APPENDIX C1
LABORATORY ANALYTICAL RESULTS – YEAR 2016
(PDF ONLY)

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2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater and Water Samples
Collected on 04/25/16-04/26/16

SDG# RAE59

GROUP	SAMPLE NUMBERS
1654743	8352776-8352787

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **05/31/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAE59
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8352776	5W8B	04/25/2016 09:35	04/27/2016 10:00
8352777	5W5B	04/25/2016 12:30	04/27/2016 10:00
8352778	5W7B	04/25/2016 11:25	04/27/2016 10:00
8352779	5W7B Matrix Spike	04/25/2016 11:25	04/27/2016 10:00
8352780	5W7B Matrix Spike Dup	04/25/2016 11:25	04/27/2016 10:00
8352781	5WC21	04/26/2016 09:25	04/27/2016 10:00
8352782	5WDUP	04/26/2016 09:35	04/27/2016 10:00
8352783	5WC22	04/25/2016 13:25	04/27/2016 10:00
8352784	5WC23	04/25/2016 14:15	04/27/2016 10:00
8352785	5W12A	04/25/2016 10:35	04/27/2016 10:00
8352786	Trip Blank 1	04/25/2016 00:00	04/27/2016 10:00
8352787	Trip Blank 2	04/25/2016 00:00	04/27/2016 10:00

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Sample pH Log

SDG: RAE59

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8352776	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352777	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352778	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352778	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352779	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352780	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352781	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352782	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352783	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352784	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352785	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352786	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352787	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

10461 SVOAs by 8270D in Water

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 31, 2016

Project: RAAP - Radford, VA - HWMU-5

Submittal Date: 04/27/2016
Group Number: 1654743
SDG: RAE59
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
5W8B Grab Groundwater	8352776
5W5B Grab Groundwater	8352777
5W7B Grab Groundwater	8352778
5W7B Matrix Spike Grab Groundwater	8352779
5W7B Matrix Spike Dup Grab Groundwater	8352780
5WC21 Grab Groundwater	8352781
5WDUP Grab Groundwater	8352782
5WC22 Grab Groundwater	8352783
5WC23 Grab Groundwater	8352784
5W12A Grab Groundwater	8352785
Trip Blank 1 Water	8352786
Trip Blank 2 Water	8352787

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

REVISED

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU-5
LL Group #: 1654743

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Batch #: H161262AA (Sample number(s): 8352776-8352787 UNSPK: 8352778)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Vinyl Chloride, Chloroform, Trichloroethene, 1,1-Dichloroethene, trans-1,2-Dichloroethene

SW-846 8270D, GC/MS Semivolatiles

Batch #: 16120WAC026 (Sample number(s): 8352777-8352784 UNSPK: 8352778 BKG: 8352778)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) Duplicate

REVISED

Sample Description: 5W8B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352776
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 09:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W8B- SDG#: RAE59-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C	1	H161262AA	05/06/2016 00:17	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 00:17	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5W5B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352777
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 12:30 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W5B- SDG#: RAE59-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	2.3	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	N.D.	0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.70	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
10461	2-Nitroaniline	88-74-4	N.D.	0.70	10	1
10461	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
10461	Nitrobenzene	98-95-3	N.D.	0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/06/2016 00:37	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 00:37	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 04:41	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5W7B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352778
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W7B- SDG#: RAE59-03BKG

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	34		1.0	10	10
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.		0.4	12	1
11996	Methylene Chloride	75-09-2	0.3	J	0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	N.D.		0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.		0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.		0.70	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	6.0	1
10461	2-Nitroaniline	88-74-4	N.D.		0.70	10	1
10461	4-Nitroaniline	100-01-6	N.D.		1.3	20	1
10461	Nitrobenzene	98-95-3	N.D.		0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/05/2016 23:16	Kevin A Sposito	1
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161273AA	05/06/2016 22:36	Kevin A Sposito	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/05/2016 23:16	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161273AA	05/06/2016 22:36	Kevin A Sposito	10
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 03:14	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5W7B Matrix Spike Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352779
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W7B- SDG#: RAE59-03MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	42		3.0	10	1
11996	2-Butanone	78-93-3	40		1.0	10	1
11996	Chloroform	67-66-3	44	E	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	6.4		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.8		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	6.1		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.8		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	6.1		0.8	1.0	1
11996	Ethyl ether	60-29-7	5.5	J	0.4	12	1
11996	Methylene Chloride	75-09-2	5.9		0.2	1.0	1
11996	Toluene	108-88-3	5.6		0.1	1.0	1
11996	Trichloroethene	79-01-6	6.0		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	6.8		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	17		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l		ug/l	ug/l	
10461	Diethylphthalate	84-66-2	40		0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	47		0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	50		0.71	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	52		1.5	6.0	1
10461	2-Nitroaniline	88-74-4	49		0.71	10	1
10461	4-Nitroaniline	100-01-6	45		1.3	20	1
10461	Nitrobenzene	98-95-3	47		0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/05/2016 23:36	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/05/2016 23:36	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 03:43	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5W7B Matrix Spike Dup Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352780
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W7B- SDG#: RAE59-03MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	41		3.0	10	1
11996	2-Butanone	78-93-3	38		1.0	10	1
11996	Chloroform	67-66-3	45	E	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	6.2		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.9		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.9		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.7		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	6.0		0.8	1.0	1
11996	Ethyl ether	60-29-7	5.3	J	0.4	12	1
11996	Methylene Chloride	75-09-2	5.9		0.2	1.0	1
11996	Toluene	108-88-3	5.2		0.1	1.0	1
11996	Trichloroethene	79-01-6	6.0		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	6.7		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	38		0.51	10	1
10461	2,4-Dinitrotoluene	121-14-2	45		0.61	10	1
10461	2,6-Dinitrotoluene	606-20-2	46		0.71	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	48		1.5	6.1	1
10461	2-Nitroaniline	88-74-4	46		0.71	10	1
10461	4-Nitroaniline	100-01-6	43		1.3	20	1
10461	Nitrobenzene	98-95-3	44		0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/05/2016 23:56	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/05/2016 23:56	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 04:12	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5WC21 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352781
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WC21 SDG#: RAE59-04

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	1.1		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	1.6	J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	3.5		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	N.D.		0.51	10	1
10461	2,4-Dinitrotoluene	121-14-2	1	J	0.61	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.		0.71	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	6.1	1
10461	2-Nitroaniline	88-74-4	0.8	J	0.71	10	1
10461	4-Nitroaniline	100-01-6	N.D.		1.3	20	1
10461	Nitrobenzene	98-95-3	1	J	0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/06/2016 00:57	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 00:57	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 05:11	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5WDUP Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352782
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WDUP SDG#: RAE59-05FD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	1.1		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	1.6	J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	3.6		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	N.D.		0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	1	J	0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.		0.70	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	6.0	1
10461	2-Nitroaniline	88-74-4	0.9	J	0.70	10	1
10461	4-Nitroaniline	100-01-6	N.D.		1.3	20	1
10461	Nitrobenzene	98-95-3	1	J	0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/06/2016 01:17	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 01:17	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 05:40	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5WC22 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352783
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 13:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WC22 SDG#: RAE59-06

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	0.9	J	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	3.6	J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	3.8		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	N.D.		0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	0.7	J	0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.		0.70	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	6.0	1
10461	2-Nitroaniline	88-74-4	2	J	0.70	10	1
10461	4-Nitroaniline	100-01-6	N.D.		1.3	20	1
10461	Nitrobenzene	98-95-3	1	J	0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/06/2016 01:38	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 01:38	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/07/2016 06:09	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5WC23 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352784
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 14:15 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WC23 SDG#: RAE59-07

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Chloroform	67-66-3	0.9	J	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1.0	1
11996	Ethyl ether	60-29-7	4.8	J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	3.9		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Diethylphthalate	84-66-2	N.D.		0.50	10	1
10461	2,4-Dinitrotoluene	121-14-2	0.8	J	0.60	10	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.		0.71	10	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.5	6.0	1
10461	2-Nitroaniline	88-74-4	2	J	0.71	10	1
10461	4-Nitroaniline	100-01-6	1	J	1.3	20	1
10461	Nitrobenzene	98-95-3	1	J	0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/06/2016 01:58	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 01:58	Kevin A Sposito	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16120WAC026	05/10/2016 01:50	William H Saadeh	1
11010	8270D BNA Extraction	SW-846 3510C	1	16120WAC026	04/29/2016 16:30	Benjamin J Rosenberger	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 5W12A Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352785
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 10:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5W12A SDG#: RAE59-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C	1	H161262AA	05/06/2016 02:18	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/06/2016 02:18	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank 1 Water
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352786
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WTB1 SDG#: RAE59-09TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	N.D.	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/05/2016 22:35	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/05/2016 22:35	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: Trip Blank 2 Water
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352787
LL Group # 1654743
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016

Submitted: 04/27/2016 10:00
Reported: 05/31/2016 08:38

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5WTB2 SDG#: RAE59-10TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	N.D.	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C	1	H161262AA	05/05/2016 22:55	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161262AA	05/05/2016 22:55	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654743
Reported: 05/31/2016 08:38

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: H161262AA	Sample number(s): 8352776-8352787		
Acetone	N.D.	3.0	10
2-Butanone	N.D.	1.0	10
Chloroform	N.D.	0.1	1.0
Dichlorodifluoromethane	N.D.	0.3	1.0
1,2-Dichloroethane	N.D.	0.1	1.0
1,1-Dichloroethene	N.D.	0.4	1.0
cis-1,2-Dichloroethene	N.D.	0.1	1.0
trans-1,2-Dichloroethene	N.D.	0.8	1.0
Ethyl ether	N.D.	0.4	12
Methylene Chloride	N.D.	0.2	1.0
Toluene	N.D.	0.1	1.0
Trichloroethene	N.D.	0.2	1.0
Vinyl Chloride	N.D.	0.1	1.0
Xylene (Total)	N.D.	0.2	3.0
Batch number: H161273AA	Sample number(s): 8352778		
Chloroform	N.D.	0.1	1.0
Batch number: 16120WAC026	Sample number(s): 8352777-8352784		
Diethylphthalate	N.D.	0.50	10
2,4-Dinitrotoluene	N.D.	0.60	10
2,6-Dinitrotoluene	N.D.	0.70	10
bis(2-Ethylhexyl)phthalate	N.D.	1.5	6.0
2-Nitroaniline	N.D.	0.70	10
4-Nitroaniline	N.D.	1.3	20
Nitrobenzene	N.D.	0.80	10

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: H161262AA	Sample number(s): 8352776-8352787								
Acetone	37.5	41.58			111		65-124		
2-Butanone	37.5	41.3			110		66-135		
Chloroform	5.00	5.59			112		80-120		
Dichlorodifluoromethane	5.00	5.86			117		35-142		
1,2-Dichloroethane	5.00	5.74			115		72-127		
1,1-Dichloroethene	5.00	5.51			110		70-120		
cis-1,2-Dichloroethene	5.00	5.52			110		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654743
Reported: 05/31/2016 08:38

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,2-Dichloroethene	5.00	5.66			113		80-120		
Ethyl ether	5.00	5.01			100		60-129		
Methylene Chloride	5.00	5.58			112		80-120		
Toluene	5.00	4.96			99		80-120		
Trichloroethene	5.00	5.66			113		80-120		
Vinyl Chloride	5.00	6.15			123		62-128		
Xylene (Total)	15	15			100		80-120		
Batch number: H161273AA	Sample number(s): 8352778								
Chloroform	5.00	5.40	5.00	5.26	108	105	80-120	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16120WAC026	Sample number(s): 8352777-8352784								
Diethylphthalate	50	45			90		55-124		
2,4-Dinitrotoluene	50	48.01			96		71-131		
2,6-Dinitrotoluene	50	50.19			100		71-133		
bis(2-Ethylhexyl)phthalate	50	51.52			103		66-130		
2-Nitroaniline	50	50.54			101		68-130		
4-Nitroaniline	50	45.5			91		61-111		
Nitrobenzene	50	47.66			95		70-121		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H161262AA	Sample number(s): 8352776-8352787 UNSPK: 8352778, P352778									
Acetone	N.D.	37.5	42.35	37.5	40.8	113	109	65-124	4	30
2-Butanone	N.D.	37.5	39.87	37.5	37.95	106	101	66-135	5	30
Chloroform	38.71	5.00	44.05	5.00	45.12	107 (2)	128 (2)	80-120	2	30
Dichlorodifluoromethane	N.D.	5.00	6.40	5.00	6.18	128	124	35-142	4	30
1,2-Dichloroethane	N.D.	5.00	5.83	5.00	5.86	117	117	72-127	0	30
1,1-Dichloroethene	N.D.	5.00	6.05	5.00	5.92	121*	118	70-120	2	30
cis-1,2-Dichloroethene	N.D.	5.00	5.78	5.00	5.72	116	114	80-120	1	30
trans-1,2-Dichloroethene	N.D.	5.00	6.07	5.00	6.00	121*	120	80-120	1	30
Ethyl ether	N.D.	5.00	5.46	5.00	5.30	109	106	60-129	3	30
Methylene Chloride	0.273	5.00	5.90	5.00	5.93	112	113	80-120	1	30
Toluene	N.D.	5.00	5.64	5.00	5.17	113	103	80-120	9	30
Trichloroethene	N.D.	5.00	5.98	5.00	6.03	120	121*	80-120	1	30
Vinyl Chloride	N.D.	5.00	6.79	5.00	6.73	136*	135*	62-128	1	30
Xylene (Total)	N.D.	15	16.79	15	15.75	112	105	80-120	6	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 16120WAC026	Sample number(s): 8352777-8352784 UNSPK: 8352778									
Diethylphthalate	N.D.	50.4	40.23	50.81	38.15	80	75	55-124	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654743
Reported: 05/31/2016 08:38

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2,4-Dinitrotoluene	N.D.	50.4	47.43	50.81	44.71	94	88	71-131	6	30
2,6-Dinitrotoluene	N.D.	50.4	49.88	50.81	46.33	99	91	71-133	7	30
bis(2-Ethylhexyl)phthalate	N.D.	50.4	52.12	50.81	48.19	103	95	66-130	8	30
2-Nitroaniline	N.D.	50.4	48.7	50.81	45.59	97	90	68-130	7	30
4-Nitroaniline	N.D.	50.4	44.82	50.81	42.66	89	84	61-111	5	30
Nitrobenzene	N.D.	50.4	47.48	50.81	43.53	94	86	70-121	9	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: RAAP Unit 5 "J" and "K" lists
Batch number: H161262AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8352776	105	101	97	93
8352777	109	103	96	94
8352778	105	97	102	92
8352779	101	96	102	95
8352780	110	106	95	96
8352781	105	98	99	95
8352782	102	98	102	92
8352783	104	99	101	92
8352784	103	98	101	91
8352785	102	95	101	93
8352786	102	101	103	93
8352787	104	97	101	92
Blank	106	99	99	92
LCS	108	102	95	96
MS	101	96	102	95
MSD	110	106	95	96
Limits:	77-114	74-113	77-110	78-110

Analysis Name: SVOAs by 8270D in Water
Batch number: 16120WAC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8352777	79	78	72
8352778	88	88	81
8352779	90	88	76
8352780	82	83	71
8352781	86	83	64
8352782	90	87	55
8352783	93	90	65
8352784	87	87	75
Blank	86	83	81

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654743
Reported: 05/31/2016 08:38

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
LCS	93	91	80
MS	90	88	76
MSD	82	83	71
Limits:	46-128	61-112	41-125

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1654743/8352776-87

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 AT 4/18/2016

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 **Event:** 2 Qtr 2016 Corrective Action Annual Monitoring Event **DAA JN:** B03204-16 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES MPS **Carrier:** 1Z 75Y02X Y0403555 61 **Tracking Number:** 1Z 75Y02X Y0 4141 9375		

Box 1: Matrix SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	**Box 2: Preservative** A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$ E NaOH F ZnAc G Other (Specify) H None	**Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic AG Amber Glass V VOA CG Clear Glass	**Box 4: Sample Type** G Grab C Composite	**Invoice** **Copy to Consultant:** YES **Bill:** CLIENT OTHER **Preserved and shipped on ice:** YES

Box 4 - Sample Type	G	G	G	G				
Box 3 - Filtered/Unfiltered	U	U	U	U				
Required pH of Sample	<2	<2	<2					
Box 2 - Preservative	A	B	B	H				
Box 5 - Sample Container Type	3-40ml V	1-500ml P	1-500ml P	2-250mL AG				

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge Appendix J Analyte List	8260C/5030C 25 ml purge Appendix K Analyte List	(Metals-Total) 6020A(3005A)/7470A 3020A	Cobalt only-Total 6020A/3005A 3020A	8270D/3510C (Semivolatiles)				
5W8B	4/25	0935	GW	4	X			X					upgradient monitoring well
5W5B	4/25	1230	GW	6	X	X	X		X				
5W7B	4/25	1125	GW	18	X	X	X		X				USE FOR QC
5WC21	4/26	0925	GW	6	X	X	X		X				
5WDUP	4/26	0935	GW	6	X	X	X		X				
5WC22	4/25	1325	GW	6	X	X	X		X				
5WC23	4/25	1415	GW	6	X	X	X		X				
6W12A	4/25	1035	GW	4	X			X					plume well
Trip Blank 1	4/25	—	T	2	X	X							
Trip Blank 2	4/25	—	T	2	X	X							

GENERAL NOTES:

1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QL's attached.

5. Cobalt
QL = 5 µg/L
MDL 1 µg/L JMR 4/14/2016

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 4/25/16	#1 Relinquished by (Signature):	Date: 4/26/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 730	Company Name:	Time:	
Sampler Name (Print): Will Mason-Deese	Date: 4/25/16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/27/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 1080	

JMR 4/14/2016 1/5 AT 4/18/16

11200/1654743/8352776-87

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – K Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Acetone	67-64-1	10	3
2.	Chloroform (trichloromethane)	67-66-3	1	0.1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10	1
4.	1,2-dichloroethane	107-06-2	1	0.147
5.	Methylene chloride (Dichloromethane)	75-09-2	1	0.182
6.	Toluene (methyl benzene)	108-88-3	1	0.1
7.	Xylenes (total)	1330-20-7	3	0.208
8.	Diethyl ether	60-29-7	12	0.39
9.	Dichlorodifluoromethane	75-71-8	1	0.28

Note.
2Q2010 is the first event under corrective action monitoring. Analyte list and monitoring wells sampled have changed from previous event.

Final Report must list the project required QLs and MDLs listed above. Report results between the project required QL and MDL as estimated value.

Rev 07-2014 permit mod. JCF

25 ml purge volume

11200/1654743/8352776-87

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – J Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL*
1.	Trichloroethene	79-01-6	1	0.177
2.	1,1-Dichloroethene	75-35-4	1	0.44
3.	Cis-1,2-Dichloroethene	156-59-2	1	0.1
4.	Trans-1,2-Dichloroethene	156-60-5	1	0.8
5.	Vinyl Chloride	75-01-4	1	0.1

Note: *Report current lab MDL if higher.

25 ml purge volume

11200/1654743/8352776-87

ANALYTICAL METHOD: 8270D
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Bis(2-ethylhexyl)phthalate	117-81-7	6	1.5
2.	Diethyl phthalate	84-66-2	10	0.5
3.	2,4-dinitrotoluene	121-14-2	10	0.6
4.	2,6-dinitrotoluene	606-20-2	10	0.7
5.	2-Nitroaniline (o-Nitroaniline)	88-74-4	10	0.7
6.	4-Nitroaniline (p-Nitroaniline)	100-01-6	20	1.3
7.	Nitrobenzene	98-95-3	10	0.8

+MDLs

Final Report must list the project required QLs listed above. Report results between the project required QL and MDL noted above as estimated value. * If lab current MDL higher, report higher MDL. JVC 4/18/2016

Note: # 5-7 added on Jan 2004 due To 4Q2003 detection. JCF 0104

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
Reviewed 4 Q 2006 -4/18/2016 11:43 AM
10/9/2007 JCF – 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfc
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. Checked 2015JCF
2014

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-5\hwmu5 - coc rev 2010\hwmu 5 - appendix k cap target analtye list - rev 2015.doc

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Sample Administration Receipt Documentation Log

Doc Log ID: 144397

Group Number(s): 1654743

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/27/2016 10:00
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 13:08 on 04/27/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.6	DT	Wet	Y	Bagged	N
2	DT146	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5994
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

RAAP Unit 5 "J" and "K" lists

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8352776	5W8B	X		1	
8352777	5W5B	X		1	
8352778	5W7B	X		1; 10	Unspiked
8352779	5W7B Matrix Spike	X		1	Matrix Spike
8352780	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
8352781	5WC21	X		1	
8352782	5WDUP	X		1	Field Duplicate Sample
8352783	5WC22	X		1	
8352784	5WC23	X		1	
8352785	5W12A	X		1	
8352786	Trip Blank 1	X		1	Trip Blank
8352787	Trip Blank 2	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Batch#: H161262AA (Sample number(s): 8352776-8352787, UNSPK: 8352778)
The recovery(ies) for the following analyte(s) in the MS is outside the acceptance window: 1,1-Dichloroethene, trans-1,2-Dichloroethene
The recovery(ies) for the following analyte(s) in the MSD is outside the acceptance window: Chloroform, Trichloroethene
The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: Vinyl Chloride
Refer to the QC Summary forms for more information.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
RAAP Unit 5 "J" and "K" lists	H161262AA	VBLKH85	05/05/2016 21:49:00
		LCSH85	05/05/2016 20:48:00
		8352777	05/06/2016 00:37:00
		8352778 UNSPK	05/05/2016 23:16:00
		8352779 MS	05/05/2016 23:36:00
		8352780 MSD	05/05/2016 23:56:00
		8352781	05/06/2016 00:57:00
		8352782	05/06/2016 01:17:00
		8352783	05/06/2016 01:38:00
		8352784	05/06/2016 01:58:00
		8352786	05/05/2016 22:35:00
		8352787	05/05/2016 22:55:00
RAAP Unit 5 "J" and "K" lists	H161273AA	VBLKH89	05/06/2016 21:57:00
		LCSH89	05/06/2016 20:57:00
		LCDH89	05/06/2016 21:17:00
		8352778 UNSPK	05/06/2016 22:36:00
RAAP Unit 5 "J" list	H161262AA	8352776	05/06/2016 00:17:00
		8352785	05/06/2016 02:18:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAE59
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161262AA / VBLKH85 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	05/05/16	N.D.	ug/l	0.3	1.0
Vinyl Chloride	05/05/16	N.D.	ug/l	0.1	1.0
Ethyl ether	05/05/16	N.D.	ug/l	0.4	12
1,1-Dichloroethene	05/05/16	N.D.	ug/l	0.4	1.0
Acetone	05/05/16	N.D.	ug/l	3.0	10
Methylene Chloride	05/05/16	N.D.	ug/l	0.2	1.0
trans-1,2-Dichloroethene	05/05/16	N.D.	ug/l	0.8	1.0
2-Butanone	05/05/16	N.D.	ug/l	1.0	10
cis-1,2-Dichloroethene	05/05/16	N.D.	ug/l	0.1	1.0
Chloroform	05/05/16	N.D.	ug/l	0.1	1.0
1,2-Dichloroethane	05/05/16	N.D.	ug/l	0.1	1.0
Trichloroethene	05/05/16	N.D.	ug/l	0.2	1.0
Toluene	05/05/16	N.D.	ug/l	0.1	1.0
Xylene (Total)	05/05/16	N.D.	ug/l	0.2	3.0

H161273AA / VBLKH89 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Chloroform	05/06/16	N.D.	ug/l	0.1	1.0

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAE59
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161262AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH85	99	74 - 113	92	78 - 110	106	77 - 114	99	77 - 110
LCSH85	102	74 - 113	96	78 - 110	108	77 - 114	95	77 - 110
8352776	101	74 - 113	93	78 - 110	105	77 - 114	97	77 - 110
8352777	103	74 - 113	94	78 - 110	109	77 - 114	96	77 - 110
8352778 UNSPK	97	74 - 113	92	78 - 110	105	77 - 114	102	77 - 110
8352779 MS	96	74 - 113	95	78 - 110	101	77 - 114	102	77 - 110
8352780 MSD	106	74 - 113	96	78 - 110	110	77 - 114	95	77 - 110
8352781	98	74 - 113	95	78 - 110	105	77 - 114	99	77 - 110
8352782	98	74 - 113	92	78 - 110	102	77 - 114	102	77 - 110
8352783	99	74 - 113	92	78 - 110	104	77 - 114	101	77 - 110
8352784	98	74 - 113	91	78 - 110	103	77 - 114	101	77 - 110
8352785	95	74 - 113	93	78 - 110	102	77 - 114	101	77 - 110
8352786	101	74 - 113	93	78 - 110	102	77 - 114	103	77 - 110
8352787	97	74 - 113	92	78 - 110	104	77 - 114	101	77 - 110

H161273AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH89	103	74 - 113	93	78 - 110	107	77 - 114	97	77 - 110
LCSH89	107	74 - 113	96	78 - 110	109	77 - 114	95	77 - 110
LCDH89	106	74 - 113	96	78 - 110	107	77 - 114	96	77 - 110

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 8352778 MS: 8352779 MSD: 8352780 **Analyte**	Batch: **H161262AA** (Sample number(s): 8352776-8352787)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	6.40	6.18	128	124	35-142	4	30
Vinyl Chloride	5.00	N.D.	6.79	6.73	136 *	135 *	62-128	1	30
Ethyl ether	5.00	N.D.	5.46 J	5.30 J	109	106	60-129	3	30
1,1-Dichloroethene	5.00	N.D.	6.05	5.92	121 *	118	70-120	2	30
Acetone	37.5	N.D.	42.35	40.8	113	109	65-124	4	30
Methylene Chloride	5.00	0.273 J	5.90	5.93	112	113	80-120	1	30
trans-1,2-Dichloroethene	5.00	N.D.	6.07	6.00	121 *	120	80-120	1	30
2-Butanone	37.5	N.D.	39.87	37.95	106	101	66-135	5	30
cis-1,2-Dichloroethene	5.00	N.D.	5.78	5.72	116	114	80-120	1	30
Chloroform	5.00	38.71	44.05	45.12	107 (2)	128 (2)	80-120	2	30
1,2-Dichloroethane	5.00	N.D.	5.83	5.86	117	117	72-127	0	30
Trichloroethene	5.00	N.D.	5.98	6.03	120	121 *	80-120	1	30
Toluene	5.00	N.D.	5.64	5.17	113	103	80-120	9	30
Xylene (Total)	15	N.D.	16.79	15.75	112	105	80-120	6	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAE59
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH85	Batch: **H161262AA** (Sample number(s): 8352776-8352787)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	5.86	NA	117	NA	35-142	NA	NA
Vinyl Chloride	5.00	6.15	NA	123	NA	62-128	NA	NA
Ethyl ether	5.00	5.01 J	NA	100	NA	60-129	NA	NA
1,1-Dichloroethene	5.00	5.51	NA	110	NA	70-120	NA	NA
Acetone	37.5	41.58	NA	111	NA	65-124	NA	NA
Methylene Chloride	5.00	5.58	NA	112	NA	80-120	NA	NA
trans-1,2-Dichloroethene	5.00	5.66	NA	113	NA	80-120	NA	NA
2-Butanone	37.5	41.3	NA	110	NA	66-135	NA	NA
cis-1,2-Dichloroethene	5.00	5.52	NA	110	NA	80-120	NA	NA
Chloroform	5.00	5.59	NA	112	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	5.74	NA	115	NA	72-127	NA	NA
Trichloroethene	5.00	5.66	NA	113	NA	80-120	NA	NA
Toluene	5.00	4.96	NA	99	NA	80-120	NA	NA
Xylene (Total)	15	15	NA	100	NA	80-120	NA	NA

LCS: LCSH89 LCSD: LCDH89	Batch: **H161273AA** (Sample number(s): 8352778)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloroform	5.00	5.40	5.26	108	105	80-120	3	30

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID: hm14t01.d BFB Injection Date: 03/14/16

Instrument ID: HP19094 BFB Injection Time: 10:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.66
75	30.0 - 60.0% of mass 95	47.24
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.04
173	Less than 2.0% of mass 174	1.08 (1.29)1
174	Greater than 50.0% of mass 95	83.27
175	5.0 - 9.0% of mass 174	5.47 (6.57)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.30 (95.23)1
177	5.0 - 9.0% of mass 176	5.20 (6.56)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hm14i11.d	03/14/16	11:30
02	VSTD10	hm14i12.d	03/14/16	11:51
03	VSTD5	hm14i13.d	03/14/16	12:11
04	VSTD2	hm14i14.d	03/14/16	12:31
05	VSTD1	hm14i15.d	03/14/16	12:51
06	VSTD.5	hm14i16.d	03/14/16	13:12
07	VSTD.2	hm14i17.d	03/14/16	13:32
08	MDL0.1 - MDL0.1	hm14m11.d	03/14/16	13:53
09	VSTD25	hm14i01.d	03/14/16	14:53
10	VSTD10	hm14i02.d	03/14/16	15:14
11	VSTD5	hm14i03.d	03/14/16	15:34
12	VSTD2	hm14i04.d	03/14/16	15:54
13	VSTD1	hm14i05.d	03/14/16	16:15
14	VSTD.5	hm14i06.d	03/14/16	16:35
15	VSTD.2	hm14i07.d	03/14/16	16:55
16	MDL0.1 - MDL0.1	hm14m01.d	03/14/16	17:16
17	MDL0.4 - MDL0.4	hm14m02.d	03/14/16	17:36
18	LCSHLG	hm14cv1.d	03/14/16	17:56
19	LCSHSM	hm14cv12.d	03/14/16	19:18

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID: hy05t05.d BFB Injection Date: 05/05/16

Instrument ID: HP19094 BFB Injection Time: 19:55

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.22
75	30.0 - 60.0% of mass 95	51.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.01
173	Less than 2.0% of mass 174	1.27 (1.44)1
174	Greater than 50.0% of mass 95	88.23
175	5.0 - 9.0% of mass 174	7.17 (8.13)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.82 (97.28)1
177	5.0 - 9.0% of mass 176	5.65 (6.59)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hy05c05.d	05/05/16	20:28
02	LCSH85	hy05s41.d	05/05/16	20:48
03	LCSH86	hy05s71.d	05/05/16	20:48
04	LCDH86	hy05s72.d	05/05/16	21:09
05	VBLKH85	hy05b05.d	05/05/16	21:49
06	VBLKH86	hy05b71.d	05/05/16	21:49
07	8352786	hy05s42.d	05/05/16	22:35
08	8352787	hy05s43.d	05/05/16	22:55
09	8352778	hy05s44.d	05/05/16	23:16
10	8352779MS	hy05s45.d	05/05/16	23:36
11	8352780MSD	hy05s46.d	05/05/16	23:56
12	8352776	hy05s47.d	05/06/16	00:17
13	8352777	hy05s48.d	05/06/16	00:37
14	8352781	hy05s49.d	05/06/16	00:57
15	8352782	hy05s50.d	05/06/16	01:17
16	8352783	hy05s51.d	05/06/16	01:38
17	8352784	hy05s52.d	05/06/16	01:58
18	8352785	hy05s53.d	05/06/16	02:18
19	8353304	hy05s73.d	05/06/16	02:39
20	8353305	hy05s74.d	05/06/16	02:59
21	8363238	hy05s75.d	05/06/16	03:19
22	8353303	hy05s76.d	05/06/16	03:40

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID: hy05t05.d BFB Injection Date: 05/05/16

Instrument ID: HP19094 BFB Injection Time: 19:55

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.22
75	30.0 - 60.0% of mass 95	51.53
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.01
173	Less than 2.0% of mass 174	1.27 (1.44)1
174	Greater than 50.0% of mass 95	88.23
175	5.0 - 9.0% of mass 174	7.17 (8.13)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.82 (97.28)1
177	5.0 - 9.0% of mass 176	5.65 (6.59)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	8363229	hy05s77.d	05/06/16	04:00
24	8363230	hy05s78.d	05/06/16	04:20
25	8363231	hy05s79.d	05/06/16	04:40
26	8363233	hy05s80.d	05/06/16	05:01
27	8363234	hy05s81.d	05/06/16	05:21
28	8363235	hy05s82.d	05/06/16	05:41
29	8363236	hy05s83.d	05/06/16	06:02
30	8363237	hy05s84.d	05/06/16	06:22
31	8363232DL	hy05s85.d	05/06/16	06:42

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID: hy06t06.d BFB Injection Date: 05/06/16

Instrument ID: HP19094 BFB Injection Time: 20:07

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.23
75	30.0 - 60.0% of mass 95	50.94
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	1.15 (1.26)1
174	Greater than 50.0% of mass 95	90.76
175	5.0 - 9.0% of mass 174	6.91 (7.61)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.28 (99.47)1
177	5.0 - 9.0% of mass 176	5.24 (5.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hy06c05.d	05/06/16	20:36
02	LCSH89	hy06s41.d	05/06/16	20:57
03	LCSH90	hy06s51.d	05/06/16	20:57
04	LCSH91	hy06s71.d	05/06/16	20:57
05	LCDH89	hy06s42.d	05/06/16	21:17
06	LCDH90	hy06s52.d	05/06/16	21:17
07	LCDH91	hy06s72.d	05/06/16	21:17
08	VBLKH89	hy06b41.d	05/06/16	21:57
09	VBLKH90	hy06b51.d	05/06/16	21:57
10	VBLKH91	hy06b71.d	05/06/16	21:57
11	8352778DL	hy06s43.d	05/06/16	22:36
12	8362414	hy06s53.d	05/06/16	23:17
13	8362410	hy06s54.d	05/06/16	23:37
14	8362411	hy06s55.d	05/06/16	23:57
15	8362412	hy06s56.d	05/07/16	00:17
16	8362413	hy06s57.d	05/07/16	00:38
17	8363247	hy06s73.d	05/07/16	01:18
18	8363240	hy06s74.d	05/07/16	01:39
19	8363241	hy06s75.d	05/07/16	01:59
20	8363242	hy06s76.d	05/07/16	02:19
21	8363243	hy06s77.d	05/07/16	02:40
22	8363244	hy06s78.d	05/07/16	03:00

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID: hy06t06.d BFB Injection Date: 05/06/16

Instrument ID: HP19094 BFB Injection Time: 20:07

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.23
75	30.0 - 60.0% of mass 95	50.94
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	1.15 (1.26)1
174	Greater than 50.0% of mass 95	90.76
175	5.0 - 9.0% of mass 174	6.91 (7.61)1
176	Greater than 95.0%, but less than 101.0% of mass 174	90.28 (99.47)1
177	5.0 - 9.0% of mass 176	5.24 (5.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	8363246	hy06s79.d	05/07/16	03:20
24	8363239	hy06s80.d	05/07/16	03:41
25	8363239DL	hy06s81.d	05/07/16	04:01
26	8363245	hy06s82.d	05/07/16	04:21
27	8363245DL	hy06s83.d	05/07/16	04:41

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3794	0.3441	0.3851	0.2972	0.3177	0.3339	0.3560	0.3448	9	AVG #
Chloromethane	#	0.3712	0.3682	0.3027	0.3172	0.3277	0.3421	0.3382	8	AVG #
Vinyl Chloride	#0.3755	0.3230	0.3289	0.2741	0.2857	0.2988	0.3159	0.3145	11	AVG #
1,3-Butadiene	0.2859	0.2734	0.2478	0.2197	0.2031	0.2123	0.2231	0.2379	13	AVG
Bromomethane	#0.2381	0.2203	0.2196	0.1882	0.1971	0.1982	0.1998	0.2088	8	AVG #
Chloroethane	#0.2565	0.2082	0.2037	0.1691	0.1669	0.1735	0.1793	0.1939	17	AVG #
Dichlorofluoromethane	0.5349	0.4694	0.4719	0.3925	0.3894	0.4005	0.4213	0.4400	12	AVG
Trichlorofluoromethane	#0.4707	0.4254	0.4341	0.3636	0.3752	0.3872	0.4122	0.4098	9	AVG #
Ethyl ether	0.1857	0.1752	0.1684	0.1577	0.1594	0.1640	0.1730	0.1690	6	AVG
Freon 123a	0.3525	0.3296	0.3442	0.2782	0.2855	0.2931	0.3111	0.3135	9	AVG
Acrolein	3.0810	3.0839	2.9370	2.6300	2.6469	2.7838	2.7934	2.8508	7	AVG
1,1-Dichloroethene	#0.2575	0.2475	0.2493	0.2136	0.2256	0.2203	0.2320	0.2351	7	AVG #
Freon 113	#0.2438	0.2619	0.2664	0.2271	0.2344	0.2321	0.2457	0.2445	6	AVG #
Acetone	#	4.9423	4.0349	3.7140	3.5429	3.5833	3.7525	3.9283	13	AVG #
Methyl Iodide	0.4526	0.4598	0.4688	0.3991	0.4142	0.4155	0.4368	0.4353	6	AVG
Carbon Disulfide	#0.8414	0.7753	0.7634	0.6532	0.6735	0.6684	0.7068	0.7260	10	AVG #
Allyl Chloride	0.5146	0.4938	0.4351	0.4030	0.4025	0.4192	0.4437	0.4446	10	AVG
Methyl Acetate	#	9.6189	9.8815	10.128	8.9854	9.9432	9.8765	9.7388	4	AVG #
Methylene Chloride	#0.2618	0.2683	0.2715	0.2275	0.2397	0.2393	0.2508	0.2513	7	AVG #
t-Butyl Alcohol	1.4728	1.3976	1.4476	1.2056	1.2831	1.2273	1.3767	1.3444	8	AVG
Acrylonitrile	4.6277	5.0863	4.8259	4.3907	4.5424	4.6835	4.8382	4.7135	5	AVG
trans-1,2-Dichloroethene	#0.2610	0.2743	0.2723	0.2322	0.2426	0.2400	0.2498	0.2532	6	AVG #
Methyl Tertiary Butyl Ether	#0.5745	0.5608	0.5650	0.4970	0.5216	0.5235	0.5549	0.5425	5	AVG #
n-Hexane	0.4682	0.4550	0.4726	0.3859	0.4031	0.4001	0.4234	0.4297	8	AVG
1,1-Dichloroethane	#0.5492	0.5496	0.5313	0.4745	0.4916	0.4956	0.5203	0.5160	6	AVG #
di-Isopropyl Ether	0.9437	0.9424	0.9408	0.8273	0.8653	0.8697	0.9162	0.9007	5	AVG
2-Chloro-1,3-Butadiene	0.4430	0.4527	0.4533	0.3852	0.4029	0.4049	0.4231	0.4236	6	AVG
Ethyl t-butyl ether	0.7963	0.7919	0.7979	0.7010	0.7285	0.7331	0.7683	0.7596	5	AVG
cis-1,2-Dichloroethene	#0.2916	0.2956	0.2975	0.2577	0.2692	0.2704	0.2811	0.2804	5	AVG #
2,2-Dichloropropane	0.4409	0.4494	0.4402	0.3767	0.3870	0.3896	0.4062	0.4129	7	AVG
2-Butanone	#7.1976	7.0728	6.7420	6.3690	6.3071	6.5701	6.5977	6.6938	5	AVG #
Propionitrile	1.7329	1.6974	1.7303	1.5321	1.6258	1.6606	1.7047	1.6691	4	AVG
Methacrylonitrile	6.0702	6.0783	5.6869	5.4434	5.4279	5.6371	5.6608	5.7149	5	AVG
Bromochloromethane	0.1053	0.1122	0.1099	0.1013	0.1011	0.1054	0.1118	0.1067	4	AVG
Tetrahydrofuran	1.8630	1.8410	1.7011	1.5806	1.5751	1.6475	1.6453	1.6934	7	AVG
Chloroform	#0.5267	0.4894	0.4962	0.4270	0.4488	0.4474	0.4659	0.4716	7	AVG #
1,1,1-Trichloroethane	#0.4356	0.4299	0.4162	0.3669	0.3846	0.3836	0.3994	0.4023	6	AVG #
Cyclohexane	#0.6211	0.5867	0.5669	0.4571	0.4771	0.4731	0.4980	0.5257	12	AVG #
Cyclohexane(2)	#0.4116	0.4874	0.4351	0.3560	0.3722	0.3679	0.3874	0.4025	11	AVG #
Cyclohexane(3)	#0.1683	0.1617	0.1642	0.1345	0.1397	0.1386	0.1456	0.1504	9	AVG #
1,1-Dichloropropene	0.4002	0.4068	0.4150	0.3551	0.3701	0.3683	0.3877	0.3862	6	AVG
Carbon Tetrachloride	#0.3819	0.3849	0.3908	0.3354	0.3500	0.3486	0.3688	0.3658	6	AVG #
Isobutyl Alcohol		0.4905	0.4930	0.4034	0.4320	0.4316	0.4668	0.4529	8	AVG
Benzene	#1.1561	1.1416	1.1296	0.9906	1.0233	1.0189	1.0629	1.0747	6	AVG #
1,2-Dichloroethane	#0.3027	0.2858	0.2930	0.2557	0.2657	0.2677	0.2786	0.2785	6	AVG #
t-Amyl methyl ether	0.6605	0.6314	0.6607	0.5706	0.5980	0.5975	0.6262	0.6207	5	AVG
n-Heptane	0.5259	0.5187	0.5506	0.4408	0.4535	0.4416	0.4691	0.4857	9	AVG
n-Butanol	0.4418	0.3794	0.4190	0.3499	0.3627	0.3616	0.3695	0.3834	9	AVG
Trichloroethene	#0.3019	0.2903	0.2968	0.2571	0.2666	0.2681	0.2801	0.2801	6	AVG #
Methylcyclohexane	#0.4816	0.5047	0.4851	0.4210	0.4188	0.4370	0.4637	0.4588	7	AVG #
1,2-Dichloropropane	#0.2940	0.2983	0.2982	0.2545	0.2676	0.2659	0.2803	0.2798	6	AVG #
Methyl Methacrylate	12.213	12.795	11.713	11.371	11.444	11.950	12.097	11.940	4	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1232	0.1196	0.1196	0.1059	0.1110	0.1109	0.1168	0.1153	5	AVG
1,4-Dioxane		0.0537	0.0908	0.0768	0.0806	0.0776	0.0738	0.0755	16	AVG
Bromodichloromethane	#0.3243	0.3276	0.3367	0.2969	0.3144	0.3178	0.3351	0.3218	4	AVG #
2-Nitropropane	4.6486	4.2279	3.9219	3.3782	3.3840	3.6094	3.6231	3.8276	12	AVG
cis-1,3-Dichloropropene	#0.4198	0.3874	0.4098	0.3659	0.3855	0.3903	0.4098	0.3955	5	AVG #
4-Methyl-2-Pentanone	#17.171	17.506	16.820	15.707	15.605	16.287	16.220	16.473	4	AVG #
Toluene	#1.0550	1.0527	1.0130	0.8930	0.9025	0.8812	0.9200	0.9596	8	AVG #
trans-1,3-Dichloropropene	#0.4726	0.4707	0.4637	0.4207	0.4297	0.4283	0.4626	0.4497	5	AVG #
Ethyl Methacrylate	0.3469	0.3663	0.3613	0.3299	0.3364	0.3285	0.3524	0.3460	4	AVG
1,1,2-Trichloroethane	#0.2624	0.2456	0.2366	0.2185	0.2206	0.2162	0.2271	0.2324	7	AVG #
Tetrachloroethene	#0.5043	0.5013	0.4768	0.4156	0.4281	0.4126	0.4334	0.4532	9	AVG #
1,3-Dichloropropane	0.4378	0.4422	0.4381	0.3911	0.4040	0.3958	0.4165	0.4179	5	AVG
2-Hexanone	#13.649	11.440	12.122	11.015	10.889	11.290	11.127	11.647	8	AVG #
Dibromochloromethane	#0.2954	0.3167	0.3053	0.2757	0.2929	0.2899	0.3098	0.2979	5	AVG #
1,2-Dibromoethane	#0.2193	0.2394	0.2244	0.2075	0.2119	0.2092	0.2206	0.2189	5	AVG #
Chlorobenzene	#1.1380	1.1259	1.0962	0.9786	0.9874	0.9721	1.0139	1.0446	7	AVG #
1,1,1,2-Tetrachloroethane	0.3893	0.3720	0.3747	0.3345	0.3422	0.3368	0.3587	0.3583	6	AVG
Ethylbenzene	#2.1134	2.0137	1.9778	1.7409	1.7751	1.7289	1.7981	1.8783	8	AVG #
m+p-Xylene	#0.7815	0.7778	0.7550	0.6751	0.6720	0.6631	0.6905	0.7164	7	AVG #
o-Xylene	#0.7409	0.7607	0.7306	0.6493	0.6587	0.6515	0.6748	0.6952	7	AVG #
Styrene	#1.1801	1.1939	1.1620	1.0453	1.0648	1.0475	1.0916	1.1122	6	AVG #
Bromoform	#0.1725	0.1661	0.1672	0.1518	0.1610	0.1624	0.1757	0.1653	5	AVG #
Isopropylbenzene	#1.9851	2.0226	1.9572	1.7234	1.7365	1.6980	1.7743	1.8424	8	AVG #
1,1,2,2-Tetrachloroethane	#0.7438	0.6570	0.6509	0.5873	0.5855	0.5746	0.5821	0.6259	10	AVG #
Bromobenzene	1.0718	1.0292	0.9496	0.8694	0.8672	0.8647	0.8735	0.9322	9	AVG
trans-1,4-Dichloro-2-butene	4.8925	5.1777	5.1676	4.8188	4.9855	5.2640	5.2041	5.0729	3	AVG
1,2,3-Trichloropropane	0.1617	0.1778	0.1600	0.1528	0.1505	0.1473	0.1500	0.1571	7	AVG
n-Propylbenzene	5.8971	5.5876	5.2562	4.6713	4.6938	4.5895	4.6004	5.0423	11	AVG
2-Chlorotoluene	1.0885	1.0938	1.0038	0.9132	0.9073	0.8964	0.9029	0.9722	9	AVG
1,3,5-Trimethylbenzene	3.9321	3.9313	3.6885	3.2926	3.2746	3.2247	3.2638	3.5154	9	AVG
4-Chlorotoluene	1.1414	1.0760	1.0337	0.9389	0.9250	0.9058	0.9148	0.9908	9	AVG
tert-Butylbenzene	0.8221	0.8390	0.7950	0.7043	0.7007	0.6866	0.6982	0.7494	9	AVG
Pentachloroethane	0.6147	0.5969	0.5624	0.5292	0.5334	0.5506	0.5719	0.5656	6	AVG
1,2,4-Trimethylbenzene	3.9524	3.8986	3.6380	3.3087	3.2987	3.2420	3.2664	3.5150	9	AVG
sec-Butylbenzene	5.1612	5.0374	4.8561	4.2226	4.2314	4.1748	4.1768	4.5515	10	AVG
1,3-Dichlorobenzene	#2.0613	1.9935	1.8790	1.7282	1.6916	1.6946	1.7160	1.8235	8	AVG #
p-Isopropyltoluene	4.2749	4.2752	3.9843	3.6106	3.6455	3.5773	3.6033	3.8530	8	AVG
1,4-Dichlorobenzene	#2.2361	2.0721	1.9006	1.7257	1.6934	1.6593	1.6813	1.8526	12	AVG #
1,2,3-Trimethylbenzene	1.7273	1.6490	1.4414	1.3854	1.3246	1.3313	1.3446	1.4577	11	AVG
Benzyl Chloride	0.2225	0.2825	0.2499	0.2367	0.2480	0.2433	0.2528	0.2480	7	AVG
n-Butylbenzene	2.1531	1.9654	1.9531	1.7450	1.7845	1.7824	1.8102	1.8848	8	AVG
1,2-Dichlorobenzene	#1.8464	1.8109	1.6965	1.5178	1.5019	1.4784	1.4854	1.6196	10	AVG #
1,2-Dibromo-3-chloropropane	#2.9098	2.5381	2.5710	2.5040	2.4300	2.6883	2.6777	2.6170	6	AVG #
1,2,4-Trichlorobenzene	#1.4608	1.2962	1.1812	1.0543	1.0372	1.0385	1.0422	1.1586	14	AVG #
Hexachlorobutadiene	0.6982	0.6346	0.6641	0.5313	0.5592	0.5562	0.5941	0.6054	10	AVG
Naphthalene		2.2854	2.0615	1.8226	1.7195	1.6642	1.5895	1.8571	14	AVG
1,2,3-Trichlorobenzene		1.1571	1.0236	0.8912	0.8513	0.8193	0.8098	0.9254	15	AVG
Dibromofluoromethane	0.2305	0.2299	0.2370	0.2300	0.2397	0.2405	0.2419	0.2356	2	AVG
Dibromofluoromethane(2)	0.2370	0.2374	0.2440	0.2384	0.2439	0.2475	0.2492	0.2425	2	AVG
1,2-Dichloroethane-d4	0.0378	0.0383	0.0390	0.0378	0.0404	0.0402	0.0396	0.0390	3	AVG
1,2-Dichloroethane-d4(2)	0.1928	0.1919	0.2018	0.1975	0.2036	0.2021	0.2049	0.1992	3	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(3)	0.0237	0.0231	0.0251	0.0245	0.0250	0.0255	0.0256	0.0246	4	AVG
Toluene-d8	1.4649	1.4592	1.4179	1.4398	1.4104	1.3887	1.3910	1.4246	2	AVG
Toluene-d8(2)	0.9435	0.9474	0.9141	0.9318	0.9107	0.9040	0.9033	0.9221	2	AVG
4-Bromofluorobenzene	0.4499	0.4509	0.4653	0.4562	0.4616	0.4617	0.4688	0.4592	2	AVG
4-Bromofluorobenzene(2)	0.3747	0.3779	0.3838	0.3812	0.3859	0.3861	0.3903	0.3828	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i01.d	VSTD025
/chem2/HP19094.i/16mar14a.b/hm14i02.d	VSTD010
/chem2/HP19094.i/16mar14a.b/hm14i03.d	VSTD005
/chem2/HP19094.i/16mar14a.b/hm14i04.d	VSTD002
/chem2/HP19094.i/16mar14a.b/hm14i05.d	VSTD001
/chem2/HP19094.i/16mar14a.b/hm14i06.d	VSTD0.5
/chem2/HP19094.i/16mar14a.b/hm14i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	111147	106258	114879	109317	115170	106301	108855	110275	3	Yes
Fluorobenzene	2257211	2270797	2341151	2353241	2358734	2335462	2342480	2322725	2	Yes
Chlorobenzene-d5	1599038	1617323	1635921	1595701	1632519	1554894	1562481	1599697	2	Yes
1,4-Dichlorobenzene-d4	737864	725016	731141	699859	732410	663285	656295	706553	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. RT
t-Butyl Alcohol-d10	4.281	4.275	4.281	4.281	4.288	4.275	4.281	4.281
Fluorobenzene	7.805	7.805	7.805	7.805	7.805	7.805	7.805	7.805
Chlorobenzene-d5	11.262	11.262	11.262	11.262	11.262	11.262	11.262	11.262
1,4-Dichlorobenzene-d4	13.146	13.146	13.146	13.145	13.146	13.146	13.146	13.146

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/14/2016 at 18:26.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.2869	4.16	5	-17	#
# Chloromethane	0.3382	0.3005	4.44	5	-11	#
# Vinyl Chloride	0.3145	0.2814	4.47	5	-11	#
1,3-Butadiene	0.2379	0.2129	4.47	5	-11	
# Bromomethane	0.2088	0.1862	4.46	5	-11	#
# Chloroethane	0.1939	0.1691	4.36	5	-13	#
Dichlorofluoromethane	0.4400	0.4339	4.93	5	-1	
# Trichlorofluoromethane	0.4098	0.3885	4.74	5	-5	#
Ethyl ether	0.1690	0.1791	5.30	5	6	
Freon 123a	0.3135	0.3086	4.92	5	-2	
Acrolein	2.8508	2.6518	34.88	37.5	-7	
# 1,1-Dichloroethene	0.2351	0.2224	4.73	5	-5	#
# Freon 113	0.2445	0.2348	4.80	5	-4	#
# Acetone	3.9283	3.4222	32.67	37.5	-13	#
Methyl Iodide	0.4353	0.4152	4.77	5	-5	
# Carbon Disulfide	0.7260	0.6225	4.29	5	-14	#
Allyl Chloride	0.4446	0.4460	5.02	5	0	
# Methyl Acetate	9.7388	9.0187	4.63	5	-7	#
# Methylene Chloride	0.2513	0.2371	4.72	5	-6	#
t-Butyl Alcohol	1.3444	1.3828	51.43	50	3	
Acrylonitrile	4.7135	4.5543	24.16	25	-3	
# trans-1,2-Dichloroethene	0.2532	0.2494	4.92	5	-2	#
# Methyl Tertiary Butyl Ether	0.5425	0.5217	4.81	5	-4	#
n-Hexane	0.4297	0.4096	4.77	5	-5	
# 1,1-Dichloroethane	0.5160	0.4949	4.80	5	-4	#
di-Isopropyl Ether	0.9007	0.9135	5.07	5	1	
2-Chloro-1,3-Butadiene	0.4236	0.3837	4.53	5	-9	
Ethyl t-butyl ether	0.7596	0.7366	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2804	0.2746	4.90	5	-2	#
2,2-Dichloropropane	0.4129	0.3968	4.80	5	-4	
# 2-Butanone	6.6938	6.3917	35.81	37.5	-5	#
Propionitrile	1.6691	1.6206	36.41	37.5	-3	
Methacrylonitrile	5.7149	5.7301	37.60	37.5	0	
Bromochloromethane	0.1067	0.1083	5.08	5	2	
Tetrahydrofuran	1.6934	1.5668	23.13	25	-7	
# Chloroform	0.4716	0.4589	4.86	5	-3	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,1,1-Trichloroethane	0.4023	0.3935	4.89	5	-2	#
Cyclohexane	0.5257	0.4856	4.62	5	-8	#
1,1-Dichloropropene	0.3862	0.3590	4.65	5	-7	
Carbon Tetrachloride	0.3658	0.3606	4.93	5	-1	#
Isobutyl Alcohol	0.4529	0.4698	129.67	125	4	
Benzene	1.0747	1.0422	4.85	5	-3	#
1,2-Dichloroethane	0.2785	0.2730	4.90	5	-2	#
t-Amyl methyl ether	0.6207	0.6059	4.88	5	-2	
n-Heptane	0.4857	0.4729	4.87	5	-3	
n-Butanol	0.3834	0.3583	233.61	250	-7	
Trichloroethene	0.2801	0.2798	4.99	5	0	#
Methylcyclohexane	0.4588	0.4593	5.01	5	0	#
1,2-Dichloropropane	0.2798	0.2759	4.93	5	-1	#
Methyl Methacrylate	11.940	11.8571	4.97	5	-1	
Dibromomethane	0.1153	0.1094	4.75	5	-5	
1,4-Dioxane	0.0755	0.0843	139.58	125	12	
Bromodichloromethane	0.3218	0.3160	4.91	5	-2	#
2-Nitropropane	3.8276	3.4176	4.46	5	-11	
cis-1,3-Dichloropropene	0.3955	0.3901	4.93	5	-1	#
4-Methyl-2-Pentanone	16.473	15.6459	23.74	25	-5	#
Toluene	0.9596	0.9407	4.90	5	-2	#
trans-1,3-Dichloropropene	0.4497	0.4515	5.02	5	0	#
Ethyl Methacrylate	0.3460	0.3509	5.07	5	1	
1,1,2-Trichloroethane	0.2324	0.2233	4.80	5	-4	#
Tetrachloroethene	0.4532	0.4458	4.92	5	-2	#
1,3-Dichloropropane	0.4179	0.4093	4.90	5	-2	
2-Hexanone	11.647	11.1994	24.04	25	-4	#
Dibromochloromethane	0.2979	0.2889	4.85	5	-3	#
1,2-Dibromoethane	0.2189	0.2225	5.08	5	2	#
Chlorobenzene	1.0446	1.0197	4.88	5	-2	#
1,1,1,2-Tetrachloroethane	0.3583	0.3524	4.92	5	-2	
Ethylbenzene	1.8783	1.8452	4.91	5	-2	#
m+p-Xylene	0.7164	0.7004	9.78	10	-2	#
o-Xylene	0.6952	0.6721	4.83	5	-3	#
Styrene	1.1122	1.0972	4.93	5	-1	#
Bromoform	0.1653	0.1583	4.79	5	-4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Isopropylbenzene	1.8424	1.8341	4.98	5	0	#
#	1,1,2,2-Tetrachloroethane	0.6259	0.5866	4.69	5	-6	#
	Bromobenzene	0.9322	0.9029	4.84	5	-3	
	trans-1,4-Dichloro-2-butene	5.0729	4.9756	24.52	25	-2	
	1,2,3-Trichloropropane	0.1571	0.1558	4.96	5	-1	
	n-Propylbenzene	5.0423	4.9524	4.91	5	-2	
	2-Chlorotoluene	0.9722	0.9485	4.88	5	-2	
	1,3,5-Trimethylbenzene	3.5154	3.4299	4.88	5	-2	
	4-Chlorotoluene	0.9908	0.9498	4.79	5	-4	
	tert-Butylbenzene	0.7494	0.7459	4.98	5	0	
	Pentachloroethane	0.5656	0.5688	5.03	5	1	
	1,2,4-Trimethylbenzene	3.5150	3.4285	4.88	5	-2	
	sec-Butylbenzene	4.5515	4.4795	4.92	5	-2	
#	1,3-Dichlorobenzene	1.8235	1.7406	4.77	5	-5	#
	p-Isopropyltoluene	3.8530	3.7502	4.87	5	-3	
#	1,4-Dichlorobenzene	1.8526	1.7439	4.71	5	-6	#
	1,2,3-Trimethylbenzene	1.4577	1.4042	4.82	5	-4	
	Benzyl Chloride	0.2480	0.2436	4.91	5	-2	
	n-Butylbenzene	1.8848	1.8861	5.00	5	0	
#	1,2-Dichlorobenzene	1.6196	1.5372	4.75	5	-5	#
#	1,2-Dibromo-3-chloropropane	2.6170	2.5079	4.79	5	-4	#
#	1,2,4-Trichlorobenzene	1.1586	0.9938	4.29	5	-14	#
	Hexachlorobutadiene	0.6054	0.5862	4.84	5	-3	
	Naphthalene	1.8571	1.5831	4.26	5	-15	
	1,2,3-Trichlorobenzene	0.9254	0.7706	4.16	5	-17	

Average %Drift 4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i07.d
/chem2/HP19094.i/16mar14a.b/hm14i06.d
/chem2/HP19094.i/16mar14a.b/hm14i05.d
/chem2/HP19094.i/16mar14a.b/hm14i04.d
/chem2/HP19094.i/16mar14a.b/hm14i03.d
/chem2/HP19094.i/16mar14a.b/hm14i02.d
/chem2/HP19094.i/16mar14a.b/hm14i01.d

File /chem2/HP19094.i/16mar14a.b/hm14i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/16may05b.b/hy05c05.d

RT Summary

Internal Standard Name	File ID: hy05c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.257	4.275	Yes
Fluorobenzene	7.787	7.805	Yes
Chlorobenzene-d5	11.249	11.262	Yes
1,4-Dichlorobenzene-d4	13.127	13.146	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hy05c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	108356	106258	53129	212516	Yes
Fluorobenzene	2208584	2270797	1135398	4541594	Yes
Chlorobenzene-d5	1710106	1617323	808662	3234646	Yes
1,4-Dichlorobenzene-d4	805226	725016	362508	1450032	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/05/2016 at 20:52

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/05/16 Time: 20:28

Lab File ID: hy05c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.4072	11.81	10	18	#
# Chloromethane	0.3382	0.4116	12.17	10	22	#<-
# Vinyl Chloride	0.3145	0.3840	12.21	10	22	#<-
| 1,3-Butadiene	0.2379	0.3465	14.56	10	46	|<-
# Bromomethane	0.2088	0.2600	12.46	10	25	#<-
# Chloroethane	0.1939	0.2228	11.49	10	15	#
| Dichlorofluoromethane	0.4400	0.5190	11.80	10	18	|
# Trichlorofluoromethane	0.4098	0.4924	12.02	10	20	#
| Ethyl ether	0.1690	0.1866	11.04	10	10	|
| Freon 123a	0.3135	0.3253	10.38	10	4	|
| Acrolein	2.8508	2.6463	464.13	500	-7	|
# 1,1-Dichloroethene	0.2351	0.2416	10.27	10	3	#
# Freon 113	0.2445	0.2592	10.60	10	6	#
# Acetone	3.9283	4.0832	103.94	100	4	#
| Methyl Iodide	0.4353	0.4662	10.71	10	7	|
# Carbon Disulfide	0.7260	0.6739	9.28	10	-7	#
| Allyl Chloride	0.4446	0.4310	9.70	10	-3	|
# Methyl Acetate	9.7388	9.8612	10.13	10	1	#
# Methylene Chloride	0.2513	0.2720	10.82	10	8	#
| t-Butyl Alcohol	1.3444	1.3856	206.14	200	3	|
| Acrylonitrile	4.7135	4.7288	50.16	50	0	|
# trans-1,2-Dichloroethene	0.2532	0.2620	10.35	10	3	#
# Methyl Tertiary Butyl Ether	0.5425	0.5618	10.36	10	4	#
| n-Hexane	0.4297	0.3977	9.25	10	-7	|
# 1,1-Dichloroethane	0.5160	0.5408	10.48	10	5	#
| di-Isopropyl Ether	0.9007	0.9054	10.05	10	1	|
| 2-Chloro-1,3-Butadiene	0.4236	0.4582	10.82	10	8	|
| Ethyl t-butyl ether	0.7596	0.7476	9.84	10	-2	|
# cis-1,2-Dichloroethene	0.2804	0.2998	10.69	10	7	#
| 2,2-Dichloropropane	0.4129	0.4186	10.14	10	1	|
# 2-Butanone	6.6938	6.3329	94.61	100	-5	#
| Propionitrile	1.6691	1.7601	210.90	200	5	|
| Methacrylonitrile	5.7149	5.6794	99.38	100	-1	|
| Bromochloromethane	0.1067	0.1234	11.57	10	16	|
| Tetrahydrofuran	1.6934	1.6430	97.02	100	-3	|
# Chloroform	0.4716	0.5088	10.79	10	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/05/16 Time: 20:28

Lab File ID: hy05c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4023	0.4225	10.50	10	5	#
# Cyclohexane	0.5257	0.4865	9.25	10	-7	#
# Cyclohexane(2)	0.4025	0.3883	9.65	10	-4	#
# Cyclohexane(3)	0.1504	0.1445	9.61	10	-4	#
1,1-Dichloropropene	0.3862	0.3960	10.26	10	3	
# Carbon Tetrachloride	0.3658	0.3815	10.43	10	4	#
Isobutyl Alcohol	0.4529	0.4919	543.02	500	9	
# Benzene	1.0747	1.0955	10.19	10	2	#
# 1,2-Dichloroethane	0.2785	0.3059	10.99	10	10	#
t-Amyl methyl ether	0.6207	0.6259	10.08	10	1	
n-Heptane	0.4857	0.4379	9.01	10	-10	
n-Butanol	0.3834	0.3866	1008.45	1000	1	
# Trichloroethene	0.2801	0.2947	10.52	10	5	#
# Methylcyclohexane	0.4588	0.4772	10.40	10	4	#
# 1,2-Dichloropropane	0.2798	0.2856	10.21	10	2	#
Methyl Methacrylate	11.9400	11.4105	9.56	10	-4	
Dibromomethane	0.1153	0.1227	10.64	10	6	
1,4-Dioxane	0.0755	0.1148	759.66	500	52	<-
# Bromodichloromethane	0.3218	0.3455	10.74	10	7	#
2-Nitropropane	3.8276	3.7944	99.13	100	-1	
# cis-1,3-Dichloropropene	0.3955	0.3872	9.79	10	-2	#
# 4-Methyl-2-Pentanone	16.4730	15.4497	93.78	100	-6	#
# Toluene	0.9596	0.8841	9.21	10	-8	#
# trans-1,3-Dichloropropene	0.4497	0.3901	8.67	10	-13	#
Ethyl Methacrylate	0.3460	0.2981	8.61	10	-14	
# 1,1,2-Trichloroethane	0.2324	0.2162	9.30	10	-7	#
# Tetrachloroethene	0.4532	0.4302	9.49	10	-5	#
1,3-Dichloropropane	0.4179	0.3866	9.25	10	-7	
# 2-Hexanone	11.6470	10.5680	90.73	100	-9	#
# Dibromochloromethane	0.2979	0.2807	9.42	10	-6	#
# 1,2-Dibromoethane	0.2189	0.2061	9.42	10	-6	#
# Chlorobenzene	1.0446	0.9851	9.43	10	-6	#
1,1,1,2-Tetrachloroethane	0.3583	0.3486	9.73	10	-3	
# Ethylbenzene	1.8783	1.7628	9.39	10	-6	#
# m+p-Xylene	0.7164	0.6830	19.07	20	-5	#
# o-Xylene	0.6952	0.6751	9.71	10	-3	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/05/16 Time: 20:28

Lab File ID: hy05c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.1122	1.0588	9.52	10	-5	#
# Bromoform	0.1653	0.1534	9.28	10	-7	#
# Isopropylbenzene	1.8424	1.7629	9.57	10	-4	#
# 1,1,2,2-Tetrachloroethane	0.6259	0.5514	8.81	10	-12	#
Bromobenzene	0.9322	0.8668	9.30	10	-7	
trans-1,4-Dichloro-2-butene	5.0729	4.3411	85.58	100	-14	
1,2,3-Trichloropropane	0.1571	0.1459	9.28	10	-7	
n-Propylbenzene	5.0423	4.5333	8.99	10	-10	
2-Chlorotoluene	0.9722	0.8768	9.02	10	-10	
1,3,5-Trimethylbenzene	3.5154	3.2396	9.22	10	-8	
4-Chlorotoluene	0.9908	0.8811	8.89	10	-11	
tert-Butylbenzene	0.7494	0.6672	8.90	10	-11	
Pentachloroethane	0.5656	0.5535	9.79	10	-2	
1,2,4-Trimethylbenzene	3.5150	3.2622	9.28	10	-7	
sec-Butylbenzene	4.5515	4.1501	9.12	10	-9	
# 1,3-Dichlorobenzene	1.8235	1.7134	9.40	10	-6	#
p-Isopropyltoluene	3.8530	3.5557	9.23	10	-8	
# 1,4-Dichlorobenzene	1.8526	1.6948	9.15	10	-9	#
1,2,3-Trimethylbenzene	1.4577	1.3661	9.37	10	-6	
Benzyl Chloride	0.2480	0.2063	8.32	10	-17	
n-Butylbenzene	1.8848	1.7781	9.43	10	-6	
# 1,2-Dichlorobenzene	1.6196	1.5141	9.35	10	-7	#
# 1,2-Dibromo-3-chloropropane	2.6170	2.6990	10.31	10	3	#
# 1,2,4-Trichlorobenzene	1.1586	1.0473	9.04	10	-10	#
Hexachlorobutadiene	0.6054	0.5987	9.89	10	-1	
Naphthalene	1.8571	1.5095	8.13	10	-19	
1,2,3-Trichlorobenzene	0.9254	0.8379	9.05	10	-9	
Dibromofluoromethane	0.2356	0.2600	11.03	10	10	
Dibromofluoromethane(2)	0.2425	0.2648	10.92	10	9	
1,2-Dichloroethane-d4	0.0390	0.0421	10.78	10	8	
1,2-Dichloroethane-d4(2)	0.1992	0.2179	10.94	10	9	
1,2-Dichloroethane-d4(3)	0.0246	0.0262	10.62	10	6	
Toluene-d8	1.4246	1.3251	9.30	10	-7	
Toluene-d8(2)	0.9221	0.8562	9.29	10	-7	
4-Bromofluorobenzene	0.4592	0.4505	9.81	10	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/05/16 Time: 20:28

Lab File ID: hy05c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.3828	0.4099	10.71	10	7

Average %Drift 8

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i07.d
/chem2/HP19094.i/16mar14a.b/hm14i06.d
/chem2/HP19094.i/16mar14a.b/hm14i05.d
/chem2/HP19094.i/16mar14a.b/hm14i04.d
/chem2/HP19094.i/16mar14a.b/hm14i03.d
/chem2/HP19094.i/16mar14a.b/hm14i02.d
/chem2/HP19094.i/16mar14a.b/hm14i01.d

File /chem2/HP19094.i/16mar14a.b/hm14i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/16may06b.b/hy06c05.d

RT Summary

Internal Standard Name	File ID: hy06c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.257	4.275	Yes
Fluorobenzene	7.787	7.805	Yes
Chlorobenzene-d5	11.243	11.262	Yes
1,4-Dichlorobenzene-d4	13.127	13.146	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hy06c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	96106	106258	53129	212516	Yes
Fluorobenzene	2141557	2270797	1135398	4541594	Yes
Chlorobenzene-d5	1696135	1617323	808662	3234646	Yes
1,4-Dichlorobenzene-d4	821619	725016	362508	1450032	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/06/2016 at 21:42

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/06/16 Time: 20:36

Lab File ID: hy06c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.3880	11.25	10	13	#
# Chloromethane	0.3382	0.4041	11.95	10	19	#
# Vinyl Chloride	0.3145	0.3780	12.02	10	20	#
1,3-Butadiene	0.2379	0.3476	14.61	10	46	<-
# Bromomethane	0.2088	0.2643	12.66	10	27	#<-
# Chloroethane	0.1939	0.2242	11.57	10	16	#
Dichlorofluoromethane	0.4400	0.5176	11.76	10	18	
# Trichlorofluoromethane	0.4098	0.4875	11.90	10	19	#
Ethyl ether	0.1690	0.1912	11.31	10	13	
Freon 123a	0.3135	0.3225	10.29	10	3	
Acrolein	2.8508	2.9114	510.62	500	2	
# 1,1-Dichloroethene	0.2351	0.2405	10.23	10	2	#
# Freon 113	0.2445	0.2561	10.48	10	5	#
# Acetone	3.9283	4.3168	109.89	100	10	#
Methyl Iodide	0.4353	0.4704	10.81	10	8	
# Carbon Disulfide	0.7260	0.6498	8.95	10	-10	#
Allyl Chloride	0.4446	0.4232	9.52	10	-5	
# Methyl Acetate	9.7388	10.4600	10.74	10	7	#
# Methylene Chloride	0.2513	0.2687	10.69	10	7	#
t-Butyl Alcohol	1.3444	1.4244	211.91	200	6	
Acrylonitrile	4.7135	5.1365	54.49	50	9	
# trans-1,2-Dichloroethene	0.2532	0.2642	10.44	10	4	#
# Methyl Tertiary Butyl Ether	0.5425	0.5565	10.26	10	3	#
n-Hexane	0.4297	0.3800	8.84	10	-12	
# 1,1-Dichloroethane	0.5160	0.5363	10.39	10	4	#
di-Isopropyl Ether	0.9007	0.8835	9.81	10	-2	
2-Chloro-1,3-Butadiene	0.4236	0.4477	10.57	10	6	
Ethyl t-butyl ether	0.7596	0.7484	9.85	10	-1	
# cis-1,2-Dichloroethene	0.2804	0.3022	10.78	10	8	#
2,2-Dichloropropane	0.4129	0.4035	9.77	10	-2	
# 2-Butanone	6.6938	6.7964	101.53	100	2	#
Propionitrile	1.6691	1.8055	216.35	200	8	
Methacrylonitrile	5.7149	6.2584	109.51	100	10	
Bromochloromethane	0.1067	0.1282	12.01	10	20	
Tetrahydrofuran	1.6934	1.8080	106.77	100	7	
# Chloroform	0.4716	0.5091	10.79	10	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/06/16 Time: 20:36

Lab File ID: hy06c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4023	0.4196	10.43	10	4	#
# Cyclohexane	0.5257	0.4697	8.93	10	-11	#
# Cyclohexane(2)	0.4025	0.3881	9.64	10	-4	#
# Cyclohexane(3)	0.1504	0.1413	9.39	10	-6	#
1,1-Dichloropropene	0.3862	0.3907	10.12	10	1	
# Carbon Tetrachloride	0.3658	0.3845	10.51	10	5	#
Isobutyl Alcohol	0.4529	0.4866	537.26	500	7	
# Benzene	1.0747	1.1018	10.25	10	3	#
# 1,2-Dichloroethane	0.2785	0.3129	11.24	10	12	#
t-Amyl methyl ether	0.6207	0.6281	10.12	10	1	
n-Heptane	0.4857	0.4193	8.63	10	-14	
n-Butanol	0.3834	0.3865	1007.96	1000	1	
# Trichloroethene	0.2801	0.2952	10.54	10	5	#
# Methylcyclohexane	0.4588	0.4683	10.21	10	2	#
# 1,2-Dichloropropane	0.2798	0.2870	10.26	10	3	#
Methyl Methacrylate	11.9400	11.8822	9.95	10	0	
Dibromomethane	0.1153	0.1258	10.92	10	9	
1,4-Dioxane	0.0755	0.0969	641.58	500	28	<-
# Bromodichloromethane	0.3218	0.3473	10.79	10	8	#
2-Nitropropane	3.8276	4.1222	107.70	100	8	
# cis-1,3-Dichloropropene	0.3955	0.3865	9.77	10	-2	#
# 4-Methyl-2-Pentanone	16.4730	16.7068	101.41	100	1	#
# Toluene	0.9596	0.8763	9.13	10	-9	#
# trans-1,3-Dichloropropene	0.4497	0.3844	8.55	10	-15	#
Ethyl Methacrylate	0.3460	0.2848	8.23	10	-18	
# 1,1,2-Trichloroethane	0.2324	0.2192	9.43	10	-6	#
# Tetrachloroethene	0.4532	0.4275	9.43	10	-6	#
1,3-Dichloropropane	0.4179	0.3867	9.25	10	-7	
# 2-Hexanone	11.6470	11.4391	98.21	100	-2	#
# Dibromochloromethane	0.2979	0.2801	9.40	10	-6	#
# 1,2-Dibromoethane	0.2189	0.2101	9.60	10	-4	#
# Chlorobenzene	1.0446	0.9888	9.47	10	-5	#
1,1,1,2-Tetrachloroethane	0.3583	0.3517	9.82	10	-2	
# Ethylbenzene	1.8783	1.7459	9.30	10	-7	#
# m+p-Xylene	0.7164	0.6722	18.76	20	-6	#
# o-Xylene	0.6952	0.6631	9.54	10	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/06/16 Time: 20:36

Lab File ID: hy06c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Styrene	1.1122	1.0649	9.57	10	-4	#
#	Bromoform	0.1653	0.1519	9.19	10	-8	#
#	Isopropylbenzene	1.8424	1.7371	9.43	10	-6	#
#	1,1,2,2-Tetrachloroethane	0.6259	0.5371	8.58	10	-14	#
	Bromobenzene	0.9322	0.8569	9.19	10	-8	
	trans-1,4-Dichloro-2-butene	5.0729	4.7072	92.79	100	-7	
	1,2,3-Trichloropropane	0.1571	0.1431	9.11	10	-9	
	n-Propylbenzene	5.0423	4.3201	8.57	10	-14	
	2-Chlorotoluene	0.9722	0.8391	8.63	10	-14	
	1,3,5-Trimethylbenzene	3.5154	3.1067	8.84	10	-12	
	4-Chlorotoluene	0.9908	0.8613	8.69	10	-13	
	tert-Butylbenzene	0.7494	0.6494	8.67	10	-13	
	Pentachloroethane	0.5656	0.5461	9.66	10	-3	
	1,2,4-Trimethylbenzene	3.5150	3.1329	8.91	10	-11	
	sec-Butylbenzene	4.5515	3.9446	8.67	10	-13	
#	1,3-Dichlorobenzene	1.8235	1.6668	9.14	10	-9	#
	p-Isopropyltoluene	3.8530	3.4403	8.93	10	-11	
#	1,4-Dichlorobenzene	1.8526	1.6377	8.84	10	-12	#
	1,2,3-Trimethylbenzene	1.4577	1.3425	9.21	10	-8	
	Benzyl Chloride	0.2480	0.2016	8.13	10	-19	
	n-Butylbenzene	1.8848	1.6854	8.94	10	-11	
#	1,2-Dichlorobenzene	1.6196	1.4709	9.08	10	-9	#
#	1,2-Dibromo-3-chloropropane	2.6170	2.9497	11.27	10	13	#
#	1,2,4-Trichlorobenzene	1.1586	1.0217	8.82	10	-12	#
	Hexachlorobutadiene	0.6054	0.5812	9.60	10	-4	
	Naphthalene	1.8571	1.4881	8.01	10	-20	
	1,2,3-Trichlorobenzene	0.9254	0.8096	8.75	10	-13	
	Dibromofluoromethane	0.2356	0.2619	11.11	10	11	
	Dibromofluoromethane(2)	0.2425	0.2685	11.07	10	11	
	1,2-Dichloroethane-d4	0.0390	0.0444	11.37	10	14	
	1,2-Dichloroethane-d4(2)	0.1992	0.2190	10.99	10	10	
	1,2-Dichloroethane-d4(3)	0.0246	0.0267	10.82	10	8	
	Toluene-d8	1.4246	1.3092	9.19	10	-8	
	Toluene-d8(2)	0.9221	0.8555	9.28	10	-7	
	4-Bromofluorobenzene	0.4592	0.4478	9.75	10	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/06/16 Time: 20:36

Lab File ID: hy06c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.3828	0.4137	10.81	10	8

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID (Standard): hy05c05.d Date Analyzed: 05/05/16

Instrument ID: HP19094 Time Analyzed: 20:28

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	108356	4.257	2208584	7.787	1710106	11.249	805226	13.127
UPPER LIMIT	216712	4.757	4417168	8.287	3420212	11.749	1610452	13.627
LOWER LIMIT	54178	3.757	1104292	7.287	855053	10.749	402613	12.627
LAB SAMPLE ID								
01 LCSH85	92844	4.263	2274735	7.787	1721469	11.243	779224	13.127
02 LCSH86	92844	4.263	2274735	7.787	1721469	11.243	779224	13.127
03 LCDH86	95605	4.257	2345021	7.787	1729735	11.250	790646	13.127
04 VBLKH85	112846	4.263	2324720	7.793	1689839	11.250	735750	13.127
05 VBLKH86	112846	4.263	2324720	7.793	1689839	11.250	735750	13.127
06 8352786	104156	4.257	2240029	7.781	1532685	11.250	668371	13.127
07 8352787	94350	4.275	2269855	7.787	1594119	11.250	668868	13.127
08 8352778	105600	4.288	2239975	7.793	1565237	11.250	668727	13.127
09 8352779MS	93721	4.269	2284193	7.787	1611186	11.250	733659	13.127
10 8352780MSD	100898	4.263	2228355	7.793	1701315	11.249	784442	13.127
11 8352776	96097	4.300	2293621	7.793	1661541	11.249	717020	13.127
12 8352777	108204	4.269	2259999	7.793	1672712	11.250	733757	13.127
13 8352781	100753	4.263	2245919	7.787	1596834	11.250	702778	13.127
14 8352782	91367	4.281	2158236	7.787	1481838	11.249	639317	13.127
15 8352783	103920	4.269	2264420	7.787	1595091	11.250	691784	13.127
16 8352784	104447	4.269	2255083	7.787	1598730	11.250	693956	13.127
17 8352785	105757	4.306	2279010	7.793	1598019	11.250	691038	13.127
18 8353304	99098	4.281	2282328	7.793	1582694	11.250	676593	13.127
19 8353305	97873	4.324	2254004	7.787	1568103	11.250	668875	13.127
20 8363238	87451	4.275	2239073	7.787	1647113	11.249	711013	13.127
21 8353303	91168	4.281	2241119	7.793	1663315	11.250	749131	13.127
22 8363229	91158	4.288	2236735	7.787	1605630	11.250	710722	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID (Standard): hy05c05.d Date Analyzed: 05/05/16

Instrument ID: HP19094 Time Analyzed: 20:28

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	108356	4.257	2208584	7.787	1710106	11.249	805226	13.127
UPPER LIMIT	216712	4.757	4417168	8.287	3420212	11.749	1610452	13.627
LOWER LIMIT	54178	3.757	1104292	7.287	855053	10.749	402613	12.627
LAB SAMPLE ID								
23 8363230	99575	4.294	2170584	7.793	1613362	11.250	689557	13.127
24 8363231	100008	4.281	2213273	7.787	1608961	11.250	688951	13.127
25 8363233	99307	4.300	2197405	7.793	1544248	11.250	654773	13.127
26 8363234	90222	4.281	2213468	7.787	1580472	11.250	672292	13.127
27 8363235	99660	4.306	2230569	7.787	1563038	11.249	670462	13.127
28 8363236	91823	4.282	2213301	7.787	1565304	11.250	656199	13.127
29 8363237	99426	4.281	2253098	7.787	1585177	11.249	675218	13.127
30 8363232DL	108095	4.263	2274618	7.787	1649229	11.250	711224	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID (Standard): hy06c05.d Date Analyzed: 05/06/16

Instrument ID: HP19094 Time Analyzed: 20:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	96106	4.257	2141557	7.787	1696135	11.243	821619	13.127
UPPER LIMIT	192212	4.757	4283114	8.287	3392270	11.743	1643238	13.627
LOWER LIMIT	48053	3.757	1070778	7.287	848068	10.743	410810	12.627
LAB SAMPLE ID								
01 LCSH89	89180	4.263	2247358	7.793	1720563	11.249	815208	13.127
02 LCSH90	89180	4.263	2247358	7.793	1720563	11.249	815208	13.127
03 LCSH91	89180	4.263	2247358	7.793	1720563	11.249	815208	13.127
04 LCDH89	107746	4.269	2311980	7.787	1728904	11.243	798222	13.127
05 LCDH90	107746	4.269	2311980	7.787	1728904	11.243	798222	13.127
06 LCDH91	107746	4.269	2311980	7.787	1728904	11.243	798222	13.127
07 VBLKH89	108601	4.275	2258413	7.793	1672746	11.249	740685	13.127
08 VBLKH90	108601	4.275	2258413	7.793	1672746	11.249	740685	13.127
09 VBLKH91	108601	4.275	2258413	7.793	1672746	11.249	740685	13.127
10 8352778DL	116476	4.275	2179145	7.787	1523909	11.250	669916	13.127
11 8362414	110177	4.275	2282942	7.793	1615895	11.250	704847	13.127
12 8362410	93020	4.287	2227293	7.787	1605752	11.249	696283	13.127
13 8362411	101719	4.281	2171790	7.793	1685396	11.250	766697	13.127
14 8362412	96509	4.245	2193876	7.787	1664699	11.250	749147	13.127
15 8362413	95021	4.269	2152196	7.793	1665783	11.250	751605	13.127
16 8363247	93285	4.275	2224363	7.787	1655682	11.250	726401	13.127
17 8363240	101582	4.269	2197990	7.793	1656607	11.250	722119	13.127
18 8363241	95970	4.275	2189556	7.793	1625521	11.250	702964	13.127
19 8363242	101497	4.282	2212536	7.793	1621548	11.250	704851	13.127
20 8363243	92742	4.269	2178037	7.793	1573507	11.250	688439	13.127
21 8363244	101133	4.263	2172862	7.787	1564136	11.250	670647	13.127
22 8363246	97659	4.269	2230813	7.793	1683177	11.249	764258	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE59___

Lab File ID (Standard): hy06c05.d Date Analyzed: 05/06/16

Instrument ID: HP19094 Time Analyzed: 20:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	96106	4.257	2141557	7.787	1696135	11.243	821619	13.127
UPPER LIMIT	192212	4.757	4283114	8.287	3392270	11.743	1643238	13.627
LOWER LIMIT	48053	3.757	1070778	7.287	848068	10.743	410810	12.627
LAB SAMPLE ID								
23 8363239	111343	4.294	2242651	7.793	1670661	11.249	743941	13.127
24 8363239DL	95296	4.275	2231597	7.787	1677737	11.250	742071	13.127
25 8363245	97195	4.287	2229290	7.793	1665562	11.250	727766	13.127
26 8363245DL	88172	4.269	2206587	7.793	1624839	11.250	712358	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

11996: RAAP Unit 5 "J" and "K" lists Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.3	1.0	ug/l
Vinyl Chloride	0.1	1.0	ug/l
Ethyl ether	0.4	12	ug/l
1,1-Dichloroethene	0.4	1.0	ug/l
Acetone	3.0	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
trans-1,2-Dichloroethene	0.8	1.0	ug/l
2-Butanone	1.0	10	ug/l
cis-1,2-Dichloroethene	0.1	1.0	ug/l
Chloroform	0.1	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l
Toluene	0.1	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l

5W8B- Lancaster Laboratories 8352776
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s47.d Injection date and time: **06-MAY-2016 00:17**
Data file Sample Info. Line: 5W8B-;8352776;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 00:36 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.300	(-0.043)	445	65	96097	(-11)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2293621	(4)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1661541	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	717020	(-11)	10.00	

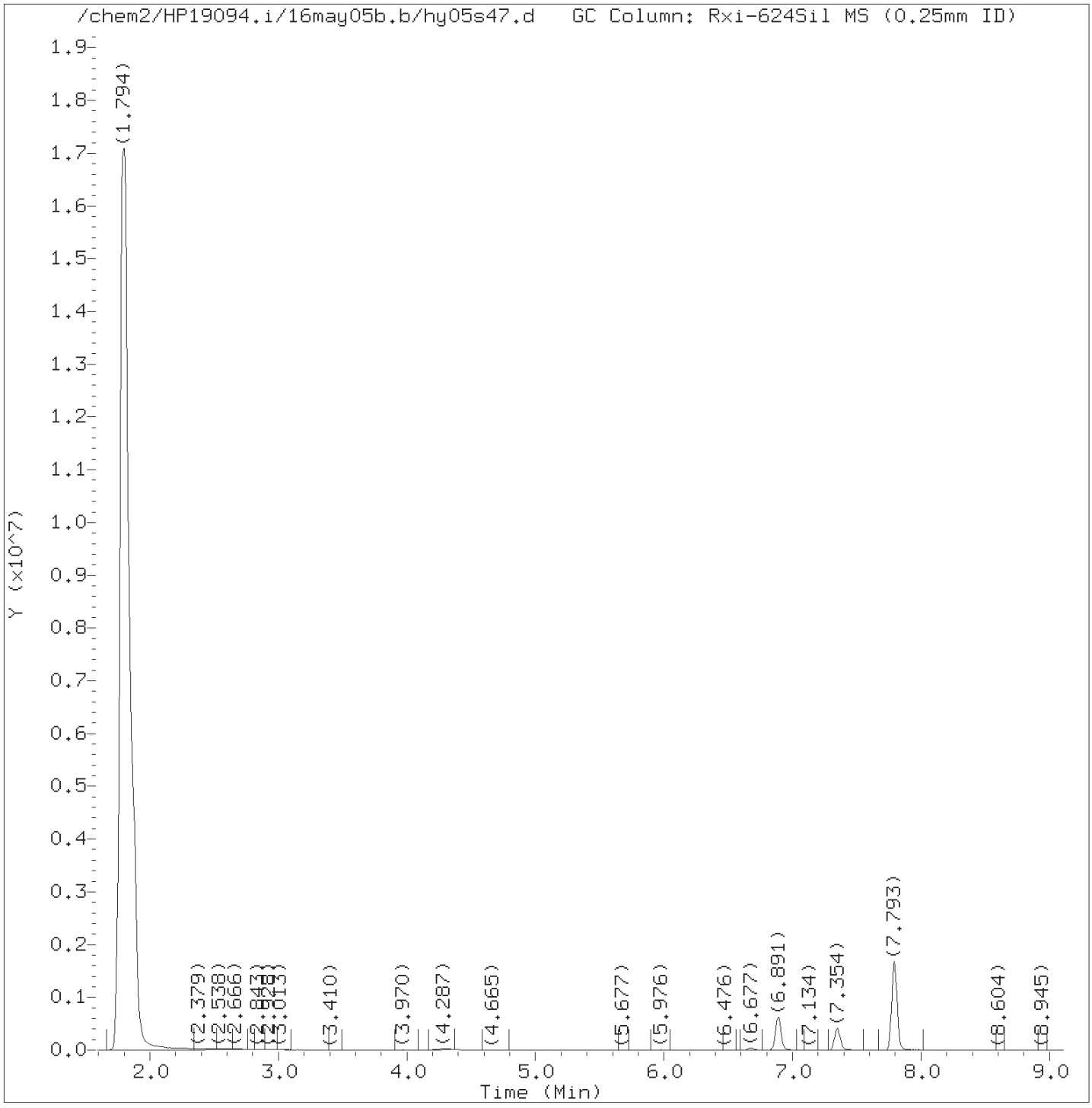
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	565545	10.464	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(0.000)	102	90401	10.099	101%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2307267	9.748	97%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	710683	9.315	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

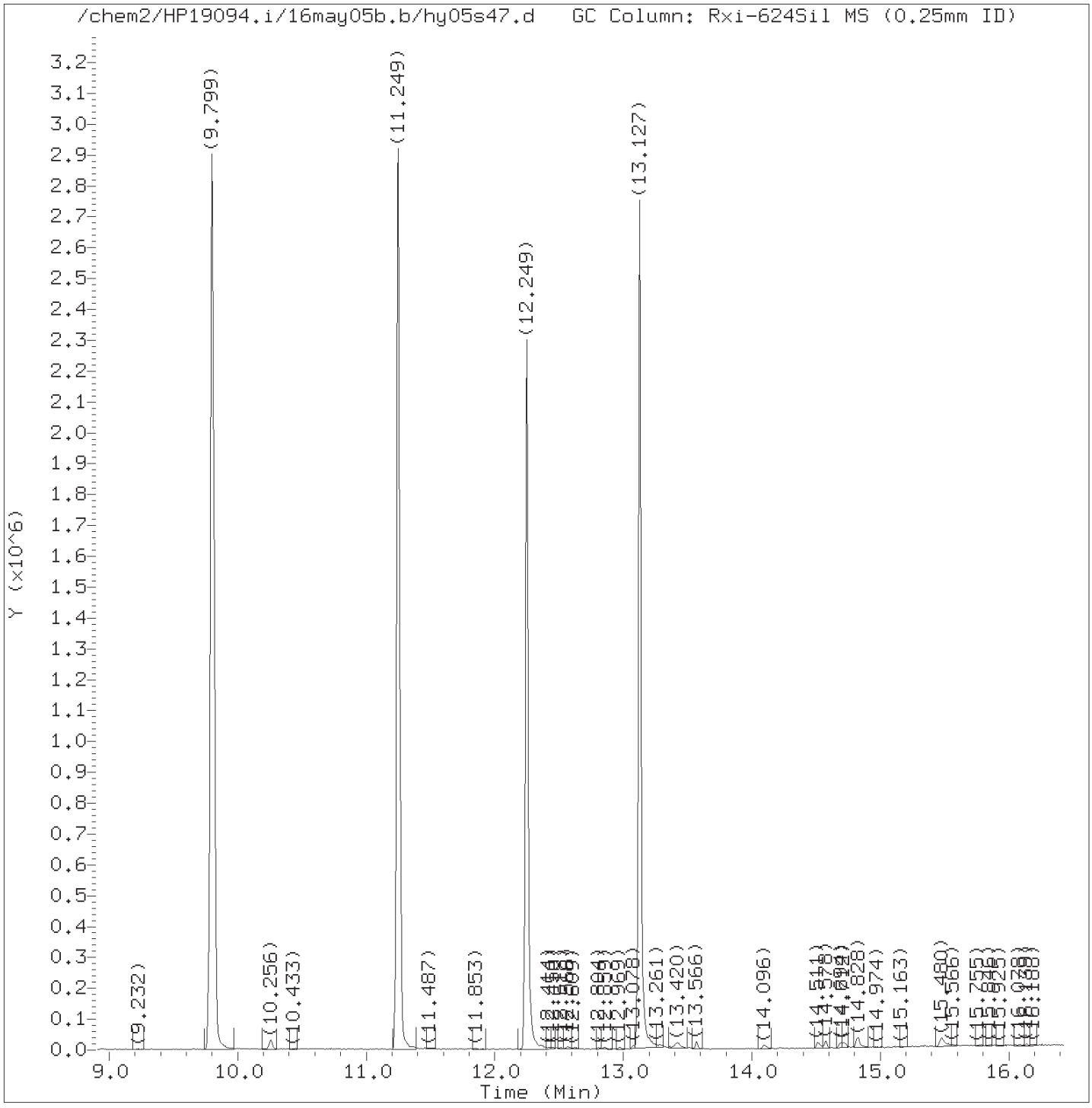
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s47.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:36 Automation

Sample Name: 5W8B- Lab Sample ID: 8352776

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s47.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:36 Automation

Sample Name: 5W8B- Lab Sample ID: 8352776

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s47.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:36 Automation

Sample Name: 5W8B- Lab Sample ID: 8352776

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.300	65	96097	50.000
50)$Dibromofluoromethane	(2)	6.891	113	565545	10.464
57)$1,2-Dichloroethane-d4	(2)	7.354	102	90401	10.099
63)*Fluorobenzene	(2)	7.793	96	2293621	10.000
82)$Toluene-d8	(3)	9.799	98	2307267	9.748
97)*Chlorobenzene-d5	(3)	11.249	117	1661541	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	710683	9.315
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	717020	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

5W5B- Lancaster Laboratories 8352777
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s48.d Injection date and time: **06-MAY-2016 00:37**
Data file Sample Info. Line: 5W5B-;8352777;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 00:56 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.012)	440	65	108204	(0)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2259999	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1672712	(-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	733757	(-9)	10.00	

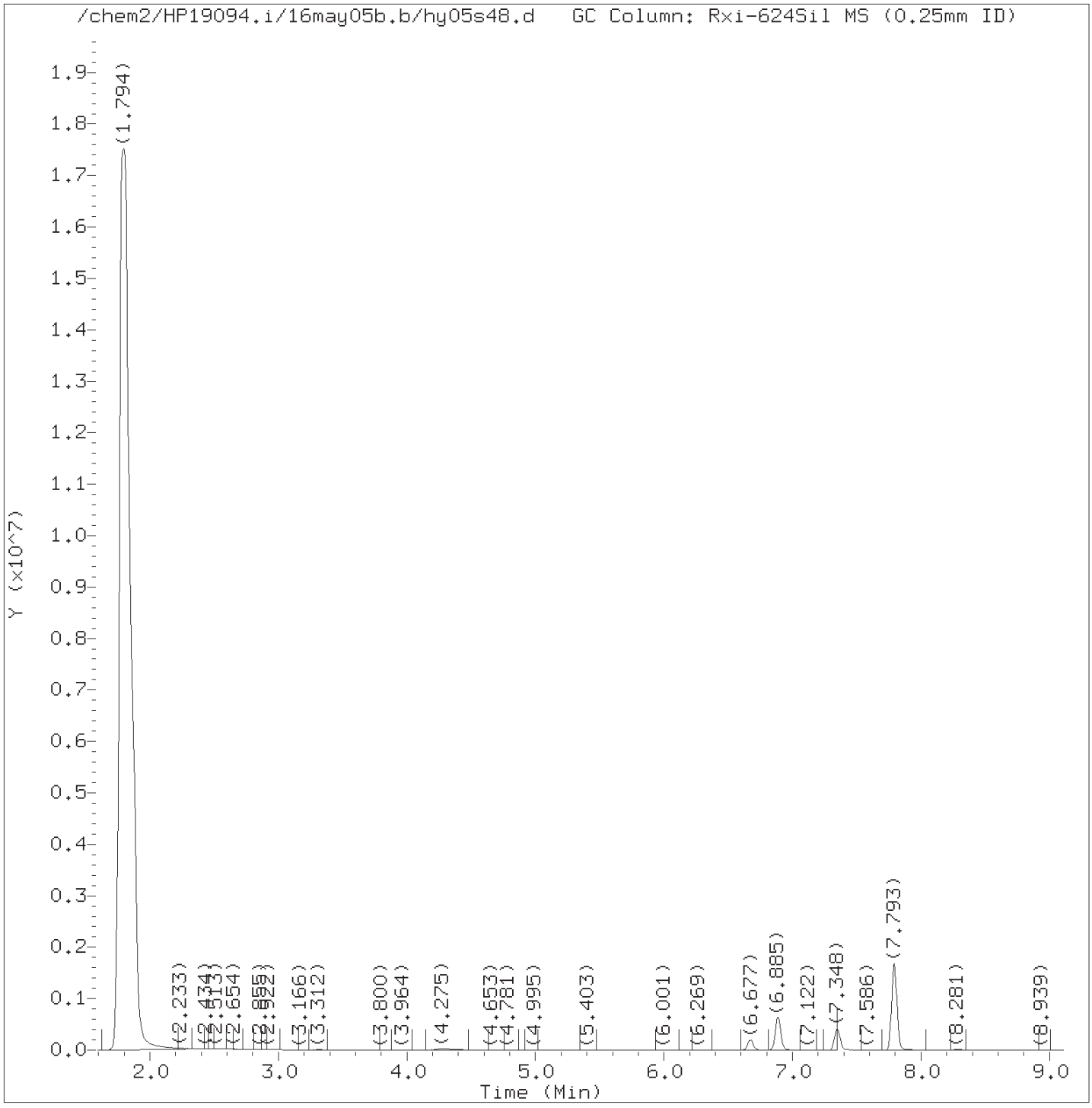
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	578398	10.861	109%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	90788	10.293	103%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2295008	9.631	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	720431	9.379	94%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.677	(-0.000)	83	242482	2.275	2.27			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

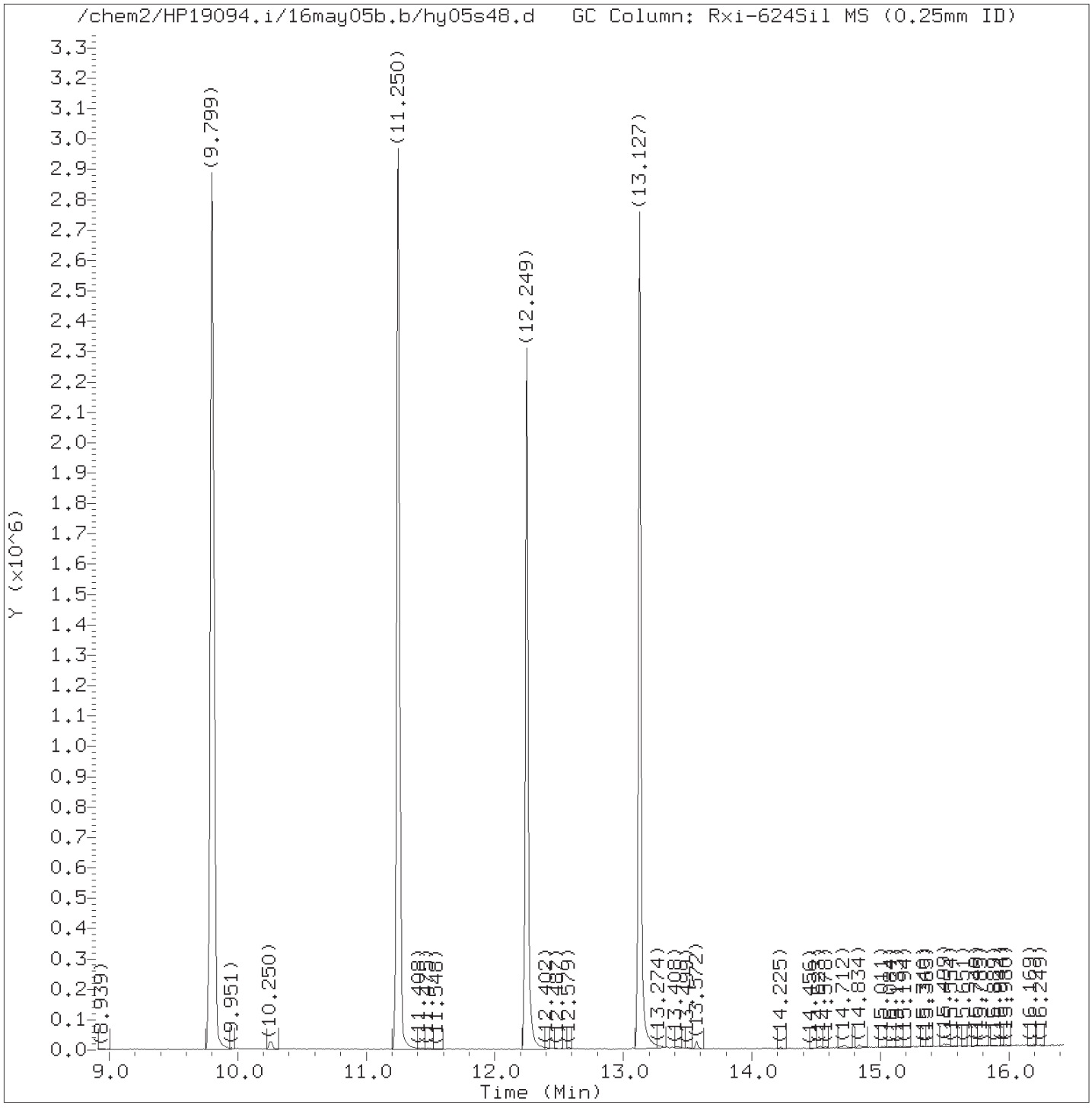
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s48.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:37 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:56 Automation

Sample Name: 5W5B- Lab Sample ID: 8352777

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01073



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s48.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:37 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:56 Automation

Sample Name: 5W5B- Lab Sample ID: 8352777

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s48.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:37 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:56 Automation

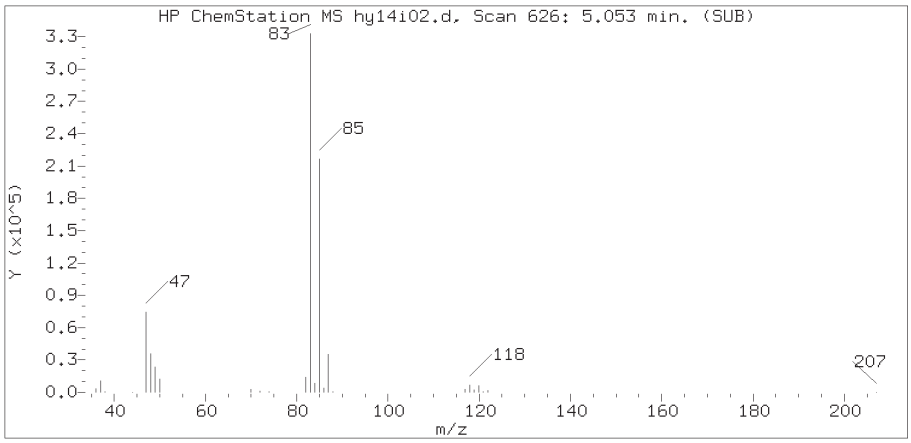
Sample Name: 5W5B- Lab Sample ID: 8352777

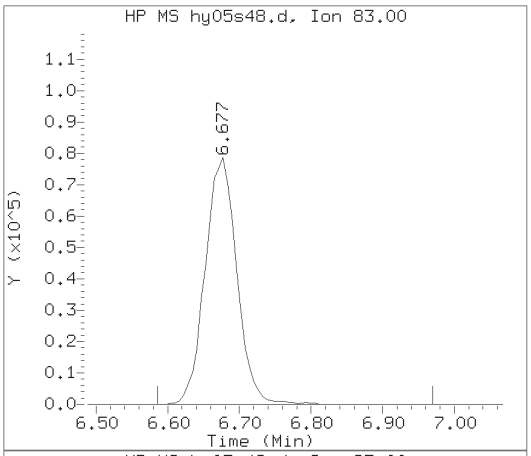
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	108204	50.000
49) Chloroform	(2)	6.677	83	242482	2.275
50)$Dibromofluoromethane	(2)	6.891	113	578398	10.861
57)$1,2-Dichloroethane-d4	(2)	7.348	102	90788	10.293
63)*Fluorobenzene	(2)	7.793	96	2259999	10.000
82)$Toluene-d8	(3)	9.799	98	2295008	9.631
97)*Chlorobenzene-d5	(3)	11.250	117	1672712	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	720431	9.379
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	733757	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

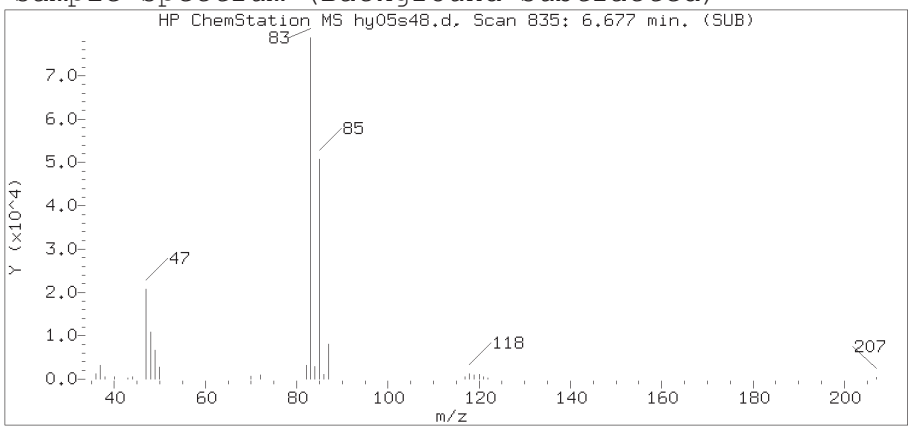
Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

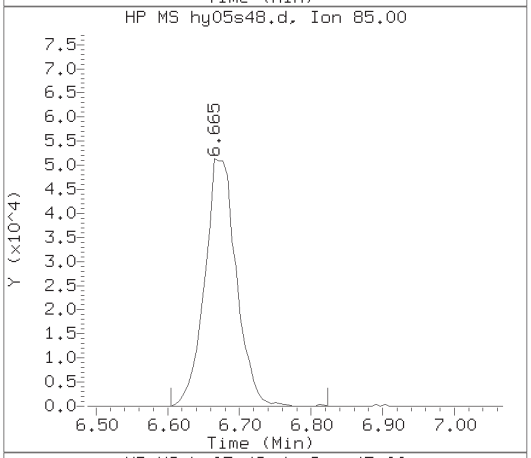
Reference Standard Spectrum for Chloroform



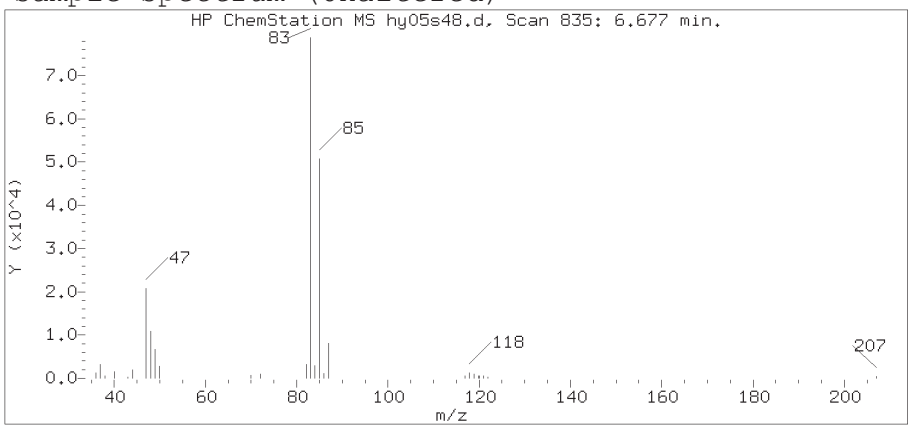


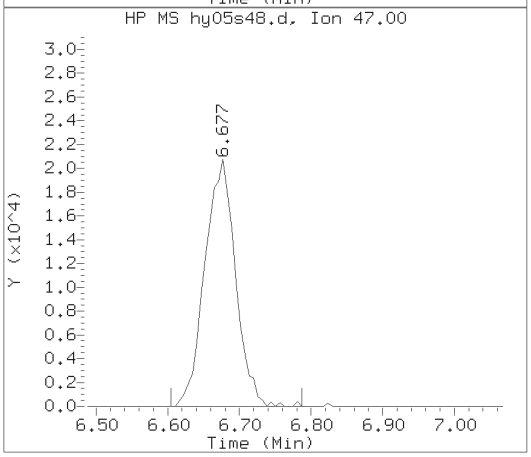
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s48.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:37 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:56 Automation

Sample Name: 5W5B- Lab Sample ID: 8352777

Compound Number : 49
Compound Name : Chloroform
Scan Number : 835
Retention Time (minutes): 6.677
Relative Retention Time :-0.00090
Quant Ion : 83.00
Area (flag) : 242482
On-Column Amount (ng) : 2.2749

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Target 3.5 esignature meaning ID: 201673

5W7B- Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8352778

Data file: /chem2/HP19094.i/16may05b.b/hy05s44.d Injection date and time: **05-MAY-2016 23:16**
Data file Sample Info. Line: 5W7B-;8352778;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.288	(-0.031)	443	65	105600	(-3)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2239975	(1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1565237	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	668727	(-17)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.001)	113	553187	10.480	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	85201	9.746	97%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2276127	10.208	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	659011	9.169	92%		78 - 110

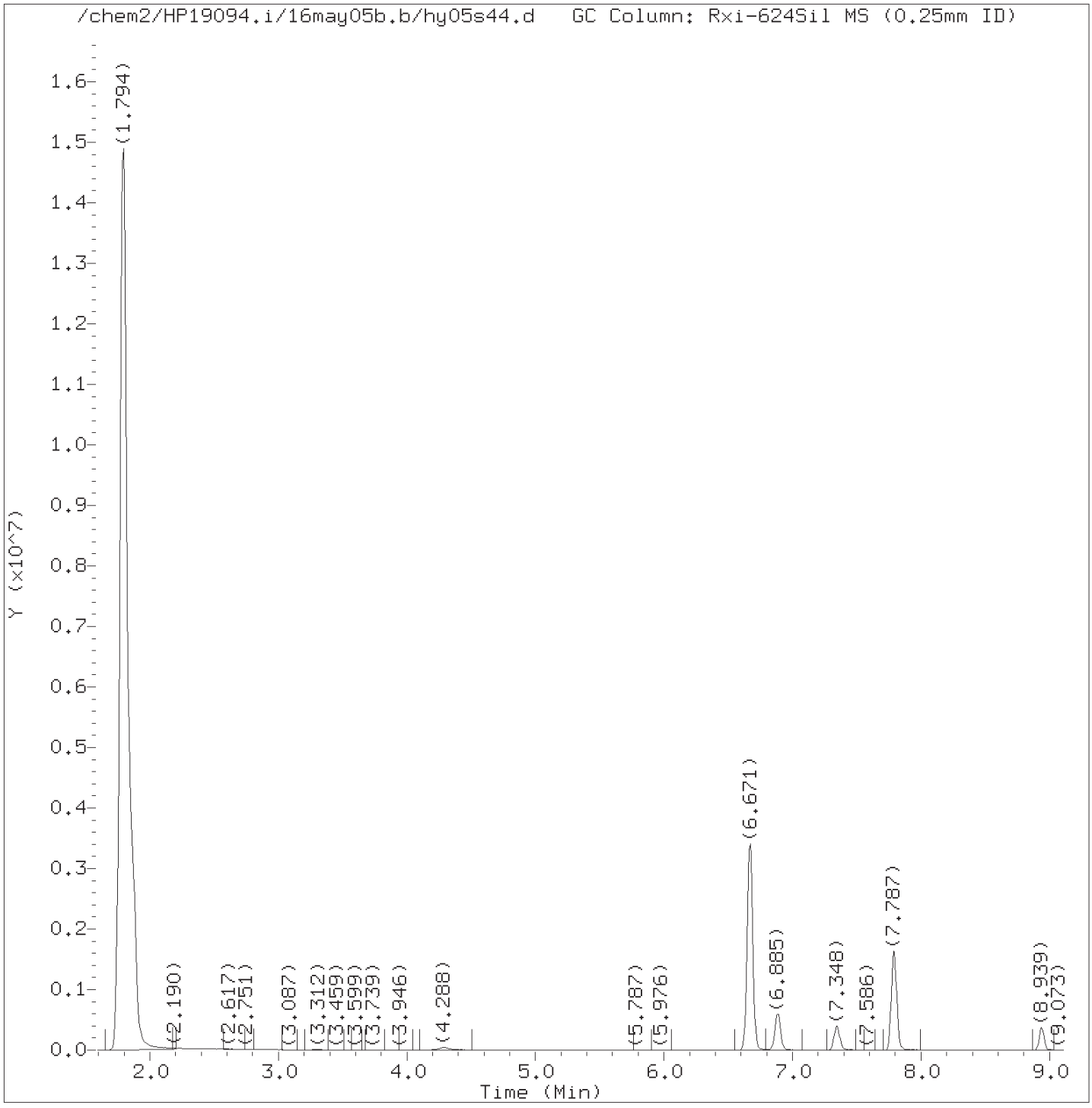
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)	4.282	(-0.000)	84	15339	0.273	0.27		J	0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.671	(-0.000)	83	4090077	38.714	38.71		E	0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

E = Compound concentration above calibration range.

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

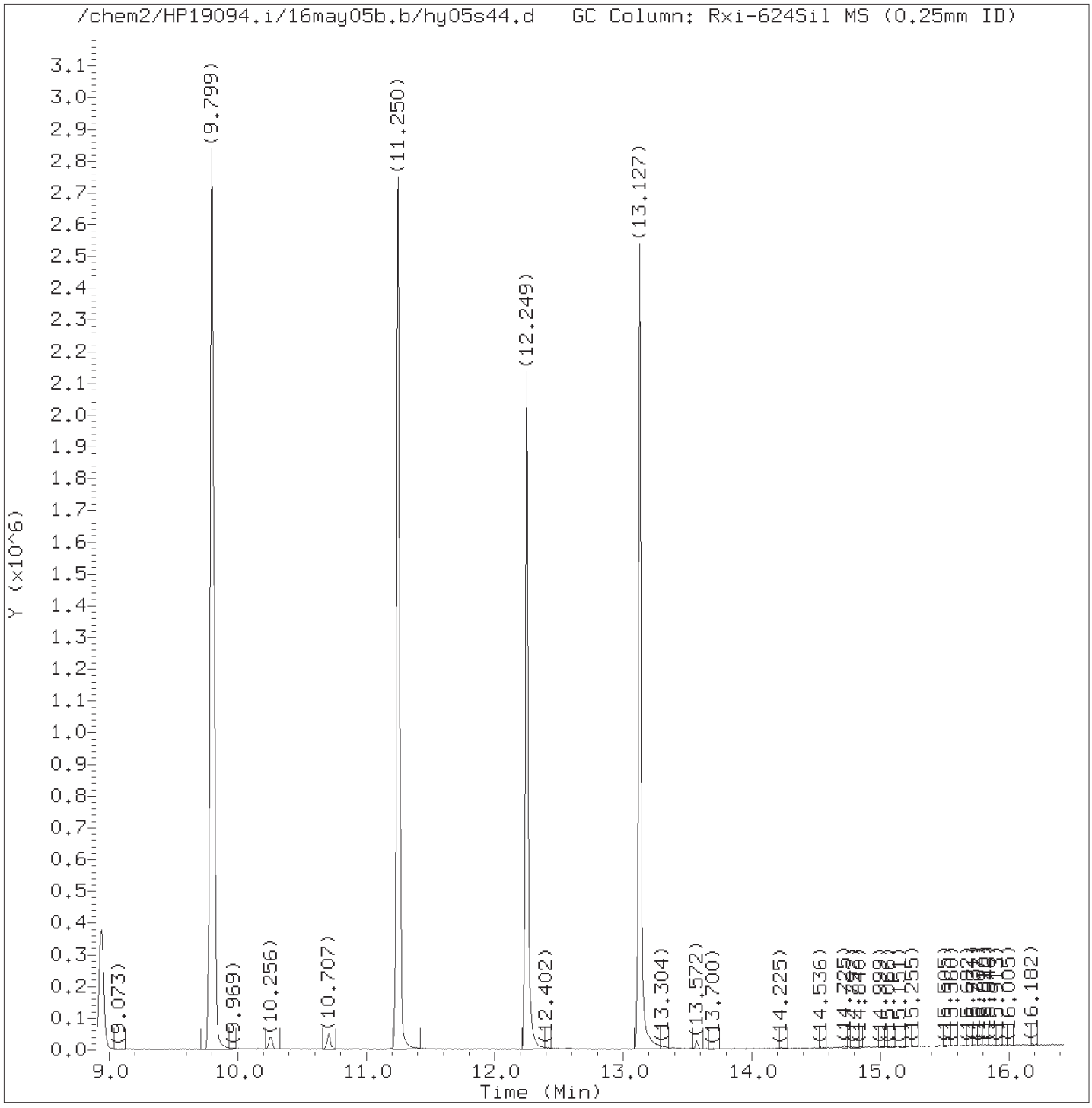
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s44.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:16 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

Sample Name: 5W7B- Lab Sample ID: 8352778

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s44.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:16 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

Sample Name: 5W7B- Lab Sample ID: 8352778

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s44.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:16 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

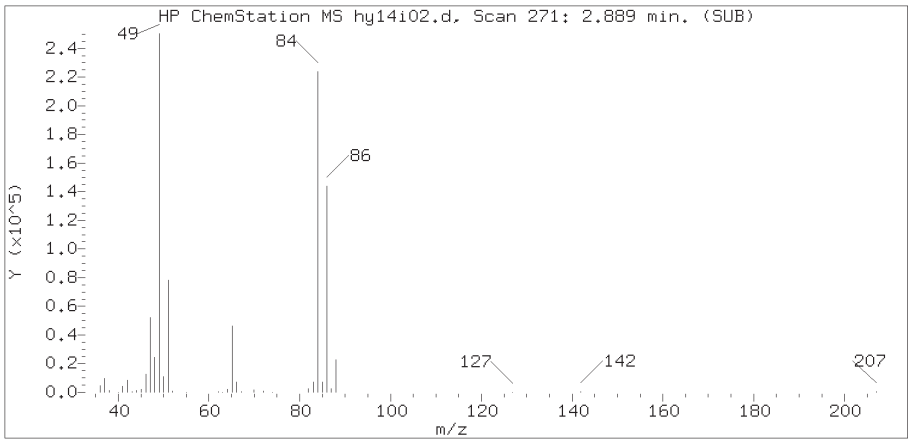
Sample Name: 5W7B- Lab Sample ID: 8352778

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
23) Methylene Chloride	(2)	4.282	84	15339	0.273
26)*t-Butyl Alcohol-d10	(1)	4.288	65	105600	50.000
49) Chloroform	(2)	6.671	83	4090077	38.714
50)$Dibromofluoromethane	(2)	6.885	113	553187	10.480
57)$1,2-Dichloroethane-d4	(2)	7.348	102	85201	9.746
63)*Fluorobenzene	(2)	7.793	96	2239975	10.000
82)$Toluene-d8	(3)	9.799	98	2276127	10.208
97)*Chlorobenzene-d5	(3)	11.250	117	1565237	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	659011	9.169
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	668727	10.000

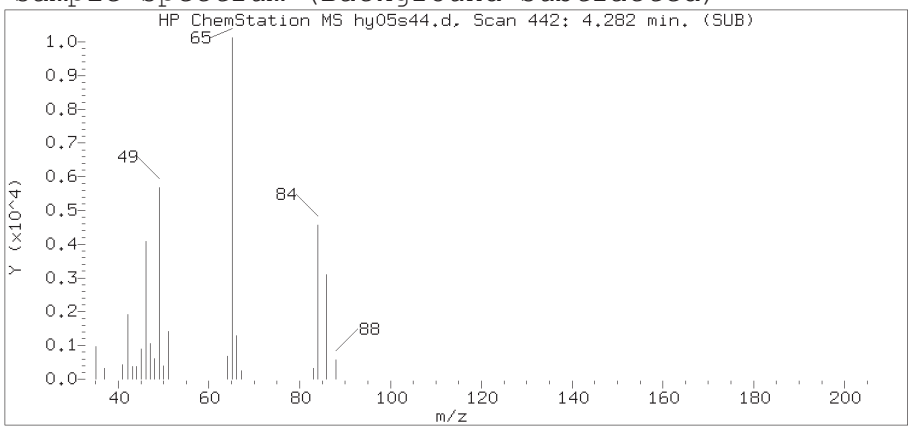
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

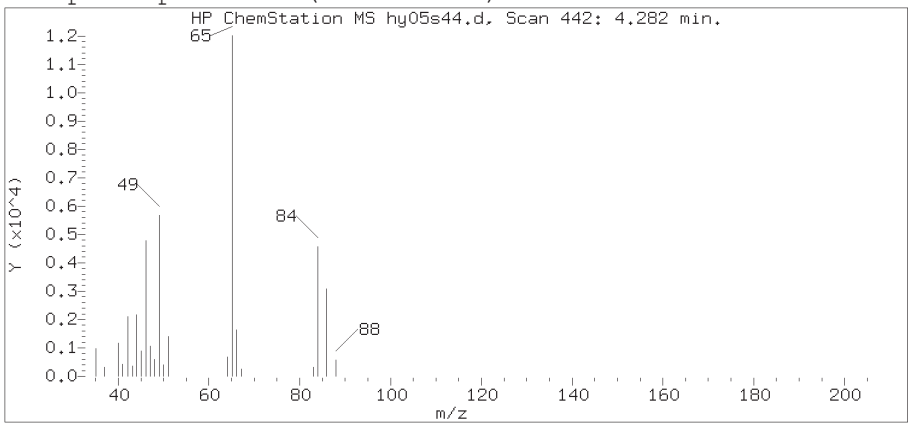
Reference Standard Spectrum for Methylene Chloride

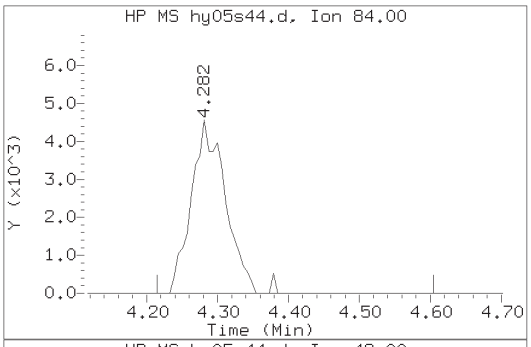


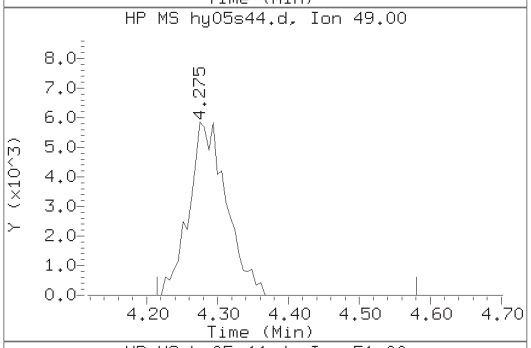
Sample Spectrum (Background Subtracted)

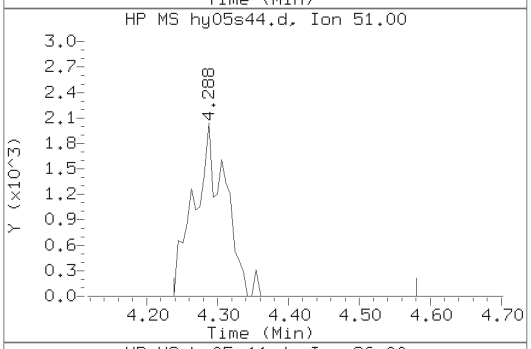


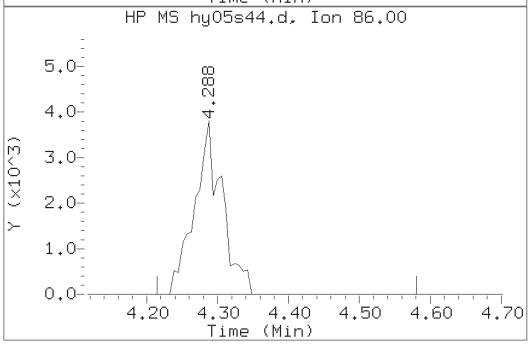
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may05b.b/hy05s44.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:16 Analyst ID: KAS02648

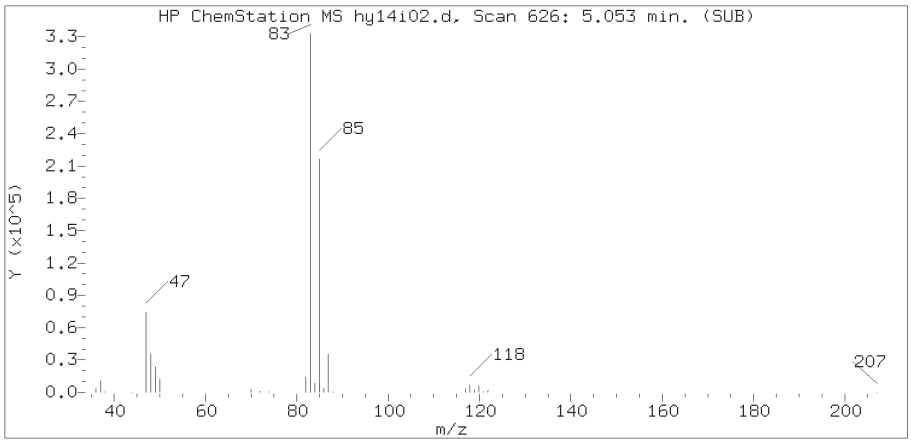
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

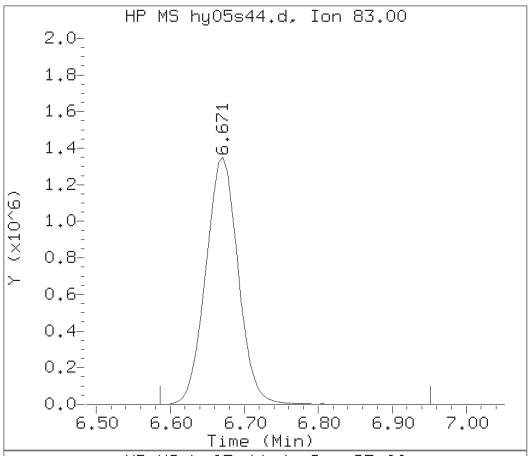
Sample Name: 5W7B- Lab Sample ID: 8352778

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 442
Retention Time (minutes): 4.282
Relative Retention Time :-0.00037
Quant Ion : 84.00
Area (flag) : 15339
On-Column Amount (ng) : 0.2725

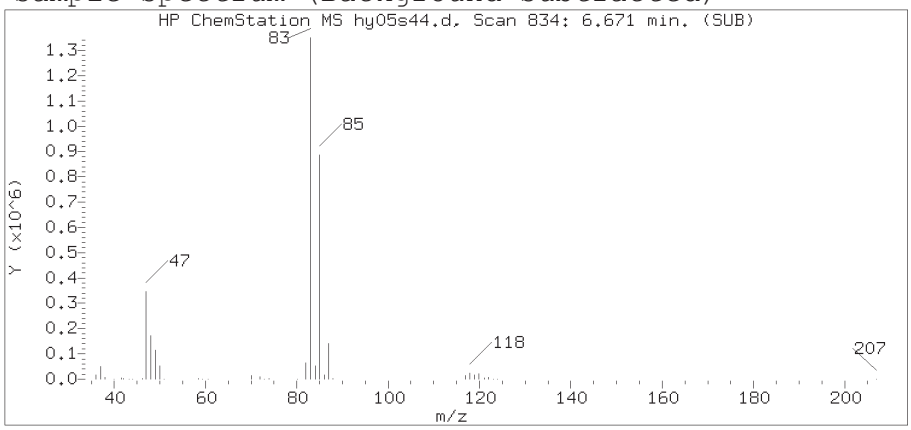
Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05.
Target 3.5 esignature ID: 1e261873

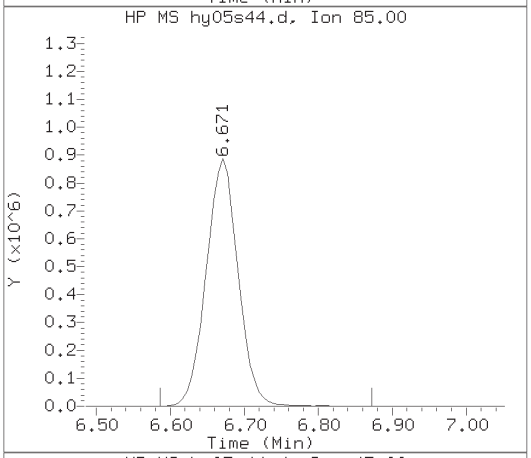
Reference Standard Spectrum for Chloroform



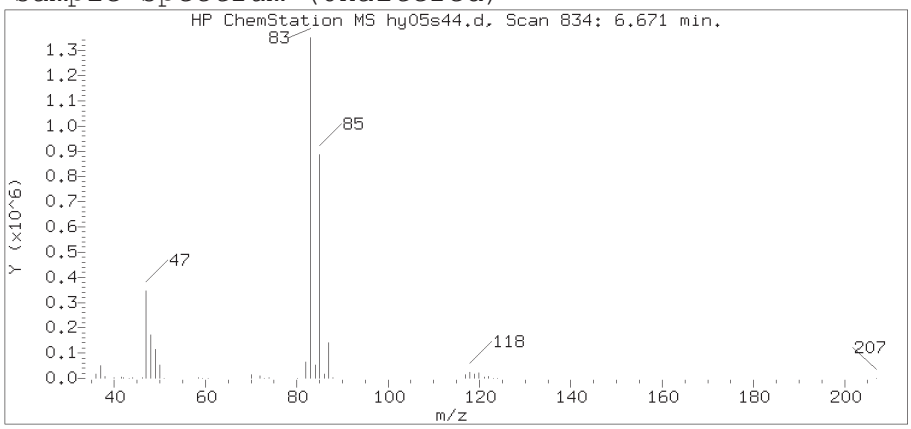


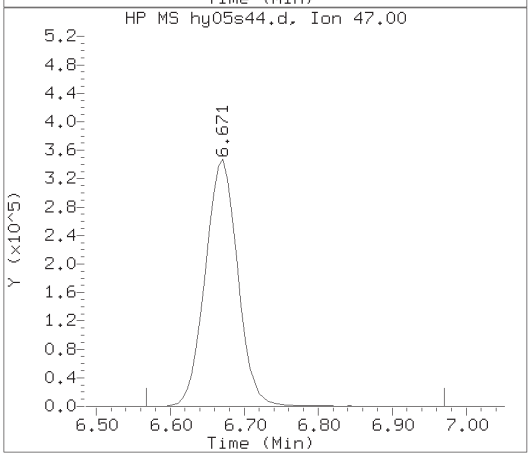
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s44.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:16 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:35 Automation

Sample Name: 5W7B- Lab Sample ID: 8352778

Compound Number : 49
Compound Name : Chloroform
Scan Number : 834
Retention Time (minutes): 6.671
Relative Retention Time :-0.00012
Quant Ion : 83.00
Area (flag) : 4090077
On-Column Amount (ng) : 38.7142

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05.
Target 3.5 esignature meaning ID: de201673

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 8352781

Data file: /chem2/HP19094.i/16may05b.b/hy05s49.d Injection date and time: **06-MAY-2016 00:57**
Data file Sample Info. Line: 5WC21;8352781;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.006)	439	65	100753	(-7)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2245919	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1596834	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	702778	(-13)	10.00	

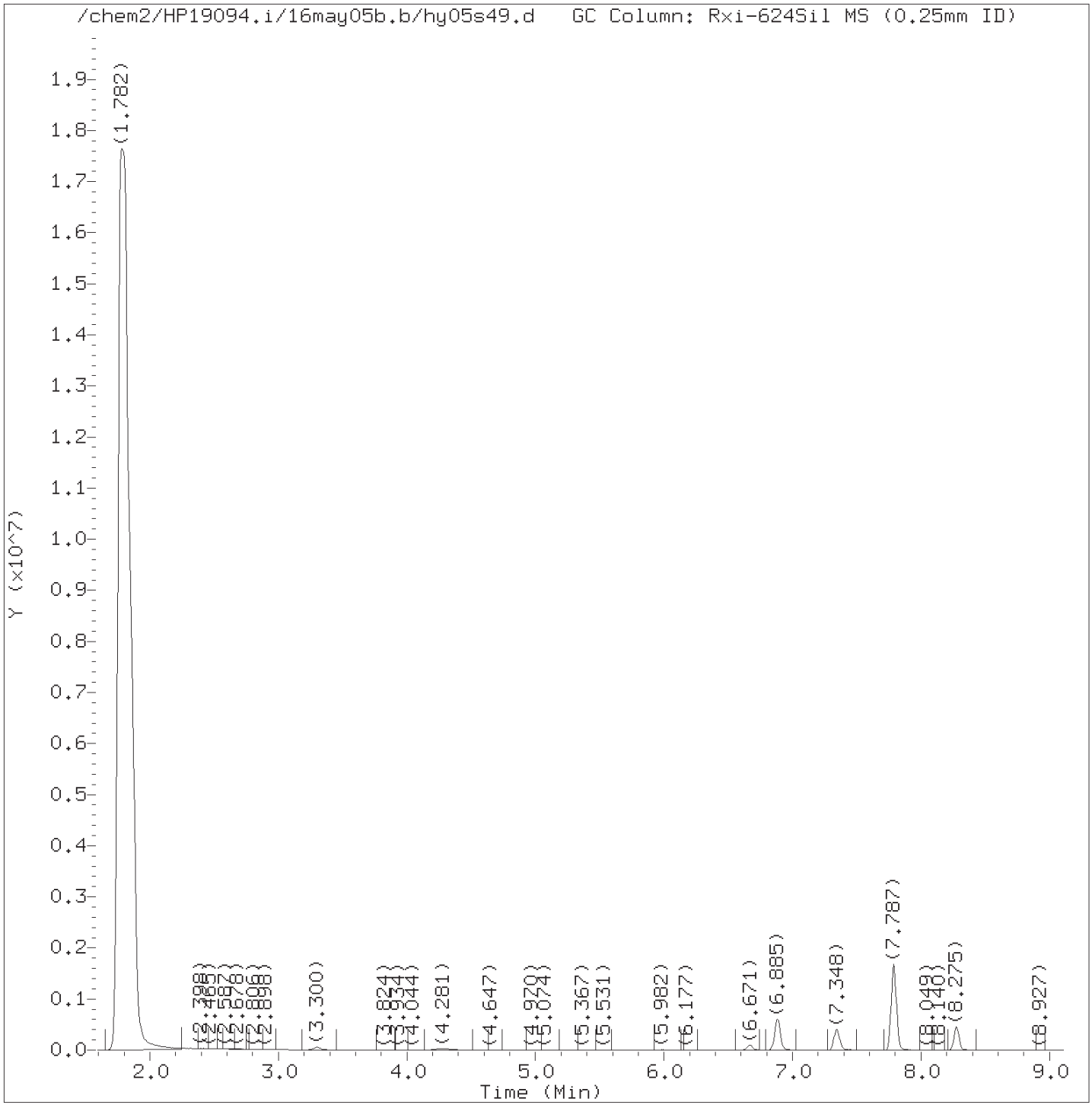
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878	(0.001)	113	557510	10.534	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	86150	9.828	98%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2247037	9.878	99%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	697856	9.517	95%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	59217	1.560	1.56		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.671	(-0.000)	83	116196	1.097	1.10			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	221731	3.524	3.52			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

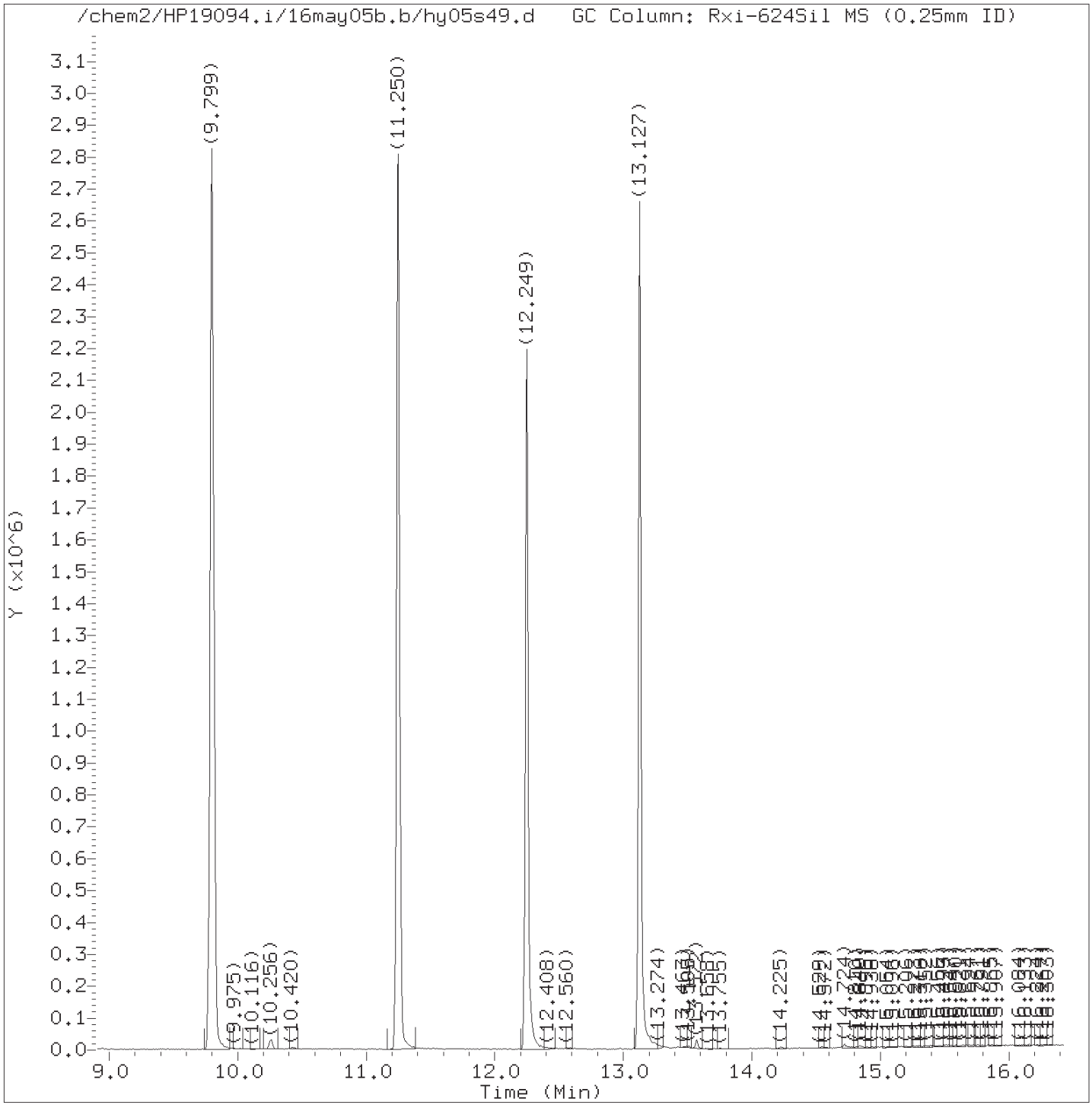
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

Sample Name: 5WC21 Lab Sample ID: 8352781

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01873



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

Sample Name: 5WC21 Lab Sample ID: 8352781

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

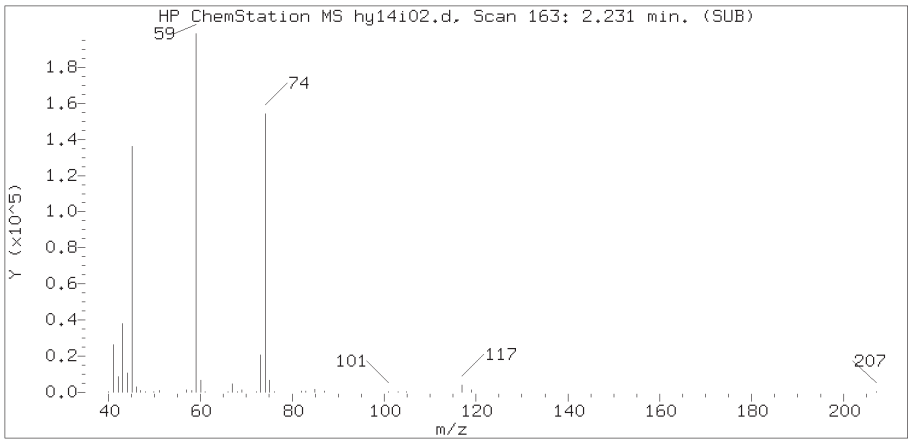
Sample Name: 5WC21 Lab Sample ID: 8352781

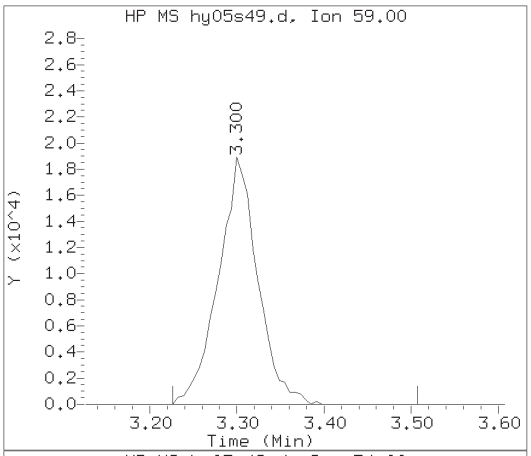
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.300	59	59217	1.560
26)*t-Butyl Alcohol-d10	(1)	4.263	65	100753	50.000
49) Chloroform	(2)	6.671	83	116196	1.097
50)$Dibromofluoromethane	(2)	6.878	113	557510	10.534
57)$1,2-Dichloroethane-d4	(2)	7.348	102	86150	9.828
63)*Fluorobenzene	(2)	7.787	96	2245919	10.000
67) Trichloroethene	(2)	8.275	95	221731	3.524
82)$Toluene-d8	(3)	9.799	98	2247037	9.878
97)*Chlorobenzene-d5	(3)	11.250	117	1596834	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	697856	9.517
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	702778	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

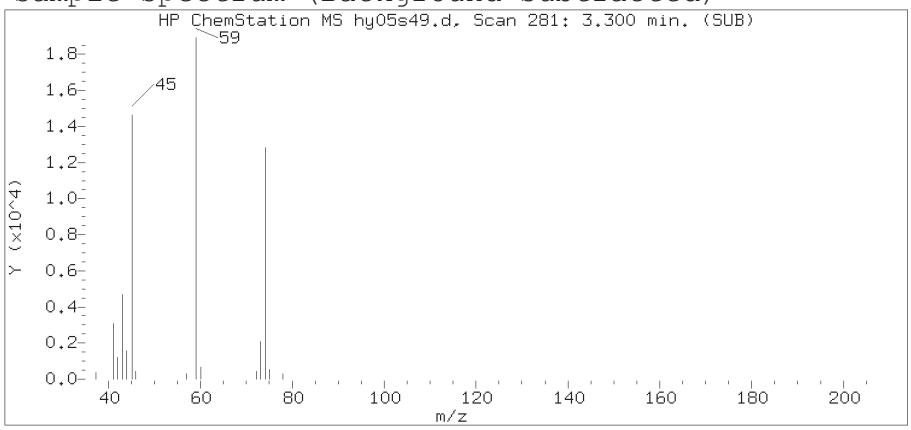
Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

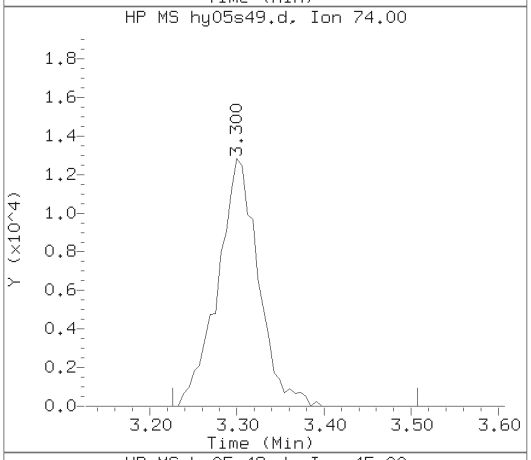
Reference Standard Spectrum for Ethyl ether



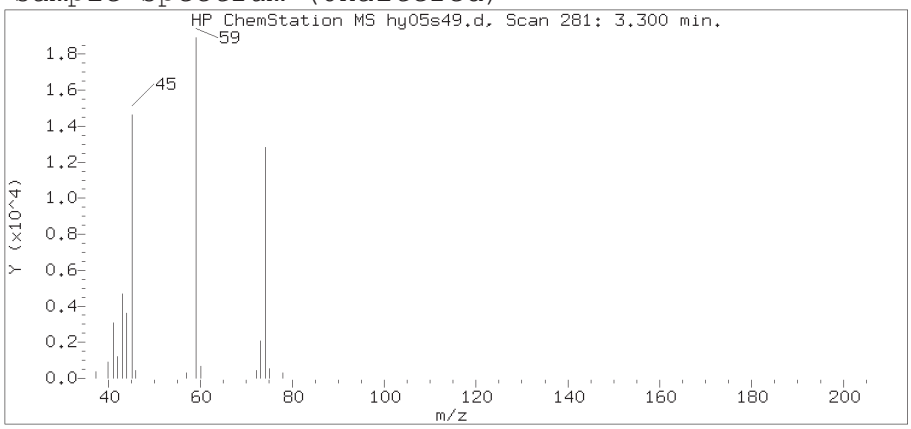


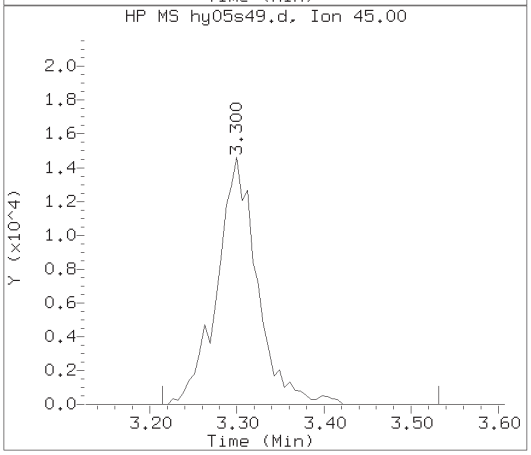
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

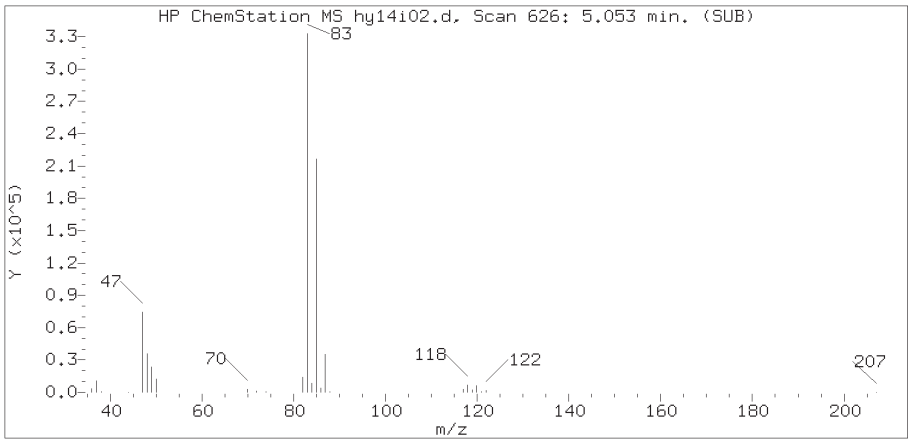
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

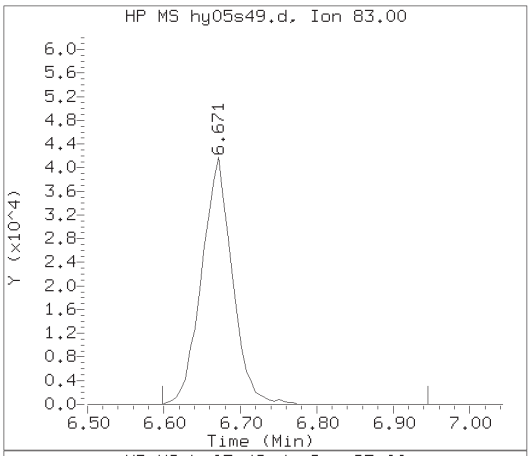
Sample Name: 5WC21 Lab Sample ID: 8352781

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 281
Retention Time (minutes): 3.300
Relative Retention Time :-0.00079
Quant Ion : 59.00
Area (flag) : 59217
On-Column Amount (ng) : 1.5597

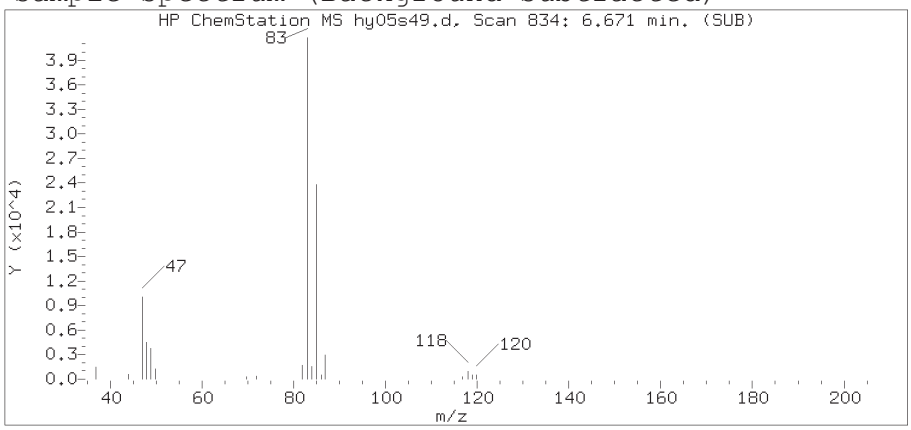
Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature meaning ID: de011873

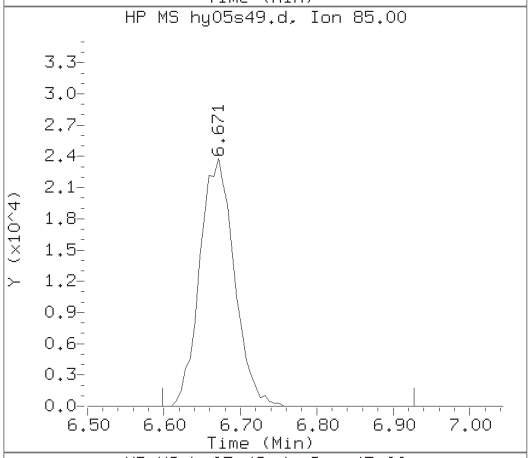
Reference Standard Spectrum for Chloroform



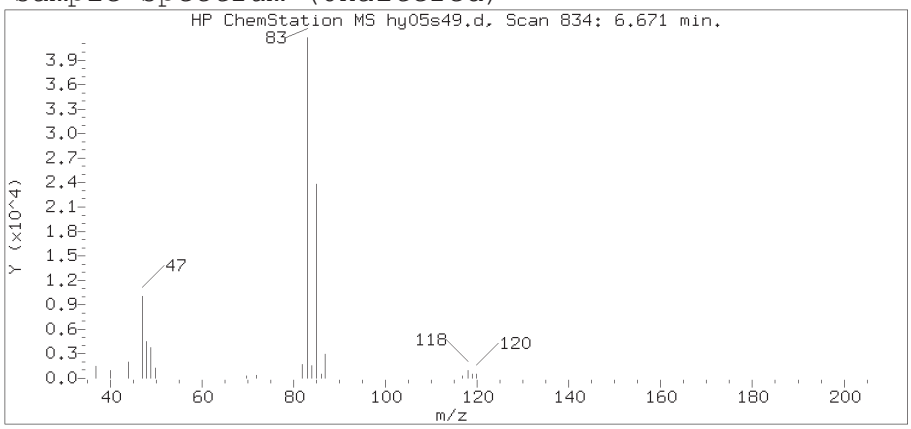


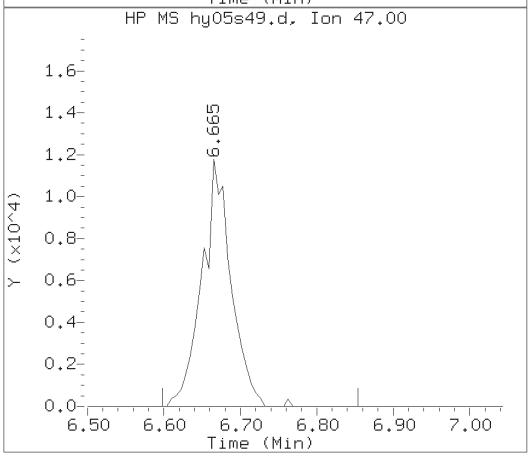
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

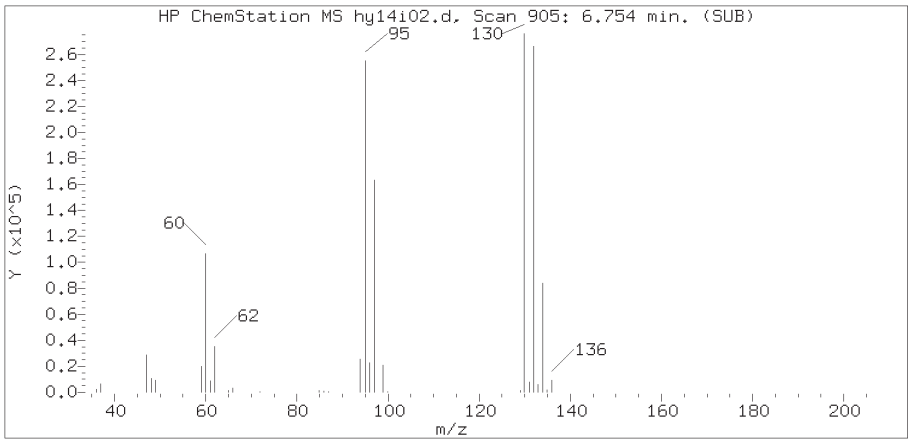
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

Sample Name: 5WC21 Lab Sample ID: 8352781

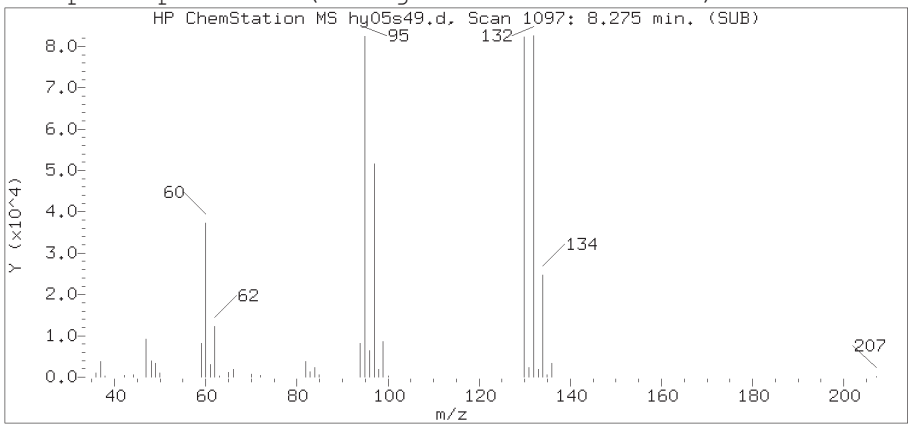
Compound Number : 49
Compound Name : Chloroform
Scan Number : 834
Retention Time (minutes): 6.671
Relative Retention Time :-0.00079
Quant Ion : 83.00
Area (flag) : 116196
On-Column Amount (ng) : 1.0969

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature ID: 1021873

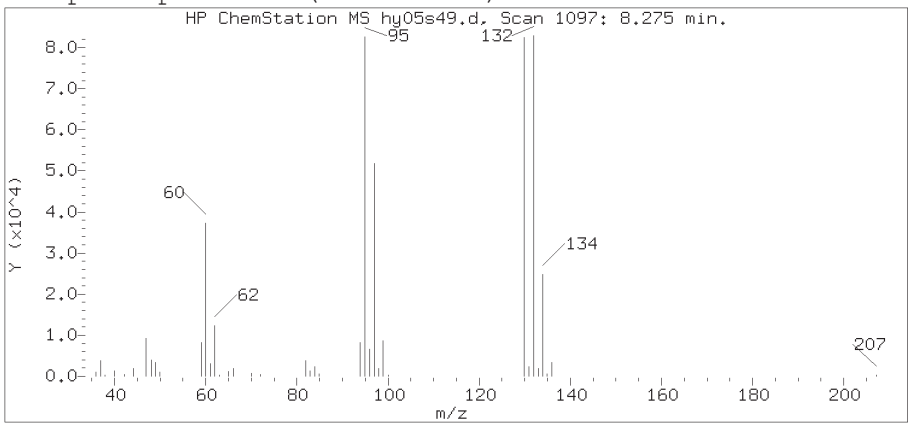
Reference Standard Spectrum for Trichloroethene

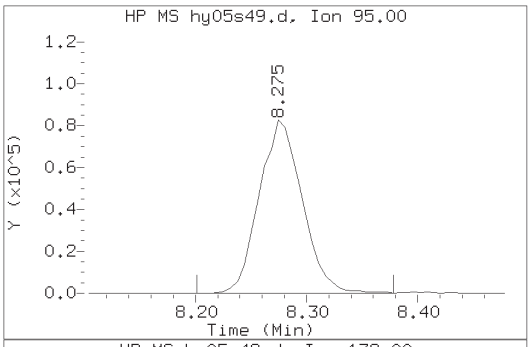


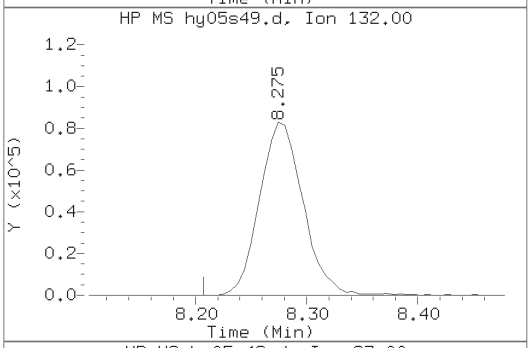
Sample Spectrum (Background Subtracted)

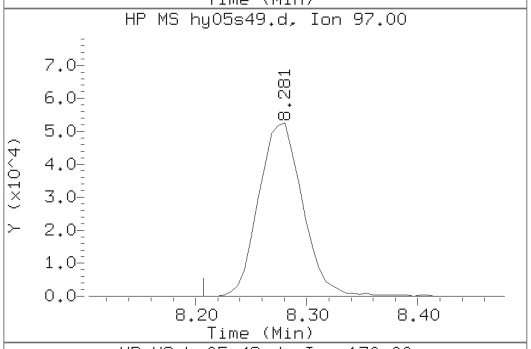


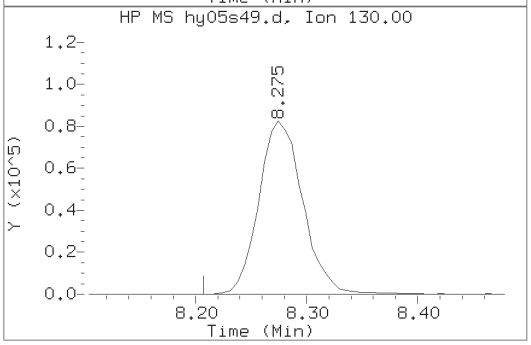
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may05b.b/hy05s49.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 00:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:16 Automation

Sample Name: 5WC21 Lab Sample ID: 8352781

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.275
Relative Retention Time : 0.00000
Quant Ion : 95.00
Area (flag) : 221731
On-Column Amount (ng) : 3.5245

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature meet ID: 221731

5WDUP

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8352782

Data file: /chem2/HP19094.i/16may05b.b/hy05s50.d Injection date and time: **06-MAY-2016 01:17**
Data file Sample Info. Line: 5WDUP;8352782;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.281	(-0.024)	442	65	91367	(-16)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2158236	(-2)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1481838	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	639317	(-21)	10.00	

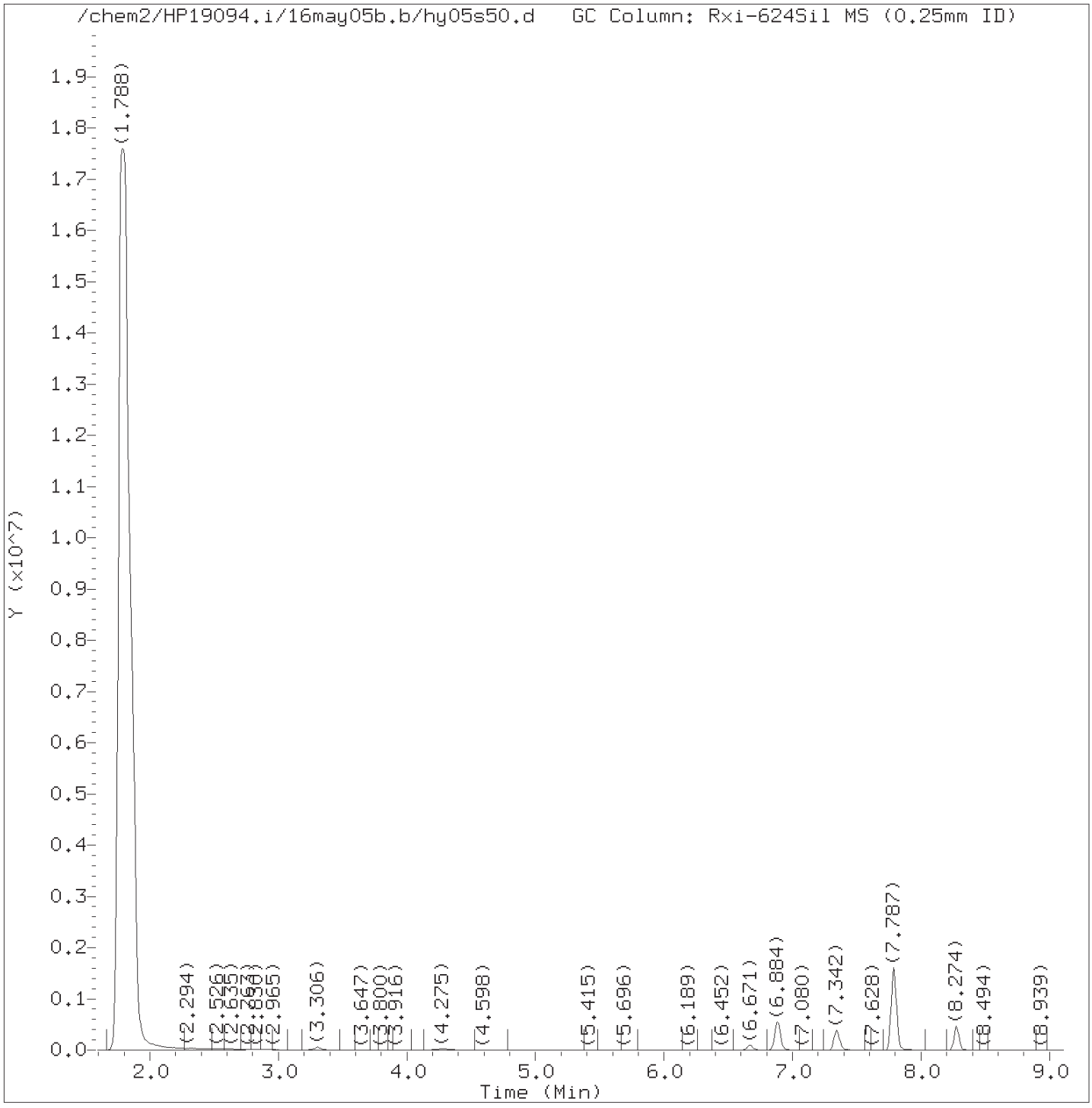
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.000)	113	517345	10.173	102%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	82524	9.797	98%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2161302	10.238	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	625055	9.186	92%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.306	(-0.001)	59	58022	1.590	1.59		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.677	(-0.001)	83	110630	1.087	1.09			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	219478	3.630	3.63			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

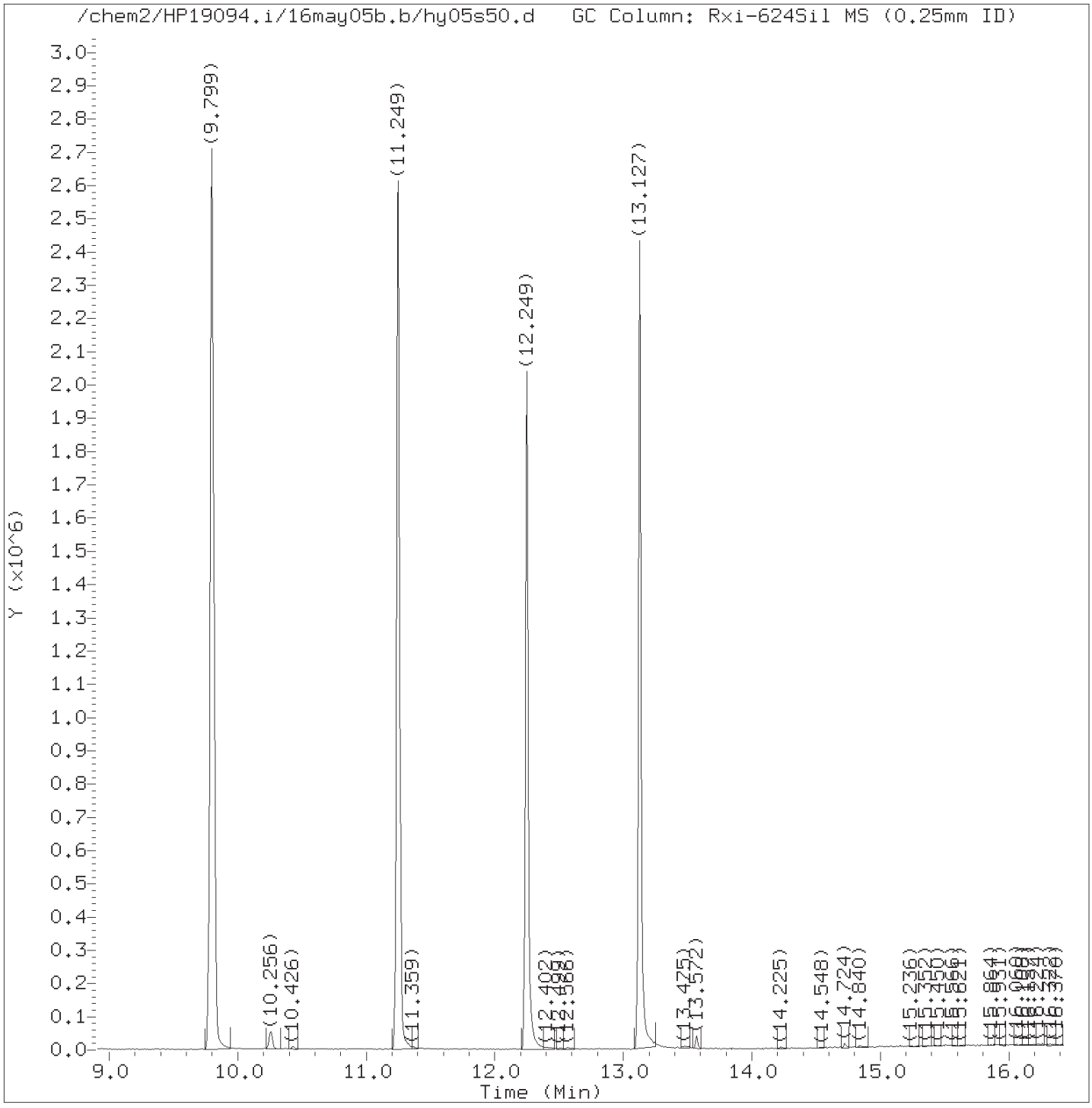
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

Sample Name: 5WDUP Lab Sample ID: 8352782

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

Sample Name: 5WDUP Lab Sample ID: 8352782

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

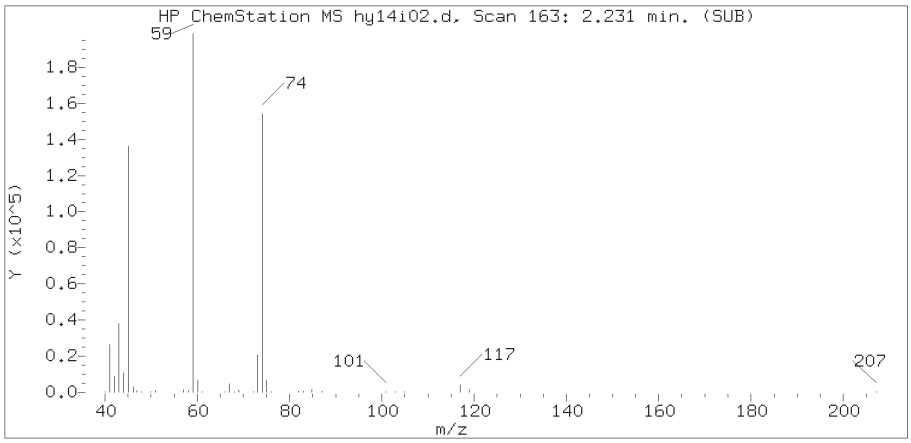
Sample Name: 5WDUP Lab Sample ID: 8352782

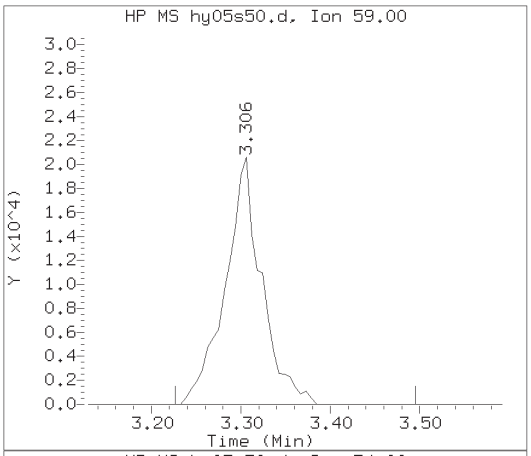
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.306	59	58022	1.590
26)*t-Butyl Alcohol-d10	(1)	4.281	65	91367	50.000
49) Chloroform	(2)	6.677	83	110630	1.087
50)$Dibromofluoromethane	(2)	6.884	113	517345	10.173
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82524	9.797
63)*Fluorobenzene	(2)	7.787	96	2158236	10.000
67) Trichloroethene	(2)	8.274	95	219478	3.630
82)$Toluene-d8	(3)	9.799	98	2161302	10.238
97)*Chlorobenzene-d5	(3)	11.249	117	1481838	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	625055	9.186
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	639317	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

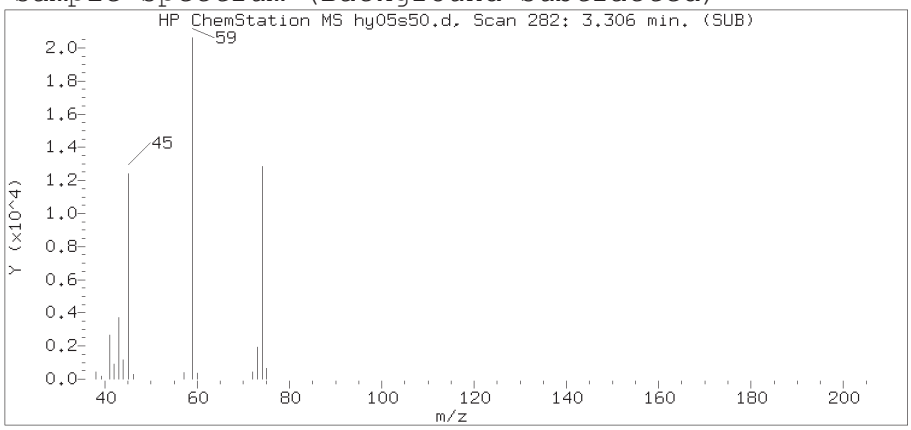
Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

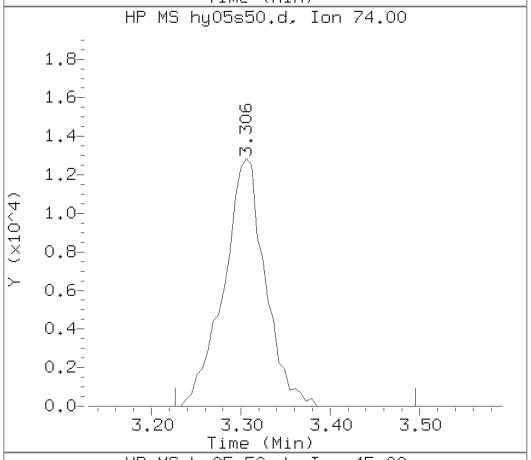
Reference Standard Spectrum for Ethyl ether



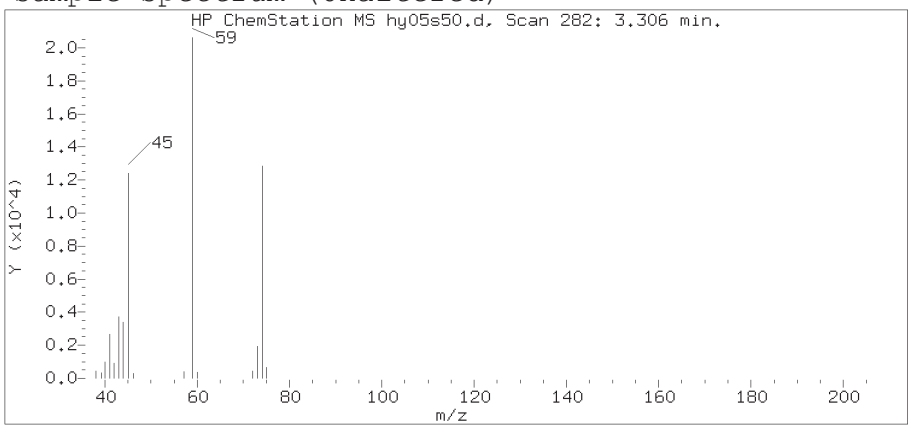


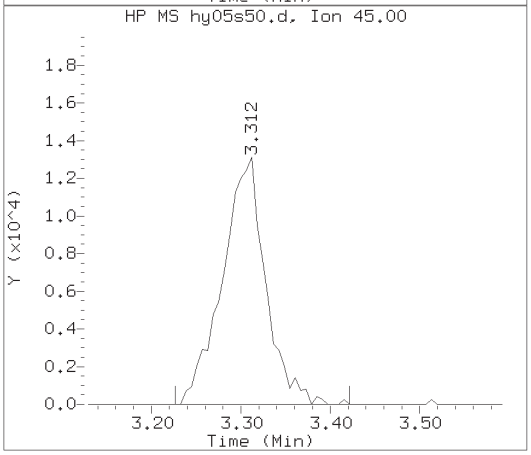
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

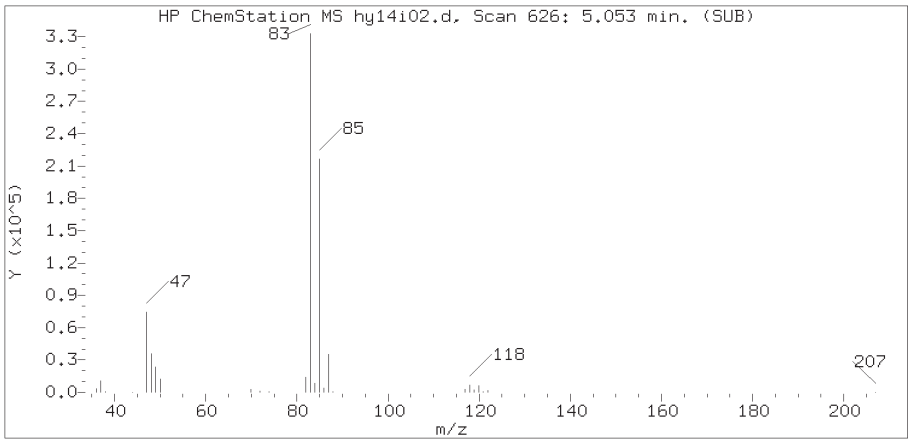
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

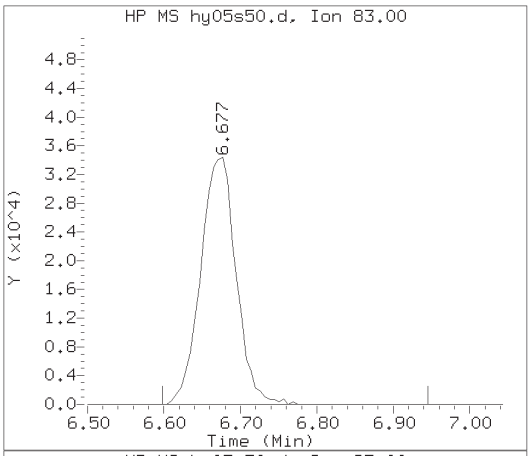
Sample Name: 5WDUP Lab Sample ID: 8352782

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00157
Quant Ion : 59.00
Area (flag) : 58022
On-Column Amount (ng) : 1.5904

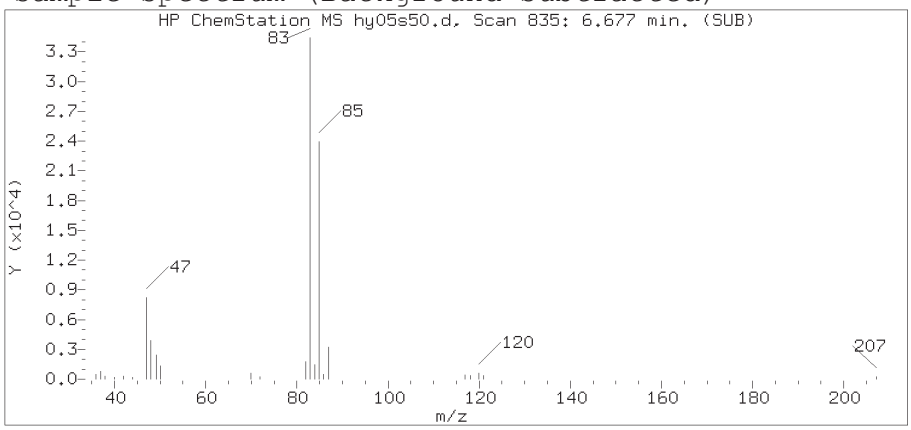
Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature meaning ID: de001873

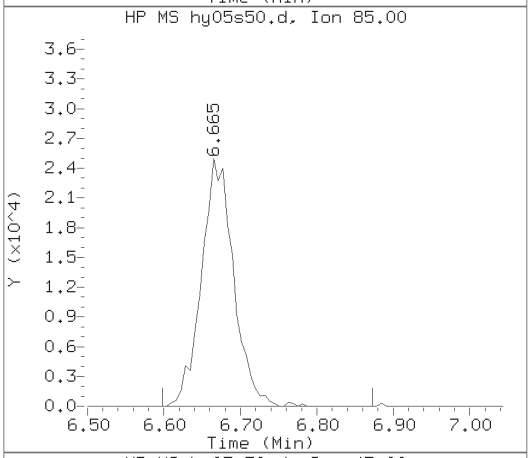
Reference Standard Spectrum for Chloroform



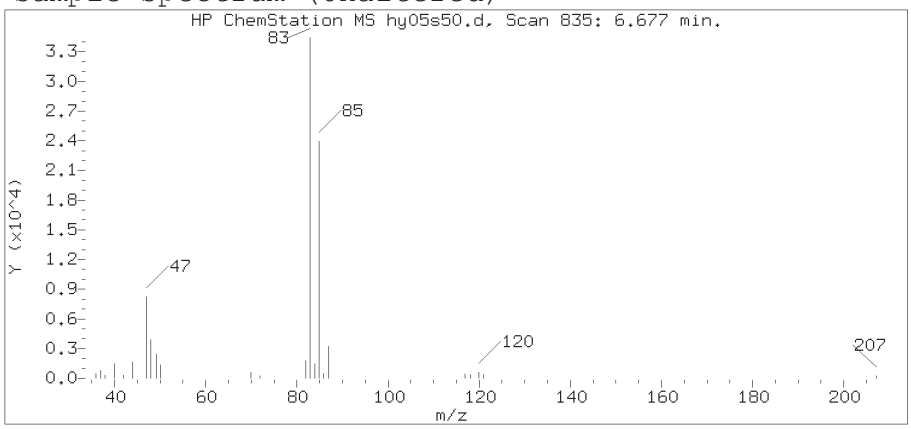


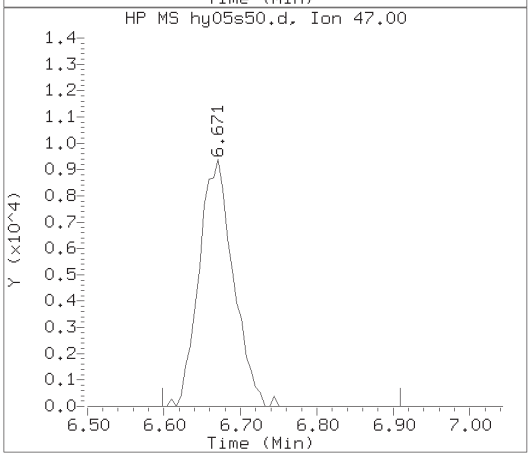
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

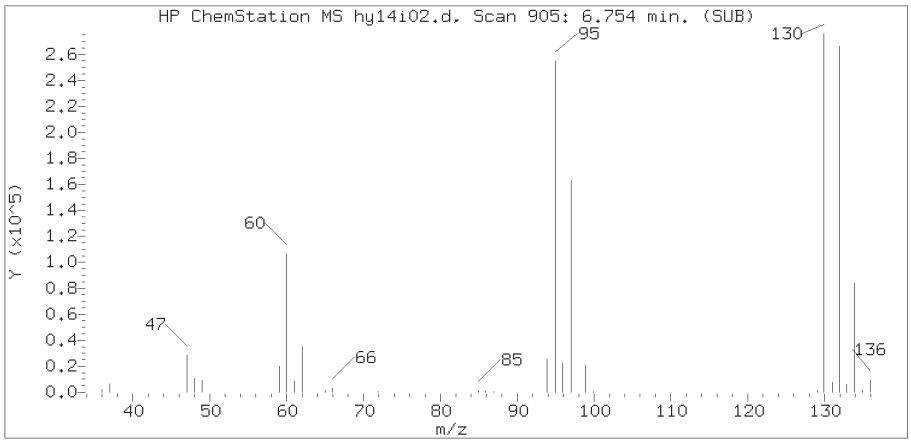
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

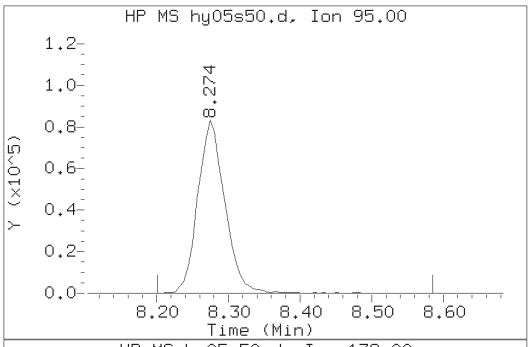
Sample Name: 5WDUP Lab Sample ID: 8352782

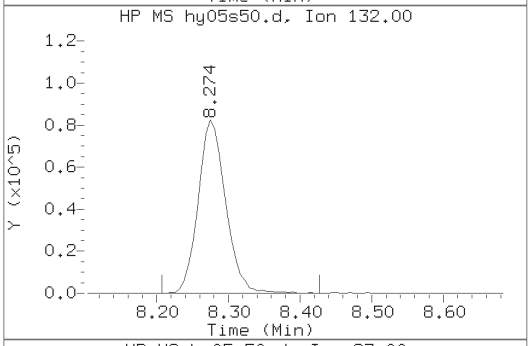
Compound Number : 49
Compound Name : Chloroform
Scan Number : 835
Retention Time (minutes): 6.677
Relative Retention Time :-0.00157
Quant Ion : 83.00
Area (flag) : 110630
On-Column Amount (ng) : 1.0868

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature meaning ID: de001873

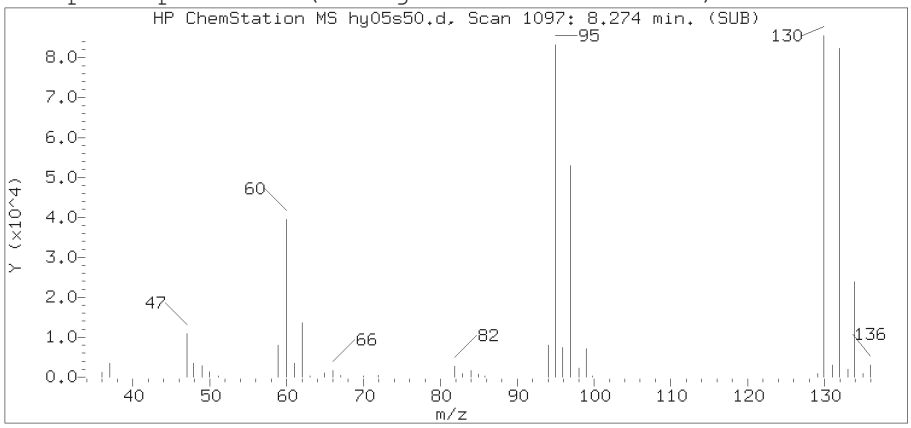
Reference Standard Spectrum for Trichloroethene

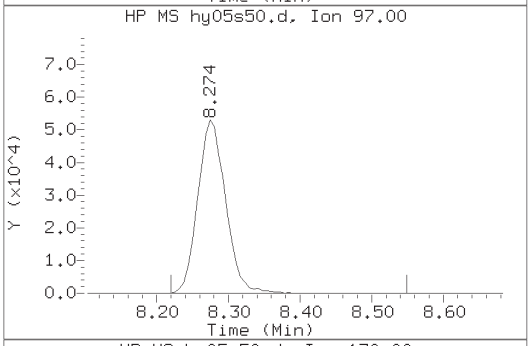




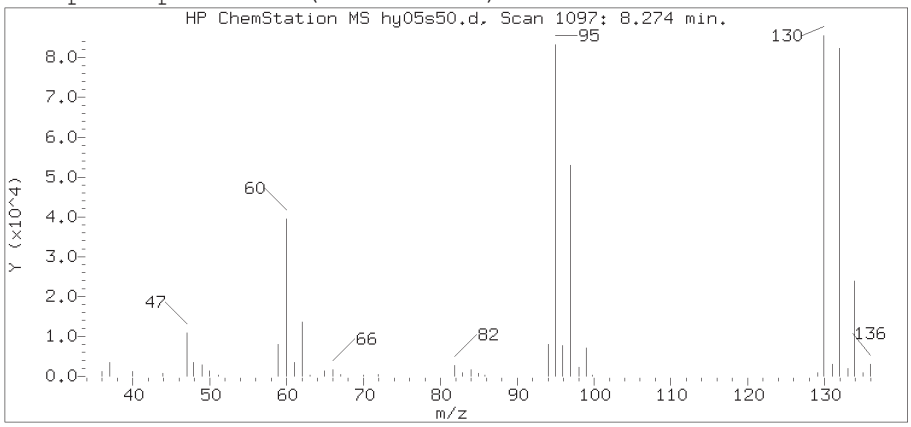


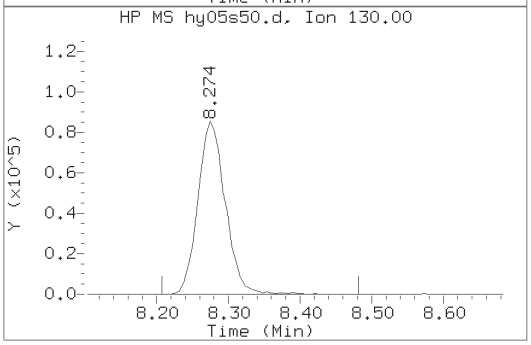
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s50.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:36 Automation

Sample Name: 5WDUP Lab Sample ID: 8352782

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.274
Relative Retention Time : 0.00000
Quant Ion : 95.00
Area (flag) : 219478
On-Column Amount (ng) : 3.6304

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature [illegible]

5WC22 Lancaster Laboratories 8352783
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s51.d Injection date and time: **06-MAY-2016 01:38**
Data file Sample Info. Line: 5WC22;8352783;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.012)	440	65	103920	(-4)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2264420	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1595091	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	691784	(-14)	10.00	

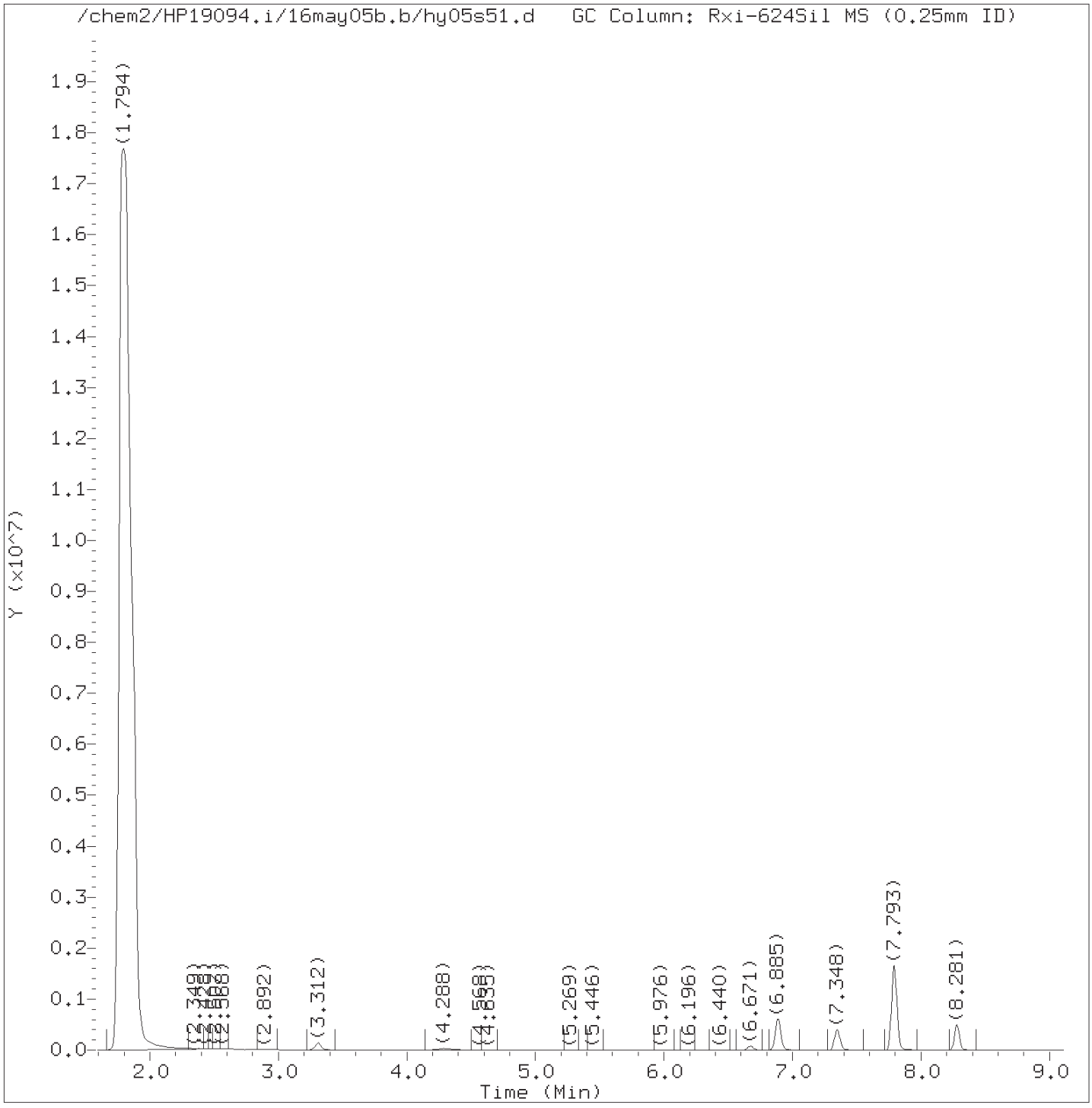
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(-0.001)	113	552801	10.360	104%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	87196	9.866	99%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2288433	10.071	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	675086	9.217	92%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.312	(-0.002)	59	137688	3.597	3.60		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.671	(-0.000)	83	96973	0.908	0.91		J	0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	240256	3.788	3.79			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

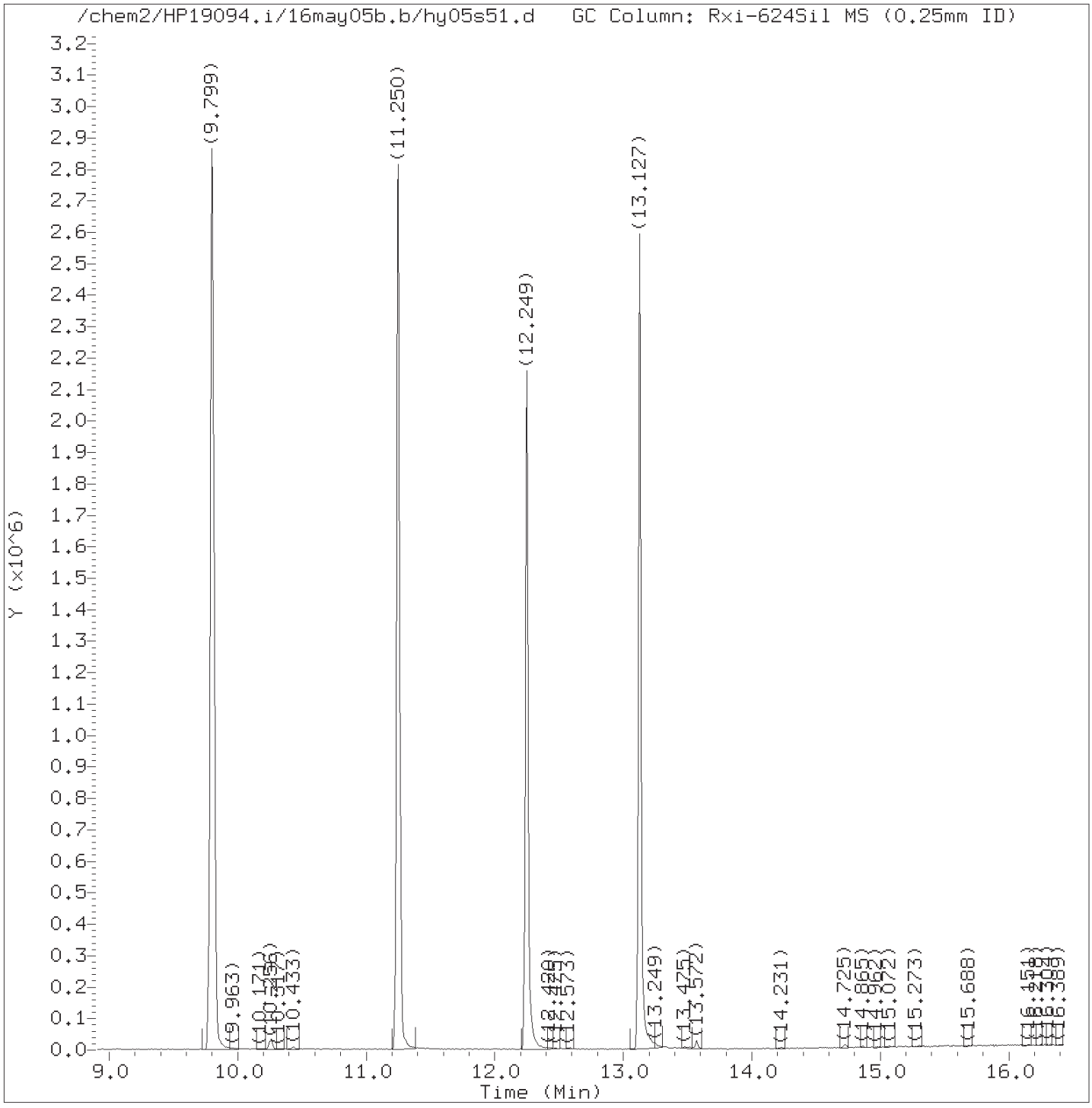
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

Sample Name: 5WC22 Lab Sample ID: 8352783

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

Sample Name: 5WC22 Lab Sample ID: 8352783

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel0173

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

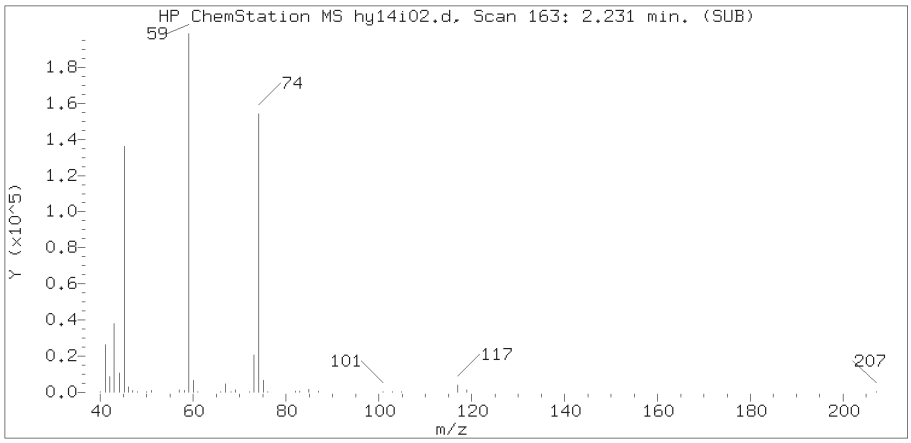
Sample Name: 5WC22 Lab Sample ID: 8352783

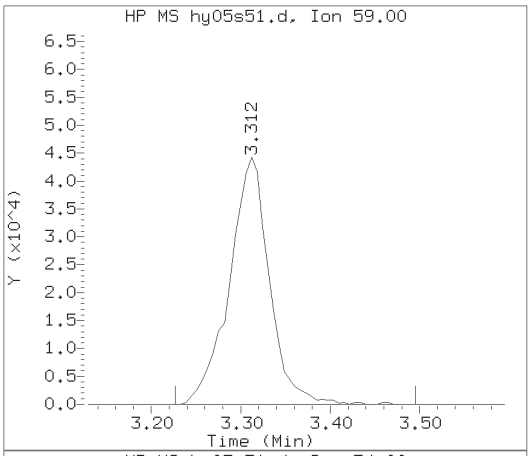
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.312	59	137688	3.597
26)*t-Butyl Alcohol-d10	(1)	4.269	65	103920	50.000
49) Chloroform	(2)	6.671	83	96973	0.908
50)$Dibromofluoromethane	(2)	6.891	113	552801	10.360
57)$1,2-Dichloroethane-d4	(2)	7.348	102	87196	9.866
63)*Fluorobenzene	(2)	7.787	96	2264420	10.000
67) Trichloroethene	(2)	8.275	95	240256	3.788
82)$Toluene-d8	(3)	9.799	98	2288433	10.071
97)*Chlorobenzene-d5	(3)	11.250	117	1595091	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	675086	9.217
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	691784	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

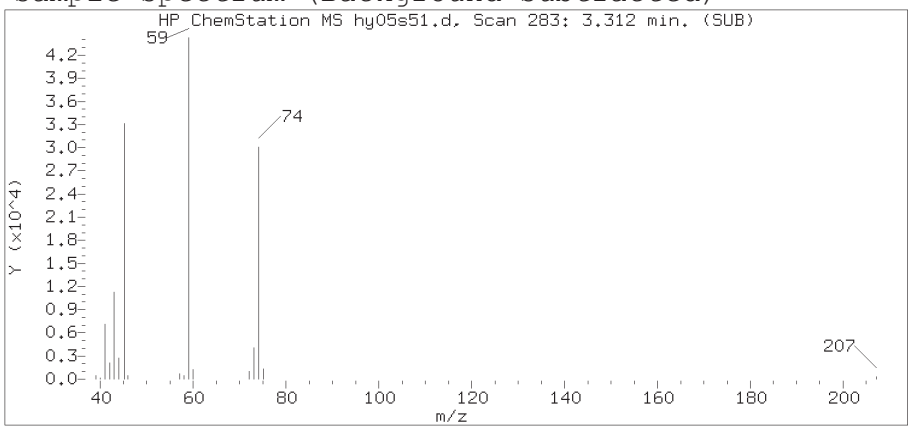
Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:06.
Target 3.5 esignature user ID: kel01973

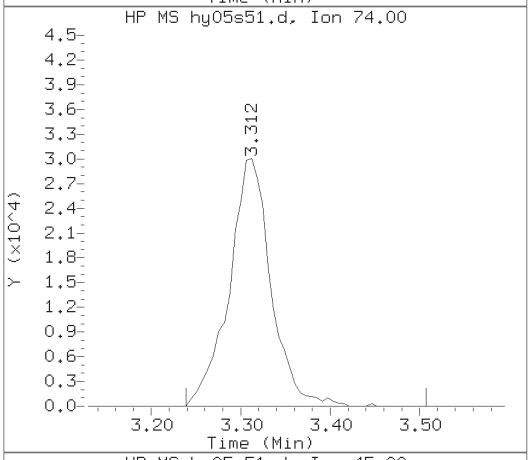
Reference Standard Spectrum for Ethyl ether



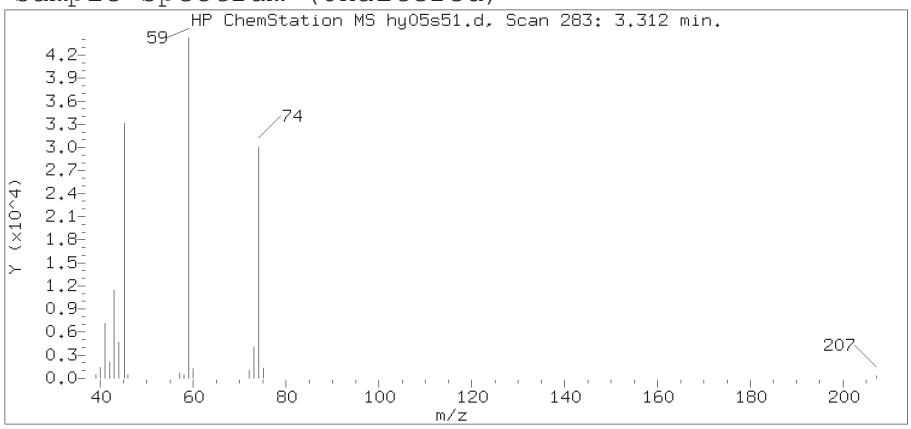


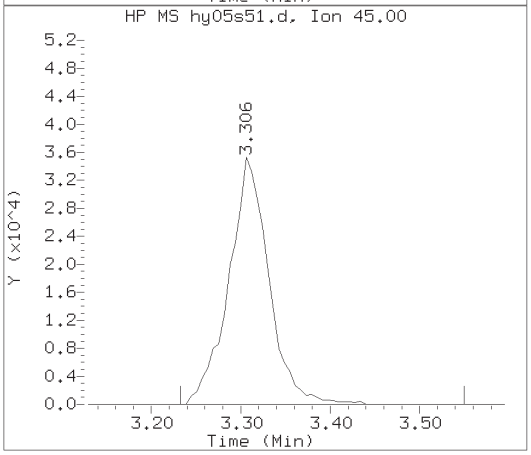
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

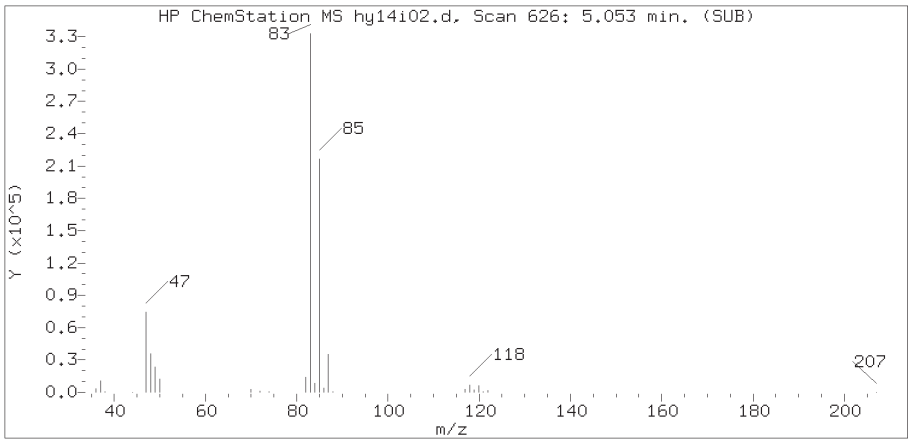
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

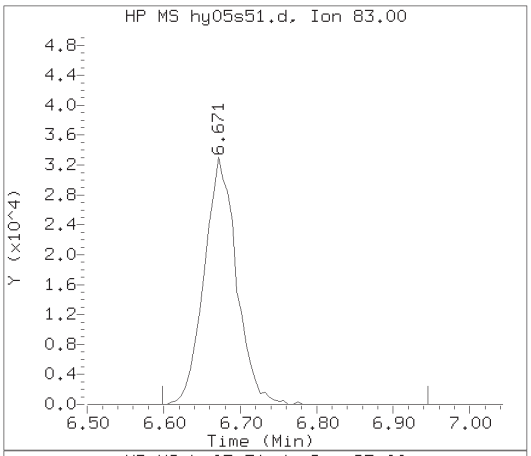
Sample Name: 5WC22 Lab Sample ID: 8352783

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 283
Retention Time (minutes): 3.312
Relative Retention Time :-0.00236
Quant Ion : 59.00
Area (flag) : 137688
On-Column Amount (ng) : 3.5970

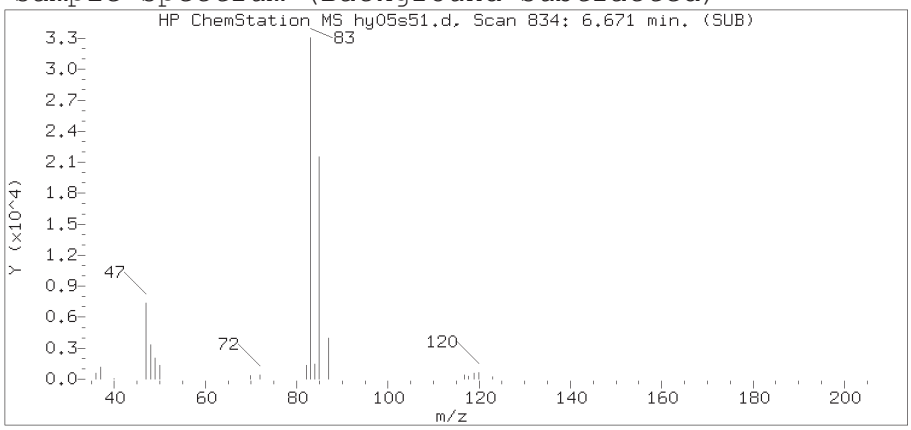
Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature [illegible]

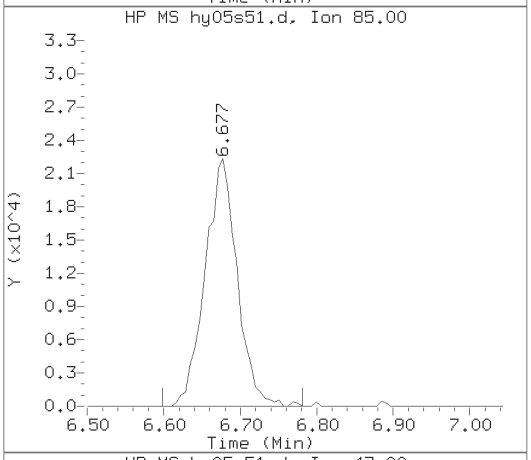
Reference Standard Spectrum for Chloroform



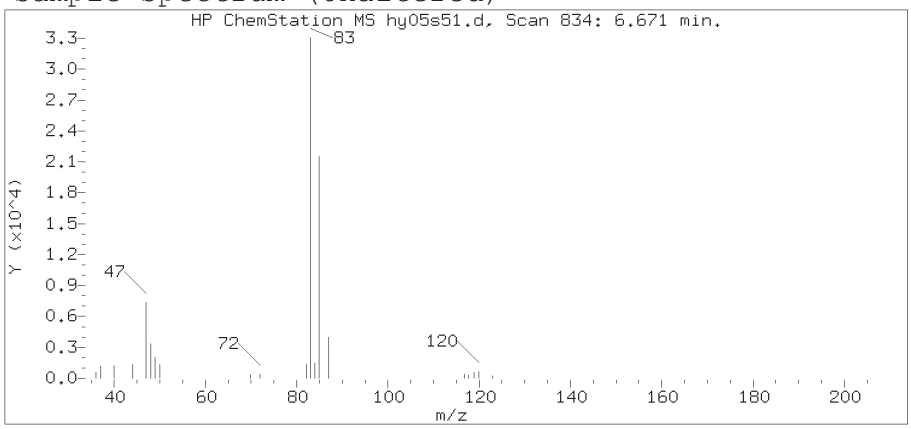


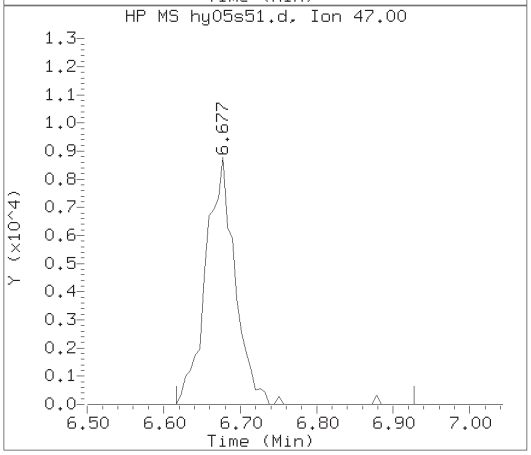
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

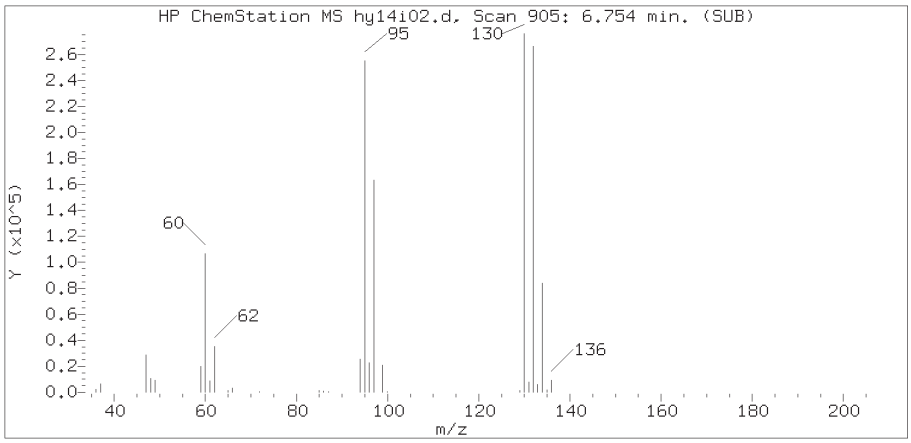
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

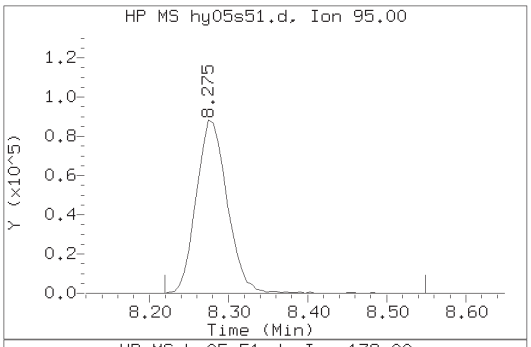
Sample Name: 5WC22 Lab Sample ID: 8352783

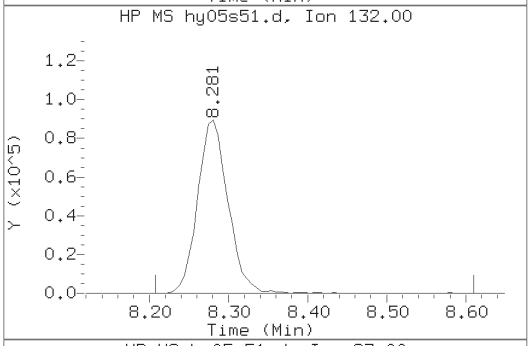
Compound Number : 49
Compound Name : Chloroform
Scan Number : 834
Retention Time (minutes): 6.671
Relative Retention Time :-0.00079
Quant Ion : 83.00
Area (flag) : 96973
On-Column Amount (ng) : 0.9080

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature [illegible]

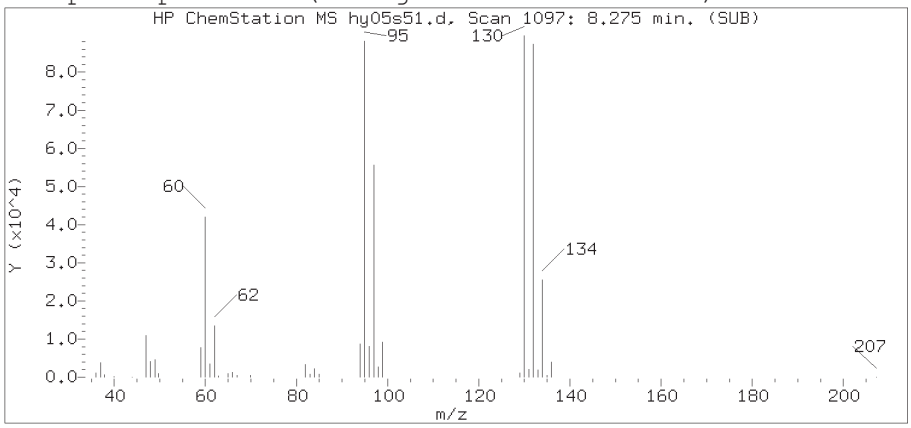
Reference Standard Spectrum for Trichloroethene

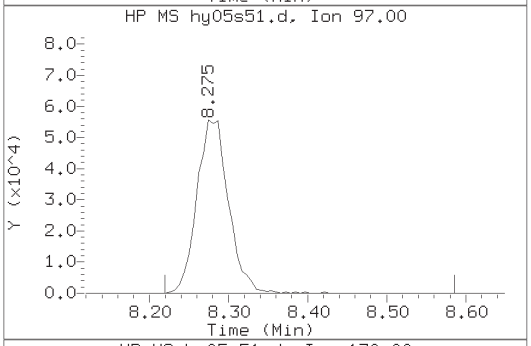




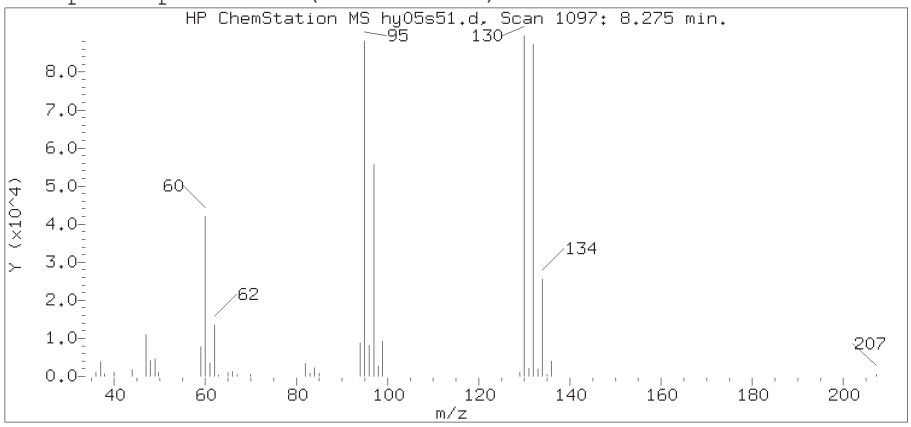


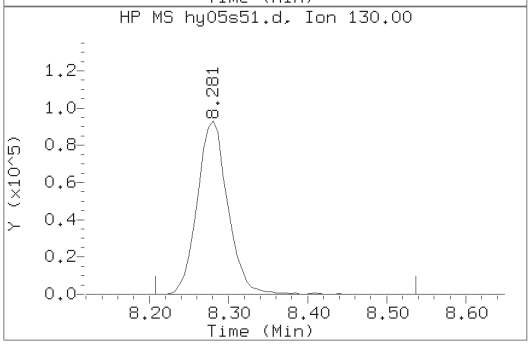
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s51.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:38 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 01:57 Automation

Sample Name: 5WC22 Lab Sample ID: 8352783

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1097
Retention Time (minutes): 8.275
Relative Retention Time : 0.00000
Quant Ion : 95.00
Area (flag) : 240256
On-Column Amount (ng) : 3.7877

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:06.
Target 3.5 esignature meaning: I have verified

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 8352784

Data file: /chem2/HP19094.i/16may05b.b/hy05s52.d Injection date and time: **06-MAY-2016 01:58**
Data file Sample Info. Line: 5WC23;8352784;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.012)	440	65	104447	(-4)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2255083	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1598730	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	693956	(-14)	10.00	

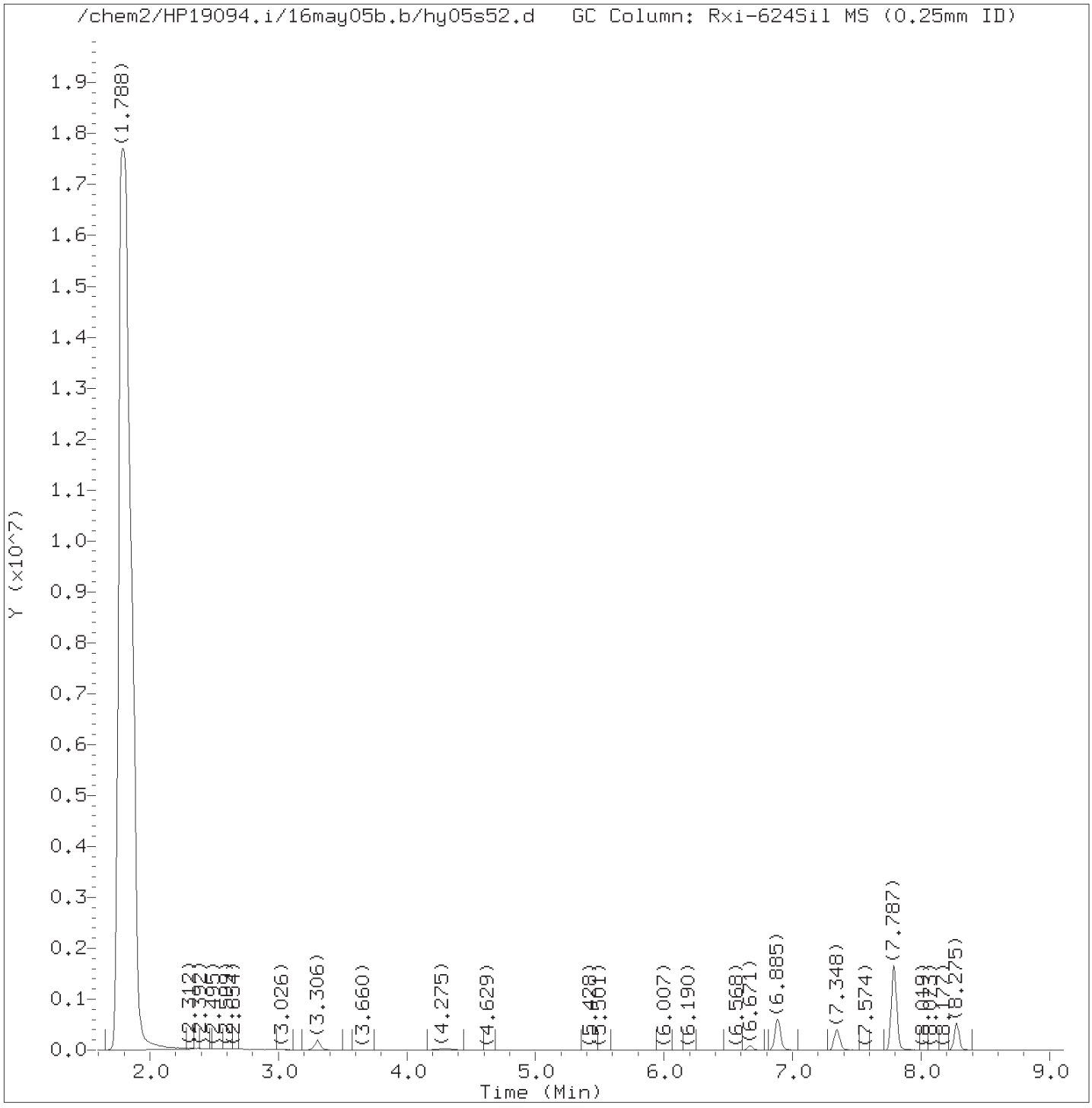
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.000)	113	548954	10.330	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	85894	9.759	98%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2291534	10.062	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	665616	9.067	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.306	(-0.001)	59	184505	4.840	4.84		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.671	(-0.000)	83	95967	0.902	0.90		J	0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	8.281	(-0.000)	95	248288	3.931	3.93			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:07. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

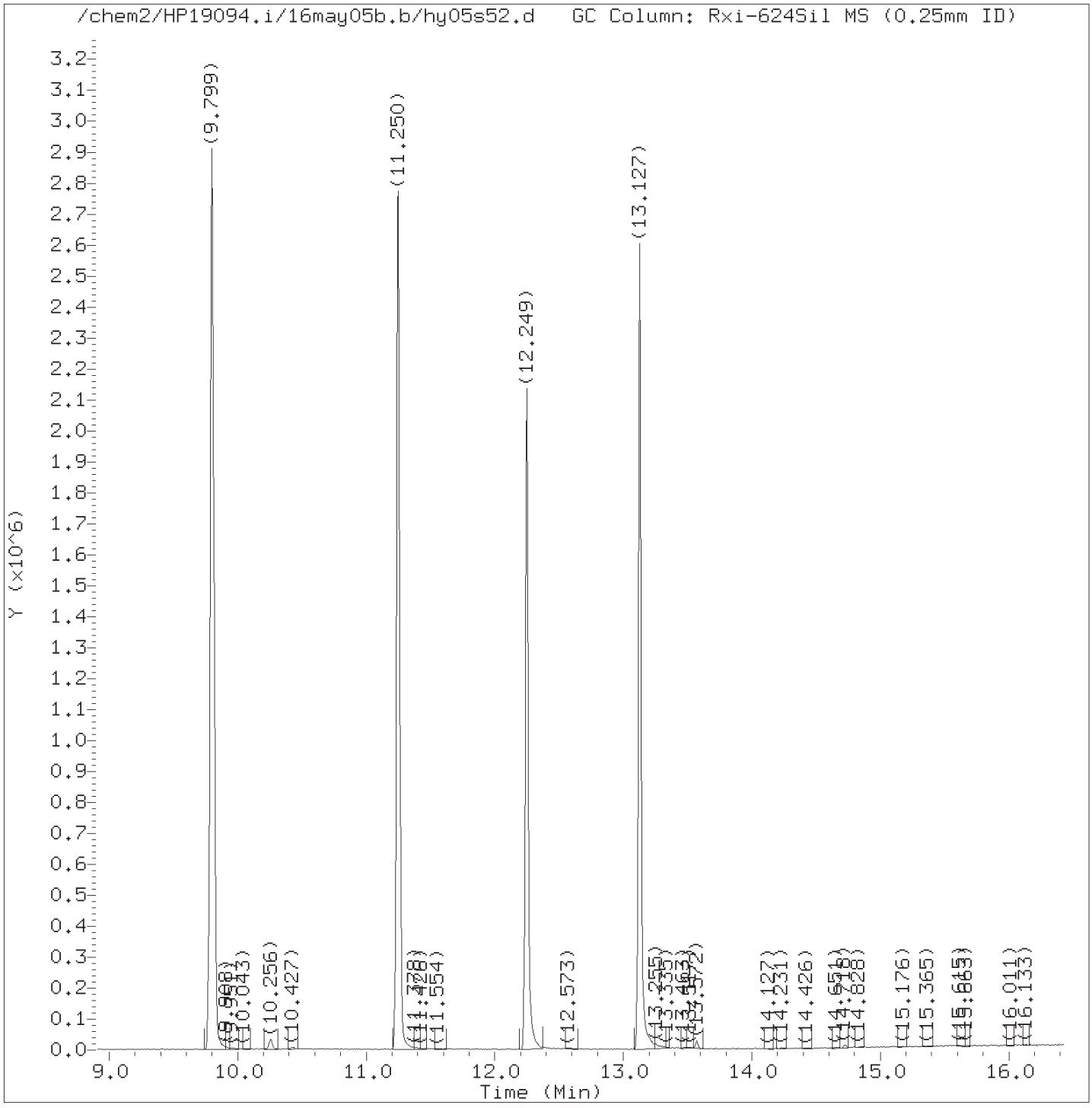
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

Sample Name: 5WC23 Lab Sample ID: 8352784

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

Sample Name: 5WC23 Lab Sample ID: 8352784

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

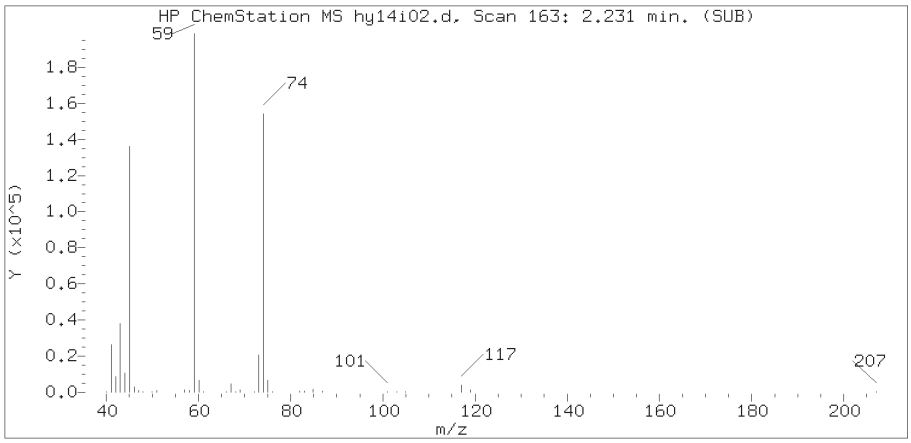
Sample Name: 5WC23 Lab Sample ID: 8352784

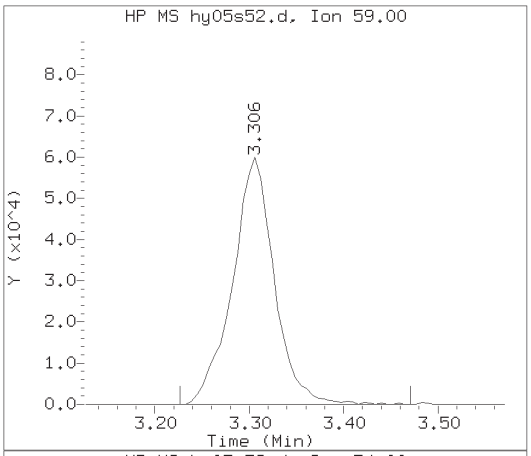
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.306	59	184505	4.840
26)*t-Butyl Alcohol-d10	(1)	4.269	65	104447	50.000
49) Chloroform	(2)	6.671	83	95967	0.902
50)$Dibromofluoromethane	(2)	6.885	113	548954	10.330
57)$1,2-Dichloroethane-d4	(2)	7.348	102	85894	9.759
63)*Fluorobenzene	(2)	7.787	96	2255083	10.000
67) Trichloroethene	(2)	8.281	95	248288	3.931
82)$Toluene-d8	(3)	9.799	98	2291534	10.062
97)*Chlorobenzene-d5	(3)	11.250	117	1598730	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	665616	9.067
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	693956	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

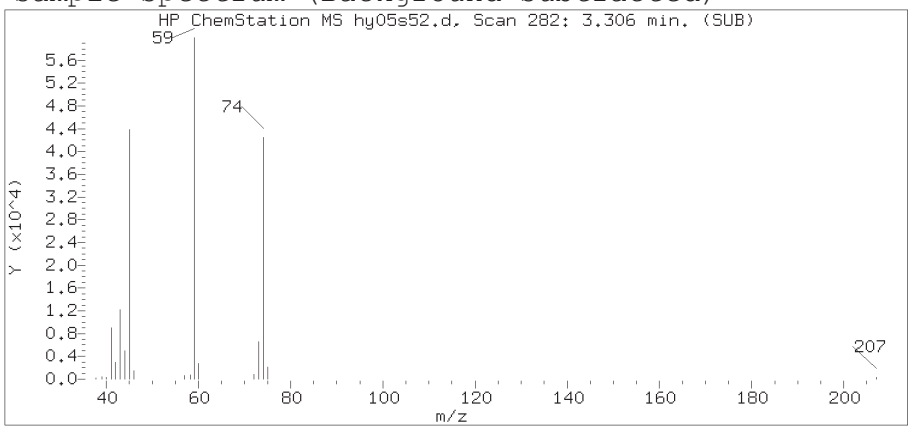
Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature user ID: kel01973

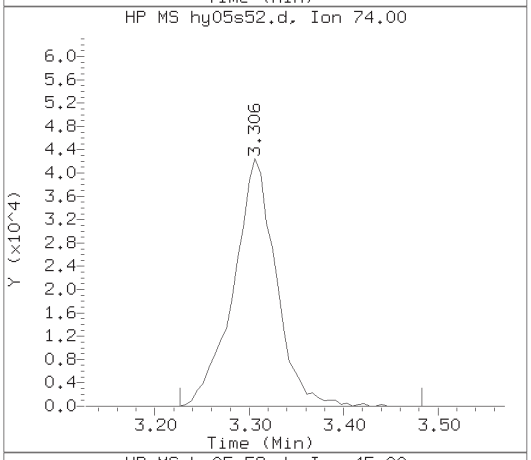
Reference Standard Spectrum for Ethyl ether



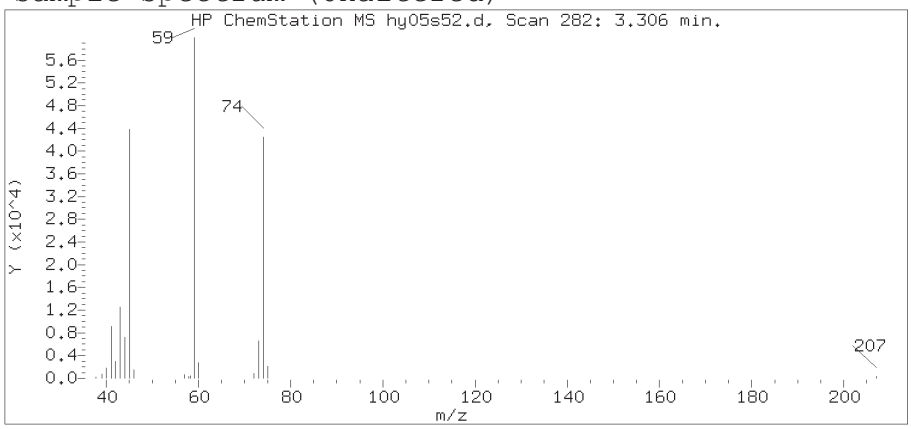


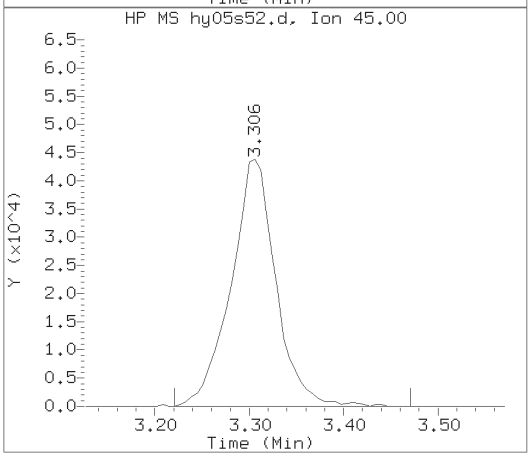
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

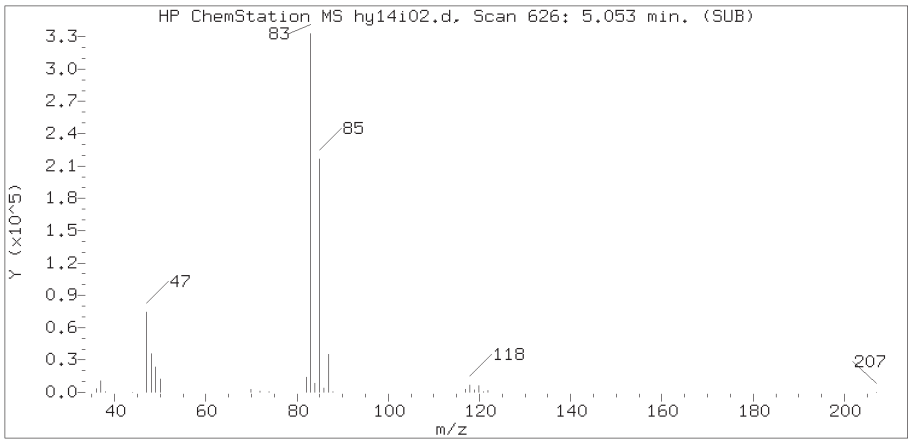
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

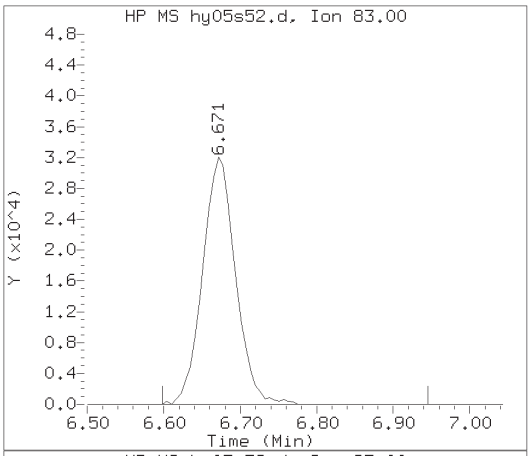
Sample Name: 5WC23 Lab Sample ID: 8352784

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00158
Quant Ion : 59.00
Area (flag) : 184505
On-Column Amount (ng) : 4.8400

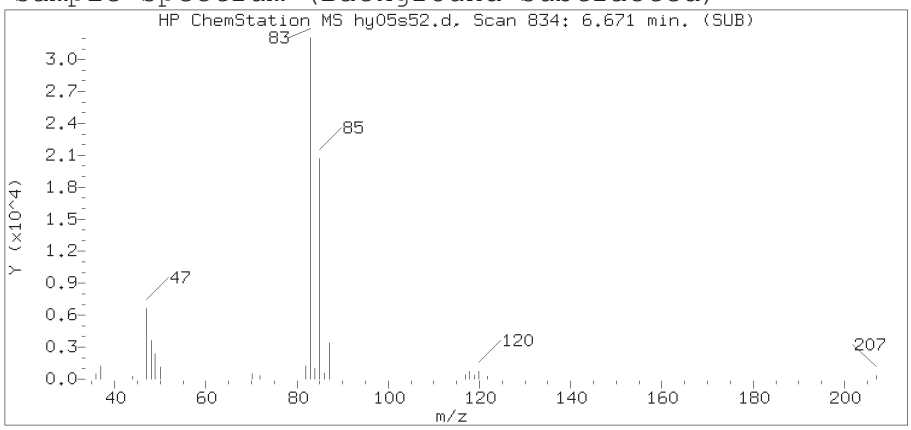
Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:07.
Target 3.5 esignature [illegible]

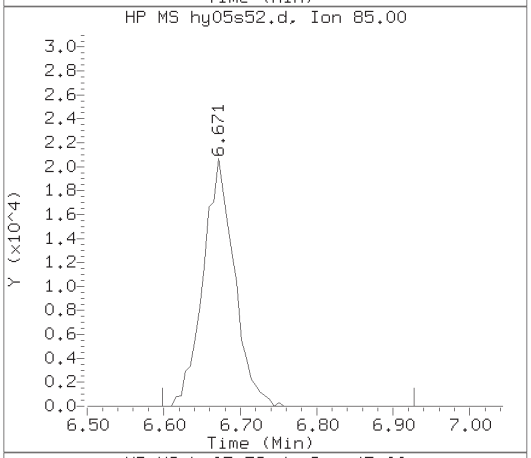
Reference Standard Spectrum for Chloroform



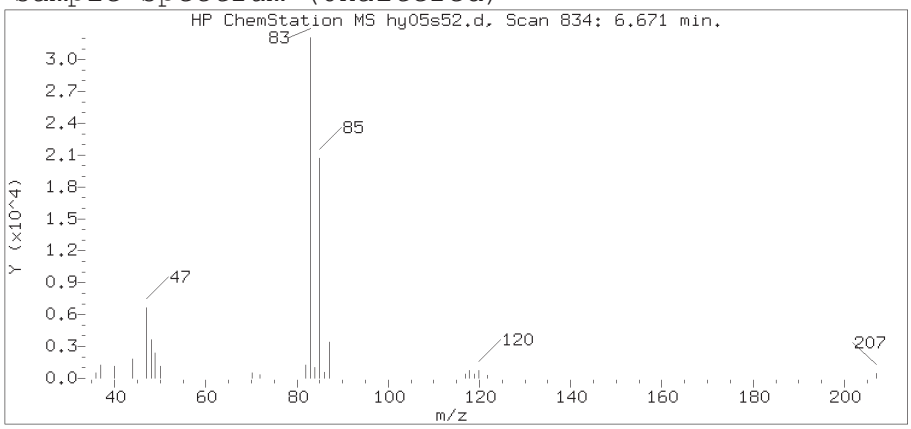


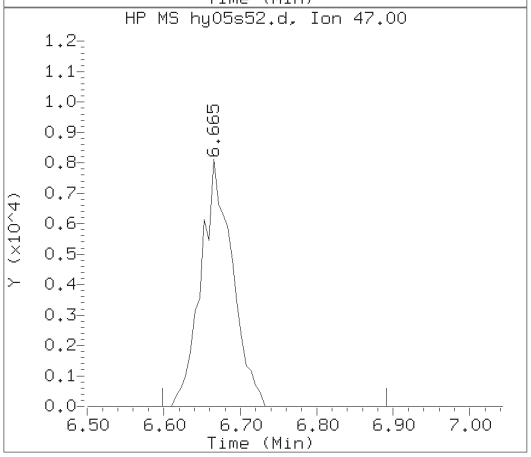
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

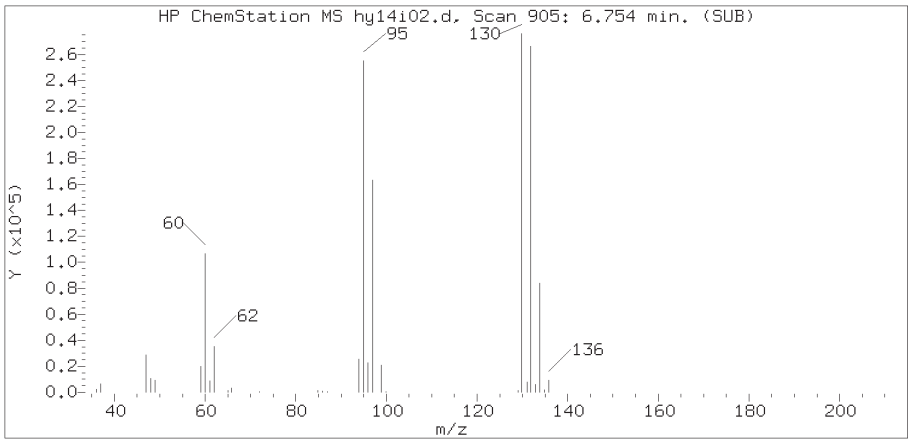
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

Sample Name: 5WC23 Lab Sample ID: 8352784

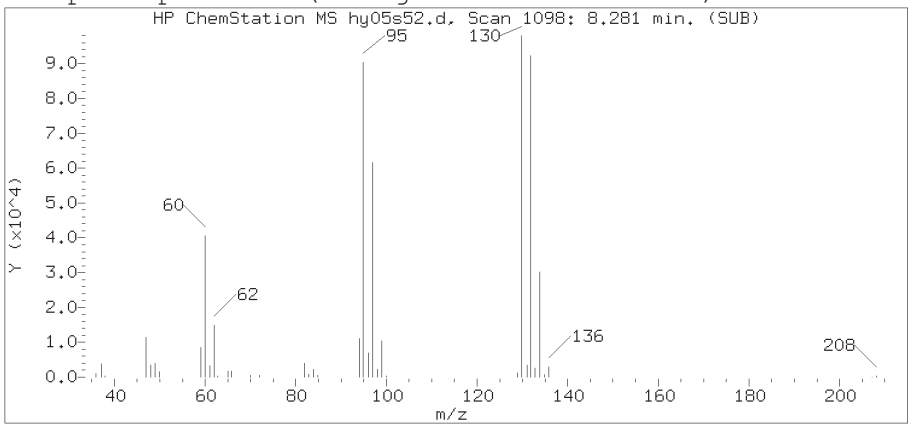
Compound Number : 49
Compound Name : Chloroform
Scan Number : 834
Retention Time (minutes): 6.671
Relative Retention Time :-0.00079
Quant Ion : 83.00
Area (flag) : 95967
On-Column Amount (ng) : 0.9023

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:07.
Target 3.5 esignature [illegible]

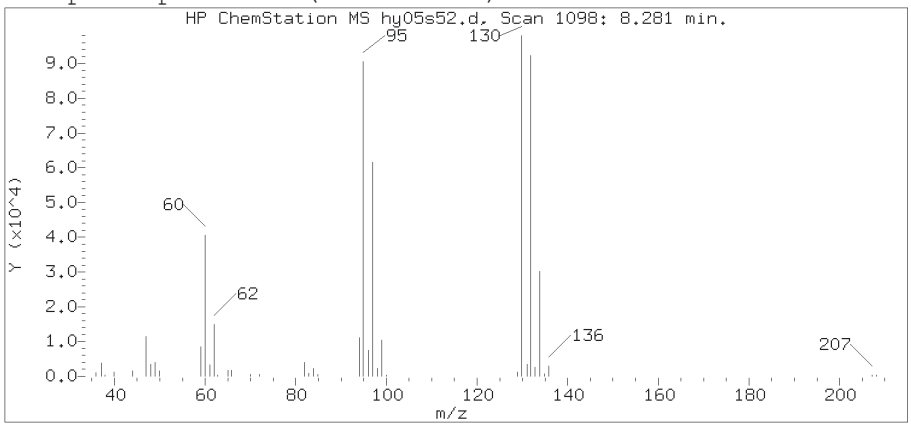
Reference Standard Spectrum for Trichloroethene

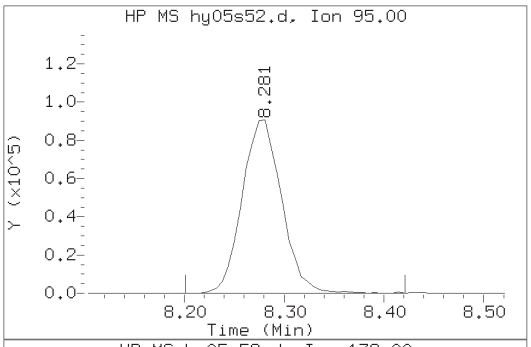


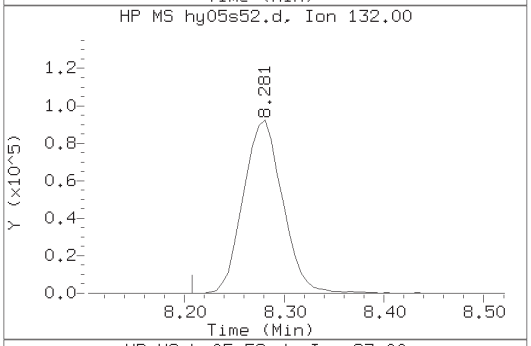
Sample Spectrum (Background Subtracted)

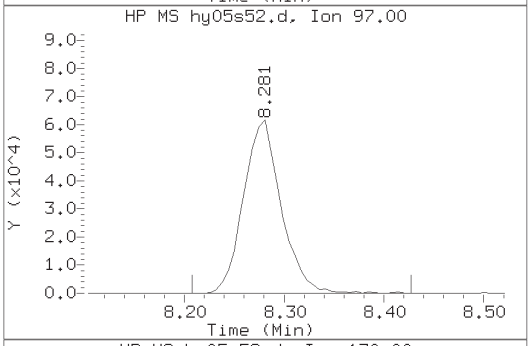


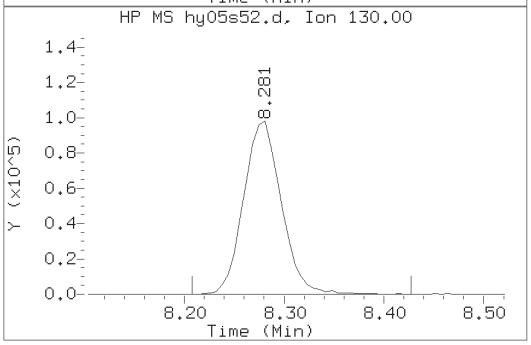
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may05b.b/hy05s52.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 01:58 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:17 Automation

Sample Name: 5WC23 Lab Sample ID: 8352784

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1098
Retention Time (minutes): 8.281
Relative Retention Time :-0.00078
Quant Ion : 95.00
Area (flag) : 248288
On-Column Amount (ng) : 3.9306

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:07.
Target 3.5 esignature [illegible]

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s53.d Injection date and time: **06-MAY-2016 02:18**
Data file Sample Info. Line: 5W12A;8352785;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 02:37 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.306	(-0.049)	446	65	105757	(-2)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2279010	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1598019	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	691038	(-14)	10.00	

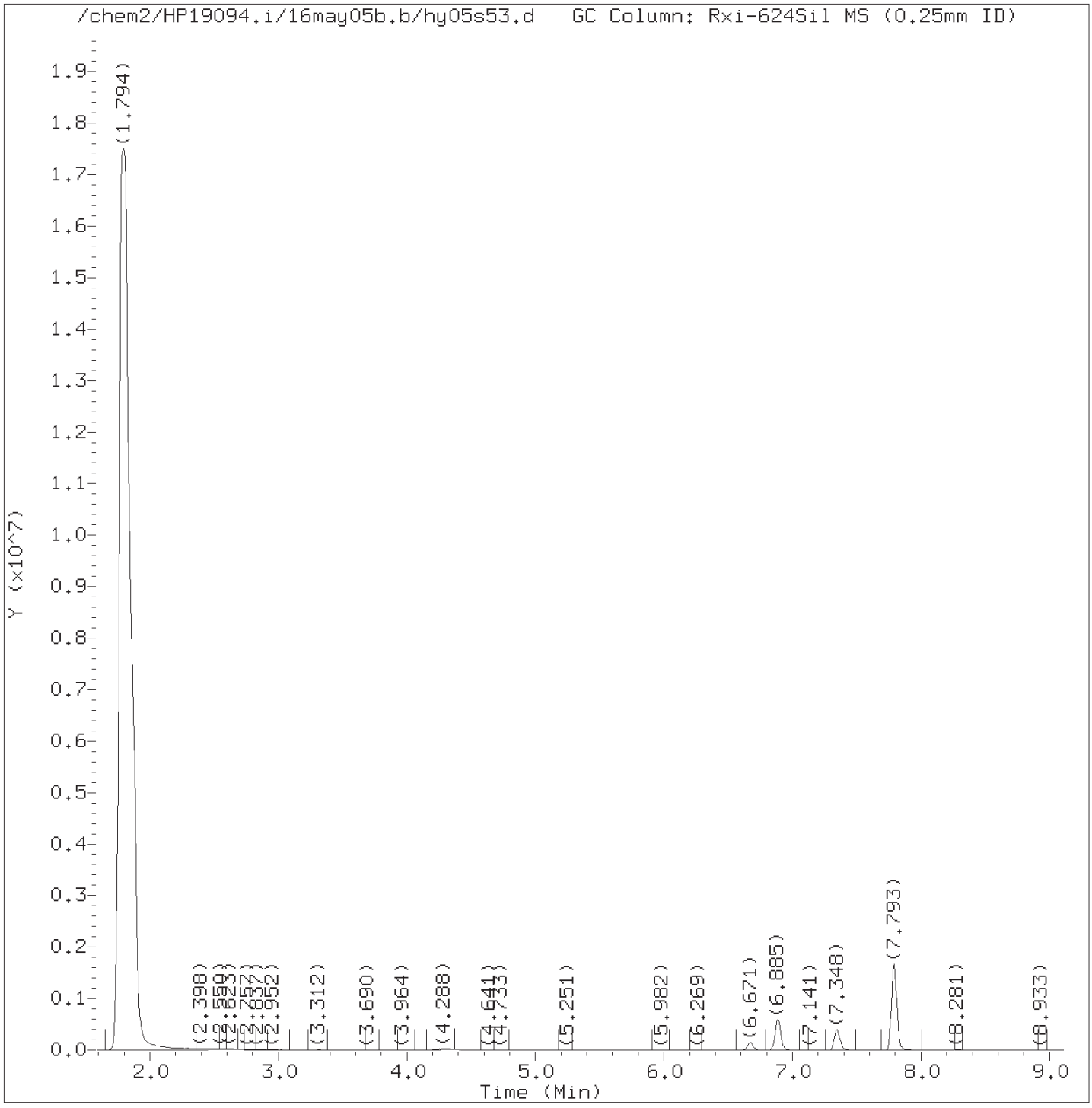
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.001)	113	547363	10.192	102%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.002)	102	84162	9.462	95%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2302604	10.115	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	680848	9.278	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:07. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

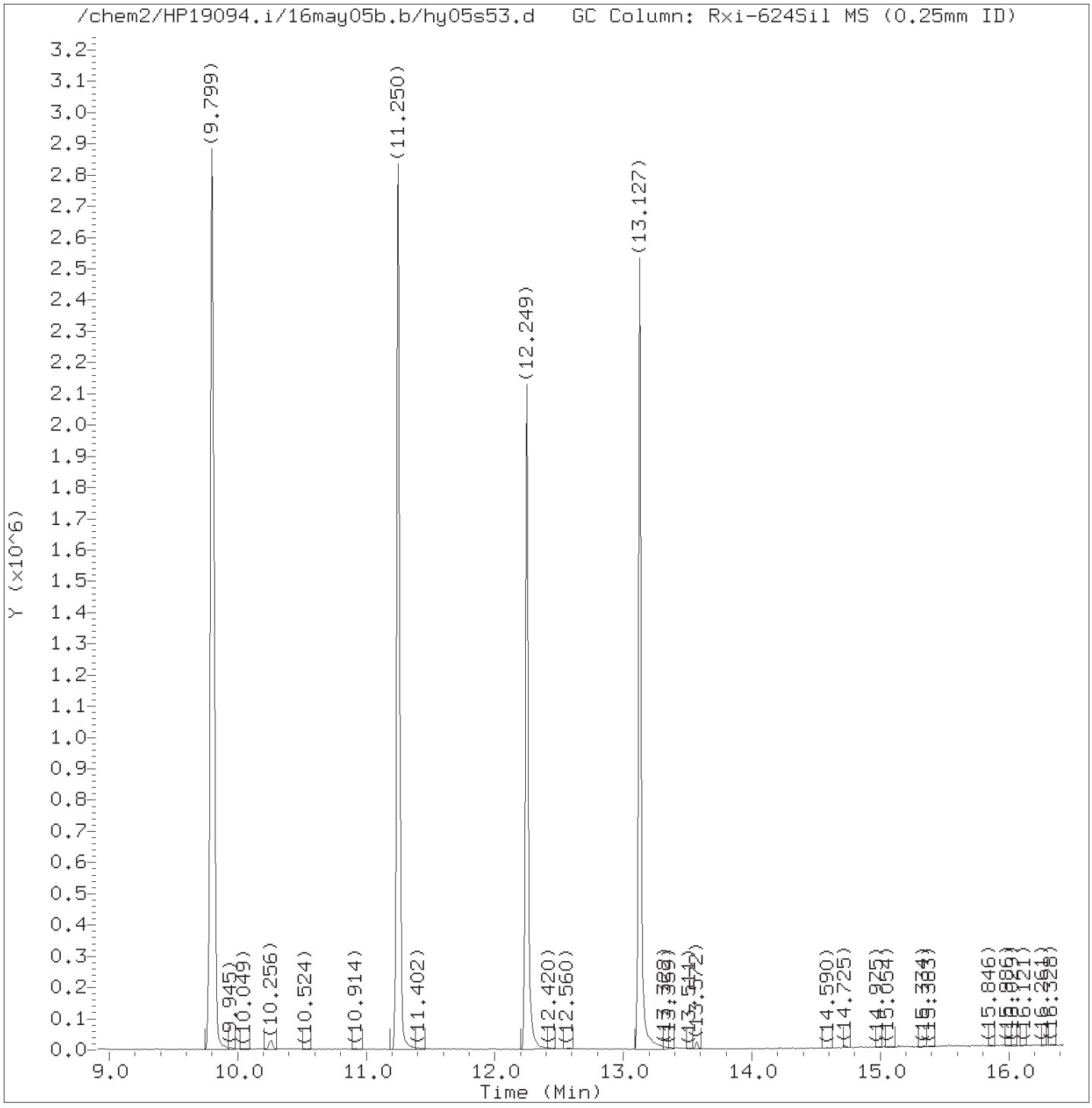
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s53.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 02:18 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:37 Automation

Sample Name: 5W12A Lab Sample ID: 8352785

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s53.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 02:18 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:37 Automation

Sample Name: 5W12A Lab Sample ID: 8352785

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s53.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 02:18 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 02:37 Automation

Sample Name: 5W12A Lab Sample ID: 8352785

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.306	65	105757	50.000
50)$Dibromofluoromethane	(2)	6.885	113	547363	10.192
57)$1,2-Dichloroethane-d4	(2)	7.342	102	84162	9.462
63)*Fluorobenzene	(2)	7.793	96	2279010	10.000
82)$Toluene-d8	(3)	9.799	98	2302604	10.115
97)*Chlorobenzene-d5	(3)	11.250	117	1598019	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	680848	9.278
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	691038	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:07.
Target 3.5 esignature user ID: kel01973

5WTB1 Lancaster Laboratories 8352786
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s42.d Injection date and time: **05-MAY-2016 22:35**
Data file Sample Info. Line: 5WTB1;8352786;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 22:54 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.257	(0.000)	438	65	104156	(-4)	50.00	
63) Fluorobenzene	7.781	(0.006)	1016	96	2240029	(1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1532685	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	668371	(-17)	10.00	

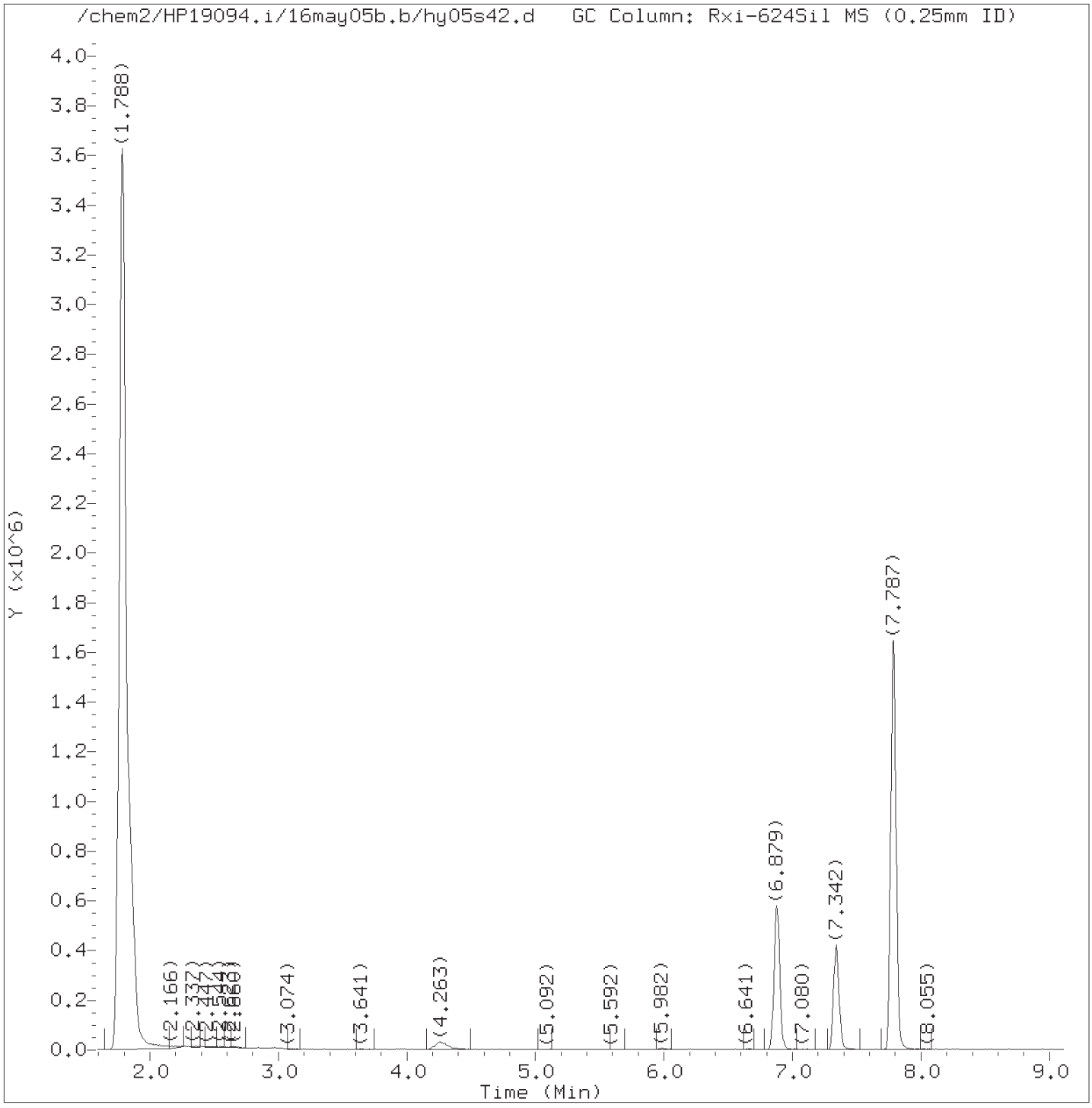
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.879	(0.000)	113	538224	10.197	102%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.000)	102	87947	10.060	101%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2238925	10.254	103%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	653207	9.281	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/05/2016 at 23:00. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

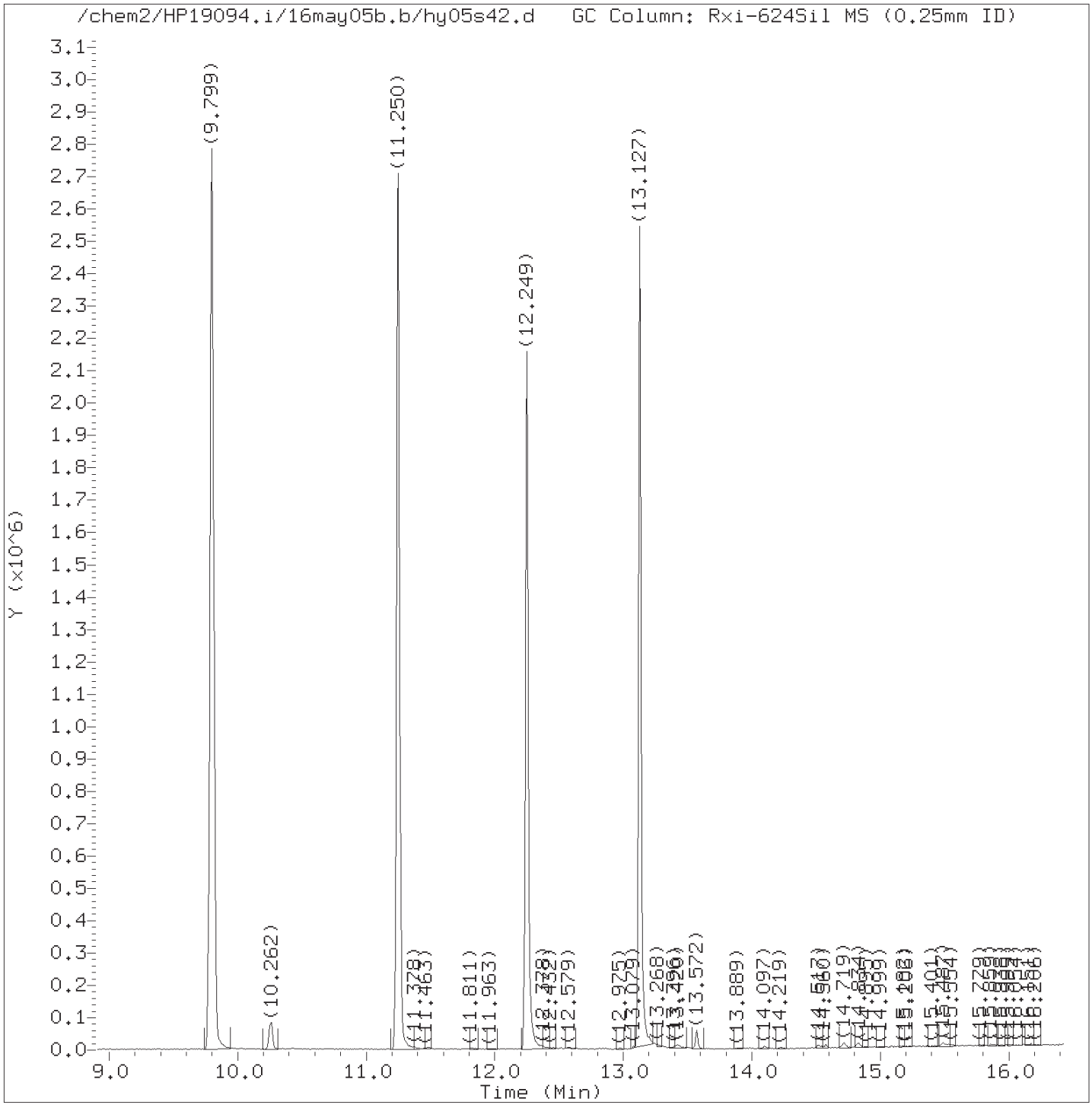
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s42.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:35 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 22:54 Automation

Sample Name: 5WTB1 Lab Sample ID: 8352786

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 23:00.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s42.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:35 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 22:54 Automation

Sample Name: 5WTB1 Lab Sample ID: 8352786

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 23:00.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s42.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:35 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 22:54 Automation

Sample Name: 5WTB1 Lab Sample ID: 8352786

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	104156	50.000
50)$Dibromofluoromethane	(2)	6.879	113	538224	10.197
57)$1,2-Dichloroethane-d4	(2)	7.342	102	87947	10.060
63)*Fluorobenzene	(2)	7.781	96	2240029	10.000
82)$Toluene-d8	(3)	9.799	98	2238925	10.254
97)*Chlorobenzene-d5	(3)	11.250	117	1532685	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	653207	9.281
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	668371	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 23:00.
Target 3.5 esignature user ID: kas02648

5WTB2 Lancaster Laboratories 8352787
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s43.d Injection date and time: **05-MAY-2016 22:55**
Data file Sample Info. Line: 5WTB2;8352787;1;0;;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 23:14 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.018)	441	65	94350	(-13)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2269855	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1594119	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	668868	(-17)	10.00	

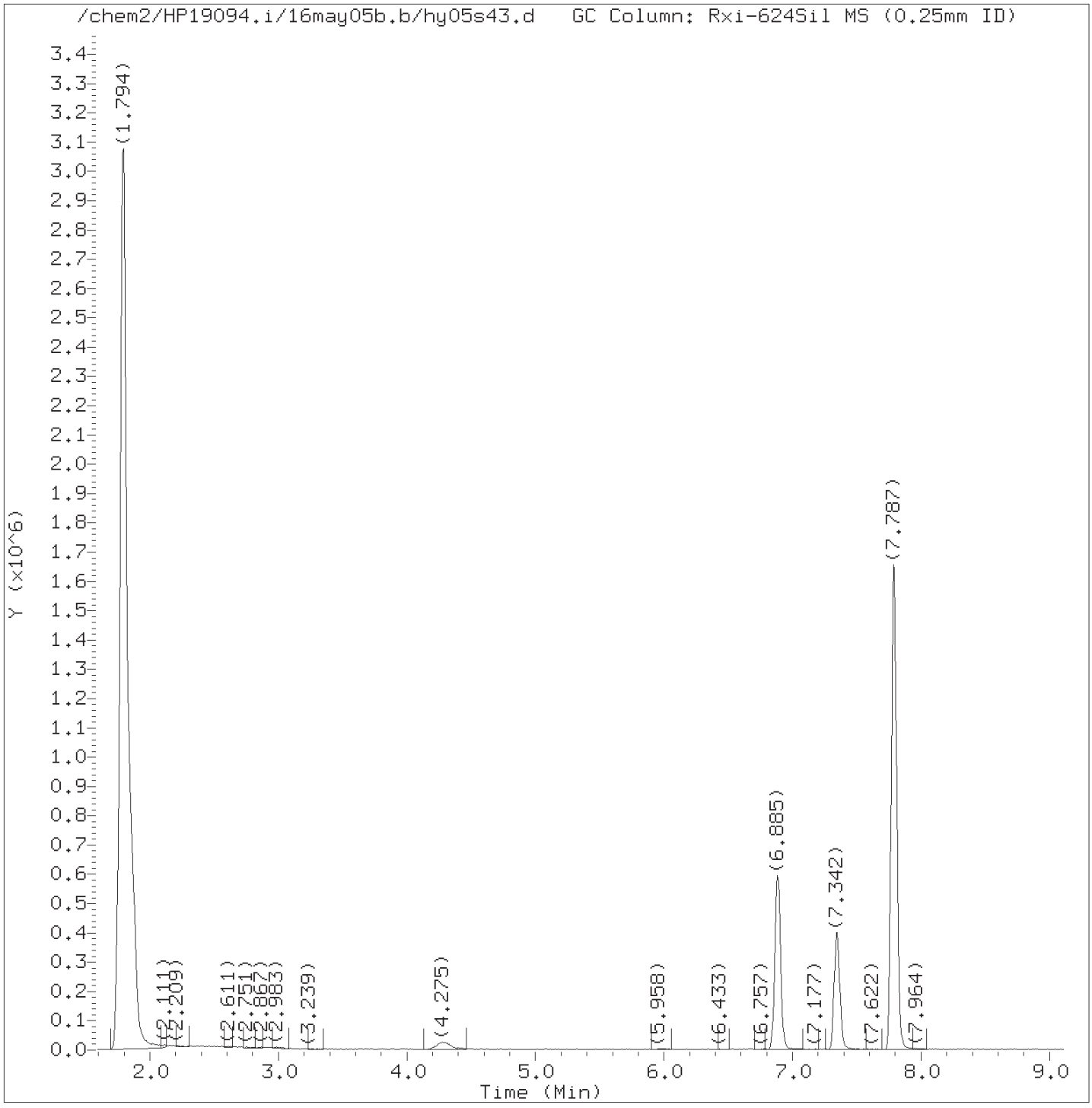
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(-0.001)	113	554767	10.372	104%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	85839	9.689	97%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2296274	10.112	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	670384	9.158	92%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:04. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

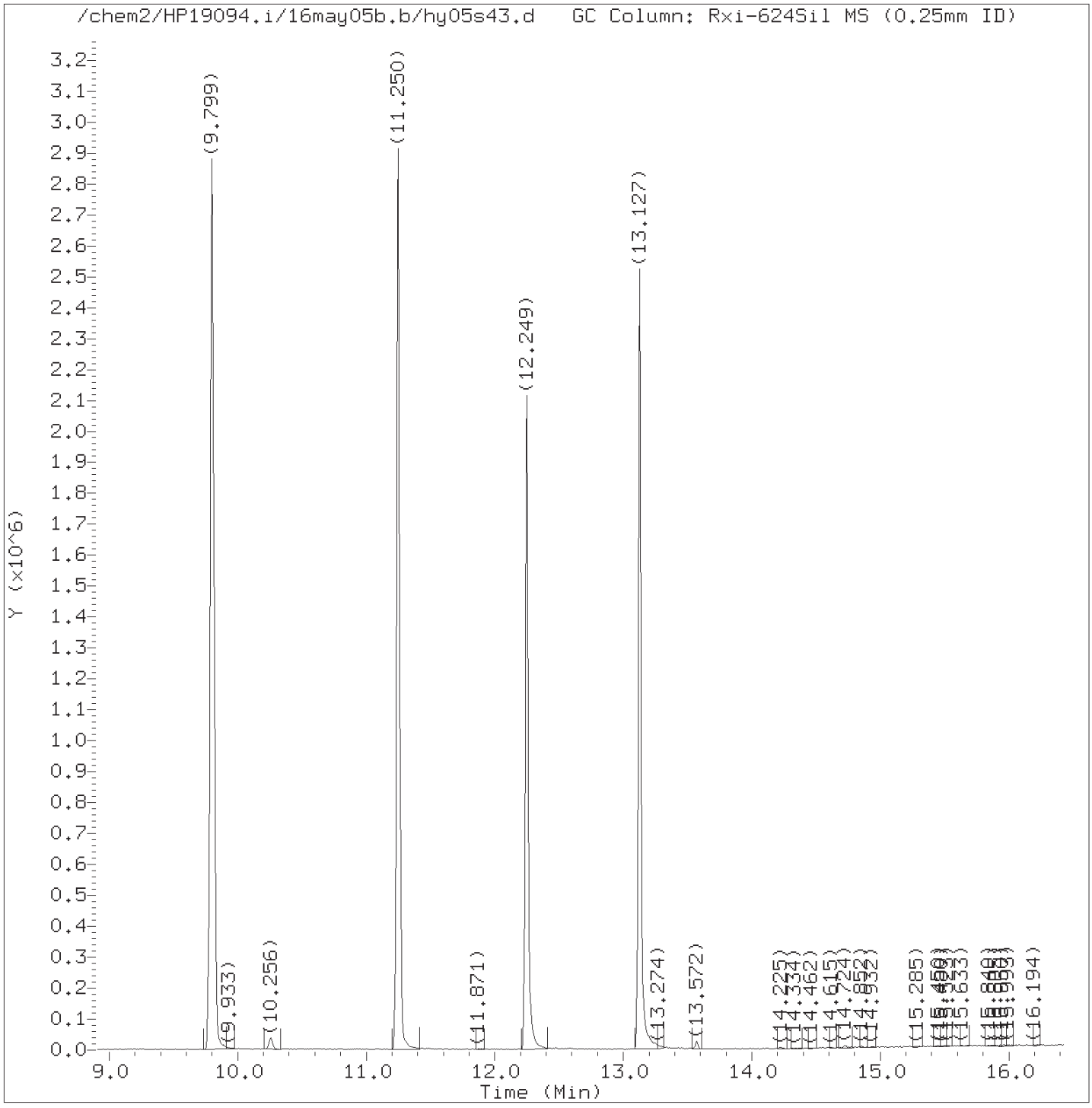
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s43.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:55 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:14 Automation

Sample Name: 5WTB2 Lab Sample ID: 8352787

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:04.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s43.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:55 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:14 Automation

Sample Name: 5WTB2 Lab Sample ID: 8352787

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:04.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s43.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 22:55 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:14 Automation

Sample Name: 5WTB2 Lab Sample ID: 8352787

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	94350	50.000
50)$Dibromofluoromethane	(2)	6.891	113	554767	10.372
57)$1,2-Dichloroethane-d4	(2)	7.348	102	85839	9.689
63)*Fluorobenzene	(2)	7.787	96	2269855	10.000
82)$Toluene-d8	(3)	9.799	98	2296274	10.112
97)*Chlorobenzene-d5	(3)	11.250	117	1594119	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	670384	9.158
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	668868	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:04.
Target 3.5 esignature user ID: kel01973

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\DATA\16MAR14A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kel01973	hm14t01.D	bfb FEB23-16	03/14/2016	10:34		
kel01973	HM14X05.D	blk	03/14/2016	11:10		
kel01973	HM14i11.D	VSTD025	03/14/2016	11:30		
kel01973	HM14i12.D	VSTD010	03/14/2016	11:51		
kel01973	HM14i13.D	VSTD005	03/14/2016	12:11		
kel01973	HM14i14.D	VSTD002	03/14/2016	12:31		
kel01973	HM14i15.D	VSTD001	03/14/2016	12:51		
kel01973	HM14i16.D	VSTD0.5	03/14/2016	13:12		
kel01973	HM14i17.D	VSTD0.2	03/14/2016	13:32		
kel01973	HM14m11.D	MDL0.1	03/14/2016	13:53		
kel01973	HM14cv11.D	LCSHSM	03/14/2016	14:13		
kel01973	HM14X06.D	blk	03/14/2016	14:33		
kel01973	HM14i01.D	VSTD025	03/14/2016	14:53		
kel01973	HM14i02.D	VSTD010	03/14/2016	15:14		
kel01973	HM14i03.D	VSTD005	03/14/2016	15:34		
kel01973	HM14i04.D	VSTD002	03/14/2016	15:54		
kel01973	HM14i05.D	VSTD001	03/14/2016	16:15		
kel01973	HM14i06.D	VSTD0.5	03/14/2016	16:35		
kel01973	HM14i07.D	VSTD0.2	03/14/2016	16:55		
kel01973	HM14m01.D	MDL0.1	03/14/2016	17:16		
kel01973	HM14m02.D	MDL0.4	03/14/2016	17:36		
kel01973	HM14cv1.D	LCSHLG	03/14/2016	17:56		
kel01973	HM14X07.D	blk	03/14/2016	18:58		
kel01973	HM14cv12.D	LCSHSM	03/14/2016	19:18		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\data\16may05B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	HY05T05.D	50NGBFB	05/05/2016	19:55	H161262AA	
KAS02648	HY05X05.D	BLANK	05/05/2016	20:08		
KAS02648	HY05C05.D	VSTD010	05/05/2016	20:28	H161262AA	
KAS02648	HY05S41.D	LCSH85	05/05/2016	20:48	H161262AA	
KAS02648	HY05S72.D	LCDH86	05/05/2016	21:09	H161263AA	
KAS02648	HY05X06.D	BLANK	05/05/2016	21:29		
KAS02648	HY05B05.D	VBLKH85	05/05/2016	21:49	H161262AA	
KAS02648	HY05S42.D	8352786	05/05/2016	22:35	H161262AA	
KAS02648	HY05S43.D	8352787	05/05/2016	22:55	H161262AA	
KAS02648	HY05S44.D	8352778	05/05/2016	23:16	H161262AA	
KAS02648	HY05S45.D	8352779MS	05/05/2016	23:36	H161262AA	
KAS02648	HY05S46.D	8352780MSD	05/05/2016	23:56	H161262AA	
KAS02648	HY05S47.D	8352776	05/06/2016	00:17	H161262AA	
KAS02648	HY05S48.D	8352777	05/06/2016	00:37	H161262AA	
KAS02648	HY05S49.D	8352781	05/06/2016	00:57	H161262AA	
KAS02648	HY05S50.D	8352782	05/06/2016	01:17	H161262AA	
KAS02648	HY05S51.D	8352783	05/06/2016	01:38	H161262AA	
KAS02648	HY05S52.D	8352784	05/06/2016	01:58	H161262AA	
KAS02648	HY05S53.D	8352785	05/06/2016	02:18	H161262AA	
KAS02648	HY05S73.D	8353304	05/06/2016	02:39	H161263AA	
KAS02648	HY05S74.D	8353305	05/06/2016	02:59	H161263AA	
KAS02648	HY05S75.D	8363238	05/06/2016	03:19	H161263AA	
KAS02648	HY05S76.D	8353303	05/06/2016	03:40	H161263AA	
KAS02648	HY05S77.D	8363229	05/06/2016	04:00	H161263AA	
KAS02648	HY05S78.D	8363230	05/06/2016	04:20	H161263AA	
KAS02648	HY05S79.D	8363231	05/06/2016	04:40	H161263AA	
KAS02648	HY05S80.D	8363233	05/06/2016	05:01	H161263AA	
KAS02648	HY05S81.D	8363234	05/06/2016	05:21	H161263AA	
KAS02648	HY05S82.D	8363235	05/06/2016	05:41	H161263AA	
KAS02648	HY05S83.D	8363236	05/06/2016	06:02	H161263AA	
KAS02648	HY05S84.D	8363237	05/06/2016	06:22	H161263AA	
KAS02648	HY05S85.D	8363232	05/06/2016	06:42	H161263AA	100
KAS02648	HY05S86.D	8363232DL	05/06/2016	07:03	H161263AA	1000

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\data\16may06B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	HY06T05.D	50NGBFB	05/06/2016	19:58	H161273AA	
KAS02648	HY06T06.D	50NGBFB	05/06/2016	20:07	H161273AA	
KAS02648	HY06X41.D	BLANK	05/06/2016	20:16		
KAS02648	HY06C05.D	VSTD010	05/06/2016	20:36	H161273AA	
KAS02648	HY06S41.D	LCSH89	05/06/2016	20:57	H161273AA	
KAS02648	HY06S42.D	LCDH89	05/06/2016	21:17	H161273AA	
KAS02648	HY06X42.D	BLANK	05/06/2016	21:37		
KAS02648	HY06B41.D	VBLKH89	05/06/2016	21:57	H161273AA	
KAS02648	HY06S43.D	8352778DL	05/06/2016	22:36	H161273AA	
KAS02648	HY06X51.D	BLANK	05/06/2016	22:56		
KAS02648	HY06S53.D	8362414	05/06/2016	23:17	H161274AA	
KAS02648	HY06S54.D	8362410	05/06/2016	23:37	H161274AA	
KAS02648	HY06S55.D	8362411	05/06/2016	23:57	H161274AA	
KAS02648	HY06S56.D	8362412	05/07/2016	00:17	H161274AA	
KAS02648	HY06S57.D	8362413	05/07/2016	00:38	H161274AA	
KAS02648	HY06X61.D	BLANK	05/07/2016	00:58		
KAS02648	HY06S73.D	8363247	05/07/2016	01:18	H161275AA	
KAS02648	HY06S74.D	8363240	05/07/2016	01:39	H161275AA	
KAS02648	HY06S75.D	8363241	05/07/2016	01:59	H161275AA	
KAS02648	HY06S76.D	8363242	05/07/2016	02:19	H161275AA	
KAS02648	HY06S77.D	8363243	05/07/2016	02:40	H161275AA	
KAS02648	HY06S78.D	8363244	05/07/2016	03:00	H161275AA	
KAS02648	HY06S79.D	8363246	05/07/2016	03:20	H161275AA	
KAS02648	HY06S80.D	8363239	05/07/2016	03:41	H161275AA	
KAS02648	HY06S81.D	8363239DL	05/07/2016	04:01	H161275AA	10
KAS02648	HY06S82.D	8363245	05/07/2016	04:21	H161275AA	200
KAS02648	HY06S83.D	8363245DL	05/07/2016	04:41	H161275AA	2000

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

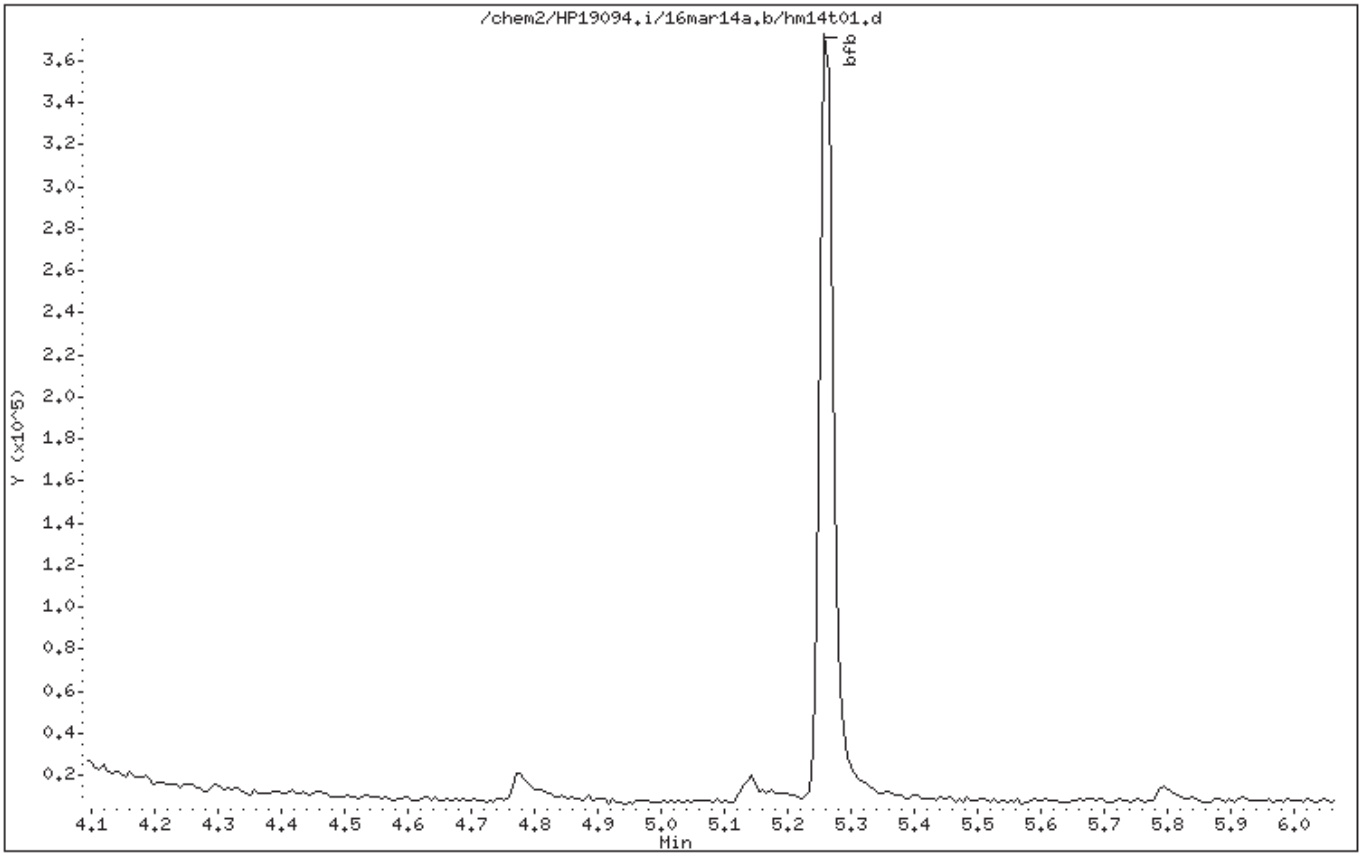
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

Instrument: HP19094.i

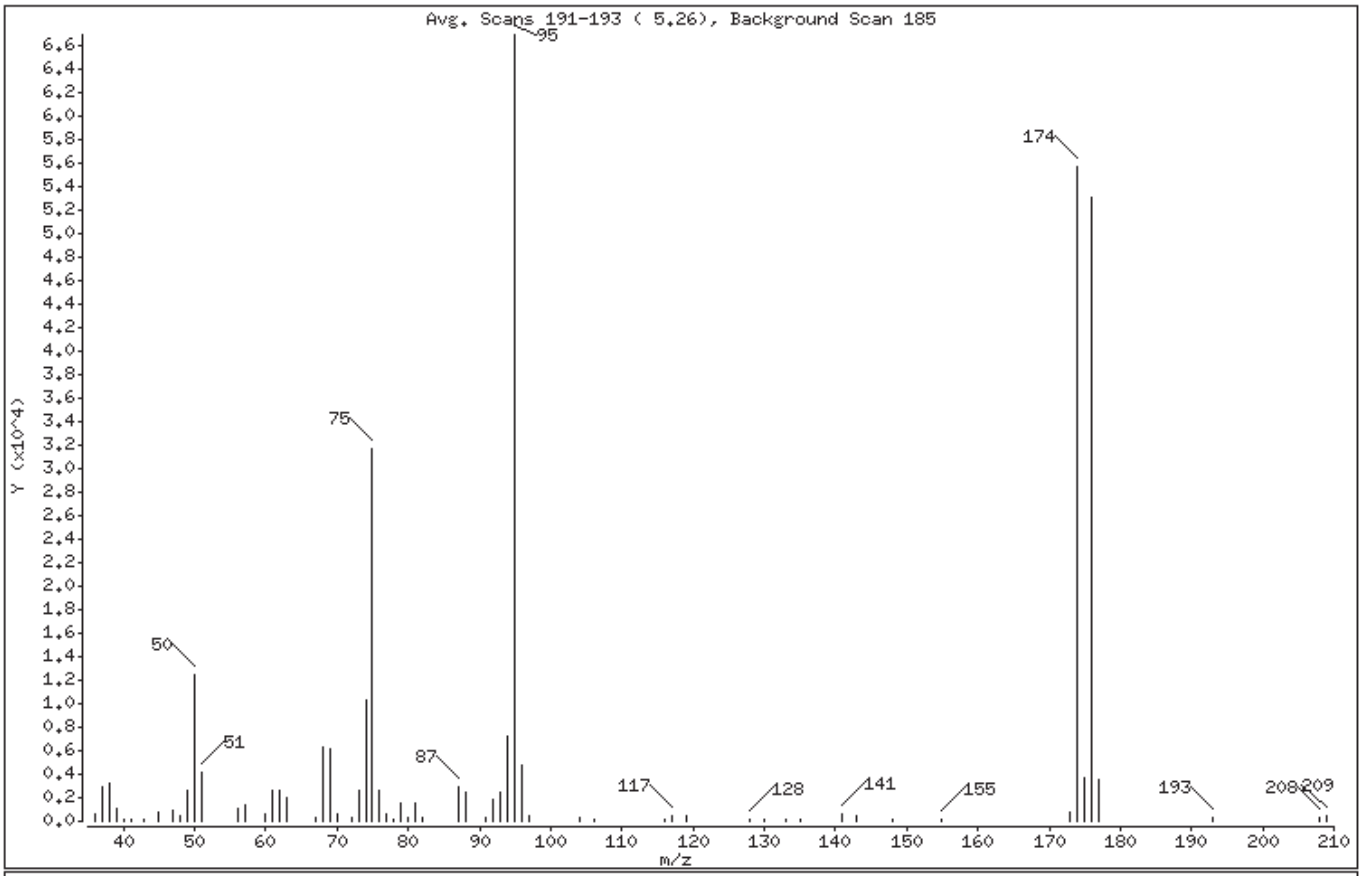
Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.66
75	30.00 - 60.00% of mass 95	47.24
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	1.08 (1.29)
174	50.00 - 100.00% of mass 95	83.27
175	5.00 - 9.00% of mass 174	5.47 (6.57)
176	95.00 - 101.00% of mass 174	79.30 (95.23)
177	5.00 - 9.00% of mass 176	5.20 (6.56)

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

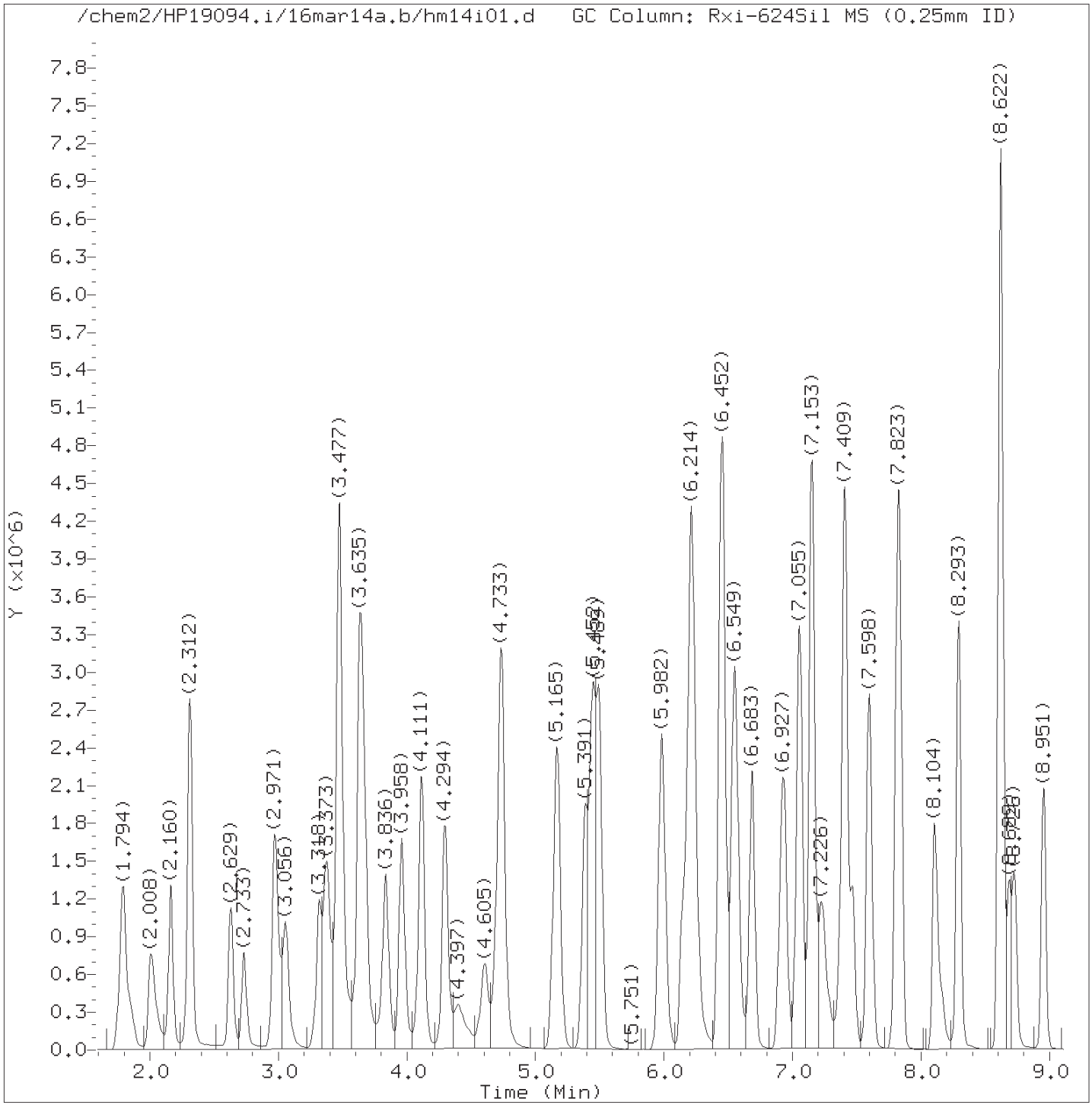
Operator: kel01973

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hm14t01.d
Spectrum: Avg. Scans 191-193 (5.26), Background Scan 185
Location of Maximum: 95.00
Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	568	62.00	2690	87.00	2937	135.00	88
37.00	2915	63.00	1978	88.00	2489	141.00	601
38.00	3227	67.00	295	91.00	352	143.00	452
39.00	1041	68.00	6248	92.00	1831	148.00	106
40.00	211	69.00	6175	93.00	2405	155.00	102
41.00	138	70.00	603	94.00	7195	173.00	721
43.00	80	72.00	384	95.00	66888	174.00	55696
45.00	819	73.00	2572	96.00	4710	175.00	3661
47.00	979	74.00	10334	97.00	454	176.00	53040
48.00	502	75.00	31600	104.00	282	177.00	3478
49.00	2564	76.00	2635	106.00	220	193.00	329
50.00	12480	77.00	553	116.00	198	208.00	291
51.00	4076	78.00	227	117.00	435	209.00	398
56.00	1053	79.00	1490	119.00	416		
57.00	1417	80.00	341	128.00	174		
60.00	691	81.00	1539	130.00	130		
61.00	2576	82.00	332	133.00	162		

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

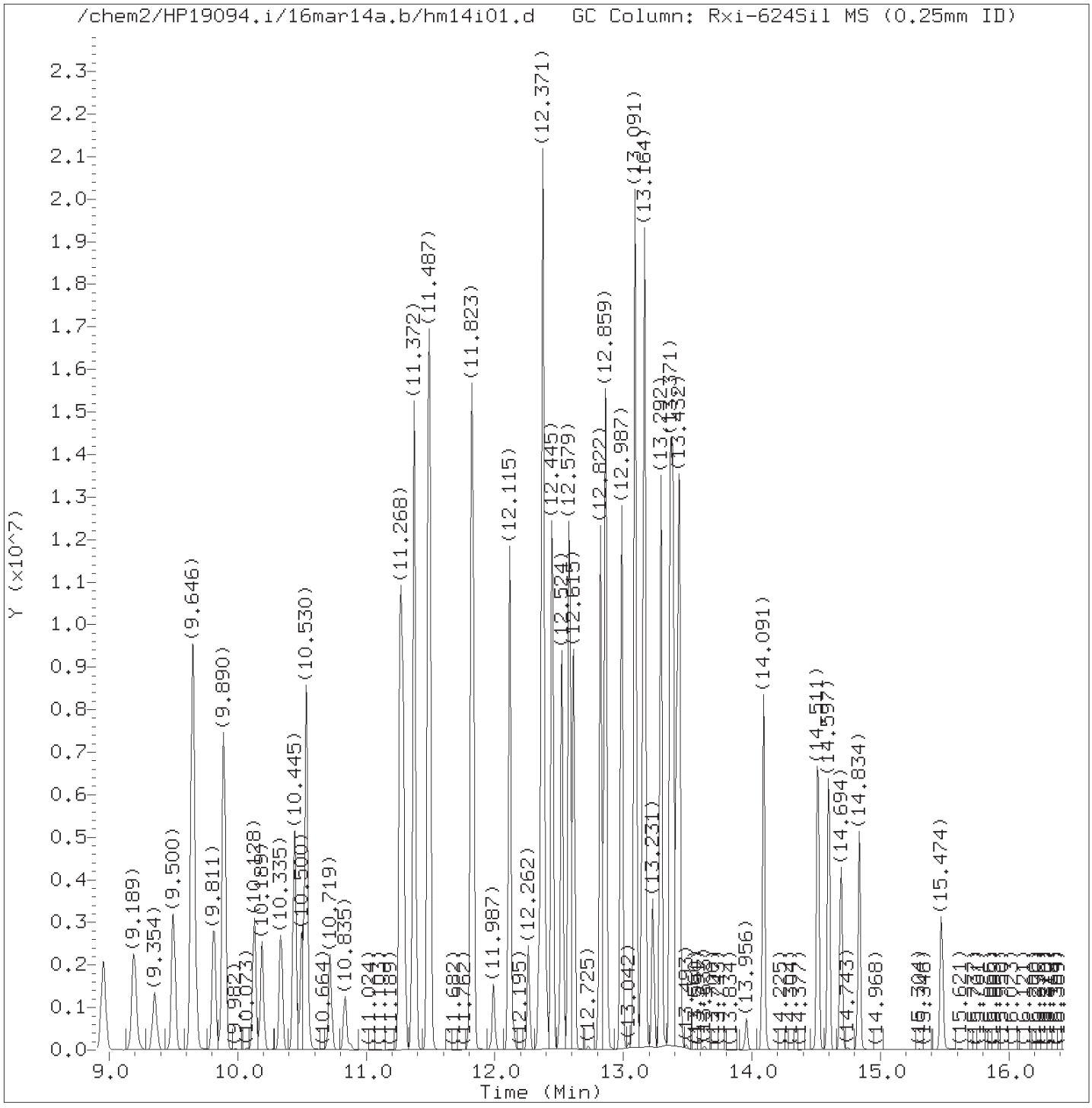
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	2008997	25.815
2) Chloromethane	(2)	2.160	50	1930677	25.291
5) Vinyl Chloride	(2)	2.300	62	1782605	25.108
6) 1,3-Butadiene	(2)	2.318	39	1259167	23.448
7) Bromomethane	(2)	2.629	94	1127283	23.922
8) Chloroethane	(2)	2.733	64	1011870	23.121
9) Dichlorofluoromethane	(2)	2.971	67	2377573	23.939
10) Trichlorofluoromethane	(2)	3.056	101	2325783	25.146
11) Ethyl ether	(2)	3.312	59	976265	25.585
12) Freon 123a	(2)	3.373	67	1755457	24.811
13) Acrolein	(1)	3.477	56	7761893	1224.807
15) 1,1-Dichloroethene	(2)	3.629	96	1309324	24.672
14) Acetone	(1)	3.641	43	2085385	238.809
16) Freon 113	(2)	3.666	101	1386666	25.128
17) Methyl Iodide	(2)	3.836	142	2464824	25.088
18) Carbon Disulfide	(2)	3.958	76	3988224	24.337
21) Methyl Acetate	(1)	4.080	43	548869	22.378
22) Allyl Chloride	(2)	4.117	41	2503549	24.949
26)*t-Butyl Alcohol-d10	(1)	4.281	65	111147M	50.000
23) Methylene Chloride	(2)	4.300	84	1415279	24.953
28) t-Butyl Alcohol	(1)	4.403	59	1530138	512.007
29) Acrylonitrile	(1)	4.605	53	1344372	128.306
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	3131373	25.573
31) trans-1,2-Dichloroethene	(2)	4.739	96	1409407	24.663
32) n-Hexane	(2)	5.165	57	2389053	24.629
33) 1,1-Dichloroethane	(2)	5.385	63	2935899	25.206
34) di-Isopropyl Ether	(2)	5.446	45	5169991	25.428
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	2387583	24.972
37) Ethyl t-butyl ether	(2)	5.982	59	4335697	25.288
40) 1,2-Dichloroethene (Total)	(2)		96	2995941	49.726
38) 2-Butanone	(1)	6.153	43	3666599	246.413
39) cis-1,2-Dichloroethene	(2)	6.208	96	1586534	25.063
42) Propionitrile	(1)	6.220	54	1894772	510.674
41) 2,2-Dichloropropane	(2)	6.232	77	2291981	24.594
45) Methacrylonitrile	(1)	6.452	67	3145891	247.630
47) Bromochloromethane	(2)	6.543	128	630660	26.187
48) Tetrahydrofuran	(1)	6.562	71	914371	242.906
49) Chloroform	(2)	6.690	83	2629287	24.697

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546108	10.267
50)$Dibromofluoromethane	(2)	6.903	111	562451	10.277
51) 1,1,1-Trichloroethane	(2)	6.933	97	2254077	24.822
52) Cyclohexane	(2)	7.055	56	2810155	23.681
52) Cyclohexane	(2)	7.055	84	2186157	24.061
52) Cyclohexane	(2)	7.055	69	821906	24.214
55) 1,1-Dichloropropene	(2)	7.147	75	2187719	25.099
54) Carbon Tetrachloride	(2)	7.159	117	2081377	25.209
56) Isobutyl Alcohol	(1)	7.226	41	1297190	1225.034
57)$1,2-Dichloroethane-d4	(2)	7.366	102	89493	10.158
57)$1,2-Dichloroethane-d4	(2)	7.366	65	462443	10.282
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57884	10.406
58) Benzene	(2)	7.409	78	5997923	24.725
59) 1,2-Dichloroethane	(2)	7.470	62	1572413M	25.017
60) t-Amyl methyl ether	(2)	7.598	73	3533776	25.222
63)*Fluorobenzene	(2)	7.805	96	2257211	10.000
62) n-Heptane	(2)	7.836	43	2647219	24.144
65) n-Butanol	(1)	8.104	56	2053515	2409.417
67) Trichloroethene	(2)	8.293	95	1580529	24.997
70) 1,2-Dichloropropane	(2)	8.616	63	1581786	25.042
69) Methylcyclohexane	(2)	8.622	83	2616789	25.266
71) Methyl Methacrylate	(1)	8.683	69	672245	25.327
72) 1,4-Dioxane	(1)	8.707	88	205013M	1220.938
73) Dibromomethane	(2)	8.726	93	658959	25.328
74) Bromodichloromethane	(2)	8.951	83	1891232	26.035
76) 2-Nitropropane	(1)	9.189	41	2013504	236.646
80) cis-1,3-Dichloropropene	(2)	9.500	75	2312738	25.907
81) 4-Methyl-2-Pentanone	(1)	9.646	43	9014052	246.150
82)$Toluene-d8	(3)	9.811	98	2224229	9.764
82)$Toluene-d8	(3)	9.811	100	1444488	9.796
83) Toluene	(3)	9.890	92	3677619	23.967
84) trans-1,3-Dichloropropene	(3)	10.128	75	1849106	25.712
85) 1,3-Dichloropropene (total)	(3)		75	4161844	51.619
86) Ethyl Methacrylate	(3)	10.189	69	1408940	25.467
88) 1,1,2-Trichloroethane	(3)	10.335	97	907741	24.424
89) Tetrachloroethene	(3)	10.445	166	1732530	23.909
90) 1,3-Dichloropropane	(3)	10.500	76	1664933	24.914
91) 2-Hexanone	(1)	10.530	43	6183877	238.836

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	1238486	25.994
95) 1,2-Dibromoethane	(3)	10.835	107	882013	25.195
97)*Chlorobenzene-d5	(3)	11.262	117	1599038	10.000
98) Chlorobenzene	(3)	11.286	112	4053298	24.267
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	1433933	25.027
100) Ethylbenzene	(3)	11.378	91	7188062	23.933
101) m+p-Xylene	(3)	11.487	106	5520871	48.193
105) Xylene (Total)	(3)		106	8218402	72.456
104) o-Xylene	(3)	11.817	106	2697531	24.266
106) Styrene	(3)	11.829	104	4363621	24.536
107) Bromoform	(3)	11.987	173	702183	26.571
108) Isopropylbenzene	(3)	12.115	105	7093094	24.076
111)$4-Bromofluorobenzene	(3)	12.262	95	749580	10.209
111)$4-Bromofluorobenzene	(3)	12.262	174	624138	10.195
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	1073753M	23.250
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	2892089	256.466
114) Bromobenzene	(4)	12.377	156	1611323	23.425
116) 1,2,3-Trichloropropane	(4)	12.396	110	276663	23.862
117) n-Propylbenzene	(4)	12.445	91	8486136	22.809
119) 2-Chlorotoluene	(4)	12.524	126	1665528	23.216
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	6020587	23.211
122) 4-Chlorotoluene	(4)	12.615	126	1687462	23.082
125) tert-Butylbenzene	(4)	12.822	134	1287997M	23.293
126) Pentachloroethane	(4)	12.853	167	1054918	25.278
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	6025338	23.232
128) sec-Butylbenzene	(4)	12.987	105	7704726	22.942
131) 1,3-Dichlorobenzene	(4)	13.085	146	3165482	23.527
132) p-Isopropyltoluene	(4)	13.097	119	6646807	23.380
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	737864	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	3101519	22.689
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	2480382	23.061
136) Benzyl Chloride	(4)	13.231	126	466327	25.487
138) n-Butylbenzene	(4)	13.383	92	3339202	24.011
139) 1,2-Dichlorobenzene	(4)	13.420	146	2740022	22.928
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	148809	25.580
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	1922561	22.489
146) Hexachlorobutadiene	(4)	14.597	225	1095991	24.535
147) Naphthalene	(4)	14.694	128	2932131	19.951

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.834	180	1493780	21.877

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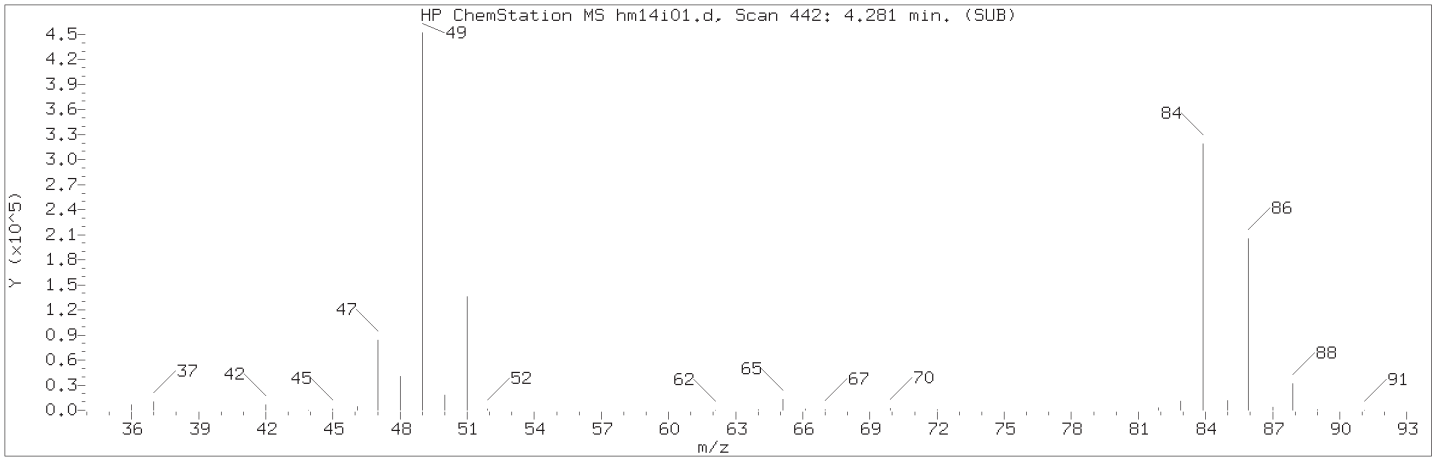
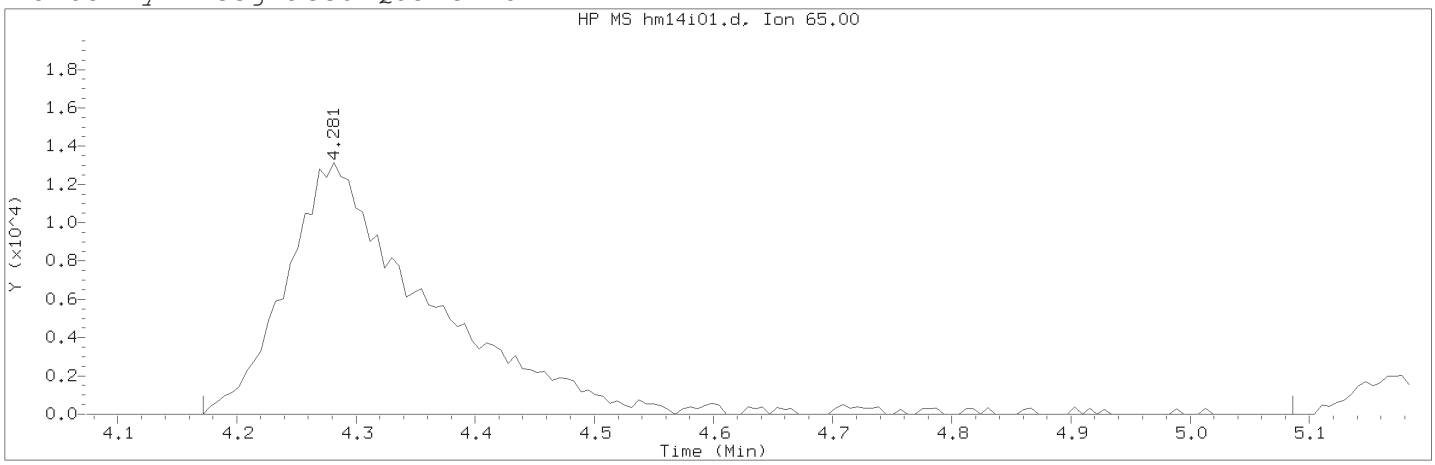
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

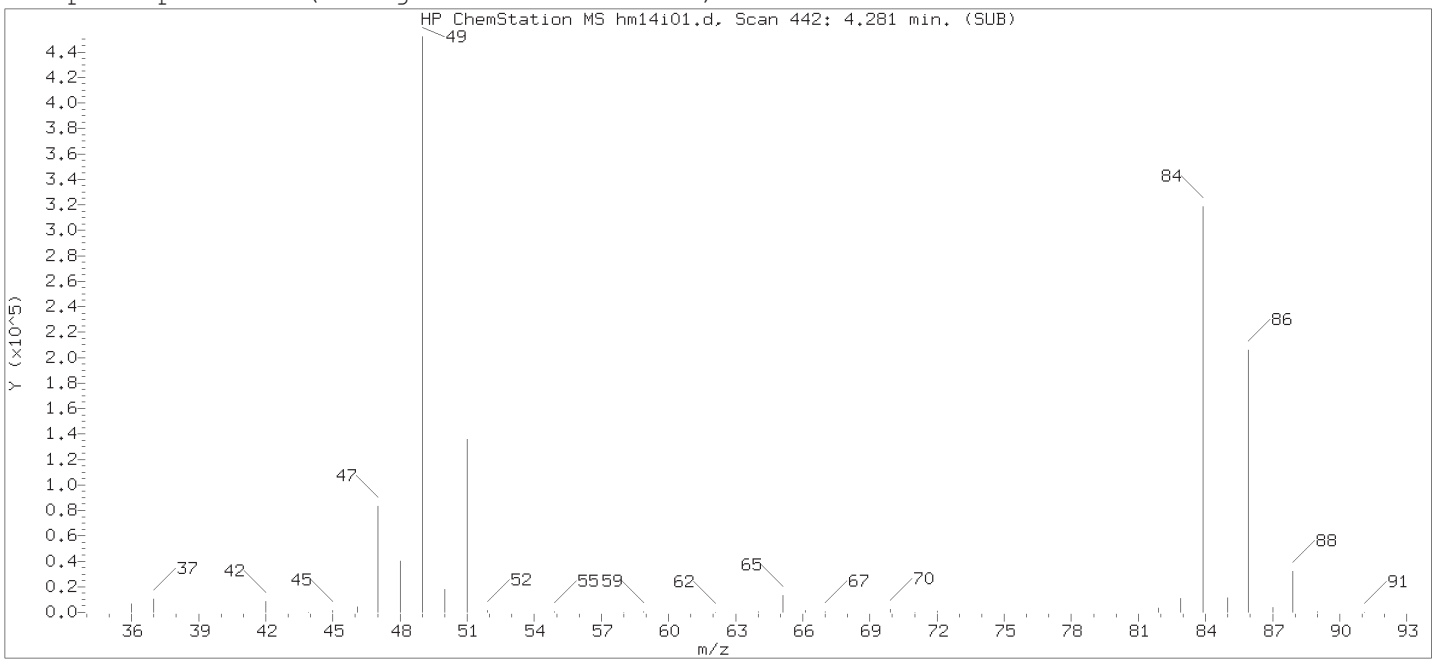
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 111147M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

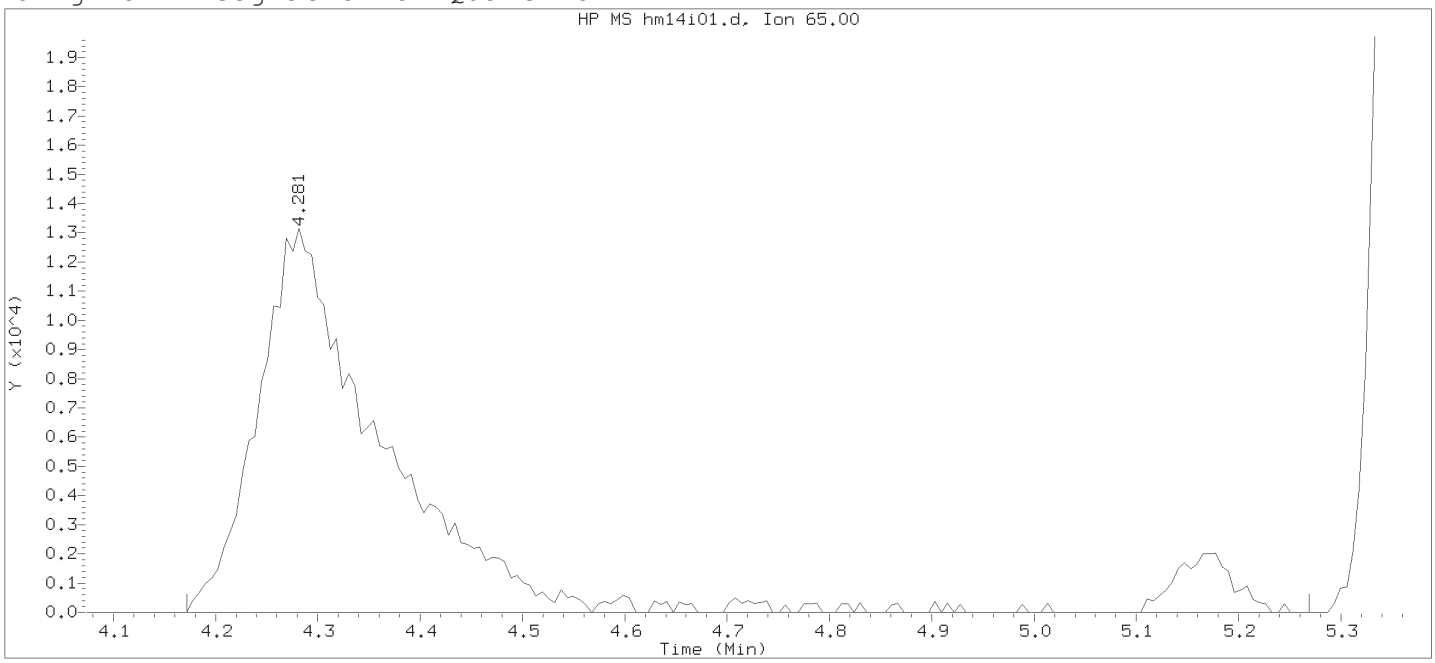
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

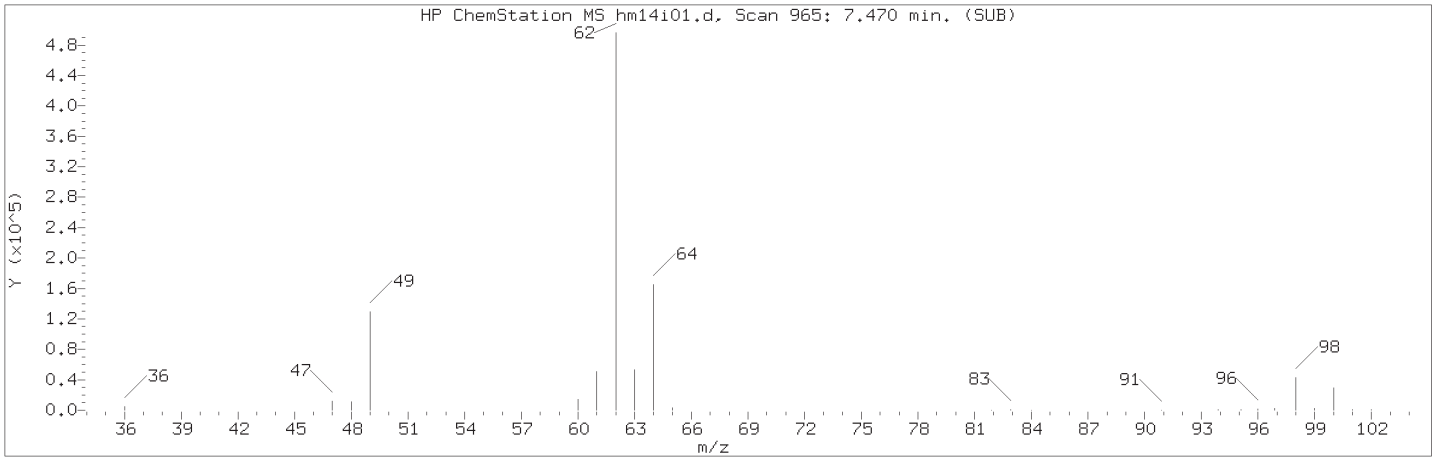
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

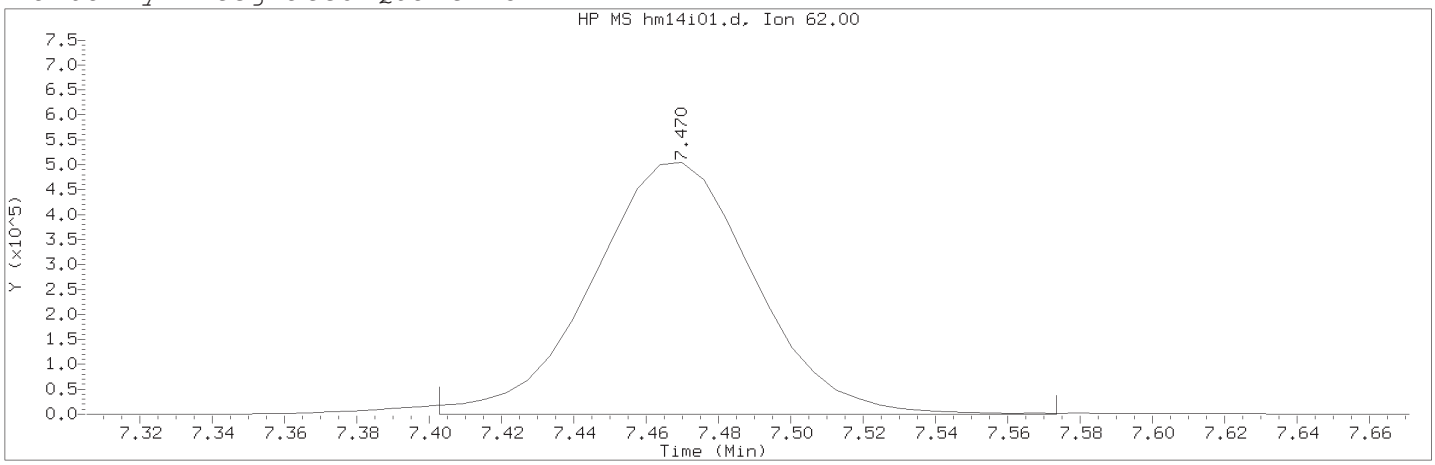
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 442		
Retention Time (minutes)	: 4.281		
Quant Ion	: 65.00		
Area	: 119286		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 423	Integration stop scan:	603
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

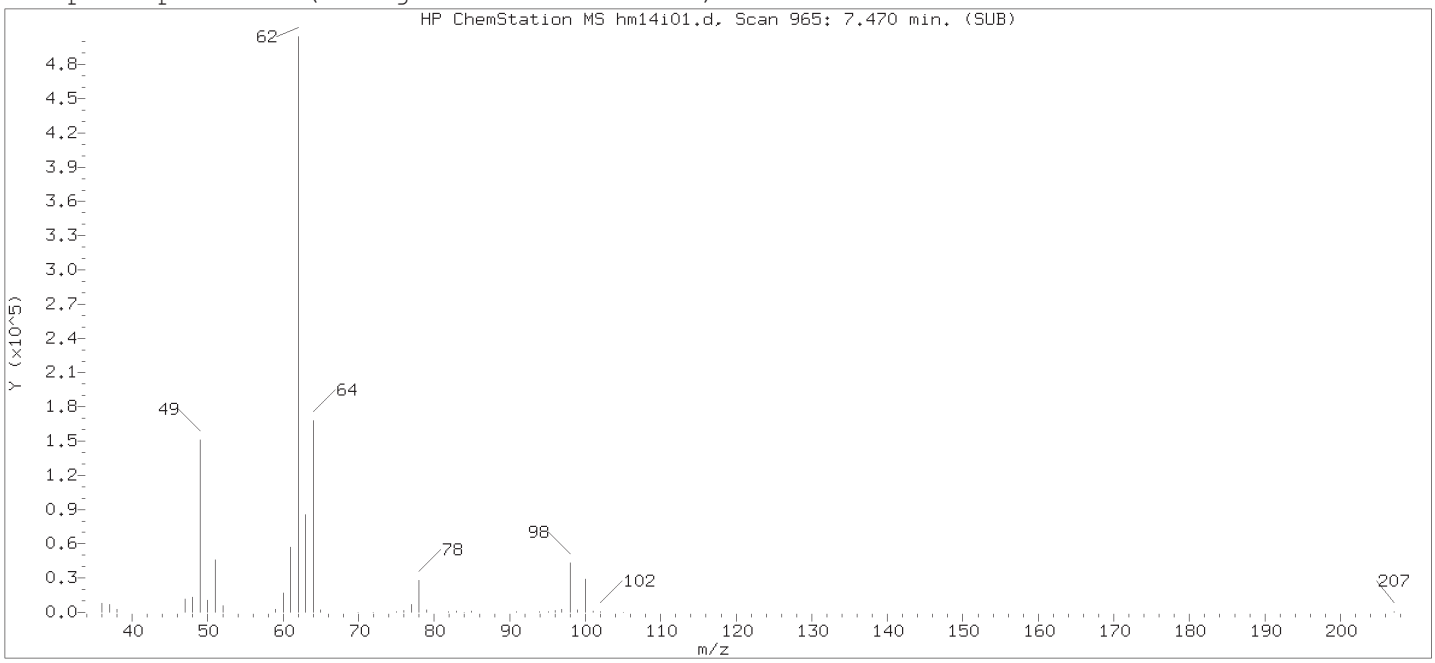
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 1572413M
On-Column Amount (ng) : 25.0167
Integration start scan : 953 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

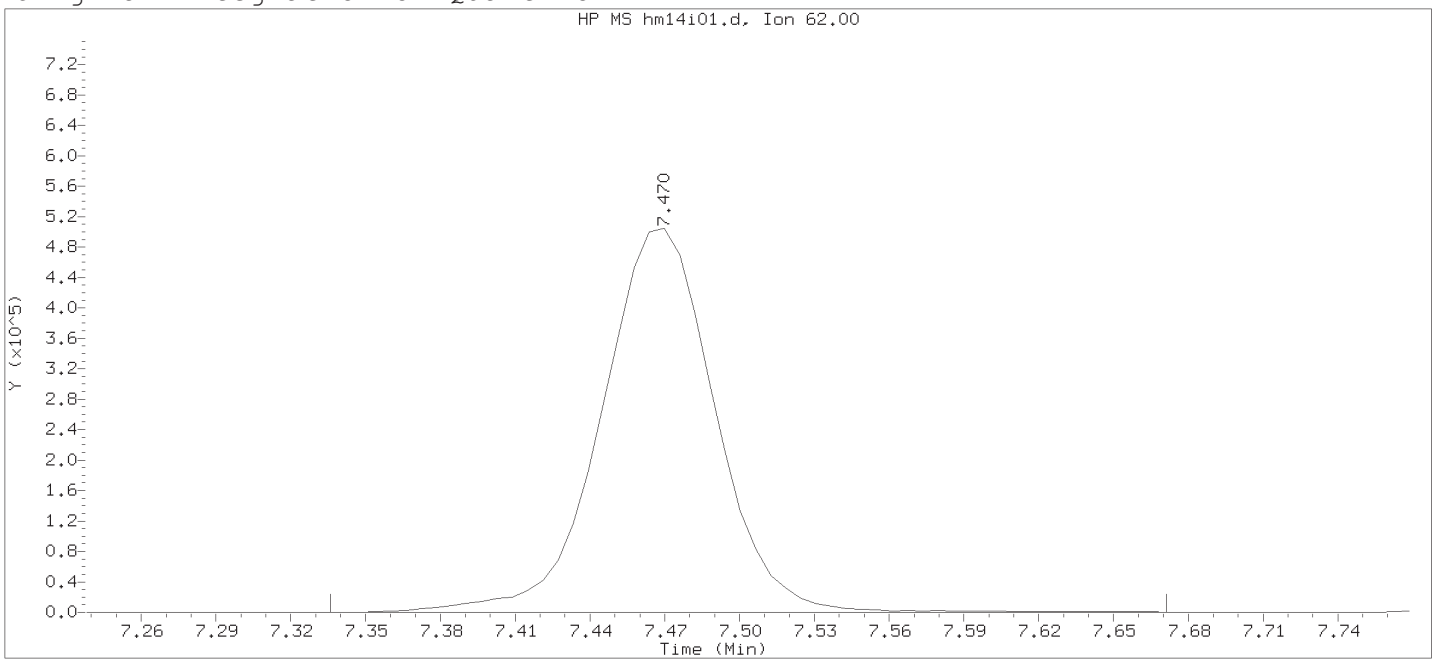
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

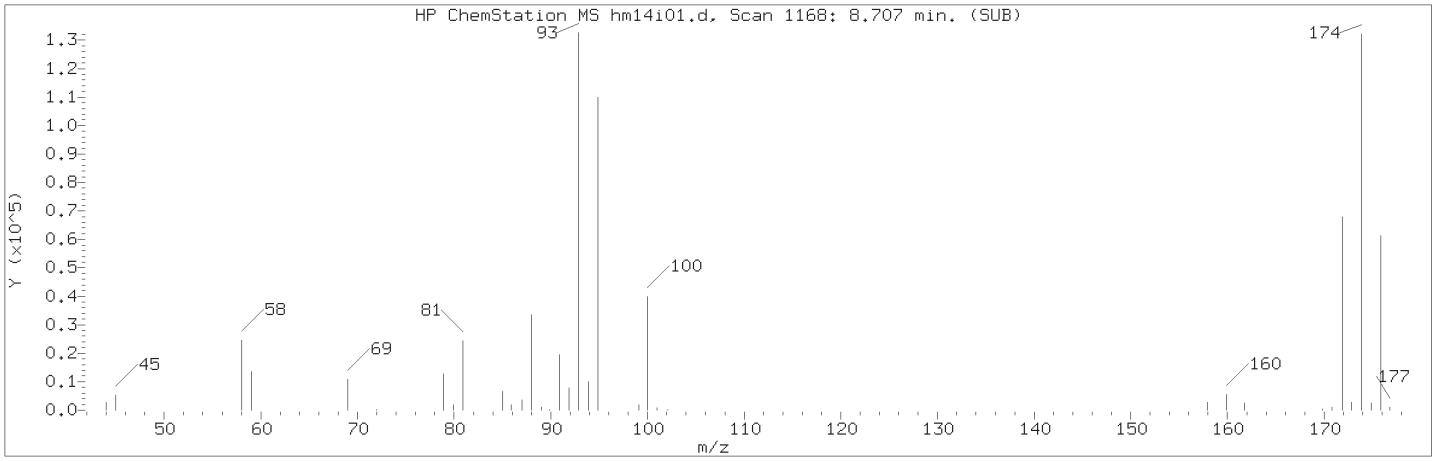
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

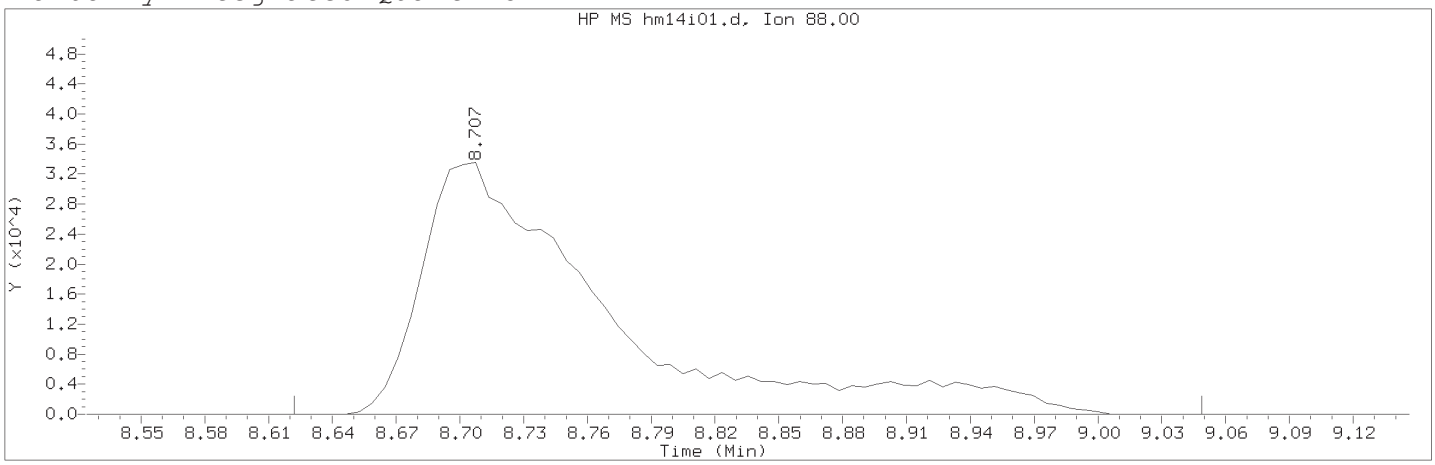
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 1596005
On-column Amount (ng) : 25.0000
Integration start scan : 942 Integration stop scan: 997
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

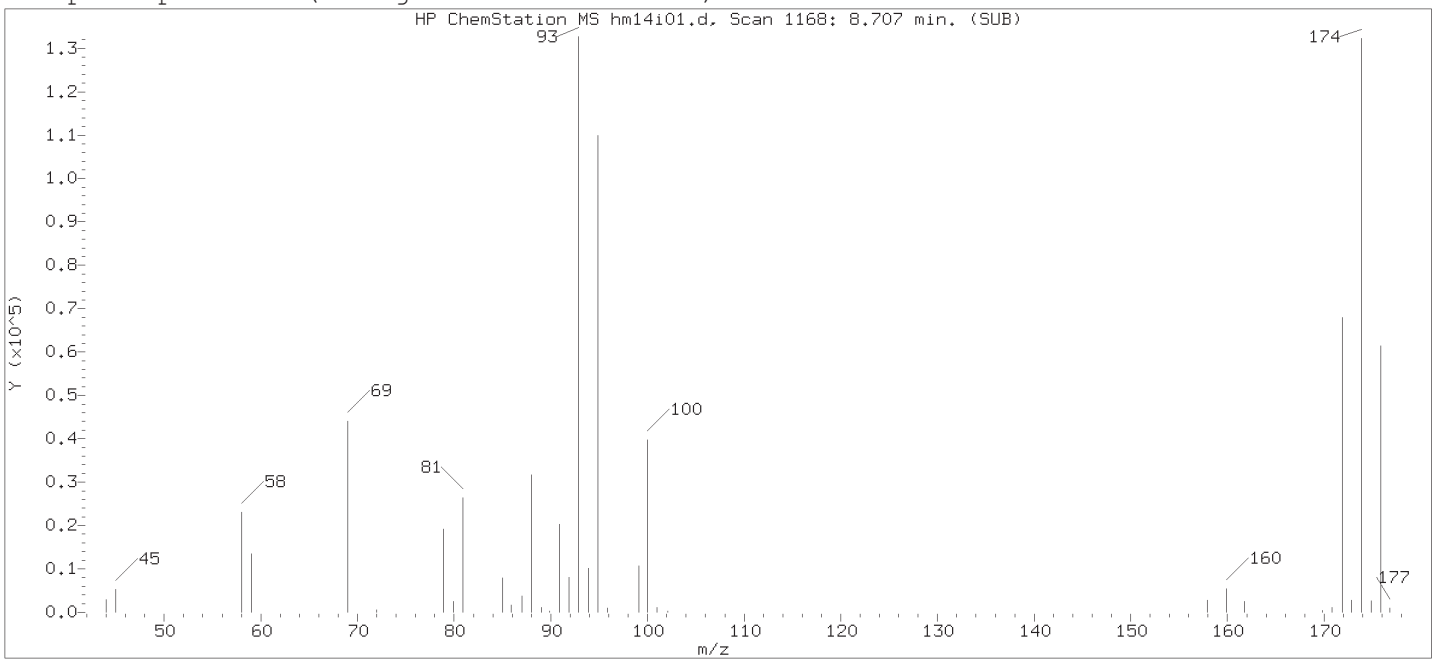
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area (flag) : 205013M
On-Column Amount (ng) : 1220.9383
Integration start scan : 1153 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

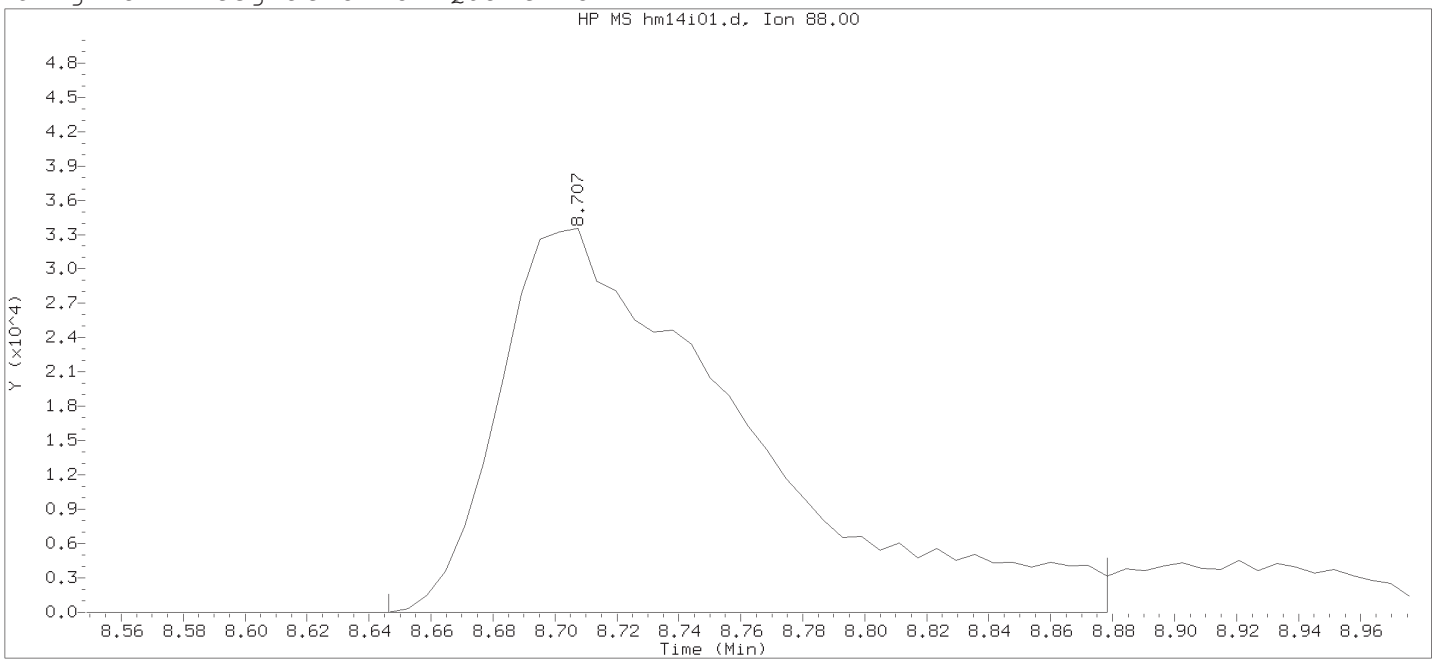
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

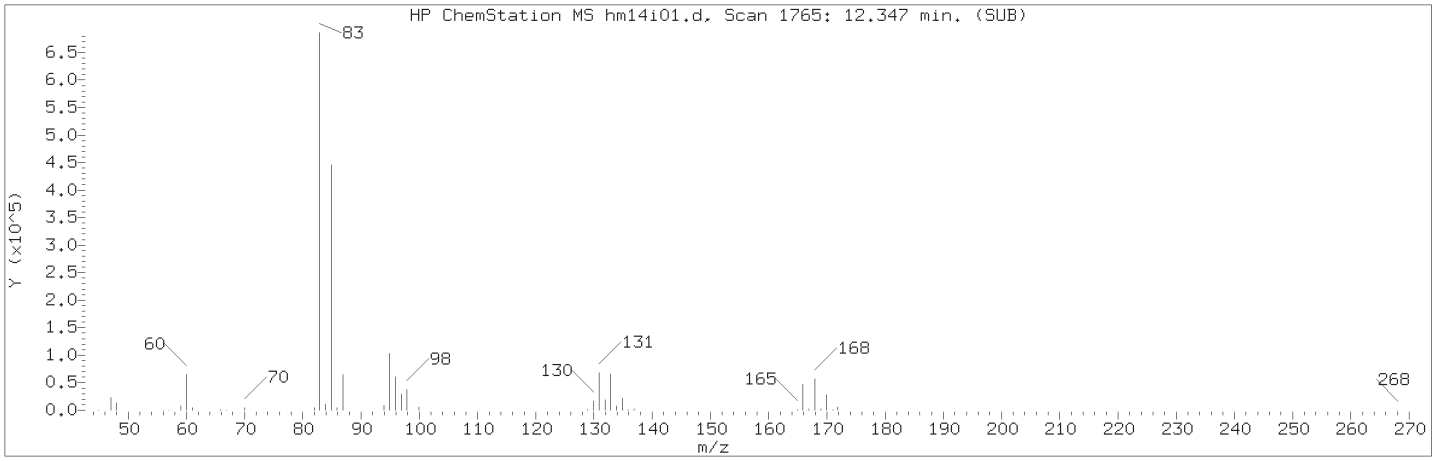
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

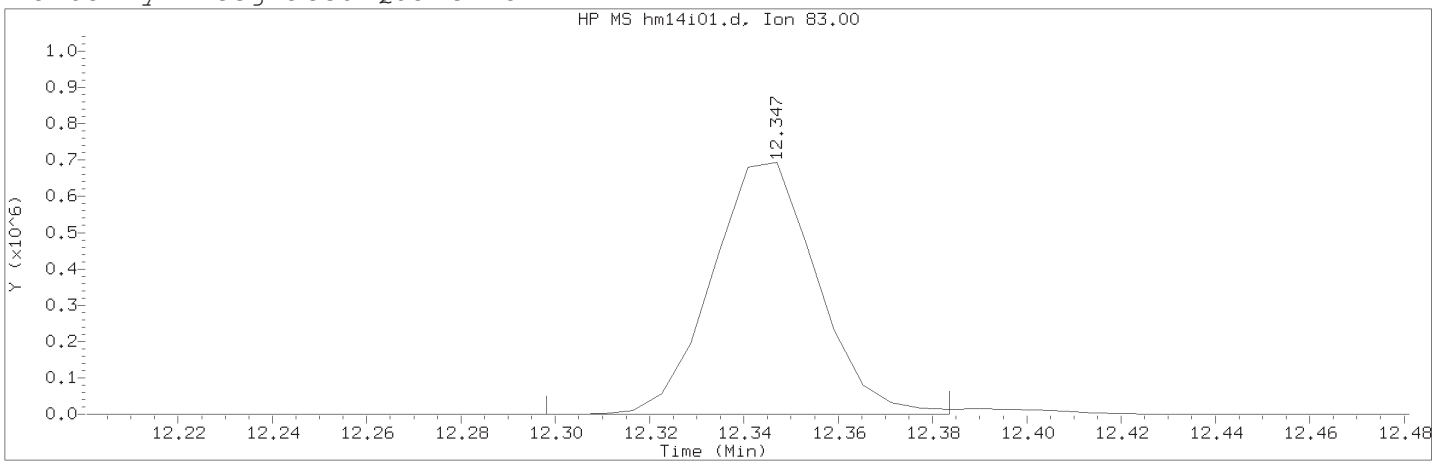
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area : 182586
On-column Amount (ng) : 1250.0000
Integration start scan : 1157 Integration stop scan: 1195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

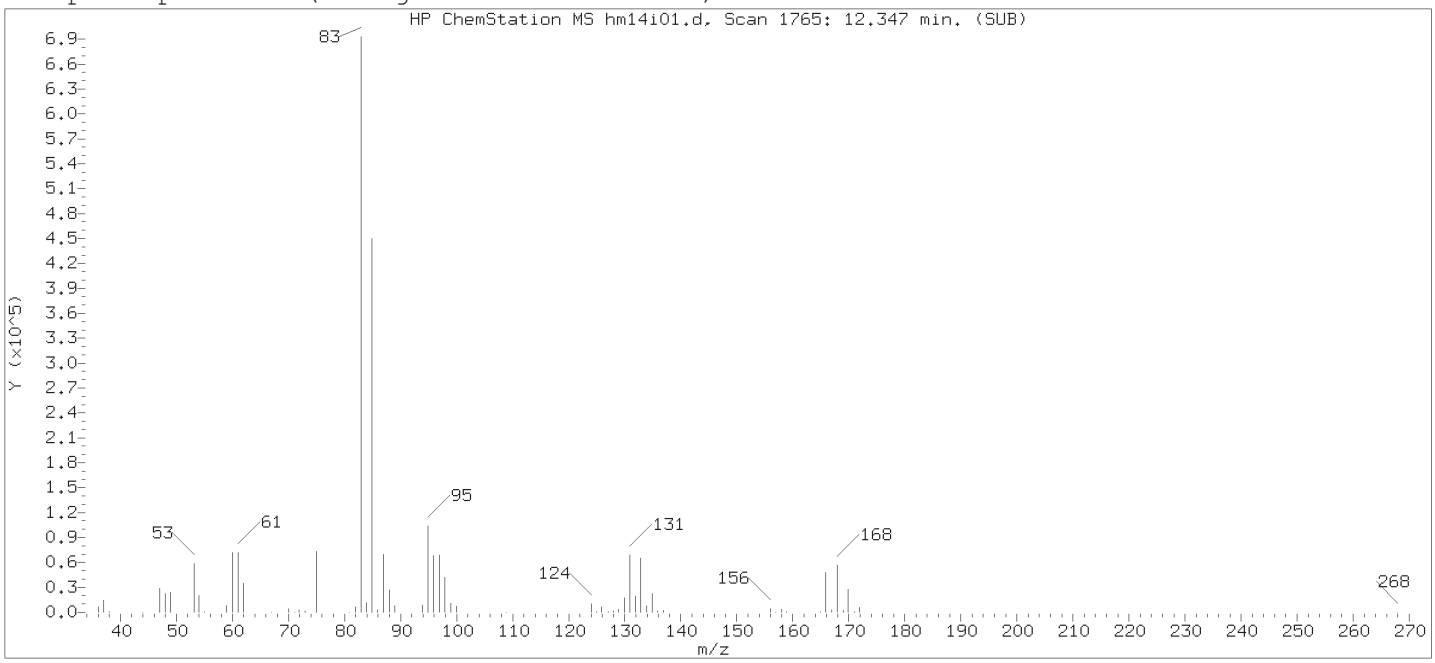
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 1073753M
On-Column Amount (ng) : 23.2501
Integration start scan : 1756 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

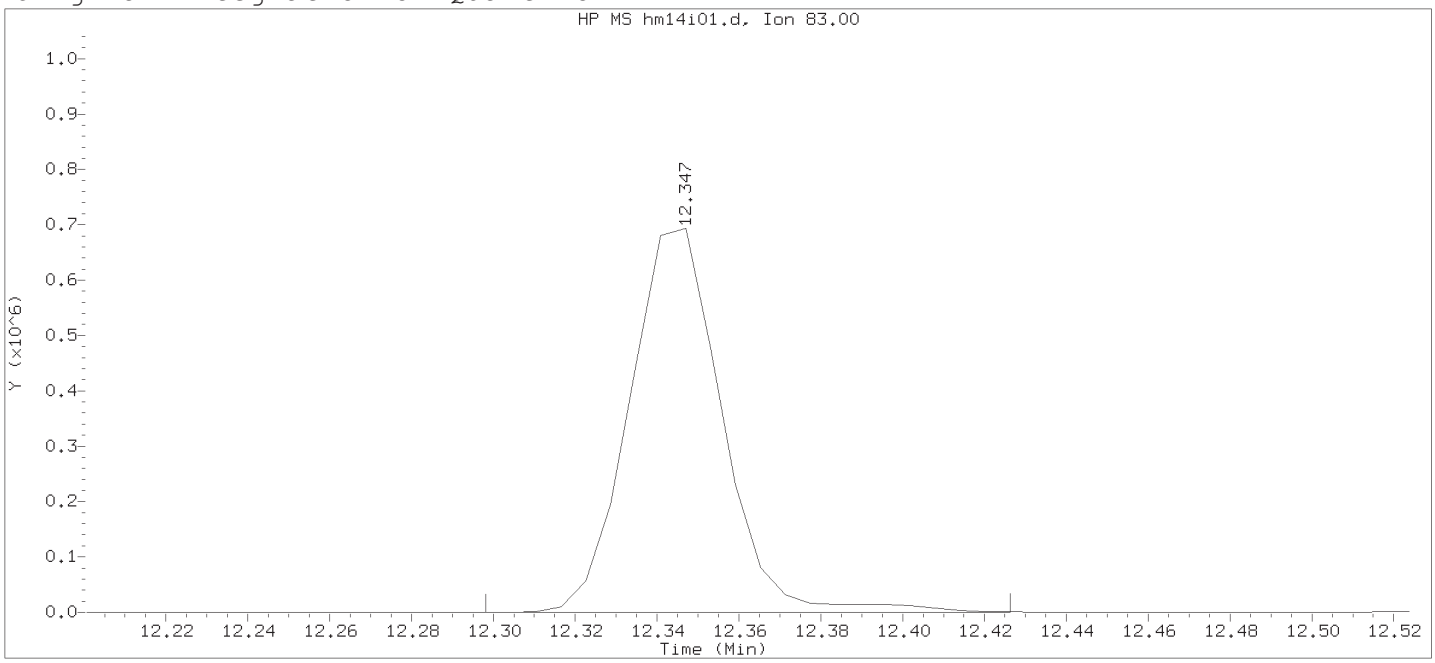
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

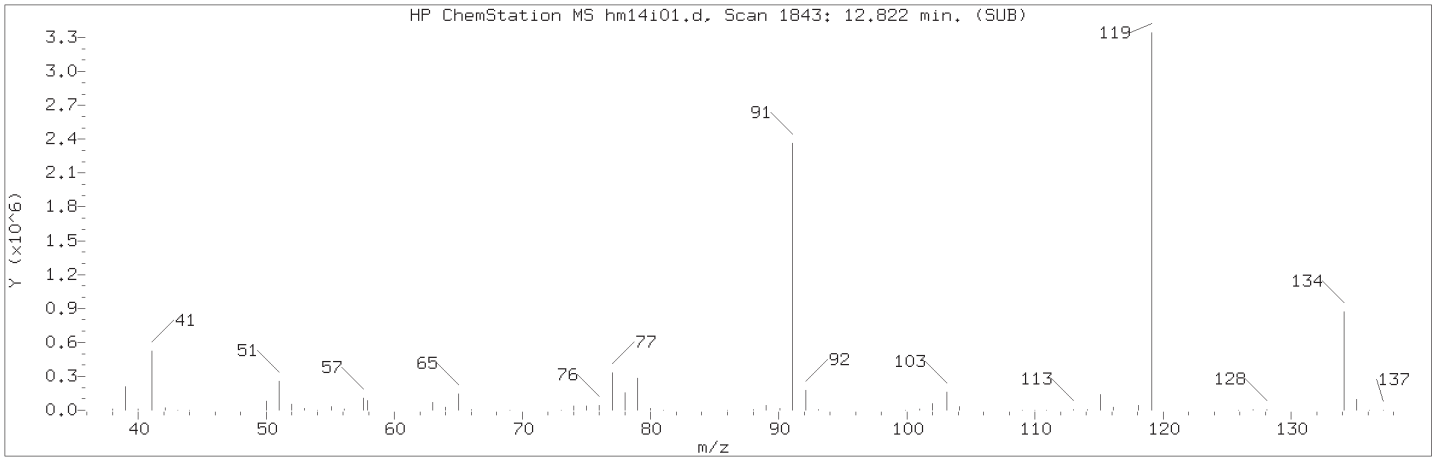
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

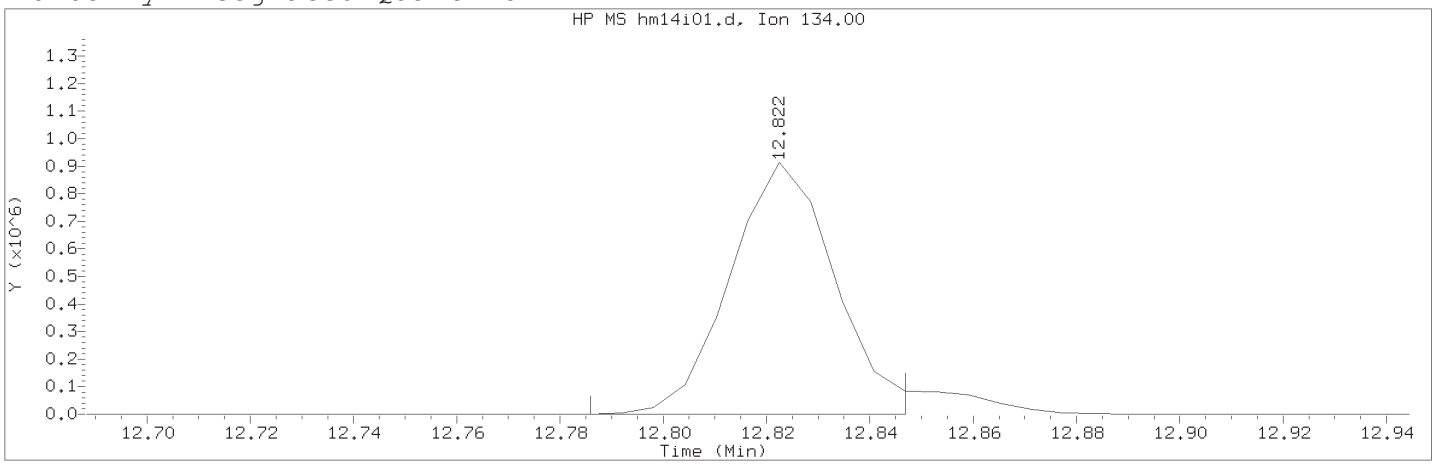
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 1092930
On-column Amount (ng) : 25.0000
Integration start scan : 1756 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

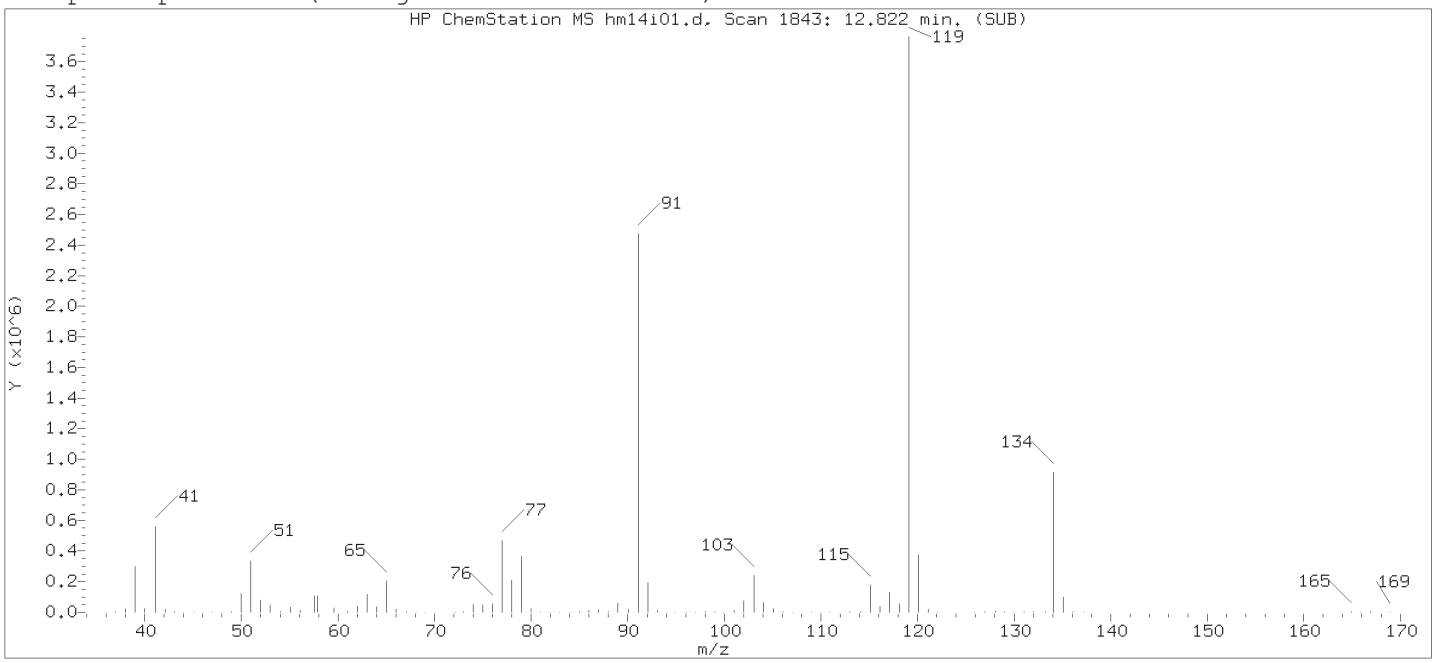
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 1287997M
On-Column Amount (ng) : 23.2927
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

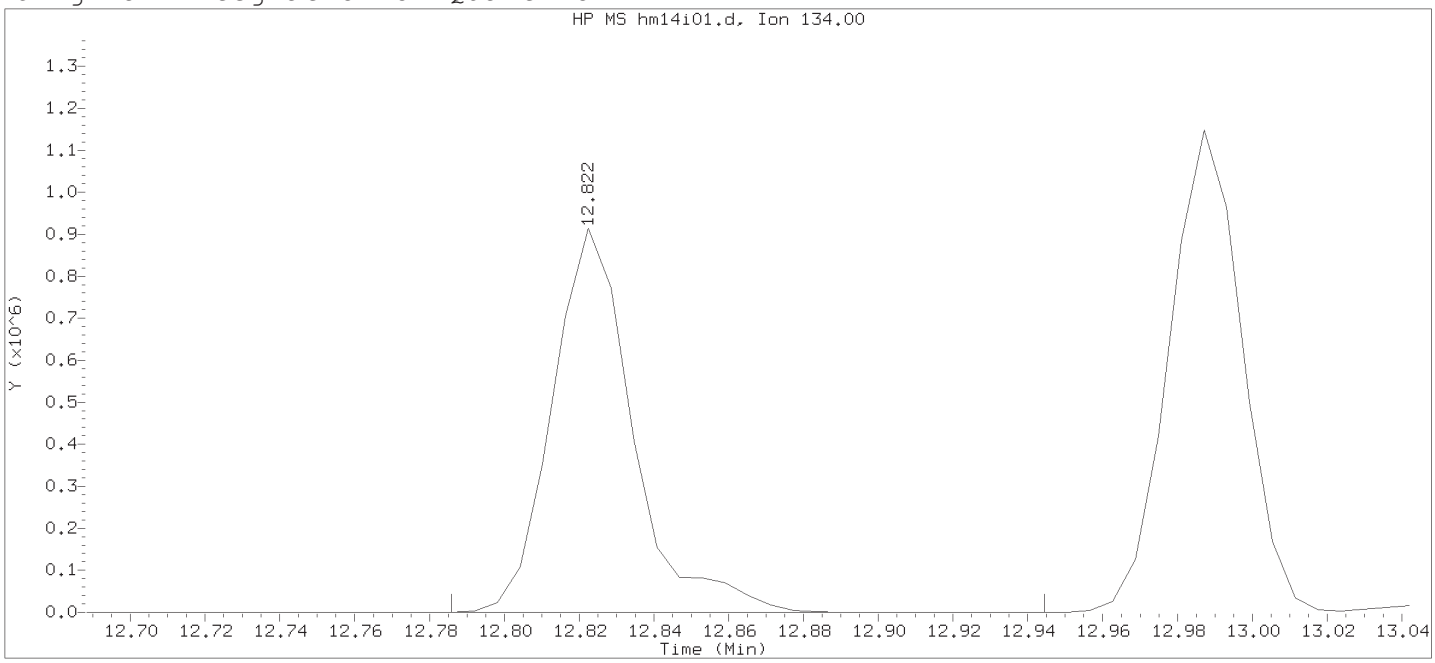
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



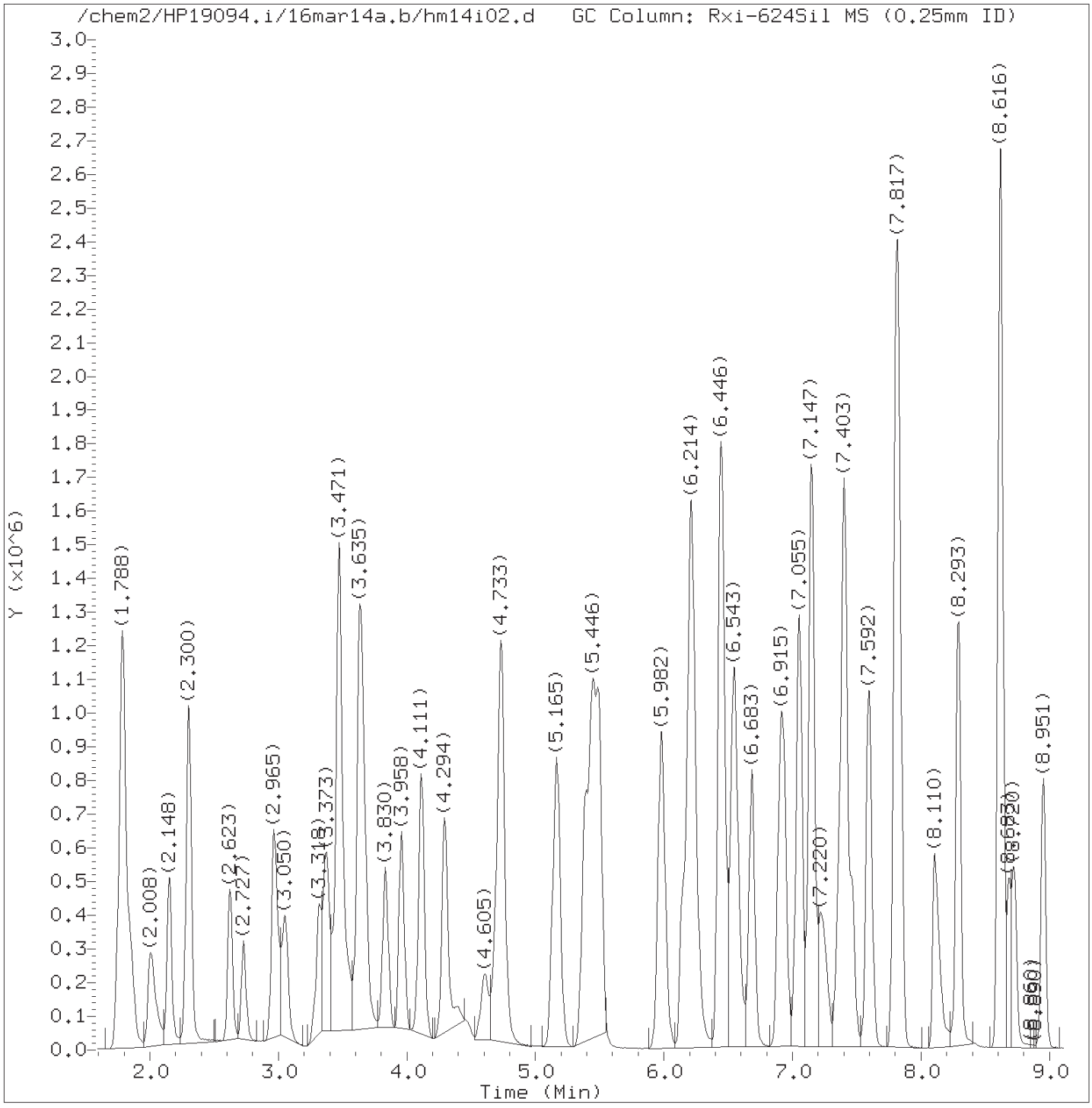
Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 1366807
On-column Amount (ng) : 25.0000
Integration start scan : 1836 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

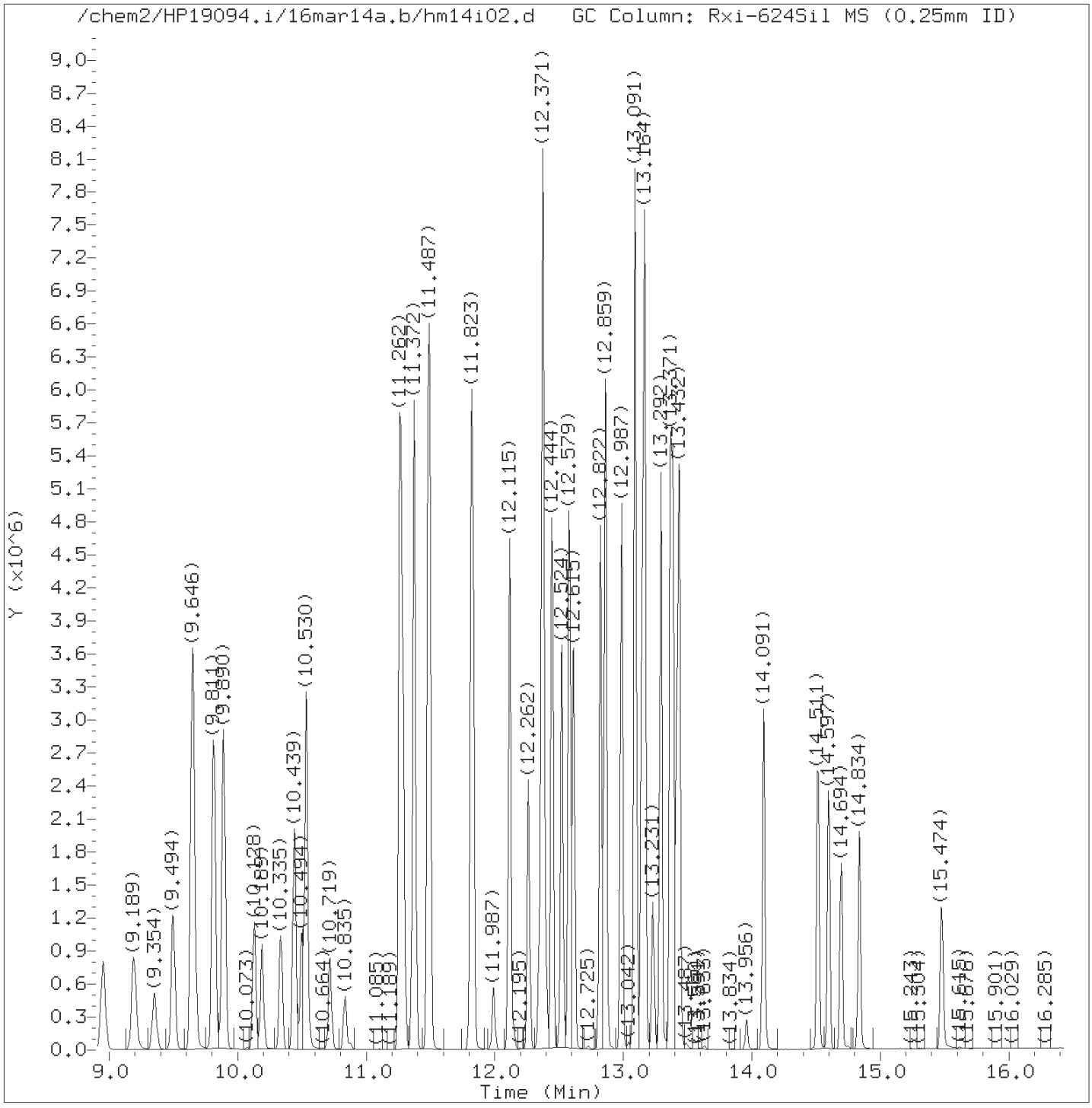
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	758272	9.685
2) Chloromethane	(2)	2.148	50	744162	9.690
5) Vinyl Chloride	(2)	2.288	62	678425	9.498
6) 1,3-Butadiene	(2)	2.306	39	482193	8.926
7) Bromomethane	(2)	2.623	94	450112	9.495
8) Chloroethane	(2)	2.727	64	393994	8.949
9) Dichlorofluoromethane	(2)	2.965	67	909527	9.103
10) Trichlorofluoromethane	(2)	3.056	101	879230	9.449
11) Ethyl ether	(2)	3.312	59	372383	9.701
12) Freon 123a	(2)	3.367	67	665574	9.351
13) Acrolein	(1)	3.471	56	2957969	488.236
15) 1,1-Dichloroethene	(2)	3.629	96	500183	9.369
14) Acetone	(1)	3.641	43	761515M	91.218
16) Freon 113	(2)	3.660	101	527043	9.493
17) Methyl Iodide	(2)	3.830	142	943626	9.547
18) Carbon Disulfide	(2)	3.958	76	1517826	9.207
21) Methyl Acetate	(1)	4.074	43	211309	9.012
22) Allyl Chloride	(2)	4.111	41	951813	9.428
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106258M	50.000
23) Methylene Chloride	(2)	4.294	84	543334	9.522
28) t-Butyl Alcohol	(1)	4.403	59	521660	182.586
29) Acrylonitrile	(1)	4.605	53	497658	49.681
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	1188852	9.651
31) trans-1,2-Dichloroethene	(2)	4.739	96	544914	9.478
32) n-Hexane	(2)	5.165	57	908578	9.311
33) 1,1-Dichloroethane	(2)	5.385	63	1125385	9.604
34) di-Isopropyl Ether	(2)	5.446	45	1974977	9.656
35) 2-Chloro-1,3-Butadiene	(2)	5.495	53	919425	9.559
37) Ethyl t-butyl ether	(2)	5.982	59	1664806	9.652
40) 1,2-Dichloroethene (Total)	(2)		96	1158873	19.119
38) 2-Butanone	(1)	6.147	43	1396262	98.153
39) cis-1,2-Dichloroethene	(2)	6.208	96	613959	9.641
42) Propionitrile	(1)	6.220	54	705816	198.982
41) 2,2-Dichloropropane	(2)	6.232	77	884733	9.437
45) Methacrylonitrile	(1)	6.446	67	1197973	98.638
47) Bromochloromethane	(2)	6.537	128	239261	9.875
48) Tetrahydrofuran	(1)	6.549	71	350126	97.292
49) Chloroform	(2)	6.683	83	1016040	9.487

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546085	10.205
50)$Dibromofluoromethane	(2)	6.903	111	562057	10.208
51) 1,1,1-Trichloroethane	(2)	6.933	97	871071	9.535
52) Cyclohexane	(2)	7.055	56	1074292	8.999
52) Cyclohexane	(2)	7.055	84	835438	9.140
52) Cyclohexane	(2)	7.049	69	314832	9.220
55) 1,1-Dichloropropene	(2)	7.147	75	836378	9.538
54) Carbon Tetrachloride	(2)	7.159	117	791512	9.529
56) Isobutyl Alcohol	(1)	7.226	41	458659M	453.075
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91172M	10.287
57)$1,2-Dichloroethane-d4	(2)	7.360	65	459039	10.145
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57870	10.341
58) Benzene	(2)	7.403	78	2313730	9.481
59) 1,2-Dichloroethane	(2)	7.464	62	607813M	9.612
60) t-Amyl methyl ether	(2)	7.598	73	1356799	9.626
63)*Fluorobenzene	(2)	7.805	96	2270797	10.000
62) n-Heptane	(2)	7.830	43	1002679	9.090
65) n-Butanol	(1)	8.110	56	768455	943.123
67) Trichloroethene	(2)	8.293	95	608730	9.570
70) 1,2-Dichloropropane	(2)	8.616	63	603857	9.503
69) Methylcyclohexane	(2)	8.622	83	992242	9.523
71) Methyl Methacrylate	(1)	8.683	69	253966M	10.008
72) 1,4-Dioxane	(1)	8.720	88	82405	513.336
73) Dibromomethane	(2)	8.726	93	251750	9.618
74) Bromodichloromethane	(2)	8.951	83	721713	9.876
76) 2-Nitropropane	(1)	9.189	41	767062	94.300
80) cis-1,3-Dichloropropene	(2)	9.494	75	886193	9.868
81) 4-Methyl-2-Pentanone	(1)	9.646	43	3461188	98.865
82)$Toluene-d8	(3)	9.811	98	2246008	9.748
82)$Toluene-d8	(3)	9.811	100	1462137	9.804
83) Toluene	(3)	9.890	92	1425153	9.183
84) trans-1,3-Dichloropropene	(3)	10.128	75	692682	9.523
85) 1,3-Dichloropropene (total)	(3)		75	1578875	19.391
86) Ethyl Methacrylate	(3)	10.189	69	531314	9.495
88) 1,1,2-Trichloroethane	(3)	10.335	97	349734	9.304
89) Tetrachloroethene	(3)	10.439	166	667231	9.104
90) 1,3-Dichloropropane	(3)	10.500	76	640156	9.471
91) 2-Hexanone	(1)	10.530	43	2399359	96.933

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	468929	9.731
95) 1,2-Dibromoethane	(3)	10.835	107	338365	9.556
97)*Chlorobenzene-d5	(3)	11.262	117	1617323	10.000
98) Chlorobenzene	(3)	11.286	112	1572207	9.306
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	544790	9.401
100) Ethylbenzene	(3)	11.372	91	2796238	9.205
101) m+p-Xylene	(3)	11.487	106	2144836	18.511
105) Xylene (Total)	(3)		106	3198492	27.880
104) o-Xylene	(3)	11.817	106	1053656	9.371
106) Styrene	(3)	11.829	104	1694211	9.419
107) Bromoform	(3)	11.993	173	262691	9.828
108) Isopropylbenzene	(3)	12.115	105	2746137	9.216
111)$4-Bromofluorobenzene	(3)	12.262	95	746740	10.055
111)$4-Bromofluorobenzene	(3)	12.262	174	624403	10.084
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	416614M	9.181
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	1118677	103.767
114) Bromobenzene	(4)	12.377	156	626886	9.275
116) 1,2,3-Trichloropropane	(4)	12.396	110	106766	9.372
117) n-Propylbenzene	(4)	12.444	91	3327479	9.102
119) 2-Chlorotoluene	(4)	12.524	126	649916	9.220
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	2337991	9.173
122) 4-Chlorotoluene	(4)	12.615	126	656708	9.142
125) tert-Butylbenzene	(4)	12.822	134	497778M	9.162
126) Pentachloroethane	(4)	12.853	167	399158	9.734
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	2350492	9.223
128) sec-Butylbenzene	(4)	12.987	105	3026768	9.172
131) 1,3-Dichlorobenzene	(4)	13.091	146	1228582	9.293
132) p-Isopropyltoluene	(4)	13.097	119	2593636	9.285
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	725016	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	1202986	8.956
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	965211	9.133
136) Benzyl Chloride	(4)	13.231	126	176407	9.812
138) n-Butylbenzene	(4)	13.383	92	1292257	9.457
139) 1,2-Dichlorobenzene	(4)	13.420	146	1071844	9.128
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	57131	10.273
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	752893	8.963
146) Hexachlorobutadiene	(4)	14.597	225	403240	9.187
147) Naphthalene	(4)	14.694	128	1206602	8.356

M = Compound was manually integrated.
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Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

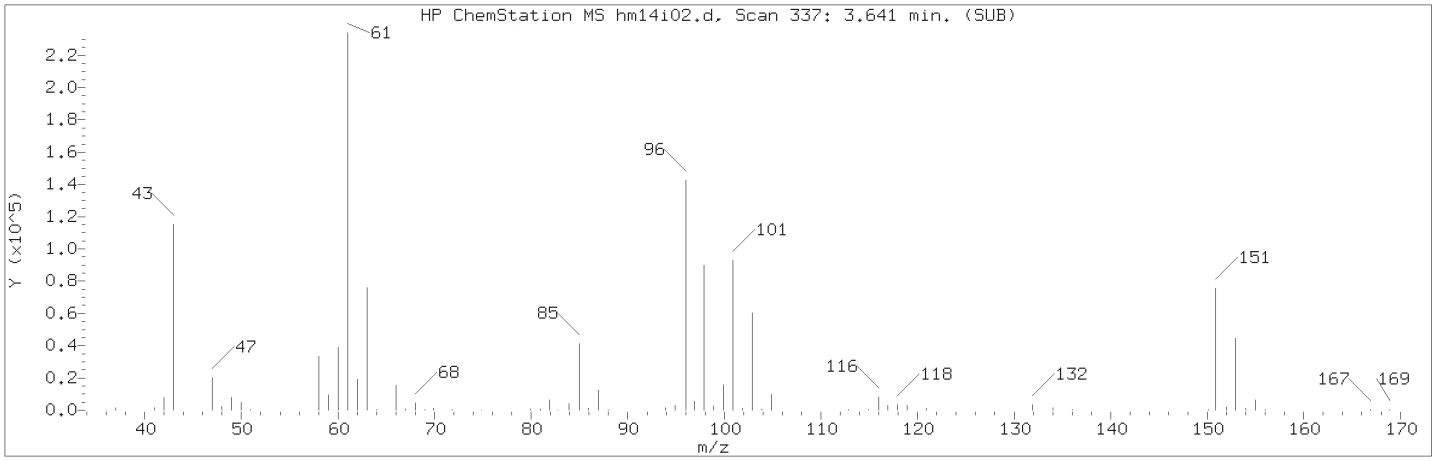
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

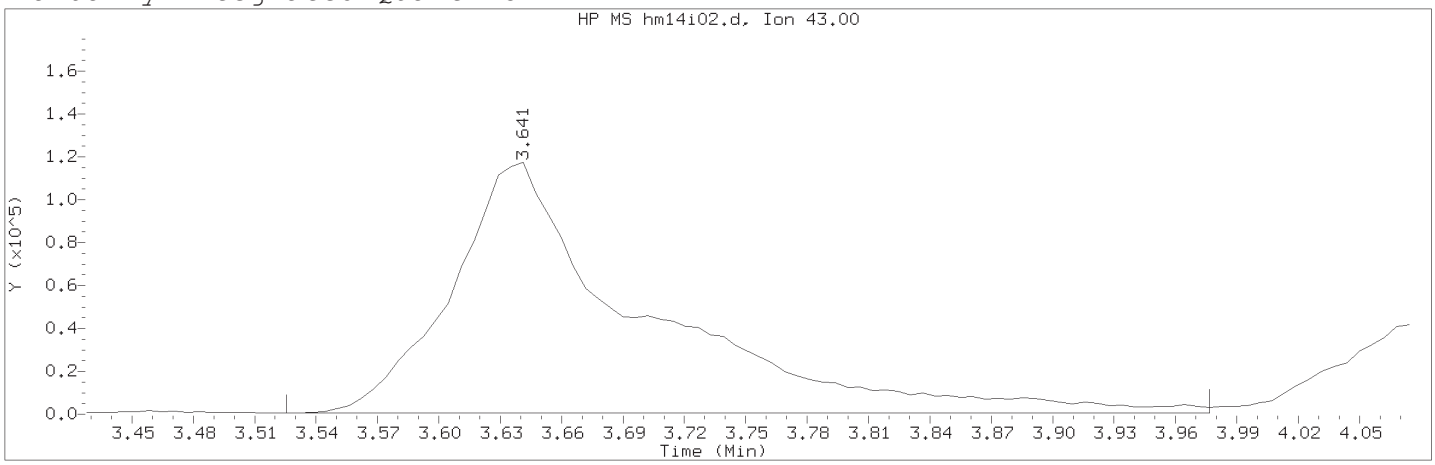
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	594025	8.854

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

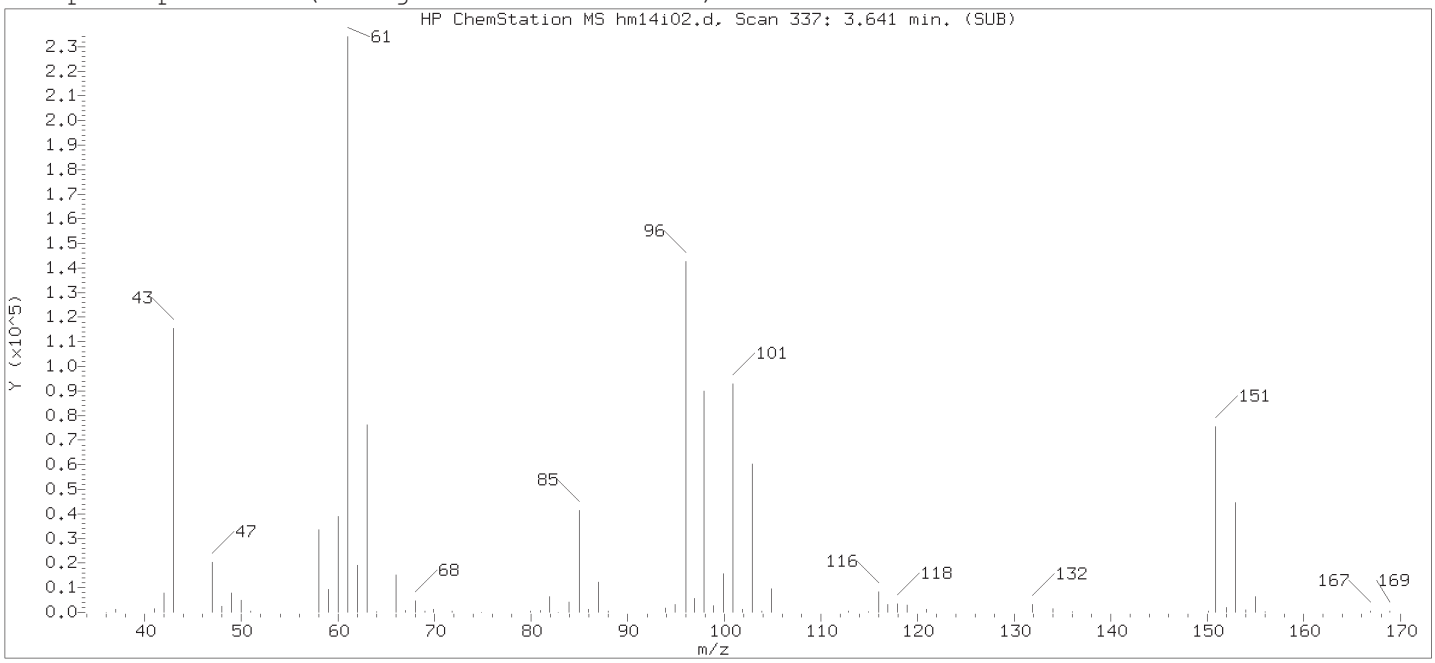
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 761515M
On-Column Amount (ng) : 91.2179
Integration start scan : 317 Integration stop scan: 391
Y at integration start : 433 Y at integration end: 433

Reason for manual integration: improper integration

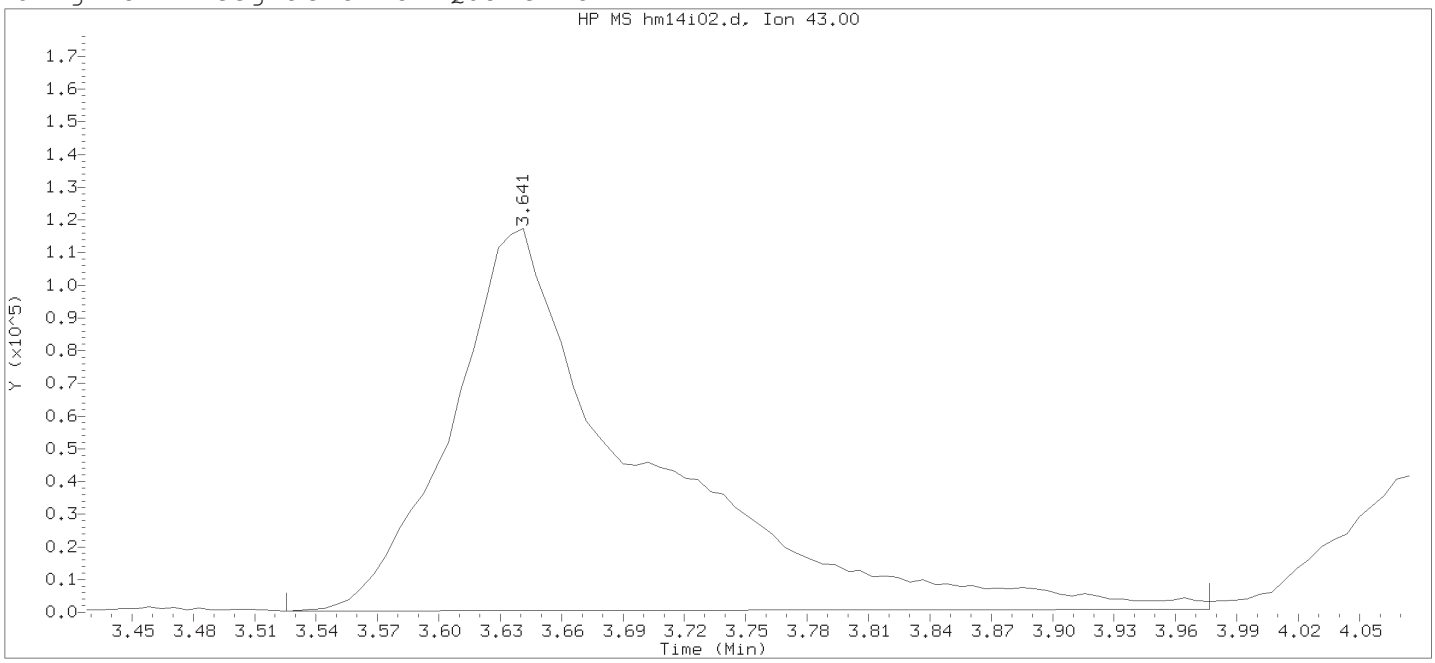
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

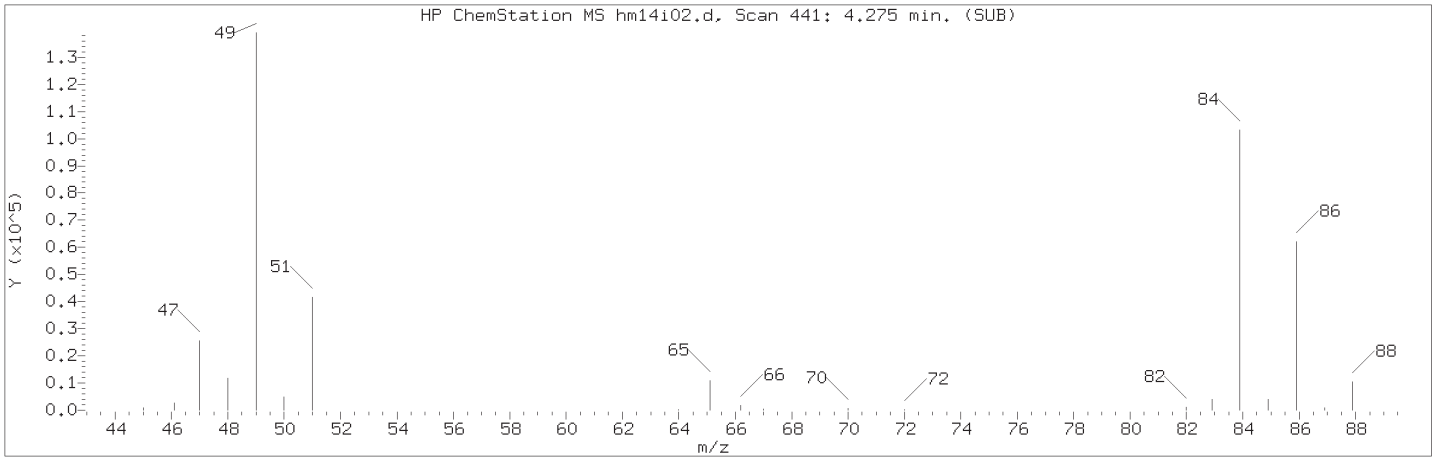
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

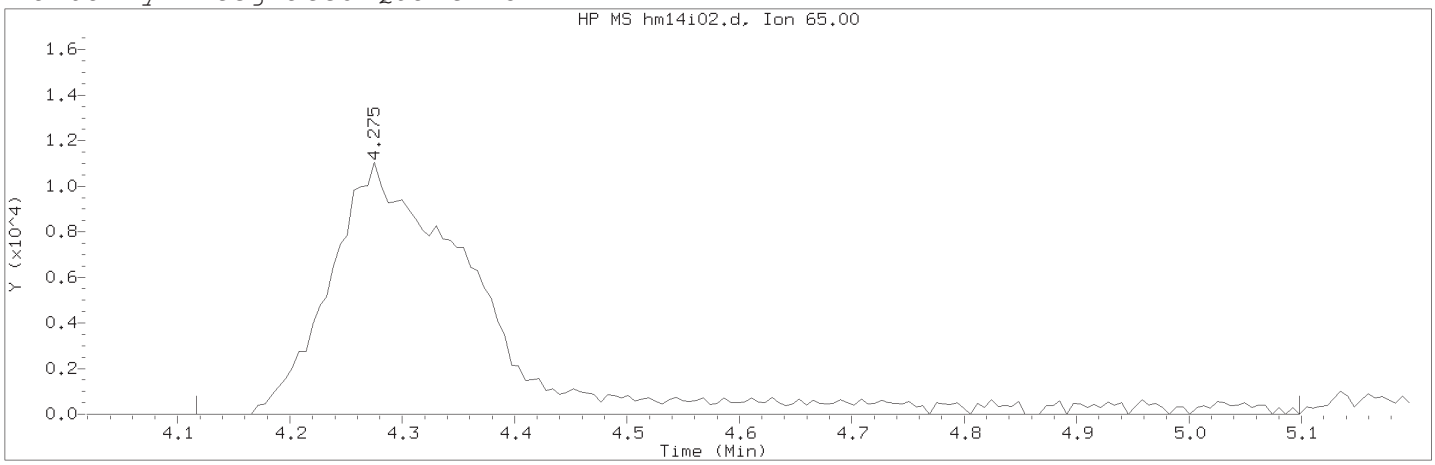
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 337		
Retention Time (minutes)	: 3.641		
Quant Ion	: 43.00		
Area	: 753577		
On-column Amount (ng)	: 98.9310		
Integration start scan	: 317	Integration stop scan:	391
Y at integration start	: 443	Y at integration end:	971

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

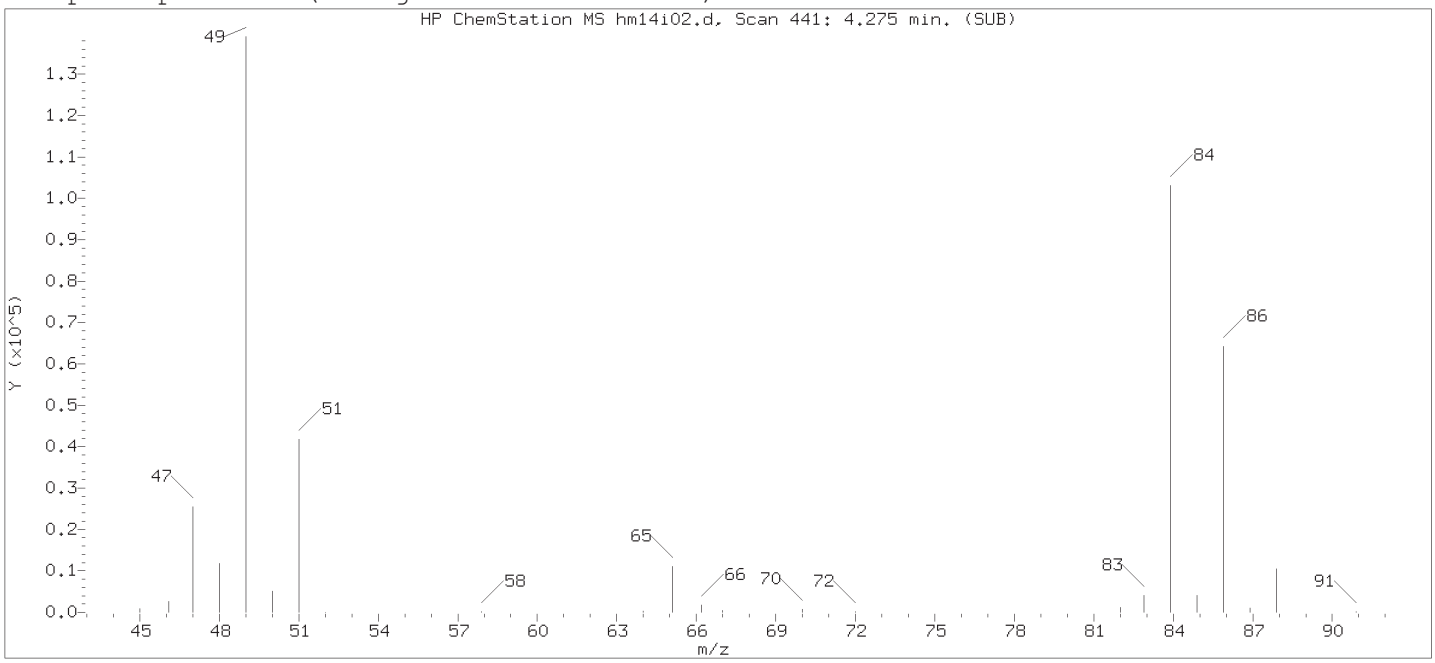
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 106258M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 575
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

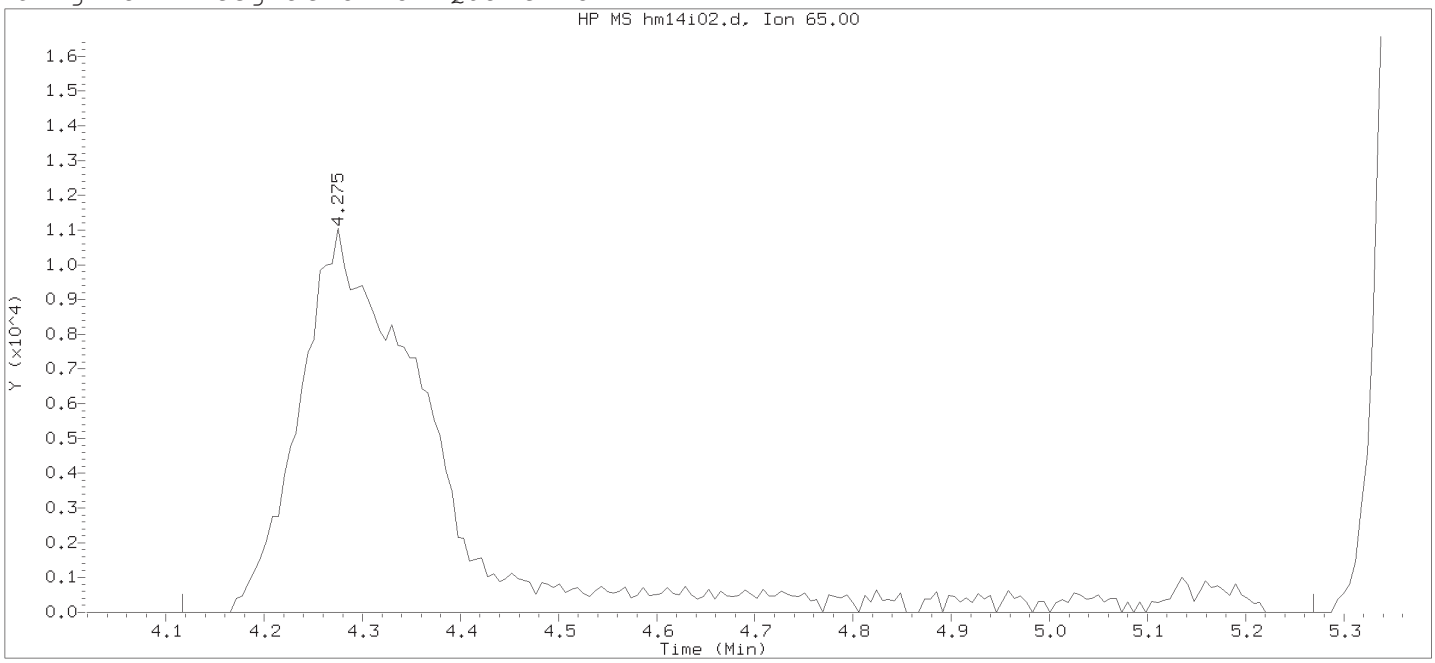
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

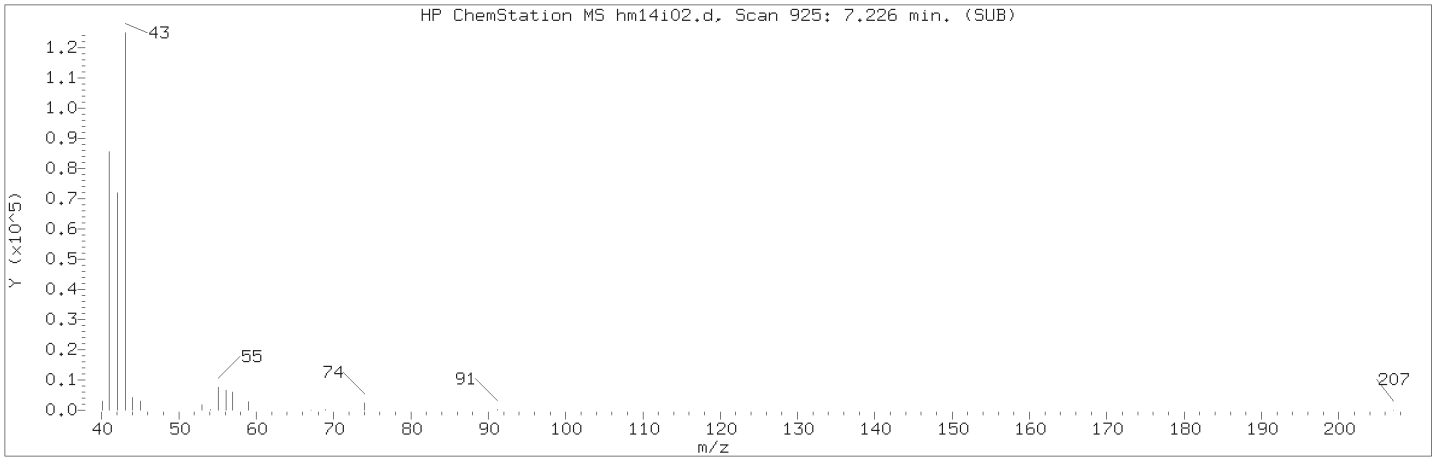
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

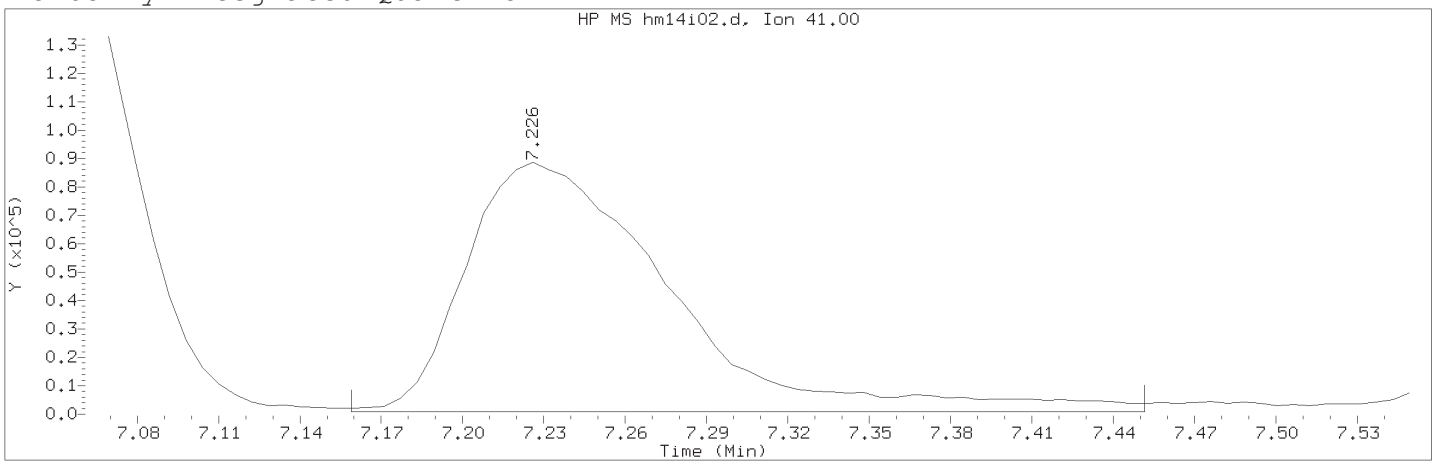
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area : 110092
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

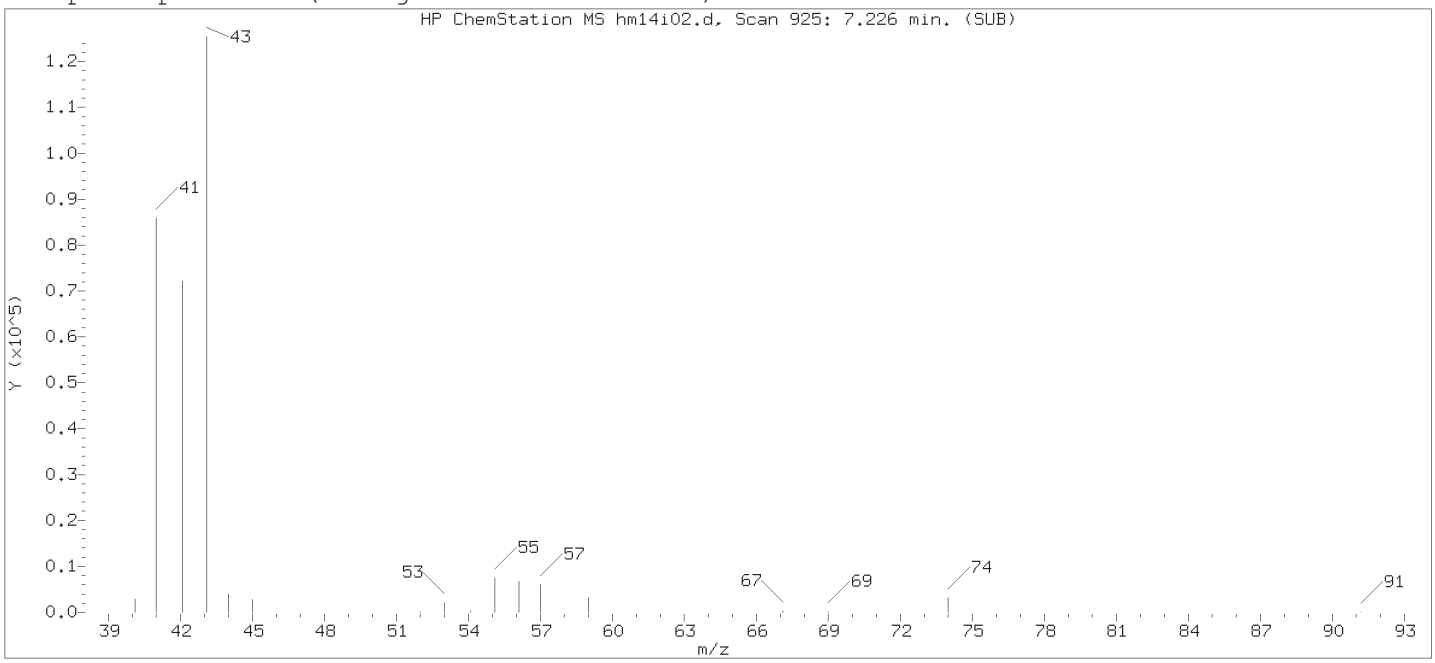
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 458659M
On-Column Amount (ng) : 453.0753
Integration start scan : 913 Integration stop scan: 961
Y at integration start : 855 Y at integration end: 855

Reason for manual integration: improper integration

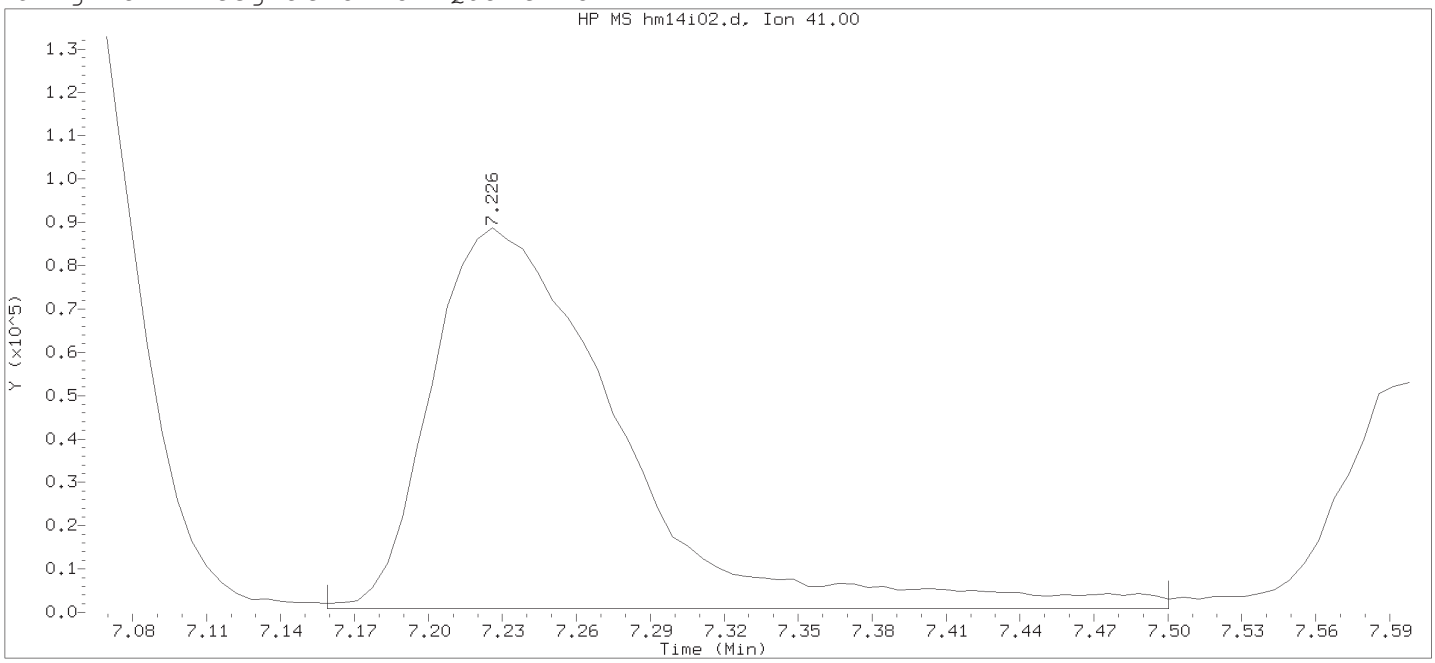
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

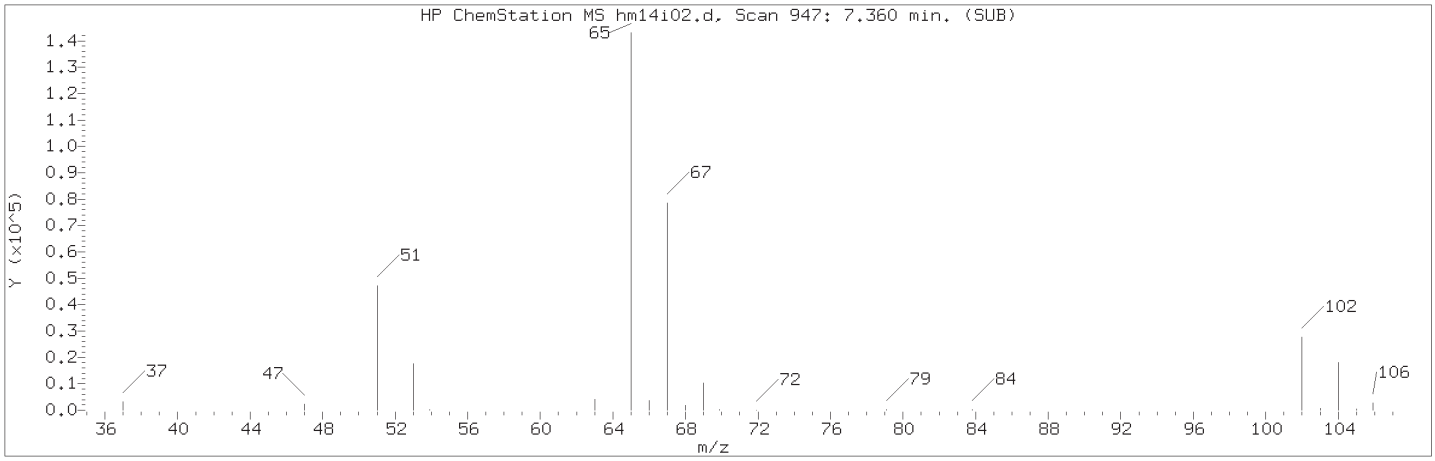
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

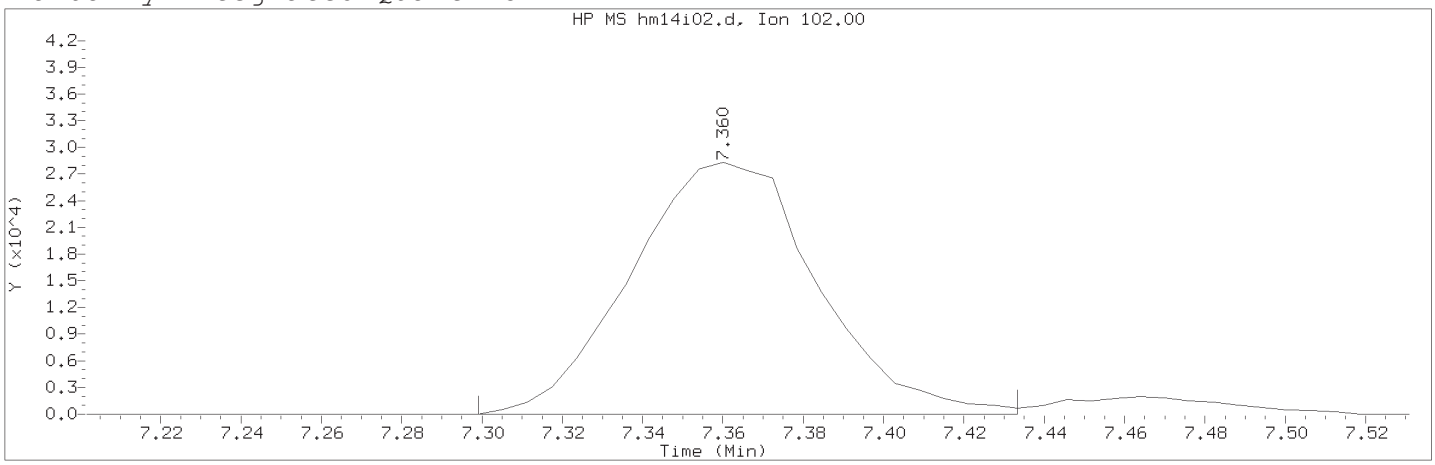
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 467057
On-column Amount (ng) : 493.7484
Integration start scan : 913 Integration stop scan: 969
Y at integration start : 855 Y at integration end: 855

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

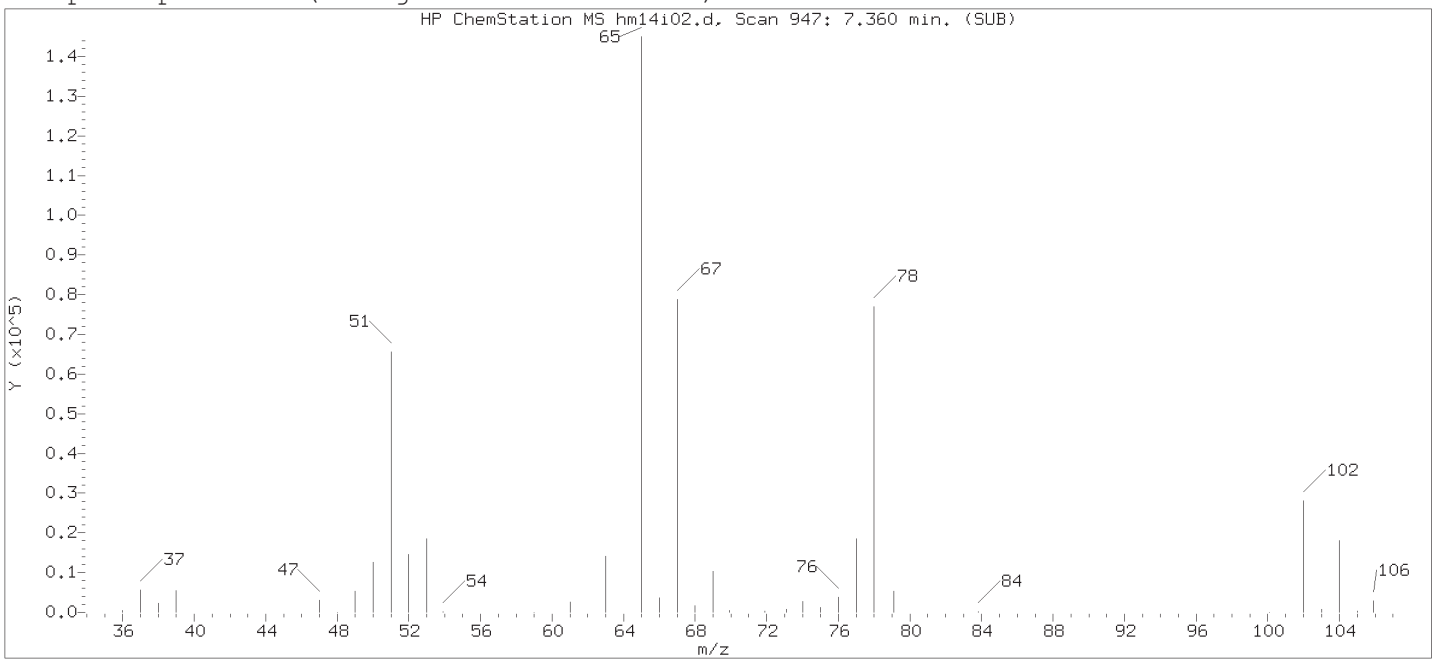
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 91172M
On-Column Amount (ng) : 10.2870
Integration start scan : 936 Integration stop scan: 958
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

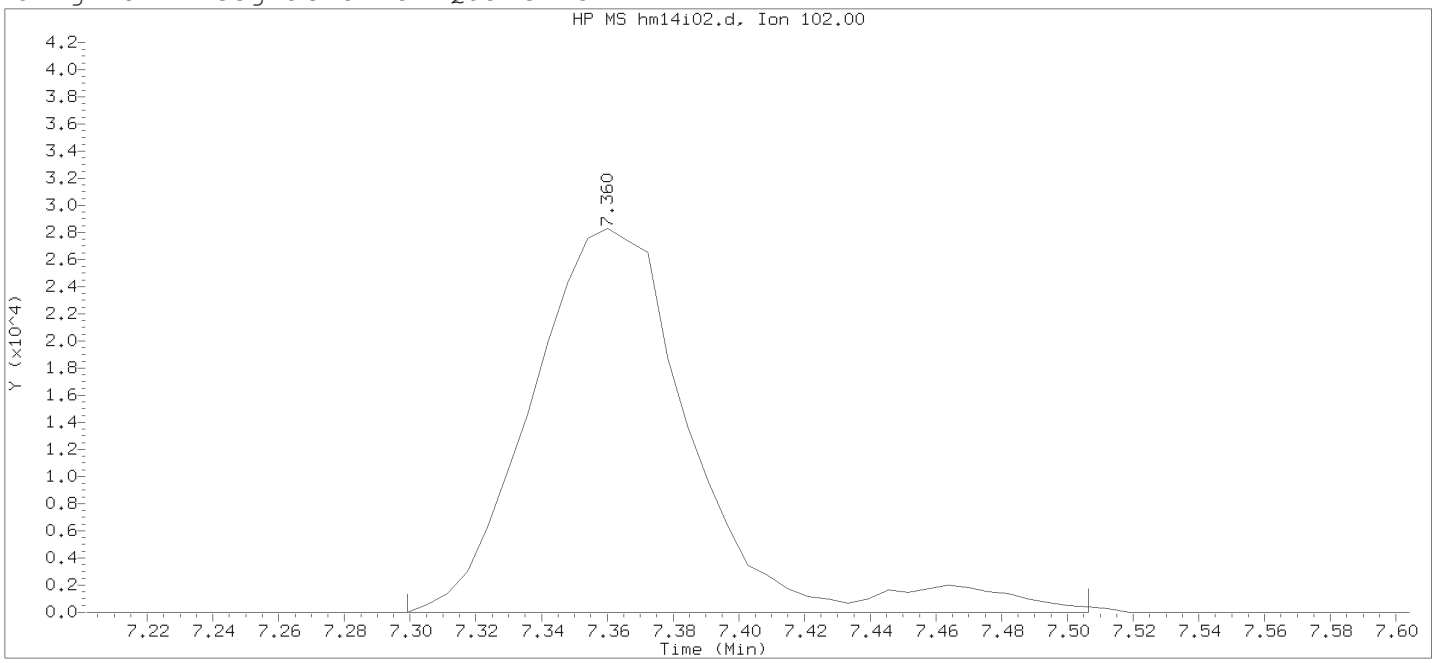
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

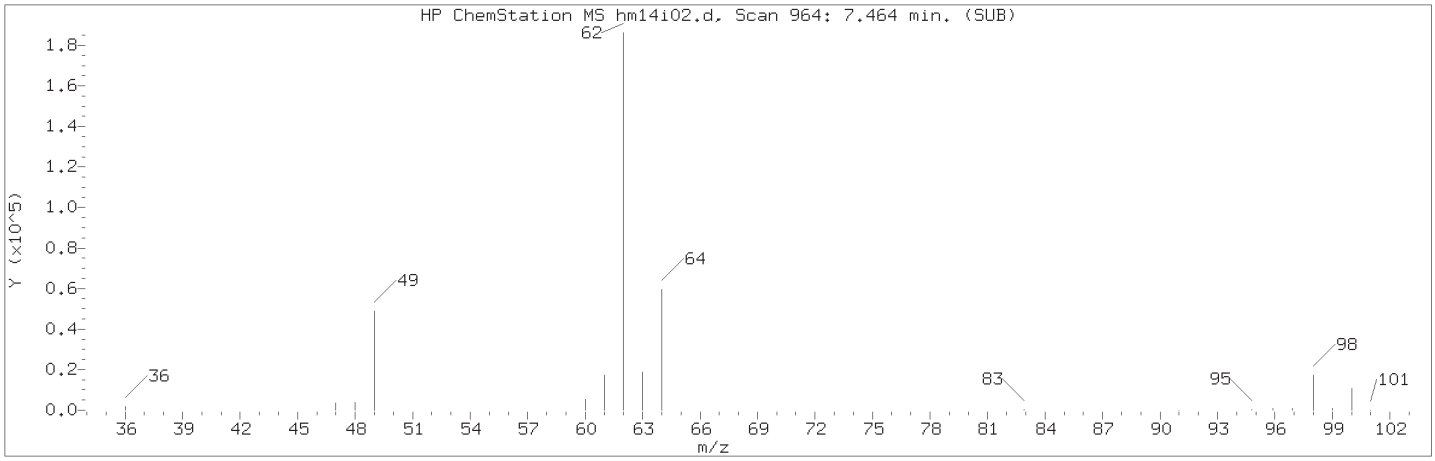
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

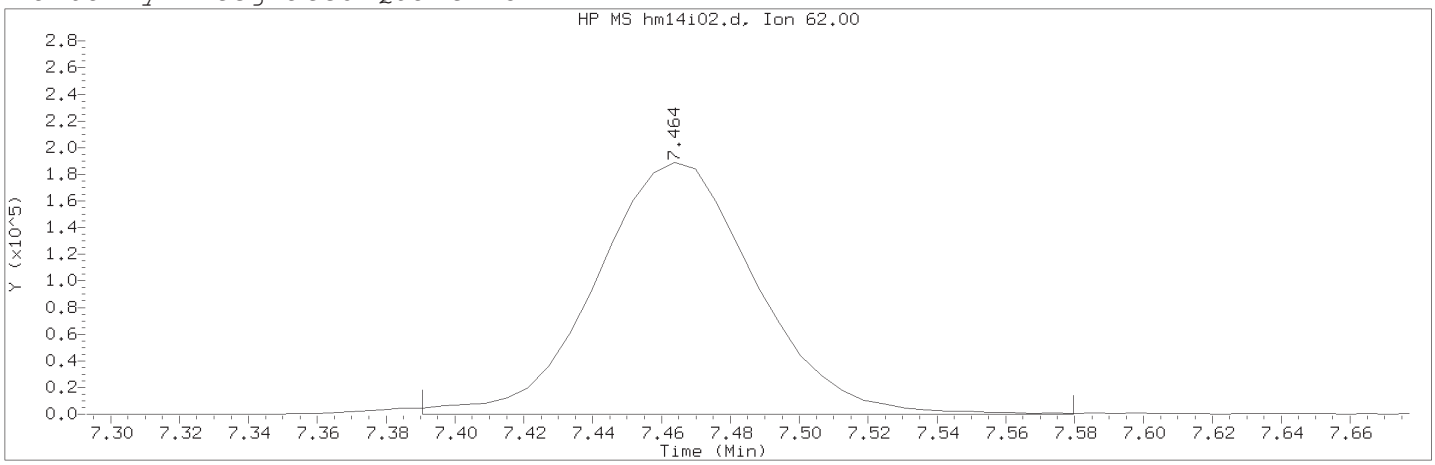
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 96625
On-column Amount (ng) : 10.3533
Integration start scan : 936 Integration stop scan: 970
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

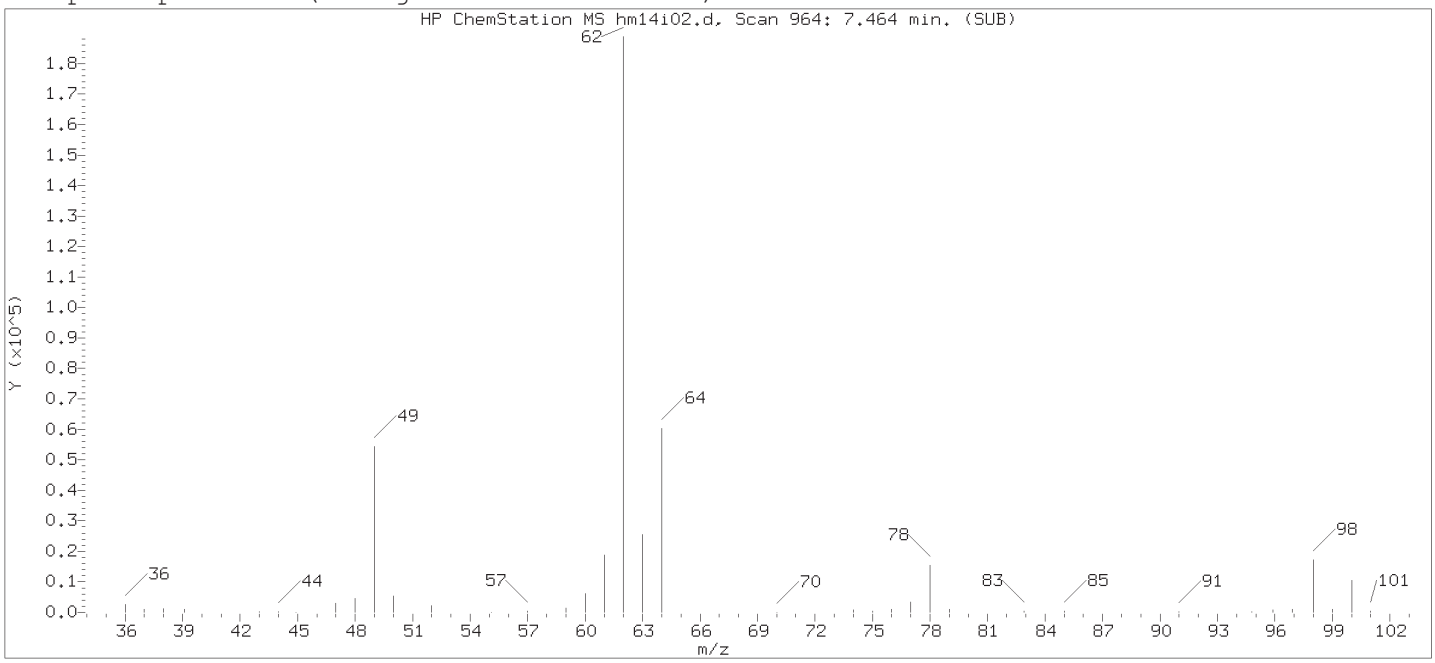
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 607813M
On-Column Amount (ng) : 9.6123
Integration start scan : 951 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

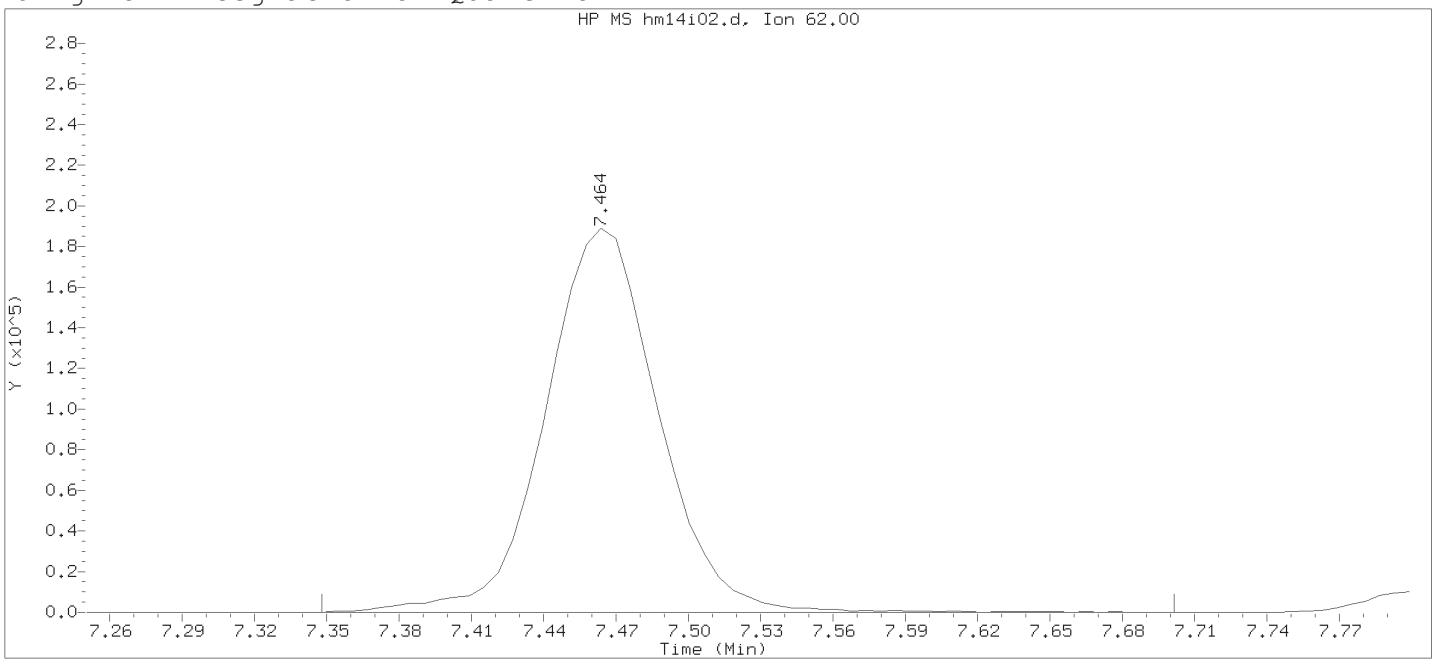
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

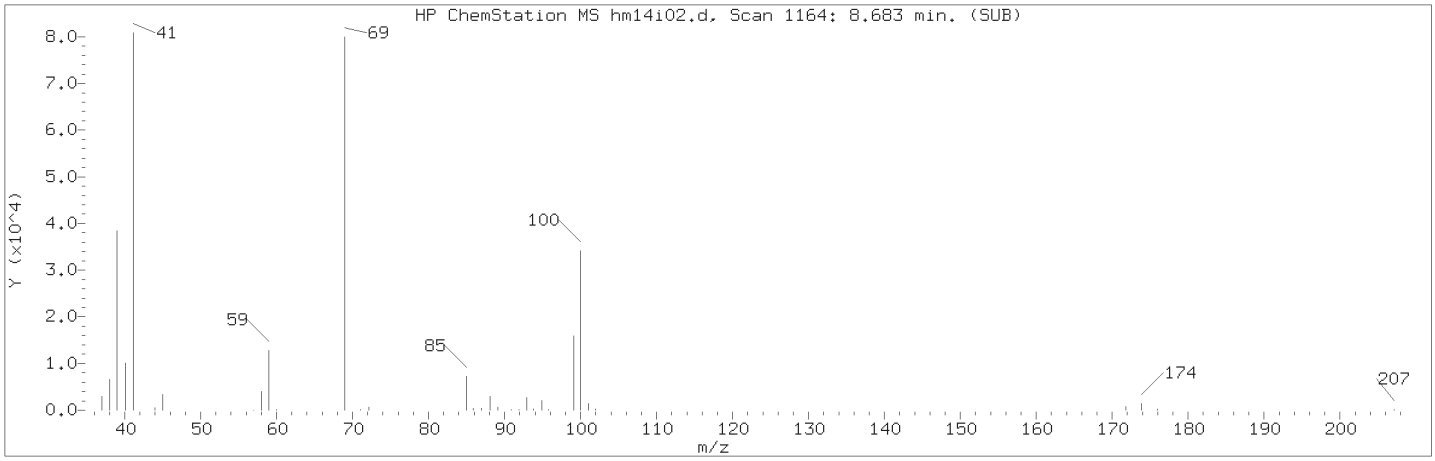
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

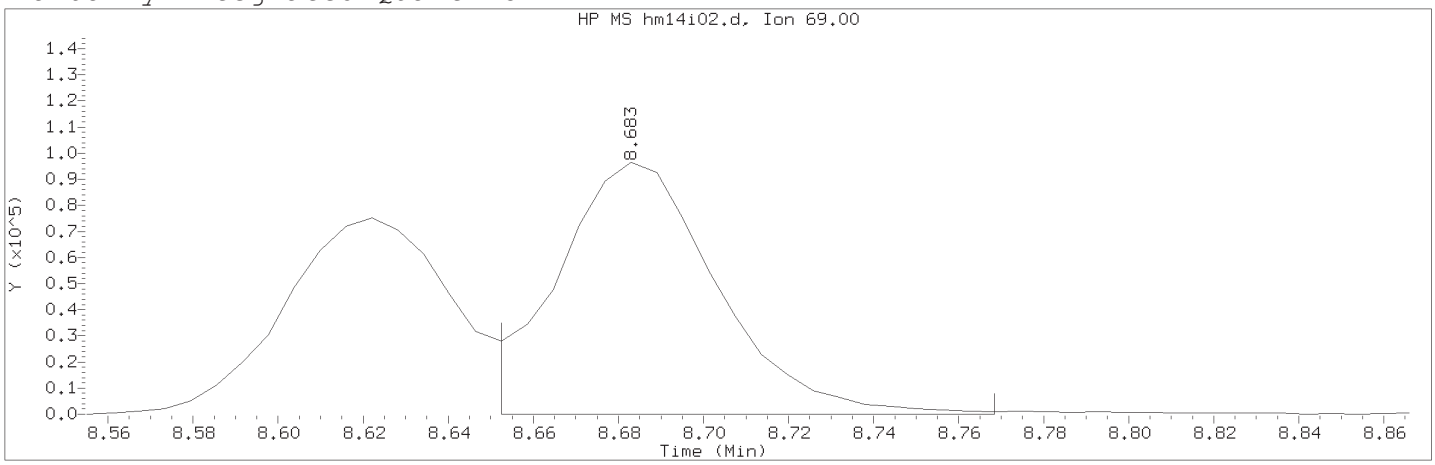
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 614292
On-column Amount (ng) : 9.7775
Integration start scan : 944 Integration stop scan: 1002
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

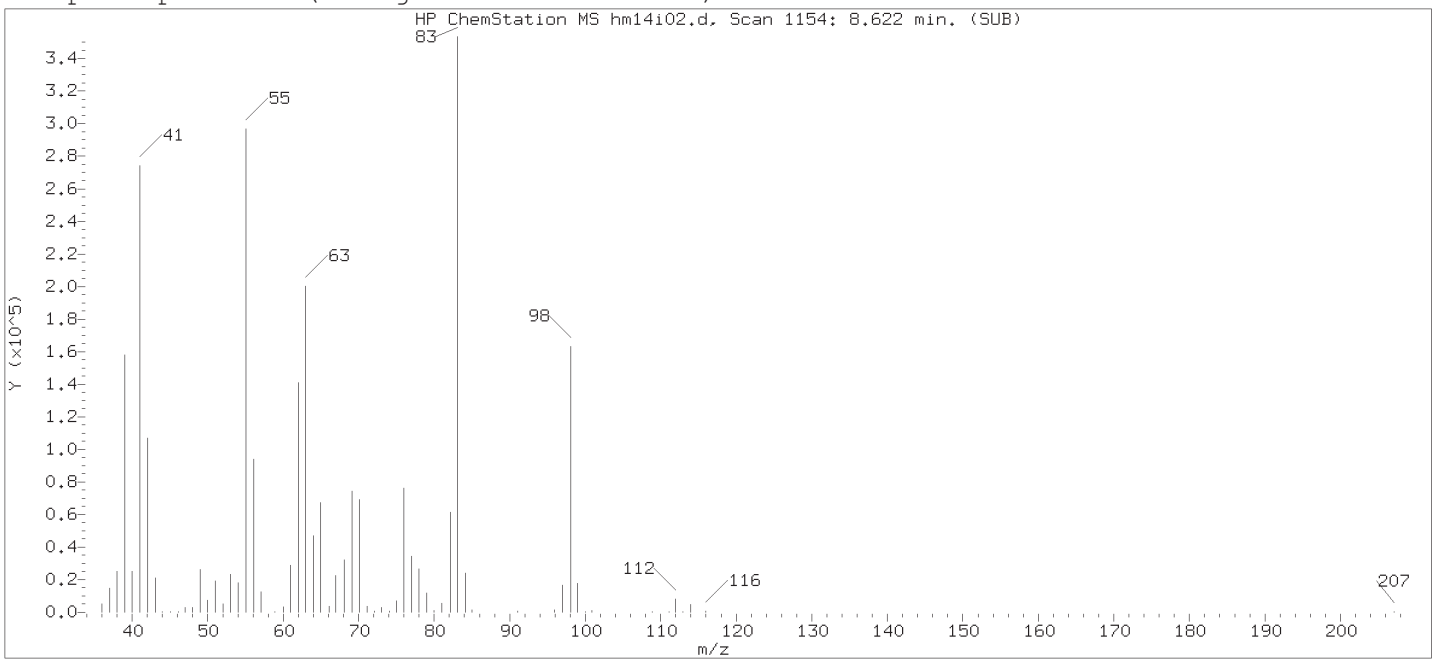
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 253966M
On-Column Amount (ng) : 10.0084
Integration start scan : 1158 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

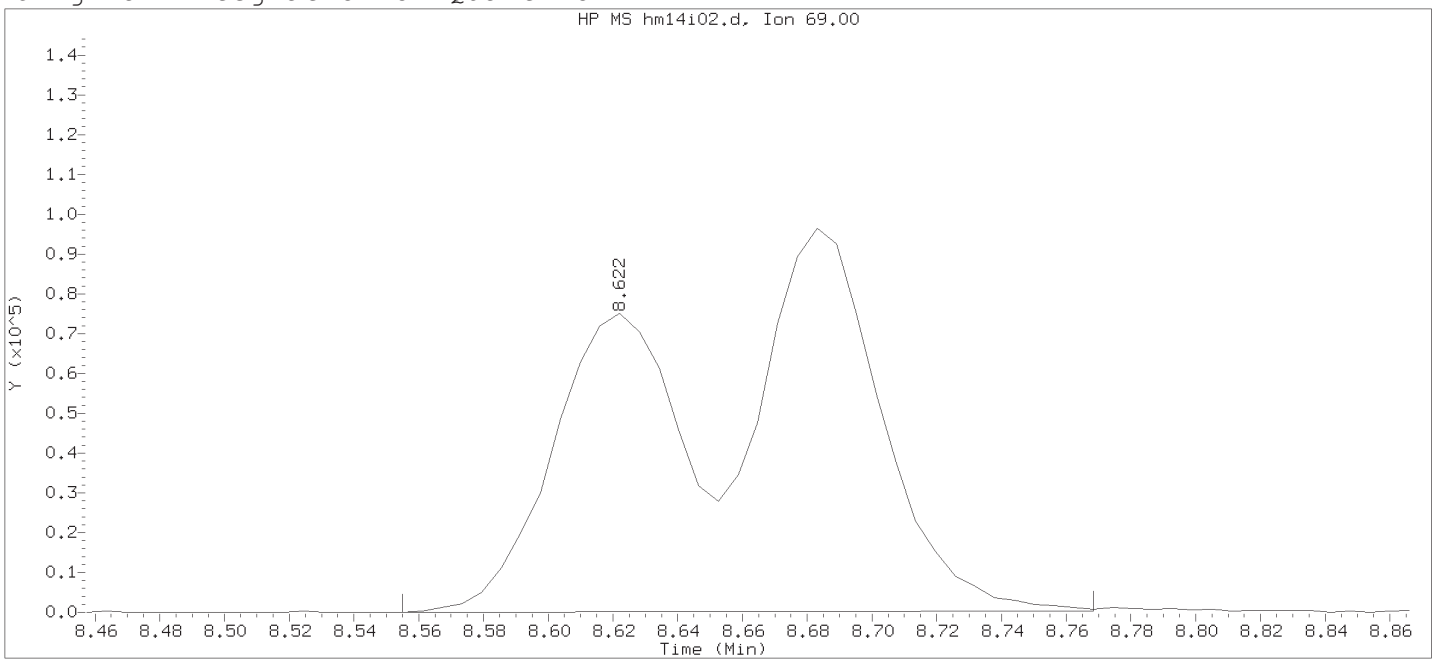
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

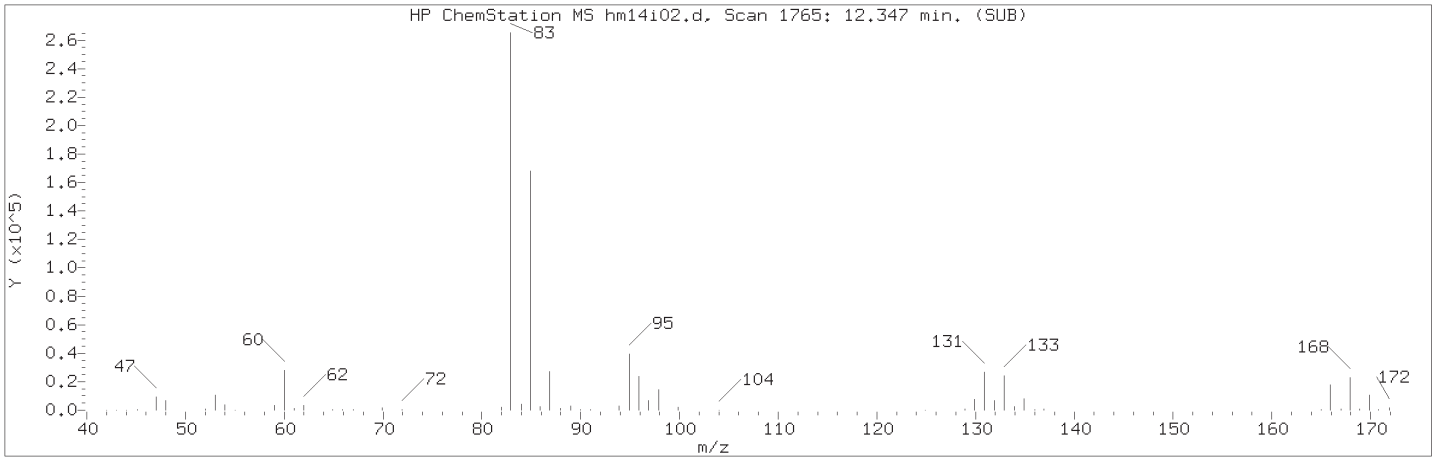
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

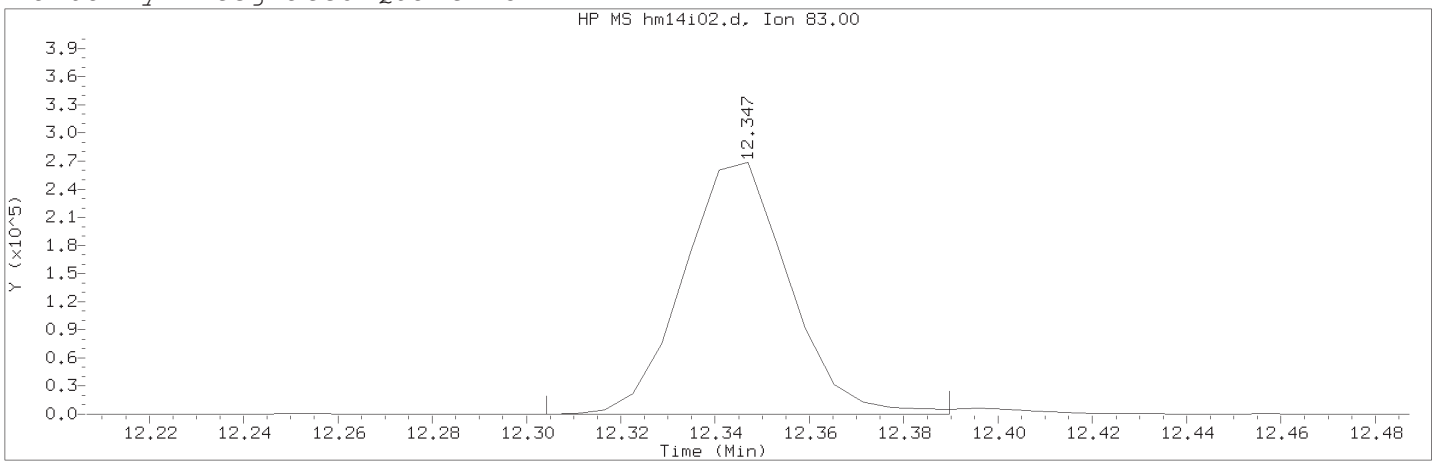
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 448439
On-column Amount (ng) : 12.8749
Integration start scan : 1142 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 342

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

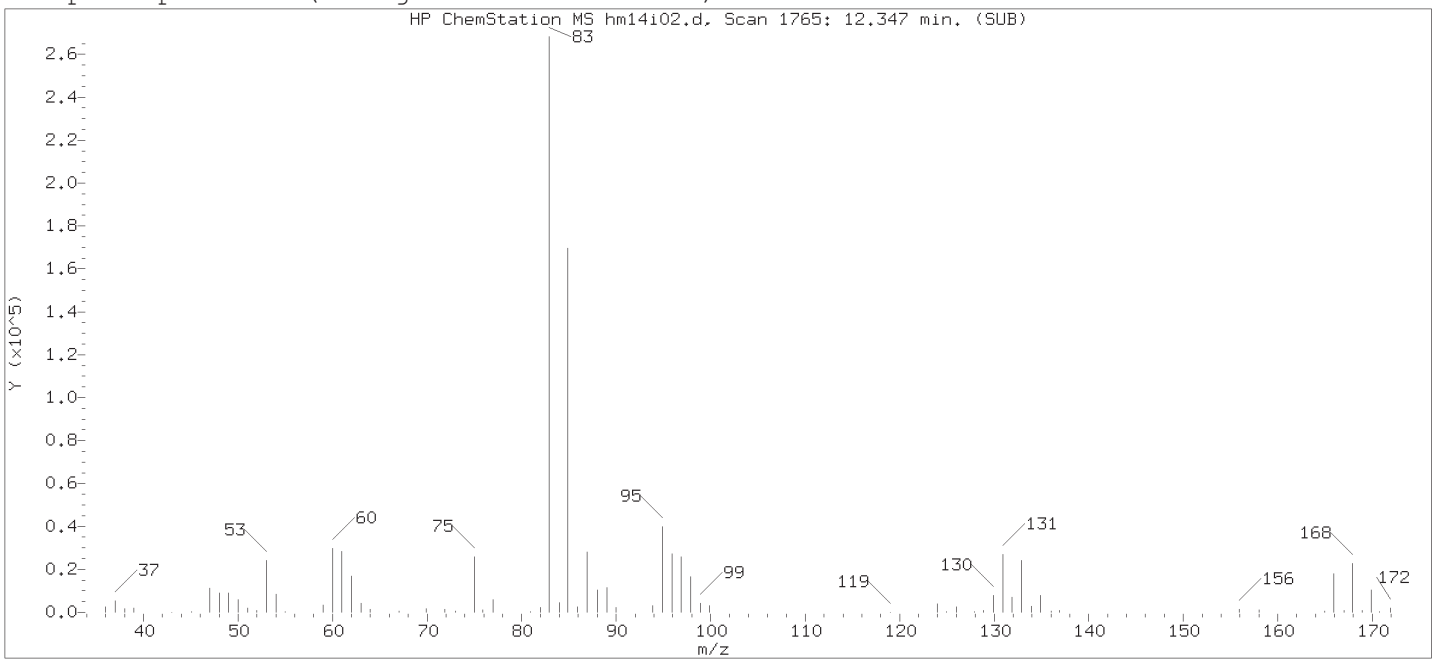
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 416614M
On-Column Amount (ng) : 9.1808
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

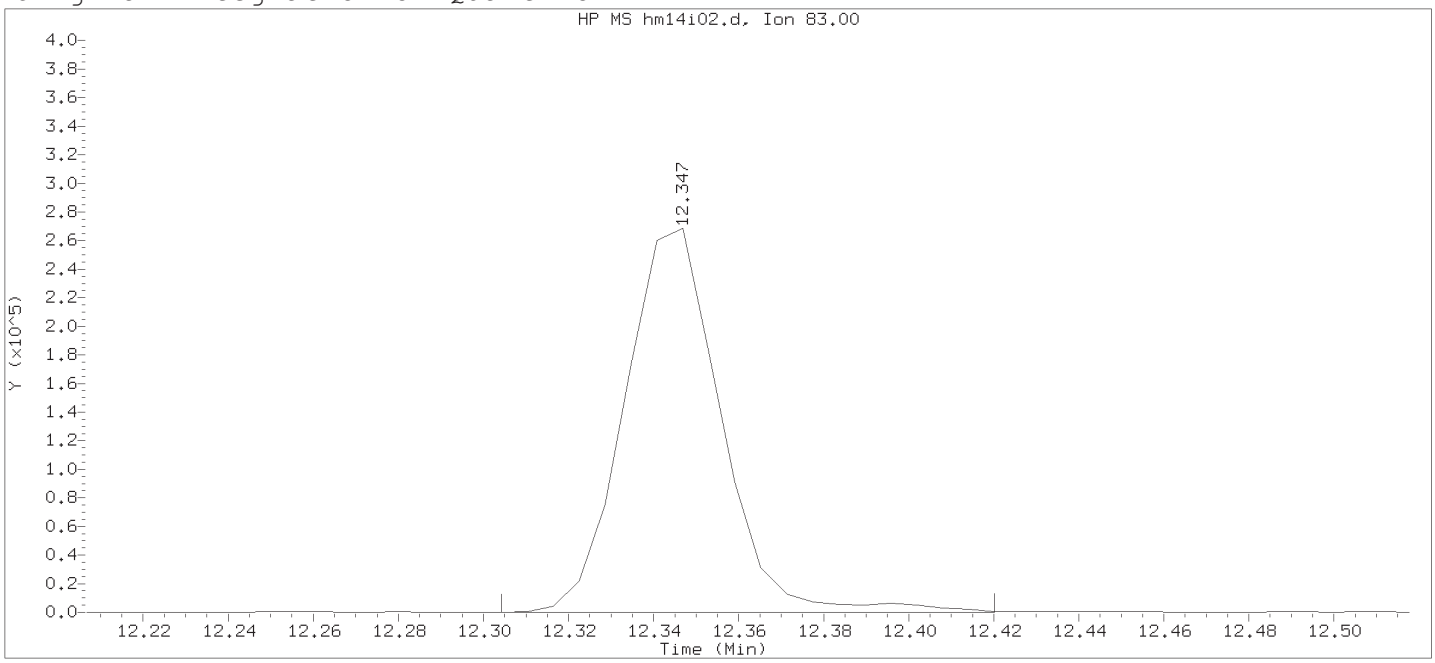
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

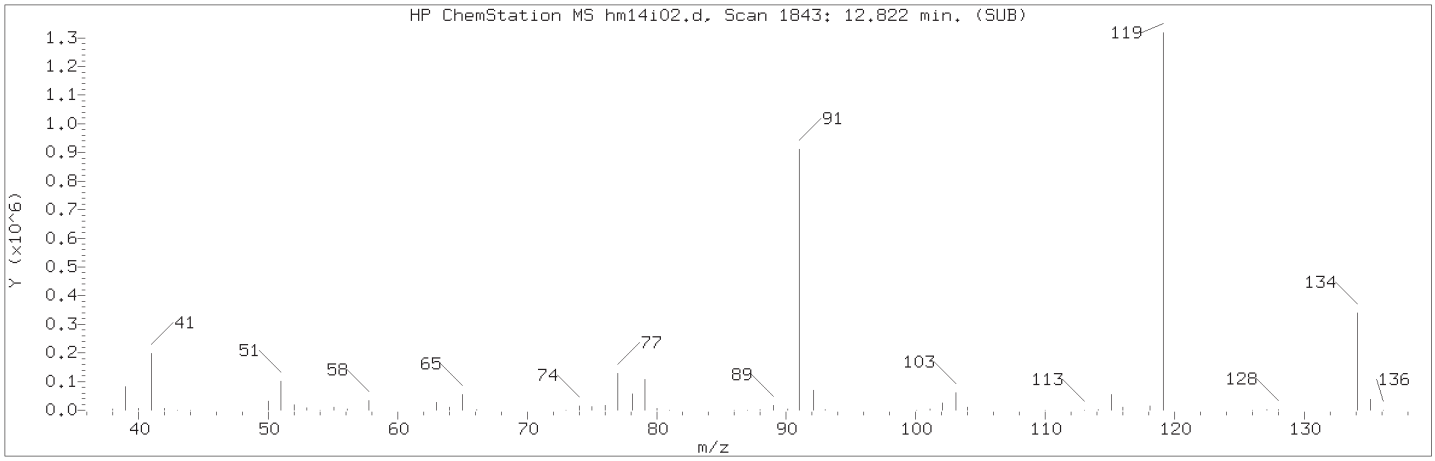
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

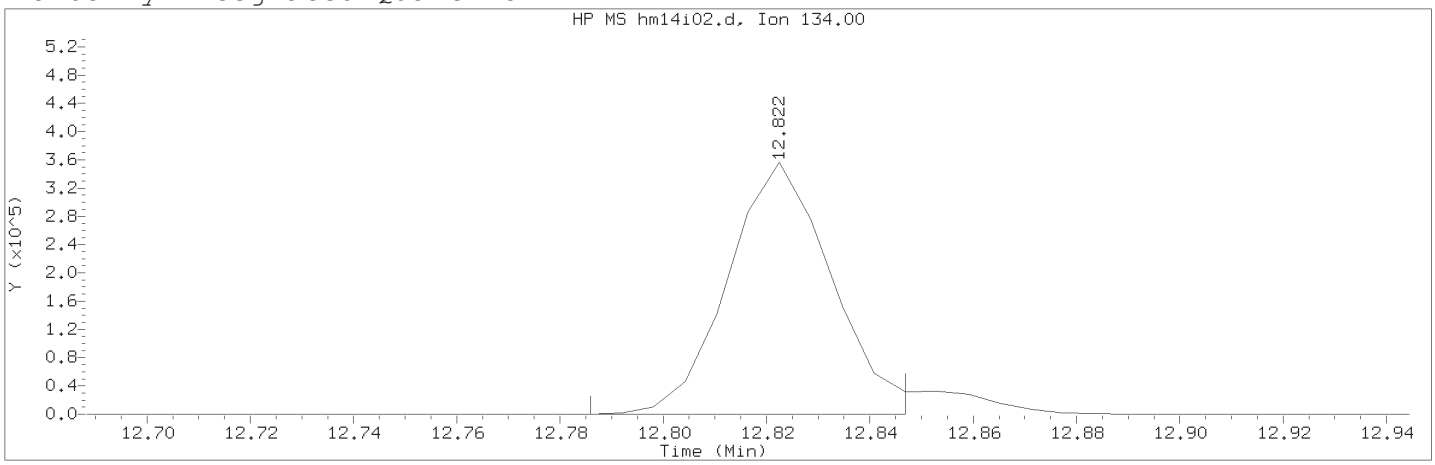
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 422693
On-column Amount (ng) : 9.9194
Integration start scan : 1757 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

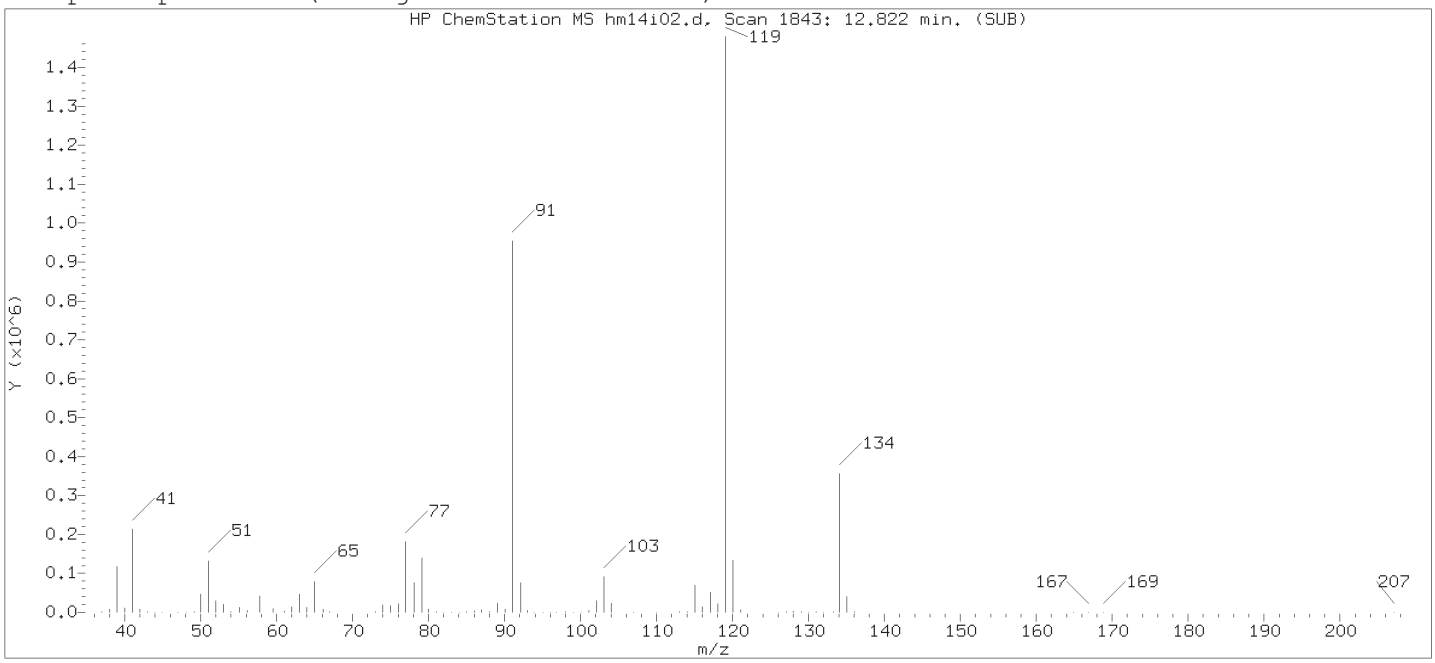
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 497778M
On-Column Amount (ng) : 9.1615
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

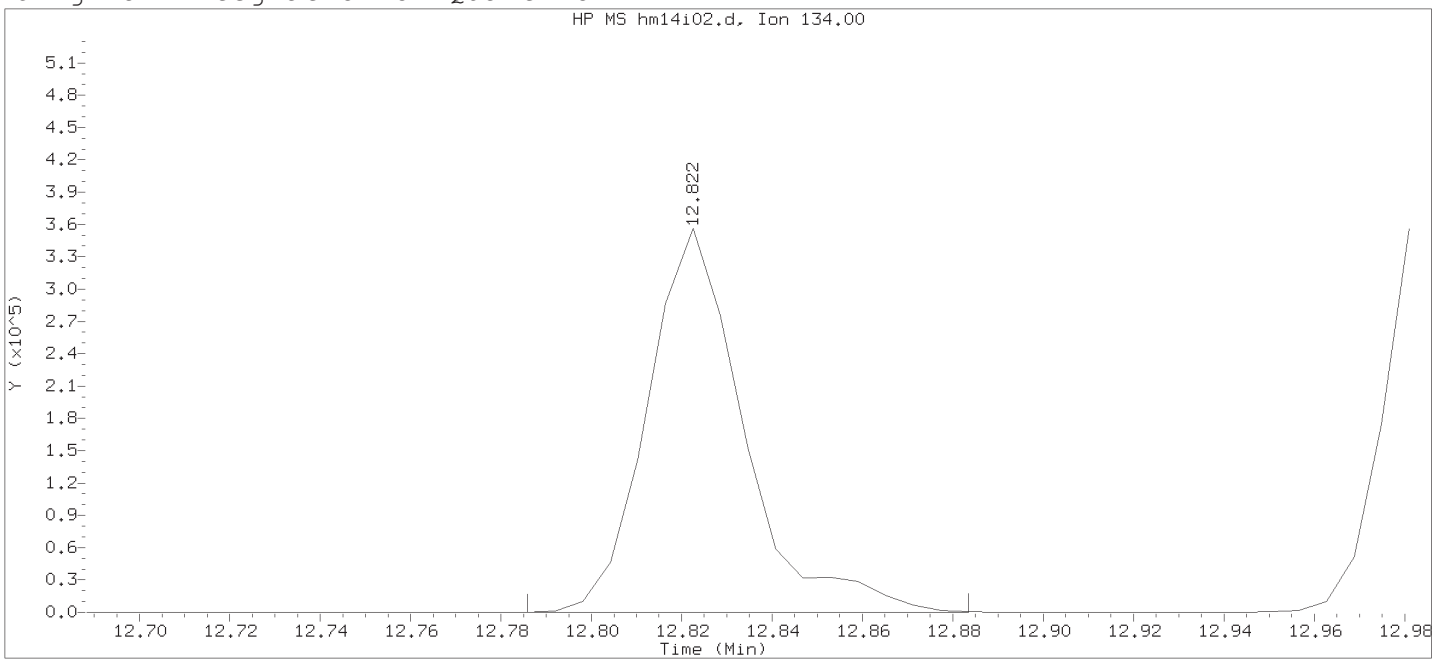
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



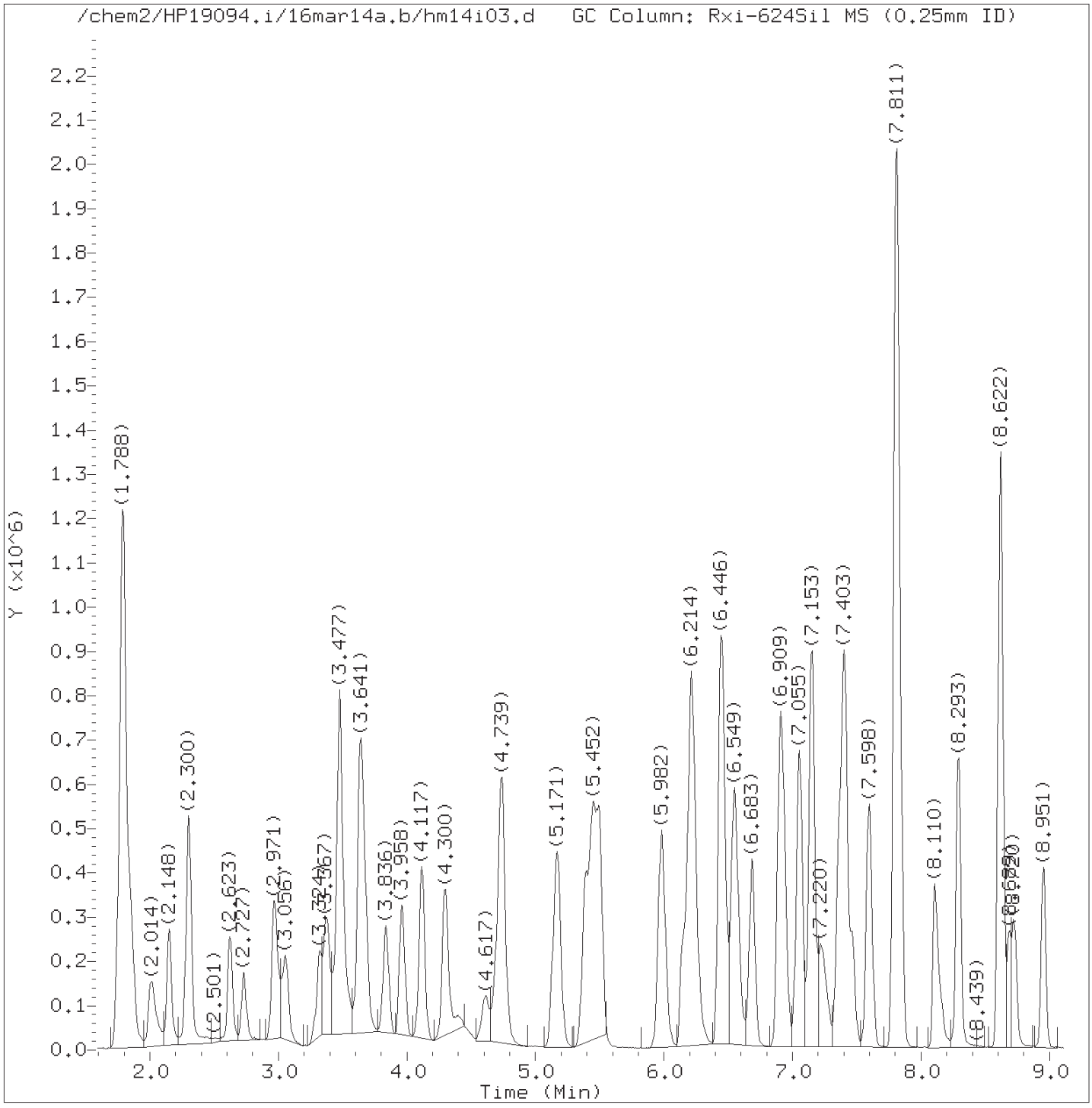
Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 528844
On-column Amount (ng) : 9.9216
Integration start scan : 1836 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

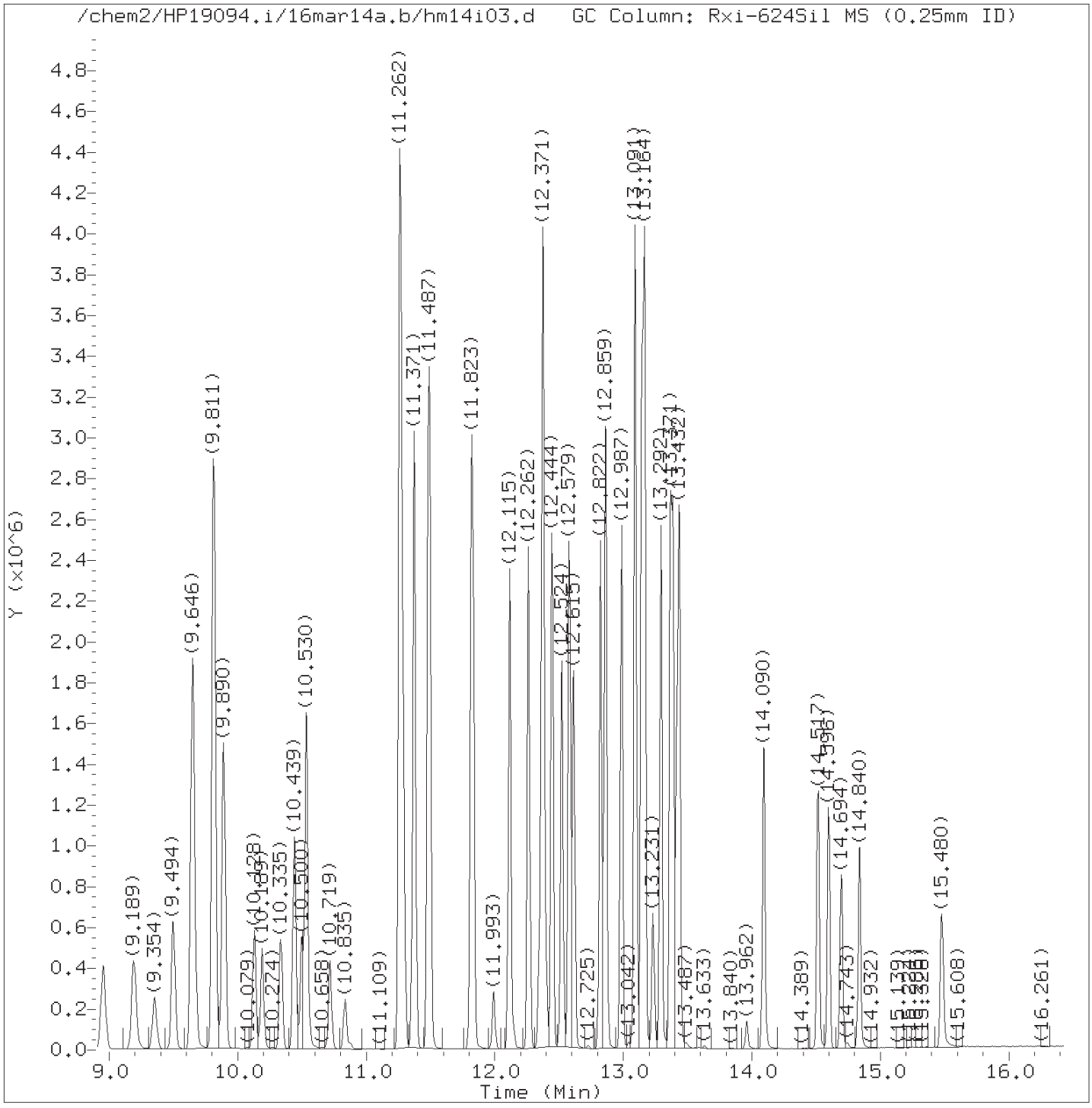
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	371892	4.607
2) Chloromethane	(2)	2.148	50	371363	4.690
5) Vinyl Chloride	(2)	2.288	62	334404	4.541
6) 1,3-Butadiene	(2)	2.306	39	237702	4.268
7) Bromomethane	(2)	2.623	94	230727	4.721
8) Chloroethane	(2)	2.727	64	195395	4.305
9) Dichlorofluoromethane	(2)	2.965	67	455840	4.425
10) Trichlorofluoromethane	(2)	3.056	101	439145	4.578
11) Ethyl ether	(2)	3.318	59	186575	4.714
12) Freon 123a	(2)	3.373	67	334257	4.555
13) Acrolein	(1)	3.477	56	1520359	232.115
15) 1,1-Dichloroethene	(2)	3.635	96	264048	4.797
14) Acetone	(1)	3.641	43	407008M	45.095
16) Freon 113	(2)	3.666	101	274365	4.794
17) Methyl Iodide	(2)	3.836	142	484906	4.759
18) Carbon Disulfide	(2)	3.958	76	788356	4.638
21) Methyl Acetate	(1)	4.086	43	103223	4.072
22) Allyl Chloride	(2)	4.117	41	471192	4.527
26)*t-Butyl Alcohol-d10	(1)	4.281	65	114879M	50.000
23) Methylene Chloride	(2)	4.300	84	280635	4.770
28) t-Butyl Alcohol	(1)	4.415	59	294800	95.440
29) Acrylonitrile	(1)	4.617	53	260911	24.092
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	610597	4.808
31) trans-1,2-Dichloroethene	(2)	4.739	96	284034	4.792
32) n-Hexane	(2)	5.171	57	471915	4.691
33) 1,1-Dichloroethane	(2)	5.385	63	575491	4.764
34) di-Isopropyl Ether	(2)	5.446	45	1012862	4.803
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	471646	4.756
37) Ethyl t-butyl ether	(2)	5.982	59	852742	4.795
40) 1,2-Dichloroethene (Total)	(2)		96	599149	9.592
38) 2-Butanone	(1)	6.153	43	724555	47.112
39) cis-1,2-Dichloroethene	(2)	6.208	96	315115	4.800
42) Propionitrile	(1)	6.220	54	373531	97.403
41) 2,2-Dichloropropane	(2)	6.232	77	453046	4.687
45) Methacrylonitrile	(1)	6.452	67	623555	47.489
47) Bromochloromethane	(2)	6.543	128	118335	4.737
48) Tetrahydrofuran	(1)	6.549	71	180949	46.508
49) Chloroform	(2)	6.683	83	525408	4.758

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	561160	10.172
50)$Dibromofluoromethane	(2)	6.903	111	570981	10.059
51) 1,1,1-Trichloroethane	(2)	6.933	97	450232	4.780
52) Cyclohexane	(2)	7.055	56	558514	4.538
52) Cyclohexane	(2)	7.055	84	435746	4.624
52) Cyclohexane	(2)	7.049	69	163572	4.646
55) 1,1-Dichloropropene	(2)	7.147	75	433185	4.792
54) Carbon Tetrachloride	(2)	7.159	117	409702	4.784
56) Isobutyl Alcohol	(1)	7.220	41	248139M	226.723
57)$1,2-Dichloroethane-d4	(2)	7.360	102	94691	10.363
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476757	10.220
57)$1,2-Dichloroethane-d4	(2)	7.360	104	58559	10.150
58) Benzene	(2)	7.409	78	1197894	4.761
59) 1,2-Dichloroethane	(2)	7.464	62	311010M	4.771
60) t-Amyl methyl ether	(2)	7.598	73	700009	4.817
63)*Fluorobenzene	(2)	7.805	96	2341151	10.000
62) n-Heptane	(2)	7.829	43	530860	4.668
65) n-Butanol	(1)	8.110	56	416627	472.954
67) Trichloroethene	(2)	8.293	95	312040	4.758
70) 1,2-Dichloropropane	(2)	8.616	63	313225	4.781
69) Methylcyclohexane	(2)	8.622	83	490226	4.564
71) Methyl Methacrylate	(1)	8.683	69	131470A	4.792
72) 1,4-Dioxane	(1)	8.713	88	46287	266.703
73) Dibromomethane	(2)	8.726	93	129894	4.814
74) Bromodichloromethane	(2)	8.951	83	367976	4.884
76) 2-Nitropropane	(1)	9.189	41	388746	44.205
80) cis-1,3-Dichloropropene	(2)	9.494	75	451220	4.873
81) 4-Methyl-2-Pentanone	(1)	9.646	43	1792678	47.363
82)$Toluene-d8	(3)	9.811	98	2307236	9.900
82)$Toluene-d8	(3)	9.811	100	1489785	9.876
83) Toluene	(3)	9.890	92	738213	4.702
84) trans-1,3-Dichloropropene	(3)	10.128	75	351450	4.777
85) 1,3-Dichloropropene (total)	(3)		75	802670	9.650
86) Ethyl Methacrylate	(3)	10.189	69	275188	4.862
88) 1,1,2-Trichloroethane	(3)	10.335	97	180447	4.746
89) Tetrachloroethene	(3)	10.445	166	350153	4.723
90) 1,3-Dichloropropane	(3)	10.500	76	330475	4.834
91) 2-Hexanone	(1)	10.530	43	1250901	46.743

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	239573	4.915
95) 1,2-Dibromoethane	(3)	10.835	107	173349	4.840
97)*Chlorobenzene-d5	(3)	11.262	117	1635921	10.000
98) Chlorobenzene	(3)	11.286	112	807623	4.726
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	279929	4.776
100) Ethylbenzene	(3)	11.371	91	1451953	4.725
101) m+p-Xylene	(3)	11.487	106	1099307	9.380
105) Xylene (Total)	(3)		106	1638133	14.117
104) o-Xylene	(3)	11.816	106	538826	4.738
106) Styrene	(3)	11.829	104	870981	4.787
107) Bromoform	(3)	11.993	173	131706	4.872
108) Isopropylbenzene	(3)	12.115	105	1420386	4.712
111)$4-Bromofluorobenzene	(3)	12.262	95	755184	10.053
111)$4-Bromofluorobenzene	(3)	12.262	174	631325	10.080
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	214047M	4.677
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	572735	49.139
114) Bromobenzene	(4)	12.377	156	317033	4.651
116) 1,2,3-Trichloropropane	(4)	12.396	110	55006M	4.788
117) n-Propylbenzene	(4)	12.444	91	1715901	4.654
119) 2-Chlorotoluene	(4)	12.524	126	331681	4.666
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	1197091	4.658
122) 4-Chlorotoluene	(4)	12.615	126	338136	4.668
125) tert-Butylbenzene	(4)	12.822	134	256144M	4.675
126) Pentachloroethane	(4)	12.853	167	194984	4.715
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1205906	4.692
128) sec-Butylbenzene	(4)	12.987	105	1546890	4.648
131) 1,3-Dichlorobenzene	(4)	13.091	146	618407	4.638
132) p-Isopropyltoluene	(4)	13.097	119	1332677	4.731
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	731141	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	619072	4.570
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	484232	4.544
136) Benzyl Chloride	(4)	13.231	126	90666	5.001
138) n-Butylbenzene	(4)	13.383	92	652357	4.734
139) 1,2-Dichlorobenzene	(4)	13.420	146	549041	4.637
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27916	4.643
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	379175	4.476
146) Hexachlorobutadiene	(4)	14.596	225	204443	4.619
147) Naphthalene	(4)	14.694	128	628588	4.316

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	311205	4.600

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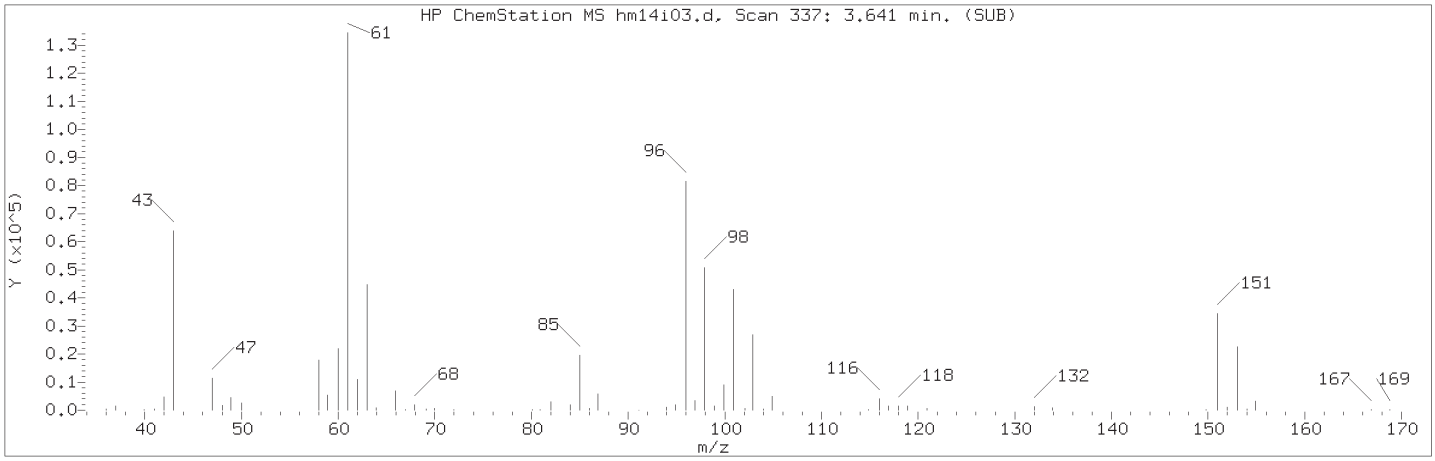
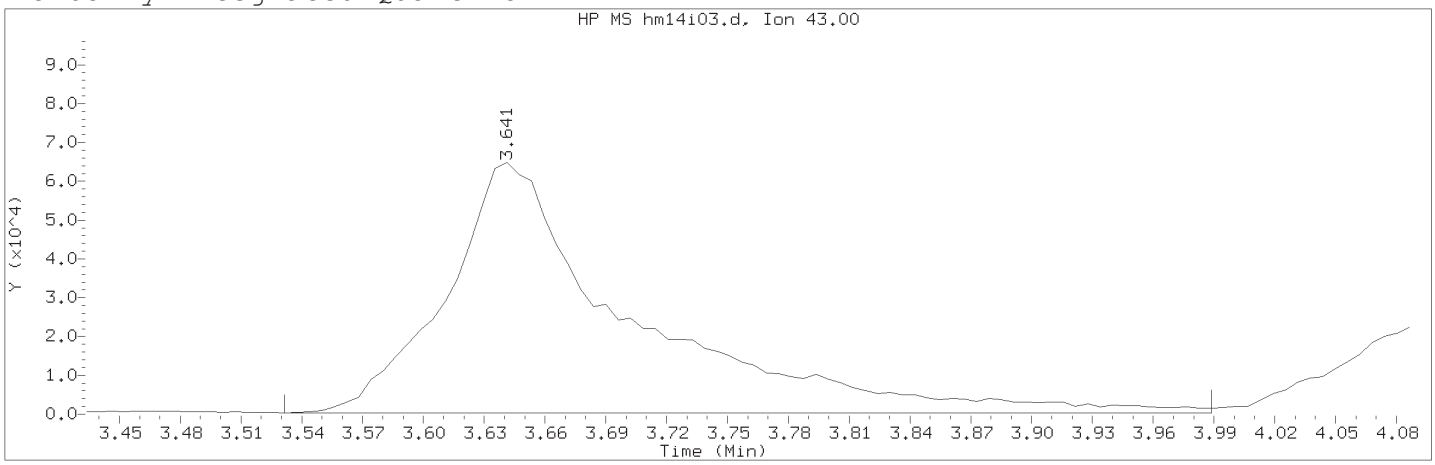
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

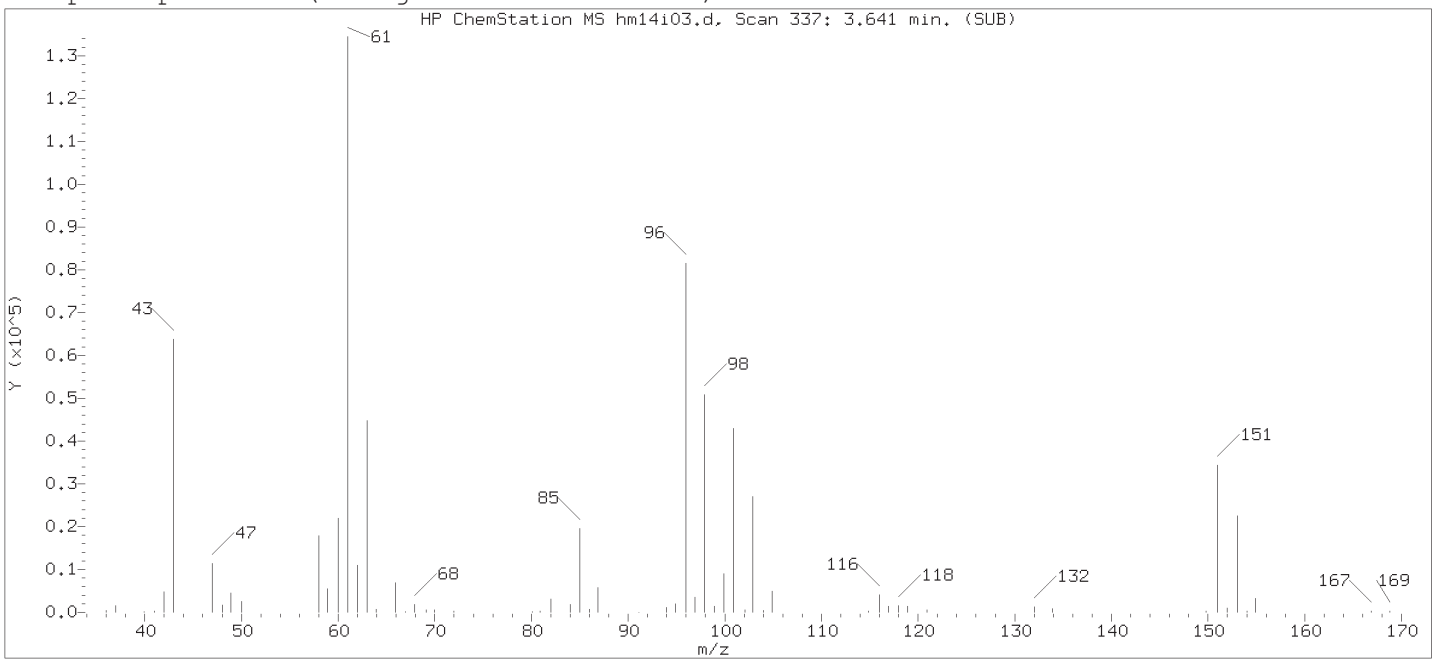
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 407008M
On-Column Amount (ng) : 45.0947
Integration start scan : 318 Integration stop scan: 393
Y at integration start : 297 Y at integration end: 297

Reason for manual integration: improper integration

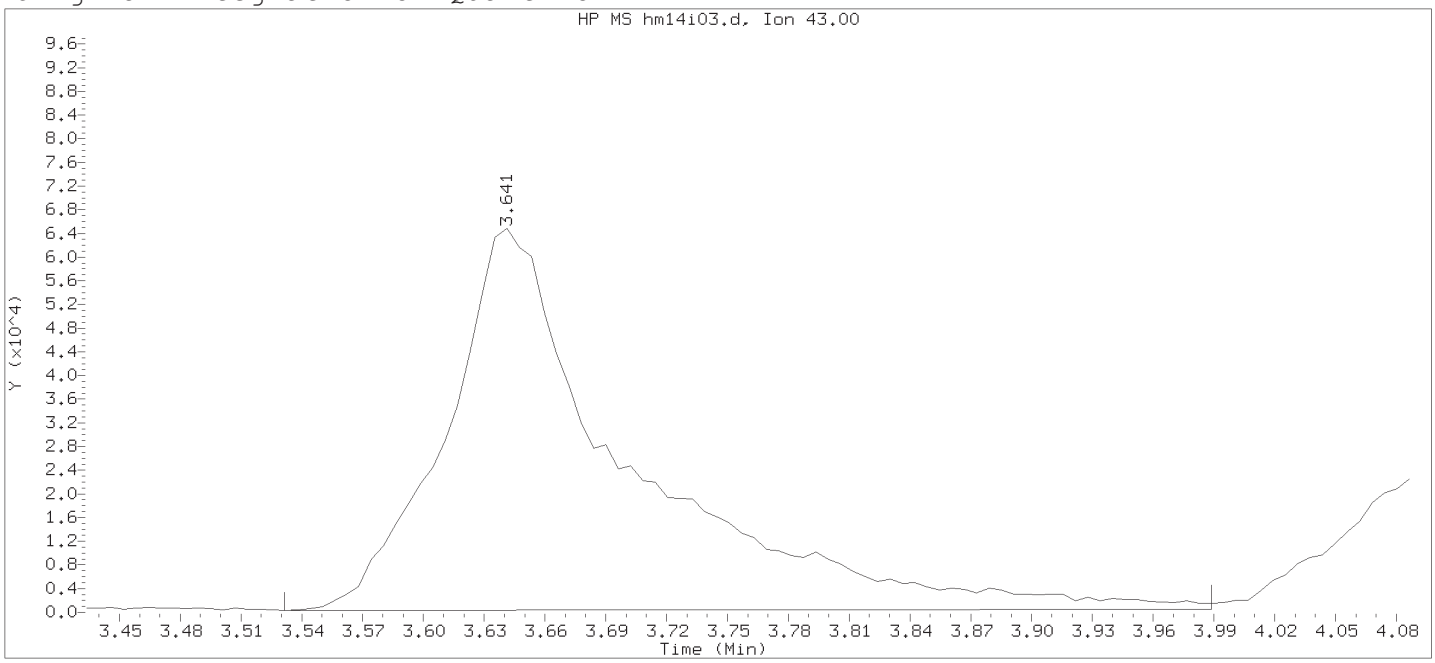
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

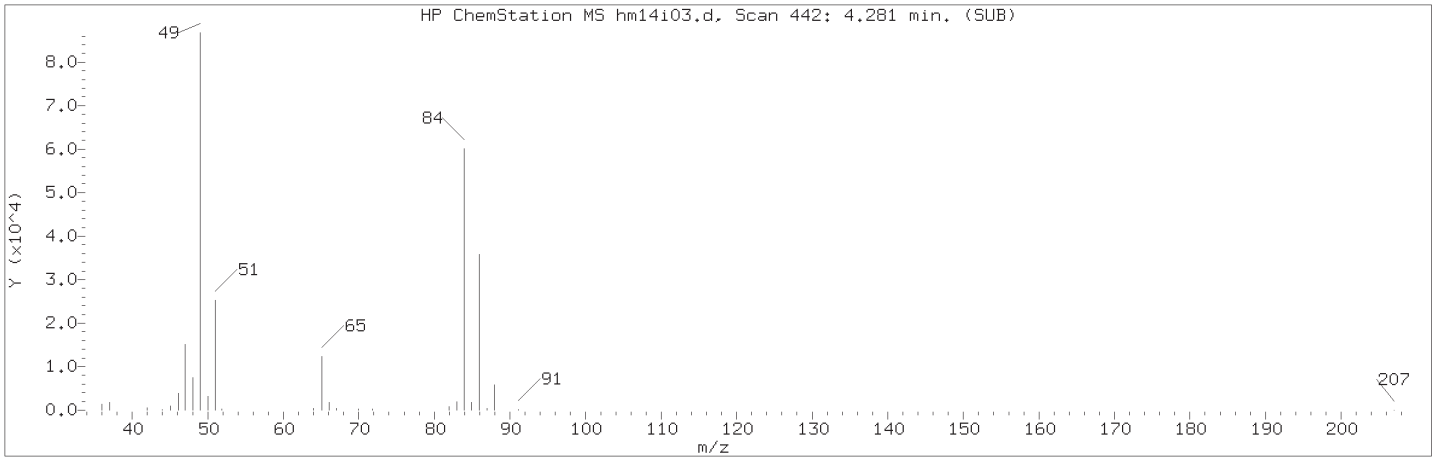
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

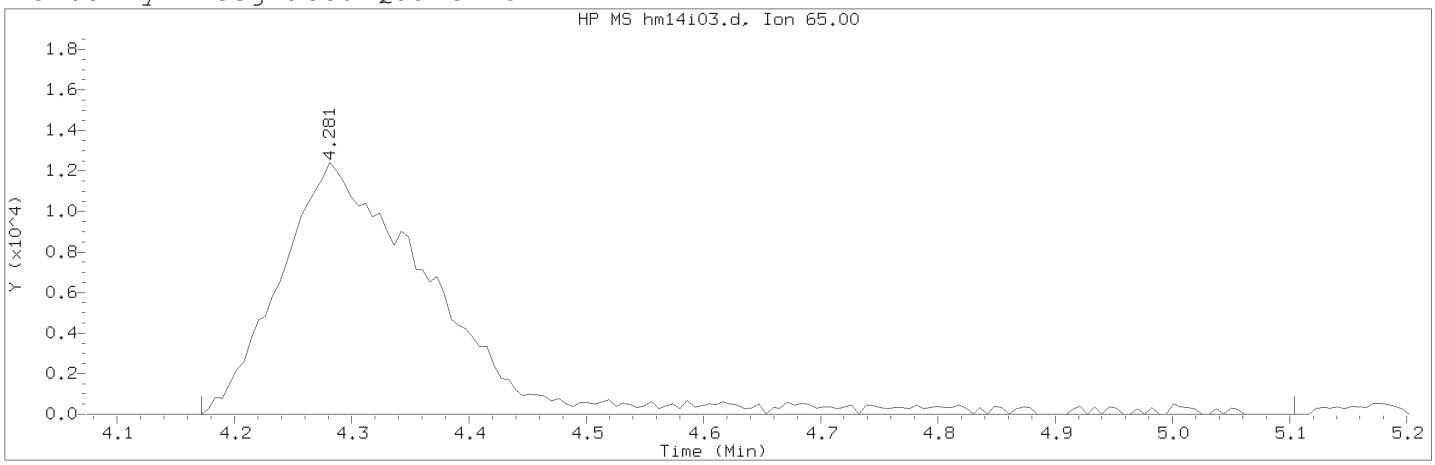
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 337		
Retention Time (minutes)	: 3.641		
Quant Ion	: 43.00		
Area	: 403107		
On-column Amount (ng)	: 49.9647		
Integration start scan	: 318	Integration stop scan:	393
Y at integration start	: 309	Y at integration end:	553

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

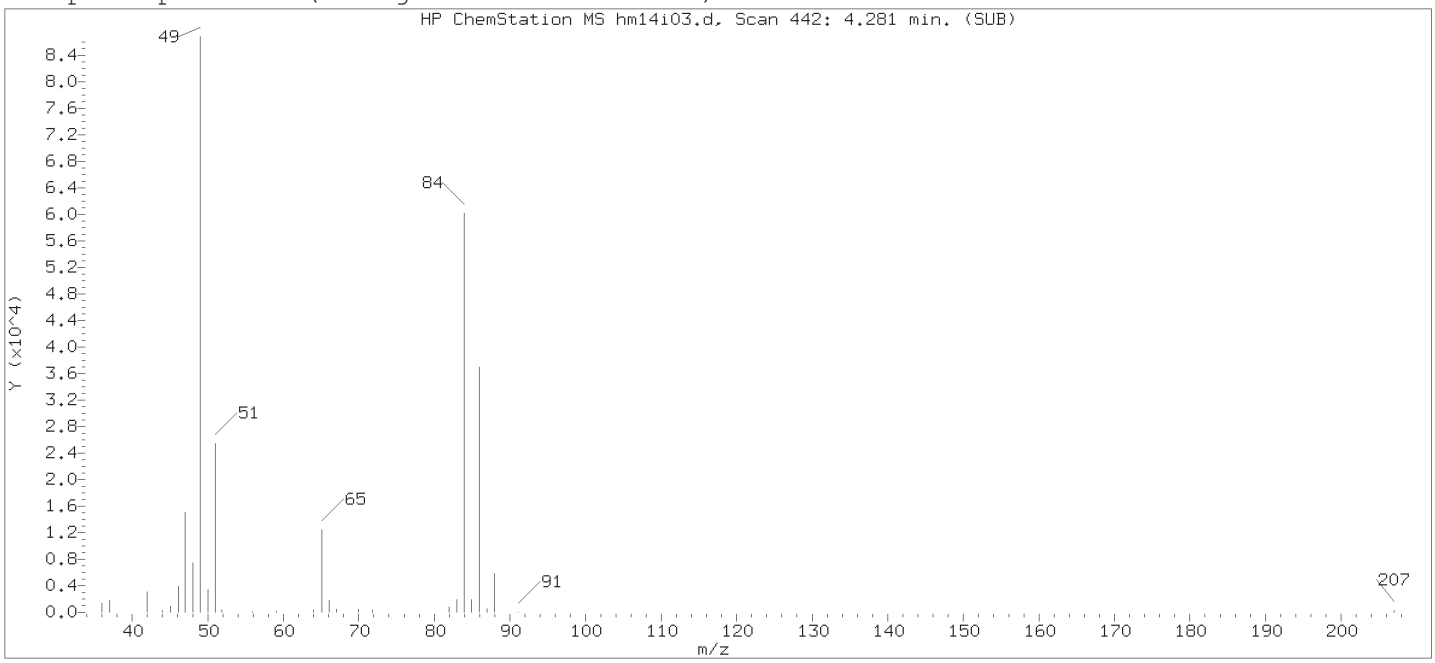
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 114879M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

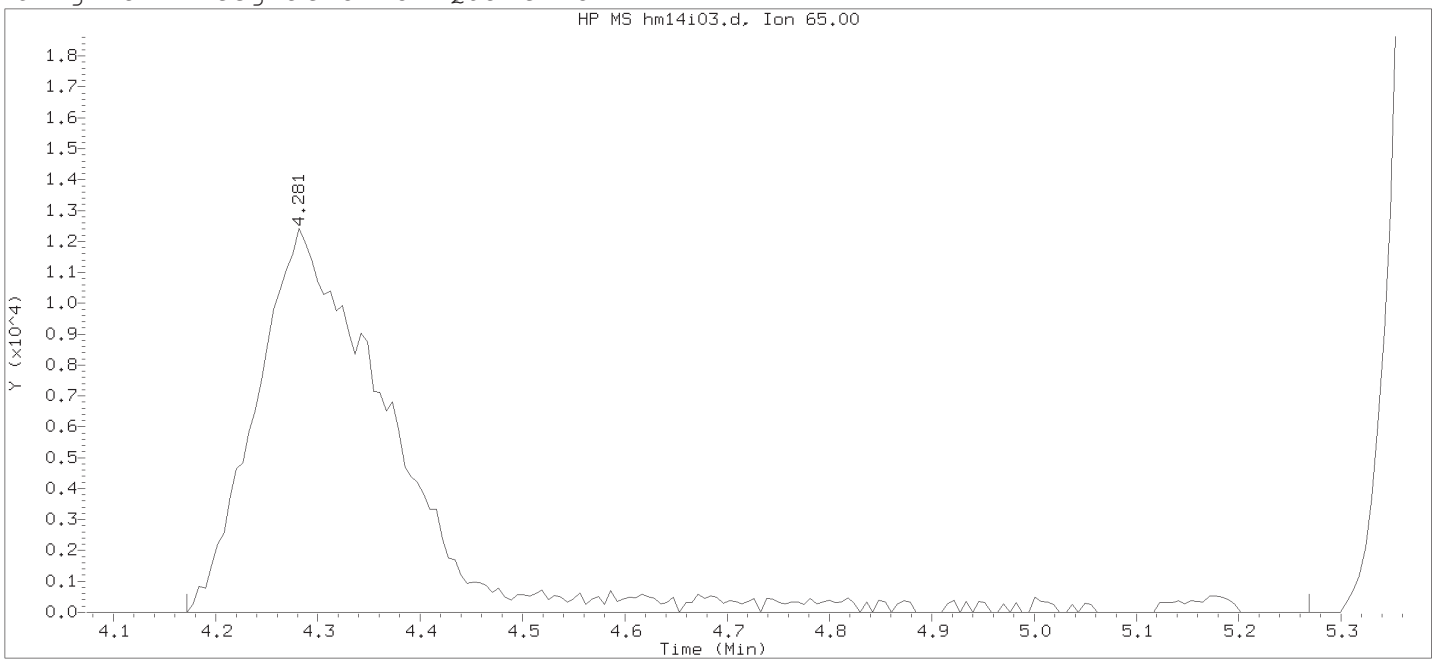
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

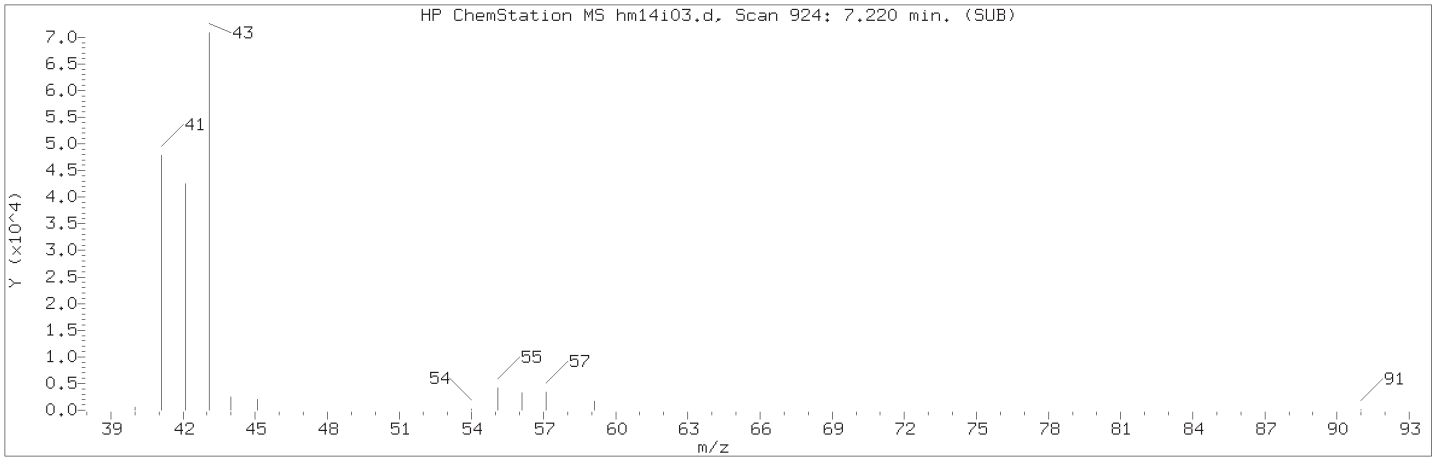
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

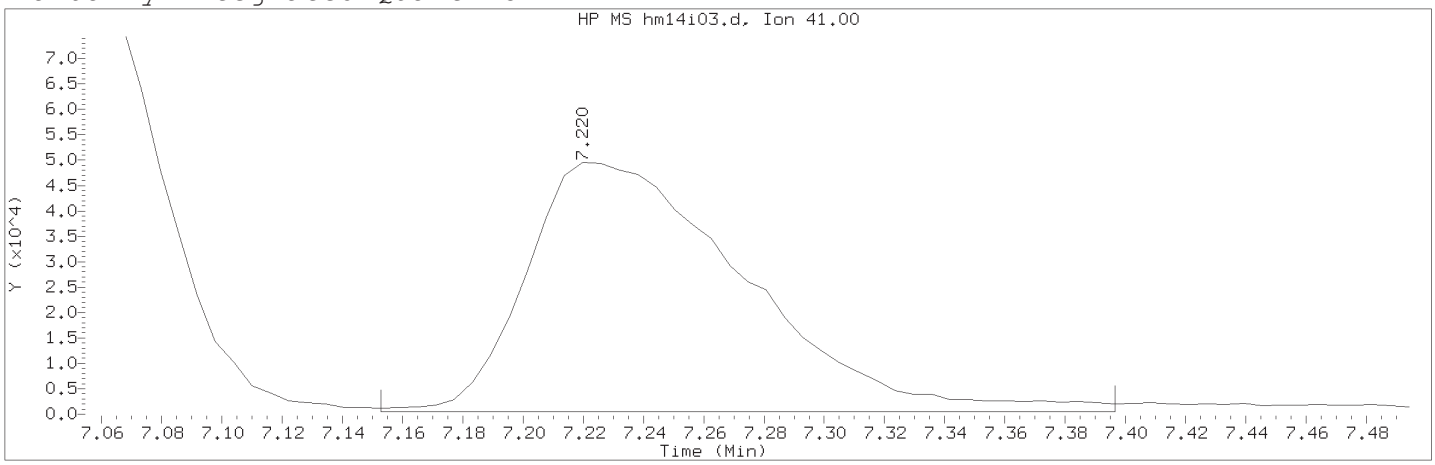
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 116646
On-column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

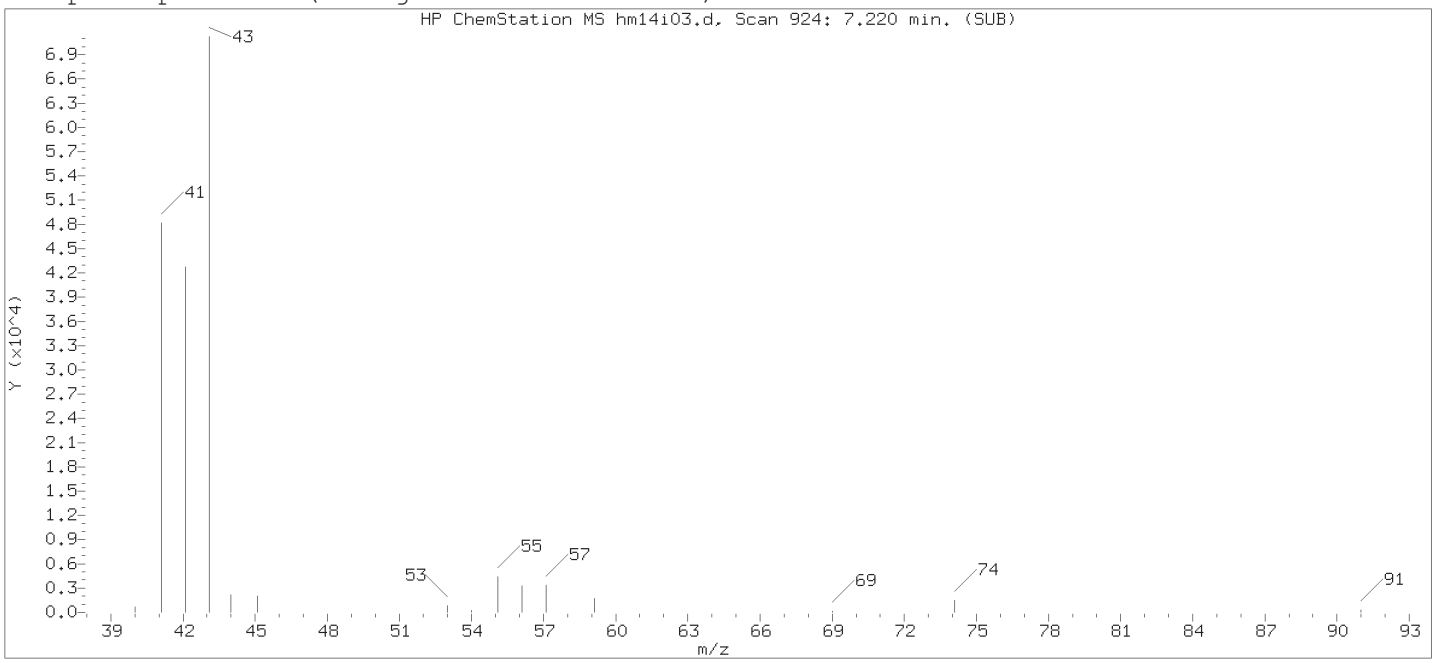
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area (flag) : 248139M
On-Column Amount (ng) : 226.7235
Integration start scan : 912 Integration stop scan: 952
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

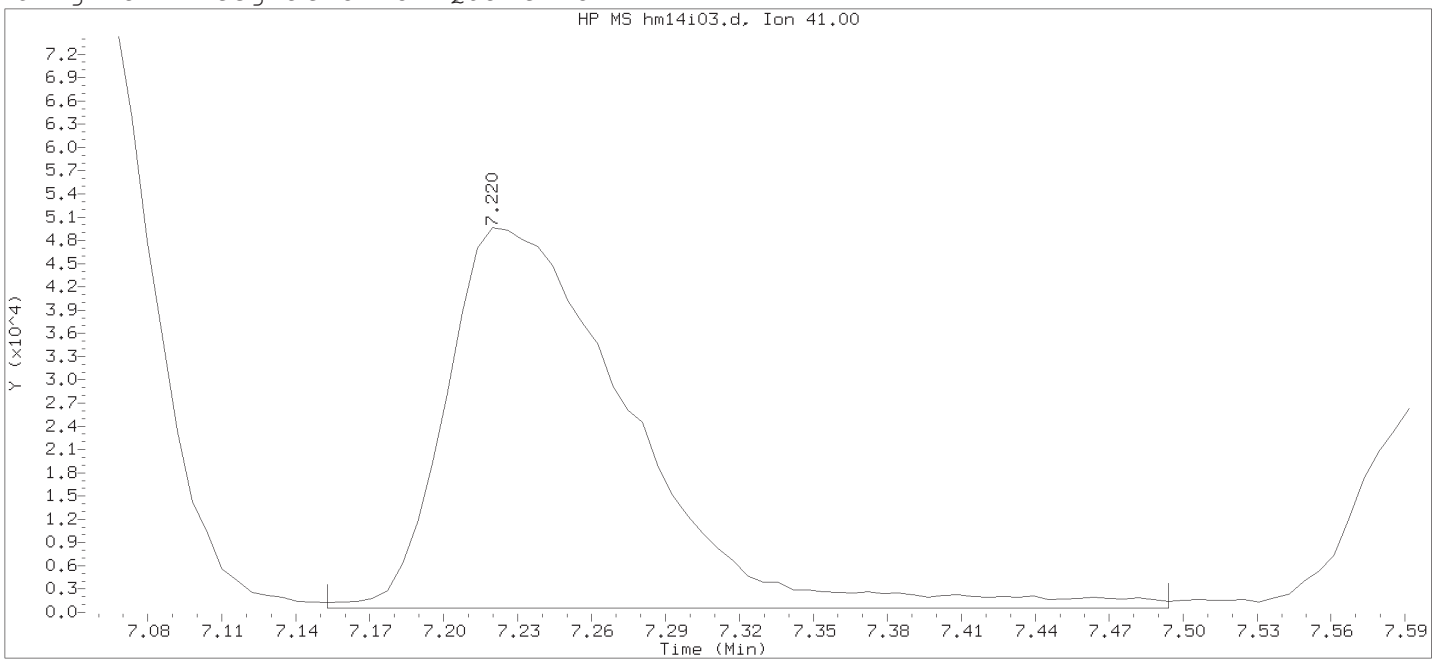
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

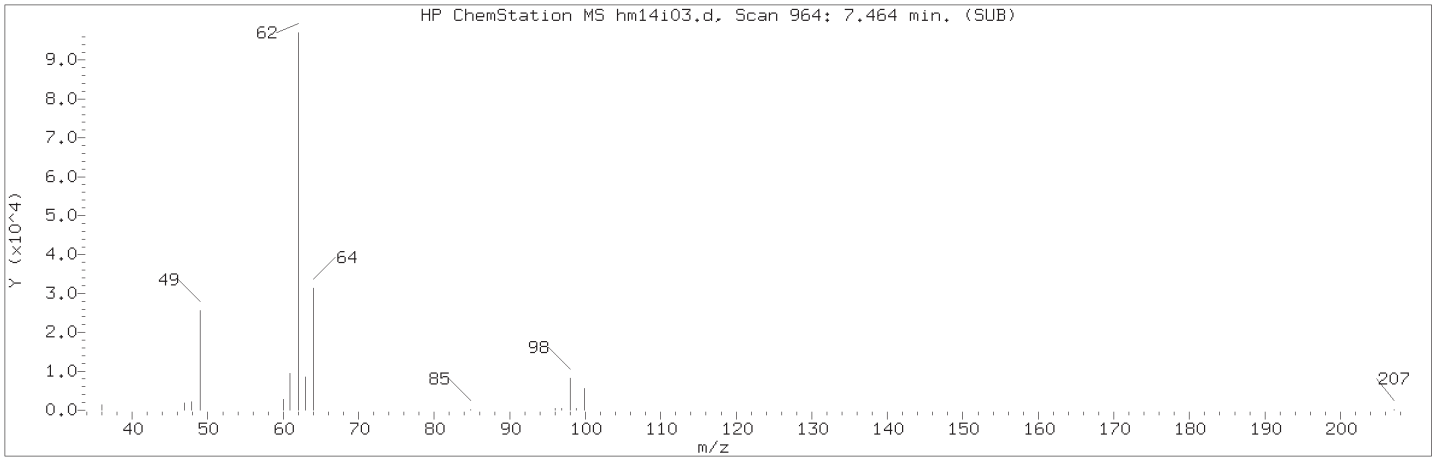
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

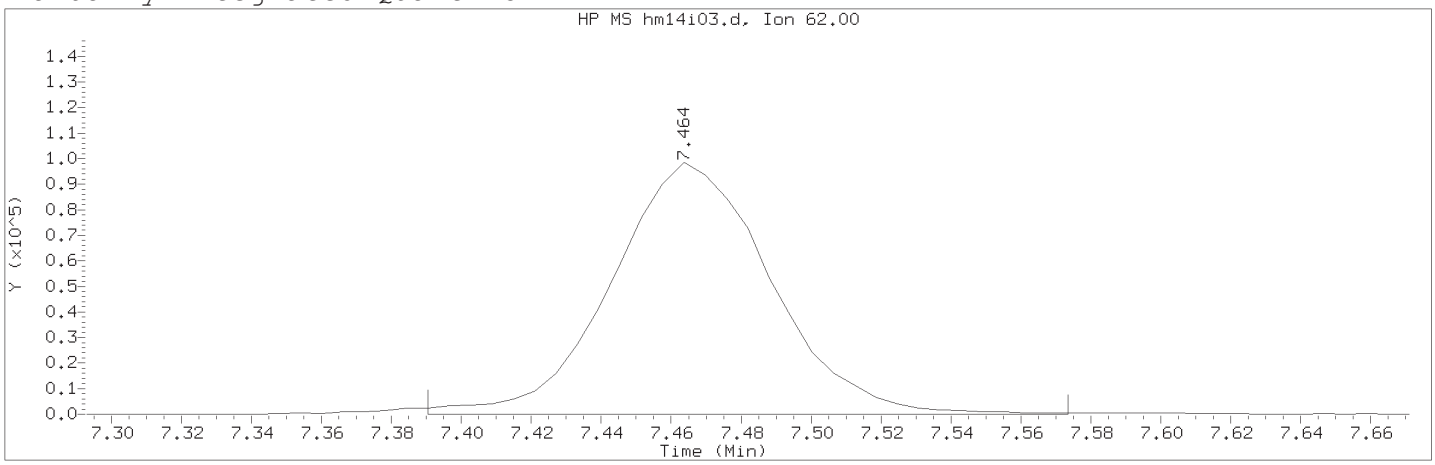
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area : 255850
On-column Amount (ng) : 253.4913
Integration start scan : 912 Integration stop scan: 968
Y at integration start : 518 Y at integration end: 518

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

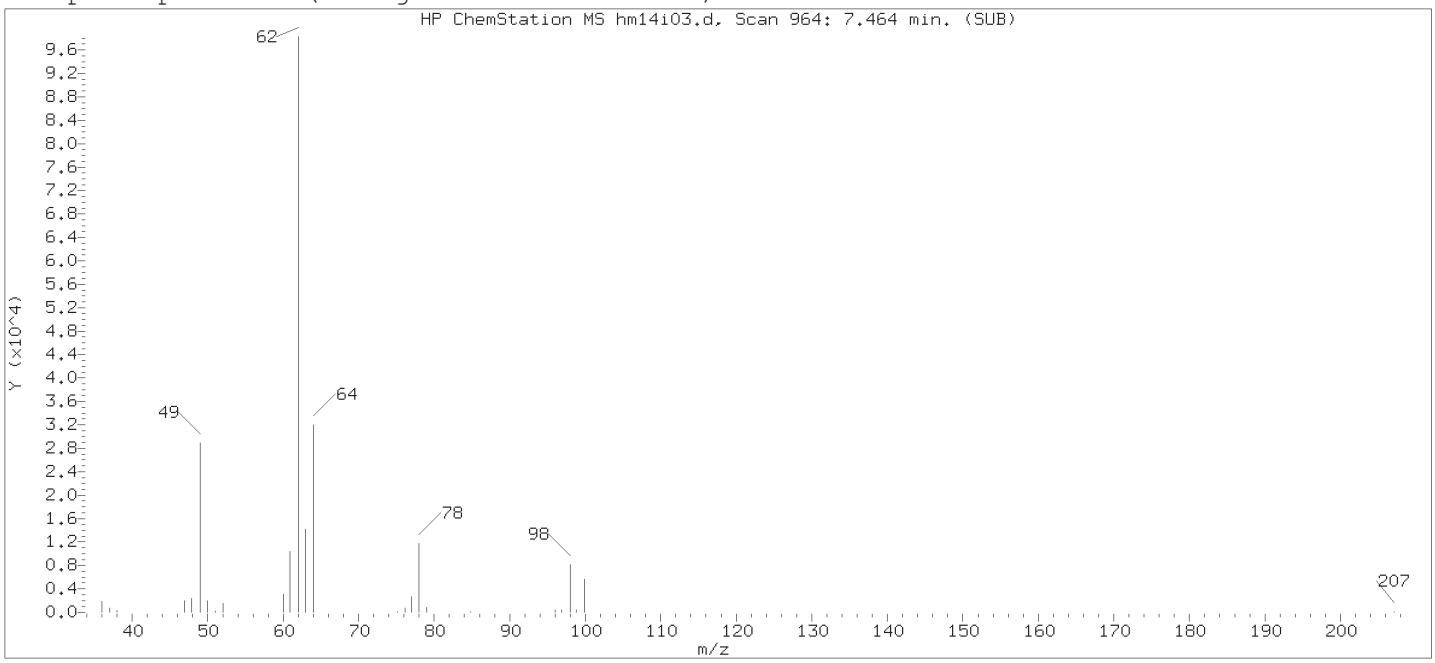
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 311010M
On-Column Amount (ng) : 4.7707
Integration start scan : 951 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

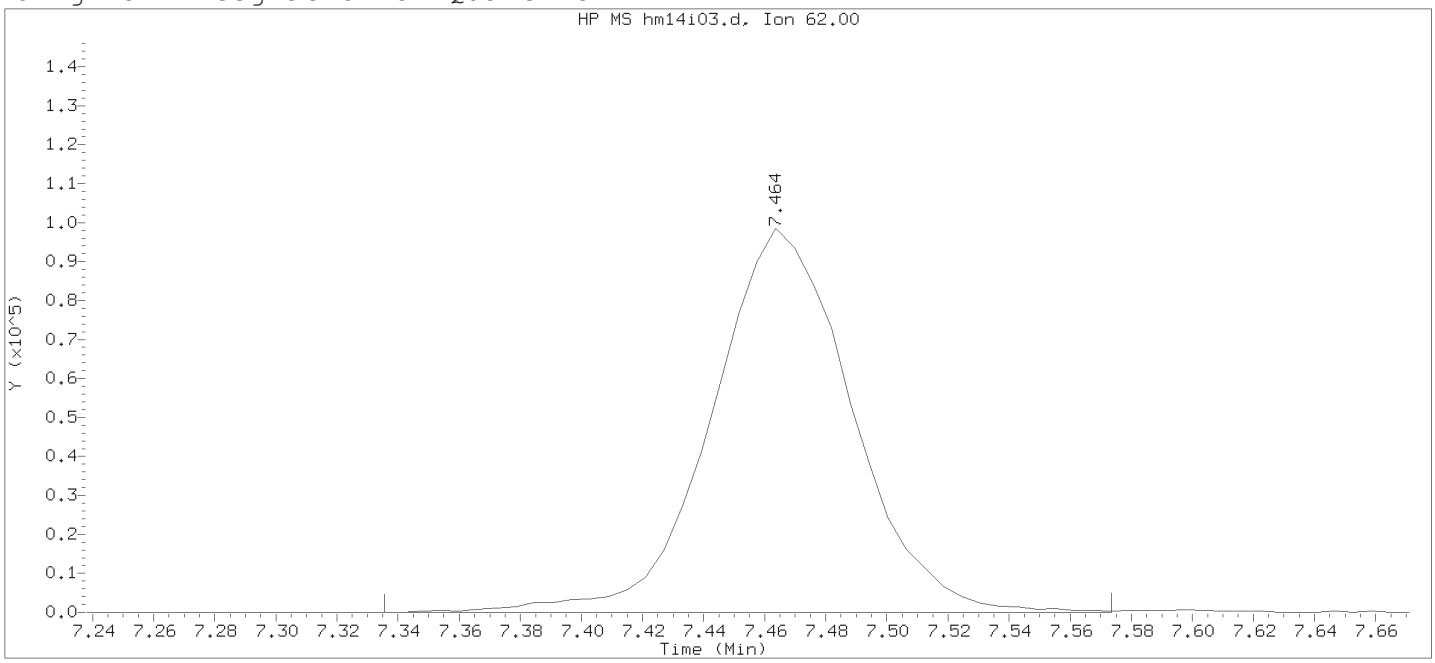
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

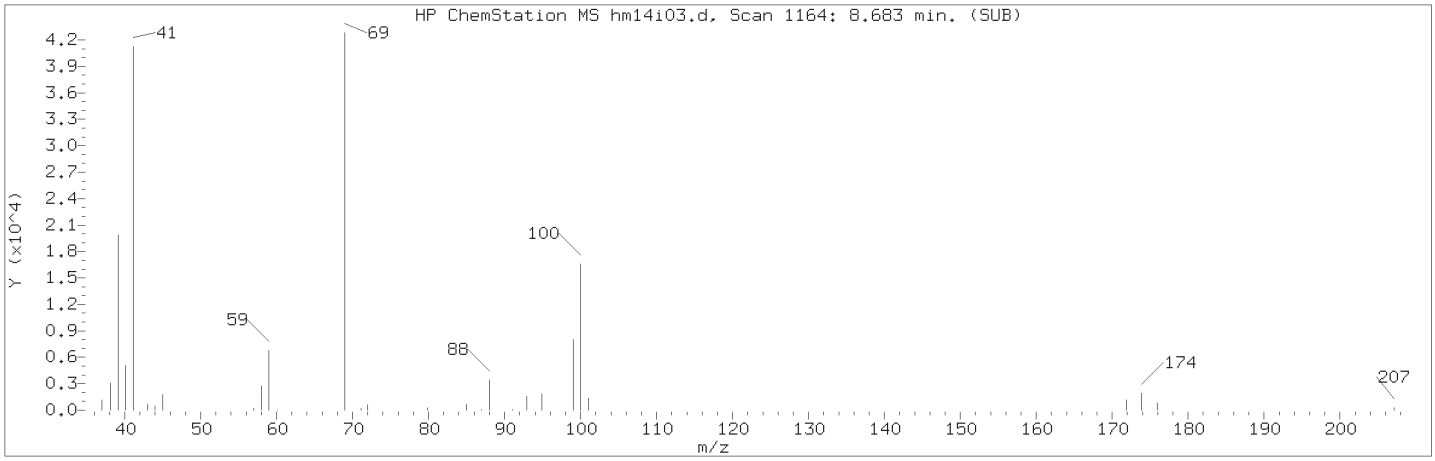
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

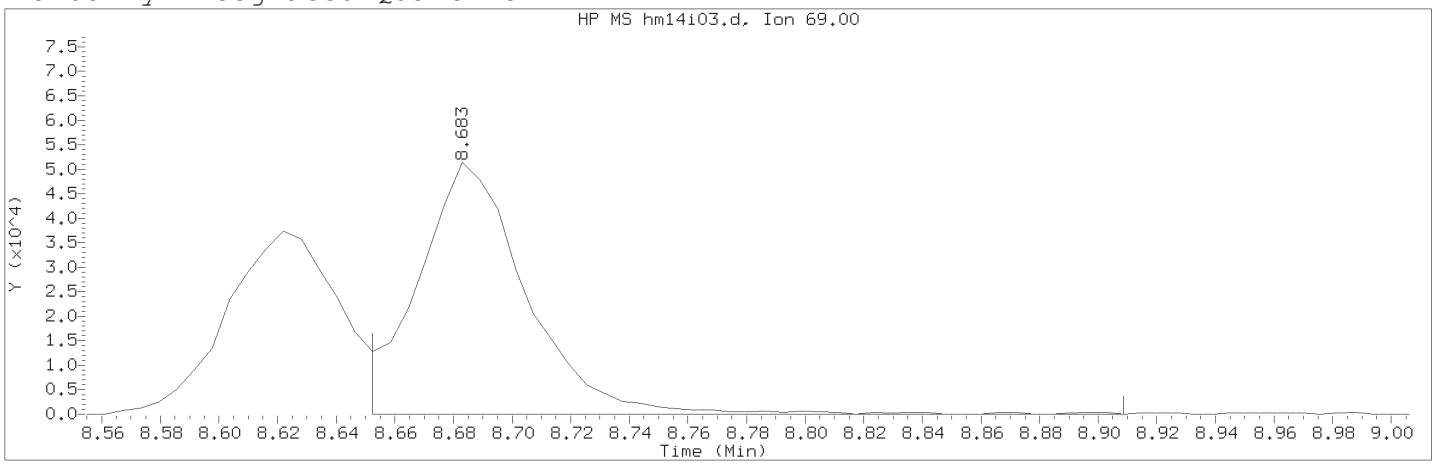
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 313394
On-column Amount (ng) : 4.8910
Integration start scan : 942 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

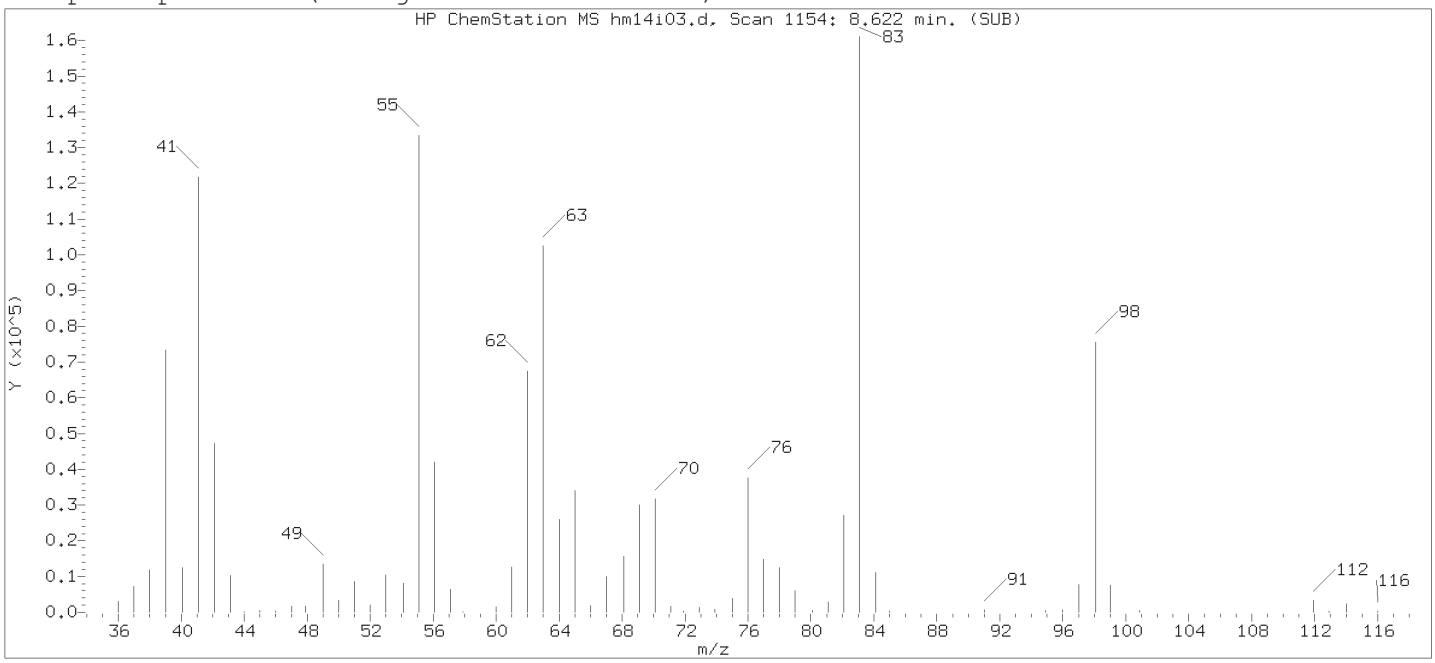
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 131470A
On-Column Amount (ng) : 4.7922
Integration start scan : 1158 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

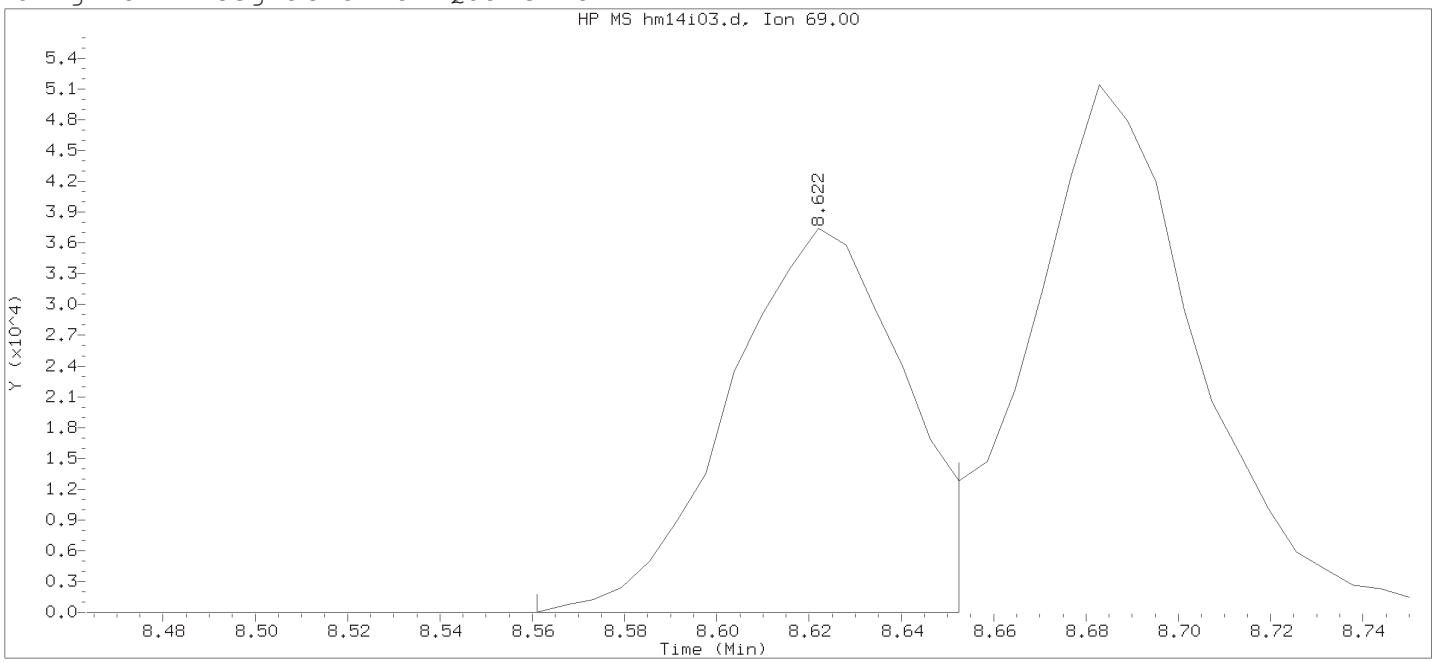
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

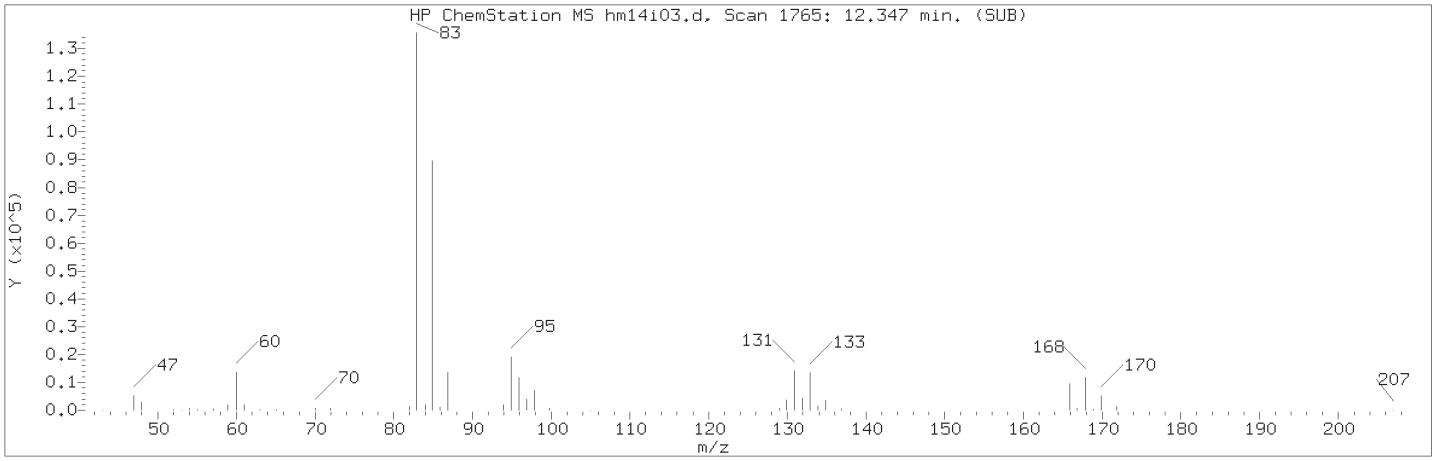
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

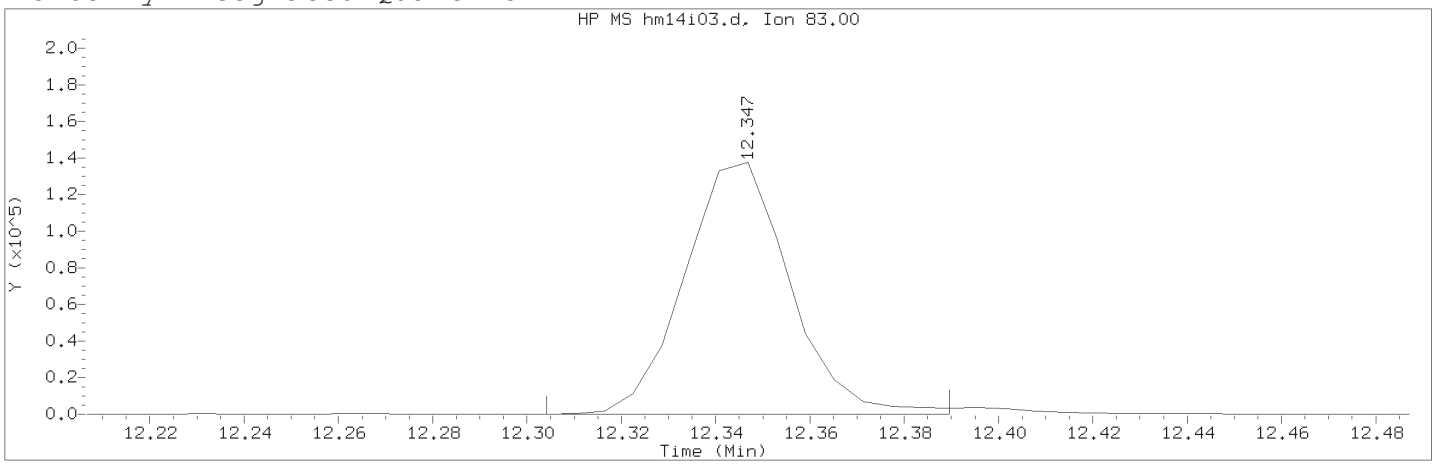
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 97947
On-column Amount (ng) : 3.1461
Integration start scan : 1143 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

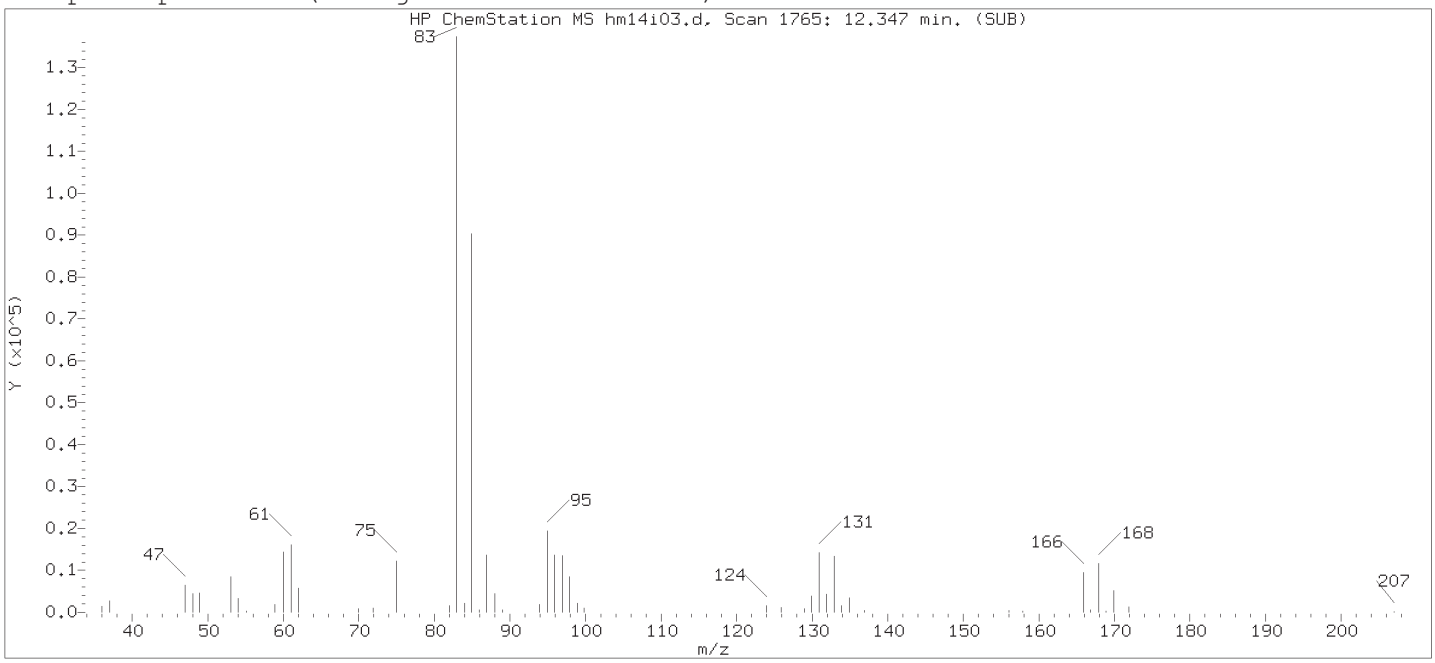
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 214047M
On-Column Amount (ng) : 4.6774
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

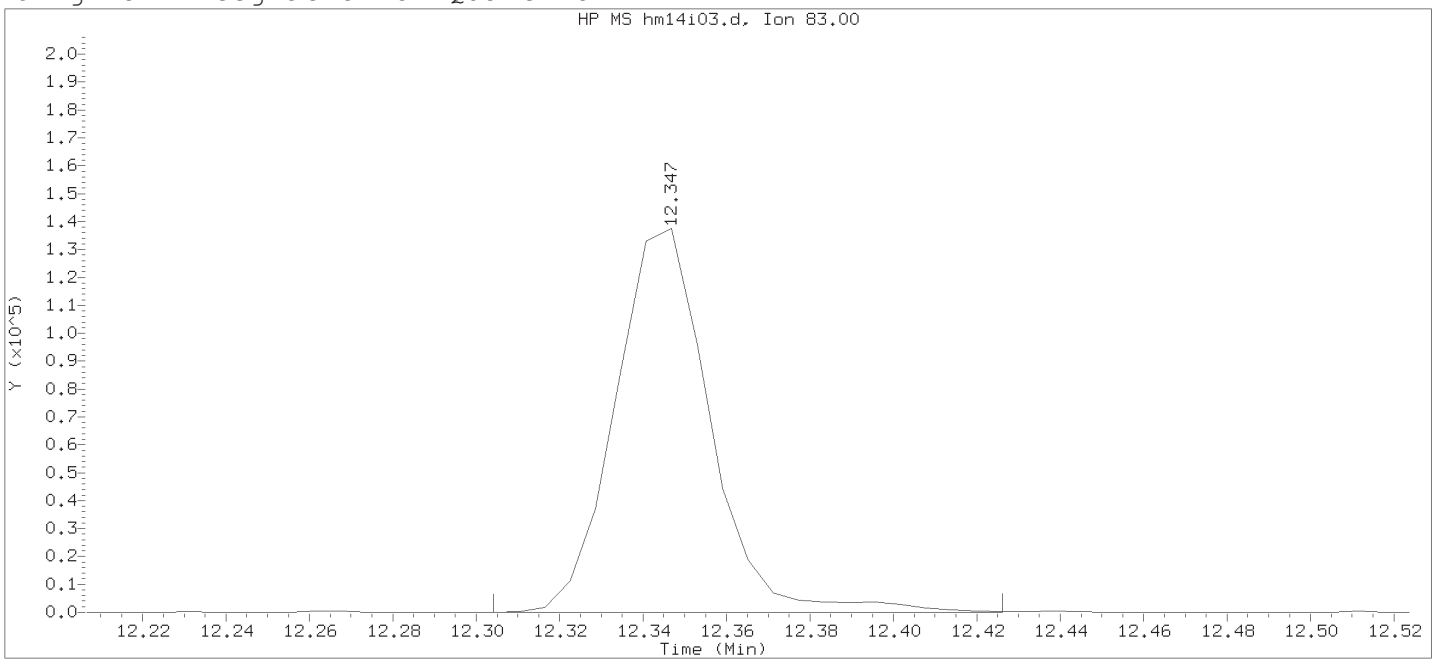
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

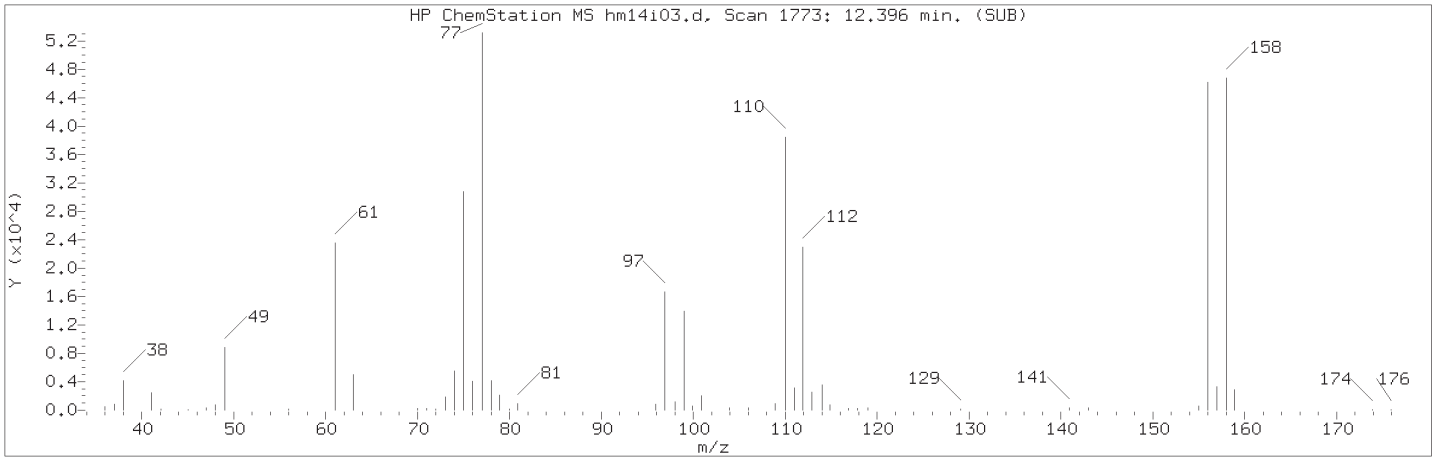
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

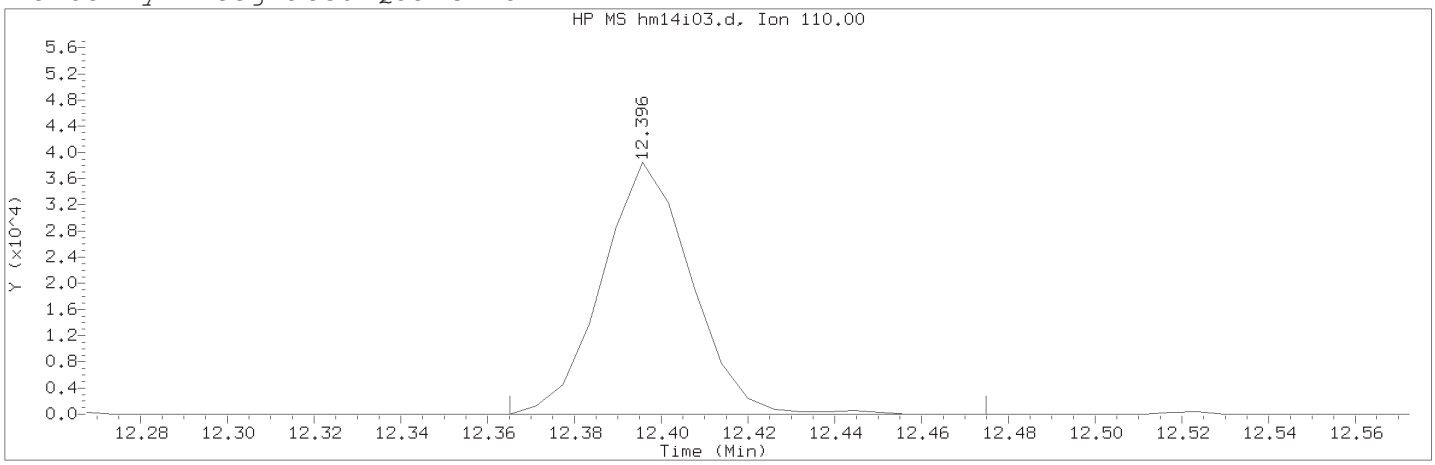
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area	: 217575		
On-column Amount (ng)	: 5.0419		
Integration start scan	: 1757	Integration stop scan:	1777
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

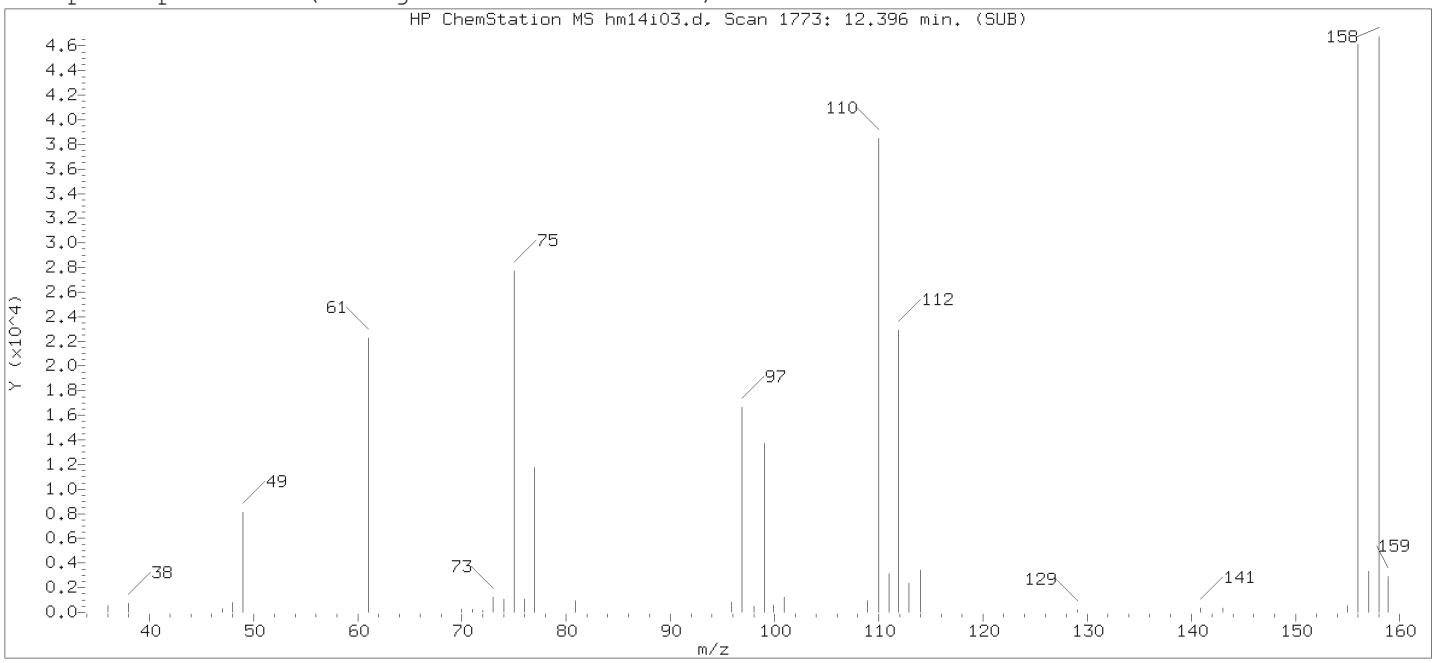
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area (flag) : 55006M
On-Column Amount (ng) : 4.7878
Integration start scan : 1767 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

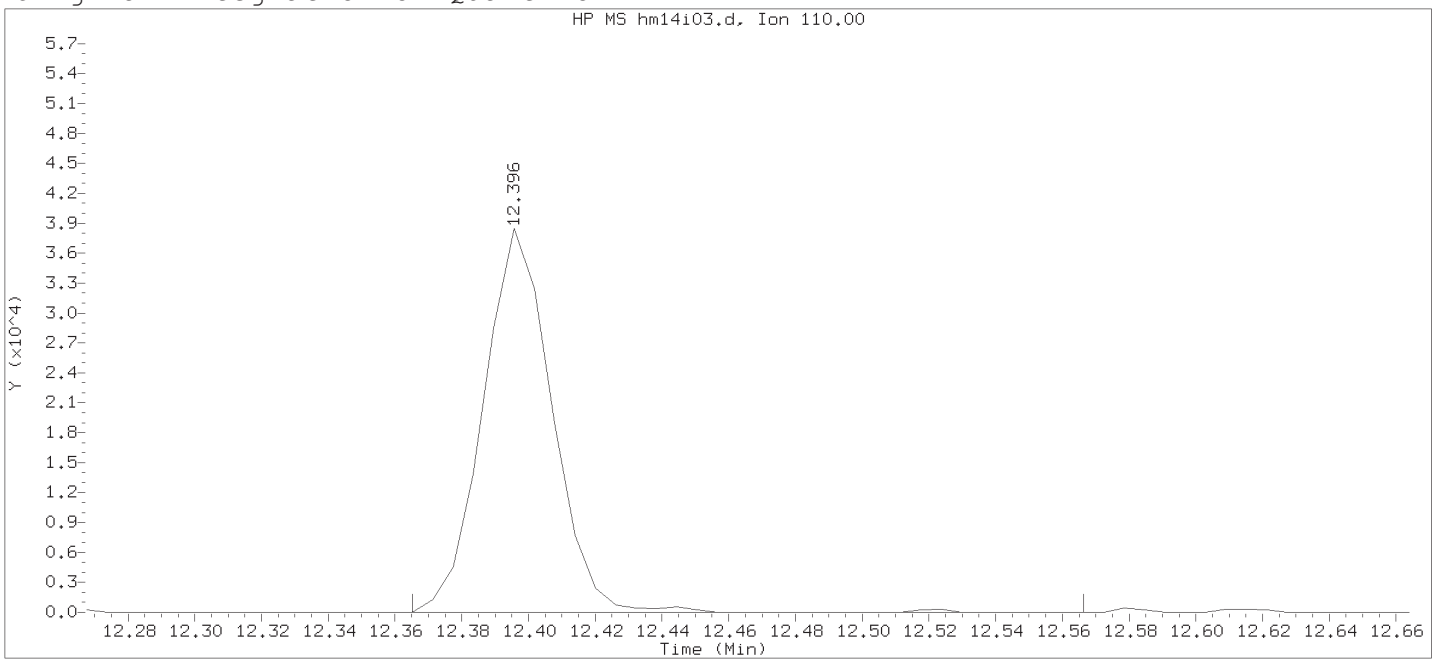
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

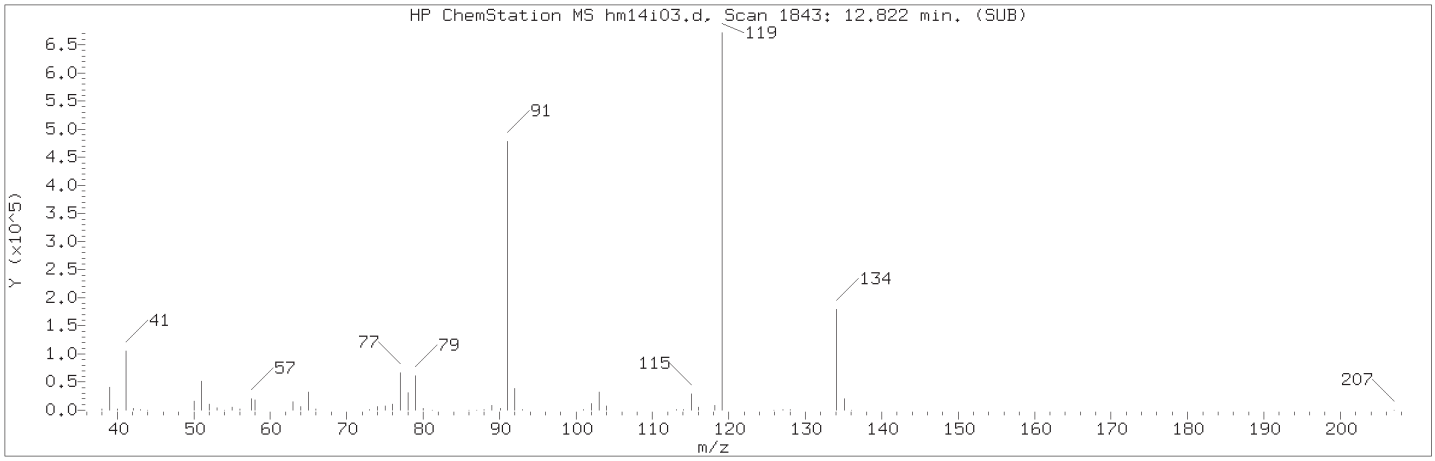
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

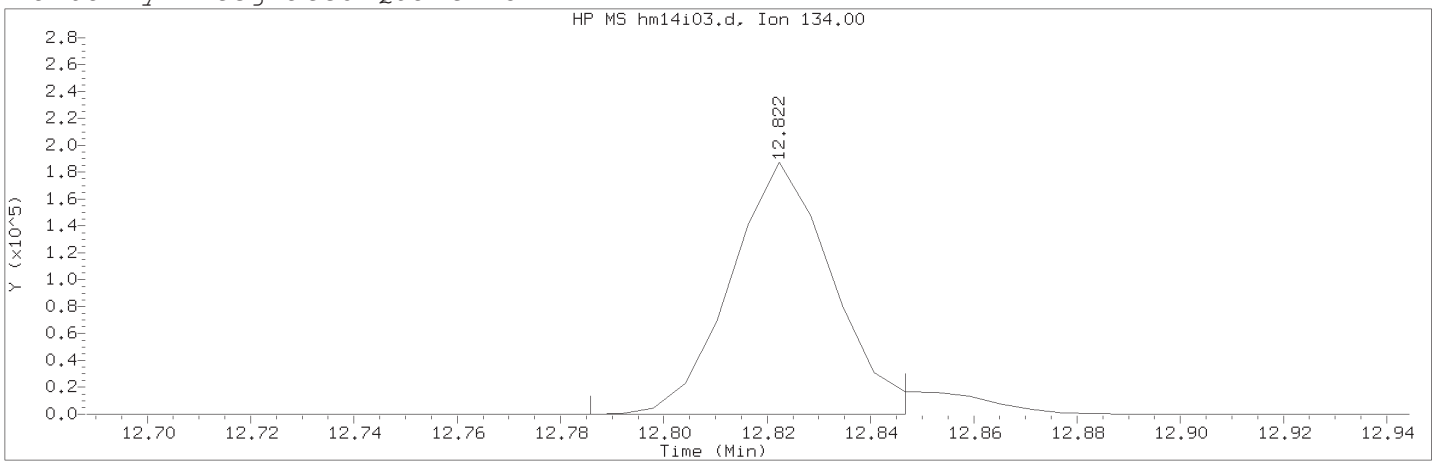
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area : 55224
On-column Amount (ng) : 5.0545
Integration start scan : 1767 Integration stop scan: 1800
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

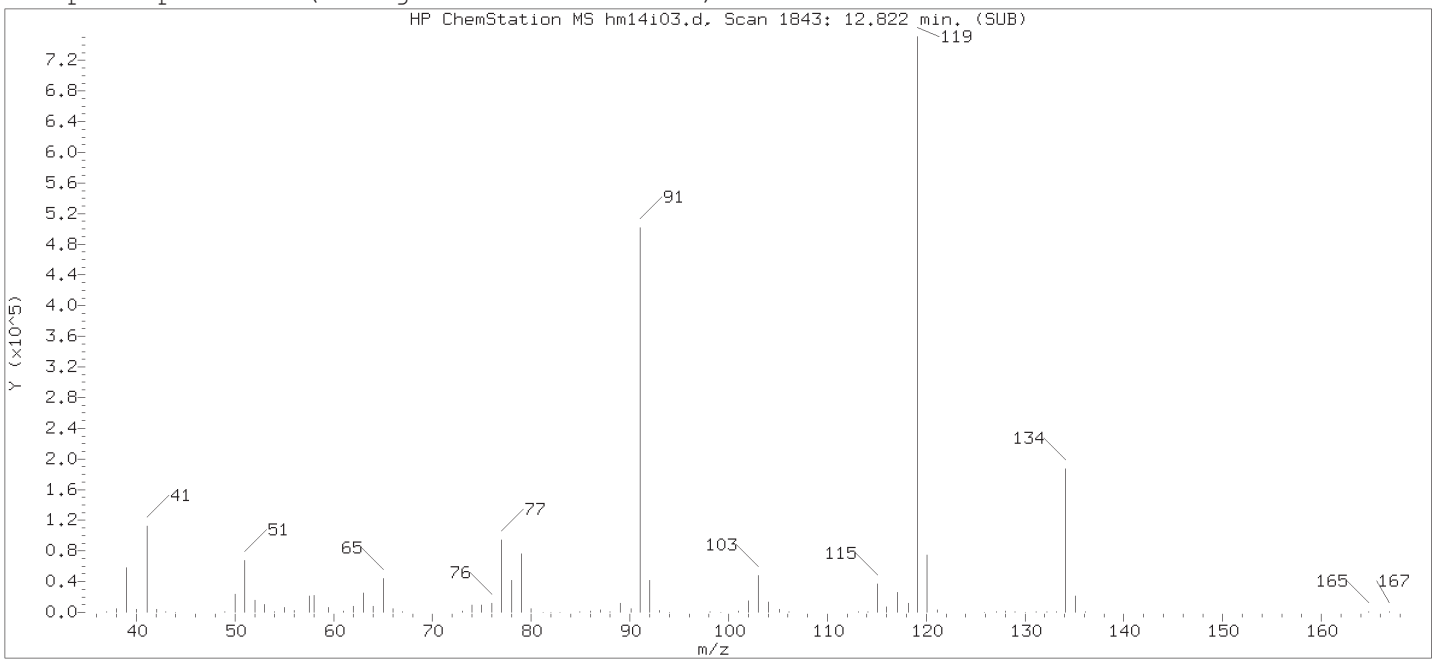
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 256144M
On-Column Amount (ng) : 4.6748
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

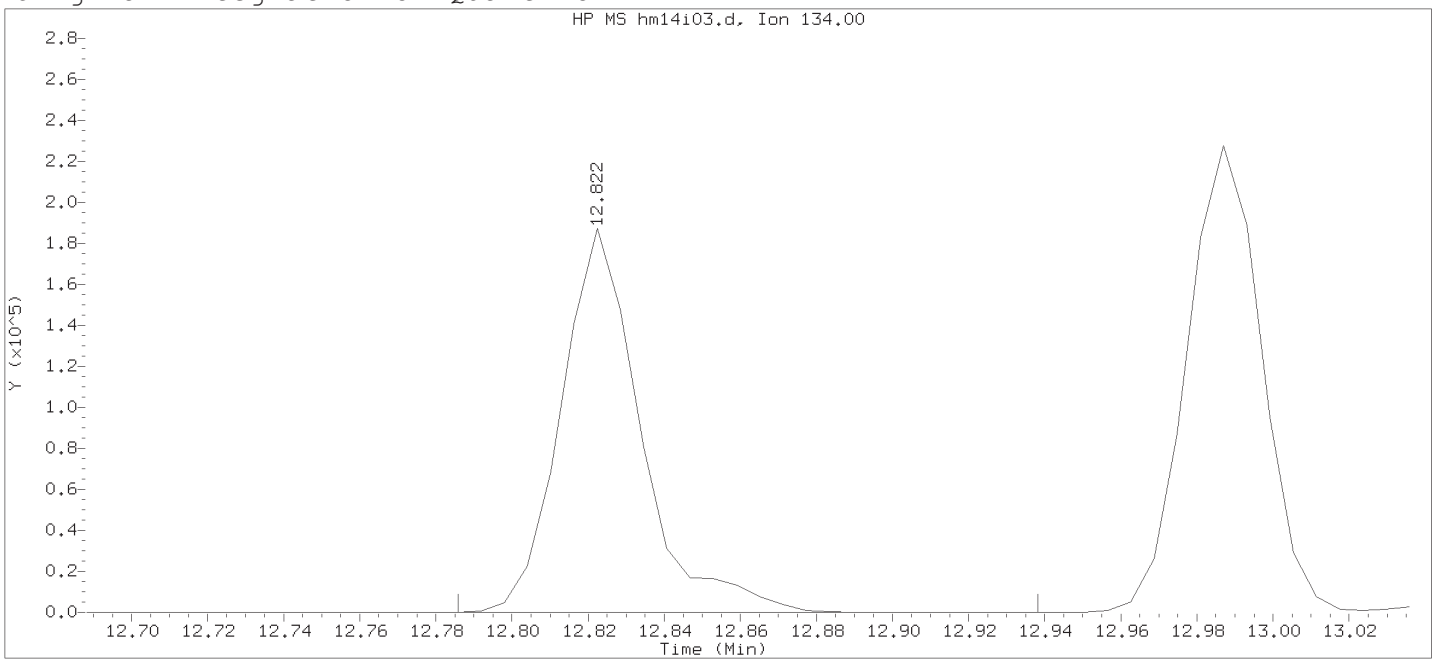
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



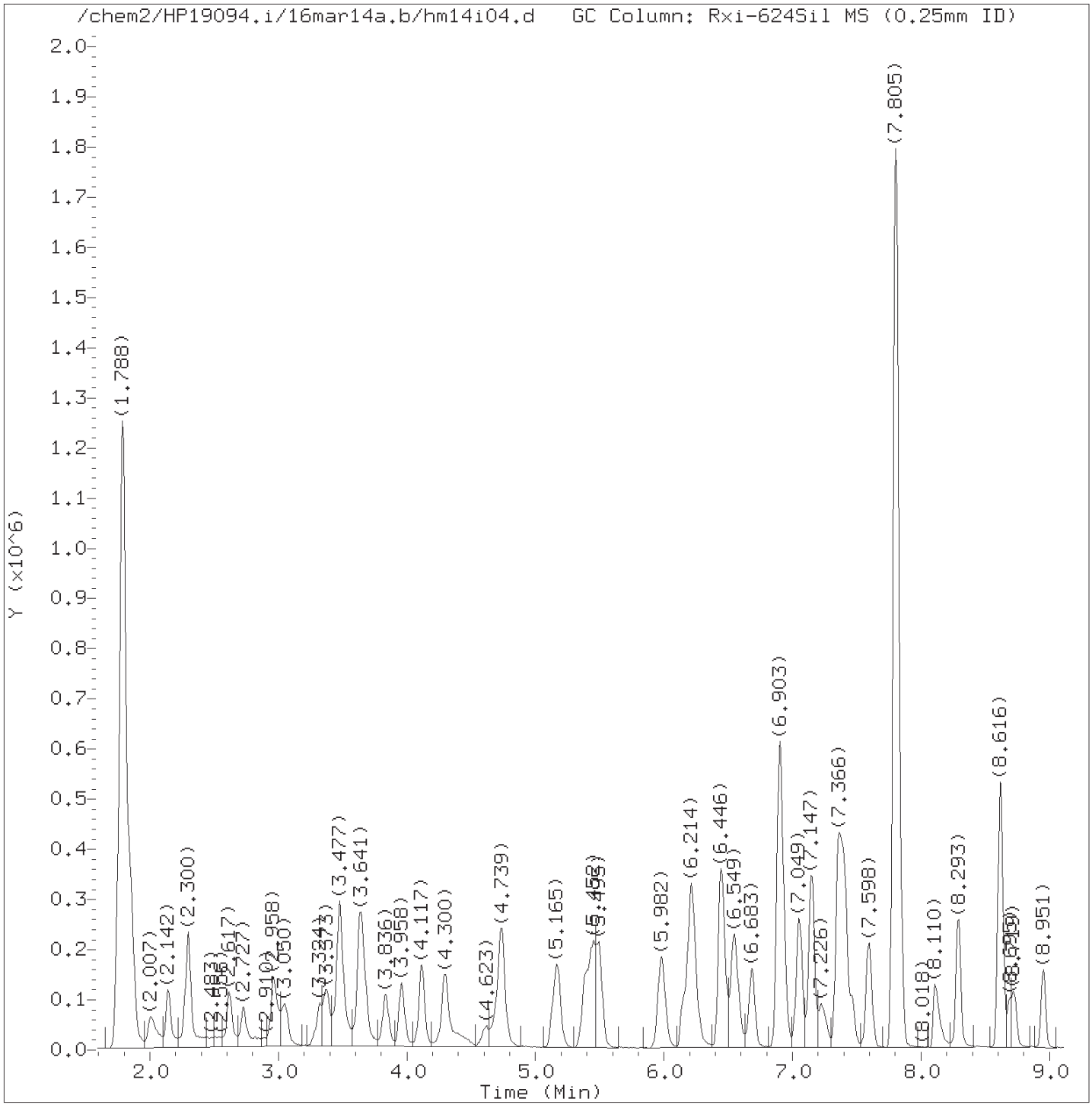
Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 271684
On-column Amount (ng) : 5.0361
Integration start scan : 1836 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

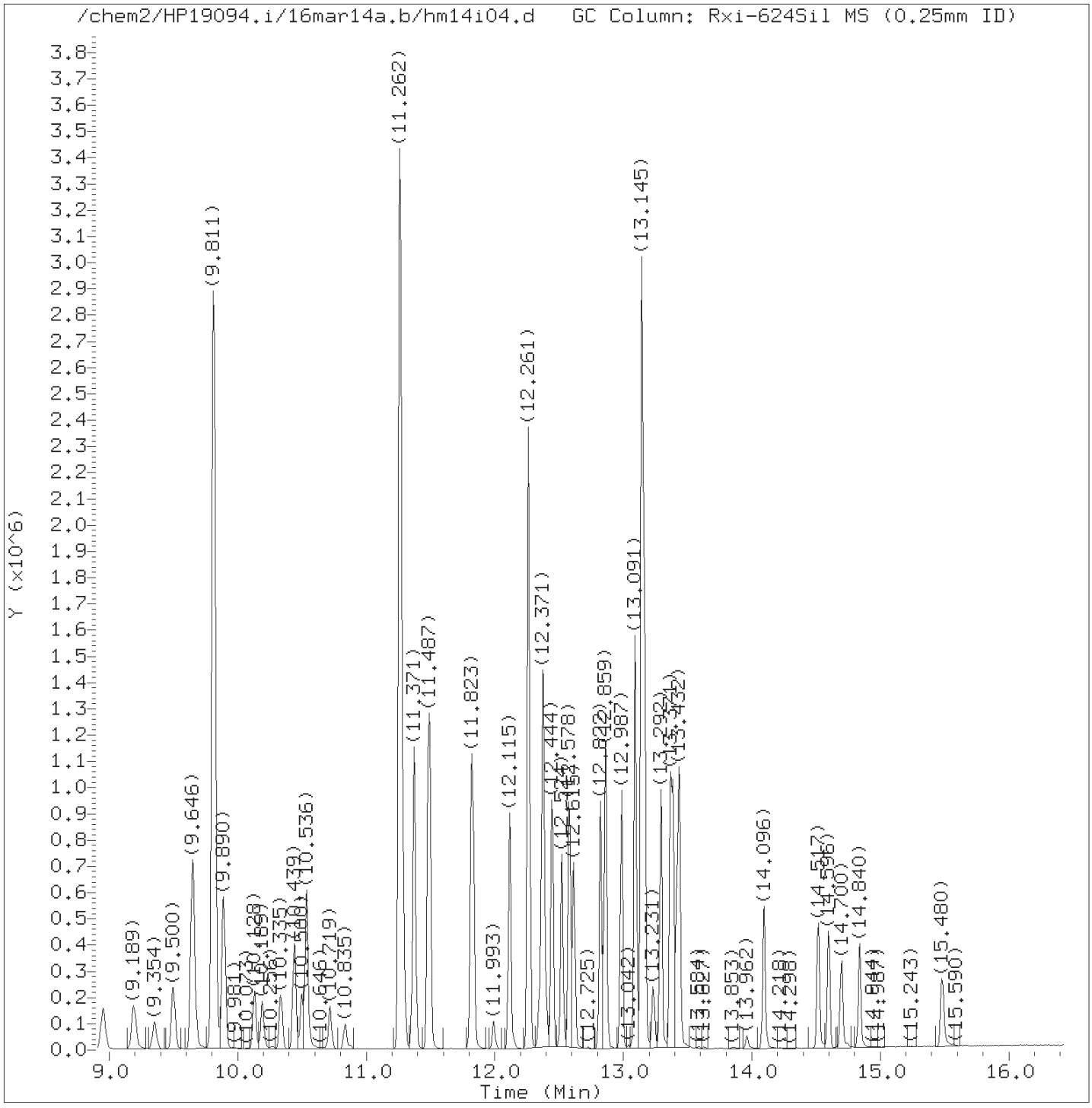
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	139885	1.724
2) Chloromethane	(2)	2.142	50	142464	1.790
5) Vinyl Chloride	(2)	2.282	62	129023	1.743
6) 1,3-Butadiene	(2)	2.300	39	103398	1.847
7) Bromomethane	(2)	2.617	94	88576	1.803
8) Chloroethane	(2)	2.727	64	79594	1.744
9) Dichlorofluoromethane	(2)	2.958	67	184744	1.784
10) Trichlorofluoromethane	(2)	3.050	101	171114	1.775
11) Ethyl ether	(2)	3.318	59	74208	1.865
12) Freon 123a	(2)	3.373	67	130927	1.775
13) Acrolein	(1)	3.477	56	574998	92.252
15) 1,1-Dichloroethene	(2)	3.635	96	100525	1.817
14) Acetone	(1)	3.641	43	162401	18.909
16) Freon 113	(2)	3.653	101	106894	1.858
17) Methyl Iodide	(2)	3.830	142	187827	1.834
18) Carbon Disulfide	(2)	3.958	76	307437	1.800
21) Methyl Acetate	(1)	4.086	43	44285	1.836
22) Allyl Chloride	(2)	4.111	41	189683	1.813
26)*t-Butyl Alcohol-d10	(1)	4.281	65	109317M	50.000
23) Methylene Chloride	(2)	4.306	84	107068	1.811
28) t-Butyl Alcohol	(1)	4.415	59	105430	35.869
29) Acrylonitrile	(1)	4.623	53	95995	9.315
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	233893	1.832
31) trans-1,2-Dichloroethene	(2)	4.739	96	109284	1.834
32) n-Hexane	(2)	5.165	57	181618	1.796
33) 1,1-Dichloroethane	(2)	5.385	63	223342	1.839
34) di-Isopropyl Ether	(2)	5.452	45	389368	1.837
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	181278	1.819
37) Ethyl t-butyl ether	(2)	5.982	59	329916	1.846
40) 1,2-Dichloroethene (Total)	(2)		96	230554	3.672
38) 2-Butanone	(1)	6.153	43	278494	19.029
39) cis-1,2-Dichloroethene	(2)	6.208	96	121270	1.838
42) Propionitrile	(1)	6.220	54	133985	36.716
41) 2,2-Dichloropropane	(2)	6.226	77	177302	1.825
45) Methacrylonitrile	(1)	6.446	67	238023	19.050
47) Bromochloromethane	(2)	6.543	128	47663	1.898
48) Tetrahydrofuran	(1)	6.543	71	69113	18.667
49) Chloroform	(2)	6.683	83	200949	1.811

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	541274	9.761
50)$Dibromofluoromethane	(2)	6.897	111	560925	9.831
51) 1,1,1-Trichloroethane	(2)	6.933	97	172678	1.824
52) Cyclohexane	(2)	7.049	56	215153	1.739
52) Cyclohexane	(2)	7.055	84	167560	1.769
52) Cyclohexane	(2)	7.049	69	63301	1.789
55) 1,1-Dichloropropene	(2)	7.147	75	167116	1.839
54) Carbon Tetrachloride	(2)	7.153	117	157879	1.834
56) Isobutyl Alcohol	(1)	7.232	41	88204M	84.692
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88937M	9.683
57)$1,2-Dichloroethane-d4	(2)	7.354	65	464876	9.914
57)$1,2-Dichloroethane-d4	(2)	7.360	104	57550	9.924
58) Benzene	(2)	7.403	78	466216	1.843
59) 1,2-Dichloroethane	(2)	7.464	62	120356M	1.837
60) t-Amyl methyl ether	(2)	7.598	73	268537	1.838
63)*Fluorobenzene	(2)	7.805	96	2353241	10.000
62) n-Heptane	(2)	7.836	43	207480	1.815
65) n-Butanol	(1)	8.116	56	152979	182.497
67) Trichloroethene	(2)	8.287	95	120987	1.835
70) 1,2-Dichloropropane	(2)	8.610	63	119785	1.819
69) Methylcyclohexane	(2)	8.616	83	198138	1.835
71) Methyl Methacrylate	(1)	8.689	69	49722A	1.905
72) 1,4-Dioxane	(1)	8.701	88	16792	101.677
73) Dibromomethane	(2)	8.719	93	49857	1.838
74) Bromodichloromethane	(2)	8.951	83	139727	1.845
76) 2-Nitropropane	(1)	9.189	41	147718	17.652
80) cis-1,3-Dichloropropene	(2)	9.494	75	172194	1.850
81) 4-Methyl-2-Pentanone	(1)	9.646	43	686835	19.070
82)$Toluene-d8	(3)	9.811	98	2297550	10.107
82)$Toluene-d8	(3)	9.811	100	1486837	10.105
83) Toluene	(3)	9.890	92	285003	1.861
84) trans-1,3-Dichloropropene	(3)	10.128	75	134261	1.871
85) 1,3-Dichloropropene (total)	(3)		75	306455	3.721
86) Ethyl Methacrylate	(3)	10.189	69	105288	1.907
88) 1,1,2-Trichloroethane	(3)	10.335	97	69730	1.880
89) Tetrachloroethene	(3)	10.445	166	132643	1.834
90) 1,3-Dichloropropane	(3)	10.500	76	124831	1.872
91) 2-Hexanone	(1)	10.536	43	481671	18.915

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	87977	1.850
95) 1,2-Dibromoethane	(3)	10.835	107	66221	1.896
97)*Chlorobenzene-d5	(3)	11.262	117	1595701	10.000
98) Chlorobenzene	(3)	11.286	112	312300	1.874
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	106742	1.867
100) Ethylbenzene	(3)	11.371	91	555580	1.854
101) m+p-Xylene	(3)	11.487	106	430889	3.769
105) Xylene (Total)	(3)		106	638092	5.637
104) o-Xylene	(3)	11.816	106	207203	1.868
106) Styrene	(3)	11.829	104	333612	1.880
107) Bromoform	(3)	11.987	173	48461	1.838
108) Isopropylbenzene	(3)	12.115	105	550002	1.871
111)$4-Bromofluorobenzene	(3)	12.261	95	727976	9.935
111)$4-Bromofluorobenzene	(3)	12.261	174	608350	9.958
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	82205M	1.877
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	210710	18.998
114) Bromobenzene	(4)	12.377	156	121698	1.865
116) 1,2,3-Trichloropropane	(4)	12.396	110	21388	1.945
117) n-Propylbenzene	(4)	12.444	91	653852	1.853
119) 2-Chlorotoluene	(4)	12.524	126	127817	1.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	460865	1.873
122) 4-Chlorotoluene	(4)	12.615	126	131416	1.895
125) tert-Butylbenzene	(4)	12.822	134	98583M	1.880
126) Pentachloroethane	(4)	12.853	167	74073	1.871
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	463124	1.883
128) sec-Butylbenzene	(4)	12.987	105	591046	1.855
131) 1,3-Dichlorobenzene	(4)	13.091	146	241904	1.896
132) p-Isopropyltoluene	(4)	13.097	119	505380	1.874
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	699859	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	241546	1.863
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	193916	1.901
136) Benzyl Chloride	(4)	13.237	126	33133	1.909
138) n-Butylbenzene	(4)	13.389	92	244250	1.852
139) 1,2-Dichlorobenzene	(4)	13.420	146	212444	1.874
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	10949	1.914
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	147571	1.820
146) Hexachlorobutadiene	(4)	14.596	225	74368	1.755
147) Naphthalene	(4)	14.700	128	255107	1.830

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	124736	1.926

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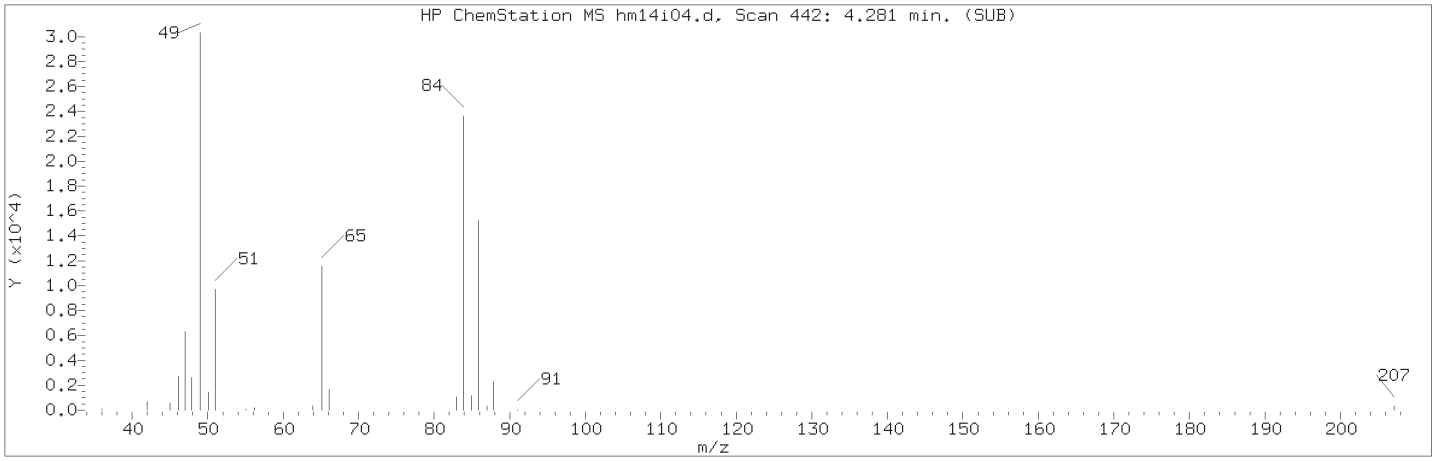
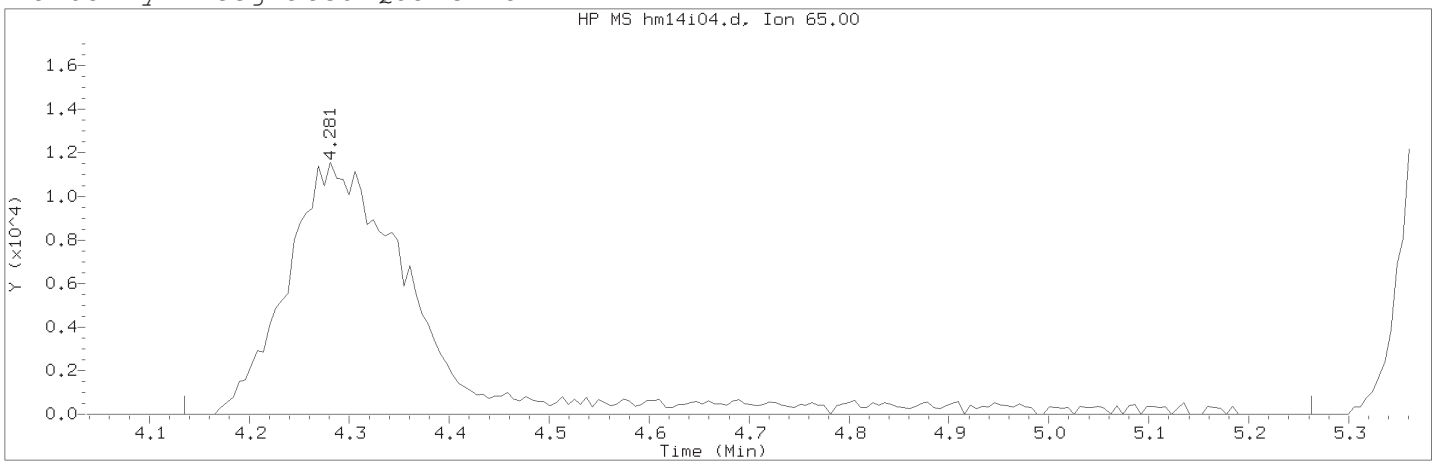
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

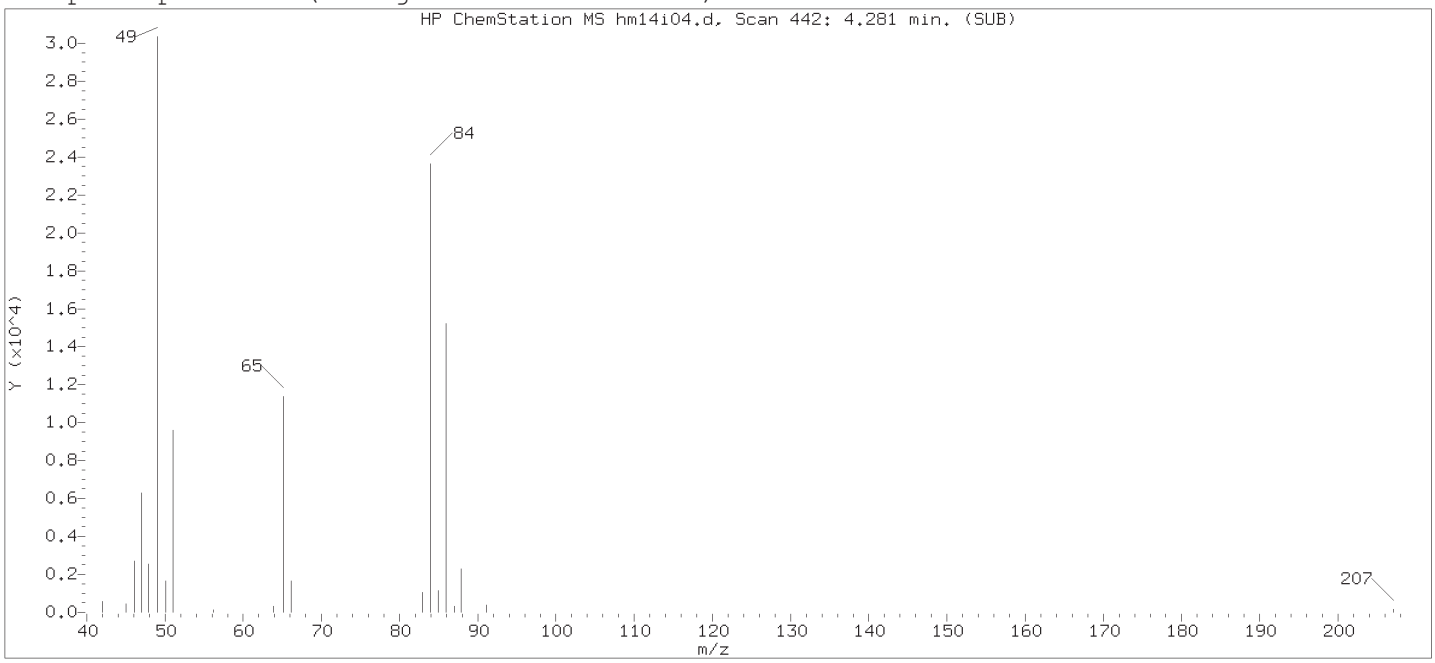
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 109317M
On-Column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

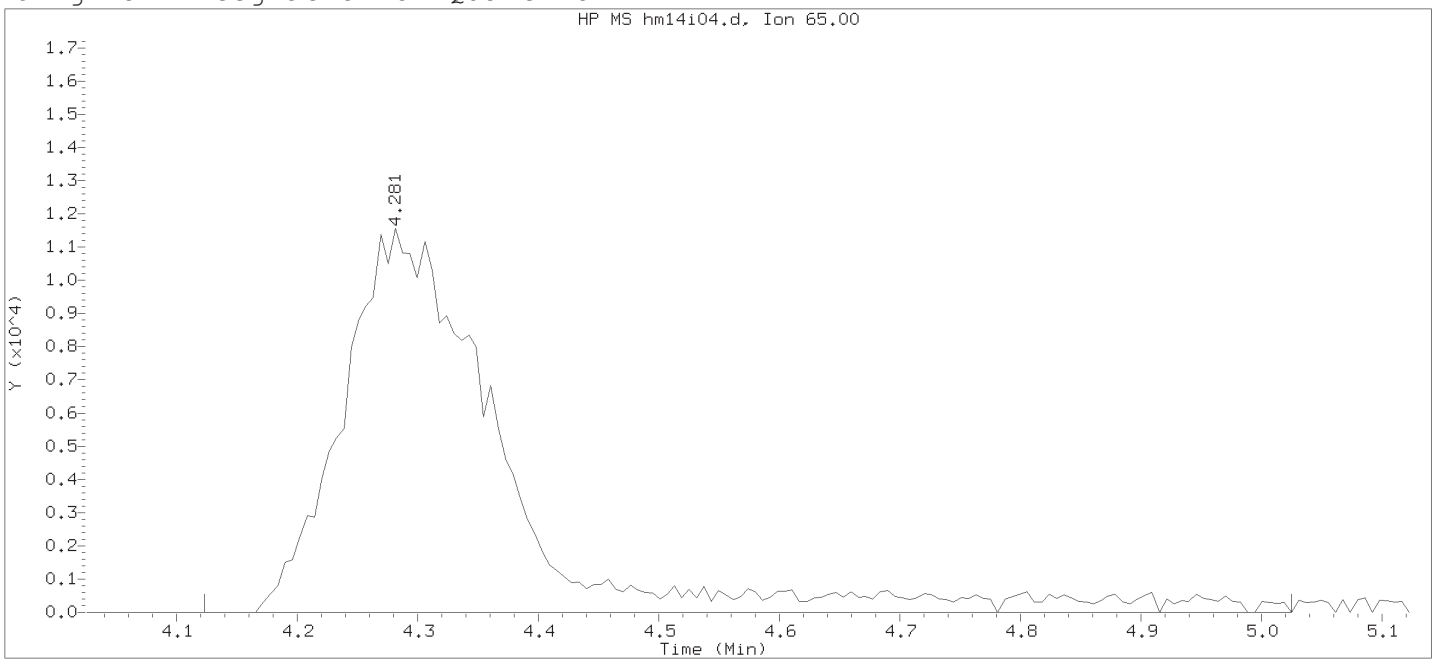
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

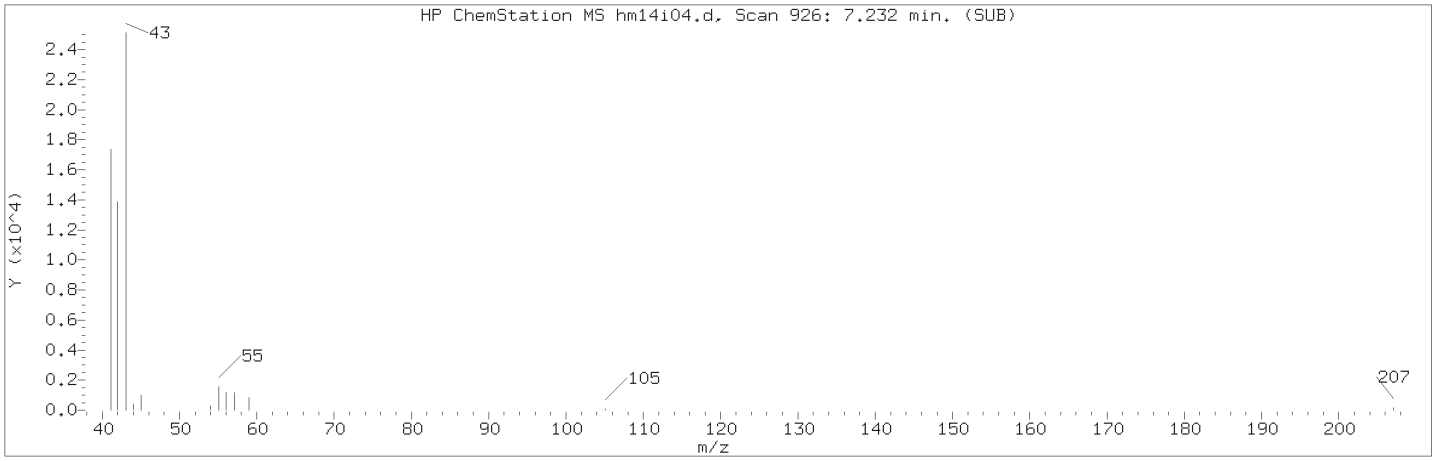
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

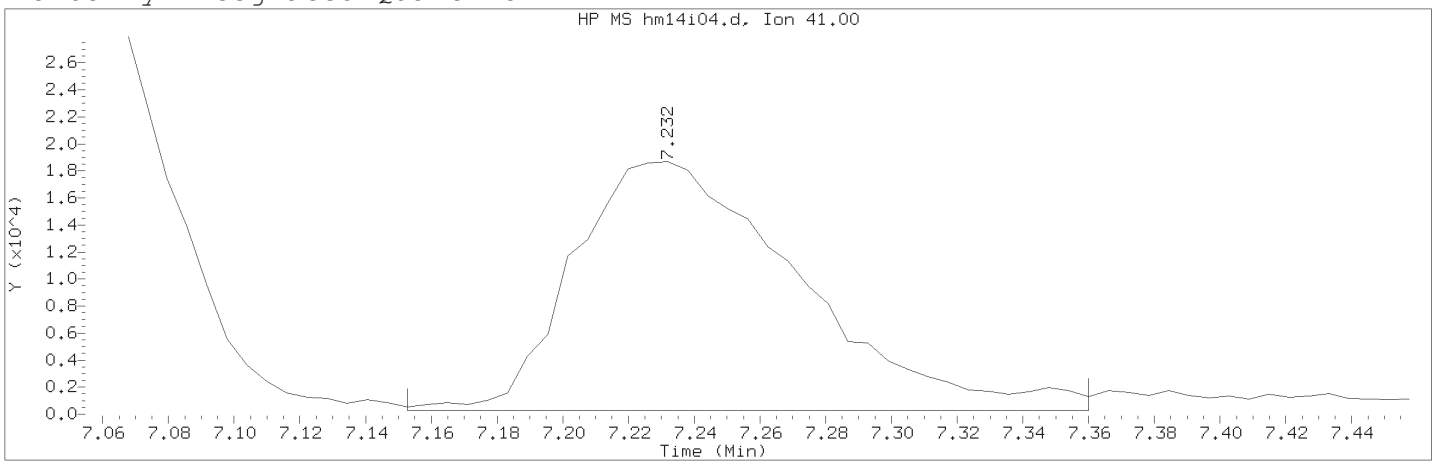
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 107024
On-column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

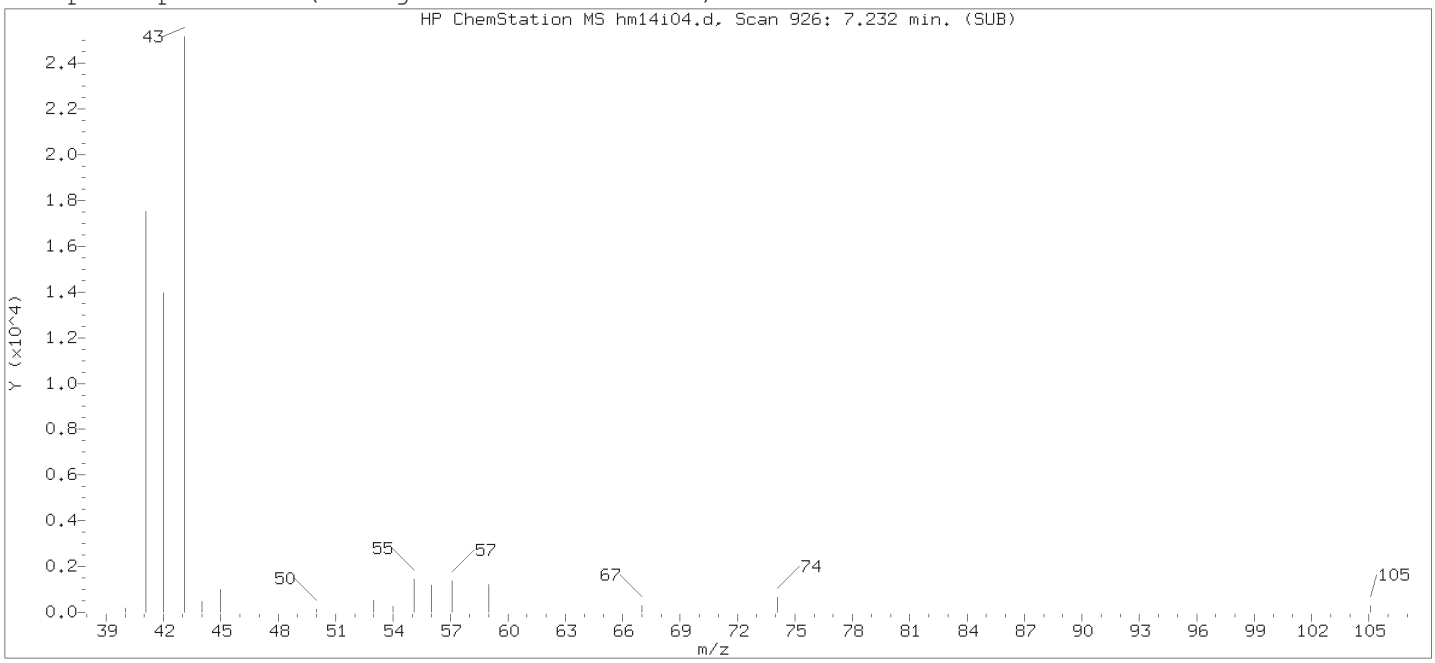
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area (flag) : 88204M
On-Column Amount (ng) : 84.6921
Integration start scan : 912 Integration stop scan: 946
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

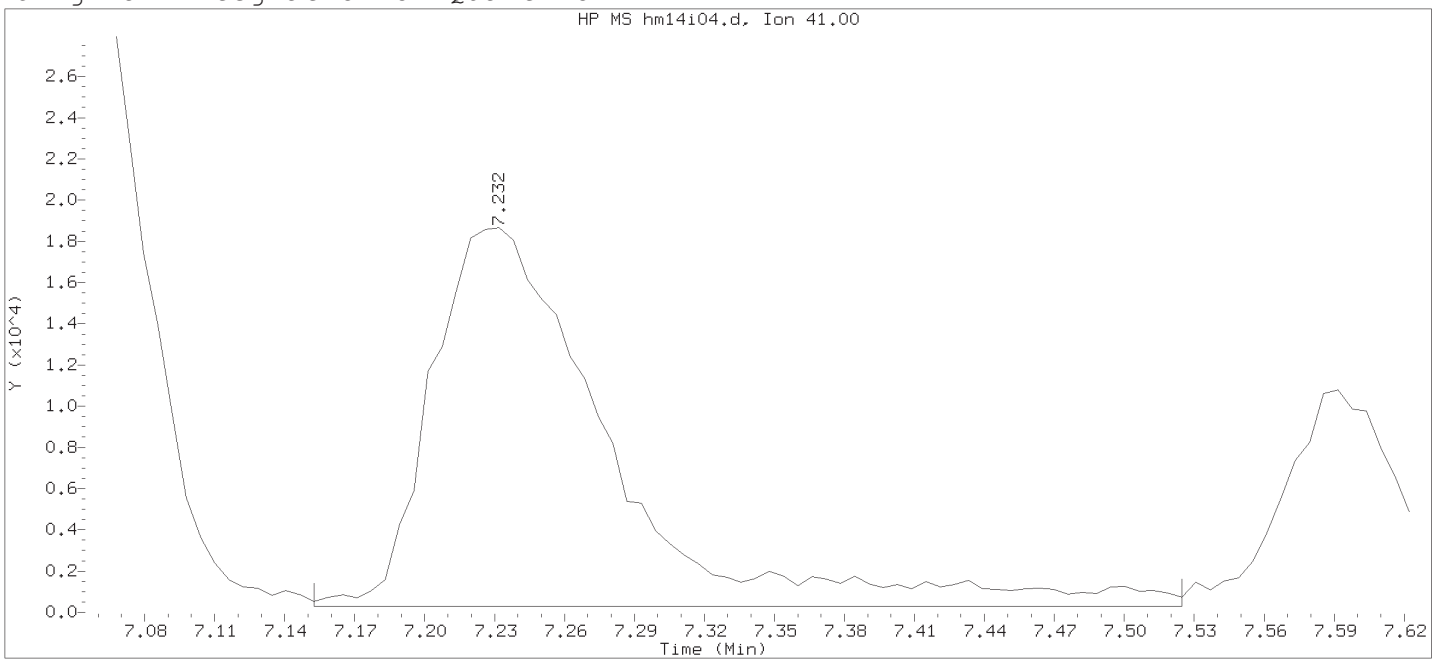
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

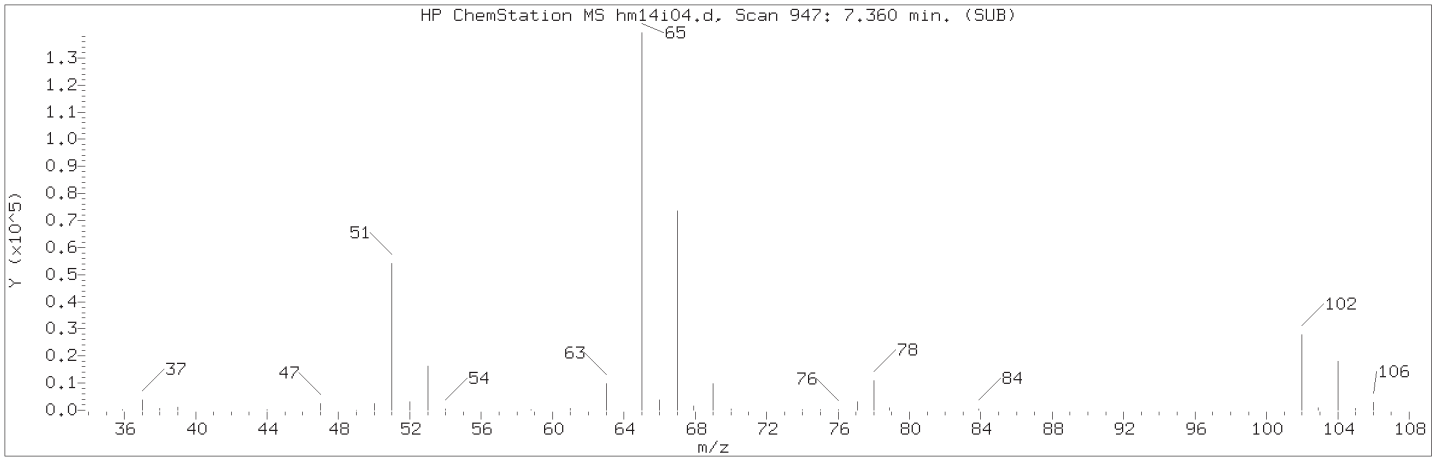
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

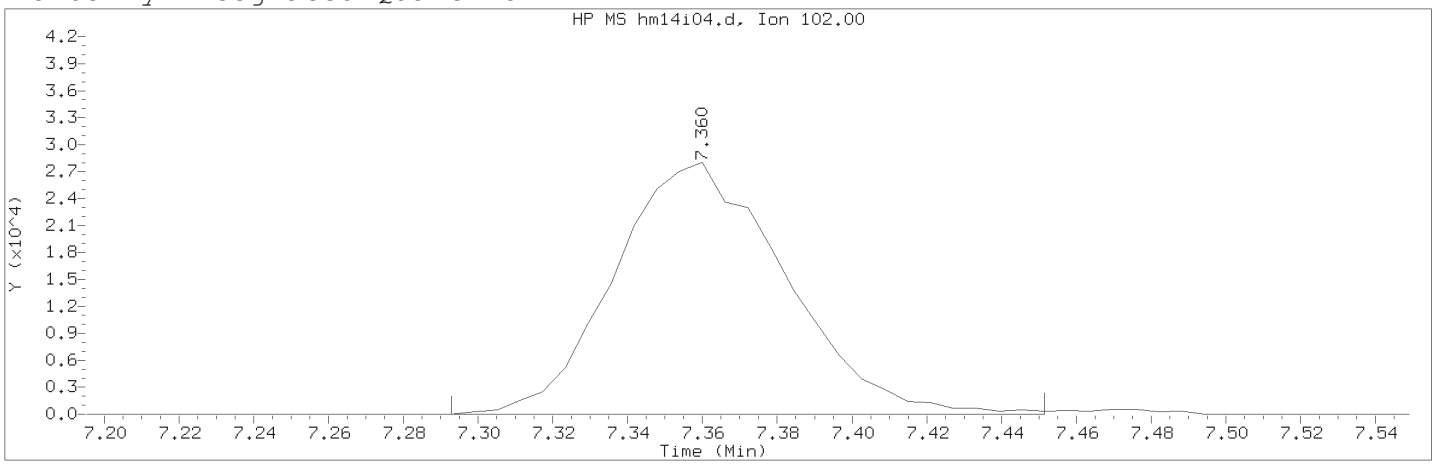
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area : 97287
On-column Amount (ng) : 103.7447
Integration start scan : 912 Integration stop scan: 973
Y at integration start : 285 Y at integration end: 285

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

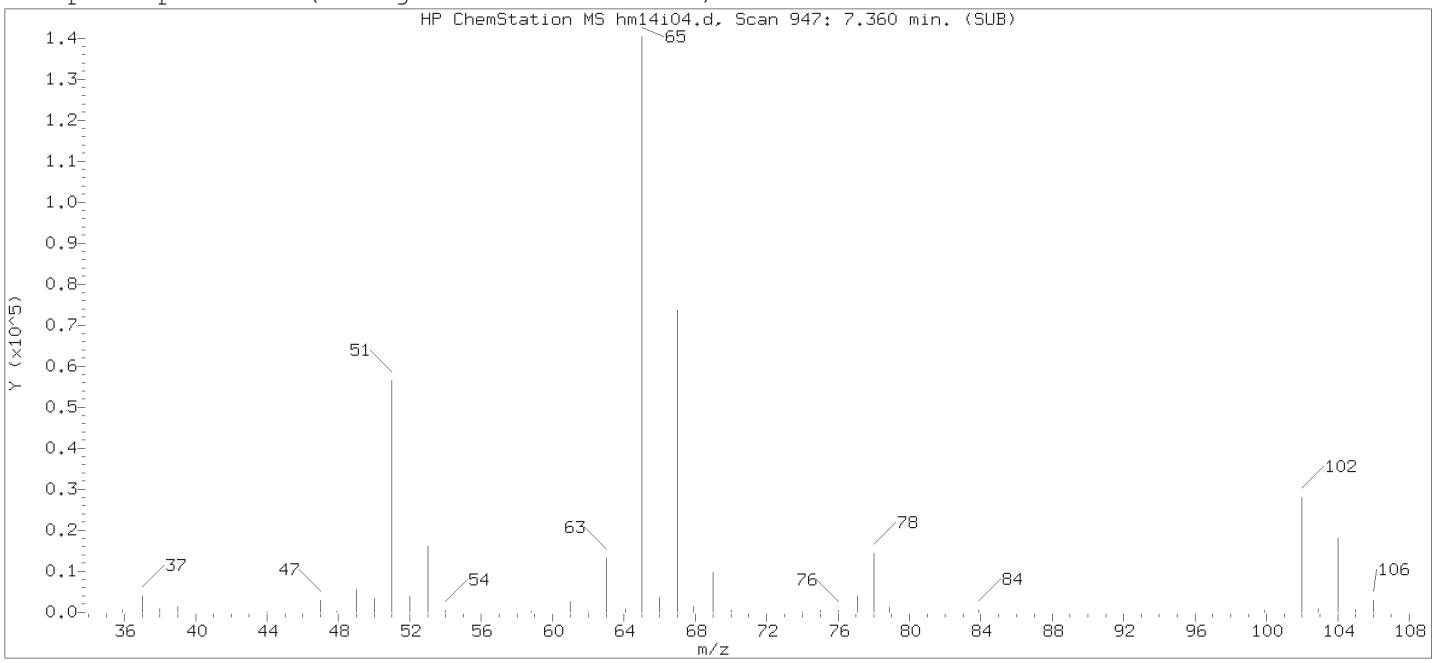
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 88937M
On-Column Amount (ng) : 9.6833
Integration start scan : 935 Integration stop scan: 961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

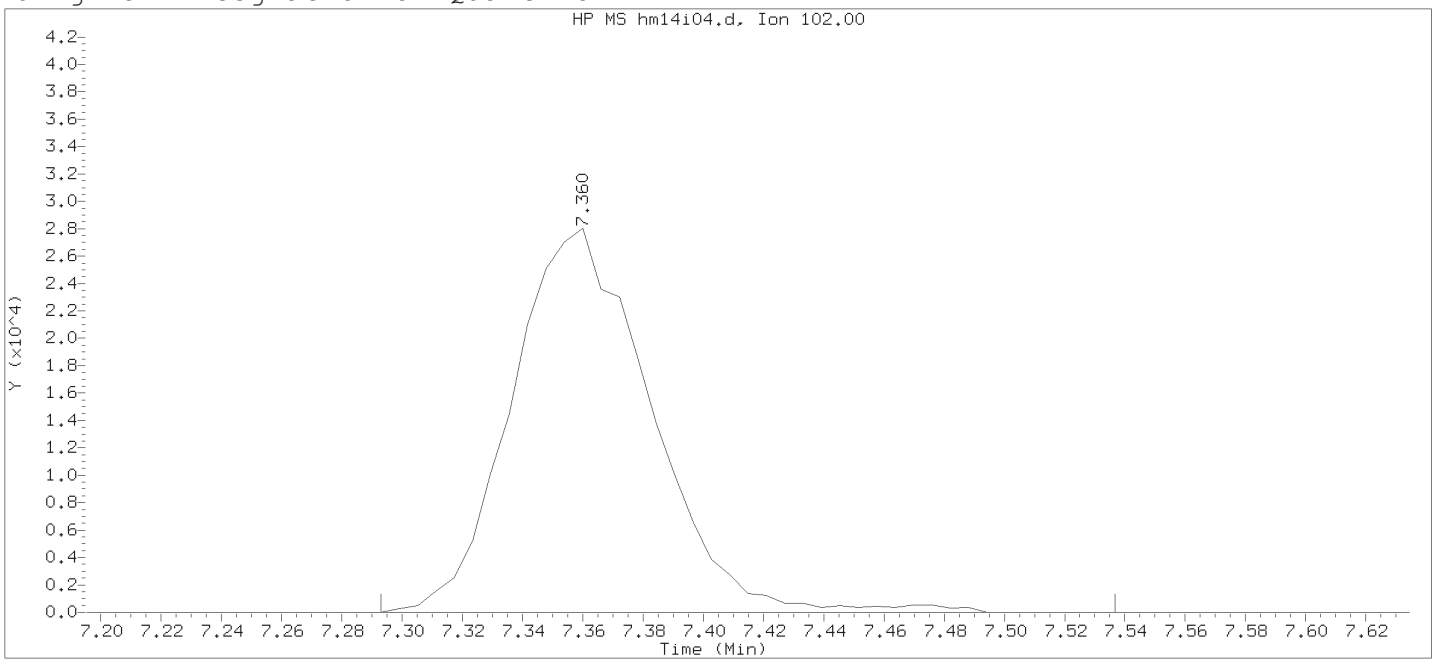
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

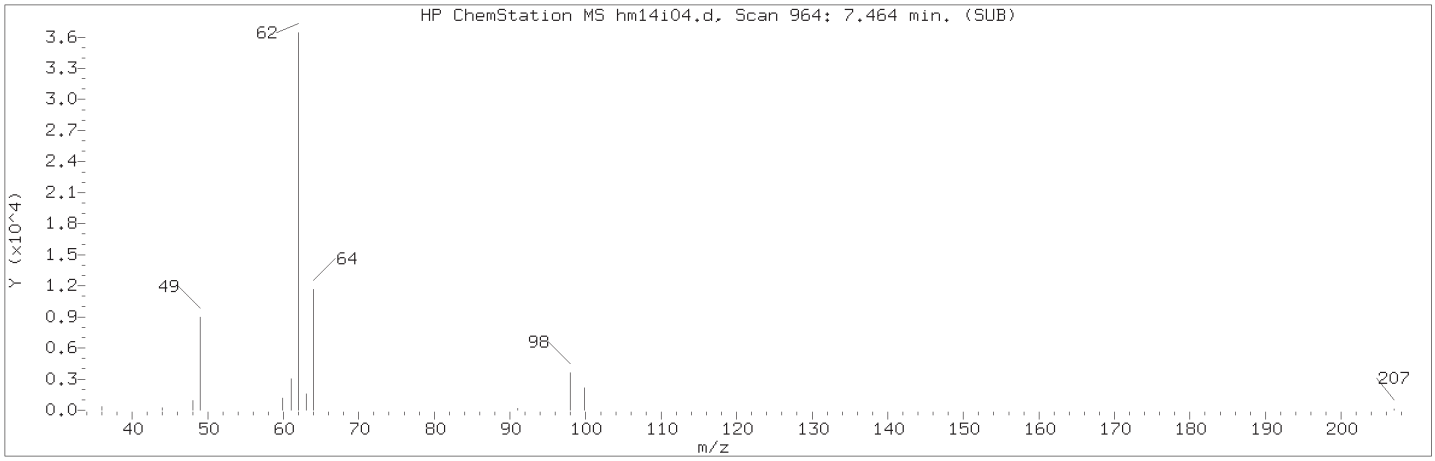
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

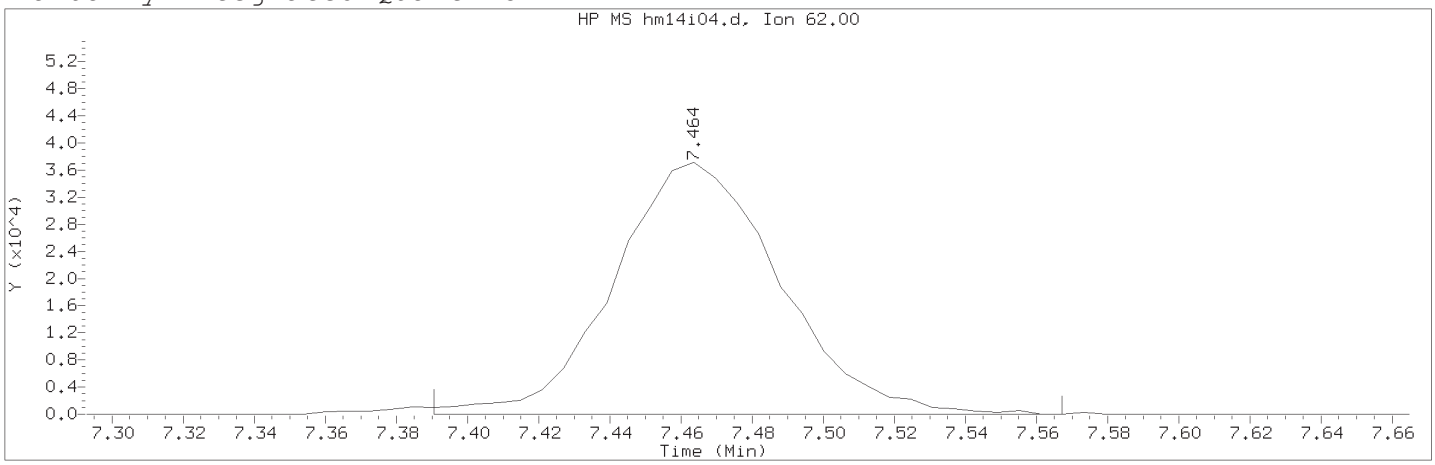
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 89840
On-column Amount (ng) : 9.4955
Integration start scan : 935 Integration stop scan: 975
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

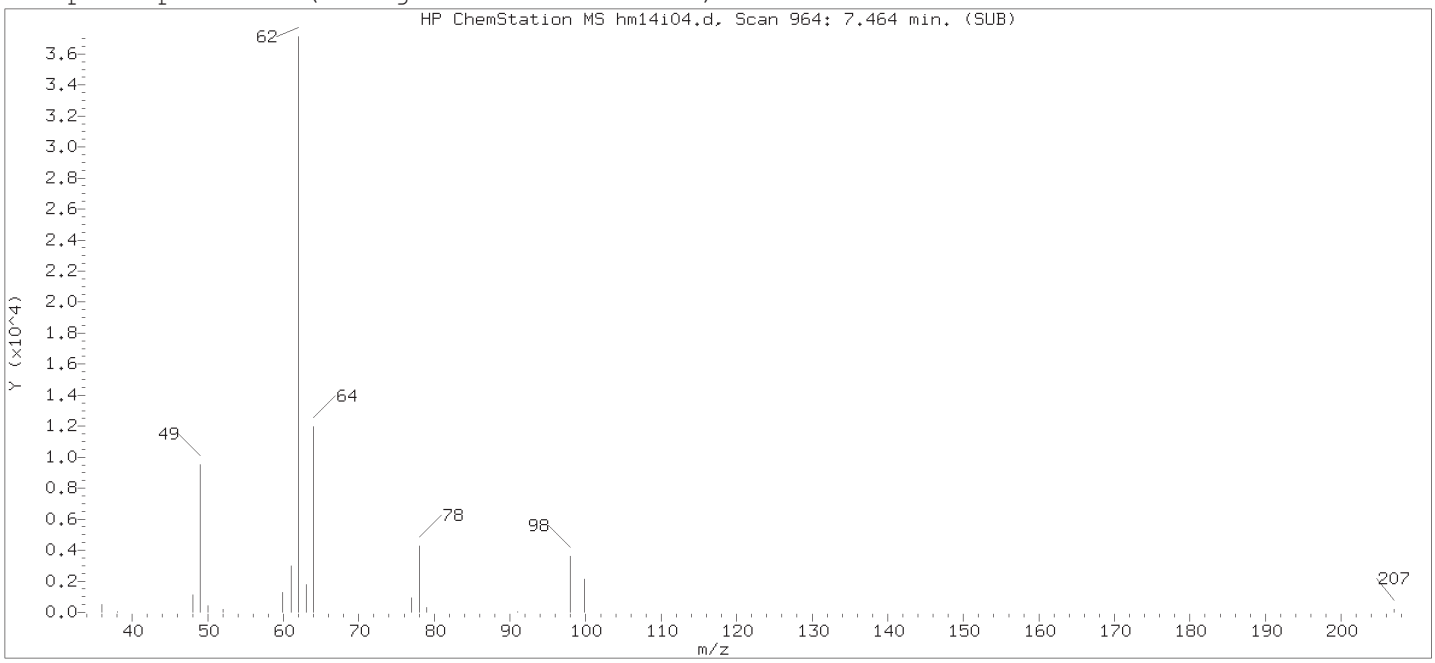
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 120356M
On-Column Amount (ng) : 1.8367
Integration start scan : 951 Integration stop scan: 980
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

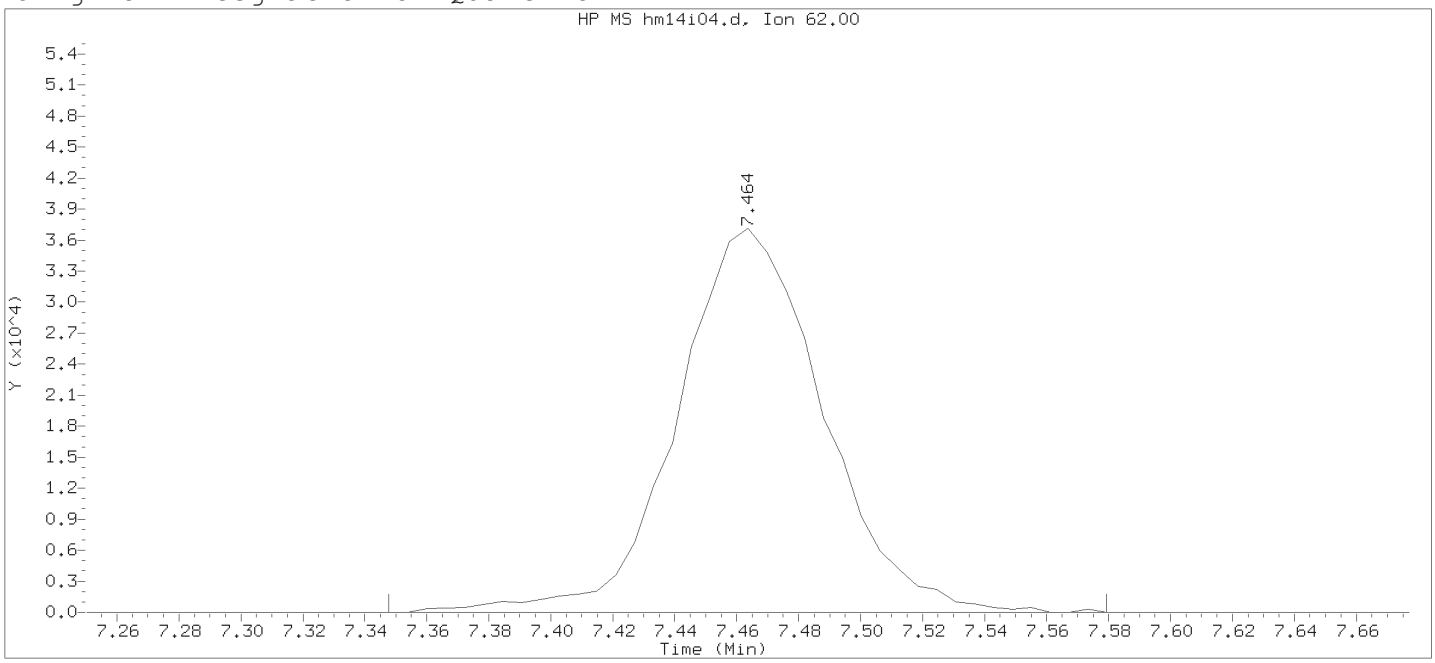
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

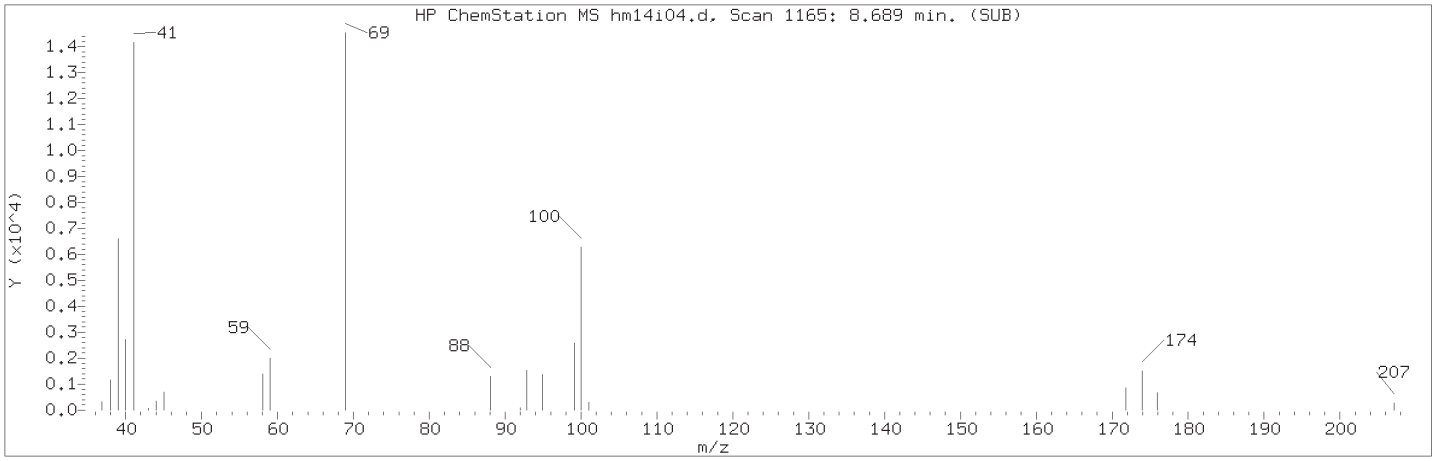
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

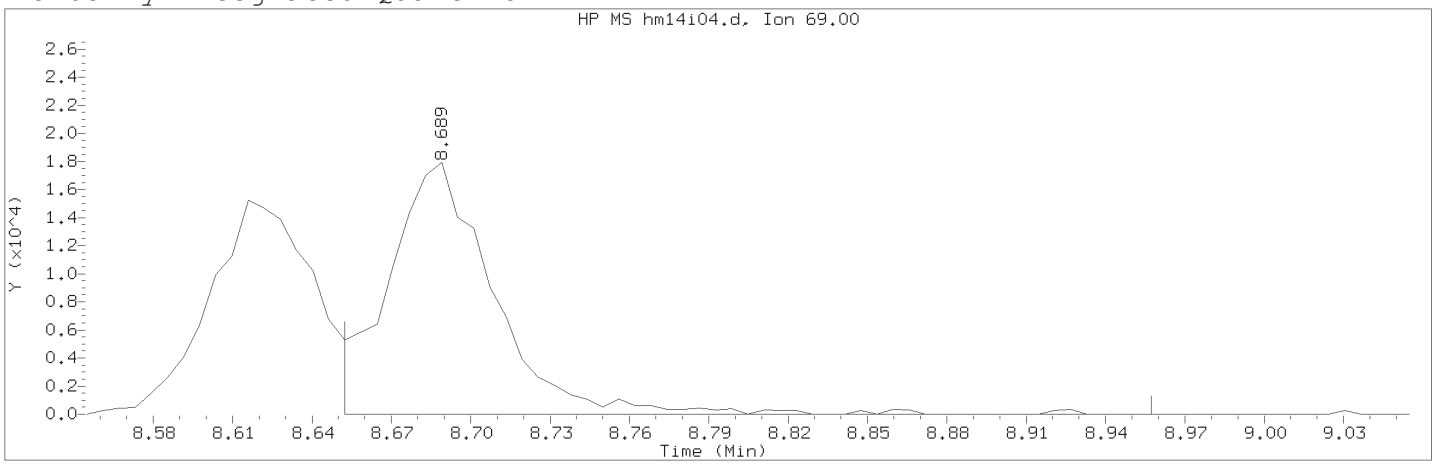
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 121600
On-column Amount (ng) : 1.9148
Integration start scan : 944 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

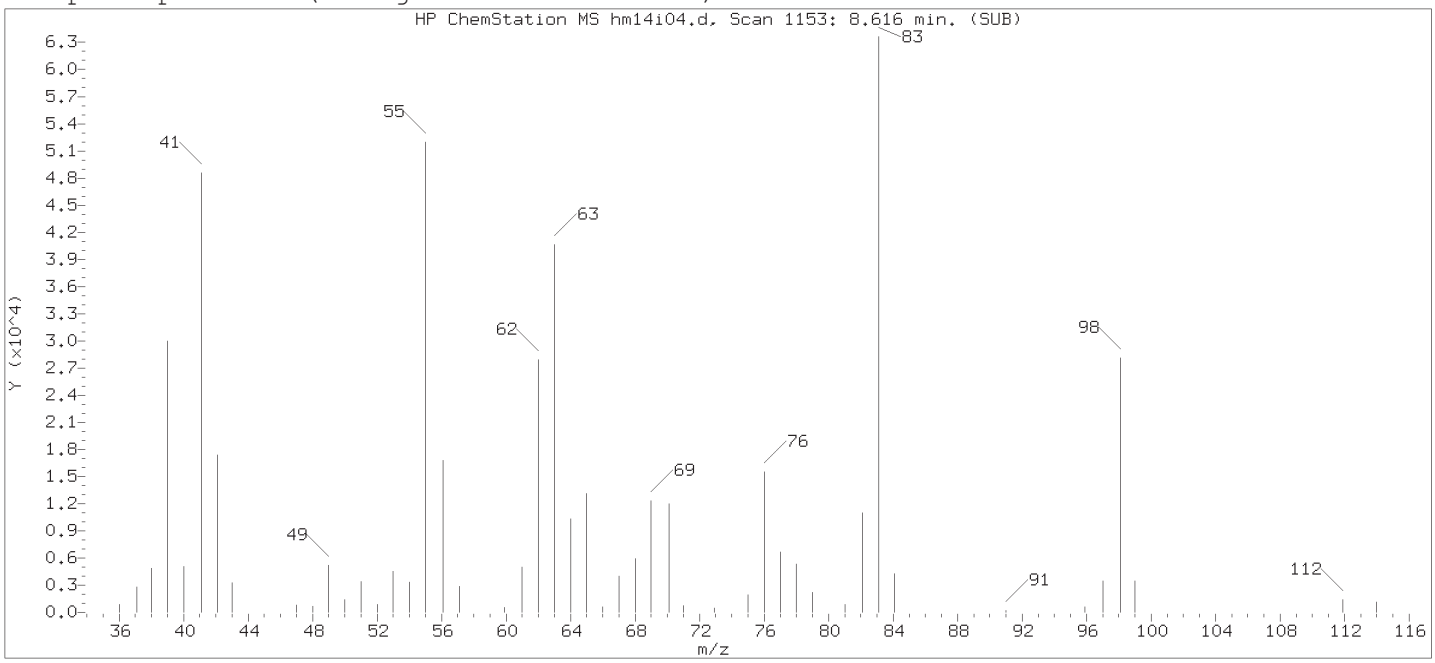
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 49722A
On-Column Amount (ng) : 1.9046
Integration start scan : 1158 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

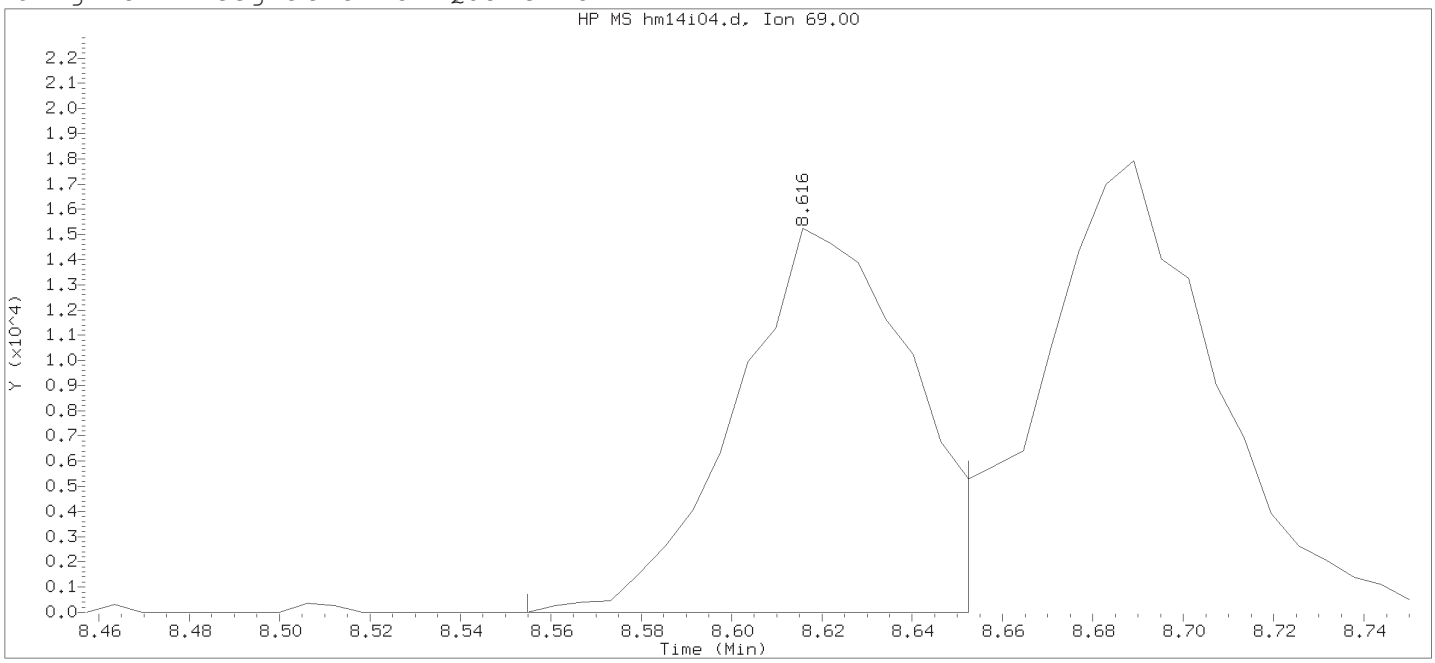
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

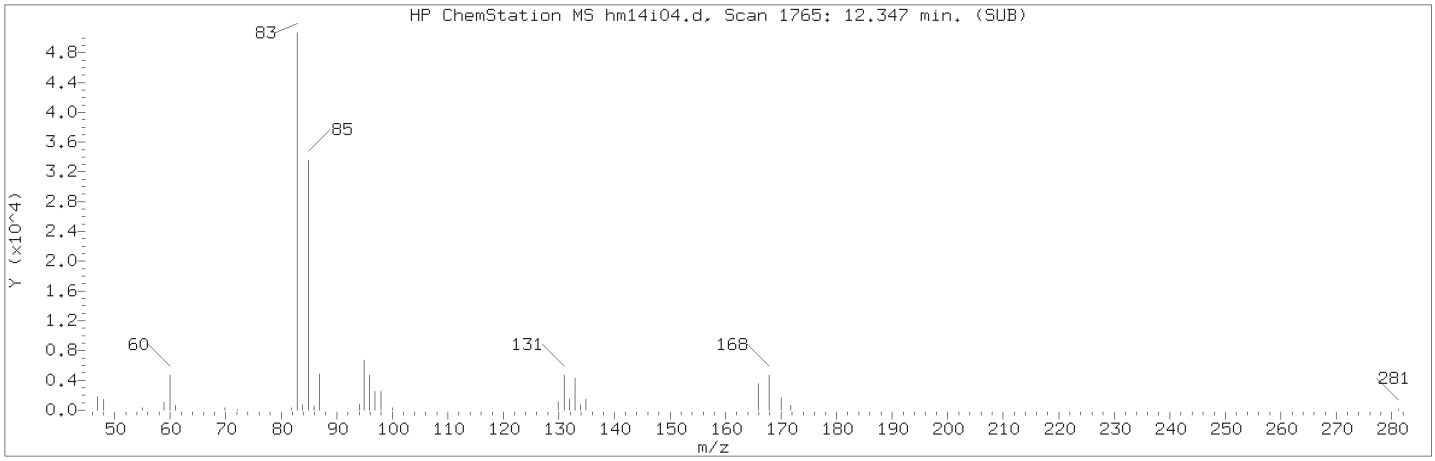
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

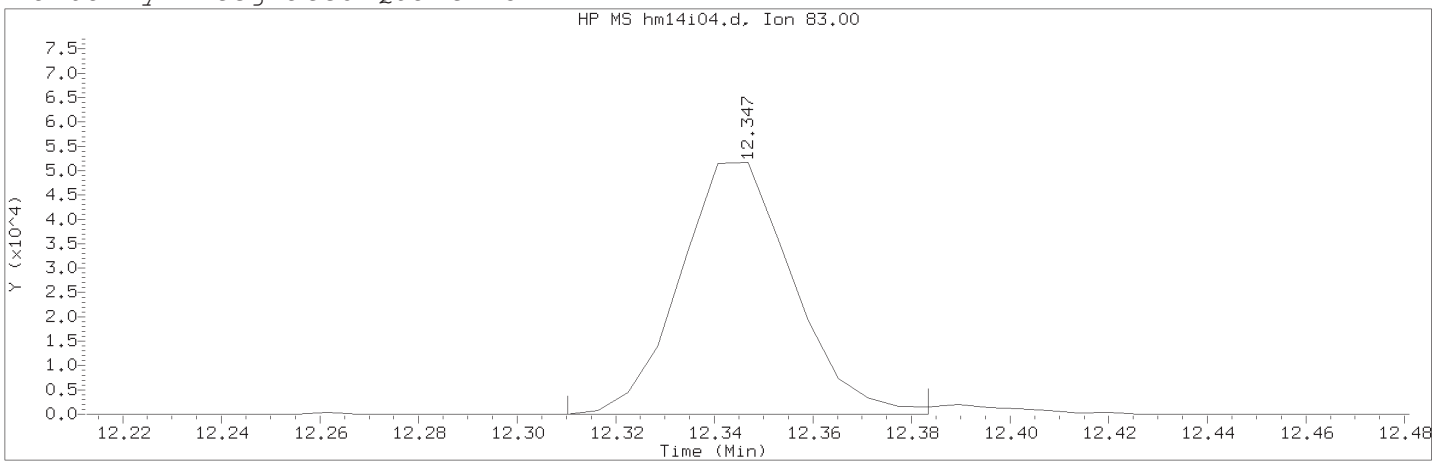
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1153
Retention Time (minutes): 8.616
Quant Ion : 69.00
Area : 40958
On-column Amount (ng) : 1.5431
Integration start scan : 1142 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

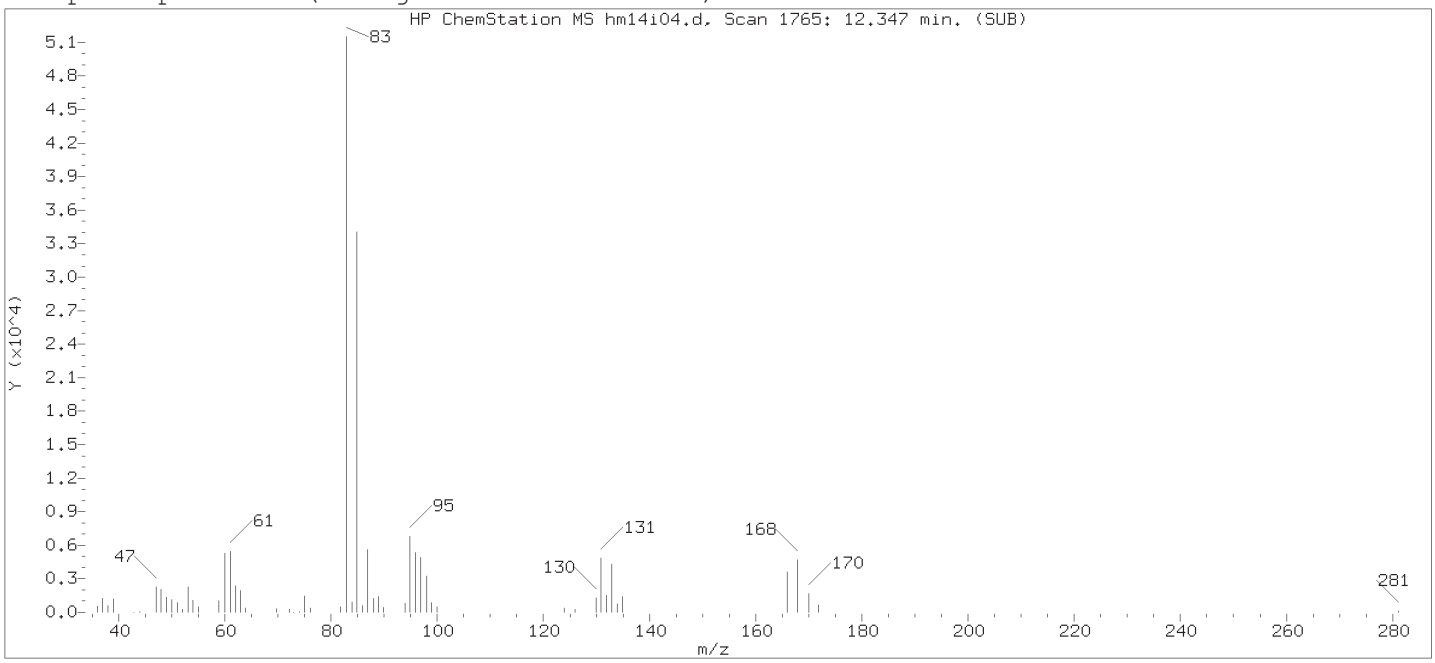
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 82205M
On-Column Amount (ng) : 1.8767
Integration start scan : 1758 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

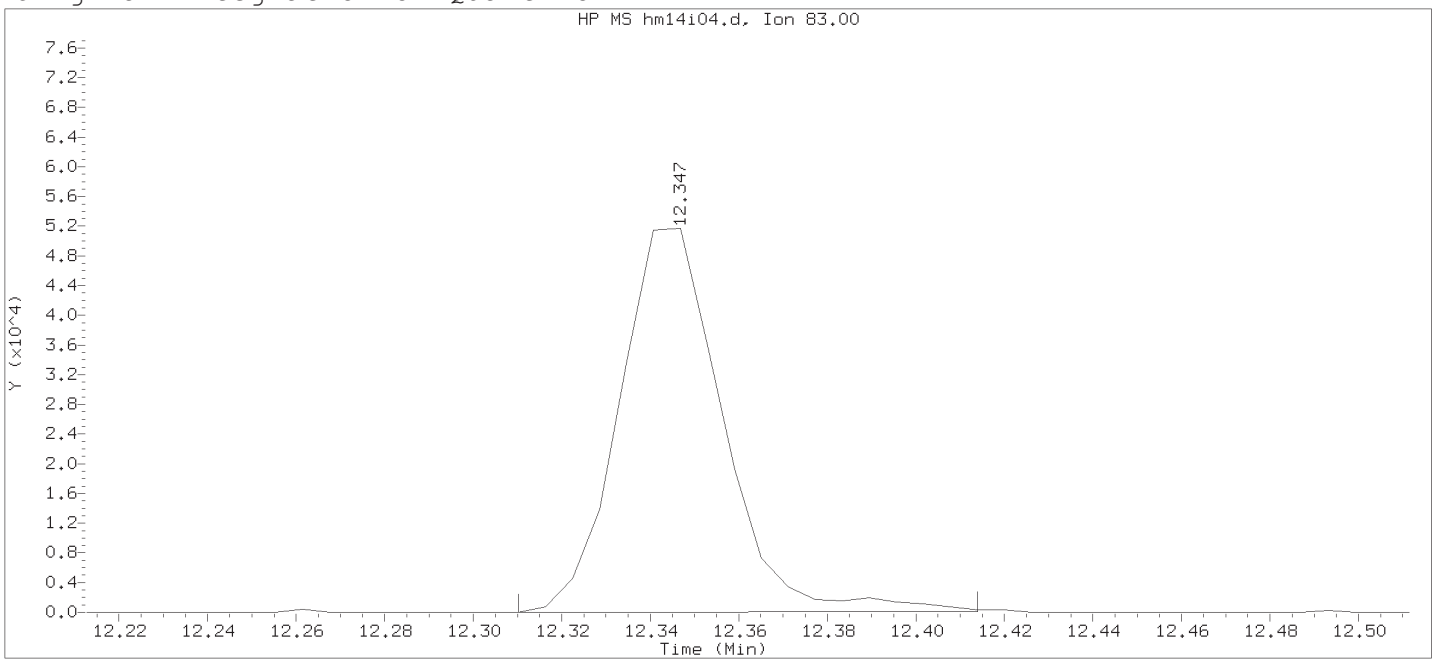
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

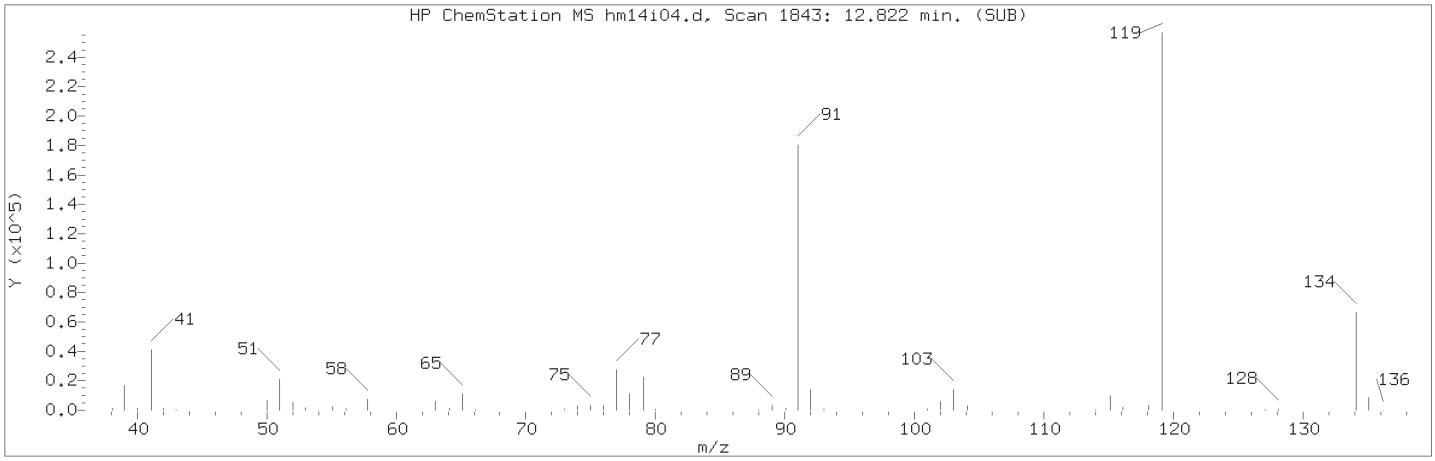
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

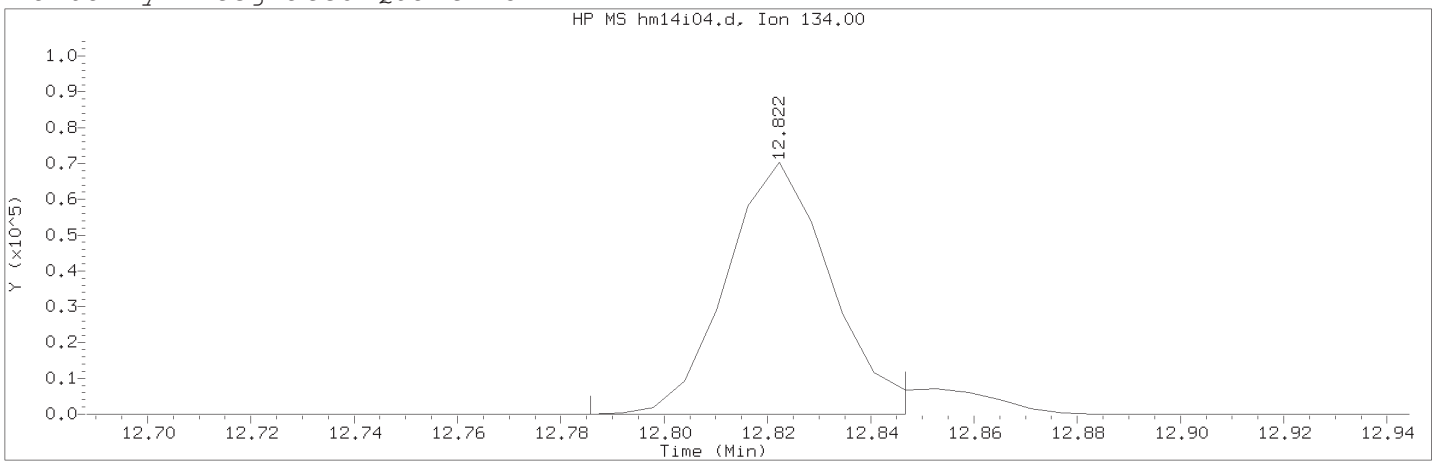
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area	: 83949		
On-column Amount (ng)	: 2.0241		
Integration start scan	: 1758	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	78

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

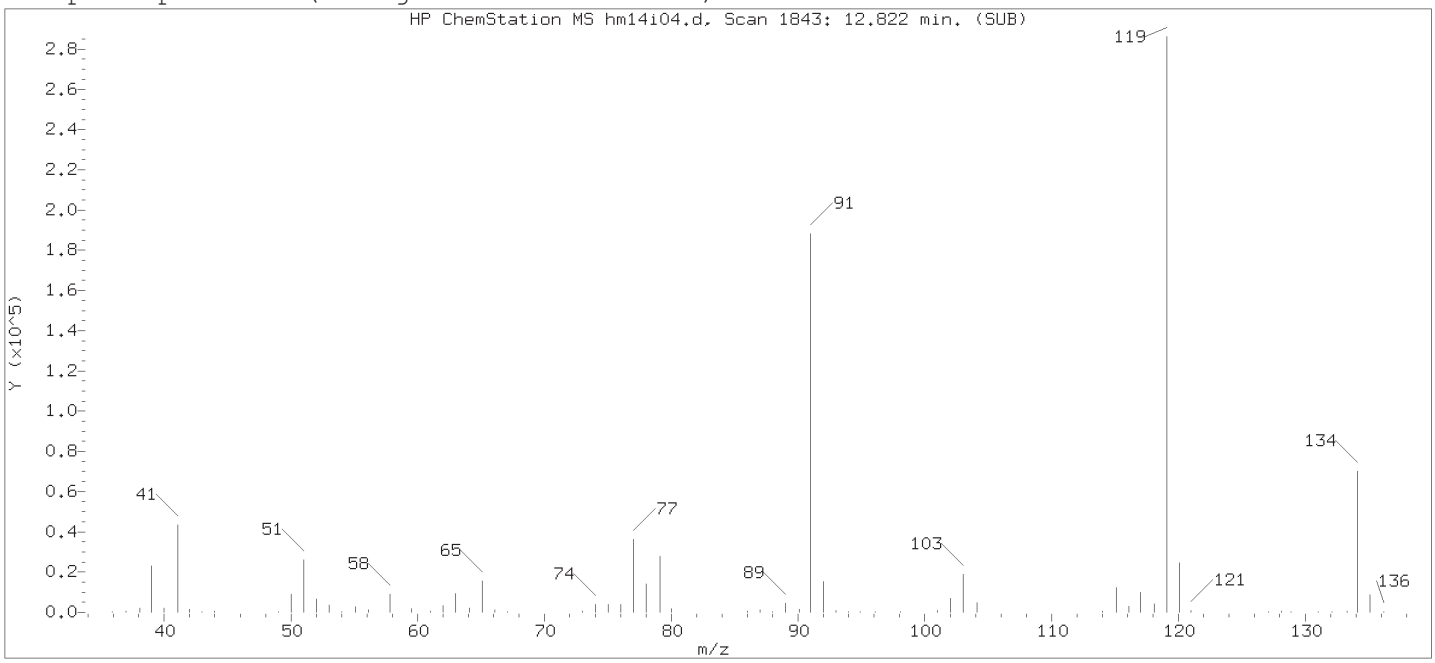
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 98583M
On-Column Amount (ng) : 1.8796
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

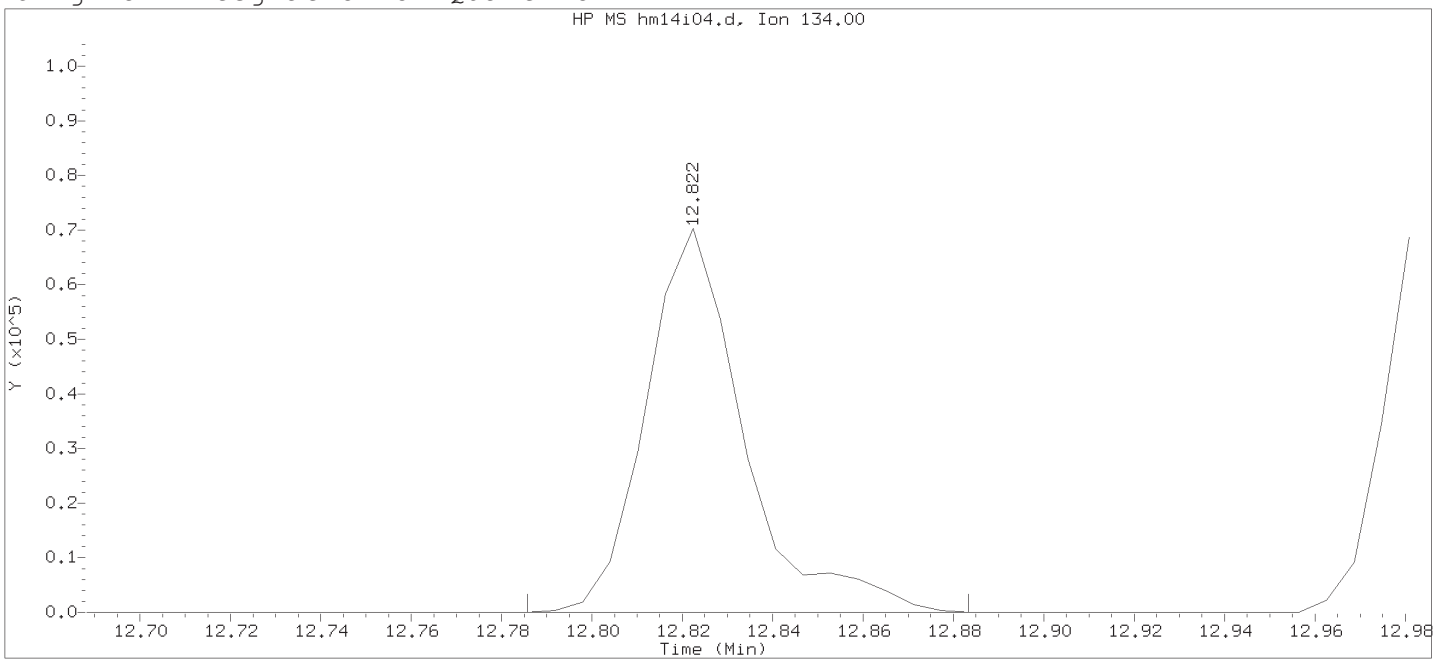
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



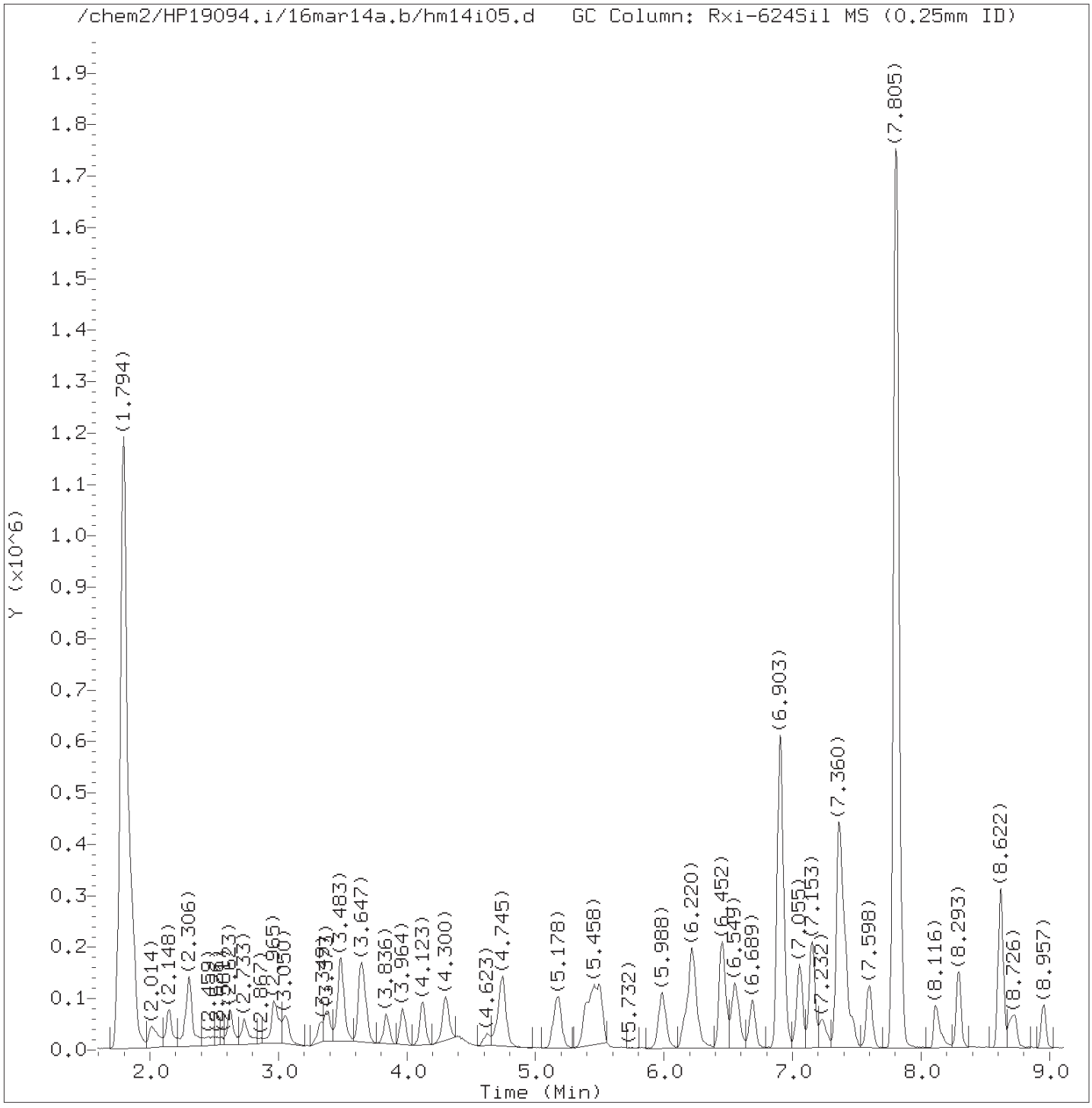
Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 105559
On-column Amount (ng) : 2.0329
Integration start scan : 1836 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

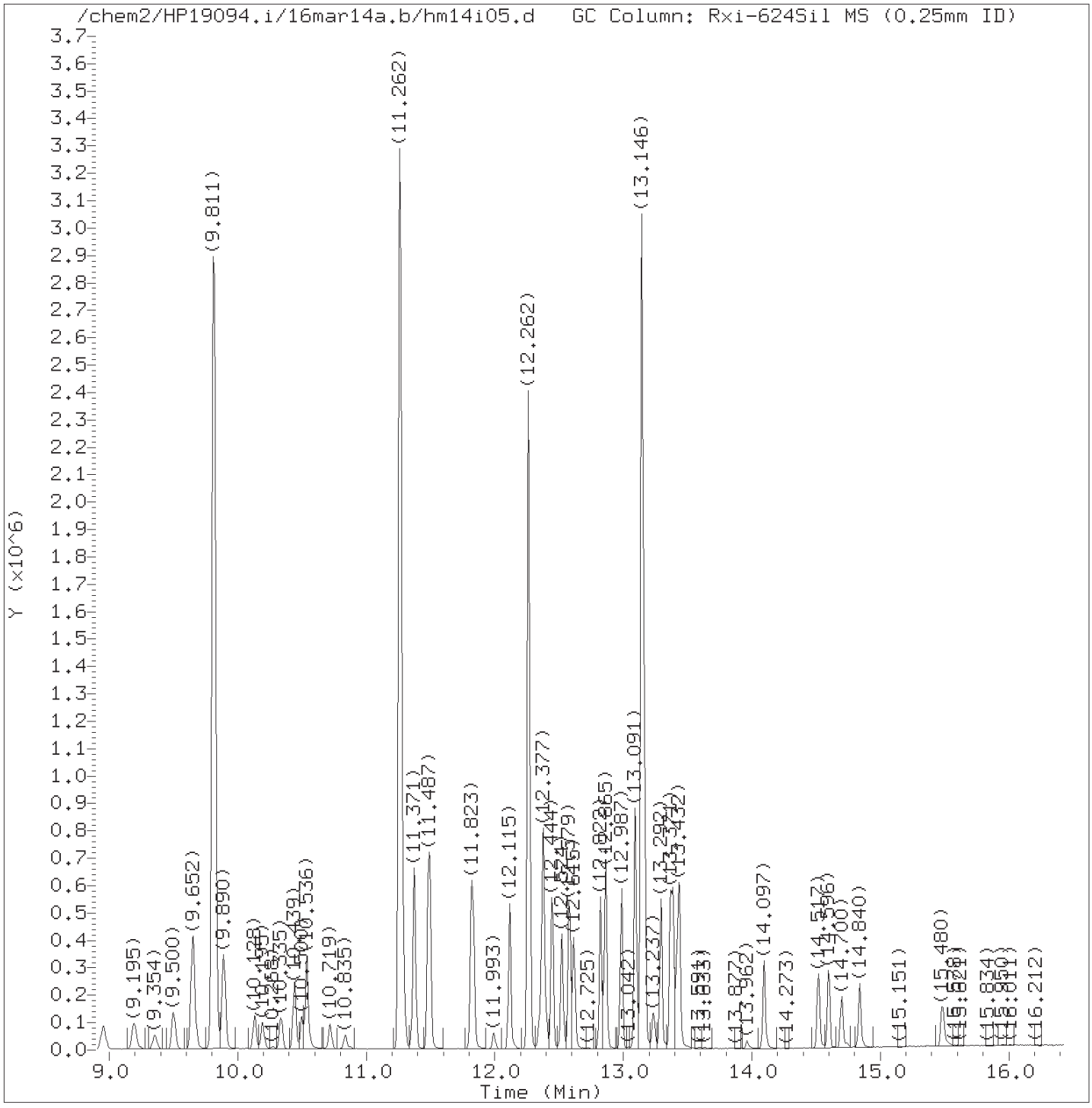
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	90824	1.117
2) Chloromethane	(2)	2.148	50	86848	1.089
5) Vinyl Chloride	(2)	2.282	62	77575	1.046
6) 1,3-Butadiene	(2)	2.306	39	58441M	1.041
7) Bromomethane	(2)	2.617	94	51798	1.052
8) Chloroethane	(2)	2.739	64	48041	1.050
9) Dichlorofluoromethane	(2)	2.965	67	111313	1.073
10) Trichlorofluoromethane	(2)	3.050	101	102392	1.059
11) Ethyl ether	(2)	3.318	59	39723	0.996
12) Freon 123a	(2)	3.385	67	81176	1.098
13) Acrolein	(1)	3.483	56	338250	51.511
15) 1,1-Dichloroethene	(2)	3.635	96	58799	1.060
14) Acetone	(1)	3.647	43	92940M	10.271
16) Freon 113	(2)	3.666	101	62827	1.089
17) Methyl Iodide	(2)	3.836	142	110580	1.077
18) Carbon Disulfide	(2)	3.964	76	180063	1.052
21) Methyl Acetate	(1)	4.092	43	22761	0.896
22) Allyl Chloride	(2)	4.123	41	102626	0.979
26)*t-Butyl Alcohol-d10	(1)	4.288	65	115170	50.000
23) Methylene Chloride	(2)	4.306	84	64037	1.080
28) t-Butyl Alcohol	(1)	4.416	59	66690M	21.536
29) Acrylonitrile	(1)	4.623	53	55580	5.119
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	133271	1.042
31) trans-1,2-Dichloroethene	(2)	4.751	96	64235	1.076
32) n-Hexane	(2)	5.178	57	111465	1.100
33) 1,1-Dichloroethane	(2)	5.391	63	125312	1.030
34) di-Isopropyl Ether	(2)	5.458	45	221898	1.044
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	106915	1.070
37) Ethyl t-butyl ether	(2)	5.988	59	188215M	1.051
40) 1,2-Dichloroethene (Total)	(2)		96	134411	2.137
38) 2-Butanone	(1)	6.165	43	155295	10.072
39) cis-1,2-Dichloroethene	(2)	6.214	96	70176	1.061
42) Propionitrile	(1)	6.226	54	79710	20.733
41) 2,2-Dichloropropane	(2)	6.232	77	103830	1.066
45) Methacrylonitrile	(1)	6.458	67	130992	9.951
47) Bromochloromethane	(2)	6.549	128	25933	1.030
48) Tetrahydrofuran	(1)	6.555	71	39184	10.046
49) Chloroform	(2)	6.689	83	117044	1.052

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	558930	10.056
50)$Dibromofluoromethane	(2)	6.903	111	575455	10.062
51) 1,1,1-Trichloroethane	(2)	6.939	97	98160	1.034
52) Cyclohexane	(2)	7.061	56	133716	1.078
52) Cyclohexane	(2)	7.055	84	102626	1.081
52) Cyclohexane	(2)	7.055	69	38732	1.092
55) 1,1-Dichloropropene	(2)	7.147	75	97878	1.075
54) Carbon Tetrachloride	(2)	7.159	117	92169	1.068
56) Isobutyl Alcohol	(1)	7.232	41	56777	51.746
57)$1,2-Dichloroethane-d4	(2)	7.360	102	92087	10.003
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476091	10.130
57)$1,2-Dichloroethane-d4	(2)	7.360	104	59190	10.183
58) Benzene	(2)	7.409	78	266449	1.051
59) 1,2-Dichloroethane	(2)	7.464	62	69113M	1.052
60) t-Amyl methyl ether	(2)	7.598	73	155840	1.064
63)*Fluorobenzene	(2)	7.805	96	2358734	10.000
62) n-Heptane	(2)	7.830	43	129863	1.133
65) n-Butanol	(1)	8.116	56	96518	109.290
67) Trichloroethene	(2)	8.293	95	70014	1.060
70) 1,2-Dichloropropane	(2)	8.622	63	70333	1.066
69) Methylcyclohexane	(2)	8.628	83	114418	1.057
71) Methyl Methacrylate	(1)	8.695	69	26979A	0.981
72) 1,4-Dioxane	(1)	8.713	88	10458	60.106
73) Dibromomethane	(2)	8.732	93	28208	1.038
74) Bromodichloromethane	(2)	8.957	83	79407	1.046
76) 2-Nitropropane	(1)	9.195	41	90337	10.246
80) cis-1,3-Dichloropropene	(2)	9.500	75	96651	1.036
81) 4-Methyl-2-Pentanone	(1)	9.652	43	387421	10.210
82)$Toluene-d8	(3)	9.811	98	2314810	9.954
82)$Toluene-d8	(3)	9.811	100	1492208	9.913
83) Toluene	(3)	9.890	92	165369	1.056
84) trans-1,3-Dichloropropene	(3)	10.128	75	75692	1.031
85) 1,3-Dichloropropene (total)	(3)		75	172343	2.067
86) Ethyl Methacrylate	(3)	10.195	69	58979M	1.044
88) 1,1,2-Trichloroethane	(3)	10.335	97	38621	1.018
89) Tetrachloroethene	(3)	10.445	166	77846	1.052
90) 1,3-Dichloropropane	(3)	10.500	76	71521	1.048
91) 2-Hexanone	(1)	10.536	43	279210	10.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	49840	1.025
95) 1,2-Dibromoethane	(3)	10.835	107	36641	1.025
97)*Chlorobenzene-d5	(3)	11.262	117	1632519	10.000
98) Chlorobenzene	(3)	11.292	112	178955	1.049
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	61163	1.046
100) Ethylbenzene	(3)	11.378	91	322880	1.053
101) m+p-Xylene	(3)	11.493	106	246499	2.108
105) Xylene (Total)	(3)		106	365764	3.159
104) o-Xylene	(3)	11.817	106	119265	1.051
106) Styrene	(3)	11.835	104	189698	1.045
107) Bromoform	(3)	11.993	173	27300	1.012
108) Isopropylbenzene	(3)	12.115	105	319515	1.062
111)$4-Bromofluorobenzene	(3)	12.262	95	759607	10.133
111)$4-Bromofluorobenzene	(3)	12.262	174	626593	10.025
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	47675	1.040
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	119030A	10.187
114) Bromobenzene	(4)	12.383	156	69551	1.019
116) 1,2,3-Trichloropropane	(4)	12.402	110	11715	1.018
117) n-Propylbenzene	(4)	12.444	91	384967	1.042
119) 2-Chlorotoluene	(4)	12.524	126	73519	1.032
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	270152	1.049
122) 4-Chlorotoluene	(4)	12.615	126	75710	1.043
125) tert-Butylbenzene	(4)	12.822	134	58224M	1.061
126) Pentachloroethane	(4)	12.853	167	41190	0.994
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	266450	1.035
128) sec-Butylbenzene	(4)	12.987	105	355663	1.067
131) 1,3-Dichlorobenzene	(4)	13.091	146	137619	1.030
132) p-Isopropyltoluene	(4)	13.097	119	291814	1.034
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	732410	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	139199	1.026
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	105569	0.989
136) Benzyl Chloride	(4)	13.231	126	18304	1.008
138) n-Butylbenzene	(4)	13.389	92	143045	1.036
139) 1,2-Dichlorobenzene	(4)	13.420	146	124256	1.047
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	5922	0.982
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	86509	1.019
146) Hexachlorobutadiene	(4)	14.596	225	48640	1.097
147) Naphthalene	(4)	14.700	128	150985	1.035

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	74970	1.106

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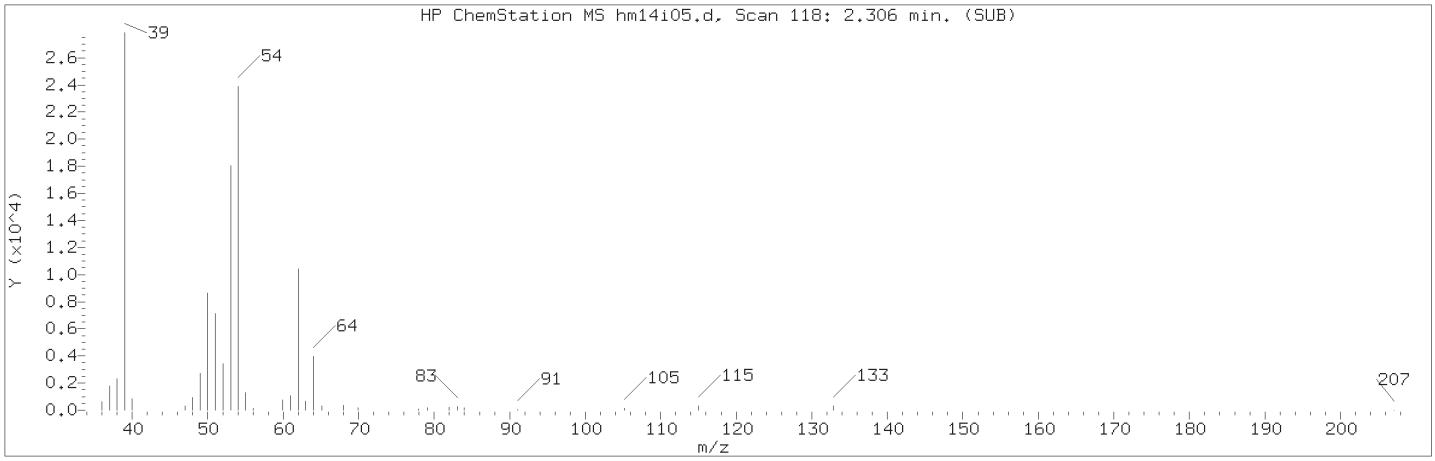
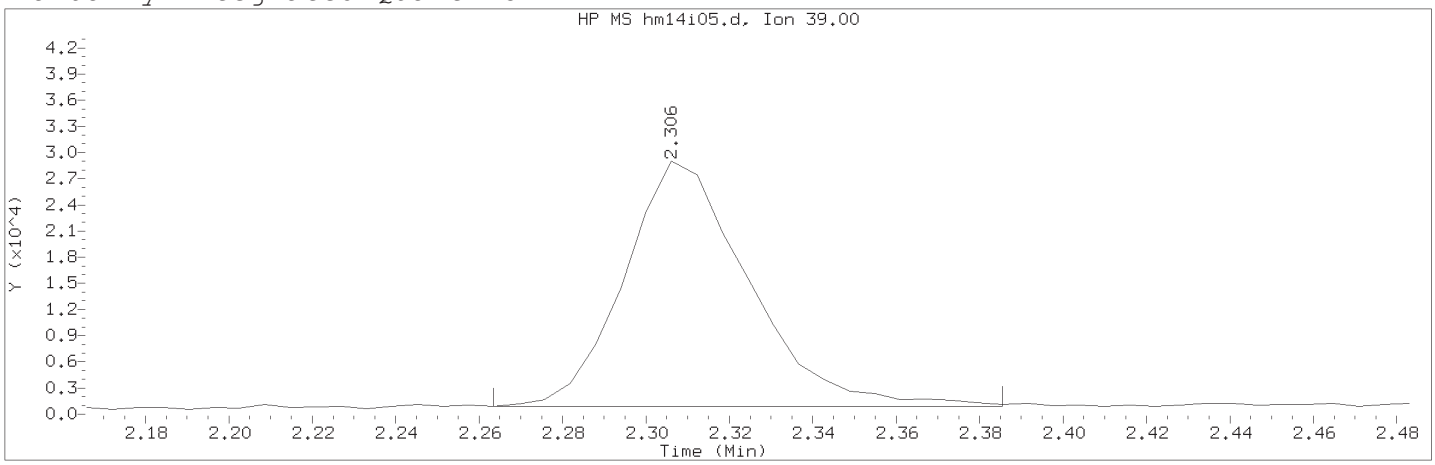
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

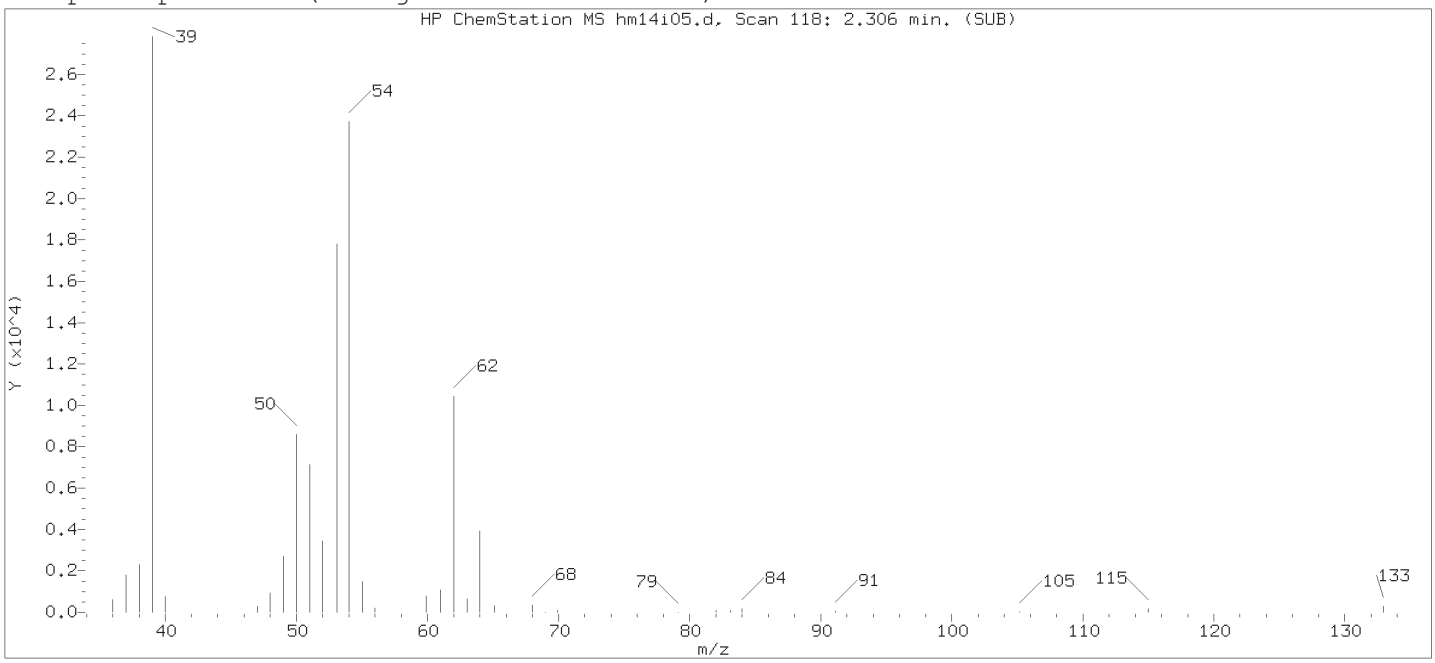
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 58441M
On-Column Amount (ng) : 1.0414
Integration start scan : 110 Integration stop scan: 130
Y at integration start : 866 Y at integration end: 866

Reason for manual integration: improper integration

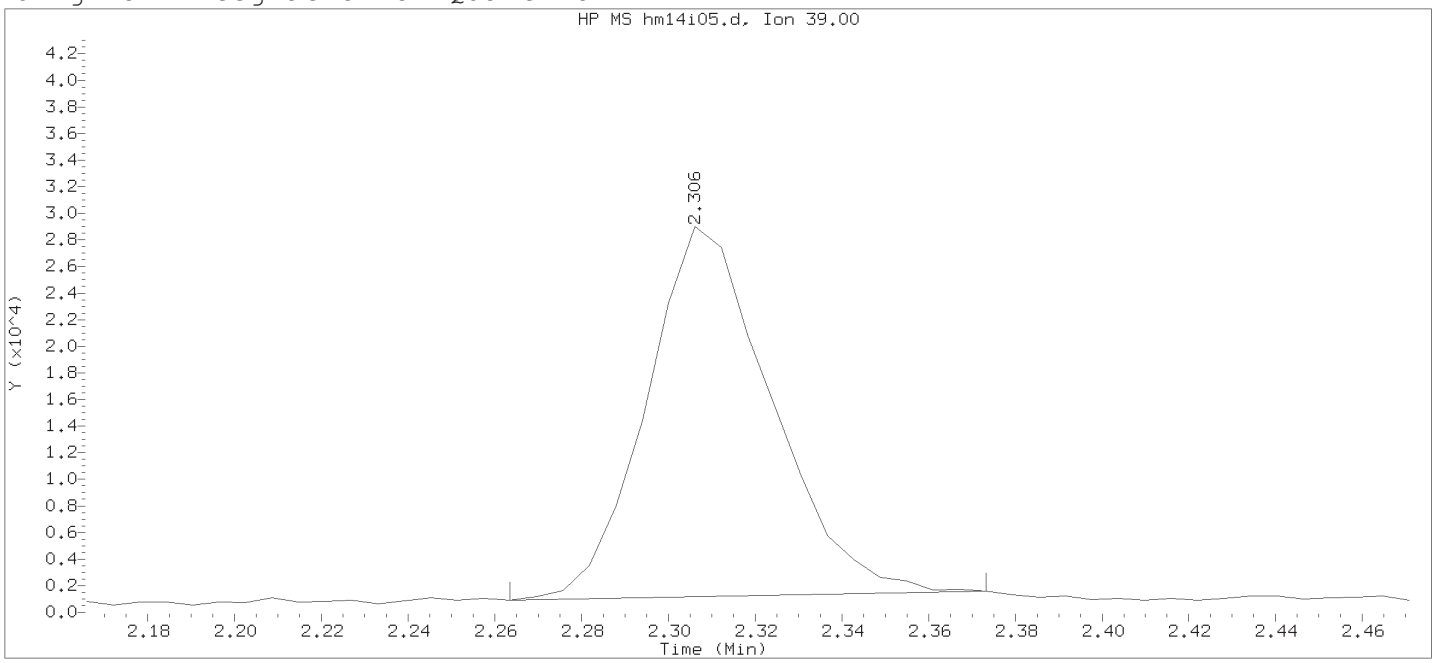
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

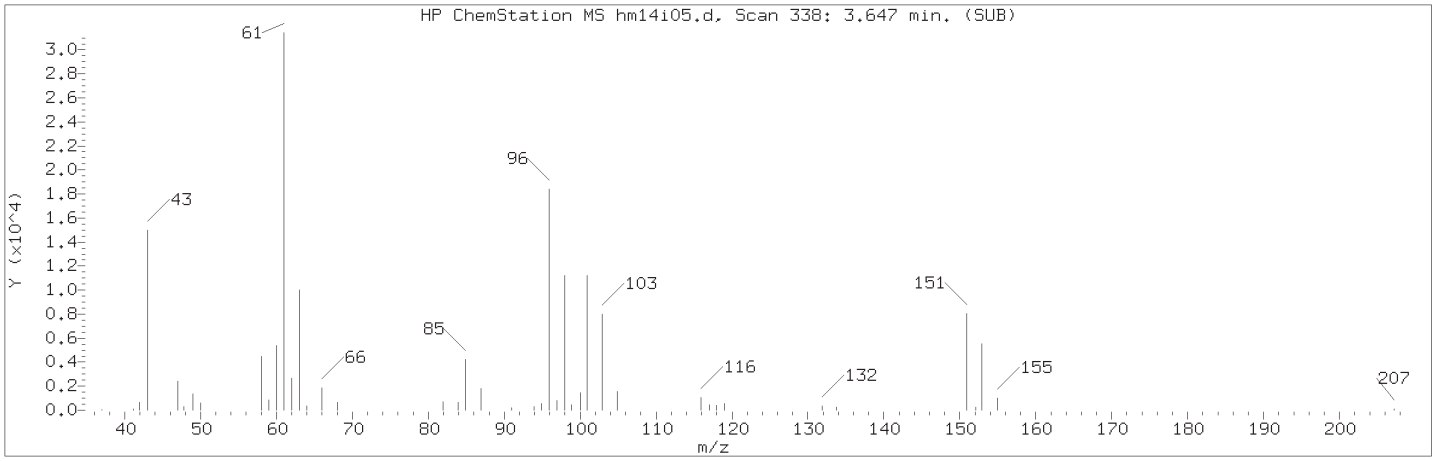
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

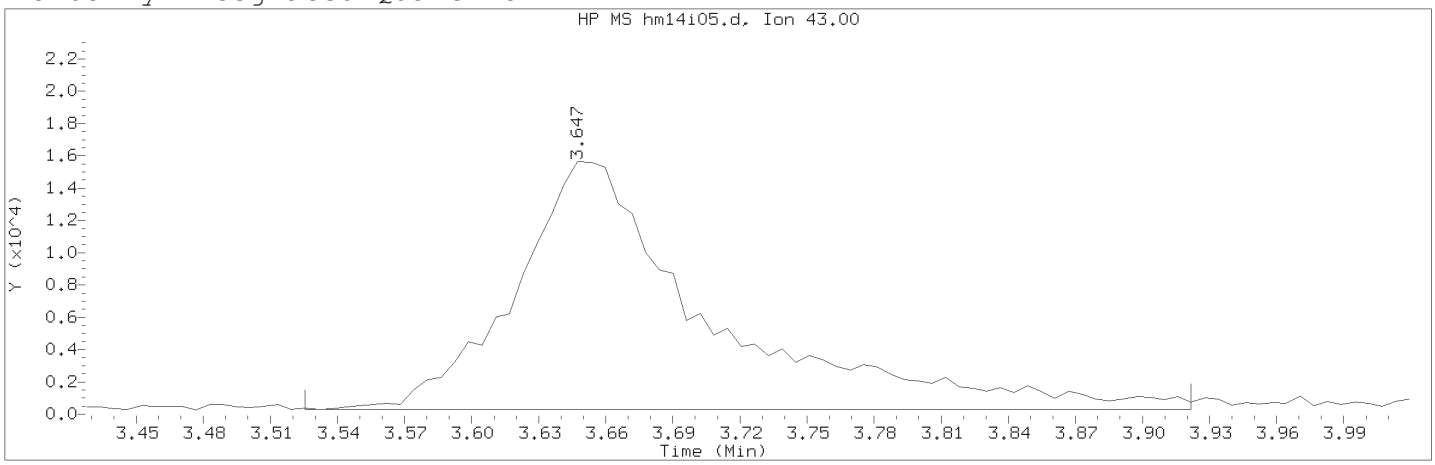
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 55576
On-column Amount (ng) : 1.0770
Integration start scan : 110 Integration stop scan: 128
Y at integration start : 903 Y at integration end: 1582

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

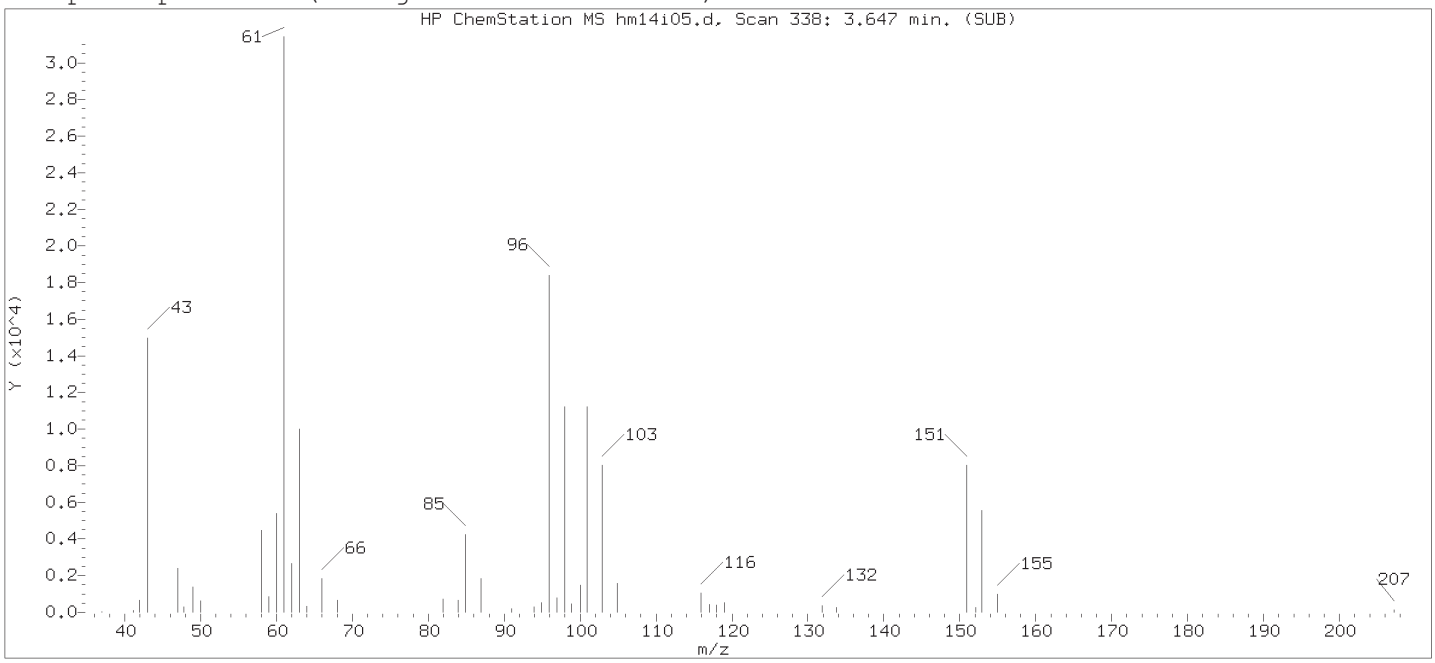
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 92940M
On-Column Amount (ng) : 10.2713
Integration start scan : 317 Integration stop scan: 382
Y at integration start : 282 Y at integration end: 282

Reason for manual integration: improper integration

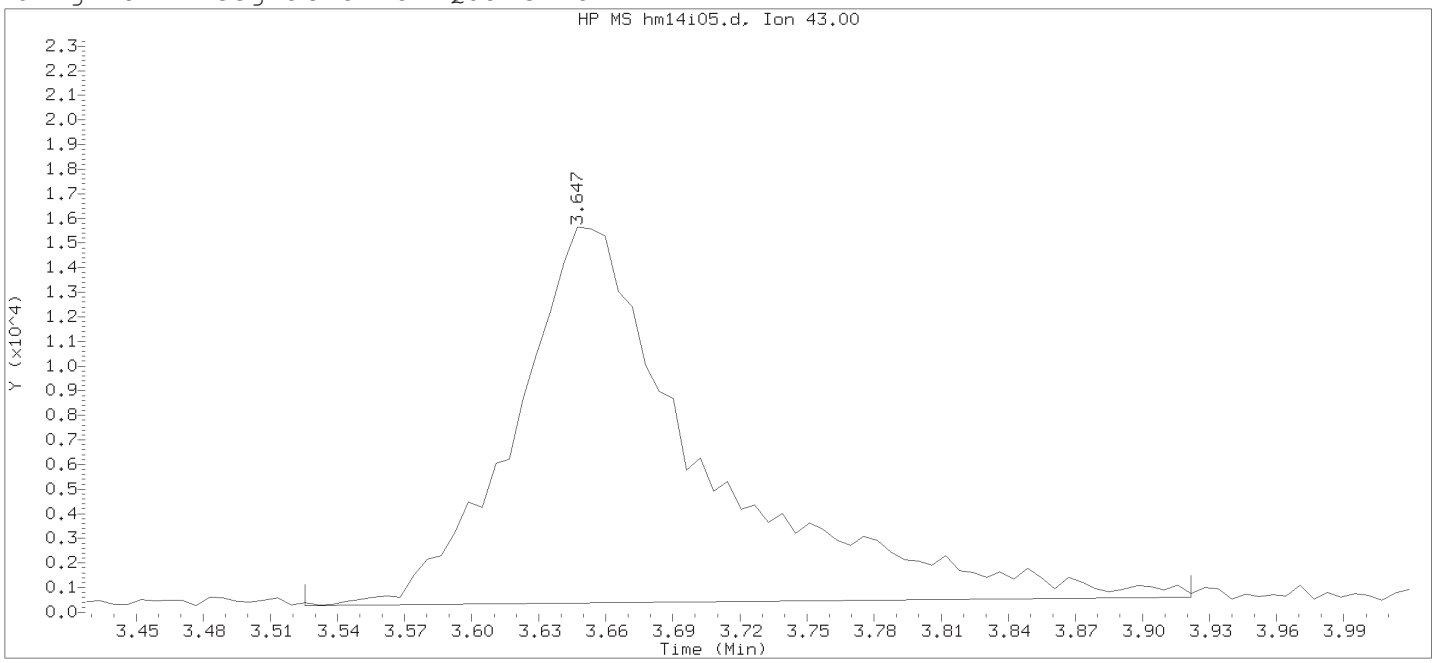
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

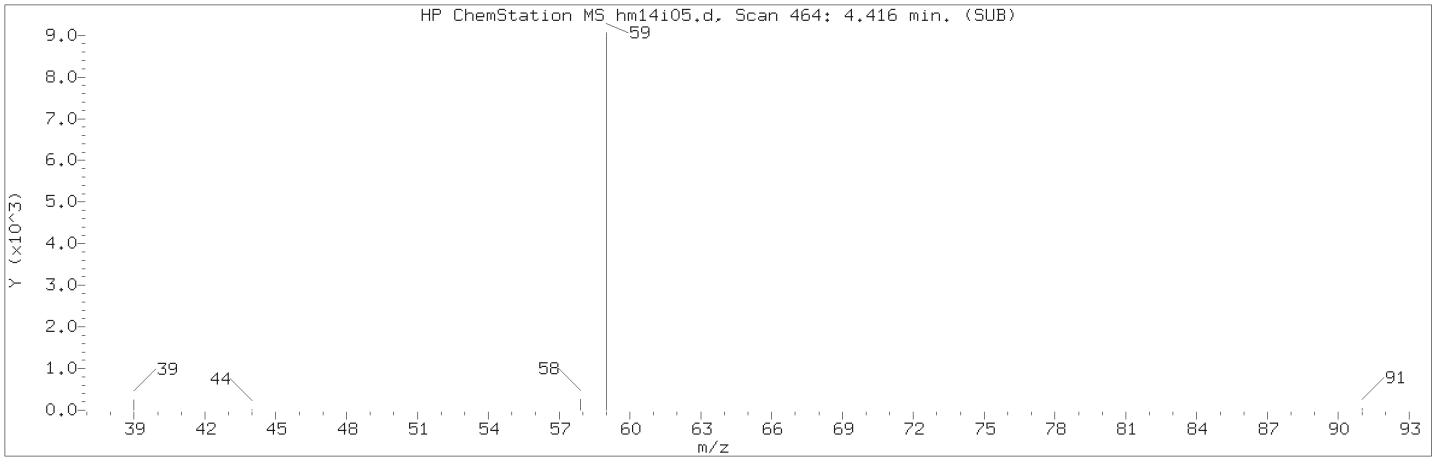
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

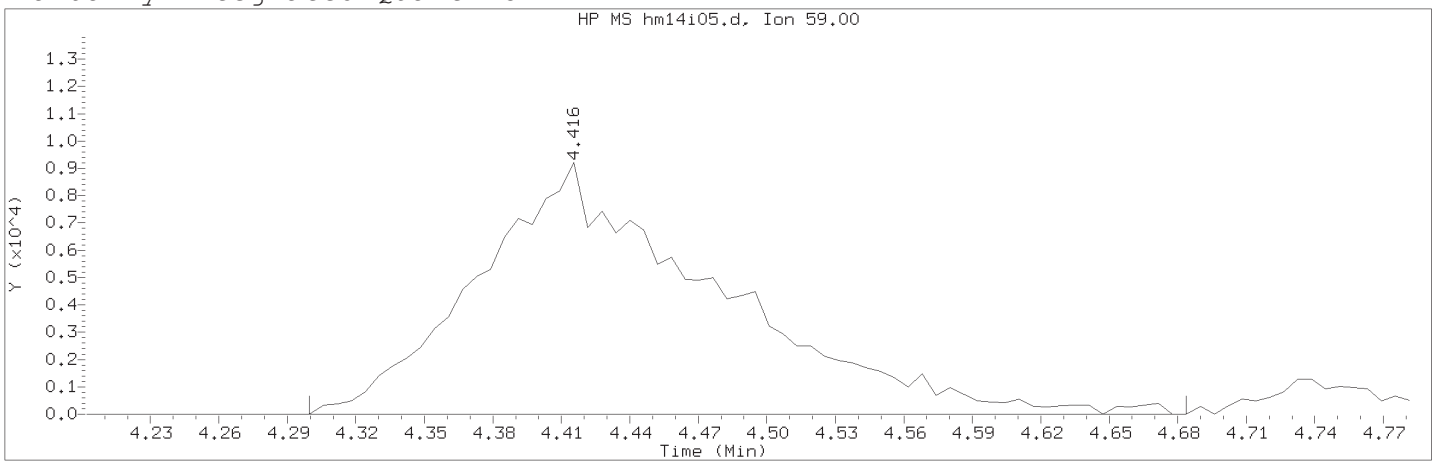
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 89041		
On-column Amount (ng)	: 10.7176		
Integration start scan	: 317	Integration stop scan:	382
Y at integration start	: 276	Y at integration end:	607

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

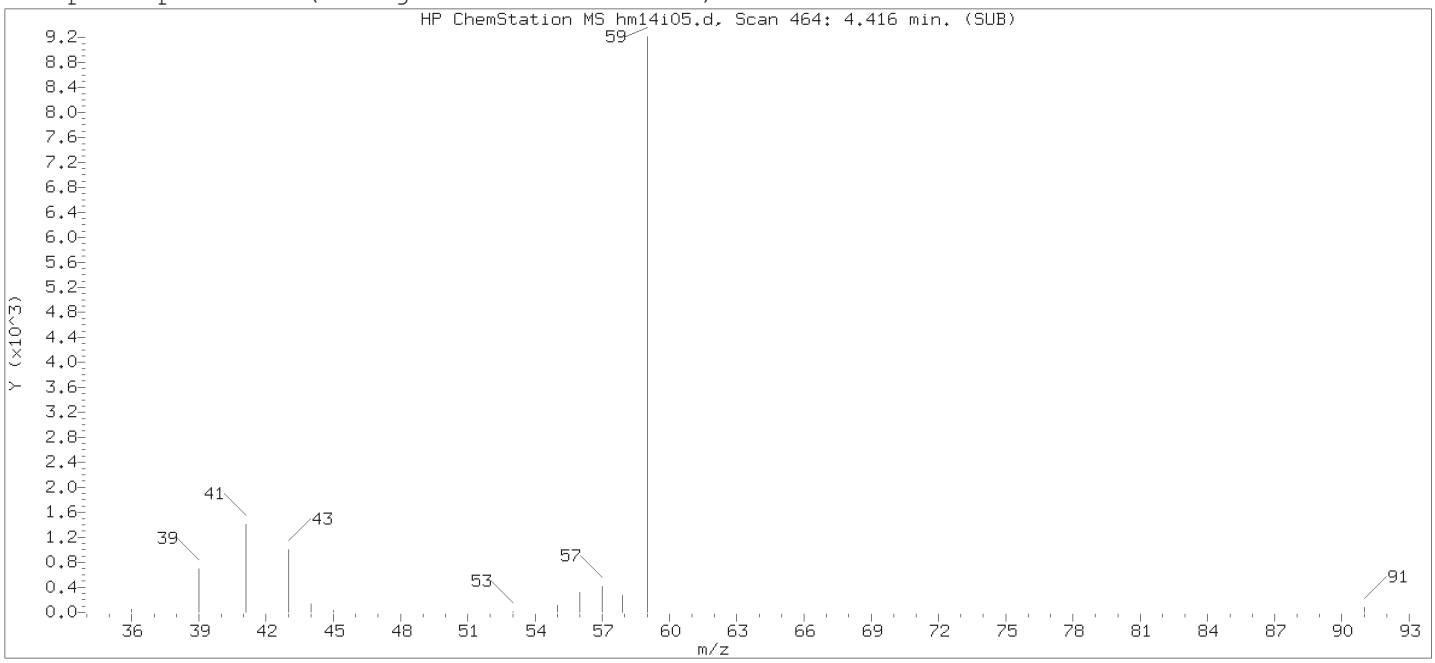
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area (flag) : 66690M
On-Column Amount (ng) : 21.5360
Integration start scan : 444 Integration stop scan: 507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

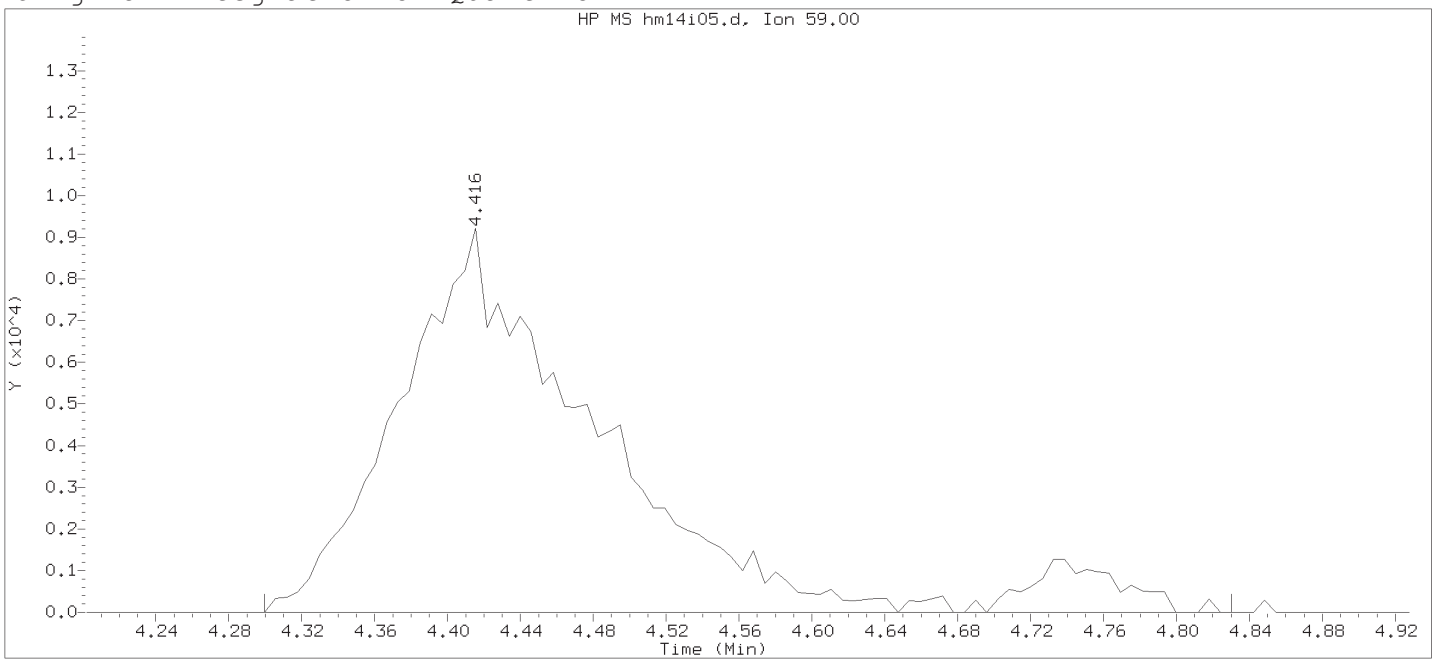
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

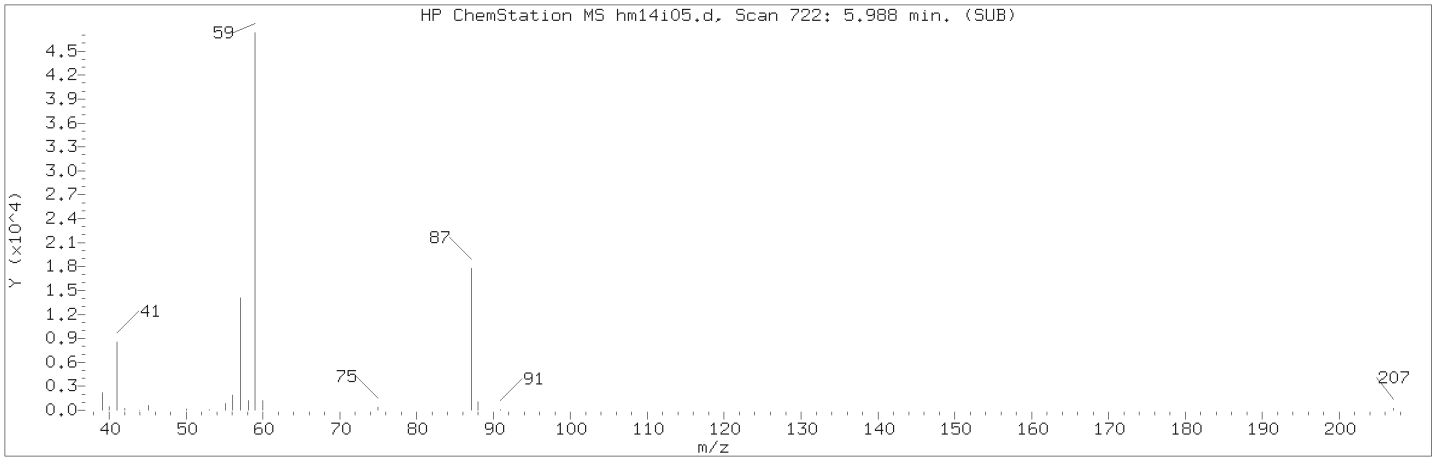
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

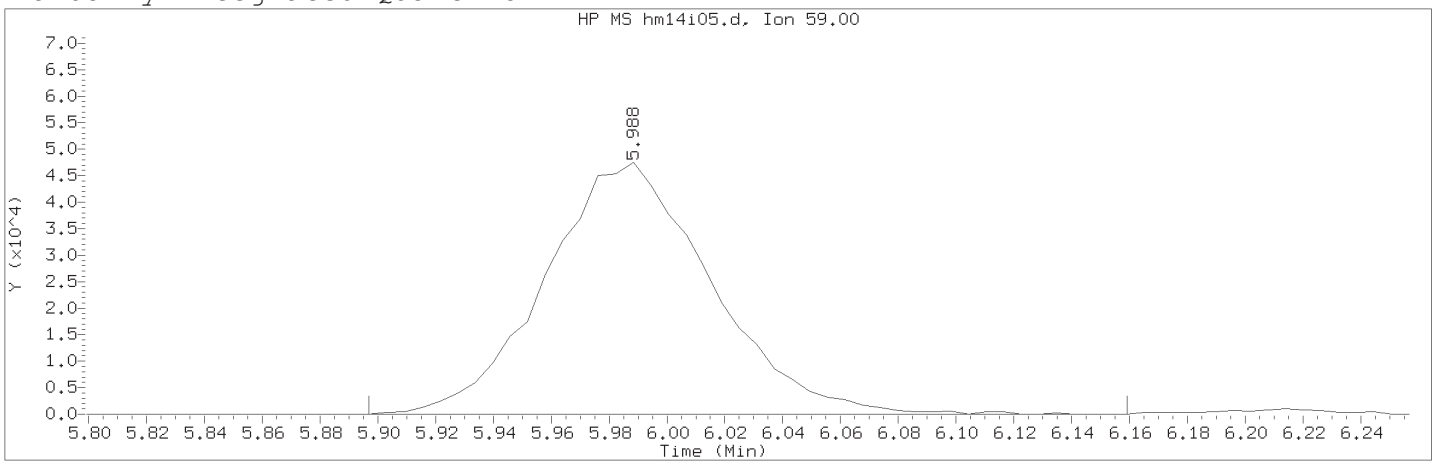
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area : 71245
On-column Amount (ng) : 23.7600
Integration start scan : 444 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

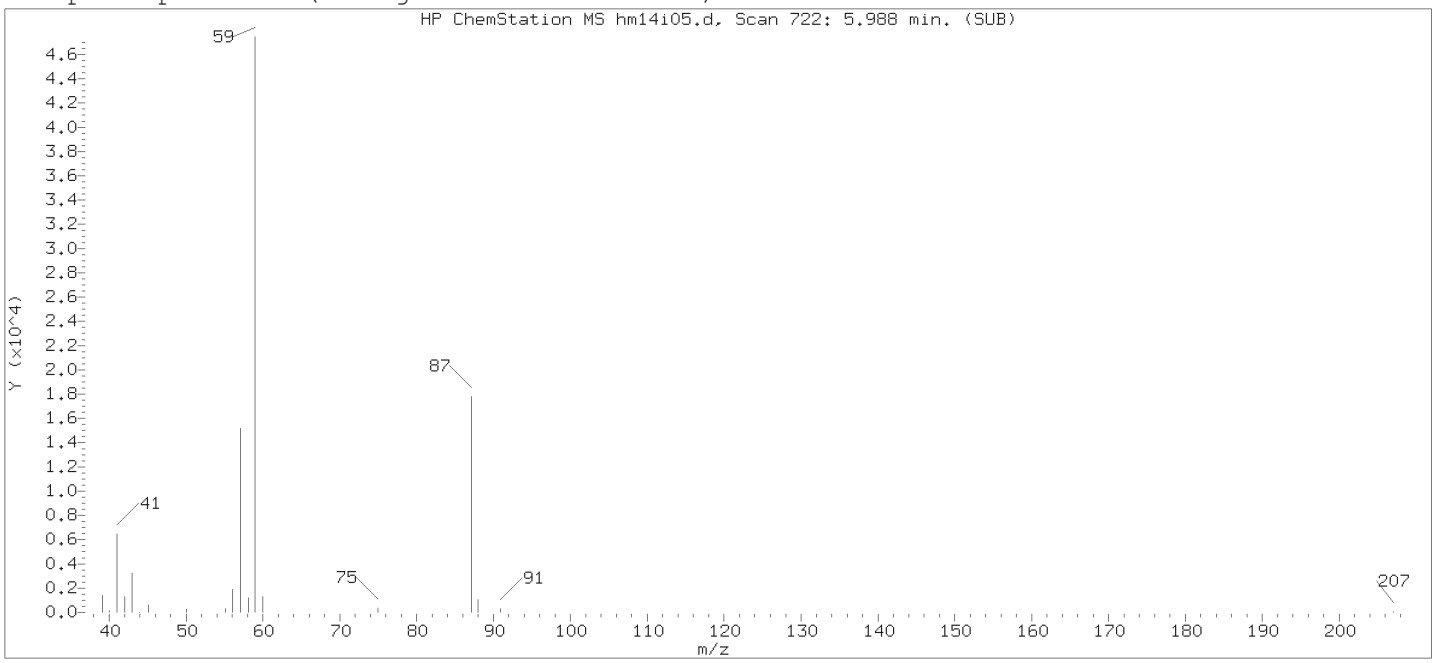
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 722
Retention Time (minutes): 5.988
Quant Ion : 59.00
Area (flag) : 188215M
On-Column Amount (ng) : 1.0505
Integration start scan : 706 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

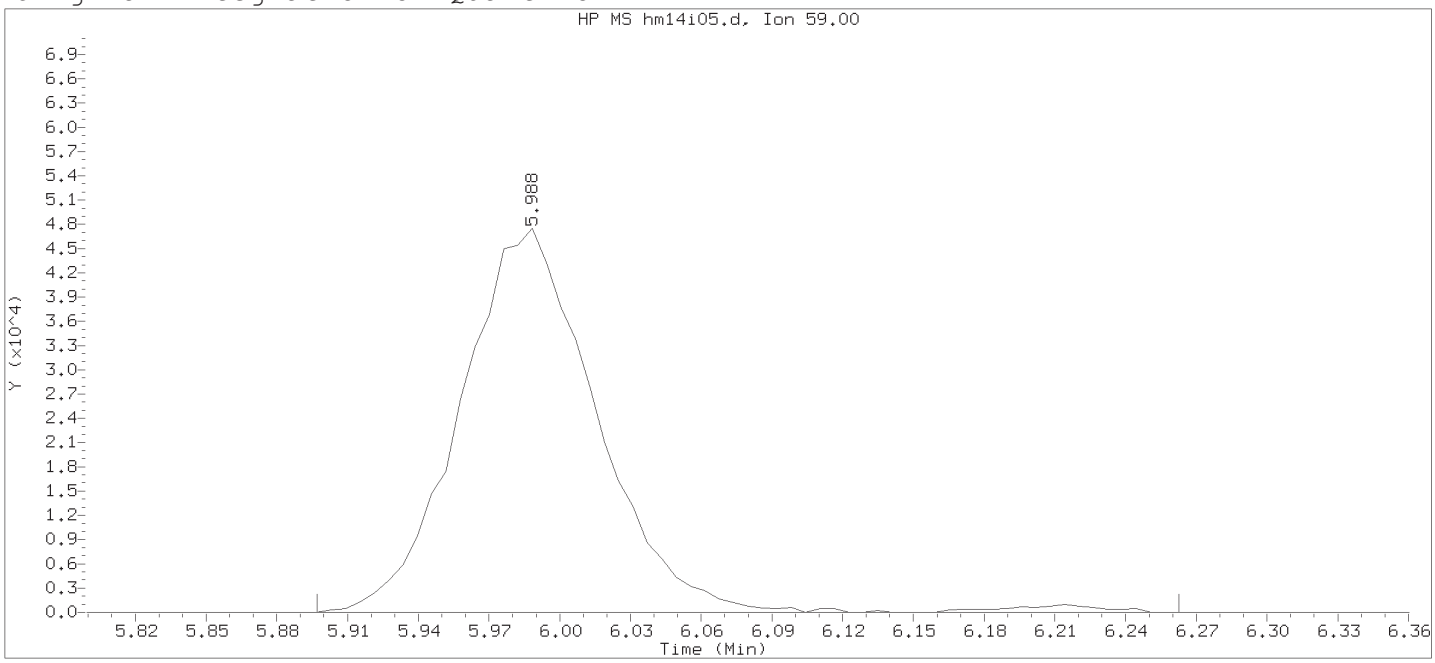
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

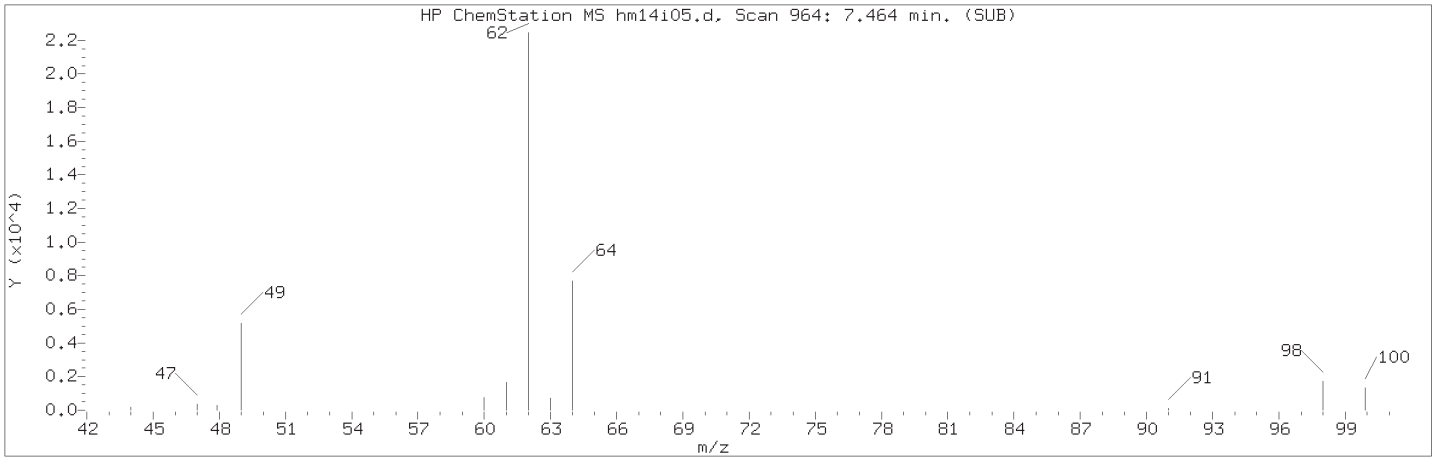
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

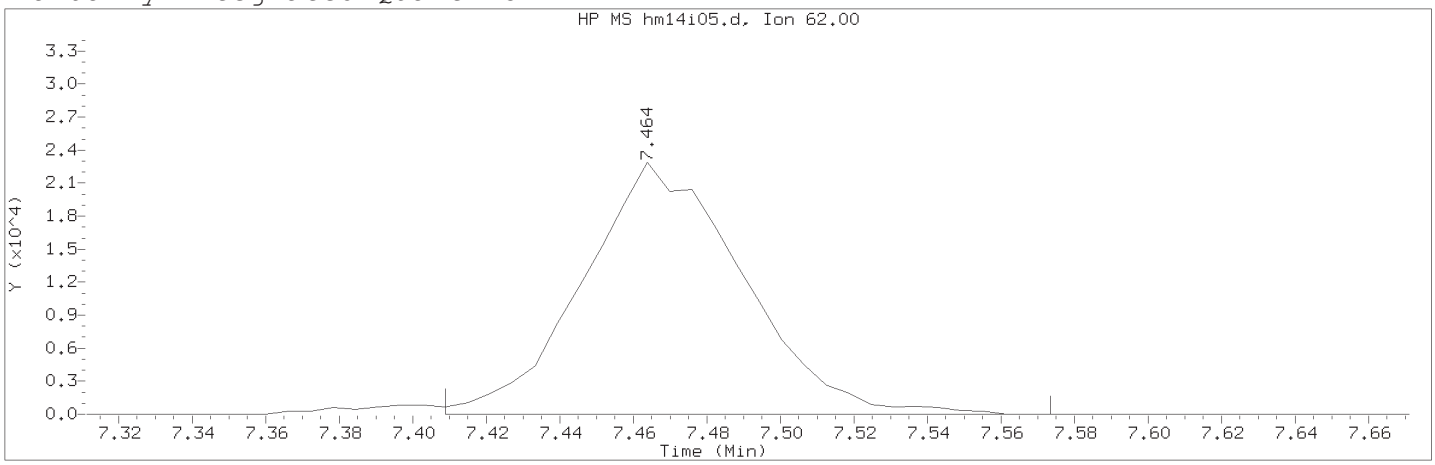
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 722
Retention Time (minutes): 5.988
Quant Ion : 59.00
Area : 190932
On-column Amount (ng) : 1.0821
Integration start scan : 706 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

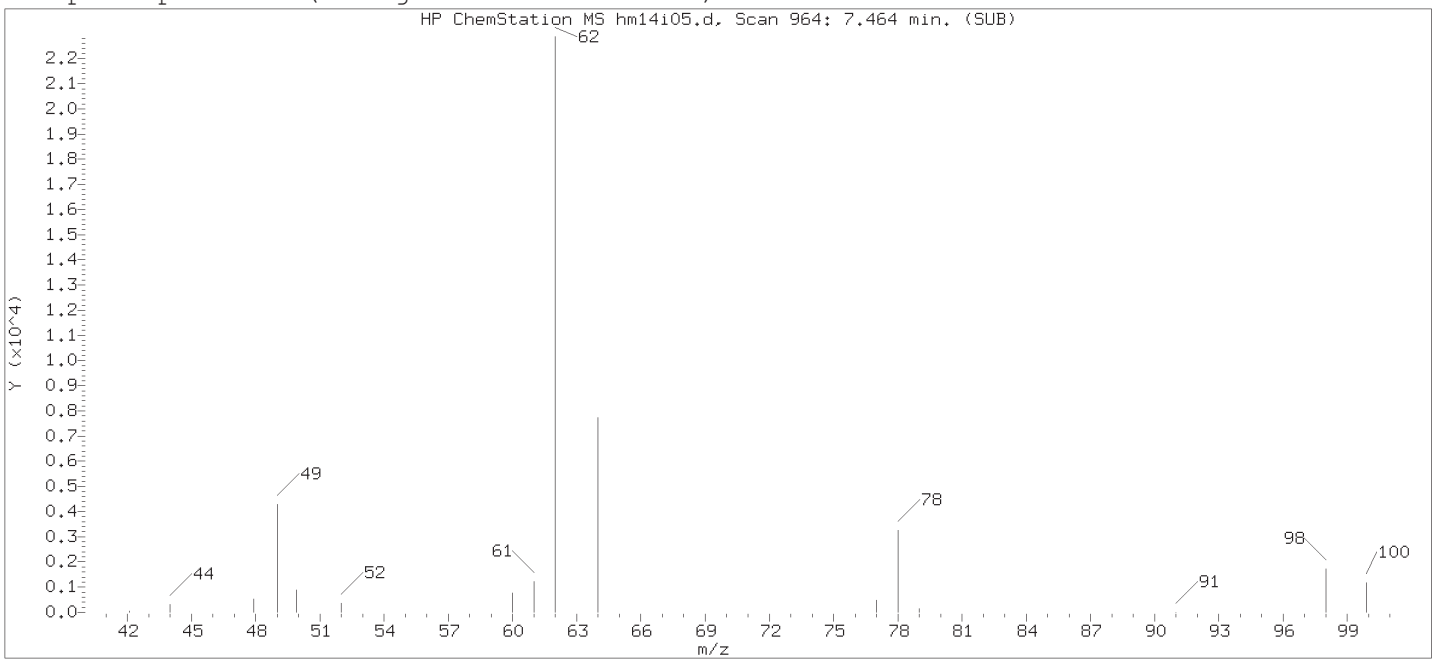
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 69113M
On-Column Amount (ng) : 1.0522
Integration start scan : 954 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

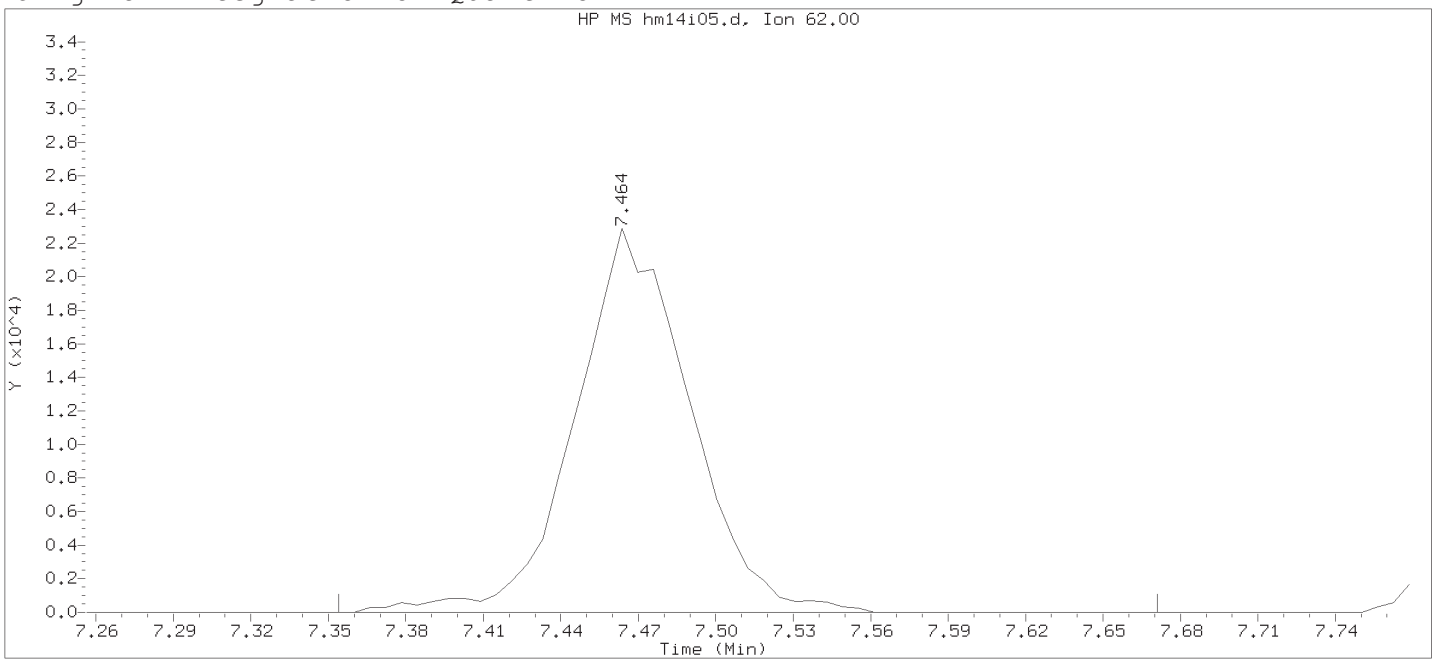
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

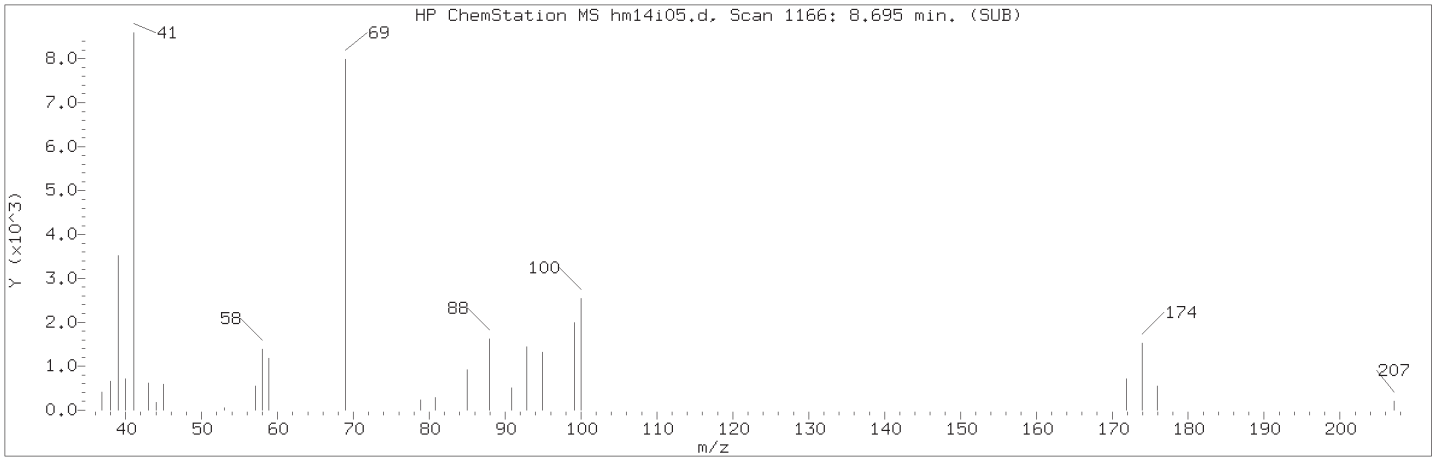
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

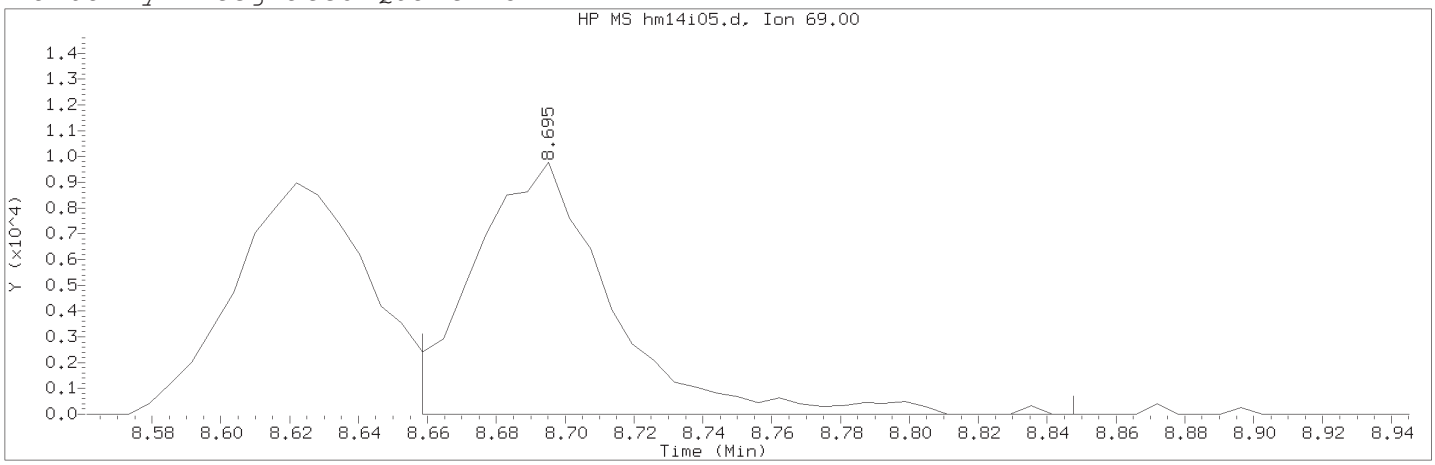
Compound Number	: 59		
Compound Name	: 1,2-Dichloroethane		
Scan Number	: 964		
Retention Time (minutes)	: 7.464		
Quant Ion	: 62.00		
Area	: 70540		
On-column Amount (ng)	: 1.0847		
Integration start scan	: 945	Integration stop scan:	997
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

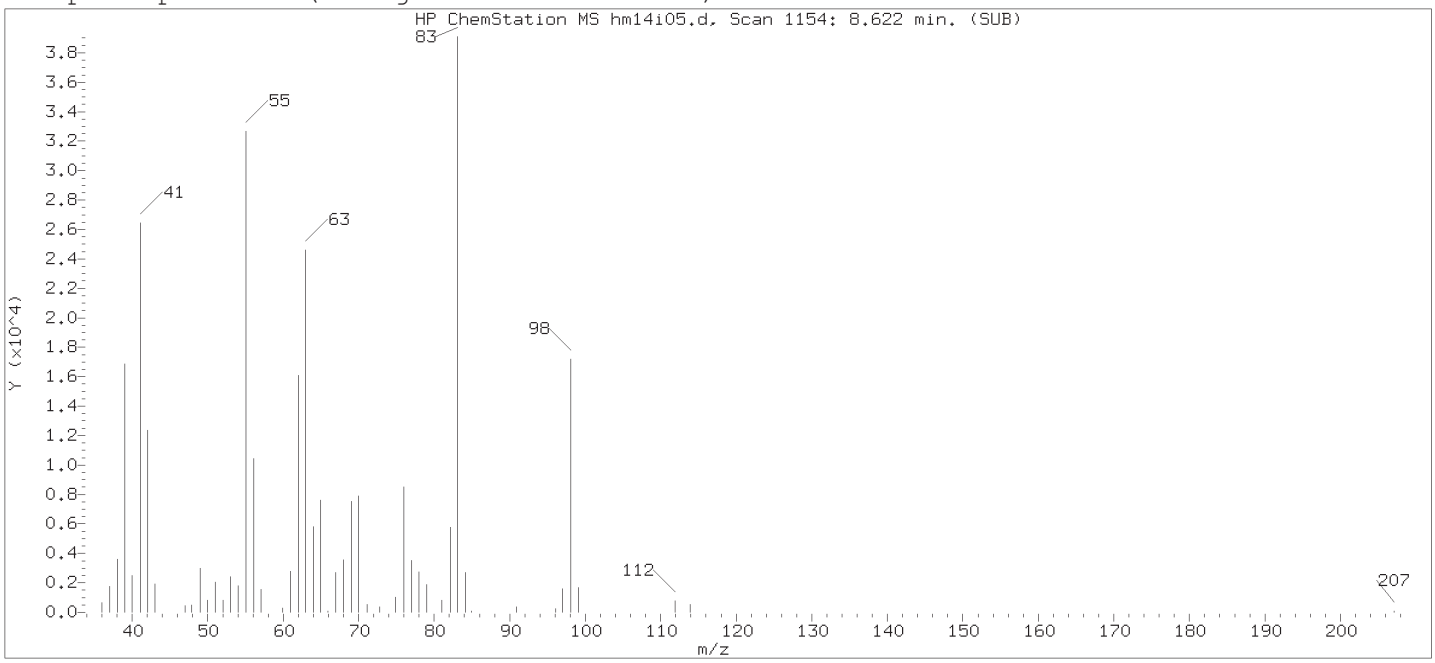
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 26979A
On-Column Amount (ng) : 0.9809
Integration start scan : 1159 Integration stop scan: 1190
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

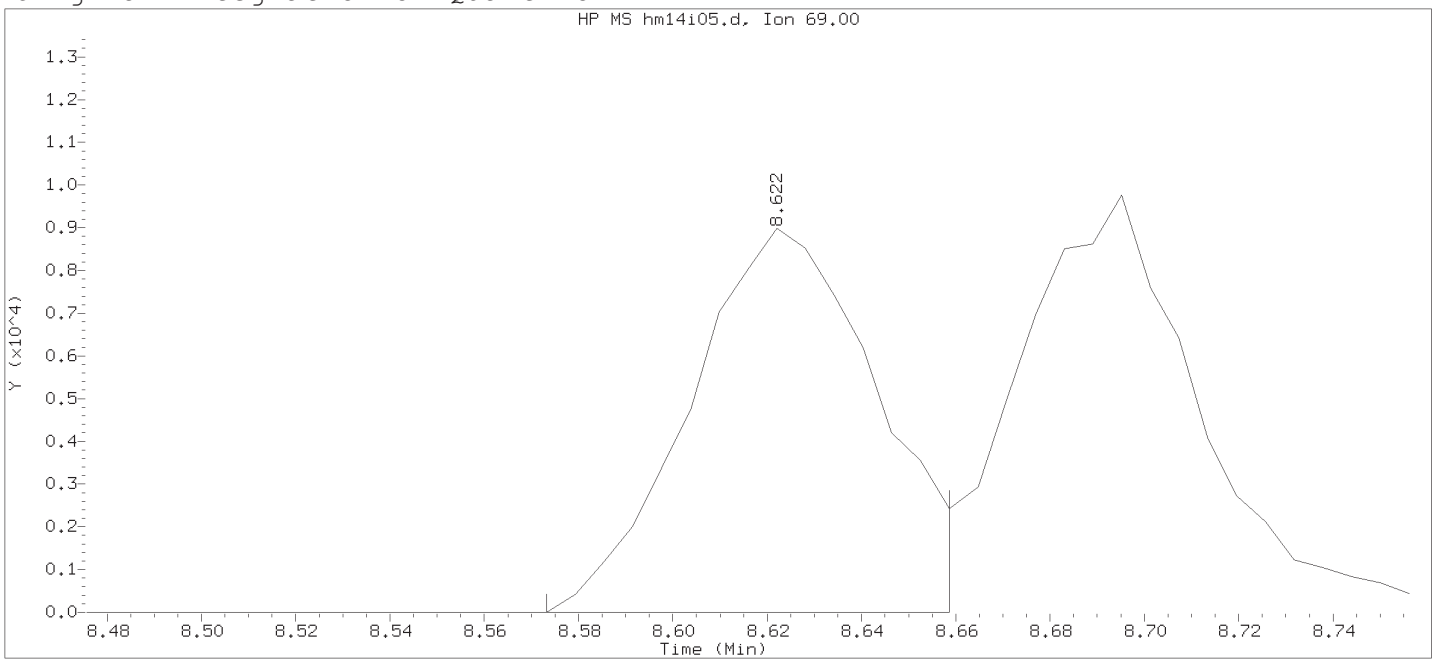
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

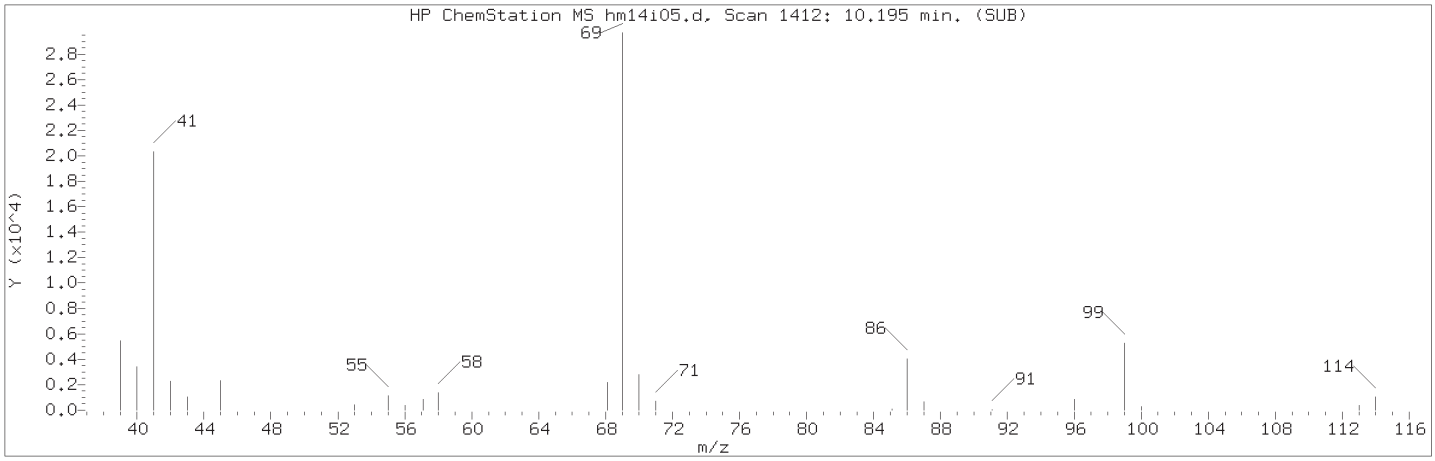
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

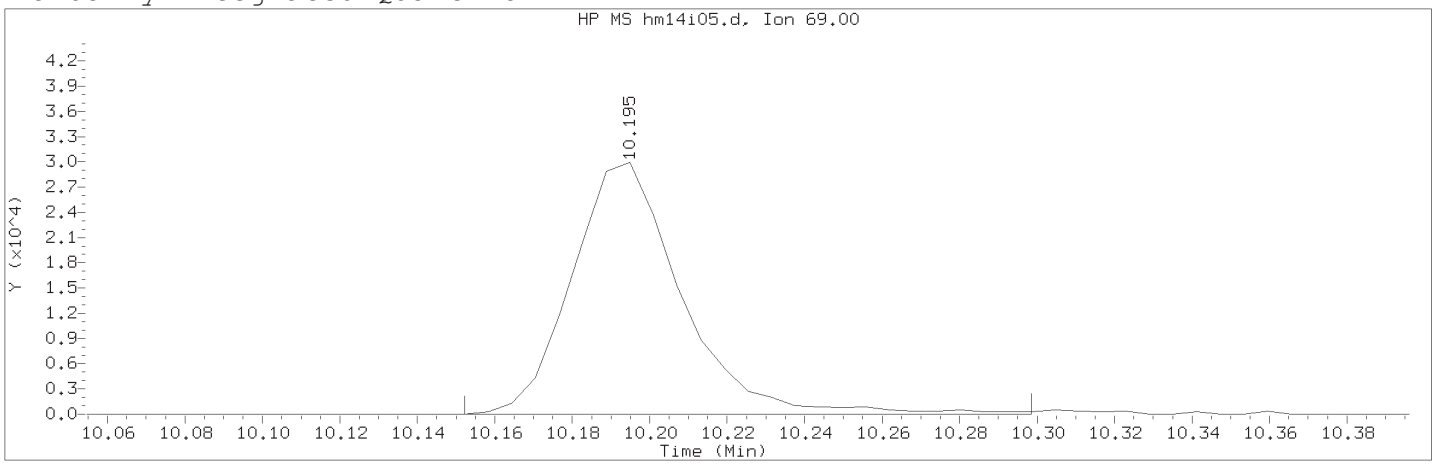
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 24473
On-column Amount (ng) : 0.8821
Integration start scan : 1145 Integration stop scan: 1159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

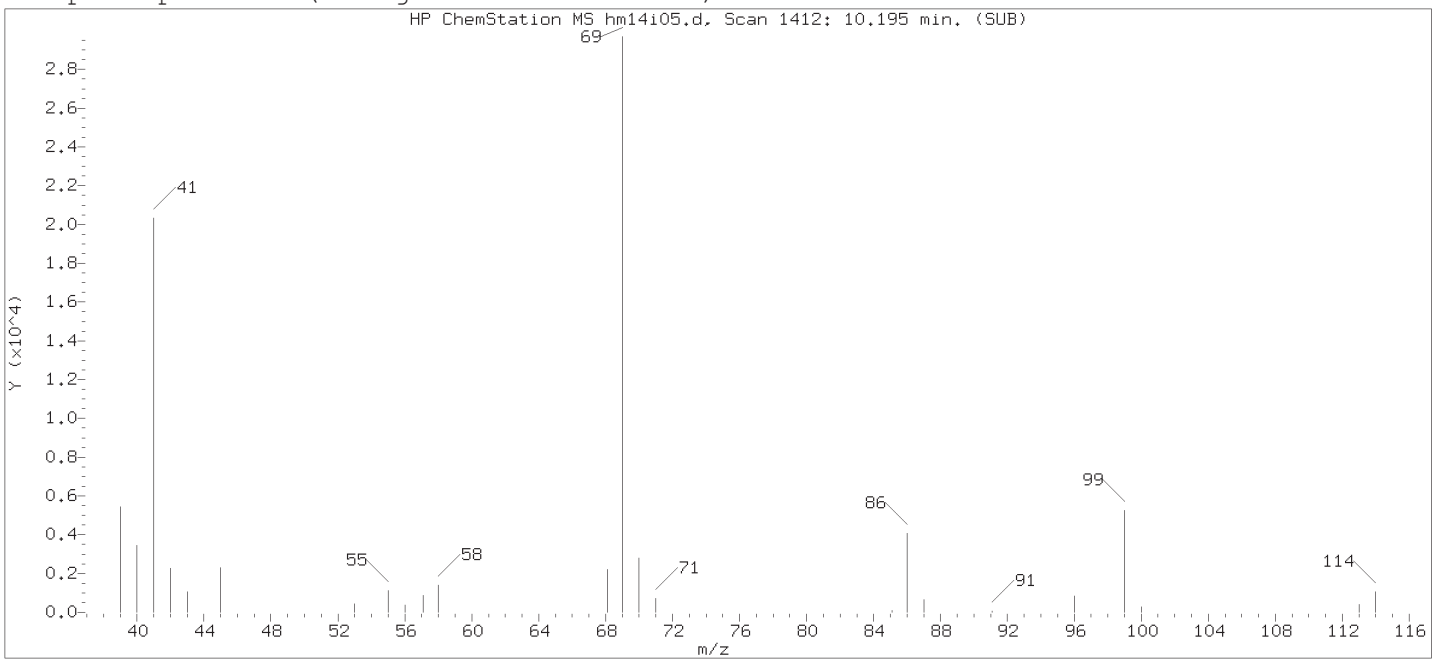
Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area (flag) : 58979M
On-Column Amount (ng) : 1.0442
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

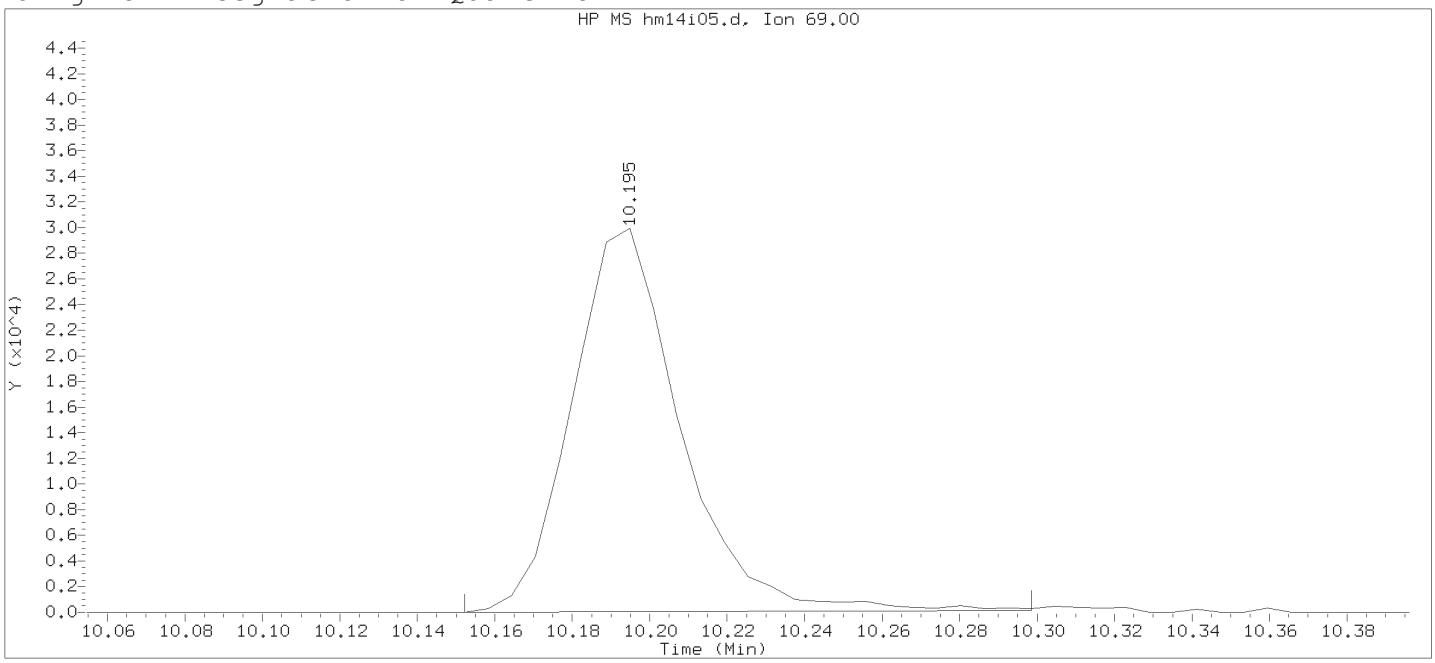
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area : 58269
On-column Amount (ng) : 1.0472
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 149

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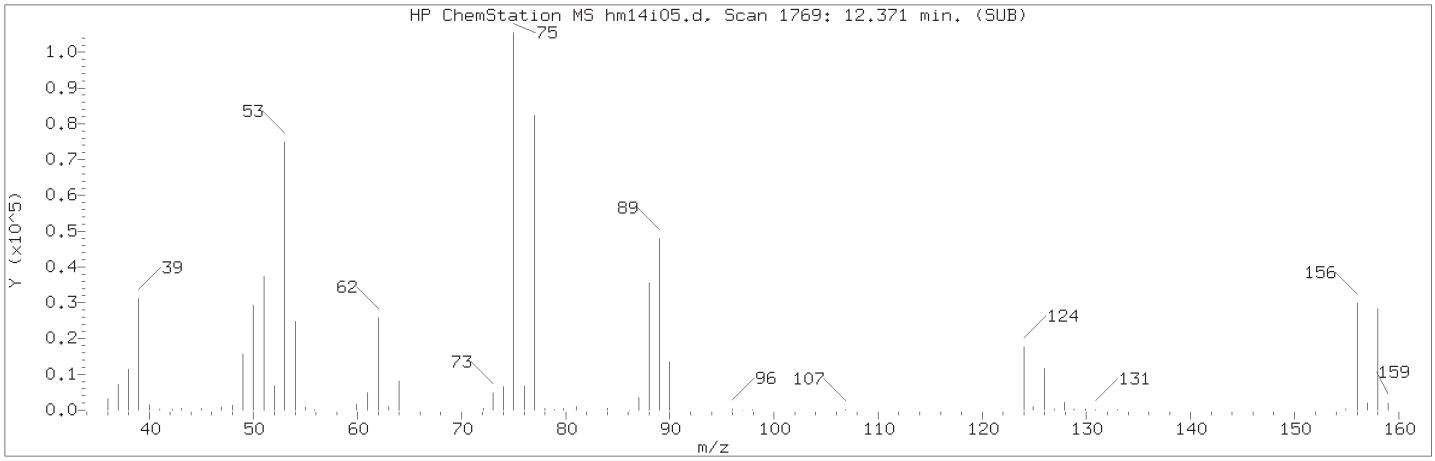
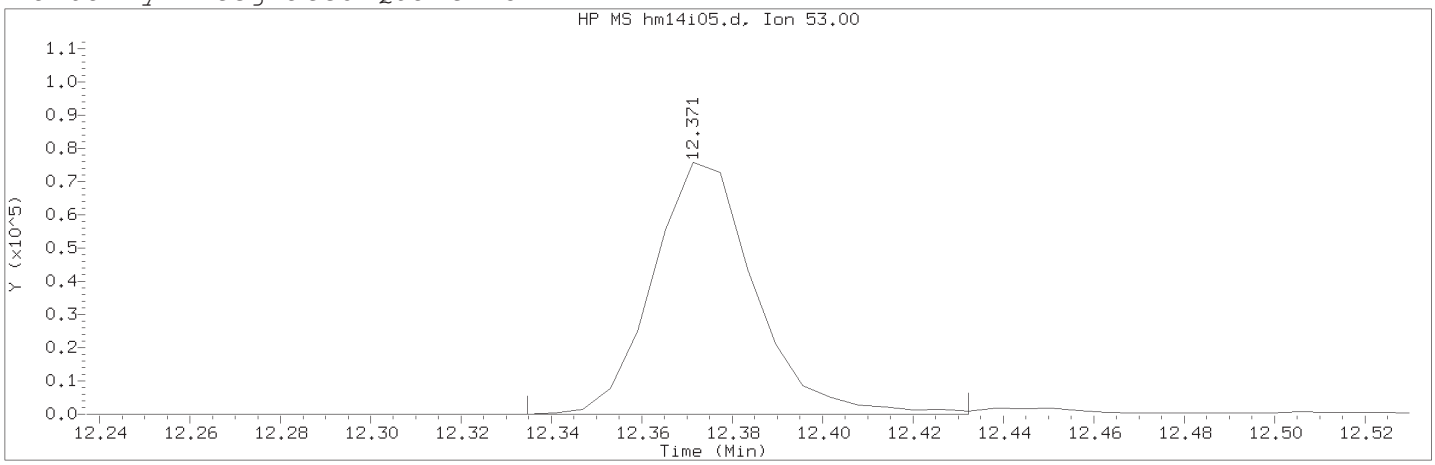
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

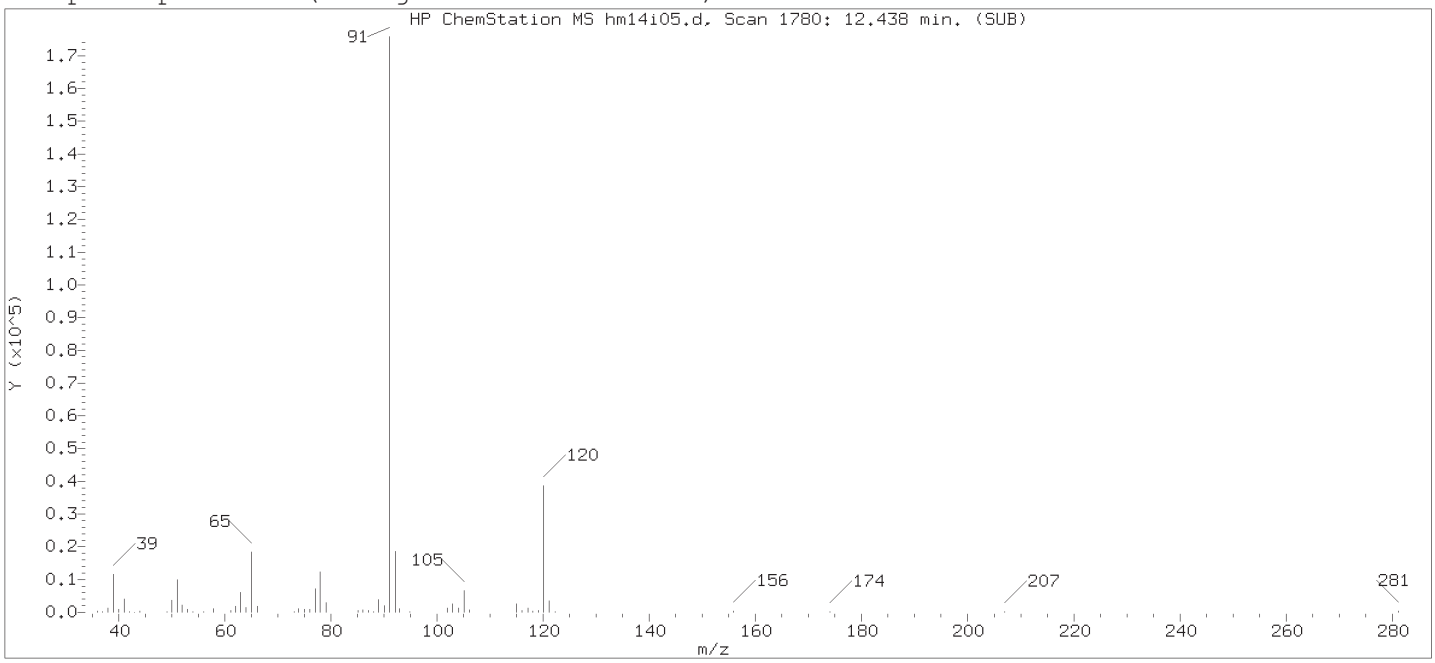
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1769
Retention Time (minutes): 12.371
Quant Ion : 53.00
Area (flag) : 119030A
On-Column Amount (ng) : 10.1867
Integration start scan : 1762 Integration stop scan: 1778
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

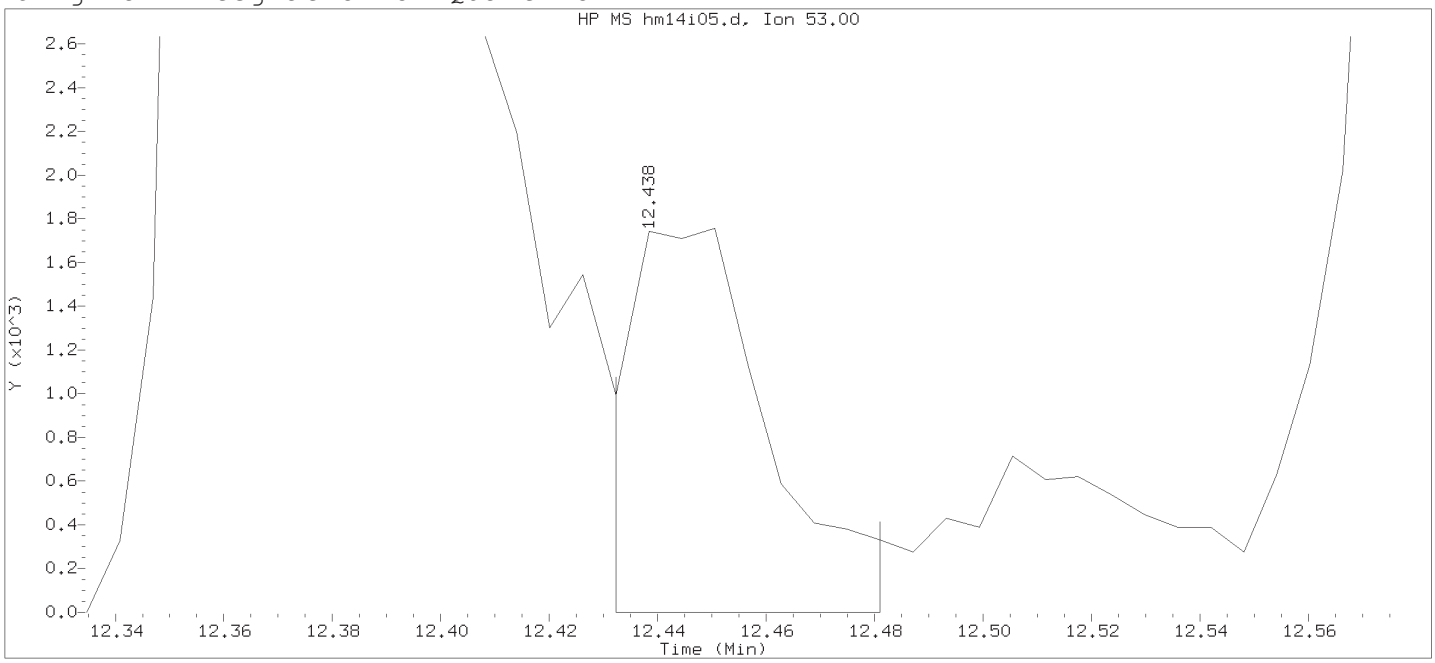
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

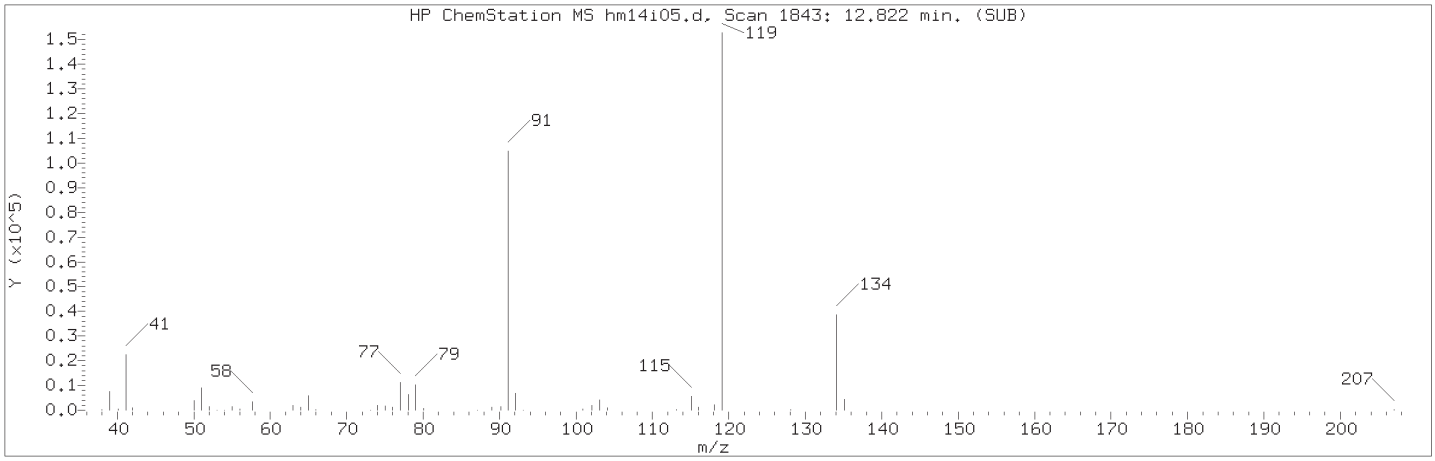
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

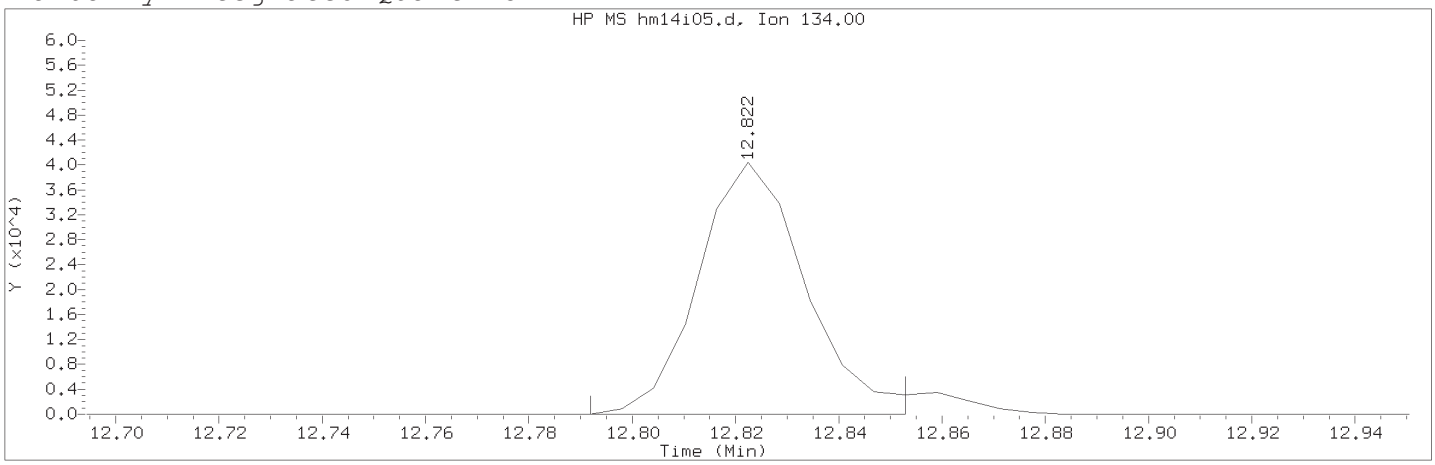
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1780
Retention Time (minutes): 12.438
Quant Ion : 53.00
Area : 3064
On-column Amount (ng) : 0.3344
Integration start scan : 1778 Integration stop scan: 1786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

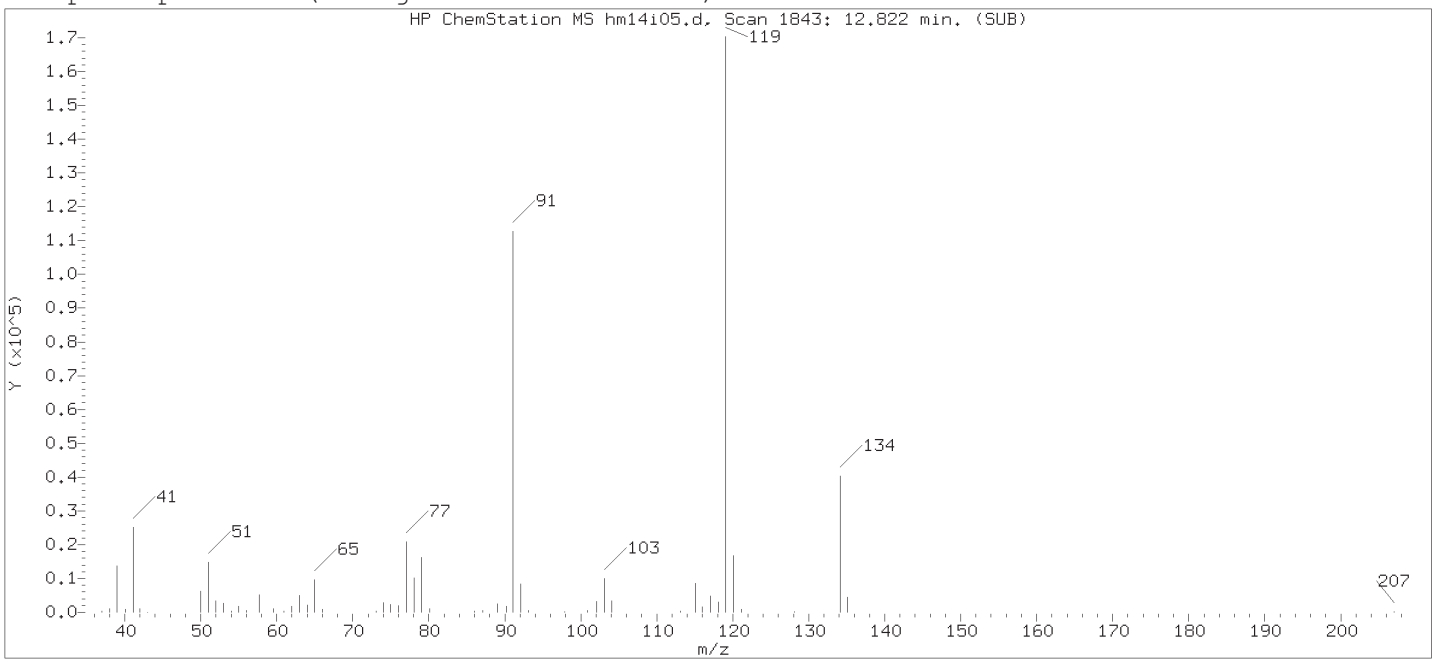
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 58224M
On-Column Amount (ng) : 1.0608
Integration start scan : 1837 Integration stop scan: 1847
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

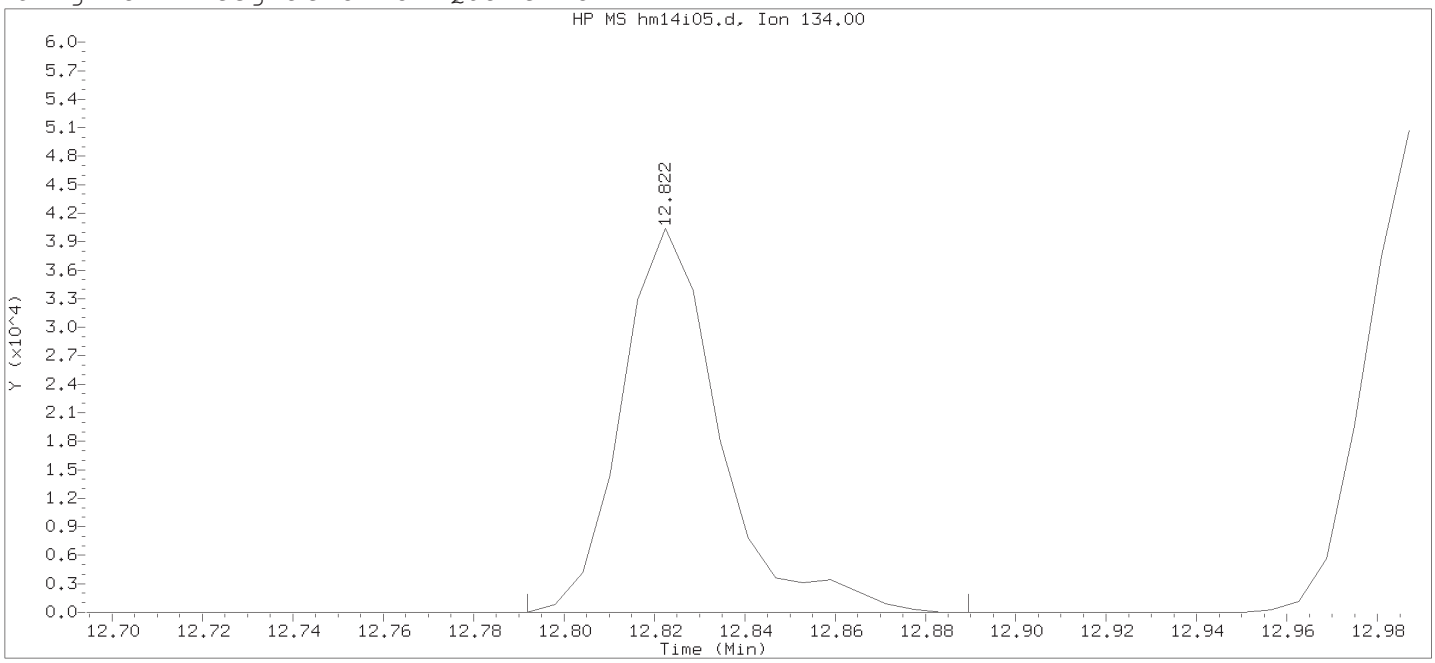
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



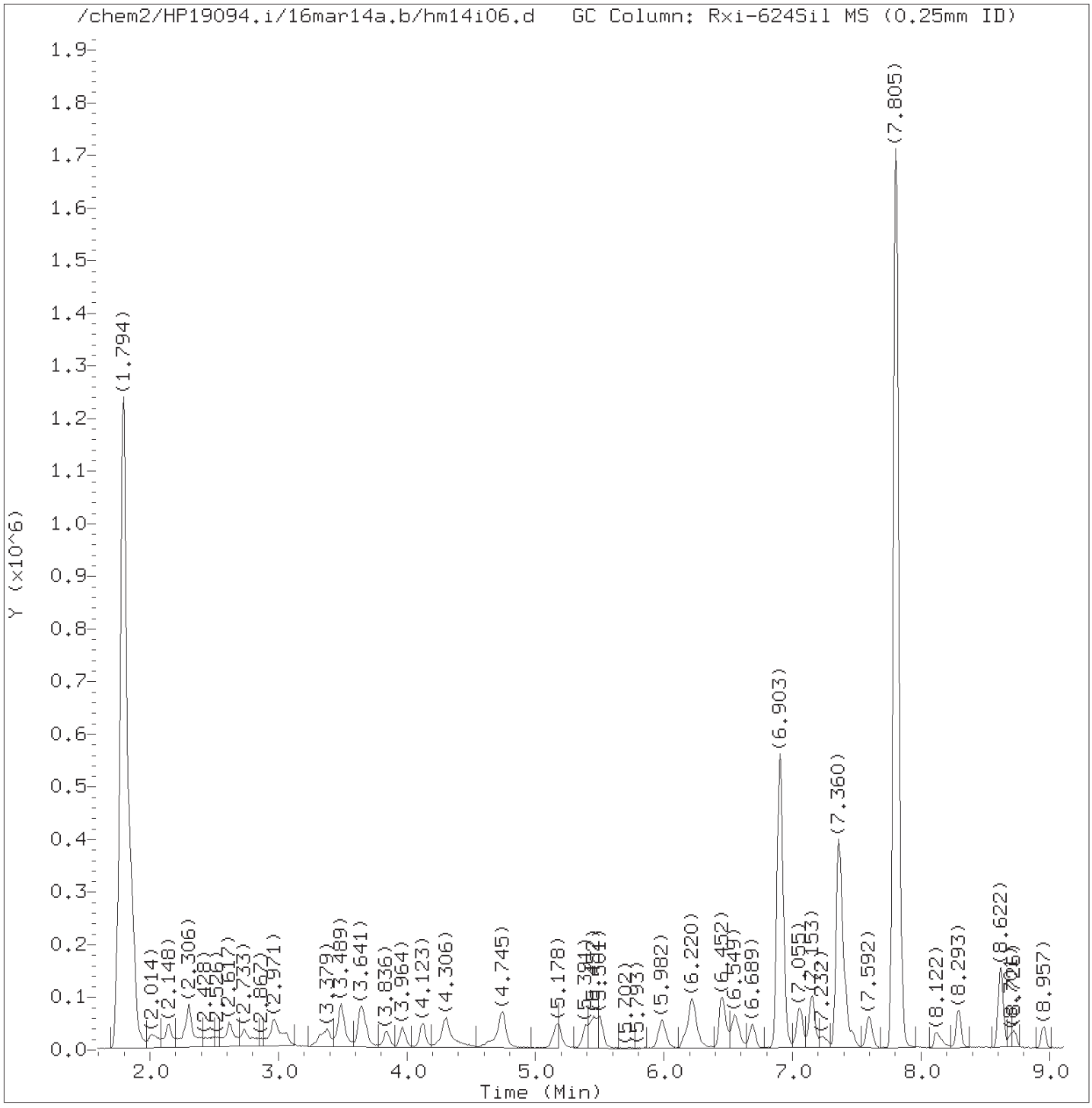
Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 60718
On-column Amount (ng) : 1.0918
Integration start scan : 1837 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

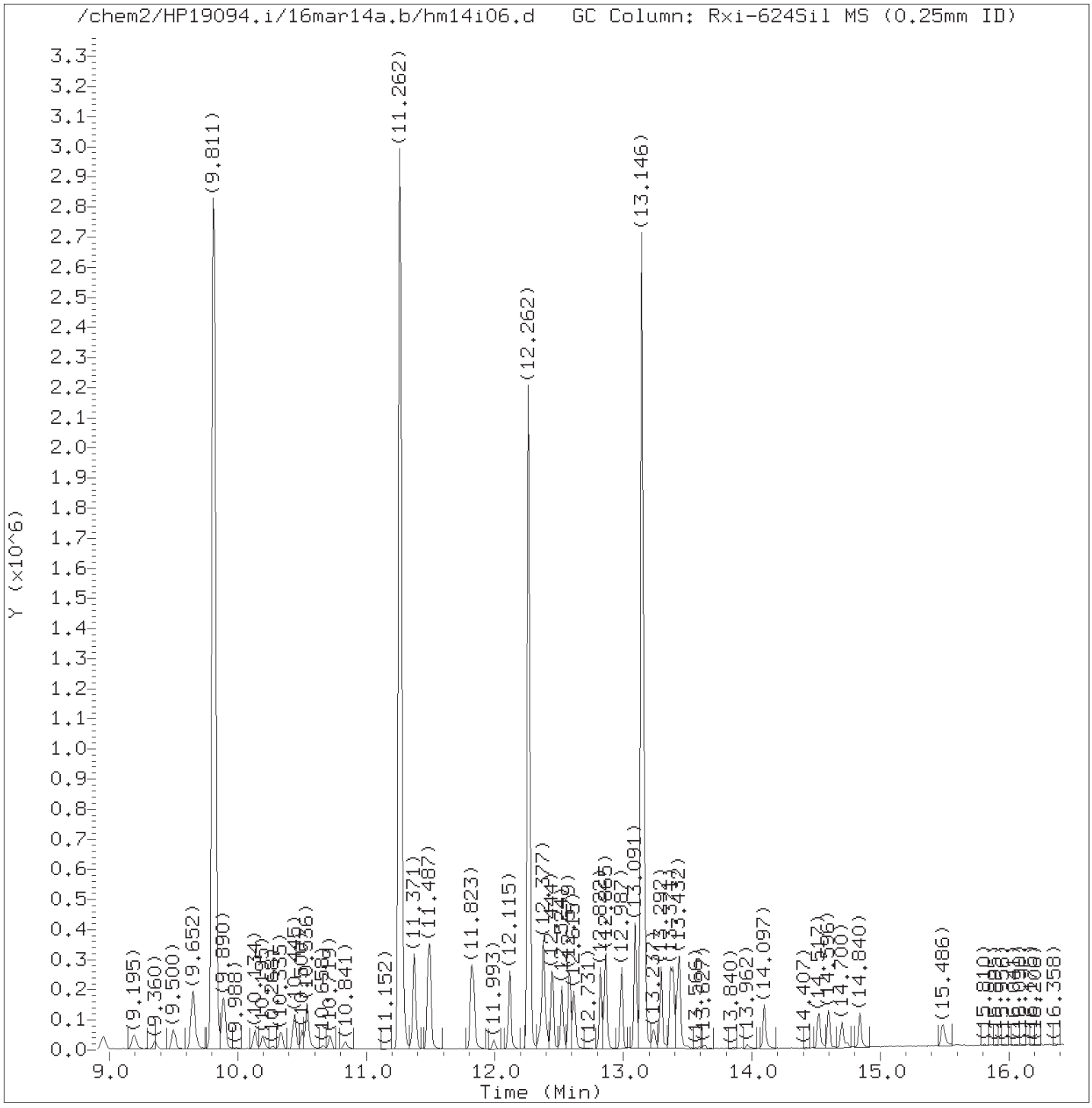
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	40184	0.499
2) Chloromethane	(2)	2.148	50	43348	0.549
5) Vinyl Chloride	(2)	2.282	62	37713	0.513
6) 1,3-Butadiene	(2)	2.306	39	31929M	0.575
7) Bromomethane	(2)	2.617	94	25727	0.528
8) Chloroethane	(2)	2.733	64	24311	0.537
9) Dichlorofluoromethane	(2)	2.965	67	54811	0.533
10) Trichlorofluoromethane	(2)	3.056	101	49676	0.519
11) Ethyl ether	(2)	3.324	59	20456	0.518
12) Freon 123a	(2)	3.373	67	38493	0.526
13) Acrolein	(1)	3.489	56	163912	27.044
15) 1,1-Dichloroethene	(2)	3.641	96	28901	0.526
16) Freon 113	(2)	3.660	101	30580	0.536
14) Acetone	(1)	3.660	43	52537	6.291
17) Methyl Iodide	(2)	3.842	142	53694	0.528
18) Carbon Disulfide	(2)	3.964	76	90535	0.534
21) Methyl Acetate	(1)	4.111	43	10225M	0.436
22) Allyl Chloride	(2)	4.129	41	57668	0.555
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106301	50.000
23) Methylene Chloride	(2)	4.300	84	31336	0.534
28) t-Butyl Alcohol	(1)	4.440	59	29714	10.396
29) Acrylonitrile	(1)	4.629	53	27034	2.698
30) Methyl Tertiary Butyl Ether	(2)	4.726	73	65484	0.517
31) trans-1,2-Dichloroethene	(2)	4.745	96	32032	0.542
32) n-Hexane	(2)	5.178	57	53126	0.529
33) 1,1-Dichloroethane	(2)	5.391	63	64178	0.533
34) di-Isopropyl Ether	(2)	5.452	45	110047	0.523
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	52860	0.534
37) Ethyl t-butyl ether	(2)	5.976	59	92475	0.521
40) 1,2-Dichloroethene (Total)	(2)		96	66546	1.069
38) 2-Butanone	(1)	6.165	43	75185	5.283
39) cis-1,2-Dichloroethene	(2)	6.214	96	34514	0.527
41) 2,2-Dichloropropane	(2)	6.226	77	52479	0.544
42) Propionitrile	(1)	6.238	54	36087	10.169
45) Methacrylonitrile	(1)	6.452	67	64613	5.318
47) Bromochloromethane	(2)	6.549	128	13099	0.526
48) Tetrahydrofuran	(1)	6.568	71	19570	5.436
49) Chloroform	(2)	6.683	83	57150	0.519

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	536851	9.755
50)$Dibromofluoromethane	(2)	6.903	111	554348	9.790
51) 1,1,1-Trichloroethane	(2)	6.939	97	50196	0.534
52) Cyclohexane	(2)	7.061	56	68514	0.558
52) Cyclohexane	(2)	7.055	84	56914	0.605
52) Cyclohexane	(2)	7.061	69	18877	0.537
55) 1,1-Dichloropropene	(2)	7.147	75	47498	0.527
54) Carbon Tetrachloride	(2)	7.159	117	44948	0.526
56) Isobutyl Alcohol	(1)	7.250	41	26068	25.740
57)$1,2-Dichloroethane-d4	(2)	7.360	102	89545	9.824
57)$1,2-Dichloroethane-d4	(2)	7.360	65	448273	9.633
57)$1,2-Dichloroethane-d4	(2)	7.360	104	54035	9.389
58) Benzene	(2)	7.409	78	133306	0.531
59) 1,2-Dichloroethane	(2)	7.470	62	33374M	0.513
60) t-Amyl methyl ether	(2)	7.598	73	73732	0.509
63)*Fluorobenzene	(2)	7.805	96	2335462	10.000
62) n-Heptane	(2)	7.829	43	60575M	0.534
65) n-Butanol	(1)	8.122	56	40331	49.478
67) Trichloroethene	(2)	8.293	95	33901	0.518
70) 1,2-Dichloropropane	(2)	8.610	63	34835	0.533
69) Methylcyclohexane	(2)	8.622	83	58941	0.550
71) Methyl Methacrylate	(1)	8.689	69	13601A	0.536
72) 1,4-Dioxane	(1)	8.713	88	2854	17.772
73) Dibromomethane	(2)	8.726	93	13961	0.519
74) Bromodichloromethane	(2)	8.957	83	38256	0.509
76) 2-Nitropropane	(1)	9.195	41	44943	5.523
80) cis-1,3-Dichloropropene	(2)	9.500	75	45238	0.490
81) 4-Methyl-2-Pentanone	(1)	9.652	43	186093	5.313
82)$Toluene-d8	(3)	9.811	98	2268918	10.243
82)$Toluene-d8	(3)	9.811	100	1473141	10.274
83) Toluene	(3)	9.890	92	81840	0.548
84) trans-1,3-Dichloropropene	(3)	10.134	75	36598	0.523
85) 1,3-Dichloropropene (total)	(3)		75	81836	1.013
86) Ethyl Methacrylate	(3)	10.195	69	28481	0.529
88) 1,1,2-Trichloroethane	(3)	10.335	97	19097	0.528
89) Tetrachloroethene	(3)	10.445	166	38977	0.553
90) 1,3-Dichloropropane	(3)	10.500	76	34375	0.529
91) 2-Hexanone	(1)	10.536	43	121611M	4.911

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	24621	0.531
95) 1,2-Dibromoethane	(3)	10.835	107	18616	0.547
97)*Chlorobenzene-d5	(3)	11.262	117	1554894	10.000
98) Chlorobenzene	(3)	11.286	112	87530	0.539
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	28920	0.519
100) Ethylbenzene	(3)	11.371	91	156551	0.536
101) m+p-Xylene	(3)	11.493	106	120935	1.086
105) Xylene (Total)	(3)		106	180074	1.633
104) o-Xylene	(3)	11.816	106	59139	0.547
106) Styrene	(3)	11.835	104	92822	0.537
107) Bromoform	(3)	11.993	173	12916	0.503
108) Isopropylbenzene	(3)	12.115	105	157247	0.549
111)$4-Bromofluorobenzene	(3)	12.262	95	701040	9.819
111)$4-Bromofluorobenzene	(3)	12.262	174	587578	9.870
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	21790M	0.525
114) Bromobenzene	(4)	12.377	156	34134	0.552
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	55039	5.103
116) 1,2,3-Trichloropropane	(4)	12.396	110	5897	0.566
117) n-Propylbenzene	(4)	12.444	91	185309	0.554
119) 2-Chlorotoluene	(4)	12.524	126	36274	0.562
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	130379	0.559
122) 4-Chlorotoluene	(4)	12.615	126	35686	0.543
125) tert-Butylbenzene	(4)	12.822	134	27825M	0.560
126) Pentachloroethane	(4)	12.853	167	19797	0.528
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	129293	0.555
128) sec-Butylbenzene	(4)	12.987	105	167062	0.553
131) 1,3-Dichlorobenzene	(4)	13.091	146	66114	0.547
132) p-Isopropyltoluene	(4)	13.097	119	141783	0.555
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	663285	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	68720	0.559
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	54688	0.566
136) Benzyl Chloride	(4)	13.237	126	9369	0.570
138) n-Butylbenzene	(4)	13.389	92	65180M	0.521
139) 1,2-Dichlorobenzene	(4)	13.420	146	60057	0.559
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	2698	0.485
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	42987	0.559
146) Hexachlorobutadiene	(4)	14.596	225	21047	0.524
147) Naphthalene	(4)	14.700	128	75793	0.574

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	38375	0.625

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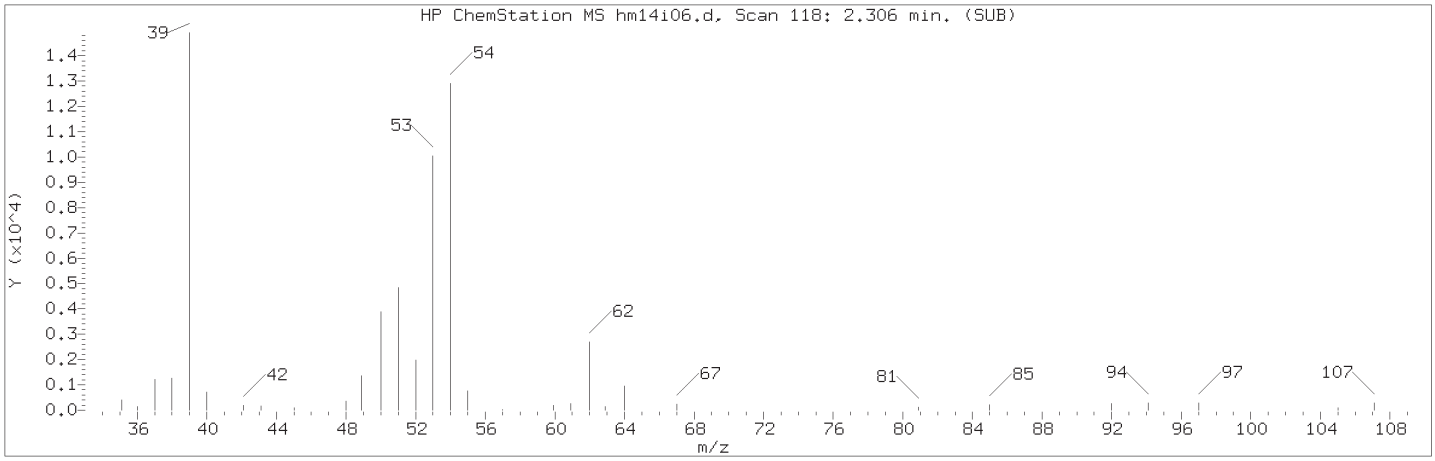
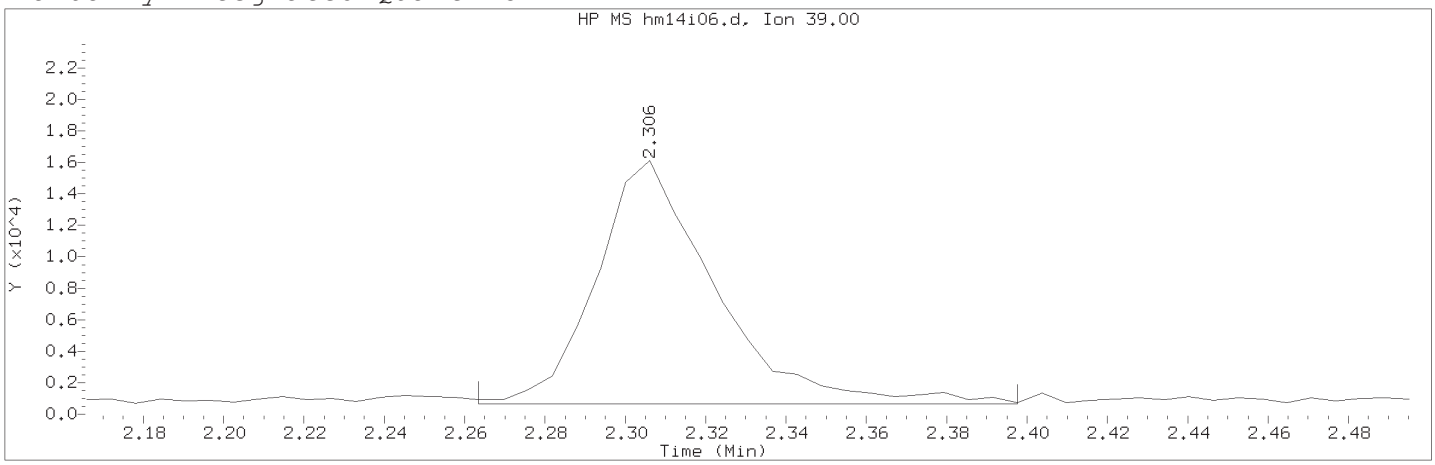
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

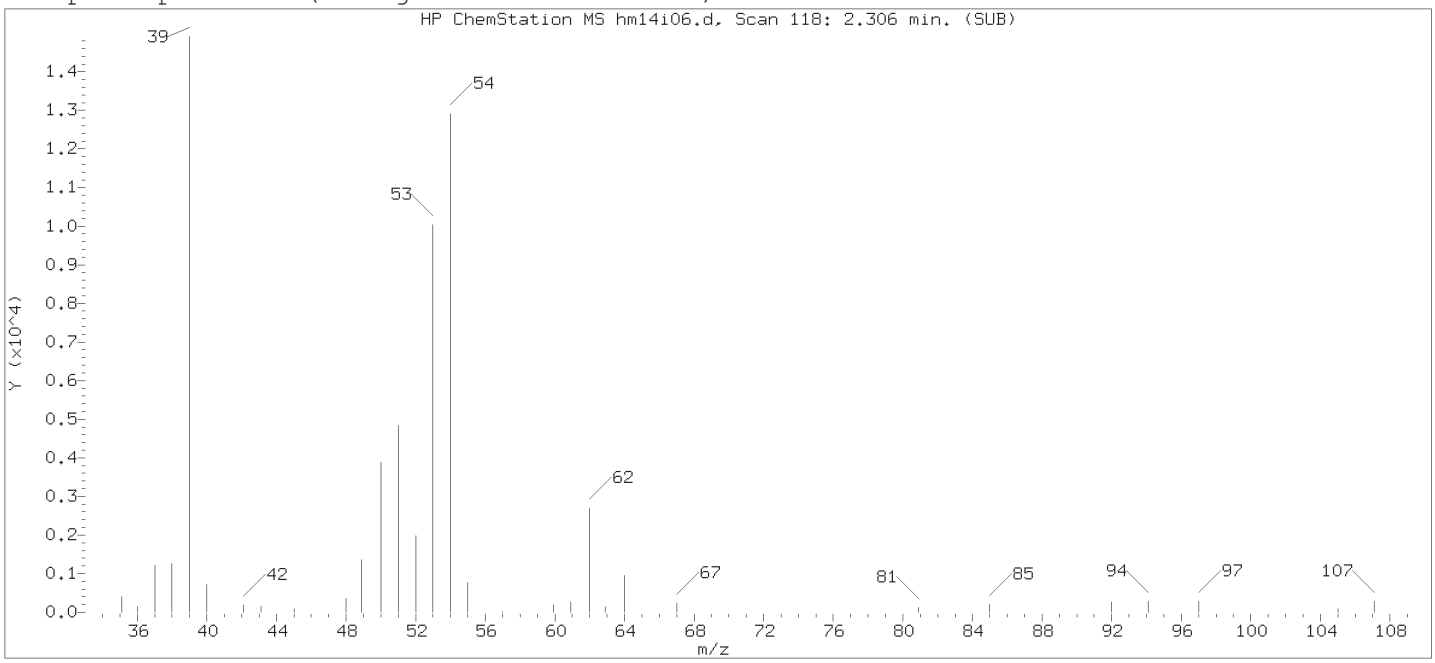
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 31929M
On-Column Amount (ng) : 0.5747
Integration start scan : 110 Integration stop scan: 132
Y at integration start : 658 Y at integration end: 658

Reason for manual integration: improper integration

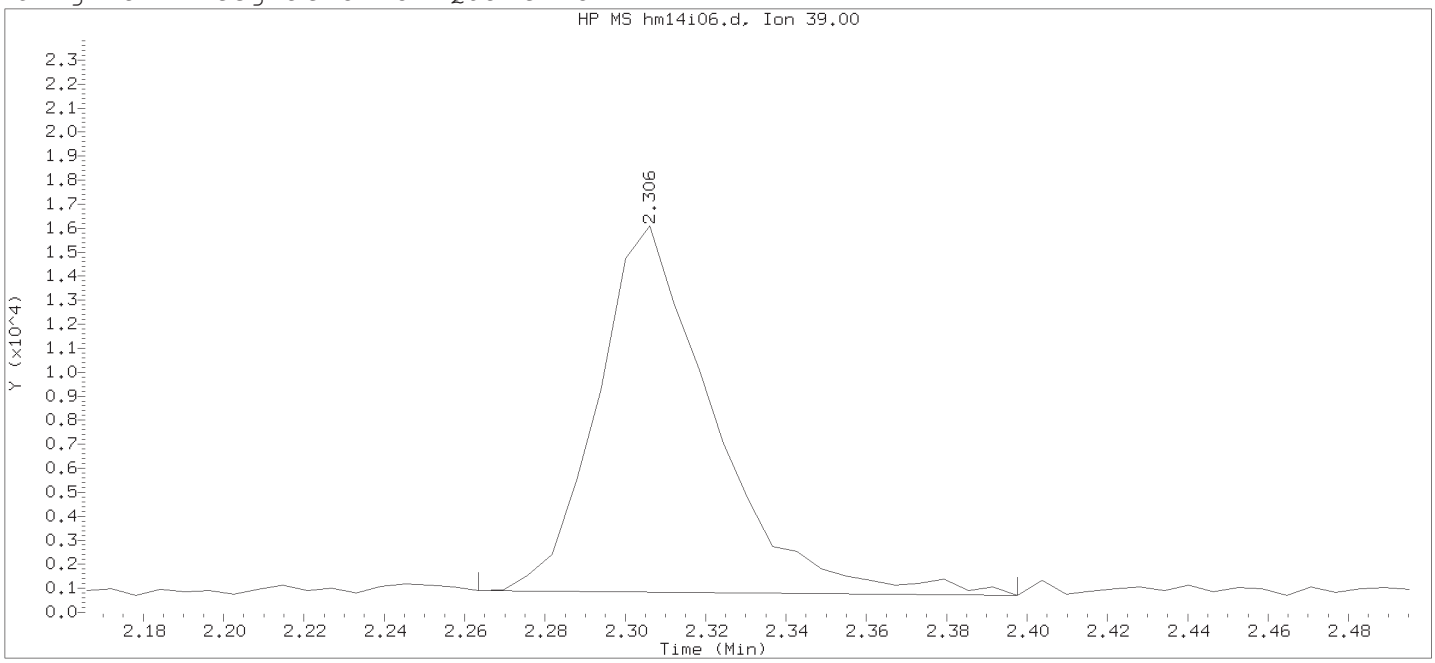
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

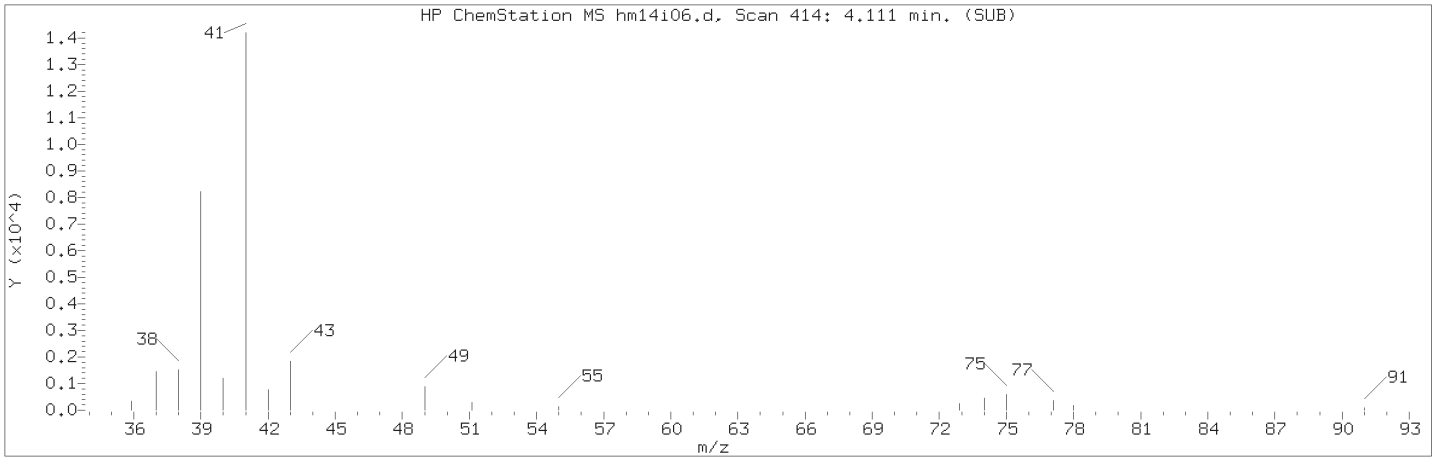
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

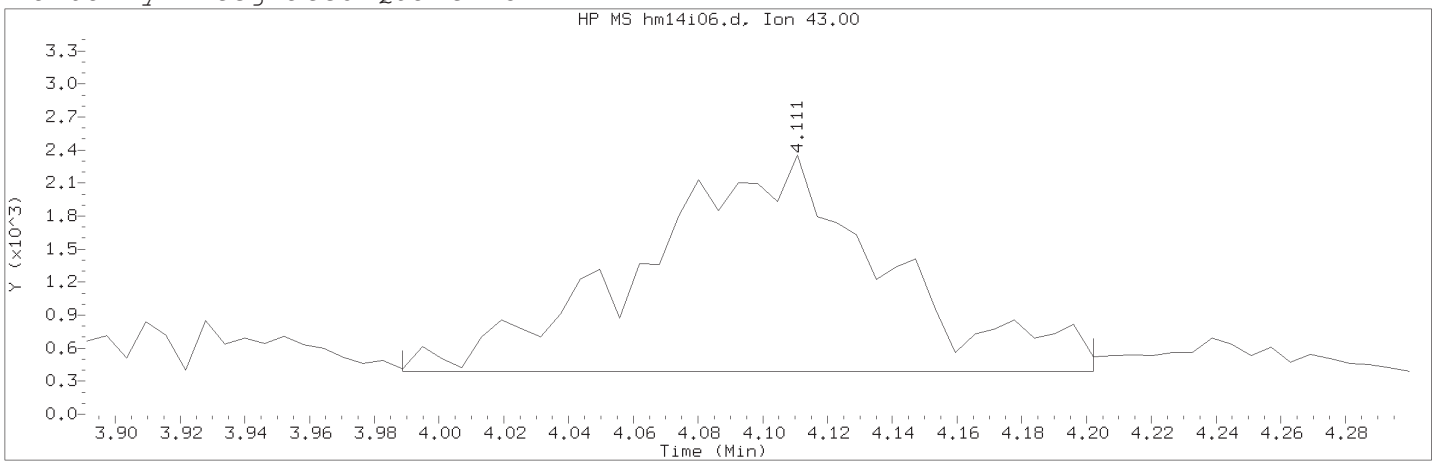
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 30607
On-column Amount (ng) : 0.5799
Integration start scan : 110 Integration stop scan: 132
Y at integration start : 916 Y at integration end: 714

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

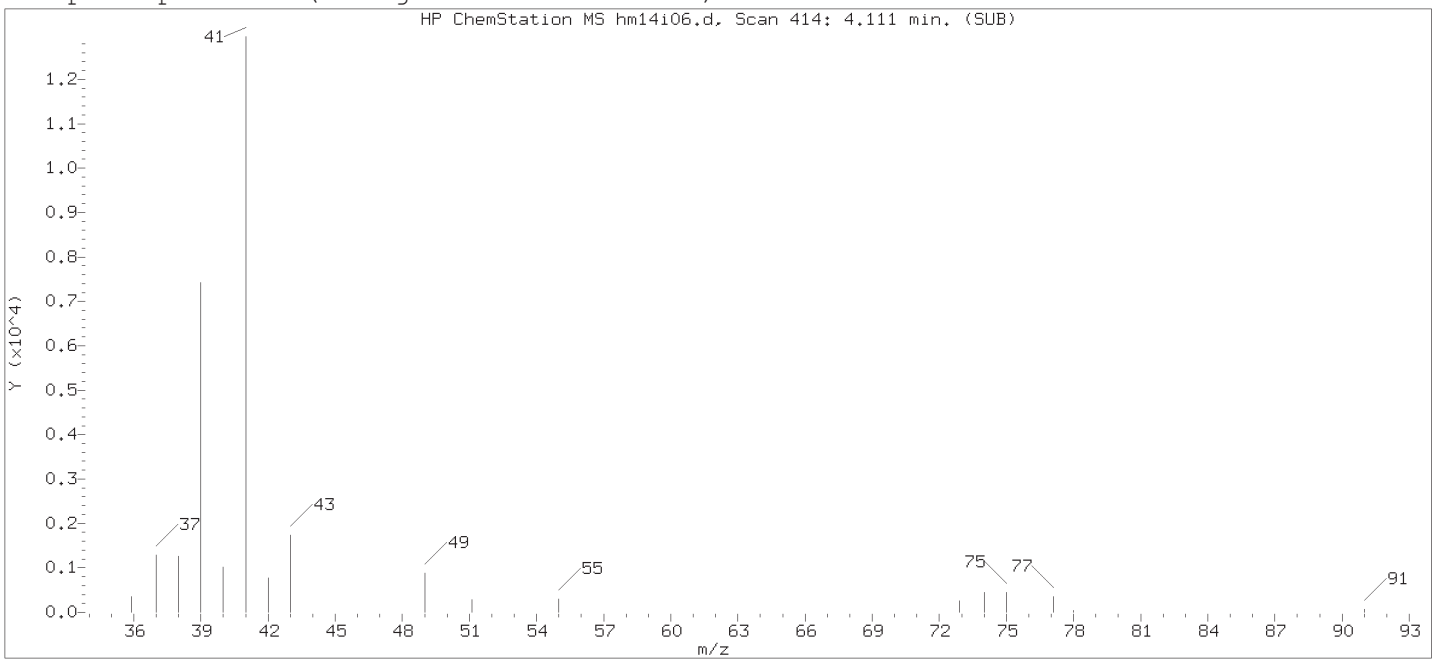
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area (flag) : 10225M
On-Column Amount (ng) : 0.4359
Integration start scan : 393 Integration stop scan: 428
Y at integration start : 392 Y at integration end: 392

Reason for manual integration: improper integration

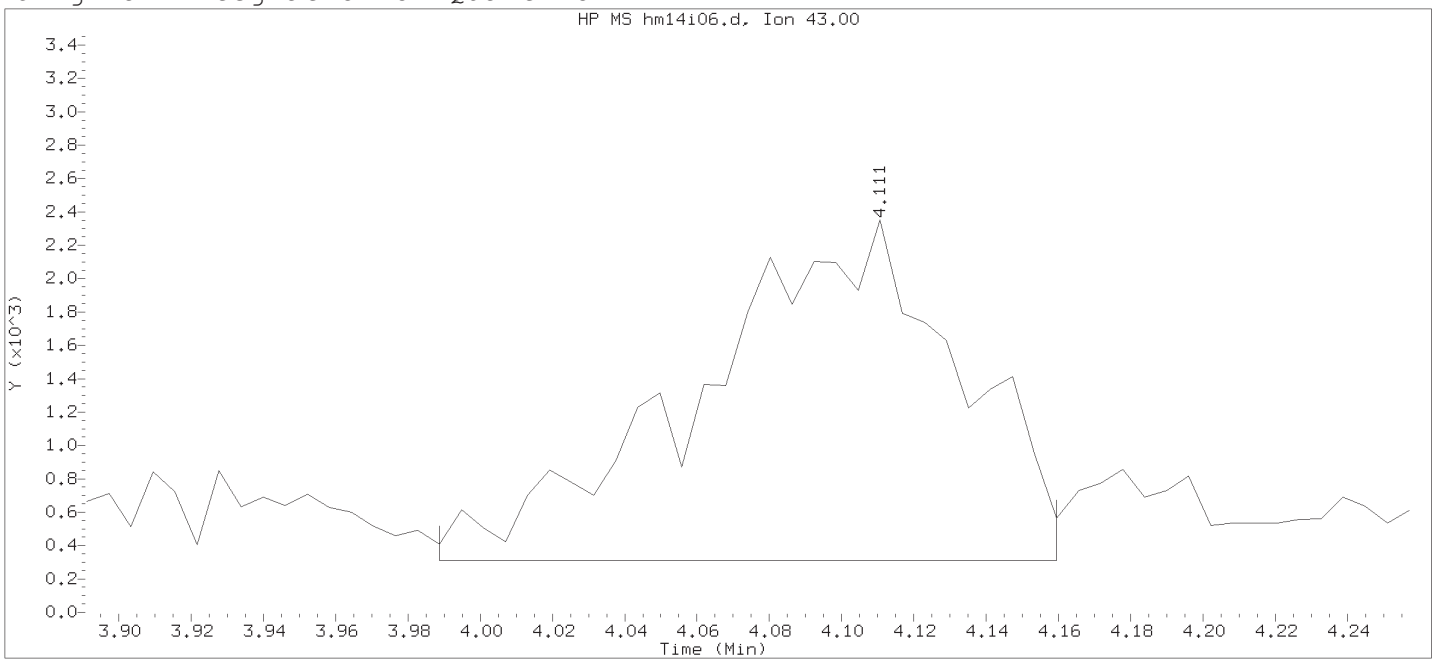
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

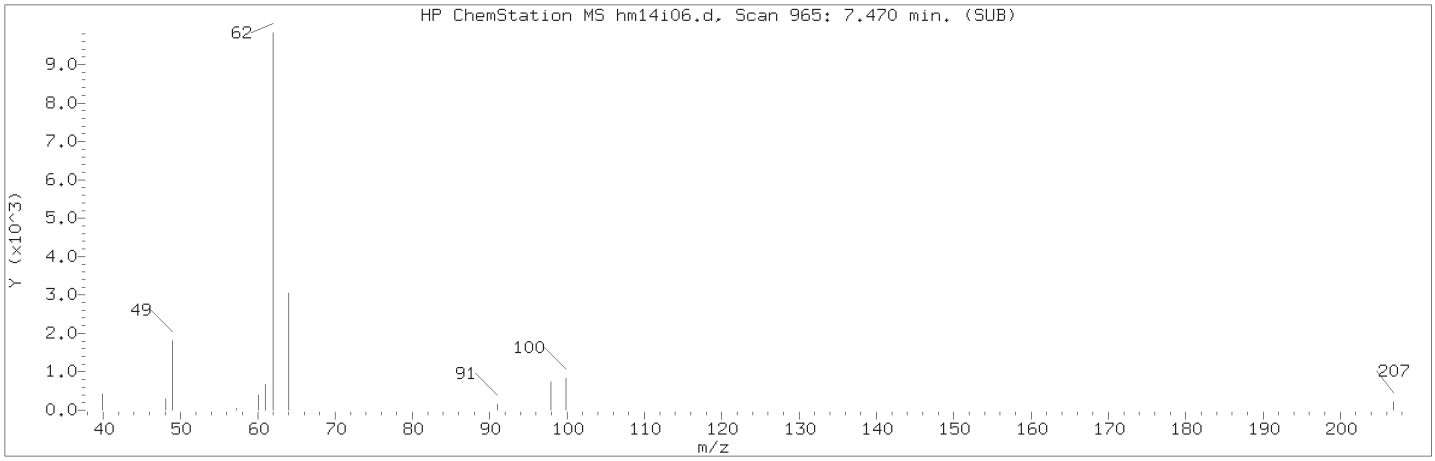
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

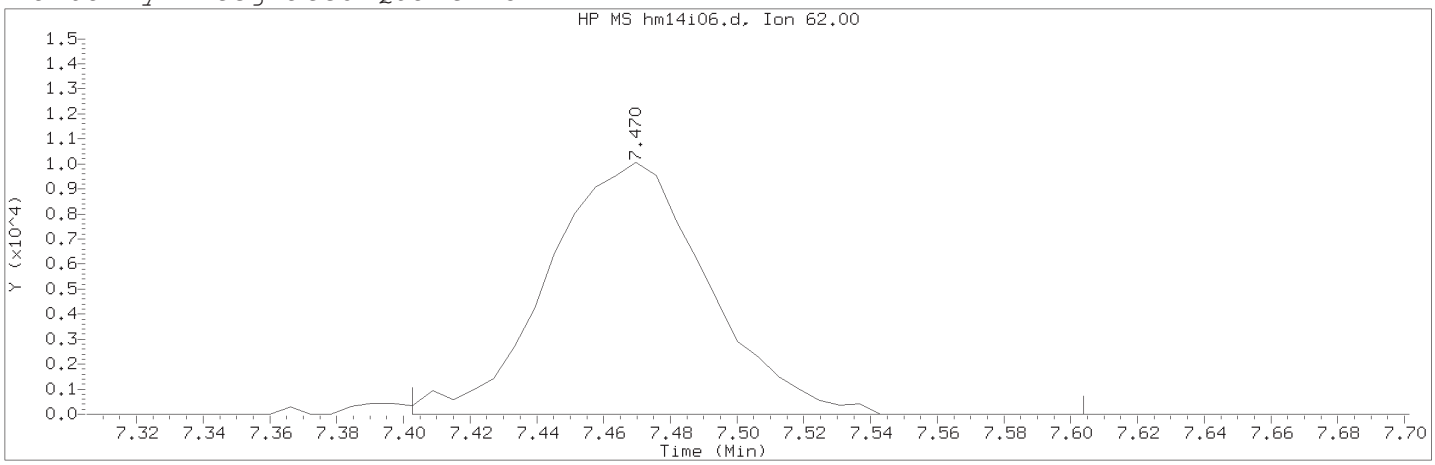
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area : 10172
On-column Amount (ng) : 0.4998
Integration start scan : 393 Integration stop scan: 421
Y at integration start : 309 Y at integration end: 309

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

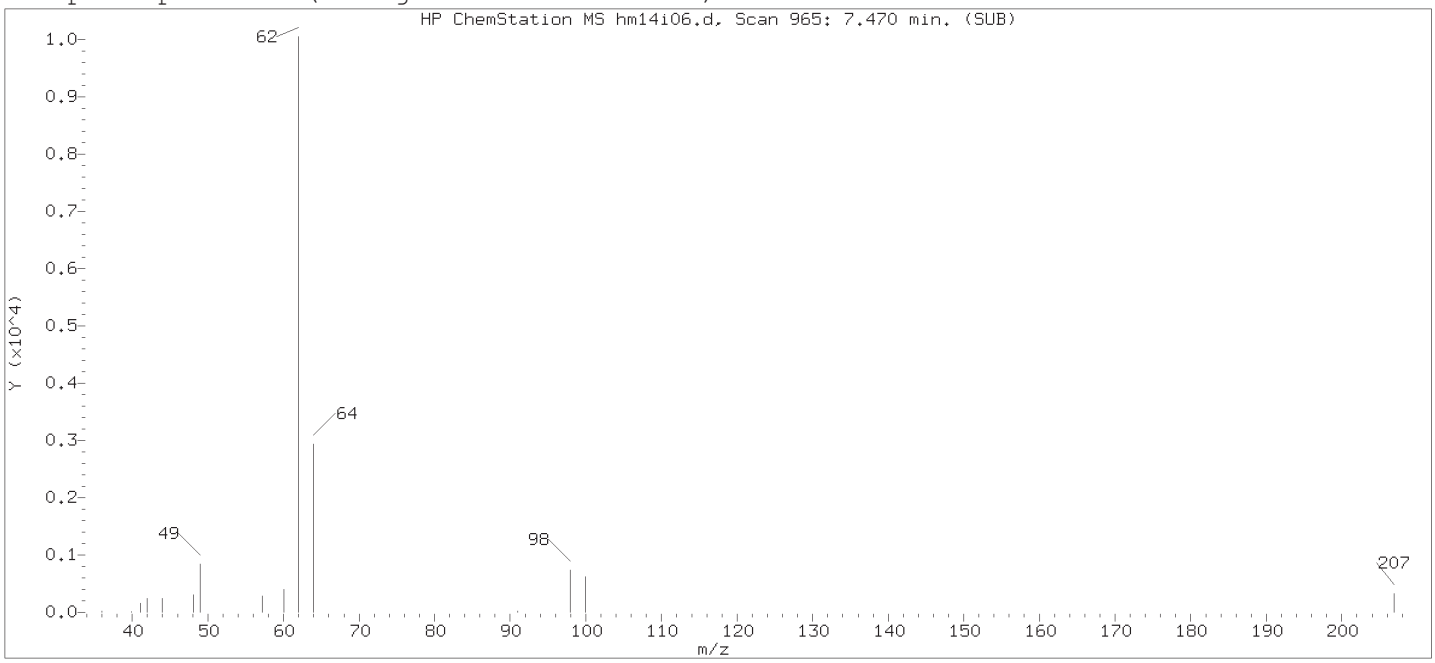
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 33374M
On-Column Amount (ng) : 0.5132
Integration start scan : 953 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

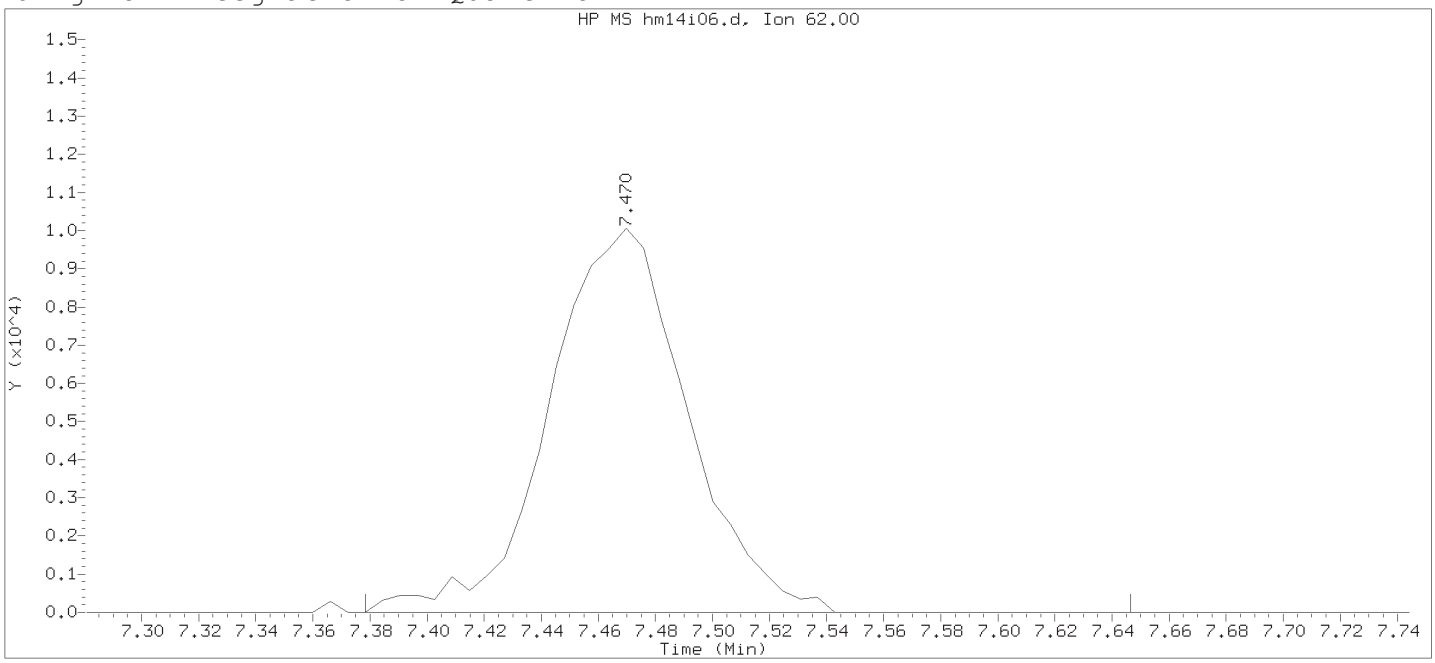
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

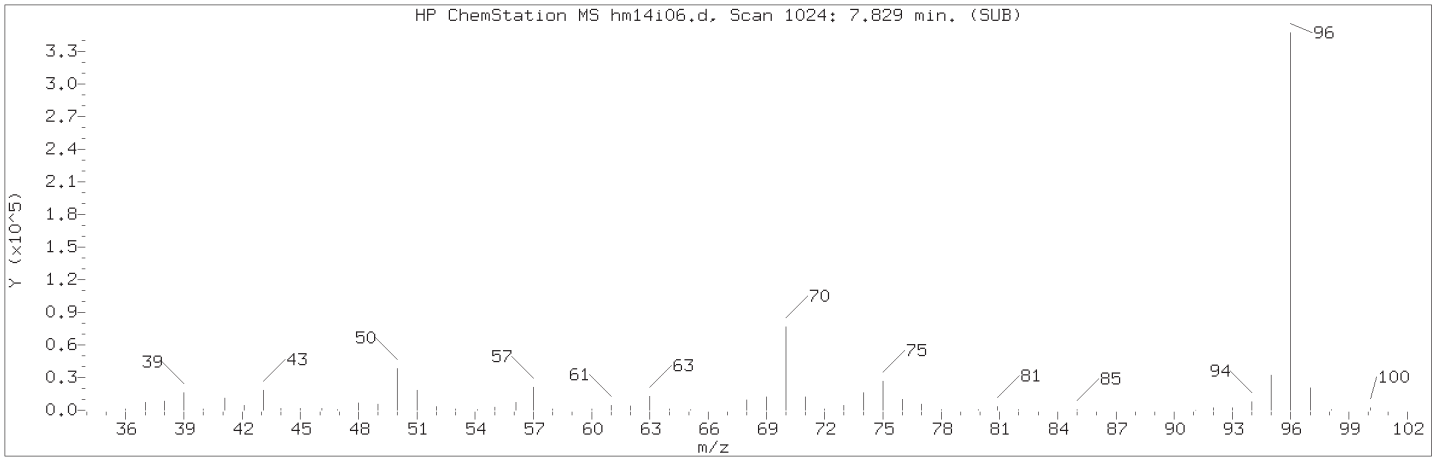
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

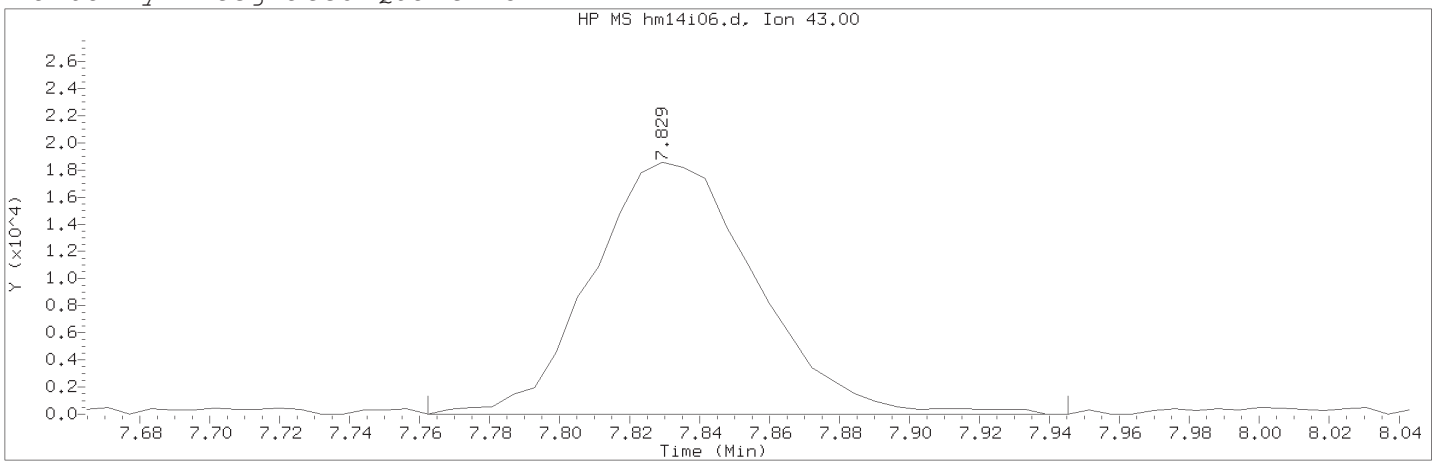
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 33809
On-column Amount (ng) : 0.5207
Integration start scan : 949 Integration stop scan: 993
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

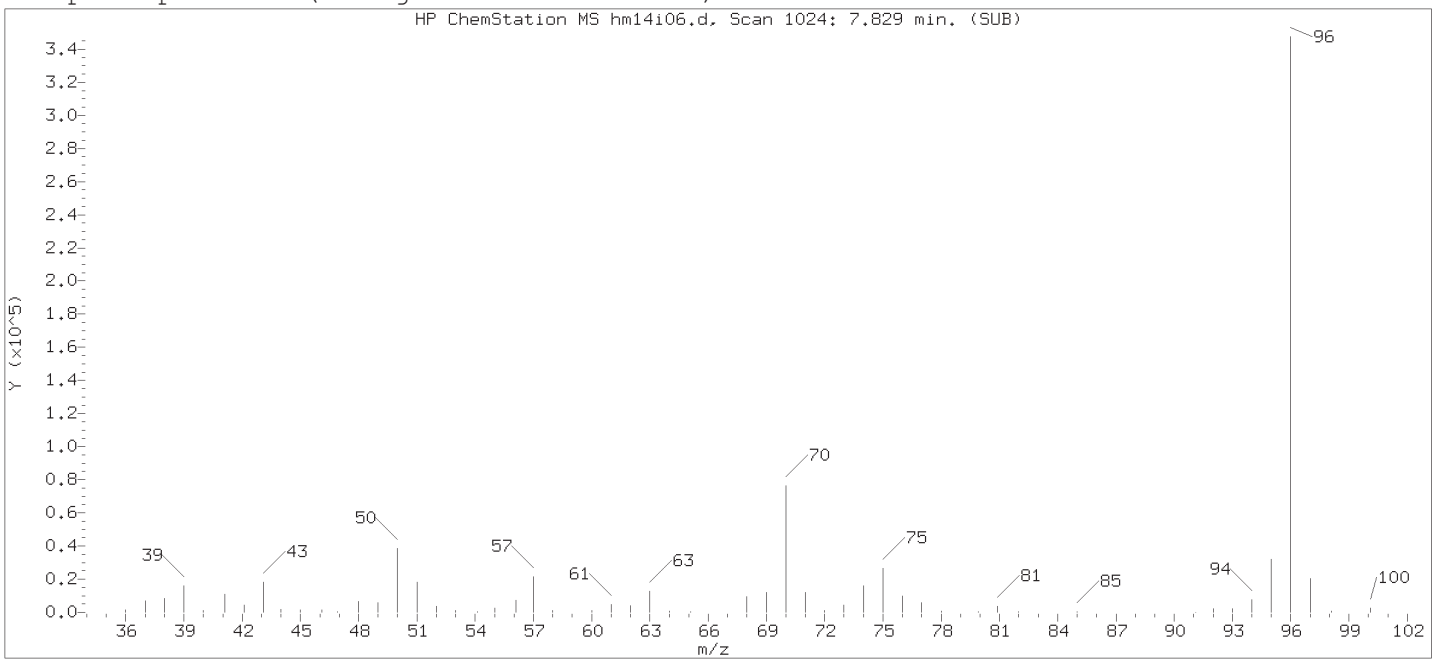
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area (flag) : 60575M
On-Column Amount (ng) : 0.5340
Integration start scan : 1012 Integration stop scan: 1042
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

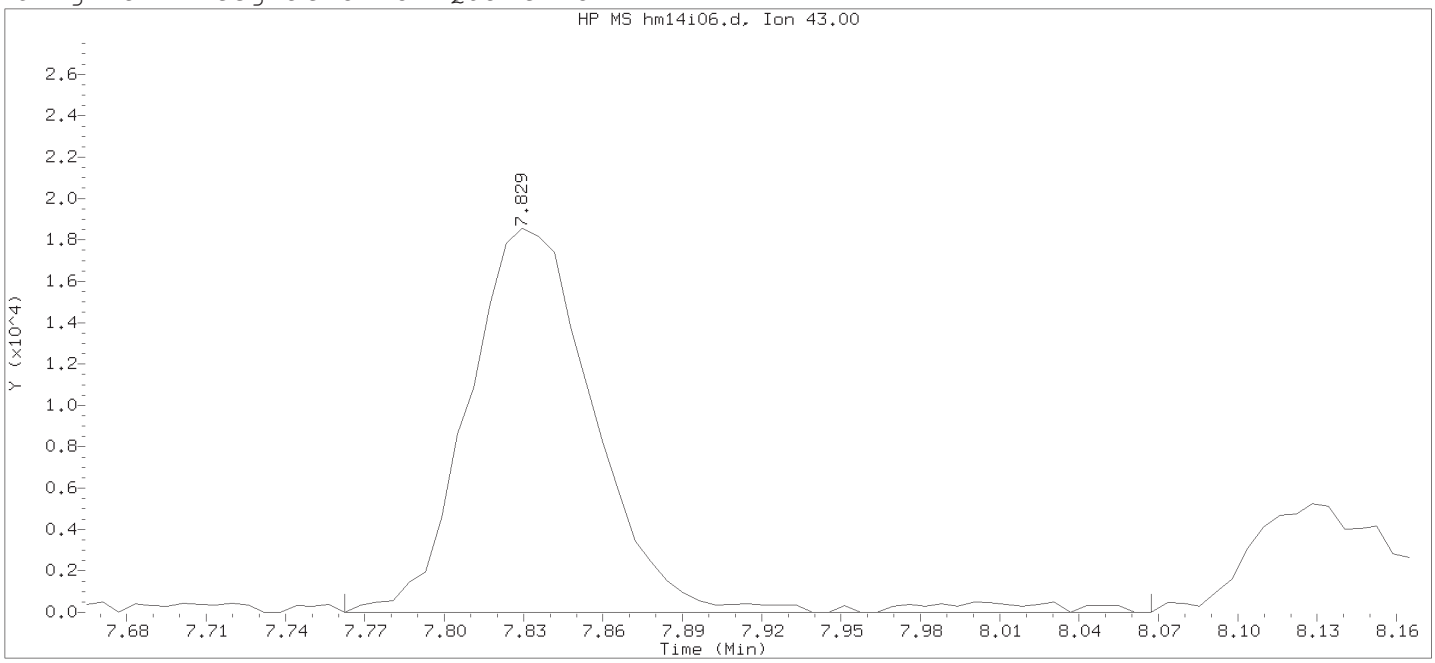
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

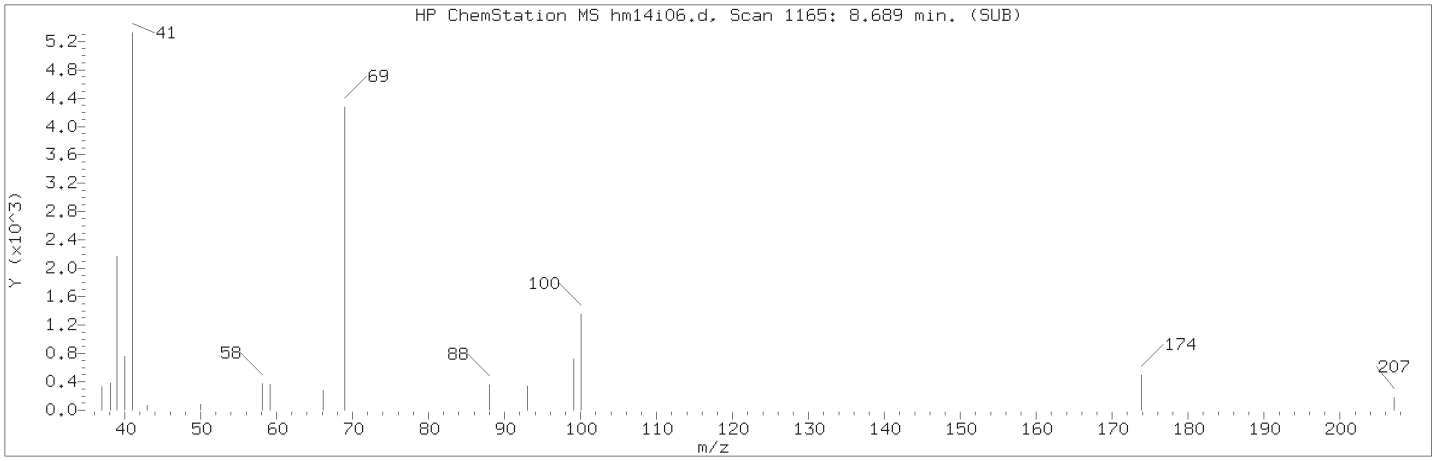
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

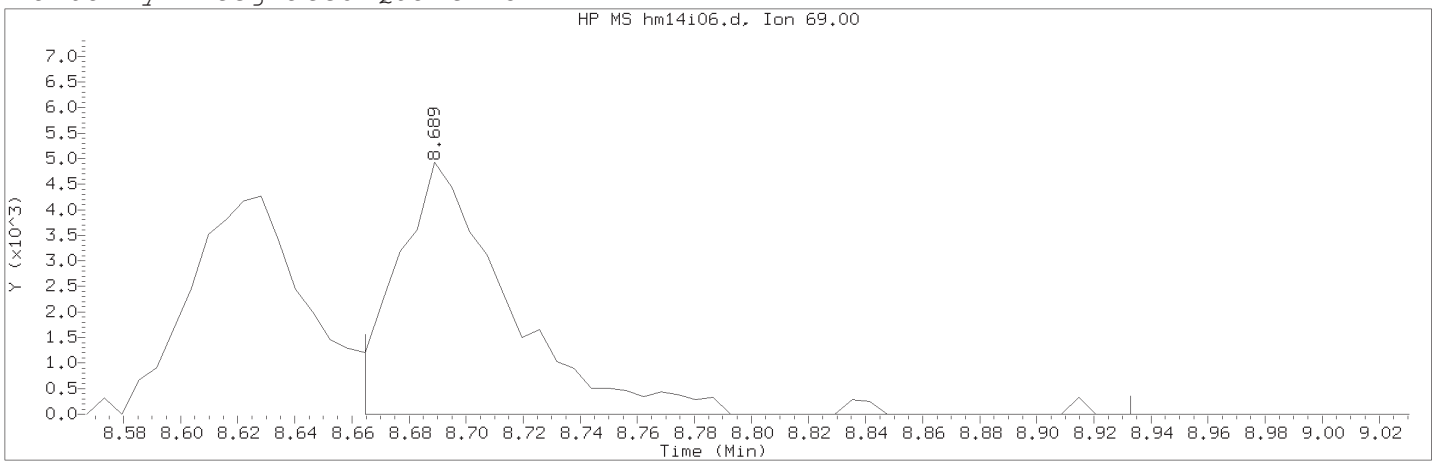
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area : 62549
On-column Amount (ng) : 0.5558
Integration start scan : 1012 Integration stop scan: 1062
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

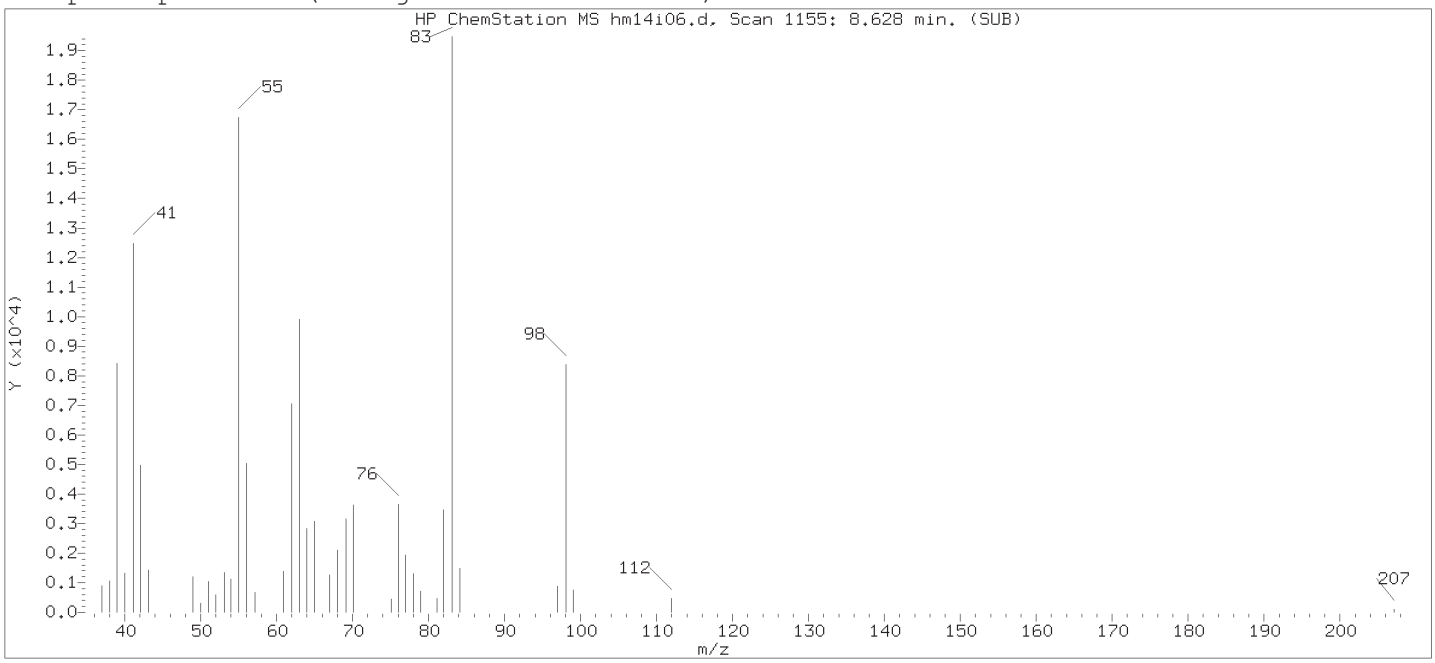
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 13601A
On-Column Amount (ng) : 0.5358
Integration start scan : 1160 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

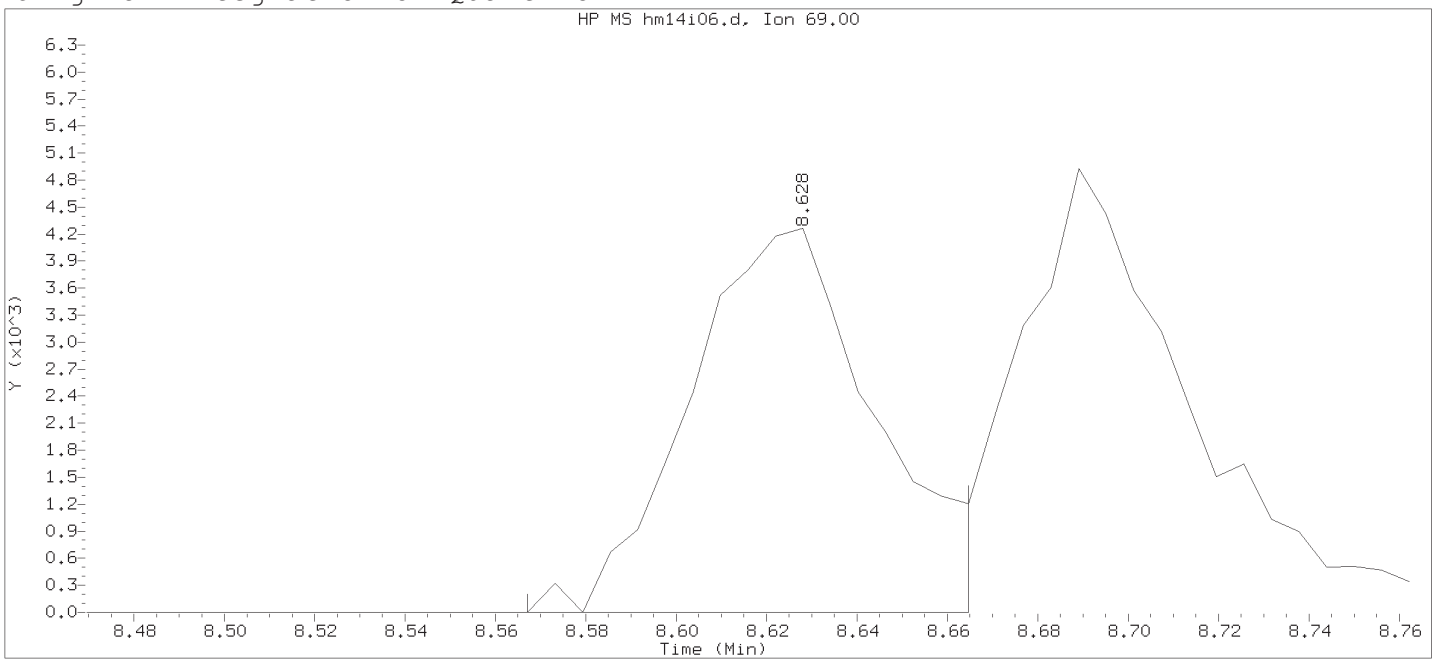
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

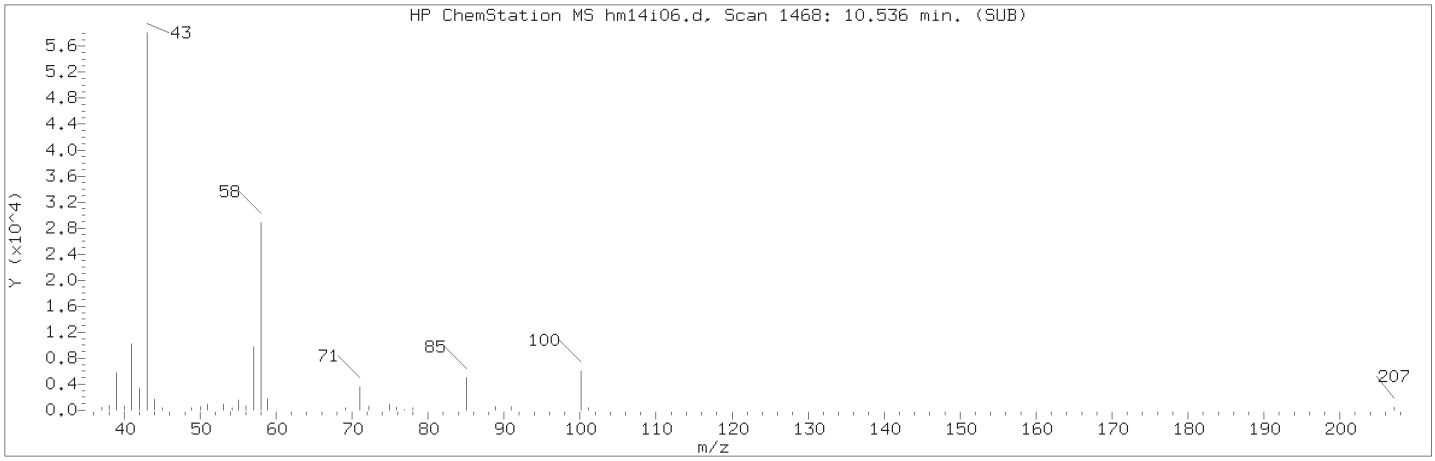
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

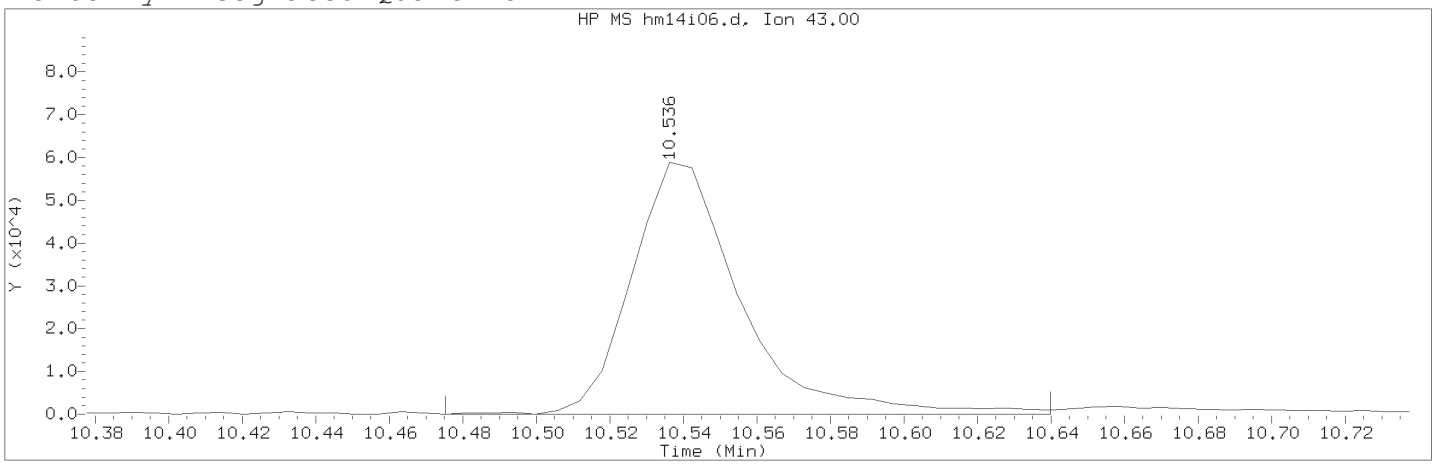
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1155
Retention Time (minutes): 8.628
Quant Ion : 69.00
Area : 12059
On-column Amount (ng) : 0.4755
Integration start scan : 1144 Integration stop scan: 1160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

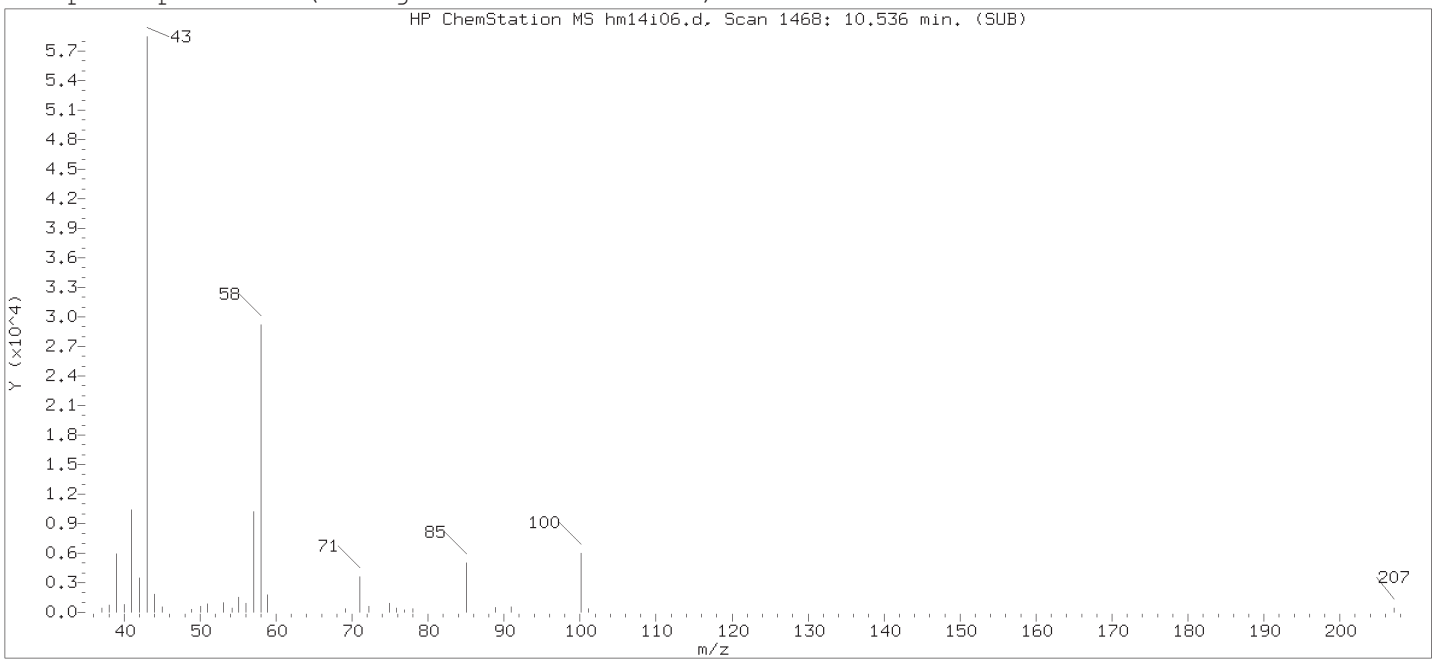
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area (flag) : 121611M
On-Column Amount (ng) : 4.9110
Integration start scan : 1457 Integration stop scan: 1484
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

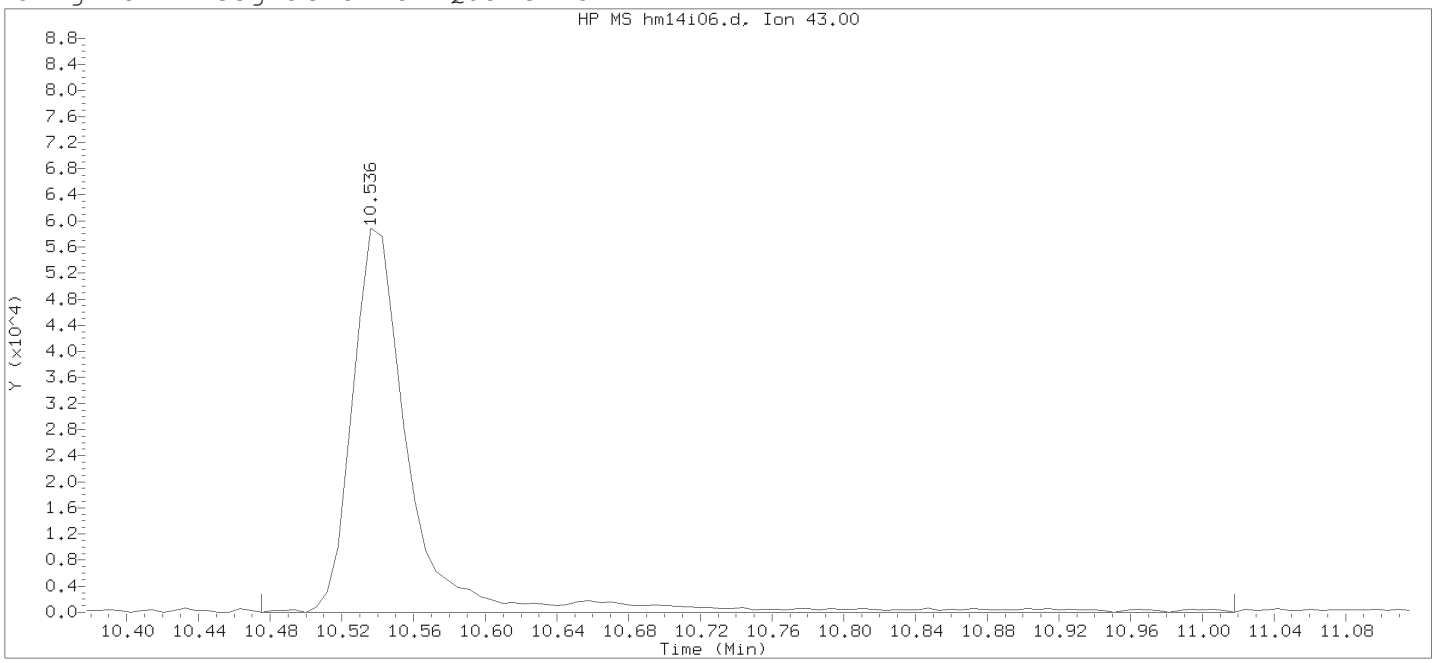
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

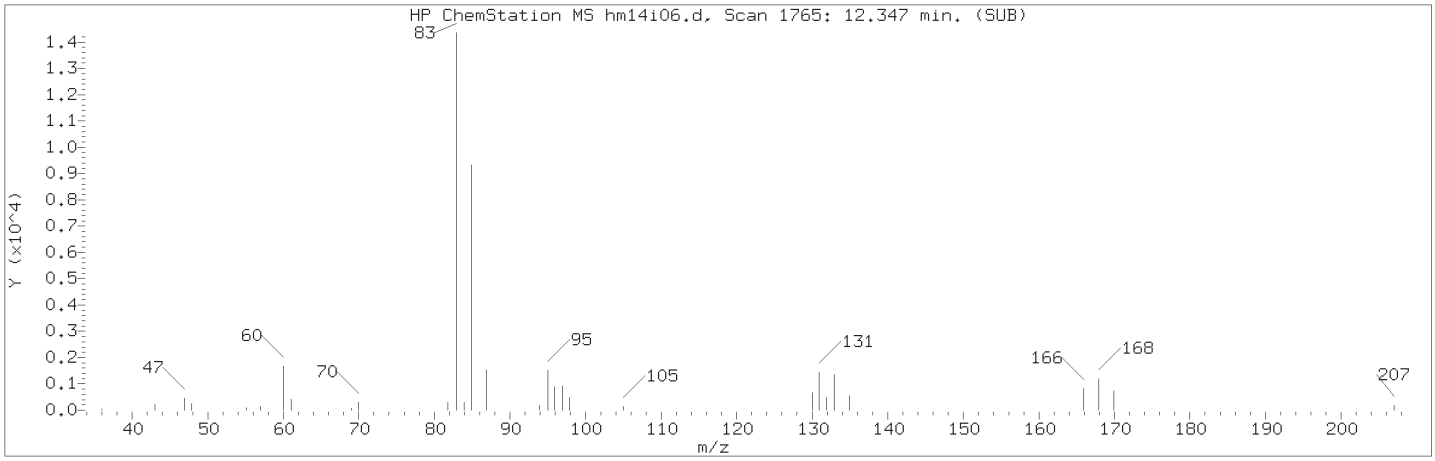
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

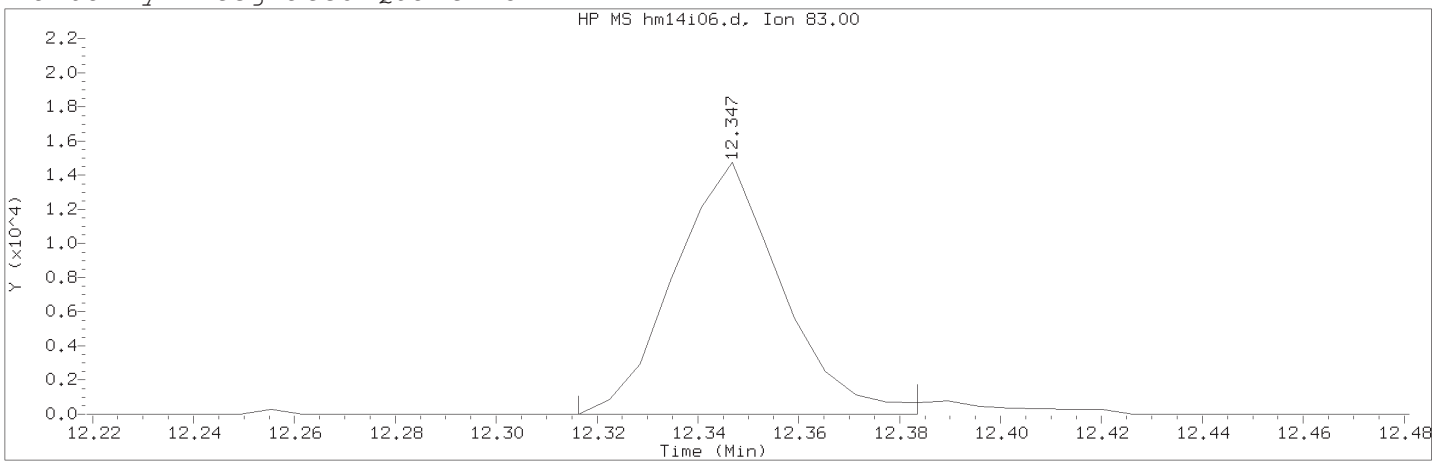
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area : 134712
On-column Amount (ng) : 5.5880
Integration start scan : 1457 Integration stop scan: 1546
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

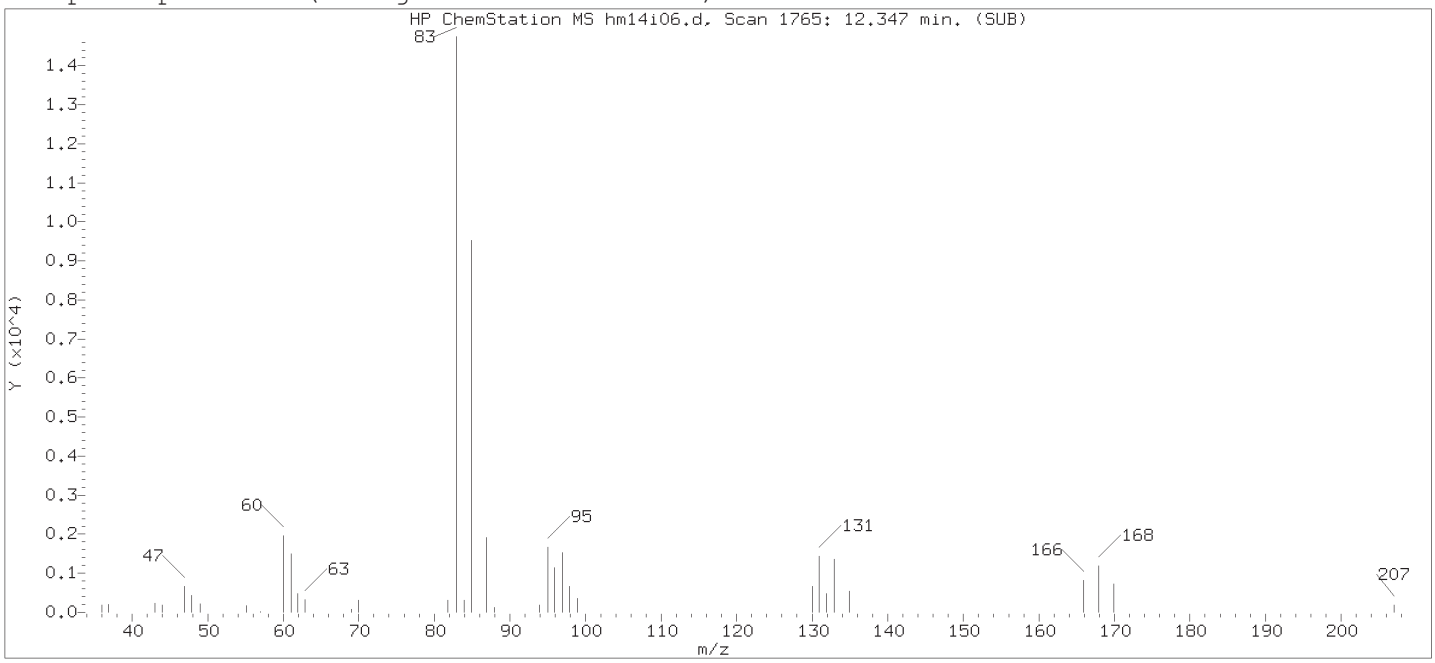
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 21790M
On-Column Amount (ng) : 0.5249
Integration start scan : 1759 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

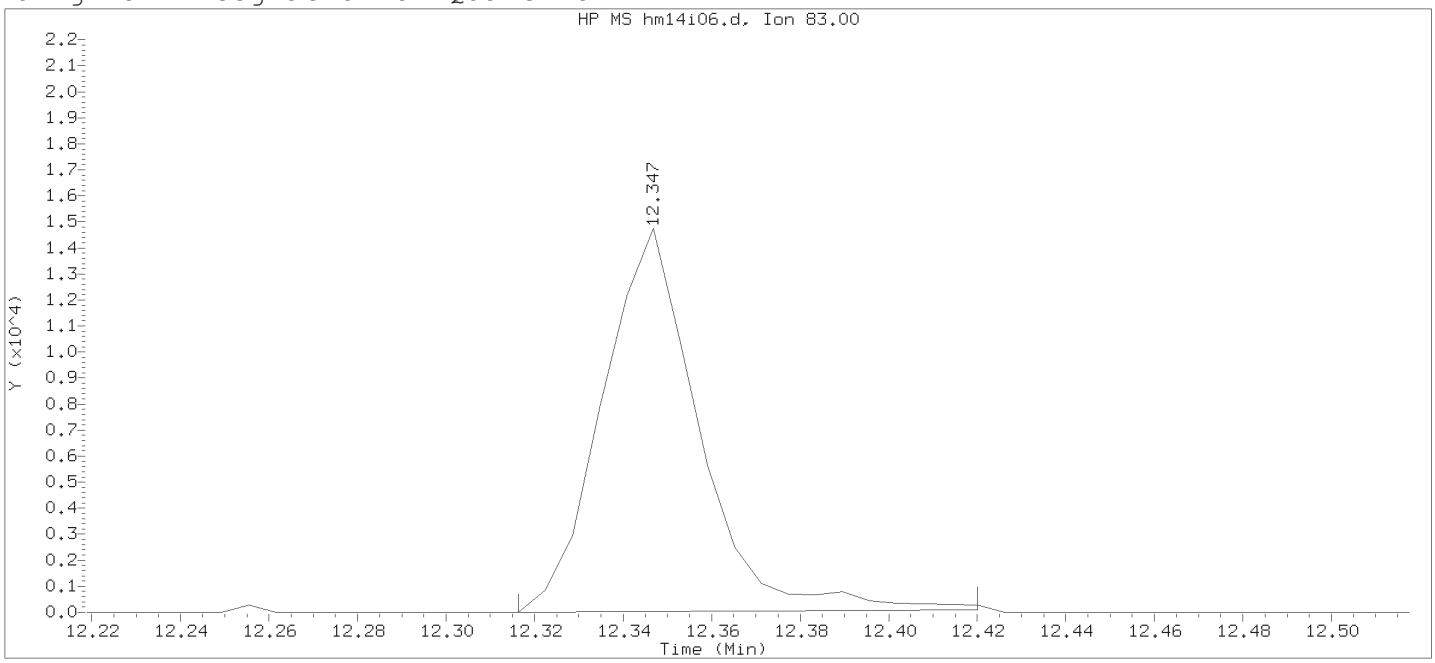
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

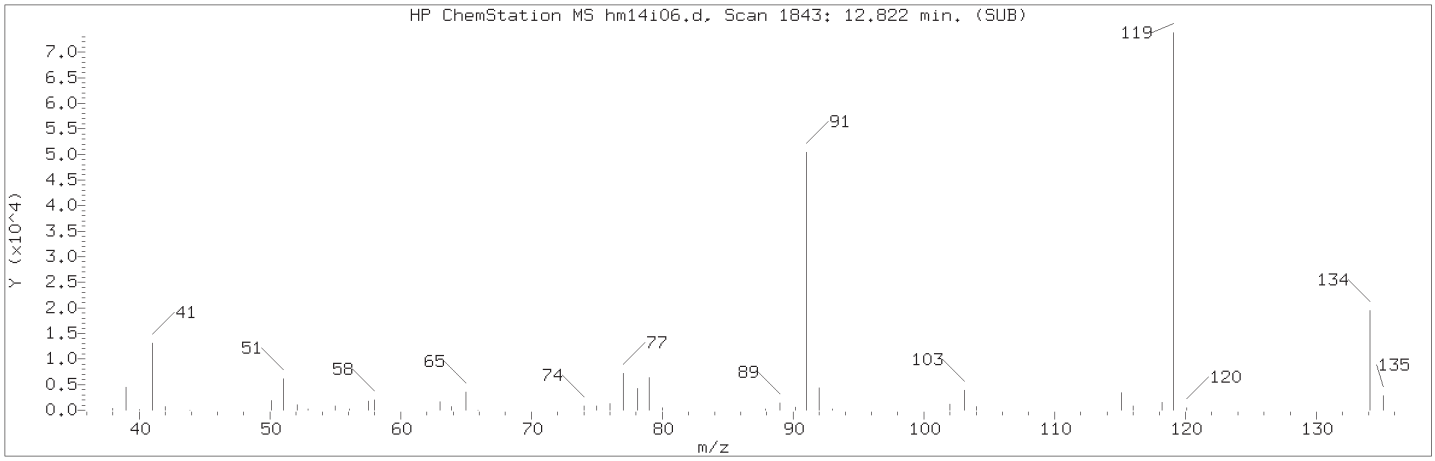
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

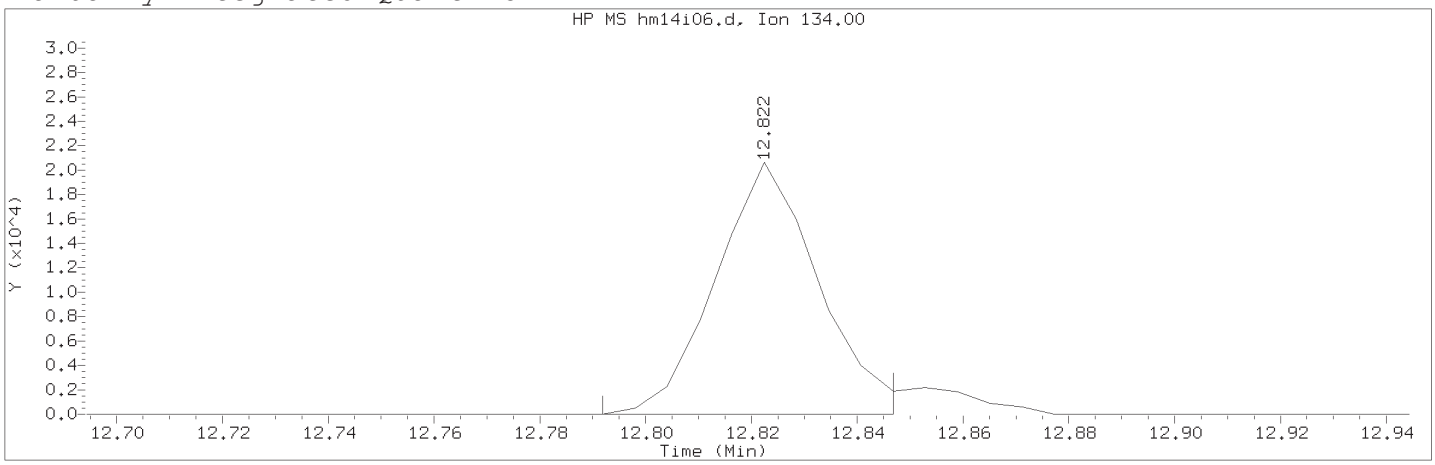
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area	: 22370		
On-column Amount (ng)	: 0.5475		
Integration start scan	: 1759	Integration stop scan:	1776
Y at integration start	: 0	Y at integration end:	87

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

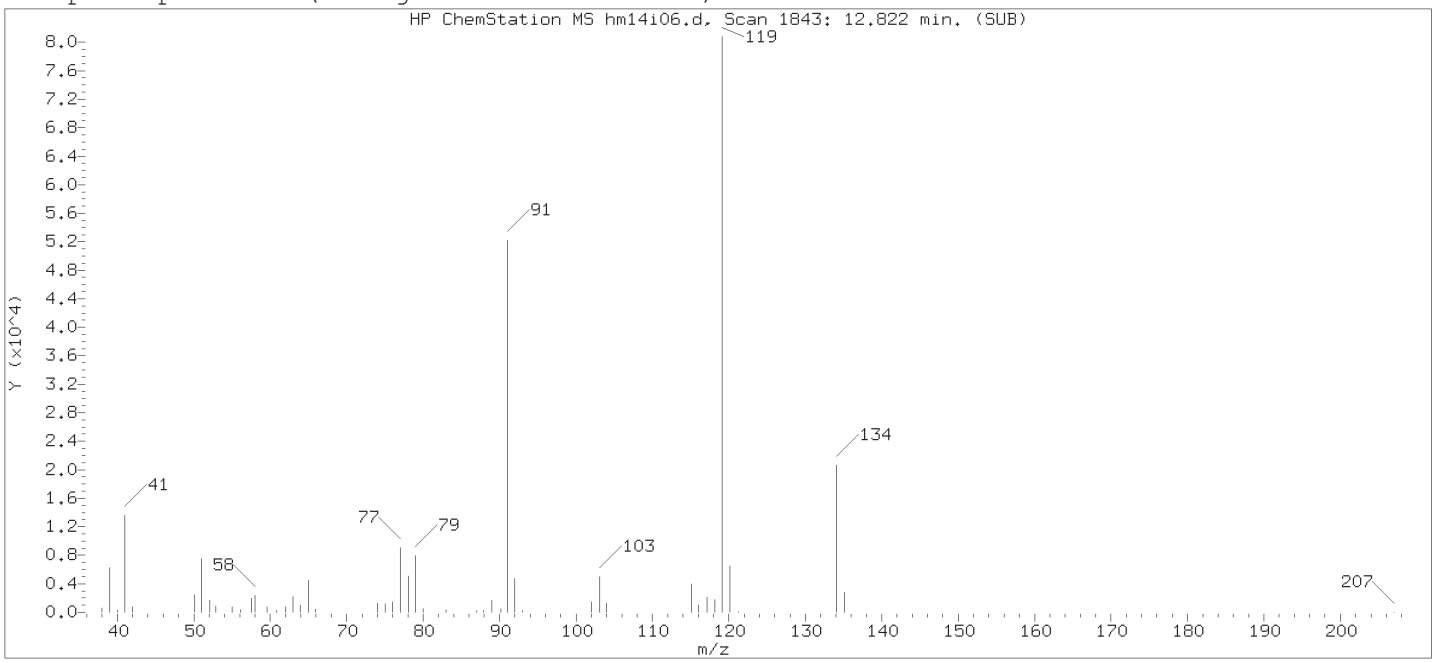
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 27825M
On-Column Amount (ng) : 0.5598
Integration start scan : 1837 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

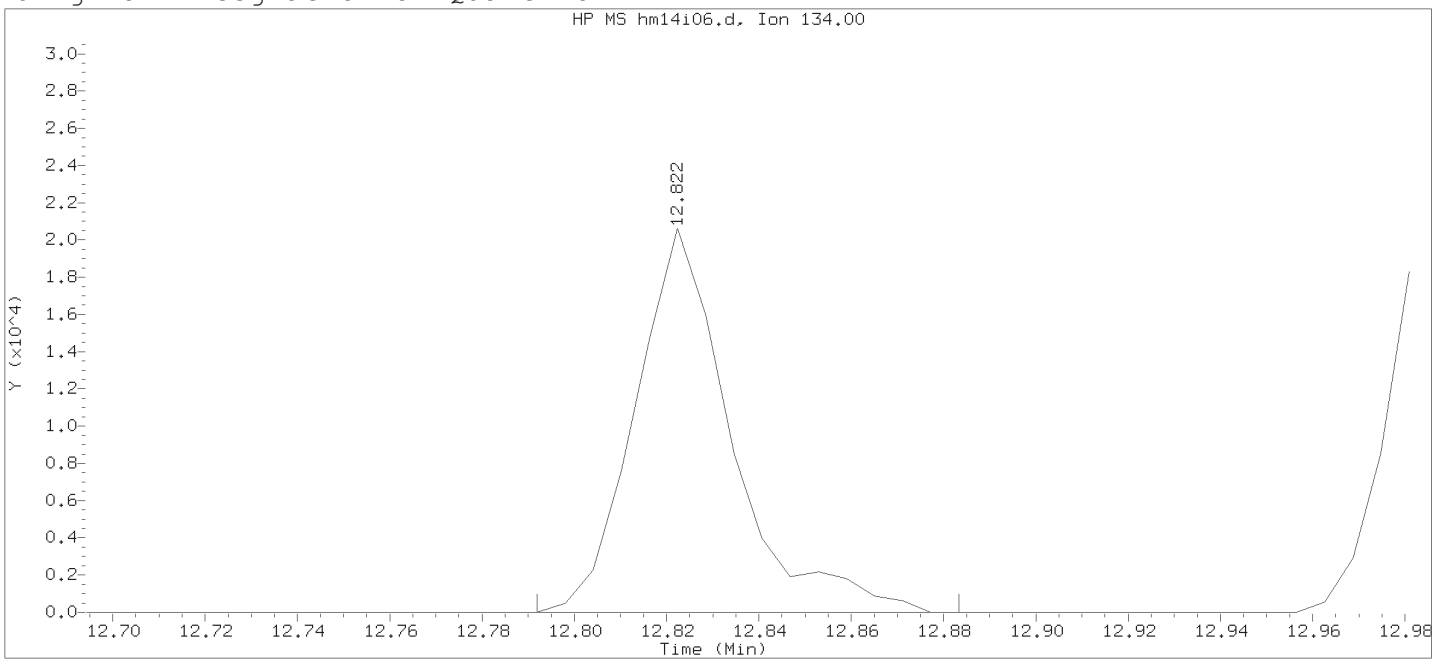
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

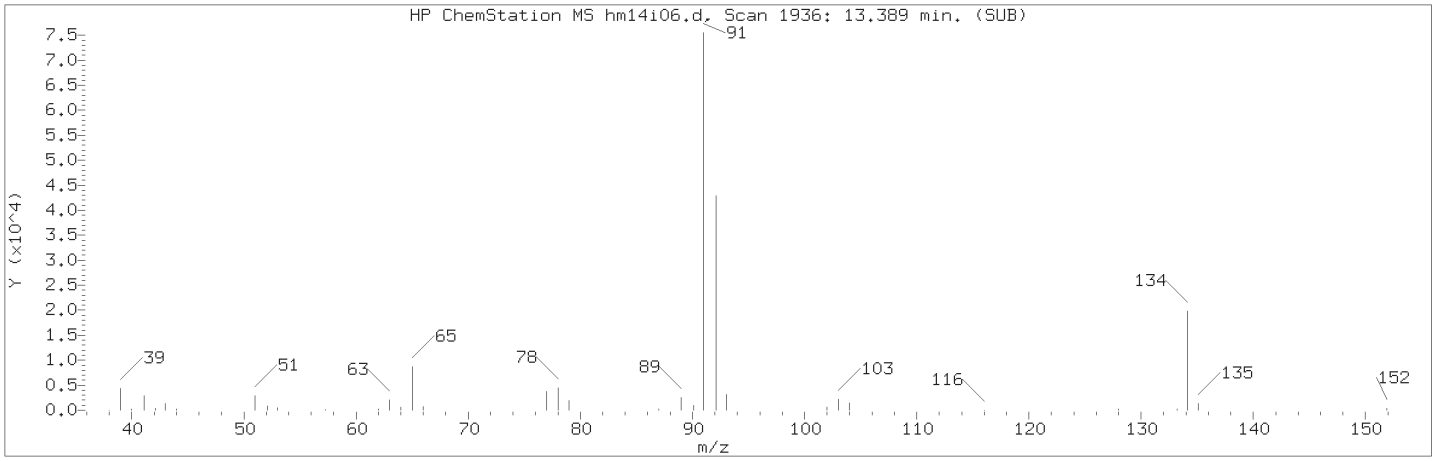
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

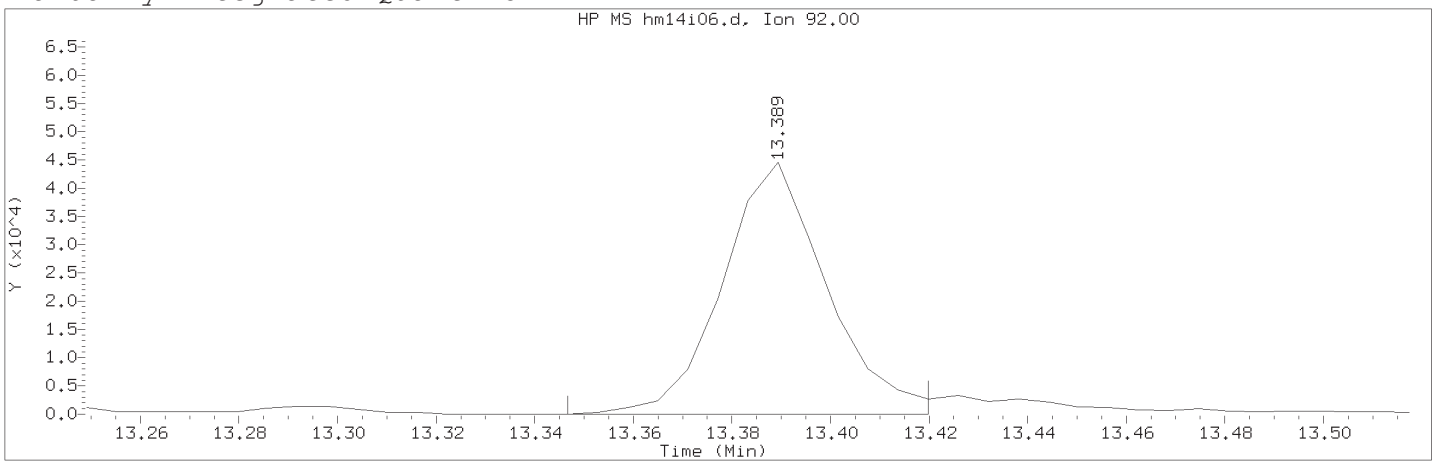
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 29830
On-column Amount (ng) : 0.5746
Integration start scan : 1837 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

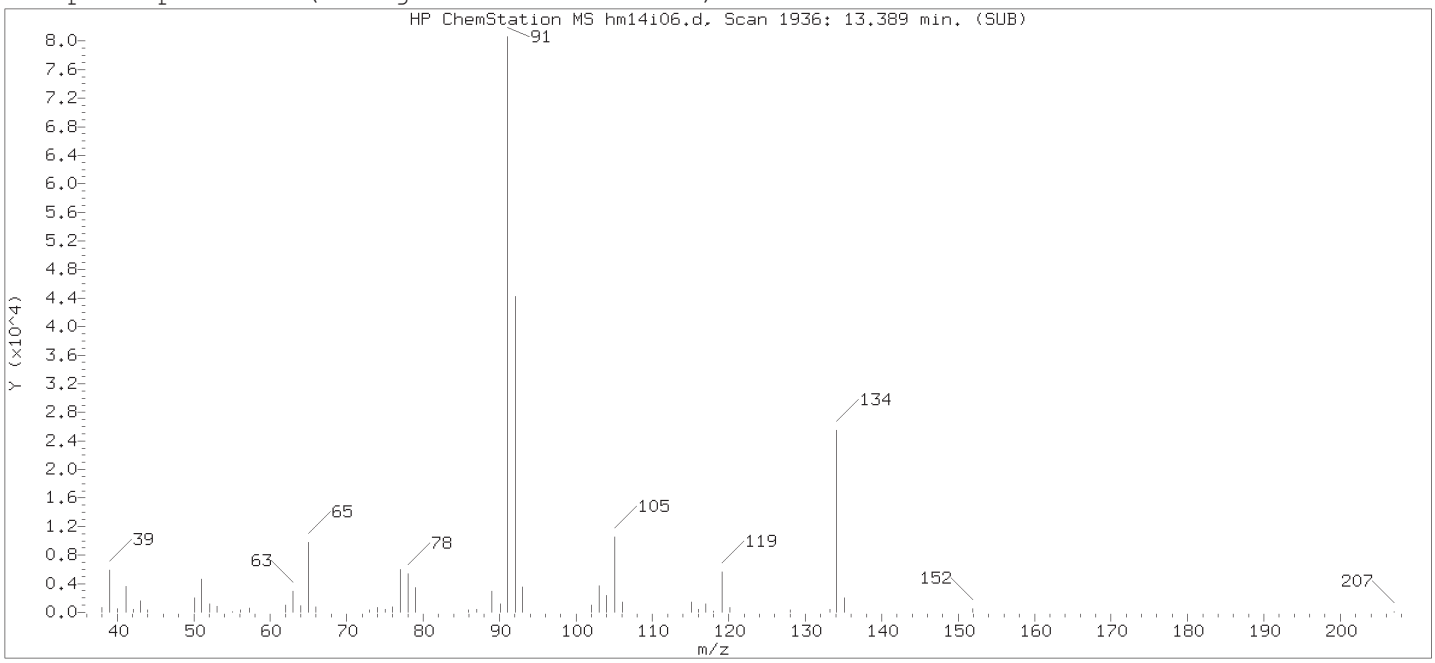
Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1936
Retention Time (minutes): 13.389
Quant Ion : 92.00
Area (flag) : 65180M
On-Column Amount (ng) : 0.5214
Integration start scan : 1928 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

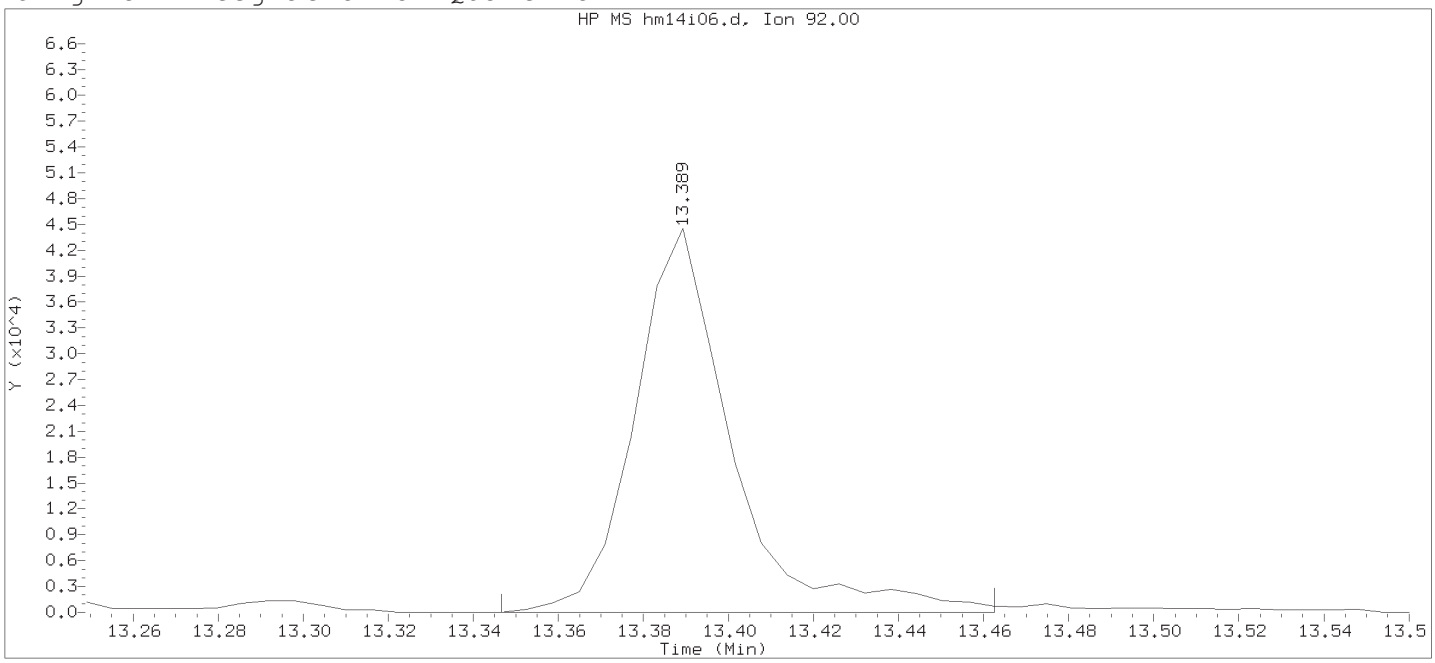
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



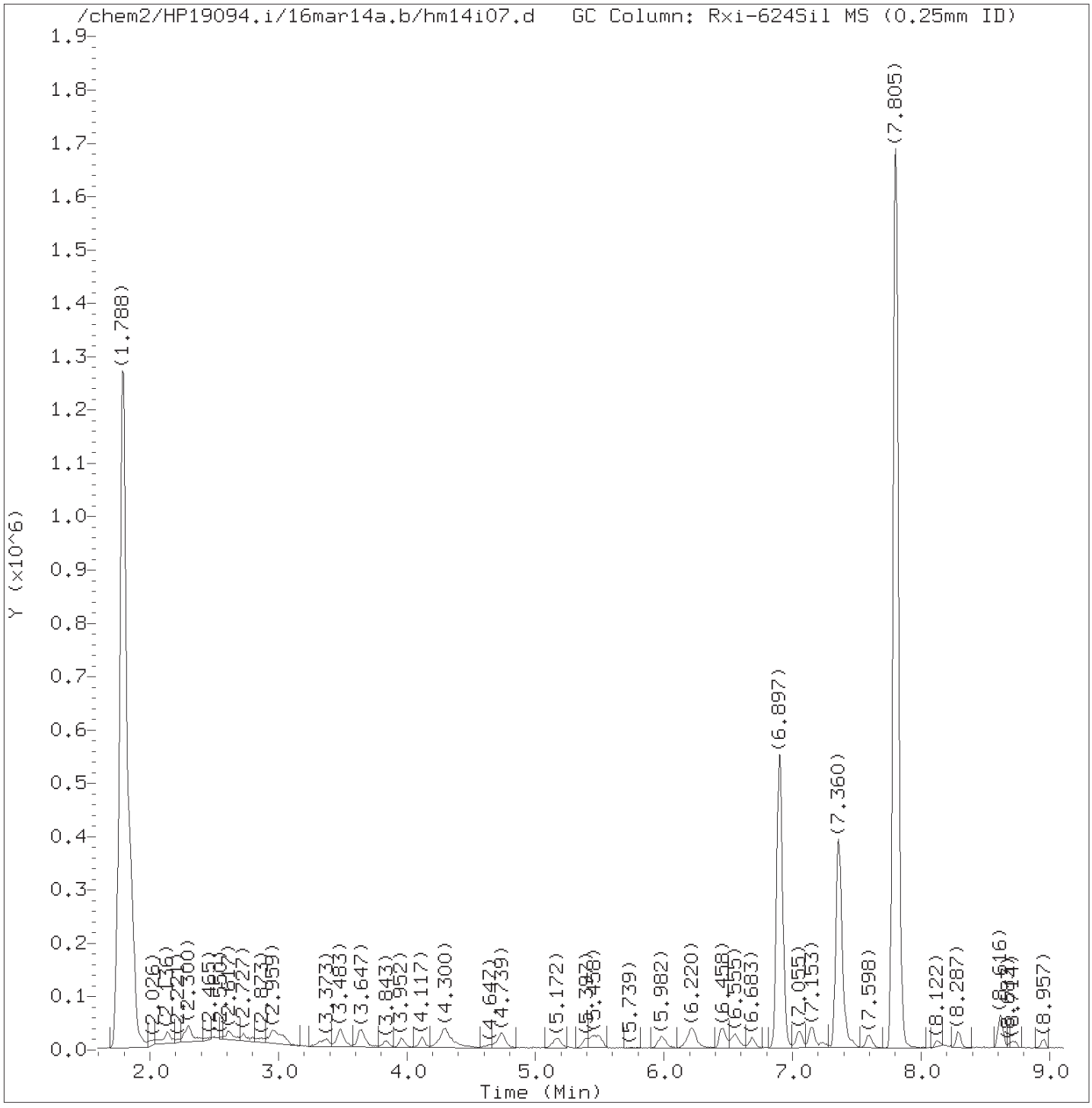
Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1936
Retention Time (minutes): 13.389
Quant Ion : 92.00
Area : 70021
On-column Amount (ng) : 0.5662
Integration start scan : 1928 Integration stop scan: 1947
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

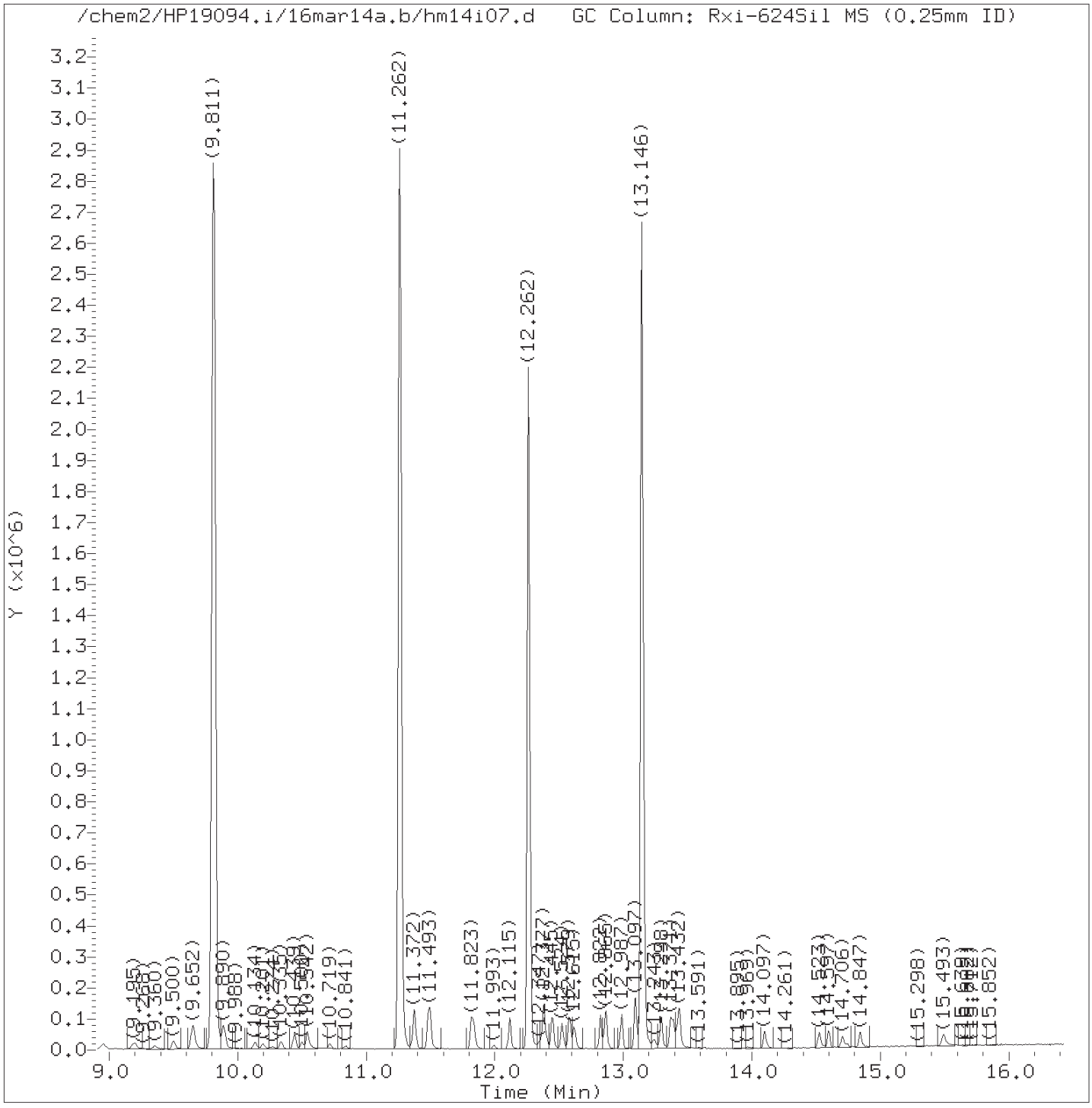
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	17775	0.220
2) Chloromethane	(2)	2.136	50	20194	0.255
5) Vinyl Chloride	(2)	2.276	62	17591	0.239
6) 1,3-Butadiene	(2)	2.300	39	13395M	0.240
7) Bromomethane	(2)	2.617	94	11157	0.228
8) Chloroethane	(2)	2.727	64	12016	0.265
9) Dichlorofluoromethane	(2)	2.965	67	25059	0.243
10) Trichlorofluoromethane	(2)	3.050	101	22054	0.230
11) Ethyl ether	(2)	3.318	59	8699	0.220
12) Freon 123a	(2)	3.367	67	16514	0.225
13) Acrolein	(1)	3.483	56	67076	10.807
15) 1,1-Dichloroethene	(2)	3.635	96	12065	0.219
14) Acetone	(1)	3.647	43	26660M	3.117
16) Freon 113	(2)	3.666	101	11422	0.199
17) Methyl Iodide	(2)	3.830	142	21202	0.208
18) Carbon Disulfide	(2)	3.952	76	39421	0.232
21) Methyl Acetate	(1)	4.068	43	8187	0.341
22) Allyl Chloride	(2)	4.117	41	24111	0.232
26)*t-Butyl Alcohol-d10	(1)	4.281	65	108855M	50.000
23) Methylene Chloride	(2)	4.300	84	12265	0.208
28) t-Butyl Alcohol	(1)	4.428	59	12826	4.382
29) Acrylonitrile	(1)	4.641	53	10075	0.982
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	26917	0.212
31) trans-1,2-Dichloroethene	(2)	4.739	96	12229	0.206
32) n-Hexane	(2)	5.172	57	21934	0.218
33) 1,1-Dichloroethane	(2)	5.385	63	25729	0.213
34) di-Isopropyl Ether	(2)	5.446	45	44211	0.210
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	20753	0.209
37) Ethyl t-butyl ether	(2)	5.988	59	37305	0.210
40) 1,2-Dichloroethene (Total)	(2)		96	25891	0.414
38) 2-Butanone	(1)	6.177	43	31340	2.151
39) cis-1,2-Dichloroethene	(2)	6.208	96	13662	0.208
41) 2,2-Dichloropropane	(2)	6.232	77	20656	0.214
42) Propionitrile	(1)	6.251	54	15091	4.153
45) Methacrylonitrile	(1)	6.458	67	26431	2.124
47) Bromochloromethane	(2)	6.543	128	4931	0.197
48) Tetrahydrofuran	(1)	6.568	71	8112	2.200
49) Chloroform	(2)	6.683	83	24677	0.223

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	540029	9.783
50)$Dibromofluoromethane	(2)	6.903	111	555065	9.773
51) 1,1,1-Trichloroethane	(2)	6.939	97	20406	0.217
52) Cyclohexane	(2)	7.061	56	29098	0.236
52) Cyclohexane	(2)	7.049	84	19283	0.205
52) Cyclohexane	(2)	7.043	69	7883	0.224
55) 1,1-Dichloropropene	(2)	7.147	75	18750	0.207
54) Carbon Tetrachloride	(2)	7.159	117	17892	0.209
56) Isobutyl Alcohol	(1)	7.226	41	13435M	12.955
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88516	9.682
57)$1,2-Dichloroethane-d4	(2)	7.354	65	451656	9.676
57)$1,2-Dichloroethane-d4	(2)	7.360	104	55455	9.607
58) Benzene	(2)	7.403	78	54162	0.215
59) 1,2-Dichloroethane	(2)	7.464	62	14181	0.217
60) t-Amyl methyl ether	(2)	7.598	73	30946	0.213
63)*Fluorobenzene	(2)	7.805	96	2342480	10.000
62) n-Heptane	(2)	7.823	43	24636	0.217
65) n-Butanol	(1)	8.134	56	19236	23.045
67) Trichloroethene	(2)	8.287	95	14143	0.216
70) 1,2-Dichloropropane	(2)	8.616	63	13776	0.210
69) Methylcyclohexane	(2)	8.628	83	22564	0.210
71) Methyl Methacrylate	(1)	8.695	69	5318M	0.205
72) 1,4-Dioxane	(1)	8.714	88	1121	6.817
73) Dibromomethane	(2)	8.732	93	5770	0.214
74) Bromodichloromethane	(2)	8.951	83	15194	0.202
76) 2-Nitropropane	(1)	9.195	41	20241	2.429
80) cis-1,3-Dichloropropene	(2)	9.494	75	19669	0.212
81) 4-Methyl-2-Pentanone	(1)	9.652	43	74767	2.085
82)$Toluene-d8	(3)	9.811	98	2288811	10.283
82)$Toluene-d8	(3)	9.811	100	1474233	10.232
83) Toluene	(3)	9.890	92	32967	0.220
84) trans-1,3-Dichloropropene	(3)	10.134	75	14768	0.210
85) 1,3-Dichloropropene (total)	(3)		75	34437	0.422
86) Ethyl Methacrylate	(3)	10.201	69	10842	0.201
88) 1,1,2-Trichloroethane	(3)	10.341	97	8199	0.226
89) Tetrachloroethene	(3)	10.439	166	15760	0.223
90) 1,3-Dichloropropane	(3)	10.500	76	13680	0.209
91) 2-Hexanone	(1)	10.542	43	59429	2.344

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	9231	0.198
95) 1,2-Dibromoethane	(3)	10.841	107	6853	0.200
97)*Chlorobenzene-d5	(3)	11.262	117	1562481	10.000
98) Chlorobenzene	(3)	11.292	112	35561	0.218
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	12166	0.217
100) Ethylbenzene	(3)	11.378	91	66043	0.225
101) m+p-Xylene	(3)	11.487	106	48843	0.436
105) Xylene (Total)	(3)		106	71996	0.650
104) o-Xylene	(3)	11.817	106	23153	0.213
106) Styrene	(3)	11.835	104	36879	0.212
107) Bromoform	(3)	11.993	173	5392	0.209
108) Isopropylbenzene	(3)	12.115	105	62034	0.215
111)$4-Bromofluorobenzene	(3)	12.262	95	702914	9.797
111)$4-Bromofluorobenzene	(3)	12.262	174	585424	9.787
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	9763	0.238
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	21303M	1.929
114) Bromobenzene	(4)	12.377	156	14069	0.230
116) 1,2,3-Trichloropropane	(4)	12.402	110	2122	0.206
117) n-Propylbenzene	(4)	12.451	91	77405	0.234
119) 2-Chlorotoluene	(4)	12.530	126	14287	0.224
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	51612	0.224
122) 4-Chlorotoluene	(4)	12.621	126	14982	0.230
125) tert-Butylbenzene	(4)	12.822	134	10791M	0.219
126) Pentachloroethane	(4)	12.853	167	8069	0.217
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	51879	0.225
128) sec-Butylbenzene	(4)	12.987	105	67745	0.227
131) 1,3-Dichlorobenzene	(4)	13.091	146	27056	0.226
132) p-Isopropyltoluene	(4)	13.097	119	56112	0.222
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	656295	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	29351	0.241
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	22673M	0.237
136) Benzyl Chloride	(4)	13.237	126	2921	0.179
138) n-Butylbenzene	(4)	13.389	92	28261	0.228
139) 1,2-Dichlorobenzene	(4)	13.426	146	24236	0.228
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	1267	0.222
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	19174	0.252
146) Hexachlorobutadiene	(4)	14.603	225	9164	0.231
147) Naphthalene	(4)	14.706	128	36748	0.281

M = Compound was manually integrated.
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on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.847	180	18503	0.305

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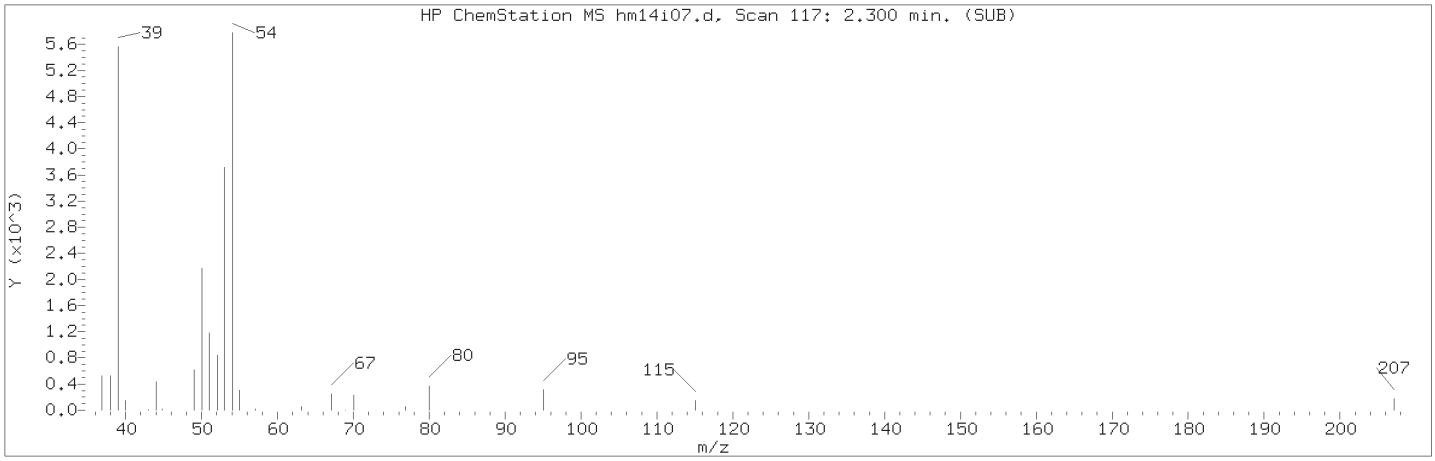
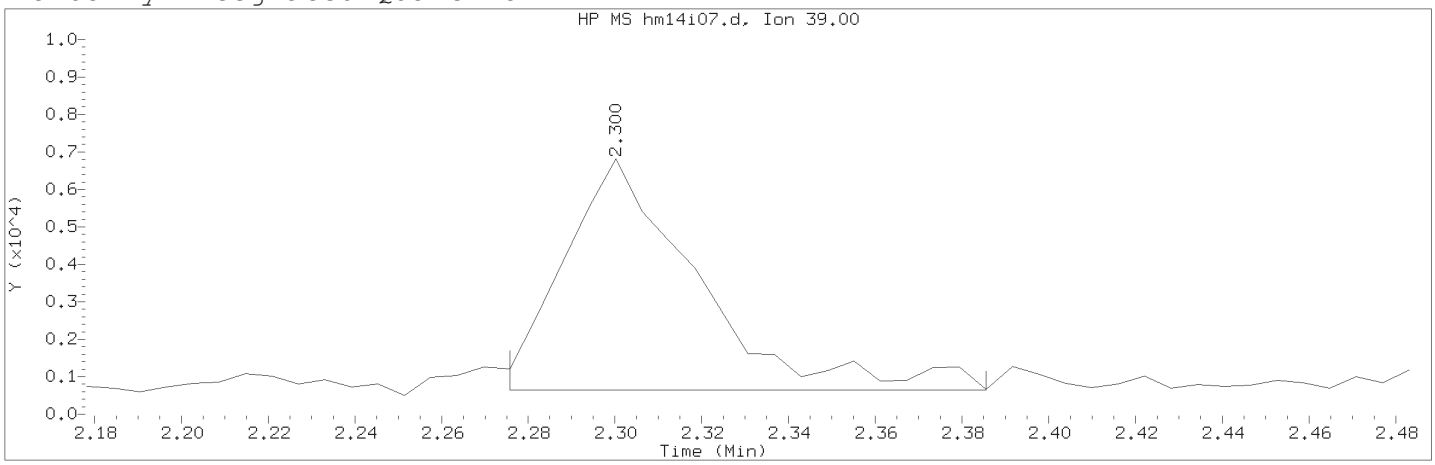
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

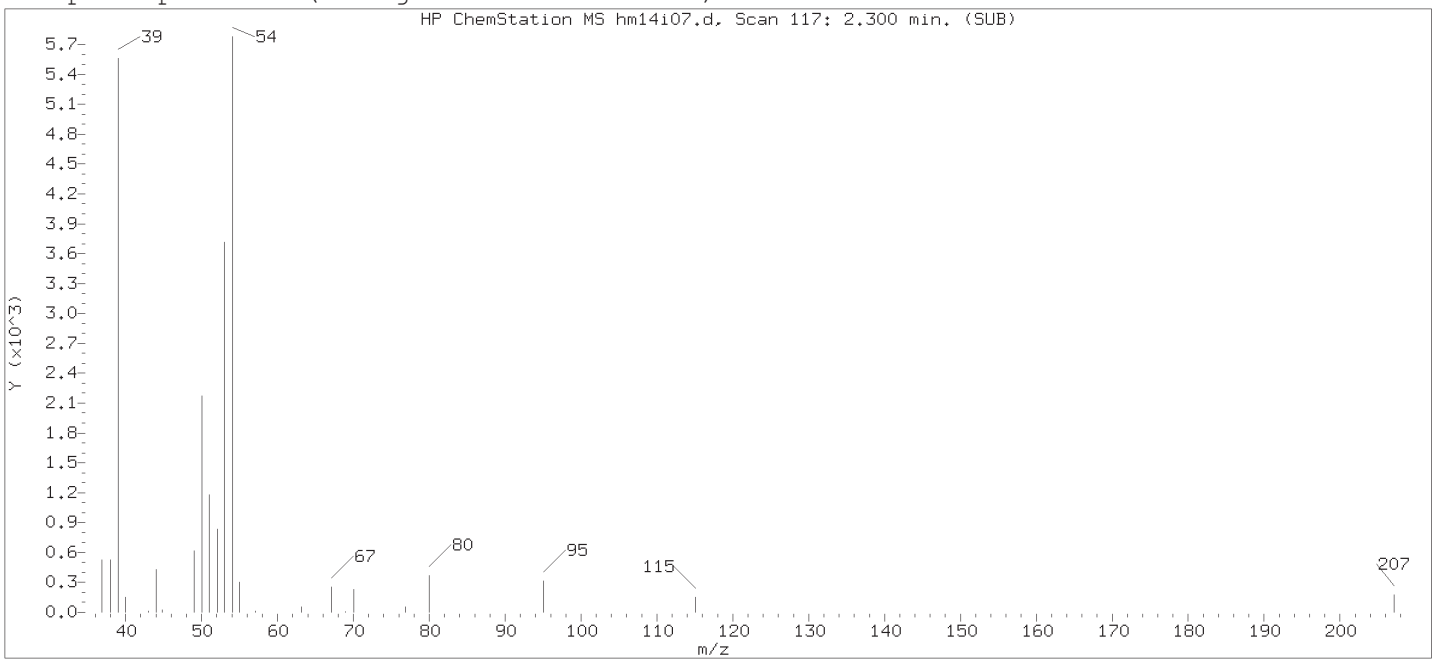
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area (flag) : 13395M
On-Column Amount (ng) : 0.2404
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 637 Y at integration end: 637

Reason for manual integration: improper integration

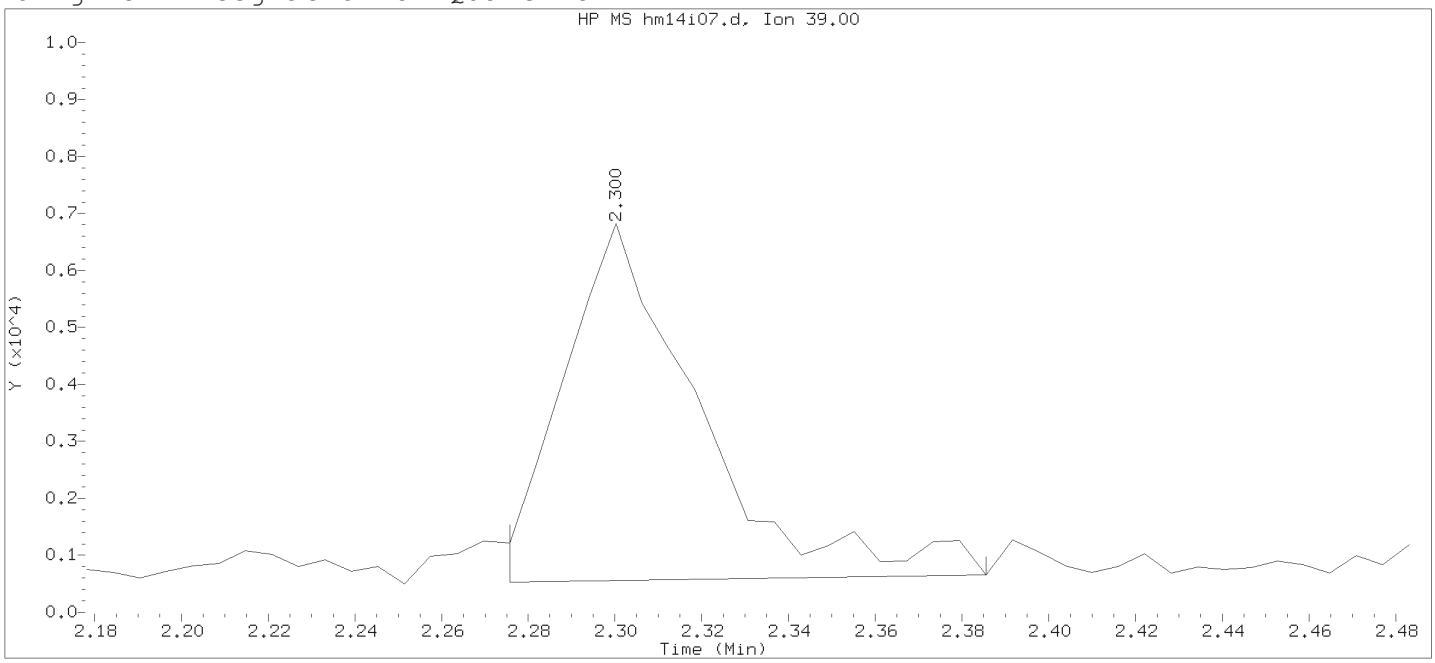
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

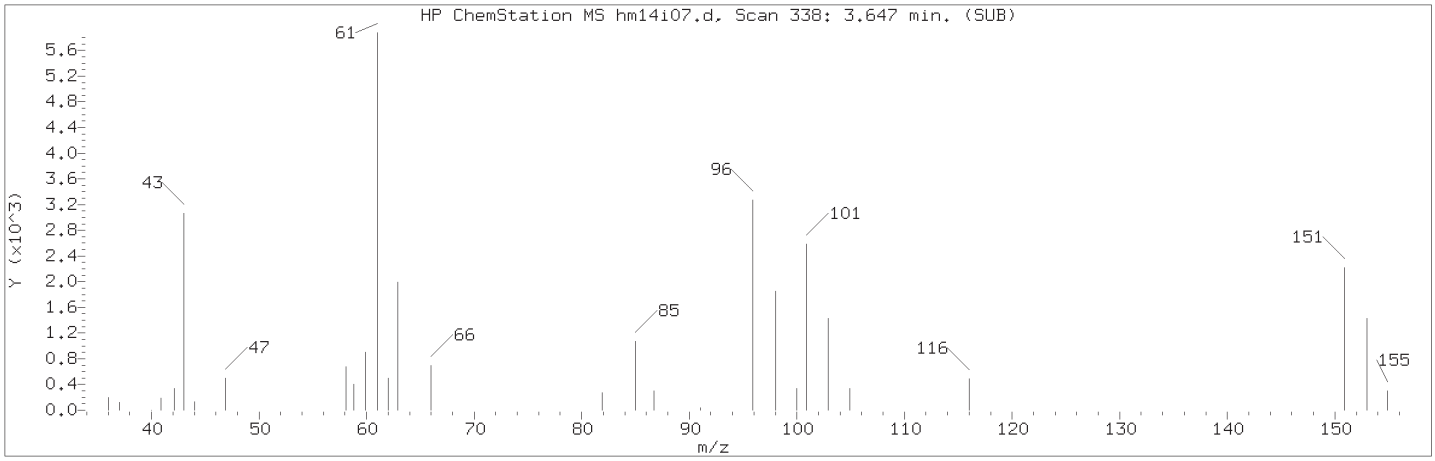
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

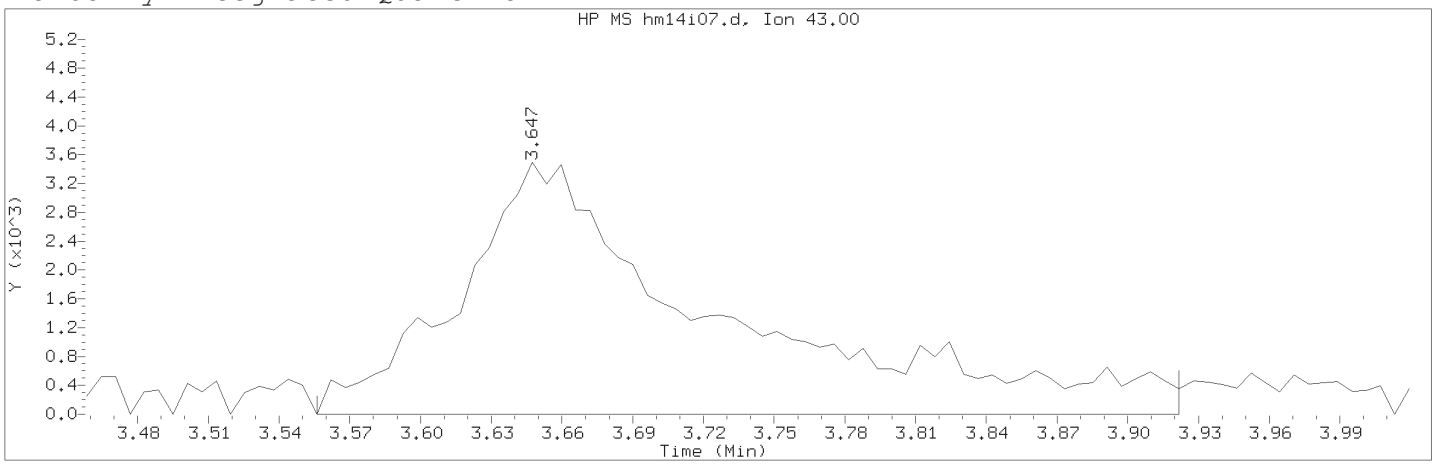
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area : 13576
On-column Amount (ng) : 0.2465
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 529 Y at integration end: 657

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

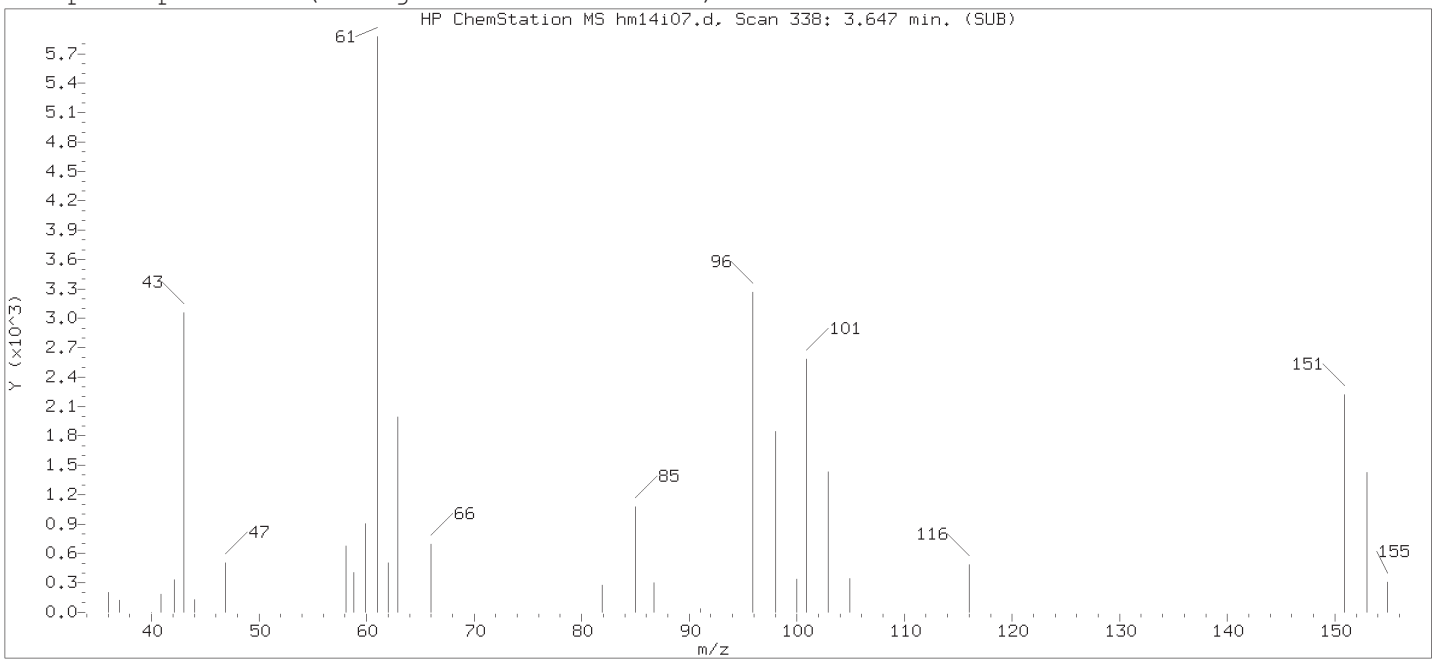
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 26660M
On-Column Amount (ng) : 3.1173
Integration start scan : 322 Integration stop scan: 382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

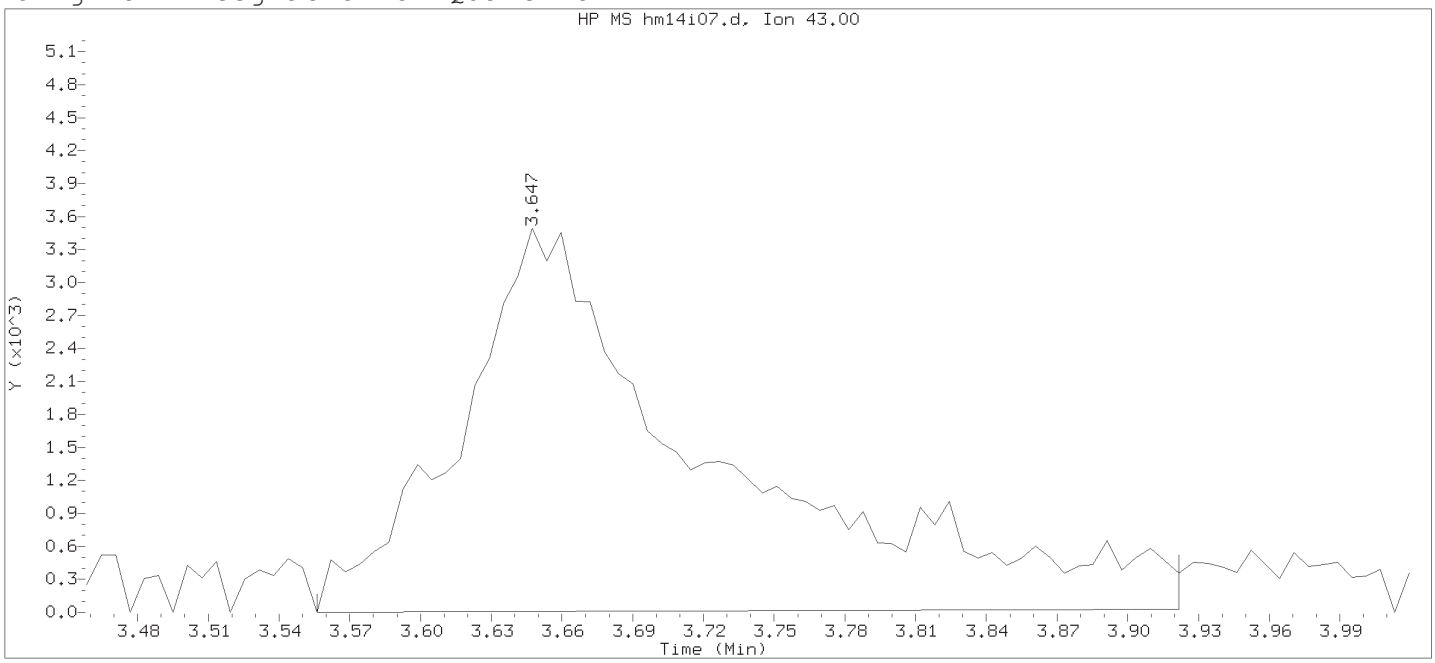
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 26310		
On-column Amount (ng)	: 3.2378		
Integration start scan	: 322	Integration stop scan:	382
Y at integration start	: 0	Y at integration end:	26

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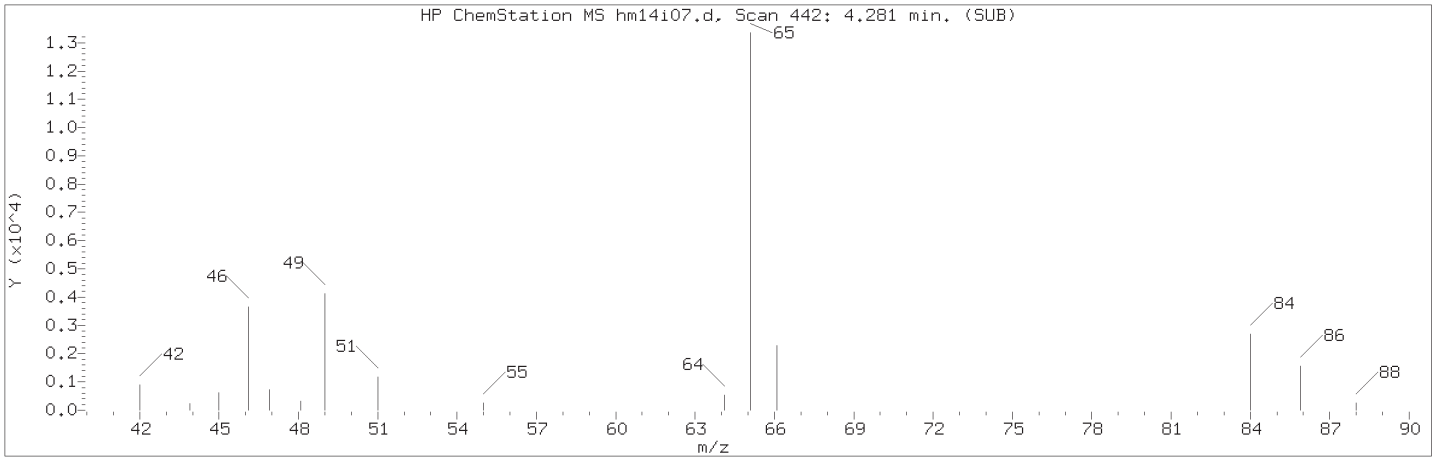
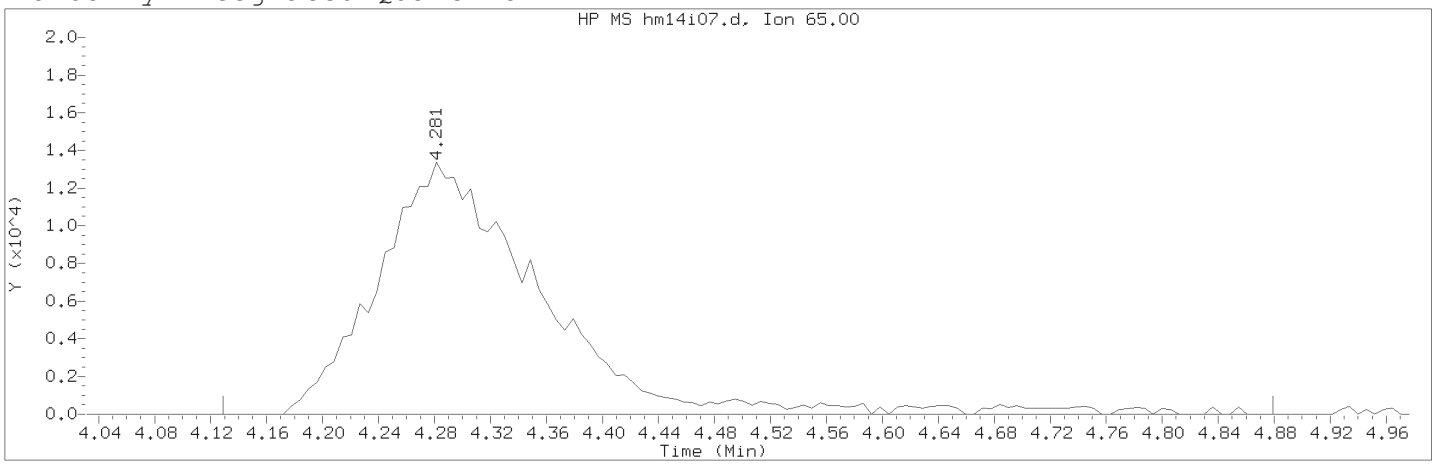
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

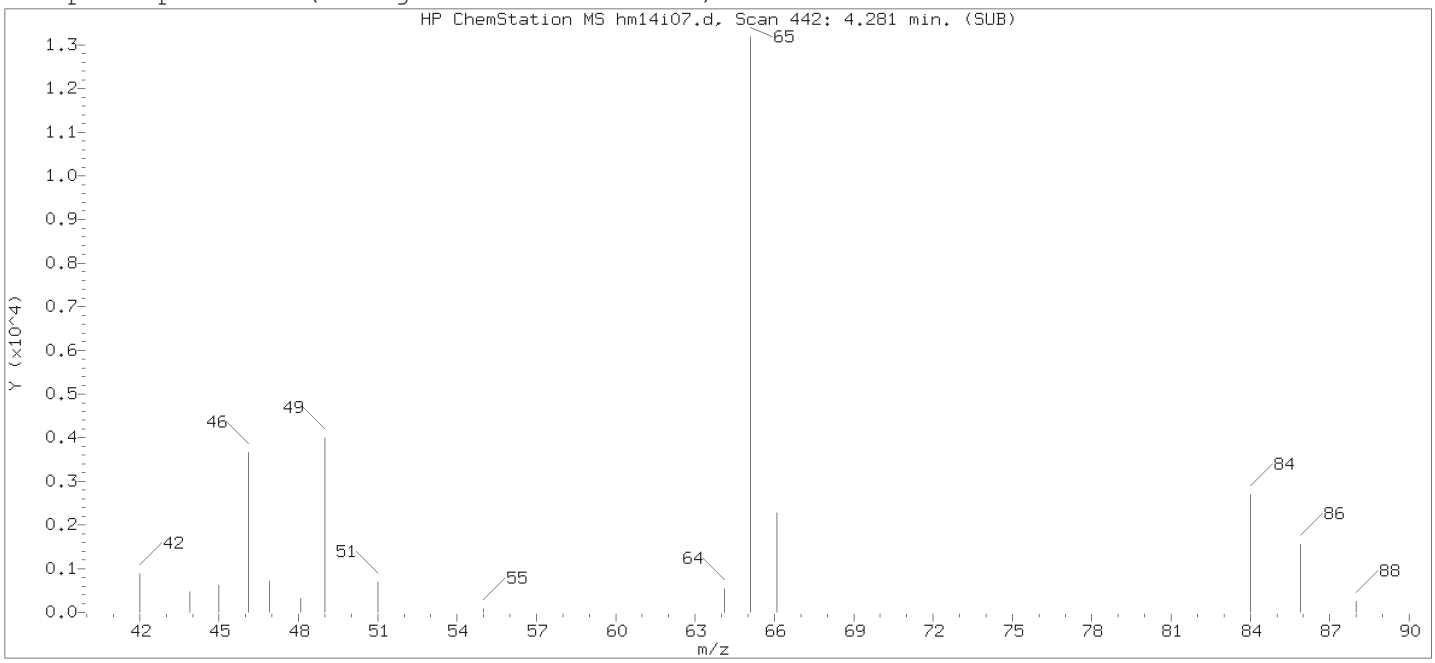
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 108855M
On-Column Amount (ng) : 50.0000
Integration start scan : 416 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

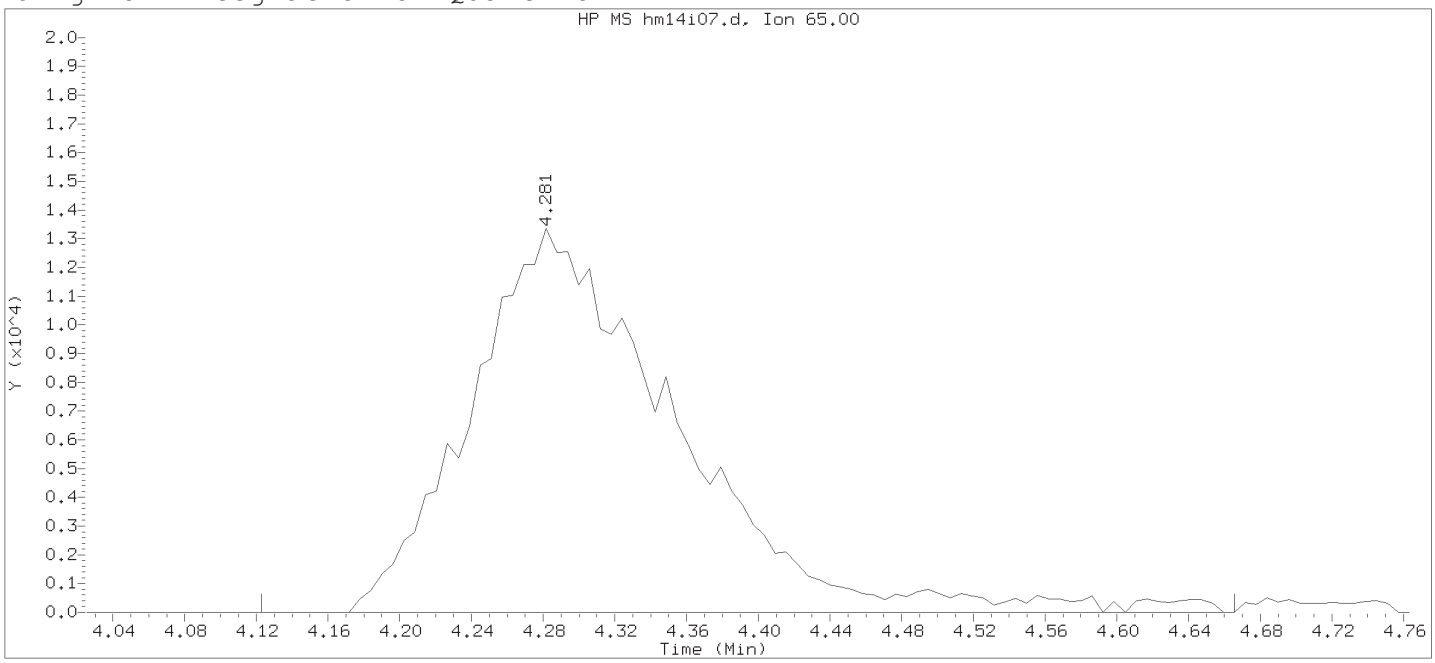
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

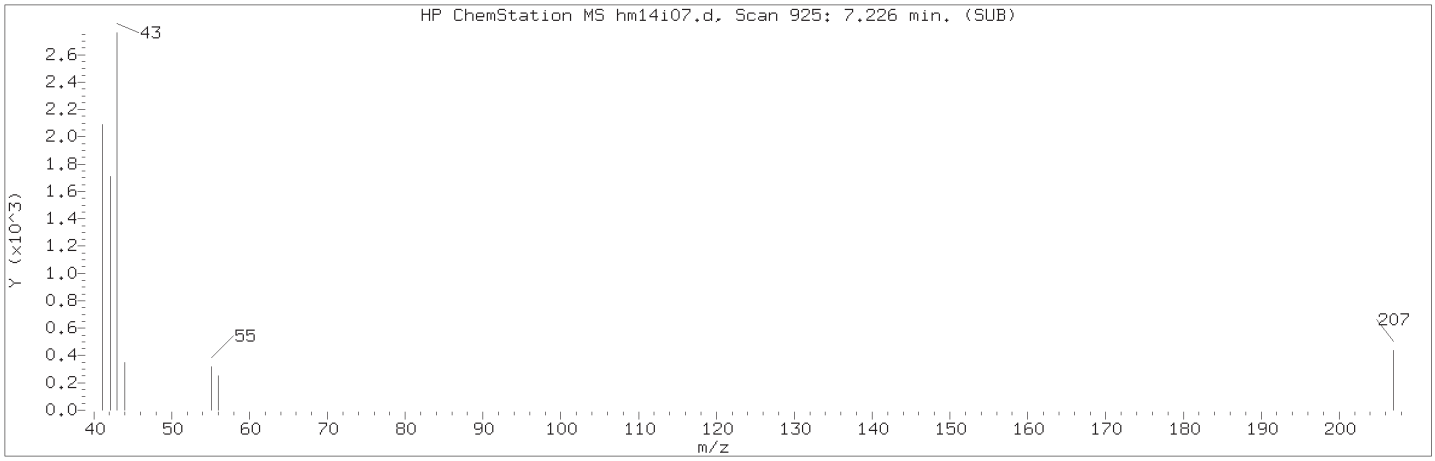
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

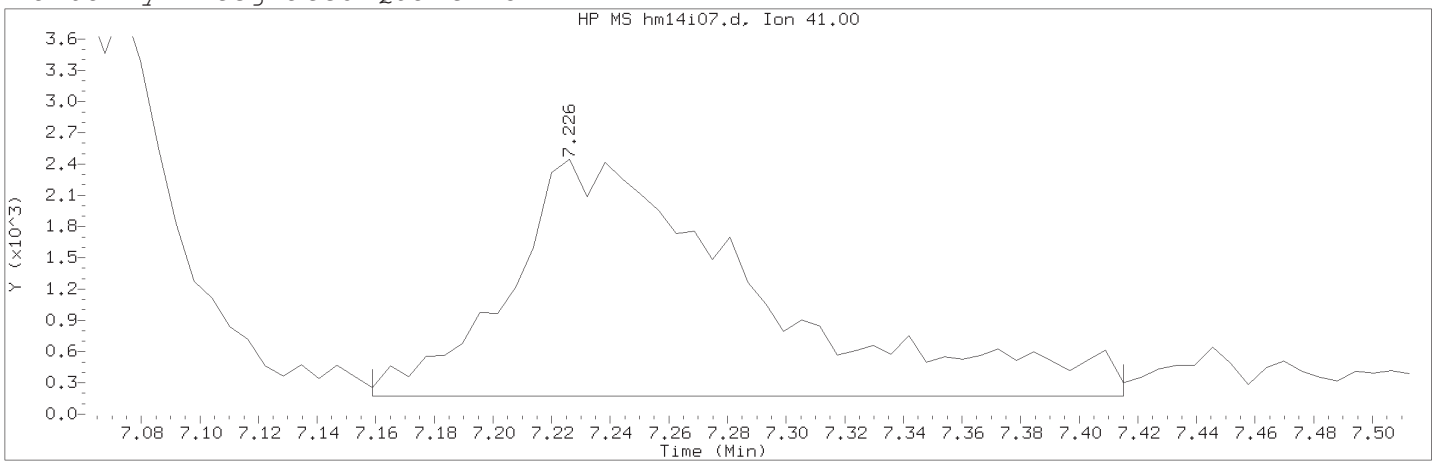
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 442
Retention Time (minutes)	: 4.281
Quant Ion	: 65.00
Area	: 106099
On-column Amount (ng)	: 50.0000
Integration start scan	: 415 Integration stop scan: 504
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

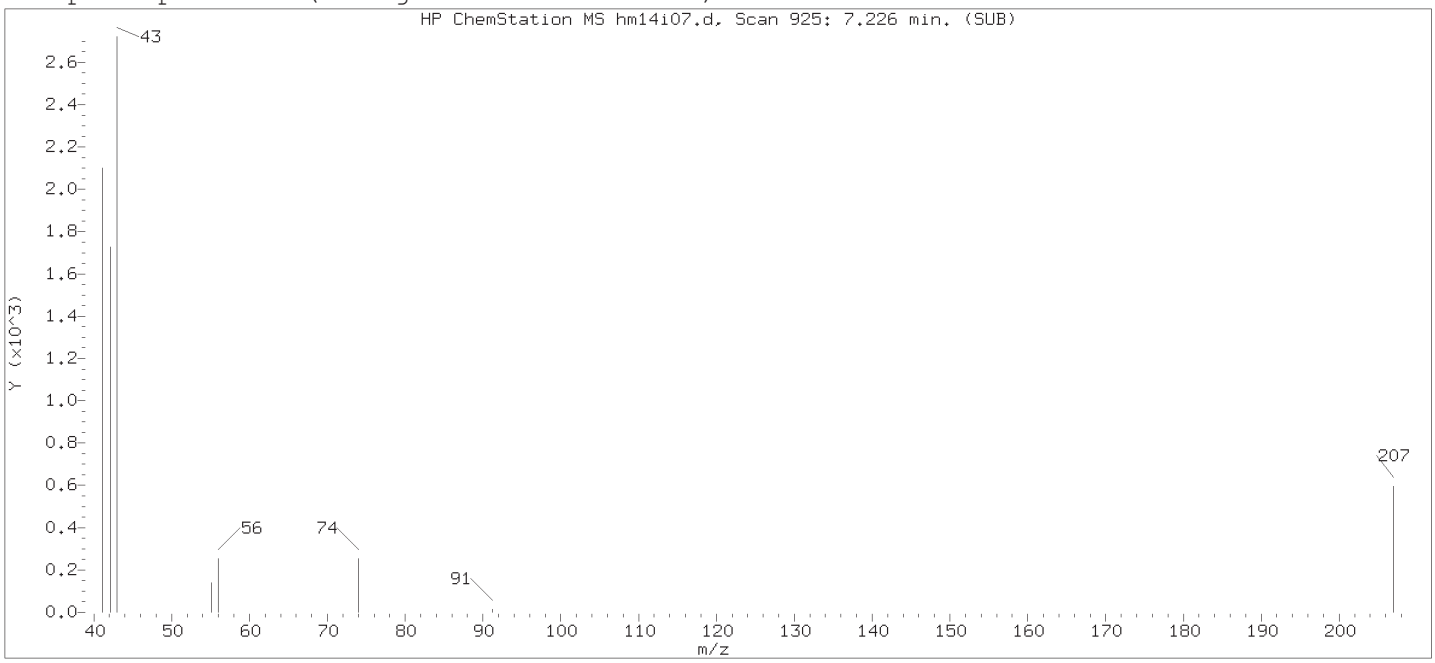
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 13435M
On-Column Amount (ng) : 12.9548
Integration start scan : 913 Integration stop scan: 955
Y at integration start : 173 Y at integration end: 173

Reason for manual integration: improper integration

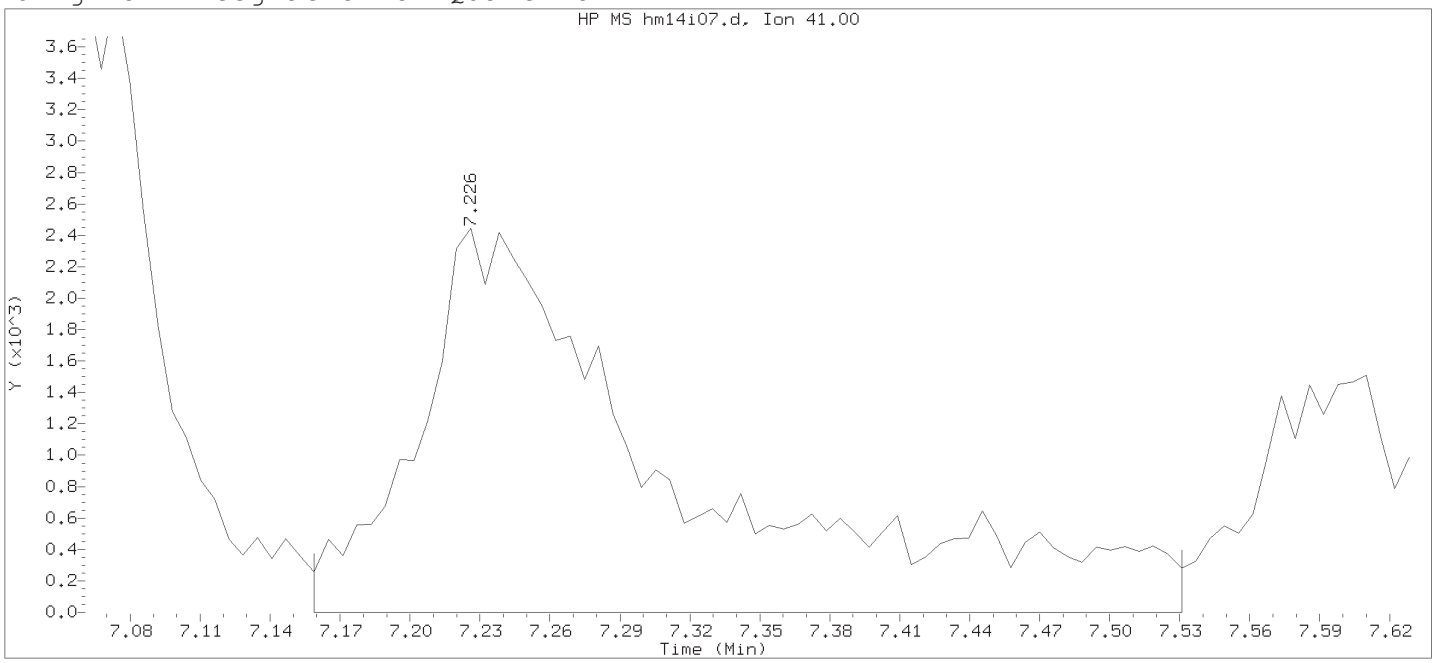
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

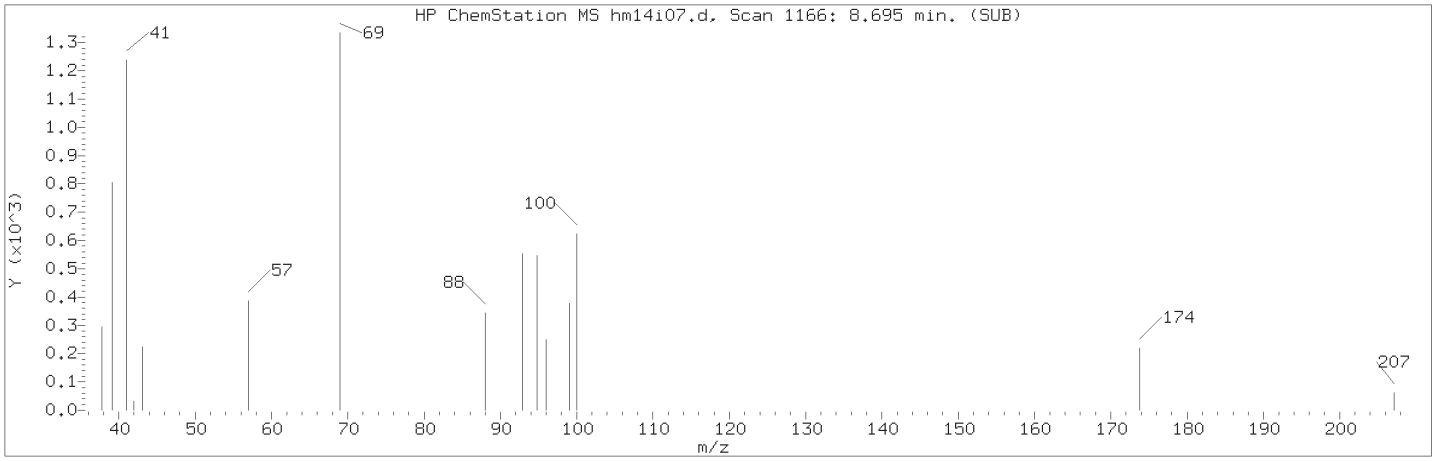
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

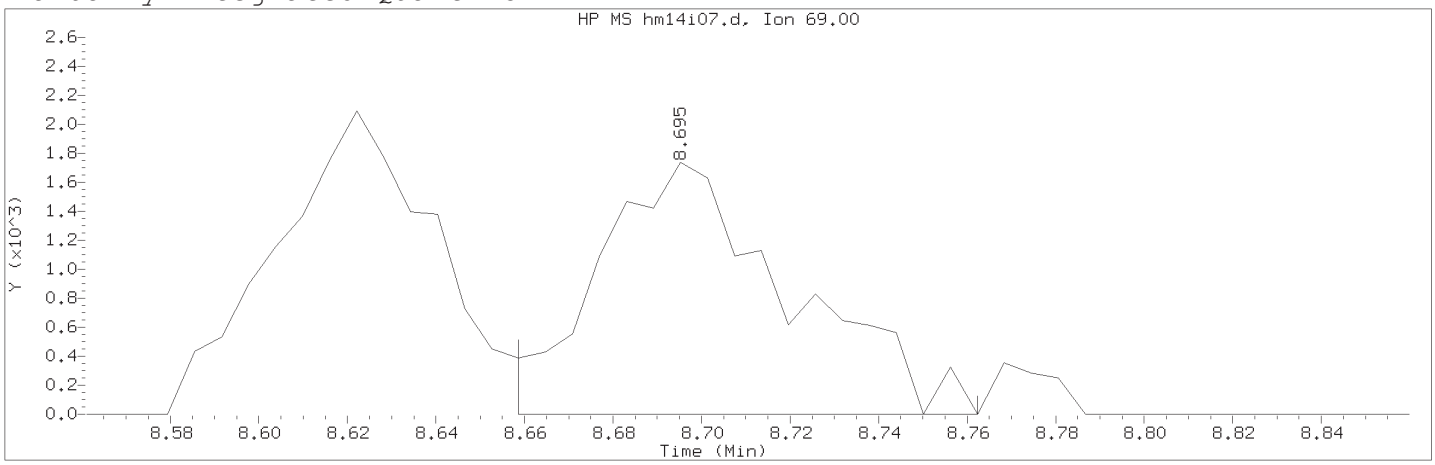
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 18938
On-column Amount (ng) : 17.2181
Integration start scan : 913 Integration stop scan: 974
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

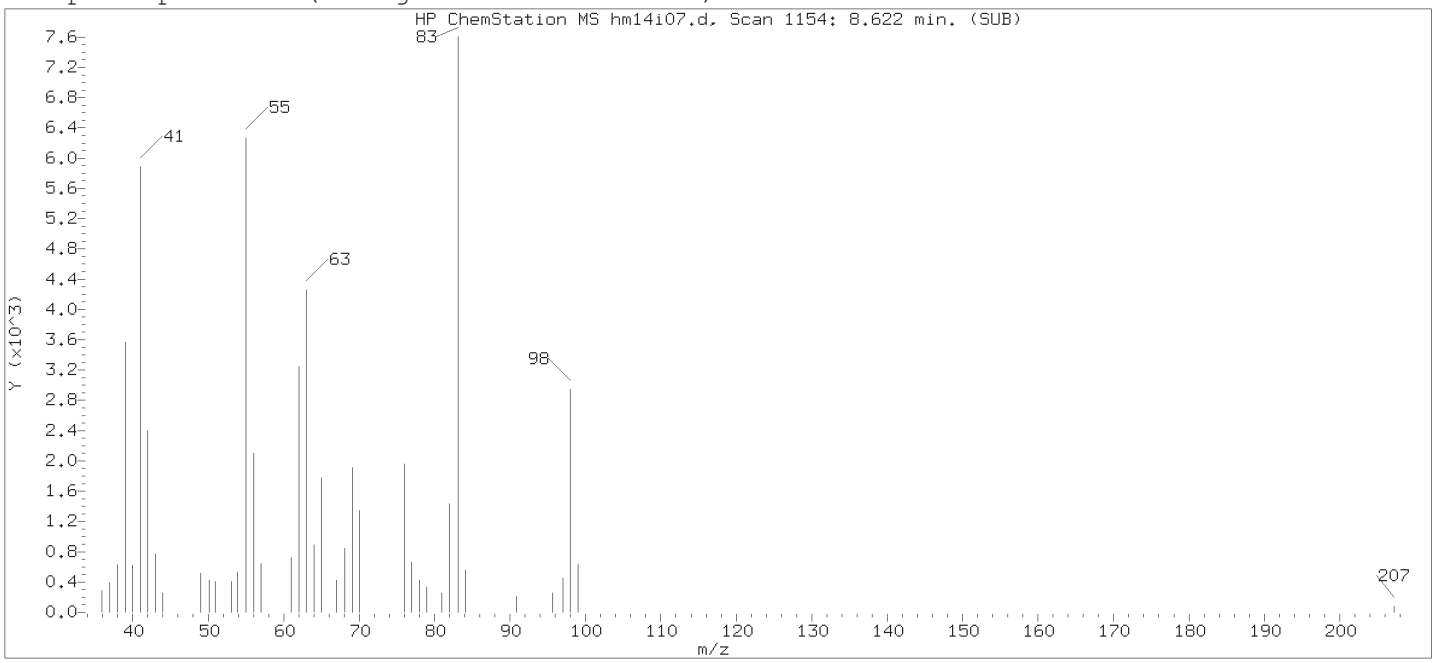
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 5318M
On-Column Amount (ng) : 0.2046
Integration start scan : 1159 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

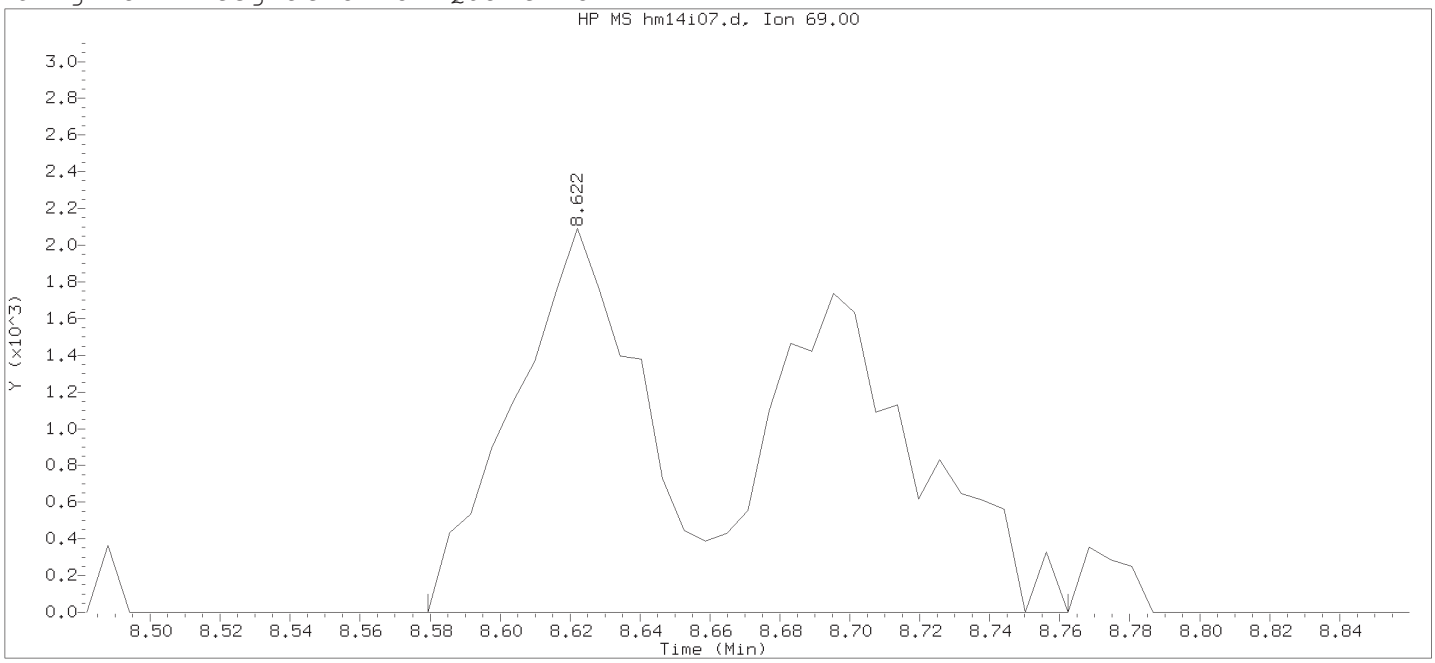
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

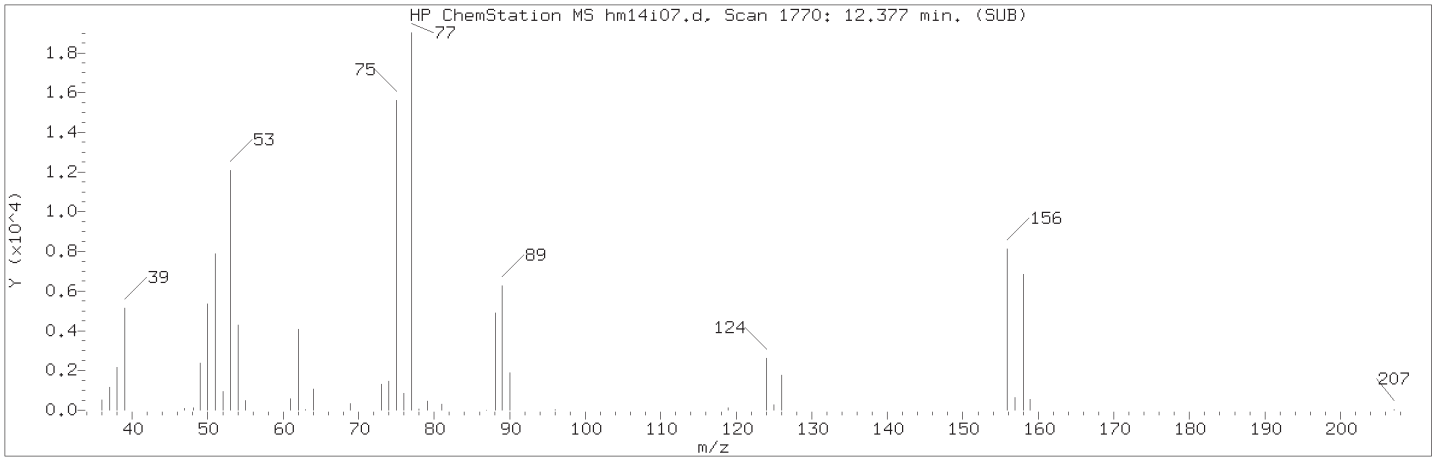
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

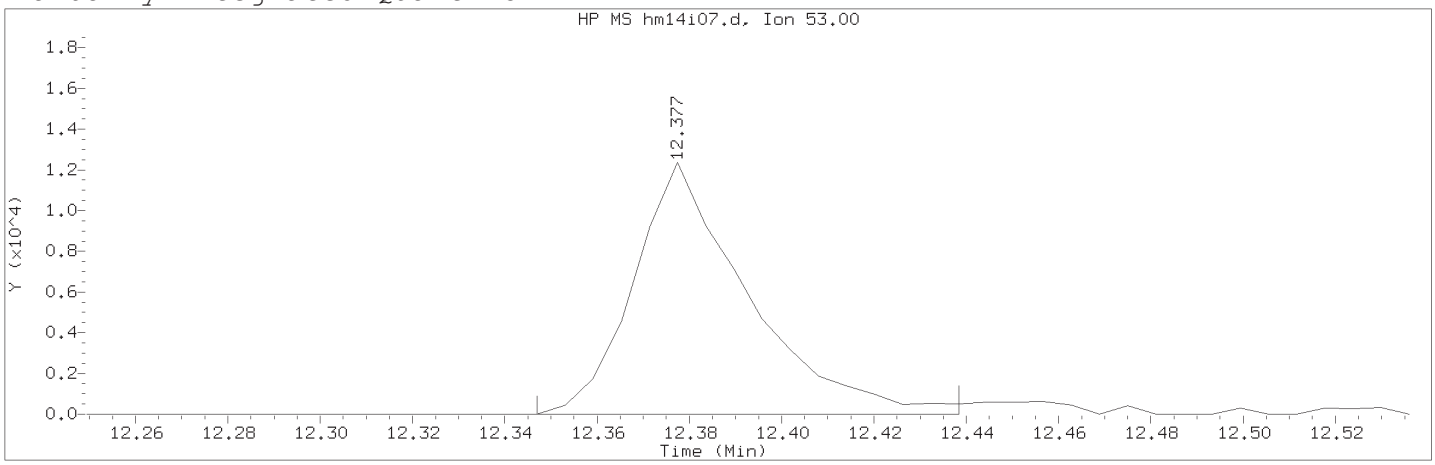
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 10420
On-column Amount (ng) : 0.3576
Integration start scan : 1146 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

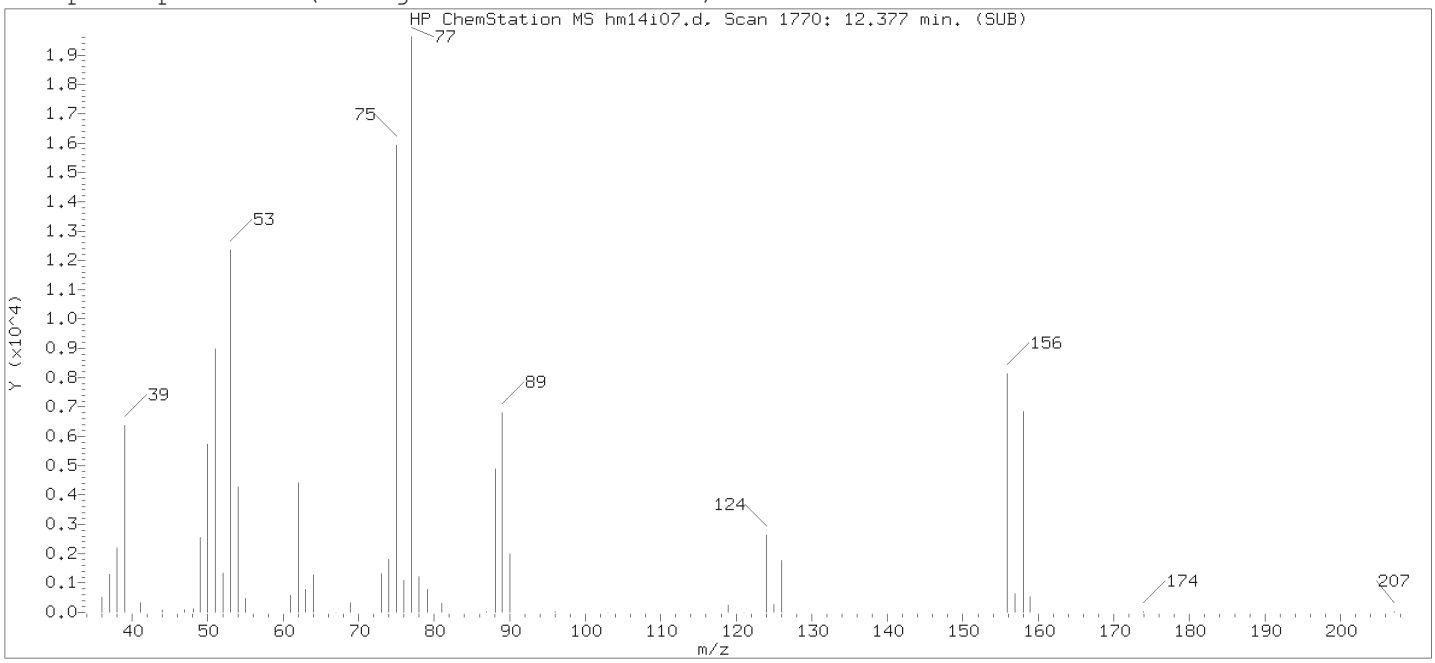
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area (flag) : 21303M
On-Column Amount (ng) : 1.9289
Integration start scan : 1764 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

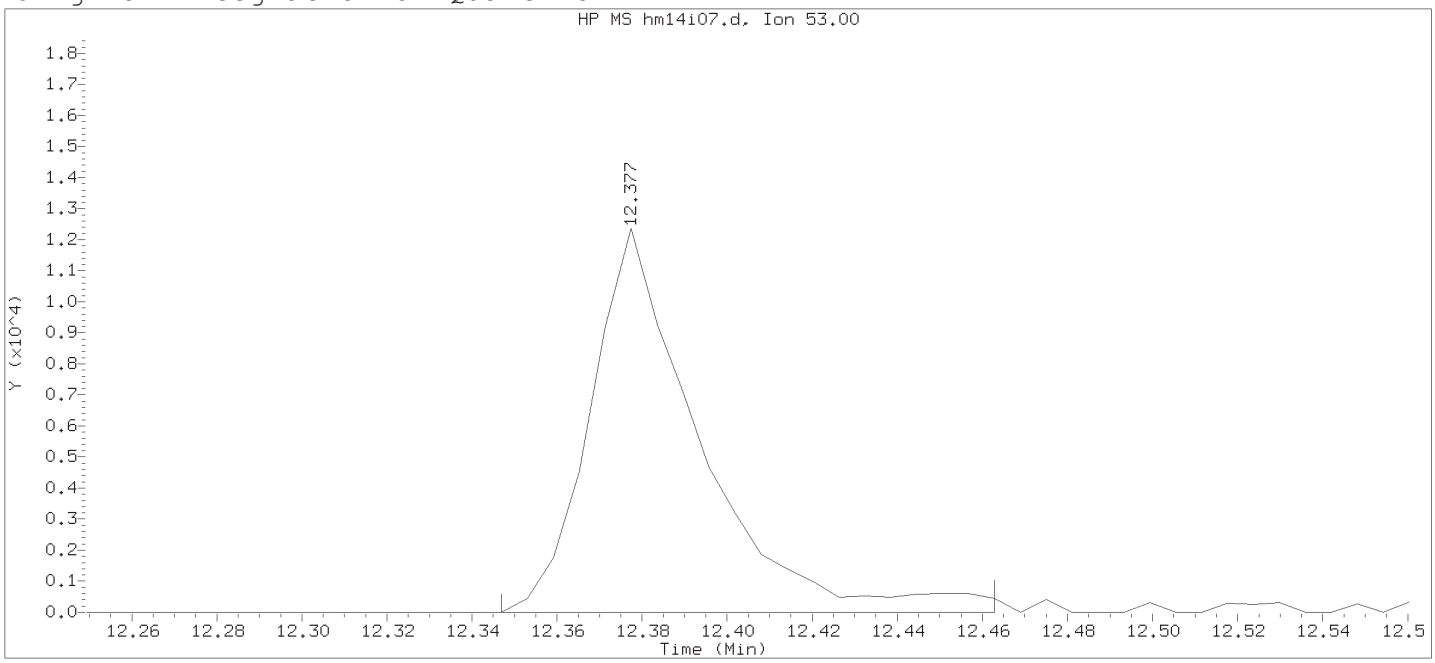
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

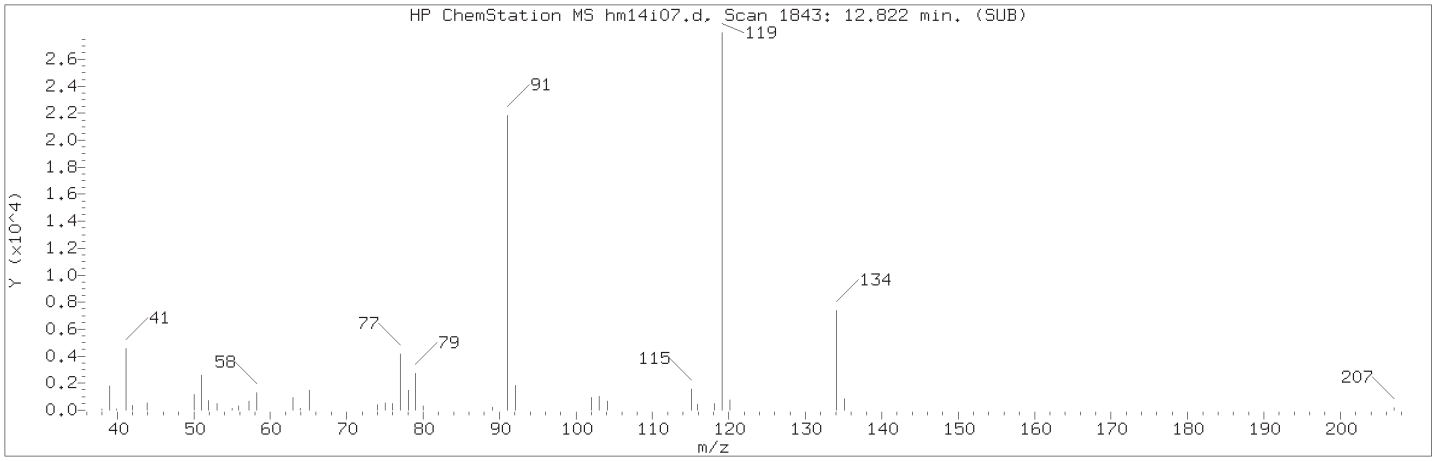
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

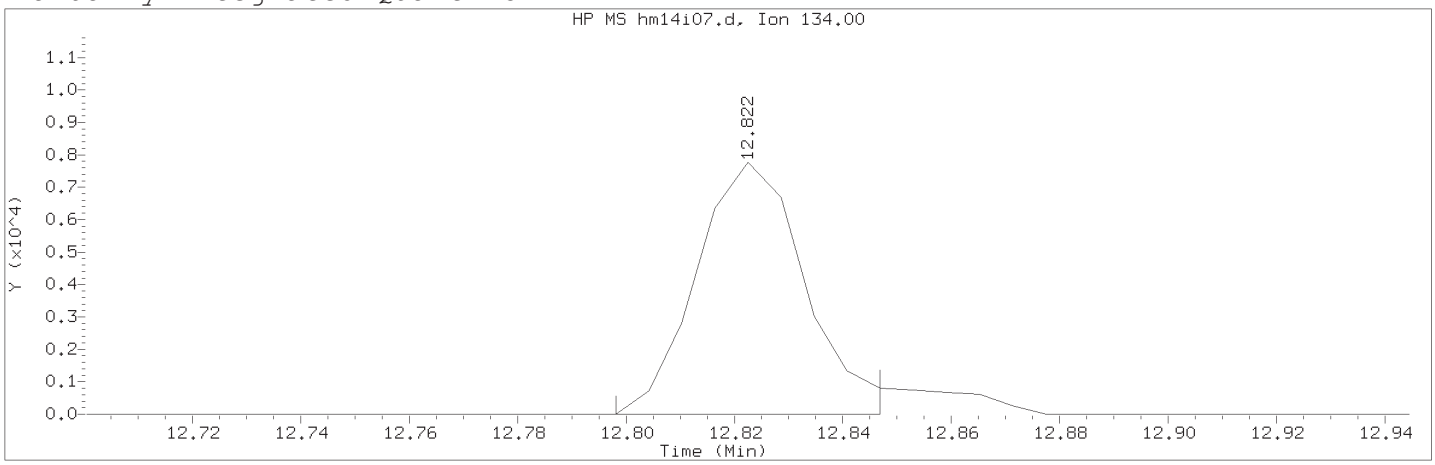
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 22042
On-column Amount (ng) : 2.4024
Integration start scan : 1764 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

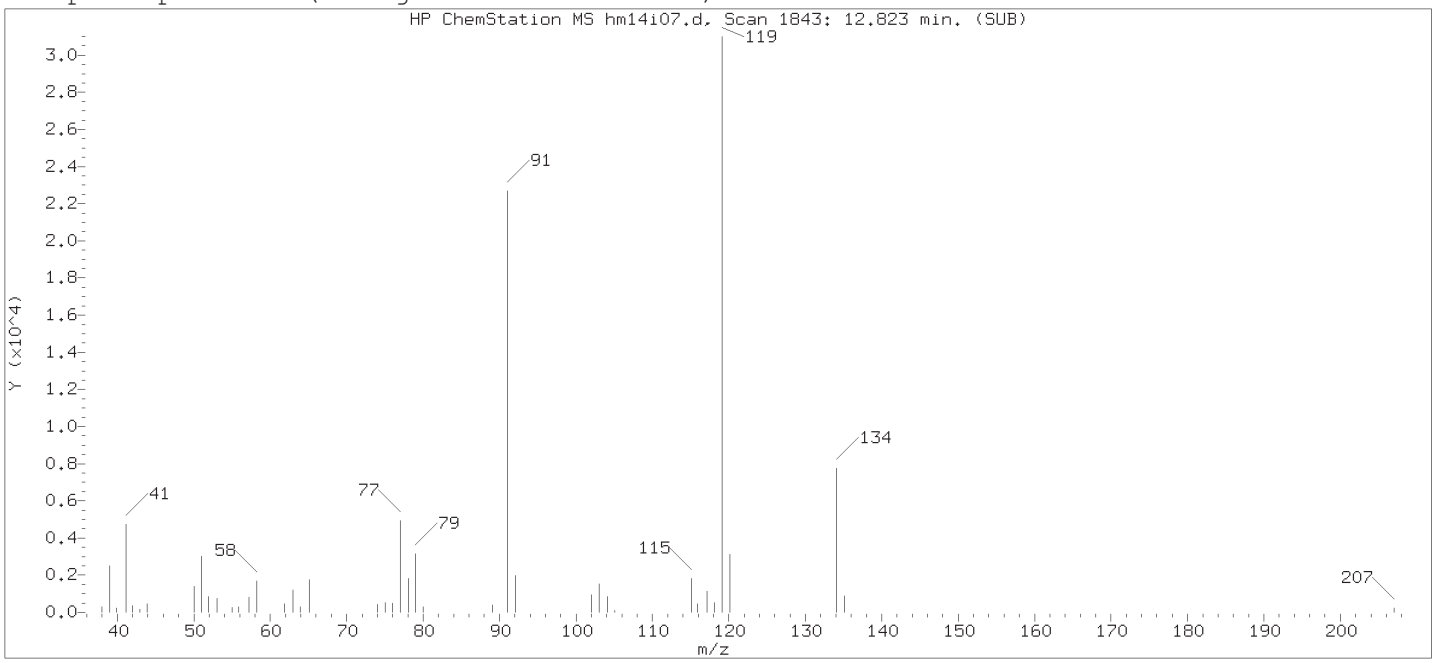
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 10791M
On-Column Amount (ng) : 0.2194
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

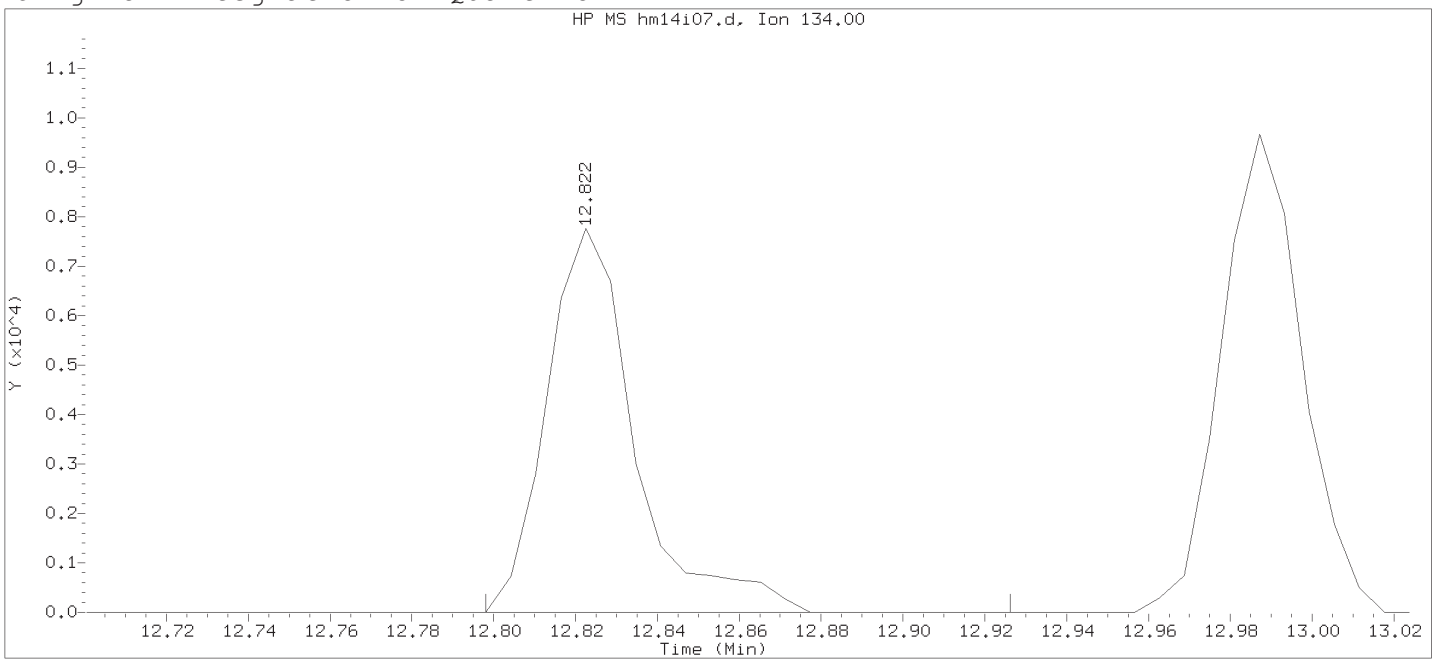
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

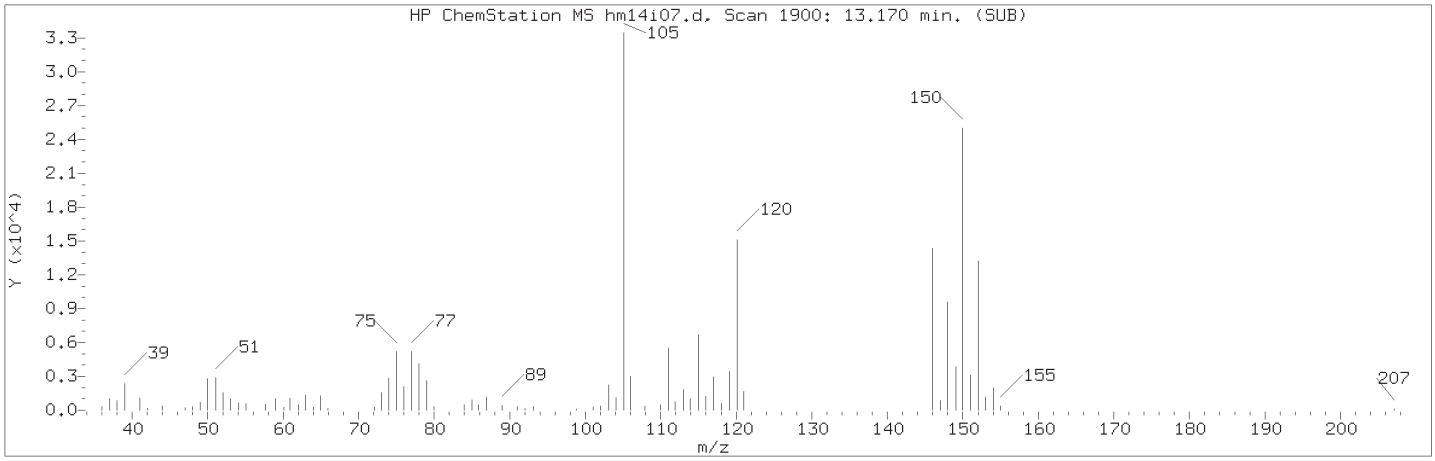
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

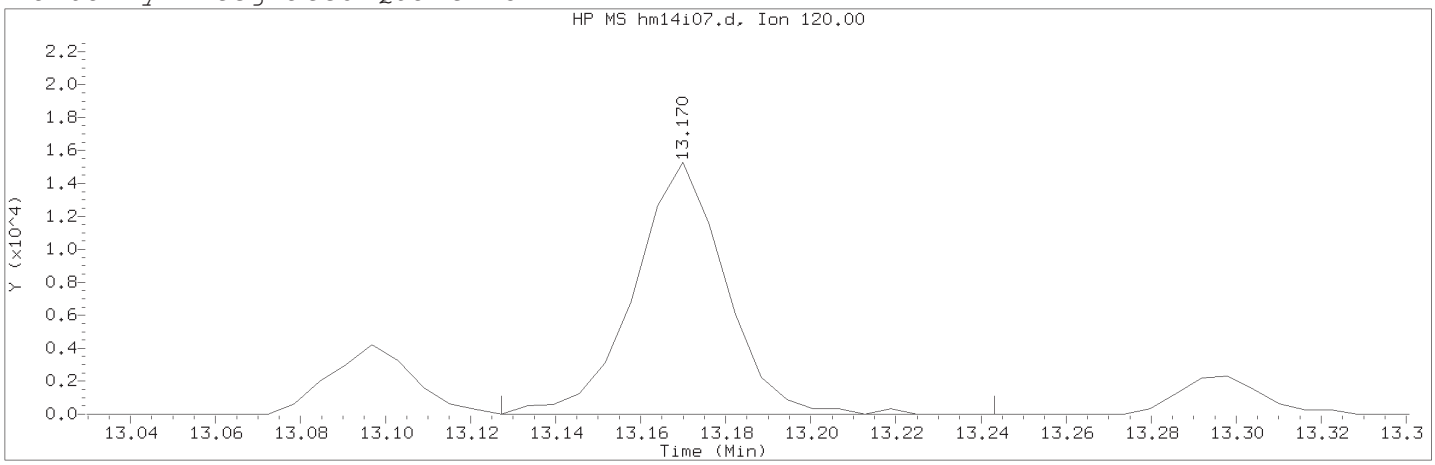
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 11628
On-column Amount (ng) : 0.2222
Integration start scan : 1838 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

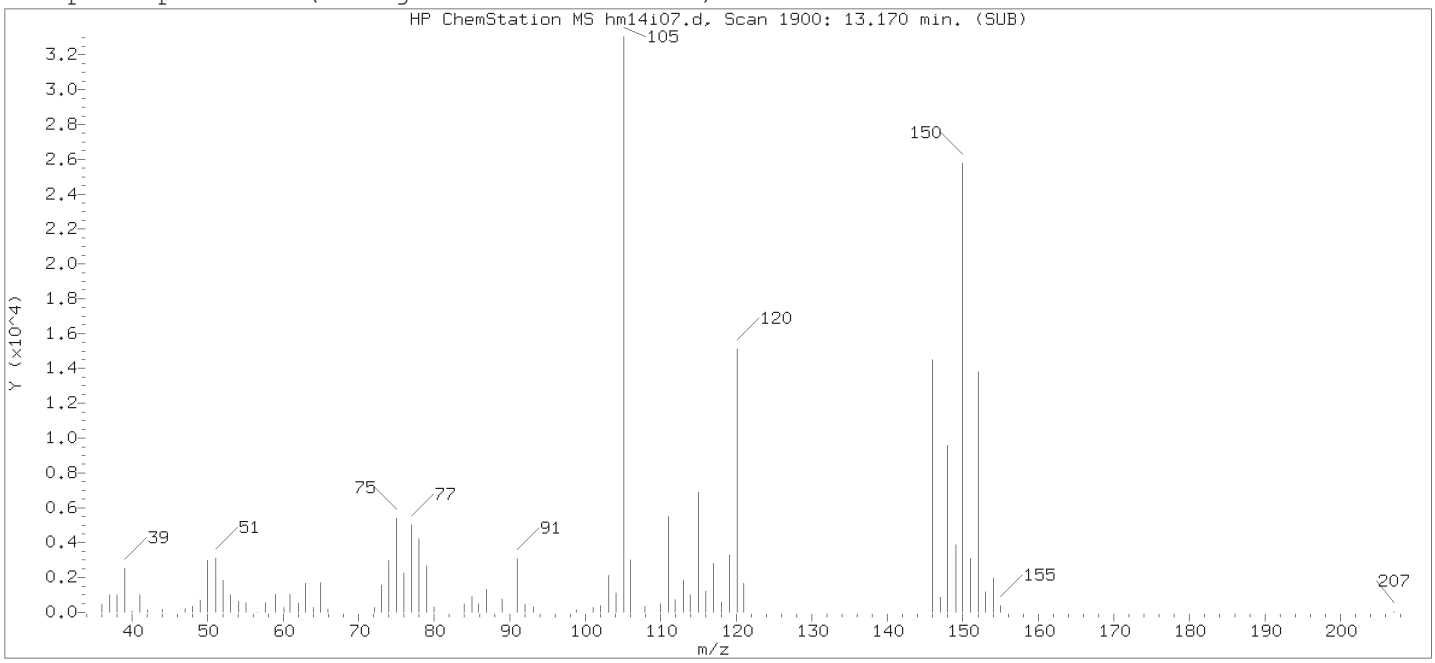
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 22673M
On-Column Amount (ng) : 0.2370
Integration start scan : 1892 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

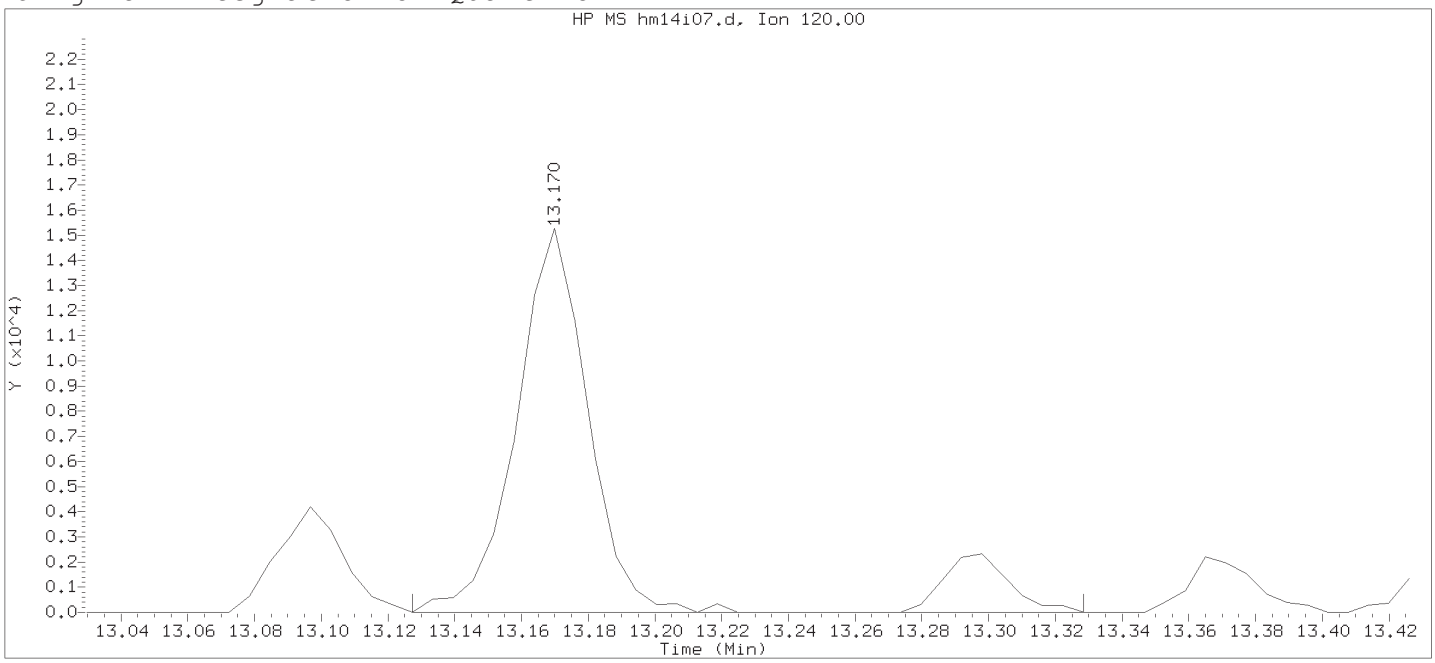
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



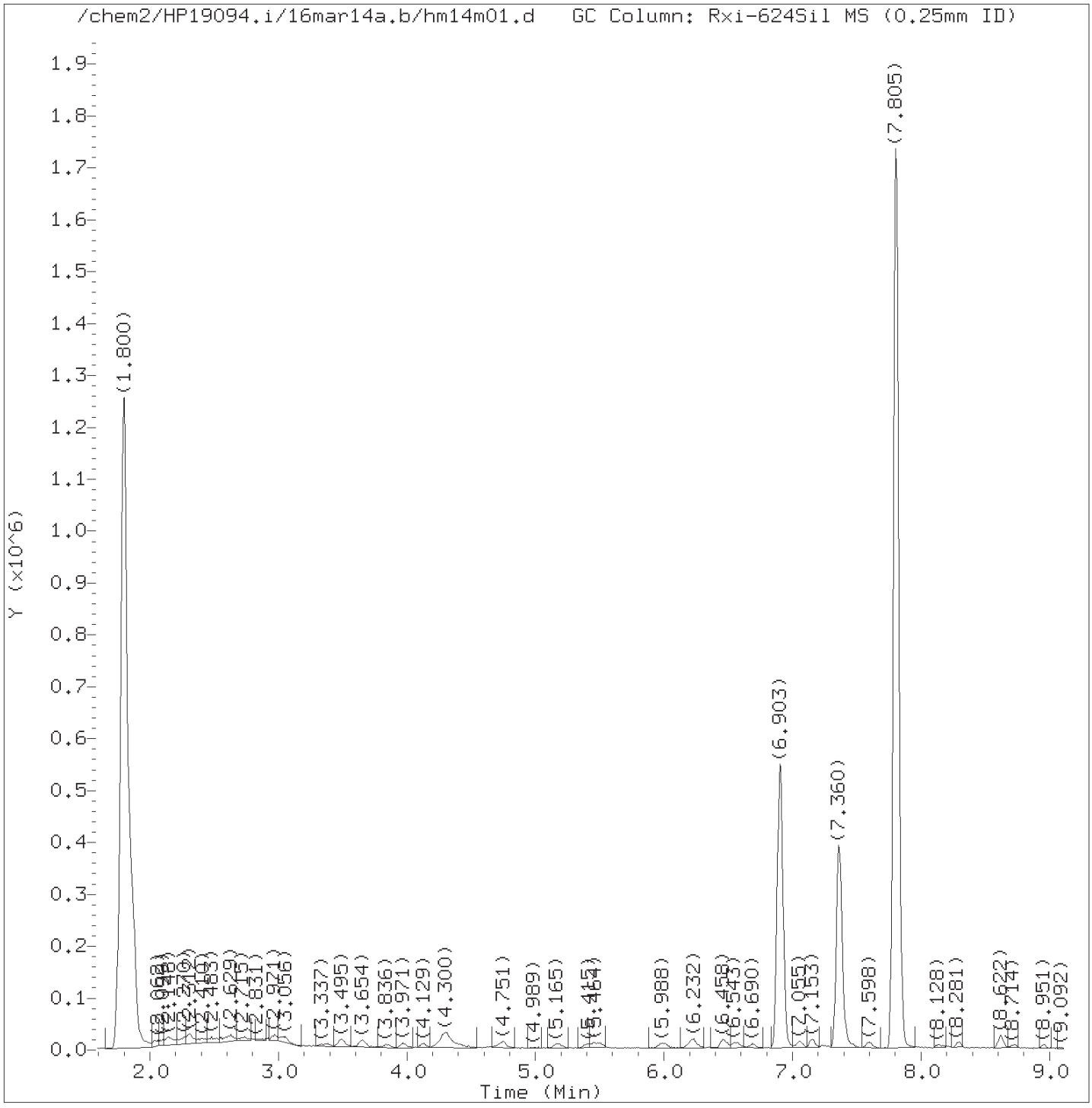
Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 25865
On-column Amount (ng) : 0.2641
Integration start scan : 1892 Integration stop scan: 1925
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973



Total Ion Chromatogram (TIC)

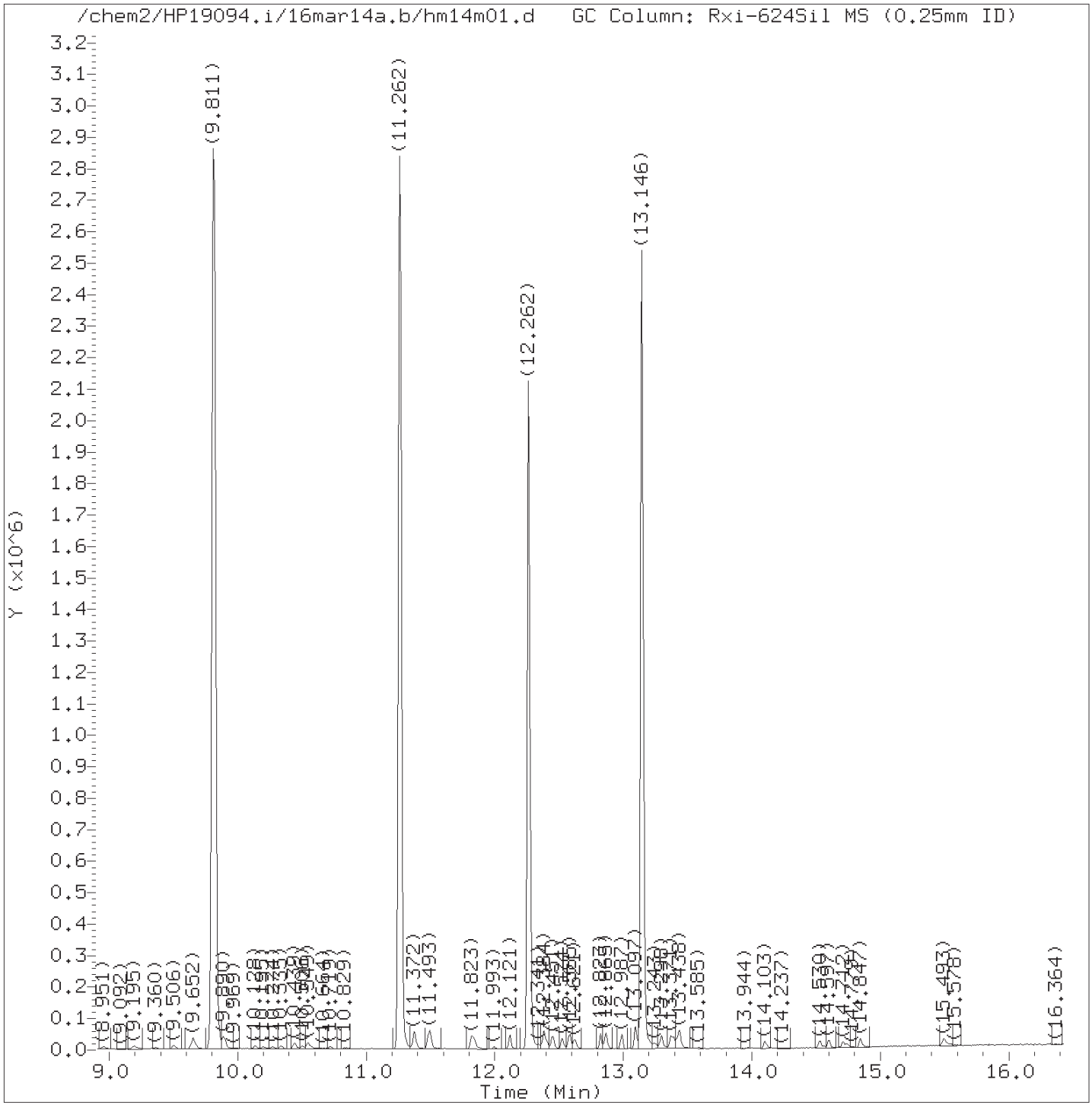
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.026	85	6696	0.082
2) Chloromethane	(2)	2.148	50	9614	0.121
5) Vinyl Chloride	(2)	2.276	62	7085	0.096
6) 1,3-Butadiene	(2)	2.306	39	5670M	0.101
7) Bromomethane	(2)	2.623	94	4812	0.098
8) Chloroethane	(2)	2.727	64	5751	0.126
9) Dichlorofluoromethane	(2)	2.971	67	10742M	0.104
10) Trichlorofluoromethane	(2)	3.038	101	7789	0.081
11) Ethyl ether	(2)	3.337	59	3631	0.091
12) Freon 123a	(2)	3.379	67	7477	0.101
13) Acrolein	(1)	3.495	56	32120	5.112
15) 1,1-Dichloroethene	(2)	3.647	96	4952	0.089
16) Freon 113	(2)	3.666	101	4280	0.074
14) Acetone	(1)	3.666	43	14842	1.714
17) Methyl Iodide	(2)	3.855	142	8881	0.087
18) Carbon Disulfide	(2)	3.971	76	18311	0.107
21) Methyl Acetate	(1)	4.105	43	1472M	0.069
22) Allyl Chloride	(2)	4.129	41	15054	0.144
26)*t-Butyl Alcohol-d10	(1)	4.300	65	110195	50.000
23) Methylene Chloride	(2)	4.306	84	5972	0.101
28) t-Butyl Alcohol	(1)	4.416	59	5844	1.972
29) Acrylonitrile	(1)	4.653	53	3931	0.378
30) Methyl Tertiary Butyl Ether	(2)	4.727	73	12091	0.095
31) trans-1,2-Dichloroethene	(2)	4.751	96	6174	0.103
32) n-Hexane	(2)	5.172	57	9215	0.091
33) 1,1-Dichloroethane	(2)	5.397	63	10893	0.090
34) di-Isopropyl Ether	(2)	5.458	45	20098	0.095
35) 2-Chloro-1,3-Butadiene	(2)	5.513	53	9367	0.094
37) Ethyl t-butyl ether	(2)	5.976	59	15662	0.088
40) 1,2-Dichloroethene (Total)	(2)		96	12317	0.196
38) 2-Butanone	(1)	6.171	43	14238	0.965
39) cis-1,2-Dichloroethene	(2)	6.214	96	6143	0.093
41) 2,2-Dichloropropane	(2)	6.232	77	9828	0.101
42) Propionitrile	(1)	6.251	54	5878	1.598
45) Methacrylonitrile	(1)	6.458	67	11576	0.919
47) Bromochloromethane	(2)	6.543	128	2206	0.088
48) Tetrahydrofuran	(1)	6.574	71	3515	0.942
49) Chloroform	(2)	6.702	83	10638	0.096

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	530960	9.562
51) 1,1,1-Trichloroethane	(2)	6.933	97	8879	0.094
52) Cyclohexane	(2)	7.055	56	11628	0.094
55) 1,1-Dichloropropene	(2)	7.147	75	8426	0.093
54) Carbon Tetrachloride	(2)	7.165	117	7632	0.089
56) Isobutyl Alcohol	(1)	7.232	41	9169	9.186
57)$1,2-Dichloroethane-d4	(2)	7.354	102	87351	9.498
58) Benzene	(2)	7.403	78	23626	0.093
59) 1,2-Dichloroethane	(2)	7.470	62	7033	0.107
60) t-Amyl methyl ether	(2)	7.598	73	13048	0.089
63)*Fluorobenzene	(2)	7.805	96	2356396	10.000
62) n-Heptane	(2)	7.836	43	11952	0.104
65) n-Butanol	(1)	8.140	56	8938M	10.579
67) Trichloroethene	(2)	8.299	95	6124	0.093
69) Methylcyclohexane	(2)	8.616	83	8271	0.076
70) 1,2-Dichloropropane	(2)	8.616	63	5958	0.090
71) Methyl Methacrylate	(1)	8.714	69	2158M	0.082
72) 1,4-Dioxane	(1)	8.732	88	326	1.958
73) Dibromomethane	(2)	8.738	93	2535	0.093
74) Bromodichloromethane	(2)	8.957	83	6776	0.089
76) 2-Nitropropane	(1)	9.201	41	10978M	1.301
80) cis-1,3-Dichloropropene	(2)	9.506	75	7727	0.083
81) 4-Methyl-2-Pentanone	(1)	9.652	43	33110	0.912
82)$Toluene-d8	(3)	9.811	98	2286073	10.383
83) Toluene	(3)	9.896	92	14724	0.099
84) trans-1,3-Dichloropropene	(3)	10.134	75	6281	0.090
85) 1,3-Dichloropropene (total)	(3)		75	14008	0.173
86) Ethyl Methacrylate	(3)	10.201	69	5026	0.094
88) 1,1,2-Trichloroethane	(3)	10.335	97	3199	0.089
89) Tetrachloroethene	(3)	10.445	166	6977	0.100
90) 1,3-Dichloropropane	(3)	10.500	76	5803	0.090
91) 2-Hexanone	(1)	10.549	43	22438M	0.874
93) Dibromochloromethane	(3)	10.719	129	4035	0.088
95) 1,2-Dibromoethane	(3)	10.841	107	2950	0.087
97)*Chlorobenzene-d5	(3)	11.262	117	1545583	10.000
98) Chlorobenzene	(3)	11.292	112	15041	0.093
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	5096	0.092
100) Ethylbenzene	(3)	11.378	91	29367	0.101

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

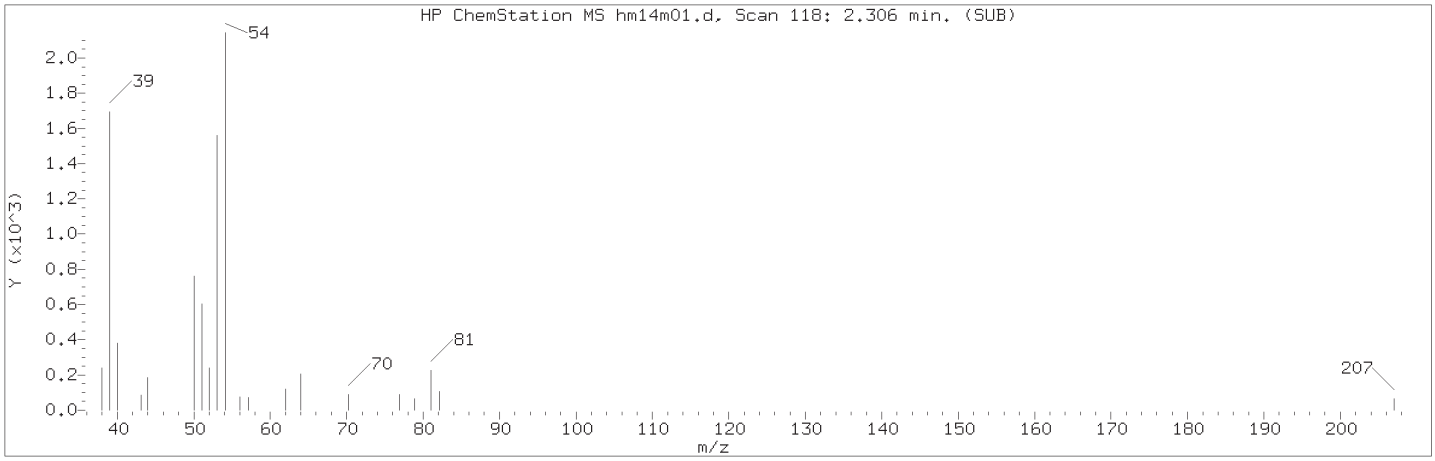
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.500	106	20833	0.188
105) Xylene (Total)	(3)		106	31010	0.283
104) o-Xylene	(3)	11.823	106	10177	0.095
106) Styrene	(3)	11.841	104	15819	0.092
107) Bromoform	(3)	11.993	173	2673	0.105
108) Isopropylbenzene	(3)	12.121	105	27703	0.097
111)$4-Bromofluorobenzene	(3)	12.262	95	688635	9.703
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	4168	0.103
115) trans-1,4-Dichloro-2-butene	(1)	12.384	53	9161	0.819
114) Bromobenzene	(4)	12.384	156	6169	0.102
116) 1,2,3-Trichloropropane	(4)	12.402	110	637	0.062
117) n-Propylbenzene	(4)	12.445	91	32243	0.098
119) 2-Chlorotoluene	(4)	12.524	126	6039	0.096
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	23290	0.102
122) 4-Chlorotoluene	(4)	12.621	126	6581	0.102
125) tert-Butylbenzene	(4)	12.823	134	4695M	0.096
126) Pentachloroethane	(4)	12.853	167	3455	0.094
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	22439	0.098
128) sec-Butylbenzene	(4)	12.987	105	29894	0.101
131) 1,3-Dichlorobenzene	(4)	13.097	146	11583	0.098
132) p-Isopropyltoluene	(4)	13.097	119	23890	0.095
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	649366	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	12863	0.107
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	10366M	0.110
136) Benzyl Chloride	(4)	13.249	126	1282	0.080
138) n-Butylbenzene	(4)	13.396	92	9637	0.079
139) 1,2-Dichlorobenzene	(4)	13.426	146	10813	0.103
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	358	0.062
145) 1,2,4-Trichlorobenzene	(4)	14.530	180	9978	0.133
146) Hexachlorobutadiene	(4)	14.597	225	4369	0.111
147) Naphthalene	(4)	14.712	128	19939	0.165
148) 1,2,3-Trichlorobenzene	(4)	14.853	180	10320	0.172

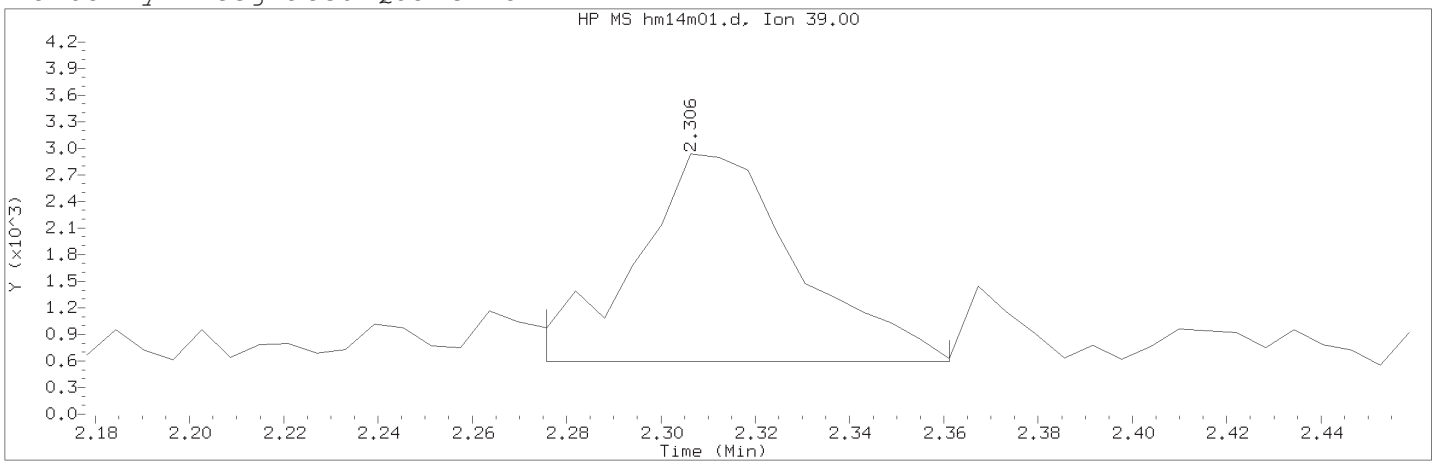
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

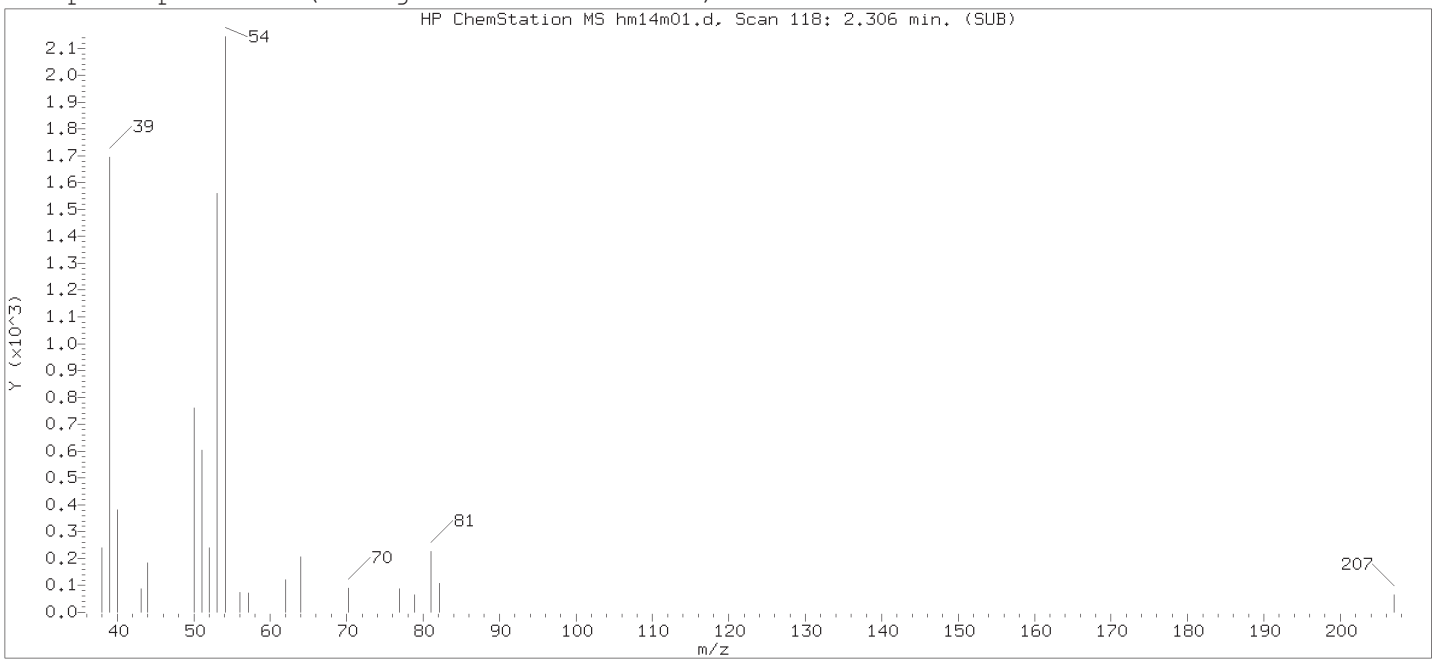
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 5670M
On-Column Amount (ng) : 0.1012
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 590 Y at integration end: 590

Reason for manual integration: improper integration

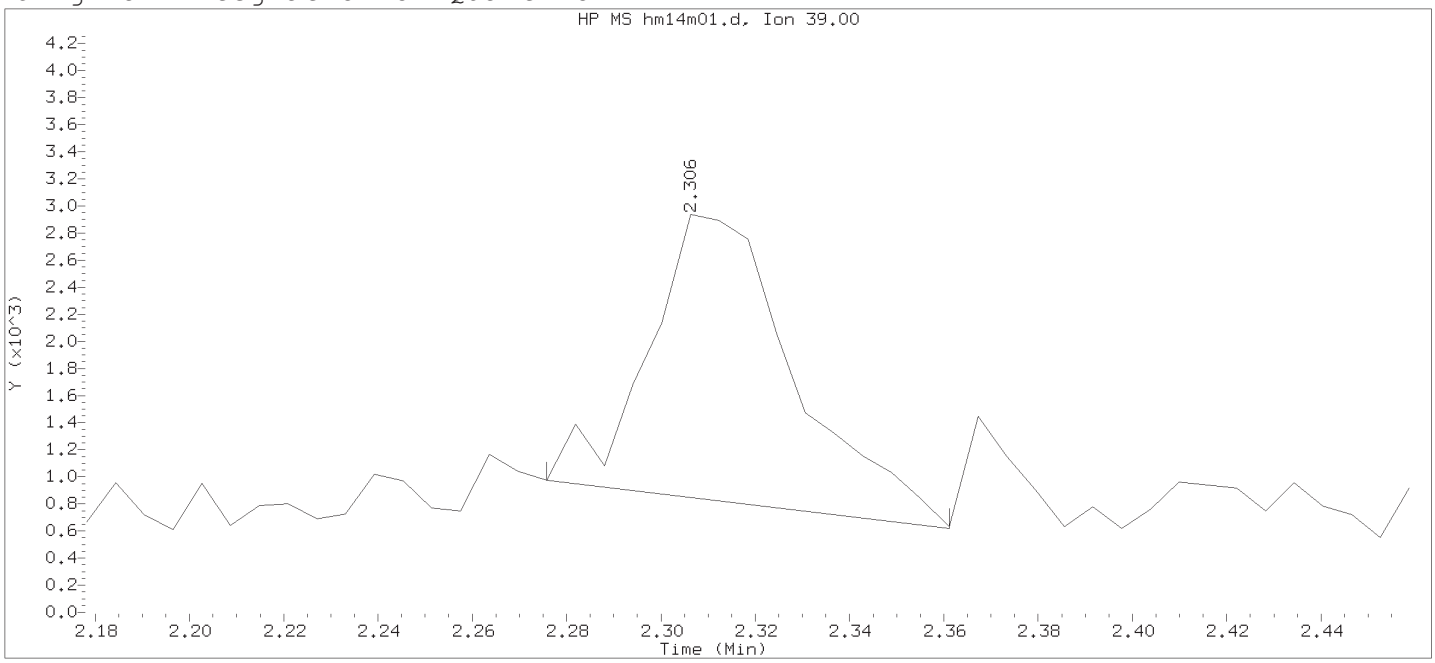
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

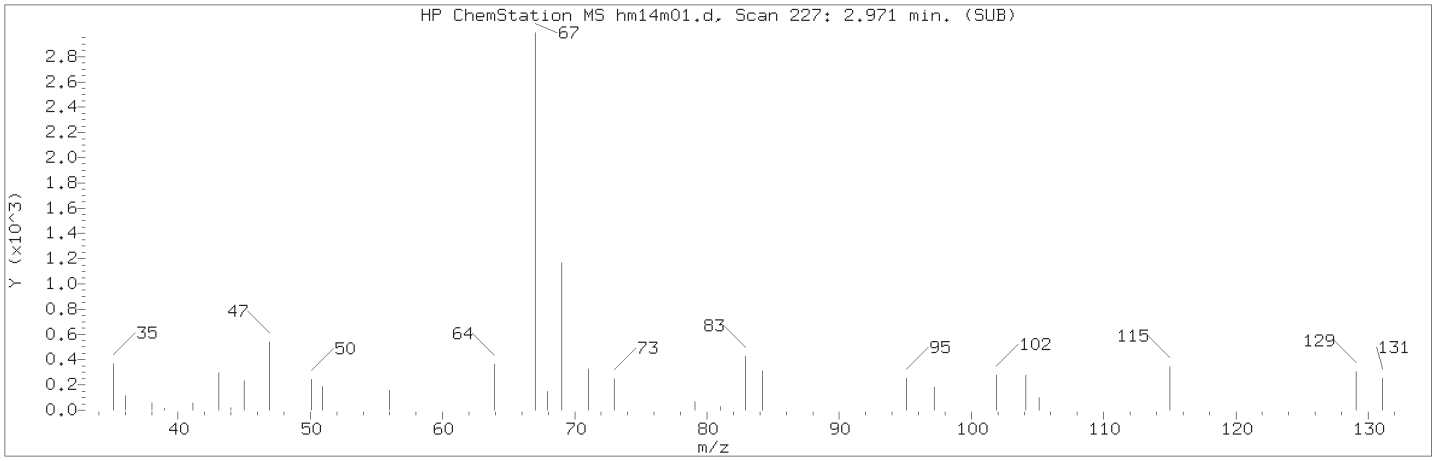
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

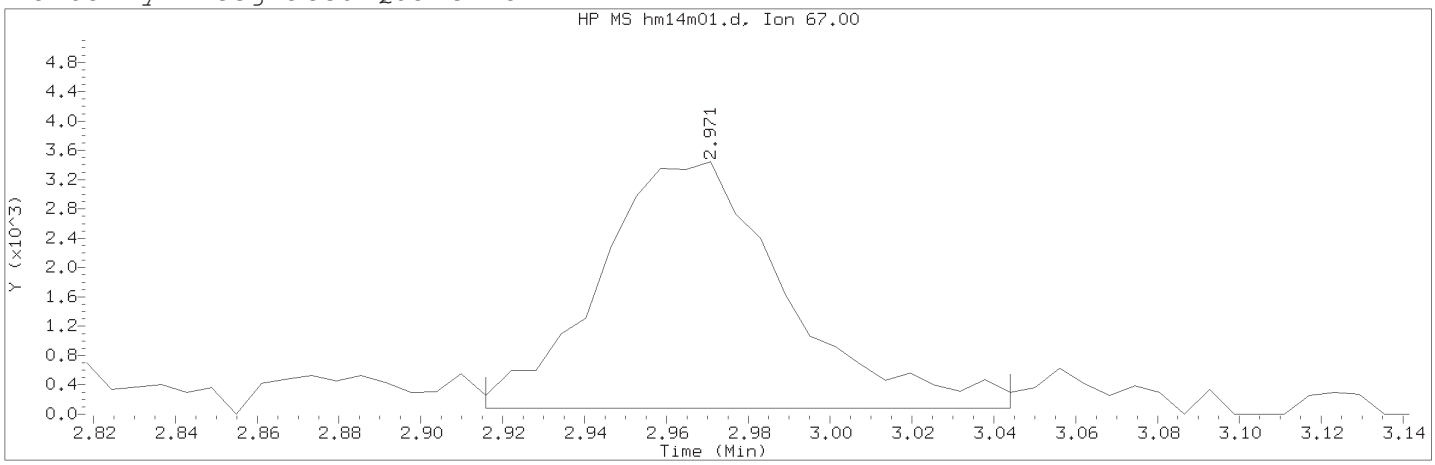
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 4538
On-column Amount (ng) : 0.0810
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 973 Y at integration end: 619

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

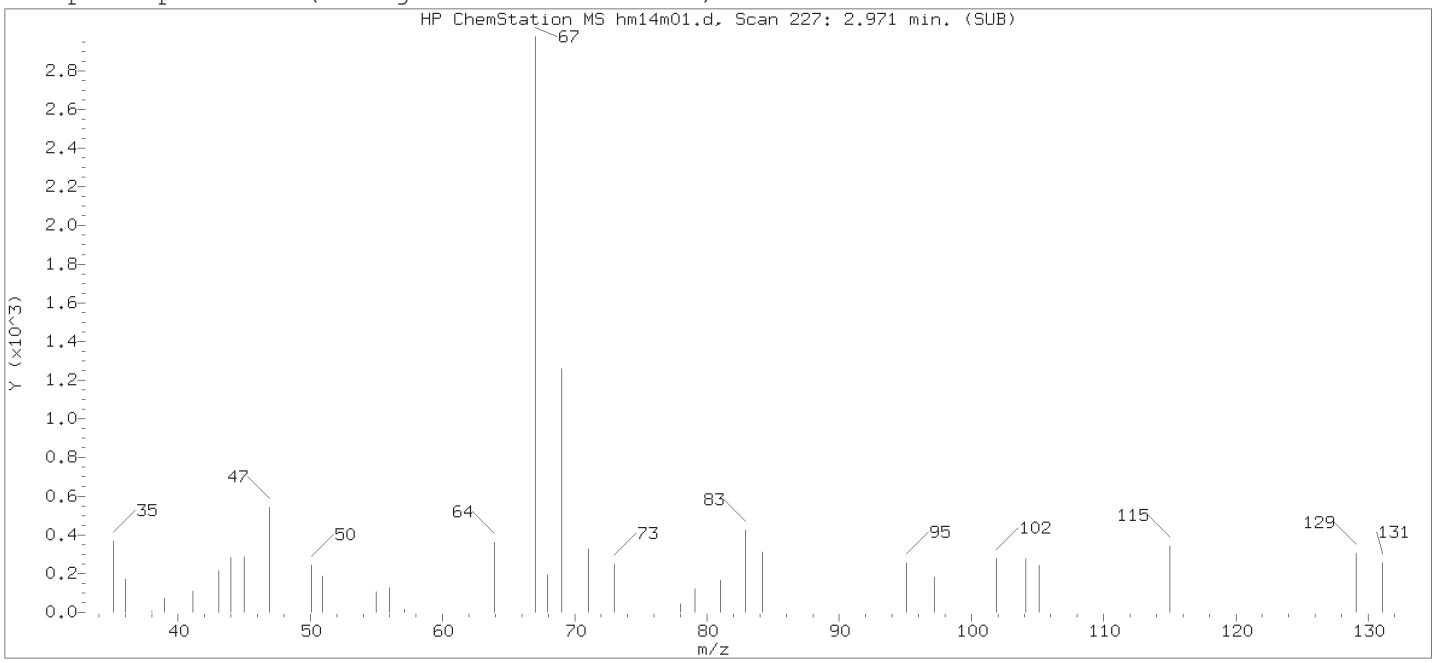
Compound Number : 9
Compound Name : Dichlorofluoromethane
Scan Number : 227
Retention Time (minutes): 2.971
Quant Ion : 67.00
Area (flag) : 10742M
On-Column Amount (ng) : 0.1036
Integration start scan : 217 Integration stop scan: 238
Y at integration start : 82 Y at integration end: 82

Reason for manual integration: improper integration

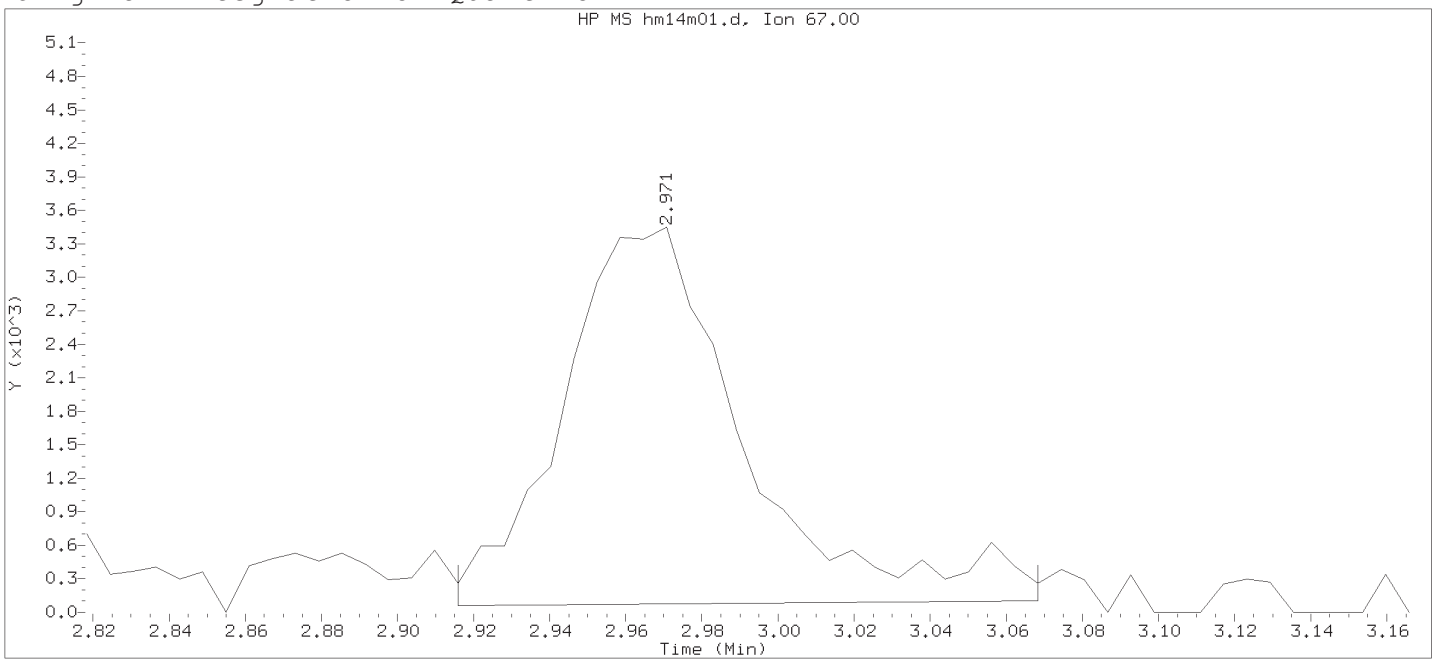
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 9		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 227		
Retention Time (minutes)	: 2.971		
Quant Ion	: 67.00		
Area	: 11158		
On-column Amount (ng)	: 0.1076		
Integration start scan	: 217	Integration stop scan:	242
Y at integration start	: 62	Y at integration end:	103

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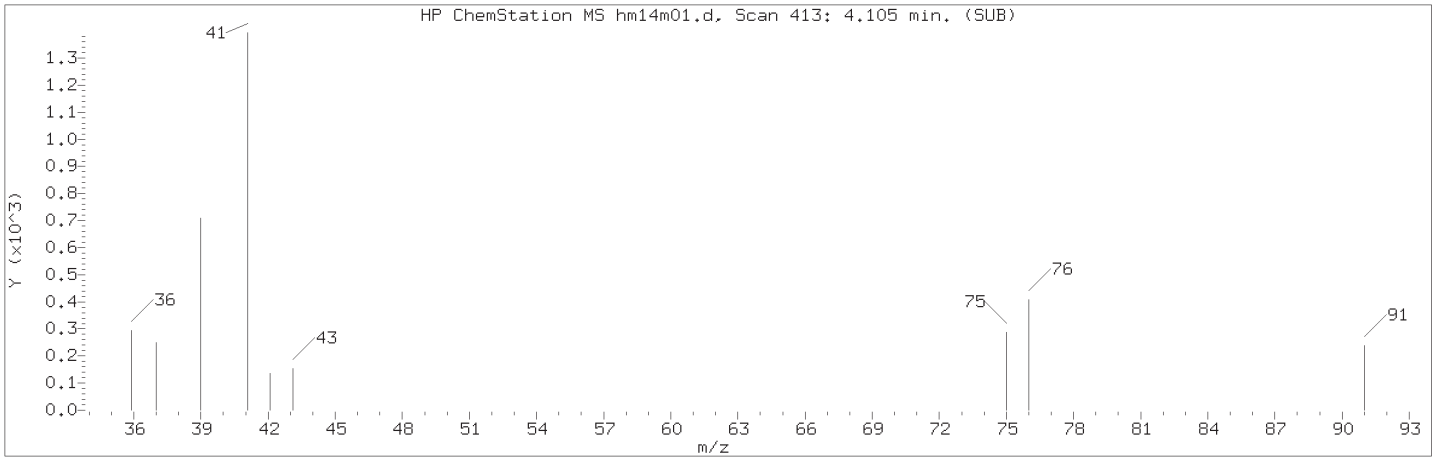
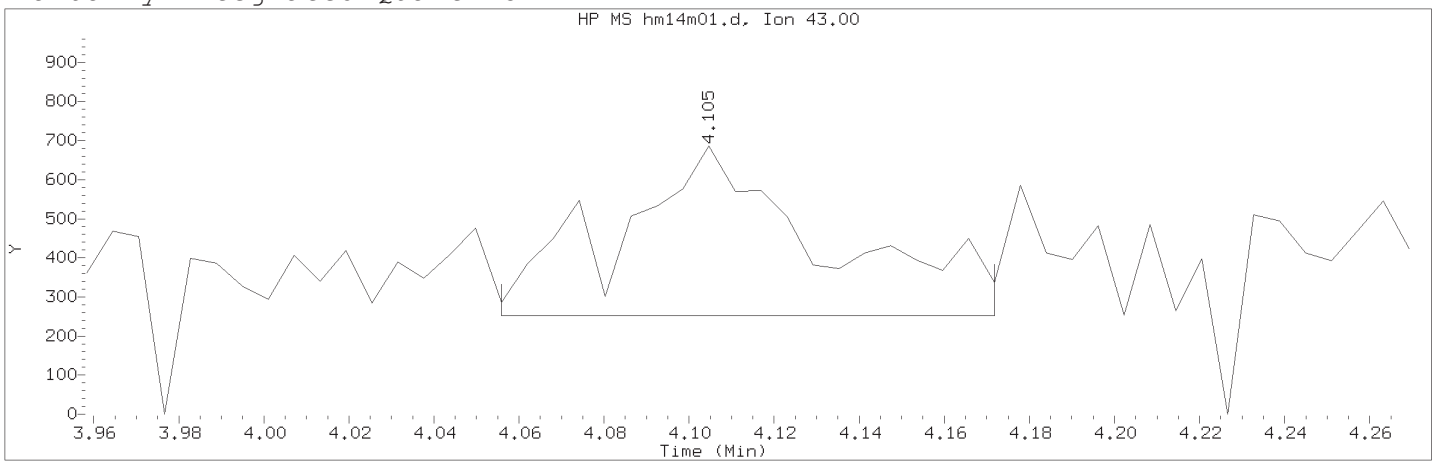
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

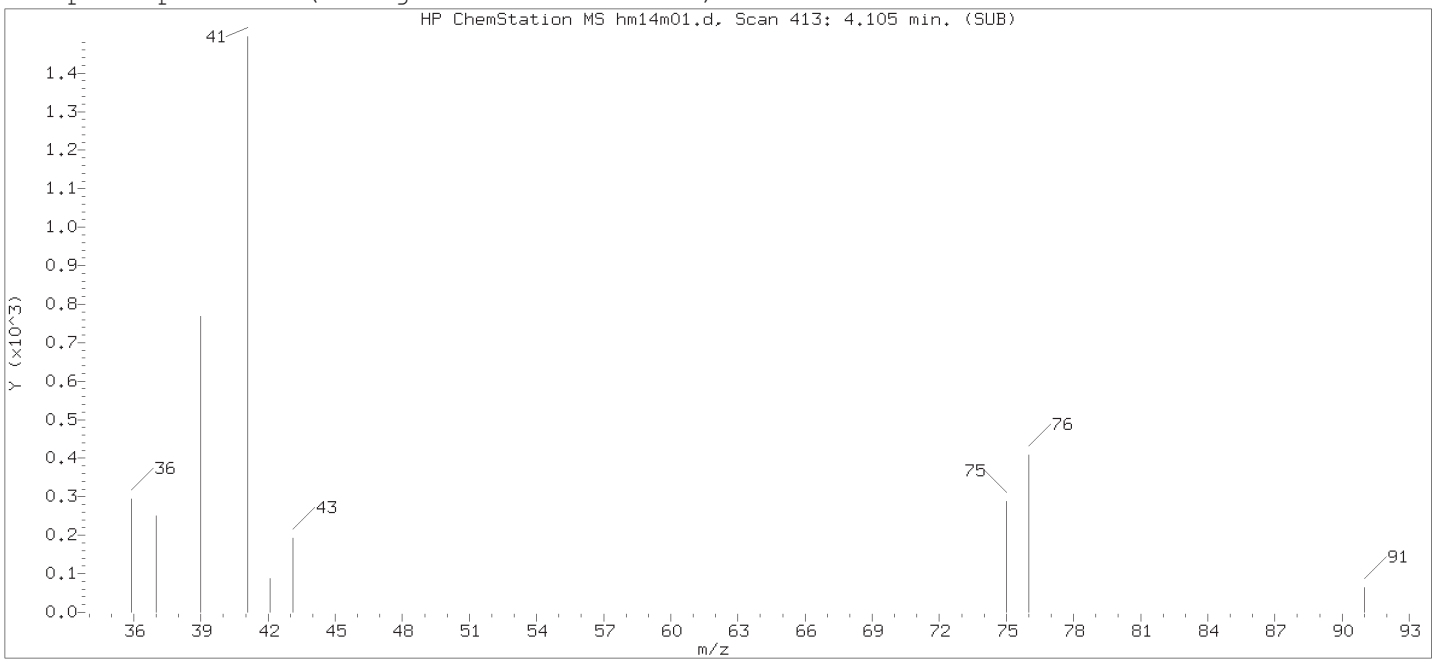
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area (flag) : 1472M
On-Column Amount (ng) : 0.0686
Integration start scan : 404 Integration stop scan: 423
Y at integration start : 252 Y at integration end: 252

Reason for manual integration: improper integration

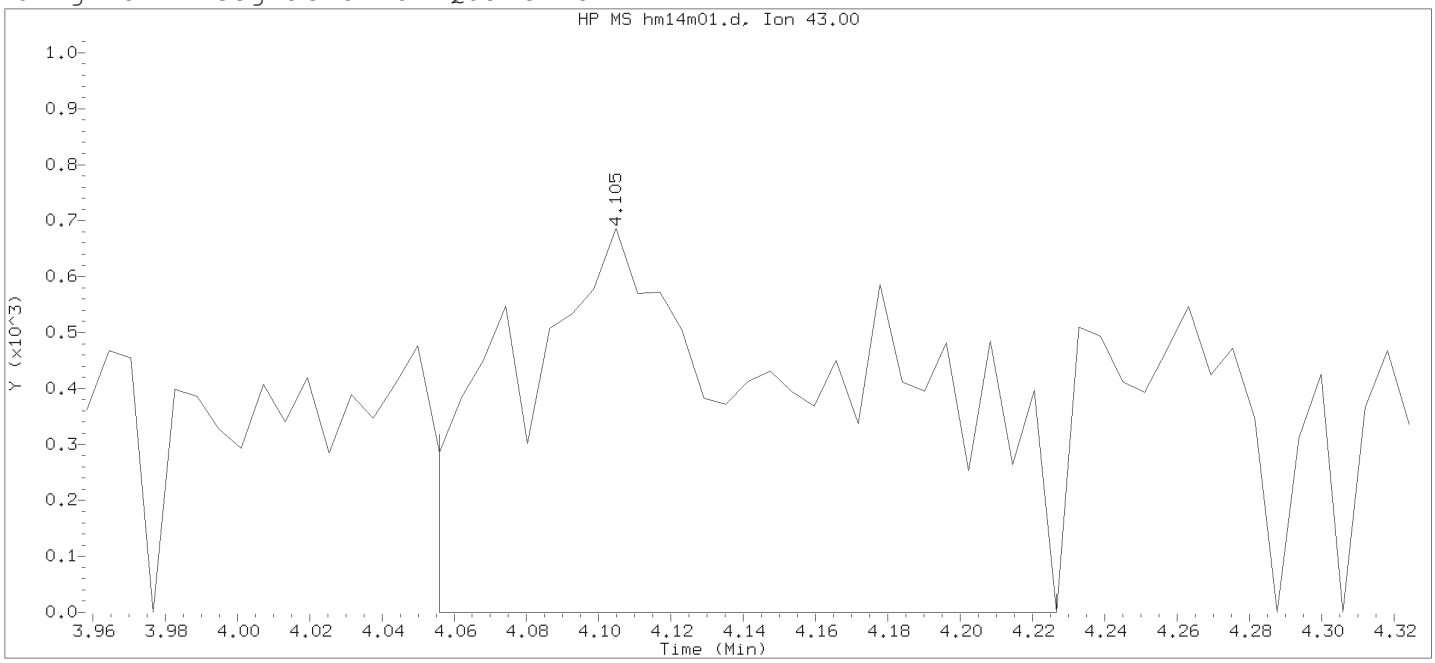
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

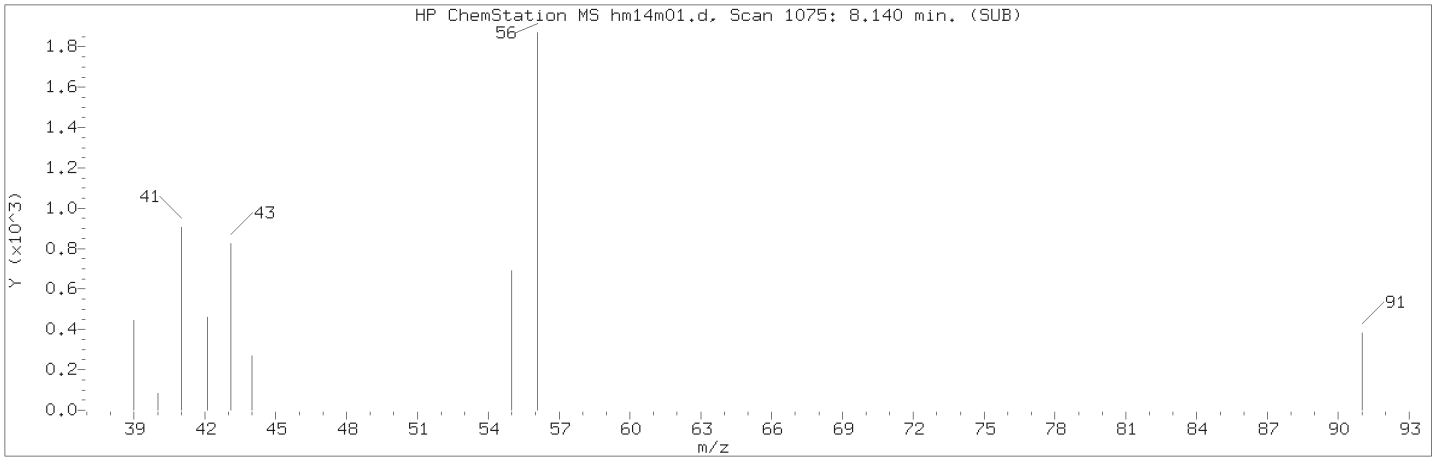
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

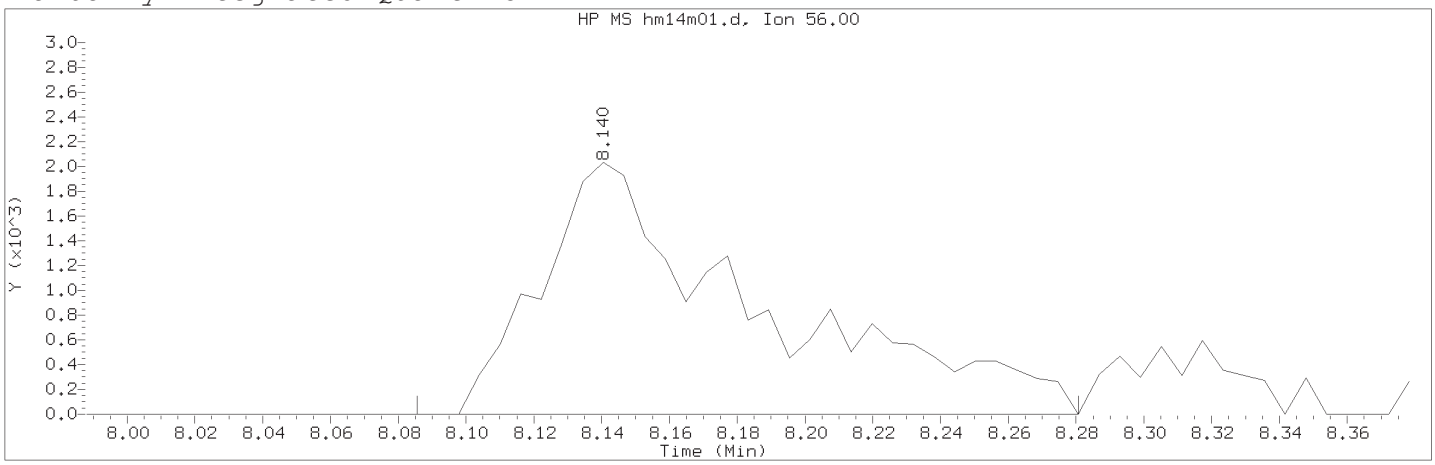
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area : 4461
On-column Amount (ng) : 0.2079
Integration start scan : 404 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

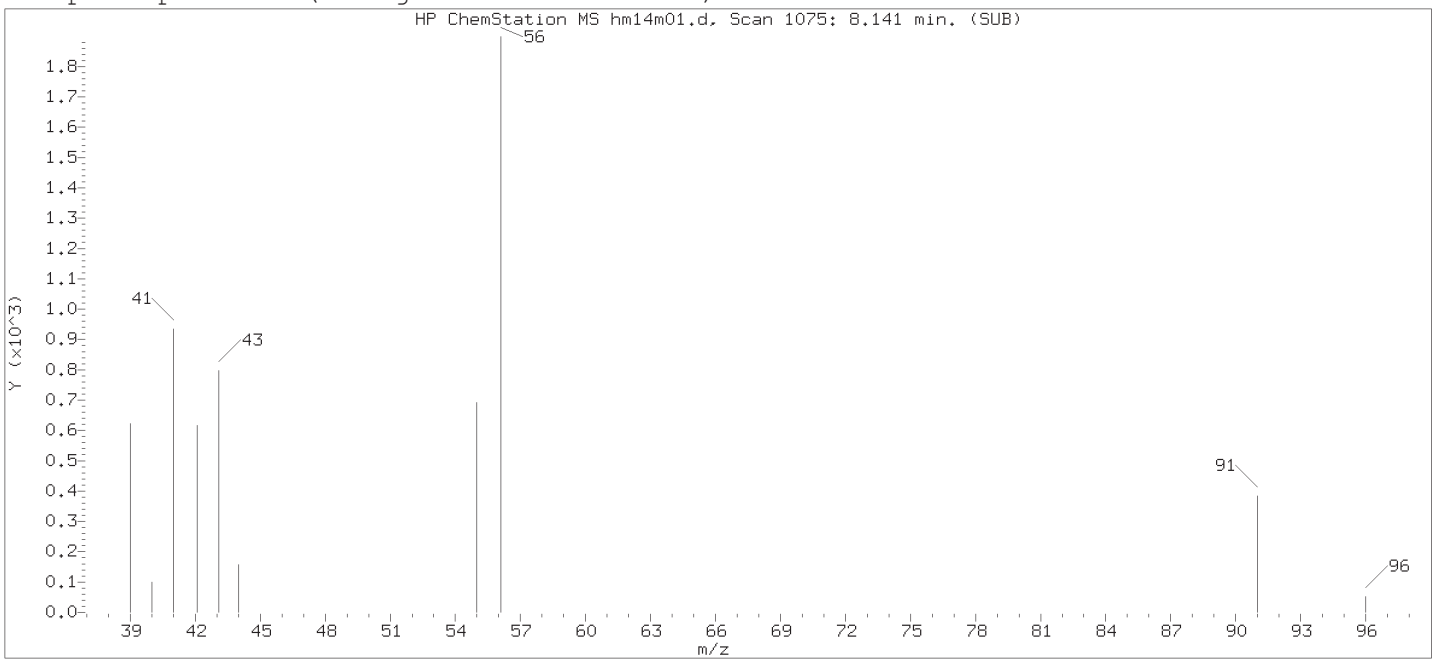
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area (flag) : 8938M
On-Column Amount (ng) : 10.5787
Integration start scan : 1065 Integration stop scan: 1097
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

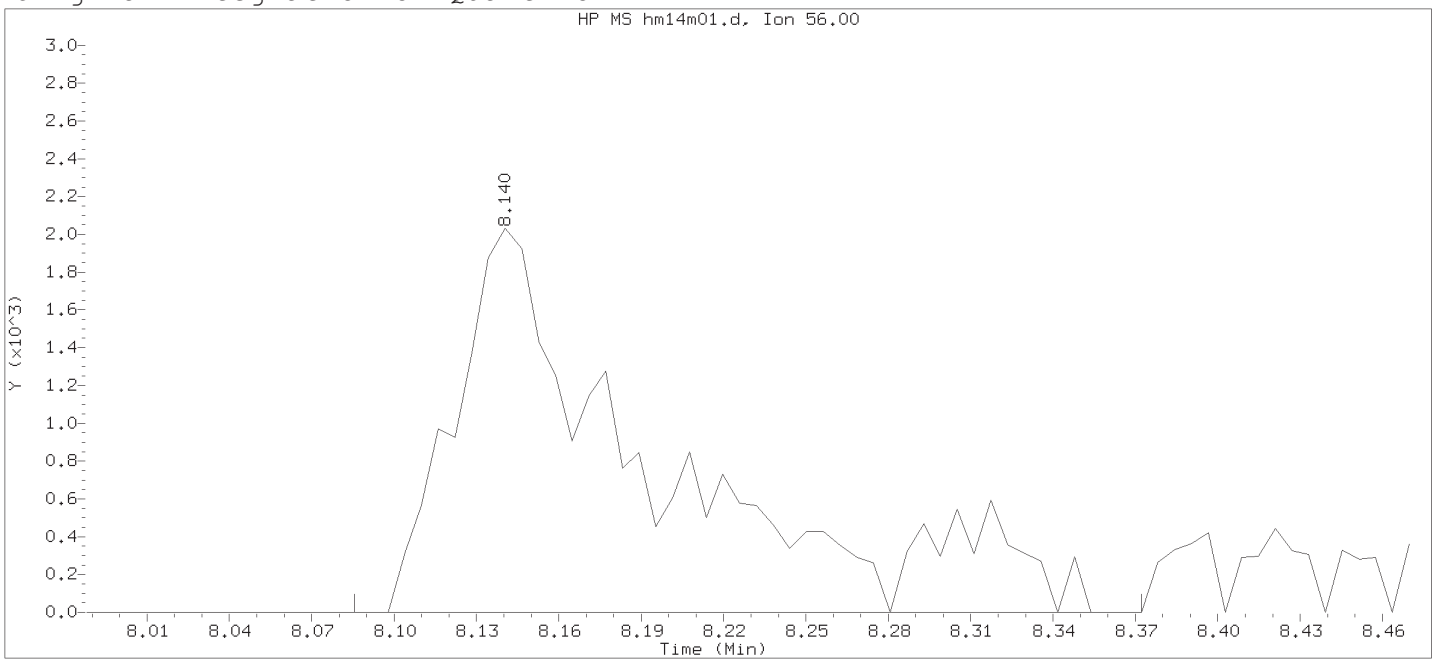
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

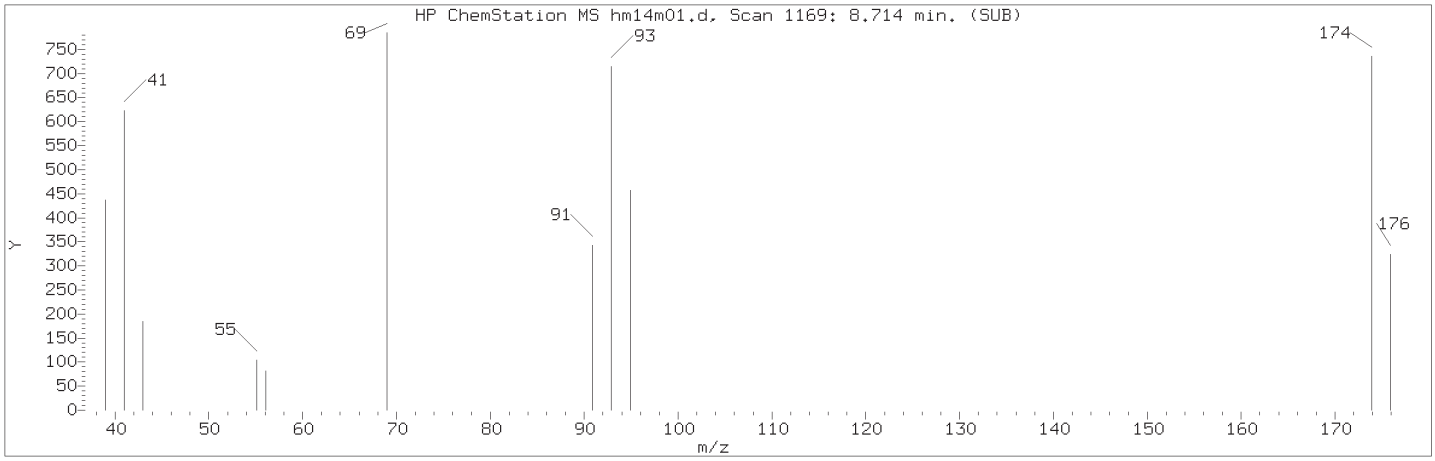
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

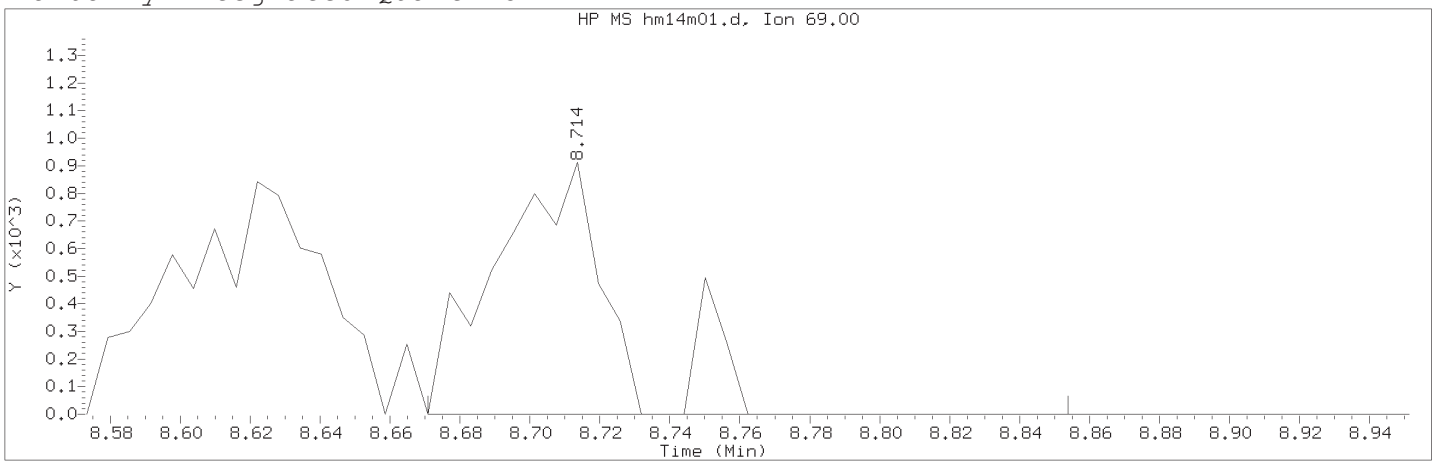
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area : 10317
On-column Amount (ng) : 12.2097
Integration start scan : 1065 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

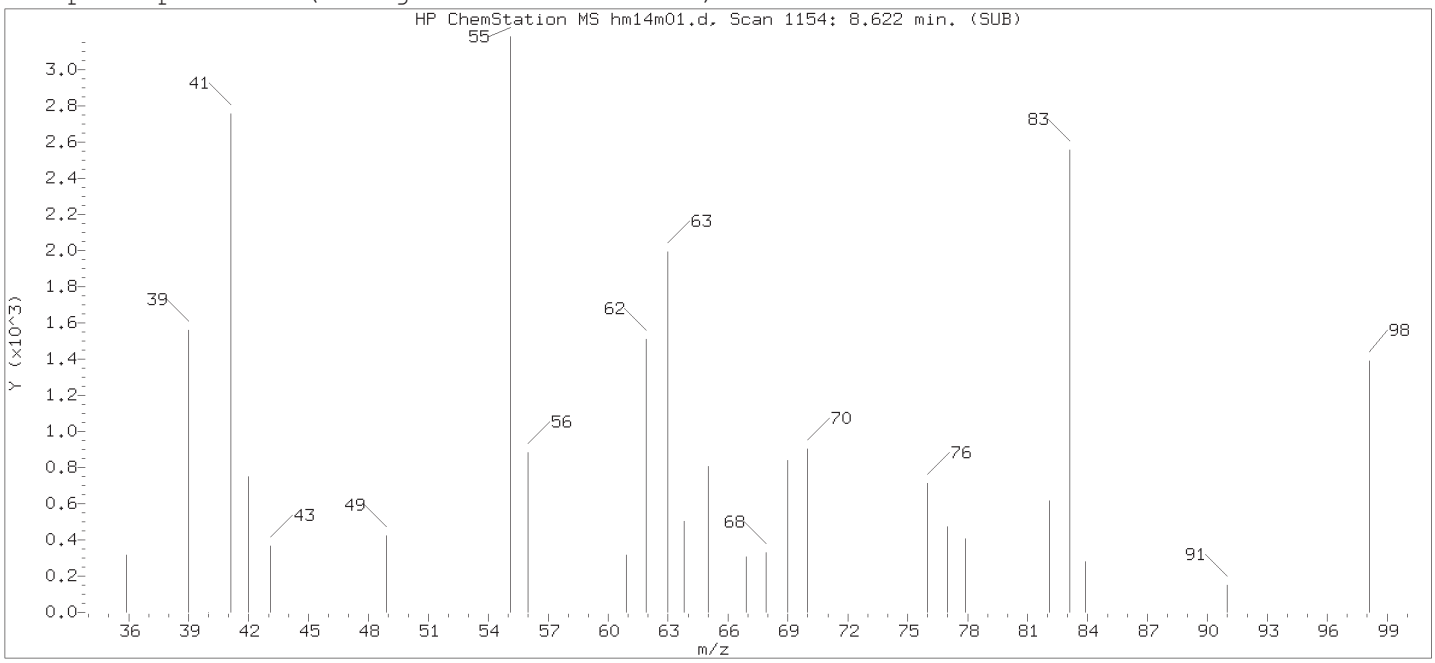
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1169
Retention Time (minutes): 8.714
Quant Ion : 69.00
Area (flag) : 2158M
On-Column Amount (ng) : 0.0820
Integration start scan : 1161 Integration stop scan: 1191
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

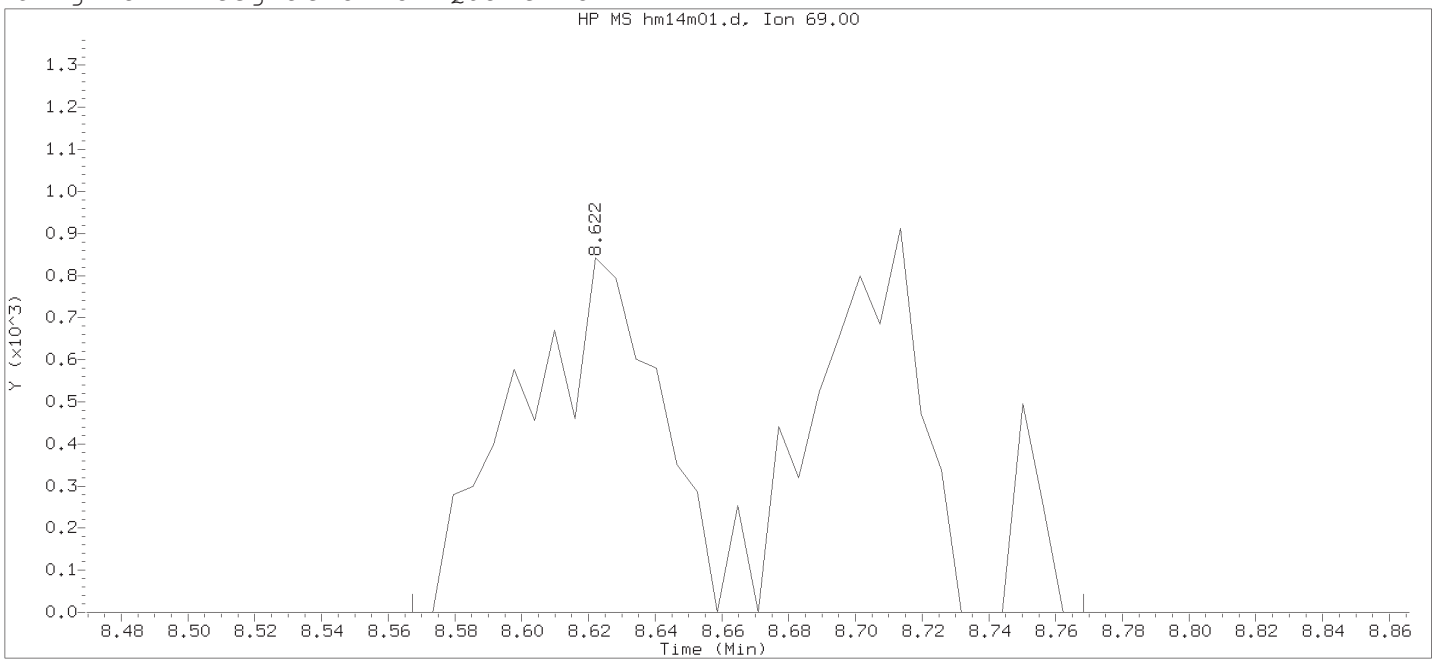
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

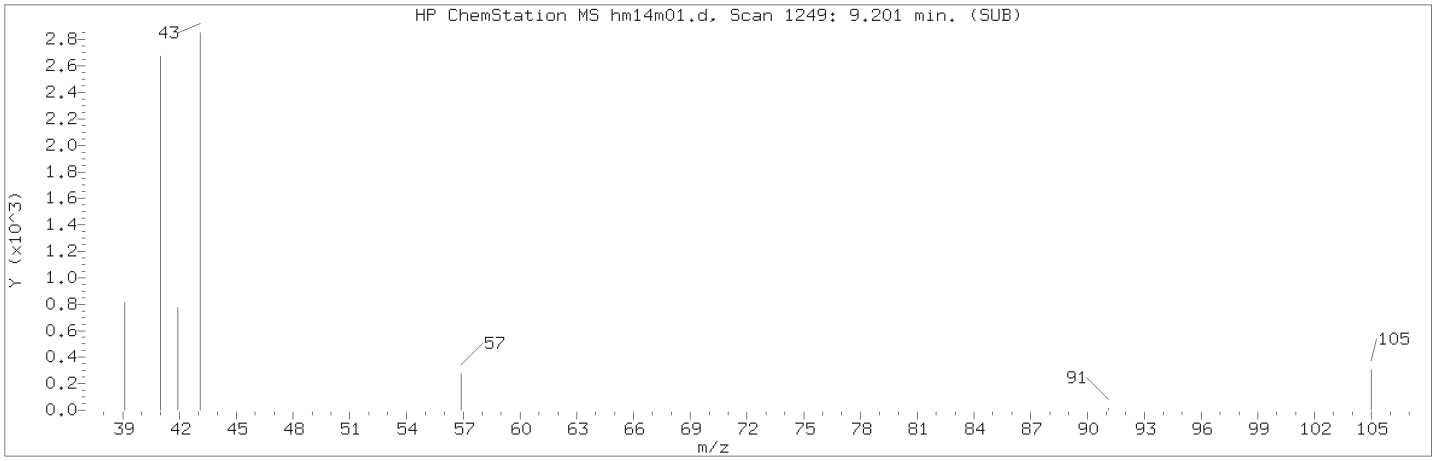
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

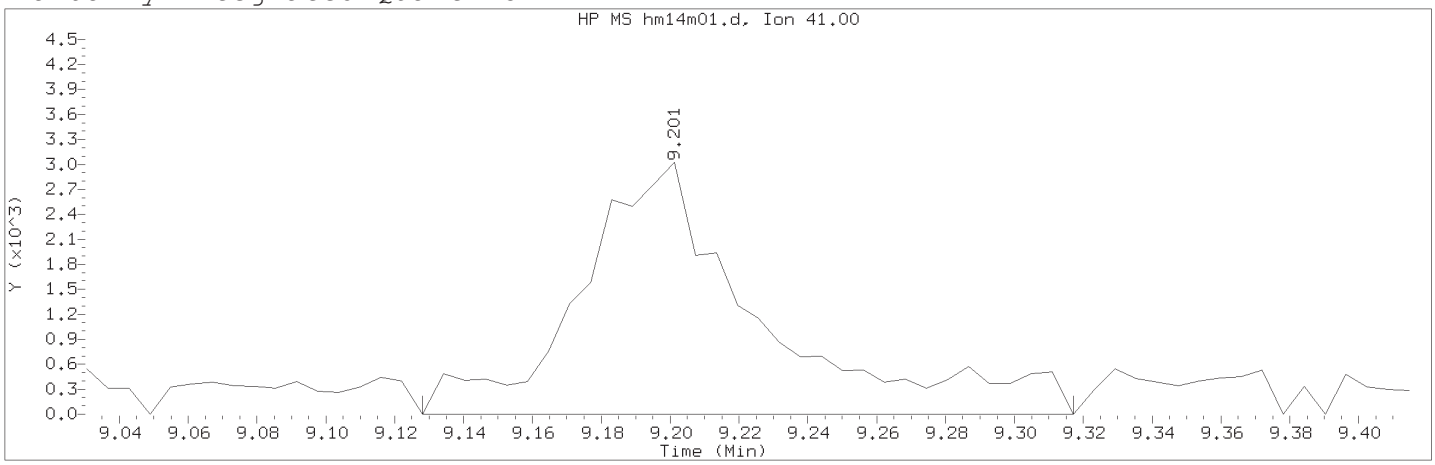
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 4664
On-column Amount (ng) : 0.1772
Integration start scan : 1144 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

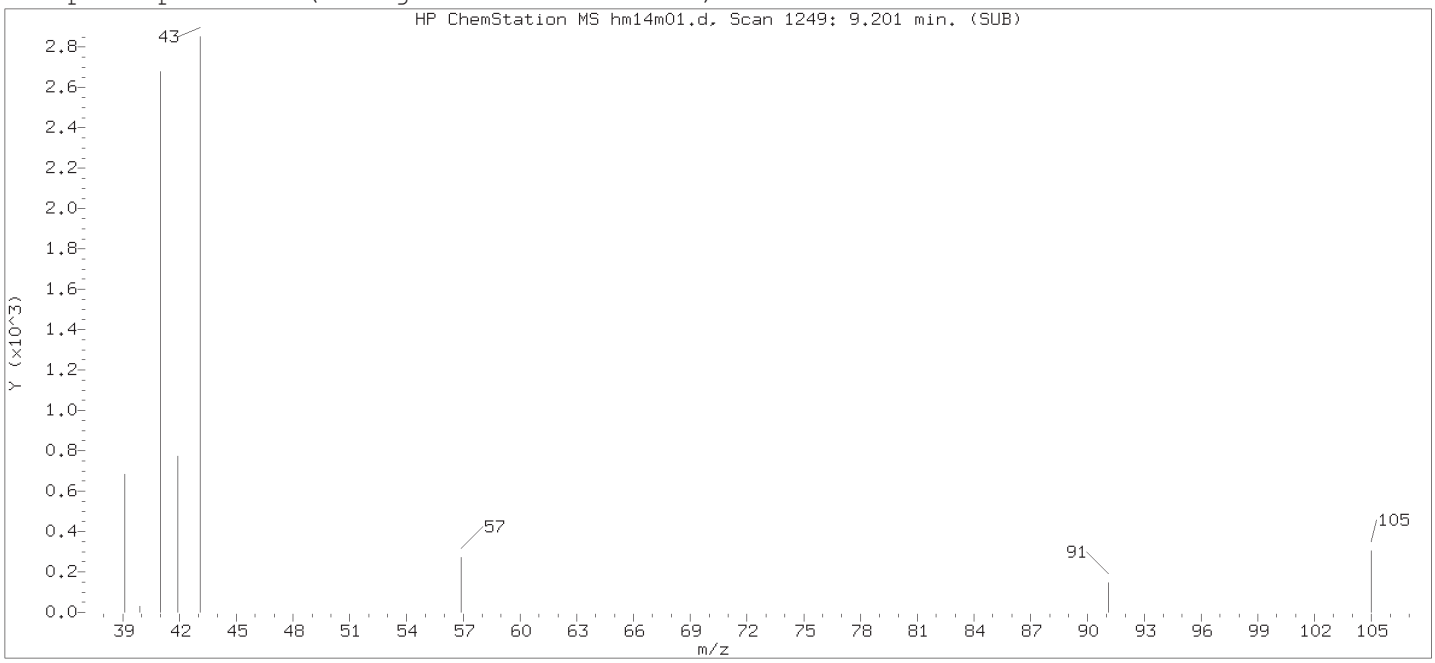
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area (flag) : 10978M
On-Column Amount (ng) : 1.3014
Integration start scan : 1236 Integration stop scan: 1267
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

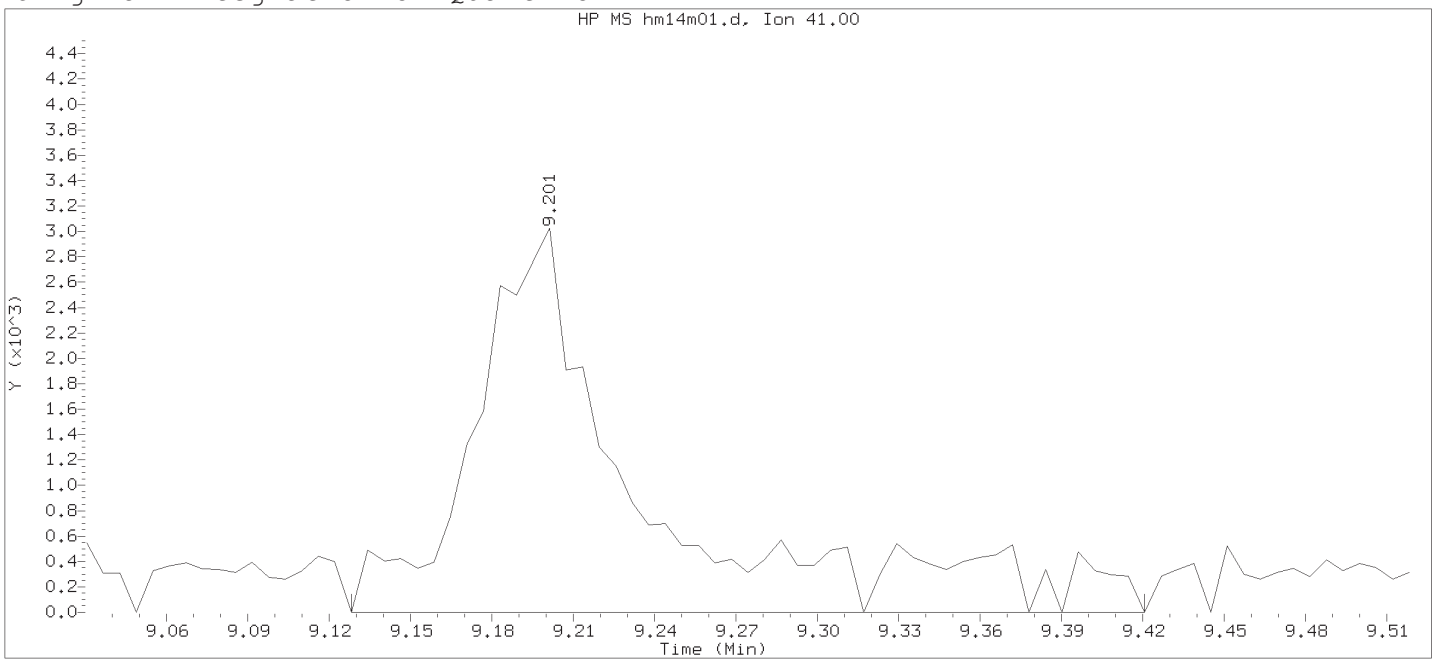
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

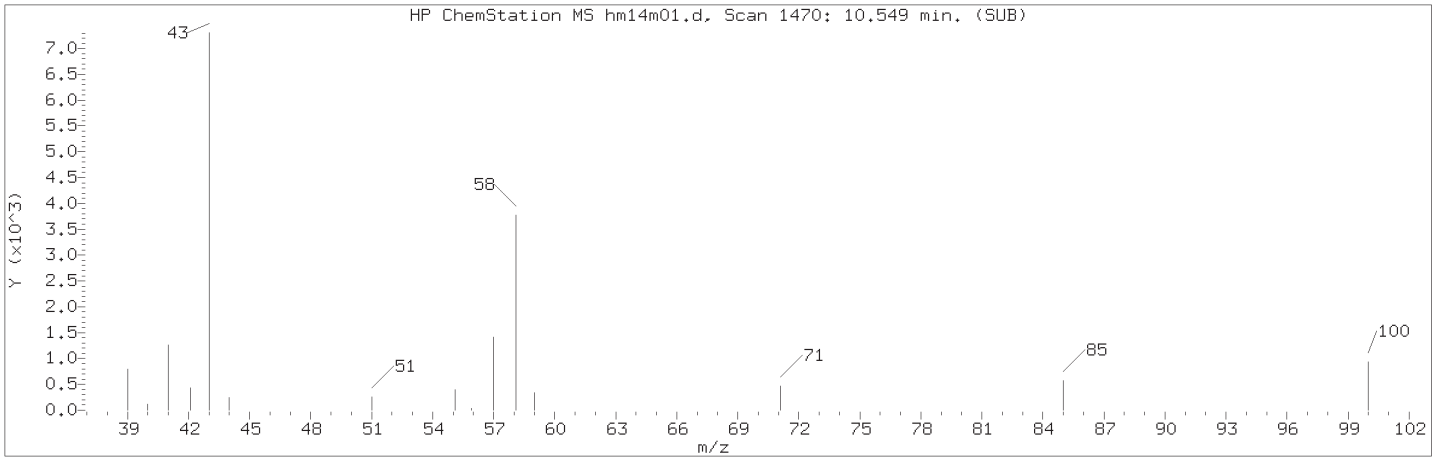
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

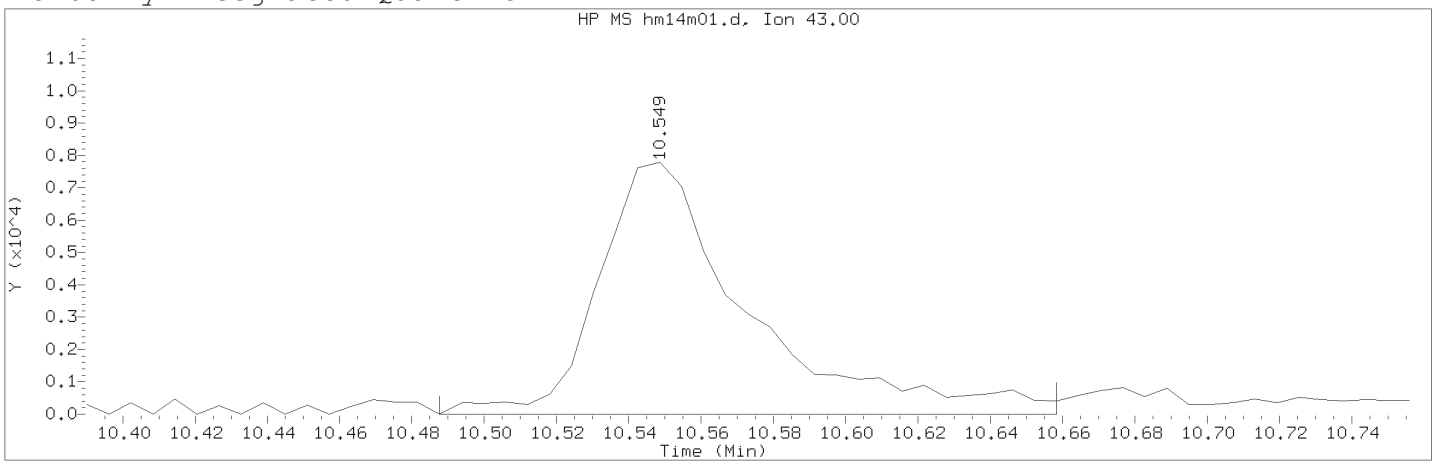
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area : 12999
On-column Amount (ng) : 1.5410
Integration start scan : 1236 Integration stop scan: 1284
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

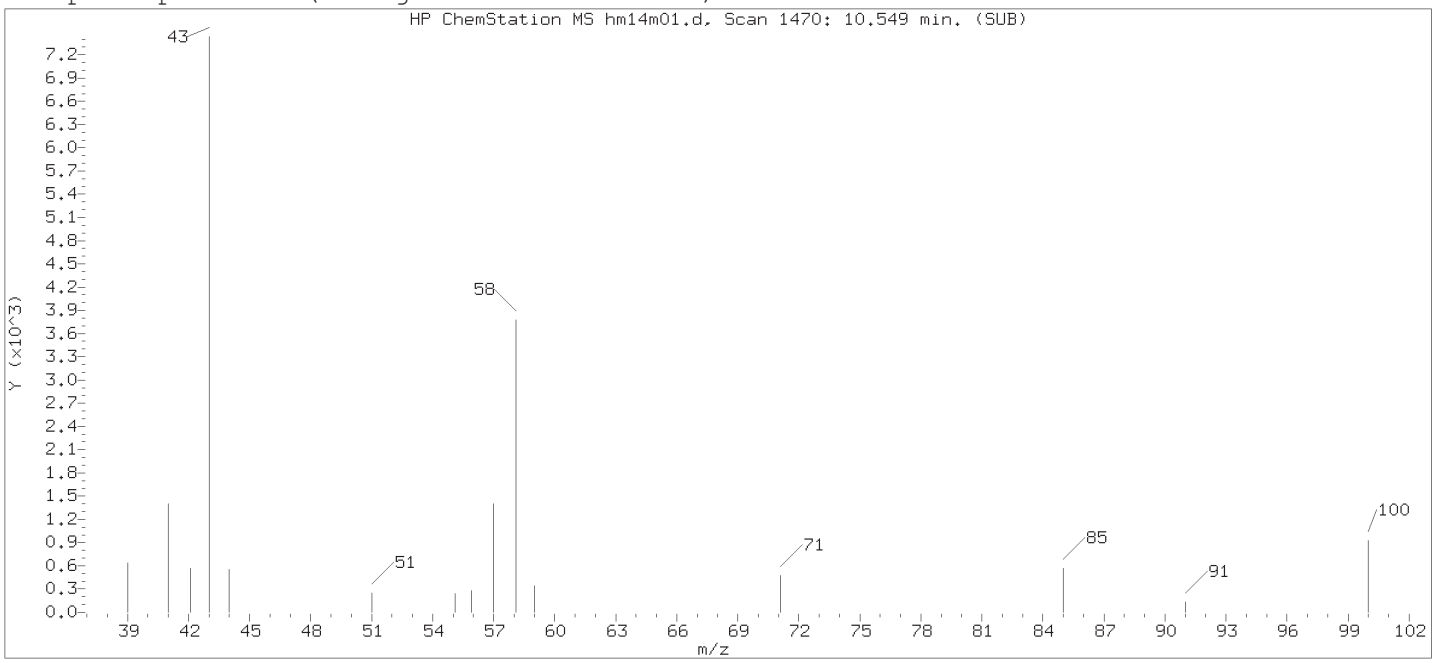
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area (flag) : 22438M
On-Column Amount (ng) : 0.8741
Integration start scan : 1459 Integration stop scan: 1487
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

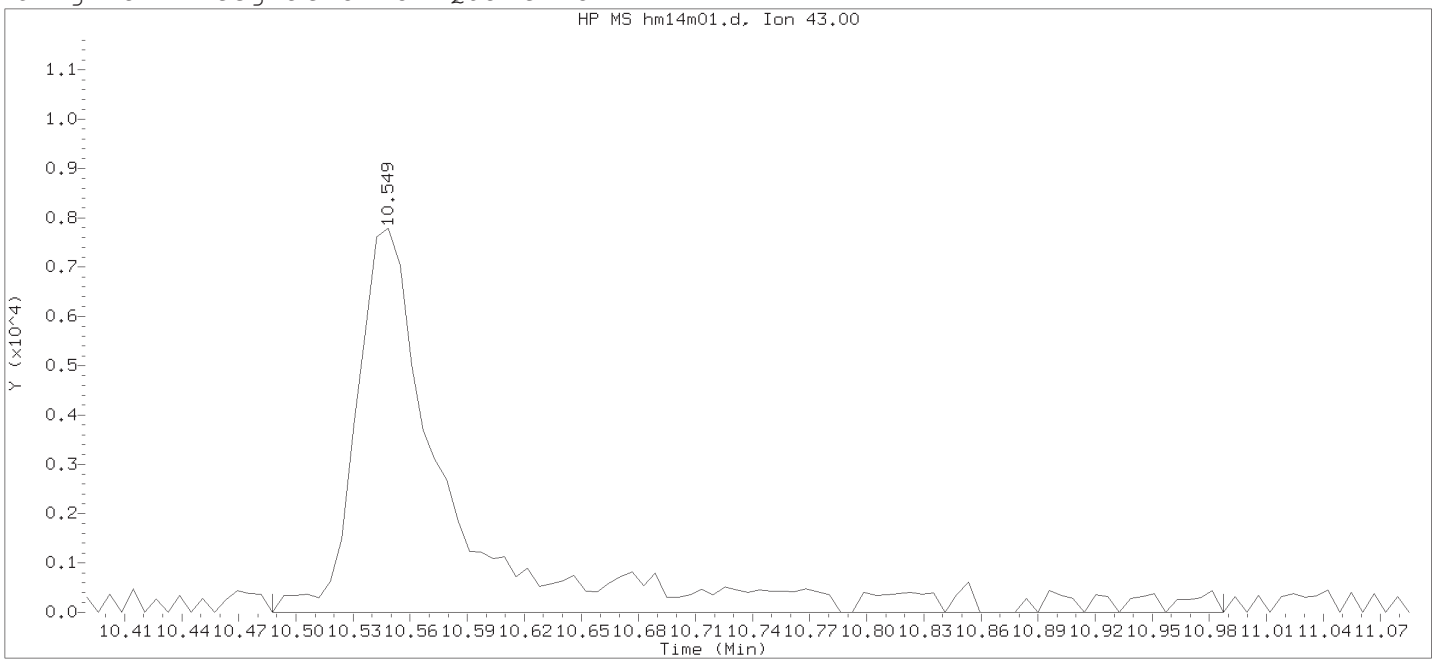
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

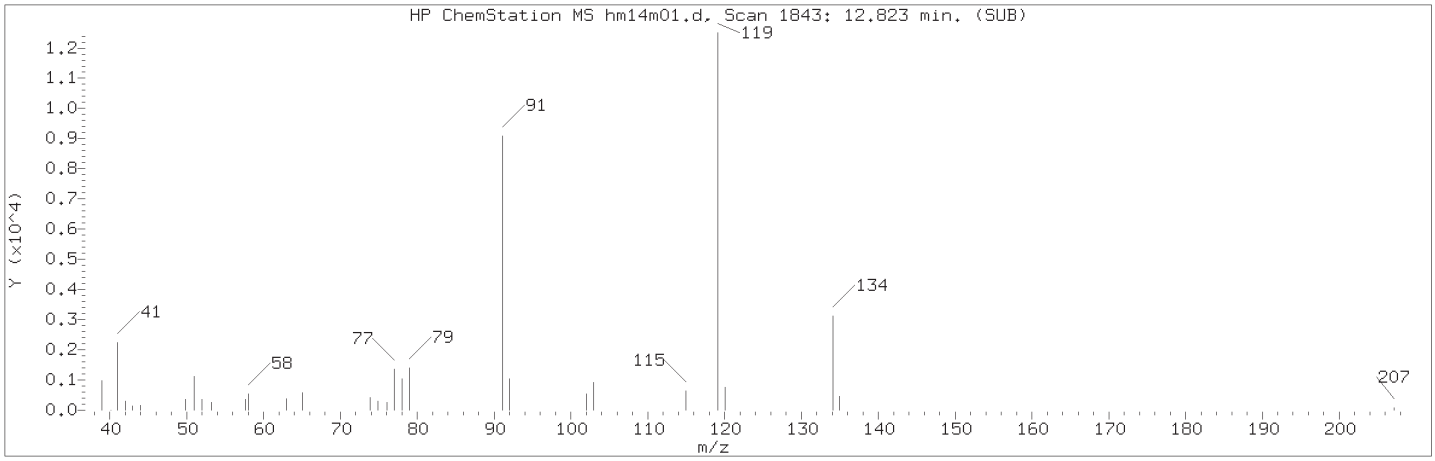
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

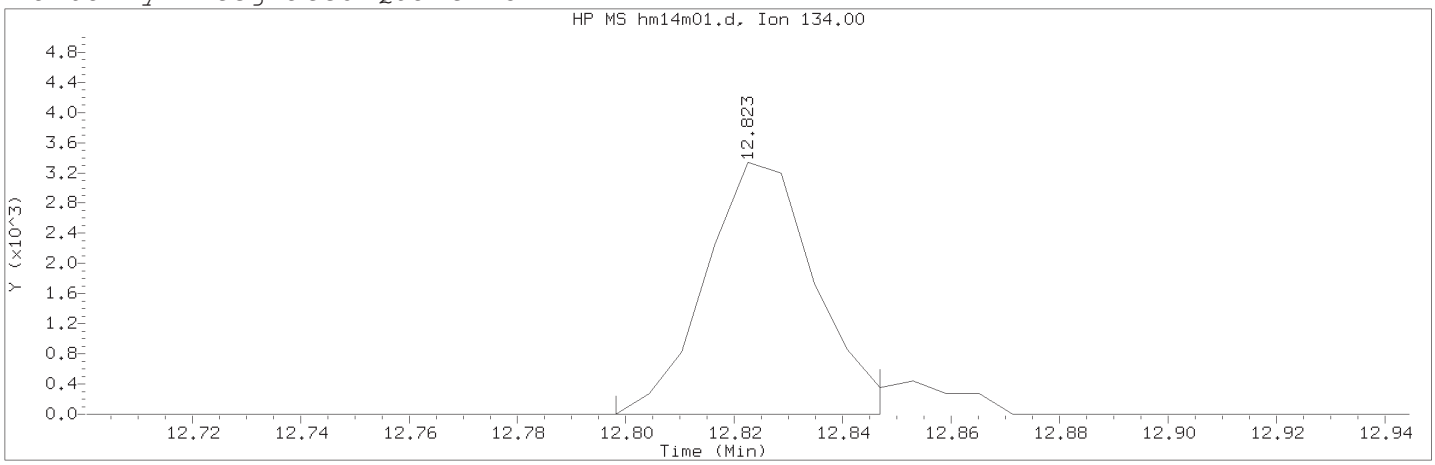
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area : 28808
On-column Amount (ng) : 1.1223
Integration start scan : 1459 Integration stop scan: 1541
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

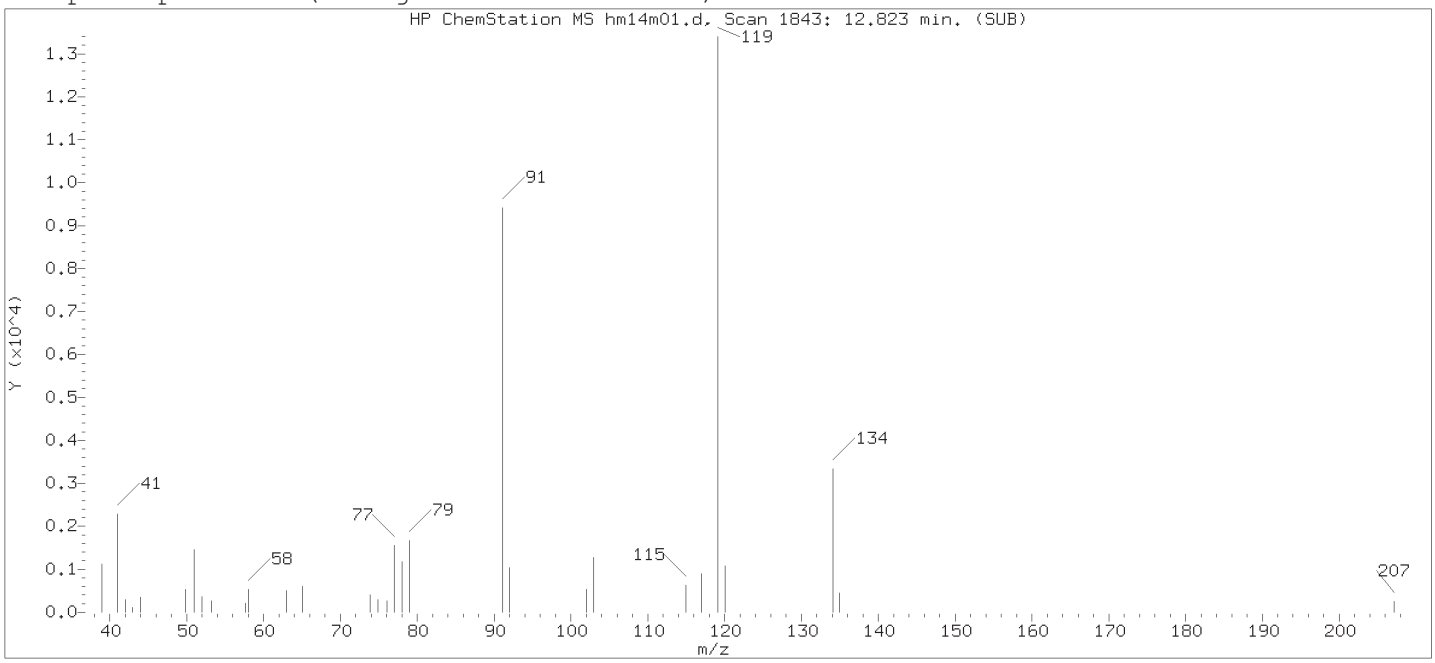
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area (flag) : 4695M
On-Column Amount (ng) : 0.0965
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

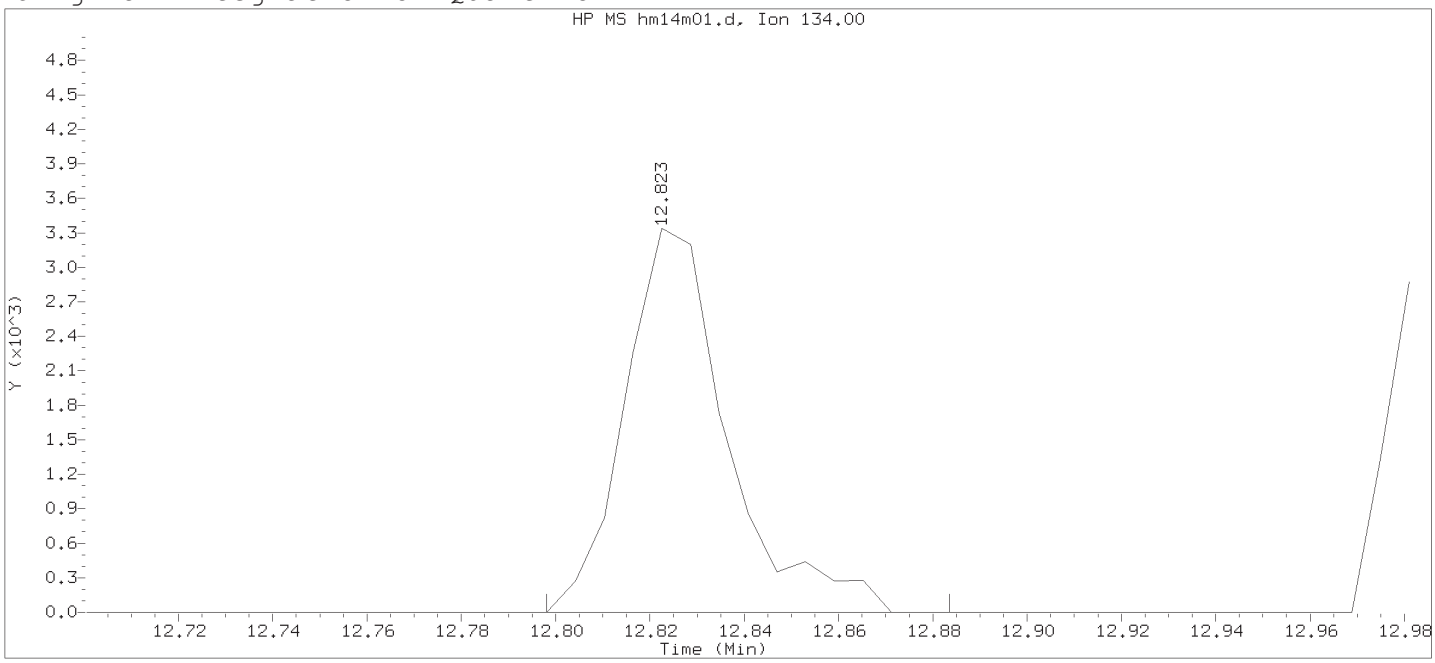
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area : 5056
On-column Amount (ng) : 0.1039
Integration start scan : 1838 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

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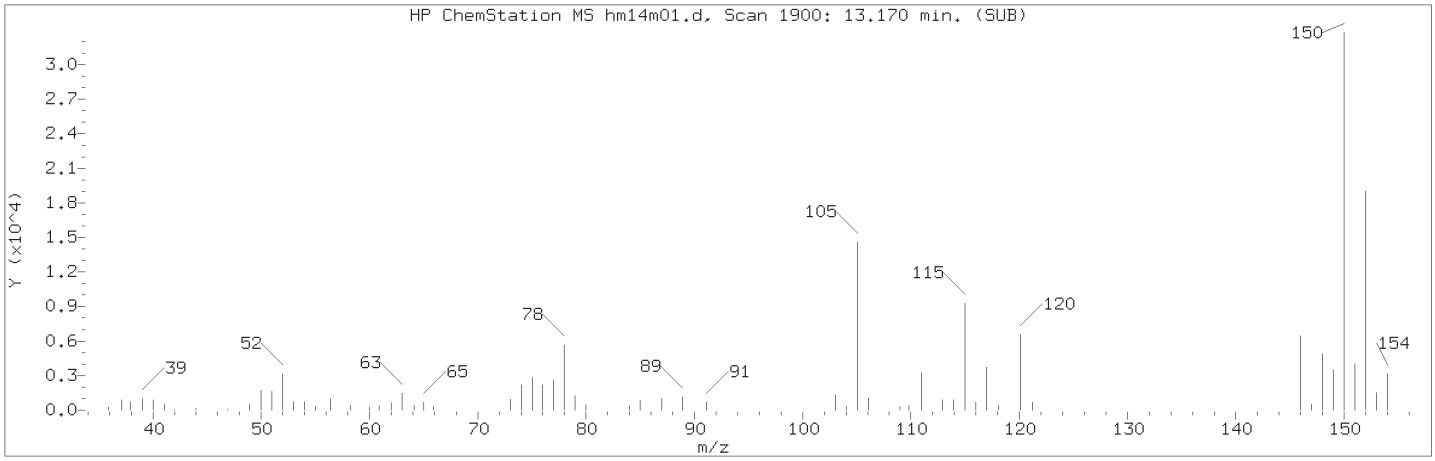
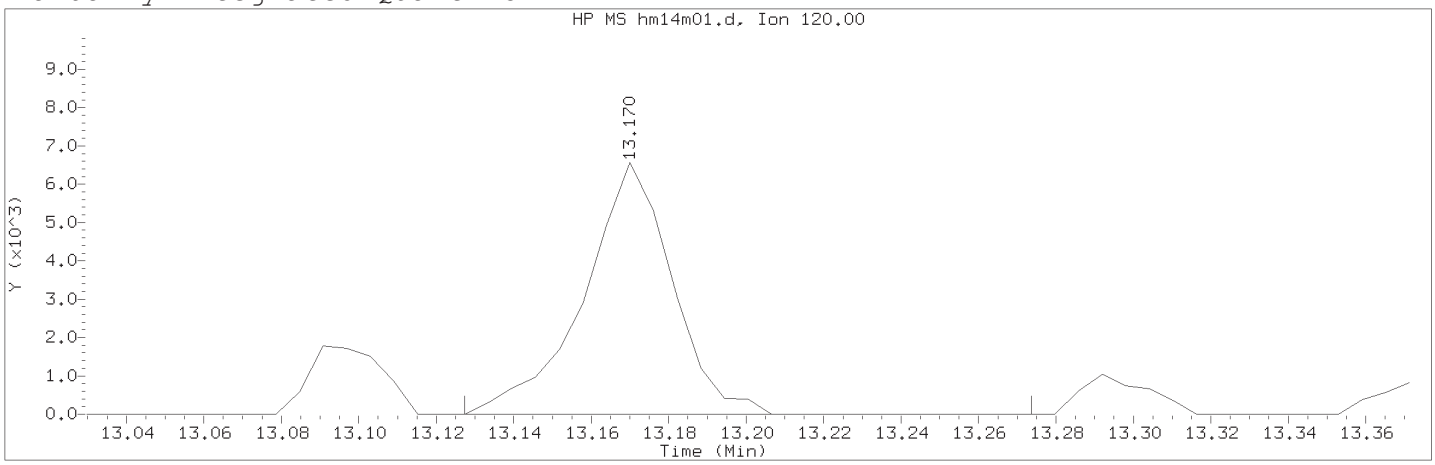
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

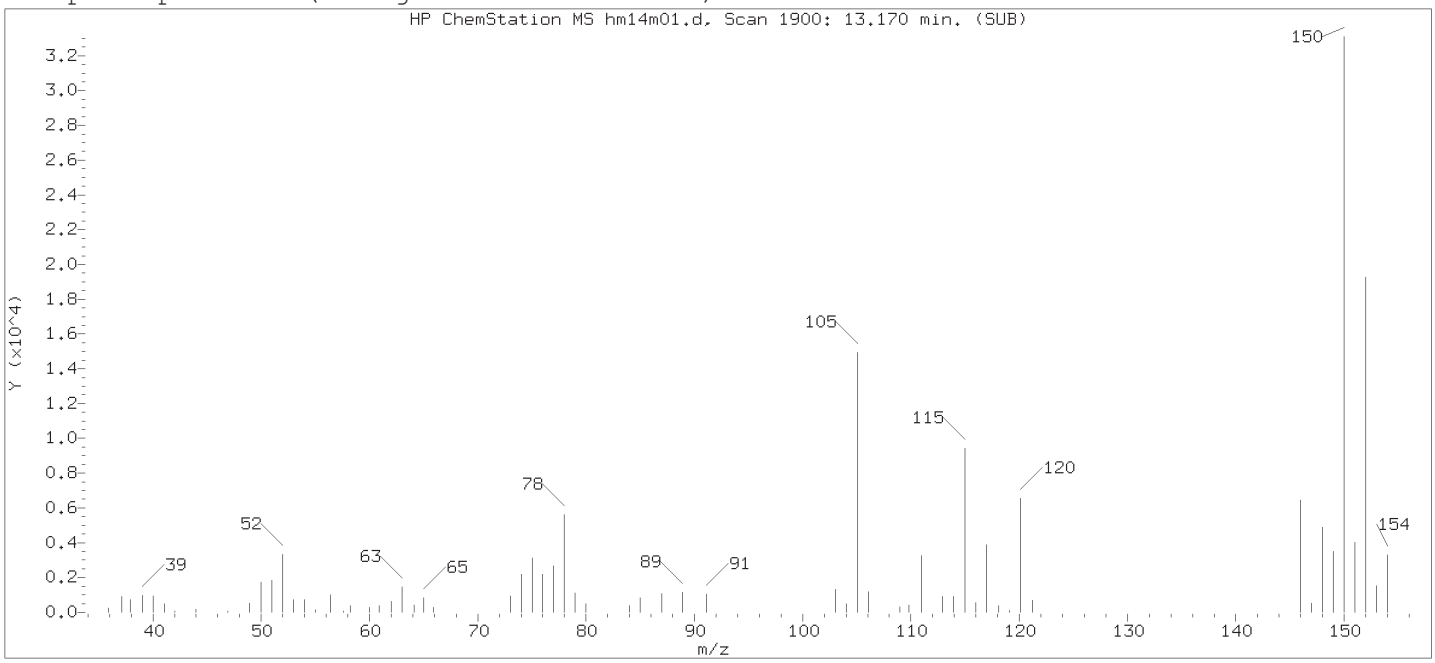
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 10366M
On-Column Amount (ng) : 0.1095
Integration start scan : 1892 Integration stop scan: 1916
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

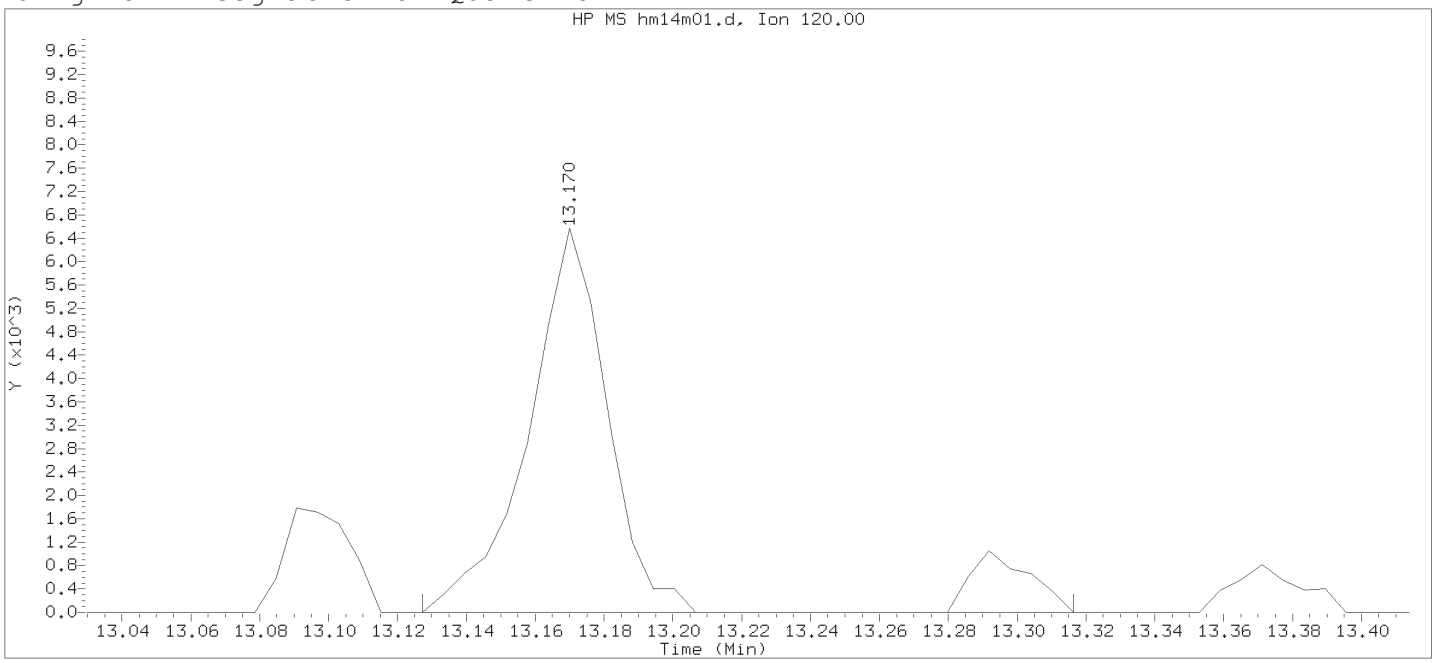
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



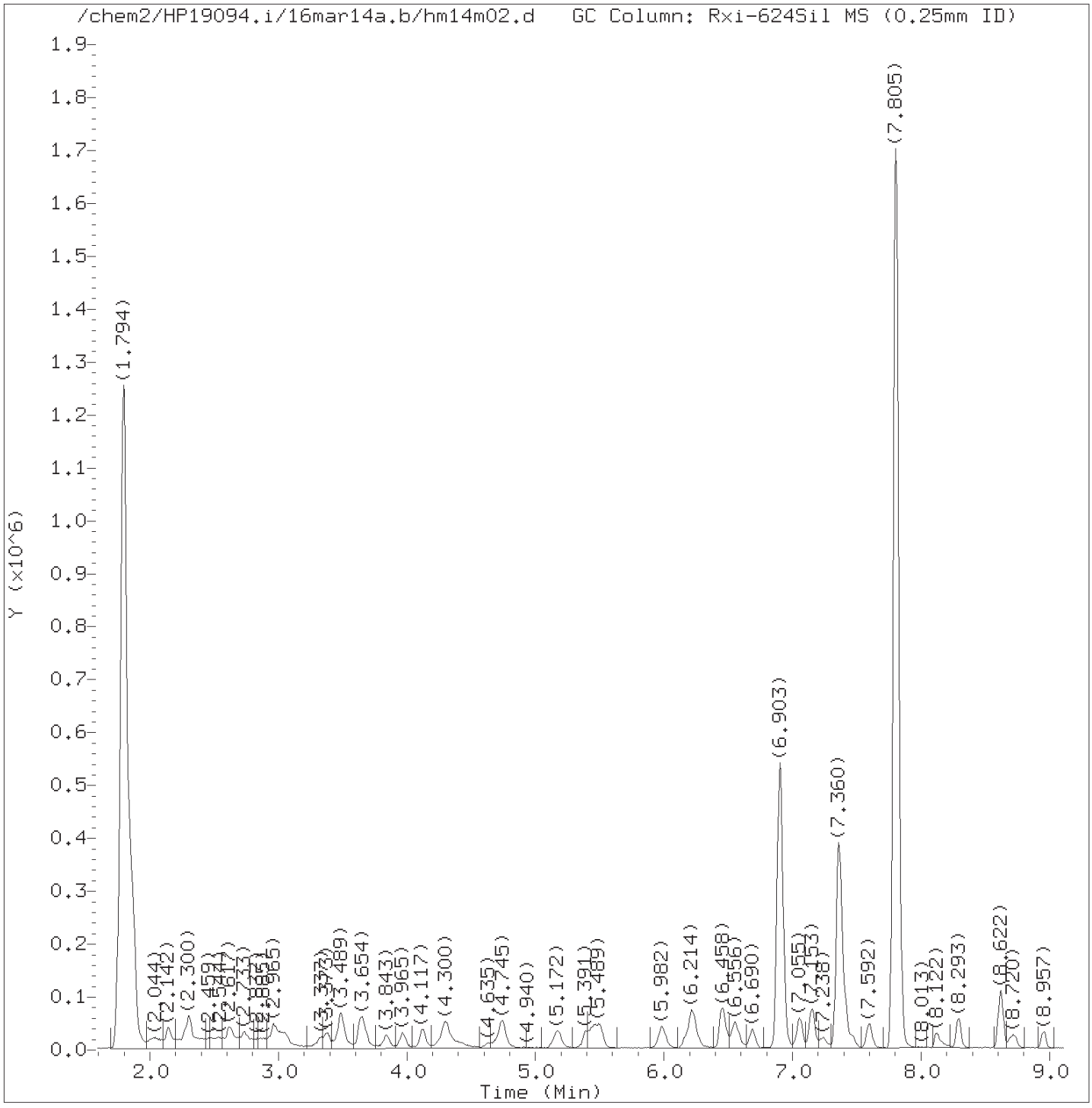
Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 11622
On-column Amount (ng) : 0.1228
Integration start scan : 1892 Integration stop scan: 1923
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

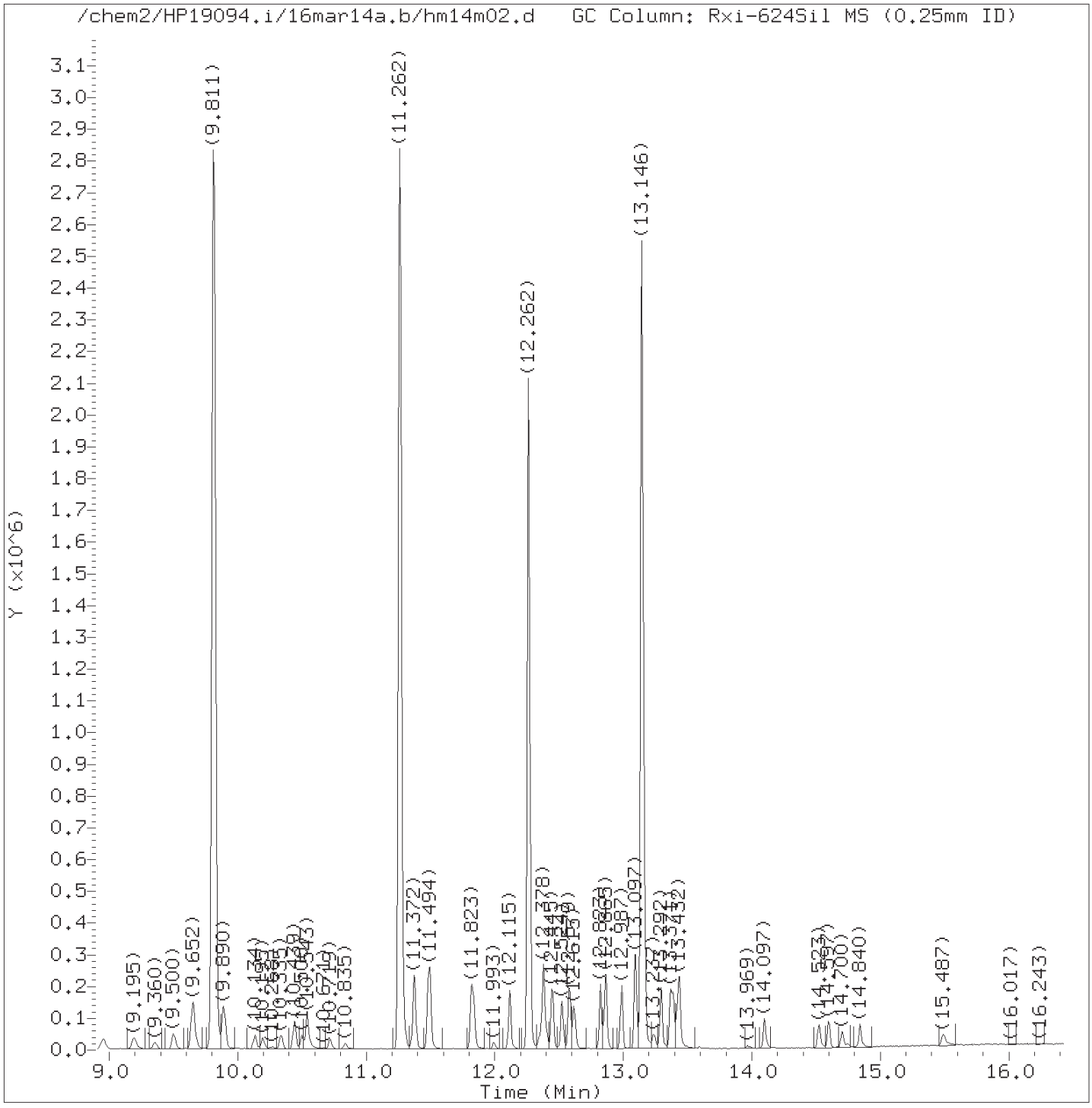
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

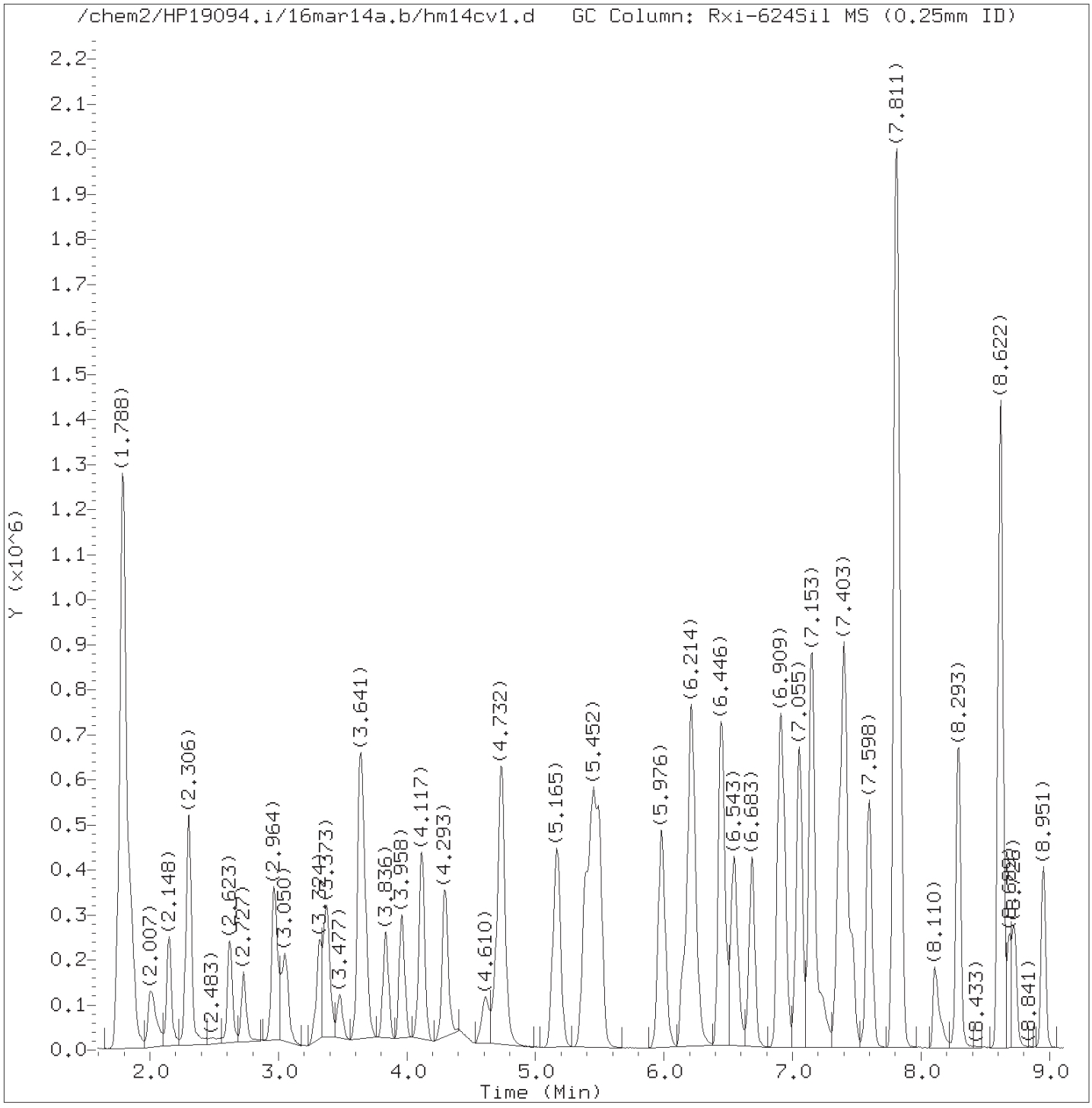
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.294	65	110415	50.000
50)$Dibromofluoromethane	(2)	6.903	113	514833	9.537
57)$1,2-Dichloroethane-d4	(2)	7.360	102	85992	9.618
63)*Fluorobenzene	(2)	7.805	96	2290874	10.000
72) 1,4-Dioxane	(1)	8.708	88	2930	17.567
82)$Toluene-d8	(3)	9.811	98	2229175	10.562
97)*Chlorobenzene-d5	(3)	11.262	117	1481588	10.000
111)$4-Bromofluorobenzene	(3)	12.262	95	671822	9.875
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	624400	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

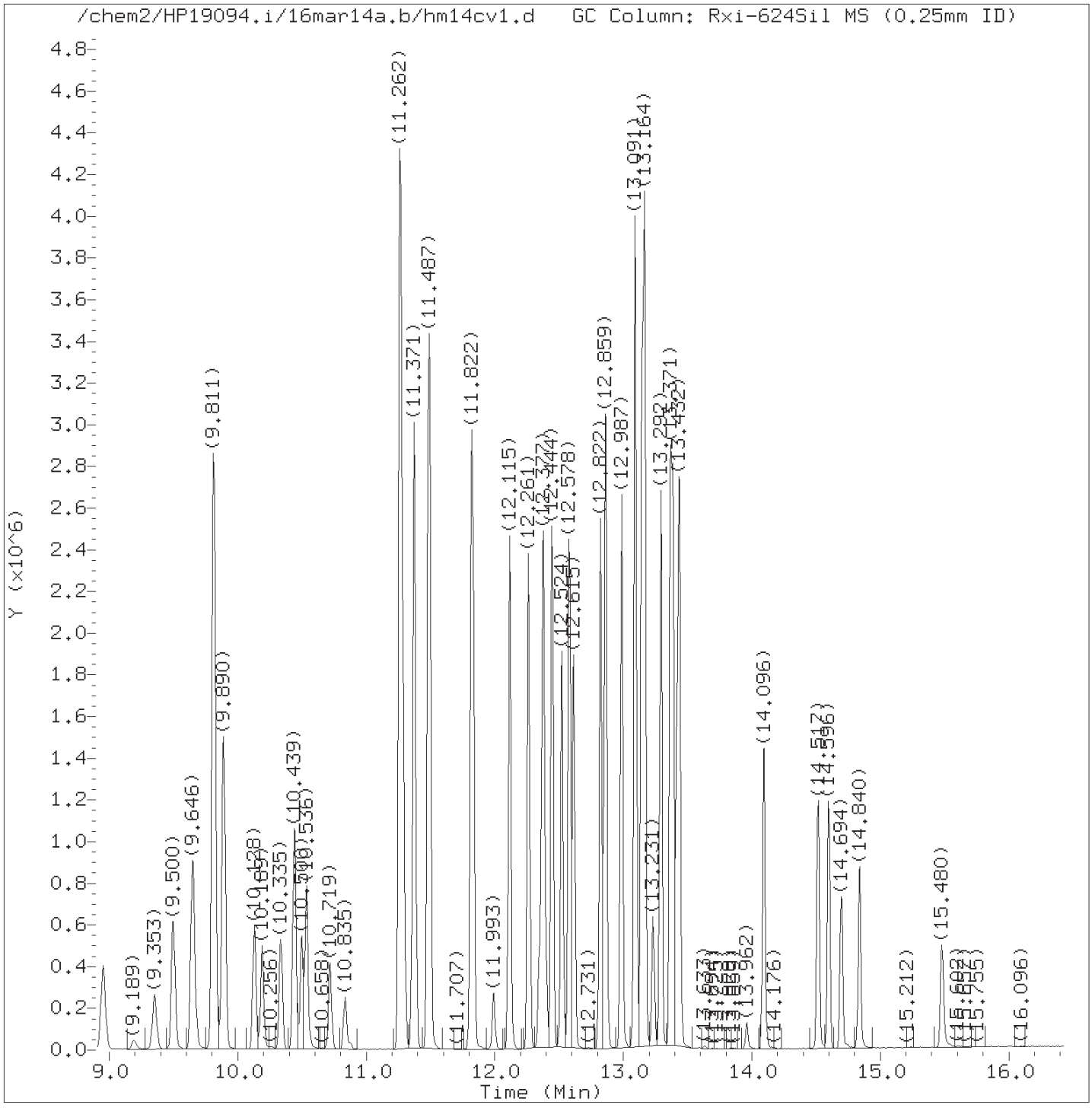
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	328771	4.161
2) Chloromethane	(2)	2.148	50	344269	4.442
5) Vinyl Chloride	(2)	2.288	62	322391	4.473
6) 1,3-Butadiene	(2)	2.306	39	243952	4.474
7) Bromomethane	(2)	2.623	94	213394	4.460
8) Chloroethane	(2)	2.727	64	193746	4.360
9) Dichlorofluoromethane	(2)	2.964	67	497189	4.931
10) Trichlorofluoromethane	(2)	3.050	101	445190	4.741
11) Ethyl ether	(2)	3.318	59	205267	5.299
12) Freon 123a	(2)	3.373	67	353620	4.923
13) Acrolein	(1)	3.477	56	218457	34.882
15) 1,1-Dichloroethene	(2)	3.629	96	254825	4.730
14) Acetone	(1)	3.641	43	281922	32.668
16) Freon 113	(2)	3.666	101	269029	4.802
17) Methyl Iodide	(2)	3.836	142	475759	4.770
18) Carbon Disulfide	(2)	3.958	76	713266	4.287
21) Methyl Acetate	(1)	4.086	43	99062	4.630
22) Allyl Chloride	(2)	4.117	41	511077	5.016
26)*t-Butyl Alcohol-d10	(1)	4.275	65	109841	50.000
23) Methylene Chloride	(2)	4.300	84	271623	4.717
28) t-Butyl Alcohol	(1)	4.397	59	151885	51.427
29) Acrylonitrile	(1)	4.604	53	250122	24.155
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	597823	4.809
31) trans-1,2-Dichloroethene	(2)	4.739	96	285728	4.925
32) n-Hexane	(2)	5.165	57	469293	4.765
33) 1,1-Dichloroethane	(2)	5.385	63	567103	4.796
34) di-Isopropyl Ether	(2)	5.446	45	1046719	5.071
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	439660	4.529
37) Ethyl t-butyl ether	(2)	5.982	59	844012	4.849
40) 1,2-Dichloroethene (Total)	(2)		96	600327	9.820
38) 2-Butanone	(1)	6.147	43	526550	35.807
39) cis-1,2-Dichloroethene	(2)	6.208	96	314599	4.895
42) Propionitrile	(1)	6.220	54	133510	36.411
41) 2,2-Dichloropropane	(2)	6.226	77	454613	4.805
45) Methacrylonitrile	(1)	6.452	67	472050	37.599
47) Bromochloromethane	(2)	6.543	128	124104	5.076
48) Tetrahydrofuran	(1)	6.555	71	86049	23.131
49) Chloroform	(2)	6.683	83	525783	4.864

* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	539982	9.999
51) 1,1,1-Trichloroethane	(2)	6.933	97	450922	4.891
52) Cyclohexane	(2)	7.055	56	556433	4.619
55) 1,1-Dichloropropene	(2)	7.147	75	411399	4.649
54) Carbon Tetrachloride	(2)	7.159	117	413241	4.930
56) Isobutyl Alcohol	(1)	7.232	41	129013	129.671
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91183	10.195
58) Benzene	(2)	7.403	78	1194211	4.849
59) 1,2-Dichloroethane	(2)	7.464	62	312832M	4.902
60) t-Amyl methyl ether	(2)	7.598	73	694215	4.880
63)*Fluorobenzene	(2)	7.805	96	2291680	10.000
62) n-Heptane	(2)	7.835	43	541861	4.868
65) n-Butanol	(1)	8.110	56	196761	233.607
67) Trichloroethene	(2)	8.287	95	320611	4.994
70) 1,2-Dichloropropane	(2)	8.616	63	316169	4.930
69) Methylcyclohexane	(2)	8.622	83	526322	5.005
71) Methyl Methacrylate	(1)	8.689	69	130240	4.965
72) 1,4-Dioxane	(1)	8.713	88	23162	139.580
73) Dibromomethane	(2)	8.726	93	125402	4.747
74) Bromodichloromethane	(2)	8.951	83	362079	4.909
76) 2-Nitropropane	(1)	9.195	41	37539M	4.465
80) cis-1,3-Dichloropropene	(2)	9.500	75	447003	4.932
81) 4-Methyl-2-Pentanone	(1)	9.646	43	859279M	23.744
82)$Toluene-d8	(3)	9.811	98	2249744	10.002
83) Toluene	(3)	9.890	92	742657	4.902
84) trans-1,3-Dichloropropene	(3)	10.128	75	356461	5.020
85) 1,3-Dichloropropene (total)	(3)		75	803464	9.952
86) Ethyl Methacrylate	(3)	10.189	69	277034	5.071
88) 1,1,2-Trichloroethane	(3)	10.335	97	176312	4.804
89) Tetrachloroethene	(3)	10.445	166	351918	4.918
90) 1,3-Dichloropropane	(3)	10.500	76	323115	4.897
91) 2-Hexanone	(1)	10.536	43	615079	24.038
93) Dibromochloromethane	(3)	10.719	129	228064	4.848
95) 1,2-Dibromoethane	(3)	10.835	107	175678	5.082
97)*Chlorobenzene-d5	(3)	11.262	117	1578909	10.000
98) Chlorobenzene	(3)	11.286	112	804977	4.881
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	278208	4.918
100) Ethylbenzene	(3)	11.371	91	1456679	4.912

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

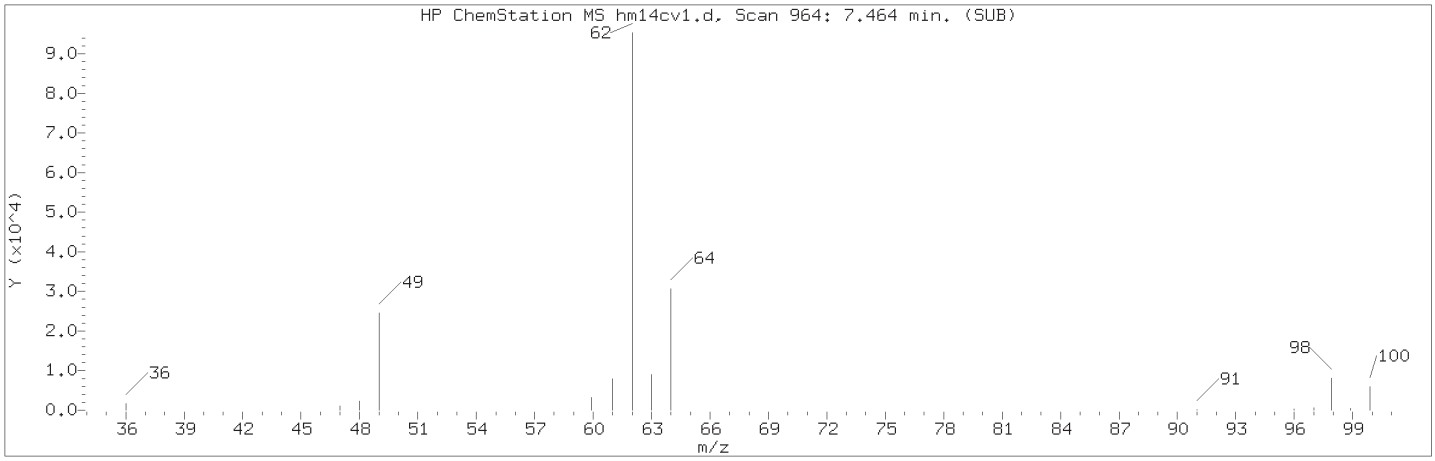
Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.487	106	1105802	9.776
105) Xylene (Total)	(3)		106	1636412	14.610
104) o-Xylene	(3)	11.816	106	530610	4.834
106) Styrene	(3)	11.829	104	866196	4.933
107) Bromoform	(3)	11.993	173	124959	4.789
108) Isopropylbenzene	(3)	12.115	105	1447902	4.977
111)$4-Bromofluorobenzene	(3)	12.261	95	726691	10.023
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	205716M	4.686
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	273261	24.520
114) Bromobenzene	(4)	12.377	156	316623	4.843
116) 1,2,3-Trichloropropane	(4)	12.396	110	54629	4.957
117) n-Propylbenzene	(4)	12.444	91	1736744	4.911
119) 2-Chlorotoluene	(4)	12.524	126	332613	4.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	1202820	4.878
122) 4-Chlorotoluene	(4)	12.615	126	333089	4.793
125) tert-Butylbenzene	(4)	12.822	134	261563M	4.976
126) Pentachloroethane	(4)	12.853	167	199481	5.029
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1202340	4.877
128) sec-Butylbenzene	(4)	12.987	105	1570903	4.921
131) 1,3-Dichlorobenzene	(4)	13.091	146	610401	4.773
132) p-Isopropyltoluene	(4)	13.097	119	1315146	4.867
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	701377	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	611552	4.706
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	492432	4.817
136) Benzyl Chloride	(4)	13.231	126	85413	4.911
138) n-Butylbenzene	(4)	13.389	92	661432	5.003
139) 1,2-Dichlorobenzene	(4)	13.420	146	539092	4.746
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27547	4.792
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	348528	4.289
146) Hexachlorobutadiene	(4)	14.596	225	205577	4.842
147) Naphthalene	(4)	14.694	128	555174	4.262
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	270242	4.164

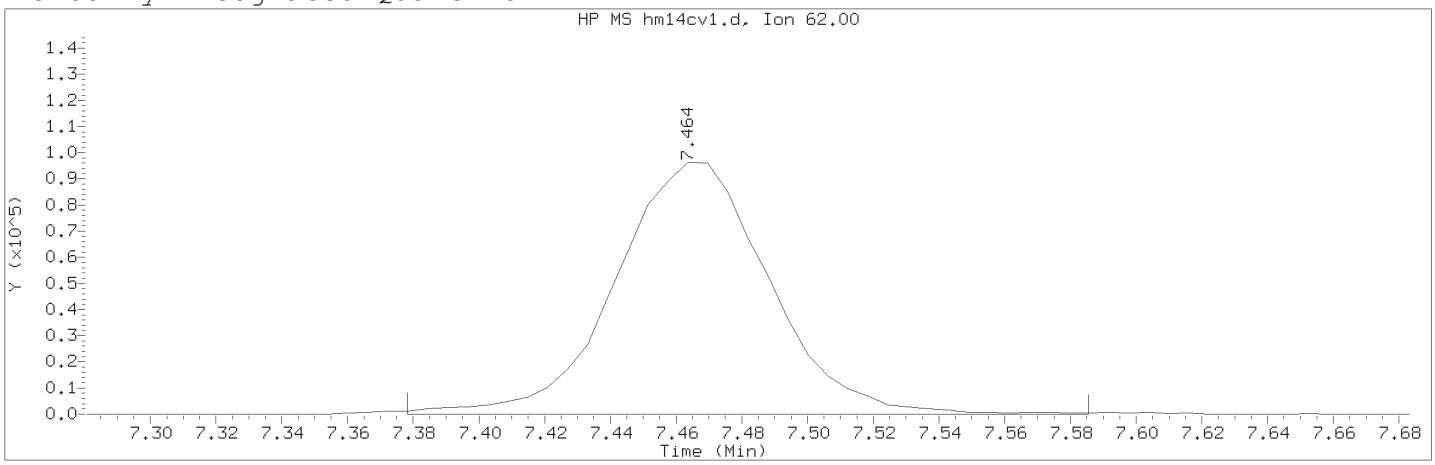
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

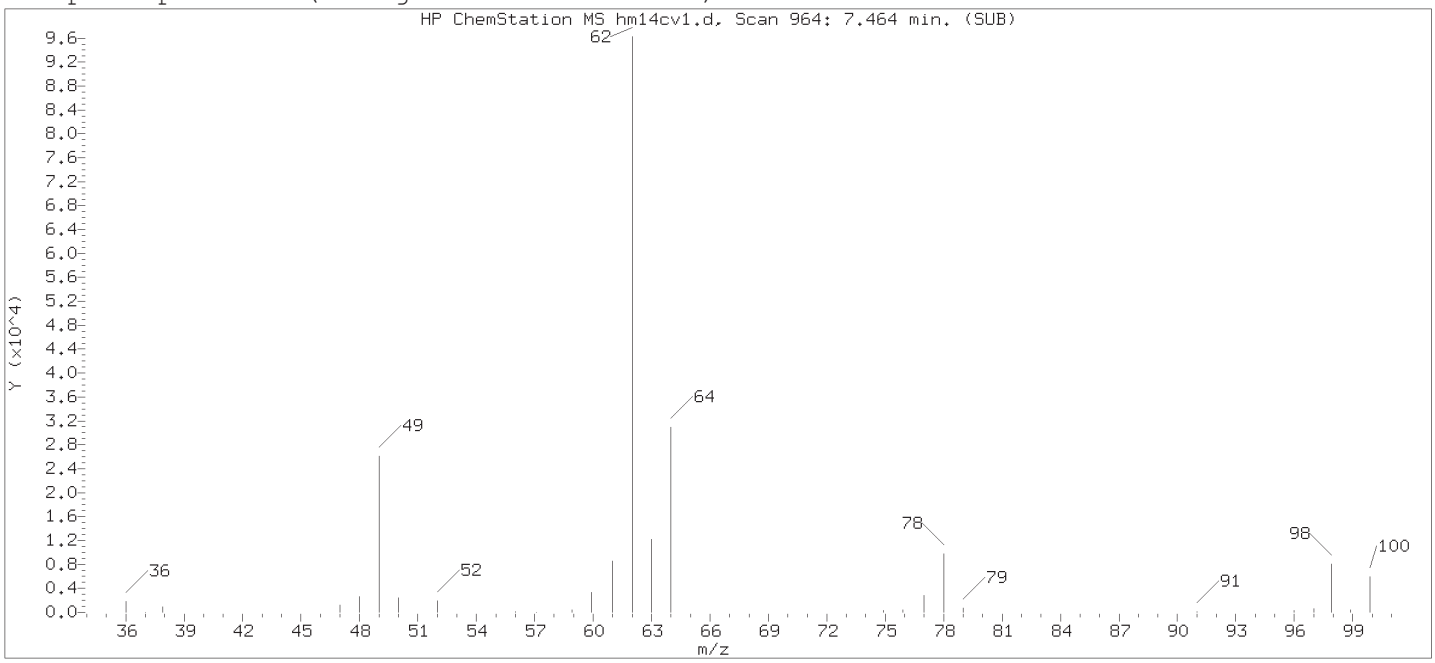
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 312832M
On-Column Amount (ng) : 4.9022
Integration start scan : 949 Integration stop scan: 983
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

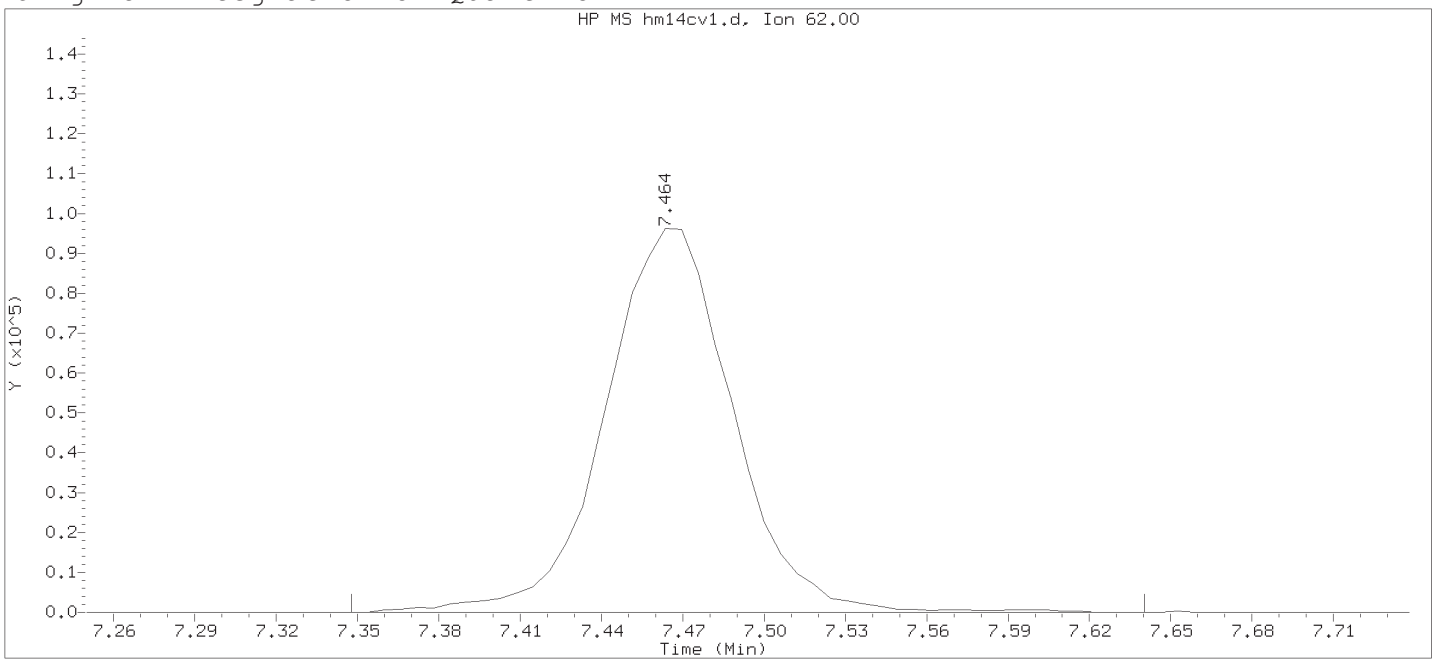
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

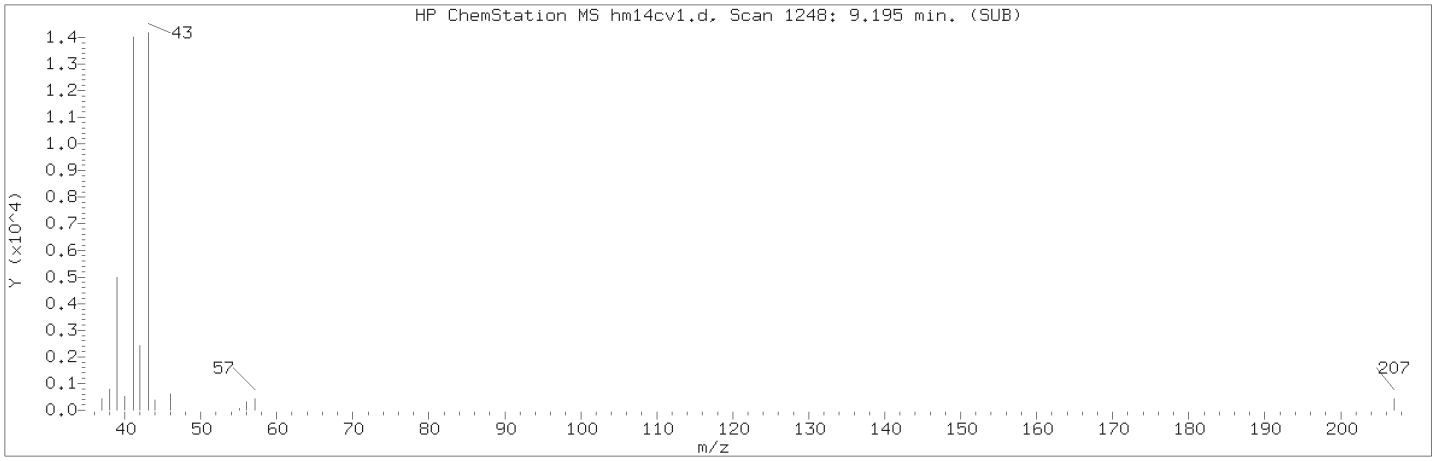
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

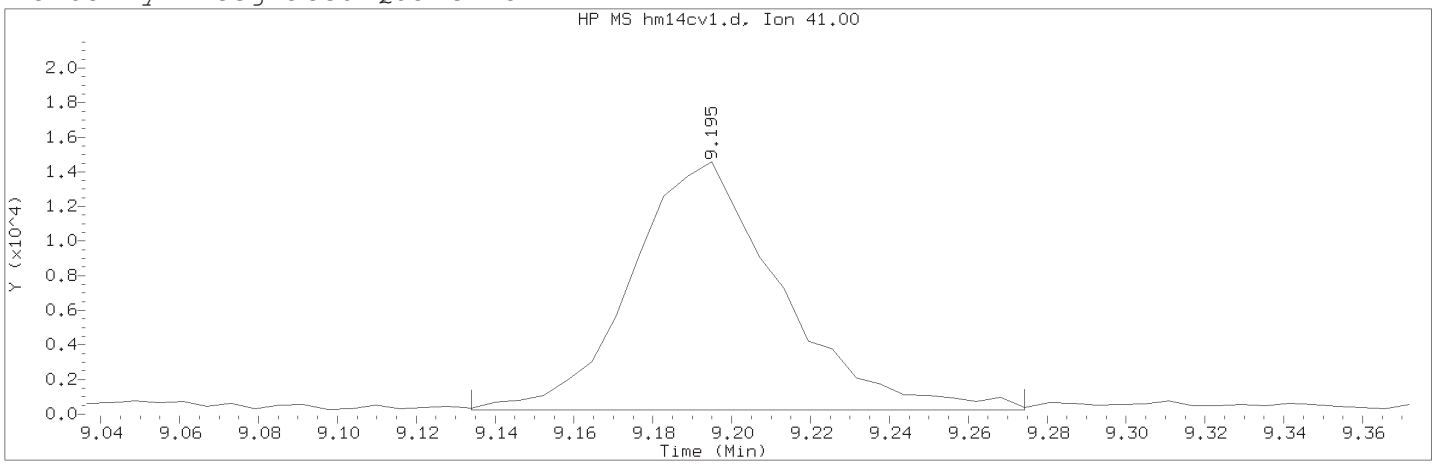
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 314656
On-column Amount (ng) : 4.9308
Integration start scan : 944 Integration stop scan: 992
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

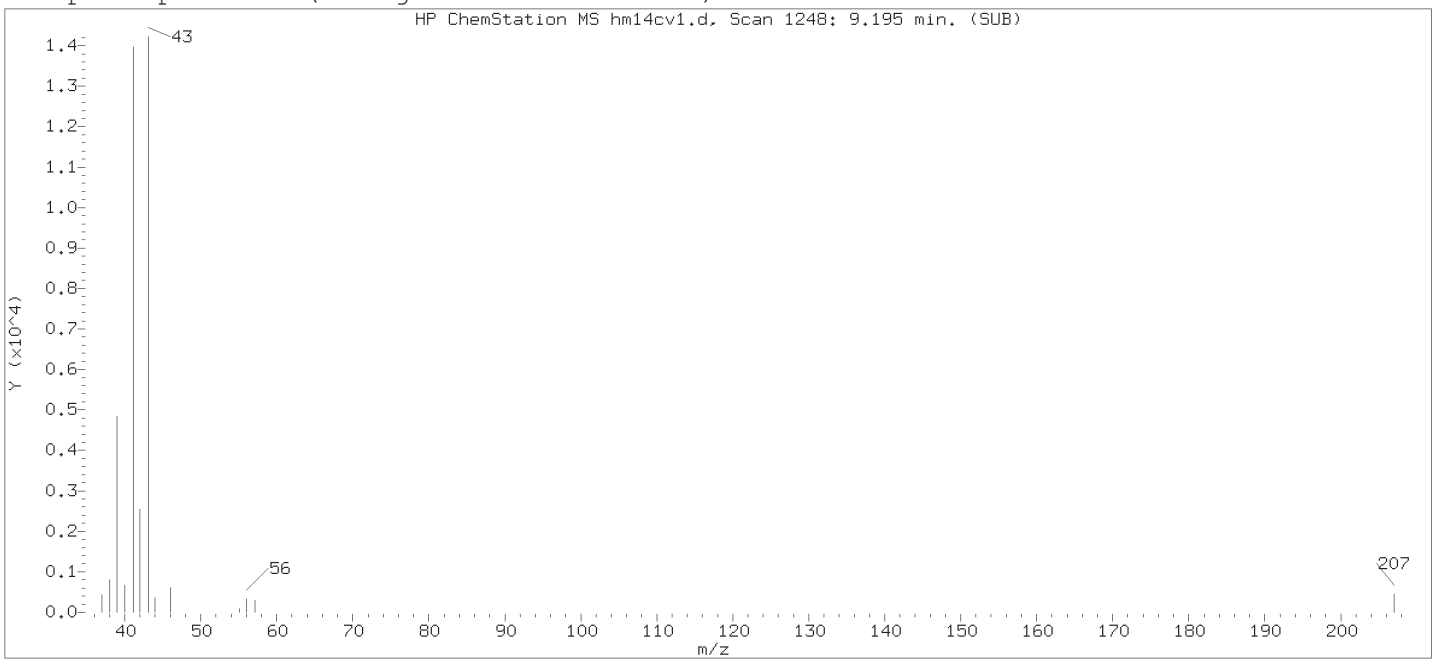
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area (flag) : 37539M
On-Column Amount (ng) : 4.4645
Integration start scan : 1237 Integration stop scan: 1260
Y at integration start : 259 Y at integration end: 259

Reason for manual integration: improper integration

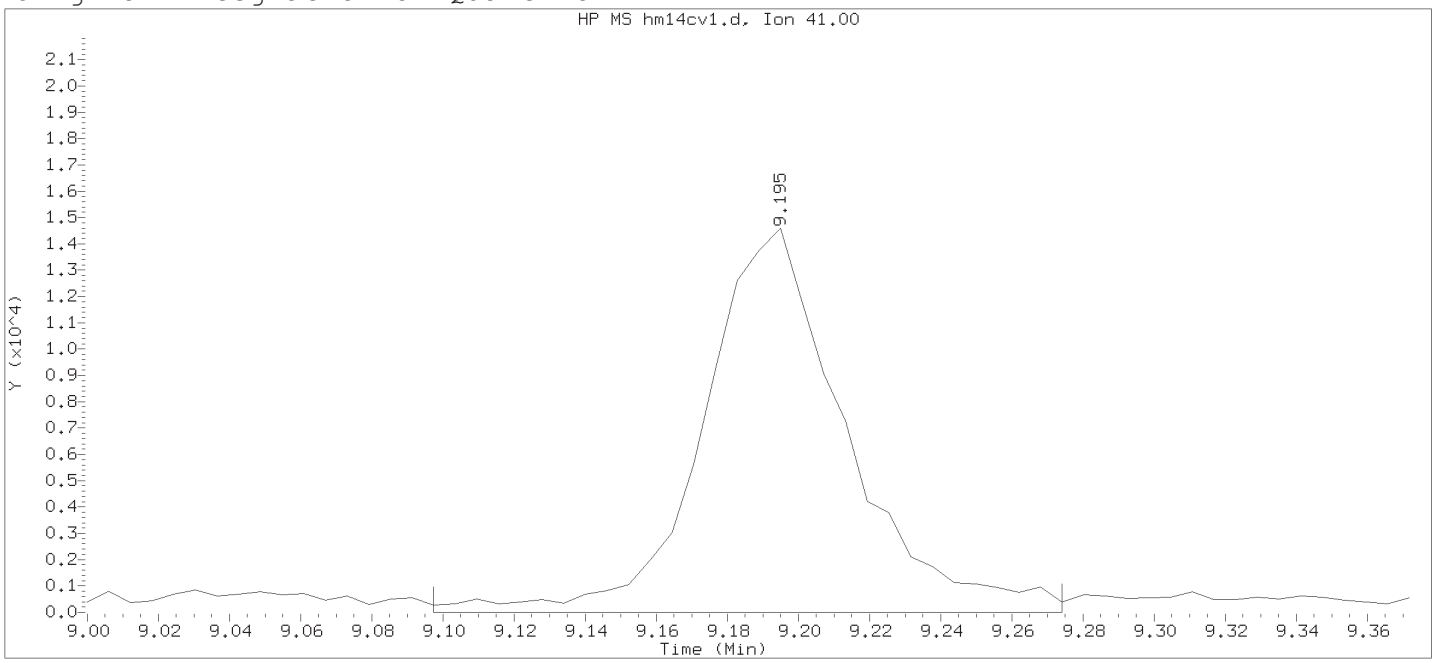
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

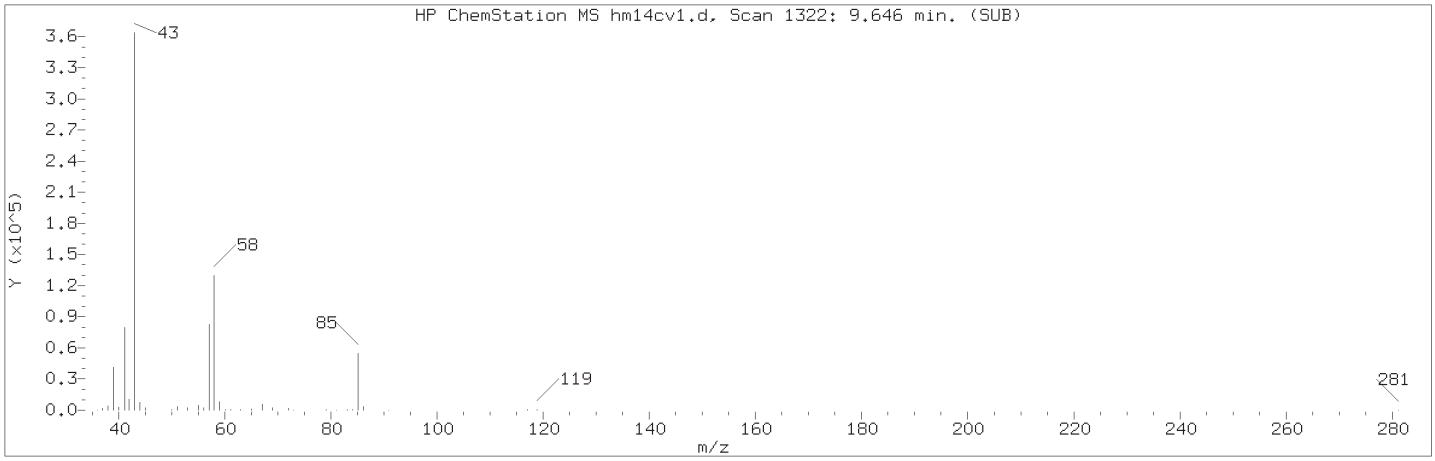
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

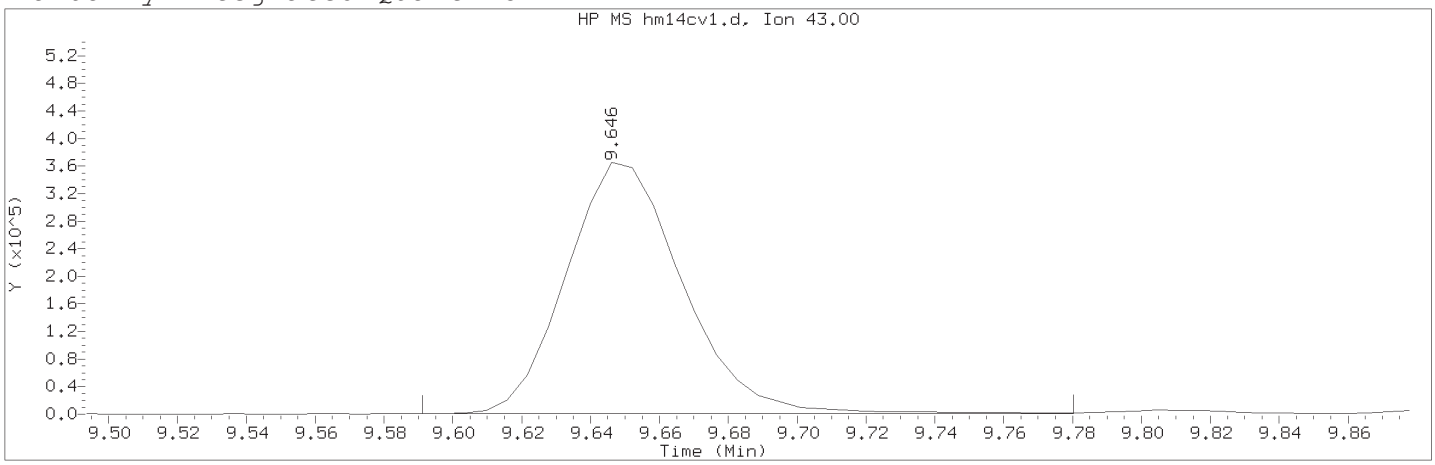
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area : 40531
On-column Amount (ng) : 4.8202
Integration start scan : 1231 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

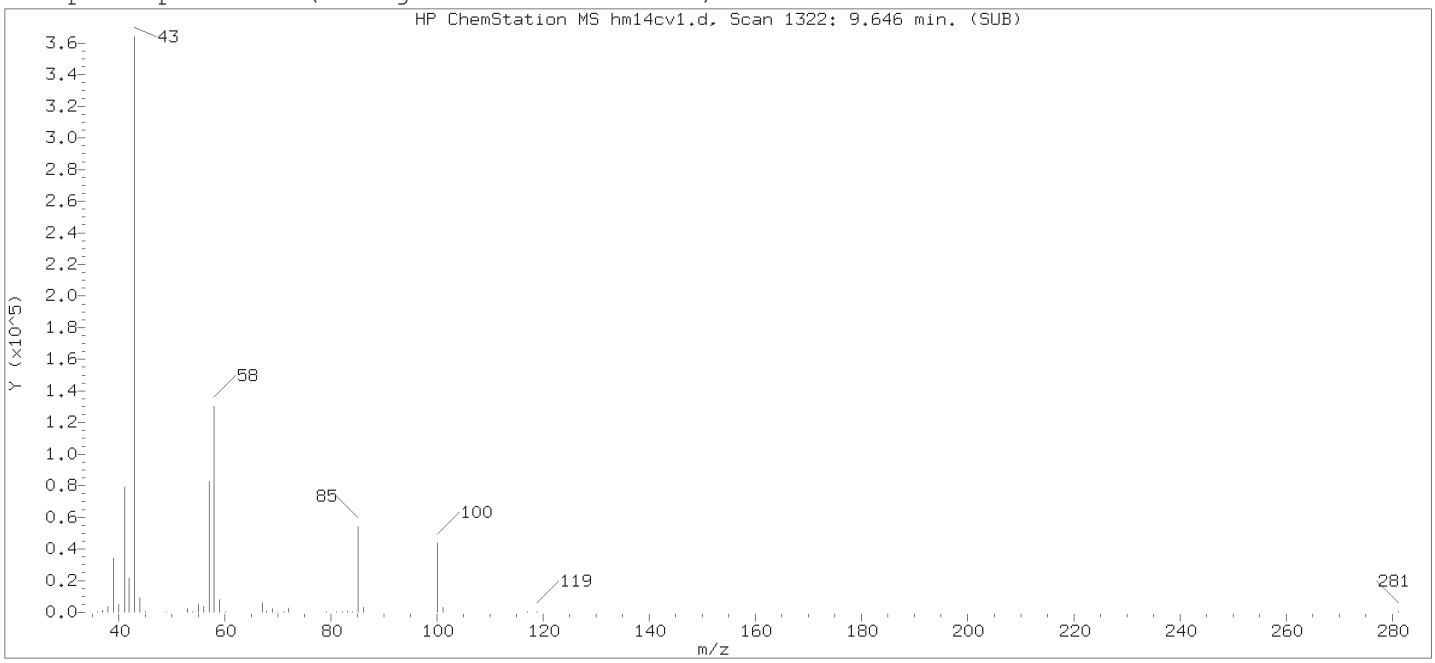
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area (flag) : 859279M
On-Column Amount (ng) : 23.7437
Integration start scan : 1312 Integration stop scan: 1343
Y at integration start : 445 Y at integration end: 445

Reason for manual integration: improper integration

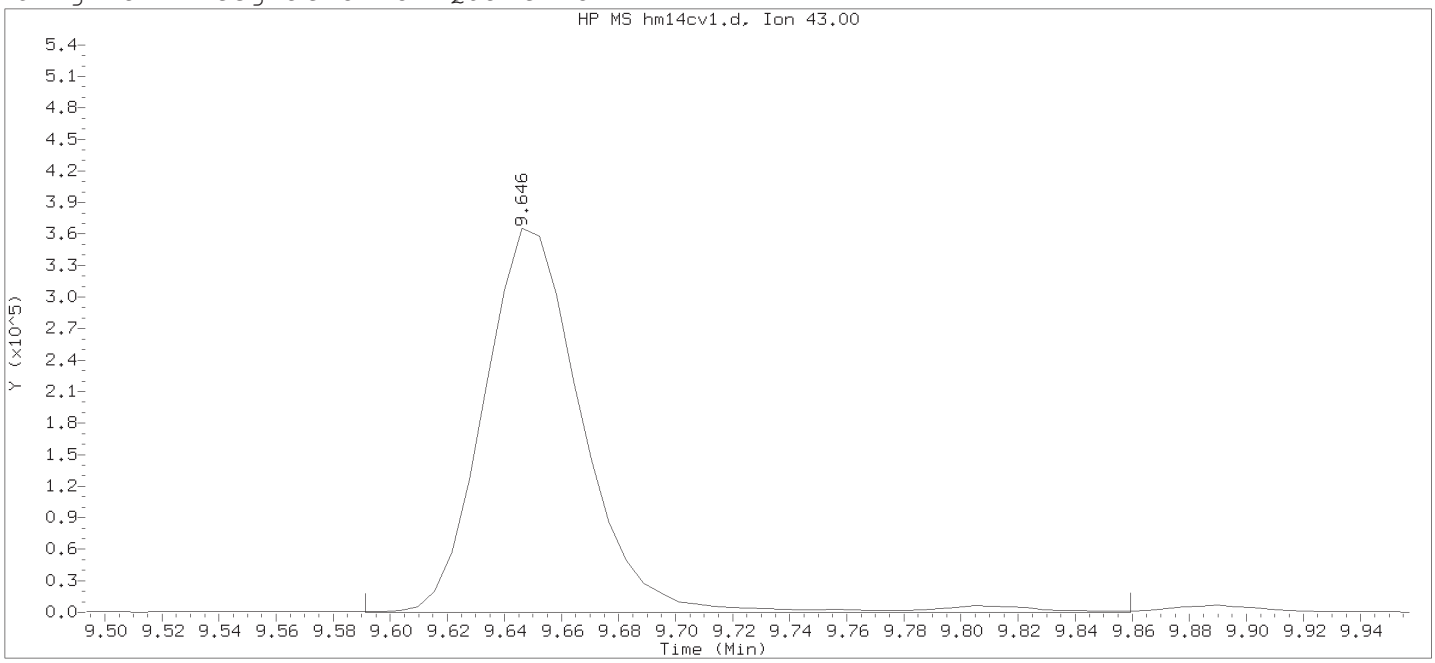
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

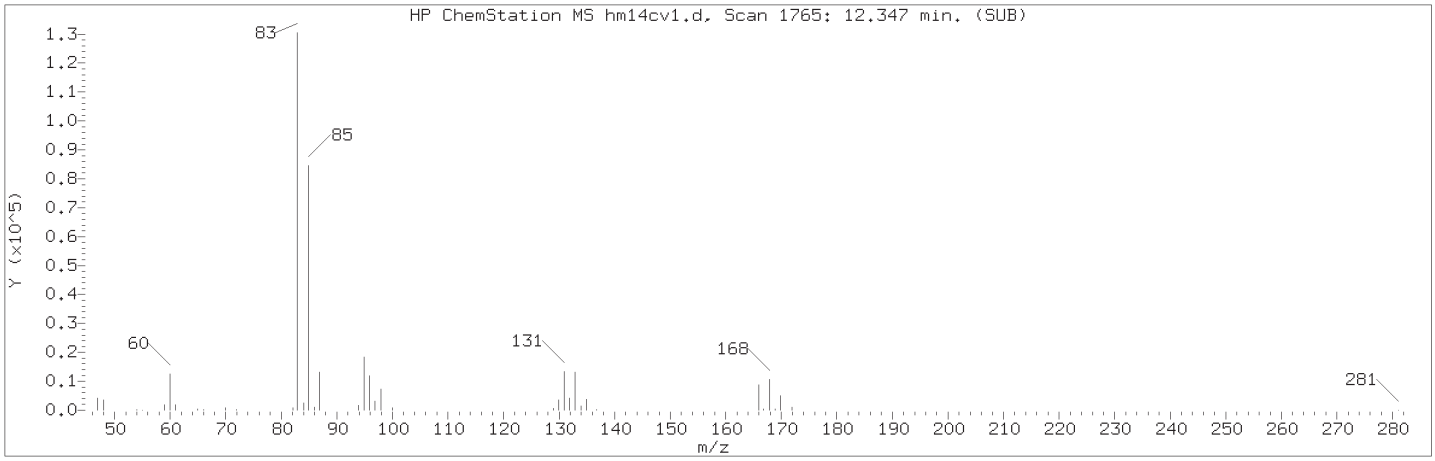
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

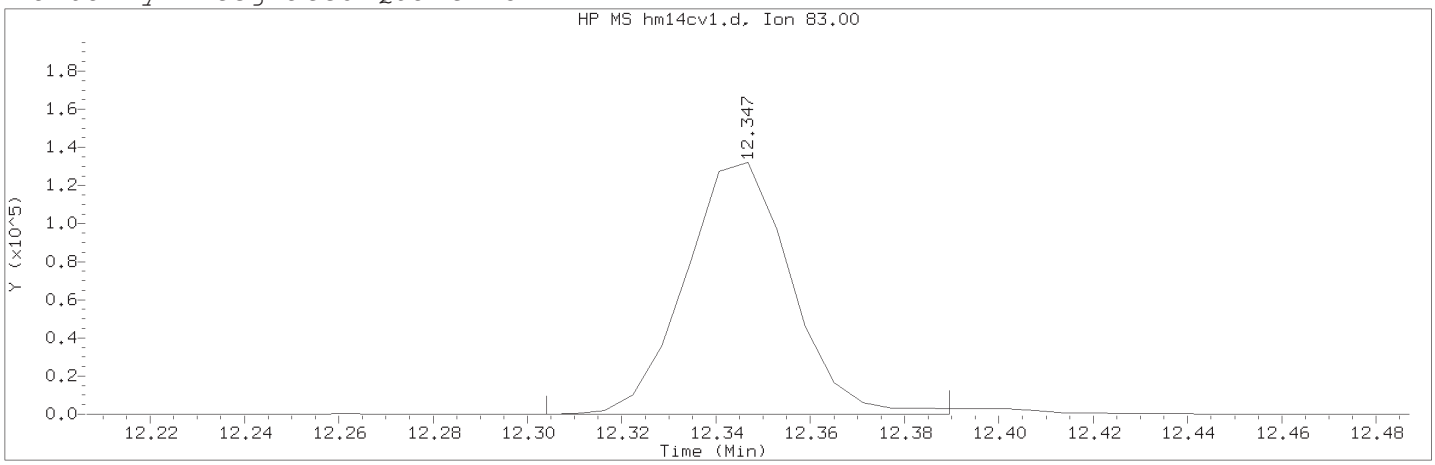
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area : 879138
On-column Amount (ng) : 24.2924
Integration start scan : 1312 Integration stop scan: 1356
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

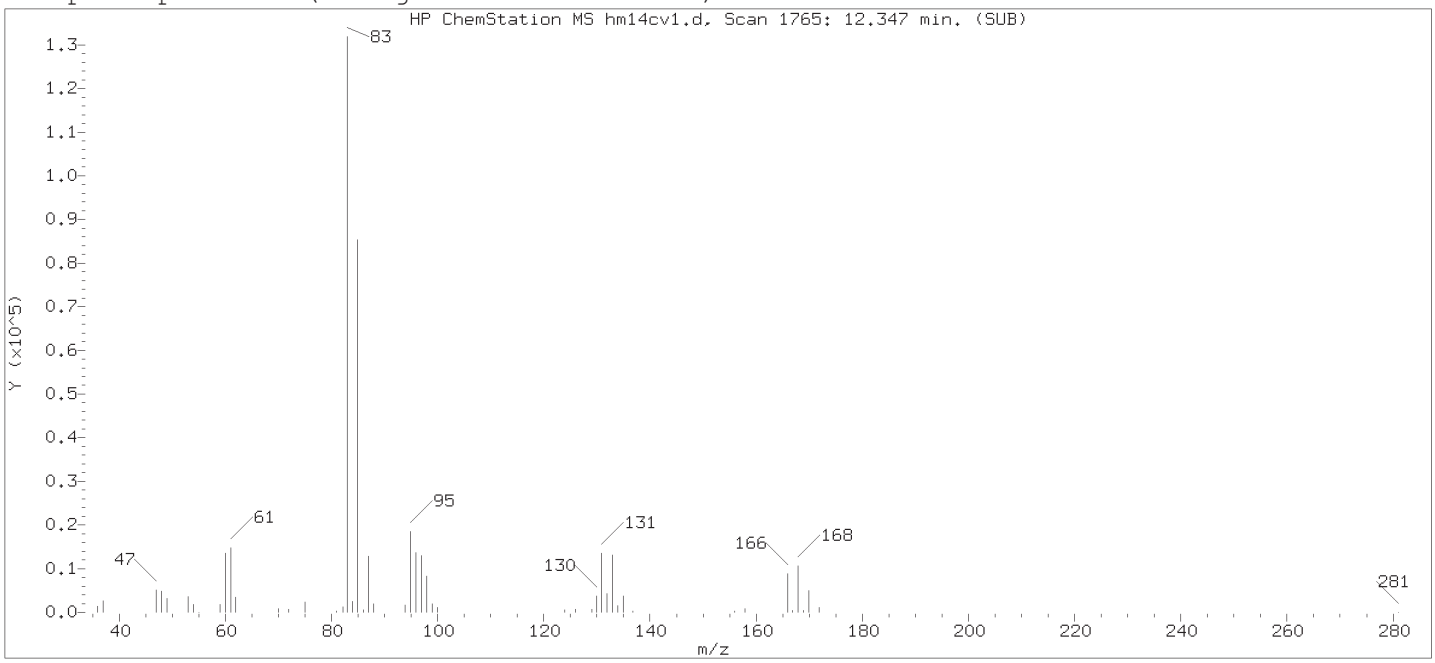
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 205716M
On-Column Amount (ng) : 4.6861
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

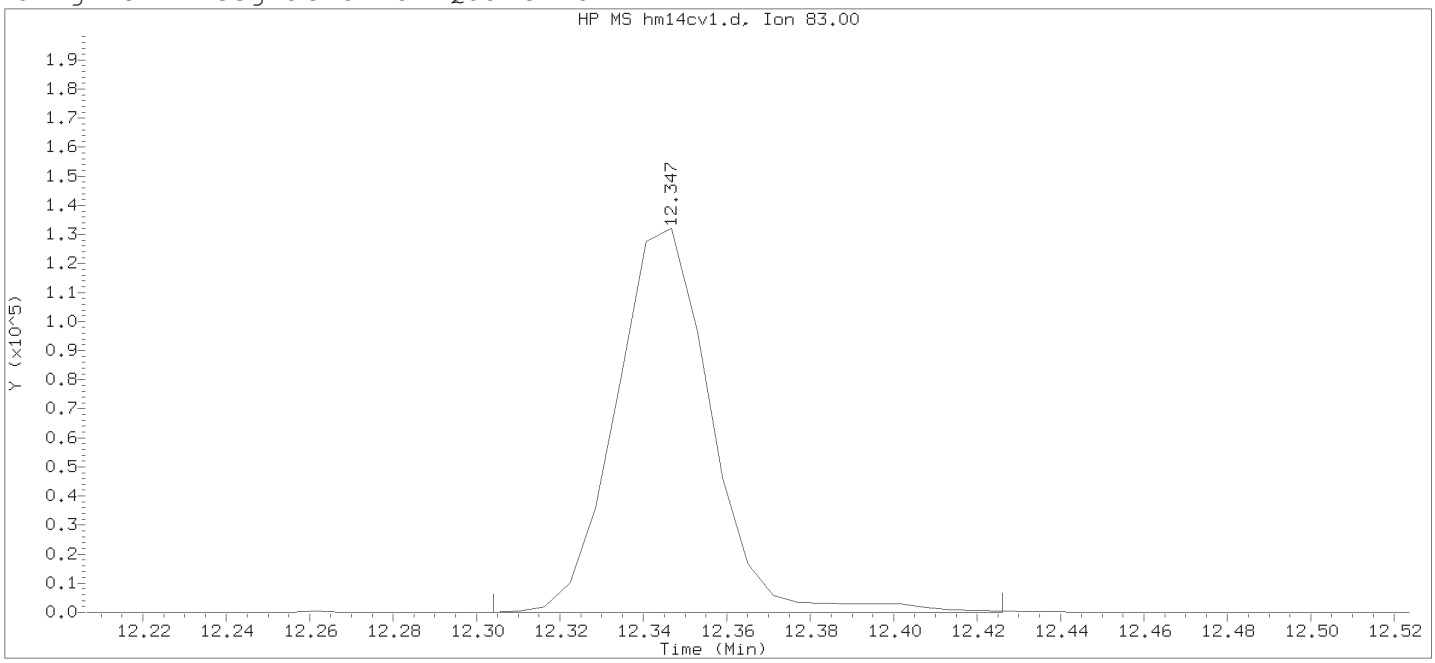
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

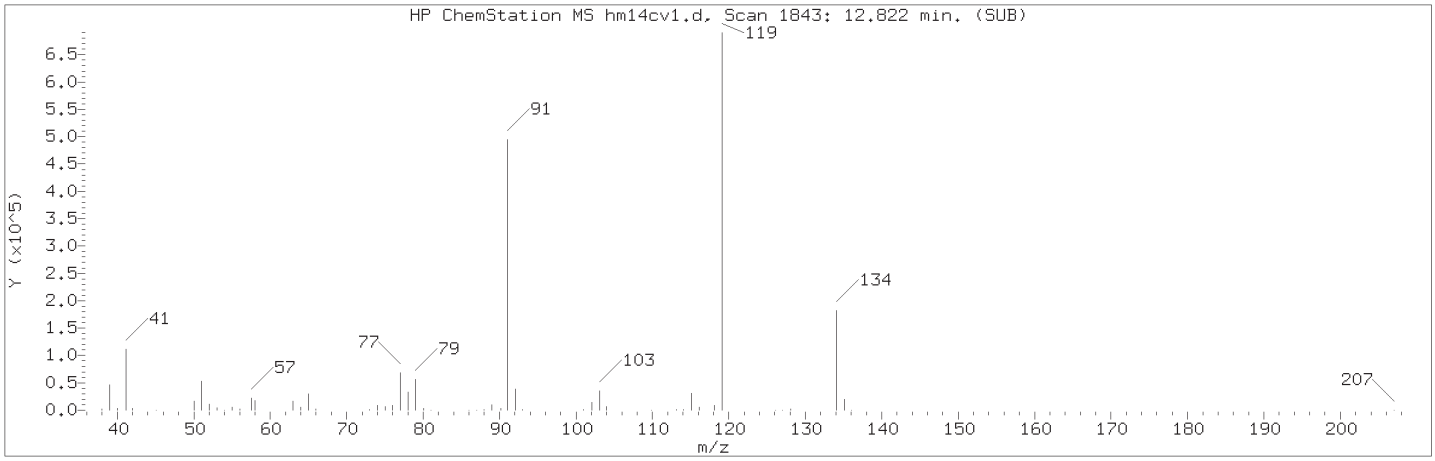
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

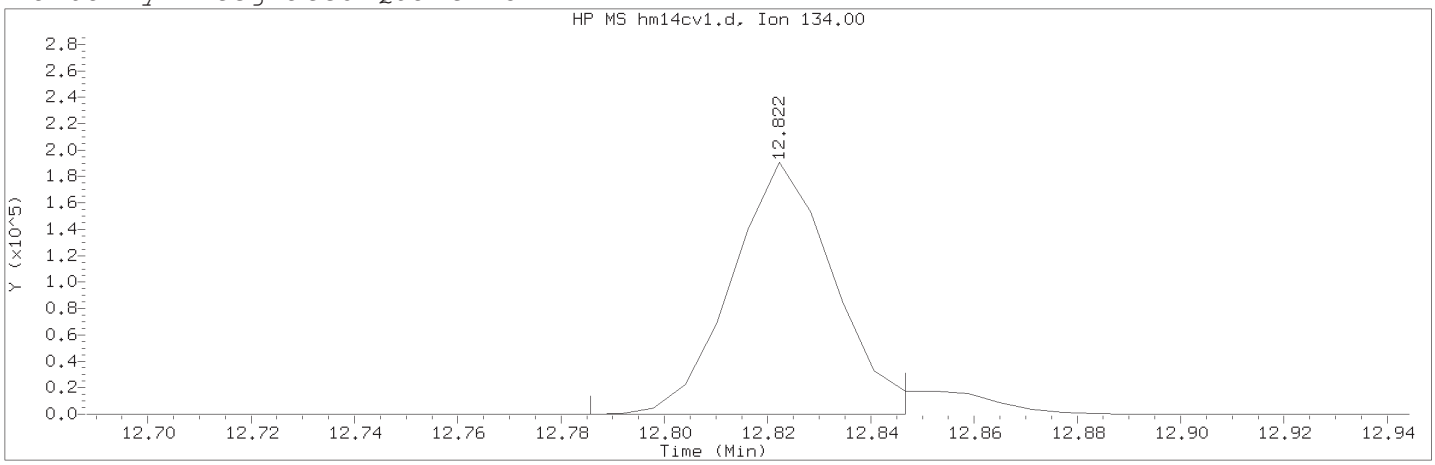
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 208705
On-column Amount (ng) : 4.7542
Integration start scan : 1757 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 95

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

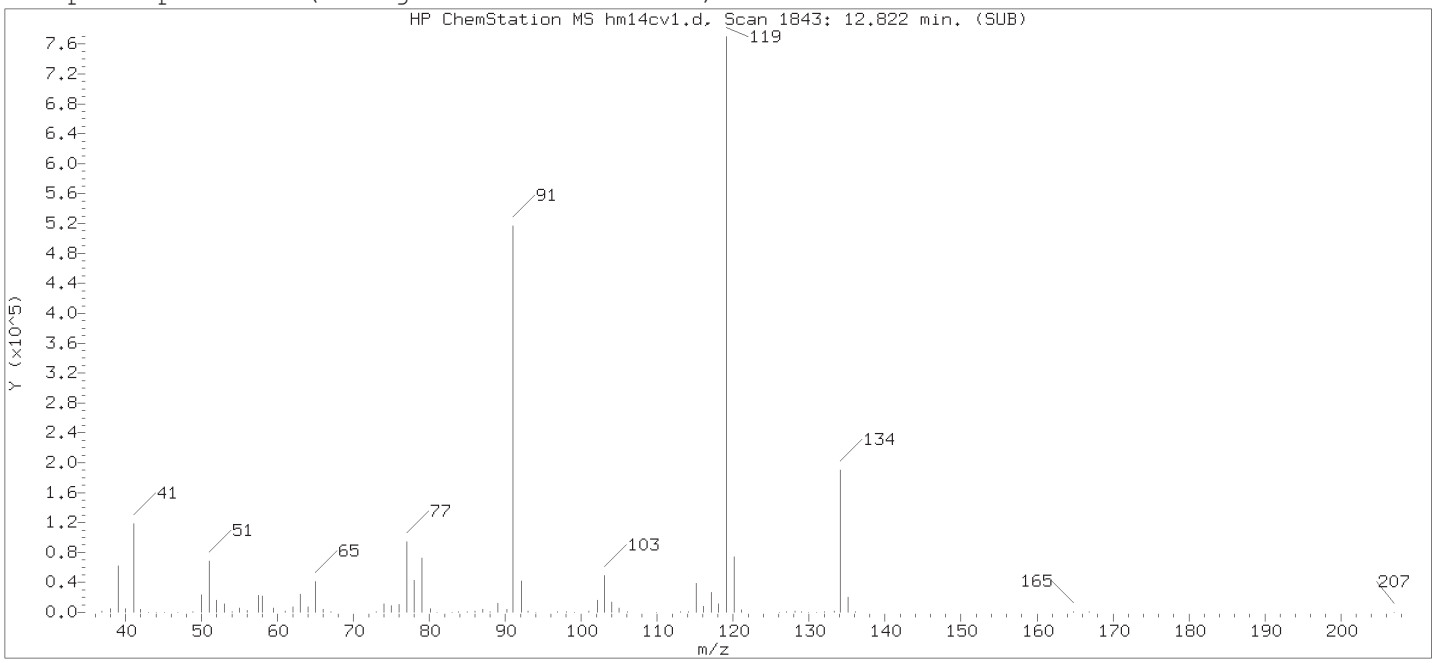
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 261563M
On-Column Amount (ng) : 4.9763
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

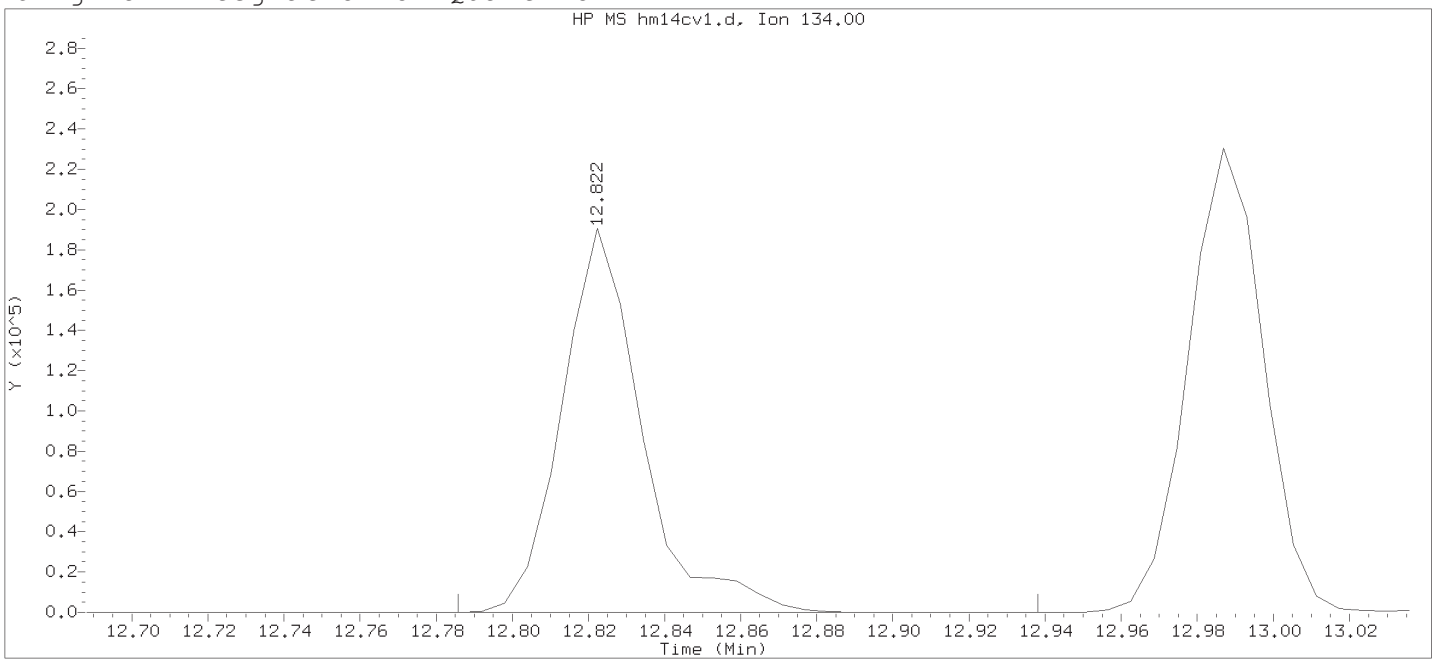
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 278761
On-column Amount (ng) : 5.3035
Integration start scan : 1836 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16may05b.b/hy05t05.d

Date : 05-MAY-2016 19:55

Client ID: aug28-15

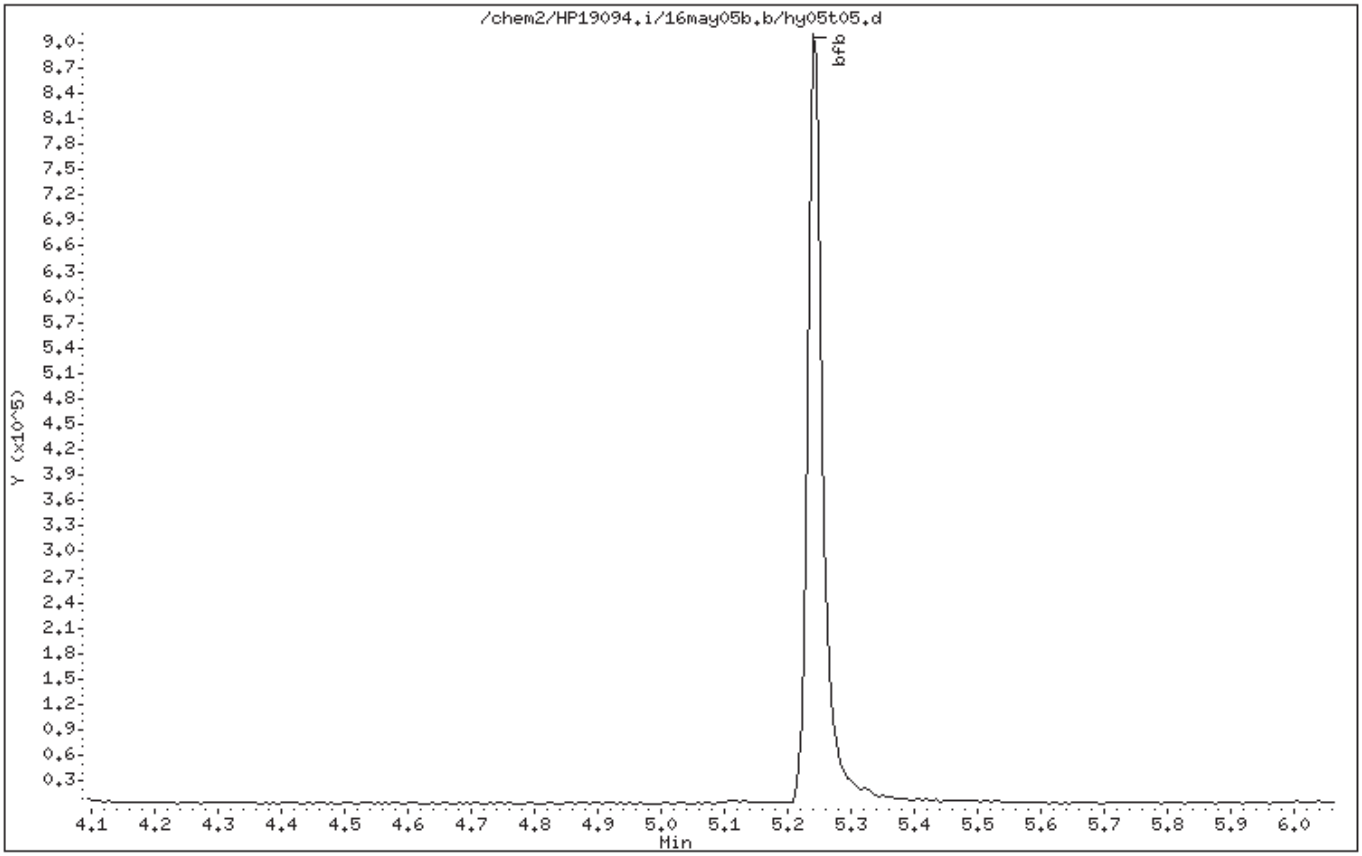
Instrument: HP19094.i

Sample Info: aug28-15;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin A. Sposito on 05/05/2016 at 20:03.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/16may05b.b/hy05t05.d

Date : 05-MAY-2016 19:55

Client ID: aug28-15

Instrument: HP19094.i

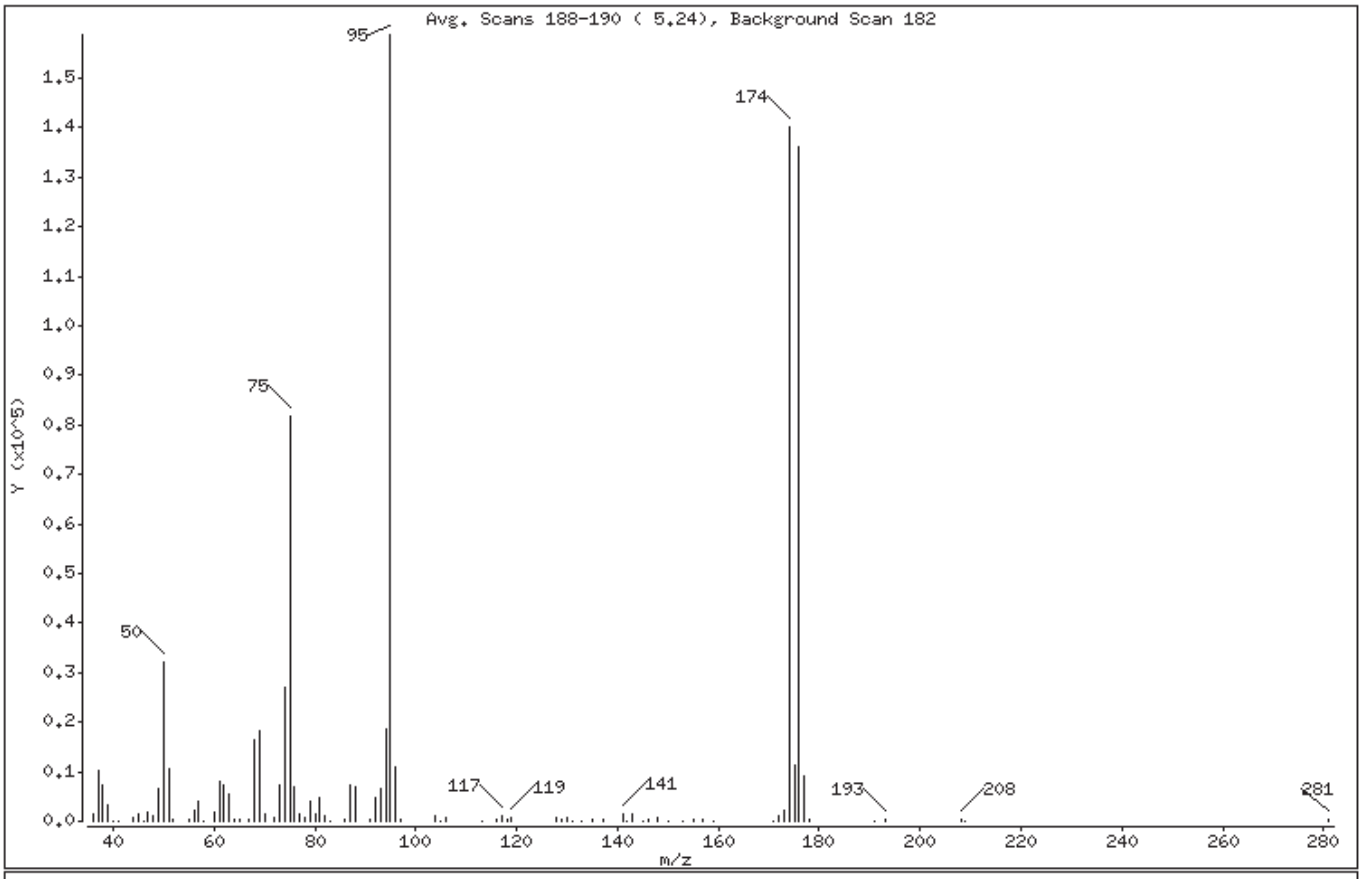
Sample Info: aug28-15;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.22
75	30.00 - 60.00% of mass 95	51.53
96	5.00 - 9.00% of mass 95	7.01
173	Less than 2.00% of mass 174	1.27 (1.44)
174	50.00 - 100.00% of mass 95	88.23
175	5.00 - 9.00% of mass 174	7.17 (8.13)
176	95.00 - 101.00% of mass 174	85.82 (97.28)
177	5.00 - 9.00% of mass 176	5.65 (6.59)

Digitally signed by Kevin A. Sposito on 05/05/2016 at 20:03.
Target 3.5 esignature user ID: kas02648

Date : 05-MAY-2016 19:55

Client ID: aug28-15 Instrument: HP19094.i

Sample Info: aug28-15;50NGBFB;1;3;;;;;;

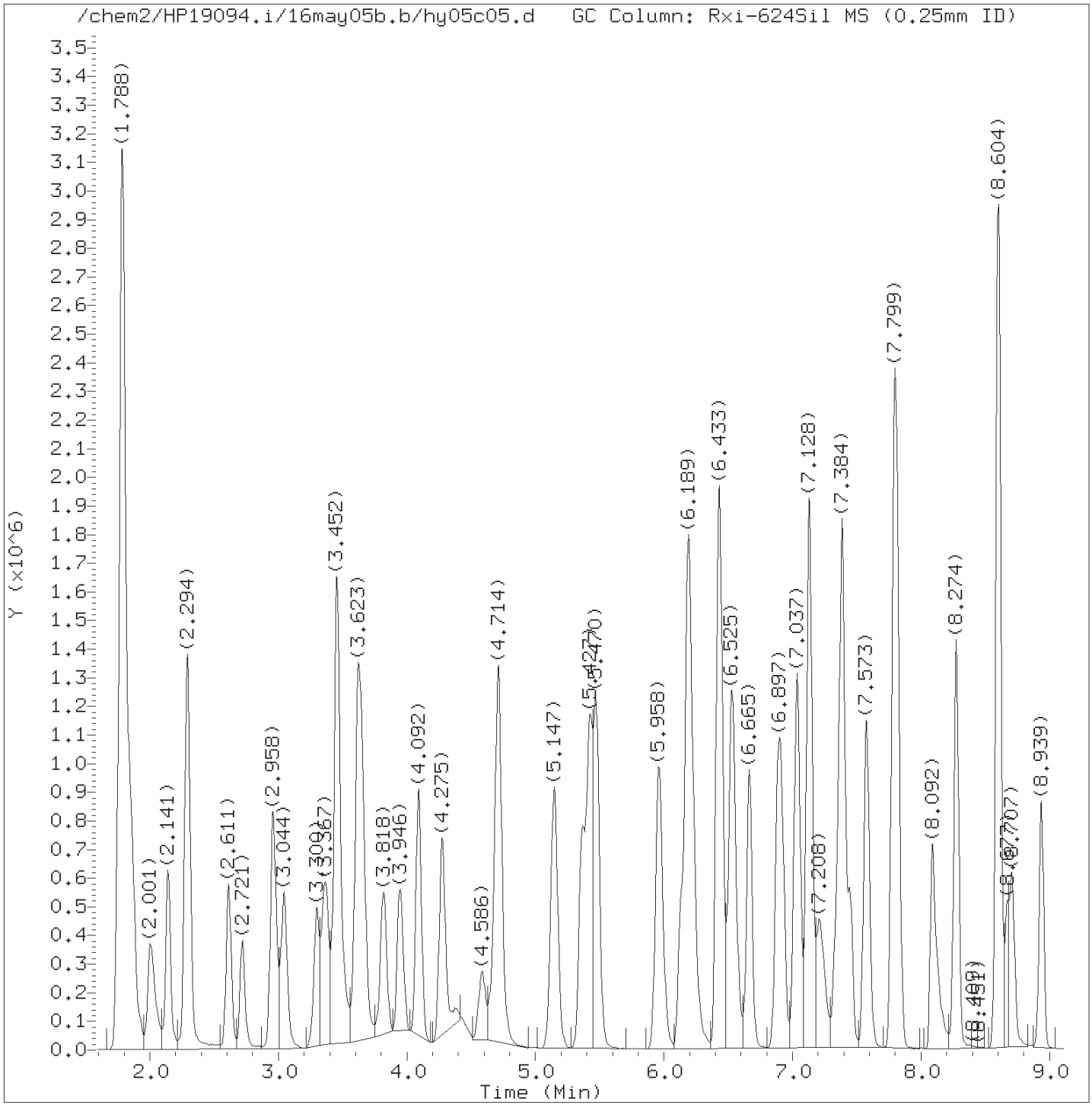
Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hy05t05.d
Spectrum: Avg. Scans 188-190 (5.24), Background Scan 182
Location of Maximum: 95.00
Number of points: 90

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1321	64.00	524	93.00	6597	145.00	139
37.00	10057	65.00	371	94.00	18552	146.00	251
38.00	7271	67.00	411	95.00	158720	148.00	570
39.00	3292	68.00	16440	96.00	11126	150.00	86
40.00	177	69.00	18064	97.00	397	153.00	83
41.00	134	70.00	1365	104.00	1015	155.00	442
44.00	626	72.00	814	105.00	113	157.00	221
45.00	1332	73.00	7172	106.00	651	159.00	97
46.00	134	74.00	27016	113.00	85	171.00	105
47.00	1972	75.00	81784	116.00	492	172.00	1187
48.00	995	76.00	6959	117.00	1103	173.00	2021
49.00	6586	77.00	1394	118.00	543	174.00	140032
50.00	32096	78.00	790	119.00	881	175.00	11385
51.00	10500	79.00	4177	128.00	619	176.00	136192
52.00	485	80.00	1419	129.00	208	177.00	8975
55.00	480	81.00	4574	130.00	664	178.00	276
56.00	2245	82.00	1082	131.00	171	191.00	85
57.00	3944	83.00	151	133.00	85	193.00	465
58.00	92	86.00	264	135.00	465	208.00	193
60.00	1672	87.00	7161	137.00	250	209.00	106
61.00	7990	88.00	6904	141.00	1449	281.00	224
62.00	7239	91.00	527	142.00	109		
63.00	5642	92.00	4596	143.00	1423		

Digitally signed by Kevin A. Sposito on 05/05/2016 at 20:03.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

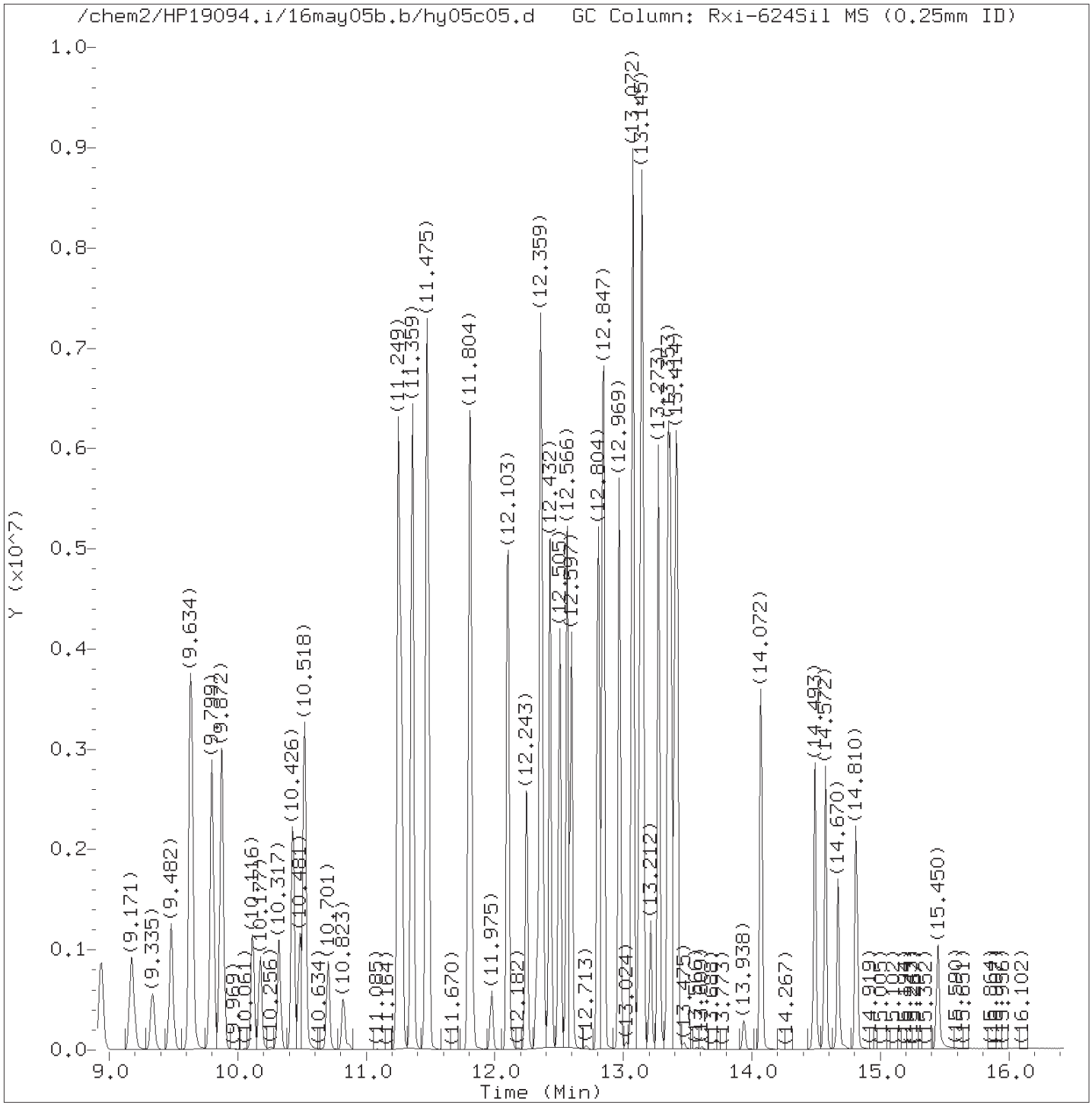
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.001	85	899372	11.811
2) Chloromethane	(2)	2.141	50	909152	12.172
5) Vinyl Chloride	(2)	2.276	62	848053	12.208
6) 1,3-Butadiene	(2)	2.294	39	765225	14.564
7) Bromomethane	(2)	2.611	94	574307	12.456
8) Chloroethane	(2)	2.721	64	492052	11.491
9) Dichlorofluoromethane	(2)	2.952	67	1146250	11.795
10) Trichlorofluoromethane	(2)	3.044	101	1087479	12.017
11) Ethyl ether	(2)	3.294	59	412048	11.036
12) Freon 123a	(2)	3.367	67	718467	10.378
13) Acrolein	(1)	3.458	56	2867441	464.130
15) 1,1-Dichloroethene	(2)	3.611	96	533513	10.275
14) Acetone	(1)	3.623	43	884873	103.942
16) Freon 113	(2)	3.653	101	572465	10.602
17) Methyl Iodide	(2)	3.818	142	1029601	10.710
18) Carbon Disulfide	(2)	3.946	76	1488441	9.283
21) Methyl Acetate	(1)	4.056	43	213703	10.126
22) Allyl Chloride	(2)	4.092	41	951989	9.696
26)*t-Butyl Alcohol-d10	(1)	4.257	65	108356	50.000
23) Methylene Chloride	(2)	4.275	84	600634	10.823
28) t-Butyl Alcohol	(1)	4.379	59	600569	206.135
29) Acrylonitrile	(1)	4.586	53	512391	50.162
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	1240801	10.356
31) trans-1,2-Dichloroethene	(2)	4.714	96	578548	10.347
32) n-Hexane	(2)	5.147	57	878355	9.254
33) 1,1-Dichloroethane	(2)	5.360	63	1194318	10.480
34) di-Isopropyl Ether	(2)	5.421	45	1999541	10.051
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	1011961	10.817
37) Ethyl t-butyl ether	(2)	5.958	59	1651100	9.842
40) 1,2-Dichloroethene (Total)	(2)		96	1240734	21.038
38) 2-Butanone	(1)	6.135	43	1372422	94.609
39) cis-1,2-Dichloroethene	(2)	6.183	96	662186	10.691
42) Propionitrile	(1)	6.202	54	762866	210.902
41) 2,2-Dichloropropane	(2)	6.214	77	924543	10.139
45) Methacrylonitrile	(1)	6.433	67	1230784	99.377
47) Bromochloromethane	(2)	6.525	128	272573	11.567
48) Tetrahydrofuran	(1)	6.543	71	356052	97.023
49) Chloroform	(2)	6.665	83	1123726	10.788

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.884	113	574261	11.034
50)$Dibromofluoromethane	(2)	6.884	111	584868	10.922
51) 1,1,1-Trichloroethane	(2)	6.909	97	933084	10.501
52) Cyclohexane	(2)	7.037	56	1074547	9.255
52) Cyclohexane	(2)	7.031	84	857699	9.648
52) Cyclohexane	(2)	7.037	69	319108	9.608
55) 1,1-Dichloropropene	(2)	7.128	75	874606	10.255
54) Carbon Tetrachloride	(2)	7.134	117	842638	10.431
56) Isobutyl Alcohol	(1)	7.214	41	532961	543.021
57)$1,2-Dichloroethane-d4	(2)	7.348	102	92935	10.781
57)$1,2-Dichloroethane-d4	(2)	7.342	65	481235	10.935
57)$1,2-Dichloroethane-d4	(2)	7.348	104	57818	10.623
58) Benzene	(2)	7.384	78	2419614	10.194
59) 1,2-Dichloroethane	(2)	7.445	62	675610	10.985
60) t-Amyl methyl ether	(2)	7.579	73	1382378	10.084
63)*Fluorobenzene	(2)	7.787	96	2208584	10.000
62) n-Heptane	(2)	7.811	43	967118	9.015
65) n-Butanol	(1)	8.085	56	837906	1008.449
67) Trichloroethene	(2)	8.274	95	650845	10.520
70) 1,2-Dichloropropane	(2)	8.598	63	630740	10.205
69) Methylcyclohexane	(2)	8.604	83	1053836	10.399
71) Methyl Methacrylate	(1)	8.671	69	247279	9.556
72) 1,4-Dioxane	(1)	8.689	88	124355	759.662
73) Dibromomethane	(2)	8.713	93	270966	10.644
74) Bromodichloromethane	(2)	8.939	83	763081	10.736
76) 2-Nitropropane	(1)	9.171	41	822302	99.134
80) cis-1,3-Dichloropropene	(2)	9.482	75	855142	9.790
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3348132	93.784
82)$Toluene-d8	(3)	9.799	98	2266086	9.302
82)$Toluene-d8	(3)	9.799	100	1464252	9.286
83) Toluene	(3)	9.872	92	1511838	9.213
84) trans-1,3-Dichloropropene	(3)	10.116	75	667079	8.673
85) 1,3-Dichloropropene (total)	(3)		75	1522221	18.464
86) Ethyl Methacrylate	(3)	10.177	69	509700	8.615
88) 1,1,2-Trichloroethane	(3)	10.323	97	369749	9.302
89) Tetrachloroethene	(3)	10.426	166	735643	9.493
90) 1,3-Dichloropropane	(3)	10.481	76	661188	9.251
91) 2-Hexanone	(1)	10.518	43	2290223	90.732

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	480062	9.422
95) 1,2-Dibromoethane	(3)	10.823	107	352489	9.415
97)*Chlorobenzene-d5	(3)	11.249	117	1710106	10.000
98) Chlorobenzene	(3)	11.274	112	1684646	9.431
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	596099	9.728
100) Ethylbenzene	(3)	11.359	91	3014653	9.386
101) m+p-Xylene	(3)	11.475	106	2336161	19.068
105) Xylene (Total)	(3)		106	3490669	28.776
104) o-Xylene	(3)	11.798	106	1154508	9.711
106) Styrene	(3)	11.816	104	1810651	9.520
107) Bromoform	(3)	11.975	173	262334	9.282
108) Isopropylbenzene	(3)	12.103	105	3014795	9.568
111)$4-Bromofluorobenzene	(3)	12.243	95	770394	9.811
111)$4-Bromofluorobenzene	(3)	12.249	174	700895	10.705
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	444009	8.810
115) trans-1,4-Dichloro-2-butene	(1)	12.353	53	940775	85.575
114) Bromobenzene	(4)	12.365	156	697967	9.298
116) 1,2,3-Trichloropropane	(4)	12.383	110	117463	9.284
117) n-Propylbenzene	(4)	12.432	91	3650323	8.991
119) 2-Chlorotoluene	(4)	12.505	126	706053	9.019
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	2608628	9.216
122) 4-Chlorotoluene	(4)	12.597	126	709474	8.893
125) tert-Butylbenzene	(4)	12.804	134	537282M	8.904
126) Pentachloroethane	(4)	12.841	167	445679	9.786
127) 1,2,4-Trimethylbenzene	(4)	12.847	105	2626834	9.281
128) sec-Butylbenzene	(4)	12.969	105	3341775	9.118
131) 1,3-Dichlorobenzene	(4)	13.072	146	1379672	9.396
132) p-Isopropyltoluene	(4)	13.078	119	2863125	9.228
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	805226	10.000
134) 1,4-Dichlorobenzene	(4)	13.145	146	1364726	9.148
135) 1,2,3-Trimethylbenzene	(4)	13.152	120	1100040	9.372
136) Benzyl Chloride	(4)	13.212	126	166101	8.319
138) n-Butylbenzene	(4)	13.365	92	1431745	9.434
139) 1,2-Dichlorobenzene	(4)	13.401	146	1219219	9.349
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	58491	10.313
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	843285	9.039
146) Hexachlorobutadiene	(4)	14.572	225	482112	9.890
147) Naphthalene	(4)	14.670	128	1215494	8.128

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

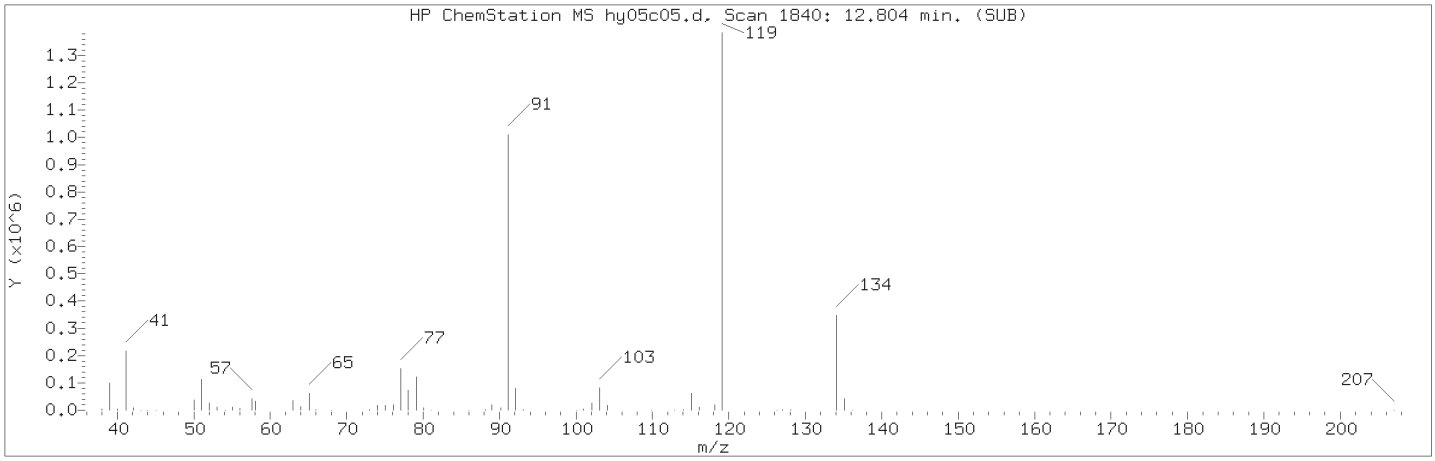
Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

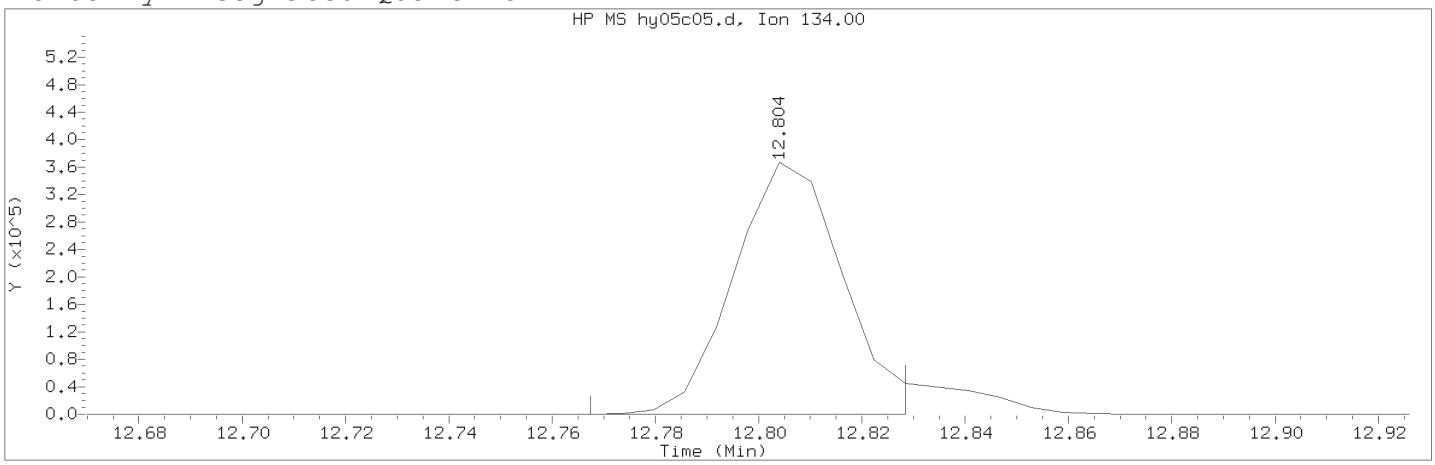
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.810	180	674707	9.055

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:51 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

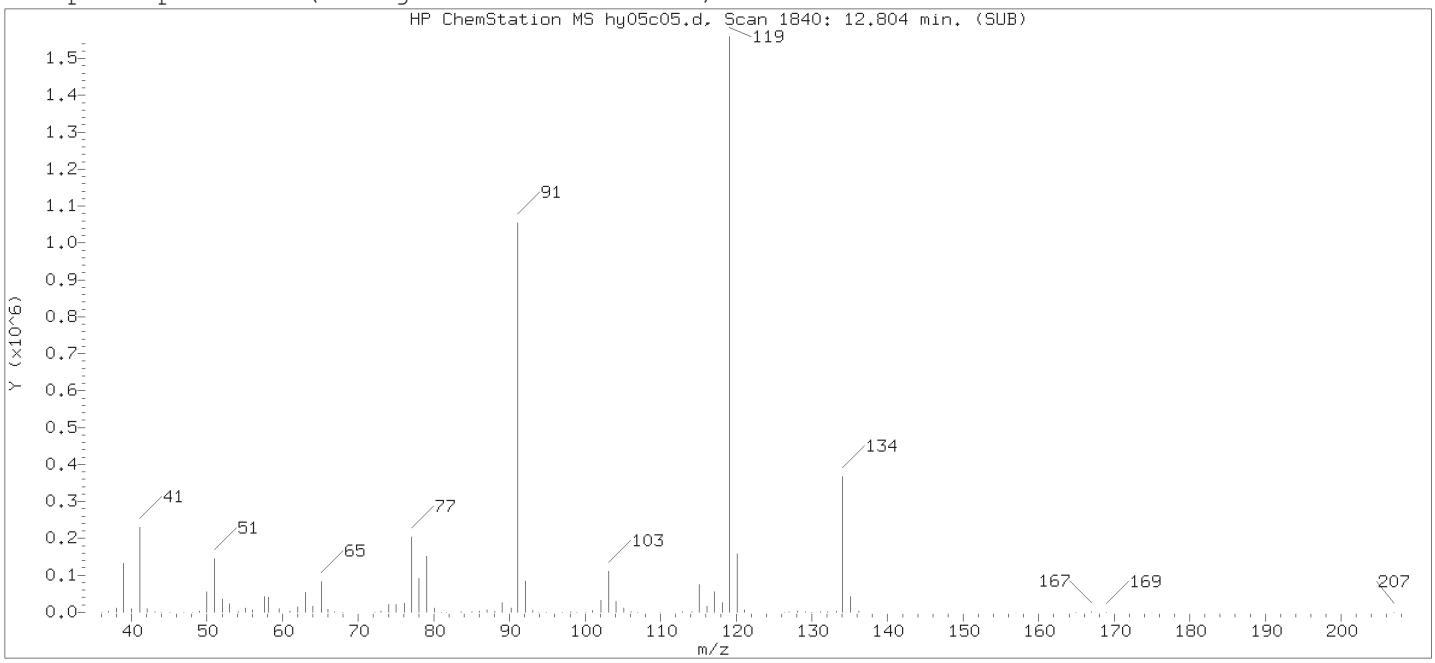
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area (flag) : 537282M
On-Column Amount (ng) : 8.9036
Integration start scan : 1833 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

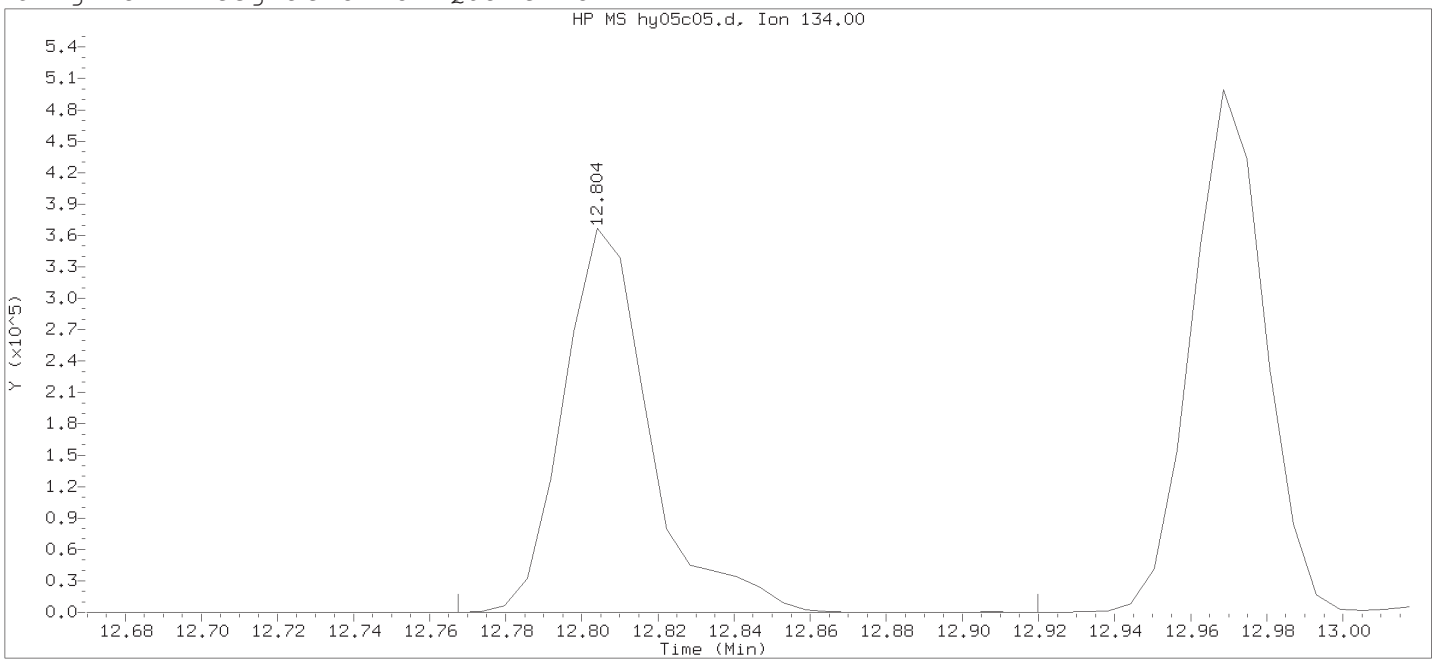
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/05/2016 at 20:52.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may05b.b/hy05c05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:28 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 20:47 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 577765
On-column Amount (ng) : 9.5745
Integration start scan : 1833 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/05/2016 at 20:52.
Target 3.5 esignature User ID: KAS02648

Data File: /chem2/HP19094.i/16may06b.b/hy06t06.d

Date : 06-MAY-2016 20:07

Client ID: aug28-15

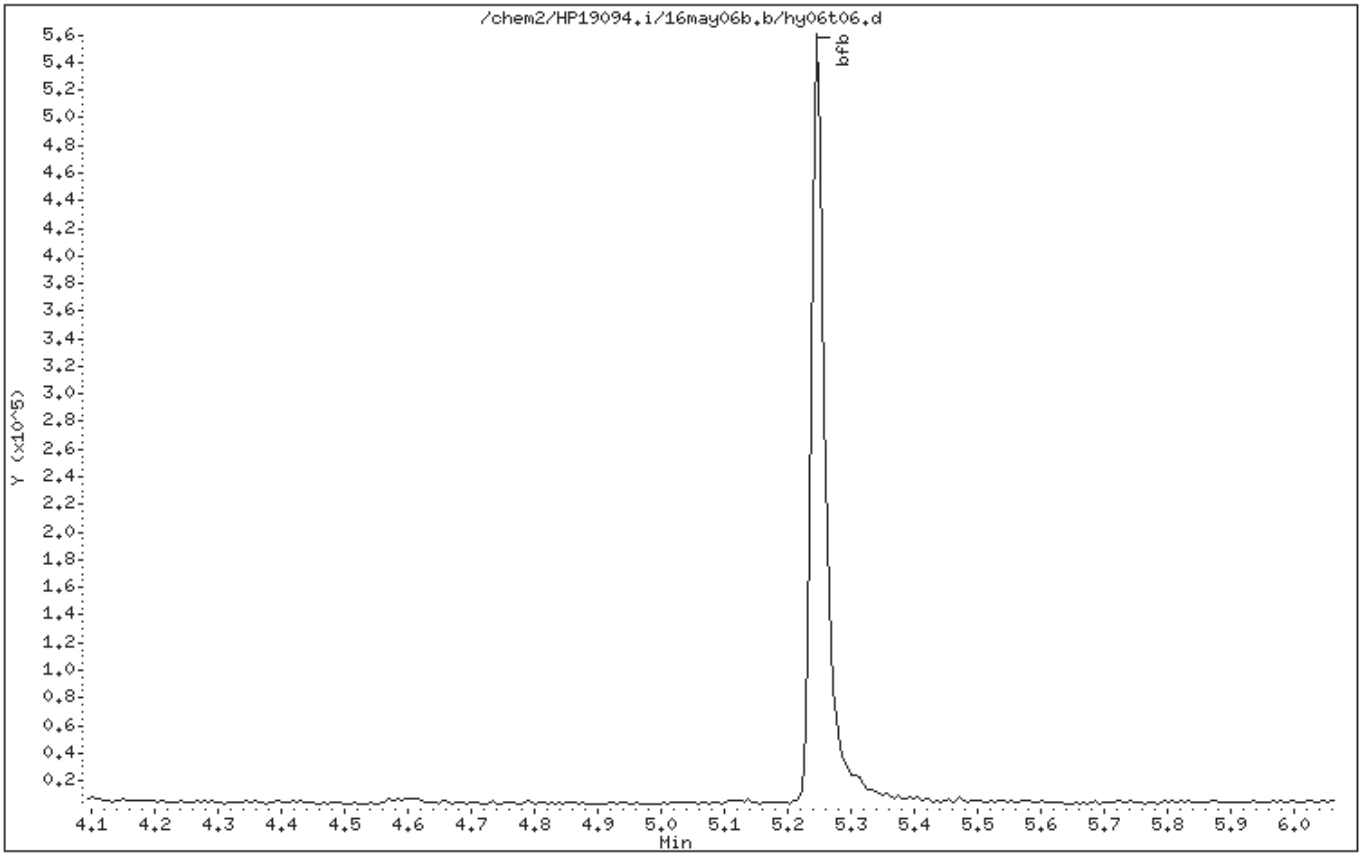
Instrument: HP19094.i

Sample Info: aug28-15;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin A. Sposito on 05/06/2016 at 20:14.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP19094.i/16may06b.b/hy06t06.d

Date : 06-MAY-2016 20:07

Client ID: aug28-15

Instrument: HP19094.i

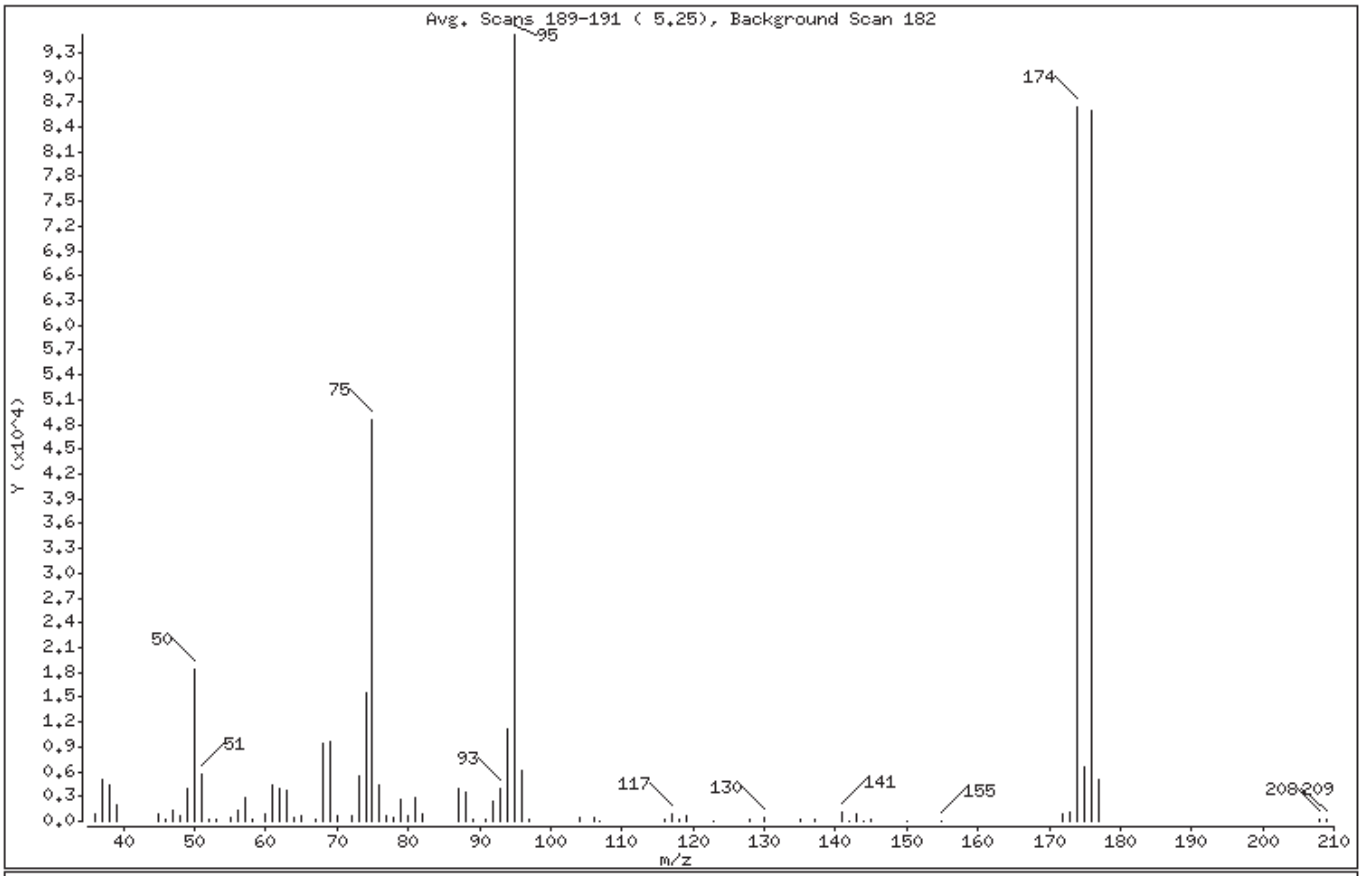
Sample Info: aug28-15;50NGBFB;1;3;;;;;;

Operator: KAS02648

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.23
75	30.00 - 60.00% of mass 95	50.94
96	5.00 - 9.00% of mass 95	6.47
173	Less than 2.00% of mass 174	1.15 (1.26)
174	50.00 - 100.00% of mass 95	90.76
175	5.00 - 9.00% of mass 174	6.91 (7.61)
176	95.00 - 101.00% of mass 174	90.28 (99.47)
177	5.00 - 9.00% of mass 176	5.24 (5.81)

Digitally signed by Kevin A. Sposito on 05/06/2016 at 20:14.
Target 3.5 esignature user ID: kas02648

Date : 06-MAY-2016 20:07

Client ID: aug28-15 Instrument: HP19094.i

Sample Info: aug28-15;50NGBFB;1;3;;;;;;

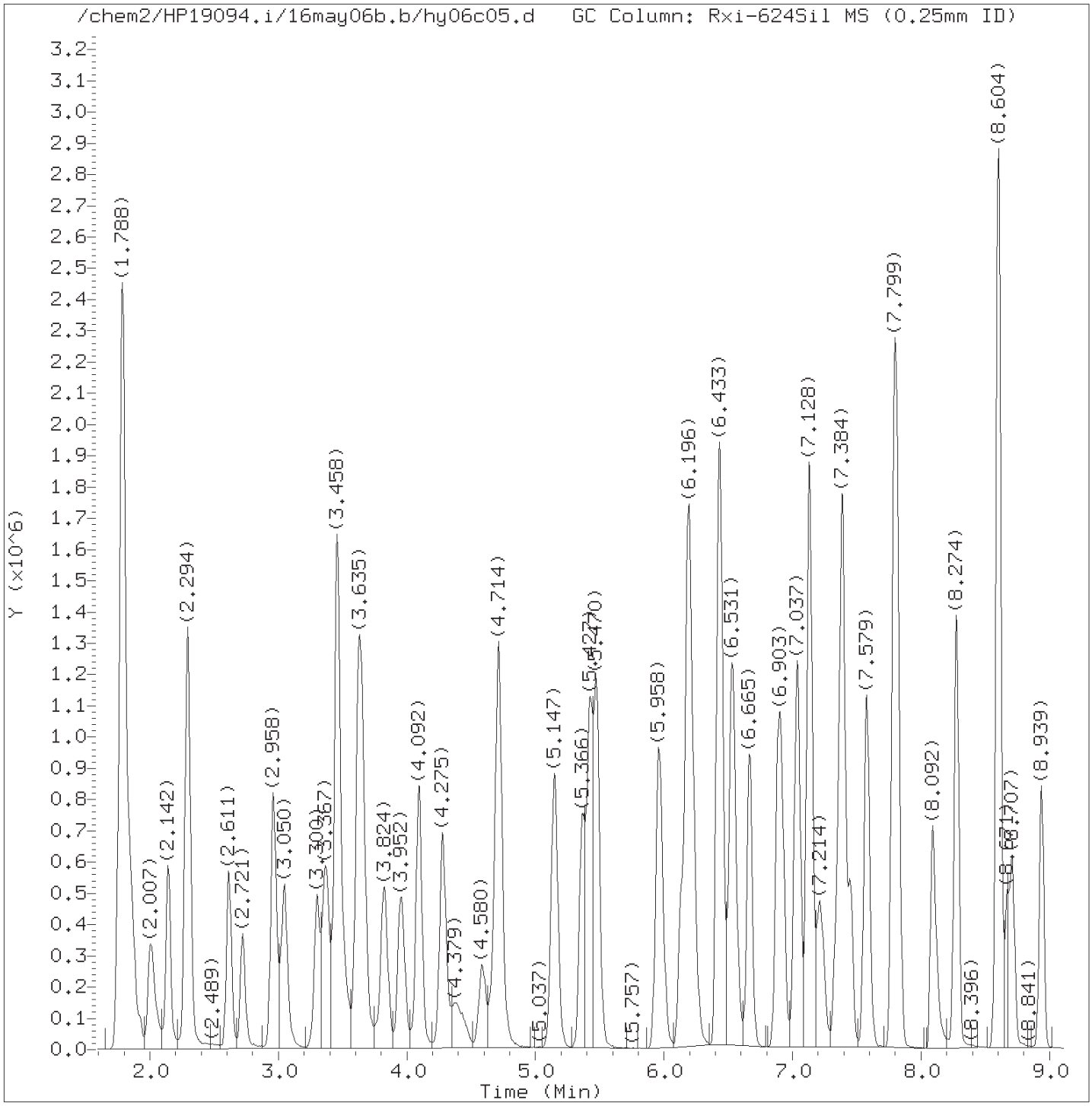
Operator: KAS02648

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hy06t06.d
Spectrum: Avg. Scans 189-191 (5.25), Background Scan 182
Location of Maximum: 95.00
Number of points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	846	62.00	3946	87.00	3894	130.00	357
37.00	5122	63.00	3644	88.00	3430	135.00	178
38.00	4387	64.00	357	89.00	249	137.00	192
39.00	1973	65.00	652	91.00	274	141.00	986
45.00	795	67.00	286	92.00	2359	142.00	104
46.00	111	68.00	9466	93.00	3954	143.00	934
47.00	1314	69.00	9637	94.00	11198	144.00	103
48.00	584	70.00	743	95.00	95152	145.00	154
49.00	3836	72.00	623	96.00	6153	150.00	92
50.00	18296	73.00	5370	97.00	314	155.00	86
51.00	5636	74.00	15553	104.00	441	172.00	792
52.00	221	75.00	48464	106.00	429	173.00	1092
53.00	111	76.00	4467	107.00	83	174.00	86360
55.00	445	77.00	631	116.00	324	175.00	6575
56.00	1234	78.00	494	117.00	811	176.00	85904
57.00	2802	79.00	2706	118.00	324	177.00	4989
58.00	196	80.00	582	119.00	703	208.00	110
60.00	776	81.00	2905	123.00	103	209.00	150
61.00	4439	82.00	854	128.00	307		

Digitally signed by Kevin A. Sposito on 05/06/2016 at 20:14.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

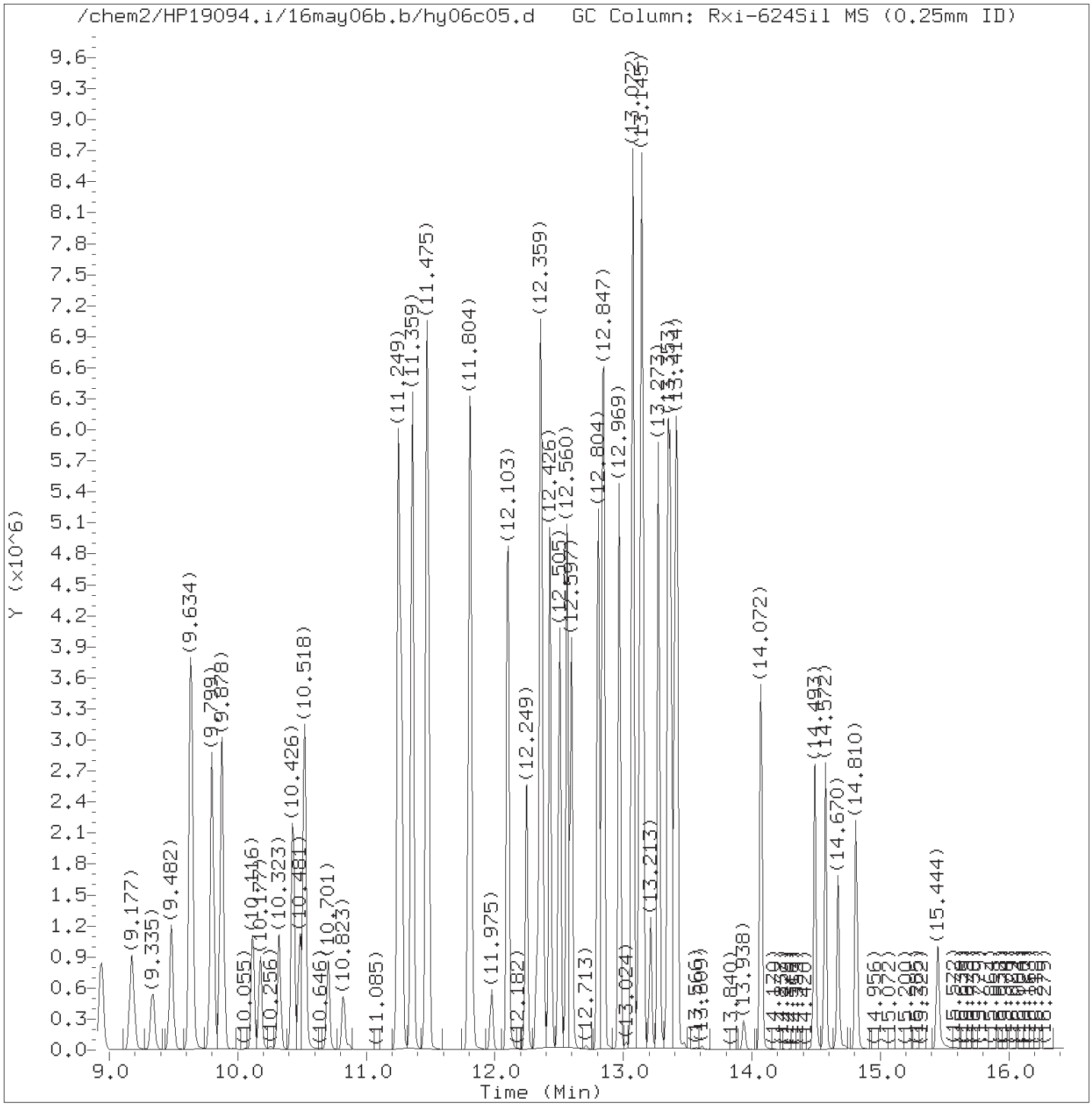
Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	830832	11.252
2) Chloromethane	(2)	2.142	50	865382	11.948
5) Vinyl Chloride	(2)	2.276	62	809508	12.017
6) 1,3-Butadiene	(2)	2.300	39	744435	14.611
7) Bromomethane	(2)	2.611	94	566071	12.661
8) Chloroethane	(2)	2.721	64	480239	11.566
9) Dichlorofluoromethane	(2)	2.958	67	1108515	11.764
10) Trichlorofluoromethane	(2)	3.050	101	1044079	11.898
11) Ethyl ether	(2)	3.300	59	409437	11.310
12) Freon 123a	(2)	3.367	67	690667	10.289
13) Acrolein	(1)	3.458	56	2798006	510.618
14) Acetone	(1)	3.623	43	829740	109.889
15) 1,1-Dichloroethene	(2)	3.623	96	515103	10.230
16) Freon 113	(2)	3.653	101	548514	10.476
17) Methyl Iodide	(2)	3.824	142	1007483	10.808
18) Carbon Disulfide	(2)	3.958	76	1391616	8.951
21) Methyl Acetate	(1)	4.062	43	201053	10.740
22) Allyl Chloride	(2)	4.092	41	906386	9.520
26)*t-Butyl Alcohol-d10	(1)	4.257	65	96106	50.000
23) Methylene Chloride	(2)	4.275	84	575335	10.692
28) t-Butyl Alcohol	(1)	4.391	59	547587	211.907
29) Acrylonitrile	(1)	4.580	53	493650	54.487
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	1191761	10.258
31) trans-1,2-Dichloroethene	(2)	4.714	96	565783	10.435
32) n-Hexane	(2)	5.147	57	813884	8.843
33) 1,1-Dichloroethane	(2)	5.360	63	1148555	10.394
34) di-Isopropyl Ether	(2)	5.427	45	1891974	9.808
35) 2-Chloro-1,3-Butadiene	(2)	5.476	53	958827	10.570
37) Ethyl t-butyl ether	(2)	5.958	59	1602747	9.853
40) 1,2-Dichloroethene (Total)	(2)		96	1213052	21.213
38) 2-Butanone	(1)	6.141	43	1306358	101.534
39) cis-1,2-Dichloroethene	(2)	6.183	96	647269	10.777
42) Propionitrile	(1)	6.202	54	694096	216.348
41) 2,2-Dichloropropane	(2)	6.214	77	864145	9.774
45) Methacrylonitrile	(1)	6.433	67	1202935	109.509
47) Bromochloromethane	(2)	6.519	128	274465	12.012
48) Tetrahydrofuran	(1)	6.537	71	347522	106.769
49) Chloroform	(2)	6.665	83	1090205	10.793

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.884	113	560773	11.112
50)$Dibromofluoromethane	(2)	6.884	111	574914	11.072
51) 1,1,1-Trichloroethane	(2)	6.909	97	898597	10.430
52) Cyclohexane	(2)	7.037	56	1005827	8.934
52) Cyclohexane	(2)	7.043	84	831066	9.641
52) Cyclohexane	(2)	7.043	69	302546	9.395
55) 1,1-Dichloropropene	(2)	7.128	75	836698	10.118
54) Carbon Tetrachloride	(2)	7.141	117	823483	10.513
56) Isobutyl Alcohol	(1)	7.214	41	467693	537.260
57)$1,2-Dichloroethane-d4	(2)	7.354	102	95002	11.366
57)$1,2-Dichloroethane-d4	(2)	7.348	65	469007	10.991
57)$1,2-Dichloroethane-d4	(2)	7.342	104	57117	10.823
58) Benzene	(2)	7.390	78	2359481	10.252
59) 1,2-Dichloroethane	(2)	7.451	62	670102	11.237
60) t-Amyl methyl ether	(2)	7.579	73	1345059	10.119
63)*Fluorobenzene	(2)	7.787	96	2141557	10.000
62) n-Heptane	(2)	7.817	43	897850	8.631
65) n-Butanol	(1)	8.092	56	742819	1007.962
67) Trichloroethene	(2)	8.281	95	632088	10.537
69) Methylcyclohexane	(2)	8.604	83	1002997	10.207
70) 1,2-Dichloropropane	(2)	8.604	63	614594	10.255
71) Methyl Methacrylate	(1)	8.665	69	228390	9.951
72) 1,4-Dioxane	(1)	8.683	88	93152	641.581
73) Dibromomethane	(2)	8.707	93	269495	10.918
74) Bromodichloromethane	(2)	8.939	83	743819	10.792
76) 2-Nitropropane	(1)	9.177	41	792339	107.697
80) cis-1,3-Dichloropropene	(2)	9.482	75	827637	9.772
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3211242	101.415
82)$Toluene-d8	(3)	9.799	98	2220499	9.190
82)$Toluene-d8	(3)	9.799	100	1451102	9.278
83) Toluene	(3)	9.878	92	1486321	9.132
84) trans-1,3-Dichloropropene	(3)	10.116	75	652070	8.548
85) 1,3-Dichloropropene (total)	(3)		75	1479707	18.320
86) Ethyl Methacrylate	(3)	10.177	69	482981	8.230
88) 1,1,2-Trichloroethane	(3)	10.323	97	371793	9.431
89) Tetrachloroethene	(3)	10.426	166	725083	9.433
90) 1,3-Dichloropropane	(3)	10.481	76	655973	9.254
91) 2-Hexanone	(1)	10.518	43	2198730	98.211

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.701	129	475106	9.401
95) 1,2-Dibromoethane	(3)	10.823	107	356303	9.595
97)*Chlorobenzene-d5	(3)	11.243	117	1696135	10.000
98) Chlorobenzene	(3)	11.274	112	1677145	9.466
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	596547	9.816
100) Ethylbenzene	(3)	11.359	91	2961358	9.296
101) m+p-Xylene	(3)	11.475	106	2280117	18.764
105) Xylene (Total)	(3)		106	3404750	28.299
104) o-Xylene	(3)	11.804	106	1124633	9.538
106) Styrene	(3)	11.816	104	1806168	9.575
107) Bromoform	(3)	11.975	173	257697	9.193
108) Isopropylbenzene	(3)	12.103	105	2946342	9.428
111)$4-Bromofluorobenzene	(3)	12.243	95	759519	9.752
111)$4-Bromofluorobenzene	(3)	12.249	174	701682	10.806
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	441282	8.581
115) trans-1,4-Dichloro-2-butene	(1)	12.353	53	904789	92.792
114) Bromobenzene	(4)	12.365	156	704081	9.192
116) 1,2,3-Trichloropropane	(4)	12.383	110	117562	9.106
117) n-Propylbenzene	(4)	12.426	91	3549489	8.568
119) 2-Chlorotoluene	(4)	12.505	126	689433	8.631
121) 1,3,5-Trimethylbenzene	(4)	12.560	105	2552522	8.837
122) 4-Chlorotoluene	(4)	12.597	126	707691	8.693
125) tert-Butylbenzene	(4)	12.804	134	533577M	8.666
126) Pentachloroethane	(4)	12.835	167	448697	9.656
127) 1,2,4-Trimethylbenzene	(4)	12.847	105	2574040	8.913
128) sec-Butylbenzene	(4)	12.969	105	3240966	8.667
131) 1,3-Dichlorobenzene	(4)	13.072	146	1369499	9.141
132) p-Isopropyltoluene	(4)	13.078	119	2826622	8.929
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	821619	10.000
134) 1,4-Dichlorobenzene	(4)	13.145	146	1345561	8.840
135) 1,2,3-Trimethylbenzene	(4)	13.152	120	1102998	9.210
136) Benzyl Chloride	(4)	13.213	126	165634	8.130
138) n-Butylbenzene	(4)	13.365	92	1384785	8.942
139) 1,2-Dichlorobenzene	(4)	13.402	146	1208504	9.082
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	56697	11.271
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	839438	8.818
146) Hexachlorobutadiene	(4)	14.572	225	477538	9.601
147) Naphthalene	(4)	14.670	128	1222636	8.013

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.810	180	665208	8.749

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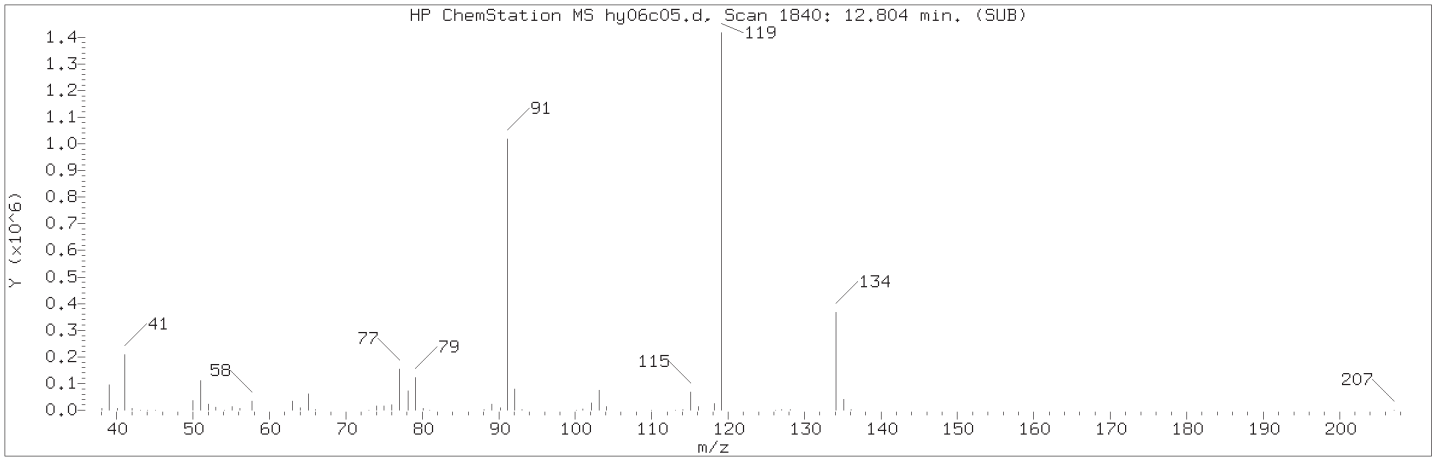
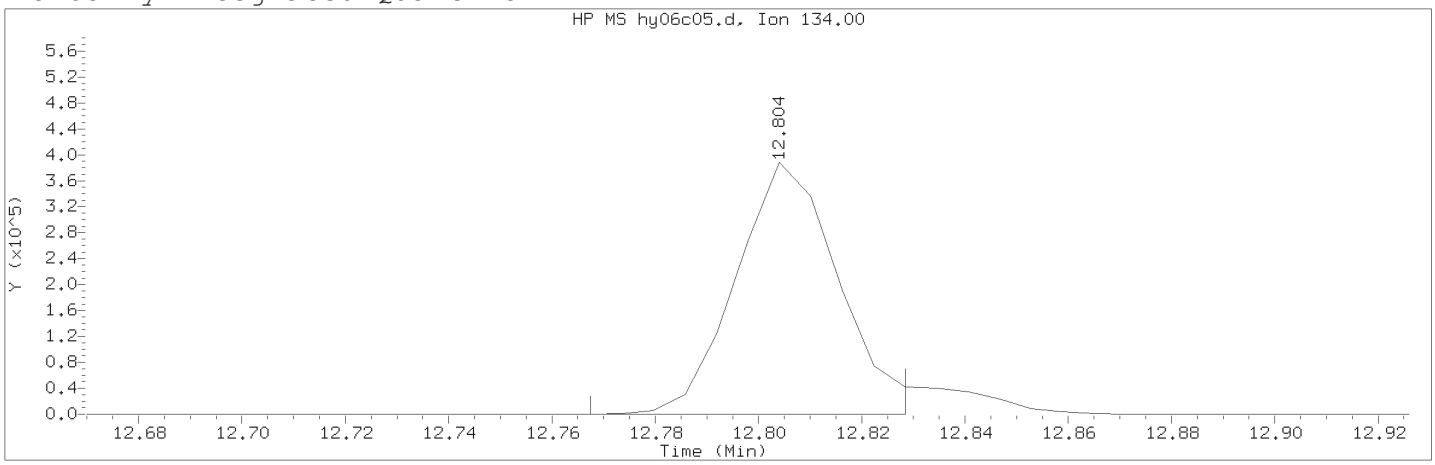
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 21:42 kas02648

Sample Name: VSTD010 Lab Sample ID: VSTD010

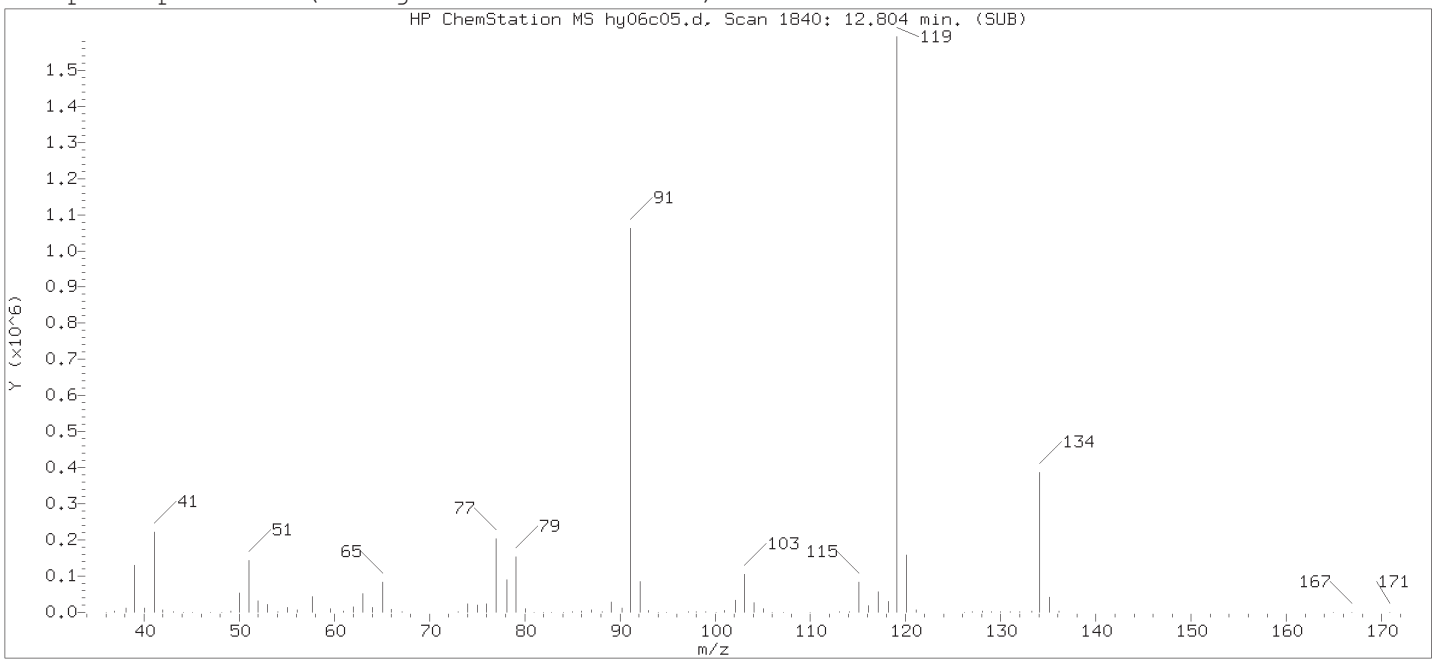
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area (flag) : 533577M
On-Column Amount (ng) : 8.6658
Integration start scan : 1833 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

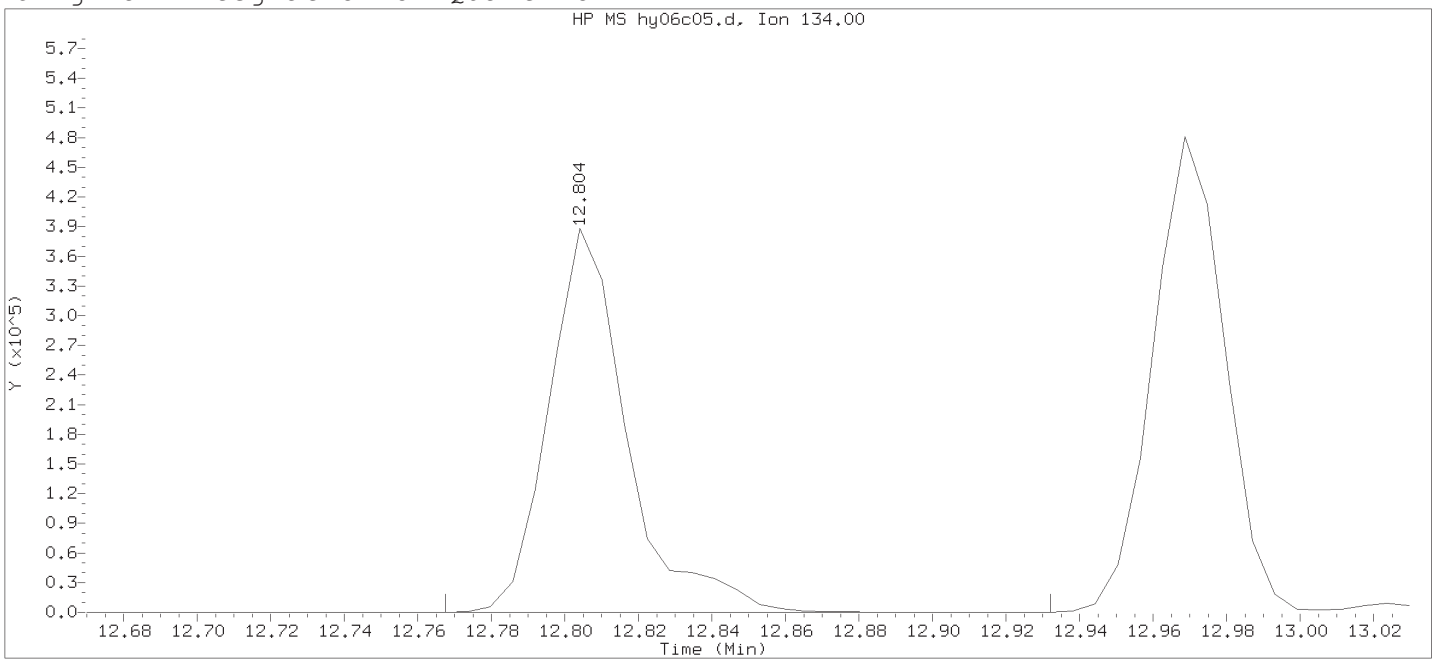
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 09:16.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may06b.b/hy06c05.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 20:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 574271
On-column Amount (ng) : 9.3267
Integration start scan : 1833 Integration stop scan: 1860
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/06/2016 at 21:43.
Target 3.5 esignature user ID: KAS02648

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH85

Data file: /chem2/HP19094.i/16may05b.b/hy05b05.d Injection date and time: **05-MAY-2016 21:49**
Data file Sample Info. Line: VBLKH85;VBLKH85;1;3;;;DRAPERJK;;; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 22:08 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 20:47
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.006)	439	65	112846	(4)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2324720	(5)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1689839	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	735750	(-9)	10.00	

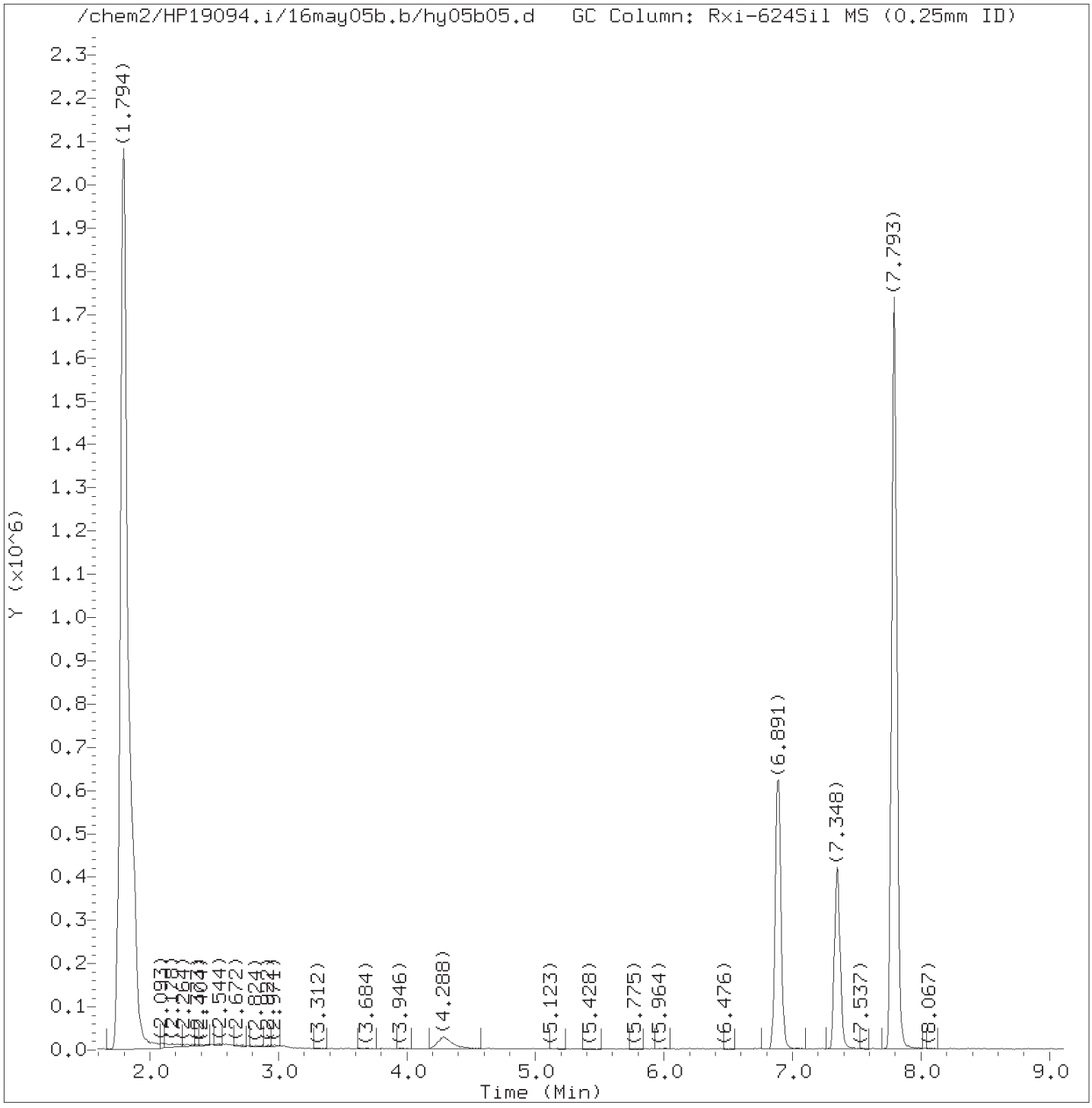
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.001)	113	581121	10.608	106%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	89809	9.898	99%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2379496	9.885	99%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	714642	9.210	92%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/05/2016 at 22:10. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

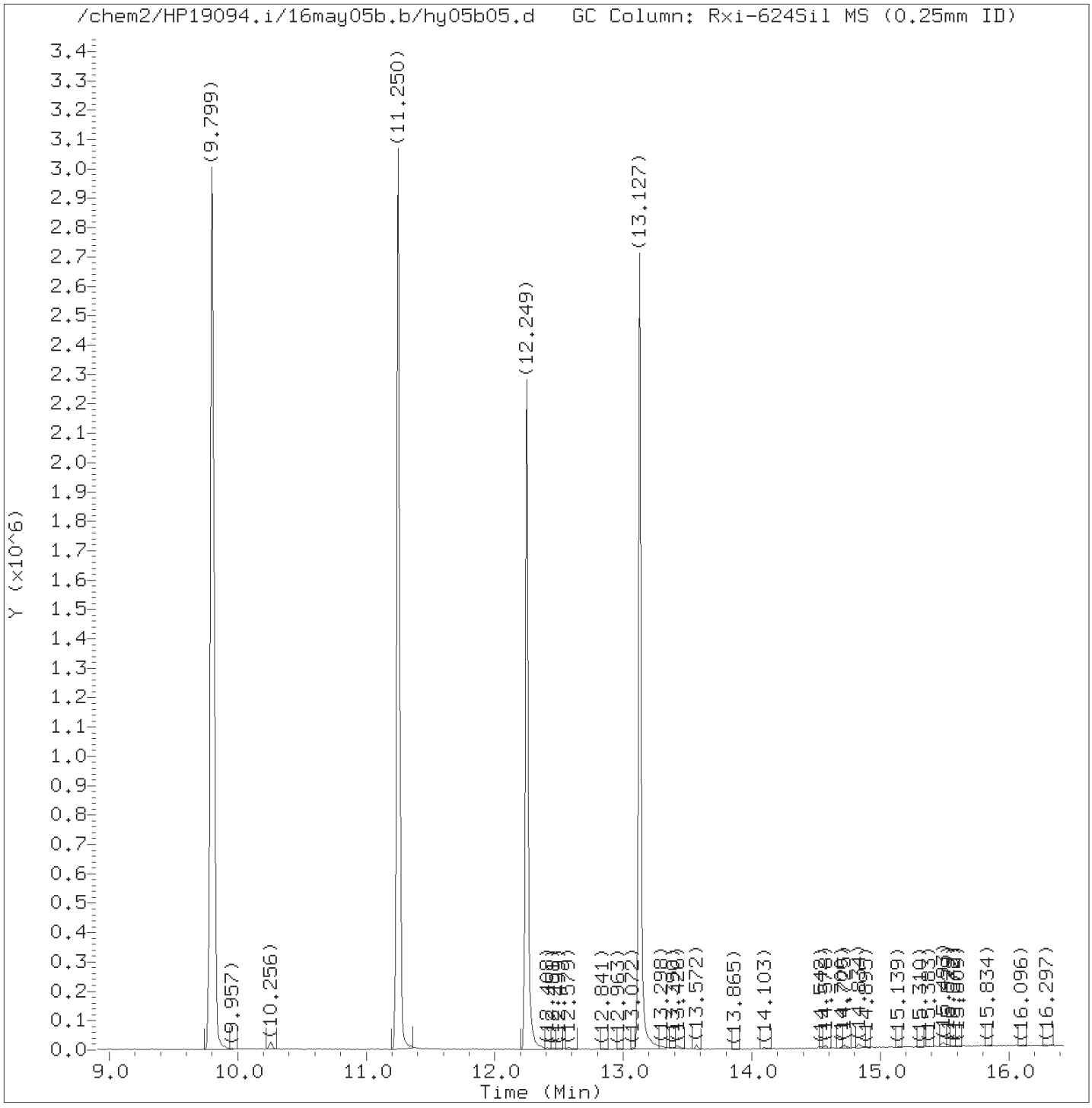
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05b05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:08 Automation

Sample Name: VBLKH85 Lab Sample ID: VBLKH85

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:10.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05b05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:08 Automation

Sample Name: VBLKH85 Lab Sample ID: VBLKH85

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:10.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05b05.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:08 Automation

Sample Name: VBLKH85 Lab Sample ID: VBLKH85

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.263	65	112846	50.000
50)$Dibromofluoromethane	(2)	6.885	113	581121	10.608
57)$1,2-Dichloroethane-d4	(2)	7.348	102	89809	9.898
63)*Fluorobenzene	(2)	7.793	96	2324720	10.000
82)$Toluene-d8	(3)	9.799	98	2379496	9.885
97)*Chlorobenzene-d5	(3)	11.250	117	1689839	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	714642	9.210
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	735750	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:10.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may06b.b/hy06b41.d Injection date and time: **06-MAY-2016 21:57**
Data file Sample Info. Line: VBLKH89;VBLKH89;1;3;;;DRAPERJK;;; Instrument ID: **HP19094.i** Batch: **H161273AA**
Date, time and analyst ID of latest file update: 06-May-2016 22:16 Automation

Blank Data file reference: **/chem2/HP19094.i/16may06b.b/hy06b41.d**

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 06-MAY-2016 20:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may06b.b/hy06c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.018)	441	65	108601	(13)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2258413	(5)	10.00	
97) Chlorobenzene-d5	11.249	(-0.006)	1585	117	1672746	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	740685	(-10)	10.00	

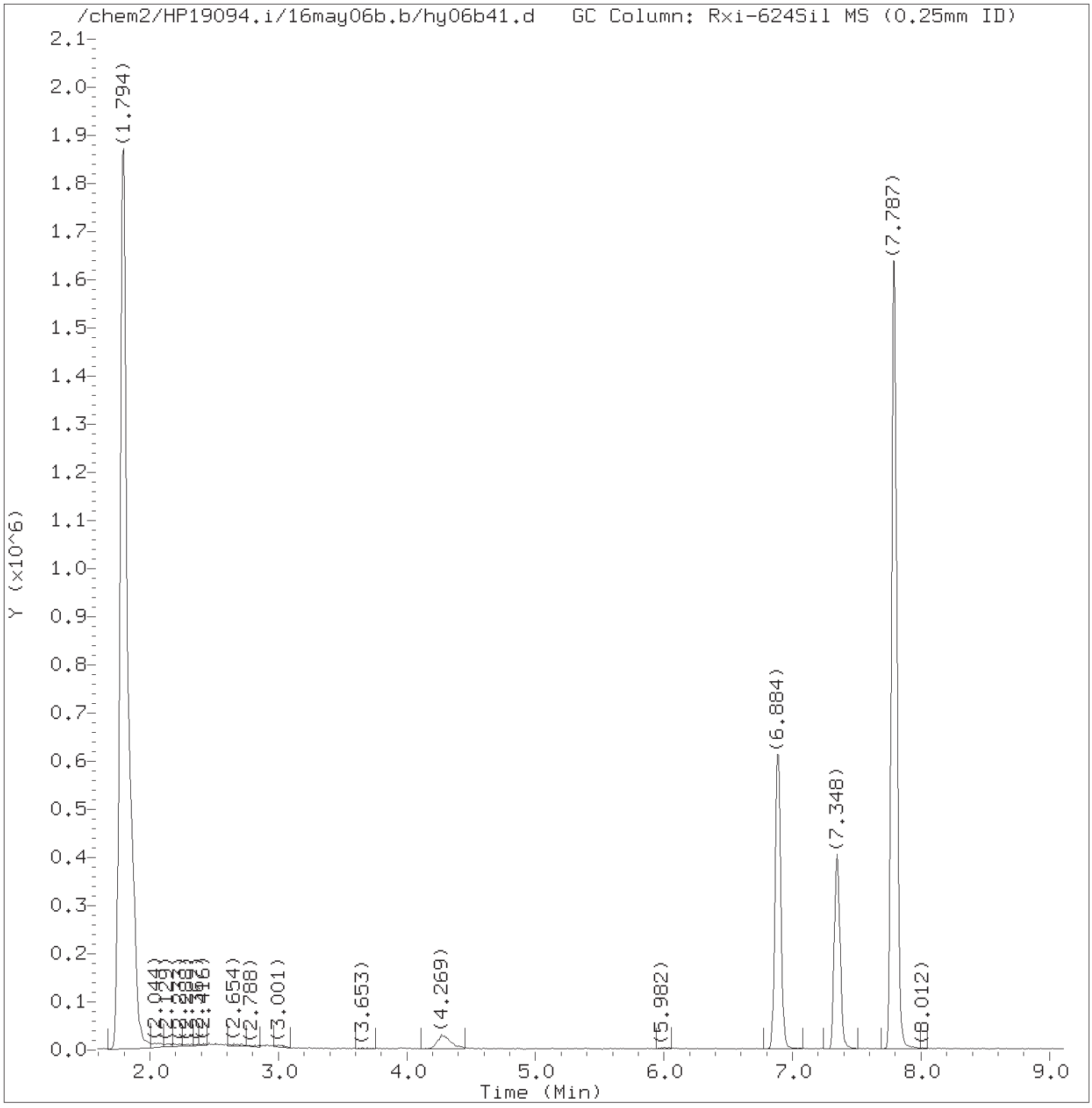
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	567220	10.658	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.002)	102	90941	10.317	103%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2321210	9.741	97%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(0.000)	95	711637	9.265	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/06/2016 at 22:18. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 09:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

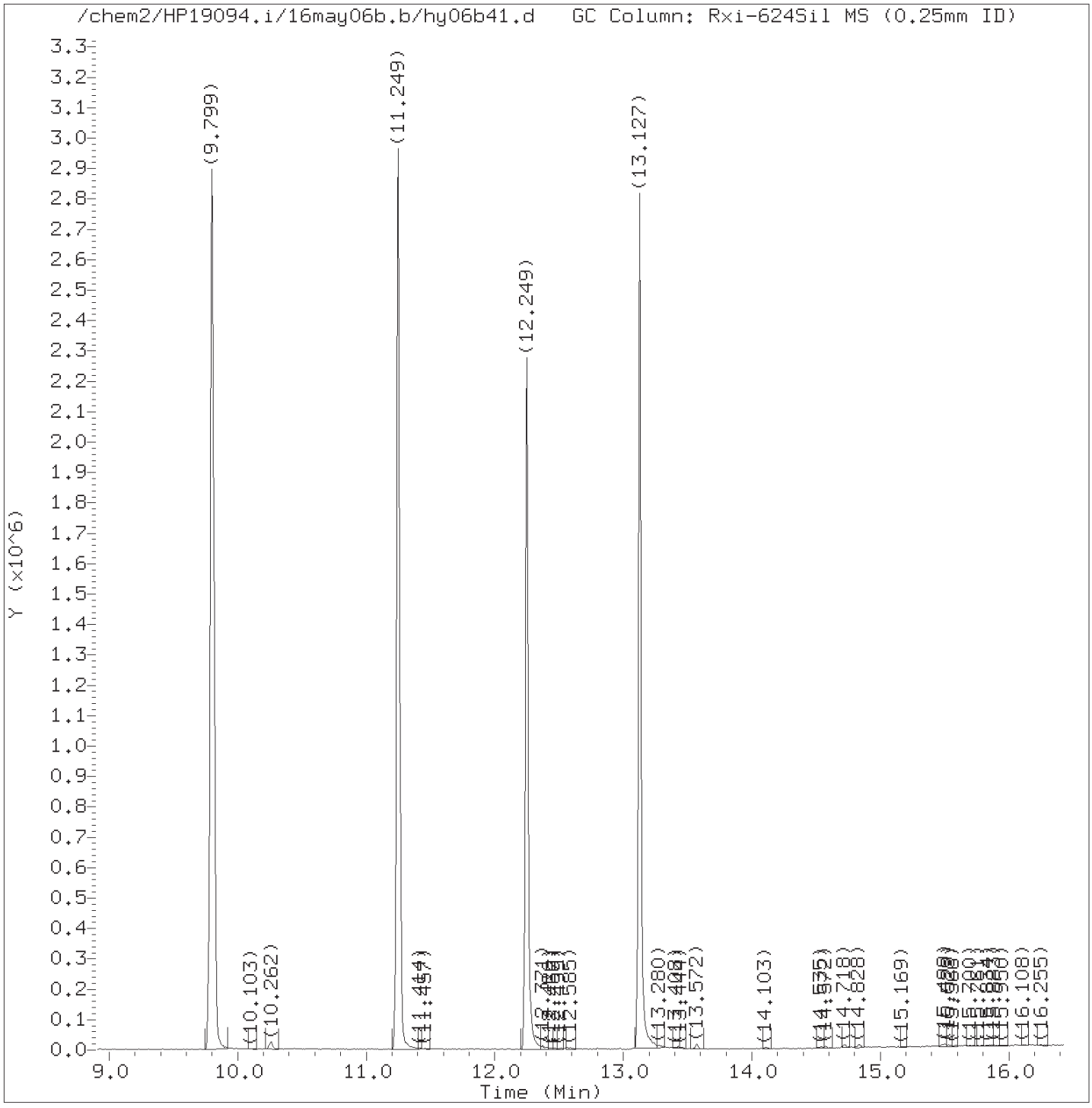
Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06b41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:16 Automation

Sample Name: VBLKH89 Lab Sample ID: VBLKH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:18.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06b41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:16 Automation

Sample Name: VBLKH89 Lab Sample ID: VBLKH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:18.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06b41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:16 Automation

Sample Name: VBLKH89 Lab Sample ID: VBLKH89

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	108601	50.000
50)$Dibromofluoromethane	(2)	6.891	113	567220	10.658
57)$1,2-Dichloroethane-d4	(2)	7.348	102	90941	10.317
63)*Fluorobenzene	(2)	7.793	96	2258413	10.000
82)$Toluene-d8	(3)	9.799	98	2321210	9.741
97)*Chlorobenzene-d5	(3)	11.249	117	1672746	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	711637	9.265
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	740685	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:18.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s45.d Injection date and time: **05-MAY-2016 23:36**
Data file Sample Info. Line: 5W7B-MS;8352779MS;1;3;MS;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 23:55 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.012)	440	65	93721	(-14)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2284193	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1611186	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	733659	(-9)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.000)	113	541372	10.058	101%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	85263	9.564	96%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2335937	10.177	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(0.000)	95	703402	9.507	95%		78 - 110

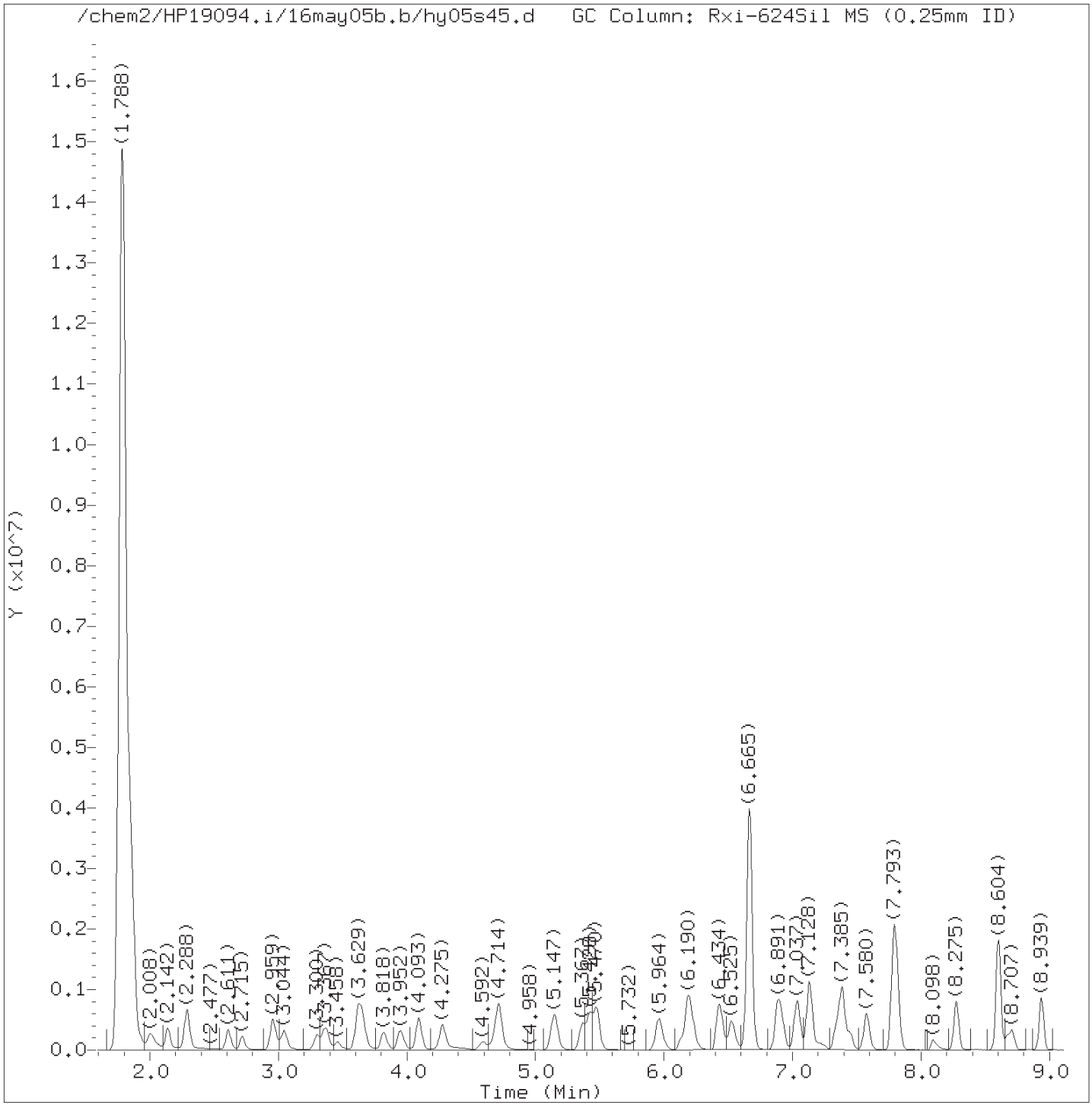
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.008	(-0.000)	85	504368	6.404	6.40			0.3	1
5) Vinyl Chloride	(2)	2.276	(-0.000)	62	487682	6.788	6.79			0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	210667	5.456	5.46		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.617	(-0.000)	96	325073	6.053	6.05			0.4	1
14) Acetone	(1)	3.629	(0.000)	43	311815	42.347	42.35			3	10
23) Methylene Chloride	(2)	4.282	(-0.000)	84	338457	5.897	5.90			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.720	(-0.000)	96	350966	6.069	6.07			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.190	(-0.000)	96	370034	5.777	5.78			0.1	1
38) 2-Butanone	(1)	6.147	(0.001)	43	500189	39.865	39.87			1	10
49) Chloroform	(2)	6.665	(-0.000)	83	4745752	44.051	44.05		E	0.1	1
59) 1,2-Dichloroethane	(2)	7.446	(-0.000)	62	370730	5.829	5.83			0.1	1
67) Trichloroethene	(2)	8.275	(0.000)	95	382755	5.982	5.98			0.2	1
83) Toluene	(3)	9.872	(-0.000)	92	871575	5.637	5.64			0.1	1
101) m+p-Xylene	(3)	11.475	(0.000)	106	1303202	11.290	11.29			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.000)	106	615765	5.497	5.50			0.1	0.5
105) Xylene (Total)	(3)			106	1918967	16.788	16.79			0.2	3

E = Compound concentration above calibration range.

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

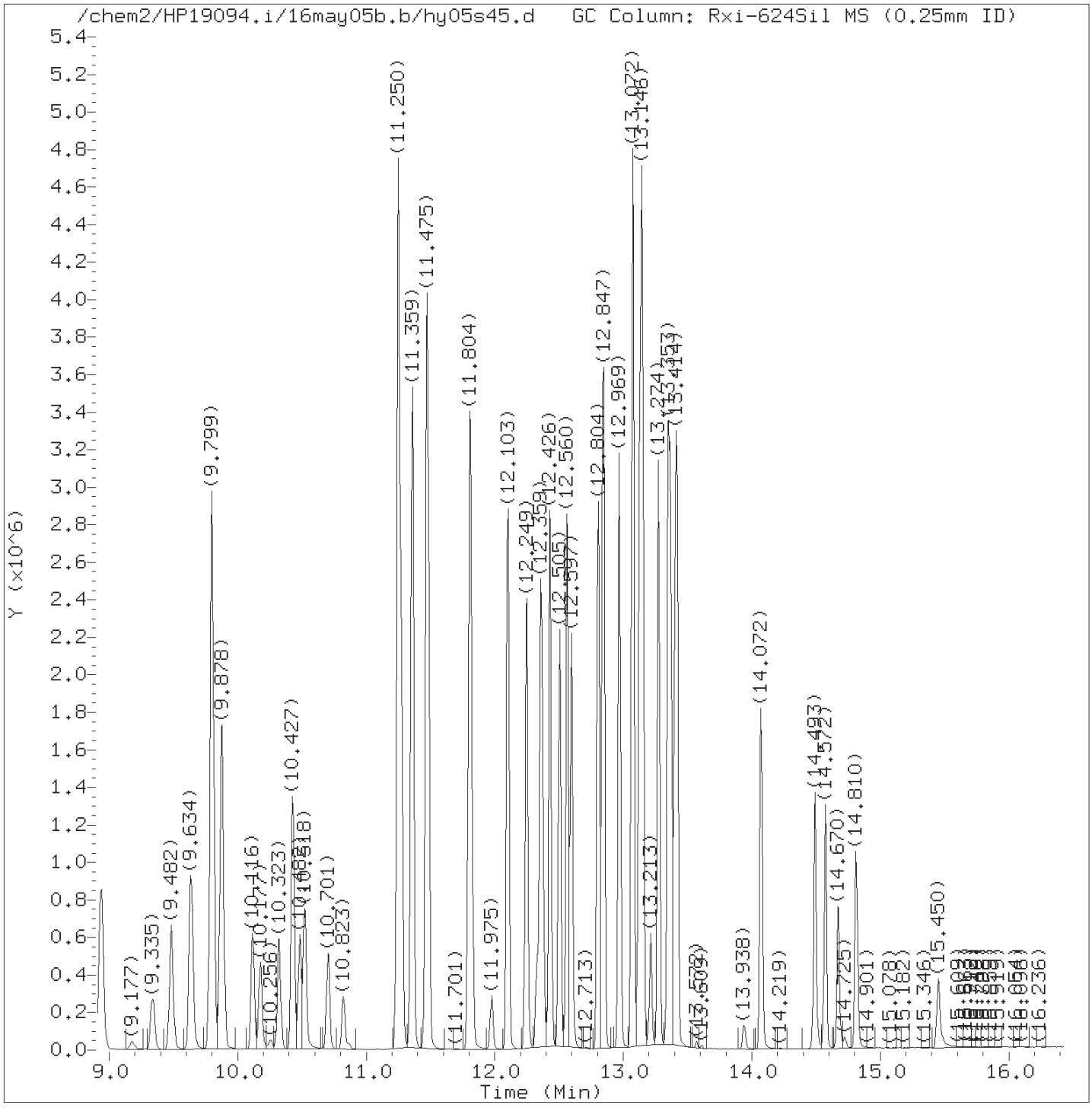
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s45.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:55 Automation

Sample Name: 5W7B-MS Lab Sample ID: 8352779MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s45.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:55 Automation

Sample Name: 5W7B-MS Lab Sample ID: 8352779MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature userID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s45.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 05-May-2016 23:55 Automation

Sample Name: 5W7B-MS Lab Sample ID: 8352779MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	504368	6.404
5) Vinyl Chloride	(2)	2.276	62	487682	6.788
11) Ethyl ether	(2)	3.300	59	210667	5.456
15) 1,1-Dichloroethene	(2)	3.617	96	325073	6.053
14) Acetone	(1)	3.629	43	311815	42.347
26)*t-Butyl Alcohol-d10	(1)	4.269	65	93721	50.000
23) Methylene Chloride	(2)	4.282	84	338457	5.897
31) trans-1,2-Dichloroethene	(2)	4.720	96	350966	6.069
38) 2-Butanone	(1)	6.147	43	500189	39.865
39) cis-1,2-Dichloroethene	(2)	6.190	96	370034	5.777
49) Chloroform	(2)	6.665	83	4745752	44.051
50)$Dibromofluoromethane	(2)	6.885	113	541372	10.058
57)$1,2-Dichloroethane-d4	(2)	7.348	102	85263	9.564
59) 1,2-Dichloroethane	(2)	7.446	62	370730	5.829
63)*Fluorobenzene	(2)	7.787	96	2284193	10.000
67) Trichloroethene	(2)	8.275	95	382755	5.982
82)$Toluene-d8	(3)	9.799	98	2335937	10.177
83) Toluene	(3)	9.872	92	871575	5.637
97)*Chlorobenzene-d5	(3)	11.250	117	1611186	10.000
101) m+p-Xylene	(3)	11.475	106	1303202	11.290
105) Xylene (Total)	(3)		106	1918967	16.788
104) o-Xylene	(3)	11.804	106	615765	5.497
111)$4-Bromofluorobenzene	(3)	12.243	95	703402	9.507
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	733659	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

5W7B-MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8352780MSD

Data file: /chem2/HP19094.i/16may05b.b/hy05s46.d Injection date and time: **05-MAY-2016 23:56**
Data file Sample Info. Line: 5W7B-MSD;8352780MSD;1;3;MSD;RAE59;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 06-May-2016 00:15 Automation

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 22:29
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.006)	439	65	100898	(-7)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2228355	(1)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1701315	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	784442	(-3)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	575435	10.959	110%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.002)	102	91797	10.555	106%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2309280	9.528	95%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	746108	9.550	96%		78 - 110

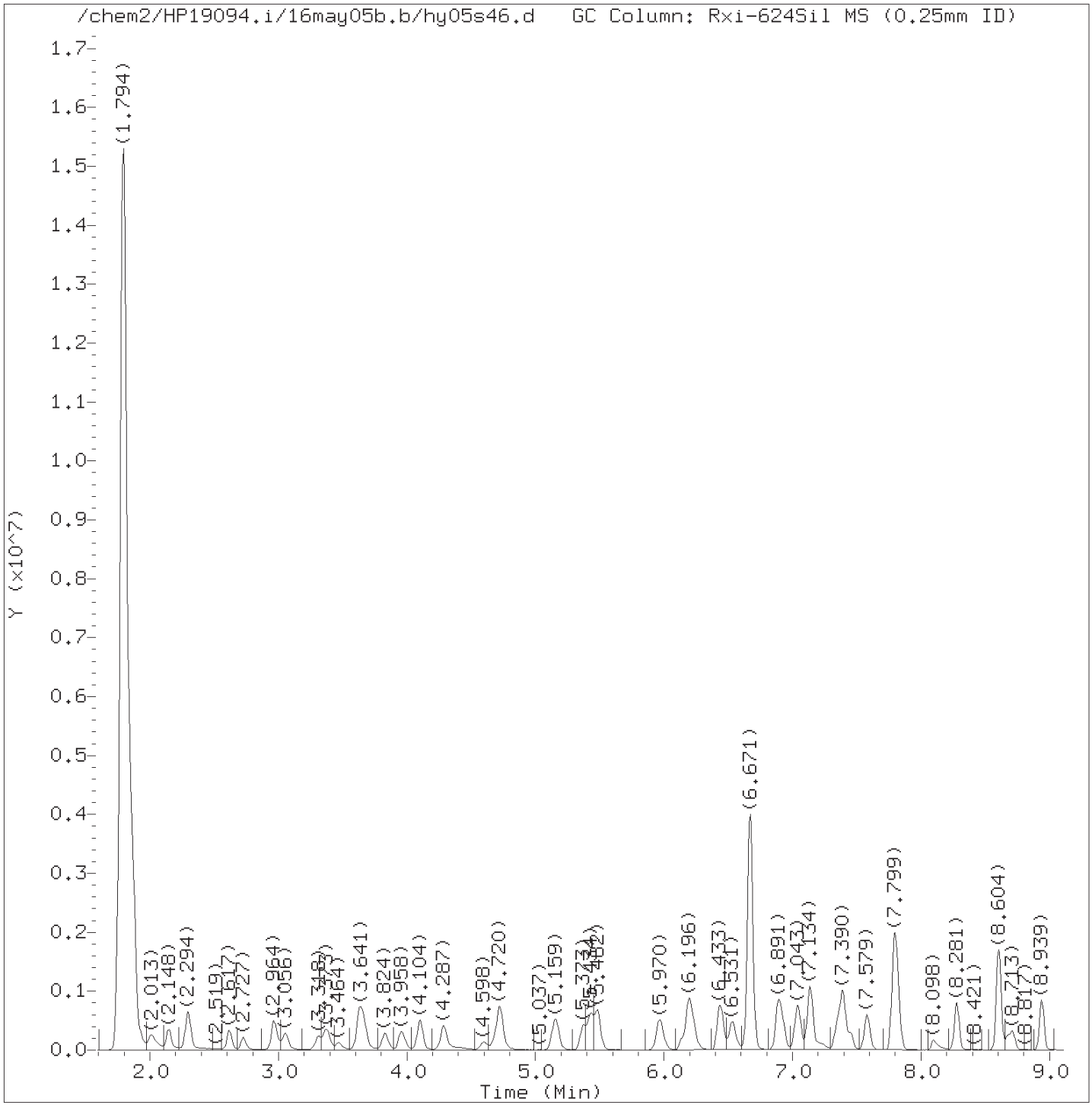
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.013	(-0.001)	85	474445	6.175	6.18			0.3	1
5) Vinyl Chloride	(2)	2.282	(-0.000)	62	471884	6.732	6.73			0.1	1
11) Ethyl ether	(2)	3.306	(-0.001)	59	199697	5.301	5.30		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.629	(-0.001)	96	310124	5.919	5.92			0.4	1
14) Acetone	(1)	3.629	(-0.000)	43	323457	40.803	40.80			3	10
23) Methylene Chloride	(2)	4.287	(-0.001)	84	331907	5.928	5.93			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.726	(-0.001)	96	338731	6.004	6.00			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.189	(-0.000)	96	357667	5.723	5.72			0.1	1
38) 2-Butanone	(1)	6.141	(0.000)	43	512554	37.945	37.95			1	10
49) Chloroform	(2)	6.671	(-0.000)	83	4742536	45.124	45.12		E	0.1	1
59) 1,2-Dichloroethane	(2)	7.451	(-0.000)	62	363321	5.855	5.86			0.1	1
67) Trichloroethene	(2)	8.280	(0.000)	95	376176	6.027	6.03			0.2	1
83) Toluene	(3)	9.878	(-0.000)	92	843632	5.167	5.17			0.1	1
101) m+p-Xylene	(3)	11.475	(0.000)	106	1289448	10.579	10.58			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.000)	106	611244	5.168	5.17			0.1	0.5
105) Xylene (Total)	(3)			106	1900692	15.747	15.75			0.2	3

E = Compound concentration above calibration range.

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/06/2016 at 15:05. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

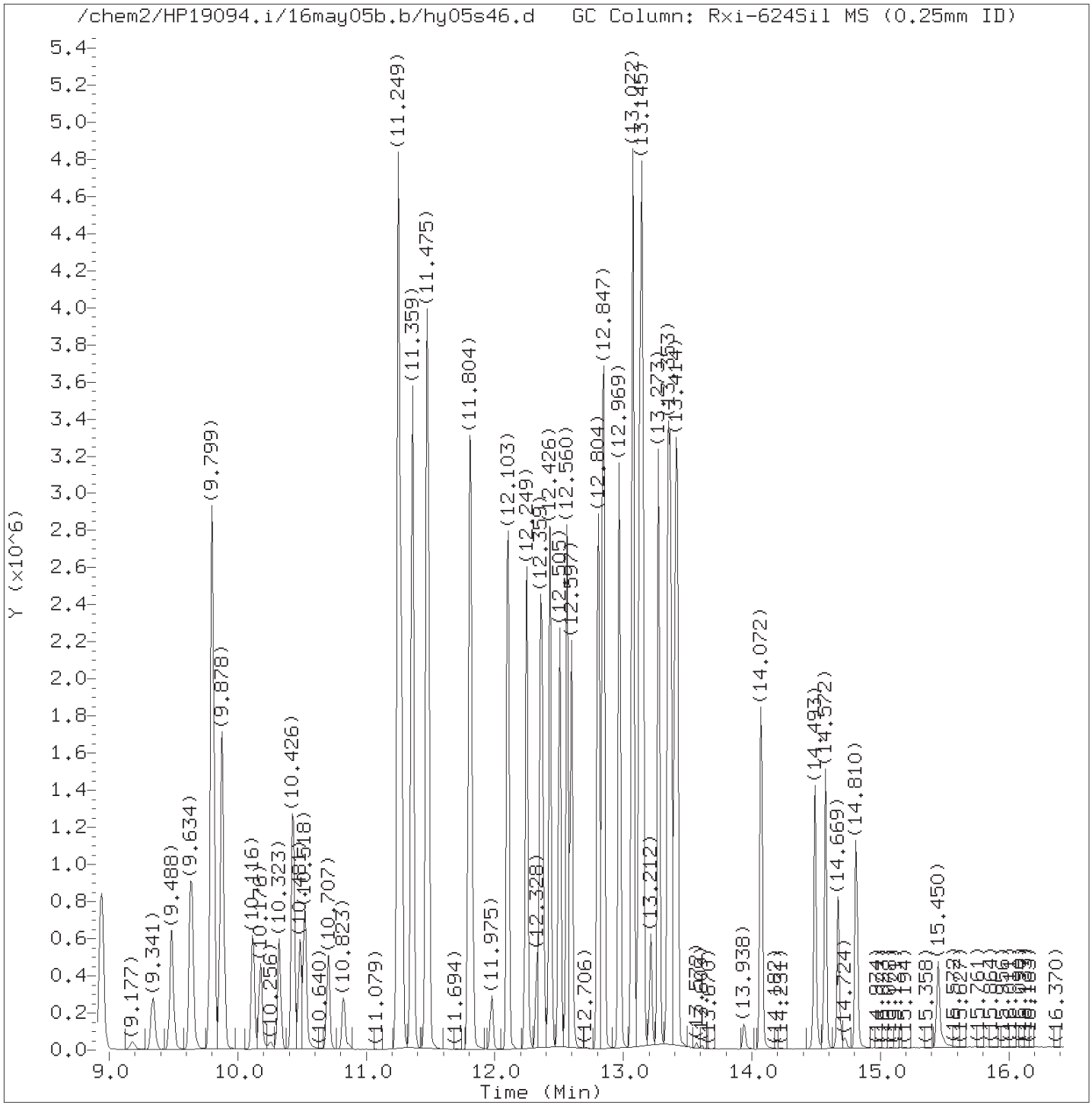
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s46.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:56 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:15 Automation

Sample Name: 5W7B-MSD Lab Sample ID: 8352780MSD

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature userID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s46.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:56 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:15 Automation

Sample Name: 5W7B-MSD Lab Sample ID: 8352780MSD

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s46.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 23:56 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 22:29
Date, time and analyst ID of latest file update: 06-May-2016 00:15 Automation

Sample Name: 5W7B-MSD Lab Sample ID: 8352780MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.013	85	474445	6.175
5) Vinyl Chloride	(2)	2.282	62	471884	6.732
11) Ethyl ether	(2)	3.306	59	199697	5.301
15) 1,1-Dichloroethene	(2)	3.629	96	310124	5.919
14) Acetone	(1)	3.629	43	323457	40.803
26)*t-Butyl Alcohol-d10	(1)	4.263	65	100898	50.000
23) Methylene Chloride	(2)	4.287	84	331907	5.928
31) trans-1,2-Dichloroethene	(2)	4.726	96	338731	6.004
38) 2-Butanone	(1)	6.141	43	512554	37.945
39) cis-1,2-Dichloroethene	(2)	6.189	96	357667	5.723
49) Chloroform	(2)	6.671	83	4742536	45.124
50)$Dibromofluoromethane	(2)	6.891	113	575435	10.959
57)$1,2-Dichloroethane-d4	(2)	7.342	102	91797	10.555
59) 1,2-Dichloroethane	(2)	7.451	62	363321	5.855
63)*Fluorobenzene	(2)	7.793	96	2228355	10.000
67) Trichloroethene	(2)	8.281	95	376176	6.027
82)$Toluene-d8	(3)	9.799	98	2309280	9.528
83) Toluene	(3)	9.878	92	843632	5.167
97)*Chlorobenzene-d5	(3)	11.249	117	1701315	10.000
101) m+p-Xylene	(3)	11.475	106	1289448	10.579
105) Xylene (Total)	(3)		106	1900692	15.747
104) o-Xylene	(3)	11.804	106	611244	5.168
111)$4-Bromofluorobenzene	(3)	12.249	95	746108	9.550
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	784442	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/06/2016 at 15:05.
Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may05b.b/hy05s41.d Injection date and time: **05-MAY-2016 20:48**
Data file Sample Info. Line: LCSH85;LCSH85;1;3;LCS;;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 20:47
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.006)	439	65	92844	(-14)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2274735	(3)	10.00	
97) Chlorobenzene-d5	11.243	(0.006)	1584	117	1721469	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	779224	(-3)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.000)	113	576366	10.753	108%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	90215M	10.161	102%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2332187	9.510	95%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(-0.001)	95	759186	9.604	96%		78 - 110

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.001	(-0.000)	85	459630	5.861	5.86			0.3	1
5) Vinyl Chloride	(2)	2.276	(-0.000)	62	440371	6.155	6.15			0.1	1
11) Ethyl ether	(2)	3.300	(-0.000)	59	192753	5.013	5.01		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.623	(-0.001)	96	294888	5.514	5.51			0.4	1
14) Acetone	(1)	3.623	(0.001)	43	303335	41.585	41.58			3	10
23) Methylene Chloride	(2)	4.281	(-0.000)	84	319209	5.585	5.58			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.714	(-0.000)	96	326090	5.662	5.66			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.183	(-0.000)	96	352090	5.519	5.52			0.1	1
38) 2-Butanone	(1)	6.141	(0.000)	43	513369	41.302	41.30			1	10
49) Chloroform	(2)	6.671	(-0.000)	83	599891	5.591	5.59			0.1	1
59) 1,2-Dichloroethane	(2)	7.451	(-0.000)	62	363818	5.744	5.74			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	360549	5.658	5.66			0.2	1
83) Toluene	(3)	9.878	(-0.001)	92	819362	4.960	4.96			0.1	1
101) m+p-Xylene	(3)	11.475	(-0.000)	106	1241514	10.067	10.07			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.001)	106	590978	4.938	4.94			0.1	0.5
105) Xylene (Total)	(3)			106	1832492	15.005	15.00			0.2	3

Digitally signed by Kevin A. Sposito on 05/05/2016 at 22:11. Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/16may05b.b/hy05s41.d Injection date and time: **05-MAY-2016 20:48**
Data file Sample Info. Line: LCSH85;LCSH85;1;3;LCS;;DRAPERJK;;hy05b05; Instrument ID: **HP19094.i** Batch: **H161262AA**
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

Blank Data file reference: **/chem2/HP19094.i/16may05b.b/hy05b05.d**

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 05-MAY-2016 20:47
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may05b.b/hy05c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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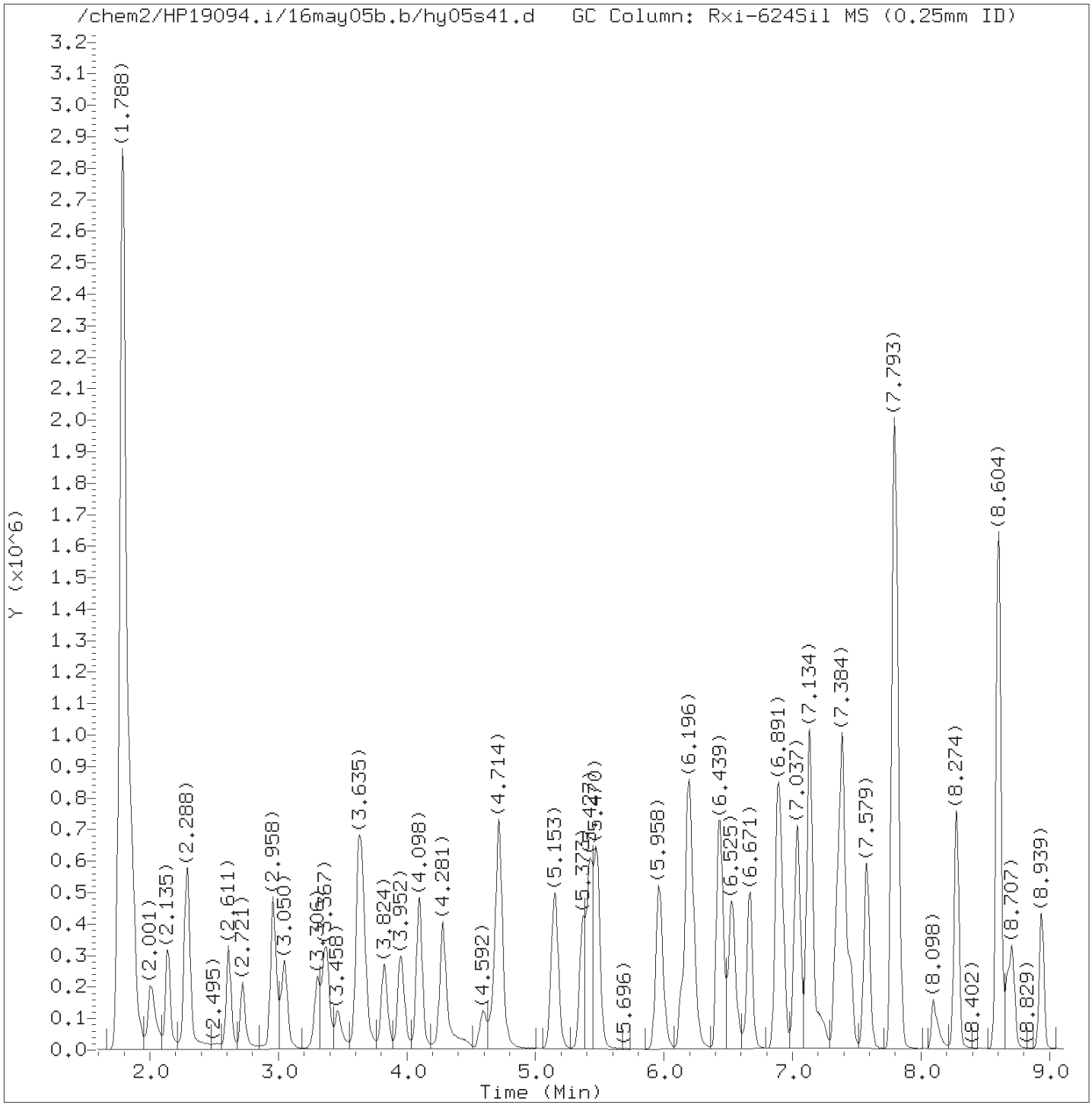
Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/05/2016 at 22:11. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

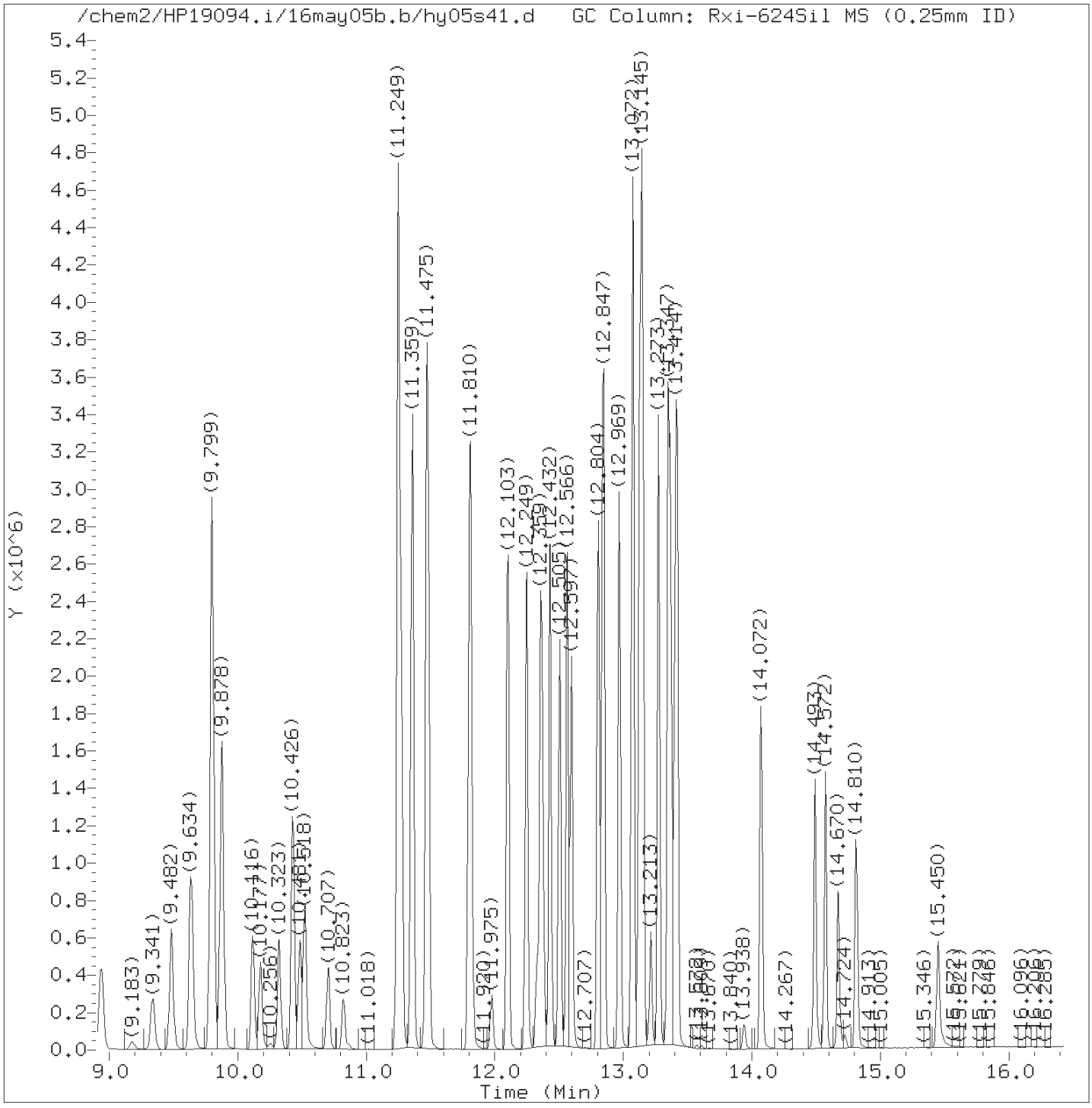
Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s41.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

Sample Name: LCSH85 Lab Sample ID: LCSH85

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:11.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s41.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

Sample Name: LCSH85 Lab Sample ID: LCSH85

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:11.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may05b.b/hy05s41.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

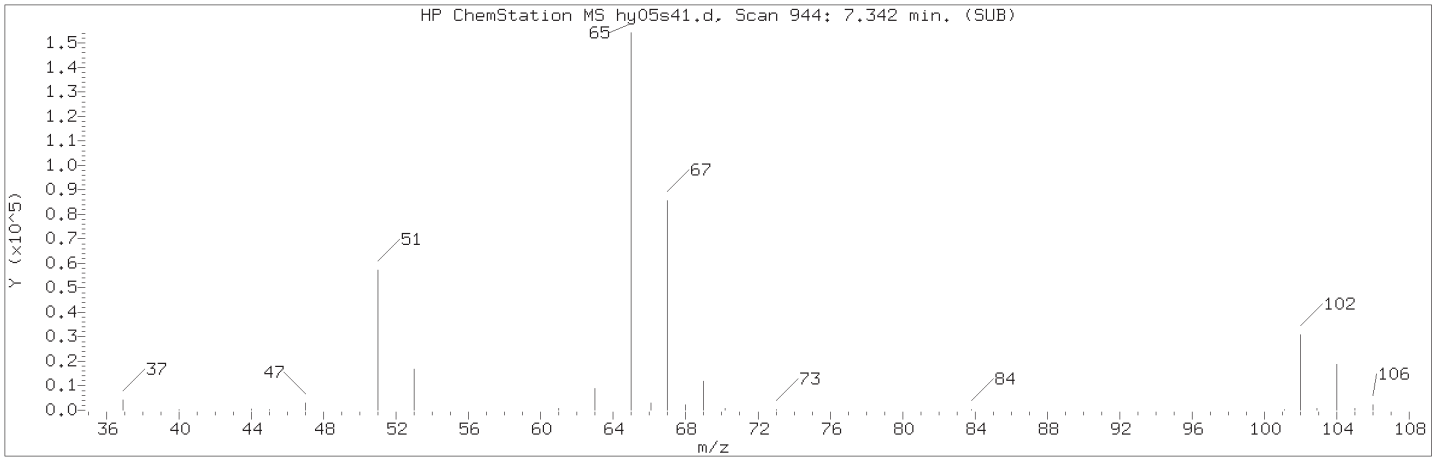
Sample Name: LCSH85 Lab Sample ID: LCSH85

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.001	85	459630	5.861
5) Vinyl Chloride	(2)	2.276	62	440371	6.155
11) Ethyl ether	(2)	3.300	59	192753	5.013
15) 1,1-Dichloroethene	(2)	3.623	96	294888	5.514
14) Acetone	(1)	3.623	43	303335	41.585
26)*t-Butyl Alcohol-d10	(1)	4.263	65	92844	50.000
23) Methylene Chloride	(2)	4.281	84	319209	5.585
31) trans-1,2-Dichloroethene	(2)	4.714	96	326090	5.662
38) 2-Butanone	(1)	6.141	43	513369	41.302
39) cis-1,2-Dichloroethene	(2)	6.183	96	352090	5.519
49) Chloroform	(2)	6.671	83	599891	5.591
50)$Dibromofluoromethane	(2)	6.884	113	576366	10.753
57)$1,2-Dichloroethane-d4	(2)	7.342	102	90215M	10.161
59) 1,2-Dichloroethane	(2)	7.451	62	363818	5.744
63)*Fluorobenzene	(2)	7.787	96	2274735	10.000
67) Trichloroethene	(2)	8.274	95	360549	5.658
82)$Toluene-d8	(3)	9.799	98	2332187	9.510
83) Toluene	(3)	9.878	92	819362	4.960
97)*Chlorobenzene-d5	(3)	11.243	117	1721469	10.000
101) m+p-Xylene	(3)	11.475	106	1241514	10.067
105) Xylene (Total)	(3)		106	1832492	15.005
104) o-Xylene	(3)	11.804	106	590978	4.938
111)$4-Bromofluorobenzene	(3)	12.243	95	759186	9.604
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	779224	10.000

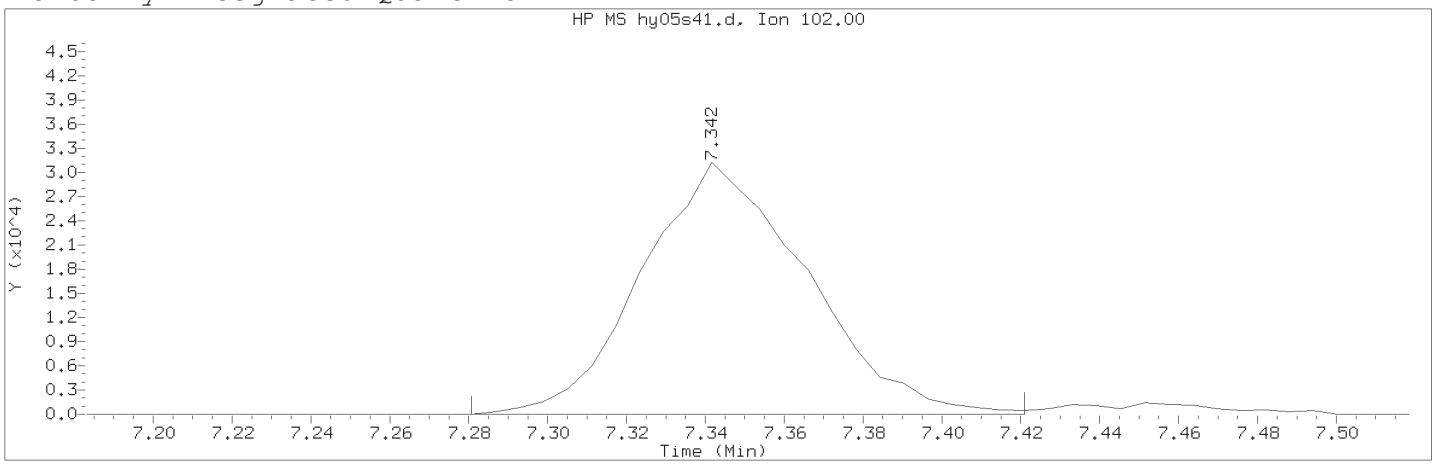
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:11.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may05b.b/hy05s41.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 22:10 kas02648

Sample Name: LCSH85 Lab Sample ID: LCSH85

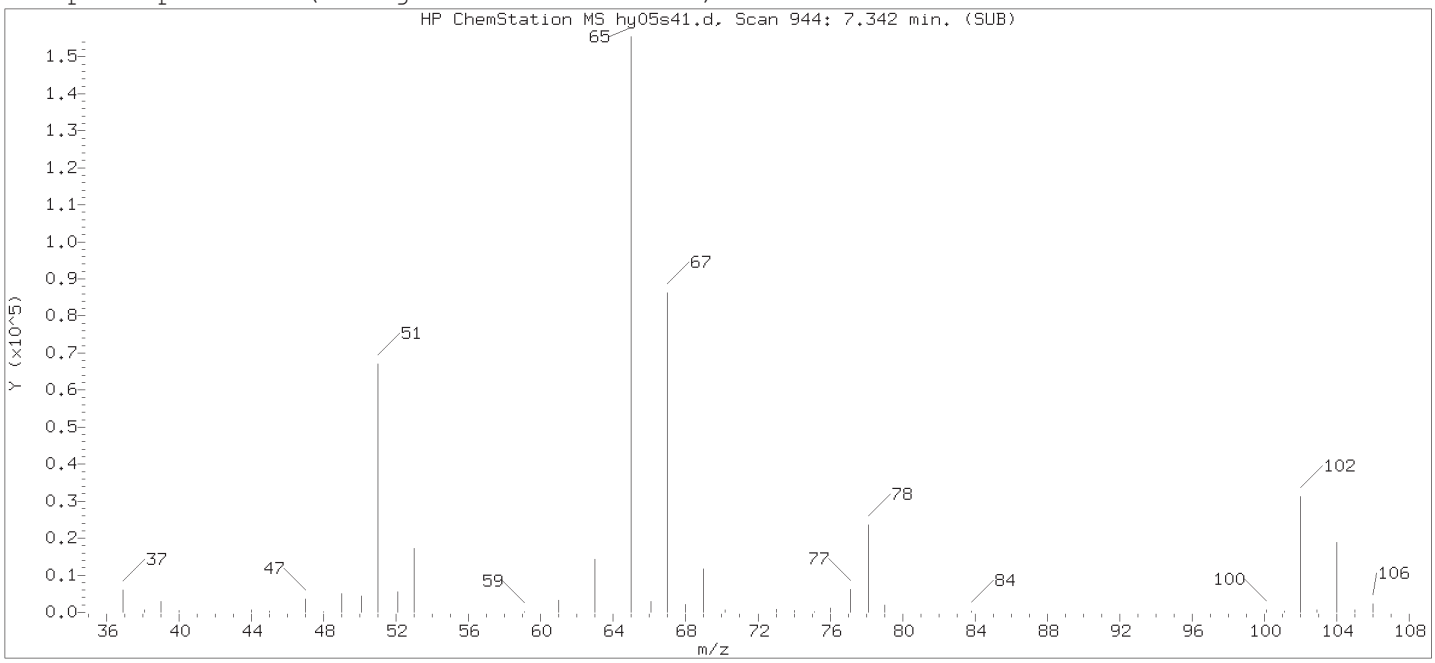
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area (flag) : 90215M
On-Column Amount (ng) : 10.1614
Integration start scan : 933 Integration stop scan: 956
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

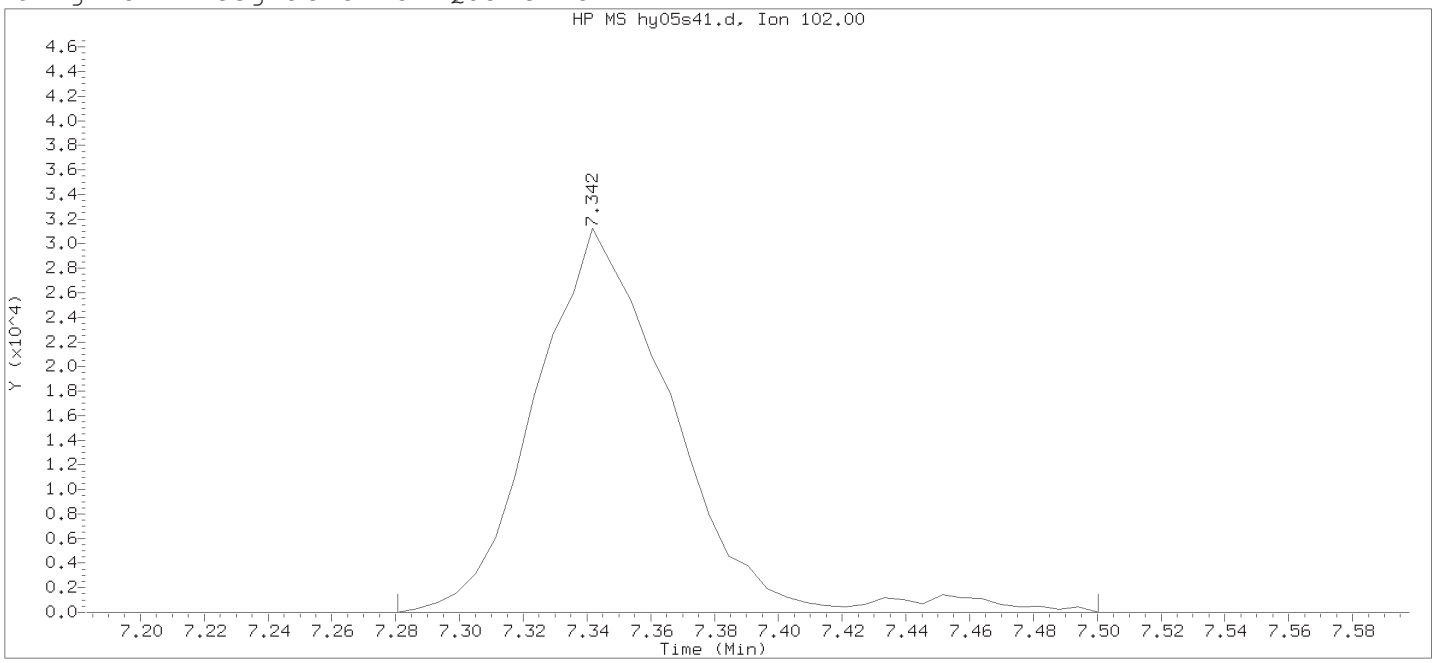
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 05/05/2016 at 22:11.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/08/2016 at 16:39.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may05b.b/hy05s41.d Instrument ID: HP19094.i
Injection date and time: 05-MAY-2016 20:48 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may05b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 05-MAY-2016 20:47
Date, time and analyst ID of latest file update: 05-May-2016 21:08 Automation

Sample Name: LCSH85 Lab Sample ID: LCSH85

Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 102.00
Area : 93716
On-column Amount (ng) : 10.5558
Integration start scan : 933 Integration stop scan: 969
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 05/05/2016 at 22:11.
Target 3.5 esignature user ID: KAS02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may06b.b/hy06s41.d Injection date and time: **06-MAY-2016 20:57**
Data file Sample Info. Line: LCSH89;LCSH89;1;3;LCS;;DRAPERJK;;hy06b41; Instrument ID: **HP19094.i** Batch: **H161273AA**
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Blank Data file reference: **/chem2/HP19094.i/16may06b.b/hy06b41.d**

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 06-MAY-2016 20:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may06b.b/hy06c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(-0.006)	439	65	89180	(-7)	50.00	
63) Fluorobenzene	7.793	(-0.006)	1018	96	2247358	(5)	10.00	
97) Chlorobenzene-d5	11.249	(-0.006)	1585	117	1720563	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	815208	(-1)	10.00	

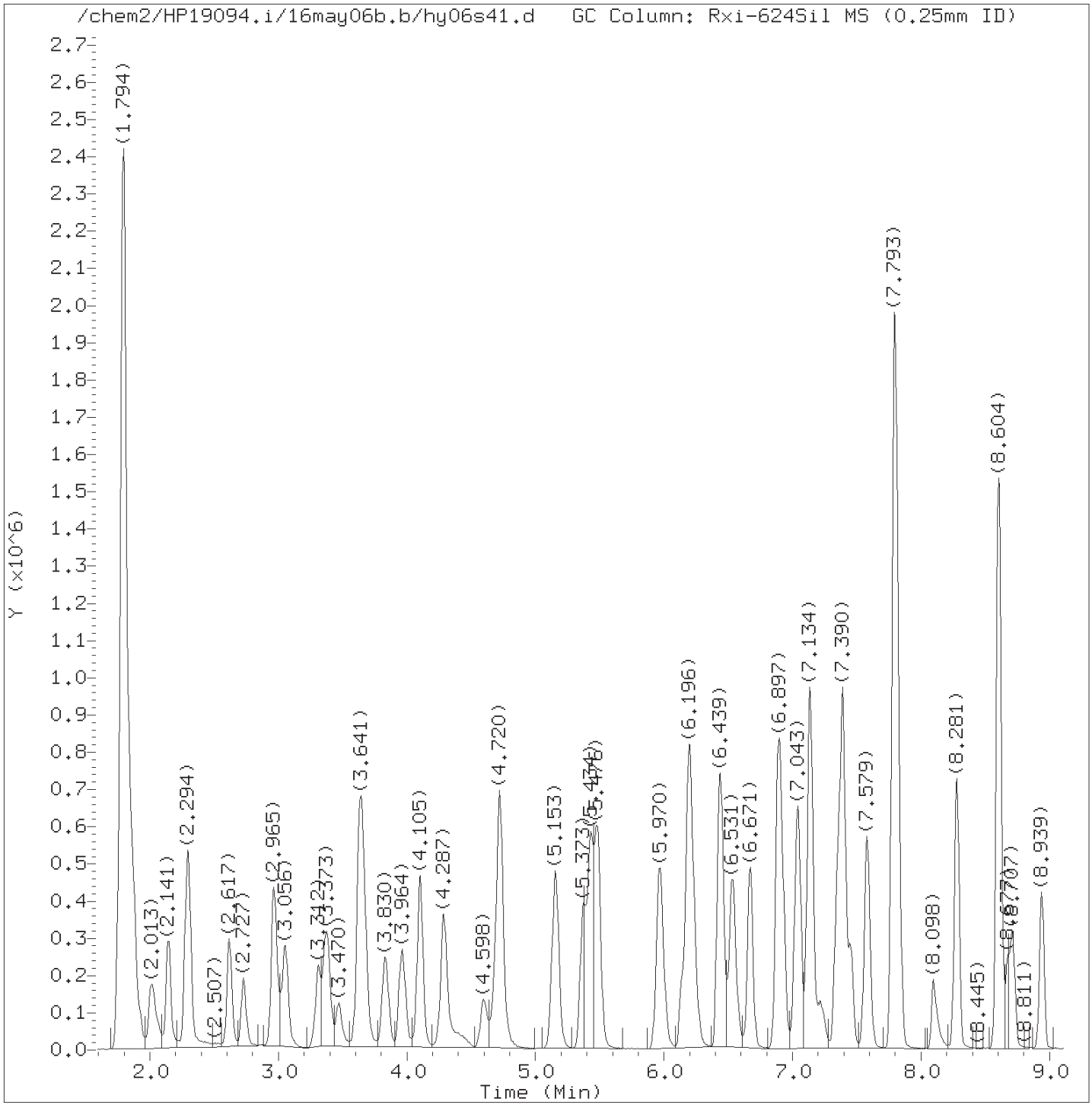
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.001)	113	577160	10.899	109%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.002)	102	94032	10.720	107%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2320415	9.467	95%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(0.001)	95	760572	9.627	96%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.013	(-0.000)	85	410165	5.294	5.29			0.3	1
5) Vinyl Chloride	(2)	2.282	(-0.000)	62	419132	5.929	5.93			0.1	1
11) Ethyl ether	(2)	3.312	(-0.001)	59	183674	4.835	4.83		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.629	(-0.000)	96	278089	5.263	5.26			0.4	1
14) Acetone	(1)	3.635	(-0.001)	43	303988	43.386	43.39			3	10
23) Methylene Chloride	(2)	4.281	(-0.000)	84	294102	5.208	5.21			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.726	(-0.001)	96	306750	5.391	5.39			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.189	(-0.000)	96	333235	5.287	5.29			0.1	1
38) 2-Butanone	(1)	6.141	(0.002)	43	494701	41.436	41.44			1	10
49) Chloroform	(2)	6.671	(-0.000)	83	572675	5.403	5.40			0.1	1
59) 1,2-Dichloroethane	(2)	7.458	(-0.000)	62	340530	5.441	5.44			0.1	1
67) Trichloroethene	(2)	8.280	(0.000)	95	340888	5.415	5.42			0.2	1
83) Toluene	(3)	9.878	(0.000)	92	781464	4.733	4.73			0.1	1
101) m+p-Xylene	(3)	11.475	(0.000)	106	1190629	9.659	9.66			0.1	0.5
104) o-Xylene	(3)	11.804	(0.000)	106	571206	4.775	4.78			0.1	0.5
105) Xylene (Total)	(3)			106	1761835	14.435	14.43			0.2	3

Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/06/2016 at 22:19. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 09:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

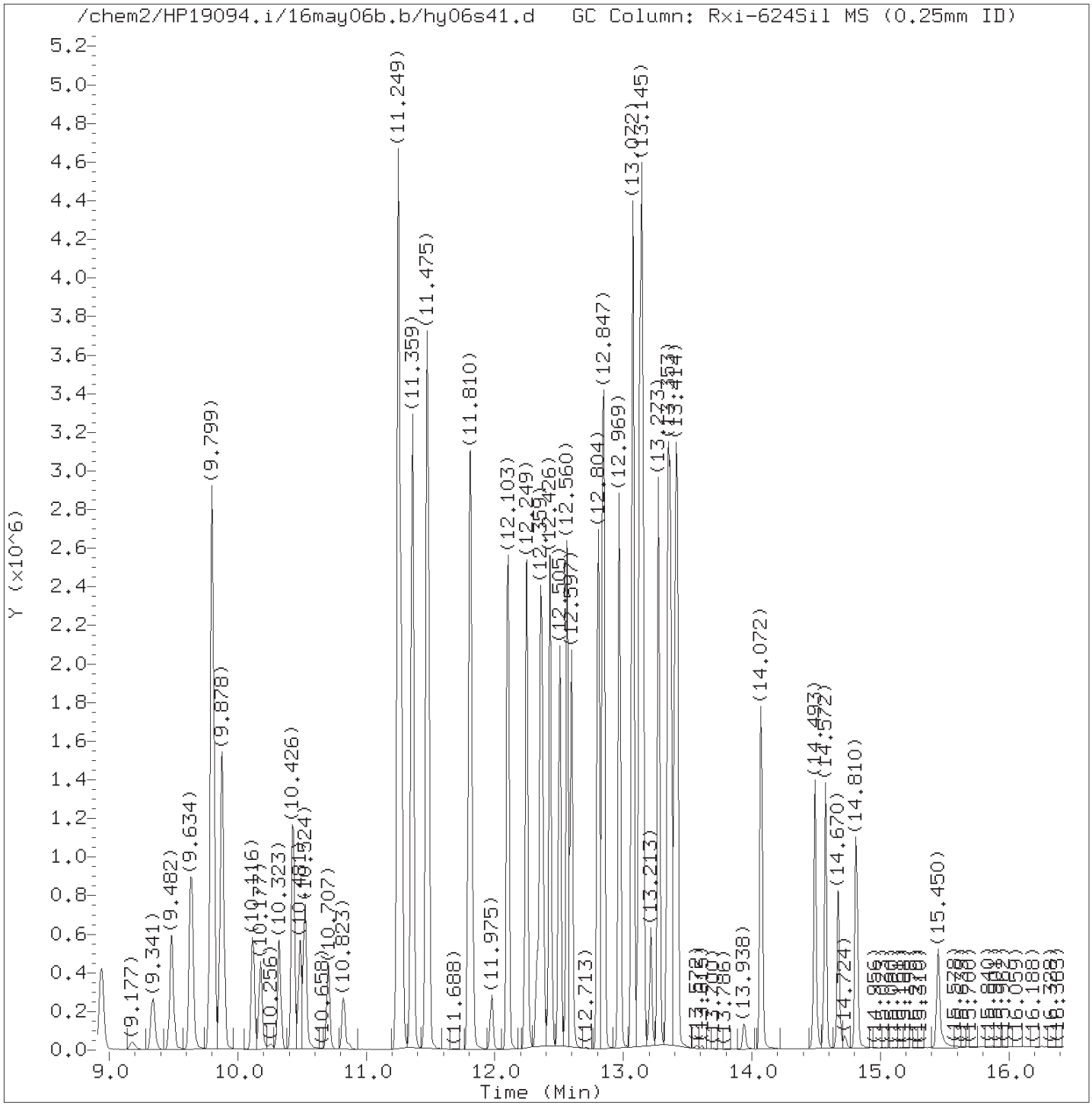
Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCSH89 Lab Sample ID: LCSH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:19.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCSH89 Lab Sample ID: LCSH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:19.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s41.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 20:57 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCSH89 Lab Sample ID: LCSH89

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.013	85	410165	5.294
5) Vinyl Chloride	(2)	2.282	62	419132	5.929
11) Ethyl ether	(2)	3.312	59	183674	4.835
15) 1,1-Dichloroethene	(2)	3.629	96	278089	5.263
14) Acetone	(1)	3.635	43	303988	43.386
26)*t-Butyl Alcohol-d10	(1)	4.263	65	89180	50.000
23) Methylene Chloride	(2)	4.281	84	294102	5.208
31) trans-1,2-Dichloroethene	(2)	4.726	96	306750	5.391
38) 2-Butanone	(1)	6.141	43	494701	41.436
39) cis-1,2-Dichloroethene	(2)	6.189	96	333235	5.287
49) Chloroform	(2)	6.671	83	572675	5.403
50)$Dibromofluoromethane	(2)	6.884	113	577160	10.899
57)$1,2-Dichloroethane-d4	(2)	7.348	102	94032	10.720
59) 1,2-Dichloroethane	(2)	7.458	62	340530	5.441
63)*Fluorobenzene	(2)	7.793	96	2247358	10.000
67) Trichloroethene	(2)	8.281	95	340888	5.415
82)$Toluene-d8	(3)	9.799	98	2320415	9.467
83) Toluene	(3)	9.878	92	781464	4.733
97)*Chlorobenzene-d5	(3)	11.249	117	1720563	10.000
101) m+p-Xylene	(3)	11.475	106	1190629	9.659
105) Xylene (Total)	(3)		106	1761835	14.435
104) o-Xylene	(3)	11.804	106	571206	4.775
111)$4-Bromofluorobenzene	(3)	12.243	95	760572	9.627
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	815208	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:19.
Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may06b.b/hy06s42.d Injection date and time: **06-MAY-2016 21:17**
Data file Sample Info. Line: LCDH89;LCDH89;1;3;LCSD;;DRAPERJK;;hy06b41; Instrument ID: **HP19094.i** Batch: **H161273AA**
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Blank Data file reference: **/chem2/HP19094.i/16may06b.b/hy06b41.d**

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 06-MAY-2016 20:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may06b.b/hy06c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.012)	440	65	107746	(12)	50.00	
63) Fluorobenzene	7.787	(0.000)	1017	96	2311980	(8)	10.00	
97) Chlorobenzene-d5	11.243	(0.000)	1584	117	1728904	(2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	798222	(-3)	10.00	

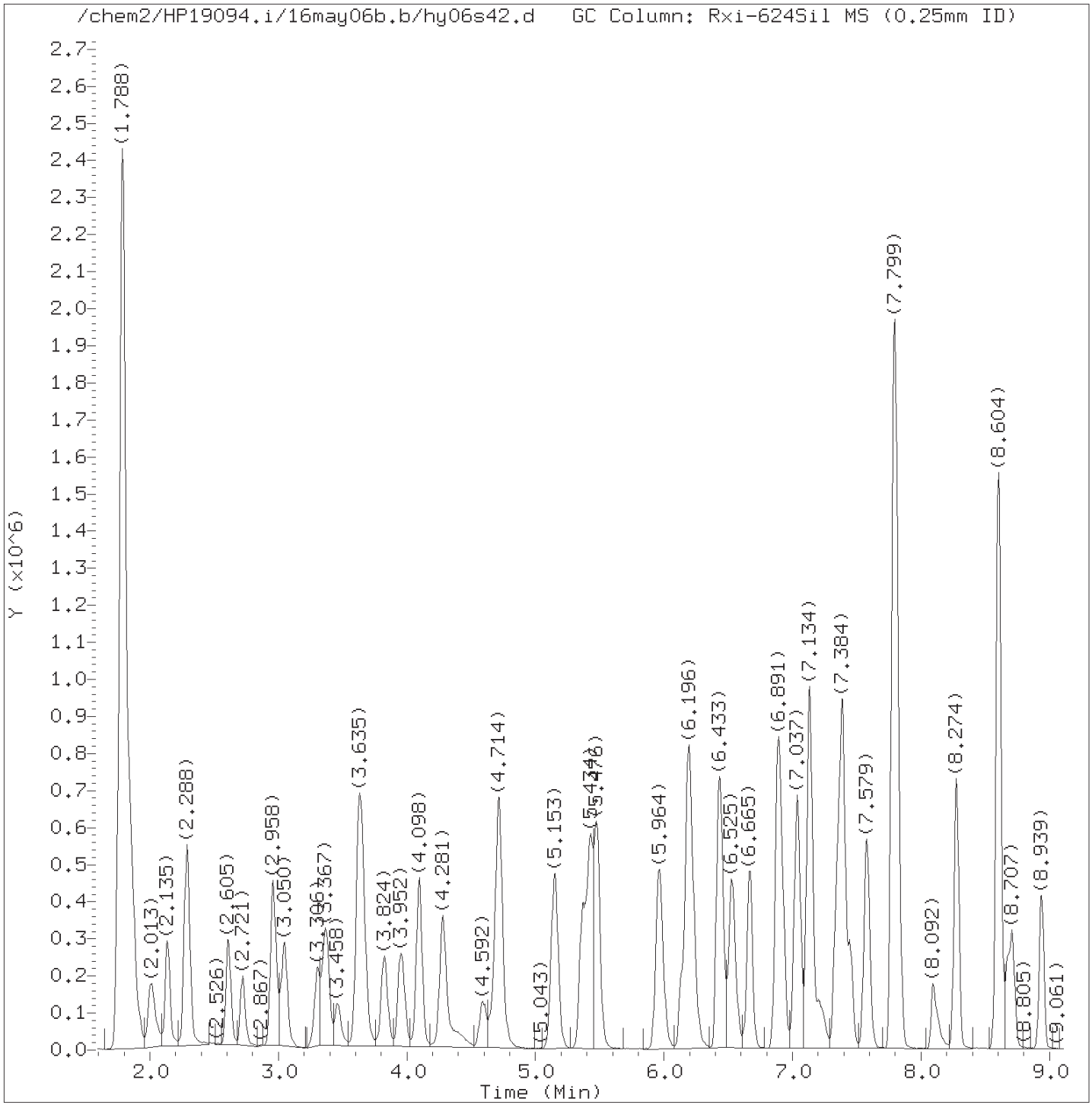
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.000)	113	580941	10.663	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.002)	102	95320	10.563	106%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2374556	9.641	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(0.000)	95	760809	9.583	96%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.007	(-0.000)	85	414381	5.199	5.20			0.3	1
5) Vinyl Chloride	(2)	2.276	(0.000)	62	422628	5.812	5.81			0.1	1
11) Ethyl ether	(2)	3.300	(0.000)	59	184171	4.712	4.71		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.617	(0.000)	96	284071	5.226	5.23			0.4	1
14) Acetone	(1)	3.629	(0.001)	43	306966	36.262	36.26			3	10
23) Methylene Chloride	(2)	4.275	(-0.000)	84	300260	5.168	5.17			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.720	(-0.000)	96	304083	5.195	5.19			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.189	(-0.000)	96	342022	5.275	5.28			0.1	1
38) 2-Butanone	(1)	6.135	(0.005)	43	507510	35.184	35.18			1	10
49) Chloroform	(2)	6.671	(-0.000)	83	573699	5.261	5.26			0.1	1
59) 1,2-Dichloroethane	(2)	7.445	(0.000)	62	347630	5.400	5.40			0.1	1
67) Trichloroethene	(2)	8.274	(0.000)	95	345514	5.335	5.34			0.2	1
83) Toluene	(3)	9.878	(-0.000)	92	794057	4.786	4.79			0.1	1
101) m+p-Xylene	(3)	11.475	(-0.000)	106	1203875	9.720	9.72			0.1	0.5
104) o-Xylene	(3)	11.804	(-0.000)	106	579784	4.824	4.82			0.1	0.5
105) Xylene (Total)	(3)			106	1783659	14.543	14.54			0.2	3

Total number of targets = 16

Digitally signed by Kevin A. Sposito on 05/06/2016 at 22:20. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 09:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

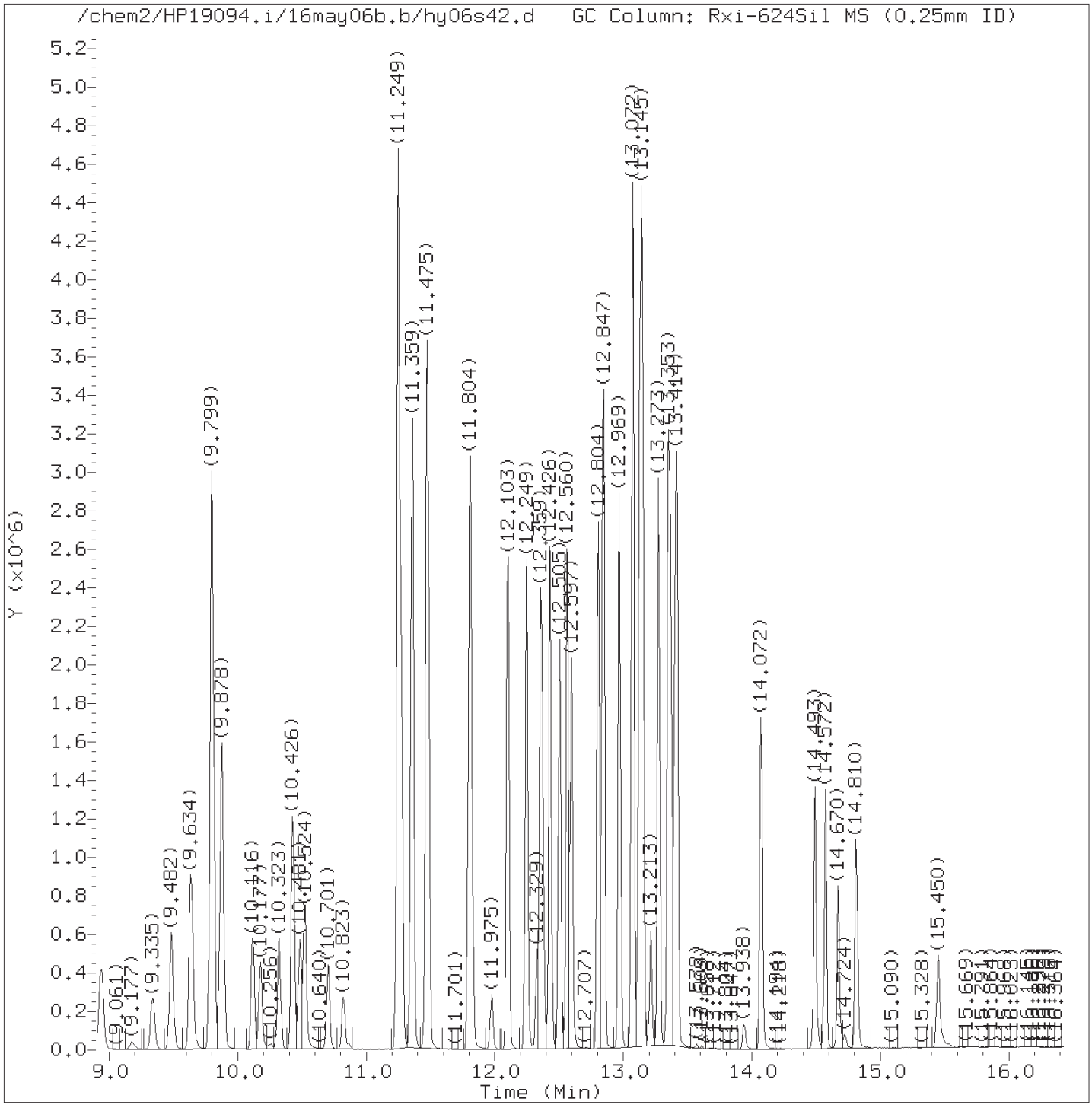
Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s42.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCDH89 Lab Sample ID: LCDH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:20.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s42.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCDH89 Lab Sample ID: LCDH89

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:20.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s42.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 21:17 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 06-May-2016 22:19 kas02648

Sample Name: LCDH89 Lab Sample ID: LCDH89

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	414381	5.199
5) Vinyl Chloride	(2)	2.276	62	422628	5.812
11) Ethyl ether	(2)	3.300	59	184171	4.712
15) 1,1-Dichloroethene	(2)	3.617	96	284071	5.226
14) Acetone	(1)	3.629	43	306966	36.262
26)*t-Butyl Alcohol-d10	(1)	4.269	65	107746	50.000
23) Methylene Chloride	(2)	4.275	84	300260	5.168
31) trans-1,2-Dichloroethene	(2)	4.720	96	304083	5.195
38) 2-Butanone	(1)	6.135	43	507510	35.184
39) cis-1,2-Dichloroethene	(2)	6.189	96	342022	5.275
49) Chloroform	(2)	6.671	83	573699	5.261
50)$Dibromofluoromethane	(2)	6.884	113	580941	10.663
57)$1,2-Dichloroethane-d4	(2)	7.342	102	95320	10.563
59) 1,2-Dichloroethane	(2)	7.445	62	347630	5.400
63)*Fluorobenzene	(2)	7.787	96	2311980	10.000
67) Trichloroethene	(2)	8.274	95	345514	5.335
82)$Toluene-d8	(3)	9.799	98	2374556	9.641
83) Toluene	(3)	9.878	92	794057	4.786
97)*Chlorobenzene-d5	(3)	11.243	117	1728904	10.000
101) m+p-Xylene	(3)	11.475	106	1203875	9.720
105) Xylene (Total)	(3)		106	1783659	14.543
104) o-Xylene	(3)	11.804	106	579784	4.824
111)$4-Bromofluorobenzene	(3)	12.243	95	760809	9.583
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	798222	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 05/06/2016 at 22:20.
Target 3.5 esignature user ID: kas02648

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8352777	5W5B	X		1	
8352778	5W7B	X		1	Unspiked
8352779	5W7B Matrix Spike	X		1	Matrix Spike
8352780	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
8352781	5WC21	X		1	
8352782	5WDUP	X		1	Field Duplicate Sample
8352783	5WC22	X		1	
8352784	5WC23	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE59

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOAs by 8270D in Water	16120WAC026	SBLKWC120	05/06/2016 19:54:00
		120WCLCS	05/06/2016 20:23:00
		8352777	05/07/2016 04:41:00
		8352778 UNSPK	05/07/2016 03:14:00
		8352779 MS	05/07/2016 03:43:00
		8352780 MSD	05/07/2016 04:12:00
		8352781	05/07/2016 05:11:00
		8352782	05/07/2016 05:40:00
		8352783	05/07/2016 06:09:00
		8352784	05/10/2016 01:50:00

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAE59
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

16120WAC026 / SBLKWC120 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitrobenzene	05/06/16	N.D.	ug/l	0.8	10
2-Nitroaniline	05/06/16	N.D.	ug/l	0.7	10
2,6-Dinitrotoluene	05/06/16	N.D.	ug/l	0.7	10
2,4-Dinitrotoluene	05/06/16	N.D.	ug/l	0.6	10
Diethylphthalate	05/06/16	N.D.	ug/l	0.5	10
4-Nitroaniline	05/06/16	N.D.	ug/l	1	20
bis(2-Ethylhexyl)phthalate	05/06/16	N.D.	ug/l	2	6

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAE59
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

16120WAC026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWC120	83	61 - 112	86	46 - 128	81	41 - 125
120WCLCS	91	61 - 112	93	46 - 128	80	41 - 125
8352777	78	61 - 112	79	46 - 128	72	41 - 125
8352778 UNSPK	88	61 - 112	88	46 - 128	81	41 - 125
8352779 MS	88	61 - 112	90	46 - 128	76	41 - 125
8352780 MSD	83	61 - 112	82	46 - 128	71	41 - 125
8352781	83	61 - 112	86	46 - 128	64	41 - 125
8352782	87	61 - 112	90	46 - 128	55	41 - 125
8352783	90	61 - 112	93	46 - 128	65	41 - 125
8352784	87	61 - 112	87	46 - 128	75	41 - 125

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 8352778 MS: 8352779 MSD: 8352780 **Analyte**	Batch: **16120WAC026** (Sample number(s): 8352777-8352784)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	50.4 / 50.81	N.D.	47.48	43.53	94	86	70-121	9	30
2-Nitroaniline	50.4 / 50.81	N.D.	48.7	45.59	97	90	68-130	7	30
2,6-Dinitrotoluene	50.4 / 50.81	N.D.	49.88	46.33	99	91	71-133	7	30
2,4-Dinitrotoluene	50.4 / 50.81	N.D.	47.43	44.71	94	88	71-131	6	30
Diethylphthalate	50.4 / 50.81	N.D.	40.23	38.15	80	75	55-124	5	30
4-Nitroaniline	50.4 / 50.81	N.D.	44.82	42.66	89	84	61-111	5	30
bis(2-Ethylhexyl)phthalate	50.4 / 50.81	N.D.	52.12	48.19	103	95	66-130	8	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAE59
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 120WCLCS	Batch: **16120WAC026** (Sample number(s): 8352777-8352784)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	50	47.66	NA	95	NA	70-121	NA	NA
2-Nitroaniline	50	50.54	NA	101	NA	68-130	NA	NA
2,6-Dinitrotoluene	50	50.19	NA	100	NA	71-133	NA	NA
2,4-Dinitrotoluene	50	48.01	NA	96	NA	71-131	NA	NA
Diethylphthalate	50	45	NA	90	NA	55-124	NA	NA
4-Nitroaniline	50	45.5	NA	91	NA	61-111	NA	NA
bis(2-Ethylhexyl)phthalate	50	51.52	NA	103	NA	66-130	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: hd0630.d DFTPP Injection Date: 04/15/16

Instrument ID: HP18831 DFTPP Injection Time: 17:25

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.1
68	Less than 2.0% of mass 69	0.69 (1.46)1
69	Mass 69 relative abundance	47.6
70	Less than 2.0% of mass 69	0.15 (0.31)1
127	40.0 - 60.0% of mass 198	44.7
197	Less than 1.0% of mass 198	0.76
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.68
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.07
441	Present, and less than mass 443	8.63
442	Greater than 40.0 % of mass 198	55.4
443	17.0 - 23.0% of mass 442	10.1 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0816 - SSTD7.5	hd0631.d	04/15/16	17:39
02	RVSTD0816 - SSTD.125	hd0632.d	04/15/16	18:17
03	RVSTD0816 - SSTD30	hd0633.d	04/15/16	18:46
04	RVSTD0816 - SSTD20	hd0634.d	04/15/16	19:14
05	RVSTD0816 - SSTD12.5	hd0635.d	04/15/16	19:43
06	RVSTD0816 - SSTD3.75	hd0636.d	04/15/16	20:12
07	RVSTD0816 - SSTD1.25	hd0637.d	04/15/16	20:41
08	RVSTD0816 - SSTD.25	hd0638.d	04/15/16	21:10
09	RVMDL0816 - SSTD0.125	hd0639.d	04/15/16	21:39
10	PAHMDL0816 - SSTD0.025	hd0640.d	04/15/16	22:07
11	RVICV3205 - SSTD12.5	hd0641.d	04/15/16	22:36
12	RVBASICV0716 - SSTD12.5	hd0642.d	04/15/16	23:05
13	RVPDA3085 - SSTD30	hd0644.d	04/16/16	00:04
14	RVPDA3085 - SSTD20	hd0645.d	04/16/16	00:33
15	RVPDA3085 - SSTD12.5	hd0646.d	04/16/16	01:02
16	RVPDA3085 - SSTD7.5	hd0647.d	04/16/16	01:31
17	RVPDA3085 - SSTD3.75	hd0648.d	04/16/16	02:00

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: he0400.d DFTPP Injection Date: 05/06/16

Instrument ID: HP18831 DFTPP Injection Time: 18:27

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.7
68	Less than 2.0% of mass 69	0.71 (1.65)1
69	Mass 69 relative abundance	43.3
70	Less than 2.0% of mass 69	0.19 (0.44)1
127	40.0 - 60.0% of mass 198	43.0
197	Less than 1.0% of mass 198	0.75
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.95
275	10.0 - 30.0% of mass 198	23.3
365	Greater than 1.00% of mass 198	2.26
441	Present, and less than mass 443	9.46
442	Greater than 40.0 % of mass 198	59.8
443	17.0 - 23.0% of mass 442	11.2 (18.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0816 - SSTD125	he0401.d	05/06/16	18:50
02	SBLKWC120	he0402.d	05/06/16	19:54
03	120WCLCS	he0403.d	05/06/16	20:23
04	8345664	he0409.d	05/06/16	23:19
05	8345666	he0410.d	05/06/16	23:49
06	8345668	he0411.d	05/07/16	00:18
07	8345670	he0412.d	05/07/16	00:47
08	8345672	he0413.d	05/07/16	01:17
09	8345676	he0414.d	05/07/16	01:46
10	8345678	he0415.d	05/07/16	02:15
11	8343710DL	he0416.d	05/07/16	02:44
12	8352778	he0417.d	05/07/16	03:14
13	8352779MS	he0418.d	05/07/16	03:43
14	8352780MSD	he0419.d	05/07/16	04:12
15	8352777	he0420.d	05/07/16	04:41
16	8352781	he0421.d	05/07/16	05:11
17	8352782	he0422.d	05/07/16	05:40
18	8352783	he0423.d	05/07/16	06:09

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: he0520.d DFTPP Injection Date: 05/09/16

Instrument ID: HP18831 DFTPP Injection Time: 20:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.4
68	Less than 2.0% of mass 69	0.69 (1.54)1
69	Mass 69 relative abundance	45.0
70	Less than 2.0% of mass 69	0.24 (0.53)1
127	40.0 - 60.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.76
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.49
275	10.0 - 30.0% of mass 198	22.6
365	Greater than 1.00% of mass 198	2.23
441	Present, and less than mass 443	8.97
442	Greater than 40.0 % of mass 198	57.0
443	17.0 - 23.0% of mass 442	10.9 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD1266 - SSTD7.5	he0521.d	05/09/16	21:08
02	SBLKWC128	he0522.d	05/09/16	22:26
03	128WCLCS	he0523.d	05/09/16	22:55
04	SBLKWB124	he0524.d	05/09/16	23:25
05	124WBLCS	he0525.d	05/09/16	23:54
06	124WBLCSD	he0526.d	05/10/16	00:23
07	8349468	he0527.d	05/10/16	00:52
08	8350677	he0528.d	05/10/16	01:21
09	8352784	he0529.d	05/10/16	01:50
10	8345657RE	he0530.d	05/10/16	02:20
11	8345658RE	he0531.d	05/10/16	02:49
12	8345659MSDSD	he0532.d	05/10/16	03:18
13	8343712RE	he0533.d	05/10/16	03:47

FORM V SV

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 04/15/16 04/15/16

Calibration Times: 17:39 21:10

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.125 = hd0632.d RRF0.25 = hd0638.d RRF1.25 = hd0637.d RRF3.75 = hd0636.d
RRF7.5 = hd0631.d RRF12.5 = hd0635.d RRF20 = hd0634.d RRF30 = hd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.677	0.679	0.704	0.679	0.684	0.693	0.686	2	AVG
N-Nitrosodimethylamine			1.015	1.111	1.149	1.139	1.137	1.159	1.118	5	AVG
Pyridine			1.615	1.689	1.814	1.874	1.899	1.911	1.800	7	AVG
2-Picoline			1.887	1.867	1.959	1.936	1.939	1.951	1.923	2	AVG
N-Nitrosomethylethylamine			0.716	0.742	0.774	0.770	0.774	0.771	0.758	3	AVG
Methyl methanesulfonate			0.839	0.859	0.892	0.891	0.877	0.891	0.875	2	AVG
N-Nitrosodiethylamine		0.692	0.707	0.734	0.760	0.764	0.761	0.765	0.740	4	AVG
Ethyl methanesulfonate		0.699	0.701	0.752	0.785	0.772	0.767	0.773	0.750	5	AVG
Benzaldehyde			1.491	1.485	1.559	1.435	1.358	1.131	1.410	11	AVG
Phenol		1.925	2.022	2.121	2.174	2.213	2.165	2.327	2.135	6	AVG
Aniline		2.645	2.516	2.635	2.746	2.719	2.738	2.742	2.677	3	AVG
a-methylstyrene			1.506	1.526	1.580	1.552	1.558	1.561	1.547	2	AVG
bis(2-Chloroethyl)ether		1.691	1.663	1.701	1.760	1.737	1.723	1.730	1.715	2	AVG
2-Chlorophenol		1.310	1.366	1.412	1.448	1.469	1.442	1.449	1.414	4	AVG
1,3-Dichlorobenzene		1.461	1.487	1.523	1.526	1.537	1.529	1.520	1.512	2	AVG
1,4-Dichlorobenzene		1.528	1.505	1.559	1.558	1.570	1.555	1.552	1.547	1	AVG
Benzyl alcohol			0.950	0.989	1.041	1.011	1.028	1.037	1.009	3	AVG
1,2-Dichlorobenzene		1.429	1.449	1.476	1.481	1.486	1.457	1.467	1.463	1	AVG
Indene			2.553	2.590	2.644	2.590	2.594	2.586	2.593	1	AVG
2-Methylphenol		1.363	1.325	1.383	1.454	1.439	1.422	1.422	1.401	3	AVG
2,2'-oxybis(1-Chloropropane)		2.578	2.594	2.540	2.656	2.583	2.551	2.578	2.583	1	AVG
bis(2-Chloroisopropyl)ether		2.578	2.594	2.540	2.656	2.583	2.551	2.578	2.583	1	AVG
N-Nitrosopyrrolidine		0.699	0.712	0.737	0.800	0.799	0.789	0.788	0.760	6	AVG
Acetophenone		2.294	2.217	2.197	2.351	2.332	2.310	2.313	2.288	3	AVG
4-Methylphenol		1.355	1.390	1.472	1.525	1.510	1.497	1.490	1.463	4	AVG
Total Cresols		1.359	1.358	1.427	1.489	1.474	1.459	1.456	1.432	4	AVG
N-Nitroso-di-n-propylamine		1.238	1.268	1.302	1.372	1.368	1.345	1.353	1.321	4	AVG
N-Nitrosomorpholine			1.087	1.086	1.137	1.099	1.098	1.086	1.099	2	AVG
o-Toluidine		2.447	2.405	2.493	2.550	2.554	2.514	2.533	2.499	2	AVG
Hexachloroethane			0.629	0.644	0.673	0.668	0.655	0.660	0.655	2	AVG
Nitrobenzene		0.507	0.507	0.515	0.528	0.519	0.510	0.518	0.515	1	AVG
N-Nitrosopiperidine		0.160	0.177	0.187	0.191	0.192	0.187	0.191	0.184	6	AVG
Isophorone		0.783	0.812	0.867	0.896	0.889	0.868	0.886	0.857	5	AVG
2-Nitrophenol		0.170	0.177	0.189	0.195	0.201	0.197	0.200	0.190	6	AVG
2,4-Dimethylphenol		0.365	0.392	0.407	0.421	0.422	0.411	0.414	0.404	5	AVG
O,O,O-Triethylphosphorothioate			0.199	0.205	0.207	0.208	0.201	0.202	0.204	2	AVG
bis(2-Chloroethoxy)methane		0.527	0.542	0.555	0.552	0.557	0.531	0.552	0.545	2	AVG
Benzoic acid			0.181	0.245	0.285	0.330	0.339	0.350	0.288	23	1STDEG
1,2,3,4-Tetrahydronaphthalene			0.636	0.628	0.631	0.622	0.616	0.619	0.625	1	AVG
2,4-Dichlorophenol		0.251	0.288	0.302	0.311	0.311	0.306	0.309	0.297	7	AVG
1,2,4-Trichlorobenzene		0.340	0.357	0.366	0.368	0.367	0.357	0.359	0.359	3	AVG
Naphthalene	1.089	1.073	1.034	1.066	1.075	1.070	1.043	1.053	1.063	2	AVG
4-Chloroaniline		0.386	0.425	0.445	0.455	0.456	0.444	0.449	0.437	6	AVG
2,6-Dichlorophenol		0.278	0.284	0.296	0.303	0.300	0.290	0.295	0.292	3	AVG
Hexachloropropene			0.211	0.225	0.235	0.231	0.229	0.229	0.227	4	AVG
Hexachlorobutadiene		0.211	0.221	0.215	0.219	0.218	0.211	0.212	0.215	2	AVG
Quinoline			0.653	0.665	0.686	0.671	0.650	0.651	0.663	2	AVG
Caprolactam			0.088	0.098	0.104	0.101	0.101	0.104	0.099	6	AVG
N-Nitrosodi-n-butylamine			0.297	0.308	0.344	0.404	0.393	0.397	0.357	13	AVG
4-Chloro-3-methylphenol		0.307	0.329	0.345	0.363	0.359	0.348	0.349	0.343	6	AVG
Safrole			0.261	0.271	0.278	0.277	0.269	0.272	0.271	2	AVG
2-Methylnaphthalene	0.697	0.690	0.692	0.724	0.729	0.724	0.707	0.714	0.710	2	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 04/15/16 04/15/16

Calibration Times: 17:39 21:10

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = hd0632.d RRF0.25 = hd0638.d RRF1.25 = hd0637.d RRF3.75 = hd0636.d
RRF7.5 = hd0631.d RRF12.5 = hd0635.d RRF20 = hd0634.d RRF30 = hd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1-Methylnaphthalene	0.633	0.642	0.638	0.658	0.668	0.668	0.648	0.653	0.651	2	AVG
Hexachlorocyclopentadiene			0.366	0.395	0.417	0.405	0.398	0.387	0.394	4	AVG
1,2,4,5-Tetrachlorobenzene		0.626	0.648	0.678	0.651	0.661	0.657	0.654	0.654	2	AVG
cis-Isosafrole			0.495	0.511	0.511	0.522	0.502	0.522	0.511	2	AVG
2,4,6-Trichlorophenol		0.347	0.393	0.415	0.435	0.437	0.432	0.434	0.413	8	AVG
2,4,5-Trichlorophenol		0.360	0.406	0.447	0.456	0.470	0.455	0.451	0.435	9	AVG
trans-Isosafrole			0.488	0.533	0.538	0.545	0.532	0.543	0.530	4	AVG
Isosafrole			0.489	0.529	0.534	0.541	0.527	0.539	0.527	4	AVG
1,1'-Biphenyl		1.546	1.489	1.498	1.512	1.543	1.508	1.505	1.514	1	AVG
2-Chloronaphthalene		1.179	1.206	1.209	1.247	1.220	1.167	1.192	1.203	2	AVG
1-Chloronaphthalene		1.070	1.106	1.165	1.101	1.143	1.147	1.116	1.121	3	AVG
Diphenyl ether		0.758	0.809	0.836	0.810	0.824	0.806	0.812	0.808	3	AVG
2-Nitroaniline		0.279	0.325	0.376	0.376	0.373	0.370	0.370	0.353	11	AVG
1,4-Naphthoquinone			0.428	0.501	0.507	0.516	0.499	0.498	0.491	6	AVG
1,4-Dinitrobenzene			0.175	0.200	0.204	0.201	0.202	0.205	0.198	6	AVG
Dimethylphthalate			1.327	1.394	1.357	1.365	1.326	1.358	1.354	2	AVG
1,3-Dinitrobenzene			0.183	0.218	0.214	0.223	0.220	0.223	0.214	7	AVG
2,6-Dinitrotoluene		0.233	0.279	0.306	0.307	0.307	0.301	0.305	0.291	9	AVG
Acenaphthylene	1.634	1.613	1.700	1.811	1.800	1.829	1.787	1.789	1.745	5	AVG
3-Nitroaniline		0.236	0.278	0.317	0.312	0.323	0.322	0.327	0.302	11	AVG
Acenaphthene	1.185	1.147	1.181	1.198	1.194	1.210	1.187	1.181	1.185	2	AVG
2,4-Dinitrophenol				0.179	0.186	0.212	0.211	0.216	0.201	8	AVG
4-Nitrophenol				0.201	0.212	0.223	0.230	0.235	0.220	6	AVG
Pentachlorobenzene		0.508	0.533	0.527	0.527	0.531	0.518	0.515	0.523	2	AVG
2,4-Dinitrotoluene			0.380	0.415	0.408	0.428	0.419	0.423	0.412	4	AVG
2,4_2,6-Dinitrotoluenes		0.278	0.329	0.361	0.358	0.368	0.360	0.364	0.345	9	AVG
Dibenzofuran		1.586	1.619	1.668	1.653	1.659	1.594	1.587	1.624	2	AVG
1-Naphthylamine				1.205	1.166	1.216	1.226	1.239	1.210	2	AVG
2,3,4,6-Tetrachlorophenol		0.281	0.317	0.349	0.340	0.359	0.359	0.363	0.338	9	AVG
2-Naphthylamine				1.161	1.139	1.200	1.202	1.210	1.183	3	AVG
Diethylphthalate			1.236	1.309	1.323	1.365	1.349	1.375	1.326	4	AVG
Thionazin			0.216	0.225	0.224	0.236	0.240	0.242	0.230	4	AVG
Fluorene	1.238	1.219	1.283	1.352	1.302	1.317	1.282	1.272	1.283	3	AVG
4-Chlorophenyl-phenylether		0.652	0.668	0.685	0.660	0.675	0.653	0.653	0.664	2	AVG
5-Nitro-o-toluidine		0.274	0.316	0.352	0.364	0.372	0.369	0.374	0.346	11	AVG
4-Nitroaniline		0.244	0.300	0.336	0.345	0.337	0.327	0.330	0.317	11	AVG
4,6-Dinitro-2-methylphenol				0.128	0.132	0.143	0.146	0.144	0.139	6	AVG
N-Nitrosodiphenylamine (1)		0.524	0.554	0.574	0.578	0.571	0.565	0.573	0.563	3	AVG
NDPA as diphenylamine		0.524	0.554	0.574	0.578	0.571	0.565	0.573	0.563	3	AVG
1,2-Diphenylhydrazine		0.811	0.845	0.864	0.873	0.853	0.844	0.859	0.850	2	AVG
Tetraethyldithiopyrophosphate			0.121	0.130	0.138	0.137	0.134	0.135	0.132	5	AVG
1,3,5-Trinitrobenzene				0.080	0.087	0.091	0.091	0.093	0.088	6	AVG
Diallate (peak 1)			0.339	0.359	0.373	0.364	0.361	0.368	0.361	3	AVG
Phorate		0.450	0.507	0.550	0.559	0.561	0.559	0.551	0.534	8	AVG
Phenacetin		0.288	0.355	0.402	0.411	0.412	0.407	0.405	0.383	12	AVG
4-Bromophenyl-phenylether		0.179	0.202	0.198	0.197	0.196	0.197	0.196	0.195	4	AVG
Diallate (peak 2)			0.337	0.347	0.362	0.347	0.355	0.363	0.352	3	AVG
Diallate trans/cis			0.339	0.357	0.371	0.361	0.360	0.367	0.359	3	AVG
Hexachlorobenzene	0.206	0.198	0.208	0.210	0.206	0.205	0.203	0.204	0.205	2	AVG
Dimethoate			0.304	0.349	0.363	0.359	0.354	0.351	0.347	6	AVG
Atrazine			0.202	0.207	0.216	0.204	0.201	0.189	0.203	4	AVG
Pentachlorophenol			0.115	0.132	0.142	0.141	0.141	0.138	0.135	8	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 04/15/16 04/15/16

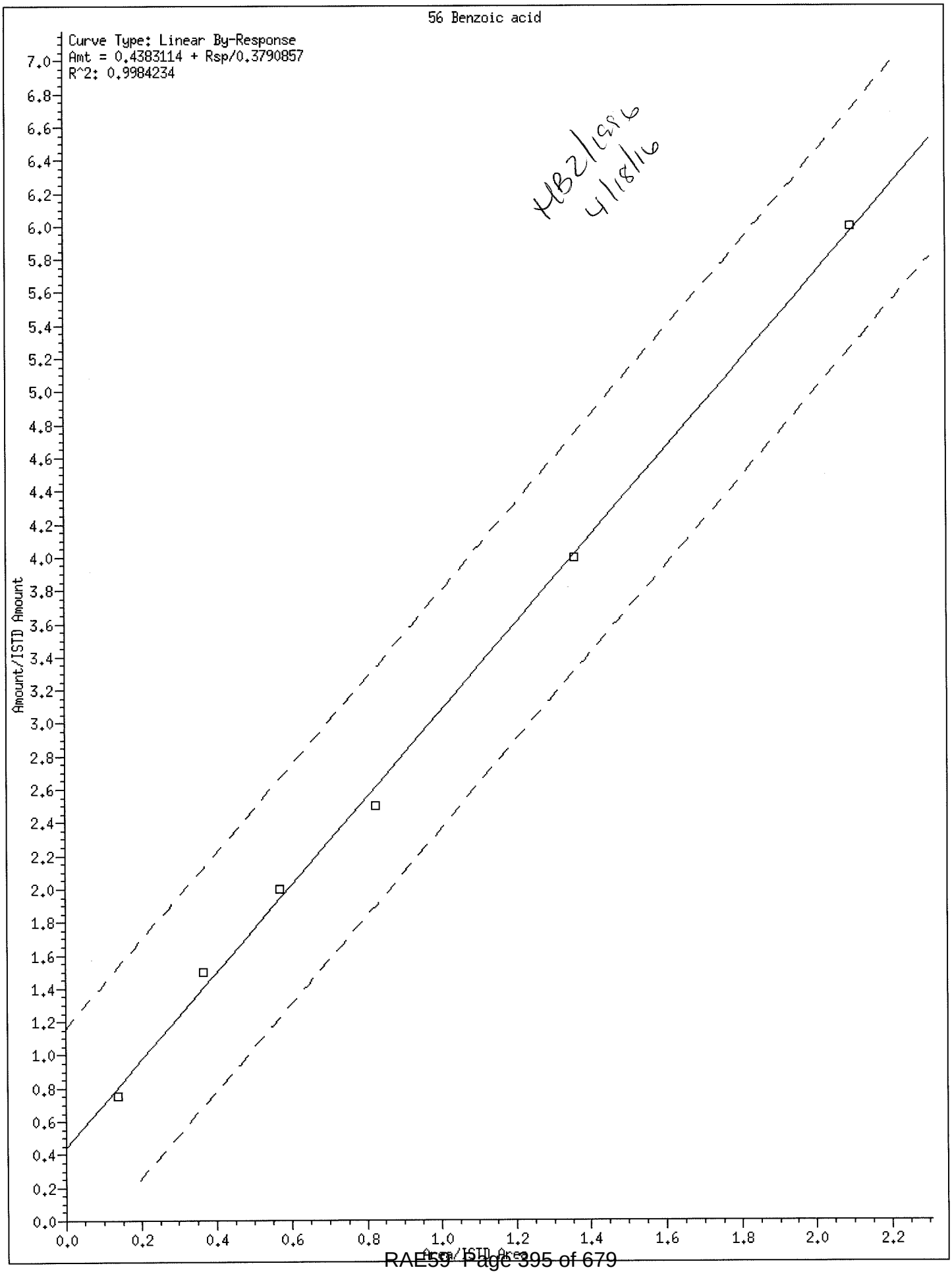
Calibration Times: 17:39 21:10

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = hd0632.d RRF0.25 = hd0638.d RRF1.25 = hd0637.d RRF3.75 = hd0636.d
RRF7.5 = hd0631.d RRF12.5 = hd0635.d RRF20 = hd0634.d RRF30 = hd0633.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
4-Aminobiphenyl		0.459	0.517	0.580	0.585	0.560	0.546	0.535	0.540	8	AVG
Pentachloronitrobenzene			0.094	0.101	0.099	0.100	0.098	0.098	0.098	3	AVG
Pronamide		0.249	0.302	0.337	0.346	0.348	0.343	0.340	0.324	11	AVG
Dinoseb			0.157	0.194	0.209	0.225	0.225	0.228	0.206	13	AVG
Phenanthrene	1.009	0.993	1.010	1.030	1.036	1.035	1.020	1.018	1.019	1	AVG
Anthracene	0.893	0.909	0.995	1.020	1.041	1.042	1.033	1.028	0.995	6	AVG
Carbazole		0.839	0.928	0.973	1.005	0.990	0.979	0.967	0.954	6	AVG
Methyl parathion			0.220	0.258	0.282	0.278	0.277	0.276	0.265	9	AVG
Di-n-butylphthalate			1.099	1.192	1.263	1.239	1.228	1.224	1.207	5	AVG
Parathion			0.124	0.154	0.170	0.170	0.170	0.170	0.160	12	AVG
4-Nitroquinoline-1-oxide				0.097	0.115	0.126	0.132	0.133	0.121	13	AVG
Octachlorostyrene			0.080	0.081	0.082	0.079	0.078	0.078	0.080	2	AVG
Isodrin		0.125	0.124	0.125	0.127	0.124	0.124	0.124	0.125	1	AVG
Fluoranthene	1.058	1.049	1.115	1.184	1.226	1.213	1.198	1.175	1.152	6	AVG
Benzidine				0.702	0.705	0.705	0.693	0.632	0.687	5	AVG
Pyrene	1.038	1.033	1.013	1.038	1.038	1.042	1.030	1.021	1.031	1	AVG
p-Dimethylaminoazobenzene		0.132	0.147	0.171	0.183	0.187	0.189	0.187	0.171	13	AVG
Chlorobenzilate			0.275	0.312	0.321	0.316	0.317	0.313	0.309	5	AVG
3,3'-Dimethylbenzidine			0.530	0.600	0.702	0.654	0.647	0.629	0.627	9	AVG
Butylbenzylphthalate			0.390	0.446	0.472	0.454	0.454	0.439	0.442	6	AVG
2-Acetylaminofluorene			0.288	0.362	0.388	0.390	0.406	0.409	0.374	12	AVG
3,3'-Dichlorobenzidine			0.317	0.352	0.377	0.357	0.363	0.350	0.353	6	AVG
4,4'-Methylenebis(2-chloroanil				0.194	0.205	0.189	0.196	0.189	0.194	3	AVG
Benzo(a)anthracene	0.826	0.831	0.896	0.991	1.013	0.974	0.976	0.933	0.930	8	AVG
Chrysene	0.815	0.810	0.872	0.917	0.939	0.899	0.896	0.870	0.877	5	AVG
bis(2-Ethylhexyl)phthalate			0.535	0.617	0.676	0.647	0.655	0.647	0.629	8	AVG
6-Methylchrysene			0.584	0.623	0.664	0.627	0.643	0.626	0.628	4	AVG
Di-n-octylphthalate			1.265	1.530	1.600	1.683	1.622	1.669	1.561	10	AVG
Benzo(b)fluoranthene	1.160	1.155	1.278	1.354	1.334	1.360	1.335	1.313	1.286	6	AVG
7,12-Dimethylbenz[a]anthracene		0.403	0.498	0.577	0.572	0.593	0.586	0.586	0.545	13	AVG
Benzo(k)fluoranthene	1.110	1.171	1.248	1.356	1.300	1.348	1.273	1.307	1.264	7	AVG
Benzo(a)pyrene	1.092	1.008	1.116	1.212	1.228	1.281	1.237	1.245	1.177	8	AVG
3-Methylcholanthrene		0.413	0.442	0.477	0.514	0.519	0.507	0.514	0.484	9	AVG
Dibenz(a,h)acridine			0.864	0.949	0.998	0.994	0.985	0.978	0.961	5	AVG
Dibenz(a,j)acridine			0.875	0.963	1.004	1.003	0.973	0.980	0.966	5	AVG
Indeno(1,2,3-cd)pyrene	1.132	1.078	1.211	1.306	1.374	1.337	1.311	1.301	1.256	8	AVG
Dibenz(a,h)anthracene	0.888	0.931	1.011	1.088	1.161	1.134	1.103	1.095	1.051	9	AVG
Benzo(g,h,i)perylene	1.032	0.999	1.030	1.095	1.141	1.115	1.089	1.066	1.071	4	AVG
Total PAHs	1.078	1.092	1.139	1.199	1.122	1.203	1.135	1.148	1.139	4	AVG
2-Fluorophenol		1.389	1.404	1.454	1.500	1.497	1.495	1.501	1.463	3	AVG
Phenol-d6		1.737	1.798	1.917	1.974	1.978	1.964	1.964	1.905	5	AVG
Nitrobenzene-d5		0.469	0.486	0.497	0.507	0.503	0.491	0.500	0.493	3	AVG
2-Fluorobiphenyl		1.396	1.394	1.460	1.427	1.440	1.393	1.395	1.415	2	AVG
2,4,6-Tribromophenol		0.135	0.152	0.174	0.172	0.178	0.179	0.179	0.167	10	AVG
Terphenyl-d14		0.675	0.696	0.715	0.722	0.709	0.703	0.685	0.701	2	AVG
								Average %RSD	5		

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


56 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.4383114 + Rsp/0.3790857
R^2: 0.9984234
MB21596
4/18/16
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP18831.i/16apr15a.b/hd0631.d SSTD7.5
/chem/HP18831.i/16apr15a.b/hd0632.d SSTD0.125
/chem/HP18831.i/16apr15a.b/hd0633.d SSTD030
/chem/HP18831.i/16apr15a.b/hd0634.d SSTD020
/chem/HP18831.i/16apr15a.b/hd0635.d SSTD12.5
/chem/HP18831.i/16apr15a.b/hd0636.d SSTD3.75
/chem/HP18831.i/16apr15a.b/hd0637.d SSTD1.25
/chem/HP18831.i/16apr15a.b/hd0638.d SSTD0.25

Area Summary

	File ID:									
Internal Standard Name	hd0631.d	hd0632.d	hd0633.d	hd0634.d	hd0635.d	hd0636.d	hd0637.d	hd0638.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	135936	131489	135286	137129	159203	142571	143210	136684	140188	6
Naphthalene-d8	520953	502477	520547	533726	613044	542063	541346	525888	537506	6
Acenaphthene-d10	299858	286474	291587	299599	345044	302724	304509	295719	303189	6
Phenanthrene-d10	567439	523050	574378	582635	671755	577365	564964	558297	577485	7
Pyrene-d10	705105	627250	684709	698323	814298	701815	697159	658722	698423	8
Perylene-d12	518255	431346	471027	494846	539594	464636	459526	439545	477347	8

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:							
Internal Standard Name	hd0631.d	hd0632.d	hd0633.d	hd0634.d	hd0635.d	hd0636.d	hd0637.d	hd0638.d
1,4-Dichlorobenzene-d4	7.292	7.286	7.292	7.292	7.292	7.292	7.292	7.292
Naphthalene-d8	9.221	9.221	9.227	9.227	9.227	9.221	9.221	9.221
Acenaphthene-d10	11.966	11.966	11.972	11.966	11.966	11.966	11.966	11.966
Phenanthrene-d10	13.849	13.849	13.855	13.855	13.855	13.849	13.849	13.849
Pyrene-d10	15.889	15.889	15.895	15.895	15.895	15.889	15.889	15.889
Perylene-d12	20.435	20.436	20.441	20.435	20.435	20.435	20.435	20.430

Comments: _____

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Report generated on 04/16/2016 at 12:28

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270D MINI File ID: hd0641.d

ICV SAMPLE ID: RVICV3205 BATCH: 16APR15A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.04	-4	30	YES
N-Nitrosodimethylamine	12.50	12.52	0	30	YES
Pyridine	12.50	13.04	4	30	YES
2-Picoline	12.50	12.47	0	30	YES
N-Nitrosomethylethylamine	12.50	12.88	3	30	YES
Methyl methanesulfonate	12.50	13.69	9	30	YES
N-Nitrosodiethylamine	12.50	12.76	2	30	YES
Ethyl methanesulfonate	12.50	13.07	5	30	YES
Phenol	12.50	12.51	0	30	YES
Aniline	12.50	12.47	0	30	YES
bis(2-Chloroethyl)ether	12.50	12.73	2	30	YES
2-Chlorophenol	12.50	12.89	3	30	YES
1,3-Dichlorobenzene	12.50	13.05	4	30	YES
1,4-Dichlorobenzene	12.50	12.99	4	30	YES
Benzyl alcohol	12.50	13.09	5	30	YES
1,2-Dichlorobenzene	12.50	13.13	5	30	YES
Indene	12.50	12.81	2	30	YES
2-Methylphenol	12.50	13.30	6	30	YES
2,2'-oxybis(1-Chloropropane	12.50	13.37	7	30	YES
bis(2-Chloroisopropyl)ether	12.50	13.37	7	30	YES
N-Nitrosopyrrolidine	12.50	13.08	5	30	YES
Acetophenone	12.50	12.50	0	30	YES
4-Methylphenol	12.50	12.96	4	30	YES
N-Nitroso-di-n-propylamine	12.50	12.86	3	30	YES
N-Nitrosomorpholine	12.50	12.59	1	30	YES
o-Toluidine	12.50	12.62	1	30	YES
Total Cresols	25.00	26.27	5	30	YES
Hexachloroethane	12.50	13.11	5	30	YES
Nitrobenzene	12.50	12.56	0	30	YES
N-Nitrosopiperidine	12.50	12.75	2	30	YES
Isophorone	12.50	13.41	7	30	YES
2-Nitrophenol	12.50	13.26	6	30	YES
2,4-Dimethylphenol	12.50	12.34	-1	30	YES
bis(2-Chloroethoxy)methane	12.50	12.96	4	30	YES
Benzoic acid	25.00	20.67	-17	30	YES
O,O,O-Triethylphosphorothio	12.50	12.86	3	30	YES
2,4-Dichlorophenol	12.50	13.09	5	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270D MINI File ID: hd0641.d

ICV SAMPLE ID: RVICV3205 BATCH: 16APR15A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.01	4	30	YES
Naphthalene	12.50	12.86	3	30	YES
4-Chloroaniline	12.50	13.28	6	30	YES
2,6-Dichlorophenol	12.50	13.02	4	30	YES
Hexachloropropene	12.50	14.63	17	30	YES
Hexachlorobutadiene	12.50	13.10	5	30	YES
Quinoline	12.50	12.82	3	30	YES
N-Nitrosodi-n-butylamine	12.50	11.16	-11	30	YES
4-Chloro-3-methylphenol	12.50	13.07	5	30	YES
Safrole	12.50	12.89	3	30	YES
2-Methylnaphthalene	12.50	12.47	0	30	YES
1-Methylnaphthalene	12.50	12.68	1	30	YES
Hexachlorocyclopentadiene	25.00	25.35	1	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.67	1	30	YES
cis-Isosafrole	2.13	1.62	-24	30	YES
2,4,6-Trichlorophenol	12.50	13.24	6	30	YES
2,4,5-Trichlorophenol	12.50	13.13	5	30	YES
trans-Isosafrole	10.38	12.21	18	30	YES
1,1'-Biphenyl	12.50	12.33	-1	30	YES
2-Chloronaphthalene	12.50	12.81	2	30	YES
Isosafrole	12.50	13.83	11	30	YES
1-Chloronaphthalene	12.50	12.11	-3	30	YES
Diphenyl ether	12.50	12.16	-3	30	YES
2-Nitroaniline	12.50	13.12	5	30	YES
1,4-Naphthoquinone	15.63	15.75	1	30	YES
1,4-Dinitrobenzene	12.50	12.80	2	30	YES
Dimethylphthalate	12.50	12.44	-1	30	YES
1,3-Dinitrobenzene	12.50	12.87	3	30	YES
2,6-Dinitrotoluene	12.50	13.29	6	30	YES
Acenaphthylene	12.50	13.08	5	30	YES
3-Nitroaniline	12.50	13.45	8	30	YES
Acenaphthene	12.50	13.06	4	30	YES
2,4-Dinitrophenol	25.00	25.90	4	30	YES
4-Nitrophenol	12.50	12.65	1	30	YES
Pentachlorobenzene	12.50	12.67	1	30	YES
2,4-Dinitrotoluene	12.50	12.97	4	30	YES
Dibenzofuran	12.50	12.68	1	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270D MINI File ID: hd0641.d

ICV SAMPLE ID: RVICV3205 BATCH: 16APR15A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	26.25	5	30	YES
1-Naphthylamine	25.00	24.18	-3	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.59	9	30	YES
2-Naphthylamine	25.00	24.81	-1	30	YES
Diethylphthalate	12.50	12.90	3	30	YES
Thionazin	12.50	12.80	2	30	YES
Fluorene	12.50	13.16	5	30	YES
4-Chlorophenyl-phenylether	12.50	12.84	3	30	YES
5-Nitro-o-toluidine	12.50	13.92	11	30	YES
4-Nitroaniline	12.50	13.02	4	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.90	3	30	YES
N-Nitrosodiphenylamine	12.50	12.70	2	30	YES
NDPA as diphenylamine	12.50	12.70	2	30	YES
1,2-Diphenylhydrazine	12.50	12.62	1	30	YES
Tetraethyldithiopyrophospha	12.50	12.36	-1	30	YES
1,3,5-Trinitrobenzene	12.50	12.47	0	30	YES
Diallate (peak 1)	9.38	8.98	-4	30	YES
Phorate	12.50	12.73	2	30	YES
Phenacetin	12.50	13.15	5	30	YES
4-Bromophenyl-phenylether	12.50	12.82	3	30	YES
Diallate (peak 2)	3.13	3.05	-2	30	YES
Hexachlorobenzene	12.50	12.43	-1	30	YES
Diallate trans/cis	12.50	12.03	-4	30	YES
Dimethoate	12.50	12.83	3	30	YES
Pentachlorophenol	12.50	13.59	9	30	YES
4-Aminobiphenyl	12.50	17.83	43	30	NO#
Pentachloronitrobenzene	12.50	12.39	-1	30	YES
Pronamide	12.50	13.41	7	30	YES
Dinoseb	12.50	13.52	8	30	YES
Phenanthrene	12.50	12.44	-1	30	YES
Anthracene	12.50	13.31	6	30	YES
Carbazole	12.50	12.66	1	30	YES
Methyl parathion	12.50	13.02	4	30	YES
Di-n-butylphthalate	12.50	12.91	3	30	YES
Parathion	12.50	12.96	4	30	YES
4-Nitroquinoline-1-oxide	150.00	179.60	20	30	YES
Isodrin	12.50	12.68	1	30	YES

NC = Could not calculate

Comments: _____

_____#run hits under valid ICV_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP18831

Method: SW-846 8270D MINI | File ID: hd0641.d

ICV SAMPLE ID: RVICV3205 | BATCH: 16APR15A026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	13.07	5	30	YES
Benzidine	62.50	51.67	-17	30	YES
Pyrene	12.50	12.52	0	30	YES
p-Dimethylaminoazobenzene	12.50	15.77	26	30	YES
Chlorobenzilate	12.50	13.17	5	30	YES
3,3'-Dimethylbenzidine	25.00	23.65	-5	30	YES
Butylbenzylphthalate	12.50	13.11	5	30	YES
2-Acetylaminofluorene	12.50	13.19	6	30	YES
3,3'-Dichlorobenzidine	12.50	12.07	-3	30	YES
Benzo(a)anthracene	12.50	12.99	4	30	YES
Chrysene	12.50	13.12	5	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.25	-2	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.10	5	30	YES
6-Methylchrysene	12.50	12.12	-3	30	YES
Di-n-octylphthalate	12.50	14.22	14	30	YES
Benzo(b)fluoranthene	12.50	13.83	11	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.35	7	30	YES
Benzo(k)fluoranthene	12.50	13.76	10	30	YES
Benzo(a)pyrene	12.50	13.33	7	30	YES
3-Methylcholanthrene	12.50	16.05	28	30	YES
Dibenz(a,h)acridine	12.50	12.60	1	30	YES
Dibenz(a,j)acridine	12.50	12.87	3	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.32	7	30	YES
Dibenz(a,h)anthracene	12.50	13.78	10	30	YES
Benzo(g,h,i)perylene	12.50	13.13	5	30	YES
Total PAHs	225.00	235.90	5	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270D MINI File ID: hd0642.d

ICV SAMPLE ID: RVBASICV0716 BATCH: 16APR15A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	14.01	12	30	YES
Caprolactam	12.50	11.70	-6	30	YES
Atrazine	12.50	12.32	-1	30	YES

NC = Could not calculate

Comments: _____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/06/16 Time: 18:50

Lab File ID: he0401.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.686	0.679	12.370	12.5	-1
N-Nitrosodimethylamine	1.118	1.154	12.900	12.5	3
Pyridine	1.800	1.817	12.620	12.5	1
2-Picoline	1.923	1.957	12.720	12.5	2
N-Nitrosomethylethylamine	0.758	0.780	12.870	12.5	3
Methyl methanesulfonate	0.875	0.870	12.440	12.5	-1
N-Nitrosodiethylamine	0.740	0.764	12.890	12.5	3
Ethyl methanesulfonate	0.750	0.779	12.990	12.5	4
Benzaldehyde	1.410	1.345	11.920	12.5	-5
Phenol	2.135	2.365	13.850	12.5	11
Aniline	2.677	2.757	12.870	12.5	3
a-methylstyrene	1.547	1.565	12.640	12.5	1
bis(2-Chloroethyl)ether	1.715	1.720	12.540	12.5	0
2-Chlorophenol	1.414	1.470	12.990	12.5	4
1,3-Dichlorobenzene	1.512	1.584	13.100	12.5	5
1,4-Dichlorobenzene	1.547	1.591	12.850	12.5	3
Benzyl alcohol	1.009	0.988	12.240	12.5	-2
1,2-Dichlorobenzene	1.464	1.507	12.870	12.5	3
Indene	2.593	2.627	12.660	12.5	1
2-Methylphenol	1.401	1.487	13.260	12.5	6
2,2'-oxybis(1-Chloropropane)	2.583	2.438	11.800	12.5	-6
bis(2-Chloroisopropyl)ether	2.583	2.438	11.800	12.5	-6
N-Nitrosopyrrolidine	0.760	0.811	13.330	12.5	7
Acetophenone	2.288	2.349	12.830	12.5	3
4-Methylphenol	1.463	1.668	14.250	12.5	14
Total Cresols	1.432	1.577	27.520	25.0	10
N-Nitroso-di-n-propylamine	1.321	1.320	12.490	12.5	0
N-Nitrosomorpholine	1.099	1.057	12.020	12.5	-4
o-Toluidine	2.500	2.572	12.860	12.5	3
Hexachloroethane	0.655	0.678	12.940	12.5	4
Nitrobenzene	0.515	0.516	12.520	12.5	0
N-Nitrosopiperidine	0.184	0.190	12.950	12.5	4
Isophorone	0.857	0.870	12.690	12.5	2
2-Nitrophenol	0.190	0.204	13.440	12.5	7
2,4-Dimethylphenol	0.404	0.416	12.860	12.5	3
O,O,O-Triethylphosphorothioate	0.204	0.205	12.590	12.5	1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/06/16 Time: 18:50

Lab File ID: he0401.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.545	0.530	12.140	12.5	-3
Benzoic acid	0.288	0.253	10.550	12.5	-16
1,2,3,4-Tetrahydronaphthalene	0.625	0.630	12.590	12.5	1
2,4-Dichlorophenol	0.297	0.312	13.140	12.5	5
1,2,4-Trichlorobenzene	0.359	0.370	12.900	12.5	3
Naphthalene	1.063	1.072	12.610	12.5	1
4-Chloroaniline	0.437	0.452	12.920	12.5	3
2,6-Dichlorophenol	0.292	0.300	12.840	12.5	3
Hexachloropropene	0.227	0.248	13.690	12.5	10
Hexachlorobutadiene	0.215	0.222	12.870	12.5	3
Quinoline	0.663	0.678	12.790	12.5	2
Caprolactam	0.099	0.101	12.700	12.5	2
N-Nitrosodi-n-butylamine	0.357	0.385	13.460	12.5	8
4-Chloro-3-methylphenol	0.343	0.355	12.950	12.5	4
Safrole	0.271	0.275	12.650	12.5	1
2-Methylnaphthalene	0.710	0.717	12.630	12.5	1
1-Methylnaphthalene	0.651	0.653	12.540	12.5	0
Hexachlorocyclopentadiene	0.394	0.393	12.440	12.5	0
1,2,4,5-Tetrachlorobenzene	0.654	0.660	12.620	12.5	1
cis-Isosafrole	0.511	0.504	2.100	2.1	-1
2,4,6-Trichlorophenol	0.413	0.423	12.810	12.5	2
2,4,5-Trichlorophenol	0.435	0.445	12.780	12.5	2
trans-Isosafrole	0.530	0.542	10.620	10.4	2
Isosafrole	0.527	0.536	12.720	12.5	2
1,1'-Biphenyl	1.514	1.494	12.330	12.5	-1
2-Chloronaphthalene	1.203	1.159	12.050	12.5	-4
1-Chloronaphthalene	1.121	1.148	12.800	12.5	2
Diphenyl ether	0.808	0.811	12.540	12.5	0
2-Nitroaniline	0.353	0.371	13.140	12.5	5
1,4-Naphthoquinone	0.491	0.480	12.220	12.5	-2
1,4-Dinitrobenzene	0.198	0.199	12.580	12.5	1
Dimethylphthalate	1.354	1.323	12.210	12.5	-2
1,3-Dinitrobenzene	0.214	0.217	12.670	12.5	1
2,6-Dinitrotoluene	0.291	0.297	12.760	12.5	2
Acenaphthylene	1.745	1.803	12.910	12.5	3
3-Nitroaniline	0.302	0.322	13.310	12.5	6

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/06/16 Time: 18:50

Lab File ID: he0401.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.186	1.178	12.430	12.5	-1
2,4-Dinitrophenol	0.201	0.199	12.410	12.5	-1
4-Nitrophenol	0.220	0.220	12.470	12.5	0
Pentachlorobenzene	0.523	0.526	12.570	12.5	1
2,4-Dinitrotoluene	0.412	0.421	12.760	12.5	2
2,4_2,6-Dinitrotoluenes	0.345	0.359	25.520	25.0	2
Dibenzofuran	1.624	1.640	12.620	12.5	1
1-Naphthylamine	1.210	1.188	12.280	12.5	-2
2,3,4,6-Tetrachlorophenol	0.338	0.347	12.840	12.5	3
2-Naphthylamine	1.183	1.177	12.440	12.5	0
Diethylphthalate	1.326	1.331	12.540	12.5	0
Thionazin	0.230	0.254	13.770	12.5	10
Fluorene	1.283	1.272	12.390	12.5	-1
4-Chlorophenyl-phenylether	0.664	0.671	12.630	12.5	1
5-Nitro-o-toluidine	0.346	0.368	13.310	12.5	6
4-Nitroaniline	0.317	0.330	13.010	12.5	4
4,6-Dinitro-2-methylphenol	0.139	0.141	12.710	12.5	2
N-Nitrosodiphenylamine (1)	0.563	0.565	12.550	12.5	0
NDPA as diphenylamine	0.563	0.565	12.550	12.5	0
1,2-Diphenylhydrazine	0.850	0.835	12.280	12.5	-2
Tetraethyldithiopyrophosphate	0.132	0.135	12.720	12.5	2
1,3,5-Trinitrobenzene	0.088	0.088	12.480	12.5	0
Diallate (peak 1)	0.361	0.354	10.190	10.4	-2
Phorate	0.534	0.581	13.610	12.5	9
Phenacetin	0.383	0.395	12.900	12.5	3
4-Bromophenyl-phenylether	0.195	0.198	12.680	12.5	1
Diallate (peak 2)	0.352	0.340	2.060	2.1	-3
Diallate trans/cis	0.359	0.352	12.250	12.5	-2
Hexachlorobenzene	0.205	0.211	12.860	12.5	3
Dimethoate	0.347	0.337	12.150	12.5	-3
Atrazine	0.203	0.185	11.400	12.5	-9
Pentachlorophenol	0.135	0.119	11.060	12.5	-12
4-Aminobiphenyl	0.540	0.530	12.260	12.5	-2
Pentachloronitrobenzene	0.098	0.098	12.520	12.5	0
Pronamide	0.324	0.338	13.070	12.5	5
Dinoseb	0.206	0.215	13.030	12.5	4

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/06/16 Time: 18:50

Lab File ID: he0401.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.019	1.022	12.540	12.5	0
Anthracene	0.995	1.028	12.920	12.5	3
Carbazole	0.954	0.964	12.620	12.5	1
Methyl parathion	0.265	0.266	12.560	12.5	1
Di-n-butylphthalate	1.207	1.216	12.590	12.5	1
Parathion	0.160	0.165	12.880	12.5	3
4-Nitroquinoline-1-oxide	0.121	0.106	11.000	12.5	-12
Octachlorostyrene	0.080	0.077	12.100	12.5	-3
Isodrin	0.125	0.125	12.550	12.5	0
Fluoranthene	1.152	1.190	12.910	12.5	3
Benzidine	0.687	0.665	36.310	37.5	-3
Pyrene	1.031	1.005	12.170	12.5	-3
p-Dimethylaminoazobenzene	0.171	0.189	13.830	12.5	11
Chlorobenzilate	0.309	0.306	12.360	12.5	-1
3,3'-Dimethylbenzidine	0.627	0.652	13.000	12.5	4
Butylbenzylphthalate	0.442	0.461	13.030	12.5	4
2-Acetylaminofluorene	0.374	0.420	14.050	12.5	12
3,3'-Dichlorobenzidine	0.353	0.386	13.680	12.5	9
4,4'-Methylenebis(2-chloroanil	0.194	0.201	12.940	12.5	4
Benzo(a)anthracene	0.930	0.994	13.360	12.5	7
Chrysene	0.877	0.927	13.210	12.5	6
bis(2-Ethylhexyl)phthalate	0.629	0.680	13.500	12.5	8
6-Methylchrysene	0.628	0.682	13.570	12.5	9
Di-n-octylphthalate	1.561	1.547	12.390	12.5	-1
Benzo(b)fluoranthene	1.286	1.342	13.040	12.5	4
7,12-Dimethylbenz[a]anthracene	0.545	0.562	12.890	12.5	3
Benzo(k)fluoranthene	1.264	1.276	12.610	12.5	1
Benzo(a)pyrene	1.177	1.245	13.220	12.5	6
3-Methylcholanthrene	0.484	0.518	13.380	12.5	7
Dibenz(a,h)acridine	0.961	1.011	13.150	12.5	5
Dibenz(a,j)acridine	0.966	1.035	13.380	12.5	7
Indeno(1,2,3-cd)pyrene	1.256	1.371	13.640	12.5	9
Dibenz(a,h)anthracene	1.051	1.158	13.770	12.5	10
Benzo(g,h,i)perylene	1.071	1.113	12.990	12.5	4
Total PAHs	1.139	0.920	206.240	225.0	-8
2-Fluorophenol	1.463	1.517	25.930	25.0	4

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/06/16 Time: 18:50

Lab File ID: he0401.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.905	1.982	26.020	25.0	4
Nitrobenzene-d5	0.493	0.494	25.030	25.0	0
2-Fluorobiphenyl	1.415	1.391	24.570	25.0	-2
2,4,6-Tribromophenol	0.167	0.175	26.130	25.0	5
Terphenyl-d14	0.701	0.697	24.850	25.0	-1
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP18831.i/16apr15a.b/hd0631.d **
/chem/HP18831.i/16apr15a.b/hd0632.d
/chem/HP18831.i/16apr15a.b/hd0633.d
/chem/HP18831.i/16apr15a.b/hd0634.d
/chem/HP18831.i/16apr15a.b/hd0635.d
/chem/HP18831.i/16apr15a.b/hd0636.d
/chem/HP18831.i/16apr15a.b/hd0637.d
/chem/HP18831.i/16apr15a.b/hd0638.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP18831.i/16may06a.b/he0401.d

Area Summary

Internal Standard Name	File ID: he0401.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	223397	135936	67968	271872	Yes
Naphthalene-d8	863229	520953	260476	1041906	Yes
Acenaphthene-d10	498134	299858	149929	599716	Yes
Phenanthrene-d10	961121	567439	283720	1134878	Yes
Pyrene-d10	1190529	705105	352552	1410210	Yes
Perylene-d12	926549	518255	259128	1036510	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: he0401.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.949	7.292	Yes
Naphthalene-d8	8.884	9.221	Yes
Acenaphthene-d10	11.665	11.966	Yes
Phenanthrene-d10	13.541	13.849	Yes
Pyrene-d10	15.529	15.889	Yes
Perylene-d12	20.029	20.435	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments:_____

Report generated on 05/06/2016 at 19:29

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/09/16 Time: 21:08

Lab File ID: he0521.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.686	0.679	7.420	7.5	-1
N-Nitrosodimethylamine	1.118	1.111	7.450	7.5	-1
Pyridine	1.800	1.634	6.810	7.5	-9
2-Picoline	1.923	1.892	7.380	7.5	-2
N-Nitrosomethylethylamine	0.758	0.750	7.430	7.5	-1
Methyl methanesulfonate	0.875	0.848	7.270	7.5	-3
N-Nitrosodiethylamine	0.740	0.734	7.430	7.5	-1
Ethyl methanesulfonate	0.750	0.748	7.480	7.5	0
Benzaldehyde	1.410	1.499	7.970	7.5	6
Phenol	2.135	2.310	8.110	7.5	8
Aniline	2.677	2.680	7.510	7.5	0
a-methylstyrene	1.547	1.516	7.350	7.5	-2
bis(2-Chloroethyl)ether	1.715	1.705	7.450	7.5	-1
2-Chlorophenol	1.414	1.448	7.680	7.5	2
1,3-Dichlorobenzene	1.512	1.547	7.680	7.5	2
1,4-Dichlorobenzene	1.547	1.573	7.630	7.5	2
Benzyl alcohol	1.009	0.954	7.090	7.5	-5
1,2-Dichlorobenzene	1.464	1.491	7.640	7.5	2
Indene	2.593	2.569	7.430	7.5	-1
2-Methylphenol	1.401	1.441	7.710	7.5	3
2,2'-oxybis(1-Chloropropane)	2.583	2.397	6.960	7.5	-7
bis(2-Chloroisopropyl)ether	2.583	2.397	6.960	7.5	-7
N-Nitrosopyrrolidine	0.760	0.779	7.690	7.5	2
Acetophenone	2.288	2.265	7.430	7.5	-1
4-Methylphenol	1.463	1.635	8.380	7.5	12
Total Cresols	1.432	1.538	16.090	15.0	7
N-Nitroso-di-n-propylamine	1.321	1.288	7.310	7.5	-3
N-Nitrosomorpholine	1.099	1.049	7.160	7.5	-5
o-Toluidine	2.500	2.511	7.530	7.5	0
Hexachloroethane	0.655	0.667	7.640	7.5	2
Nitrobenzene	0.515	0.516	7.520	7.5	0
N-Nitrosopiperidine	0.184	0.188	7.680	7.5	2
Isophorone	0.857	0.859	7.520	7.5	0
2-Nitrophenol	0.190	0.199	7.850	7.5	5
2,4-Dimethylphenol	0.404	0.414	7.670	7.5	2
O,O,O-Triethylphosphorothioate	0.204	0.206	7.590	7.5	1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/09/16 Time: 21:08

Lab File ID: he0521.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	$\overline{RRF}$	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.545	0.541	7.440	7.5	-1
Benzoic acid	0.288	0.219	7.980	10.0	-20
1,2,3,4-Tetrahydronaphthalene	0.625	0.631	7.560	7.5	1
2,4-Dichlorophenol	0.297	0.319	8.060	7.5	7
1,2,4-Trichlorobenzene	0.359	0.377	7.880	7.5	5
Naphthalene	1.063	1.088	7.680	7.5	2
4-Chloroaniline	0.437	0.456	7.820	7.5	4
2,6-Dichlorophenol	0.292	0.305	7.830	7.5	4
Hexachloropropene	0.227	0.240	7.950	7.5	6
Hexachlorobutadiene	0.215	0.228	7.930	7.5	6
Quinoline	0.663	0.674	7.630	7.5	2
Caprolactam	0.099	0.096	7.270	7.5	-3
N-Nitrosodi-n-butylamine	0.357	0.382	8.030	7.5	7
4-Chloro-3-methylphenol	0.343	0.346	7.570	7.5	1
Safrole	0.271	0.271	7.490	7.5	0
2-Methylnaphthalene	0.710	0.718	7.590	7.5	1
1-Methylnaphthalene	0.651	0.666	7.670	7.5	2
Hexachlorocyclopentadiene	0.394	0.349	6.630	7.5	-12
1,2,4,5-Tetrachlorobenzene	0.654	0.656	7.520	7.5	0
cis-Isosafrole	0.511	0.492	1.230	1.3	-4
2,4,6-Trichlorophenol	0.413	0.422	7.650	7.5	2
2,4,5-Trichlorophenol	0.435	0.454	7.820	7.5	4
trans-Isosafrole	0.530	0.529	6.220	6.2	0
Isosafrole	0.527	0.523	7.450	7.5	-1
1,1'-Biphenyl	1.514	1.476	7.310	7.5	-3
2-Chloronaphthalene	1.203	1.174	7.320	7.5	-2
1-Chloronaphthalene	1.121	1.157	7.740	7.5	3
Diphenyl ether	0.808	0.810	7.520	7.5	0
2-Nitroaniline	0.353	0.365	7.750	7.5	3
1,4-Naphthoquinone	0.491	0.477	7.280	7.5	-3
1,4-Dinitrobenzene	0.198	0.192	7.280	7.5	-3
Dimethylphthalate	1.354	1.339	7.410	7.5	-1
1,3-Dinitrobenzene	0.214	0.208	7.310	7.5	-3
2,6-Dinitrotoluene	0.291	0.303	7.790	7.5	4
Acenaphthylene	1.745	1.788	7.690	7.5	2
3-Nitroaniline	0.302	0.301	7.470	7.5	0

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/09/16 Time: 21:08

Lab File ID: he0521.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.186	1.196	7.560	7.5	1
2,4-Dinitrophenol	0.201	0.162	8.090	10.0	-19
4-Nitrophenol	0.220	0.210	7.140	7.5	-5
Pentachlorobenzene	0.523	0.529	7.590	7.5	1
2,4-Dinitrotoluene	0.412	0.399	7.260	7.5	-3
2,4_2,6-Dinitrotoluenes	0.345	0.351	15.050	15.0	0
Dibenzofuran	1.624	1.672	7.720	7.5	3
1-Naphthylamine	1.210	1.130	7.000	7.5	-7
2,3,4,6-Tetrachlorophenol	0.338	0.331	7.340	7.5	-2
2-Naphthylamine	1.183	1.098	6.970	7.5	-7
Diethylphthalate	1.326	1.271	7.190	7.5	-4
Thionazin	0.230	0.246	8.010	7.5	7
Fluorene	1.283	1.293	7.560	7.5	1
4-Chlorophenyl-phenylether	0.664	0.673	7.600	7.5	1
5-Nitro-o-toluidine	0.346	0.346	7.510	7.5	0
4-Nitroaniline	0.317	0.310	7.340	7.5	-2
4,6-Dinitro-2-methylphenol	0.139	0.121	6.560	7.5	-13
N-Nitrosodiphenylamine (1)	0.563	0.576	7.680	7.5	2
NDPA as diphenylamine	0.563	0.576	7.680	7.5	2
1,2-Diphenylhydrazine	0.850	0.863	7.620	7.5	2
Tetraethyldithiopyrophosphate	0.132	0.132	7.490	7.5	0
1,3,5-Trinitrobenzene	0.088	0.078	6.640	7.5	-11
Diallate (peak 1)	0.361	0.357	6.160	6.2	-1
Phorate	0.534	0.536	7.540	7.5	0
Phenacetin	0.383	0.379	7.430	7.5	-1
4-Bromophenyl-phenylether	0.195	0.201	7.720	7.5	3
Diallate (peak 2)	0.352	0.349	1.260	1.3	-1
Diallate trans/cis	0.359	0.356	7.430	7.5	-1
Hexachlorobenzene	0.205	0.212	7.750	7.5	3
Dimethoate	0.347	0.325	7.030	7.5	-6
Atrazine	0.203	0.188	6.930	7.5	-8
Pentachlorophenol	0.135	0.111	6.200	7.5	-17
4-Aminobiphenyl	0.540	0.553	7.680	7.5	2
Pentachloronitrobenzene	0.098	0.097	7.390	7.5	-1
Pronamide	0.324	0.332	7.700	7.5	3
Dinoseb	0.206	0.176	6.400	7.5	-15

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/09/16 Time: 21:08

Lab File ID: he0521.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.019	1.014	7.460	7.5	-1
Anthracene	0.995	1.014	7.640	7.5	2
Carbazole	0.954	0.954	7.500	7.5	0
Methyl parathion	0.265	0.249	7.060	7.5	-6
Di-n-butylphthalate	1.207	1.153	7.160	7.5	-5
Parathion	0.160	0.150	7.070	7.5	-6
4-Nitroquinoline-1-oxide	0.121	0.072	4.470	7.5	-40
Octachlorostyrene	0.080	0.076	7.150	7.5	-5
Isodrin	0.125	0.120	7.200	7.5	-4
Fluoranthene	1.152	1.155	7.520	7.5	0
Benzidine	0.687	0.607	19.890	22.5	-12
Pyrene	1.031	1.037	7.540	7.5	0
p-Dimethylaminoazobenzene	0.171	0.170	7.470	7.5	0
Chlorobenzilate	0.309	0.300	7.280	7.5	-3
3,3'-Dimethylbenzidine	0.627	0.603	7.210	7.5	-4
Butylbenzylphthalate	0.442	0.434	7.350	7.5	-2
2-Acetylaminofluorene	0.374	0.374	7.510	7.5	0
3,3'-Dichlorobenzidine	0.353	0.360	7.650	7.5	2
4,4'-Methylenebis(2-chloroanil	0.194	0.192	7.410	7.5	-1
Benzo(a)anthracene	0.930	0.985	7.940	7.5	6
Chrysene	0.877	0.924	7.900	7.5	5
bis(2-Ethylhexyl)phthalate	0.629	0.606	7.220	7.5	-4
6-Methylchrysene	0.628	0.654	7.810	7.5	4
Di-n-octylphthalate	1.561	1.412	6.780	7.5	-10
Benzo(b)fluoranthene	1.286	1.286	7.500	7.5	0
7,12-Dimethylbenz[a]anthracene	0.545	0.588	8.090	7.5	8
Benzo(k)fluoranthene	1.264	1.320	7.830	7.5	4
Benzo(a)pyrene	1.177	1.244	7.920	7.5	6
3-Methylcholanthrene	0.484	0.504	7.810	7.5	4
Dibenz(a,h)acridine	0.961	1.026	8.010	7.5	7
Dibenz(a,j)acridine	0.966	1.076	8.350	7.5	11
Indeno(1,2,3-cd)pyrene	1.256	1.442	8.610	7.5	15
Dibenz(a,h)anthracene	1.051	1.216	8.680	7.5	16
Benzo(g,h,i)perylene	1.071	1.195	8.370	7.5	12
Total PAHs	1.139	0.998	125.330	135.0	-7
2-Fluorophenol	1.463	1.486	15.230	15.0	2

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 05/09/16 Time: 21:08

Lab File ID: he0521.d Init. Calib. Date(s): 04/15/16 04/15/16

Init. Calib. Times(s): 17:39 21:10

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.905	1.918	15.110	15.0	1
Nitrobenzene-d5	0.493	0.493	15.000	15.0	0
2-Fluorobiphenyl	1.415	1.415	15.010	15.0	0
2,4,6-Tribromophenol	0.167	0.168	15.120	15.0	1
Terphenyl-d14	0.701	0.707	15.140	15.0	1
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time
Summary

Initial Calibration Standards:

/chem/HP18831.i/16apr15a.b/hd0631.d **
/chem/HP18831.i/16apr15a.b/hd0632.d
/chem/HP18831.i/16apr15a.b/hd0633.d
/chem/HP18831.i/16apr15a.b/hd0634.d
/chem/HP18831.i/16apr15a.b/hd0635.d
/chem/HP18831.i/16apr15a.b/hd0636.d
/chem/HP18831.i/16apr15a.b/hd0637.d
/chem/HP18831.i/16apr15a.b/hd0638.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP18831.i/16may09a.b/he0521.d

Area Summary

Internal Standard Name	File ID: he0521.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	136427	135936	67968	271872	Yes
Naphthalene-d8	510835	520953	260476	1041906	Yes
Acenaphthene-d10	294874	299858	149929	599716	Yes
Phenanthrene-d10	549214	567439	283720	1134878	Yes
Pyrene-d10	648485	705105	352552	1410210	Yes
Perylene-d12	480441	518255	259128	1036510	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: he0521.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.908	7.292	Yes
Naphthalene-d8	8.843	9.221	Yes
Acenaphthene-d10	11.630	11.966	Yes
Phenanthrene-d10	13.506	13.849	Yes
Pyrene-d10	15.488	15.889	Yes
Perylene-d12	19.982	20.435	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

Report generated on 05/09/2016 at 21:55

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): he0401.d Date Analyzed: 05/06/16

Instrument ID: HP18831 Time Analyzed: 18:50

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	223397	6.949	863229	8.884	498134	11.665
UPPER LIMIT	446794	7.449	1726458	9.384	996268	12.165
LOWER LIMIT	111699	6.449	431615	8.384	249067	11.165
LLI SAMPLE NO.						
01 SBLKWC120	132724	6.949	495800	8.878	283457	11.659
02 120WCLCS	129343	6.955	489354	8.884	281976	11.659
03 8345664	188126	6.949	702321	8.884	403890	11.659
04 8345666	167812	6.949	623831	8.884	361157	11.659
05 8345668	136594	6.949	508391	8.884	293892	11.659
06 8345670	157180	6.949	577300	8.884	337861	11.659
07 8345672	151010	6.949	562502	8.884	323977	11.659
08 8345676	215414	6.949	804922	8.884	465585	11.659
09 8345678	145395	6.949	540380	8.884	315407	11.659
10 8343710DL	131099	6.949	482409	8.884	277116	11.659
11 8352778	132440	6.949	486788	8.884	278457	11.659
12 8352779MS	125014	6.955	480241	8.884	283298	11.659
13 8352780MSD	129827	6.955	488065	8.884	283462	11.659
14 8352777	124801	6.949	463054	8.879	270649	11.659
15 8352781	127076	6.949	463154	8.879	270811	11.659
16 8352782	128530	6.949	486180	8.884	282031	11.659
17 8352783	133614	6.949	498057	8.884	288053	11.659

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): he0401.d Date Analyzed: 05/06/16

Instrument ID: HP18831 Time Analyzed: 18:50

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	961121	13.541	1190529	15.529	926549	20.029
UPPER LIMIT	1922242	14.041	2381058	16.029	1853098	20.529
LOWER LIMIT	480561	13.041	595265	15.029	463275	19.529
LLI SAMPLE NO.						
01 SBLKWC120	546513	13.536	644138	15.523	483982	20.017
02 120WCLCS	549726	13.536	665084	15.529	494892	20.017
03 8345664	769369	13.535	934422	15.523	705388	20.017
04 8345666	684522	13.535	836530	15.523	618704	20.017
05 8345668	564724	13.536	679546	15.523	501884	20.017
06 8345670	637412	13.536	778621	15.523	577254	20.017
07 8345672	607798	13.536	746847	15.523	557061	20.017
08 8345676	881971	13.536	1086158	15.523	778109	20.017
09 8345678	598034	13.536	718537	15.523	543689	20.017
10 8343710DL	509203	13.536	627724	15.523	468502	20.017
11 8352778	532392	13.536	649167	15.523	470016	20.017
12 8352779MS	538959	13.536	652067	15.523	483130	20.017
13 8352780MSD	546650	13.536	663444	15.523	485108	20.017
14 8352777	522896	13.536	645369	15.523	489555	20.017
15 8352781	526015	13.536	629972	15.523	481266	20.017
16 8352782	539361	13.536	684210	15.523	507527	20.017
17 8352783	540864	13.535	666568	15.523	500062	20.017

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): he0521.d Date Analyzed: 05/09/16

Instrument ID: HP18831 Time Analyzed: 21:08

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	136427	6.908	510835	8.843	294874	11.630
UPPER LIMIT	272854	7.408	1021670	9.343	589748	12.130
LOWER LIMIT	68214	6.408	255418	8.343	147437	11.130
LLI SAMPLE NO.						
01 SBLKWC128	126762	6.908	479579	8.843	273755	11.624
02 128WCLCS	120089	6.914	462496	8.844	265170	11.630
03 SBLKWB124	113613	6.908	425682	8.843	241140	11.624
04 124WBLCS	114664	6.914	435130	8.843	250123	11.629
05 124WBLCSD	116442	6.914	445929	8.843	253582	11.629
06 8349468	123199	6.908	467104	8.844	262424	11.624
07 8350677	111539	6.908	416628	8.843	239004	11.624
08 8352784	128632	6.908	492792	8.843	279547	11.624
09 8345657RE	115803	6.908	438335	8.843	247477	11.624
10 8345658RE	113928	6.914	432155	8.843	253439	11.629
11 8345659MSDSD	125787	6.914	473799	8.844	274531	11.630
12 8343712RE	117532	6.908	438427	8.844	248028	11.624

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): he0521.d Date Analyzed: 05/09/16

Instrument ID: HP18831 Time Analyzed: 21:08

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	549214	13.506	648485	15.488	480441	19.982
UPPER LIMIT	1098428	14.006	1296970	15.988	960882	20.482
LOWER LIMIT	274607	13.006	324243	14.988	240221	19.482
LLI SAMPLE NO.						
01 SBLKWC128	507115	13.506	576715	15.488	433393	19.982
02 128WCLCS	482359	13.507	581903	15.488	439610	19.982
03 SBLKWB124	457857	13.506	523084	15.488	403248	19.976
04 124WBLCS	457062	13.506	553907	15.488	415357	19.976
05 124WBLCSD	479735	13.506	577686	15.488	427620	19.982
06 8349468	494263	13.506	554929	15.488	437676	19.976
07 8350677	452129	13.506	514797	15.482	390585	19.976
08 8352784	533232	13.506	620454	15.488	454483	19.976
09 8345657RE	467375	13.506	539543	15.488	412310	19.976
10 8345658RE	461395	13.506	565624	15.488	417895	19.982
11 8345659MSDSD	504180	13.507	611142	15.488	454694	19.982
12 8343712RE	466476	13.506	545682	15.488	424361	19.976

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10461: SVOAs by 8270D in Water Analyte Name	Default MDL	Default LOQ	Units
Nitrobenzene	0.8	10	ug/l
2-Nitroaniline	0.7	10	ug/l
2,6-Dinitrotoluene	0.7	10	ug/l
2,4-Dinitrotoluene	0.6	10	ug/l
Diethylphthalate	0.5	10	ug/l
4-Nitroaniline	1	20	ug/l
bis(2-Ethylhexyl)phthalate	2	6	ug/l

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0420.d
Data file Sample Info. Line: 5W5B-;8352777;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 04:41**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949(0.000)	920	152	124801 (-44)	5.00	
65) Naphthalene-d8	8.879(0.006)	1251	136	463054 (-46)	5.00	
113) Acenaphthene-d10	11.659(0.006)	1728	164	270649 (-46)	5.00	
153) Phenanthrene-d10	13.536(0.006)	2050	188	522896 (-46)	5.00	
175) Pyrene-d10	15.523(0.006)	2391	212	645369 (-46)	5.00	
213) Perylene-d12	20.017(0.012)	3162	264	489555 (-47)	5.00	

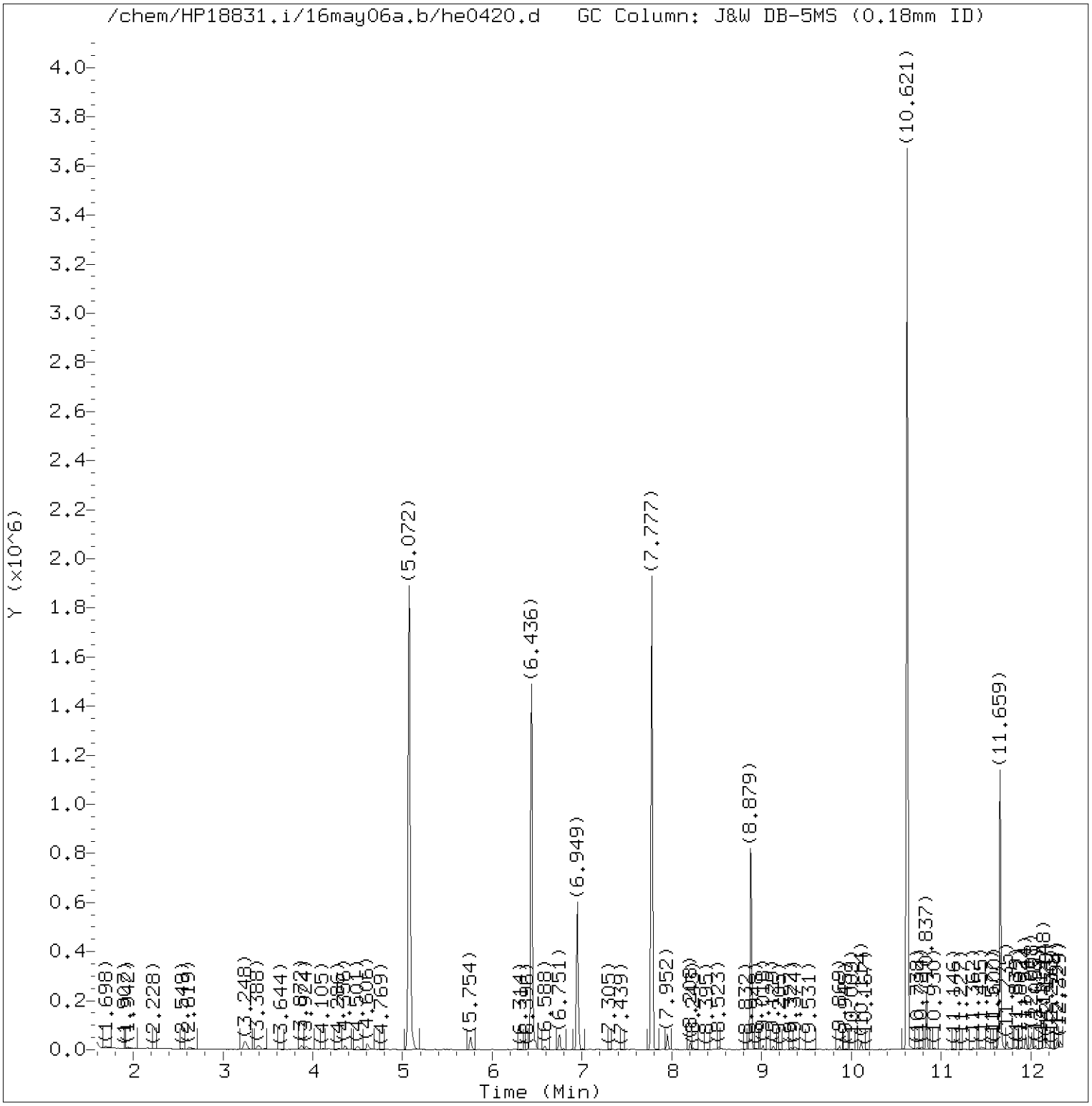
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.777(0.001)	82	904803	19.806	79%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.621(0.001)	172	1488444	19.435	78%		61 - 112
179) Terphenyl-d14	(5)	15.832(0.000)	244	1637825	18.106	72%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)			Not Detected					0.2
100) 2-Nitroaniline	(3)			Not Detected					0.2
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.2
124) Diethylphthalate	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.2
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

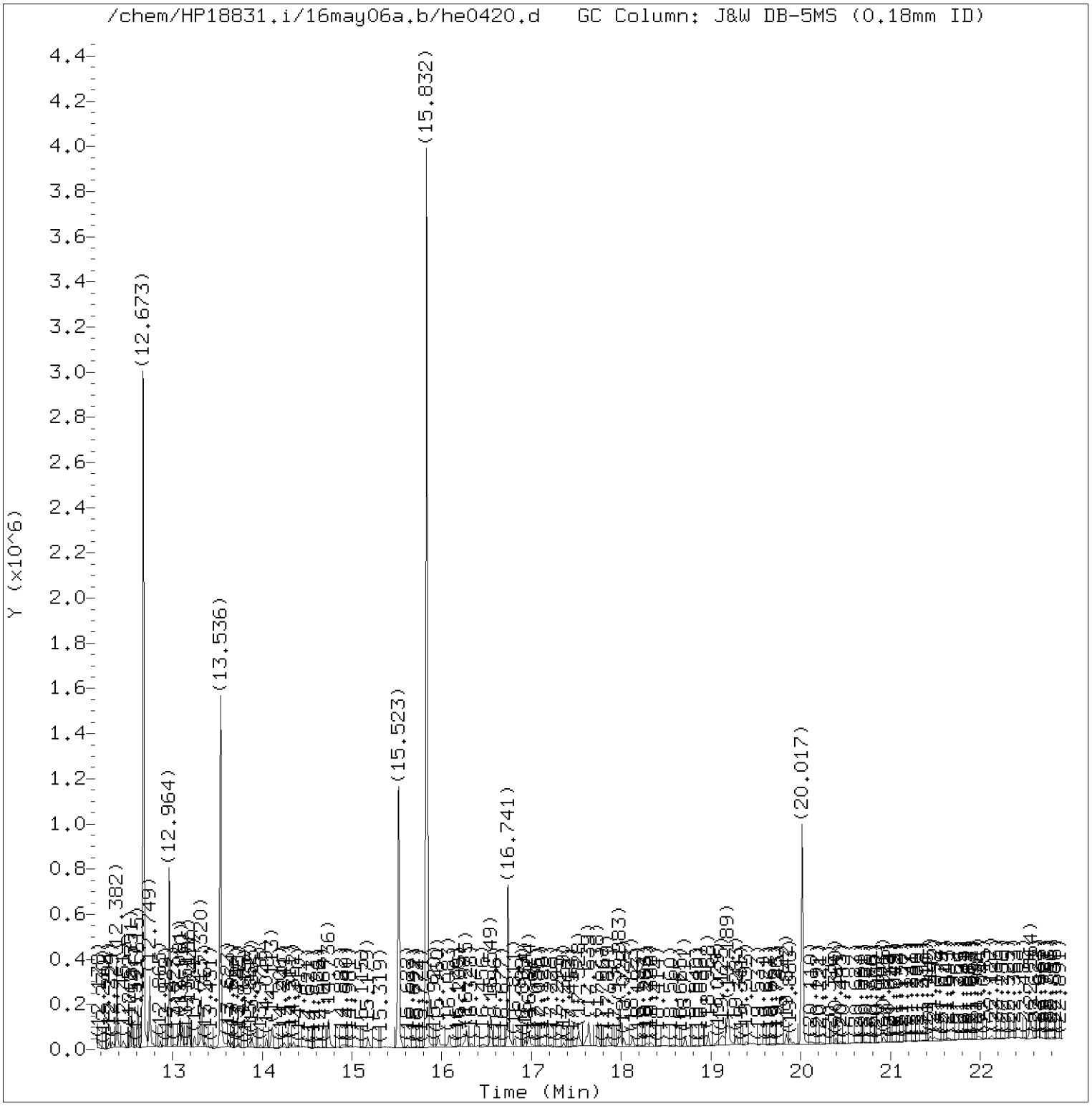
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0420.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:41 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W5B- Lab Sample ID: 8352777

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0420.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:41 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W5B- Lab Sample ID: 8352777

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0420.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:41 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W5B- Lab Sample ID: 8352777

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	124801	5.000
44)$Nitrobenzene-d5	(2)	7.777	82	904803	19.806
65)*Naphthalene-d8	(2)	8.879	136	463054	5.000
93)$2-Fluorobiphenyl	(3)	10.621	172	1488444	19.435
113)*Acenaphthene-d10	(3)	11.659	164	270649	5.000
153)*Phenanthrene-d10	(4)	13.536	188	522896	5.000
175)*Pyrene-d10	(5)	15.523	212	645369	5.000
179)$Terphenyl-d14	(5)	15.832	244	1637825	18.106
213)*Perylene-d12	(6)	20.017	264	489555	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0417.d
Data file Sample Info. Line: 5W7B-;8352778;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 03:14**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 251 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949(0.000)	920	152	132440 (-41)	5.00	
65) Naphthalene-d8	8.884(0.000)	1252	136	486788 (-44)	5.00	
113) Acenaphthene-d10	11.659(0.006)	1728	164	278457 (-44)	5.00	
153) Phenanthrene-d10	13.536(0.006)	2050	188	532392 (-45)	5.00	
175) Pyrene-d10	15.523(0.006)	2391	212	649167 (-45)	5.00	
213) Perylene-d12	20.017(0.012)	3162	264	470016 (-49)	5.00	

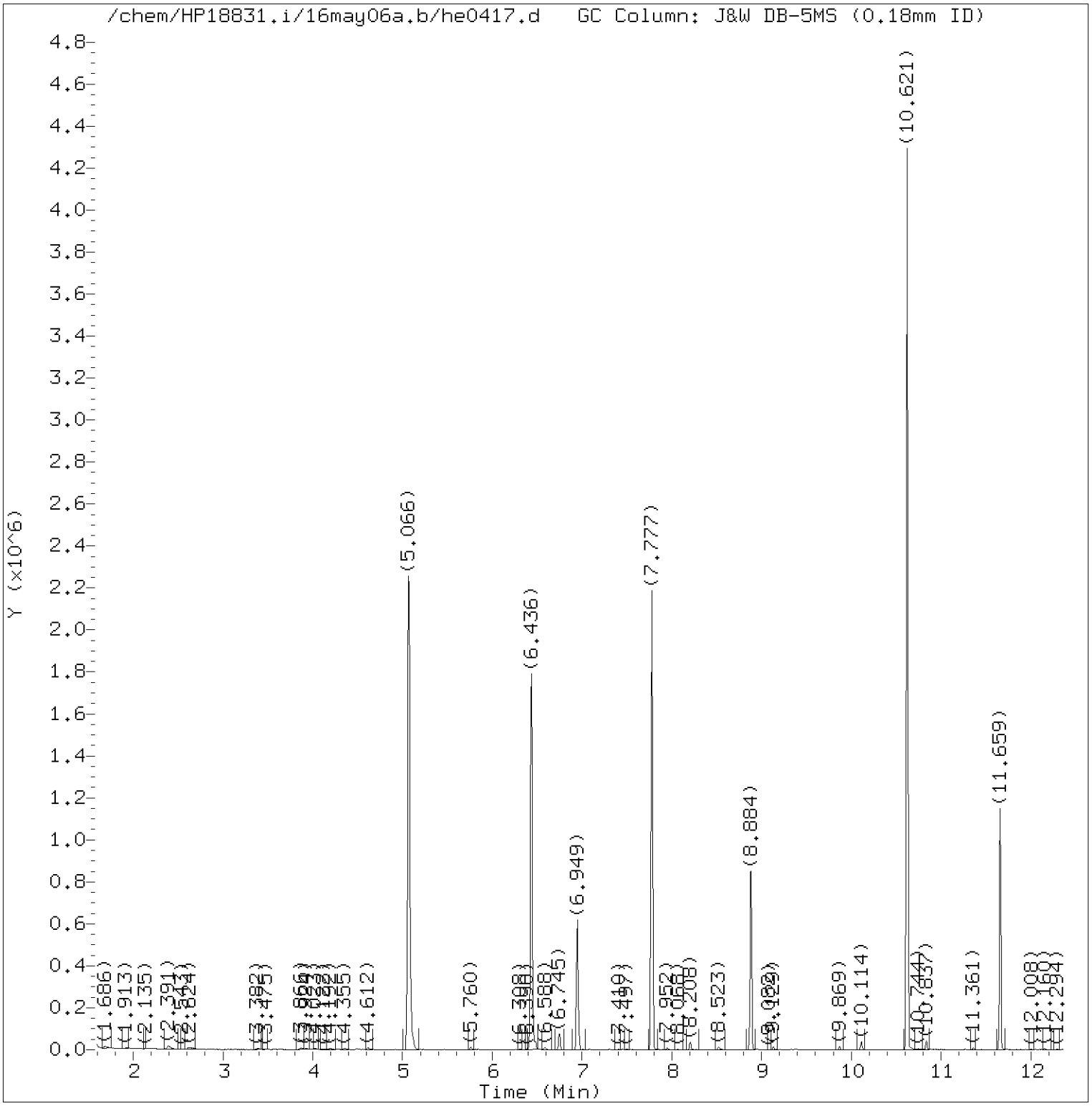
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.783(0.001)	82	1056606	22.002	88%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627(0.000)	172	1724151	21.881	88%		61 - 112
179) Terphenyl-d14	(5)	15.832(0.000)	244	1844161	20.268	81%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)			Not Detected					0.2
100) 2-Nitroaniline	(3)			Not Detected					0.2
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.2
124) Diethylphthalate	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.2
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

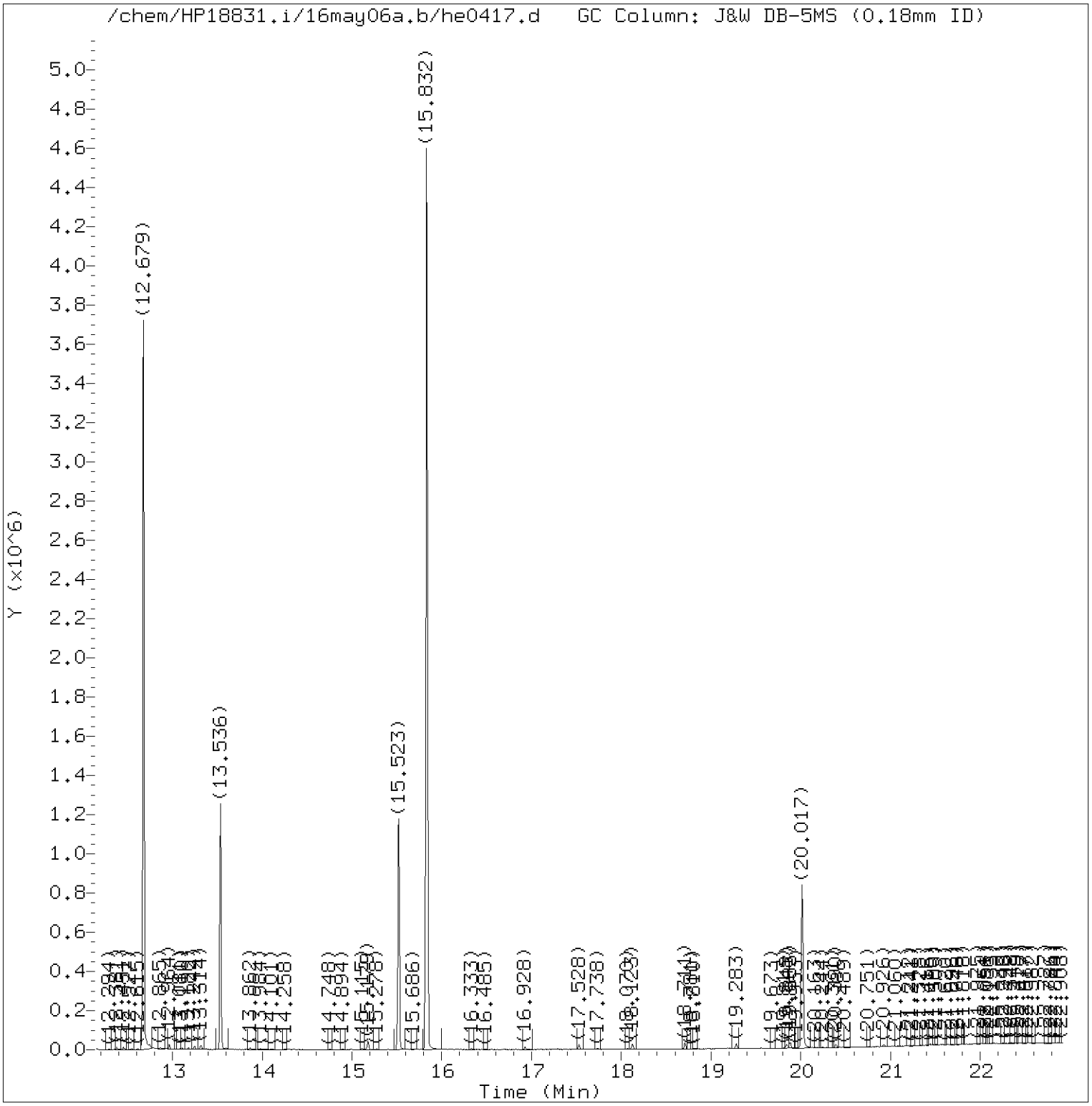
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0417.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:14 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B- Lab Sample ID: 8352778

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0417.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:14 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B- Lab Sample ID: 8352778

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on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0417.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:14 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B- Lab Sample ID: 8352778

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	132440	5.000
44)$Nitrobenzene-d5	(2)	7.783	82	1056606	22.002
65)*Naphthalene-d8	(2)	8.884	136	486788	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1724151	21.881
113)*Acenaphthene-d10	(3)	11.659	164	278457	5.000
153)*Phenanthrene-d10	(4)	13.536	188	532392	5.000
175)*Pyrene-d10	(5)	15.523	212	649167	5.000
179)$Terphenyl-d14	(5)	15.832	244	1844161	20.268
213)*Perylene-d12	(6)	20.017	264	470016	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0421.d
Data file Sample Info. Line: 5WC21;8352781;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 05:11**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949(0.000)	920	152	127076 (-43)	5.00	
65) Naphthalene-d8	8.879(0.006)	1251	136	463154 (-46)	5.00	
113) Acenaphthene-d10	11.659(0.006)	1728	164	270811 (-46)	5.00	
153) Phenanthrene-d10	13.536(0.006)	2050	188	526015 (-45)	5.00	
175) Pyrene-d10	15.523(0.006)	2391	212	629972 (-47)	5.00	
213) Perylene-d12	20.017(0.012)	3162	264	481266 (-48)	5.00	

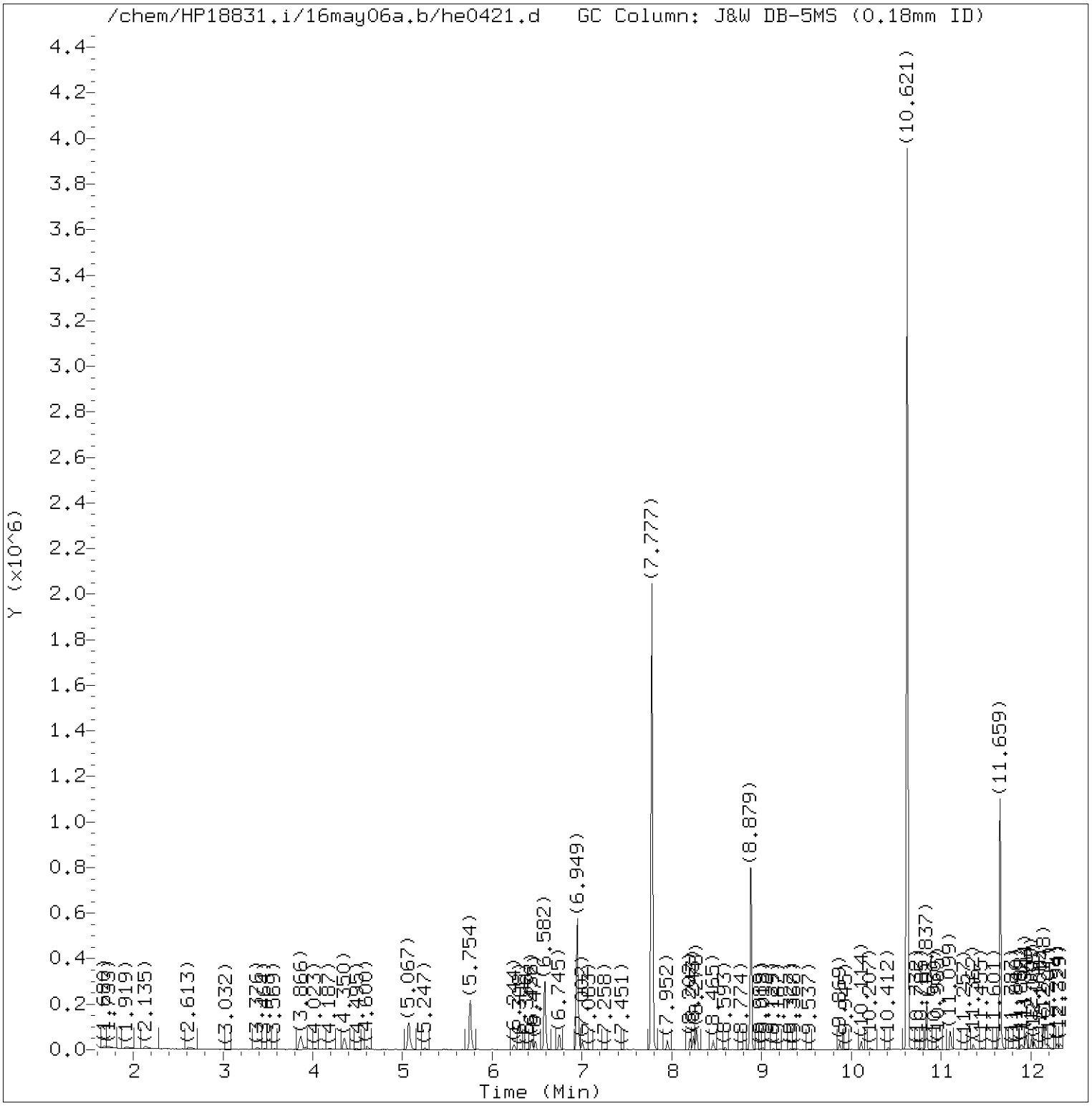
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.777(0.001)	82	980674	21.463	86%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627(0.000)	172	1585161	20.685	83%		61 - 112
179) Terphenyl-d14	(5)	15.832(0.000)	244	1421622	16.100	64%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.806(0.000)	77	11867	0.249	1.01			0.2
100) 2-Nitroaniline	(3)	10.959(0.001)	138	3774	0.198	0.80			0.2
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	11.950(0.000)	165	5783	0.259	1.05			0.2
124) Diethylphthalate	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.2
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

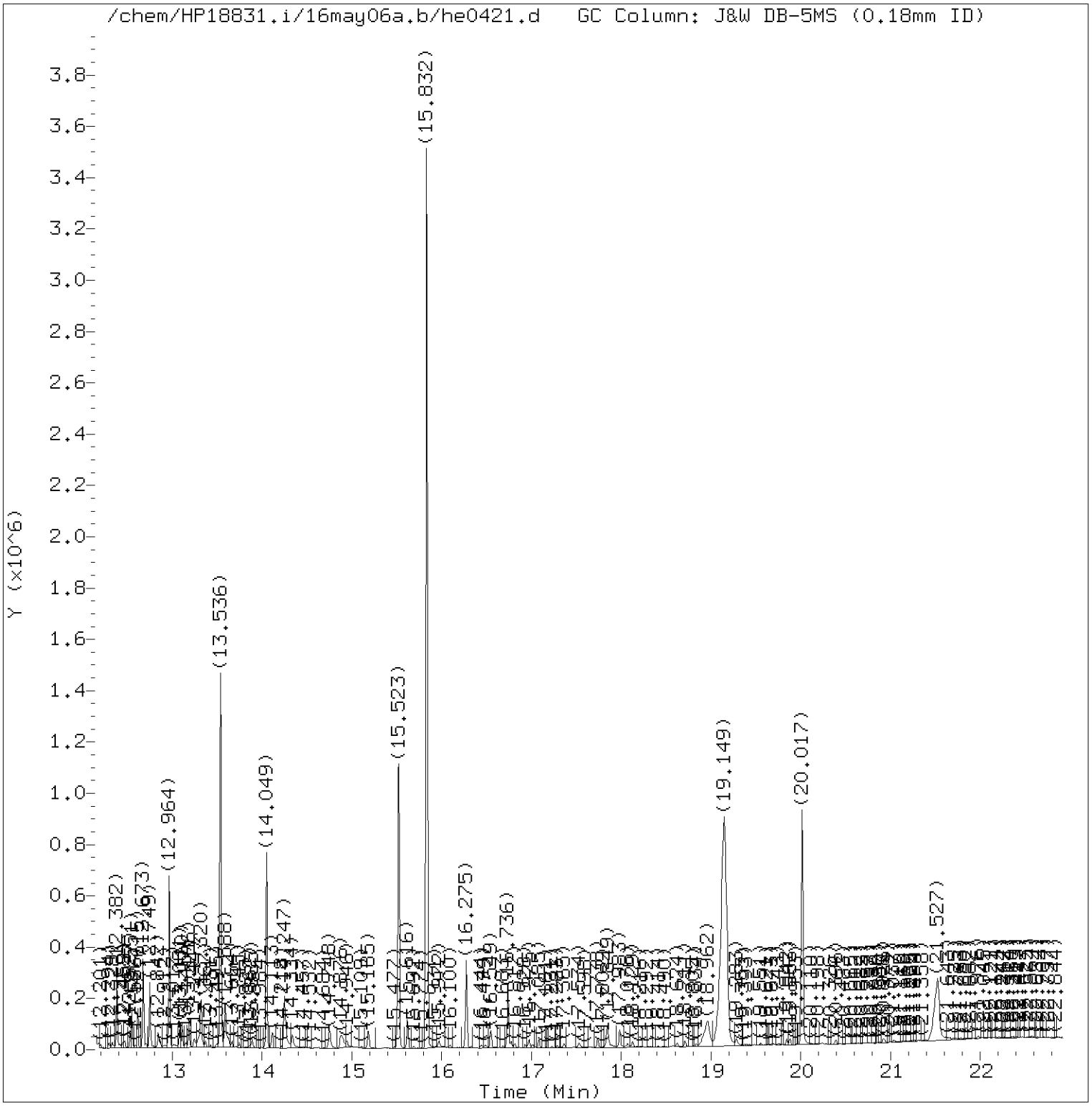
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WC21 Lab Sample ID: 8352781

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WC21 Lab Sample ID: 8352781

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

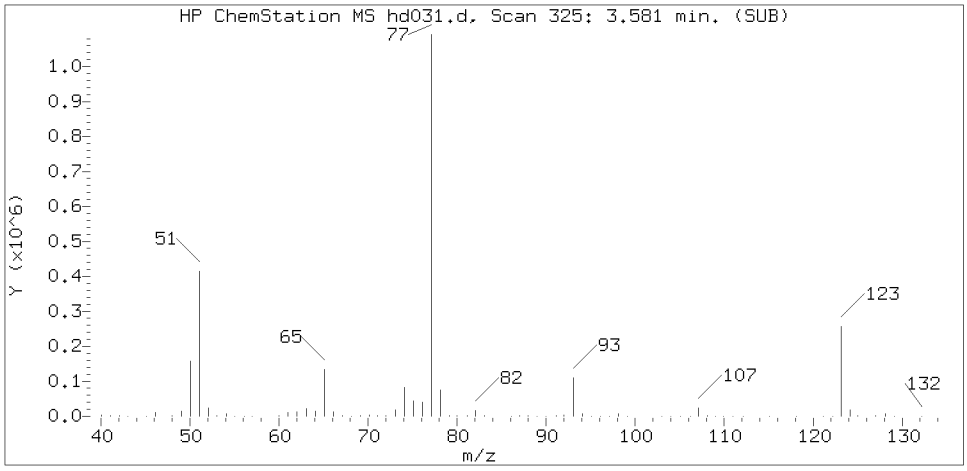
Sample Name: 5WC21 Lab Sample ID: 8352781

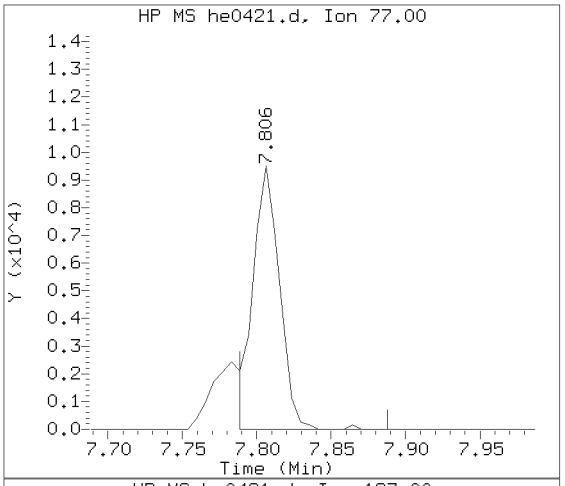
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	127076	5.000
44)$Nitrobenzene-d5	(2)	7.777	82	980674	21.463
45) Nitrobenzene	(2)	7.806	77	11867	0.249
65)*Naphthalene-d8	(2)	8.879	136	463154	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1585161	20.685
100) 2-Nitroaniline	(3)	10.959	138	3774	0.198
113)*Acenaphthene-d10	(3)	11.659	164	270811	5.000
118) 2,4-Dinitrotoluene	(3)	11.950	165	5783	0.259
153)*Phenanthrene-d10	(4)	13.536	188	526015	5.000
175)*Pyrene-d10	(5)	15.523	212	629972	5.000
179)$Terphenyl-d14	(5)	15.832	244	1421622	16.100
213)*Perylene-d12	(6)	20.017	264	481266	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

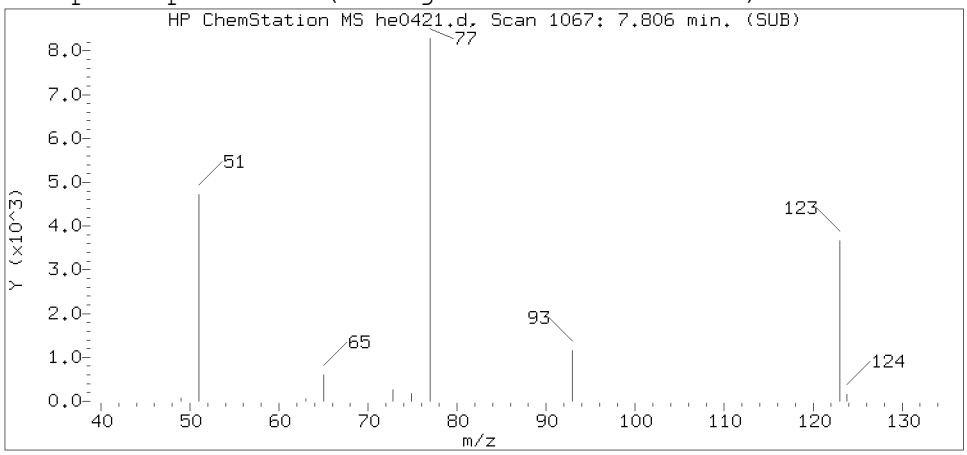
Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

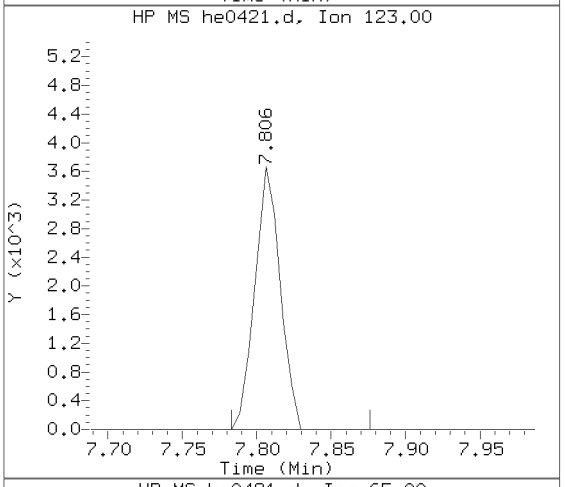
Reference Standard Spectrum for Nitrobenzene



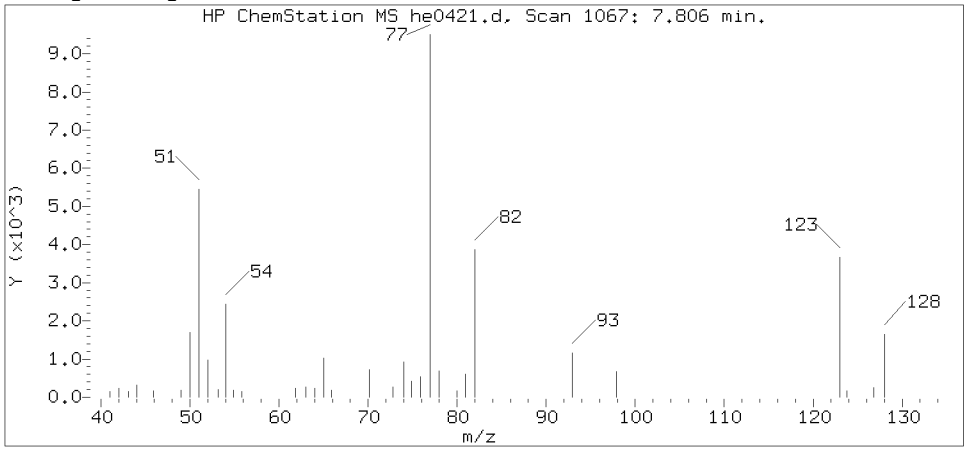


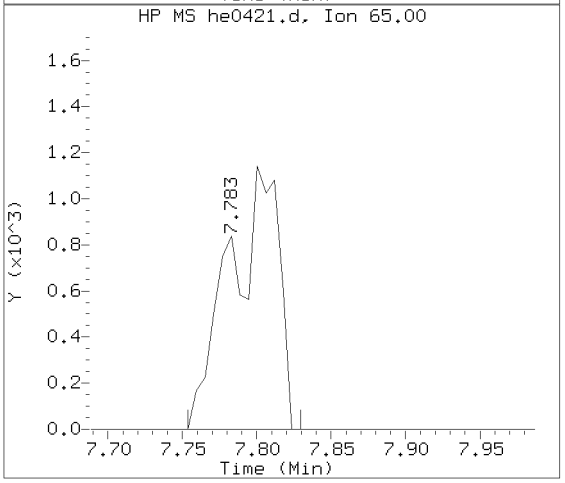
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

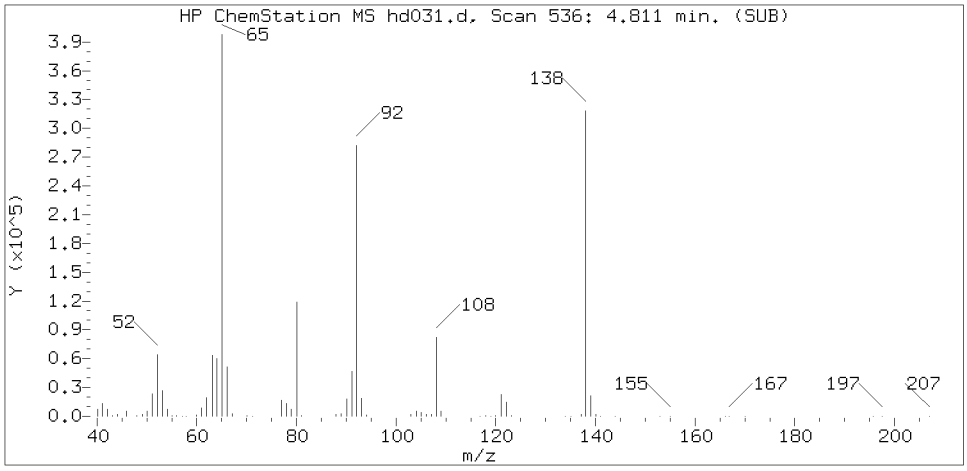
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

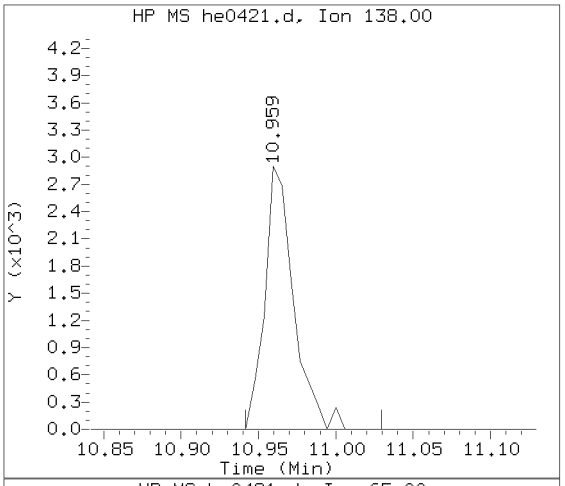
Sample Name: 5WC21 Lab Sample ID: 8352781

Compound Number : 45
Compound Name : Nitrobenzene
Scan Number : 1067
Retention Time (minutes) : 7.806
Relative Retention Time : 0.00073
Quant Ion : 77.00
Area (flag) : 11867
On-column Amount (ng/ul) : 0.2488

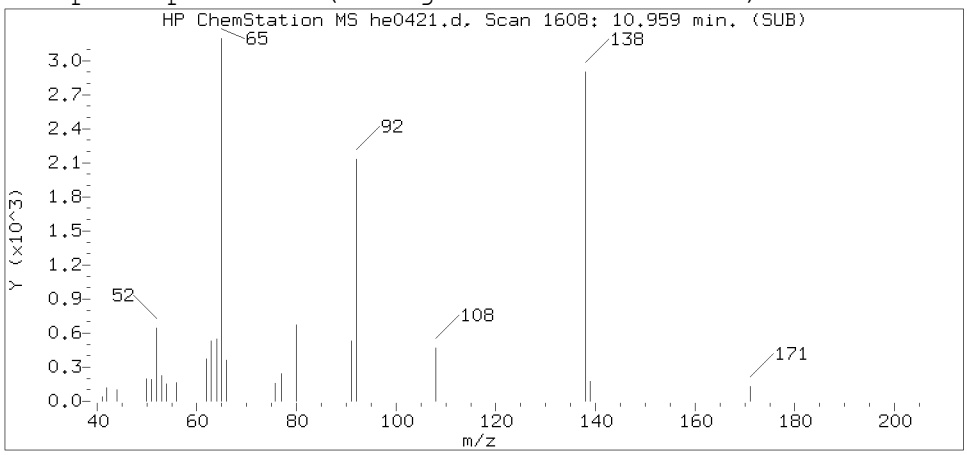
Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

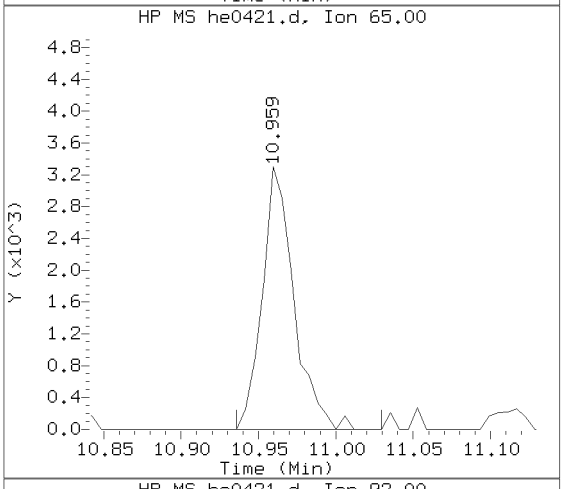
Reference Standard Spectrum for 2-Nitroaniline



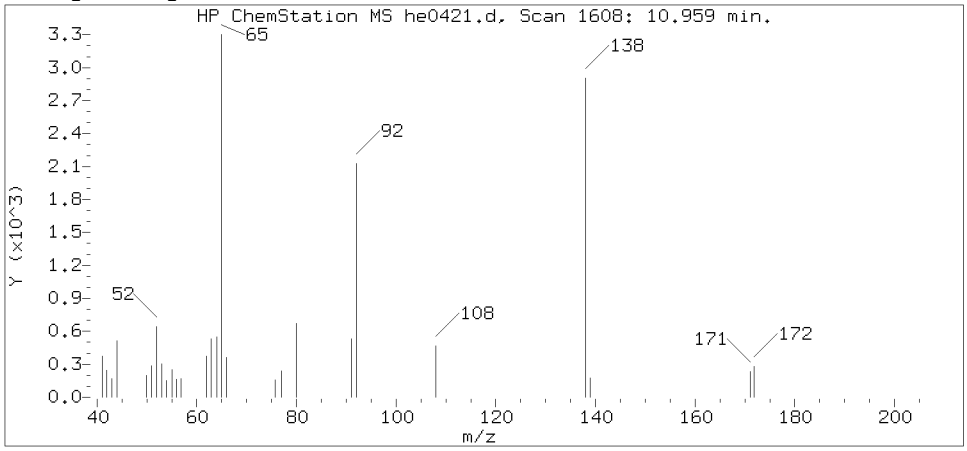


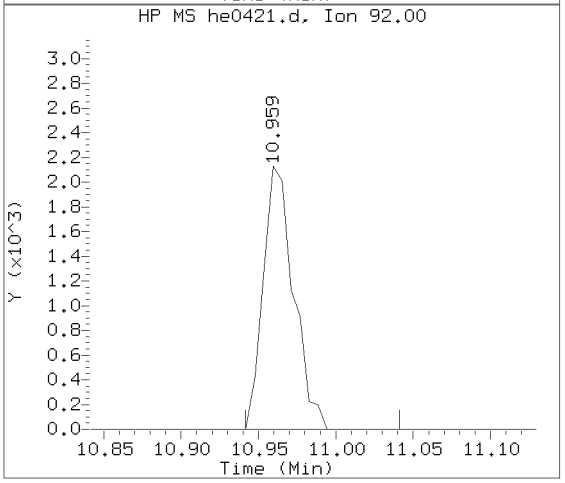
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

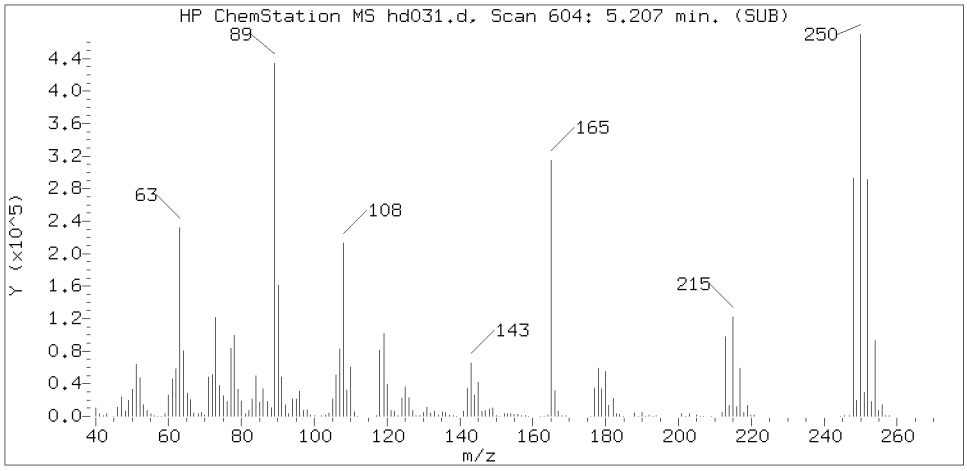
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

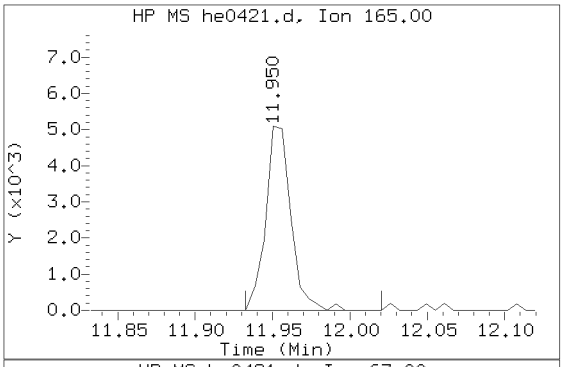
Sample Name: 5WC21 Lab Sample ID: 8352781

Compound Number	: 100
Compound Name	: 2-Nitroaniline
Scan Number	: 1608
Retention Time (minutes)	: 10.959
Relative Retention Time	: 0.00103
Quant Ion	: 138.00
Area (flag)	: 3774
On-column Amount (ng/ul)	: 0.1976

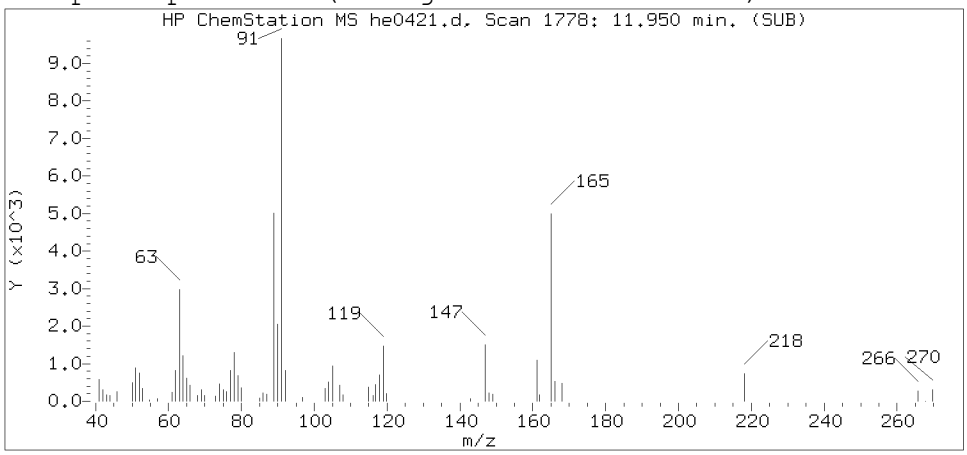
Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

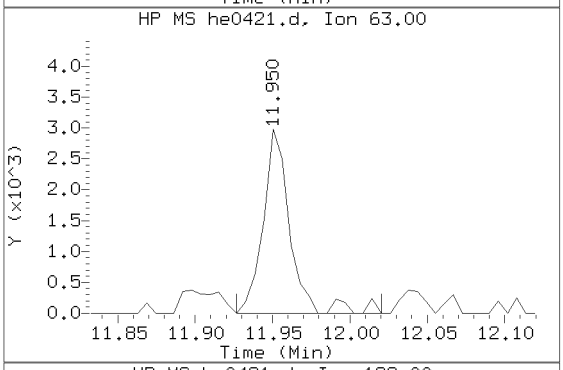
Reference Standard Spectrum for 2,4-Dinitrotoluene

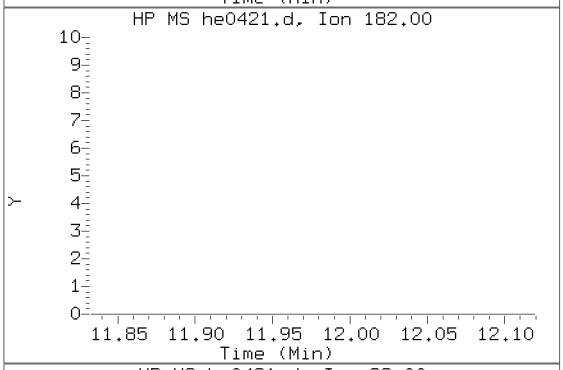




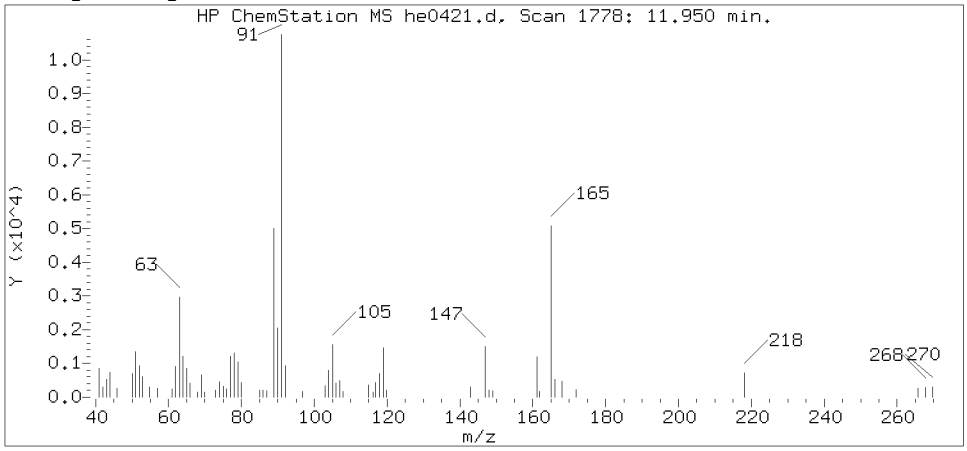
Sample Spectrum (Background Subtracted)

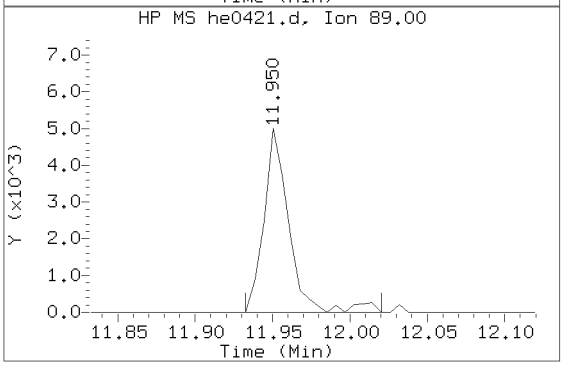






Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0421.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:11 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WC21 Lab Sample ID: 8352781

Compound Number	: 118
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1778
Retention Time (minutes)	: 11.950
Relative Retention Time	: 0.00099
Quant Ion	: 165.00
Area (flag)	: 5783
On-column Amount (ng/ul)	: 0.2590

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0422.d
Data file Sample Info. Line: 5WDUP;8352782;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 05:40**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949(0.000)	920	152	128530 (-42)	5.00	
65) Naphthalene-d8	8.884(0.000)	1252	136	486180 (-44)	5.00	
113) Acenaphthene-d10	11.659(0.006)	1728	164	282031 (-43)	5.00	
153) Phenanthrene-d10	13.536(0.006)	2050	188	539361 (-44)	5.00	
175) Pyrene-d10	15.523(0.006)	2391	212	684210 (-43)	5.00	
213) Perylene-d12	20.017(0.012)	3162	264	507527 (-45)	5.00	

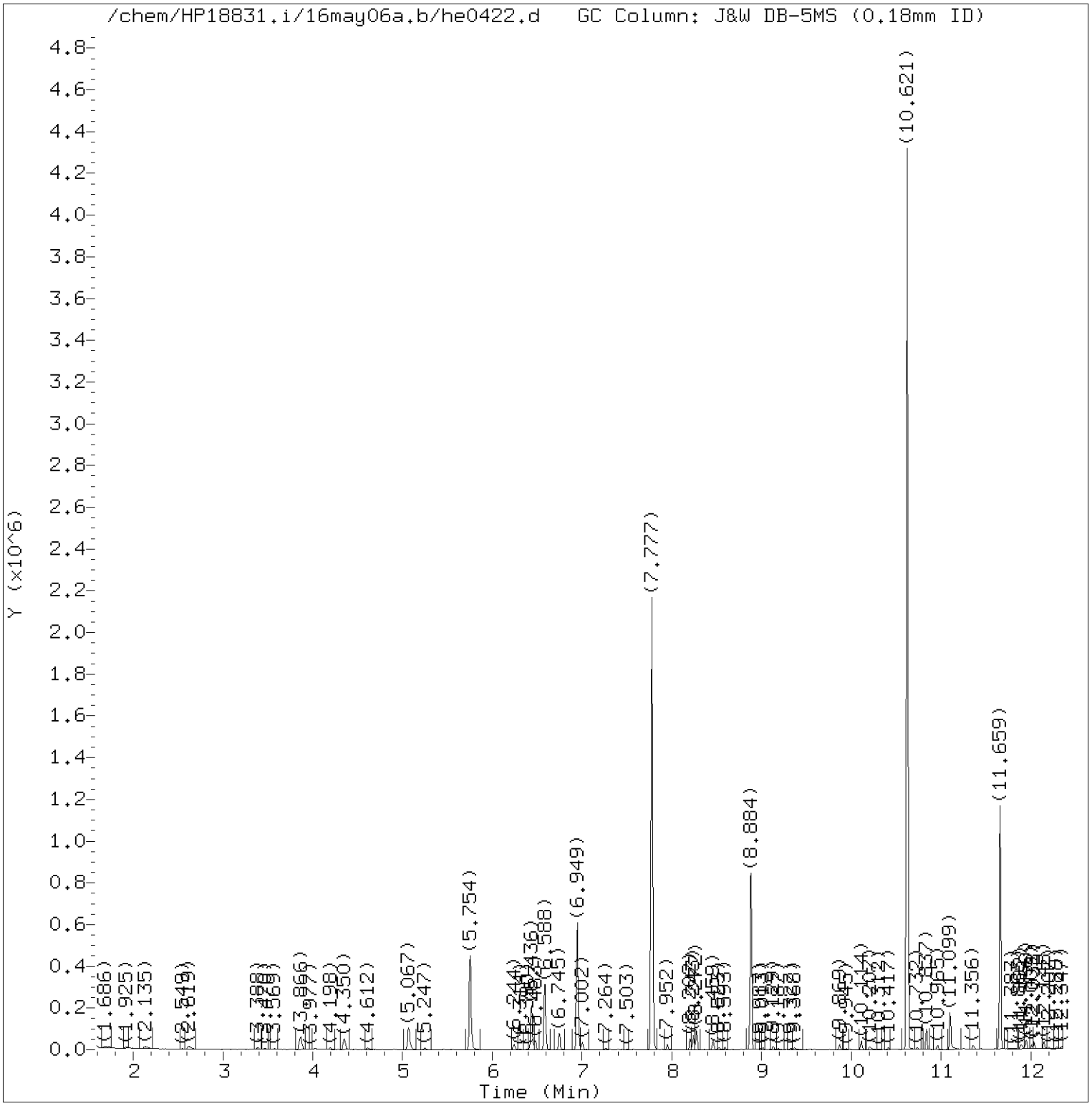
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.777(0.001)	82	1073274	22.377	90%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.621(0.001)	172	1744616	21.861	87%		61 - 112
179) Terphenyl-d14	(5)	15.832(0.000)	244	1313483	13.696	55%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.806(0.001)	77	12937	0.258	1.04			0.2
100) 2-Nitroaniline	(3)	10.965(0.000)	138	4217	0.212	0.85			0.2
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	11.950(0.000)	165	6178	0.266	1.07			0.2
124) Diethylphthalate	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.2
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:30. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

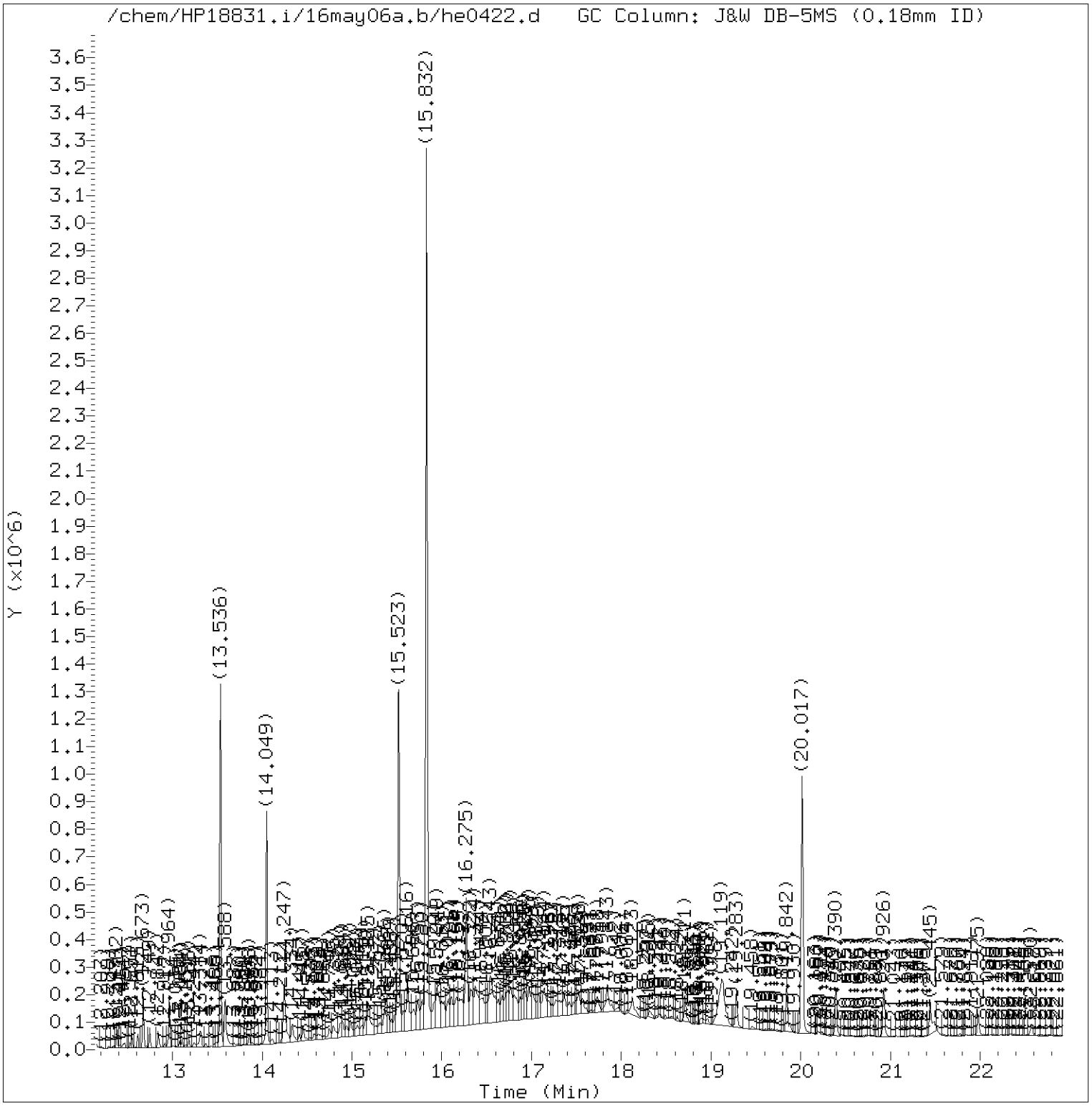
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WDUP Lab Sample ID: 8352782

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WDUP Lab Sample ID: 8352782

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

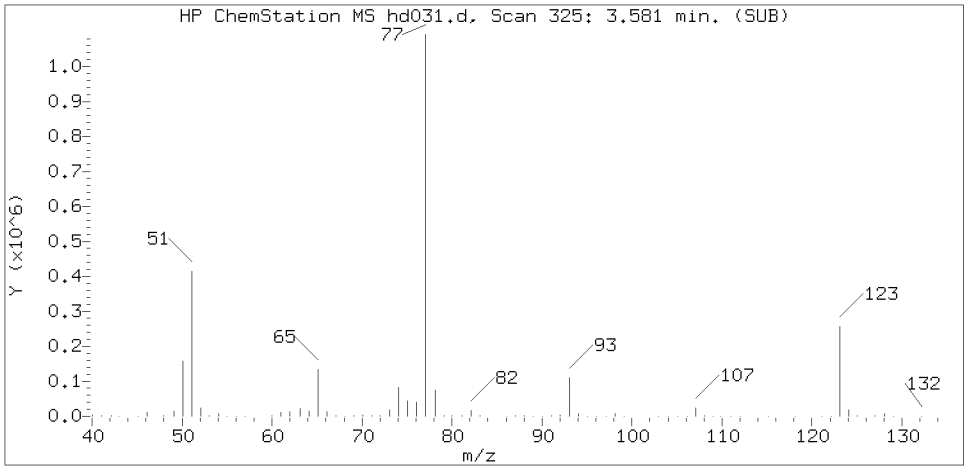
Sample Name: 5WDUP Lab Sample ID: 8352782

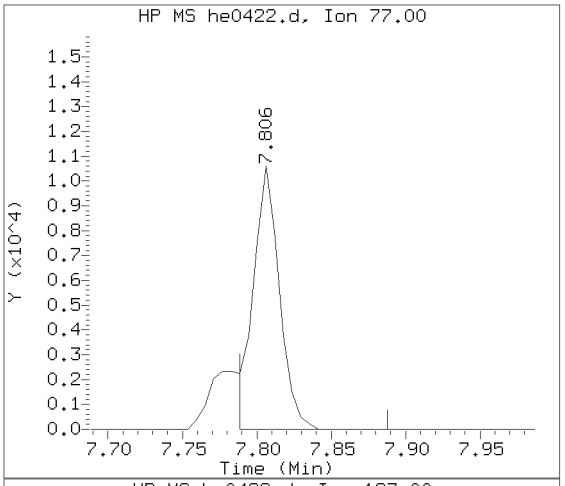
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	128530	5.000
44)$Nitrobenzene-d5	(2)	7.777	82	1073274	22.377
45) Nitrobenzene	(2)	7.806	77	12937	0.258
65)*Naphthalene-d8	(2)	8.884	136	486180	5.000
93)$2-Fluorobiphenyl	(3)	10.621	172	1744616	21.861
100) 2-Nitroaniline	(3)	10.965	138	4217	0.212
113)*Acenaphthene-d10	(3)	11.659	164	282031	5.000
118) 2,4-Dinitrotoluene	(3)	11.950	165	6178	0.266
153)*Phenanthrene-d10	(4)	13.536	188	539361	5.000
175)*Pyrene-d10	(5)	15.523	212	684210	5.000
179)$Terphenyl-d14	(5)	15.832	244	1313483	13.696
213)*Perylene-d12	(6)	20.017	264	507527	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

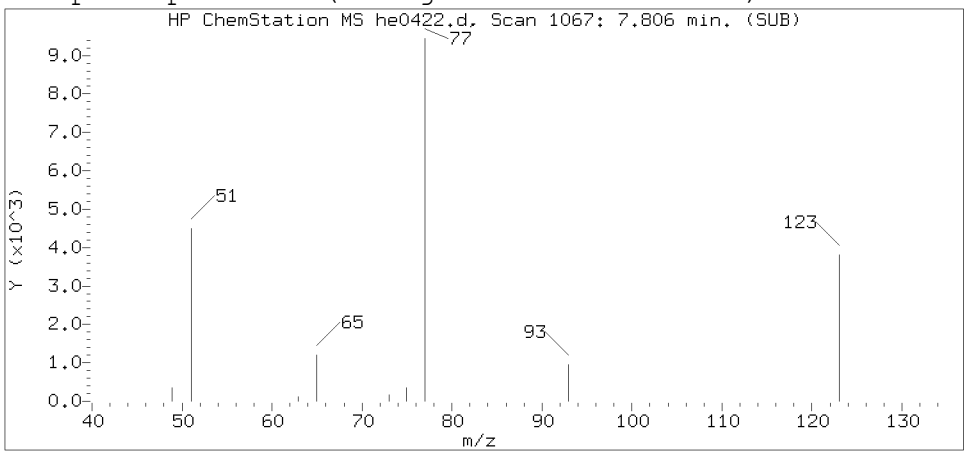
Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346

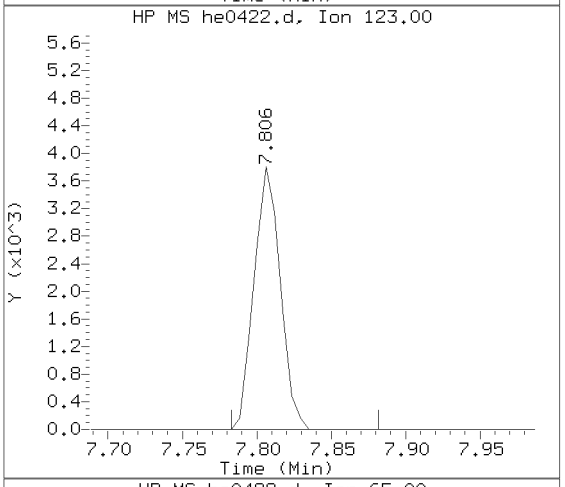
Reference Standard Spectrum for Nitrobenzene



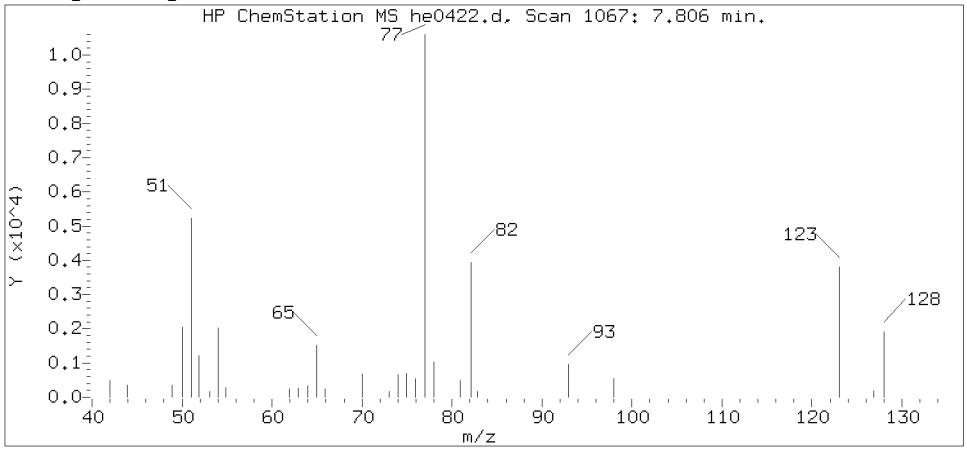


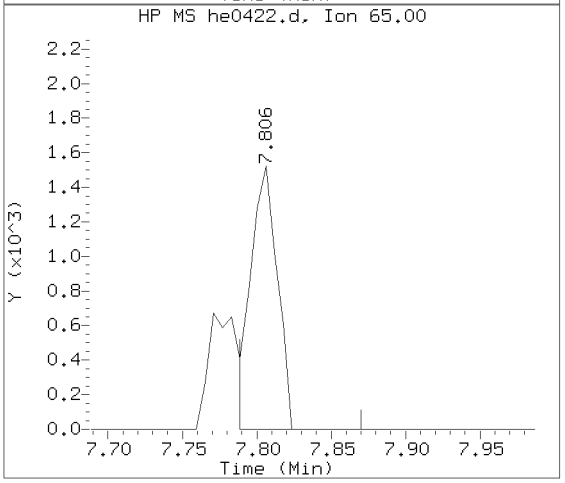
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

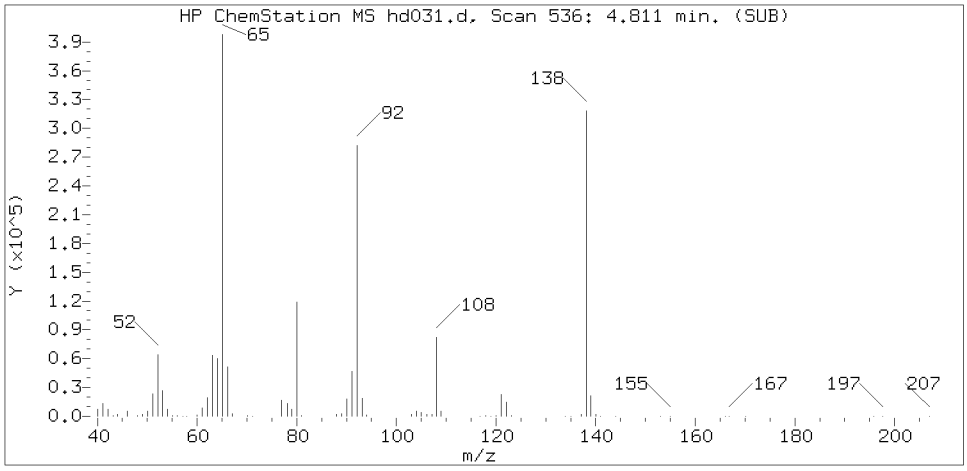
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

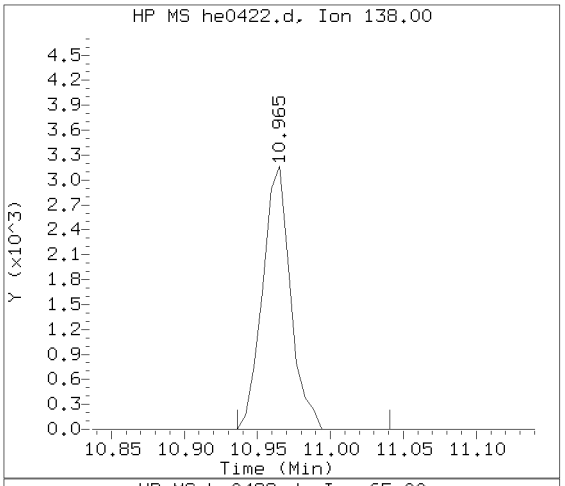
Sample Name: 5WDUP Lab Sample ID: 8352782

Compound Number : 45
Compound Name : Nitrobenzene
Scan Number : 1067
Retention Time (minutes) : 7.806
Relative Retention Time : 0.00131
Quant Ion : 77.00
Area (flag) : 12937
On-column Amount (ng/ul) : 0.2584

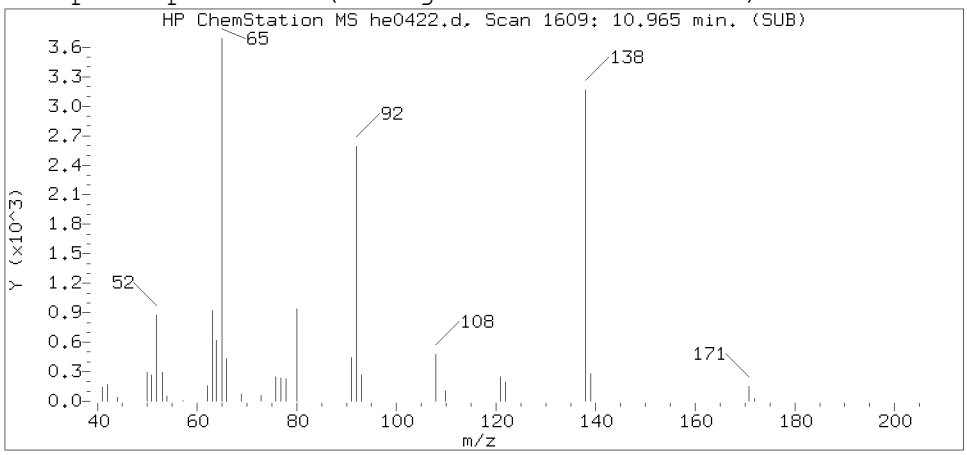
Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346

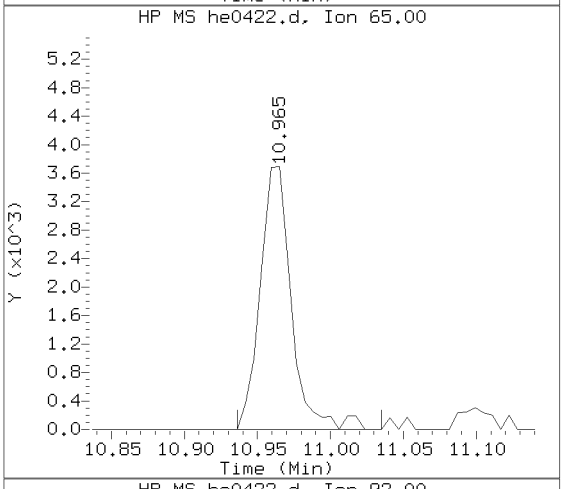
Reference Standard Spectrum for 2-Nitroaniline



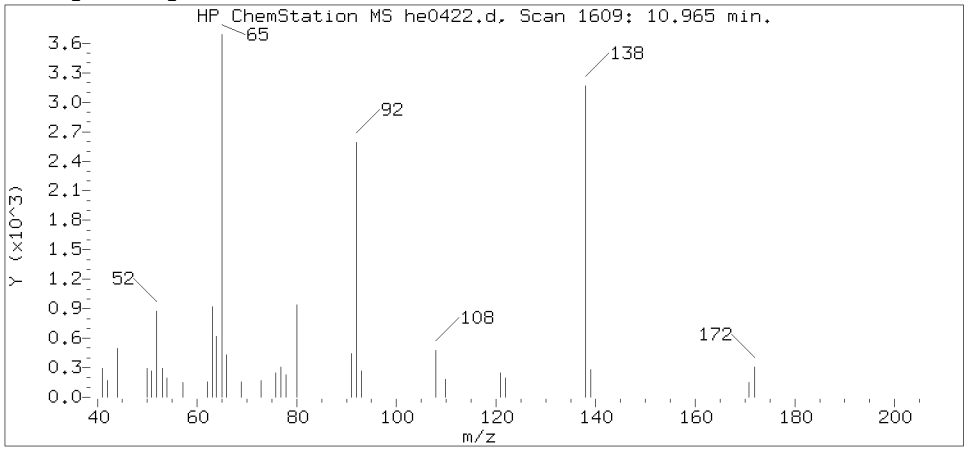


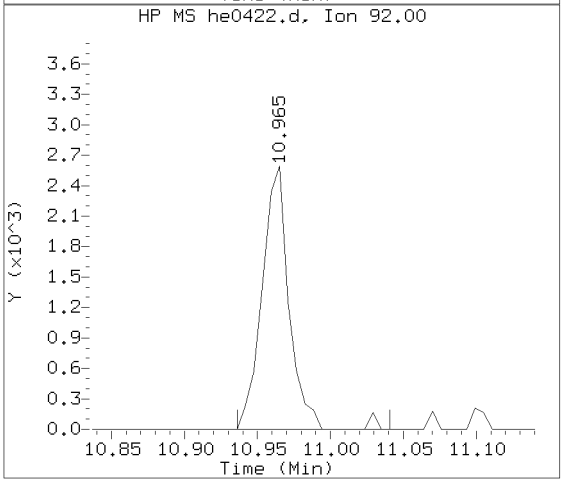
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

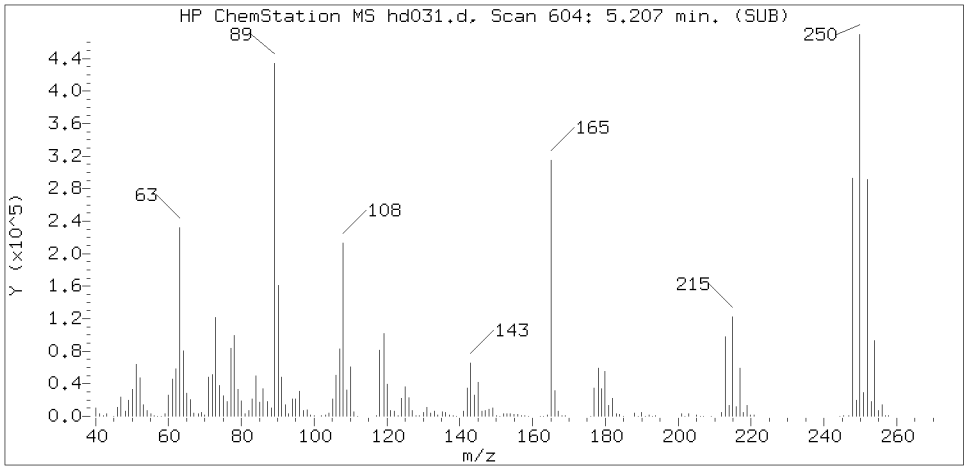
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

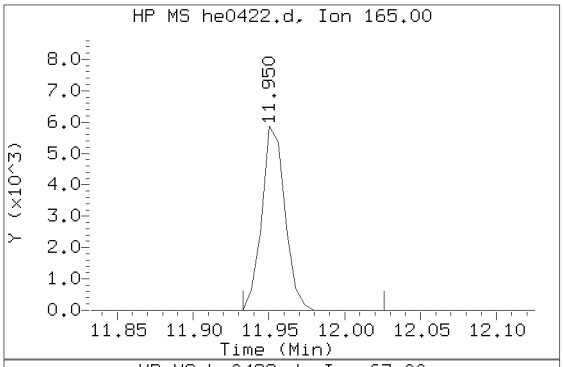
Sample Name: 5WDUP Lab Sample ID: 8352782

Compound Number	: 100
Compound Name	: 2-Nitroaniline
Scan Number	: 1609
Retention Time (minutes)	: 10.965
Relative Retention Time	: 0.00053
Quant Ion	: 138.00
Area (flag)	: 4217
On-column Amount (ng/ul)	: 0.2120

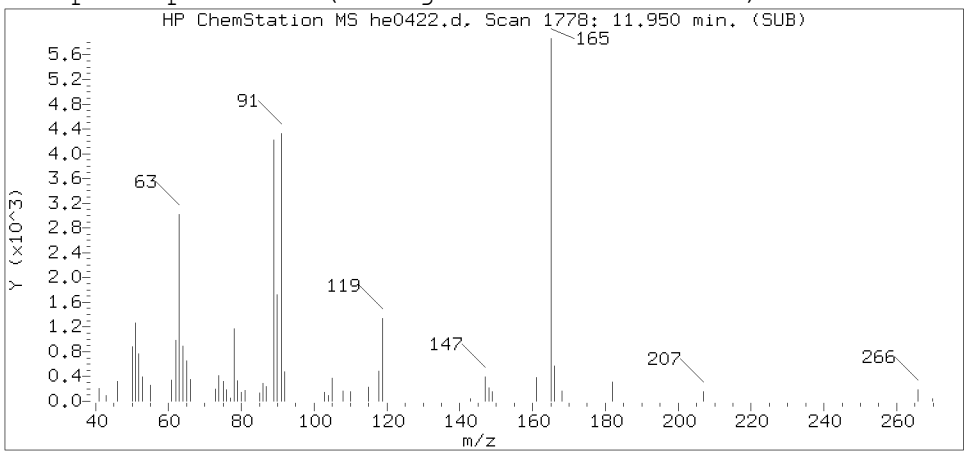
Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346

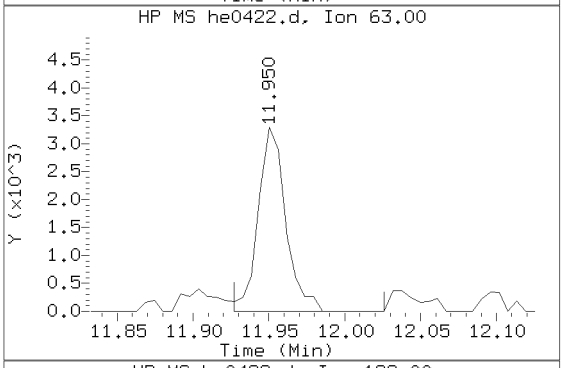
Reference Standard Spectrum for 2,4-Dinitrotoluene

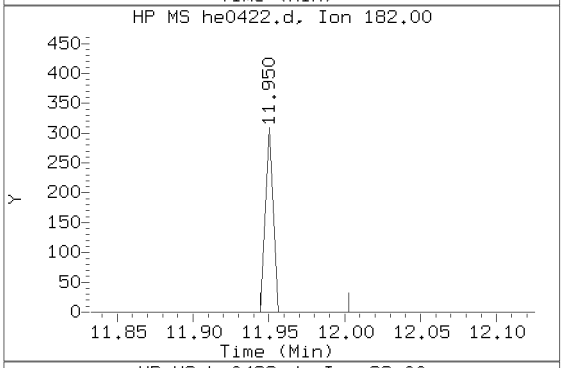




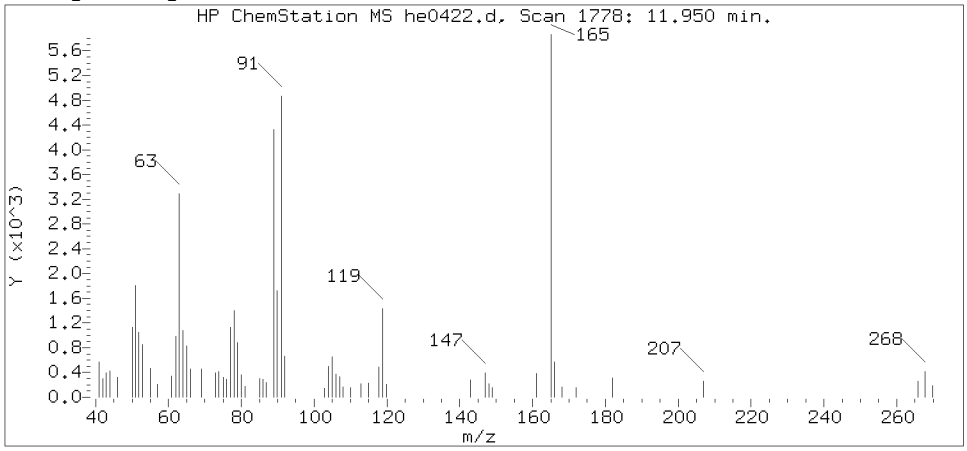
Sample Spectrum (Background Subtracted)

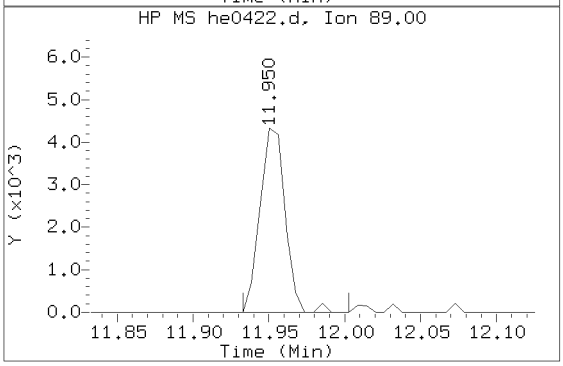






Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0422.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 05:40 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5WDUP Lab Sample ID: 8352782

Compound Number	: 118
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1778
Retention Time (minutes)	: 11.950
Relative Retention Time	: 0.00099
Quant Ion	: 165.00
Area (flag)	: 6178
On-column Amount (ng/ul)	: 0.2657

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:30.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0423.d
Data file Sample Info. Line: 5WC22;8352783;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

Injection date and time: **07-MAY-2016 06:09**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949(0.000)	920	152	133614 (-40)	5.00	
65) Naphthalene-d8	8.884(0.000)	1252	136	498057 (-42)	5.00	
113) Acenaphthene-d10	11.659(0.006)	1728	164	288053 (-42)	5.00	
153) Phenanthrene-d10	13.535(0.006)	2050	188	540864 (-44)	5.00	
175) Pyrene-d10	15.523(0.006)	2391	212	666568 (-44)	5.00	
213) Perylene-d12	20.017(0.012)	3162	264	500062 (-46)	5.00	

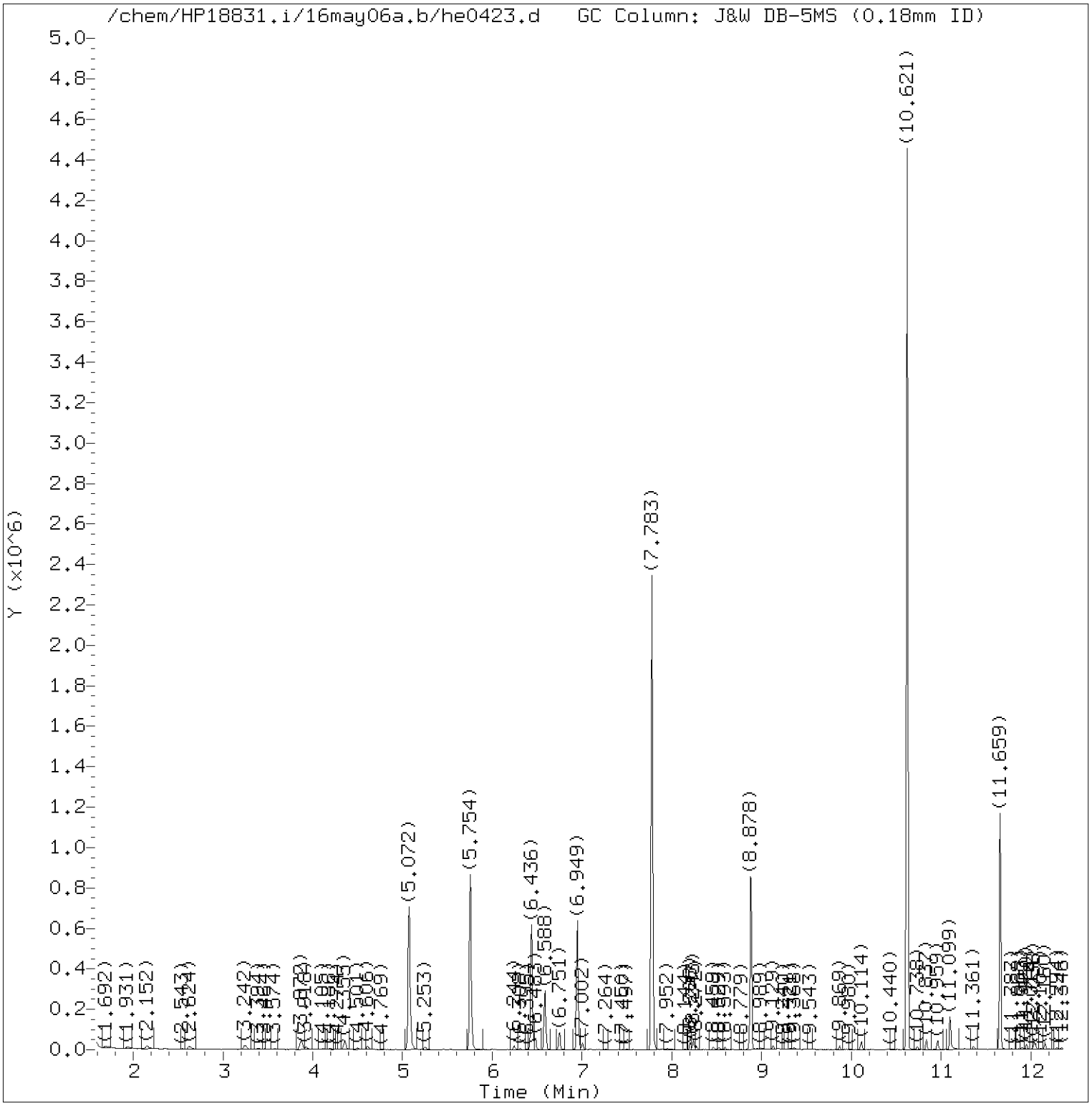
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.783(0.001)	82	1141591	23.234	93%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627(0.000)	172	1828982	22.439	90%		61 - 112
179) Terphenyl-d14	(5)	15.832(0.000)	244	1524042	16.312	65%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.806(0.001)	77	16728	0.326	1.30			0.2
100) 2-Nitroaniline	(3)	10.959(0.001)	138	10206	0.502	2.01			0.2
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	11.956(0.000)	165	4239	0.178	0.71			0.2
124) Diethylphthalate	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.3
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/27/2016 at 10:44. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/27/2016 at 10:42. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

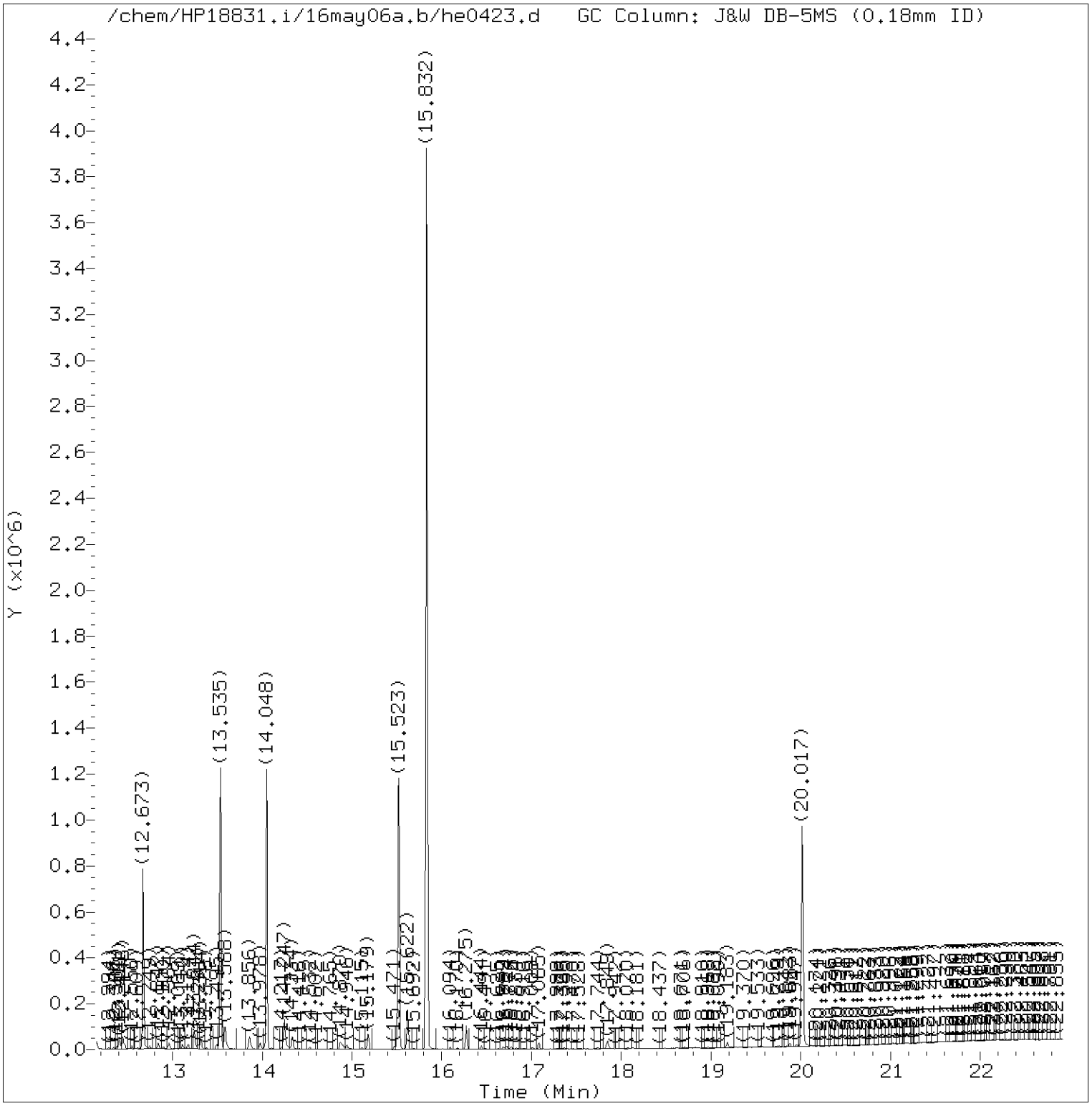
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

Sample Name: 5WC22 Lab Sample ID: 8352783

Digitally signed by Joseph M. Gambler
on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

Sample Name: 5WC22 Lab Sample ID: 8352783

Digitally signed by Joseph M. Gambler
on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

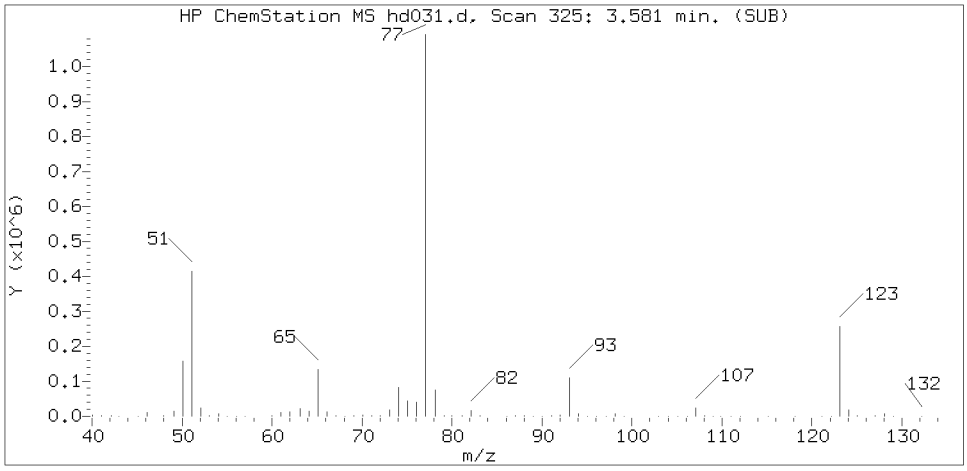
Sample Name: 5WC22 Lab Sample ID: 8352783

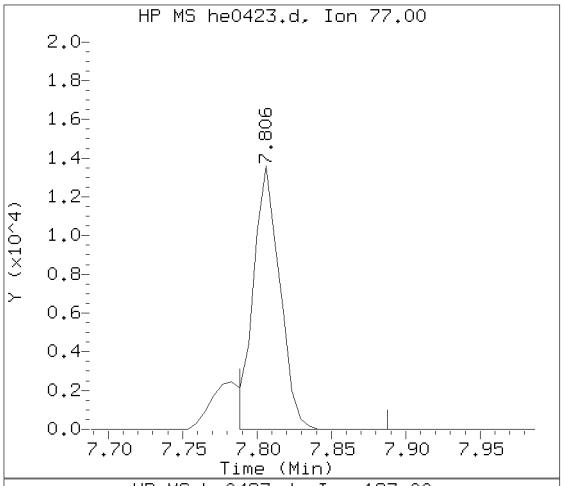
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	133614	5.000
44)$Nitrobenzene-d5	(2)	7.783	82	1141591	23.234
45) Nitrobenzene	(2)	7.806	77	16728	0.326
65)*Naphthalene-d8	(2)	8.884	136	498057	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1828982	22.439
100) 2-Nitroaniline	(3)	10.959	138	10206	0.502
113)*Acenaphthene-d10	(3)	11.659	164	288053	5.000
118) 2,4-Dinitrotoluene	(3)	11.956	165	4239	0.178
153)*Phenanthrene-d10	(4)	13.535	188	540864	5.000
175)*Pyrene-d10	(5)	15.523	212	666568	5.000
179)$Terphenyl-d14	(5)	15.832	244	1524042	16.312
213)*Perylene-d12	(6)	20.017	264	500062	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

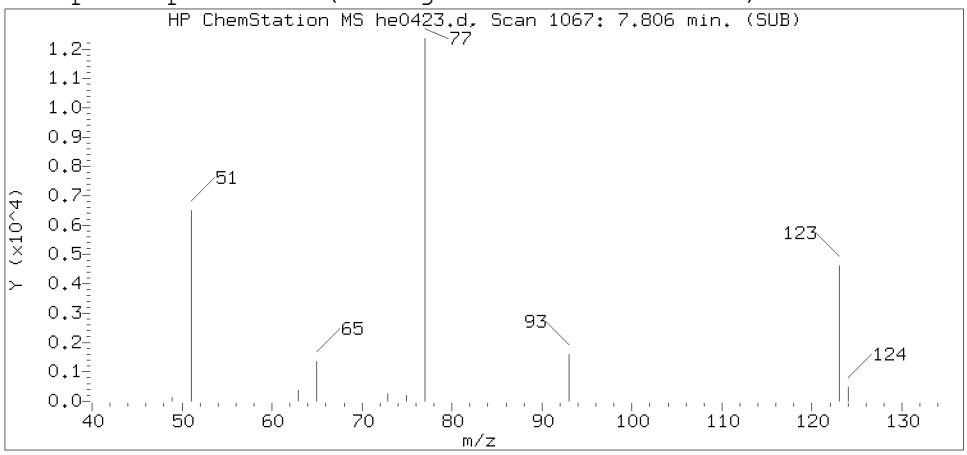
Digitally signed by Joseph M. Gambler
on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346

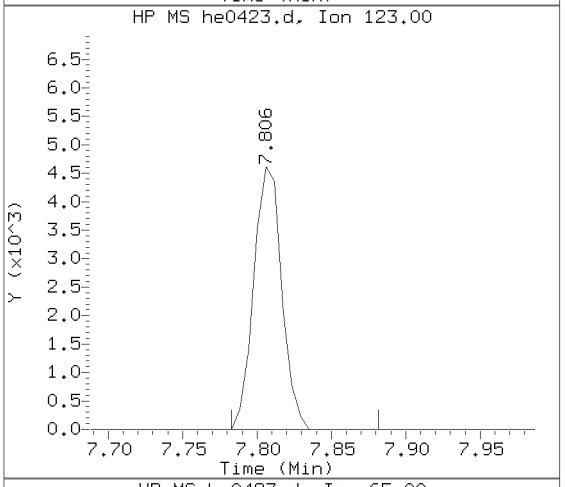
Reference Standard Spectrum for Nitrobenzene



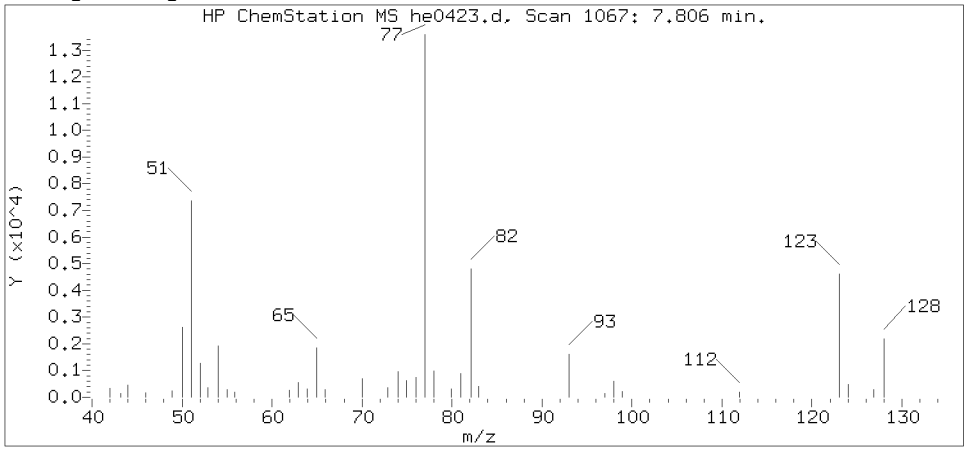


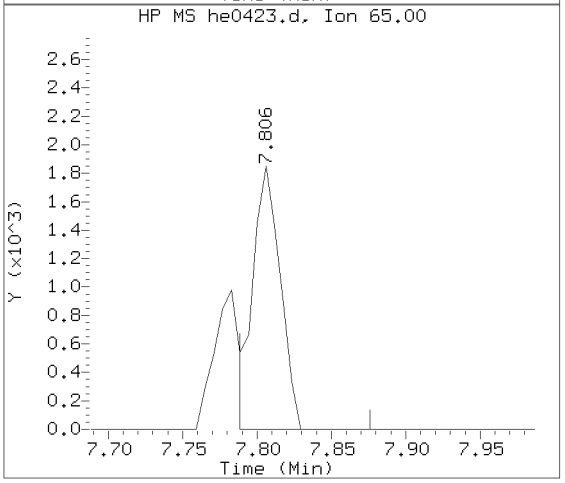
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

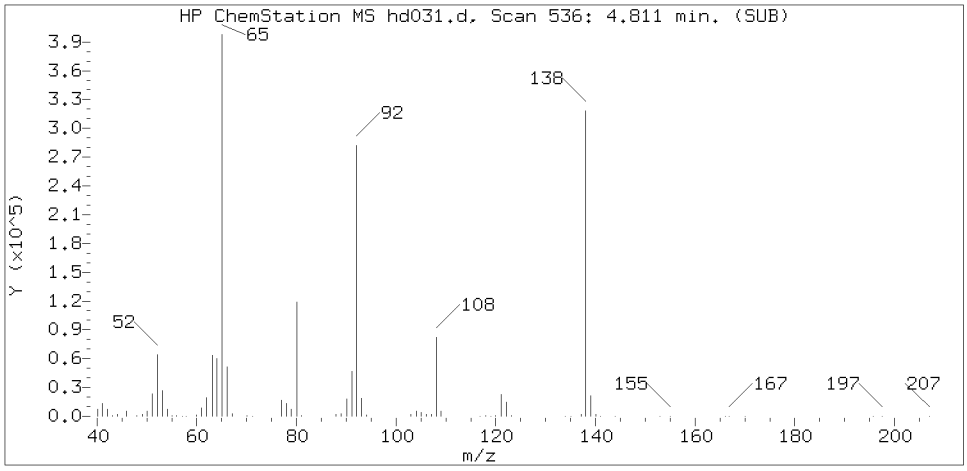
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

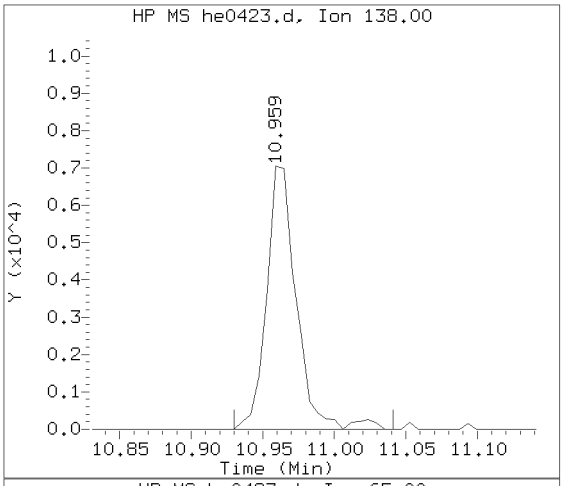
Sample Name: 5WC22 Lab Sample ID: 8352783

Compound Number : 45
Compound Name : Nitrobenzene
Scan Number : 1067
Retention Time (minutes) : 7.806
Relative Retention Time : 0.00131
Quant Ion : 77.00
Area (flag) : 16728
On-column Amount (ng/ul) : 0.3261

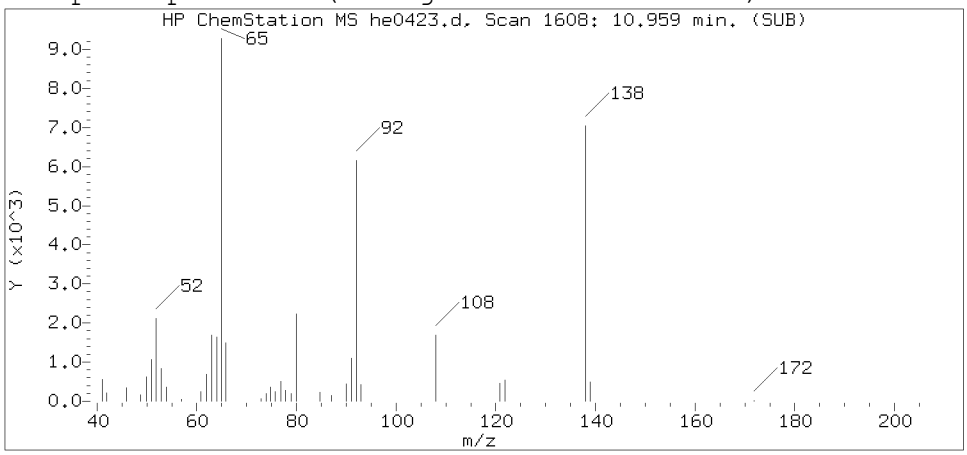
Digitally signed by Joseph M. Gambler on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346

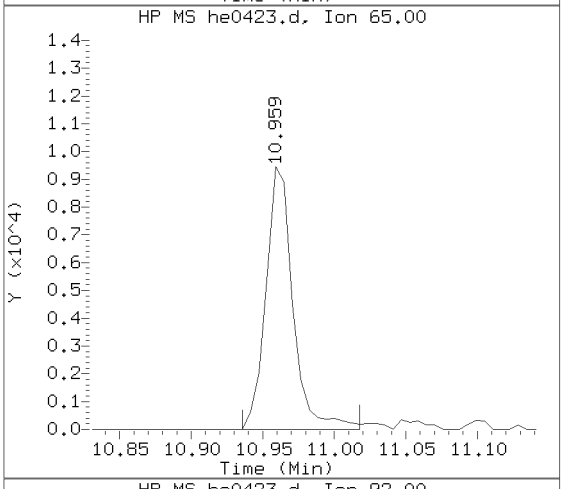
Reference Standard Spectrum for 2-Nitroaniline



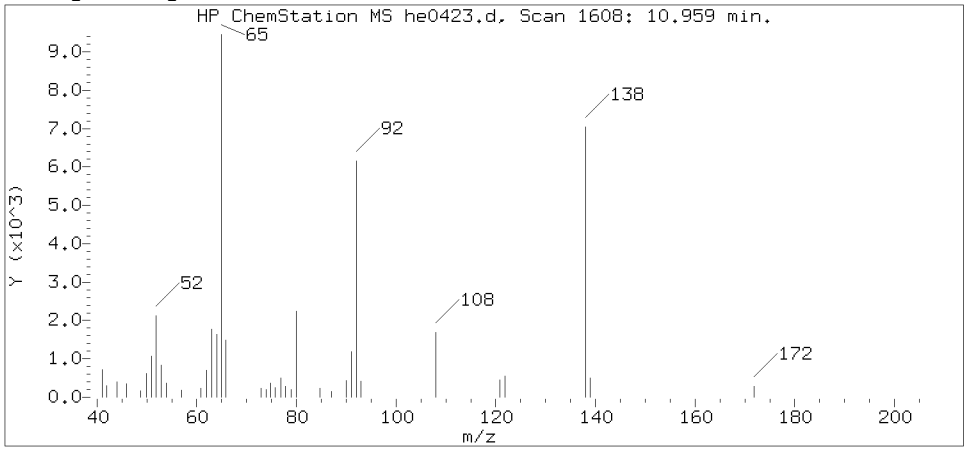


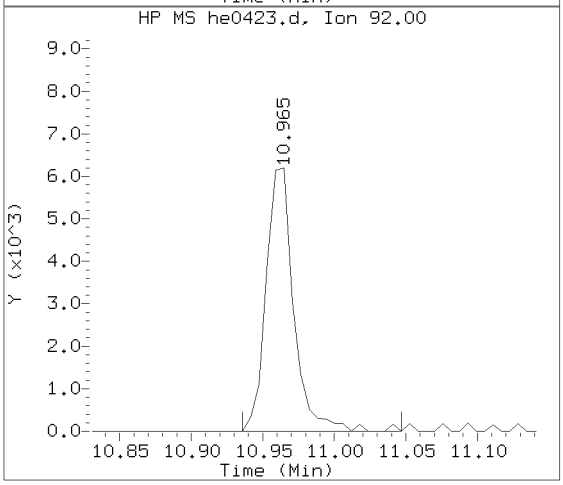
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

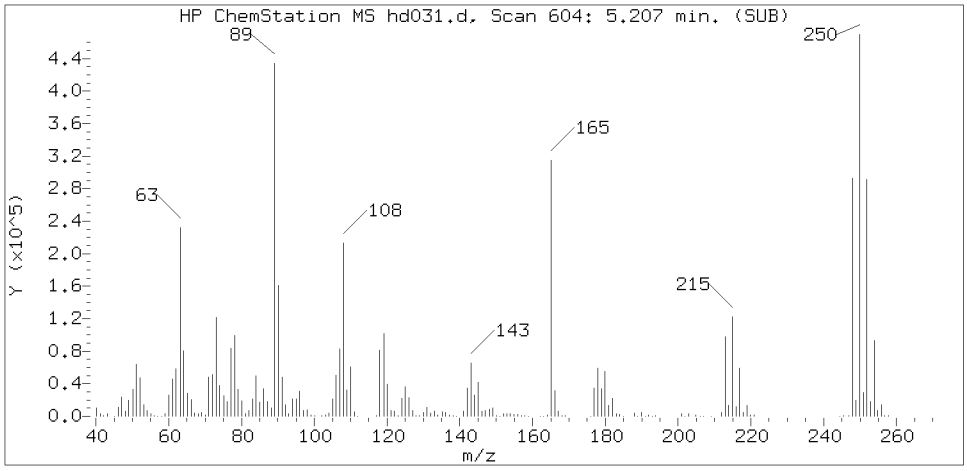
Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

Sample Name: 5WC22 Lab Sample ID: 8352783

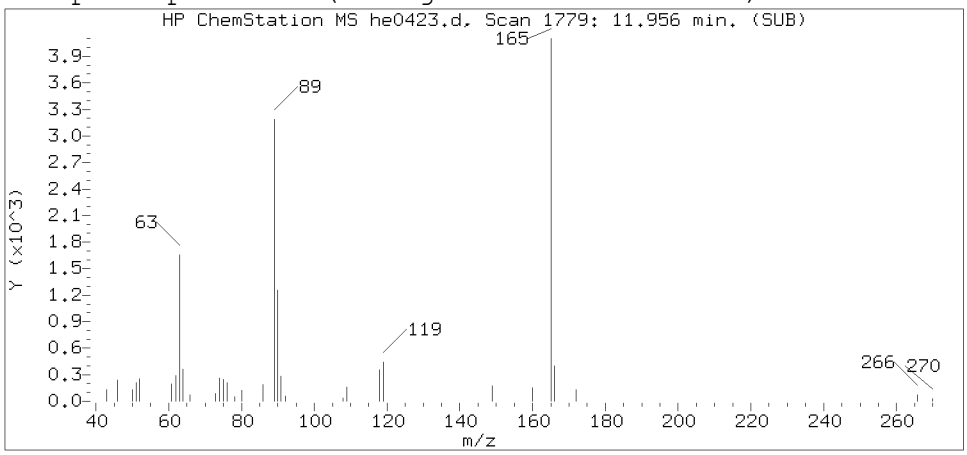
Compound Number	: 100
Compound Name	: 2-Nitroaniline
Scan Number	: 1608
Retention Time (minutes)	: 10.959
Relative Retention Time	: 0.00103
Quant Ion	: 138.00
Area (flag)	: 10206
On-column Amount (ng/ul)	: 0.5023

Digitally signed by Joseph M. Gambler on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346

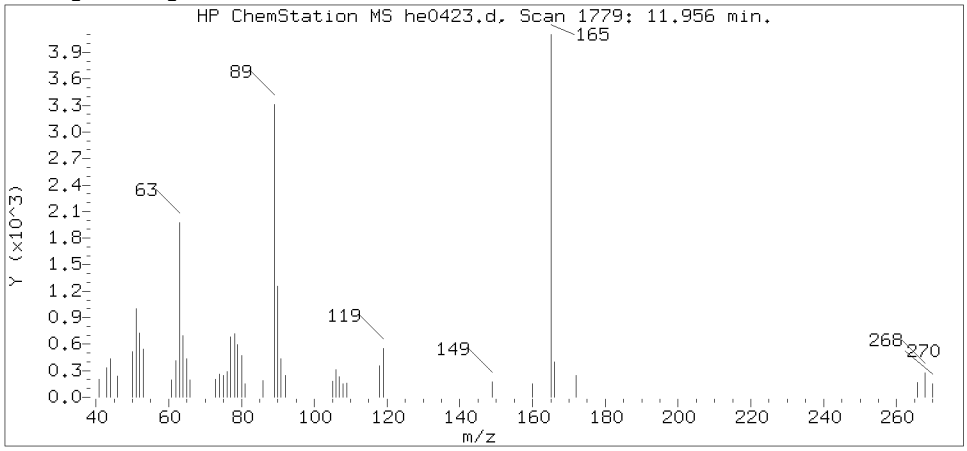
Reference Standard Spectrum for 2,4-Dinitrotoluene

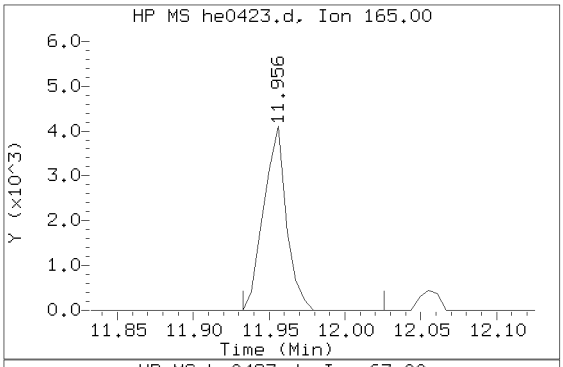


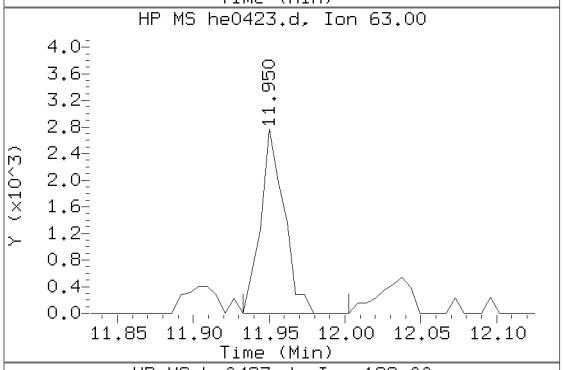
Sample Spectrum (Background Subtracted)

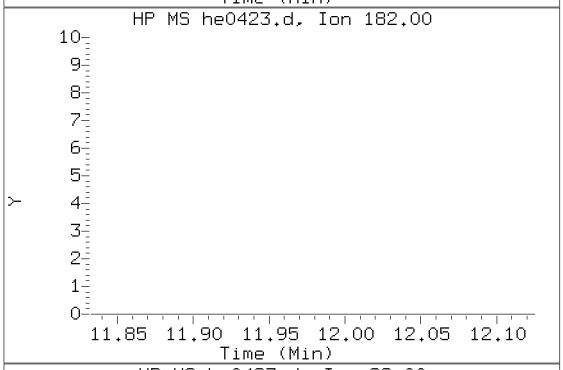


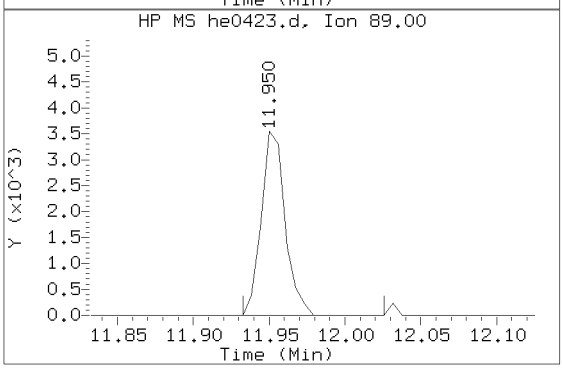
Sample Spectrum (Unaltered)











Data File: /chem/HP18831.i/16may06a.b/he0423.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 06:09 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 27-May-2016 10:44 jmg00346

Sample Name: 5WC22 Lab Sample ID: 8352783

Compound Number : 118
Compound Name : 2,4-Dinitrotoluene
Scan Number : 1779
Retention Time (minutes) : 11.956
Relative Retention Time : 0.00049
Quant Ion : 165.00
Area (flag) : 4239
On-column Amount (ng/ul) : 0.1785

Digitally signed by Joseph M. Gambler on 05/27/2016 at 10:44.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may09a.b/he0529.d
Data file Sample Info. Line: 5WC23;8352784;1;0;SAMPLE;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Injection date and time: **10-MAY-2016 01:50**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:41
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may09a.b/he0521.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.908	(0.000)	913	152	128632	(-6)	5.00	
65) Naphthalene-d8	8.843	(0.000)	1245	136	492792	(-4)	5.00	
113) Acenaphthene-d10	11.624	(0.006)	1722	164	279547	(-5)	5.00	
153) Phenanthrene-d10	13.506	(0.000)	2045	188	533232	(-3)	5.00	
175) Pyrene-d10	15.488	(0.000)	2385	212	620454	(-4)	5.00	
213) Perylene-d12	19.976	(0.006)	3155	264	454483	(-5)	5.00	

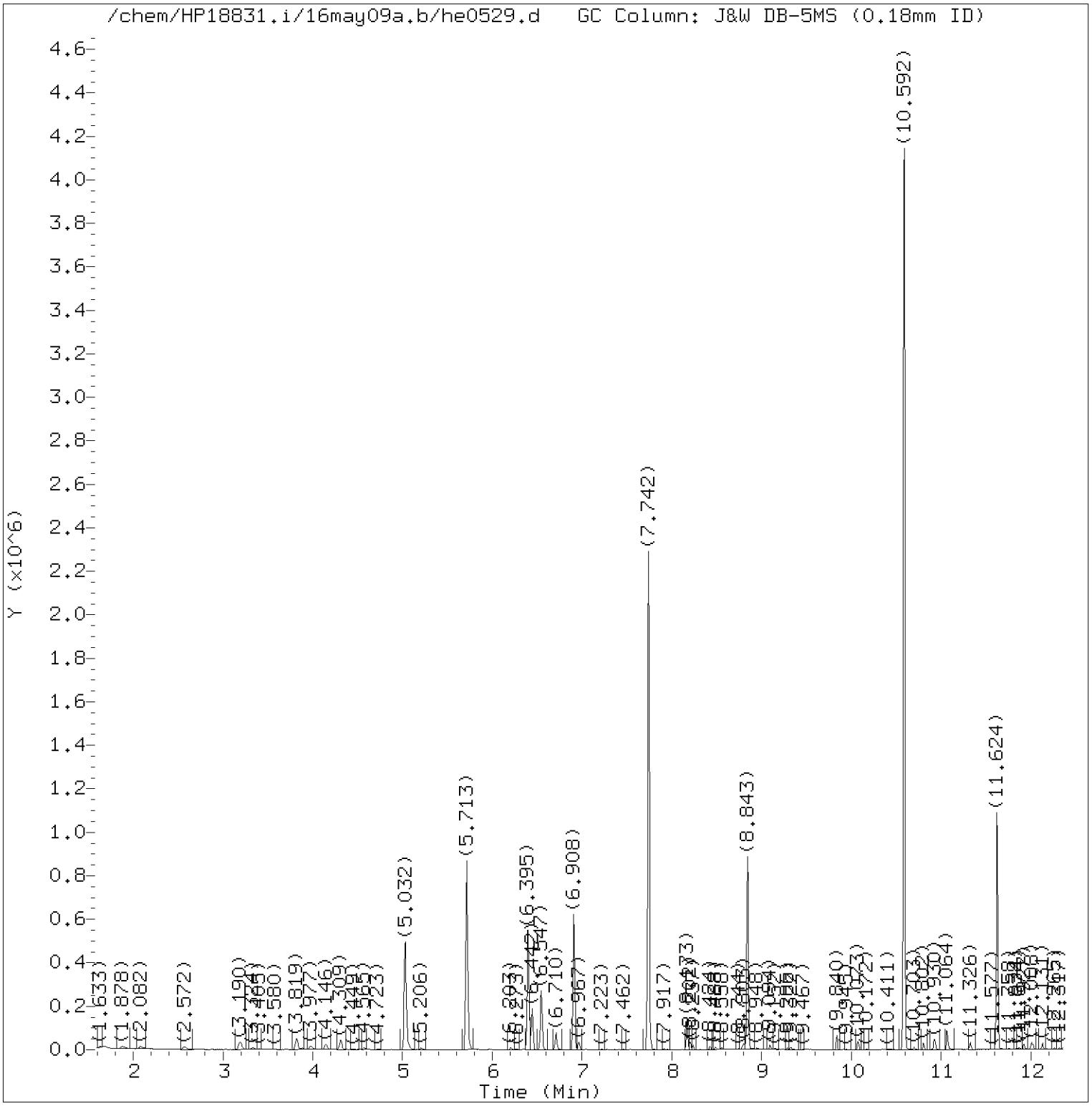
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.742	(0.000)	82	1052182	21.643	87%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.592	(0.000)	172	1724455	21.800	87%		61 - 112
179) Terphenyl-d14	(5)	15.797	(0.000)	244	1624872	18.684	75%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.771	(0.000)	77	14439	0.285	1.15			0.2
100) 2-Nitroaniline	(3)	10.930	(0.000)	138	10822	0.549	2.21			0.2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)	11.927	(-0.000)	165	4331	0.188	0.76			0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)	12.393	(-0.000)	138	6496	0.367	1.48			0.2
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:27. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

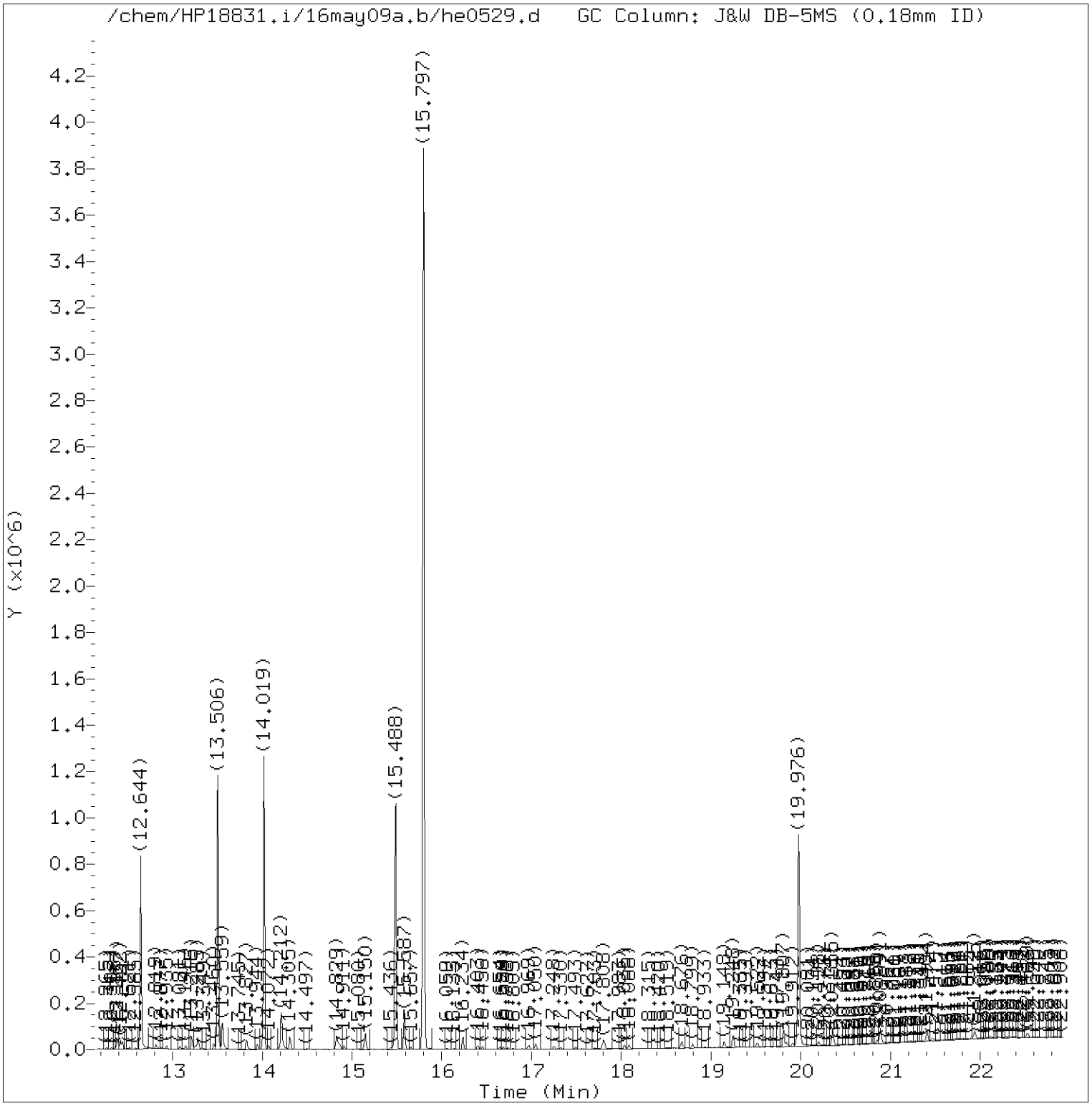
Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Sample Name: 5WC23 Lab Sample ID: 8352784

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Sample Name: 5WC23 Lab Sample ID: 8352784

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

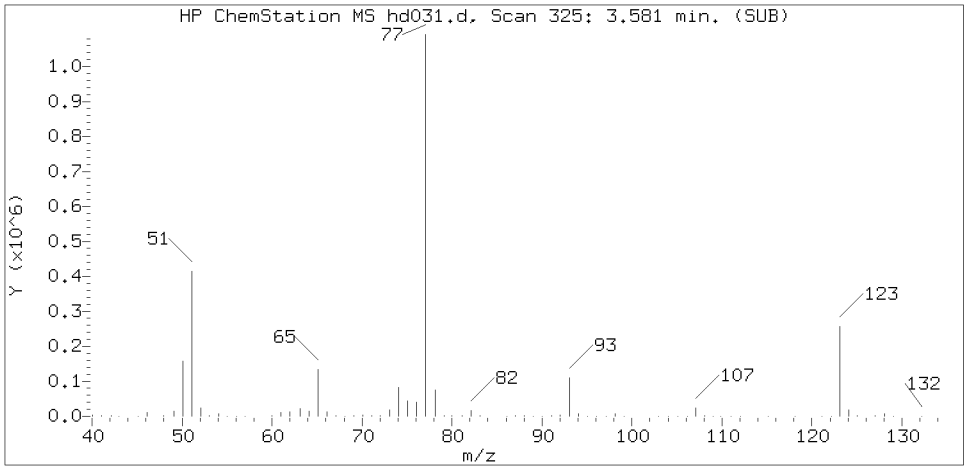
Sample Name: 5WC23 Lab Sample ID: 8352784

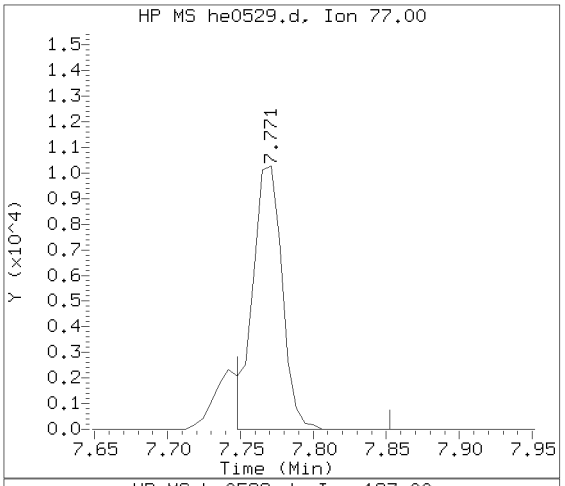
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.908	152	128632	5.000
44)$Nitrobenzene-d5	(2)	7.742	82	1052182	21.643
45) Nitrobenzene	(2)	7.771	77	14439	0.285
65)*Naphthalene-d8	(2)	8.843	136	492792	5.000
93)$2-Fluorobiphenyl	(3)	10.592	172	1724455	21.800
100) 2-Nitroaniline	(3)	10.930	138	10822	0.549
113)*Acenaphthene-d10	(3)	11.624	164	279547	5.000
118) 2,4-Dinitrotoluene	(3)	11.927	165	4331	0.188
129) 4-Nitroaniline	(3)	12.393	138	6496	0.367
153)*Phenanthrene-d10	(4)	13.506	188	533232	5.000
175)*Pyrene-d10	(5)	15.488	212	620454	5.000
179)$Terphenyl-d14	(5)	15.797	244	1624872	18.684
213)*Perylene-d12	(6)	19.976	264	454483	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

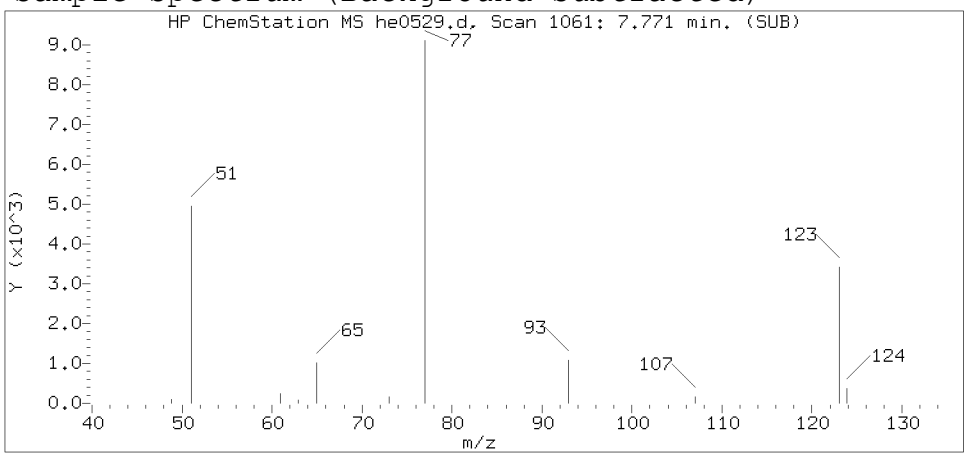
Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346

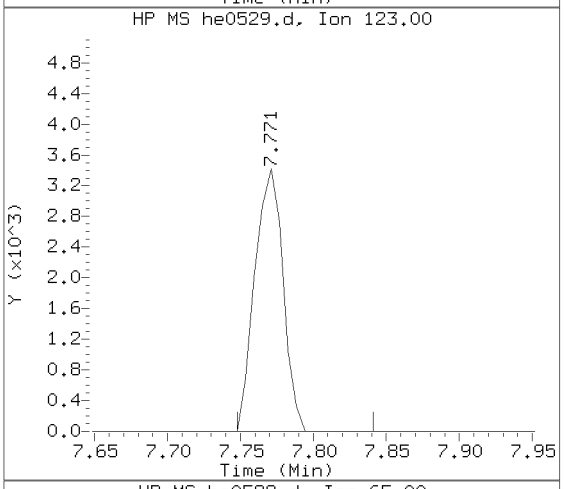
Reference Standard Spectrum for Nitrobenzene



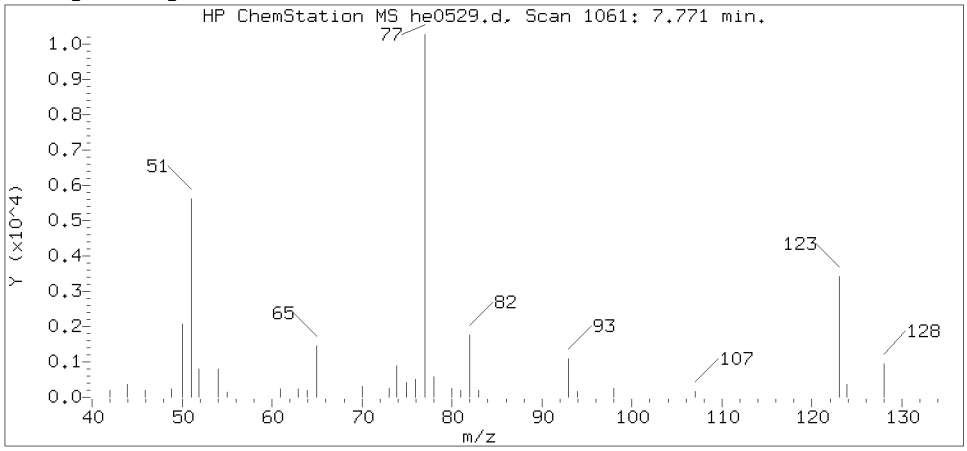


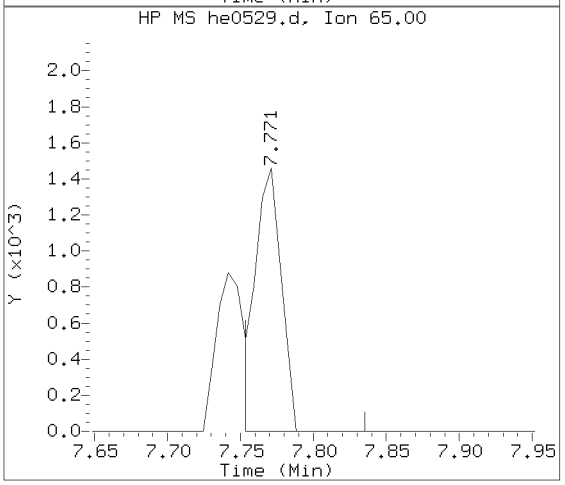
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

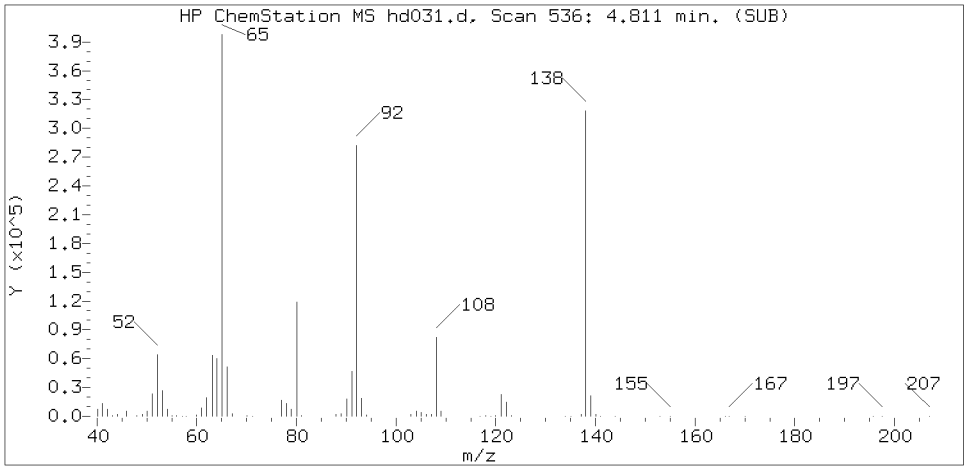
Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

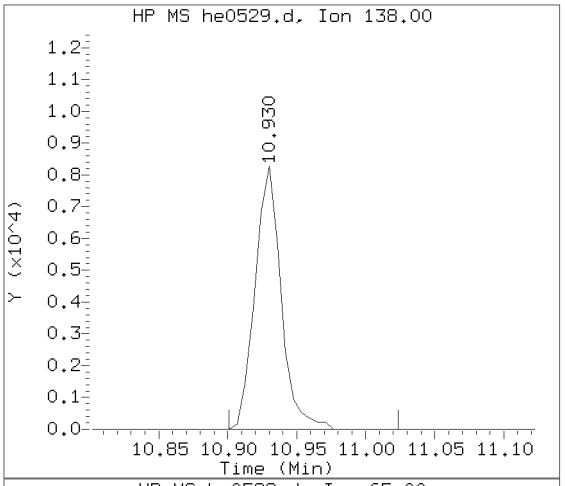
Sample Name: 5WC23 Lab Sample ID: 8352784

Compound Number	: 45
Compound Name	: Nitrobenzene
Scan Number	: 1061
Retention Time (minutes)	: 7.771
Relative Retention Time	: 0.00000
Quant Ion	: 77.00
Area (flag)	: 14439
On-column Amount (ng/ul)	: 0.2845

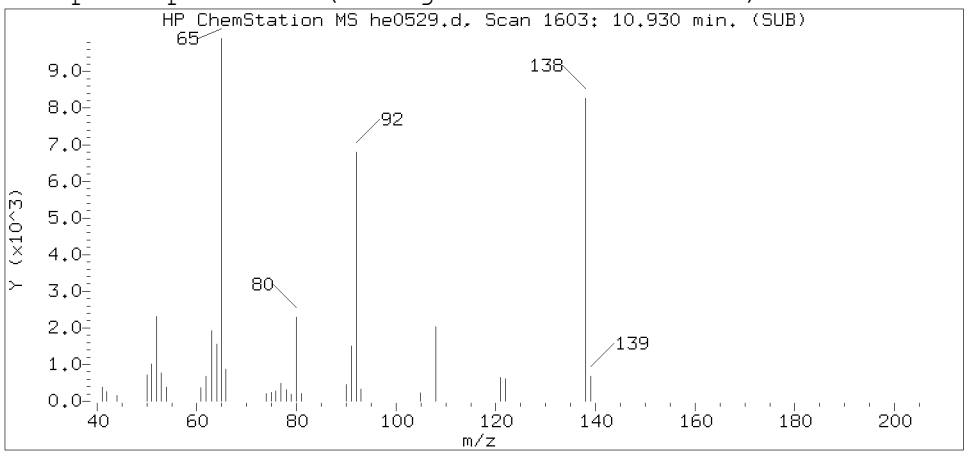
Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346

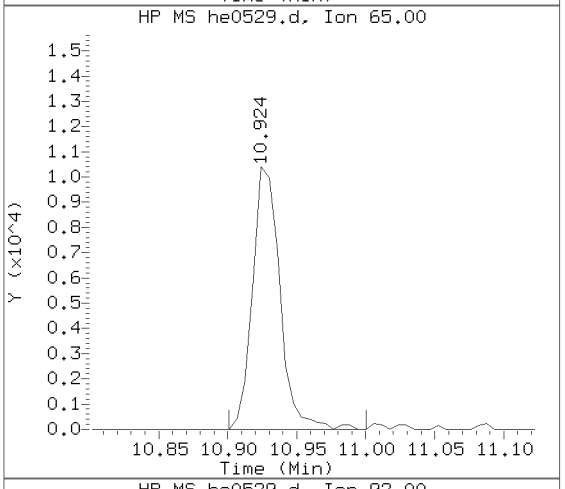
Reference Standard Spectrum for 2-Nitroaniline



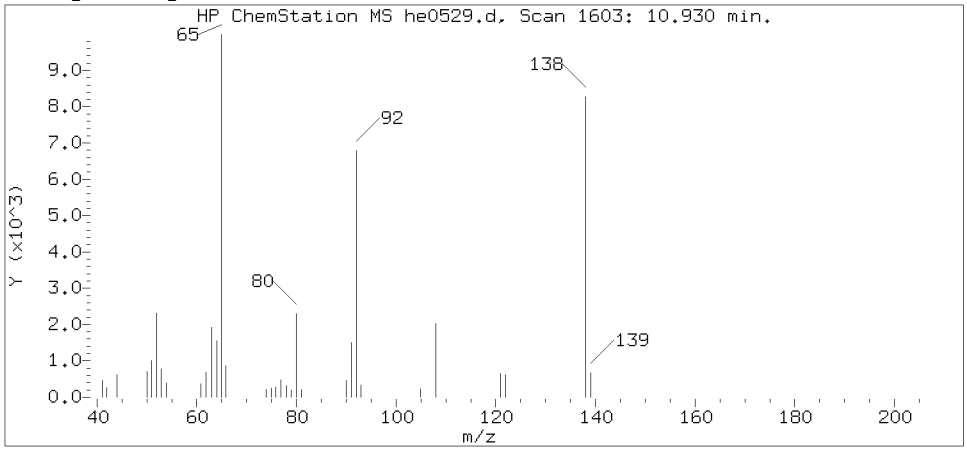


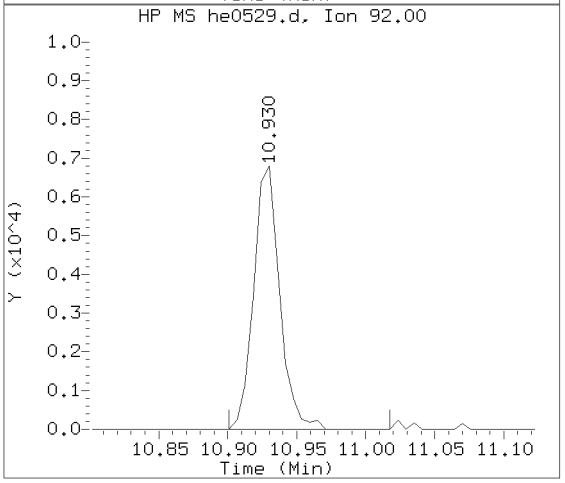
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Sample Name: 5WC23 Lab Sample ID: 8352784

Compound Number	: 100
Compound Name	: 2-Nitroaniline
Scan Number	: 1603
Retention Time (minutes)	: 10.930
Relative Retention Time	: 0.00003
Quant Ion	: 138.00
Area (flag)	: 10822
On-column Amount (ng/ul)	: 0.5489

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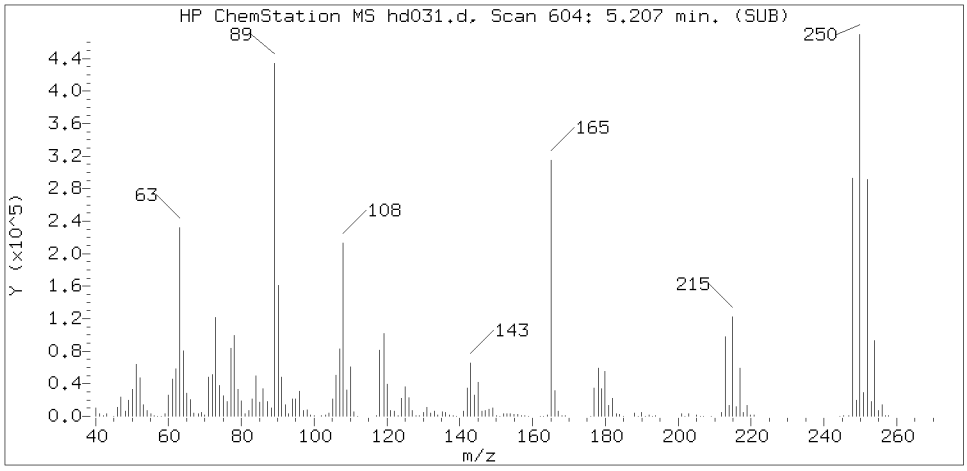
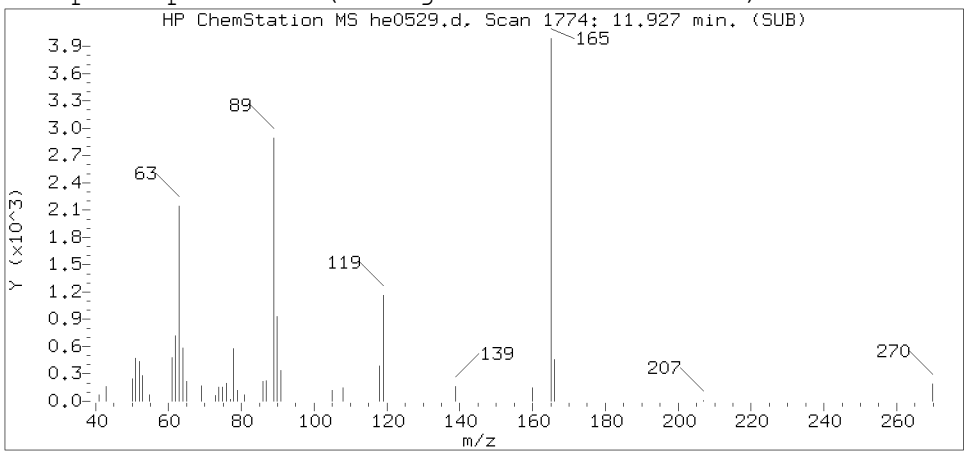
Target 3.5 esignature user ID: jmg00346

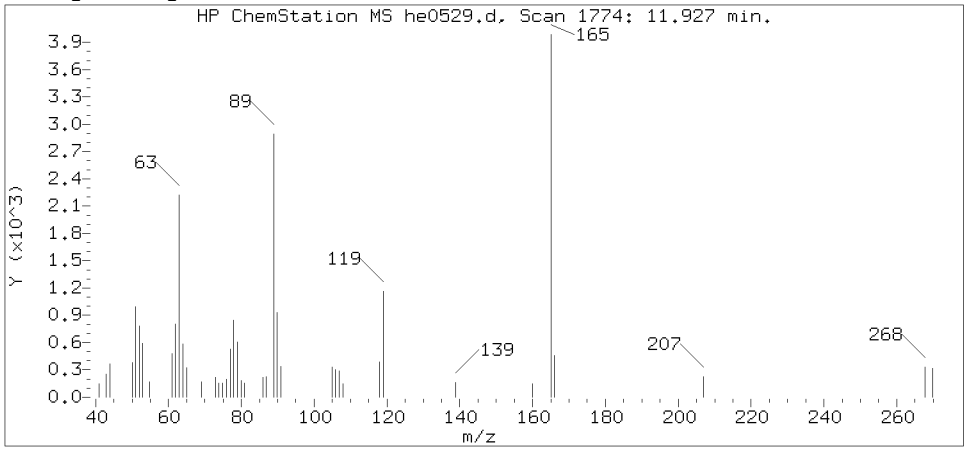
Reference Standard Spectrum for 2,4-Dinitrotoluene

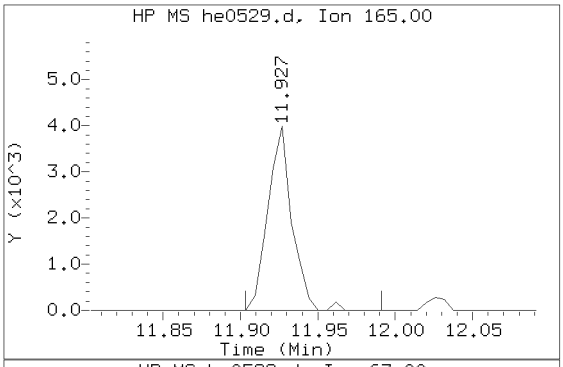


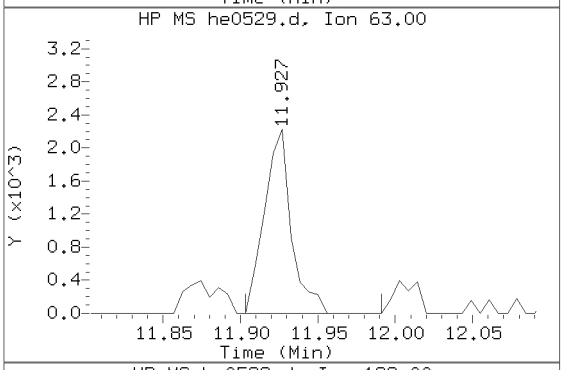
Sample Spectrum (Background Subtracted)

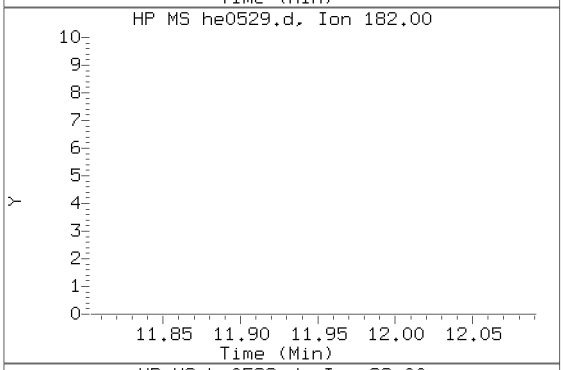


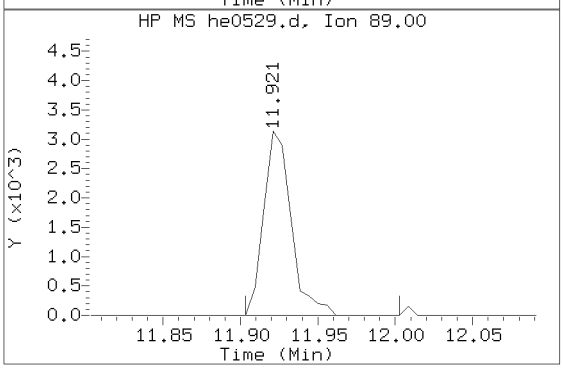
Sample Spectrum (Unaltered)











Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

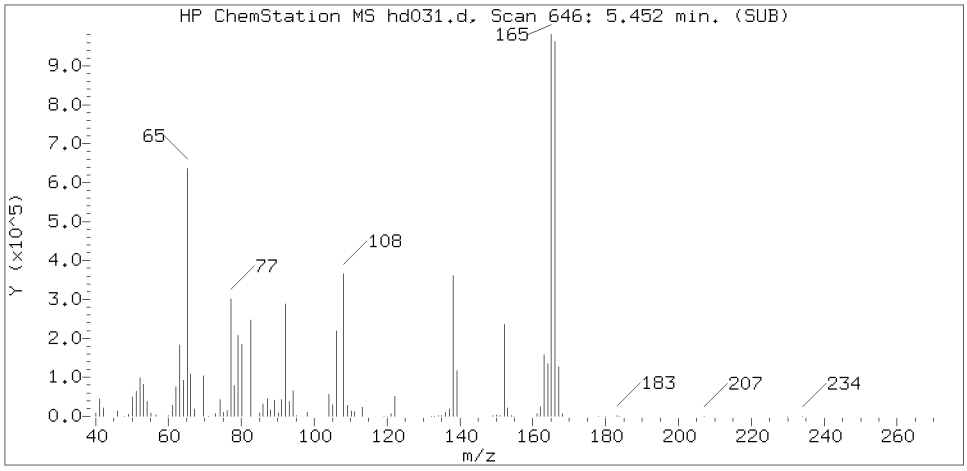
Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Sample Name: 5WC23 Lab Sample ID: 8352784

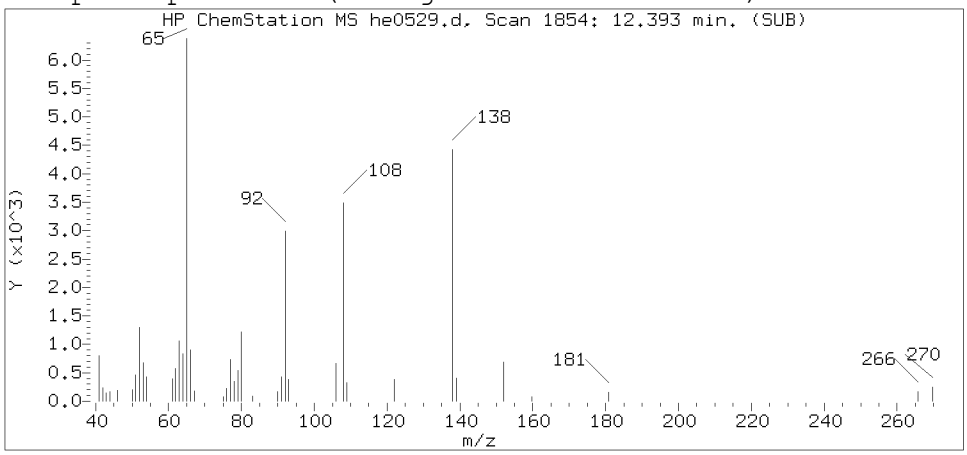
Compound Number : 118
Compound Name : 2,4-Dinitrotoluene
Scan Number : 1774
Retention Time (minutes) : 11.927
Relative Retention Time :-0.00051
Quant Ion : 165.00
Area (flag) : 4331
On-column Amount (ng/ul) : 0.1879

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346

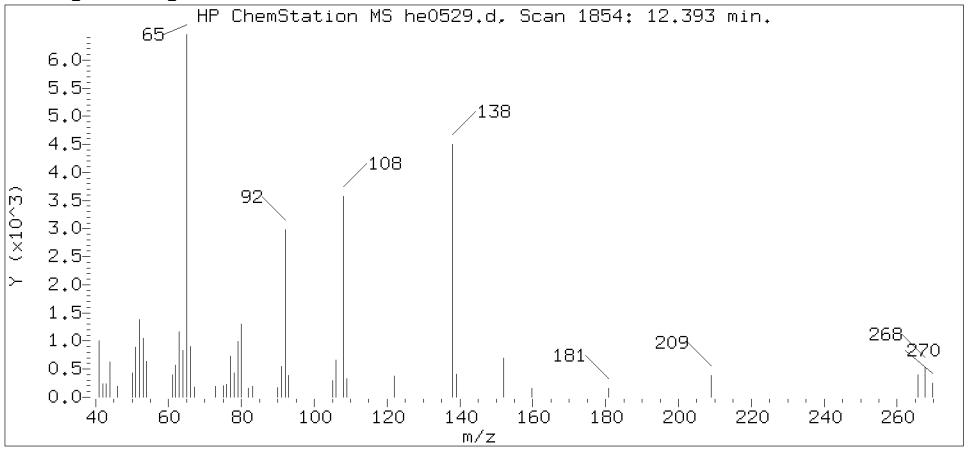
Reference Standard Spectrum for 4-Nitroaniline

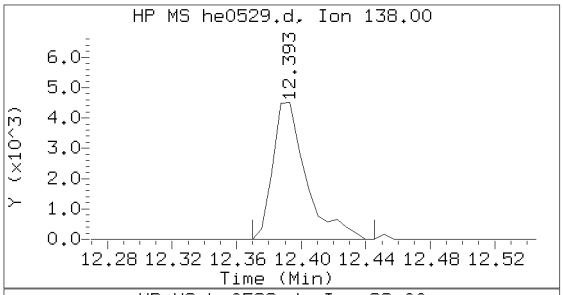


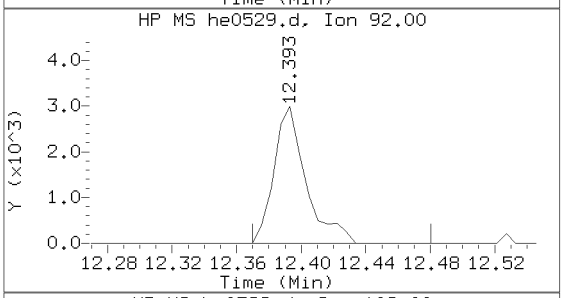
Sample Spectrum (Background Subtracted)

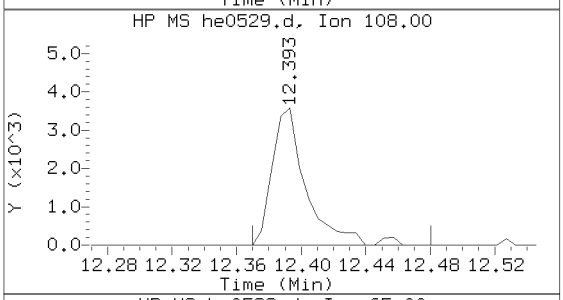


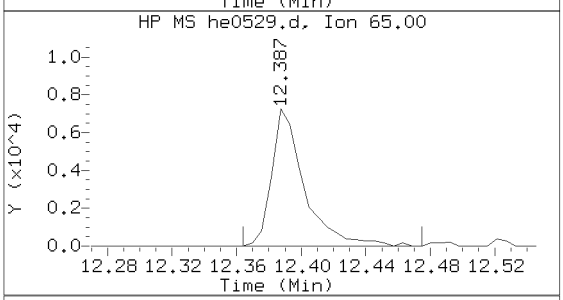
Sample Spectrum (Unaltered)

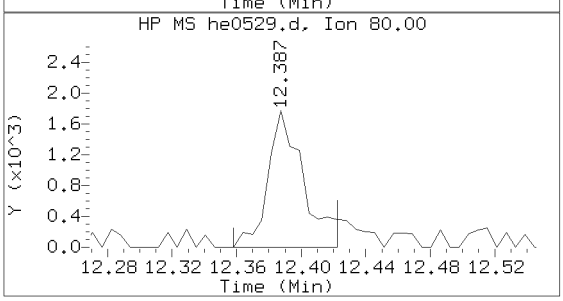












Data File: /chem/HP18831.i/16may09a.b/he0529.d Instrument ID: HP18831.i
Injection date and time: 10-MAY-2016 01:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 10-MAY-2016 17:41
Date, time and analyst ID of latest file update: 25-May-2016 03:26 jmg00346

Sample Name: 5WC23 Lab Sample ID: 8352784

Compound Number	: 129
Compound Name	: 4-Nitroaniline
Scan Number	: 1854
Retention Time (minutes)	: 12.393
Relative Retention Time	:-0.00003
Quant Ion	: 138.00
Area (flag)	: 6496
On-column Amount (ng/ul)	: 0.3667

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:27.
Target 3.5 esignature user ID: jmg00346

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP18831 **HP #08**

Data Directory Path is - C:\msdchem\1\data\16apr15a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
aap07680	HD0630.D	RVDFTPP0826	04/15/2016	17:25		
aap07680	HD0631.D	RVSTD0816	04/15/2016	17:39		
aap07680	HD0632.D	RVSTD0816	04/15/2016	18:17		
aap07680	HD0633.D	RVSTD0816	04/15/2016	18:46		
aap07680	HD0634.D	RVSTD0816	04/15/2016	19:14		
aap07680	HD0635.D	RVSTD0816	04/15/2016	19:43		
aap07680	HD0636.D	RVSTD0816	04/15/2016	20:12		
aap07680	HD0637.D	RVSTD0816	04/15/2016	20:41		
aap07680	HD0638.D	RVSTD0816	04/15/2016	21:10		
aap07680	HD0639.D	RVMDL0816	04/15/2016	21:39		
aap07680	HD0640.D	PAHMDL0816	04/15/2016	22:07		
aap07680	HD0641.D	RVICV3205	04/15/2016	22:36		
aap07680	HD0642.D	RVBASICV0716	04/15/2016	23:05		
aap07680	HD0643.D	BACIDICV3165	04/15/2016	23:35		
aap07680	HD0644.D	RVPDA3085	04/16/2016	00:04		
aap07680	HD0645.D	RVPDA3085	04/16/2016	00:33		
aap07680	HD0646.D	RVPDA3085	04/16/2016	01:02		
aap07680	HD0647.D	RVPDA3085	04/16/2016	01:31		
aap07680	HD0648.D	RVPDA3085	04/16/2016	02:00		

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP18831 **HP #08**

*** Shift #1 Analyst:_____*** Shift #2 Analyst:_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted

S = Surrogate problem I = Internal Standard problem

NU = Not used F = Further dilution required

MR = Meets requirements IUO = Internal use only

Cz = Confirms z, (z = I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

Data Directory Path is - C:\msdchem\1\data\16may06a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	HE0400.D	DFTPP	RVDFTPP0826	06 May 2016	18:27			
2	HE0401.D	SSTD7.5	RVSTD0816	06 May 2016	18:50			
3	HE0402.D	SBLKWC120	SBLKWC120	06 May 2016	19:54	16120WAC		
4	HE0403.D	120WCLCS	120WCLCS	06 May 2016	20:23	16120WAC		
5	HE0404.D	SBLKWB124	SBLKWB124	06 May 2016	20:53	16124WAB		
6	HE0405.D	124WBLCS	124WBLCS	06 May 2016	21:22	16124WAB		
7	HE0406.D	124WBLCSD	124WBLCSD	06 May 2016	21:51	16124WAB		
8	HE0407.D	124WBLCS1	124WBLCS1	06 May 2016	22:21	16124WAB		
9	HE0408.D	124WBLCSD1	124WBLCSD1	06 May 2016	22:50	16124WAB		
10	HE0409.D	R87S9	8345664	06 May 2016	23:19	16114WAT		
11	HE0410.D	87S10	8345666	06 May 2016	23:49	16114WAT		
12	HE0411.D	M-213	8345668	07 May 2016	00:18	16114WAT		
13	HE0412.D	87S8D	8345670	07 May 2016	00:47	16114WAT		
14	HE0413.D	EBG21	8345672	07 May 2016	01:17	16114WAT		
15	HE0414.D	M107A	8345676	07 May 2016	01:46	16114WAT		
16	HE0415.D	M107B	8345678	07 May 2016	02:15	16114WAT		
17	HE0416.D	M216BDL	8343710DL	07 May 2016	02:44	16114WAT	50	
18	HE0417.D	5W7B-	8352778	07 May 2016	03:14	16120WAC		
19	HE0418.D	5W7B-MS	8352779	07 May 2016	03:43	16120WAC		
20	HE0419.D	5W7B-MSD	8352780	07 May 2016	04:12	16120WAC		
21	HE0420.D	5W5B-	8352777	07 May 2016	04:41	16120WAC		
22	HE0421.D	5WC21	8352781	07 May 2016	05:11	16120WAC		
23	HE0422.D	5WDUP	8352782	07 May 2016	05:40	16120WAC		
24	HE0423.D	5WC22	8352783	07 May 2016	06:09	16120WAC		
25	HE0424.D	5WC23	8352784	07 May 2016	06:39	16120WAC		
26	HE0425.D	N3130	8349468	07 May 2016	07:08	16124WAB		
27	HE0426.D	33225	8350677	07 May 2016	07:37	16124WAB		

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP18831.i/16may09a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
he0520.d	09-MAY-2016 20:44	DFTPP	1.00	HP18831	rvdftpp8270d.m	16may09a.b
he0521.d	09-MAY-2016 21:08	Continuing Cal	1.00	HP18831	rv8270d.m	16may09a.b
he0522.d	09-MAY-2016 22:26	BLANK	1.00	HP18831	rv8270d.m	16may09a.b
he0523.d	09-MAY-2016 22:55	LCS	1.00	HP18831	rv8270d.m	16may09a.b
he0524.d	09-MAY-2016 23:25	BLANK	1.00	HP18831	rv8270d.m	16may09a.b
he0525.d	09-MAY-2016 23:54	LCS	1.00	HP18831	rv8270d.m	16may09a.b
he0526.d	10-MAY-2016 00:23	LCSD	1.00	HP18831	rv8270d.m	16may09a.b
he0527.d	10-MAY-2016 00:52	Unknown	1.00	HP18831	rv8270d.m	16may09a.b
he0528.d	10-MAY-2016 01:21	Unknown	1.00	HP18831	rv8270d.m	16may09a.b
he0529.d	10-MAY-2016 01:50	Unknown	1.00	HP18831	rv8270d.m	16may09a.b
he0530.d	10-MAY-2016 02:20	Unknown	1.00	HP18831	rv8270d.m	16may09a.b
he0531.d	10-MAY-2016 02:49	MS	1.00	HP18831	rv8270d.m	16may09a.b
he0532.d	10-MAY-2016 03:18	MSD	1.00	HP18831	rv8270d.m	16may09a.b
he0533.d	10-MAY-2016 03:47	Unknown	1.00	HP18831	rv8270d.m	16may09a.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
he0520.d	LIQUID	SV	RVDFTPP0826	16may09a	DFTPP	16may09a
he0521.d	LIQUID	SV	RVSTD1266	16may09a	SSTD7.5	16may09a
he0522.d	LIQUID	SV	SBLKWC128	16128WAC	SBLKWC128	16may09a
he0523.d	LIQUID	SV	128WCLCS	16128WAC	128WCLCS	16may09a
he0524.d	LIQUID	SV	SBLKWB124	16124WAB	SBLKWB124	16may09a
he0525.d	LIQUID	SV	124WBLCS	16124WAB	124WBLCS	16may09a
he0526.d	LIQUID	SV	124WBLCSD	16124WAB	124WBLCSD	16may09a
he0527.d	LIQUID	SV	8349468	16124WAB	N3130	16may09a
he0528.d	LIQUID	SV	8350677	16124WAB	33225	16may09a
he0529.d	LIQUID	SV	8352784	16120WAC	5WC23	16may09a
he0530.d	LIQUID	SV	8345657RE	16128WAC	R87S8RE	16may09a
he0531.d	LIQUID	SV	8345658RE	16128WAC	R87S8REMS	16may09a
he0532.d	LIQUID	SV	8345659RE	16128WAC	R87S8REMSD	16may09a
he0533.d	LIQUID	SV	8343712RE	16128WAC	B106ARE	16may09a

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
he0520.d	all.sub		201586614	201586615	200002637	201586613
he0521.d	all1.sub		201586699	201586615	201564247	201586698
he0522.d	15881.sub		201586760	201586615	201564247	201586698
he0523.d	15881.sub		201586776	201586615	201564247	201586698
he0524.d	14048.sub		201586796	201586615	201564247	201586698
he0525.d	14048.sub		201586821	201586615	201564247	201586698
he0526.d	14048.sub		201586842	201586615	201564247	201586698
he0527.d	14048.sub		201586861	201586615	201564247	201586698
he0528.d	14048.sub		201586881	201586615	201564247	201586698
he0529.d	19356.sub		201586897	201586615	201564247	201586698
he0530.d	15881.sub		201586915	201586615	201564247	201586698
he0531.d	15881.sub		201586931	201586615	201564247	201586698
he0532.d	15881.sub		201586948	201586615	201564247	201586698
he0533.d	15881.sub		201586961	201586615	201564247	201586698

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP18831.i/16may09a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #

Data File: /chem/HP18831.i/16apr15a.b/hd0630.d

Date : 15-APR-2016 17:25

Client ID: DFTPP12.5

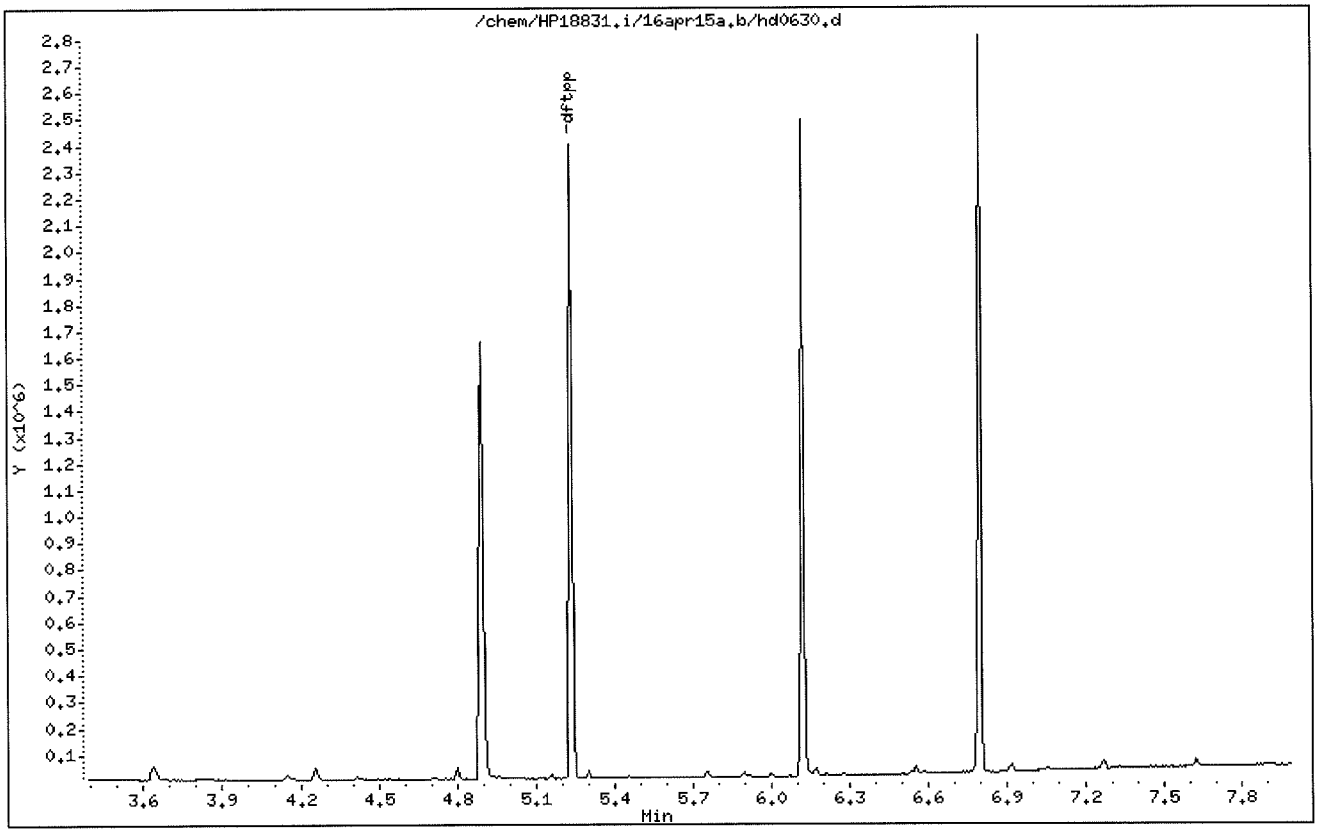
Instrument: HP18831.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: aap07680

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP18831.i/16apr15a.b/hd0630.d

Date : 15-APR-2016 17:25

Client ID: DFTPP12.5

Instrument: HP18831.i

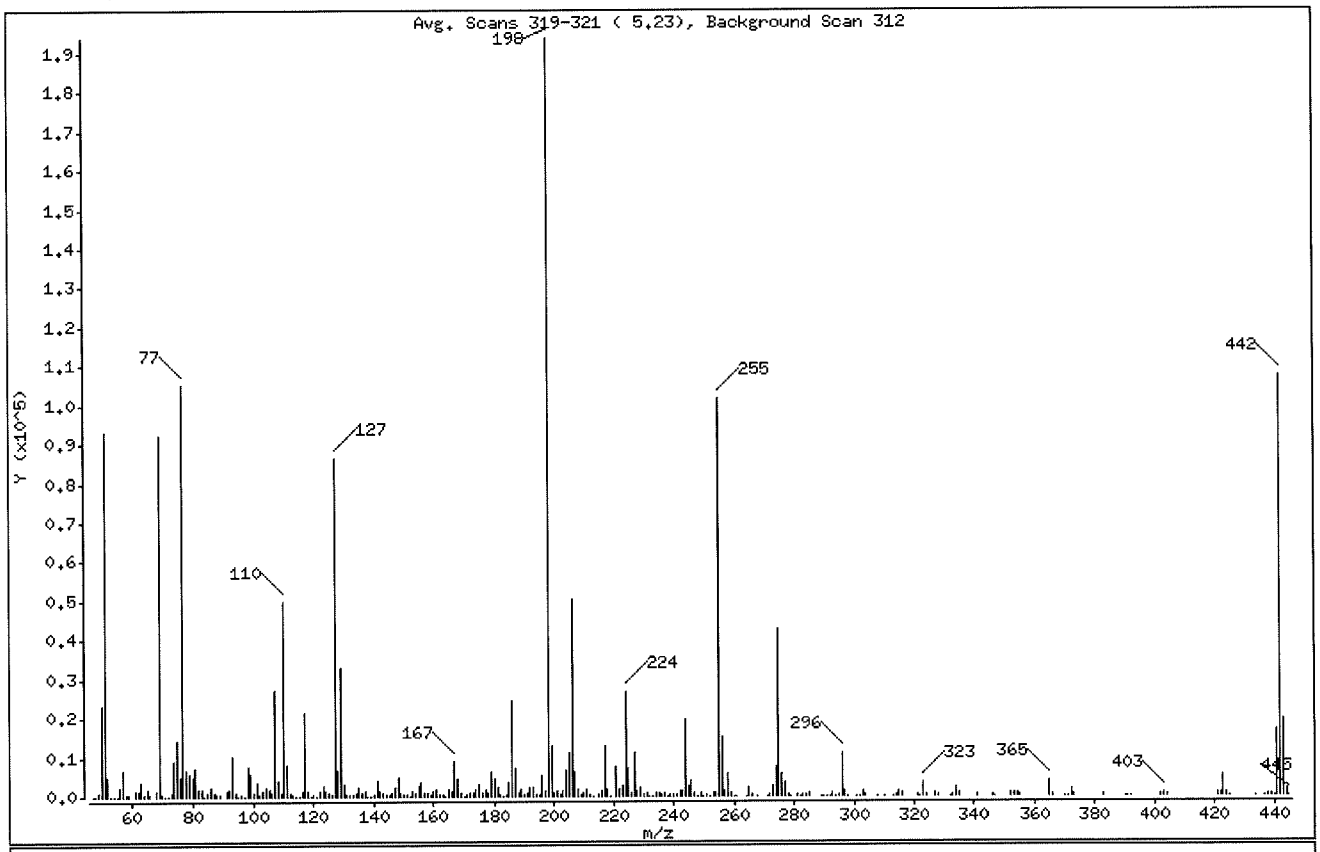
Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: aap07680

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.13
68	Less than 2.00% of mass 69	0.69 (1.46)
69	Mass 69 relative abundance	47.61
70	Less than 2.00% of mass 69	0.15 (0.31)
127	10.00 - 80.00% of mass 198	44.65
197	Less than 2.00% of mass 198	0.76
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 60.00% of mass 198	22.12
365	Greater than 1.00% of mass 198	2.07
441	0.01 - 24.00% of mass 442	8.63 (15.58)
442	50.00 - 99.99% of mass 198	55.36
443	15.00 - 24.00% of mass 442	10.15 (18.33)

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Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP18831.i/16apr15a.b/hd0630.d

Date : 15-APR-2016 17:25

Client ID: DFTPP12.5

Instrument: HP18831.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: aap07680

Column phase: DB-5MS

Column diameter: 0.18

Data File: hd0630.d

Spectrum: Avg. Scans 319-321 (5.23), Background Scan 312

Location of Maximum: 198.00

Number of points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	55	124.00	1166	198.00	193920	279.00	112
48.00	53	125.00	1105	199.00	12963	281.00	264
49.00	681	126.00	518	200.00	1017	282.00	91
50.00	23272	127.00	86608	201.00	1166	283.00	593
51.00	93352	128.00	6746	202.00	320	284.00	447
52.00	4726	129.00	32784	203.00	1252	285.00	719
53.00	126	130.00	2949	204.00	6528	289.00	124
54.00	20	131.00	619	205.00	11330	290.00	57
55.00	214	132.00	323	206.00	50192	291.00	89
56.00	2450	133.00	300	207.00	6250	292.00	109
57.00	6517	134.00	854	208.00	1710	293.00	903
58.00	374	135.00	2360	209.00	580	294.00	212
59.00	239	136.00	1040	210.00	770	295.00	313
61.00	1185	137.00	1435	211.00	1786	296.00	11027
62.00	1334	138.00	211	212.00	393	297.00	1506
63.00	3605	139.00	65	213.00	61	298.00	114
64.00	493	140.00	457	215.00	363	301.00	216
65.00	1805	141.00	3917	216.00	1164	302.00	207
66.00	282	142.00	1382	217.00	12829	303.00	1216
68.00	1345	143.00	890	218.00	1683	304.00	379
69.00	92352	144.00	332	219.00	102	308.00	213
70.00	282	145.00	231	221.00	7517	310.00	140
71.00	145	146.00	817	222.00	1808	313.00	114
72.00	106	147.00	2339	223.00	2819	314.00	540
73.00	890	148.00	4977	224.00	26768	315.00	1193
74.00	8816	149.00	1060	225.00	7161	316.00	676
75.00	14053	150.00	294	226.00	732	321.00	304
76.00	4935	151.00	665	227.00	11221	322.00	134
77.00	105136	152.00	209	228.00	1406	323.00	3355
78.00	6904	153.00	1319	229.00	2283	324.00	652
79.00	5716	154.00	998	230.00	486	327.00	683
80.00	4891	155.00	2507	231.00	961	328.00	390
81.00	6939	156.00	3670	232.00	96	332.00	210
82.00	1571	157.00	948	233.00	181	333.00	309
83.00	1786	158.00	814	234.00	692	334.00	2248

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Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP18831.i/16apr15a.b/hd0630.d

Date : 15-APR-2016 17:25

Client ID: DFTPP12.5

Instrument: HP18831.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: aap07680

Column phase: DB-5MS

Column diameter: 0.18

Data File: hd0630.d

Spectrum: Avg. Scans 319-321 (5.23), Background Scan 312

Location of Maximum: 198.00

Number of points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	25	159.00	624	235.00	871	335.00	675
85.00	1106	160.00	1422	236.00	434	341.00	437
86.00	2012	161.00	1942	237.00	1007	346.00	563
87.00	817	162.00	641	238.00	125	347.00	60
88.00	357	163.00	226	239.00	479	352.00	858
89.00	233	164.00	195	240.00	271	353.00	692
91.00	1511	165.00	1951	241.00	576	354.00	956
92.00	1832	166.00	1433	242.00	1409	355.00	268
93.00	10409	167.00	8990	243.00	1383	365.00	4024
94.00	884	168.00	4605	244.00	19720	366.00	631
95.00	212	169.00	767	245.00	2531	370.00	54
96.00	404	170.00	193	246.00	4195	371.00	195
97.00	193	171.00	431	247.00	804	372.00	1639
98.00	7703	172.00	903	248.00	215	373.00	234
99.00	5659	173.00	1016	249.00	685	383.00	306
100.00	700	174.00	1957	250.00	93	390.00	186
101.00	3476	175.00	3222	251.00	281	391.00	76
102.00	290	176.00	854	252.00	186	392.00	50
103.00	1224	177.00	1703	253.00	677	402.00	601
104.00	2299	178.00	681	254.00	877	403.00	960
105.00	1959	179.00	6277	255.00	101496	404.00	250
106.00	802	180.00	4283	256.00	15015	421.00	852
107.00	27408	181.00	2244	257.00	1167	422.00	762
108.00	4182	182.00	458	258.00	5574	423.00	5253
109.00	839	183.00	203	259.00	1008	424.00	1075
110.00	49760	184.00	532	260.00	93	425.00	57
111.00	7896	185.00	3501	261.00	157	434.00	55
112.00	1029	186.00	24624	264.00	177	437.00	126
113.00	380	187.00	7216	265.00	2295	438.00	426
114.00	55	188.00	702	266.00	428	439.00	249
115.00	128	189.00	1572	268.00	55	440.00	163
116.00	1364	190.00	243	271.00	128	441.00	16728
117.00	21320	191.00	915	272.00	403	442.00	107384
118.00	1482	192.00	2231	273.00	2596	443.00	19680
119.00	171	193.00	2250	274.00	7543	444.00	1824

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Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP18831.i/16apr15a.b/hd0630.d

Date : 15-APR-2016 17:25

Client ID: DFTPP12.5

Instrument: HP18831.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: aap07680

Column phase: DB-5MS

Column diameter: 0.18

Data File: hd0630.d

Spectrum: Avg. Scans 319-321 (5.23), Background Scan 312

Location of Maximum: 198.00

Number of points: 293

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	419	194.00	634	275.00	42896	445.00	63
121.00	114	195.00	439	276.00	5844		
122.00	1476	196.00	5456	277.00	3414		
123.00	2799	197.00	1482	278.00	583		

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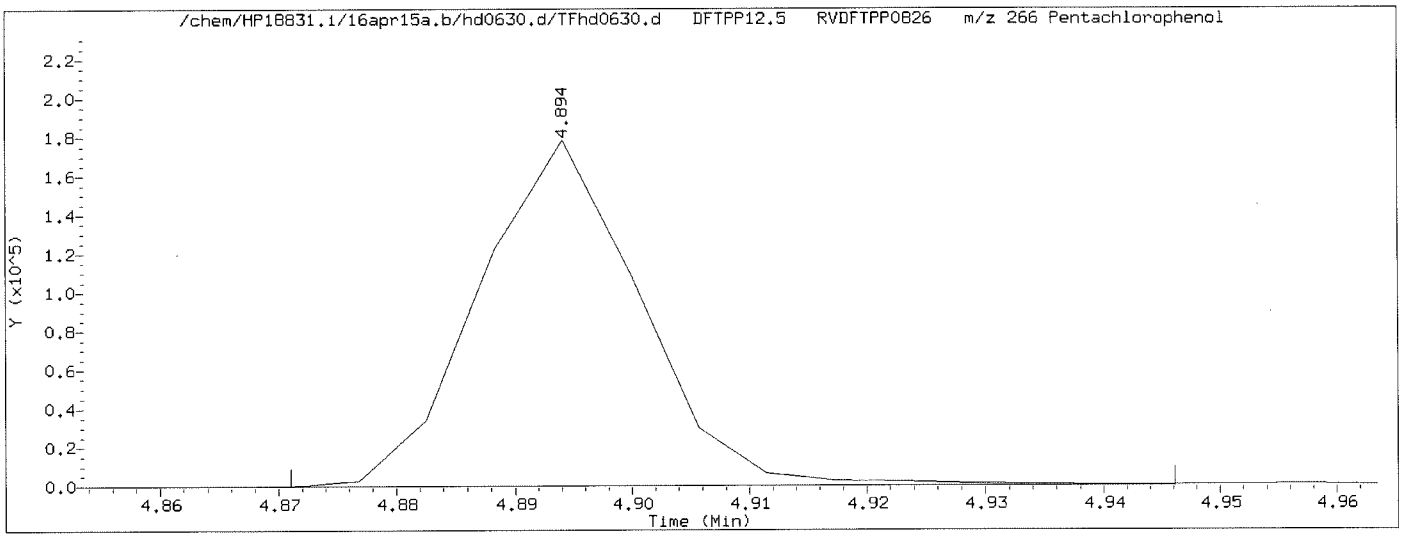
Target 3.5 esignature user ID: hbz01996

Assessment of GC Column Performance and Injection Port Inertness for

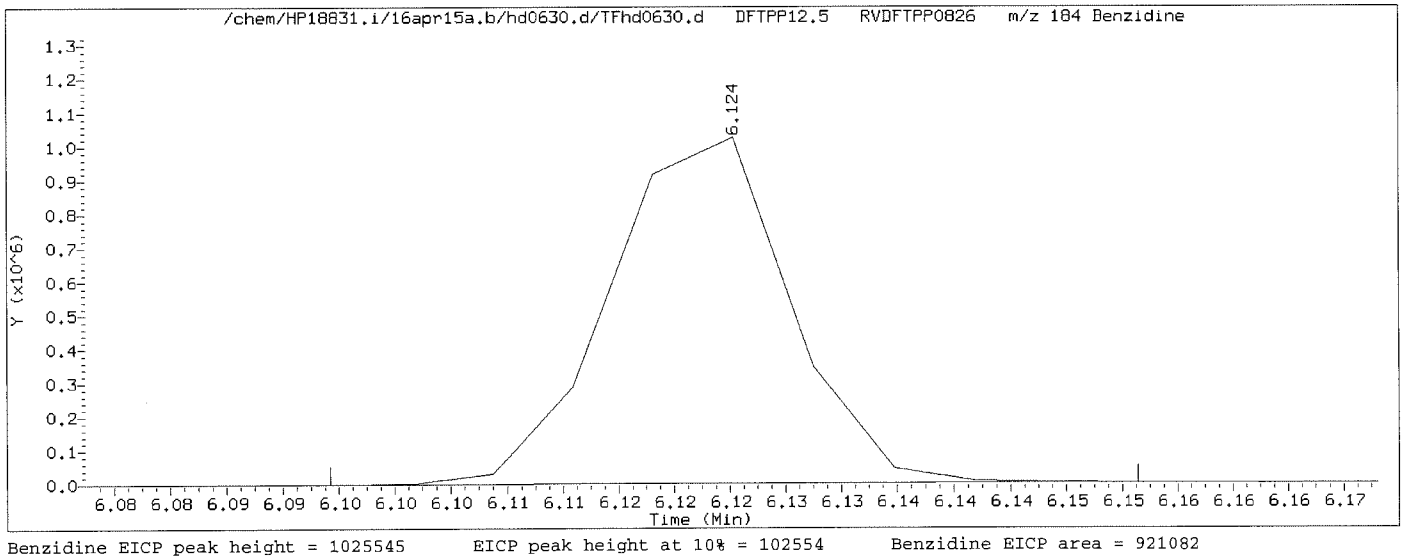
Instrument ID: HP18831.i Injection Date: 15-APR-2016 17:25 Operator: aap07680



Pentachlorophenol EICP peak height = 178624 EICP peak height at 10% = 17862 Pentachlorophenol EICP area = 170584

Pentachlorophenol EICP peak apex (min.) = 4.894
RT at 10% of front half of EICP (min.) = 4.880 'Front' peak width (min.) = 0.0144833333
RT at 10% of back half of EICP (min.) = 4.909 'Tailing' peak width (min.) = 0.0145500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0145500000}{0.0144833333} = 1.005$



Benzidine EICP peak height = 1025545 EICP peak height at 10% = 102554 Benzidine EICP area = 921082

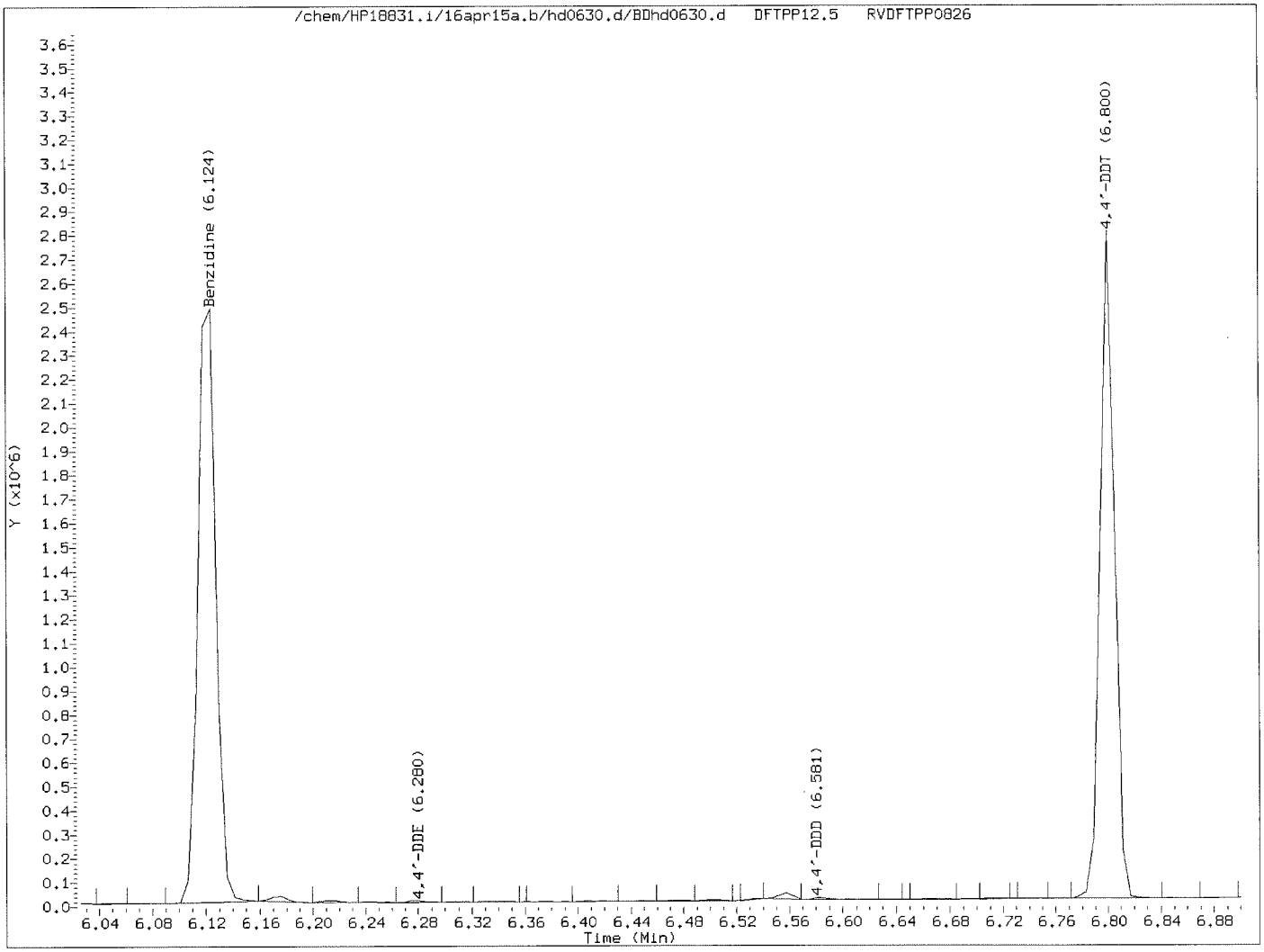
Benzidine EICP peak apex (min.) = 6.124
RT at 10% of front half of EICP (min.) = 6.109 'Front' peak width (min.) = 0.0156833333
RT at 10% of back half of EICP (min.) = 6.135 'Tailing' peak width (min.) = 0.0104333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0104333333}{0.0156833333} = 0.665$

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP18831.i Injection Date: 15-APR-2016 17:25 Operator: aap07680



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{7736 + 8135}{7736 + 8135 + 2168830} \times 100 = 0.7$$

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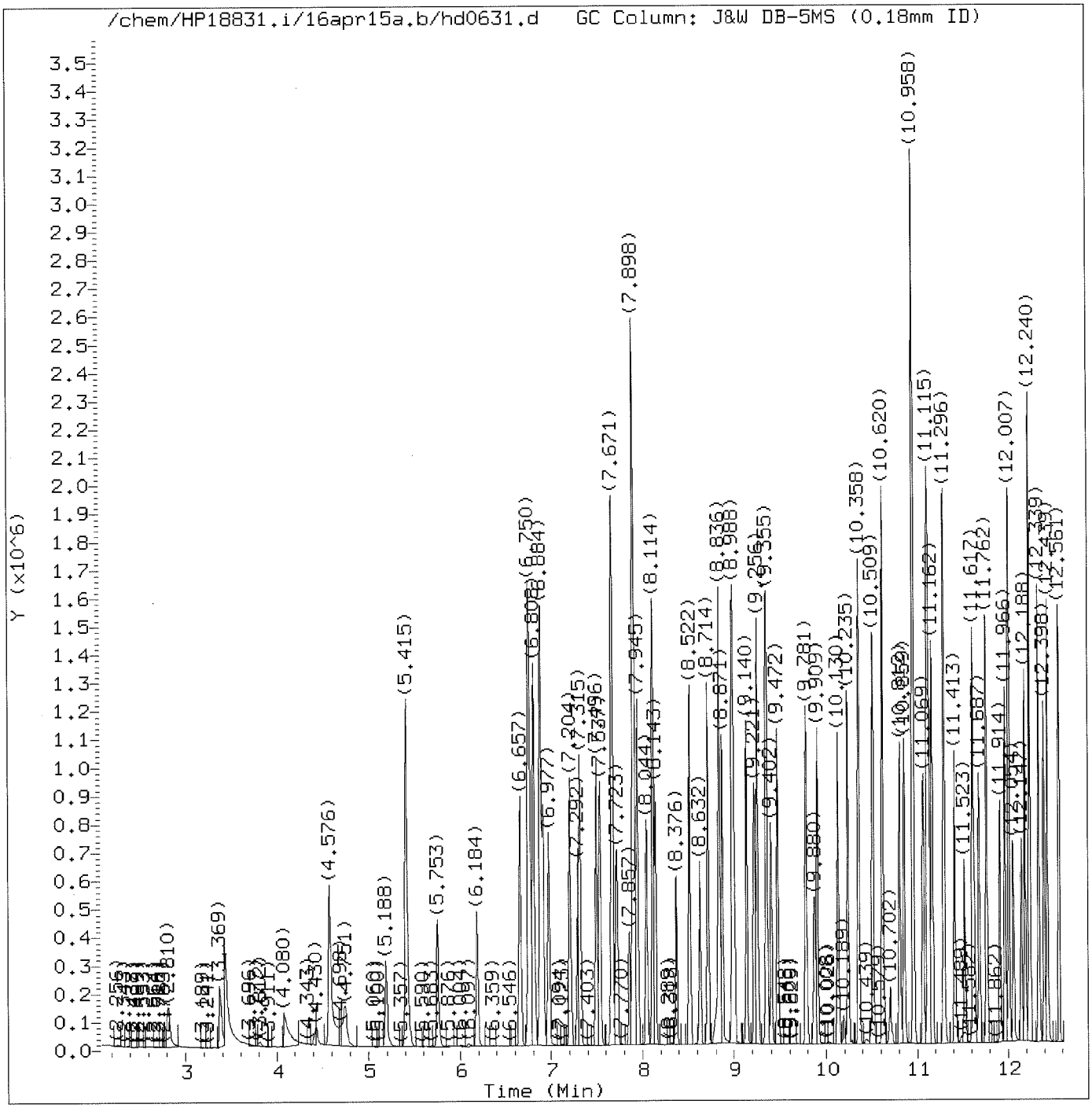
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

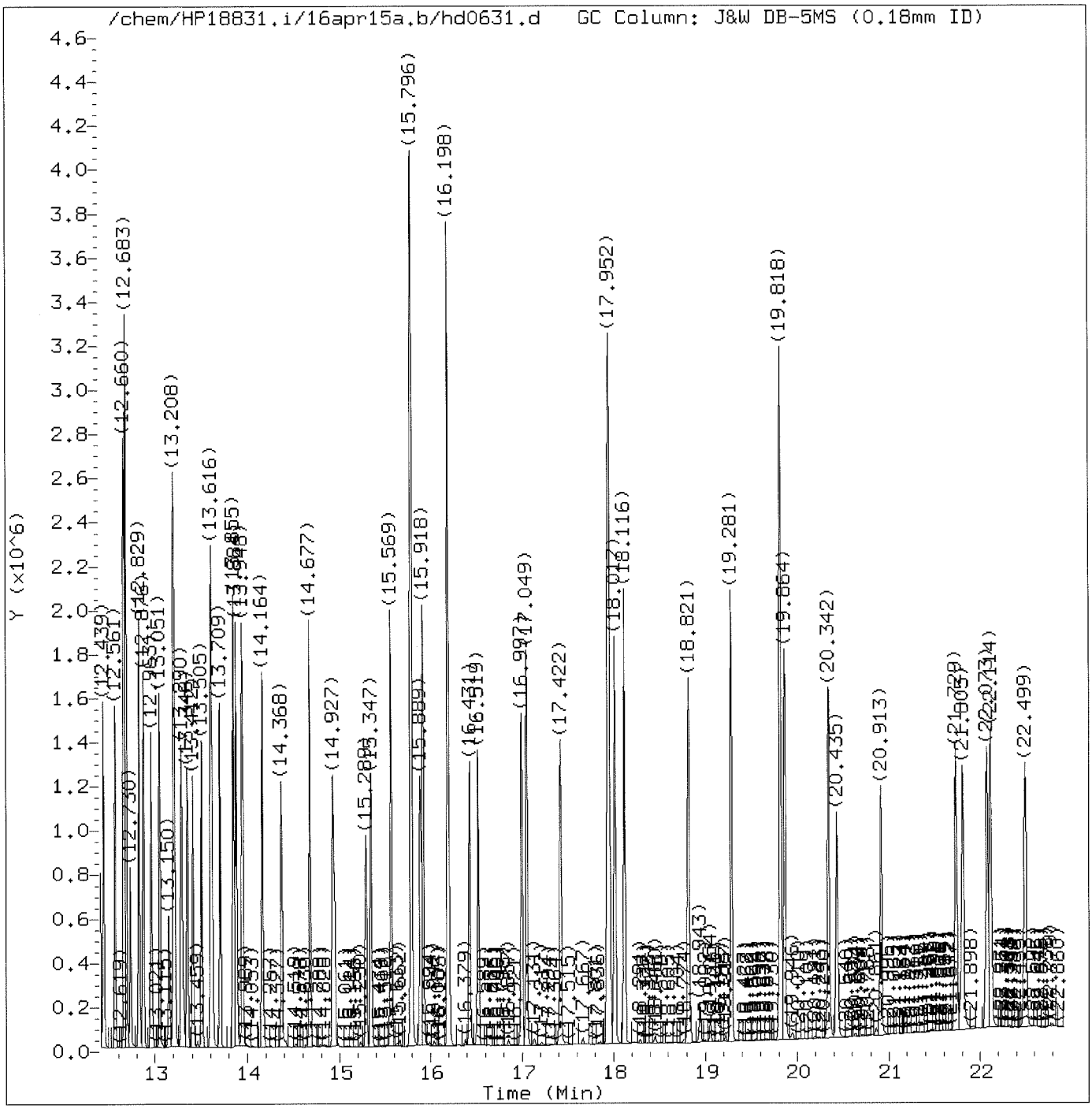
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.816	88	143646M	7.702
4) N-Nitrosodimethylamine	(1)	3.369	74	234201	7.703
5) Pyridine	(1)	3.428	79	369946	7.559
7) 2-Picoline	(1)	4.576	93	399521	7.641
8) N-Nitrosomethylethylamine	(1)	4.751	88	157861	7.662
9) Methyl methanesulfonate	(1)	5.188	80	181781	7.643
11)$2-Fluorophenol	(1)	5.415	112	611613	15.378
42) Total Cresols	(1)			607429	15.602
13) N-Nitrosodiethylamine	(1)	5.753	102	155001	7.699
15) Ethyl methanesulfonate	(1)	6.190	109	160064	7.852
16) Benzaldehyde	(1)	6.657	77	317951	8.294
17)$Phenol-d6	(1)	6.750	99	804977	15.546
18) Phenol	(1)	6.767	94	443287	7.636
19) Aniline	(1)	6.808	93	560001	7.693
20) a-methylstyrene	(1)	6.890	118	322192	7.659
22) bis(2-Chloroethyl)ether	(1)	6.913	93	358861	7.697
23) 2-Chlorophenol	(1)	6.977	128	295344	7.685
24) 1,3-Dichlorobenzene	(1)	7.204	146	311189	7.572
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	135936	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	317674	7.554
97) Isosafrole	(3)			240114	7.603
27) Benzyl alcohol	(1)	7.496	108	212216	7.733
28) 1,2-Dichlorobenzene	(1)	7.537	146	302048	7.591
31) 2-Methylphenol	(1)	7.665	108	296388	7.781
30) Indene	(1)	7.671	115	539068	7.647
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	541504	7.711
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	541504	7.711
35) N-Nitrosopyrrolidine	(1)	7.857	100	163117	7.890
36) Acetophenone	(1)	7.892	105	479377	7.707
37) 4-Methylphenol	(1)	7.898	108	311041	7.821
38) N-Nitroso-di-n-propylamine	(1)	7.910	70	279835	7.792
39) N-Nitrosomorpholine	(1)	7.921	56	231832	7.760
40) o-Toluidine	(1)	7.945	106	520023	7.653
43) Hexachloroethane	(1)	8.044	117	137279	7.710
120) 2,4_2,6-Dinitrotoluenes	(3)			321785	15.337
44)$Nitrobenzene-d5	(2)	8.114	82	791650	15.403
45) Nitrobenzene	(2)	8.143	77	412757	7.693
48) N-Nitrosopiperidine	(2)	8.376	114	149625	7.820
50) Isophorone	(2)	8.522	82	700546	7.842
51) 2-Nitrophenol	(2)	8.632	139	152366	7.699

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53)	2,4-Dimethylphenol	(2)	8.714	107	329069	7.809
146)	Diallate trans/cis	(4)			315831	7.747
57)	O,O,O-Triethylphosphorothioate	(2)	8.836	198	161850	7.628
56)	Benzoic acid	(2)	8.848	105	296652M	9.876
55)	bis(2-Chloroethoxy)methane	(2)	8.871	93	431378	7.593
59)	1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	493004	7.568
60)	2,4-Dichlorophenol	(2)	9.000	162	243370	7.863
62)	1,2,4-Trichlorobenzene	(2)	9.140	180	287326	7.683
65)	*Naphthalene-d8	(2)	9.221	136	520953	5.000
66)	Naphthalene	(2)	9.256	128	840310	7.588
67)	4-Chloroaniline	(2)	9.349	127	355552	7.805
68)	2,6-Dichlorophenol	(2)	9.361	162	236730	7.775
69)	Hexachloropropene	(2)	9.402	213	183304	7.763
71)	Hexachlorobutadiene	(2)	9.472	225	171303	7.642
75)	Quinoline	(2)	9.781	129	535935	7.765
76)	Caprolactam	(2)	9.880	113	81134	7.839
77)	N-Nitrosodi-n-butylamine	(2)	9.909	84	268493	7.215
80)	4-Chloro-3-methylphenol	(2)	10.130	107	283841	7.945
82)	Safrole	(2)	10.241	162	216868	7.674
83)	2-Methylnaphthalene	(2)	10.358	142	569891	7.710
84)	1-Methylnaphthalene	(2)	10.515	142	521649	7.691
85)	Hexachlorocyclopentadiene	(3)	10.620	237	187457	7.924
86)	1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	292903	7.472
88)	cis-Isosafrole	(3)	10.702	162	39101	1.277
90)	2,4,6-Trichlorophenol	(3)	10.812	196	195506	7.890
92)	2,4,5-Trichlorophenol	(3)	10.859	196	204915	7.857
93)	$2-Fluorobiphenyl	(3)	10.964	172	1283339	15.125
94)	trans-Isosafrole	(3)	11.069	162	201013	6.326
95)	1,1'-Biphenyl	(3)	11.115	154	680256	7.490
96)	2-Chloronaphthalene	(3)	11.133	162	560669	7.773
98)	1-Chloronaphthalene	(3)	11.162	162	495287	7.366
99)	Diphenyl ether	(3)	11.290	170	364278	7.519
100)	2-Nitroaniline	(3)	11.302	138	169222	8.001
104)	1,4-Naphthoquinone	(3)	11.419	158	228137	7.739
105)	1,4-Dinitrobenzene	(3)	11.529	168	91950	7.747
106)	Dimethylphthalate	(3)	11.617	163	610230	7.513
107)	1,3-Dinitrobenzene	(3)	11.634	168	96351	7.517
108)	2,6-Dinitrotoluene	(3)	11.687	165	138093	7.907
109)	Acenaphthylene	(3)	11.768	152	809511	7.734
112)	3-Nitroaniline	(3)	11.914	138	140354	7.748

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.966	164	299858	5.000
114) Acenaphthene	(3)	12.013	153	537256	7.557
115) 2,4-Dinitrophenol	(3)	12.060	184	111446	9.249
116) 4-Nitrophenol	(3)	12.147	109	95301	7.214
117) Pentachlorobenzene	(3)	12.188	250	236937	7.559
118) 2,4-Dinitrotoluene	(3)	12.235	165	183692	7.429
119) Dibenzofuran	(3)	12.240	168	743536	7.636
121) 1-Naphthylamine	(3)	12.339	143	524231	7.223
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	153031	7.543
123) 2-Naphthylamine	(3)	12.439	143	512456	7.226
124) Diethylphthalate	(3)	12.561	149	595032	7.482
125) Thionazin	(3)	12.654	107	100816	7.296
126) Fluorene	(3)	12.666	166	585627	7.609
128) 5-Nitro-o-toluidine	(3)	12.683	152	163778	7.898
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	297000	7.463
129) 4-Nitroaniline	(3)	12.689	138	154959	8.154
130) 4,6-Dinitro-2-methylphenol	(4)	12.730	198	112729	7.162
132) NDPA as diphenylamine	(4)	12.829	169	491921	7.705
131) N-Nitrosodiphenylamine	(4)	12.829	169	491921	7.705
134) 1,2-Diphenylhydrazine	(4)	12.876	77	743481	7.709
135)$2,4,6-Tribromophenol	(3)	12.963	330	154869	15.453
137) Tetraethyldithiopyrophosphate	(4)	13.051	97	117549	7.816
139) 1,3,5-Trinitrobenzene	(4)	13.155	213	74002	7.374
140) Diallate (peak 1)	(4)	13.202	86	263450	6.435
141) Phorate	(4)	13.208	75	475421	7.848
142) Phenacetin	(4)	13.220	108	350230	8.057
143) 4-Bromophenyl-phenylether	(4)	13.290	248	167721	7.578
144) Diallate (peak 2)	(4)	13.307	86	52381	1.312
145) Hexachlorobenzene	(4)	13.348	284	175497	7.544
147) Dimethoate	(4)	13.412	87	309103	7.856
148) Atrazine	(4)	13.511	200	183713	7.968
149) Pentachlorophenol	(4)	13.604	266	120552	7.886
150) 4-Aminobiphenyl	(4)	13.616	169	497748	8.119
151) Pentachloronitrobenzene	(4)	13.622	237	84362	7.565
152) Pronamide	(4)	13.709	173	294852	8.024
153)*Phenanthrene-d10	(4)	13.849	188	567439	5.000
154) Dinoseb	(4)	13.855	211	178111	7.605
155) Phenanthrene	(4)	13.884	178	881689	7.625
157) Anthracene	(4)	13.948	178	885976	7.845
163) Carbazole	(4)	14.164	167	855706	7.900

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:17.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.368	109	239618	7.970
165) Di-n-butylphthalate	(4)	14.677	149	1075425	7.848
167) Parathion	(4)	14.922	109	144715	7.987
168) 4-Nitroquinoline-1-oxide	(4)	14.945	190	97734	7.133
222) Total PAHs	(6)			15697287	140.870
169) Octachlorostyrene	(4)	15.289	308	69757	7.717
171) Isodrin	(4)	15.347	193	108218	7.651
173) Fluoranthene	(4)	15.569	202	1043678	7.982
174) Benzidine	(5)	15.796	184	2236040	23.079
175)*Pyrene-d10	(5)	15.889	212	705105	5.000
177) Pyrene	(5)	15.918	202	1097769	7.547
179)$Terphenyl-d14	(5)	16.198	244	1526552	15.446
182) p-Dimethylaminoazobenzene	(5)	16.431	225	193235	8.020
185) Chlorobenzilate	(5)	16.519	139	339180	7.782
187) 3,3'-Dimethylbenzidine	(5)	16.997	212	742082	8.394
188) Butylbenzylphthalate	(5)	17.049	149	498887	7.995
191) 2-Acetylaminofluorene	(5)	17.422	181	410051	7.778
193) 3,3'-Dichlorobenzidine	(5)	17.935	252	398798	8.017
195) Benzo(a)anthracene	(5)	17.952	228	1071165	8.168
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.952	231	216381	7.898
196) Chrysene	(5)	18.017	228	992650	8.023
199) bis(2-Ethylhexyl)phthalate	(5)	18.122	149	714752	8.052
203) 6-Methylchrysene	(5)	18.821	242	702537	7.934
205) Di-n-octylphthalate	(6)	19.281	149	1243571	7.684
206) Benzo(b)fluoranthene	(6)	19.818	252	1037150	7.779
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.818	256	444893	7.875
208) Benzo(k)fluoranthene	(6)	19.864	252	1010559	7.712
211) Benzo(a)pyrene	(6)	20.348	252	954477	7.821
213)*Perylene-d12	(6)	20.435	264	518255	5.000
215) 3-Methylcholanthrene	(6)	20.913	268	399565	7.970
217) Dibenz(a,h)acridine	(6)	21.729	279	776011	7.789
218) Dibenz(a,j)acridine	(6)	21.805	279	780436	7.791
219) Indeno(1,2,3-cd)pyrene	(6)	22.073	276	1068448	8.204
220) Dibenz(a,h)anthracene	(6)	22.114	278	902225	8.280
221) Benzo(g,h,i)perylene	(6)	22.499	276	887257	7.994

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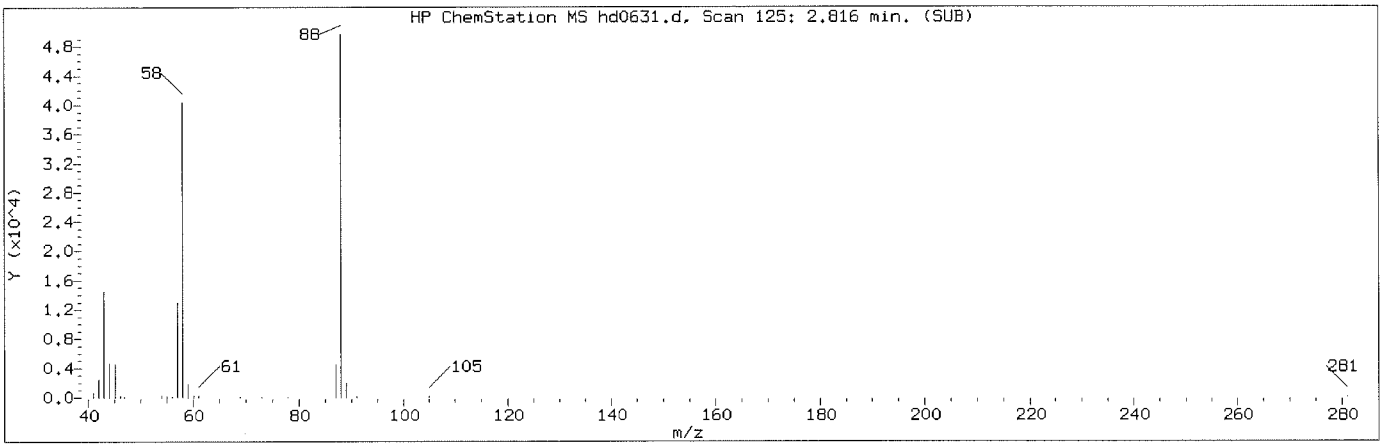
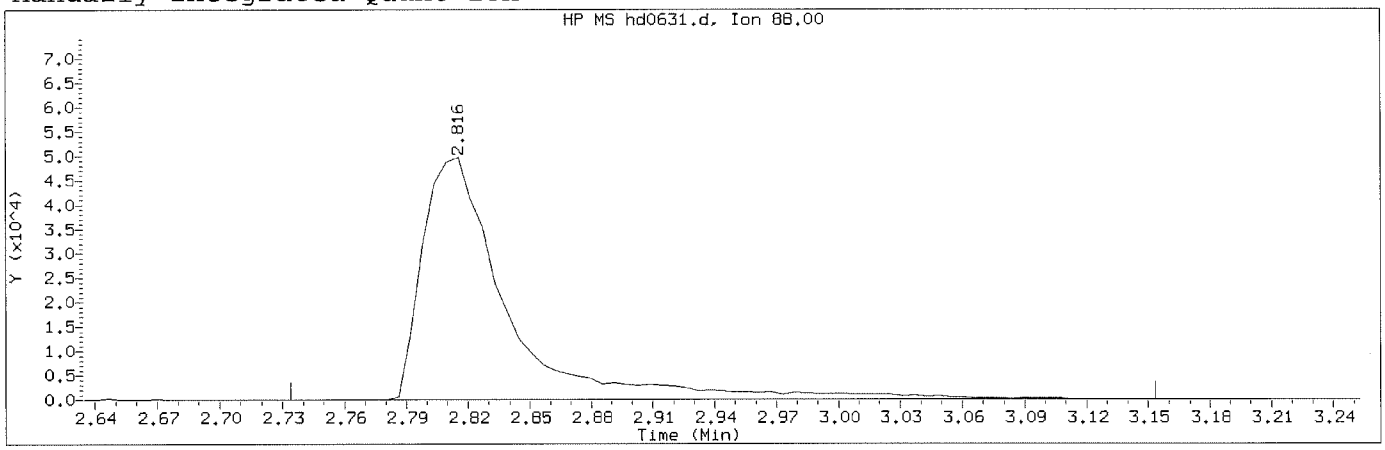
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 125
Retention Time (minutes) : 2.816
Quant Ion : 88.00
Area (flag) : 143646M
On-Column Amount (ng/ul) : 7.7023
Integration start scan : 110 Integration stop scan: 182
Y at integration start : 0 Y at integration end: 0

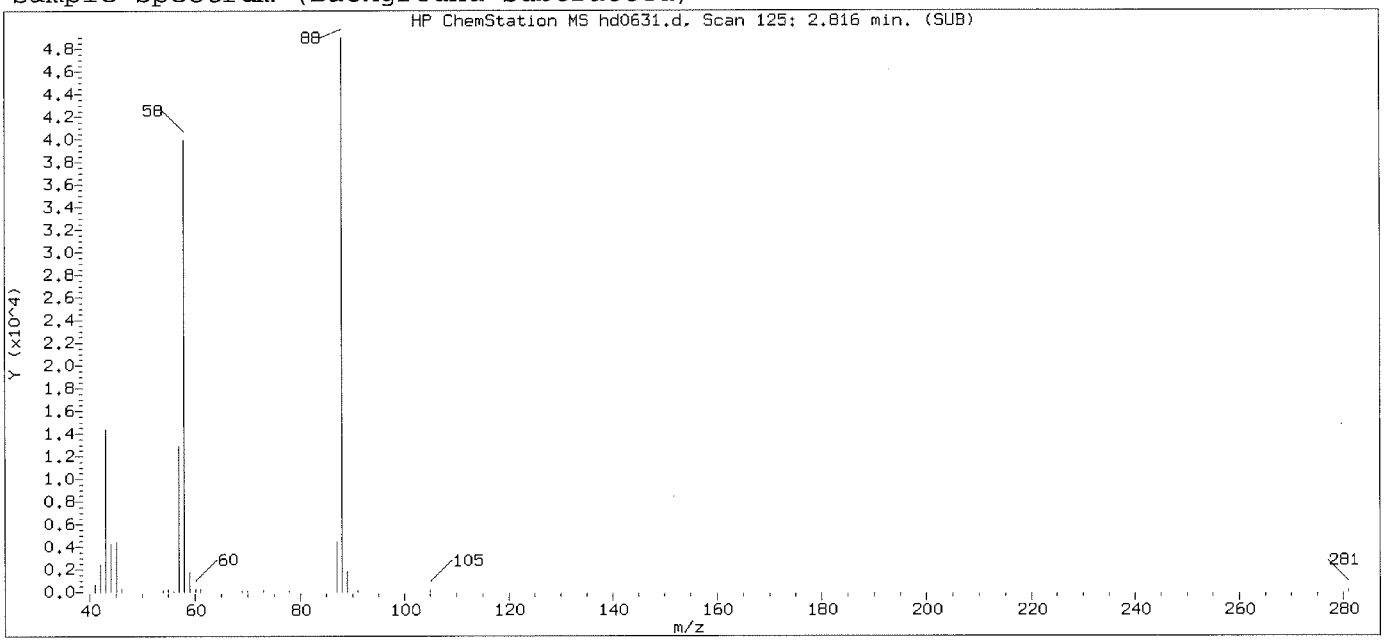
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:17.
Target 3.5 signature user ID: hbz01996

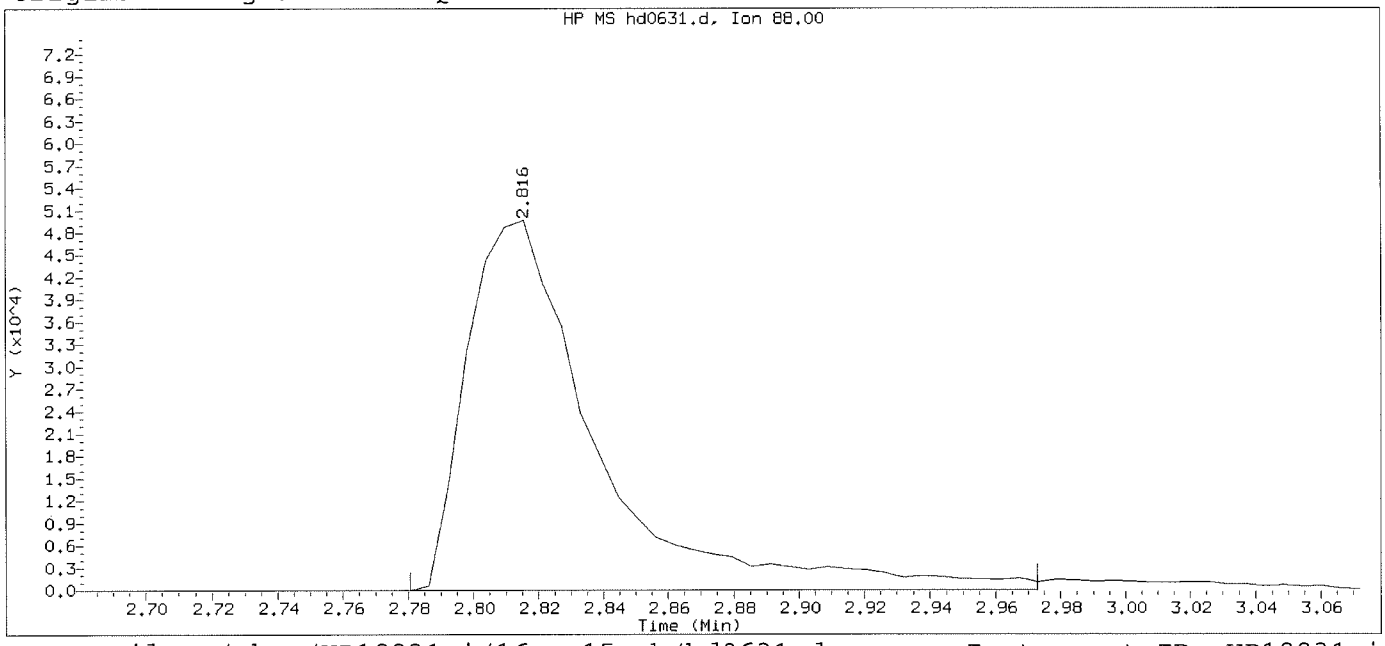
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:24
Date, time and analyst ID of latest file update: 16-Apr-2016 12:24 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 125		
Retention Time (minutes)	: 2.816		
Quant Ion	: 88.00		
Area	: 137853		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 118	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	0

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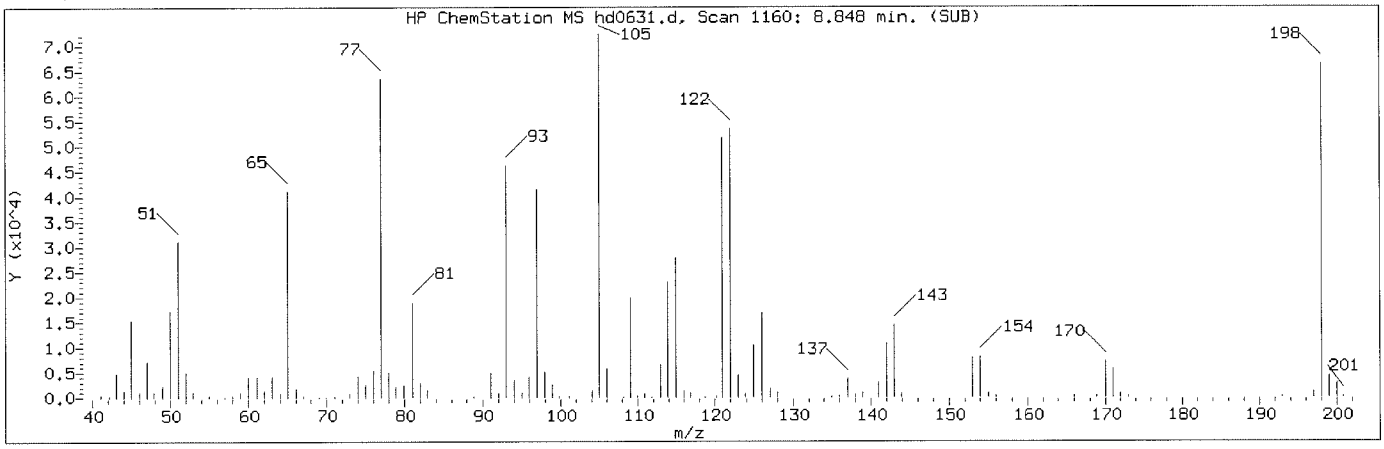
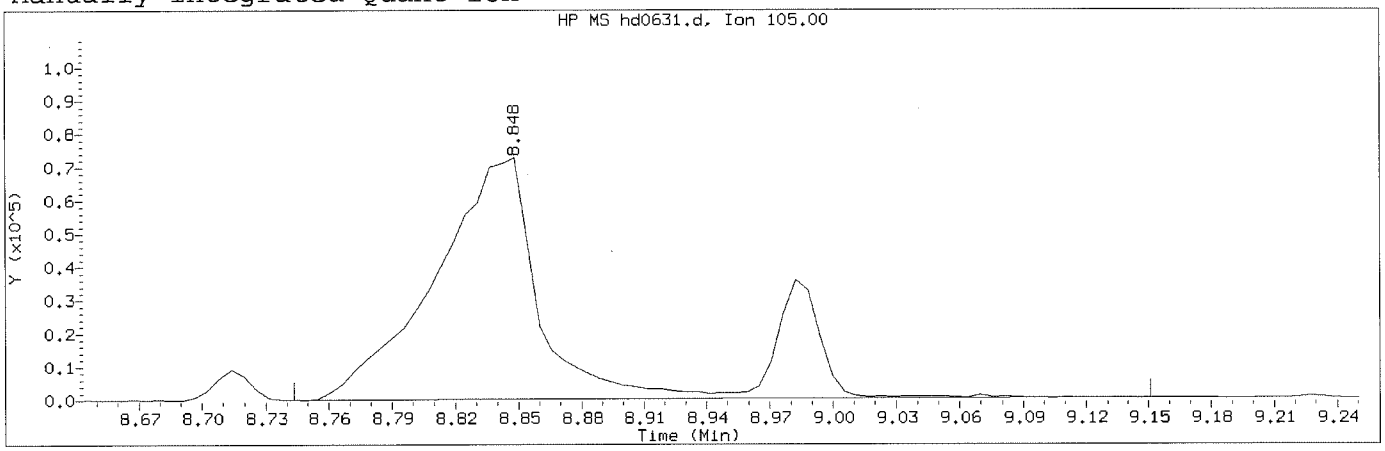
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1160		
Retention Time (minutes)	: 8.848		
Quant Ion	: 105.00		
Area (flag)	: 296652M		
On-Column Amount (ng/ul)	: 9.8763		
Integration start scan	: 1141	Integration stop scan:	1211
Y at integration start	: 178	Y at integration end:	777

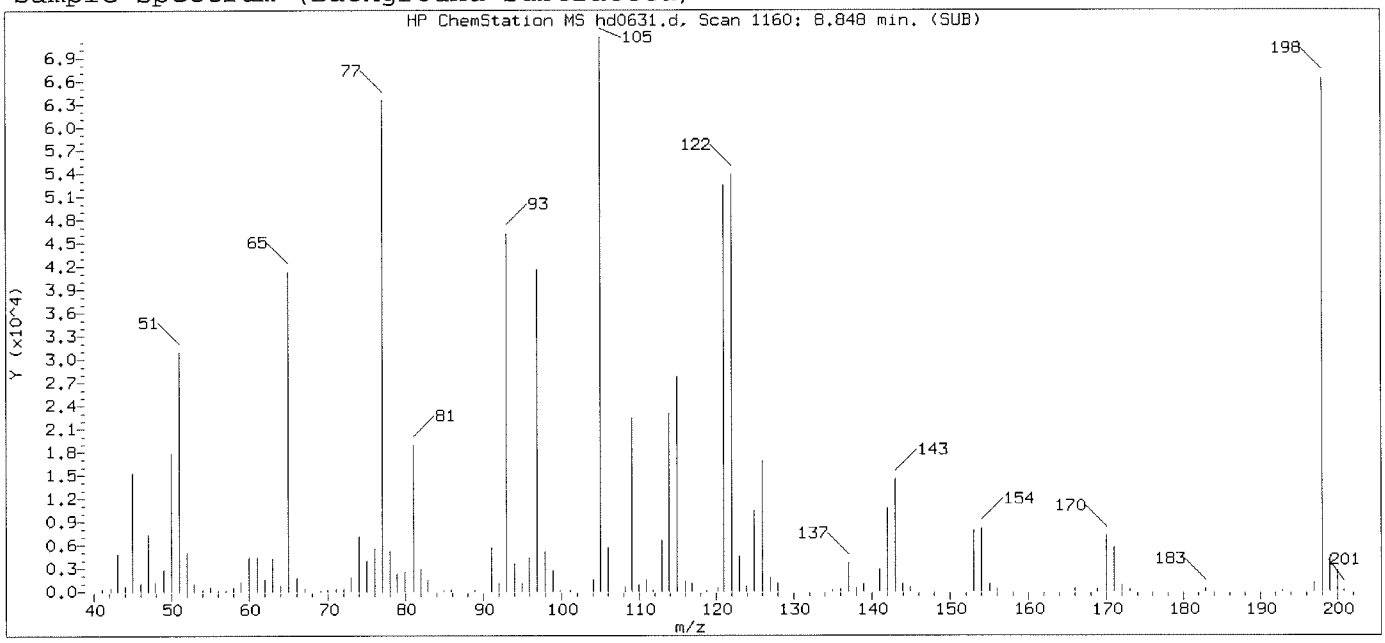
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:17. Target 3.5 esignature user ID: hbz01996

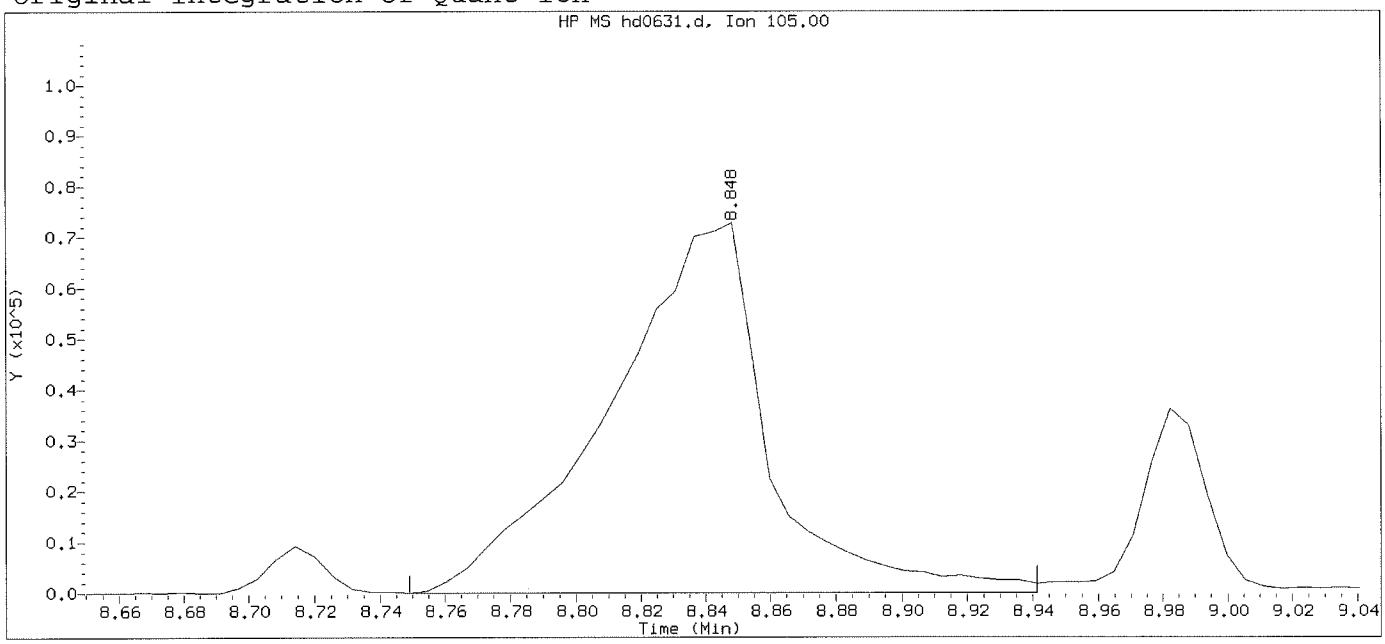
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0631.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 17:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:24
Date, time and analyst ID of latest file update: 16-Apr-2016 12:24 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1160		
Retention Time (minutes)	: 8.848		
Quant Ion	: 105.00		
Area	: 249561		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 1142	Integration stop scan:	1175
Y at integration start	: 0	Y at integration end:	0

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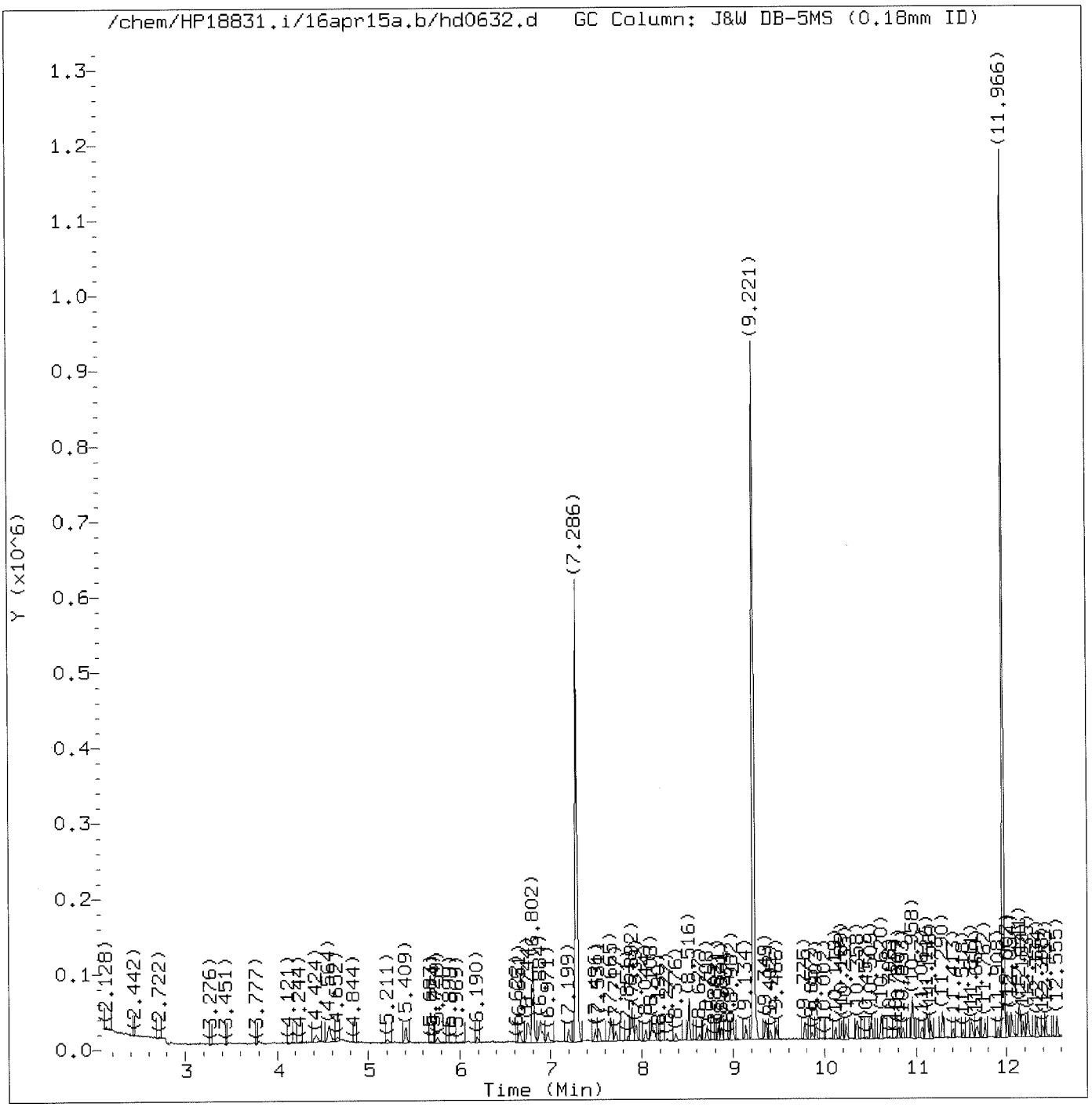
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

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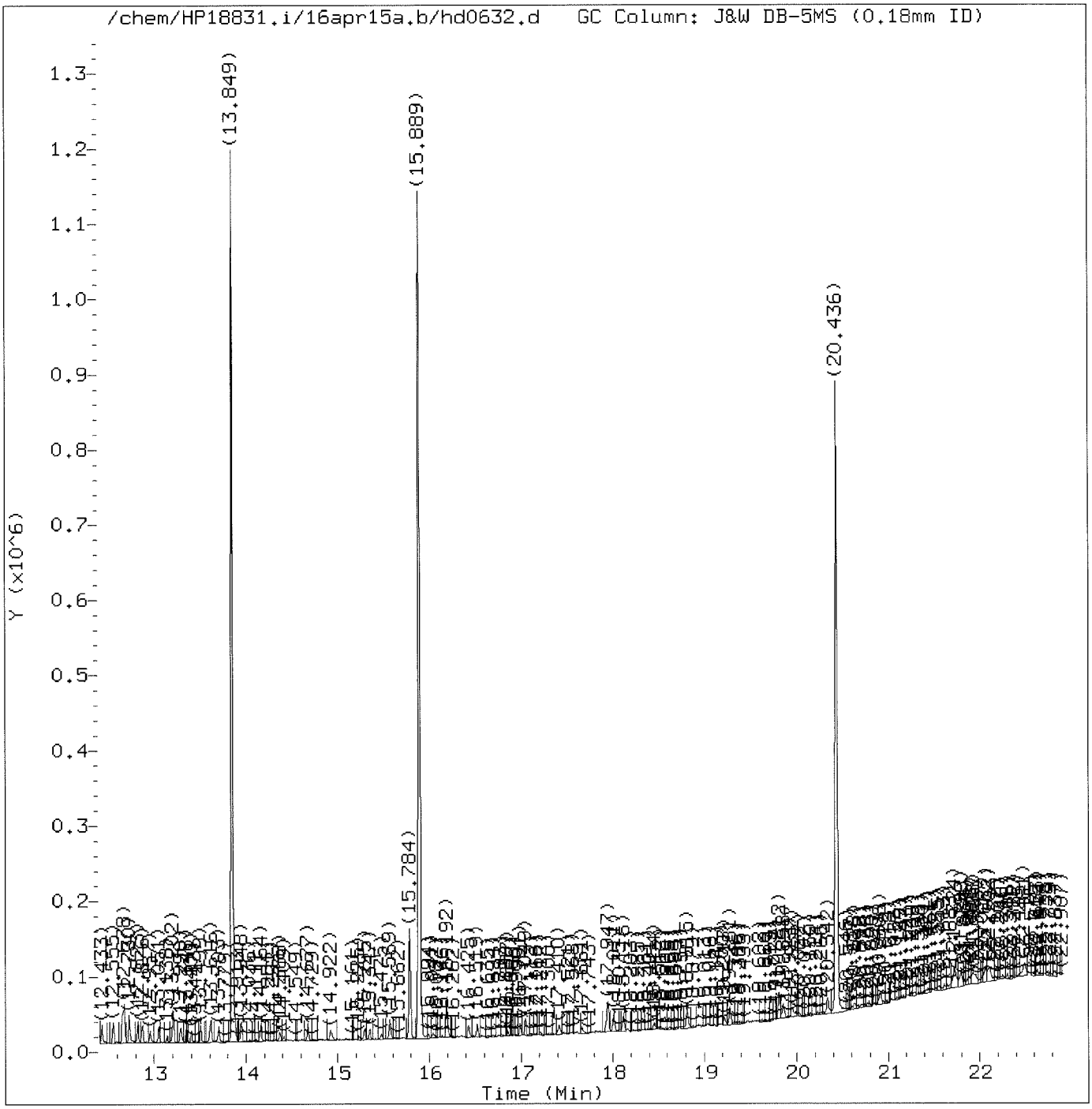
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.856	88	1947	0.108
4) N-Nitrosodimethylamine	(1)	3.497	74	2755	0.094
7) 2-Picoline	(1)	4.646	93	3191	0.063
9) Methyl methanesulfonate	(1)	5.205	80	2340	0.102
11)$2-Fluorophenol	(1)	5.409	112	8929	0.232
42) Total Cresols	(1)			9597	0.255
13) N-Nitrosodiethylamine	(1)	5.765	102	2596	0.133
15) Ethyl methanesulfonate	(1)	6.196	109	2546	0.129
16) Benzaldehyde	(1)	6.657	77	5845	0.158
17)$Phenol-d6	(1)	6.744	99	12302	0.246
18) Phenol	(1)	6.762	94	7439	0.132
19) Aniline	(1)	6.808	93	8564	0.122
20) a-methylstyrene	(1)	6.884	118	5109	0.126
22) bis(2-Chloroethyl)ether	(1)	6.913	93	5336	0.118
23) 2-Chlorophenol	(1)	6.971	128	4241	0.114
24) 1,3-Dichlorobenzene	(1)	7.199	146	4634	0.117
25)*1,4-Dichlorobenzene-d4	(1)	7.286	152	131489	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	5210	0.128
97) Isosafrole	(3)			3472	0.115
27) Benzyl alcohol	(1)	7.496	108	3107	0.117
28) 1,2-Dichlorobenzene	(1)	7.531	146	5386	0.140
31) 2-Methylphenol	(1)	7.659	108	4504	0.122
30) Indene	(1)	7.671	115	8667	0.127
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	8527	0.126
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	8527	0.126
35) N-Nitrosopyrrolidine	(1)	7.857	100	2151	0.108
36) Acetophenone	(1)	7.886	105	8167	0.136
37) 4-Methylphenol	(1)	7.892	108	5093	0.132
38) N-Nitroso-di-n-propylamine	(1)	7.898	70	4505	0.130
39) N-Nitrosomorpholine	(1)	7.916	56	3342	0.116
40) o-Toluidine	(1)	7.939	106	7895	0.120
43) Hexachloroethane	(1)	8.044	117	2181	0.127
120) 2,4_2,6-Dinitrotoluenes	(3)			3909	0.196
44)$Nitrobenzene-d5	(2)	8.108	82	12348	0.249
45) Nitrobenzene	(2)	8.137	77	6397	0.124
48) N-Nitrosopiperidine	(2)	8.370	114	2304	0.125
50) Isophorone	(2)	8.516	82	10520	0.122
51) 2-Nitrophenol	(2)	8.633	139	2293	0.120
53) 2,4-Dimethylphenol	(2)	8.708	107	4949	0.122
146) Diallate trans/cis	(4)			8050	0.216

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$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
57)	O,O,O-Triethylphosphorothioate	(2)	8.837	198	2471	0.121
55)	bis(2-Chloroethoxy)methane	(2)	8.871	93	6747	0.123
56)	Benzoic acid	(2)	8.982	105	1037	0.036
59)	1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	8077	0.129
60)	2,4-Dichlorophenol	(2)	9.000	162	3583	0.120
62)	1,2,4-Trichlorobenzene	(2)	9.134	180	4461	0.124
65)	*Naphthalene-d8	(2)	9.221	136	502477	5.000
66)	Naphthalene	(2)	9.250	128	13682	0.128
67)	4-Chloroaniline	(2)	9.344	127	5457	0.124
68)	2,6-Dichlorophenol	(2)	9.355	162	3732	0.127
69)	Hexachloropropene	(2)	9.402	213	2714	0.119
71)	Hexachlorobutadiene	(2)	9.472	225	2782	0.129
75)	Quinoline	(2)	9.781	129	8132	0.122
77)	N-Nitrosodi-n-butylamine	(2)	9.903	84	3987	0.111
80)	4-Chloro-3-methylphenol	(2)	10.119	107	3867	0.112
82)	Safrole	(2)	10.235	162	3126	0.115
83)	2-Methylnaphthalene	(2)	10.358	142	8752	0.123
84)	1-Methylnaphthalene	(2)	10.509	142	7956	0.122
85)	Hexachlorocyclopentadiene	(3)	10.620	237	2823	0.125
86)	1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	4861	0.130
88)	cis-Isosafrole	(3)	10.702	162	421	0.014
90)	2,4,6-Trichlorophenol	(3)	10.807	196	2344	0.099
92)	2,4,5-Trichlorophenol	(3)	10.853	196	2719	0.109
93)	$2-Fluorobiphenyl	(3)	10.958	172	20554	0.254
94)	trans-Isosafrole	(3)	11.063	162	3051	0.101
95)	1,1'-Biphenyl	(3)	11.110	154	10390	0.120
96)	2-Chloronaphthalene	(3)	11.127	162	8606	0.125
98)	1-Chloronaphthalene	(3)	11.156	162	7911	0.123
99)	Diphenyl ether	(3)	11.290	170	5917	0.128
100)	2-Nitroaniline	(3)	11.296	138	2215	0.110
104)	1,4-Naphthoquinone	(3)	11.413	158	2953	0.105
106)	Dimethylphthalate	(3)	11.611	163	8967	0.116
108)	2,6-Dinitrotoluene	(3)	11.681	165	1716	0.103
109)	Acenaphthylene	(3)	11.762	152	11706	0.117
112)	3-Nitroaniline	(3)	11.908	138	1726	0.100
113)	*Acenaphthene-d10	(3)	11.966	164	286474	5.000
114)	Acenaphthene	(3)	12.007	153	8487	0.125
115)	2,4-Dinitrophenol	(3)	12.054	184	4485	0.390
116)	4-Nitrophenol	(3)	12.141	109	5794	0.459
117)	Pentachlorobenzene	(3)	12.182	250	3763	0.126

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$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118) 2,4-Dinitrotoluene	(3)	12.229	165	2193	0.093
119) Dibenzofuran	(3)	12.240	168	11429	0.123
121) 1-Naphthylamine	(3)	12.334	143	7408	0.107
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	1909	0.098
123) 2-Naphthylamine	(3)	12.433	143	7644	0.113
124) Diethylphthalate	(3)	12.555	149	8805	0.116
125) Thionazin	(3)	12.654	107	1773	0.134
126) Fluorene	(3)	12.666	166	8864	0.121
128) 5-Nitro-o-toluidine	(3)	12.672	152	2343	0.118
129) 4-Nitroaniline	(3)	12.678	138	1981	0.109
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	4779	0.126
130) 4,6-Dinitro-2-methylphenol	(4)	12.730	198	4319	0.298
132) NDPA as diphenylamine	(4)	12.823	169	6945	0.118
131) N-Nitrosodiphenylamine	(4)	12.823	169	6945	0.118
134) 1,2-Diphenylhydrazine	(4)	12.870	77	10967	0.123
135)$2,4,6-Tribromophenol	(3)	12.963	330	1976	0.206
137) Tetraethyldithiopyrophosphate	(4)	13.051	97	1760	0.127
140) Diallate (peak 1)	(4)	13.196	86	4025	0.107
144) Diallate (peak 2)	(4)	13.196	86	4025	0.109
141) Phorate	(4)	13.208	75	6458	0.116
142) Phenacetin	(4)	13.208	108	4143	0.103
143) 4-Bromophenyl-phenylether	(4)	13.290	248	2202	0.108
145) Hexachlorobenzene	(4)	13.348	284	2692	0.126
147) Dimethoate	(4)	13.400	87	3537	0.098
148) Atrazine	(4)	13.499	200	2799	0.132
149) Pentachlorophenol	(4)	13.610	266	893	0.063
150) 4-Aminobiphenyl	(4)	13.610	169	6417	0.114
152) Pronamide	(4)	13.703	173	3379	0.100
153)*Phenanthrene-d10	(4)	13.849	188	523050	5.000
155) Phenanthrene	(4)	13.878	178	13193	0.124
157) Anthracene	(4)	13.948	178	11671	0.112
163) Carbazole	(4)	14.164	167	10953	0.110
164) Methyl parathion	(4)	14.368	109	2438	0.088
165) Di-n-butylphthalate	(4)	14.677	149	13562	0.107
222) Total PAHs	(6)			209308	2.116
173) Fluoranthene	(4)	15.569	202	13830	0.115
174) Benzidine	(5)	15.784	184	71854	0.834
175)*Pyrene-d10	(5)	15.889	212	627250	5.000
177) Pyrene	(5)	15.918	202	16273	0.126
179)$Terphenyl-d14	(5)	16.192	244	20960	0.238

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0632.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:17 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182)	p-Dimethylaminoazobenzene	(5)	16.425	225	1984	0.093
185)	Chlorobenzilate	(5)	16.519	139	4010	0.103
187)	3,3'-Dimethylbenzidine	(5)	16.991	212	7932	0.101
188)	Butylbenzylphthalate	(5)	17.049	149	5412	0.097
191)	2-Acetylaminofluorene	(5)	17.416	181	4337	0.092
193)	3,3'-Dichlorobenzidine	(5)	17.929	252	5029	0.114
195)	Benzo(a)anthracene	(5)	17.947	228	12951	0.111
198)	4,4'-Methylenebis(2-chloroanil	(5)	17.947	231	2493	0.102
196)	Chrysene	(5)	18.011	228	12775	0.116
199)	bis(2-Ethylhexyl)phthalate	(5)	18.122	149	7673	0.097
203)	6-Methylchrysene	(5)	18.815	242	9088	0.115
205)	Di-n-octylphthalate	(6)	19.281	149	12915	0.096
206)	Benzo(b)fluoranthene	(6)	19.812	252	12513	0.113
207)	7,12-Dimethylbenz[a]anthracene	(6)	19.812	256	4754	0.101
208)	Benzo(k)fluoranthene	(6)	19.853	252	11967	0.110
211)	Benzo(a)pyrene	(6)	20.342	252	11781	0.116
213)	*Perylene-d12	(6)	20.436	264	431346	5.000
215)	3-Methylcholanthrene	(6)	20.908	268	5079	0.122
217)	Dibenz(a,h)acridine	(6)	21.724	279	8407	0.101
218)	Dibenz(a,j)acridine	(6)	21.799	279	8705	0.104
219)	Indeno(1,2,3-cd)pyrene	(6)	22.062	276	12210	0.113
220)	Dibenz(a,h)anthracene	(6)	22.102	278	9571	0.106
221)	Benzo(g,h,i)perylene	(6)	22.487	276	11126	0.120

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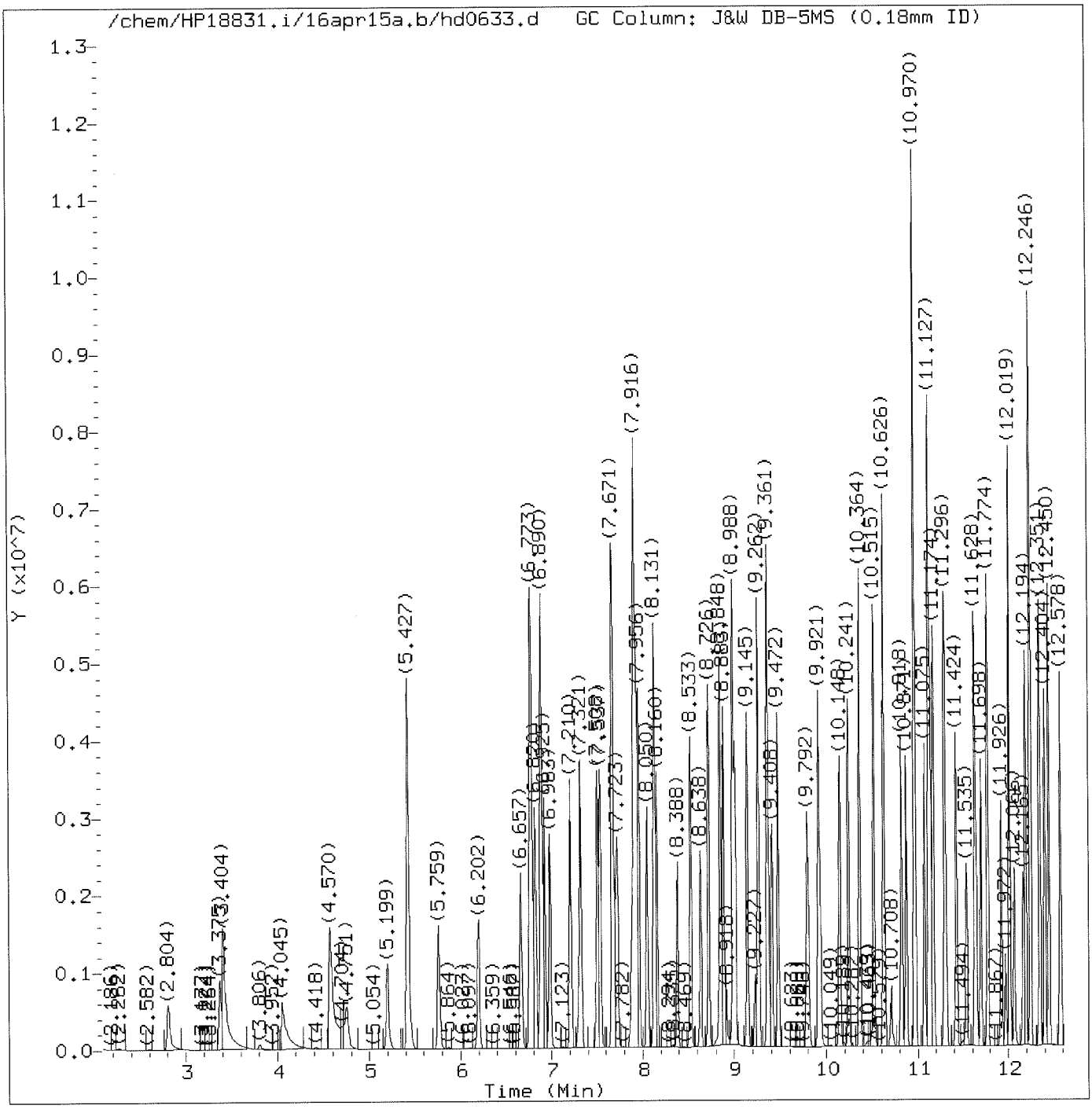
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

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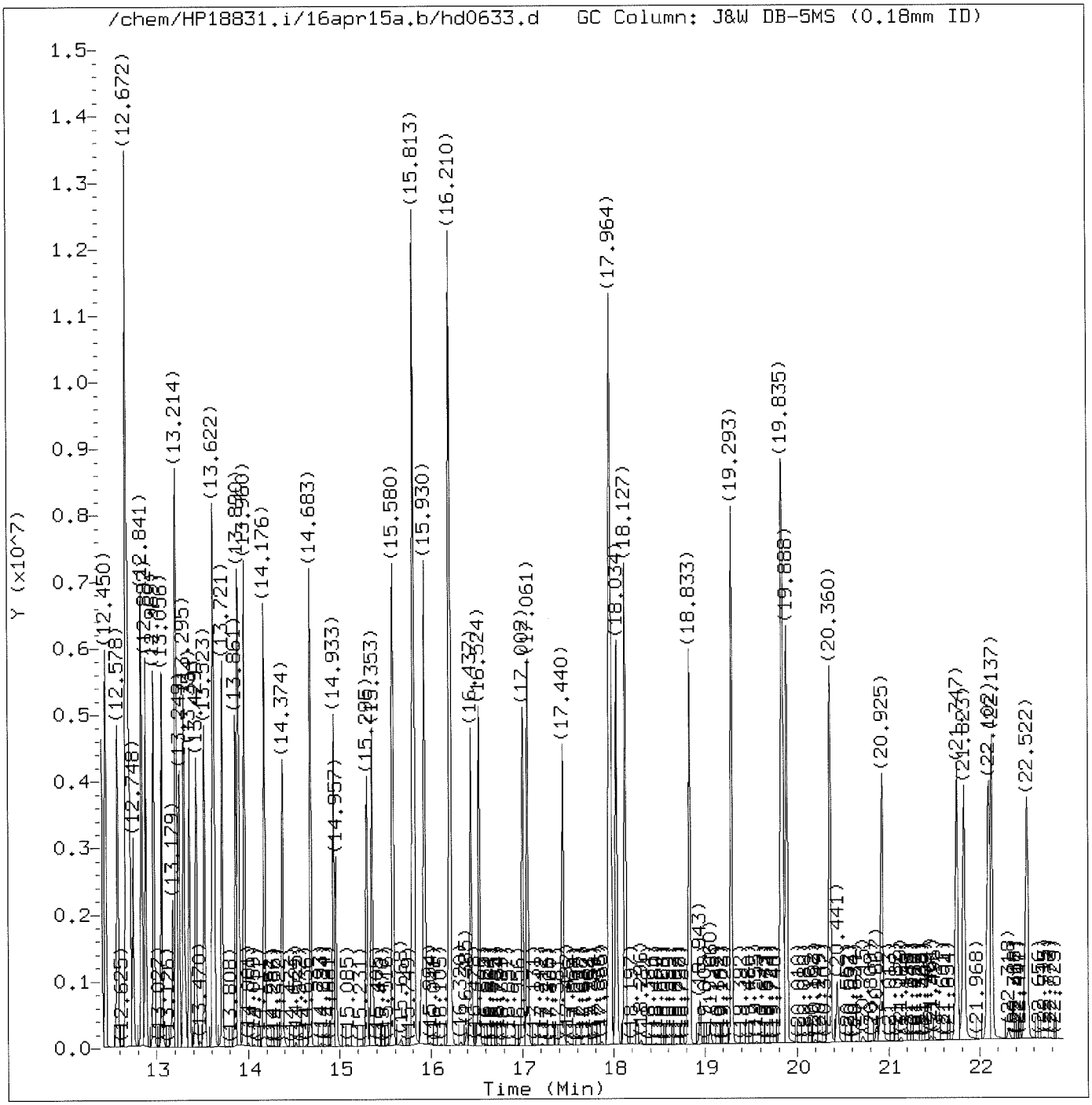
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.804	88	562143	30.287
4) N-Nitrosodimethylamine	(1)	3.375	74	941022	31.100
5) Pyridine	(1)	3.404	79	1550863	31.839
7) 2-Picoline	(1)	4.570	93	1583696	30.433
8) N-Nitrosomethylethylamine	(1)	4.751	88	625487	30.504
9) Methyl methanesulfonate	(1)	5.199	80	723078	30.549
11)$2-Fluorophenol	(1)	5.427	112	2436755	61.563
42) Total Cresols	(1)			2363660	61.005
13) N-Nitrosodiethylamine	(1)	5.759	102	621194	31.003
15) Ethyl methanesulfonate	(1)	6.202	109	627129	30.911
16) Benzaldehyde	(1)	6.657	77	918326	24.071
17)$Phenol-d6	(1)	6.767	99	3189218	61.889
18) Phenol	(1)	6.785	94	1888997	32.695
19) Aniline	(1)	6.820	93	2226029	30.729
20) a-methylstyrene	(1)	6.896	118	1267311	30.272
22) bis(2-Chloroethyl)ether	(1)	6.925	93	1403930	30.256
23) 2-Chlorophenol	(1)	6.983	128	1175941	30.744
24) 1,3-Dichlorobenzene	(1)	7.210	146	1233604	30.160
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	135286	5.000
26) 1,4-Dichlorobenzene	(1)	7.321	146	1259723	30.099
97) Isosafrole	(3)			943413	30.722
27) Benzyl alcohol	(1)	7.508	108	842005	30.831
28) 1,2-Dichlorobenzene	(1)	7.537	146	1190526	30.065
30) Indene	(1)	7.671	115	2099423	29.926
31) 2-Methylphenol	(1)	7.671	108	1154180	30.445
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.723	45	2092325	29.939
34) bis(2-Chloroisopropyl)ether	(1)	7.723	45	2092325	29.939
35) N-Nitrosopyrrolidine	(1)	7.881	100	639286	31.072
36) Acetophenone	(1)	7.904	105	1877629	30.333
37) 4-Methylphenol	(1)	7.916	108	1209480	30.560
38) N-Nitroso-di-n-propylamine	(1)	7.933	70	1098100	30.723
39) N-Nitrosomorpholine	(1)	7.945	56	881704	29.653
40) o-Toluidine	(1)	7.956	106	2055997	30.401
43) Hexachloroethane	(1)	8.050	117	535845	30.240
120) 2,4_2,6-Dinitrotoluenes	(3)			1273417	62.178
44)$Nitrobenzene-d5	(2)	8.131	82	3124916	60.850
45) Nitrobenzene	(2)	8.160	77	1618618	30.193
48) N-Nitrosopiperidine	(2)	8.388	114	595401	31.142
50) Isophorone	(2)	8.533	82	2766942	30.999
51) 2-Nitrophenol	(2)	8.638	139	626003	31.656

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.726	107	1294046	30.733
146) Diallate trans/cis	(4)			1265334	30.666
57) O,O,O-Triethylphosphorothioate	(2)	8.848	198	630931	29.758
55) bis(2-Chloroethoxy)methane	(2)	8.883	93	1724844	30.386
56) Benzoic acid	(2)	8.918	105	1091895M	36.380
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.988	104	1934778	29.722
60) 2,4-Dichlorophenol	(2)	9.011	162	964133	31.174
62) 1,2,4-Trichlorobenzene	(2)	9.145	180	1121281	30.005
65)*Naphthalene-d8	(2)	9.227	136	520547	5.000
66) Naphthalene	(2)	9.262	128	3288322	29.716
67) 4-Chloroaniline	(2)	9.355	127	1403784	30.840
68) 2,6-Dichlorophenol	(2)	9.367	162	922275	30.313
69) Hexachloropropene	(2)	9.408	213	714893	30.298
71) Hexachlorobutadiene	(2)	9.472	225	662472	29.577
75) Quinoline	(2)	9.792	129	2034231	29.495
77) N-Nitrosodi-n-butylamine	(2)	9.921	84	1239559	33.336
76) Caprolactam	(2)	9.938	113	324580	31.386
80) 4-Chloro-3-methylphenol	(2)	10.148	107	1090065	30.536
82) Safrole	(2)	10.247	162	848463	30.046
83) 2-Methylnaphthalene	(2)	10.364	142	2228967	30.177
84) 1-Methylnaphthalene	(2)	10.515	142	2040548	30.109
85) Hexachlorocyclopentadiene	(3)	10.620	237	676261	29.396
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.632	216	1144534	30.027
88) cis-Isosafrole	(3)	10.708	162	155396	5.218
90) 2,4,6-Trichlorophenol	(3)	10.818	196	758935	31.496
92) 2,4,5-Trichlorophenol	(3)	10.877	196	789146	31.115
93)$2-Fluorobiphenyl	(3)	10.970	172	4880201	59.146
94) trans-Isosafrole	(3)	11.075	162	788017	25.504
95) 1,1'-Biphenyl	(3)	11.121	154	2632253	29.805
96) 2-Chloronaphthalene	(3)	11.139	162	2085626	29.734
98) 1-Chloronaphthalene	(3)	11.174	162	1951843	29.851
99) Diphenyl ether	(3)	11.296	170	1421330	30.168
100) 2-Nitroaniline	(3)	11.314	138	647135	31.466
104) 1,4-Naphthoquinone	(3)	11.424	158	870764	30.378
105) 1,4-Dinitrobenzene	(3)	11.535	168	359451	31.143
106) Dimethylphthalate	(3)	11.628	163	2376041	30.082
107) 1,3-Dinitrobenzene	(3)	11.646	168	391014	31.371
108) 2,6-Dinitrotoluene	(3)	11.698	165	532804	31.374
109) Acenaphthylene	(3)	11.774	152	3130399	30.755
112) 3-Nitroaniline	(3)	11.926	138	571453	32.443

M = Compound was manually integrated.
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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.972	164	291587	5.000
114) Acenaphthene	(3)	12.019	153	2066706	29.895
115) 2,4-Dinitrophenol	(3)	12.071	184	378190	32.278
116) 4-Nitrophenol	(3)	12.165	109	411445M	32.030
117) Pentachlorobenzene	(3)	12.194	250	901435	29.573
119) Dibenzofuran	(3)	12.246	168	2775663	29.312
118) 2,4-Dinitrotoluene	(3)	12.246	165	740613	30.804
121) 1-Naphthylamine	(3)	12.351	143	2168033	30.721
122) 2,3,4,6-Tetrachlorophenol	(3)	12.404	232	634866	32.179
123) 2-Naphthylamine	(3)	12.450	143	2117123	30.699
124) Diethylphthalate	(3)	12.578	149	2405859	31.108
125) Thionazin	(3)	12.672	107	422834M	31.468
126) Fluorene	(3)	12.672	166	2224961	29.730
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	1142479	29.521
128) 5-Nitro-o-toluidine	(3)	12.701	152	653503	32.409
129) 4-Nitroaniline	(3)	12.713	138	576852	31.215
130) 4,6-Dinitro-2-methylphenol	(4)	12.748	198	497178	31.207
132) NDPA as diphenylamine	(4)	12.841	169	1973884	30.542
131) N-Nitrosodiphenylamine	(4)	12.841	169	1973884	30.542
134) 1,2-Diphenylhydrazine	(4)	12.882	77	2958658	30.306
135)$2,4,6-Tribromophenol	(3)	12.975	330	626023	64.237
137) Tetraethyldithiopyrophosphate	(4)	13.056	97	464275	30.496
139) 1,3,5-Trinitrobenzene	(4)	13.179	213	318971	31.401
140) Diallate (peak 1)	(4)	13.208	86	1052932	25.409
141) Phorate	(4)	13.220	75	1898192	30.958
142) Phenacetin	(4)	13.249	108	1397376	31.760
143) 4-Bromophenyl-phenylether	(4)	13.295	248	674348	30.102
144) Diallate (peak 2)	(4)	13.313	86	212402	5.256
145) Hexachlorobenzene	(4)	13.360	284	701858	29.806
147) Dimethoate	(4)	13.429	87	1210187	30.384
148) Atrazine	(4)	13.523	200	650368	27.868
149) Pentachlorophenol	(4)	13.610	266	476807	30.813
150) 4-Aminobiphenyl	(4)	13.622	169	1842409	29.689
151) Pentachloronitrobenzene	(4)	13.628	237	337068	29.861
152) Pronamide	(4)	13.721	173	1173401	31.548
153)*Phenanthrene-d10	(4)	13.855	188	574378	5.000
154) Dinoseb	(4)	13.867	211	786357	33.170
155) Phenanthrene	(4)	13.890	178	3508477	29.976
157) Anthracene	(4)	13.960	178	3542817	30.992
163) Carbazole	(4)	14.176	167	3331097	30.383

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.374	109	949668	31.205
165) Di-n-butylphthalate	(4)	14.683	149	4218232	30.412
167) Parathion	(4)	14.933	109	586339	31.968
168) 4-Nitroquinoline-1-oxide	(4)	14.957	190	459992	33.167
222) Total PAHs	(6)			58390028	547.037
169) Octachlorostyrene	(4)	15.295	308	267435	29.229
171) Isodrin	(4)	15.353	193	425687	29.733
173) Fluoranthene	(4)	15.580	202	4048158	30.584
174) Benzidine	(5)	15.813	184	7783624	82.730
175)*Pyrene-d10	(5)	15.895	212	684709	5.000
177) Pyrene	(5)	15.930	202	4193398	29.688
179)$Terphenyl-d14	(5)	16.210	244	5630540	58.669
182) p-Dimethylaminoazobenzene	(5)	16.437	225	767197	32.789
185) Chlorobenzilate	(5)	16.524	139	1287576	30.422
187) 3,3'-Dimethylbenzidine	(5)	17.002	212	2585524	30.117
188) Butylbenzylphthalate	(5)	17.061	149	1803622	29.763
191) 2-Acetylaminofluorene	(5)	17.440	181	1679474	32.805
193) 3,3'-Dichlorobenzidine	(5)	17.947	252	1437464	29.758
195) Benzo(a)anthracene	(5)	17.964	228	3833198	30.100
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.964	231	775458	29.147
196) Chrysene	(5)	18.034	228	3573783	29.747
199) bis(2-Ethylhexyl)phthalate	(5)	18.127	149	2659588	30.853
203) 6-Methylchrysene	(5)	18.833	242	2571032	29.899
205) Di-n-octylphthalate	(6)	19.293	149	4716784	32.066
206) Benzo(b)fluoranthene	(6)	19.835	252	3712037	30.634
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.841	256	1656065	32.252
208) Benzo(k)fluoranthene	(6)	19.888	252	3694137	31.019
211) Benzo(a)pyrene	(6)	20.360	252	3517223	31.711
213)*Perylene-d12	(6)	20.441	264	471027	5.000
215) 3-Methylcholanthrene	(6)	20.925	268	1453638	31.902
217) Dibenz(a,h)acridine	(6)	21.747	279	2763309	30.519
218) Dibenz(a,j)acridine	(6)	21.829	279	2770180	30.425
219) Indeno(1,2,3-cd)pyrene	(6)	22.102	276	3677446	31.069
220) Dibenz(a,h)anthracene	(6)	22.137	278	3096026	31.263
221) Benzo(g,h,i)perylene	(6)	22.522	276	3013425	29.872

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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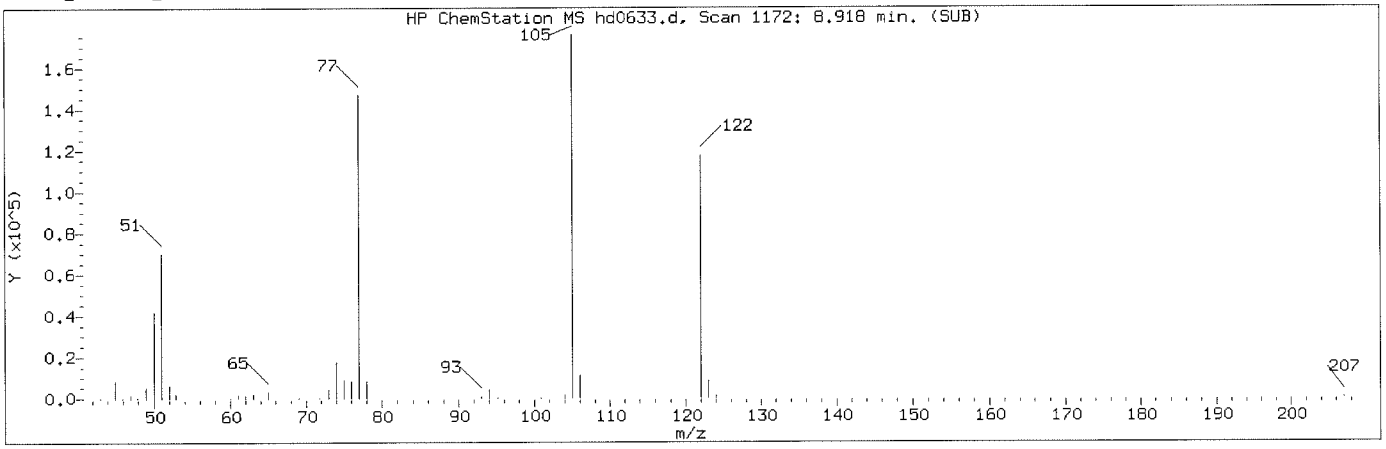
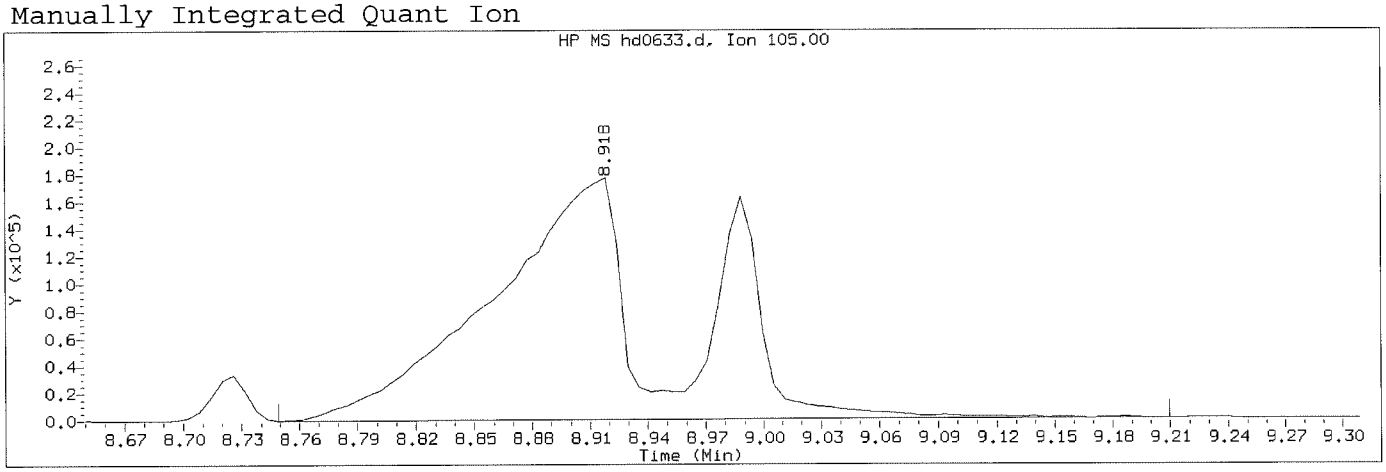
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1172		
Retention Time (minutes)	: 8.918		
Quant Ion	: 105.00		
Area (flag)	: 1091895M		
On-Column Amount (ng/ul)	: 36.3804		
Integration start scan	: 1142	Integration stop scan:	1221
Y at integration start	: 196	Y at integration end:	1180

Reason for manual integration: improper integration

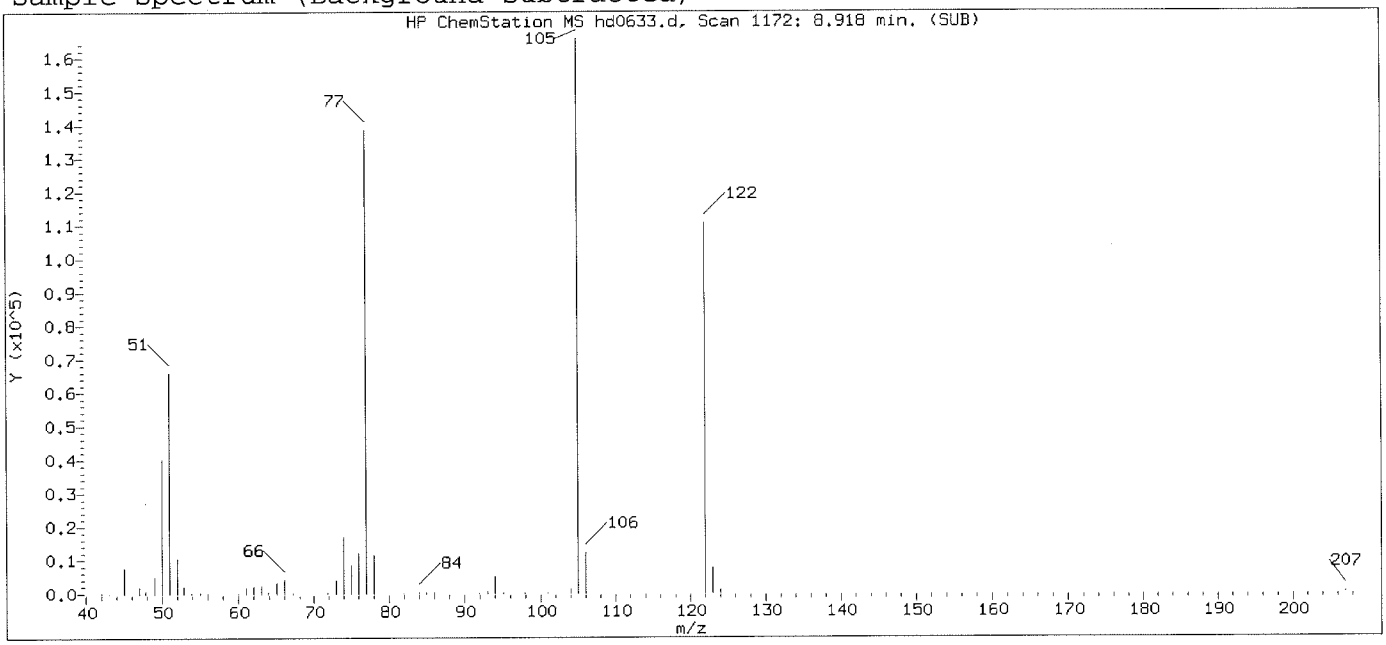
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

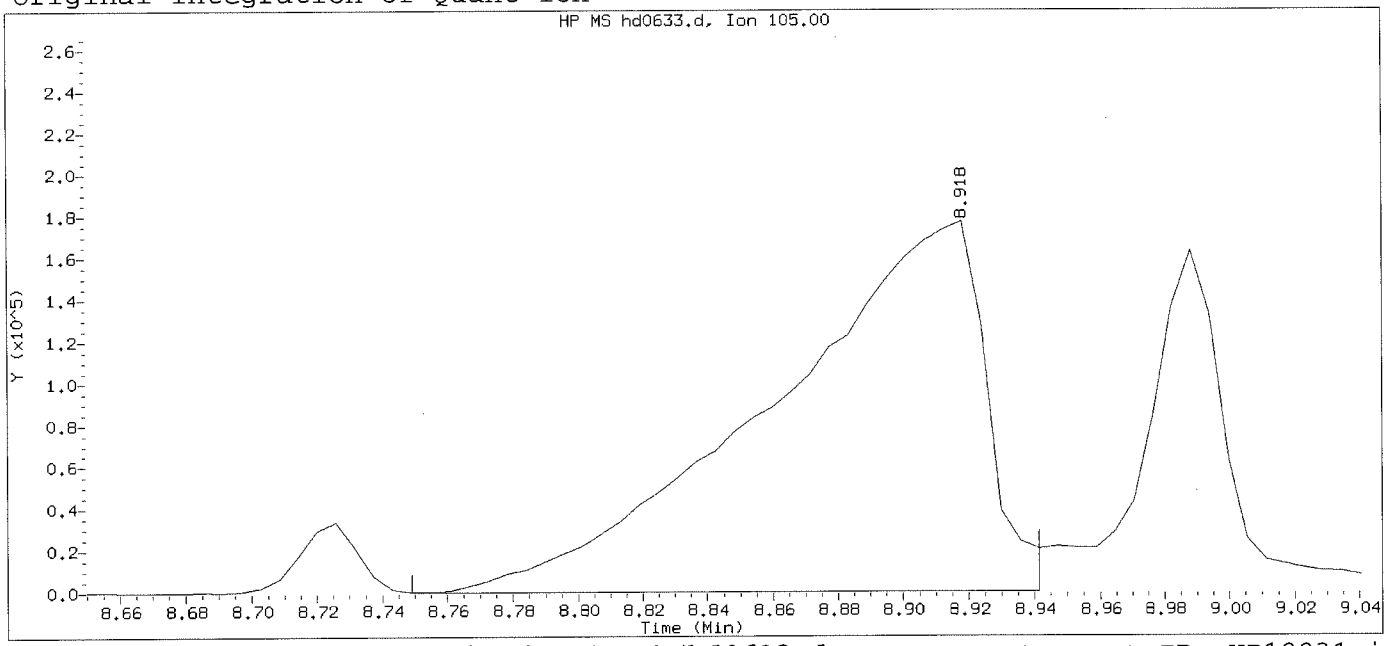
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:25
Date, time and analyst ID of latest file update: 16-Apr-2016 12:25 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1172		
Retention Time (minutes)	: 8.918		
Quant Ion	: 105.00		
Area	: 796266		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 1142	Integration stop scan:	1175
Y at integration start	: 0	Y at integration end:	0

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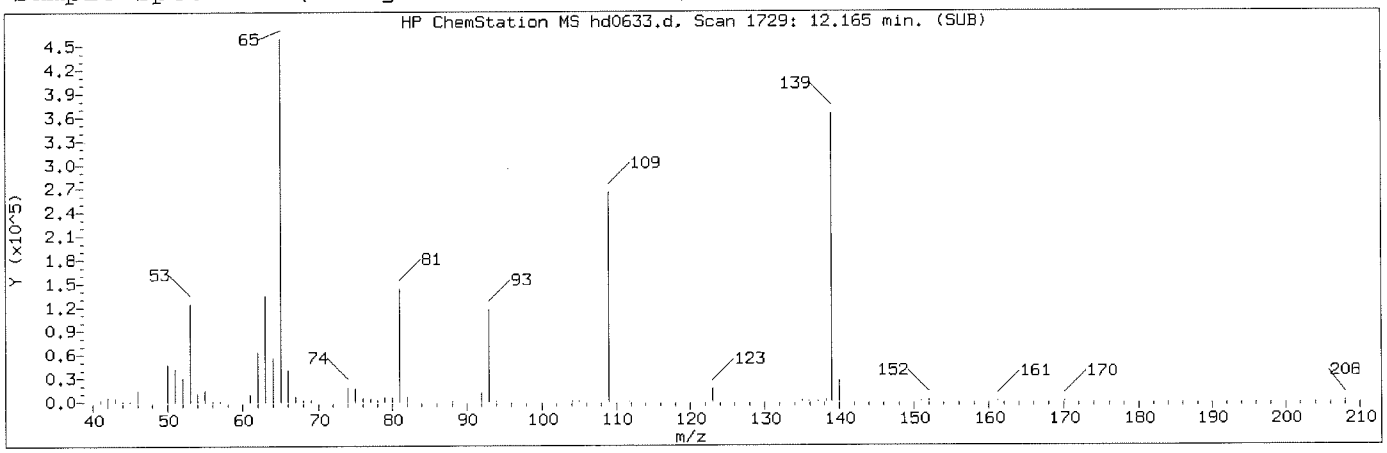
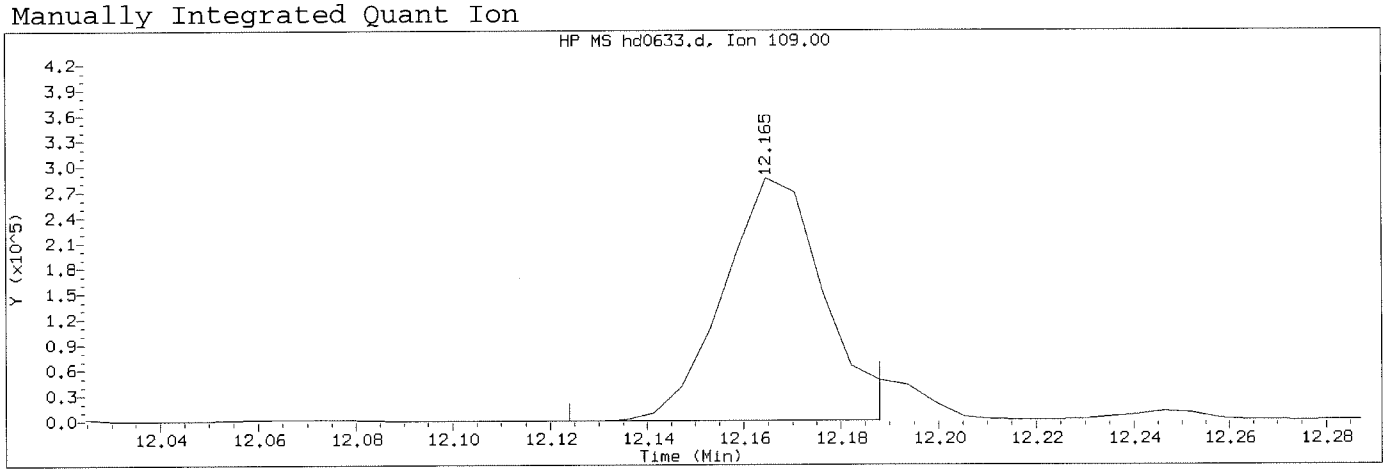
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1729		
Retention Time (minutes)	: 12.165		
Quant Ion	: 109.00		
Area (flag)	: 411445M		
On-Column Amount (ng/ul)	: 32.0301		
Integration start scan	: 1721	Integration stop scan:	1732
Y at integration start	: 0	Y at integration end:	0

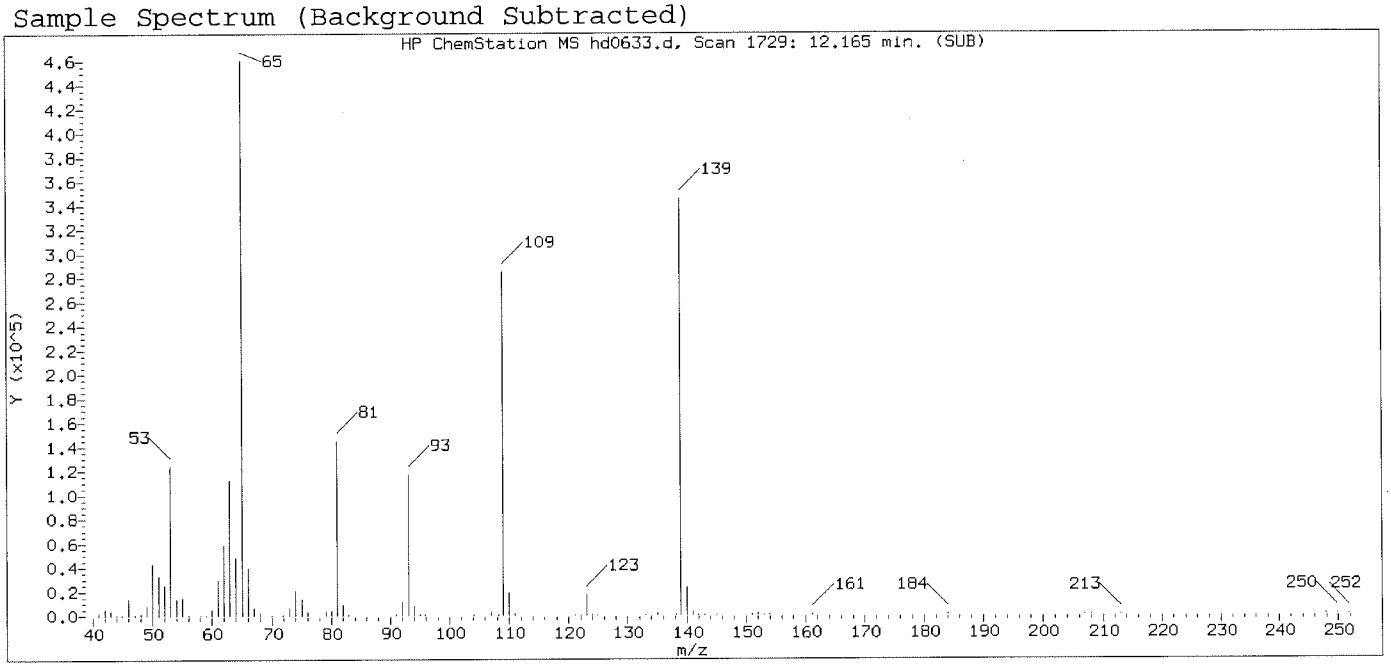
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

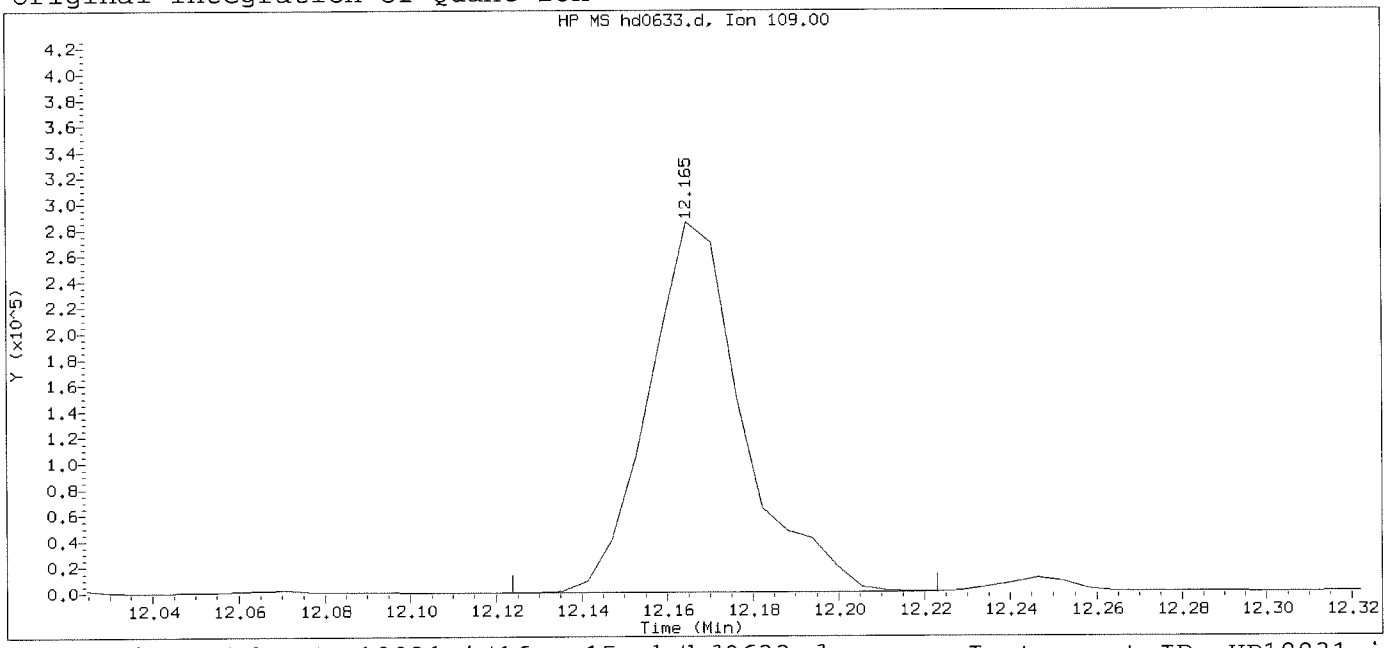
GC/MS audit/management approval: APR 19 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:25
Date, time and analyst ID of latest file update: 16-Apr-2016 12:25 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1729		
Retention Time (minutes)	: 12.165		
Quant Ion	: 109.00		
Area	: 434956		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 1721	Integration stop scan:	1738
Y at integration start	: 0	Y at integration end:	0

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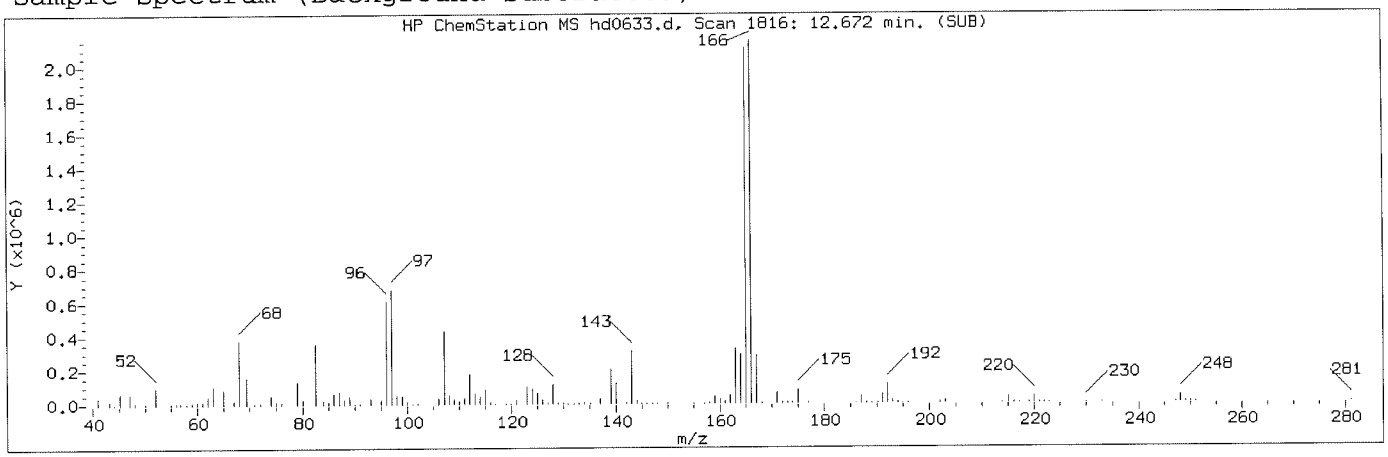
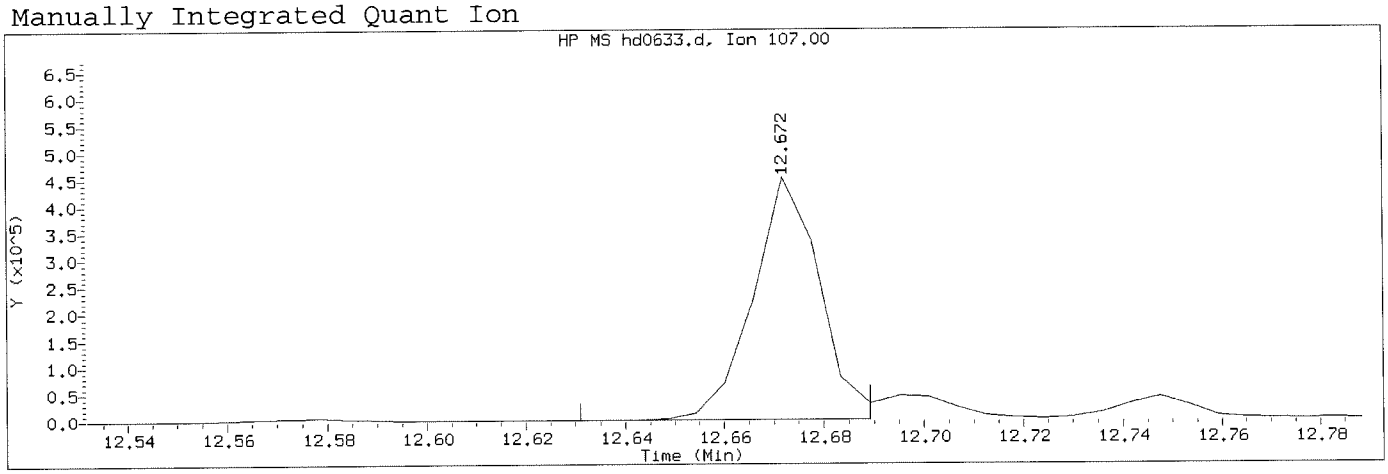
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1816		
Retention Time (minutes)	: 12.672		
Quant Ion	: 107.00		
Area (flag)	: 422834M		
On-Column Amount (ng/ul)	: 31.4683		
Integration start scan	: 1808	Integration stop scan:	1818
Y at integration start	: 0	Y at integration end:	0

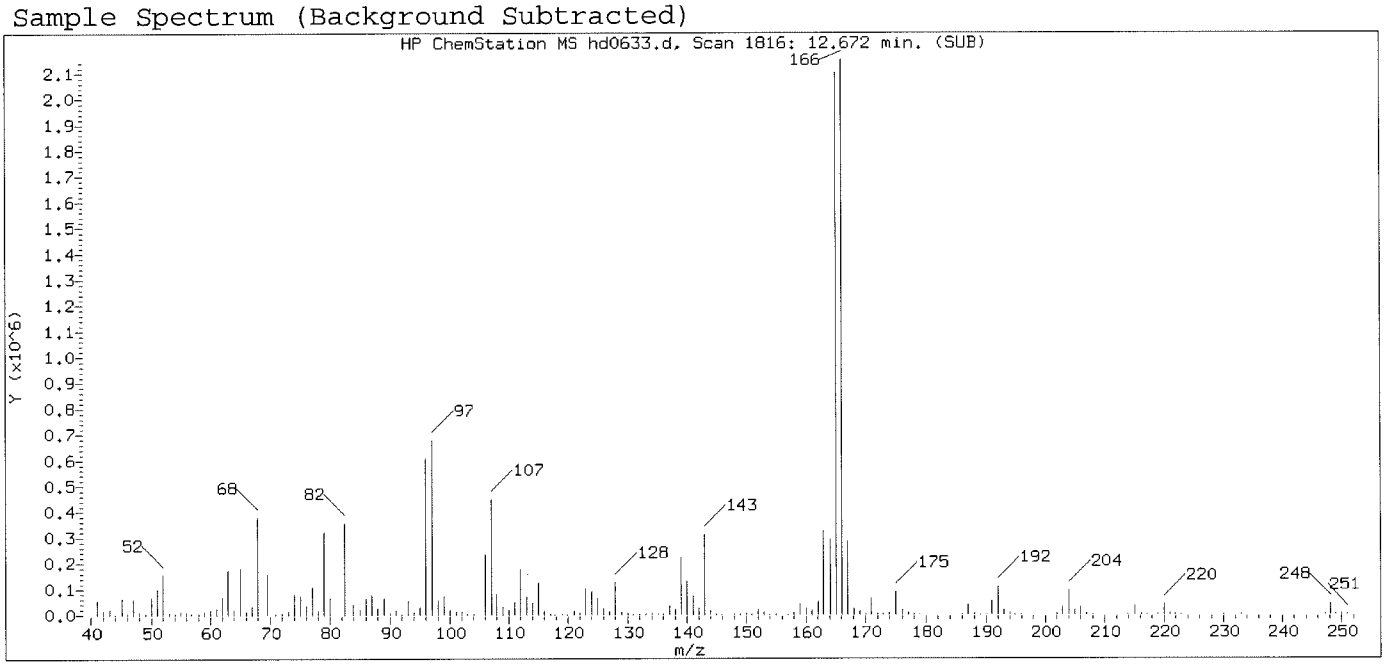
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18
Target 3.5 signature user ID: hbz01996

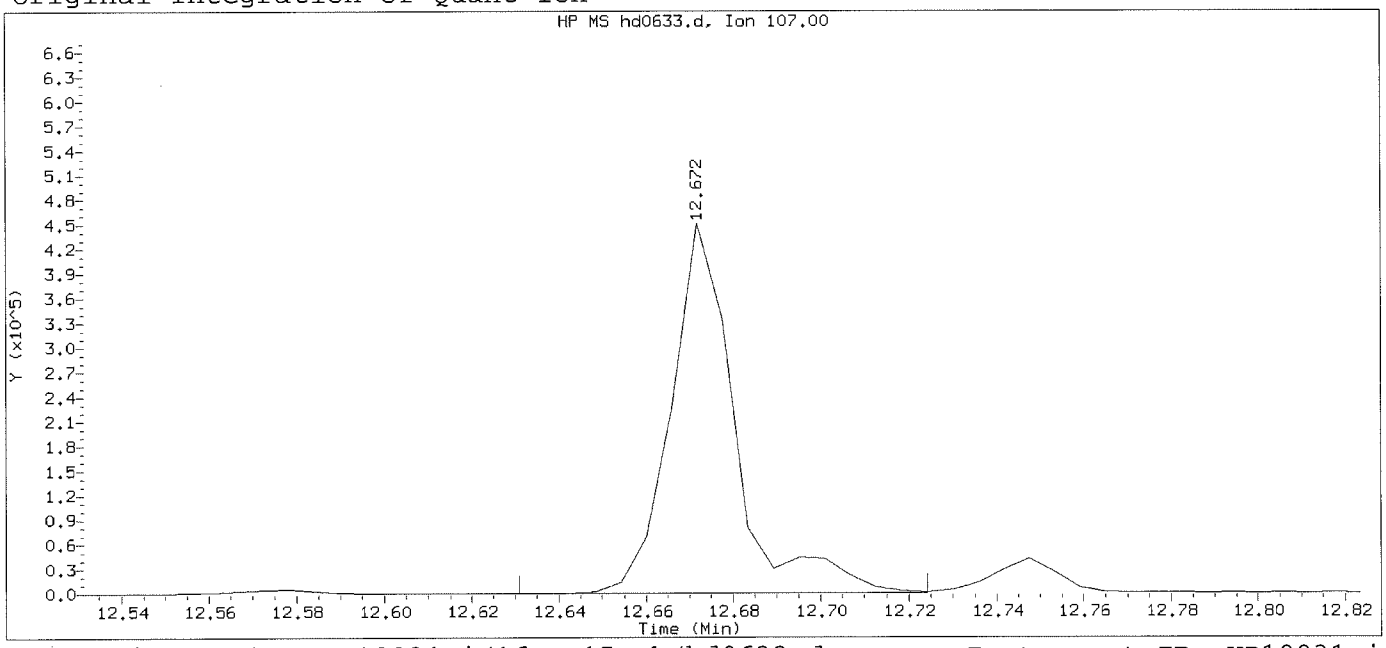
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



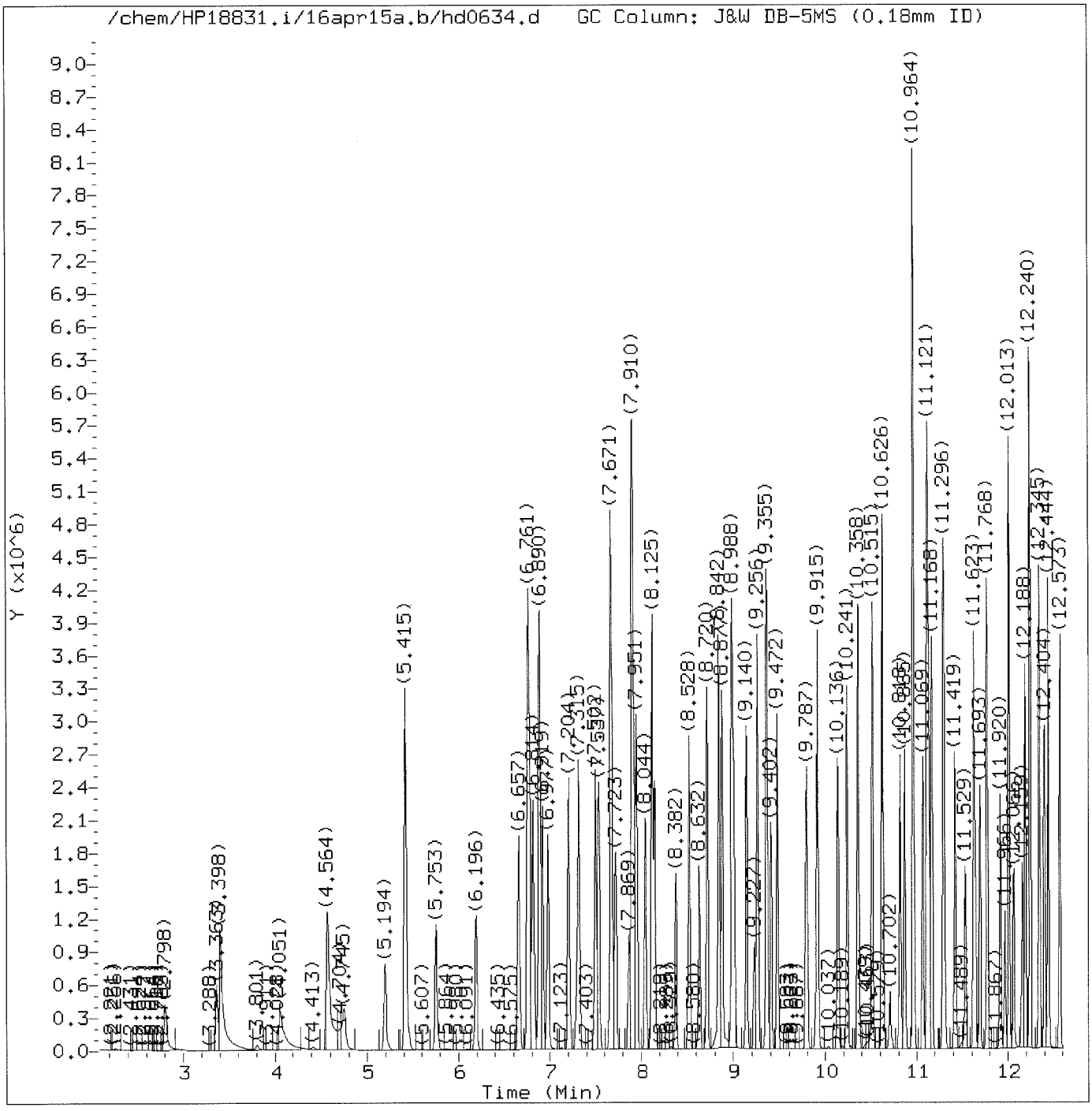
Data File: /chem/HP18831.i/16apr15a.b/hd0633.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 18:46 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:25
Date, time and analyst ID of latest file update: 16-Apr-2016 12:25 hbz01996

Sample Name: SSTD030 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1816		
Retention Time (minutes)	: 12.672		
Quant Ion	: 107.00		
Area	: 464755		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 1808	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

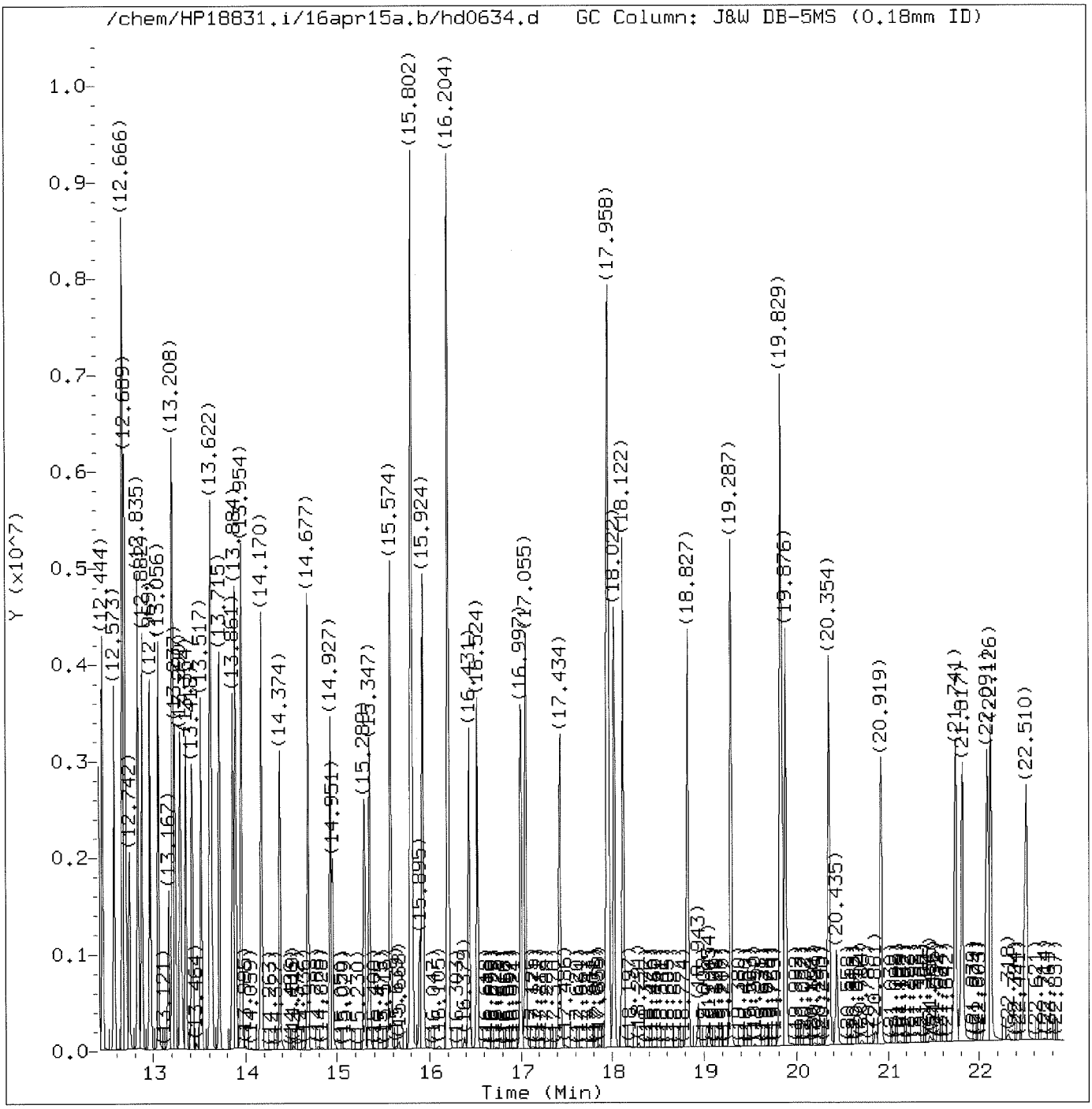
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.798	88	375001	19.933
4) N-Nitrosodimethylamine	(1)	3.363	74	623869	20.341
5) Pyridine	(1)	3.404	79	1041538	21.095
7) 2-Picoline	(1)	4.570	93	1063421	20.160
8) N-Nitrosomethylethylamine	(1)	4.751	88	424346	20.416
9) Methyl methanesulfonate	(1)	5.194	80	481257	20.059
11)$2-Fluorophenol	(1)	5.415	112	1639614	40.867
42) Total Cresols	(1)			1601036	40.765
13) N-Nitrosodiethylamine	(1)	5.753	102	417303	20.547
15) Ethyl methanesulfonate	(1)	6.196	109	420719	20.459
16) Benzaldehyde	(1)	6.657	77	745071	19.267
17)$Phenol-d6	(1)	6.761	99	2154308	41.244
18) Phenol	(1)	6.779	94	1187811	20.282
19) Aniline	(1)	6.814	93	1501770	20.452
20) a-methylstyrene	(1)	6.890	118	854709	20.142
22) bis(2-Chloroethyl)ether	(1)	6.919	93	945219	20.097
23) 2-Chlorophenol	(1)	6.977	128	790705	20.394
24) 1,3-Dichlorobenzene	(1)	7.204	146	838482	20.225
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	137129	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	852839	20.103
97) Isosafrole	(3)			631356	20.008
27) Benzyl alcohol	(1)	7.502	108	563612	20.360
28) 1,2-Dichlorobenzene	(1)	7.537	146	799201	19.912
30) Indene	(1)	7.671	115	1423079	20.012
31) 2-Methylphenol	(1)	7.671	108	780013	20.299
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.723	45	1399463	19.756
34) bis(2-Chloroisopropyl)ether	(1)	7.723	45	1399463	19.756
35) N-Nitrosopyrrolidine	(1)	7.869	100	432857	20.756
36) Acetophenone	(1)	7.898	105	1266976	20.193
37) 4-Methylphenol	(1)	7.910	108	821023	20.466
38) N-Nitroso-di-n-propylamine	(1)	7.921	70	737970	20.370
39) N-Nitrosomorpholine	(1)	7.933	56	602462	19.989
40) o-Toluidine	(1)	7.951	106	1379101	20.118
43) Hexachloroethane	(1)	8.044	117	359029	19.989
120) 2,4_2,6-Dinitrotoluenes	(3)			863039	41.001
44)$Nitrobenzene-d5	(2)	8.125	82	2097013	39.826
45) Nitrobenzene	(2)	8.149	77	1089696	19.825
48) N-Nitrosopiperidine	(2)	8.382	114	399368	20.373
50) Isophorone	(2)	8.528	82	1854120	20.260
51) 2-Nitrophenol	(2)	8.632	139	419842	20.707

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.720	107	876650	20.306
146) Diallate trans/cis	(4)			839512	20.057
57) O,O,O-Triethylphosphorothioate	(2)	8.842	198	428984	19.733
55) bis(2-Chloroethoxy)methane	(2)	8.877	93	1133462	19.475
56) Benzoic acid	(2)	8.889	105	724597M	23.546
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.988	104	1314343	19.692
60) 2,4-Dichlorophenol	(2)	9.006	162	654275	20.633
62) 1,2,4-Trichlorobenzene	(2)	9.140	180	761414	19.872
65)*Naphthalene-d8	(2)	9.227	136	533726	5.000
66) Naphthalene	(2)	9.262	128	2227095	19.629
67) 4-Chloroaniline	(2)	9.355	127	948346	20.320
68) 2,6-Dichlorophenol	(2)	9.361	162	619209	19.849
69) Hexachloropropene	(2)	9.402	213	488112	20.176
71) Hexachlorobutadiene	(2)	9.472	225	450093	19.599
75) Quinoline	(2)	9.787	129	1386653	19.609
76) Caprolactam	(2)	9.915	113	215101	20.286
77) N-Nitrosodi-n-butylamine	(2)	9.915	84	839839	22.029
80) 4-Chloro-3-methylphenol	(2)	10.136	107	742450	20.285
82) Safrole	(2)	10.241	162	573222	19.798
83) 2-Methylnaphthalene	(2)	10.364	142	1509678	19.934
84) 1-Methylnaphthalene	(2)	10.515	142	1382488	19.895
85) Hexachlorocyclopentadiene	(3)	10.620	237	477294	20.193
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	786977	20.094
88) cis-Isosafrole	(3)	10.707	162	102349	3.345
90) 2,4,6-Trichlorophenol	(3)	10.818	196	517541	20.903
92) 2,4,5-Trichlorophenol	(3)	10.865	196	544805	20.906
93)$2-Fluorobiphenyl	(3)	10.964	172	3338646	39.381
94) trans-Isosafrole	(3)	11.069	162	529007	16.663
95) 1,1'-Biphenyl	(3)	11.121	154	1807016	19.914
96) 2-Chloronaphthalene	(3)	11.139	162	1398758	19.409
98) 1-Chloronaphthalene	(3)	11.168	162	1374994	20.467
99) Diphenyl ether	(3)	11.296	170	966237	19.960
100) 2-Nitroaniline	(3)	11.308	138	442890	20.959
104) 1,4-Naphthoquinone	(3)	11.419	158	597762	20.296
105) 1,4-Dinitrobenzene	(3)	11.535	168	242014	20.407
106) Dimethylphthalate	(3)	11.623	163	1589205	19.582
107) 1,3-Dinitrobenzene	(3)	11.640	168	263847	20.602
108) 2,6-Dinitrotoluene	(3)	11.693	165	360404	20.655
109) Acenaphthylene	(3)	11.768	152	2141347	20.476
112) 3-Nitroaniline	(3)	11.920	138	385883	21.322

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.966	164	299599	5.000
114) Acenaphthene	(3)	12.013	153	1422244	20.023
115) 2,4-Dinitrophenol	(3)	12.066	184	252985	21.014
116) 4-Nitrophenol	(3)	12.159	109	275431M	20.868
117) Pentachlorobenzene	(3)	12.188	250	620630	19.816
118) 2,4-Dinitrotoluene	(3)	12.240	165	502635	20.347
119) Dibenzofuran	(3)	12.246	168	1910705	19.638
121) 1-Naphthylamine	(3)	12.345	143	1468849	20.257
122) 2,3,4,6-Tetrachlorophenol	(3)	12.404	232	430178	21.221
123) 2-Naphthylamine	(3)	12.444	143	1440523	20.330
124) Diethylphthalate	(3)	12.573	149	1616402	20.341
125) Thionazin	(3)	12.666	107	287238M	20.805
126) Fluorene	(3)	12.666	166	1536681	19.984
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	781964	19.665
128) 5-Nitro-o-toluidine	(3)	12.689	152	442208	21.344
129) 4-Nitroaniline	(3)	12.701	138	392273	20.659
130) 4,6-Dinitro-2-methylphenol	(4)	12.742	198	339974	21.037
132) NDPA as diphenylamine	(4)	12.835	169	1317650	20.099
131) N-Nitrosodiphenylamine	(4)	12.835	169	1317650	20.099
134) 1,2-Diphenylhydrazine	(4)	12.882	77	1967406	19.867
135)$2,4,6-Tribromophenol	(3)	12.969	330	429890	42.932
137) Tetraethyldithiopyrophosphate	(4)	13.056	97	312401	20.229
139) 1,3,5-Trinitrobenzene	(4)	13.167	213	212641	20.637
140) Diallate (peak 1)	(4)	13.202	86	698976	16.629
141) Phorate	(4)	13.214	75	1302982	20.949
142) Phenacetin	(4)	13.237	108	949241	21.269
143) 4-Bromophenyl-phenylether	(4)	13.295	248	459273	20.211
144) Diallate (peak 2)	(4)	13.313	86	140536	3.429
145) Hexachlorobenzene	(4)	13.354	284	472782	19.793
147) Dimethoate	(4)	13.418	87	825095	20.422
148) Atrazine	(4)	13.517	200	467745	19.759
149) Pentachlorophenol	(4)	13.610	266	328942	20.956
150) 4-Aminobiphenyl	(4)	13.622	169	1273159	20.225
151) Pentachloronitrobenzene	(4)	13.628	237	228204	19.930
152) Pronamide	(4)	13.715	173	798432	21.162
153)*Phenanthrene-d10	(4)	13.855	188	582635	5.000
154) Dinoseb	(4)	13.861	211	523562	21.772
155) Phenanthrene	(4)	13.890	178	2376757	20.019
157) Anthracene	(4)	13.954	178	2407004	20.758
163) Carbazole	(4)	14.170	167	2281611	20.516

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.374	109	646275	20.935
165) Di-n-butylphthalate	(4)	14.677	149	2860796	20.333
167) Parathion	(4)	14.927	109	396550	21.314
168) 4-Nitroquinoline-1-oxide	(4)	14.951	190	308796	21.950
222) Total PAHs	(6)			40445463	366.998
169) Octachlorostyrene	(4)	15.295	308	182327	19.645
171) Isodrin	(4)	15.347	193	287984	19.830
173) Fluoranthene	(4)	15.574	202	2792086	20.796
174) Benzidine	(5)	15.808	184	5804560	60.492
175)*Pyrene-d10	(5)	15.895	212	698323	5.000
177) Pyrene	(5)	15.924	202	2876427	19.967
179)$Terphenyl-d14	(5)	16.204	244	3928249	40.134
182) p-Dimethylaminoazobenzene	(5)	16.431	225	528621	22.152
185) Chlorobenzilate	(5)	16.524	139	886120	20.529
187) 3,3'-Dimethylbenzidine	(5)	16.997	212	1808201	20.652
188) Butylbenzylphthalate	(5)	17.055	149	1269542	20.542
191) 2-Acetylaminofluorene	(5)	17.434	181	1134348	21.725
193) 3,3'-Dichlorobenzidine	(5)	17.941	252	1015300	20.609
195) Benzo(a)anthracene	(5)	17.958	228	2726466	20.992
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.958	231	547032	20.160
196) Chrysene	(5)	18.022	228	2503740	20.434
199) bis(2-Ethylhexyl)phthalate	(5)	18.122	149	1829962	20.815
203) 6-Methylchrysene	(5)	18.827	242	1795237	20.470
205) Di-n-octylphthalate	(6)	19.287	149	3210421	20.775
206) Benzo(b)fluoranthene	(6)	19.823	252	2641702	20.751
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.829	256	1159467	21.494
208) Benzo(k)fluoranthene	(6)	19.876	252	2520654	20.147
211) Benzo(a)pyrene	(6)	20.354	252	2449031	21.017
213)*Perylene-d12	(6)	20.435	264	494846	5.000
215) 3-Methylcholanthrene	(6)	20.919	268	1003273	20.958
217) Dibenz(a,h)acridine	(6)	21.741	279	1949685	20.496
218) Dibenz(a,j)acridine	(6)	21.817	279	1925935	20.135
219) Indeno(1,2,3-cd)pyrene	(6)	22.091	276	2594856	20.868
220) Dibenz(a,h)anthracene	(6)	22.126	278	2182300	20.976
221) Benzo(g,h,i)perylene	(6)	22.510	276	2154907	20.334

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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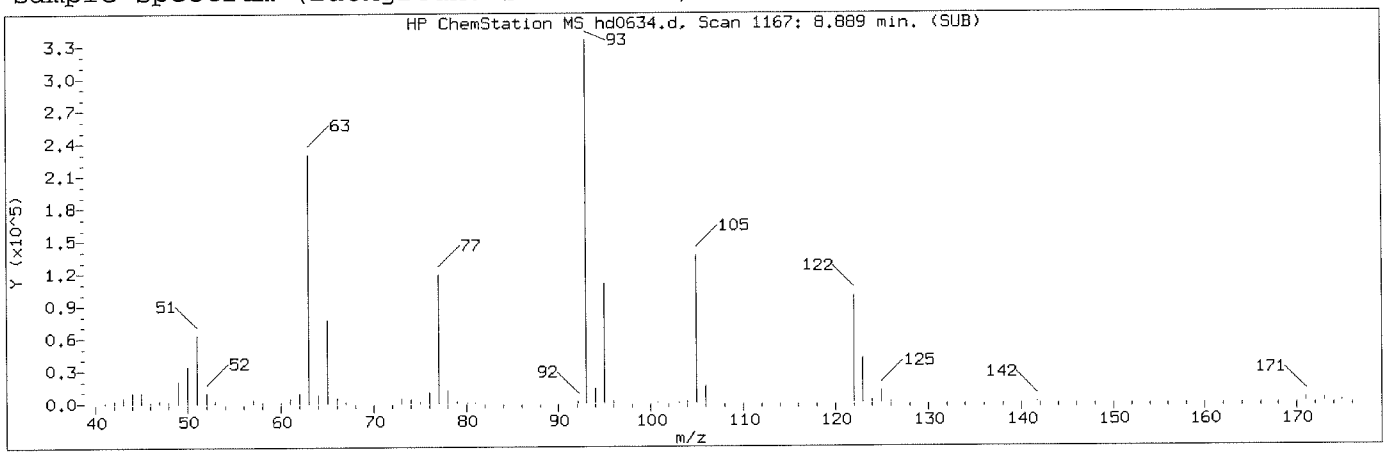
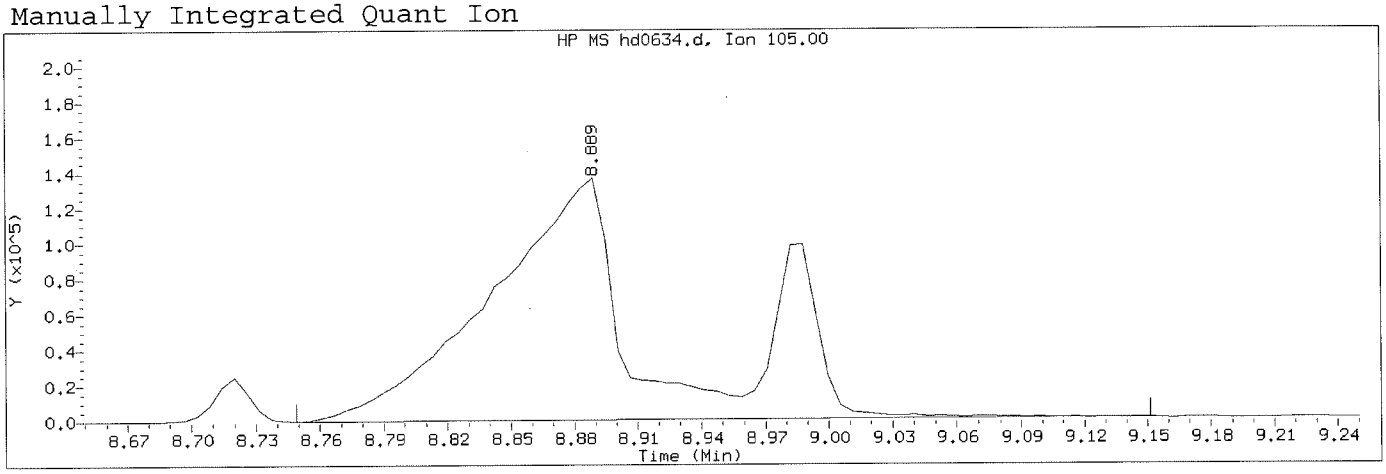
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1167		
Retention Time (minutes)	: 8.889		
Quant Ion	: 105.00		
Area (flag)	: 724597M		
On-Column Amount (ng/ul)	: 23.5464		
Integration start scan	: 1142	Integration stop scan:	1211
Y at integration start	: 0	Y at integration end:	1165

Reason for manual integration: improper integration

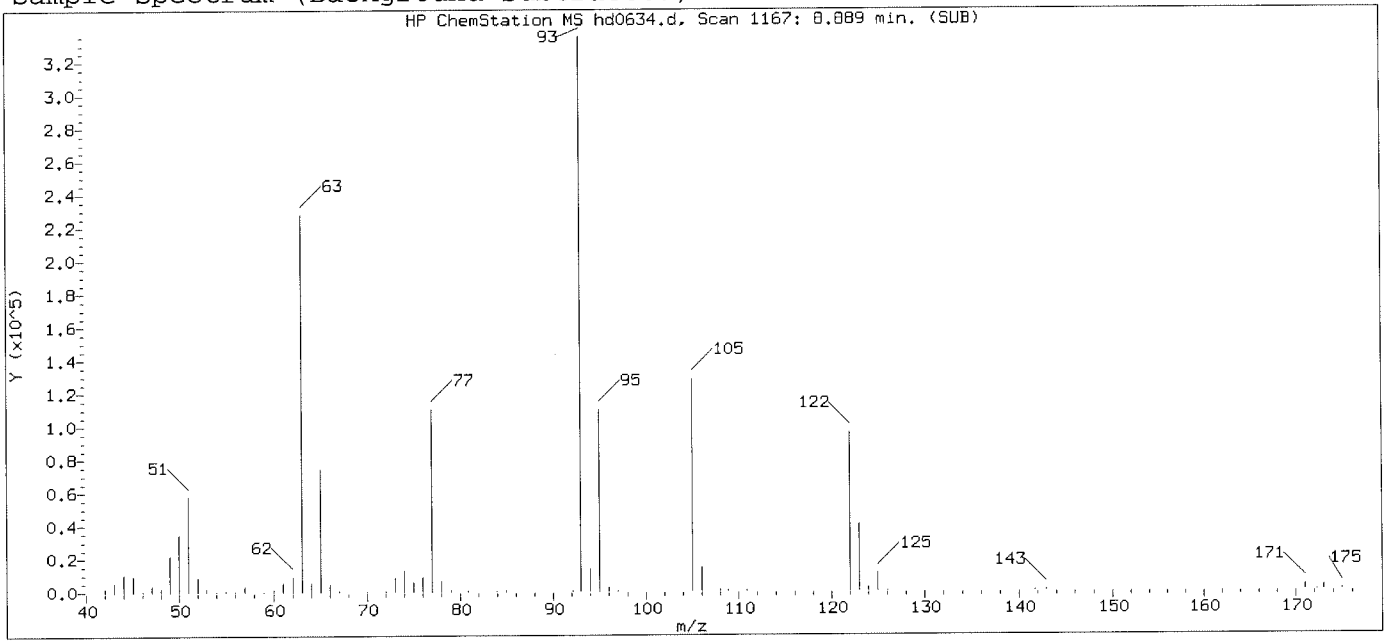
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 signature user ID: hbz01996

APR 19 2016

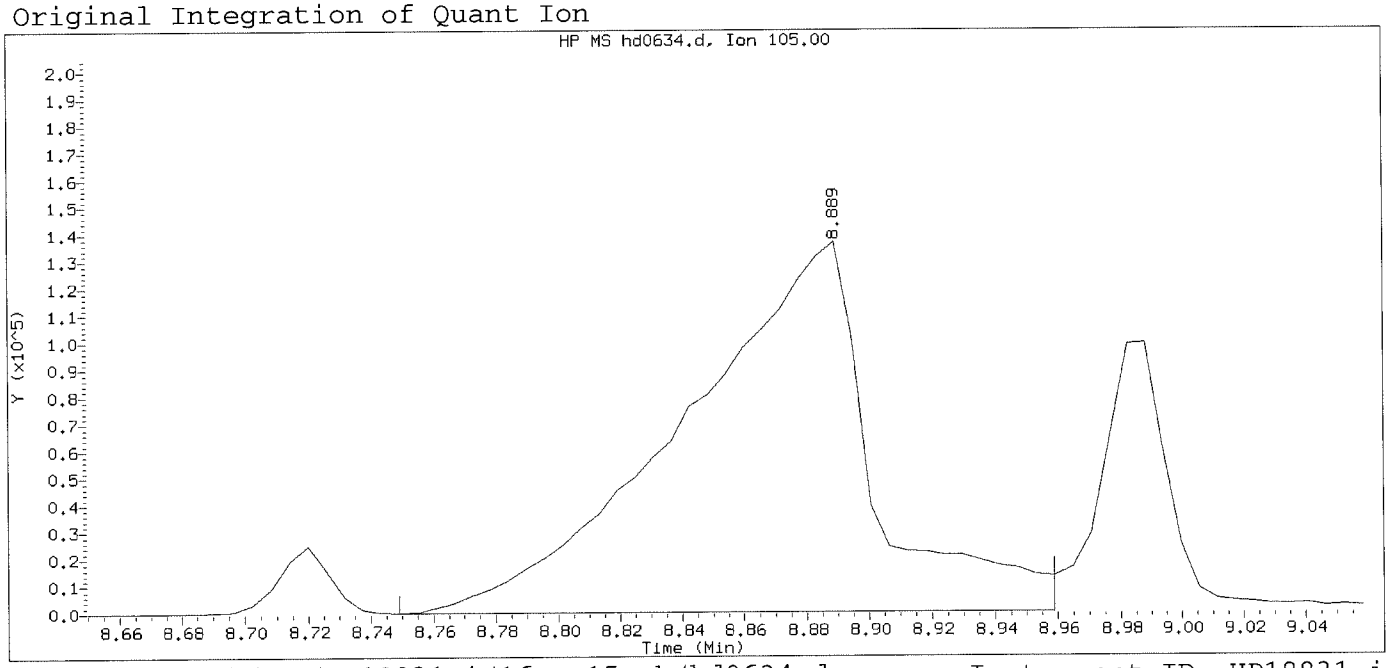
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

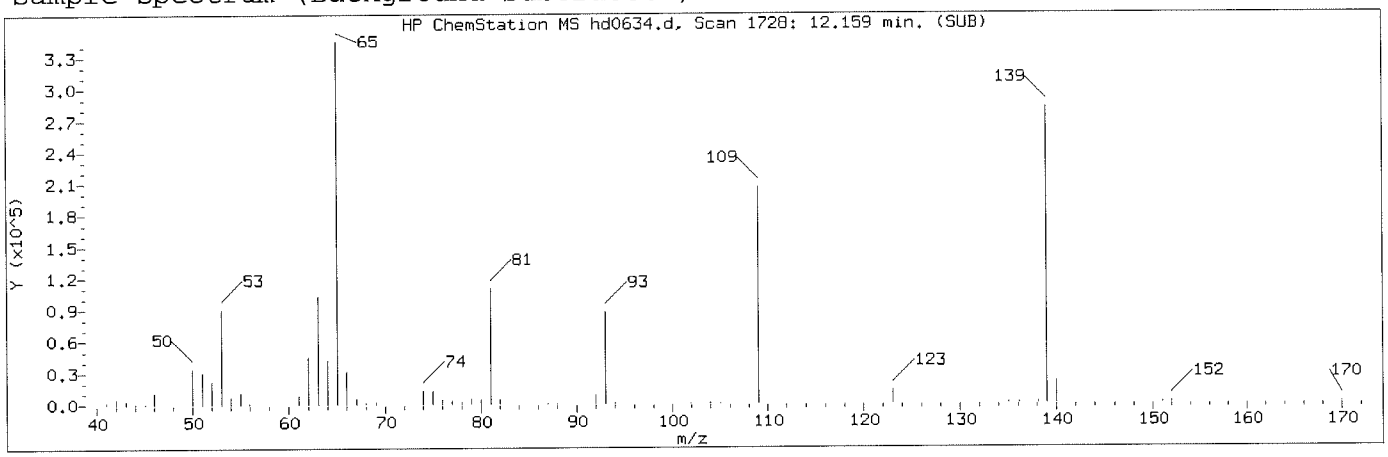
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

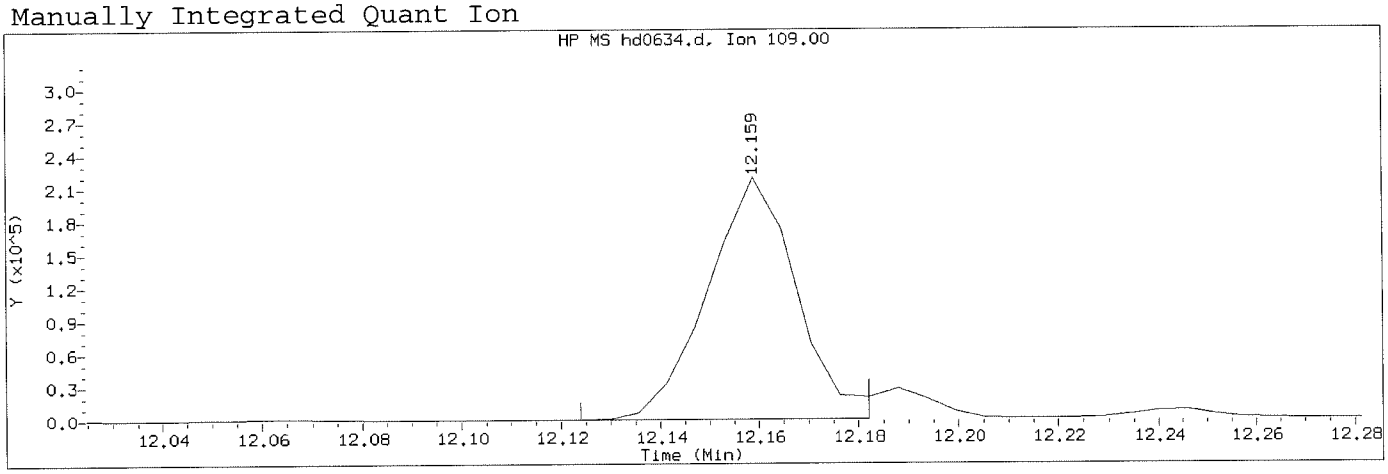
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1167		
Retention Time (minutes)	: 8.889		
Quant Ion	: 105.00		
Area	: 578962		
On-column Amount (ng/ul)	: 20.6175		
Integration start scan	: 1142	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1728		
Retention Time (minutes)	: 12.159		
Quant Ion	: 109.00		
Area (flag)	: 275431M		
On-Column Amount (ng/ul)	: 20.8683		
Integration start scan	: 1721	Integration stop scan:	1731
Y at integration start	: 0	Y at integration end:	0

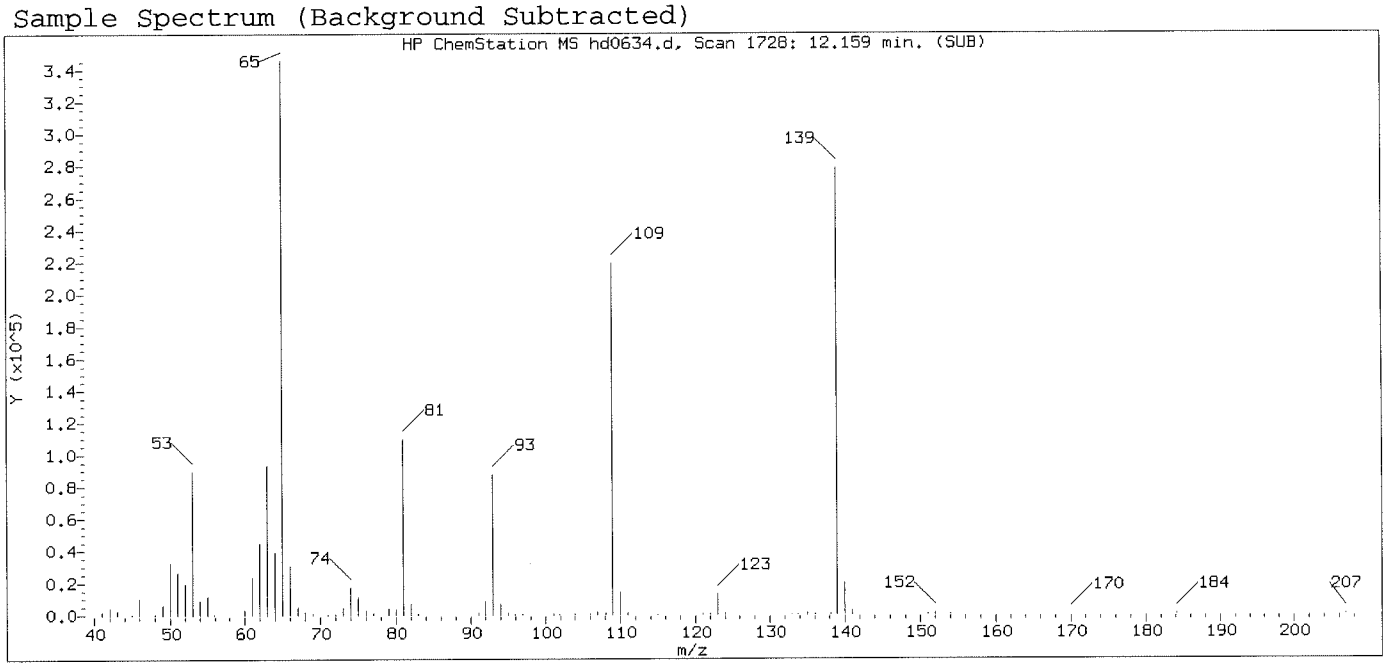
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 signature user ID: hbz01996

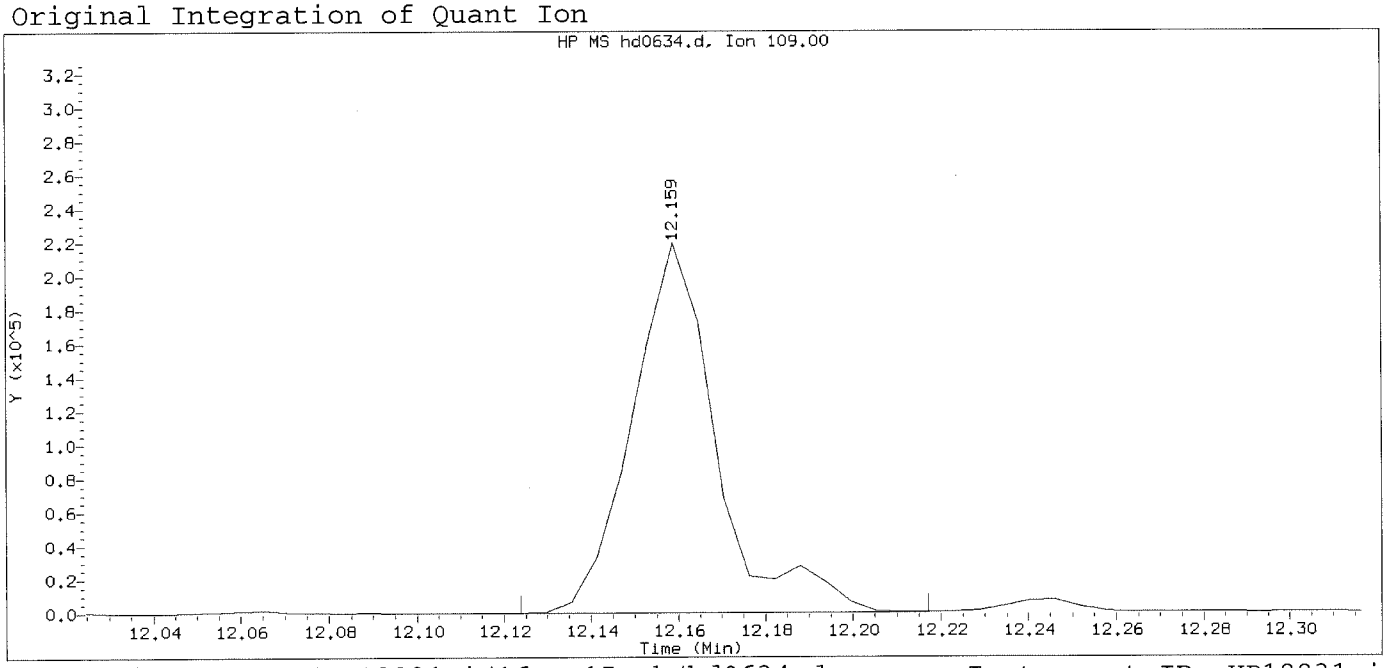
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

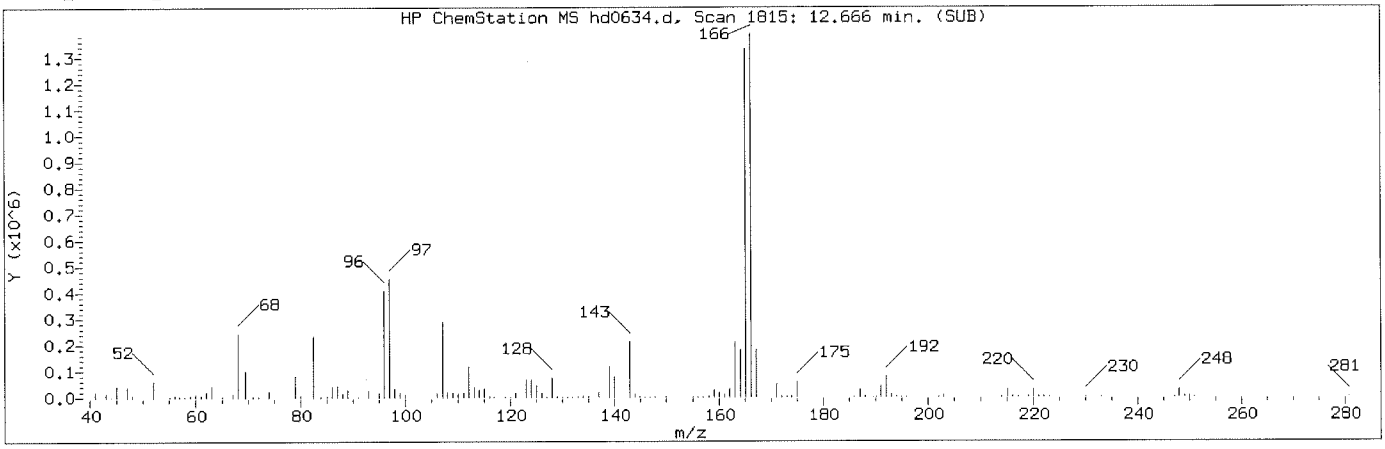
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

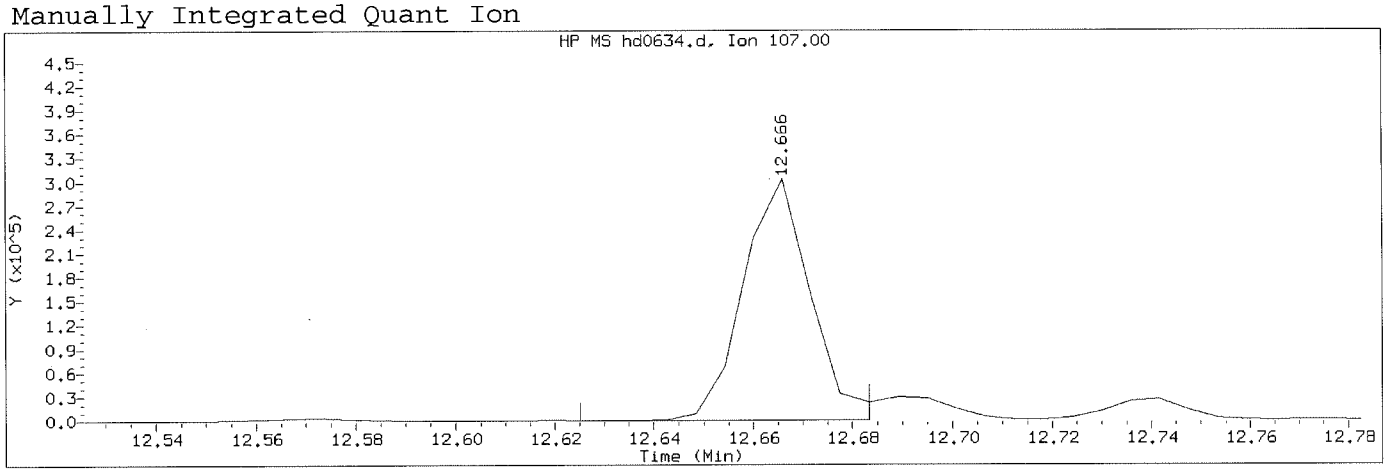
Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1728		
Retention Time (minutes)	: 12.159		
Quant Ion	: 109.00		
Area	: 294515		
On-column Amount (ng/ul)	: 19.8844		
Integration start scan	: 1721	Integration stop scan:	1737
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1815		
Retention Time (minutes)	: 12.666		
Quant Ion	: 107.00		
Area (flag)	: 287238M		
On-Column Amount (ng/ul)	: 20.8052		
Integration start scan	: 1807	Integration stop scan:	1817
Y at integration start	: 0	Y at integration end:	0

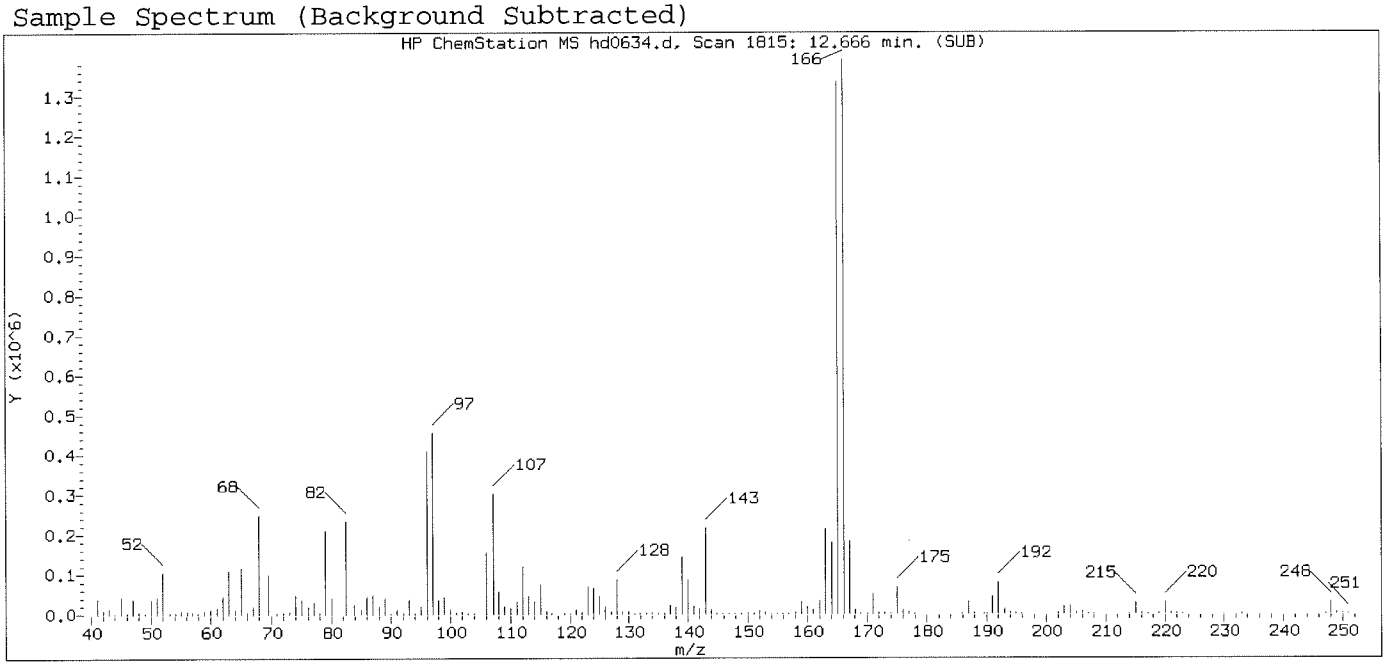
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 signature user ID: hbz01996

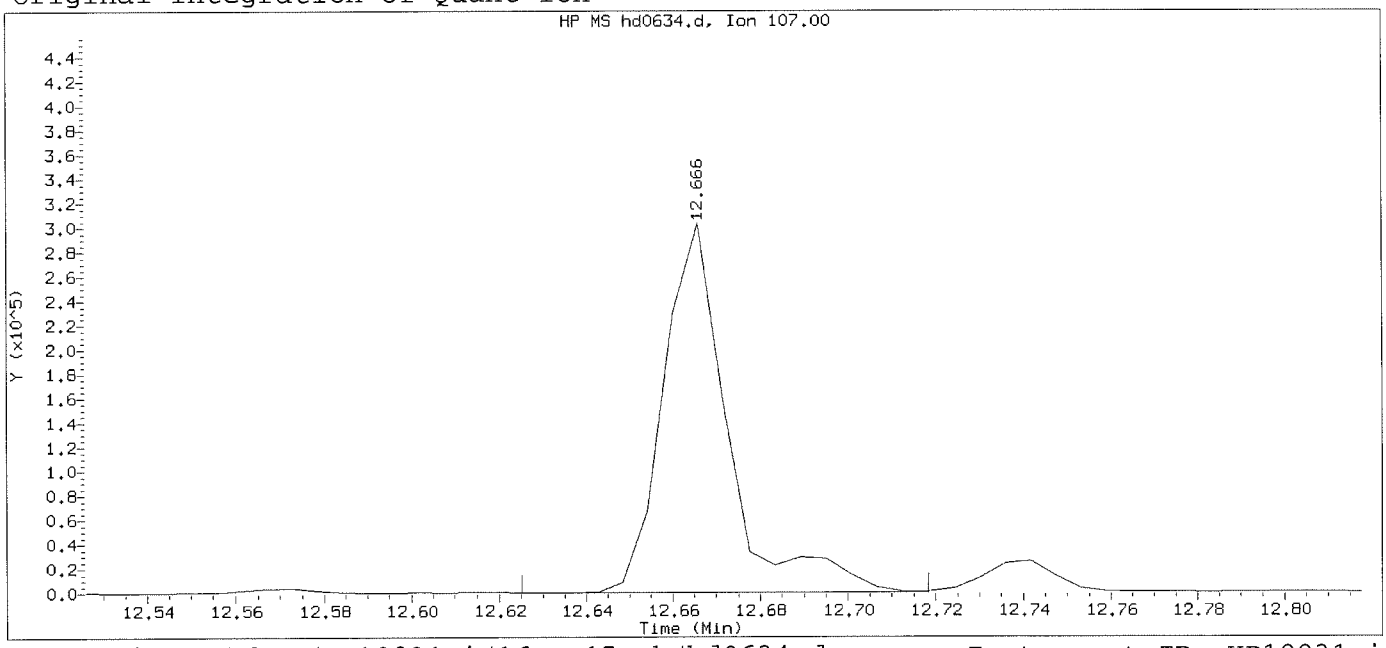
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



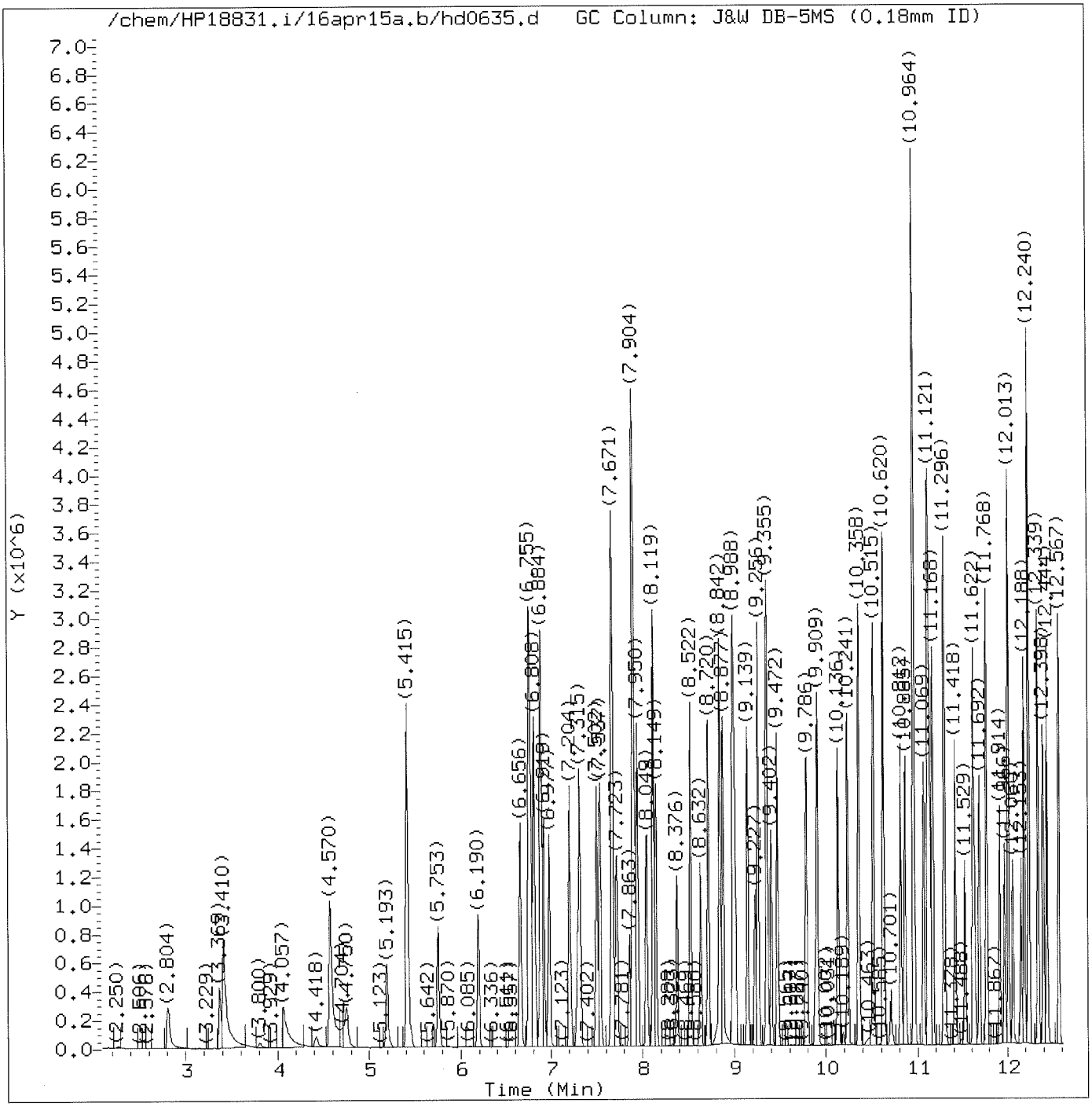
Data File: /chem/HP18831.i/16apr15a.b/hd0634.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:14 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD020 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1815		
Retention Time (minutes)	: 12.666		
Quant Ion	: 107.00		
Area	: 314024		
On-column Amount (ng/ul)	: 19.8632		
Integration start scan	: 1807	Integration stop scan:	1823
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

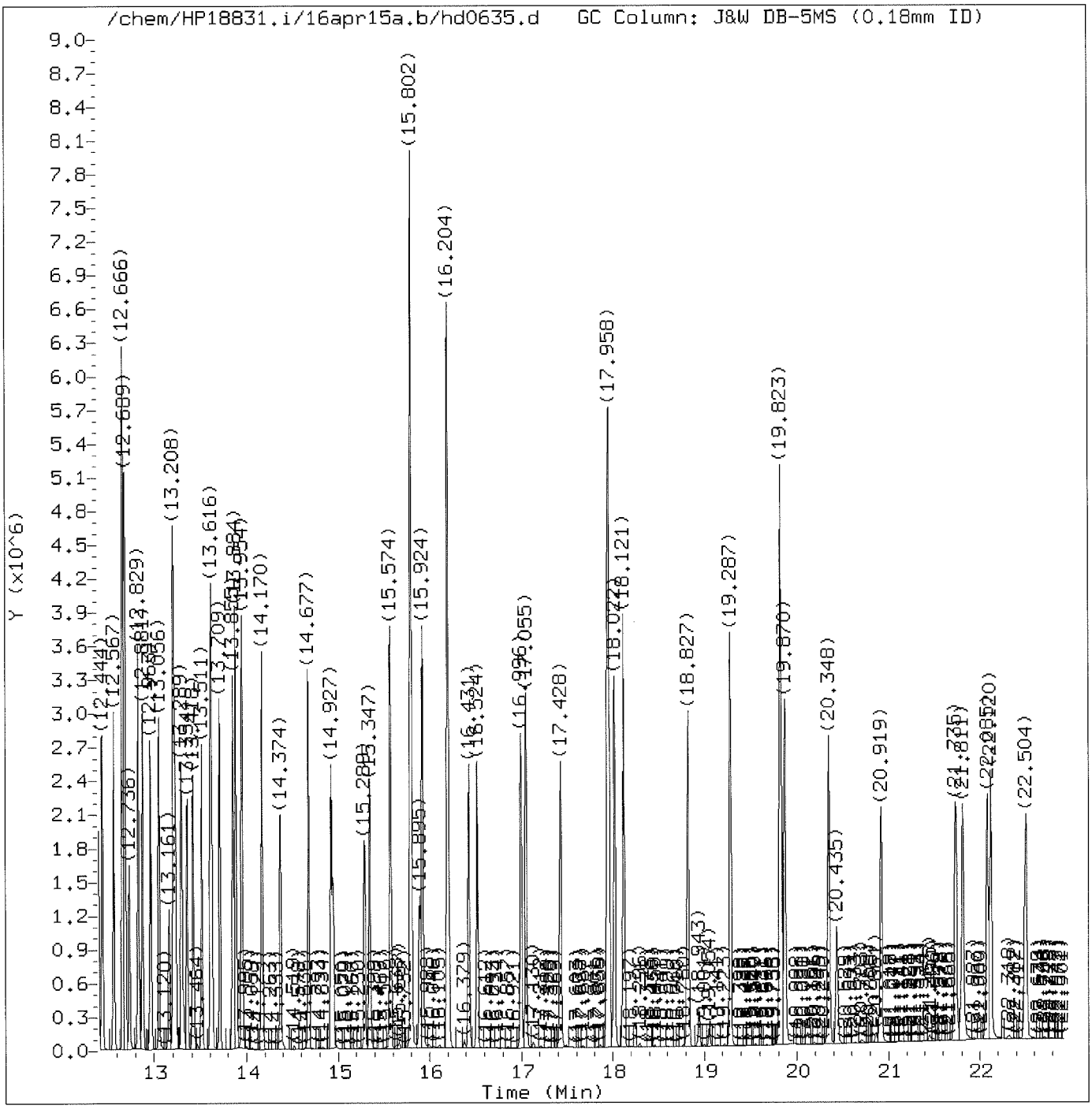
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.804	88	270423	12.381
4) N-Nitrosodimethylamine	(1)	3.369	74	453207	12.728
5) Pyridine	(1)	3.410	79	745800	13.011
7) 2-Picoline	(1)	4.570	93	770653	12.584
8) N-Nitrosomethylethylamine	(1)	4.750	88	306645	12.708
9) Methyl methanesulfonate	(1)	5.193	80	354740	12.736
11)$2-Fluorophenol	(1)	5.415	112	1191647	25.583
42) Total Cresols	(1)			1173716	25.742
13) N-Nitrosodiethylamine	(1)	5.753	102	303964	12.892
15) Ethyl methanesulfonate	(1)	6.190	109	307355	12.874
16) Benzaldehyde	(1)	6.656	77	571178	12.722
17)$Phenol-d6	(1)	6.755	99	1574221	25.960
18) Phenol	(1)	6.773	94	880622	12.952
19) Aniline	(1)	6.814	93	1082327	12.696
20) a-methylstyrene	(1)	6.890	118	617685	12.538
22) bis(2-Chloroethyl)ether	(1)	6.919	93	691200	12.658
23) 2-Chlorophenol	(1)	6.977	128	584684	12.990
24) 1,3-Dichlorobenzene	(1)	7.204	146	611570	12.706
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	159203	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	624943	12.689
97) Isosafrole	(3)			466846	12.847
27) Benzyl alcohol	(1)	7.502	108	402542	12.525
28) 1,2-Dichlorobenzene	(1)	7.537	146	591479	12.693
31) 2-Methylphenol	(1)	7.665	108	572549	12.834
30) Indene	(1)	7.671	115	1030904	12.487
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.723	45	1028025	12.500
34) bis(2-Chloroisopropyl)ether	(1)	7.723	45	1028025	12.500
35) N-Nitrosopyrrolidine	(1)	7.863	100	317942	13.132
36) Acetophenone	(1)	7.898	105	928041	12.740
37) 4-Methylphenol	(1)	7.904	108	601167	12.908
38) N-Nitroso-di-n-propylamine	(1)	7.915	70	544510	12.946
39) N-Nitrosomorpholine	(1)	7.927	56	437503	12.503
40) o-Toluidine	(1)	7.950	106	1016359	12.771
43) Hexachloroethane	(1)	8.044	117	265908	12.752
120) 2,4_2,6-Dinitrotoluenes	(3)			634144	26.162
44)$Nitrobenzene-d5	(2)	8.119	82	1540368	25.469
45) Nitrobenzene	(2)	8.149	77	795250	12.596
48) N-Nitrosopiperidine	(2)	8.376	114	294317	13.072
50) Isophorone	(2)	8.522	82	1362291	12.960
51) 2-Nitrophenol	(2)	8.632	139	308815	13.260

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.720	107	646747	13.042
146) Diallate trans/cis	(4)			606582	12.568
57) O,O,O-Triethylphosphorothioate	(2)	8.842	198	318839	12.769
56) Benzoic acid	(2)	8.865	105	505820M	14.310
55) bis(2-Chloroethoxy)methane	(2)	8.877	93	853376	12.765
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.988	104	952914	12.430
60) 2,4-Dichlorophenol	(2)	9.005	162	477193	13.101
62) 1,2,4-Trichlorobenzene	(2)	9.139	180	562303	12.777
65)*Naphthalene-d8	(2)	9.227	136	613044	5.000
66) Naphthalene	(2)	9.256	128	1639966	12.584
67) 4-Chloroaniline	(2)	9.349	127	698652	13.033
68) 2,6-Dichlorophenol	(2)	9.361	162	459145	12.814
69) Hexachloropropene	(2)	9.402	213	354556	12.759
71) Hexachlorobutadiene	(2)	9.472	225	333762	12.653
75) Quinoline	(2)	9.786	129	1028070	12.657
76) Caprolactam	(2)	9.897	113	154332	12.672
77) N-Nitrosodi-n-butylamine	(2)	9.909	84	618872	14.132
80) 4-Chloro-3-methylphenol	(2)	10.136	107	550945	13.105
82) Safrole	(2)	10.241	162	424323	12.759
83) 2-Methylnaphthalene	(2)	10.358	142	1109047	12.750
84) 1-Methylnaphthalene	(2)	10.515	142	1024199	12.832
85) Hexachlorocyclopentadiene	(3)	10.620	237	348969	12.819
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	570089	12.639
88) cis-Isosafrole	(3)	10.707	162	76593	2.173
90) 2,4,6-Trichlorophenol	(3)	10.812	196	376550	13.206
92) 2,4,5-Trichlorophenol	(3)	10.865	196	405444	13.509
93)$2-Fluorobiphenyl	(3)	10.964	172	2485010	25.451
94) trans-Isosafrole	(3)	11.069	162	390253	10.674
95) 1,1'-Biphenyl	(3)	11.115	154	1330728	12.734
96) 2-Chloronaphthalene	(3)	11.133	162	1052122	12.676
98) 1-Chloronaphthalene	(3)	11.168	162	986182	12.746
99) Diphenyl ether	(3)	11.296	170	710540	12.745
100) 2-Nitroaniline	(3)	11.302	138	321779	13.222
104) 1,4-Naphthoquinone	(3)	11.418	158	445208	13.126
105) 1,4-Dinitrobenzene	(3)	11.529	168	173180	12.680
106) Dimethylphthalate	(3)	11.622	163	1177815	12.601
107) 1,3-Dinitrobenzene	(3)	11.634	168	192691	13.064
108) 2,6-Dinitrotoluene	(3)	11.692	165	264993	13.186
109) Acenaphthylene	(3)	11.768	152	1577494	13.097
112) 3-Nitroaniline	(3)	11.914	138	278545	13.364

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113) *Acenaphthene-d10	(3)	11.966	164	345044	5.000
114) Acenaphthene	(3)	12.013	153	1043900	12.761
115) 2,4-Dinitrophenol	(3)	12.060	184	182959	13.196
116) 4-Nitrophenol	(3)	12.153	109	192406	12.658
117) Pentachlorobenzene	(3)	12.188	250	458302	12.706
119) Dibenzofuran	(3)	12.240	168	1431099	12.772
118) 2,4-Dinitrotoluene	(3)	12.240	165	369151	12.975
121) 1-Naphthylamine	(3)	12.339	143	1048767	12.558
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	309528	13.258
123) 2-Naphthylamine	(3)	12.444	143	1035023	12.683
124) Diethylphthalate	(3)	12.567	149	1177143	12.862
125) Thionazin	(3)	12.660	107	203679	12.810
126) Fluorene	(3)	12.666	166	1136458	12.833
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	582417	12.718
128) 5-Nitro-o-toluidine	(3)	12.689	152	320796	13.444
129) 4-Nitroaniline	(3)	12.695	138	290290	13.275
130) 4,6-Dinitro-2-methylphenol	(4)	12.736	198	240712	12.919
132) NDPA as diphenylamine	(4)	12.829	169	958934	12.687
131) N-Nitrosodiphenylamine	(4)	12.829	169	958934	12.687
134) 1,2-Diphenylhydrazine	(4)	12.881	77	1432795	12.549
135) $2,4,6-Tribromophenol	(3)	12.969	330	307685	26.680
137) Tetraethyldithiopyrophosphate	(4)	13.050	97	230366	12.938
139) 1,3,5-Trinitrobenzene	(4)	13.161	213	152975	12.877
140) Diallate (peak 1)	(4)	13.202	86	507496	10.472
141) Phorate	(4)	13.214	75	941919	13.135
142) Phenacetin	(4)	13.231	108	691269	13.434
143) 4-Bromophenyl-phenylether	(4)	13.289	248	328515	12.539
144) Diallate (peak 2)	(4)	13.313	86	99086	2.097
145) Hexachlorobenzene	(4)	13.354	284	344361	12.504
147) Dimethoate	(4)	13.418	87	602900	12.943
148) Atrazine	(4)	13.511	200	342612	12.553
149) Pentachlorophenol	(4)	13.610	266	236865	13.088
150) 4-Aminobiphenyl	(4)	13.616	169	939901	12.950
151) Pentachloronitrobenzene	(4)	13.622	237	168444	12.759
152) Pronamide	(4)	13.709	173	584648	13.440
153) *Phenanthrene-d10	(4)	13.855	188	671755	5.000
154) Dinoseb	(4)	13.861	211	377183	13.604
155) Phenanthrene	(4)	13.884	178	1738452	12.700
157) Anthracene	(4)	13.954	178	1750608	13.094
163) Carbazole	(4)	14.170	167	1662737	12.967

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.368	109	466424	13.105
165) Di-n-butylphthalate	(4)	14.677	149	2080734	12.827
167) Parathion	(4)	14.927	109	284883	13.281
168) 4-Nitroquinoline-1-oxide	(4)	14.951	190	212159	13.080
222) Total PAHs	(6)			29209278	234.282
169) Octachlorostyrene	(4)	15.294	308	132153	12.350
171) Isodrin	(4)	15.347	193	208803	12.470
173) Fluoranthene	(4)	15.574	202	2036525	13.156
174) Benzidine	(5)	15.802	184	4303029	38.457
175)*Pyrene-d10	(5)	15.895	212	814298	5.000
177) Pyrene	(5)	15.924	202	2120581	12.624
179)$Terphenyl-d14	(5)	16.204	244	2886795	25.293
182) p-Dimethylaminoazobenzene	(5)	16.431	225	380006	13.656
185) Chlorobenzilate	(5)	16.518	139	642838	12.771
187) 3,3'-Dimethylbenzidine	(5)	16.996	212	1330398	13.030
188) Butylbenzylphthalate	(5)	17.055	149	923655	12.816
191) 2-Acetylaminofluorene	(5)	17.428	181	794317	13.046
193) 3,3'-Dichlorobenzidine	(5)	17.941	252	725998	12.638
195) Benzo(a)anthracene	(5)	17.958	228	1982323	13.089
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.958	231	384115	12.140
196) Chrysene	(5)	18.022	228	1830688	12.813
199) bis(2-Ethylhexyl)phthalate	(5)	18.121	149	1316764	12.844
203) 6-Methylchrysene	(5)	18.827	242	1277364	12.491
205) Di-n-octylphthalate	(6)	19.287	149	2270163	13.472
206) Benzo(b)fluoranthene	(6)	19.823	252	1834754	13.217
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.829	256	799827	13.597
208) Benzo(k)fluoranthene	(6)	19.870	252	1818534	13.330
211) Benzo(a)pyrene	(6)	20.354	252	1728386	13.603
213)*Perylene-d12	(6)	20.435	264	539594	5.000
215) 3-Methylcholanthrene	(6)	20.919	268	699697	13.404
217) Dibenz(a,h)acridine	(6)	21.741	279	1340264	12.921
218) Dibenz(a,j)acridine	(6)	21.811	279	1353639	12.978
219) Indeno(1,2,3-cd)pyrene	(6)	22.085	276	1803781	13.303
220) Dibenz(a,h)anthracene	(6)	22.126	278	1530065	13.487
221) Benzo(g,h,i)perylene	(6)	22.504	276	1503517	13.011

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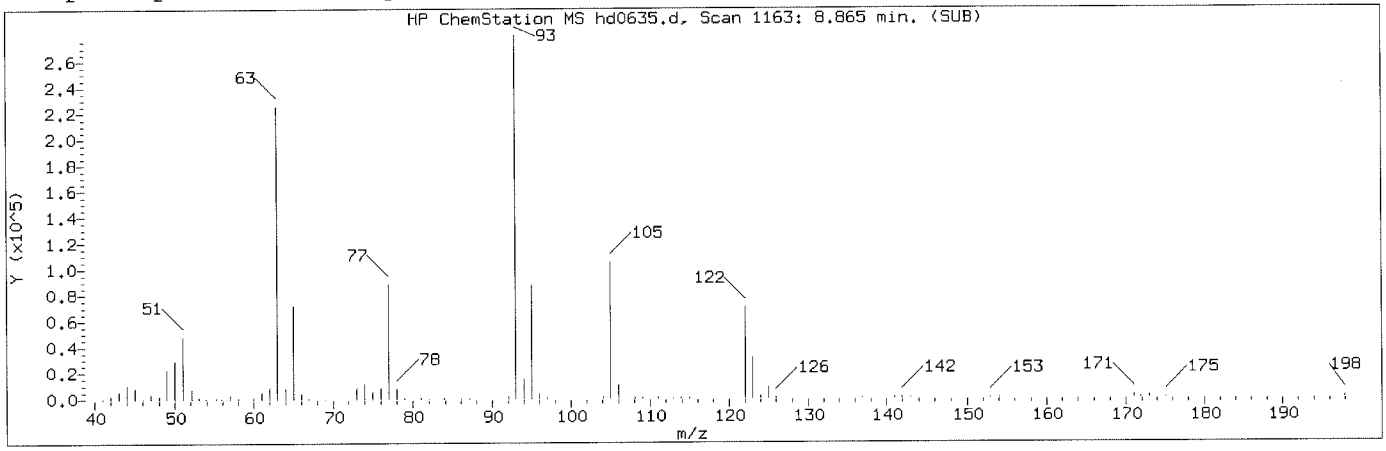
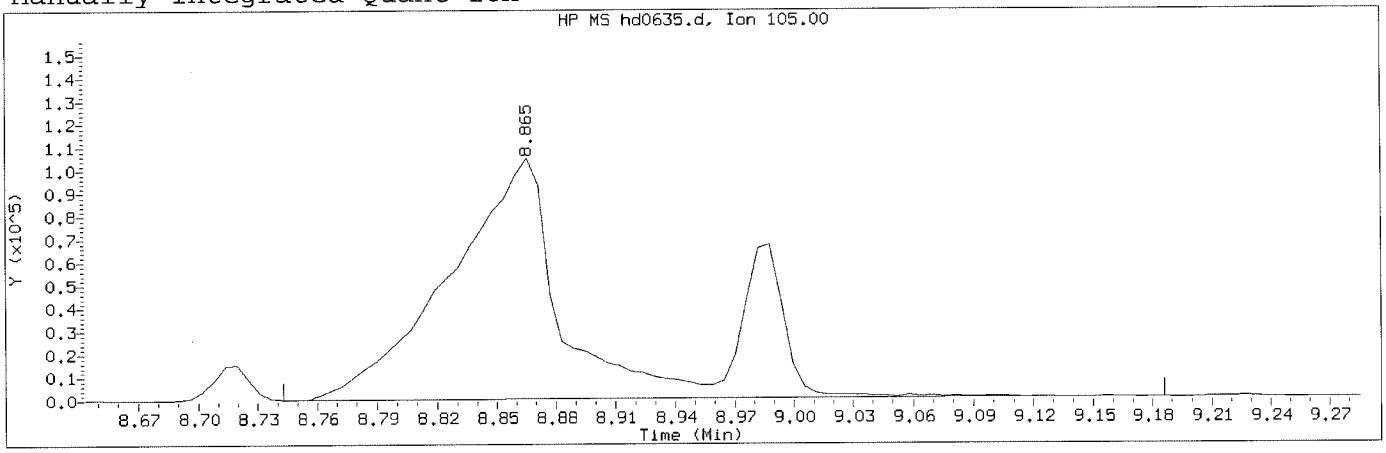
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1163		
Retention Time (minutes)	: 8.865		
Quant Ion	: 105.00		
Area (flag)	: 505820M		
On-Column Amount (ng/ul)	: 14.3104		
Integration start scan	: 1141	Integration stop scan:	1217
Y at integration start	: 165	Y at integration end:	715

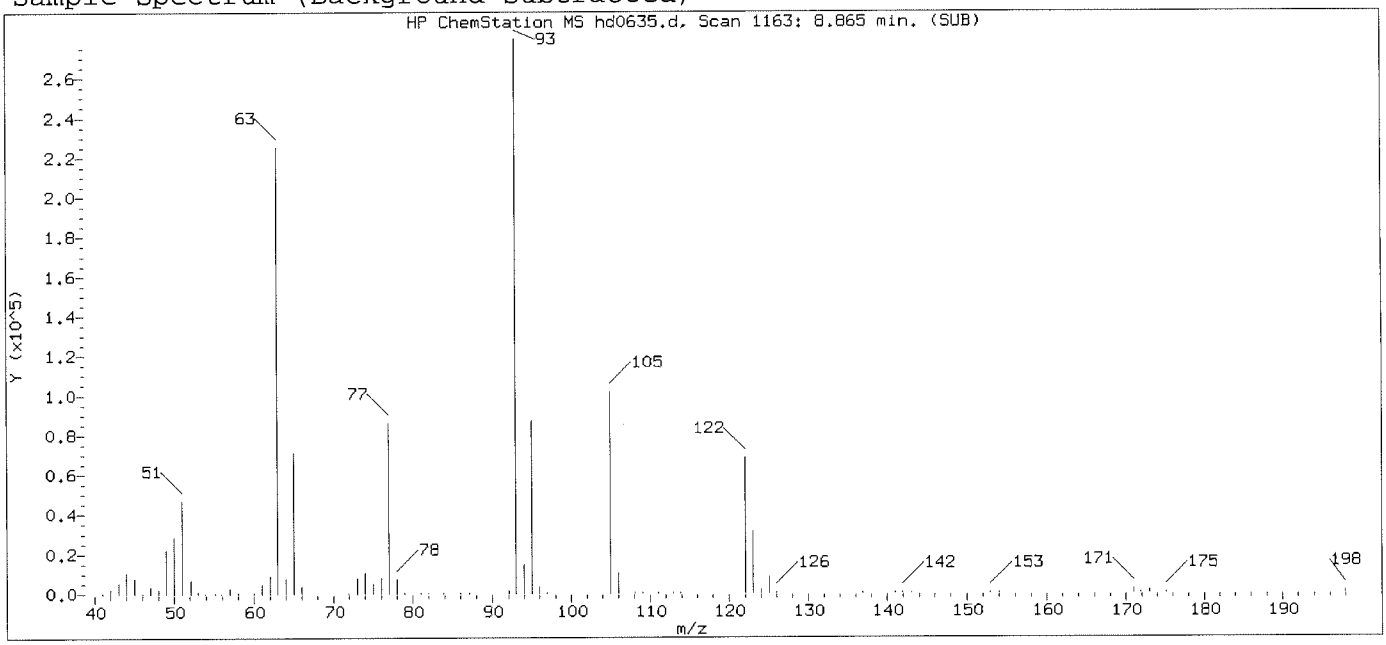
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 signature user ID: hbz01996

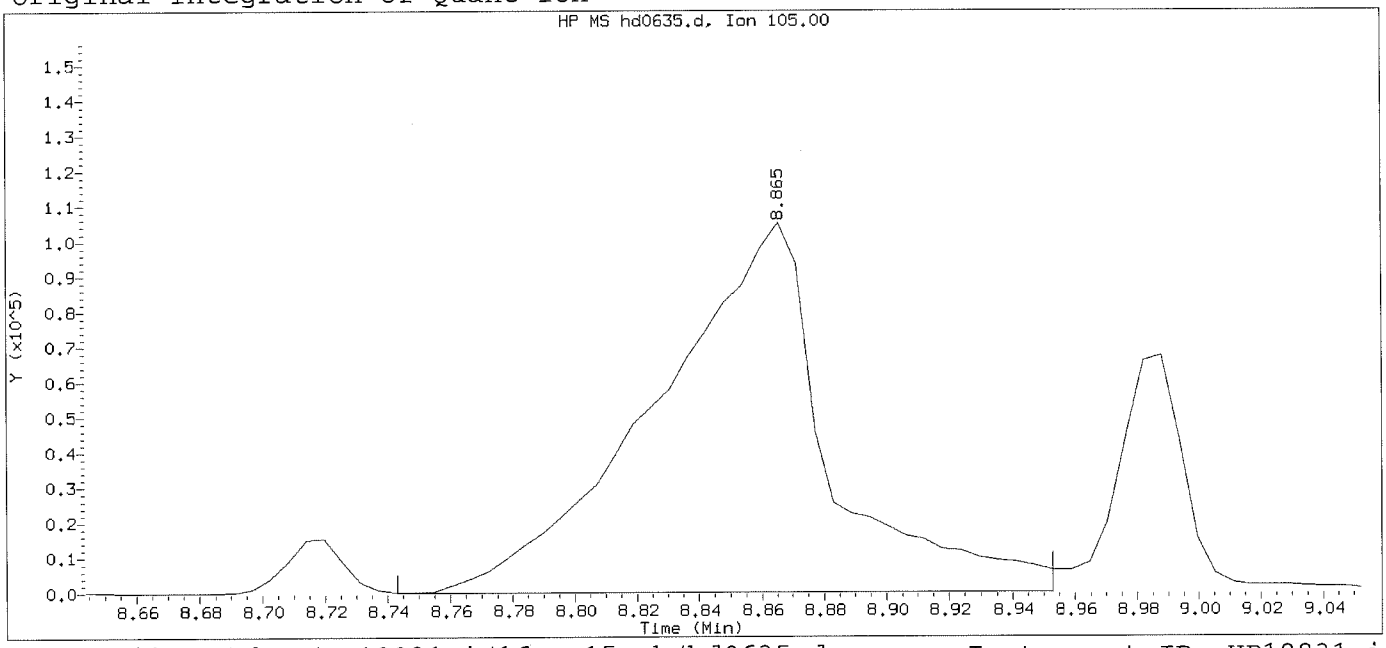
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0635.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 19:43 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1163		
Retention Time (minutes)	: 8.865		
Quant Ion	: 105.00		
Area	: 407340		
On-column Amount (ng/ul)	: 12.5857		
Integration start scan	: 1141	Integration stop scan:	1177
Y at integration start	: 0	Y at integration end:	0

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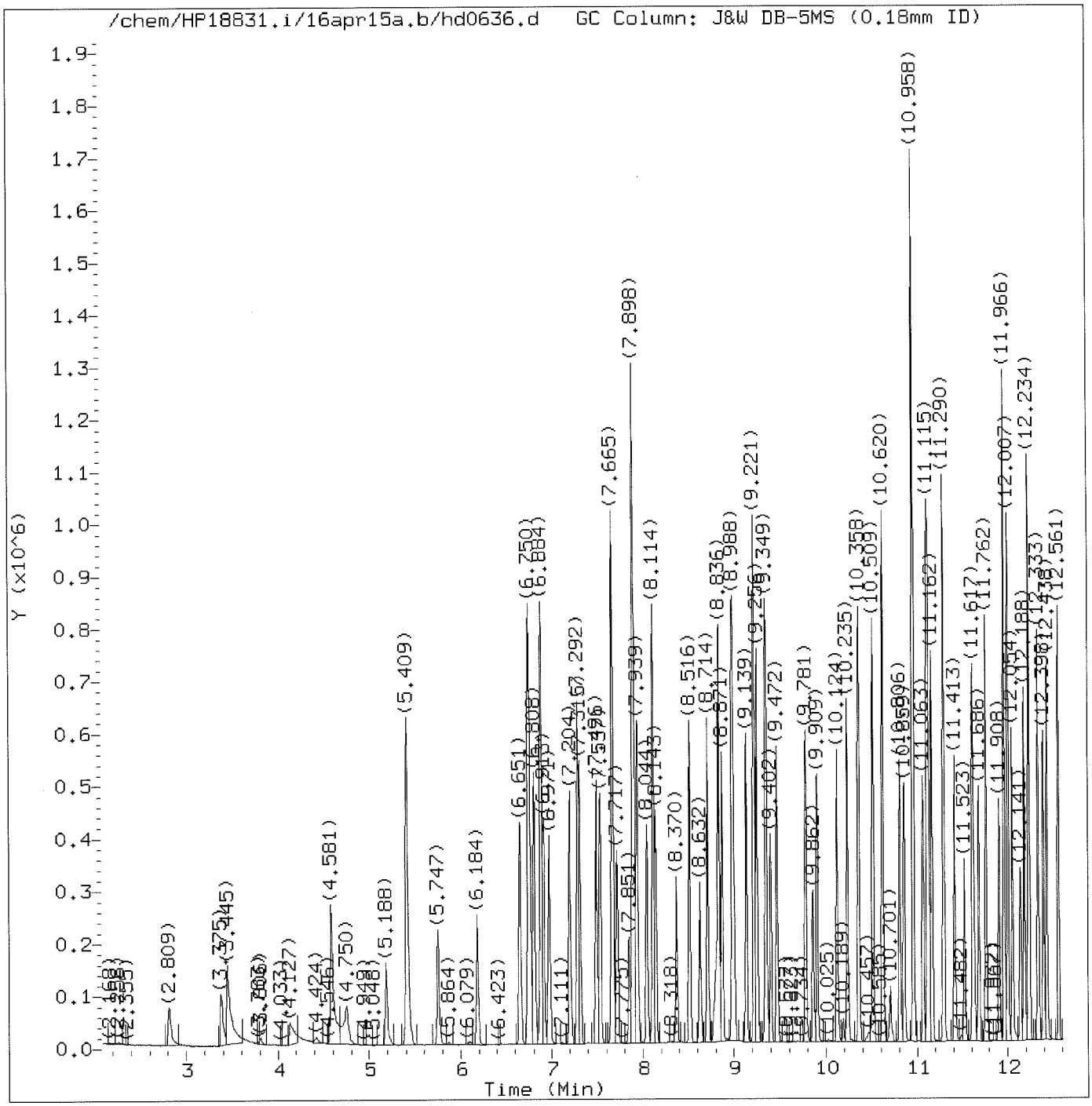
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

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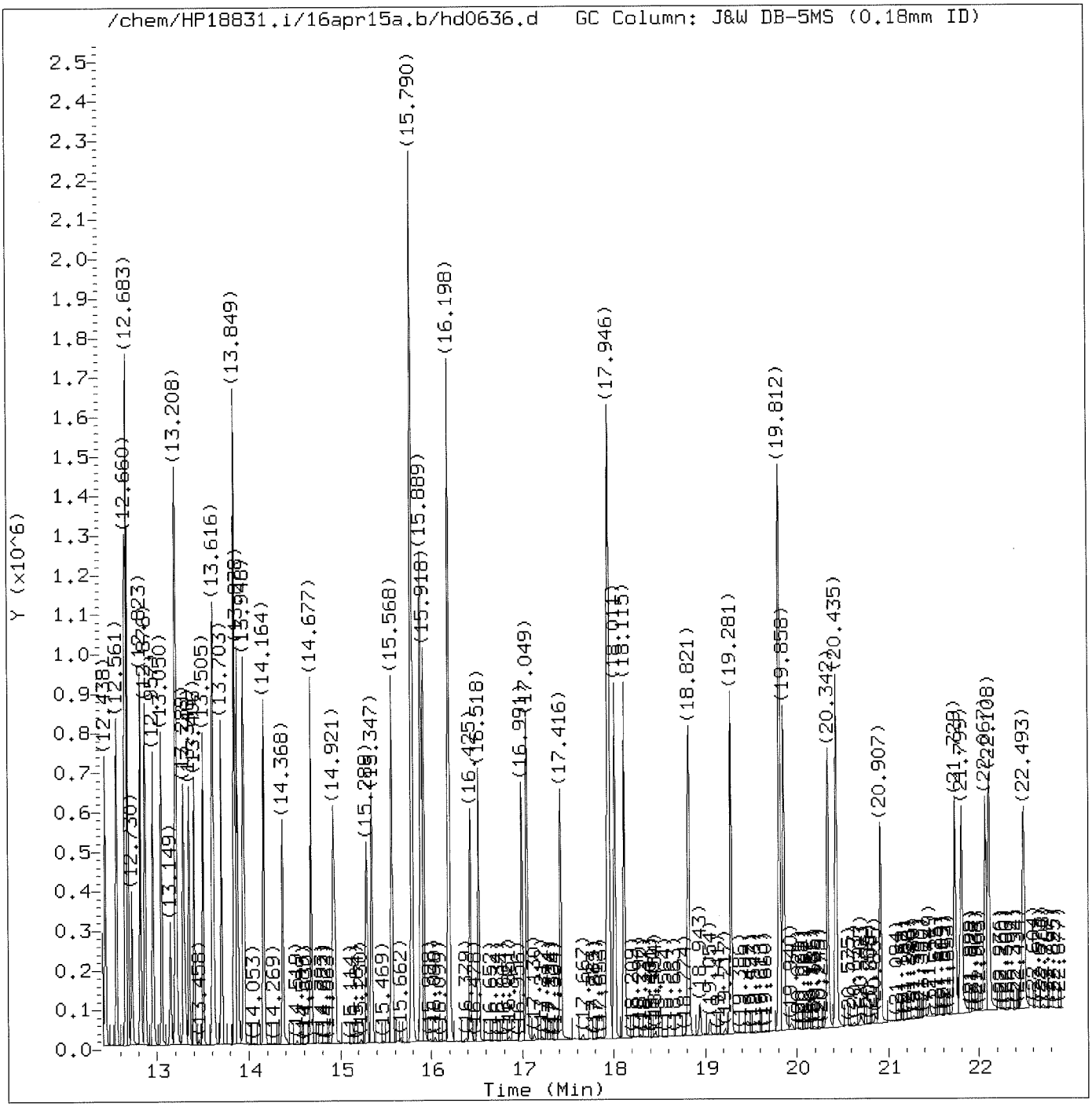
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.809	88	72592M	3.711
4) N-Nitrosodimethylamine	(1)	3.375	74	118772	3.725
5) Pyridine	(1)	3.445	79	180607	3.518
7) 2-Picoline	(1)	4.581	93	199665	3.641
8) N-Nitrosomethylethylamine	(1)	4.750	88	79363	3.673
9) Methyl methanesulfonate	(1)	5.188	80	91823	3.681
11)$2-Fluorophenol	(1)	5.409	112	310991	7.455
42) Total Cresols	(1)			305263	7.475
13) N-Nitrosodiethylamine	(1)	5.753	102	78498	3.718
15) Ethyl methanesulfonate	(1)	6.184	109	80408	3.761
16) Benzaldehyde	(1)	6.651	77	158771	3.949
17)$Phenol-d6	(1)	6.744	99	410069	7.551
18) Phenol	(1)	6.767	94	226806	3.725
19) Aniline	(1)	6.808	93	281721	3.690
20) a-methylstyrene	(1)	6.884	118	163193	3.699
22) bis(2-Chloroethyl)ether	(1)	6.913	93	181938	3.721
23) 2-Chlorophenol	(1)	6.971	128	151006	3.746
24) 1,3-Dichlorobenzene	(1)	7.204	146	162830	3.778
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	142571	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	166740	3.780
97) Isosafrole	(3)			120105	3.767
27) Benzyl alcohol	(1)	7.496	108	105804	3.676
28) 1,2-Dichlorobenzene	(1)	7.537	146	157794	3.781
31) 2-Methylphenol	(1)	7.659	108	147907	3.702
30) Indene	(1)	7.671	115	276905	3.745
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	271640	3.688
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	271640	3.688
35) N-Nitrosopyrrolidine	(1)	7.851	100	78834	3.636
36) Acetophenone	(1)	7.892	105	234888	3.601
37) 4-Methylphenol	(1)	7.898	108	157356	3.773
38) N-Nitroso-di-n-propylamine	(1)	7.904	70	139202	3.696
39) N-Nitrosomorpholine	(1)	7.915	56	116115	3.706
40) o-Toluidine	(1)	7.939	106	266624	3.741
43) Hexachloroethane	(1)	8.044	117	68907	3.690
120) 2,4_2,6-Dinitrotoluenes	(3)			163750	7.719
44)$Nitrobenzene-d5	(2)	8.114	82	404351	7.561
45) Nitrobenzene	(2)	8.143	77	209362	3.750
48) N-Nitrosopiperidine	(2)	8.370	114	76189	3.827
50) Isophorone	(2)	8.516	82	352443	3.792
51) 2-Nitrophenol	(2)	8.632	139	76860	3.732

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.714	107	165303	3.770
146) Diallate trans/cis	(4)			154610	3.727
56) Benzoic acid	(2)	8.825	105	198968M	6.366
57) O,O,O-Triethylphosphorothioate	(2)	8.836	198	83433	3.779
55) bis(2-Chloroethoxy)methane	(2)	8.871	93	225755	3.819
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	255257	3.766
60) 2,4-Dichlorophenol	(2)	8.999	162	122821	3.814
62) 1,2,4-Trichlorobenzene	(2)	9.139	180	148628	3.819
65)*Naphthalene-d8	(2)	9.221	136	542063	5.000
66) Naphthalene	(2)	9.256	128	433224	3.760
67) 4-Chloroaniline	(2)	9.343	127	180867	3.816
68) 2,6-Dichlorophenol	(2)	9.355	162	120535	3.804
69) Hexachloropropene	(2)	9.402	213	91530	3.725
71) Hexachlorobutadiene	(2)	9.472	225	87231	3.740
75) Quinoline	(2)	9.781	129	270201	3.762
76) Caprolactam	(2)	9.862	113	39994	3.714
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	125265	3.235
80) 4-Chloro-3-methylphenol	(2)	10.124	107	140115	3.769
82) Safrole	(2)	10.235	162	110363	3.753
83) 2-Methylnaphthalene	(2)	10.358	142	294144	3.824
84) 1-Methylnaphthalene	(2)	10.509	142	267508	3.790
85) Hexachlorocyclopentadiene	(3)	10.614	237	89647	3.754
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	154028	3.892
88) cis-Isosafrole	(3)	10.701	162	19724	0.638
90) 2,4,6-Trichlorophenol	(3)	10.806	196	94323	3.770
92) 2,4,5-Trichlorophenol	(3)	10.859	196	101439	3.852
93)$2-Fluorobiphenyl	(3)	10.958	172	662993	7.740
94) trans-Isosafrole	(3)	11.063	162	100381	3.129
95) 1,1'-Biphenyl	(3)	11.109	154	340073	3.709
96) 2-Chloronaphthalene	(3)	11.127	162	274458	3.769
98) 1-Chloronaphthalene	(3)	11.162	162	264617	3.898
99) Diphenyl ether	(3)	11.290	170	189789	3.880
100) 2-Nitroaniline	(3)	11.296	138	85347	3.997
104) 1,4-Naphthoquinone	(3)	11.413	158	113733	3.822
105) 1,4-Dinitrobenzene	(3)	11.523	168	45413	3.790
106) Dimethylphthalate	(3)	11.611	163	316420	3.859
107) 1,3-Dinitrobenzene	(3)	11.628	168	49484	3.824
108) 2,6-Dinitrotoluene	(3)	11.686	165	69549	3.945
109) Acenaphthylene	(3)	11.762	152	411127	3.891
112) 3-Nitroaniline	(3)	11.908	138	71894	3.931

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113) *Acenaphthene-d10	(3)	11.966	164	302724	5.000
114) Acenaphthene	(3)	12.007	153	271991	3.790
115) 2,4-Dinitrophenol	(3)	12.054	184	81444	6.695
116) 4-Nitrophenol	(3)	12.141	109	45729	3.429
117) Pentachlorobenzene	(3)	12.188	250	119720	3.783
118) 2,4-Dinitrotoluene	(3)	12.229	165	94201	3.774
119) Dibenzofuran	(3)	12.240	168	378701	3.852
121) 1-Naphthylamine	(3)	12.339	143	273483	3.733
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	79346	3.874
123) 2-Naphthylamine	(3)	12.438	143	263685	3.683
124) Diethylphthalate	(3)	12.561	149	297286	3.703
125) Thionazin	(3)	12.654	107	51078M	3.661
126) Fluorene	(3)	12.666	166	307043	3.952
128) 5-Nitro-o-toluidine	(3)	12.677	152	79870	3.815
129) 4-Nitroaniline	(3)	12.683	138	76175	3.970
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	155467	3.869
130) 4,6-Dinitro-2-methylphenol	(4)	12.730	198	55215	3.448
132) NDPA as diphenylamine	(4)	12.823	169	248458	3.825
131) N-Nitrosodiphenylamine	(4)	12.823	169	248458	3.825
134) 1,2-Diphenylhydrazine	(4)	12.876	77	374181	3.813
135) $2,4,6-Tribromophenol	(3)	12.963	330	78980	7.806
137) Tetraethyldithiopyrophosphate	(4)	13.050	97	56160	3.670
139) 1,3,5-Trinitrobenzene	(4)	13.149	213	34771	3.405
140) Diallate (peak 1)	(4)	13.202	86	129061	3.098
141) Phorate	(4)	13.208	75	238115	3.863
142) Phenacetin	(4)	13.214	108	173871	3.931
143) 4-Bromophenyl-phenylether	(4)	13.289	248	85796	3.810
144) Diallate (peak 2)	(4)	13.307	86	25549	0.629
145) Hexachlorobenzene	(4)	13.348	284	90752	3.834
147) Dimethoate	(4)	13.406	87	151319	3.780
148) Atrazine	(4)	13.505	200	89782	3.827
149) Pentachlorophenol	(4)	13.604	266	56944	3.661
150) 4-Aminobiphenyl	(4)	13.616	169	251284	4.028
151) Pentachloronitrobenzene	(4)	13.616	237	43648	3.847
152) Pronamide	(4)	13.703	173	146140	3.909
153) *Phenanthrene-d10	(4)	13.849	188	577365	5.000
154) Dinoseb	(4)	13.855	211	84124	3.530
155) Phenanthrene	(4)	13.878	178	446034	3.791
157) Anthracene	(4)	13.948	178	441722	3.844
163) Carbazole	(4)	14.164	167	421351	3.823

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.368	109	111533	3.646
165) Di-n-butylphthalate	(4)	14.677	149	516030	3.701
167) Parathion	(4)	14.921	109	66506	3.607
168) 4-Nitroquinoline-1-oxide	(4)	14.945	190	41792	2.998
222) Total PAHs	(6)			7518778	69.628
169) Octachlorostyrene	(4)	15.289	308	35238	3.831
171) Isodrin	(4)	15.347	193	54151	3.763
173) Fluoranthene	(4)	15.568	202	512811	3.854
174) Benzidine	(5)	15.790	184	1108042	11.490
175)*Pyrene-d10	(5)	15.889	212	701815	5.000
177) Pyrene	(5)	15.918	202	546352	3.774
179)$Terphenyl-d14	(5)	16.198	244	752831	7.653
182) p-Dimethylaminoazobenzene	(5)	16.431	225	89975	3.752
185) Chlorobenzilate	(5)	16.518	139	164163	3.784
187) 3,3'-Dimethylbenzidine	(5)	16.991	212	315787	3.589
188) Butylbenzylphthalate	(5)	17.049	149	234772	3.780
191) 2-Acetylaminofluorene	(5)	17.416	181	190560	3.631
193) 3,3'-Dichlorobenzidine	(5)	17.935	252	185312	3.743
195) Benzo(a)anthracene	(5)	17.952	228	521580	3.996
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.952	231	101869	3.736
196) Chrysene	(5)	18.011	228	482879	3.921
199) bis(2-Ethylhexyl)phthalate	(5)	18.115	149	324650	3.674
203) 6-Methylchrysene	(5)	18.821	242	328186	3.723
205) Di-n-octylphthalate	(6)	19.281	149	533152	3.674
206) Benzo(b)fluoranthene	(6)	19.812	252	471930	3.948
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.812	256	201187	3.972
208) Benzo(k)fluoranthene	(6)	19.858	252	472525	4.022
211) Benzo(a)pyrene	(6)	20.342	252	422382	3.861
213)*Perylene-d12	(6)	20.435	264	464636	5.000
215) 3-Methylcholanthrene	(6)	20.907	268	166329	3.700
217) Dibenz(a,h)acridine	(6)	21.729	279	330645	3.702
218) Dibenz(a,j)acridine	(6)	21.799	279	335673	3.737
219) Indeno(1,2,3-cd)pyrene	(6)	22.067	276	455084	3.898
220) Dibenz(a,h)anthracene	(6)	22.108	278	379028	3.880
221) Benzo(g,h,i)perylene	(6)	22.493	276	381414	3.833

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$ = Compound is a surrogate standard.

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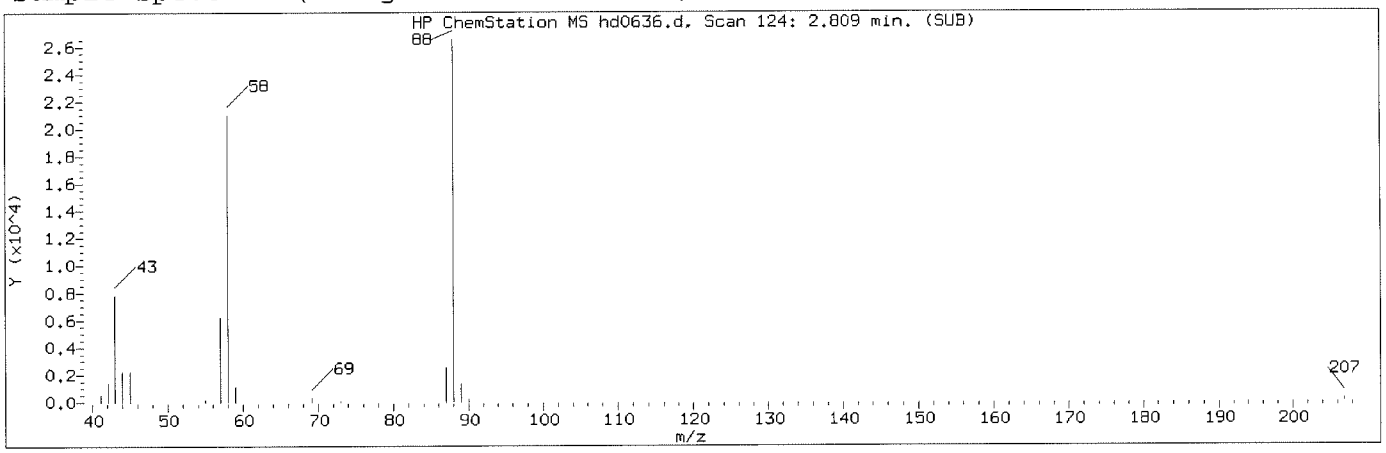
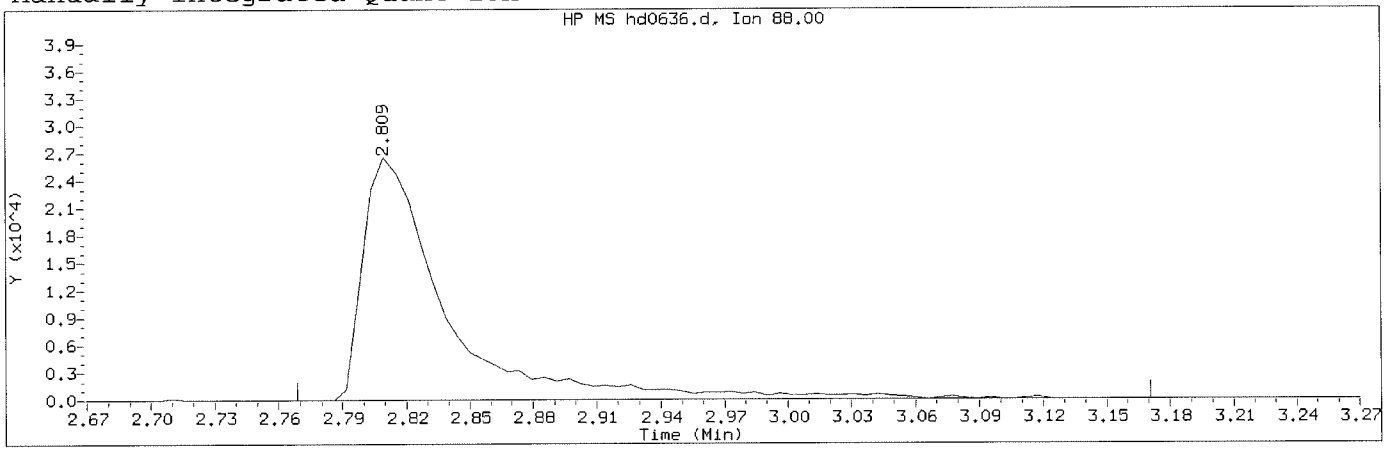
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 124		
Retention Time (minutes)	: 2.809		
Quant Ion	: 88.00		
Area (flag)	: 72592M		
On-Column Amount (ng/ul)	: 3.7112		
Integration start scan	: 116	Integration stop scan:	185
Y at integration start	: 0	Y at integration end:	0

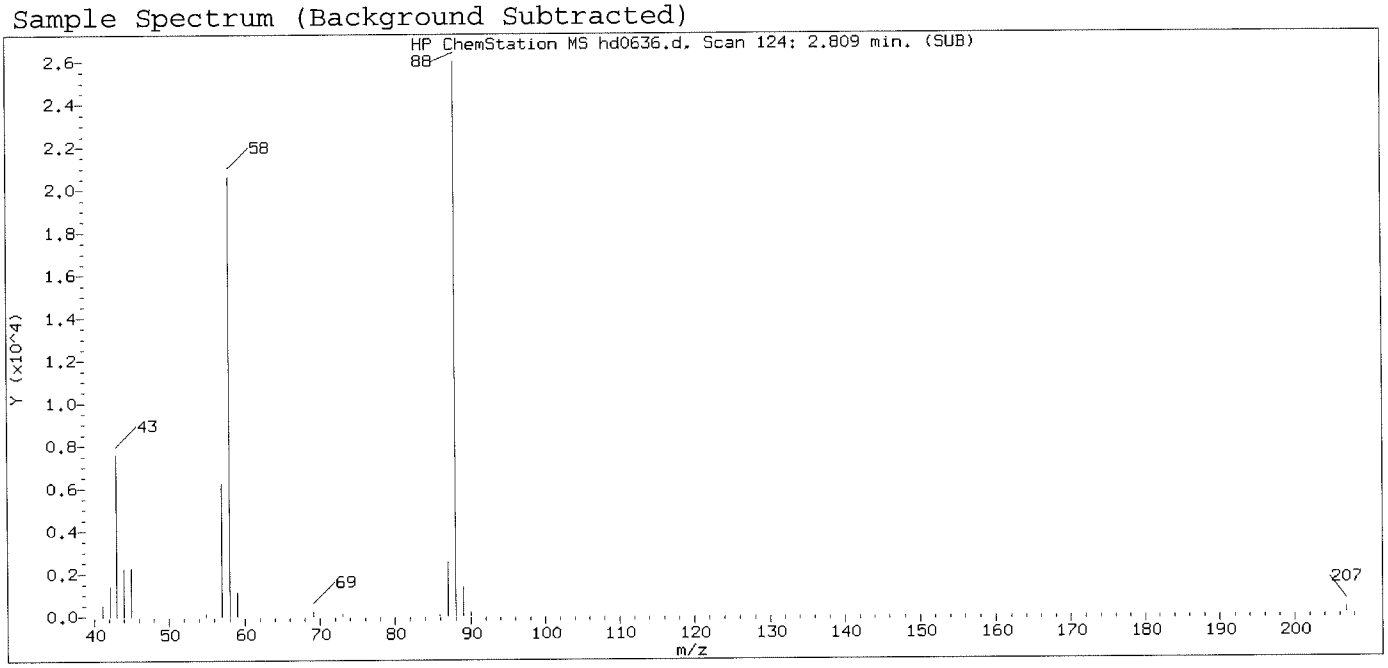
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

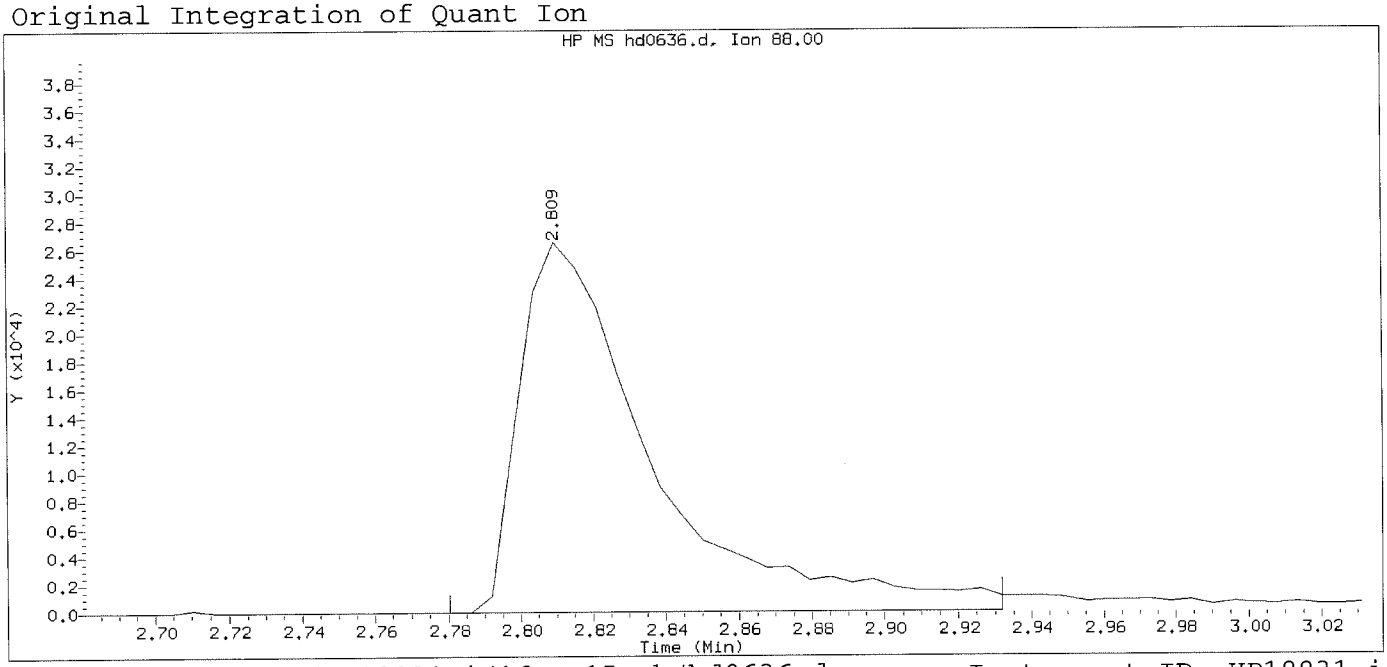
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 124		
Retention Time (minutes)	: 2.809		
Quant Ion	: 88.00		
Area	: 67317		
On-column Amount (ng/ul)	: 3.5168		
Integration start scan	: 118	Integration stop scan:	144
Y at integration start	: 0	Y at integration end:	0

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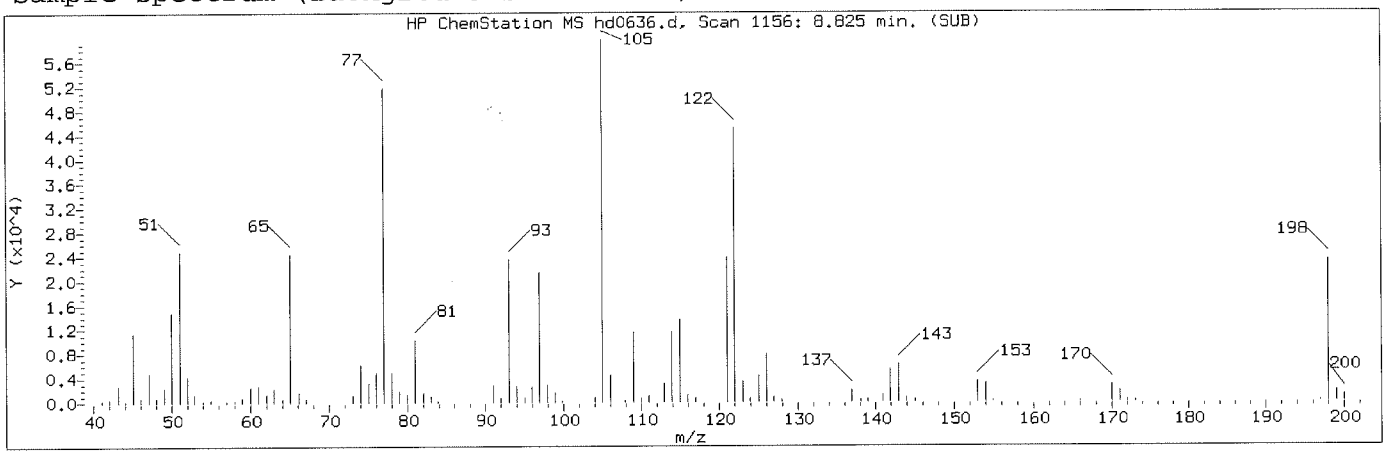
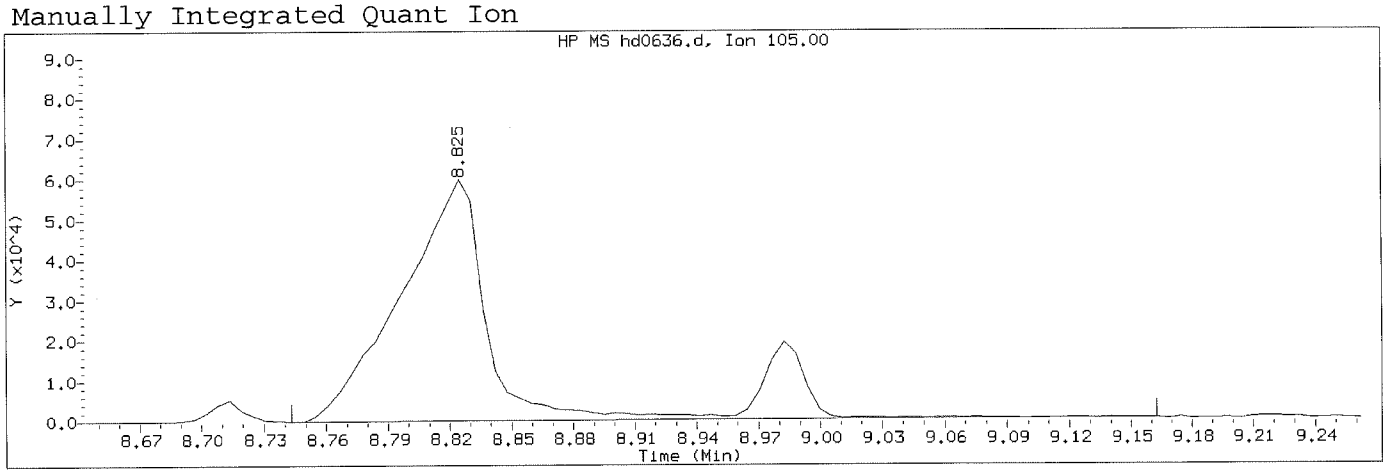
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1156		
Retention Time (minutes)	: 8.825		
Quant Ion	: 105.00		
Area (flag)	: 198968M		
On-Column Amount (ng/ul)	: 6.3662		
Integration start scan	: 1141	Integration stop scan:	1213
Y at integration start	: 0	Y at integration end:	583

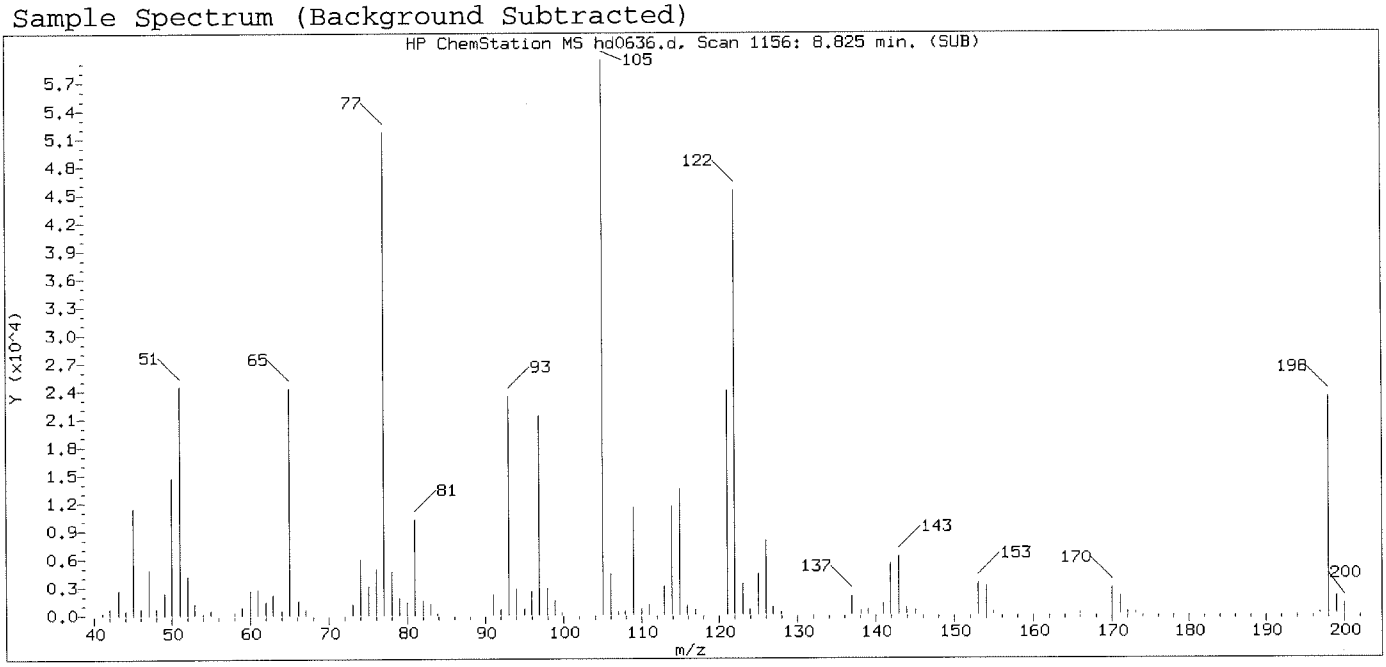
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

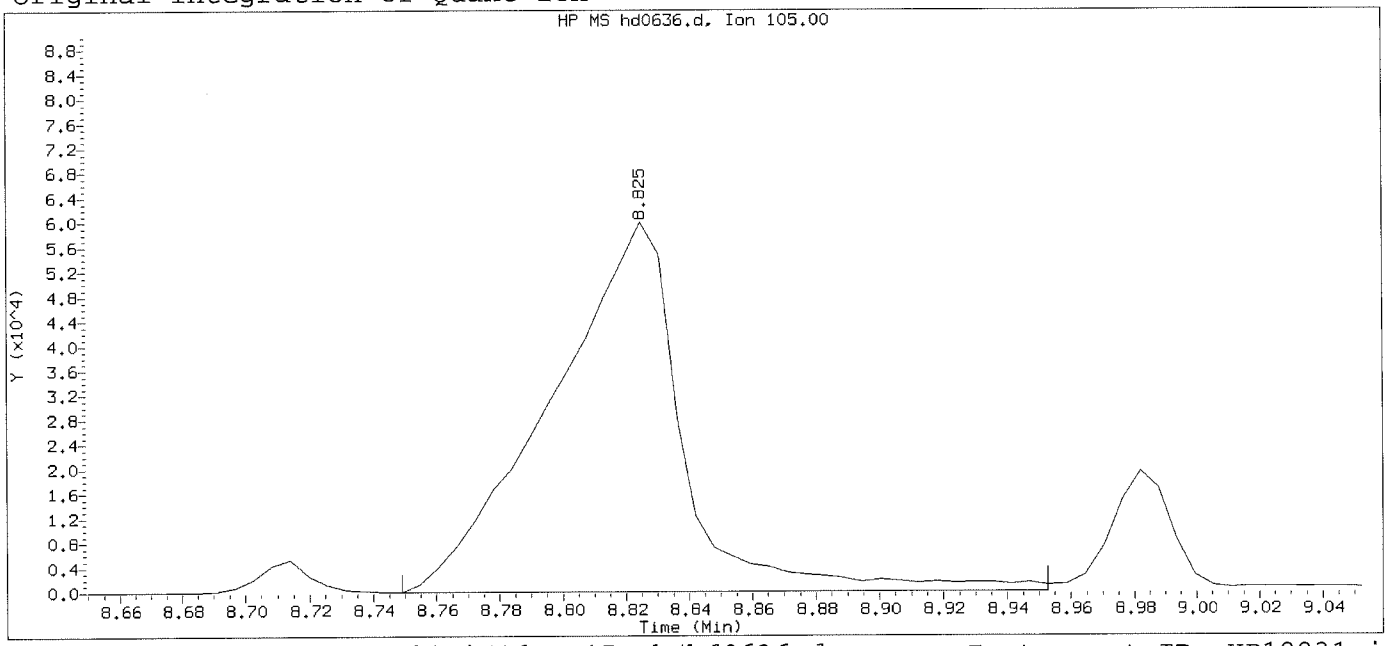
GC/MS audit/management approval: APR 19 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

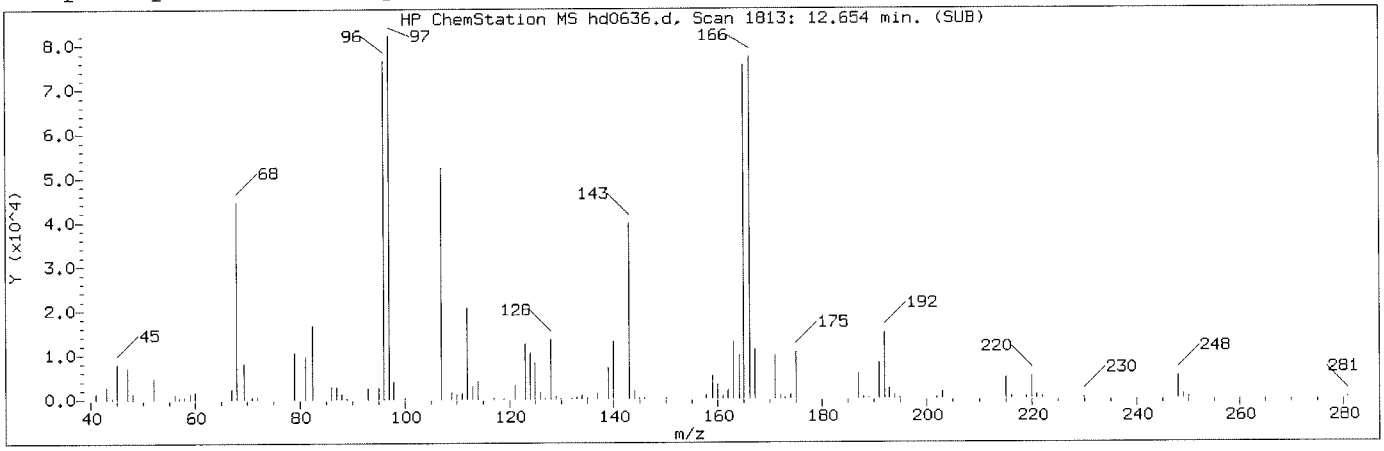
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

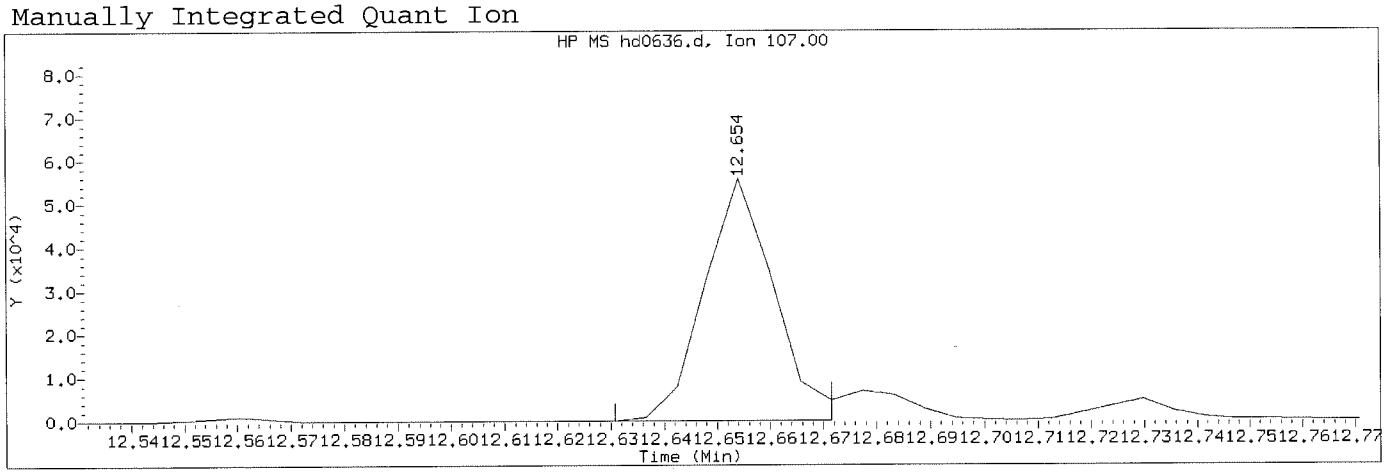
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1156		
Retention Time (minutes)	: 8.825		
Quant Ion	: 105.00		
Area	: 174255		
On-column Amount (ng/ul)	: 6.3896		
Integration start scan	: 1142	Integration stop scan:	1177
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1813		
Retention Time (minutes)	: 12.654		
Quant Ion	: 107.00		
Area (flag)	: 51078M		
On-Column Amount (ng/ul)	: 3.6615		
Integration start scan	: 1808	Integration stop scan:	1815
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

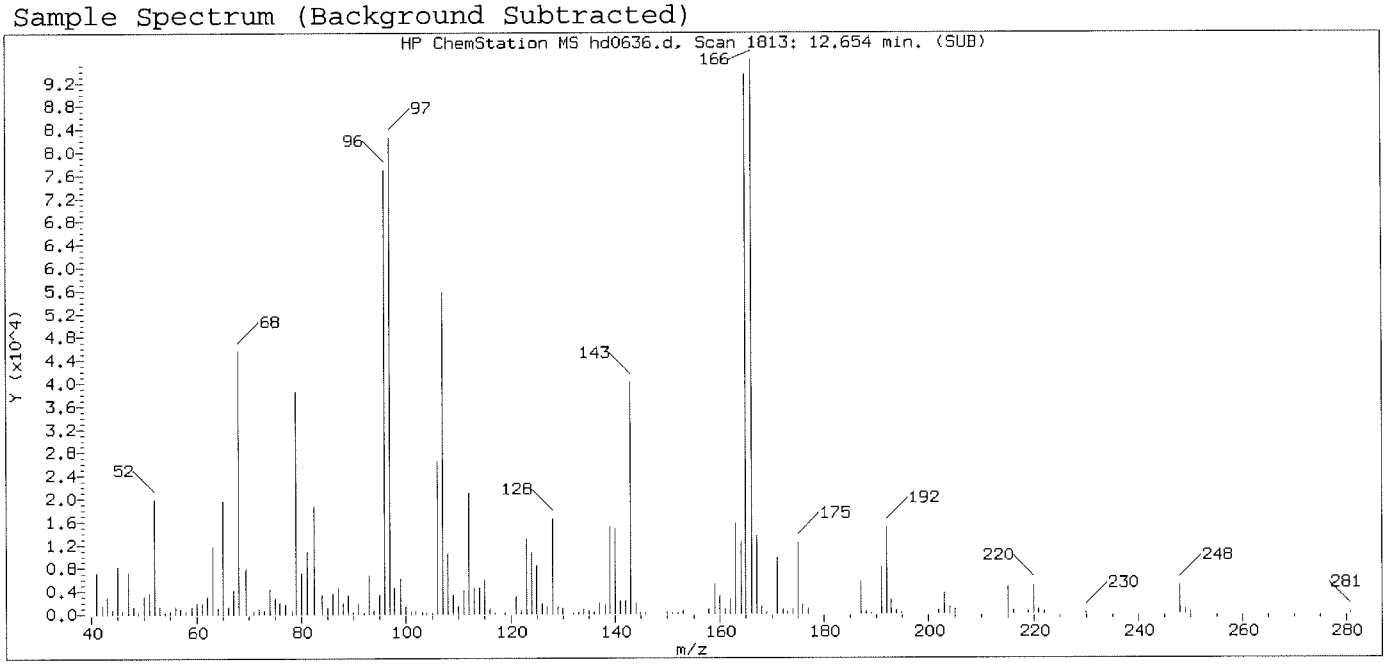
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

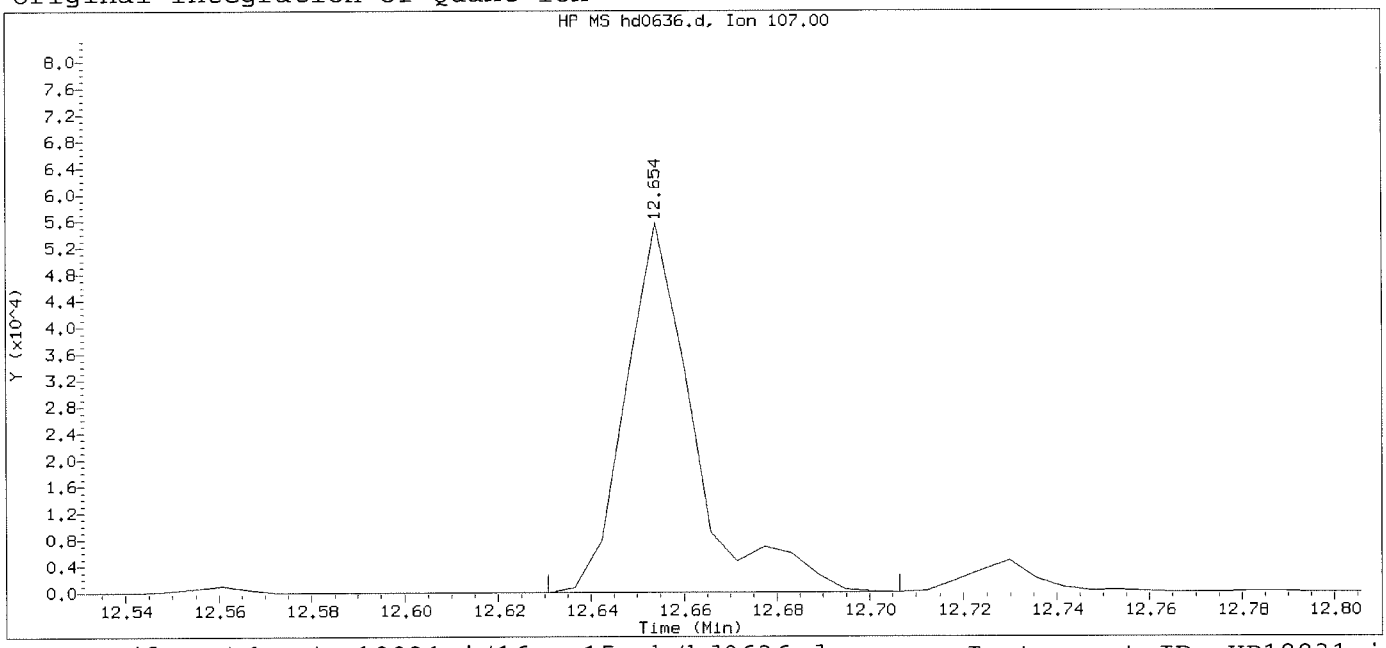
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



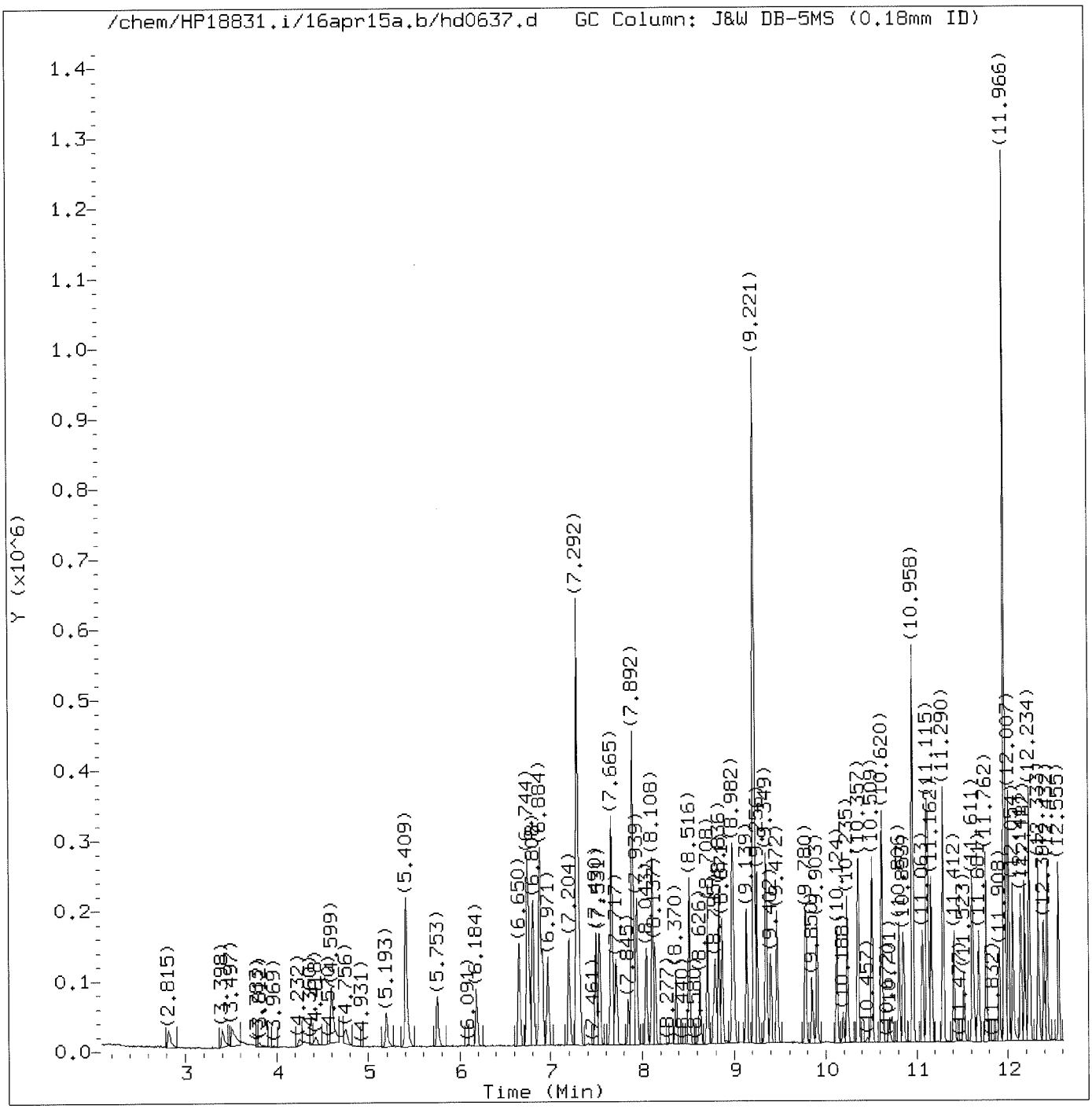
Data File: /chem/HP18831.i/16apr15a.b/hd0636.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:12 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1813		
Retention Time (minutes)	: 12.654		
Quant Ion	: 107.00		
Area	: 56731		
On-column Amount (ng/ul)	: 3.6975		
Integration start scan	: 1808	Integration stop scan:	1821
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

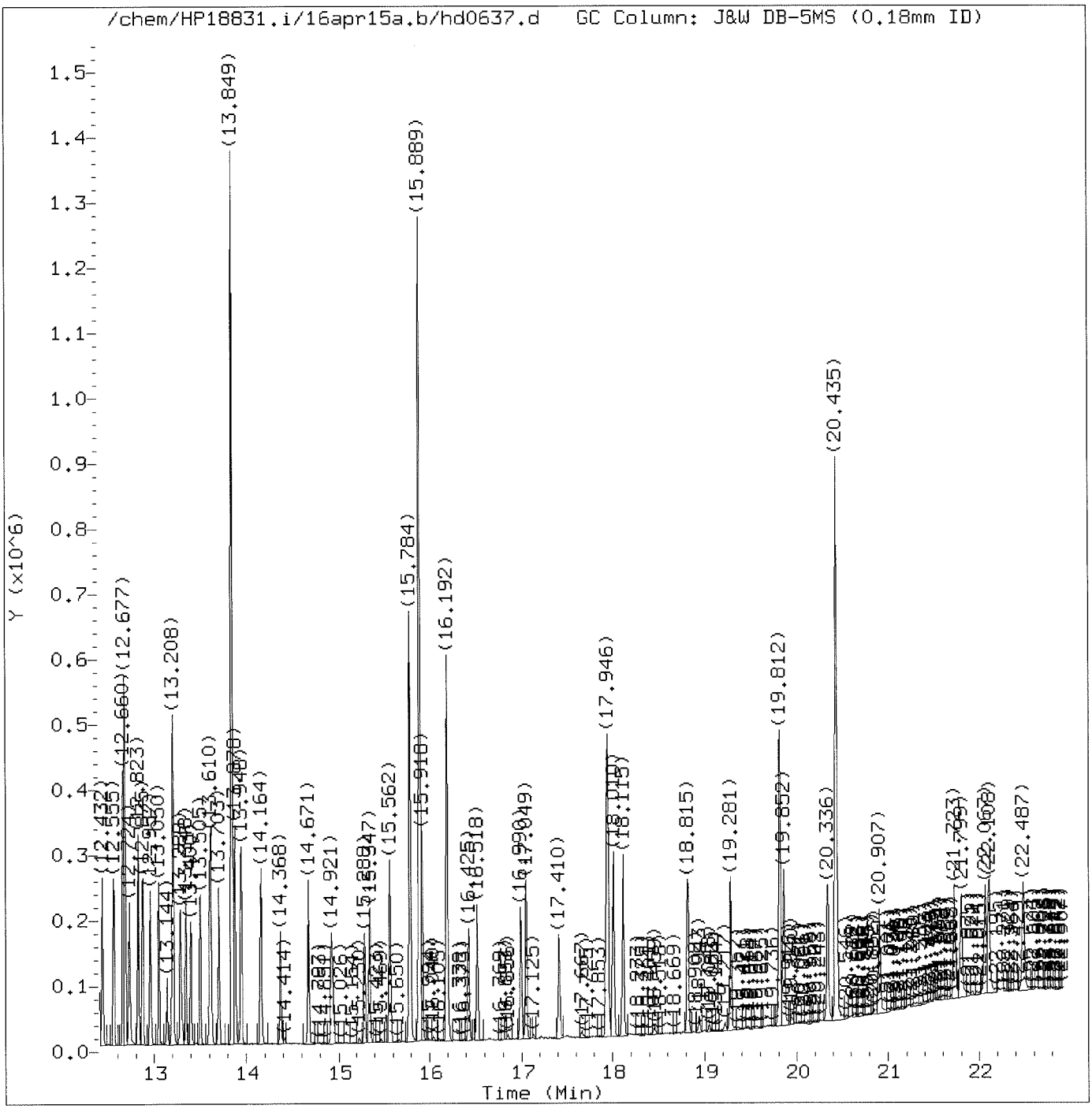
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.815	88	24233M	1.233
4) N-Nitrosodimethylamine	(1)	3.398	74	36339	1.135
5) Pyridine	(1)	3.503	79	57813M	1.121
7) 2-Picoline	(1)	4.599	93	67565M	1.227
8) N-Nitrosomethylethylamine	(1)	4.750	88	25636	1.181
9) Methyl methanesulfonate	(1)	5.187	80	30041	1.199
11)$2-Fluorophenol	(1)	5.409	112	100562	2.400
42) Total Cresols	(1)			97213	2.370
13) N-Nitrosodiethylamine	(1)	5.753	102	25323	1.194
15) Ethyl methanesulfonate	(1)	6.184	109	25101	1.169
16) Benzaldehyde	(1)	6.650	77	53389	1.322
17)$Phenol-d6	(1)	6.744	99	128714	2.360
18) Phenol	(1)	6.761	94	72405	1.184
19) Aniline	(1)	6.808	93	90070	1.175
20) a-methylstyrene	(1)	6.884	118	53914	1.217
22) bis(2-Chloroethyl)ether	(1)	6.913	93	59531	1.212
23) 2-Chlorophenol	(1)	6.971	128	48895	1.208
24) 1,3-Dichlorobenzene	(1)	7.204	146	53243	1.230
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	143210	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	53886	1.216
97) Isosafrole	(3)			37247	1.162
27) Benzyl alcohol	(1)	7.490	108	34000	1.176
28) 1,2-Dichlorobenzene	(1)	7.536	146	51871	1.237
31) 2-Methylphenol	(1)	7.659	108	47437	1.182
30) Indene	(1)	7.670	115	91386	1.231
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	92867	1.255
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	92867	1.255
35) N-Nitrosopyrrolidine	(1)	7.845	100	25475	1.170
36) Acetophenone	(1)	7.892	105	79389	1.212
37) 4-Methylphenol	(1)	7.892	108	49776	1.188
38) N-Nitroso-di-n-propylamine	(1)	7.898	70	45390	1.200
39) N-Nitrosomorpholine	(1)	7.915	56	38914	1.236
40) o-Toluidine	(1)	7.939	106	86106	1.203
43) Hexachloroethane	(1)	8.043	117	22517	1.200
120) 2,4_2,6-Dinitrotoluenes	(3)			50160	2.350
44)$Nitrobenzene-d5	(2)	8.113	82	131555	2.463
45) Nitrobenzene	(2)	8.137	77	68640	1.231
48) N-Nitrosopiperidine	(2)	8.370	114	23916	1.203
50) Isophorone	(2)	8.516	82	109911	1.184
51) 2-Nitrophenol	(2)	8.632	139	23917	1.163

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.714	107	52996	1.210
146) Diallate trans/cis	(4)			47815	1.178
56) Benzoic acid	(2)	8.795	105	73588M	2.358
57) O,O,O-Triethylphosphorothioate	(2)	8.836	198	26878	1.219
55) bis(2-Chloroethoxy)methane	(2)	8.871	93	73352	1.243
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	86066	1.271
60) 2,4-Dichlorophenol	(2)	8.999	162	38966	1.211
62) 1,2,4-Trichlorobenzene	(2)	9.139	180	48250	1.242
65)*Naphthalene-d8	(2)	9.221	136	541346	5.000
66) Naphthalene	(2)	9.256	128	139922	1.216
67) 4-Chloroaniline	(2)	9.343	127	57489	1.214
68) 2,6-Dichlorophenol	(2)	9.355	162	38382	1.213
69) Hexachloropropene	(2)	9.402	213	28591	1.165
71) Hexachlorobutadiene	(2)	9.472	225	29846	1.281
75) Quinoline	(2)	9.780	129	88326	1.231
76) Caprolactam	(2)	9.850	113	11966	1.113
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	40219	1.040
80) 4-Chloro-3-methylphenol	(2)	10.124	107	44590	1.201
82) Safrole	(2)	10.235	162	35379	1.205
83) 2-Methylnaphthalene	(2)	10.357	142	93683	1.220
84) 1-Methylnaphthalene	(2)	10.509	142	86378	1.226
85) Hexachlorocyclopentadiene	(3)	10.614	237	27853	1.159
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	49301	1.239
88) cis-Isosafrole	(3)	10.701	162	6400	0.206
90) 2,4,6-Trichlorophenol	(3)	10.806	196	29954	1.190
92) 2,4,5-Trichlorophenol	(3)	10.853	196	30929	1.168
93)$2-Fluorobiphenyl	(3)	10.958	172	212185	2.462
94) trans-Isosafrole	(3)	11.063	162	30847	0.956
95) 1,1'-Biphenyl	(3)	11.109	154	113366	1.229
96) 2-Chloronaphthalene	(3)	11.127	162	91837	1.254
98) 1-Chloronaphthalene	(3)	11.162	162	84168	1.233
99) Diphenyl ether	(3)	11.290	170	61564	1.251
100) 2-Nitroaniline	(3)	11.296	138	24722	1.151
104) 1,4-Naphthoquinone	(3)	11.412	158	32608	1.089
105) 1,4-Dinitrobenzene	(3)	11.523	168	13313	1.104
106) Dimethylphthalate	(3)	11.611	163	100984	1.224
107) 1,3-Dinitrobenzene	(3)	11.628	168	13944	1.071
108) 2,6-Dinitrotoluene	(3)	11.681	165	21257	1.199
109) Acenaphthylene	(3)	11.762	152	129418	1.218
112) 3-Nitroaniline	(3)	11.908	138	21195	1.152

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.966	164	304509	5.000
114) Acenaphthene	(3)	12.007	153	89897	1.245
115) 2,4-Dinitrophenol	(3)	12.054	184	32966	2.694
116) 4-Nitrophenol	(3)	12.141	109	27844	2.076
117) Pentachlorobenzene	(3)	12.188	250	40564	1.274
118) 2,4-Dinitrotoluene	(3)	12.228	165	28903	1.151
119) Dibenzofuran	(3)	12.240	168	123286	1.247
121) 1-Naphthylamine	(3)	12.333	143	83917	1.139
122) 2,3,4,6-Tetrachlorophenol	(3)	12.397	232	24140	1.172
123) 2-Naphthylamine	(3)	12.432	143	86400	1.200
124) Diethylphthalate	(3)	12.555	149	94108	1.165
125) Thionazin	(3)	12.654	107	16432M	1.171
126) Fluorene	(3)	12.660	166	97706	1.250
128) 5-Nitro-o-toluidine	(3)	12.677	152	24036M	1.141
129) 4-Nitroaniline	(3)	12.677	138	22853	1.184
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	50833	1.258
130) 4,6-Dinitro-2-methylphenol	(4)	12.730	198	32218	2.056
132) NDPA as diphenylamine	(4)	12.823	169	78208	1.230
131) N-Nitrosodiphenylamine	(4)	12.823	169	78208	1.230
134) 1,2-Diphenylhydrazine	(4)	12.875	77	119310	1.242
135)$2,4,6-Tribromophenol	(3)	12.957	330	23156	2.275
137) Tetraethyldithiopyrophosphate	(4)	13.050	97	17151	1.145
139) 1,3,5-Trinitrobenzene	(4)	13.144	213	10518	1.053
140) Diallate (peak 1)	(4)	13.196	86	39720	0.974
141) Phorate	(4)	13.208	75	71589	1.187
142) Phenacetin	(4)	13.213	108	50208	1.160
143) 4-Bromophenyl-phenylether	(4)	13.289	248	28555	1.296
144) Diallate (peak 2)	(4)	13.307	86	8095	0.204
145) Hexachlorobenzene	(4)	13.348	284	29434	1.271
147) Dimethoate	(4)	13.400	87	42869	1.094
148) Atrazine	(4)	13.505	200	28574	1.245
149) Pentachlorophenol	(4)	13.598	266	16179	1.063
150) 4-Aminobiphenyl	(4)	13.610	169	73008	1.196
151) Pentachloronitrobenzene	(4)	13.616	237	13224	1.191
152) Pronamide	(4)	13.703	173	42691	1.167
153)*Phenanthrene-d10	(4)	13.849	188	564964	5.000
154) Dinoseb	(4)	13.855	211	22210	0.952
155) Phenanthrene	(4)	13.878	178	142672	1.239
157) Anthracene	(4)	13.948	178	140602	1.250
163) Carbazole	(4)	14.164	167	131092	1.216

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on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.368	109	31049	1.037
165) Di-n-butylphthalate	(4)	14.676	149	155196	1.138
167) Parathion	(4)	14.921	109	17576	0.974
168) 4-Nitroquinoline-1-oxide	(4)	14.939	190	10076	0.739
222) Total PAHs	(6)			2354586	22.019
169) Octachlorostyrene	(4)	15.288	308	11303	1.256
171) Isodrin	(4)	15.347	193	17523	1.244
173) Fluoranthene	(4)	15.568	202	157514	1.210
174) Benzidine	(5)	15.784	184	320461	3.345
175)*Pyrene-d10	(5)	15.889	212	697159	5.000
177) Pyrene	(5)	15.918	202	176521	1.227
179)$Terphenyl-d14	(5)	16.192	244	242760	2.484
182) p-Dimethylaminoazobenzene	(5)	16.425	225	25690	1.078
185) Chlorobenzilate	(5)	16.518	139	47998	1.114
187) 3,3'-Dimethylbenzidine	(5)	16.990	212	92322	1.056
188) Butylbenzylphthalate	(5)	17.049	149	67995	1.102
191) 2-Acetylaminofluorene	(5)	17.410	181	50241	0.964
193) 3,3'-Dichlorobenzidine	(5)	17.929	252	55309	1.125
195) Benzo(a)anthracene	(5)	17.946	228	156135	1.204
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.946	231	28560	1.054
196) Chrysene	(5)	18.010	228	152016	1.243
199) bis(2-Ethylhexyl)phthalate	(5)	18.115	149	93241	1.062
203) 6-Methylchrysene	(5)	18.815	242	101771	1.162
205) Di-n-octylphthalate	(6)	19.281	149	145357	1.013
206) Benzo(b)fluoranthene	(6)	19.812	252	146862	1.242
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.812	256	57235	1.143
208) Benzo(k)fluoranthene	(6)	19.858	252	143395	1.234
211) Benzo(a)pyrene	(6)	20.342	252	128191	1.185
213)*Perylene-d12	(6)	20.435	264	459526	5.000
215) 3-Methylcholanthrene	(6)	20.907	268	50777	1.142
217) Dibenz(a,h)acridine	(6)	21.723	279	99203	1.123
218) Dibenz(a,j)acridine	(6)	21.799	279	100533	1.132
219) Indeno(1,2,3-cd)pyrene	(6)	22.067	276	139138	1.205
220) Dibenz(a,h)anthracene	(6)	22.108	278	116169	1.202
221) Benzo(g,h,i)perylene	(6)	22.487	276	118367	1.203

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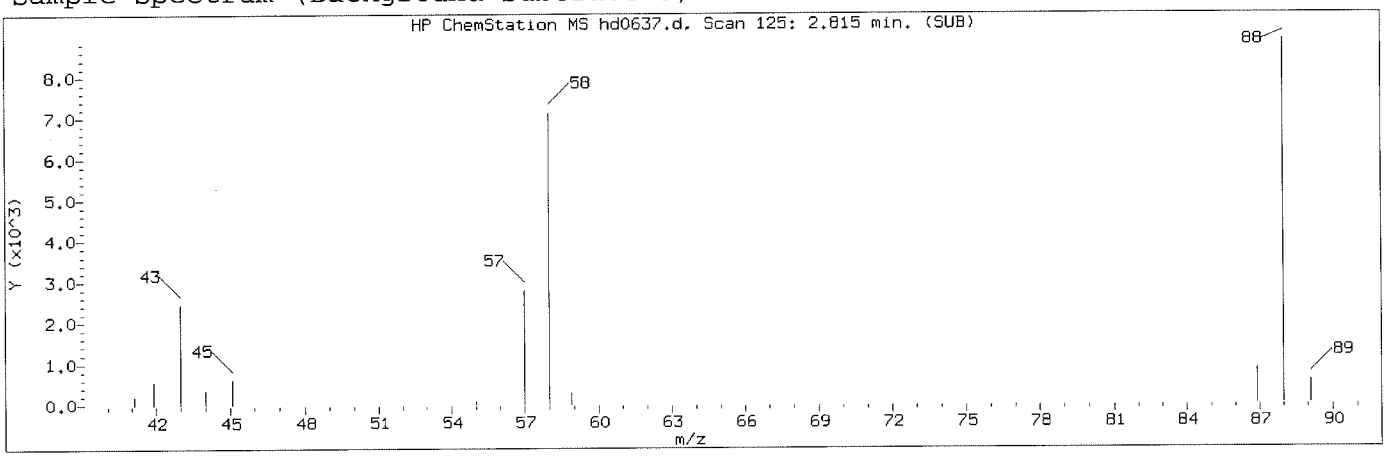
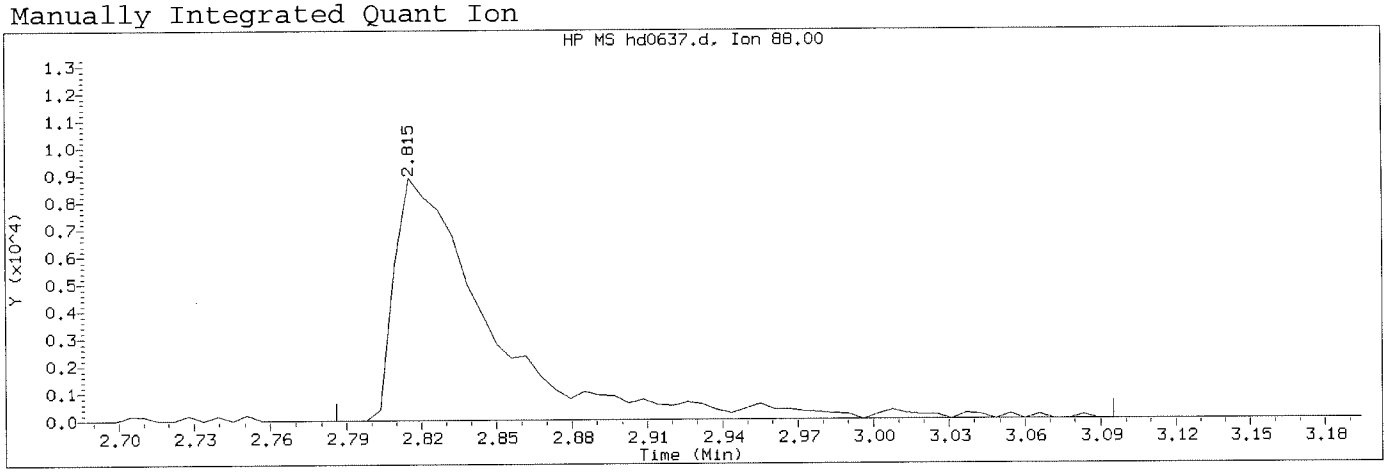
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 125		
Retention Time (minutes)	: 2.815		
Quant Ion	: 88.00		
Area (flag)	: 24233M		
On-Column Amount (ng/ul)	: 1.2334		
Integration start scan	: 119	Integration stop scan:	172
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

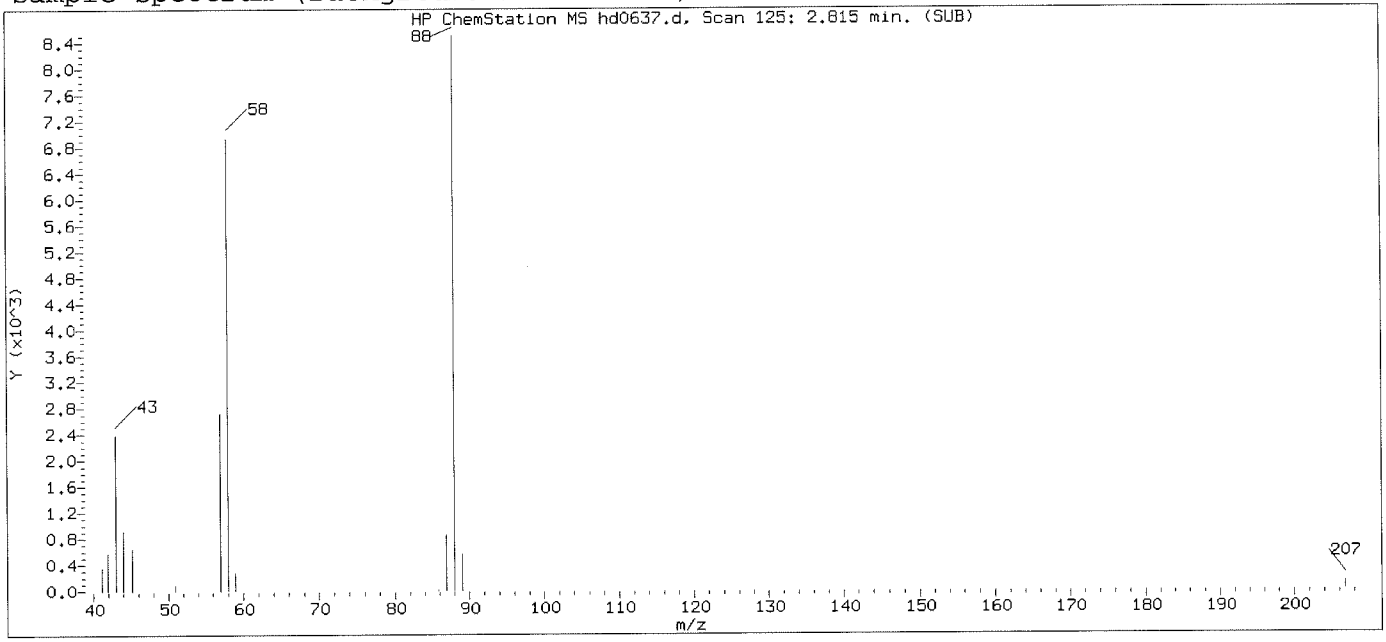
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

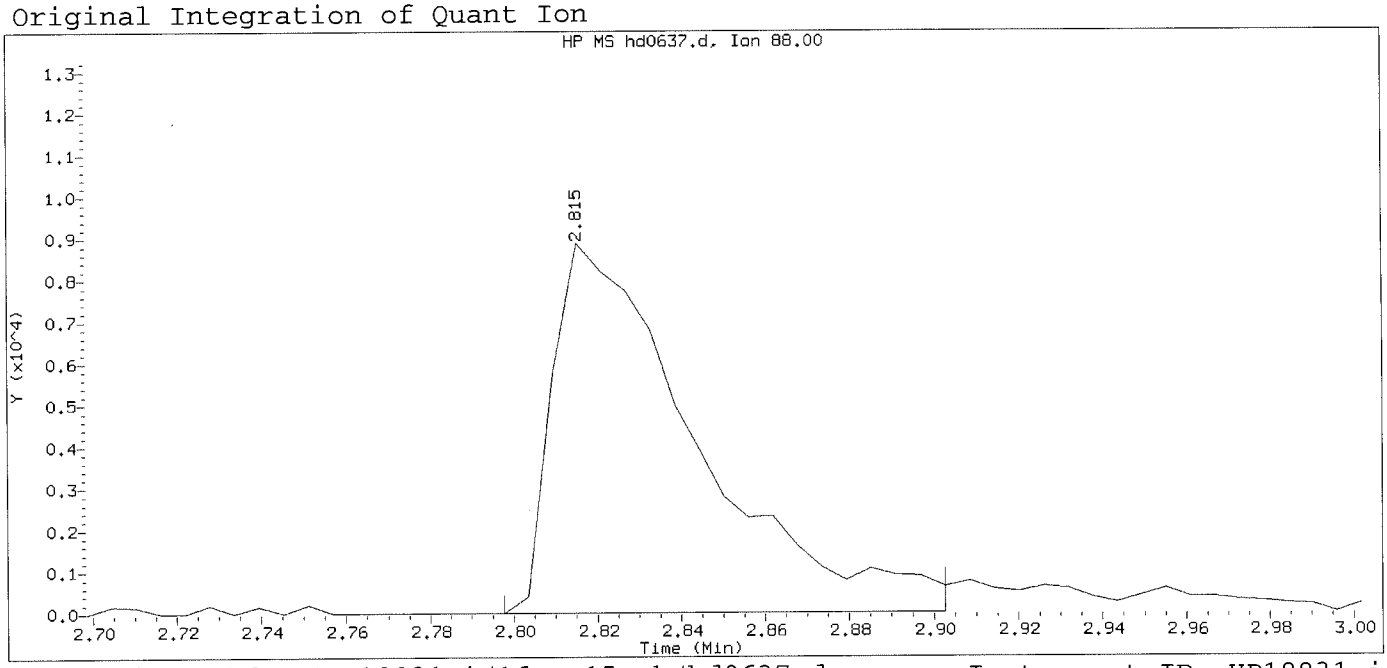
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

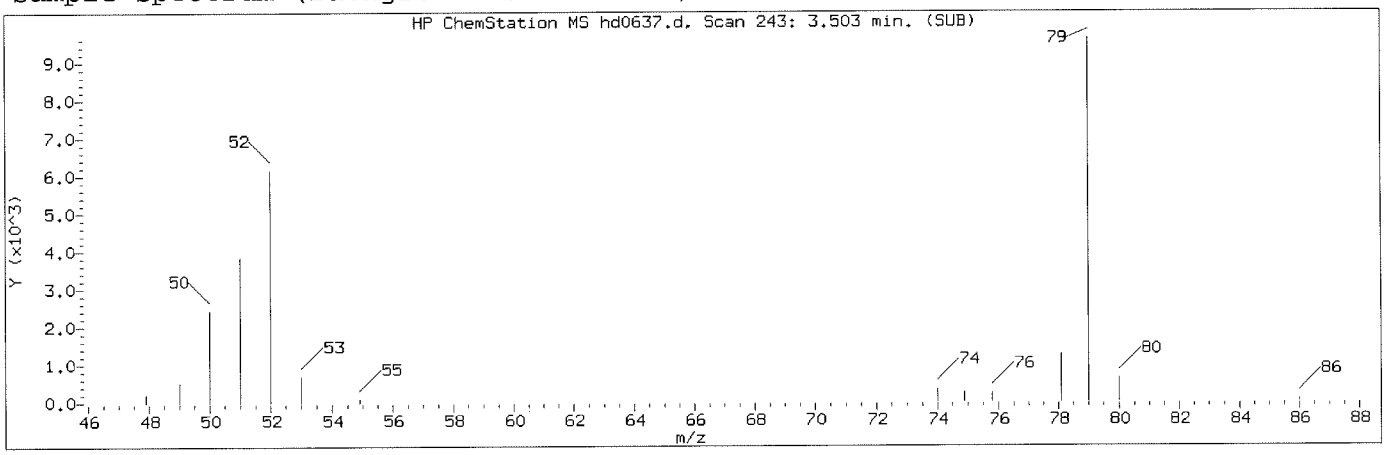
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

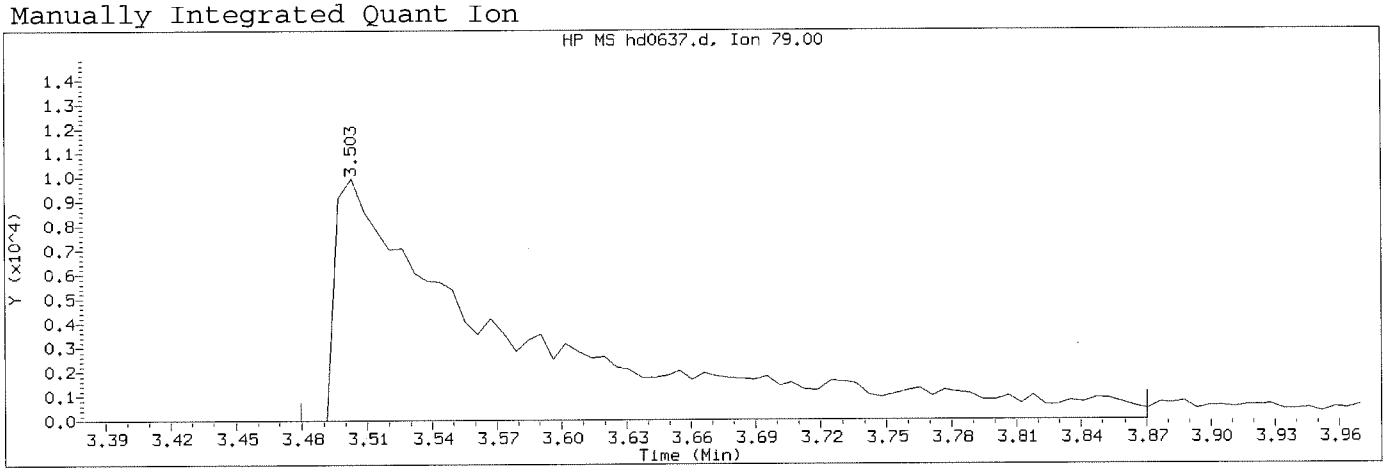
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 125		
Retention Time (minutes)	: 2.815		
Quant Ion	: 88.00		
Area	: 21234		
On-column Amount (ng/ul)	: 1.1307		
Integration start scan	: 121	Integration stop scan:	139
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 243		
Retention Time (minutes)	: 3.503		
Quant Ion	: 79.00		
Area (flag)	: 57813M		
On-Column Amount (ng/ul)	: 1.1212		
Integration start scan	: 238	Integration stop scan:	305
Y at integration start	: -1	Y at integration end:	-1

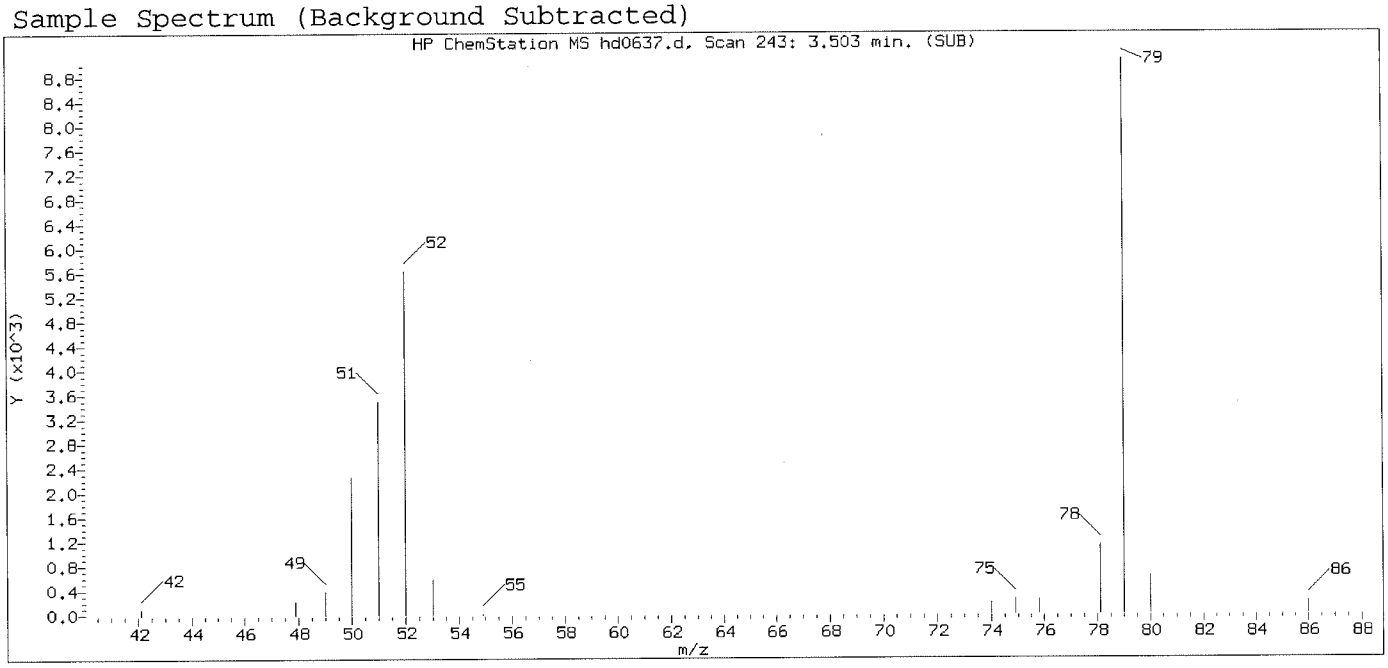
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 ~~signature~~ user ID: hbz01996

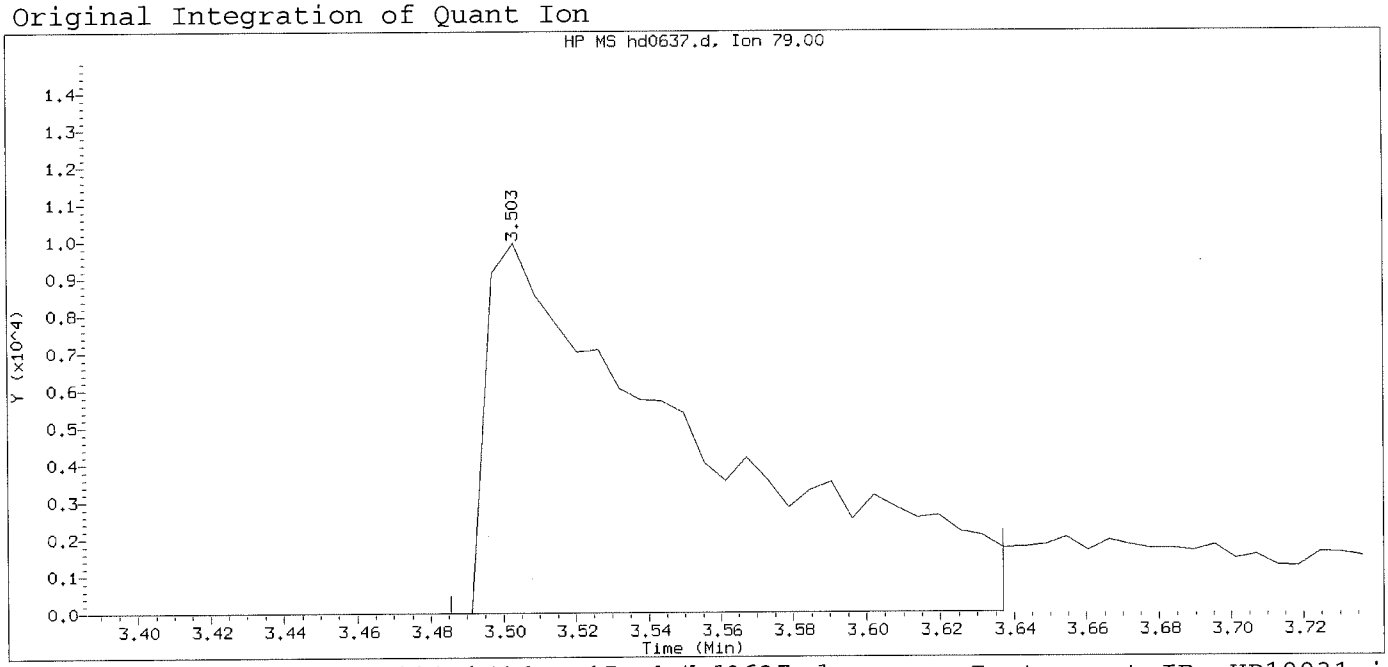
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

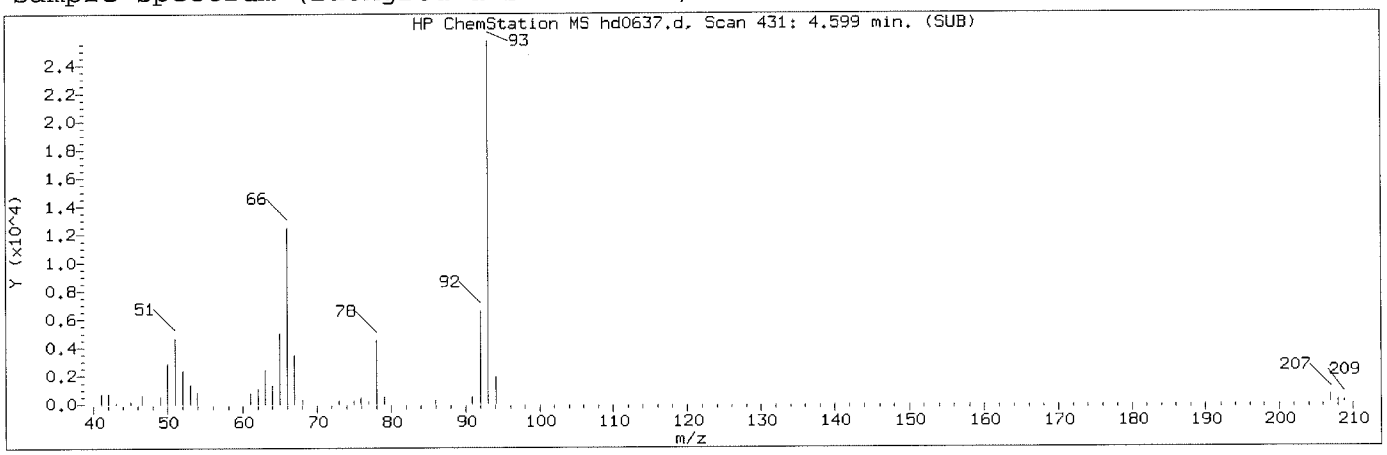
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

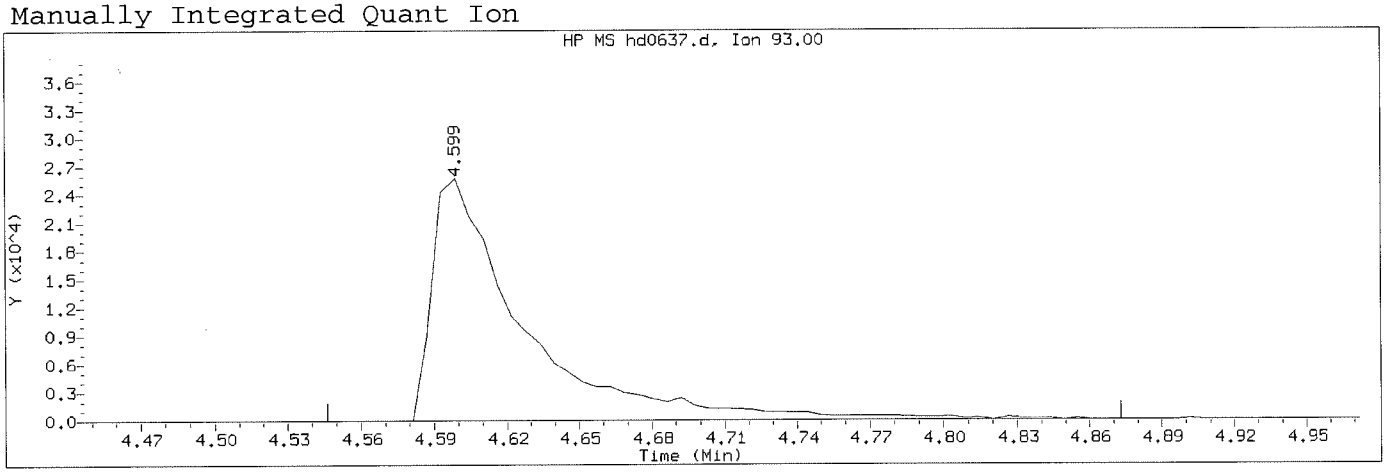
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 243		
Retention Time (minutes)	: 3.503		
Quant Ion	: 79.00		
Area	: 40625		
On-column Amount (ng/ul)	: 0.8336		
Integration start scan	: 239	Integration stop scan:	265
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 431		
Retention Time (minutes)	: 4.599		
Quant Ion	: 93.00		
Area (flag)	: 67565M		
On-Column Amount (ng/ul)	: 1.2265		
Integration start scan	: 421	Integration stop scan:	477
Y at integration start	: 0	Y at integration end:	0

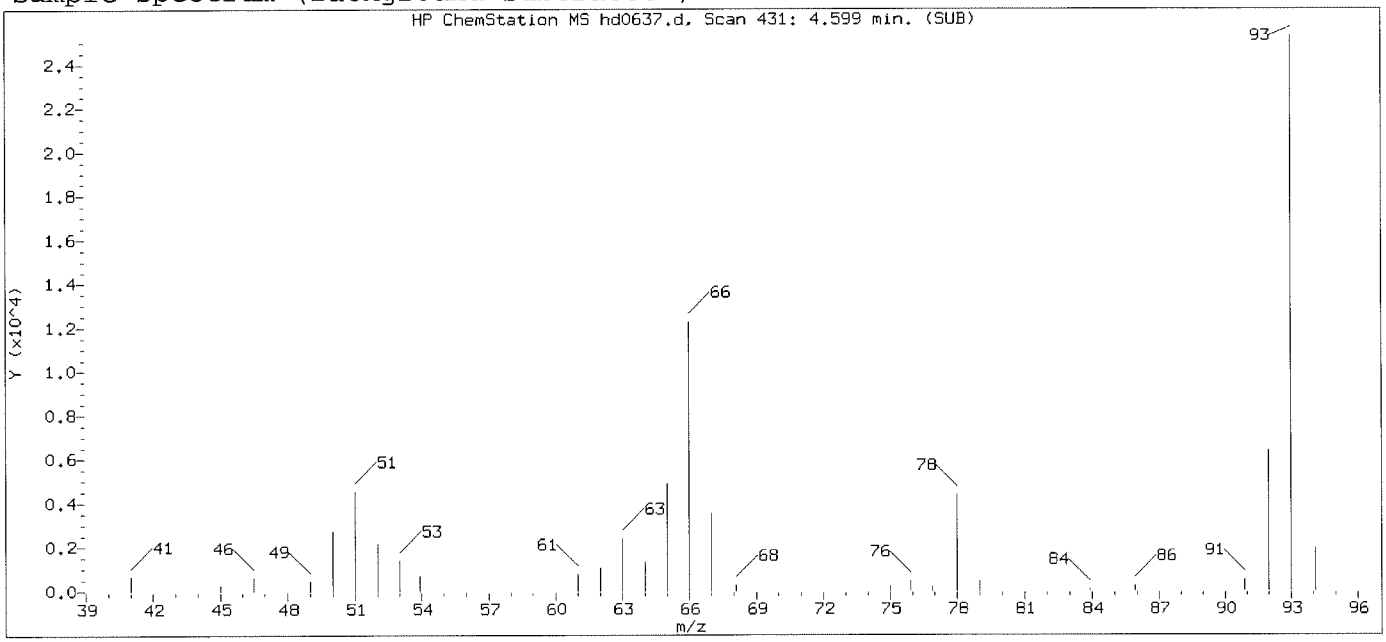
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 ~~signature user ID: hbz~~01996

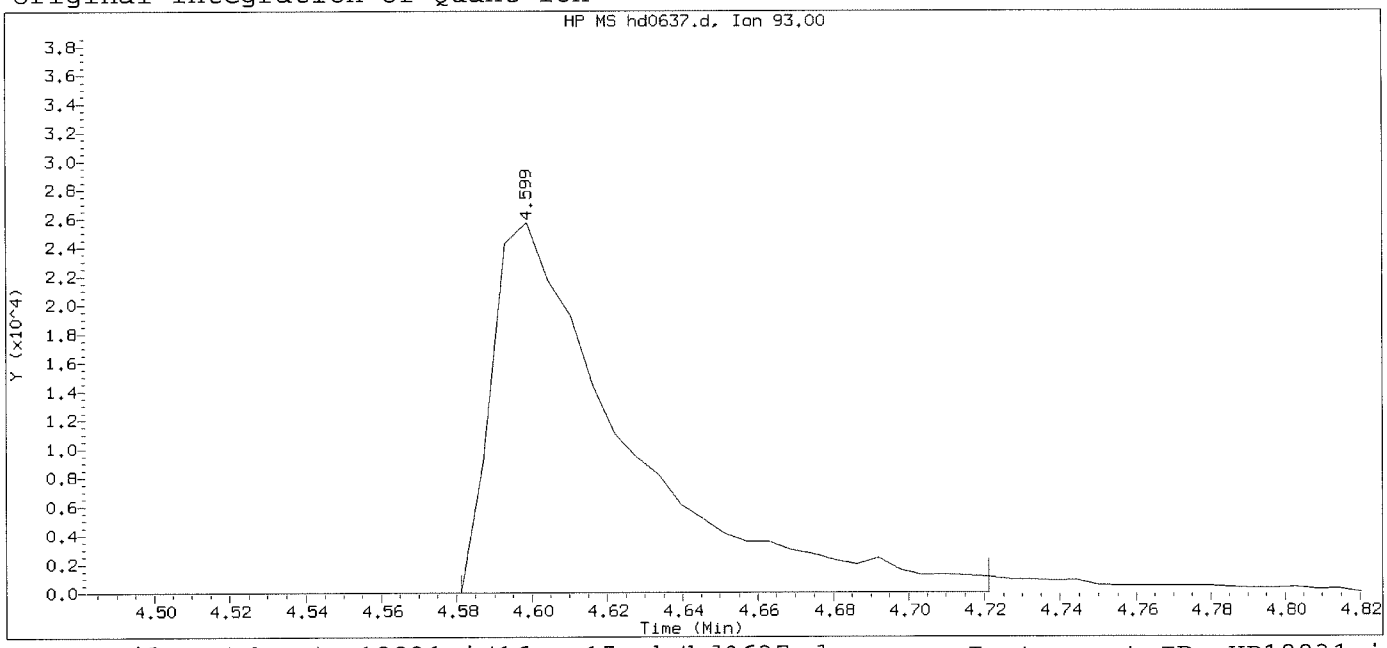
APR 19 2016

GC/MS audit/management approval:_____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

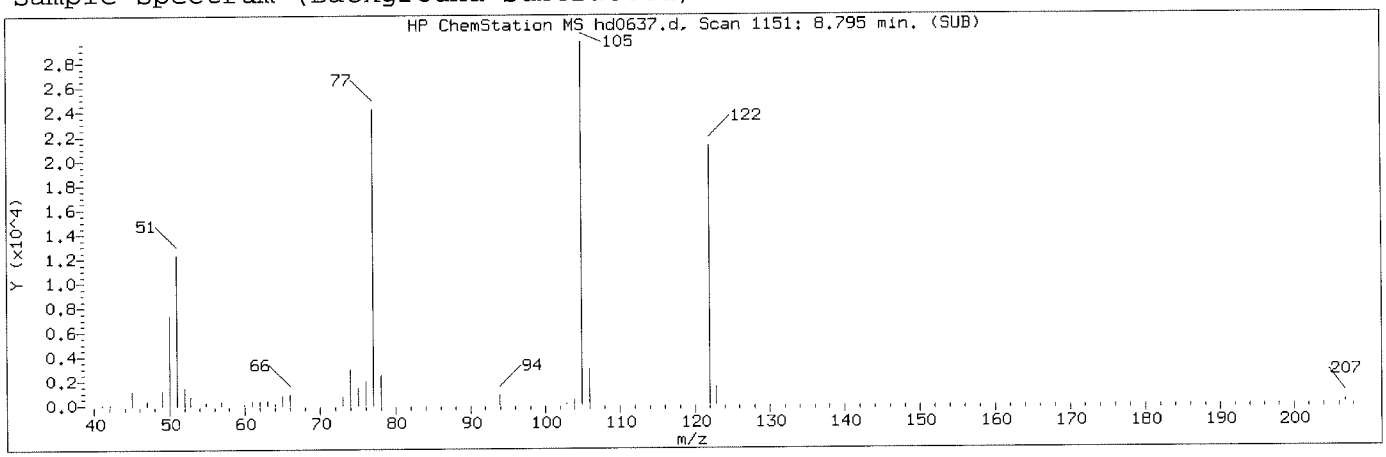
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

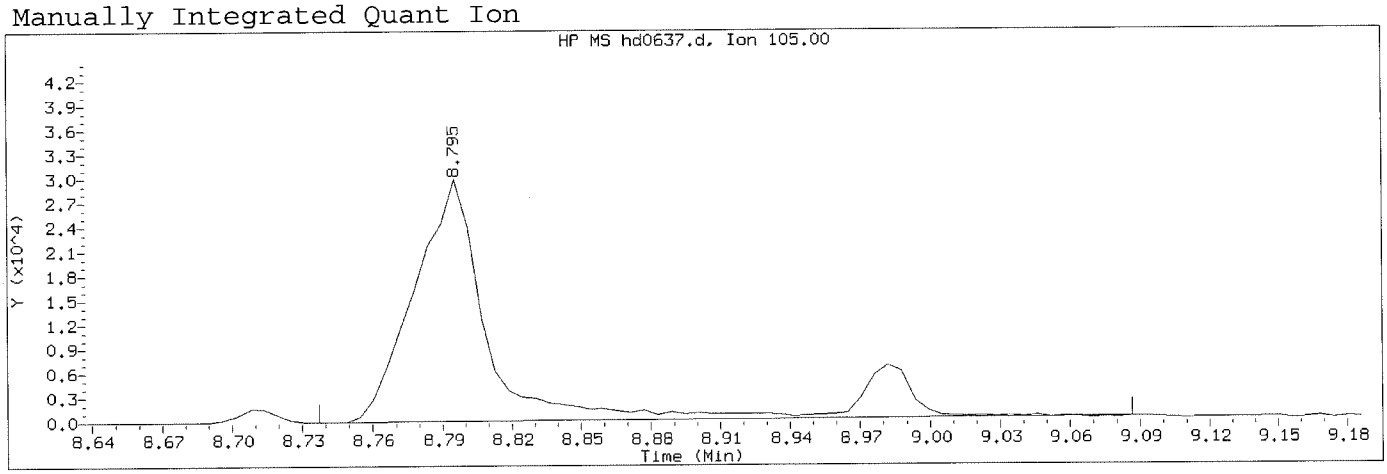
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 431		
Retention Time (minutes)	: 4.599		
Quant Ion	: 93.00		
Area	: 64281		
On-column Amount (ng/ul)	: 1.1826		
Integration start scan	: 427	Integration stop scan:	451
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1151		
Retention Time (minutes)	: 8.795		
Quant Ion	: 105.00		
Area (flag)	: 73588M		
On-Column Amount (ng/ul)	: 2.3576		
Integration start scan	: 1140	Integration stop scan:	1200
Y at integration start	: 0	Y at integration end:	451

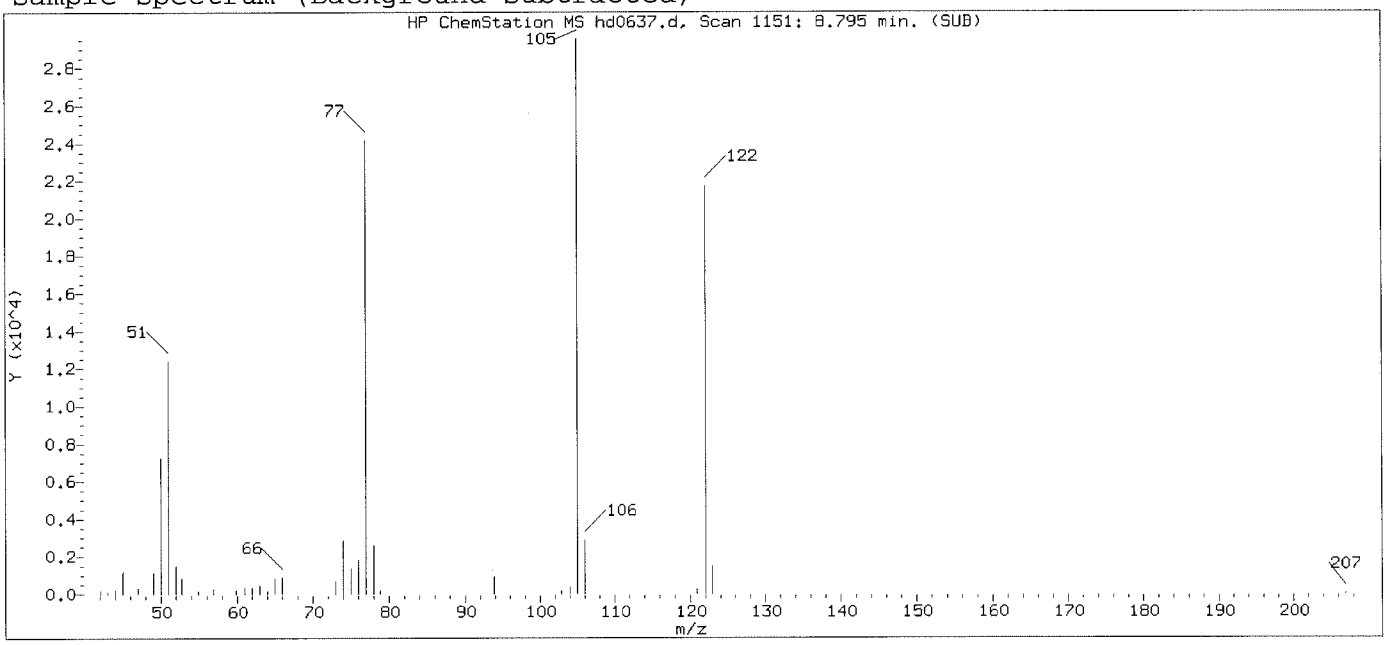
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

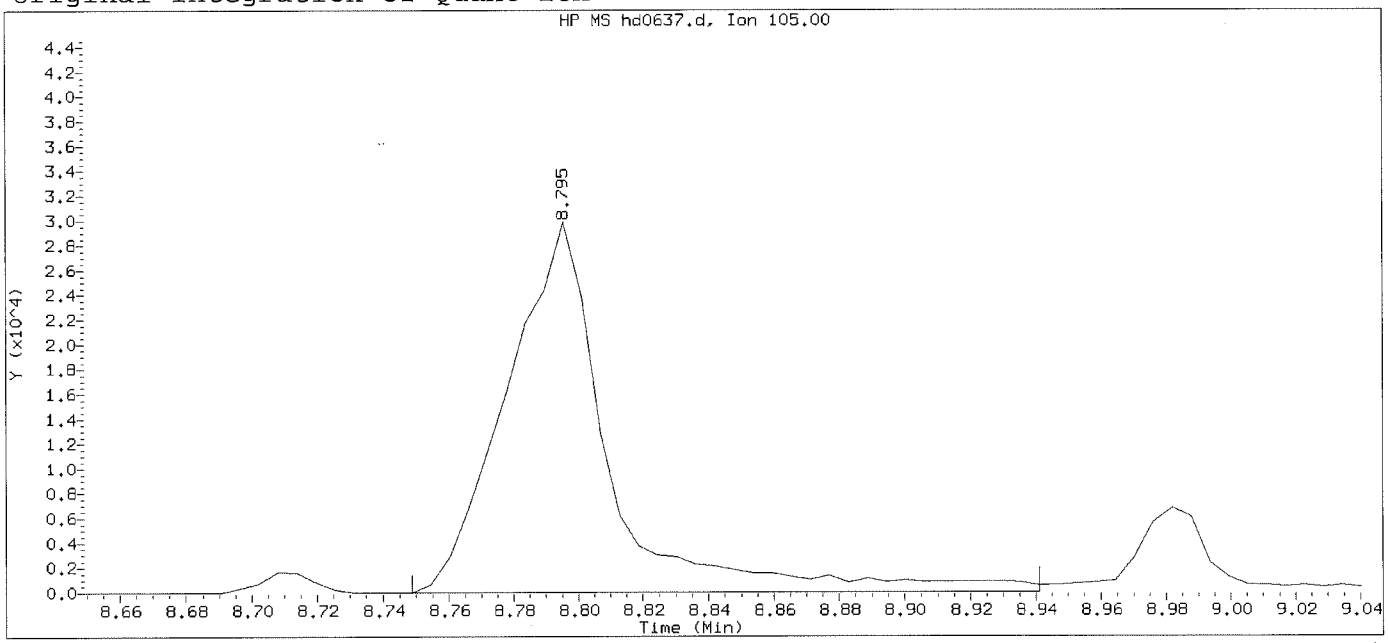
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

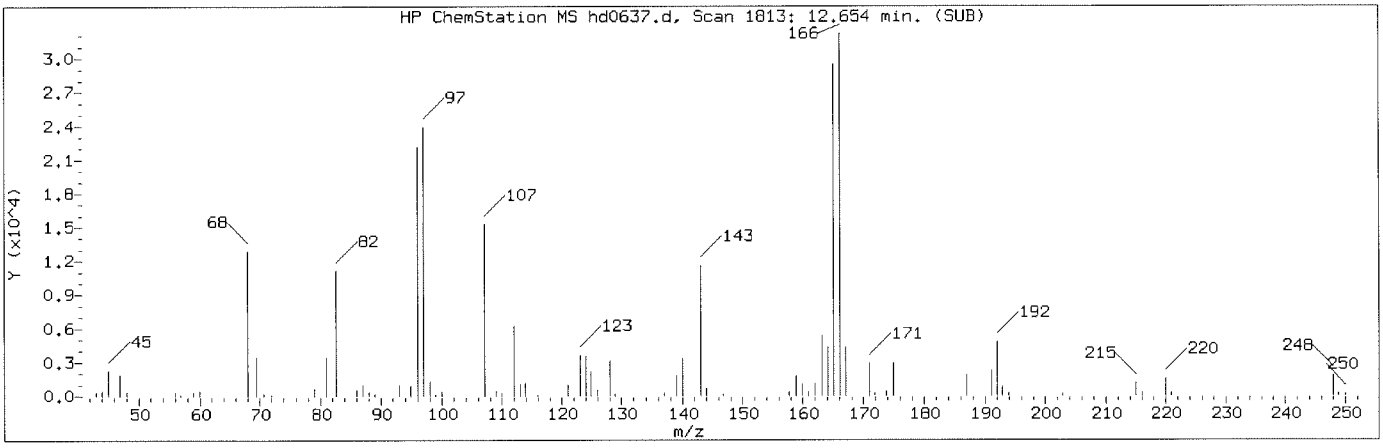
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

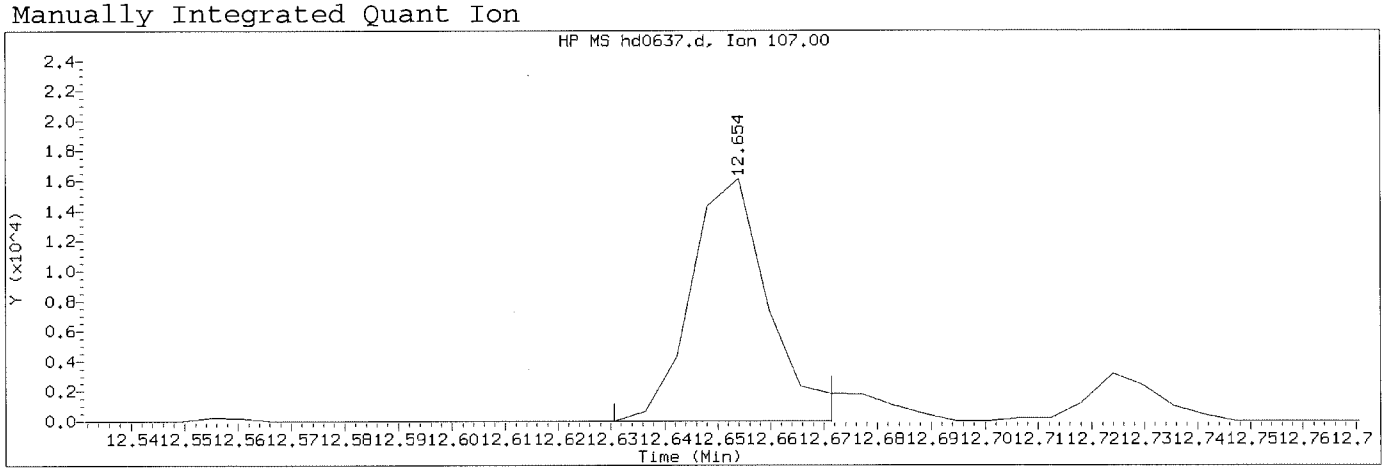
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1151		
Retention Time (minutes)	: 8.795		
Quant Ion	: 105.00		
Area	: 66104		
On-column Amount (ng/ul)	: 2.6114		
Integration start scan	: 1142	Integration stop scan:	1175
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1813		
Retention Time (minutes)	: 12.654		
Quant Ion	: 107.00		
Area (flag)	: 16432M		
On-Column Amount (ng/ul)	: 1.1710		
Integration start scan	: 1808	Integration stop scan:	1815
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

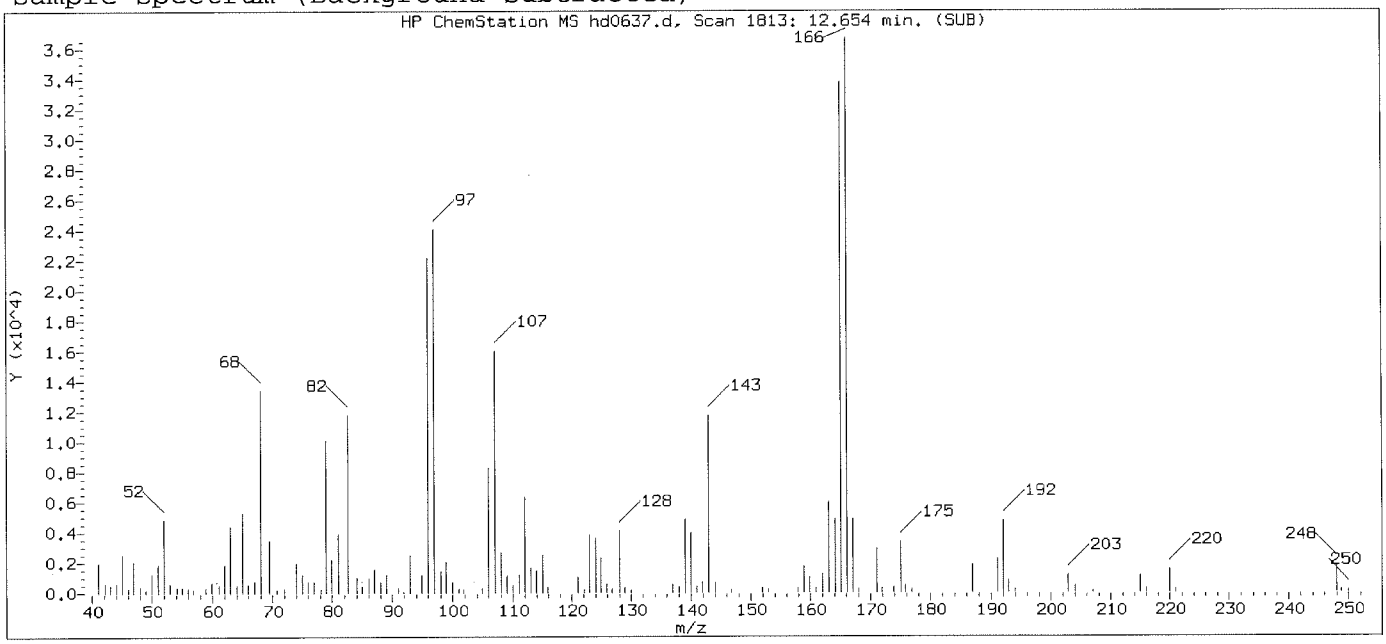
Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18. Target 3.5 signature user ID: hbz01996

APR 19 2016

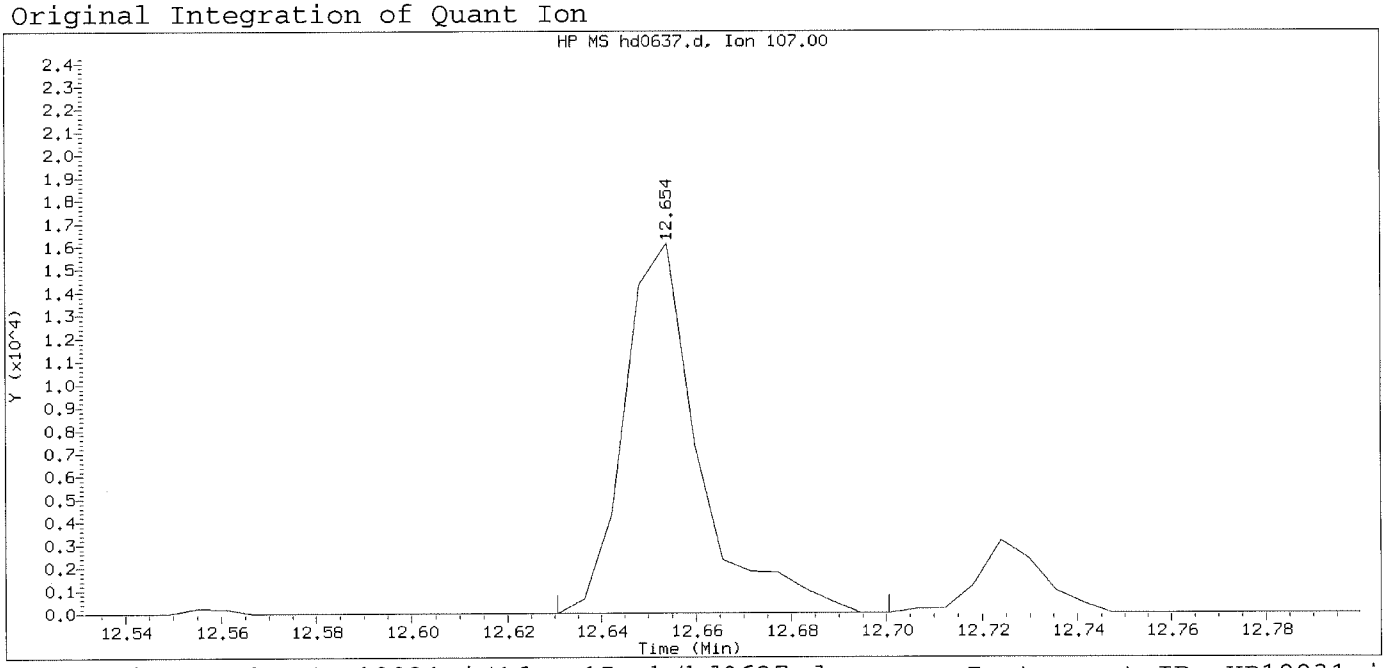
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

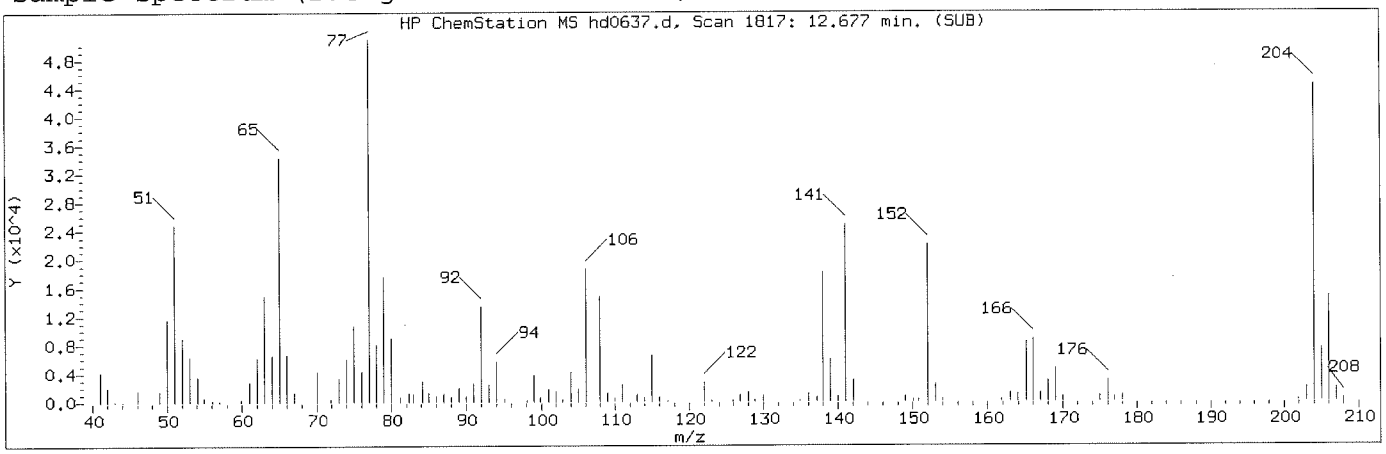
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

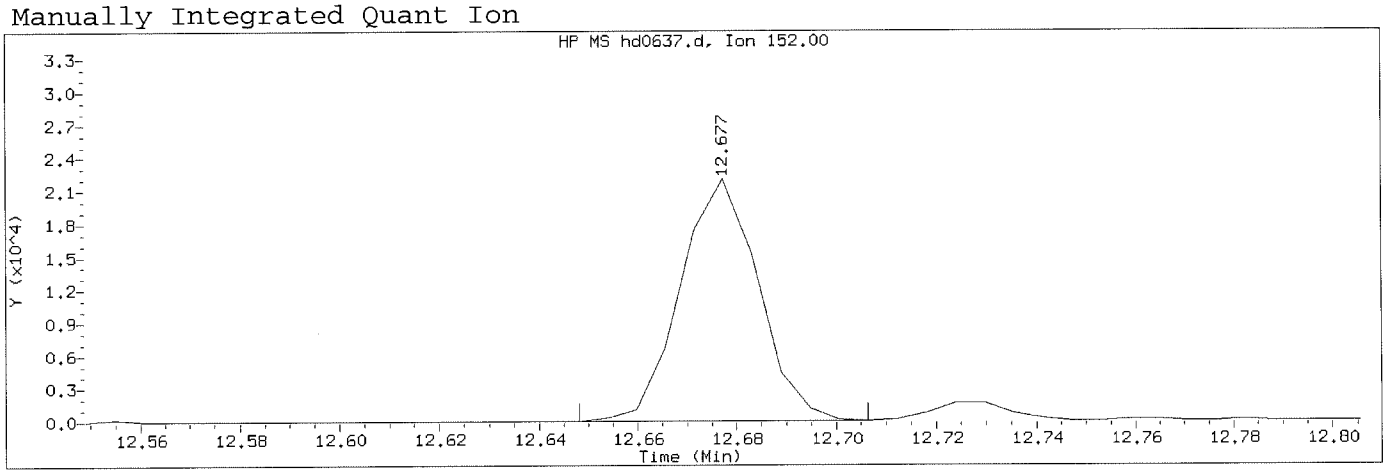
Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1813		
Retention Time (minutes)	: 12.654		
Quant Ion	: 107.00		
Area	: 17586		
On-column Amount (ng/ul)	: 1.1600		
Integration start scan	: 1808	Integration stop scan:	1820
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 128		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1817		
Retention Time (minutes)	: 12.677		
Quant Ion	: 152.00		
Area (flag)	: 24036M		
On-Column Amount (ng/ul)	: 1.1414		
Integration start scan	: 1811	Integration stop scan:	1821
Y at integration start	: 0	Y at integration end:	0

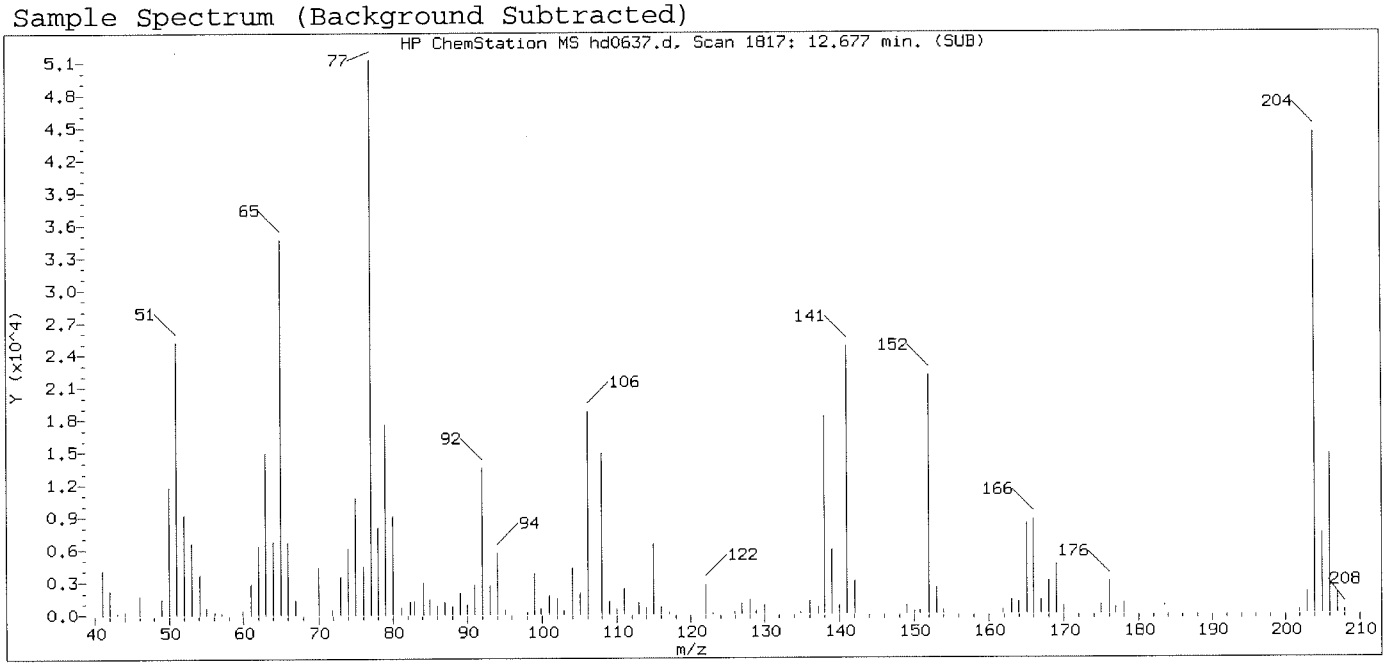
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18. Target 3.5 signature user ID: hbz01996

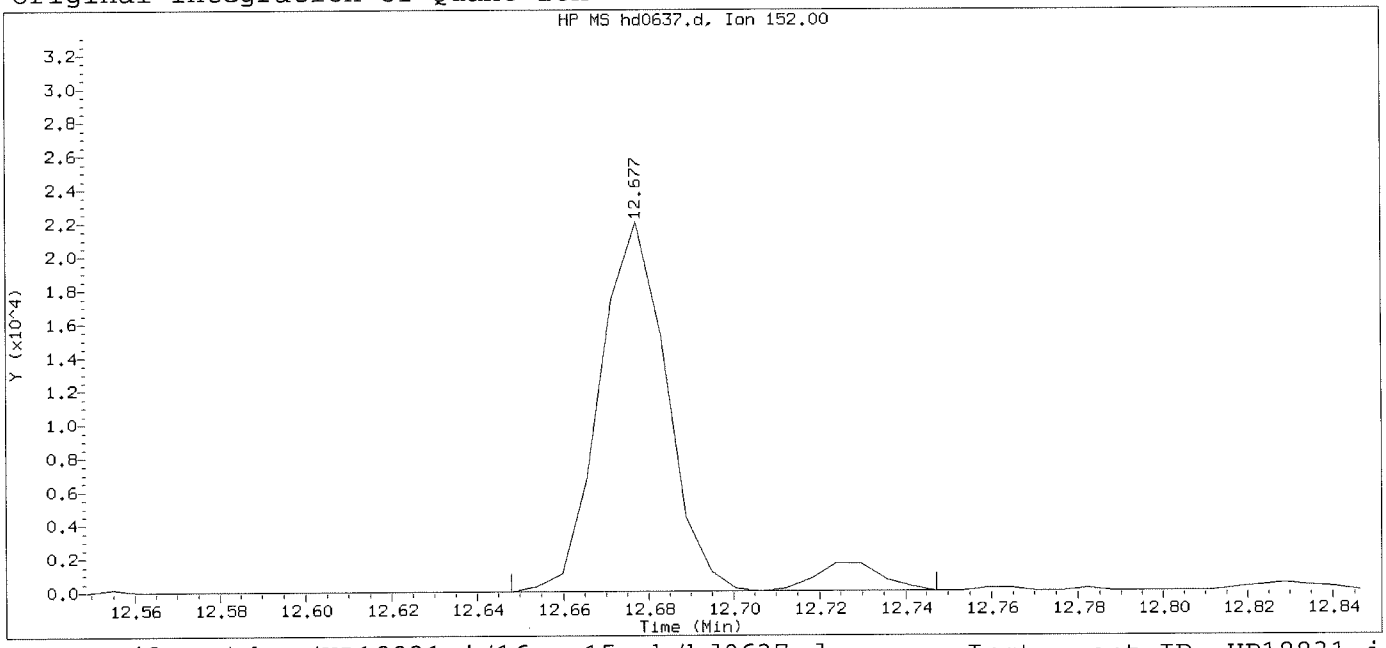
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



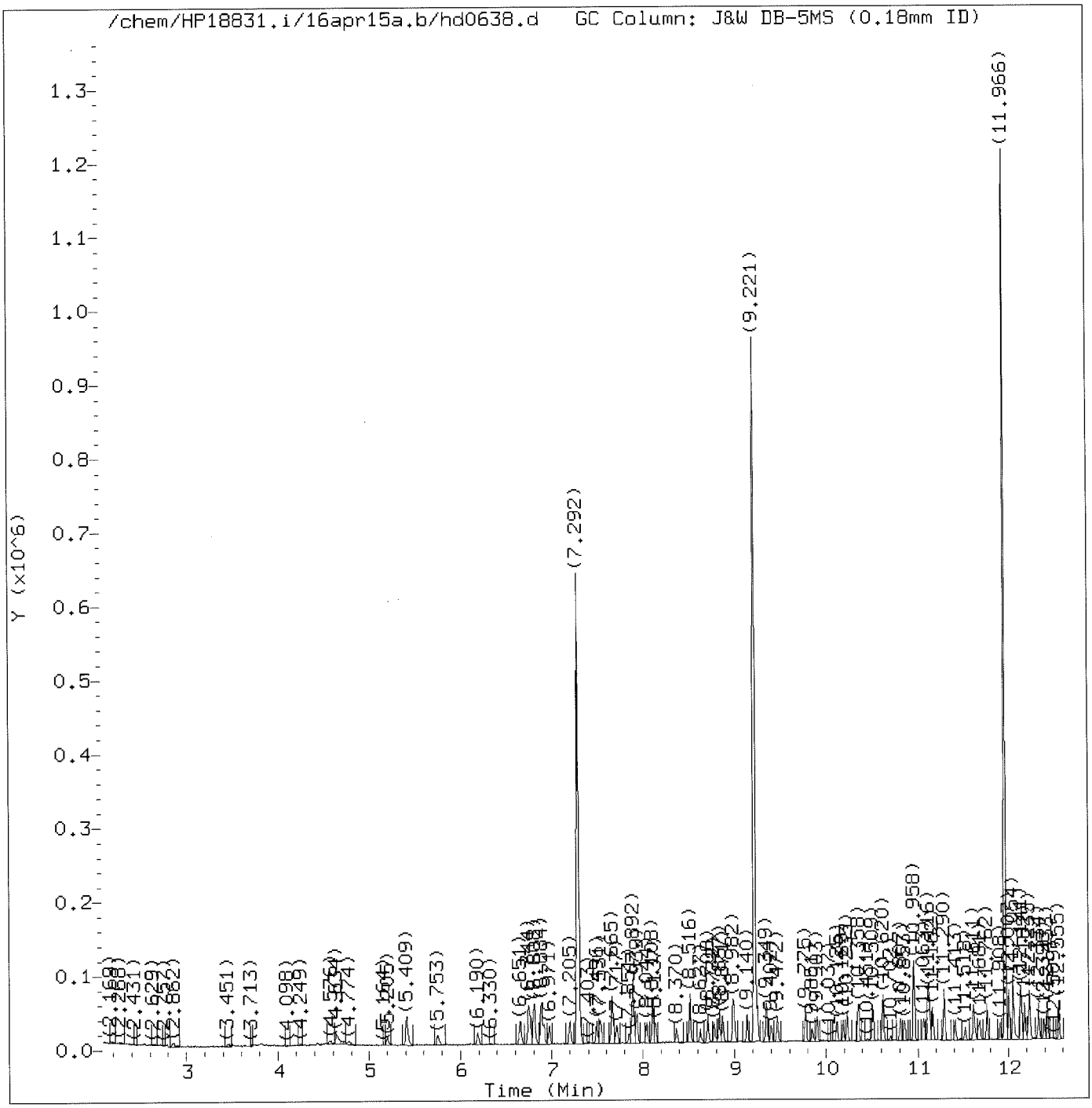
Data File: /chem/HP18831.i/16apr15a.b/hd0637.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 20:41 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 128		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1817		
Retention Time (minutes)	: 12.677		
Quant Ion	: 152.00		
Area	: 25847		
On-column Amount (ng/ul)	: 1.1752		
Integration start scan	: 1811	Integration stop scan:	1828
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

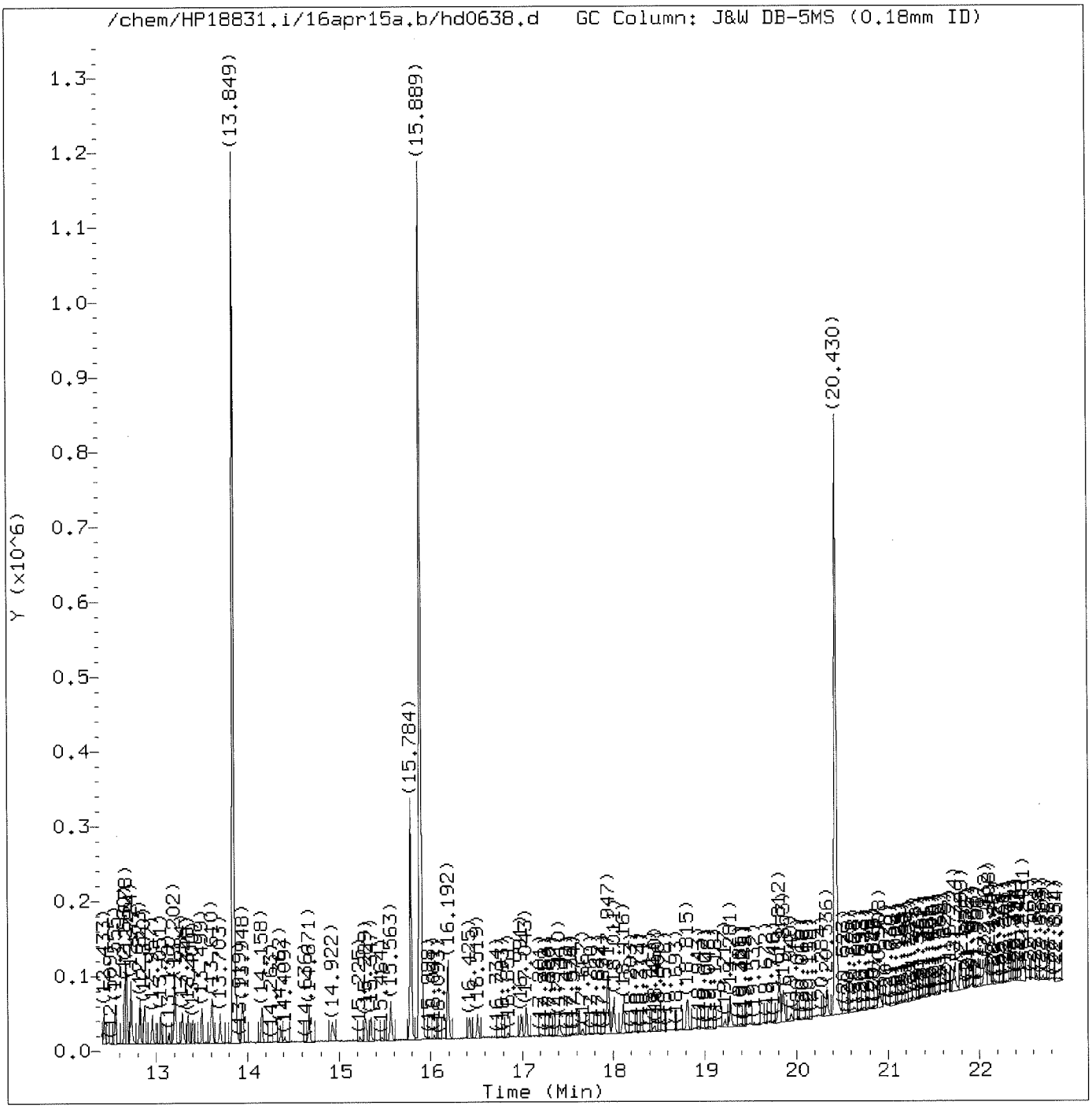
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:18.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.850	88	4181M	0.223
4) N-Nitrosodimethylamine	(1)	3.463	74	6687M	0.219
5) Pyridine	(1)	3.754	79	10365M	0.211
7) 2-Picoline	(1)	4.634	93	13198M	0.251
8) N-Nitrosomethylethylamine	(1)	4.774	88	5186M	0.250
9) Methyl methanesulfonate	(1)	5.199	80	5864M	0.245
11)$2-Fluorophenol	(1)	5.409	112	18989	0.475
42) Total Cresols	(1)			18575	0.475
13) N-Nitrosodiethylamine	(1)	5.753	102	4731	0.234
15) Ethyl methanesulfonate	(1)	6.184	109	4776	0.233
16) Benzaldehyde	(1)	6.657	77	11136	0.289
17)$Phenol-d6	(1)	6.744	99	23740	0.456
18) Phenol	(1)	6.762	94	13155	0.225
19) Aniline	(1)	6.808	93	18077	0.247
20) a-methylstyrene	(1)	6.890	118	11031	0.261
22) bis(2-Chloroethyl)ether	(1)	6.913	93	11556	0.246
23) 2-Chlorophenol	(1)	6.971	128	8953	0.232
24) 1,3-Dichlorobenzene	(1)	7.205	146	9982	0.242
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	136684	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	10446	0.247
97) Isosafrole	(3)			7356	0.236
27) Benzyl alcohol	(1)	7.490	108	6632	0.240
28) 1,2-Dichlorobenzene	(1)	7.531	146	9765	0.244
31) 2-Methylphenol	(1)	7.659	108	9318	0.243
30) Indene	(1)	7.671	115	18302	0.258
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	17620	0.250
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	17620	0.250
35) N-Nitrosopyrrolidine	(1)	7.851	100	4774	0.230
36) Acetophenone	(1)	7.892	105	15680	0.251
37) 4-Methylphenol	(1)	7.892	108	9257	0.232
38) N-Nitroso-di-n-propylamine	(1)	7.898	70	8464	0.234
39) N-Nitrosomorpholine	(1)	7.916	56	7261	0.242
40) o-Toluidine	(1)	7.939	106	16722	0.245
43) Hexachloroethane	(1)	8.044	117	4225	0.236
120) 2,4_2,6-Dinitrotoluenes	(3)			8227	0.396
44)$Nitrobenzene-d5	(2)	8.108	82	24670	0.476
45) Nitrobenzene	(2)	8.143	77	13320	0.246
48) N-Nitrosopiperidine	(2)	8.370	114	4211	0.218
50) Isophorone	(2)	8.516	82	20579	0.228
51) 2-Nitrophenol	(2)	8.627	139	4477	0.224

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.708	107	9594	0.226
56) Benzoic acid	(2)	8.772	105	15717M	0.518
146) Diallate trans/cis	(4)			9080	0.226
57) O,O,O-Triethylphosphorothioate	(2)	8.837	198	5206	0.243
55) bis(2-Chloroethoxy)methane	(2)	8.871	93	13867	0.242
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	16086	0.245
60) 2,4-Dichlorophenol	(2)	9.000	162	6613	0.212
62) 1,2,4-Trichlorobenzene	(2)	9.134	180	8948	0.237
65)*Naphthalene-d8	(2)	9.221	136	525888	5.000
66) Naphthalene	(2)	9.256	128	28218	0.252
67) 4-Chloroaniline	(2)	9.344	127	10157	0.221
68) 2,6-Dichlorophenol	(2)	9.355	162	7303	0.238
69) Hexachloropropene	(2)	9.402	213	5166	0.217
71) Hexachlorobutadiene	(2)	9.466	225	5547	0.245
75) Quinoline	(2)	9.775	129	16184	0.232
76) Caprolactam	(2)	9.851	113	2014	0.193
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	7398	0.197
80) 4-Chloro-3-methylphenol	(2)	10.119	107	8061	0.224
82) Safrole	(2)	10.235	162	6547	0.229
83) 2-Methylnaphthalene	(2)	10.358	142	18131	0.243
84) 1-Methylnaphthalene	(2)	10.509	142	16868	0.246
85) Hexachlorocyclopentadiene	(3)	10.614	237	4993	0.214
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	9261	0.240
88) cis-Isosafrole	(3)	10.702	162	1285	0.043
90) 2,4,6-Trichlorophenol	(3)	10.807	196	5125	0.210
92) 2,4,5-Trichlorophenol	(3)	10.853	196	5323	0.207
93)$2-Fluorobiphenyl	(3)	10.958	172	41271	0.493
94) trans-Isosafrole	(3)	11.063	162	6071	0.194
95) 1,1'-Biphenyl	(3)	11.110	154	22861	0.255
96) 2-Chloronaphthalene	(3)	11.127	162	17427	0.245
98) 1-Chloronaphthalene	(3)	11.162	162	15820	0.239
100) 2-Nitroaniline	(3)	11.290	138	4129	0.198
99) Diphenyl ether	(3)	11.290	170	11211	0.235
104) 1,4-Naphthoquinone	(3)	11.413	158	5560	0.191
105) 1,4-Dinitrobenzene	(3)	11.524	168	2054	0.175
106) Dimethylphthalate	(3)	11.611	163	18672	0.233
107) 1,3-Dinitrobenzene	(3)	11.628	168	2188	0.173
108) 2,6-Dinitrotoluene	(3)	11.681	165	3451	0.200
109) Acenaphthylene	(3)	11.762	152	23846	0.231
112) 3-Nitroaniline	(3)	11.902	138	3484	0.195

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.966	164	295719	5.000
114) Acenaphthene	(3)	12.007	153	16960	0.242
115) 2,4-Dinitrophenol	(3)	12.054	184	11912	1.002
116) 4-Nitrophenol	(3)	12.141	109	10390M	0.798
117) Pentachlorobenzene	(3)	12.188	250	7504	0.243
118) 2,4-Dinitrotoluene	(3)	12.229	165	4776	0.196
119) Dibenzofuran	(3)	12.240	168	23446	0.244
121) 1-Naphthylamine	(3)	12.334	143	15039	0.210
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	4150	0.207
123) 2-Naphthylamine	(3)	12.433	143	15224	0.218
124) Diethylphthalate	(3)	12.555	149	16814	0.214
125) Thionazin	(3)	12.654	107	3354	0.246
126) Fluorene	(3)	12.666	166	18030	0.238
129) 4-Nitroaniline	(3)	12.678	138	3614	0.193
128) 5-Nitro-o-toluidine	(3)	12.678	152	4056	0.198
127) 4-Chlorophenyl-phenylether	(3)	12.678	204	9639	0.246
130) 4,6-Dinitro-2-methylphenol	(4)	12.724	198	11421	0.738
132) NDPA as diphenylamine	(4)	12.823	169	14615	0.233
131) N-Nitrosodiphenylamine	(4)	12.823	169	14615	0.233
134) 1,2-Diphenylhydrazine	(4)	12.870	77	22630	0.238
135)$2,4,6-Tribromophenol	(3)	12.957	330	3992	0.404
137) Tetraethyldithiopyrophosphate	(4)	13.051	97	3045	0.206
139) 1,3,5-Trinitrobenzene	(4)	13.144	213	1386	0.140
140) Diallate (peak 1)	(4)	13.196	86	7605	0.189
142) Phenacetin	(4)	13.208	108	8045	0.188
141) Phorate	(4)	13.208	75	12569	0.211
143) 4-Bromophenyl-phenylether	(4)	13.290	248	5007	0.230
144) Diallate (peak 2)	(4)	13.307	86	1475	0.038
145) Hexachlorobenzene	(4)	13.348	284	5535	0.242
147) Dimethoate	(4)	13.400	87	7401	0.191
148) Atrazine	(4)	13.499	200	5028	0.222
149) Pentachlorophenol	(4)	13.599	266	2358	0.157
150) 4-Aminobiphenyl	(4)	13.610	169	12811	0.212
151) Pentachloronitrobenzene	(4)	13.616	237	2097	0.191
152) Pronamide	(4)	13.703	173	6953	0.192
153)*Phenanthrene-d10	(4)	13.849	188	558297	5.000
154) Dinoseb	(4)	13.861	211	2797	0.121
155) Phenanthrene	(4)	13.878	178	27717	0.244
157) Anthracene	(4)	13.948	178	25364	0.228
163) Carbazole	(4)	14.164	167	23409	0.220

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on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.362	109	4903	0.166
165) Di-n-butylphthalate	(4)	14.671	149	27583	0.205
167) Parathion	(4)	14.922	109	2634	0.148
168) 4-Nitroquinoline-1-oxide	(4)	14.933	190	1168	0.087
222) Total PAHs	(6)			431882	4.196
169) Octachlorostyrene	(4)	15.289	308	2231	0.251
171) Isodrin	(4)	15.341	193	3482	0.250
173) Fluoranthene	(4)	15.563	202	29283	0.228
174) Benzidine	(5)	15.784	184	151105	1.669
175)*Pyrene-d10	(5)	15.889	212	658722	5.000
177) Pyrene	(5)	15.912	202	34024	0.250
179)$Terphenyl-d14	(5)	16.192	244	44466	0.482
182) p-Dimethylaminoazobenzene	(5)	16.425	225	4359	0.194
185) Chlorobenzilate	(5)	16.519	139	8004	0.197
187) 3,3'-Dimethylbenzidine	(5)	16.991	212	14873	0.180
188) Butylbenzylphthalate	(5)	17.043	149	11232	0.193
191) 2-Acetylaminofluorene	(5)	17.410	181	7119	0.145
193) 3,3'-Dichlorobenzidine	(5)	17.929	252	9208	0.198
195) Benzo(a)anthracene	(5)	17.947	228	27382	0.223
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.947	231	4644	0.181
196) Chrysene	(5)	18.011	228	26683	0.231
199) bis(2-Ethylhexyl)phthalate	(5)	18.116	149	14131	0.170
203) 6-Methylchrysene	(5)	18.815	242	17213	0.208
205) Di-n-octylphthalate	(6)	19.281	149	22257	0.162
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.806	256	8856	0.185
206) Benzo(b)fluoranthene	(6)	19.812	252	25383	0.224
208) Benzo(k)fluoranthene	(6)	19.853	252	25732	0.232
211) Benzo(a)pyrene	(6)	20.342	252	22149	0.214
213)*Perylene-d12	(6)	20.430	264	439545	5.000
215) 3-Methylcholanthrene	(6)	20.908	268	9069	0.213
217) Dibenz(a,h)acridine	(6)	21.724	279	17839	0.211
218) Dibenz(a,j)acridine	(6)	21.799	279	17100	0.201
219) Indeno(1,2,3-cd)pyrene	(6)	22.068	276	23702	0.215
220) Dibenz(a,h)anthracene	(6)	22.102	278	20453	0.221
221) Benzo(g,h,i)perylene	(6)	22.481	276	21957	0.233

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$ = Compound is a surrogate standard.

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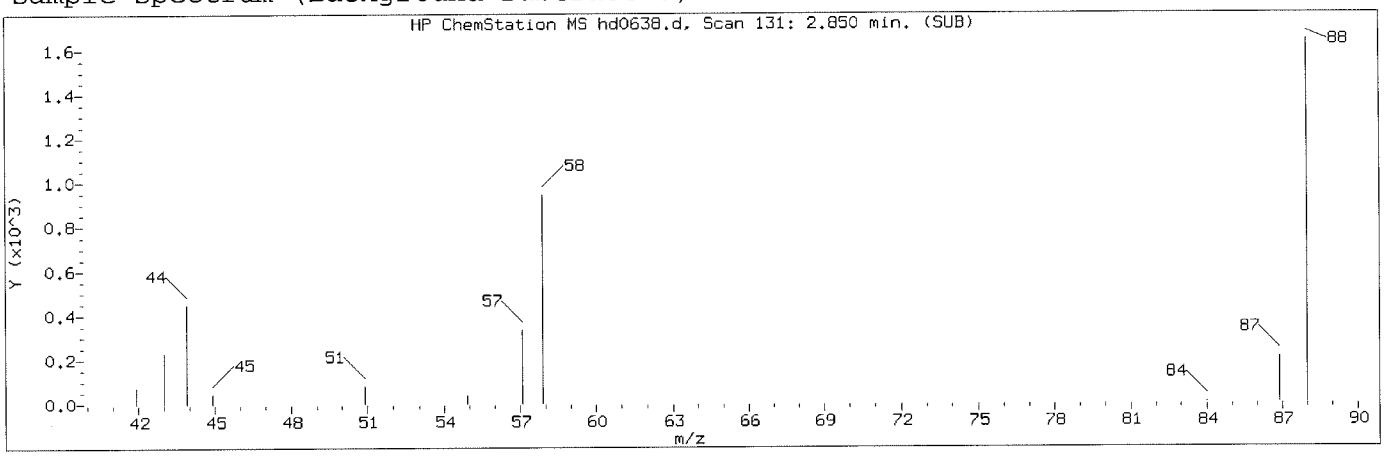
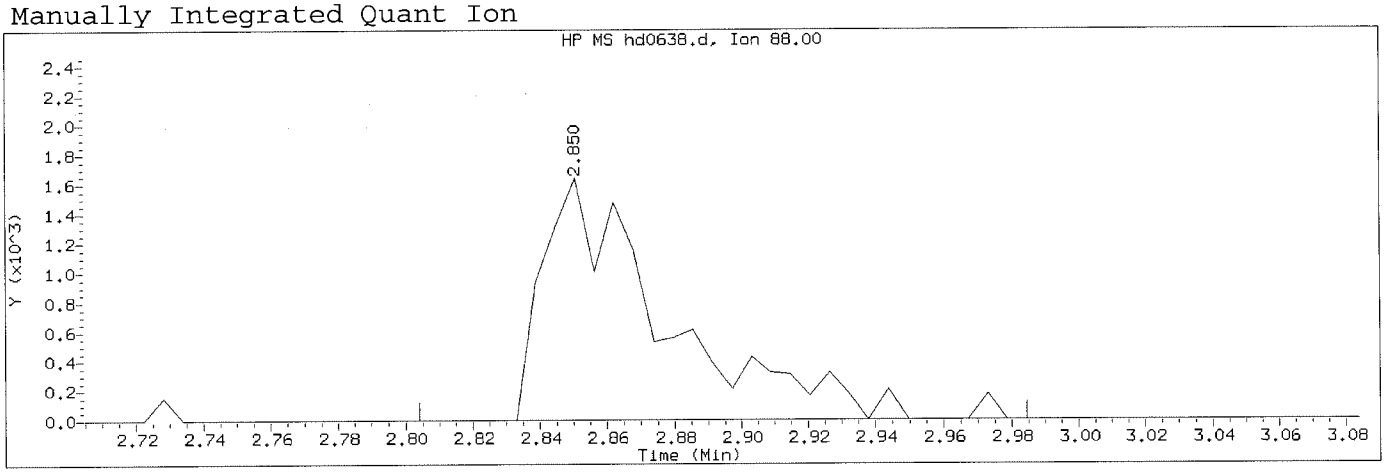
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 131		
Retention Time (minutes)	: 2.850		
Quant Ion	: 88.00		
Area (flag)	: 4181M		
On-Column Amount (ng/ul)	: 0.2230		
Integration start scan	: 122	Integration stop scan:	153
Y at integration start	: 0	Y at integration end:	0

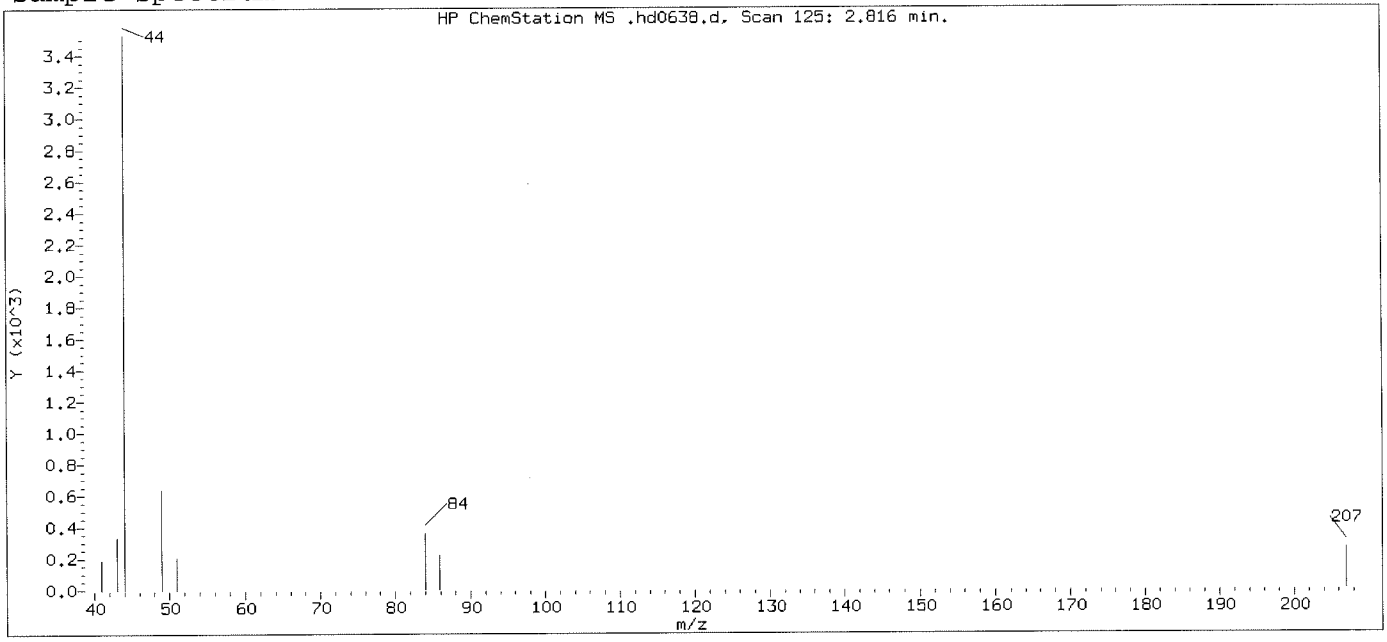
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

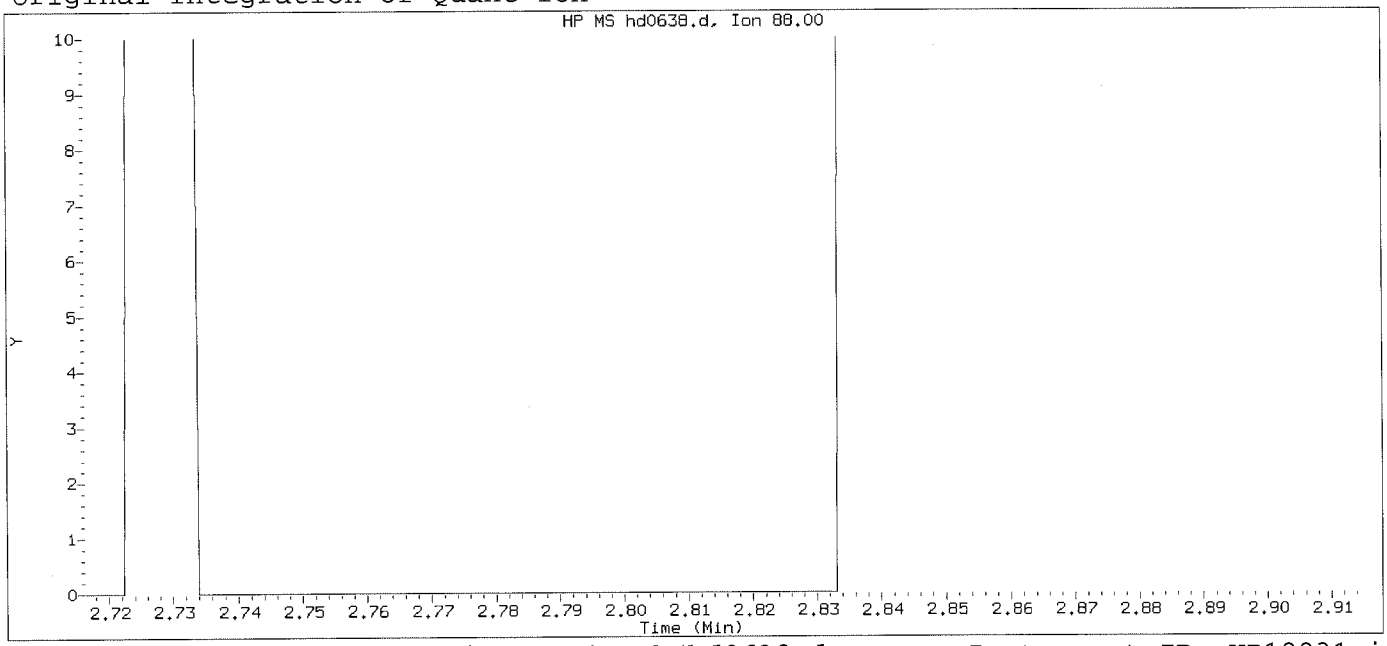
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.816
Quant Ion : 88.00

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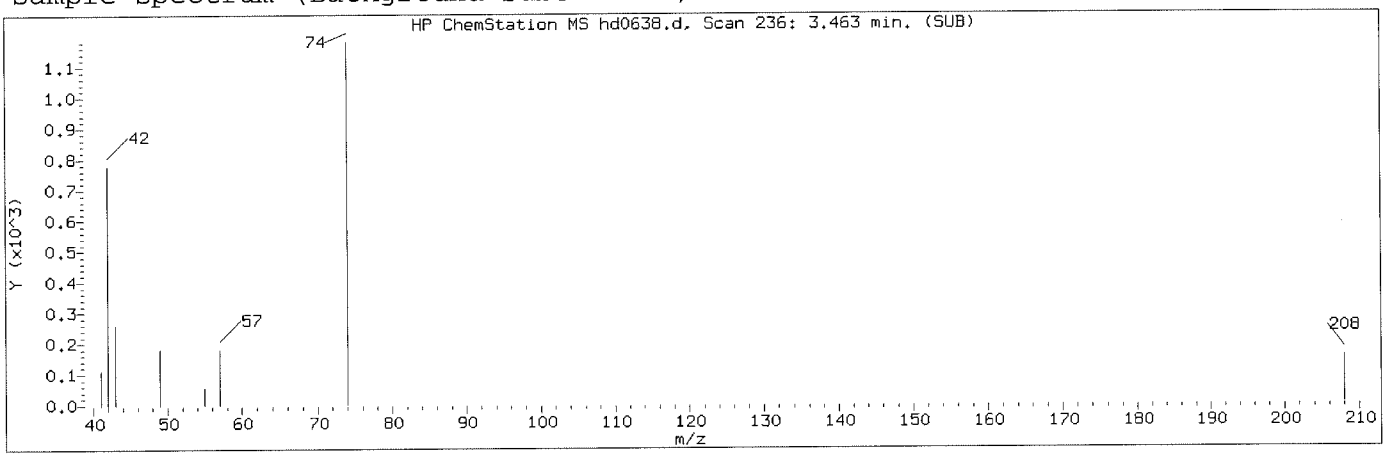
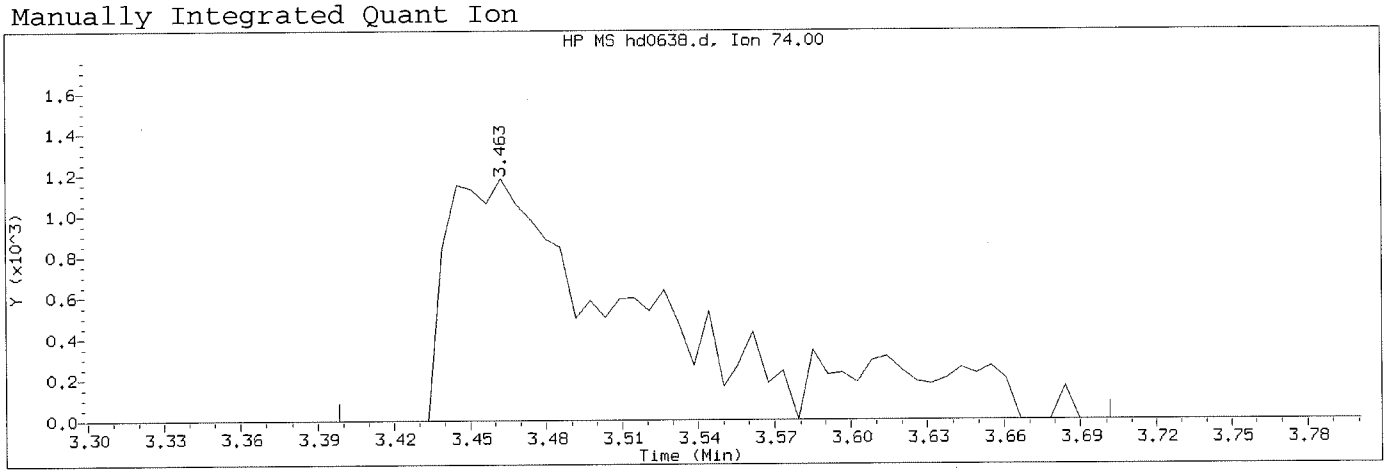
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 236		
Retention Time (minutes)	: 3.463		
Quant Ion	: 74.00		
Area (flag)	: 6687M		
On-Column Amount (ng/ul)	: 0.2187		
Integration start scan	: 224	Integration stop scan:	276
Y at integration start	: 0	Y at integration end:	0

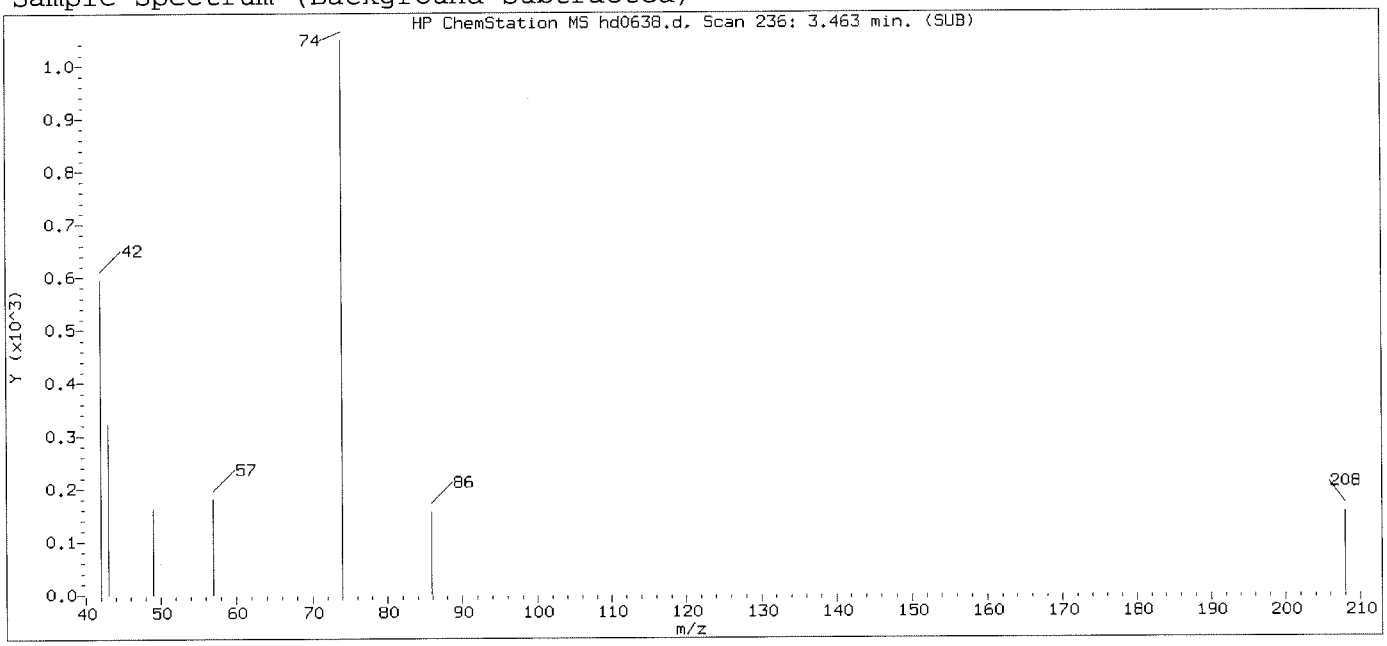
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

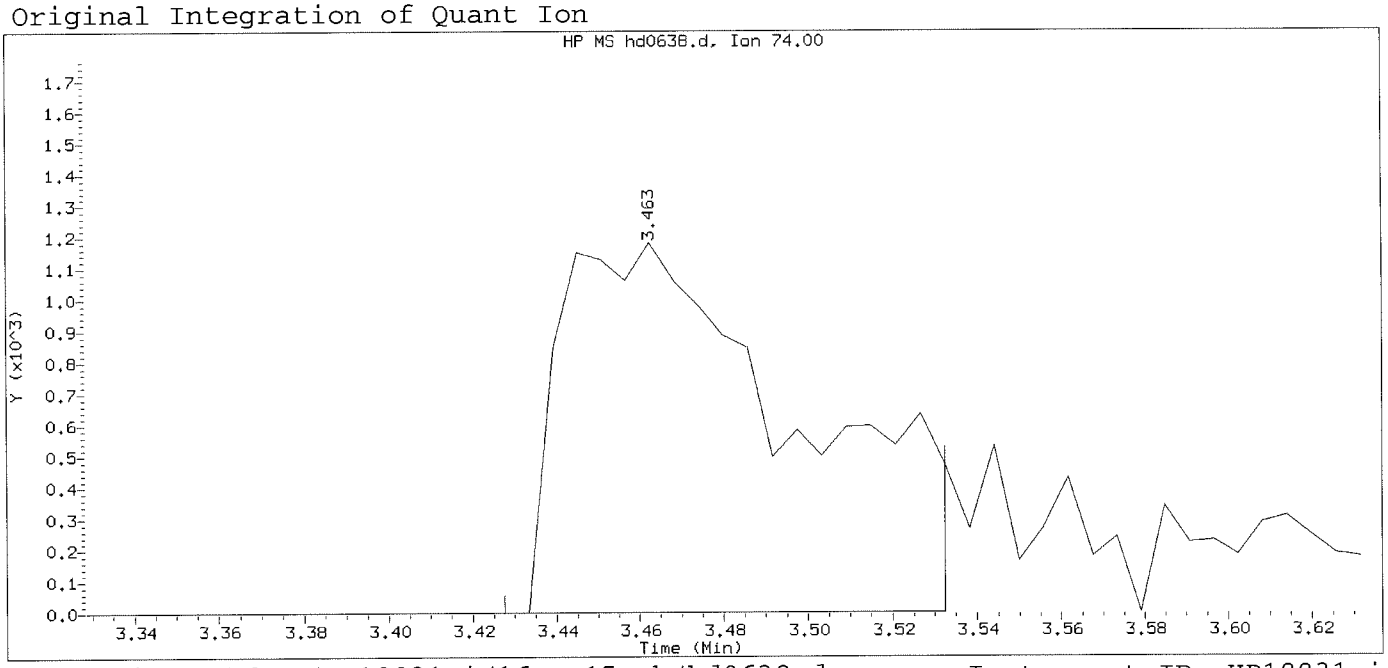
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

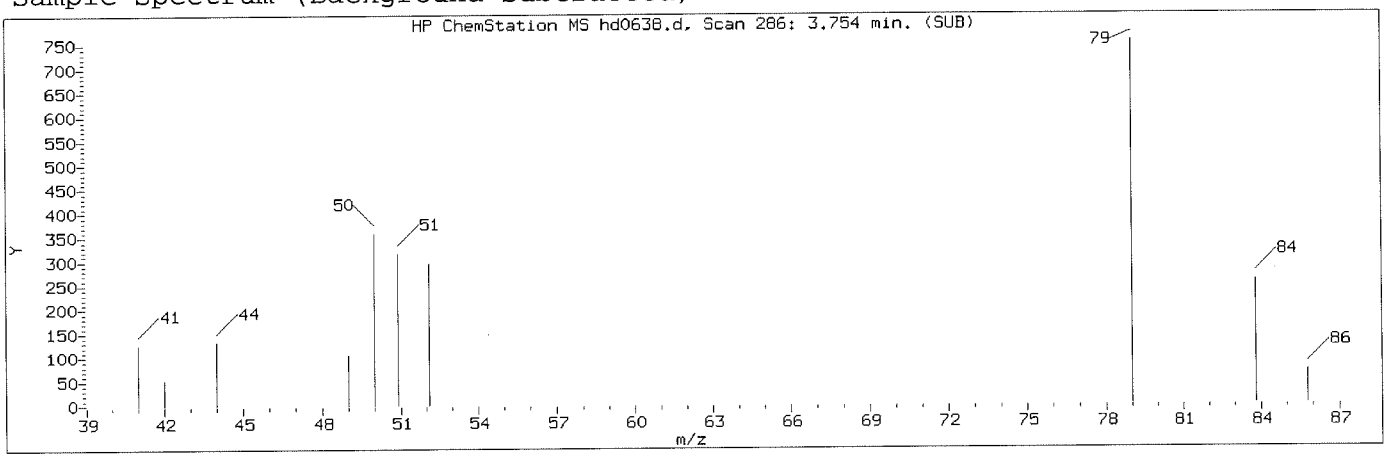
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

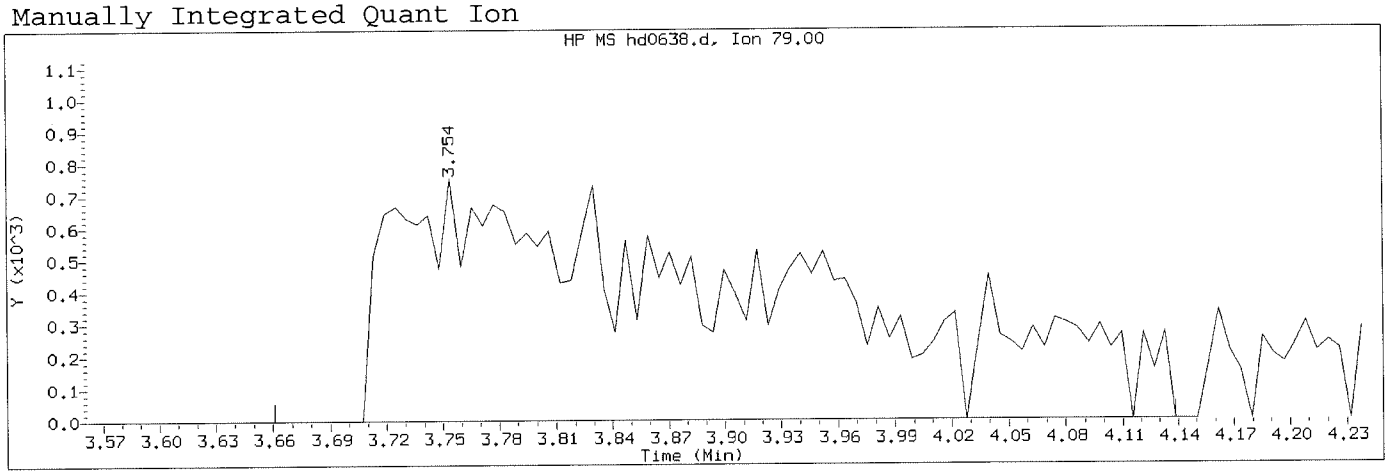
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 236		
Retention Time (minutes)	: 3.463		
Quant Ion	: 74.00		
Area	: 4653		
On-column Amount (ng/ul)	: 0.1531		
Integration start scan	: 229	Integration stop scan:	247
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 286		
Retention Time (minutes)	: 3.754		
Quant Ion	: 79.00		
Area (flag)	: 10365M		
On-Column Amount (ng/ul)	: 0.2106		
Integration start scan	: 269	Integration stop scan:	351
Y at integration start	: 0	Y at integration end:	0

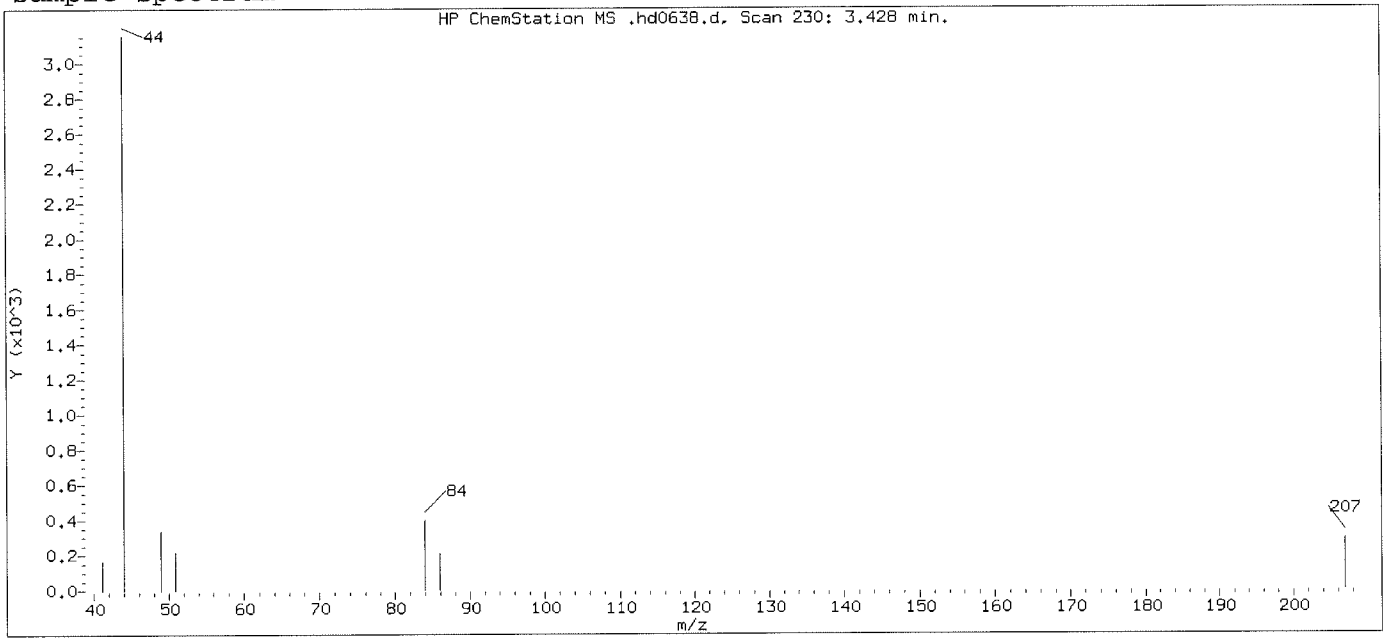
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19. Target 3.5 signature user ID: hbz01996

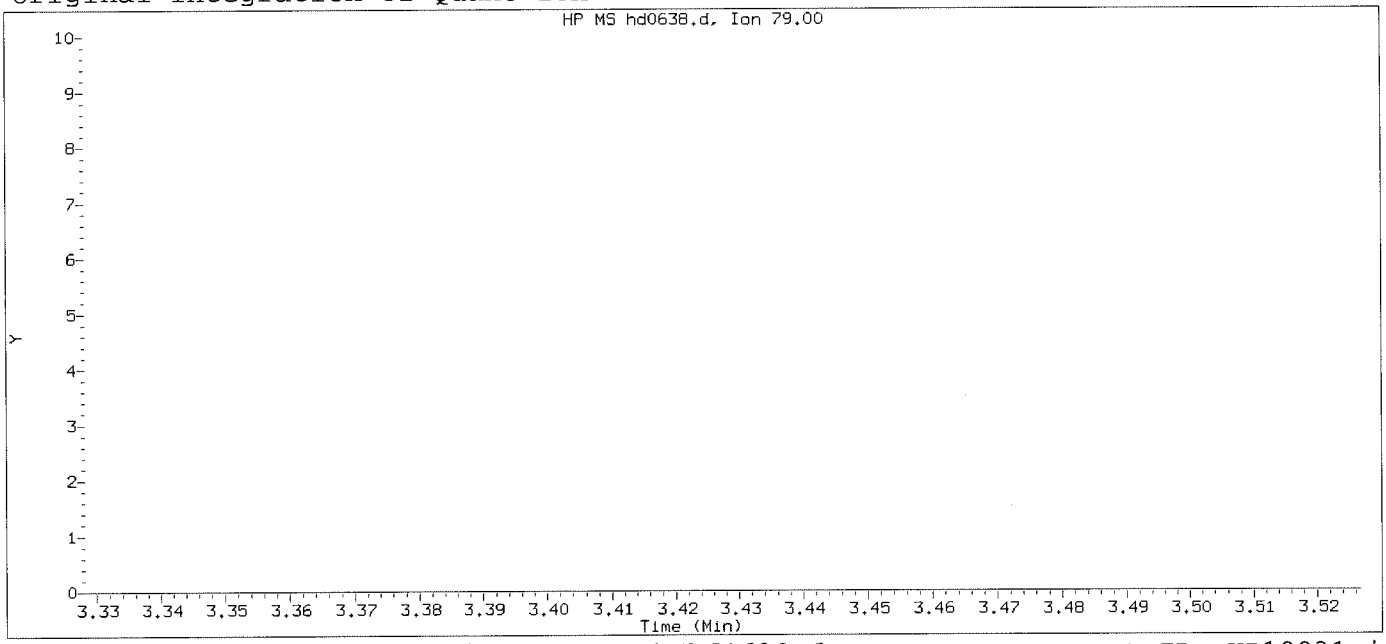
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

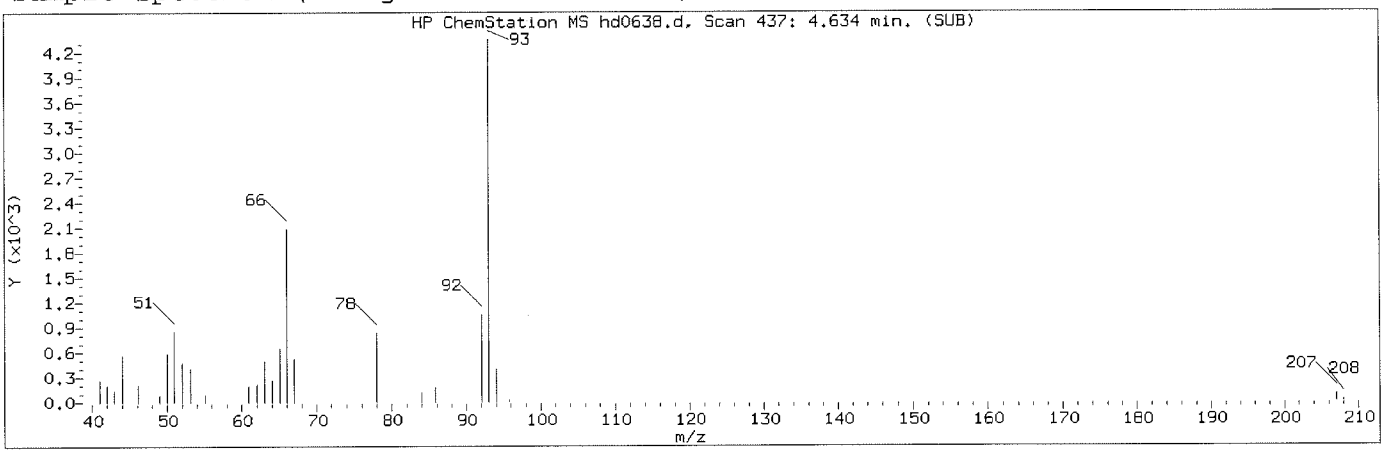
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

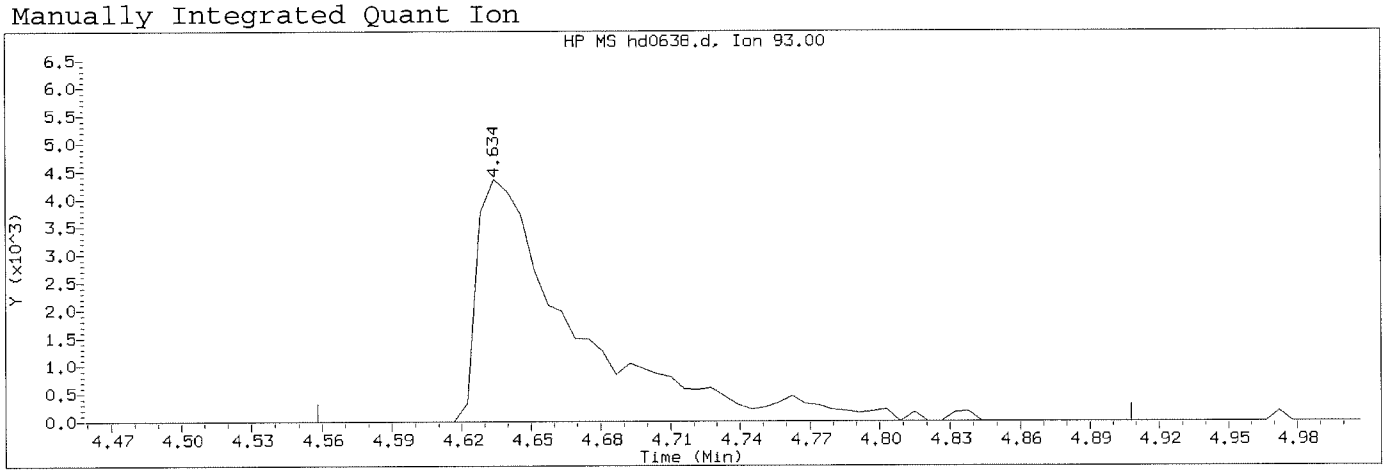
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.428
Quant Ion : 79.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 437		
Retention Time (minutes)	: 4.634		
Quant Ion	: 93.00		
Area (flag)	: 13198M		
On-Column Amount (ng/ul)	: 0.2510		
Integration start scan	: 423	Integration stop scan:	483
Y at integration start	: 0	Y at integration end:	0

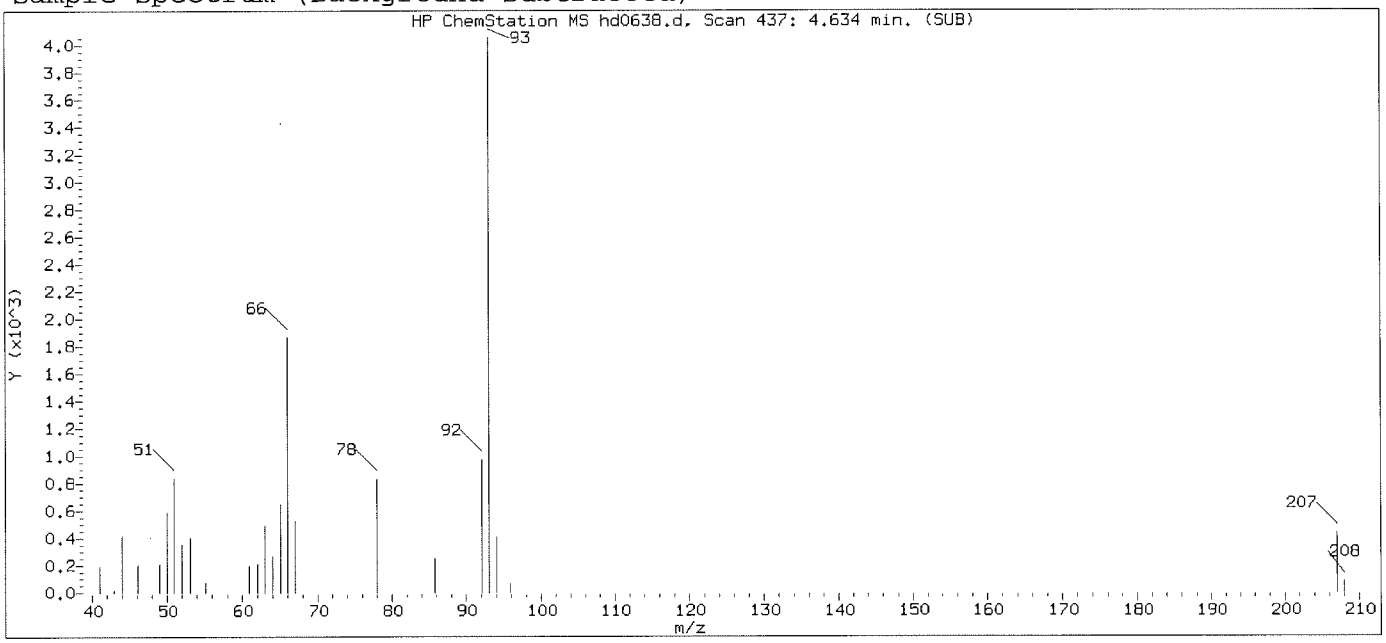
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

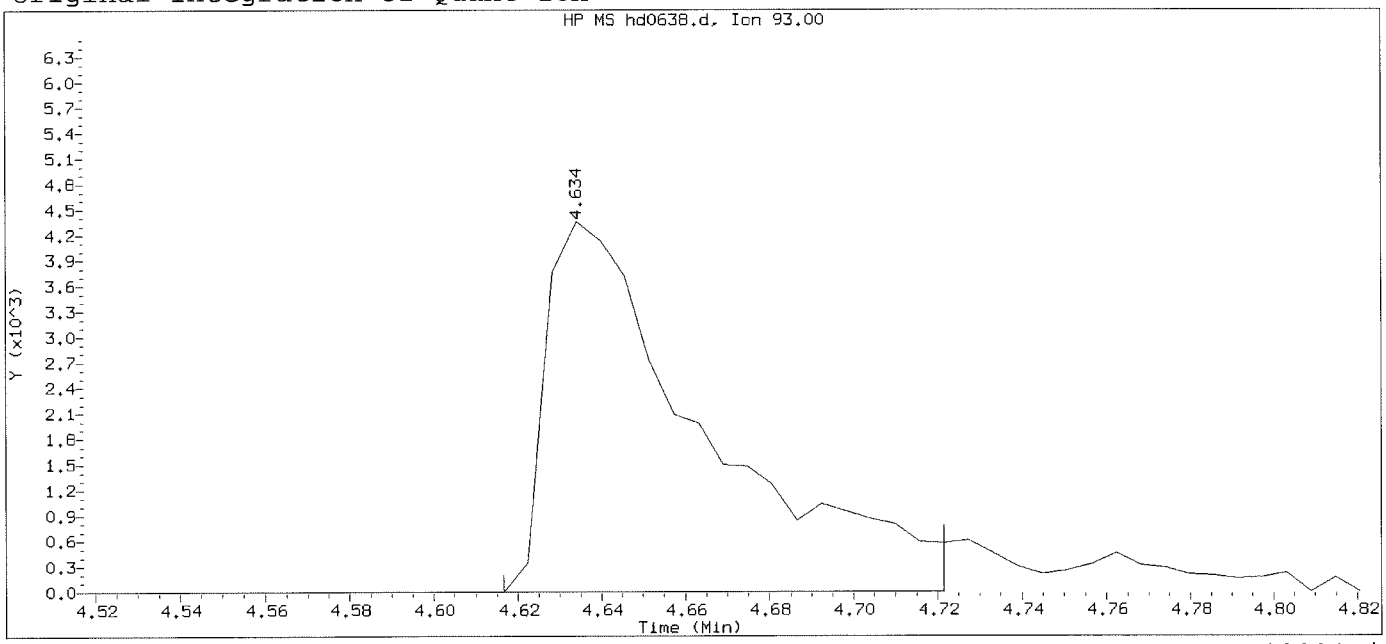
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

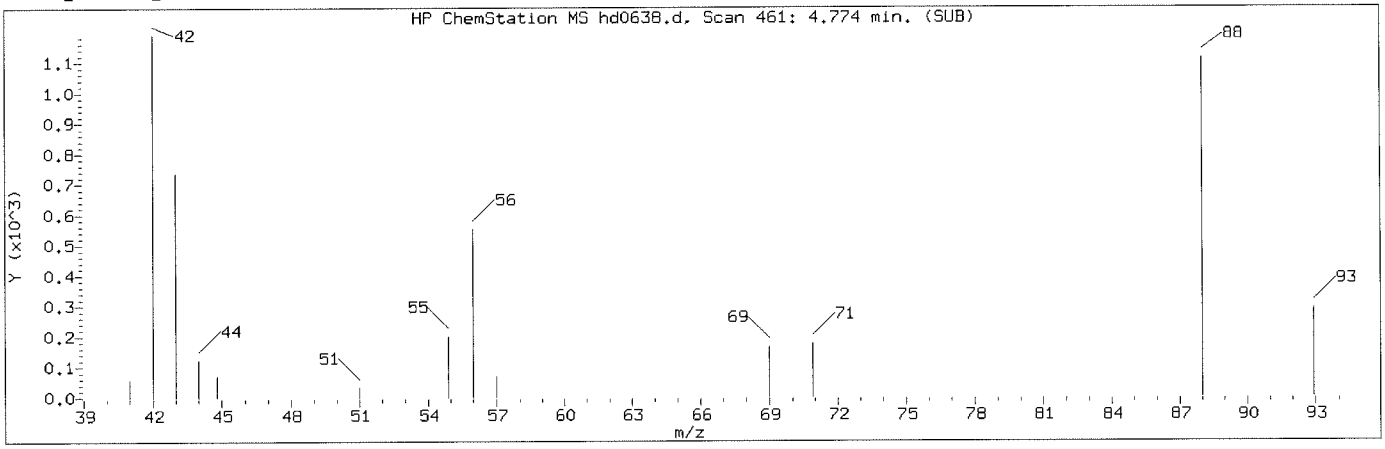
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

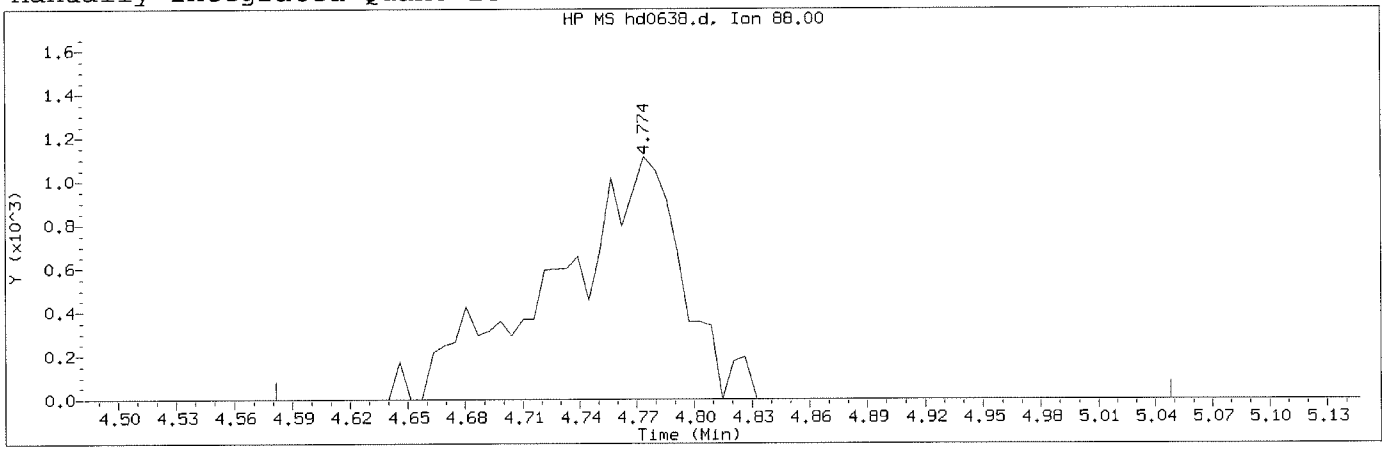
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 437		
Retention Time (minutes)	: 4.634		
Quant Ion	: 93.00		
Area	: 11452		
On-column Amount (ng/ul)	: 0.2207		
Integration start scan	: 433	Integration stop scan:	451
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 461		
Retention Time (minutes)	: 4.774		
Quant Ion	: 88.00		
Area (flag)	: 5186M		
On-Column Amount (ng/ul)	: 0.2503		
Integration start scan	: 427	Integration stop scan:	507
Y at integration start	: 0	Y at integration end:	0

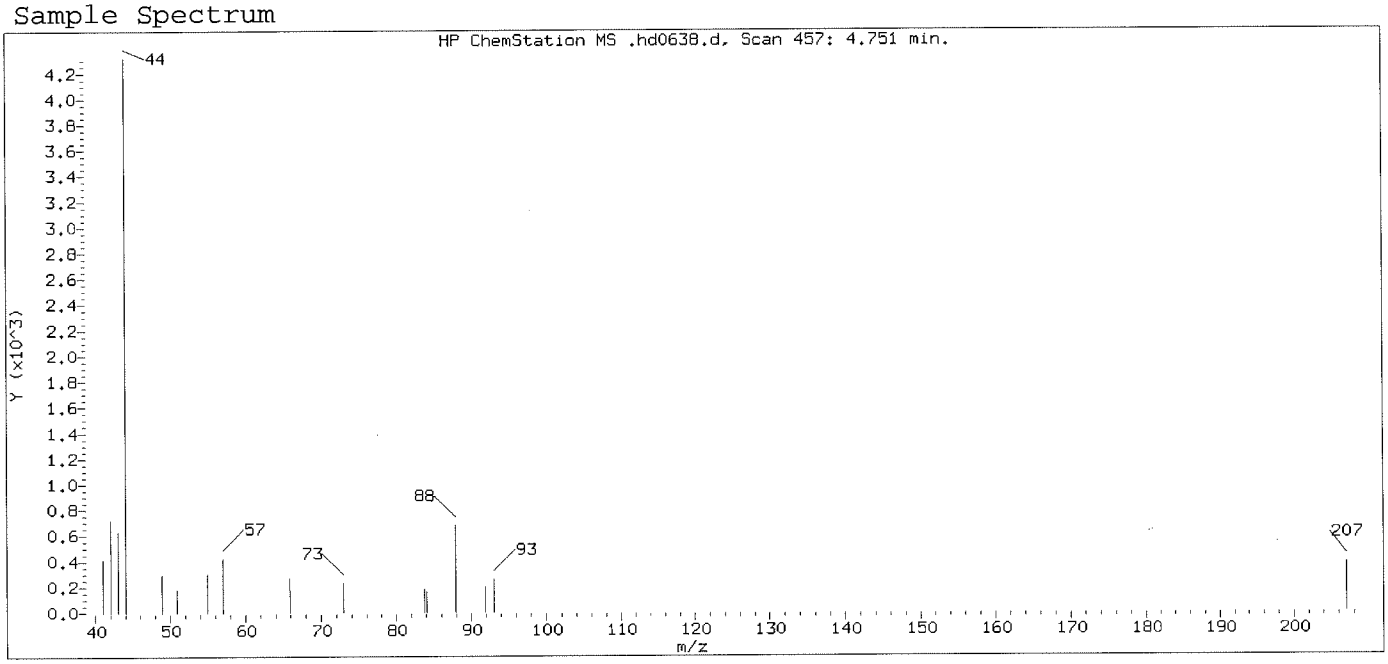
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

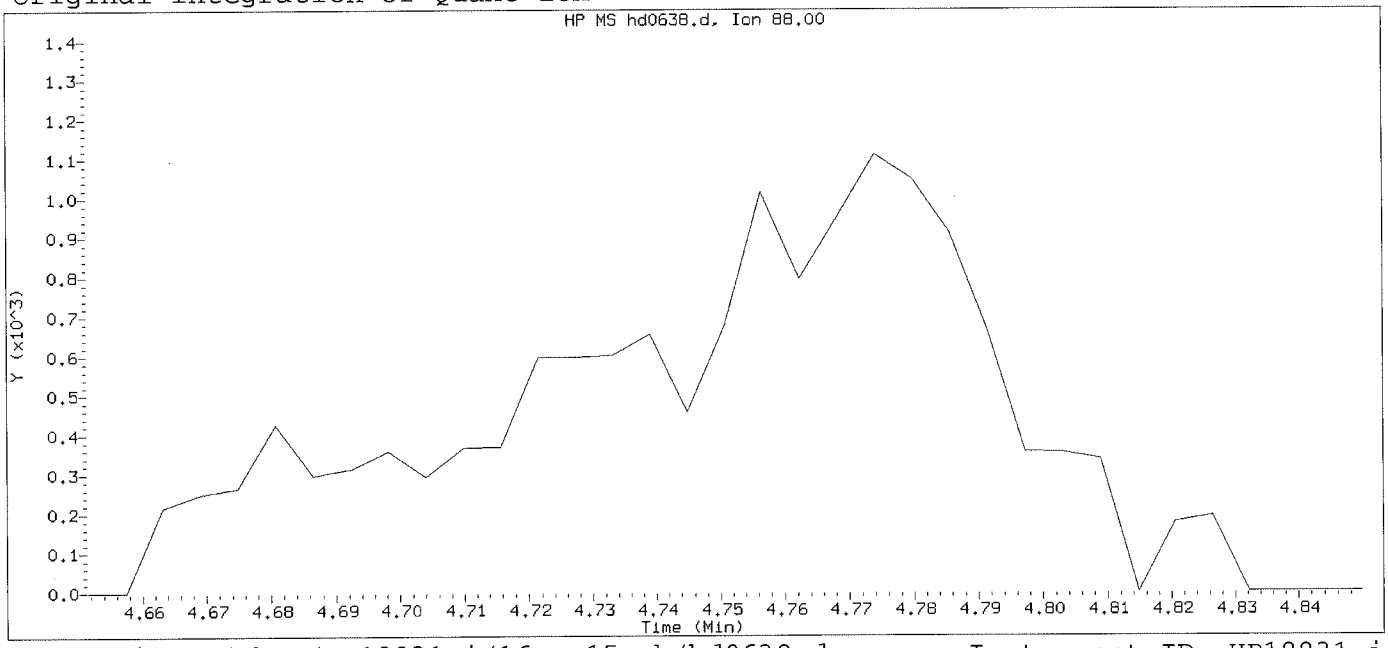
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

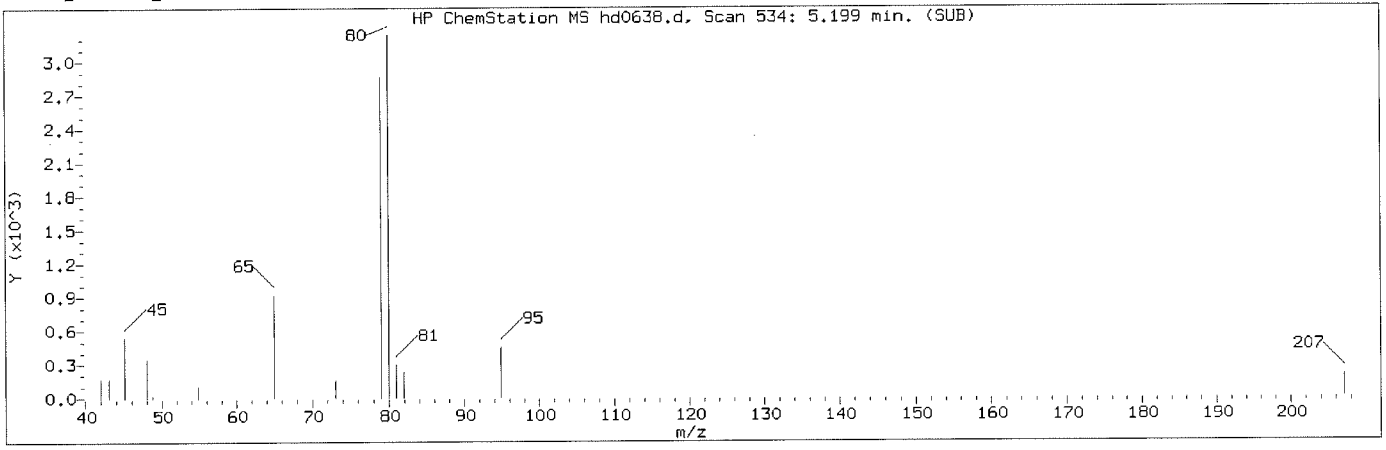
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

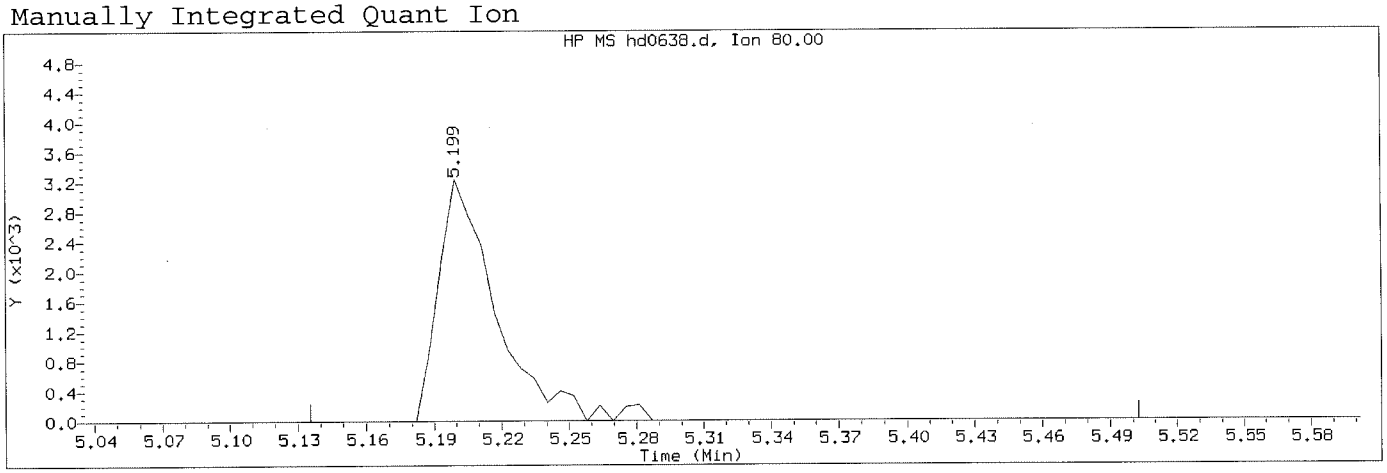
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.751
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 534		
Retention Time (minutes)	: 5.199		
Quant Ion	: 80.00		
Area (flag)	: 5864M		
On-Column Amount (ng/ul)	: 0.2452		
Integration start scan	: 522	Integration stop scan:	585
Y at integration start	: 0	Y at integration end:	0

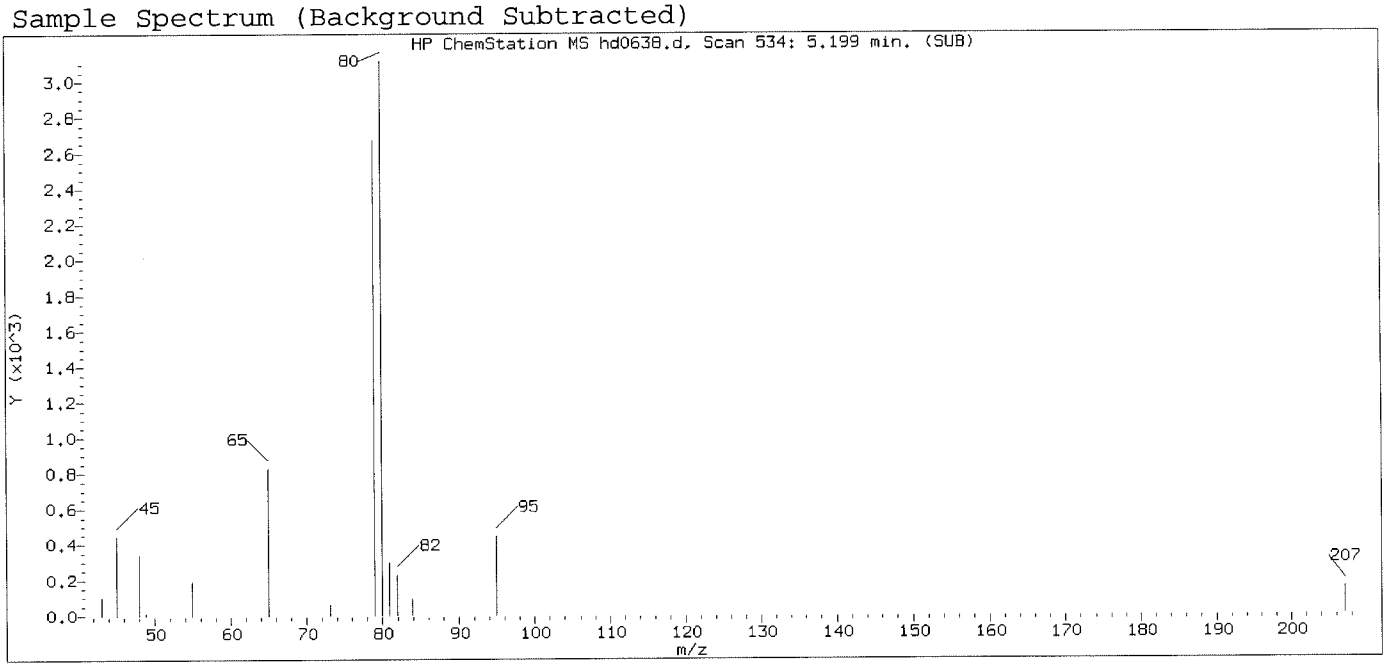
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 ~~signature user ID: hbz~~01996

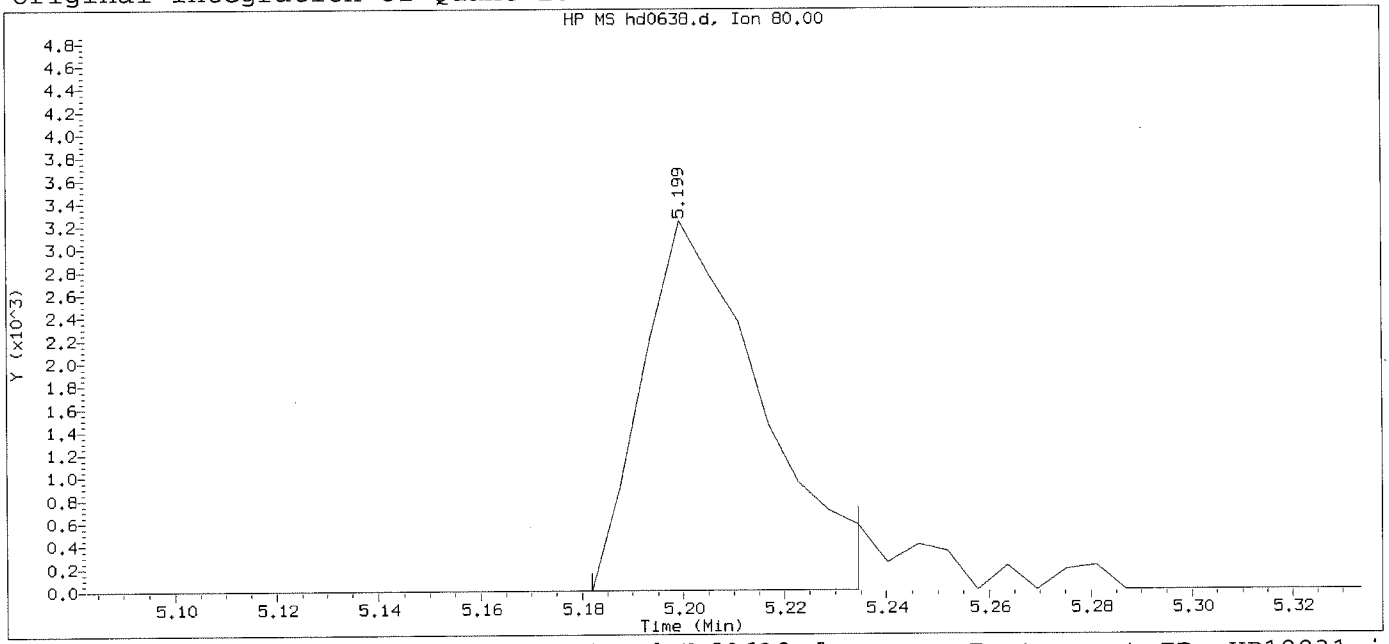
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

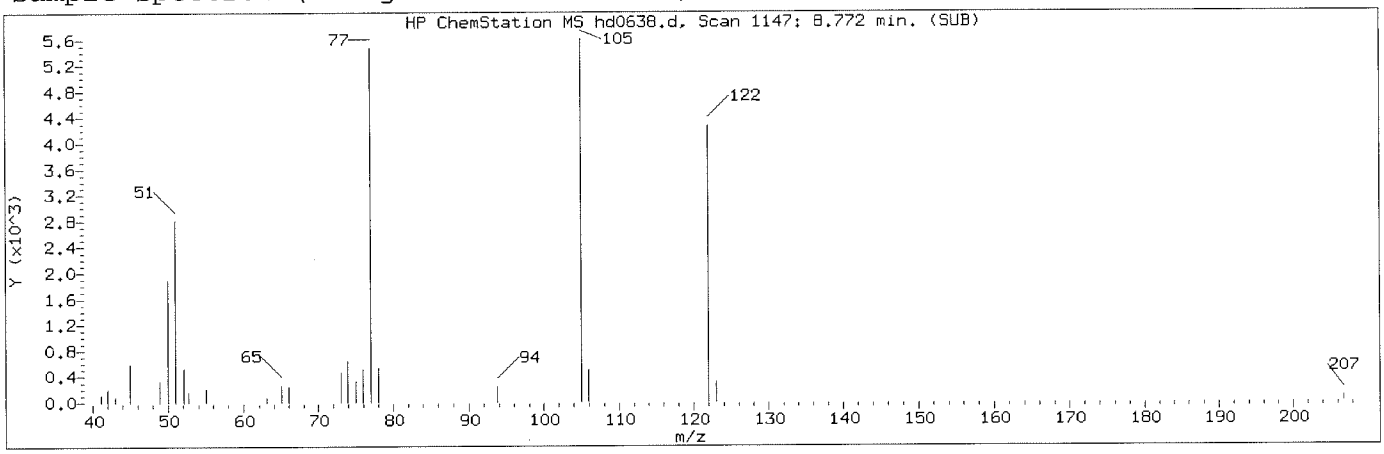
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

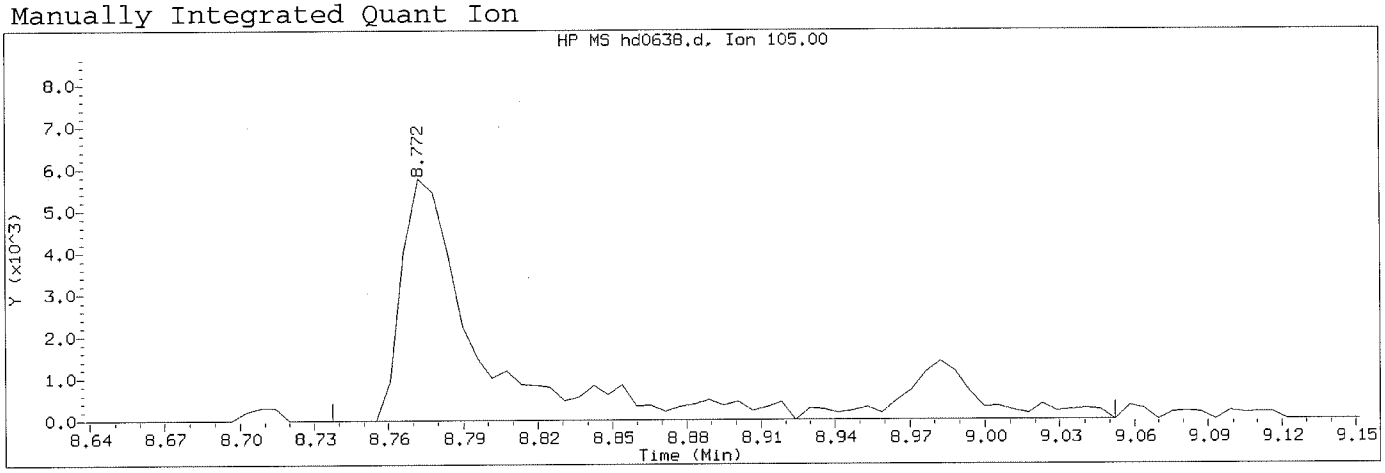
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 534		
Retention Time (minutes)	: 5.199		
Quant Ion	: 80.00		
Area	: 5204		
On-column Amount (ng/ul)	: 0.2185		
Integration start scan	: 530	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1147		
Retention Time (minutes)	: 8.772		
Quant Ion	: 105.00		
Area (flag)	: 15717M		
On-Column Amount (ng/ul)	: 0.5184		
Integration start scan	: 1140	Integration stop scan:	1194
Y at integration start	: 0	Y at integration end:	0

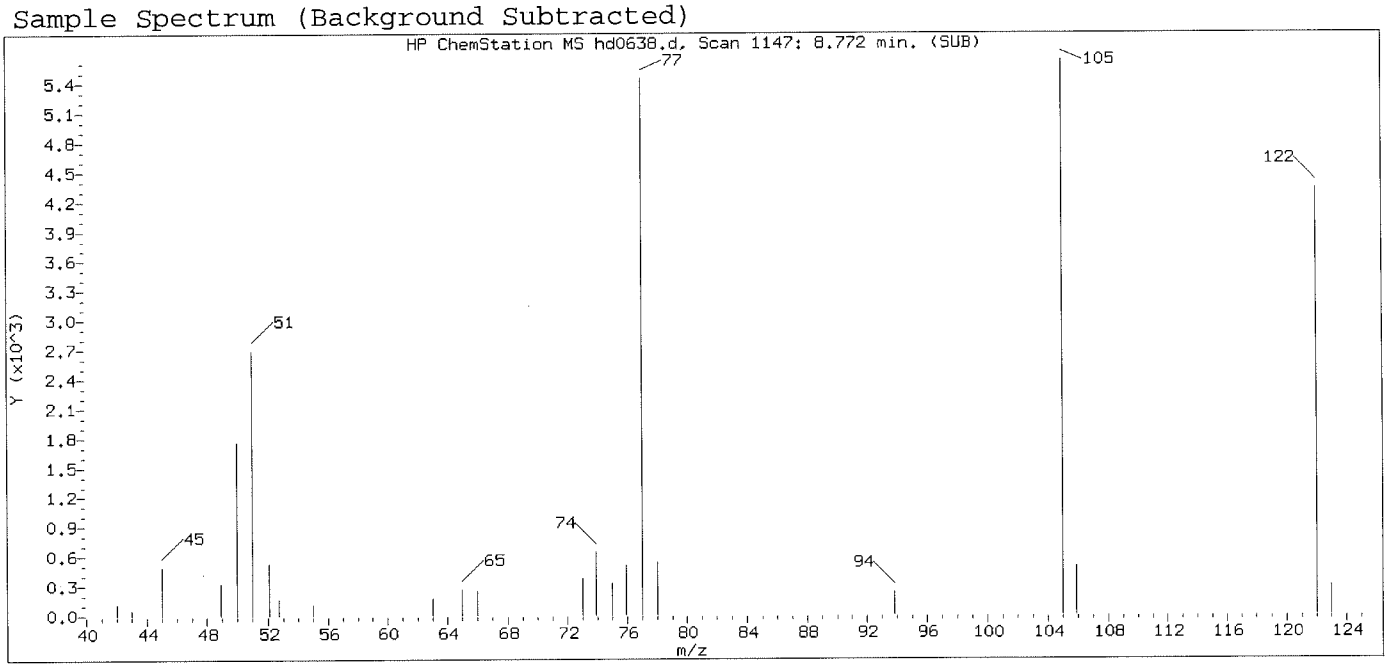
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

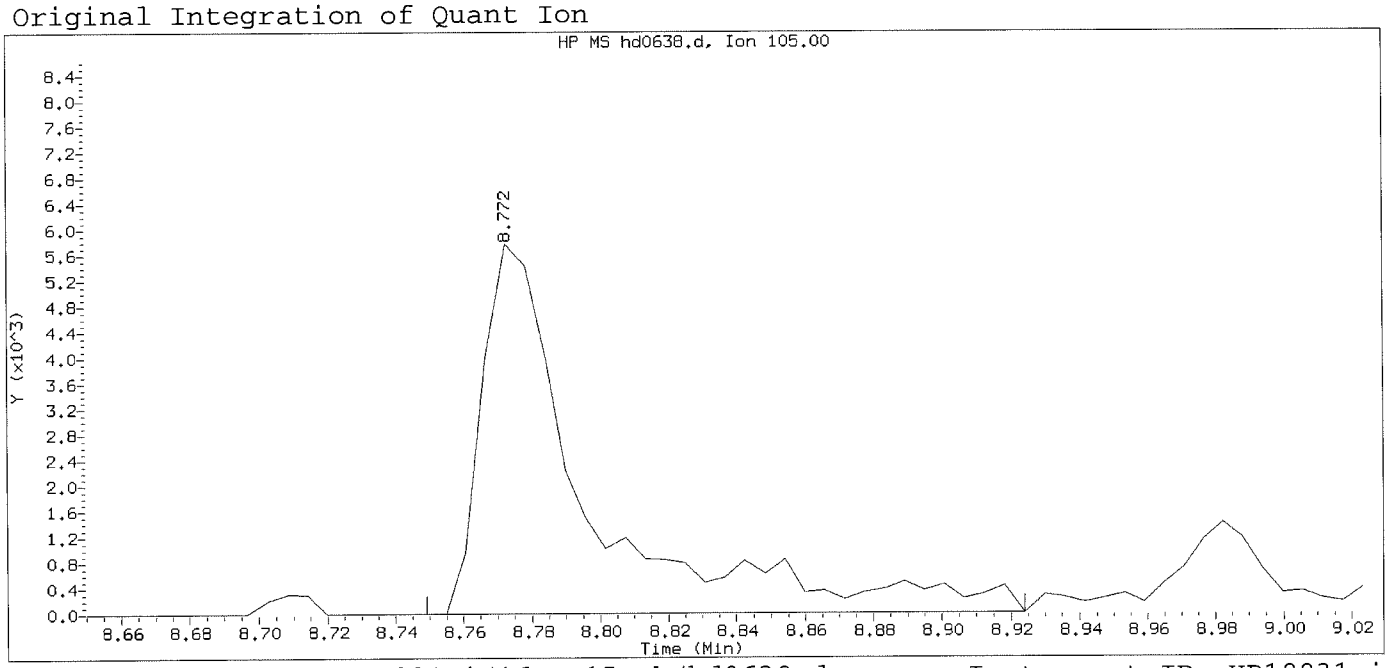
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

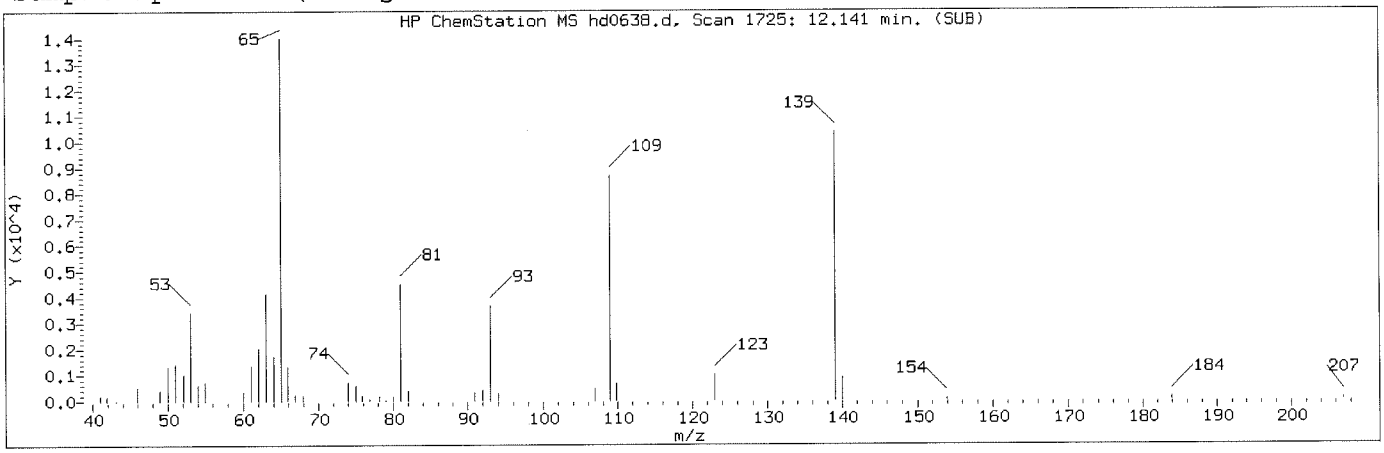
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

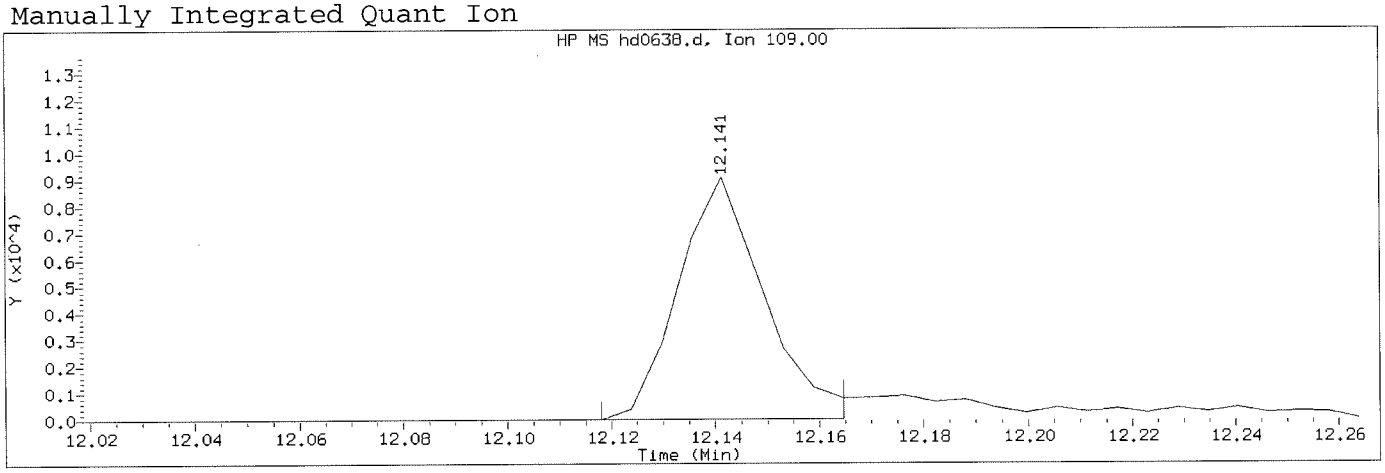
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1147		
Retention Time (minutes)	: 8.772		
Quant Ion	: 105.00		
Area	: 12490		
On-column Amount (ng/ul)	: 0.5079		
Integration start scan	: 1142	Integration stop scan:	1172
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:10 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1725		
Retention Time (minutes)	: 12.141		
Quant Ion	: 109.00		
Area (flag)	: 10390M		
On-Column Amount (ng/ul)	: 0.7975		
Integration start scan	: 1720	Integration stop scan:	1728
Y at integration start	: 0	Y at integration end:	0

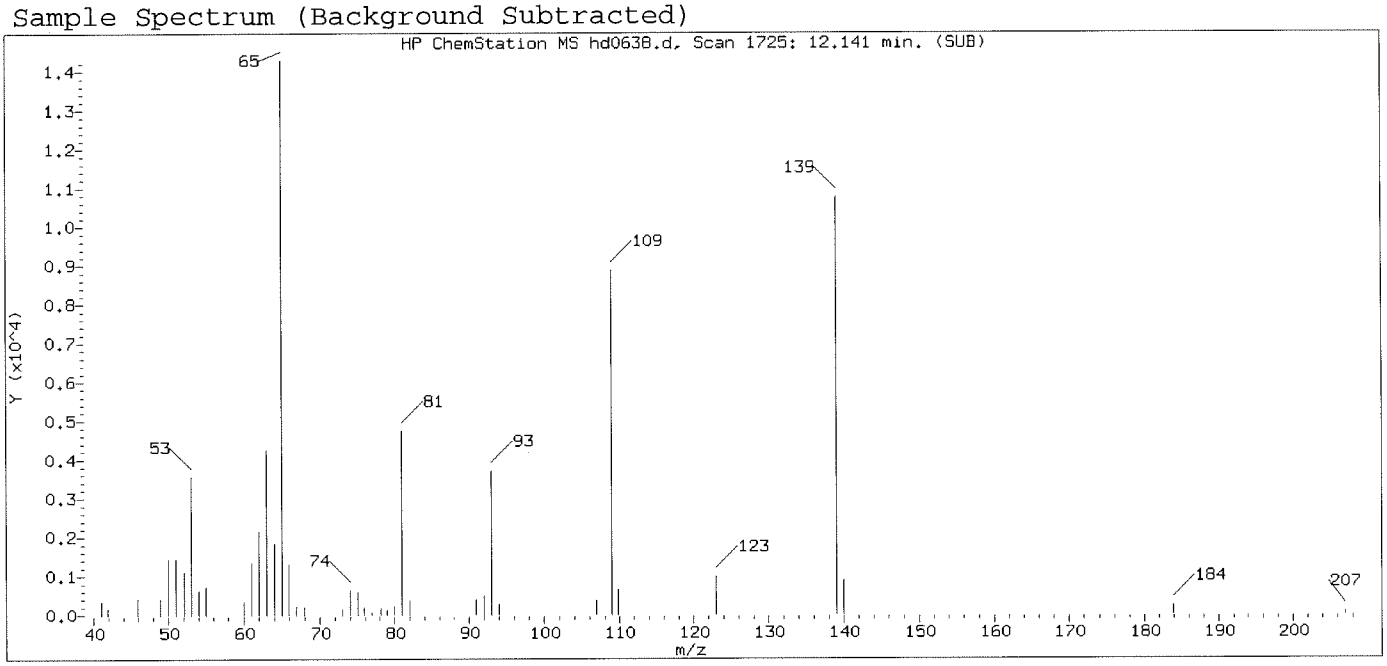
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19. Target 3.5 signature user ID: hbz01996

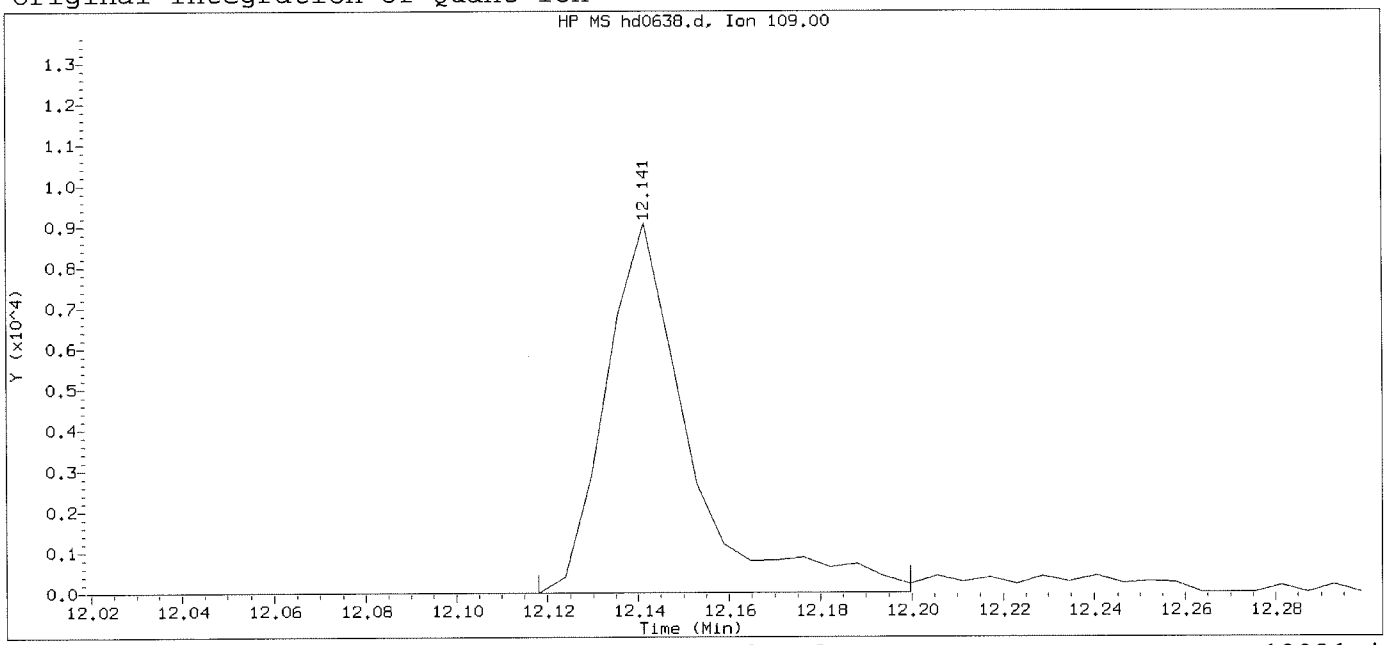
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



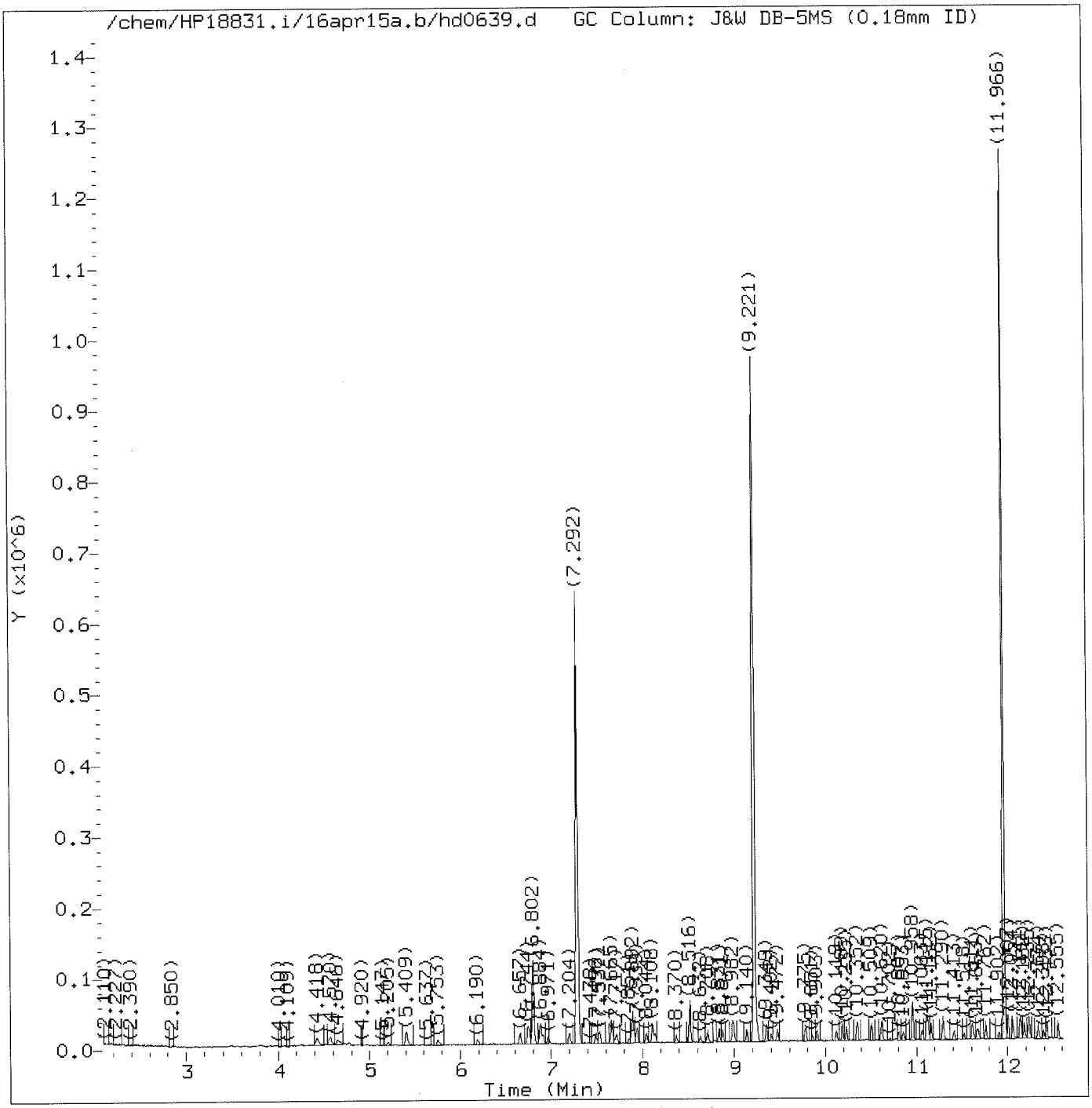
Data File: /chem/HP18831.i/16apr15a.b/hd0638.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:10 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: all1
Calibration date and time: 16-APR-2016 12:26
Date, time and analyst ID of latest file update: 16-Apr-2016 12:26 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number : 116
Compound Name : 4-Nitrophenol
Scan Number : 1725
Retention Time (minutes) : 12.141
Quant Ion : 109.00
Area : 11622
On-column Amount (ng/ul) : 0.8555
Integration start scan : 1720 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

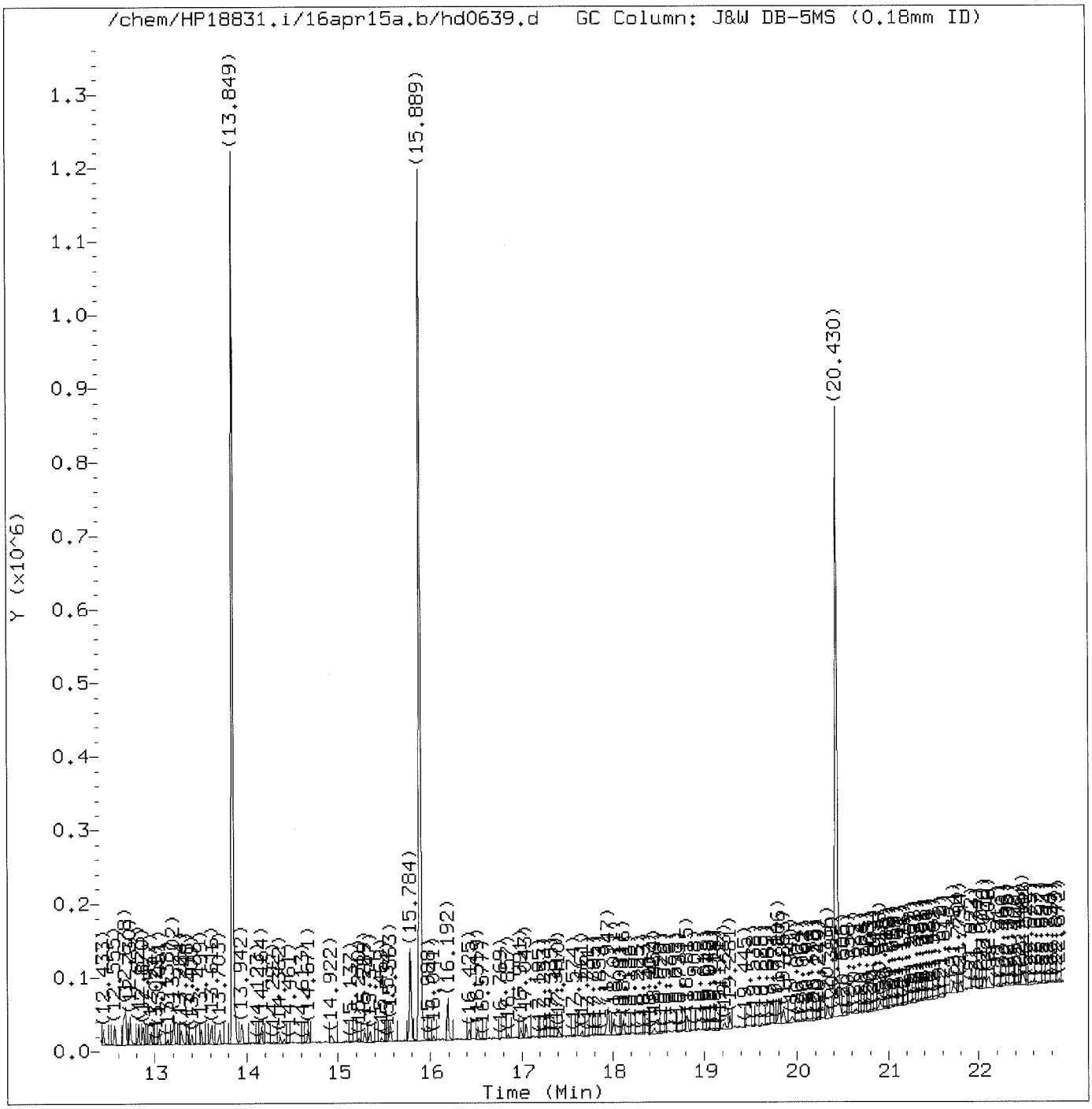
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.850	88	1913M	0.099
4) N-Nitrosodimethylamine	(1)	3.486	74	2974	0.094
5) Pyridine	(1)	3.900	79	4522M	0.089
7) 2-Picoline	(1)	4.646	93	6250M	0.115
8) N-Nitrosomethylethylamine	(1)	4.780	88	2181M	0.102
9) Methyl methanesulfonate	(1)	5.199	80	2651M	0.107
11)$2-Fluorophenol	(1)	5.409	112	9516	0.230
42) Total Cresols	(1)			9423	0.233
13) N-Nitrosodiethylamine	(1)	5.753	102	2027M	0.097
15) Ethyl methanesulfonate	(1)	6.190	109	2341	0.110
16) Benzaldehyde	(1)	6.651	77	5850	0.147
17)$Phenol-d6	(1)	6.744	99	12035	0.224
18) Phenol	(1)	6.761	94	7640	0.127
19) Aniline	(1)	6.814	93	8768	0.116
20) a-methylstyrene	(1)	6.890	118	5551	0.127
22) bis(2-Chloroethyl)ether	(1)	6.913	93	5693	0.117
23) 2-Chlorophenol	(1)	6.971	128	4588	0.115
24) 1,3-Dichlorobenzene	(1)	7.204	146	5190	0.121
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	141334	5.000
26) 1,4-Dichlorobenzene	(1)	7.309	146	5226	0.120
97) Isosafrole	(3)			3521	0.112
27) Benzyl alcohol	(1)	7.496	108	3201	0.112
28) 1,2-Dichlorobenzene	(1)	7.537	146	5247	0.127
31) 2-Methylphenol	(1)	7.659	108	4383	0.111
30) Indene	(1)	7.665	115	9349	0.128
34) bis(2-Chloroisopropyl)ether	(1)	7.717	45	9318	0.128
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.717	45	9318	0.128
35) N-Nitrosopyrrolidine	(1)	7.851	100	2178	0.101
36) Acetophenone	(1)	7.886	105	7991	0.124
37) 4-Methylphenol	(1)	7.892	108	5040	0.122
38) N-Nitroso-di-n-propylamine	(1)	7.898	70	4504	0.121
39) N-Nitrosomorpholine	(1)	7.915	56	3830	0.123
40) o-Toluidine	(1)	7.939	106	7828	0.111
43) Hexachloroethane	(1)	8.050	117	2273	0.123
120) 2,4_2,6-Dinitrotoluenes	(3)			3934	0.190
44)$Nitrobenzene-d5	(2)	8.108	82	12284	0.233
45) Nitrobenzene	(2)	8.137	77	6479	0.118
48) N-Nitrosopiperidine	(2)	8.370	114	2078	0.106
50) Isophorone	(2)	8.516	82	10094	0.110
51) 2-Nitrophenol	(2)	8.632	139	1976	0.098

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.714	107	4582	0.106
146) Diallate trans/cis	(4)			3875	0.097
56) Benzoic acid	(2)	8.778	105	1471	2.228
57) O,O,O-Triethylphosphorothioate	(2)	8.831	198	2254	0.104
55) bis(2-Chloroethoxy)methane	(2)	8.871	93	7133	0.123
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.982	104	8723	0.131
60) 2,4-Dichlorophenol	(2)	8.994	162	3428	0.108
62) 1,2,4-Trichlorobenzene	(2)	9.140	180	5109	0.133
65)*Naphthalene-d8	(2)	9.221	136	533436	5.000
67) 4-Chloroaniline	(2)	9.344	127	5575	0.120
68) 2,6-Dichlorophenol	(2)	9.355	162	3215	0.103
69) Hexachloropropene	(2)	9.396	213	2535M	0.105
71) Hexachlorobutadiene	(2)	9.472	225	3051	0.133
75) Quinoline	(2)	9.781	129	8308	0.118
76) Caprolactam	(2)	9.851	113	934M	0.088
77) N-Nitrosodi-n-butylamine	(2)	9.903	84	3787	0.099
80) 4-Chloro-3-methylphenol	(2)	10.119	107	3273	0.089
82) Safrole	(2)	10.235	162	3252	0.112
85) Hexachlorocyclopentadiene	(3)	10.614	237	2523	0.107
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.620	216	5014	0.128
88) cis-Isosafrole	(3)	10.696	162	482M	0.016
90) 2,4,6-Trichlorophenol	(3)	10.807	196	2575	0.104
92) 2,4,5-Trichlorophenol	(3)	10.853	196	2272	0.087
93)$2-Fluorobiphenyl	(3)	10.958	172	20849	0.247
94) trans-Isosafrole	(3)	11.063	162	3039	0.096
95) 1,1'-Biphenyl	(3)	11.110	154	11378	0.126
96) 2-Chloronaphthalene	(3)	11.127	162	8781	0.122
98) 1-Chloronaphthalene	(3)	11.162	162	8110	0.121
99) Diphenyl ether	(3)	11.290	170	5887	0.122
100) 2-Nitroaniline	(3)	11.290	138	1680	0.080
104) 1,4-Naphthoquinone	(3)	11.413	158	2686	0.092
105) 1,4-Dinitrobenzene	(3)	11.518	168	933M	0.079
106) Dimethylphthalate	(3)	11.611	163	9252	0.114
107) 1,3-Dinitrobenzene	(3)	11.628	168	1190M	0.093
108) 2,6-Dinitrotoluene	(3)	11.681	165	1764	0.101
112) 3-Nitroaniline	(3)	11.908	138	1457	0.081
113)*Acenaphthene-d10	(3)	11.966	164	298612	5.000
115) 2,4-Dinitrophenol	(3)	12.054	184	4600	0.383
116) 4-Nitrophenol	(3)	12.141	109	4884	0.371
117) Pentachlorobenzene	(3)	12.188	250	3901	0.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118) 2,4-Dinitrotoluene	(3)	12.229	165	2170	0.088
119) Dibenzofuran	(3)	12.240	168	12619	0.130
121) 1-Naphthylamine	(3)	12.334	143	7251	0.100
122) 2,3,4,6-Tetrachlorophenol	(3)	12.398	232	1868	0.092
123) 2-Naphthylamine	(3)	12.433	143	7252	0.103
124) Diethylphthalate	(3)	12.555	149	8504	0.107
125) Thionazin	(3)	12.654	107	1417	0.103
129) 4-Nitroaniline	(3)	12.678	138	1704	0.090
128) 5-Nitro-o-toluidine	(3)	12.678	152	2213	0.107
127) 4-Chlorophenyl-phenylether	(3)	12.683	204	4717	0.119
130) 4,6-Dinitro-2-methylphenol	(4)	12.724	198	4734	0.307
131) N-Nitrosodiphenylamine	(4)	12.823	169	6626	0.106
132) NDPA as diphenylamine	(4)	12.823	169	6626	0.106
134) 1,2-Diphenylhydrazine	(4)	12.870	77	11116	0.118
135)$2,4,6-Tribromophenol	(3)	12.957	330	1804	0.181
137) Tetraethyldithiopyrophosphate	(4)	13.051	97	1591	0.108
139) 1,3,5-Trinitrobenzene	(4)	13.138	213	789M	0.080
140) Diallate (peak 1)	(4)	13.196	86	3240	0.081
141) Phorate	(4)	13.202	75	5671	0.096
142) Phenacetin	(4)	13.208	108	3657	0.086
143) 4-Bromophenyl-phenylether	(4)	13.290	248	2502	0.115
144) Diallate (peak 2)	(4)	13.307	86	635M	0.016
147) Dimethoate	(4)	13.400	87	3225	0.084
148) Atrazine	(4)	13.499	200	2602	0.115
149) Pentachlorophenol	(4)	13.604	266	920	0.061
150) 4-Aminobiphenyl	(4)	13.610	169	5871	0.098
151) Pentachloronitrobenzene	(4)	13.616	237	1094M	0.100
152) Pronamide	(4)	13.703	173	3208	0.089
153)*Phenanthrene-d10	(4)	13.849	188	556178	5.000
154) Dinoseb	(4)	13.855	211	1221M	0.053
163) Carbazole	(4)	14.164	167	11162	0.105
164) Methyl parathion	(4)	14.362	109	2253	0.076
165) Di-n-butylphthalate	(4)	14.671	149	13592	0.101
167) Parathion	(4)	14.916	109	1259M	0.071
168) 4-Nitroquinoline-1-oxide	(4)	14.933	190	607	0.045
169) Octachlorostyrene	(4)	15.289	308	898M	0.101
171) Isodrin	(4)	15.347	193	1914M	0.138
174) Benzidine	(5)	15.784	184	67322	0.721
175)*Pyrene-d10	(5)	15.889	212	679408	5.000
179)$Terphenyl-d14	(5)	16.192	244	21987	0.231

M = Compound was manually integrated.
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on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.425	225	1972	0.085
185) Chlorobenzilate	(5)	16.519	139	3480	0.083
187) 3,3'-Dimethylbenzidine	(5)	16.991	212	7166	0.084
188) Butylbenzylphthalate	(5)	17.049	149	5513	0.092
191) 2-Acetylaminofluorene	(5)	17.410	181	3351	0.066
193) 3,3'-Dichlorobenzidine	(5)	17.929	252	3619	0.076
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.941	231	2104M	0.080
199) bis(2-Ethylhexyl)phthalate	(5)	18.116	149	6553	0.077
203) 6-Methylchrysene	(5)	18.815	242	8482	0.099
205) Di-n-octylphthalate	(6)	19.276	149	9998	0.074
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.806	256	4242	0.090
213)*Perylene-d12	(6)	20.430	264	430995	5.000
215) 3-Methylcholanthrene	(6)	20.908	268	3962	0.095
217) Dibenz(a,h)acridine	(6)	21.724	279	8137	0.098
218) Dibenz(a,j)acridine	(6)	21.794	279	7800	0.094

M = Compound was manually integrated.
* = Compound is an internal standard.

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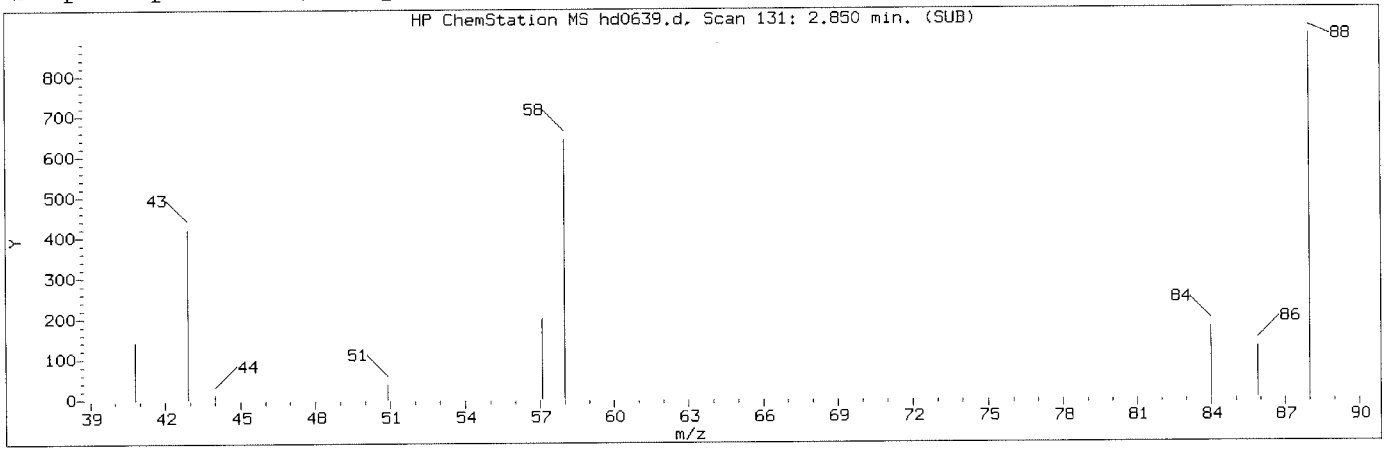
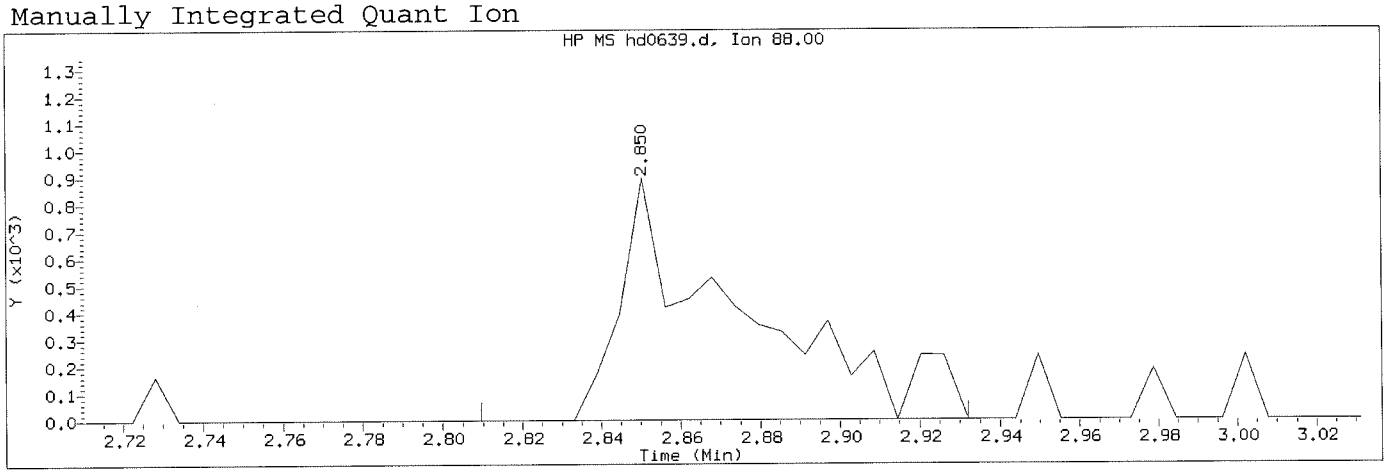
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 131		
Retention Time (minutes)	: 2.850		
Quant Ion	: 88.00		
Area (flag)	: 1913M		
On-Column Amount (ng/ul)	: 0.0987		
Integration start scan	: 123	Integration stop scan:	144
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

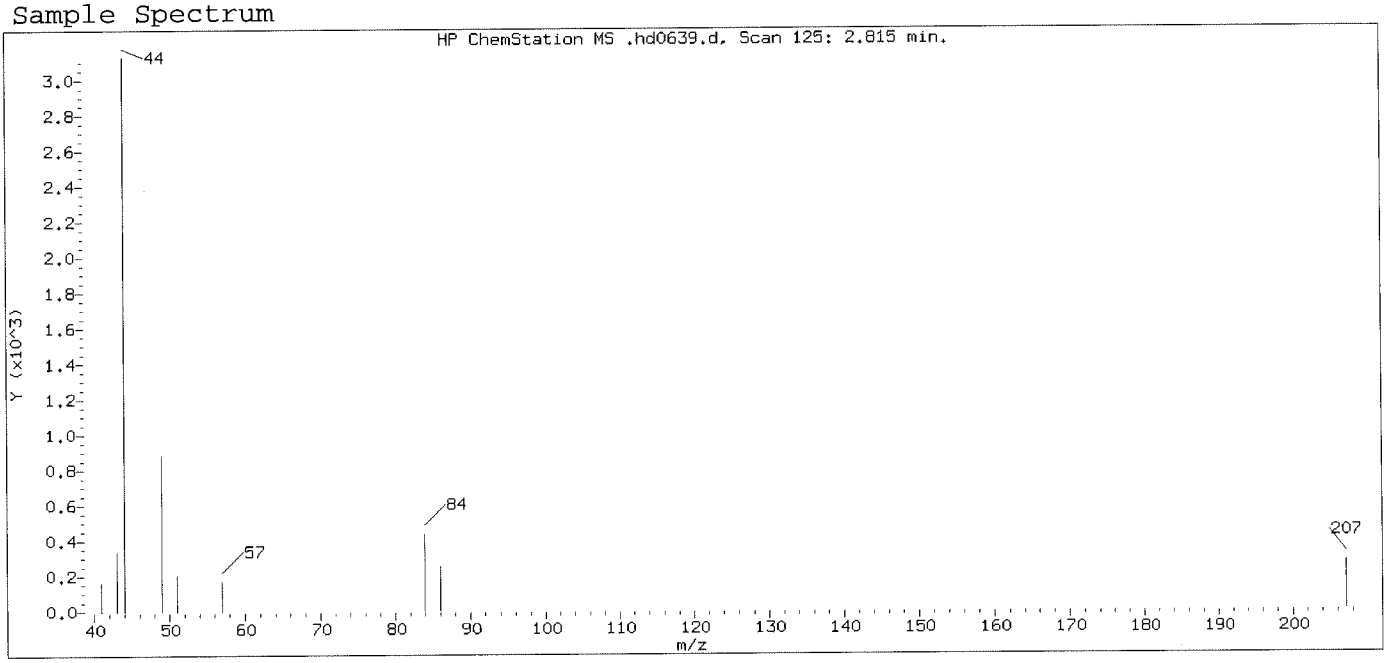
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

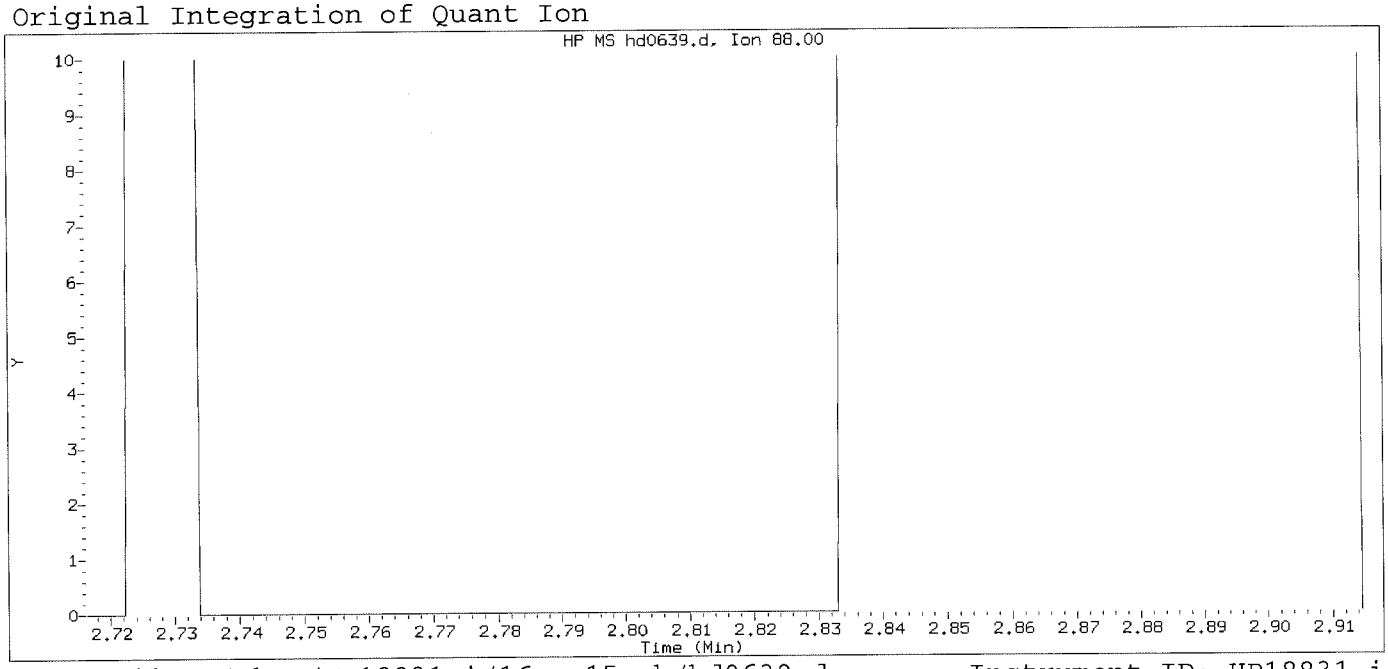
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

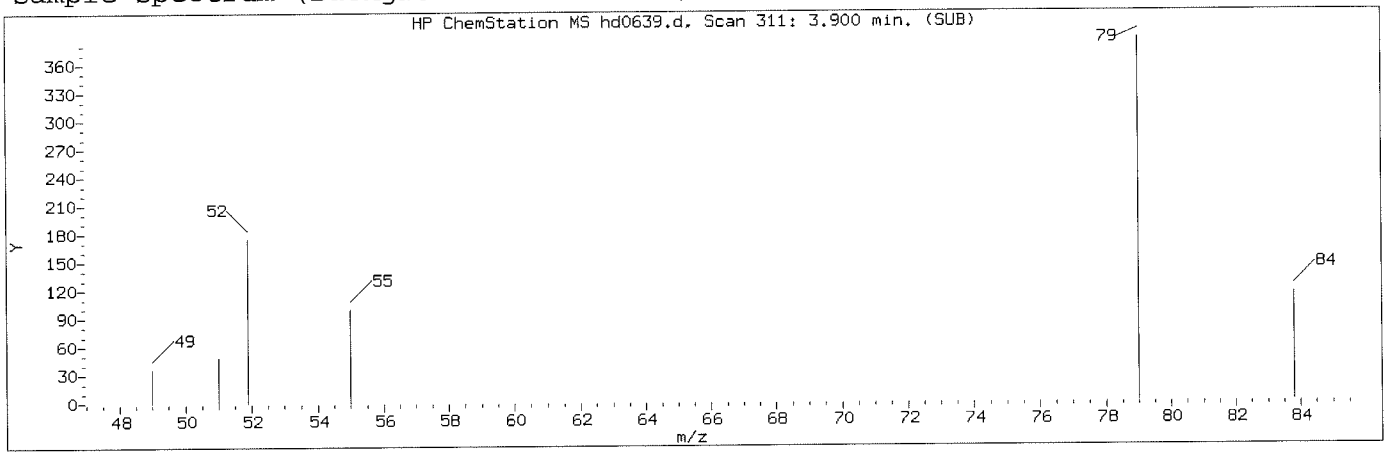
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

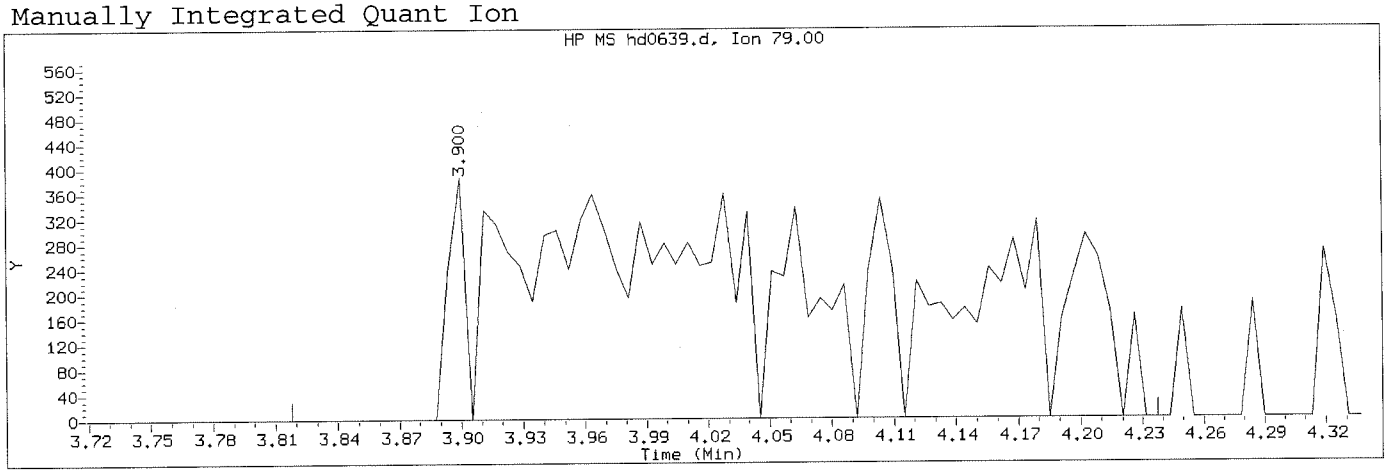
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.816
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 311		
Retention Time (minutes)	: 3.900		
Quant Ion	: 79.00		
Area (flag)	: 4522M		
On-Column Amount (ng/ul)	: 0.0889		
Integration start scan	: 296	Integration stop scan:	368
Y at integration start	: 0	Y at integration end:	0

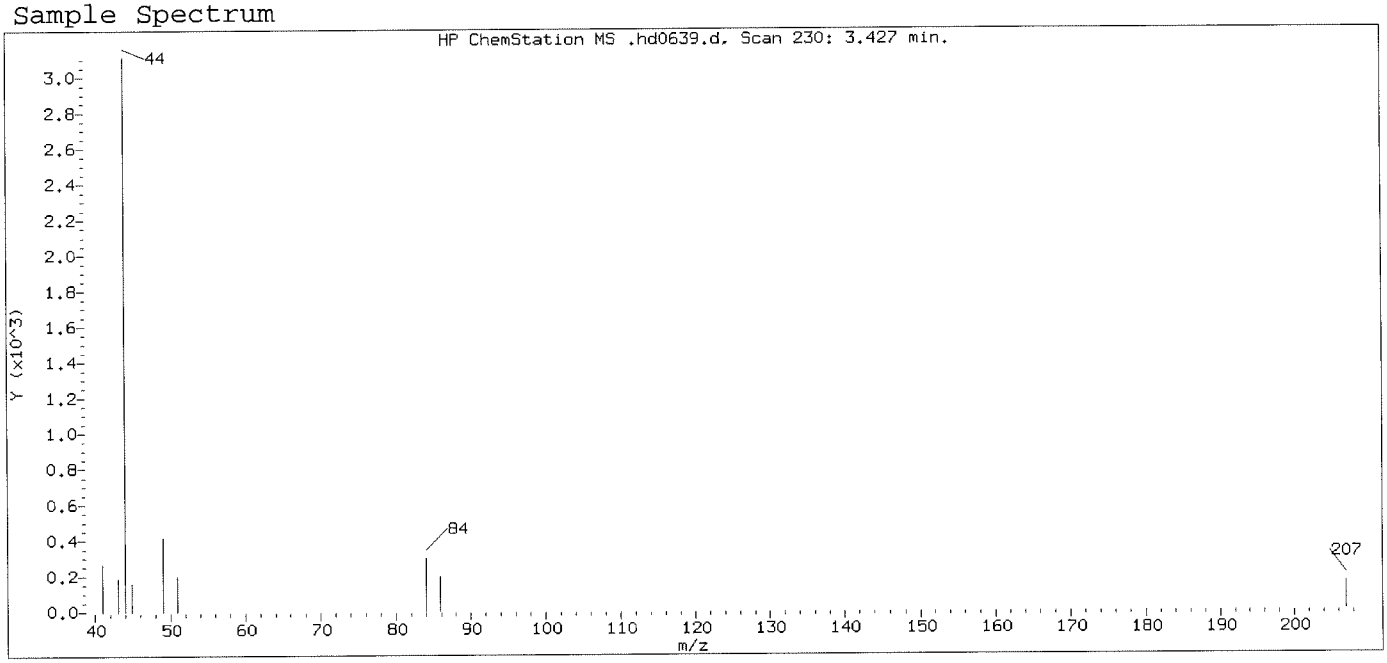
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

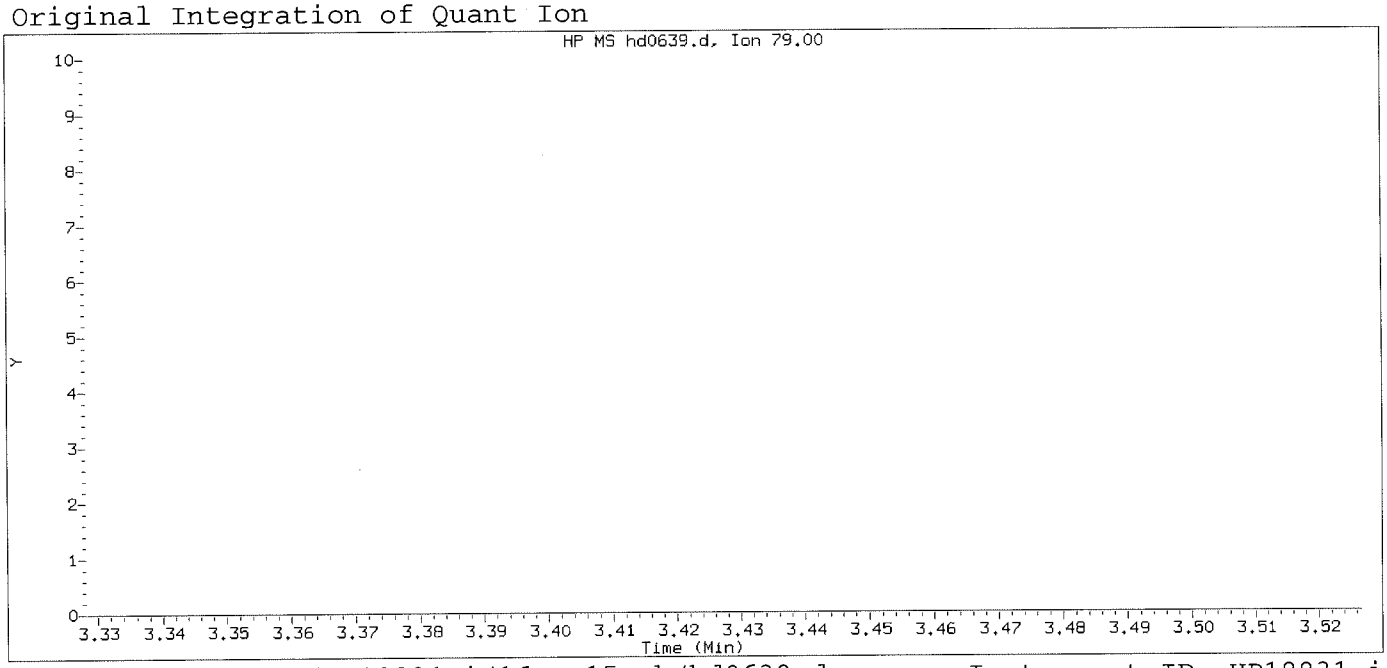
GC/MS audit/management approval: APR 19 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 3.428
Quant Ion : 79.00

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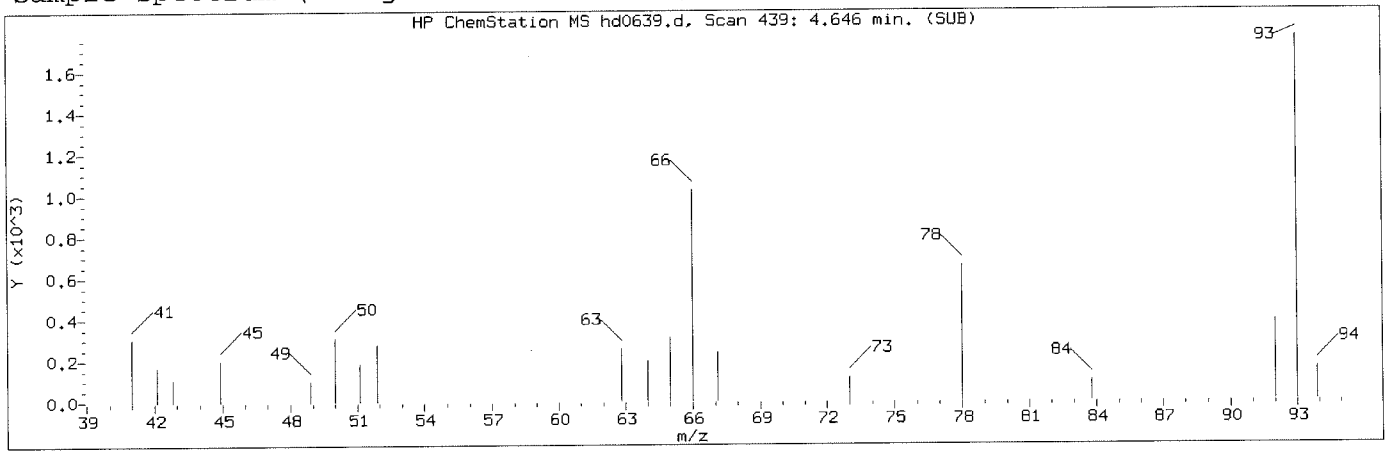
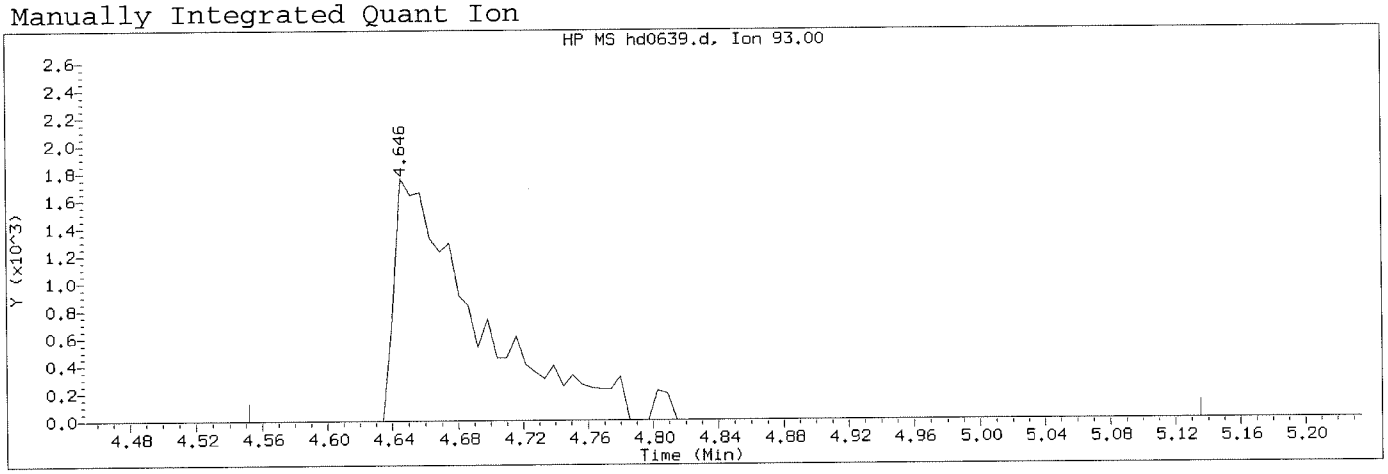
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 439		
Retention Time (minutes)	: 4.646		
Quant Ion	: 93.00		
Area (flag)	: 6250M		
On-Column Amount (ng/ul)	: 0.1150		
Integration start scan	: 422	Integration stop scan:	522
Y at integration start	: 0	Y at integration end:	0

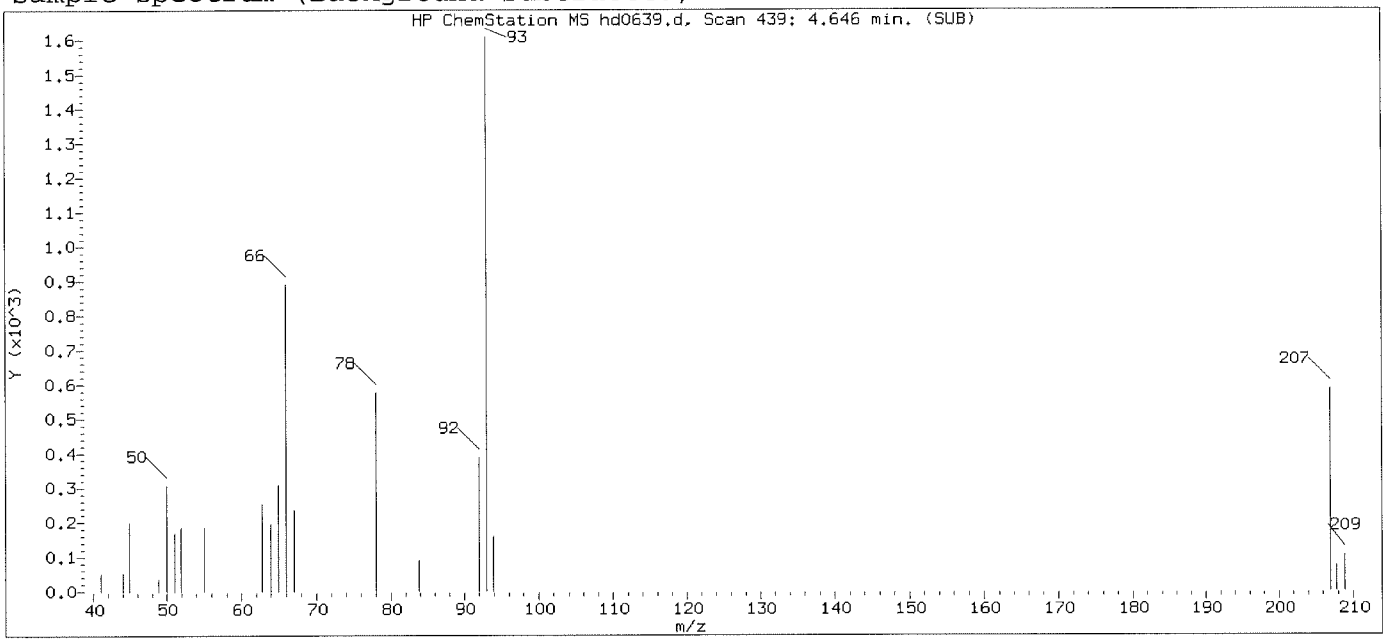
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

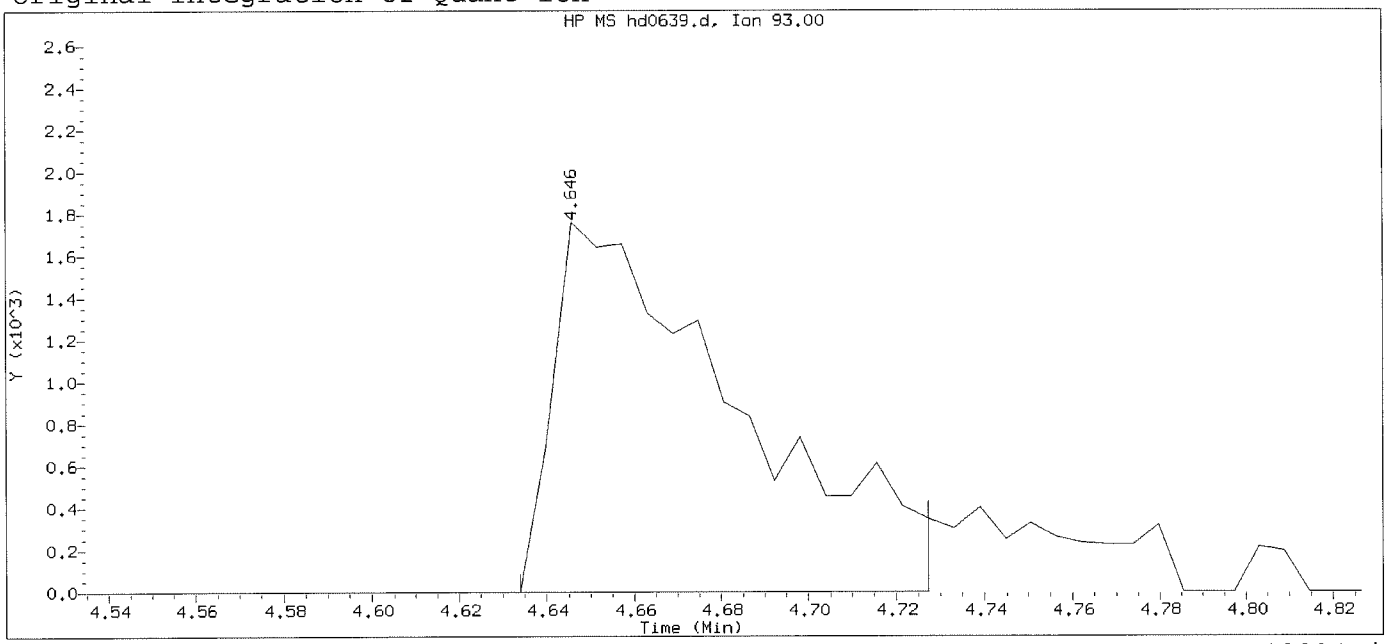
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

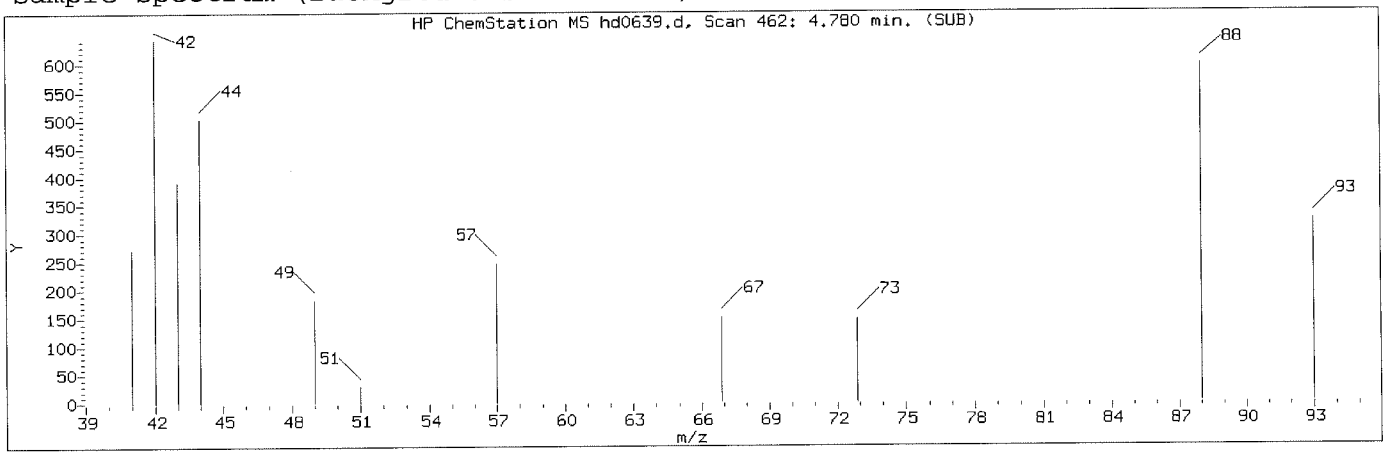
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

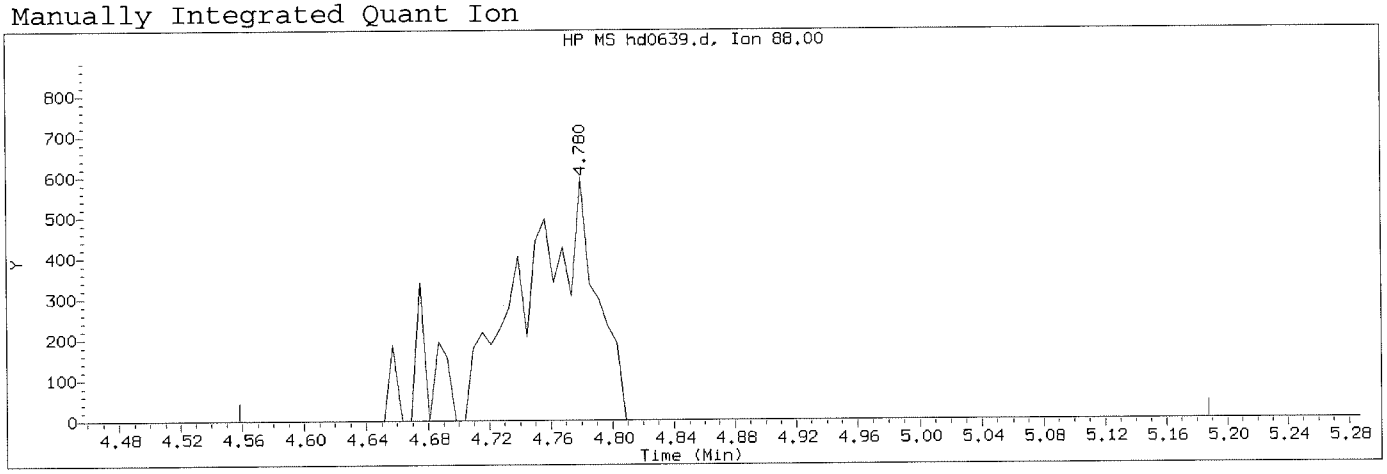
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 439		
Retention Time (minutes)	: 4.646		
Quant Ion	: 93.00		
Area	: 5149		
On-column Amount (ng/ul)	: 0.0947		
Integration start scan	: 436	Integration stop scan:	452
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 462		
Retention Time (minutes)	: 4.780		
Quant Ion	: 88.00		
Area (flag)	: 2181M		
On-Column Amount (ng/ul)	: 0.1018		
Integration start scan	: 423	Integration stop scan:	531
Y at integration start	: 0	Y at integration end:	0

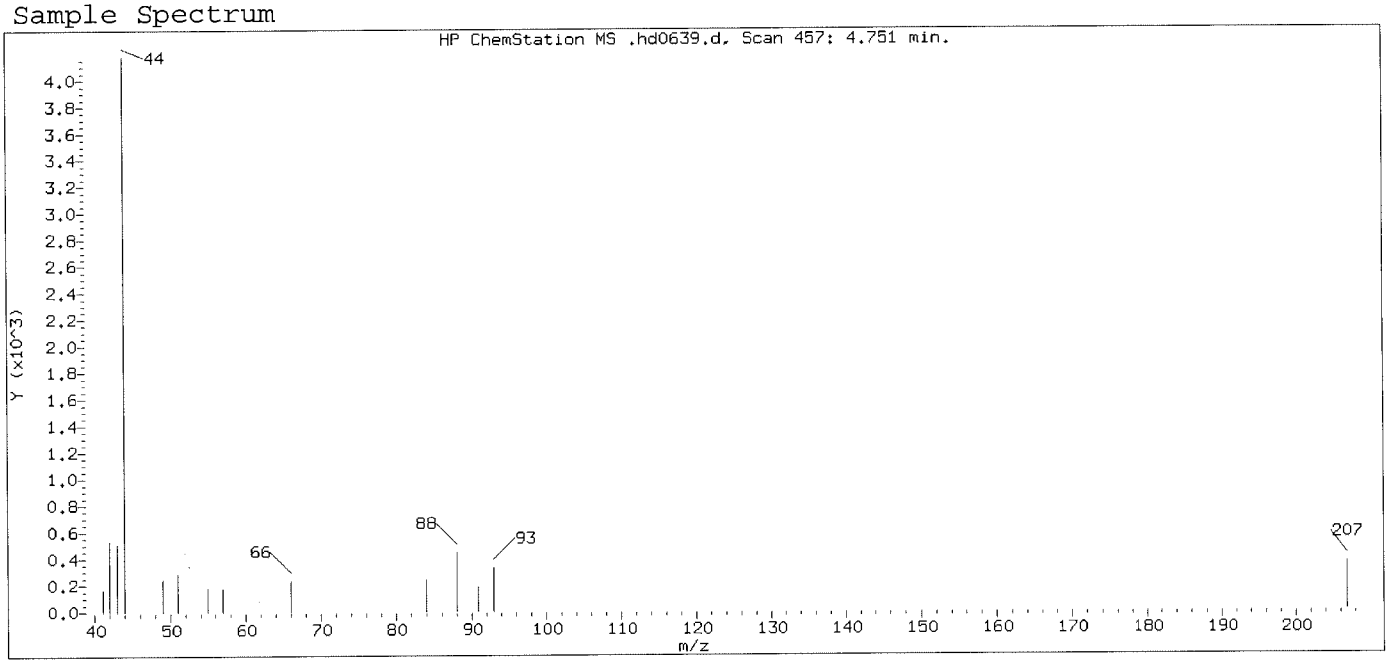
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

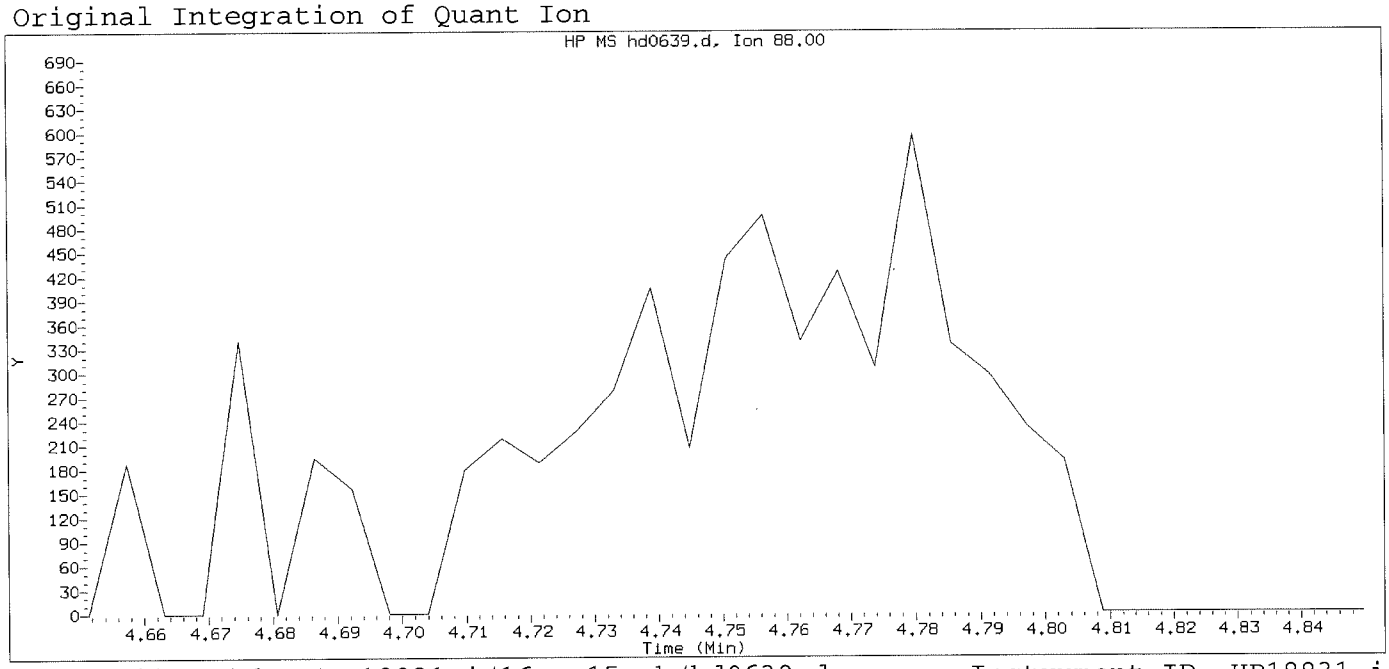
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

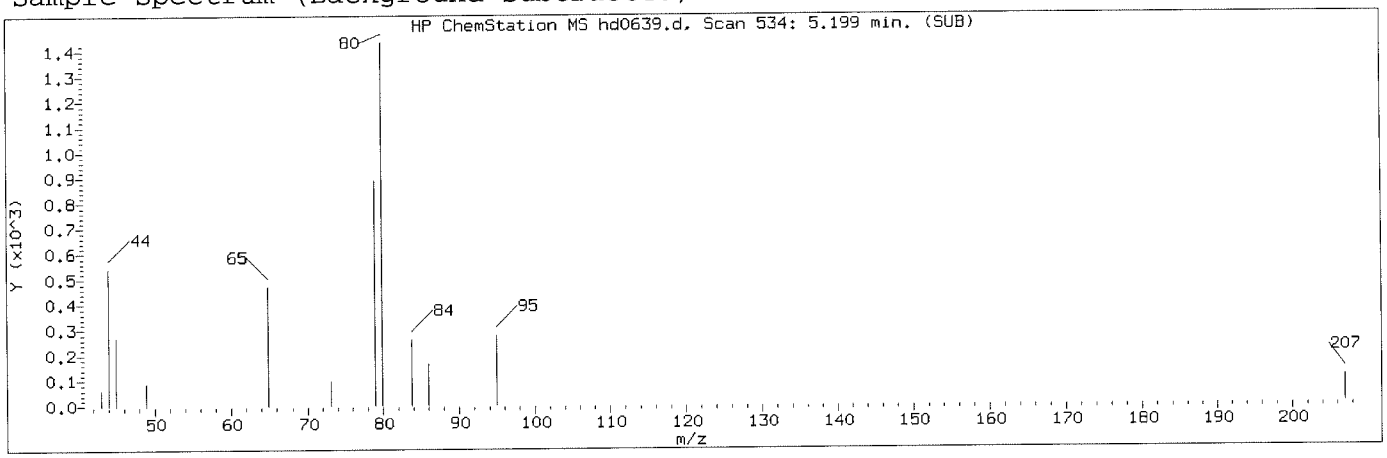
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

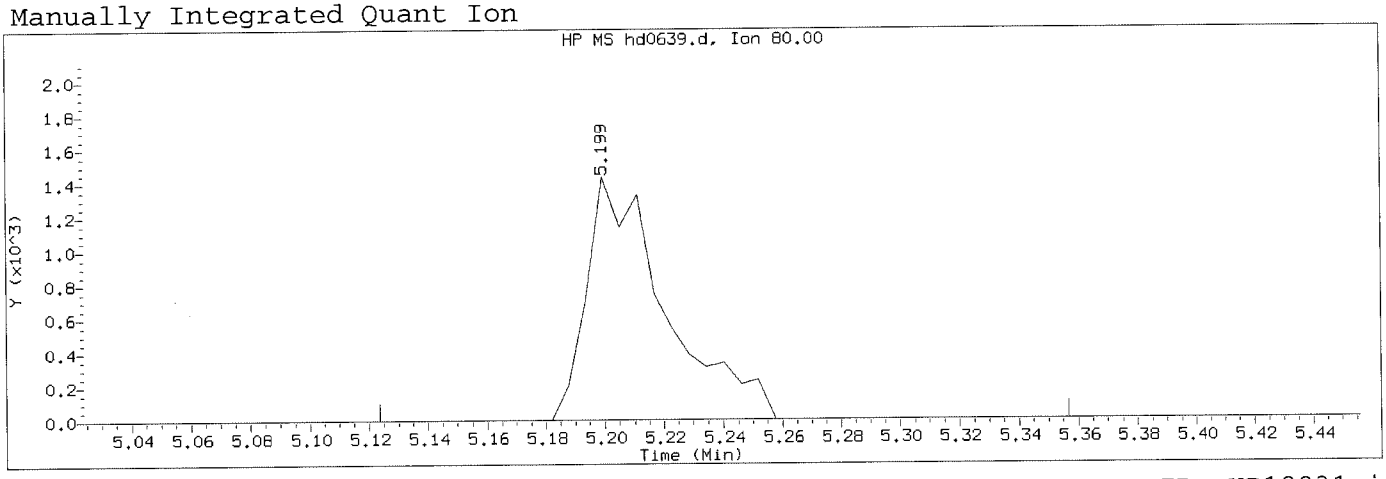
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.751
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 534		
Retention Time (minutes)	: 5.199		
Quant Ion	: 80.00		
Area (flag)	: 2651M		
On-Column Amount (ng/ul)	: 0.1072		
Integration start scan	: 520	Integration stop scan:	560
Y at integration start	: 0	Y at integration end:	0

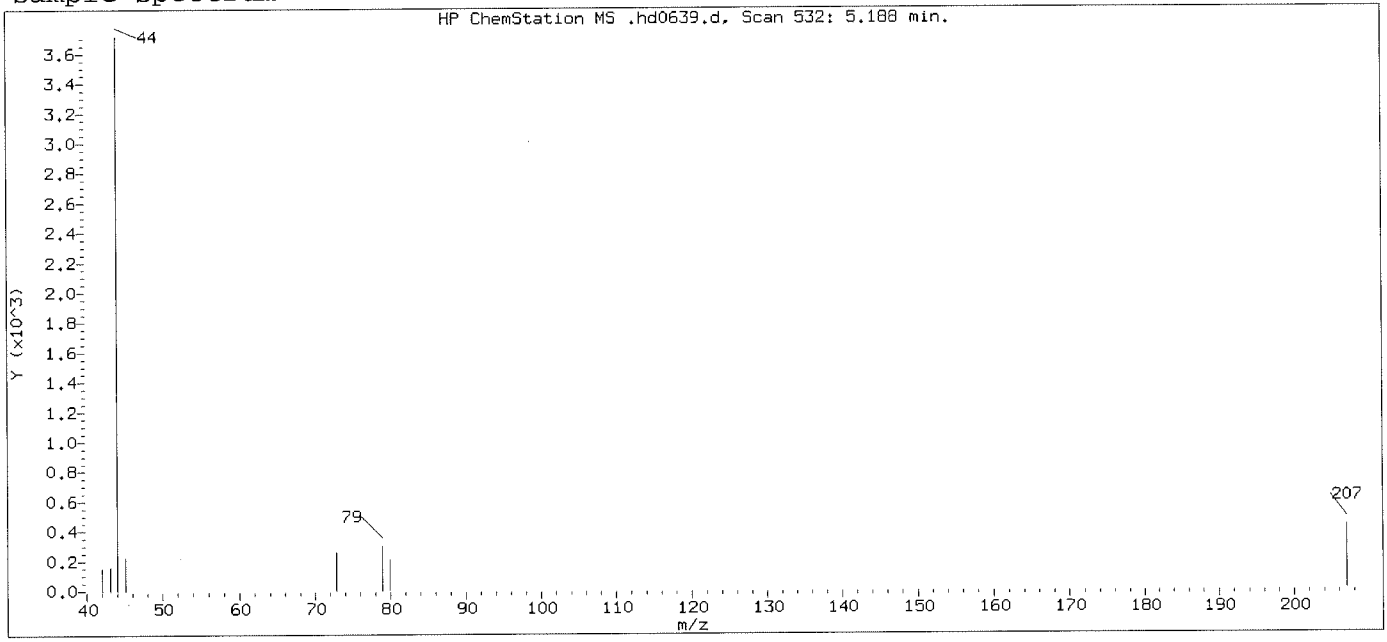
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

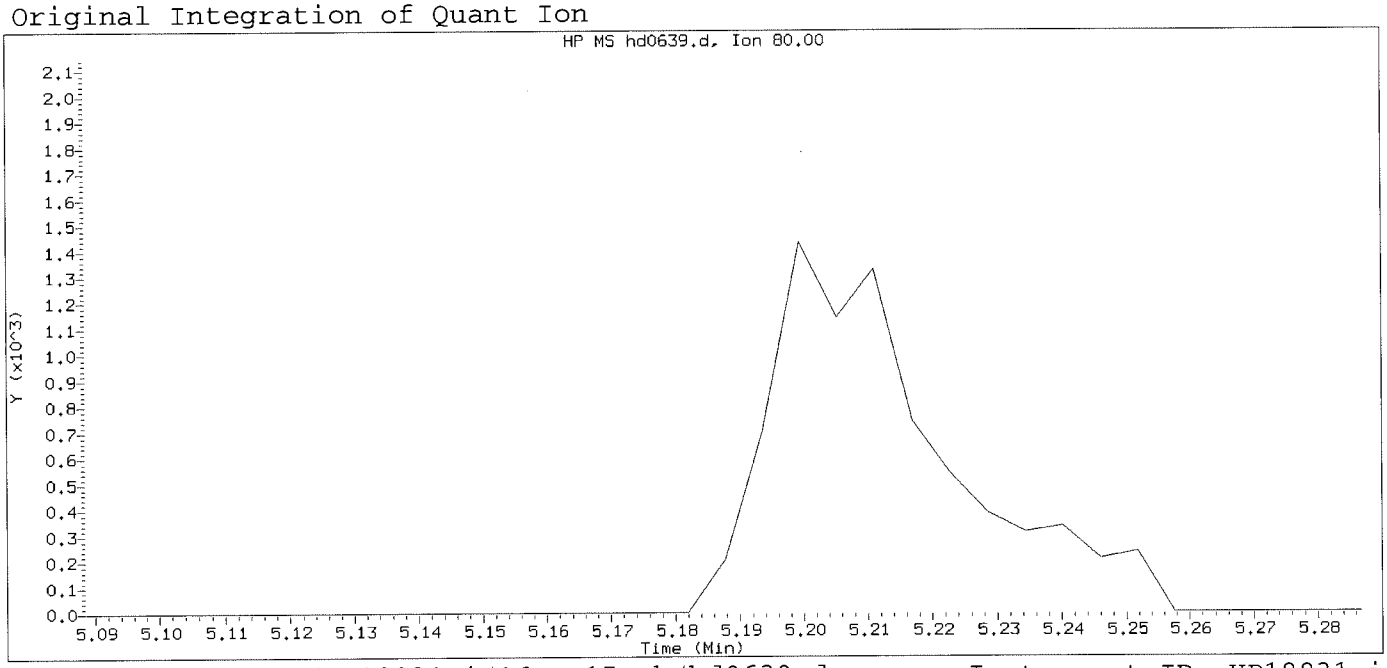
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

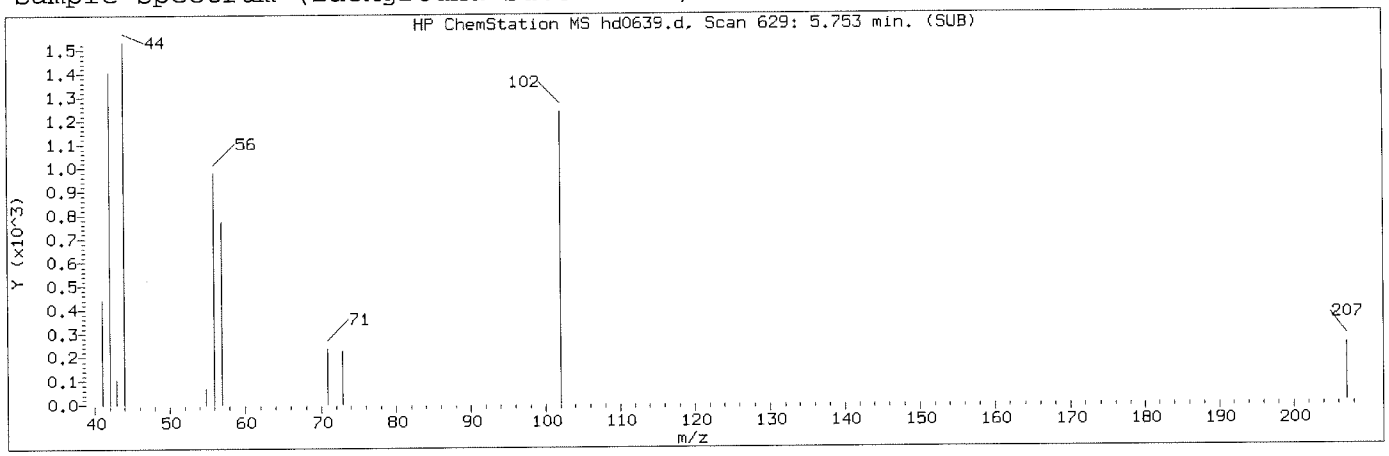
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

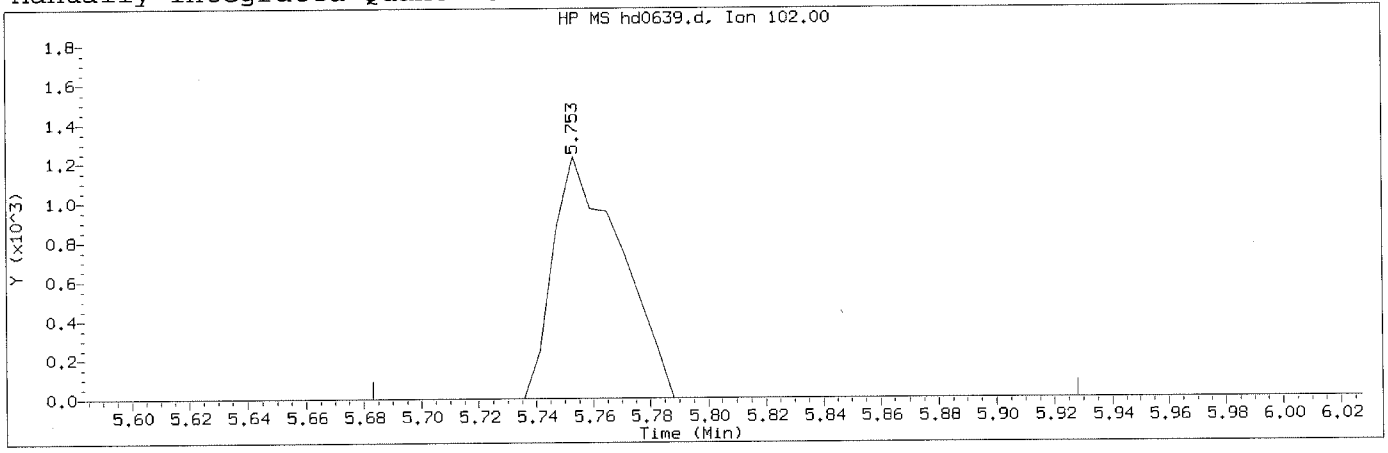
Compound Number : 9
Compound Name : Methyl methanesulfonate
Expected RT (minutes) : 5.188
Quant Ion : 80.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 13		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 629		
Retention Time (minutes)	: 5.753		
Quant Ion	: 102.00		
Area (flag)	: 2027M		
On-Column Amount (ng/ul)	: 0.0968		
Integration start scan	: 616	Integration stop scan:	658
Y at integration start	: 0	Y at integration end:	0

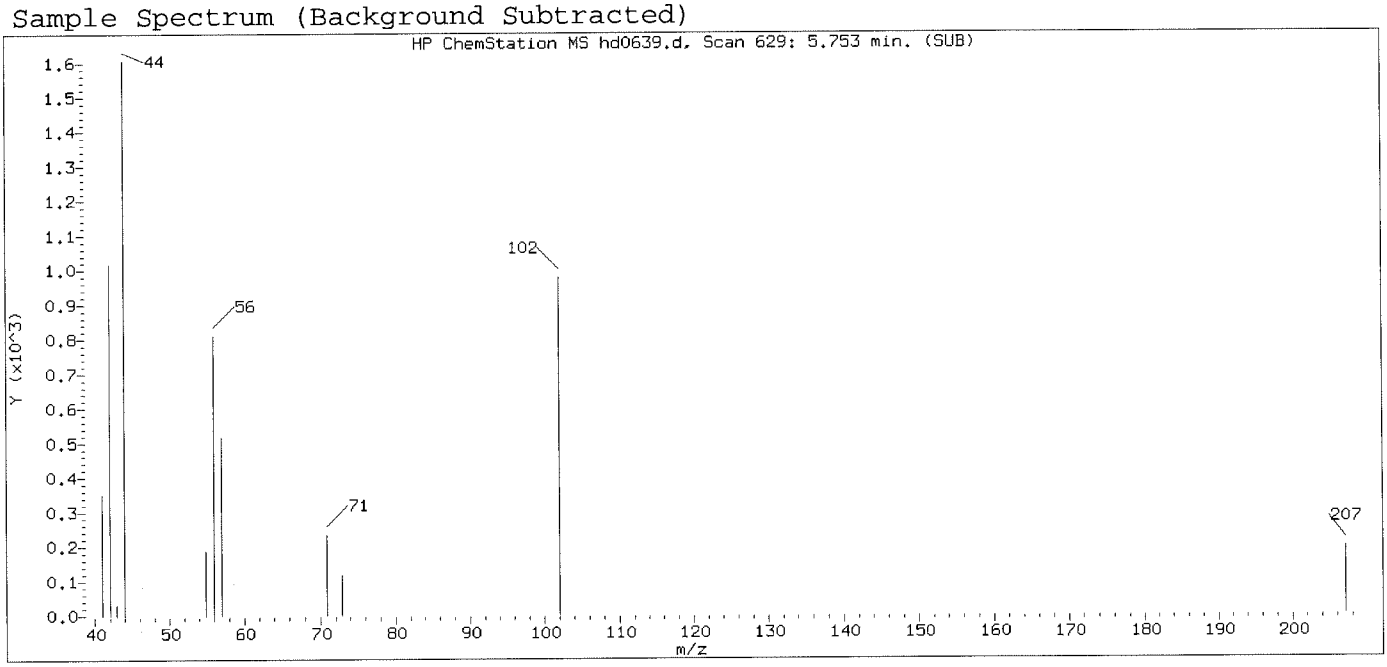
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

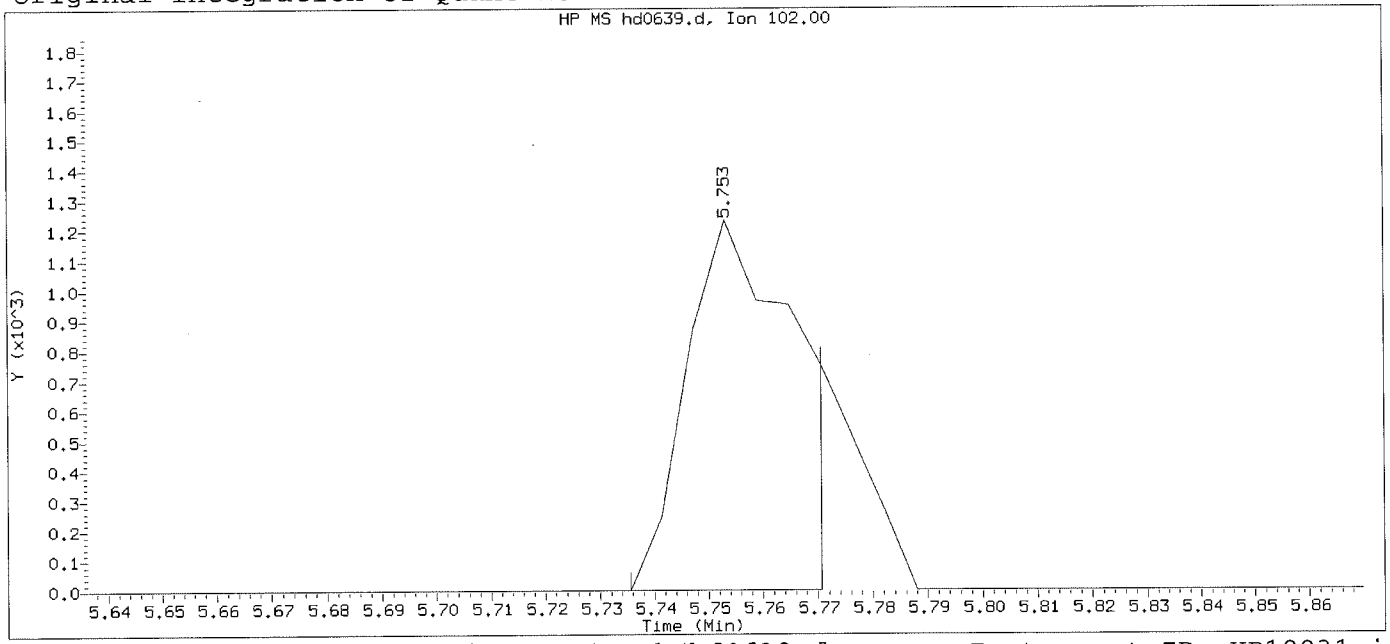
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

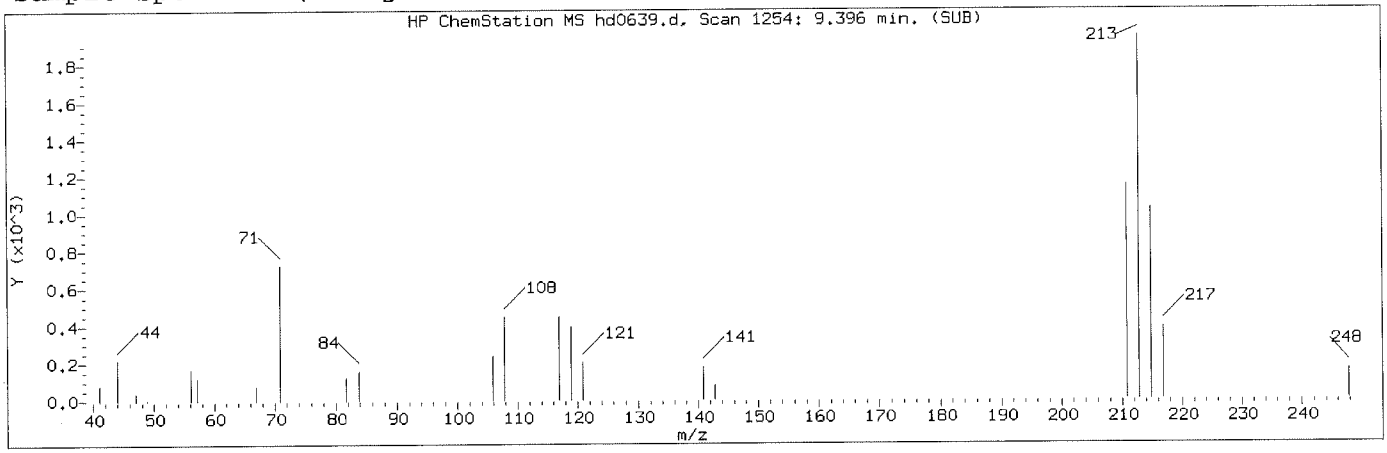
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

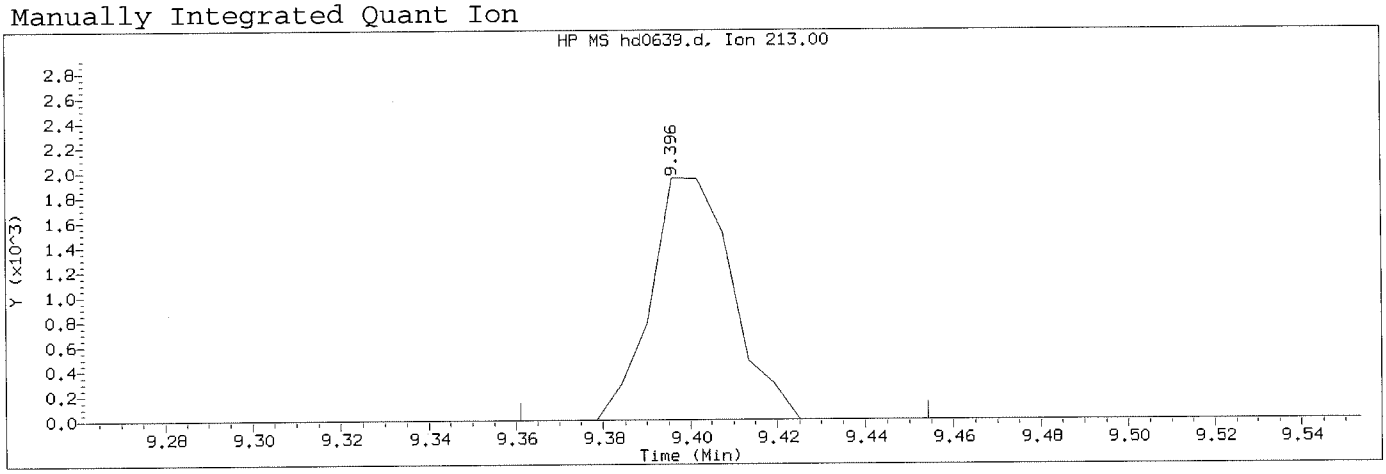
Compound Number	: 13		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 629		
Retention Time (minutes)	: 5.753		
Quant Ion	: 102.00		
Area	: 1624		
On-column Amount (ng/ul)	: 0.0776		
Integration start scan	: 625	Integration stop scan:	631
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 69		
Compound Name	: Hexachloropropene		
Scan Number	: 1254		
Retention Time (minutes)	: 9.396		
Quant Ion	: 213.00		
Area (flag)	: 2535M		
On-Column Amount (ng/ul)	: 0.1048		
Integration start scan	: 1247	Integration stop scan:	1263
Y at integration start	: 0	Y at integration end:	0

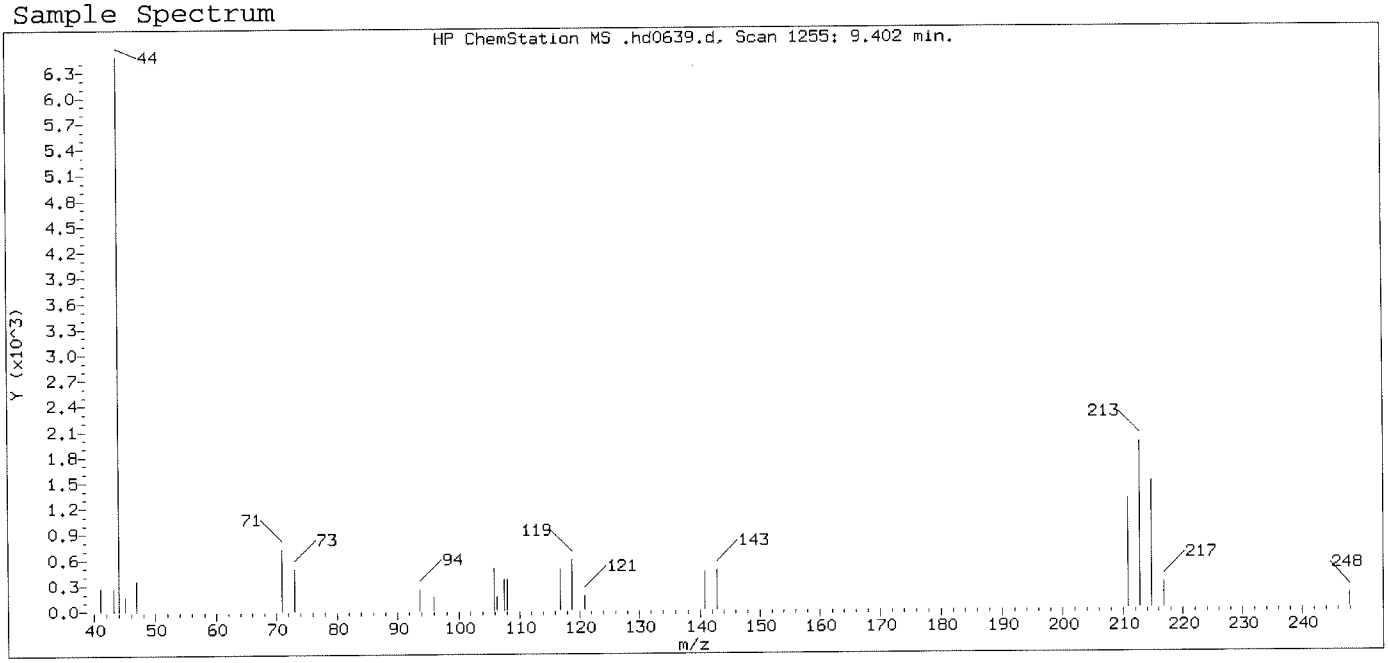
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

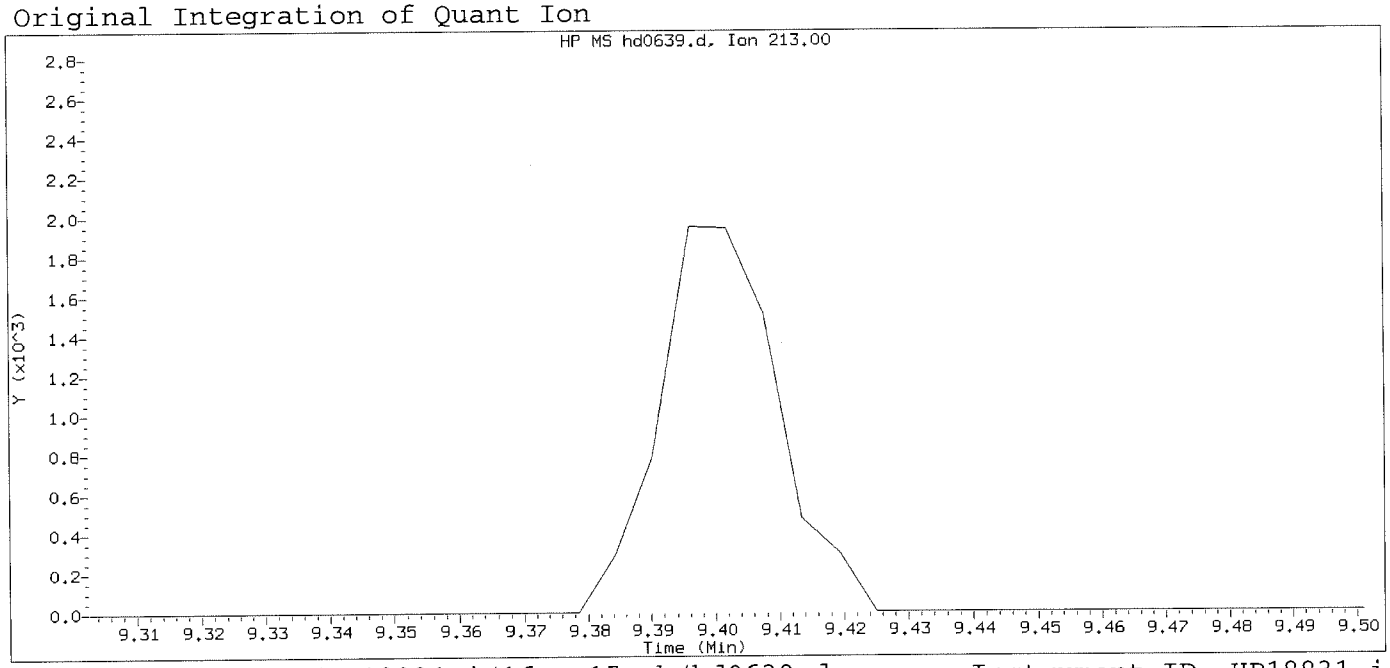
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

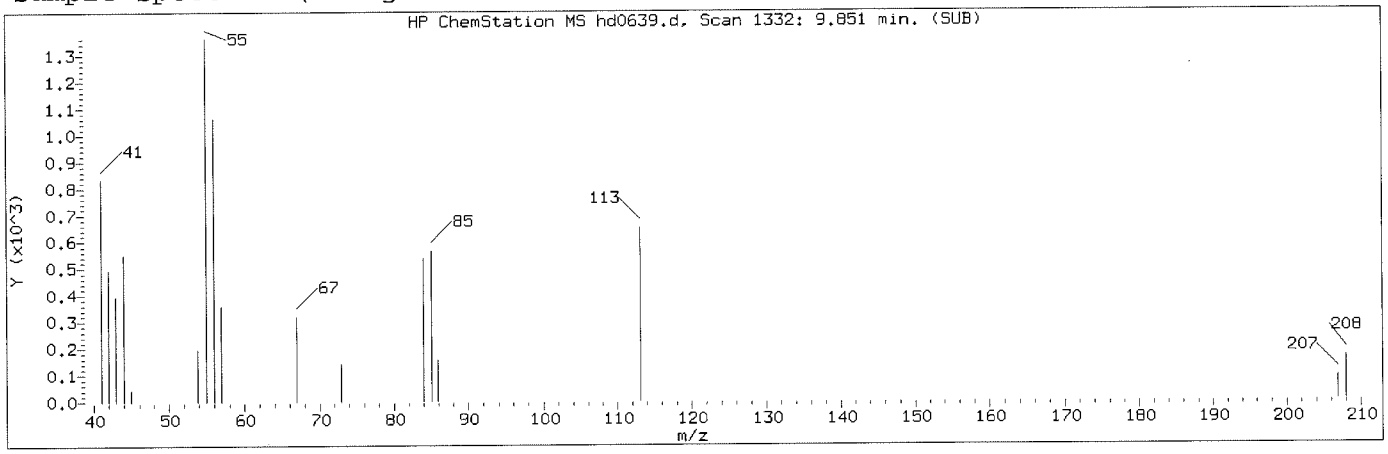
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

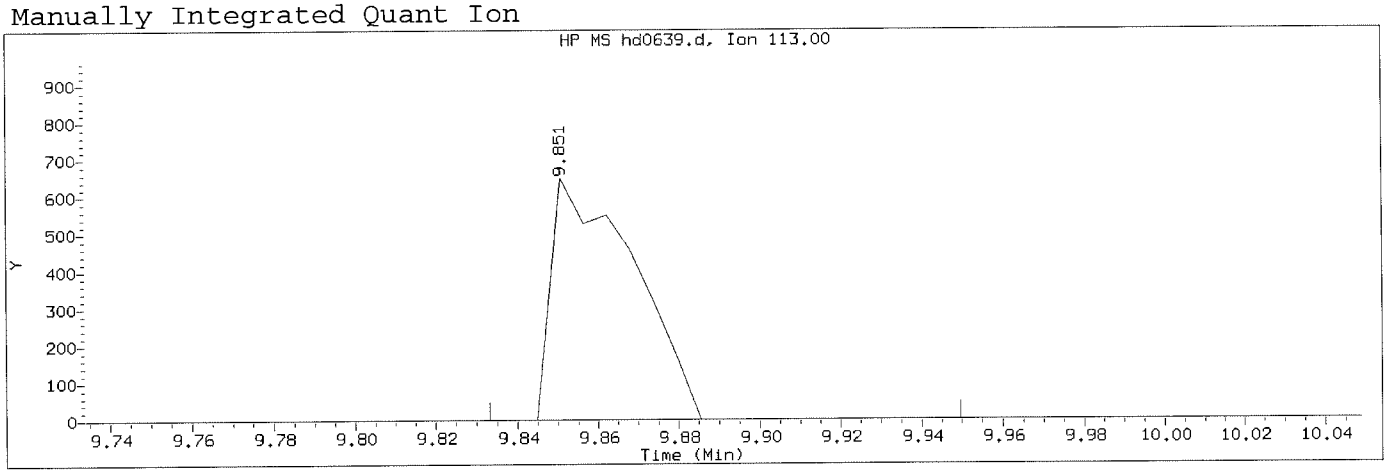
Compound Number : 69
Compound Name : Hexachloropropene
Expected RT (minutes) : 9.402
Quant Ion : 213.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1332		
Retention Time (minutes)	: 9.851		
Quant Ion	: 113.00		
Area (flag)	: 934M		
On-Column Amount (ng/ul)	: 0.0881		
Integration start scan	: 1328	Integration stop scan:	1348
Y at integration start	: 0	Y at integration end:	0

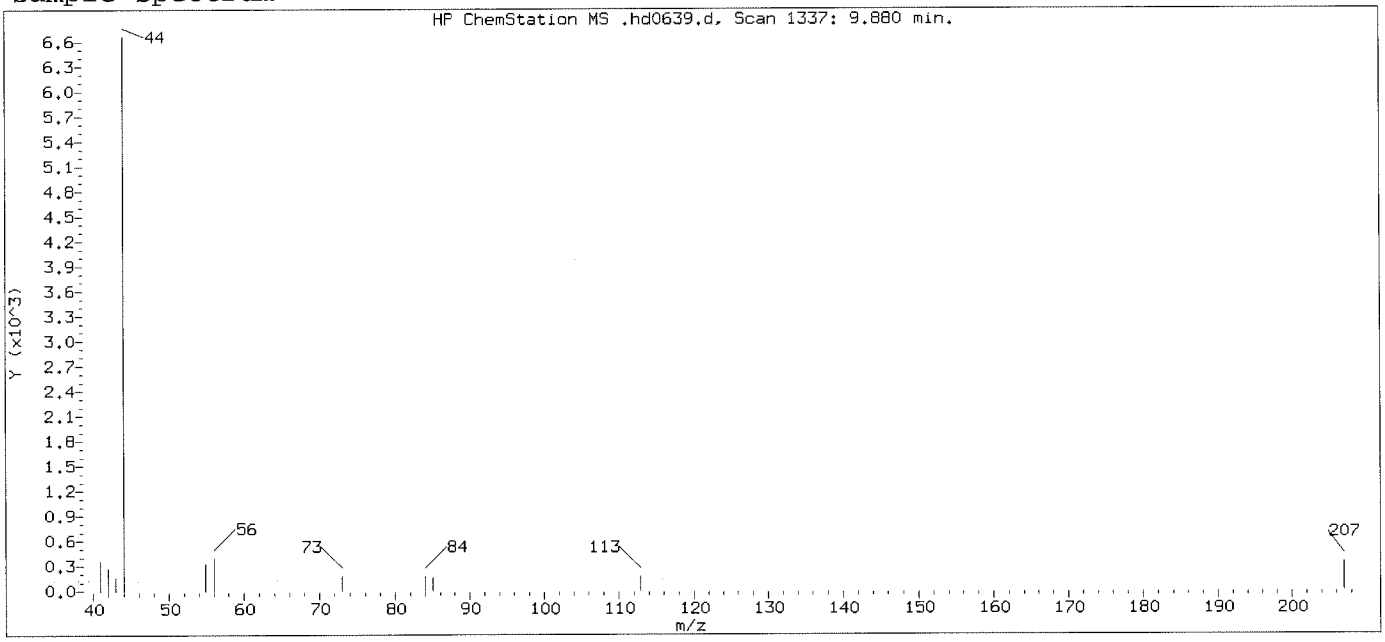
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

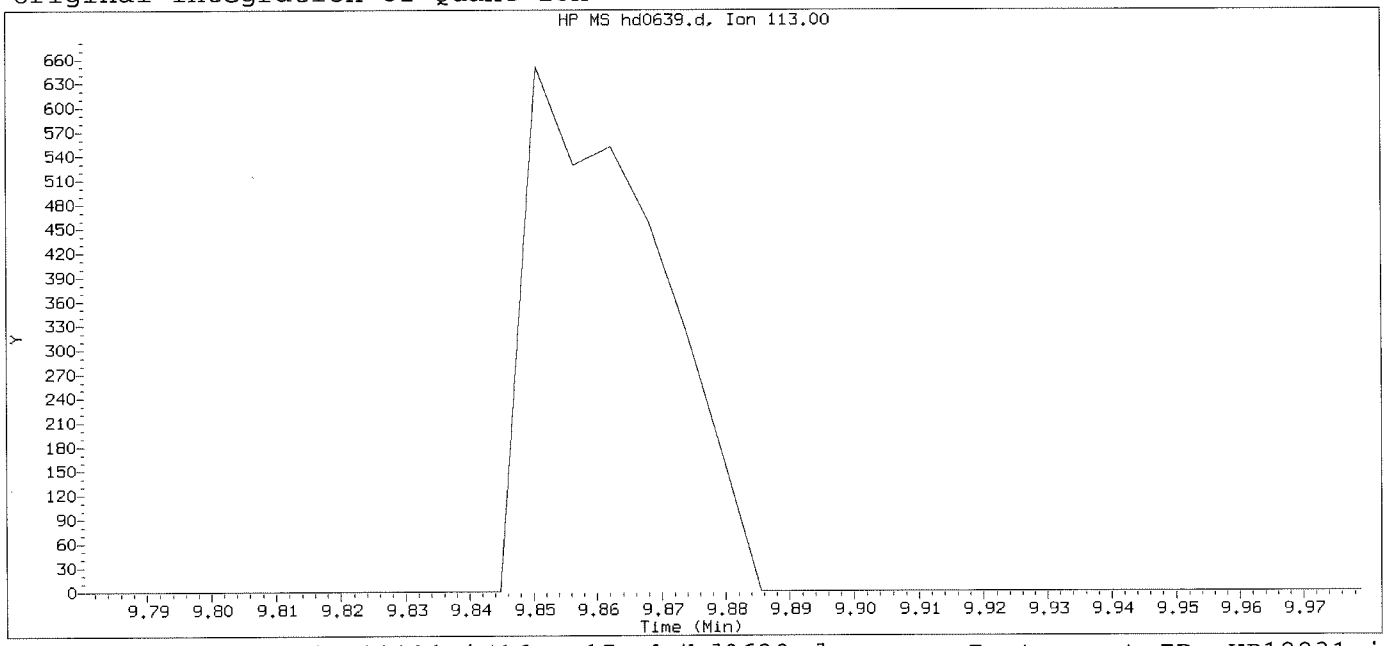
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

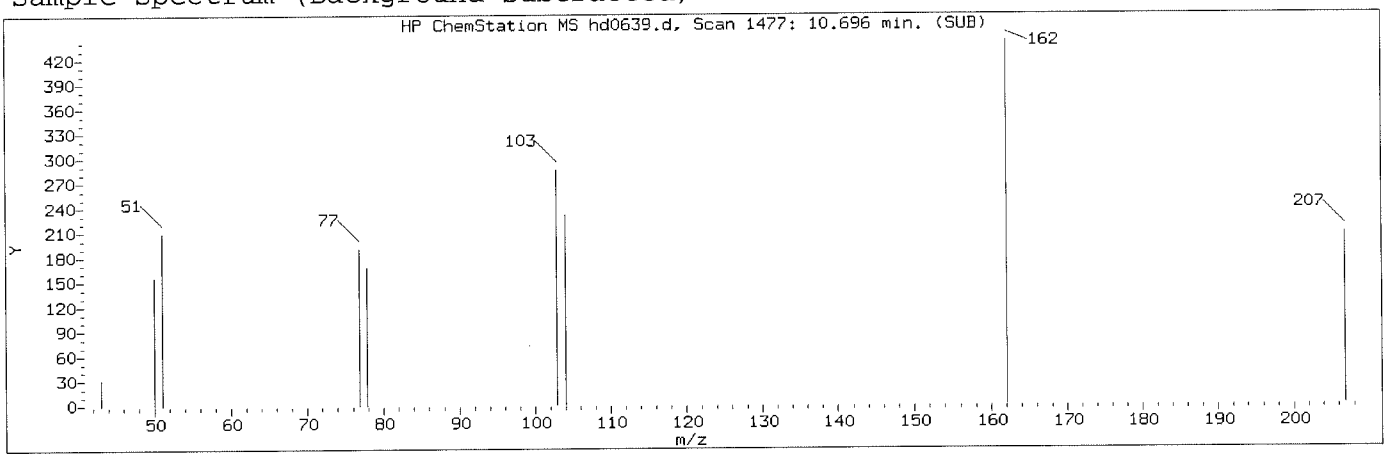
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

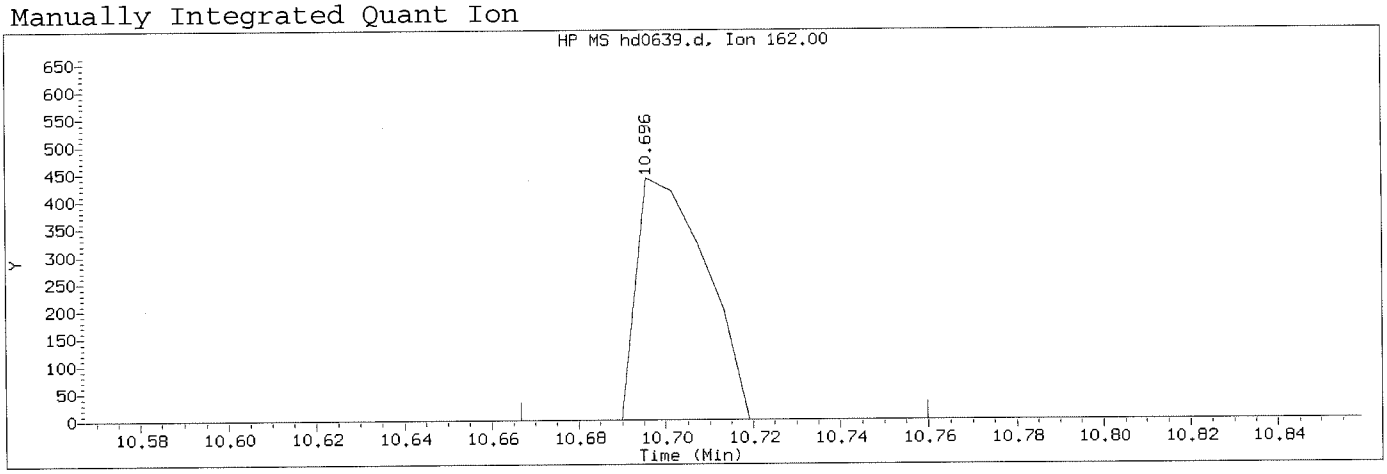
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.880
Quant Ion : 113.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 88		
Compound Name	: cis-Isosafrole		
Scan Number	: 1477		
Retention Time (minutes)	: 10.696		
Quant Ion	: 162.00		
Area (flag)	: 482M		
On-Column Amount (ng/ul)	: 0.0158		
Integration start scan	: 1471	Integration stop scan:	1487
Y at integration start	: 0	Y at integration end:	0

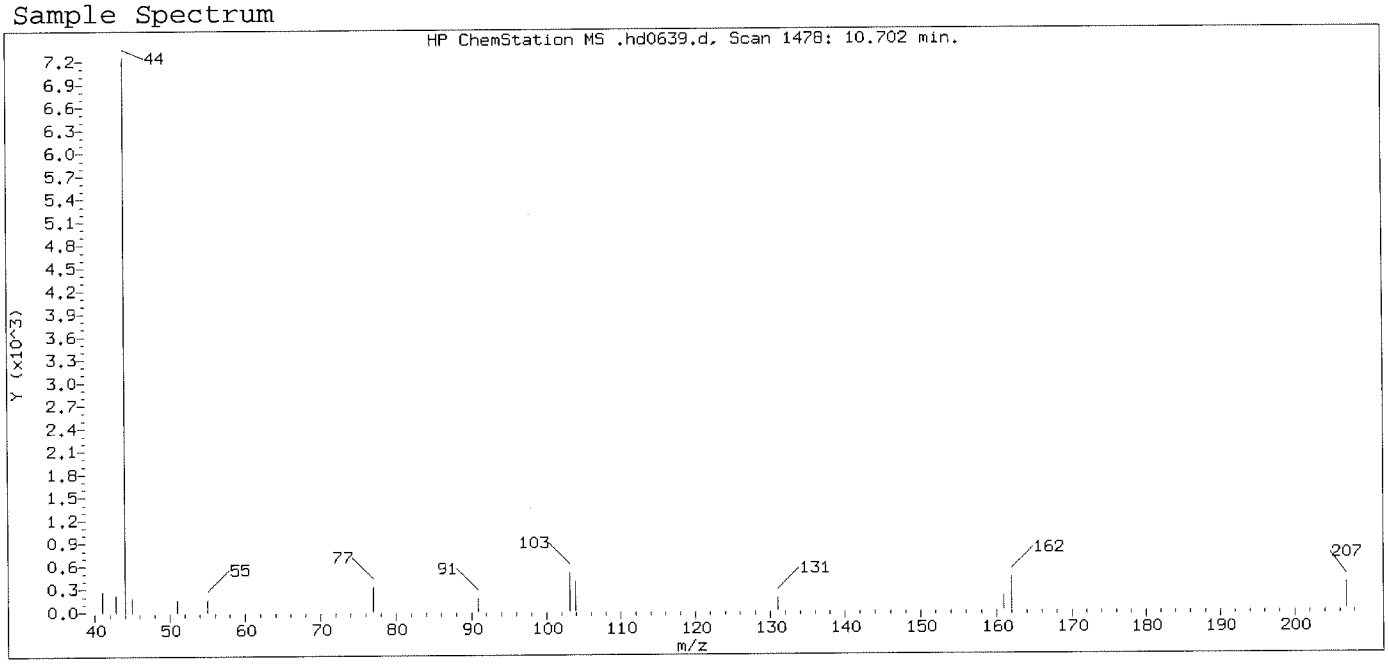
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

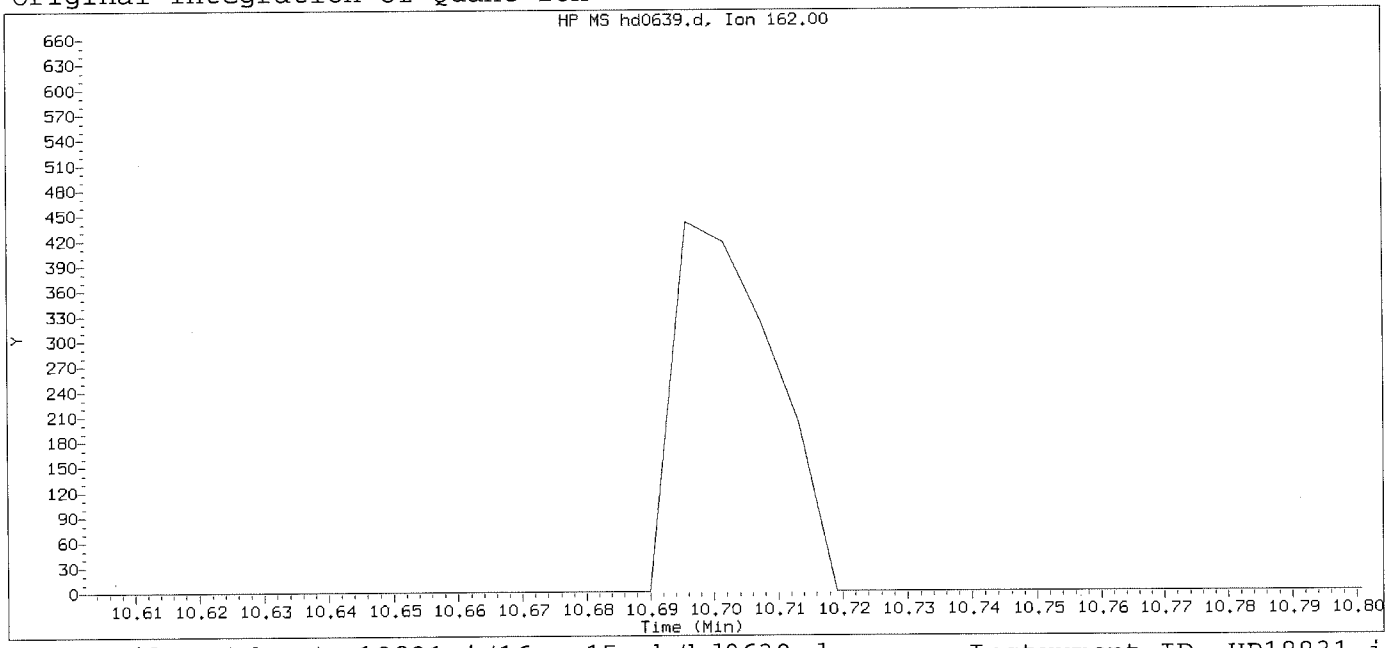
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

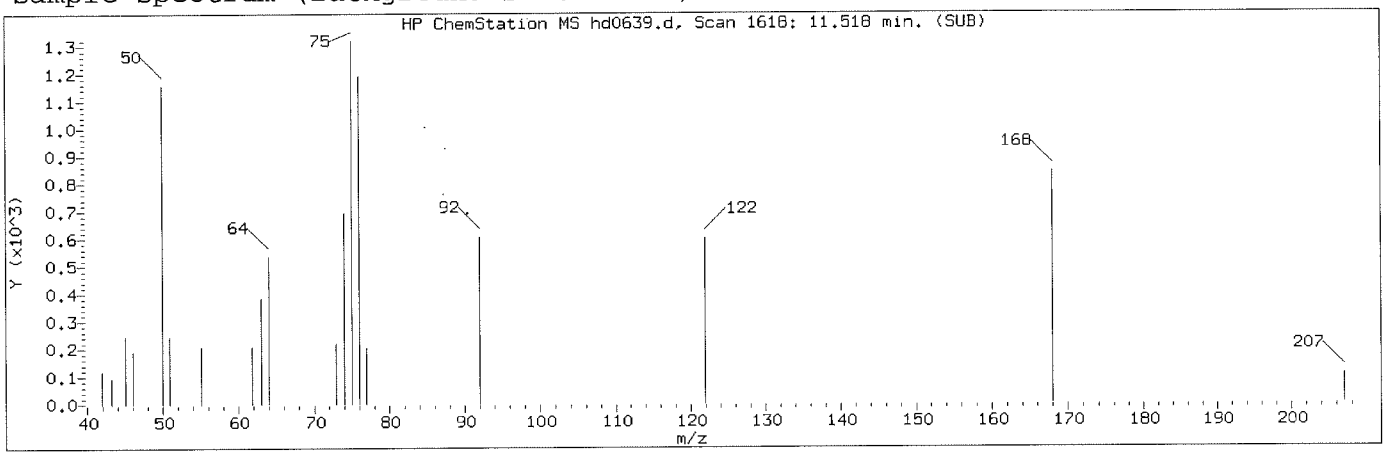
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

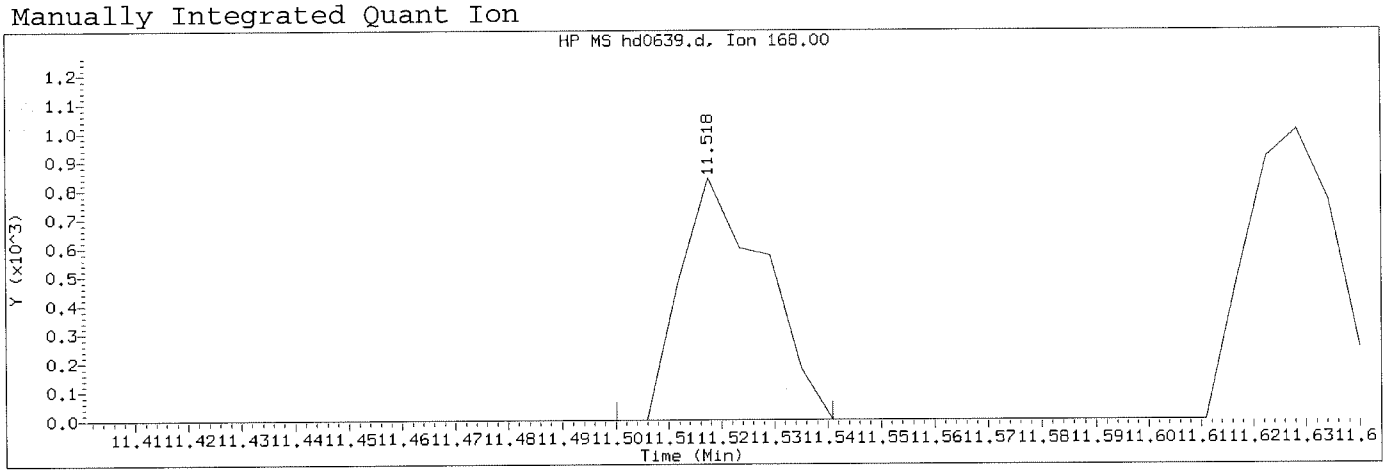
Compound Number : 88
Compound Name : cis-Isosafrole
Expected RT (minutes) : 10.702
Quant Ion : 162.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 105		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1618		
Retention Time (minutes)	: 11.518		
Quant Ion	: 168.00		
Area (flag)	: 933M		
On-Column Amount (ng/ul)	: 0.0789		
Integration start scan	: 1614	Integration stop scan:	1621
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

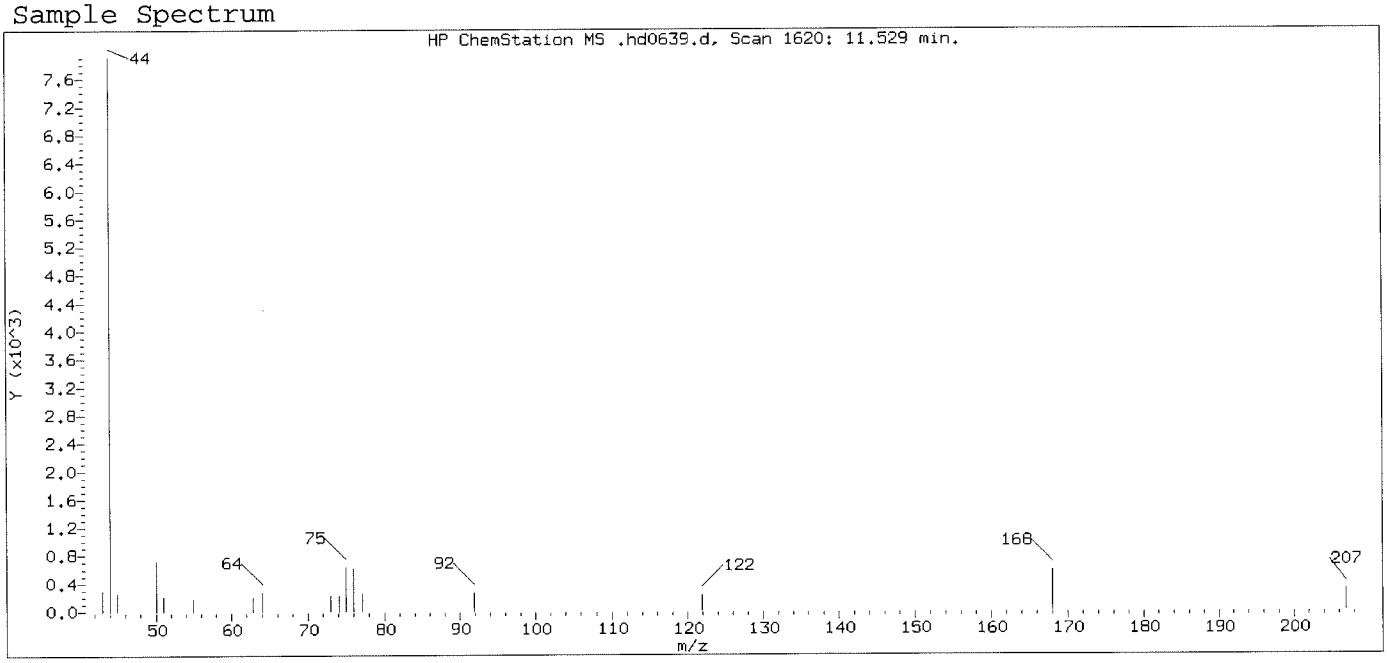
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

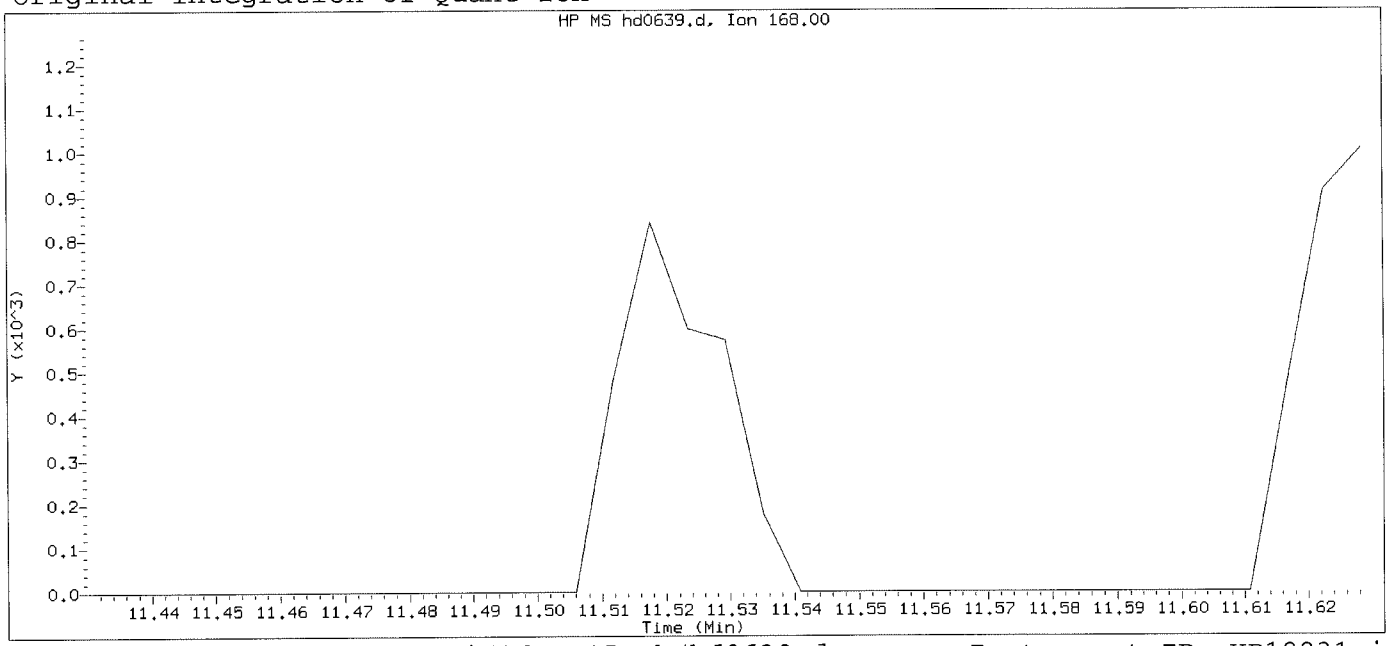
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

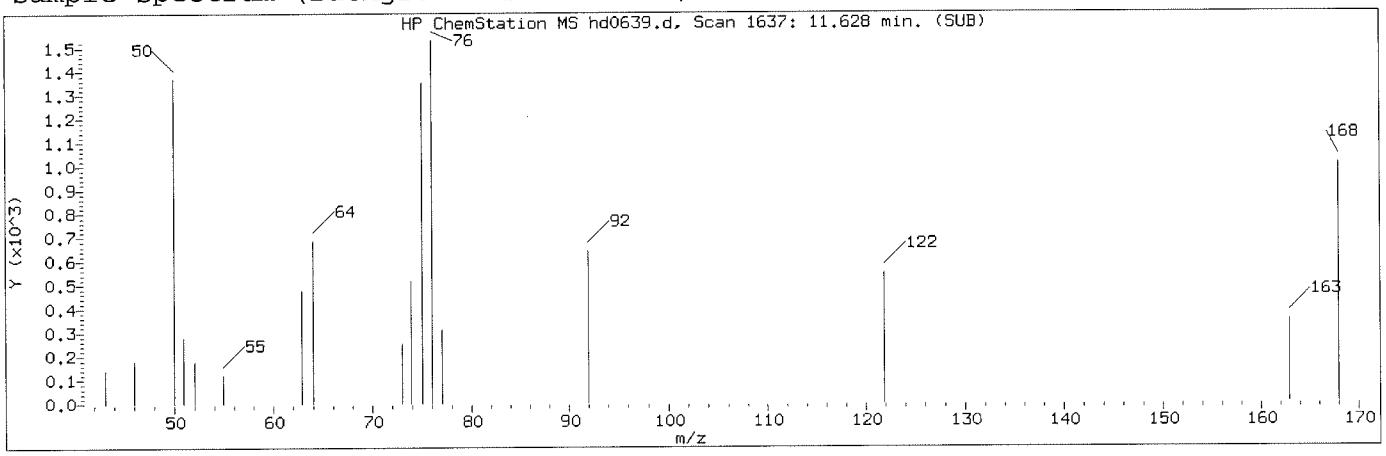
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

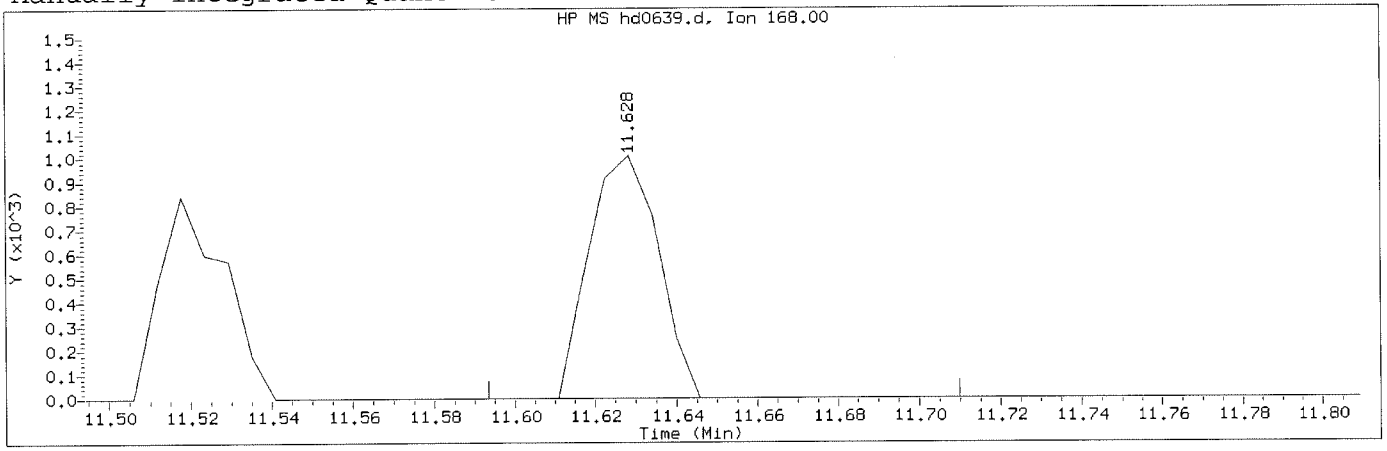
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 11.529
Quant Ion : 168.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 107		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1637		
Retention Time (minutes)	: 11.628		
Quant Ion	: 168.00		
Area (flag)	: 1190M		
On-Column Amount (ng/ul)	: 0.0932		
Integration start scan	: 1630	Integration stop scan:	1650
Y at integration start	: 0	Y at integration end:	0

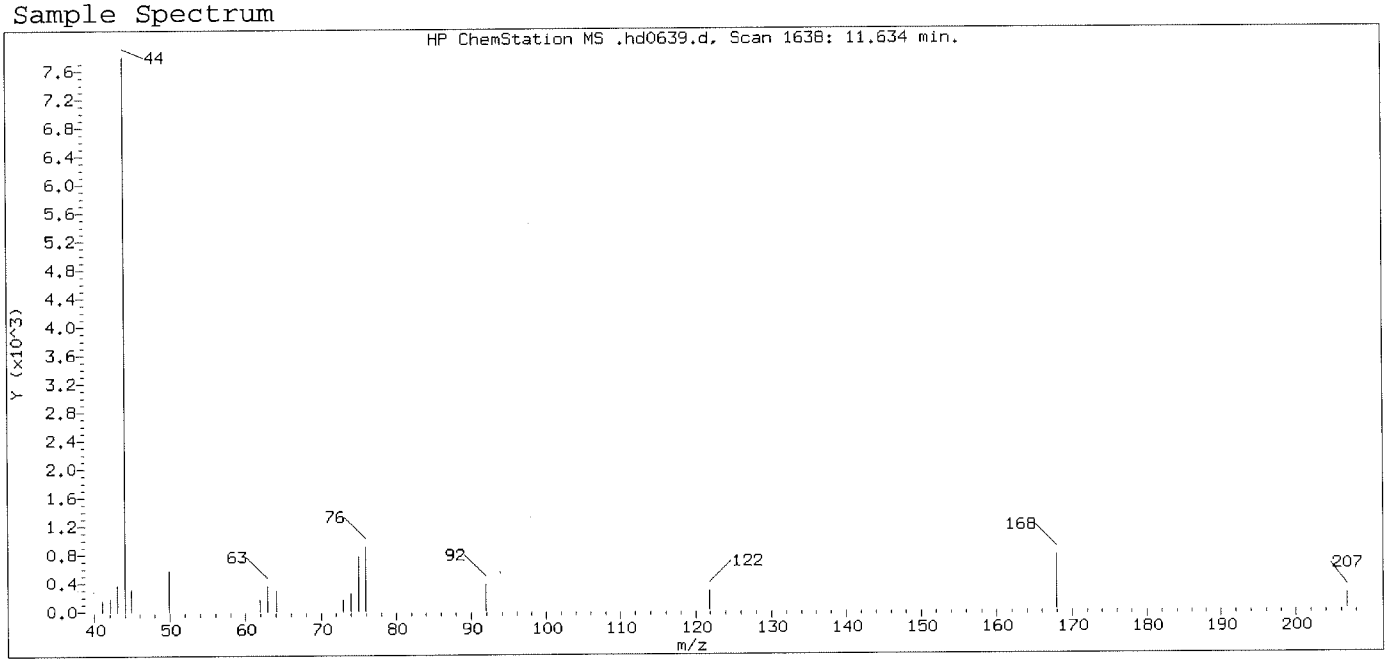
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

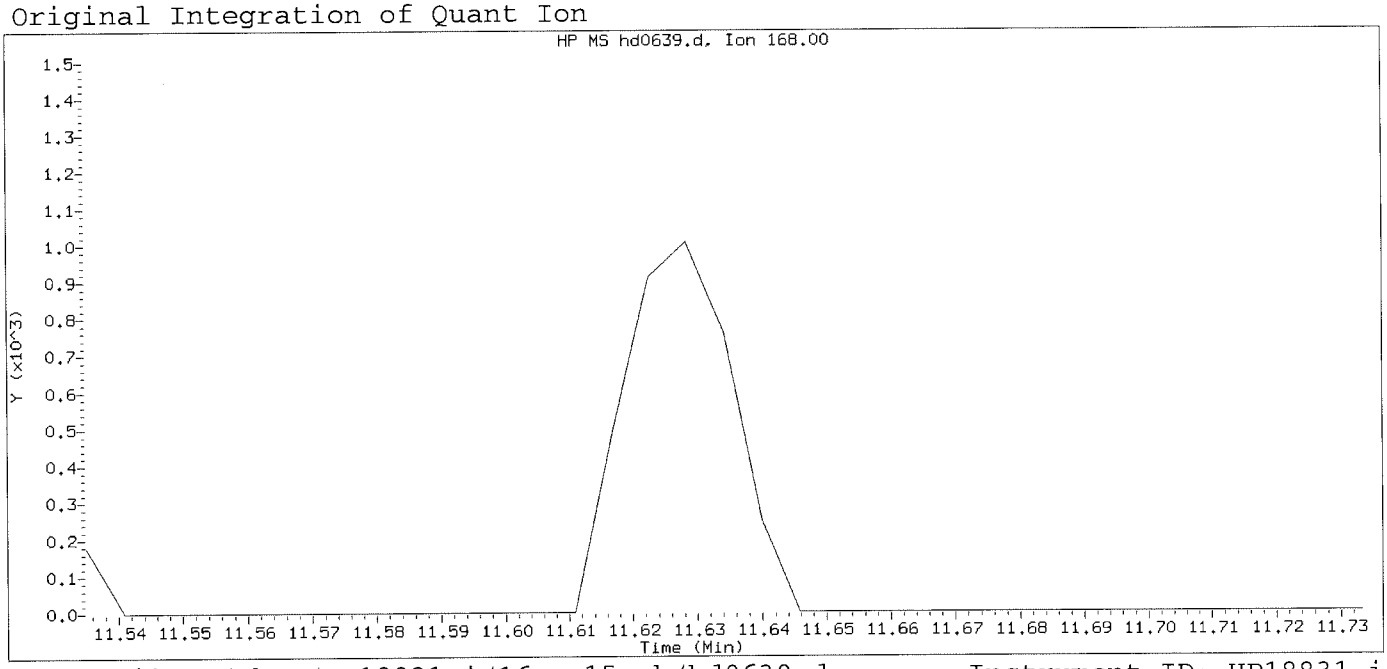
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

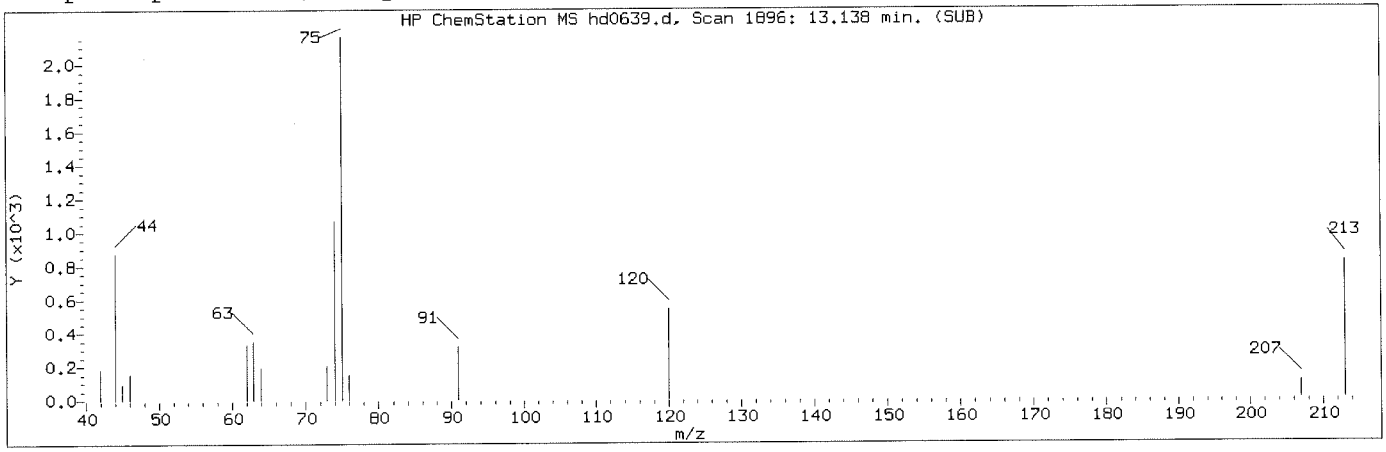
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

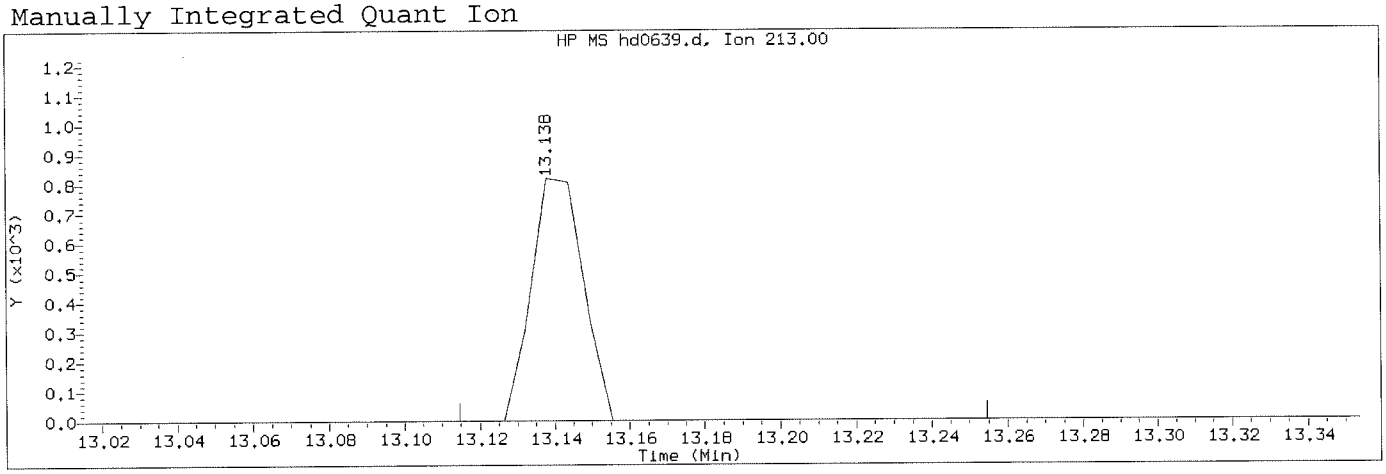
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.634
Quant Ion : 168.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 139		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1896		
Retention Time (minutes)	: 13.138		
Quant Ion	: 213.00		
Area (flag)	: 789M		
On-Column Amount (ng/ul)	: 0.0802		
Integration start scan	: 1891	Integration stop scan:	1915
Y at integration start	: 0	Y at integration end:	0

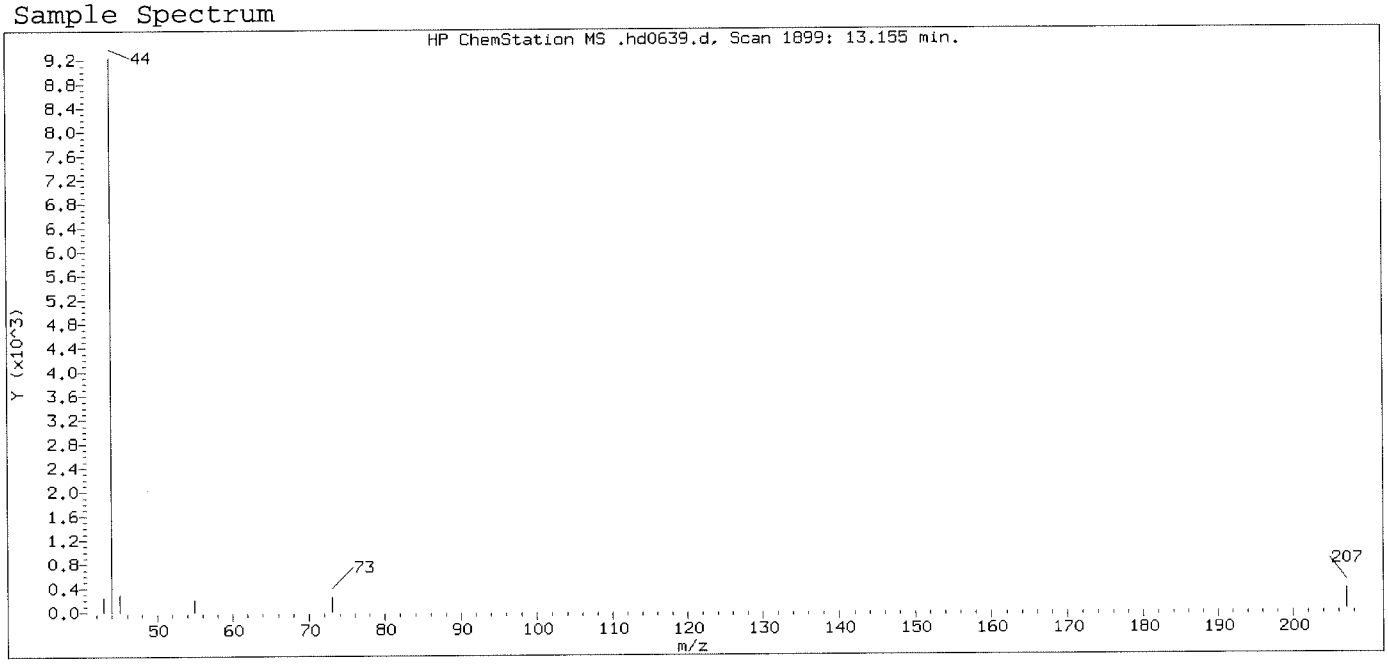
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19. Target 3.5 signature user ID: hbz01996

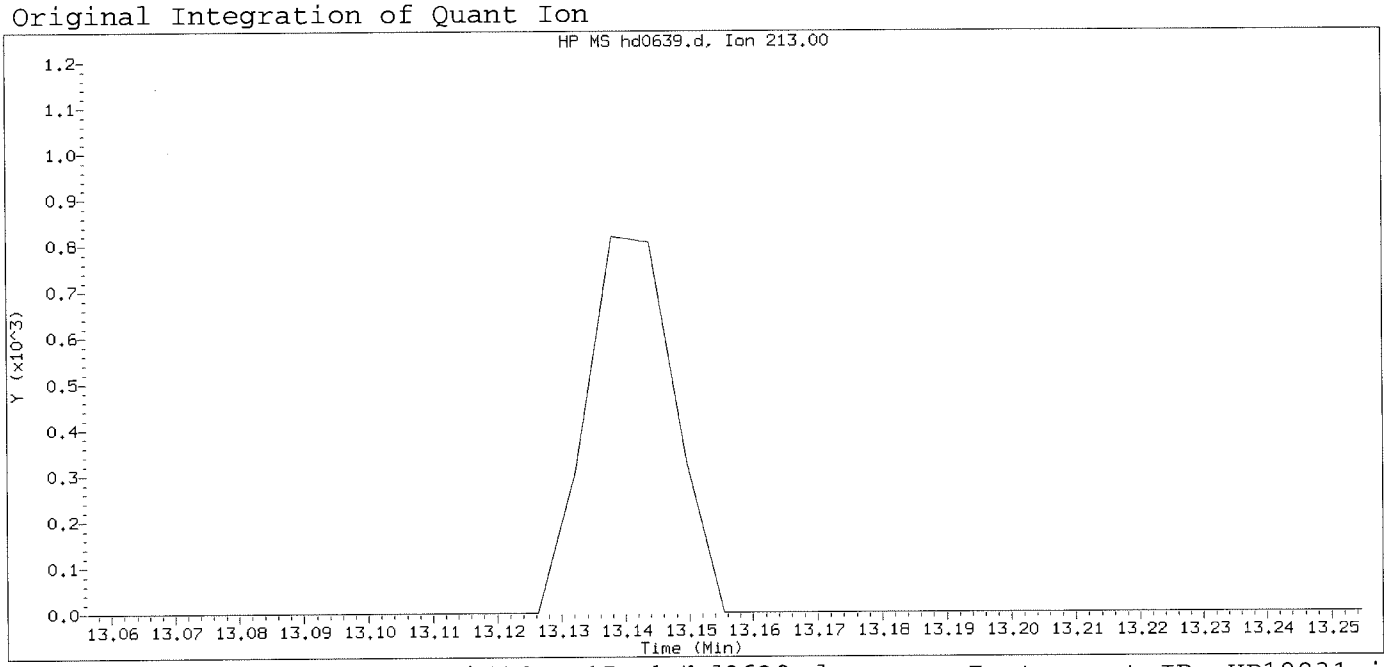
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

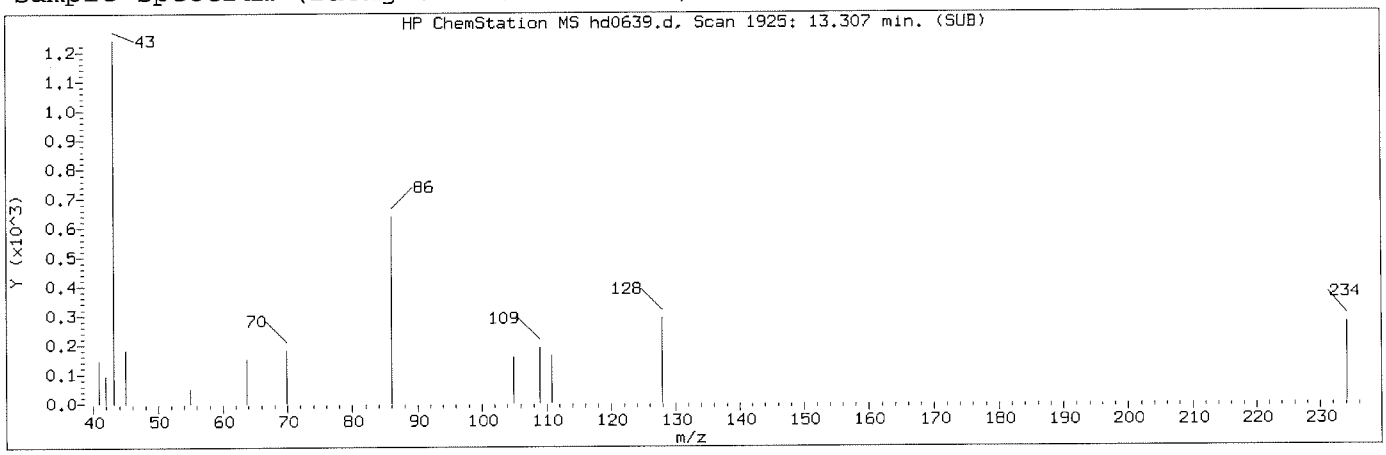
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

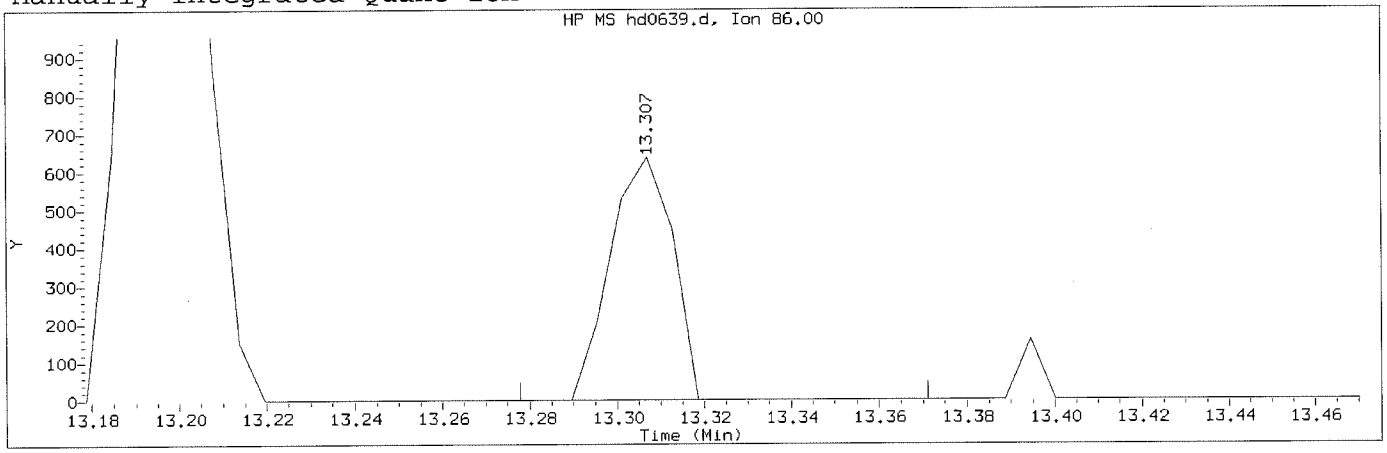
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 13.155
Quant Ion : 213.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1925		
Retention Time (minutes)	: 13.307		
Quant Ion	: 86.00		
Area (flag)	: 635M		
On-Column Amount (ng/ul)	: 0.0162		
Integration start scan	: 1919	Integration stop scan:	1935
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

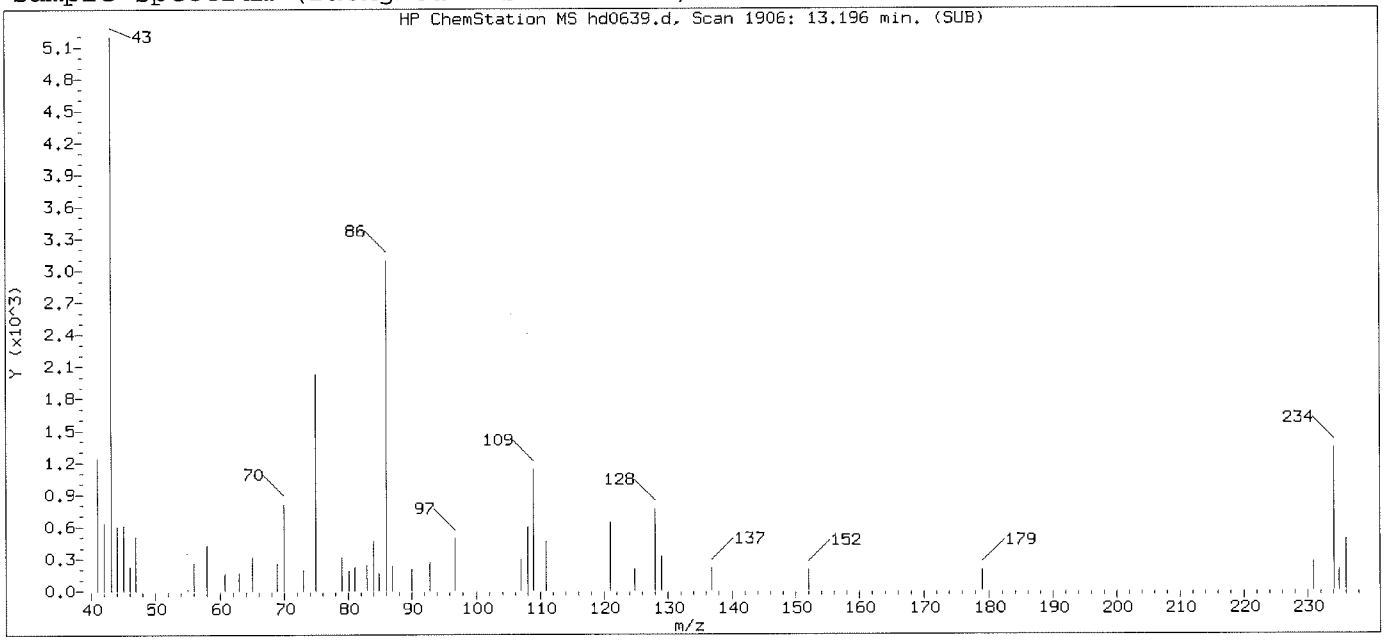
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

APR 19 2016

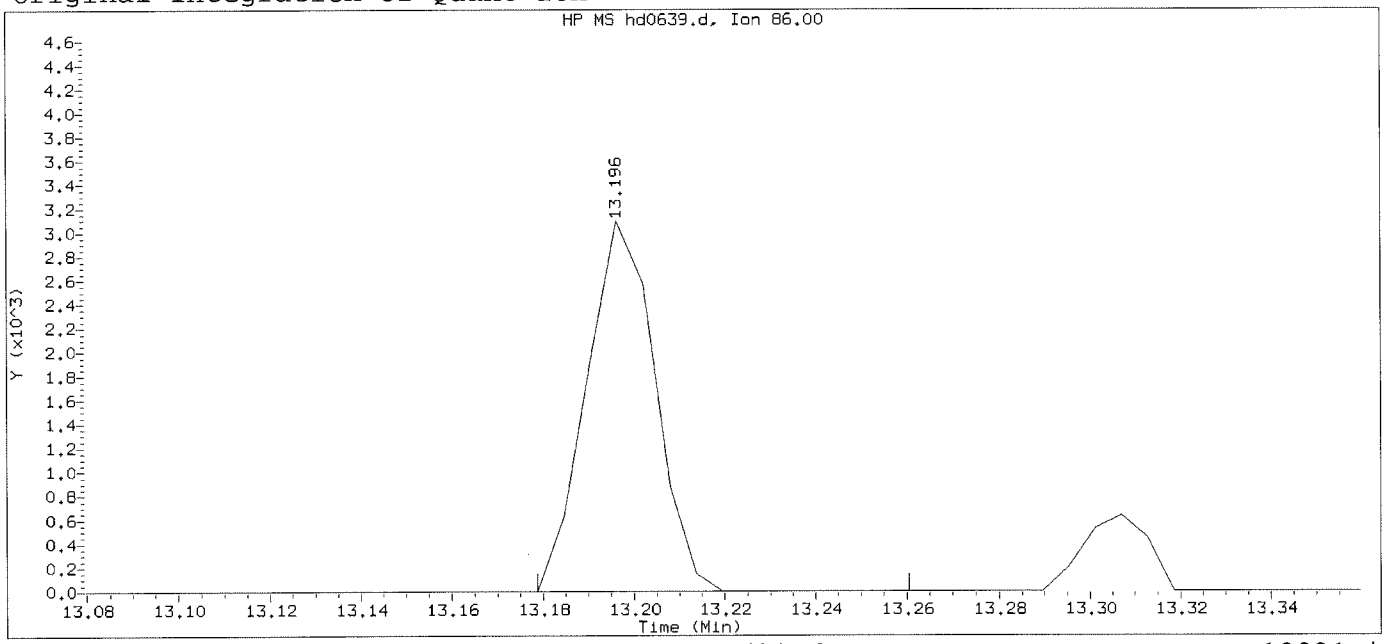
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

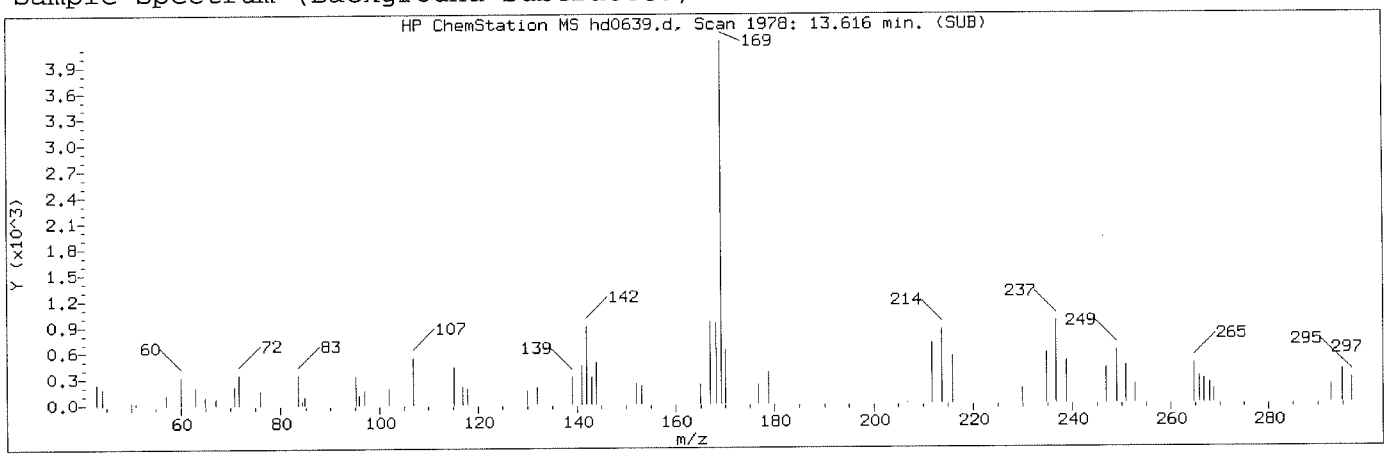
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

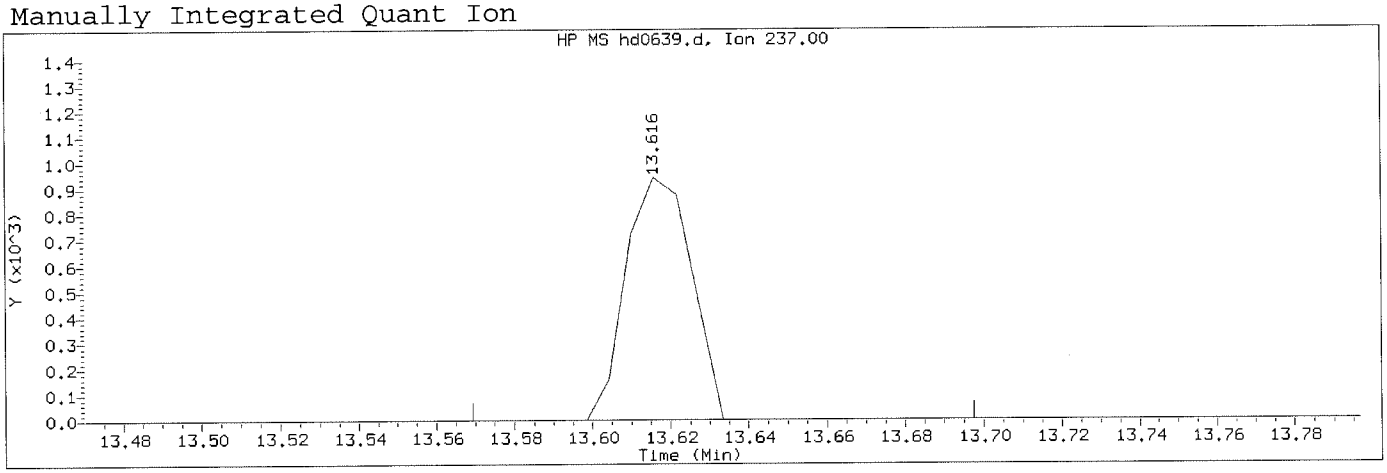
Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1906		
Retention Time (minutes)	: 13.196		
Quant Ion	: 86.00		
Area	: 3240		
On-column Amount (ng/ul)	: 0.0828		
Integration start scan	: 1902	Integration stop scan:	1916
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 151		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1978		
Retention Time (minutes)	: 13.616		
Quant Ion	: 237.00		
Area (flag)	: 1094M		
On-Column Amount (ng/ul)	: 0.1001		
Integration start scan	: 1969	Integration stop scan:	1991
Y at integration start	: 0	Y at integration end:	0

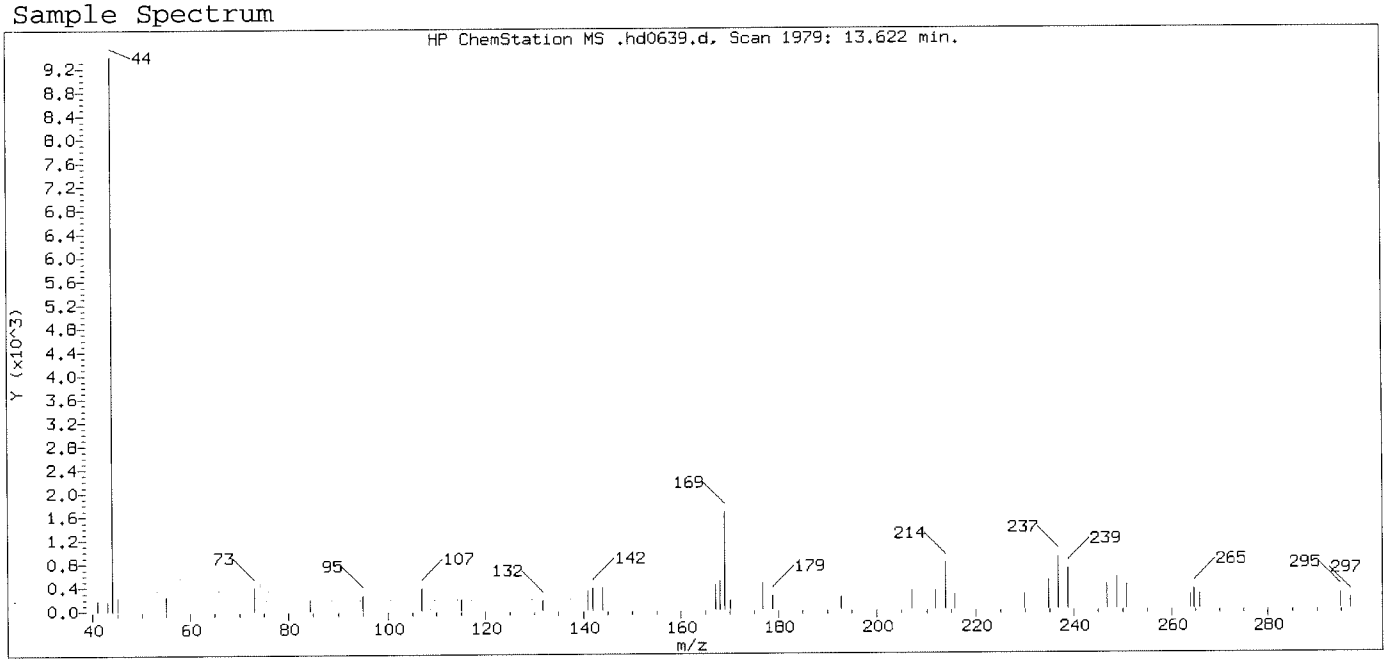
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

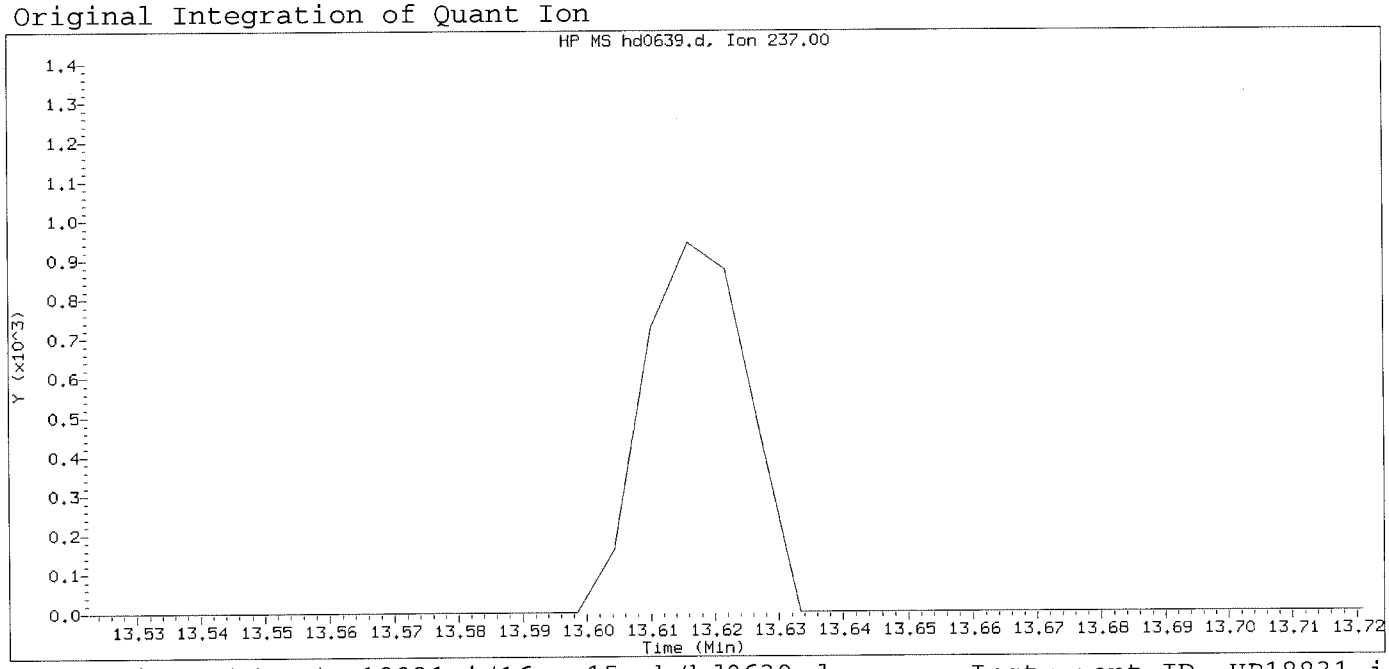
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

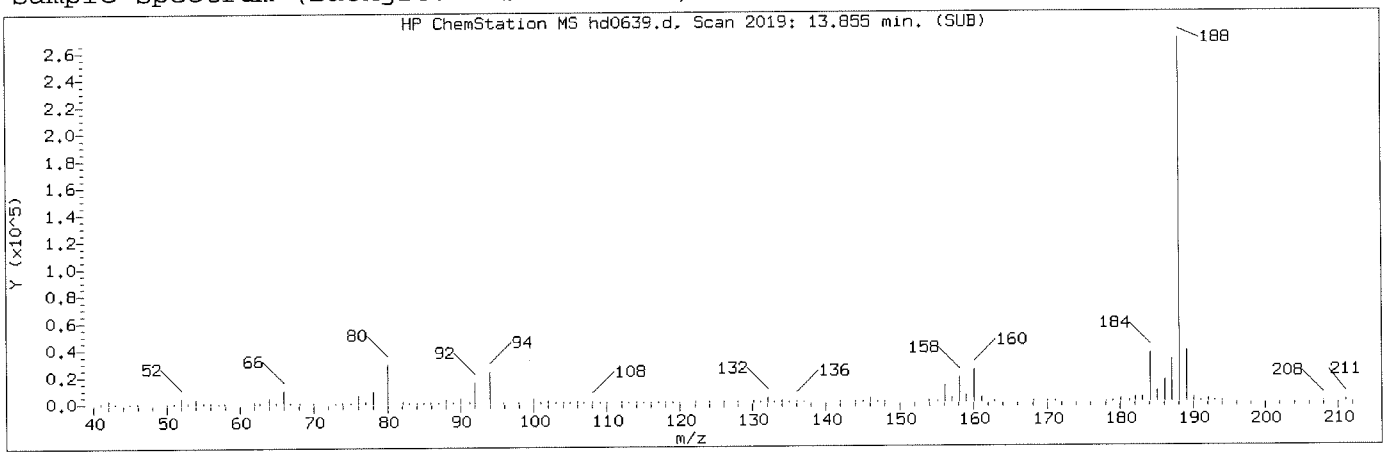
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

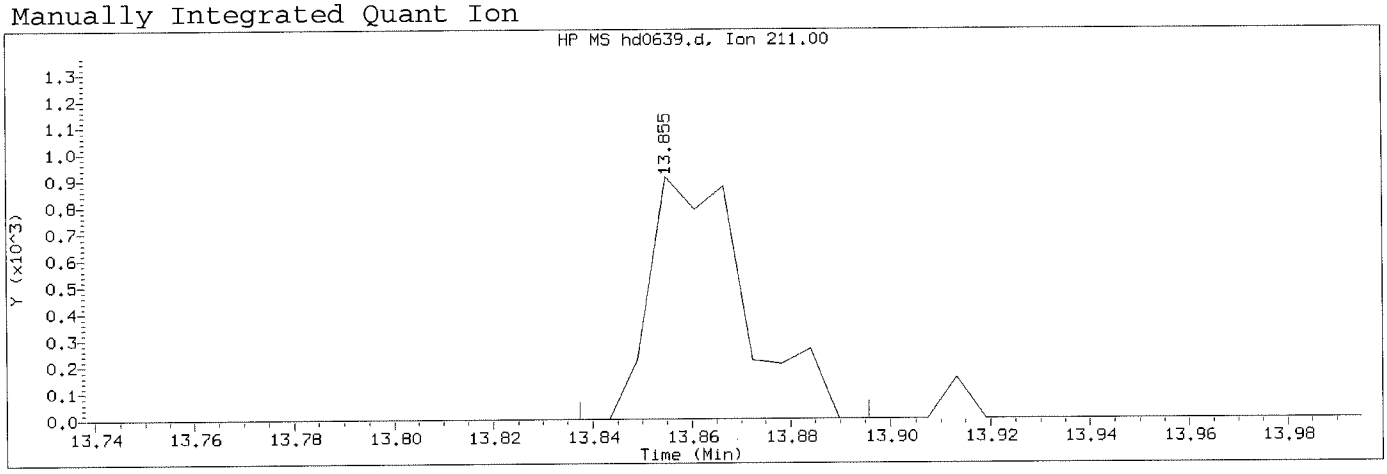
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.622
Quant Ion : 237.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 2019		
Retention Time (minutes)	: 13.855		
Quant Ion	: 211.00		
Area (flag)	: 1221M		
On-Column Amount (ng/ul)	: 0.0532		
Integration start scan	: 2015	Integration stop scan:	2025
Y at integration start	: 0	Y at integration end:	0

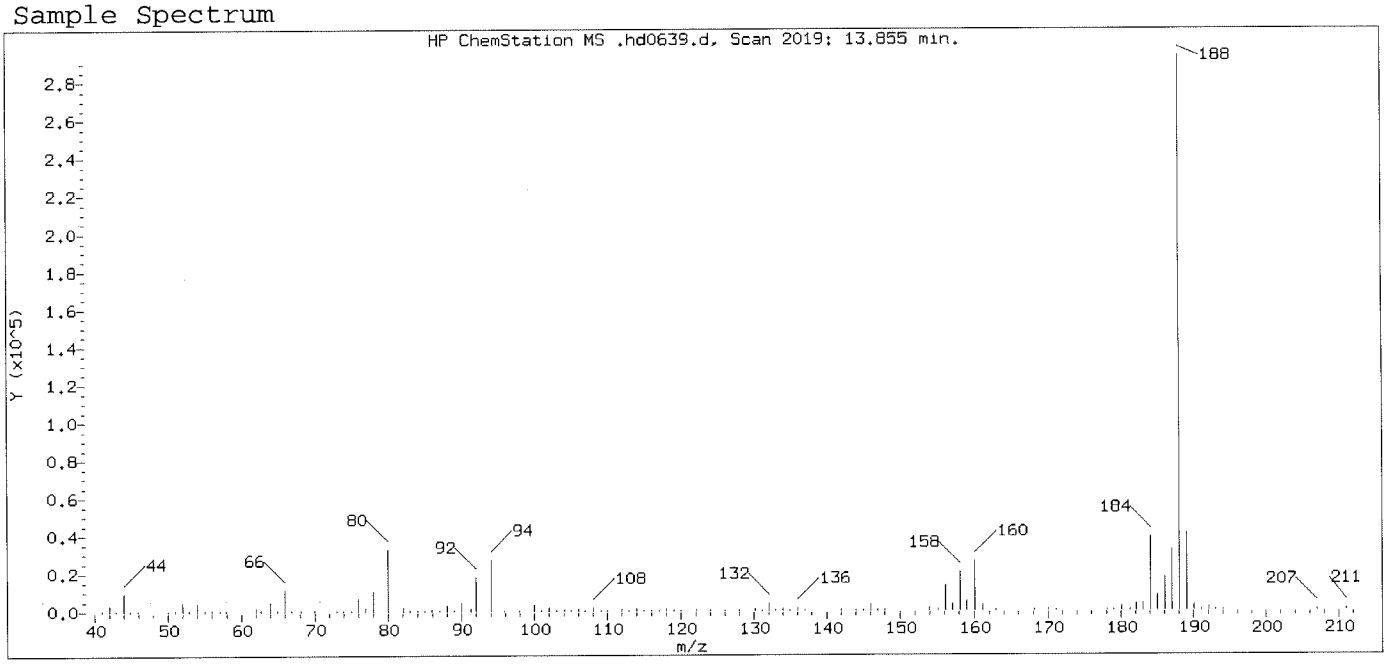
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19
Target 3.5 signature user ID: hbz01996

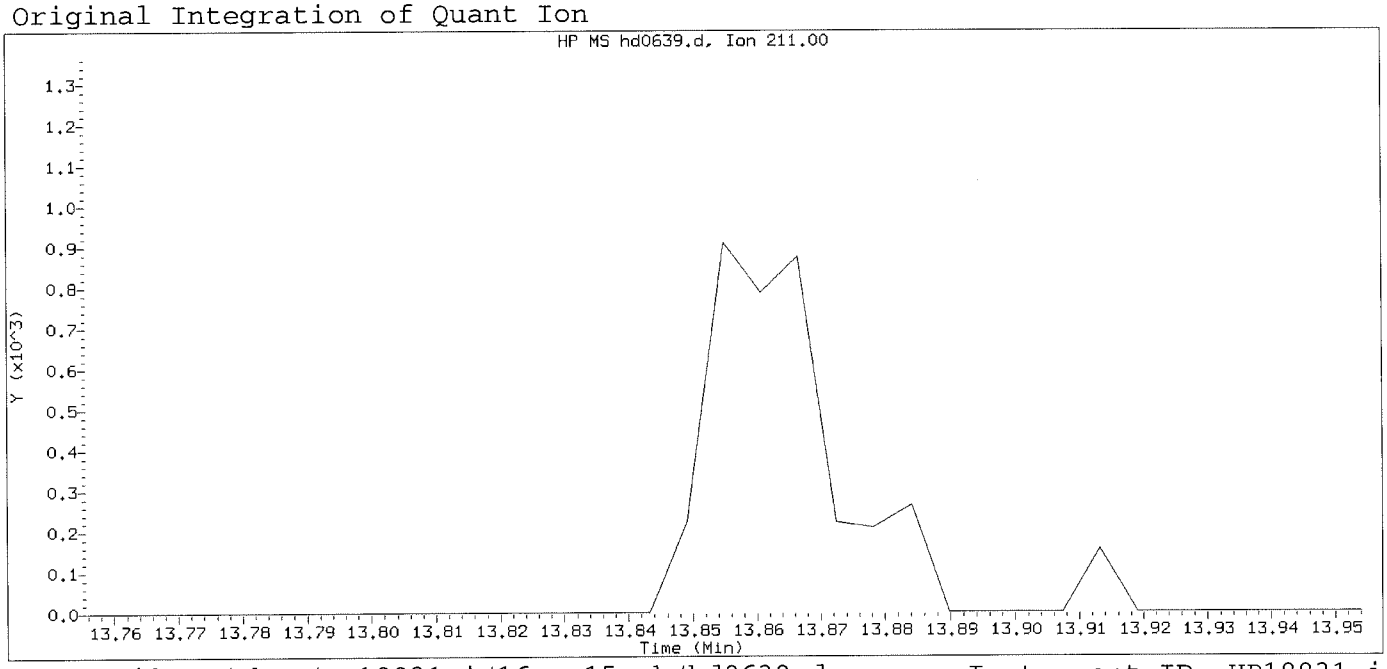
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

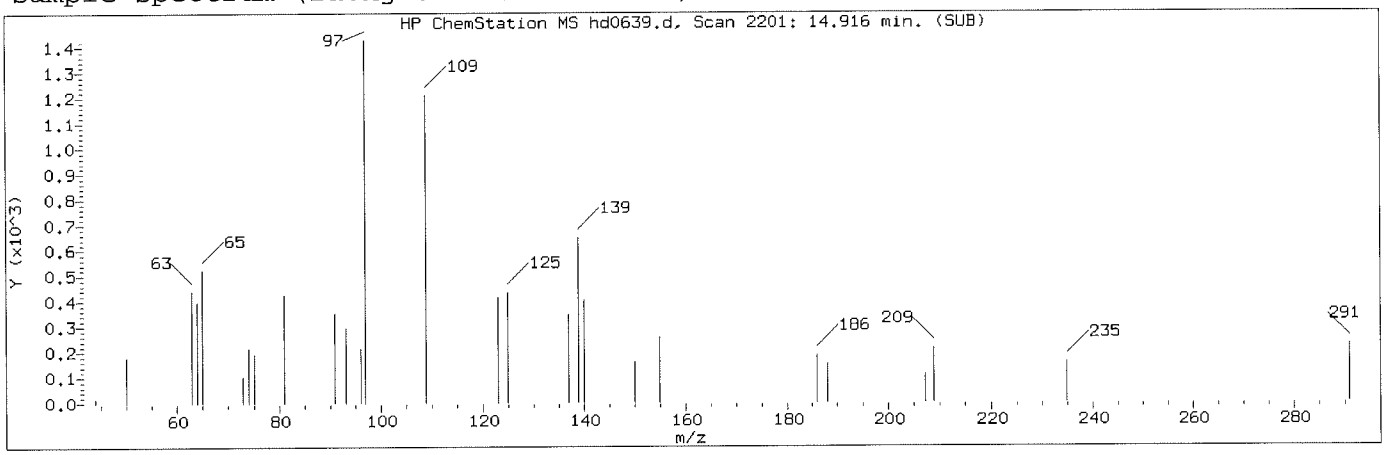
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

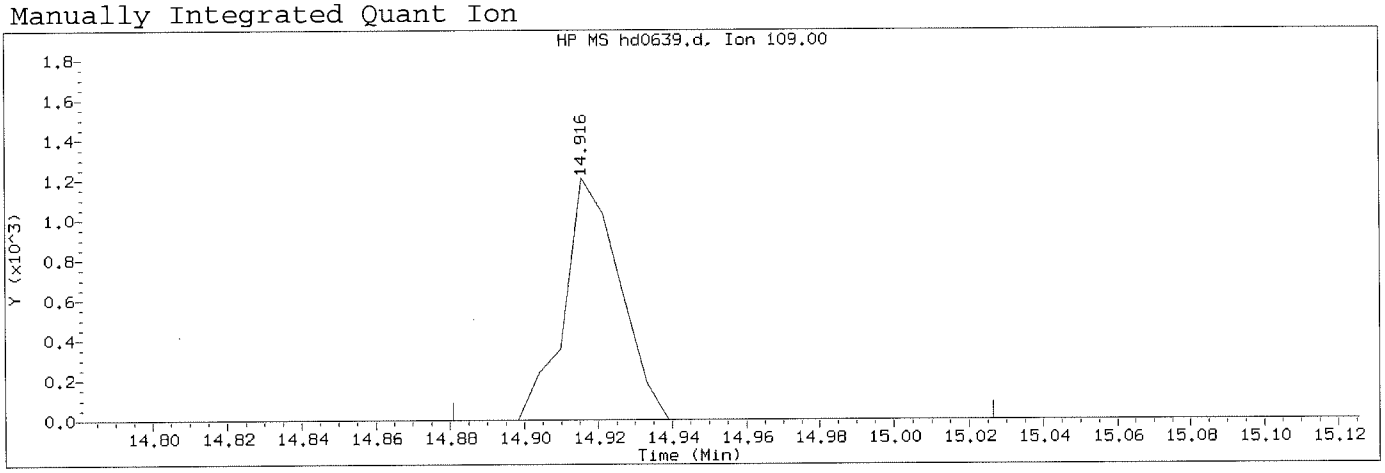
Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.855
Quant Ion : 211.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 167		
Compound Name	: Parathion		
Scan Number	: 2201		
Retention Time (minutes)	: 14.916		
Quant Ion	: 109.00		
Area (flag)	: 1259M		
On-Column Amount (ng/ul)	: 0.0709		
Integration start scan	: 2194	Integration stop scan:	2219
Y at integration start	: 0	Y at integration end:	0

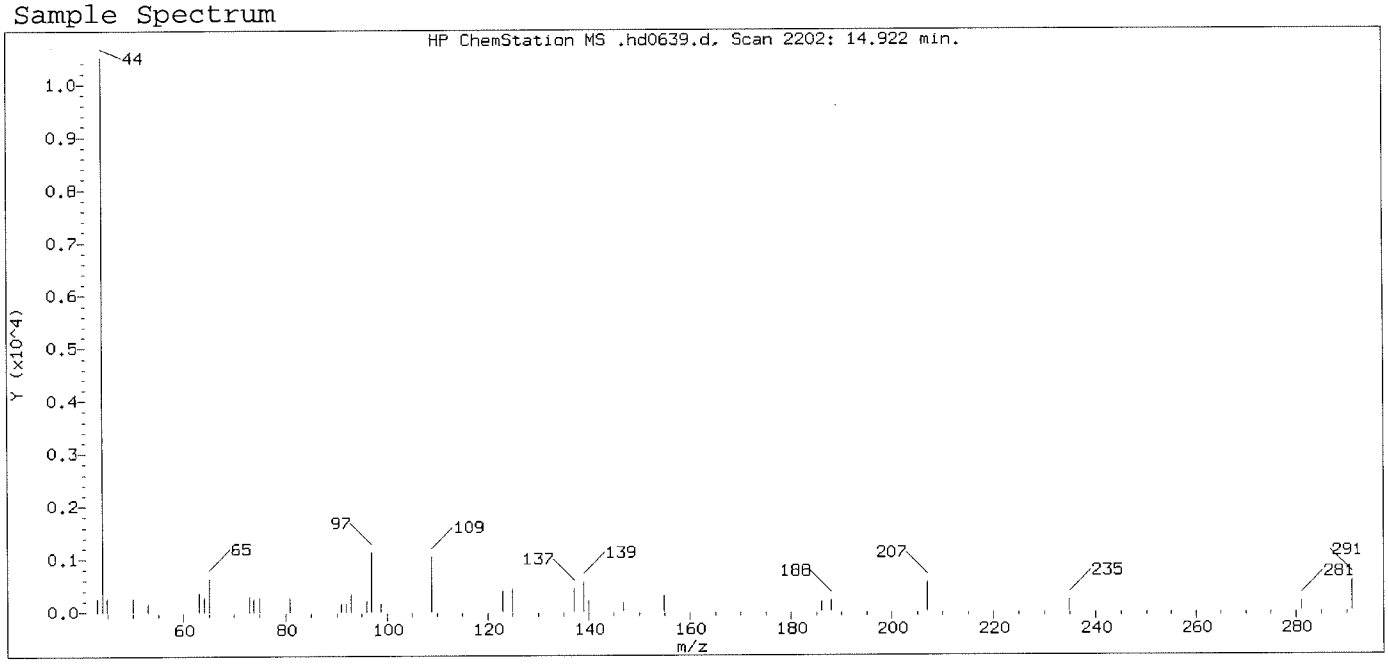
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19. Target 3.5 signature user ID: hbz01996

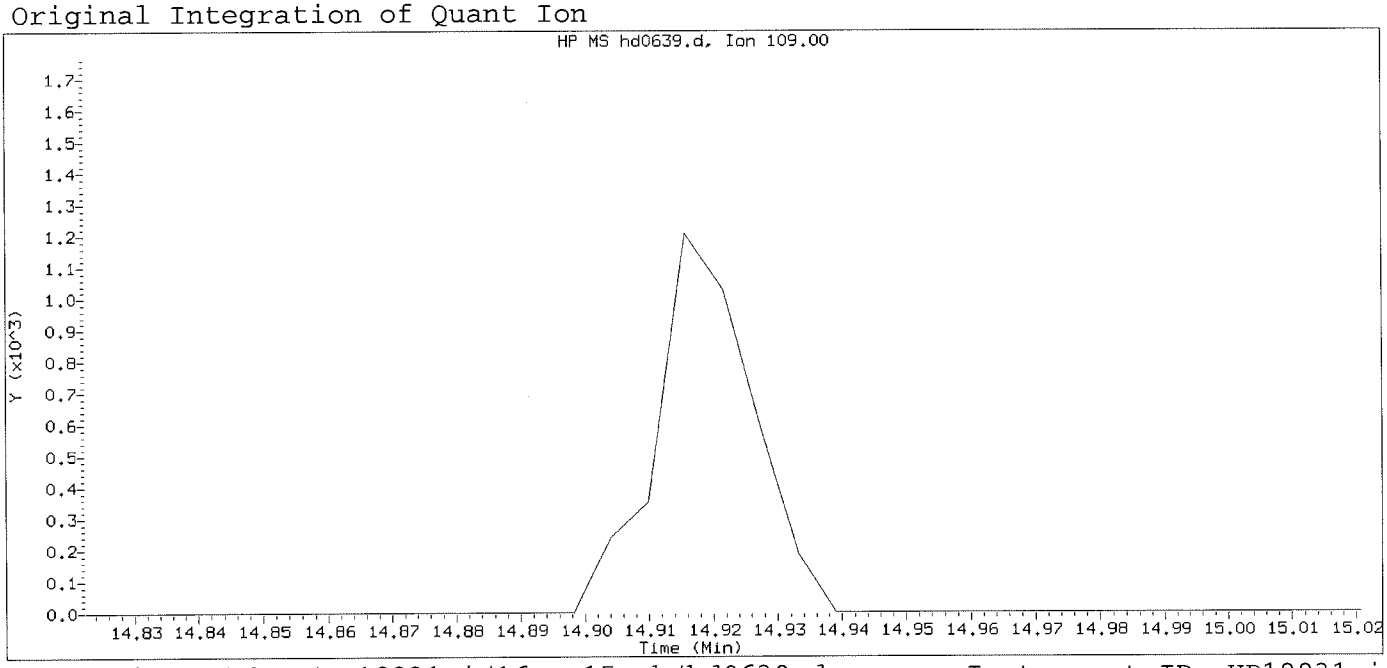
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

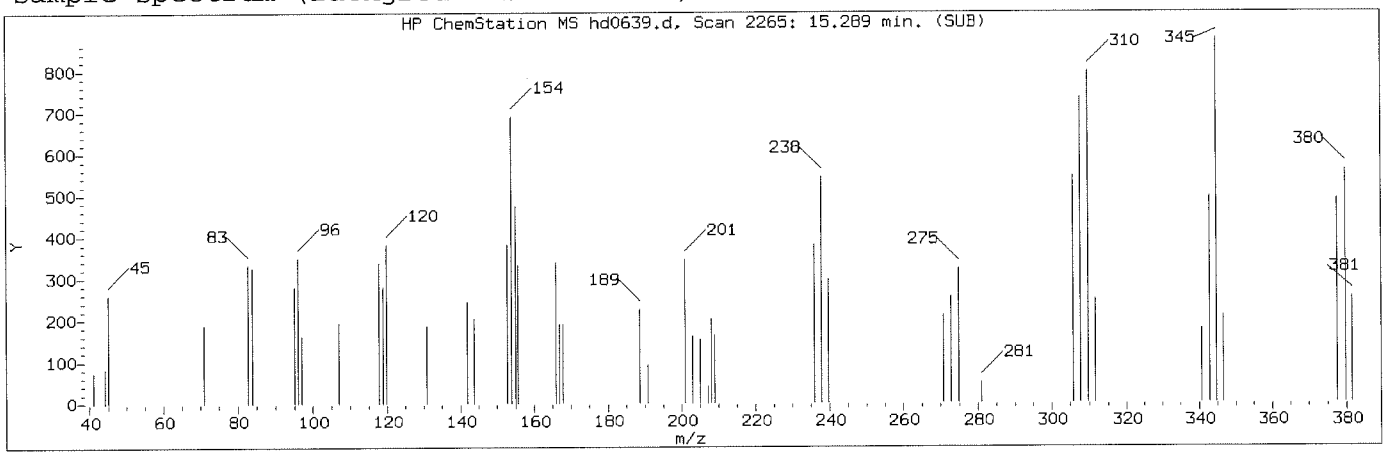
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

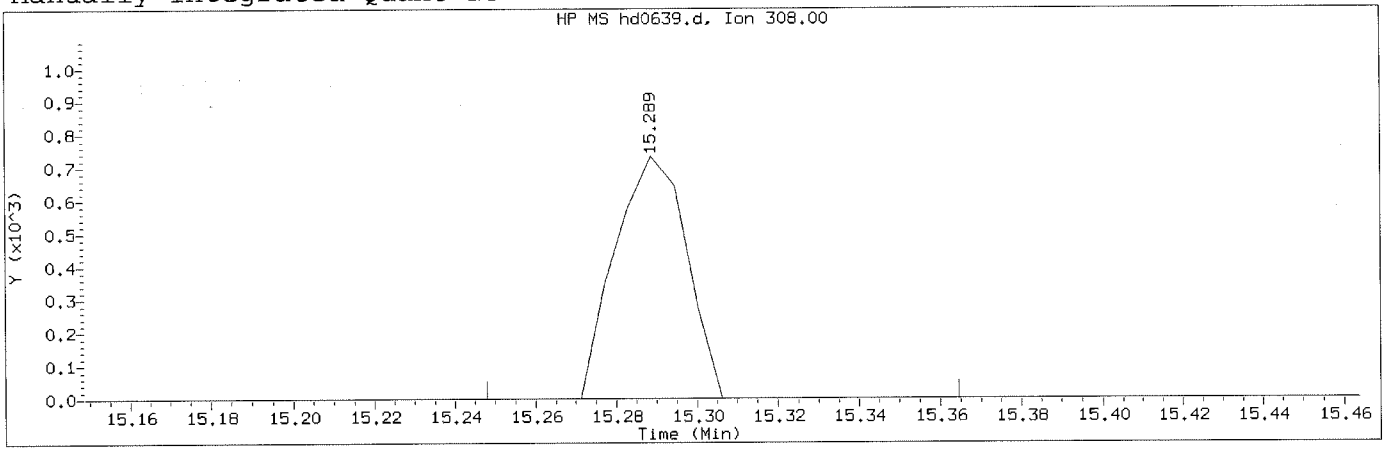
Compound Number : 167
Compound Name : Parathion
Expected RT (minutes) : 14.922
Quant Ion : 109.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 169		
Compound Name	: Octachlorostyrene		
Scan Number	: 2265		
Retention Time (minutes)	: 15.289		
Quant Ion	: 308.00		
Area (flag)	: 898M		
On-Column Amount (ng/ul)	: 0.1014		
Integration start scan	: 2257	Integration stop scan:	2277
Y at integration start	: 0	Y at integration end:	0

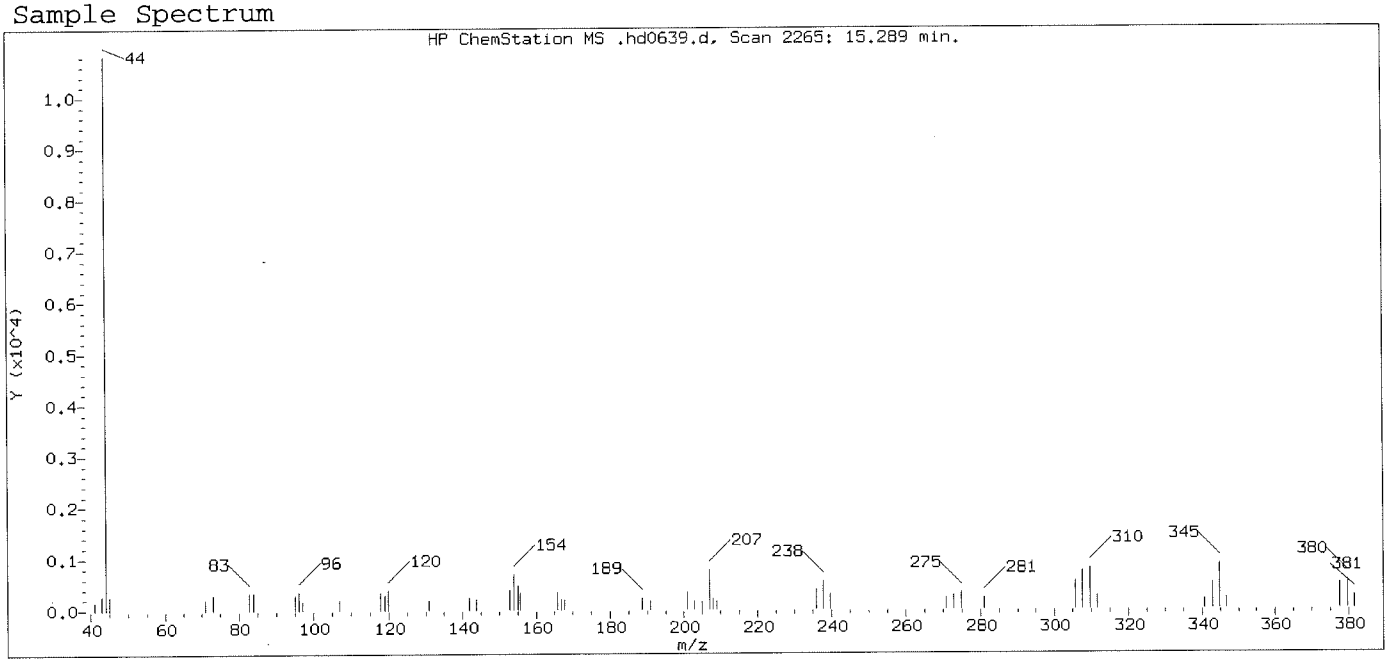
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

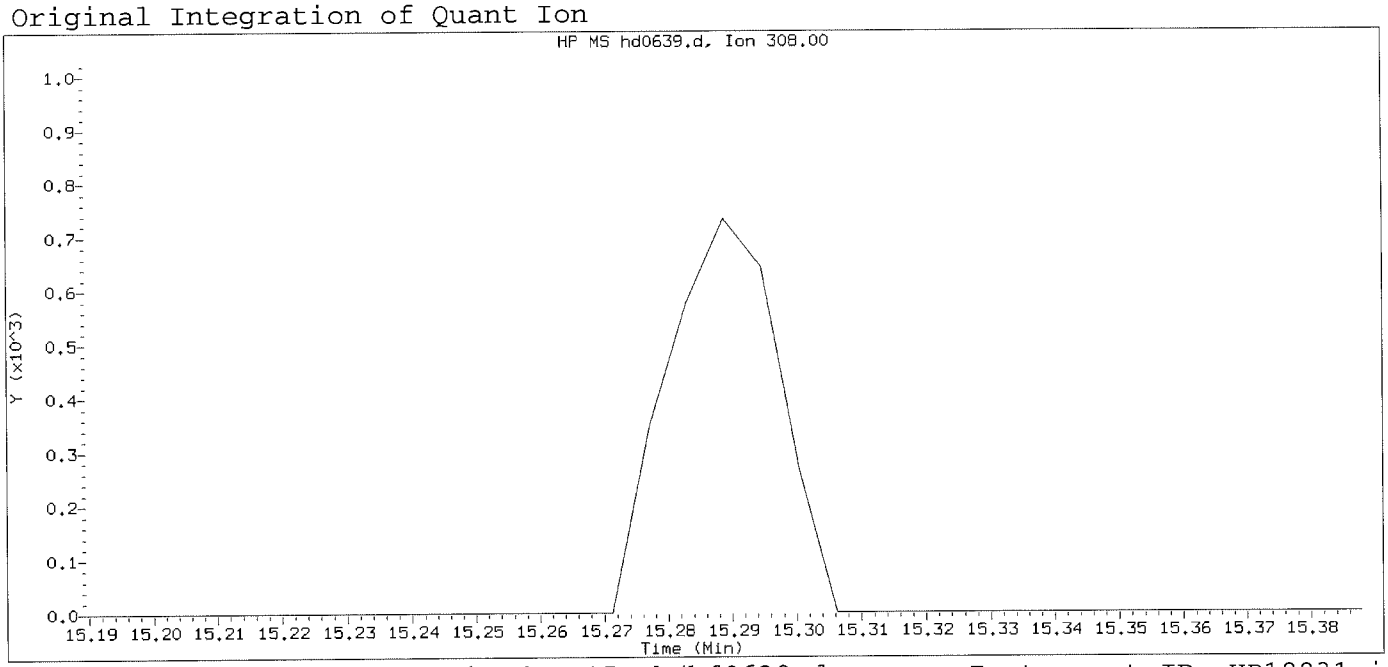
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

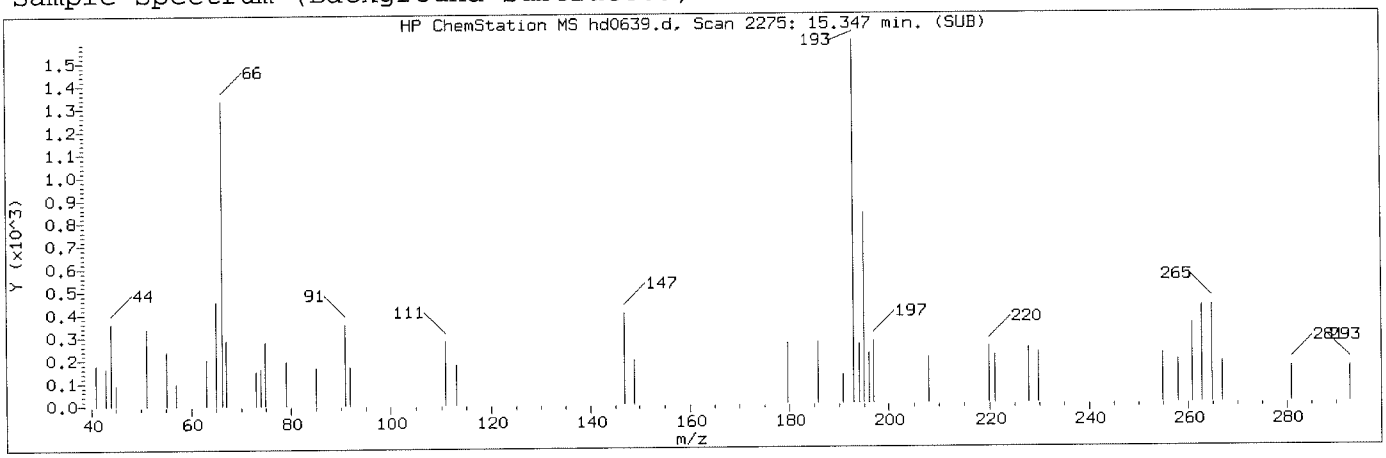
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

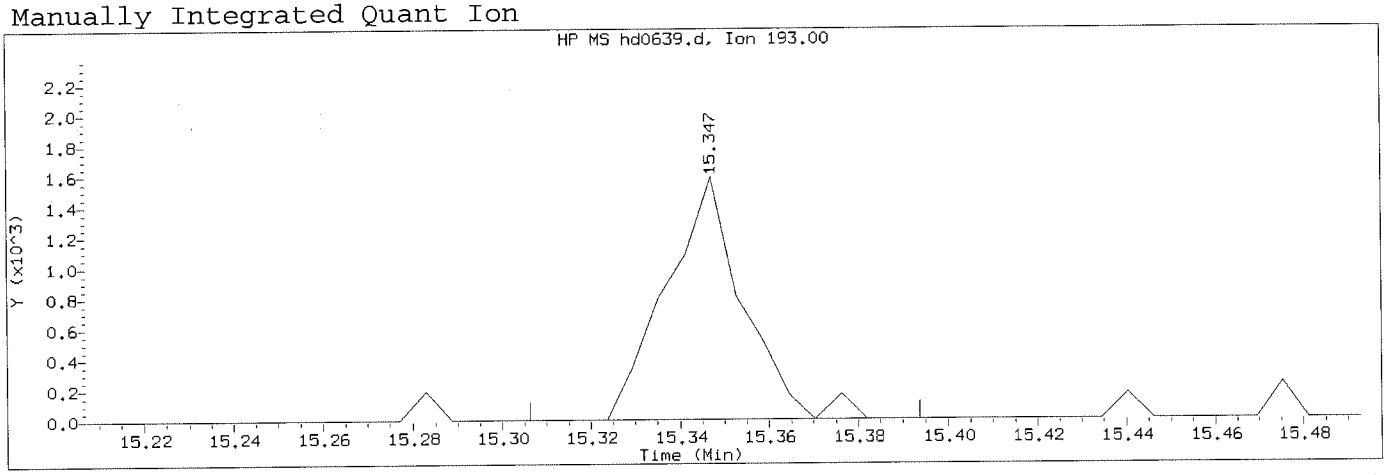
Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 15.289
Quant Ion : 308.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 171		
Compound Name	: Isodrin		
Scan Number	: 2275		
Retention Time (minutes)	: 15.347		
Quant Ion	: 193.00		
Area (flag)	: 1914M		
On-Column Amount (ng/ul)	: 0.1381		
Integration start scan	: 2267	Integration stop scan:	2282
Y at integration start	: 0	Y at integration end:	0

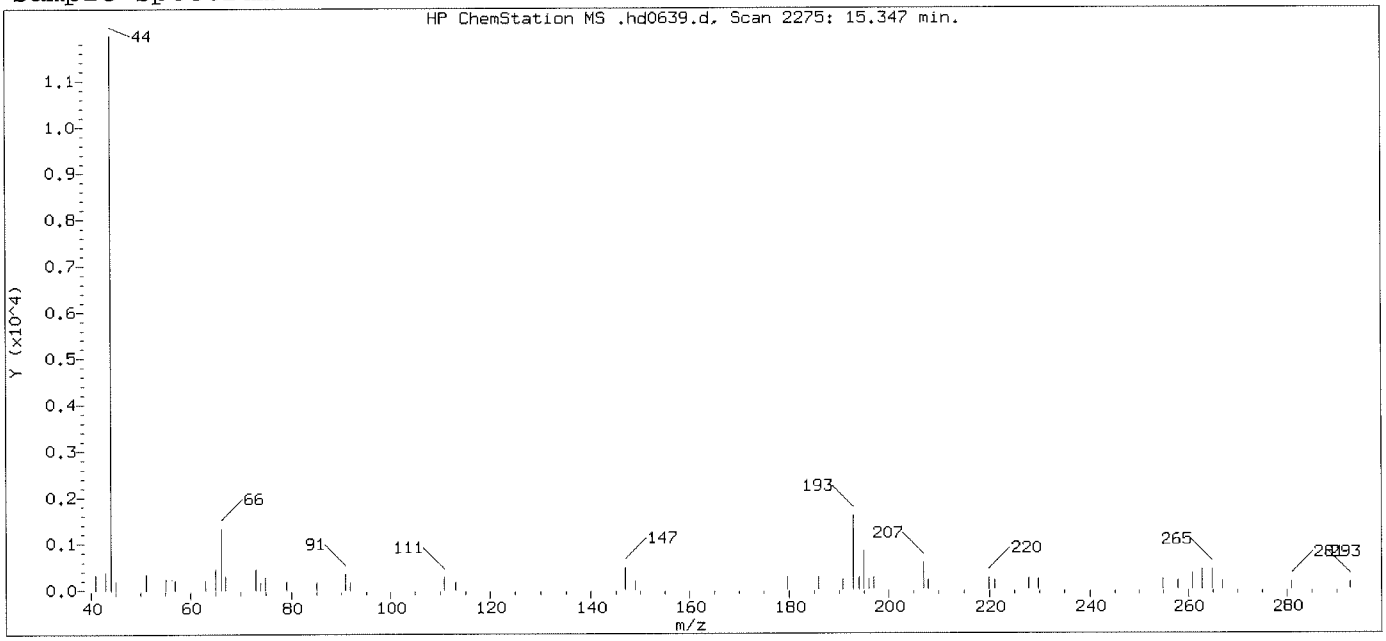
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

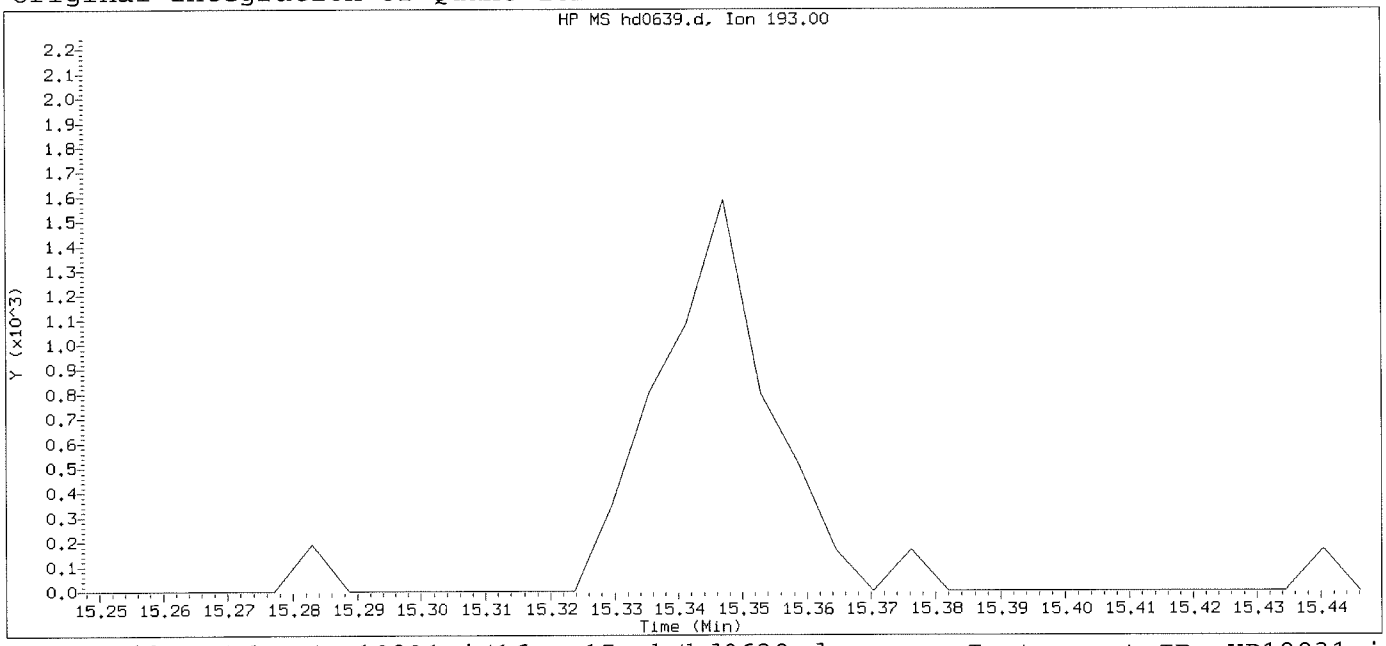
GC/MS audit/management approval: APR 19 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

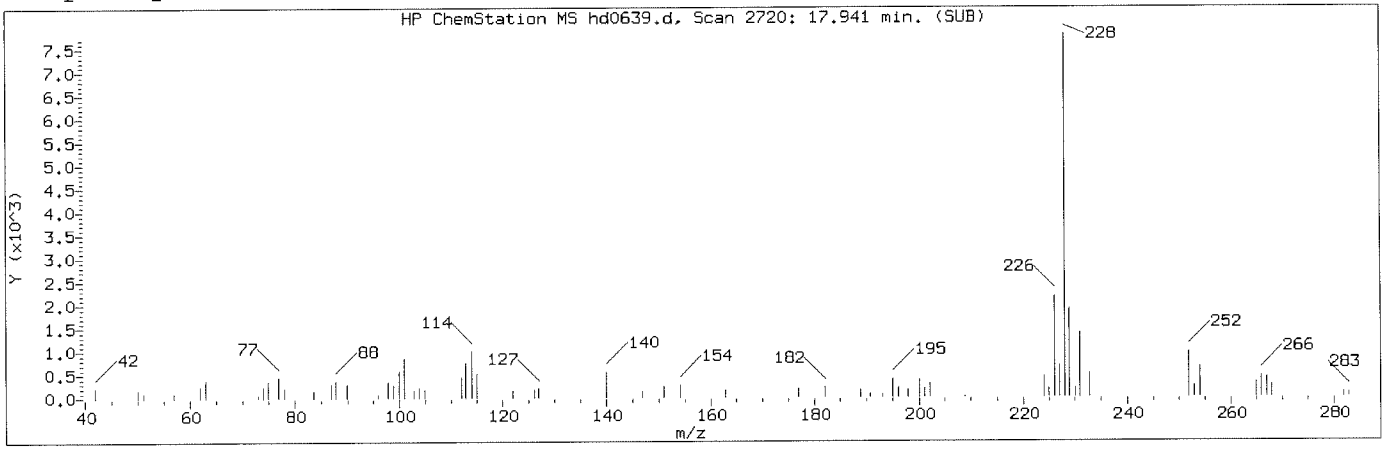
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

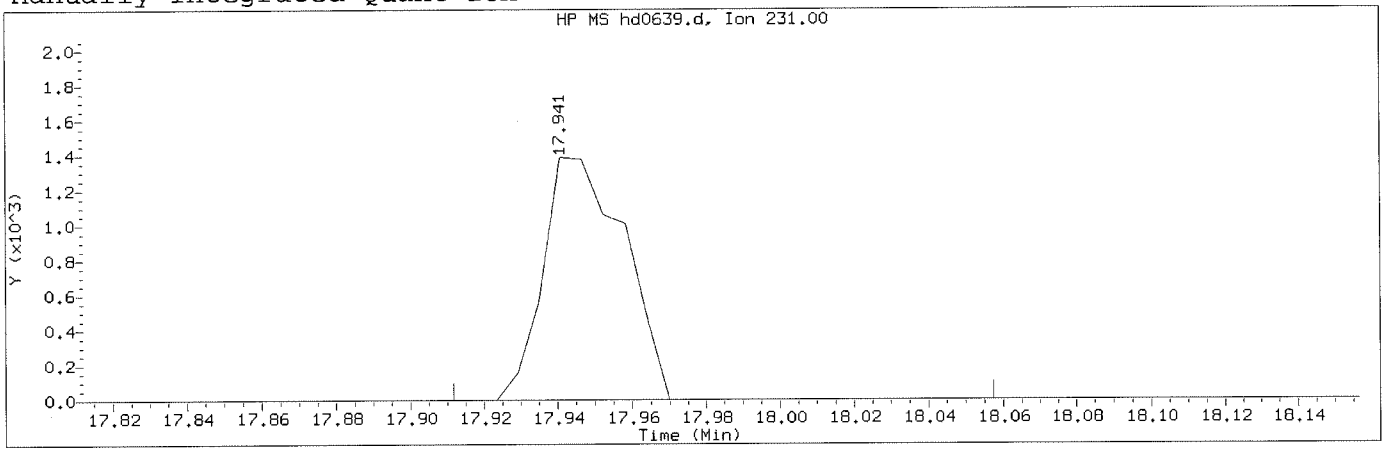
Compound Number : 171
Compound Name : Isodrin
Expected RT (minutes) : 15.347
Quant Ion : 193.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number	: 198		
Compound Name	: 4,4'-Methylenebis(2-chloroanil		
Scan Number	: 2720		
Retention Time (minutes)	: 17.941		
Quant Ion	: 231.00		
Area (flag)	: 2104M		
On-Column Amount (ng/ul)	: 0.0797		
Integration start scan	: 2714	Integration stop scan:	2739
Y at integration start	: 0	Y at integration end:	0

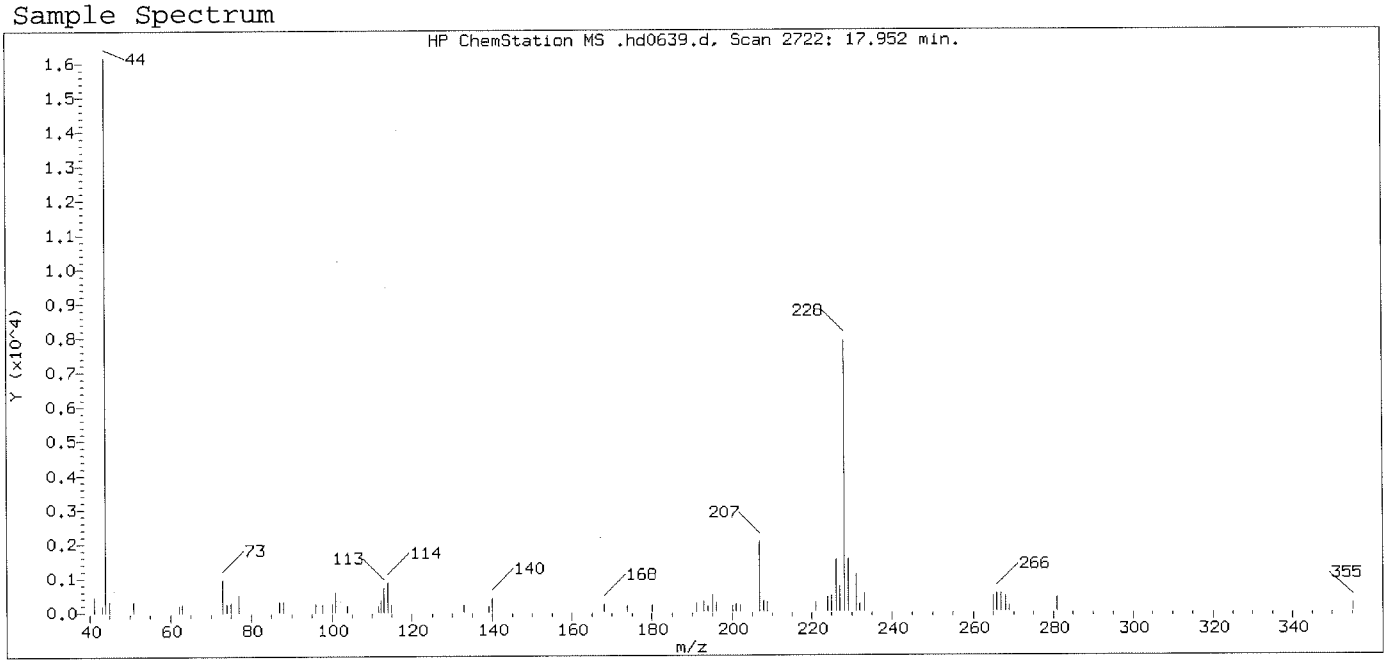
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 signature user ID: hbz01996

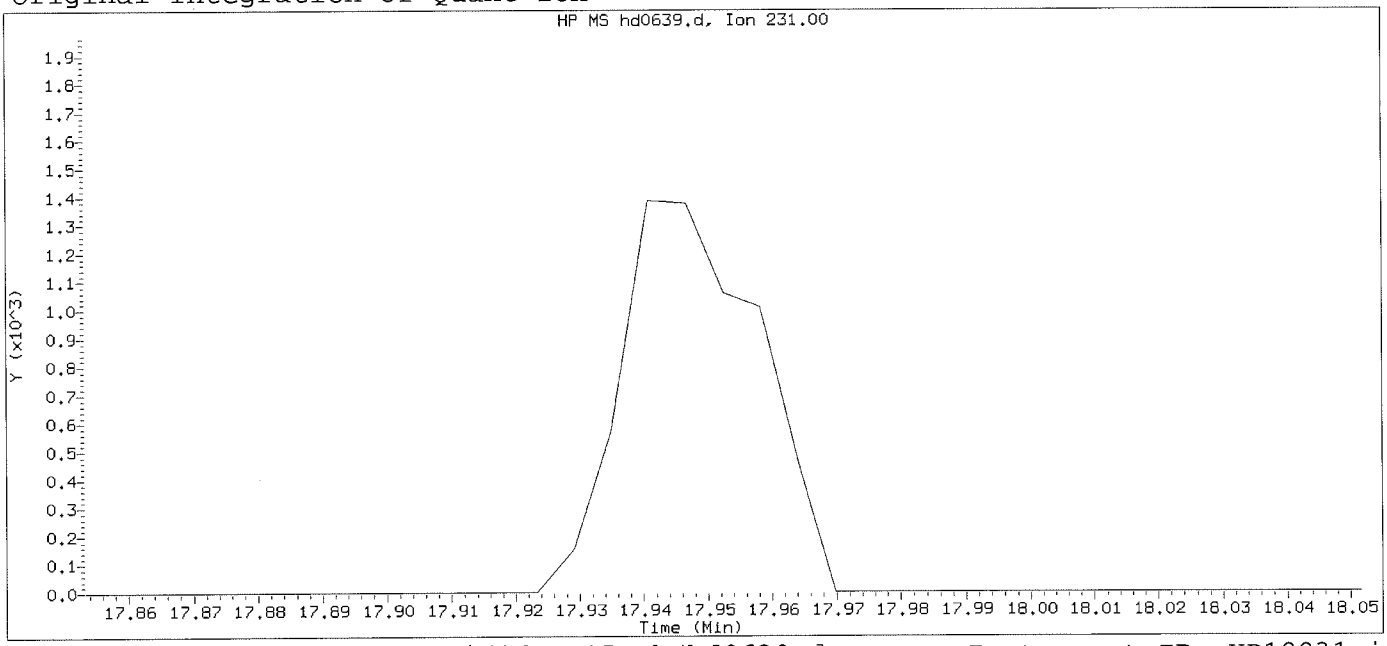
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



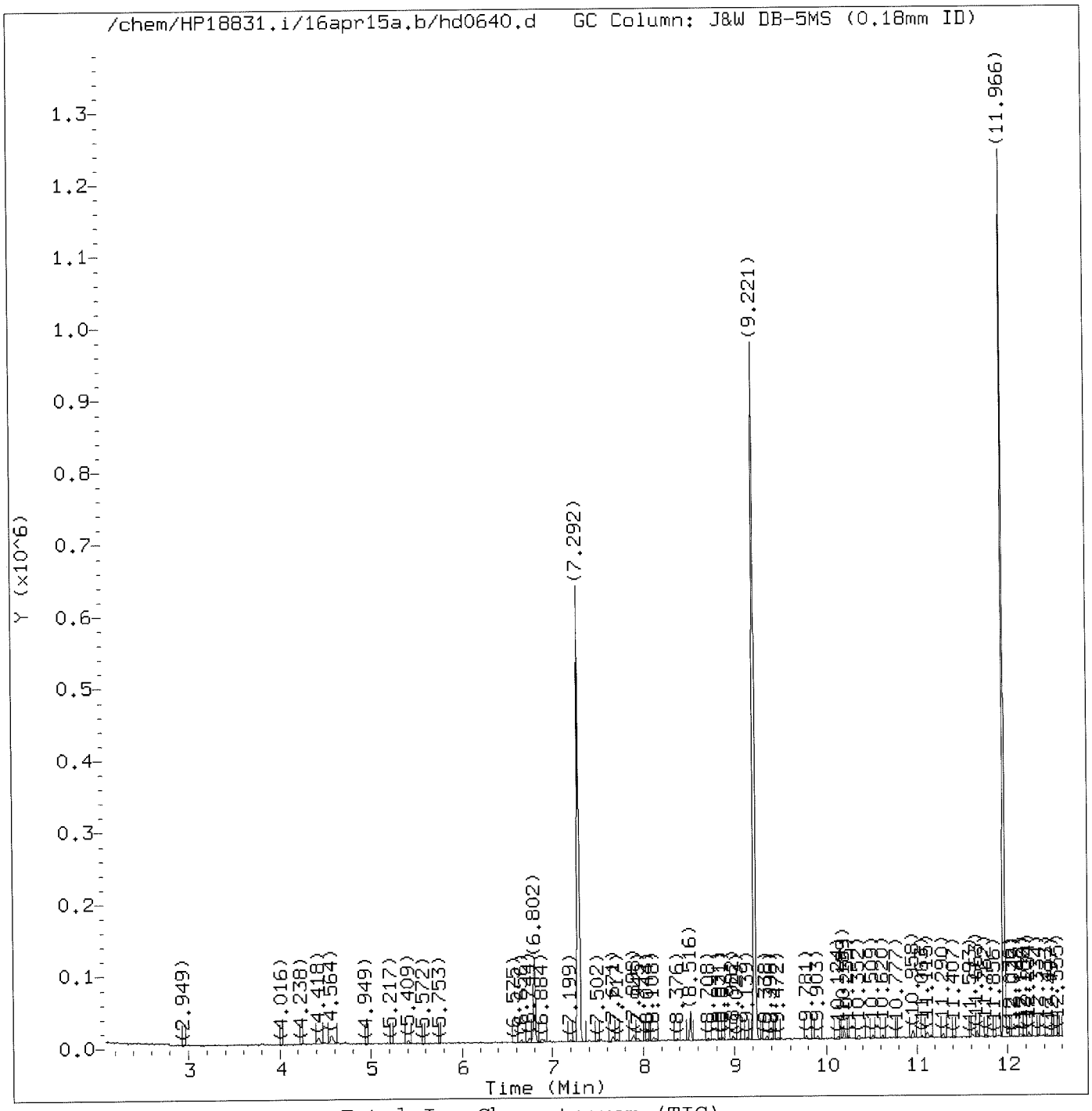
Data File: /chem/HP18831.i/16apr15a.b/hd0639.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 21:39 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVMDL0816

Compound Number : 198
Compound Name : 4,4'-Methylenebis(2-chloroanil
Expected RT (minutes) : 17.952
Quant Ion : 231.00

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

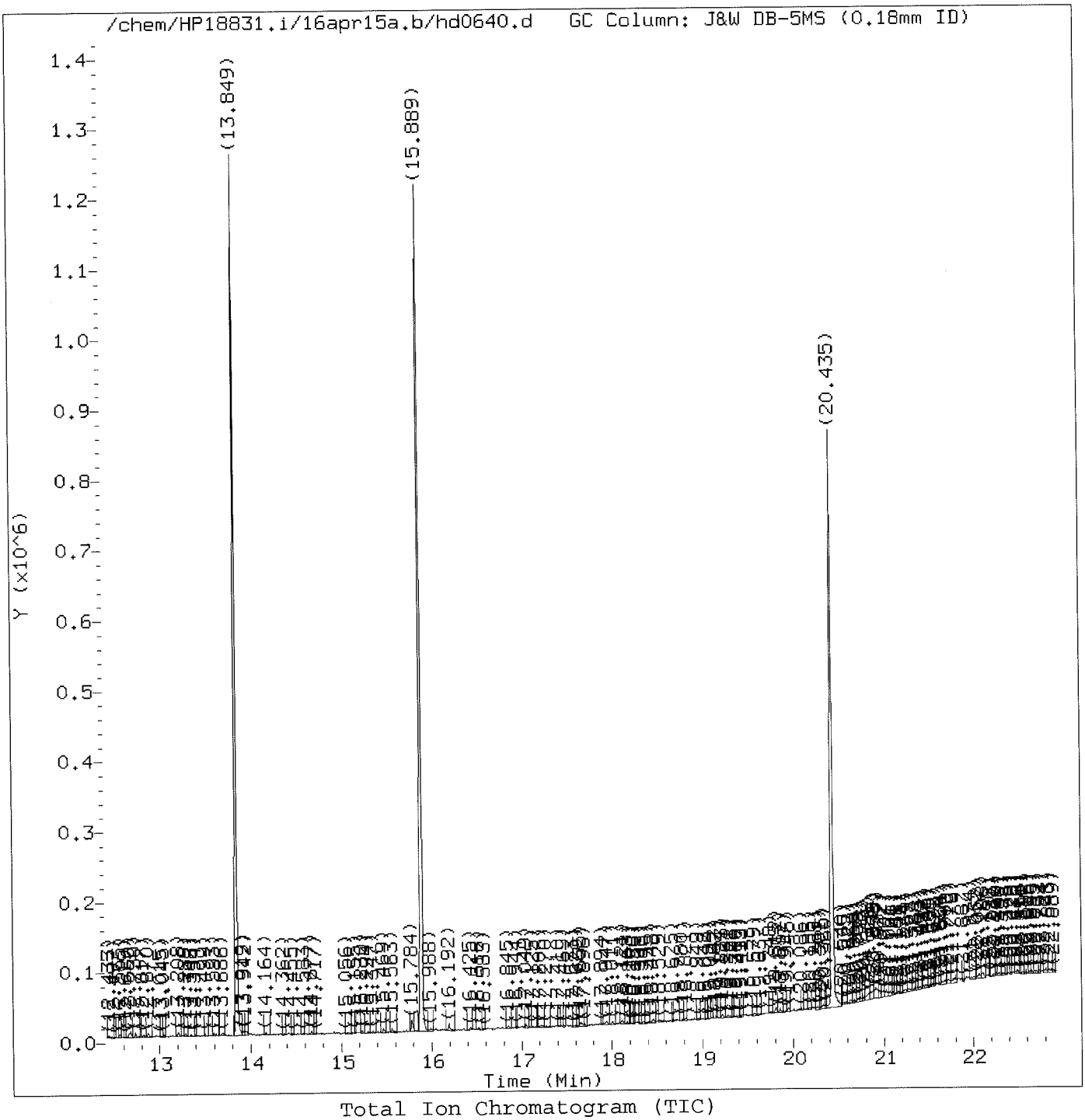
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 09:06 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 09:06 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 09:06 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	7.286	152	142274	5.000
44)$Nitrobenzene-d5	(2)	8.114	82	2559	0.048
65)*Naphthalene-d8	(2)	9.221	136	539227	5.000
66) Naphthalene	(2)	9.250	128	2798	0.024
83) 2-Methylnaphthalene	(2)	10.358	142	1736	0.023
84) 1-Methylnaphthalene	(2)	10.509	142	1697	0.024
93)$2-Fluorobiphenyl	(3)	10.958	172	4103	0.049
109) Acenaphthylene	(3)	11.762	152	2449	0.024
113)*Acenaphthene-d10	(3)	11.966	164	295846	5.000
114) Acenaphthene	(3)	12.007	153	1724	0.025
126) Fluorene	(3)	12.660	166	1708	0.022
145) Hexachlorobenzene	(4)	13.348	284	514	0.023
153)*Phenanthrene-d10	(4)	13.849	188	554752	5.000
155) Phenanthrene	(4)	13.878	178	2803	0.025
157) Anthracene	(4)	13.948	178	2573	0.023
222) Total PAHs	(6)			41563	0.401
173) Fluoranthene	(4)	15.563	202	2820	0.022
175)*Pyrene-d10	(5)	15.889	212	668696	5.000
177) Pyrene	(5)	15.918	202	3747	0.027
179)$Terphenyl-d14	(5)	16.192	244	4412	0.047
195) Benzo(a)anthracene	(5)	17.947	228	2407	0.019
196) Chrysene	(5)	18.011	228	2396	0.020
206) Benzo(b)fluoranthene	(6)	19.806	252	2260	0.020
208) Benzo(k)fluoranthene	(6)	19.852	252	2249M	0.020
211) Benzo(a)pyrene	(6)	20.336	252	2183M	0.021
213)*Perylene-d12	(6)	20.435	264	441569	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	22.062	276	2195	0.020
220) Dibenz(a,h)anthracene	(6)	22.114	278	1573	0.017
221) Benzo(g,h,i)perylene	(6)	22.481	276	2245	0.024

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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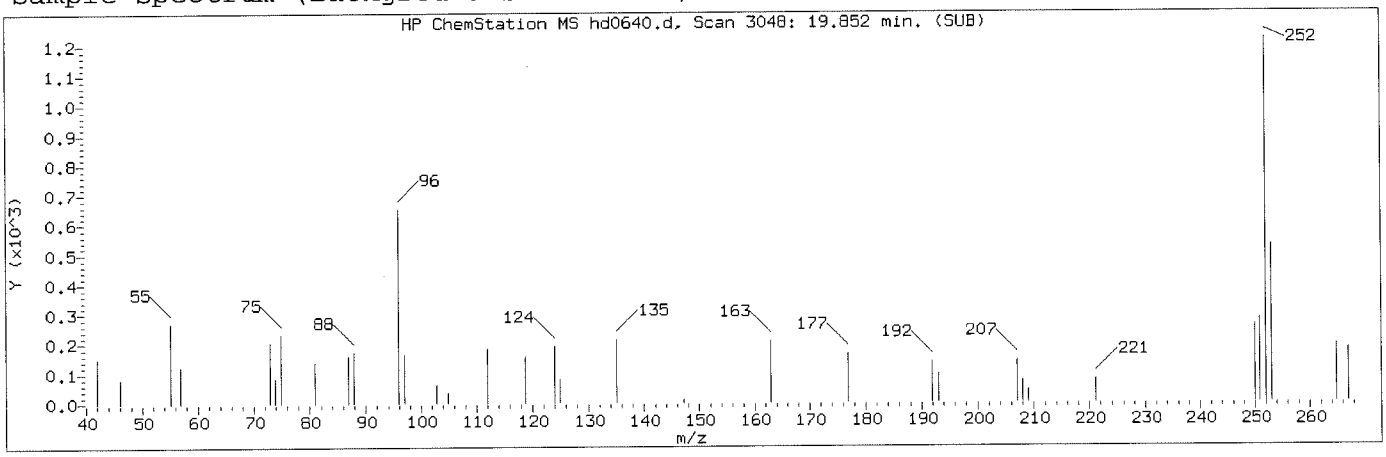
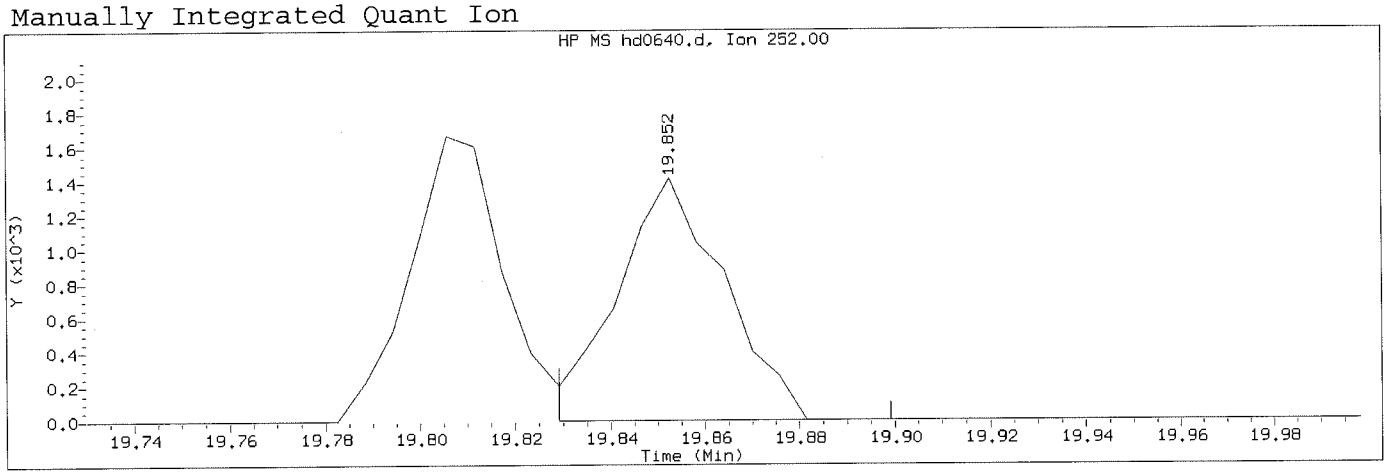
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 09:06 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3048		
Retention Time (minutes)	: 19.852		
Quant Ion	: 252.00		
Area (flag)	: 2249M		
On-Column Amount (ng/ul)	: 0.0201		
Integration start scan	: 3043	Integration stop scan:	3055
Y at integration start	: 0	Y at integration end:	0

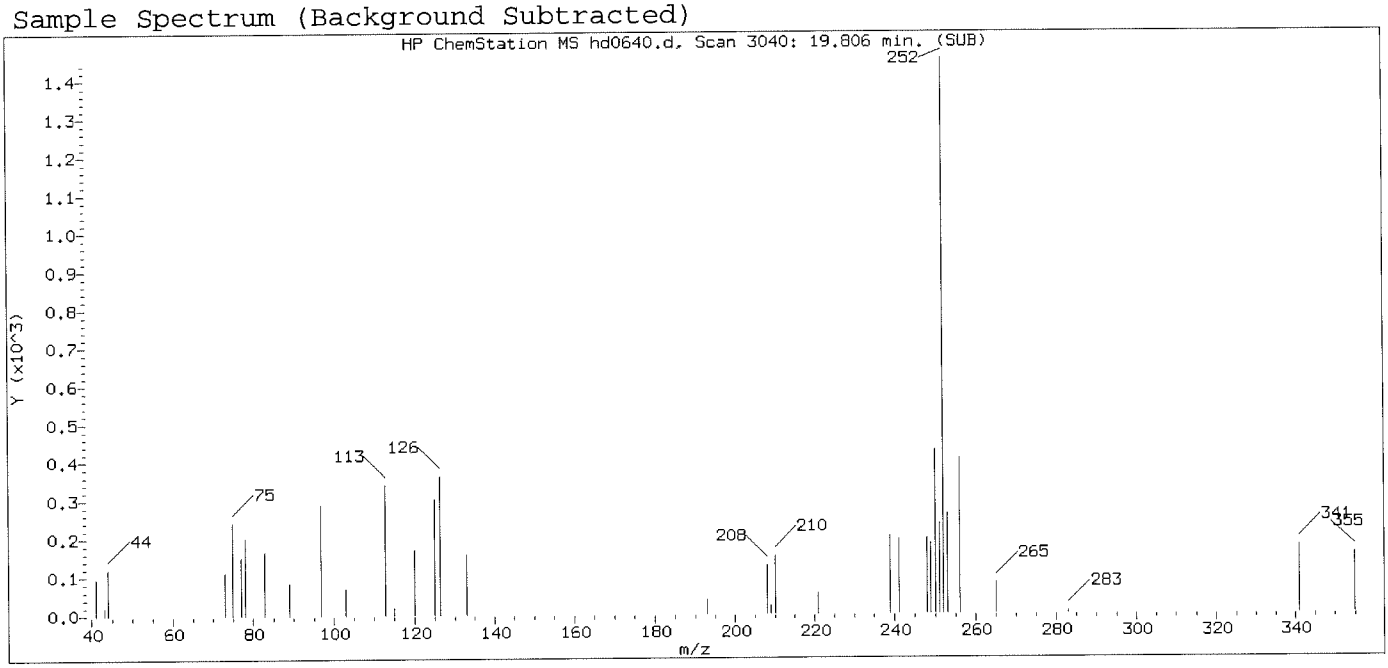
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996

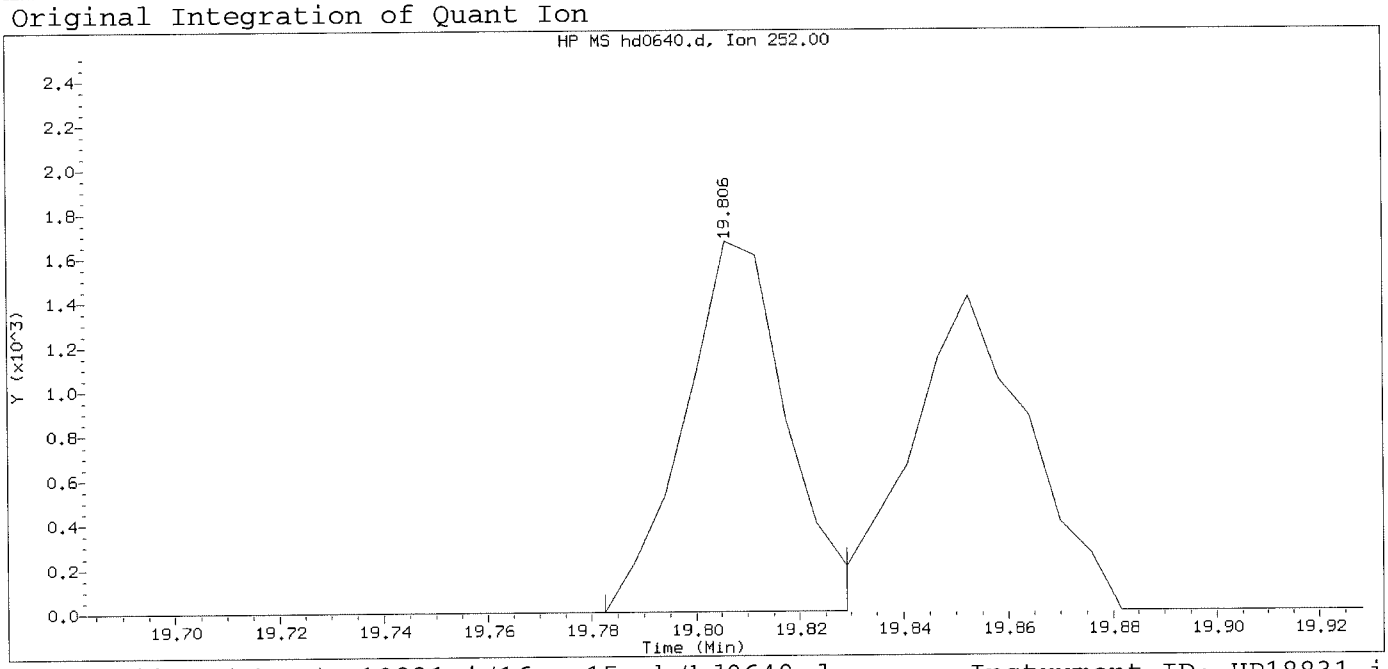
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	:	208
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	3040
Retention Time (minutes)	:	19.806
Quant Ion	:	252.00
Area	:	2260
On-column Amount (ng/ul)	:	0.0202
Integration start scan	:	3035
Integration stop scan	:	3043
Y at integration start	:	0
Y at integration end	:	0

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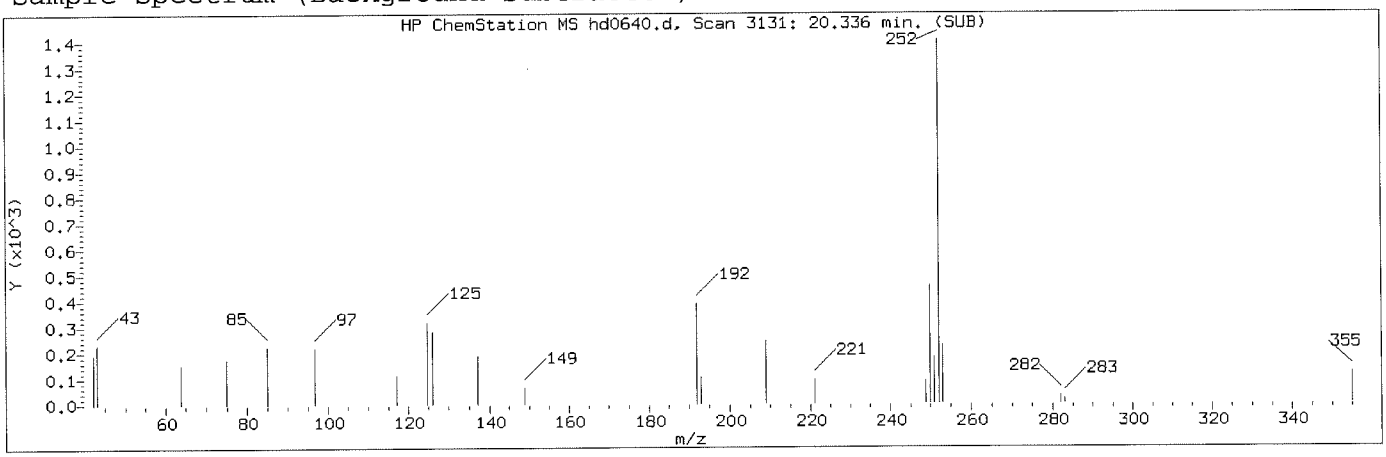
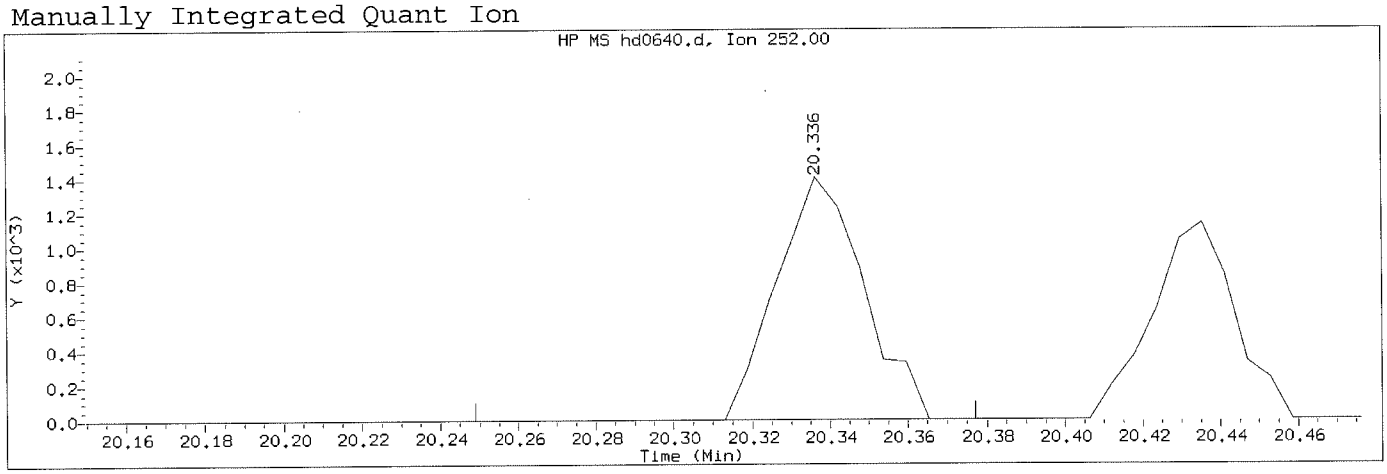
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 09:06 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3131		
Retention Time (minutes)	: 20.336		
Quant Ion	: 252.00		
Area (flag)	: 2183M		
On-Column Amount (ng/ul)	: 0.0210		
Integration start scan	: 3115	Integration stop scan:	3137
Y at integration start	: 0	Y at integration end:	0

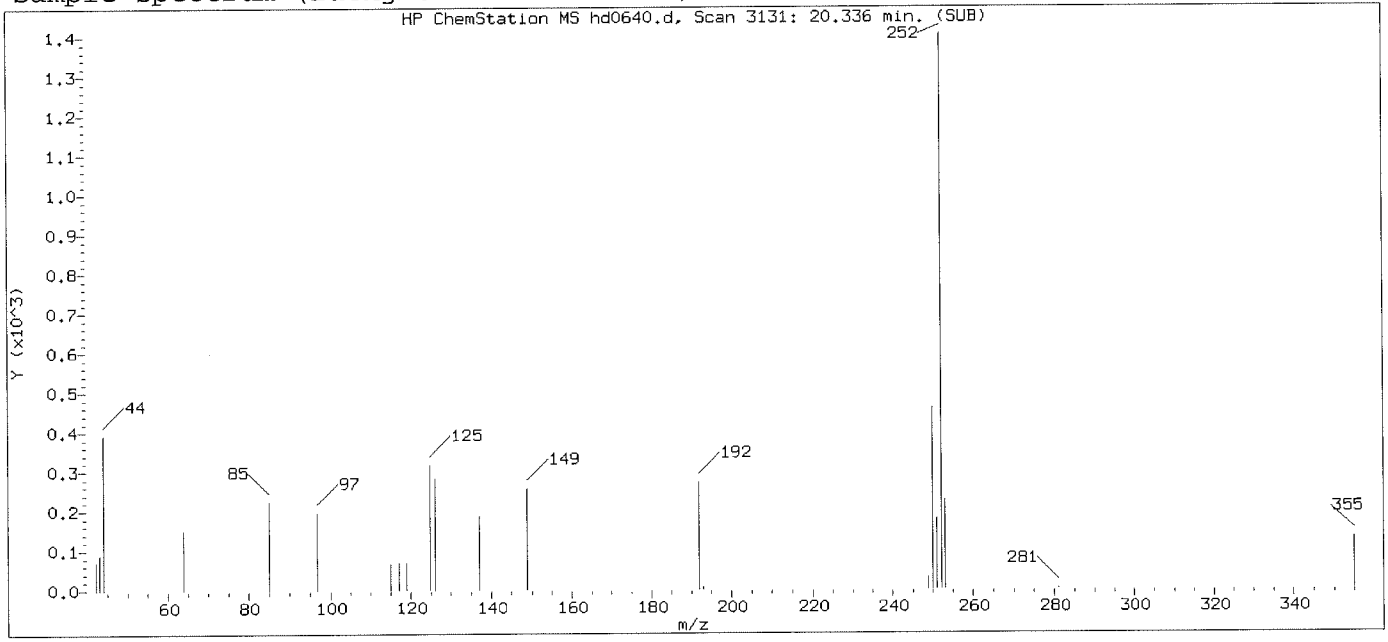
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 Signature user ID: hbz01996

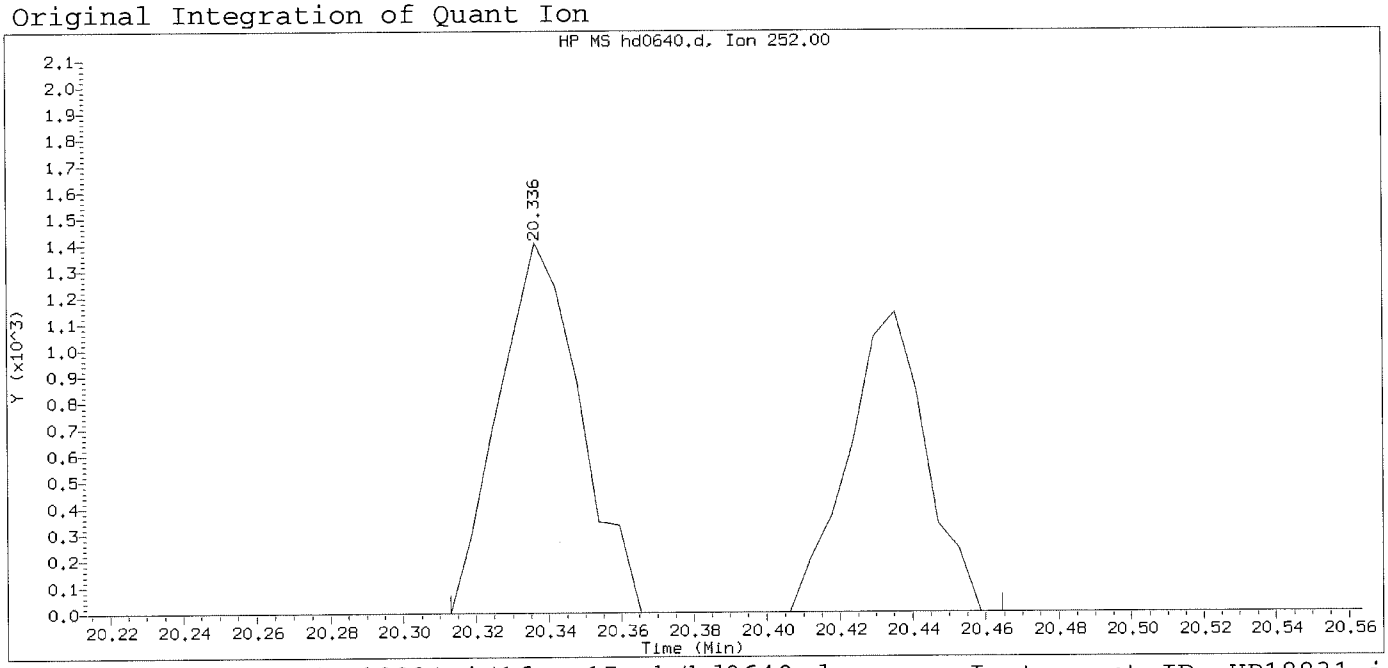
APR 19 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



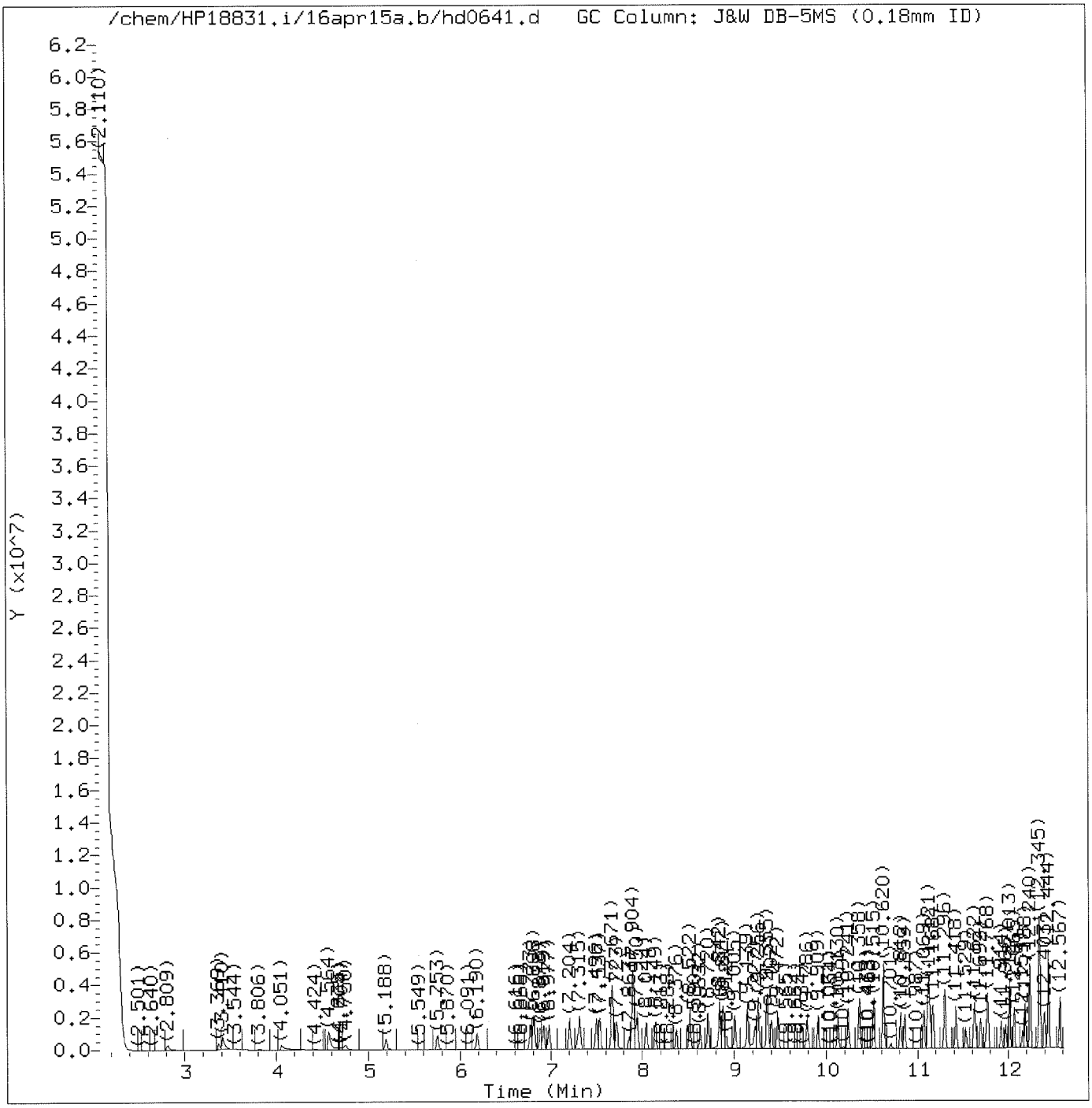
Data File: /chem/HP18831.i/16apr15a.b/hd0640.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:07 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: pahmdlal11
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3131		
Retention Time (minutes)	: 20.336		
Quant Ion	: 252.00		
Area	: 3872		
On-column Amount (ng/ul)	: 0.0372		
Integration start scan	: 3126	Integration stop scan:	3152
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

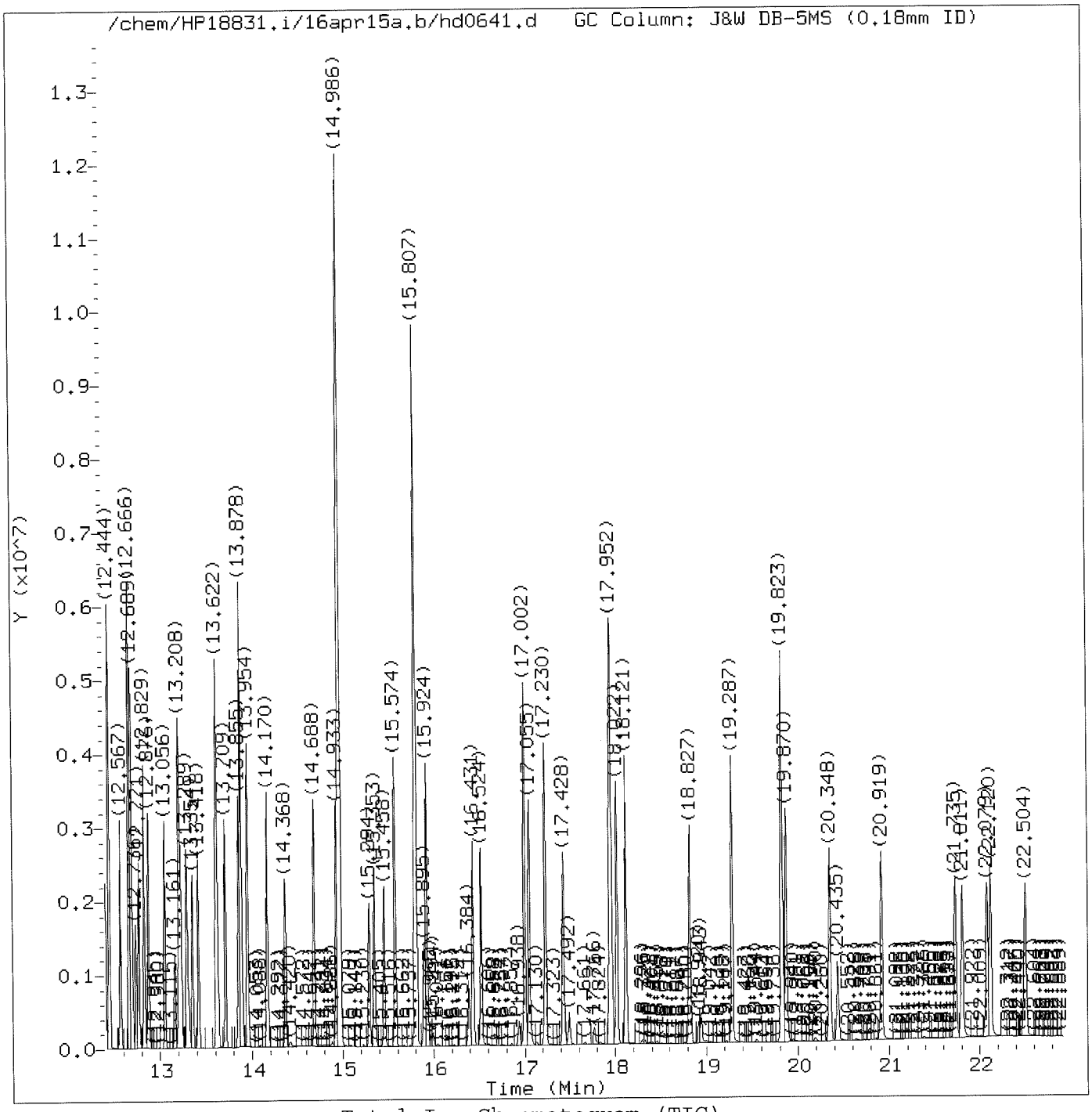
Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icval11
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.809	88	263249	12.041
4) N-Nitrosodimethylamine	(1)	3.369	74	446065	12.516
5) Pyridine	(1)	3.410	79	748041	13.038
7) 2-Picoline	(1)	4.570	93	764531	12.472
8) N-Nitrosomethylethylamine	(1)	4.750	88	311052	12.878
9) Methyl methanesulfonate	(1)	5.188	80	381549	13.685
42) Total Cresols	(1)	5.660	100	1198345	26.266
13) N-Nitrosodiethylamine	(1)	5.753	102	301110	12.758
15) Ethyl methanesulfonate	(1)	6.190	109	312435	13.074
18) Phenol	(1)	6.773	94	851177	12.507
19) Aniline	(1)	6.808	93	1064007	12.469
22) bis(2-Chloroethyl)ether	(1)	6.919	93	695553	12.726
23) 2-Chlorophenol	(1)	6.977	128	580963	12.895
24) 1,3-Dichlorobenzene	(1)	7.204	146	628663	13.049
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	159355	5.000
26) 1,4-Dichlorobenzene	(1)	7.315	146	640634	12.995
97) Isosafrole	(3)	7.383	162	522128	13.831
27) Benzyl alcohol	(1)	7.502	108	420966	13.086
28) 1,2-Dichlorobenzene	(1)	7.537	146	612256	13.126
31) 2-Methylphenol	(1)	7.665	108	594053	13.303
30) Indene	(1)	7.671	115	1058195	12.806
34) bis(2-Chloroisopropyl)ether	(1)	7.723	45	1100753	13.372
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.723	45	1100753	13.372
35) N-Nitrosopyrrolidine	(1)	7.863	100	316950	13.078
36) Acetophenone	(1)	7.898	105	911464	12.501
37) 4-Methylphenol	(1)	7.904	108	604292	12.962
38) N-Nitroso-di-n-propylamine	(1)	7.915	70	541512	12.862
39) N-Nitrosomorpholine	(1)	7.927	56	440888	12.588
40) o-Toluidine	(1)	7.950	106	1005364	12.621
43) Hexachloroethane	(1)	8.044	117	273597	13.108
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	659392	26.255
45) Nitrobenzene	(2)	8.149	77	797445	12.558
48) N-Nitrosopiperidine	(2)	8.376	114	288822	12.753
50) Isophorone	(2)	8.522	82	1417569	13.407
51) 2-Nitrophenol	(2)	8.632	139	310686	13.263
53) 2,4-Dimethylphenol	(2)	8.720	107	615282	12.336
146) Diallate trans/cis	(4)	8.775	86	606696	12.032
57) O,O,O-Triethylphosphorothioate	(2)	8.842	198	322887	12.856
55) bis(2-Chloroethoxy)methane	(2)	8.877	93	871673	12.964
56) Benzoic acid	(2)	8.912	105	863825	20.669

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	9.005	162	479493	13.088
62) 1,2,4-Trichlorobenzene	(2)	9.139	180	575800	13.008
65)*Naphthalene-d8	(2)	9.227	136	616608	5.000
66) Naphthalene	(2)	9.256	128	1685963	12.862
67) 4-Chloroaniline	(2)	9.349	127	715857	13.277
68) 2,6-Dichlorophenol	(2)	9.361	162	469194	13.019
69) Hexachloropropene	(2)	9.402	213	408953	14.632
71) Hexachlorobutadiene	(2)	9.472	225	347560	13.100
75) Quinoline	(2)	9.786	129	1047233	12.819
77) N-Nitrosodi-n-butylamine	(2)	9.909	84	491593	11.161
80) 4-Chloro-3-methylphenol	(2)	10.130	107	552849	13.074
82) Safrole	(2)	10.241	162	431079	12.887
83) 2-Methylnaphthalene	(2)	10.358	142	1091325	12.473
84) 1-Methylnaphthalene	(2)	10.515	142	1018203	12.683
85) Hexachlorocyclopentadiene	(3)	10.620	237	715502	25.349
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.626	216	592739	12.674
88) cis-Isosafrole	(3)	10.707	162	59058	1.616
90) 2,4,6-Trichlorophenol	(3)	10.812	196	391386	13.238
92) 2,4,5-Trichlorophenol	(3)	10.859	196	408609	13.131
94) trans-Isosafrole	(3)	11.069	162	463070	12.215
95) 1,1'-Biphenyl	(3)	11.115	154	1335762	12.327
96) 2-Chloronaphthalene	(3)	11.133	162	1102066	12.806
98) 1-Chloronaphthalene	(3)	11.168	162	971347	12.108
99) Diphenyl ether	(3)	11.296	170	702719	12.157
100) 2-Nitroaniline	(3)	11.302	138	330966	13.116
104) 1,4-Naphthoquinone	(3)	11.418	158	553843	15.748
105) 1,4-Dinitrobenzene	(3)	11.529	168	181252	12.799
106) Dimethylphthalate	(3)	11.622	163	1205371	12.438
107) 1,3-Dinitrobenzene	(3)	11.640	168	196815	12.870
108) 2,6-Dinitrotoluene	(3)	11.692	165	276901	13.289
109) Acenaphthylene	(3)	11.768	152	1633935	13.084
112) 3-Nitroaniline	(3)	11.920	138	290718	13.452
113)*Acenaphthene-d10	(3)	11.966	164	357766	5.000
114) Acenaphthene	(3)	12.013	153	1107884	13.061
115) 2,4-Dinitrophenol	(3)	12.065	184	372377	25.903
116) 4-Nitrophenol	(3)	12.159	109	199394M	12.651
117) Pentachlorobenzene	(3)	12.188	250	473980	12.673
119) Dibenzofuran	(3)	12.240	168	1473558	12.683
118) 2,4-Dinitrotoluene	(3)	12.240	165	382491	12.966
121) 1-Naphthylamine	(3)	12.345	143	2093375	24.176

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icval11
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
122) 2,3,4,6-Tetrachlorophenol	(3)	12.403	232	328890	13.587
123) 2-Naphthylamine	(3)	12.444	143	2099500	24.812
124) Diethylphthalate	(3)	12.567	149	1223855	12.897
125) Thionazin	(3)	12.660	107	211025	12.800
126) Fluorene	(3)	12.666	166	1208495	13.161
128) 5-Nitro-o-toluidine	(3)	12.689	152	344272	13.915
127) 4-Chlorophenyl-phenylether	(3)	12.689	204	609746	12.841
129) 4-Nitroaniline	(3)	12.701	138	295304	13.024
130) 4,6-Dinitro-2-methylphenol	(4)	12.736	198	251613	12.897
131) N-Nitrosodiphenylamine	(4)	12.829	169	1005293	12.703
132) NDPA as diphenylamine	(4)	12.829	169	1005293	12.703
134) 1,2-Diphenylhydrazine	(4)	12.876	77	1509055	12.623
137) Tetraethyldithiopyrophosphate	(4)	13.056	97	230341	12.356
139) 1,3,5-Trinitrobenzene	(4)	13.161	213	155148	12.473
140) Diallate (peak 1)	(4)	13.202	86	455921	8.985
141) Phorate	(4)	13.214	75	955920	12.731
142) Phenacetin	(4)	13.231	108	708692	13.154
143) 4-Bromophenyl-phenylether	(4)	13.289	248	351725	12.822
144) Diallate (peak 2)	(4)	13.313	86	150775	3.047
145) Hexachlorobenzene	(4)	13.354	284	358352	12.428
147) Dimethoate	(4)	13.418	87	625824	12.831
149) Pentachlorophenol	(4)	13.610	266	257561	13.592
150) 4-Aminobiphenyl	(4)	13.622	169	1354888	17.829
151) Pentachloronitrobenzene	(4)	13.627	237	171260	12.390
152) Pronamide	(4)	13.709	173	610607	13.406
153)*Phenanthrene-d10	(4)	13.855	188	703347	5.000
154) Dinoseb	(4)	13.861	211	392347	13.515
155) Phenanthrene	(4)	13.884	178	1782442	12.436
157) Anthracene	(4)	13.954	178	1862700	13.307
163) Carbazole	(4)	14.170	167	1699254	12.657
164) Methyl parathion	(4)	14.368	109	485194	13.020
165) Di-n-butylphthalate	(4)	14.688	149	2192092	12.906
167) Parathion	(4)	14.933	109	291100	12.961
168) 4-Nitroquinoline-1-oxide	(4)	14.986	190	3050155	179.602
222) Total PAHs	(6)	15.000	100	29960949	235.905
171) Isodrin	(4)	15.353	193	222249	12.677
173) Fluoranthene	(4)	15.574	202	2117673	13.066
174) Benzidine	(5)	15.807	184	5908207	51.672
175)*Pyrene-d10	(5)	15.895	212	832115	5.000
177) Pyrene	(5)	15.924	202	2149320	12.521

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

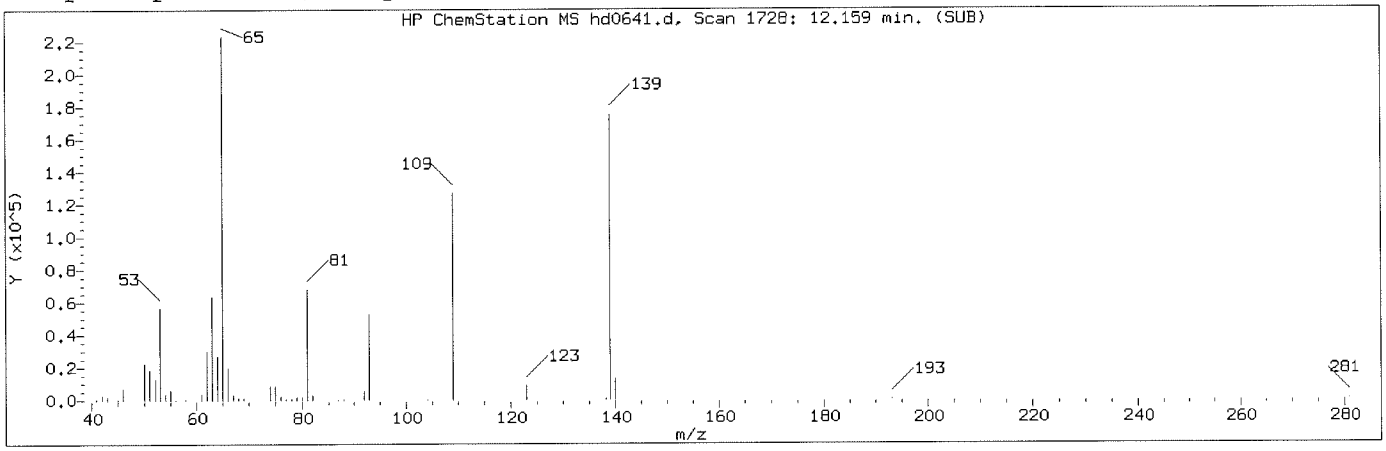
Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.437	225	448341	15.767
185) Chlorobenzilate	(5)	16.524	139	677229	13.167
187) 3,3'-Dimethylbenzidine	(5)	17.002	212	2467456	23.650
188) Butylbenzylphthalate	(5)	17.055	149	965573	13.111
191) 2-Acetylaminofluorene	(5)	17.428	181	820530	13.188
193) 3,3'-Dichlorobenzidine	(5)	17.941	252	708275	12.065
195) Benzo(a)anthracene	(5)	17.958	228	2010127	12.988
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.958	231	396105	12.251
196) Chrysene	(5)	18.022	228	1915284	13.118
199) bis(2-Ethylhexyl)phthalate	(5)	18.121	149	1371941	13.096
203) 6-Methylchrysene	(5)	18.827	242	1266742	12.122
205) Di-n-octylphthalate	(6)	19.287	149	2396325	14.220
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.823	256	785612	13.354
206) Benzo(b)fluoranthene	(6)	19.823	252	1920007	13.830
208) Benzo(k)fluoranthene	(6)	19.870	252	1876834	13.756
211) Benzo(a)pyrene	(6)	20.348	252	1694256	13.333
213)*Perylene-d12	(6)	20.435	264	539639	5.000
215) 3-Methylcholanthrene	(6)	20.919	268	837677	16.046
217) Dibenz(a,h)acridine	(6)	21.735	279	1306899	12.599
218) Dibenz(a,j)acridine	(6)	21.811	279	1342456	12.870
219) Indeno(1,2,3-cd)pyrene	(6)	22.079	276	1805633	13.315
220) Dibenz(a,h)anthracene	(6)	22.120	278	1563216	13.778
221) Benzo(g,h,i)perylene	(6)	22.504	276	1517652	13.132

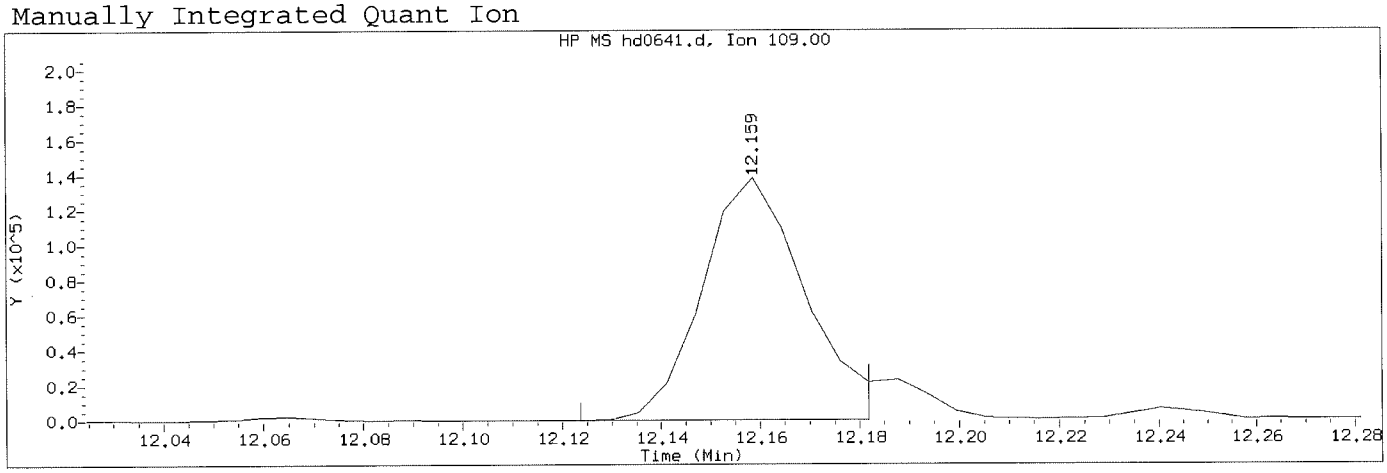
* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icval11
Calibration date and time: 18-APR-2016 09:12
Date, time and analyst ID of latest file update: 18-Apr-2016 09:13 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1728		
Retention Time (minutes)	: 12.159		
Quant Ion	: 109.00		
Area (flag)	: 199394M		
On-Column Amount (ng/ul)	: 12.6511		
Integration start scan	: 1721	Integration stop scan:	1731
Y at integration start	: 0	Y at integration end:	0

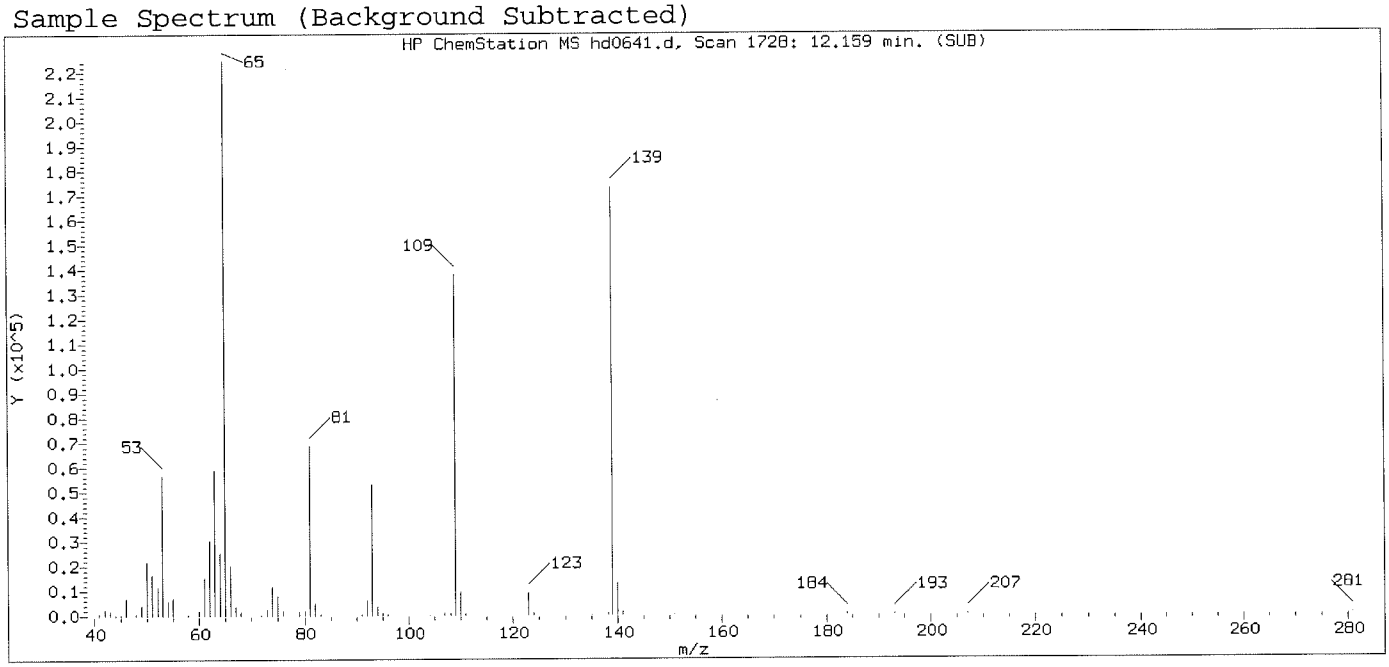
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20
Target 3.5 signature user ID: hbz01996

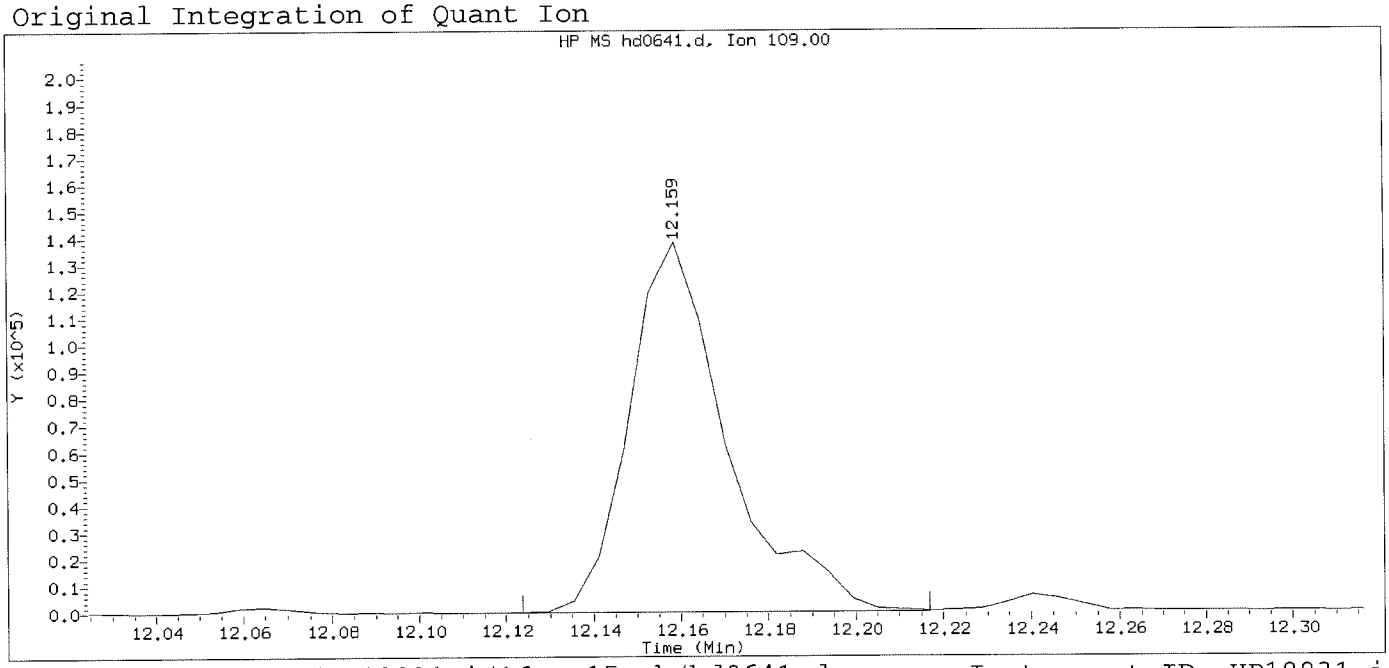
APR 19 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



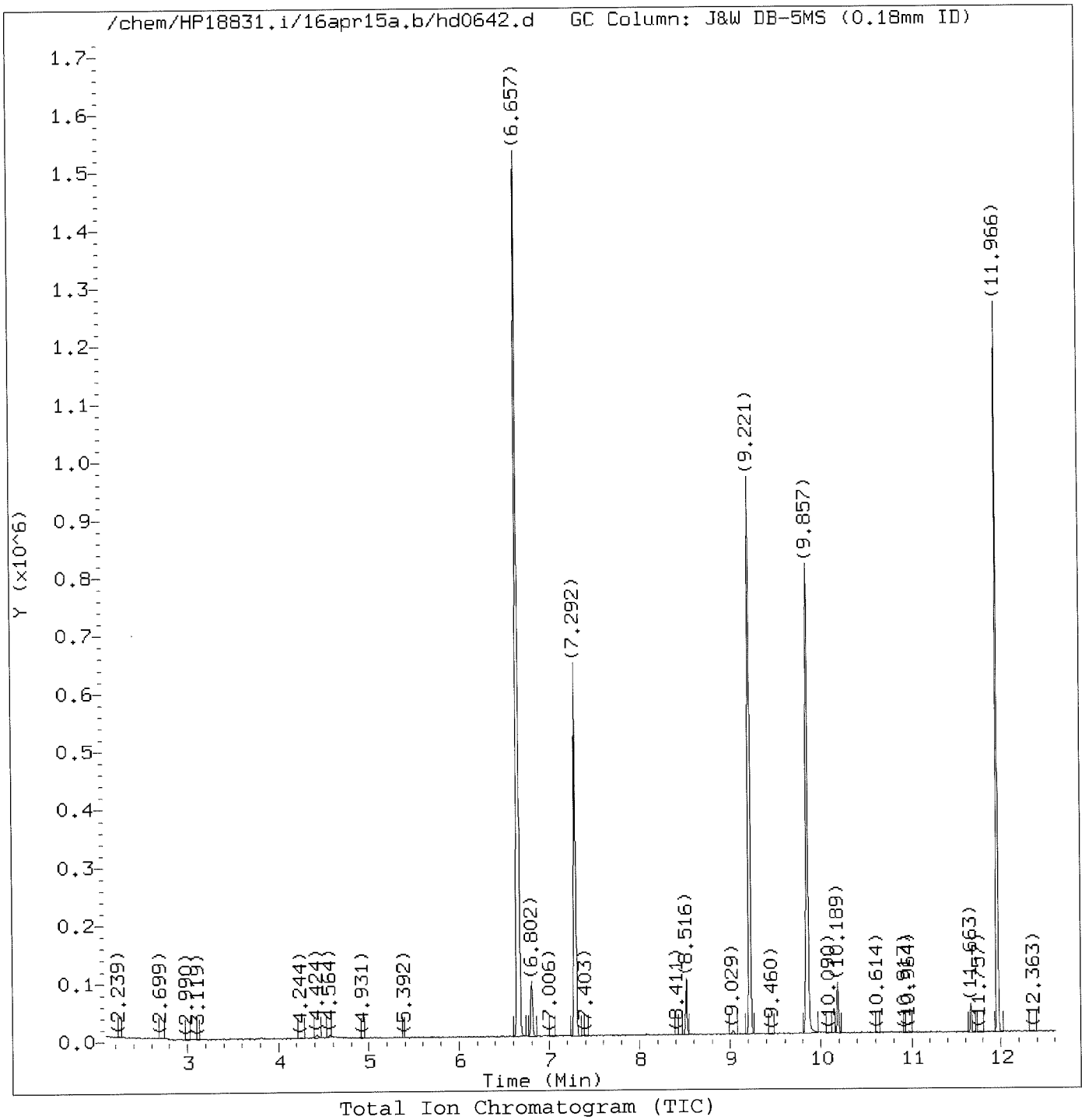
Data File: /chem/HP18831.i/16apr15a.b/hd0641.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 22:36 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: icval11
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV3205

Compound Number	: 116		
Compound Name	: 4-Nitrophenol		
Scan Number	: 1728		
Retention Time (minutes)	: 12.159		
Quant Ion	: 109.00		
Area	: 215108		
On-column Amount (ng/ul)	: 13.6481		
Integration start scan	: 1721	Integration stop scan:	1737
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0642.d
Injection date and time: 15-APR-2016 23:05

Instrument ID: HP18831.i
Analyst ID: aap07680

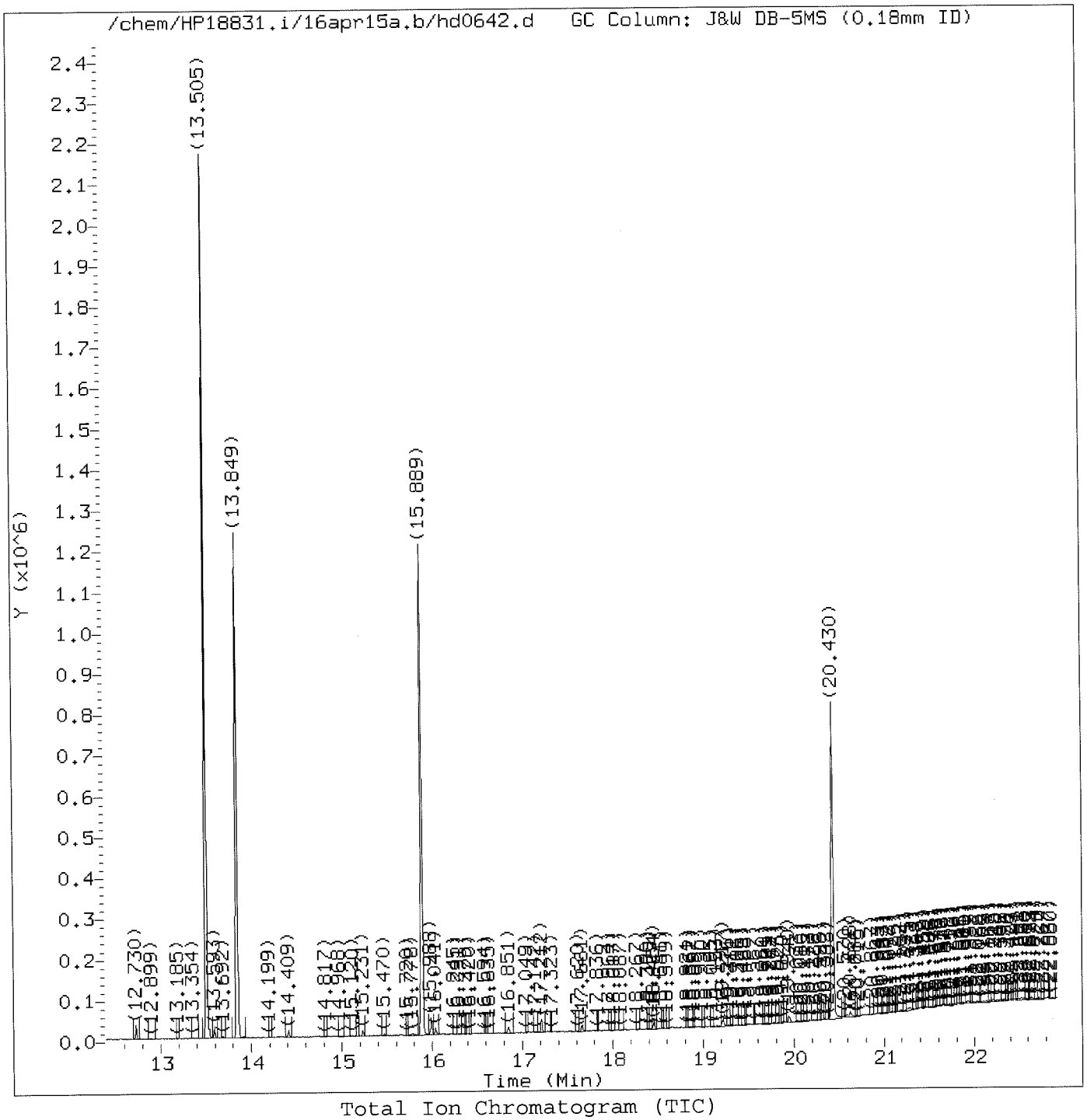
Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sublist used: basicval11

Sample Name: SSTD12.5

Lab Sample ID: RVBASICV0716

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0642.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 23:05 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: basicval11
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV0716

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16apr15a.b/hd0642.d Instrument ID: HP18831.i
Injection date and time: 15-APR-2016 23:05 Analyst ID: aap07680

Method used: /chem/HP18831.i/16apr15a.b/rv8270d.m Sublist used: basicval11
Calibration date and time: 18-APR-2016 08:10
Date, time and analyst ID of latest file update: 18-Apr-2016 08:19 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV0716

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.657	77	554739	14.012
25)*1,4-Dichlorobenzene-d4	(1)	7.292	152	140392	5.000
65)*Naphthalene-d8	(2)	9.221	136	533916	5.000
76) Caprolactam	(2)	9.857	113	124077	11.698
113)*Acenaphthene-d10	(3)	11.966	164	302013	5.000
148) Atrazine	(4)	13.511	200	283506	12.320
153)*Phenanthrene-d10	(4)	13.849	188	566367	5.000
175)*Pyrene-d10	(5)	15.889	212	667427	5.000
213)*Perylene-d12	(6)	20.430	264	426137	5.000

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 04/18/2016 at 09:20.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP18831.i/16may06a.b/he0400.d

Date : 06-MAY-2016 18:27

Client ID: DFTPP

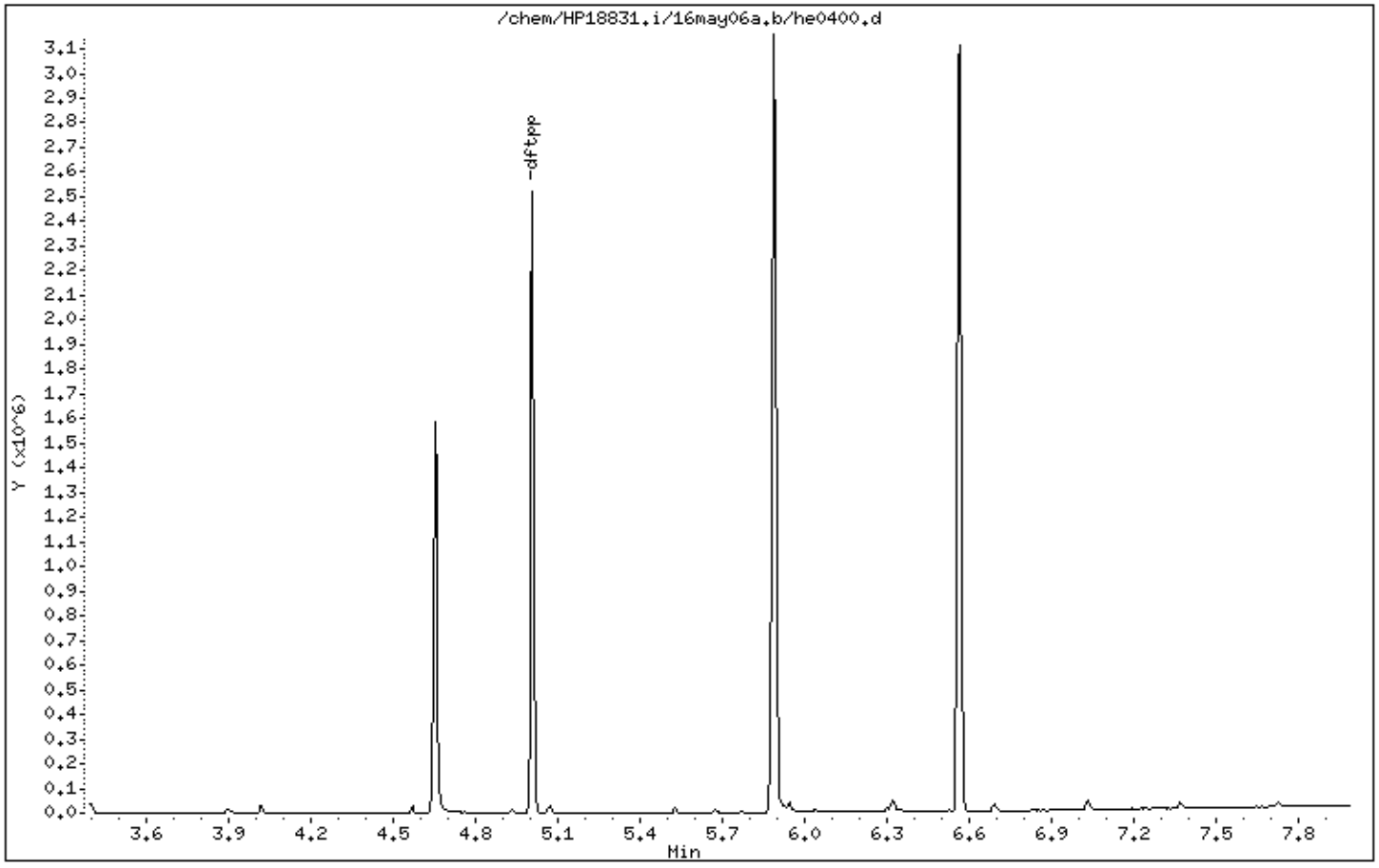
Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Data File: /chem/HP18831.i/16may06a.b/he0400.d

Date : 06-MAY-2016 18:27

Client ID: DFTPP

Instrument: HP18831.i

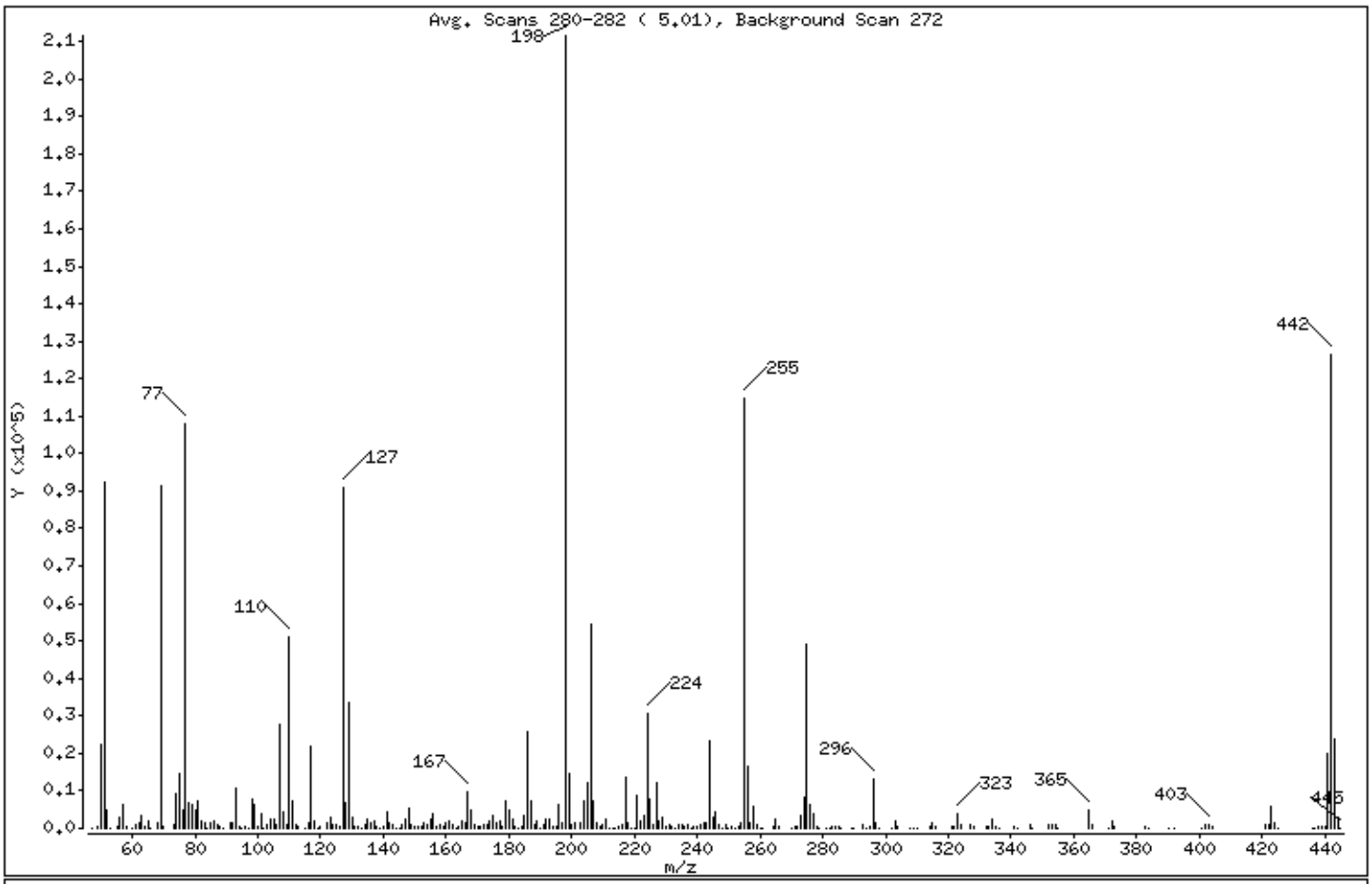
Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	43.70
68	Less than 2.00% of mass 69	0.71 (1.65)
69	Mass 69 relative abundance	43.30
70	Less than 2.00% of mass 69	0.19 (0.44)
127	10.00 - 80.00% of mass 198	42.97
197	Less than 2.00% of mass 198	0.75
199	5.00 - 9.00% of mass 198	6.95
275	10.00 - 60.00% of mass 198	23.27
365	Greater than 1.00% of mass 198	2.26
441	0.01 - 24.00% of mass 442	9.46 (15.81)
442	50.00 - 99.99% of mass 198	59.83
443	15.00 - 24.00% of mass 442	11.22 (18.75)

Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Date : 06-MAY-2016 18:27

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: he0400.d
Spectrum: Avg. Scans 280-282 (5.01), Background Scan 272
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	59	129.00	33760	203.00	1457	282.00	66
49.00	652	130.00	2997	204.00	7159	283.00	455
50.00	22576	131.00	604	205.00	12237	284.00	286
51.00	92440	132.00	252	206.00	54528	285.00	657
52.00	4691	133.00	70	207.00	7436	286.00	60
53.00	210	134.00	961	208.00	1581	289.00	52
55.00	507	135.00	2615	209.00	540	290.00	125
56.00	2740	136.00	1237	210.00	740	293.00	941
57.00	6268	137.00	1759	211.00	2283	294.00	232
58.00	285	138.00	289	212.00	81	295.00	410
60.00	51	139.00	204	213.00	88	296.00	12951
61.00	898	140.00	430	214.00	57	297.00	1671
62.00	1246	141.00	4560	215.00	562	298.00	121
63.00	3637	142.00	1406	216.00	1197	302.00	157
64.00	544	143.00	1033	217.00	13484	303.00	1719
65.00	1826	144.00	217	218.00	1675	304.00	333
66.00	99	145.00	190	219.00	132	308.00	51
68.00	1512	146.00	910	220.00	60	309.00	72
69.00	91584	147.00	2315	221.00	8686	310.00	75
70.00	403	148.00	5360	222.00	1933	314.00	577
73.00	745	149.00	1072	223.00	3268	315.00	1394
74.00	9353	150.00	327	224.00	30400	316.00	670
75.00	14748	151.00	519	225.00	7680	321.00	445
76.00	5041	152.00	382	226.00	832	322.00	245
77.00	107808	153.00	1514	227.00	11964	323.00	3868
78.00	6817	154.00	1197	228.00	1799	324.00	747
79.00	6220	155.00	2464	229.00	2679	327.00	771
80.00	4823	156.00	3765	230.00	301	328.00	382
81.00	7166	157.00	692	231.00	1071	332.00	282
82.00	1858	158.00	896	232.00	253	333.00	376
83.00	1666	159.00	655	233.00	118	334.00	2456
84.00	203	160.00	1603	234.00	782	335.00	600
85.00	1263	161.00	2059	235.00	871	336.00	74
86.00	1942	162.00	731	236.00	518	341.00	432
87.00	899	163.00	189	237.00	972	342.00	86

Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Date : 06-MAY-2016 18:27

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: he0400.d
Spectrum: Avg. Scans 280-282 (5.01), Background Scan 272
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	282	164.00	279	238.00	232	346.00	777
89.00	177	165.00	1745	239.00	619	347.00	89
91.00	1636	166.00	1493	240.00	404	352.00	1176
92.00	1547	167.00	9560	241.00	803	353.00	889
93.00	10614	168.00	5041	242.00	1541	354.00	1161
94.00	690	169.00	932	243.00	1526	355.00	183
95.00	217	170.00	326	244.00	23560	365.00	4775
96.00	378	171.00	403	245.00	2950	366.00	743
97.00	167	172.00	916	246.00	4445	371.00	196
98.00	7975	173.00	1112	247.00	901	372.00	1901
99.00	6480	174.00	1966	248.00	157	373.00	468
100.00	552	175.00	3606	249.00	952	383.00	487
101.00	3741	176.00	1248	250.00	164	384.00	152
102.00	188	177.00	1778	251.00	375	390.00	69
103.00	1178	178.00	649	252.00	215	392.00	50
104.00	2259	179.00	7435	253.00	532	401.00	64
105.00	2195	180.00	4730	254.00	1461	402.00	740
106.00	825	181.00	2418	255.00	114520	403.00	1100
107.00	27704	182.00	509	256.00	16648	404.00	334
108.00	4469	183.00	185	257.00	1341	421.00	992
109.00	817	184.00	616	258.00	5981	422.00	779
110.00	51280	185.00	3363	259.00	1002	423.00	6074
111.00	7495	186.00	25808	260.00	114	424.00	1357
112.00	1069	187.00	7470	261.00	166	425.00	86
113.00	389	188.00	835	264.00	290	436.00	96
115.00	59	189.00	1783	265.00	2434	437.00	85
116.00	1425	190.00	228	266.00	535	438.00	263
117.00	21976	191.00	977	270.00	146	439.00	279
118.00	1738	192.00	2289	271.00	294	440.00	337
119.00	163	193.00	2553	272.00	360	441.00	20008
120.00	263	194.00	515	273.00	3168	442.00	126560
122.00	1630	195.00	375	274.00	8494	443.00	23728
123.00	2824	196.00	6446	275.00	49216	444.00	2298
124.00	1140	197.00	1583	276.00	6444	445.00	150
125.00	967	198.00	211520	277.00	3821		

Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Date : 06-MAY-2016 18:27

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

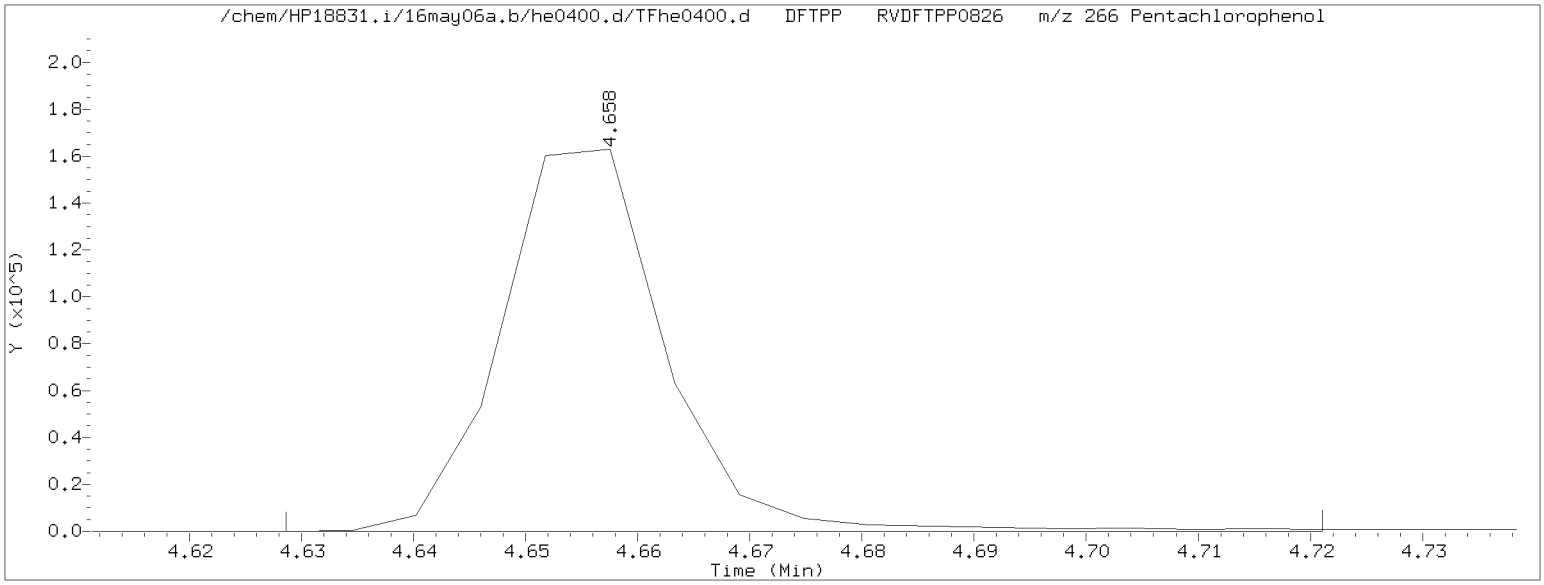
Data File: he0400.d
Spectrum: Avg. Scans 280-282 (5.01), Background Scan 272
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
126.00	622	199.00	14703	278.00	710		
127.00	90888	200.00	1033	279.00	118		
128.00	6801	201.00	1290	281.00	112		

Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Assessment of GC Column Performance and Injection Port Inertness for

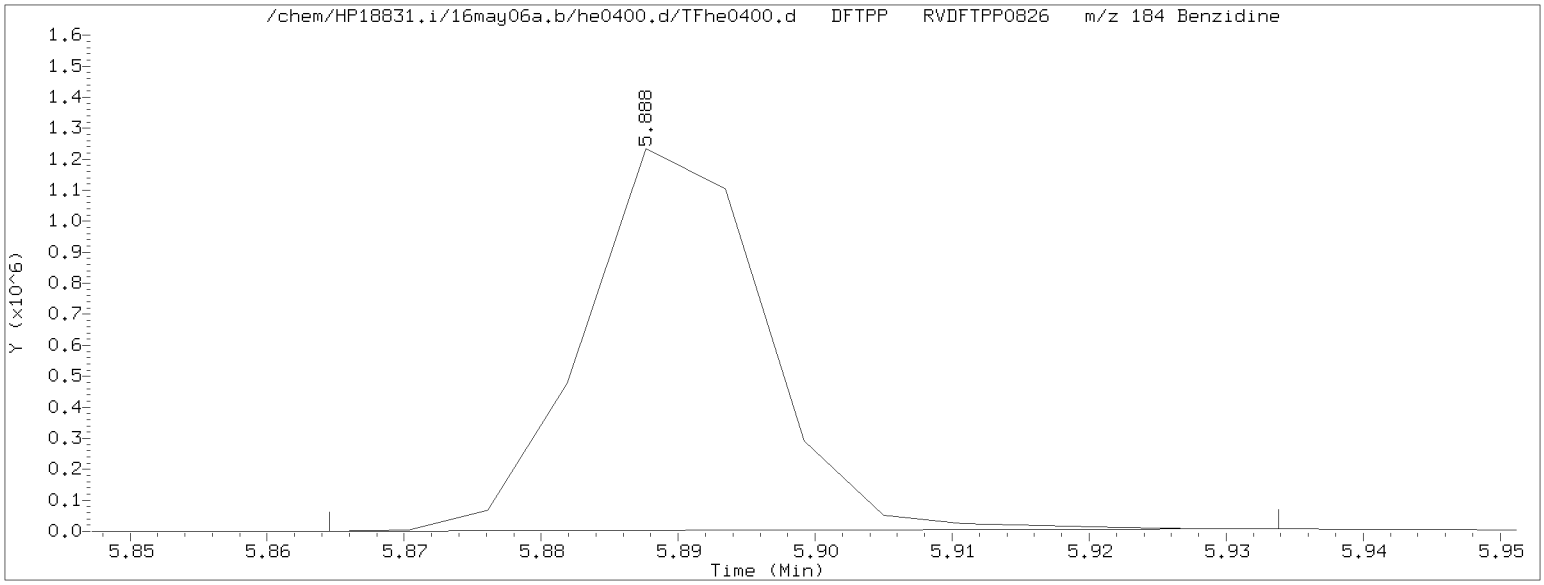
Instrument ID: HP18831.i Injection Date: 06-MAY-2016 18:27 Operator: whs02991



Pentachlorophenol EICP peak height = 163008 EICP peak height at 10% = 16301 Pentachlorophenol EICP area = 166078

Pentachlorophenol EICP peak apex (min.) = 4.658
RT at 10% of front half of EICP (min.) = 4.641 'Front' peak width (min.) = 0.0161166667
RT at 10% of back half of EICP (min.) = 4.669 'Tailing' peak width (min.) = 0.0114500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0114500000}{0.0161166667} = 0.710$$



Benzidine EICP peak height = 1232803 EICP peak height at 10% = 123280 Benzidine EICP area = 1127581

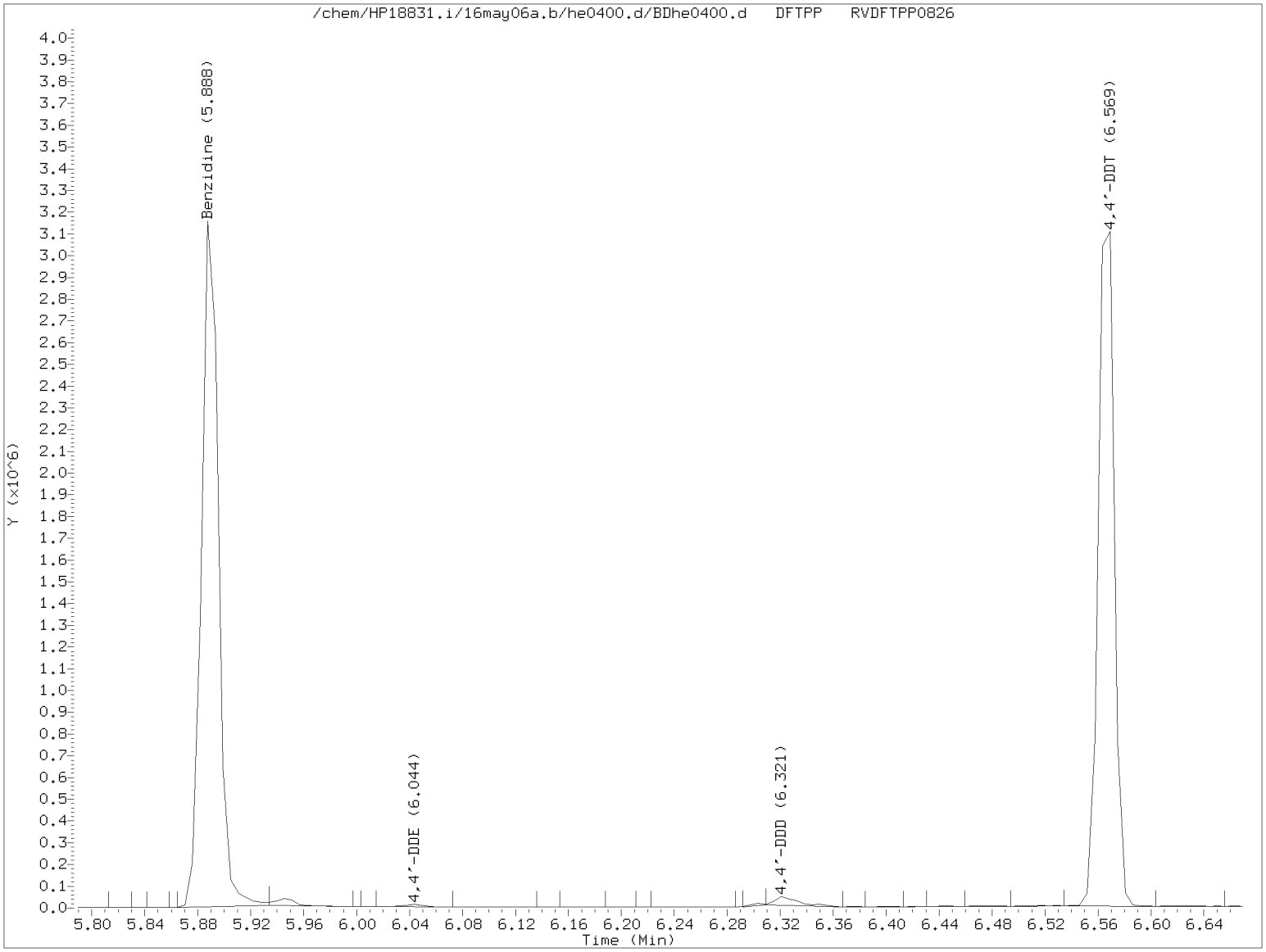
Benzidine EICP peak apex (min.) = 5.888
RT at 10% of front half of EICP (min.) = 5.877 'Front' peak width (min.) = 0.0107333333
RT at 10% of back half of EICP (min.) = 5.903 'Tailing' peak width (min.) = 0.0155333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0155333333}{0.0107333333} = 1.447$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/09/2016 at 11:08. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

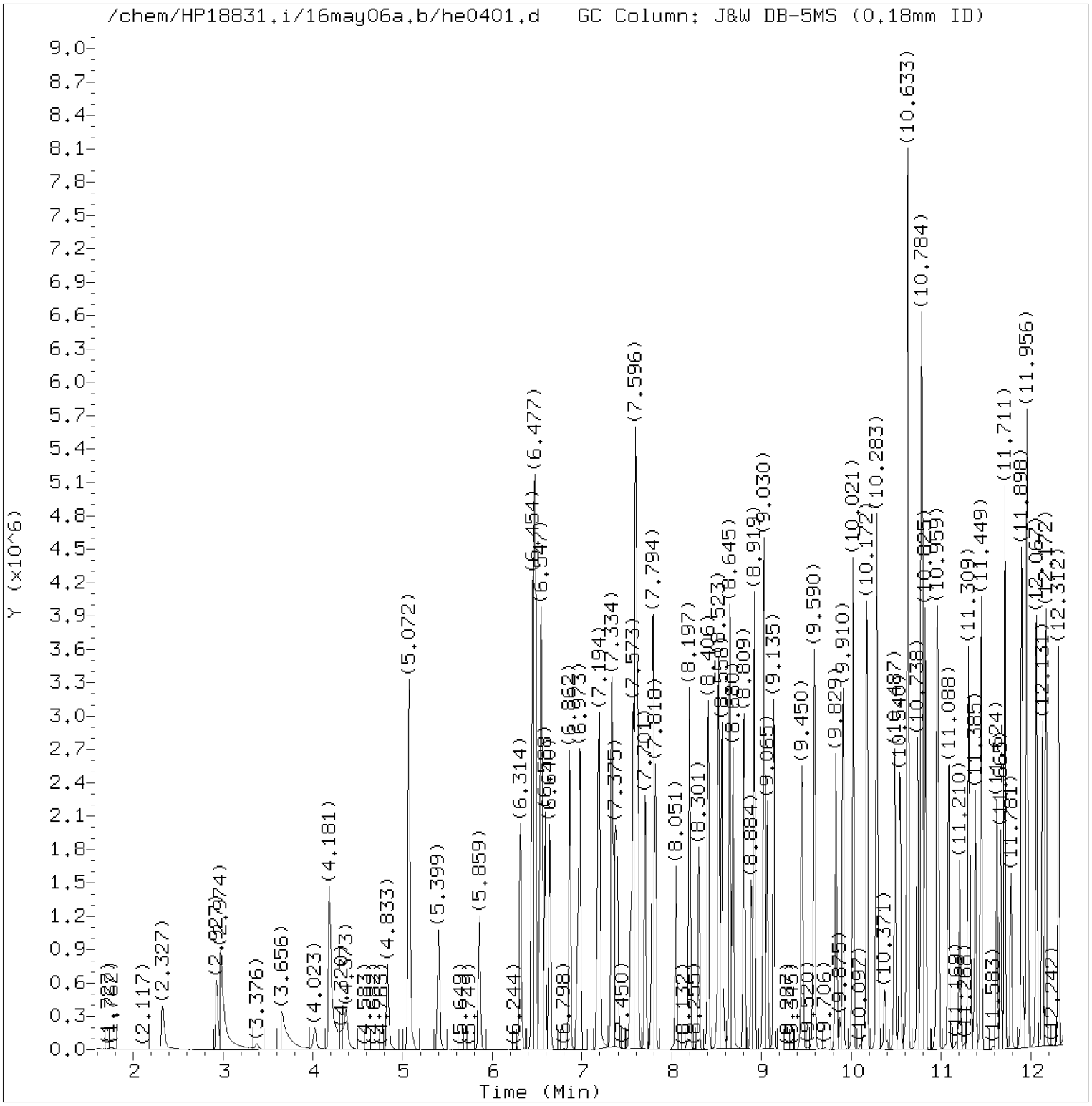
Instrument ID: HP18831.i Injection Date: 06-MAY-2016 18:27 Operator: whs02991



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{11122 + 47755}{11122 + 47755 + 2701601} \times 100 = 2.1$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/09/2016 at 11:08. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

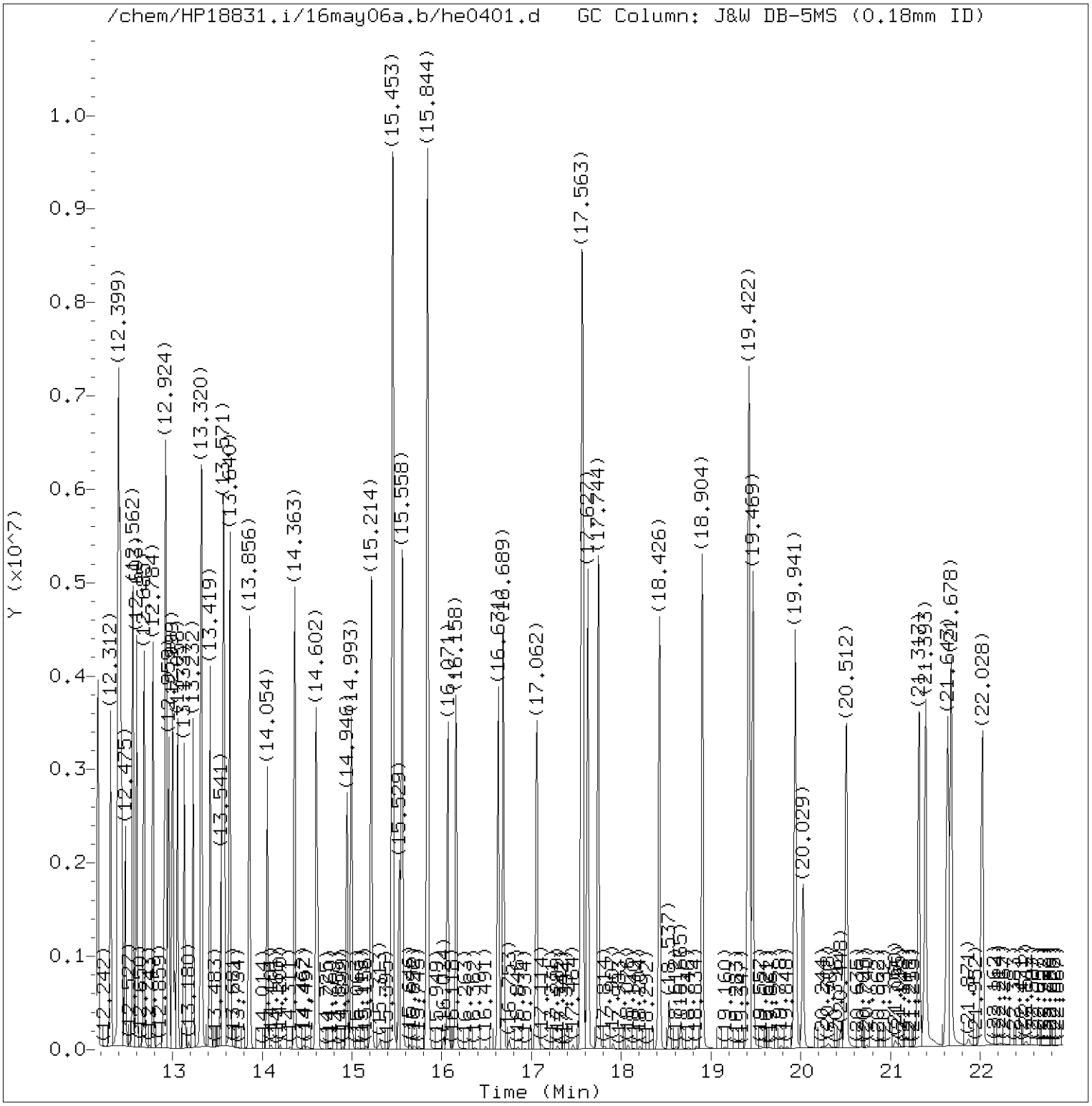
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by William H Saadeh
on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

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Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by William H Saadeh
on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.327	88	379146	12.371
4) N-Nitrosodimethylamine	(1)	2.927	74	644368	12.897
5) Pyridine	(1)	2.974	79	1014808	12.617
7) 2-Picoline	(1)	4.181	93	1092955	12.719
8) N-Nitrosomethylethylamine	(1)	4.373	88	435782	12.870
9) Methyl methanesulfonate	(1)	4.833	80	486038	12.435
11)$2-Fluorophenol	(1)	5.072	112	1694841	25.930
13) N-Nitrosodiethylamine	(1)	5.405	102	426595	12.894
42) Total Cresols	(1)			1761896	27.518
15) Ethyl methanesulfonate	(1)	5.859	109	435119	12.988
16) Benzaldehyde	(1)	6.314	77	750981	11.921
17)$Phenol-d6	(1)	6.448	99	2213772	26.016
18) Phenol	(1)	6.465	94	1321109	13.847
19) Aniline	(1)	6.477	93	1539591	12.870
20) a-methylstyrene	(1)	6.547	118	873940	12.642
22) bis(2-Chloroethyl)ether	(1)	6.588	93	960761	12.539
23) 2-Chlorophenol	(1)	6.640	128	820774	12.995
24) 1,3-Dichlorobenzene	(1)	6.862	146	884684	13.099
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	223397	5.000
26) 1,4-Dichlorobenzene	(1)	6.978	146	888347	12.854
27) Benzyl alcohol	(1)	7.177	108	552035	12.241
28) 1,2-Dichlorobenzene	(1)	7.194	146	841407	12.868
30) Indene	(1)	7.328	115	1467100	12.664
31) 2-Methylphenol	(1)	7.357	108	830343	13.264
97) Isosafrole	(3)			667288	12.718
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.392	45	1361517	11.798
34) bis(2-Chloroisopropyl)ether	(1)	7.392	45	1361517	11.798
35) N-Nitrosopyrrolidine	(1)	7.544	100	452868	13.330
36) Acetophenone	(1)	7.573	105	1311761	12.833
37) 4-Methylphenol	(1)	7.596	108	931553	14.254
38) N-Nitroso-di-n-propylamine	(1)	7.596	70	736970	12.487
39) N-Nitrosomorpholine	(1)	7.608	56	590161	12.020
40) o-Toluidine	(1)	7.620	106	1436355	12.862
43) Hexachloroethane	(1)	7.701	117	378746	12.944
44)$Nitrobenzene-d5	(2)	7.789	82	2131571	25.030
45) Nitrobenzene	(2)	7.818	77	1112932	12.519
120) 2,4_2,6-Dinitrotoluenes	(3)			894229	25.520
48) N-Nitrosopiperidine	(2)	8.051	114	410433	12.946
50) Isophorone	(2)	8.197	82	1878541	12.691
51) 2-Nitrophenol	(2)	8.301	139	440624	13.436

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.406	107	897697	12.856
57) O,O,O-Triethylphosphorothioate	(2)	8.523	198	442722	12.592
55) bis(2-Chloroethoxy)methane	(2)	8.558	93	1142755	12.140
56) Benzoic acid	(2)	8.645	105	546885M	10.548
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.645	104	1358815	12.588
60) 2,4-Dichlorophenol	(2)	8.680	162	673719	13.136
146) Diallate trans/cis	(4)			845630	12.246
62) 1,2,4-Trichlorobenzene	(2)	8.809	180	799177	12.896
65)*Naphthalene-d8	(2)	8.884	136	863229	5.000
66) Naphthalene	(2)	8.919	128	2313846	12.609
67) 4-Chloroaniline	(2)	9.024	127	975348	12.921
68) 2,6-Dichlorophenol	(2)	9.036	162	647710	12.838
69) Hexachloropropene	(2)	9.065	213	535701	13.691
71) Hexachlorobutadiene	(2)	9.135	225	478180	12.874
75) Quinoline	(2)	9.450	129	1463354	12.795
77) N-Nitrosodi-n-butylamine	(2)	9.590	84	830179	13.463
76) Caprolactam	(2)	9.595	113	217843	12.703
80) 4-Chloro-3-methylphenol	(2)	9.829	107	766614	12.950
82) Safrole	(2)	9.910	162	592440	12.651
83) 2-Methylnaphthalene	(2)	10.021	142	1547479	12.634
84) 1-Methylnaphthalene	(2)	10.172	142	1409804	12.544
85) Hexachlorocyclopentadiene	(3)	10.283	237	488914	12.440
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.289	216	821824	12.621
88) cis-Isosafrole	(3)	10.371	162	106742	2.098
90) 2,4,6-Trichlorophenol	(3)	10.487	196	527302	12.809
92) 2,4,5-Trichlorophenol	(3)	10.545	196	553566	12.776
93)$2-Fluorobiphenyl	(3)	10.633	172	3463297	24.570
94) trans-Isosafrole	(3)	10.738	162	560546	10.620
95) 1,1'-Biphenyl	(3)	10.779	154	1860265	12.330
96) 2-Chloronaphthalene	(3)	10.796	162	1443436	12.046
98) 1-Chloronaphthalene	(3)	10.825	162	1429987	12.802
99) Diphenyl ether	(3)	10.959	170	1009428	12.542
100) 2-Nitroaniline	(3)	10.977	138	461716	13.141
104) 1,4-Naphthoquinone	(3)	11.088	158	598320	12.218
105) 1,4-Dinitrobenzene	(3)	11.210	168	248013	12.578
106) Dimethylphthalate	(3)	11.309	163	1647976	12.213
107) 1,3-Dinitrobenzene	(3)	11.327	168	269732	12.668
108) 2,6-Dinitrotoluene	(3)	11.385	165	370327	12.765
109) Acenaphthylene	(3)	11.449	152	2244887	12.910
112) 3-Nitroaniline	(3)	11.624	138	400378	13.305

M = Compound was manually integrated.
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on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.665	164	498134	5.000
114) Acenaphthene	(3)	11.711	153	1467547	12.426
115) 2,4-Dinitrophenol	(3)	11.781	184	248420	12.411
117) Pentachlorobenzene	(3)	11.898	250	654761	12.574
116) 4-Nitrophenol	(3)	11.904	109	273739	12.474
119) Dibenzofuran	(3)	11.956	168	2042296	12.625
118) 2,4-Dinitrotoluene	(3)	11.968	165	523902	12.755
121) 1-Naphthylamine	(3)	12.067	143	1479994	12.276
122) 2,3,4,6-Tetrachlorophenol	(3)	12.131	232	432690	12.838
123) 2-Naphthylamine	(3)	12.172	143	1465573	12.440
124) Diethylphthalate	(3)	12.312	149	1657299	12.544
126) Fluorene	(3)	12.393	166	1583507	12.386
125) Thionazin	(3)	12.405	107	316026	13.767
127) 4-Chlorophenyl-phenylether	(3)	12.416	204	835280	12.634
128) 5-Nitro-o-toluidine	(3)	12.422	152	458584	13.312
129) 4-Nitroaniline	(3)	12.440	138	410725	13.010
130) 4,6-Dinitro-2-methylphenol	(4)	12.475	198	338918	12.713
131) N-Nitrosodiphenylamine	(4)	12.562	169	1357726	12.555
132) NDPA as diphenylamine	(4)	12.562	169	1357726	12.555
134) 1,2-Diphenylhydrazine	(4)	12.603	77	2006517	12.283
135)$2,4,6-Tribromophenol	(3)	12.685	330	434969	26.126
137) Tetraethyldithiopyrophosphate	(4)	12.784	97	324069	12.721
139) 1,3,5-Trinitrobenzene	(4)	12.906	213	212174	12.483
140) Diallate (peak 1)	(4)	12.924	86	706599	10.190
141) Phorate	(4)	12.929	75	1396134	13.607
142) Phenacetin	(4)	12.959	108	949875	12.902
143) 4-Bromophenyl-phenylether	(4)	13.005	248	475251	12.678
144) Diallate (peak 2)	(4)	13.023	86	139031	2.056
145) Hexachlorobenzene	(4)	13.058	284	506633	12.858
147) Dimethoate	(4)	13.133	87	809913	12.152
148) Atrazine	(4)	13.232	200	445362	11.405
149) Pentachlorophenol	(4)	13.314	266	286346	11.059
150) 4-Aminobiphenyl	(4)	13.326	169	1272860	12.258
151) Pentachloronitrobenzene	(4)	13.326	237	236448	12.518
152) Pronamide	(4)	13.419	173	813146	13.065
153)*Phenanthrene-d10	(4)	13.541	188	961121	5.000
154) Dinoseb	(4)	13.565	211	517021	13.033
155) Phenanthrene	(4)	13.576	178	2456668	12.544
157) Anthracene	(4)	13.640	178	2470508	12.915
163) Carbazole	(4)	13.856	167	2315636	12.622

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Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

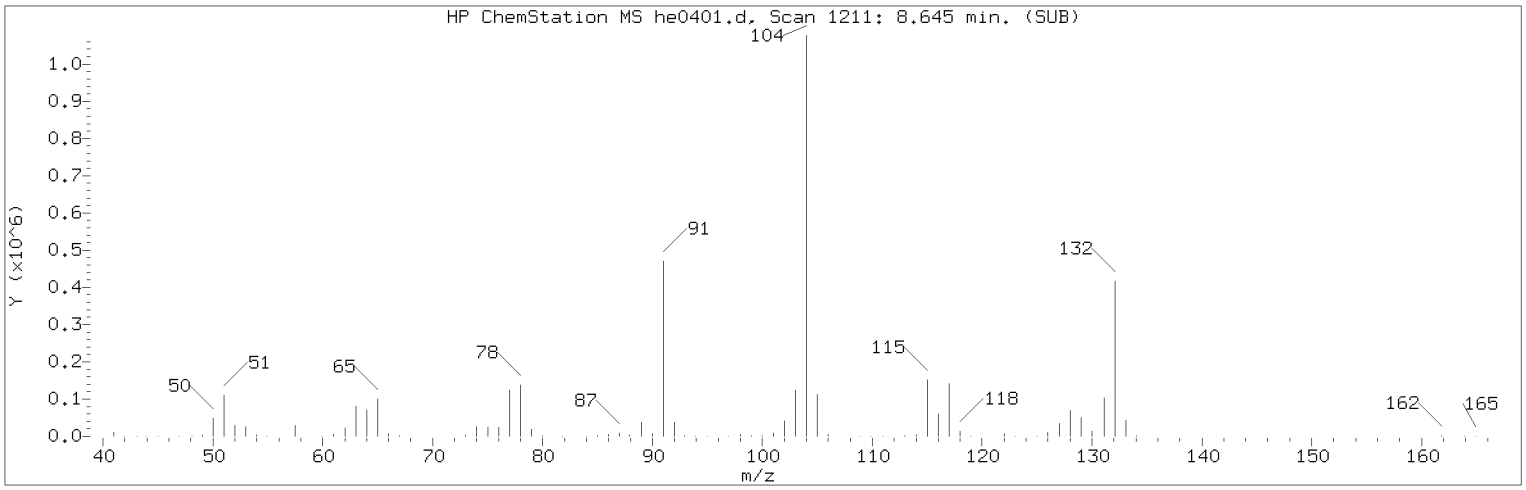
Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.054	109	639832	12.564
165) Di-n-butylphthalate	(4)	14.363	149	2921116	12.586
167) Parathion	(4)	14.602	109	395351	12.882
168) 4-Nitroquinoline-1-oxide	(4)	14.620	190	255339	11.003
169) Octachlorostyrene	(4)	14.946	308	185271	12.101
171) Isodrin	(4)	14.993	193	300706	12.552
222) Total PAHs	(6)			38379965	206.236
173) Fluoranthene	(4)	15.220	202	2859606	12.911
174) Benzidine	(5)	15.459	184	5939358	36.307
175)*Pyrene-d10	(5)	15.529	212	1190529	5.000
177) Pyrene	(5)	15.558	202	2990017	12.175
179)$Terphenyl-d14	(5)	15.844	244	4146355	24.848
182) p-Dimethylaminoazobenzene	(5)	16.071	225	562662	13.830
185) Chlorobenzilate	(5)	16.158	139	909612	12.361
187) 3,3'-Dimethylbenzidine	(5)	16.631	212	1939829	12.995
188) Butylbenzylphthalate	(5)	16.689	149	1373111	13.032
191) 2-Acetylaminofluorene	(5)	17.062	181	1250374	14.047
193) 3,3'-Dichlorobenzidine	(5)	17.557	252	1149002	13.680
195) Benzo(a)anthracene	(5)	17.563	228	2957660	13.357
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.575	231	598779	12.944
196) Chrysene	(5)	17.627	228	2758938	13.207
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	149	2023024	13.497
203) 6-Methylchrysene	(5)	18.426	242	2029658	13.575
205) Di-n-octylphthalate	(6)	18.904	149	3584545	12.388
206) Benzo(b)fluoranthene	(6)	19.417	252	3108212	13.040
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.422	256	1302105	12.891
208) Benzo(k)fluoranthene	(6)	19.469	252	2954826	12.613
211) Benzo(a)pyrene	(6)	19.941	252	2883534	13.216
213)*Perylene-d12	(6)	20.029	264	926549	5.000
215) 3-Methylcholanthrene	(6)	20.512	268	1199498	13.382
217) Dibenz(a,h)acridine	(6)	21.323	279	2343000	13.155
218) Dibenz(a,j)acridine	(6)	21.393	279	2396404	13.380
219) Indeno(1,2,3-cd)pyrene	(6)	21.643	276	3174987	13.636
220) Dibenz(a,h)anthracene	(6)	21.678	278	2682596	13.771
221) Benzo(g,h,i)perylene	(6)	22.028	276	2578381	12.994

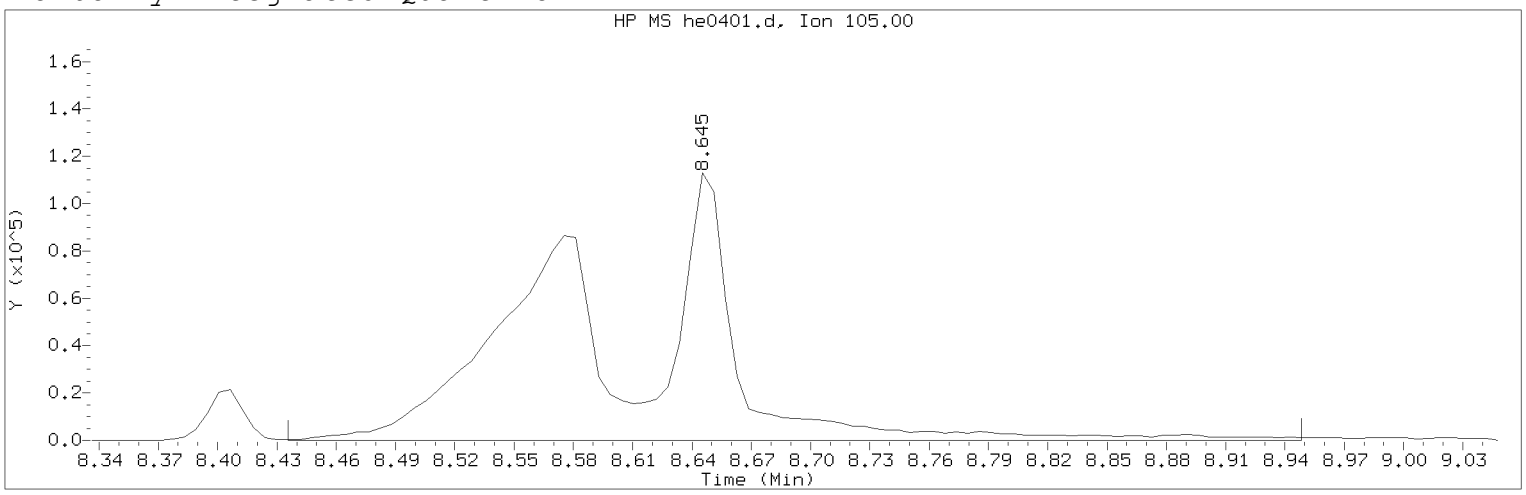
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:28
Date, time and analyst ID of latest file update: 06-May-2016 19:29 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

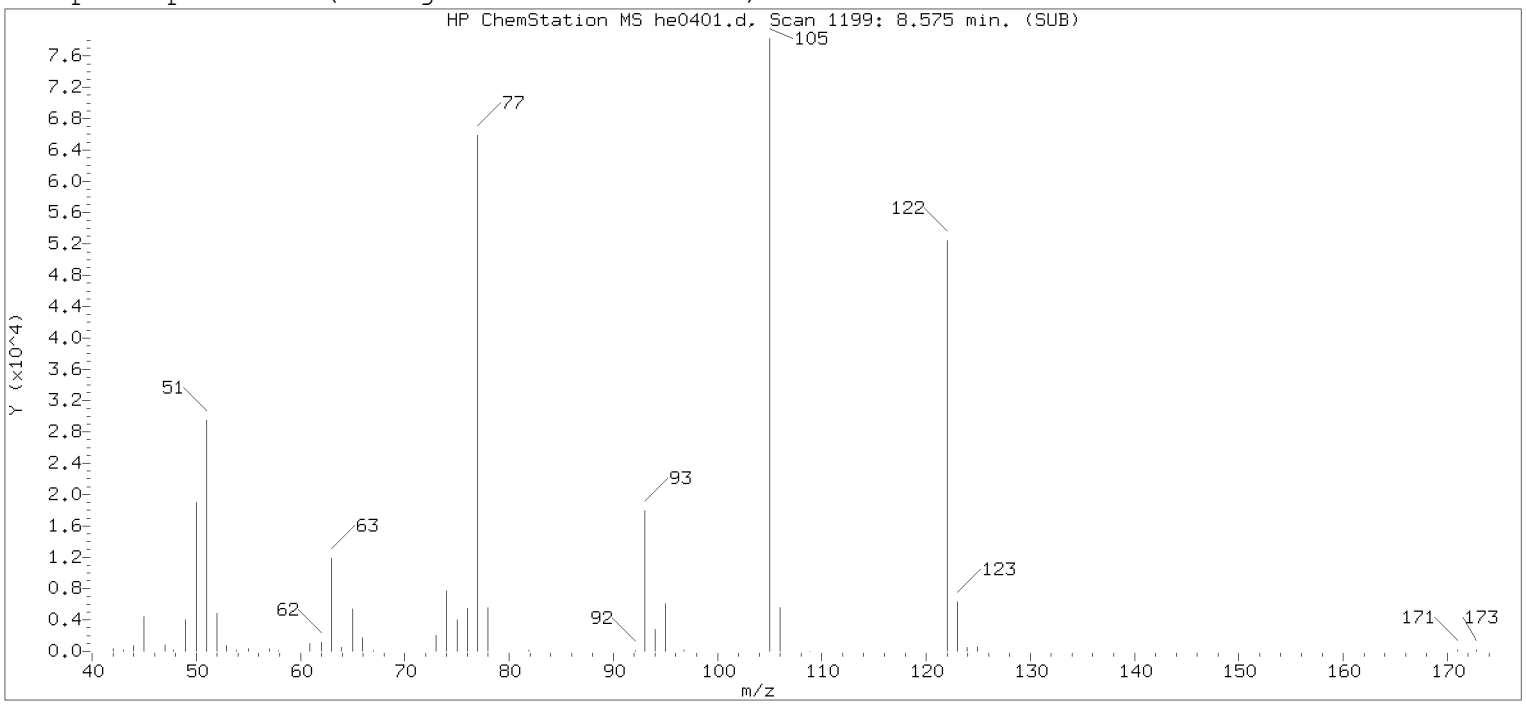
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1211
Retention Time (minutes) : 8.645
Quant Ion : 105.00
Area (flag) : 546885M
On-Column Amount (ng/ul) : 10.5476
Integration start scan : 1174 Integration stop scan: 1262
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

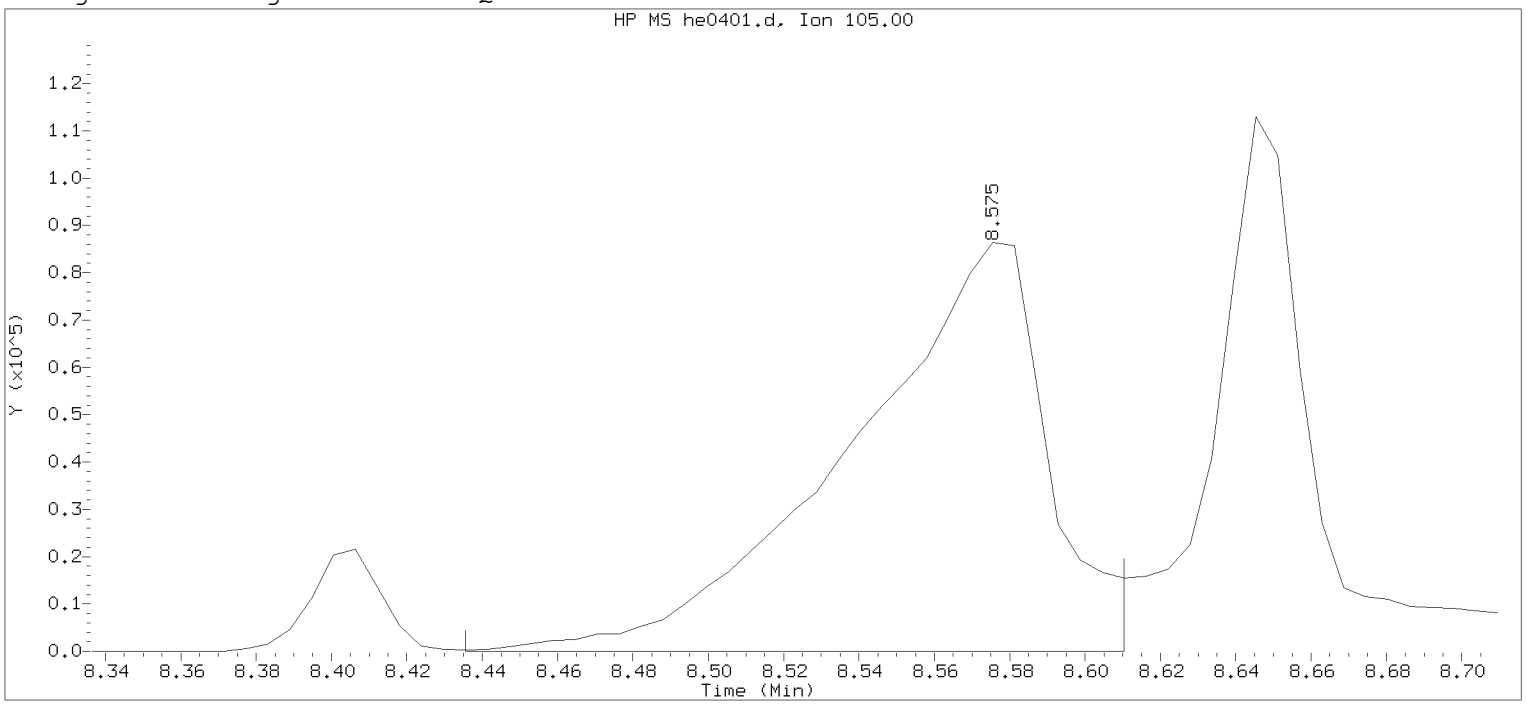
Analyst responsible for change: Digitally signed by William H Saadeh
on 05/06/2016 at 19:30.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Matthew E. Barton on 05/09/2016 at 11:08.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16may06a.b/he0401.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 18:50 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 19:17
Date, time and analyst ID of latest file update: 06-May-2016 19:17 Automation

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1199
Retention Time (minutes) : 8.575
Quant Ion : 105.00
Area : 309789
On-column Amount (ng/ul) : 6.9250
Integration start scan : 1174 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Digitally signed by William H Saadeh on 05/06/2016 at 19:30.
Target 3.5 esignature user name: whs02991

Data File: /chem/HP18831.i/16may09a.b/he0520.d

Date : 09-MAY-2016 20:44

Client ID: DFTPP

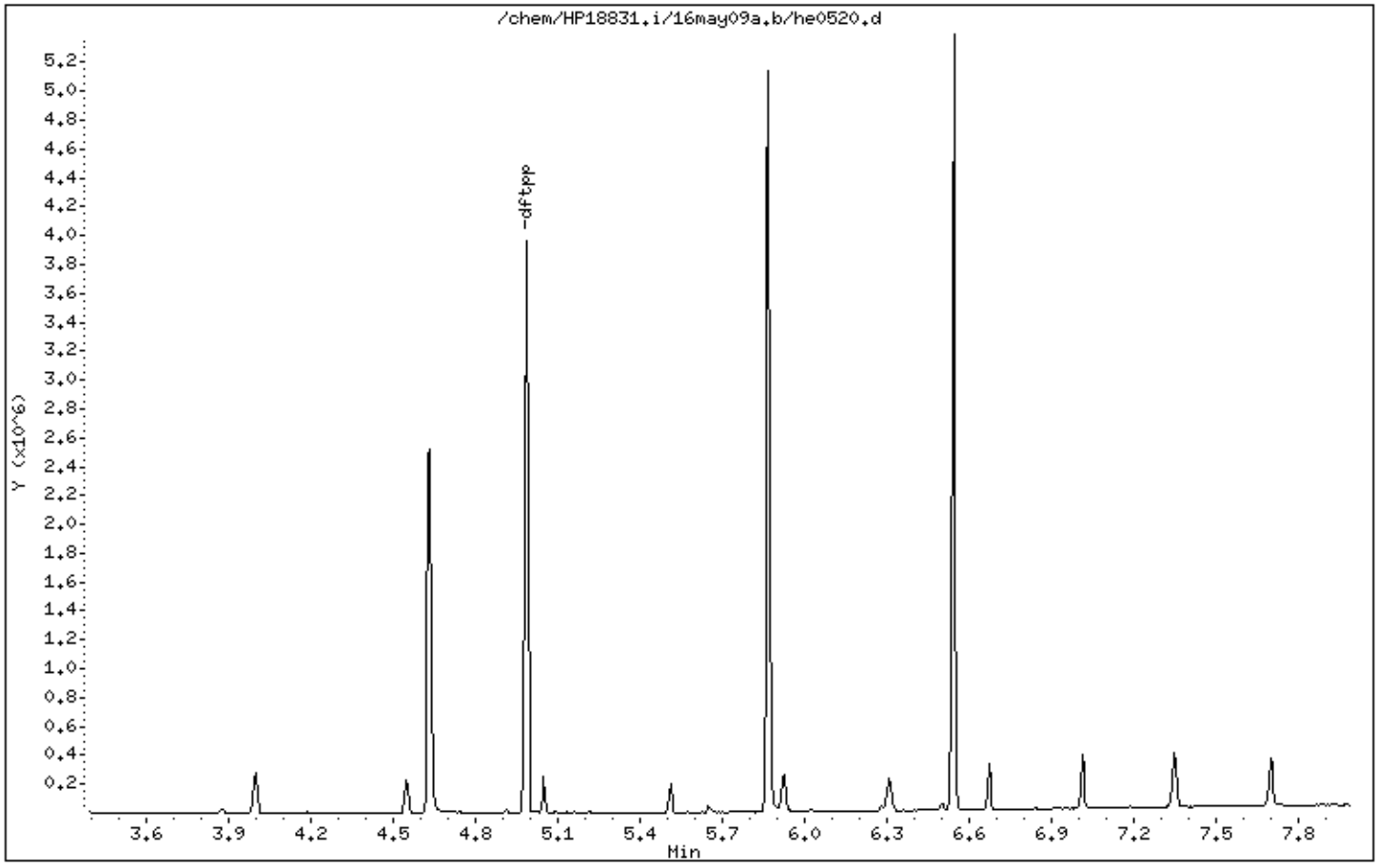
Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Data File: /chem/HP18831.i/16may09a.b/he0520.d

Date : 09-MAY-2016 20:44

Client ID: DFTPP

Instrument: HP18831.i

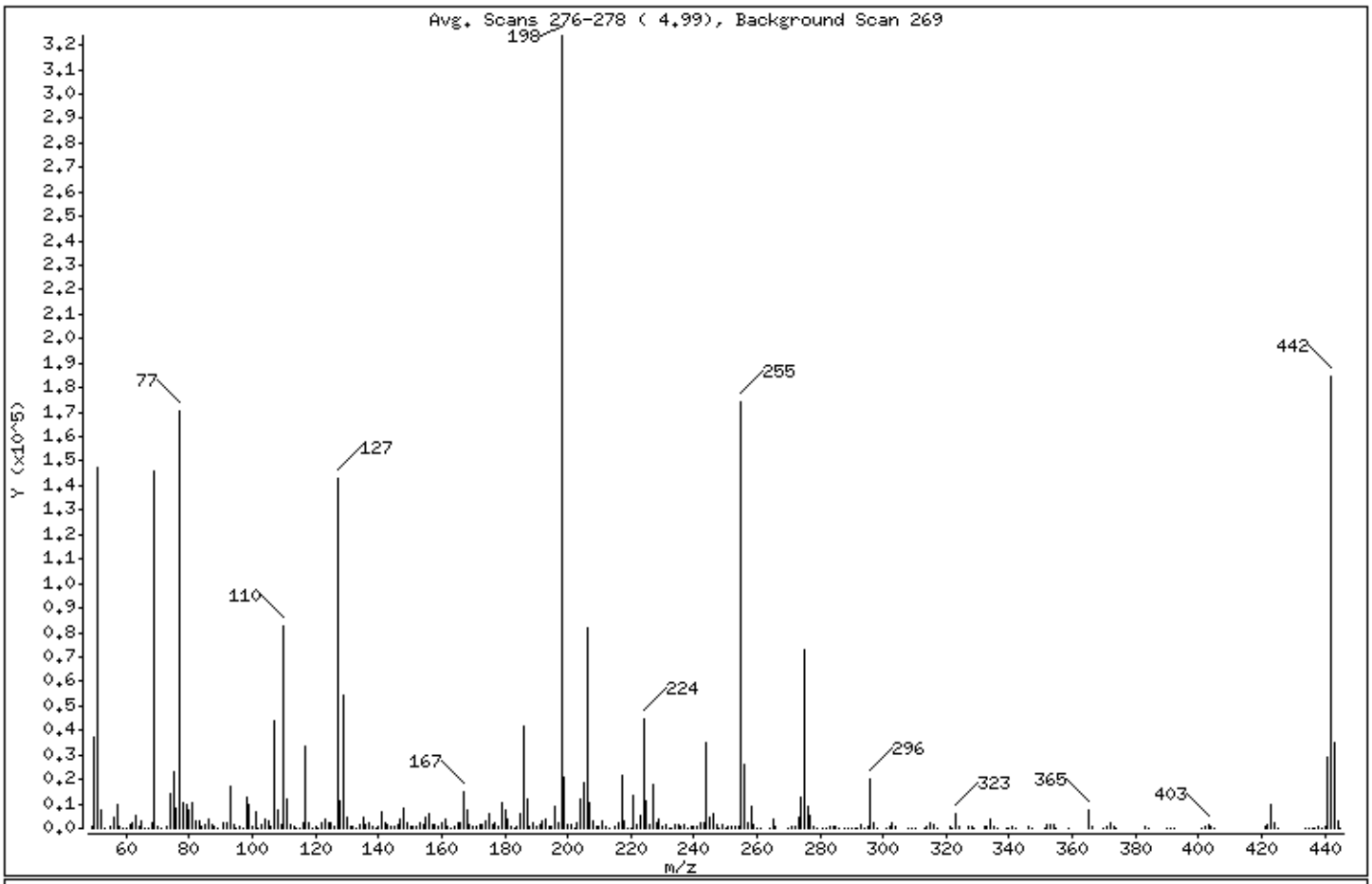
Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.40
68	Less than 2.00% of mass 69	0.69 (1.54)
69	Mass 69 relative abundance	45.04
70	Less than 2.00% of mass 69	0.24 (0.53)
127	10.00 - 80.00% of mass 198	44.14
197	Less than 2.00% of mass 198	0.76
199	5.00 - 9.00% of mass 198	6.49
275	10.00 - 60.00% of mass 198	22.60
365	Greater than 1.00% of mass 198	2.23
441	0.01 - 24.00% of mass 442	8.97 (15.71)
442	50.00 - 99.99% of mass 198	57.05
443	15.00 - 24.00% of mass 442	10.90 (19.11)

Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Date : 09-MAY-2016 20:44

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: he0520.d
Spectrum: Avg. Scans 276-278 (4.99), Background Scan 269
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	1017	130.00	4764	208.00	2672	294.00	297
50.00	36880	131.00	876	209.00	1021	295.00	479
51.00	147008	132.00	462	210.00	1102	296.00	19792
52.00	7476	133.00	142	211.00	3219	297.00	2377
53.00	317	134.00	1435	212.00	727	298.00	106
55.00	526	135.00	4489	213.00	170	301.00	185
56.00	4494	136.00	1548	215.00	922	302.00	450
57.00	9867	137.00	2039	216.00	1864	303.00	2106
58.00	419	138.00	502	217.00	21640	304.00	602
59.00	74	139.00	321	218.00	2626	308.00	199
60.00	56	140.00	552	219.00	362	309.00	126
61.00	1693	141.00	6929	220.00	132	310.00	295
62.00	2165	142.00	2023	221.00	13042	313.00	185
63.00	5470	143.00	1614	222.00	1325	314.00	846
64.00	852	144.00	376	223.00	5145	315.00	1915
65.00	2959	145.00	413	224.00	44496	316.00	1132
66.00	175	146.00	1199	225.00	11369	317.00	162
67.00	207	147.00	3619	226.00	1252	321.00	548
68.00	2248	148.00	8423	227.00	17616	322.00	284
69.00	145856	149.00	2032	228.00	2529	323.00	6021
70.00	772	150.00	626	229.00	3742	324.00	1031
71.00	208	151.00	872	230.00	521	327.00	1110
73.00	1021	152.00	570	231.00	1700	328.00	651
74.00	14506	153.00	2391	232.00	143	329.00	61
75.00	23016	154.00	1602	233.00	235	332.00	390
76.00	7877	155.00	4094	234.00	1167	333.00	715
77.00	170752	156.00	6122	235.00	1228	334.00	3490
78.00	10679	157.00	1329	236.00	879	335.00	893
79.00	9959	158.00	1273	237.00	1602	336.00	60
80.00	7550	159.00	1051	238.00	171	339.00	81
81.00	10782	160.00	2186	239.00	807	340.00	63
82.00	2786	161.00	3515	240.00	723	341.00	635
83.00	2859	162.00	868	241.00	1082	342.00	145
84.00	437	163.00	345	242.00	2199	346.00	1044
85.00	1587	164.00	379	243.00	2453	347.00	214

Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Date : 09-MAY-2016 20:44

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: he0520.d
Spectrum: Avg. Scans 276-278 (4.99), Background Scan 269
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	3471	165.00	2378	244.00	35128	351.00	52
87.00	1423	166.00	2253	245.00	4807	352.00	1799
88.00	489	167.00	14617	246.00	6135	353.00	1204
89.00	307	168.00	7229	247.00	1194	354.00	1664
91.00	2046	169.00	1368	248.00	323	355.00	316
92.00	2565	170.00	539	249.00	1277	359.00	154
93.00	16792	171.00	555	250.00	256	365.00	7237
94.00	1348	172.00	1354	251.00	405	366.00	937
95.00	217	173.00	1701	252.00	453	370.00	161
96.00	769	174.00	2783	253.00	889	371.00	432
97.00	316	175.00	5995	254.00	949	372.00	2571
98.00	12457	176.00	1574	255.00	174144	373.00	640
99.00	9558	177.00	2594	256.00	26184	374.00	50
100.00	874	178.00	877	257.00	1917	383.00	607
101.00	6778	179.00	10681	258.00	8948	384.00	178
102.00	320	180.00	7699	259.00	1550	390.00	214
103.00	1784	181.00	3678	260.00	216	391.00	255
104.00	3552	182.00	464	261.00	274	392.00	166
105.00	3288	183.00	329	264.00	235	401.00	116
106.00	1004	184.00	943	265.00	3680	402.00	1066
107.00	43792	185.00	5670	266.00	738	403.00	1521
108.00	7113	186.00	41456	270.00	187	404.00	538
109.00	1382	187.00	11716	271.00	425	405.00	62
110.00	82456	188.00	1094	272.00	553	421.00	1028
111.00	11764	189.00	2405	273.00	4822	422.00	1484
112.00	1539	190.00	433	274.00	12790	423.00	9326
113.00	563	191.00	1350	275.00	73192	424.00	2371
114.00	152	192.00	3077	276.00	9300	425.00	202
115.00	265	193.00	3622	277.00	5512	434.00	120
116.00	2198	194.00	941	278.00	990	435.00	50
117.00	33312	195.00	616	279.00	166	436.00	153
118.00	2452	196.00	9127	281.00	162	437.00	165
119.00	351	197.00	2474	282.00	187	438.00	509
120.00	451	198.00	323776	283.00	679	439.00	359
121.00	256	199.00	21000	284.00	489	440.00	523

Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Date : 09-MAY-2016 20:44

Client ID: DFTPP Instrument: HP18831.i

Sample Info: DFTPP;RVDFTPP0826;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

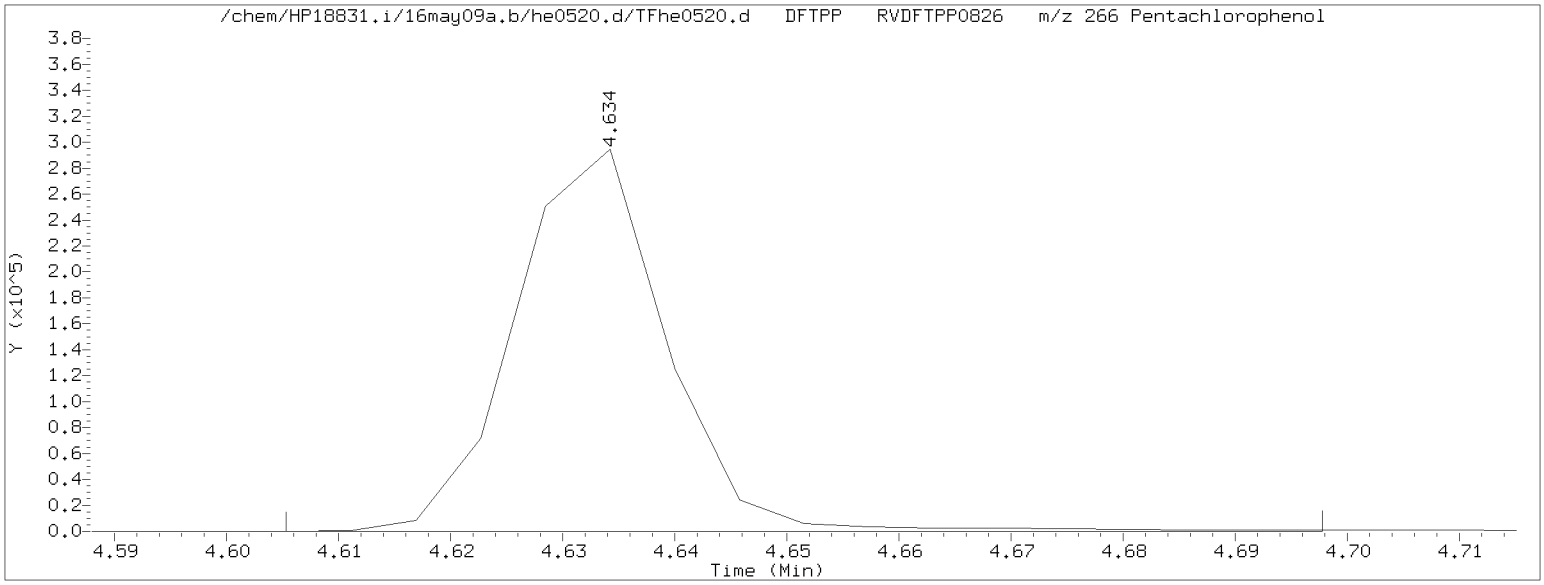
Data File: he0520.d
Spectrum: Avg. Scans 276-278 (4.99), Background Scan 269
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	2552	200.00	1721	285.00	1099	441.00	29032
123.00	4022	201.00	1477	286.00	247	442.00	184704
124.00	1881	202.00	172	288.00	70	443.00	35304
125.00	1960	203.00	2032	289.00	197	444.00	3203
126.00	685	204.00	11670	290.00	93	445.00	227
127.00	142912	205.00	18536	291.00	203		
128.00	10912	206.00	81904	292.00	220		
129.00	54096	207.00	10517	293.00	1487		

Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Assessment of GC Column Performance and Injection Port Inertness for

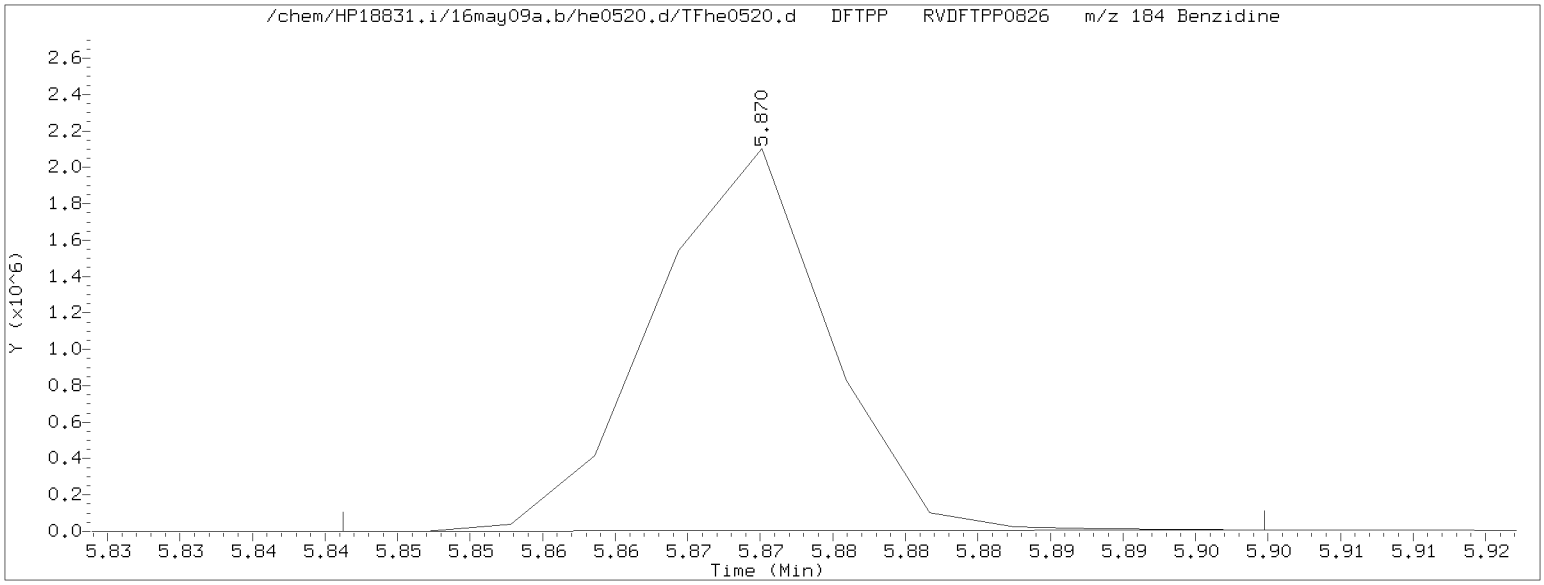
Instrument ID: HP18831.i Injection Date: 09-MAY-2016 20:44 Operator: whs02991



Pentachlorophenol EICP peak height = 294720 EICP peak height at 10% = 29472 Pentachlorophenol EICP area = 275970

Pentachlorophenol EICP peak apex (min.) = 4.634
RT at 10% of front half of EICP (min.) = 4.619 'Front' peak width (min.) = 0.0153666667
RT at 10% of back half of EICP (min.) = 4.645 'Tailing' peak width (min.) = 0.0112333333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0112333333}{0.0153666667} = 0.731$$



Benzidine EICP peak height = 2100609 EICP peak height at 10% = 210061 Benzidine EICP area = 1748077

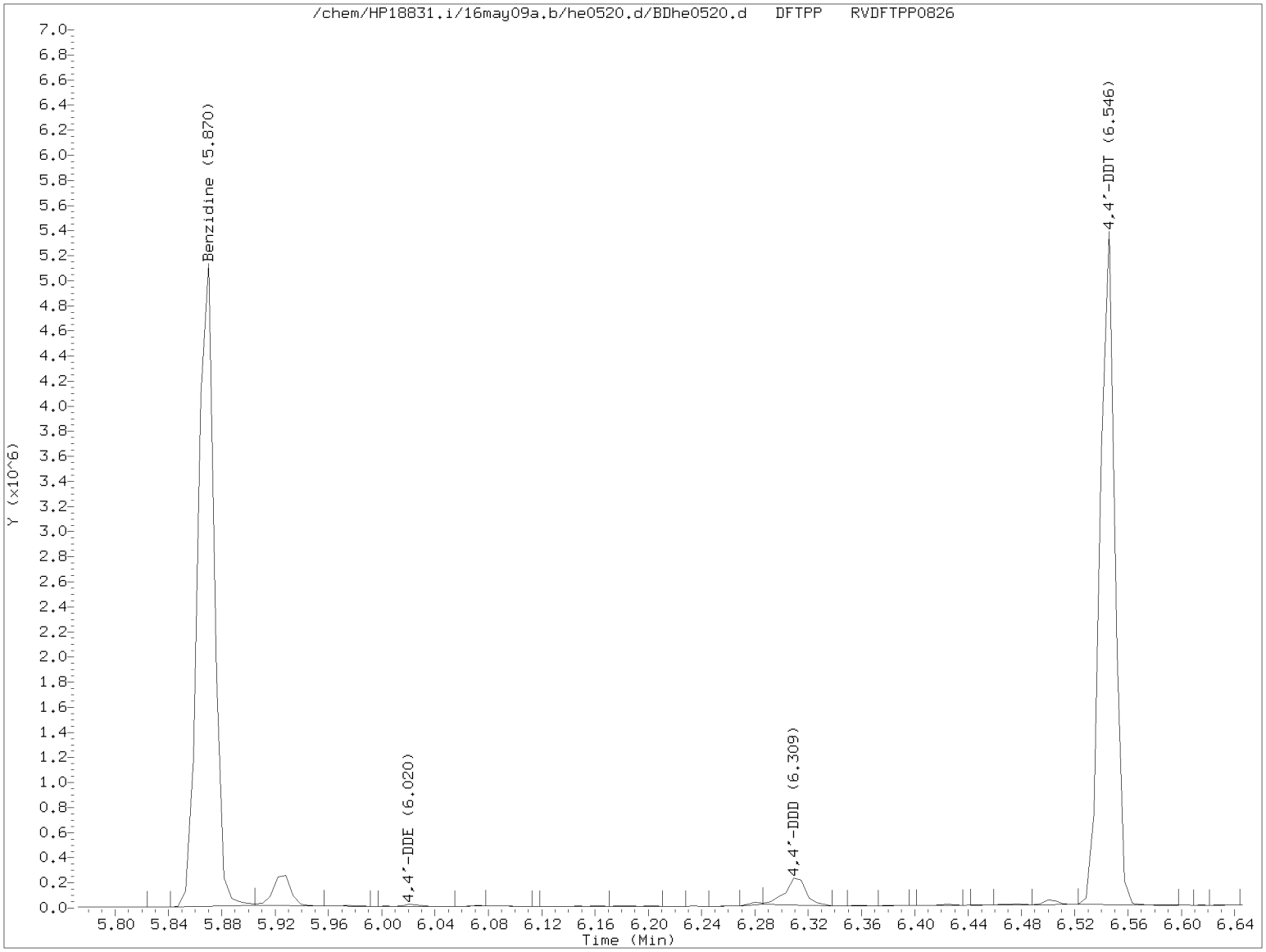
Benzidine EICP peak apex (min.) = 5.870
RT at 10% of front half of EICP (min.) = 5.855 'Front' peak width (min.) = 0.0146500000
RT at 10% of back half of EICP (min.) = 5.881 'Tailing' peak width (min.) = 0.0106666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106666667}{0.0146500000} = 0.728$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 09:14. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

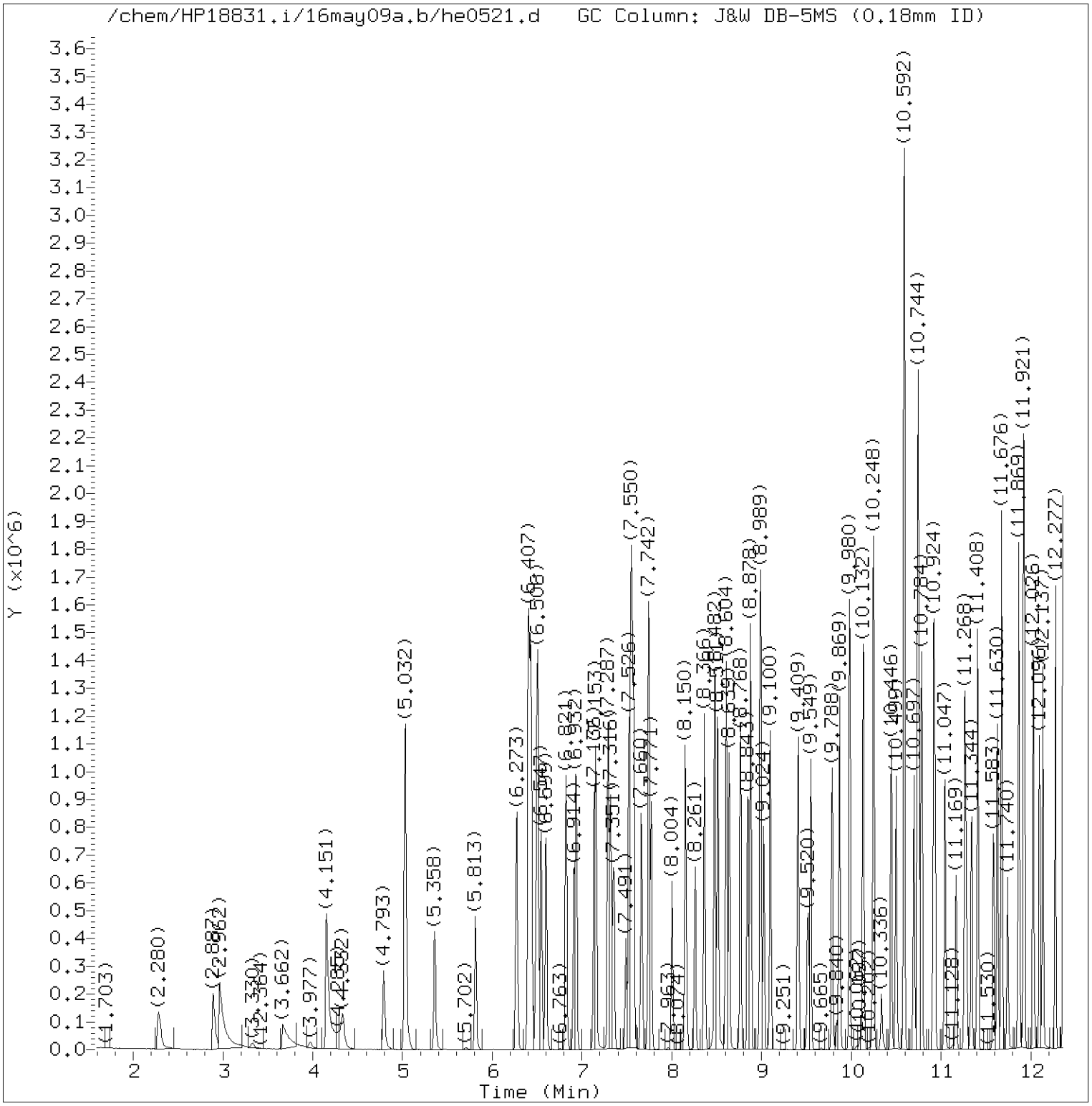
Instrument ID: HP18831.i Injection Date: 09-MAY-2016 20:44 Operator: whs02991



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{15783 + 242061}{15783 + 242061 + 4150087} \times 100 = 5.8$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 09:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

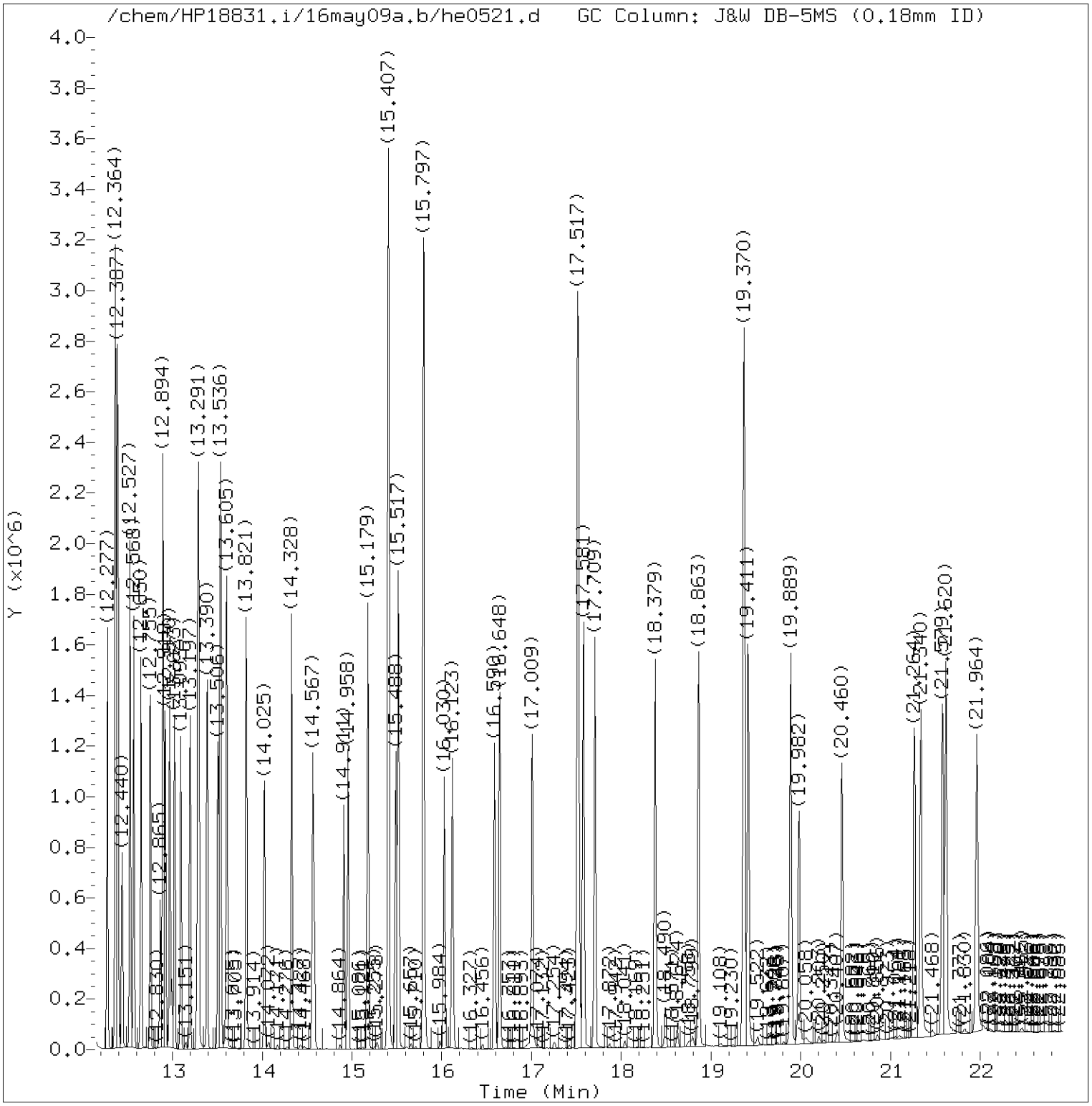
Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.286	88	138887	7.420
4) N-Nitrosodimethylamine	(1)	2.887	74	227310	7.450
5) Pyridine	(1)	2.962	79	334484	6.810
7) 2-Picoline	(1)	4.151	93	387127	7.377
8) N-Nitrosomethylethylamine	(1)	4.332	88	153536	7.425
9) Methyl methanesulfonate	(1)	4.793	80	173466	7.267
11)$2-Fluorophenol	(1)	5.032	112	608056	15.234
13) N-Nitrosodiethylamine	(1)	5.358	102	150181	7.433
42) Total Cresols	(1)			629380	16.094
15) Ethyl methanesulfonate	(1)	5.813	109	153052	7.481
16) Benzaldehyde	(1)	6.273	77	306700	7.972
17)$Phenol-d6	(1)	6.401	99	785204	15.110
18) Phenol	(1)	6.425	94	472638	8.112
19) Aniline	(1)	6.430	93	548415	7.507
20) a-methylstyrene	(1)	6.506	118	310179	7.347
22) bis(2-Chloroethyl)ether	(1)	6.547	93	348824	7.455
23) 2-Chlorophenol	(1)	6.599	128	296308	7.682
24) 1,3-Dichlorobenzene	(1)	6.821	146	316589	7.676
25)*1,4-Dichlorobenzene-d4	(1)	6.908	152	136427	5.000
26) 1,4-Dichlorobenzene	(1)	6.938	146	321936	7.628
27) Benzyl alcohol	(1)	7.136	108	195321	7.092
28) 1,2-Dichlorobenzene	(1)	7.153	146	305151	7.642
30) Indene	(1)	7.287	115	525761	7.432
31) 2-Methylphenol	(1)	7.316	108	294838	7.712
34) bis(2-Chloroisopropyl)ether	(1)	7.351	45	490609	6.961
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.351	45	490609	6.961
97) Isosafrole	(3)			231349	7.448
35) N-Nitrosopyrrolidine	(1)	7.491	100	159480	7.686
36) Acetophenone	(1)	7.526	105	463565	7.426
38) N-Nitroso-di-n-propylamine	(1)	7.544	70	263543	7.312
37) 4-Methylphenol	(1)	7.555	108	334542	8.382
39) N-Nitrosomorpholine	(1)	7.555	56	214714	7.161
40) o-Toluidine	(1)	7.573	106	513828	7.534
43) Hexachloroethane	(1)	7.660	117	136513	7.640
44)$Nitrobenzene-d5	(2)	7.742	82	755781	14.997
45) Nitrobenzene	(2)	7.771	77	395748	7.523
48) N-Nitrosopiperidine	(2)	8.004	114	144011	7.676
120) 2,4_2,6-Dinitrotoluenes	(3)			310367	15.053
50) Isophorone	(2)	8.150	82	658571	7.519
51) 2-Nitrophenol	(2)	8.261	139	152384	7.852

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.366	107	317058	7.673
57) O,O,O-Triethylphosphorothioate	(2)	8.482	198	157881	7.588
56) Benzoic acid	(2)	8.511	105	224154	7.979
55) bis(2-Chloroethoxy)methane	(2)	8.517	93	414686	7.444
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.604	104	483136	7.563
60) 2,4-Dichlorophenol	(2)	8.639	162	244645	8.061
62) 1,2,4-Trichlorobenzene	(2)	8.768	180	288923	7.878
146) Diallate trans/cis	(4)			293042	7.427
65)*Naphthalene-d8	(2)	8.843	136	510835	5.000
66) Naphthalene	(2)	8.878	128	833916	7.679
67) 4-Chloroaniline	(2)	8.983	127	349268	7.819
68) 2,6-Dichlorophenol	(2)	8.995	162	233706	7.827
69) Hexachloropropene	(2)	9.024	213	184130	7.952
71) Hexachlorobutadiene	(2)	9.100	225	174346	7.932
75) Quinoline	(2)	9.409	129	516722	7.635
76) Caprolactam	(2)	9.520	113	73752	7.267
77) N-Nitrosodi-n-butylamine	(2)	9.549	84	293040M	8.031
80) 4-Chloro-3-methylphenol	(2)	9.788	107	265360	7.575
82) Safrole	(2)	9.869	162	207591	7.491
83) 2-Methylnaphthalene	(2)	9.980	142	550371	7.593
84) 1-Methylnaphthalene	(2)	10.132	142	510178	7.671
85) Hexachlorocyclopentadiene	(3)	10.242	237	154321	6.633
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.248	216	290050	7.525
88) cis-Isosafrole	(3)	10.336	162	36975	1.228
90) 2,4,6-Trichlorophenol	(3)	10.446	196	186453	7.652
92) 2,4,5-Trichlorophenol	(3)	10.499	196	200659	7.823
93)$2-Fluorobiphenyl	(3)	10.592	172	1252139	15.006
94) trans-Isosafrole	(3)	10.697	162	194374	6.221
95) 1,1'-Biphenyl	(3)	10.738	154	652665	7.308
96) 2-Chloronaphthalene	(3)	10.755	162	519384	7.322
98) 1-Chloronaphthalene	(3)	10.784	162	511911	7.742
99) Diphenyl ether	(3)	10.918	170	358214	7.519
100) 2-Nitroaniline	(3)	10.936	138	161238	7.753
104) 1,4-Naphthoquinone	(3)	11.047	158	211008	7.279
105) 1,4-Dinitrobenzene	(3)	11.169	168	84985	7.281
106) Dimethylphthalate	(3)	11.262	163	592207	7.414
107) 1,3-Dinitrobenzene	(3)	11.286	168	92083	7.305
108) 2,6-Dinitrotoluene	(3)	11.344	165	133826	7.792
109) Acenaphthylene	(3)	11.408	152	791040	7.685
112) 3-Nitroaniline	(3)	11.583	138	133085	7.471

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.630	164	294874	5.000
114) Acenaphthene	(3)	11.676	153	528849	7.565
115) 2,4-Dinitrophenol	(3)	11.746	184	95815	8.087
117) Pentachlorobenzene	(3)	11.869	250	233895	7.588
116) 4-Nitrophenol	(3)	11.869	109	92743	7.139
119) Dibenzofuran	(3)	11.921	168	739652	7.724
118) 2,4-Dinitrotoluene	(3)	11.927	165	176541	7.261
121) 1-Naphthylamine	(3)	12.026	143	499615	7.001
122) 2,3,4,6-Tetrachlorophenol	(3)	12.096	232	146407	7.338
123) 2-Naphthylamine	(3)	12.137	143	485851	6.967
124) Diethylphthalate	(3)	12.277	149	562221	7.188
126) Fluorene	(3)	12.364	166	572074	7.559
125) Thionazin	(3)	12.370	107	108864	8.012
128) 5-Nitro-o-toluidine	(3)	12.387	152	153072	7.507
127) 4-Chlorophenyl-phenylether	(3)	12.387	204	297479	7.601
129) 4-Nitroaniline	(3)	12.399	138	137132	7.338
130) 4,6-Dinitro-2-methylphenol	(4)	12.440	198	99908	6.558
131) N-Nitrosodiphenylamine	(4)	12.527	169	474628	7.680
132) NDPA as diphenylamine	(4)	12.527	169	474628	7.680
134) 1,2-Diphenylhydrazine	(4)	12.568	77	711364	7.621
135)$2,4,6-Tribromophenol	(3)	12.650	330	148987	15.117
137) Tetraethyldithiopyrophosphate	(4)	12.749	97	109017	7.489
139) 1,3,5-Trinitrobenzene	(4)	12.865	213	64484	6.639
140) Diallate (peak 1)	(4)	12.889	86	244204	6.163
141) Phorate	(4)	12.894	75	441903	7.537
142) Phenacetin	(4)	12.918	108	312579	7.430
143) 4-Bromophenyl-phenylether	(4)	12.970	248	165272	7.716
144) Diallate (peak 2)	(4)	12.993	86	48838	1.264
145) Hexachlorobenzene	(4)	13.023	284	174417	7.746
147) Dimethoate	(4)	13.093	87	267752	7.030
148) Atrazine	(4)	13.197	200	154737	6.934
149) Pentachlorophenol	(4)	13.279	266	91794	6.204
150) 4-Aminobiphenyl	(4)	13.291	169	455782	7.681
151) Pentachloronitrobenzene	(4)	13.291	237	79743	7.388
152) Pronamide	(4)	13.390	173	273799	7.699
153)*Phenanthrene-d10	(4)	13.506	188	549214	5.000
154) Dinoseb	(4)	13.530	211	144966	6.395
155) Phenanthrene	(4)	13.536	178	835134	7.462
157) Anthracene	(4)	13.605	178	835602	7.645
163) Carbazole	(4)	13.821	167	786321	7.501

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

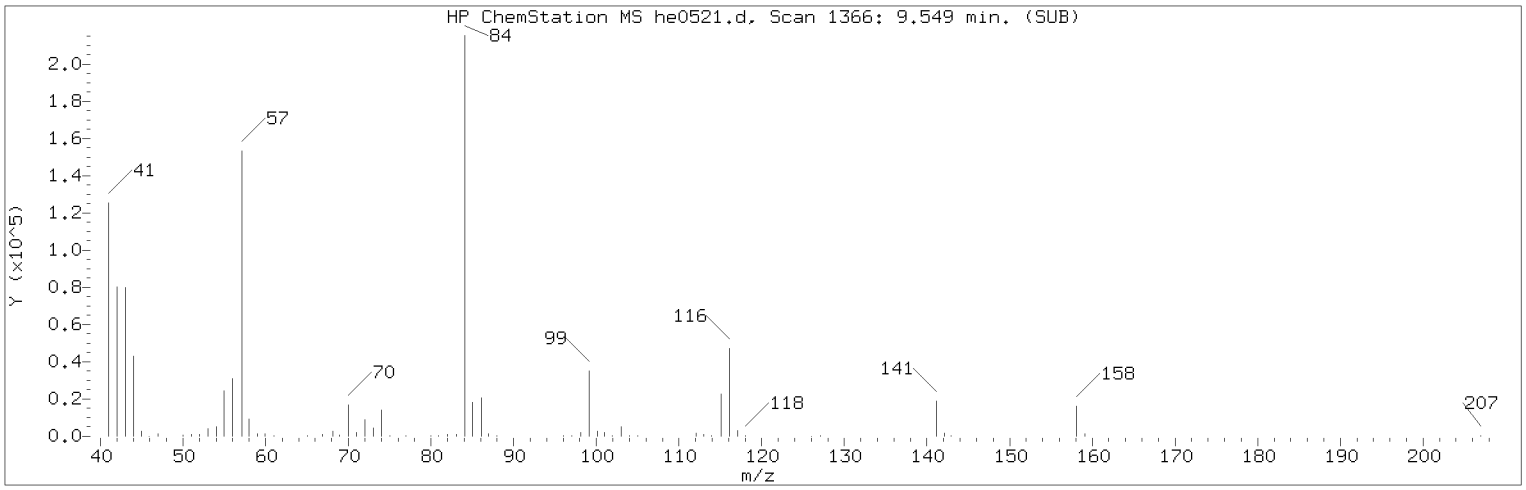
Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.025	109	205304	7.055
165) Di-n-butylphthalate	(4)	14.328	149	949915	7.162
167) Parathion	(4)	14.561	109	123928	7.066
168) 4-Nitroquinoline-1-oxide	(4)	14.579	190	59244	4.467
169) Octachlorostyrene	(4)	14.911	308	62518	7.146
171) Isodrin	(4)	14.958	193	98576	7.201
222) Total PAHs	(6)			12946712	125.331
173) Fluoranthene	(4)	15.179	202	951361	7.517
174) Benzidine	(5)	15.407	184	1772083	19.887
175)*Pyrene-d10	(5)	15.488	212	648485	5.000
177) Pyrene	(5)	15.517	202	1008320	7.537
179)$Terphenyl-d14	(5)	15.797	244	1375835	15.137
182) p-Dimethylaminoazobenzene	(5)	16.030	225	165569	7.471
185) Chlorobenzilate	(5)	16.118	139	291709	7.277
187) 3,3'-Dimethylbenzidine	(5)	16.590	212	586317	7.211
188) Butylbenzylphthalate	(5)	16.648	149	421905	7.351
191) 2-Acetylaminofluorene	(5)	17.009	181	363971	7.507
193) 3,3'-Dichlorobenzidine	(5)	17.511	252	350100	7.653
195) Benzo(a)anthracene	(5)	17.517	228	958194	7.944
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.528	231	186623	7.406
196) Chrysene	(5)	17.581	228	898404	7.896
199) bis(2-Ethylhexyl)phthalate	(5)	17.709	149	589639	7.222
203) 6-Methylchrysene	(5)	18.379	242	635831	7.807
205) Di-n-octylphthalate	(6)	18.863	149	1017474	6.782
206) Benzo(b)fluoranthene	(6)	19.364	252	927025	7.500
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.370	256	423558	8.087
208) Benzo(k)fluoranthene	(6)	19.411	252	951477	7.833
211) Benzo(a)pyrene	(6)	19.889	252	896274	7.922
213)*Perylene-d12	(6)	19.982	264	480441	5.000
215) 3-Methylcholanthrene	(6)	20.460	268	362988	7.810
217) Dibenz(a,h)acridine	(6)	21.264	279	739452	8.007
218) Dibenz(a,j)acridine	(6)	21.340	279	775549	8.351
219) Indeno(1,2,3-cd)pyrene	(6)	21.579	276	1039458	8.610
220) Dibenz(a,h)anthracene	(6)	21.620	278	876523	8.677
221) Benzo(g,h,i)perylene	(6)	21.964	276	861014	8.368

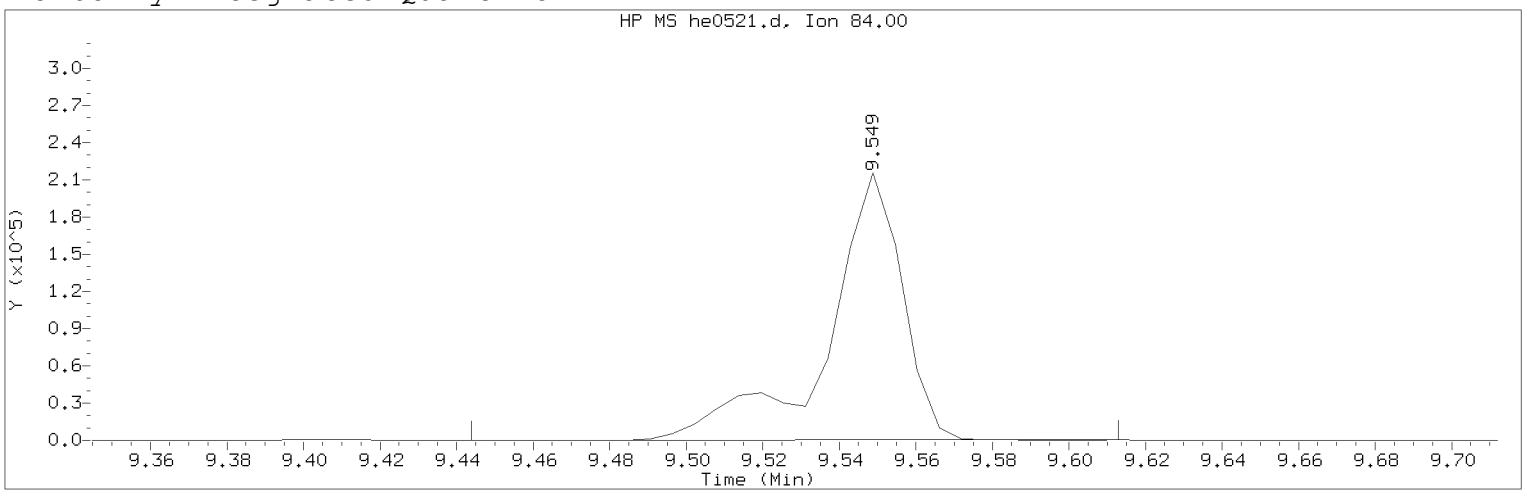
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:54
Date, time and analyst ID of latest file update: 09-May-2016 21:54 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

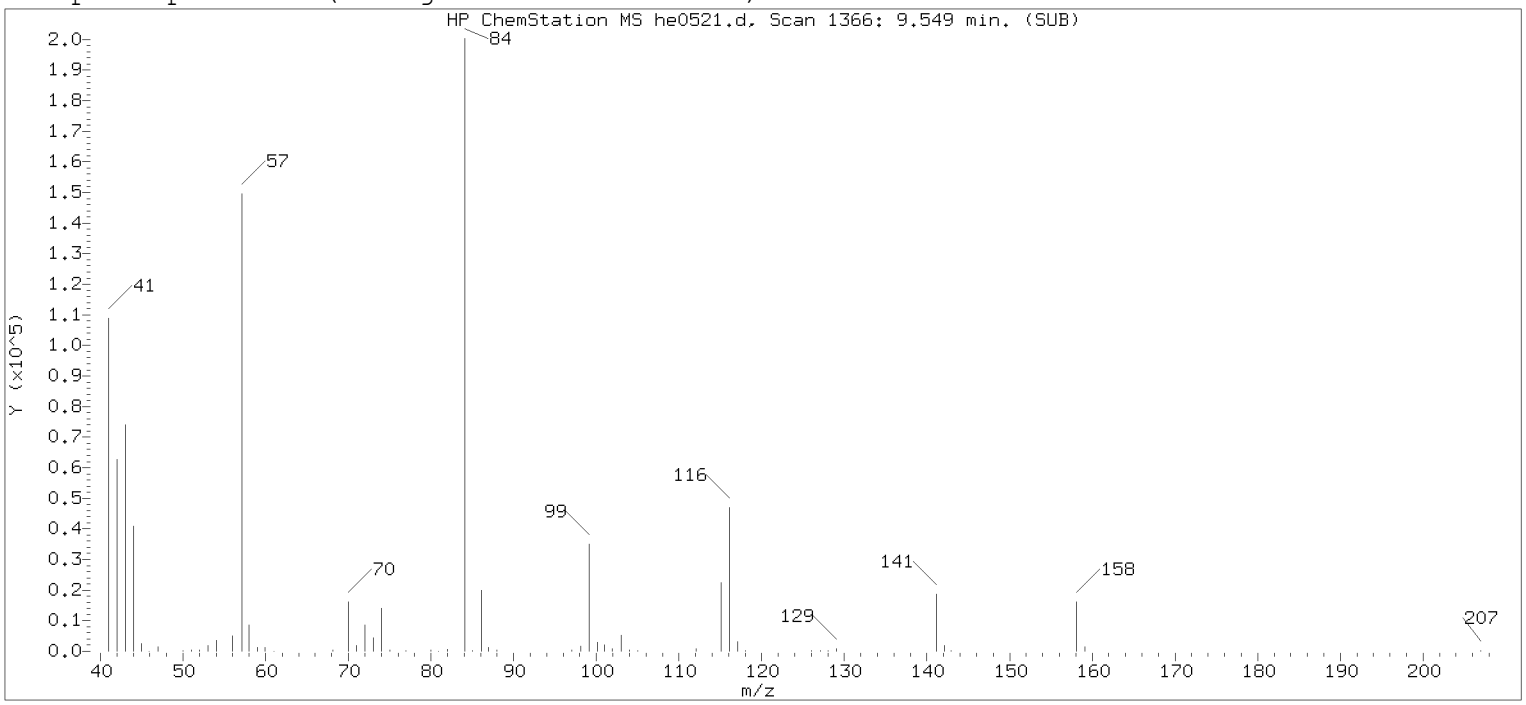
Compound Number : 77
Compound Name : N-Nitrosodi-n-butylamine
Scan Number : 1366
Retention Time (minutes) : 9.549
Quant Ion : 84.00
Area (flag) : 293040M
On-Column Amount (ng/ul) : 8.0307
Integration start scan : 1347 Integration stop scan: 1376
Y at integration start : 0 Y at integration end: 311

Reason for manual integration: improper integration

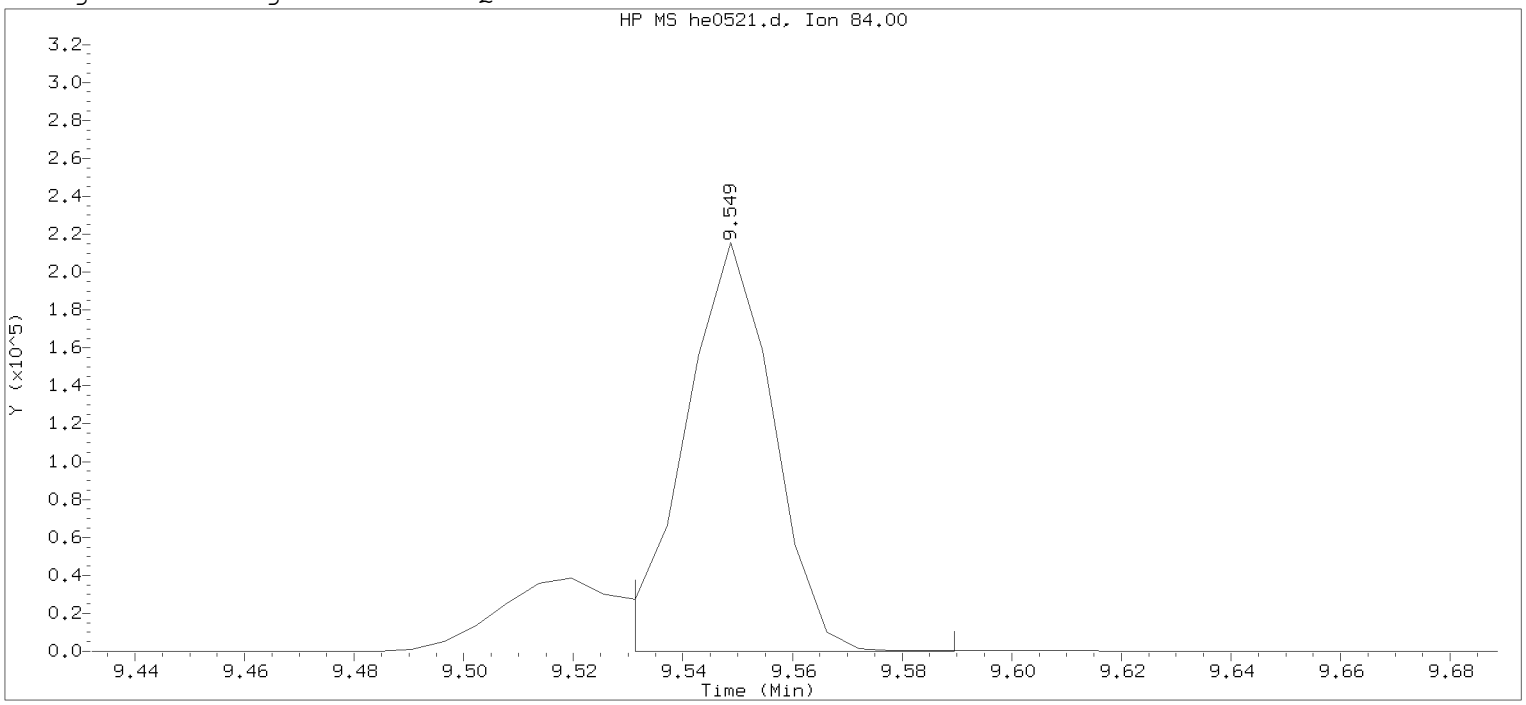
Analyst responsible for change: Digitally signed by William H Saadeh
on 05/09/2016 at 21:56.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 09:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/16may09a.b/he0521.d Instrument ID: HP18831.i
Injection date and time: 09-MAY-2016 21:08 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may09a.b/rv8270d.m Sublist used: all1
Calibration date and time: 09-MAY-2016 21:52
Date, time and analyst ID of latest file update: 09-May-2016 21:52 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 77		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 1366		
Retention Time (minutes)	: 9.549		
Quant Ion	: 84.00		
Area	: 237383		
On-column Amount (ng/ul)	: 6.5055		
Integration start scan	: 1362	Integration stop scan:	1372
Y at integration start	: 0	Y at integration end:	0

Digitally signed by William H Saadeh on 05/09/2016 at 21:56.
Target 3.5 esignature user name: whs02991

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP18831.i/16may06a.b/he0402.d Injection date and time: **06-MAY-2016 19:54**
Data file Sample Info. Line: SBLKWC120;SBLKWC120;1;3;BLANK;;DRRAAP; Instrument ID: **HP18831.i** Batch: **16120WAC**
Date, time and analyst ID of latest file update: 25-May-2016 03:22 jmg00346

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.949	(0.000)	920	152	132724	(-41)	5.00	
65) Naphthalene-d8	8.878	(0.006)	1251	136	495800	(-43)	5.00	
113) Acenaphthene-d10	11.659	(0.006)	1728	164	283457	(-43)	5.00	
153) Phenanthrene-d10	13.536	(0.006)	2050	188	546513	(-43)	5.00	
175) Pyrene-d10	15.523	(0.006)	2391	212	644138	(-46)	5.00	
213) Perylene-d12	20.017	(0.012)	3162	264	483982	(-48)	5.00	

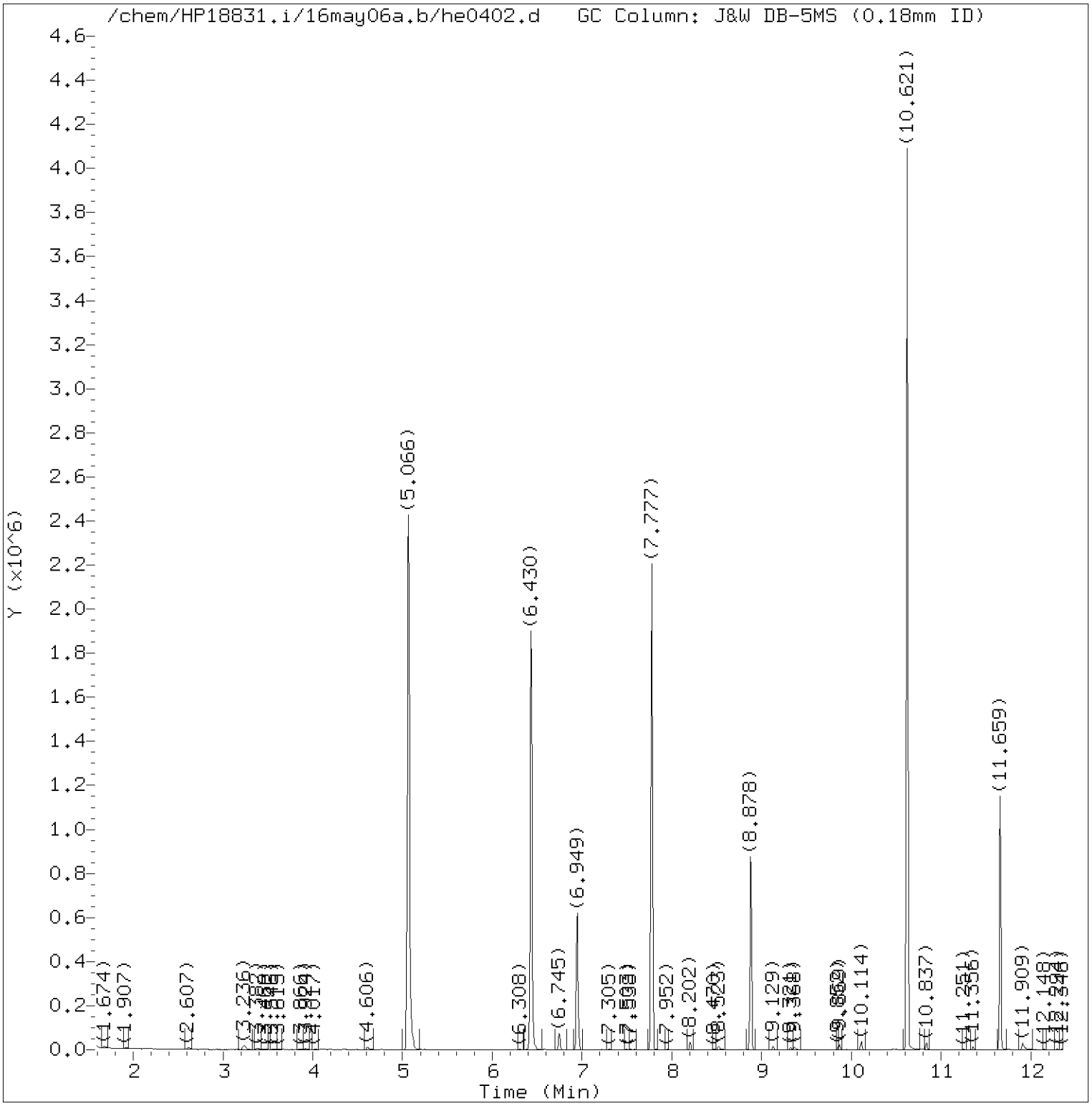
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.777	(0.001)	82	1056465	21.599	86%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627	(0.000)	172	1659794	20.693	83%		61 - 112
179) Terphenyl-d14	(5)	15.838	(0.000)	244	1817860	20.135	81%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)				Not Detected					0.2
100) 2-Nitroaniline	(3)				Not Detected					0.2
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
124) Diethylphthalate	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

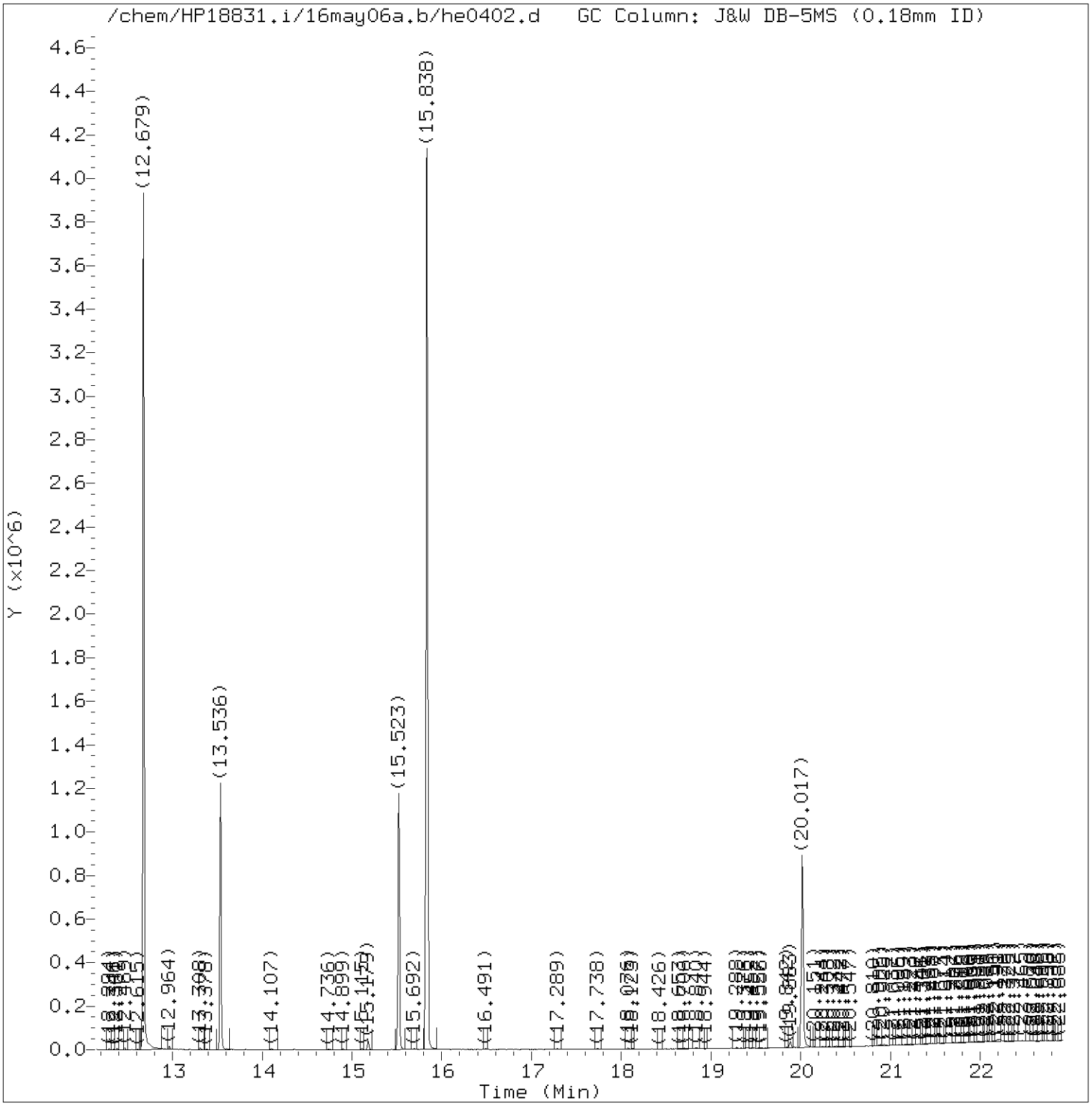
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0402.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 19:54 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:22 jmg00346

Sample Name: SBLKWC120 Lab Sample ID: SBLKWC120

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0402.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 19:54 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:22 jmg00346

Sample Name: SBLKWC120 Lab Sample ID: SBLKWC120

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0402.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 19:54 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:22 jmg00346

Sample Name: SBLKWC120 Lab Sample ID: SBLKWC120

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.949	152	132724	5.000
44)$Nitrobenzene-d5	(2)	7.777	82	1056465	21.599
65)*Naphthalene-d8	(2)	8.878	136	495800	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1659794	20.693
113)*Acenaphthene-d10	(3)	11.659	164	283457	5.000
153)*Phenanthrene-d10	(4)	13.536	188	546513	5.000
175)*Pyrene-d10	(5)	15.523	212	644138	5.000
179)$Terphenyl-d14	(5)	15.838	244	1817860	20.135
213)*Perylene-d12	(6)	20.017	264	483982	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0418.d
Data file Sample Info. Line: 5W7B-MS;8352779;1;3;MS;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 03:43**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.955	(-0.006)	921	152	125014	(-44)	5.00	
65) Naphthalene-d8	8.884	(0.000)	1252	136	480241	(-44)	5.00	
113) Acenaphthene-d10	11.659	(0.006)	1728	164	283298	(-43)	5.00	
153) Phenanthrene-d10	13.536	(0.006)	2050	188	538959	(-44)	5.00	
175) Pyrene-d10	15.523	(0.006)	2391	212	652067	(-45)	5.00	
213) Perylene-d12	20.017	(0.012)	3162	264	483130	(-48)	5.00	

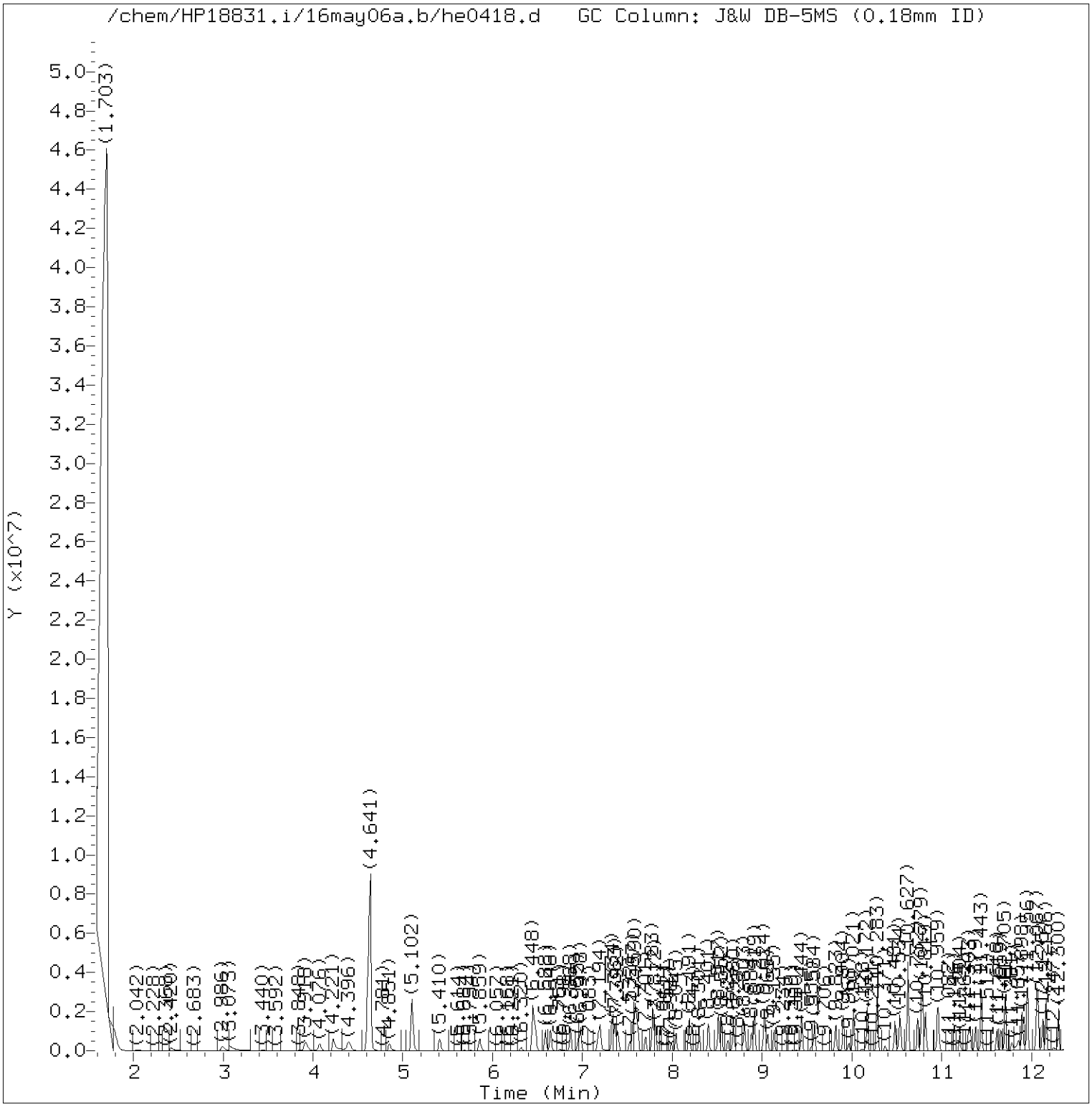
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.783	(0.001)	82	1070072	22.586	90%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627	(0.000)	172	1772216	22.107	88%		61 - 112
179) Terphenyl-d14	(5)	15.832	(0.000)	244	1741787	19.058	76%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.812	(0.000)	77	582353	11.775	47.48			0.2
100) 2-Nitroaniline	(3)	10.971	(0.000)	138	241313	12.077	48.70			0.2
108) 2,6-Dinitrotoluene	(3)	11.379	(0.000)	165	204100	12.370	49.88			0.2
118) 2,4-Dinitrotoluene	(3)	11.962	(-0.000)	165	274777	11.763	47.43			0.2
124) Diethylphthalate	(3)	12.300	(0.000)	149	749624	9.976	40.23			0.1
129) 4-Nitroaniline	(3)	12.428	(0.000)	138	199558	11.114	44.82			0.2
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	(-0.000)	149	1061083	12.925	52.12			0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

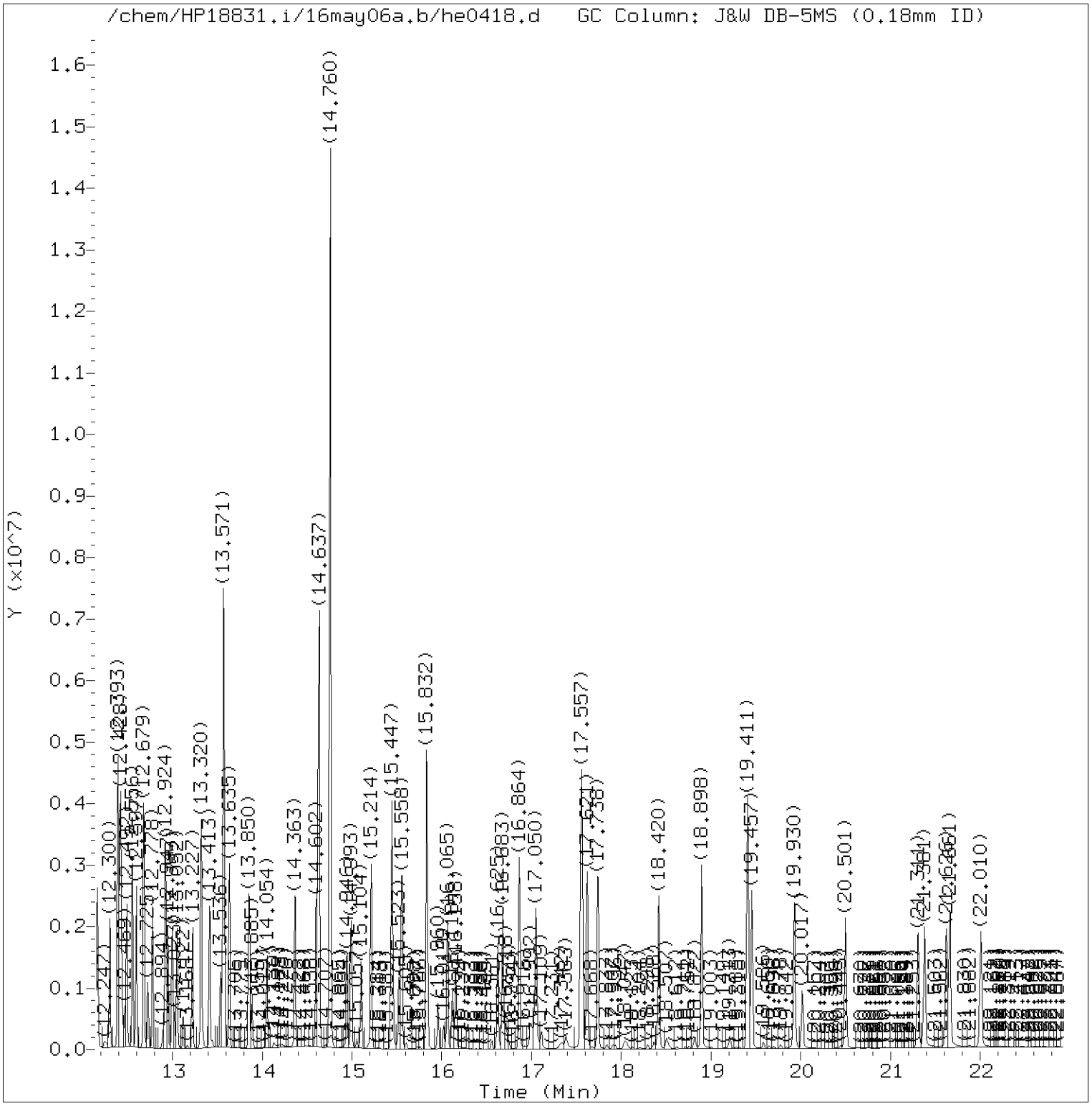
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0418.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:43 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MS Lab Sample ID: 8352779

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0418.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:43 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MS Lab Sample ID: 8352779

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0418.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 03:43 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MS Lab Sample ID: 8352779

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.955	152	125014	5.000
44)$Nitrobenzene-d5	(2)	7.783	82	1070072	22.586
45) Nitrobenzene	(2)	7.812	77	582353	11.775
65)*Naphthalene-d8	(2)	8.884	136	480241	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1772216	22.107
100) 2-Nitroaniline	(3)	10.971	138	241313	12.077
108) 2,6-Dinitrotoluene	(3)	11.379	165	204100	12.370
113)*Acenaphthene-d10	(3)	11.659	164	283298	5.000
118) 2,4-Dinitrotoluene	(3)	11.962	165	274777	11.763
124) Diethylphthalate	(3)	12.300	149	749624	9.976
129) 4-Nitroaniline	(3)	12.428	138	199558	11.114
153)*Phenanthrene-d10	(4)	13.536	188	538959	5.000
175)*Pyrene-d10	(5)	15.523	212	652067	5.000
179)$Terphenyl-d14	(5)	15.832	244	1741787	19.058
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	149	1061083	12.925
213)*Perylene-d12	(6)	20.017	264	483130	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/16may06a.b/he0419.d
Data file Sample Info. Line: 5W7B-MSD;8352780;1;3;MSD;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **07-MAY-2016 04:12**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.955	(-0.006)	921	152	129827	(-42)	5.00	
65) Naphthalene-d8	8.884	(0.000)	1252	136	488065	(-43)	5.00	
113) Acenaphthene-d10	11.659	(0.006)	1728	164	283462	(-43)	5.00	
153) Phenanthrene-d10	13.536	(0.006)	2050	188	546650	(-43)	5.00	
175) Pyrene-d10	15.523	(0.006)	2391	212	663444	(-44)	5.00	
213) Perylene-d12	20.017	(0.012)	3162	264	485108	(-48)	5.00	

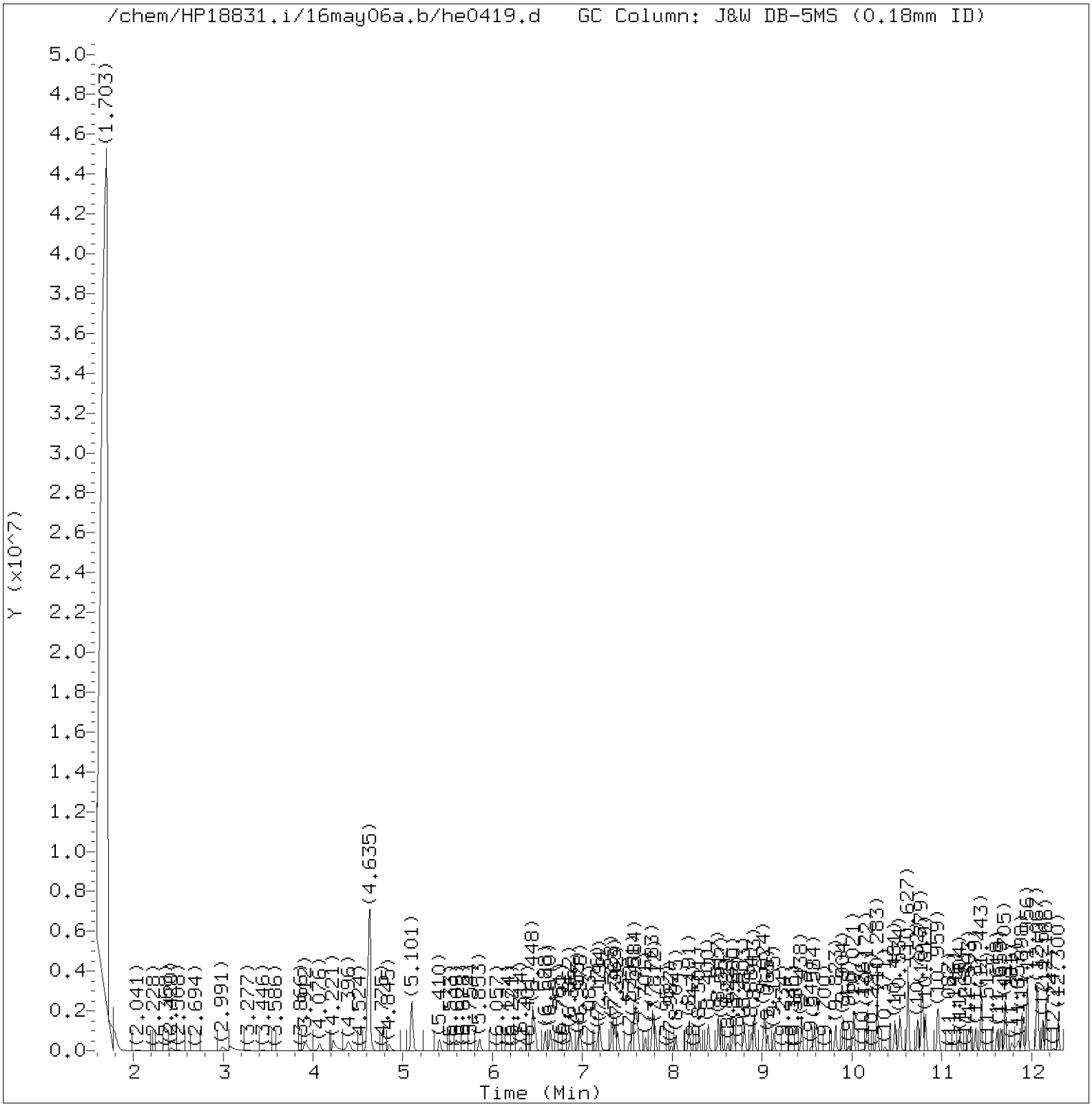
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.783	(0.001)	82	987323	20.505	82%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627	(0.000)	172	1658368	20.675	83%		61 - 112
179) Terphenyl-d14	(5)	15.832	(0.000)	244	1649113	17.734	71%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.812	(0.000)	77	538251	10.709	43.53			0.2
100) 2-Nitroaniline	(3)	10.971	(0.000)	138	224232	11.215	45.59			0.2
108) 2,6-Dinitrotoluene	(3)	11.379	(0.000)	165	188179	11.398	46.33			0.2
118) 2,4-Dinitrotoluene	(3)	11.962	(-0.000)	165	257098	11.000	44.71			0.2
124) Diethylphthalate	(3)	12.300	(0.000)	149	705522	9.384	38.15			0.1
129) 4-Nitroaniline	(3)	12.428	(0.000)	138	188530	10.494	42.66			0.2
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	(-0.000)	149	990188	11.855	48.19			0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

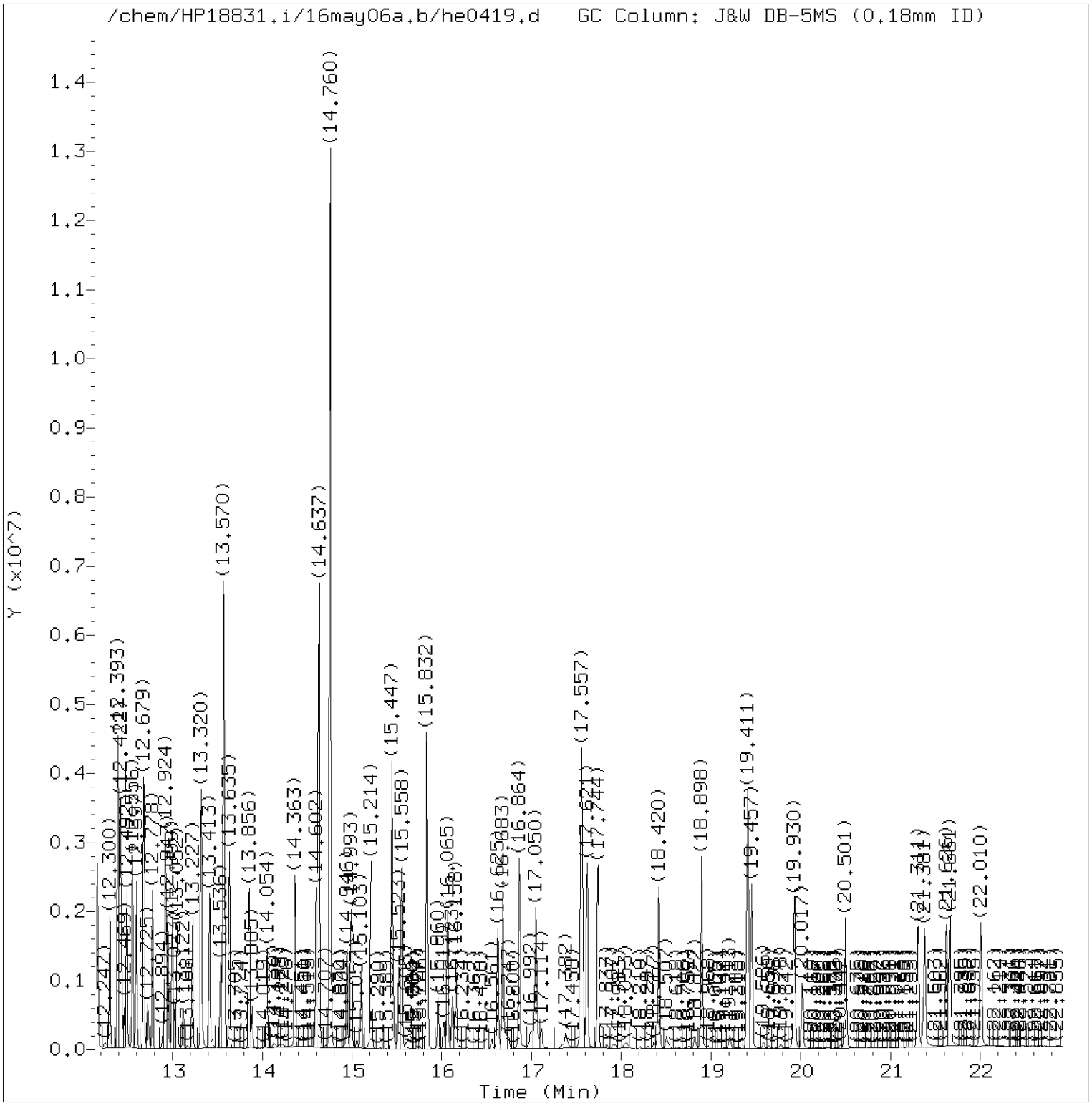
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0419.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:12 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MSD Lab Sample ID: 8352780

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0419.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:12 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MSD Lab Sample ID: 8352780

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0419.d Instrument ID: HP18831.i
Injection date and time: 07-MAY-2016 04:12 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 5W7B-MSD Lab Sample ID: 8352780

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.955	152	129827	5.000
44)$Nitrobenzene-d5	(2)	7.783	82	987323	20.505
45) Nitrobenzene	(2)	7.812	77	538251	10.709
65)*Naphthalene-d8	(2)	8.884	136	488065	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1658368	20.675
100) 2-Nitroaniline	(3)	10.971	138	224232	11.215
108) 2,6-Dinitrotoluene	(3)	11.379	165	188179	11.398
113)*Acenaphthene-d10	(3)	11.659	164	283462	5.000
118) 2,4-Dinitrotoluene	(3)	11.962	165	257098	11.000
124) Diethylphthalate	(3)	12.300	149	705522	9.384
129) 4-Nitroaniline	(3)	12.428	138	188530	10.494
153)*Phenanthrene-d10	(4)	13.536	188	546650	5.000
175)*Pyrene-d10	(5)	15.523	212	663444	5.000
179)$Terphenyl-d14	(5)	15.832	244	1649113	17.734
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	149	990188	11.855
213)*Perylene-d12	(6)	20.017	264	485108	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

120WCLCS

Data file: /chem/HP18831.i/16may06a.b/he0403.d
Data file Sample Info. Line: 120WCLCS;120WCLCS;1;3;LCS;;DRRAAP;
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Injection date and time: **06-MAY-2016 20:23**
Instrument ID: **HP18831.i** Batch: **16120WAC**

Blank Data file reference: **/chem/HP18831.i/16may06a.b/he0402.d**

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: **19356**
Calibration date and time (Last Method Edit): 25-MAY-2016 03:19
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/16may06a.b/he0401.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.955	(-0.006)	921	152	129343	(-42)	5.00	
65) Naphthalene-d8	8.884	(0.000)	1252	136	489354	(-43)	5.00	
113) Acenaphthene-d10	11.659	(0.006)	1728	164	281976	(-43)	5.00	
153) Phenanthrene-d10	13.536	(0.006)	2050	188	549726	(-43)	5.00	
175) Pyrene-d10	15.529	(0.000)	2392	212	665084	(-44)	5.00	
213) Perylene-d12	20.017	(0.012)	3162	264	494892	(-47)	5.00	

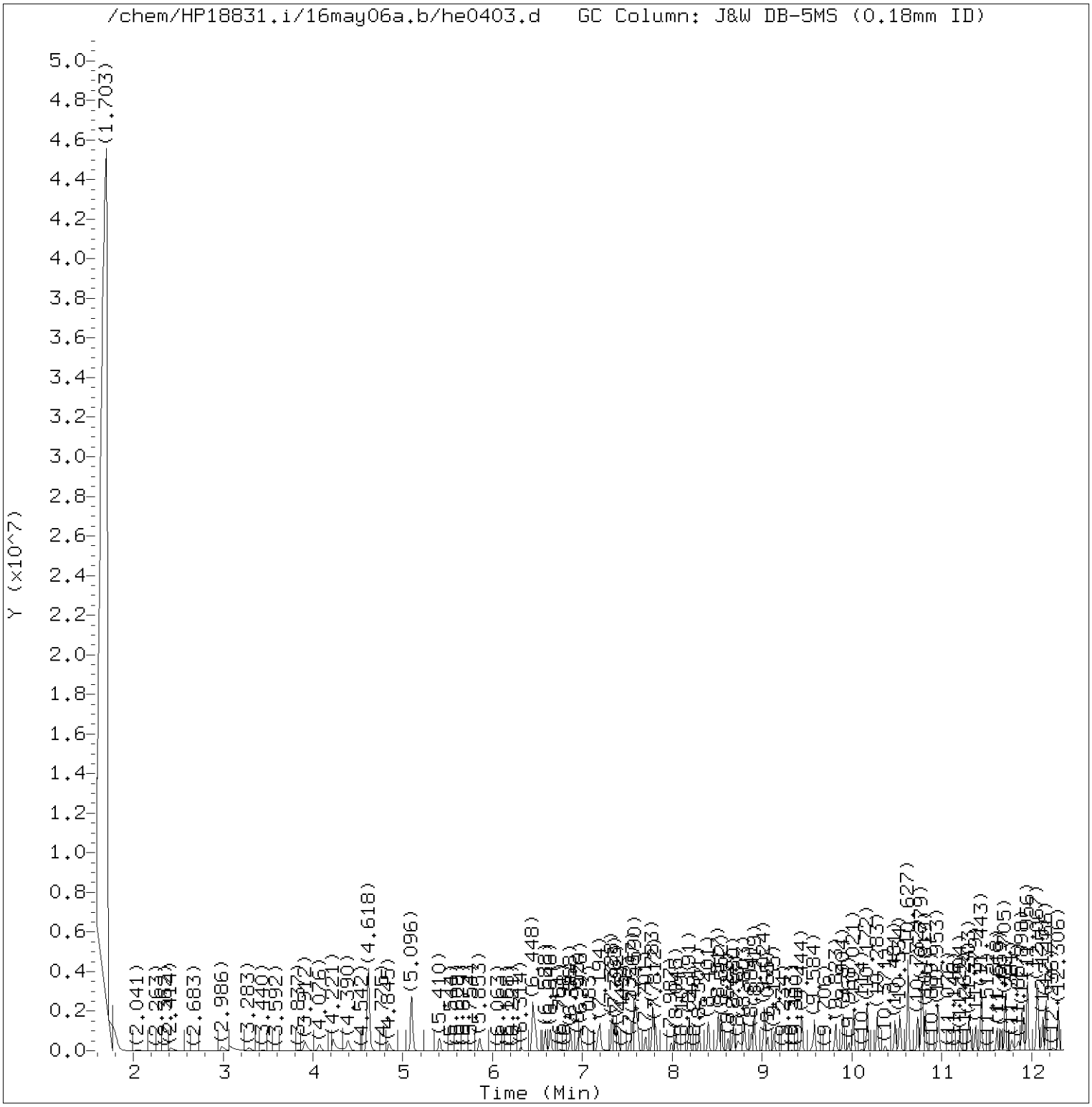
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.783	(0.001)	82	1122138	23.244	93%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.627	(0.000)	172	1818117	22.786	91%		61 - 112
179) Terphenyl-d14	(5)	15.838	(0.000)	244	1858079	19.932	80%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
45) Nitrobenzene	(2)	7.812	(0.000)	77	600504	11.916	47.66			0.2
100) 2-Nitroaniline	(3)	10.971	(0.000)	138	251273	12.634	50.54			0.2
108) 2,6-Dinitrotoluene	(3)	11.379	(0.000)	165	206055	12.547	50.19			0.2
118) 2,4-Dinitrotoluene	(3)	11.962	(-0.000)	165	279082	12.003	48.01			0.2
124) Diethylphthalate	(3)	12.306	(-0.000)	149	841398	11.250	45.00			0.1
129) 4-Nitroaniline	(3)	12.428	(0.000)	138	203280	11.375	45.50			0.2
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	(-0.000)	149	1078444	12.880	51.52			0.4

Total number of targets = 7

Digitally signed by Joseph M. Gambler on 05/25/2016 at 03:29. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 05/25/2016 at 09:04. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

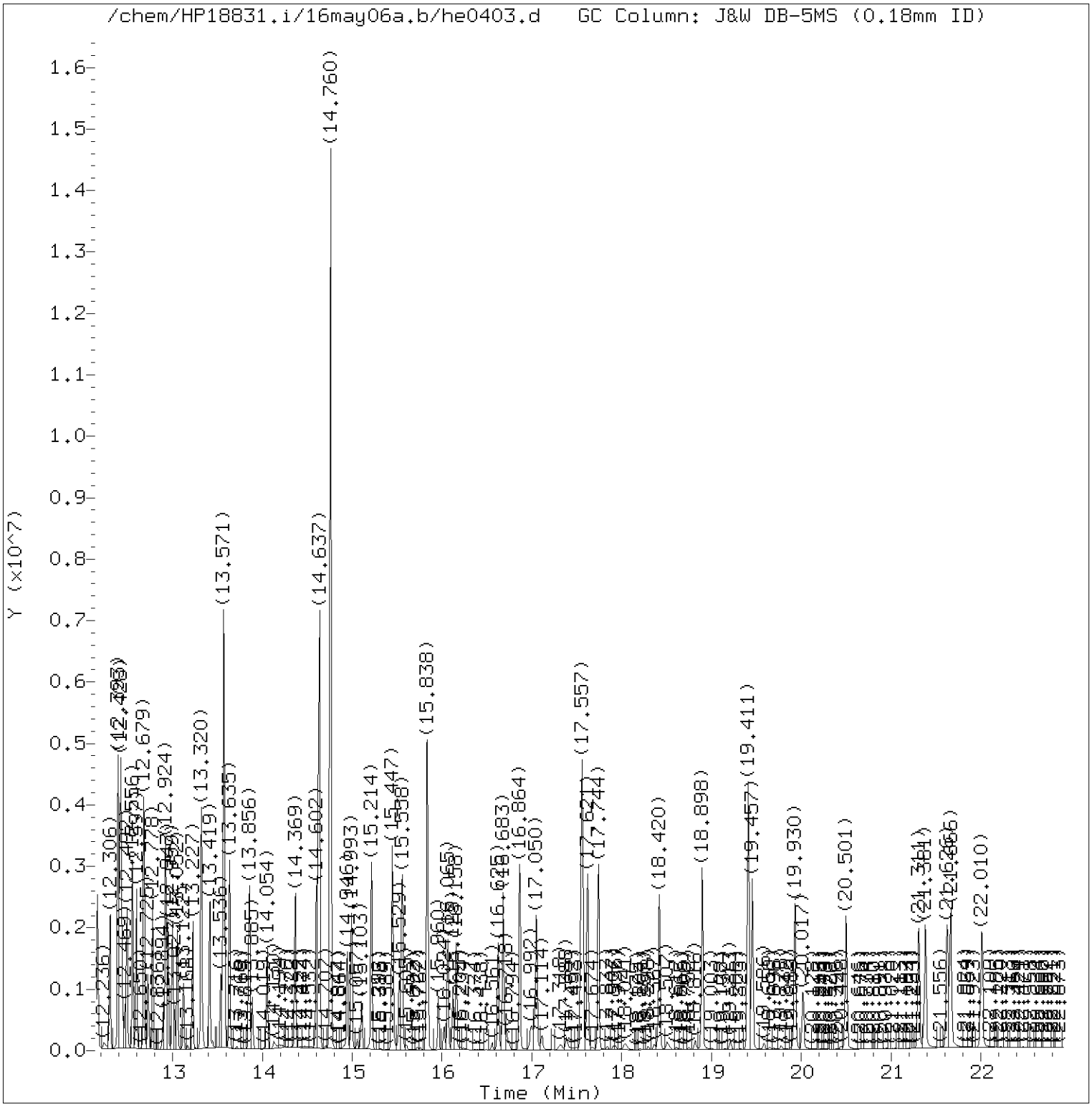
Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0403.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 20:23 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 120WCLCS Lab Sample ID: 120WCLCS

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0403.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 20:23 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 120WCLCS Lab Sample ID: 120WCLCS

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/16may06a.b/he0403.d Instrument ID: HP18831.i
Injection date and time: 06-MAY-2016 20:23 Analyst ID: whs02991

Method used: /chem/HP18831.i/16may06a.b/rv8270d.m Sublist used: 19356
Calibration date and time: 25-MAY-2016 03:19
Date, time and analyst ID of latest file update: 25-May-2016 03:23 jmg00346

Sample Name: 120WCLCS Lab Sample ID: 120WCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.955	152	129343	5.000
44)$Nitrobenzene-d5	(2)	7.783	82	1122138	23.244
45) Nitrobenzene	(2)	7.812	77	600504	11.916
65)*Naphthalene-d8	(2)	8.884	136	489354	5.000
93)$2-Fluorobiphenyl	(3)	10.627	172	1818117	22.786
100) 2-Nitroaniline	(3)	10.971	138	251273	12.634
108) 2,6-Dinitrotoluene	(3)	11.379	165	206055	12.547
113)*Acenaphthene-d10	(3)	11.659	164	281976	5.000
118) 2,4-Dinitrotoluene	(3)	11.962	165	279082	12.003
124) Diethylphthalate	(3)	12.306	149	841398	11.250
129) 4-Nitroaniline	(3)	12.428	138	203280	11.375
153)*Phenanthrene-d10	(4)	13.536	188	549726	5.000
175)*Pyrene-d10	(5)	15.529	212	665084	5.000
179)$Terphenyl-d14	(5)	15.838	244	1858079	19.932
199) bis(2-Ethylhexyl)phthalate	(5)	17.744	149	1078444	12.880
213)*Perylene-d12	(6)	20.017	264	494892	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 05/25/2016 at 03:29.
Target 3.5 esignature user ID: jmg00346

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 7964 Shawn McMullen Reviewed by: [illegible] 5/6/16 Start Date: 4/29/16 Start time: 16:30

16120WAC026 Tech 1: SM7964 Tech 2: RD 9431

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs by 8270D in Water

QC	Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
8352779MS	5W7B-	248	SS1611326B	1.0	MS1610926A MS1611126A	1.0 1.0	1	✓	✓	153a	③SM7964 4/29/16 ~~157~~ clear
8352780MSD	5W7B-	246	SS1611326B	↓	MS1610926A MS1611126A	1.0 1.0	1	✓	✓	153a	↓
BLANKA	SBLKWC120	250	SS1611326B	↓	—	—	1	✓	✓	—	tap H_2O
LCSA	120WCLCS	250	SS1611326B	↓	MS1610926A MS1611126A	1.0 1.0	1	✓	✓	—	↓

Solvent Used	Lot No.
10N NaOH	2507A14
Methylene Chloride	162661
Sodium Sulfate	16120A
Sulfuric Acid	158902

Spike Solutions: Witness: NA

MS1610926A APPIX #1 MINI SPIKE

MS1611126A MINI SEP. LCS SPIKE

SS1611326B MINI SEP. BNA SURROGATE

Sample #		Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1	8352777	5W5B-	250	SS1611326B	1.0	1	✓	✓	153a	clear	10461	19356	05/09/2016	N
2	8352778BKG	5W7B-	251	SS1611326B	↓	1	✓	✓	153a	↓	10461	19356	05/09/2016	N
3	8352781	5WC21	247	SS1611326B	↓	1	✓	✓	153a	↓	10461	19356	05/09/2016	N
4	8352782	5WDUP	249	SS1611326B	↓	1	✓	✓	153a	↓	10461	19356	05/09/2016	N
5	8352783	5WC22	250	SS1611326B	↓	1	✓	✓	153a	↓	10461	19356	05/09/2016	N
6	8352784	5WC23	248	SS1611326B	↓	1	✓	✓	153a	↓	10461	19356	05/09/2016	N

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NA SM7964 4/29/16

Rack ID:	—	Work Station	H_2O bench5	Micro Temp 100?	—
Internal Standard	RVISTD1266	Balance #	13		

S-bath ID 11	87° C	S-bath ID —	C	N-Evap —	C	M-vap —	C	16120WAC026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

ANALYTICAL REPORT

Job Number: 240-64029-1

Job Description: RFAAP, Radford VA, HWMU5

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
6/8/2016 11:26 AM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
06/08/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RFAAP, Radford VA, HWMU5

Report Number: 240-64029-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 4/27/2016 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples 5WC21 (240-64029-3), 5WC22 (240-64029-4) and 5WC23 (240-64029-5) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/28/2016 and analyzed on 05/06/2016.

The continuing calibration verification (CCV) associated with batch 240-228727 recovered above the upper control limit for 4-nitroaniline. The sample associated with this CCV, (MB 240-227942/15-A) , was non-detect for this analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU5

TestAmerica Job ID: 240-64029-1

Client Sample ID: 5WC23 **Lab Sample ID: 240-64029-5**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 5WC23

Date Collected: 04/23/16 14:15
Date Received: 04/27/16 10:10

Lab Sample ID: 240-64029-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
p-Nitroaniline	<2.0		2.0	0.22	ug/L		04/28/16 09:19	05/06/16 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*102*		*29 - 110*	*04/28/16 09:19*	*05/06/16 13:30*	*1*
2-Fluorophenol (Surr)	*66*		*15 - 110*	*04/28/16 09:19*	*05/06/16 13:30*	*1*
2,4,6-Tribromophenol (Surr)	*87*		*21 - 128*	*04/28/16 09:19*	*05/06/16 13:30*	*1*
Nitrobenzene-d5 (Surr)	*110*		*31 - 110*	*04/28/16 09:19*	*05/06/16 13:30*	*1*
Phenol-d5 (Surr)	*68*		*10 - 110*	*04/28/16 09:19*	*05/06/16 13:30*	*1*
Terphenyl-d14 (Surr)	*107*		*31 - 115*	*04/28/16 09:19*	*05/06/16 13:30*	*1*

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU5

TestAmerica Job ID: 240-64029-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	RL		Units	Method
p-Nitroaniline	2.0	0.24	ug/L	8270D

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU5

TestAmerica Job ID: 240-64029-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	TBP	NBZ	PHL	TPH		
Lab Sample ID	Client Sample ID	(29-110)	(15-110)	(21-128)	(31-110)	(10-110)	(31-115)		
240-64029-5	5WC23	102	66	87	110	68	107		
LCS 240-227942/16-A	Lab Control Sample	86	77	87	97	58	80		
MB 240-227942/15-A	Method Blank	70	51	62	75	51	72		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-227942/15-A
Matrix: Water
Analysis Batch: 228727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227942

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
p-Nitroaniline	<2.0		2.0	0.24	ug/L		04/28/16 09:19	05/04/16 09:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*70*		*29 - 110*	*04/28/16 09:19*	*05/04/16 09:35*	*1*
2-Fluorophenol (Surr)	*51*		*15 - 110*	*04/28/16 09:19*	*05/04/16 09:35*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*21 - 128*	*04/28/16 09:19*	*05/04/16 09:35*	*1*
Nitrobenzene-d5 (Surr)	*75*		*31 - 110*	*04/28/16 09:19*	*05/04/16 09:35*	*1*
Phenol-d5 (Surr)	*51*		*10 - 110*	*04/28/16 09:19*	*05/04/16 09:35*	*1*
Terphenyl-d14 (Surr)	*72*		*31 - 115*	*04/28/16 09:19*	*05/04/16 09:35*	*1*

Lab Sample ID: LCS 240-227942/16-A
Matrix: Water
Analysis Batch: 228727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227942

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
p-Nitroaniline			32.0	36.3		ug/L		114	40 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*86*		*29 - 110*
2-Fluorophenol (Surr)	*77*		*15 - 110*
2,4,6-Tribromophenol (Surr)	*87*		*21 - 128*
Nitrobenzene-d5 (Surr)	*97*		*31 - 110*
Phenol-d5 (Surr)	*58*		*10 - 110*
Terphenyl-d14 (Surr)	*80*		*31 - 115*

GC/MS Semi VOA

Prep Batch: 227942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64029-5	5WC23	Total/NA	Water	3510C	
LCS 240-227942/16-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-227942/15-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 228727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-227942/16-A	Lab Control Sample	Total/NA	Water	8270D	227942
MB 240-227942/15-A	Method Blank	Total/NA	Water	8270D	227942

Analysis Batch: 229123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64029-5	5WC23	Total/NA	Water	8270D	227942

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU5

TestAmerica Job ID: 240-64029-1

Client Sample ID: 5WC23

Date Collected: 04/23/16 14:15
Date Received: 04/27/16 10:10

Lab Sample ID: 240-64029-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			227942	04/28/16 09:19	JDR	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 13:30	TMH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64029-1
Project/Site: RFAAP, Radford VA, HWMU5

Laboratory: TestAmerica Canton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460175	09-14-16

Method Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64029-1
Project/Site: RFAAP, Radford VA, HWMU5

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU5

TestAmerica Job ID: 240-64029-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-64029-5	5WC23	Water	04/23/16 14:15	04/27/16 10:10

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 227507

Lab Sample ID: STD4 240-227507/7 IC Client Sample ID:

Date Analyzed: 04/26/16 09:48 Lab File ID: 60426007.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.64	Poor chromatography	hulat	04/26/16 11:05

Lab Sample ID: STD3 240-227507/8 IC Client Sample ID:

Date Analyzed: 04/26/16 10:13 Lab File ID: 60426008.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.64	Poor chromatography	hulat	04/26/16 11:09

Lab Sample ID: STD1 240-227507/10 IC Client Sample ID:

Date Analyzed: 04/26/16 11:03 Lab File ID: 60426010.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dibenz(a,h)anthracene	18.41	Poor chromatography	hulat	04/26/16 12:15
Indeno[1,2,3-cd]pyrene	18.41	Poor chromatography	hulat	04/26/16 12:15
Benzo[g,h,i]perylene	19.05	Poor chromatography	hulat	04/26/16 12:15

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 229123

Lab Sample ID: STD6 240-229123/2 CCVIS Client Sample ID:

Date Analyzed: 05/06/16 07:16 Lab File ID: 60506002.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	8.00	Poor chromatography	hulat	05/06/16 07:52

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
exBENZALDEHYD_00038	01/31/17	04/22/16	MEOH, Lot 0000118655	200 mL	exLIST1_S11_00002	4 mL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
.exLIST1_S11_00002	01/31/17	Restek, Lot A0112321			(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
exBNASPIKE_00062	08/31/16	04/15/16	MEOH, Lot 0000118655	200 mL	exLIST1_S1_00005	4 mL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Methylphenol	10 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Methylphenol	10 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.1 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							p-Nitroaniline	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	20 ug/mL
					EXLIST1_S10_00001	4 mL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					exLIST1_S9_00003	4 mL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
.exLIST1_S1_00005	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	500 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	500 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	855 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.EXLIST1_S10_00001	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.exLIST1_S9_00003	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
exBNASURR W_00034	07/13/17	04/22/16	MEOH, Lot 0000118655	2000 mL	SMLIST1 SURR_00003	8 mL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMLIST1 SURR_00003	02/22/18		Restek, Lot A093638		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMIS80PPMW_00013	07/10/16	07/10/15	MECL2, Lot 0000103549	25 mL	SMIS R_00005	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
.SMIS R_00005	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 L1 W_00007	03/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1PAH ST_00005	2 uL	1,1'-Biphenyl	0.1 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							2-Chloronaphthalene	0.1 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Dibenzofuran	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Hexachlorobenzene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							2-Fluorobiphenyl (Surr)	0.1 ug/mL
							Nitrobenzene-d5 (Surr)	0.1 ug/mL
							Terphenyl-d14 (Surr)	0.1 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1PAH ST_00005	03/31/17	03/04/16	MECL2, Lot 0000127195	3 mL	SMLIST1 PAH_00005	300 uL	1,1'-Biphenyl	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Chrysene	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Naphthalene	100 ug/mL
							Phenanthrene	100 ug/mL
							Pyrene	100 ug/mL
					SMLIST1 SURR_00004	60 uL	2-Fluorobiphenyl (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 PAH_00005	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Chrysene	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L2 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	10 uL	1,1'-Biphenyl	0.5 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.5 ug/mL
							1,2,4-Trichlorobenzene	0.5 ug/mL
							1,2-Dichlorobenzene	0.5 ug/mL
							1,2-Diphenylhydrazine	0.5 ug/mL
							1,3-Dichlorobenzene	0.5 ug/mL
							1,3-Dinitrobenzene	0.5 ug/mL
							1,4-Dichlorobenzene	0.5 ug/mL
							1,4-Dioxane	0.5 ug/mL
							1-Methylnaphthalene	0.5 ug/mL
							2,2'-oxybis[1-chloropropane]	0.5 ug/mL
							2,3,4,6-Tetrachlorophenol	0.5 ug/mL
							2,4,5-Trichlorophenol	0.5 ug/mL
							2,4,6-Trichlorophenol	0.5 ug/mL
							2,4-Dichlorophenol	0.5 ug/mL
							2,4-Dimethylphenol	0.5 ug/mL
							2,4-Dinitrophenol	1 ug/mL
							2,4-Dinitrotoluene	0.5 ug/mL
							2,6-Dichlorophenol	0.5 ug/mL
							2,6-Dinitrotoluene	0.5 ug/mL
							2-Chloronaphthalene	0.5 ug/mL
							2-Chlorophenol	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							2-Methylphenol	0.5 ug/mL
							2-Nitroaniline	0.5 ug/mL
							2-Nitrophenol	0.5 ug/mL
							3 & 4 Methylphenol	0.5 ug/mL
							3-Nitroaniline	0.5 ug/mL
							4,6-Dinitro-2-methylphenol	1 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	0.5 ug/mL
							4-Chloro-3-methylphenol	0.5 ug/mL
							4-Chloroaniline	0.5 ug/mL
							4-Chlorophenyl phenyl ether	0.5 ug/mL
							4-Nitrophenol	1 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Acetophenone	0.5 ug/mL
							Aniline	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Azobenzene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Benzyl alcohol	0.5 ug/mL
							Bis(2-chloroethoxy)methane	0.5 ug/mL
							Bis(2-chloroethyl)ether	0.5 ug/mL
							Bis(2-ethylhexyl) phthalate	0.5 ug/mL
							Butyl benzyl phthalate	0.5 ug/mL
							Carbazole	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Di-n-butyl phthalate	0.5 ug/mL
							Di-n-octyl phthalate	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Dibenzofuran	0.5 ug/mL
							Diethyl phthalate	0.5 ug/mL
							Dimethyl phthalate	0.5 ug/mL
							Diphenylamine	0.42535 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Hexachlorobenzene	0.5 ug/mL
							Hexachlorobutadiene	0.5 ug/mL
							Hexachlorocyclopentadiene	0.5 ug/mL
							Hexachloroethane	0.5 ug/mL
							Hexadecane	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Isophorone	0.5 ug/mL
							n-Decane	0.5 ug/mL
							N-Nitrosodi-n-propylamine	0.5 ug/mL
							N-Nitrosodimethylamine	0.5 ug/mL
							N-Nitrosodiphenylamine	0.5 ug/mL
							n-Octadecane	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Nitrobenzene	0.5 ug/mL
							p-Nitroaniline	0.5 ug/mL
							Pentachlorophenol	1 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	0.5 ug/mL
							Phenol	0.5 ug/mL
							Pyrene	0.5 ug/mL
							Pyridine	0.5 ug/mL
							Benzoic acid	1 ug/mL
							Indene	1 ug/mL
							Atrazine	1 ug/mL
							Benzaldehyde	1 ug/mL
							Caprolactam	1 ug/mL
							3,3'-Dichlorobenzidine	1 ug/mL
							Benzidine	1 ug/mL
							2,4,6-Tribromophenol (Surr)	0.5 ug/mL
							2-Fluorobiphenyl (Surr)	0.5 ug/mL
							2-Fluorophenol (Surr)	0.5 ug/mL
							Nitrobenzene-d5 (Surr)	0.5 ug/mL
							Phenol-d5 (Surr)	0.5 ug/mL
							Terphenyl-d14 (Surr)	0.5 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L3 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	20 uL	1,1'-Biphenyl	1 ug/mL
							1,2,4,5-Tetrachlorobenzene	1 ug/mL
							1,2,4-Trichlorobenzene	1 ug/mL
							1,2-Dichlorobenzene	1 ug/mL
							1,2-Diphenylhydrazine	1 ug/mL
							1,3-Dichlorobenzene	1 ug/mL
							1,3-Dinitrobenzene	1 ug/mL
							1,4-Dichlorobenzene	1 ug/mL
							1,4-Dioxane	1 ug/mL
							1-Methylnaphthalene	1 ug/mL
							2,2'-oxybis[1-chloropropane]	1 ug/mL
							2,3,4,6-Tetrachlorophenol	1 ug/mL
							2,4,5-Trichlorophenol	1 ug/mL
							2,4,6-Trichlorophenol	1 ug/mL
							2,4-Dichlorophenol	1 ug/mL
							2,4-Dimethylphenol	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	2 ug/mL
							2,4-Dinitrotoluene	1 ug/mL
							2,6-Dichlorophenol	1 ug/mL
							2,6-Dinitrotoluene	1 ug/mL
							2-Chloronaphthalene	1 ug/mL
							2-Chlorophenol	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							2-Methylphenol	1 ug/mL
							2-Nitroaniline	1 ug/mL
							2-Nitrophenol	1 ug/mL
							3 & 4 Methylphenol	1 ug/mL
							3-Nitroaniline	1 ug/mL
							4,6-Dinitro-2-methylphenol	2 ug/mL
							4-Bromophenyl phenyl ether	1 ug/mL
							4-Chloro-3-methylphenol	1 ug/mL
							4-Chloroaniline	1 ug/mL
							4-Chlorophenyl phenyl ether	1 ug/mL
							4-Nitrophenol	2 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Acetophenone	1 ug/mL
							Aniline	1 ug/mL
							Anthracene	1 ug/mL
							Azobenzene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Benzyl alcohol	1 ug/mL
							Bis(2-chloroethoxy)methane	1 ug/mL
							Bis(2-chloroethyl)ether	1 ug/mL
							Bis(2-ethylhexyl) phthalate	1 ug/mL
							Butyl benzyl phthalate	1 ug/mL
							Carbazole	1 ug/mL
							Chrysene	1 ug/mL
							Di-n-butyl phthalate	1 ug/mL
							Di-n-octyl phthalate	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Dibenzofuran	1 ug/mL
							Diethyl phthalate	1 ug/mL
							Dimethyl phthalate	1 ug/mL
							Diphenylamine	0.8507 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Hexachlorobenzene	1 ug/mL
							Hexachlorobutadiene	1 ug/mL
							Hexachlorocyclopentadiene	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	1 ug/mL
							Hexadecane	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Isophorone	1 ug/mL
							n-Decane	1 ug/mL
							N-Nitrosodi-n-propylamine	1 ug/mL
							N-Nitrosodimethylamine	1 ug/mL
							N-Nitrosodiphenylamine	1 ug/mL
							n-Octadecane	1 ug/mL
							Naphthalene	1 ug/mL
							Nitrobenzene	1 ug/mL
							p-Nitroaniline	1 ug/mL
							Pentachlorophenol	2 ug/mL
							Phenanthrene	1 ug/mL
							Phenol	1 ug/mL
							Pyrene	1 ug/mL
							Pyridine	1 ug/mL
							Benzoic acid	2 ug/mL
							Indene	2 ug/mL
							Atrazine	2 ug/mL
							Benzaldehyde	2 ug/mL
							Caprolactam	2 ug/mL
							3,3'-Dichlorobenzidine	2 ug/mL
							Benzidine	2 ug/mL
							2,4,6-Tribromophenol (Surr)	1 ug/mL
							2-Fluorobiphenyl (Surr)	1 ug/mL
							2-Fluorophenol (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	1 ug/mL
							Phenol-d5 (Surr)	1 ug/mL
							Terphenyl-d14 (Surr)	1 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L4 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	40 uL	1,1'-Biphenyl	2 ug/mL
							1,2,4,5-Tetrachlorobenzene	2 ug/mL
							1,2,4-Trichlorobenzene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	2 ug/mL
							1,2-Diphenylhydrazine	2 ug/mL
							1,3-Dichlorobenzene	2 ug/mL
							1,3-Dinitrobenzene	2 ug/mL
							1,4-Dichlorobenzene	2 ug/mL
							1,4-Dioxane	2 ug/mL
							1-Methylnaphthalene	2 ug/mL
							2,2'-oxybis[1-chloropropane]	2 ug/mL
							2,3,4,6-Tetrachlorophenol	2 ug/mL
							2,4,5-Trichlorophenol	2 ug/mL
							2,4,6-Trichlorophenol	2 ug/mL
							2,4-Dichlorophenol	2 ug/mL
							2,4-Dimethylphenol	2 ug/mL
							2,4-Dinitrophenol	4 ug/mL
							2,4-Dinitrotoluene	2 ug/mL
							2,6-Dichlorophenol	2 ug/mL
							2,6-Dinitrotoluene	2 ug/mL
							2-Chloronaphthalene	2 ug/mL
							2-Chlorophenol	2 ug/mL
							2-Methylnaphthalene	2 ug/mL
							2-Methylphenol	2 ug/mL
							2-Nitroaniline	2 ug/mL
							2-Nitrophenol	2 ug/mL
							3 & 4 Methylphenol	2 ug/mL
							3-Nitroaniline	2 ug/mL
							4,6-Dinitro-2-methylphenol	4 ug/mL
							4-Bromophenyl phenyl ether	2 ug/mL
							4-Chloro-3-methylphenol	2 ug/mL
							4-Chloroaniline	2 ug/mL
							4-Chlorophenyl phenyl ether	2 ug/mL
							4-Nitrophenol	4 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Acetophenone	2 ug/mL
							Aniline	2 ug/mL
							Anthracene	2 ug/mL
							Azobenzene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Benzyl alcohol	2 ug/mL
							Bis(2-chloroethoxy)methane	2 ug/mL
							Bis(2-chloroethyl)ether	2 ug/mL
							Bis(2-ethylhexyl) phthalate	2 ug/mL
							Butyl benzyl phthalate	2 ug/mL
							Carbazole	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	2 ug/mL
							Di-n-butyl phthalate	2 ug/mL
							Di-n-octyl phthalate	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Dibenzofuran	2 ug/mL
							Diethyl phthalate	2 ug/mL
							Dimethyl phthalate	2 ug/mL
							Diphenylamine	1.7014 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Hexachlorobenzene	2 ug/mL
							Hexachlorobutadiene	2 ug/mL
							Hexachlorocyclopentadiene	2 ug/mL
							Hexachloroethane	2 ug/mL
							Hexadecane	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Isophorone	2 ug/mL
							n-Decane	2 ug/mL
							N-Nitrosodi-n-propylamine	2 ug/mL
							N-Nitrosodimethylamine	2 ug/mL
							N-Nitrosodiphenylamine	2 ug/mL
							n-Octadecane	2 ug/mL
							Naphthalene	2 ug/mL
							Nitrobenzene	2 ug/mL
							p-Nitroaniline	2 ug/mL
							Pentachlorophenol	4 ug/mL
							Phenanthrene	2 ug/mL
							Phenol	2 ug/mL
							Pyrene	2 ug/mL
							Pyridine	2 ug/mL
							Benzoic acid	4 ug/mL
							Indene	4 ug/mL
							Atrazine	4 ug/mL
							Benzaldehyde	4 ug/mL
							Caprolactam	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzidine	4 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl (Surr)	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Terphenyl-d14 (Surr)	2 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L5 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	100 uL	1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Diphenylhydrazine	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dinitrobenzene	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dichlorophenol	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL
							3 & 4 Methylphenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chloroaniline	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Aniline	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	5 ug/mL
							Azobenzene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Benzyl alcohol	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Chrysene	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Diphenylamine	4.2535 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Hexadecane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Isophorone	5 ug/mL
							n-Decane	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodimethylamine	5 ug/mL
							N-Nitrosodiphenylamine	5 ug/mL
							n-Octadecane	5 ug/mL
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							p-Nitroaniline	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Pyridine	5 ug/mL
							Benzoic acid	10 ug/mL
							Indene	10 ug/mL
							Atrazine	10 ug/mL
							Benzaldehyde	10 ug/mL
							Caprolactam	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzidine	10 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl (Surr)	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L6 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	200 uL	1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.507 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Hexadecane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							n-Decane	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							n-Octadecane	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							p-Nitroaniline	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	10 ug/mL
							Benzoic acid	20 ug/mL
							Indene	20 ug/mL
							Atrazine	20 ug/mL
							Benzaldehyde	20 ug/mL
							Caprolactam	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzidine	20 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L7 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	300 uL	1,1'-Biphenyl	15 ug/mL
							1,2,4,5-Tetrachlorobenzene	15 ug/mL
							1,2,4-Trichlorobenzene	15 ug/mL
							1,2-Dichlorobenzene	15 ug/mL
							1,2-Diphenylhydrazine	15 ug/mL
							1,3-Dichlorobenzene	15 ug/mL
							1,3-Dinitrobenzene	15 ug/mL
							1,4-Dichlorobenzene	15 ug/mL
							1,4-Dioxane	15 ug/mL
							1-Methylnaphthalene	15 ug/mL
							2,2'-oxybis[1-chloropropane]	15 ug/mL
							2,3,4,6-Tetrachlorophenol	15 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	15 ug/mL
							2,4,6-Trichlorophenol	15 ug/mL
							2,4-Dichlorophenol	15 ug/mL
							2,4-Dimethylphenol	15 ug/mL
							2,4-Dinitrophenol	30 ug/mL
							2,4-Dinitrotoluene	15 ug/mL
							2,6-Dichlorophenol	15 ug/mL
							2,6-Dinitrotoluene	15 ug/mL
							2-Chloronaphthalene	15 ug/mL
							2-Chlorophenol	15 ug/mL
							2-Methylnaphthalene	15 ug/mL
							2-Methylphenol	15 ug/mL
							2-Nitroaniline	15 ug/mL
							2-Nitrophenol	15 ug/mL
							3 & 4 Methylphenol	15 ug/mL
							3-Nitroaniline	15 ug/mL
							4,6-Dinitro-2-methylphenol	30 ug/mL
							4-Bromophenyl phenyl ether	15 ug/mL
							4-Chloro-3-methylphenol	15 ug/mL
							4-Chloroaniline	15 ug/mL
							4-Chlorophenyl phenyl ether	15 ug/mL
							4-Nitrophenol	30 ug/mL
							Acenaphthene	15 ug/mL
							Acenaphthylene	15 ug/mL
							Acetophenone	15 ug/mL
							Aniline	15 ug/mL
							Anthracene	15 ug/mL
							Azobenzene	15 ug/mL
							Benzo[a]anthracene	15 ug/mL
							Benzo[a]pyrene	15 ug/mL
							Benzo[b]fluoranthene	15 ug/mL
							Benzo[g,h,i]perylene	15 ug/mL
							Benzo[k]fluoranthene	15 ug/mL
							Benzyl alcohol	15 ug/mL
							Bis(2-chloroethoxy)methane	15 ug/mL
							Bis(2-chloroethyl)ether	15 ug/mL
							Bis(2-ethylhexyl) phthalate	15 ug/mL
							Butyl benzyl phthalate	15 ug/mL
							Carbazole	15 ug/mL
							Chrysene	15 ug/mL
							Di-n-butyl phthalate	15 ug/mL
							Di-n-octyl phthalate	15 ug/mL
							Dibenz(a,h)anthracene	15 ug/mL
							Dibenzofuran	15 ug/mL
							Diethyl phthalate	15 ug/mL
							Dimethyl phthalate	15 ug/mL
							Diphenylamine	12.7605 ug/mL
							Fluoranthene	15 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	15 ug/mL
							Hexachlorobenzene	15 ug/mL
							Hexachlorobutadiene	15 ug/mL
							Hexachlorocyclopentadiene	15 ug/mL
							Hexachloroethane	15 ug/mL
							Hexadecane	15 ug/mL
							Indeno[1,2,3-cd]pyrene	15 ug/mL
							Isophorone	15 ug/mL
							n-Decane	15 ug/mL
							N-Nitrosodi-n-propylamine	15 ug/mL
							N-Nitrosodimethylamine	15 ug/mL
							N-Nitrosodiphenylamine	15 ug/mL
							n-Octadecane	15 ug/mL
							Naphthalene	15 ug/mL
							Nitrobenzene	15 ug/mL
							p-Nitroaniline	15 ug/mL
							Pentachlorophenol	30 ug/mL
							Phenanthrene	15 ug/mL
							Phenol	15 ug/mL
							Pyrene	15 ug/mL
							Pyridine	15 ug/mL
							Benzoic acid	30 ug/mL
							Indene	30 ug/mL
							Atrazine	30 ug/mL
							Benzaldehyde	30 ug/mL
							Caprolactam	30 ug/mL
							3,3'-Dichlorobenzidine	30 ug/mL
							Benzidine	30 ug/mL
							2,4,6-Tribromophenol (Surr)	15 ug/mL
							2-Fluorobiphenyl (Surr)	15 ug/mL
							2-Fluorophenol (Surr)	15 ug/mL
							Nitrobenzene-d5 (Surr)	15 ug/mL
							Phenol-d5 (Surr)	15 ug/mL
							Terphenyl-d14 (Surr)	15 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L8 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	400 uL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.014 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							p-Nitroaniline	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	20 ug/mL
							Benzoic acid	40 ug/mL
							Indene	40 ug/mL
							Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
							3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L9 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	500 uL	1,1'-Biphenyl	25 ug/mL
							1,2,4,5-Tetrachlorobenzene	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Diphenylhydrazine	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dinitrobenzene	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	25 ug/mL
							1-Methylnaphthalene	25 ug/mL
							2,2'-oxybis[1-chloropropane]	25 ug/mL
							2,3,4,6-Tetrachlorophenol	25 ug/mL
							2,4,5-Trichlorophenol	25 ug/mL
							2,4,6-Trichlorophenol	25 ug/mL
							2,4-Dichlorophenol	25 ug/mL
							2,4-Dimethylphenol	25 ug/mL
							2,4-Dinitrophenol	50 ug/mL
							2,4-Dinitrotoluene	25 ug/mL
							2,6-Dichlorophenol	25 ug/mL
							2,6-Dinitrotoluene	25 ug/mL
							2-Chloronaphthalene	25 ug/mL
							2-Chlorophenol	25 ug/mL
							2-Methylnaphthalene	25 ug/mL
							2-Methylphenol	25 ug/mL
							2-Nitroaniline	25 ug/mL
							2-Nitrophenol	25 ug/mL
							3 & 4 Methylphenol	25 ug/mL
							3-Nitroaniline	25 ug/mL
							4,6-Dinitro-2-methylphenol	50 ug/mL
							4-Bromophenyl phenyl ether	25 ug/mL
							4-Chloro-3-methylphenol	25 ug/mL
							4-Chloroaniline	25 ug/mL
							4-Chlorophenyl phenyl ether	25 ug/mL
							4-Nitrophenol	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	25 ug/mL
							Acenaphthylene	25 ug/mL
							Acetophenone	25 ug/mL
							Aniline	25 ug/mL
							Anthracene	25 ug/mL
							Azobenzene	25 ug/mL
							Benzo[a]anthracene	25 ug/mL
							Benzo[a]pyrene	25 ug/mL
							Benzo[b]fluoranthene	25 ug/mL
							Benzo[g,h,i]perylene	25 ug/mL
							Benzo[k]fluoranthene	25 ug/mL
							Benzyl alcohol	25 ug/mL
							Bis(2-chloroethoxy)methane	25 ug/mL
							Bis(2-chloroethyl)ether	25 ug/mL
							Bis(2-ethylhexyl) phthalate	25 ug/mL
							Butyl benzyl phthalate	25 ug/mL
							Carbazole	25 ug/mL
							Chrysene	25 ug/mL
							Di-n-butyl phthalate	25 ug/mL
							Di-n-octyl phthalate	25 ug/mL
							Dibenz(a,h)anthracene	25 ug/mL
							Dibenzofuran	25 ug/mL
							Diethyl phthalate	25 ug/mL
							Dimethyl phthalate	25 ug/mL
							Diphenylamine	21.2675 ug/mL
							Fluoranthene	25 ug/mL
							Fluorene	25 ug/mL
							Hexachlorobenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexachlorocyclopentadiene	25 ug/mL
							Hexachloroethane	25 ug/mL
							Hexadecane	25 ug/mL
							Indeno[1,2,3-cd]pyrene	25 ug/mL
							Isophorone	25 ug/mL
							n-Decane	25 ug/mL
							N-Nitrosodi-n-propylamine	25 ug/mL
							N-Nitrosodimethylamine	25 ug/mL
							N-Nitrosodiphenylamine	25 ug/mL
							n-Octadecane	25 ug/mL
							Naphthalene	25 ug/mL
							Nitrobenzene	25 ug/mL
							p-Nitroaniline	25 ug/mL
							Pentachlorophenol	50 ug/mL
							Phenanthrene	25 ug/mL
							Phenol	25 ug/mL
							Pyrene	25 ug/mL
							Pyridine	25 ug/mL
							Benzoic acid	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	50 ug/mL
							Atrazine	50 ug/mL
							Benzaldehyde	50 ug/mL
							Caprolactam	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzidine	50 ug/mL
							2,4,6-Tribromophenol (Surr)	25 ug/mL
							2-Fluorobiphenyl (Surr)	25 ug/mL
							2-Fluorophenol (Surr)	25 ug/mL
							Nitrobenzene-d5 (Surr)	25 ug/mL
							Phenol-d5 (Surr)	25 ug/mL
							Terphenyl-d14 (Surr)	25 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 SS W_00006	03/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMLIST1 SS ST_00006	200 uL	Nitrobenzene	10 ug/mL
							p-Nitroaniline	10 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMLIST1 SS ST_00006	03/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 SS S1_00005	1 mL	Nitrobenzene	100 ug/mL
							p-Nitroaniline	100 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 SS S1_00005	06/30/17		Restek, Lot A0115803		(Purchased Reagent)		Nitrobenzene	1000 ug/mL
							p-Nitroaniline	1000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST2 L6 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

Reagent

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exLIST1_S1_00005

Reference Standards

8270 List 1 / Std #1 MegaMix (2016)

Catalog # 570666

Lot # A0114832

110 Benner Circle Bellefonte, PA 16823-8812
1-814-353-1300 1-800-356-1688
www.restek.com

FOR LABORATORY USE ONLY. READ SDS PRIOR TO USE.

RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	1,4-Dioxane		1,000.9	µg/mL	+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7	µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6	µg/mL	+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8	µg/mL	+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2	µg/mL	+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6	µg/mL	+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6	µg/mL	+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/- 5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/- 11.9712	µg/mL	Unstressed
	Purity 99%				+/- 19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/- 5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/- 11.9600	µg/mL	Unstressed
	Purity 99%				+/- 19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/- 5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/- 11.9549	µg/mL	Unstressed
	Purity 99%				+/- 19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/- 5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/- 11.9616	µg/mL	Unstressed
	Purity 99%				+/- 19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/- 5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/- 11.9600	µg/mL	Unstressed
	Purity 99%				+/- 19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/- 5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/- 11.9692	µg/mL	Unstressed
	Purity 99%				+/- 19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/- 5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/- 11.9684	µg/mL	Unstressed
	Purity 99%				+/- 19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/- 5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/- 11.9740	µg/mL	Unstressed
	Purity 99%				+/- 19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/- 5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/- 11.9557	µg/mL	Unstressed
	Purity 99%				+/- 19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/- 5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/- 11.9716	µg/mL	Unstressed
	Purity 99%				+/- 19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/- 2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/- 5.9822	µg/mL	Unstressed
	Purity 99%				+/- 9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/- 2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/- 5.9970	µg/mL	Unstressed
	Purity 99%				+/- 9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/- 5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/- 11.9796	µg/mL	Unstressed
	Purity 99%				+/- 19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/- 5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/- 11.9808	µg/mL	Unstressed
	Purity 99%				+/- 19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/- 5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/- 11.9557	µg/mL	Unstressed
	Purity 99%				+/- 19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/- 5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/- 11.9580	µg/mL	Unstressed
	Purity 99%				+/- 19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 3299900)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.1	µg/mL	+/-	5.8144	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	11.9547	µg/mL	Unstressed
	Purity 98%				+/-	19.0258	µg/mL	Stressed
27	Naphthalene		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
29	4-Chloroaniline		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
31	2-Methylnaphthalene		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0494	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
33	1-Methylnaphthalene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
35	Hexachlorocyclopentadiene		999.7	µg/mL	+/-	5.8126	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/-	11.9510	µg/mL	Unstressed
	Purity 97%				+/-	19.0199	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot 150806JLM)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI-TE)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed
39	Biphenyl		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%				+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

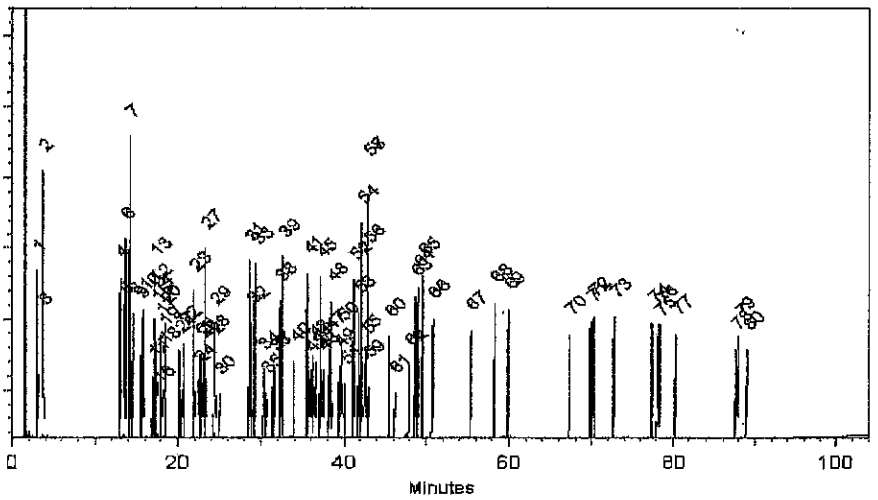
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56/	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2015) (Cat.#570666)

COMPONENT	Runs of Lot # A0114832 Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Runs of Lot # A0109802 Run #1	Run #2	Run #3	(Cat.#569729.sec) AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150957	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259884	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688695	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261968	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394269	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	386966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	186	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	194929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	183539	192864	3515	1.82	188027	184782	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371876	373978	375314	373723	1732	0.46	370261	370296	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	126181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	218344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502361	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217428	218239	217513	687	0.32	216034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104823	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187496	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516780	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.84	PASS
2-Nitroaniline	495370	498313	499647	497777	2166	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219787	221183	221648	220873	969	0.44	220378	220710	218379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263813	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240480	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266686	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240980	242171	242559	241907	817	0.34	242096	242287	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364646	367383	364830	2467	0.68	356401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764556	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160976	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851668	37192248	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1356337	3.22	-9.56	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530487	531526	529991	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.56	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363869	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539380	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531536	530298	2382	0.45	537532	535982	533785	535766	1863	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)anthracene	532496	537967	537904	536130	3145	0.59	530873	529760	528617	529750	1126	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542689	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

Reagent

EXLIST1_S10_00001

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

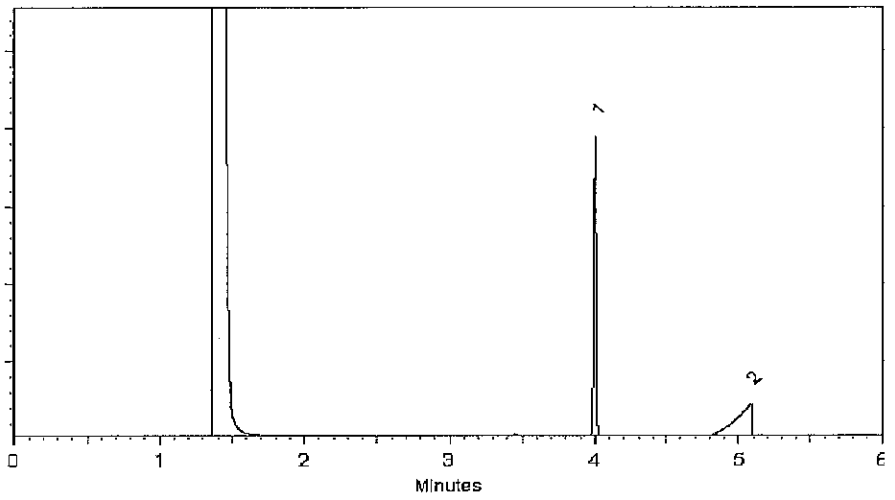
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 10-Feb-2015 **Balance:** 1128360905

Jennifer L. Pollino - QC Analyst

Date Passed: 12-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0108988

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene **CAS #** 95-13-6 **Purity** 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL +/- 22.5687 µg/mL +/- 25.9700 µg/mL	Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL +/- 22.5540 µg/mL +/- 25.9531 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

exLIST1_S11_00002

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0112321

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde		2,001.2	µg/mL	+/- 11.6351	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBD3510V)			+/- 64.1498	µg/mL	Unstressed
	Purity 99%				+/- 74.5716	µg/mL	Stressed
2	epsilon-Caprolactam		2,009.2	µg/mL	+/- 11.6817	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)			+/- 64.4062	µg/mL	Unstressed
	Purity 99%				+/- 74.8697	µg/mL	Stressed
3	Atrazine		1,999.2	µg/mL	+/- 11.6235	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)			+/- 64.0857	µg/mL	Unstressed
	Purity 98%				+/- 74.4971	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

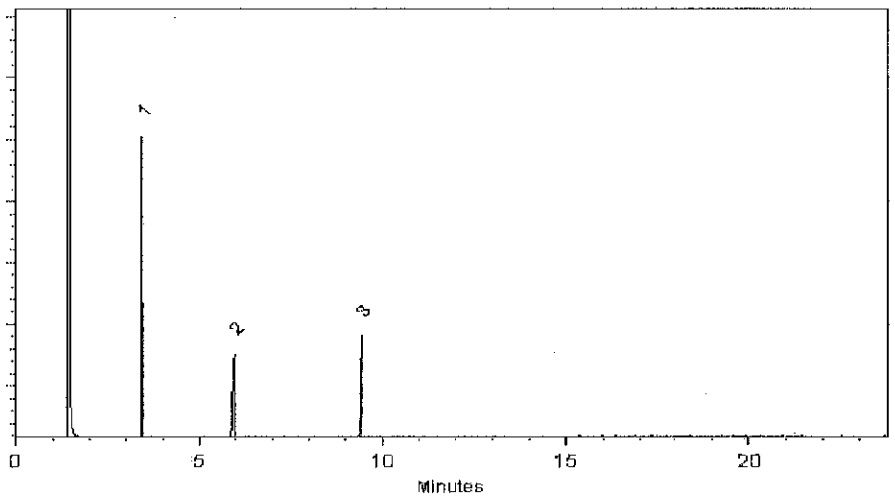
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 06-Jul-2015 **Balance:** 1128360905

Amanda Miller - QC Analyst

Date Passed: 08-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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exLIST1_S9_00003

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0112567

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine **CAS #** 92-87-5 **Purity** 99% (Lot 150701JLMB)	2,001.0 µg/mL	+/- 11.6337 µg/mL +/- 21.9078 µg/mL +/- 37.1592 µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99% (Lot 150701JLMA)	2,001.5 µg/mL	+/- 11.6369 µg/mL +/- 21.9138 µg/mL +/- 37.1694 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

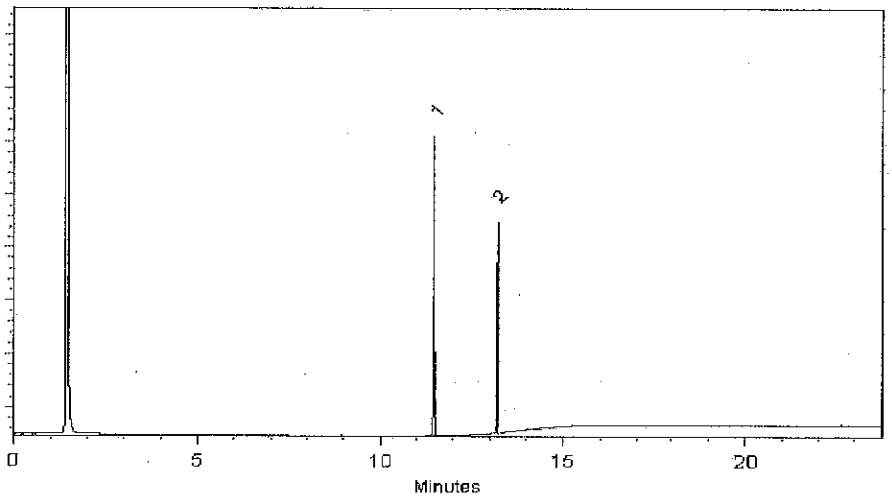
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 15-Jul-2015 **Balance:** 1122030677

Jennifer L. Pollino - QC Analyst

Date Passed: 17-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMIS R_00005

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CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0101020

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4	2,005.4 µg/mL	+/- 11.6596	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 89.1010	µg/mL	Unstressed
	Purity 99%		+/- 97.8939	µg/mL	Stressed
2	Naphthalene-d8	2,005.8 µg/mL	+/- 11.6619	µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot PR-20449)		+/- 89.1187	µg/mL	Unstressed
	Purity 99%		+/- 97.9134	µg/mL	Stressed
3	Acenaphthene-d10	1,998.2 µg/mL	+/- 11.6177	µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-21070)		+/- 88.7811	µg/mL	Unstressed
	Purity 97%		+/- 97.5424	µg/mL	Stressed
4	Phenanthrene-d10	2,001.2 µg/mL	+/- 11.6351	µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-23065)		+/- 88.9144	µg/mL	Unstressed
	Purity 99%		+/- 97.6889	µg/mL	Stressed
5	Chrysene-d12	1,999.6 µg/mL	+/- 11.6258	µg/mL	Gravimetric
	CAS # 1719-03-5 (Lot PR-24875)		+/- 88.8429	µg/mL	Unstressed
	Purity 98%		+/- 97.6104	µg/mL	Stressed
6	Perylene-d12	2,002.6 µg/mL	+/- 11.6433	µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-24113)		+/- 88.9766	µg/mL	Unstressed
	Purity 99%		+/- 97.7572	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

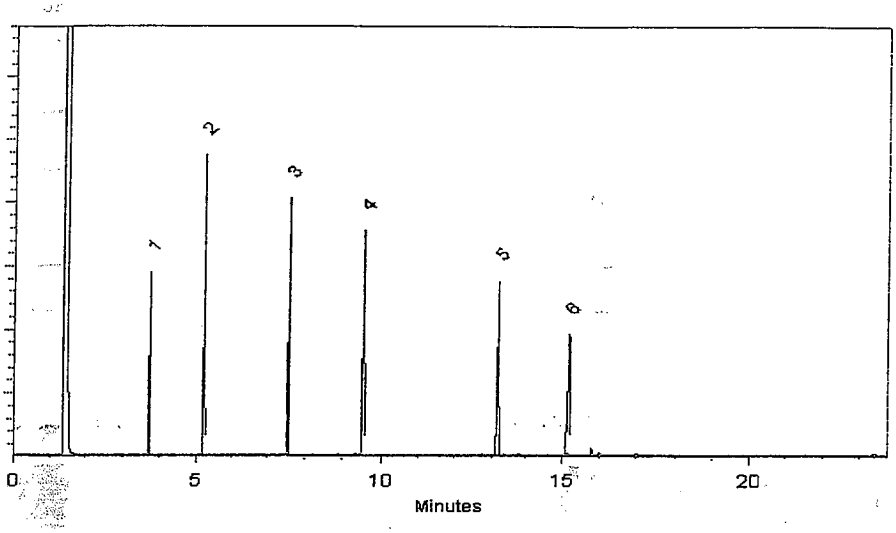
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen to guarantee product quality. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 30-Jan-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 03-Feb-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\,stability} + U^2_{shipping\,stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,000.9	µg/mL	+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7	µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6	µg/mL	+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8	µg/mL	+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2	µg/mL	+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6	µg/mL	+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6	µg/mL	+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/-	5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9740	µg/mL	Unstressed
	Purity 99%				+/-	19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/-	5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.9716	µg/mL	Unstressed
	Purity 99%				+/-	19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/-	2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.9822	µg/mL	Unstressed
	Purity 99%				+/-	9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/-	2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9970	µg/mL	Unstressed
	Purity 99%				+/-	9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/-	5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/-	11.9796	µg/mL	Unstressed
	Purity 99%				+/-	19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 3299900)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
26 ✓	1,2,4-Trichlorobenzene		1,000.1	µg/mL	+/-	5.8144	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	11.9547	µg/mL	Unstressed
	Purity 98%				+/-	19.0258	µg/mL	Stressed
27	Naphthalene		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
29	4-Chloroaniline		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
31	2-Methylnaphthalene		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0494	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
33	1-Methylnaphthalene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
34 ✓	1,2,4,5-Tetrachlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
35	Hexachlorocyclopentadiene		999.7	µg/mL	+/-	5.8126	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/-	11.9510	µg/mL	Unstressed
	Purity 97%				+/-	19.0199	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot 150806JLM)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI-TE)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed
39 ✓	Biphenyl		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene (1,2-Diphenylhydrazine)		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%	122-66-7			+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

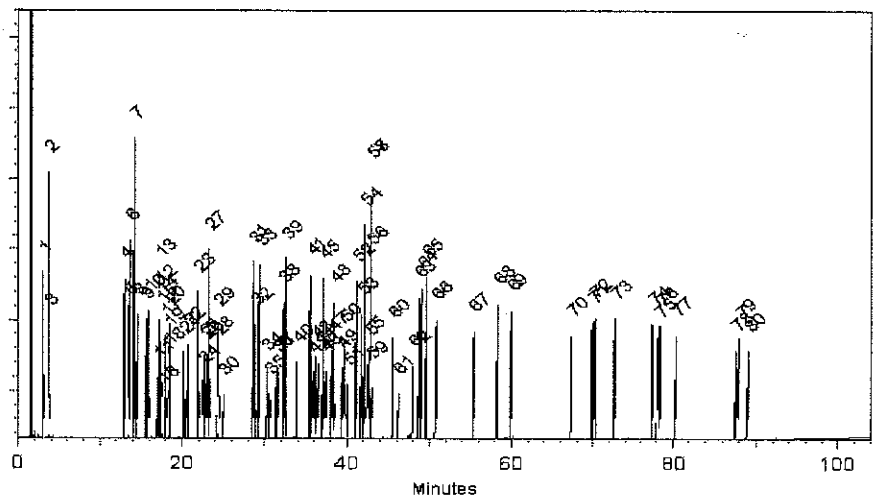
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 8°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56A	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2016) (Cat.#570666)

	Runs of Lot # A0114832						Runs of Lot # A0109802 (Cat.#569729.sec)							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150967	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259684	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688895	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261968	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394289	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	386966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	188	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	184929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	193539	192864	3515	1.82	188027	184762	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371878	373978	375314	373723	1732	0.46	370261	370298	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	128181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	216344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502381	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217426	218239	217513	687	0.32	218034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104923	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187498	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516760	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.64	PASS
2-Nitroaniline	495370	498313	499647	497777	2188	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219767	221183	221648	220873	969	0.44	220378	220710	219379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263913	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240490	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266666	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240990	242171	242559	241907	817	0.34	242096	242267	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364648	367383	364830	2467	0.68	358401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764558	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160978	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851868	37192246	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1358337	3.22	-9.66	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530497	531526	529961	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.58	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363669	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539380	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531636	530298	2382	0.45	537532	535982	533785	535766	1883	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)enthracene	532498	537987	537904	536130	3145	0.59	530873	529760	528617	529750	1128	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542669	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

Reagent

SMLIST1 S1_00006

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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,000.9	µg/mL	+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7	µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6	µg/mL	+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8	µg/mL	+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2	µg/mL	+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6	µg/mL	+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6	µg/mL	+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/-	5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9740	µg/mL	Unstressed
	Purity 99%				+/-	19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/-	5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.9716	µg/mL	Unstressed
	Purity 99%				+/-	19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/-	2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.9822	µg/mL	Unstressed
	Purity 99%				+/-	9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/-	2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9970	µg/mL	Unstressed
	Purity 99%				+/-	9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/-	5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/-	11.9796	µg/mL	Unstressed
	Purity 99%				+/-	19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 3299900)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBH1617V)	1,002.2	µg/mL	+/- 5.8271 +/- 11.9808 +/- 19.0672	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26 ✓	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 98%	(Lot SHBC5541V)	1,000.1	µg/mL	+/- 5.8144 +/- 11.9547 +/- 19.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	1,000.4	µg/mL	+/- 5.8164 +/- 11.9588 +/- 19.0323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBN2776V)	1,001.1	µg/mL	+/- 5.8205 +/- 11.9672 +/- 19.0456	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot 12528PH)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9624 +/- 19.0380	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot J31X013)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9626 +/- 19.0382	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 99%	(Lot 19399MJV)	1,001.3	µg/mL	+/- 5.8216 +/- 11.9696 +/- 19.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC0769V)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-10)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34 ✓	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot 06024AIV)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 97%	(Lot 150909)	999.7	µg/mL	+/- 5.8126 +/- 11.9510 +/- 19.0199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,001.4	µg/mL	+/- 5.8220 +/- 11.9704 +/- 19.0507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot 150806JLM)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI-TE)	1,000.9	µg/mL	+/- 5.8193 +/- 11.9648 +/- 19.0418	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39 ✓	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.6	µg/mL	+/- 5.8178 +/- 11.9616 +/- 19.0368	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene (1,2-Diphenylhydrazine)		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%	(122-66-7)			+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

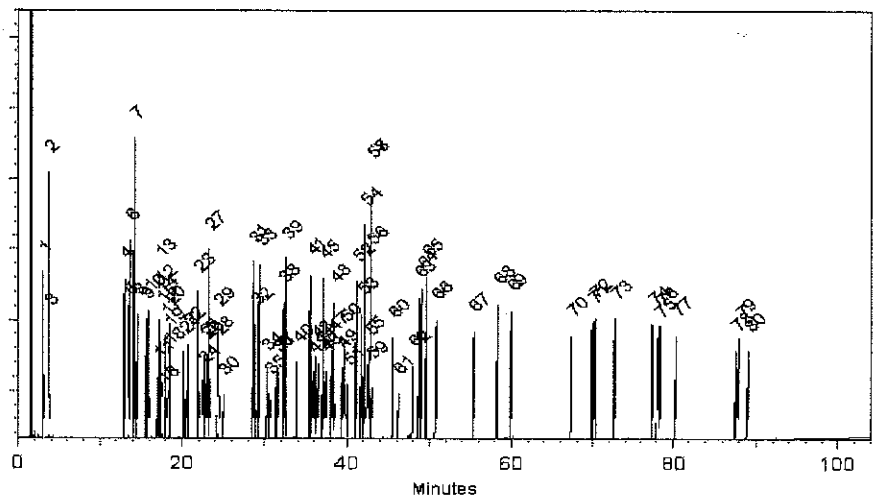
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 8°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56A	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2016) (Cat.#570666)

	Runs of Lot # A0114832						Runs of Lot # A0109802 (Cat.#569729.sec)							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150967	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259684	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688895	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261968	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394289	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	386966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	188	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	184929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	193539	192864	3515	1.82	188027	184762	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371878	373978	375314	373723	1732	0.46	370261	370298	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	128181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	216344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502381	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217426	218239	217513	687	0.32	218034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104923	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187498	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516760	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.64	PASS
2-Nitroaniline	495370	498313	499647	497777	2188	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219767	221183	221648	220873	969	0.44	220378	220710	219379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263913	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240490	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266666	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240990	242171	242559	241907	817	0.34	242096	242267	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364648	367383	364830	2467	0.68	358401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764558	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160978	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851868	37192246	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1358337	3.22	-9.66	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530497	531526	529961	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.58	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363669	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539360	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531636	530298	2382	0.45	537532	535982	533785	535766	1883	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)enthracene	532498	537987	537904	536130	3145	0.59	530873	529760	528617	529750	1128	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542669	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

Reagent

SMLIST1 S10_00002

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

ilac-MRA

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0115596

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene	2,009.8 µg/mL	+/- 11.6852	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBP3098V)		+/- 112.6875	µg/mL	Unstressed
	Purity 99%		+/- 115.3242	µg/mL	Stressed
2	Benzoic acid	2,011.6 µg/mL	+/- 11.6953	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBL6689V)		+/- 112.7856	µg/mL	Unstressed
	Purity 99%		+/- 115.4247	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

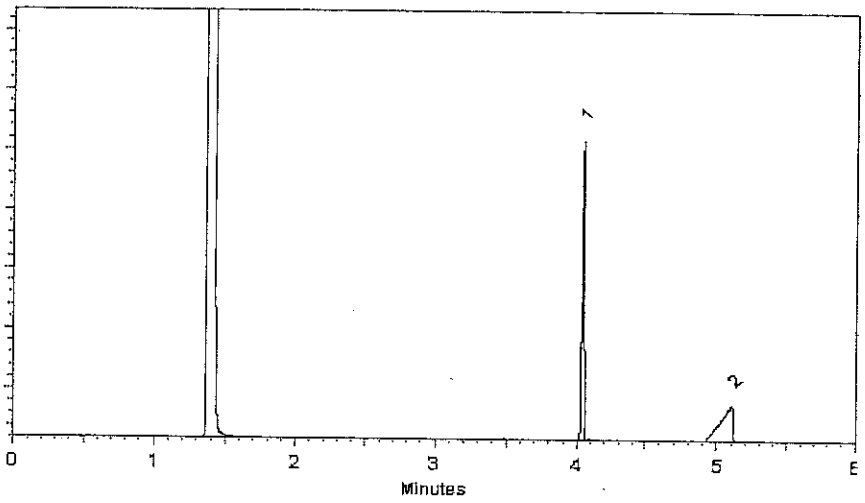
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 23-Nov-2015 **Balance:** 1128360905

Jodi E. Breon - QA Analyst

Date Passed: 25-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0115387

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde	2,017.4 µg/mL	+/- 11.7290	µg/mL	Gravimetric
	CAS # 100-52-7 (Lot SHBD3510V)		+/- 64.6675	µg/mL	Unstressed
	Purity 99%		+/- 75.1734	µg/mL	Stressed
2	epsilon-Caprolactam	2,012.4 µg/mL	+/- 11.7003	µg/mL	Gravimetric
	CAS # 105-60-2 (Lot I16X016)		+/- 64.5088	µg/mL	Unstressed
	Purity 99%		+/- 74.9890	µg/mL	Stressed
3	Atrazine	2,003.5 µg/mL	+/- 11.6483	µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot TZ8ED)		+/- 64.2223	µg/mL	Unstressed
	Purity 98%		+/- 74.6560	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

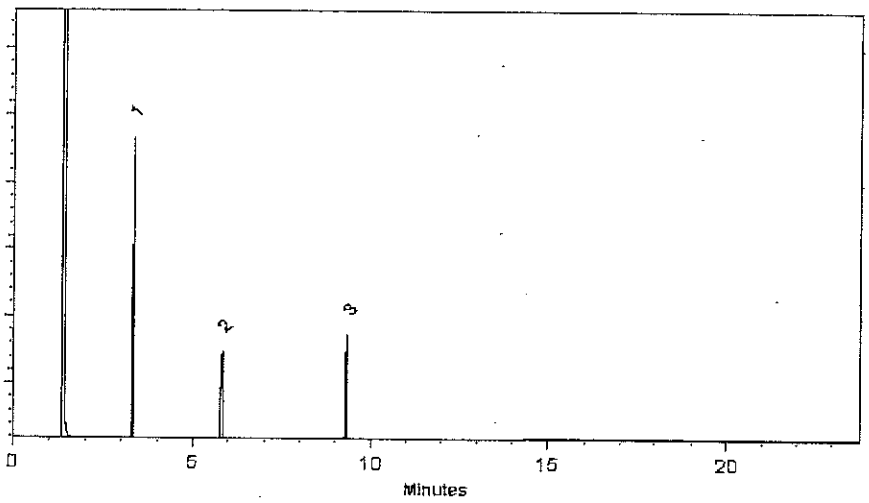
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 12-Nov-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 13-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0112567

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine		2,001.0 µg/mL	+/- 11.6337	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 150701JLMB)		+/- 21.9078	µg/mL	Unstressed
	Purity 99%			+/- 37.1592	µg/mL	Stressed
2	3,3'-Dichlorobenzidine		2,001.5 µg/mL	+/- 11.6369	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 150701JLMA)		+/- 21.9138	µg/mL	Unstressed
	Purity 99%			+/- 37.1694	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

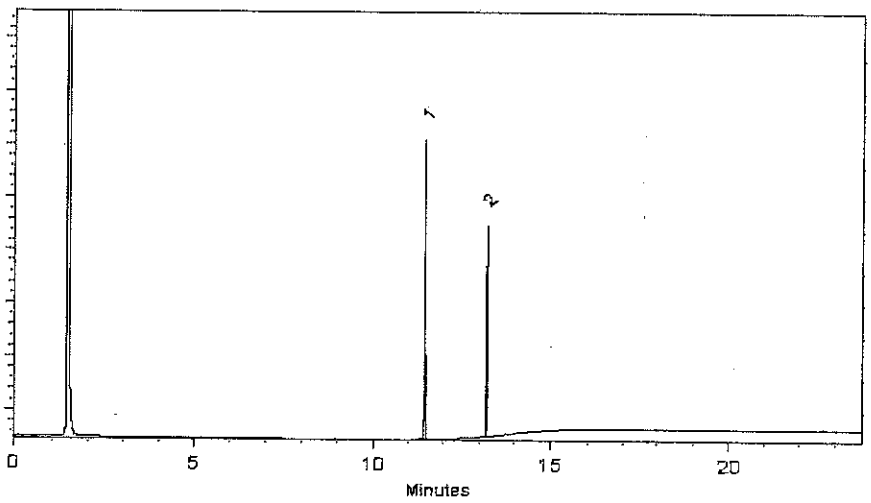
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 15-Jul-2015 **Balance:** 1122030677

Jennifer L. Pollino - QC Analyst

Date Passed: 17-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666.sec **Lot No.:** A0115803

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane	1,001.0 µg/mL	+/- 5.8333 µg/mL	Gravimetric
	CAS # 123-91-1.SEC (Lot CHA4A)		+/- 11.9726 µg/mL	Unstressed
	Purity 99%		+/- 19.0478 µg/mL	Stressed
2	Pyridine	1,000.3 µg/mL	+/- 5.8290 µg/mL	Gravimetric
	CAS # 110-86-1.SEC (Lot QN8DK)		+/- 11.9636 µg/mL	Unstressed
	Purity 99%		+/- 19.0336 µg/mL	Stressed
3	N-Nitrosodimethylamine	1,001.4 µg/mL	+/- 5.8359 µg/mL	Gravimetric
	CAS # 62-75-9.SEC (Lot 41B67)		+/- 11.9778 µg/mL	Unstressed
	Purity 98%		+/- 19.0562 µg/mL	Stressed
4	Aniline	1,000.3 µg/mL	+/- 5.8290 µg/mL	Gravimetric
	CAS # 62-53-3.SEC (Lot ZCD3N)		+/- 11.9636 µg/mL	Unstressed
	Purity 99%		+/- 19.0336 µg/mL	Stressed
5	Bis(2-chloroethyl)ether	1,000.3 µg/mL	+/- 5.8290 µg/mL	Gravimetric
	CAS # 111-44-4.SEC (Lot FA010143)		+/- 11.9636 µg/mL	Unstressed
	Purity 99%		+/- 19.0336 µg/mL	Stressed
6	2-Chlorophenol	1,000.6 µg/mL	+/- 5.8312 µg/mL	Gravimetric
	CAS # 95-57-8.SEC (Lot GJ01)		+/- 11.9681 µg/mL	Unstressed
	Purity 99%		+/- 19.0407 µg/mL	Stressed
7	Phenol	1,000.1 µg/mL	+/- 5.8282 µg/mL	Gravimetric
	CAS # 108-95-2.SEC (Lot EDPYN)		+/- 11.9621 µg/mL	Unstressed
	Purity 99%		+/- 19.0312 µg/mL	Stressed

8	n-Decane (C10)		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 124-18-5.SEC	(Lot UCVNN)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.3	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot YWKDC-MK)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD-KA)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
12	Benzyl alcohol		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 100-51-6.SEC	(Lot QZBUO)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 108-60-1 *	(Lot 2-KMW-57-8)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,000.3	µg/mL	+/-	5.8295	µg/mL	Gravimetric
	CAS # 95-48-7.SEC	(Lot NC7HL)			+/-	11.9646	µg/mL	Unstressed
	Purity 98%				+/-	19.0352	µg/mL	Stressed
15	Hexachloroethane		1,000.6	µg/mL	+/-	5.8309	µg/mL	Gravimetric
	CAS # 67-72-1.SEC	(Lot 10173016)			+/-	11.9675	µg/mL	Unstressed
	Purity 98%				+/-	19.0399	µg/mL	Stressed
16	Acetophenone		1,000.3	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 98-86-2.SEC	(Lot NSGTI)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 621-64-7.SEC	(Lot 1528900)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.1	µg/mL	+/-	2.9145	µg/mL	Gravimetric
	CAS # 106-44-5.SEC	(Lot 65S2E)			+/-	5.9818	µg/mL	Unstressed
	Purity 99%				+/-	9.5168	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		500.1	µg/mL	+/-	2.9145	µg/mL	Gravimetric
	CAS # 108-39-4.SEC	(Lot 6LHTM)			+/-	5.9818	µg/mL	Unstressed
	Purity 99%				+/-	9.5168	µg/mL	Stressed
20	Nitrobenzene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 98-95-3.SEC	(Lot FLY1G)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
21	Isophorone		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 78-59-1.SEC	(Lot XHGJI)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
22	2-Nitrophenol		1,000.3	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 88-75-5.SEC	(Lot GXJ7J)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 105-67-9.SEC	(Lot MKBL3650V)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 111-91-1 *	(Lot 3299900)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 120-83-2.SEC	(Lot FHM01)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
27	Naphthalene		1,001.1	µg/mL	+/-	5.8341	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot 4KW3H-OO)			+/-	11.9741	µg/mL	Unstressed
	Purity 99%				+/-	19.0502	µg/mL	Stressed
28	2,6-Dichlorophenol		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 87-65-0.SEC	(Lot SIDBB)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
29	4-Chloroaniline		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 106-47-8.SEC	(Lot 10171860)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.8	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 3265500)			+/-	11.9705	µg/mL	Unstressed
	Purity 98%				+/-	19.0445	µg/mL	Stressed
31	2-Methylnaphthalene		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 59-50-7.SEC	(Lot FDO02)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
33	1-Methylnaphthalene		1,000.9	µg/mL	+/-	5.8326	µg/mL	Gravimetric
	CAS # 90-12-0.SEC	(Lot UATSA)			+/-	11.9711	µg/mL	Unstressed
	Purity 99%				+/-	19.0455	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 95-94-3.SEC	(Lot AF02)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,001.1	µg/mL	+/-	5.8341	µg/mL	Gravimetric
	CAS # 77-47-4.SEC	(Lot 0012013)			+/-	11.9741	µg/mL	Unstressed
	Purity 99%				+/-	19.0502	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,000.9	µg/mL	+/-	5.8330	µg/mL	Gravimetric
	CAS # 88-06-2.SEC	(Lot UUMYM)			+/-	11.9719	µg/mL	Unstressed
	Purity 98%				+/-	19.0469	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.9	µg/mL	+/-	5.8329	µg/mL	Gravimetric
	CAS # 95-95-4.SEC	(Lot MKBQ9937V)			+/-	11.9716	µg/mL	Unstressed
	Purity 97%				+/-	19.0463	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.3	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 91-58-7.SEC	(Lot LC03928V)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
39	Biphenyl		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 92-52-4.SEC	(Lot 330QE)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed

40	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
41	Acenaphthylene		1,000.1	µg/mL	+/-	5.8280	µg/mL	Gravimetric
	CAS # 208-96-8.SEC	(Lot 062013)			+/-	11.9617	µg/mL	Unstressed
	Purity 98%				+/-	19.0305	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 99-65-0.SEC	(Lot 3XXLB)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
43	Dimethylphthalate		1,000.3	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 131-11-3.SEC	(Lot 483WC)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 606-20-2.SEC	(Lot GE01)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
45	Acenaphthene		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 83-32-9.SEC	(Lot BWZJE)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
46	2,4-Dinitrophenol		2,000.4	µg/mL	+/-	11.6304	µg/mL	Gravimetric
	CAS # 51-28-5.SEC	(Lot 2TXXH)			+/-	23.9126	µg/mL	Unstressed
	Purity 99%				+/-	38.0566	µg/mL	Stressed
47	Dibenzofuran		1,000.5	µg/mL	+/-	5.8304	µg/mL	Gravimetric
	CAS # 132-64-9.SEC	(Lot 27ZGC)			+/-	11.9666	µg/mL	Unstressed
	Purity 99%				+/-	19.0383	µg/mL	Stressed
48	3-Nitroaniline		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 99-09-2.SEC	(Lot FGN03)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,000.5	µg/mL	+/-	5.8304	µg/mL	Gravimetric
	CAS # 121-14-2.SEC	(Lot SHRSA)			+/-	11.9666	µg/mL	Unstressed
	Purity 99%				+/-	19.0383	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6296	µg/mL	Gravimetric
	CAS # 100-02-7.SEC	(Lot 2J5LB)			+/-	23.9111	µg/mL	Unstressed
	Purity 99%				+/-	38.0542	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.1	µg/mL	+/-	5.8338	µg/mL	Gravimetric
	CAS # 58-90-2.SEC	(Lot LC10202V)			+/-	11.9734	µg/mL	Unstressed
	Purity 98%				+/-	19.0492	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 86-73-7.SEC	(Lot 1561600)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 7005-72-3.SEC	(Lot P31G)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 544-76-3.SEC	(Lot A0328141)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
55	Diethylphthalate		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 84-66-2.SEC	(Lot UMBJC)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed

56	Azobenzene 1,2-Diphenylhydrazine		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%	122-66-7			+/-	19.0431	µg/mL	Stressed
57	Diphenylamine		850.5	µg/mL	+/-	4.9563	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1725	µg/mL	Unstressed
	Purity 99%				+/-	16.1840	µg/mL	Stressed
58	2-Nitroaniline		1,000.5	µg/mL	+/-	5.8304	µg/mL	Gravimetric
	CAS # 88-74-4.SEC	(Lot T6E7B)			+/-	11.9666	µg/mL	Unstressed
	Purity 99%				+/-	19.0383	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.8	µg/mL	+/-	11.6325	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 3256700)			+/-	23.9171	µg/mL	Unstressed
	Purity 99%				+/-	38.0637	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.9	µg/mL	+/-	5.8326	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9711	µg/mL	Unstressed
	Purity 99%				+/-	19.0455	µg/mL	Stressed
61	Hexachlorobenzene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot 20622)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
62	Pentachlorophenol		2,001.1	µg/mL	+/-	11.6347	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 2357600)			+/-	23.9216	µg/mL	Unstressed
	Purity 99%				+/-	38.0708	µg/mL	Stressed
63	Phenanthrene		1,000.2	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 1777100)			+/-	11.9631	µg/mL	Unstressed
	Purity 98%				+/-	19.0329	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.9	µg/mL	+/-	5.8326	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9711	µg/mL	Unstressed
	Purity 99%				+/-	19.0455	µg/mL	Stressed
65	Anthracene		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
68	Fluoranthene		1,000.6	µg/mL	+/-	5.8312	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9681	µg/mL	Unstressed
	Purity 99%				+/-	19.0407	µg/mL	Stressed
69	Pyrene		1,000.9	µg/mL	+/-	5.8326	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9711	µg/mL	Unstressed
	Purity 99%				+/-	19.0455	µg/mL	Stressed
70	Benzyl butyl phthalate		1,001.6	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9793	µg/mL	Unstressed
	Purity 98%				+/-	19.0585	µg/mL	Stressed
71	Benz(a)anthracene		1,000.2	µg/mL	+/-	5.8286	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9629	µg/mL	Unstressed
	Purity 97%				+/-	19.0325	µg/mL	Stressed

72	chrysene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 218-01-9.SEC	(Lot KQ4SE)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 117-81-7.SEC	(Lot MT8AG)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
74	Di-n-octyl phthalate		1,000.9	µg/mL	+/-	5.8330	µg/mL	Gravimetric
	CAS # 117-84-0.SEC	(Lot O8DLD)			+/-	11.9719	µg/mL	Unstressed
	Purity 98%				+/-	19.0469	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.4	µg/mL	+/-	5.8297	µg/mL	Gravimetric
	CAS # 205-99-2.SEC	(Lot 022011)			+/-	11.9651	µg/mL	Unstressed
	Purity 99%				+/-	19.0360	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.9	µg/mL	+/-	5.8326	µg/mL	Gravimetric
	CAS # 207-08-9.SEC	(Lot ER061608-02)			+/-	11.9711	µg/mL	Unstressed
	Purity 99%				+/-	19.0455	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 50-32-8.SEC	(Lot NPEZF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.1	µg/mL	+/-	5.8282	µg/mL	Gravimetric
	CAS # 193-39-5.SEC	(Lot 022013)			+/-	11.9621	µg/mL	Unstressed
	Purity 99%				+/-	19.0312	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,000.8	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 53-70-3.SEC	(Lot 0012012)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0431	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.6	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 191-24-2.SEC	(Lot 0022012)			+/-	11.9673	µg/mL	Unstressed
	Purity 96%				+/-	19.0395	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

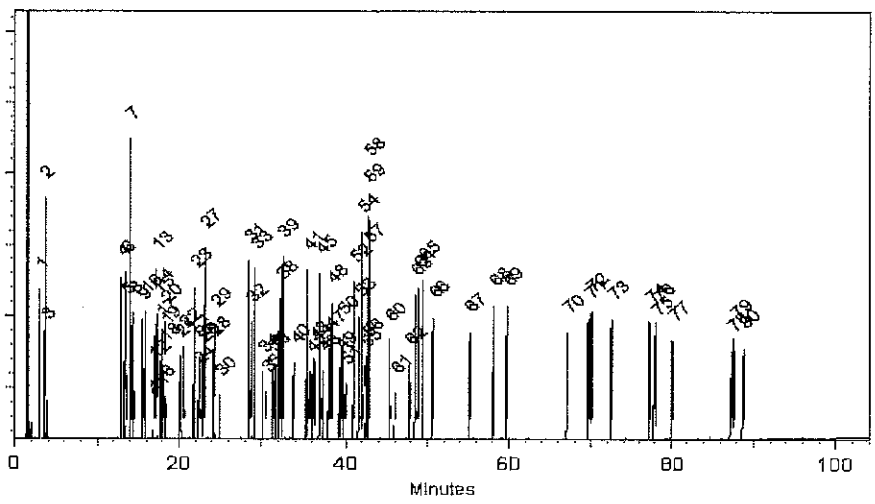
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 07-Dec-2015 **Balance:** 1128353505

Amanda Miller - QC Analyst

Date Passed: 17-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0115803

Catalog #: 570666.sec	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 155124	**Final Volume:** 800 ml

Made by: Michael Maye	**Date:** 12/8/2015 1:32:32PM		
Tested by: Amanda Miller	**Date:** 12/10/2015 9:50:29AM		
Pass	**By:** Amanda Miller	**Date:** 12/17/2015 12:45:45I	
Packaged by: Cheryl Graham / Michael Maye	**Date:** 12/10/2015 4:32:08F	**No. Units:** 131	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC2 XP205	**Serial #:** 1128353505		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9.SEC	CALS002	41B67	0.98	1,000.00	816.33 mg	817.50 mg	1,001.4
Pyridine	110-86-1.SE(	FS068	QN8DK	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1.SEC	RS012	4NRGF-OT	0.99	1,000.00	800.00 mg	800.00 mg	1,000.0
1,3-Dichlorobenzene	541-73-1.SE(	RS013	FMDFD-KA	0.99	1,000.00	800.00 mg	800.00 mg	1,000.0
1,4-Dichlorobenzene	106-46-7.SE(	RS014	YWKDC-MK	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
2-Methylnaphthalene	91-57-6.SEC	RS015	76023-1	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
1,2,4-Trichlorobenzene	120-82-1.SE(	RS016	3LYYC	0.99	1,000.00	800.00 mg	800.00 mg	1,000.0
Hexachlorobutadiene	87-68-3.SEC	RS017	3265500	0.98	1,000.00	816.33 mg	817.00 mg	1,000.8
Naphthalene	91-20-3.SEC	RS018	4KW3H-OO	0.99	1,000.00	800.00 mg	800.90 mg	1,001.1
1,4-Dioxane	123-91-1.SE(	RS030	CHA4A	0.99	1,000.00	800.00 mg	800.80 mg	1,001.0
4-Nitroaniline	100-01-6.SE(	RS031	5ITRC	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
4-Nitrophenol	100-02-7.SE(	RS032	2J5LB	0.99	2,000.00	1,600.00 mg	1,600.20 mg	2,000.3
Benzyl alcohol	100-51-6.SE(	RS034	QZBUO	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
4-Bromophenyl phenyl ether	101-55-3.SE(	RS035	84C6D	0.99	1,000.00	800.00 mg	800.70 mg	1,000.9
Azobenzene	103-33-3.SE(	RS036	JUWAG	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
4-Methylphenol (p-cresol)	106-44-5.SE(	RS038	65S2E	0.99	500.00	400.00 mg	400.10 mg	500.1
4-Chloroaniline	106-47-8.SE(	RS039	10171860	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
3-Methylphenol (m-cresol)	108-39-4.SE(	RS041	6LHTM	0.99	500.00	400.00 mg	400.10 mg	500.1
Phenol	108-95-2.SE(	RS042	EDPYN	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
Di-n-octyl phthalate	117-84-0.SE(	RS044	O8DLD	0.98	1,000.00	816.33 mg	817.10 mg	1,000.9
Anthracene	120-12-7.SE(	RS045	WDFNJ	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
2,4-Dichlorophenol	120-83-2.SE(	RS046	FHM01	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
2,4-Dinitrotoluene	121-14-2.SE(	RS047	SHRSA	0.99	1,000.00	800.00 mg	800.40 mg	1,000.5
n-Decane (C10)	124-18-5.SE(	RS048	UCVNN	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
Pyrene	129-00-0.SE(	RS049	ROVJC	0.99	1,000.00	800.00 mg	800.70 mg	1,000.9
Dimethylphthalate	131-11-3.SE(	RS051	483WC	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Dibenzofuran	132-64-9.SE(	RS052	27ZGC	0.99	1,000.00	800.00 mg	800.40 mg	1,000.5
Fluoranthene	206-44-0.SE(	RS054	FREGF	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
chrysene	218-01-9.SE(	RS055	KQ4SE	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
Benzo(a)pyrene	50-32-8.SEC	RS056	NPEZF	0.99	1,000.00	800.00 mg	800.00 mg	1,000.0
2,4-Dinitrophenol	51-28-5.SEC	RS057	2TXXH	0.99	2,000.00	1,600.00 mg	1,600.30 mg	2,000.4
n-Hexadecane (C16)	544-76-3.SE(	RS058	A0328141	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
4-Chloro-3-methylphenol	59-50-7.SEC	RS060	FDO02	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
2,6-Dinitrotoluene	606-20-2.SE(	RS061	GE01	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
Aniline	62-53-3.SEC	RS062	ZCD3N	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Hexachlorocyclopentadiene	77-47-4.SEC	RS065	0012013	0.99	1,000.00	800.00 mg	800.90 mg	1,001.1
Isophorone	78-59-1.SEC	RS066	XHGJI	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
Acenaphthene	83-32-9.SEC	RS068	BWZJE	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
Diethylphthalate	84-66-2.SEC	RS069	UMBJC	0.99	1,000.00	800.00 mg	800.80 mg	1,001.0
Di-n-butylphthalate	84-74-2.SEC	RS070	42FSG	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
Benzyl butyl phthalate	85-68-7.SEC	RS071	GX3GL	0.98	1,000.00	816.33 mg	817.60 mg	1,001.6
Carbazole	86-74-8.SEC	RS073	LMIZB	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
2,6-Dichlorophenol	87-65-0.SEC	RS074	SIDBB	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
2,4,6-Trichlorophenol	88-06-2.SEC	rs075	UUMYM	0.98	1,000.00	816.33 mg	817.10 mg	1,000.9
2-Nitroaniline	88-74-4.SEC	RS076	T6E7B	0.99	1,000.00	800.00 mg	800.40 mg	1,000.5
2-Nitrophenol	88-75-5.SEC	RS077	GXJ7J	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Biphenyl	92-52-4.SEC	RS078	330QE	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
2-Methylphenol (o-cresol)	95-48-7.SEC	RS080	NC7HL	0.98	1,000.00	816.33 mg	816.60 mg	1,000.3
2-Chlorophenol	95-57-8.SEC	RS082	GJ01	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
1,2,4,5-Tetrachlorobenzene	95-94-3.SEC	RS083	AF02	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
Acetophenone	98-86-2.SEC	RS084	NSGTI	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Nitrobenzene	98-95-3.SEC	RS085	FLYIG	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
3-Nitroaniline	99-09-2.SEC	RS086	FGN03	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
1,3-Dinitrobenzene	99-65-0.SEC	RS088	3XXLB	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
Bis(2-chloroethyl)ether	111-44-4.SE(	RS089	FA010143	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7.SE(	RS090	MT8AG	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
Benz(a)anthracene	56-55-3.SEC	RS091	MTENF	0.97	1,000.00	824.74 mg	824.90 mg	1,000.2
n-Octadecane (C18)	593-45-3.SE(	RS092	G14U045	0.99	1,000.00	800.00 mg	800.70 mg	1,000.9
Hexachloroethane	67-72-1.SEC	RS094	10173016	0.98	1,000.00	816.33 mg	816.80 mg	1,000.6
4-Chlorophenyl phenyl ether	7005-72-3.SE	RS096	P31G	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
4,6-Dinitro-2-methylphenol (Dinitro-o-cı	534-52-1.SE(	RS100	3256700	0.99	2,000.00	1,600.00 mg	1,600.60 mg	2,000.8
N-Nitroso-di-n-propylamine	621-64-7.SE(	RS104	1528900	0.99	1,000.00	800.00 mg	800.50 mg	1,000.6
1-Methylnaphthalene	90-12-0.SEC	RS118	UATSA	0.99	1,000.00	800.00 mg	800.70 mg	1,000.9
Pentachlorophenol	87-86-5.SEC	RS119	2357600	0.99	2,000.00	1,600.00 mg	1,600.90 mg	2,001.1
Phenanthrene	85-01-8.SEC	RS122	1777100	0.98	1,000.00	816.33 mg	816.50 mg	1,000.2
Fluorene	86-73-7.SEC	RS123	1561600	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
Hexachlorobenzene	118-74-1.SE(	RS126	20622	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
2,4-Dimethylphenol	105-67-9.SE(	RS127	MKBL3650V	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
2-Chloronaphthalene	91-58-7.SEC	RS128	LC03928V	0.99	1,000.00	800.00 mg	800.20 mg	1,000.3
2,4,5-Trichlorophenol	95-95-4.SEC	RS129	MKBQ9937V	0.97	1,000.00	824.74 mg	825.50 mg	1,000.9
Benzo(g,h,i)perylene	191-24-2.SE(	RS135	0022012	0.96	1,000.00	833.33 mg	833.80 mg	1,000.6
Indeno(1,2,3-cd)pyrene	193-39-5.SE(	RS136	022013	0.99	1,000.00	800.00 mg	800.10 mg	1,000.1
Benzo(b)fluoranthene	205-99-2.SE(	RS137	022011	0.99	1,000.00	800.00 mg	800.30 mg	1,000.4
Benzo(k)fluoranthene	207-08-9.SE(	RS138	ER061608-02	0.99	1,000.00	800.00 mg	800.70 mg	1,000.9
Acenaphthylene	208-96-8.SE(	RS139	062013	0.98	1,000.00	816.33 mg	816.40 mg	1,000.1
Dibenz(a,h)anthracene	53-70-3.SEC	RS140	0012012	0.99	1,000.00	800.00 mg	800.60 mg	1,000.8
2,3,4,6-Tetrachlorophenol	58-90-2.SEC	RS141	LC10202V	0.98	1,000.00	816.33 mg	817.20 mg	1,001.1
Diphenylamine	122-39-4.SE(	RS268	10164691	0.99	850.00	680.00 mg	680.40 mg	850.5

QA Report: 8270 List 1 / Std #1 MegaMix (2016) (Cat.#570666)

	Runs of Lot # A0114832						Runs of Lot # A0115803							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	158308	153650	152020	154659	3263	2.11	147606	145618	146638	146621	994	0.68	5.20	PASS
Pyridine	369755	358910	353427	360697	8309	2.30	343286	337212	340220	340239	3037	0.89	5.67	PASS
N-Nitrosodimethylamine	165474	161102	158689	161755	3439	2.13	145176	144704	147693	145858	1607	1.10	9.83	PASS
Aniline	412358	400400	396116	402958	8418	2.09	390868	385577	389295	388580	2717	0.70	3.57	PASS
Bis(2-chloroethyl)ether	272910	263983	261380	266091	6047	2.27	256005	252254	255055	254438	1950	0.77	4.38	PASS
2-Chlorophenol	537875	523751	517707	526444	10350	1.97	508135	501589	505901	505208	3328	0.66	4.03	PASS
Phenol	729446	708289	701483	713076	14578	2.04	682873	674731	680050	679218	4134	0.61	4.75	PASS
n-Decane	275228	267255	264397	268960	5613	2.09	260234	256902	259143	258760	1699	0.66	3.79	PASS
1,4-Dichlorobenzene	276540	268421	265435	270132	5747	2.13	259681	256301	258677	258220	1736	0.67	4.41	PASS
1,3-Dichlorobenzene	414872	403299	399589	405920	7971	1.96	392085	386930	390721	389912	2671	0.69	3.94	PASS
1,2-Dichlorobenzene & Benzyl alcohol	186183	180747	179145	182025	3689	2.03	175391	172949	174709	174350	1260	0.72	4.22	PASS
2,2'-oxybis(1-chloropropane) & 2-Methylphenol	409328	397862	393734	400308	8080	2.02	394450	388644	392923	392072	2898	0.74	2.06	PASS
Hexachloroethane	374034	365443	361257	366911	6514	1.78	348127	343865	347839	346610	2382	0.69	5.53	PASS
Acetophenone	95439	90766	90939	92381	2649	2.87	88727	86868	87312	87636	971	1.11	5.14	PASS
N-Nitroso-di-n-propylamine	300441	291783	289857	294027	5638	1.92	282452	278526	281398	280792	2032	0.72	4.50	PASS
4-Methylphenol	197887	194449	188452	193596	4775	2.47	187030	186598	190456	188028	2114	1.12	2.88	PASS
3-Methylphenol	229120	213380	221681	221454	7878	3.56	205841	200049	201898	202596	2958	1.46	8.52	PASS
Nitrobenzene	290677	289567	280305	286850	5695	1.99	283968	280759	281855	282194	1631	0.58	1.62	PASS
Isophrone	390805	379728	377645	382793	7002	1.83	371639	366527	370686	369617	2718	0.74	3.44	PASS
2-Nitrophenol	248754	241761	239768	243428	4719	1.94	235334	231901	234417	233884	1777	0.76	3.92	PASS
2,4-Dimethylphenol	414058	402177	399073	405103	7909	1.95	387604	382384	386291	385426	2715	0.70	4.66	PASS
Bis(2-chloroethoxy)methane	133576	129561	128709	130615	2599	1.99	125932	124441	125529	125301	771	0.62	4.07	PASS
2,4-Dichlorophenol	229857	223239	221290	224795	4491	2.00	215666	212907	214882	214485	1422	0.66	4.59	PASS
1,2,4-Trichlorobenzene	233653	226841	224741	228412	4659	2.04	214217	211681	213482	213127	1305	0.61	6.69	PASS
Naphthalene	528183	513289	508824	516765	10137	1.96	501498	494863	498943	498768	3470	0.70	3.48	PASS
2,6-Dichlorophenol	226521	220378	218496	221798	4197	1.89	214919	210559	214170	213216	2331	1.09	3.87	PASS
4-Chloroaniline	312325	303213	300990	305509	6006	1.97	294548	291930	294111	293530	1402	0.48	3.92	PASS
Hexachlorobutadiene	109613	106366	105640	107206	2116	1.97	103261	101807	102922	102663	761	0.74	4.24	PASS
2-Methylnaphthalene	523821	508920	505818	512853	9624	1.88	495181	488997	493641	492606	3219	0.65	3.95	PASS
4-Chloro-3-methylphenol	311530	303022	295706	303419	7919	2.61	296841	291875	295156	294624	2525	0.86	2.90	PASS
1-Methylnaphthalene	523583	508769	505674	512675	9572	1.87	491826	482547	488111	487495	4670	0.96	4.91	PASS
1,2,4,5-Tetrachlorobenzene	196093	190477	189612	192061	3519	1.83	184971	182500	184489	183987	1310	0.71	4.20	PASS
Hexachlorocyclopentadiene	120321	116614	116111	117682	2299	1.95	117367	115776	116863	116669	813	0.70	0.86	PASS
2,4,6-Trichlorophenol	189735	184401	183521	185886	3363	1.81	182079	179496	181588	181054	1372	0.76	2.60	PASS
2,4,5-Trichlorophenol	182030	176956	176573	178520	3046	1.71	180680	178277	180324	179760	1297	0.72	-0.69	PASS
2-Chloronaphthalene	425627	413854	411972	417151	7401	1.77	404874	397059	401783	401239	3936	0.98	3.81	PASS

Biphenyl	538577	523524	521496	527866	9332	1.77	511730	503249	509304	508094	4368	0.86	3.75	PASS
2-Nitroaniline	281357	273906	273213	276159	4515	1.64	269412	265482	268797	267897	2114	0.79	2.99	PASS
Acenaphthylene	517512	504062	502073	507882	8399	1.65	513351	506212	511912	510492	3775	0.74	-0.51	PASS
1,3-Dinitrobenzene	230303	224631	224516	226483	3308	1.46	219599	216661	219502	218587	1669	0.76	3.49	PASS
Dimethylphthalate	275458	267919	267898	270425	4359	1.61	261423	258105	261194	260241	1853	0.71	3.77	PASS
2,6-Dinitrotoluene	251000	244311	244004	246438	3954	1.60	237785	234660	237498	236648	1727	0.73	3.97	PASS
Acenaphthene	541215	526205	524823	530748	9091	1.71	523548	516445	522669	520887	3872	0.74	1.86	PASS
2,4-Dinitrophenol	276392	269158	269603	271718	4054	1.49	263952	260508	263444	262635	1859	0.71	3.34	PASS
Dibenzofuran	359453	349716	350264	353144	5470	1.55	338742	334642	338645	337343	2340	0.69	4.47	PASS
3-Nitroaniline	469066	455884	454920	459957	7904	1.72	441731	435861	440883	439492	3173	0.72	4.45	PASS
2,4-Dinitrotoluene	252124	245616	246139	247960	3616	1.46	239626	236579	239458	238554	1713	0.72	3.79	PASS
4-Nitrophenol	508860	496386	496260	500502	7239	1.45	486153	478448	485562	483388	4288	0.89	3.42	PASS
2,3,4,6-Tetrachlorophenol	168176	163840	163312	165109	2669	1.62	163208	160348	162940	162165	1580	0.97	1.78	PASS
Fluorene	545513	530886	530706	535702	8497	1.59	515984	509179	515530	513564	3805	0.74	4.13	PASS
4-Chlorophenyl phenyl ether	381326	368408	368965	372900	7303	1.96	356733	352062	356356	355050	2595	0.73	4.79	PASS
n-Hexadecane	793105	767782	771522	777470	13669	1.76	751882	742300	751654	748612	5468	0.73	3.71	PASS
Diethylphthalate	340056	329405	330228	333230	5926	1.78	312741	306368	311241	310117	3332	1.07	6.94	PASS
Azobenzene	351739	345084	346597	347807	3489	1.00	326360	324867	328353	326527	1749	0.54	6.12	PASS
Diphenylamine, 4-Nitroaniline, & 4,6-Dinitro-2-methylphenol	854983	831588	832930	839834	13137	1.56	813031	802345	812773	809383	6096	0.75	3.63	PASS
4-Bromophenyl phenyl ether	319459	310646	311662	313922	4822	1.54	297240	293202	297003	295815	2266	0.77	5.77	PASS
Hexachlorobenzene	153983	149767	150244	151331	2309	1.53	148052	146406	148127	147528	973	0.66	2.51	PASS
Pentachlorophenol	284358	277877	278700	280312	3528	1.26	281644	278294	281362	280433	1858	0.66	-0.04	PASS
Phenanthrene	547793	534234	536283	539437	7309	1.35	520682	514735	521075	518831	3552	0.68	3.82	PASS
n-Octadecane	554517	540884	543251	546217	7285	1.33	524720	518365	525046	522710	3767	0.72	4.30	PASS
Anthracene	489422	473756	478394	480524	8047	1.67	465698	460629	466596	464308	3217	0.69	3.37	PASS
Carbazole	491065	480110	482312	484496	5795	1.20	466015	460697	466596	464437	3252	0.70	4.14	PASS
Di-n-butylphthalate	343377	334573	338404	338785	4414	1.30	329705	326162	330203	326690	2203	0.67	2.98	PASS
Fluoranthene	552298	540673	544228	545733	5957	1.09	525850	521102	527590	524847	3358	0.64	3.63	PASS
Pyrene	543269	531914	535616	536933	5791	1.08	524182	519848	526526	523519	3388	0.65	2.50	PASS
Benzyl butyl phthalate	367399	359696	364187	363761	3869	1.06	360667	358801	363239	360902	2228	0.62	0.79	PASS
Benz(a)anthracene	540565	531764	538473	536934	4598	0.86	538319	536233	542733	539095	3319	0.62	-0.40	PASS
Chrysene	538589	529991	536687	535089	4516	0.84	530623	528825	534745	531398	3035	0.57	0.69	PASS
Bis(2-ethylhexyl)phthalate	385196	376767	382926	381630	4361	1.14	374447	372707	377556	374903	2456	0.66	1.76	PASS
Di-n-octyl phthalate	377041	369665	376943	374550	4231	1.13	378386	377158	381854	379133	2435	0.64	-1.22	PASS
Benzo(b)fluoranthene	549119	543757	548581	547152	2953	0.54	540141	537436	543319	540299	2945	0.55	1.25	PASS
Benzo(k)fluoranthene	535179	528964	534158	532767	3333	0.63	534410	531417	536135	533987	2387	0.45	-0.23	PASS
Benzo(a)pyrene	542486	537736	542401	540874	2718	0.50	518152	515819	521507	518493	2859	0.55	4.14	PASS
Indeno(1,2,3-cd)pyrene	538019	535718	537900	537212	1295	0.24	522359	520597	524786	522581	2103	0.40	2.72	PASS
Dibenz(a,h)anthracene	539592	536436	539654	538561	1840	0.34	532136	530478	534724	532446	2140	0.40	1.14	PASS
Benzo(g,h,i)perylene	544243	541483	544406	543377	1643	0.30	556434	556028	560667	556376	2320	0.42	-2.76	PASS

Reagent

SMLIST1 SURR_00003

5MLIST1 SURR-00002

RESTEK

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A093638

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 2018 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 367-12-4		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed
2	Phenol-d5	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 4165-62-2		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed
3	Nitrobenzene-d5	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 4165-60-0		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed
4	2-Fluorobiphenyl	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 321-60-8		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed
5	2,4,6-Tribromophenol	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 118-79-6		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed
6	p-Terphenyl-d14	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 1718-51-0		+/- 132.9492	µg/mL	Unstressed
	Purity 99%		+/- 163.4029	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x .25mm x .25um
Rtx-5 (cat.#10223)

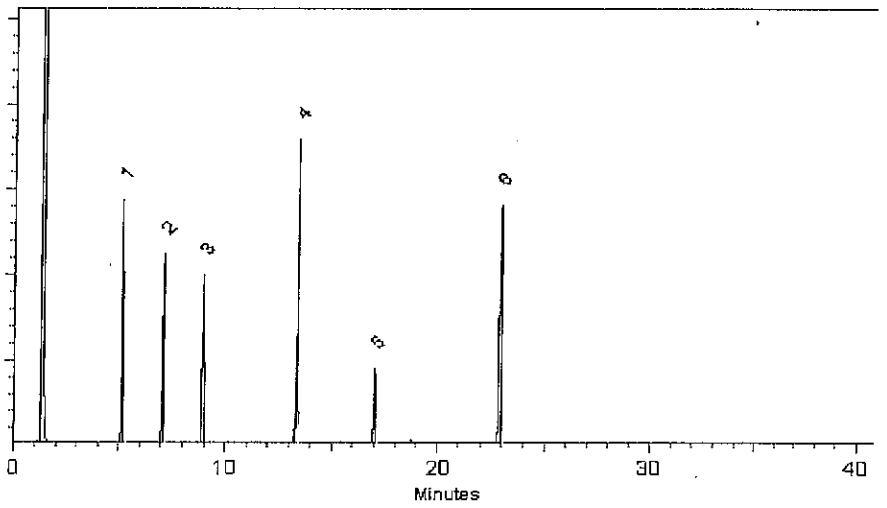
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



Diane Shaffer - QA Analyst

Date Passed: 22-Feb-2013 **Balance:** 1128342313

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 SURR_00004

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0103960

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBC5591V)	5,006.1 µg/mL	+/- 29.1044 +/- 124.7363 +/- 156.8636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X479P6)	5,002.5 µg/mL	+/- 29.0834 +/- 124.6466 +/- 156.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-20474)	5,003.7 µg/mL	+/- 29.0901 +/- 124.6753 +/- 156.7868	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot B19Z016)	5,002.4 µg/mL	+/- 29.0826 +/- 124.6429 +/- 156.7461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,024.2 µg/mL	+/- 29.2093 +/- 125.1861 +/- 157.4292	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-20577)	5,010.4 µg/mL	+/- 29.1291 +/- 124.8422 +/- 156.9968	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

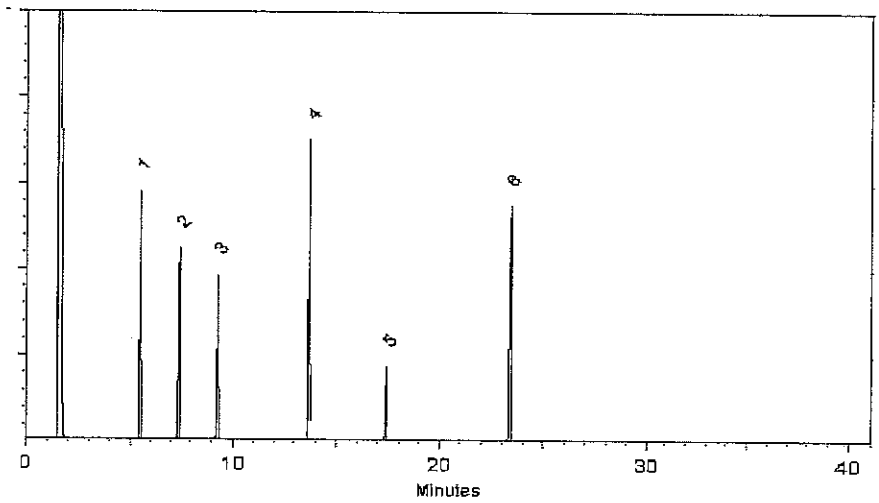
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sauer

Date Mixed: 11-Jun-2014 **Balance:** 1128360905

Jennifer L. Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 23-Jun-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
5WC23	240-64029-5	66	68	110	102	87	107
	MB 240-227942/15-A	51	51	75	70	62	72
	LCS 240-227942/16-A	77	58	97	86	87	80

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	15-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	31-110
FBP = 2-Fluorobiphenyl (Surr)	29-110
TBP = 2,4,6-Tribromophenol (Surr)	21-128
TPH = Terphenyl-d14 (Surr)	31-115

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 60504008.D

Lab ID: LCS 240-227942/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
p-Nitroaniline	32.0	36.3	114	40-135	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab File ID: 60504007.D Lab Sample ID: MB 240-227942/15-A

Matrix: Water Date Extracted: 04/28/2016 09:19

Instrument ID: A4AG2 Date Analyzed: 05/04/2016 09:35

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-227942/16-A	60504008.D	05/04/2016 10:00
5WC23	240-64029-5	60506017.D	05/06/2016 13:30

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab File ID: 60426001.D DFTPP Injection Date: 04/26/2016

Instrument ID: A4AG2 DFTPP Injection Time: 07:23

Analysis Batch No.: 227507

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	52.3	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	42.6	
70	Less than 2.0% of mass 69	0.2	(0.5) 1
127	25.0 - 75.0% of mass 198	54.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	27.8	
365	Greater than 0.75% of mass 198	3.6	
441	Present, but less than mass 443	8.5	
442	40.0 - 110.0% of mass 198	59.3	
443	15.0 - 24.0% of mass 442	11.2	(18.9) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-227507/2	60426002.D	04/26/2016	07:44
	STD8 240-227507/3	60426003.D	04/26/2016	08:09
	STD7 240-227507/4	60426004.D	04/26/2016	08:34
	STD6 240-227507/5	60426005.D	04/26/2016	08:59
	STD5 240-227507/6	60426006.D	04/26/2016	09:23
	STD4 240-227507/7	60426007.D	04/26/2016	09:48
	STD3 240-227507/8	60426008.D	04/26/2016	10:13
	STD2 240-227507/9	60426009.D	04/26/2016	10:38
	STD1 240-227507/10	60426010.D	04/26/2016	11:03

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab File ID: 60504001.D DFTPP Injection Date: 05/04/2016

Instrument ID: A4AG2 DFTPP Injection Time: 07:12

Analysis Batch No.: 228727

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	48.2	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	40.7	
70	Less than 2.0% of mass 69	0.2	(0.4) 1
127	25.0 - 75.0% of mass 198	51.0	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	27.7	
365	Greater than 0.75% of mass 198	3.5	
441	Present, but less than mass 443	9.2	
442	40.0 - 110.0% of mass 198	64.8	
443	15.0 - 24.0% of mass 442	12.3	(19.0) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	MB 240-227942/15-A	60504007.D	05/04/2016	09:35
	LCS 240-227942/16-A	60504008.D	05/04/2016	10:00

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab File ID: 60506001.D DFTPP Injection Date: 05/06/2016

Instrument ID: A4AG2 DFTPP Injection Time: 06:58

Analysis Batch No.: 229123

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	53.6	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	45.0	
70	Less than 2.0% of mass 69	0.2	(0.6) 1
127	25.0 - 75.0% of mass 198	53.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.0	
275	10.0- 30.0% of mass 198	26.0	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	7.8	
442	40.0 - 110.0% of mass 198	53.7	
443	15.0 - 24.0% of mass 442	10.4	(19.4) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-229123/2	60506002.D	05/06/2016	07:16
	STD6 240-229123/3	60506003.D	05/06/2016	07:40
5WC23	240-64029-5	60506017.D	05/06/2016	13:30

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Sample No.: STD6 240-227507/5 Date Analyzed: 04/26/2016 08:59

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60426005.D Heated Purge: (Y/N) N

Calibration ID: 34174

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		293740	6.92	1248544	7.99	672048	9.49
UPPER LIMIT		587480	7.42	2497088	8.49	1344096	9.99
LOWER LIMIT		146870	6.42	624272	7.49	336024	8.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/2 CCVIS		219446	6.90	868590	7.97	506583	9.47

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Sample No.: STD6 240-227507/5 Date Analyzed: 04/26/2016 08:59

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60426005.D Heated Purge: (Y/N) N

Calibration ID: 34174

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		998374	10.79	962653	13.79	715790	16.19
UPPER LIMIT		1996748	11.29	1925306	14.29	1431580	16.69
LOWER LIMIT		499187	10.29	481327	13.29	357895	15.69
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/2 CCVIS		844371	10.76	854403	13.74	654389	16.14

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Sample No.: STD6 240-229123/2 Date Analyzed: 05/06/2016 07:16

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60506002.D Heated Purge: (Y/N) N

Calibration ID: 34178

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		219446	6.90	868590	7.97	506583	9.47
UPPER LIMIT		438892	7.40	1737180	8.47	1013166	9.97
LOWER LIMIT		109723	6.40	434295	7.47	253292	8.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/3 CCV		209759	6.90	895843	7.97	512060	9.47
240-64029-5	5WC23	193817	6.90	934768	7.97	546038	9.47

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Sample No.: STD6 240-229123/2 Date Analyzed: 05/06/2016 07:16

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60506002.D Heated Purge: (Y/N) N

Calibration ID: 34178

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		844371	10.76	854403	13.74	654389	16.14
UPPER LIMIT		1688742	11.26	1708806	14.24	1308778	16.64
LOWER LIMIT		422186	10.26	427202	13.24	327195	15.64
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/3 CCV		876620	10.76	825519	13.73	634681	16.14
240-64029-5	5WC23	971164	10.76	910514	13.73	588905	16.13

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64029-1

SDG No.:

Client Sample ID: 5WC23 | Lab Sample ID: 240-64029-5

Matrix: Water | Lab File ID: 60506017.D

Analysis Method: 8270D | Date Collected: 04/23/2016 14:15

Extract. Method: 3510C | Date Extracted: 04/28/2016 09:19

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 13:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
100-01-6	p-Nitroaniline	<2.0		2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	102		29-110
367-12-4	2-Fluorophenol (Surr)	66		15-110
118-79-6	2,4,6-Tribromophenol (Surr)	87		21-128
4165-60-0	Nitrobenzene-d5 (Surr)	110		31-110
4165-62-2	Phenol-d5 (Surr)	68		10-110
1718-51-0	Terphenyl-d14 (Surr)	107		31-115

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506017.D
Lims ID: 240-64029-A-5-A
Client ID: 5WC23
Sample Type: Client
Inject. Date: 06-May-2016 13:30:30 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-017
Misc. Info.: 240-64029-A-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 09-May-2016 06:36:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	193817	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	934768	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	546038	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	97	971164	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	910514	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	588905	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	556496	1053.1	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	724296	1089.6	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	1445245	1754.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2628765	1627.3	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	90	226887	1398.8	
$ 12 Terphenyl-d14	244	12.267	12.267	0.000	99	2927434	1715.3	
62 Nitrobenzene	77	7.361	7.361	0.000	92	65224	82.2	
125 4-Nitroaniline	138	9.926	9.926	0.000	82	24542	87.7	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

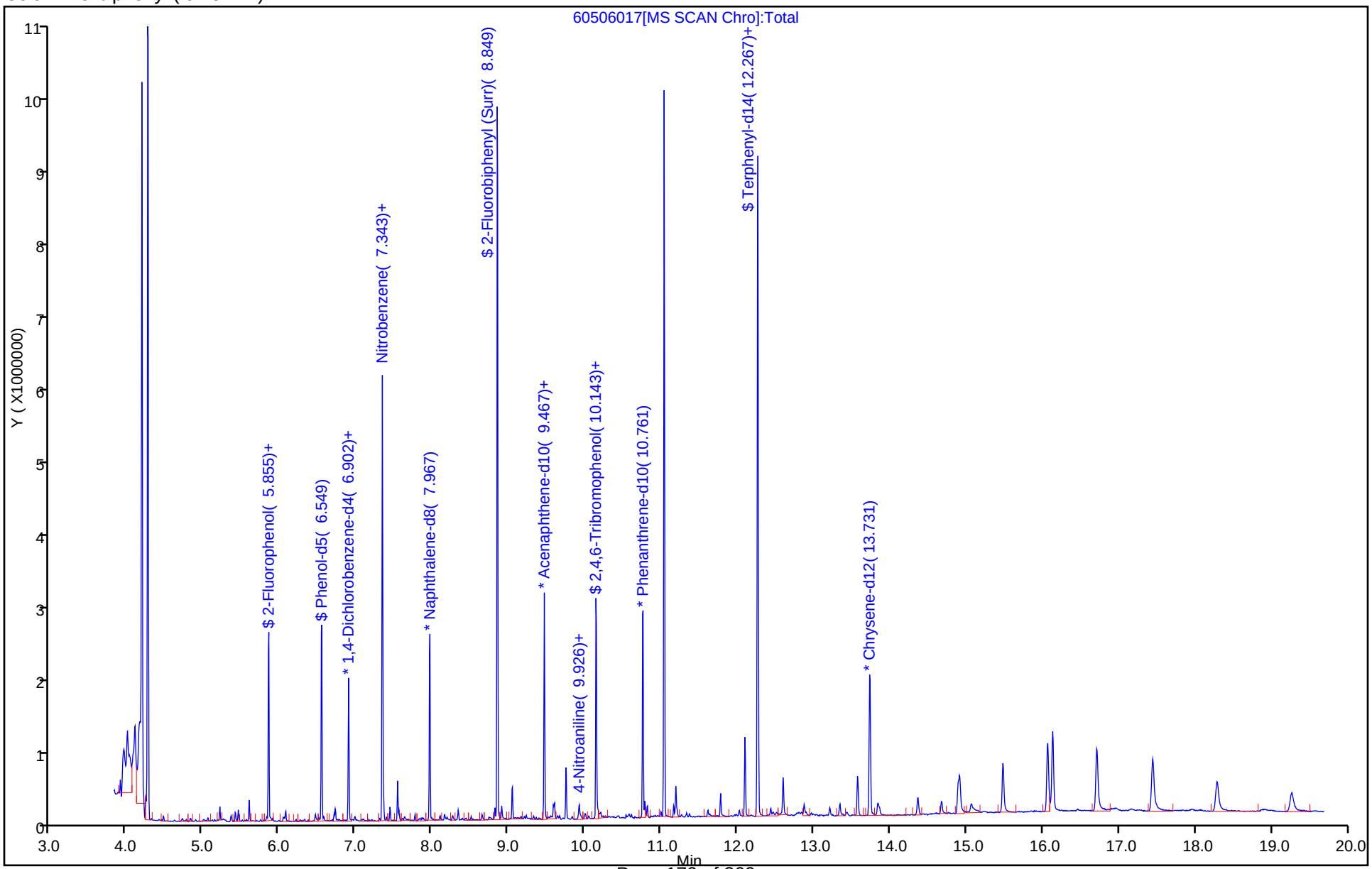
Report Date: 16-May-2016 11:13:33 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506017.D

Injection Date:	06-May-2016 13:30:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64029-A-5-A	Lab Sample ID:	240-64029-5	Worklist Smp#:	17
Client ID:	5WC23				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-227507/10	60426010.D
Level 2	STD2 240-227507/9	60426009.D
Level 3	STD3 240-227507/8	60426008.D
Level 4	STD4 240-227507/7	60426007.D
Level 5	STD5 240-227507/6	60426006.D
Level 6	STD6 240-227507/5	60426005.D
Level 7	STD7 240-227507/4	60426004.D
Level 8	STD8 240-227507/3	60426003.D
Level 9	STD9 240-227507/2	60426002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4597	0.4032 0.4914	0.3994 0.4302	0.4180 0.4607	0.4274	Ave		0.4362				7.3		20.0			
N-Nitrosodimethylamine	0.8677	0.8517 0.9056	0.9008 0.9031	0.8512 0.8392	0.8639	Ave		0.8729				3.0		20.0			
Pyridine	1.2566	1.0658 1.3818	1.0964 1.3800	1.1105 1.3455	1.1729	Ave		1.2262				10.8		20.0			
Benzaldehyde	0.6384	1.0685 0.5677	1.0530 +++++	0.9779 +++++	0.7969	Qua	57.236	0.7966	-0.000084		0.0100				0.9980		0.9900
Phenol	1.4324	1.4209 1.5207	1.6132 1.6314	1.5055 1.5454	1.2997	Ave		1.4961			0.8000	7.3		20.0			
Aniline	2.1662	1.5639 2.2116	1.9505 2.1751	2.2459 2.2946	2.2181	Ave		2.1032				11.4		20.0			
Bis(2-chloroethyl)ether	1.3573	1.5758 1.4721	1.7957 1.5395	1.4885 1.2930	1.3852	Ave		1.4884			0.7000	10.5		20.0			
n-Decane	1.5781	1.8179 1.5441	1.9041 1.4067	1.8399 1.2685	1.7295	Ave		1.6361				13.8		20.0			
2-Chlorophenol	1.2208	1.1402 1.2408	1.3025 1.2501	1.2491 1.1457	1.1957	Ave		1.2181			0.8000	4.5		20.0			
1,3-Dichlorobenzene	1.4377	1.4330 1.4846	1.5081 1.4596	1.4794 1.4079	1.4572	Ave		1.4585				2.2		20.0			
1,4-Dichlorobenzene	1.4371	1.4690 1.5070	1.5161 1.4975	1.5168 1.4254	1.4595	Ave		1.4786				2.4		20.0			
Benzyl alcohol	0.8916	0.6603 0.9390	0.7755 0.9283	0.7886 0.8837	0.8621	Ave		0.8411				11.2		20.0			
2-Methylphenol	1.1838	1.0329 1.2279	1.2071 1.1715	1.1553 1.0829	1.1267	Ave		1.1485			0.7000	5.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3219	1.3719 1.3614	1.5080 1.3302	1.4396 1.2250	1.3633	Ave		1.3652				6.1		20.0			
bis (2-chloroisopropyl) ether	2.1285	2.3211 2.1582	2.5287 2.1149	2.4361 1.9520	2.2338	Ave		2.2342				8.4		20.0			
Indene	2.4022	2.5907 2.3784	2.7843 2.2762	2.7067 2.0352	2.5258	Ave		2.4624				9.8		20.0			
3 & 4 Methylphenol	1.3198	1.0213 1.3874	1.0920 1.3741	1.0582 1.3073	1.2249	Ave		1.2231				12.0		20.0			
N-Nitrosodi-n-propylamine	1.0181	0.9256 1.0671	1.1118 1.0520	1.1159 0.9876	1.0233	Ave		1.0377			0.5000	6.1		20.0			
Acetophenone	1.8318	1.8150 1.9163	1.9984 1.9183	1.9615 1.8022	1.8529	Ave		1.8871			0.0100	3.8		20.0			
Hexachloroethane	0.5419	0.5275 0.5590	0.5664 0.5551	0.5612 0.5216	0.5503	Ave		0.5479			0.3000	3.0		20.0			
Nitrobenzene	0.3434	0.3053 0.3547	0.3445 0.3486	0.3402 0.3348	0.3439	Ave		0.3394			0.2000	4.4		20.0			
Isophorone	0.6161	0.5861 0.6319	0.6413 0.6239	0.6402 0.5866	0.6247	Ave		0.6188			0.4000	3.5		20.0			
2,4-Dimethylphenol	0.3100	0.2688 0.3234	0.2562 0.3129	0.2887 0.2989	0.3133	Ave		0.2966			0.2000	8.0		20.0			
2-Nitrophenol	0.1663	0.1069 0.1715	0.1482 0.1708	0.1549 0.1642	0.1555	Ave		0.1548			0.1000	13.6		20.0			
Benzoic acid	0.1543	+++++ 0.1840	0.0871 0.1819	0.1098 0.1772	0.1316	Lin1	-25.73	0.1825							0.9950		0.9900
Bis(2-chloroethoxy)methane	0.3695	0.3758 0.3767	0.3921 0.3601	0.3970 0.3270	0.3767	Ave		0.3719			0.3000	5.8		20.0			
2,4-Dichlorophenol	0.2469	0.1662 0.2576	0.1856 0.2571	0.1845 0.2480	0.2401	Ave		0.2233			0.2000	16.9		20.0			
1,2,4-Trichlorobenzene	0.2596	0.2579 0.2696	0.2637 0.2654	0.2617 0.2580	0.2574	Ave		0.2617				1.7		20.0			
Naphthalene	1.0563 0.9269	0.9777 0.9370	0.9979 0.9130	0.9791 0.8544	0.9402	Ave		0.9536			0.7000	6.0		20.0			
4-Chloroaniline	0.3385	0.2709 0.2857	0.3396 0.3038	0.3839 0.2635	0.3437	Ave		0.3162			0.0100	13.3		20.0			
2,6-Dichlorophenol	0.2447	0.1991 0.2543	0.2056 0.2523	0.2355 0.2428	0.2415	Ave		0.2345				8.9		20.0			
Hexachlorobutadiene	0.1324	0.1316 0.1371	0.1370 0.1381	0.1276 0.1354	0.1292	Ave		0.1335			0.0100	2.9		20.0			
Caprolactam	0.0891	0.0773 0.0864	0.0957 0.0847	0.1018 0.0809	0.0983	Ave		0.0893			0.0100	9.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.2541	0.1966 0.2660	0.2384 0.2580	0.2464 0.2498	0.2509	Ave		0.2450			0.2000	8.6		20.0			
2-Methylnaphthalene	0.6565 0.6028	0.6047 0.6205	0.6511 0.6030	0.6312 0.5659	0.6101	Ave		0.6162			0.4000	4.5		20.0			
1-Methylnaphthalene	0.6326 0.5608	0.5862 0.5789	0.6054 0.5645	0.5917 0.5395	0.5658	Ave		0.5806				4.7		20.0			
Hexachlorocyclopentadiene	0.2574	0.1626 0.2782	0.1892 0.2910	0.2111 0.2799	0.2327	Ave		0.2378			0.0500	19.7		20.0			
1,2,4,5-Tetrachlorobenzene	0.4250	0.3690 0.4395	0.4093 0.4450	0.4190 0.4229	0.4168	Ave		0.4183			0.0100	5.5		20.0			
2,4,6-Trichlorophenol	0.2969	0.2147 0.3089	0.2543 0.3218	0.2644 0.3079	0.2815	Ave		0.2813			0.2000	12.6		20.0			
2,4,5-Trichlorophenol	0.2956	0.2293 0.3116	0.2715 0.3184	0.2740 0.3135	0.2755	Ave		0.2862			0.2000	10.4		20.0			
1,1'-Biphenyl	1.4030 1.3077	1.2897 1.3344	1.3806 1.3311	1.3602 1.2455	1.3010	Ave		1.3282			0.0100	3.7		20.0			
2-Chloronaphthalene	1.0482 1.0198	0.9839 1.0433	1.0595 1.0500	1.0408 1.0019	1.0096	Ave		1.0286			0.8000	2.5		20.0			
2-Nitroaniline	0.3450	0.2609 0.3648	0.2969 0.3585	0.3188 0.3444	0.3398	Ave		0.3286			0.0100	10.6		20.0			
Dimethyl phthalate	1.1231	1.0627 1.1566	1.1367 1.1639	1.1159 1.1033	1.1055	Ave		1.1210			0.0100	2.9		20.0			
1,3-Dinitrobenzene	0.1789	0.1077 0.1934	0.1376 0.1947	0.1476 0.1903	0.1686	Ave		0.1648				19.0		20.0			
2,6-Dinitrotoluene	0.2559	0.1930 0.2703	0.2229 0.2724	0.2391 0.2640	0.2597	Ave		0.2472				11.1		20.0			
Acenaphthylene	1.5365 1.5845	1.4053 1.6048	1.5604 1.6075	1.5801 1.5189	1.5907	Ave		1.5543			0.9000	4.1		20.0			
3-Nitroaniline	0.1217	0.1461 0.1167	0.1594 0.1341	0.2041 0.1260	0.1523	Ave		0.1450			0.0100	19.5		20.0			
2,4-Dinitrophenol	0.1127	+++++ 0.1344	0.0472 0.1431	0.0656 0.1392	0.0872	Lin1	-26.64	0.1414			0.0100				0.9910		0.9900
4-Nitrophenol	0.1562	+++++ 0.1649	0.1097 0.1634	0.1258 0.1576	0.1426	Ave		0.1458				14.4		20.0			
Acenaphthene	1.1533 0.9952	1.0283 0.9847	1.0815 0.9474	1.0317 0.8828	1.0112	Ave		1.0129			0.9000	7.6		20.0			
2,4-Dinitrotoluene	0.3300	0.2303 0.3499	0.2782 0.3598	0.3019 0.3459	0.3220	Ave		0.3148			0.2000	13.8		20.0			
Dibenzofuran	1.5296 1.4294	1.4056 1.4427	1.4916 1.4487	1.4359 1.3623	1.4077	Ave		1.4393			0.8000	3.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3,4,6-Tetrachlorophenol	0.2211	0.1544 0.2406	0.1869 0.2456	0.2052 0.2425	0.2141	Ave		0.2138			0.0100	14.7		20.0			
Hexadecane	0.8016	0.8720 0.7620	0.9567 0.7325	0.9472 0.6570	0.8772	Ave		0.8258				12.8		20.0			
Diethyl phthalate	1.0866	1.3001 1.1028	1.2418 1.1040	1.2066 1.0254	1.1165	Ave		1.1480			0.0100	8.0		20.0			
4-Chlorophenyl phenyl ether	0.5107	0.4806 0.5294	0.5226 0.5376	0.5059 0.5157	0.5106	Ave		0.5141			0.4000	3.3		20.0			
p-Nitroaniline	0.2187	0.1623 0.2037	0.2089 0.1993	0.2366 0.1731	0.2375	Ave		0.2050			0.0100	13.2		20.0			
Fluorene	1.2472 1.1537	1.1124 1.1537	1.1811 1.1517	1.1966 1.0715	1.1561	Ave		1.1582			0.9000	4.3		20.0			
4,6-Dinitro-2-methylphenol	0.1079	+++++ 0.1163	0.0543 0.1238	0.0687 0.1168	0.0895	Lin1	-17.73	0.1215			0.0100				0.9960		0.9900
Diphenylamine	0.6424	0.5684 0.6418	0.6312 0.6451	0.6440 0.6225	0.6290	Ave		0.6281				4.1		20.0			
N-Nitrosodiphenylamine	0.5465	0.4835 0.5460	0.5370 0.5488	0.5479 0.5296	0.5351	Ave		0.5343			0.0100	4.1		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.8955	0.7844 0.8785	0.8757 0.8622	0.8960 0.8045	0.8949	Ave		0.8616				5.0		20.0			
Azobenzene	0.8955	0.7853 0.8785	0.8757 0.8622	0.8955 0.8045	0.8954	Ave		0.8616				5.0		20.0			
4-Bromophenyl phenyl ether	0.1907	0.1626 0.1979	0.1797 0.2036	0.1802 0.1915	0.1807	Ave		0.1859			0.1000	6.9		20.0			
Atrazine	0.1884	0.1598 0.1910	0.1807 0.1911	0.1901 0.1754	0.1899	Ave		0.1833			0.0100	6.0		20.0			
Hexachlorobenzene	0.1931 0.1930	0.1772 0.2016	0.1882 0.2060	0.1864 0.1970	0.1818	Ave		0.1916			0.1000	4.8		20.0			
n-Octadecane	0.5971	0.5237 0.5634	0.6055 0.5432	0.6098 0.4914	0.6091	Ave		0.5679				7.9		20.0			
Pentachlorophenol	0.1235	0.0509 0.1293	0.0834 0.1339	0.0909 0.1278	0.1054	Lin1	-10.20	0.1309			0.0500				0.9980		0.9900
Phenanthrene	1.1104 1.0329	0.9948 1.0389	1.0458 1.0530	1.0327 0.9868	0.9978	Ave		1.0326			0.7000	3.7		20.0			
Anthracene	1.0053 1.0781	0.9570 1.0805	1.0538 1.0837	1.0601 1.0213	1.0278	Ave		1.0408			0.7000	4.0		20.0			
Carbazole	0.7843	0.8228 0.7463	0.9260 0.7380	0.8945 0.7464	0.8120	Ave		0.8088			0.0100	8.7		20.0			
Di-n-butyl phthalate	1.2651	1.5219 1.2609	1.3073 1.2564	1.3171 1.1445	1.2525	Ave		1.2907			0.0100	8.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Fluoranthene	0.9339 1.0317	0.8799 1.0572	0.9576 1.0733	0.9837 1.0347	1.0042	Ave		0.9951			0.6000	6.3		20.0			
Benzidine	0.3555	0.1066 0.4010	0.1107 0.4228	0.1887 0.4230	0.2362	Lin	-105.8	0.4402							0.9950		0.9900
Pyrene	1.0275 1.0955	1.0010 1.1418	1.0619 1.1372	1.0826 1.1036	1.0484	Ave		1.0777			0.6000	4.4		20.0			
Butyl benzyl phthalate	0.5436	0.4845 0.5683	0.4907 0.5681	0.5112 0.5576	0.5087	Ave		0.5291			0.0100	6.5		20.0			
Bis(2-ethylhexyl) phthalate	0.7370	0.5341 0.7932	0.6309 0.7940	0.6488 0.7800	0.6870	Ave		0.7006			0.0100	13.3		20.0			
3,3'-Dichlorobenzidine	0.3220	0.2293 0.3356	0.2625 0.3438	0.3053 0.3502	0.3054	Ave		0.3068			0.0100	13.7		20.0			
Benzo[a]anthracene	0.9627 0.9618	0.8590 1.0164	0.9232 1.0344	0.9227 1.0107	0.9240	Ave		0.9572			0.8000	5.9		20.0			
Chrysene	0.9353 0.9181	0.8740 0.9800	0.9603 0.9795	0.9359 0.9680	0.8942	Ave		0.9384			0.7000	4.0		20.0			
Di-n-octyl phthalate	1.6344	0.9033 1.7185	1.2436 1.7787	1.2559 1.7231	1.4880	Lin1	-55.70	1.7437			0.0100				0.9980		0.9900
Benzo[b]fluoranthene	0.9973 1.1560	0.9272 1.1877	1.0994 1.2482	1.0074 1.2482	1.1070	Ave		1.1087			0.7000	10.2		20.0			
Benzo[k]fluoranthene	1.3439 1.1986	1.2080 1.2735	1.1640 1.2799	1.1930 1.2420	1.1603	Ave		1.2292			0.7000	4.9		20.0			
Benzo[a]pyrene	0.8959 1.0673	0.8233 1.1368	0.9630 1.1686	0.9376 1.1542	1.0009	Ave		1.0164			0.7000	12.1		20.0			
Indeno[1,2,3-cd]pyrene	0.7977 1.1061	0.8942 1.1581	0.9837 1.1893	1.0166 1.1544	1.0331	Ave		1.0370			0.5000	12.6		20.0			
Dibenz(a,h)anthracene	0.7270 0.9485	0.7822 1.0106	0.8387 1.0451	0.8692 1.0244	0.8897	Ave		0.9039			0.4000	12.3		20.0			
Benzo[g,h,i]perylene	0.7303 0.8572	0.7306 0.8840	0.8216 0.8910	0.8142 0.8765	0.8113	Ave		0.8241			0.5000	7.4		20.0			
2-Fluorophenol (Surr)	1.0316	1.0606 1.1394	1.1301 1.0655	1.1360 1.0928	1.0687	Ave		1.0906				3.7		20.0			
Phenol-d5 (Surr)	1.3257	1.2485 1.4256	1.5042 1.4942	1.3870 1.4035	1.1868	Ave		1.3719				8.2		20.0			
Nitrobenzene-d5 (Surr)	0.3477 0.3548	0.3339 0.3617	0.3591 0.3556	0.3671 0.3363	0.3571	Ave		0.3526				3.2		20.0			
2-Fluorobiphenyl (Surr)	1.2897 1.1697	1.1217 1.1960	1.1877 1.2047	1.1821 1.1285	1.1699	Ave		1.1833				4.1		20.0			
2,4,6-Tribromophenol (Surr)	0.1238	0.0873 0.1361	0.1019 0.1420	0.1085 0.1384	0.1125	Ave		0.1188				16.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Terphenyl-d14 (Surr)	0.7640 0.7501	0.6734 0.7981	0.7369 0.7977	0.7363 0.7775	0.7140	Ave		0.7498				5.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-227507/10	60426010.D
Level 2	STD2 240-227507/9	60426009.D
Level 3	STD3 240-227507/8	60426008.D
Level 4	STD4 240-227507/7	60426007.D
Level 5	STD5 240-227507/6	60426006.D
Level 6	STD6 240-227507/5	60426005.D
Level 7	STD7 240-227507/4	60426004.D
Level 8	STD8 240-227507/3	60426003.D
Level 9	STD9 240-227507/2	60426002.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	337577	13706 543365	27089 609009	59264 820575	155649	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodimethylamine	DCB	Ave	637190	28954 1001385	61100 1278421	120673 1494715	314627	1000	50.0 1500	100 2000	200 2500	500
Pyridine	DCB	Ave	922807	36232 1527918	74363 1953548	157436 2396589	427143	1000	50.0 1500	100 2000	200 2500	500
Benzaldehyde	DCB	Qua	937598	72645 1255402	142836 +++++	277280 +++++	580416	2000	100 3000	200 +++++	400 +++++	1000
Phenol	DCB	Ave	1051882	48304 1681485	109416 2309466	213435 2752603	473316	1000	50.0 1500	100 2000	200 2500	500
Aniline	DCB	Ave	1590734	53167 2445461	132294 3079101	318398 4087029	807805	1000	50.0 1500	100 2000	200 2500	500
Bis(2-chloroethyl)ether	DCB	Ave	996750	53571 1627829	121791 2179327	211022 2303050	504462	1000	50.0 1500	100 2000	200 2500	500
n-Decane	DCB	Ave	1158866	61799 1707375	129148 1991306	260836 2259509	629858	1000	50.0 1500	100 2000	200 2500	500
2-Chlorophenol	DCB	Ave	896516	38763 1372089	88346 1769714	177087 2040646	435465	1000	50.0 1500	100 2000	200 2500	500
1,3-Dichlorobenzene	DCB	Ave	1055741	48715 1641654	102291 2066329	209728 2507749	530701	1000	50.0 1500	100 2000	200 2500	500
1,4-Dichlorobenzene	DCB	Ave	1055356	49939 1666372	102833 2119947	215028 2538948	531521	1000	50.0 1500	100 2000	200 2500	500
Benzyl alcohol	DCB	Ave	654717	22447 1038263	52596 1314170	111800 1574008	313943	1000	50.0 1500	100 2000	200 2500	500
2-Methylphenol	DCB	Ave	869333	35114 1357745	81869 1658399	163786 1928812	410333	1000	50.0 1500	100 2000	200 2500	500
1,2-Dichlorobenzene	DCB	Ave	970727	46638 1505398	102282 1883136	204083 2181961	496492	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCB	Ave	1563034	78906 2386488	171513 2993961	345355 3476843	813502	1000	50.0 1500	100 2000	200 2500	500
Indene	DCB	Ave	3528150	176142 5259989	377691 6444486	767438 7250007	1839694	2000	100 3000	200 4000	400 5000	1000
3 & 4 Methylphenol	DCB	Ave	969188	34719 1534099	74066 1945193	150020 2328598	446099	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodi-n-propylamine	DCB	Ave	747609	31466 1179988	75405 1489193	158200 1759007	372677	1000	50.0 1500	100 2000	200 2500	500
Acetophenone	DCB	Ave	1345213	61702 2119007	135545 2715581	278080 3210028	674774	1000	50.0 1500	100 2000	200 2500	500
Hexachloroethane	DCB	Ave	397939	17934 618158	38416 785821	79554 929037	200408	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene	NPT	Ave	1072001	44137 1703798	103228 2179483	214201 2590210	533568	1000	50.0 1500	100 2000	200 2500	500
Isophorone	NPT	Ave	1922922	84731 3035213	192173 3900878	403101 4538036	969058	1000	50.0 1500	100 2000	200 2500	500
2,4-Dimethylphenol	NPT	Ave	967738	38868 1553578	76781 1956505	181808 2312268	486096	1000	50.0 1500	100 2000	200 2500	500
2-Nitrophenol	NPT	Ave	518965	15455 823662	44395 1067653	97551 1270503	241299	1000	50.0 1500	100 2000	200 2500	500
Benzoic acid	NPT	Lin1	962951	+++++ 1767481	52170 2274853	138266 2741238	408235	2000	+++++ 3000	200 4000	400 5000	1000
Bis(2-chloroethoxy)methane	NPT	Ave	1153478	54336 1809554	117507 2251454	249948 2530218	584439	1000	50.0 1500	100 2000	200 2500	500
2,4-Dichlorophenol	NPT	Ave	770595	24031 1237277	55620 1607554	116195 1918986	372483	1000	50.0 1500	100 2000	200 2500	500
1,2,4-Trichlorobenzene	NPT	Ave	810230	37290 1294859	79023 1659588	164785 1995860	399292	1000	50.0 1500	100 2000	200 2500	500
Naphthalene	NPT	Ave	26932 2893169	141356 4500883	299015 5707890	616483 6610238	1458617	10.0 1000	50.0 1500	100 2000	200 2500	500
4-Chloroaniline	NPT	Ave	1056699	39165 1372190	101758 1899452	241749 2038574	533216	1000	50.0 1500	100 2000	200 2500	500
2,6-Dichlorophenol	NPT	Ave	763809	28784 1221466	61606 1577407	148307 1878690	374659	1000	50.0 1500	100 2000	200 2500	500
Hexachlorobutadiene	NPT	Ave	413322	19022 658397	41060 863418	80351 1047259	200479	1000	50.0 1500	100 2000	200 2500	500
Caprolactam	NPT	Ave	556319	22359 830416	57382 1059219	128189 1252177	305065	2000	100 3000	200 4000	400 5000	1000
4-Chloro-3-methylphenol	NPT	Ave	793203	28429 1277735	71449 1613096	155156 1932506	389179	1000	50.0 1500	100 2000	200 2500	500
2-Methylnaphthalene	NPT	Ave	16738 1881498	87424 2980336	195109 3769687	397448 4378075	946462	10.0 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1-Methylnaphthalene	NPT	Ave	16129 1750507	84743 2780691	181424 3528966	372596 4173562	877790	10.0 1000	50.0 1500	100 2000	200 2500	500
Hexachlorocyclopentadiene	ANT	Ave	 432468	13607 730181	31630 967198	73338 1164529	196777	 1000	50.0 1500	100 2000	200 2500	500
1,2,4,5-Tetrachlorobenzene	ANT	Ave	 714000	30876 1153457	68425 1478989	145562 1759303	352462	 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Trichlorophenol	ANT	Ave	 498789	17966 810874	42510 1069490	91859 1281015	237996	 1000	50.0 1500	100 2000	200 2500	500
2,4,5-Trichlorophenol	ANT	Ave	 496697	19187 817857	45387 1058206	95201 1304155	232949	 1000	50.0 1500	100 2000	200 2500	500
1,1'-Biphenyl	ANT	Ave	21252 2197161	107915 3502522	230809 4423760	472521 5181119	1100099	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Chloronaphthalene	ANT	Ave	15877 1713426	82329 2738315	177129 3489581	361553 4167770	853681	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Nitroaniline	ANT	Ave	 579581	21833 957536	49630 1191528	110737 1432719	287319	 1000	50.0 1500	100 2000	200 2500	500
Dimethyl phthalate	ANT	Ave	 1886923	88921 3035648	190038 3867899	387667 4589804	934760	 1000	50.0 1500	100 2000	200 2500	500
1,3-Dinitrobenzene	ANT	Ave	 300589	9012 507504	22999 646943	51270 791626	142589	 1000	50.0 1500	100 2000	200 2500	500
2,6-Dinitrotoluene	ANT	Ave	 429987	16145 709378	37273 905227	83062 1098326	219608	 1000	50.0 1500	100 2000	200 2500	500
Acenaphthylene	ANT	Ave	23274 2662189	117584 4212038	260872 5342305	548921 6318517	1345049	10.0 1000	50.0 1500	100 2000	200 2500	500
3-Nitroaniline	ANT	Ave	 204493	12225 306270	26644 445767	70893 524127	128776	 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrophenol	ANT	Lin1	 378547	+++++ 705771	15781 950841	45564 1158191	147517	 2000	+++++ 3000	200 4000	400 5000	1000
4-Nitrophenol	ANT	Ave	 524981	+++++ 865875	36672 1086166	87392 1311478	241106	 2000	+++++ 3000	200 4000	400 5000	1000
Acenaphthene	ANT	Ave	17470 1672134	86041 2584432	180800 3148375	358390 3672291	854995	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrotoluene	ANT	Ave	 554451	19273 918418	46503 1195783	104862 1438920	272299	 1000	50.0 1500	100 2000	200 2500	500
Dibenzofuran	ANT	Ave	23170 2401480	117607 3786598	249371 4814312	498812 5666896	1190297	10.0 1000	50.0 1500	100 2000	200 2500	500
2,3,4,6-Tetrachlorophenol	ANT	Ave	 371464	12918 631592	31245 816336	71296 1008636	181049	 1000	50.0 1500	100 2000	200 2500	500
Hexadecane	ANT	Ave	 1346821	72963 2000096	159942 2434452	329060 2732880	741718	 1000	50.0 1500	100 2000	200 2500	500
Diethyl phthalate	ANT	Ave	 1825619	108784 2894538	207607 3668816	419175 4265802	944071	 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chlorophenyl phenyl ether	ANT	Ave	858027	40212 1389520	87372 1786502	175743 2145121	431750	1000	50.0 1500	100 2000	200 2500	500
p-Nitroaniline	ANT	Ave	367364	13576 534739	34923 662347	82204 720141	200842	1000	50.0 1500	100 2000	200 2500	500
Fluorene	ANT	Ave	18892 1938355	93081 3028183	197456 3827347	415678 4457350	977515	10.0 1000	50.0 1500	100 2000	200 2500	500
4,6-Dinitro-2-methylphenol	PHN	Lin1	538554	+++++ 933281	28195 1255369	73053 1489981	229646	2000	+++++ 3000	200 4000	400 5000	1000
Diphenylamine	PHN	Ave	1364072	63576 2191130	139535 2783662	291450 3378645	686867	851	42.5 1276	85.1 1701	170 2127	425
N-Nitrosodiphenylamine	PHN	Ave	1364072	63576 2191130	139535 2783662	291450 3378645	686867	1000	50.0 1500	100 2000	200 2500	500
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	2235089	103141 3525461	227564 4373199	476641 5132406	1148759	1000	50.0 1500	100 2000	200 2500	500
Azobenzene	PHN	Ave	2235089	103260 3525461	227565 4373199	476376 5132406	1149321	1000	50.0 1500	100 2000	200 2500	500
4-Bromophenyl phenyl ether	PHN	Ave	475981	21385 794236	46696 1032944	95843 1221706	231976	1000	50.0 1500	100 2000	200 2500	500
Atrazine	PHN	Ave	940653	42014 1532823	93906 1938293	202271 2238512	487456	2000	100 3000	200 4000	400 5000	1000
Hexachlorobenzene	PHN	Ave	4568 481744	23298 809080	48900 1045057	99164 1256725	233347	10.0 1000	50.0 1500	100 2000	200 2500	500
n-Octadecane	PHN	Ave	1490361	68855 2260953	157350 2755086	324411 3135149	781812	1000	50.0 1500	100 2000	200 2500	500
Pentachlorophenol	PHN	Lin1	616620	13385 1037711	43367 1357913	96690 1630778	270656	2000	100 3000	200 4000	400 5000	1000
Phenanthrene	PHN	Ave	26266 2577944	130809 4169234	271774 5340963	549392 6295733	1280870	10.0 1000	50.0 1500	100 2000	200 2500	500
Anthracene	PHN	Ave	23780 2690779	125831 4336033	273846 5496985	563932 6515422	1319281	10.0 1000	50.0 1500	100 2000	200 2500	500
Carbazole	PHN	Ave	1957495	108193 2994760	240626 3743482	475830 4762080	1042291	1000	50.0 1500	100 2000	200 2500	500
Di-n-butyl phthalate	PHN	Ave	3157556	200113 5060134	339724 6372767	700658 7301414	1607753	1000	50.0 1500	100 2000	200 2500	500
Fluoranthene	PHN	Ave	22092 2575180	115701 4242654	248841 5443901	523306 6601016	1288992	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzidine	CRY	Lin	1711129	25204 3049016	52920 4177001	186576 5171140	588179	2000	100 3000	200 4000	400 5000	1000
Pyrene	CRY	Ave	22549 2636367	118370 4340531	253880 5617234	535301 6745883	1305143	10.0 1000	50.0 1500	100 2000	200 2500	500
Butyl benzyl phthalate	CRY	Ave	1308269	57293 2160300	117316 2806057	252783 3408484	633270	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64029-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bis(2-ethylhexyl) phthalate	CRY	Ave	1773685	63153 3015513	150844 3921910	320826 4768259	855274	1000	50.0 1500	100 2000	200 2500	500
3,3'-Dichlorobenzidine	CRY	Ave	1549886	54229 2551454	125518 3396710	301885 4281705	760454	2000	100 3000	200 4000	400 5000	1000
Benzo[a]anthracene	CRY	Ave	21128 2314652	101574 3863753	220723 5109475	456236 6178311	1150329	10.0 1000	50.0 1500	100 2000	200 2500	500
Chrysene	CRY	Ave	20526 2209529	103352 3725543	229586 4838377	462777 5917224	1113229	10.0 1000	50.0 1500	100 2000	200 2500	500
Di-n-octyl phthalate	PRY	Lin1	2924804	81426 4972592	222698 6591452	485859 8043475	1352358	1000	50.0 1500	100 2000	200 2500	500
Benzo[b]fluoranthene	PRY	Ave	16543 2068551	83574 3436754	196883 4625299	389739 5826654	1006071	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[k]fluoranthene	PRY	Ave	22291 2144816	108893 3685038	208454 4742785	461544 5797492	1054530	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[a]pyrene	PRY	Ave	14861 1909976	74213 3289357	172460 4330428	362712 5387867	909683	10.0 1000	50.0 1500	100 2000	200 2500	500
Indeno[1,2,3-cd]pyrene	PRY	Ave	13232 1979301	80605 3351091	176161 4407046	393283 5388557	938866	10.0 1000	50.0 1500	100 2000	200 2500	500
Dibenz(a,h)anthracene	PRY	Ave	12059 1697335	70503 2924308	150188 3872819	336257 4781943	808562	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[g,h,i]perylene	PRY	Ave	12114 1533923	65858 2557919	147133 3301597	314976 4091454	737333	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorophenol (Surr)	DCB	Ave	757551	36055 1259917	76650 1508319	161042 1946519	389188	1000	50.0 1500	100 2000	200 2500	500
Phenol-d5 (Surr)	DCB	Ave	973558	42442 1576386	102026 2115181	196628 2499847	432206	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene-d5 (Surr)	NPT	Ave	8865 1107441	48271 1737381	107612 2223041	231167 2602037	554051	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorobiphenyl (Surr)	ANT	Ave	19536 1965261	93852 3139161	198569 4003608	410646 4694363	989245	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Tribromophenol (Surr)	ANT	Ave	207986	7303 357275	17041 471933	37700 575849	95114	1000	50.0 1500	100 2000	200 2500	500
Terphenyl-d14 (Surr)	CRY	Ave	16768 1805150	79632 3033813	176170 3940277	364061 4752626	888875	10.0 1000	50.0 1500	100 2000	200 2500	500

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426002.D
Lims ID: std9 l1lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 26-Apr-2016 07:44:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-002
Misc. Info.: STD9 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:41 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 06:24:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	96	284988	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1237863	400.0	400.0	
* 3 Acenaphthene-d10	164	9.499	9.499	0.000	90	665591	400.0	400.0	
* 4 Phenanthrene-d10	188	10.793	10.793	0.000	97	1020746	400.0	400.0	
* 5 Chrysene-d12	240	13.799	13.799	0.000	97	978048	400.0	400.0	
* 6 Perylene-d12	264	16.211	16.211	0.000	96	746869	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	93	1946519	2500.0	2505.2	
$ 8 Phenol-d5	99	6.564	6.564	0.000	97	2499847	2500.0	2557.5	
$ 9 Nitrobenzene-d5	82	7.370	7.370	0.000	91	2602037	2500.0	2384.6	
$ 10 2-Fluorobiphenyl (Surr)	172	8.882	8.882	0.000	100	4694363	2500.0	2384.1	
$ 11 2,4,6-Tribromophenol	330	10.182	10.182	0.000	95	575849	2500.0	2912.5	
$ 12 Terphenyl-d14	244	12.317	12.317	0.000	99	4752626	2500.0	2592.4	
26 1,4-Dioxane	88	4.541	4.541	0.000	98	820575	2500.0	2640.1	
27 N-Nitrosodimethylamine	74	4.782	4.782	0.000	87	1494715	2500.0	2403.4	
28 Pyridine	79	4.841	4.841	0.000	90	2396589	2500.0	2743.3	
42 Benzaldehyde	77		6.564				ND	ND	
43 Phenol	94	6.576	6.576	0.000	98	2752603	2500.0	2582.3	
44 Aniline	93	6.646	6.646	0.000	97	4087029	2500.0	2727.4	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	95	2303050	2500.0	2171.8	
244 n-Decane	57	6.752	6.752	0.000	95	2259509	2500.0	1938.4	
47 2-Chlorophenol	128	6.758	6.758	0.000	96	2040646	2500.0	2351.3	
48 1,3-Dichlorobenzene	146	6.888	6.888	0.000	97	2507749	2500.0	2413.4	
49 1,4-Dichlorobenzene	146	6.941	6.941	0.000	93	2538948	2500.0	2410.2	
50 Benzyl alcohol	108	6.999	6.999	0.000	91	1574008	2500.0	2626.5	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1928812	2500.0	2357.2	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	92	2181961	2500.0	2243.3	
54 2,2'-oxybis[1-chloropropan	45	7.105	7.105	0.000	92	3476843	2500.0	2184.3	
53 Indene	115	7.146	7.146	0.000	91	7250007	5000.0	4132.5	
55 3 & 4 Methylphenol	108	7.193	7.193	0.000	92	2328598	2500.0	2672.1	
57 N-Nitrosodi-n-propylamine	70	7.211	7.211	0.000	90	1759007	2500.0	2379.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	95	3210028	2500.0	2387.6	
61 Hexachloroethane	117	7.358	7.358	0.000	94	929037	2500.0	2380.0	
62 Nitrobenzene	77	7.382	7.382	0.000	90	2590210	2500.0	2465.9	
64 Isophorone	82	7.570	7.570	0.000	98	4538036	2500.0	2369.6	
66 2,4-Dimethylphenol	107	7.641	7.641	0.000	95	2312268	2500.0	2519.5	
65 2-Nitrophenol	139	7.652	7.652	0.000	97	1270503	2500.0	2652.4	
70 Benzoic acid	122	7.711	7.711	0.000	91	2741238	5000.0	4994.7	
69 Bis(2-chloroethoxy)methane	93	7.717	7.717	0.000	100	2530218	2500.0	2198.6	
72 2,4-Dichlorophenol	162	7.846	7.846	0.000	96	1918986	2500.0	2777.4	
73 1,2,4-Trichlorobenzene	180	7.935	7.935	0.000	94	1995860	2500.0	2464.8	
74 Naphthalene	128	8.011	8.011	0.000	98	6610238	2500.0	2239.9	
75 4-Chloroaniline	127	8.011	8.011	0.000	95	2038574	2500.0	2083.3	
76 2,6-Dichlorophenol	162	8.040	8.040	0.000	96	1878690	2500.0	2589.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	97	1047259	2500.0	2534.0	
83 Caprolactam	113	8.317	8.317	0.000	78	1252177	5000.0	4531.2	
85 4-Chloro-3-methylphenol	107	8.399	8.399	0.000	96	1932506	2500.0	2548.5	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	93	4378075	2500.0	2295.9	
87 1-Methylnaphthalene	142	8.682	8.682	0.000	94	4173562	2500.0	2322.8	
89 Hexachlorocyclopentadiene	237	8.729	8.729	0.000	97	1164529	2500.0	2943.3	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	1759303	2500.0	2527.5	
93 2,4,6-Trichlorophenol	196	8.817	8.817	0.000	94	1281015	2500.0	2736.7	
94 2,4,5-Trichlorophenol	196	8.852	8.852	0.000	93	1304155	2500.0	2738.6	
99 1,1'-Biphenyl	154	8.976	8.976	0.000	95	5181119	2500.0	2344.4	
100 2-Chloronaphthalene	162	9.017	9.017	0.000	97	4167770	2500.0	2435.2	
101 2-Nitroaniline	65	9.076	9.076	0.000	84	1432719	2500.0	2620.0	
104 Dimethyl phthalate	163	9.193	9.193	0.000	98	4589804	2500.0	2460.7	
103 1,3-Dinitrobenzene	168	9.240	9.240	0.000	84	791626	2500.0	2886.1	
106 2,6-Dinitrotoluene	165	9.264	9.264	0.000	94	1098326	2500.0	2670.5	
108 Acenaphthylene	152	9.382	9.382	0.000	98	6318517	2500.0	2443.0	
109 3-Nitroaniline	138	9.429	9.429	0.000	93	524127	2500.0	2171.6	
110 2,4-Dinitrophenol	184	9.511	9.511	0.000	83	1158191	5000.0	5109.8	
111 Acenaphthene	153	9.529	9.529	0.000	94	3672291	2500.0	2178.9	
112 4-Nitrophenol	109	9.529	9.529	0.000	96	1311478	5000.0	5407.5	
113 2,4-Dinitrotoluene	165	9.617	9.617	0.000	92	1438920	2500.0	2747.4	
115 Dibenzofuran	168	9.670	9.670	0.000	95	5666896	2500.0	2366.2	
118 2,3,4,6-Tetrachlorophenol	232	9.770	9.770	0.000	74	1008636	2500.0	2835.1	
248 Hexadecane	57	9.787	9.787	0.000	95	2732880	2500.0	1988.9	
120 Diethyl phthalate	149	9.793	9.793	0.000	98	4265802	2500.0	2233.1	
122 4-Chlorophenyl phenyl ethe	204	9.934	9.934	0.000	94	2145121	2500.0	2507.4	
125 4-Nitroaniline	138	9.958	9.958	0.000	83	720141	2500.0	2111.0	
124 Fluorene	166	9.970	9.970	0.000	95	4457350	2500.0	2312.8	
127 4,6-Dinitro-2-methylphenol	198	9.982	9.982	0.000	82	1489981	5000.0	4951.6	
128 N-Nitrosodiphenylamine	169	10.029	10.029	0.000	62	3378645	2500.0	2478.0	
129 Diphenylamine	169	10.029	10.029	0.000	95	3378645	2126.8	2108.1	
131 Azobenzene	77	10.076	10.076	0.000	99	5132406	2500.0	2334.4	
130 1,2-Diphenylhydrazine	77	10.076	10.076	0.000	97	5132406	2500.0	2334.4	
138 4-Bromophenyl phenyl ether	248	10.364	10.364	0.000	70	1221706	2500.0	2575.7	
141 Atrazine	200	10.458	10.458	0.000	94	2238512	5000.0	4785.8	
140 Hexachlorobenzene	284	10.470	10.470	0.000	95	1256725	2500.0	2570.4	
245 n-Octadecane	57	10.576	10.576	0.000	93	3135149	2500.0	2163.4	
143 Pentachlorophenol	266	10.617	10.617	0.000	92	1630778	5000.0	4961.3	
148 Phenanthrene	178	10.817	10.817	0.000	98	6295733	2500.0	2389.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.864	10.864	0.000	97	6515422	2500.0	2453.0	
150 Carbazole	167	10.976	10.976	0.000	96	4762080	2500.0	2307.3	
154 Di-n-butyl phthalate	149	11.205	11.205	0.000	100	7301414	2500.0	2216.8	e
159 Fluoranthene	202	11.958	11.958	0.000	98	6601016	2500.0	2599.4	
160 Benzidine	184	12.040	12.040	0.000	99	5171140	5000.0	5044.6	
161 Pyrene	202	12.217	12.217	0.000	97	6745883	2500.0	2560.0	
169 Butyl benzyl phthalate	149	12.864	12.864	0.000	98	3408484	2500.0	2634.7	
174 Bis(2-ethylhexyl) phthalat	149	13.646	13.646	0.000	98	4768259	2500.0	2783.3	
177 3,3'-Dichlorobenzidine	252	13.687	13.687	0.000	74	4281705	5000.0	5708.3	
178 Benzo[a]anthracene	228	13.781	13.781	0.000	99	6178311	2500.0	2639.7	
179 Chrysene	228	13.846	13.846	0.000	98	5917224	2500.0	2578.9	
181 Di-n-octyl phthalate	149	14.681	14.681	0.000	99	8043475	2500.0	2502.5	
183 Benzo[b]fluoranthene	252	15.546	15.546	0.000	98	5826654	2500.0	2814.6	
184 Benzo[k]fluoranthene	252	15.593	15.593	0.000	99	5797492	2500.0	2525.9	
185 Benzo[a]pyrene	252	16.122	16.122	0.000	85	5387867	2500.0	2839.0	
190 Indeno[1,2,3-cd]pyrene	276	18.440	18.440	0.000	98	5388557	2500.0	2782.9	
189 Dibenz(a,h)anthracene	278	18.452	18.452	0.000	90	4781943	2500.0	2833.3	
191 Benzo[g,h,i]perylene	276	19.104	19.104	0.000	96	4091454	2500.0	2659.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

e - Potential Peak Saturated

Reagents:

SMLIST1 L9 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:42 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426002.D

Injection Date: 26-Apr-2016 07:44:30 Instrument ID: A4AG2 Operator ID:

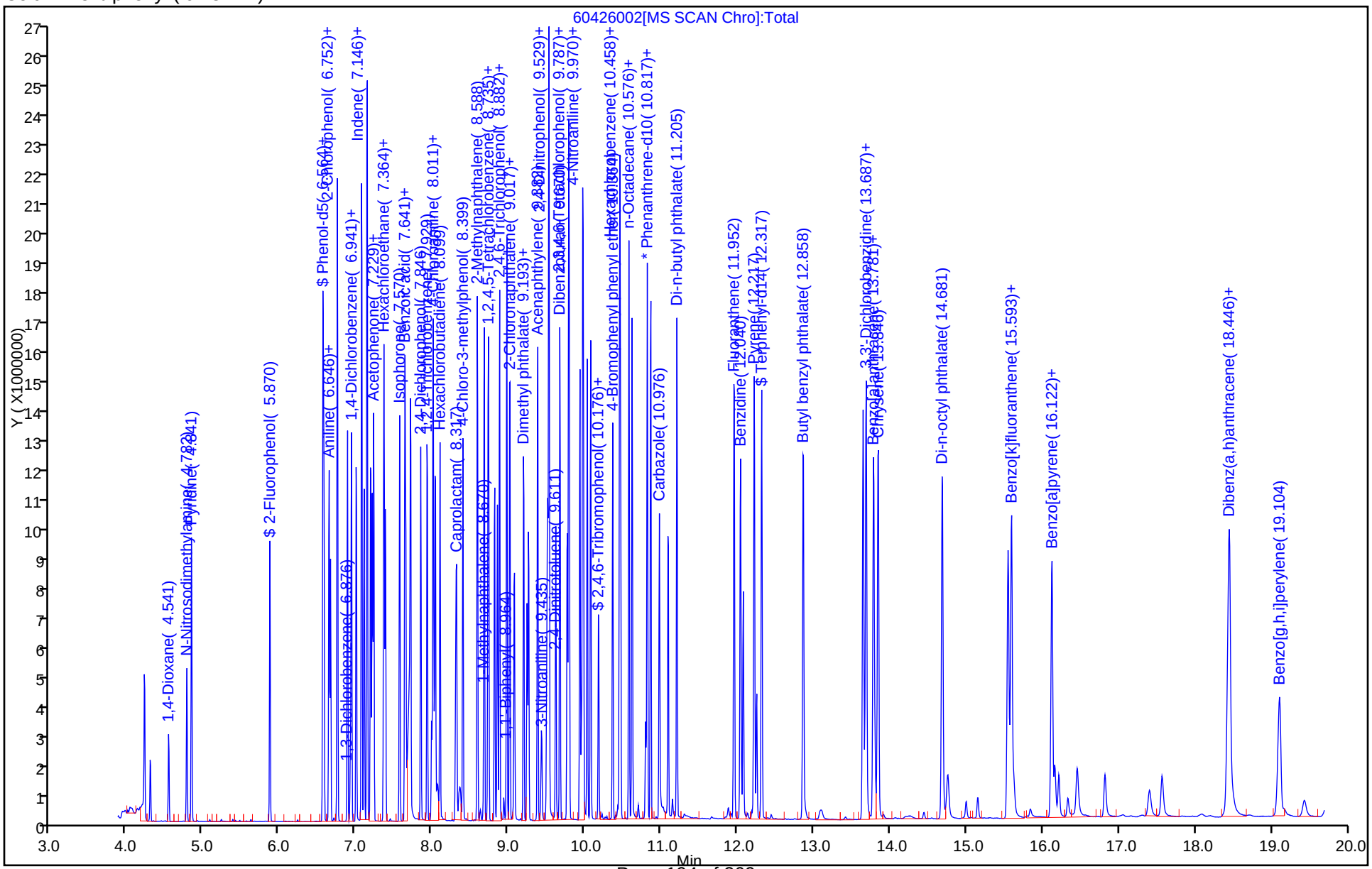
Lims ID: std9 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426003.D
Lims ID: std8 l1lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 26-Apr-2016 08:09:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-003
Misc. Info.: STD8 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:44 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 08:38:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	283127	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1250400	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.499	-0.006	92	664658	400.0	400.0	
* 4 Phenanthrene-d10	188	10.788	10.793	-0.005	98	1014439	400.0	400.0	
* 5 Chrysene-d12	240	13.793	13.799	-0.006	97	987886	400.0	400.0	
* 6 Perylene-d12	264	16.205	16.211	-0.006	96	741137	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	94	1508319	2000.0	1954.0	
$ 8 Phenol-d5	99	6.564	6.564	0.000	96	2115181	2000.0	2178.2	
$ 9 Nitrobenzene-d5	82	7.364	7.370	-0.006	91	2223041	2000.0	2016.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.882	-0.006	100	4003608	2000.0	2036.1	
$ 11 2,4,6-Tribromophenol	330	10.176	10.182	-0.006	93	471933	2000.0	2390.3	
$ 12 Terphenyl-d14	244	12.311	12.317	-0.006	100	3940277	2000.0	2127.9	
26 1,4-Dioxane	88	4.541	4.541	0.000	98	609009	2000.0	1972.3	
27 N-Nitrosodimethylamine	74	4.782	4.782	0.000	87	1278421	2000.0	2069.1	
28 Pyridine	79	4.841	4.841	0.000	89	1953548	2000.0	2250.9	
42 Benzaldehyde	77		6.564				ND	ND	
43 Phenol	94	6.576	6.576	0.000	99	2309466	2000.0	2180.8	
44 Aniline	93	6.641	6.646	-0.005	96	3079101	2000.0	2068.3	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	93	2179327	2000.0	2068.6	
244 n-Decane	57	6.752	6.752	0.000	94	1991306	2000.0	1719.5	
47 2-Chlorophenol	128	6.752	6.758	-0.006	97	1769714	2000.0	2052.5	
48 1,3-Dichlorobenzene	146	6.888	6.888	0.000	98	2066329	2000.0	2001.6	
49 1,4-Dichlorobenzene	146	6.935	6.941	-0.006	93	2119947	2000.0	2025.7	
50 Benzyl alcohol	108	7.000	6.999	0.001	91	1314170	2000.0	2207.4	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1658399	2000.0	2040.0	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	1883136	2000.0	1948.8	
54 2,2'-oxybis[1-chloropropan	45	7.105	7.105	0.000	92	2993961	2000.0	1893.3	
53 Indene	115	7.141	7.146	-0.005	90	6444486	4000.0	3697.5	
55 3 & 4 Methylphenol	108	7.188	7.193	-0.005	93	1945193	2000.0	2246.8	
57 N-Nitrosodi-n-propylamine	70	7.211	7.211	0.000	88	1489193	2000.0	2027.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	2715581	2000.0	2033.1	
61 Hexachloroethane	117	7.358	7.358	0.000	94	785821	2000.0	2026.4	
62 Nitrobenzene	77	7.382	7.382	0.000	90	2179483	2000.0	2054.1	
64 Isophorone	82	7.570	7.570	0.000	98	3900878	2000.0	2016.5	
66 2,4-Dimethylphenol	107	7.635	7.641	-0.006	95	1956505	2000.0	2110.5	
65 2-Nitrophenol	139	7.647	7.652	-0.005	97	1067653	2000.0	2206.6	
70 Benzoic acid	122	7.705	7.711	-0.006	91	2274853	4000.0	4128.5	
69 Bis(2-chloroethoxy)methane	93	7.711	7.717	-0.006	99	2251454	2000.0	1936.7	
72 2,4-Dichlorophenol	162	7.847	7.846	0.001	96	1607554	2000.0	2303.4	
73 1,2,4-Trichlorobenzene	180	7.929	7.935	-0.006	94	1659588	2000.0	2028.9	
74 Naphthalene	128	8.005	8.011	-0.006	98	5707890	2000.0	1914.8	
75 4-Chloroaniline	127	8.017	8.011	0.006	95	1899452	2000.0	1921.6	
76 2,6-Dichlorophenol	162	8.035	8.040	-0.005	96	1577407	2000.0	2152.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	863418	2000.0	2068.2	
83 Caprolactam	113	8.311	8.317	-0.006	76	1059219	4000.0	3794.5	
85 4-Chloro-3-methylphenol	107	8.394	8.399	-0.005	95	1613096	2000.0	2105.9	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	92	3769687	2000.0	1957.1	
87 1-Methylnaphthalene	142	8.676	8.682	-0.006	93	3528966	2000.0	1944.4	
89 Hexachlorocyclopentadiene	237	8.729	8.729	0.000	97	967198	2000.0	2448.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	1478989	2000.0	2127.8	
93 2,4,6-Trichlorophenol	196	8.811	8.817	-0.006	94	1069490	2000.0	2288.0	
94 2,4,5-Trichlorophenol	196	8.846	8.852	-0.006	93	1058206	2000.0	2225.3	
99 1,1'-Biphenyl	154	8.970	8.976	-0.006	95	4423760	2000.0	2004.5	
100 2-Chloronaphthalene	162	9.011	9.017	-0.006	97	3489581	2000.0	2041.8	
101 2-Nitroaniline	65	9.070	9.076	-0.006	83	1191528	2000.0	2182.0	
104 Dimethyl phthalate	163	9.194	9.193	0.001	98	3867899	2000.0	2076.6	
103 1,3-Dinitrobenzene	168	9.241	9.240	0.001	85	646943	2000.0	2361.9	
106 2,6-Dinitrotoluene	165	9.258	9.264	-0.006	94	905227	2000.0	2204.1	
108 Acenaphthylene	152	9.376	9.382	-0.006	98	5342305	2000.0	2068.5	
109 3-Nitroaniline	138	9.423	9.429	-0.006	92	445767	2000.0	1849.5	
110 2,4-Dinitrophenol	184	9.505	9.511	-0.006	81	950841	4000.0	4234.4	
111 Acenaphthene	153	9.523	9.529	-0.006	95	3148375	2000.0	1870.6	
112 4-Nitrophenol	109	9.523	9.529	-0.006	60	1086166	4000.0	4484.8	
113 2,4-Dinitrotoluene	165	9.617	9.617	0.000	92	1195783	2000.0	2286.4	
115 Dibenzofuran	168	9.670	9.670	0.000	96	4814312	2000.0	2013.1	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.770	-0.006	76	816336	2000.0	2297.8	
248 Hexadecane	57	9.782	9.787	-0.005	95	2434452	2000.0	1774.2	
120 Diethyl phthalate	149	9.788	9.793	-0.005	98	3668816	2000.0	1923.3	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.934	-0.005	98	1786502	2000.0	2091.2	
125 4-Nitroaniline	138	9.952	9.958	-0.006	83	662347	2000.0	1944.3	
124 Fluorene	166	9.964	9.970	-0.006	96	3827347	2000.0	1988.7	
127 4,6-Dinitro-2-methylphenol	198	9.976	9.982	-0.006	82	1255369	4000.0	4220.1	
128 N-Nitrosodiphenylamine	169	10.029	10.029	0.000	63	2783662	2000.0	2054.3	
129 Diphenylamine	169	10.029	10.029	0.000	95	2783662	1701.4	1747.6	
131 Azobenzene	77	10.070	10.076	-0.006	99	4373199	2000.0	2001.4	
130 1,2-Diphenylhydrazine	77	10.070	10.076	-0.006	97	4373199	2000.0	2001.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.364	-0.006	70	1032944	2000.0	2191.3	
141 Atrazine	200	10.452	10.458	-0.006	94	1938293	4000.0	4169.7	
140 Hexachlorobenzene	284	10.464	10.470	-0.006	94	1045057	2000.0	2150.8	
245 n-Octadecane	57	10.570	10.576	-0.006	93	2755086	2000.0	1912.9	
143 Pentachlorophenol	266	10.617	10.617	0.000	93	1357913	4000.0	4169.5	
148 Phenanthrene	178	10.811	10.817	-0.006	97	5340963	2000.0	2039.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.858	10.864	-0.006	97	5496985	2000.0	2082.5	
150 Carbazole	167	10.970	10.976	-0.006	96	3743482	2000.0	1825.1	
154 Di-n-butyl phthalate	149	11.199	11.205	-0.006	100	6372767	2000.0	1946.8	
159 Fluoranthene	202	11.946	11.958	-0.012	98	5443901	2000.0	2157.1	
160 Benzidine	184	12.029	12.040	-0.011	99	4177001	4000.0	4082.4	
161 Pyrene	202	12.211	12.217	-0.006	97	5617234	2000.0	2110.4	
169 Butyl benzyl phthalate	149	12.852	12.864	-0.012	98	2806057	2000.0	2147.4	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.646	-0.012	98	3921910	2000.0	2266.5	
177 3,3'-Dichlorobenzidine	252	13.676	13.687	-0.011	74	3396710	4000.0	4483.3	
178 Benzo[a]anthracene	228	13.776	13.781	-0.005	99	5109475	2000.0	2161.3	
179 Chrysene	228	13.834	13.846	-0.012	98	4838377	2000.0	2087.7	
181 Di-n-octyl phthalate	149	14.675	14.681	-0.006	99	6591452	2000.0	2072.2	
183 Benzo[b]fluoranthene	252	15.534	15.546	-0.012	98	4625299	2000.0	2251.6	
184 Benzo[k]fluoranthene	252	15.581	15.593	-0.012	99	4742785	2000.0	2082.4	
185 Benzo[a]pyrene	252	16.111	16.122	-0.011	79	4330428	2000.0	2299.4	
190 Indeno[1,2,3-cd]pyrene	276	18.422	18.440	-0.018	98	4407046	2000.0	2293.6	
189 Dibenz(a,h)anthracene	278	18.428	18.452	-0.024	91	3872819	2000.0	2312.4	
191 Benzo[g,h,i]perylene	276	19.087	19.104	-0.017	96	3301597	2000.0	2162.3	
S 246 Total Cresols	100				0			4286.8	
S 193 Methyl Phenols,Total	100				0			4286.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST1 L8 W_00007 Amount Added: 0.10 Units: mL

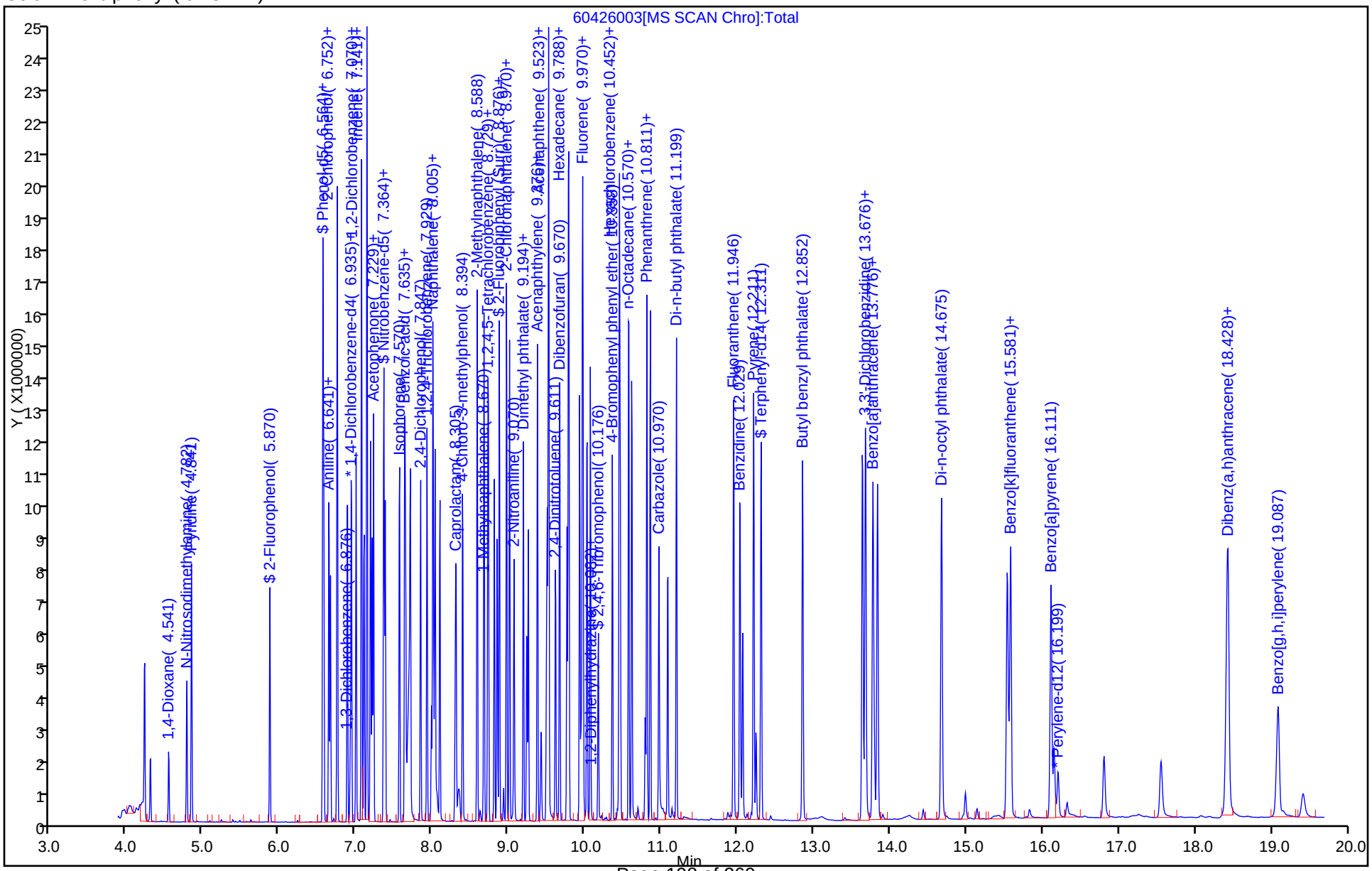
Report Date: 27-Apr-2016 07:29:45 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426003.D

Injection Date:	26-Apr-2016 08:09:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std8 l1lvi			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426004.D
Lims ID: std7 l1lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 26-Apr-2016 08:34:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-004
Misc. Info.: STD7 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:47 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:57:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	294871	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1280933	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.499	-0.006	91	699923	400.0	400.0	
* 4 Phenanthrene-d10	188	10.788	10.793	-0.005	97	1070140	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.799	-0.012	97	1013737	400.0	400.0	
* 6 Perylene-d12	264	16.199	16.211	-0.012	96	771624	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	94	1259917	1500.0	1567.2	
$ 8 Phenol-d5	99	6.564	6.564	0.000	97	1576386	1500.0	1558.7	
$ 9 Nitrobenzene-d5	82	7.364	7.370	-0.006	91	1737381	1500.0	1538.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.882	-0.006	100	3139161	1500.0	1516.1	
$ 11 2,4,6-Tribromophenol	330	10.176	10.182	-0.006	95	357275	1500.0	1718.4	
$ 12 Terphenyl-d14	244	12.305	12.317	-0.012	99	3033813	1500.0	1596.6	
26 1,4-Dioxane	88	4.541	4.541	0.000	99	543365	1500.0	1689.6	
27 N-Nitrosodimethylamine	74	4.776	4.782	-0.006	88	1001385	1500.0	1556.2	
28 Pyridine	79	4.841	4.841	0.000	89	1527918	1500.0	1690.3	
42 Benzaldehyde	77	6.564	6.564	0.000	89	1255402	3000.0	3045.2	
43 Phenol	94	6.576	6.576	0.000	99	1681485	1500.0	1524.6	
44 Aniline	93	6.641	6.646	-0.005	96	2445461	1500.0	1577.3	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	97	1627829	1500.0	1483.6	
244 n-Decane	57	6.752	6.752	0.000	94	1707375	1500.0	1415.6	
47 2-Chlorophenol	128	6.752	6.758	-0.006	97	1372089	1500.0	1528.0	
48 1,3-Dichlorobenzene	146	6.882	6.888	-0.006	97	1641654	1500.0	1526.9	
49 1,4-Dichlorobenzene	146	6.935	6.941	-0.006	92	1666372	1500.0	1528.8	
50 Benzyl alcohol	108	7.000	6.999	0.001	91	1038263	1500.0	1674.5	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1357745	1500.0	1603.7	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	1505398	1500.0	1495.9	
54 2,2'-oxybis[1-chloropropan	45	7.100	7.105	-0.005	92	2386488	1500.0	1449.0	
53 Indene	115	7.141	7.146	-0.005	90	5259989	3000.0	2897.7	
55 3 & 4 Methylphenol	108	7.188	7.193	-0.005	92	1534099	1500.0	1701.4	
57 N-Nitrosodi-n-propylamine	70	7.205	7.211	-0.006	89	1179988	1500.0	1542.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	2119007	1500.0	1523.3	
61 Hexachloroethane	117	7.358	7.358	0.000	96	618158	1500.0	1530.5	
62 Nitrobenzene	77	7.382	7.382	0.000	90	1703798	1500.0	1567.5	
64 Isophorone	82	7.564	7.570	-0.006	98	3035213	1500.0	1531.6	
66 2,4-Dimethylphenol	107	7.635	7.641	-0.006	95	1553578	1500.0	1635.9	
65 2-Nitrophenol	139	7.647	7.652	-0.005	96	823662	1500.0	1661.8	
70 Benzoic acid	122	7.694	7.711	-0.017	90	1767481	3000.0	3165.3	
69 Bis(2-chloroethoxy)methane	93	7.711	7.717	-0.006	99	1809554	1500.0	1519.5	
72 2,4-Dichlorophenol	162	7.847	7.846	0.001	96	1237277	1500.0	1730.6	
73 1,2,4-Trichlorobenzene	180	7.929	7.935	-0.006	94	1294859	1500.0	1545.3	
74 Naphthalene	128	8.005	8.011	-0.006	98	4500883	1500.0	1473.9	
75 4-Chloroaniline	127	8.011	8.011	0.000	97	1372190	1500.0	1355.1	
76 2,6-Dichlorophenol	162	8.035	8.040	-0.005	95	1221466	1500.0	1626.7	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	658397	1500.0	1539.5	
83 Caprolactam	113	8.305	8.317	-0.012	76	830416	3000.0	2904.0	
85 4-Chloro-3-methylphenol	107	8.394	8.399	-0.005	95	1277735	1500.0	1628.3	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	92	2980336	1500.0	1510.4	
87 1-Methylnaphthalene	142	8.676	8.682	-0.006	93	2780691	1500.0	1495.6	
89 Hexachlorocyclopentadiene	237	8.723	8.729	-0.006	97	730181	1500.0	1755.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	1153457	1500.0	1575.8	
93 2,4,6-Trichlorophenol	196	8.811	8.817	-0.006	94	810874	1500.0	1647.3	
94 2,4,5-Trichlorophenol	196	8.846	8.852	-0.006	93	817857	1500.0	1633.2	
99 1,1'-Biphenyl	154	8.970	8.976	-0.006	95	3502522	1500.0	1507.1	
100 2-Chloronaphthalene	162	9.011	9.017	-0.006	97	2738315	1500.0	1521.5	
101 2-Nitroaniline	65	9.070	9.076	-0.006	83	957536	1500.0	1665.1	
104 Dimethyl phthalate	163	9.194	9.193	0.001	99	3035648	1500.0	1547.6	
103 1,3-Dinitrobenzene	168	9.235	9.240	-0.005	84	507504	1500.0	1759.5	
106 2,6-Dinitrotoluene	165	9.258	9.264	-0.006	93	709378	1500.0	1640.2	
108 Acenaphthylene	152	9.376	9.382	-0.006	98	4212038	1500.0	1548.7	
109 3-Nitroaniline	138	9.423	9.429	-0.006	92	306270	1500.0	1206.7	
110 2,4-Dinitrophenol	184	9.505	9.511	-0.006	82	705771	3000.0	3040.3	
111 Acenaphthene	153	9.523	9.529	-0.006	95	2584432	1500.0	1458.2	
112 4-Nitrophenol	109	9.523	9.529	-0.006	59	865875	3000.0	3395.1	
113 2,4-Dinitrotoluene	165	9.611	9.617	-0.006	91	918418	1500.0	1667.6	
115 Dibenzofuran	168	9.664	9.670	-0.006	96	3786598	1500.0	1503.6	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.770	-0.006	75	631592	1500.0	1688.2	
248 Hexadecane	57	9.782	9.787	-0.005	93	2000096	1500.0	1384.2	
120 Diethyl phthalate	149	9.788	9.793	-0.005	98	2894538	1500.0	1441.0	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.934	-0.005	96	1389520	1500.0	1544.5	
125 4-Nitroaniline	138	9.946	9.958	-0.012	83	534739	1500.0	1490.6	
124 Fluorene	166	9.964	9.970	-0.006	95	3028183	1500.0	1494.2	
127 4,6-Dinitro-2-methylphenol	198	9.976	9.982	-0.006	86	933281	3000.0	3017.1	
128 N-Nitrosodiphenylamine	169	10.023	10.029	-0.006	63	2191130	1500.0	1532.9	
129 Diphenylamine	169	10.023	10.029	-0.006	95	2191130	1276.1	1304.0	
131 Azobenzene	77	10.070	10.076	-0.006	99	3525461	1500.0	1529.5	
130 1,2-Diphenylhydrazine	77	10.070	10.076	-0.006	97	3525461	1500.0	1529.5	
138 4-Bromophenyl phenyl ether	248	10.358	10.364	-0.006	71	794236	1500.0	1597.2	
141 Atrazine	200	10.446	10.458	-0.012	93	1532823	3000.0	3125.8	
140 Hexachlorobenzene	284	10.458	10.470	-0.012	93	809080	1500.0	1578.5	
245 n-Octadecane	57	10.570	10.576	-0.006	92	2260953	1500.0	1488.1	
143 Pentachlorophenol	266	10.611	10.617	-0.006	91	1037711	3000.0	3041.9	
148 Phenanthrene	178	10.811	10.817	-0.006	97	4169234	1500.0	1509.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.864	-0.012	98	4336033	1500.0	1557.2	
150 Carbazole	167	10.970	10.976	-0.006	96	2994760	1500.0	1384.0	
154 Di-n-butyl phthalate	149	11.199	11.205	-0.006	100	5060134	1500.0	1465.4	
159 Fluoranthene	202	11.946	11.958	-0.012	98	4242654	1500.0	1593.6	
160 Benzidine	184	12.029	12.040	-0.011	99	3049016	3000.0	2973.3	
161 Pyrene	202	12.205	12.217	-0.012	97	4340531	1500.0	1589.2	
169 Butyl benzyl phthalate	149	12.852	12.864	-0.012	98	2160300	1500.0	1611.1	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.646	-0.012	98	3015513	1500.0	1698.2	
177 3,3'-Dichlorobenzidine	252	13.676	13.687	-0.011	75	2551454	3000.0	3281.8	
178 Benzo[a]anthracene	228	13.770	13.781	-0.011	99	3863753	1500.0	1592.7	
179 Chrysene	228	13.829	13.846	-0.018	98	3725543	1500.0	1566.6	
181 Di-n-octyl phthalate	149	14.670	14.681	-0.011	99	4972592	1500.0	1510.3	
183 Benzo[b]fluoranthene	252	15.534	15.546	-0.012	98	3436754	1500.0	1606.9	
184 Benzo[k]fluoranthene	252	15.575	15.593	-0.018	99	3685038	1500.0	1554.0	
185 Benzo[a]pyrene	252	16.105	16.122	-0.017	79	3289357	1500.0	1677.6	
190 Indeno[1,2,3-cd]pyrene	276	18.416	18.440	-0.024	98	3351091	1500.0	1675.2	
189 Dibenz(a,h)anthracene	278	18.422	18.452	-0.030	91	2924308	1500.0	1677.0	
191 Benzo[g,h,i]perylene	276	19.075	19.104	-0.029	95	2557919	1500.0	1609.1	
S 246 Total Cresols	100				0			3305.1	
S 193 Methyl Phenols,Total	100				0			3305.1	

Reagents:

SMLIST1 L7 W_00007 Amount Added: 0.10 Units: mL

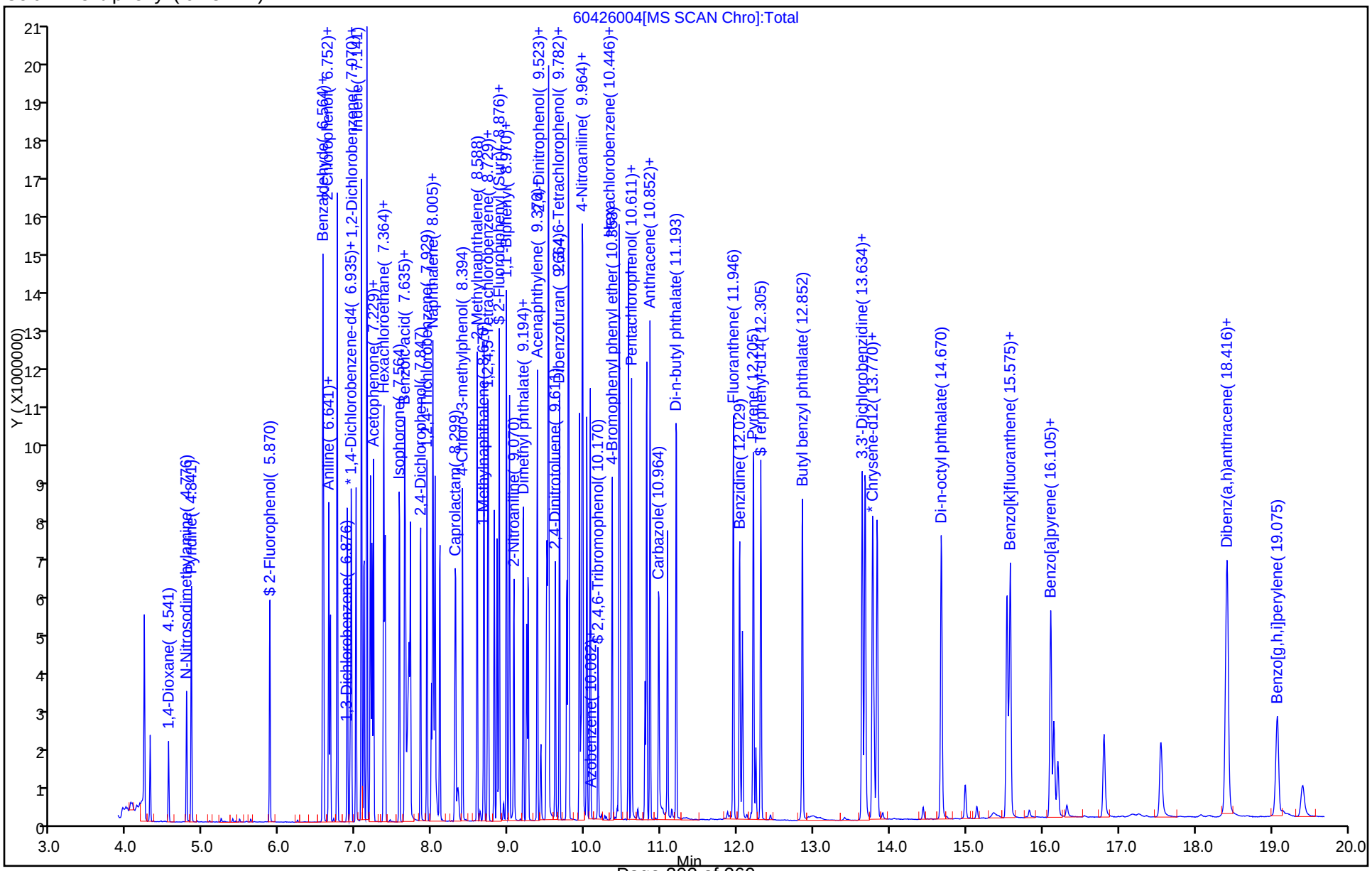
Report Date: 27-Apr-2016 07:29:48 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426004.D

Injection Date:	26-Apr-2016 08:34:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std7 l1lvi			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426005.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 26-Apr-2016 08:59:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-005
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:49 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:27:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	293740	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1248544	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	93	672048	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	998374	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.787	0.000	96	962653	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	715790	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	757551	1000.0	945.9	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	973558	1000.0	966.3	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	1107441	1000.0	1006.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	1965261	1000.0	988.5	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	86	207986	1000.0	1041.8	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	1805150	1000.0	1000.4	
26 1,4-Dioxane	88	4.535	4.535	0.000	99	337577	1000.0	1053.7	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	87	637190	1000.0	994.0	
28 Pyridine	79	4.835	4.835	0.000	88	922807	1000.0	1024.8	
42 Benzaldehyde	77	6.564	6.564	0.000	92	937598	2000.0	1920.4	
43 Phenol	94	6.570	6.570	0.000	98	1051882	1000.0	957.4	
44 Aniline	93	6.641	6.641	0.000	96	1590734	1000.0	1029.9	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	93	996750	1000.0	911.9	
244 n-Decane	57	6.752	6.752	0.000	93	1158866	1000.0	964.5	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	896516	1000.0	1002.2	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	1055741	1000.0	985.7	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	1055356	1000.0	972.0	
50 Benzyl alcohol	108	6.999	6.999	0.000	91	654717	1000.0	1060.0	
52 2-Methylphenol	108	7.070	7.070	0.000	88	869333	1000.0	1030.7	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	970727	1000.0	968.3	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	1563034	1000.0	952.7	
53 Indene	115	7.141	7.141	0.000	91	3528150	2000.0	1951.1	
55 3 & 4 Methylphenol	108	7.188	7.188	0.000	92	969188	1000.0	1079.0	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	91	747609	1000.0	981.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	1345213	1000.0	970.7	
61 Hexachloroethane	117	7.358	7.358	0.000	95	397939	1000.0	989.1	
62 Nitrobenzene	77	7.382	7.382	0.000	91	1072001	1000.0	1011.8	
64 Isophorone	82	7.564	7.564	0.000	98	1922922	1000.0	995.5	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	967738	1000.0	1045.5	
65 2-Nitrophenol	139	7.646	7.646	0.000	96	518965	1000.0	1074.2	
70 Benzoic acid	122	7.682	7.682	0.000	93	962951	2000.0	1831.4	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	99	1153478	1000.0	993.7	
72 2,4-Dichlorophenol	162	7.846	7.846	0.000	96	770595	1000.0	1105.8	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	810230	1000.0	992.0	
74 Naphthalene	128	8.005	8.005	0.000	96	2893169	1000.0	972.0	
75 4-Chloroaniline	127	8.017	8.017	0.000	96	1056699	1000.0	1070.6	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	96	763809	1000.0	1043.6	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	413322	1000.0	991.5	
83 Caprolactam	113	8.293	8.293	0.000	76	556319	2000.0	1995.9	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	793203	1000.0	1037.1	
86 2-Methylnaphthalene	142	8.587	8.587	0.000	93	1881498	1000.0	978.2	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	1750507	1000.0	965.9	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	97	432468	1000.0	1082.5	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	714000	1000.0	1015.9	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	498789	1000.0	1055.3	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	92	496697	1000.0	1033.0	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	2197161	1000.0	984.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	1713426	1000.0	991.5	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	579581	1000.0	1049.7	
104 Dimethyl phthalate	163	9.187	9.187	0.000	98	1886923	1000.0	1001.9	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.000	84	300589	1000.0	1085.3	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	92	429987	1000.0	1035.4	
108 Acenaphthylene	152	9.376	9.376	0.000	98	2662189	1000.0	1019.4	
109 3-Nitroaniline	138	9.417	9.417	0.000	92	204493	1000.0	839.1	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	81	378547	2000.0	1781.4	
111 Acenaphthene	153	9.523	9.523	0.000	95	1672134	1000.0	982.6	
112 4-Nitrophenol	109	9.517	9.517	0.000	88	524981	2000.0	2143.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	91	554451	1000.0	1048.5	
115 Dibenzofuran	168	9.664	9.664	0.000	96	2401480	1000.0	993.1	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	76	371464	1000.0	1034.1	
248 Hexadecane	57	9.782	9.782	0.000	93	1346821	1000.0	970.7	
120 Diethyl phthalate	149	9.787	9.787	0.000	98	1825619	1000.0	946.5	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	858027	1000.0	993.3	
125 4-Nitroaniline	138	9.946	9.946	0.000	84	367364	1000.0	1066.5	
124 Fluorene	166	9.964	9.964	0.000	95	1938355	1000.0	996.1	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	87	538554	2000.0	1921.9	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	63	1364072	1000.0	1022.9	
129 Diphenylamine	169	10.023	10.023	0.000	95	1364072	850.7	870.2	
131 Azobenzene	77	10.070	10.070	0.000	99	2235089	1000.0	1039.4	
130 1,2-Diphenylhydrazine	77	10.070	10.070	0.000	98	2235089	1000.0	1039.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	73	475981	1000.0	1026.0	
141 Atrazine	200	10.446	10.446	0.000	91	940653	2000.0	2056.1	
140 Hexachlorobenzene	284	10.458	10.458	0.000	93	481744	1000.0	1007.4	
245 n-Octadecane	57	10.570	10.570	0.000	92	1490361	1000.0	1051.5	
143 Pentachlorophenol	266	10.611	10.611	0.000	91	616620	2000.0	1965.8	
148 Phenanthrene	178	10.811	10.811	0.000	98	2577944	1000.0	1000.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	97	2690779	1000.0	1035.8	
150 Carbazole	167	10.964	10.964	0.000	96	1957495	1000.0	969.7	
154 Di-n-butyl phthalate	149	11.199	11.199	0.000	100	3157556	1000.0	980.1	
159 Fluoranthene	202	11.946	11.946	0.000	98	2575180	1000.0	1036.8	
160 Benzidine	184	12.023	12.023	0.000	99	1711129	2000.0	1855.5	
161 Pyrene	202	12.205	12.205	0.000	97	2636367	1000.0	1016.5	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	1308269	1000.0	1027.4	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	97	1773685	1000.0	1051.9	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	75	1549886	2000.0	2099.3	
178 Benzo[a]anthracene	228	13.770	13.770	0.000	99	2314652	1000.0	1004.8	
179 Chrysene	228	13.828	13.828	0.000	98	2209529	1000.0	978.4	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	2924804	1000.0	969.3	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	99	2068551	1000.0	1042.6	
184 Benzo[k]fluoranthene	252	15.569	15.569	0.000	99	2144816	1000.0	975.0	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	80	1909976	1000.0	1050.1	
190 Indeno[1,2,3-cd]pyrene	276	18.399	18.399	0.000	97	1979301	1000.0	1066.6	
189 Dibenz(a,h)anthracene	278	18.410	18.410	0.000	92	1697335	1000.0	1049.3	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	94	1533923	1000.0	1040.2	

Reagents:

SMLIST1 L6 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:51 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426005.D

Injection Date: 26-Apr-2016 08:59:30 Instrument ID: A4AG2 Operator ID:

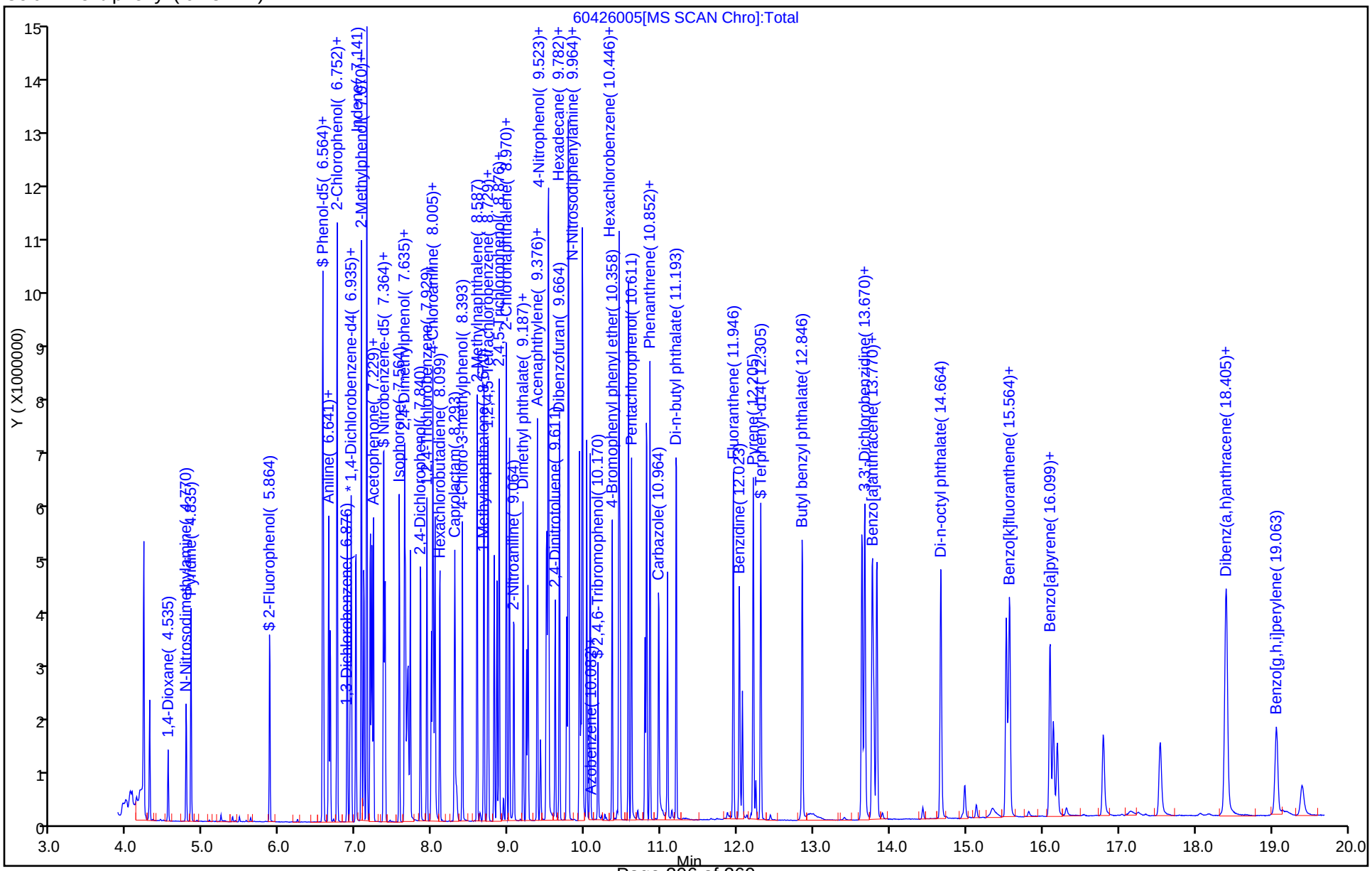
Lims ID: std6 l1lvi Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426006.D
Lims ID: std5 l1lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Apr-2016 09:23:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-006
Misc. Info.: STD5 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:53 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:03:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	291345	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1241077	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	676439	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1026922	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.787	0.000	97	995937	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	727059	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	389188	500.0	490.0	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	432206	500.0	432.5	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	554051	500.0	506.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	989245	500.0	494.3	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	85	95114	500.0	473.3	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	888875	500.0	476.1	
26 1,4-Dioxane	88	4.535	4.535	0.000	96	155649	500.0	489.9	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	87	314627	500.0	494.9	
28 Pyridine	79	4.835	4.835	0.000	88	427143	500.0	478.3	
42 Benzaldehyde	77	6.564	6.564	0.000	93	580416	1000.0	1043.5	
43 Phenol	94	6.570	6.570	0.000	98	473316	500.0	434.3	
44 Aniline	93	6.641	6.641	0.000	96	807805	500.0	527.3	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	94	504462	500.0	465.3	
244 n-Decane	57	6.746	6.752	-0.006	93	629858	500.0	528.6	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	435465	500.0	490.8	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	530701	500.0	499.6	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	531521	500.0	493.6	
50 Benzyl alcohol	108	6.994	6.999	-0.005	91	313943	500.0	512.4	
52 2-Methylphenol	108	7.070	7.070	0.000	97	410333	500.0	490.5	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	95	496492	500.0	499.3	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	813502	500.0	499.9	
53 Indene	115	7.141	7.141	0.000	91	1839694	1000.0	1025.7	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	94	446099	500.0	500.7	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	92	372677	500.0	493.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	94	674774	500.0	490.9	
61 Hexachloroethane	117	7.358	7.358	0.000	93	200408	500.0	502.2	
62 Nitrobenzene	77	7.376	7.382	-0.006	91	533568	500.0	506.6	
64 Isophorone	82	7.564	7.564	0.000	98	969058	500.0	504.7	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	94	486096	500.0	528.3	
65 2-Nitrophenol	139	7.646	7.646	0.000	95	241299	500.0	502.5	
70 Benzoic acid	122	7.664	7.682	-0.018	92	408235	1000.0	862.0	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	98	584439	500.0	506.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	97	372483	500.0	537.7	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	399292	500.0	491.8	
74 Naphthalene	128	8.005	8.005	0.000	98	1458617	500.0	493.0	
75 4-Chloroaniline	127	8.017	8.017	0.000	95	533216	500.0	543.5	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	95	374659	500.0	515.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	200479	500.0	483.8	
83 Caprolactam	113	8.288	8.293	-0.005	75	305065	1000.0	1101.1	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	389179	500.0	511.9	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	93	946462	500.0	495.1	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	877790	500.0	487.3	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	96	196777	500.0	489.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	352462	500.0	498.2	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	237996	500.0	500.3	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	91	232949	500.0	481.3	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	96	1100099	500.0	489.8	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	853681	500.0	490.8	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	287319	500.0	517.0	
104 Dimethyl phthalate	163	9.187	9.187	0.000	98	934760	500.0	493.1	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	83	142589	500.0	511.5	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	93	219608	500.0	525.4	
108 Acenaphthylene	152	9.376	9.376	0.000	98	1345049	500.0	511.7	
109 3-Nitroaniline	138	9.417	9.417	0.000	93	128776	500.0	525.0	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	77	147517	1000.0	805.1	
111 Acenaphthene	153	9.523	9.523	0.000	95	854995	500.0	499.2	
112 4-Nitrophenol	109	9.517	9.517	0.000	94	241106	1000.0	978.2	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	91	272299	500.0	511.6	
115 Dibenzofuran	168	9.664	9.664	0.000	96	1190297	500.0	489.0	
118 2,3,4,6-Tetrachlorophenol	232	9.758	9.764	-0.006	81	181049	500.0	500.7	
248 Hexadecane	57	9.782	9.782	0.000	93	741718	500.0	531.1	
120 Diethyl phthalate	149	9.787	9.787	0.000	97	944071	500.0	486.3	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	431750	500.0	496.6	
125 4-Nitroaniline	138	9.946	9.946	0.000	83	200842	500.0	579.3	
124 Fluorene	166	9.964	9.964	0.000	95	977515	500.0	499.1	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	76	229646	1000.0	882.1	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	64	686867	500.0	500.7	
129 Diphenylamine	169	10.023	10.023	0.000	94	686867	425.4	426.0	
131 Azobenzene	77	10.064	10.070	-0.006	99	1149321	500.0	519.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	1148759	500.0	519.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	75	231976	500.0	486.1	
141 Atrazine	200	10.446	10.446	0.000	90	487456	1000.0	1035.9	
140 Hexachlorobenzene	284	10.458	10.458	0.000	92	233347	500.0	474.4	
245 n-Octadecane	57	10.570	10.570	0.000	91	781812	500.0	536.2	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	270656	1000.0	883.5	
148 Phenanthrene	178	10.805	10.811	-0.006	98	1280870	500.0	483.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	1319281	500.0	493.7	
150 Carbazole	167	10.964	10.964	0.000	96	1042291	500.0	502.0	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	100	1607753	500.0	485.2	
159 Fluoranthene	202	11.940	11.946	-0.006	99	1288992	500.0	504.5	
160 Benzidine	184	12.023	12.023	0.000	99	588179	1000.0	777.0	
161 Pyrene	202	12.205	12.205	0.000	97	1305143	500.0	486.4	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	633270	500.0	480.7	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.628	0.006	97	855274	500.0	490.3	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	76	760454	1000.0	995.6	
178 Benzo[a]anthracene	228	13.770	13.770	0.000	99	1150329	500.0	482.7	
179 Chrysene	228	13.828	13.828	0.000	98	1113229	500.0	476.5	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	1352358	500.0	458.6	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	98	1006071	500.0	499.2	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	98	1054530	500.0	472.0	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	80	909683	500.0	492.4	
190 Indeno[1,2,3-cd]pyrene	276	18.405	18.399	0.006	97	938866	500.0	498.1	
189 Dibenz(a,h)anthracene	278	18.410	18.410	0.000	91	808562	500.0	492.1	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	95	737333	500.0	492.3	
S 246 Total Cresols	100				0			991.3	
S 193 Methyl Phenols,Total	100				0			991.3	

Reagents:

SMLIST1 L5 W_00007 Amount Added: 0.10 Units: mL

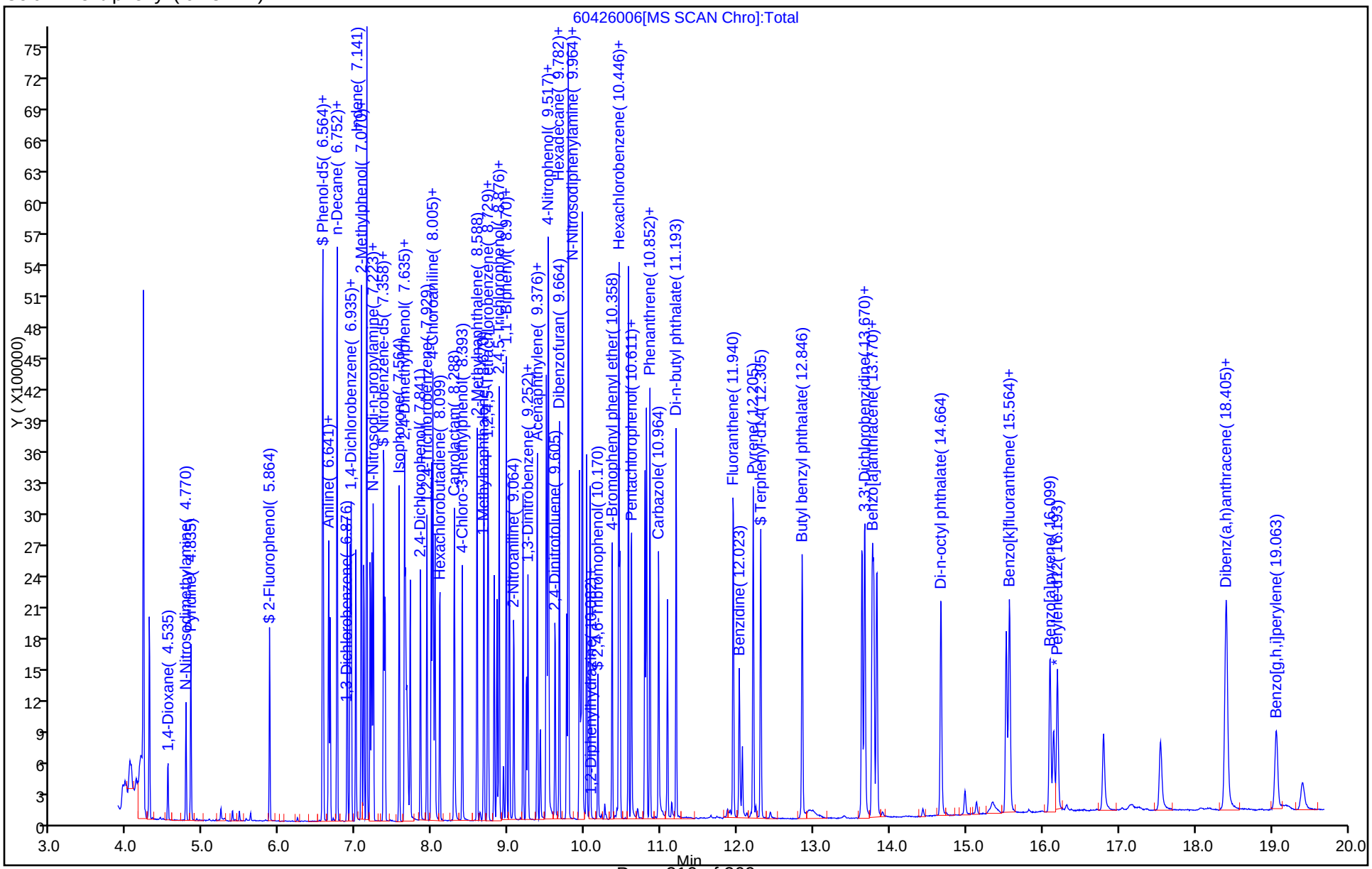
Report Date: 27-Apr-2016 07:29:55 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426006.D

Injection Date:	26-Apr-2016 09:23:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std5 l1lvi			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D
Lims ID: std4 l1lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Apr-2016 09:48:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-007
Misc. Info.: STD4 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:56 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:23:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	283535	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1259321	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	694783	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1063959	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	988928	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	773740	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	161042	200.0	208.3	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	196628	200.0	202.2	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	231167	200.0	208.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	410646	200.0	199.8	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	84	37700	200.0	182.7	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	364061	200.0	196.4	
26 1,4-Dioxane	88	4.535	4.535	0.000	98	59264	200.0	191.7	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	86	120673	200.0	195.0	
28 Pyridine	79	4.835	4.835	0.000	87	157436	200.0	181.1	
42 Benzaldehyde	77	6.564	6.564	0.000	92	277280	400.0	439.6	
43 Phenol	94	6.570	6.570	0.000	98	213435	200.0	201.3	
44 Aniline	93	6.641	6.641	0.000	97	318398	200.0	213.6	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	95	211022	200.0	200.0	
244 n-Decane	57	6.747	6.752	-0.005	92	260836	200.0	224.9	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	177087	200.0	205.1	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	209728	200.0	202.9	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	93	215028	200.0	205.2	
50 Benzyl alcohol	108	6.994	6.999	-0.005	92	111800	200.0	187.5	
52 2-Methylphenol	108	7.064	7.070	-0.006	98	163786	200.0	201.2	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	94	204083	200.0	210.9	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	345355	200.0	218.1	
53 Indene	115	7.141	7.141	0.000	91	767438	400.0	439.7	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	93	150020	200.0	173.0	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	92	158200	200.0	215.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	93	278080	200.0	207.9	
61 Hexachloroethane	117	7.358	7.358	0.000	94	79554	200.0	204.8	
62 Nitrobenzene	77	7.376	7.382	-0.006	92	214201	200.0	200.4	
64 Isophorone	82	7.564	7.564	0.000	98	403101	200.0	206.9	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	181808	200.0	194.7	
65 2-Nitrophenol	139	7.646	7.646	0.000	96	97551	200.0	200.2	
70 Benzoic acid	122	7.641	7.682	-0.041	93	138266	400.0	381.7	M
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	98	249948	200.0	213.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	96	116195	200.0	165.3	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	93	164785	200.0	200.0	
74 Naphthalene	128	8.005	8.005	0.000	98	616483	200.0	205.3	
75 4-Chloroaniline	127	8.011	8.017	-0.006	95	241749	200.0	242.8	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	95	148307	200.0	200.9	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	80351	200.0	191.1	
83 Caprolactam	113	8.282	8.293	-0.011	76	128189	400.0	456.0	
85 4-Chloro-3-methylphenol	107	8.388	8.393	-0.005	95	155156	200.0	201.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	93	397448	200.0	204.9	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	372596	200.0	203.8	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	95	73338	200.0	177.6	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	145562	200.0	200.3	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	91859	200.0	188.0	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	91	95201	200.0	191.5	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	472521	200.0	204.8	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	361553	200.0	202.4	
101 2-Nitroaniline	65	9.064	9.064	0.000	81	110737	200.0	194.0	
104 Dimethyl phthalate	163	9.188	9.187	0.001	97	387667	200.0	199.1	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	83	51270	200.0	179.1	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	91	83062	200.0	193.5	
108 Acenaphthylene	152	9.376	9.376	0.000	98	548921	200.0	203.3	
109 3-Nitroaniline	138	9.411	9.417	-0.006	91	70893	200.0	281.4	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	77	45564	400.0	373.8	
112 4-Nitrophenol	109	9.517	9.517	0.000	94	87392	400.0	345.2	
111 Acenaphthene	153	9.523	9.523	0.000	95	358390	200.0	203.7	
113 2,4-Dinitrotoluene	165	9.605	9.611	-0.006	90	104862	200.0	191.8	
115 Dibenzofuran	168	9.664	9.664	0.000	96	498812	200.0	199.5	
118 2,3,4,6-Tetrachlorophenol	232	9.758	9.764	-0.006	79	71296	200.0	192.0	
248 Hexadecane	57	9.782	9.782	0.000	88	329060	200.0	229.4	
120 Diethyl phthalate	149	9.788	9.787	0.001	97	419175	200.0	210.2	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	97	175743	200.0	196.8	
125 4-Nitroaniline	138	9.946	9.946	0.000	84	82204	200.0	230.8	
124 Fluorene	166	9.964	9.964	0.000	95	415678	200.0	206.6	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	75	73053	400.0	371.9	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	63	291450	200.0	205.1	
129 Diphenylamine	169	10.023	10.023	0.000	94	291450	170.1	174.5	
131 Azobenzene	77	10.064	10.070	-0.006	99	476376	200.0	207.9	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	476641	200.0	208.0	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	75	95843	200.0	193.9	
141 Atrazine	200	10.440	10.446	-0.006	88	202271	400.0	414.9	
140 Hexachlorobenzene	284	10.458	10.458	0.000	92	99164	200.0	194.6	
245 n-Octadecane	57	10.570	10.570	0.000	91	324411	200.0	214.8	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	96690	400.0	355.7	
148 Phenanthrene	178	10.805	10.811	-0.006	98	549392	200.0	200.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	563932	200.0	203.7	
150 Carbazole	167	10.964	10.964	0.000	96	475830	200.0	221.2	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	700658	200.0	204.1	
159 Fluoranthene	202	11.940	11.946	-0.006	99	523306	200.0	197.7	
160 Benzidine	184	12.023	12.023	0.000	99	186576	400.0	411.8	
161 Pyrene	202	12.205	12.205	0.000	96	535301	200.0	200.9	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	252783	200.0	193.2	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	320826	200.0	185.2	
177 3,3'-Dichlorobenzidine	252	13.664	13.670	-0.006	76	301885	400.0	398.0	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	100	456236	200.0	192.8	
179 Chrysene	228	13.823	13.828	-0.005	98	462777	200.0	199.5	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	485859	200.0	176.0	
183 Benzo[b]fluoranthene	252	15.517	15.522	-0.005	99	389739	200.0	181.7	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	97	461544	200.0	194.1	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	80	362712	200.0	184.5	
190 Indeno[1,2,3-cd]pyrene	276	18.393	18.399	-0.006	91	393283	200.0	196.1	
189 Dibenz(a,h)anthracene	278	18.399	18.410	-0.011	67	336257	200.0	192.3	
191 Benzo[g,h,i]perylene	276	19.052	19.063	-0.011	95	314976	200.0	197.6	
S 246 Total Cresols	100				0			374.2	
S 193 Methyl Phenols,Total	100				0			374.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L4 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:58 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D

Injection Date: 26-Apr-2016 09:48:30 Instrument ID: A4AG2 Operator ID:

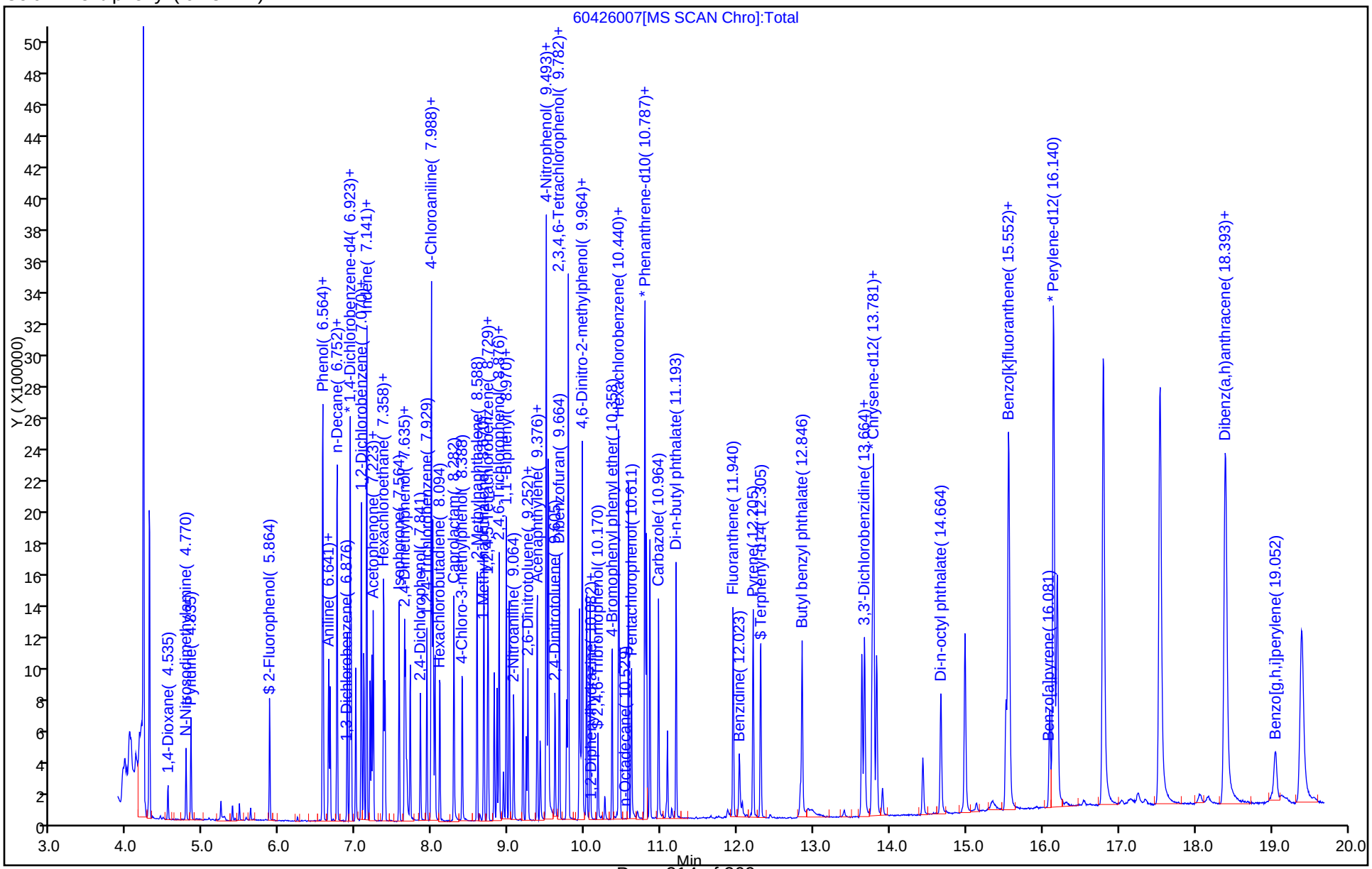
Lims ID: std4 l1lvi Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 7

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

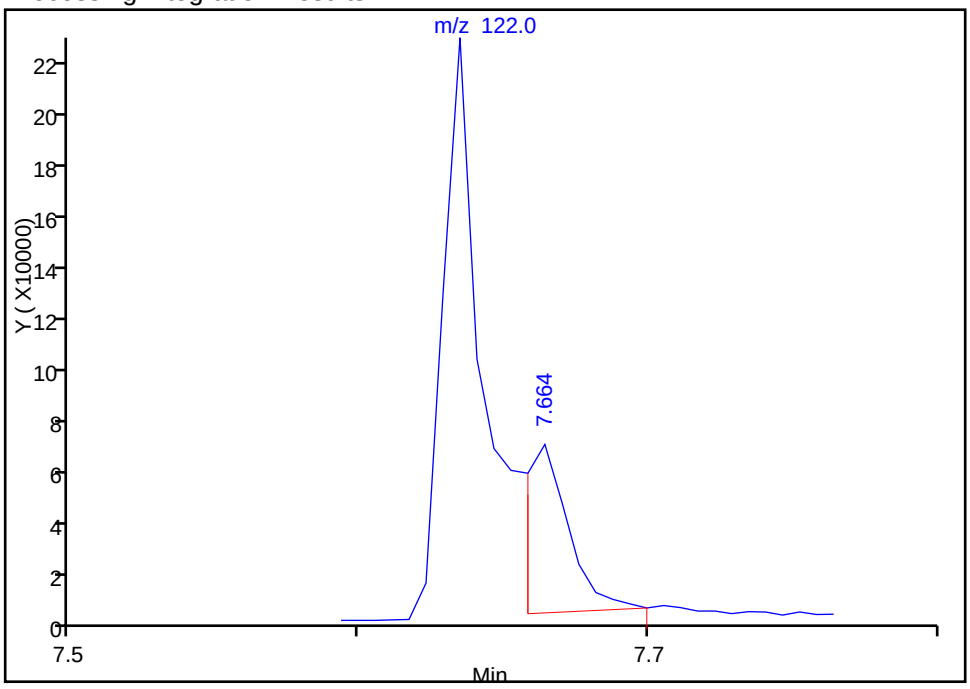
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D
Injection Date: 26-Apr-2016 09:48:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 Benzoic acid, CAS: 65-85-0

Signal: 1

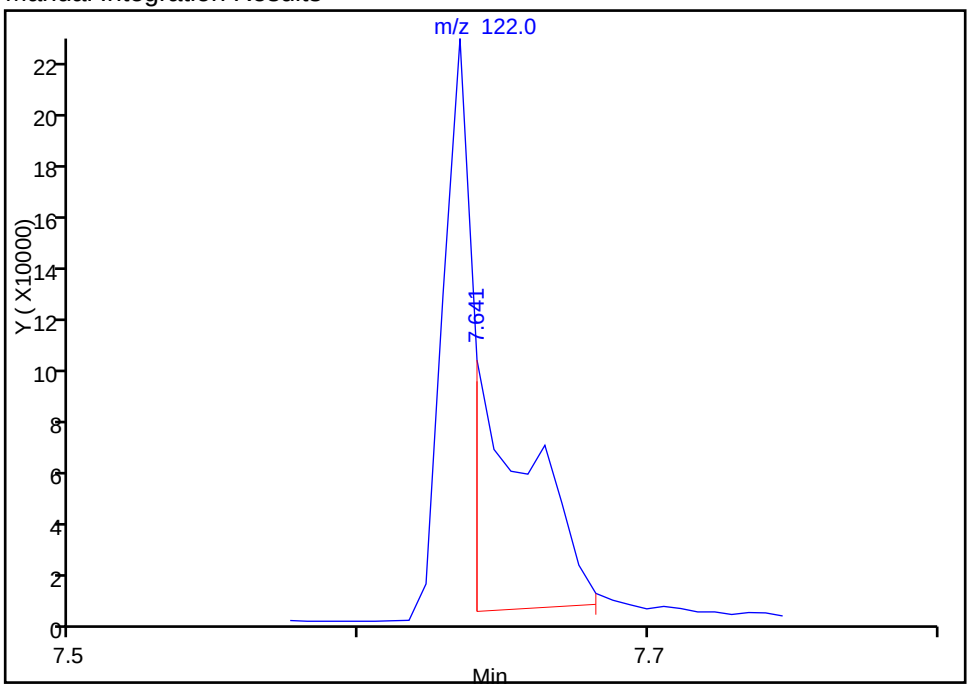
Processing Integration Results

RT: 7.66
Area: 68937
Amount: 410.3019
Amount Units: ng/ml



Manual Integration Results

RT: 7.64
Area: 138266
Amount: 381.6501
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 11:05:31
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D
Lims ID: std3 l1lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Apr-2016 10:13:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-008
Misc. Info.: STD3 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:59 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:09:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	271302	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1198615	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	668728	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1039438	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	956303	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	716328	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	93	76650	100.0	103.6	
$ 8 Phenol-d5	99	6.558	6.558	0.000	99	102026	100.0	109.6	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	91	107612	100.0	101.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	198569	100.0	100.4	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	83	17041	100.0	85.8	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	176170	100.0	98.3	
26 1,4-Dioxane	88	4.529	4.535	-0.006	98	27089	100.0	91.6	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	88	61100	100.0	103.2	
28 Pyridine	79	4.835	4.835	0.000	88	74363	100.0	89.4	
42 Benzaldehyde	77	6.564	6.564	0.000	92	142836	200.0	196.6	
43 Phenol	94	6.570	6.570	0.000	98	109416	100.0	107.8	
44 Aniline	93	6.641	6.641	0.000	96	132294	100.0	92.7	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	91	121791	100.0	120.6	
244 n-Decane	57	6.747	6.752	-0.005	93	129148	100.0	116.4	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	88346	100.0	106.9	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	96	102291	100.0	103.4	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	95	102833	100.0	102.5	
50 Benzyl alcohol	108	6.994	6.999	-0.005	89	52596	100.0	92.2	
52 2-Methylphenol	108	7.064	7.070	-0.006	95	81869	100.0	105.1	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	94	102282	100.0	110.5	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	171513	100.0	113.2	
53 Indene	115	7.141	7.141	0.000	90	377691	200.0	226.1	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	92	74066	100.0	89.3	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	90	75405	100.0	107.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	94	135545	100.0	105.9	
61 Hexachloroethane	117	7.358	7.358	0.000	92	38416	100.0	103.4	
62 Nitrobenzene	77	7.376	7.382	-0.006	91	103228	100.0	101.5	
64 Isophorone	82	7.564	7.564	0.000	98	192173	100.0	103.6	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	76781	100.0	86.4	
65 2-Nitrophenol	139	7.646	7.646	0.000	95	44395	100.0	95.7	
70 Benzoic acid	122	7.641	7.682	-0.041	0	52170	200.0	236.4	M
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	97	117507	100.0	105.4	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	97	55620	100.0	83.1	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	79023	100.0	100.8	
74 Naphthalene	128	8.005	8.005	0.000	98	299015	100.0	104.6	
75 4-Chloroaniline	127	8.011	8.017	-0.006	94	101758	100.0	107.4	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	94	61606	100.0	87.7	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	41060	100.0	102.6	
83 Caprolactam	113	8.282	8.293	-0.011	75	57382	200.0	214.4	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	71449	100.0	97.3	
86 2-Methylnaphthalene	142	8.582	8.587	-0.005	93	195109	100.0	105.7	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	181424	100.0	104.3	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	95	31630	100.0	79.6	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	97	68425	100.0	97.8	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	42510	100.0	90.4	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	93	45387	100.0	94.9	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	230809	100.0	103.9	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	98	177129	100.0	103.0	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	49630	100.0	90.3	
104 Dimethyl phthalate	163	9.188	9.187	0.001	98	190038	100.0	101.4	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	80	22999	100.0	83.5	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	88	37273	100.0	90.2	
108 Acenaphthylene	152	9.376	9.376	0.000	98	260872	100.0	100.4	
109 3-Nitroaniline	138	9.411	9.417	-0.006	91	26644	100.0	109.9	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	42	15781	200.0	255.1	
112 4-Nitrophenol	109	9.523	9.517	0.006	93	36672	200.0	150.5	
111 Acenaphthene	153	9.523	9.523	0.000	95	180800	100.0	106.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	93	46503	100.0	88.4	
115 Dibenzofuran	168	9.664	9.664	0.000	96	249371	100.0	103.6	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	81	31245	100.0	87.4	
248 Hexadecane	57	9.782	9.782	0.000	91	159942	100.0	115.9	
120 Diethyl phthalate	149	9.782	9.787	-0.005	97	207607	100.0	108.2	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	97	87372	100.0	101.7	
125 4-Nitroaniline	138	9.946	9.946	0.000	85	34923	100.0	101.9	
124 Fluorene	166	9.964	9.964	0.000	95	197456	100.0	102.0	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	75	28195	200.0	235.2	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	65	139535	100.0	100.5	
129 Diphenylamine	169	10.023	10.023	0.000	93	139535	85.1	85.5	
131 Azobenzene	77	10.064	10.070	-0.006	98	227565	100.0	101.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	227564	100.0	101.6	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	76	46696	100.0	96.7	
141 Atrazine	200	10.440	10.446	-0.006	88	93906	200.0	197.2	
140 Hexachlorobenzene	284	10.458	10.458	0.000	93	48900	100.0	98.2	
245 n-Octadecane	57	10.570	10.570	0.000	91	157350	100.0	106.6	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	43367	200.0	205.5	
148 Phenanthrene	178	10.805	10.811	-0.006	98	271774	100.0	101.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	273846	100.0	101.2	
150 Carbazole	167	10.964	10.964	0.000	96	240626	100.0	114.5	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	339724	100.0	101.3	
159 Fluoranthene	202	11.940	11.946	-0.006	99	248841	100.0	96.2	
160 Benzidine	184	12.023	12.023	0.000	99	52920	200.0	290.7	
161 Pyrene	202	12.205	12.205	0.000	96	253880	100.0	98.5	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	117316	100.0	92.7	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	150844	100.0	90.1	
177 3,3'-Dichlorobenzidine	252	13.664	13.670	-0.006	76	125518	200.0	171.1	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	99	220723	100.0	96.5	
179 Chrysene	228	13.823	13.828	-0.005	98	229586	100.0	102.3	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	222698	100.0	103.3	
183 Benzo[b]fluoranthene	252	15.517	15.522	-0.005	99	196883	100.0	99.2	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	98	208454	100.0	94.7	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	79	172460	100.0	94.7	
190 Indeno[1,2,3-cd]pyrene	276	18.387	18.399	-0.012	81	176161	100.0	94.9	
189 Dibenz(a,h)anthracene	278	18.399	18.410	-0.011	68	150188	100.0	92.8	
191 Benzo[g,h,i]perylene	276	19.046	19.063	-0.017	95	147133	100.0	99.7	
S 246 Total Cresols	100				0			194.4	
S 193 Methyl Phenols,Total	100				0			194.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L3 W_00007 Amount Added: 0.10 Units: mL

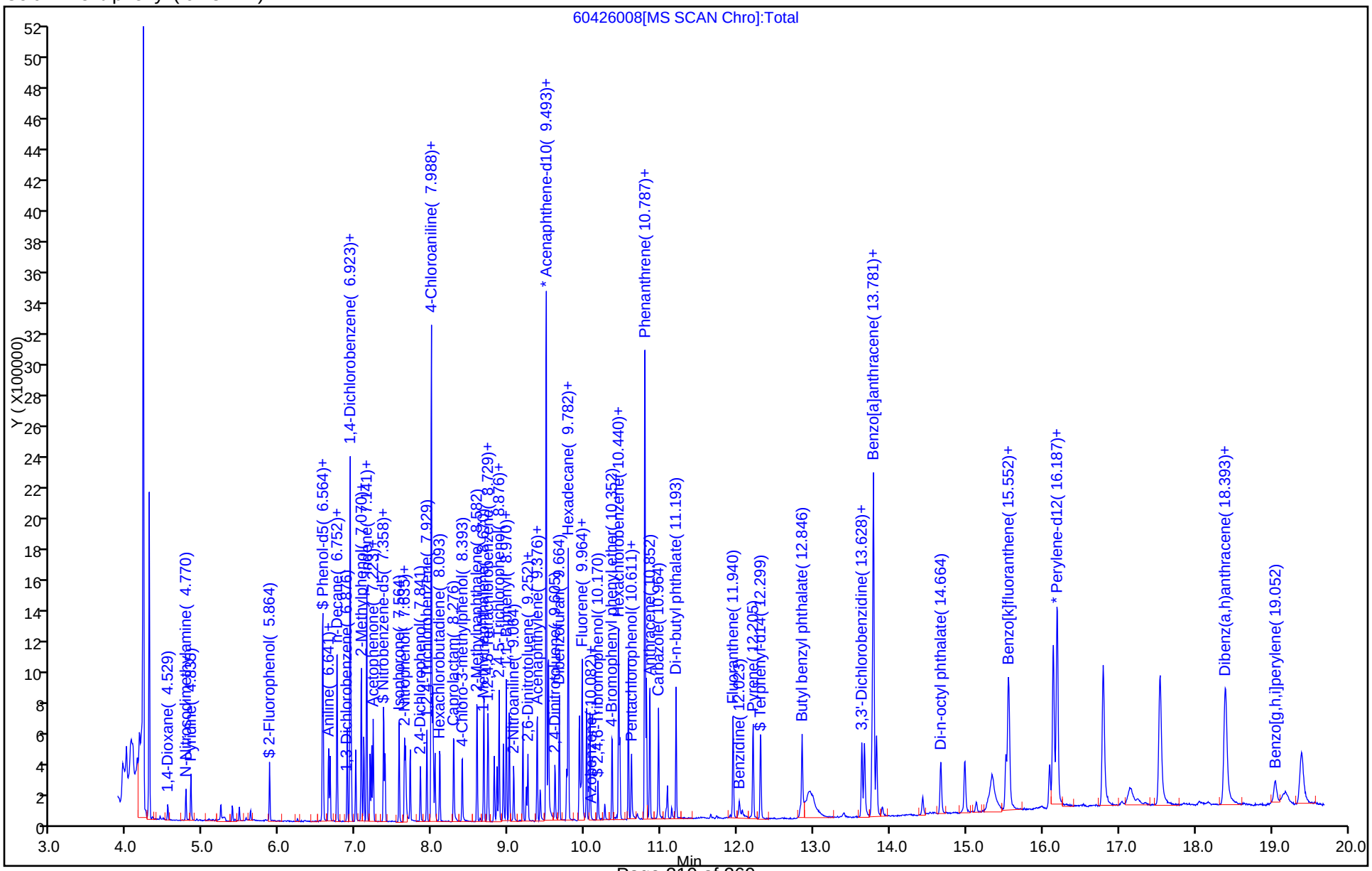
Report Date: 27-Apr-2016 07:30:01 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D

Injection Date:	26-Apr-2016 10:13:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std3 l1lvi			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

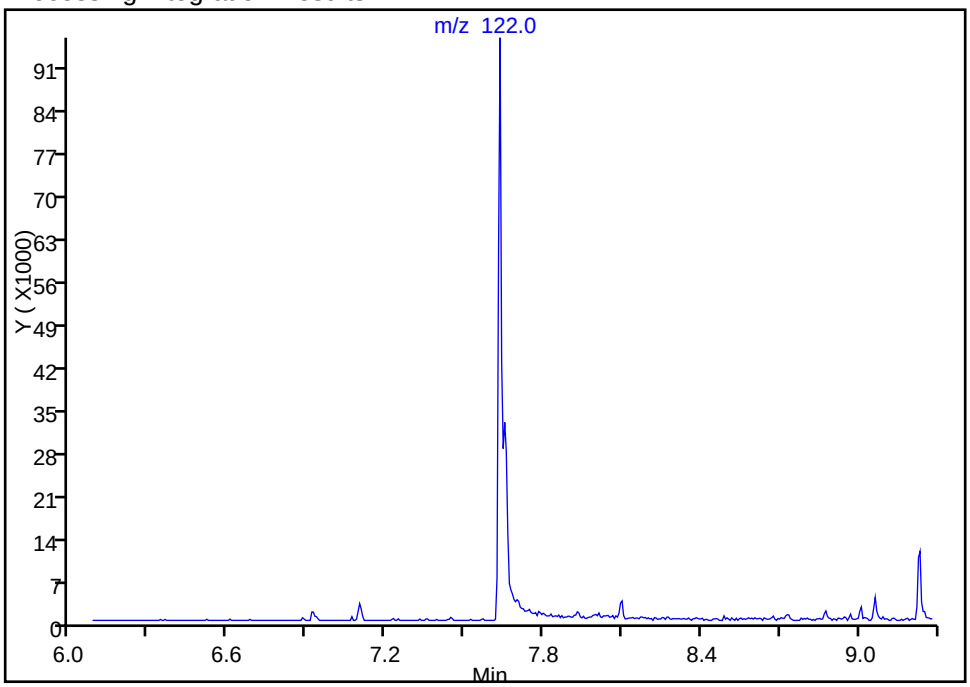
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D
Injection Date: 26-Apr-2016 10:13:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 Benzoic acid, CAS: 65-85-0

Signal: 1

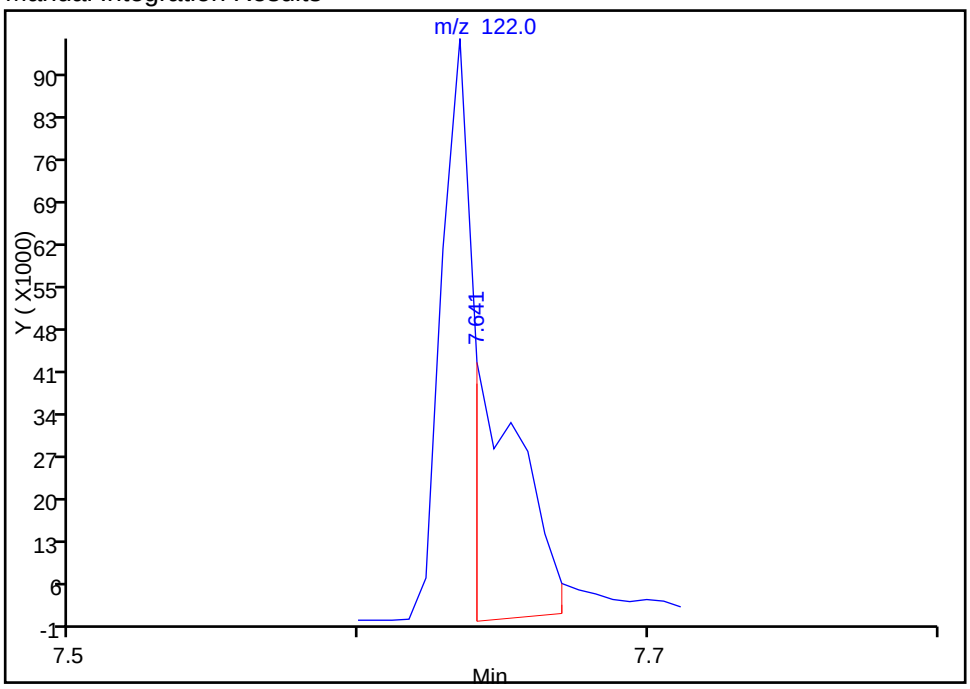
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.64
Area: 52170
Amount: 236.4029
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 11:09:36
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426009.D
Lims ID: std2 l1lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Apr-2016 10:38:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-009
Misc. Info.: STD2 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:09 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:11:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	271963	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1156603	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	669380	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	1051898	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	97	946007	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	95	721119	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	93	36055	50.0	48.6	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	42442	50.0	45.5	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	93	48271	50.0	47.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	93852	50.0	47.4	
$ 11 2,4,6-Tribromophenol	330	10.176	10.170	0.006	83	7303	50.0	36.7	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	79632	50.0	44.9	
26 1,4-Dioxane	88	4.529	4.535	-0.006	96	13706	50.0	46.2	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	89	28954	50.0	48.8	
28 Pyridine	79	4.835	4.835	0.000	87	36232	50.0	43.5	
42 Benzaldehyde	77	6.564	6.564	0.000	91	72645	100.0	62.7	
43 Phenol	94	6.570	6.570	0.000	97	48304	50.0	47.5	
44 Aniline	93	6.641	6.641	0.000	97	53167	50.0	37.2	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	91	53571	50.0	52.9	
244 n-Decane	57	6.747	6.752	-0.005	94	61799	50.0	55.6	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	38763	50.0	46.8	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	95	48715	50.0	49.1	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	49939	50.0	49.7	
50 Benzyl alcohol	108	6.994	6.999	-0.005	90	22447	50.0	39.3	
52 2-Methylphenol	108	7.064	7.070	-0.006	95	35114	50.0	45.0	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	46638	50.0	50.2	
54 2,2'-oxybis[1-chloropropan	45	7.100	7.099	0.001	92	78906	50.0	51.9	
53 Indene	115	7.141	7.141	0.000	91	176142	100.0	105.2	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	93	34719	50.0	41.7	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	90	31466	50.0	44.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	95	61702	50.0	48.1	
61 Hexachloroethane	117	7.358	7.358	0.000	92	17934	50.0	48.1	
62 Nitrobenzene	77	7.376	7.382	-0.006	93	44137	50.0	45.0	
64 Isophorone	82	7.564	7.564	0.000	98	84731	50.0	47.4	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	96	38868	50.0	45.3	
65 2-Nitrophenol	139	7.647	7.646	0.001	92	15455	50.0	34.5	
70 Benzoic acid	122		7.682				ND	ND	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	99	54336	50.0	50.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	96	24031	50.0	37.2	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	93	37290	50.0	49.3	
74 Naphthalene	128	8.005	8.005	0.000	98	141356	50.0	51.3	
75 4-Chloroaniline	127	8.005	8.017	-0.012	94	39165	50.0	42.8	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	93	28784	50.0	42.5	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	19022	50.0	49.3	
83 Caprolactam	113	8.282	8.293	-0.011	74	22359	100.0	86.6	
85 4-Chloro-3-methylphenol	107	8.394	8.393	0.001	96	28429	50.0	40.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	92	87424	50.0	49.1	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	84743	50.0	50.5	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	93	13607	50.0	34.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	30876	50.0	44.1	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	96	17966	50.0	38.2	
94 2,4,5-Trichlorophenol	196	8.852	8.846	0.006	90	19187	50.0	40.1	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	107915	50.0	48.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	82329	50.0	47.8	
101 2-Nitroaniline	65	9.064	9.064	0.000	77	21833	50.0	39.7	
104 Dimethyl phthalate	163	9.188	9.187	0.001	98	88921	50.0	47.4	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	82	9012	50.0	32.7	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	89	16145	50.0	39.0	
108 Acenaphthylene	152	9.376	9.376	0.000	98	117584	50.0	45.2	
109 3-Nitroaniline	138	9.417	9.417	0.000	90	12225	50.0	50.4	
110 2,4-Dinitrophenol	184		9.499				ND	ND	
112 4-Nitrophenol	109		9.517				ND	ND	
111 Acenaphthene	153	9.523	9.523	0.000	94	86041	50.0	50.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	87	19273	50.0	36.6	
115 Dibenzofuran	168	9.664	9.664	0.000	96	117607	50.0	48.8	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	79	12918	50.0	36.1	
248 Hexadecane	57	9.782	9.782	0.000	86	72963	50.0	52.8	
120 Diethyl phthalate	149	9.788	9.787	0.001	97	108784	50.0	56.6	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	40212	50.0	46.7	
125 4-Nitroaniline	138	9.946	9.946	0.000	80	13576	50.0	39.6	
124 Fluorene	166	9.964	9.964	0.000	95	93081	50.0	48.0	
127 4,6-Dinitro-2-methylphenol	198		9.970				ND	ND	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	64	63576	50.0	45.2	
129 Diphenylamine	169	10.023	10.023	0.000	93	63576	42.5	38.5	
131 Azobenzene	77	10.064	10.070	-0.006	99	103260	50.0	45.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	97	103141	50.0	45.5	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	77	21385	50.0	43.8	
141 Atrazine	200	10.440	10.446	-0.006	87	42014	100.0	87.2	
140 Hexachlorobenzene	284	10.458	10.458	0.000	91	23298	50.0	46.2	
245 n-Octadecane	57	10.570	10.570	0.000	92	68855	50.0	46.1	
143 Pentachlorophenol	266	10.611	10.611	0.000	86	13385	100.0	116.8	
148 Phenanthrene	178	10.805	10.811	-0.006	97	130809	50.0	48.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	125831	50.0	46.0	
150 Carbazole	167	10.964	10.964	0.000	96	108193	50.0	50.9	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	200113	50.0	59.0	
159 Fluoranthene	202	11.940	11.946	-0.006	99	115701	50.0	44.2	
160 Benzidine	184	12.023	12.023	0.000	98	25204	100.0	264.6	
161 Pyrene	202	12.205	12.205	0.000	96	118370	50.0	46.4	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	96	57293	50.0	45.8	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	63153	50.0	38.1	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	75	54229	100.0	74.7	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	99	101574	50.0	44.9	
179 Chrysene	228	13.823	13.828	-0.005	98	103352	50.0	46.6	
181 Di-n-octyl phthalate	149	14.670	14.664	0.006	98	81426	50.0	57.8	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	96	83574	50.0	41.8	
184 Benzo[k]fluoranthene	252	15.570	15.569	0.001	96	108893	50.0	49.1	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	81	74213	50.0	40.5	
190 Indeno[1,2,3-cd]pyrene	276	18.399	18.399	0.000	94	80605	50.0	43.1	
189 Dibenz(a,h)anthracene	278	18.411	18.410	0.001	73	70503	50.0	43.3	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	93	65858	50.0	44.3	
S 246 Total Cresols	100				0			86.7	
S 193 Methyl Phenols,Total	100				0			86.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST1 L2 W_00007 Amount Added: 0.10 Units: mL

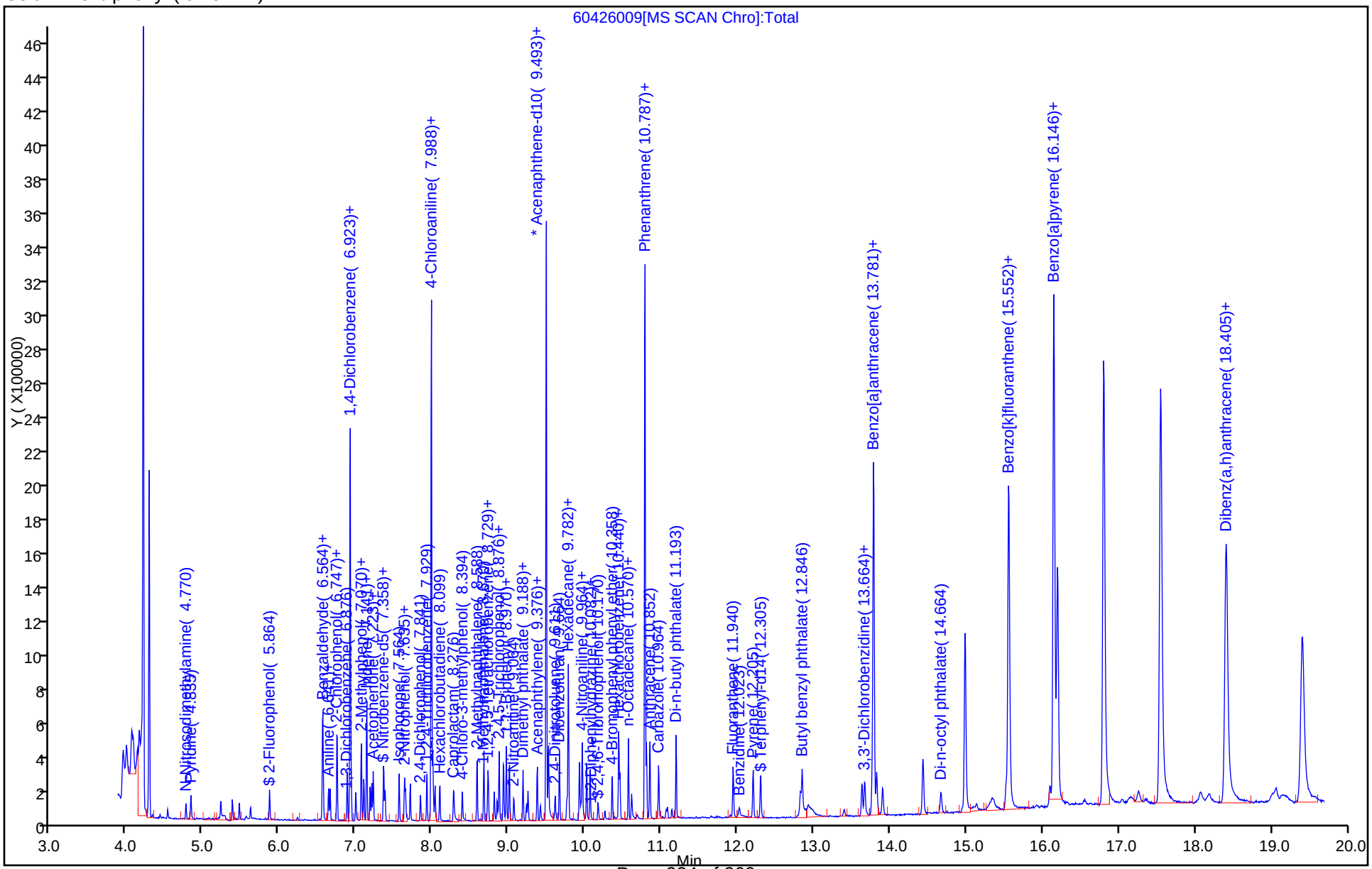
Report Date: 27-Apr-2016 07:30:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426009.D

Injection Date:	26-Apr-2016 10:38:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std2 l1lvi			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D
Lims ID: std1 l1lvi
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Apr-2016 11:03:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-010
Misc. Info.: STD1 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:21 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 12:15:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	234310	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1019831	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	605895	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	946215	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	877855	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	663492	400.0	400.0	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	8865	10.0	9.86	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	99	19536	10.0	10.9	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	98	16768	10.0	10.2	
74 Naphthalene	128	8.005	8.005	0.000	94	26932	10.0	11.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	89	16738	10.0	10.7	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	89	16129	10.0	10.9	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	21252	10.0	10.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	96	15877	10.0	10.2	
108 Acenaphthylene	152	9.376	9.376	0.000	98	23274	10.0	9.89	
111 Acenaphthene	153	9.523	9.523	0.000	95	17470	10.0	11.4	
115 Dibenzofuran	168	9.664	9.664	0.000	94	23170	10.0	10.6	
124 Fluorene	166	9.964	9.964	0.000	96	18892	10.0	10.8	
140 Hexachlorobenzene	284	10.458	10.458	0.000	87	4568	10.0	10.1	
148 Phenanthrene	178	10.805	10.811	-0.006	97	26266	10.0	10.8	
149 Anthracene	178	10.852	10.852	0.000	99	23780	10.0	9.66	
159 Fluoranthene	202	11.940	11.946	-0.006	98	22092	10.0	9.38	
161 Pyrene	202	12.205	12.205	0.000	93	22549	10.0	9.53	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	97	21128	10.0	10.1	
179 Chrysene	228	13.822	13.828	-0.006	96	20526	10.0	9.97	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	95	16543	10.0	9.00	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	45	22291	10.0	10.9	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	81	14861	10.0	8.81	
190 Indeno[1,2,3-cd]pyrene	276	18.405	18.399	0.006	38	13232	10.0	7.69	M
189 Dibenz(a,h)anthracene	278	18.405	18.410	-0.005	0	12059	10.0	8.04	M

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
191 Benzo[g,h,i]perylene	276	19.046	19.063	-0.017	77	12114	10.0	8.86	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L1 W_00007 Amount Added: 0.10 Units: mL

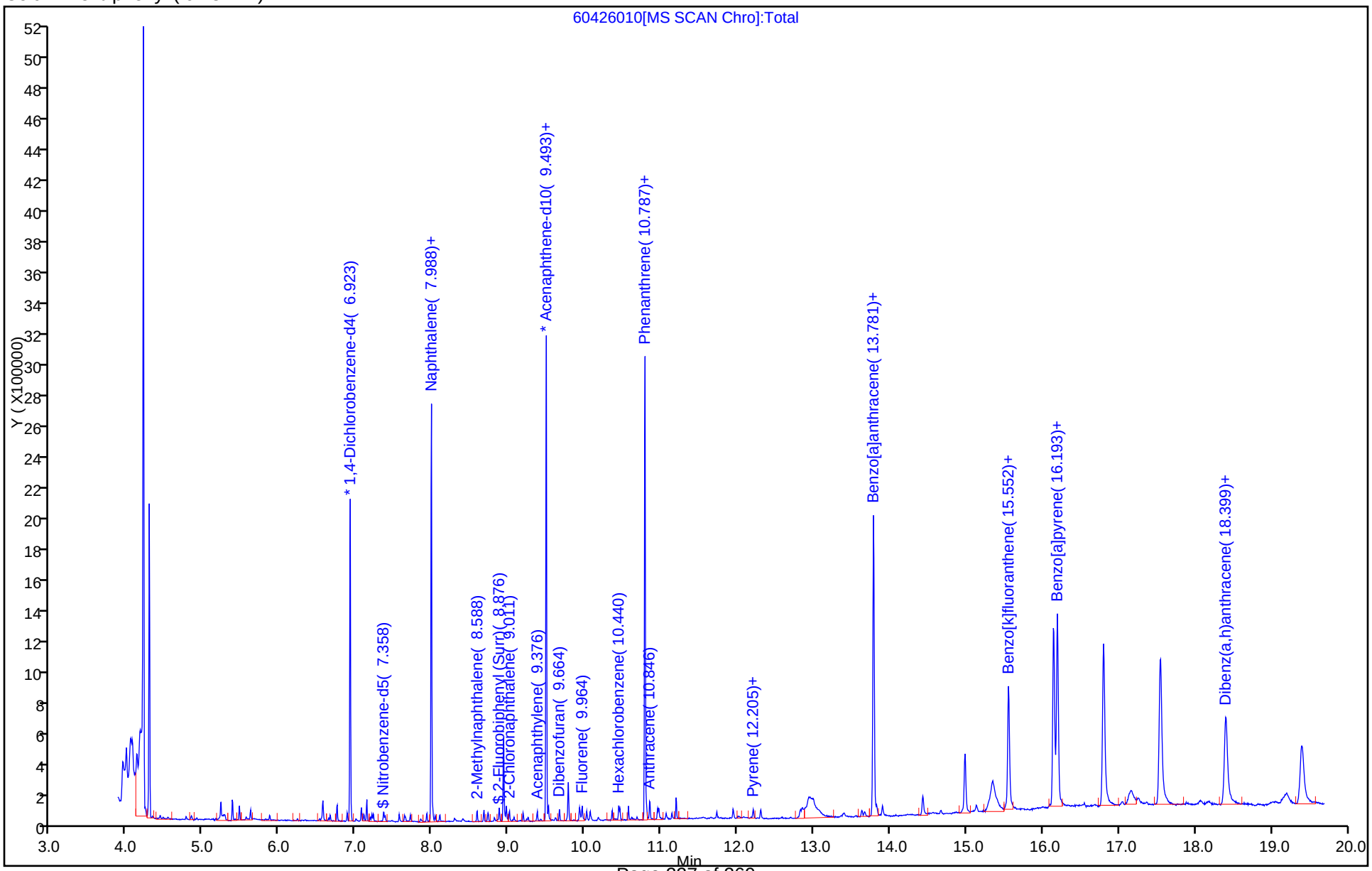
Report Date: 27-Apr-2016 07:30:26 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D

Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std1 l1lvi			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

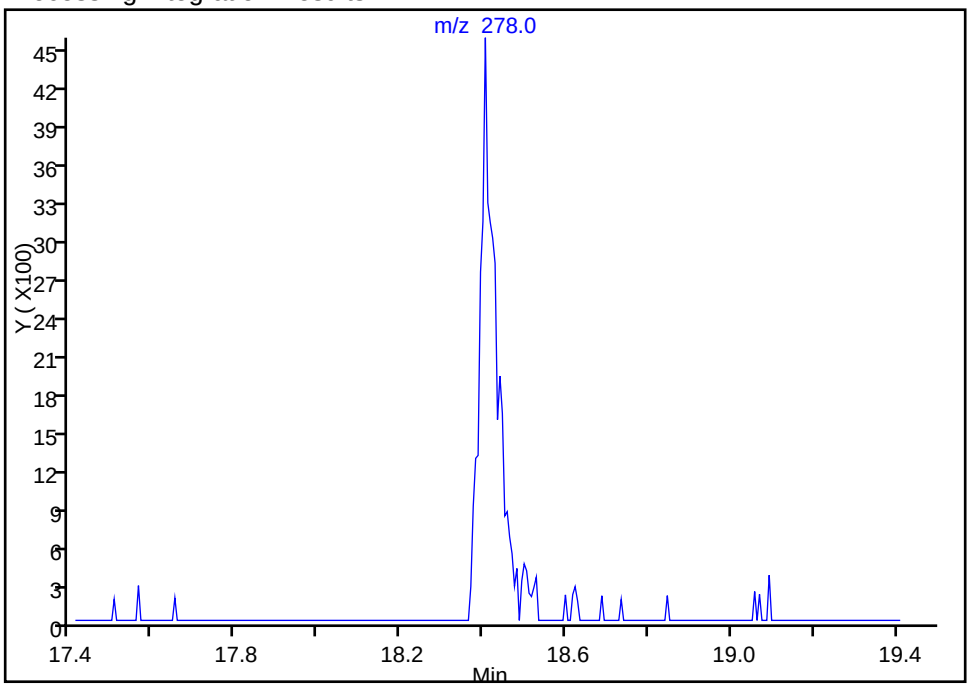
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D				
Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

189 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

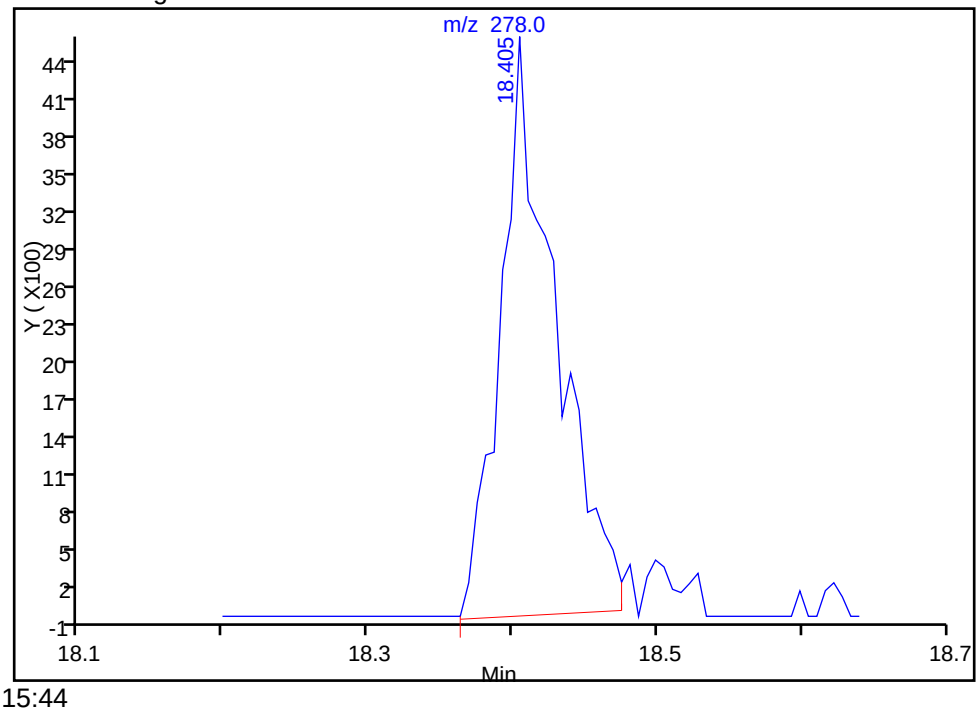
Not Detected
Expected RT: 18.41

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 12059
Amount: 8.042736
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

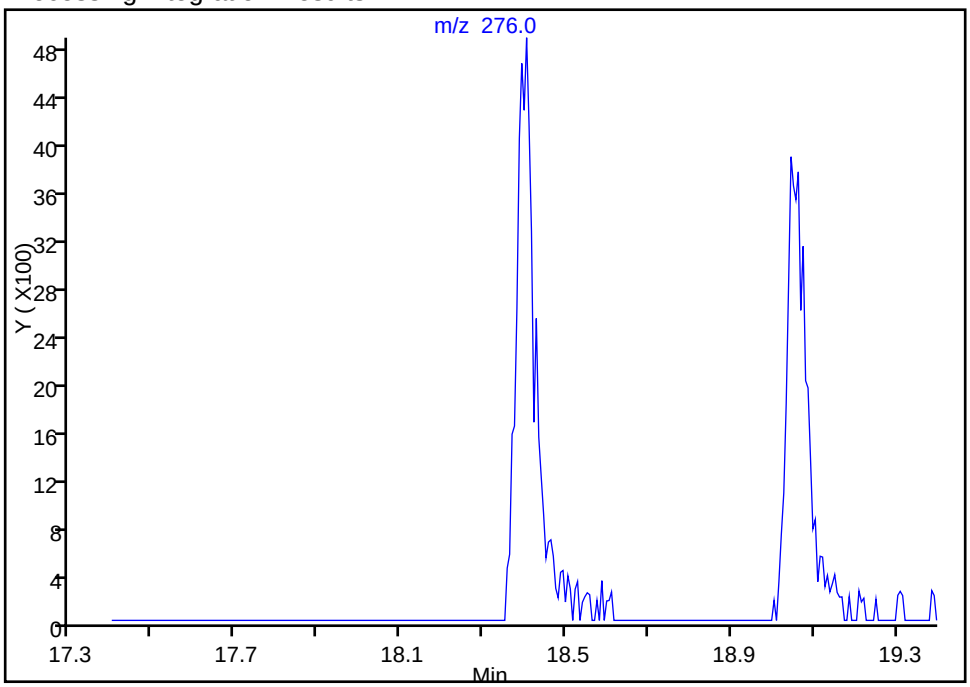
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D				
Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

190 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

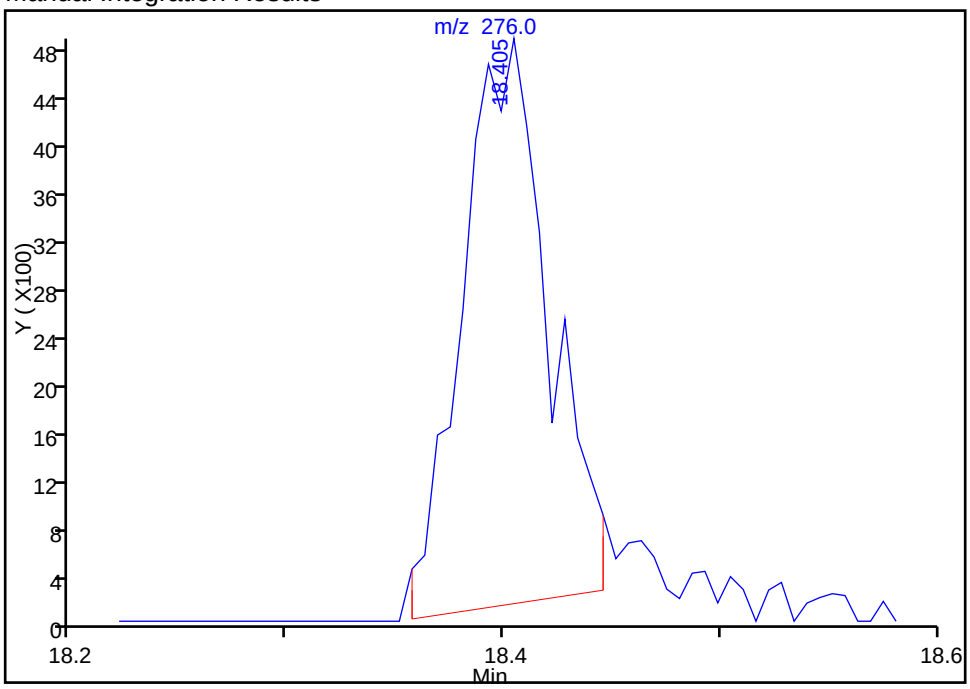
Not Detected
Expected RT: 18.40

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 13232
Amount: 7.692485
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

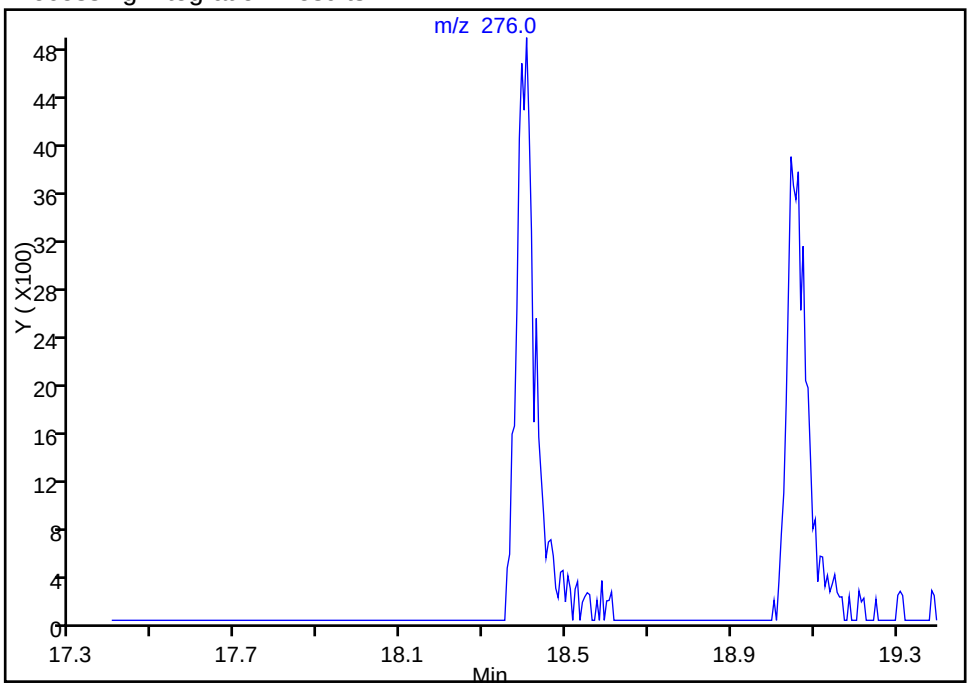
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D
Injection Date: 26-Apr-2016 11:03:30 Instrument ID: A4AG2
Lims ID: std1 l1lvi
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

190 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

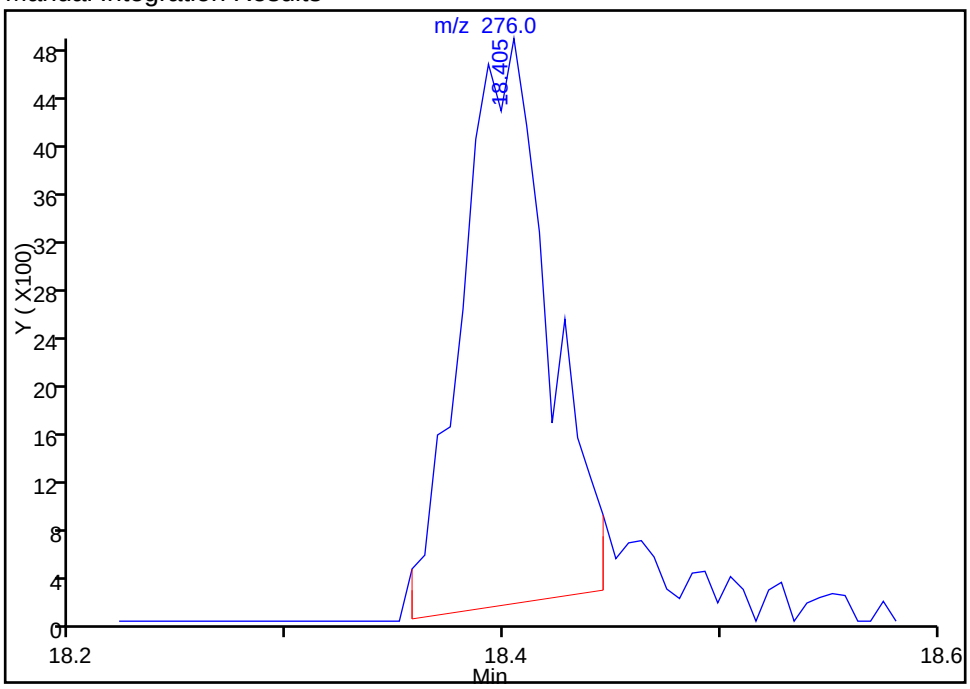
Not Detected
Expected RT: 18.40

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 13232
Amount: 7.692485
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

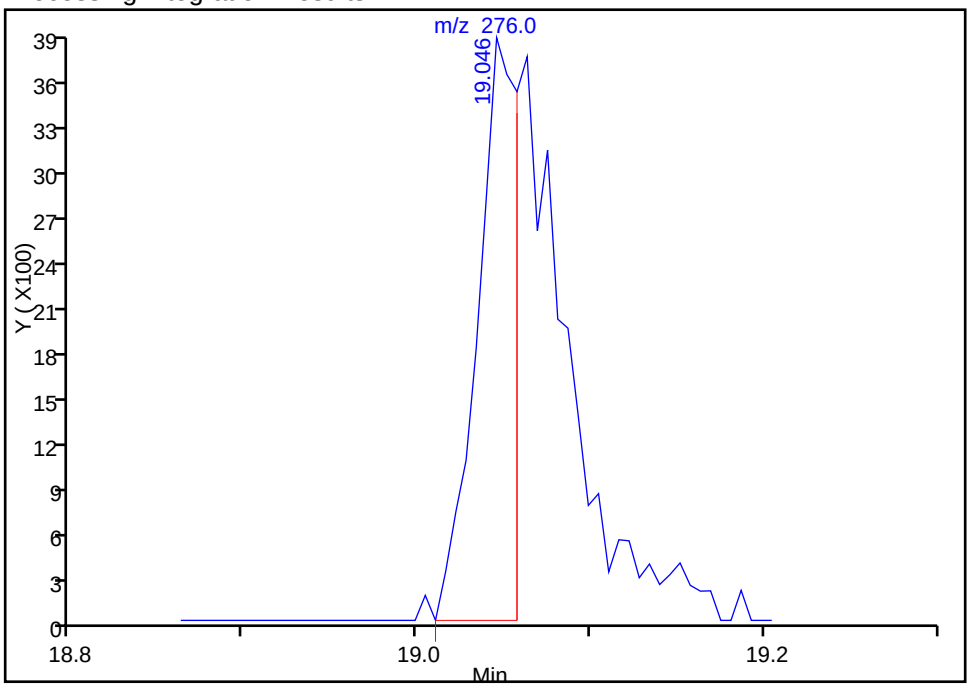
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D				
Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

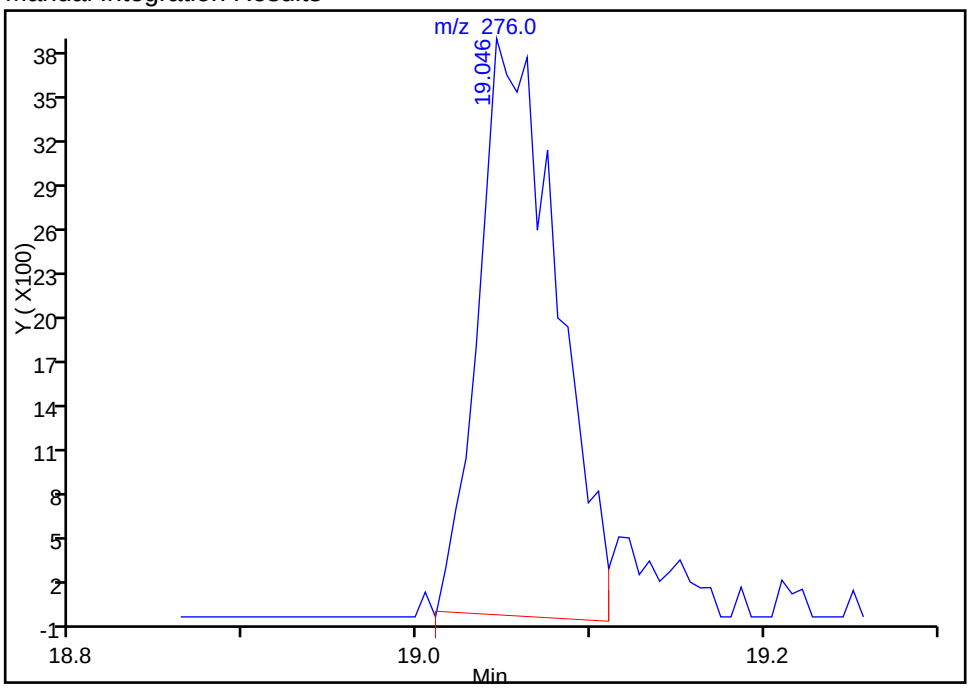
Processing Integration Results

RT: 19.05
Area: 6258
Amount: 11.141185
Amount Units: ng/ml



Manual Integration Results

RT: 19.05
Area: 12114
Amount: 8.862307
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44

Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4362	0.3386		0.776	1.00	-22.4*	20.0
N-Nitrosodimethylamine	Ave	0.8729	0.8192		0.938	1.00	-6.2	20.0
Pyridine	Ave	1.226	0.9859		0.804	1.00	-19.6	20.0
Benzaldehyde	Qua		0.6637	0.0100	2.03	2.00	1.5	20.0
Phenol	Ave	1.496	1.490	0.8000	0.996	1.00	-0.4	20.0
Aniline	Ave	2.103	2.021		0.961	1.00	-3.9	20.0
Bis(2-chloroethyl)ether	Ave	1.488	1.562	0.7000	1.05	1.00	5.0	20.0
n-Decane	Ave	1.636	1.554		0.950	1.00	-5.0	20.0
2-Chlorophenol	Ave	1.218	1.121	0.8000	0.920	1.00	-8.0	20.0
1,3-Dichlorobenzene	Ave	1.458	1.344		0.922	1.00	-7.8	20.0
1,4-Dichlorobenzene	Ave	1.479	1.367		0.924	1.00	-7.6	20.0
Benzyl alcohol	Ave	0.8411	0.8155		0.970	1.00	-3.0	20.0
1,2-Dichlorobenzene	Ave	1.365	1.241		0.909	1.00	-9.1	20.0
2-Methylphenol	Ave	1.149	1.183	0.7000	1.03	1.00	3.0	20.0
bis (2-chloroisopropyl) ether	Ave	2.234	2.068		0.926	1.00	-7.4	20.0
Indene	Ave	2.462	2.358		1.92	2.00	-4.2	20.0
3 & 4 Methylphenol	Ave	1.223	1.267		1.04	1.00	3.6	20.0
N-Nitrosodi-n-propylamine	Ave	1.038	1.029	0.5000	0.991	1.00	-0.9	20.0
Acetophenone	Ave	1.887	1.839	0.0100	0.975	1.00	-2.5	20.0
Hexachloroethane	Ave	0.5479	0.5332	0.3000	0.973	1.00	-2.7	20.0
Nitrobenzene	Ave	0.3394	0.3814	0.2000	1.12	1.00	12.4	20.0
Isophorone	Ave	0.6188	0.6931	0.4000	1.12	1.00	12.0	20.0
2,4-Dimethylphenol	Ave	0.2966	0.3411	0.2000	1.15	1.00	15.0	20.0
2-Nitrophenol	Ave	0.1548	0.1642	0.1000	1.06	1.00	6.1	20.0
Benzoic acid	Lin1		0.1894		2.22	2.00	10.9	20.0
Bis(2-chloroethoxy)methane	Ave	0.3719	0.3913	0.3000	1.05	1.00	5.2	20.0
2,4-Dichlorophenol	Ave	0.2233	0.2484	0.2000	1.11	1.00	11.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2617	0.2764		1.06	1.00	5.6	20.0
Naphthalene	Ave	0.9536	0.9817	0.7000	1.03	1.00	2.9	20.0
4-Chloroaniline	Ave	0.3162	0.3060	0.0100	0.968	1.00	-3.2	20.0
2,6-Dichlorophenol	Ave	0.2345	0.2519		1.07	1.00	7.4	20.0
Hexachlorobutadiene	Ave	0.1335	0.1532	0.0100	1.15	1.00	14.7	20.0
Caprolactam	Ave	0.0893	0.1091	0.0100	2.44	2.00	22.2*	20.0
4-Chloro-3-methylphenol	Ave	0.2450	0.2923	0.2000	1.19	1.00	19.3	20.0
2-Methylnaphthalene	Ave	0.6162	0.6284	0.4000	1.02	1.00	2.0	20.0
1-Methylnaphthalene	Ave	0.5806	0.5907		1.02	1.00	1.7	20.0
Hexachlorocyclopentadiene	Ave	0.2378	0.2158	0.0500	0.907	1.00	-9.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4183	0.4663	0.0100	1.11	1.00	11.5	20.0
2,4,6-Trichlorophenol	Ave	0.2813	0.2990	0.2000	1.06	1.00	6.3	20.0
2,4,5-Trichlorophenol	Ave	0.2862	0.2921	0.2000	1.02	1.00	2.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.328	1.366	0.0100	1.03	1.00	2.8	20.0
2-Chloronaphthalene	Ave	1.029	0.9786	0.8000	0.951	1.00	-4.9	20.0
2-Nitroaniline	Ave	0.3286	0.3661	0.0100	1.11	1.00	11.4	20.0
Dimethyl phthalate	Ave	1.121	1.141	0.0100	1.02	1.00	1.7	20.0
1,3-Dinitrobenzene	Ave	0.1648	0.1866		1.13	1.00	13.2	20.0
2,6-Dinitrotoluene	Ave	0.2472	0.2567		1.04	1.00	3.8	20.0
Acenaphthylene	Ave	1.554	1.622	0.9000	1.04	1.00	4.3	20.0
3-Nitroaniline	Ave	0.1450	0.1150	0.0100	0.793	1.00	-20.7*	20.0
2,4-Dinitrophenol	Lin1		0.1333	0.0100	2.07	2.00	3.7	20.0
Acenaphthene	Ave	1.013	1.052	0.9000	1.04	1.00	3.9	20.0
4-Nitrophenol	Ave	0.1458	0.1750		2.40	2.00	20.0	20.0
2,4-Dinitrotoluene	Ave	0.3148	0.3280	0.2000	1.04	1.00	4.2	20.0
Dibenzofuran	Ave	1.439	1.489	0.8000	1.03	1.00	3.5	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2138	0.2150	0.0100	1.01	1.00	0.5	20.0
Hexadecane	Ave	0.8258	0.8486		1.03	1.00	2.8	20.0
Diethyl phthalate	Ave	1.148	1.172	0.0100	1.02	1.00	2.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.5141	0.5527	0.4000	1.07	1.00	7.5	20.0
p-Nitroaniline	Ave	0.2050	0.2365	0.0100	1.15	1.00	15.4	20.0
Fluorene	Ave	1.158	1.232	0.9000	1.06	1.00	6.4	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.0955	0.0100	1.72	2.00	-14.1	20.0
Diphenylamine	Ave	0.6281	0.6023		0.816	0.851	-4.1	20.0
N-Nitrosodiphenylamine	Ave	0.5343	0.5124	0.0100	0.959	1.00	-4.1	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.8615	0.8613		1.00	1.00	-0.0	20.0
Azobenzene	Ave	0.8616	0.8613		1.00	1.00	-0.0	20.0
4-Bromophenyl phenyl ether	Ave	0.1859	0.1832	0.1000	0.986	1.00	-1.4	20.0
Atrazine	Ave	0.1833	0.1904	0.0100	2.08	2.00	3.9	20.0
Hexachlorobenzene	Ave	0.1916	0.1710	0.1000	0.892	1.00	-10.8	20.0
n-Octadecane	Ave	0.5679	0.5525		0.973	1.00	-2.7	20.0
Pentachlorophenol	Lin1		0.1091	0.0500	1.75	2.00	-12.7	20.0
Phenanthrene	Ave	1.033	0.9811	0.7000	0.950	1.00	-5.0	20.0
Anthracene	Ave	1.041	1.012	0.7000	0.972	1.00	-2.8	20.0
Carbazole	Ave	0.8088	0.8424	0.0100	1.04	1.00	4.1	20.0
Di-n-butyl phthalate	Ave	1.291	1.243	0.0100	0.963	1.00	-3.7	20.0
Fluoranthene	Ave	0.995	1.077	0.6000	1.08	1.00	8.2	20.0
Benzidine	Lin		0.3500		1.83	2.00	-8.5	20.0
Pyrene	Ave	1.078	1.081	0.6000	1.00	1.00	0.3	20.0
Butyl benzyl phthalate	Ave	0.5291	0.5355	0.0100	1.01	1.00	1.2	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.7006	0.7458	0.0100	1.06	1.00	6.4	20.0
3,3'-Dichlorobenzidine	Ave	0.3068	0.3299	0.0100	2.15	2.00	7.5	20.0
Benzo[a]anthracene	Ave	0.9572	0.9507	0.8000	0.993	1.00	-0.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-64029-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 | Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 | Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) | Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	0.9384	0.9273	0.7000	0.988	1.00	-1.2	20.0
Di-n-octyl phthalate	Lin1		1.676	0.0100	0.993	1.00	-0.7	20.0
Benzo[b]fluoranthene	Ave	1.109	1.152	0.7000	1.04	1.00	3.9	20.0
Benzo[k]fluoranthene	Ave	1.229	1.219	0.7000	0.991	1.00	-0.9	20.0
Benzo[a]pyrene	Ave	1.016	1.108	0.7000	1.09	1.00	9.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.037	1.080	0.5000	1.04	1.00	4.2	20.0
Dibenz(a,h)anthracene	Ave	0.9039	0.9309	0.4000	1.03	1.00	3.0	20.0
Benzo[g,h,i]perylene	Ave	0.8241	0.8666	0.5000	1.05	1.00	5.2	20.0
2-Fluorophenol (Surr)	Ave	1.091	0.7931		0.727	1.00	-27.3*	20.0
Phenol-d5 (Surr)	Ave	1.372	1.353		0.987	1.00	-1.3	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3526	0.4104		1.16	1.00	16.4	20.0
2-Fluorobiphenyl (Surr)	Ave	1.183	1.229		1.04	1.00	3.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1188	0.1125		0.947	1.00	-5.3	20.0
Terphenyl-d14 (Surr)	Ave	0.7498	0.6996		0.933	1.00	-6.7	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: CCVIS
Inject. Date: 06-May-2016 07:16:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-002
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:22:43 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 07:52:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	96	219446	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	868590	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	506583	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	97	844371	400.0	400.0	
* 5 Chrysene-d12	240	13.743	13.743	0.000	97	854403	400.0	400.0	
* 6 Perylene-d12	264	16.143	16.143	0.000	96	654389	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	435092	1000.0	727.2	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	742505	1000.0	986.5	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	891228	1000.0	1164.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.855	8.855	0.000	100	1556150	1000.0	1038.4	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	87	142439	1000.0	946.6	
$ 12 Terphenyl-d14	244	12.267	12.267	0.000	99	1494336	1000.0	933.1	
26 1,4-Dioxane	88	4.526	4.526	0.000	98	185770	1000.0	776.2	
27 N-Nitrosodimethylamine	74	4.761	4.761	0.000	83	449401	1000.0	938.4	
28 Pyridine	79	4.826	4.826	0.000	88	540895	1000.0	804.1	
42 Benzaldehyde	77	6.544	6.544	0.000	93	728253	2000.0	2029.5	
43 Phenol	94	6.561	6.561	0.000	98	817704	1000.0	996.2	
44 Aniline	93	6.626	6.626	0.000	96	1108763	1000.0	960.9	
45 Bis(2-chloroethyl)ether	93	6.644	6.644	0.000	89	857004	1000.0	1049.5	
244 n-Decane	57	6.726	6.726	0.000	92	852731	1000.0	950.0	
47 2-Chlorophenol	128	6.738	6.738	0.000	97	615033	1000.0	920.3	
48 1,3-Dichlorobenzene	146	6.867	6.867	0.000	95	737605	1000.0	921.9	
49 1,4-Dichlorobenzene	146	6.920	6.920	0.000	92	749898	1000.0	924.5	
50 Benzyl alcohol	108	6.979	6.979	0.000	90	447414	1000.0	969.6	
51 1,2-Dichlorobenzene	146	7.049	7.049	0.000	93	680915	1000.0	909.2	
52 2-Methylphenol	108	7.055	7.055	0.000	97	649054	1000.0	1030.1	
54 2,2'-oxybis[1-chloropropan	45	7.085	7.085	0.000	91	1134663	1000.0	925.7	
53 Indene	115	7.120	7.120	0.000	90	2587324	2000.0	1915.2	
55 3 & 4 Methylphenol	108	7.173	7.173	0.000	92	694903	1000.0	1035.6	
57 N-Nitrosodi-n-propylamine	70	7.185	7.185	0.000	91	564395	1000.0	991.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.208	7.208	0.000	93	1008959	1000.0	974.6	
61 Hexachloroethane	117	7.338	7.338	0.000	93	292506	1000.0	973.2	
62 Nitrobenzene	77	7.361	7.361	0.000	91	828132	1000.0	1123.6	
64 Isophorone	82	7.543	7.543	0.000	98	1505130	1000.0	1120.1	
66 2,4-Dimethylphenol	107	7.620	7.620	0.000	96	740666	1000.0	1150.2	
65 2-Nitrophenol	139	7.626	7.626	0.000	92	356644	1000.0	1061.1	
70 Benzoic acid	122	7.673	7.673	0.000	91	822706	2000.0	2217.0	
69 Bis(2-chloroethoxy)methane	93	7.691	7.691	0.000	98	849584	1000.0	1052.1	
72 2,4-Dichlorophenol	162	7.826	7.826	0.000	97	539475	1000.0	1112.8	
73 1,2,4-Trichlorobenzene	180	7.908	7.908	0.000	93	600234	1000.0	1056.4	
74 Naphthalene	128	7.985	7.985	0.000	96	2131698	1000.0	1029.4	
75 4-Chloroaniline	127	7.996	7.996	0.000	96	664490	1000.0	967.8	M
76 2,6-Dichlorophenol	162	8.014	8.014	0.000	94	546955	1000.0	1074.2	
78 Hexachlorobutadiene	225	8.073	8.073	0.000	96	332588	1000.0	1146.9	
83 Caprolactam	113	8.279	8.279	0.000	75	473921	2000.0	2444.1	
85 4-Chloro-3-methylphenol	107	8.379	8.379	0.000	96	634729	1000.0	1192.9	
86 2-Methylnaphthalene	142	8.567	8.567	0.000	92	1364526	1000.0	1019.8	
87 1-Methylnaphthalene	142	8.655	8.655	0.000	93	1282688	1000.0	1017.4	
89 Hexachlorocyclopentadiene	237	8.702	8.702	0.000	96	273252	1000.0	907.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.714	8.714	0.000	99	590576	1000.0	1114.8	
93 2,4,6-Trichlorophenol	196	8.790	8.790	0.000	96	378707	1000.0	1063.0	
94 2,4,5-Trichlorophenol	196	8.832	8.832	0.000	94	369887	1000.0	1020.5	
99 1,1'-Biphenyl	154	8.949	8.949	0.000	95	1729350	1000.0	1028.1	
100 2-Chloronaphthalene	162	8.990	8.990	0.000	99	1239341	1000.0	951.4	
101 2-Nitroaniline	65	9.049	9.049	0.000	78	463584	1000.0	1113.8	
104 Dimethyl phthalate	163	9.167	9.167	0.000	97	1444445	1000.0	1017.5	
103 1,3-Dinitrobenzene	168	9.214	9.214	0.000	82	236290	1000.0	1131.9	
106 2,6-Dinitrotoluene	165	9.232	9.232	0.000	88	325076	1000.0	1038.5	
108 Acenaphthylene	152	9.355	9.355	0.000	98	2053667	1000.0	1043.3	
109 3-Nitroaniline	138	9.402	9.402	0.000	91	145579	1000.0	792.5	
110 2,4-Dinitrophenol	184	9.485	9.485	0.000	85	337738	2000.0	2074.0	
111 Acenaphthene	153	9.496	9.496	0.000	95	1332517	1000.0	1038.8	
112 4-Nitrophenol	109	9.502	9.502	0.000	96	443194	2000.0	2401.0	
113 2,4-Dinitrotoluene	165	9.590	9.590	0.000	87	415361	1000.0	1042.0	
115 Dibenzofuran	168	9.643	9.643	0.000	96	1886042	1000.0	1034.7	
118 2,3,4,6-Tetrachlorophenol	232	9.737	9.737	0.000	80	272236	1000.0	1005.4	
248 Hexadecane	57	9.755	9.755	0.000	72	1074729	1000.0	1027.6	
120 Diethyl phthalate	149	9.761	9.761	0.000	97	1484393	1000.0	1021.0	
122 4-Chlorophenyl phenyl ethe	204	9.902	9.902	0.000	97	699902	1000.0	1074.9	
125 4-Nitroaniline	138	9.926	9.926	0.000	82	299538	1000.0	1153.7	
124 Fluorene	166	9.943	9.943	0.000	96	1560492	1000.0	1063.8	
127 4,6-Dinitro-2-methylphenol	198	9.949	9.949	0.000	76	403344	2000.0	1718.6	
128 N-Nitrosodiphenylamine	169	10.002	10.002	0.000	64	1081530	1000.0	958.9	
129 Diphenylamine	169	10.002	10.002	0.000	94	1081530	850.7	815.8	
131 Azobenzene	77	10.043	10.043	0.000	99	1818151	1000.0	999.7	
130 1,2-Diphenylhydrazine	77	10.043	10.043	0.000	98	1818151	1000.0	999.7	
138 4-Bromophenyl phenyl ether	248	10.332	10.332	0.000	75	386779	1000.0	985.8	
141 Atrazine	200	10.420	10.420	0.000	94	803938	2000.0	2077.8	
140 Hexachlorobenzene	284	10.437	10.437	0.000	92	360870	1000.0	892.3	
245 n-Octadecane	57	10.543	10.543	0.000	92	1166234	1000.0	972.8	
143 Pentachlorophenol	266	10.590	10.590	0.000	89	460601	2000.0	1745.3	
148 Phenanthrene	178	10.784	10.784	0.000	98	2070996	1000.0	950.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.826	10.826	0.000	98	2135346	1000.0	971.9	
150 Carbazole	167	10.943	10.943	0.000	96	1778132	1000.0	1041.5	
154 Di-n-butyl phthalate	149	11.167	11.167	0.000	100	2623988	1000.0	963.1	
159 Fluoranthene	202	11.914	11.914	0.000	98	2272890	1000.0	1082.0	
160 Benzidine	184	11.996	11.996	0.000	99	1495123	2000.0	1830.4	
161 Pyrene	202	12.173	12.173	0.000	97	2308048	1000.0	1002.6	
169 Butyl benzyl phthalate	149	12.808	12.808	0.000	97	1143800	1000.0	1012.1	
174 Bis(2-ethylhexyl) phthalat	149	13.584	13.584	0.000	97	1593029	1000.0	1064.4	
177 3,3'-Dichlorobenzidine	252	13.625	13.625	0.000	75	1409380	2000.0	2150.9	
178 Benzo[a]anthracene	228	13.725	13.725	0.000	99	2030631	1000.0	993.2	
179 Chrysene	228	13.784	13.784	0.000	98	1980731	1000.0	988.2	
181 Di-n-octyl phthalate	149	14.614	14.614	0.000	99	2742636	1000.0	993.4	
183 Benzo[b]fluoranthene	252	15.478	15.478	0.000	98	1883976	1000.0	1038.7	
184 Benzo[k]fluoranthene	252	15.519	15.519	0.000	99	1993731	1000.0	991.4	
185 Benzo[a]pyrene	252	16.049	16.049	0.000	81	1812611	1000.0	1090.1	
190 Indeno[1,2,3-cd]pyrene	276	18.331	18.331	0.000	98	1767212	1000.0	1041.7	
189 Dibenz(a,h)anthracene	278	18.337	18.337	0.000	90	1522895	1000.0	1029.8	
191 Benzo[g,h,i]perylene	276	18.990	18.990	0.000	95	1417658	1000.0	1051.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L6 W_00007 Amount Added: 0.10 Units: mL

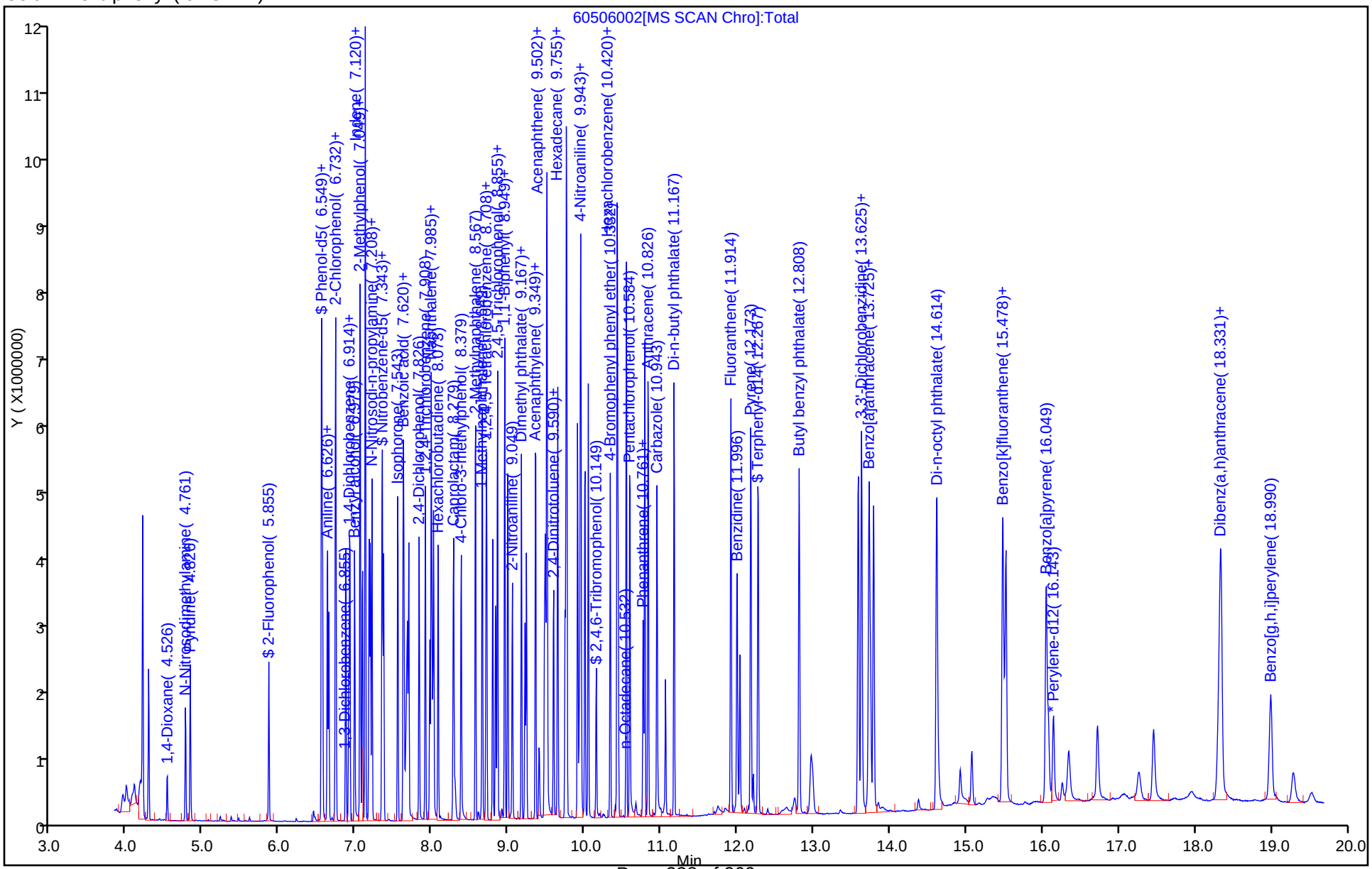
Report Date: 16-May-2016 11:23:02 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D

Injection Date:	06-May-2016 07:16:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l1lvi			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

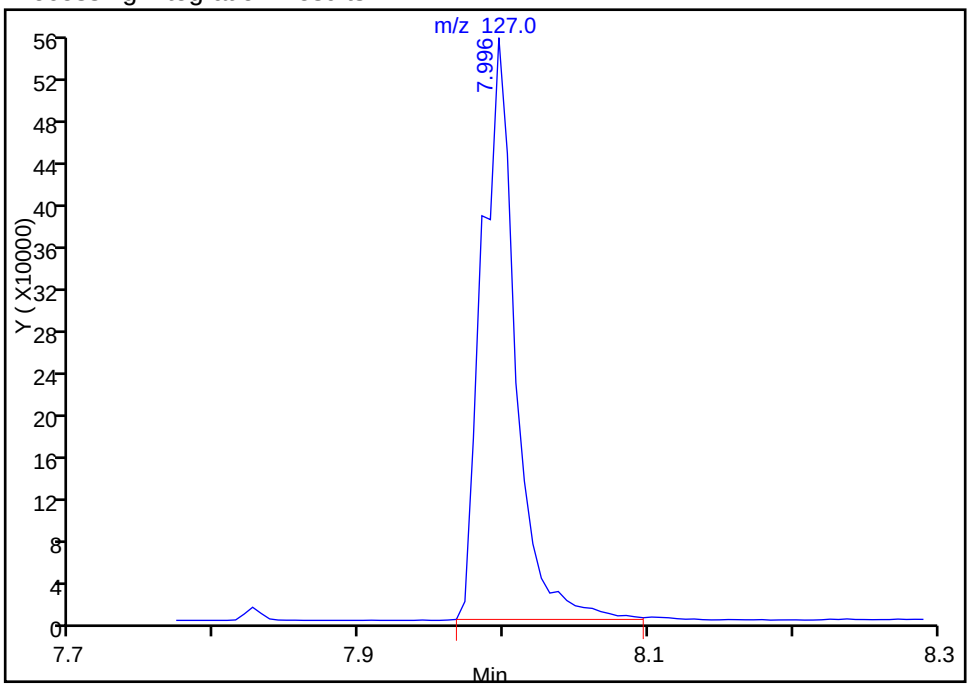
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D
Injection Date: 06-May-2016 07:16:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

75 4-Chloroaniline, CAS: 106-47-8

Signal: 1

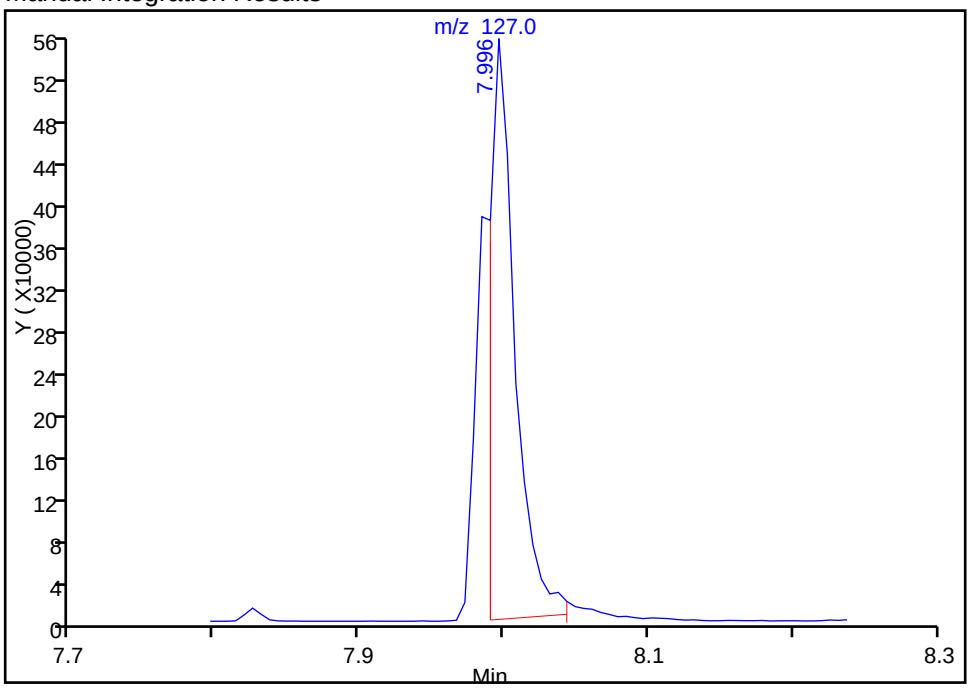
Processing Integration Results

RT: 8.00
Area: 898029
Amount: 1307.8751
Amount Units: ng/ml



Manual Integration Results

RT: 8.00
Area: 664490
Amount: 967.7526
Amount Units: ng/ml



Reviewer: hulat, 06-May-2016 07:52:57
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 06-May-2016 06:58:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:22:19 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 07:17:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.585	10.585	0.000	89	836989	NR	NR	
160 Benzidine	184	11.990	11.990	0.000	99	5352712	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.196	12.196	0.000	66	4909		NR	
166 4,4'-DDD	235	12.596	12.596	0.000	94	62875		NR	
171 4,4'-DDT	235	12.996	12.996	0.000	98	3167023	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

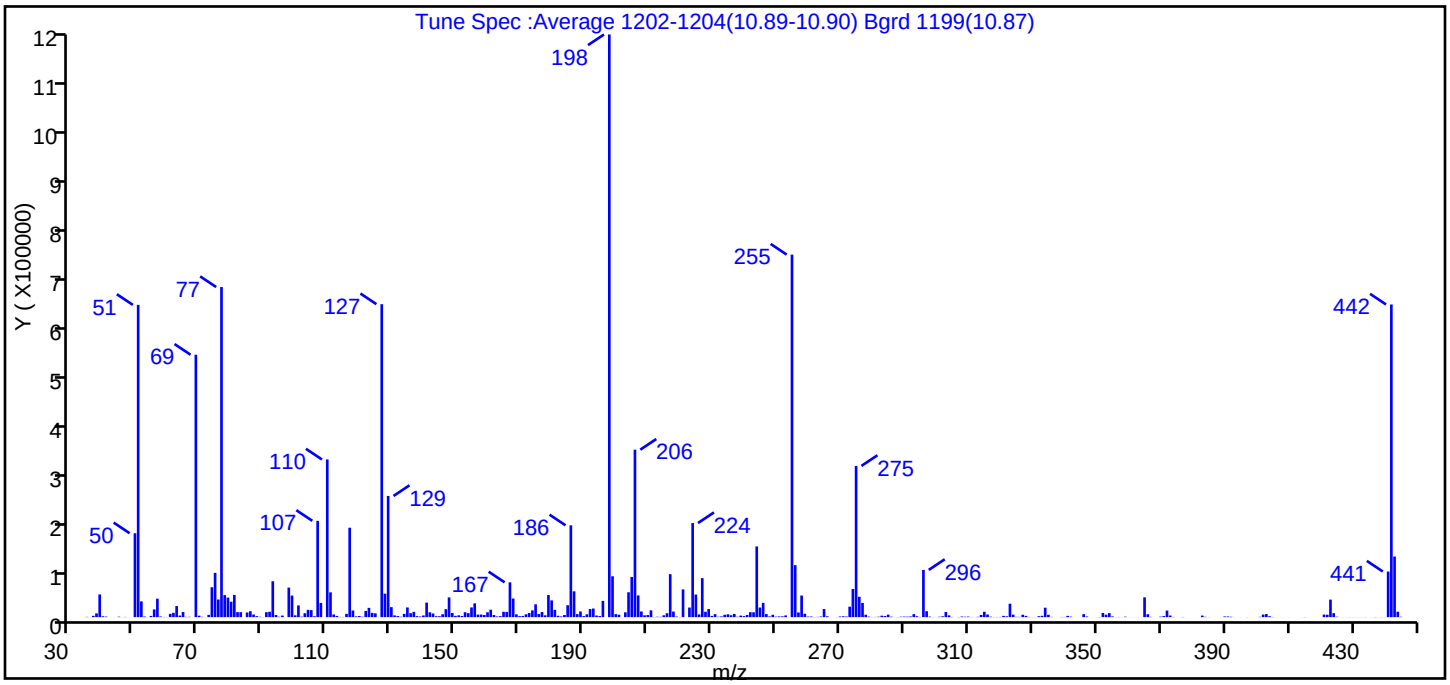
SMDFTPPW_00011 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	53.6
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	45.0
70	Less than 2.0 percent of mass 69	0.2 (0.6)
127	25.0 - 75.0 percent of mass 198	53.7
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	7.0
275	10.0 - 30.0 percent of mass 198	26.0
365	Greater than 0.75 percent of mass 198	3.4
441	Present but less than mass 443	7.8 (75.2)
442	40.0 - 110.0 percent of mass 198	53.7
443	15.0 - 24.0 percent of mass 442	10.4 (19.4)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	484	136.00	7539	230.00	2392	323.00	25368
37.00	2500	137.00	10003	231.00	5673	324.00	4748
38.00	7147	138.00	1914	232.00	768	325.00	573
39.00	42920	139.00	1279	233.00	1406	326.00	528
40.00	1618	140.00	3158	234.00	4427	327.00	4571
41.00	1030	141.00	27480	235.00	5379	328.00	2410
45.00	866	142.00	9158	236.00	3592	329.00	447
46.00	163	143.00	6902	237.00	6029	330.00	207
47.00	402	144.00	1803	238.00	773	331.00	148
48.00	67	145.00	1773	239.00	2919	332.00	1778
50.00	158592	146.00	5497	240.00	1989	333.00	2546
51.00	590208	147.00	15083	241.00	4133	334.00	17864
52.00	29800	148.00	37336	242.00	9384	335.00	4415
53.00	1170	149.00	7890	243.00	9214	336.00	469
54.00	189	150.00	2468	244.00	133632	339.00	326
55.00	2293	151.00	3432	245.00	18208	340.00	372
56.00	14610	152.00	2229	246.00	27032	341.00	2403
57.00	34904	153.00	9301	247.00	5807	342.00	952
58.00	1263	154.00	7505	248.00	1386	346.00	5607
59.00	364	155.00	18360	249.00	4472	347.00	1185
60.00	217	156.00	26104	250.00	950	348.00	52
61.00	6231	157.00	4801	251.00	1331	350.00	134
62.00	8102	158.00	4927	252.00	1525	351.00	385
63.00	20936	159.00	4067	253.00	3203	352.00	7889
64.00	2979	160.00	9264	255.00	685248	353.00	4650
65.00	9610	161.00	14046	256.00	98304	354.00	7601
66.00	570	162.00	3955	257.00	8813	355.00	1345
67.00	645	163.00	1318	258.00	40816	356.00	163
69.00	496000	164.00	1842	259.00	6401	357.00	174
70.00	2746	165.00	10159	260.00	1127	358.00	109
71.00	607	166.00	9881	261.00	1137	359.00	866
72.00	153	167.00	65760	262.00	298	360.00	75
73.00	4243	168.00	35224	263.00	478	361.00	120

Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	56544	169.00	5330	264.00	1199	362.00	76
75.00	83704	170.00	1949	265.00	15313	363.00	65
76.00	33344	171.00	2286	266.00	1586	365.00	37392
77.00	623936	172.00	5407	267.00	49	366.00	5509
78.00	41680	173.00	7721	268.00	30	367.00	528
79.00	37024	174.00	12769	269.00	203	370.00	963
80.00	29160	175.00	24256	270.00	1245	371.00	2004
81.00	42016	176.00	5889	271.00	1591	372.00	12421
82.00	9544	177.00	9703	272.00	1160	373.00	3073
83.00	9443	178.00	3455	273.00	19776	374.00	398
85.00	8813	179.00	41816	274.00	53232	377.00	345
86.00	11201	180.00	31664	275.00	285824	383.00	2965
87.00	4998	181.00	13769	276.00	38496	384.00	606
88.00	1881	182.00	2585	277.00	26888	385.00	171
89.00	705	183.00	1310	278.00	4567	389.00	57
90.00	212	184.00	4047	279.00	1031	390.00	1308
91.00	9368	185.00	22592	280.00	215	391.00	1208
92.00	10251	186.00	173568	281.00	363	392.00	755
93.00	67880	187.00	48824	282.00	741	393.00	133
94.00	3956	188.00	5745	283.00	2751	395.00	94
95.00	749	189.00	10745	284.00	2185	397.00	199
96.00	2990	190.00	2008	285.00	4716	401.00	644
98.00	55816	191.00	5382	286.00	916	402.00	4942
99.00	40752	192.00	15240	287.00	149	403.00	5833
100.00	3417	193.00	16306	288.00	278	404.00	1772
101.00	22192	194.00	3061	289.00	816	405.00	357
102.00	914	195.00	2087	290.00	1056	408.00	60
103.00	7407	196.00	30784	291.00	956	410.00	105
104.00	13748	198.00	1101312	292.00	1274	414.00	75
105.00	13308	199.00	77264	293.00	5684	415.00	261
106.00	1744	200.00	5648	294.00	1691	416.00	65
107.00	182016	201.00	4627	295.00	357	421.00	4887
108.00	26840	203.00	9120	296.00	89240	422.00	4567
110.00	298048	204.00	47016	297.00	11180	423.00	33168

Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	46872	205.00	75984	298.00	986	424.00	7476
112.00	5100	206.00	316544	299.00	220	425.00	758
113.00	2270	207.00	41104	300.00	97	426.00	52
114.00	411	208.00	10691	301.00	799	427.00	122
115.00	395	209.00	3432	302.00	1563	428.00	102
116.00	6204	210.00	3976	303.00	9655	429.00	196
117.00	169024	211.00	12865	304.00	3287	430.00	189
118.00	12530	212.00	365	305.00	410	431.00	186
119.00	1475	213.00	733	307.00	328	432.00	161
120.00	2092	214.00	555	308.00	1153	433.00	121
121.00	751	215.00	3525	309.00	808	434.00	214
122.00	11742	216.00	7349	310.00	1035	435.00	57
123.00	17560	217.00	81224	311.00	242	436.00	148
124.00	8138	218.00	10579	312.00	198	437.00	315
125.00	7230	219.00	1063	313.00	665	438.00	138
127.00	591552	220.00	295	314.00	4230	439.00	184
128.00	44376	221.00	52440	315.00	10127	440.00	178
129.00	229056	223.00	18152	316.00	5017	441.00	86200
130.00	18896	224.00	177856	317.00	852	442.00	590976
131.00	3348	225.00	42672	318.00	208	443.00	114576
132.00	2061	226.00	5039	319.00	336	444.00	10313
133.00	720	227.00	73776	320.00	411	445.00	671
134.00	6146	228.00	10182	321.00	2388		
135.00	18312	229.00	15273	322.00	1547		

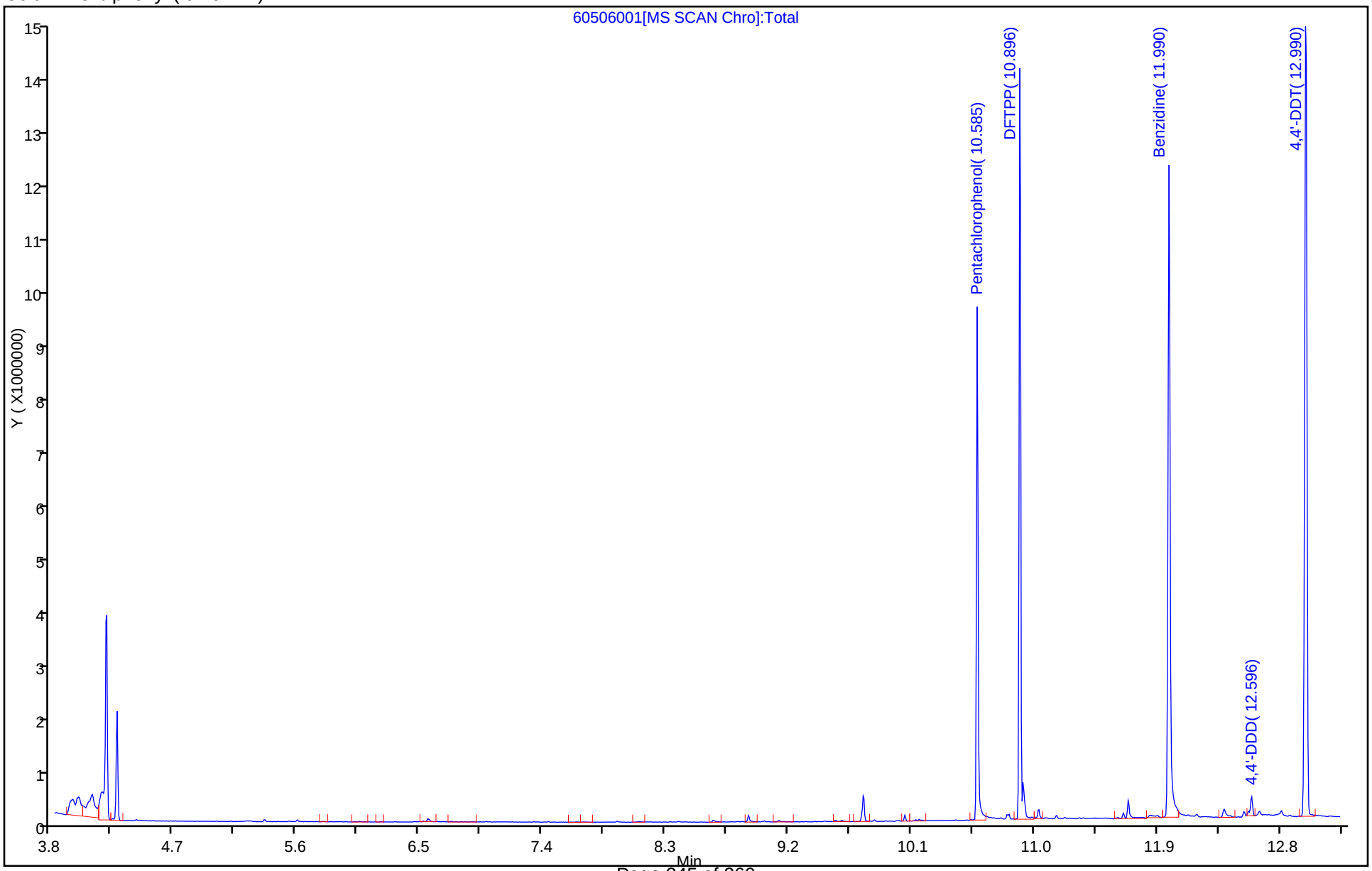
Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D

Injection Date:	06-May-2016 06:58:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

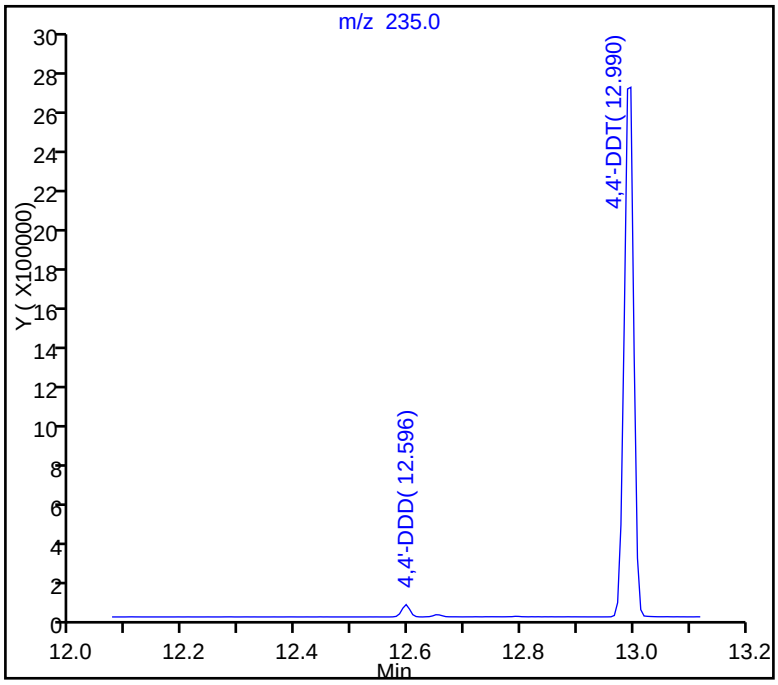


Breakdown Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D				
Injection Date:	06-May-2016 06:58:30	Instrument ID:	A4AG2		
Lims ID:	dftpp				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 3167023
166 4,4'-DDD, Area = 62875
167 4,4'-DDE, Area = 4909

%Breakdown: 2.10%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

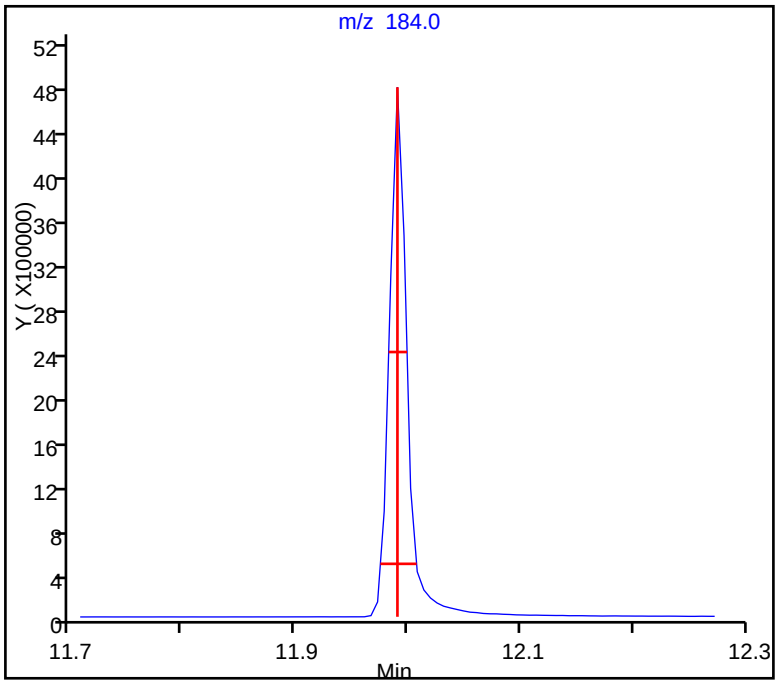
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

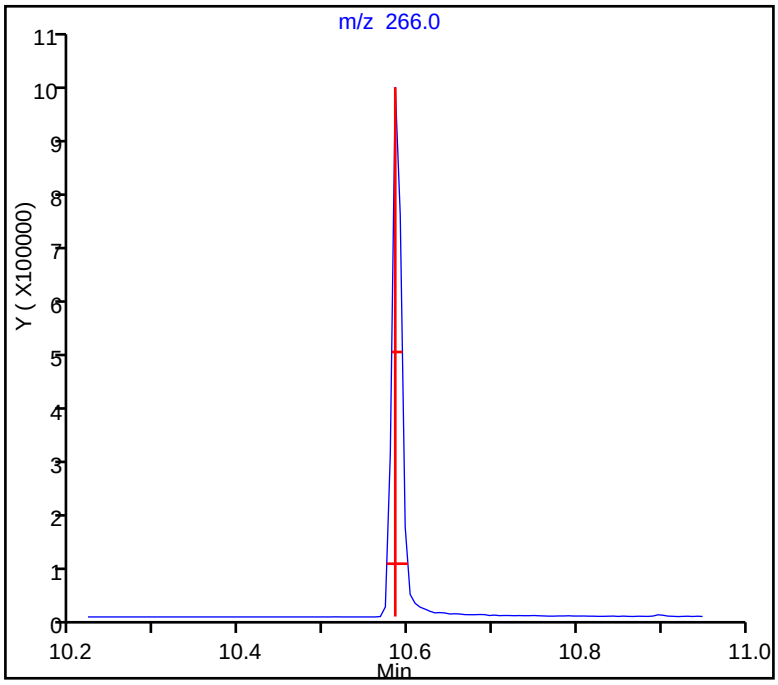
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.015 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.5, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64029-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-227942/15-A

Matrix: Water | Lab File ID: 60504007.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/28/2016 09:19

Sample wt/vol: 250(mL) | Date Analyzed: 05/04/2016 09:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 228727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
100-01-6	p-Nitroaniline	<2.0		2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	70		29-110
367-12-4	2-Fluorophenol (Surr)	51		15-110
118-79-6	2,4,6-Tribromophenol (Surr)	62		21-128
4165-60-0	Nitrobenzene-d5 (Surr)	75		31-110
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	72		31-115

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\60504007.D
Lims ID: MB 240-227942/15-A
Client ID:
Sample Type: MB
Inject. Date: 04-May-2016 09:35:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054123-007
Misc. Info.: MB 240-227942/15-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 04-May-2016 13:06:14 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: hulat Date: 04-May-2016 10:27:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.864	6.864	0.000	97	244591	400.0	400.0	
* 2 Naphthalene-d8	136	7.929	7.929	0.000	100	1057368	400.0	400.0	
* 3 Acenaphthene-d10	164	9.429	9.429	0.000	92	602666	400.0	400.0	
* 4 Phenanthrene-d10	188	10.717	10.723	-0.006	97	1084908	400.0	400.0	
* 5 Chrysene-d12	240	13.664	13.675	-0.011	97	995538	400.0	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	96	688887	400.0	400.0	
$ 7 2-Fluorophenol	112	5.799	5.805	-0.006	94	541940	1600.0	812.7	
$ 8 Phenol-d5	99	6.505	6.505	0.000	97	687161	1600.0	819.1	
$ 9 Nitrobenzene-d5	82	7.305	7.305	0.000	93	1111529	1600.0	1192.6	
$ 10 2-Fluorobiphenyl (Surr)	172	8.817	8.817	0.000	100	1983611	1600.0	1112.6	
$ 11 2,4,6-Tribromophenol	330	10.105	10.111	-0.006	83	177009	1600.0	988.7	
$ 12 Terphenyl-d14	244	12.211	12.217	-0.006	98	2141541	1600.0	1147.6	
264 2-Ethoxyethanol	59		3.362					ND	
22 Dimethylformamide	73	4.158	4.255	-0.097	57	3047130			NC
29 Ethyl methacrylate	69	4.311	4.340	-0.029	85	2675			NC
26 1,4-Dioxane	88		4.423					ND	
30 3-Chloropropionitrile	54		4.597					ND	
27 N-Nitrosodimethylamine	74		4.676					ND	
28 Pyridine	79		4.735					ND	
33 Malononitrile	66		5.046					ND	
35 3-Picoline	93		5.046					ND	
233 n,n'-Dimethylacetamide	44	5.023	5.052	-0.029	1	2662			NC
31 2-Picoline	93		5.414					ND	
32 N-Nitrosomethylethylamine	88		5.473					ND	
14 Acrylamide	71		5.632					ND	
34 Methyl methanesulfonate	80		5.697					ND	
38 2-Methylcyclohexanone	68	5.799	5.779	0.020	33	9947			NC
39 3-Methylcyclohexanone	69	5.799	5.806	-0.007	37	7883			NC
40 4-Methylcyclohexanone	55	5.858	5.849	0.009	50	820			NC
36 N-Nitrosodiethylamine	102		6.026					ND	
41 Phenylmercaptan	110		6.194					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
37 Ethyl methanesulfonate	79		6.232					ND	
232 1-Methyl-2-pyrrilidinone	99	6.405	6.330	0.075	0	54			NC
286 4-Methyl-1-cyclohexanemeth	55	6.558	6.490	0.068	0	544			NC
42 Benzaldehyde	77		6.505					ND	
43 Phenol	94		6.517					ND	
44 Aniline	93		6.582					ND	
45 Bis(2-chloroethyl)ether	93		6.605					ND	
287 4-Methyl-1-cyclohexanemeth	55	6.635	6.624	0.011	0	443			NC
46 Pentachloroethane	167		6.691					ND	
244 n-Decane	57		6.694					ND	
47 2-Chlorophenol	128		6.694					ND	
48 1,3-Dichlorobenzene	146		6.823					ND	
49 1,4-Dichlorobenzene	146		6.876					ND	
50 Benzyl alcohol	108		6.941					ND	
67 1,3,5-Trichlorobenzene	180		6.988					ND	
51 1,2-Dichlorobenzene	146		7.011					ND	
52 2-Methylphenol	108		7.017					ND	
54 2,2'-oxybis[1-chloropropan	45		7.046					ND	
53 Indene	115		7.082					ND	
55 3 & 4 Methylphenol	108		7.135					ND	
57 N-Nitrosodi-n-propylamine	70		7.152					ND	
58 Acetophenone	105		7.170					ND	
56 N-Nitrosopyrrolidine	100		7.185					ND	
24 Catechol	110		7.191					ND	
59 N-Nitrosomorpholine	56		7.208					ND	
60 2-Toluidine	106		7.249					ND	
61 Hexachloroethane	117		7.299					ND	
62 Nitrobenzene	77		7.323					ND	
79 1,2,3-Trichlorobenzene	180		7.443					ND	
63 N-Nitrosopiperidine	114		7.491					ND	
64 Isophorone	82		7.511					ND	
80 Benzothiazole	135		7.533					ND	
15 3-Methylcatechol	124	7.593	7.555	0.038	26	141			NC
66 2,4-Dimethylphenol	107		7.582					ND	
65 2-Nitrophenol	139		7.594					ND	
70 Benzoic acid	122		7.629					ND	
69 Bis(2-chloroethoxy)methane	93		7.652					ND	
68 o,o',o''-Triethylphosphoro	198		7.673					ND	
18 4-Methylcatechol	124	7.593	7.694	-0.101	16	141			NC
72 2,4-Dichlorophenol	162		7.788					ND	
71 alpha,alpha-Dimethyl phene	58		7.796					ND	
73 1,2,4-Trichlorobenzene	180		7.870					ND	
74 Naphthalene	128		7.946					ND	
75 4-Chloroaniline	127		7.958					ND	
76 2,6-Dichlorophenol	162		7.982					ND	
88 1,2,3,5-Tetrachlorobenzene	216		8.026					ND	
78 Hexachlorobutadiene	225		8.041					ND	
77 Hexachloropropene	213		8.073					ND	
83 Caprolactam	113		8.241					ND	
97 2,4-Toluene diamine	121		8.261					ND	
82 N-Nitrosodi-n-butylamine	84		8.261					ND	
81 Quinoline	129		8.267					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
98 1,2,3,4 -Tetrachlorobenzen	216		8.282					ND	
84 p-Phenylene diamine	108		8.296					ND	
96 3,4-Dichloronitrobenzene	109		8.309					ND	
85 4-Chloro-3-methylphenol	107		8.341					ND	
192 Phenyl ether	170		8.373					ND	
92 Safrole, Total	162		8.467					ND	
86 2-Methylnaphthalene	142		8.529					ND	
87 1-Methylnaphthalene	142		8.617					ND	
107 1,2-Dinitrobenzene	168		8.625					ND	
89 Hexachlorocyclopentadiene	237		8.664					ND	
90 1,2,4,5-Tetrachlorobenzene	216		8.676					ND	
95 Isosafrole Peak 1	162		8.714					ND	
93 2,4,6-Trichlorophenol	196		8.752					ND	
94 2,4,5-Trichlorophenol	196		8.793					ND	
91 Isosafrole Peak 2	162		8.908					ND	
99 1,1'-Biphenyl	154		8.911					ND	
100 2-Chloronaphthalene	162		8.952					ND	
101 2-Nitroaniline	65		9.011					ND	
247 1-Chloronaphthalene	162		9.026					ND	
104 Dimethyl phthalate	163		9.129					ND	
102 1,4-Naphthoquinone	158		9.132					ND	
105 1,4-Dinitrobenzene	168		9.149					ND	
103 1,3-Dinitrobenzene	168		9.176					ND	
106 2,6-Dinitrotoluene	165		9.193					ND	
126 Tributyl phosphate	99		9.277					ND	
108 Acenaphthylene	152		9.311					ND	
109 3-Nitroaniline	138		9.358					ND	
110 2,4-Dinitrophenol	184		9.440					ND	
111 Acenaphthene	153		9.458					ND	
112 4-Nitrophenol	109		9.464					ND	
113 2,4-Dinitrotoluene	165		9.546					ND	
115 Dibenzofuran	168		9.605					ND	
114 Pentachlorobenzene	250		9.632					ND	
118 2,3,4,6-Tetrachlorophenol	232		9.699					ND	
117 1-Naphthylamine	143		9.714					ND	
116 2,3,5,6-Tetrachlorophenol	232		9.714					ND	
248 Hexadecane	57		9.717					ND	
120 Diethyl phthalate	149		9.723					ND	
119 2-Naphthylamine	143		9.779					ND	
121 Thionazin	97		9.855					ND	
122 4-Chlorophenyl phenyl ethe	204		9.864					ND	
125 4-Nitroaniline	138		9.882					ND	
124 Fluorene	166		9.899					ND	
127 4,6-Dinitro-2-methylphenol	198		9.911					ND	
123 N-Nitro-o-toluidine	152		9.932					ND	
128 N-Nitrosodiphenylamine	169		9.958					ND	
129 Diphenylamine	169		9.958					ND	
130 1,2-Diphenylhydrazine	77		10.005					ND	
131 Azobenzene	77		10.005					ND	
132 Sulfotepp	202		10.102					ND	
133 1,3,5-Trinitrobenzene	213		10.196					ND	
135 Phenacetin	108		10.243					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
134 Diallate Peak 1	86		10.249					ND	
136 Phorate	121		10.255					ND	
138 4-Bromophenyl phenyl ether	248		10.293					ND	
137 Diallate Peak 2	86		10.332					ND	
141 Atrazine	200		10.382					ND	
140 Hexachlorobenzene	284		10.393					ND	
139 Dimethoate	87		10.408					ND	
245 n-Octadecane	57		10.505					ND	
153 Diphenylsulfone	125		10.513					ND	
143 Pentachlorophenol	266		10.546					ND	
142 4-Aminobiphenyl	169		10.567					ND	
144 Pronamide	173		10.584					ND	
145 Pentachloronitrobenzene	237		10.614					ND	
146 Disulfoton	88		10.702					ND	
147 Dinoseb	211		10.720					ND	
148 Phenanthrene	178		10.740					ND	
149 Anthracene	178		10.787					ND	
150 Carbazole	167		10.899					ND	
152 Methyl parathion	109		11.043					ND	
154 Di-n-butyl phthalate	149		11.129					ND	
155 Ethyl Parathion	97		11.384					ND	
156 4-Nitroquinoline-1-oxide	190		11.467					ND	
157 Methapyrilene	58		11.502					ND	
158 Isodrin	66		11.778					ND	
159 Fluoranthene	202		11.864					ND	
160 Benzidine	184		11.940					ND	
161 Pyrene	202		12.123					ND	
162 Aramite Peak 1	185		12.202					ND	
163 Aramite Peak 2	185		12.284					ND	
164 p-Dimethylamino azobenzene	225		12.443					ND	
165 Chlorobenzilate	139		12.478					ND	
173 3,3'-Dimethoxybenzidine	244		12.524					ND	
176 Hexabromobenzene	232		12.668					ND	
169 Butyl benzyl phthalate	149		12.752					ND	
168 Famphur	218		12.784					ND	
170 3,3'-Dimethylbenzidine	212		12.861					ND	
172 2-Acetylaminofluorene	181		13.220					ND	
174 Bis(2-ethylhexyl) phthalat	149	13.517	13.523	-0.007	97	98710		56.6	
177 3,3'-Dichlorobenzidine	252		13.558					ND	
175 4,4'-Methylene bis(2-chlor	231		13.631					ND	
178 Benzo[a]anthracene	228		13.658					ND	
179 Chrysene	228		13.717					ND	
180 6-Methylchrysene	242		14.514					ND	
181 Di-n-octyl phthalate	149		14.546					ND	
183 Benzo[b]fluoranthene	252		15.393					ND	
184 Benzo[k]fluoranthene	252		15.434					ND	
182 7,12-Dimethylbenz(a)anthra	256		15.472					ND	
185 Benzo[a]pyrene	252		15.958					ND	
187 Dibenz[a,j]acridine	279		16.129					ND	
186 3-Methylcholanthrene	268		16.696					ND	
188 Dibenz[a,h]acridine	279		17.808					ND	
190 Indeno[1,2,3-cd]pyrene	276		18.199					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
189 Dibenz(a,h)anthracene	278		18.205					ND	
191 Benzo[g,h,i]perylene	276		18.840					ND	
283 3,4-Dichloroaniline	1		0.000					ND	
25 2,3-Dichlorophenol	1		0.000					ND	
250 gamma-BHC (Lindane)	1		0.000					ND	
259 Aldrin	1		0.000					ND	
269 2,6-Diaminotoluene	1		0.000					ND	
253 Chlorobenzene	112		0.000					ND	
19 2,5-Dichlorophenol	1		0.000					ND	
271 Endrin	1		0.000					ND	
272 Dibenzo[a,e]pyrene	1		0.000					ND	
285 Chlorobenzene TIC	1		0.000					ND	
254 Endrin aldehyde	1		0.000					ND	
13 Bis(2-hydroxyphenyl)methan	1		0.000					ND	
266 alpha-BHC	1		0.000					ND	
252 4-tert-Butylphenol	1		0.000					ND	
279 Chlordane (technical)	1		0.000					ND	
277 Dibenz(a,i)pyrene	1		0.000					ND	
290 1-Phenoxy-2-propanol	1		0.000					ND	
267 Dibenzo[a,h]pyrene	1		0.000					ND	
281 delta-BHC	1		0.000					ND	
265 Heptachlor epoxide	1		0.000					ND	
278 Dieldrin	1		0.000					ND	
280 Chlorpyrifos	1		0.000					ND	
258 Endosulfan I	1		0.000					ND	
255 2-Chloroaniline	1		0.000					ND	
262 Endosulfan II	1		0.000					ND	
270 Hexachlorophene	196		0.000					ND	
275 2,3-Dinitrotoluene	1		0.000					ND	
256 beta-BHC	1		0.000					ND	
284 2,3,7,8-TCDD TIC	1		0.000					ND	
263 Isoquinoline	1		0.000					ND	
260 o-Phenylphenol	1		0.000					ND	
17 Bis(4-hydroxyphenyl)methan	1		0.000					ND	
16 Octachlorocyclopentene	1		0.000					ND	
282 Kepone	272		0.000					ND	
276 3 & 4 Chlorophenol	1		0.000					ND	
274 3 & 4 Phenoxyphenol	1		0.000					ND	
261 Methoxychlor	1		0.000					ND	
257 Chloroacetophenone	1		0.000					ND	
273 Toxaphene	1		0.000					ND	
268 Heptachlor	1		0.000					ND	
251 Endosulfan sulfate	1		0.000					ND	
S 194 Isosafrole	162		5.181					ND	
S 195 Diallate	86		6.385					ND	
S 196 Aramite, Total	185		7.898					ND	
S 246 Total Cresols	100		0.000					ND	
S 193 Methyl Phenols,Total	100		0.000					ND	
S 288 4-Methyl-1-cyclohexanemeth	1		0.000					ND	
T 201 Kepone TIC	272		8.281					ND	
T 21 2,3,7,8-TCDD	322		8.500					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
T 200 Hexamethylphosphoramide TI	44		0.000					ND	
T 236 4-isopropylphenol TIC	1		0.000					ND	
T 197 Hydroquinone TIC	110		0.000					ND	
T 289 1-Phenoxy-2-propanol TIC	1		0.000					ND	
T 249 4-Chlorophenol TIC	1		0.000					ND	
T 198 Octadecane (TIC)	57		0.000					ND	
T 239 2,3,7,8 TCDF TIC	1		0.000					ND	
T 240 3-isopropylphenol TIC	1		0.000					ND	
T 241 Tricresyl phosphate TIC	1		0.000					ND	
T 237 Tris(2,3-dibromopropyl)pho	1		0.000					ND	
T 238 Trimethyl phosphate TIC	1		0.000					ND	
T 242 Triphenyl Phosphate TIC	1		0.000					ND	
T 243 3-(1,1-Dimethylethyl Pheno	1		0.000					ND	
T 234 2-Isopropylphenol TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

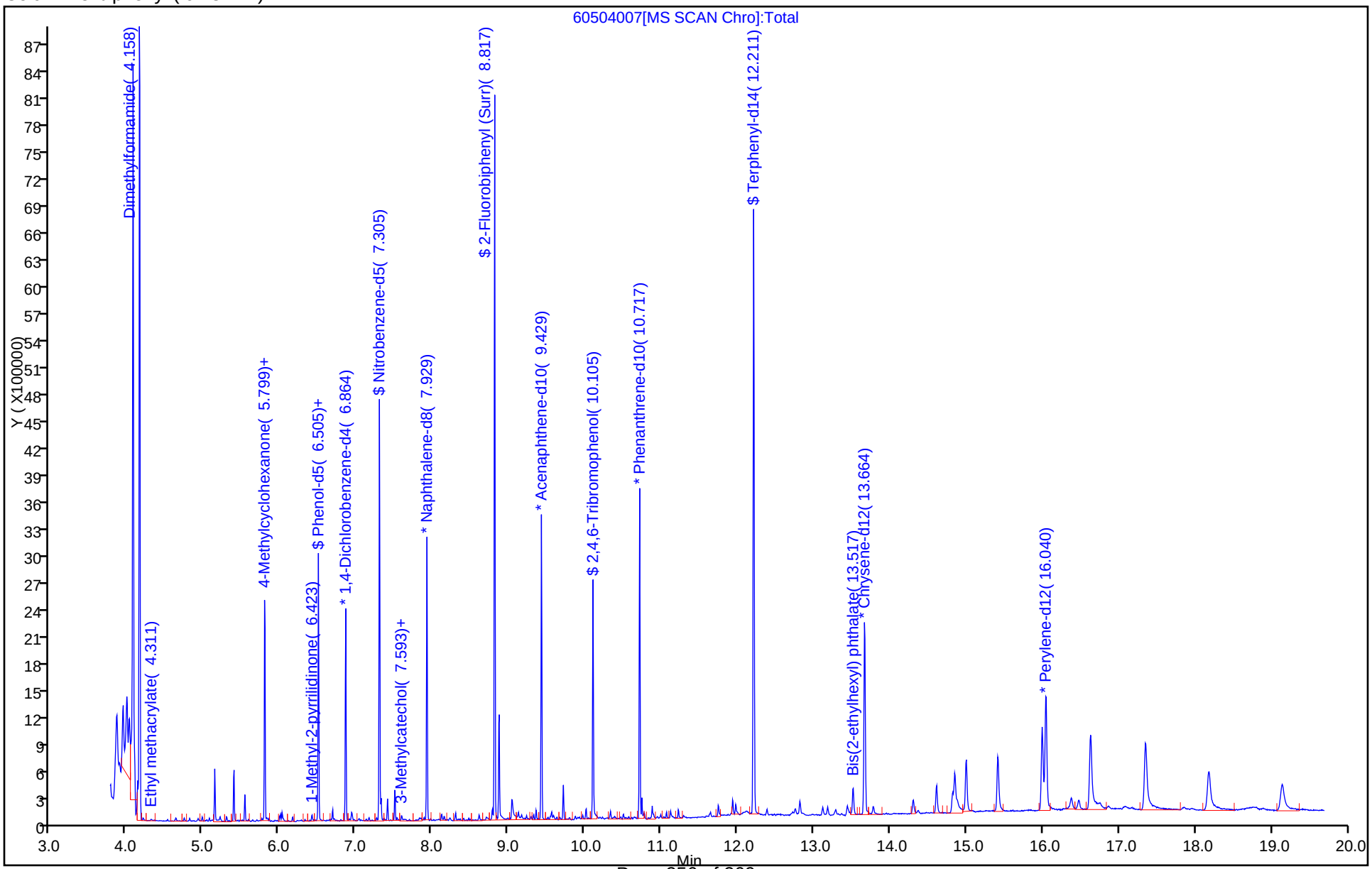
Report Date: 04-May-2016 13:07:46 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\60504007.D

Injection Date:	04-May-2016 09:35:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	MB 240-227942/15-A			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64029-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-227942/16-A

Matrix: Water | Lab File ID: 60504008.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/28/2016 09:19

Sample wt/vol: 250(mL) | Date Analyzed: 05/04/2016 10:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 228727 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL
100-01-6	p-Nitroaniline	36.3		2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	86		29-110
367-12-4	2-Fluorophenol (Surr)	77		15-110
118-79-6	2,4,6-Tribromophenol (Surr)	87		21-128
4165-60-0	Nitrobenzene-d5 (Surr)	97		31-110
4165-62-2	Phenol-d5 (Surr)	58		10-110
1718-51-0	Terphenyl-d14 (Surr)	80		31-115

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\60504008.D
Lims ID: LCS 240-227942/16-A
Client ID:
Sample Type: LCS
Inject. Date: 04-May-2016 10:00:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054123-008
Misc. Info.: LCS 240-227942/16-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 04-May-2016 13:06:14 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: hulat Date: 04-May-2016 10:58:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.864	6.864	0.000	97	212120	400.0	400.0	
* 2 Naphthalene-d8	136	7.929	7.929	0.000	100	859924	400.0	400.0	
* 3 Acenaphthene-d10	164	9.429	9.429	0.000	93	486602	400.0	400.0	
* 4 Phenanthrene-d10	188	10.717	10.723	-0.006	97	839605	400.0	400.0	
* 5 Chrysene-d12	240	13.670	13.675	-0.005	97	854430	400.0	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	96	572986	400.0	400.0	
$ 7 2-Fluorophenol	112	5.799	5.805	-0.006	94	711050	1600.0	1229.5	
$ 8 Phenol-d5	99	6.505	6.505	0.000	97	679935	1600.0	934.6	
$ 9 Nitrobenzene-d5	82	7.305	7.305	0.000	92	1182495	1600.0	1560.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.817	8.817	0.000	100	1990579	1600.0	1382.8	
$ 11 2,4,6-Tribromophenol	330	10.105	10.111	-0.006	84	202305	1600.0	1399.6	
$ 12 Terphenyl-d14	244	12.211	12.217	-0.006	99	2050907	1600.0	1280.6	
26 1,4-Dioxane	88	4.405	4.423	-0.018	97	152218	1600.0	658.0	
27 N-Nitrosodimethylamine	74	4.664	4.676	-0.012	85	381741	1600.0	824.7	
28 Pyridine	79	4.735	4.735	0.000	96	11631	1600.0	17.9	
42 Benzaldehyde	77	6.499	6.505	-0.006	93	1645937	3200.0	NQ	E
43 Phenol	94	6.517	6.517	0.000	97	780188	1600.0	983.3	
44 Aniline	93		6.582				ND	ND	
45 Bis(2-chloroethyl)ether	93	6.599	6.605	-0.006	96	979458	1600.0	1240.9	
244 n-Decane	57	6.693	6.694	-0.001	92	984346	1600.0	1134.5	
47 2-Chlorophenol	128	6.693	6.694	-0.001	93	911065	1600.0	1410.4	
48 1,3-Dichlorobenzene	146	6.823	6.823	0.000	95	935093	1600.0	1209.0	
49 1,4-Dichlorobenzene	146	6.876	6.876	0.000	90	961681	1600.0	1226.5	
50 Benzyl alcohol	108	6.941	6.941	0.000	91	529945	1600.0	1188.1	
51 1,2-Dichlorobenzene	146	7.011	7.011	0.000	93	896979	1600.0	1239.0	
52 2-Methylphenol	108	7.017	7.017	0.000	96	838316	1600.0	1376.4	
54 2,2'-oxybis[1-chloropropan	45	7.046	7.046	0.000	91	1533025	1600.0	1293.9	
53 Indene	115	7.082	7.082	0.000	91	3075019	3200.0	2354.8	
55 3 & 4 Methylphenol	108	7.135	7.135	0.000	92	874035	1600.0	1347.5	
57 N-Nitrosodi-n-propylamine	70	7.146	7.152	-0.006	91	763008	1600.0	1386.6	
58 Acetophenone	105	7.170	7.170	0.000	93	1386532	1600.0	1385.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
61 Hexachloroethane	117	7.299	7.299	0.000	94	375185	1600.0	1291.3	
62 Nitrobenzene	77	7.323	7.323	0.000	91	1131628	1600.0	1550.8	
64 Isophorone	82	7.511	7.511	0.000	99	2146328	1600.0	1613.3	
66 2,4-Dimethylphenol	107	7.582	7.582	0.000	96	933086	1600.0	1463.6	
65 2-Nitrophenol	139	7.588	7.594	-0.006	95	494134	1600.0	1485.0	
70 Benzoic acid	122	7.617	7.629	-0.012	92	370844	3200.0	1086.2	
69 Bis(2-chloroethoxy)methane	93	7.652	7.652	0.000	98	1140846	1600.0	1427.0	
72 2,4-Dichlorophenol	162	7.788	7.788	0.000	96	743096	1600.0	1548.2	
73 1,2,4-Trichlorobenzene	180	7.870	7.870	0.000	93	787571	1600.0	1400.1	
74 Naphthalene	128	7.946	7.946	0.000	98	2813963	1600.0	1372.6	
75 4-Chloroaniline	127	7.946	7.958	-0.012	87	689096	1600.0	1013.7	
76 2,6-Dichlorophenol	162	7.976	7.982	-0.006	94	741263	1600.0	1470.5	
78 Hexachlorobutadiene	225	8.040	8.041	-0.001	97	429695	1600.0	1496.7	
83 Caprolactam	113	8.235	8.241	-0.006	75	176159	3200.0	917.6	
85 4-Chloro-3-methylphenol	107	8.335	8.341	-0.005	96	829479	1600.0	1574.6	
86 2-Methylnaphthalene	142	8.529	8.529	0.000	92	1807950	1600.0	1364.8	
87 1-Methylnaphthalene	142	8.617	8.617	0.000	93	1702362	1600.0	1363.9	
89 Hexachlorocyclopentadiene	237	8.664	8.664	0.000	97	362364	1600.0	1252.7	
90 1,2,4,5-Tetrachlorobenzene	216	8.676	8.676	0.000	99	749460	1600.0	1472.8	
93 2,4,6-Trichlorophenol	196	8.752	8.752	0.000	95	498295	1600.0	1456.1	
94 2,4,5-Trichlorophenol	196	8.787	8.793	-0.006	91	498436	1600.0	1431.7	
99 1,1'-Biphenyl	154	8.911	8.911	0.000	95	2202509	1600.0	1363.2	
100 2-Chloronaphthalene	162	8.946	8.952	-0.006	99	1637135	1600.0	1308.4	
101 2-Nitroaniline	65	9.005	9.011	-0.006	79	635399	1600.0	1589.3	
104 Dimethyl phthalate	163	9.129	9.129	0.000	97	1898265	1600.0	1392.0	
103 1,3-Dinitrobenzene	168	9.176	9.176	0.000	84	316917	1600.0	1580.4	
106 2,6-Dinitrotoluene	165	9.193	9.193	0.000	89	433514	1600.0	1441.8	
108 Acenaphthylene	152	9.311	9.311	0.000	98	2653380	1600.0	1403.3	
109 3-Nitroaniline	138	9.352	9.358	-0.006	91	392180	1600.0	2222.6	
110 2,4-Dinitrophenol	184	9.440	9.440	0.000	82	385173	3200.0	2427.1	
111 Acenaphthene	153	9.458	9.458	0.000	95	1690355	1600.0	1371.8	
112 4-Nitrophenol	109	9.458	9.464	-0.006	97	377208	3200.0	2127.4	
113 2,4-Dinitrotoluene	165	9.546	9.546	0.000	87	554006	1600.0	1446.9	
115 Dibenzofuran	168	9.605	9.605	0.000	96	2442304	1600.0	1394.9	
118 2,3,4,6-Tetrachlorophenol	232	9.699	9.699	0.000	76	402358	1600.0	1546.9	
248 Hexadecane	57	9.717	9.717	0.000	95	1304641	1600.0	1298.7	
120 Diethyl phthalate	149	9.723	9.723	0.000	97	1860989	1600.0	1332.6	
122 4-Chlorophenyl phenyl ethe	204	9.864	9.864	0.000	96	910048	1600.0	1455.0	
125 4-Nitroaniline	138	9.882	9.882	0.000	80	453149	1600.0	1817.0	
124 Fluorene	166	9.899	9.899	0.000	95	1987706	1600.0	1410.7	
127 4,6-Dinitro-2-methylphenol	198	9.905	9.911	-0.006	79	582587	3200.0	2430.4	
128 N-Nitrosodiphenylamine	169	9.958	9.958	0.000	64	1445015	1600.0	1288.5	
129 Diphenylamine	169	9.958	9.958	0.000	94	1445015	1368.0	1096.1	
130 1,2-Diphenylhydrazine	77	10.005	10.005	0.000	98	2394153	1600.0	1323.9	
131 Azobenzene	77	10.005	10.005	0.000	99	2393706	1600.0	1323.6	
138 4-Bromophenyl phenyl ether	248	10.293	10.293	0.000	74	506926	1600.0	1299.3	
141 Atrazine	200	10.381	10.382	-0.001	94	1056994	3200.0	2747.3	
140 Hexachlorobenzene	284	10.393	10.393	0.000	93	481147	1600.0	1196.4	
245 n-Octadecane	57	10.499	10.505	-0.006	92	1510938	1600.0	1267.5	
143 Pentachlorophenol	266	10.540	10.546	-0.006	89	532633	3200.0	2017.0	
148 Phenanthrene	178	10.740	10.740	0.000	98	2731935	1600.0	1260.5	
149 Anthracene	178	10.781	10.787	-0.006	98	2788628	1600.0	1276.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
150 Carbazole	167	10.893	10.899	-0.006	96	2667168	1600.0	1571.1	
154 Di-n-butyl phthalate	149	11.123	11.129	-0.006	100	3450964	1600.0	1273.8	
159 Fluoranthene	202	11.858	11.864	-0.006	98	3006605	1600.0	1439.4	
160 Benzidine	184		11.940				ND	ND	
161 Pyrene	202	12.111	12.123	-0.012	98	3095518	1600.0	1344.7	
169 Butyl benzyl phthalate	149	12.746	12.752	-0.006	98	1507508	1600.0	1333.9	
174 Bis(2-ethylhexyl) phthalat	149	13.517	13.523	-0.006	97	2252366	1600.0	1505.0	
177 3,3'-Dichlorobenzidine	252	13.552	13.558	-0.006	75	1472014	3200.0	2246.4	
178 Benzo[a]anthracene	228	13.646	13.658	-0.012	99	2738118	1600.0	1339.1	
179 Chrysene	228	13.711	13.717	-0.006	98	2676598	1600.0	1335.3	
181 Di-n-octyl phthalate	149	14.534	14.546	-0.012	99	3589388	1600.0	1469.0	
183 Benzo[b]fluoranthene	252	15.387	15.393	-0.006	98	2606930	1600.0	1641.5	
184 Benzo[k]fluoranthene	252	15.434	15.434	0.000	99	2685180	1600.0	1524.9	
185 Benzo[a]pyrene	252	15.952	15.958	-0.006	79	2434393	1600.0	1672.0	
190 Indeno[1,2,3-cd]pyrene	276	18.193	18.199	-0.006	99	2459368	1600.0	1655.6	
189 Dibenz(a,h)anthracene	278	18.204	18.205	-0.001	90	2109112	1600.0	1628.9	
191 Benzo[g,h,i]perylene	276	18.834	18.840	-0.006	95	1969281	1600.0	1668.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND
NQ - Not Quantifiable
E - Exceeded Maximum Amount

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 04-May-2016 13:08:08 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160504-54123.b\60504008.D

Injection Date: 04-May-2016 10:00:30 Instrument ID: A4AG2 Operator ID:

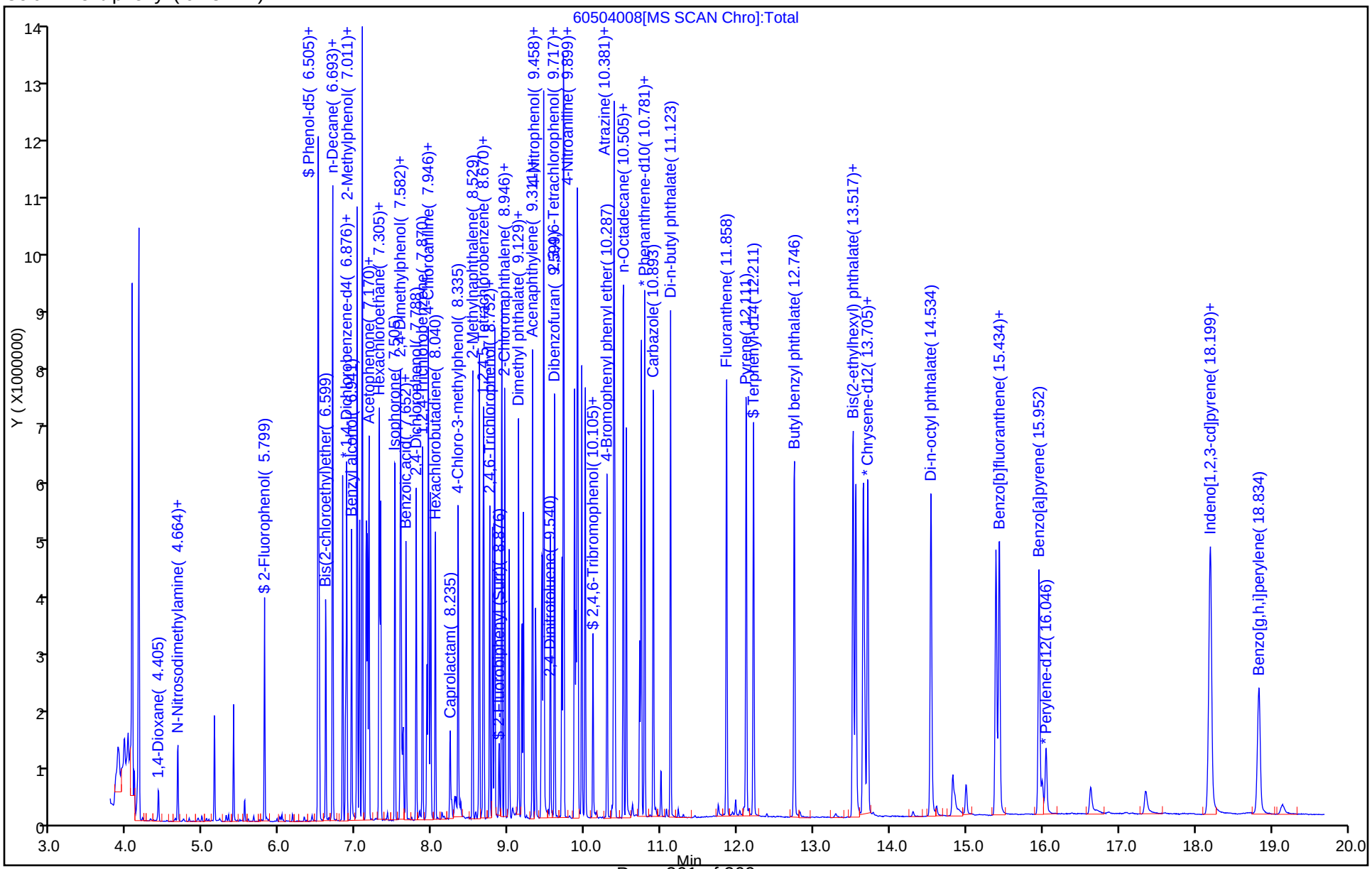
Lims ID: LCS 240-227942/16-A Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 8

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/26/2016 07:23

Analysis Batch Number: 227507 End Date: 04/26/2016 15:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-227507/1		04/26/2016 07:23	1	60426001.D	RXI-5SILMS 0.45(mm)
STD9 240-227507/2 IC		04/26/2016 07:44	1	60426002.D	RXI-5SILMS 0.45(mm)
STD8 240-227507/3 IC		04/26/2016 08:09	1	60426003.D	RXI-5SILMS 0.45(mm)
STD7 240-227507/4 IC		04/26/2016 08:34	1	60426004.D	RXI-5SILMS 0.45(mm)
STD6 240-227507/5 ICIS		04/26/2016 08:59	1	60426005.D	RXI-5SILMS 0.45(mm)
STD5 240-227507/6 IC		04/26/2016 09:23	1	60426006.D	RXI-5SILMS 0.45(mm)
STD4 240-227507/7 IC		04/26/2016 09:48	1	60426007.D	RXI-5SILMS 0.45(mm)
STD3 240-227507/8 IC		04/26/2016 10:13	1	60426008.D	RXI-5SILMS 0.45(mm)
STD2 240-227507/9 IC		04/26/2016 10:38	1	60426009.D	RXI-5SILMS 0.45(mm)
STD1 240-227507/10 IC		04/26/2016 11:03	1	60426010.D	RXI-5SILMS 0.45(mm)
ICV 240-227507/11		04/26/2016 11:28	1	60426011.D	RXI-5SILMS 0.45(mm)
STD9 240-227507/12 IC		04/26/2016 11:53	1		RXI-5SILMS 0.45(mm)
STD8 240-227507/13 IC		04/26/2016 12:18	1		RXI-5SILMS 0.45(mm)
STD7 240-227507/14 IC		04/26/2016 12:43	1		RXI-5SILMS 0.45(mm)
STD6 240-227507/15 IC		04/26/2016 13:08	1		RXI-5SILMS 0.45(mm)
STD5 240-227507/16 IC		04/26/2016 13:33	1		RXI-5SILMS 0.45(mm)
STD4 240-227507/17 IC		04/26/2016 13:58	1		RXI-5SILMS 0.45(mm)
STD3 240-227507/18 IC		04/26/2016 14:22	1		RXI-5SILMS 0.45(mm)
STD2 240-227507/19 IC		04/26/2016 14:47	1		RXI-5SILMS 0.45(mm)
ICV 240-227507/20		04/26/2016 15:12	1		RXI-5SILMS 0.45(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/04/2016 07:12

Analysis Batch Number: 228727 End Date: 05/04/2016 19:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-228727/1		05/04/2016 07:12	1	60504001.D	RXI-5SILMS 0.45(mm)
STD6 240-228727/2 CCVIS		05/04/2016 07:30	1	60504002.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 07:55	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 08:20	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 08:45	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 09:10	1		RXI-5SILMS 0.45(mm)
MB 240-227942/15-A		05/04/2016 09:35	1	60504007.D	RXI-5SILMS 0.45(mm)
LCS 240-227942/16-A		05/04/2016 10:00	1	60504008.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 17:30	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 17:55	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 18:20	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 18:46	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/04/2016 19:11	1		RXI-5SILMS 0.45(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/06/2016 06:58

Analysis Batch Number: 229123 End Date: 05/06/2016 13:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-229123/1		05/06/2016 06:58	1	60506001.D	RXI-5SILMS 0.45(mm)
STD6 240-229123/2 CCVIS		05/06/2016 07:16	1	60506002.D	RXI-5SILMS 0.45(mm)
STD6 240-229123/3 CCV		05/06/2016 07:40	1	60506003.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 08:05	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 08:30	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 09:20	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 09:45	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 10:10	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 10:35	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 11:00	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 11:25	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 11:50	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 12:15	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 12:40	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 13:05	1		RXI-5SILMS 0.45(mm)
240-64029-5		05/06/2016 13:30	1	60506017.D	RXI-5SILMS 0.45(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64029-1

SDG No.:

Batch Number: 227942 Batch Start Date: 04/28/16 09:19 Batch Analyst: Ross, Justin

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	exBENZALDEHYD 00038	exBNASPIKE 00062
240-64029-A-5	5WC23	3510C, 8270D	T	7 SU	280 mL	5 mL	2 SU		
MB 240-227942/15		3510C, 8270D		7 SU	250 mL	5 mL	2 SU		
LCS 240-227942/16		3510C, 8270D		7 SU	250 mL	5 mL	2 SU	0.4 mL	0.4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	exBNASURR W 00034					
240-64029-A-5	5WC23	3510C, 8270D	T	0.4 mL					
MB 240-227942/15		3510C, 8270D		0.4 mL					
LCS 240-227942/16		3510C, 8270D		0.4 mL					

Batch Notes	
Acid Used for pH Adjustment ID	2315745
Acidified Na2SO4 ID	2305854
NaCl ID	2437454
Prep Solvent ID	2498846

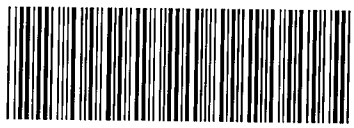
Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-64029 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

1,4/C0.9

CHAIN OF CUSTODY RECORD

OK JLC 4/26/2016

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Mark Loeb, Manager/1-800-966-9387

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 2nd Quarter 2016 Groundwater Corrective Action Monitoring Event **Event:** **DAA JN:** B03204-16 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 1Z2373010196378152 **Tracking Number:**		

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on Ice: YES

| | | | | |

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 94030**
Canton Facility

Client Draper Aden Site Name

Cooler Received on 4-27-16 Opened on 4-27-16

Cooler unpacked by:

FedEx: 1st Grd Exp (UPS) FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box ~~Client Cooler~~ Box Other

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN# 18 (CF -0.5 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 0.9 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC559158**
13. Were VOAs on the COC? Yes (No)
14. Were air bubbles >6 mm in any VOA vials? Yes No (NA)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes (No)
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Need ms/msD volume for SW7B, not marked on COC will log.

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater Samples
Collected on 04/25/16-04/26/16

SDG# RAE60

GROUP	SAMPLE NUMBERS
1654745	8352789-8352799

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **05/25/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number RAE60
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8352789	5W8B	04/25/2016 09:35	04/27/2016 10:00
8352790	5W5B	04/25/2016 12:30	04/27/2016 10:00
8352791	5W7B	04/25/2016 11:25	04/27/2016 10:00
8352792	5W7B Matrix Spike	04/25/2016 11:25	04/27/2016 10:00
8352793	5W7B Matrix Spike Dup	04/25/2016 11:25	04/27/2016 10:00
8352794	5W7B Duplicate	04/25/2016 11:25	04/27/2016 10:00
8352795	5WC21	04/26/2016 09:25	04/27/2016 10:00
8352796	5WDUP	04/26/2016 09:35	04/27/2016 10:00
8352797	5WC22	04/25/2016 13:25	04/27/2016 10:00
8352798	5WC23	04/25/2016 14:15	04/27/2016 10:00
8352799	5W12A	04/25/2016 10:35	04/27/2016 10:00

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Sample pH Log

SDG: RAE60

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8352789	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352790	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352791	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352792	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352793	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352795	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352796	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352797	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352798	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8352799	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

06024 Antimony
06025 Arsenic
06026 Barium
06027 Beryllium
06028 Cadmium
06031 Chromium
06032 Cobalt
06033 Copper
06035 Lead
06039 Nickel
06041 Selenium
06042 Silver
06045 Thallium
06048 Vanadium
06049 Zinc

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 10, 2016

Project: RAAP - Radford, VA - HWMU-5

Submittal Date: 04/27/2016
Group Number: 1654745
SDG: RAE60
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
5W8B Grab Groundwater	8352789
5W5B Grab Groundwater	8352790
5W7B Grab Groundwater	8352791
5W7B Matrix Spike Grab Groundwater	8352792
5W7B Matrix Spike Dup Grab Groundwater	8352793
5W7B Duplicate Grab Groundwater	8352794
5WC21 Grab Groundwater	8352795
5WDUP Grab Groundwater	8352796
5WC22 Grab Groundwater	8352797
5WC23 Grab Groundwater	8352798
5W12A Grab Groundwater	8352799

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU-5
LL Group #: 1654745

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: 5W8B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352789
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 09:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F8B- SDG#: RAE60-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:13	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W5B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352790
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 12:30 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F5B- SDG#: RAE60-02

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	32.3		1.0	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.		0.20	1.0	1
06031	Chromium	7440-47-3	N.D.		1.0	4.0	1
06032	Cobalt	7440-48-4	N.D.		1.0	1.0	1
06033	Copper	7440-50-8	1.3	J	1.0	4.0	1
06035	Lead	7439-92-1	0.53	J	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	N.D.		3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:16	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:16	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:16	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:51	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:51	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W5B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352790
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 12:30 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F5B- SDG#: RAE60-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352791
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03BKG

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	44.8		1.0	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.		0.20	1.0	1
06031	Chromium	7440-47-3	N.D.		1.0	4.0	1
06032	Cobalt	7440-48-4	1.4		1.0	1.0	1
06033	Copper	7440-50-8	1.1	J	1.0	4.0	1
06035	Lead	7439-92-1	0.76	J	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	6.1	J	3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 09:55	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 09:55	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 09:55	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:43	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:43	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352791
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Matrix Spike Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352792
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	0.0489	0.0010	0.0010	1
	SW-846 6020A		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	6.3	0.40	2.0	1
06025	Arsenic	7440-38-2	11.1	2.0	4.0	1
06026	Barium	7440-39-3	96.7	1.0	4.0	1
06027	Beryllium	7440-41-7	4.3	0.20	1.0	1
06028	Cadmium	7440-43-9	5.3	0.20	1.0	1
06031	Chromium	7440-47-3	51.6	1.0	4.0	1
06032	Cobalt	7440-48-4	256	1.0	1.0	1
06033	Copper	7440-50-8	54.1	1.0	4.0	1
06035	Lead	7439-92-1	16.9	0.20	2.0	1
06039	Nickel	7440-02-0	54.7	2.0	4.0	1
06041	Selenium	7782-49-2	10.1	3.0	4.0	1
06042	Silver	7440-22-4	53.8	0.20	1.0	1
06045	Thallium	7440-28-0	2.2	0.20	1.0	1
06049	Zinc	7440-66-6	522	3.0	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	1.0	0.050	0.20	1
00259	Mercury	7439-97-6	1.0	0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:04	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:04	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:04	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:47	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:47	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Grab Groundwater**
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352792
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Matrix Spike Dup Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352793
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	0.0478	0.0010	0.0010	1
	SW-846 6020A		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	6.4	0.40	2.0	1
06025	Arsenic	7440-38-2	10.6	2.0	4.0	1
06026	Barium	7440-39-3	97.8	1.0	4.0	1
06027	Beryllium	7440-41-7	4.3	0.20	1.0	1
06028	Cadmium	7440-43-9	5.2	0.20	1.0	1
06031	Chromium	7440-47-3	50.5	1.0	4.0	1
06032	Cobalt	7440-48-4	250	1.0	1.0	1
06033	Copper	7440-50-8	53.2	1.0	4.0	1
06035	Lead	7439-92-1	16.4	0.20	2.0	1
06039	Nickel	7440-02-0	52.9	2.0	4.0	1
06041	Selenium	7782-49-2	10.1	3.0	4.0	1
06042	Silver	7440-22-4	52.2	0.20	1.0	1
06045	Thallium	7440-28-0	2.0	0.20	1.0	1
06049	Zinc	7440-66-6	520	3.0	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.99	0.050	0.20	1
00259	Mercury	7439-97-6	0.99	0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:07	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:07	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:07	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:49	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:49	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352793
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Duplicate Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352794
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03DUP

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	43.0		1.0	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.		0.20	1.0	1
06031	Chromium	7440-47-3	N.D.		1.0	4.0	1
06032	Cobalt	7440-48-4	1.4		1.0	1.0	1
06033	Copper	7440-50-8	1.1	J	1.0	4.0	1
06035	Lead	7439-92-1	0.74	J	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	5.5	J	3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:01	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:01	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:01	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:45	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:45	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W7B Duplicate Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352794
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 11:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F7B- SDG#: RAE60-03DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC21 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352795
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC21 SDG#: RAE60-04

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	13.8		1.0	4.0	1
06027	Beryllium	7440-41-7	1.0		0.20	1.0	1
06028	Cadmium	7440-43-9	0.43	J	0.20	1.0	1
06031	Chromium	7440-47-3	3.6	J	1.0	4.0	1
06032	Cobalt	7440-48-4	61.6		1.0	1.0	1
06033	Copper	7440-50-8	3.1	J	1.0	4.0	1
06035	Lead	7439-92-1	N.D.		0.20	2.0	1
06039	Nickel	7440-02-0	32.9		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	27.1	J	3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:25	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:25	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:25	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:53	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:53	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC21 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352795
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC21 SDG#: RAE60-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WDUP Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352796
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FDUP SDG#: RAE60-05FD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	14.4		1.0	4.0	1
06027	Beryllium	7440-41-7	1.1		0.20	1.0	1
06028	Cadmium	7440-43-9	0.45	J	0.20	1.0	1
06031	Chromium	7440-47-3	3.4	J	1.0	4.0	1
06032	Cobalt	7440-48-4	62.7		1.0	1.0	1
06033	Copper	7440-50-8	3.1	J	1.0	4.0	1
06035	Lead	7439-92-1	N.D.		0.20	2.0	1
06039	Nickel	7440-02-0	33.2		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	27.4	J	3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:28	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:28	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:28	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:55	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:55	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WDUP Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352796
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/26/2016 09:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FDUP SDG#: RAE60-05FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC22 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352797
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 13:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC22 SDG#: RAE60-06

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	33.6		1.0	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.20	1.0	1
06028	Cadmium	7440-43-9	0.25	J	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.		1.0	4.0	1
06032	Cobalt	7440-48-4	11.4		1.0	1.0	1
06033	Copper	7440-50-8	N.D.		1.0	4.0	1
06035	Lead	7439-92-1	N.D.		0.20	2.0	1
06039	Nickel	7440-02-0	5.6		2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	N.D.		3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:31	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:31	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:31	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:57	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:57	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC22 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352797
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 13:25 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC22 SDG#: RAE60-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC23 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352798
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 14:15 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC23 SDG#: RAE60-07

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**		**mg/l**	**mg/l**	
06048	Vanadium	7440-62-2	N.D.		0.0010	0.0010	1
	SW-846 6020A		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.		2.0	4.0	1
06026	Barium	7440-39-3	22.9		1.0	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.		0.20	1.0	1
06031	Chromium	7440-47-3	N.D.		1.0	4.0	1
06032	Cobalt	7440-48-4	3.1		1.0	1.0	1
06033	Copper	7440-50-8	N.D.		1.0	4.0	1
06035	Lead	7439-92-1	N.D.		0.20	2.0	1
06039	Nickel	7440-02-0	2.9	J	2.0	4.0	1
06041	Selenium	7782-49-2	N.D.		3.0	4.0	1
06042	Silver	7440-22-4	N.D.		0.20	1.0	1
06045	Thallium	7440-28-0	N.D.		0.20	1.0	1
06049	Zinc	7440-66-6	N.D.		3.0	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	161250639004D	05/06/2016 10:34	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	161250639004B	05/06/2016 10:34	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	161250639004A	05/06/2016 10:34	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	161255713005	05/06/2016 08:59	Damary Valentin	1
00259	Mercury	SW-846 7470A	3	161255713005	05/06/2016 08:59	Damary Valentin	1

*=This limit was used in the evaluation of the final result

Sample Description: 5WC23 Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352798
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 14:15 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5FC23 SDG#: RAE60-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	161255713005	05/05/2016 08:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: 5W12A Grab Groundwater
2 Qtr 2016 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

LL Sample # WW 8352799
LL Group # 1654745
Account # 11200

Project Name: RAAP - Radford, VA - HWMU-5

Collected: 04/25/2016 10:35 by KC

Submitted: 04/27/2016 10:00
Reported: 05/10/2016 13:46

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

5F12A SDG#: RAE60-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161250639004A	05/06/2016 10:37	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161250639004	05/05/2016 07:14	James L Mertz	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654745
Reported: 05/10/2016 13:46

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 161250639004A	Sample number(s): 8352789-8352799		
Vanadium	N.D.	0.0010	0.0010
	ug/l	ug/l	ug/l
Antimony	N.D.	0.40	2.0
Arsenic	N.D.	2.0	4.0
Beryllium	N.D.	0.20	1.0
Cadmium	N.D.	0.20	1.0
Chromium	N.D.	1.0	4.0
Cobalt	N.D.	1.0	1.0
Copper	N.D.	1.0	4.0
Lead	N.D.	0.20	2.0
Nickel	N.D.	2.0	4.0
Silver	N.D.	0.20	1.0
Thallium	N.D.	0.20	1.0
Zinc	N.D.	3.0	30.0
Batch number: 161250639004B	Sample number(s): 8352790-8352798		
Selenium	N.D.	3.0	4.0
Batch number: 161250639004D	Sample number(s): 8352790-8352798		
Barium	N.D.	1.0	4.0
Batch number: 161255713005	Sample number(s): 8352790-8352798		
Mercury	N.D.	0.050	0.20

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 161250639004A	Sample number(s): 8352789-8352799								
Vanadium	0.0500	0.0482			96		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 161250639004A	Sample number(s): 8352789-8352799								
Antimony	6.00	6.25			104		80-120		
Arsenic	10	10.8			108		80-120		
Beryllium	4.00	4.16			104		80-120		
Cadmium	5.00	5.32			106		80-120		
Chromium	50	51.2			102		80-120		
Cobalt	250	256.7			103		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654745
Reported: 05/10/2016 13:46

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Copper	50	52.94			106		80-120		
Lead	15	15.81			105		80-120		
Nickel	50	54.33			109		80-120		
Silver	50	52.94			106		80-120		
Thallium	2.00	2.15			107		80-120		
Zinc	500	529			106		80-120		
Batch number: 161250639004B	Sample number(s): 8352790-8352798								
Selenium	10	10.19			102		80-120		
Batch number: 161250639004D	Sample number(s): 8352790-8352798								
Barium	50	54.01			108		80-120		
Batch number: 161255713005	Sample number(s): 8352790-8352798								
Mercury	1.00	1.02			102		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 161250639004A	Sample number(s): 8352789-8352799 UNSPK: 8352791									
Vanadium	N.D.	0.0500	0.0489	0.0500	0.0478	98	96	75-125	2	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 161250639004A	Sample number(s): 8352789-8352799 UNSPK: 8352791									
Antimony	N.D.	6.00	6.32	6.00	6.39	105	106	75-125	1	20
Arsenic	N.D.	10	11.08	10	10.64	111	106	75-125	4	20
Beryllium	N.D.	4.00	4.27	4.00	4.32	107	108	75-125	1	20
Cadmium	N.D.	5.00	5.32	5.00	5.15	106	103	75-125	3	20
Chromium	N.D.	50	51.63	50	50.47	103	101	75-125	2	20
Cobalt	1.39	250	256.1	250	250.1	102	99	75-125	2	20
Copper	1.06	50	54.1	50	53.19	106	104	75-125	2	20
Lead	0.761	15	16.85	15	16.35	107	104	75-125	3	20
Nickel	N.D.	50	54.73	50	52.94	109	106	75-125	3	20
Silver	N.D.	50	53.83	50	52.24	108	104	75-125	3	20
Thallium	N.D.	2.00	2.23	2.00	2.04	111	102	75-125	9	20
Zinc	6.06	500	522.4	500	520.2	103	103	75-125	0	20
Batch number: 161250639004B	Sample number(s): 8352790-8352798 UNSPK: 8352791									
Selenium	N.D.	10	10.11	10	10.06	101	101	75-125	0	20
Batch number: 161250639004D	Sample number(s): 8352790-8352798 UNSPK: 8352791									
Barium	44.8	50	96.67	50	97.76	104	106	75-125	1	20
Batch number: 161255713005	Sample number(s): 8352790-8352798 UNSPK: 8352791									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1654745
Reported: 05/10/2016 13:46

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Mercury	N.D.	1.00	1.02	1.00	0.991	102	99	80-120	3	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 161250639004A	Sample number(s): 8352789-8352799 BKG: 8352791			
Vanadium	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 161250639004A	Sample number(s): 8352789-8352799 BKG: 8352791			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Cobalt	1.39	1.35	3 (1)	20
Copper	1.06	1.12	6 (1)	20
Lead	0.761	0.737	3 (1)	20
Nickel	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Zinc	6.06	5.51	9 (1)	20
Batch number: 161250639004B	Sample number(s): 8352790-8352798 BKG: 8352791			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 161250639004D	Sample number(s): 8352790-8352798 BKG: 8352791			
Barium	44.8	42.98	4	20
Batch number: 161255713005	Sample number(s): 8352790-8352798 BKG: 8352791			
Mercury	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1654745/8352789-99

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 AT 4/18/2016

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 **Event:** 2 Qtr 2016 Corrective Action Annual Monitoring Event **DAA JN:** B03204-16 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 1Z75Y02XY04035556 1 **Tracking Number:** 1Z75Y02XY0414193 75

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on Ice: YES

Box 4 - Sample Type	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U
Required pH of Sample	<2	<2	<2	
Box 2 - Preservative	A	B	B	H
Box 5 - Sample Container Type	3-40ml V	1-500ml P	1-500ml P	2-250mL AG

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge Appendix J Analyte List	8260C/5030C 25 ml purge Appendix K Analyte List	(Metals-Total) 6020A(3005A)/ 7470A 3020A	Cobalt only-Total 6020A/3005A 3020A	8270D/3510C (Semivolatiles)	
5W8B	4/25	0935	GW	4	X			X		
5W6B	4/25	1230	GW	6	X	X	X		X	upgradient monitoring well
5W7B	4/25	1125	GW	18	X	X	X		X	
5WC21	4/26	0925	GW	6	X	X	X		X	USE FOR QC
5WDUP	4/26	0935	GW	6	X	X	X		X	
5WC22	4/25	1325	GW	6	X	X	X		X	
5WC23	4/25	1415	GW	6	X	X	X		X	
5W12A	4/25	1035	GW	4	X			X		plume well
Trip Blank 1	4/25	—	T	2	X	X				
Trip Blank 2	4/25	—	T	2	X	X				

GENERAL NOTES:
1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QL's attached.

5. Cobalt
QL = 5 µg/L
MDL 1 µg/L JMC 4/14/2016

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 4/25/16	#1 Relinquished by (Signature):	Date: 4/26/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Will Mason-Deese	Date: 4/25/16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/27/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 1080	

JMC 4/14/2016 1/5 AT 4/18/16

11200/1654745/83552789-99

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020A (ICP/MS) - Prep 3020A. JWH 4/6/2016

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Antimony	7440-36-0	1	0.4
2.	Arsenic	7440-38-2	10	2
3.	Barium	7440-39-3	10	1
4.	Beryllium	7440-41-7	1	0.2
5.	Cadmium	7440-43-9	1	0.2
6.	Chromium	7440-47-3	5	1
7.	Cobalt	7440-48-4	5	1
8.	Copper	7440-50-8	5	1
9.	Lead	7440-92-1	1	0.2
10.	Nickel	7440-02-0	10	2
11.	Selenium	7782-49-2	10	3
12.	Silver	7440-22-4	2	0.2
13.	Thallium	7440-28-0	1	0.2
14.	Vanadium	7440-62-2	10	1
15.	Zinc	7440-66-6	10	3
Method SW 7470A/CVAA				
16.	Mercury	7439-97-6	2	0.2

Final Report must list the project required MDLs listed above. Report results between the project required QL noted above and MDL above as estimated value.

* Report lab's current MDL, if higher. JWH 4/16/2016.

. Note: # 6 added on Jan 2004 due To 4Q2003 detection.

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
Reviewed 4 Q 2006 -4/18/2016 11:43 AM
10/9/2007 JCF – 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfc
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. JCF

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-5\hwmu5 - coc rev 2010\hwmu 5 - appendix k cap target analtye list - rev 2015.doc

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Sample Administration Receipt Documentation Log

Doc Log ID: 144397

Group Number(s): 1654745

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/27/2016 10:00
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 13:08 on 04/27/2016

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.6	DT	Wet	Y	Bagged	N
2	DT146	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-5419
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE60

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8352789	5W8B	X		1	
8352790	5W5B	X		1	
8352791	5W7B	X		1	Background/Unspiked
8352792	5W7B Matrix Spike	X		1	Matrix Spike
8352793	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
8352794	5W7B Duplicate	X		1	Duplicate
8352795	5WC21	X		1	
8352796	5WDUP	X		1	Field Duplicate Sample
8352797	5WC22	X		1	
8352798	5WC23	X		1	
8352799	5W12A	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE60

ICP Metals

Fraction: Metals in Liquid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352789 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352790 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	32.3			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.3	B		MS
7439-92-1	Lead	0.53	B		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	3.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352791BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	44.8			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.4			MS
7440-50-8	Copper	1.1	B		MS
7439-92-1	Lead	0.76	B		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	6.1	B		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352792MS % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	6.3			MS
7440-38-2	Arsenic	11.1			MS
7440-39-3	Barium	96.7			MS
7440-41-7	Beryllium	4.3			MS
7440-43-9	Cadmium	5.3			MS
7440-47-3	Chromium	51.6			MS
7440-48-4	Cobalt	256			MS
7440-50-8	Copper	54.1			MS
7439-92-1	Lead	16.9			MS
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	54.7			MS
7782-49-2	Selenium	10.1			MS
7440-22-4	Silver	53.8			MS
7440-28-0	Thallium	2.2			MS
7440-62-2	Vanadium	48.9			MS
7440-66-6	Zinc	522			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352793MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	6.4			MS
7440-38-2	Arsenic	10.6			MS
7440-39-3	Barium	97.8			MS
7440-41-7	Beryllium	4.3			MS
7440-43-9	Cadmium	5.2			MS
7440-47-3	Chromium	50.5			MS
7440-48-4	Cobalt	250			MS
7440-50-8	Copper	53.2			MS
7439-92-1	Lead	16.4			MS
7439-97-6	Mercury	0.99			CV
7440-02-0	Nickel	52.9			MS
7782-49-2	Selenium	10.1			MS
7440-22-4	Silver	52.2			MS
7440-28-0	Thallium	2.0			MS
7440-62-2	Vanadium	47.8			MS
7440-66-6	Zinc	520			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352794DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	43.0			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.4			MS
7440-50-8	Copper	1.1	B		MS
7439-92-1	Lead	0.74	B		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	5.5	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352795 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	13.8			MS
7440-41-7	Beryllium	1.0			MS
7440-43-9	Cadmium	0.43	B		MS
7440-47-3	Chromium	3.6	B		MS
7440-48-4	Cobalt	61.6			MS
7440-50-8	Copper	3.1	B		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	32.9			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	27.1	B		MS

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352796 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	14.4			MS
7440-41-7	Beryllium	1.1			MS
7440-43-9	Cadmium	0.45	B		MS
7440-47-3	Chromium	3.4	B		MS
7440-48-4	Cobalt	62.7			MS
7440-50-8	Copper	3.1	B		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	33.2			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	27.4	B		MS

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352797 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	33.6			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.25	B		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	11.4			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	5.6			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	3.0	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352798 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	22.9			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	3.1			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.9	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	3.0	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8352799 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/27/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAE60
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Antimony	161250639004	8352789
Arsenic		8352790
Barium		8352791BKG
Beryllium		8352792MS
Cadmium		8352793MSD
Chromium		8352794DUP
Cobalt		8352795
Copper		8352796
Lead		8352797
Nickel		8352798
Selenium		8352799
Silver		P12539DB
Thallium		P12539DQ
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: RAE60
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Mercury	161255713005	8352790
		8352791BKG
		8352792MS
		8352793MSD
		8352794DUP
		8352795
		8352796
		8352797
		8352798
		P12513EB
		P12513EQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE60

Method: MS
Run Name: 1612705E03
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	50.94	101.9	25.0	26.42	105.7	25.0	26.64	106.6
Arsenic	75	500.0	514.60	102.9	250.0	260.90	104.4	250.0	261.00	104.4
Barium	137	500.0	517.80	103.6	250.0	257.40	103.0	250.0	267.40	107.0
Beryllium	9	50.0	52.05	104.1	25.0	25.60	102.4	25.0	26.57	106.3
Cadmium	111	50.0	51.13	102.3	25.0	25.63	102.5	25.0	25.91	103.6
Chromium	52	500.0	502.60	100.5	250.0	250.30	100.1	250.0	252.50	101.0
Cobalt	59	500.0	511.10	102.2	250.0	247.40	99.0	250.0	249.10	99.6
Copper	63	500.0	503.60	100.7	250.0	254.20	101.7	250.0	255.30	102.1
Lead	208	50.0	51.05	102.1	25.0	25.66	102.6	25.0	26.07	104.3
Nickel	60	500.0	513.10	102.6	250.0	259.00	103.6	250.0	264.90	106.0
Selenium	78	50.0	50.08	100.2	25.0	25.80	103.2	25.0	26.23	104.9
Silver	107	50.0	50.80	101.6	25.0	25.88	103.5	25.0	26.57	106.3
Thallium	203	50.0	50.78	101.6	25.0	26.26	105.0	25.0	25.78	103.1
Vanadium	51	500.0	478.50	95.7	250.0	243.50	97.4	250.0	241.50	96.6
Zinc	66	500.0	504.70	100.9	250.0	259.00	103.6	250.0	257.50	103.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1612705E03
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	26.76	107.0			
Arsenic	75				250.0	263.50	105.4			
Barium	137				250.0	262.80	105.1			
Beryllium	9				25.0	25.52	102.1			
Cadmium	111				25.0	25.47	101.9			
Chromium	52				250.0	253.30	101.3			
Cobalt	59				250.0	250.20	100.1			
Copper	63				250.0	252.30	100.9			
Lead	208				25.0	25.82	103.3			
Nickel	60				250.0	264.60	105.8			
Selenium	78				25.0	25.98	103.9			
Silver	107				25.0	26.32	105.3			
Thallium	203				25.0	25.65	102.6			
Vanadium	51				250.0	242.50	97.0			
Zinc	66				250.0	262.40	105.0			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.48	99.2	1.0	0.93	93.0	1.0	0.93	93.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE60

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0	1.0	0.94	94.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE60

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	0.93	93.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE60

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.95	95.0	1.0	0.93	93.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1612705E03
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	2.0	2.09	104.5	2.03	101.5
Arsenic	75	4.0	3.60	90.0	3.79	94.8
Barium	137	4.0	3.76	94.0	4.08	102.0
Beryllium	9	1.0	0.99	99.0	1.04	104.0
Cadmium	111	1.0	1.02	102.0	1.00	100.0
Chromium	52	4.0	4.37	109.3	4.57	114.3
Cobalt	59	1.0	1.04	104.0	1.02	102.0
Copper	63	4.0	4.17	104.3	3.83	95.8
Lead	208	2.0	1.96	98.0	2.03	101.5
Nickel	60	4.0	3.80	95.0	4.22	105.5
Selenium	78	4.0	3.97	99.3	4.02	100.5
Silver	107	1.0	1.03	103.0	0.99	99.0
Thallium	203	1.0	1.00	100.0	0.98	98.0
Vanadium	51	1.0	0.90	90.0	0.98	98.0
Zinc	66	30.0	30.78	102.6	30.49	101.6

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.17	85.0	0.18	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAE60

Method: MS
Run Name: 1612705E03
Calibration Date(s): 05/06/2016
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony	121	0.33	U	0.33	U	0.33	U	0.33	U	121	0.400	U	161250639004A
Arsenic	75	0.40	U	0.40	U	0.40	U	0.40	U	75	2.000	U	161250639004A
Barium	137	0.064	U	0.064	U	0.064	U	0.064	U	137	1.000	U	161250639004A
Beryllium	9	0.11	U	0.11	U	0.11	U	0.11	U	9	0.200	U	161250639004A
Cadmium	111	0.15	U	0.15	U	0.15	U	0.15	U	111	0.200	U	161250639004A
Chromium	52	0.50	U	0.50	U	0.50	U	0.50	U	52	1.000	U	161250639004A
Cobalt	59	0.20	B	0.25	B	0.10	U	0.13	B	59	1.000	U	161250639004A
Copper	63	0.40	U	0.40	U	0.40	U	0.40	U	63	1.000	U	161250639004A
Lead	208	0.026	U	0.026	U	0.026	U	0.026	U	208	0.200	U	161250639004A
Nickel	60	0.84	U	0.84	U	0.84	U	0.84	U	60	2.000	U	161250639004A
Selenium	78	0.50	U	0.50	U	0.50	U	0.50	U	78	3.000	U	161250639004A
Silver	107	0.039	U	0.039	U	0.039	U	0.039	U	107	0.200	U	161250639004A
Thallium	203	0.15	U	0.15	U	0.15	U	0.15	U	203	0.200	U	161250639004A
Vanadium	51	0.15	U	0.15	U	0.15	U	0.15	U	51	1.000	U	161250639004A
Zinc	66	2.1	U	2.1	U	2.1	U	2.1	U	66	3.000	U	161250639004A

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury		0.050	U	0.050	U	0.050	U	0.050	U		0.050	U	161255713005

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAE60

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U	0.050	U	0.050	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAE60

Method: CV
Run Name: 1612702M08
Calibration Date(s): 05/06/2016

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U	0.050	U						

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE60

Instrument ID: 11332
Run Name: 1612705E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	99450	99.5	100200.0	100.2
Antimony	121	0	0	0		0.1	
Arsenic	75	0	100	0		101.2	101.2
Barium	137	0	0	3		2.2	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		93.7	93.7
Calcium	44	300000	300000	339300	113.1	343900.0	114.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	3		209.5	104.8
Cobalt	59	0	205	3		190.2	92.8
Copper	63	0	200	3		190.2	95.1
Iron	57	250000	250000	251200	100.5	255700.0	102.3
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	96250	96.3	98320.0	98.3
Molybdenum	98	2000	2000	2156	107.8	2140.0	107.0
Nickel	60	0	200	2		193.9	97.0
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	99750	99.8	99610.0	99.6
Selenium	78	0	100	0		92.0	92.0
Silver	107	0	50	0		47.8	95.6
Sodium	23	250000	250000	253800	101.5	259100.0	103.6
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	2000	2000	2227	111.4	2210.0	110.5
Vanadium	51	0	200	0		203.6	101.8
Zinc	66	0	100	1		91.3	91.3

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE60

Instrument ID: 11332
Run Name: 1612705E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	99660	99.7	103300.0	103.3
Antimony	121	0	0	0		0.1	
Arsenic	75	0	100	0		101.3	101.3
Barium	137	0	0	3		2.4	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		95.1	95.1
Calcium	44	300000	300000	343800	114.6	355400.0	118.5
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	3		212.3	106.2
Cobalt	59	0	205	3		191.6	93.5
Copper	63	0	200	3		193.7	96.9
Iron	57	250000	250000	255400	102.2	260400.0	104.2
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	97520	97.5	100800.0	100.8
Molybdenum	98	2000	2000	2158	107.9	2199.0	110.0
Nickel	60	0	200	1		199.2	99.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	99720	99.7	102200.0	102.2
Selenium	78	0	100	0		93.6	93.6
Silver	107	0	50	0		48.5	97.0
Sodium	23	250000	250000	260000	104.0	262200.0	104.9
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	2000	2000	2248	112.4	2295.0	114.8
Vanadium	51	0	200	0		205.9	103.0
Zinc	66	0	100	1		91.0	91.0

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8352791BKG Matrix Spike Lab Sample ID: 8352792MS Matrix Spike Duplicate Lab Sample ID: 8352793MSD
Batch Number(s): 161250639004, 161255713005

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Antimony	121	0.4000	U	6.3170		6.3860		6.0000	6.0000	UG/L	105		106		1		75 - 125	20	MS
Arsenic	75	2.0000	U	11.0800		10.6400		10.0000	10.0000	UG/L	111		106		4		75 - 125	20	MS
Barium	137	44.8000		96.6700		97.7600		50.0000	50.0000	UG/L	104		106		1		75 - 125	20	MS
Beryllium	9	0.2000	U	4.2700		4.3210		4.0000	4.0000	UG/L	107		108		1		75 - 125	20	MS
Cadmium	111	0.2000	U	5.3200		5.1510		5.0000	5.0000	UG/L	106		103		3		75 - 125	20	MS
Chromium	52	1.0000	U	51.6300		50.4700		50.0000	50.0000	UG/L	103		101		2		75 - 125	20	MS
Cobalt	59	1.3930		256.1000		250.1000		250.0000	250.0000	UG/L	102		99		2		75 - 125	20	MS
Copper	63	1.0590	B	54.1000		53.1900		50.0000	50.0000	UG/L	106		104		2		75 - 125	20	MS
Lead	208	0.7608	B	16.8500		16.3500		15.0000	15.0000	UG/L	107		104		3		75 - 125	20	MS
Mercury		0.0500	U	1.0183		0.9912		1.0000	1.0000	UG/L	102		99		3		80 - 120	20	CV
Nickel	60	2.0000	U	54.7300		52.9400		50.0000	50.0000	UG/L	109		106		3		75 - 125	20	MS
Selenium	78	3.0000	U	10.1100		10.0600		10.0000	10.0000	UG/L	101		101		0		75 - 125	20	MS
Silver	107	0.2000	U	53.8300		52.2400		50.0000	50.0000	UG/L	108		104		3		75 - 125	20	MS
Thallium	203	0.2000	U	2.2270		2.0360		2.0000	2.0000	UG/L	111		102		9		75 - 125	20	MS
Vanadium	51	1.0000	U	48.9400		47.8000		50.0000	50.0000	UG/L	98		96		2		75 - 125	20	MS
Zinc	66	6.0570	B	522.4000		520.2000		500.0000	500.0000	UG/L	103		103		0		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8352791BKG Duplicate Lab Sample ID: 8352794DUP
Batch Number(s): 161250639004, 161255713005
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121		0.4000	U	0.4000	U			MS
Arsenic	75		2.0000	U	2.0000	U			MS
Barium	137		44.8000		42.9800		4		MS
Beryllium	9		0.2000	U	0.2000	U			MS
Cadmium	111		0.2000	U	0.2000	U			MS
Chromium	52		1.0000	U	1.0000	U			MS
Cobalt	59	1.0	1.3930		1.3530		3		MS
Copper	63		1.0590	B	1.1190	B	6		MS
Lead	208		0.7608	B	0.7368	B	3		MS
Mercury			0.0500	U	0.0500	U			CV
Nickel	60		2.0000	U	2.0000	U			MS
Selenium	78		3.0000	U	3.0000	U			MS
Silver	107		0.2000	U	0.2000	U			MS
Thallium	203		0.2000	U	0.2000	U			MS
Vanadium	51		1.0000	U	1.0000	U			MS
Zinc	66		6.0570	B	5.5100	B	9		MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAE60
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Antimony	121	P12539DQ	UG/L	6.000	6.246		80 - 120	104	MS	Yes
Arsenic	75	P12539DQ	UG/L	10.000	10.800		80 - 120	108	MS	Yes
Barium	137	P12539DQ	UG/L	50.000	54.010		80 - 120	108	MS	Yes
Beryllium	9	P12539DQ	UG/L	4.000	4.160		80 - 120	104	MS	Yes
Cadmium	111	P12539DQ	UG/L	5.000	5.321		80 - 120	106	MS	Yes
Chromium	52	P12539DQ	UG/L	50.000	51.200		80 - 120	102	MS	Yes
Cobalt	59	P12539DQ	UG/L	250.000	256.700		80 - 120	103	MS	Yes
Copper	63	P12539DQ	UG/L	50.000	52.940		80 - 120	106	MS	Yes
Lead	208	P12539DQ	UG/L	15.000	15.810		80 - 120	105	MS	Yes
Mercury		P12513EQ	UG/L	1.000	1.023		80 - 120	102	CV	Yes
Nickel	60	P12539DQ	UG/L	50.000	54.330		80 - 120	109	MS	Yes
Selenium	78	P12539DQ	UG/L	10.000	10.190		80 - 120	102	MS	Yes
Silver	107	P12539DQ	UG/L	50.000	52.940		80 - 120	106	MS	Yes
Thallium	203	P12539DQ	UG/L	2.000	2.148		80 - 120	107	MS	Yes
Vanadium	51	P12539DQ	UG/L	50.000	48.200		80 - 120	96	MS	Yes
Zinc	66	P12539DQ	UG/L	500.000	529.000		80 - 120	106	MS	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAE60
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8352791BKG Serial Dilution Lab Sample ID: 8352791L
Batch Number(s): 161250639004
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Antimony	121	0.4000	U	2.0000	U			MS
Arsenic	75	2.0000	U	10.0000	U			MS
Barium	137	44.8000		44.8600		0		MS
Beryllium	9	0.2000	U	1.0000	U			MS
Cadmium	111	0.2000	U	1.0000	U			MS
Chromium	52	1.0000	U	5.0000	U			MS
Cobalt	59	1.3930		5.0000	U	100		MS
Copper	63	1.0590	B	5.0000	U	100		MS
Lead	208	0.7608	B	1.0000	U	100		MS
Nickel	60	2.0000	U	10.0000	U			MS
Selenium	78	3.0000	U	15.0000	U			MS
Silver	107	0.2000	U	1.0000	U			MS
Thallium	203	0.2000	U	1.0000	U			MS
Vanadium	51	1.0000	U	5.0000	U			MS
Zinc	66	6.0570	B	15.0000	U	100		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: RAE60

Method: MS
Instrument ID: 11332
Date: 04/2016

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.33
Arsenic	75		0.40
Barium	137		0.064
Beryllium	9		0.11
Cadmium	111		0.15
Chromium	52		0.50
Cobalt	59		0.10
Copper	63		0.40
Lead	208		0.026
Nickel	60		0.84
Selenium	78		0.50
Silver	107		0.039
Thallium	203		0.15
Vanadium	51		0.15
Zinc	66		2.1

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Instrument ID: 19302
Date: 04/2016

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury			0.050

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAE60
Matrix: WATER

Method: MS
Date: 04/2016

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		2.0	0.40
Arsenic	75		4.0	2.0
Barium	137		4.0	1.0
Beryllium	9		1.0	0.20
Cadmium	111		1.0	0.20
Chromium	52		4.0	1.0
Cobalt	59		1.0	1.0
Copper	63		4.0	1.0
Lead	208		2.0	0.20
Nickel	60		4.0	2.0
Selenium	78		4.0	3.0
Silver	107		1.0	0.20
Thallium	203		1.0	0.20
Vanadium	51		1.0	1.0
Zinc	66		30.0	3.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAE60
Matrix: WATER

Method: CV
Date: 07/2015

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury			0.20	0.050

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
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_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 161250639004

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
8352789	05/05/2016	50.00	50
8352790	05/05/2016	50.00	50
8352795	05/05/2016	50.00	50
8352796	05/05/2016	50.00	50
8352797	05/05/2016	50.00	50
8352798	05/05/2016	50.00	50
8352799	05/05/2016	50.00	50
8352791BKG	05/05/2016	50.00	50
8352794DUP	05/05/2016	50.00	50
8352793MSD	05/05/2016	50.00	50
8352792MS	05/05/2016	50.00	50
P12539DB	05/05/2016	50.00	50
P12539DQ	05/05/2016	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

Method: CV
Batch Number: 161255713005

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
8352790	05/05/2016	40.00	40
8352795	05/05/2016	40.00	40
8352796	05/05/2016	40.00	40
8352797	05/05/2016	40.00	40
8352798	05/05/2016	40.00	40
8352791BKG	05/05/2016	40.00	40
8352794DUP	05/05/2016	40.00	40
8352793MSD	05/05/2016	40.00	40
8352792MS	05/05/2016	40.00	40
P12513EB	05/05/2016	40.00	40
P12513EQ	05/05/2016	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE60

Method: MS
Instrument ID: 11332
Run Name: 1612705E03

Run Start Date: 05/06/2016
Run End Date: 05/06/2016

| Lab Sample ID | D/F | Time | Analytes | | |

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE60

Method: CV
Instrument ID: 19302
Run Name: 1612702M08

Run Start Date: 05/06/2016
Run End Date: 05/06/2016

Lab Sample ID	D/F	Time	Analytes																																		
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																			
S0	1.00	05:53										X																									
S0.2	1.00	05:55										X																									
S0.5	1.00	05:57										X																									
S1.0	1.00	05:59										X																									
S2.5	1.00	06:01										X																									
S5.0	1.00	06:03										X																									
ICV	1.00	06:05										X																									
ICB	1.00	06:07										X																									
CRA	1.00	06:09										X																									
CCV	1.00	06:11										X																									
CCB	1.00	06:13										X																									
ZZZZZZ	1.00	06:15																																			
ZZZZZZ	1.00	06:17																																			
ZZZZZZ	1.00	06:19																																			
ZZZZZZ	1.00	06:21																																			
ZZZZZZ	1.00	06:23																																			
ZZZZZZ	1.00	06:25																																			
ZZZZZZ	1.00	06:27																																			
ZZZZZZ	1.00	06:29																																			
ZZZZZZ	1.00	06:31																																			
ZZZZZZ	1.00	06:33																																			
CCV	1.00	06:35										X																									
CCB	1.00	06:37										X																									
ZZZZZZ	1.00	06:39																																			
ZZZZZZ	1.00	06:41																																			
ZZZZZZ	1.00	06:43																																			
ZZZZZZ	1.00	06:45																																			
ZZZZZZ	1.00	06:47																																			
ZZZZZZ	1.00	06:49																																			
ZZZZZZ	1.00	06:51																																			
ZZZZZZ	1.00	06:54																																			
ZZZZZZ	1.00	06:56																																			
ZZZZZZ	1.00	06:58																																			
CCV	1.00	07:00										X																									
CCB	1.00	07:02										X																									
ZZZZZZ	1.00	07:04																																			
ZZZZZZ	1.00	07:06																																			
ZZZZZZ	1.00	07:08																																			

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE60

Method: CV
Instrument ID: 19302
Run Name: 1612702M08

Run Start Date: 05/06/2016
Run End Date: 05/06/2016

Lab Sample ID	D/F	Time	Analytes																														
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN															
ZZZZZZ	1.00	07:10																															
ZZZZZZ	1.00	07:12																															
ZZZZZZ	1.00	07:14																															
ZZZZZZ	1.00	07:16																															
ZZZZZZ	1.00	07:18																															
ZZZZZZ	1.00	07:20																															
ZZZZZZ	1.00	07:22																															
CCV	1.00	07:24										X																					
CCB	1.00	07:26										X																					
ZZZZZZ	1.00	07:28																															
ZZZZZZ	1.00	07:30																															
ZZZZZZ	1.00	07:32																															
ZZZZZZ	1.00	07:34																															
ZZZZZZ	1.00	07:36																															
ZZZZZZ	1.00	07:38																															
ZZZZZZ	1.00	07:40																															
ZZZZZZ	1.00	07:42																															
ZZZZZZ	1.00	07:44																															
ZZZZZZ	1.00	07:46																															
CCV	1.00	07:49										X																					
CCB	1.00	07:51										X																					
ZZZZZZ	1.00	07:53																															
ZZZZZZ	1.00	07:55																															
ZZZZZZ	1.00	07:57																															
ZZZZZZ	1.00	07:59																															
ZZZZZZ	1.00	08:01																															
ZZZZZZ	1.00	08:03																															
ZZZZZZ	1.00	08:05																															
ZZZZZZ	1.00	08:07																															
ZZZZZZ	1.00	08:09																															
ZZZZZZ	1.00	08:11																															
CCV	1.00	08:13										X																					
CCB	1.00	08:15										X																					
ZZZZZZ	1.00	08:17																															
ZZZZZZ	1.00	08:19																															
ZZZZZZ	1.00	08:21																															
ZZZZZZ	1.00	08:23																															
ZZZZZZ	1.00	08:25																															

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE60

Method: CV
Instrument ID: 19302
Run Name: 1612702M08

Run Start Date: 05/06/2016
Run End Date: 05/06/2016

Lab Sample ID	D/F	Time	Analytes																													
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN														
ZZZZZZ	1.00	08:27																														
ZZZZZZ	1.00	08:29																														
ZZZZZZ	1.00	08:31																														
P12513EB	1.00	08:34										X																				
P12513EQ	1.00	08:36										X																				
CCV	1.00	08:38										X																				
CCB	1.00	08:40										X																				
8352791BKG	1.00	08:43										X																				
8352794DUP	1.00	08:45										X																				
8352792MS	1.00	08:47										X																				
8352793MSD	1.00	08:49										X																				
8352790	1.00	08:51										X																				
8352795	1.00	08:53										X																				
8352796	1.00	08:55										X																				
8352797	1.00	08:57										X																				
8352798	1.00	08:59										X																				
CRA	1.00	09:01										X																				
CCV	1.00	09:03										X																				
CCB	1.00	09:05										X																				

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 15
ICP-MS TUNE
SDG No.: RAE60
Matrix: WATER

Instrument ID: 11332
Date: 05/06/2016

Analyte	Mass	Avg. Measured Mass (amu)	Avg. Peak Width at 5% Peak Height (amu)	%RSD
Lithium	6.000	6.00	0.65	1.5
Magnesium	24.000	23.90	0.65	1.3
Rhodium	103.000	103.00	0.60	1.2
Indium	115.000	115.00	0.60	0.5
Cerium	140.000	140.00	0.65	1.3
Lead	208.000	208.00	0.65	1.5
Uranium	238.000	238.00	0.65	1.5

Comments:

_____
_____
_____
_____

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE60

Instrument ID: 11332
Run Name: 1612705E03

Start Date: 05/06/2016
End Date: 05/06/2016

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,AS,BA,CD,CO,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element BI-2-209	Q	Element	Q	Element	Q
S0	09:13	100		100		100		100		100					
S	09:16	102		103		101		99		98					
CCS	09:19	102		99		100		101		100					
CCS	09:22	99		97		99		98		98					
ICV	09:25	100		101		103		99		98					
ICB	09:28	99		98		99		98		98					
LLC	09:31	100		99		99		99		99					
ICSA	09:34	91		88		94		93		90					
ICSAB	09:37	89		88		93		92		88					
ZZZZZZ	09:40														
CCV	09:43	100		102		100		98		97					
CCB	09:46	98		99		98		96		97					
P12539DB	09:49	98		102		99		97		99					
P12539DQ	09:52	101		101		101		97		98					
8352791BKG	09:55	104		102		101		99		101					
8352791A	09:58	100		100		100		100		98					
8352794DUP	10:01	101		103		98		100		99					
8352792MS	10:04	101		101		99		98		98					
8352793MSD	10:07	101		101		100		98		98					
8352791L	10:10	103		102		102		101		102					
8352789	10:13							101							
8352790	10:16	103		101		101		101		100					
CCV	10:19	101		101		102		98		99					
CCB	10:22	101		99		99		99		99					
8352795	10:25	101		104		101		98		97					
8352796	10:28	103		104		101		100		99					
8352797	10:31	101		102		100		98		97					
8352798	10:34	102		99		99		98		95					
8352799	10:37							99							
8352799	10:40														
LLC	10:43	97		97		99		98		98					

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE60

Instrument ID: 11332
Run Name: 1612705E03

Start Date: 05/06/2016
End Date: 05/06/2016

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,AS,BA,CD,CO,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element BI-2-209	Q	Element	Q	Element	Q
ICSA	10:46	90		88		93		92		90					
ICSAB	10:49	88		87		93		90		87					
ZZZZZZ	10:52														
CCV	10:55	100		101		99		97		98					
CCB	10:58	99		100		97		99		98					

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 16E06F00.E03

Run Name: 1612705E03

Analyst: 1242

Reviewed By:	Reviewed Date
Nina C Haller	05/10/2016 13:37

Verified By:	Verified Date
Deborah A Krady	05/10/2016 09:48
Nina C Haller	05/10/2016 13:40

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1612705E03 Date/Time: 05/06/2016 9:13:00
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	13.33350	-436130000	-0.00172	0.00076	0.00096
B	11	0.00000	18793.20000	-147347000	-0.38481	0.33843	0.04635
NA	23	-0.00001	73961.40000	-129358000	8.10985	-1.06102	-7.05135
MG	24	0.00000	173.34100	480998000	-0.16034	-0.22517	0.38550
AL	27	0.00000	93.33750	10255700000	1.04625	-0.78311	-0.26315
K	39	-0.00002	132491.00000	-72802100	-4.80105	15.92729	-11.13204
CA	44	0.00000	413.35700	5430570000	10.04631	0.09177	-10.13805
SC-1	45	357892.00000	0.00000	0.808	358713.00000	354678.00000	360284.00000
SC-2	45	65485.30000	0.00000	1.216	65264.00000	64822.70000	66369.20000
SC-3	45	1364570	0	2.170	1397120	1357350	1339230
TI	47	0.00000	3.33346	-26653600000	0.18849	-0.09424	-0.09424
V	51	0.00000	36.66800	-1330800000	-0.00517	0.01073	-0.00556
CR	52	0.00000	113.33900	-549081000	-0.01510	-0.00136	0.01646
MN	55	0.00000	40.00230	5274480000	-0.02433	0.00063	0.02369
FE	57	0.00000	73.33640	4430890000	-0.44114	1.24142	-0.80028
CO	59	0.00000	203.34400	-2635040000	0.01366	-0.00010	-0.01356
NI	60	0.00000	90.00420	-1164380000	0.02842	0.01617	-0.04459
CU	63	0.00000	173.34100	-1523200000	-0.00161	0.01478	-0.01317
ZN	66	0.00000	56.66880	31218600000	0.01407	-0.09691	0.08284
GE-1	72	459140.00000	0.00000	1.543	466099.00000	451933.00000	459388.00000
GE-2	72	162765.00000	0.00000	1.763	159593.00000	163521.00000	165181.00000
GE-3	72	1169280	0	4.172	1225080	1148030	1134730
AS	75	0.00000	165.33600	144463000	0.00778	-0.08082	0.07305
SE	78	0.00000	2.88890	-1360450000	0.00348	-0.00730	0.00381
SR	88	0.00000	3.33346	-9994500000	0.00629	-0.00315	-0.00315
MO	98	0.00000	30.00140	1164550000	-0.01332	0.00713	0.00619
AG	107	0.00000	30.00200	2079970000	0.00319	-0.00613	0.00293
CD	111	0.00000	17.33350	2385730000	0.02539	-0.00745	-0.01794
IN-1	115	329038.00000	0.00000	1.923	334431.00000	322072.00000	330609.00000
IN-2	115	83568.50000	0.00000	1.766	83359.20000	82208.20000	85138.30000
SN	120	0.00000	170.01100	-694283000	0.01534	-0.01305	-0.00230
SB	121	0.00000	10.00040	182417000000	0.00996	-0.00982	-0.00014
BA	137	0.00000	6.66693	3112280000	0.00770	0.00802	-0.01572
TB-2	159	271936.00000	0.00000	0.600	270375.00000	273630.00000	271803.00000
TL	203	0.00000	30.00120	1701080000	0.00659	0.00007	-0.00666
PB	208	0.00000	176.67400	-394429000	0.00035	-0.00360	0.00325
BI-2	209	217191.00000	0.00000	0.855	217344.00000	215261.00000	218968.00000
U	238	0.00000	16.66740	1046710000	-0.00058	0.00030	0.00027

Run Name: 1612705E03 Date/Time: 05/06/2016 9:16:00
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66959.40000	0.00000	0.549	66922.20000	67344.20000	66611.70000
SC-3	45	1403240	0	2.600	1445330	1380730	1383670
AL	27	10000.00000	559043.00000	0.386	9974.96661	9980.59678	10044.43683
B	11	1000.00000	779890.00000	8.522	1067.35689	904.18924	1028.44926
BE	9	100.00000	97682.90000	0.819	100.38207	100.55721	99.05964
CA	44	10000.00000	59379.60000	2.653	9888.31024	9808.79810	10302.88646
CR	52	1000.00000	1549440.00000	2.410	972.38678	1010.77279	1016.83442
FE	57	10000.00000	309533.00000	1.057	10048.07096	9878.80933	10073.09183
K	39	10000.00000	1353840.00000	2.327	9955.29867	9792.84014	10251.74448
MG	24	10000.00000	1431930.00000	1.128	9999.08503	9887.60206	10113.23790
MN	55	1000.00000	833349.00000	1.579	984.49857	999.44543	1016.05885
NA	23	10000.00000	2804280.00000	0.627	9936.76662	10062.24660	10000.95537
TI	47	1000.00000	36291.20000	1.675	990.83229	989.83952	1019.33142
V	51	1000.00000	1312840.00000	0.817	1001.98332	991.01637	1006.99095
IN-1	115	332303.00000	0.00000	1.770	334432.00000	325652.00000	336825.00000
IN-2	115	82361.40000	0.00000	0.226	82496.40000	82148.90000	82438.90000
AG	107	100.00000	316652.00000	0.810	99.46662	99.60148	100.93195
AS	75	1000.00000	155165.00000	0.478	998.87395	995.89167	1005.24340
BA	137	1000.00000	421953.00000	0.961	991.10166	998.69916	1010.19977
CD	111	100.00000	41542.20000	0.598	99.57951	100.68443	99.73633
CO	59	1000.00000	2670260.00000	0.681	993.32745	999.73006	1006.94797
CU	63	1000.00000	1977300.00000	1.421	983.60753	1007.49941	1008.89683
MO	98	100.00000	147666.00000	1.088	99.70358	101.20585	99.09170
NI	60	1000.00000	693696.00000	1.339	986.51389	1013.28696	1000.19838
SB	121	100.00000	99952.20000	1.375	100.57665	100.99311	98.43133
SE	78	100.00000	11583.90000	0.878	100.42050	100.58857	98.99049
SN	120	100.00000	132066.00000	0.212	99.79756	99.98157	100.22098
SR	88	100.00000	104679.00000	0.606	100.62429	99.96093	99.41458
ZN	66	1000.00000	263409.00000	0.536	994.60847	1000.06156	1005.32883
BI-2	209	211850.00000	0.00000	1.224	212313.00000	214178.00000	209057.00000
PB	208	100.00000	953929.00000	0.676	100.35270	99.22100	100.42714
TL	203	100.00000	294883.00000	1.062	100.35769	98.80646	100.83768
U	238	100.00000	1129110.00000	1.102	100.68830	98.72881	100.58279
SC-1	45	361444.00000	0.00000	1.400	358174.00000	358886.00000	367273.00000
GE-1	72	463124.00000	0.00000	1.642	456205.00000	461899.00000	471267.00000
GE-2	72	160524.00000	0.00000	0.695	159845.00000	161810.00000	159916.00000
GE-3	72	1208610	0	3.550	1258140	1184960	1182740
TB-2	159	277223.00000	0.00000	0.451	278545.00000	276062.00000	277060.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:19:00
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66851.80000	0.00000	0.384	66661.40000	67143.60000	66750.50000
SC-3	45	1345270	0	2.588	1384970	1330880	1319970
AL	27	-0.27390	80.00400	-63.490	-0.44916	-0.10136	-0.27140
B	11	27.73000	38719.10000	2.362	27.13632	27.61423	28.43138
BE	9	0.05517	64.66740	17.533	0.04404	0.06151	0.05996
CA	44	10.92000	486.69800	108.425	13.44466	21.28986	-1.98316
CR	52	0.45550	820.06200	5.346	0.46993	0.42739	0.46920
FE	57	1.13200	110.00500	86.581	1.14018	0.14775	2.10785
K	39	-37.31000	130726.00000	-28.786	-25.35517	-46.13934	-40.43079
MG	24	0.25720	213.34400	83.243	0.44854	0.29717	0.02592
MN	55	0.16750	180.00900	29.045	0.16803	0.11860	0.21589
NA	23	-0.95800	75251.90000	-382.046	-0.64772	-4.76455	2.53594
TI	47	0.54970	23.33450	126.596	-0.09424	0.45539	1.28794
V	51	0.08583	150.00800	0.509	0.08616	0.08534	0.08600
IN-1	115	329023.00000	0.00000	1.867	334333.00000	322292.00000	330444.00000
IN-2	115	84811.60000	0.00000	1.769	83516.70000	84462.80000	86455.40000
AG	107	0.04080	163.34300	41.422	0.05301	0.02151	0.04788
AS	75	0.09424	182.66900	35.802	0.08214	0.13236	0.06822
BA	137	0.09230	46.66880	58.992	0.12452	0.12295	0.02944
CD	111	0.02563	28.66700	71.401	0.02051	0.01043	0.04595
CO	59	0.17730	693.38100	13.514	0.19079	0.19147	0.14964
CU	63	0.14480	470.03300	28.308	0.18280	0.15018	0.10136
MO	98	0.02829	73.33640	37.469	0.04010	0.01961	0.02515
NI	60	0.15210	200.01100	29.625	0.15609	0.19509	0.10522
SB	121	0.10370	116.67200	29.499	0.09873	0.13654	0.07597
SE	78	0.02351	5.55557	102.765	0.02638	0.04611	-0.00196
SN	120	0.04287	230.01500	140.308	0.11229	0.00609	0.01025
SR	88	0.02483	30.00120	75.473	0.02512	0.04343	0.00595
ZN	66	0.43000	173.34200	57.070	0.42558	0.67765	0.18689
BI-2	209	217555.00000	0.00000	0.938	215457.00000	219532.00000	217676.00000
PB	208	0.01565	330.01800	22.812	0.01803	0.01737	0.01154
TL	203	0.02203	96.67090	32.633	0.03007	0.01624	0.01976
U	238	0.01210	156.67400	48.992	0.01423	0.00540	0.01666
SC-1	45	355147.00000	0.00000	1.346	360596.00000	353193.00000	351652.00000
GE-1	72	459480.00000	0.00000	1.459	464425.00000	451850.00000	462164.00000
GE-2	72	164744.00000	0.00000	1.518	161972.00000	165425.00000	166834.00000
GE-3	72	1157930	0	5.126	1218470	1155510	1099820
TB-2	159	271571.00000	0.00000	0.212	272230.00000	271176.00000	271306.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:22:00
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	64657.40000	0.00000	1.525	64078.10000	65795.90000	64098.30000
SC-3	45	1325710	0	1.077	1339650	1311120	1326350
AL	27	-0.66070	56.66950	-88.875	-0.39846	-0.25054	-1.33338
B	11	13.65000	28058.00000	6.905	14.41029	13.93920	12.59400
BE	9	0.00621	18.66690	103.221	-0.00119	0.01005	0.00977
CA	44	4.36000	433.36000	37.133	2.69893	5.93346	4.44772
CR	52	0.39610	703.38400	28.351	0.52561	0.32600	0.33661
FE	57	1.03800	103.33800	102.601	1.28406	-0.12836	1.95807
K	39	20.82000	133249.00000	126.801	24.59949	-7.26161	45.12615
MG	24	-0.63340	83.33690	-22.813	-0.79731	-0.52442	-0.57856
MN	55	0.06721	93.33760	44.264	0.10153	0.04875	0.05134
NA	23	2.09300	73582.80000	133.254	5.26508	0.03025	0.98085
TI	47	0.18870	10.00040	148.649	0.19372	0.46665	-0.09424
V	51	-0.00767	26.66790	-153.906	-0.02065	0.00239	-0.00474
IN-1	115	324283.00000	0.00000	1.149	327752.00000	324750.00000	320346.00000
IN-2	115	82107.30000	0.00000	1.519	83024.00000	82610.40000	80687.50000
AG	107	0.00970	60.00230	55.375	0.00638	0.01590	0.00683
AS	75	-0.13490	141.33500	-62.639	-0.21835	-0.13700	-0.04938
BA	137	0.04013	23.33450	93.147	0.00779	0.03154	0.08105
CD	111	-0.00104	16.66680	-1032.790	0.01133	-0.00762	-0.00682
CO	59	0.12520	533.36700	3.546	0.12177	0.13023	0.12365
CU	63	0.00139	173.34300	559.107	-0.00628	0.00925	0.00120
MO	98	0.00723	40.00210	99.696	0.00014	0.00700	0.01455
NI	60	0.08471	146.67400	101.570	0.01475	0.05859	0.18078
SB	121	0.03050	40.00180	67.771	0.02989	0.01013	0.05147
SE	78	-0.00152	2.66667	-17.892	-0.00177	-0.00155	-0.00123
SN	120	0.00002	166.67400	125633.000	-0.02169	-0.00604	0.02779
SR	88	0.01268	16.66730	114.274	0.02529	0.01590	-0.00315
ZN	66	0.32370	140.00800	45.227	0.20334	0.28114	0.48666
BI-2	209	212644.00000	0.00000	0.797	214288.00000	212742.00000	210903.00000
PB	208	0.00283	200.00900	155.909	0.00787	-0.00030	0.00091
TL	203	-0.00209	23.33430	-369.201	0.00682	-0.00656	-0.00653
U	238	0.00121	30.00150	74.182	0.00119	0.00032	0.00212
SC-1	45	348261.00000	0.00000	0.589	349359.00000	349527.00000	345895.00000
GE-1	72	447419.00000	0.00000	0.404	448603.00000	448314.00000	445338.00000
GE-2	72	160458.00000	0.00000	2.421	157284.00000	164791.00000	159300.00000
GE-3	72	1142330	0	3.100	1182910	1117640	1126450
TB-2	159	268720.00000	0.00000	1.158	267565.00000	272244.00000	266350.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:25:00
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65344.00000	0.00000	0.887	65796.30000	64691.10000	65544.60000
SC-3	45	1375370	0	4.080	1431820	1374710	1319580
AL	27	5176.00000	282372.00000	3.188	4986.49040	5289.49886	5251.15726
B	11	491.70000	384984.00000	1.715	482.02253	497.21154	495.97110
BE	9	52.05000	49817.70000	1.323	51.28593	52.22927	52.62601
CA	44	5409.00000	31539.10000	2.337	5441.07001	5269.52496	5516.17650
CR	52	502.60000	760007.00000	1.709	493.01357	509.53798	505.34692
FE	57	5080.00000	153503.00000	1.356	5038.15926	5042.93228	5159.81662
K	39	4772.00000	699579.00000	1.566	4696.98478	4846.48155	4772.29695
MG	24	4989.00000	697231.00000	0.992	4948.91008	5044.32319	4973.71995
MN	55	526.30000	428041.00000	1.007	520.86887	526.59733	531.45919
NA	23	5295.00000	1483830.00000	1.097	5232.49752	5306.59766	5347.06752
TI	47	528.70000	18724.00000	4.120	510.38140	552.81299	523.05029
V	51	478.50000	613114.00000	0.854	474.21272	482.32425	479.11924
IN-1	115	338195.00000	0.00000	0.389	339204.00000	338673.00000	336710.00000
IN-2	115	82482.40000	0.00000	2.636	80056.00000	83140.10000	84251.20000
AG	107	50.80000	161020.00000	2.764	52.40129	50.19335	49.79403
AS	75	514.60000	80009.80000	2.169	527.45367	508.09348	508.15750
BA	137	517.80000	218779.00000	1.483	525.85902	517.16307	510.54410
CD	111	51.13000	21270.70000	3.057	52.93348	50.12243	50.34274
CO	59	511.10000	1366500.00000	1.351	518.84748	505.66033	508.69298
CU	63	503.60000	997093.00000	1.688	513.42198	498.22327	499.22680
MO	98	50.41000	74539.90000	2.257	51.71184	49.94180	49.58881
NI	60	513.10000	356365.00000	2.325	526.71280	504.53447	508.00817
SB	121	50.94000	50947.90000	5.365	53.81642	50.62563	48.37701
SE	78	50.08000	5906.25000	2.103	51.29654	49.46145	49.48281
SN	120	50.75000	67208.30000	0.802	50.90202	50.29265	51.06526
SR	88	51.80000	54290.20000	2.871	53.26286	50.29012	51.85870
ZN	66	504.70000	133107.00000	2.730	518.42255	490.85929	504.66916
BI-2	209	213132.00000	0.00000	0.537	214337.00000	212059.00000	213000.00000
PB	208	51.05000	490017.00000	1.462	50.51415	50.73051	51.90186
TL	203	50.78000	150667.00000	0.264	50.65477	50.92054	50.75963
U	238	51.76000	587972.00000	0.597	51.84277	52.01369	51.41403
SC-1	45	366638.00000	0.00000	0.262	367491.00000	365598.00000	366824.00000
GE-1	72	463873.00000	0.00000	0.671	465331.00000	465988.00000	460298.00000
GE-2	72	161854.00000	0.00000	1.891	160067.00000	160108.00000	165388.00000
GE-3	72	1191040	0	3.373	1232130	1189110	1151870
TB-2	159	270773.00000	0.00000	0.499	271874.00000	271181.00000	269265.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:28:00
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	64657.60000	0.00000	1.584	65374.20000	63485.20000	65113.40000
SC-3	45	1331620	0	3.339	1379940	1322500	1292430
AL	27	-1.15200	30.00140	-42.127	-1.52392	-1.32977	-0.60325
B	11	20.70000	33263.20000	3.226	20.53691	20.13414	21.43815
BE	9	0.04062	50.66720	1.936	0.04008	0.04026	0.04153
CA	44	-5.10000	380.02600	-207.059	4.69824	-16.28422	-3.71643
CR	52	0.37020	666.71000	22.993	0.36826	0.28612	0.45632
FE	57	0.69500	93.33760	263.453	-1.10646	0.63709	2.55431
K	39	6.11700	131531.00000	261.403	-11.08894	20.51562	8.92543
MG	24	-0.75500	66.67010	-43.404	-0.37675	-0.94055	-0.94792
MN	55	0.13270	146.67300	76.714	0.09855	0.05231	0.24723
NA	23	-2.76000	72302.00000	-118.514	-6.41378	-0.10339	-1.76508
TI	47	0.00264	3.33346	6356.060	-0.09424	0.19641	-0.09424
V	51	0.03191	76.66960	38.483	0.01820	0.03566	0.04189
IN-1	115	324978.00000	0.00000	0.877	321763.00000	327192.00000	325979.00000
IN-2	115	81659.60000	0.00000	1.968	83345.70000	81488.60000	80144.50000
AG	107	0.00346	40.00160	7.240	0.00319	0.00348	0.00369
AS	75	0.00016	161.33600	49555.400	-0.03030	-0.05922	0.09001
BA	137	0.00819	10.00040	5.730	0.00770	0.00823	0.00864
CD	111	-0.01367	11.33340	-55.867	-0.01268	-0.02176	-0.00658
CO	59	0.19880	723.38200	27.384	0.14322	0.20120	0.25202
CU	63	0.00694	183.34200	304.655	-0.00160	0.03101	-0.00860
MO	98	0.00973	43.33500	113.396	0.00006	0.00737	0.02175
NI	60	-0.00195	86.67020	-1653.530	-0.01430	-0.02627	0.03471
SB	121	0.01399	23.33420	170.908	0.00007	0.00030	0.04160
SE	78	0.00828	3.77779	249.517	0.01055	-0.01342	0.02770
SN	120	0.02115	193.34500	115.887	-0.00711	0.03394	0.03664
SR	88	0.01625	20.00080	61.600	0.00629	0.01617	0.02631
ZN	66	0.17150	100.00600	41.948	0.23927	0.09600	0.17920
BI-2	209	212337.00000	0.00000	1.060	214048.00000	209789.00000	213175.00000
PB	208	0.00637	233.34400	28.829	0.00582	0.00842	0.00488
TL	203	0.00696	50.00210	46.882	0.00684	0.00376	0.01028
U	238	0.00562	80.00340	14.485	0.00645	0.00482	0.00560
SC-1	45	350183.00000	0.00000	1.060	350768.00000	346213.00000	353567.00000
GE-1	72	446371.00000	0.00000	0.244	445115.00000	447054.00000	446944.00000
GE-2	72	159441.00000	0.00000	0.124	159651.00000	159258.00000	159412.00000
GE-3	72	1180190	0	1.777	1201870	1178700	1160000
TB-2	159	271118.00000	0.00000	1.883	269618.00000	266931.00000	276805.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:31:00
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65335.00000	0.00000	0.784	65133.40000	64954.10000	65917.60000
SC-3	45	1351890	0	1.699	1375460	1329580	1350630
AL	27	199.80000	10988.30000	6.622	214.68910	189.44241	195.19898
B	11	104.30000	94962.60000	1.712	104.59639	105.92501	102.39009
BE	9	0.99270	947.37500	3.527	0.99089	0.95856	1.02851
CA	44	390.00000	2657.04000	12.787	332.81383	412.62841	424.50813
CR	52	4.36900	6718.68000	2.660	4.23951	4.40453	4.46375
FE	57	192.20000	5878.22000	1.178	189.95997	194.48904	192.26884
K	39	364.50000	175524.00000	4.203	362.79025	380.57551	350.07285
MG	24	193.90000	27262.30000	2.665	190.59640	191.19649	199.83288
MN	55	3.96100	3260.55000	1.617	3.93643	4.03400	3.91336
NA	23	369.10000	172081.00000	1.174	365.69497	374.00934	367.73709
TI	47	31.54000	1120.09000	15.900	37.01905	27.17838	30.41882
V	51	0.89510	1183.45000	7.321	0.95815	0.82736	0.89996
IN-1	115	326783.00000	0.00000	1.920	321701.00000	324851.00000	333796.00000
IN-2	115	82419.00000	0.00000	1.307	81201.10000	82811.00000	83245.10000
AG	107	1.02600	3280.56000	4.704	1.07367	0.97721	1.02834
AS	75	3.59700	720.69200	5.933	3.75290	3.68518	3.35408
BA	137	3.75700	1593.50000	10.120	3.71058	3.40243	4.15851
CD	111	1.01600	439.34500	1.989	1.02864	1.02701	0.99285
CO	59	1.04400	2990.46000	1.148	1.03425	1.05739	1.04037
CU	63	4.16500	8413.05000	1.682	4.12156	4.24616	4.12839
MO	98	0.87610	1323.46000	5.144	0.92128	0.87603	0.83114
NI	60	3.80400	2730.40000	4.127	3.64503	3.95894	3.80916
SB	121	2.08900	2100.26000	6.802	1.92881	2.19966	2.13865
SE	78	3.97000	455.34300	4.373	3.82786	3.92004	4.16389
SN	120	4.14500	5641.52000	5.407	3.89589	4.20995	4.32987
SR	88	2.05200	2153.59000	3.321	1.97381	2.09693	2.08598
ZN	66	30.78000	8166.23000	3.609	31.03496	29.55865	31.73386
BI-2	209	216030.00000	0.00000	0.702	214279.00000	216865.00000	216945.00000
PB	208	1.95500	19186.90000	3.137	2.01642	1.89376	1.95452
TL	203	1.00100	3040.52000	3.789	1.03967	1.00065	0.96383
U	238	0.95140	10972.20000	2.406	0.94202	0.97753	0.93475
SC-1	45	353058.00000	0.00000	2.001	346891.00000	351515.00000	360767.00000
GE-1	72	455921.00000	0.00000	1.652	447600.00000	457895.00000	462268.00000
GE-2	72	159970.00000	0.00000	2.274	155958.00000	163054.00000	160897.00000
GE-3	72	1175000	0	2.970	1208390	1177840	1138760
TB-2	159	269619.00000	0.00000	1.118	266226.00000	271992.00000	270638.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:34:00
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	59435.90000	0.00000	2.751	57617.30000	59907.70000	60782.80000
SC-3	45	1206000	0	2.970	1232250	1220570	1165190
AL	27	99450.00000	4932920.00000	1.907	100971.73293	100058.97970	97325.50743
B	11	9.03700	22514.30000	2.663	9.30572	8.84077	8.96506
BE	9	0.04396	48.66720	16.968	0.04890	0.03538	0.04760
CA	44	339300.00000	1775650.00000	1.165	343088.44318	339528.46087	335194.08337
CR	52	3.05300	4297.54000	4.504	3.21137	2.97746	2.96912
FE	57	251200.00000	6897620.00000	2.474	258013.03208	249787.89825	245829.60386
K	39	99750.00000	10904900.00000	1.953	101532.69334	100039.24807	97669.81033
MG	24	96250.00000	12230100.00000	1.980	97353.28181	97353.21363	94051.97915
MN	55	57.79000	42761.80000	3.314	60.00463	56.64598	56.73249
NA	23	253800.00000	61498600.00000	3.789	263235.35971	254166.33842	244013.95843
TI	47	2227.00000	71701.00000	3.126	2291.45180	2236.35937	2153.16836
V	51	0.14370	200.01200	28.525	0.17500	0.15870	0.09726
IN-1	115	307881.00000	0.00000	0.662	309110.00000	305530.00000	309005.00000
IN-2	115	77543.40000	0.00000	0.865	77687.00000	78130.70000	76812.60000
AG	107	0.24680	763.39400	6.507	0.22846	0.25375	0.25827
AS	75	0.13320	172.66900	53.416	0.16712	0.05139	0.18098
BA	137	2.78700	1113.43000	1.463	2.77346	2.83259	2.75438
CD	111	0.30360	134.66900	19.835	0.28046	0.25832	0.37191
CO	59	2.79300	7208.94000	5.428	2.68127	2.73278	2.96580
CU	63	3.27200	6248.45000	8.380	3.29791	2.98529	3.53174
MO	98	2156.00000	2996420.00000	1.252	2137.62162	2142.95390	2186.81554
NI	60	1.59800	1126.76000	12.278	1.44617	1.52842	1.81967
SB	121	0.08588	90.00430	13.076	0.07505	0.08511	0.09747
SE	78	0.05369	8.44448	44.943	0.03677	0.08132	0.04298
SN	120	0.14180	333.35300	39.570	0.11416	0.10480	0.20633
SR	88	3.43100	3383.93000	5.689	3.64367	3.26030	3.38801
ZN	66	1.43100	406.69100	28.267	1.52009	0.98986	1.78411
BI-2	209	194719.00000	0.00000	0.395	194373.00000	195599.00000	194183.00000
PB	208	0.17470	1690.13000	8.369	0.16251	0.19091	0.17070
TL	203	-0.00008	26.66810	-11966.300	0.00115	-0.00994	0.00856
U	238	0.01141	133.34000	19.798	0.01014	0.01007	0.01402
SC-1	45	321429.00000	0.00000	0.380	322590.00000	320156.00000	321540.00000
GE-1	72	427432.00000	0.00000	1.395	426820.00000	421798.00000	433676.00000
GE-2	72	150578.00000	0.00000	1.221	152698.00000	149606.00000	149431.00000
GE-3	72	1096370	0	6.204	1093590	1165750	1029790
TB-2	159	241706.00000	0.00000	1.233	243732.00000	243102.00000	238284.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:37:00
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	58193.60000	0.00000	1.010	57588.50000	58230.10000	58762.30000
SC-3	45	1202770	0	2.761	1240700	1188690	1178920
AL	27	100200.00000	4869370.00000	0.850	101225.46289	99738.77122	99760.36233
B	11	4.25400	19340.00000	6.425	4.45281	4.36657	3.94213
BE	9	0.04776	52.00060	35.029	0.06700	0.03671	0.03957
CA	44	343900.00000	1762520.00000	1.211	346448.76956	339077.30117	346124.78712
CR	52	209.50000	282230.00000	1.133	206.78069	210.67508	211.07942
FE	57	255700.00000	6877590.00000	0.357	254652.42314	256237.08011	256230.19543
K	39	99610.00000	10666300.00000	0.441	100096.34239	99235.05967	99513.92980
MG	24	98320.00000	12234300.00000	1.691	98589.19874	99834.32612	96540.23238
MN	55	272.30000	197234.00000	0.724	274.43592	270.55463	271.88879
NA	23	259100.00000	61515800.00000	1.531	255526.08102	258413.24022	263369.72263
TI	47	2210.00000	69700.70000	1.784	2225.27207	2165.06946	2239.24867
V	51	203.60000	232380.00000	1.335	200.97148	206.40511	203.51388
IN-1	115	304599.00000	0.00000	1.765	310694.00000	300538.00000	302565.00000
IN-2	115	76690.90000	0.00000	0.946	77524.20000	76199.10000	76349.40000
AG	107	47.77000	140850.00000	2.447	46.71725	49.02778	47.56979
AS	75	101.20000	14755.80000	2.664	98.49985	101.20868	103.89211
BA	137	2.15600	853.39700	1.314	2.14977	2.18746	2.13197
CD	111	93.65000	36224.60000	0.594	93.00436	93.96466	93.97236
CO	59	190.20000	473133.00000	1.629	186.83327	192.88287	191.02109
CU	63	190.20000	350287.00000	2.209	185.46171	193.45928	191.69952
MO	98	2140.00000	2942050.00000	1.096	2166.35385	2131.89953	2121.55044
NI	60	193.90000	125343.00000	1.801	193.92786	197.44586	190.45961
SB	121	0.11200	113.33900	15.063	0.10712	0.13079	0.09812
SE	78	92.04000	9772.59000	1.642	90.81137	93.72813	91.58791
SN	120	0.11970	303.35400	55.230	0.17106	0.04511	0.14292
SR	88	3.20900	3130.52000	8.716	3.04214	3.05382	3.53232
ZN	66	91.29000	22440.30000	2.295	93.54791	90.90339	89.41038
BI-2	209	190606.00000	0.00000	1.066	188516.00000	190726.00000	192575.00000
PB	208	0.18790	1766.79000	8.558	0.18697	0.20440	0.17227
TL	203	0.00267	33.33470	221.613	0.00912	0.00136	-0.00248
U	238	0.01232	140.00700	26.769	0.00851	0.01430	0.01415
SC-1	45	320489.00000	0.00000	1.850	327265.00000	317937.00000	316263.00000
GE-1	72	424524.00000	0.00000	1.870	432561.00000	416692.00000	424320.00000
GE-2	72	149571.00000	0.00000	0.999	148249.00000	151192.00000	149271.00000
GE-3	72	1056410	0	1.633	1076040	1043670	1049520
TB-2	159	239451.00000	0.00000	0.538	238864.00000	238559.00000	240929.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:40:00
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	63977.80000	0.00000	0.476	63816.80000	63787.50000	64329.10000
SC-3	45	1348620	0	2.703	1370890	1368420	1306560
AL	27	3.59900	283.34900	23.615	2.79819	4.49068	3.50729
B	11	-0.22380	18402.70000	-386.461	-0.34515	-1.02167	0.69509
BE	9	-0.00123	12.00010	-199.757	-0.00358	-0.00146	0.00134
CA	44	-0.16460	403.35700	-4281.290	-5.89411	-2.30423	7.70474
CR	52	0.45210	780.05500	11.451	0.45356	0.39960	0.50311
FE	57	15.71000	536.70400	14.615	13.50586	15.54856	18.08831
K	39	37.73000	133844.00000	33.952	27.35001	52.04754	33.79900
MG	24	3.83300	693.37900	11.453	4.26122	3.38388	3.85387
MN	55	0.09337	113.33800	27.846	0.11474	0.06442	0.10094
NA	23	31.90000	80583.30000	26.953	41.46494	24.81680	29.41101
TI	47	0.09775	6.66692	170.128	0.19490	-0.09424	0.19260
V	51	-0.00467	30.00140	-172.507	-0.00464	0.00337	-0.01276
IN-1	115	324301.00000	0.00000	2.054	330337.00000	317153.00000	325413.00000
IN-2	115	81138.40000	0.00000	1.346	80538.10000	80477.80000	82399.40000
AG	107	0.01842	86.67060	71.173	0.00363	0.02303	0.02859
AS	75	-0.08990	146.66900	-96.062	-0.17948	-0.00716	-0.08307
BA	137	0.01623	13.33390	170.548	0.03275	-0.01572	0.03166
CD	111	-0.01178	12.00020	-112.309	-0.00183	-0.00673	-0.02679
CO	59	0.14140	570.03700	24.873	0.16616	0.10117	0.15696
CU	63	0.02781	223.34600	116.505	0.01171	0.00661	0.06511
MO	98	0.53440	806.72400	6.845	0.54801	0.49298	0.56226
NI	60	0.01798	100.00400	72.080	0.00442	0.01928	0.03025
SB	121	0.00360	13.33390	424.200	0.00042	-0.00982	0.02019
SE	78	0.01020	4.00001	50.873	0.01542	0.00504	0.01015
SN	120	0.04513	223.38000	131.797	0.11346	0.00492	0.01700
SR	88	0.02595	30.00140	37.649	0.03593	0.01641	0.02550
ZN	66	0.45850	173.34200	33.544	0.52679	0.56621	0.28239
BI-2	209	215905.00000	0.00000	0.888	217730.00000	216078.00000	213908.00000
PB	208	0.00424	216.67800	133.435	0.00031	0.01074	0.00168
TL	203	0.00889	56.67010	55.463	0.01316	0.01001	0.00349
U	238	0.00059	23.33430	170.860	0.00115	-0.00057	0.00119
SC-1	45	339313.00000	0.00000	2.797	350113.00000	332297.00000	335529.00000
GE-1	72	441565.00000	0.00000	1.915	451246.00000	435609.00000	437842.00000
GE-2	72	159065.00000	0.00000	1.852	156778.00000	158027.00000	162389.00000
GE-3	72	1198080	0	0.950	1210830	1194460	1188960
TB-2	159	266768.00000	0.00000	0.862	264236.00000	268726.00000	267340.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:43:00
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65320.40000	0.00000	1.274	64378.80000	65956.70000	65625.80000
SC-3	45	1393480	0	2.304	1419210	1403750	1357490
AL	27	2483.00000	135484.00000	0.884	2507.63534	2465.16684	2476.74743
B	11	233.10000	195012.00000	1.864	231.92553	229.44578	237.89768
BE	9	25.60000	24839.30000	0.846	25.59156	25.38758	25.82042
CA	44	2583.00000	15269.60000	1.182	2618.32089	2562.54036	2568.88378
CR	52	250.30000	378374.00000	0.918	252.61550	250.22073	248.02075
FE	57	2499.00000	75527.20000	0.048	2500.54672	2498.12796	2499.40123
K	39	2337.00000	409886.00000	0.984	2348.11520	2310.06468	2351.46941
MG	24	2398.00000	335041.00000	1.148	2422.86676	2401.68712	2368.24638
MN	55	258.90000	210468.00000	1.982	264.68948	254.92548	257.06942
NA	23	2370.00000	704576.00000	1.824	2414.17616	2368.17306	2327.79978
TI	47	265.10000	9390.43000	3.604	259.96065	276.13438	259.23630
V	51	243.50000	311836.00000	1.380	247.36512	241.68792	241.40830
IN-1	115	330166.00000	0.00000	1.000	333412.00000	326812.00000	330274.00000
IN-2	115	81589.70000	0.00000	1.684	80018.30000	82186.70000	82564.20000
AG	107	25.88000	81193.50000	1.618	26.35580	25.72704	25.56214
AS	75	260.90000	40209.20000	1.944	266.24662	256.17050	260.17260
BA	137	257.40000	107597.00000	1.144	257.35693	260.36810	254.47765
CD	111	25.63000	10558.50000	2.604	26.39292	25.36703	25.14012
CO	59	247.40000	654489.00000	1.727	252.25000	245.83816	244.15003
CU	63	254.20000	498034.00000	1.094	257.36366	252.07852	253.21818
MO	98	26.05000	38131.80000	3.031	26.45017	25.14571	26.56894
NI	60	259.00000	177993.00000	1.450	262.96303	258.37810	255.51782
SB	121	26.42000	26168.30000	1.964	26.20743	26.03803	27.00927
SE	78	25.80000	2971.90000	0.931	25.70259	25.62500	26.07439
SN	120	25.63000	33656.40000	1.109	25.87895	25.32198	25.69895
SR	88	26.22000	27179.90000	3.135	27.14674	25.58603	25.91817
ZN	66	259.00000	67611.60000	1.970	264.14465	258.92719	253.93861
BI-2	209	211256.00000	0.00000	2.103	216288.00000	209606.00000	207874.00000
PB	208	25.66000	244194.00000	1.646	25.17541	25.93542	25.87482
TL	203	26.26000	77224.90000	1.635	25.79398	26.34084	26.64088
U	238	25.50000	287041.00000	1.575	25.05786	25.84688	25.58164
SC-1	45	352930.00000	0.00000	1.850	357492.00000	345452.00000	355846.00000
GE-1	72	457145.00000	0.00000	1.433	464710.00000	453314.00000	453409.00000
GE-2	72	161271.00000	0.00000	1.121	161872.00000	162701.00000	159239.00000
GE-3	72	1233860	0	2.760	1268310	1233030	1200240
TB-2	159	269396.00000	0.00000	0.361	268440.00000	270385.00000	269364.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 9:46:00
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	63887.20000	0.00000	0.425	63575.10000	64018.50000	64068.00000
SC-3	45	1352780	0	1.997	1376000	1359210	1323130
AL	27	-1.14400	30.00110	-16.582	-0.95343	-1.33291	-1.14622
B	11	5.11000	22379.40000	6.722	5.26975	5.34418	4.71544
BE	9	0.01154	24.00020	88.908	0.00891	0.00285	0.02286
CA	44	1.12900	410.02600	801.506	-3.85730	-4.32853	11.57451
CR	52	0.40780	713.38200	7.379	0.37399	0.43164	0.41777
FE	57	0.05722	73.33640	2416.990	1.65381	-0.74043	-0.74171
K	39	48.49000	134909.00000	18.835	39.19298	48.81749	57.45023
MG	24	-0.84540	53.33530	-26.307	-1.08809	-0.79690	-0.65125
MN	55	0.09345	113.33900	68.550	0.03952	0.07657	0.16427
NA	23	8.14600	74283.50000	54.419	13.13196	6.64850	4.65387
TI	47	-0.09424	0.00000	0.000	-0.09424	-0.09424	-0.09424
V	51	0.00063	36.66800	1928.960	-0.01257	0.01122	0.00323
IN-1	115	322952.00000	0.00000	1.208	325600.00000	318474.00000	324782.00000
IN-2	115	80343.30000	0.00000	1.919	78565.70000	81150.30000	81314.10000
AG	107	0.00164	33.33460	654.667	0.01389	-0.00288	-0.00609
AS	75	0.03410	164.00300	46.129	0.01823	0.04968	0.03440
BA	137	0.02432	16.66730	150.822	-0.01572	0.03239	0.05630
CD	111	0.01139	21.33350	214.486	0.00926	-0.01190	0.03682
CO	59	0.25370	856.72900	19.354	0.25074	0.20615	0.30423
CU	63	0.01046	186.67600	336.807	0.03008	0.03150	-0.03021
MO	98	0.03097	73.33670	16.280	0.03679	0.02811	0.02801
NI	60	0.05046	120.00600	214.031	0.17401	0.00342	-0.02605
SB	121	0.00732	16.66730	82.753	0.01116	0.00034	0.01045
SE	78	-0.00159	2.66668	-1284.990	0.01013	-0.02511	0.01022
SN	120	-0.01848	140.01300	-142.424	-0.04751	0.00383	-0.01178
SR	88	0.04273	46.66870	53.803	0.05695	0.05503	0.01621
ZN	66	-0.05492	40.00200	-187.728	-0.01200	-0.17250	0.01974
BI-2	209	211551.00000	0.00000	2.258	207238.00000	216686.00000	210730.00000
PB	208	0.00224	193.34200	57.098	0.00232	0.00348	0.00092
TL	203	0.01060	60.00280	161.321	0.01086	-0.00663	0.02756
U	238	0.00389	60.00310	24.432	0.00490	0.00376	0.00301
SC-1	45	342797.00000	0.00000	1.467	347208.00000	337320.00000	343861.00000
GE-1	72	443864.00000	0.00000	1.248	446375.00000	437515.00000	447701.00000
GE-2	72	161065.00000	0.00000	0.738	159759.00000	161354.00000	162083.00000
GE-3	72	1180700	0	3.377	1226470	1162060	1153560
TB-2	159	266423.00000	0.00000	1.082	267588.00000	263140.00000	268539.00000

Run Name: 1612705E03
Tube Number: 13
Sample Number: **PBW**

Date/Time: 05/06/2016 9:49:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	64208.90000	0.00000	1.628	64339.20000	65183.20000	63104.40000
SC-3	45	1386610	0	1.915	1416530	1377530	1365780
AL	27	-0.51970	63.33590	-119.665	-0.96238	-0.78824	0.19125
B	11	1.42300	20165.90000	24.877	1.11825	1.81118	1.33851
BE	9	0.00813	21.33350	122.154	0.00217	0.00263	0.01960
CA	44	0.20280	406.69200	3345.660	7.69298	-5.53290	-1.55150
CR	52	0.44740	776.72400	18.818	0.52318	0.46238	0.35679
FE	57	0.37230	83.33700	180.553	0.93272	0.55718	-0.37304
K	39	33.63000	133828.00000	53.524	36.31819	14.43603	50.13936
MG	24	-0.70110	73.33630	-21.409	-0.87177	-0.58949	-0.64233
MN	55	0.14680	156.67400	41.478	0.08843	0.20993	0.14205
NA	23	24.24000	78869.80000	10.433	21.49818	24.75010	26.47925
TI	47	-0.09424	0.00000	0.000	-0.09424	-0.09424	-0.09424
V	51	-0.00751	26.66770	-117.610	-0.01276	0.00269	-0.01245
IN-1	115	327031.00000	0.00000	0.280	326177.00000	326920.00000	327997.00000
IN-2	115	81202.80000	0.00000	1.217	80065.60000	81686.00000	81856.80000
AG	107	-0.00290	20.00080	-108.577	-0.00604	0.00026	-0.00293
AS	75	-0.04012	154.66900	-597.956	-0.29380	-0.00957	0.18300
BA	137	0.07994	40.00190	78.684	0.00866	0.12766	0.10351
CD	111	0.00762	20.00020	7.855	0.00831	0.00733	0.00723
CO	59	-0.01672	153.34000	-138.218	0.00961	-0.03361	-0.02616
CU	63	0.05542	276.68300	39.083	0.06432	0.03073	0.07120
MO	98	0.03026	73.33700	45.539	0.01482	0.03462	0.04132
NI	60	0.05644	126.67300	163.483	-0.00963	0.01709	0.16186
SB	121	-0.00310	6.66693	-187.831	-0.00982	0.00027	0.00025
SE	78	0.00219	3.11112	157.385	0.00421	0.00414	-0.00179
SN	120	0.03963	216.68500	58.592	0.03680	0.06414	0.01796
SR	88	0.01616	20.00080	102.599	0.00668	0.00649	0.03530
ZN	66	0.71360	240.01400	19.661	0.76555	0.55470	0.82058
BI-2	209	213988.00000	0.00000	0.813	212216.00000	214052.00000	215696.00000
PB	208	0.00790	250.01200	20.545	0.00603	0.00893	0.00873
TL	203	-0.00436	16.66740	-117.396	-0.00994	0.00013	-0.00328
U	238	-0.00026	13.33390	-781.776	0.00210	-0.00144	-0.00144
SC-1	45	348734.00000	0.00000	1.359	347890.00000	344475.00000	353838.00000
GE-1	72	451421.00000	0.00000	0.695	452780.00000	447833.00000	453651.00000
GE-2	72	159495.00000	0.00000	2.488	156140.00000	158469.00000	163875.00000
GE-3	72	1199300	0	2.176	1223350	1203010	1171550
TB-2	159	270403.00000	0.00000	0.257	270057.00000	271203.00000	269948.00000

Run Name: 1612705E03
Tube Number: 14
Sample Number: **LCSW**

Date/Time: 05/06/2016 9:52:00
Batch: 161250639004A
Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66312.70000	0.00000	2.858	64339.50000	68118.20000	66480.50000
SC-3	45	1377230	0	1.754	1371480	1403740	1356470
AL	27	2094.00000	115985.00000	1.283	2122.97126	2088.80247	2069.97078
B	11	244.50000	201283.00000	0.815	246.77274	243.04704	243.68365
BE	9	4.16000	4001.30000	2.233	4.26725	4.11561	4.09846
CA	44	4229.00000	25098.50000	3.135	4375.42020	4117.08738	4194.53315
CR	52	51.20000	78624.80000	3.252	52.70101	49.40922	51.48549
FE	57	1039.00000	31900.30000	2.573	1059.22395	1008.61192	1048.85726
K	39	10440.00000	1393680.00000	1.429	10555.69148	10271.81504	10493.22515
MG	24	2011.00000	285153.00000	3.390	2063.18232	1933.80013	2035.79526
MN	55	53.83000	44430.70000	4.293	55.28445	51.16158	55.03090
NA	23	10490.00000	2907490.00000	3.129	10770.25198	10128.05967	10566.51270
TI	47	268.30000	9644.00000	2.619	271.30943	260.32380	273.40427
V	51	48.20000	62678.60000	2.251	49.27052	47.10062	48.22986
IN-1	115	333098.00000	0.00000	2.038	337184.00000	336848.00000	325261.00000
IN-2	115	81376.30000	0.00000	1.204	80682.40000	82496.90000	80949.50000
AG	107	52.94000	165609.00000	1.699	53.59417	51.91098	53.30355
AS	75	10.80000	1814.81000	2.154	10.54149	10.99516	10.85783
BA	137	54.01000	22521.30000	1.789	54.03383	53.03431	54.96589
CD	111	5.32100	2200.21000	3.443	5.12162	5.35915	5.48199
CO	59	256.70000	677280.00000	1.938	258.39561	251.08710	260.58854
CU	63	52.94000	103575.00000	2.423	53.34722	51.50593	53.97523
MO	98	53.01000	77346.90000	2.813	54.68459	52.51472	51.82723
NI	60	54.33000	37311.60000	2.431	54.89140	52.81621	55.26932
SB	121	6.24600	6175.10000	6.382	6.69247	5.92544	6.12044
SE	78	10.19000	1186.06000	1.358	10.19215	10.05464	10.33142
SN	120	53.52000	69913.80000	1.214	53.44781	52.91638	54.20857
SR	88	42.15000	43585.90000	3.288	42.70768	40.57234	43.17153
ZN	66	529.00000	137674.00000	1.991	530.53646	517.73688	538.61757
BI-2	209	213796.00000	0.00000	1.420	214545.00000	216386.00000	210457.00000
PB	208	15.81000	152315.00000	1.091	15.96080	15.62028	15.83858
TL	203	2.14800	6418.67000	4.478	2.06686	2.12225	2.25408
U	238	-0.00055	10.00040	-160.881	-0.00057	-0.00144	0.00034
SC-1	45	359373.00000	0.00000	2.131	356857.00000	367973.00000	353289.00000
GE-1	72	459548.00000	0.00000	1.343	460136.00000	465408.00000	453101.00000
GE-2	72	160754.00000	0.00000	0.226	160557.00000	160533.00000	161173.00000
GE-3	72	1228110	0	0.959	1236410	1233280	1214620
TB-2	159	274608.00000	0.00000	0.316	275370.00000	273664.00000	274790.00000

Run Name: 1612705E03
Tube Number: 15
Sample Number: **8352791**

Date/Time: 05/06/2016 9:55:00
Batch: 161250639004A
Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	67961.30000	0.00000	0.754	67625.90000	68551.30000	67706.60000
SC-3	45	1395240	0	1.909	1425920	1381820	1377970
AL	27	497.10000	28297.90000	2.036	485.42932	503.88988	501.86772
B	11	9.93000	26719.30000	4.643	9.78758	10.44580	9.55756
BE	9	0.09852	109.33500	6.187	0.09880	0.10448	0.09230
CA	44	5765.00000	34934.50000	4.092	5502.38895	5835.76585	5958.22628
CR	52	0.83050	1423.48000	5.797	0.78813	0.82062	0.88287
FE	57	12.64000	473.36500	2.657	12.92790	12.72101	12.27097
K	39	571.50000	208177.00000	3.974	576.91709	546.57503	591.00728
MG	24	3082.00000	448075.00000	1.024	3078.37010	3052.65834	3115.45106
MN	55	33.63000	28489.20000	2.929	32.49525	34.15886	34.24052
NA	23	7269.00000	2089860.00000	2.139	7215.32036	7148.21949	7444.73164
TI	47	0.63190	26.66770	90.141	1.27003	0.17493	0.45082
V	51	0.04879	103.33900	62.636	0.02418	0.08300	0.03919
IN-1	115	332996.00000	0.00000	3.288	342144.00000	335981.00000	320864.00000
IN-2	115	82665.10000	0.00000	0.401	82993.30000	82329.60000	82672.40000
AG	107	0.00224	36.66840	291.711	0.00011	-0.00297	0.00959
AS	75	0.03342	168.66900	429.384	0.17891	-0.10807	0.02943
BA	137	44.80000	18982.00000	1.631	44.98952	43.99903	45.42440
CD	111	0.01798	24.66690	94.716	0.01612	0.03586	0.00195
CO	59	1.39300	3934.10000	8.033	1.29286	1.51377	1.37281
CU	63	1.05900	2273.62000	8.053	0.97263	1.14311	1.06241
MO	98	0.03856	86.67130	88.745	0.00687	0.07485	0.03397
NI	60	0.99690	783.38400	7.084	1.07362	0.98233	0.93465
SB	121	0.04335	53.33540	13.273	0.03983	0.04023	0.04999
SE	78	0.16200	21.77780	17.778	0.17056	0.18553	0.12988
SN	120	0.21400	450.63800	126.636	0.06864	0.52671	0.04674
SR	88	17.99000	18904.70000	2.415	17.49243	18.19819	18.28452
ZN	66	6.05700	1656.84000	11.261	5.81878	5.52551	6.82593
BI-2	209	218765.00000	0.00000	1.918	215868.00000	216849.00000	223579.00000
PB	208	0.76080	7671.26000	2.325	0.77847	0.74310	0.76094
TL	203	0.03942	150.00700	37.874	0.05662	0.02982	0.03183
U	238	0.03409	413.35900	21.707	0.03507	0.04096	0.02625
SC-1	45	359393.00000	0.00000	2.775	364751.00000	365544.00000	347886.00000
GE-1	72	464760.00000	0.00000	0.862	467240.00000	466900.00000	460141.00000
GE-2	72	162630.00000	0.00000	0.864	161605.00000	162053.00000	164231.00000
GE-3	72	1218960	0	0.654	1226420	1219890	1210570
TB-2	159	280012.00000	0.00000	0.615	278242.00000	281680.00000	280114.00000

Run Name: 1612705E03
Tube Number: 16
Sample Number: **8352791**

Date/Time: 05/06/2016 9:58:00
Batch: 161250639004A
Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	65491.40000	0.00000	0.931	65715.70000	64801.50000	65956.90000
SC-3	45	1364340	0	0.893	1378120	1359890	1355020
AL	27	696.30000	38156.00000	1.247	686.35060	702.54252	699.86282
B	11	108.90000	99270.10000	1.850	110.79026	109.21798	106.79144
BE	9	1.20200	1155.39000	8.852	1.32052	1.11440	1.17148
CA	44	6168.00000	35980.40000	2.892	5983.18330	6339.24165	6182.05012
CR	52	4.72800	7279.03000	2.166	4.70140	4.64195	4.84136
FE	57	211.00000	6458.55000	4.976	211.31357	221.34580	200.36086
K	39	979.20000	249209.00000	0.703	973.78381	986.96019	976.92117
MG	24	3297.00000	461869.00000	2.679	3197.91060	3367.25689	3326.17354
MN	55	37.29000	30426.40000	2.250	36.96999	38.23796	36.65151
NA	23	7749.00000	2141790.00000	2.584	7611.86732	7978.96914	7657.05678
TI	47	32.95000	1173.44000	10.850	32.19750	29.80569	36.83626
V	51	1.02800	1356.80000	2.832	1.05807	1.02617	0.99995
IN-1	115	329922.00000	0.00000	0.881	326741.00000	330583.00000	332441.00000
IN-2	115	83475.80000	0.00000	0.910	84065.70000	82618.60000	83743.10000
AG	107	1.02600	3320.57000	3.445	1.04296	1.04880	0.98486
AS	75	4.14100	815.36600	4.238	4.00644	4.33941	4.07666
BA	137	45.51000	19469.40000	4.999	43.48524	45.07527	47.97168
CD	111	0.97480	427.34500	11.418	0.86006	1.08231	0.98196
CO	59	2.33000	6508.55000	4.824	2.22615	2.44950	2.31609
CU	63	5.20000	10594.70000	4.550	5.45597	5.15443	4.98939
MO	98	1.04300	1590.16000	2.921	1.00867	1.06720	1.05260
NI	60	4.92700	3553.96000	1.696	4.98581	4.83105	4.96295
SB	121	2.10300	2140.27000	3.434	2.07844	2.18487	2.04713
SE	78	3.95800	458.00900	1.824	3.96747	4.02522	3.88176
SN	120	4.07300	5614.84000	2.858	3.95198	4.08397	4.18402
SR	88	19.63000	20834.30000	1.190	19.84698	19.38402	19.66949
ZN	66	35.65000	9573.94000	1.677	35.92685	34.96873	36.06674
BI-2	209	213801.00000	0.00000	0.660	212265.00000	215044.00000	214093.00000
PB	208	2.77700	26899.50000	1.327	2.77399	2.74099	2.81456
TL	203	0.93550	2813.78000	0.827	0.92775	0.93568	0.94323
U	238	9.98300	113785.00000	2.041	9.87138	10.21815	9.85912
SC-1	45	352953.00000	0.00000	2.020	347161.00000	360915.00000	350784.00000
GE-1	72	456752.00000	0.00000	1.281	453447.00000	463509.00000	453301.00000
GE-2	72	160147.00000	0.00000	1.085	159827.00000	162022.00000	158591.00000
GE-3	72	1200610	0	1.137	1198570	1215160	1188090
TB-2	159	271375.00000	0.00000	0.780	269298.00000	271296.00000	273530.00000

Run Name: 1612705E03
Tube Number: 17
Sample Number: **8352794**

Date/Time: 05/06/2016 10:01:00
Batch: 161250639004A
Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65931.00000	0.00000	2.363	64751.50000	65344.50000	67697.10000
SC-3	45	1406990	0	2.060	1416940	1429690	1374330
AL	27	505.40000	27900.40000	1.860	512.24334	509.22919	494.66726
B	11	5.07100	23242.20000	13.607	5.77949	4.40119	5.03238
BE	9	0.10170	113.33500	1.248	0.10154	0.10051	0.10303
CA	44	5949.00000	34937.70000	2.721	6015.32862	6066.44983	5763.90833
CR	52	0.89400	1476.82000	6.687	0.88652	0.95717	0.83831
FE	57	14.07000	503.36400	10.178	12.60728	14.12658	15.46922
K	39	607.00000	206207.00000	4.946	592.26699	641.54079	587.21179
MG	24	3172.00000	447287.00000	1.347	3214.49985	3172.56384	3129.03437
MN	55	34.51000	28372.10000	3.671	34.41210	33.29885	35.82727
NA	23	7519.00000	2094220.00000	1.838	7470.42065	7674.55830	7411.05223
TI	47	0.08747	6.66692	359.780	-0.09424	-0.09424	0.45089
V	51	0.04622	96.67060	43.163	0.06591	0.02602	0.04673
IN-1	115	322448.00000	0.00000	2.213	330644.00000	319080.00000	317619.00000
IN-2	115	83165.10000	0.00000	3.176	81946.00000	81354.00000	86195.20000
AG	107	-0.00717	6.66693	-51.108	-0.00294	-0.00929	-0.00929
AS	75	0.04280	170.66900	335.047	0.16869	0.07305	-0.11334
BA	137	42.98000	18304.20000	4.483	45.01566	42.72425	41.18585
CD	111	0.01284	22.66690	115.265	-0.00251	0.02703	0.01399
CO	59	1.35300	3857.41000	10.281	1.40823	1.19527	1.45683
CU	63	1.11900	2407.00000	8.390	1.02177	1.20908	1.12664
MO	98	-0.00899	16.66730	-80.841	-0.01321	-0.01316	-0.00060
NI	60	1.00600	793.39300	14.652	1.17595	0.92269	0.91876
SB	121	0.05929	70.00350	42.385	0.03041	0.07122	0.07623
SE	78	0.16090	20.88900	10.255	0.14844	0.15473	0.17964
SN	120	-0.03909	116.67400	-35.840	-0.03554	-0.02720	-0.05454
SR	88	18.01000	19031.60000	2.825	17.96615	18.54239	17.52806
ZN	66	5.51000	1516.82000	16.949	5.43783	6.47858	4.61497
BI-2	209	215523.00000	0.00000	1.933	212266.00000	214088.00000	220215.00000
PB	208	0.73680	7321.21000	3.318	0.75850	0.74151	0.71029
TL	203	0.02346	100.00500	87.468	0.01037	0.04711	0.01290
U	238	0.03751	446.69600	13.514	0.04276	0.03712	0.03264
SC-1	45	346910.00000	0.00000	1.023	347114.00000	350353.00000	343263.00000
GE-1	72	450066.00000	0.00000	1.031	448191.00000	446655.00000	455351.00000
GE-2	72	160942.00000	0.00000	3.487	158174.00000	157251.00000	167401.00000
GE-3	72	1229090	0	1.552	1229580	1247920	1209790
TB-2	159	274376.00000	0.00000	1.658	269133.00000	277293.00000	276701.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:04:00
Tube Number: 18 Batch: 161250639004A
Sample Number: **8352792** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65958.00000	0.00000	4.344	63315.50000	65554.50000	69003.90000
SC-3	45	1380720	0	1.764	1388770	1400030	1353370
AL	27	2629.00000	144720.00000	3.175	2687.45872	2666.23978	2533.48079
B	11	254.60000	209336.00000	1.965	260.32289	251.25698	252.12941
BE	9	4.27000	4116.67000	1.054	4.21807	4.29903	4.29267
CA	44	10220.00000	59724.70000	4.977	10459.15360	10572.99683	9640.68227
CR	52	51.63000	78829.20000	3.494	53.31408	51.84858	49.72582
FE	57	1066.00000	32531.80000	5.309	1101.06362	1096.78262	1000.98402
K	39	11590.00000	1524040.00000	1.745	11588.11719	11792.37691	11387.66059
MG	24	5226.00000	736496.00000	3.749	5421.94700	5226.68925	5030.17030
MN	55	87.91000	72114.50000	4.517	90.83897	89.51042	83.39428
NA	23	17430.00000	4752460.00000	4.684	18294.68848	17313.20638	16673.97306
TI	47	275.20000	9827.49000	5.491	292.61923	267.12752	265.80955
V	51	48.94000	63274.60000	2.673	50.09982	49.19303	47.52051
IN-1	115	324903.00000	0.00000	2.207	326739.00000	330978.00000	316993.00000
IN-2	115	81996.30000	0.00000	1.485	82162.90000	80703.30000	83122.60000
AG	107	53.83000	169694.00000	3.108	52.00775	55.29537	54.19269
AS	75	11.08000	1872.15000	2.020	10.88892	11.02578	11.32652
BA	137	96.67000	40610.80000	0.862	96.76531	97.44713	95.78905
CD	111	5.32000	2216.21000	1.527	5.22659	5.37593	5.35668
CO	59	256.10000	680960.00000	1.267	253.12175	259.56553	255.66763
CU	63	54.10000	106642.00000	2.943	52.71749	55.84145	53.74859
MO	98	52.77000	77577.30000	1.570	52.19515	53.71684	52.38845
NI	60	54.73000	37886.50000	0.700	54.76971	54.33217	55.09570
SB	121	6.31700	6295.17000	9.946	5.59840	6.58860	6.76356
SE	78	10.11000	1147.61000	1.819	9.99769	10.01383	10.32394
SN	120	53.66000	70627.20000	1.190	53.62736	54.32063	53.04513
SR	88	60.94000	63499.50000	1.606	60.01775	61.96555	60.82672
ZN	66	522.40000	136981.00000	2.282	520.12406	535.25074	511.71607
BI-2	209	212073.00000	0.00000	1.360	209047.00000	214791.00000	212381.00000
PB	208	16.85000	161040.00000	0.390	16.83761	16.78879	16.91896
TL	203	2.22700	6602.10000	1.458	2.21088	2.20505	2.26400
U	238	0.03783	443.35800	23.098	0.03985	0.02826	0.04538
SC-1	45	354602.00000	0.00000	0.603	353998.00000	356977.00000	352829.00000
GE-1	72	451766.00000	0.00000	0.625	451660.00000	454639.00000	448999.00000
GE-2	72	161301.00000	0.00000	1.682	159318.00000	160192.00000	164392.00000
GE-3	72	1202260	0	3.516	1243460	1204320	1159000
TB-2	159	274794.00000	0.00000	1.772	269333.00000	278685.00000	276363.00000

Run Name: 1612705E03
Tube Number: 19
Sample Number: **8352793**

Date/Time: 05/06/2016 10:07:00
Batch: 161250639004A
Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66379.60000	0.00000	1.641	67052.80000	65123.10000	66962.90000
SC-3	45	1381460	0	2.067	1409900	1352770	1381720
AL	27	2575.00000	142714.00000	2.694	2541.53973	2654.29726	2527.90531
B	11	258.30000	212193.00000	2.689	260.49021	263.84401	250.48981
BE	9	4.32100	4168.02000	1.761	4.38709	4.33708	4.23759
CA	44	9627.00000	56690.60000	2.066	9429.76389	9623.90732	9827.61381
CR	52	50.47000	77622.80000	2.213	49.32740	51.55870	50.53655
FE	57	1021.00000	31402.30000	2.455	993.94391	1043.12039	1027.01816
K	39	11040.00000	1468460.00000	0.437	11099.65566	11026.75311	11008.46096
MG	24	5004.00000	710326.00000	1.956	4906.19074	5101.97341	5003.96602
MN	55	85.37000	70562.00000	1.086	84.30234	85.83571	85.97251
NA	23	17110.00000	4700840.00000	4.107	16487.16156	17871.17667	16967.20241
TI	47	260.20000	9360.37000	4.312	249.31171	271.73015	259.57310
V	51	47.80000	62236.60000	1.962	47.81082	48.73277	46.85677
IN-1	115	328798.00000	0.00000	1.844	328421.00000	335041.00000	322931.00000
IN-2	115	81483.60000	0.00000	2.112	79599.10000	81880.60000	82971.10000
AG	107	52.24000	163606.00000	2.770	53.90081	51.26484	51.54935
AS	75	10.64000	1791.47000	6.666	11.46038	10.24207	10.22180
BA	137	97.76000	40805.00000	2.260	100.30136	96.28680	96.69516
CD	111	5.15100	2132.20000	2.968	5.32148	5.02669	5.10354
CO	59	250.10000	660599.00000	2.434	256.73637	248.73113	244.79036
CU	63	53.19000	104192.00000	1.795	54.29109	52.71894	52.56664
MO	98	52.79000	77108.40000	2.756	54.41315	51.60747	52.34309
NI	60	52.94000	36401.90000	3.466	54.89208	52.68990	51.24952
SB	121	6.38600	6325.20000	4.187	6.23481	6.69518	6.22935
SE	78	10.06000	1155.61000	4.760	10.28419	9.51520	10.39424
SN	120	52.30000	68392.20000	1.891	53.31684	52.23401	51.34157
SR	88	59.52000	61623.70000	2.310	61.09622	58.91098	58.55648
ZN	66	520.20000	135550.00000	2.501	534.09393	518.28189	508.29731
BI-2	209	213380.00000	0.00000	1.842	209363.00000	217219.00000	213559.00000
PB	208	16.35000	157178.00000	1.430	16.55532	16.09356	16.38819
TL	203	2.03600	6075.15000	2.168	2.06331	1.98505	2.05962
U	238	0.02756	330.01700	25.533	0.02993	0.03311	0.01965
SC-1	45	355736.00000	0.00000	0.333	354659.00000	355543.00000	357007.00000
GE-1	72	459146.00000	0.00000	0.600	460382.00000	461069.00000	455987.00000
GE-2	72	163136.00000	0.00000	1.178	162203.00000	165344.00000	161859.00000
GE-3	72	1194800	0	3.449	1232800	1200610	1151000
TB-2	159	270385.00000	0.00000	1.517	274186.00000	266036.00000	270933.00000

Run Name: 1612705E03
Tube Number: 20
Sample Number: **8352791**

Date/Time: 05/06/2016 10:10:00
Batch: 161250639004A
Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	67689.60000	0.00000	0.944	68078.50000	66952.10000	68038.40000
SC-3	45	1392610	0	1.694	1408790	1403490	1365540
AL	27	99.91000	5744.83000	8.079	103.72389	90.63971	105.37223
B	11	6.37500	23990.20000	11.235	7.12377	5.69640	6.30434
BE	9	0.02023	33.33360	63.322	0.03489	0.01460	0.01119
CA	44	1175.00000	7432.42000	4.588	1229.84069	1173.67429	1122.05674
CR	52	0.49120	886.73600	12.160	0.56018	0.45466	0.45890
FE	57	2.46700	153.34100	51.358	1.70150	1.77101	3.93019
K	39	91.13000	148170.00000	26.676	82.52955	118.57339	72.29739
MG	24	635.20000	92127.50000	0.925	630.19266	633.84906	641.69553
MN	55	6.94900	5894.93000	2.075	6.78669	6.99768	7.06253
NA	23	1380.00000	457214.00000	1.443	1366.28423	1403.24022	1371.89834
TI	47	0.35920	16.66730	86.832	0.17680	0.18136	0.71936
V	51	-0.00605	30.00110	-121.772	0.00135	-0.01338	-0.00612
IN-1	115	335633.00000	0.00000	1.496	333080.00000	341416.00000	332402.00000
IN-2	115	84184.30000	0.00000	1.397	83143.30000	83949.20000	85460.40000
AG	107	0.00102	33.33460	700.978	-0.00303	0.00930	-0.00320
AS	75	-0.13240	145.33500	-47.832	-0.06617	-0.13891	-0.19233
BA	137	8.97200	3877.43000	3.355	8.71941	8.89123	9.30503
CD	111	0.00916	21.33350	164.593	0.02556	0.00602	-0.00410
CO	59	0.27550	956.74100	10.174	0.26619	0.30701	0.25333
CU	63	0.24540	670.04400	19.055	0.29423	0.24095	0.20104
MO	98	0.02208	63.33580	106.386	0.02024	0.04644	-0.00043
NI	60	0.27620	286.68300	4.888	0.28591	0.28194	0.26079
SB	121	0.01646	26.66770	150.182	0.01992	0.03927	-0.00982
SE	78	0.02246	5.55557	60.686	0.01508	0.01410	0.03818
SN	120	0.03361	216.67700	39.096	0.02322	0.02922	0.04838
SR	88	3.57400	3827.40000	6.942	3.71672	3.28723	3.71718
ZN	66	1.47500	453.35900	18.292	1.78266	1.27917	1.36263
BI-2	209	220925.00000	0.00000	0.707	222726.00000	219918.00000	220132.00000
PB	208	0.14650	1636.79000	9.693	0.14053	0.16275	0.13634
TL	203	-0.00020	30.00120	-2866.700	0.00296	0.00313	-0.00668
U	238	0.00932	126.67300	6.053	0.00867	0.00965	0.00964
SC-1	45	361650.00000	0.00000	1.389	355889.00000	365112.00000	363949.00000
GE-1	72	466303.00000	0.00000	1.570	460194.00000	474418.00000	464296.00000
GE-2	72	164444.00000	0.00000	0.634	163241.00000	165110.00000	164979.00000
GE-3	72	1212610	0	2.201	1242490	1204220	1191130
TB-2	159	274606.00000	0.00000	1.122	271116.00000	275750.00000	276951.00000

Run Name: 1612705E03
Tube Number: 21
Sample Number: **8352789**

Date/Time: 05/06/2016 10:13:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	66841.60000	0.00000	1.616	66187.80000	66248.80000	68088.30000
SC-3	45	1387260	0	1.408	1409810	1376100	1375870
AL	27	97.51000	5534.74000	3.057	100.94116	95.96257	95.61251
B	11	9.79800	26470.90000	5.115	10.28735	9.82040	9.28558
BE	9	0.13500	144.00200	9.133	0.14901	0.13003	0.12588
CA	44	2248.00000	13654.50000	6.481	2357.55422	2082.41579	2303.10687
CR	52	0.95300	1590.16000	4.901	0.90484	0.95613	0.99811
FE	57	11.81000	440.02900	4.117	11.30035	12.26767	11.87049
K	39	1275.00000	290265.00000	3.723	1302.00166	1302.80669	1220.18396
MG	24	1791.00000	256172.00000	1.644	1812.42504	1803.95722	1757.71499
MN	55	43.12000	35907.50000	1.997	42.41414	44.07853	42.86217
NA	23	3711.00000	1086000.00000	1.772	3741.08384	3755.46028	3635.08743
TI	47	0.09161	6.66692	351.381	0.46333	-0.09424	-0.09424
V	51	0.04528	96.67060	36.882	0.04074	0.06377	0.03131
IN-1	115	339706.00000	0.00000	0.290	340576.00000	339907.00000	338634.00000
IN-2	115	84389.60000	0.00000	1.133	84081.50000	85461.50000	83625.80000
AG	107	-0.00109	26.66770	-426.538	-0.00620	0.00289	0.00004
AS	75	-0.02147	163.33600	-288.263	0.01133	-0.09286	0.01711
BA	137	76.80000	33208.90000	2.736	79.12068	76.23694	75.03233
CD	111	0.02144	26.66700	134.515	0.05313	0.01447	-0.00328
CO	59	0.77740	2333.65000	7.969	0.77975	0.83815	0.71431
CU	63	0.26390	710.04500	4.350	0.27512	0.26440	0.25218
MO	98	0.01957	60.00310	55.953	0.01316	0.03221	0.01334
NI	60	1.43000	1106.76000	7.217	1.45353	1.31682	1.51898
SB	121	0.02586	36.66860	76.759	0.00979	0.04804	0.01975
SE	78	0.42340	53.11140	5.909	0.44666	0.39694	0.42677
SN	120	0.01310	190.01200	523.740	-0.02301	0.09222	-0.02992
SR	88	10.57000	11342.20000	3.274	10.38898	10.35945	10.97326
ZN	66	3.46700	993.41100	13.063	3.58318	3.85126	2.96798
BI-2	209	218617.00000	0.00000	0.609	218669.00000	217260.00000	219922.00000
PB	208	0.03852	556.69600	4.442	0.03680	0.04023	0.03851
TL	203	0.02401	103.33800	20.308	0.01963	0.02313	0.02926
U	238	0.01286	166.67600	7.708	0.01400	0.01238	0.01221
SC-1	45	365240.00000	0.00000	0.193	366050.00000	364769.00000	364900.00000
GE-1	72	472309.00000	0.00000	0.585	470065.00000	475396.00000	471467.00000
GE-2	72	163851.00000	0.00000	0.904	162182.00000	164357.00000	165014.00000
GE-3	72	1231890	0	0.826	1229070	1223430	1243170
TB-2	159	277791.00000	0.00000	2.251	273311.00000	284936.00000	275127.00000

Run Name: 1612705E03
Tube Number: 22
Sample Number: **8352790**

Date/Time: 05/06/2016 10:16:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	67418.50000	0.00000	1.041	68007.90000	66642.00000	67605.60000
SC-3	45	1384970	0	1.419	1405260	1383590	1366040
AL	27	19.44000	1190.11000	3.352	19.43263	18.78665	20.08984
B	11	1.65400	20318.80000	15.502	1.93951	1.44313	1.57989
BE	9	0.03155	44.00040	25.081	0.03911	0.02332	0.03222
CA	44	41150.00000	244698.00000	1.336	40522.37280	41545.93309	41381.59940
CR	52	0.91730	1546.83000	8.589	0.82778	0.97600	0.94824
FE	57	11.38000	430.02400	15.536	9.34192	12.50540	12.29258
K	39	2161.00000	401504.00000	2.319	2106.37932	2204.72500	2172.23768
MG	24	17340.00000	2500130.00000	2.983	17524.34360	17744.53496	16759.05119
MN	55	103.20000	86609.50000	0.960	103.96784	103.49265	102.06462
NA	23	8161.00000	2318020.00000	0.643	8107.15058	8212.05237	8162.41540
TI	47	0.36140	16.66730	87.023	0.17708	0.18264	0.72457
V	51	0.04456	96.67060	26.616	0.03138	0.04792	0.05438
IN-1	115	333951.00000	0.00000	2.091	338395.00000	337556.00000	325903.00000
IN-2	115	84540.30000	0.00000	1.859	85309.50000	82732.00000	85579.50000
AG	107	-0.00212	23.33420	-80.964	-0.00014	-0.00300	-0.00321
AS	75	-0.18920	136.66900	-104.545	-0.17836	0.00295	-0.39222
BA	137	32.27000	13978.40000	2.998	31.53262	33.36581	31.91229
CD	111	0.02124	26.66690	86.629	0.04247	0.01151	0.00976
CO	59	0.08421	436.69300	13.193	0.09480	0.08518	0.07264
CU	63	1.32800	2873.77000	7.046	1.41276	1.22777	1.34474
MO	98	0.01523	53.33590	29.619	0.01268	0.02044	0.01258
NI	60	0.88230	720.05100	10.535	0.98532	0.80470	0.85692
SB	121	0.02564	36.66810	93.877	0.02882	0.00014	0.04796
SE	78	2.35400	276.89300	7.239	2.16809	2.50221	2.39301
SN	120	0.01095	186.67600	53.489	0.00477	0.01642	0.01165
SR	88	81.20000	87220.40000	2.615	79.44704	83.56020	80.58799
ZN	66	2.97300	860.06500	7.437	2.97857	3.19137	2.74924
BI-2	209	217766.00000	0.00000	0.501	216604.00000	217926.00000	218769.00000
PB	208	0.52950	5367.37000	4.816	0.53781	0.54972	0.50083
TL	203	-0.00111	26.66810	-861.725	0.00996	-0.00664	-0.00666
U	238	0.01781	223.34600	10.556	0.01935	0.01836	0.01571
SC-1	45	362179.00000	0.00000	0.965	365761.00000	361996.00000	358779.00000
GE-1	72	470332.00000	0.00000	1.336	473672.00000	474238.00000	463086.00000
GE-2	72	165668.00000	0.00000	0.356	165607.00000	166285.00000	165110.00000
GE-3	72	1237300	0	2.435	1270260	1211200	1230430
TB-2	159	280998.00000	0.00000	0.747	283274.00000	280579.00000	279139.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:19:00
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66128.40000	0.00000	3.722	63314.60000	67193.40000	67877.40000
SC-3	45	1374590	0	4.427	1443610	1351490	1328680
AL	27	2503.00000	138153.00000	4.467	2617.49121	2394.03764	2498.18350
B	11	235.70000	194269.00000	2.050	230.69724	240.33773	236.06520
BE	9	26.57000	25409.70000	3.568	25.47975	27.17291	27.06532
CA	44	2608.00000	15600.00000	2.672	2650.90853	2527.59396	2645.46911
CR	52	252.50000	386163.00000	2.776	260.10371	250.99110	246.32177
FE	57	2497.00000	76295.50000	5.106	2643.01567	2441.06652	2407.15782
K	39	2334.00000	414337.00000	4.893	2465.29310	2280.32797	2256.73378
MG	24	2453.00000	346741.00000	3.450	2543.16783	2440.23402	2375.31993
MN	55	265.80000	218697.00000	1.690	270.15958	266.02115	261.18194
NA	23	2391.00000	718474.00000	3.340	2480.38914	2365.69845	2326.81015
TI	47	272.20000	9757.29000	6.789	273.07586	290.28535	253.35305
V	51	241.50000	313072.00000	1.921	245.06923	243.23185	236.27358
IN-1	115	335644.00000	0.00000	1.962	343220.00000	331306.00000	332406.00000
IN-2	115	82309.00000	0.00000	0.498	82297.60000	82724.70000	81904.80000
AG	107	26.57000	84108.30000	0.786	26.70691	26.33201	26.67862
AS	75	261.00000	40587.10000	1.514	262.25009	256.54732	264.13692
BA	137	267.40000	112736.00000	2.499	268.91624	260.03380	273.12300
CD	111	25.91000	10770.60000	0.819	25.99845	25.67196	26.06981
CO	59	249.10000	664842.00000	1.298	246.47605	248.08809	252.70543
CU	63	255.30000	504586.00000	0.971	255.00453	252.96944	257.90373
MO	98	26.70000	39415.80000	1.544	26.36977	26.55802	27.15898
NI	60	264.90000	183719.00000	1.896	261.89076	262.15852	270.72229
SB	121	26.64000	26619.10000	2.890	26.07292	26.33782	27.51918
SE	78	26.23000	3070.81000	1.661	25.95398	25.99889	26.73009
SN	120	27.32000	36185.70000	8.302	25.53109	29.87053	26.55627
SR	88	26.02000	27219.90000	4.646	25.29283	25.35313	27.41654
ZN	66	257.50000	67822.30000	2.155	258.15808	251.65734	262.69736
BI-2	209	215216.00000	0.00000	1.083	215335.00000	217485.00000	212827.00000
PB	208	26.07000	252777.00000	2.320	26.00832	25.50470	26.70878
TL	203	25.78000	77243.70000	1.468	25.35388	25.89143	26.08425
U	238	25.72000	294985.00000	1.677	26.10181	25.25034	25.79595
SC-1	45	361742.00000	0.00000	0.840	358659.00000	361835.00000	364732.00000
GE-1	72	468525.00000	0.00000	0.741	470783.00000	464525.00000	470267.00000
GE-2	72	162874.00000	0.00000	0.428	163666.00000	162608.00000	162348.00000
GE-3	72	1209750	0	3.902	1264130	1179380	1185750
TB-2	159	274727.00000	0.00000	2.060	277078.00000	268270.00000	278833.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:22:00
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65960.40000	0.00000	0.892	65294.20000	66409.10000	66177.80000
SC-3	45	1351710	0	2.931	1390680	1311470	1352980
AL	27	-1.22200	26.66770	-22.725	-1.15675	-1.52678	-0.98307
B	11	2.56500	20490.40000	20.924	2.35420	3.17529	2.16615
BE	9	0.02143	33.33360	18.315	0.01694	0.02319	0.02417
CA	44	-7.37300	373.35700	-206.564	8.26973	-22.14588	-8.24349
CR	52	0.41920	753.39100	12.944	0.48133	0.38088	0.39554
FE	57	-0.46310	60.00250	-121.291	-0.77344	-0.80124	0.18532
K	39	-5.92400	132750.00000	-75.878	-0.81878	-7.68071	-9.26861
MG	24	-0.59770	90.00410	-19.709	-0.73383	-0.53098	-0.52853
MN	55	-0.01238	30.00140	-98.465	-0.01203	-0.02475	-0.00038
NA	23	-16.32000	70120.20000	-4.510	-17.15366	-16.09441	-15.73842
TI	47	-0.00004	3.33346	-374226.000	0.18836	-0.09424	-0.09424
V	51	-0.01569	16.66730	-75.207	-0.01299	-0.02861	-0.00549
IN-1	115	327072.00000	0.00000	1.008	323266.00000	329112.00000	328836.00000
IN-2	115	82533.60000	0.00000	1.351	82822.30000	81302.50000	83476.20000
AG	107	-0.00190	23.33420	-259.716	-0.00615	0.00351	-0.00306
AS	75	0.04012	169.33600	471.087	-0.17783	0.13912	0.15907
BA	137	-0.01572	0.00000	0.000	-0.01572	-0.01572	-0.01572
CD	111	0.00998	21.33350	66.967	0.01145	0.00268	0.01579
CO	59	0.06415	373.35300	44.334	0.05893	0.03867	0.09484
CU	63	0.00608	183.34200	212.923	-0.00106	0.02103	-0.00173
MO	98	-0.00427	23.33420	-87.345	-0.00654	-0.00629	0.00003
NI	60	0.08273	146.67300	19.521	0.10112	0.07620	0.07088
SB	121	0.01676	26.66770	32.601	0.02003	0.01046	0.01980
SE	78	-0.00566	2.22223	-155.422	-0.01328	-0.00768	0.00397
SN	120	-0.02592	133.34000	-78.974	-0.02897	-0.00410	-0.04470
SR	88	0.07623	83.33760	30.697	0.05386	0.07428	0.10054
ZN	66	0.02908	63.33600	153.267	-0.02223	0.05824	0.05122
BI-2	209	214899.00000	0.00000	1.114	217467.00000	214498.00000	212731.00000
PB	208	-0.00220	153.34000	-70.954	-0.00273	-0.00044	-0.00343
TL	203	0.00006	30.00120	11091.300	0.00658	-0.00659	0.00019
U	238	0.00178	36.66820	151.966	-0.00058	0.00118	0.00473
SC-1	45	353211.00000	0.00000	1.163	349569.00000	357664.00000	352401.00000
GE-1	72	456029.00000	0.00000	1.014	461361.00000	453077.00000	453650.00000
GE-2	72	159920.00000	0.00000	0.746	160483.00000	160728.00000	158550.00000
GE-3	72	1202690	0	3.200	1237300	1161240	1209540
TB-2	159	266659.00000	0.00000	0.960	268553.00000	263745.00000	267680.00000

Run Name: 1612705E03
Tube Number: 25
Sample Number: **8352795**

Date/Time: 05/06/2016 10:25:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66456.80000	0.00000	3.032	65354.70000	65233.80000	68782.00000
SC-3	45	1418310	0	1.394	1441140	1406780	1407010
AL	27	4457.00000	247211.00000	2.816	4469.09021	4575.71436	4325.64951
B	11	10.83000	27854.30000	6.148	10.87450	11.47461	10.14527
BE	9	1.03500	1035.38000	5.529	0.97500	1.04206	1.08886
CA	44	57130.00000	334693.00000	0.588	57118.56918	57468.11076	56796.49251
CR	52	3.60000	5644.81000	6.211	3.55668	3.84179	3.40091
FE	57	363.20000	11228.50000	2.334	372.84883	356.94367	359.81155
K	39	2048.00000	381985.00000	3.907	2084.46773	2103.94625	1956.65071
MG	24	22910.00000	3254070.00000	2.778	23334.12591	23218.01020	22178.43220
MN	55	5633.00000	4657210.00000	1.435	5678.24423	5680.15808	5539.18010
NA	23	19810.00000	5436210.00000	3.416	20305.03905	20085.83959	19038.59943
TI	47	1.93000	73.33630	29.528	1.59978	1.60292	2.58848
V	51	0.48560	670.04200	3.153	0.50210	0.47180	0.48307
IN-1	115	331549.00000	0.00000	0.236	331803.00000	330671.00000	332174.00000
IN-2	115	81768.30000	0.00000	1.067	81410.20000	81131.80000	82762.80000
AG	107	-0.00293	20.00080	-108.908	0.00030	-0.00608	-0.00300
AS	75	1.15400	339.34000	7.195	1.09050	1.12405	1.24813
BA	137	13.75000	5764.90000	3.423	14.20640	13.77374	13.26598
CD	111	0.43300	195.33600	12.543	0.45578	0.47215	0.37097
CO	59	61.62000	163558.00000	1.593	60.50598	62.34416	62.02198
CU	63	3.10200	6258.44000	3.189	3.05608	3.21585	3.03490
MO	98	0.01413	50.00220	84.713	0.02795	0.00749	0.00695
NI	60	32.85000	22710.80000	2.367	32.51420	32.28944	33.73466
SB	121	0.03739	46.66850	68.895	0.04080	0.06129	0.01010
SE	78	1.34400	158.22400	6.222	1.31810	1.27642	1.43752
SN	120	0.03627	213.37800	346.292	-0.07330	0.17327	0.00882
SR	88	72.29000	75122.70000	2.105	72.27086	73.82820	70.78498
ZN	66	27.13000	7145.60000	8.017	26.03447	29.63463	25.71927
BI-2	209	210311.00000	0.00000	0.723	209648.00000	209234.00000	212051.00000
PB	208	0.10090	1126.74000	14.381	0.10168	0.08599	0.11499
TL	203	0.13010	410.02400	8.847	0.11686	0.13771	0.13575
U	238	0.24610	2773.79000	9.850	0.22948	0.27389	0.23483
SC-1	45	368595.00000	0.00000	2.195	369998.00000	359893.00000	375894.00000
GE-1	72	467556.00000	0.00000	0.321	469001.00000	466006.00000	467661.00000
GE-2	72	160267.00000	0.00000	1.972	161984.00000	156620.00000	162196.00000
GE-3	72	1215920	0	1.369	1225760	1196690	1225300
TB-2	159	281195.00000	0.00000	0.780	281228.00000	278985.00000	283371.00000

Run Name: 1612705E03
Tube Number: 26
Sample Number: **8352796**

Date/Time: 05/06/2016 10:28:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	67586.10000	0.00000	1.231	68208.60000	67908.50000	66641.10000
SC-3	45	1423170	0	4.153	1487470	1371220	1410820
AL	27	4381.00000	247221.00000	2.467	4278.91999	4370.05719	4494.25792
B	11	7.85700	25632.60000	16.533	6.82199	9.31418	7.43378
BE	9	1.05900	1064.05000	3.254	1.09876	1.04430	1.03496
CA	44	57100.00000	340196.00000	1.981	56060.47545	56935.14865	58304.76167
CR	52	3.43200	5484.71000	1.751	3.47446	3.45834	3.36328
FE	57	336.80000	10594.70000	2.176	329.20646	337.36938	343.82854
K	39	2037.00000	387179.00000	2.730	1988.32042	2024.20224	2097.43621
MG	24	22680.00000	3277560.00000	3.090	21878.71317	22995.15885	23170.96960
MN	55	5603.00000	4712360.00000	1.837	5506.38226	5591.96035	5711.24838
NA	23	19760.00000	5516370.00000	2.400	19226.37899	19897.03920	20142.40907
TI	47	3.72000	140.00700	28.226	4.77531	3.70982	2.67464
V	51	0.44200	623.37400	5.274	0.42755	0.42956	0.46889
IN-1	115	333598.00000	0.00000	0.705	333040.00000	336180.00000	331574.00000
IN-2	115	83386.60000	0.00000	3.014	81272.20000	82722.70000	86164.80000
AG	107	-0.00518	13.33380	-68.745	-0.00929	-0.00300	-0.00325
AS	75	1.12400	342.00800	22.224	0.85876	1.15932	1.35473
BA	137	14.42000	6168.41000	3.078	14.25443	14.07504	14.91748
CD	111	0.44730	205.33700	9.390	0.42246	0.49585	0.42375
CO	59	62.70000	169580.00000	4.164	63.85318	64.54260	59.71522
CU	63	3.08200	6335.17000	6.603	3.25630	3.13218	2.85848
MO	98	0.00214	33.33460	446.745	0.00058	-0.00653	0.01236
NI	60	33.24000	23421.80000	2.763	34.28181	32.88796	32.54912
SB	121	0.01315	23.33420	37.741	0.01046	0.01011	0.01888
SE	78	1.52700	180.44600	10.079	1.69792	1.48269	1.39979
SN	120	0.13390	343.62300	161.090	0.38075	0.03909	-0.01828
SR	88	72.99000	77335.90000	1.443	73.83562	73.32636	71.81158
ZN	66	27.42000	7369.04000	1.395	27.38826	27.05554	27.81861
BI-2	209	215735.00000	0.00000	0.860	216680.00000	213597.00000	216928.00000
PB	208	0.09696	1116.74000	6.056	0.09472	0.10362	0.09254
TL	203	0.11890	386.69100	23.936	0.08622	0.13806	0.13248
U	238	0.24550	2840.49000	4.676	0.25577	0.23312	0.24768
SC-1	45	364411.00000	0.00000	0.822	362153.00000	363274.00000	367807.00000
GE-1	72	463149.00000	0.00000	0.678	465920.00000	463784.00000	459742.00000
GE-2	72	163451.00000	0.00000	1.665	161756.00000	162005.00000	166591.00000
GE-3	72	1239180	0	1.876	1265950	1223960	1227650
TB-2	159	287520.00000	0.00000	0.245	286914.00000	288293.00000	287352.00000

Run Name: 1612705E03
Tube Number: 27
Sample Number: **8352797**

Date/Time: 05/06/2016 10:31:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	66078.40000	0.00000	2.222	64882.20000	67717.30000	65635.90000
SC-3	45	1389990	0	2.158	1416230	1396440	1357290
AL	27	92.97000	5221.32000	4.335	91.00075	90.30505	97.60721
B	11	8.77300	25756.80000	8.498	9.47971	8.84561	7.99400
BE	9	0.05230	64.00070	30.497	0.04478	0.04150	0.07063
CA	44	134500.00000	782613.00000	1.833	136324.12462	131669.20368	135406.19560
CR	52	0.51850	906.74000	3.315	0.53816	0.50612	0.51137
FE	57	95.19000	2980.46000	2.052	97.29628	93.43897	94.83152
K	39	3383.00000	540430.00000	2.145	3406.34799	3302.26213	3441.84878
MG	24	38060.00000	5375300.00000	3.203	38359.67146	36714.60819	39094.50312
MN	55	3534.00000	2905590.00000	2.426	3595.78698	3436.48427	3570.99808
NA	23	23630.00000	6434100.00000	2.584	23997.06442	22921.42254	23959.69640
TI	47	0.46730	20.00070	61.096	0.47455	0.17824	0.74914
V	51	0.45770	630.03900	16.017	0.39590	0.43839	0.53868
IN-1	115	330063.00000	0.00000	0.251	331014.00000	329683.00000	329492.00000
IN-2	115	82198.30000	0.00000	1.189	83285.70000	81916.90000	81392.20000
AG	107	-0.00504	13.33410	-72.982	-0.00929	-0.00294	-0.00290
AS	75	0.03577	168.00300	325.133	-0.01680	0.16912	-0.04498
BA	137	33.55000	14132.00000	1.893	32.90928	33.55500	34.17959
CD	111	0.24950	120.66800	25.234	0.29694	0.27353	0.17809
CO	59	11.43000	30643.80000	1.985	11.16424	11.55952	11.55486
CU	63	0.19420	553.36600	20.103	0.15853	0.18805	0.23589
MO	98	0.17680	290.01600	15.147	0.17424	0.20473	0.15134
NI	60	5.60300	3967.45000	4.344	5.71831	5.32300	5.76679
SB	121	0.02356	33.33490	22.801	0.02976	0.02036	0.02056
SE	78	0.61440	73.55600	19.531	0.51229	0.74654	0.58444
SN	120	0.01483	186.67500	107.755	0.00797	0.03310	0.00344
SR	88	127.40000	133062.00000	2.242	124.21569	128.20372	129.75138
ZN	66	1.11900	350.01900	19.178	1.36615	1.01072	0.98016
BI-2	209	210814.00000	0.00000	0.850	208769.00000	212102.00000	211573.00000
PB	208	0.02864	443.35600	21.100	0.02238	0.02908	0.03445
TL	203	0.04909	173.34200	33.754	0.03824	0.04087	0.06816
U	238	0.63130	7109.07000	1.220	0.63863	0.62327	0.63193
SC-1	45	362249.00000	0.00000	1.014	363790.00000	364900.00000	358056.00000
GE-1	72	459874.00000	0.00000	1.706	463472.00000	465276.00000	450876.00000
GE-2	72	160045.00000	0.00000	0.993	158208.00000	160977.00000	160949.00000
GE-3	72	1202090	0	0.273	1198320	1203620	1204340
TB-2	159	280035.00000	0.00000	1.408	282643.00000	275499.00000	281964.00000

Run Name: 1612705E03
Tube Number: 28
Sample Number: **8352798**

Date/Time: 05/06/2016 10:34:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	66513.70000	0.00000	0.882	66821.80000	66882.10000	65837.30000
SC-3	45	1357040	0	2.440	1389810	1357700	1323600
AL	27	139.60000	7847.81000	4.648	136.02375	147.10342	135.71426
B	11	7.93000	24519.90000	4.671	8.20770	7.50969	8.07393
BE	9	0.03678	48.00050	29.962	0.02936	0.04944	0.03153
CA	44	138100.00000	809410.00000	1.238	139513.84100	136217.19507	138654.11177
CR	52	0.71600	1216.78000	6.838	0.66268	0.75896	0.72622
FE	57	159.50000	4977.79000	7.260	149.78781	172.30743	156.33767
K	39	3376.00000	543215.00000	0.783	3358.78659	3363.36680	3406.71720
MG	24	40420.00000	5748620.00000	0.929	40713.94788	39995.29114	40543.56758
MN	55	2765.00000	2289000.00000	0.656	2754.51119	2755.06724	2786.23084
NA	23	24550.00000	6729430.00000	0.817	24411.08434	24779.76809	24459.07776
TI	47	3.60800	133.34000	24.182	2.66715	3.76829	4.39010
V	51	0.43400	603.37100	16.659	0.36068	0.50524	0.43623
IN-1	115	324833.00000	0.00000	0.796	326247.00000	321848.00000	326403.00000
IN-2	115	82033.90000	0.00000	1.419	83346.80000	81130.30000	81624.40000
AG	107	-0.00609	10.00040	-52.652	-0.00929	-0.00288	-0.00610
AS	75	0.02886	166.66900	129.002	0.07169	0.01065	0.00423
BA	137	22.89000	9624.13000	4.171	22.45324	22.22411	23.98046
CD	111	0.12000	66.66740	10.192	0.11583	0.11034	0.13372
CO	59	3.12000	8499.80000	5.295	3.24960	3.17680	2.93403
CU	63	0.34050	840.06200	13.903	0.28831	0.38071	0.35236
MO	98	0.13390	226.67800	17.476	0.16071	0.11751	0.12352
NI	60	2.92800	2110.25000	7.333	2.70712	3.13593	2.94153
SB	121	0.04354	53.33570	56.132	0.06928	0.02066	0.04067
SE	78	0.37480	45.33350	30.870	0.36184	0.26610	0.49644
SN	120	0.20830	437.41800	191.407	0.00787	0.66749	-0.05048
SR	88	117.10000	122040.00000	1.330	115.26766	117.96592	117.96321
ZN	66	1.42900	430.02500	12.078	1.32750	1.33097	1.62816
BI-2	209	207173.00000	0.00000	1.271	207118.00000	209833.00000	204568.00000
PB	208	0.07462	863.37800	16.765	0.07633	0.06134	0.08619
TL	203	0.05842	196.67800	35.365	0.06984	0.03457	0.07084
U	238	0.81670	9033.87000	0.412	0.82051	0.81525	0.81424
SC-1	45	356853.00000	0.00000	1.208	357090.00000	352429.00000	361039.00000
GE-1	72	455132.00000	0.00000	0.748	458565.00000	455075.00000	451757.00000
GE-2	72	160221.00000	0.00000	1.325	162649.00000	158714.00000	159299.00000
GE-3	72	1187320	0	2.274	1215540	1161740	1184680
TB-2	159	276766.00000	0.00000	1.268	279826.00000	277538.00000	272934.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:37:00
Tube Number: 29 Batch: 161250639004A
Sample Number: **8352799** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65931.00000	0.00000	1.454	65225.20000	65545.60000	67022.30000
SC-3	45	1389830	0	3.954	1447930	1382900	1338670
AL	27	44.92000	2567.07000	4.702	45.13428	42.71085	46.91791
B	11	1.10200	19962.90000	50.617	0.45810	1.40579	1.44153
BE	9	0.02541	38.00040	42.031	0.02166	0.01711	0.03746
CA	44	62770.00000	364858.00000	1.192	62267.05162	63634.97606	62425.17012
CR	52	1.34400	2163.60000	4.263	1.36332	1.38925	1.27961
FE	57	41.66000	1343.46000	13.747	36.38450	47.75039	40.83316
K	39	1801.00000	349481.00000	0.712	1795.81092	1791.39826	1815.47399
MG	24	25990.00000	3664010.00000	2.335	25951.83830	26618.14635	25406.31304
MN	55	0.87020	753.38900	24.661	0.77648	1.11574	0.71838
NA	23	7838.00000	2180700.00000	1.724	7870.18208	7690.52094	7955.07147
TI	47	1.95700	73.33940	6.704	1.88617	1.87638	2.10838
V	51	0.24680	356.68600	22.002	0.19034	0.25153	0.29863
IN-1	115	328255.00000	0.00000	0.899	331592.00000	327179.00000	325994.00000
IN-2	115	82577.80000	0.00000	2.587	82378.50000	80548.90000	84806.10000
AG	107	0.00025	30.00120	2250.500	0.00334	0.00363	-0.00622
AS	75	0.14150	184.67000	201.272	0.38160	0.21622	-0.17318
BA	137	55.41000	23446.40000	0.676	55.62741	55.62828	54.97944
CD	111	0.02933	29.33360	24.524	0.02618	0.03756	0.02425
CO	59	0.01299	236.68000	141.416	-0.00026	0.00527	0.03397
CU	63	0.76770	1693.52000	9.824	0.85409	0.71511	0.73382
MO	98	0.02264	63.33630	104.373	0.04771	0.00076	0.01945
NI	60	0.23680	253.34800	19.236	0.23210	0.28451	0.19377
SB	121	0.00358	13.33390	171.149	0.00019	0.01065	-0.00010
SE	78	0.13220	18.00010	8.026	0.14217	0.12104	0.13331
SN	120	0.46460	781.25600	174.279	1.39944	-0.01845	0.01291
SR	88	70.48000	73938.40000	2.606	70.98005	72.01292	68.44333
ZN	66	2.12000	616.71000	11.986	2.02899	1.92454	2.40742
BI-2	209	214067.00000	0.00000	0.913	213390.00000	212541.00000	216271.00000
PB	208	0.02902	453.35600	17.870	0.03192	0.03212	0.02303
TL	203	0.00016	30.00150	4262.460	0.00689	0.00020	-0.00662
U	238	0.15510	1786.89000	5.894	0.16299	0.14511	0.15733
SC-1	45	359533.00000	0.00000	1.410	361032.00000	353883.00000	363684.00000
GE-1	72	458856.00000	0.00000	1.505	466535.00000	456876.00000	453156.00000
GE-2	72	163198.00000	0.00000	2.111	159240.00000	164825.00000	165528.00000
GE-3	72	1211880	0	2.696	1235780	1225210	1174640
TB-2	159	275255.00000	0.00000	0.737	275913.00000	276873.00000	272978.00000

Run Name: 1612705E03
Tube Number: 30
Sample Number: **8352799**

Date/Time: 05/06/2016 10:40:00
Batch: 161250639004A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	65682.90000	0.00000	2.125	64088.80000	66690.10000	66269.80000
SC-3	45	1387500	0	3.287	1431040	1391380	1340070
AL	27	3.47600	283.35300	37.112	4.83555	3.32275	2.26989
B	11	-8.82600	12479.90000	-1.670	-8.99007	-8.70448	-8.78380
BE	9	0.00527	18.66680	90.065	0.00200	0.01072	0.00309
CA	44	6148.00000	35970.30000	1.406	6199.04918	6048.39899	6197.16309
CR	52	0.46570	820.06700	16.259	0.51878	0.37896	0.49924
FE	57	5.36900	236.67800	9.935	5.67264	5.68095	4.75290
K	39	137.00000	149250.00000	12.029	155.85963	125.32759	129.81621
MG	24	2626.00000	369052.00000	0.467	2638.26697	2627.40394	2613.80178
MN	55	0.21710	216.67800	53.339	0.27704	0.08359	0.29057
NA	23	684.70000	257424.00000	1.856	699.32335	678.82583	676.05012
TI	47	-0.09424	0.00000	0.000	-0.09424	-0.09424	-0.09424
V	51	0.01272	53.33610	137.893	0.00322	0.00198	0.03296
IN-1	115	333526.00000	0.00000	1.061	329485.00000	336083.00000	335010.00000
IN-2	115	82117.10000	0.00000	1.653	81462.20000	81211.50000	83677.50000
AG	107	-0.00085	26.66800	-575.922	-0.00610	0.00352	0.00004
AS	75	-0.04138	156.00200	-120.783	-0.03281	-0.09510	0.00376
BA	137	5.32400	2246.96000	3.186	5.13660	5.36890	5.46683
CD	111	0.00718	20.00020	144.150	0.00746	0.01738	-0.00331
CO	59	-0.04391	83.33700	-24.186	-0.03729	-0.05616	-0.03829
CU	63	0.09943	366.68600	15.981	0.08219	0.11349	0.10262
MO	98	-0.00641	20.00100	-214.319	-0.02002	0.00746	-0.00668
NI	60	0.05564	126.67300	160.155	0.14869	0.04719	-0.02894
SB	121	0.00358	13.33390	432.161	0.02053	-0.00982	0.00003
SE	78	-0.00217	2.66668	-11.275	-0.00189	-0.00235	-0.00228
SN	120	-0.00283	163.34100	-811.021	0.01866	-0.02703	-0.00012
SR	88	7.17500	7495.81000	4.833	6.91468	7.04272	7.56904
ZN	66	2.01200	583.37100	25.298	2.59172	1.63751	1.80729
BI-2	209	217489.00000	0.00000	0.971	218525.00000	218883.00000	215058.00000
PB	208	0.00407	216.67800	93.078	0.00838	0.00123	0.00261
TL	203	-0.00554	13.33390	-33.869	-0.00665	-0.00338	-0.00660
U	238	0.01610	203.34300	7.484	0.01745	0.01570	0.01514
SC-1	45	357332.00000	0.00000	1.463	353375.00000	363259.00000	355363.00000
GE-1	72	459676.00000	0.00000	1.329	454394.00000	458272.00000	466363.00000
GE-2	72	163359.00000	0.00000	0.656	164209.00000	162155.00000	163713.00000
GE-3	72	1230330	0	2.330	1258020	1232200	1200770
TB-2	159	271946.00000	0.00000	1.324	271908.00000	275565.00000	268365.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:43:00
Tube Number: 31
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	63290.80000	0.00000	1.481	62209.90000	63786.40000	63876.10000
SC-3	45	1327670	0	3.473	1356920	1351590	1274510
AL	27	212.30000	11308.60000	1.314	209.43789	212.49220	215.00640
B	11	87.87000	81435.10000	1.739	86.12421	88.51416	88.96825
BE	9	1.03500	970.04300	2.122	1.03851	1.05542	1.01186
CA	44	414.80000	2710.40000	6.133	441.30420	412.59179	390.57175
CR	52	4.57400	6808.72000	2.387	4.56042	4.47298	4.69000
FE	57	205.90000	6091.66000	4.424	216.05230	198.43381	203.23543
K	39	391.30000	173111.00000	5.180	414.55033	377.08970	382.38886
MG	24	210.10000	28591.80000	1.647	214.00029	208.68141	207.50442
MN	55	3.96900	3163.86000	7.211	4.17537	3.64256	4.09032
NA	23	373.00000	167680.00000	2.772	384.88183	365.78684	368.47596
TI	47	27.64000	950.07400	15.727	31.64449	28.25630	23.01627
V	51	0.97900	1250.12000	8.376	0.99633	1.05094	0.88971
IN-1	115	324198.00000	0.00000	1.320	328816.00000	323413.00000	320365.00000
IN-2	115	82060.40000	0.00000	0.152	82192.80000	82044.30000	81944.20000
AG	107	0.99470	3167.19000	0.952	0.99096	1.00545	0.98766
AS	75	3.79300	748.02700	8.890	3.53978	3.66467	4.17625
BA	137	4.07600	1720.19000	8.035	4.44946	3.83887	3.93889
CD	111	1.00300	432.01100	9.238	0.95782	1.10952	0.94149
CO	59	1.02100	2917.13000	7.265	0.97582	0.98149	1.10704
CU	63	3.83200	7719.26000	1.006	3.86285	3.78876	3.84430
MO	98	0.97270	1460.15000	12.892	0.82847	1.03402	1.05573
NI	60	4.22300	3007.15000	2.486	4.32199	4.11293	4.23411
SB	121	2.02900	2030.26000	13.140	2.33665	1.87873	1.87099
SE	78	4.01500	456.45400	3.255	3.93647	3.94349	4.16635
SN	120	4.04900	5488.12000	2.788	3.92333	4.08298	4.14145
SR	88	1.99800	2086.92000	6.296	1.85421	2.08780	2.05192
ZN	66	30.49000	8056.19000	6.202	31.68618	28.31108	31.47751
BI-2	209	212618.00000	0.00000	0.781	210727.00000	213283.00000	213843.00000
PB	208	2.02900	19597.10000	4.419	2.03381	2.11656	1.93741
TL	203	0.98350	2940.48000	3.447	0.94483	0.99740	1.00819
U	238	1.01700	11542.90000	3.487	1.05419	1.01424	0.98345
SC-1	45	347743.00000	0.00000	0.889	349013.00000	344218.00000	349998.00000
GE-1	72	450341.00000	0.00000	1.909	458293.00000	441221.00000	451509.00000
GE-2	72	158293.00000	0.00000	0.759	157761.00000	157449.00000	159670.00000
GE-3	72	1167270	0	5.057	1213780	1187160	1100860
TB-2	159	265338.00000	0.00000	1.569	269213.00000	260935.00000	265866.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:46:00
Tube Number: 32
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	58837.30000	0.00000	4.348	56333.00000	61445.60000	58733.30000
SC-3	45	1204400	0	2.671	1238810	1199320	1175080
AL	27	99660.00000	4890380.00000	3.678	101994.43724	95440.06292	101558.39924
B	11	-6.03400	12656.70000	-2.758	-5.91795	-5.95966	-6.22486
BE	9	0.03851	44.00040	38.535	0.02769	0.05543	0.03240
CA	44	343800.00000	1780160.00000	3.342	350216.43232	330548.19514	350675.22743
CR	52	3.07900	4290.88000	2.862	3.14050	2.97846	3.11951
FE	57	255400.00000	6942820.00000	3.246	255409.30413	247164.69051	263746.28554
K	39	99720.00000	10784000.00000	3.909	102662.19914	95297.62249	101194.46145
MG	24	97520.00000	12254500.00000	4.330	101287.07981	92956.01212	98323.68304
MN	55	56.56000	41397.10000	5.504	58.32604	52.97031	58.39731
NA	23	260000.00000	62364400.00000	3.272	264404.16357	250236.13241	265480.76462
TI	47	2248.00000	71564.30000	5.565	2360.85190	2113.35368	2269.08701
V	51	0.17820	236.68000	32.862	0.22491	0.11250	0.19718
IN-1	115	304958.00000	0.00000	1.391	308620.00000	300310.00000	305943.00000
IN-2	115	76713.30000	0.00000	1.103	75818.10000	77499.60000	76822.20000
AG	107	0.23490	720.05000	3.486	0.23775	0.22568	0.24130
AS	75	0.38200	206.67000	38.665	0.54755	0.33461	0.26383
BA	137	2.72500	1076.76000	8.668	2.86798	2.45276	2.85567
CD	111	0.30160	132.66800	16.731	0.25699	0.29147	0.35637
CO	59	2.92500	7459.12000	4.848	2.94057	2.77555	3.05785
CU	63	3.27000	6181.71000	8.358	3.11745	3.10706	3.58554
MO	98	2158.00000	2966880.00000	1.867	2144.93055	2125.07571	2202.63424
NI	60	1.43000	1006.75000	5.829	1.39099	1.37334	1.52574
SB	121	0.11200	113.33800	20.625	0.12062	0.08589	0.12964
SE	78	0.07112	10.22230	31.229	0.04926	0.07043	0.09368
SN	120	0.05189	220.01300	92.369	0.00479	0.05028	0.10062
SR	88	3.45600	3373.92000	7.442	3.16263	3.56104	3.64369
ZN	66	1.44600	406.69400	12.905	1.23276	1.52429	1.58031
BI-2	209	194398.00000	0.00000	2.245	193216.00000	199232.00000	190745.00000
PB	208	0.16580	1606.78000	13.480	0.15210	0.15365	0.19157
TL	203	-0.00253	20.00080	-150.000	-0.00622	-0.00273	0.00136
U	238	0.01116	130.00600	33.539	0.01021	0.00798	0.01528
SC-1	45	320746.00000	0.00000	1.188	323448.00000	316389.00000	322401.00000
GE-1	72	417087.00000	0.00000	1.918	426276.00000	411687.00000	413297.00000
GE-2	72	148735.00000	0.00000	0.214	148745.00000	149047.00000	148411.00000
GE-3	72	1056360	0	2.569	1087160	1046000	1035930
TB-2	159	240255.00000	0.00000	0.727	241069.00000	238249.00000	241447.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:49:00
Tube Number: 33
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	57654.40000	0.00000	1.755	56943.90000	57206.70000	58812.70000
SC-3	45	1193930	0	1.528	1210930	1196190	1174660
AL	27	103300.00000	4969740.00000	1.751	102005.29785	105337.82672	102451.74388
B	11	-9.06200	10586.20000	-3.264	-9.08038	-9.34862	-8.75777
BE	9	0.03978	44.66710	27.099	0.03577	0.03158	0.05199
CA	44	355400.00000	1804790.00000	0.376	355000.15763	356934.34053	354366.75060
CR	52	212.30000	283286.00000	1.033	214.51925	212.25517	210.13129
FE	57	260400.00000	6938340.00000	0.316	261337.43599	259874.01050	259955.54831
K	39	102200.00000	10838400.00000	0.431	102691.52709	102063.84978	101843.10086
MG	24	100800.00000	12426800.00000	1.155	102147.63504	100102.27810	100162.92552
MN	55	271.90000	195082.00000	1.371	271.89034	275.58381	268.12541
NA	23	262200.00000	61663300.00000	1.715	266953.17273	258012.32443	261621.23705
TI	47	2295.00000	71710.80000	0.614	2280.42259	2308.54441	2295.62717
V	51	205.90000	232704.00000	1.957	210.46954	203.03691	204.05751
IN-1	115	304755.00000	0.00000	1.008	303156.00000	308296.00000	302813.00000
IN-2	115	75448.70000	0.00000	2.121	76481.50000	73605.40000	76259.20000
AG	107	48.46000	140545.00000	2.057	47.53897	49.51847	48.32261
AS	75	101.30000	14525.60000	2.801	98.89760	104.42152	100.54210
BA	137	2.42500	943.40700	6.247	2.56220	2.45074	2.26249
CD	111	95.14000	36201.80000	1.046	94.42874	96.27698	94.71479
CO	59	191.60000	468642.00000	3.480	184.08711	196.82798	193.86217
CU	63	193.70000	350903.00000	1.479	191.57034	196.95224	192.55893
MO	98	2199.00000	2972480.00000	4.477	2116.88674	2308.23497	2172.37762
NI	60	199.20000	126623.00000	1.593	195.93385	202.27529	199.36417
SB	121	0.10290	103.33700	14.665	0.09794	0.09095	0.11986
SE	78	93.61000	9945.84000	0.677	92.95001	93.67219	94.21223
SN	120	0.05805	223.34500	56.159	0.07713	0.07662	0.02041
SR	88	3.38600	3247.23000	6.604	3.17627	3.62135	3.36104
ZN	66	91.01000	21996.00000	3.327	88.31264	94.28360	90.41902
BI-2	209	188904.00000	0.00000	0.611	190231.00000	188356.00000	188124.00000
PB	208	0.15290	1453.43000	7.397	0.14659	0.16592	0.14607
TL	203	-0.00361	16.66740	-161.280	-0.00239	0.00150	-0.00994
U	238	0.00816	96.67240	14.382	0.00744	0.00952	0.00754
SC-1	45	320895.00000	0.00000	1.488	315409.00000	324121.00000	323154.00000
GE-1	72	420935.00000	0.00000	0.949	418844.00000	425541.00000	418420.00000
GE-2	72	147174.00000	0.00000	0.032	147126.00000	147175.00000	147220.00000
GE-3	72	1054390	0	1.479	1070330	1053660	1039180
TB-2	159	238114.00000	0.00000	0.813	237174.00000	240340.00000	236828.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:52:00
Tube Number: 34
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	64155.30000	0.00000	2.190	63304.30000	63384.90000	65776.50000
SC-3	45	1335150	0	1.439	1350940	1340750	1313760
AL	27	4.50600	333.35000	28.673	3.02394	5.09696	5.39603
B	11	-12.53000	9330.63000	-1.097	-12.37680	-12.63041	-12.59515
BE	9	0.00315	16.00010	63.446	0.00296	0.00523	0.00125
CA	44	8.52700	453.36100	189.985	25.13792	-7.23871	7.68358
CR	52	0.42470	740.05200	13.480	0.45102	0.46399	0.35898
FE	57	18.33000	616.71400	16.536	15.00198	19.07667	20.92694
K	39	36.55000	134039.00000	65.718	56.63517	43.07204	9.94899
MG	24	3.70000	676.71000	8.941	3.56691	4.07725	3.45750
MN	55	0.02576	60.00280	139.674	0.02721	-0.01092	0.06100
NA	23	27.23000	79540.60000	46.456	33.98380	35.07245	12.64292
TI	47	0.29050	13.33380	58.899	0.19724	0.48798	0.18628
V	51	-0.02334	6.66692	-19.554	-0.02861	-0.02057	-0.02086
IN-1	115	322401.00000	0.00000	1.473	325884.00000	316989.00000	324329.00000
IN-2	115	80778.70000	0.00000	2.143	79179.70000	82617.20000	80539.30000
AG	107	0.00682	50.00220	5.045	0.00714	0.00645	0.00686
AS	75	-0.05230	151.33500	-348.948	0.10390	-0.25285	-0.00795
BA	137	0.01653	13.33390	85.058	0.00893	0.00791	0.03275
CD	111	-0.00006	16.66680	-32584.100	0.01889	-0.01722	-0.00183
CO	59	0.07772	400.02300	19.570	0.07679	0.06300	0.09337
CU	63	0.02184	210.01100	34.121	0.02918	0.01428	0.02205
MO	98	0.56210	843.40300	5.065	0.55072	0.59450	0.54108
NI	60	0.00886	93.33740	65.779	0.00670	0.01546	0.00442
SB	121	0.00394	13.33410	302.308	0.01100	-0.00982	0.01065
SE	78	0.01818	4.88891	120.957	0.03358	-0.00701	0.02796
SN	120	0.14160	350.34000	128.602	0.06232	0.34989	0.01257
SR	88	0.01965	23.33450	30.931	0.02667	0.01590	0.01639
ZN	66	0.39530	156.67300	29.598	0.30245	0.35679	0.52678
BI-2	209	211532.00000	0.00000	0.589	210558.00000	211101.00000	212936.00000
PB	208	0.00260	196.67600	127.889	-0.00117	0.00510	0.00386
TL	203	0.00253	36.66820	207.182	0.00712	0.00367	-0.00319
U	238	0.00122	30.00150	145.775	-0.00055	0.00300	0.00120
SC-1	45	339961.00000	0.00000	0.512	341586.00000	338122.00000	340176.00000
GE-1	72	447560.00000	0.00000	0.789	451580.00000	444963.00000	446137.00000
GE-2	72	158386.00000	0.00000	2.423	155099.00000	157456.00000	162603.00000
GE-3	72	1181460	0	2.692	1213530	1180920	1149910
TB-2	159	269850.00000	0.00000	1.592	268271.00000	274711.00000	266567.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:55:00
Tube Number: 35
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65213.50000	0.00000	0.988	64550.00000	65254.00000	65836.60000
SC-3	45	1377990	0	3.856	1431530	1377170	1325280
AL	27	2461.00000	134044.00000	0.848	2441.57474	2482.90158	2457.22110
B	11	219.00000	182290.00000	2.006	216.72222	216.17425	224.04012
BE	9	25.52000	24481.90000	1.764	25.03927	25.60387	25.92921
CA	44	2607.00000	15382.90000	0.783	2630.52121	2592.61365	2598.39475
CR	52	253.30000	382257.00000	1.383	256.10511	254.36389	249.35984
FE	57	2501.00000	75463.90000	0.593	2487.84461	2498.71173	2517.19919
K	39	2347.00000	410463.00000	1.243	2380.77335	2328.96041	2331.60729
MG	24	2408.00000	335852.00000	2.341	2470.73014	2389.57304	2362.35729
MN	55	262.00000	212665.00000	1.017	264.87239	261.51678	259.60978
NA	23	2337.00000	694824.00000	1.818	2379.83722	2294.85212	2337.99138
TI	47	259.60000	9183.57000	5.154	247.25310	257.88571	273.83204
V	51	242.50000	310037.00000	0.874	243.52551	243.83912	240.02169
IN-1	115	327317.00000	0.00000	1.099	331013.00000	327109.00000	323828.00000
IN-2	115	81015.40000	0.00000	1.153	81985.90000	80938.40000	80122.00000
AG	107	26.32000	81980.20000	1.844	26.08660	25.98779	26.87348
AS	75	263.50000	40332.20000	2.631	257.26907	262.33816	270.98200
BA	137	262.80000	109086.00000	0.730	262.58908	261.02455	264.84161
CD	111	25.47000	10417.00000	2.456	24.75116	25.91573	25.72944
CO	59	250.20000	657220.00000	0.805	247.91305	250.83133	251.77674
CU	63	252.30000	490799.00000	0.989	250.45695	251.28412	255.13068
MO	98	26.36000	38312.40000	1.529	26.11518	26.82685	26.14325
NI	60	264.60000	180607.00000	1.488	260.65218	268.52518	264.61433
SB	121	26.76000	26308.70000	2.256	26.20284	26.66436	27.40013
SE	78	25.98000	2967.01000	1.002	25.99878	26.23342	25.71366
SN	120	25.74000	33559.30000	1.986	25.60586	26.30227	25.30622
SR	88	26.14000	26919.40000	2.026	25.75456	25.93227	26.74746
ZN	66	262.40000	68029.80000	1.716	257.45052	266.22248	263.60733
BI-2	209	212404.00000	0.00000	2.668	217548.00000	213335.00000	206329.00000
PB	208	25.82000	246934.00000	2.911	25.30332	25.46750	26.67962
TL	203	25.65000	75848.90000	1.487	25.21244	25.83629	25.90407
U	238	25.25000	285776.00000	1.513	25.04622	25.00775	25.68773
SC-1	45	351866.00000	0.00000	0.681	351566.00000	354398.00000	349635.00000
GE-1	72	459467.00000	0.00000	1.547	467255.00000	453326.00000	457818.00000
GE-2	72	158836.00000	0.00000	0.406	159571.00000	158571.00000	158367.00000
GE-3	72	1220340	0	3.239	1262970	1184920	1213110
TB-2	159	270226.00000	0.00000	0.425	269916.00000	269265.00000	271497.00000

Run Name: 1612705E03 Date/Time: 05/06/2016 10:58:00
Tube Number: 36
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	65113.30000	0.00000	0.310	65344.60000	64972.60000	65022.70000
SC-3	45	1360170	0	2.891	1353140	1402530	1324840
AL	27	-0.91030	43.33770	-41.909	-0.60704	-0.78524	-1.33869
B	11	-5.38900	14762.90000	-11.288	-4.71448	-5.89538	-5.55863
BE	9	0.02184	34.00030	5.046	0.02204	0.02282	0.02064
CA	44	-8.97400	360.01900	-132.271	4.73165	-15.80643	-15.84952
CR	52	0.37670	680.04800	16.830	0.36846	0.31777	0.44377
FE	57	0.56300	90.00500	237.478	-0.77472	1.89905	0.56464
K	39	10.73000	133022.00000	96.925	14.62259	18.61143	-1.04741
MG	24	-0.44440	110.00500	-97.300	-0.87737	-0.44344	-0.01249
MN	55	0.06219	90.00370	59.994	0.02483	0.09946	0.06227
NA	23	-2.74400	72821.50000	-218.586	-4.74088	3.99524	-7.49140
TI	47	0.18860	10.00060	149.735	0.47054	-0.09424	0.18954
V	51	0.00535	43.33550	225.192	-0.00520	0.01849	0.00276
IN-1	115	319548.00000	0.00000	2.043	326665.00000	313837.00000	318141.00000
IN-2	115	82365.70000	0.00000	0.561	82872.40000	81968.00000	82256.50000
AG	107	0.00442	43.33500	150.102	-0.00301	0.00975	0.00652
AS	75	0.12740	182.67000	152.747	0.30895	-0.07798	0.15116
BA	137	-0.01572	0.00000	0.000	-0.01572	-0.01572	-0.01572
CD	111	0.00523	19.33350	502.391	0.03057	-0.02187	0.00699
CO	59	0.12590	536.70600	25.361	0.11469	0.16195	0.10111
CU	63	0.00445	180.01000	452.483	0.00392	-0.01542	0.02485
MO	98	0.05450	110.00400	12.728	0.05403	0.06166	0.04781
NI	60	-0.02735	70.00320	-279.452	-0.05663	-0.08482	0.05939
SB	121	0.00684	16.66730	83.604	0.01007	0.00024	0.01022
SE	78	-0.00496	2.22223	-311.895	-0.01926	0.01145	-0.00708
SN	120	0.01458	186.67600	288.752	0.01618	0.05585	-0.02830
SR	88	0.04789	53.33590	61.224	0.01584	0.05445	0.07338
ZN	66	-0.04708	43.33500	-333.050	0.12861	-0.17288	-0.09698
BI-2	209	213276.00000	0.00000	0.698	211556.00000	214134.00000	214139.00000
PB	208	0.00071	180.00900	768.193	0.00400	0.00374	-0.00560
TL	203	0.00468	43.33510	151.346	0.01044	-0.00323	0.00683
U	238	0.00413	63.33630	11.823	0.00388	0.00382	0.00469
SC-1	45	344334.00000	0.00000	0.452	344913.00000	342571.00000	345516.00000
GE-1	72	446694.00000	0.00000	1.733	452276.00000	437860.00000	449947.00000
GE-2	72	159523.00000	0.00000	1.279	157570.00000	161640.00000	159358.00000
GE-3	72	1185020	0	2.023	1196770	1200840	1157440
TB-2	159	270216.00000	0.00000	1.261	268018.00000	268487.00000	274142.00000

Lancaster Laboratories

Instrument Tuning Report

(ICPMS #11332)

File Name: default.tun

File Path: C:\elandata\Tuning

Sample Date/Time: 5/6/2016 12:11:00AM

Number of Replicates: 6

Method File: c:\elandata\Method\dailytune.mth

Measured Mass must be within +/- 0.1 amu of the Exact Mass.

Measured Peak Width must be > or = to 0.640 AND < or = to 0.660.

Analyte	EXACT MASS	MEAS. MASS	Mass DAC	RES. DAC	MEAS. PK. WIDTH
Ce	140.000	140.000	0	0	0.650
In	115.000	115.000	0	0	0.600
Li	6.000	6.000	0	0	0.650
Mg	24.000	23.900	0	0	0.650
Pb	208.000	208.000	0	0	0.650
Rh	103.000	103.000	0	0	0.600
U	238.000	238.000	0	0	0.650

Summary: Verify that the RSD is less than 5 for the following masses.

Mass	Meas. Intens. Mean	Meas. Intens. RSD
140.000	113278.000	1.320
115.000	108653.000	0.530
6.000	18915.000	1.510
24.000	33797.000	1.340
208.000	63220.000	1.460
103.000	95855.000	1.160
238.000	120439.000	1.460

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

Mercury Run Data Report

Data File Name: 1612701.M08

Run Name: 1612702M08

Instrument No.: 19302

Element: Hg

Analyst Employee ID: 354

Reviewed By	Reviewed Date
Damary Valentin	05/06/2016 9:45AM
Jennifer L Moyer	05/10/2016 1:30PM

Verified By:	Verified Date
Jennifer L Moyer	05/10/2016 1:35PM

Method Reference Name(s):

SW-846 7470A

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

1 Burn Date/Time: 05/06/2016 05:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	403.0

2 Burn Date/Time: 05/06/2016 05:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1829.0

3 Burn Date/Time: 05/06/2016 05:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	4074.0

4 Burn Date/Time: 05/06/2016 05:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	7802.0

5 Burn Date/Time: 05/06/2016 06:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	19830.0

6 Burn Date/Time: 05/06/2016 06:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	38374.0

CorrelationCoefficient = 1.00000
Slope = 7636.7848100000
Y-Intercept = 342.2632900000

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

7 Burn Date/Time: 05/06/2016 06:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4833	19308.0

8 Burn Date/Time: 05/06/2016 06:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0317	98.0

9 Burn Date/Time: 05/06/2016 06:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1722	1655.0

10 Burn Date/Time: 05/06/2016 06:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9305	7447.0

11 Burn Date/Time: 05/06/2016 06:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0249	150.0

12 Burn Date/Time: 05/06/2016 06:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0086	274.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

13 Burn Date/Time: 05/06/2016 06:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9714	7760.0		

14 Burn Date/Time: 05/06/2016 06:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355563	U*********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0187	483.0		

15 Burn Date/Time: 05/06/2016 06:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355566	D*********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0337	597.0		

16 Burn Date/Time: 05/06/2016 06:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355564	R*********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9789	7817.0		

17 Burn Date/Time: 05/06/2016 06:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355565	M*********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9329	7466.0		

18 Burn Date/Time: 05/06/2016 06:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355562	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0046	305.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

19 Burn Date/Time: 05/06/2016 06:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355567	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0105	420.0		

20 Burn Date/Time: 05/06/2016 06:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355568	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0314	580.0		

21 Burn Date/Time: 05/06/2016 06:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355569	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0478	705.0		

22 Burn Date/Time: 05/06/2016 06:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9256	7410.0

23 Burn Date/Time: 05/06/2016 06:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0264	138.0

24 Burn Date/Time: 05/06/2016 06:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355570	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0100	416.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

25 Burn Date/Time: 05/06/2016 06:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355572	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0159	461.0		

26 Burn Date/Time: 05/06/2016 06:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355573	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0119	249.0		

27 Burn Date/Time: 05/06/2016 06:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355575	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0125	244.0		

28 Burn Date/Time: 05/06/2016 06:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355576	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0095	267.0		

29 Burn Date/Time: 05/06/2016 06:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355577	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0011	348.0		

30 Burn Date/Time: 05/06/2016 06:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355578	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0017	353.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

31 Burn Date/Time: 05/06/2016 06:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355579	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0152	456.0		

32 Burn Date/Time: 05/06/2016 06:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355580	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0301	110.0		

33 Burn Date/Time: 05/06/2016 06:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355581	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0197	189.0		

34 Burn Date/Time: 05/06/2016 07:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9446	7555.0

35 Burn Date/Time: 05/06/2016 07:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0234	161.0

36 Burn Date/Time: 05/06/2016 07:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355582	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0224	169.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

37 Burn Date/Time: 05/06/2016 07:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355583	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0195	191.0		

38 Burn Date/Time: 05/06/2016 07:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355584	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0214	176.0		

39 Burn Date/Time: 05/06/2016 07:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355585	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0118	250.0		

40 Burn Date/Time: 05/06/2016 07:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8355586	**********	40	40	1.00	161245713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0133	238.0		

41 Burn Date/Time: 05/06/2016 07:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0097	414.0		

42 Burn Date/Time: 05/06/2016 07:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1441	9079.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

43 Burn Date/Time: 05/06/2016 07:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361898	U*********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0267	544.0		

44 Burn Date/Time: 05/06/2016 07:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361898	D*********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0320	584.0		

45 Burn Date/Time: 05/06/2016 07:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361898	R*********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0889	8657.0		

46 Burn Date/Time: 05/06/2016 07:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9375	7501.0

47 Burn Date/Time: 05/06/2016 07:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0233	162.0

48 Burn Date/Time: 05/06/2016 07:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361898	M*********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0576	8418.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

49 Burn Date/Time: 05/06/2016 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361896	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0197	189.0		

50 Burn Date/Time: 05/06/2016 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361897	**********	20	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0051	301.0		

51 Burn Date/Time: 05/06/2016 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361899	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0124	245.0		

52 Burn Date/Time: 05/06/2016 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361900	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0123	246.0		

53 Burn Date/Time: 05/06/2016 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361901	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0179	203.0		

54 Burn Date/Time: 05/06/2016 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361902	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0135	237.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

55 Burn Date/Time: 05/06/2016 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361903	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0105	260.0		

56 Burn Date/Time: 05/06/2016 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361904	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0005	336.0		

57 Burn Date/Time: 05/06/2016 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361905	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0022	323.0		

58 Burn Date/Time: 05/06/2016 07:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9658	7717.0

59 Burn Date/Time: 05/06/2016 07:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0238	158.0

60 Burn Date/Time: 05/06/2016 07:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361906	**********	40	40	1.00	161255713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0071	394.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

61 Burn Date/Time: 05/06/2016 07:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0193	487.0		

62 Burn Date/Time: 05/06/2016 07:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0626	8456.0		

63 Burn Date/Time: 05/06/2016 07:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361602	U*********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0059	295.0		

64 Burn Date/Time: 05/06/2016 08:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361602	D*********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0069	287.0		

65 Burn Date/Time: 05/06/2016 08:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361602	R*********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6221	12730.0		

66 Burn Date/Time: 05/06/2016 08:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361602	M*********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5531	12203.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

67 Burn Date/Time: 05/06/2016 08:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8362903	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0272	132.0		

68 Burn Date/Time: 05/06/2016 08:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8362533	U*1*******	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0078	280.0		

69 Burn Date/Time: 05/06/2016 08:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8362533	R*1*******	4	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6407	12872.0		

70 Burn Date/Time: 05/06/2016 08:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9314	7454.0

71 Burn Date/Time: 05/06/2016 08:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0245	153.0

72 Burn Date/Time: 05/06/2016 08:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8360821	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0106	259.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

73 Burn Date/Time: 05/06/2016 08:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8360824	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0112	254.0		

74 Burn Date/Time: 05/06/2016 08:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8360927	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0102	262.0		

75 Burn Date/Time: 05/06/2016 08:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8360932	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0111	255.0		

76 Burn Date/Time: 05/06/2016 08:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8360947	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0110	256.0		

77 Burn Date/Time: 05/06/2016 08:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361566	U*2*******	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0115	252.0		

78 Burn Date/Time: 05/06/2016 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361566	R*2*******	4	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5892	12479.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

79 Burn Date/Time: 05/06/2016 08:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8361569	**********	40	40	1.00	161265713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0277	128.0		

80 Burn Date/Time: 05/06/2016 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0305	107.0		

81 Burn Date/Time: 05/06/2016 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0230	8154.0		

82 Burn Date/Time: 05/06/2016 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9484	7584.0

83 Burn Date/Time: 05/06/2016 08:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0272	132.0

84 Burn Date/Time: 05/06/2016 08:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352791	U**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0276	129.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Analyst ID: 354.00

Instrument ID: 19302

CV Element: Hg

85 Burn Date/Time: 05/06/2016 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352794	D*********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0275	130.0		

86 Burn Date/Time: 05/06/2016 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352792	R*********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0183	8118.0		

87 Burn Date/Time: 05/06/2016 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352793	M*********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9912	7911.0		

88 Burn Date/Time: 05/06/2016 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352790	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0212	178.0		

89 Burn Date/Time: 05/06/2016 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352795	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0012	349.0		

90 Burn Date/Time: 05/06/2016 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352796	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0152	456.0		

LANCASTER LABORATORIES

Run Name: 1612702M08

Instrument ID: 19302

Analyst ID: 354.00

CV Element: Hg

91 Burn Date/Time: 05/06/2016 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352797	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0117	429.0		

92 Burn Date/Time: 05/06/2016 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
8352798	**********	40	40	1.00	161255713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0275	550.0		

93 Burn Date/Time: 05/06/2016 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1757	1682.0

94 Burn Date/Time: 05/06/2016 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9272	7422.0

95 Burn Date/Time: 05/06/2016 09:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0297	113.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 16 125 0639 004

Balance ID#: CLEAR **Start Time:** 5/5/16 7:14 **End Time:** 5/5/16 12:03 **Hot Block:** 14

Pipette ID: JU06758
Reflux Cap Lot#: 15091046091NK

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	119637	3.00
ICP/MS Spike	1608420#1	0.50
LCS	1608420#1	0.50

Method Ref: SW-846 3020A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1512329	
2)	LCSW	.							1512329	
3)	8352789	05/09/16 10:00		WW	N8			008a	1512329	
4)	8352790	05/09/16 10:00		WW	N8			008a	1512329	
5)	**8352791U**	05/09/16 10:00		WW	N8			008a	1512329	
6)	**8352792R**	05/09/16 10:00		WW	N8			008a	1512329	
7)	**8352793M**	05/09/16 10:00		WW	N8			008a	1512329	
8)	**8352794D**	05/09/16 10:00		WW	N8			008a	1512329	
9)	8352795	05/09/16 10:00		WW	N8			008a	1512329	
10)	8352796FD	05/09/16 10:00		WW	N8			008a	1512329	
11)	8352797	05/09/16 10:00		WW	N8			008a	1512329	
12)	8352798	05/09/16 10:00		WW	N8			008a	1512329	
13)	8352799	05/09/16 10:00		WW	N8			008a	1512329	

Prep Employee: 1184
5/5/2016
v 1.0.1

Batch# 16 125 0639 004

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		5/4/16 12:39	1184
2)	Sample Vol		5/5/16 7:14	1184
3)	Final Vol	CLEAR	5/5/16 7:14	1184
4)	Trial		5/5/16 7:14	1184
5)	Upload Prep	US19PCC06691	5/5/16 12:03	1184

				Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 16 125 0639 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
8352789	05/09/16	N8	5F8B-	RAE60-01	50.0000	50.0000	1
8352790	05/09/16	N8	5F5B-	RAE60-02	50.0000	50.0000	1
8352791U	05/09/16	N8	5F7B-	RAE60-03BKG	50.0000	50.0000	1
8352792R	05/09/16	N8	5F7B-	RAE60-03MS	50.0000	50.0000	1
8352793M	05/09/16	N8	5F7B-	RAE60-03MSD	50.0000	50.0000	1
8352794D	05/09/16	N8	5F7B-	RAE60-03DUP	50.0000	50.0000	1
8352795	05/09/16	N8	5FC21	RAE60-04	50.0000	50.0000	1
8352796FD	05/09/16	N8	5FDUP	RAE60-05FD	50.0000	50.0000	1
8352797	05/09/16	N8	5FC22	RAE60-06	50.0000	50.0000	1
8352798	05/09/16	N8	5FC23	RAE60-07	50.0000	50.0000	1
8352799	05/09/16	N8	5F12A	RAE60-08	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 16 125 5713 005

Balance ID#: CLEAR **Start Time:** 5/5/16 8:25 **End Time:** 5/5/16 10:25 **Hot Block:** 10

Pipette ID: W/1000

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	P16111E	3.20
5%KMnO4	P16117F	6.00
H2SO4	156246	2.00
HNO3	119637	1.00
LCS 40ppb Hg	P16126A	1.00
NaCl/NH2OH.HCl	P16111i	2.40
Spike 40ppb Hg	P16126A	1.00

Method Ref: SW-846 7470A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1212329	
2)	LCSW	.							1212329	
3)	8352790	05/09/16 10:00		WW	N8			008a	1212329	
4)	**8352791U**	05/09/16 10:00		WW	N8			008a	1212329	
5)	**8352792R**	05/09/16 10:00		WW	N8			008a	1212329	
6)	**8352793M**	05/09/16 10:00		WW	N8			008a	1212329	
7)	**8352794D**	05/09/16 10:00		WW	N8			008a	1212329	
8)	8352795	05/09/16 10:00		WW	N8			008a	1212329	
9)	8352796FD	05/09/16 10:00		WW	N8			008a	1212329	
10)	8352797	05/09/16 10:00		WW	N8			008a	1212329	
11)	8352798	05/09/16 10:00		WW	N8			008a	1212329	

Prep Employee: 1184

5/5/2016

v 1.0.1

Batch# 16 125 5713 005

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		5/4/16 12:40	1184
2)	Sample Vol		5/5/16 8:25	1184
3)	Final Vol	CLEAR	5/5/16 8:25	1184
4)	Trial		5/5/16 8:25	1184
5)	Upload Prep	US19PCC06691	5/5/16 10:26	1184

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 16 125 5713 005

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
8352790	05/09/16	N8	5F5B-	RAE60-02	40.0000		40.0000	1
8352791U	05/09/16	N8	5F7B-	RAE60-03BKG	40.0000		40.0000	1
8352792R	05/09/16	N8	5F7B-	RAE60-03MS	40.0000		40.0000	1
8352793M	05/09/16	N8	5F7B-	RAE60-03MSD	40.0000		40.0000	1
8352794D	05/09/16	N8	5F7B-	RAE60-03DUP	40.0000		40.0000	1
8352795	05/09/16	N8	5FC21	RAE60-04	40.0000		40.0000	1
8352796FD	05/09/16	N8	5FDUP	RAE60-05FD	40.0000		40.0000	1
8352797	05/09/16	N8	5FC22	RAE60-06	40.0000		40.0000	1
8352798	05/09/16	N8	5FC23	RAE60-07	40.0000		40.0000	1

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H16-109K	Hg 1.0mg/L Cal	15	4-25-16	H16-109A	0.25ml	1	6	1196137
2	↓	L	↓	15	↓	↓	0.5ml	↓	↓	↓
3	↓	M	—	—	—	—	—			
4	ICV	N	Hg 1.0mg/L Cont	15	4-25-16	H16-109C	0.25ml			
5	CCV	O	Hg 1.0mg/L Cal	↓	↓	H16-109A	0.20ml			
6	Hg 1.0mg/L InterCal	H16-111A	Hg 10mg/L Cal	15	9-04-16	H16-016-HU	1.0ml			
7	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-27-16	H16-111A	↓			
8	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-16 (17)	J2HG02138				
9	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-27-16 (3)	H16-111C	↓			
10	Hg 5701 ICV	E	↓	↓	↓	↓	0.25ml			
11	CCV	F	Hg 1.0mg/L Cal			H16-111A	0.10			
12	CCV	G				↓	0.10			
13	CCV	H					0.10			
14	CCV	I	↓			↓	0.10			
15	CBA	J	Hg 0.1mg/L Cont			H16-111D	0.25			
16	Std Cal	K	Hg 0.1mg/L Cal			H16-111B	0.20			
17	↓	L	↓			↓	0.50			
18	↓	M	Hg 1.0mg/L Cal			H16-111A	0.10			
19	↓	N	↓			↓	0.25			
20	↓	O	↓	↓	↓	↓	0.50			

4-21-16 DK

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX: Inorganic 4-20-16 DK

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml HNO3	4	153403	3.2ml Ka5208 6ml Km 0.4		H16-024A H16-0704	100	2.5 µg/L	DJ354	4-18-16	4-25-16	RT
2								5.0				
3								6.0				
4							↓	2.5				
5	↓	↓	↓	↓	↓	↓	200	1.0 ↓	↓	↓	↓	↓
6				To vol w/ 0.15% HNO3		H16-004EE	10	1.0	DJ354	4-20-16	4-27-16	RT
7								0.1				
8								1.0				
9				↓	↓	↓	↓	0.1				
10				5ml Aqua Regia 15ml Km		not H16-111U H16-0704	100	2.5 µg/L				
11								1.0				
12								1.0				
13								1.0				
14								1.0				
15								0.2				
16								0.2				
17								0.5				
18								1.0				
19								2.5				
20				↓	↓	↓	↓	5.0 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FDR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 Std Cal	H16-111P								
2	S1	Q	Hg-0.1mg/L Cal	15	4-27-16	H16-111B	0.10ml			
3	CRA	R	Hg-0.1mg/L Cont	↓	↓	H16-111D	0.10			
4	CRA	S	↓			↓	0.40			
5	↓ ICV	T	Hg-1.0mg/L Cont	↓	↓	H16-111C	0.25 ↓			
6	Aqua Regia	↓ U						20	6	119637
7	Hg-1.0mg/L InterCal	H16-112A	Hg-10mg/L Cal	15	9-27-16 4-28-16	H16-064U	1.0ml			
8	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-28-16	H16-112A				
9	1.0mg/L InterCont	C	10 mg/L Cont	XX	1-22-17	12HG02138				
10	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont	15	4-28-16	H16-112C	↓			
11	Hg-5700 ICV	E	↓			↓	0.25ml	1	6	119637
12	CCV	F	Hg-1.0mg/L Cal			H16-112A	0.20			
13	CRA	G	Hg-0.1mg/L Cont			H16-112D	0.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H16-112B	0.20			
15		I	↓			↓	0.50			
16		J	Hg-1.0mg/L Cal			H16-112A	0.20			
17		K	↓			↓	0.25			
18		L	↓	↓	↓	↓	0.50 ↓			
19	↓	M								
20	↓ ICV	↓ N	Hg-1.0mg/L Cont	15	4-28-16	H16-112C	0.25ml	↓	↓	↓

RAE 4-28-16 2354 (34)
(36) 4-28-16 2354
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Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua-Regia 15ml DI H2O		H16-1114 H16-0704	100	0.01 ug/L	DU354	4-20-16	4-27-16	RT
2								0.1				
3								0.1				
4								0.4				
5				↓	↓	↓	↓	2.5 ↓			↓	
6	60	6	123882				80	1.3	↓	↓	4-20-16	↓
7				To vol w/ 0.15% HNO3		H16-0046EE	10	1.0	DU354	4-28-16	4-28-16	RT
8								0.1		4-21-16 (3)		
9								1.0		4-21-16		
10				↓	↓	↓	↓	0.1		↓		
11	2ml H2SO4	4	158403	3.2ml K2S2O8 1.6ml KMnO4		H16-0951 H16-0960	100	2.5 ug/L				
12				↓	↓	↓	200	1.0			↓	
13							100	0.2				
14							↓	0.2				
15							↓	0.5				
16							200	1.0				
17							100	2.5				
18							↓	5.0				
19								0.0				
20	↓	↓	↓	↓	↓	↓	↓	2.5 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 CCV	H16-112D	Hg 1.0mg/L Cal	15	4-28-16	H16-112A	0.20ml	1	6	119637
2	0.15% HNO3 Sol.	↓ 112P	—				—	3	↓	↓
3	Stannous Chloride	H16-114A	SnCl2	6	8-12-16	128701 #2	200.03g	—		
4	Stannous Chloride	H16-114B	SnCl2	6	↓	↓	200.02g	—		
5	Hg 1.0mg/L InterCal	H16-116A	Hg 1.0mg/L Cal	15	9-04-16	H16-064G	1.0ml	—		
6	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-02-16	H16-116A				
7	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-16	I2HG02138				
8	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-02-16	H16-116C	↓			
9	Hg 5700 ICV	E	↓			↓	0.25ml	1	6	119637
10	CCV	F	Hg 1.0mg/L Cal			H16-116A	0.20			
11	CRA	G	Hg 0.1mg/L Cont			H16-116D	0.20			
12	Std Cal	H	Hg 0.1mg/L Cal			H16-116B	0.20			
13	↓	I	↓			↓	0.50			
14		J	Hg 1.0mg/L Cal			H16-116A	0.20			
15		K	↓			↓	0.25			
16		L	↓	↓	↓	↓	0.50			
17	↓	M	—				—			
18	ICV	N	Hg 1.0mg/L Cont	15	5-02-16	H16-116C	0.25ml			
19	CCV	O	Hg 1.0mg/L Cal	15	↓	H16-116A	0.20ml	↓	↓	↓
20	Aqua Regia	↓ P	—				—	7.5	6	119637

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Key – Manufacturer (M•)

1 – Aldrich Chemical
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5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX = Inorganic 4-25-16 DVSJ

a

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	158403	3.2ml $K_2S_2O_8$ 1.6ml $KMnO_4$	08	H16-095P H16-090C	200	1.0ug/L	DU354	4-21-16	4-28-16	RT
2	~	~	~	~	~	~	2000	0.15%	↓	↓	10-21-16	RT
3	200	6	123882	~	~	~	2000	10%	DU354	4-23-16	8-12-16	RT
4	200	6	123882	~	~	~	2000	10%	↓	↓	↓	↓
5	~	~	~	Teflon w/0.5% HNO_3		H16-0078EE	10	1.0	DU354	4-25-16	5-02-16	RT
6				↓	↓	↓	↓	0.1	↓	↓	↓	↓
7								1.0				
8								0.1				
9	2ml H_2SO_4	4	158403	3.2ml $K_2S_2O_8$ 1.6ml $KMnO_4$	08	H16-095P H16-090C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16							↓	5.0				
17								0.0				
18							↓	2.5				
19	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
20	22.5	6	123882	~	~	~	30	1:3	↓	↓	4-25-16	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 CCV	H16-116B	Hg-1.0mg/L Cal	15	5-02-16	H16-116A	6.10 ml			
2	CCV	R					6.10			
3	CCV	S					6.10			
4	CCV	T					6.10			
5	CRA	U	Hg-0.1mg/L Cont			H16-116D	0.40			
6	SO	V								
7	Hg-1.0mg/L InterCal	H16-117A	Hg-10mg/L Cal	15	9-07-16	H16-0607U	1.0 ml			
8	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-03-16	H16-117A				
9	1.0mg/L InterCont	C	10mg/L Cont.	XX	1-22-17	J2HG02138				
10	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-03-16	H16-117C				
11	Hg-5701 ICV	E					0.25ml			
12	CCV	F	Hg-1.0mg/L Cal			H16-117A	0.10			
13	CCV	G					0.10			
14	CCV	H					0.10			
15	CCV	I					0.10			
16	CCV	J					0.10			
17	CRA	K	Hg-0.1mg/L Cont			H16-117D	0.20			
18	Std Cal	L	Hg-0.1mg/L Cal			H16-117B	0.20			
19		M					0.50			
20		N	Hg-1.0mg/L Cal			H16-117A	0.10			

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8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

a

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml KMnO4		H16-116P H16-090C	100	1.0ug/L	DL354	4-25-16	5-02-16	RT
2								1.0				
3								1.0				
4								1.0				
5								0.4				
6								0.0				
7				To vol w/ 0.15% HNO3		H16-091GE	10	1.0	DL354	4-26-16	5-03-16	RT
8								0.1				
9								1.0				
10								0.1				
11				5ml Aqua Regia 15ml KMnO4		H16-117 H16-090C	100	2.5ug/L				
12								1.0				
13								1.0				
14								1.0				
15								1.0				
16								1.0				
17								0.2				
18								0.2				
19								0.5				
20								1.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 StdCal	H16-1170	Hg 1.0mg/L Cal	15	5-03-16	H16-117A	0.25 ml			
2	↓	P	↓	↓	↓	↓	0.50 ml			
3	↓	Q								
4	SI	R	Hg 0.1 mg/L Cal	15	5-03-16	H16-117B	0.10 ml			
5	CRA	S	Hg 0.1 mg/L Cont	↓	↓	H16-117D	0.10			
6	CRA	T	↓			↓	0.40			
7	ICV	U	Hg 1.0 mg/L Cont	↓	↓	H16-117C	0.25 ↓			
8	Aqua Regia	V						22.5	6	119637
9	Hg 1.0 mg/L InterCal	H16-119A	Hg 10 mg/L Cal	15	9-04-16	H16-01-4U	1.0 ml			
10	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	5-05-16	H16-119A				
11	1.0 mg/L InterCont	C	10 mg/L Cont	XX	1-22-17	J2HG02138				
12	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	5-05-16	H16-119C	↓			
13	Hg 5700 ICV	E	↓			↓	0.25 ml	1	6	119637
14	CCV	F	Hg 1.0 mg/L Cal			H16-119A	0.20			
15	CRA	G	Hg 0.1 mg/L Cont			H16-119D	0.20			
16	Std Cal	H	Hg 0.1 mg/L Cal			H16-119B	0.20			
17		I	↓			↓	0.50			
18		J	Hg 1.0 mg/L Cal			H16-119A	0.20			
19		K					0.25			
20	↓	L	↓	↓	↓	↓	0.50 ✓	↓	↓	↓

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8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

xx = Inorganic 4-28-16 DV354

a

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml Hmno3		H16-117 V H16-090C	100	2.5ug/L	DJ354	4-26-16	5-03-16	RT
2								5.0				
3								0.0				
4								0.1				
5								0.1				
6								0.4				
7								2.5				
8	67.5	6	123888				90	1:3			4-26-16	
9				Transfer 0.15ml HNO3		H16-090EE	10	1.0	DJ354	4-28-16	5-05-16	RT
10								0.1				
11								1.0				
12								0.1				
13	2ml H2SO4	4	158403	3.2ml Ka2S2O8 1ml Hmno3		H16-095P H16-090C	100	2.5ug/L				
14							200	1.0				
15							100	0.2				
16								0.2				
17								0.5				
18							200	1.0				
19							100	2.5				
20								5.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 Std Cal	H16-119m						1	6	119637
2	↓ ICV	↓ N	Hg 1.0 mg/L Cont	15	5-05-16	H16-119C	0.25 ml	↓	↓	↓
3	↓ CCV	O	Hg 1.0 mg/L Cal	15	5-05-16	H16-119A	0.25 ml	↓	↓	↓
4	Stannous Chloride	P	$SnCl_2$	6	8-12-16	138701 #2+3	200.05g			
5	Stannous Chloride	↓ Q	$SnCl_2$	↓	↓	↓ #3	200.06g			
6	Hg 1.0 mg/L Inter Cal	H16-123A	Hg 10 mg/L Cal	15	9-04-16	H16-064U	1.0 ml			
7	0.1 mg/L Inter Cal	B	↓ 1.0 mg/L Cal	15	5-09-16	H16-123A	↓			
8	1.0 mg/L Inter Cont	C	10 mg/L Cont	XX	1-22-17	J2HG02138				
9	↓ 0.1 mg/L Inter Cont	D	↓ 1.0 mg/L Cont	15	5-09-16	H16-123C	↓			
10	Hg-5700 ICV	E	↓	↓	↓	↓	0.25 ml	1	6	119637
11	CCV	F	Hg 1.0 mg/L Cal			H16-123A	0.20			
12	CRA	G	Hg 0.1 mg/L Cont			H16-123D	0.20			
13	Std Cal	H	Hg 0.1 mg/L Cal			H16-123B	0.20			
14		I	↓			↓	0.50			
15		J	Hg 1.0 mg/L Cal			H16-123A	0.20			
16		K	↓			↓	0.25			
17		L	↓	↓	↓	↓	0.50 ↓			
18	↓	m								
19	ICV	N	Hg 1.0 mg/L Cont	15	5-09-16	H16-123C	0.25 ml			
20	↓ CCV	↓ O	Hg 1.0 mg/L Cal	15	5-09-16	H16-123A	0.20 ml	↓	↓	↓

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10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX = Inorganic 5-2-16 DV354

a

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	158403	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H16-095P H16-090C	100	0.0µg/L	DLJ354	4-28-16	5-05-16	RT
2							100	2.5				
3							200	1.0				
4	200	6	1238320				2000	10%			8-12-16	
5												
6				To vol w/ 0.15% HNO_3		H16-0054	10	1.0	DLJ354	5-02-16	5-09-16	RT
7								0.1				
8								1.0				
9								0.1				
10	2ml H_2SO_4	4	158403	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H16-095P H16-090C	100	2.5µg/L				
11							200	1.0				
12							100	0.2				
13								0.2				
14								0.5				
15							200	1.0				
16							100	2.5				
17								5.0				
18								0.0				
19								2.5				
20							200	1.0				

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

b

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L InterCal	HH6-124A	Hg-10mg/L Cal	15	9-04-16	HH6-064U	1.0ml			
2	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-10-16	HH6-124A				
3	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-17	J2HB02138				
4	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-10-16	HH6-124C				
5	Hg 5701 ICV	E					0.25ml			
6	CCV	F	Hg-1.0mg/L Cal			HH6-124A	0.10			
7	CCV	G					0.10			
8	CCV	H					0.10			
9	CRA	I	Hg-0.1mg/L Cont			HH6-124D	0.20			
10	Std Cal	J	Hg-0.1mg/L Cal			HH6-124B	0.20			
11		K					0.50			
12		L	Hg-1.0mg/L Cal			HH6-124A	0.10			
13		M					0.25			
14		N					0.50			
15		O								
16	SI	P	Hg-0.1mg/L Cal	15	5-10-16	HH6-124B	0.10ml			
17	CRA	Q	Hg-0.1mg/L Cont			HH6-124D	0.10			
18	CRA	R					0.10			
19	ICV	S	Hg-1.0mg/L Cont			HH6-124C	0.25			
20	Aqua Regia	T						20	L	119637

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX = Inorganic 5-3-16 DV 354

a

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To volume 0.15% HNO3		HIL-112P	10	1.0	DW35*	5-03-16	5-10-16	RT
2								0.1				
3								1.0				
4								0.1				
5				5ml Aqua Regia 15ml HNO3		HIL-124T HIL-090C	100	2.5ug/L				
6								1.0				
7								1.0				
8								1.0				
9								0.2				
10								0.2				
11								0.5				
12								1.0				
13								2.5				
14								5.0				
15								0.0				
16								0.1				
17								0.1				
18								0.4				
19								2.5				
20	60	6	123887				80	1:3			5-03-16	

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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b

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 4792 ICV	H16-124AA	Hg 1.0mg/L Cont	15	5-10-16	H16-124C	0.25ml			
2	CCV	BB	Hg 1.0mg/L Cal			H16-124A	0.10			
3	CCV	CC	↓			↓	0.10			
4	CRA	DD	Hg 0.1mg/L Cont			H16-124D	0.20			
5	Std Cal	EE	Hg 0.1mg/L Cal			H16-124B	0.20			
6		FF	↓			↓	0.50			
7		GG	Hg 1.0mg/L Cal			H16-124A	0.10			
8		HH	↓			↓	0.25			
9		II	↓	↓	↓	↓	0.50 ↓			
10	↓ ↓	↓ JJ								
11	Hg 1.0mg/L InterCal	H16-126A	Hg 1.0mg/L Cal	15	9-04-16	H16-064U	1.0ml			
12	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-12-16	H16-126A	↓			
13	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-17	J2HG02138	↓			
14	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont	15	5-12-16	H16-126C	↓			
15	Hg 5760 ICV	E	↓	↓	↓	↓	0.25ml	1	6	119637
16	CCV	F	Hg 1.0mg/L Cal			H16-126A	0.20			
17	CRA	G	Hg 0.1mg/L Cont			H16-126D	0.20			
18	Std Cal	H	Hg 0.1mg/L Cal			H16-126D	0.20			
19		I	↓			↓	0.50			
20	↓ ↓	↓ J	Hg 1.0mg/L Cal	↓	↓	H16-126A	0.20 ↓	↓	↓	↓

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a

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Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	5	6	123883	15ml KMnO4		H16-090C	100	2.5 ug/L	DLJ35	5-03-16	5-10-16	RT
2								1.0				
3								1.0				
4								0.2				
5								0.2				
6								0.5				
7								1.0				
8								2.5				
9								5.0				
10								0.0				
11				To vol w/ 0.15% HNO3		H16-124	10	1.0	DLJ35	5-05-16	5-12-16	RT
12								0.1				
13								1.0				
14								0.1				
15	2ml H_2SO_4	4	156246	3.2ml $K_2S_2O_8$ 6ml KMnO4		H16-095P H16-090C	100	2.5 ug/L				
16							200	1.0				
17							100	0.2				
18								0.2				
19								0.5				
20							250	1.0				

Footnotes

Key (••) – Other Used

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B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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RT = Room Temperature Storage

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Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H16-126K	Hg 1.0mg/L Cal	15	5-12-16	H16-126A	0.25ml	1	6	119637
2	↓	L	↓	15	↓	↓	0.50ml	↓	↓	↓
3	↓	M	—				—			
4	ICV	N	Hg 1.0mg/L Cont	15	5-12-16	H16-126C	0.25ml	↓	↓	↓
5	↓ CCV	↓ O	Hg 1.0mg/L Cal	15	5-12-16	H16-126D	0.20ml	↓	↓	↓
6	Stannous Chloride	H16-127A	SnCl2	6	8-12-16	128701 #3	200.05g	—		
7	Stannous Chloride	B	SnCl2	6	8-12-16	128701 #4	200.04g			
8	Permanganate	C	KMnO4	6	11-20-16	121730 #1	100.00g			
9	Permanganate	↓ D	KMnO4	6	11-20-16	121730 #1	100.01g			
10	Hg 1.0mg/L Inter Cal	H16-130A	Hg 10mg/L Cal	15	9-04-16	H16-0644	1.0ml			
11	Hg 0.1mg/L Inter Cal	↓ 130D	Hg 1.0mg/L Cal	15	5-16-16	H16-130A	1.0ml			
12	Hg 1.0mg/L Inter Cal	H16-131A	Hg 10mg/L Cal	15	9-04-16	H16-0644	1.0 ml			
13	0.1mg/L Inter Cal	B	1.0mg/L Cal	15	5-17-16	H16-131A				
14	1.0mg/L Inter Cont	C	10mg/L Cont	xx	1-27-17	J2HG02138				
15	↓ 0.1mg/L Inter Cont	D	↓ 1.0mg/L Cont	15	5-17-16	H16-131C	↓			
16	Hg 5700 ICV	E	↓			↓	0.25ml	1	6	119637
17	CCV	F	Hg 1.0mg/L Cal			H16-131A	0.20			
18	CRA	G	Hg 0.1mg/L Cont			H16-131D	0.20			
19	Std Cal	H	Hg 0.1mg/L Cal			H16-131B	0.20			
20	↓	↓ I	↓	↓	↓	↓	0.50 ↓	↓	↓	↓

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

xx = Inorganic 5-10-16 DV 354

a

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	156246	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$	208	H16-095P H16-090C	100	2.5ug/L	DW354	5-05-16	5-12-16	RT
2								5.0				
3								0.0				
4								2.5				
5							200	1.0				
6	200	6	123882				2000	10%	DW354	5-06-16	8-12-16	RT
7	200	6	123882				2000	10%			8-12-16	
8								5%			11-06-16	
9								5%			11-06-16	
10				To vol w/ 0.15% HNO_3	D	H16-112P	10	1.0	DW354	5-09-16	5-16-16	RT
11							10	0.1				
12				To vol w/ 0.15% HNO_3	D	H16-112P	10	1.0	DW354	5-10-16	5-17-16	RT
13								0.1				
14								1.0				
15								0.1				
16	2ml H_2SO_4	4	156246	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H16-095P H16-090C	100	2.5ug/L				
17							200	1.0				
18							100	0.2				
19								0.2				
20								0.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

eurofins | Lancaster Laboratories Environmental	Document Title: Standard/Reagent Preparation Log		
	Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
	Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 Std Cal	H16-131J	Hg-1.0mg/L Cal	15	5-17-16	H16-131A	0.20ml	1	16	1191637
2		K					0.25			
3		L					0.50			
4		M								
5	ICV	N	Hg-1.0mg/L Cont	15	5-17-16	H16-131C	0.25ml			
6	CCV	O	Hg-1.0mg/L Cal			H16-131A	0.20			
7	Hg-5701 ICV	P	Hg-1.0mg/L Cont			H16-131C	0.25			
8	CCV	Q	Hg-1.0mg/L Cal			H16-131A	0.10			
9	CCV	R					0.10			
10	CCV	S					0.10			
11	CRA	T	Hg-0.1mg/L Cont			H16-131D	0.20			
12	Std Cal	U	Hg-0.1mg/L Cal			H16-131D	0.20			
13		V					0.50			
14		W	Hg-1.0mg/L Cal			H16-131A	0.10			
15		X					0.25			
16		Y					0.50			
17		Z								
18	ICV	AA	Hg-1.0mg/L Cont	15	5-17-16	H16-131C	0.25ml			
19	Aqua Regia	BB						15	16	1191637
20	Hg-1.0mg/L Inter Cal	H16-1334	Hg-10mg/L Cal	15	9-04-16	H16-064U	1.0ml			

Key – Manufacturer (M•)

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4 – Fisher Scientific
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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

a

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml HCl	4	156246	3.2ml K2Cr2O7 1ml KMnO4		HL6-0951 HL6-0910C	200	1.0ug/L	DU354	5-10-16	5-17-16	RT
2							100	2.5				
3								5.0				
4								0.0				
5							↓	2.5				
6	↓	↓	↓	↓	↓	↓	200	1.0				
7				5ml Aqua Regia 15ml KMnO4		HL6-1318D HL6-0910C	100	2.5				
8								1.0				
9								1.0				
10								1.0				
11								0.2				
12								0.2				
13								0.5				
14								1.0				
15								2.5				
16								5.0				
17								0.0				
18				↓	↓	↓	↓	25			↓	
19	45	6	123882				60	1:3	↓	↓	5-16-16	↓
20				To vol w/ 0.15% HNO3		HL6-1128	10	1.0	DU354	5-12-16	5-19-16	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 0.1mg/L InterCal	H16-133D	Hg 1.0mg/L Cal	15	5-19-16	H16-133A	1.0ml			
2	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-17	J2HG02138	↓			
3	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont	15	5-19-16	H16-133C	↓			
4	Hg 5700 ICV	E	↓	↓	↓	↓	5-13-16 DV354 ③ 0.25ml	1	6	119637
5	CCV	F	Hg 1.0mg/L Cal			H16-133A	0.20ml			
6	CRA	G	Hg 0.1mg/L Cont			H16-133D	0.20			
7	Std Cal	H	Hg 0.1mg/L Cal			H16-133B	0.20			
8	↓	I	↓			↓	0.50			
9		J	Hg 1.0mg/L Cal			H16-133A	0.20			
10		K	↓			↓	0.25			
11	↓	L	↓	↓	↓	↓	0.50 ↓			
12		m								
13	ICV	N	Hg 1.0mg/L Cont	15	5-19-16	H16-133C	0.25ml			
14	CCV	↓ O	Hg 1.0mg/L Cal	15	5-19-16	H16-133A	0.20ml	↓	↓	↓
15	Stannous Chloride	H16-134A	SnCl2	6	8-12-16	128701 #4	200.02g			
16	Stannous Chloride	↓ 134B	SnCl2	↓	↓	↓	200.03g			
17	Hydroxylamine ①	H16-134C	NaCl		7-8-20	123071 #3	240.02g			
18	Hydroxylamine	↓	NH2OH·HCl	↓	4-18-21	137319 #3	240.08g			
19	Hg 1.0mg/L InterCal	H16-137A	Hg 10mg/L Cal	15	9-04-16	H16-01.44	1.0ml			
20	Hg 0.1mg/L InterCal	↓ 137D	Hg 1.0mg/L Cal	15	5-23-16	H16-137A	1.0ml			

① 5-13-16 DV354

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX = Inorganic 5-12-16 DV354

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818 | Revision: 2 | Historical Reference: Form 1105

Effective date: Feb 20, 2015 | Status: Effective

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To volume 0.15% HNO3		HI16-112P	10	0.1	DW354	5-12-16	5-19-16	RT
2				↓	↓	↓	↓	1.0	↓	↓	↓	↓
3				↓	↓	↓	↓	0.1	↓	↓	↓	↓
4	2ml H2SO4	4	151246	3.2ml 172308 1ml KMnO4	↓	HI16-095P HI16-090D	100	2.5 ug/L	↓	↓	↓	↓
5	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	2.5	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	200	1.0 ↓	↓	↓	↓	↓
15	200	6	123882				2000	10%	DW354	5-13-16	8-12-16	RT
16	200	6	↓				↓	10%	↓	↓	↓	↓
17								12%	↓	↓	11-13-16	↓
18							↓	12%	↓	↓	↓	↓
19				To volume 0.15% HNO3	↓	HI16-112P	10	1.0	DW354	5-16-16	5-23-16	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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b

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L InterCal	H16-138A	Hg-10mg/L Cal	15	9-04-16	H16-0644	1.0 ml			
2	0.1mg/L InterCal	B	1.0 mg/L Cal	15	5-24-16	H16-1389	↓			
3	1.0mg/L InterCont	C	10mg/L Cont	XX	1-22-17	J2HG02138				
4	↓0.1mg/L InterCont	D	↓ 1.0mg/L Cont	15	5-24-16	H16-138C	↓			
5	Hg 5700 ICV	E	↓			↓	0.25ml	1	6	1196137
6	CCV	F	Hg-1.0mg/L Cal			H16-138A	0.20			
7	CRA	G	Hg-0.1mg/L Cont			H16-138D	0.20			
8	Std Cal	H	Hg-0.1mg/L Cal			H16-138B	0.20			
9		I	↓			↓	0.50			
10		J	Hg-1.0mg/L CCV			H16-138A	0.20			
11		K	↓			↓	0.25			
12		L	↓	↓	↓	↓	0.50			
13	↓	M								
14	ICV	N	Hg-1.0mg/L Cont	15	5-24-16	H16-138C	0.25ml			
15	↓ CCV	O	Hg-1.0mg/L Cal			H16-138A	0.20	↓	↓	↓
16	Hg 5701 ICV	P	Hg-1.0mg/L Cont			H16-138C	0.25			
17	CCV	Q	Hg-1.0mg/L Cal			H16-138A	0.10			
18	CCV	R	↓			↓	0.10			
19	CCV	S	↓			↓	0.10			
20	↓ CRA	↓ T	Hg-0.1mg/L Cont	↓	↓	H16-138D	0.20 ↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX=Inorganic 5-17-16 DV354

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a

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Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				Tevalw/0.15%	HNO3	H16-112F	10	1.0	DL 354	5-17-16	5-24-16	RT
2								0.1				
3								1.0				
4								0.1				
5	2ml H_2SO_4	4	158403	3.2ml KA2308 1ml Ammonia		H16-095 H16-090D	100	2.5 µg/L				
6							200	1.0				
7							100	0.2				
8								0.2				
9								0.5				
10							200	1.0				
11							100	2.5				
12								5.0				
13								0.0				
14								2.5				
15							200	1.0				
16				5ml Aqua Regia 15ml Ammonia		H16-138B H16-090B	100	2.5				
17								1.0				
18								1.0				
19								1.0				
20								0.2				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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b

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Document Title: Standard/Reagent Preparation Log		
Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 Std Cal	H16-128U	Hg-0.1mg/L Cal	15	5-24-16	H16-138B	0.20ml			
2	↓	↓	↓	↓	↓	↓	0.50			
3		W	Hg-1.0mg/L Cal			H16-138A	0.10			
4		X	↓			↓	0.25			
5		Y		↓	↓		.50			
6	↓	Z								
7	ICV	AA	Hg-1.0mg/L Cont	15	5-24-16	H16-138C	0.25ml			
8	Aqua Regia	BB						15	L	119637
9	5701-Blank	H16-139A						12.5	L	119637
10	Hg-1.0mg/L Inter Cal	H16-141A	Hg-10mg/L Cal	15	9-04-16	H16-064U	1.0ml			
11	0.1mg/L Inter Cal	B	1.0mg/L Cal	15	5-27-16	H16-141A				
12	1.0mg/L Inter Cont	C	10mg/L Cont	XX	1-22-17	JAHG02138				
13	0.1mg/L Inter Cont	D	1.0mg/L Cont	15	5-27-16	H16-141C	↓			
14	Hg-5700 ICV	E	↓	↓	↓	↓	0.25ml	1	L	119637
15	CCV	F	Hg-1.0mg/L Cal			H16-141A	0.20			
16	CRA	G	Hg-0.1mg/L Cont			H16-141D	0.20			
17	Std Cal	H	Hg-0.1mg/L Cal			H16-141B	0.20			
18	↓	I	↓			↓	0.50			
19		J	Hg-1.0mg/L Cal			H16-141A	0.20			
20	↓	K	↓	↓	↓	↓	0.25	↓	↓	↓

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
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13 – VWR Scientific
14 – EMD
15 – Prepared in house
XX – Other (footnote Manuf.)

XX = Inorganic 5-26-16 DK

a

eurofins | Lancaster Laboratories Environmental

Document Title: Standard/Reagent Preparation Log

Eurofins Document Reference: 1-P-QM-FOR-9009818	Revision: 2	Historical Reference: Form 1105
Effective date: Feb 20, 2015	Status: Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua Regia 15ml Kmno4		H16-138 B5 H16-090B	100	0.2 ug/L	DU354	5-17-16	5-24-16	RT
2								0.5				
3								1.0				
4								2.5				
5								5.0				
6								0.0				
7				↓	↓	↓	↓	2.5 ↓			↓	
8	45	6	1238832				60	1:3	↓	↓	5-17-16	↓
9	37.5	6	1238832	60ml Hydrox 150ml Kmno4		H16 134C H16-127C	1000	0.0	DU354	5-18-16	11-06-16	RT
10				To vol w/ 0.15% HNO3		H16-112P	10	1.0	DU354	5-20-16	5-27-16	RT
11								0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	158402	3.2ml $K_2S_2O_8$ 1.6ml Kmno4		H16-095 C H16-098D	100	2.5 ug/L				
15							200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

5W7B-DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8352778DL

Data file: /chem2/HP19094.i/16may06b.b/hy06s43.d Injection date and time: **06-MAY-2016 22:36**
Data file Sample Info. Line: 5W7B-DL;8352778DL;1;0;;RAE59;DRAPERJK;;hy06b41; Instrument ID: **HP19094.i** Batch: **H161273AA**
Date, time and analyst ID of latest file update: 07-May-2016 11:03 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may06b.b/hy06b41.d**

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 06-MAY-2016 20:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may06b.b/hy06c05.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275 (-0.018)	441	65	116476 (21)	50.00	
63) Fluorobenzene	7.787 (0.000)	1017	96	2179145 (2)	10.00	
97) Chlorobenzene-d5	11.250 (-0.006)	1585	117	1523909 (-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127 (0.000)	1893	152	669916 (-18)	10.00	

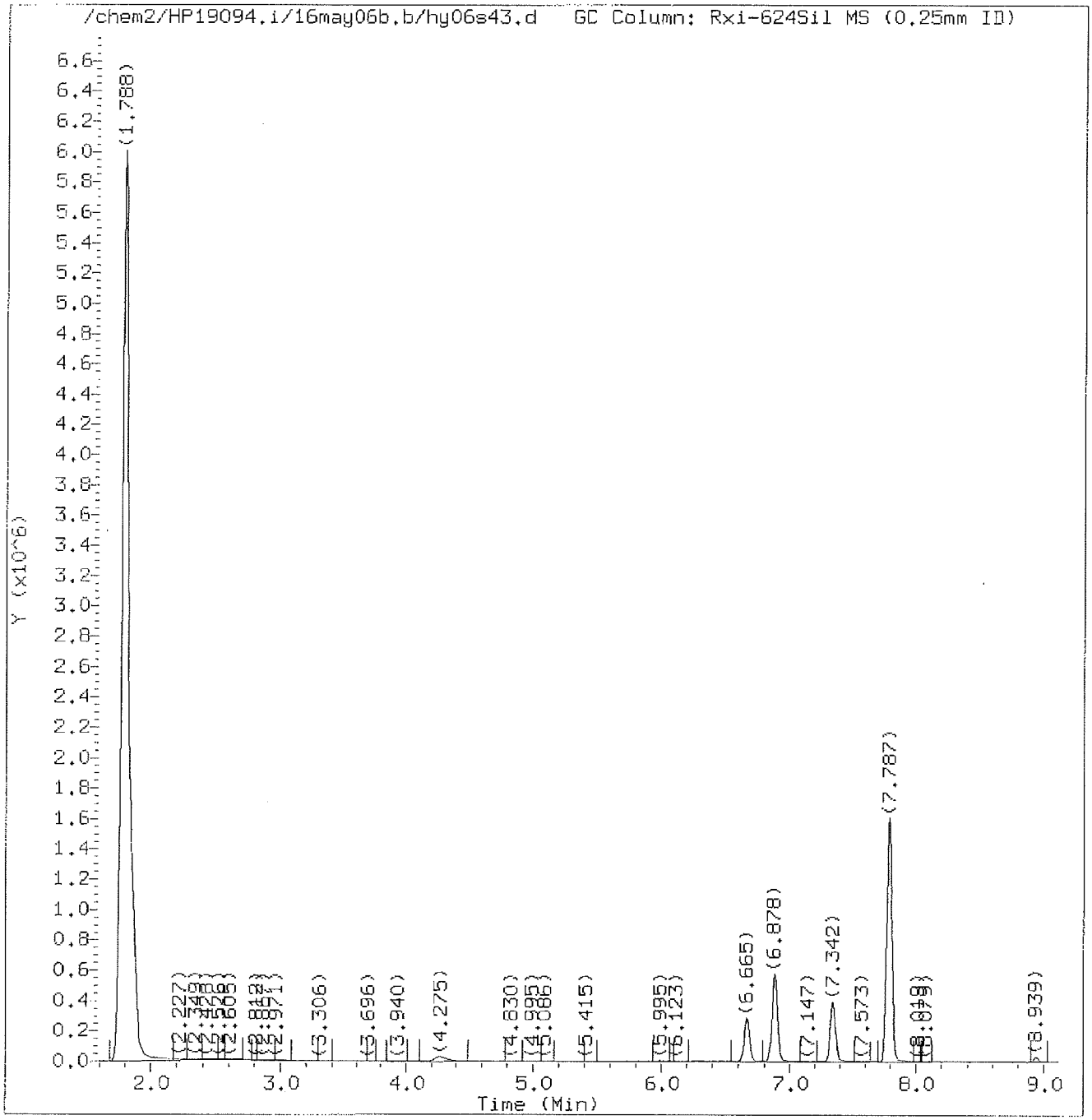
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.878 (0.001)	113	527475	10.272	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348 (0.001)	102	86554	10.177	102%		74 - 113
82) Toluene-d8	(3)	9.799 (0.000)	98	2203877	10.152	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249 (0.000)	95	652320	9.322	93%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					3	10
5) Vinyl Chloride	(2)			Not Detected					1	10
11) Ethyl ether	(2)			Not Detected					4	120
15) 1,1-Dichloroethene	(2)			Not Detected					4	10
14) Acetone	(1)			Not Detected					30	100
23) Methylene Chloride	(2)			Not Detected					2	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					8	10
39) cis-1,2-Dichloroethene	(2)			Not Detected					1	10
38) 2-Butanone	(1)			Not Detected					10	100
49) Chloroform	(2)	6.665 (-0.000)	83	348562	3.391	33.91			1	10
59) 1,2-Dichloroethane	(2)			Not Detected					1	10
67) Trichloroethene	(2)			Not Detected					2	10
83) Toluene	(3)			Not Detected					1	10
101) m+p-Xylene	(3)			Not Detected					1	5
104) o-Xylene	(3)			Not Detected					1	5
105) Xylene (Total)	(3)			Not Detected					2	30

Total number of targets = 16

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 11:03. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 09:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

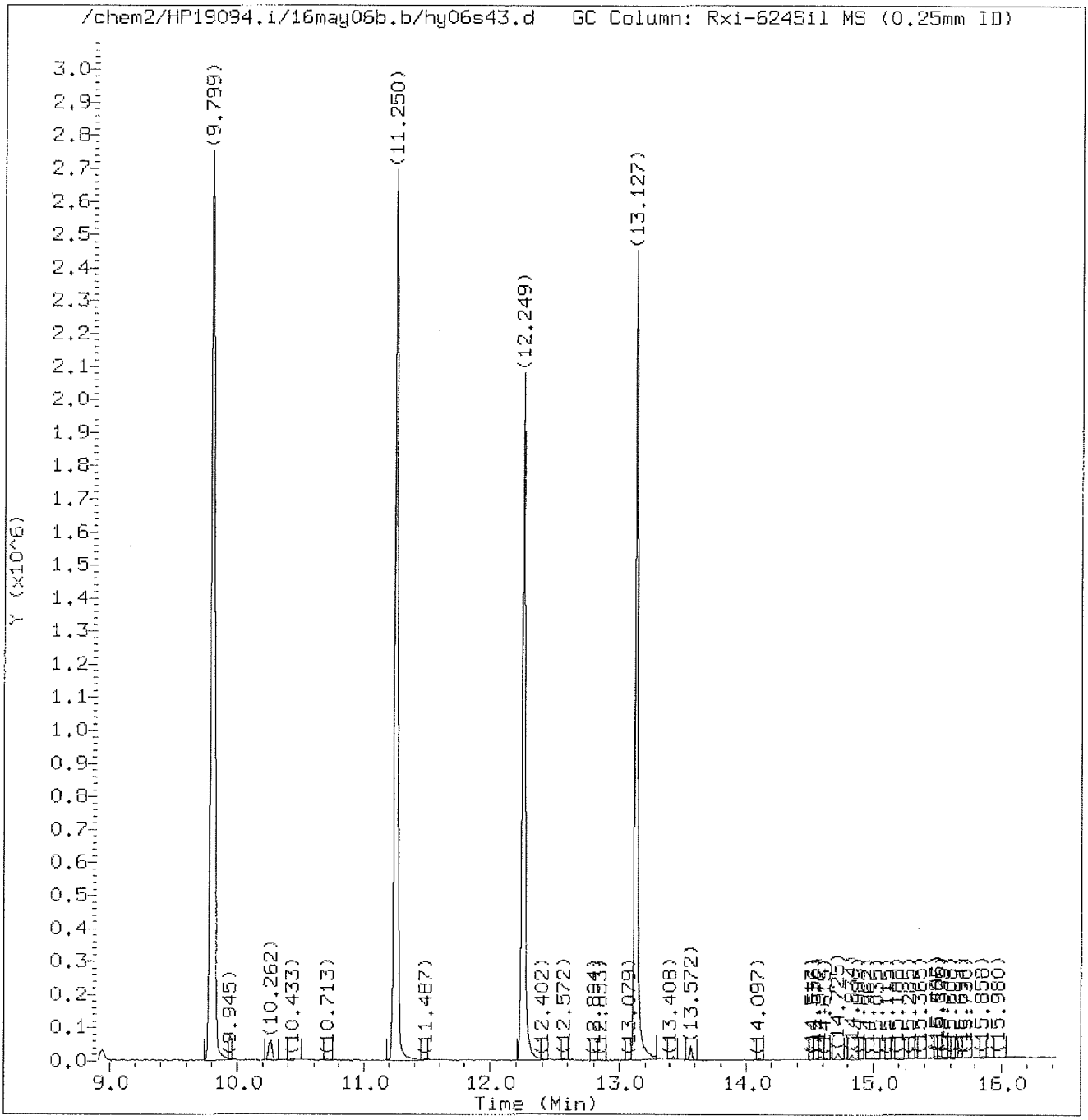
Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s43.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 22:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 07-May-2016 11:03 kel01973

Sample Name: 5W7B-DL Lab Sample ID: 8352778DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 11:03.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s43.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 22:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 07-May-2016 11:03 kel01973

Sample Name: 5W7B-DL Lab Sample ID: 8352778DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 11:03.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may06b.b/hy06s43.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 22:36 Analyst ID: KAS02648

Method used: /chem2/HP19094.i/16may06b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 07-May-2016 11:03 kel01973

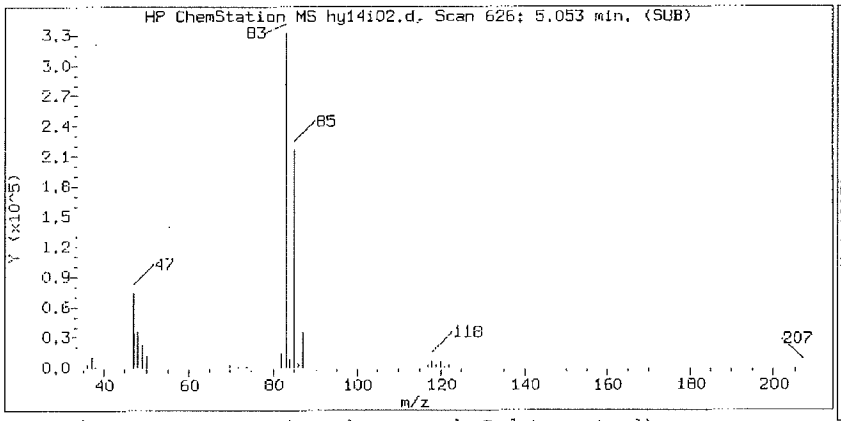
Sample Name: 5W7B-DL Lab Sample ID: 8352778DL

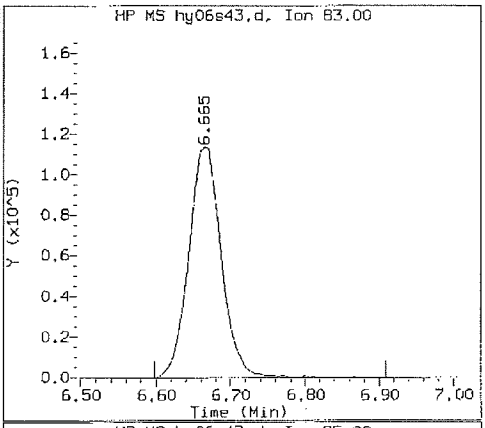
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26) *t-Butyl Alcohol-d10	(1)	4.275	65	116476	50.000
49) Chloroform	(2)	6.665	83	348562	3.391
50) $Dibromofluoromethane	(2)	6.878	113	527475	10.272
57) $1,2-Dichloroethane-d4	(2)	7.348	102	86554	10.177
63) *Fluorobenzene	(2)	7.787	96	2179145	10.000
82) $Toluene-d8	(3)	9.799	98	2203877	10.152
97) *Chlorobenzene-d5	(3)	11.250	117	1523909	10.000
111) $4-Bromofluorobenzene	(3)	12.249	95	652320	9.322
133) *1,4-Dichlorobenzene-d4	(4)	13.127	152	669916	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

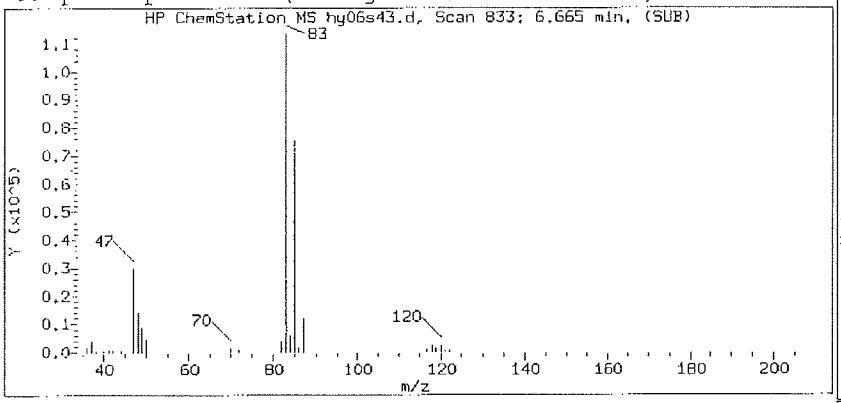
Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 11:03.
Target 3.5 esignature user ID: kel01973

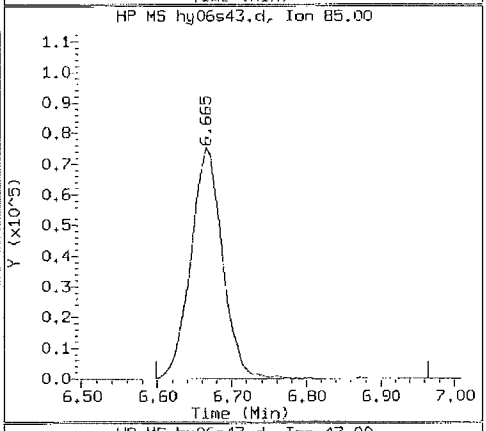
Reference Standard Spectrum for Chloroform



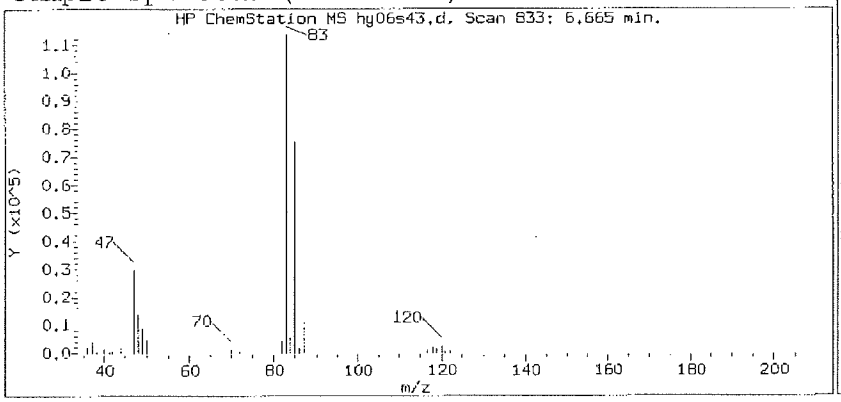


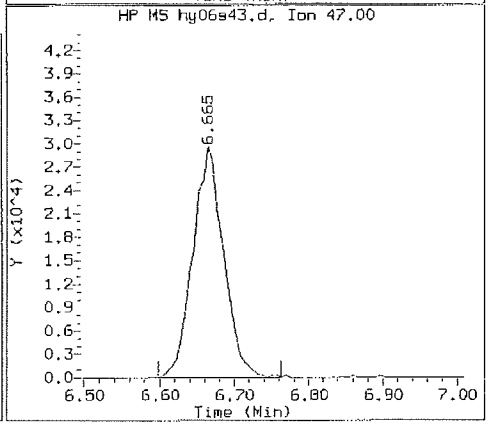
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may06b.b/hy06s43.d Instrument ID: HP19094.i
Injection date and time: 06-MAY-2016 22:36 Analyst ID: KAS02648

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Calibration date and time: 06-MAY-2016 20:55
Date, time and analyst ID of latest file update: 07-May-2016 11:03 kel01973

Sample Name: 5W7B-DL Lab Sample ID: 8352778DL

Compound Number : 49
Compound Name : Chloroform
Scan Number : 833
Retention Time (minutes): 6.665
Relative Retention Time :-0.00000
Quant Ion : 83.00
Area (flag) : 348562
On-Column Amount (ng) : 3.3914

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 11:03.
Target 3.5 esignature user ID: kel01973

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 04/26/16-04/27/16

SDG# RAE61

GROUP	SAMPLE NUMBERS
1655225	8354933-8354948

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: **Date: 05/27/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAE61
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8354933	16C1	04/27/2016 13:25	04/28/2016 10:10
8354934	16MW8	04/26/2016 13:55	04/28/2016 10:10
8354935	16MW9	04/27/2016 12:15	04/28/2016 10:10
8354936	16WC1A	04/27/2016 10:50	04/28/2016 10:10
8354937	16WC1A MS	04/27/2016 10:50	04/28/2016 10:10
8354938	16WC1A MSD	04/27/2016 10:50	04/28/2016 10:10
8354939	16WDUP	04/27/2016 11:10	04/28/2016 10:10
8354940	16WC1B	04/27/2016 09:50	04/28/2016 10:10
8354941	16-2	04/26/2016 12:50	04/28/2016 10:10
8354942	16-3	04/26/2016 14:50	04/28/2016 10:10
8354943	16-5	04/26/2016 10:45	04/28/2016 10:10
8354944	16WC2B	04/26/2016 11:55	04/28/2016 10:10
8354945	16SPRING	04/26/2016 11:00	04/28/2016 10:10
8354946	Trip Blank_1	04/26/2016 00:00	04/28/2016 10:10
8354947	Trip Blank_2	04/26/2016 00:00	04/28/2016 10:10
8354948	Trip Blank_3	04/26/2016 00:00	04/28/2016 10:10

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Sample pH Log

SDG: RAE61

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8354933	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354933	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354933	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354934	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354934	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354935	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354935	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354935	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354936	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354936	038C	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354937	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354937	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354938	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354938	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354938	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354939	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354939	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354939	038C	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354940	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354940	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354941	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354942	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354943	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354944	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354945	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354946	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354947	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8354948	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C
11997 VOCs- 5ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

10461 SVOAs by 8270D in Water

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 13, 2016

Project: RAAP - Radford, VA - HWMU16

Submittal Date: 04/28/2016
Group Number: 1655225
SDG: RAE61
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
16C1 Grab Groundwater	8354933
16MW8 Grab Groundwater	8354934
16MW9 Grab Groundwater	8354935
16WC1A Grab Groundwater	8354936
16WC1A MS Grab Groundwater	8354937
16WC1A MSD Grab Groundwater	8354938
16WDUP Grab Groundwater	8354939
16WC1B Grab Groundwater	8354940
16-2 Grab Groundwater	8354941
16-3 Grab Groundwater	8354942
16-5 Grab Groundwater	8354943
16WC2B Grab Groundwater	8354944
16SPRING Grab Groundwater	8354945
Trip Blank_1 Water	8354946
Trip Blank_2 Water	8354947
Trip Blank_3 Water	8354948

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU16
LL Group #: 1655225

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 8354935, 8354940, 8354946, 8354947, 8354948

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 8354933, 8354934, 8354936, 8354939

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Tetrahydrofuran.

Batch #: H161301AA (Sample number(s): 8354933-8354948 UNSPK: 8354936)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: 1,2-Dibromo-3-chloropropane

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 1,4-Dioxane, 1,2-Dibromo-3-chloropropane, Ethyl ether

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 8354937, MS

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 8354933, 8354934, 8354935, 8354936, 8354939, 8354940

The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.
The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Batch #: 16124WAA026 (Sample number(s): 8354933-8354940 UNSPK: 8354936)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Aramite, Methapyrilene, a,a-Dimethylphenethylamine, Disulfoton

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Naphthoquinone

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 1,4-Naphthoquinone, Aramite, Methapyrilene, a,a-Dimethylphenethylamine, Disulfoton

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: 3,3'-Dimethylbenzidine, 1-Naphthylamine, o-Toluidine

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 8354940

Batch #: 16124WAZ026 (Sample number(s): 8354941-8354945 UNSPK: 24WZUS)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 8354944

Sample Description: 16C1 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354933
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 13:25 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6101 SDG#: RAE61-01

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	0.3	J	0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	4.9		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	6.0		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	0.3	J	0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	7.8	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	33	J	11	130	10
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	1.8		0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16C1 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354933
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 13:25 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6101 SDG#: RAE61-01

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.		10	100	1
11996	Styrene	100-42-5	N.D.		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	0.3	J	0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	13	J	2.0	25	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	0.2	J	0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	0.3	J	0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.		3.3	10	1
11996	Vinyl Chloride	75-01-4	N.D.		0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Tetrahydrofuran.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.		2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.		0.5	1	1
10461	Aniline	62-53-3	N.D.		0.5	1	1
10461	Anthracene	120-12-7	N.D.		0.1	0.5	1
10461	Aramite	140-57-8	N.D.		5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
10461	4-Chloroaniline	106-47-8	N.D.		2	4	1
10461	Chlorobenzilate	510-15-6	N.D.		3	10	1

*=This limit was used in the evaluation of the final result

Sample Description: 16C1 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354933
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 13:25 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6101 SDG#: RAE61-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16C1 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354933
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 13:25 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6101 SDG#: RAE61-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16C1 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354933
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 13:25 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6101 SDG#: RAE61-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l	ug/l	ug/l	
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 16:41	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 17:01	Kerri E Legerlotz	10
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 18:23	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 16:41	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161301AA	05/09/2016 17:01	Kerri E Legerlotz	10
01163	GC/MS VOA Water Prep	SW-846 5030C	3	L161302AA	05/09/2016 18:23	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 00:45	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW8 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354934
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 13:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6102 SDG#: RAE61-02

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	N.D.		0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	N.D.		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	0.3	J	0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	0.6	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	12	J	1.1	13	1
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW8 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354934
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 13:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6102 SDG#: RAE61-02

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.		10	100	1
11996	Styrene	100-42-5	N.D.		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	N.D.		0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	2.2	J	2.0	25	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.		0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.		3.3	10	1
11996	Vinyl Chloride	75-01-4	N.D.		0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Tetrahydrofuran.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.		2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.		0.5	1	1
10461	Aniline	62-53-3	N.D.		0.5	1	1
10461	Anthracene	120-12-7	N.D.		0.1	0.5	1
10461	Aramite	140-57-8	N.D.		5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
10461	4-Chloroaniline	106-47-8	N.D.		2	4	1
10461	Chlorobenzilate	510-15-6	N.D.		3	10	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW8 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354934
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 13:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6102 SDG#: RAE61-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l	ug/l	ug/l	
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW8 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354934
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 13:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6102 SDG#: RAE61-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW8 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354934
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 13:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6102 SDG#: RAE61-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 14:18	Kerri E Legerlotz	1
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 18:46	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 14:18	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L161302AA	05/09/2016 18:46	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 01:13	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354935
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 12:15 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6103 SDG#: RAE61-03

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	0.4	J	0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	3.3		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	9.1		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	0.3	J	0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	0.8	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	70	J	11	130	10
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354935
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 12:15 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6103 SDG#: RAE61-03

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.		10	100	1
11996	Styrene	100-42-5	N.D.		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	N.D.		0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	N.D.		2.0	25	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.		0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.		3.3	10	1
11996	Vinyl Chloride	75-01-4	0.2	J	0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.		2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.		0.5	1	1
10461	Aniline	62-53-3	N.D.		0.5	1	1
10461	Anthracene	120-12-7	N.D.		0.1	0.5	1
10461	Aramite	140-57-8	N.D.		5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
10461	4-Chloroaniline	106-47-8	N.D.		2	4	1
10461	Chlorobenzilate	510-15-6	N.D.		3	10	1
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.		0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.		0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		0.5	1	1

Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354935
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 12:15 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6103 SDG#: RAE61-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354935
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 12:15 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6103 SDG#: RAE61-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354935
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 12:15 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6103 SDG#: RAE61-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor

performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 17:21	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 17:41	Kerri E Legerlotz	10
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 16:56	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L161302AA	05/09/2016 16:56	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161301AA	05/09/2016 17:21	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	H161301AA	05/09/2016 17:41	Kerri E Legerlotz	10
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 01:41	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354936
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04BKG

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	0.4	J	0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	2.4		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	6.0		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	4.9	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	28	J	11	130	10
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	0.4	J	0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354936
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04BKG

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.		10	100	1
11996	Styrene	100-42-5	N.D.		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	0.3	J	0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	4.6	J	2.0	25	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	0.2	J	0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.		3.3	10	1
11996	Vinyl Chloride	75-01-4	0.2	J	0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Tetrahydrofuran.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.		2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.		0.5	1	1
10461	Aniline	62-53-3	N.D.		0.5	1	1
10461	Anthracene	120-12-7	N.D.		0.1	0.5	1
10461	Aramite	140-57-8	N.D.		5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354936
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	4-Chloroaniline	106-47-8	N.D.	2	4	1
10461	Chlorobenzilate	510-15-6	N.D.	3	10	1
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354936
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l	ug/l	ug/l	
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354936
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l	ug/l	ug/l	
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 12:17	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 18:02	Kerri E Legerlotz	10
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 17:18	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 12:17	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L161302AA	05/09/2016 17:18	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	H161301AA	05/09/2016 18:02	Kerri E Legerlotz	10
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/06/2016 23:20	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MS Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354937
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	41		3.0	10	1
11996	Acetonitrile	75-05-8	48	J	32	100	1
11996	Acrolein	107-02-8	42		5.0	25	1
11996	Acrylonitrile	107-13-1	29		1.0	10	1
11996	Allyl Chloride	107-05-1	4.9	J	0.8	10	1
11996	Benzene	71-43-2	5.5		0.1	1.0	1
11996	Bromodichloromethane	75-27-4	5.6		0.1	1.0	1
11996	Bromoform	75-25-2	4.8		0.1	1.0	1
11996	Bromomethane	74-83-9	5.9		0.5	1.0	1
11996	2-Butanone	78-93-3	44		1.0	10	1
11996	Carbon Disulfide	75-15-0	4.7	J	0.4	10	1
11996	Carbon Tetrachloride	56-23-5	5.3		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	5.2	J	0.5	10	1
11996	Chloroethane	75-00-3	7.8		0.1	1.0	1
11996	Chloroform	67-66-3	5.5		0.1	1.0	1
11996	Chloromethane	74-87-3	5.4		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	6.7		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	5.0		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	5.3		0.1	1.0	1
11996	Dibromomethane	74-95-3	5.7		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	30		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	4.7		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	4.8		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	4.8		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.4		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	11		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.6		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.4		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.4		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	5.4		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	5.0		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	4.7		0.1	1.0	1
11996	Dimethyl ether	115-10-6	9.3	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	170	J	45	200	1
11996	Ethyl ether	60-29-7	39	E	1.1	13	1
11996	Ethyl Methacrylate	97-63-2	4.6	J	0.8	10	1
11996	Ethylbenzene	100-41-4	4.8		0.1	1.0	1
11996	Freon 113	76-13-1	5.2		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	4.8		0.1	1.0	1
11996	Hexachloroethane	67-72-1	4.7	J	0.1	10	1
11996	2-Hexanone	591-78-6	31		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	140	J	10	200	1
11996	Methacrylonitrile	126-98-7	49	J	9.8	100	1
11996	Methyl Iodide	74-88-4	5.2	J	0.6	10	1
11996	Methyl Methacrylate	80-62-6	5.9	J	3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	30		1.0	10	1
11996	Methylene Chloride	75-09-2	5.8		0.2	1.0	1
11996	Naphthalene	91-20-3	4.0		0.1	1.0	1
11996	Pentachloroethane	76-01-7	4.8	J	0.8	10	1
11997	2-Propanol	67-63-0	140		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MS Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354937
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	45	J	10	100	1
11996	Styrene	100-42-5	5.0		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	5.1		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	4.6		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	5.2		0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	33		2.0	25	1
11996	Toluene	108-88-3	4.7		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	4.3		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.3		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	5.1		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.7		0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	5.6		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	5.0		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	13		3.3	10	1
11996	Vinyl Chloride	75-01-4	5.7		0.2	1.0	1
11996	Xylene (Total)	1330-20-7	15		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	52		0.1	0.5	1
10461	Acenaphthylene	208-96-8	55		0.1	0.5	1
10461	Acetophenone	98-86-2	48		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	65		2	5	1
10461	4-Aminobiphenyl	92-67-1	50		0.5	1	1
10461	Aniline	62-53-3	38		0.5	1	1
10461	Anthracene	120-12-7	52		0.1	0.5	1
10461	Aramite	140-57-8	110	E	5	15	1
10461	Benzo(a)anthracene	56-55-3	58		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	53		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	55		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	45		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	54		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	49		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	54		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	54		2	5	1
10461	Di-n-butylphthalate	84-74-2	52		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	51		0.5	1	1
10461	4-Chloroaniline	106-47-8	43		2	4	1
10461	Chlorobenzilate	510-15-6	55		3	10	1
10461	bis(2-Chloroethoxy)methane	111-91-1	52		0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	49		0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	47		0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10461	2-Chloronaphthalene	91-58-7	48		0.4	1	1
10461	2-Chlorophenol	95-57-8	47		0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	53		0.5	1	1
10461	Chrysene	218-01-9	58		0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MS Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354937
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**		**ug/l**	**ug/l**	
10461	Diallate trans/cis	2303-16-4	48		1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	47		0.1	0.5	1
10461	Dibenzofuran	132-64-9	52		0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	52		2	5	1
10461	2,4-Dichlorophenol	120-83-2	46		0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	48		0.5	1	1
10461	Diethylphthalate	84-66-2	52		2	5	1
10461	Dimethoate	60-51-5	39		3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	59		0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	54		0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	56	J	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	59	E	5	50	1
10461	2,4-Dimethylphenol	105-67-9	44		0.5	1	1
10461	Dimethylphthalate	131-11-3	52		2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	48		5	15	1
10461	1,3-Dinitrobenzene	99-65-0	55		2	5	1
10461	2,4-Dinitrophenol	51-28-5	76		10	30	1
10461	2,4-Dinitrotoluene	121-14-2	54		1	5	1
10461	2,6-Dinitrotoluene	606-20-2	56		0.5	1	1
10461	Disulfoton	298-04-4	140	E	25	50	1
10461	Ethyl methanesulfonate	62-50-0	51		0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	54		2	5	1
10461	Famphur	52-85-7	N.D.		25	50	1
10461	Fluoranthene	206-44-0	55		0.1	0.5	1
10461	Fluorene	86-73-7	52		0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	53		0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	67		5	15	1
10461	Hexachloroethane	67-72-1	42		1	5	1
10461	Hexachloropropene	1888-71-7	41		2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	46		0.1	0.5	1
10461	Isodrin	465-73-6	56		0.5	1	1
10461	Isophorone	78-59-1	52		0.5	1	1
10461	Isosafrole	120-58-1	56		2	5	1
10461	Kepone	143-50-0	36	J	25	50	1
10461	Methapyrilene	91-80-5	470	E	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
10461	Methyl methanesulfonate	66-27-3	44		1	5	1
10461	Methyl parathion	298-00-0	40		1	5	1
10461	3-Methylcholanthrene	56-49-5	67		0.5	1	1
10461	2-Methylnaphthalene	91-57-6	49		0.1	0.5	1
10461	2-Methylphenol	95-48-7	49		0.5	1	1
10461	4-Methylphenol	106-44-5	48		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10461	1,4-Naphthoquinone	130-15-4	400	E	25	60	1
10461	1-Naphthylamine	134-32-7	69		5	15	1
10461	2-Naphthylamine	91-59-8	66		5	15	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MS Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354937
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l		ug/l	ug/l	
10461	2-Nitroaniline	88-74-4	54		0.5	1	1
10461	3-Nitroaniline	99-09-2	51		0.5	1	1
10461	4-Nitroaniline	100-01-6	50		0.5	1	1
10461	Nitrobenzene	98-95-3	50		0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	53		0.5	1	1
10461	2-Nitrophenol	88-75-5	53		0.5	1	1
10461	4-Nitrophenol	100-02-7	37		10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	540	E	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	51		0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	39		2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	48		2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	49		0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	50		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10461	N-Nitrosomethylethylamine	10595-95-6	49		2	5	1
10461	N-Nitrosomorpholine	59-89-2	48		2	5	1
10461	N-Nitrosopiperidine	100-75-4	50		0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	51		0.5	1	1
10461	Di-n-octylphthalate	117-84-0	56		2	5	1
10461	Parathion	56-38-2	57		2	5	1
10461	Pentachlorobenzene	608-93-5	53		0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	52		2	5	1
10461	Pentachlorophenol	87-86-5	47		1	5	1
10461	Phenacetin	62-44-2	53		0.5	1	1
10461	Phenanthrene	85-01-8	50		0.1	0.5	1
10461	Phenol	108-95-2	36		0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.		75	300	1
10461	Phorate	298-02-2	53		0.5	1	1
10461	2-Picoline	109-06-8	44		2	5	1
10461	Pronamide	23950-58-5	55		0.5	1	1
10461	Pyrene	129-00-0	49		0.1	0.5	1
10461	Pyridine	110-86-1	36		2	5	1
10461	Safrole	94-59-7	52		2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	50		0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	51		0.5	1	1
10461	Thionazin	297-97-2	55		2	5	1
10461	o-Toluidine	95-53-4	38		0.5	1	1
10461	2,4,5-Trichlorophenol	95-95-4	49		0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	46		0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	51		2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	46		5	15	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MS Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354937
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 12:37	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 13:17	Kerri E Legerlotz	1
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 17:40	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 12:37	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161301AA	05/09/2016 13:17	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	L161302AA	05/09/2016 17:40	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/06/2016 23:48	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354938
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	40		3.0	10	1
11996	Acetonitrile	75-05-8	52	J	32	100	1
11996	Acrolein	107-02-8	37		5.0	25	1
11996	Acrylonitrile	107-13-1	29		1.0	10	1
11996	Allyl Chloride	107-05-1	5.1	J	0.8	10	1
11996	Benzene	71-43-2	5.4		0.1	1.0	1
11996	Bromodichloromethane	75-27-4	5.5		0.1	1.0	1
11996	Bromoform	75-25-2	5.4		0.1	1.0	1
11996	Bromomethane	74-83-9	5.5		0.5	1.0	1
11996	2-Butanone	78-93-3	45		1.0	10	1
11996	Carbon Disulfide	75-15-0	4.9	J	0.4	10	1
11996	Carbon Tetrachloride	56-23-5	5.6		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	5.5	J	0.5	10	1
11996	Chloroethane	75-00-3	7.3		0.1	1.0	1
11996	Chloroform	67-66-3	5.4		0.1	1.0	1
11996	Chloromethane	74-87-3	5.2		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	6.8		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	5.3		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	5.7		0.1	1.0	1
11996	Dibromomethane	74-95-3	5.5		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	32		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	5.4		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	5.4		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	5.3		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.4		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	11		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	5.5		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.6		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.4		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	5.3		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	5.2		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	5.0		0.1	1.0	1
11996	Dimethyl ether	115-10-6	9.2	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	210		45	200	1
11996	Ethyl ether	60-29-7	35	E	1.1	13	1
11996	Ethyl Methacrylate	97-63-2	4.9	J	0.8	10	1
11996	Ethylbenzene	100-41-4	5.3		0.1	1.0	1
11996	Freon 113	76-13-1	5.7		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	5.6		0.1	1.0	1
11996	Hexachloroethane	67-72-1	4.6	J	0.1	10	1
11996	2-Hexanone	591-78-6	32		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	170	J	10	200	1
11996	Methacrylonitrile	126-98-7	50	J	9.8	100	1
11996	Methyl Iodide	74-88-4	5.2	J	0.6	10	1
11996	Methyl Methacrylate	80-62-6	6.2	J	3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	31		1.0	10	1
11996	Methylene Chloride	75-09-2	5.4		0.2	1.0	1
11996	Naphthalene	91-20-3	4.9		0.1	1.0	1
11996	Pentachloroethane	76-01-7	5.8	J	0.8	10	1
11997	2-Propanol	67-63-0	150		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354938
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	46	J	10	100	1
11996	Styrene	100-42-5	5.4		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	5.4		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	5.2		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	5.9		0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	34		2.0	25	1
11996	Toluene	108-88-3	5.2		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	5.1		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.4		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	5.3		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.9		0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	5.8		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	5.9		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	13		3.3	10	1
11996	Vinyl Chloride	75-01-4	5.9		0.2	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	52		0.1	0.5	1
10461	Acenaphthylene	208-96-8	55		0.1	0.5	1
10461	Acetophenone	98-86-2	48		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	66		2	5	1
10461	4-Aminobiphenyl	92-67-1	39		0.5	1	1
10461	Aniline	62-53-3	29		0.5	1	1
10461	Anthracene	120-12-7	52		0.1	0.5	1
10461	Aramite	140-57-8	110	E	5	15	1
10461	Benzo(a)anthracene	56-55-3	59		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	55		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	58		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	42		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	55		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	48		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	54		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	54		2	5	1
10461	Di-n-butylphthalate	84-74-2	54		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	51		0.5	1	1
10461	4-Chloroaniline	106-47-8	35		2	4	1
10461	Chlorobenzilate	510-15-6	55		3	10	1
10461	bis(2-Chloroethoxy)methane	111-91-1	51		0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	48		0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	47		0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10461	2-Chloronaphthalene	91-58-7	49		0.4	1	1
10461	2-Chlorophenol	95-57-8	44		0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	52		0.5	1	1
10461	Chrysene	218-01-9	59		0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354938
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**		**ug/l**	**ug/l**	
10461	Diallate trans/cis	2303-16-4	49		1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	46		0.1	0.5	1
10461	Dibenzofuran	132-64-9	51		0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	47		2	5	1
10461	2,4-Dichlorophenol	120-83-2	46		0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	48		0.5	1	1
10461	Diethylphthalate	84-66-2	51		2	5	1
10461	Dimethoate	60-51-5	38		3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	59		0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	56		0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	36	J	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	62	E	5	50	1
10461	2,4-Dimethylphenol	105-67-9	44		0.5	1	1
10461	Dimethylphthalate	131-11-3	50		2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	51		5	15	1
10461	1,3-Dinitrobenzene	99-65-0	55		2	5	1
10461	2,4-Dinitrophenol	51-28-5	83		10	30	1
10461	2,4-Dinitrotoluene	121-14-2	54		1	5	1
10461	2,6-Dinitrotoluene	606-20-2	56		0.5	1	1
10461	Disulfoton	298-04-4	140	E	25	50	1
10461	Ethyl methanesulfonate	62-50-0	49		0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	54		2	5	1
10461	Famphur	52-85-7	N.D.		25	50	1
10461	Fluoranthene	206-44-0	56		0.1	0.5	1
10461	Fluorene	86-73-7	52		0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	54		0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	67		5	15	1
10461	Hexachloroethane	67-72-1	42		1	5	1
10461	Hexachloropropene	1888-71-7	43		2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	44		0.1	0.5	1
10461	Isodrin	465-73-6	56		0.5	1	1
10461	Isophorone	78-59-1	53		0.5	1	1
10461	Isosafrole	120-58-1	57		2	5	1
10461	Kepone	143-50-0	N.D.		25	50	1
10461	Methapyrilene	91-80-5	470	E	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.						
10461	Methyl methanesulfonate	66-27-3	44		1	5	1
10461	Methyl parathion	298-00-0	38		1	5	1
10461	3-Methylcholanthrene	56-49-5	67		0.5	1	1
10461	2-Methylnaphthalene	91-57-6	51		0.1	0.5	1
10461	2-Methylphenol	95-48-7	46		0.5	1	1
10461	4-Methylphenol	106-44-5	43		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10461	1,4-Naphthoquinone	130-15-4	340	E	25	60	1
10461	1-Naphthylamine	134-32-7	43		5	15	1
10461	2-Naphthylamine	91-59-8	49		5	15	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354938
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l		ug/l	ug/l	
10461	2-Nitroaniline	88-74-4	55		0.5	1	1
10461	3-Nitroaniline	99-09-2	44		0.5	1	1
10461	4-Nitroaniline	100-01-6	47		0.5	1	1
10461	Nitrobenzene	98-95-3	50		0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	45		0.5	1	1
10461	2-Nitrophenol	88-75-5	54		0.5	1	1
10461	4-Nitrophenol	100-02-7	39		10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	540	E	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	50		0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	38		2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	49		2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	48		0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	52		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10461	N-Nitrosomethylethylamine	10595-95-6	49		2	5	1
10461	N-Nitrosomorpholine	59-89-2	46		2	5	1
10461	N-Nitrosopiperidine	100-75-4	51		0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	50		0.5	1	1
10461	Di-n-octylphthalate	117-84-0	58		2	5	1
10461	Parathion	56-38-2	58		2	5	1
10461	Pentachlorobenzene	608-93-5	53		0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	54		2	5	1
10461	Pentachlorophenol	87-86-5	42		1	5	1
10461	Phenacetin	62-44-2	53		0.5	1	1
10461	Phenanthrene	85-01-8	50		0.1	0.5	1
10461	Phenol	108-95-2	32		0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.		75	300	1
10461	Phorate	298-02-2	54		0.5	1	1
10461	2-Picoline	109-06-8	44		2	5	1
10461	Pronamide	23950-58-5	56		0.5	1	1
10461	Pyrene	129-00-0	49		0.1	0.5	1
10461	Pyridine	110-86-1	36		2	5	1
10461	Safrole	94-59-7	53		2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	50		0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	45		0.5	1	1
10461	Thionazin	297-97-2	53		2	5	1
10461	o-Toluidine	95-53-4	24		0.5	1	1
10461	2,4,5-Trichlorophenol	95-95-4	47		0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	43		0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	52		2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	46		5	15	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A MSD Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354938
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 10:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6104 SDG#: RAE61-04MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 12:57	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 13:38	Kerri E Legerlotz	1
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 18:02	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 12:57	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161301AA	05/09/2016 13:38	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	L161302AA	05/09/2016 18:02	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 00:17	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WDUP Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354939
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 11:10 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6105 SDG#: RAE61-05FD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	0.3	J	0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	2.4		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	0.2	J	0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	5.9		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	4.6	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	29	J	11	130	10
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	0.4	J	0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WDUP Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354939
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 11:10 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6105 SDG#: RAE61-05FD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.		10	100	1
11996	Styrene	100-42-5	N.D.		0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.2	1.0	1
11996	Tetrachloroethene	127-18-4	0.3	J	0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	3.9	J	2.0	25	1
11996	Toluene	108-88-3	N.D.		0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.		0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1.0	1
11996	Trichloroethene	79-01-6	0.2	J	0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.		0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.		0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.		3.3	10	1
11996	Vinyl Chloride	75-01-4	0.2	J	0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.		0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Tetrahydrofuran.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.		0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.		2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.		0.5	1	1
10461	Aniline	62-53-3	N.D.		0.5	1	1
10461	Anthracene	120-12-7	N.D.		0.1	0.5	1
10461	Aramite	140-57-8	N.D.		5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.		0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.		0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.		10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
10461	4-Chloroaniline	106-47-8	N.D.		2	4	1
10461	Chlorobenzilate	510-15-6	N.D.		3	10	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WDUP Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354939
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 11:10 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6105 SDG#: RAE61-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			ug/l	ug/l	ug/l	
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WDUP Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354939
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 11:10 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6105 SDG#: RAE61-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WDUP Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354939
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 11:10 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6105 SDG#: RAE61-05FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 13:58	Kerri E Legerlotz	1
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 18:22	Kerri E Legerlotz	10
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 19:08	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 13:58	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H161301AA	05/09/2016 18:22	Kerri E Legerlotz	10
01163	GC/MS VOA Water Prep	SW-846 5030C	3	L161302AA	05/09/2016 19:08	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 02:10	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354940
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 09:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6106 SDG#: RAE61-06

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11996	Acetone	67-64-1	N.D.		3.0	10	1
11996	Acetonitrile	75-05-8	N.D.		32	100	1
11996	Acrolein	107-02-8	N.D.		5.0	25	1
11996	Acrylonitrile	107-13-1	N.D.		1.0	10	1
11996	Allyl Chloride	107-05-1	N.D.		0.8	10	1
11996	Benzene	71-43-2	N.D.		0.1	1.0	1
11996	Bromodichloromethane	75-27-4	N.D.		0.1	1.0	1
11996	Bromoform	75-25-2	N.D.		0.1	1.0	1
11996	Bromomethane	74-83-9	N.D.		0.5	1.0	1
11996	2-Butanone	78-93-3	N.D.		1.0	10	1
11996	Carbon Disulfide	75-15-0	N.D.		0.4	10	1
11996	Carbon Tetrachloride	56-23-5	N.D.		0.2	1.0	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.		0.5	10	1
11996	Chloroethane	75-00-3	N.D.		0.1	1.0	1
11996	Chloroform	67-66-3	N.D.		0.1	1.0	1
11996	Chloromethane	74-87-3	N.D.		0.2	1.0	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		0.2	1.0	1
11996	Dibromochloromethane	124-48-1	N.D.		0.1	1.0	1
11996	1,2-Dibromoethane	106-93-4	N.D.		0.1	1.0	1
11996	Dibromomethane	74-95-3	N.D.		0.1	1.0	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.		1.0	10	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.		0.1	1.0	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.		0.1	1.0	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.		0.1	1.0	1
11996	1,1-Dichloroethane	75-34-3	N.D.		0.1	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.		0.2	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.		0.2	1.0	1
11996	1,2-Dichloropropane	78-87-5	N.D.		0.1	1.0	1
11996	1,3-Dichloropropane	142-28-9	N.D.		0.1	1.0	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1.0	1
11996	Dimethyl ether	115-10-6	0.3	J	0.1	13	1
11996	1,4-Dioxane	123-91-1	N.D.		45	200	1
11996	Ethyl ether	60-29-7	N.D.		1.1	13	1
11996	Ethyl Methacrylate	97-63-2	N.D.		0.8	10	1
11996	Ethylbenzene	100-41-4	N.D.		0.1	1.0	1
11996	Freon 113	76-13-1	N.D.		0.2	1.0	1
11996	Hexachlorobutadiene	87-68-3	N.D.		0.1	1.0	1
11996	Hexachloroethane	67-72-1	N.D.		0.1	10	1
11996	2-Hexanone	591-78-6	N.D.		1.0	10	1
11996	Isobutyl Alcohol	78-83-1	N.D.		10	200	1
11996	Methacrylonitrile	126-98-7	N.D.		9.8	100	1
11996	Methyl Iodide	74-88-4	N.D.		0.6	10	1
11996	Methyl Methacrylate	80-62-6	N.D.		3.6	10	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.		1.0	10	1
11996	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
11996	Naphthalene	91-20-3	N.D.		0.1	1.0	1
11996	Pentachloroethane	76-01-7	N.D.		0.8	10	1
11997	2-Propanol	67-63-0	N.D.		50	100	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354940
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 09:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6106 SDG#: RAE61-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Propionitrile	107-12-0	N.D.	10	100	1
11996	Styrene	100-42-5	N.D.	0.1	1.0	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	1.0	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	1
11996	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.0	25	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.1	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
11996	Vinyl Acetate	108-05-4	N.D.	3.3	10	1
11996	Vinyl Chloride	75-01-4	N.D.	0.2	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
10461	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
10461	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
10461	Acetophenone	98-86-2	N.D.	0.5	1	1
10461	2-Acetylaminofluorene	53-96-3	N.D.	2	5	1
10461	4-Aminobiphenyl	92-67-1	N.D.	0.5	1	1
10461	Aniline	62-53-3	N.D.	0.5	1	1
10461	Anthracene	120-12-7	N.D.	0.1	0.5	1
10461	Aramite	140-57-8	N.D.	5	15	1
10461	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
10461	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
10461	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
10461	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
10461	Benzyl alcohol	100-51-6	N.D.	10	15	1
10461	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
10461	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
10461	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
10461	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
10461	4-Chloroaniline	106-47-8	N.D.	2	4	1
10461	Chlorobenzilate	510-15-6	N.D.	3	10	1
10461	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
10461	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
10461	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.5	1	1

Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354940
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 09:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6106 SDG#: RAE61-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270D			**ug/l**	**ug/l**	**ug/l**	
10461	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
10461	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
10461	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
10461	Chrysene	218-01-9	N.D.	0.1	0.5	1
10461	Diallate trans/cis	2303-16-4	N.D.	1	5	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
10461	Dibenzofuran	132-64-9	N.D.	0.5	1	1
10461	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
10461	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
10461	2,6-Dichlorophenol	87-65-0	N.D.	0.5	1	1
10461	Diethylphthalate	84-66-2	N.D.	2	5	1
10461	Dimethoate	60-51-5	N.D.	3	10	1
10461	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.5	1	1
10461	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.5	1	1
10461	3,3'-Dimethylbenzidine	119-93-7	N.D.	25	75	1
10461	a,a-Dimethylphenethylamine	122-09-8	N.D.	5	50	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
10461	Dimethylphthalate	131-11-3	N.D.	2	5	1
10461	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
10461	1,3-Dinitrobenzene	99-65-0	N.D.	2	5	1
10461	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
10461	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
10461	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
10461	Disulfoton	298-04-4	N.D.	25	50	1
10461	Ethyl methanesulfonate	62-50-0	N.D.	0.5	1	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
10461	Famphur	52-85-7	N.D.	25	50	1
10461	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
10461	Fluorene	86-73-7	N.D.	0.1	0.5	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
10461	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
10461	Hexachloroethane	67-72-1	N.D.	1	5	1
10461	Hexachloropropene	1888-71-7	N.D.	2	5	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
10461	Isodrin	465-73-6	N.D.	0.5	1	1
10461	Isophorone	78-59-1	N.D.	0.5	1	1
10461	Isosafrole	120-58-1	N.D.	2	5	1
10461	Kepone	143-50-0	N.D.	25	50	1
10461	Methapyrilene	91-80-5	N.D.	15	50	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
10461	Methyl methanesulfonate	66-27-3	N.D.	1	5	1
10461	Methyl parathion	298-00-0	N.D.	1	5	1
10461	3-Methylcholanthrene	56-49-5	N.D.	0.5	1	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
10461	2-Methylphenol	95-48-7	N.D.	0.5	1	1
10461	4-Methylphenol	106-44-5	N.D.	0.5	1	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354940
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 09:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6106 SDG#: RAE61-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	1,4-Naphthoquinone	130-15-4	N.D.	25	60	1
10461	1-Naphthylamine	134-32-7	N.D.	5	15	1
10461	2-Naphthylamine	91-59-8	N.D.	5	15	1
10461	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
10461	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
10461	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
10461	Nitrobenzene	98-95-3	N.D.	0.5	1	1
10461	5-Nitro-o-toluidine	99-55-8	N.D.	0.5	1	1
10461	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
10461	4-Nitrophenol	100-02-7	N.D.	10	30	1
10461	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20	60	1
10461	N-Nitrosodiethylamine	55-18-5	N.D.	0.5	1	1
10461	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
10461	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2	5	1
10461	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
10461	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10461	N-Nitrosomethylethylamine	10595-95-6	N.D.	2	5	1
10461	N-Nitrosomorpholine	59-89-2	N.D.	2	5	1
10461	N-Nitrosopiperidine	100-75-4	N.D.	0.5	1	1
10461	N-Nitrosopyrrolidine	930-55-2	N.D.	0.5	1	1
10461	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
10461	Parathion	56-38-2	N.D.	2	5	1
10461	Pentachlorobenzene	608-93-5	N.D.	0.5	1	1
10461	Pentachloronitrobenzene	82-68-8	N.D.	2	5	1
10461	Pentachlorophenol	87-86-5	N.D.	1	5	1
10461	Phenacetin	62-44-2	N.D.	0.5	1	1
10461	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
10461	Phenol	108-95-2	N.D.	0.5	1	1
10461	1,4-Phenylenediamine	106-50-3	N.D.	75	300	1
10461	Phorate	298-02-2	N.D.	0.5	1	1
10461	2-Picoline	109-06-8	N.D.	2	5	1
10461	Pronamide	23950-58-5	N.D.	0.5	1	1
10461	Pyrene	129-00-0	N.D.	0.1	0.5	1
10461	Pyridine	110-86-1	N.D.	2	5	1
10461	Safrole	94-59-7	N.D.	2	5	1
10461	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	0.5	1	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.5	1	1
10461	Thionazin	297-97-2	N.D.	2	5	1
10461	o-Toluidine	95-53-4	N.D.	0.5	1	1
10461	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
10461	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
10461	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2	5	1
10461	1,3,5-Trinitrobenzene	99-35-4	N.D.	5	15	1

The QC limits for 1,4-naphthoquinone are advisory due to the erratic

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354940
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/27/2016 09:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6106 SDG#: RAE61-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor

performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 14:39	Kerri E Legerlotz	1
11997	2-Propanol	SW-846 8260C	1	L161302AA	05/09/2016 19:30	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 14:39	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L161302AA	05/09/2016 19:30	Brett W Kenyon	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAA026	05/07/2016 02:38	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAA026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16-2 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354941
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 12:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6107 SDG#: RAE61-07

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	< 5	5	2	1
10461	2,4-Dinitrotoluene	121-14-2	< 5	5	1	1
10461	2,6-Dinitrotoluene	606-20-2	< 1	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	19 RAAP compounds	SW-846 8260C	1	H161301AA	05/09/2016 14:59	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 14:59	Kerri E Legerlotz	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAZ026	05/07/2016 03:06	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAZ026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16-3 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354942
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 14:50 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6108 SDG#: RAE61-08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	< 5	5	2	1
10461	2,4-Dinitrotoluene	121-14-2	< 5	5	1	1
10461	2,6-Dinitrotoluene	606-20-2	< 1	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	19 RAAP compounds	SW-846 8260C	1	H161301AA	05/09/2016 15:20	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 15:20	Kerri E Legerlotz	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAZ026	05/07/2016 03:34	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAZ026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16-5 Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354943
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 10:45 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6109 SDG#: RAE61-09

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	< 5	5	2	1
10461	2,4-Dinitrotoluene	121-14-2	< 5	5	1	1
10461	2,6-Dinitrotoluene	606-20-2	< 1	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	19 RAAP compounds	SW-846 8260C	1	H161301AA	05/09/2016 15:40	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 15:40	Kerri E Legerlotz	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAZ026	05/07/2016 04:03	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAZ026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC2B Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354944
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 11:55 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6110 SDG#: RAE61-10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	< 5	5	2	1
10461	2,4-Dinitrotoluene	121-14-2	< 5	5	1	1
10461	2,6-Dinitrotoluene	606-20-2	< 1	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	19 RAAP compounds	SW-846 8260C	1	H161301AA	05/09/2016 16:00	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 16:00	Kerri E Legerlotz	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAZ026	05/07/2016 04:31	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAZ026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: 16SPRING Grab Groundwater
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354945
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016 11:00 by KC

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6111 SDG#: RAE61-11

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
10461	Diethylphthalate	84-66-2	< 5	5	2	1
10461	2,4-Dinitrotoluene	121-14-2	< 5	5	1	1
10461	2,6-Dinitrotoluene	606-20-2	< 1	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	19 RAAP compounds	SW-846 8260C	1	H161301AA	05/09/2016 16:20	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 16:20	Kerri E Legerlotz	1
10461	SVOAs by 8270D in Water	SW-846 8270D	1	16124WAZ026	05/07/2016 04:59	Catherine E Bachman	1
11010	8270D BNA Extraction	SW-846 3510C	1	16124WAZ026	05/03/2016 17:00	Kailah L Ortiz	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_1 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354946
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6112 SDG#: RAE61-12TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	< 10	10	3.0	1
11996	Acetonitrile	75-05-8	< 100	100	32	1
11996	Acrolein	107-02-8	< 25	25	5.0	1
11996	Acrylonitrile	107-13-1	< 10	10	1.0	1
11996	Allyl Chloride	107-05-1	< 10	10	0.8	1
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	Bromodichloromethane	75-27-4	< 1.0	1.0	0.1	1
11996	Bromoform	75-25-2	< 1.0	1.0	0.1	1
11996	Bromomethane	74-83-9	< 1.0	1.0	0.5	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Disulfide	75-15-0	< 10	10	0.4	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.2	1
11996	2-Chloro-1,3-butadiene	126-99-8	< 10	10	0.5	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloroform	67-66-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	0.2	1
11996	Dibromochloromethane	124-48-1	< 1.0	1.0	0.1	1
11996	1,2-Dibromoethane	106-93-4	< 1.0	1.0	0.1	1
11996	Dibromomethane	74-95-3	< 1.0	1.0	0.1	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	< 10	10	1.0	1
11996	1,2-Dichlorobenzene	95-50-1	< 1.0	1.0	0.1	1
11996	1,3-Dichlorobenzene	541-73-1	< 1.0	1.0	0.1	1
11996	1,4-Dichlorobenzene	106-46-7	< 1.0	1.0	0.1	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,2-Dichloroethane	107-06-2	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.2	1
11996	trans-1,2-Dichloroethene	156-60-5	< 1.0	1.0	0.2	1
11996	1,2-Dichloropropane	78-87-5	< 1.0	1.0	0.1	1
11996	1,3-Dichloropropane	142-28-9	< 1.0	1.0	0.1	1
11996	trans-1,3-Dichloropropene	10061-02-6	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	1,4-Dioxane	123-91-1	< 200	200	45	1
11996	Ethyl ether	60-29-7	< 13	13	1.1	1
11996	Ethyl Methacrylate	97-63-2	< 10	10	0.8	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Hexachlorobutadiene	87-68-3	< 1.0	1.0	0.1	1
11996	Hexachloroethane	67-72-1	< 10	10	0.1	1
11996	2-Hexanone	591-78-6	< 10	10	1.0	1
11996	Isobutyl Alcohol	78-83-1	< 200	200	10	1
11996	Methacrylonitrile	126-98-7	< 100	100	9.8	1
11996	Methyl Iodide	74-88-4	< 10	10	0.6	1
11996	Methyl Methacrylate	80-62-6	< 10	10	3.6	1
11996	4-Methyl-2-pentanone	108-10-1	< 10	10	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Naphthalene	91-20-3	< 1.0	1.0	0.1	1
11996	Pentachloroethane	76-01-7	< 10	10	0.8	1
11996	Propionitrile	107-12-0	< 100	100	10	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_1 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354946
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6112 SDG#: RAE61-12TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Styrene	100-42-5	< 1.0	1.0	0.1	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	< 1.0	1.0	0.1	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,2,4-Trichlorobenzene	120-82-1	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	1,1,2-Trichloroethane	79-00-5	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.2	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.2	1
11996	1,2,3-Trichloropropane	96-18-4	< 1.0	1.0	0.3	1
11996	Vinyl Acetate	108-05-4	< 10	10	3.3	1
11996	Vinyl Chloride	75-01-4	< 1.0	1.0	0.2	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 11:16	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 11:16	Kerri E Legerlotz	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_2 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354947
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6113 SDG#: RAE61-13TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	< 10	10	3.0	1
11996	Acetonitrile	75-05-8	< 100	100	32	1
11996	Acrolein	107-02-8	< 25	25	5.0	1
11996	Acrylonitrile	107-13-1	< 10	10	1.0	1
11996	Allyl Chloride	107-05-1	< 10	10	0.8	1
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	Bromodichloromethane	75-27-4	< 1.0	1.0	0.1	1
11996	Bromoform	75-25-2	< 1.0	1.0	0.1	1
11996	Bromomethane	74-83-9	< 1.0	1.0	0.5	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Disulfide	75-15-0	< 10	10	0.4	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.2	1
11996	2-Chloro-1,3-butadiene	126-99-8	< 10	10	0.5	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloroform	67-66-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	0.2	1
11996	Dibromochloromethane	124-48-1	< 1.0	1.0	0.1	1
11996	1,2-Dibromoethane	106-93-4	< 1.0	1.0	0.1	1
11996	Dibromomethane	74-95-3	< 1.0	1.0	0.1	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	< 10	10	1.0	1
11996	1,2-Dichlorobenzene	95-50-1	< 1.0	1.0	0.1	1
11996	1,3-Dichlorobenzene	541-73-1	< 1.0	1.0	0.1	1
11996	1,4-Dichlorobenzene	106-46-7	< 1.0	1.0	0.1	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,2-Dichloroethane	107-06-2	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.2	1
11996	trans-1,2-Dichloroethene	156-60-5	< 1.0	1.0	0.2	1
11996	1,2-Dichloropropane	78-87-5	< 1.0	1.0	0.1	1
11996	1,3-Dichloropropane	142-28-9	< 1.0	1.0	0.1	1
11996	trans-1,3-Dichloropropene	10061-02-6	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	1,4-Dioxane	123-91-1	< 200	200	45	1
11996	Ethyl ether	60-29-7	< 13	13	1.1	1
11996	Ethyl Methacrylate	97-63-2	< 10	10	0.8	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Hexachlorobutadiene	87-68-3	< 1.0	1.0	0.1	1
11996	Hexachloroethane	67-72-1	< 10	10	0.1	1
11996	2-Hexanone	591-78-6	< 10	10	1.0	1
11996	Isobutyl Alcohol	78-83-1	< 200	200	10	1
11996	Methacrylonitrile	126-98-7	< 100	100	9.8	1
11996	Methyl Iodide	74-88-4	< 10	10	0.6	1
11996	Methyl Methacrylate	80-62-6	< 10	10	3.6	1
11996	4-Methyl-2-pentanone	108-10-1	< 10	10	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Naphthalene	91-20-3	< 1.0	1.0	0.1	1
11996	Pentachloroethane	76-01-7	< 10	10	0.8	1
11996	Propionitrile	107-12-0	< 100	100	10	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_2 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354947
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6113 SDG#: RAE61-13TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Styrene	100-42-5	< 1.0	1.0	0.1	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	< 1.0	1.0	0.1	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,2,4-Trichlorobenzene	120-82-1	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	1,1,2-Trichloroethane	79-00-5	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.2	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.2	1
11996	1,2,3-Trichloropropane	96-18-4	< 1.0	1.0	0.3	1
11996	Vinyl Acetate	108-05-4	< 10	10	3.3	1
11996	Vinyl Chloride	75-01-4	< 1.0	1.0	0.2	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 11:36	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 11:36	Kerri E Legerlotz	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_3 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354948
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6114 SDG#: RAE61-14TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Acetone	67-64-1	< 10	10	3.0	1
11996	Acetonitrile	75-05-8	< 100	100	32	1
11996	Acrolein	107-02-8	< 25	25	5.0	1
11996	Acrylonitrile	107-13-1	< 10	10	1.0	1
11996	Allyl Chloride	107-05-1	< 10	10	0.8	1
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	Bromodichloromethane	75-27-4	< 1.0	1.0	0.1	1
11996	Bromoform	75-25-2	< 1.0	1.0	0.1	1
11996	Bromomethane	74-83-9	< 1.0	1.0	0.5	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Disulfide	75-15-0	< 10	10	0.4	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.2	1
11996	2-Chloro-1,3-butadiene	126-99-8	< 10	10	0.5	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloroform	67-66-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	0.2	1
11996	Dibromochloromethane	124-48-1	< 1.0	1.0	0.1	1
11996	1,2-Dibromoethane	106-93-4	< 1.0	1.0	0.1	1
11996	Dibromomethane	74-95-3	< 1.0	1.0	0.1	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	< 10	10	1.0	1
11996	1,2-Dichlorobenzene	95-50-1	< 1.0	1.0	0.1	1
11996	1,3-Dichlorobenzene	541-73-1	< 1.0	1.0	0.1	1
11996	1,4-Dichlorobenzene	106-46-7	< 1.0	1.0	0.1	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,2-Dichloroethane	107-06-2	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.2	1
11996	trans-1,2-Dichloroethene	156-60-5	< 1.0	1.0	0.2	1
11996	1,2-Dichloropropane	78-87-5	< 1.0	1.0	0.1	1
11996	1,3-Dichloropropane	142-28-9	< 1.0	1.0	0.1	1
11996	trans-1,3-Dichloropropene	10061-02-6	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	1,4-Dioxane	123-91-1	< 200	200	45	1
11996	Ethyl ether	60-29-7	< 13	13	1.1	1
11996	Ethyl Methacrylate	97-63-2	< 10	10	0.8	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Hexachlorobutadiene	87-68-3	< 1.0	1.0	0.1	1
11996	Hexachloroethane	67-72-1	< 10	10	0.1	1
11996	2-Hexanone	591-78-6	< 10	10	1.0	1
11996	Isobutyl Alcohol	78-83-1	< 200	200	10	1
11996	Methacrylonitrile	126-98-7	< 100	100	9.8	1
11996	Methyl Iodide	74-88-4	< 10	10	0.6	1
11996	Methyl Methacrylate	80-62-6	< 10	10	3.6	1
11996	4-Methyl-2-pentanone	108-10-1	< 10	10	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Naphthalene	91-20-3	< 1.0	1.0	0.1	1
11996	Pentachloroethane	76-01-7	< 10	10	0.8	1
11996	Propionitrile	107-12-0	< 100	100	10	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank_3 Water
2Q 2016 Annual GW Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8354948
LL Group # 1655225
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 04/26/2016

Submitted: 04/28/2016 10:10
Reported: 05/13/2016 19:04

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

E6114 SDG#: RAE61-14TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11996	Styrene	100-42-5	< 1.0	1.0	0.1	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	< 1.0	1.0	0.1	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,2,4-Trichlorobenzene	120-82-1	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	1,1,2-Trichloroethane	79-00-5	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.2	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.2	1
11996	1,2,3-Trichloropropane	96-18-4	< 1.0	1.0	0.3	1
11996	Vinyl Acetate	108-05-4	< 10	10	3.3	1
11996	Vinyl Chloride	75-01-4	< 1.0	1.0	0.2	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.2	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161301AA	05/09/2016 11:57	Kerri E Legerlotz	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161301AA	05/09/2016 11:57	Kerri E Legerlotz	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: H161301AA	Sample number(s): 8354933-8354948		
Acetone	N.D.	3.0	10
Acetonitrile	N.D.	32	100
Acrolein	N.D.	5.0	25
Acrylonitrile	N.D.	1.0	10
Allyl Chloride	N.D.	0.8	10
Benzene	N.D.	0.1	1.0
Bromodichloromethane	N.D.	0.1	1.0
Bromoform	N.D.	0.1	1.0
Bromomethane	N.D.	0.5	1.0
2-Butanone	N.D.	1.0	10
Carbon Disulfide	N.D.	0.4	10
Carbon Tetrachloride	N.D.	0.2	1.0
2-Chloro-1,3-butadiene	N.D.	0.5	10
Chloroethane	N.D.	0.1	1.0
Chloroform	N.D.	0.1	1.0
Chloromethane	N.D.	0.2	1.0
1,2-Dibromo-3-chloropropane	N.D.	0.2	1.0
Dibromochloromethane	N.D.	0.1	1.0
1,2-Dibromoethane	N.D.	0.1	1.0
Dibromomethane	N.D.	0.1	1.0
trans-1,4-Dichloro-2-butene	N.D.	1.0	10
1,2-Dichlorobenzene	N.D.	0.1	1.0
1,3-Dichlorobenzene	N.D.	0.1	1.0
1,4-Dichlorobenzene	N.D.	0.1	1.0
Dichlorodifluoromethane	N.D.	0.1	1.0
1,1-Dichloroethane	N.D.	0.1	1.0
1,2-Dichloroethane	N.D.	0.1	1.0
1,1-Dichloroethene	N.D.	0.2	1.0
trans-1,2-Dichloroethene	N.D.	0.2	1.0
1,2-Dichloropropane	N.D.	0.1	1.0
1,3-Dichloropropane	N.D.	0.1	1.0
trans-1,3-Dichloropropene	N.D.	0.1	1.0
Dimethyl ether	N.D.	0.1	13
1,4-Dioxane	N.D.	45	200
Ethyl ether	N.D.	1.1	13
Ethyl Methacrylate	N.D.	0.8	10
Ethylbenzene	N.D.	0.1	1.0
Freon 113	N.D.	0.2	1.0
Hexachlorobutadiene	N.D.	0.1	1.0
Hexachloroethane	N.D.	0.1	10
2-Hexanone	N.D.	1.0	10
Isobutyl Alcohol	N.D.	10	200
Methacrylonitrile	N.D.	9.8	100

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Methyl Iodide	N.D.	0.6	10
Methyl Methacrylate	N.D.	3.6	10
4-Methyl-2-pentanone	N.D.	1.0	10
Methylene Chloride	N.D.	0.2	1.0
Naphthalene	N.D.	0.1	1.0
Pentachloroethane	N.D.	0.8	10
Propionitrile	N.D.	10	100
Styrene	N.D.	0.1	1.0
1,1,1,2-Tetrachloroethane	N.D.	0.1	1.0
1,1,2,2-Tetrachloroethane	N.D.	0.2	1.0
Tetrachloroethene	N.D.	0.1	1.0
Tetrahydrofuran	N.D.	2.0	25
Toluene	N.D.	0.1	1.0
1,2,4-Trichlorobenzene	N.D.	0.1	1.0
1,1,1-Trichloroethane	N.D.	0.1	1.0
1,1,2-Trichloroethane	N.D.	0.1	1.0
Trichloroethene	N.D.	0.2	1.0
Trichlorofluoromethane	N.D.	0.2	1.0
1,2,3-Trichloropropane	N.D.	0.3	1.0
Vinyl Acetate	N.D.	3.3	10
Vinyl Chloride	N.D.	0.2	1.0
Xylene (Total)	N.D.	0.2	3.0
Batch number: L161302AA	Sample number(s): 8354933-8354940		
2-Propanol	N.D.	50	100

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: 16124WAZ026	Sample number(s): 8354941-8354945		
Diethylphthalate	< 5	5	2
2,4-Dinitrotoluene	< 5	5	1
2,6-Dinitrotoluene	< 1	1	0.5

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 16124WAA026	Sample number(s): 8354933-8354940		
Acenaphthene	N.D.	0.1	0.5
Acenaphthylene	N.D.	0.1	0.5
Acetophenone	N.D.	0.5	1
2-Acetylaminofluorene	N.D.	2	5
4-Aminobiphenyl	N.D.	0.5	1
Aniline	N.D.	0.5	1
Anthracene	N.D.	0.1	0.5
Aramite	N.D.	5	15
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(g,h,i)perylene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Benzyl alcohol	N.D.	10	15
4-Bromophenyl-phenylether	N.D.	0.5	1

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
4-Chloro-3-methylphenol	N.D.	0.5	1
4-Chloroaniline	N.D.	2	4
Chlorobenzilate	N.D.	3	10
bis(2-Chloroethoxy)methane	N.D.	0.5	1
bis(2-Chloroethyl)ether	N.D.	0.5	1
bis(2-Chloroisopropyl)ether	N.D.	0.5	1
2-Chloronaphthalene	N.D.	0.4	1
2-Chlorophenol	N.D.	0.5	1
4-Chlorophenyl-phenylether	N.D.	0.5	1
Chrysene	N.D.	0.1	0.5
Diallate trans/cis	N.D.	1	5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
Dibenzofuran	N.D.	0.5	1
3,3'-Dichlorobenzidine	N.D.	2	5
2,4-Dichlorophenol	N.D.	0.5	1
2,6-Dichlorophenol	N.D.	0.5	1
Diethylphthalate	N.D.	2	5
Dimethoate	N.D.	3	10
p-Dimethylaminoazobenzene	N.D.	0.5	1
7,12-Dimethylbenz[a]anthracene	N.D.	0.5	1
3,3'-Dimethylbenzidine	N.D.	25	75
a,a-Dimethylphenethylamine	N.D.	5	50
2,4-Dimethylphenol	N.D.	0.5	1
Dimethylphthalate	N.D.	2	5
4,6-Dinitro-2-methylphenol	N.D.	5	15
1,3-Dinitrobenzene	N.D.	2	5
2,4-Dinitrophenol	N.D.	10	30
2,4-Dinitrotoluene	N.D.	1	5
2,6-Dinitrotoluene	N.D.	0.5	1
Disulfoton	N.D.	25	50
Ethyl methanesulfonate	N.D.	0.5	1
bis(2-Ethylhexyl)phthalate	N.D.	2	5
Famphur	N.D.	25	50
Fluoranthene	N.D.	0.1	0.5
Fluorene	N.D.	0.1	0.5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorocyclopentadiene	N.D.	5	15
Hexachloroethane	N.D.	1	5
Hexachloropropene	N.D.	2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
Isodrin	N.D.	0.5	1
Isophorone	N.D.	0.5	1
Isosafrole	N.D.	2	5
Kepone	N.D.	25	50
Methapyrilene	N.D.	15	50
Methyl methanesulfonate	N.D.	1	5
Methyl parathion	N.D.	1	5
3-Methylcholanthrene	N.D.	0.5	1

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
2-Methylnaphthalene	N.D.	0.1	0.5
2-Methylphenol	N.D.	0.5	1
4-Methylphenol	N.D.	0.5	1
1,4-Naphthoquinone	N.D.	25	60
1-Naphthylamine	N.D.	5	15
2-Naphthylamine	N.D.	5	15
2-Nitroaniline	N.D.	0.5	1
3-Nitroaniline	N.D.	0.5	1
4-Nitroaniline	N.D.	0.5	1
Nitrobenzene	N.D.	0.5	1
5-Nitro-o-toluidine	N.D.	0.5	1
2-Nitrophenol	N.D.	0.5	1
4-Nitrophenol	N.D.	10	30
4-Nitroquinoline-1-oxide	N.D.	20	60
N-Nitrosodiethylamine	N.D.	0.5	1
N-Nitrosodimethylamine	N.D.	2	5
N-Nitrosodi-n-butylamine	N.D.	2	5
N-Nitroso-di-n-propylamine	N.D.	0.5	1
N-Nitrosodiphenylamine	N.D.	0.5	1
N-Nitrosomethylethylamine	N.D.	2	5
N-Nitrosomorpholine	N.D.	2	5
N-Nitrosopiperidine	N.D.	0.5	1
N-Nitrosopyrrolidine	N.D.	0.5	1
Di-n-octylphthalate	N.D.	2	5
Parathion	N.D.	2	5
Pentachlorobenzene	N.D.	0.5	1
Pentachloronitrobenzene	N.D.	2	5
Pentachlorophenol	N.D.	1	5
Phenacetin	N.D.	0.5	1
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	1
1,4-Phenylenediamine	N.D.	75	300
Phorate	N.D.	0.5	1
2-Picoline	N.D.	2	5
Pronamide	N.D.	0.5	1
Pyrene	N.D.	0.1	0.5
Pyridine	N.D.	2	5
Safrole	N.D.	2	5
1,2,4,5-Tetrachlorobenzene	N.D.	0.5	1
2,3,4,6-Tetrachlorophenol	N.D.	0.5	1
Thionazin	N.D.	2	5
o-Toluidine	N.D.	0.5	1
2,4,5-Trichlorophenol	N.D.	0.5	1
2,4,6-Trichlorophenol	N.D.	0.5	1
O,O,O-Triethylphosphorothioate	N.D.	2	5
1,3,5-Trinitrobenzene	N.D.	5	15

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H161301AA	Sample number(s): 8354933-8354948								
Acetone	37.5	38.39			102		65-124		
Acetonitrile	37.5	38.93			104		48-175		
Acrolein	37.5	42.63			114		35-137		
Acrylonitrile	25	28.72			115		68-135		
Allyl Chloride	5.00	4.74			95		62-127		
Benzene	5.00	4.98			100		80-120		
Bromodichloromethane	5.00	5.23			105		80-120		
Bromoform	5.00	5.39			108		62-128		
Bromomethane	5.00	5.41			108		71-126		
2-Butanone	37.5	43.41			116		66-135		
Carbon Disulfide	5.00	4.78			96		65-120		
Carbon Tetrachloride	5.00	5.36			107		65-134		
2-Chloro-1,3-butadiene	5.00	5.19			104		60-120		
Chloroethane	5.00	5.05			101		71-122		
Chloroform	5.00	5.18			104		80-120		
Chloromethane	5.00	4.99			100		63-121		
1,2-Dibromo-3-chloropropane	5.00	6.82			136*		56-131		
Dibromochloromethane	5.00	5.26			105		68-131		
1,2-Dibromoethane	5.00	5.22			104		80-120		
Dibromomethane	5.00	5.39			108		80-122		
trans-1,4-Dichloro-2-butene	25	35.92			144		10-182		
1,2-Dichlorobenzene	5.00	4.68			94		80-120		
1,3-Dichlorobenzene	5.00	4.64			93		80-120		
1,4-Dichlorobenzene	5.00	4.66			93		80-120		
Dichlorodifluoromethane	5.00	4.57			91		35-142		
1,1-Dichloroethane	5.00	4.83			97		75-120		
1,2-Dichloroethane	5.00	5.27			105		72-127		
1,1-Dichloroethene	5.00	5.28			106		70-120		
trans-1,2-Dichloroethene	5.00	5.26			105		80-120		
1,2-Dichloropropane	5.00	5.01			100		80-120		
1,3-Dichloropropane	5.00	4.79			96		80-120		
trans-1,3-Dichloropropene	5.00	4.83			97		77-121		
Dimethyl ether	5.00	4.70			94		80-120		
1,4-Dioxane	125	176.04			141		75-152		
Ethyl ether	5.00	4.59			92		60-129		
Ethyl Methacrylate	5.00	4.61			92		69-133		
Ethylbenzene	5.00	4.75			95		80-120		
Freon 113	5.00	5.36			107		75-120		
Hexachlorobutadiene	5.00	4.66			93		69-120		
Hexachloroethane	5.00	5.16			103		57-130		
2-Hexanone	25	30.78			123		73-128		
Isobutyl Alcohol	125	125.01			100		64-152		
Methacrylonitrile	37.5	49.95			133		60-145		
Methyl Iodide	5.00	5.09			102		72-127		
Methyl Methacrylate	5.00	6.35			127		60-136		
4-Methyl-2-pentanone	25	31.17			125		71-129		
Methylene Chloride	5.00	5.10			102		80-120		
Naphthalene	5.00	4.23			85		58-125		
Pentachloroethane	5.00	5.00			100		73-128		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Propionitrile	37.5	41.07			110		68-136		
Styrene	5.00	4.88			98		80-122		
1,1,1,2-Tetrachloroethane	5.00	4.96			99		72-125		
1,1,2,2-Tetrachloroethane	5.00	4.63			93		80-120		
Tetrachloroethene	5.00	5.09			102		80-120		
Tetrahydrofuran	25	30.51			122		64-132		
Toluene	5.00	4.80			96		80-120		
1,2,4-Trichlorobenzene	5.00	4.34			87		67-120		
1,1,1-Trichloroethane	5.00	5.13			103		70-124		
1,1,2-Trichloroethane	5.00	4.99			100		80-120		
Trichloroethene	5.00	5.23			105		80-120		
Trichlorofluoromethane	5.00	5.44			109		64-133		
1,2,3-Trichloropropane	5.00	4.89			98		80-120		
Vinyl Acetate	12.5	12.01			96		40-185		
Vinyl Chloride	5.00	5.43			109		62-128		
Xylene (Total)	15	14.4			96		80-120		
Batch number: L161302AA	Sample number(s): 8354933-8354940								
2-Propanol	150	157.57	150	146.83	105	98	52-139	7	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16124WAZ026	Sample number(s): 8354941-8354945								
Diethylphthalate	50	45.29			91		55-124		
2,4-Dinitrotoluene	50	48.47			97		71-131		
2,6-Dinitrotoluene	50	51.09			102		71-133		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16124WAA026	Sample number(s): 8354933-8354940								
Acenaphthene	50	48.24			96		69-123		
Acenaphthylene	50	50.84			102		67-125		
Acetophenone	50	46.86			94		61-124		
2-Acetylaminofluorene	50	56.18			112		63-146		
4-Aminobiphenyl	50	43.34			87		33-113		
Aniline	50	37.14			74		38-106		
Anthracene	50	49.07			98		68-126		
Aramite	50	64.75			130*		10-125		
Benzo(a)anthracene	50	53.28			107		69-133		
Benzo(a)pyrene	50	51.06			102		68-126		
Benzo(b)fluoranthene	50	51.06			102		71-131		
Benzo(g,h,i)perylene	50	50.15			100		62-132		
Benzo(k)fluoranthene	50	50.57			101		72-128		
Benzyl alcohol	50	46.56			93		55-118		
4-Bromophenyl-phenylether	50	50.32			101		64-129		
Butylbenzylphthalate	50	47.68			95		56-124		
Di-n-butylphthalate	50	48.15			96		61-125		
4-Chloro-3-methylphenol	50	48.12			96		65-125		
4-Chloroaniline	50	38.68			77		45-115		
Chlorobenzilate	50	41.8			84		49-134		
bis(2-Chloroethoxy)methane	50	48.19			96		67-124		
bis(2-Chloroethyl)ether	50	47.71			95		65-120		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
bis(2-Chloroisopropyl)ether	50	46.52			93		63-129		
2-Chloronaphthalene	50	48.14			96		57-126		
2-Chlorophenol	50	47.4			95		59-120		
4-Chlorophenyl-phenylether	50	48.65			97		67-125		
Chrysene	50	53.34			107		71-136		
Diallate trans/cis	50	45.49			91		67-112		
Dibenz(a,h)anthracene	50	52.27			105		64-133		
Dibenzofuran	50	48.14			96		67-120		
3,3'-Dichlorobenzidine	50	46.05			92		39-118		
2,4-Dichlorophenol	50	47.81			96		66-126		
2,6-Dichlorophenol	50	50.24			100		78-111		
Diethylphthalate	50	45.29			91		55-124		
Dimethoate	50	24.86			50		14-122		
p-Dimethylaminoazobenzene	50	52.55			105		63-139		
7,12-Dimethylbenz[a]anthracene	50	47.96			96		60-118		
3,3'-Dimethylbenzidine	100	40.13			40		10-82		
a,a-Dimethylphenethylamine	50	71.01			142*		10-113		
2,4-Dimethylphenol	50	41.99			84		63-117		
Dimethylphthalate	50	41.49			83		26-133		
4,6-Dinitro-2-methylphenol	50	44.29			89		64-124		
1,3-Dinitrobenzene	50	47.28			95		76-118		
2,4-Dinitrophenol	100	79.06			79		42-129		
2,4-Dinitrotoluene	50	48.47			97		71-131		
2,6-Dinitrotoluene	50	51.09			102		71-133		
Disulfoton	50	128.16			256*		78-173		
Ethyl methanesulfonate	50	48.67			97		76-106		
bis(2-Ethylhexyl)phthalate	50	48.85			98		66-130		
Fluoranthene	50	51.86			104		68-129		
Fluorene	50	48.14			96		71-127		
Hexachlorobenzene	50	50.06			100		64-128		
Hexachlorocyclopentadiene	100	63.93			64		10-101		
Hexachloroethane	50	43.3			87		23-121		
Hexachloropropene	50	41.58			83		32-107		
Indeno(1,2,3-cd)pyrene	50	50.25			101		62-128		
Isodrin	50	51.97			104		71-118		
Isophorone	50	48.87			98		68-125		
Isosafrole	50	52.96			106		70-137		
Methapyrilene	200	433.03			217*		70-130		
Methyl methanesulfonate	50	44.17			88		47-100		
Methyl parathion	50	37.12			74		19-125		
3-Methylcholanthrene	50	63.26			127		77-134		
2-Methylnaphthalene	50	46.6			93		61-117		
2-Methylphenol	50	46.5			93		54-122		
4-Methylphenol	50	44.69			89		44-114		
1,4-Naphthoquinone	100	1.05			1*		10-69		
1-Naphthylamine	100	54.93			55		10-112		
2-Naphthylamine	100	54.22			54		19-103		
2-Nitroaniline	50	48.34			97		68-130		
3-Nitroaniline	50	43.82			88		58-122		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Nitroaniline	50	44.32			89		61-111		
Nitrobenzene	50	46.67			93		70-121		
5-Nitro-o-toluidine	50	43.95			88		43-117		
2-Nitrophenol	50	46.03			92		67-131		
4-Nitrophenol	50	34.25			68		11-88		
4-Nitroquinoline-1-oxide	500	511.48			102		59-124		
N-Nitrosodiethylamine	50	49.41			99		71-113		
N-Nitrosodimethylamine	50	37.03			74		28-99		
N-Nitrosodi-n-butylamine	50	44.76			90		65-109		
N-Nitroso-di-n-propylamine	50	47.71			95		63-121		
N-Nitrosodiphenylamine	50	47.98			96		65-125		
N-Nitrosomethylethylamine	50	48.07			96		68-109		
N-Nitrosomorpholine	50	45.62			91		57-116		
N-Nitrosopiperidine	50	46.97			94		74-111		
N-Nitrosopyrrolidine	50	49.11			98		67-113		
Di-n-octylphthalate	50	49.3			99		73-131		
Parathion	50	50.44			101		73-129		
Pentachlorobenzene	50	49.37			99		75-113		
Pentachloronitrobenzene	50	50.89			102		69-117		
Pentachlorophenol	50	54.74			109		53-133		
Phenacetin	50	48.83			98		70-115		
Phenanthrene	50	47.19			94		65-120		
Phenol	50	30.23			60		19-82		
Phorate	50	49.44			99		66-130		
2-Picoline	50	43.91			88		65-96		
Pronamide	50	51.33			103		77-116		
Pyrene	50	46.78			94		68-118		
Pyridine	50	35.1			70		18-100		
Safrole	50	49.24			98		76-109		
1,2,4,5-Tetrachlorobenzene	50	46.72			93		46-129		
2,3,4,6-Tetrachlorophenol	50	54.61			109		76-124		
Thionazin	50	48.42			97		68-121		
o-Toluidine	50	31.44			63		21-121		
2,4,5-Trichlorophenol	50	48.42			97		68-126		
2,4,6-Trichlorophenol	50	49.72			99		71-130		
O,O,O-Triethylphosphorothioate	50	48.17			96		79-113		
1,3,5-Trinitrobenzene	50	28.86			58		31-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H161301AA	Sample number(s): 8354933-8354948 UNSPK: 8354936									

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P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Acetone	N.D.	37.5	41.03	37.5	39.91	109	106	65-124	3	30
Acetonitrile	N.D.	37.5	48.28	37.5	51.58	129	138	48-175	7	30
Acrolein	N.D.	37.5	41.75	37.5	36.98	111	99	35-137	12	30
Acrylonitrile	N.D.	25	28.92	25	28.52	116	114	68-135	1	30
Allyl Chloride	N.D.	5.00	4.89	5.00	5.06	98	101	62-127	3	30
Benzene	0.357	5.00	5.51	5.00	5.45	103	102	80-120	1	30
Bromodichloromethane	N.D.	5.00	5.56	5.00	5.55	111	111	80-120	0	30
Bromoform	N.D.	5.00	4.83	5.00	5.35	97	107	62-128	10	30
Bromomethane	N.D.	5.00	5.86	5.00	5.49	117	110	71-126	7	30
2-Butanone	N.D.	37.5	43.69	37.5	44.8	117	119	66-135	3	30
Carbon Disulfide	N.D.	5.00	4.74	5.00	4.90	95	98	65-120	3	30
Carbon Tetrachloride	N.D.	5.00	5.32	5.00	5.63	106	113	65-134	6	30
2-Chloro-1,3-butadiene	N.D.	5.00	5.25	5.00	5.52	105	110	60-120	5	30
Chloroethane	2.42	5.00	7.77	5.00	7.33	107	98	71-122	6	30
Chloroform	N.D.	5.00	5.51	5.00	5.39	110	108	80-120	2	30
Chloromethane	N.D.	5.00	5.40	5.00	5.23	108	105	63-121	3	30
1,2-Dibromo-3-chloropropane	N.D.	5.00	6.68	5.00	6.82	134*	136*	56-131	2	30
Dibromochloromethane	N.D.	5.00	5.00	5.00	5.31	100	106	68-131	6	30
1,2-Dibromoethane	N.D.	5.00	5.25	5.00	5.65	105	113	80-120	7	30
Dibromomethane	N.D.	5.00	5.71	5.00	5.46	114	109	80-122	4	30
trans-1,4-Dichloro-2-butene	N.D.	25	29.81	25	31.71	119	127	10-182	6	30
1,2-Dichlorobenzene	N.D.	5.00	4.70	5.00	5.40	94	108	80-120	14	30
1,3-Dichlorobenzene	N.D.	5.00	4.76	5.00	5.39	95	108	80-120	12	30
1,4-Dichlorobenzene	N.D.	5.00	4.78	5.00	5.34	96	107	80-120	11	30
Dichlorodifluoromethane	N.D.	5.00	4.37	5.00	4.44	87	89	35-142	2	30
1,1-Dichloroethane	5.98	5.00	11.19	5.00	10.85	104	98	75-120	3	30
1,2-Dichloroethane	N.D.	5.00	5.58	5.00	5.51	112	110	72-127	1	30
1,1-Dichloroethene	N.D.	5.00	5.42	5.00	5.64	108	113	70-120	4	30
trans-1,2-Dichloroethene	N.D.	5.00	5.39	5.00	5.44	108	109	80-120	1	30
1,2-Dichloropropane	N.D.	5.00	5.39	5.00	5.28	108	106	80-120	2	30
1,3-Dichloropropane	N.D.	5.00	4.96	5.00	5.22	99	104	80-120	5	30
trans-1,3-Dichloropropene	N.D.	5.00	4.70	5.00	5.04	94	101	77-121	7	30
Dimethyl ether	4.87	5.00	9.27	5.00	9.20	88	87	80-120	1	30
1,4-Dioxane	N.D.	125	167.28	125	210.04	134	168*	75-152	23	30
Ethyl ether	33.04	5.00	39.32	5.00	35.04	126 (2)	40 (2)	60-129	11	30
Ethyl Methacrylate	N.D.	5.00	4.60	5.00	4.91	92	98	69-133	6	30
Ethylbenzene	N.D.	5.00	4.80	5.00	5.30	96	106	80-120	10	30
Freon 113	N.D.	5.00	5.25	5.00	5.72	105	114	75-120	9	30
Hexachlorobutadiene	N.D.	5.00	4.83	5.00	5.57	97	111	69-120	14	30
Hexachloroethane	N.D.	5.00	4.72	5.00	4.60	94	92	57-130	3	30
2-Hexanone	N.D.	25	30.6	25	31.99	122	128	73-128	4	30
Isobutyl Alcohol	N.D.	125	143.5	125	171.21	115	137	64-152	18	30
Methacrylonitrile	N.D.	37.5	49.13	37.5	49.89	131	133	60-145	2	30
Methyl Iodide	N.D.	5.00	5.24	5.00	5.18	105	104	72-127	1	30
Methyl Methacrylate	N.D.	5.00	5.91	5.00	6.21	118	124	60-136	5	30
4-Methyl-2-pentanone	N.D.	25	29.95	25	30.76	120	123	71-129	3	30
Methylene Chloride	0.432	5.00	5.79	5.00	5.44	107	100	80-120	6	30
Naphthalene	N.D.	5.00	3.99	5.00	4.85	80	97	58-125	20	30
Pentachloroethane	N.D.	5.00	4.78	5.00	5.84	96	117	73-128	20	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Propionitrile	N.D.	37.5	44.53	37.5	45.83	119	122	68-136	3	30
Styrene	N.D.	5.00	5.00	5.00	5.41	100	108	80-122	8	30
1,1,1,2-Tetrachloroethane	N.D.	5.00	5.09	5.00	5.44	102	109	72-125	7	30
1,1,2,2-Tetrachloroethane	N.D.	5.00	4.56	5.00	5.25	91	105	80-120	14	30
Tetrachloroethene	0.293	5.00	5.20	5.00	5.87	98	111	80-120	12	30
Tetrahydrofuran	4.55	25	33.31	25	33.76	115	117	64-132	1	30
Toluene	N.D.	5.00	4.74	5.00	5.16	95	103	80-120	9	30
1,2,4-Trichlorobenzene	N.D.	5.00	4.33	5.00	5.15	87	103	67-120	17	30
1,1,1-Trichloroethane	N.D.	5.00	5.28	5.00	5.44	106	109	70-124	3	30
1,1,2-Trichloroethane	N.D.	5.00	5.07	5.00	5.34	101	107	80-120	5	30
Trichloroethene	0.222	5.00	5.68	5.00	5.86	109	113	80-120	3	30
Trichlorofluoromethane	N.D.	5.00	5.58	5.00	5.83	112	117	64-133	4	30
1,2,3-Trichloropropane	N.D.	5.00	5.00	5.00	5.91	100	118	80-120	17	30
Vinyl Acetate	N.D.	12.5	12.85	12.5	12.81	103	102	40-185	0	30
Vinyl Chloride	0.230	5.00	5.71	5.00	5.86	110	113	62-128	3	30
Xylene (Total)	N.D.	15	14.52	15	16.1	97	107	80-120	10	30
Batch number: L161302AA	Sample number(s): 8354933-8354940 UNSPK: 8354936									
2-Propanol	N.D.	150	141.53	150	146.88	94	98	52-139	4	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 16124WAZ026	Sample number(s): 8354941-8354945 UNSPK: P24WZUS									
Diethylphthalate	< 5	50	52.15	50	51.24	104	102	55-124	2	30
2,4-Dinitrotoluene	< 5	50	53.8	50	53.71	108	107	71-131	0	30
2,6-Dinitrotoluene	< 1	50	55.78	50	56.3	112	113	71-133	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 16124WAA026	Sample number(s): 8354933-8354940 UNSPK: 8354936									
Acenaphthene	N.D.	50	51.7	50	51.81	103	104	69-123	0	30
Acenaphthylene	N.D.	50	55.21	50	54.93	110	110	67-125	1	30
Acetophenone	N.D.	50	47.99	50	47.8	96	96	61-124	0	30
2-Acetylaminofluorene	N.D.	50	64.62	50	66.11	129	132	63-146	2	30
4-Aminobiphenyl	N.D.	50	50.41	50	38.77	101	78	33-113	26	30
Aniline	N.D.	50	38.33	50	29.07	77	58	38-106	27	30
Anthracene	N.D.	50	51.73	50	52.44	103	105	68-126	1	30
Aramite	N.D.	50	106.93	50	107.12	214*	214*	10-125	0	30
Benzo(a)anthracene	N.D.	50	57.74	50	59.34	115	119	69-133	3	30
Benzo(a)pyrene	N.D.	50	53.11	50	55.14	106	110	68-126	4	30
Benzo(b)fluoranthene	N.D.	50	55.33	50	57.68	111	115	71-131	4	30
Benzo(g,h,i)perylene	N.D.	50	44.65	50	42.23	89	84	62-132	6	30
Benzo(k)fluoranthene	N.D.	50	53.99	50	54.96	108	110	72-128	2	30
Benzyl alcohol	N.D.	50	48.64	50	47.62	97	95	55-118	2	30
4-Bromophenyl-phenylether	N.D.	50	53.84	50	53.57	108	107	64-129	1	30
Butylbenzylphthalate	N.D.	50	53.61	50	54.21	107	108	56-124	1	30
Di-n-butylphthalate	N.D.	50	52.15	50	53.52	104	107	61-125	3	30
4-Chloro-3-methylphenol	N.D.	50	51.27	50	50.59	103	101	65-125	1	30
4-Chloroaniline	N.D.	50	43.06	50	34.71	86	69	45-115	21	30
Chlorobenzilate	N.D.	50	54.99	50	55.16	110	110	49-134	0	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
bis(2-Chloroethoxy)methane	N.D.	50	51.93	50	51.19	104	102	67-124	1	30
bis(2-Chloroethyl)ether	N.D.	50	48.95	50	47.9	98	96	65-120	2	30
bis(2-Chloroisopropyl)ether	N.D.	50	47.4	50	46.88	95	94	63-129	1	30
2-Chloronaphthalene	N.D.	50	48.45	50	48.63	97	97	57-126	0	30
2-Chlorophenol	N.D.	50	46.8	50	43.75	94	88	59-120	7	30
4-Chlorophenyl-phenylether	N.D.	50	52.67	50	52.33	105	105	67-125	1	30
Chrysene	N.D.	50	58.15	50	58.6	116	117	71-136	1	30
Diallate trans/cis	N.D.	50	48.3	50	48.54	97	97	67-112	0	30
Dibenz(a,h)anthracene	N.D.	50	47.12	50	46.02	94	92	64-133	2	30
Dibenzofuran	N.D.	50	51.68	50	50.96	103	102	67-120	1	30
3,3'-Dichlorobenzidine	N.D.	50	51.56	50	47.12	103	94	39-118	9	30
2,4-Dichlorophenol	N.D.	50	45.96	50	45.52	92	91	66-126	1	30
2,6-Dichlorophenol	N.D.	50	48.44	50	47.58	97	95	78-111	2	30
Diethylphthalate	N.D.	50	52.15	50	51.24	104	102	55-124	2	30
Dimethoate	N.D.	50	39.36	50	37.96	79	76	14-122	4	30
p-Dimethylaminoazobenzene	N.D.	50	59.35	50	58.91	119	118	63-139	1	30
7,12-Dimethylbenz[a]anthracene	N.D.	50	54.47	50	55.67	109	111	60-118	2	30
3,3'-Dimethylbenzidine	N.D.	100	56.13	100	35.8	56	36	10-82	44*	30
a,a-Dimethylphenethylamine	N.D.	50	59.44	50	61.84	119*	124*	10-113	4	30
2,4-Dimethylphenol	N.D.	50	44.36	50	43.78	89	88	63-117	1	30
Dimethylphthalate	N.D.	50	51.88	50	50.49	104	101	26-133	3	30
4,6-Dinitro-2-methylphenol	N.D.	50	48.3	50	50.92	97	102	64-124	5	30
1,3-Dinitrobenzene	N.D.	50	54.57	50	54.78	109	110	76-118	0	30
2,4-Dinitrophenol	N.D.	100	76.12	100	82.59	76	83	42-129	8	30
2,4-Dinitrotoluene	N.D.	50	53.8	50	53.71	108	107	71-131	0	30
2,6-Dinitrotoluene	N.D.	50	55.78	50	56.3	112	113	71-133	1	30
Disulfoton	N.D.	50	136.2	50	136.92	272*	274*	78-173	1	30
Ethyl methanesulfonate	N.D.	50	50.51	50	48.85	101	98	76-106	3	30
bis(2-Ethylhexyl)phthalate	N.D.	50	53.61	50	54.43	107	109	66-130	2	30
Fluoranthene	N.D.	50	54.57	50	55.53	109	111	68-129	2	30
Fluorene	N.D.	50	52.37	50	51.92	105	104	71-127	1	30
Hexachlorobenzene	N.D.	50	52.58	50	53.88	105	108	64-128	2	30
Hexachlorocyclopentadiene	N.D.	100	66.71	100	66.92	67	67	10-101	0	30
Hexachloroethane	N.D.	50	41.97	50	42.46	84	85	23-121	1	30
Hexachloropropene	N.D.	50	40.75	50	43.48	82	87	32-107	6	30
Indeno(1,2,3-cd)pyrene	N.D.	50	45.89	50	44.46	92	89	62-128	3	30
Isodrin	N.D.	50	55.93	50	55.92	112	112	71-118	0	30
Isophorone	N.D.	50	52.08	50	53.19	104	106	68-125	2	30
Isosafrole	N.D.	50	56.49	50	56.61	113	113	70-137	0	30
Methapyrilene	N.D.	200	466.16	200	465.06	233*	233*	70-130	0	30
Methyl methanesulfonate	N.D.	50	44.37	50	43.59	89	87	47-100	2	30
Methyl parathion	N.D.	50	39.86	50	38.37	80	77	19-125	4	30
3-Methylcholanthrene	N.D.	50	66.97	50	67.19	134	134	77-134	0	30
2-Methylnaphthalene	N.D.	50	49.3	50	50.82	99	102	61-117	3	30
2-Methylphenol	N.D.	50	49.12	50	46.45	98	93	54-122	6	30
4-Methylphenol	N.D.	50	47.58	50	42.75	95	86	44-114	11	30
1,4-Naphthoquinone	N.D.	100	404.69	100	340.38	405*	340*	10-69	17	30
1-Naphthylamine	N.D.	100	68.7	100	42.79	69	43	10-112	46*	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2-Naphthylamine	N.D.	100	65.85	100	48.6	66	49	19-103	30	30
2-Nitroaniline	N.D.	50	54.35	50	54.54	109	109	68-130	0	30
3-Nitroaniline	N.D.	50	50.62	50	44.03	101	88	58-122	14	30
4-Nitroaniline	N.D.	50	50.49	50	47.35	101	95	61-111	6	30
Nitrobenzene	N.D.	50	49.61	50	50.46	99	101	70-121	2	30
5-Nitro-o-toluidine	N.D.	50	53.46	50	44.52	107	89	43-117	18	30
2-Nitrophenol	N.D.	50	53.42	50	54.35	107	109	67-131	2	30
4-Nitrophenol	N.D.	50	36.82	50	39.43	74	79	11-88	7	30
4-Nitroquinoline-1-oxide	N.D.	500	539.64	500	535.31	108	107	59-124	1	30
N-Nitrosodiethylamine	N.D.	50	51	50	50.22	102	100	71-113	2	30
N-Nitrosodimethylamine	N.D.	50	38.71	50	38.13	77	76	28-99	2	30
N-Nitrosodi-n-butylamine	N.D.	50	48.34	50	48.63	97	97	65-109	1	30
N-Nitroso-di-n-propylamine	N.D.	50	49.46	50	48.46	99	97	63-121	2	30
N-Nitrosodiphenylamine	N.D.	50	50.47	50	52.35	101	105	65-125	4	30
N-Nitrosomethylethylamine	N.D.	50	49.4	50	49.28	99	99	68-109	0	30
N-Nitrosomorpholine	N.D.	50	47.6	50	45.67	95	91	57-116	4	30
N-Nitrosopiperidine	N.D.	50	50.42	50	51.01	101	102	74-111	1	30
N-Nitrosopyrrolidine	N.D.	50	51.04	50	50.27	102	101	67-113	2	30
Di-n-octylphthalate	N.D.	50	56.17	50	58.31	112	117	73-131	4	30
Parathion	N.D.	50	56.93	50	57.72	114	115	73-129	1	30
Pentachlorobenzene	N.D.	50	52.86	50	53.38	106	107	75-113	1	30
Pentachloronitrobenzene	N.D.	50	52.29	50	54.08	105	108	69-117	3	30
Pentachlorophenol	N.D.	50	46.91	50	41.95	94	84	53-133	11	30
Phenacetin	N.D.	50	53.29	50	53	107	106	70-115	1	30
Phenanthrene	N.D.	50	49.68	50	50.14	99	100	65-120	1	30
Phenol	N.D.	50	35.5	50	32.14	71	64	19-82	10	30
Phorate	N.D.	50	53.41	50	53.63	107	107	66-130	0	30
2-Picoline	N.D.	50	44.38	50	43.74	89	87	65-96	1	30
Pronamide	N.D.	50	54.51	50	55.91	109	112	77-116	3	30
Pyrene	N.D.	50	49.4	50	49.35	99	99	68-118	0	30
Pyridine	N.D.	50	35.99	50	35.8	72	72	18-100	1	30
Safrole	N.D.	50	51.82	50	52.76	104	106	76-109	2	30
1,2,4,5-Tetrachlorobenzene	N.D.	50	49.67	50	49.86	99	100	46-129	0	30
2,3,4,6-Tetrachlorophenol	N.D.	50	51.09	50	44.78	102	90	76-124	13	30
Thionazin	N.D.	50	54.58	50	53.42	109	107	68-121	2	30
o-Toluidine	N.D.	50	38.18	50	23.5	76	47	21-121	48*	30
2,4,5-Trichlorophenol	N.D.	50	48.98	50	47.33	98	95	68-126	3	30
2,4,6-Trichlorophenol	N.D.	50	45.65	50	43.35	91	87	71-130	5	30
O,O,O-Triethylphosphorothioate	N.D.	50	51.18	50	51.87	102	104	79-113	1	30
1,3,5-Trinitrobenzene	N.D.	50	46.3	50	46.13	93	92	31-120	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: H161301AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8354933	107	104	98	94
8354934	103	102	100	91
8354935	103	104	100	92
8354936	111	110	96	94
8354937	117*	119*	92	98
8354938	107	101	96	95
8354939	102	103	102	93
8354940	101	96	102	91
8354941	103	100	102	91
8354942	101	95	101	90
8354943	107	106	98	93
8354944	107	104	98	94
8354945	100	96	103	91
8354946	103	111	100	92
8354947	105	107	100	91
8354948	102	103	102	91
Blank	99	104	103	93
LCS	105	103	96	96
MS	117*	119*	92	98
MSD	107	101	96	95
Limits:	77-114	74-113	77-110	78-110

Analysis Name: 2-Propanol
Batch number: L161302AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8354933	97	99	100	100
8354934	97	101	99	100
8354935	98	100	99	101
8354936	98	100	99	100
8354937	96	98	101	102
8354938	98	100	101	101
8354939	97	100	99	101
8354940	98	101	99	100
Blank	98	101	99	101
LCS	97	99	99	102
LCSD	99	100	101	101
MS	96	98	101	102
MSD	98	100	101	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: SVOAs by 8270D in Water
Batch number: 16124WAA026

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1655225
Reported: 05/13/2016 19:04

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8354933	47	63	95	92	94	90
8354934	39	54	86	87	90	76
8354935	55	58	90	86	94	88
8354936	51	53	74	92	91	76
8354937	66	64	87	93	95	82
8354938	60	60	74	95	94	86
8354939	44	47	69	89	93	66
8354940	5*	2*	7*	82	85	56
Blank	47	65	99	82	91	88
LCS	54	71	103	87	89	82
MS	66	64	87	93	95	82
MSD	60	60	74	95	94	86
Limits:	10-85	10-103	22-150	46-128	61-112	41-125

Analysis Name: SVOAs by 8270D in Water
Batch number: 16124WAZ026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
8354941	88	93	91
8354942	87	93	93
8354943	83	89	88
8354944	136*	142*	138*
8354945	89	94	86
Blank	82	91	88
LCS	87	89	82
MS	93	95	82
MSD	95	94	86
Limits:	46-128	61-112	41-125

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200 | 1655225 | 83549333-48

CHAIN OF CUSTODY RECORD

JOB 4/19/2016

Laboratory: Eurofins Lancaster Laboratories Environmental, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Client: 0 **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2Q 2016 Annual Groundwater Monitoring Event **DAA JN:** B03204-16 **Lab JN:**	~~Project Specific (PS)~~ or Batch (B) QC: Sample Collection for Project Complete? YES UPS Carrier: 1Z75Y02XY04170756 Tracking Number: 1Z75Y02XY04125668

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G						
Box 3 - Filtered/Unfiltered					U	U	U						
Required pH of Sample					<2	<2							
Box 2 - Preservative					A	A	H						
Box 5 - Sample Container Type					3-40mL V	3-40mL V	2-250mL AG						
Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge volume	8260C/5030C 5 ml purge volume for 2-propanol ONLY	8270D/3510C (Semivolatiles)						
16C1	4/27	1325	GW	8	X	X	X						
16MW8	4/26	1355	GW	8	X	X	X						
16MW9	4/27	1215	GW	8	X	X	X						
16WC1A	4/27	1050	GW	24	X	X	X						
16WDUP	4/27	1110	GW	8	X	X	X						
16WC1B	4/27	0950	GW	8	X	X	X						
16-2	4/26	1250	GW	5 3 3	X		X						
16-3	4/26	1450	GW	5 3 3	X		X						
16-5	4/26	1045	GW	5 3 3	X		X						
16WC2B	4/26	1155	GW	5 3 3	X		X						
16SPRING	4/26	1100	GW	5 3 3	X		X						
Trip Blank 1	4/26	—	T	2	X								
Trip Blank 2	4/26	—	T	2	X								
Trip Blank 3			T	2	X								

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. Level 1 Deliverable with EDD.

USE FOR QC

one trip blnnk required per day

Delete if not required

Clients Special Instructions: level 1 with edd. See attached target analyte list.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): KEN COBDINGTON	Date: 4/26/16	#1 Relinquished by (Signature): Will Mason-Deese	Date: 4/27/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Will Mason-Deese	Date: 4/26/16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/28/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name: ELLE	Time:	Company Name: ELLE	Time: 1090	

4/28/16

1655225

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-16

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Permit QL

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING

1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5
15	Dimethyl ether	115-10-6	12.5
16	Methylene chloride	75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF

17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014

* report to at or above permit QL. These wells only

25 ml purge volume

ANALYTICAL METHOD: 8260C/ GCMS/ Volatile (1 of 2 pages)
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Analyte	CAS#	SecondaryName	TertiaryName
1. Acetone	67-64-1		
2. Acetonitrile	75-05-8		
3. Acrolein	107-02-8		
4. Acrylonitrile	107-13-1		
5. Allyl chloride	107-05-1		
6. Benzene	71-43-2		
7. Bromodichloromethane	75-27-4		
8. Bromoform	75-25-2	Tribromomethane	
9. Carbon disulfide	75-15-0		
10. Carbon tetrachloride	56-23-5		
11. Chloroethane	75-00-3	Ethyl chloride	
12. Chloroform	67-66-3	Trichloromethane	
13. Chloroprene	126-99-8		
14. Dibromochloromethane	124-48-1		
15. 1,2-Dibromo-3-chloropropane	96-12-8	DBCP	
16. 1,2-Dibromoethane	106-93-4	EDB	Ethylene dibromide
17. 1,2-Dichlorobenzene	95-50-1	o-Dichlorobenzene	
18. 1,3-Dichlorobenzene	541-73-1	m-Dichlorobenzene	
19. 1,4-Dichlorobenzene	106-46-7	p-Dichlorobenzene	
20. trans-1,4-Dichloro-2-butene	110-57-6		
21. Dichlorodifluoromethane	75-71-8		
22. 1,1-Dichloroethane	75-34-3		
23. 1,2-Dichloroethane	107-06-2		
24. 1,1-Dichloroethene	75-35-4		
25. trans-1,2-Dichloroethene	156-60-5		
26. 1,2-Dichloropropane	78-87-5		
27. 1,3-Dichloropropane	142-28-9		
28. trans-1,3-Dichloropropene	10061-02-6		
29. Diethyl ether	60-29-7		
30. Dimethyl ether	115-10-6		
31. 1,4-Dioxane	123-91-1		
32. Ethylbenzene	100-41-4		
33. Ethyl methacrylate	97-63-2		
34. Hexachlorobutadiene	87-68-3		
35. Hexachloroethane	67-72-1		
36. 2-Hexanone	591-78-6	Methyl butyl ketone	MBK
37. Isobutyl alcohol	78-83-1		
38. Methacrylonitrile	126-98-7		
39. Bromomethane	74-83-9	Methyl bromide	
40. Chloromethane	74-87-3	Methyl chloride	
41. 2-Butanone	78-93-3	Methyl ethyl ketone	MEK
42. Iodomethane	74-88-4	methyl iodide	
43. Methyl methacrylate	80-62-6		
44. 4-Methyl-2-pentanone	108-10-1	Methyl isobutyl	
45. Dibromomethane	74-95-3	Methylene bromide	
46. Methylene chloride	75-09-2		
47. Naphthalene	91-20-3		
48. Pentachloroethane	76-01-7		

49.	2-Propanol	67-63-0	Isopropanol	
50.	Propionitrile	107-12-0		
51.	Styrene	100-42-5		
52.	1,1,1,2-Tetrachloroethane	630-20-6		
53.	1,1,2,2-Tetrachloroethane	79-34-5		
54.	Tetrachloroethene	127-18-4	Tetrachloroethylene	
55.	Tetrahydrofuran	109-99-9		
56.	Toluene	108-88-3		
57.	1,2,4-Trichlorobenzene	120-82-1		
58.	1,1,1-Trichloroethane	71-55-6	Methylchloroform	
59.	1,1,2-Trichloroethane	79-00-5		
60.	Trichloroethene	79-01-6	Trichloroethene	
61.	Trichlorofluoromethane	75-69-4		
62.	1,2,3-Trichloropropane	96-18-4		
63.	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	Freon-13	
64.	Vinyl acetate	108-05-4		
65.	Vinyl chloride	75-01-4		
66.	Xylenes (Total)	1330-20-7		

Rev per July 2014 permit renewal. JCF 4-2015

ANALYTICAL METHOD: 8270D/ GCMS/ Semivolatile

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

	Analyte	CAS#	SecondaryName	TertiaryName
1.	Acenaphthene	83-32-9		
2.	Acenaphthylene	208-96-8		
3.	Acetophenone	98-86-2		
4.	2-Acetylaminofluorene	53-96-3		
5.	4-Aminobiphenyl	92-67-1		
6.	Aniline	62-53-3		
7.	Anthracene	120-12-7		
8.	Aramite	140-57-8		
9.	Benzo[a]anthracene	56-55-3		
10.	Benzo[b]fluoranthene	205-99-2		
11.	Benzo[k]fluoranthene	207-08-9		
12.	Benzo[ghi]perylene	191-24-2		
13.	Benzo(a)pyrene	50-32-8		
14.	1,4-Benzenediamine	106-50-3	p-Phenylenediamine	
15.	Benzyl alcohol	100-51-6		
16.	bis(2-Chloroethoxy)methane	111-91-1		
17.	bis(2-Chloroethyl)ether	111-44-4		
18.	bis(2-Chloro-1-methylethyl)ether	108-60-1		
19.	bis(2-Ethylhexyl)phthalate	117-81-7		
20.	4-Bromophenyl phenyl ether	101-55-3		
21.	Butyl benzyl phthalate	85-68-7		
22.	p-Chloroaniline	106-47-8	4-Chloroaniline	
23.	Chlorobenzilate	510-15-6		
24.	p-Chloro-m-cresol	59-50-7	4-Chloro-3-methylphenol	
25.	2-Chloronaphthalene	91-58-7		
26.	2-Chlorophenol	95-57-8		
27.	4-Chlorophenyl phenyl ether	7005-72-3		
28.	Chrysene	218-01-9		
29.	Diallate	2303-16-4		
30.	Dibenz(a,h)anthracene	53-70-3		
31.	Dibenzofuran	132-64-9		
32.	Di-n-butyl phthalate	84-74-2		
33.	3,3'-Dichlorobenzidine	91-94-1		
34.	2,4-Dichlorophenol	120-83-2		
35.	2,6-Dichlorophenol	87-65-0		
36.	Diethyl phthalate	84-66-2		
37.	O,O-Diethyl O-2-pyrazinyl	297-97-2	Thionazin	
38.	Dimethoate	60-51-5		
39.	p-(Dimethylamino)azobenzene	60-11-7		
40.	7,12-Dimethylbenz[a]anthracene	57-97-6		
41.	3,3'-Dimethylbenzidine	119-93-7		
42.	a,a-Dimethylphenethylamine	122-09-8		
43.	2,4-Dimethylphenol	105-67-9		
44.	Dimethyl phthalate	131-11-3		
45.	m-Dinitrobenzene	99-65-0	1,3-Dinitrobenzene	
46.	4,6-Dinitro-o-cresol	534-52-1	4,6-Dinitro-2-methylphenol	
47.	2,4-Dinitrophenol	51-28-5		
48.	2,4-Dinitrotoluene	121-14-2		
49.	2,6-Dinitrotoluene	606-20-2		
50.	Di-n-octyl phthalate	117-84-0		
51.	Diphenylamine	122-39-4		
52.	Disulfoton	298-04-4		
53.	Ethyl methanesulfonate	62-50-0		
54.	Famphur	52-85-7		
55.	Fluoranthene	206-44-0		

56. Fluorene	86-73-7		
57. Hexachlorobenzene	118-74-1		
58. Hexachlorocyclopentadiene	77-47-4		
~~59. Hexachlorophene~~	70-30-4	To be analyzed by Test America. JCF 4-17-2014	
60. Hexachloropropene	1888-71-7		
61. Indeno[1,2,3-cd]pyrene	193-39-5		
62. Isodrin	465-73-6		
63. Isophorone	78-59-1		
64. Isosafrole	120-58-1		
65. Kepone	143-50-0		
66. Methapyrilene	91-80-5		
67. 3-Methylcholanthrene	56-49-5		
68. Methyl methane sulfonate	66-27-3		
69. 2-Methylnaphthalene	91-57-6		
70. Methyl parathion	298-00-0		
71. 2-Methylphenol	95-48-7	o-Cresol	
72. 3 & 4-Methylphenol	m 108-39-4 p	m-/p-Cresol	
73. 1,4-Naphthoquinone	130-15-4		
74. 1-Naphthylamine	134-32-7		
75. 2-Naphthylamine	91-59-8		
76. o-Nitroaniline	88-74-4	2-Nitroaniline	
77. m-Nitroaniline	99-09-2	3-Nitroaniline	
78. p-Nitroaniline	100-01-6	4-Nitroaniline	
79. Nitrobenzene	98-95-3		
80. o-Nitrophenol	88-75-5	2-Nitrophenol	
81. p-Nitrophenol	100-02-7	4-Nitrophenol	
82. 4-Nitroquinoline-1-oxide	56-57-5		
83. N-Nitrosodi-n-butylamine	924-16-3		
84. N-Nitrosodiethylamine	55-18-5		
85. N-Nitrosodimethylamine	62-75-9		
86. N-Nitrosodiphenylamine	86-30-6		
87. N-Nitrosodipropylamine	621-64-7		
88. N-Nitrosomethylethylamine	10595-95-6		
89. N-Nitrosomorpholine	59-89-2		
90. N-Nitrosopiperidine	100-75-4		
91. N-Nitrosopyrrolidine	930-55-2		
92. 5-Nitroso-o-toluidine	99-55-8		
93. Parathion	56-38-2		
94. Pentachlorobenzene	608-93-5		
95. Pentachloronitrobenzene	82-68-8		
96. Pentachlorophenol	87-86-5		
97. Phenacetin	62-44-2		
98. Phenanthrene	85-01-8		
99. Phenol	108-95-2		
100. Phorate	298-02-2		
101. 2-Picoline	931-19-1		
102. Pronamide	23950-58-5		
103. Pyrene	129-00-0		
104. Pyridine	110-86-1		
105. Safrole	94-59-7		
~~106. Sulfotep~~	3689-24-5	To be analyzed by Test America. JCF 4-17-14	
107. 1,2,4,5-Tetrachlorobenzene	95-94-3		
108. 2,3,4,6-Tetrachlorophenol	58-90-2		
109. o-Toluidine	95-53-4		
110. 2,4,5-Trichlorophenol	95-95-4		
111. 2,4,6-Trichlorophenol	88-06-2		
112. O,O,O-Triethyl phosphorothioate	126-68-1		
113. sym-Trinitrobenzene	99-35-4	1,3,5-trinitrobenzene	

114. HEXACHLOROETHANE JCF 4/9/2013

1655225

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

JLK 4/16/2010

Report to at or above the QL.
10/13- diethylphthate added 10/13.

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Sample Administration Receipt Documentation Log

Doc Log ID: 144597

Group Number(s): 165225

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/28/2016 10:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	6
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 14:46 on 04/28/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	2.7	DT	Wet	Y	Bagged	N
2	DT146	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
8354933	16C1	X		
8354934	16MW8	X		
8354935	16MW9	X		
8354936	16WC1A	X		Unspiked
8354937	16WC1A MS	X		Matrix Spike
8354938	16WC1A MSD	X		Matrix Spike Duplicate
8354939	16WDUP	X		Field Duplicate Sample
8354940	16WC1B	X		
8354941	16-2	X		
8354942	16-3	X		
8354943	16-5	X		
8354944	16WC2B	X		
8354945	16SPRING	X		
8354946	Trip Blank_1	X		Trip Blank
8354947	Trip Blank_2	X		Trip Blank
8354948	Trip Blank_3	X		Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 8354939: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Volatiles

Fraction: Volatiles by GC/MS

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Tetrahydrofuran.

(Sample number(s): 8354933-8354934: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Tetrahydrofuran.

(Sample number(s): 8354936: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Tetrahydrofuran.

(Sample number(s): 8354935, 8354940, 8354946-8354948: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 8354933-8354936, 8354939-8354940, 8354946-8354948: Analysis: 11996)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s)was not detected in the sample, the data is reported.

Batch#: H161301AA (Sample number(s): 8354933-8354948, UNSPK: 8354936)
The recovery(ies) for the following analyte(s) in the LCS exceeds the acceptance window indicating a positive bias: 1,2-Dibromo-3-chloropropane

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Since the recovery is high and no analytes are detected above the quantitation limit, the data is reported.

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Batch#: H161301AA (Sample number(s): 8354933-8354948, UNSPK: 8354936)
The recovery(ies) for the following analyte(s) in the MSD is outside the acceptance window: 1,4-Dioxane, Ethyl ether
The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: 1,2-Dibromo-3-chloropropane
Refer to the QC Summary forms for more information.

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: H161301AA (Sample number(s): 8354933-8354948, UNSPK: 8354936)
The recovery(ies) for the following surrogate(s) exceeds the acceptance window: 1,2-Dichloroethane-d4 (8354937), Dibromofluoromethane (8354937)

SAMPLE ANALYSIS:

Samples	19 RAAP compounds	2-Propanol	8260C (25 ml)
8354933		DF1	DF10
8354934		DF1	DF1
8354935		DF1	DF10
8354936		UNSPK/ DF1	UNSPK,/ DF10
8354937		MS/ DF1	MS/ DF1
8354938		MSD/ DF1	MSD/ DF1
8354939		DF1	DF10
8354940		DF1	DF1
8354941	DF1		
8354942	DF1		
8354943	DF1		
8354944	DF1		
8354945	DF1		
8354946			DF1
8354947			DF1
8354948			DF1

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Volatiles

Fraction: Volatiles by GC/MS

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
19 RAAP compounds	H161301AA	VBLKH92	05/09/2016 10:40:00
		LCSH92	05/09/2016 09:39:00
		LCSH93	05/09/2016 10:19:00
		8354941	05/09/2016 14:59:00
		8354942	05/09/2016 15:20:00
		8354943	05/09/2016 15:40:00
		8354944	05/09/2016 16:00:00
		8354945	05/09/2016 16:20:00
2-Propanol	L161302AA	VBLKL83	05/09/2016 09:36:00
		LCSL83	05/09/2016 09:58:00
		LCDL83	05/09/2016 10:22:00
		8354933	05/09/2016 18:23:00
		8354934	05/09/2016 18:46:00
		8354935	05/09/2016 16:56:00
		8354936 UNSPK	05/09/2016 17:18:00
		8354937 MS	05/09/2016 17:40:00
		8354938 MSD	05/09/2016 18:02:00
		8354939	05/09/2016 19:08:00
		8354940	05/09/2016 19:30:00
8260C (25 ml)	H161301AA	VBLKH92	05/09/2016 10:40:00
		LCSH92	05/09/2016 09:39:00
		LCSH93	05/09/2016 10:19:00
		8354933	05/09/2016 16:41:00
		8354933	05/09/2016 17:01:00
		8354934	05/09/2016 14:18:00
		8354935	05/09/2016 17:21:00
		8354935	05/09/2016 17:41:00
		8354936 UNSPK	05/09/2016 12:17:00
		8354936 UNSPK	05/09/2016 18:02:00
		8354937 MS	05/09/2016 12:37:00
		8354937 MS	05/09/2016 13:17:00
		8354938 MSD	05/09/2016 12:57:00
		8354938 MSD	05/09/2016 13:38:00
		8354939	05/09/2016 13:58:00
		8354939	05/09/2016 18:22:00
		8354940	05/09/2016 14:39:00
		8354946	05/09/2016 11:16:00
		8354947	05/09/2016 11:36:00
		8354948	05/09/2016 11:57:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAE61
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161301AA / VBLKH92 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	05/09/16	N.D.	ug/l	0.1	1.0
Chloromethane	05/09/16	N.D.	ug/l	0.2	1.0
Vinyl Chloride	05/09/16	N.D.	ug/l	0.2	1.0
Bromomethane	05/09/16	N.D.	ug/l	0.5	1.0
Chloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Trichlorofluoromethane	05/09/16	N.D.	ug/l	0.2	1.0
Ethyl ether	05/09/16	N.D.	ug/l	1.1	13
Acrolein	05/09/16	N.D.	ug/l	5.0	25
1,1-Dichloroethene	05/09/16	N.D.	ug/l	0.2	1.0
Freon 113	05/09/16	N.D.	ug/l	0.2	1.0
Acetone	05/09/16	N.D.	ug/l	3.0	10
Methyl Iodide	05/09/16	N.D.	ug/l	0.6	10
Carbon Disulfide	05/09/16	N.D.	ug/l	0.4	10
Acetonitrile	05/09/16	N.D.	ug/l	32	100
Allyl Chloride	05/09/16	N.D.	ug/l	0.8	10
Methylene Chloride	05/09/16	N.D.	ug/l	0.2	1.0
Acrylonitrile	05/09/16	N.D.	ug/l	1.0	10
trans-1,2-Dichloroethene	05/09/16	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Vinyl Acetate	05/09/16	N.D.	ug/l	3.3	10
2-Chloro-1,3-butadiene	05/09/16	N.D.	ug/l	0.5	10
2-Butanone	05/09/16	N.D.	ug/l	1.0	10
Propionitrile	05/09/16	N.D.	ug/l	10	100
Methacrylonitrile	05/09/16	N.D.	ug/l	9.8	100
Tetrahydrofuran	05/09/16	N.D.	ug/l	2.0	25
Chloroform	05/09/16	N.D.	ug/l	0.1	1.0
1,1,1-Trichloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	05/09/16	N.D.	ug/l	0.2	1.0
Isobutyl Alcohol	05/09/16	N.D.	ug/l	10	200
Benzene	05/09/16	N.D.	ug/l	0.1	1.0
1,2-Dichloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Trichloroethene	05/09/16	N.D.	ug/l	0.2	1.0
1,2-Dichloropropane	05/09/16	N.D.	ug/l	0.1	1.0
Dibromomethane	05/09/16	N.D.	ug/l	0.1	1.0
Methyl Methacrylate	05/09/16	N.D.	ug/l	3.6	10
1,4-Dioxane	05/09/16	N.D.	ug/l	45	200
Bromodichloromethane	05/09/16	N.D.	ug/l	0.1	1.0
4-Methyl-2-pentanone	05/09/16	N.D.	ug/l	1.0	10
Toluene	05/09/16	N.D.	ug/l	0.1	1.0
trans-1,3-Dichloropropene	05/09/16	N.D.	ug/l	0.1	1.0
Ethyl Methacrylate	05/09/16	N.D.	ug/l	0.8	10
1,1,2-Trichloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Tetrachloroethene	05/09/16	N.D.	ug/l	0.1	1.0
1,3-Dichloropropane	05/09/16	N.D.	ug/l	0.1	1.0
2-Hexanone	05/09/16	N.D.	ug/l	1.0	10

Fraction: Volatiles by GC/MS

H161301AA / VBLKH92 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dibromochloromethane	05/09/16	N.D.	ug/l	0.1	1.0
1,2-Dibromoethane	05/09/16	N.D.	ug/l	0.1	1.0
1,1,1,2-Tetrachloroethane	05/09/16	N.D.	ug/l	0.1	1.0
Ethylbenzene	05/09/16	N.D.	ug/l	0.1	1.0
Xylene (Total)	05/09/16	N.D.	ug/l	0.2	3.0
Styrene	05/09/16	N.D.	ug/l	0.1	1.0
Bromoform	05/09/16	N.D.	ug/l	0.1	1.0
1,1,2,2-Tetrachloroethane	05/09/16	N.D.	ug/l	0.2	1.0
trans-1,4-Dichloro-2-butene	05/09/16	N.D.	ug/l	1.0	10
1,2,3-Trichloropropane	05/09/16	N.D.	ug/l	0.3	1.0
Pentachloroethane	05/09/16	N.D.	ug/l	0.8	10
1,3-Dichlorobenzene	05/09/16	N.D.	ug/l	0.1	1.0
1,4-Dichlorobenzene	05/09/16	N.D.	ug/l	0.1	1.0
1,2-Dichlorobenzene	05/09/16	N.D.	ug/l	0.1	1.0
1,2-Dibromo-3-chloropropane	05/09/16	N.D.	ug/l	0.2	1.0
1,2,4-Trichlorobenzene	05/09/16	N.D.	ug/l	0.1	1.0
Hexachlorobutadiene	05/09/16	N.D.	ug/l	0.1	1.0
Naphthalene	05/09/16	N.D.	ug/l	0.1	1.0
Hexachloroethane	05/09/16	N.D.	ug/l	0.1	10
Dimethyl ether	05/09/16	N.D.	ug/l	0.1	13

L161302AA / VBLKL83 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Propanol	05/09/16	N.D.	ug/l	50	100

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAE61
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161301AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH92	104	74 - 113	93	78 - 110	99	77 - 114	103	77 - 110
LCSH92	103	74 - 113	96	78 - 110	105	77 - 114	96	77 - 110
8354933	104	74 - 113	94	78 - 110	107	77 - 114	98	77 - 110
8354934	102	74 - 113	91	78 - 110	103	77 - 114	100	77 - 110
8354935	104	74 - 113	92	78 - 110	103	77 - 114	100	77 - 110
8354936 UNSPK	110	74 - 113	94	78 - 110	111	77 - 114	96	77 - 110
8354937 MS	119 *	74 - 113	98	78 - 110	117 *	77 - 114	92	77 - 110
8354938 MSD	101	74 - 113	95	78 - 110	107	77 - 114	96	77 - 110
8354939	103	74 - 113	93	78 - 110	102	77 - 114	102	77 - 110
8354940	96	74 - 113	91	78 - 110	101	77 - 114	102	77 - 110
8354941	100	74 - 113	91	78 - 110	103	77 - 114	102	77 - 110
8354942	95	74 - 113	90	78 - 110	101	77 - 114	101	77 - 110
8354943	106	74 - 113	93	78 - 110	107	77 - 114	98	77 - 110
8354944	104	74 - 113	94	78 - 110	107	77 - 114	98	77 - 110
8354945	96	74 - 113	91	78 - 110	100	77 - 114	103	77 - 110
8354946	111	74 - 113	92	78 - 110	103	77 - 114	100	77 - 110
8354947	107	74 - 113	91	78 - 110	105	77 - 114	100	77 - 110
8354948	103	74 - 113	91	78 - 110	102	77 - 114	102	77 - 110

L161302AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL83	101	77 - 113	101	78 - 113	98	80 - 116	99	80 - 113
LCSL83	99	77 - 113	102	78 - 113	97	80 - 116	99	80 - 113
LCDL83	100	77 - 113	101	78 - 113	99	80 - 116	101	80 - 113
8354933	99	77 - 113	100	78 - 113	97	80 - 116	100	80 - 113
8354934	101	77 - 113	100	78 - 113	97	80 - 116	99	80 - 113
8354935	100	77 - 113	101	78 - 113	98	80 - 116	99	80 - 113
8354936 UNSPK	100	77 - 113	100	78 - 113	98	80 - 116	99	80 - 113
8354937 MS	98	77 - 113	102	78 - 113	96	80 - 116	101	80 - 113
8354938 MSD	100	77 - 113	101	78 - 113	98	80 - 116	101	80 - 113
8354939	100	77 - 113	101	78 - 113	97	80 - 116	99	80 - 113
8354940	101	77 - 113	100	78 - 113	98	80 - 116	99	80 - 113

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **H161301AA** (Sample number(s): 8354933-8354948)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	4.37	4.44	87	89	35-142	2	30
Chloromethane	5.00	N.D.	5.40	5.23	108	105	63-121	3	30
Vinyl Chloride	5.00	0.230 J	5.71	5.86	110	113	62-128	3	30
Bromomethane	5.00	N.D.	5.86	5.49	117	110	71-126	7	30
Chloroethane	5.00	2.42	7.77	7.33	107	98	71-122	6	30
Trichlorofluoromethane	5.00	N.D.	5.58	5.83	112	117	64-133	4	30
Ethyl ether	5.00	33.03	39.32	35.04	126 (2)	40 (2)	60-129	11	30
Acrolein	37.5	N.D.	41.75	36.98	111	99	35-137	12	30
1,1-Dichloroethene	5.00	N.D.	5.42	5.64	108	113	70-120	4	30
Freon 113	5.00	N.D.	5.25	5.72	105	114	75-120	9	30
Acetone	37.5	N.D.	41.03	39.91	109	106	65-124	3	30
Methyl Iodide	5.00	N.D.	5.24 J	5.18 J	105	104	72-127	1	30
Carbon Disulfide	5.00	N.D.	4.74 J	4.90 J	95	98	65-120	3	30
Acetonitrile	37.5	N.D.	48.28 J	51.58 J	129	138	48-175	7	30
Allyl Chloride	5.00	N.D.	4.89 J	5.06 J	98	101	62-127	3	30
Methylene Chloride	5.00	0.432 J	5.79	5.44	107	100	80-120	6	30
Acrylonitrile	25	N.D.	28.92	28.52	116	114	68-135	1	30
trans-1,2-Dichloroethene	5.00	N.D.	5.39	5.44	108	109	80-120	1	30
1,1-Dichloroethane	5.00	5.98	11.19	10.85	104	98	75-120	3	30
Vinyl Acetate	12.5	N.D.	12.85	12.81	103	102	40-185	0	30
2-Chloro-1,3-butadiene	5.00	N.D.	5.25 J	5.52 J	105	110	60-120	5	30
2-Butanone	37.5	N.D.	43.69	44.8	117	119	66-135	3	30
Propionitrile	37.5	N.D.	44.53 J	45.83 J	119	122	68-136	3	30
Methacrylonitrile	37.5	N.D.	49.13 J	49.89 J	131	133	60-145	2	30
Tetrahydrofuran	25	4.55 J	33.31	33.76	115	117	64-132	1	30
Chloroform	5.00	N.D.	5.51	5.39	110	108	80-120	2	30
1,1,1-Trichloroethane	5.00	N.D.	5.28	5.44	106	109	70-124	3	30
Carbon Tetrachloride	5.00	N.D.	5.32	5.63	106	113	65-134	6	30
Isobutyl Alcohol	125	N.D.	143.5 J	171.21 J	115	137	64-152	18	30
Benzene	5.00	0.357 J	5.51	5.45	103	102	80-120	1	30
1,2-Dichloroethane	5.00	N.D.	5.58	5.51	112	110	72-127	1	30
Trichloroethene	5.00	0.222 J	5.68	5.86	109	113	80-120	3	30
1,2-Dichloropropane	5.00	N.D.	5.39	5.28	108	106	80-120	2	30
Dibromomethane	5.00	N.D.	5.71	5.46	114	109	80-122	4	30
Methyl Methacrylate	5.00	N.D.	5.91 J	6.21 J	118	124	60-136	5	30
1,4-Dioxane	125	N.D.	167.28 J	210.04	134	168 *	75-152	23	30
Bromodichloromethane	5.00	N.D.	5.56	5.55	111	111	80-120	0	30
4-Methyl-2-pentanone	25	N.D.	29.95	30.76	120	123	71-129	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **H161301AA** (Sample number(s): 8354933-8354948) **Spike Added ug/l**	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Toluene	5.00	N.D.	4.74	5.16	95	103	80-120	9	30
trans-1,3-Dichloropropene	5.00	N.D.	4.70	5.04	94	101	77-121	7	30
Ethyl Methacrylate	5.00	N.D.	4.60 J	4.91 J	92	98	69-133	6	30
1,1,2-Trichloroethane	5.00	N.D.	5.07	5.34	101	107	80-120	5	30
Tetrachloroethene	5.00	0.293 J	5.20	5.87	98	111	80-120	12	30
1,3-Dichloropropane	5.00	N.D.	4.96	5.22	99	104	80-120	5	30
2-Hexanone	25	N.D.	30.6	31.99	122	128	73-128	4	30
Dibromochloromethane	5.00	N.D.	5.00	5.31	100	106	68-131	6	30
1,2-Dibromoethane	5.00	N.D.	5.25	5.65	105	113	80-120	7	30
1,1,1,2-Tetrachloroethane	5.00	N.D.	5.09	5.44	102	109	72-125	7	30
Ethylbenzene	5.00	N.D.	4.80	5.30	96	106	80-120	10	30
Xylene (Total)	15	N.D.	14.52	16.1	97	107	80-120	10	30
Styrene	5.00	N.D.	5.00	5.41	100	108	80-122	8	30
Bromoform	5.00	N.D.	4.83	5.35	97	107	62-128	10	30
1,1,2,2-Tetrachloroethane	5.00	N.D.	4.56	5.25	91	105	80-120	14	30
trans-1,4-Dichloro-2-butene	25	N.D.	29.81	31.71	119	127	10-182	6	30
1,2,3-Trichloropropane	5.00	N.D.	5.00	5.91	100	118	80-120	17	30
Pentachloroethane	5.00	N.D.	4.78 J	5.84 J	96	117	73-128	20	30
1,3-Dichlorobenzene	5.00	N.D.	4.76	5.39	95	108	80-120	12	30
1,4-Dichlorobenzene	5.00	N.D.	4.78	5.34	96	107	80-120	11	30
1,2-Dichlorobenzene	5.00	N.D.	4.70	5.40	94	108	80-120	14	30
1,2-Dibromo-3-chloropropane	5.00	N.D.	6.68	6.82	134 *	136 *	56-131	2	30
1,2,4-Trichlorobenzene	5.00	N.D.	4.33	5.15	87	103	67-120	17	30
Hexachlorobutadiene	5.00	N.D.	4.83	5.57	97	111	69-120	14	30
Naphthalene	5.00	N.D.	3.99	4.85	80	97	58-125	20	30
Hexachloroethane	5.00	N.D.	4.72 J	4.60 J	94	92	57-130	3	30
Dimethyl ether	5.00	4.87 J	9.27 J	9.20 J	88	87	80-120	1	30

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **L161302AA** (Sample number(s): 8354933-8354940) **Spike Added ug/l**	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Propanol	150	N.D.	141.53	146.88	94	98	52-139	4	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH92	Batch: **H161301AA** (Sample number(s): 8354933-8354948)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	4.57	NA	91	NA	35-142	NA	NA
Chloromethane	5.00	4.99	NA	100	NA	63-121	NA	NA
Vinyl Chloride	5.00	5.43	NA	109	NA	62-128	NA	NA
Bromomethane	5.00	5.41	NA	108	NA	71-126	NA	NA
Chloroethane	5.00	5.05	NA	101	NA	71-122	NA	NA
Trichlorofluoromethane	5.00	5.44	NA	109	NA	64-133	NA	NA
Ethyl ether	5.00	4.59 J	NA	92	NA	60-129	NA	NA
Acrolein	37.5	42.63	NA	114	NA	35-137	NA	NA
1,1-Dichloroethene	5.00	5.28	NA	106	NA	70-120	NA	NA
Freon 113	5.00	5.36	NA	107	NA	75-120	NA	NA
Acetone	37.5	38.39	NA	102	NA	65-124	NA	NA
Methyl Iodide	5.00	5.09 J	NA	102	NA	72-127	NA	NA
Carbon Disulfide	5.00	4.78 J	NA	96	NA	65-120	NA	NA
Allyl Chloride	5.00	4.74 J	NA	95	NA	62-127	NA	NA
Methylene Chloride	5.00	5.10	NA	102	NA	80-120	NA	NA
Acrylonitrile	25	28.72	NA	115	NA	68-135	NA	NA
trans-1,2-Dichloroethene	5.00	5.26	NA	105	NA	80-120	NA	NA
1,1-Dichloroethane	5.00	4.83	NA	97	NA	75-120	NA	NA
2-Chloro-1,3-butadiene	5.00	5.19 J	NA	104	NA	60-120	NA	NA
2-Butanone	37.5	43.41	NA	116	NA	66-135	NA	NA
Propionitrile	37.5	41.07 J	NA	110	NA	68-136	NA	NA
Methacrylonitrile	37.5	49.95 J	NA	133	NA	60-145	NA	NA
Tetrahydrofuran	25	30.51	NA	122	NA	64-132	NA	NA
Chloroform	5.00	5.18	NA	104	NA	80-120	NA	NA
1,1,1-Trichloroethane	5.00	5.13	NA	103	NA	70-124	NA	NA
Carbon Tetrachloride	5.00	5.36	NA	107	NA	65-134	NA	NA
Isobutyl Alcohol	125	125.01 J	NA	100	NA	64-152	NA	NA
Benzene	5.00	4.98	NA	100	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	5.27	NA	105	NA	72-127	NA	NA
Trichloroethene	5.00	5.23	NA	105	NA	80-120	NA	NA
1,2-Dichloropropane	5.00	5.01	NA	100	NA	80-120	NA	NA
Dibromomethane	5.00	5.39	NA	108	NA	80-122	NA	NA
Methyl Methacrylate	5.00	6.35 J	NA	127	NA	60-136	NA	NA
1,4-Dioxane	125	176.04 J	NA	141	NA	75-152	NA	NA
Bromodichloromethane	5.00	5.23	NA	105	NA	80-120	NA	NA
4-Methyl-2-pentanone	25	31.17	NA	125	NA	71-129	NA	NA
Toluene	5.00	4.80	NA	96	NA	80-120	NA	NA
trans-1,3-Dichloropropene	5.00	4.83	NA	97	NA	77-121	NA	NA
Ethyl Methacrylate	5.00	4.61 J	NA	92	NA	69-133	NA	NA
1,1,2-Trichloroethane	5.00	4.99	NA	100	NA	80-120	NA	NA
Tetrachloroethene	5.00	5.09	NA	102	NA	80-120	NA	NA
1,3-Dichloropropane	5.00	4.79	NA	96	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH92	Batch: **H161301AA** (Sample number(s): 8354933-8354948)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Hexanone	25	30.78	NA	123	NA	73-128	NA	NA
Dibromochloromethane	5.00	5.26	NA	105	NA	68-131	NA	NA
1,2-Dibromoethane	5.00	5.22	NA	104	NA	80-120	NA	NA
1,1,1,2-Tetrachloroethane	5.00	4.96	NA	99	NA	72-125	NA	NA
Ethylbenzene	5.00	4.75	NA	95	NA	80-120	NA	NA
Xylene (Total)	15	14.4	NA	96	NA	80-120	NA	NA
Styrene	5.00	4.88	NA	98	NA	80-122	NA	NA
Bromoform	5.00	5.39	NA	108	NA	62-128	NA	NA
1,1,2,2-Tetrachloroethane	5.00	4.63	NA	93	NA	80-120	NA	NA
trans-1,4-Dichloro-2-butene	25	35.92	NA	144	NA	10-182	NA	NA
1,2,3-Trichloropropane	5.00	4.89	NA	98	NA	80-120	NA	NA
Pentachloroethane	5.00	5.00 J	NA	100	NA	73-128	NA	NA
1,3-Dichlorobenzene	5.00	4.64	NA	93	NA	80-120	NA	NA
1,4-Dichlorobenzene	5.00	4.66	NA	93	NA	80-120	NA	NA
1,2-Dichlorobenzene	5.00	4.68	NA	94	NA	80-120	NA	NA
1,2-Dibromo-3-chloropropane	5.00	6.82	NA	136 *	NA	56-131	NA	NA
1,2,4-Trichlorobenzene	5.00	4.34	NA	87	NA	67-120	NA	NA
Hexachlorobutadiene	5.00	4.66	NA	93	NA	69-120	NA	NA
Naphthalene	5.00	4.23	NA	85	NA	58-125	NA	NA

LCS: LCSH93	Batch: **H161301AA** (Sample number(s): 8354933-8354948)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Acetonitrile	37.5	38.93 J	NA	104	NA	48-175	NA	NA
Vinyl Acetate	12.5	12.01	NA	96	NA	40-185	NA	NA
Hexachloroethane	5.00	5.16 J	NA	103	NA	57-130	NA	NA
Dimethyl ether	5.00	4.70 J	NA	94	NA	80-120	NA	NA

LCS: LCSL83 LCSD: LCDL83	Batch: **L161302AA** (Sample number(s): 8354933-8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Propanol	150	157.57	146.83	105	98	52-139	7	30

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: la22t01.d BFB Injection Date: 04/22/16

Instrument ID: HP09915 BFB Injection Time: 09:13

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.66
75	30.0 - 60.0% of mass 95	47.86
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.58 (0.66)1
174	Greater than 50.0% of mass 95	87.40
175	5.0 - 9.0% of mass 174	5.94 (6.79)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.17 (95.16)1
177	5.0 - 9.0% of mass 176	5.11 (6.15)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	la22i01.d	04/22/16	09:55
02	VSTD100	la22i02.d	04/22/16	10:17
03	VSTD50	la22i03.d	04/22/16	10:39
04	VSTD20	la22i04.d	04/22/16	11:01
05	VSTD10	la22i05.d	04/22/16	11:23
06	VSTD4	la22i06.d	04/22/16	11:45
07	VSTD1	la22i07.d	04/22/16	12:07
08	MDL0.5 - MDL0.5	la22m01.d	04/22/16	12:29
09	LCS01	la22v01.d	04/22/16	12:51
10	VSTD300	la22i11.d	04/22/16	14:05
11	VSTD100	la22i12.d	04/22/16	14:27
12	VSTD50	la22i13.d	04/22/16	14:49
13	VSTD20	la22i14.d	04/22/16	15:11
14	VSTD10	la22i15.d	04/22/16	15:33
15	VSTD4	la22i16.d	04/22/16	15:55
16	MDL001 - MDL001	la22m02.d	04/22/16	16:17
17	LCS02	la22v02.d	04/22/16	16:39

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: ly09t01.d BFB Injection Date: 05/09/16

Instrument ID: HP09915 BFB Injection Time: 08:35

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.68
75	30.0 - 60.0% of mass 95	45.95
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.76
173	Less than 2.0% of mass 174	0.59 (0.72)1
174	Greater than 50.0% of mass 95	81.97
175	5.0 - 9.0% of mass 174	5.73 (6.99)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.67 (95.98)1
177	5.0 - 9.0% of mass 176	5.39 (6.85)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ly09c01.d	05/09/16	09:14
02	VBLKL82	ly09b01.d	05/09/16	09:36
03	VBLKL83	ly09b05.d	05/09/16	09:36
04	LCSL82	ly09s01.d	05/09/16	09:58
05	LCSL83	ly09s31.d	05/09/16	09:58
06	LCDL82	ly09s02.d	05/09/16	10:22
07	LCDL83	ly09s32.d	05/09/16	10:22
08	8370084	ly09s03.d	05/09/16	11:06
09	8370086	ly09s04.d	05/09/16	11:28
10	8357925	ly09s05.d	05/09/16	11:50
11	8357926	ly09s06.d	05/09/16	12:11
12	8357927	ly09s07.d	05/09/16	12:34
13	8357928	ly09s08.d	05/09/16	12:56
14	8357933	ly09s11.d	05/09/16	14:02
15	8357934	ly09s12.d	05/09/16	14:23
16	8357932	ly09s13.d	05/09/16	14:45
17	8357932DL	ly09s14.d	05/09/16	15:07
18	8357935	ly09s17.d	05/09/16	16:12
19	8357935DL	ly09s18.d	05/09/16	16:34
20	8354935	ly09s33.d	05/09/16	16:56
21	8354936	ly09s34.d	05/09/16	17:18
22	8354937MS	ly09s35.d	05/09/16	17:40

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: ly09t01.d BFB Injection Date: 05/09/16

Instrument ID: HP09915 BFB Injection Time: 08:35

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.68
75	30.0 - 60.0% of mass 95	45.95
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.76
173	Less than 2.0% of mass 174	0.59 (0.72)1
174	Greater than 50.0% of mass 95	81.97
175	5.0 - 9.0% of mass 174	5.73 (6.99)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.67 (95.98)1
177	5.0 - 9.0% of mass 176	5.39 (6.85)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	8354938MSD	ly09s36.d	05/09/16	18:02
24	8354933	ly09s37.d	05/09/16	18:23
25	8354934	ly09s38.d	05/09/16	18:46
26	8354939	ly09s39.d	05/09/16	19:08
27	8354940	ly09s40.d	05/09/16	19:30

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: hm14t01.d BFB Injection Date: 03/14/16

Instrument ID: HP19094 BFB Injection Time: 10:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.66
75	30.0 - 60.0% of mass 95	47.24
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.04
173	Less than 2.0% of mass 174	1.08 (1.29)1
174	Greater than 50.0% of mass 95	83.27
175	5.0 - 9.0% of mass 174	5.47 (6.57)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.30 (95.23)1
177	5.0 - 9.0% of mass 176	5.20 (6.56)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hm14i11.d	03/14/16	11:30
02	VSTD10	hm14i12.d	03/14/16	11:51
03	VSTD5	hm14i13.d	03/14/16	12:11
04	VSTD2	hm14i14.d	03/14/16	12:31
05	VSTD1	hm14i15.d	03/14/16	12:51
06	VSTD.5	hm14i16.d	03/14/16	13:12
07	VSTD.2	hm14i17.d	03/14/16	13:32
08	MDL0.1 - MDL0.1	hm14m11.d	03/14/16	13:53
09	VSTD25	hm14i01.d	03/14/16	14:53
10	VSTD10	hm14i02.d	03/14/16	15:14
11	VSTD5	hm14i03.d	03/14/16	15:34
12	VSTD2	hm14i04.d	03/14/16	15:54
13	VSTD1	hm14i05.d	03/14/16	16:15
14	VSTD.5	hm14i06.d	03/14/16	16:35
15	VSTD.2	hm14i07.d	03/14/16	16:55
16	MDL0.1 - MDL0.1	hm14m01.d	03/14/16	17:16
17	MDL0.4 - MDL0.4	hm14m02.d	03/14/16	17:36
18	LCSHLG	hm14cv1.d	03/14/16	17:56
19	LCSHSM	hm14cv12.d	03/14/16	19:18

FORM V VOA

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: hy07t01.d BFB Injection Date: 05/07/16

Instrument ID: HP19094 BFB Injection Time: 11:57

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.77
75	30.0 - 60.0% of mass 95	47.56
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.55
173	Less than 2.0% of mass 174	1.55 (1.73)1
174	Greater than 50.0% of mass 95	89.79
175	5.0 - 9.0% of mass 174	6.85 (7.63)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.40 (98.44)1
177	5.0 - 9.0% of mass 176	5.70 (6.45)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hy07i01.d	05/07/16	12:38
02	VSTD10	hy07i02.d	05/07/16	12:59
03	VSTD5	hy07i03.d	05/07/16	13:19
04	VSTD2	hy07i04.d	05/07/16	13:39
05	VSTD1	hy07i05.d	05/07/16	13:59
06	VSTD.5	hy07i06.d	05/07/16	14:20
07	VSTD.2	hy07i07.d	05/07/16	14:40
08	MDL0.1 - MDL0.1	hy07m01.d	05/07/16	15:00
09	LCSHSM	hy07cv01.d	05/07/16	15:21

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: hy09t01.d BFB Injection Date: 05/09/16

Instrument ID: HP19094 BFB Injection Time: 08:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.42
75	30.0 - 60.0% of mass 95	50.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	1.14 (1.23)1
174	Greater than 50.0% of mass 95	92.44
175	5.0 - 9.0% of mass 174	6.87 (7.43)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.95 (96.22)1
177	5.0 - 9.0% of mass 176	5.40 (6.07)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hy09c01.d	05/09/16	08:58
02	VSTD10	hy09c02.d	05/09/16	09:19
03	LCSH92	hy09l01.d	05/09/16	09:39
04	MDLH92 - MDLH92	hy09m01.d	05/09/16	09:59
05	LCSH93	hy09l02.d	05/09/16	10:19
06	VBLKH92	hy09b01.d	05/09/16	10:40
07	8354946	hy09s01.d	05/09/16	11:16
08	8354947	hy09s02.d	05/09/16	11:36
09	8354948	hy09s03.d	05/09/16	11:57
10	8354936	hy09s04.d	05/09/16	12:17
11	8354937MS	hy09s05.d	05/09/16	12:37
12	8354938MSD	hy09s06.d	05/09/16	12:57
13	8354937MS1	hy09s07.d	05/09/16	13:17
14	8354938MSD1	hy09s08.d	05/09/16	13:38
15	8354939	hy09s09.d	05/09/16	13:58
16	8354934	hy09s10.d	05/09/16	14:18
17	8354940	hy09s11.d	05/09/16	14:39
18	8354941	hy09s12.d	05/09/16	14:59
19	8354942	hy09s13.d	05/09/16	15:20
20	8354943	hy09s14.d	05/09/16	15:40
21	8354944	hy09s15.d	05/09/16	16:00
22	8354945	hy09s16.d	05/09/16	16:20

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID: hy09t01.d BFB Injection Date: 05/09/16

Instrument ID: HP19094 BFB Injection Time: 08:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.42
75	30.0 - 60.0% of mass 95	50.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.73
173	Less than 2.0% of mass 174	1.14 (1.23)1
174	Greater than 50.0% of mass 95	92.44
175	5.0 - 9.0% of mass 174	6.87 (7.43)1
176	Greater than 95.0%, but less than 101.0% of mass 174	88.95 (96.22)1
177	5.0 - 9.0% of mass 176	5.40 (6.07)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	8354933	hy09s17.d	05/09/16	16:41
24	8354933DL	hy09s18.d	05/09/16	17:01
25	8354935	hy09s19.d	05/09/16	17:21
26	8354935DL	hy09s20.d	05/09/16	17:41
27	8354936DL	hy09s21.d	05/09/16	18:02
28	8354939DL	hy09s22.d	05/09/16	18:22

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3794	0.3441	0.3851	0.2972	0.3177	0.3339	0.3560	0.3448	9	AVG #
Chloromethane	#	0.3712	0.3682	0.3027	0.3172	0.3277	0.3421	0.3382	8	AVG #
Vinyl Chloride	#0.3755	0.3230	0.3289	0.2741	0.2857	0.2988	0.3159	0.3145	11	AVG #
1,3-Butadiene	0.2859	0.2734	0.2478	0.2197	0.2031	0.2123	0.2231	0.2379	13	AVG
Bromomethane	#0.2381	0.2203	0.2196	0.1882	0.1971	0.1982	0.1998	0.2088	8	AVG #
Chloroethane	#0.2565	0.2082	0.2037	0.1691	0.1669	0.1735	0.1793	0.1939	17	AVG #
Dichlorofluoromethane	0.5349	0.4694	0.4719	0.3925	0.3894	0.4005	0.4213	0.4400	12	AVG
Trichlorofluoromethane	#0.4707	0.4254	0.4341	0.3636	0.3752	0.3872	0.4122	0.4098	9	AVG #
Ethyl ether	0.1857	0.1752	0.1684	0.1577	0.1594	0.1640	0.1730	0.1690	6	AVG
Freon 123a	0.3525	0.3296	0.3442	0.2782	0.2855	0.2931	0.3111	0.3135	9	AVG
Acrolein	3.0810	3.0839	2.9370	2.6300	2.6469	2.7838	2.7934	2.8508	7	AVG
1,1-Dichloroethene	#0.2575	0.2475	0.2493	0.2136	0.2256	0.2203	0.2320	0.2351	7	AVG #
Freon 113	#0.2438	0.2619	0.2664	0.2271	0.2344	0.2321	0.2457	0.2445	6	AVG #
Acetone	#	4.9423	4.0349	3.7140	3.5429	3.5833	3.7525	3.9283	13	AVG #
Methyl Iodide	0.4526	0.4598	0.4688	0.3991	0.4142	0.4155	0.4368	0.4353	6	AVG
Carbon Disulfide	#0.8414	0.7753	0.7634	0.6532	0.6735	0.6684	0.7068	0.7260	10	AVG #
Allyl Chloride	0.5146	0.4938	0.4351	0.4030	0.4025	0.4192	0.4437	0.4446	10	AVG
Methyl Acetate	#	9.6189	9.8815	10.128	8.9854	9.9432	9.8765	9.7388	4	AVG #
Methylene Chloride	#0.2618	0.2683	0.2715	0.2275	0.2397	0.2393	0.2508	0.2513	7	AVG #
t-Butyl Alcohol	1.4728	1.3976	1.4476	1.2056	1.2831	1.2273	1.3767	1.3444	8	AVG
Acrylonitrile	4.6277	5.0863	4.8259	4.3907	4.5424	4.6835	4.8382	4.7135	5	AVG
trans-1,2-Dichloroethene	#0.2610	0.2743	0.2723	0.2322	0.2426	0.2400	0.2498	0.2532	6	AVG #
Methyl Tertiary Butyl Ether	#0.5745	0.5608	0.5650	0.4970	0.5216	0.5235	0.5549	0.5425	5	AVG #
n-Hexane	0.4682	0.4550	0.4726	0.3859	0.4031	0.4001	0.4234	0.4297	8	AVG
1,1-Dichloroethane	#0.5492	0.5496	0.5313	0.4745	0.4916	0.4956	0.5203	0.5160	6	AVG #
di-Isopropyl Ether	0.9437	0.9424	0.9408	0.8273	0.8653	0.8697	0.9162	0.9007	5	AVG
2-Chloro-1,3-Butadiene	0.4430	0.4527	0.4533	0.3852	0.4029	0.4049	0.4231	0.4236	6	AVG
Ethyl t-butyl ether	0.7963	0.7919	0.7979	0.7010	0.7285	0.7331	0.7683	0.7596	5	AVG
cis-1,2-Dichloroethene	#0.2916	0.2956	0.2975	0.2577	0.2692	0.2704	0.2811	0.2804	5	AVG #
2,2-Dichloropropane	0.4409	0.4494	0.4402	0.3767	0.3870	0.3896	0.4062	0.4129	7	AVG
2-Butanone	#7.1976	7.0728	6.7420	6.3690	6.3071	6.5701	6.5977	6.6938	5	AVG #
Propionitrile	1.7329	1.6974	1.7303	1.5321	1.6258	1.6606	1.7047	1.6691	4	AVG
Methacrylonitrile	6.0702	6.0783	5.6869	5.4434	5.4279	5.6371	5.6608	5.7149	5	AVG
Bromochloromethane	0.1053	0.1122	0.1099	0.1013	0.1011	0.1054	0.1118	0.1067	4	AVG
Tetrahydrofuran	1.8630	1.8410	1.7011	1.5806	1.5751	1.6475	1.6453	1.6934	7	AVG
Chloroform	#0.5267	0.4894	0.4962	0.4270	0.4488	0.4474	0.4659	0.4716	7	AVG #
1,1,1-Trichloroethane	#0.4356	0.4299	0.4162	0.3669	0.3846	0.3836	0.3994	0.4023	6	AVG #
Cyclohexane	#0.6211	0.5867	0.5669	0.4571	0.4771	0.4731	0.4980	0.5257	12	AVG #
Cyclohexane(2)	#0.4116	0.4874	0.4351	0.3560	0.3722	0.3679	0.3874	0.4025	11	AVG #
Cyclohexane(3)	#0.1683	0.1617	0.1642	0.1345	0.1397	0.1386	0.1456	0.1504	9	AVG #
1,1-Dichloropropene	0.4002	0.4068	0.4150	0.3551	0.3701	0.3683	0.3877	0.3862	6	AVG
Carbon Tetrachloride	#0.3819	0.3849	0.3908	0.3354	0.3500	0.3486	0.3688	0.3658	6	AVG #
Isobutyl Alcohol		0.4905	0.4930	0.4034	0.4320	0.4316	0.4668	0.4529	8	AVG
Benzene	#1.1561	1.1416	1.1296	0.9906	1.0233	1.0189	1.0629	1.0747	6	AVG #
1,2-Dichloroethane	#0.3027	0.2858	0.2930	0.2557	0.2657	0.2677	0.2786	0.2785	6	AVG #
t-Amyl methyl ether	0.6605	0.6314	0.6607	0.5706	0.5980	0.5975	0.6262	0.6207	5	AVG
n-Heptane	0.5259	0.5187	0.5506	0.4408	0.4535	0.4416	0.4691	0.4857	9	AVG
n-Butanol	0.4418	0.3794	0.4190	0.3499	0.3627	0.3616	0.3695	0.3834	9	AVG
Trichloroethene	#0.3019	0.2903	0.2968	0.2571	0.2666	0.2681	0.2801	0.2801	6	AVG #
Methylcyclohexane	#0.4816	0.5047	0.4851	0.4210	0.4188	0.4370	0.4637	0.4588	7	AVG #
1,2-Dichloropropane	#0.2940	0.2983	0.2982	0.2545	0.2676	0.2659	0.2803	0.2798	6	AVG #
Methyl Methacrylate	12.213	12.795	11.713	11.371	11.444	11.950	12.097	11.940	4	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1232	0.1196	0.1196	0.1059	0.1110	0.1109	0.1168	0.1153	5	AVG
1,4-Dioxane		0.0537	0.0908	0.0768	0.0806	0.0776	0.0738	0.0755	16	AVG
Bromodichloromethane	#0.3243	0.3276	0.3367	0.2969	0.3144	0.3178	0.3351	0.3218	4	AVG #
2-Nitropropane	4.6486	4.2279	3.9219	3.3782	3.3840	3.6094	3.6231	3.8276	12	AVG
cis-1,3-Dichloropropene	#0.4198	0.3874	0.4098	0.3659	0.3855	0.3903	0.4098	0.3955	5	AVG #
4-Methyl-2-Pentanone	#17.171	17.506	16.820	15.707	15.605	16.287	16.220	16.473	4	AVG #
Toluene	#1.0550	1.0527	1.0130	0.8930	0.9025	0.8812	0.9200	0.9596	8	AVG #
trans-1,3-Dichloropropene	#0.4726	0.4707	0.4637	0.4207	0.4297	0.4283	0.4626	0.4497	5	AVG #
Ethyl Methacrylate	0.3469	0.3663	0.3613	0.3299	0.3364	0.3285	0.3524	0.3460	4	AVG
1,1,2-Trichloroethane	#0.2624	0.2456	0.2366	0.2185	0.2206	0.2162	0.2271	0.2324	7	AVG #
Tetrachloroethene	#0.5043	0.5013	0.4768	0.4156	0.4281	0.4126	0.4334	0.4532	9	AVG #
1,3-Dichloropropane	0.4378	0.4422	0.4381	0.3911	0.4040	0.3958	0.4165	0.4179	5	AVG
2-Hexanone	#13.649	11.440	12.122	11.015	10.889	11.290	11.127	11.647	8	AVG #
Dibromochloromethane	#0.2954	0.3167	0.3053	0.2757	0.2929	0.2899	0.3098	0.2979	5	AVG #
1,2-Dibromoethane	#0.2193	0.2394	0.2244	0.2075	0.2119	0.2092	0.2206	0.2189	5	AVG #
Chlorobenzene	#1.1380	1.1259	1.0962	0.9786	0.9874	0.9721	1.0139	1.0446	7	AVG #
1,1,1,2-Tetrachloroethane	0.3893	0.3720	0.3747	0.3345	0.3422	0.3368	0.3587	0.3583	6	AVG
Ethylbenzene	#2.1134	2.0137	1.9778	1.7409	1.7751	1.7289	1.7981	1.8783	8	AVG #
m+p-Xylene	#0.7815	0.7778	0.7550	0.6751	0.6720	0.6631	0.6905	0.7164	7	AVG #
o-Xylene	#0.7409	0.7607	0.7306	0.6493	0.6587	0.6515	0.6748	0.6952	7	AVG #
Styrene	#1.1801	1.1939	1.1620	1.0453	1.0648	1.0475	1.0916	1.1122	6	AVG #
Bromoform	#0.1725	0.1661	0.1672	0.1518	0.1610	0.1624	0.1757	0.1653	5	AVG #
Isopropylbenzene	#1.9851	2.0226	1.9572	1.7234	1.7365	1.6980	1.7743	1.8424	8	AVG #
1,1,2,2-Tetrachloroethane	#0.7438	0.6570	0.6509	0.5873	0.5855	0.5746	0.5821	0.6259	10	AVG #
Bromobenzene	1.0718	1.0292	0.9496	0.8694	0.8672	0.8647	0.8735	0.9322	9	AVG
trans-1,4-Dichloro-2-butene	4.8925	5.1777	5.1676	4.8188	4.9855	5.2640	5.2041	5.0729	3	AVG
1,2,3-Trichloropropane	0.1617	0.1778	0.1600	0.1528	0.1505	0.1473	0.1500	0.1571	7	AVG
n-Propylbenzene	5.8971	5.5876	5.2562	4.6713	4.6938	4.5895	4.6004	5.0423	11	AVG
2-Chlorotoluene	1.0885	1.0938	1.0038	0.9132	0.9073	0.8964	0.9029	0.9722	9	AVG
1,3,5-Trimethylbenzene	3.9321	3.9313	3.6885	3.2926	3.2746	3.2247	3.2638	3.5154	9	AVG
4-Chlorotoluene	1.1414	1.0760	1.0337	0.9389	0.9250	0.9058	0.9148	0.9908	9	AVG
tert-Butylbenzene	0.8221	0.8390	0.7950	0.7043	0.7007	0.6866	0.6982	0.7494	9	AVG
Pentachloroethane	0.6147	0.5969	0.5624	0.5292	0.5334	0.5506	0.5719	0.5656	6	AVG
1,2,4-Trimethylbenzene	3.9524	3.8986	3.6380	3.3087	3.2987	3.2420	3.2664	3.5150	9	AVG
sec-Butylbenzene	5.1612	5.0374	4.8561	4.2226	4.2314	4.1748	4.1768	4.5515	10	AVG
1,3-Dichlorobenzene	#2.0613	1.9935	1.8790	1.7282	1.6916	1.6946	1.7160	1.8235	8	AVG #
p-Isopropyltoluene	4.2749	4.2752	3.9843	3.6106	3.6455	3.5773	3.6033	3.8530	8	AVG
1,4-Dichlorobenzene	#2.2361	2.0721	1.9006	1.7257	1.6934	1.6593	1.6813	1.8526	12	AVG #
1,2,3-Trimethylbenzene	1.7273	1.6490	1.4414	1.3854	1.3246	1.3313	1.3446	1.4577	11	AVG
Benzyl Chloride	0.2225	0.2825	0.2499	0.2367	0.2480	0.2433	0.2528	0.2480	7	AVG
n-Butylbenzene	2.1531	1.9654	1.9531	1.7450	1.7845	1.7824	1.8102	1.8848	8	AVG
1,2-Dichlorobenzene	#1.8464	1.8109	1.6965	1.5178	1.5019	1.4784	1.4854	1.6196	10	AVG #
1,2-Dibromo-3-chloropropane	#2.9098	2.5381	2.5710	2.5040	2.4300	2.6883	2.6777	2.6170	6	AVG #
1,2,4-Trichlorobenzene	#1.4608	1.2962	1.1812	1.0543	1.0372	1.0385	1.0422	1.1586	14	AVG #
Hexachlorobutadiene	0.6982	0.6346	0.6641	0.5313	0.5592	0.5562	0.5941	0.6054	10	AVG
Naphthalene		2.2854	2.0615	1.8226	1.7195	1.6642	1.5895	1.8571	14	AVG
1,2,3-Trichlorobenzene		1.1571	1.0236	0.8912	0.8513	0.8193	0.8098	0.9254	15	AVG
Dibromofluoromethane	0.2305	0.2299	0.2370	0.2300	0.2397	0.2405	0.2419	0.2356	2	AVG
Dibromofluoromethane(2)	0.2370	0.2374	0.2440	0.2384	0.2439	0.2475	0.2492	0.2425	2	AVG
1,2-Dichloroethane-d4	0.0378	0.0383	0.0390	0.0378	0.0404	0.0402	0.0396	0.0390	3	AVG
1,2-Dichloroethane-d4(2)	0.1928	0.1919	0.2018	0.1975	0.2036	0.2021	0.2049	0.1992	3	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(3)	0.0237	0.0231	0.0251	0.0245	0.0250	0.0255	0.0256	0.0246	4	AVG
Toluene-d8	1.4649	1.4592	1.4179	1.4398	1.4104	1.3887	1.3910	1.4246	2	AVG
Toluene-d8(2)	0.9435	0.9474	0.9141	0.9318	0.9107	0.9040	0.9033	0.9221	2	AVG
4-Bromofluorobenzene	0.4499	0.4509	0.4653	0.4562	0.4616	0.4617	0.4688	0.4592	2	AVG
4-Bromofluorobenzene(2)	0.3747	0.3779	0.3838	0.3812	0.3859	0.3861	0.3903	0.3828	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i01.d	VSTD025
/chem2/HP19094.i/16mar14a.b/hm14i02.d	VSTD010
/chem2/HP19094.i/16mar14a.b/hm14i03.d	VSTD005
/chem2/HP19094.i/16mar14a.b/hm14i04.d	VSTD002
/chem2/HP19094.i/16mar14a.b/hm14i05.d	VSTD001
/chem2/HP19094.i/16mar14a.b/hm14i06.d	VSTD0.5
/chem2/HP19094.i/16mar14a.b/hm14i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	111147	106258	114879	109317	115170	106301	108855	110275	3	Yes
Fluorobenzene	2257211	2270797	2341151	2353241	2358734	2335462	2342480	2322725	2	Yes
Chlorobenzene-d5	1599038	1617323	1635921	1595701	1632519	1554894	1562481	1599697	2	Yes
1,4-Dichlorobenzene-d4	737864	725016	731141	699859	732410	663285	656295	706553	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. RT
t-Butyl Alcohol-d10	4.281	4.275	4.281	4.281	4.288	4.275	4.281	4.281
Fluorobenzene	7.805	7.805	7.805	7.805	7.805	7.805	7.805	7.805
Chlorobenzene-d5	11.262	11.262	11.262	11.262	11.262	11.262	11.262	11.262
1,4-Dichlorobenzene-d4	13.146	13.146	13.146	13.145	13.146	13.146	13.146	13.146

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/14/2016 at 18:26.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.2869	4.16	5	-17	#
# Chloromethane	0.3382	0.3005	4.44	5	-11	#
# Vinyl Chloride	0.3145	0.2814	4.47	5	-11	#
1,3-Butadiene	0.2379	0.2129	4.47	5	-11	
# Bromomethane	0.2088	0.1862	4.46	5	-11	#
# Chloroethane	0.1939	0.1691	4.36	5	-13	#
Dichlorofluoromethane	0.4400	0.4339	4.93	5	-1	
# Trichlorofluoromethane	0.4098	0.3885	4.74	5	-5	#
Ethyl ether	0.1690	0.1791	5.30	5	6	
Freon 123a	0.3135	0.3086	4.92	5	-2	
Acrolein	2.8508	2.6518	34.88	37.5	-7	
# 1,1-Dichloroethene	0.2351	0.2224	4.73	5	-5	#
# Freon 113	0.2445	0.2348	4.80	5	-4	#
# Acetone	3.9283	3.4222	32.67	37.5	-13	#
Methyl Iodide	0.4353	0.4152	4.77	5	-5	
# Carbon Disulfide	0.7260	0.6225	4.29	5	-14	#
Allyl Chloride	0.4446	0.4460	5.02	5	0	
# Methyl Acetate	9.7388	9.0187	4.63	5	-7	#
# Methylene Chloride	0.2513	0.2371	4.72	5	-6	#
t-Butyl Alcohol	1.3444	1.3828	51.43	50	3	
Acrylonitrile	4.7135	4.5543	24.16	25	-3	
# trans-1,2-Dichloroethene	0.2532	0.2494	4.92	5	-2	#
# Methyl Tertiary Butyl Ether	0.5425	0.5217	4.81	5	-4	#
n-Hexane	0.4297	0.4096	4.77	5	-5	
# 1,1-Dichloroethane	0.5160	0.4949	4.80	5	-4	#
di-Isopropyl Ether	0.9007	0.9135	5.07	5	1	
2-Chloro-1,3-Butadiene	0.4236	0.3837	4.53	5	-9	
Ethyl t-butyl ether	0.7596	0.7366	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2804	0.2746	4.90	5	-2	#
2,2-Dichloropropane	0.4129	0.3968	4.80	5	-4	
# 2-Butanone	6.6938	6.3917	35.81	37.5	-5	#
Propionitrile	1.6691	1.6206	36.41	37.5	-3	
Methacrylonitrile	5.7149	5.7301	37.60	37.5	0	
Bromochloromethane	0.1067	0.1083	5.08	5	2	
Tetrahydrofuran	1.6934	1.5668	23.13	25	-7	
# Chloroform	0.4716	0.4589	4.86	5	-3	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
# 1,1,1-Trichloroethane	0.4023	0.3935	4.89	5	-2	#
# Cyclohexane	0.5257	0.4856	4.62	5	-8	#
1,1-Dichloropropene	0.3862	0.3590	4.65	5	-7	
# Carbon Tetrachloride	0.3658	0.3606	4.93	5	-1	#
Isobutyl Alcohol	0.4529	0.4698	129.67	125	4	
# Benzene	1.0747	1.0422	4.85	5	-3	#
# 1,2-Dichloroethane	0.2785	0.2730	4.90	5	-2	#
t-Amyl methyl ether	0.6207	0.6059	4.88	5	-2	
n-Heptane	0.4857	0.4729	4.87	5	-3	
n-Butanol	0.3834	0.3583	233.61	250	-7	
# Trichloroethene	0.2801	0.2798	4.99	5	0	#
# Methylcyclohexane	0.4588	0.4593	5.01	5	0	#
# 1,2-Dichloropropane	0.2798	0.2759	4.93	5	-1	#
Methyl Methacrylate	11.940	11.8571	4.97	5	-1	
Dibromomethane	0.1153	0.1094	4.75	5	-5	
1,4-Dioxane	0.0755	0.0843	139.58	125	12	
# Bromodichloromethane	0.3218	0.3160	4.91	5	-2	#
2-Nitropropane	3.8276	3.4176	4.46	5	-11	
# cis-1,3-Dichloropropene	0.3955	0.3901	4.93	5	-1	#
# 4-Methyl-2-Pentanone	16.473	15.6459	23.74	25	-5	#
# Toluene	0.9596	0.9407	4.90	5	-2	#
# trans-1,3-Dichloropropene	0.4497	0.4515	5.02	5	0	#
Ethyl Methacrylate	0.3460	0.3509	5.07	5	1	
# 1,1,2-Trichloroethane	0.2324	0.2233	4.80	5	-4	#
# Tetrachloroethene	0.4532	0.4458	4.92	5	-2	#
1,3-Dichloropropane	0.4179	0.4093	4.90	5	-2	
# 2-Hexanone	11.647	11.1994	24.04	25	-4	#
# Dibromochloromethane	0.2979	0.2889	4.85	5	-3	#
# 1,2-Dibromoethane	0.2189	0.2225	5.08	5	2	#
# Chlorobenzene	1.0446	1.0197	4.88	5	-2	#
1,1,1,2-Tetrachloroethane	0.3583	0.3524	4.92	5	-2	
# Ethylbenzene	1.8783	1.8452	4.91	5	-2	#
# m+p-Xylene	0.7164	0.7004	9.78	10	-2	#
# o-Xylene	0.6952	0.6721	4.83	5	-3	#
# Styrene	1.1122	1.0972	4.93	5	-1	#
# Bromoform	0.1653	0.1583	4.79	5	-4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Isopropylbenzene	1.8424	1.8341	4.98	5	0	#
#	1,1,2,2-Tetrachloroethane	0.6259	0.5866	4.69	5	-6	#
	Bromobenzene	0.9322	0.9029	4.84	5	-3	
	trans-1,4-Dichloro-2-butene	5.0729	4.9756	24.52	25	-2	
	1,2,3-Trichloropropane	0.1571	0.1558	4.96	5	-1	
	n-Propylbenzene	5.0423	4.9524	4.91	5	-2	
	2-Chlorotoluene	0.9722	0.9485	4.88	5	-2	
	1,3,5-Trimethylbenzene	3.5154	3.4299	4.88	5	-2	
	4-Chlorotoluene	0.9908	0.9498	4.79	5	-4	
	tert-Butylbenzene	0.7494	0.7459	4.98	5	0	
	Pentachloroethane	0.5656	0.5688	5.03	5	1	
	1,2,4-Trimethylbenzene	3.5150	3.4285	4.88	5	-2	
	sec-Butylbenzene	4.5515	4.4795	4.92	5	-2	
#	1,3-Dichlorobenzene	1.8235	1.7406	4.77	5	-5	#
	p-Isopropyltoluene	3.8530	3.7502	4.87	5	-3	
#	1,4-Dichlorobenzene	1.8526	1.7439	4.71	5	-6	#
	1,2,3-Trimethylbenzene	1.4577	1.4042	4.82	5	-4	
	Benzyl Chloride	0.2480	0.2436	4.91	5	-2	
	n-Butylbenzene	1.8848	1.8861	5.00	5	0	
#	1,2-Dichlorobenzene	1.6196	1.5372	4.75	5	-5	#
#	1,2-Dibromo-3-chloropropane	2.6170	2.5079	4.79	5	-4	#
#	1,2,4-Trichlorobenzene	1.1586	0.9938	4.29	5	-14	#
	Hexachlorobutadiene	0.6054	0.5862	4.84	5	-3	
	Naphthalene	1.8571	1.5831	4.26	5	-15	
	1,2,3-Trichlorobenzene	0.9254	0.7706	4.16	5	-17	

Average %Drift 4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 05/07/16 05/07/16

Heated Purge: (Y/N) Y Calibration Times: 12:38 14:40

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hy07i07.d RRF0.5= hy07i06.d RRF 1 = hy07i05.d
RRF 2 = hy07i04.d RRF 5 = hy07i03.d RRF 10= hy07i02.d RRF 25= hy07i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1-Chlorobutane	0.5457	0.5245	0.5372	0.5238	0.5309	0.5597	0.5642	0.5409	3	AVG
2-Chloroethyl vinyl ether	0.0664	0.0843	0.0909	0.0926	0.1025	0.1106	0.1228	0.0957	19	AVG
Acetonitrile	2.1663	2.1245	1.8770	1.7485	1.6707	1.7247	1.9235	1.8908	10	AVG
Chloroacetonitrile	0.0034	0.0038	0.0042	0.0050	0.0047	0.0053	0.0059	0.0046	19	AVG
Cyclohexanone	0.4987	0.5068	0.4865	0.5478	0.6015	0.5673	0.4843	0.5276	9	AVG
Hexachloroethane	0.6545	0.6577	0.6515	0.6525	0.7106	0.6843	0.6664	0.6682	3	AVG
Methyl Acrylate	0.0889	0.0961	0.0984	0.1045	0.1104	0.1208	0.1346	0.1077	15	AVG
Vinyl Acetate		0.2391	0.2339	0.2593	0.2896	0.3264	0.3554	0.2839	17	AVG
cis-1,4-Dichloro-2-butene	3.4307	3.7068	3.7332	4.2654	4.8070	5.0282	5.2387	4.3157	17	AVG
Dimethyl ether		0.3898	0.3355	0.3321	0.3100	0.3126	0.3806	0.3434	10	AVG

Average %RSD 12

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/16may07a.b/hy07i01.d	VSTD025
/chem2/HP19094.i/16may07a.b/hy07i02.d	VSTD010
/chem2/HP19094.i/16may07a.b/hy07i03.d	VSTD005
/chem2/HP19094.i/16may07a.b/hy07i04.d	VSTD002
/chem2/HP19094.i/16may07a.b/hy07i05.d	VSTD001
/chem2/HP19094.i/16may07a.b/hy07i06.d	VSTD0.5
/chem2/HP19094.i/16may07a.b/hy07i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hy07i01.d	hy07i02.d	hy07i03.d	hy07i04.d	hy07i05.d	hy07i06.d	hy07i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	79793	82180	78867	83788	75137	73203	77025	78570	5	Yes
Fluorobenzene	2044001	2229044	2299109	2332147	2301878	2294017	2319023	2259888	4	Yes
1,4-Dichlorobenzene-d4	784161	785691	696946	760998	738464	701611	713858	740247	5	Yes
Chlorobenzene-d5	1698842	1752410	1608272	1734238	1698133	1649322	1662229	1686207	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hy07i01.d	hy07i02.d	hy07i03.d	hy07i04.d	hy07i05.d	hy07i06.d	hy07i07.d	Avg. RT
t-Butyl Alcohol-d10	4.263	4.269	4.263	4.287	4.275	4.269	4.269	4.271
Fluorobenzene	7.793	7.793	7.787	7.793	7.793	7.787	7.787	7.790
1,4-Dichlorobenzene-d4	13.127	13.127	13.127	13.127	13.127	13.127	13.127	13.127
Chlorobenzene-d5	11.249	11.250	11.250	11.249	11.250	11.250	11.250	11.250

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/07/2016 at 15:36.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 05/07/16 Time: 15:21

Lab File ID: hy07cv01.d Init. Calib. Date(s): 05/07/16 05/07/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
1-Chlorobutane	0.5409	0.5412	5.00	5	0
2-Chloroethyl vinyl ether	0.0957	0.1033	5.40	5	8
Acetonitrile	1.8908	2.4672	48.93	37.5	30
Chloroacetonitrile	0.0046	0.0043	230.88	250	-8
Cyclohexanone	0.5276	0.4316	102.26	125	-18
Hexachloroethane	0.6682	0.6926	5.18	5	4
Methyl Acrylate	0.1077	0.1140	26.46	25	6
Vinyl Acetate	0.2839	0.2820	12.41	12.5	-1
cis-1,4-Dichloro-2-butene	4.3157	5.5375	16.04	12.5	28
Dimethyl ether	0.3434	0.3272	4.76	5	-5

Average %Drift 11

Compounds with required minimum RRF.
Maximum % Drift = 30 %

page 1 of 1 FORM VII VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 04/22/16 04/22/16

Heated Purge: (Y/N) Y Calibration Times: 09:55 12:07

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = la22i07.d RRF 4 = la22i06.d RRF 10= la22i05.d
RRF 20= la22i04.d RRF 50= la22i03.d RRF100= la22i02.d RRF300= la22i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2870	0.3828	0.3893	0.3614	0.4075	0.3999	0.3699	0.3711	11	AVG	#
Chloromethane	#0.3320	0.3656	0.3714	0.3576	0.4022	0.4037	0.3767	0.3727	7	AVG	#
1,3-Butadiene	1.1325	0.9842	0.5645	0.5365	0.3908	0.3624	0.3065	0.6111	53	AVG	
Vinyl Chloride	#0.2958	0.3515	0.3575	0.3395	0.3770	0.3874	0.3532	0.3517	8	AVG	#
Bromomethane	#0.1986	0.2254	0.2372	0.2241	0.2420	0.2439	0.2250	0.2280	7	AVG	#
Chloroethane	#0.1753	0.1946	0.1922	0.1881	0.2064	0.2045	0.1861	0.1924	6	AVG	#
Dichlorofluoromethane	0.4077	0.4571	0.4349	0.4597	0.4592	0.4732	0.4544	0.4495	5	AVG	
n-Pentane	0.3891	0.4514	0.4094	0.4260	0.4534	0.4467	0.3920	0.4240	7	AVG	
Trichlorofluoromethane	#0.2826	0.3829	0.3851	0.3612	0.4022	0.3985	0.3803	0.3704	11	AVG	#
Ethyl ether	0.2529	0.2516	0.2591	0.2549	0.2699	0.2771	0.2737	0.2627	4	AVG	
Freon 123a	0.2777	0.3271	0.3039	0.3102	0.3135	0.3156	0.3028	0.3072	5	AVG	
Acrolein	2.1334	2.0442	2.2649	2.1023	2.1291	2.0899	2.2077	2.1388	3	AVG	
1,1-Dichloroethene	#0.1775	0.2115	0.2230	0.2222	0.2331	0.2339	0.2314	0.2189	9	AVG	#
1,1-Dichloroethene(2)	#0.0963	0.1136	0.1200	0.1180	0.1248	0.1254	0.1227	0.1173	9	AVG	#
Acetone	#0.8613	0.9062	1.0419	0.9788	0.9942	0.9364	0.9829	0.9574	6	AVG	#
Freon 113	#0.1527	0.2095	0.2284	0.2124	0.2261	0.2282	0.2160	0.2105	13	AVG	#
2-Propanol	0.7482	0.7228	0.6565	0.7423	0.7481	0.7671	0.7543	0.7342	5	AVG	
Methyl Iodide	0.3302	0.3840	0.4083	0.4067	0.4312	0.4400	0.4450	0.4065	10	AVG	
Carbon Disulfide	#0.6244	0.6879	0.7237	0.7328	0.7913	0.7973	0.7889	0.7352	9	AVG	#
Allyl Chloride	0.3373	0.3844	0.4165	0.4337	0.4556	0.4743	0.4591	0.4230	11	AVG	
Methyl Acetate	#0.3003	0.2670	0.2840	0.2884	0.3033	0.3155	0.3059	0.2949	6	AVG	#
Methylene Chloride	#0.2545	0.2542	0.2686	0.2638	0.2799	0.2836	0.2853	0.2700	5	AVG	#
t-Butyl alcohol	1.2726	1.1572	1.1518	1.1610	1.1772	1.2180	1.1969	1.1906	4	AVG	
Acrylonitrile	0.1390	0.1416	0.1550	0.1474	0.1519	0.1499	0.1572	0.1489	5	AVG	
trans-1,2-Dichloroethene	#0.1997	0.2320	0.2535	0.2507	0.2639	0.2709	0.2686	0.2484	10	AVG	#
Methyl Tertiary Butyl Ether	#0.7855	0.7876	0.8575	0.8357	0.8801	0.8958	0.8827	0.8464	5	AVG	#
n-Hexane	0.2773	0.3768	0.3853	0.3997	0.4208	0.4283	0.3998	0.3840	13	AVG	
1,1-Dichloroethane	#0.4097	0.4562	0.4870	0.4994	0.5326	0.5380	0.5292	0.4931	10	AVG	#
di-Isopropyl ether	0.8239	0.8699	0.9588	0.9544	1.0090	1.0226	0.9906	0.9470	8	AVG	
2-Chloro-1,3-butadiene	0.2883	0.3510	0.3935	0.3960	0.4291	0.4363	0.4288	0.3890	14	AVG	
Ethyl t-butyl ether	0.7478	0.7910	0.8677	0.8599	0.9198	0.9351	0.9155	0.8624	8	AVG	
cis-1,2-Dichloroethene	#0.2282	0.2629	0.2815	0.2814	0.2992	0.3037	0.3018	0.2798	10	AVG	#
2-Butanone	#0.1791	0.1803	0.2015	0.1881	0.1977	0.1949	0.2000	0.1917	5	AVG	#
2,2-Dichloropropane	0.2527	0.3028	0.3405	0.3452	0.3810	0.3918	0.3827	0.3424	15	AVG	
Propionitrile	1.4728	1.5239	1.5189	1.5568	1.5326	1.6033	1.5810	1.5413	3	AVG	
Methacrylonitrile	0.1377	0.1399	0.1450	0.1484	0.1526	0.1569	0.1538	0.1477	5	AVG	
Bromochloromethane	0.1237	0.1337	0.1414	0.1410	0.1489	0.1557	0.1543	0.1427	8	AVG	
Tetrahydrofuran	1.0707	1.2371	1.3781	1.3057	1.3311	1.3040	1.3979	1.2892	9	AVG	
Chloroform	#0.3918	0.4166	0.4485	0.4475	0.4724	0.4825	0.4775	0.4481	8	AVG	#
1,1,1-Trichloroethane	#0.3469	0.4069	0.4039	0.3995	0.4047	0.4135	0.4112	0.3981	6	AVG	#
Cyclohexane	#0.3435	0.4453	0.4651	0.4680	0.5054	0.5086	0.4768	0.4589	12	AVG	#
Cyclohexane(2)	#0.3252	0.3422	0.3653	0.3620	0.3916	0.3970	0.3688	0.3646	7	AVG	#
Cyclohexane(3)	#0.0975	0.1254	0.1364	0.1350	0.1453	0.1488	0.1401	0.1327	13	AVG	#
1,1-Dichloropropene	0.2986	0.3360	0.3681	0.3653	0.3979	0.4049	0.3951	0.3665	10	AVG	
Carbon Tetrachloride	#0.2265	0.2631	0.2897	0.3001	0.3298	0.3394	0.3380	0.2981	14	AVG	#
Isobutyl Alcohol	0.4163	0.4107	0.4018	0.4066	0.4148	0.4444	0.4375	0.4189	4	AVG	
Benzene	#0.9229	1.0064	1.0891	1.0779	1.1390	1.1605	1.1245	1.0743	8	AVG	#
1,2-Dichloroethane	#0.3957	0.3778	0.3982	0.3859	0.4022	0.4133	0.4088	0.3974	3	AVG	#
1,2-Dichloroethane(2)	#0.0310	0.0317	0.0355	0.0345	0.0359	0.0368	0.0367	0.0346	7	AVG	#<-
t-Amyl methyl ether	0.7072	0.7066	0.8032	0.8014	0.8459	0.8752	0.8531	0.7989	9	AVG	
n-Heptane	0.3508	0.4281	0.4293	0.4354	0.4536	0.4644	0.4173	0.4255	9	AVG	
n-Butanol	0.2782	0.3017	0.3098	0.3324	0.3411	0.3647	0.3577	0.3265	10	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 04/22/16 04/22/16

Heated Purge: (Y/N) Y Calibration Times: 09:55 12:07

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = la22i07.d RRF 4 = la22i06.d RRF 10= la22i05.d
RRF 20= la22i04.d RRF 50= la22i03.d RRF100= la22i02.d RRF300= la22i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Trichloroethene	#0.2264	0.2535	0.2711	0.2713	0.2905	0.2951	0.2924	0.2715	9	AVG #
Methylcyclohexane	#0.3214	0.4266	0.4552	0.4635	0.4851	0.5025	0.4766	0.4473	14	AVG #
Methylcyclohexane(2)	#0.1499	0.1904	0.2036	0.2028	0.2190	0.2257	0.2153	0.2009	13	AVG #
1,2-Dichloropropane	#0.2499	0.2713	0.2981	0.2974	0.3151	0.3226	0.3159	0.2958	9	AVG #
Dibromomethane	0.1636	0.1712	0.1845	0.1791	0.1910	0.1968	0.1970	0.1833	7	AVG
1,4-Dioxane	0.0995	0.1062	0.1079	0.1102	0.1154	0.1198	0.1152	0.1106	6	AVG
Methyl Methacrylate	0.1854	0.2206	0.2502	0.2521	0.2674	0.2811	0.2782	0.2479	14	AVG
Bromodichloromethane	#0.2713	0.2876	0.3258	0.3276	0.3645	0.3795	0.3857	0.3346	13	AVG #
2-Nitropropane	0.0727	0.0753	0.0905	0.0915	0.1008	0.1035	0.1104	0.0921	15	AVG
2-Chloroethyl Vinyl Ether	0.1545	0.1805	0.2061	0.2051	0.2397	0.2485	0.2430	0.2111	17	AVG
cis-1,3-Dichloropropene	#0.3116	0.3583	0.4217	0.4373	0.4785	0.4970	0.4999	0.4292	17	AVG #
4-Methyl-2-pentanone	#0.3178	0.3502	0.4164	0.4053	0.4245	0.4161	0.4228	0.3933	11	AVG #
Toluene	#0.7746	0.8364	0.9016	0.9109	0.9437	0.9433	0.9176	0.8897	7	AVG #
trans-1,3-Dichloropropene	#0.3516	0.4233	0.4915	0.5342	0.5838	0.6087	0.6154	0.5155	19	AVG #
Ethyl Methacrylate	0.4405	0.4863	0.5708	0.5907	0.6250	0.6488	0.6355	0.5711	14	AVG
1,1,2-Trichloroethane	#0.3178	0.3216	0.3508	0.3414	0.3629	0.3646	0.3606	0.3457	6	AVG #
Tetrachloroethene	#0.3081	0.3519	0.3818	0.3816	0.4028	0.4052	0.4049	0.3766	9	AVG #
1,3-Dichloropropane	0.5449	0.5635	0.6223	0.6189	0.6430	0.6520	0.6408	0.6122	7	AVG
2-Hexanone	#0.3130	0.3278	0.3943	0.3980	0.4088	0.4008	0.4016	0.3778	10	AVG #
Dibromochloromethane	#0.2550	0.2765	0.3265	0.3422	0.3723	0.3920	0.4123	0.3395	17	AVG #
1,2-Dibromoethane	#0.3141	0.3392	0.3711	0.3759	0.3934	0.4026	0.4032	0.3713	9	AVG #
1-Chlorohexane	0.4522	0.4760	0.4969	0.5007	0.5275	0.5281	0.5124	0.4991	6	AVG
Chlorobenzene	#0.8769	0.9248	1.0194	1.0239	1.0673	1.0719	1.0638	1.0069	8	AVG #
1,1,1,2-Tetrachloroethane	0.2644	0.2911	0.3278	0.3373	0.3591	0.3713	0.3811	0.3332	13	AVG
Ethylbenzene	#1.3961	1.5924	1.7537	1.7724	1.8530	1.8631	1.7848	1.7165	10	AVG #
m+p-Xylene	#0.5302	0.5986	0.6784	0.6810	0.7111	0.7170	0.6968	0.6590	10	AVG #
o-Xylene	#0.5161	0.5895	0.6670	0.6653	0.6961	0.7083	0.6950	0.6482	11	AVG #
Styrene	#0.7989	0.9728	1.1154	1.1434	1.2039	1.2245	1.1840	1.0918	14	AVG #
Bromoform	#0.1831	0.1832	0.2089	0.2271	0.2540	0.2785	0.3018	0.2338	20	AVG #
Isopropylbenzene	#1.2543	1.5384	1.7097	1.7228	1.7909	1.8006	1.7339	1.6501	12	AVG #
Cyclohexanone	0.4397	0.4358	0.5803	0.5316	0.5203	0.5301	0.5326	0.5100	10	AVG
Bromobenzene	0.7529	0.7988	0.8533	0.8741	0.8985	0.9232	0.9146	0.8593	7	AVG
1,1,2,2-Tetrachloroethane	#0.9259	0.9395	1.0265	1.0311	1.0483	1.0805	1.0366	1.0126	6	AVG #
1,2,3-Trichloropropane	0.2909	0.2784	0.2897	0.2909	0.2957	0.3057	0.2960	0.2925	3	AVG
trans-1,4-Dichloro-2-butene	0.0404	0.0695	0.0962	0.1362	0.1644	0.2064	0.2318	0.1350	52	2NDDEG
n-Propylbenzene	3.1408	3.6653	3.9623	4.0646	4.1491	4.1511	3.7625	3.8422	9	AVG
2-Chlorotoluene	0.6777	0.7158	0.7826	0.8044	0.8207	0.8336	0.8200	0.7793	8	AVG
4-Chlorotoluene	0.6926	0.7664	0.8374	0.8476	0.8696	0.8866	0.8599	0.8229	8	AVG
1,3,5-Trimethylbenzene	2.1318	2.5246	2.7768	2.8631	2.9485	2.9754	2.8303	2.7215	11	AVG
tert-Butylbenzene	0.4613	0.5206	0.5523	0.5832	0.6023	0.6192	0.6041	0.5633	10	AVG
Pentachloroethane	0.3322	0.3941	0.4399	0.4759	0.5118	0.5515	0.5499	0.4650	18	AVG
1,2,4-Trimethylbenzene	2.2913	2.6289	2.8813	2.9487	3.0386	3.0853	2.9358	2.8300	10	AVG
sec-Butylbenzene	2.7720	3.3416	3.5031	3.6472	3.7339	3.7220	3.4234	3.4490	10	AVG
1,3-Dichlorobenzene	#1.4757	1.5232	1.6098	1.6526	1.6892	1.7213	1.6445	1.6166	5	AVG #
p-Isopropyltoluene	2.3507	2.8191	3.0347	3.1655	3.2336	3.2836	3.1108	2.9997	11	AVG
1,4-Dichlorobenzene	#1.5844	1.6105	1.7143	1.7158	1.7446	1.7731	1.6798	1.6889	4	AVG #
1,2,3-Trimethylbenzene	2.6174	2.7684	2.9411	3.0563	3.1132	3.2112	3.0087	2.9595	7	AVG
Benzyl Chloride	1.0881	1.3714	1.6479	1.8342	2.0342	2.1754	2.1461	1.7568	23	2NDDEG
1,3-Diethylbenzene	1.4843	1.7174	1.8059	1.8857	1.9136	1.9595	1.8592	1.8037	9	AVG
1,4-Diethylbenzene	1.5943	1.8034	1.8904	1.9651	1.9762	2.0236	1.9148	1.8811	8	AVG
1,2-Dichlorobenzene	#1.5095	1.5321	1.6250	1.6310	1.6384	1.6651	1.6164	1.6025	4	AVG #
n-Butylbenzene	1.3650	1.5046	1.5472	1.6079	1.6153	1.6132	1.4918	1.5350	6	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date(s): 04/22/16 04/22/16

Heated Purge: (Y/N) Y Calibration Times: 09:55 12:07

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

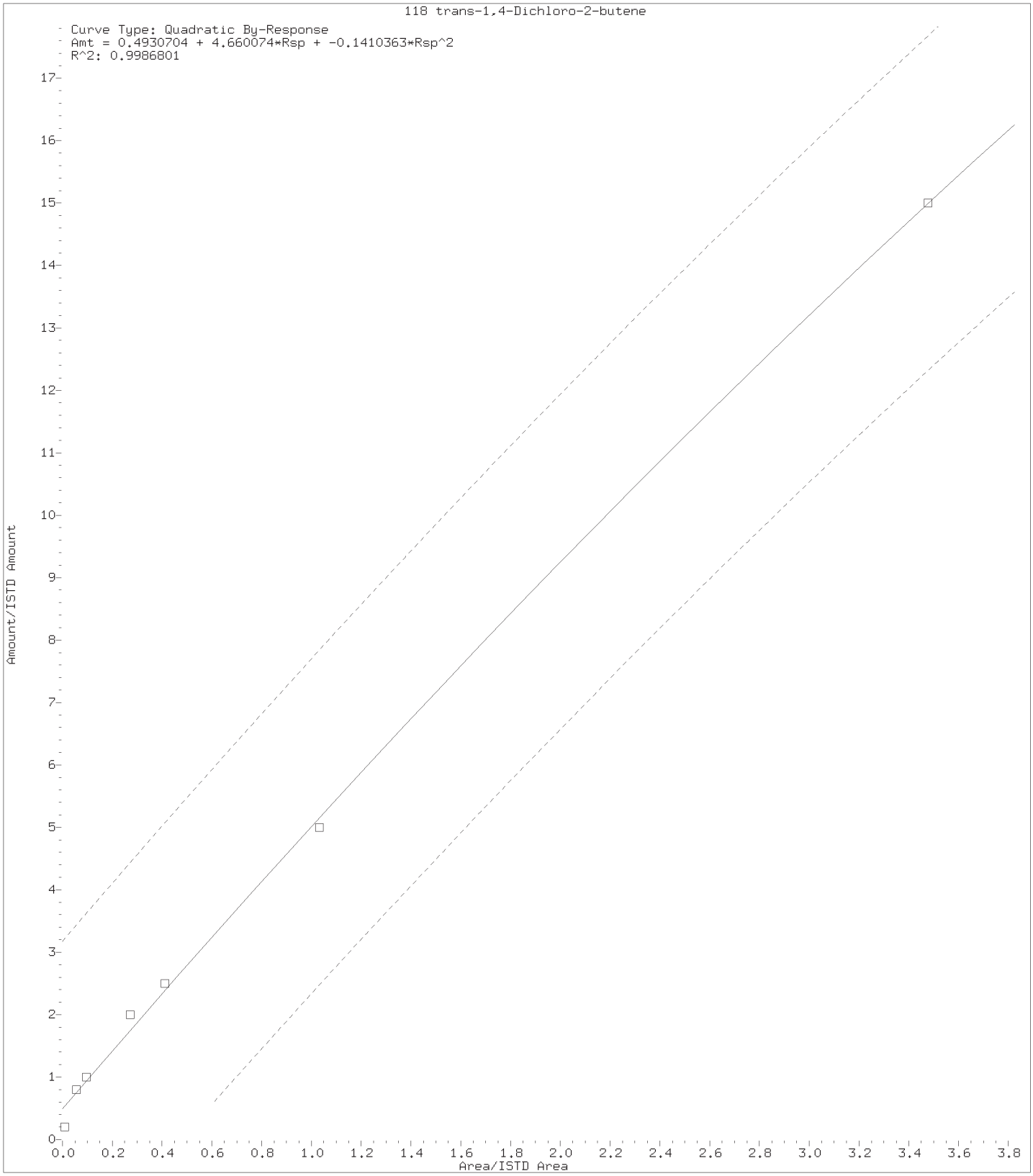
LAB FILE ID: RRF 1 = la22i07.d RRF 4 = la22i06.d RRF 10= la22i05.d
RRF 20= la22i04.d RRF 50= la22i03.d RRF100= la22i02.d RRF300= la22i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
1,2-Diethylbenzene	1.3225	1.4672	1.5421	1.5992	1.6106	1.6506	1.5771	1.5385	7	AVG
1,2-Dibromo-3-chloropropane	#0.1574	0.1700	0.1944	0.1980	0.2062	0.2228	0.2214	0.1957	13	AVG #
1,3,5-Trichlorobenzene	1.2631	1.1999	1.2685	1.2933	1.3000	1.3228	1.2797	1.2753	3	AVG
1,2,4-Trichlorobenzene	#1.3374	1.2075	1.2395	1.2630	1.2635	1.3040	1.2310	1.2637	4	AVG #
Hexachlorobutadiene	0.6454	0.5291	0.5122	0.5462	0.5263	0.5436	0.4748	0.5397	10	AVG
Naphthalene	3.1904	3.2213	3.4607	3.5124	3.5111	3.6599	3.2750	3.4044	5	AVG
1,2,3-Trichlorobenzene	1.2456	1.1501	1.1979	1.1964	1.1890	1.2328	1.1262	1.1911	4	AVG
2-Methylnaphthalene	2.2999	1.9798	2.0306	2.2775	2.1941	2.4127	1.6627	2.1225	12	AVG
Dibromofluoromethane	0.2376	0.2337	0.2391	0.2342	0.2404	0.2400	0.2377	0.2375	1	AVG
Dibromofluoromethane(2)	0.2444	0.2402	0.2448	0.2387	0.2441	0.2464	0.2436	0.2432	1	AVG
1,2-Dichloroethane-d4	0.0602	0.0599	0.0605	0.0595	0.0603	0.0604	0.0589	0.0600	1	AVG
1,2-Dichloroethane-d4(2)	0.3102	0.3070	0.3092	0.3013	0.3114	0.3084	0.3040	0.3073	1	AVG
1,2-Dichloroethane-d4(3)	0.0385	0.0381	0.0382	0.0376	0.0386	0.0381	0.0375	0.0381	1	AVG
Toluene-d8	1.3085	1.3151	1.3157	1.3199	1.3074	1.3027	1.2919	1.3088	1	AVG
Toluene-d8(2)	0.8506	0.8586	0.8547	0.8598	0.8471	0.8503	0.8445	0.8522	1	AVG
4-Bromofluorobenzene	0.4845	0.4849	0.4902	0.4836	0.4854	0.4830	0.4785	0.4843	1	AVG
4-Bromofluorobenzene(2)	0.4157	0.4147	0.4154	0.4124	0.4125	0.4070	0.4073	0.4121	1	AVG

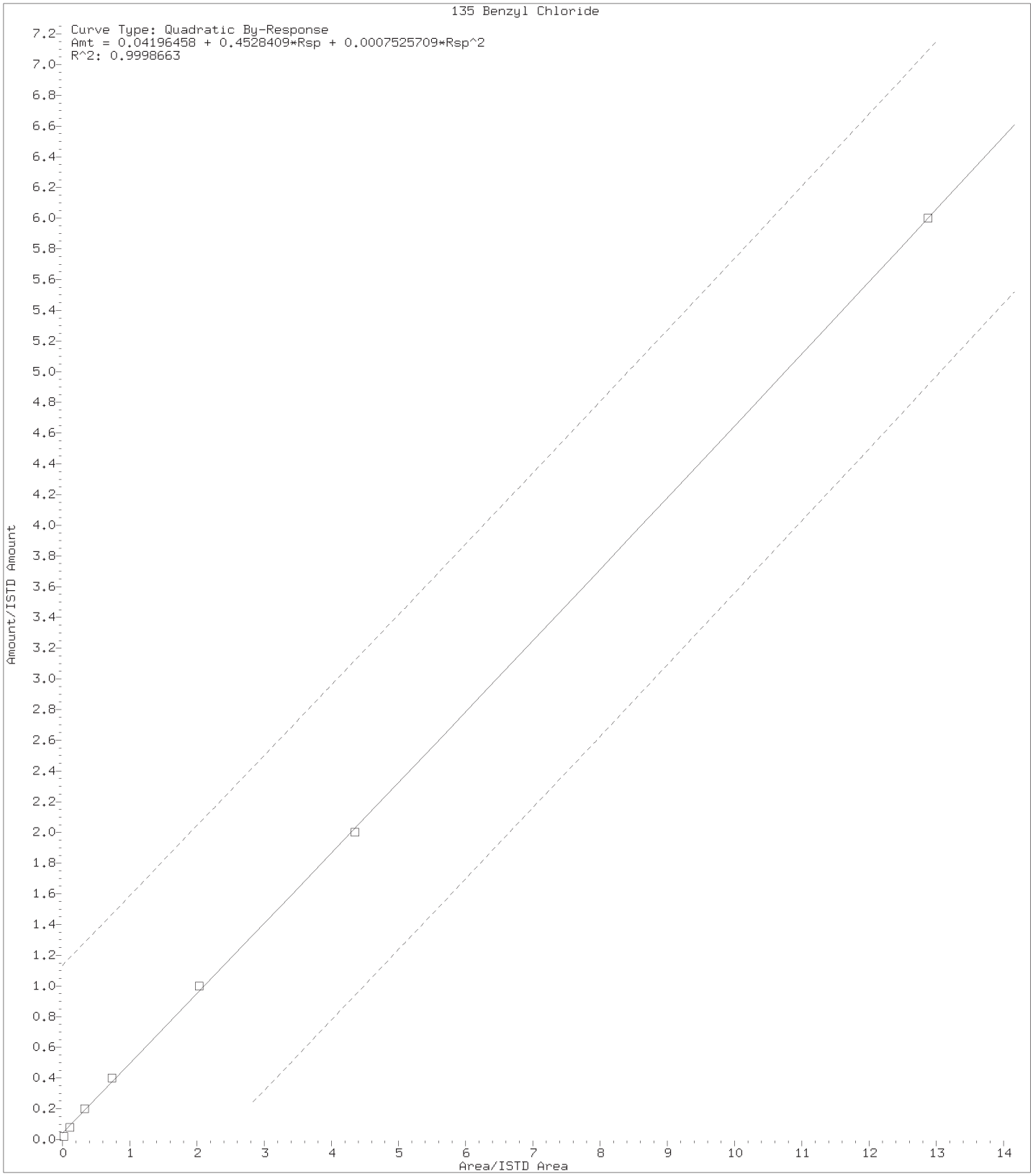
Average %RSD 9

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA



Digitally signed by Brett W. Kenyon on 04/25/2016 at 16:07.
Target 3.5 esignature user ID: bwk03231



Digitally signed by Brett W. Kenyon on 04/25/2016 at 16:07.
Target 3.5 esignature user ID: bwk03231

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/16apr22i.b/la22i01.d	VSTD300
/chem/HP09915.i/16apr22i.b/la22i02.d	VSTD100
/chem/HP09915.i/16apr22i.b/la22i03.d	VSTD050
/chem/HP09915.i/16apr22i.b/la22i04.d	VSTD020
/chem/HP09915.i/16apr22i.b/la22i05.d	VSTD010
/chem/HP09915.i/16apr22i.b/la22i06.d	VSTD004
/chem/HP09915.i/16apr22i.b/la22i07.d	VSTD001

Area Summary

File ID:

Internal Standard Name	la22i01.d	la22i02.d	la22i03.d	la22i04.d	la22i05.d	la22i06.d	la22i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	230813	237588	239110	234793	222755	229317	220884	230751	3	Yes
Fluorobenzene	1256794	1268629	1288793	1295555	1231017	1298555	1242368	1268816	2	Yes
Chlorobenzene-d5	960626	972262	977519	964347	926964	970322	934821	958123	2	Yes
1,4-Dichlorobenzene-d4	517298	509521	514202	499944	492114	506851	490975	504415	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	la22i01.d	la22i02.d	la22i03.d	la22i04.d	la22i05.d	la22i06.d	la22i07.d	Avg. RT
t-Butyl alcohol-d10	4.012	3.993	3.990	3.996	3.993	3.993	4.009	3.998
Fluorobenzene	7.510	7.504	7.504	7.507	7.507	7.507	7.510	7.507
Chlorobenzene-d5	11.041	11.041	11.041	11.041	11.041	11.041	11.041	11.041
1,4-Dichlorobenzene-d4	12.938	12.935	12.938	12.935	12.938	12.935	12.935	12.936

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/22/2016 at 13:38.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 04/22/16 Time: 12:51

Lab File ID: la22v01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3711	0.3115	16.78	20	-16	#
#	Chloromethane	0.3727	0.3338	17.91	20	-10	#
	1,3-Butadiene	0.6111	0.5293	17.32	20	-13	
#	Vinyl Chloride	0.3517	0.3217	18.29	20	-9	#
#	Bromomethane	0.2280	0.2031	17.81	20	-11	#
#	Chloroethane	0.1924	0.1731	17.99	20	-10	#
	Dichlorofluoromethane	0.4495	0.4047	18.01	20	-10	
	n-Pentane	0.4240	0.4263	20.11	20	1	
#	Trichlorofluoromethane	0.3704	0.3612	19.50	20	-2	#
	Ethyl ether	0.2627	0.2668	20.31	20	2	
	Freon 123a	0.3072	0.2804	18.25	20	-9	
	Acrolein	2.1388	2.0638	144.74	150	-4	
#	1,1-Dichloroethene	0.2189	0.2240	20.47	20	2	#
#	Acetone	0.9574	1.3094	205.15	150	37	#<-
#	Freon 113	0.2105	0.2190	20.81	20	4	#
	2-Propanol	0.7342	0.7487	152.96	150	2	
	Methyl Iodide	0.4065	0.4033	19.84	20	-1	
#	Carbon Disulfide	0.7352	0.7026	19.11	20	-4	#
	Allyl Chloride	0.4230	0.4568	21.60	20	8	
#	Methyl Acetate	0.2949	0.2937	19.92	20	0	#
#	Methylene Chloride	0.2700	0.2743	20.32	20	2	#
	t-Butyl alcohol	1.1906	1.1915	200.15	200	0	
	Acrylonitrile	0.1489	0.1442	96.88	100	-3	
#	trans-1,2-Dichloroethene	0.2484	0.2708	21.80	20	9	#
#	Methyl Tertiary Butyl Ether	0.8464	0.8425	19.91	20	0	#
	n-Hexane	0.3840	0.4115	21.44	20	7	
#	1,1-Dichloroethane	0.4931	0.5078	20.59	20	3	#
	di-Isopropyl ether	0.9470	0.9965	21.05	20	5	
	2-Chloro-1,3-butadiene	0.3890	0.4414	22.69	20	13	
	Ethyl t-butyl ether	0.8624	0.8747	20.28	20	1	
#	cis-1,2-Dichloroethene	0.2798	0.2972	21.24	20	6	#
#	2-Butanone	0.1917	0.2181	170.71	150	14	#
	2,2-Dichloropropane	0.3424	0.3561	20.80	20	4	
	Propionitrile	1.5413	1.6254	158.18	150	5	
	Methacrylonitrile	0.1477	0.1546	156.95	150	5	
	Bromochloromethane	0.1427	0.1464	20.53	20	3	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 04/22/16 Time: 12:51

Lab File ID: la22v01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Tetrahydrofuran	1.2892	1.3255	102.81	100	3	
# Chloroform	0.4481	0.4687	20.92	20	5	#
# 1,1,1-Trichloroethane	0.3981	0.4040	20.30	20	1	#
# Cyclohexane	0.4589	0.4841	21.10	20	5	#
1,1-Dichloropropene	0.3665	0.3654	19.93	20	0	
# Carbon Tetrachloride	0.2981	0.3125	20.97	20	5	#
Isobutyl Alcohol	0.4189	0.4211	502.62	500	1	
# Benzene	1.0743	1.1239	20.92	20	5	#
# 1,2-Dichloroethane	0.3974	0.4004	20.15	20	1	#
t-Amyl methyl ether	0.7989	0.8070	20.20	20	1	
n-Heptane	0.4255	0.4381	20.59	20	3	
n-Butanol	0.3265	0.3337	1022.09	1000	2	
# Trichloroethene	0.2715	0.2900	21.37	20	7	#
# Methylcyclohexane	0.4473	0.4906	21.94	20	10	#
# 1,2-Dichloropropane	0.2958	0.3121	21.10	20	6	#
Dibromomethane	0.1833	0.1840	20.07	20	0	
1,4-Dioxane	0.1106	0.1060	479.13	500	-4	
Methyl Methacrylate	0.2479	0.2459	19.84	20	-1	
# Bromodichloromethane	0.3346	0.3385	20.24	20	1	#
2-Nitropropane	0.0921	0.0858	18.63	20	-7	
2-Chloroethyl Vinyl Ether	0.2111	0.2174	20.60	20	3	
# cis-1,3-Dichloropropene	0.4292	0.4456	20.76	20	4	#
# 4-Methyl-2-pentanone	0.3933	0.4092	104.03	100	4	#
# Toluene	0.8897	0.9420	21.17	20	6	#
# trans-1,3-Dichloropropene	0.5155	0.5416	21.01	20	5	#
Ethyl Methacrylate	0.5711	0.6002	21.02	20	5	
# 1,1,2-Trichloroethane	0.3457	0.3536	20.46	20	2	#
# Tetrachloroethene	0.3766	0.3996	21.22	20	6	#
1,3-Dichloropropane	0.6122	0.6201	20.26	20	1	
# 2-Hexanone	0.3778	0.4137	109.50	100	10	#
# Dibromochloromethane	0.3395	0.3374	19.87	20	-1	#
# 1,2-Dibromoethane	0.3713	0.3836	20.66	20	3	#
1-Chlorohexane	0.4991	0.5187	20.78	20	4	
# Chlorobenzene	1.0069	1.0463	20.78	20	4	#
1,1,1,2-Tetrachloroethane	0.3332	0.3426	20.57	20	3	
# Ethylbenzene	1.7165	1.8147	21.14	20	6	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 ICV Date: 04/22/16 Time: 12:51

Lab File ID: la22v01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.6590	0.7026	42.65	40	7	#
# o-Xylene	0.6482	0.6768	20.88	20	4	#
# Styrene	1.0918	1.1651	21.34	20	7	#
# Bromoform	0.2338	0.2201	18.83	20	-6	#
# Isopropylbenzene	1.6501	1.7896	21.69	20	8	#
Cyclohexanone	0.5100	0.4286	420.13	500	-16	
Bromobenzene	0.8593	0.8833	20.56	20	3	
# 1,1,2,2-Tetrachloroethane	1.0126	1.0072	19.89	20	-1	#
1,2,3-Trichloropropane	0.2925	0.2953	20.19	20	1	
trans-1,4-Dichloro-2-butene	0.1350	0.1304	84.95	100	-15	
n-Propylbenzene	3.8422	4.0837	21.26	20	6	
2-Chlorotoluene	0.7793	0.8185	21.01	20	5	
4-Chlorotoluene	0.8229	0.8474	20.60	20	3	
1,3,5-Trimethylbenzene	2.7215	2.9057	21.35	20	7	
tert-Butylbenzene	0.5633	0.5909	20.98	20	5	
Pentachloroethane	0.4650	0.4842	20.82	20	4	
1,2,4-Trimethylbenzene	2.8300	2.9549	20.88	20	4	
sec-Butylbenzene	3.4490	3.6765	21.32	20	7	
# 1,3-Dichlorobenzene	1.6166	1.6408	20.30	20	1	#
p-Isopropyltoluene	2.9997	3.1165	20.78	20	4	
# 1,4-Dichlorobenzene	1.6889	1.7215	20.39	20	2	#
1,2,3-Trimethylbenzene	2.9595	3.1291	21.15	20	6	
Benzyl Chloride	1.7568	1.7737	18.18	20	-9	
1,3-Diethylbenzene	1.8037	1.8905	20.96	20	5	
1,4-Diethylbenzene	1.8811	2.0058	21.33	20	7	
# 1,2-Dichlorobenzene	1.6025	1.6168	20.18	20	1	#
n-Butylbenzene	1.5350	1.5804	20.59	20	3	
1,2-Diethylbenzene	1.5385	1.6189	21.05	20	5	
# 1,2-Dibromo-3-chloropropane	0.1957	0.1875	19.15	20	-4	#
1,3,5-Trichlorobenzene	1.2753	1.2558	19.69	20	-2	
# 1,2,4-Trichlorobenzene	1.2637	1.2019	19.02	20	-5	#
Hexachlorobutadiene	0.5397	0.4853	17.99	20	-10	
Naphthalene	3.4044	3.2790	19.26	20	-4	
1,2,3-Trichlorobenzene	1.1911	1.1001	18.47	20	-8	
2-Methylnaphthalene	2.1225	1.6045	15.12	20	-24	

Average %Drift 5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i07.d
/chem2/HP19094.i/16mar14a.b/hm14i06.d
/chem2/HP19094.i/16mar14a.b/hm14i05.d
/chem2/HP19094.i/16mar14a.b/hm14i04.d
/chem2/HP19094.i/16mar14a.b/hm14i03.d
/chem2/HP19094.i/16mar14a.b/hm14i02.d
/chem2/HP19094.i/16mar14a.b/hm14i01.d

File /chem2/HP19094.i/16mar14a.b/hm14i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/16may09a.b/hy09c01.d

RT Summary

Internal Standard Name	File ID: hy09c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.263	4.275	Yes
Fluorobenzene	7.793	7.805	Yes
Chlorobenzene-d5	11.249	11.262	Yes
1,4-Dichlorobenzene-d4	13.127	13.146	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hy09c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	89716	106258	53129	212516	Yes
Fluorobenzene	2413883	2270797	1135398	4541594	Yes
Chlorobenzene-d5	1873253	1617323	808662	3234646	Yes
1,4-Dichlorobenzene-d4	878826	725016	362508	1450032	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/09/16 Time: 08:58

Lab File ID: hy09c01.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.3448	0.3567	10.35	10	3	#
#	Chloromethane	0.3382	0.3735	11.04	10	10	#
#	Vinyl Chloride	0.3145	0.3580	11.38	10	14	#
	1,3-Butadiene	0.2379	0.1728	7.26	10	-27	<-
#	Bromomethane	0.2088	0.2430	11.64	10	16	#
#	Chloroethane	0.1939	0.2065	10.65	10	7	#
	Dichlorofluoromethane	0.4400	0.4973	11.30	10	13	
#	Trichlorofluoromethane	0.4098	0.4784	11.68	10	17	#
	Ethyl ether	0.1690	0.1800	10.65	10	6	
	Freon 123a	0.3135	0.3116	9.94	10	-1	
	Acrolein	2.8508	3.3827	593.28	500	19	
#	1,1-Dichloroethene	0.2351	0.2312	9.83	10	-2	#
#	Freon 113	0.2445	0.2494	10.20	10	2	#
#	Acetone	3.9283	4.3517	110.78	100	11	#
	Methyl Iodide	0.4353	0.4493	10.32	10	3	
#	Carbon Disulfide	0.7260	0.6449	8.88	10	-11	#
	Allyl Chloride	0.4446	0.4128	9.29	10	-7	
#	Methyl Acetate	9.7388	12.8317	13.18	10	32	#<-
#	Methylene Chloride	0.2513	0.2542	10.12	10	1	#
	t-Butyl Alcohol	1.3444	1.3267	197.37	200	-1	
	Acrylonitrile	4.7135	5.8552	62.11	50	24	<-
#	trans-1,2-Dichloroethene	0.2532	0.2486	9.82	10	-2	#
#	Methyl Tertiary Butyl Ether	0.5425	0.5607	10.34	10	3	#
	n-Hexane	0.4297	0.3832	8.92	10	-11	
#	1,1-Dichloroethane	0.5160	0.5112	9.91	10	-1	#
	di-Isopropyl Ether	0.9007	0.8505	9.44	10	-6	
	2-Chloro-1,3-Butadiene	0.4236	0.4318	10.19	10	2	
	Ethyl t-butyl ether	0.7596	0.7275	9.58	10	-4	
#	cis-1,2-Dichloroethene	0.2804	0.2869	10.23	10	2	#
	2,2-Dichloropropane	0.4129	0.3904	9.46	10	-5	
#	2-Butanone	6.6938	7.7688	116.06	100	16	#
	Propionitrile	1.6691	1.9031	228.04	200	14	
	Methacrylonitrile	5.7149	7.3495	128.60	100	29	<-
	Bromochloromethane	0.1067	0.1188	11.14	10	11	
	Tetrahydrofuran	1.6934	2.1216	125.28	100	25	<-
#	Chloroform	0.4716	0.4802	10.18	10	2	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/09/16 Time: 08:58

Lab File ID: hy09c01.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4023	0.4026	10.01	10	0	#
# Cyclohexane	0.5257	0.4679	8.90	10	-11	#
# Cyclohexane(2)	0.4025	0.3848	9.56	10	-4	#
# Cyclohexane(3)	0.1504	0.1387	9.22	10	-8	#
1,1-Dichloropropene	0.3862	0.3817	9.88	10	-1	
# Carbon Tetrachloride	0.3658	0.3721	10.17	10	2	#
Isobutyl Alcohol	0.4529	0.4869	537.55	500	8	
# Benzene	1.0747	1.0594	9.86	10	-1	#
# 1,2-Dichloroethane	0.2785	0.2862	10.28	10	3	#
t-Amyl methyl ether	0.6207	0.6232	10.04	10	0	
n-Heptane	0.4857	0.4219	8.69	10	-13	
n-Butanol	0.3834	0.4083	1064.93	1000	6	
# Trichloroethene	0.2801	0.2840	10.14	10	1	#
# Methylcyclohexane	0.4588	0.4744	10.34	10	3	#
# 1,2-Dichloropropane	0.2798	0.2761	9.87	10	-1	#
Methyl Methacrylate	11.940	14.6311	12.25	10	23	<-
Dibromomethane	0.1153	0.1237	10.74	10	7	
1,4-Dioxane	0.0755	0.0890	589.39	500	18	
# Bromodichloromethane	0.3218	0.3431	10.66	10	7	#
2-Nitropropane	3.8276	4.8090	125.64	100	26	<-
# cis-1,3-Dichloropropene	0.3955	0.3996	10.10	10	1	#
# 4-Methyl-2-Pentanone	16.473	019.9404	121.04	100	21	#<-
# Toluene	0.9596	0.8659	9.02	10	-10	#
# trans-1,3-Dichloropropene	0.4497	0.4082	9.08	10	-9	#
Ethyl Methacrylate	0.3460	0.2993	8.65	10	-13	
# 1,1,2-Trichloroethane	0.2324	0.2195	9.44	10	-6	#
# Tetrachloroethene	0.4532	0.4312	9.51	10	-5	#
1,3-Dichloropropane	0.4179	0.3849	9.21	10	-8	
# 2-Hexanone	11.647	013.8222	118.67	100	19	#
# Dibromochloromethane	0.2979	0.2977	9.99	10	0	#
# 1,2-Dibromoethane	0.2189	0.2112	9.65	10	-4	#
# Chlorobenzene	1.0446	0.9684	9.27	10	-7	#
1,1,1,2-Tetrachloroethane	0.3583	0.3456	9.64	10	-4	
# Ethylbenzene	1.8783	1.7191	9.15	10	-8	#
# m+p-Xylene	0.7164	0.6640	18.54	20	-7	#
# o-Xylene	0.6952	0.6517	9.37	10	-6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/09/16 Time: 08:58

Lab File ID: hy09c01.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.1122	1.0515	9.45	10	-5	#
# Bromoform	0.1653	0.1742	10.54	10	5	#
# Isopropylbenzene	1.8424	1.7064	9.26	10	-7	#
# 1,1,2,2-Tetrachloroethane	0.6259	0.5451	8.71	10	-13	#
Bromobenzene	0.9322	0.8694	9.33	10	-7	
trans-1,4-Dichloro-2-butene	5.0729	7.3225	144.35	100	44	<-
1,2,3-Trichloropropane	0.1571	0.1430	9.10	10	-9	
n-Propylbenzene	5.0423	4.4260	8.78	10	-12	
2-Chlorotoluene	0.9722	0.8540	8.78	10	-12	
1,3,5-Trimethylbenzene	3.5154	3.1024	8.83	10	-12	
4-Chlorotoluene	0.9908	0.8711	8.79	10	-12	
tert-Butylbenzene	0.7494	0.6476	8.64	10	-14	
Pentachloroethane	0.5656	0.5499	9.72	10	-3	
1,2,4-Trimethylbenzene	3.5150	3.1132	8.86	10	-11	
sec-Butylbenzene	4.5515	4.0381	8.87	10	-11	
# 1,3-Dichlorobenzene	1.8235	1.6610	9.11	10	-9	#
p-Isopropyltoluene	3.8530	3.4633	8.99	10	-10	
# 1,4-Dichlorobenzene	1.8526	1.6534	8.92	10	-11	#
1,2,3-Trimethylbenzene	1.4577	1.3074	8.97	10	-10	
Benzyl Chloride	0.2480	0.2100	8.47	10	-15	
n-Butylbenzene	1.8848	1.7125	9.09	10	-9	
# 1,2-Dichlorobenzene	1.6196	1.4694	9.07	10	-9	#
# 1,2-Dibromo-3-chloropropane	2.6170	3.5015	13.38	10	34	#<-
# 1,2,4-Trichlorobenzene	1.1586	0.9967	8.60	10	-14	#
Hexachlorobutadiene	0.6054	0.5730	9.47	10	-5	
Naphthalene	1.8571	1.4580	7.85	10	-21	<-
1,2,3-Trichlorobenzene	0.9254	0.7906	8.54	10	-15	
Dibromofluoromethane	0.2356	0.2565	10.88	10	9	
Dibromofluoromethane(2)	0.2425	0.2608	10.76	10	8	
1,2-Dichloroethane-d4	0.0390	0.0410	10.50	10	5	
1,2-Dichloroethane-d4(2)	0.1992	0.2147	10.78	10	8	
1,2-Dichloroethane-d4(3)	0.0246	0.0272	11.05	10	11	
Toluene-d8	1.4246	1.3320	9.35	10	-7	
Toluene-d8(2)	0.9221	0.8501	9.22	10	-8	
4-Bromofluorobenzene	0.4592	0.4469	9.73	10	-3	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/09/16 Time: 08:58

Lab File ID: hy09c01.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.3828	0.4048	10.57	10	6

Average %Drift 10

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/16may07a.b/hy07i07.d
/chem2/HP19094.i/16may07a.b/hy07i06.d
/chem2/HP19094.i/16may07a.b/hy07i05.d
/chem2/HP19094.i/16may07a.b/hy07i04.d
/chem2/HP19094.i/16may07a.b/hy07i03.d
/chem2/HP19094.i/16may07a.b/hy07i02.d
/chem2/HP19094.i/16may07a.b/hy07i01.d

File /chem2/HP19094.i/16may07a.b/hy07i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/16may09a.b/hy09c02.d

RT Summary

Internal Standard Name	File ID: hy09c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.281	4.269	Yes
Fluorobenzene	7.793	7.793	Yes
1,4-Dichlorobenzene-d4	13.127	13.127	Yes
Chlorobenzene-d5	11.250	11.250	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hy09c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	77462	82180	41090	164360	Yes
Fluorobenzene	2494887	2229044	1114522	4458088	Yes
1,4-Dichlorobenzene-d4	862625	785691	392846	1571382	Yes
Chlorobenzene-d5	1881397	1752410	876205	3504820	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 05/09/16 Time: 09:19

Lab File ID: hy09c02.d Init. Calib. Date(s): 05/07/16 05/07/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1-Chlorobutane	0.5409	0.5344	9.88	10	-1	
Hexachloroethane	0.6682	0.6691	10.01	10	0	
Vinyl Acetate	0.2839	0.3112	10.96	10	10	
2-Chloroethyl vinyl ether	0.0957	0.1060	11.08	10	11	
cis-1,4-Dichloro-2-butene	4.3157	9.2648	42.94	20	115	<-
Methyl Acrylate	0.1077	0.1137	52.82	50	6	
Acetonitrile	1.8908	1.7671	373.83	400	-7	
Cyclohexanone	0.5276	0.4302	407.74	500	-18	
Chloroacetonitrile	0.0046	0.0053	575.88	500	15	
Dimethyl ether	0.3434	0.3062	8.91	10	-11	

Average %Drift 19

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem/HP09915.i/16apr22i.b/la22i07.d
/chem/HP09915.i/16apr22i.b/la22i06.d
/chem/HP09915.i/16apr22i.b/la22i05.d
/chem/HP09915.i/16apr22i.b/la22i04.d
/chem/HP09915.i/16apr22i.b/la22i03.d
/chem/HP09915.i/16apr22i.b/la22i02.d
/chem/HP09915.i/16apr22i.b/la22i01.d

File /chem/HP09915.i/16apr22i.b/la22i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem/HP09915.i/16may09a.b/ly09c01.d

RT Summary

Internal Standard Name	File ID: ly09c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	3.996	3.990	Yes
Fluorobenzene	7.514	7.504	Yes
Chlorobenzene-d5	11.041	11.041	Yes
1,4-Dichlorobenzene-d4	12.938	12.938	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ly09c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	251455	239110	119555	478220	Yes
Fluorobenzene	1512990	1288793	644396	2577586	Yes
Chlorobenzene-d5	1165087	977519	488760	1955038	Yes
1,4-Dichlorobenzene-d4	625986	514202	257101	1028404	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 05/09/2016 at 09:44

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/09/16 Time: 09:14

Lab File ID: ly09c01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3711	0.3421	46.08	50	-8	#
# Chloromethane	0.3727	0.3581	48.04	50	-4	#
# Vinyl Chloride	0.3517	0.3396	48.28	50	-3	#
# Bromomethane	0.2280	0.2201	48.26	50	-3	#
# Chloroethane	0.1924	0.1903	49.45	50	-1	#
# Trichlorofluoromethane	0.3704	0.3525	47.58	50	-5	#
Ethyl ether	0.2627	0.2242	42.66	50	-15	
Acrolein	2.1388	2.4616	575.46	500	15	
# 1,1-Dichloroethene	0.2189	0.2345	53.55	50	7	#
# 1,1-Dichloroethene(2)	0.1173	0.1252	53.39	50	7	#
# Acetone	0.9574	1.0862	113.45	100	13	#
# Freon 113	0.2105	0.2281	54.20	50	8	#
2-Propanol	0.7342	0.7369	250.92	250	0	
Methyl Iodide	0.4065	0.4356	53.58	50	7	
# Carbon Disulfide	0.7352	0.8133	55.32	50	11	#
Allyl Chloride	0.4230	0.4236	50.07	50	0	
# Methyl Acetate	0.2949	0.2846	48.25	50	-3	#
# Methylene Chloride	0.2700	0.2838	52.56	50	5	#
t-Butyl alcohol	1.1906	1.1452	240.45	250	-4	
Acrylonitrile	0.1489	0.1532	51.45	50	3	
# trans-1,2-Dichloroethene	0.2484	0.2666	53.65	50	7	#
# Methyl Tertiary Butyl Ether	0.8464	0.8537	50.43	50	1	#
n-Hexane	0.3840	0.4079	53.11	50	6	
# 1,1-Dichloroethane	0.4931	0.5248	53.21	50	6	#
di-Isopropyl ether	0.9470	1.0049	53.05	50	6	
2-Chloro-1,3-butadiene	0.3890	0.4486	57.66	50	15	
Ethyl t-butyl ether	0.8624	0.8782	50.91	50	2	
# cis-1,2-Dichloroethene	0.2798	0.2991	53.45	50	7	#
# 2-Butanone	0.1917	0.1920	100.19	100	0	#
2,2-Dichloropropane	0.3424	0.3588	52.40	50	5	
Propionitrile	1.5413	1.7393	282.11	250	13	
Methacrylonitrile	0.1477	0.1555	131.58	125	5	
Bromochloromethane	0.1427	0.1423	49.85	50	0	
Tetrahydrofuran	1.2892	1.4886	115.47	100	15	
# Chloroform	0.4481	0.4678	52.19	50	4	#
# 1,1,1-Trichloroethane	0.3981	0.3776	47.43	50	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/09/16 Time: 09:14

Lab File ID: ly09c01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Cyclohexane	0.4589	0.4969	54.14	50	8	#
# Cyclohexane(2)	0.3646	0.3896	53.42	50	7	#
# Cyclohexane(3)	0.1327	0.1446	54.49	50	9	#
1,1-Dichloropropene	0.3665	0.3893	53.11	50	6	
# Carbon Tetrachloride	0.2981	0.3120	52.33	50	5	#
Isobutyl Alcohol	0.4189	0.4286	639.46	625	2	
# Benzene	1.0743	1.1435	53.22	50	6	#
# 1,2-Dichloroethane	0.3974	0.3952	49.72	50	-1	#
# 1,2-Dichloroethane(2)	0.0346	0.0360	51.95	50	4	#<-
t-Amyl methyl ether	0.7989	0.8239	51.56	50	3	
n-Heptane	0.4255	0.4447	52.26	50	5	
n-Butanol	0.3265	0.3531	1351.86	1250	8	
# Trichloroethene	0.2715	0.2881	53.06	50	6	#
# Methylcyclohexane	0.4473	0.4730	52.88	50	6	#
# Methylcyclohexane(2)	0.2009	0.2100	52.25	50	4	#
# 1,2-Dichloropropane	0.2958	0.3191	53.95	50	8	#
Dibromomethane	0.1833	0.1910	52.11	50	4	
1,4-Dioxane	0.1106	0.1172	662.19	625	6	
Methyl Methacrylate	0.2479	0.2679	54.04	50	8	
# Bromodichloromethane	0.3346	0.3612	53.99	50	8	#
2-Nitropropane	0.0921	0.0922	100.06	100	0	
2-Chloroethyl Vinyl Ether	0.2111	0.2377	56.31	50	13	
# cis-1,3-Dichloropropene	0.4292	0.4820	56.15	50	12	#
# 4-Methyl-2-pentanone	0.3933	0.4141	105.27	100	5	#
# Toluene	0.8897	0.9243	51.94	50	4	#
# trans-1,3-Dichloropropene	0.5155	0.5723	55.51	50	11	#
Ethyl Methacrylate	0.5711	0.6295	55.12	50	10	
# 1,1,2-Trichloroethane	0.3457	0.3565	51.57	50	3	#
# Tetrachloroethene	0.3766	0.3811	50.60	50	1	#
1,3-Dichloropropane	0.6122	0.6372	52.04	50	4	
# 2-Hexanone	0.3778	0.3893	103.05	100	3	#
# Dibromochloromethane	0.3395	0.3709	54.62	50	9	#
# 1,2-Dibromoethane	0.3713	0.3858	51.95	50	4	#
1-Chlorohexane	0.4991	0.5049	50.58	50	1	
# Chlorobenzene	1.0069	1.0440	51.84	50	4	#
1,1,1,2-Tetrachloroethane	0.3332	0.3491	52.39	50	5	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/09/16 Time: 09:14

Lab File ID: ly09c01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Ethylbenzene	1.7165	1.7996	52.42	50	5	#
# m+p-Xylene	0.6590	0.6904	104.76	100	5	#
# o-Xylene	0.6482	0.6804	52.48	50	5	#
# Styrene	1.0918	1.1771	53.91	50	8	#
# Bromoform	0.2338	0.2662	56.93	50	14	#
# Isopropylbenzene	1.6501	1.7387	52.69	50	5	#
Cyclohexanone	0.5100	0.4196	514.14	625	-18	
Bromobenzene	0.8593	0.8476	49.32	50	-1	
# 1,1,2,2-Tetrachloroethane	1.0126	1.0231	50.51	50	1	#
1,2,3-Trichloropropane	0.2925	0.2853	48.77	50	-2	
trans-1,4-Dichloro-2-butene	0.1350	0.2157	148.27	125	19	
n-Propylbenzene	3.8422	3.9305	51.15	50	2	
2-Chlorotoluene	0.7793	0.7770	49.86	50	0	
4-Chlorotoluene	0.8229	0.8223	49.97	50	0	
1,3,5-Trimethylbenzene	2.7215	2.7926	51.31	50	3	
tert-Butylbenzene	0.5633	0.5691	50.52	50	1	
Pentachloroethane	0.4650	0.4664	50.15	50	0	
1,2,4-Trimethylbenzene	2.8300	2.8894	51.05	50	2	
sec-Butylbenzene	3.4490	3.5065	50.83	50	2	
# 1,3-Dichlorobenzene	1.6166	1.5812	48.91	50	-2	#
p-Isopropyltoluene	2.9997	3.0492	50.82	50	2	
# 1,4-Dichlorobenzene	1.6889	1.6269	48.16	50	-4	#
1,2,3-Trimethylbenzene	2.9595	2.9106	49.17	50	-2	
Benzyl Chloride	1.7568	1.9129	45.55	50	-9	
1,3-Diethylbenzene	1.8037	1.7815	49.39	50	-1	
1,4-Diethylbenzene	1.8811	1.8450	49.04	50	-2	
# 1,2-Dichlorobenzene	1.6025	1.5382	47.99	50	-4	#
n-Butylbenzene	1.5350	1.5249	49.67	50	-1	
1,2-Diethylbenzene	1.5385	1.5048	48.91	50	-2	
# 1,2-Dibromo-3-chloropropane	0.1957	0.2025	51.71	50	3	#
1,3,5-Trichlorobenzene	1.2753	1.1920	46.73	50	-7	
# 1,2,4-Trichlorobenzene	1.2637	1.1501	45.50	50	-9	#
Hexachlorobutadiene	0.5397	0.4680	43.36	50	-13	
Naphthalene	3.4044	3.2335	47.49	50	-5	
1,2,3-Trichlorobenzene	1.1911	1.0609	44.53	50	-11	
2-Methylnaphthalene	2.1225	1.5237	35.89	50	-28	<-

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09915 Calibration Date: 05/09/16 Time: 09:14

Lab File ID: ly09c01.d Init. Calib. Date(s): 04/22/16 04/22/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane	0.2375	0.2349	49.45	50	-1
Dibromofluoromethane(2)	0.2432	0.2407	49.49	50	-1
1,2-Dichloroethane-d4	0.0600	0.0601	50.10	50	0
1,2-Dichloroethane-d4(2)	0.3073	0.2971	48.33	50	-3
1,2-Dichloroethane-d4(3)	0.0381	0.0379	49.80	50	0
Toluene-d8	1.3088	1.3086	49.99	50	0
Toluene-d8(2)	0.8522	0.8586	50.37	50	1
4-Bromofluorobenzene	0.4843	0.4999	51.60	50	3
4-Bromofluorobenzene(2)	0.4121	0.4147	50.31	50	1

Average %Drift 5

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID (Standard): ly09c01.d Date Analyzed: 05/09/16

Instrument ID: HP09915 Time Analyzed: 09:14

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	251455	3.996	1512990	7.514	1165087	11.041	625986	12.938
UPPER LIMIT	502910	4.496	3025980	8.014	2330174	11.541	1251972	13.438
LOWER LIMIT	125728	3.496	756495	7.014	582544	10.541	312993	12.438
LAB SAMPLE ID								
01 VBLKL82	238176	3.990	1529800	7.507	1165099	11.041	602934	12.938
02 VBLKL83	238176	3.990	1529800	7.507	1165099	11.041	602934	12.938
03 LCSL82	252210	4.006	1504156	7.510	1152728	11.041	607027	12.938
04 LCSL83	252210	4.006	1504156	7.510	1152728	11.041	607027	12.938
05 LCDL82	256452	4.002	1605088	7.510	1227344	11.041	641518	12.938
06 LCDL83	256452	4.002	1605088	7.510	1227344	11.041	641518	12.938
07 8370084	320100	4.002	1768994	7.507	1321007	11.041	679187	12.938
08 8370086	245959	3.993	1513743	7.510	1159859	11.041	608179	12.938
09 8357925	241202	4.012	1496099	7.514	1138069	11.041	594440	12.938
10 8357926	234838	3.993	1495045	7.510	1145919	11.041	596107	12.938
11 8357927	222463	3.986	1514159	7.507	1149133	11.041	610114	12.938
12 8357928	242981	3.996	1510595	7.514	1142782	11.044	607943	12.938
13 8357933	268694	4.002	1546651	7.514	1161962	11.041	601177	12.938
14 8357934	258245	4.012	1505884	7.510	1140547	11.041	587534	12.938
15 8357932	272324	4.012	1543002	7.510	1175904	11.041	614334	12.938
16 8357932DL	249088	4.009	1523931	7.510	1154477	11.041	598511	12.938
17 8357935	276980	3.996	1511978	7.507	1157707	11.041	611395	12.938
18 8357935DL	250931	3.990	1484678	7.507	1134929	11.041	593834	12.938
19 8354935	248522	3.996	1509905	7.507	1141326	11.041	595758	12.938
20 8354936	243188	3.990	1468191	7.507	1113483	11.041	576923	12.938
21 8354937MS	248930	3.996	1484207	7.507	1111265	11.041	583619	12.938
22 8354938MSD	236261	4.012	1496154	7.510	1134754	11.041	589469	12.938

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID (Standard): ly09c01.d Date Analyzed: 05/09/16

Instrument ID: HP09915 Time Analyzed: 09:14

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	251455	3.996	1512990	7.514	1165087	11.041	625986	12.938
UPPER LIMIT	502910	4.496	3025980	8.014	2330174	11.541	1251972	13.438
LOWER LIMIT	125728	3.496	756495	7.014	582544	10.541	312993	12.438
LAB SAMPLE ID								
23 8354933	231517	3.993	1533043	7.507	1150495	11.041	591753	12.938
24 8354934	232651	4.002	1492234	7.510	1132898	11.041	577868	12.938
25 8354939	237632	3.990	1501097	7.507	1129286	11.041	584674	12.938
26 8354940	222440	3.999	1452083	7.510	1091517	11.041	550555	12.938

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID (Standard): hy09c01.d Date Analyzed: 05/09/16

Instrument ID: HP19094 Time Analyzed: 08:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	89716	4.263	2413883	7.793	1873253	11.249	878826	13.127
UPPER LIMIT	179432	4.763	4827766	8.293	3746506	11.749	1757652	13.627
LOWER LIMIT	44858	3.763	1206942	7.293	936626	10.749	439413	12.627
LAB SAMPLE ID								
01 LCSH92	94878	4.287	2572242	7.793	1894267	11.249	890407	13.127
02 MDLH92 - MD	105639	4.275	2561061	7.793	1886748	11.250	850916	13.127
03 LCSH93	73965	4.281	2450946	7.793	1685117	11.250	733080	13.127
04 VBLKH92	92760	4.281	2425060	7.793	1633176	11.249	713361	13.127
05 8354946	147746	4.275	2547558	7.793	1770749	11.250	783926	13.127
06 8354947	93837	4.294	2447159	7.793	1725111	11.250	733986	13.127
07 8354948	97468	4.300	2366643	7.793	1609933	11.250	681948	13.127
08 8354936	75830	4.300	2355756	7.793	1748547	11.250	784451	13.127
09 8354937MS	87634	4.300	2209641	7.793	1730540	11.249	839759	13.127
10 8354938MSD	94019	4.288	2441801	7.793	1793407	11.250	821781	13.127
11 8354937MS1	80378	4.294	2427719	7.793	1774590	11.250	789955	13.127
12 8354938MSD1	80863	4.294	2485420	7.793	1773481	11.250	785927	13.127
13 8354939	94191	4.293	2426827	7.793	1638797	11.249	702261	13.127
14 8354934	84625	4.275	2438439	7.787	1711535	11.250	733250	13.127
15 8354940	74967	4.281	2429713	7.793	1662905	11.249	717907	13.127
16 8354941	74146	4.257	2423318	7.787	1656234	11.249	700699	13.127
17 8354942	63904	4.294	2406764	7.787	1654583	11.250	673258	13.127
18 8354943	82935	4.294	2439074	7.793	1750853	11.250	769329	13.127
19 8354944	81131	4.288	2452522	7.793	1736490	11.250	740959	13.127
20 8354945	73544	4.281	2395952	7.787	1595441	11.250	689918	13.127
21 8354933	94160	4.269	2433330	7.793	1719886	11.250	760755	13.127
22 8354933DL	76763	4.269	2439299	7.793	1735395	11.250	744588	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE61___

Lab File ID (Standard): hy09c01.d Date Analyzed: 05/09/16

Instrument ID: HP19094 Time Analyzed: 08:58

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	89716	4.263	2413883	7.793	1873253	11.249	878826	13.127
UPPER LIMIT	179432	4.763	4827766	8.293	3746506	11.749	1757652	13.627
LOWER LIMIT	44858	3.763	1206942	7.293	936626	10.749	439413	12.627
LAB SAMPLE ID								
23 8354935	81306	4.269	2441167	7.793	1709907	11.250	743326	13.127
24 8354935DL	83712	4.294	2421677	7.793	1676388	11.250	718817	13.127
25 8354936DL	68995	4.294	2430528	7.787	1695421	11.250	715899	13.127
26 8354939DL	72244	4.287	2414168	7.793	1685334	11.250	713185	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

11996: 19 RAAP compounds Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.1	1.0	ug/l
Chloromethane	0.2	1.0	ug/l
Vinyl Chloride	0.2	1.0	ug/l
Bromomethane	0.5	1.0	ug/l
Chloroethane	0.1	1.0	ug/l
Trichlorofluoromethane	0.2	1.0	ug/l
Ethyl ether	1.1	13	ug/l
Acrolein	5.0	25	ug/l
1,1-Dichloroethene	0.2	1.0	ug/l
Freon 113	0.2	1.0	ug/l
Acetone	3.0	10	ug/l
Methyl Iodide	0.6	10	ug/l
Carbon Disulfide	0.4	10	ug/l
Acetonitrile	32	100	ug/l
Allyl Chloride	0.8	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
Acrylonitrile	1.0	10	ug/l
trans-1,2-Dichloroethene	0.2	1.0	ug/l
1,1-Dichloroethane	0.1	1.0	ug/l
Vinyl Acetate	3.3	10	ug/l
2-Chloro-1,3-butadiene	0.5	10	ug/l
2-Butanone	1.0	10	ug/l
Propionitrile	10	100	ug/l
Methacrylonitrile	9.8	100	ug/l
Tetrahydrofuran	2.0	25	ug/l
Chloroform	0.1	1.0	ug/l
1,1,1-Trichloroethane	0.1	1.0	ug/l
Carbon Tetrachloride	0.2	1.0	ug/l
Isobutyl Alcohol	10	200	ug/l
Benzene	0.1	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l
1,2-Dichloropropane	0.1	1.0	ug/l
Dibromomethane	0.1	1.0	ug/l
Methyl Methacrylate	3.6	10	ug/l
1,4-Dioxane	45	200	ug/l
Bromodichloromethane	0.1	1.0	ug/l
4-Methyl-2-pentanone	1.0	10	ug/l
Toluene	0.1	1.0	ug/l
trans-1,3-Dichloropropene	0.1	1.0	ug/l
Ethyl Methacrylate	0.8	10	ug/l
1,1,2-Trichloroethane	0.1	1.0	ug/l
Tetrachloroethene	0.1	1.0	ug/l
1,3-Dichloropropane	0.1	1.0	ug/l
2-Hexanone	1.0	10	ug/l
Dibromochloromethane	0.1	1.0	ug/l
1,2-Dibromoethane	0.1	1.0	ug/l

Fraction: Volatiles by GC/MS

11996: 19 RAAP compounds Analyte Name	Default MDL	Default LOQ	Units
1,1,1,2-Tetrachloroethane	0.1	1.0	ug/l
Ethylbenzene	0.1	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l
Styrene	0.1	1.0	ug/l
Bromoform	0.1	1.0	ug/l
1,1,2,2-Tetrachloroethane	0.2	1.0	ug/l
trans-1,4-Dichloro-2-butene	1.0	10	ug/l
1,2,3-Trichloropropane	0.3	1.0	ug/l
Pentachloroethane	0.8	10	ug/l
1,3-Dichlorobenzene	0.1	1.0	ug/l
1,4-Dichlorobenzene	0.1	1.0	ug/l
1,2-Dichlorobenzene	0.1	1.0	ug/l
1,2-Dibromo-3-chloropropane	0.2	1.0	ug/l
1,2,4-Trichlorobenzene	0.1	1.0	ug/l
Hexachlorobutadiene	0.1	1.0	ug/l
Naphthalene	0.1	1.0	ug/l
Hexachloroethane	0.1	10	ug/l
Dimethyl ether	0.1	13	ug/l

11997: 2-Propanol Analyte Name	Default MDL	Default LOQ	Units
2-Propanol	50	100	ug/l

E6101 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 8354933

Data file: /chem/HP09915.i/16may09a.b/ly09s37.d Injection date and time: **09-MAY-2016 18:23**
Data file Sample Info. Line: E6101;8354933;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 18:43 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.993	(0.003)	750	65	231517	(-8)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1533043	(1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1150495	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	591753	(-5)	50.00	

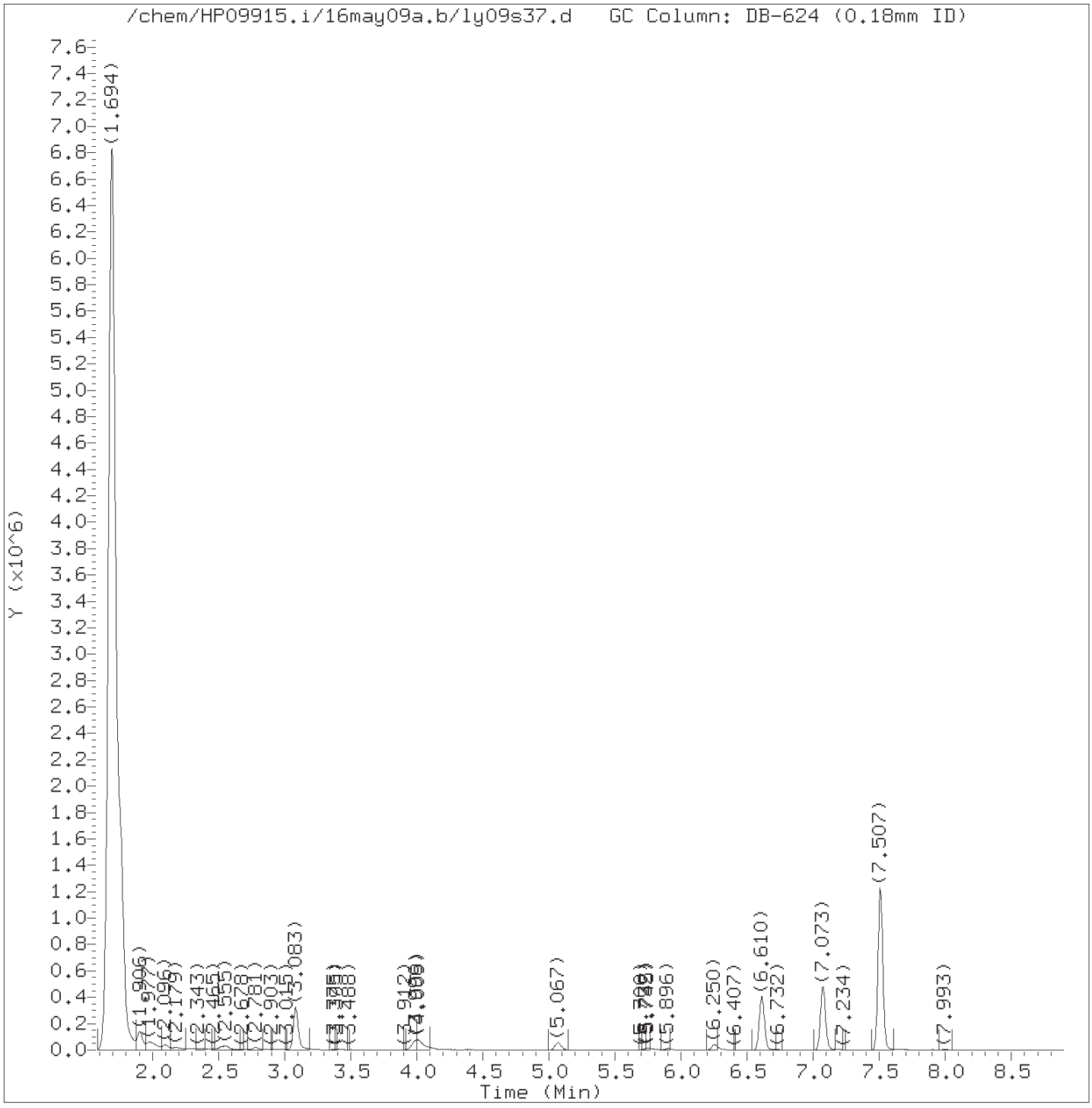
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	353520	48.539	97%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.073	(0.000)	102	91009	49.496	99%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1505354	49.988	100%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.053	(0.000)	95	557488	50.026	100%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 19:04. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:01. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

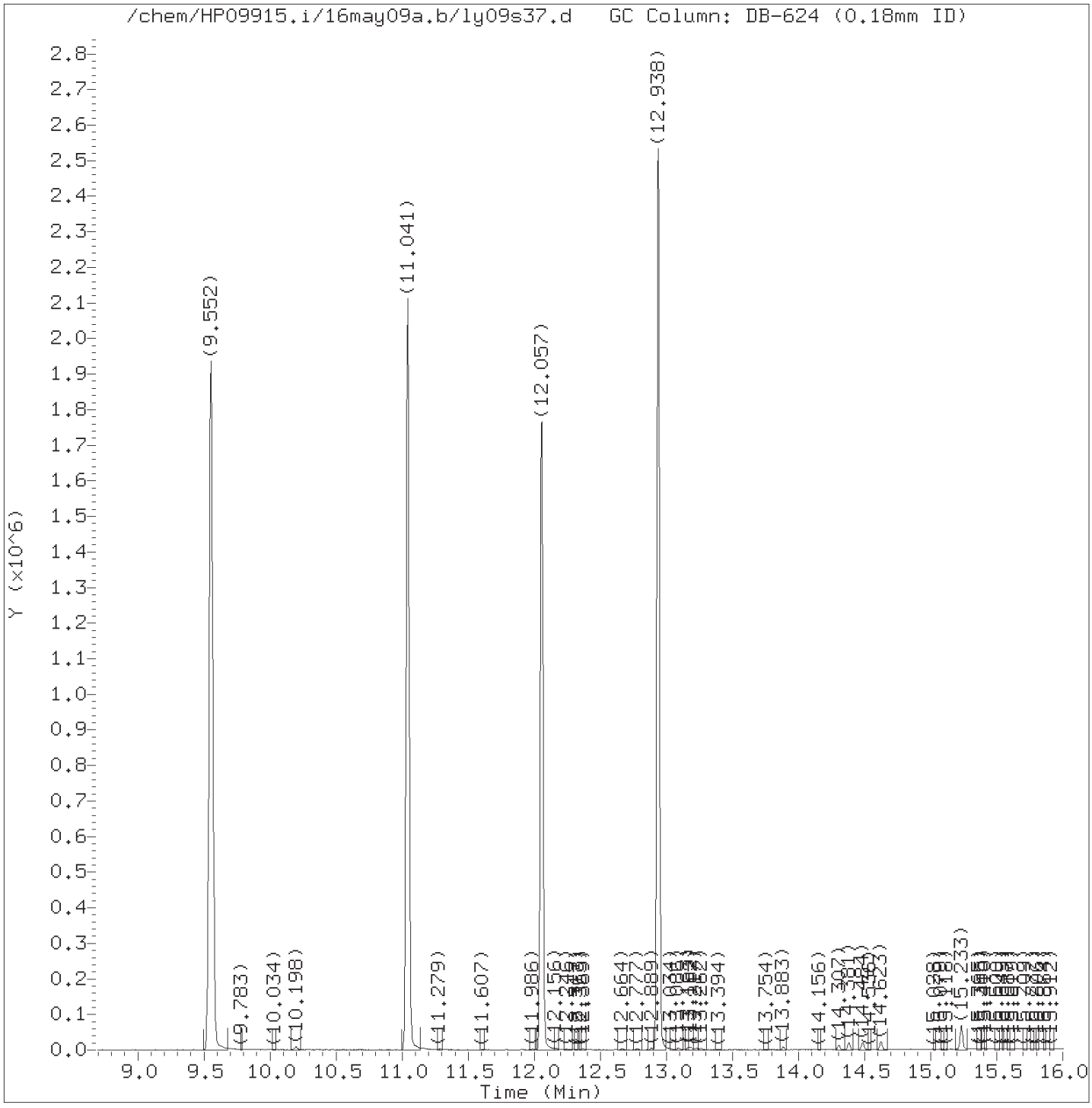
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s37.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:43 Automation

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:04.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s37.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:43 Automation

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:04.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s37.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:43 Automation

Sample Name: E6101 Lab Sample ID: 8354933

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.993	65	231517	250.000
52)$Dibromofluoromethane	(2)	6.610	113	353520	48.539
57)$1,2-Dichloroethane-d4	(2)	7.073	102	91009	49.496
66)*Fluorobenzene	(2)	7.507	96	1533043	50.000
83)$Toluene-d8	(3)	9.552	98	1505354	49.988
100)*Chlorobenzene-d5	(3)	11.041	117	1150495	50.000
114)$4-Bromofluorobenzene	(3)	12.053	95	557488	50.026
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	591753	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:04.
Target 3.5 esignature user ID: cmc07494

E6101 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354933

Data file: /chem2/HP19094.i/16may09a.b/hy09s17.d Injection date and time: **09-MAY-2016 16:41**
Data file Sample Info. Line: E6101;8354933;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274 9179

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269(-0.006)	440	65	94160 (5)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2433330 (1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1719886 (-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	760755 (-13)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	615027	10.726	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	98711	10.394	104%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2410921	9.840	98%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	739797	9.367	94%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.099(0.000)	45	650449	7.783	7.78		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.733(-0.001)	64	230930	4.895	4.89			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.312(-0.000)	59	1533598	37.283	37.28		E	1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)	3.629(-0.000)	96	16364	0.286	0.29		J	0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)	4.294(-0.001)	84	109104	1.784	1.78			0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.379(-0.001)	63	758904	6.044	6.04			0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)	6.561(-0.000)	71	41696	13.075	13.07		J	2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)	6.921(-0.000)	97	22710	0.232	0.23		J	0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

E6101 Lancaster Laboratories 8354933
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s17.d Injection date and time: **09-MAY-2016 16:41**
Data file Sample Info. Line: E6101;8354933;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

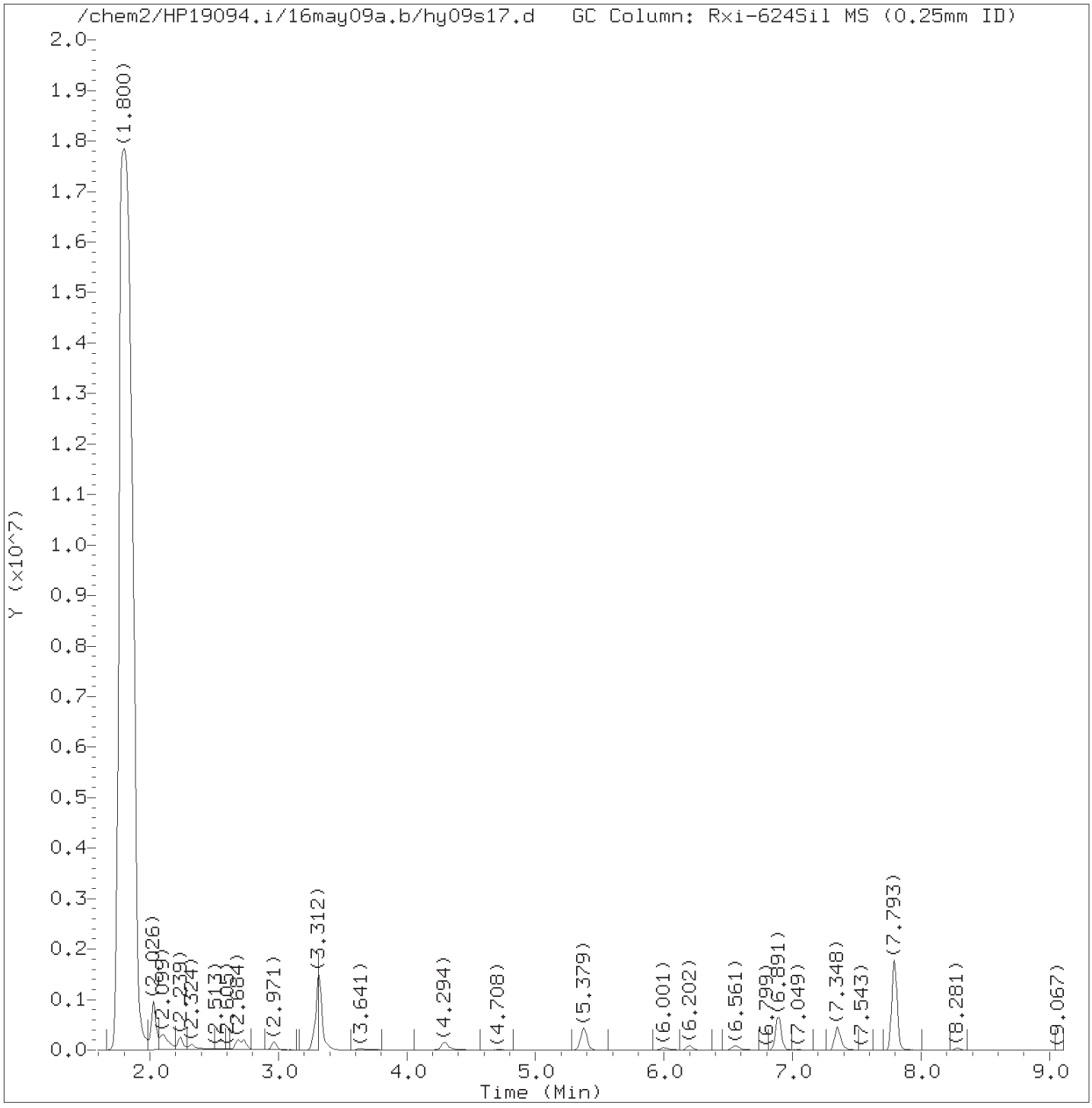
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)	7.397(-0.000)	78	66795	0.255	0.26		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)	8.287(-0.001)	95	17917	0.263	0.26		J	0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.433(-0.000)	166	23394	0.300	0.30		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

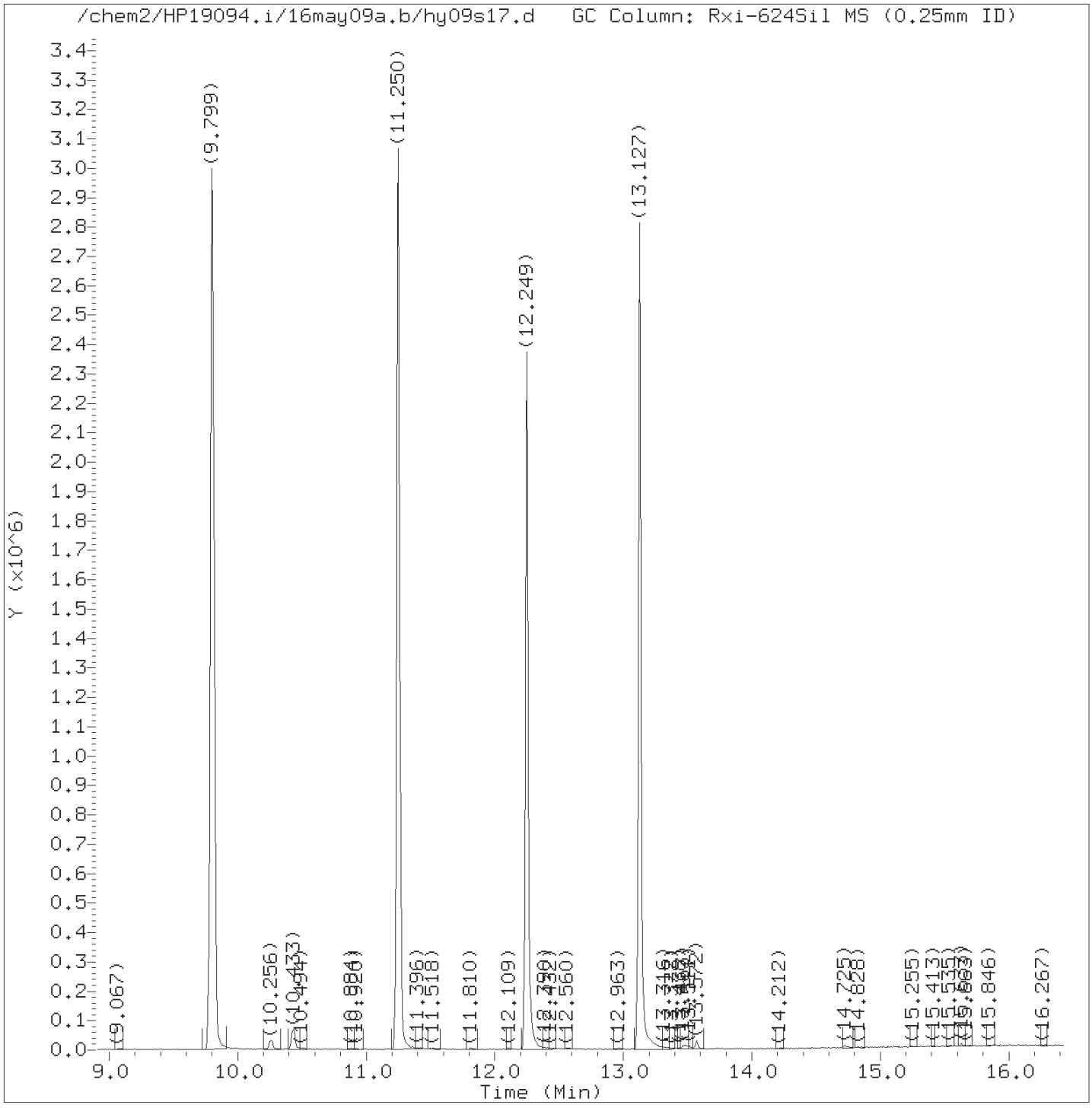
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

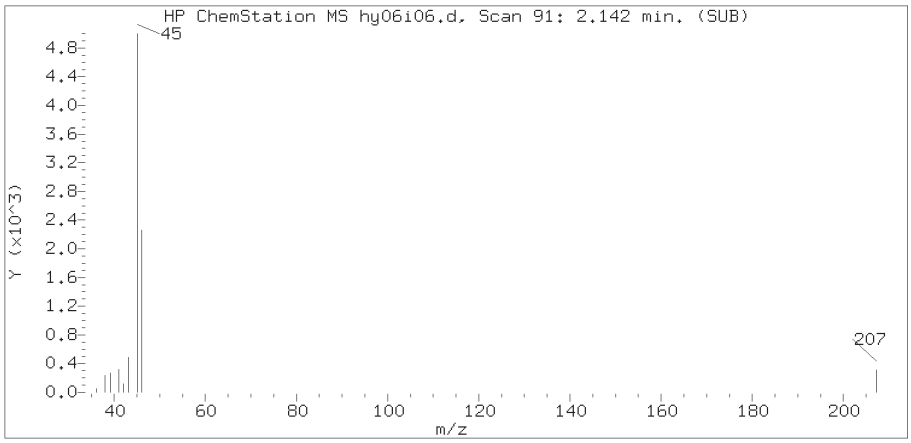
Sample Name: E6101 Lab Sample ID: 8354933

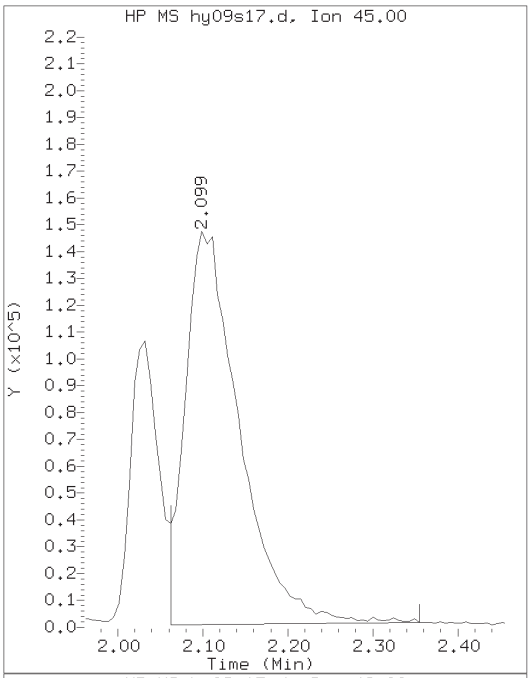
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	650449	7.783
8) Chloroethane	(2)	2.733	64	230930	4.895
11) Ethyl ether	(2)	3.312	59	1533598	37.283
15) 1,1-Dichloroethene	(2)	3.629	96	16364	0.286
26)*t-Butyl Alcohol-d10	(1)	4.269	65	94160	50.000
23) Methylene Chloride	(2)	4.294	84	109104	1.784
33) 1,1-Dichloroethane	(2)	5.379	63	758904	6.044
48) Tetrahydrofuran	(1)	6.561	71	41696	13.075
50)$Dibromofluoromethane	(2)	6.891	113	615027	10.726
51) 1,1,1-Trichloroethane	(2)	6.921	97	22710	0.232
57)$1,2-Dichloroethane-d4	(2)	7.348	102	98711	10.394
58) Benzene	(2)	7.397	78	66795	0.255
63)*Fluorobenzene	(2)	7.793	96	2433330	10.000
67) Trichloroethene	(2)	8.287	95	17917	0.263
82)$Toluene-d8	(3)	9.799	98	2410921	9.840
89) Tetrachloroethene	(3)	10.433	166	23394	0.300
97)*Chlorobenzene-d5	(3)	11.250	117	1719886	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	739797	9.367
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	760755	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

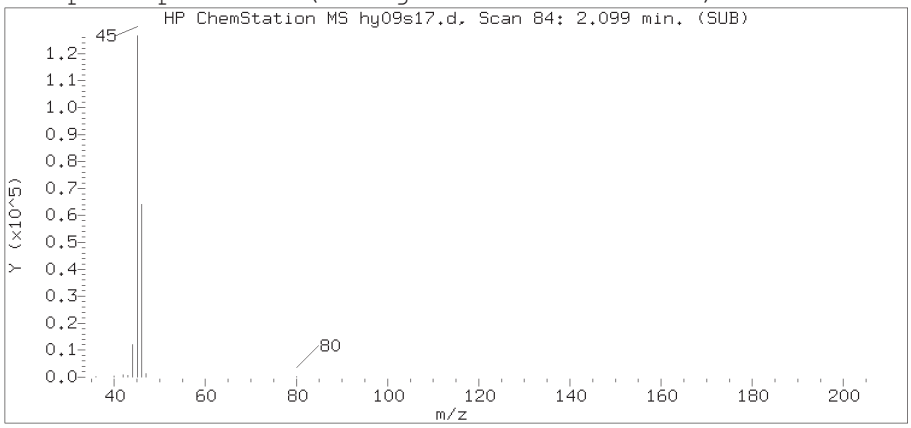
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

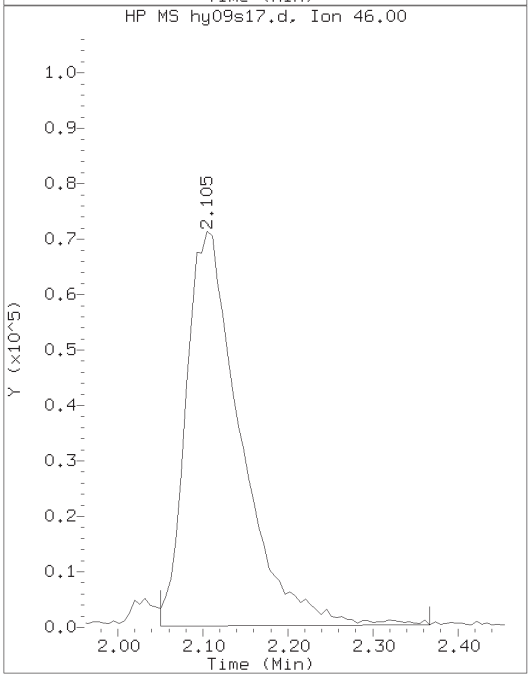
Reference Standard Spectrum for Dimethyl ether



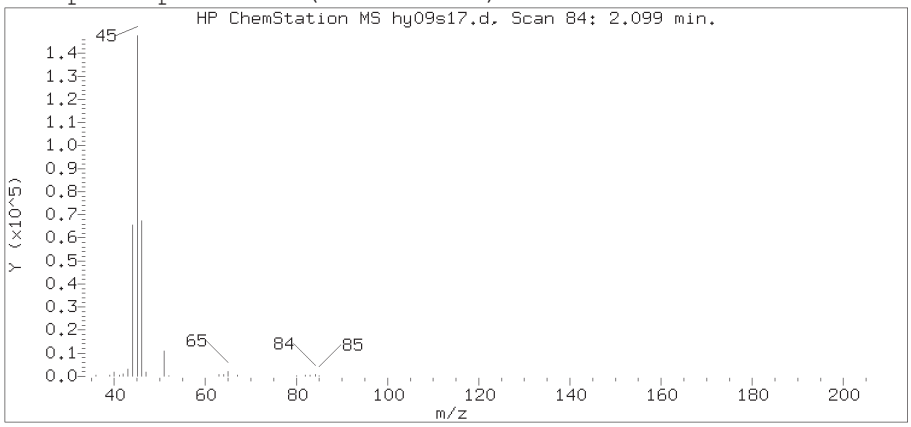


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

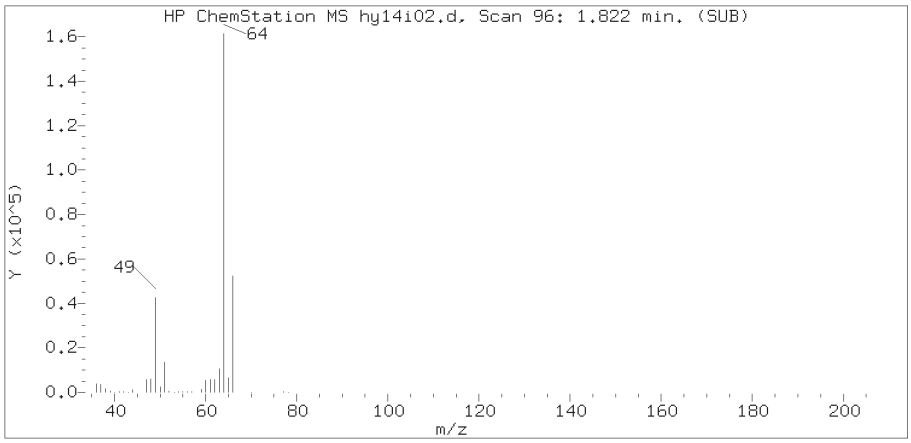
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

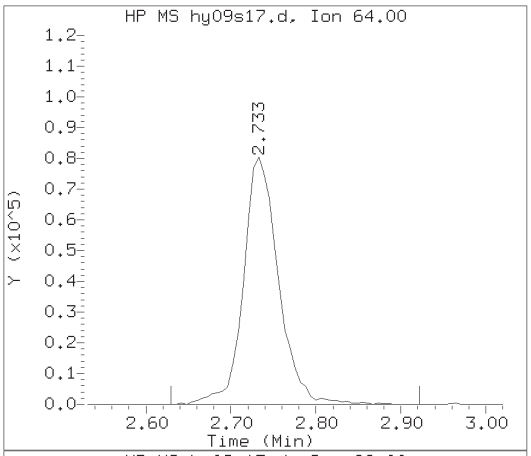
Sample Name: E6101 Lab Sample ID: 8354933

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 84
Retention Time (minutes)	: 2.099
Relative Retention Time	: 0.00001
Quant Ion	: 45.00
Area (flag)	: 650449
On-Column Amount (ng)	: 7.7834

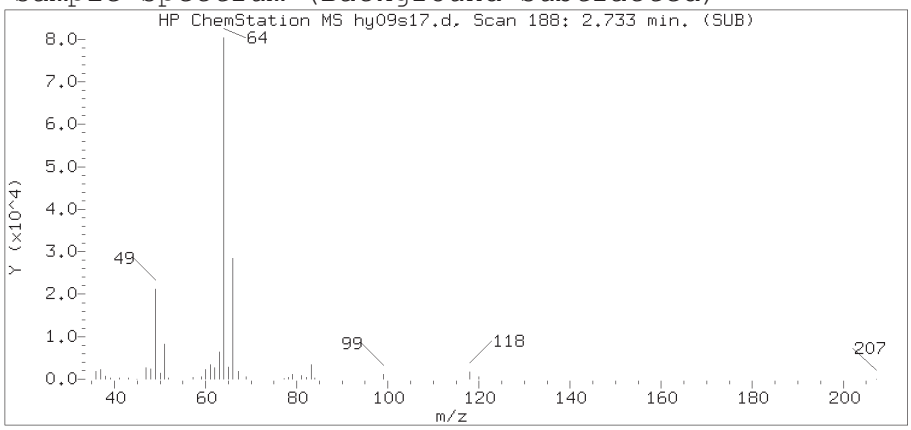
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

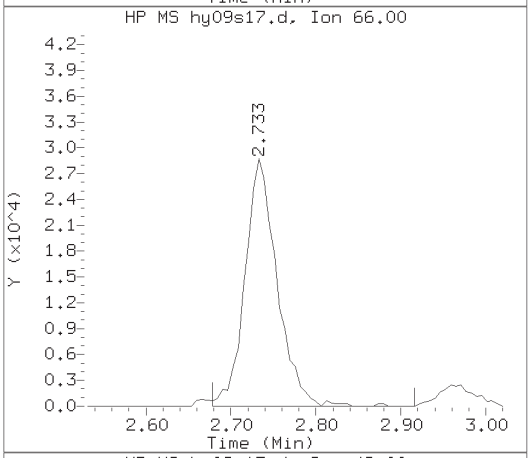
Reference Standard Spectrum for Chloroethane



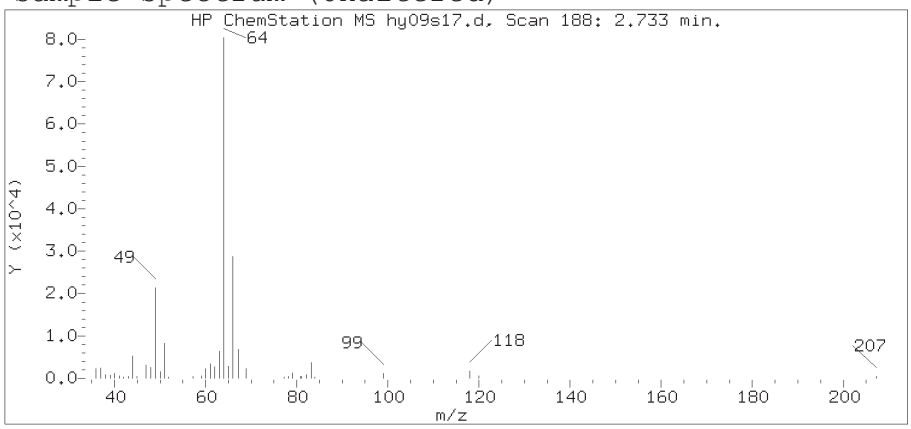


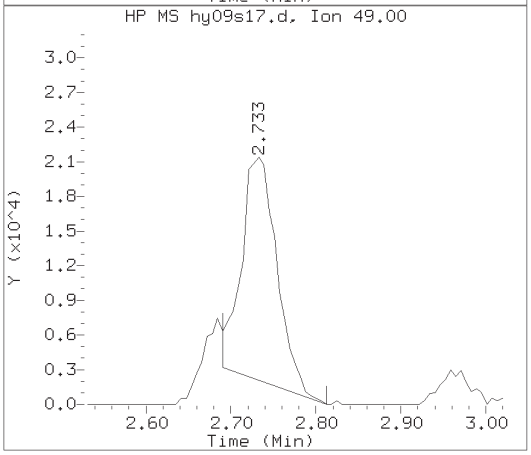
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

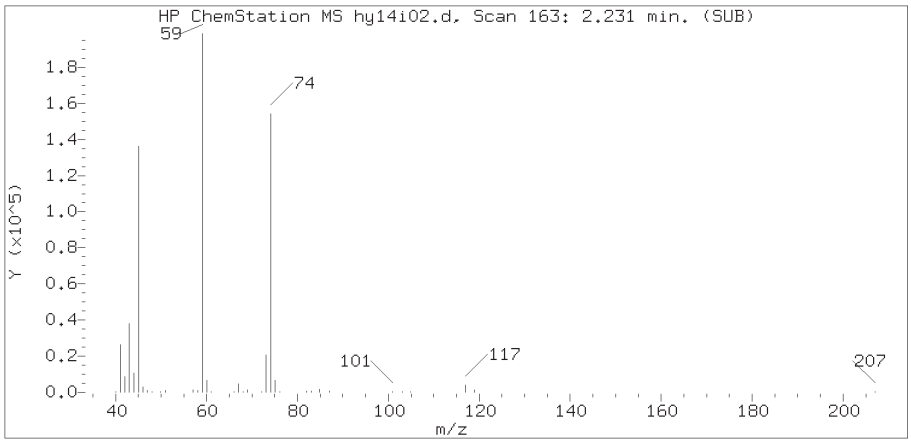
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

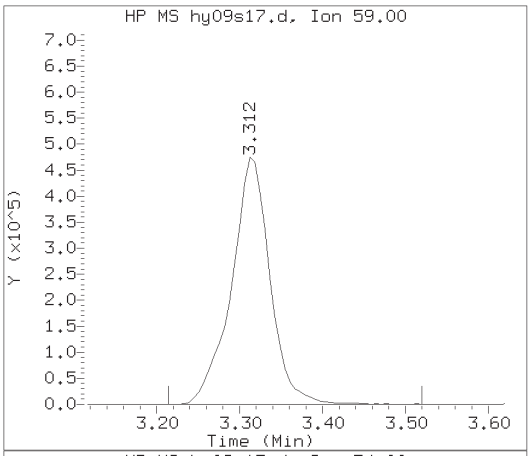
Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00157
Quant Ion : 64.00
Area (flag) : 230930
On-Column Amount (ng) : 4.8948

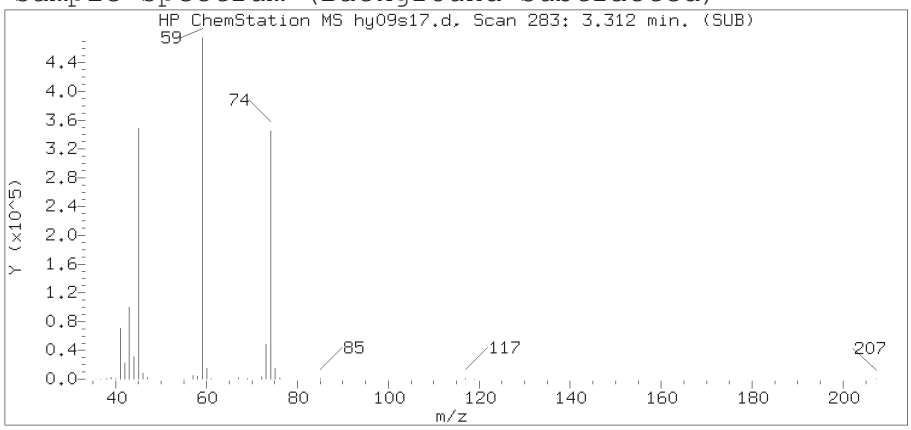
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

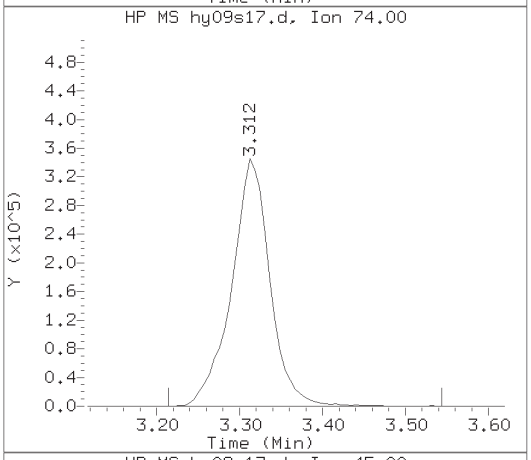
Reference Standard Spectrum for Ethyl ether



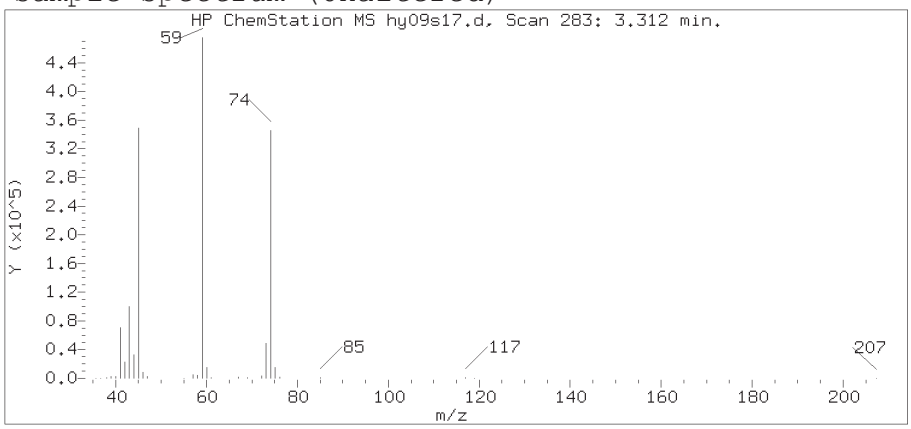


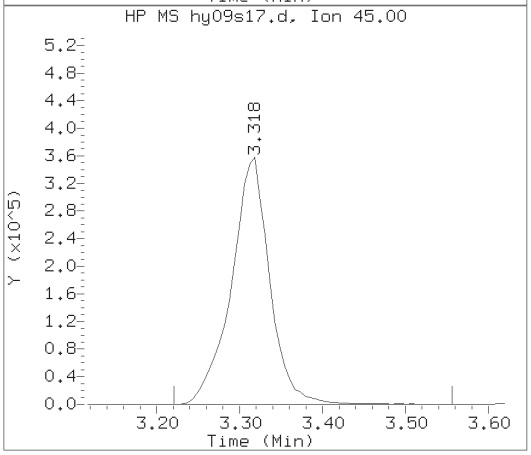
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

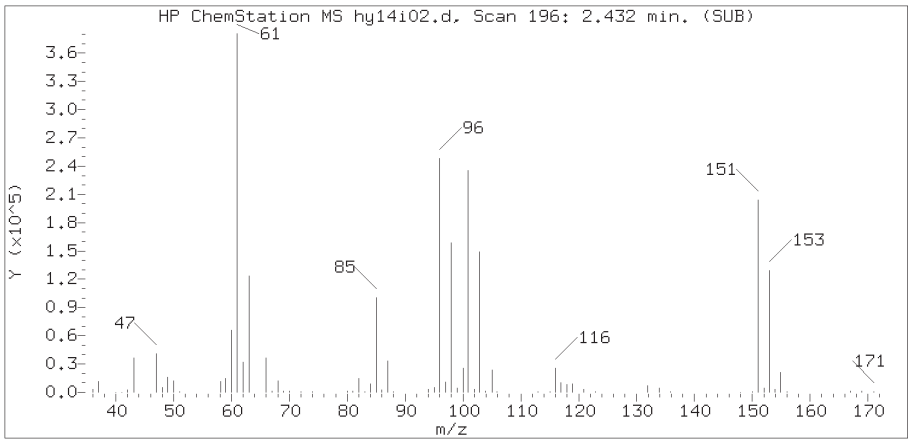
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

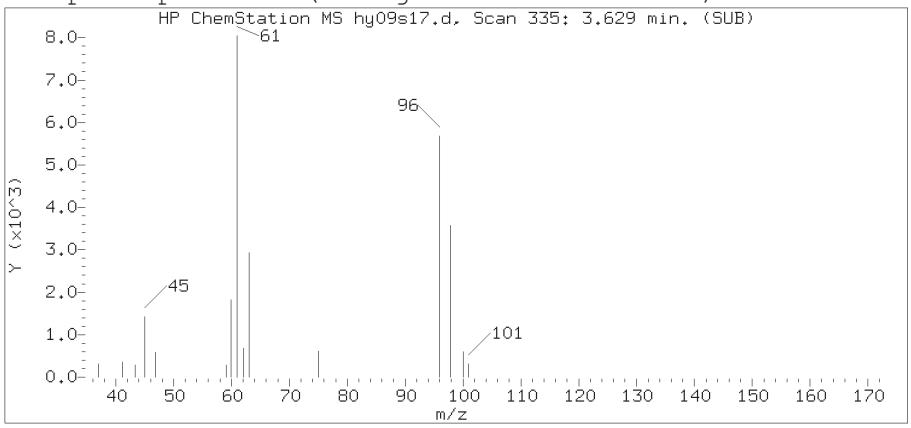
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 283
Retention Time (minutes): 3.312
Relative Retention Time :-0.00079
Quant Ion : 59.00
Area (flag) : 1533598
On-Column Amount (ng) : 37.2828

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

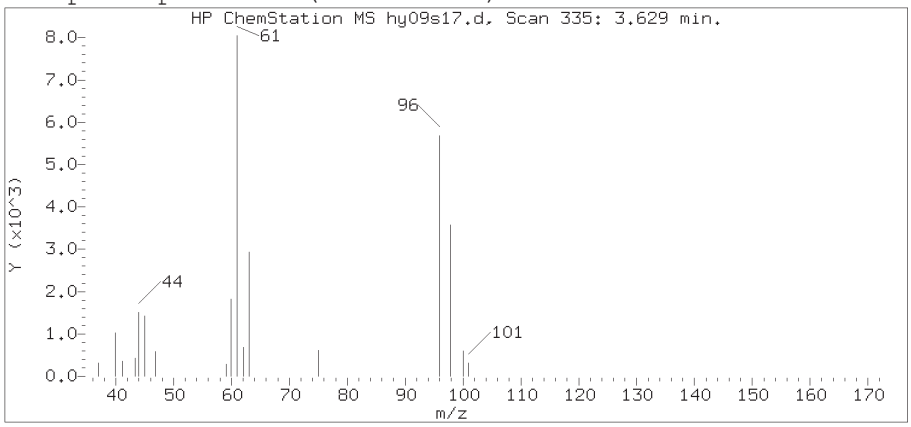
Reference Standard Spectrum for 1,1-Dichloroethene

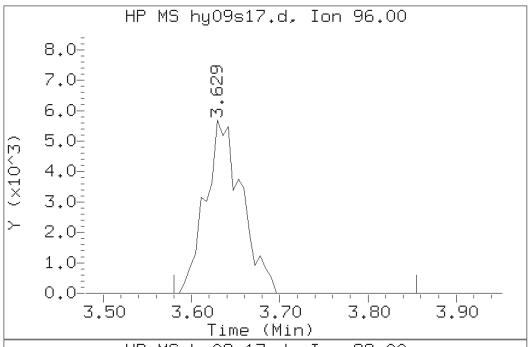


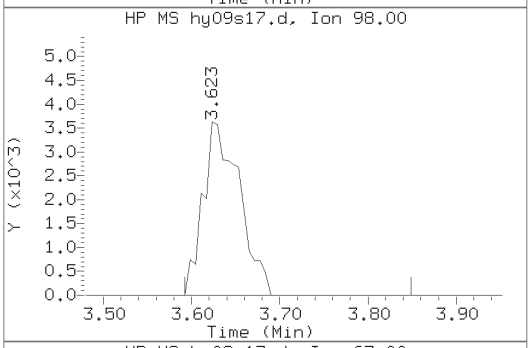
Sample Spectrum (Background Subtracted)

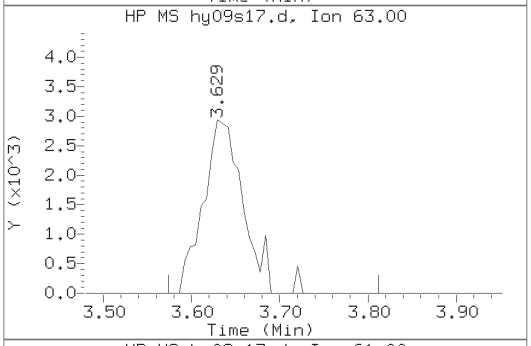


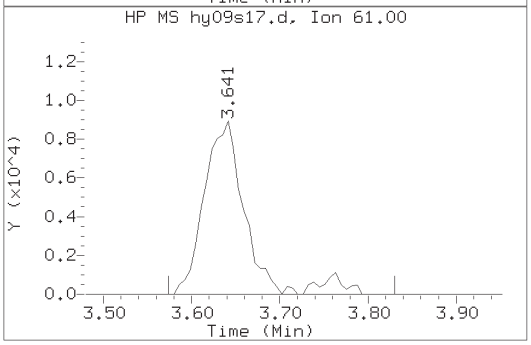
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

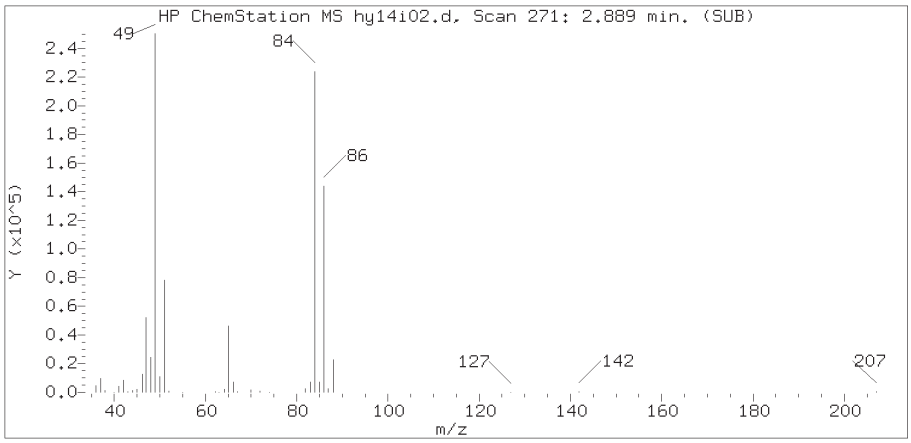
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

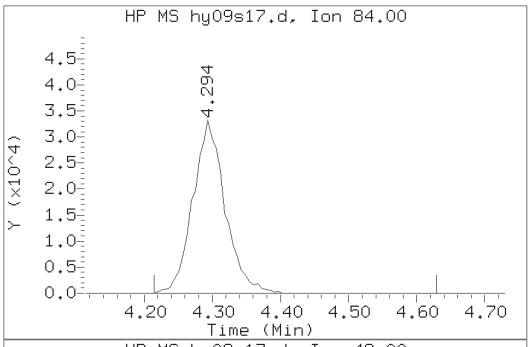
Sample Name: E6101 Lab Sample ID: 8354933

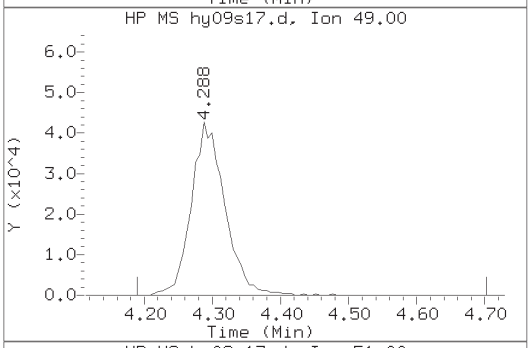
Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 335
Retention Time (minutes): 3.629
Relative Retention Time :-0.00001
Quant Ion : 96.00
Area (flag) : 16364
On-Column Amount (ng) : 0.2860

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

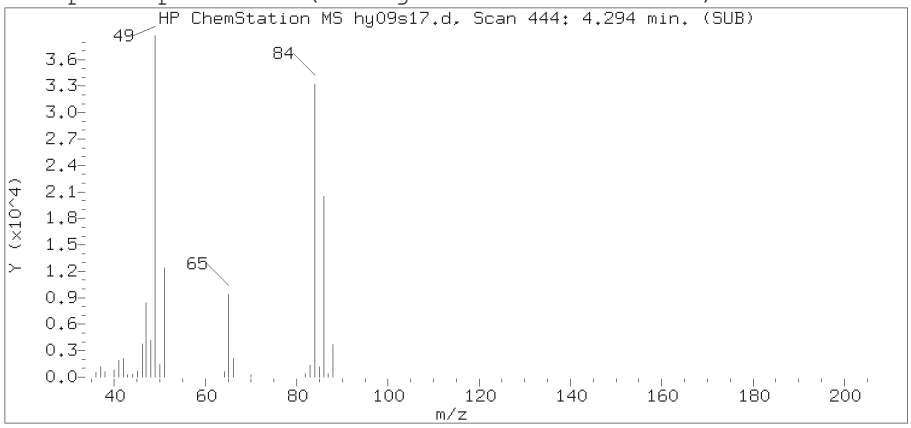
Reference Standard Spectrum for Methylene Chloride

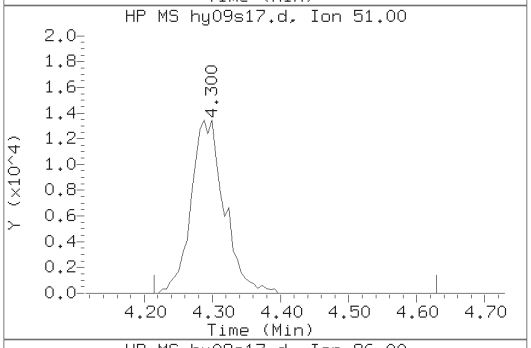




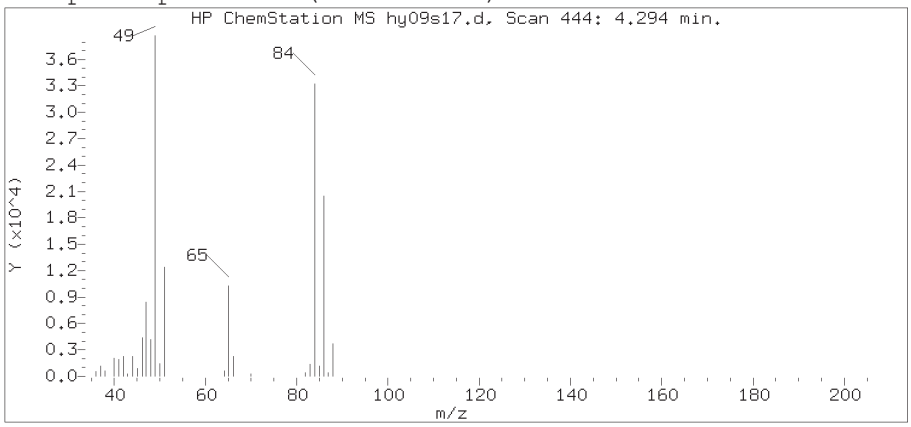


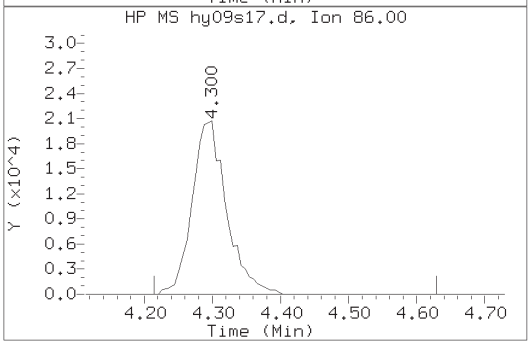
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

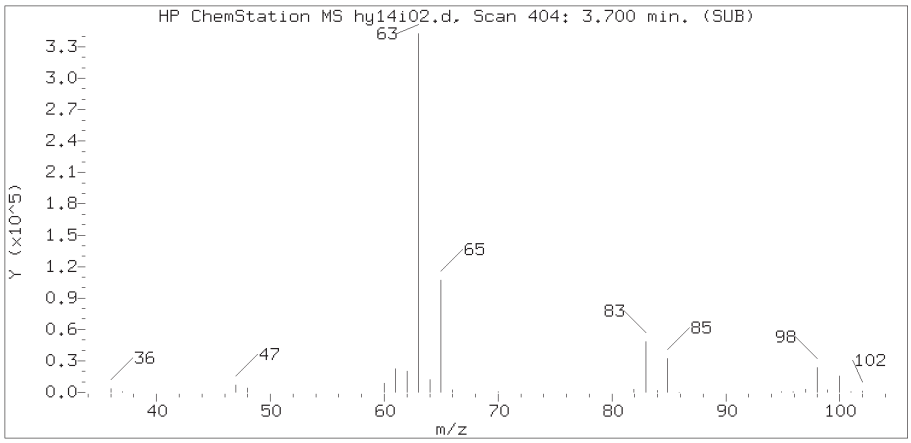
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

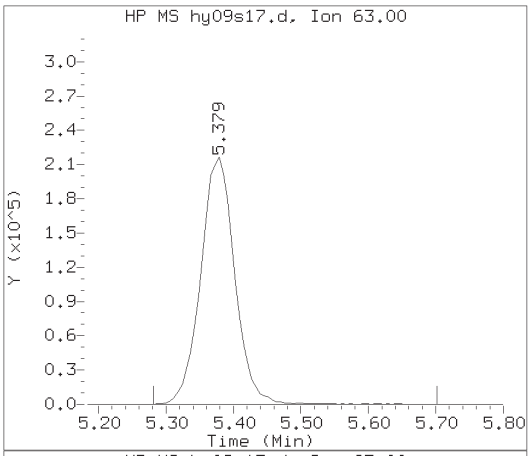
Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 444
Retention Time (minutes): 4.294
Relative Retention Time :-0.00157
Quant Ion : 84.00
Area (flag) : 109104
On-Column Amount (ng) : 1.7844

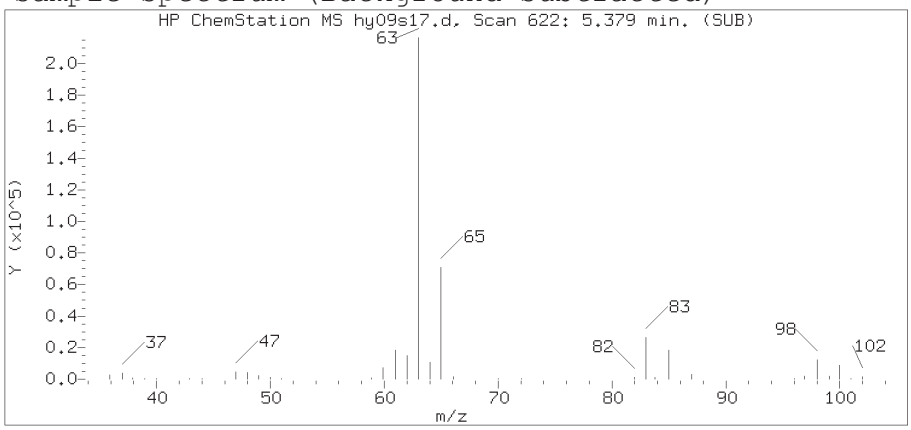
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

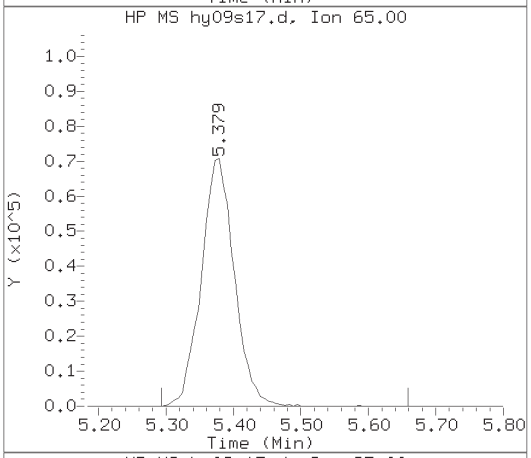
Reference Standard Spectrum for 1,1-Dichloroethane



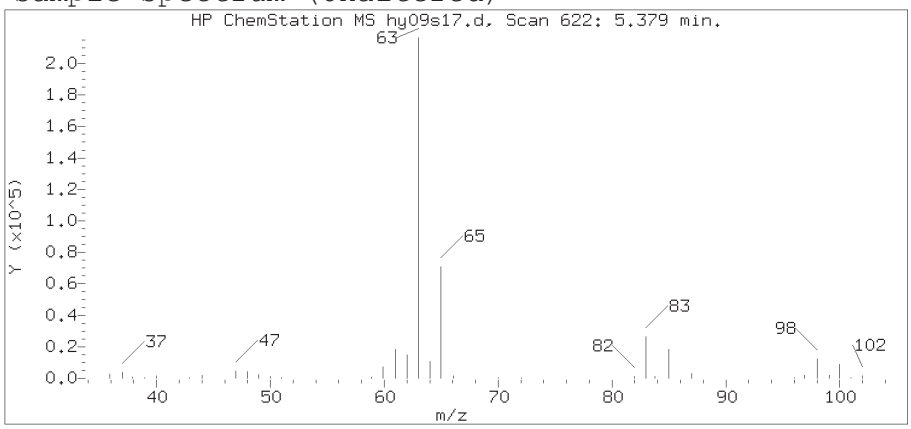


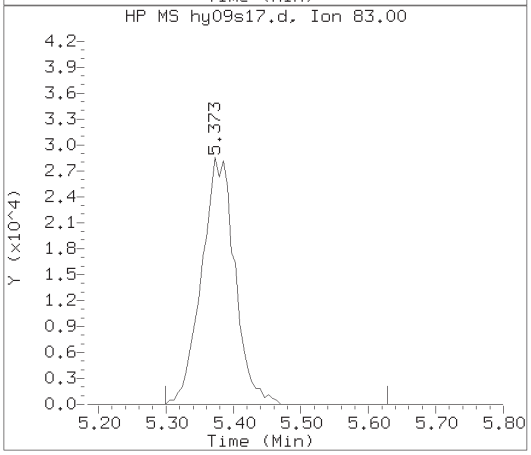
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

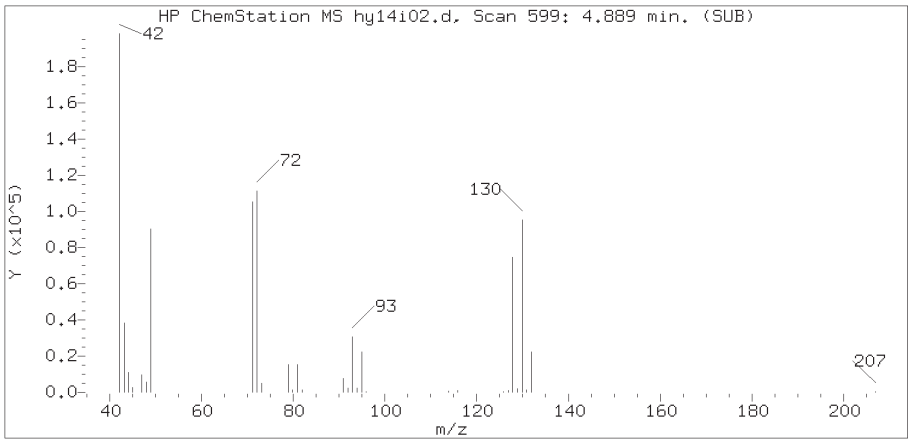
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

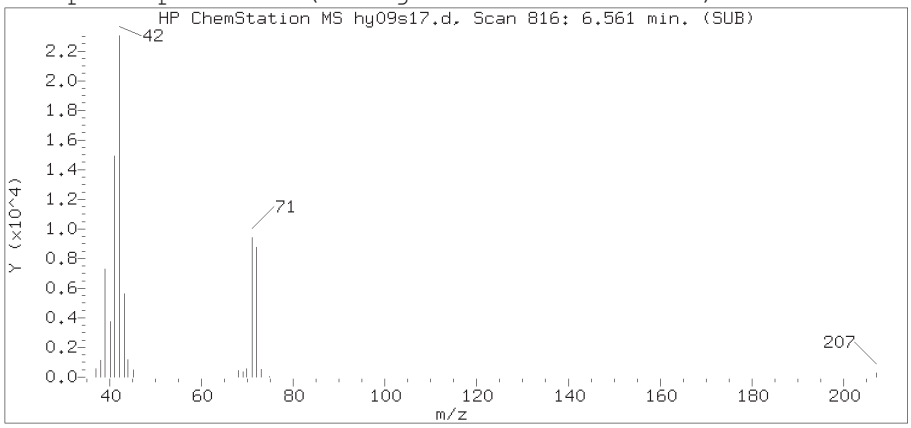
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 622
Retention Time (minutes): 5.379
Relative Retention Time :-0.00157
Quant Ion : 63.00
Area (flag) : 758904
On-Column Amount (ng) : 6.0440

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] kel01973

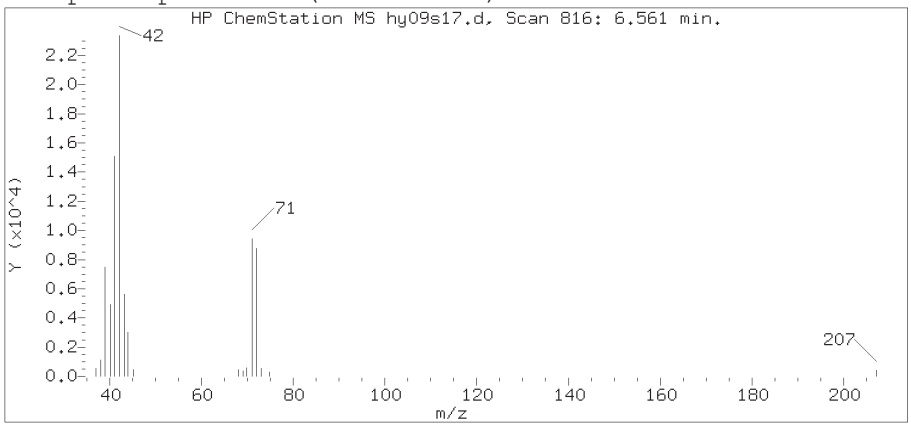
Reference Standard Spectrum for Tetrahydrofuran

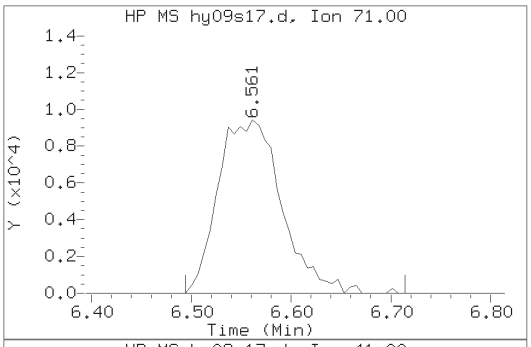


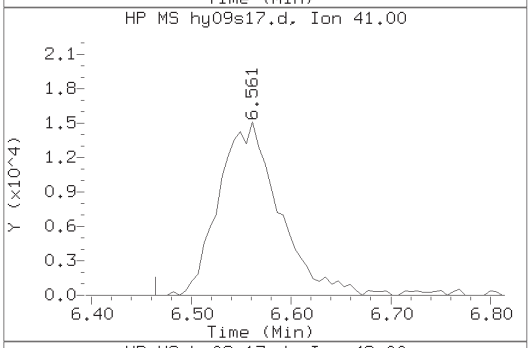
Sample Spectrum (Background Subtracted)

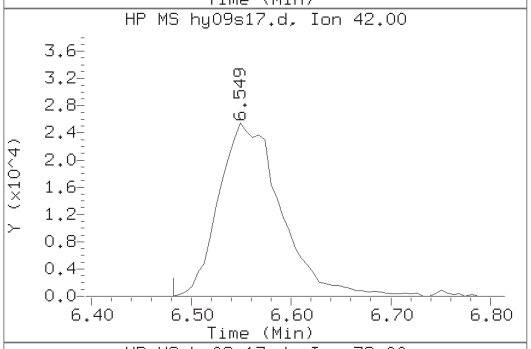


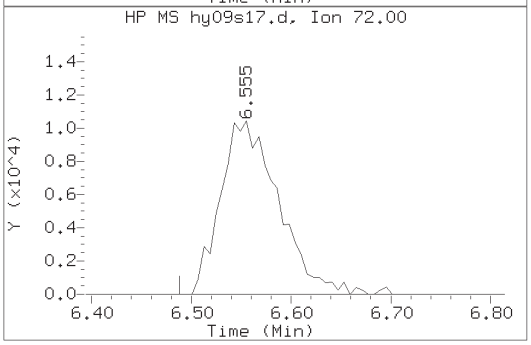
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 816
Retention Time (minutes): 6.561
Relative Retention Time :-0.00065
Quant Ion : 71.00
Area (flag) : 41696
On-Column Amount (ng) : 13.0750

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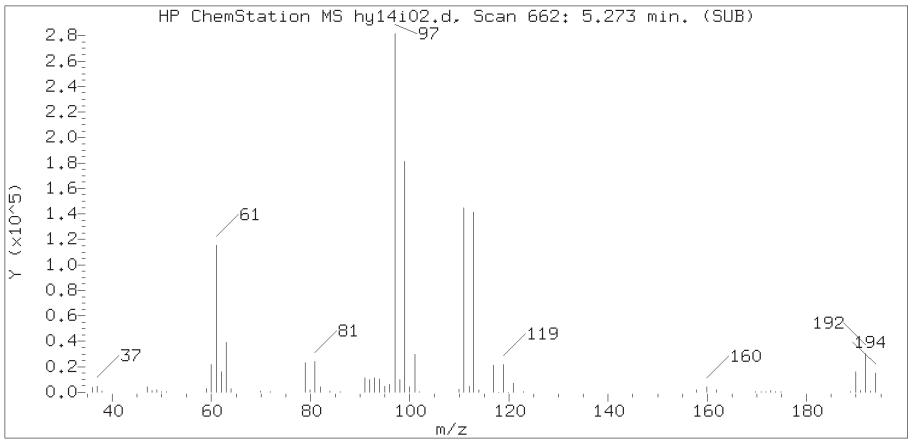
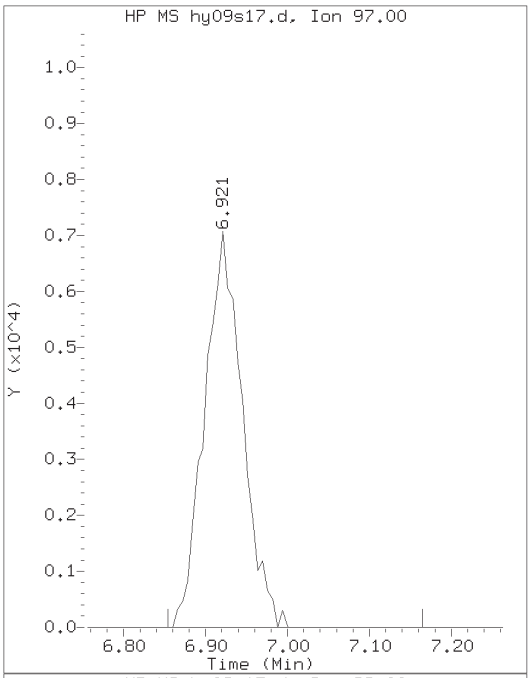
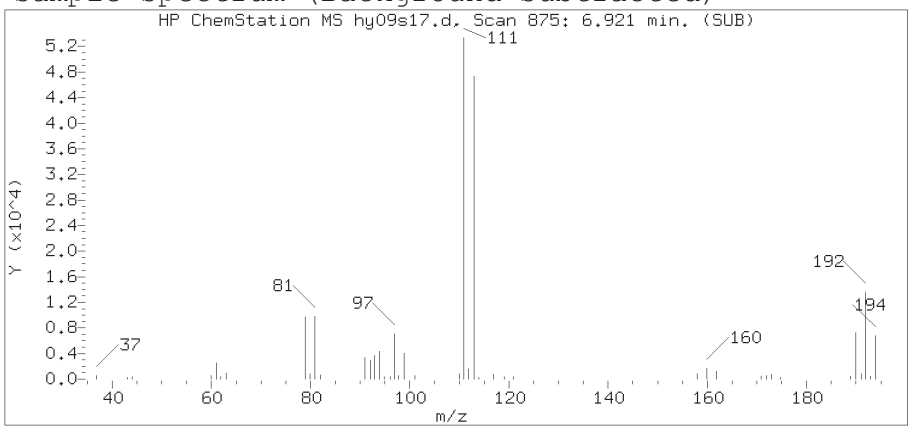
Target 3.5 esignature [illegible]

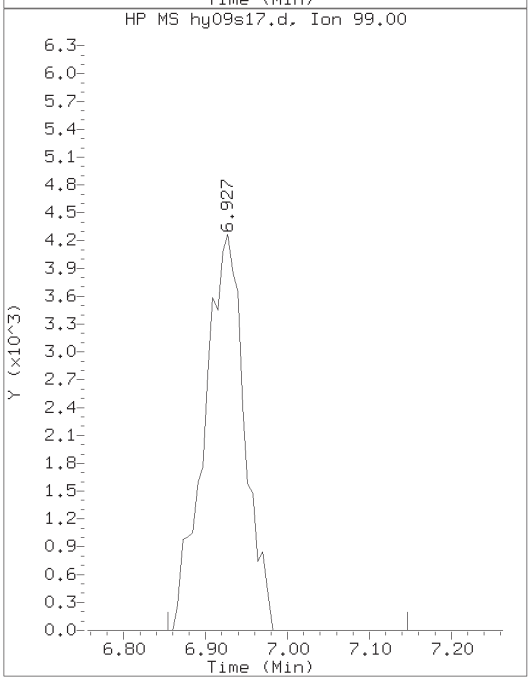
Reference Standard Spectrum for 1,1,1-Trichloroethane



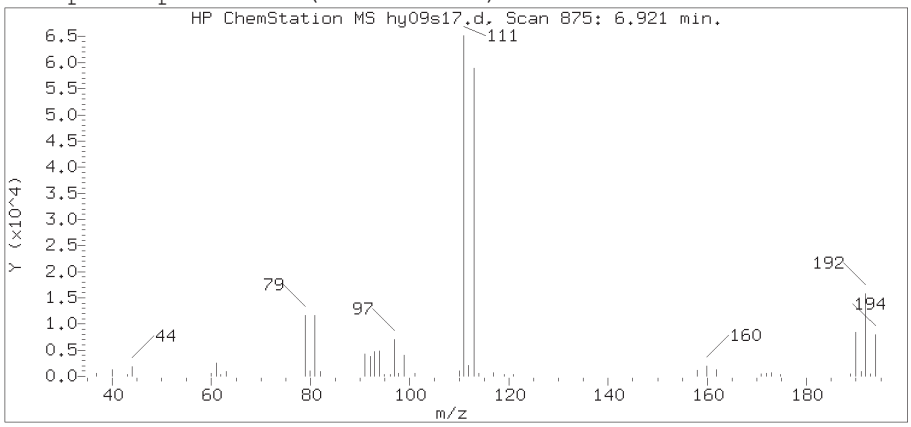


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 875
Retention Time (minutes): 6.921
Relative Retention Time :-0.00000
Quant Ion : 97.00
Area (flag) : 22710
On-Column Amount (ng) : 0.2320

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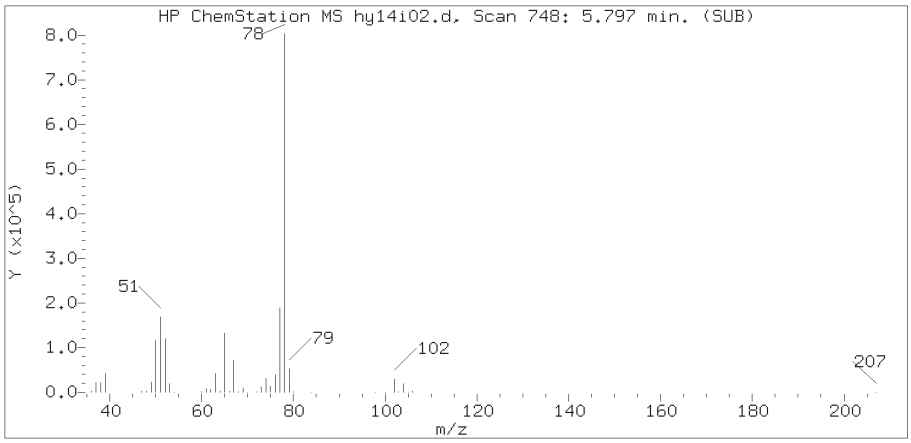
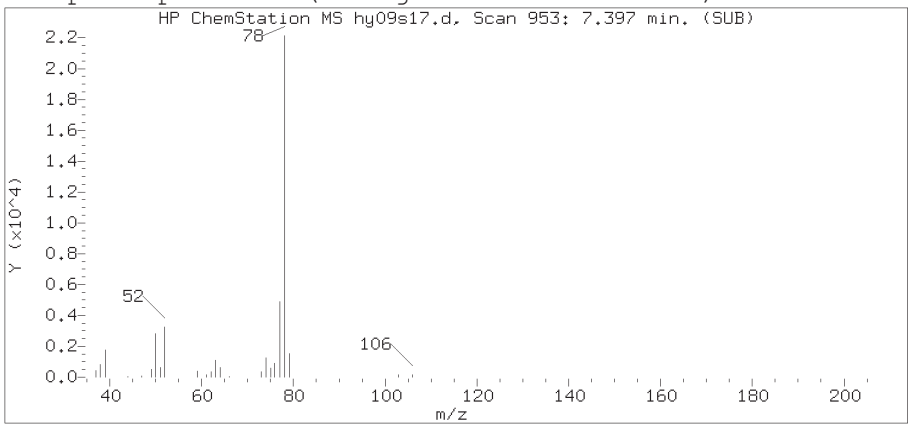
Target 3.5 esignature [illegible] 05/12/2016

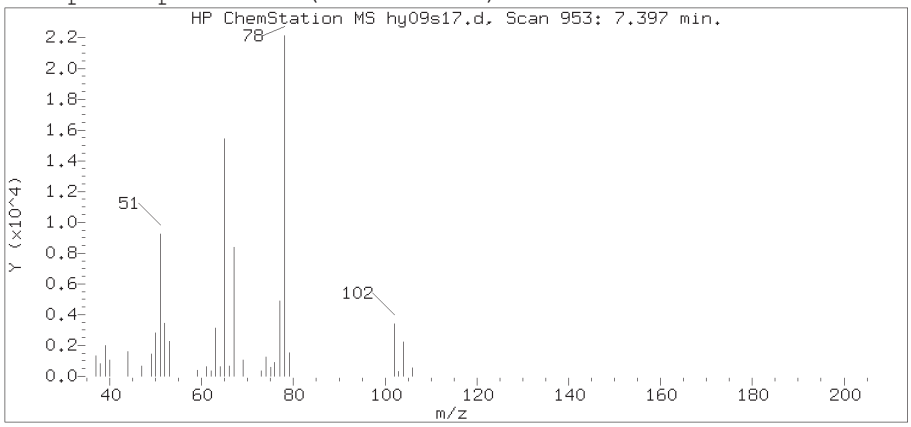
Reference Standard Spectrum for Benzene

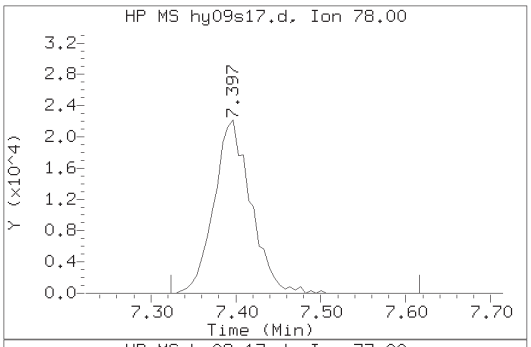


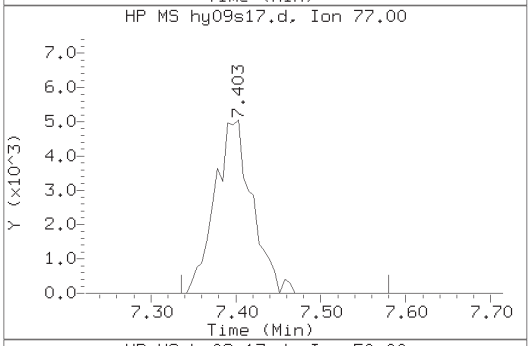
Sample Spectrum (Background Subtracted)

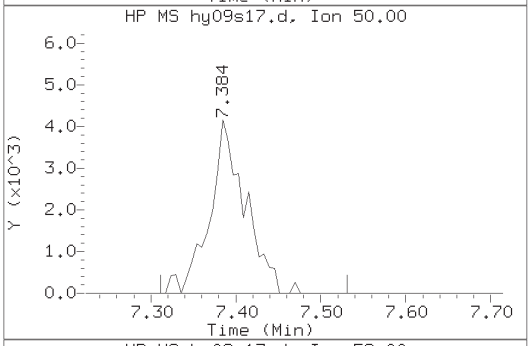


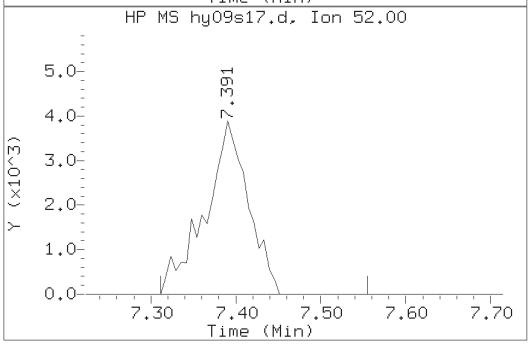
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 58
Compound Name : Benzene
Scan Number : 953
Retention Time (minutes): 7.397
Relative Retention Time :-0.00078
Quant Ion : 78.00
Area (flag) : 66795
On-Column Amount (ng) : 0.2554

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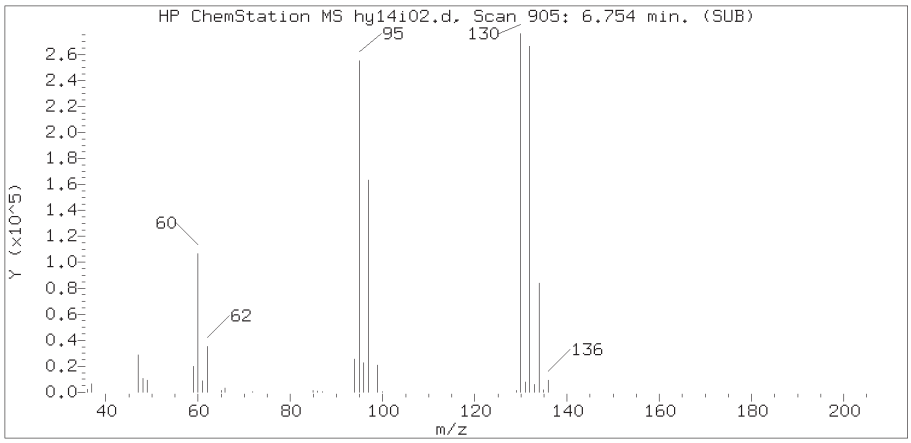
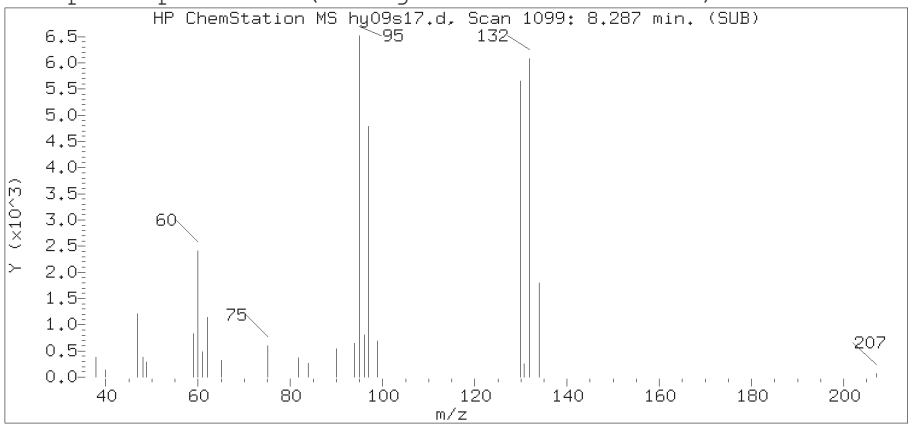
Target 3.5 esignature [illegible]

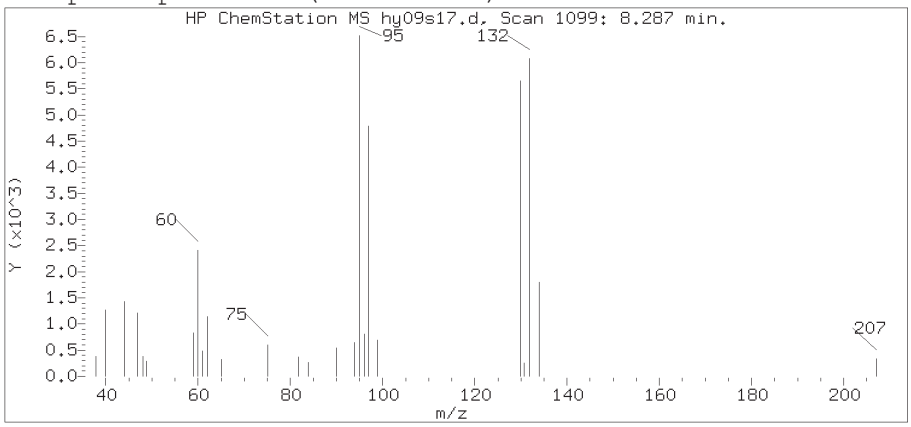
Reference Standard Spectrum for Trichloroethene

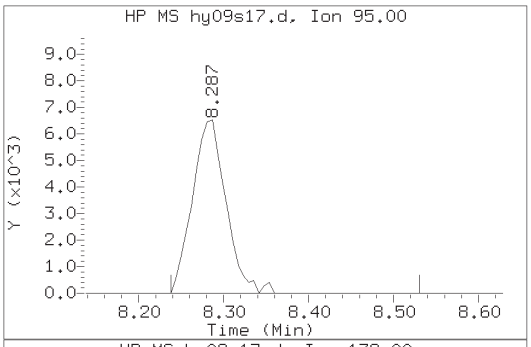


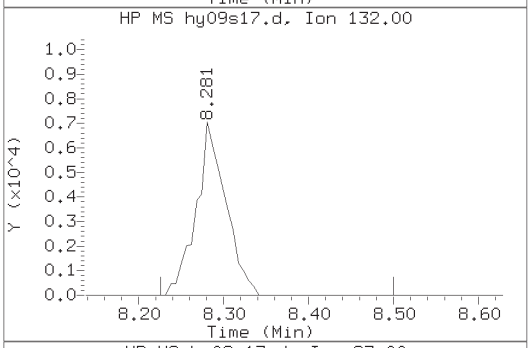
Sample Spectrum (Background Subtracted)

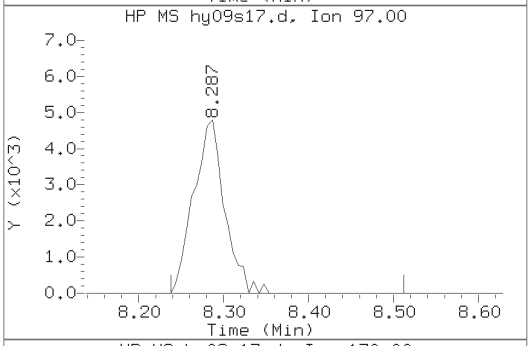


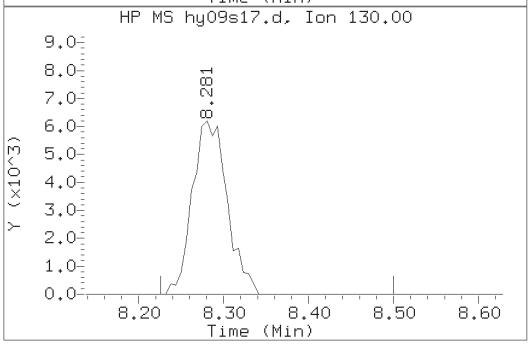
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

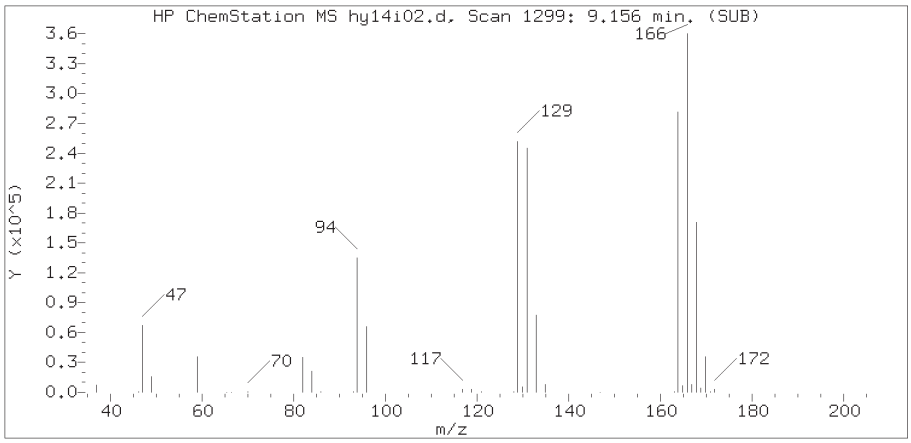
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

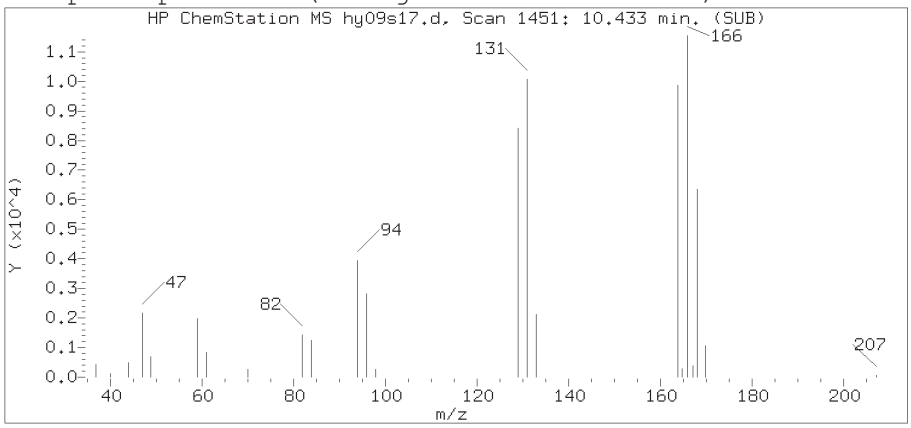
Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1099
Retention Time (minutes): 8.287
Relative Retention Time :-0.00156
Quant Ion : 95.00
Area (flag) : 17917
On-Column Amount (ng) : 0.2629

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

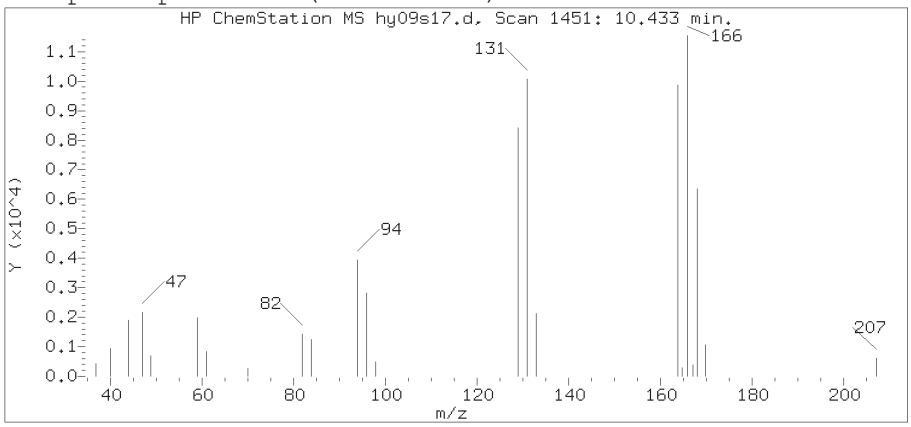
Reference Standard Spectrum for Tetrachloroethene

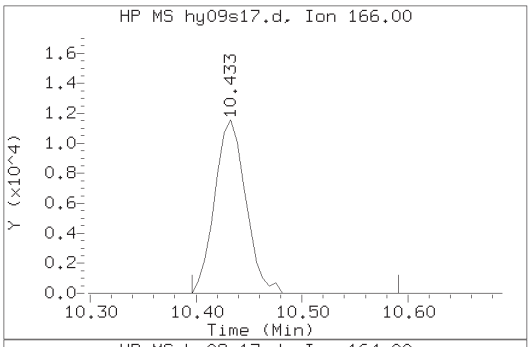


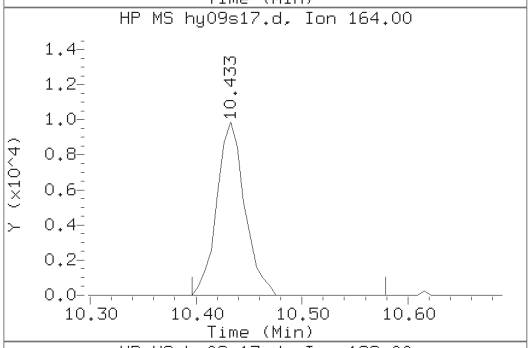
Sample Spectrum (Background Subtracted)

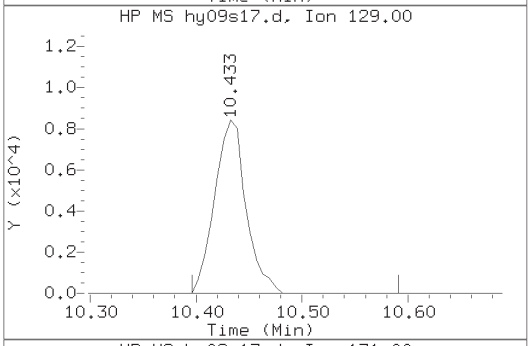


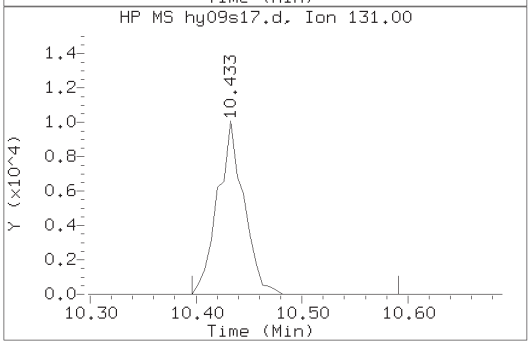
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s17.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101 Lab Sample ID: 8354933

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1451
Retention Time (minutes): 10.433
Relative Retention Time :-0.00054
Quant Ion : 166.00
Area (flag) : 23394
On-Column Amount (ng) : 0.3002

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

Data file: /chem2/HP19094.i/16may09a.b/hy09s18.d Injection date and time: **09-MAY-2016 17:01**
Data file Sample Info. Line: E6101DL;8354933DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269(-0.006)	440	65	76763	(-14)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2439299	(1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1735395	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	744588	(-15)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885(0.001)	113	607642	10.571	106%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	96328	10.118	101%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2431403	9.835	98%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	727922	9.135	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					1	10
4) Dimethyl ether	(2)	2.099(0.000)	45	71763	0.857	8.57		J	1	130
2) Chloromethane	(2)			Not Detected					2	10
5) Vinyl Chloride	(2)			Not Detected					2	10
7) Bromomethane	(2)			Not Detected					5	10
8) Chloroethane	(2)	2.715(0.000)	64	19988	0.423	4.23		J	1	10
10) Trichlorofluoromethane	(2)			Not Detected					2	10
11) Ethyl ether	(2)	3.312(-0.000)	59	136057	3.300	33.00		J	11	130
13) Acrolein	(1)			Not Detected					50	250
15) 1,1-Dichloroethene	(2)			Not Detected					2	10
16) Freon 113	(2)			Not Detected					2	10
14) Acetone	(1)			Not Detected					30	100
17) Methyl Iodide	(2)			Not Detected					6	100
18) Carbon Disulfide	(2)			Not Detected					4	100
25) Acetonitrile	(1)			Not Detected					320	1000
22) Allyl Chloride	(2)			Not Detected					8	100
23) Methylene Chloride	(2)			Not Detected					2	10
29) Acrylonitrile	(1)			Not Detected					10	100
31) trans-1,2-Dichloroethene	(2)			Not Detected					2	10
33) 1,1-Dichloroethane	(2)	5.366(-0.000)	63	63591	0.505	5.05		J	1	10
36) Vinyl Acetate	(2)			Not Detected					33	100
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					5	100
38) 2-Butanone	(1)			Not Detected					10	100
42) Propionitrile	(1)			Not Detected					100	1000
45) Methacrylonitrile	(1)			Not Detected					98	1000
48) Tetrahydrofuran	(1)			Not Detected					20	250
49) Chloroform	(2)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					1	10
54) Carbon Tetrachloride	(2)			Not Detected					2	10
56) Isobutyl Alcohol	(1)			Not Detected					100	2000

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s18.d Injection date and time: **09-MAY-2016 17:01**
Data file Sample Info. Line: E6101DL;8354933DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

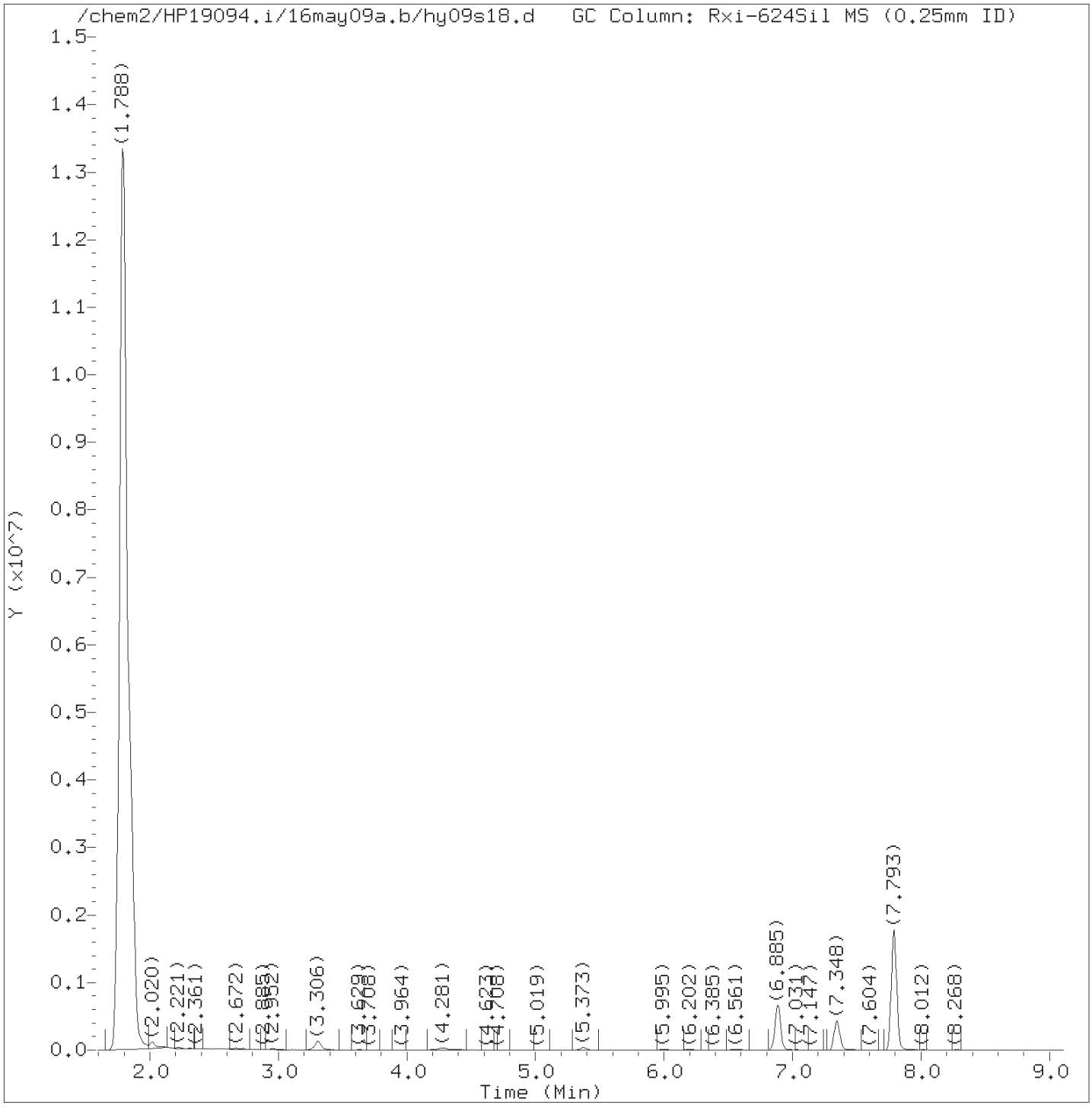
Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)				Not Detected					1	10
59) 1,2-Dichloroethane	(2)				Not Detected					1	10
67) Trichloroethene	(2)				Not Detected					2	10
70) 1,2-Dichloropropane	(2)				Not Detected					1	10
71) Methyl Methacrylate	(1)				Not Detected					36	100
73) Dibromomethane	(2)				Not Detected					1	10
72) 1,4-Dioxane	(1)				Not Detected					450	2000
74) Bromodichloromethane	(2)				Not Detected					1	10
81) 4-Methyl-2-Pentanone	(1)				Not Detected					10	100
83) Toluene	(3)				Not Detected					1	10
84) trans-1,3-Dichloropropene	(3)				Not Detected					1	10
86) Ethyl Methacrylate	(3)				Not Detected					8	100
88) 1,1,2-Trichloroethane	(3)				Not Detected					1	10
89) Tetrachloroethene	(3)				Not Detected					1	10
90) 1,3-Dichloropropane	(3)				Not Detected					1	10
91) 2-Hexanone	(1)				Not Detected					10	100
93) Dibromochloromethane	(3)				Not Detected					1	10
95) 1,2-Dibromoethane	(3)				Not Detected					1	10
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	10
100) Ethylbenzene	(3)				Not Detected					1	10
101) m+p-Xylene	(3)				Not Detected					1	30
104) o-Xylene	(3)				Not Detected					1	30
105) Xylene (Total)	(3)				Not Detected					2	30
106) Styrene	(3)				Not Detected					1	10
107) Bromoform	(3)				Not Detected					1	10
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					2	10
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					10	100
116) 1,2,3-Trichloropropane	(4)				Not Detected					3	10
126) Pentachloroethane	(4)				Not Detected					8	100
131) 1,3-Dichlorobenzene	(4)				Not Detected					1	10
134) 1,4-Dichlorobenzene	(4)				Not Detected					1	10
139) 1,2-Dichlorobenzene	(4)				Not Detected					1	10
142) Hexachloroethane	(4)				Not Detected					1	100
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					2	10
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	10
146) Hexachlorobutadiene	(4)				Not Detected					1	10
147) Naphthalene	(4)				Not Detected					1	10

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

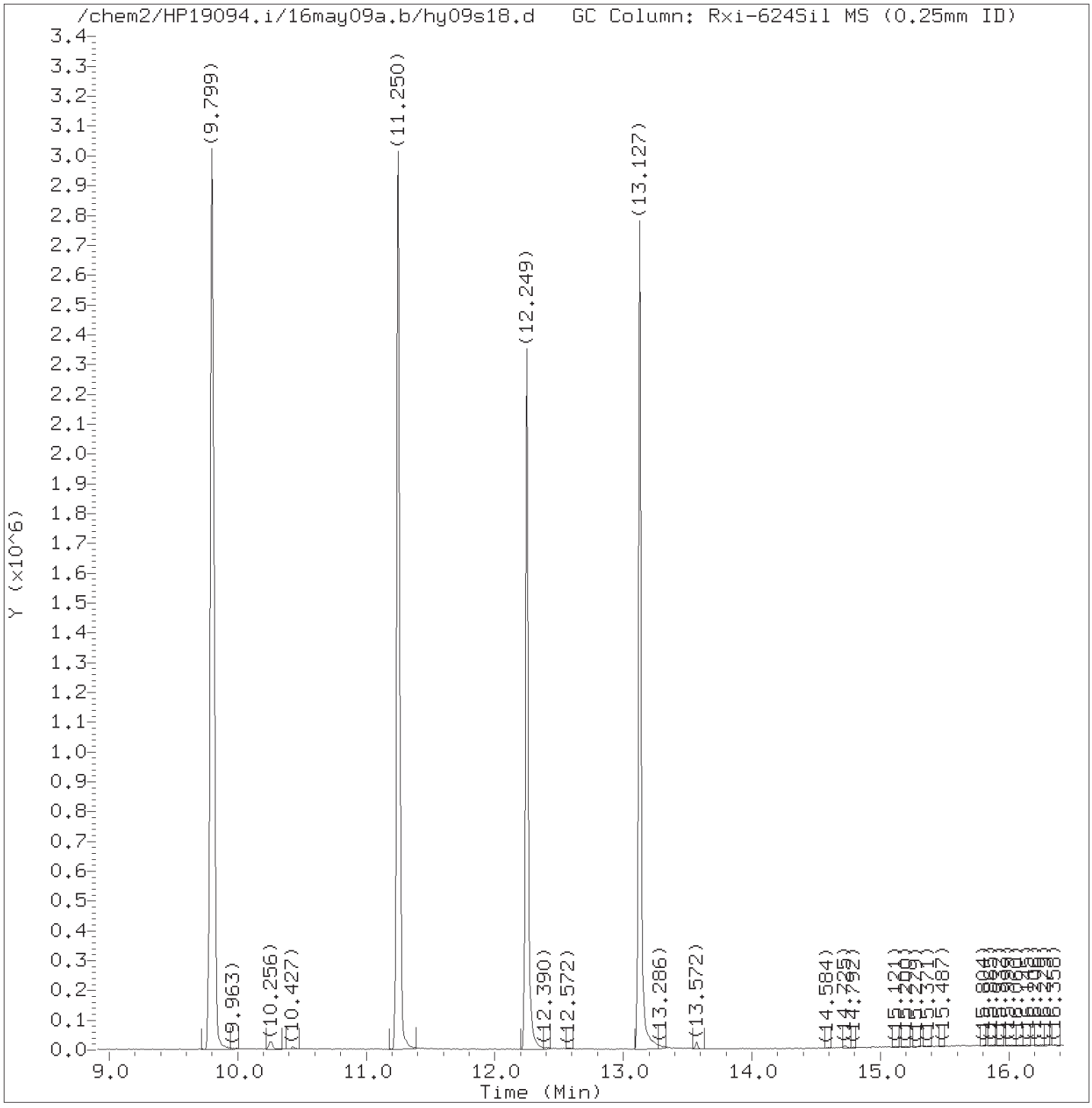
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101DL Lab Sample ID: 8354933DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101DL Lab Sample ID: 8354933DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

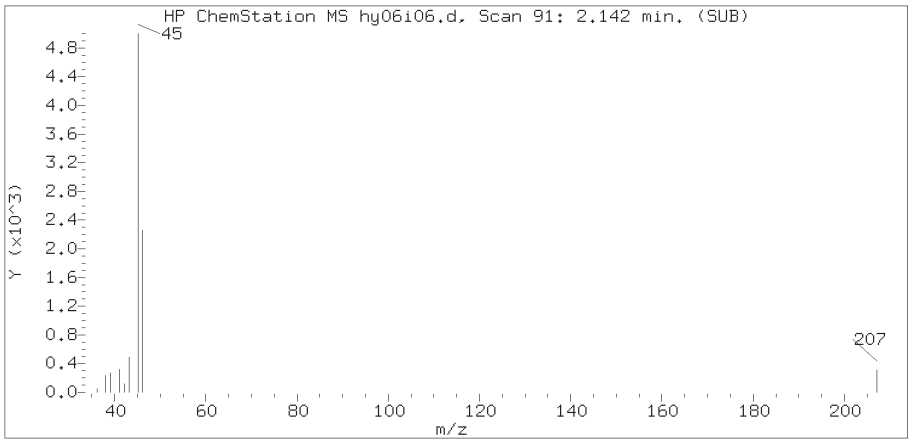
Sample Name: E6101DL Lab Sample ID: 8354933DL

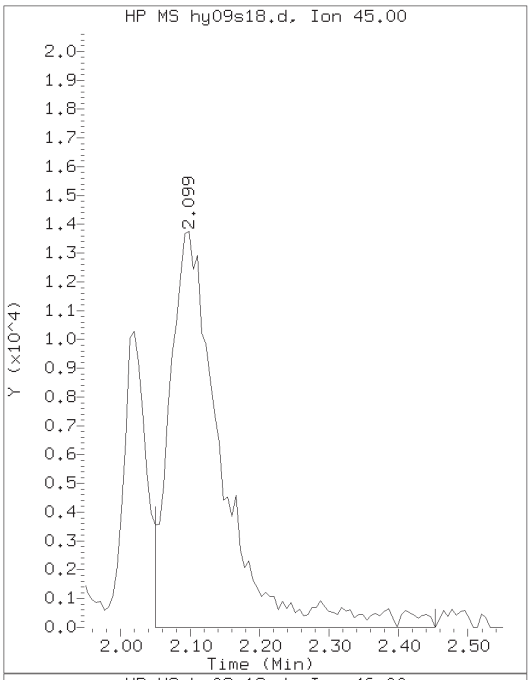
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	71763	0.857
8) Chloroethane	(2)	2.715	64	19988	0.423
11) Ethyl ether	(2)	3.312	59	136057	3.300
26)*t-Butyl Alcohol-d10	(1)	4.269	65	76763	50.000
33) 1,1-Dichloroethane	(2)	5.367	63	63591	0.505
50)$Dibromofluoromethane	(2)	6.885	113	607642	10.571
57)$1,2-Dichloroethane-d4	(2)	7.348	102	96328	10.118
63)*Fluorobenzene	(2)	7.793	96	2439299	10.000
82)$Toluene-d8	(3)	9.799	98	2431403	9.835
97)*Chlorobenzene-d5	(3)	11.250	117	1735395	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	727922	9.135
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	744588	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

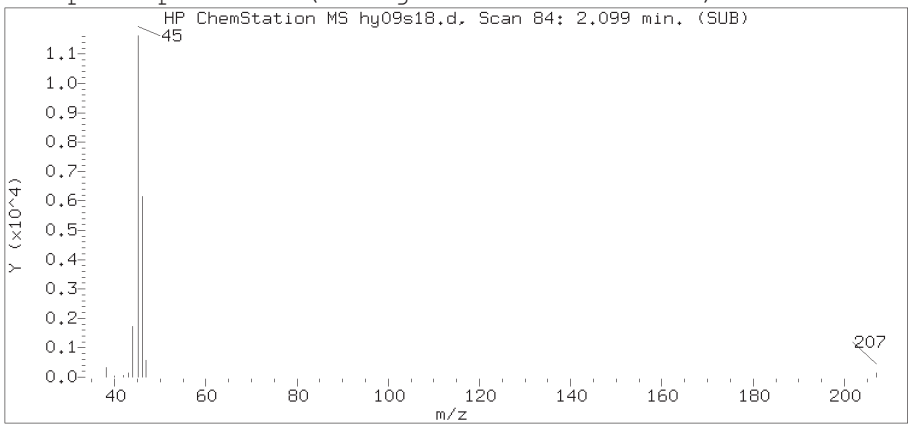
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

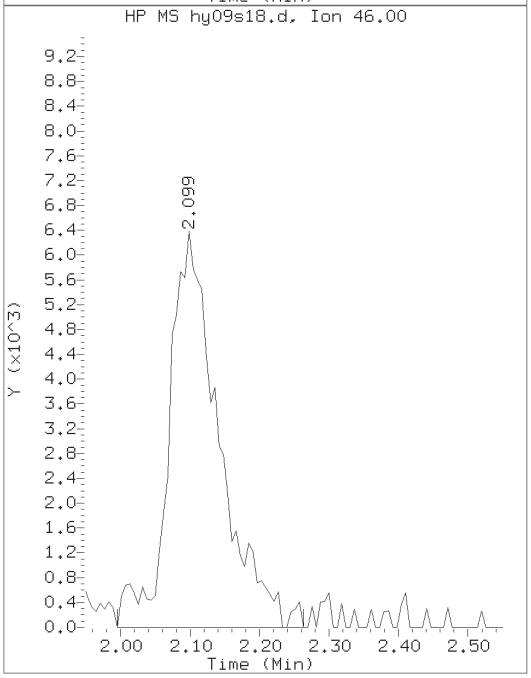
Reference Standard Spectrum for Dimethyl ether



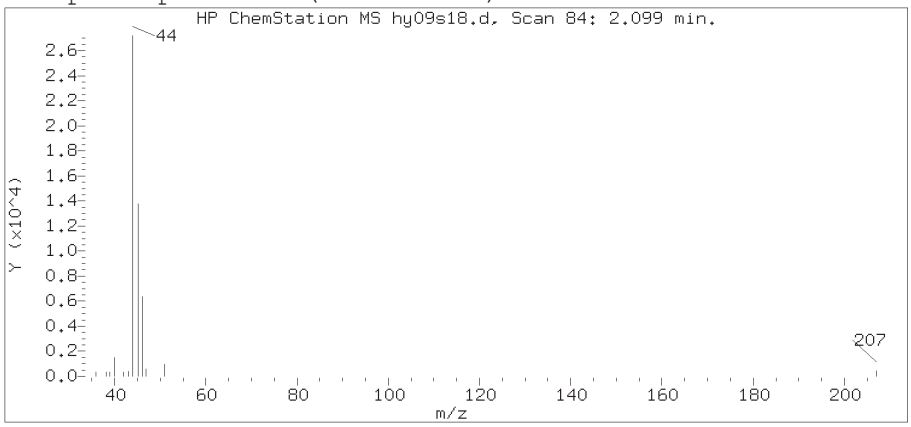


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

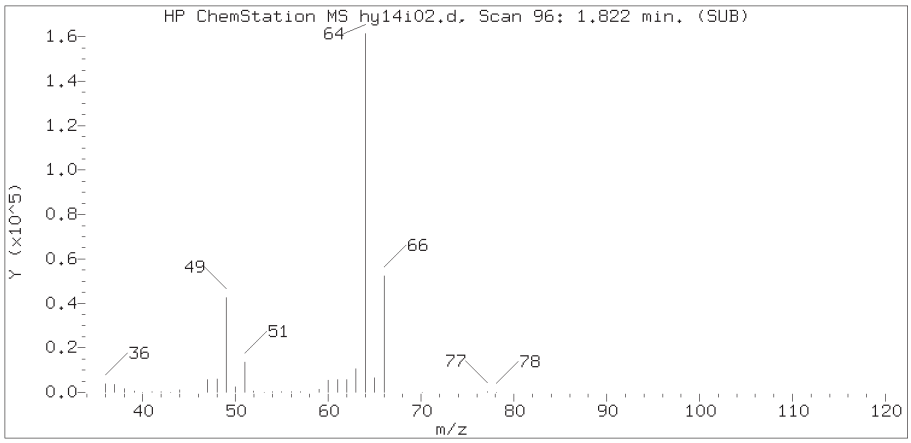
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

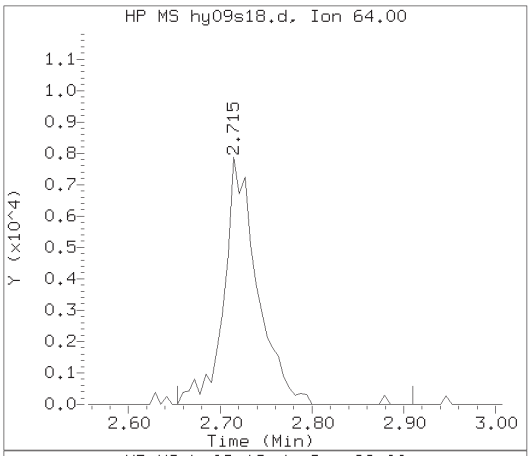
Sample Name: E6101DL Lab Sample ID: 8354933DL

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Relative Retention Time : 0.00001
Quant Ion : 45.00
Area (flag) : 71763
On-Column Amount (ng) : 0.8566

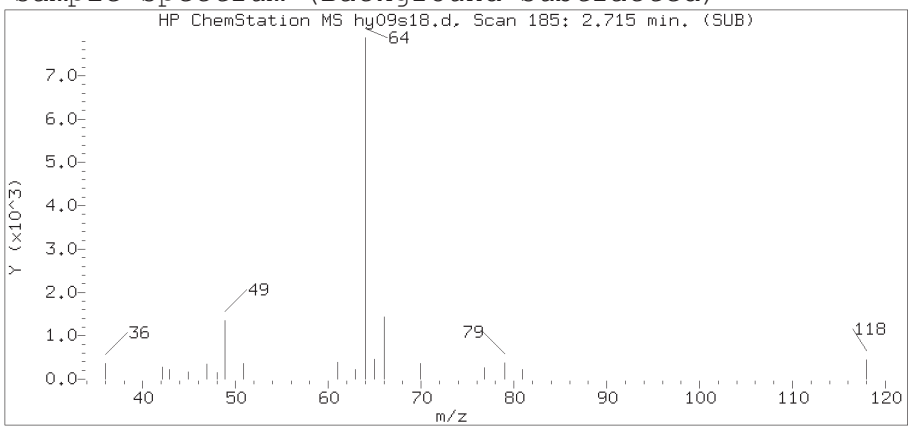
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] 71763

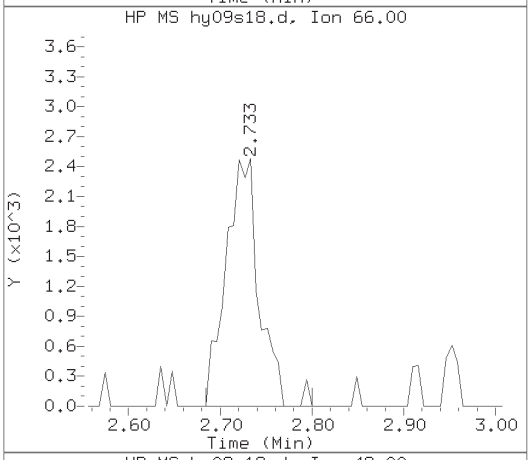
Reference Standard Spectrum for Chloroethane



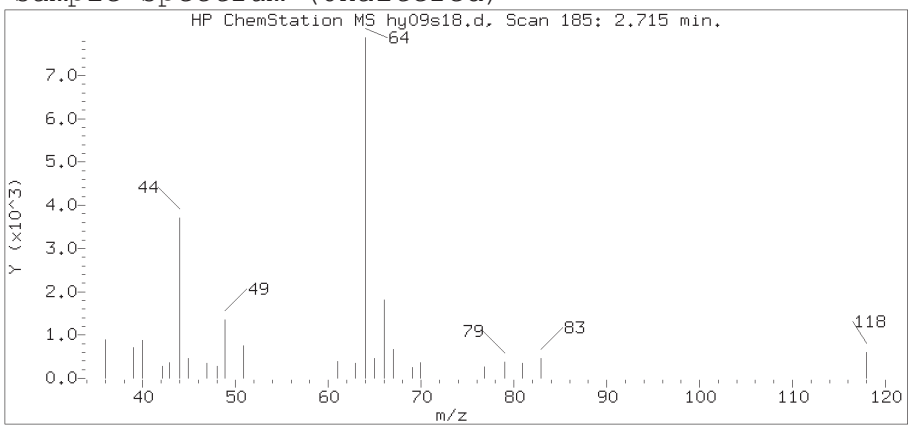


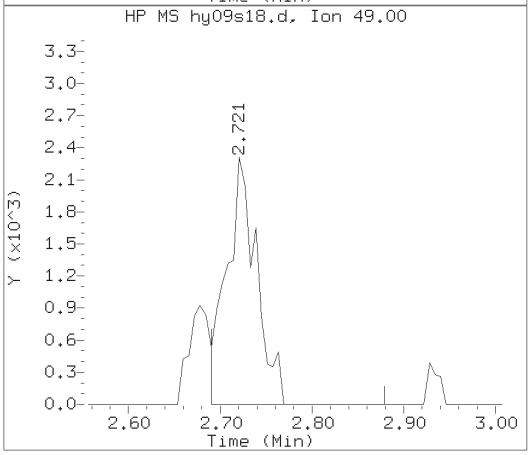
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101DL Lab Sample ID: 8354933DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 185
Retention Time (minutes): 2.715
Relative Retention Time : 0.00078
Quant Ion : 64.00
Area (flag) : 19988
On-Column Amount (ng) : 0.4226

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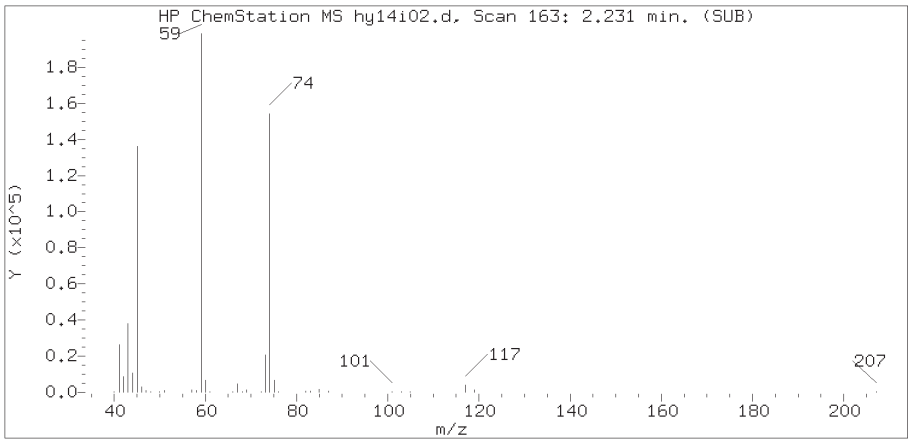
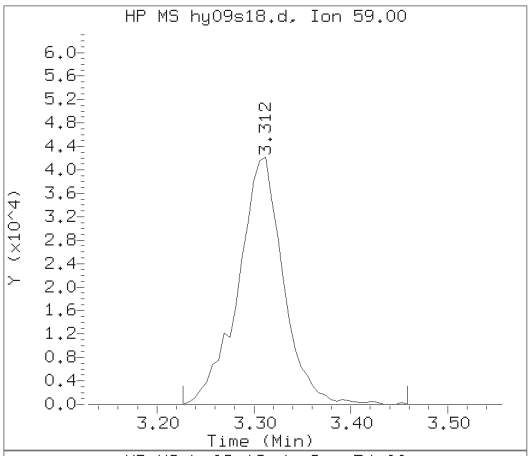
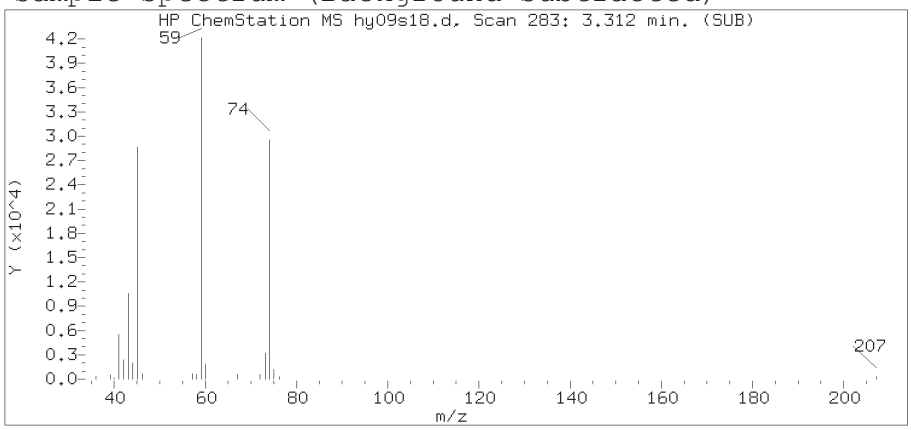
Target 3.5 esignature [illegible]

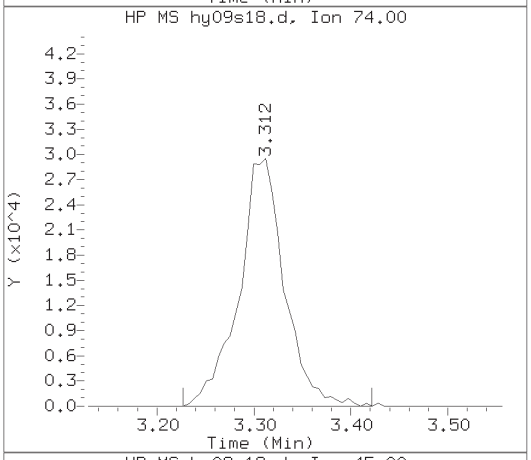
Reference Standard Spectrum for Ethyl ether



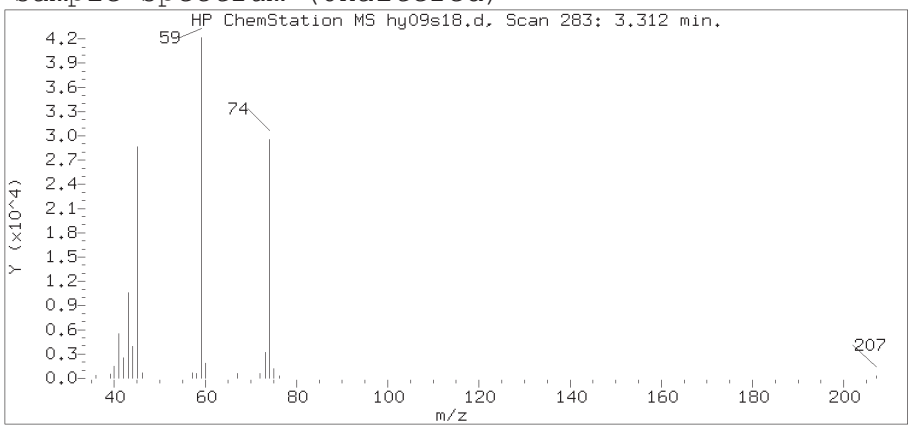


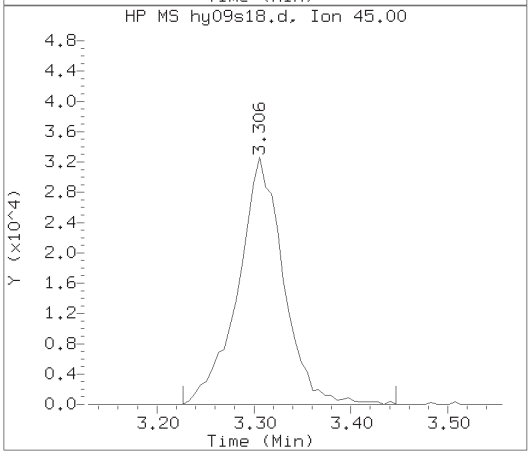
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

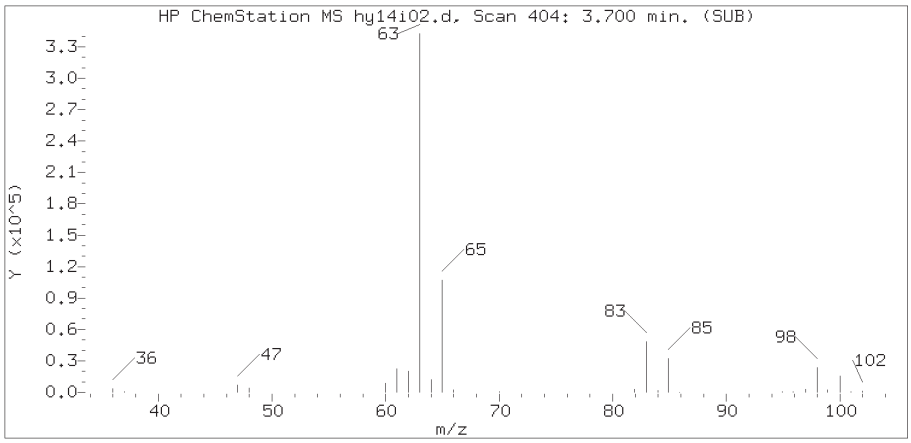
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

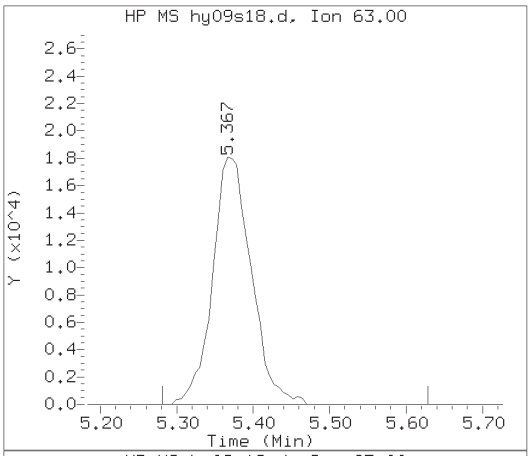
Sample Name: E6101DL Lab Sample ID: 8354933DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 283
Retention Time (minutes): 3.312
Relative Retention Time :-0.00079
Quant Ion : 59.00
Area (flag) : 136057
On-Column Amount (ng) : 3.2995

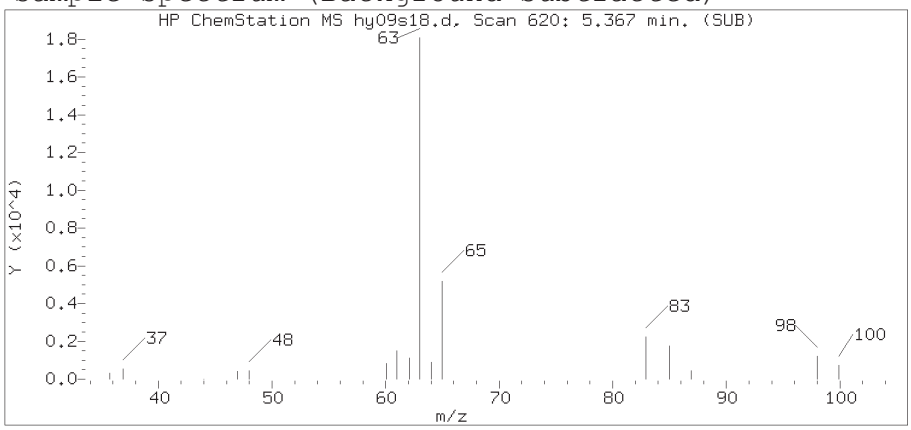
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

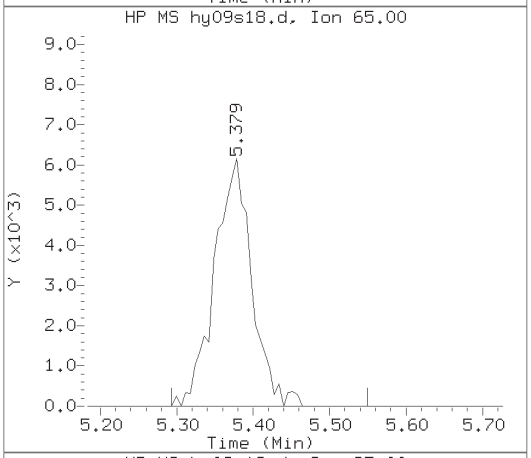
Reference Standard Spectrum for 1,1-Dichloroethane



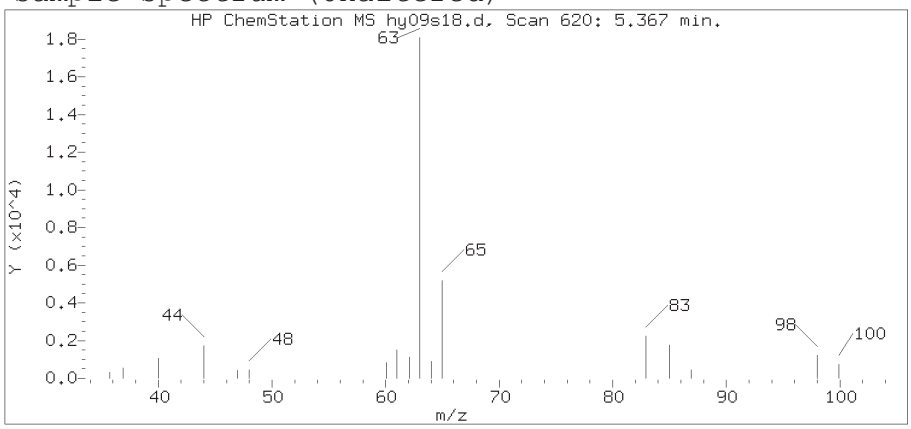


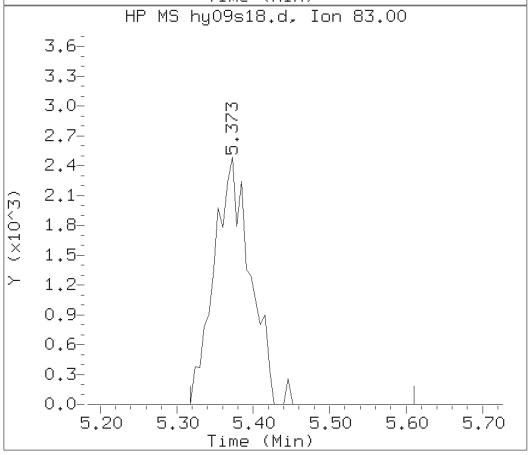
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s18.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:01 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6101DL Lab Sample ID: 8354933DL

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 620
Retention Time (minutes): 5.367
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 63591
On-Column Amount (ng) : 0.5052

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

E6102 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354934

Data file: /chem/HP09915.i/16may09a.b/ly09s38.d Injection date and time: **09-MAY-2016 18:46**
Data file Sample Info. Line: E6102;8354934;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 19:05 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.002	(-0.006)	753	65	232651	(-7)	250.00	
66) Fluorobenzene	7.510	(0.003)	1844	96	1492234	(-1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1132898	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	577868	(-8)	50.00	

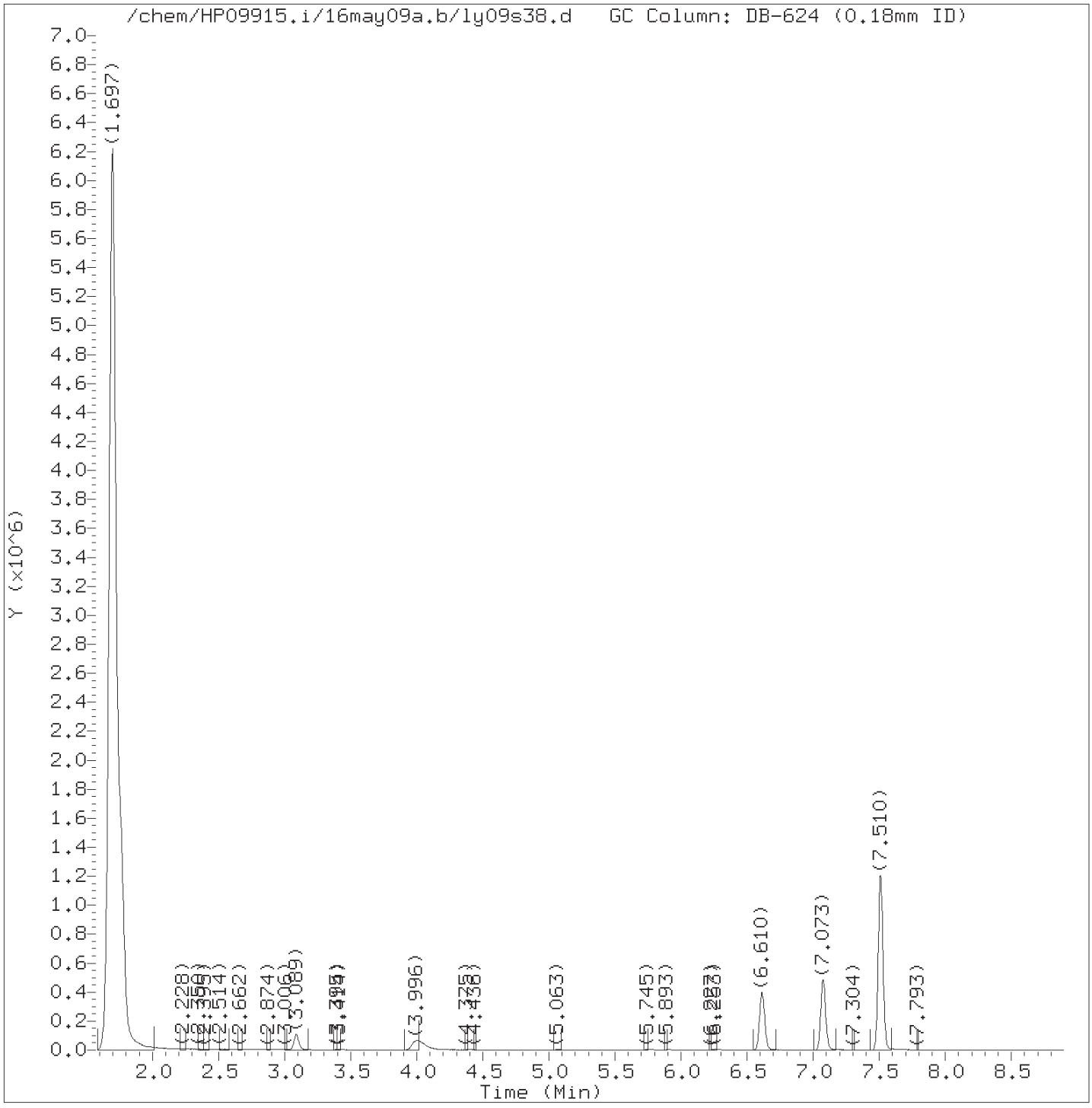
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.613	(0.000)	113	342844	48.361	97%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.073	(0.000)	102	90475	50.551	101%		77 - 113
83) Toluene-d8	(3)	9.555	(0.000)	98	1460874	49.264	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.057	(0.000)	95	546849	49.833	100%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 19:41. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:01. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

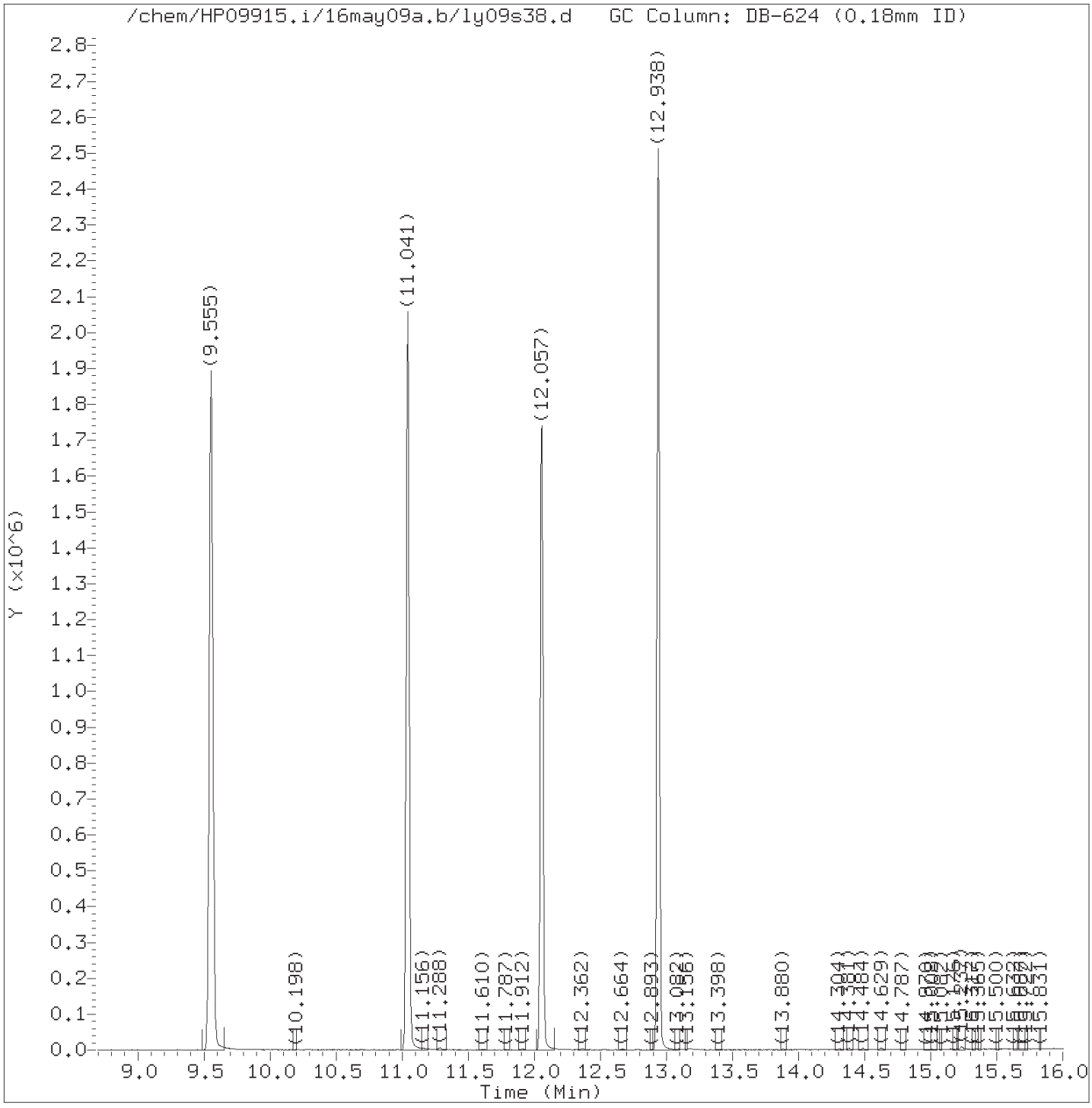
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s38.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:46 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:05 Automation

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc0749



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s38.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:46 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:05 Automation

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s38.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:46 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:05 Automation

Sample Name: E6102 Lab Sample ID: 8354934

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	4.002	65	232651	250.000
52)$Dibromofluoromethane	(2)	6.613	113	342844	48.361
57)$1,2-Dichloroethane-d4	(2)	7.073	102	90475	50.551
66)*Fluorobenzene	(2)	7.510	96	1492234	50.000
83)$Toluene-d8	(3)	9.555	98	1460874	49.264
100)*Chlorobenzene-d5	(3)	11.041	117	1132898	50.000
114)$4-Bromofluorobenzene	(3)	12.057	95	546849	49.833
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	577868	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc07494

E6102 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354934

Data file: /chem2/HP19094.i/16may09a.b/hy09s10.d Injection date and time: **09-MAY-2016 14:18**
Data file Sample Info. Line: E6102;8354934;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275(-0.012)	441	65	84625 (-6)	50.00	
63) Fluorobenzene	7.787(0.006)	1017	96	2438439 (1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1711535 (-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	733250 (-17)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885(0.000)	113	591314	10.291	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354(-0.002)	102	96688	10.159	102%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2439126	10.004	100%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	713135	9.074	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.087(0.001)	45	50631M	0.605	0.60		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.306(-0.000)	59	498190	12.086	12.09		J	1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.373(-0.001)	63	40689	0.323	0.32		J	0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)	6.555(0.002)	71	6231	2.174	2.17		J	2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

M = Compound was manually integrated.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s10.d Injection date and time: **09-MAY-2016 14:18**
Data file Sample Info. Line: E6102;8354934;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

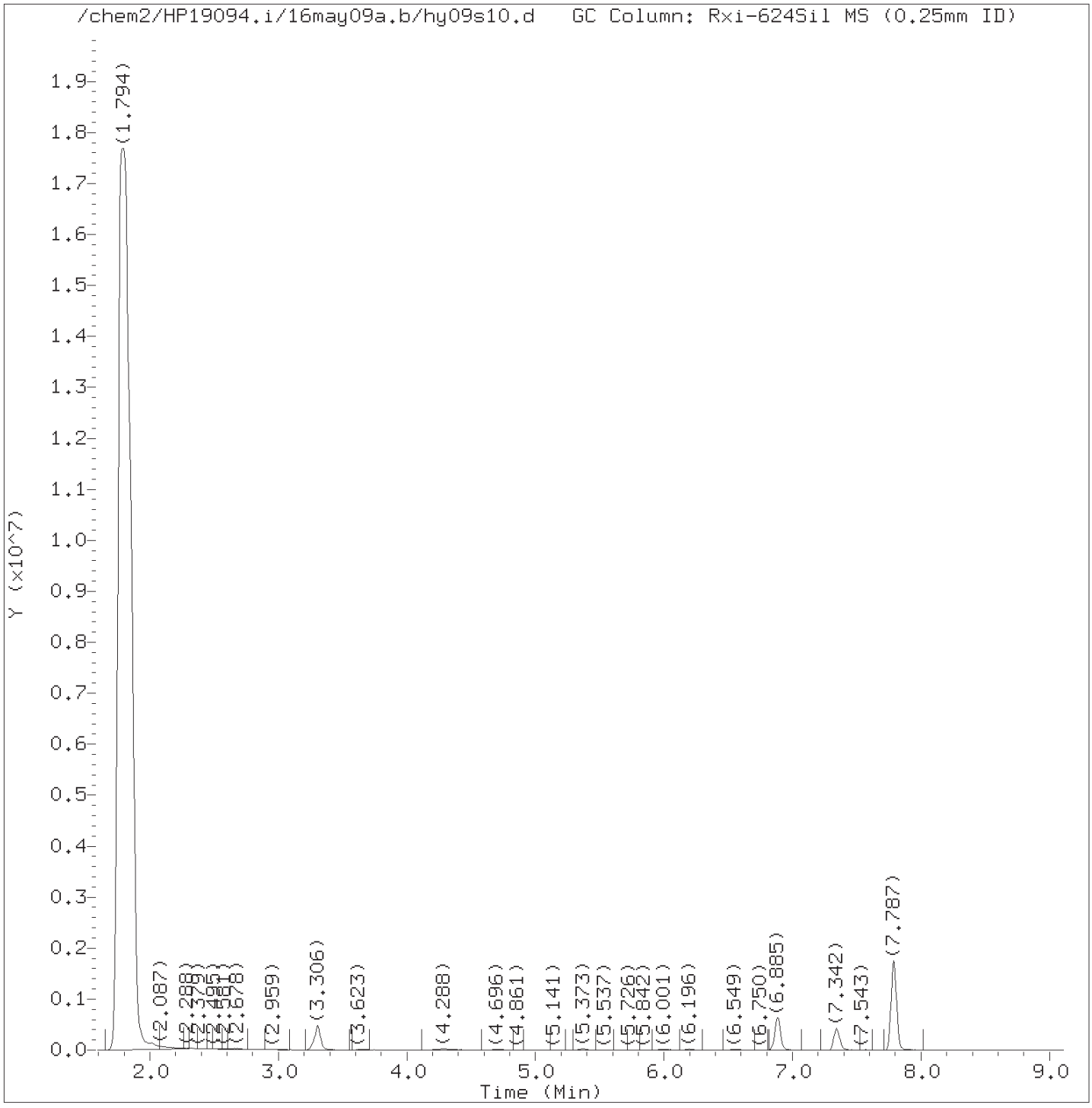
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

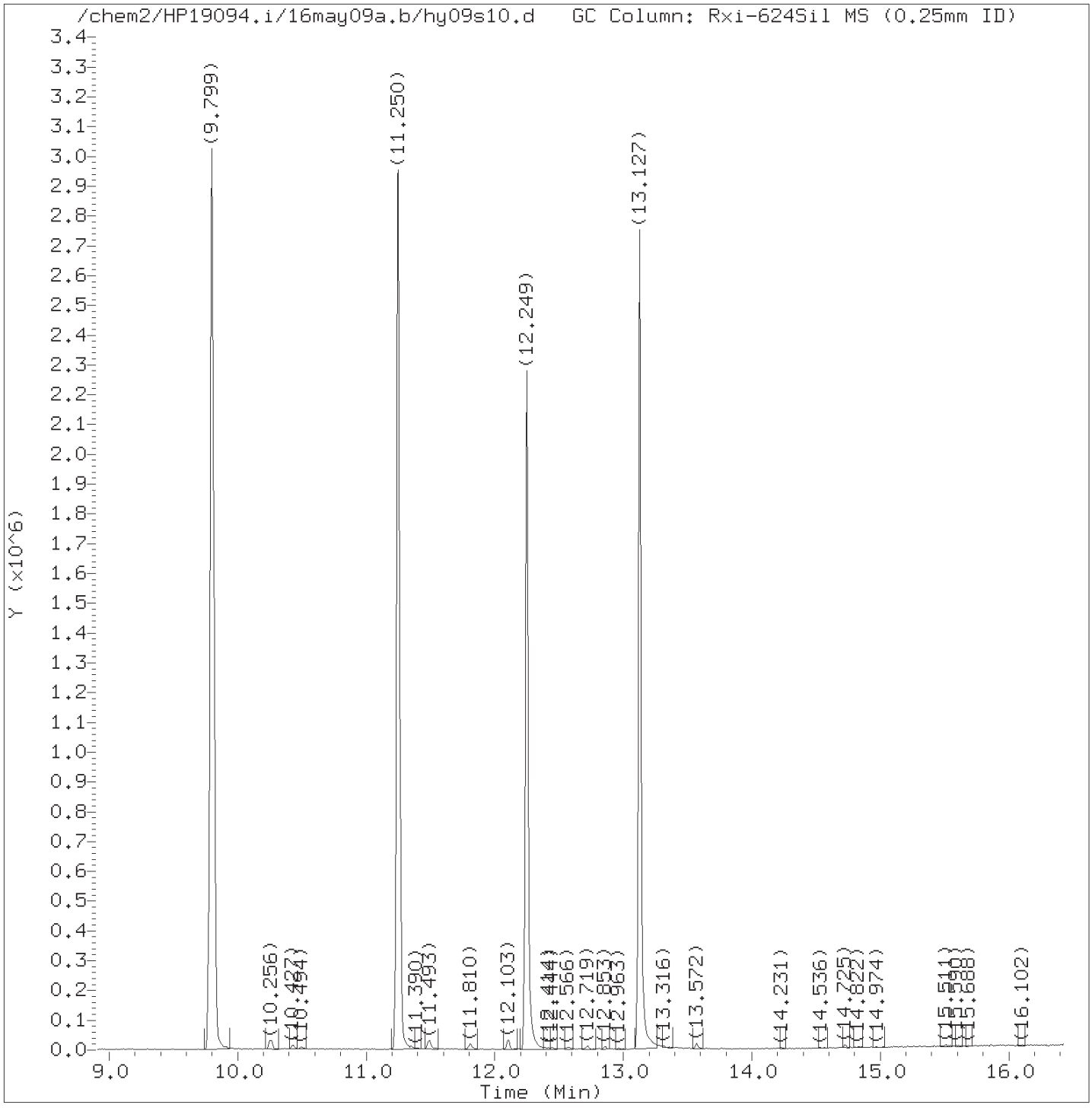
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:10.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:10.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

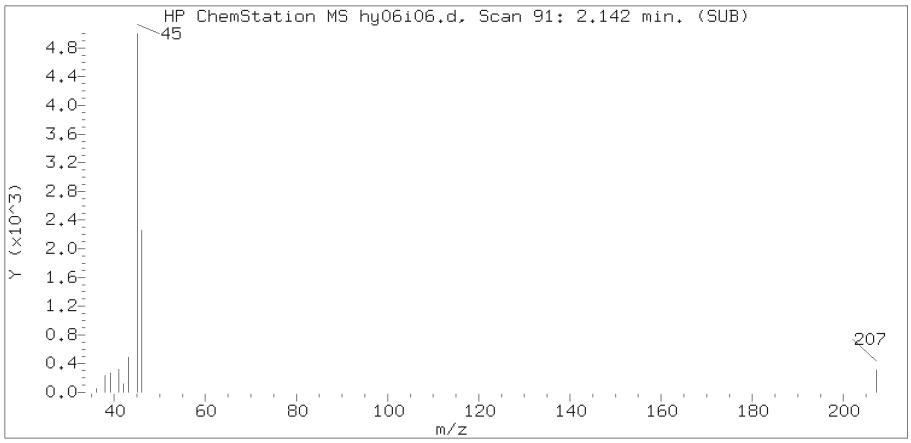
Sample Name: E6102 Lab Sample ID: 8354934

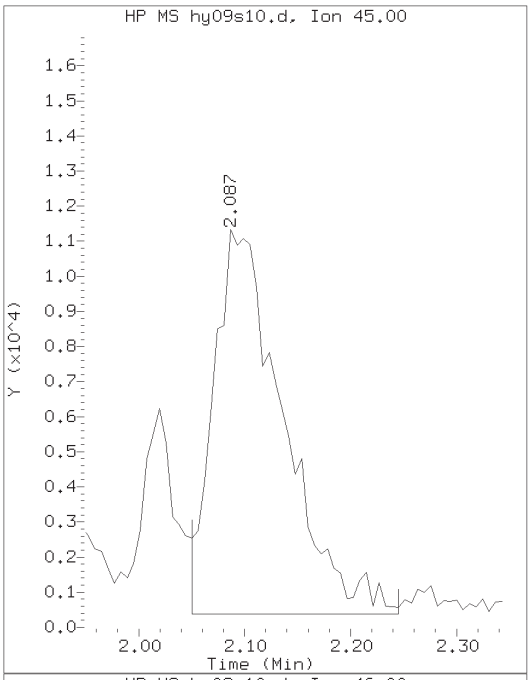
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	50631M	0.605
11) Ethyl ether	(2)	3.306	59	498190	12.086
26)*t-Butyl Alcohol-d10	(1)	4.275	65	84625	50.000
33) 1,1-Dichloroethane	(2)	5.373	63	40689	0.323
48) Tetrahydrofuran	(1)	6.555	71	6231	2.174
50)$Dibromofluoromethane	(2)	6.885	113	591314	10.291
57)$1,2-Dichloroethane-d4	(2)	7.354	102	96688	10.159
63)*Fluorobenzene	(2)	7.787	96	2438439	10.000
82)$Toluene-d8	(3)	9.799	98	2439126	10.004
97)*Chlorobenzene-d5	(3)	11.250	117	1711535	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	713135	9.074
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	733250	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

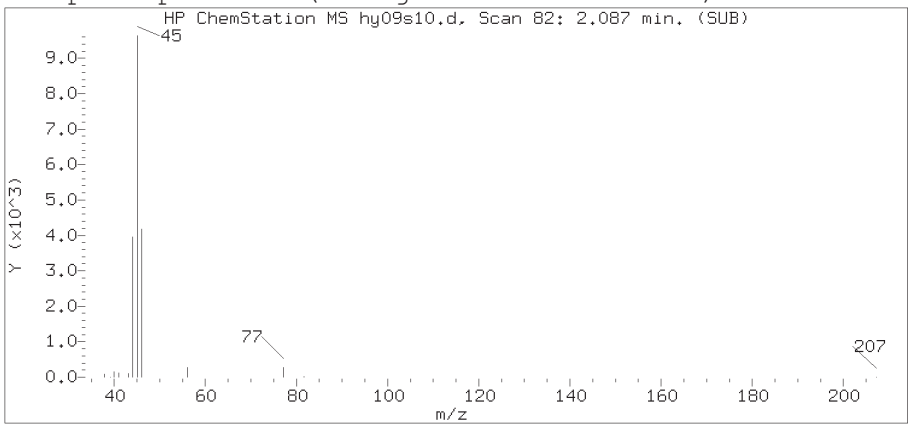
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:10.
Target 3.5 esignature user ID: kel01973

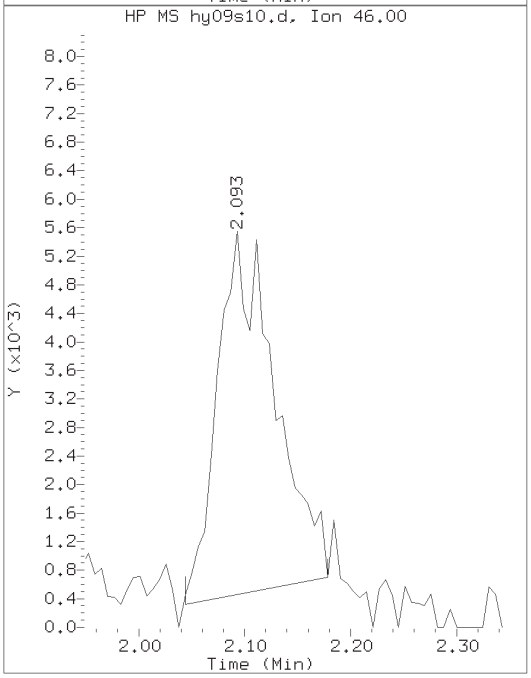
Reference Standard Spectrum for Dimethyl ether



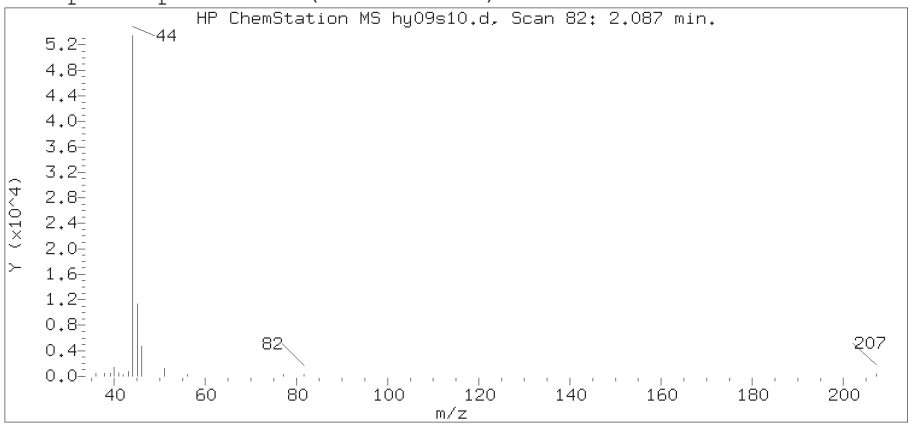


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

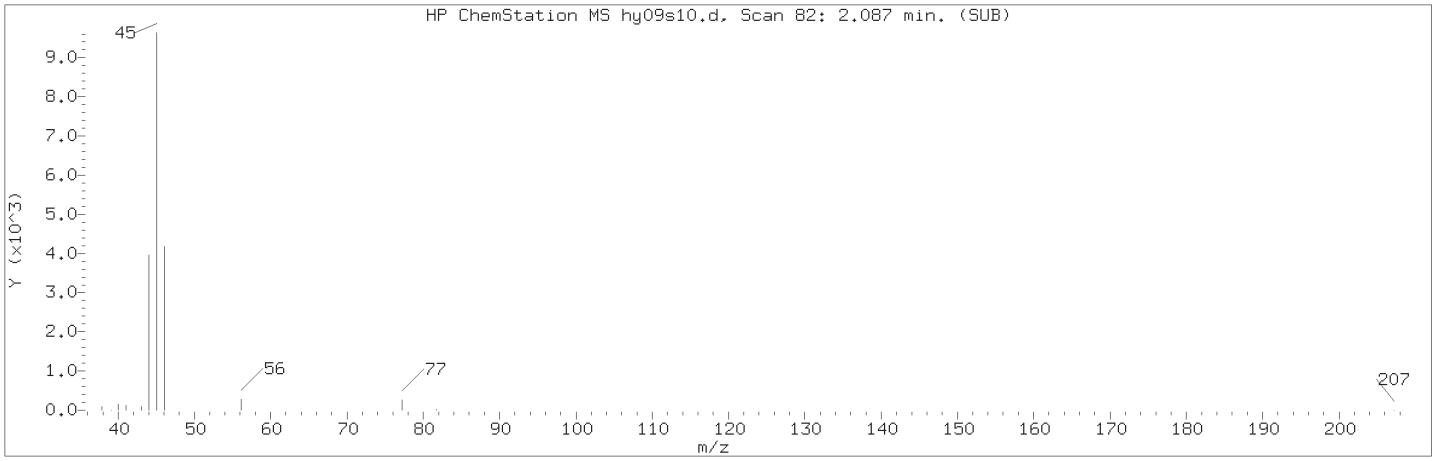
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

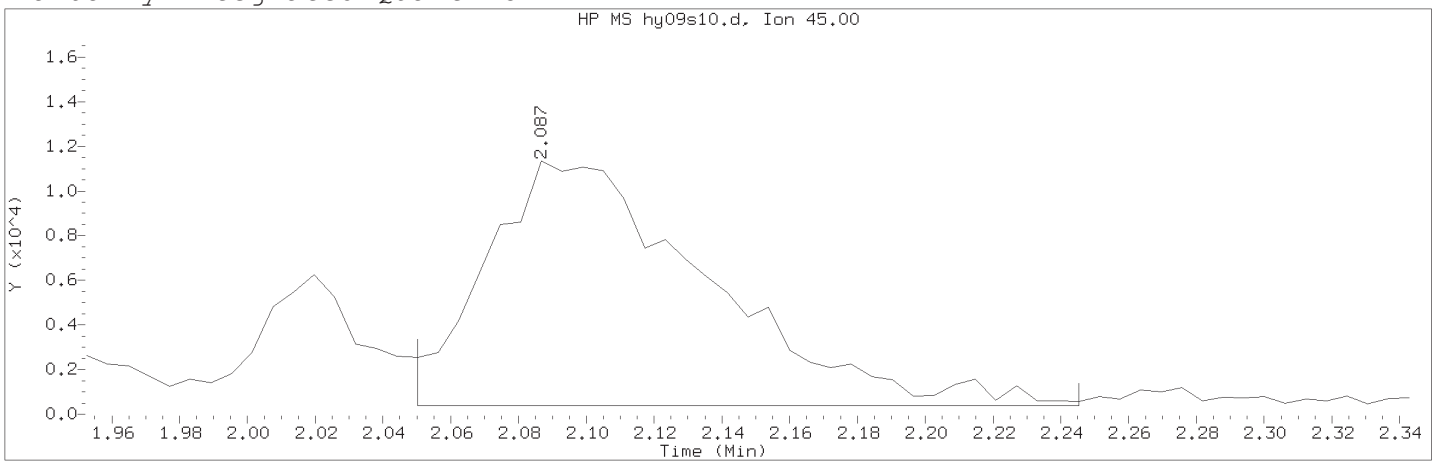
Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 82
Retention Time (minutes)	: 2.087
Relative Retention Time	: 0.00136
Quant Ion	: 45.00
Area (flag)	: 50631M
On-Column Amount (ng)	: 0.6046

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

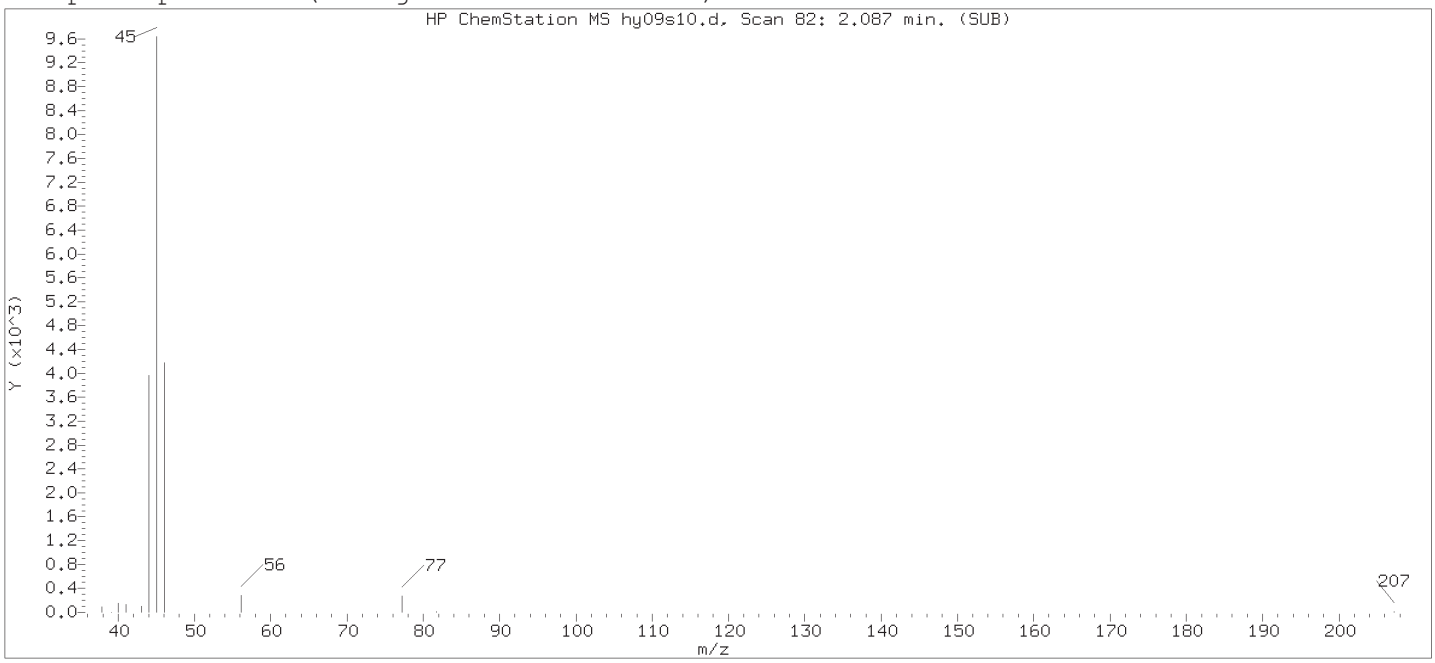
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 82
Retention Time (minutes): 2.087
Quant Ion : 45.00
Area (flag) : 50631M
On-Column Amount (ng) : 0.6046
Integration start scan : 75 Integration stop scan: 107
Y at integration start : 372 Y at integration end: 372

Reason for manual integration: improper integration

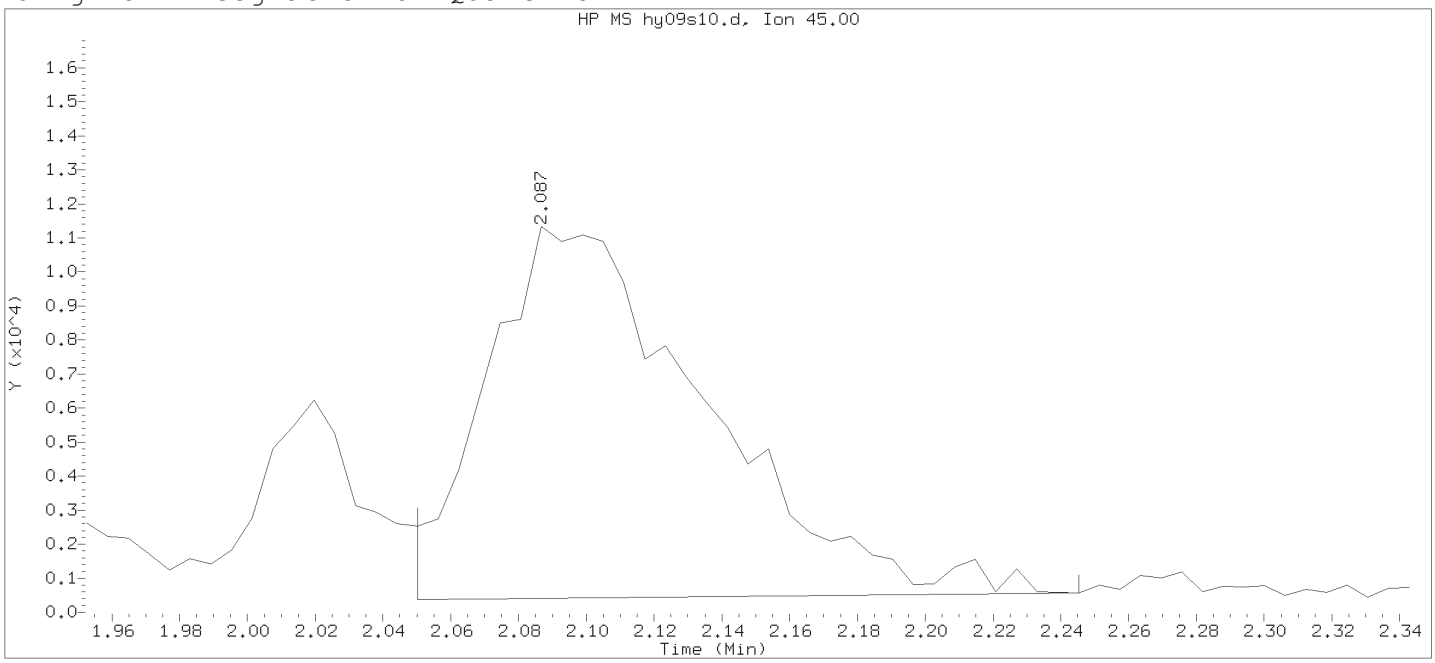
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

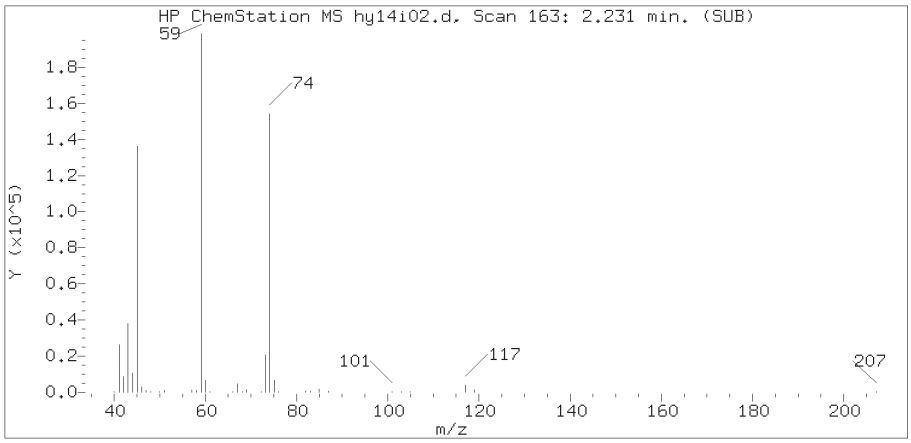
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 14:37 Automation

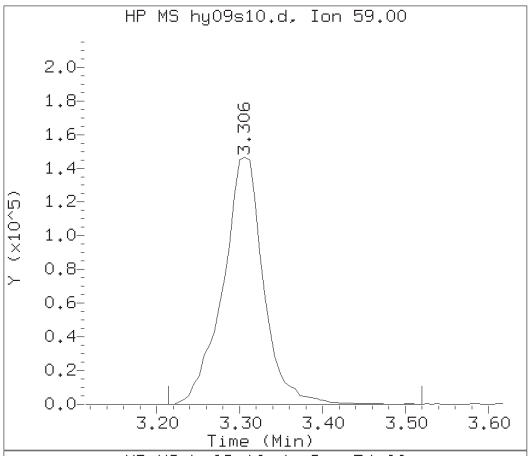
Sample Name: E6102 Lab Sample ID: 8354934

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area	: 49045		
On-column Amount (ng)	: 0.5857		
Integration start scan	: 75	Integration stop scan:	107
Y at integration start	: 371	Y at integration end:	570

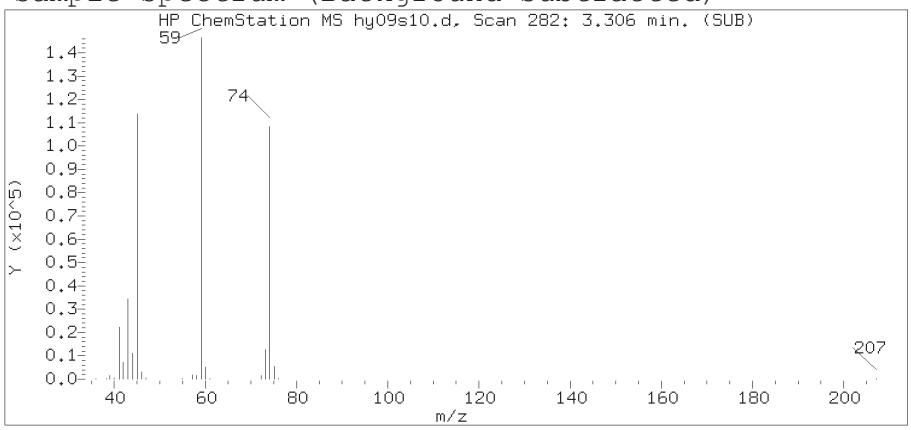
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature user ID: kel01973

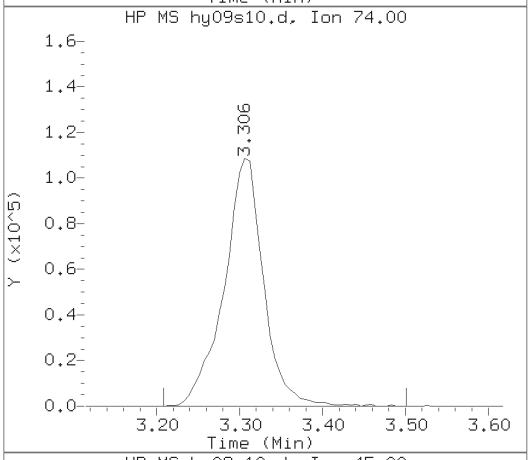
Reference Standard Spectrum for Ethyl ether



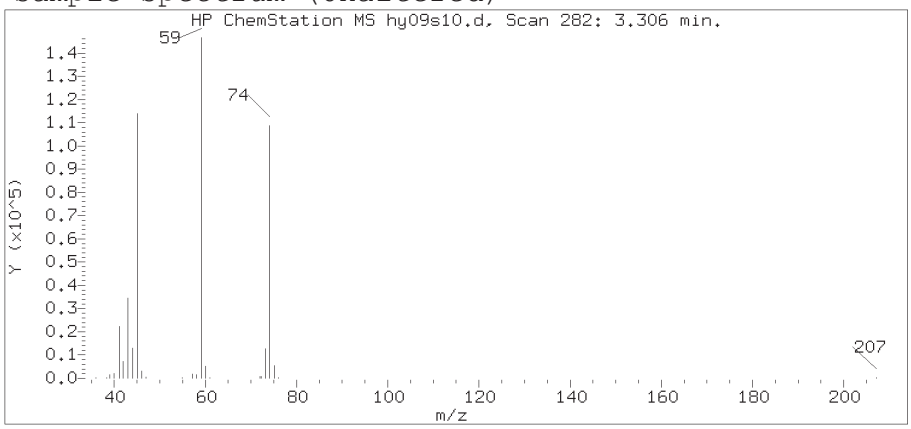


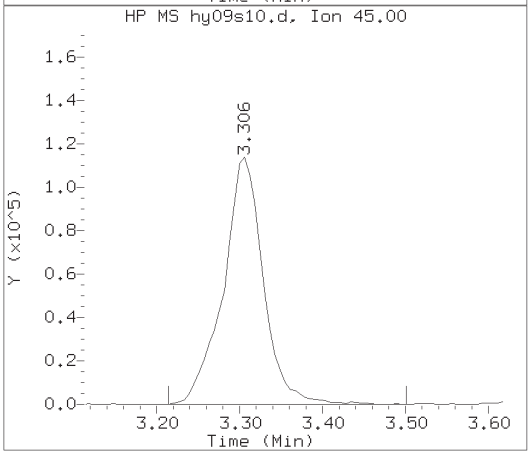
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

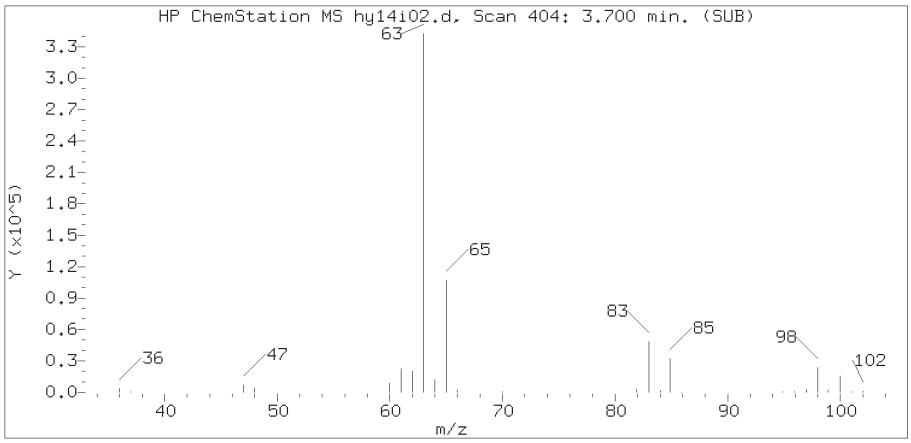
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

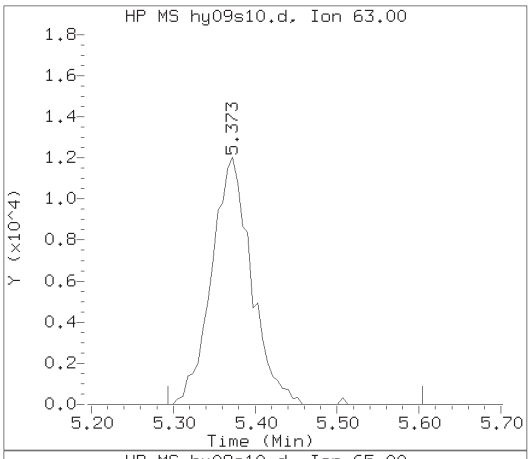
Sample Name: E6102 Lab Sample ID: 8354934

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00034
Quant Ion : 59.00
Area (flag) : 498190
On-Column Amount (ng) : 12.0859

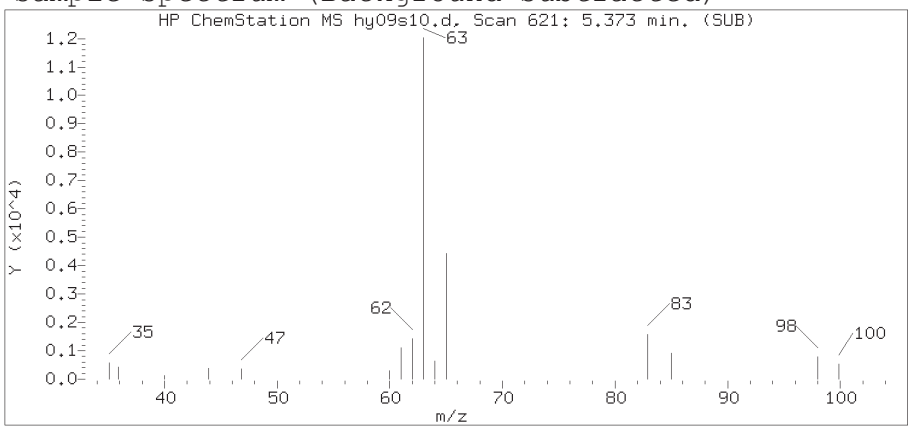
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature [illegible] 201[illegible]

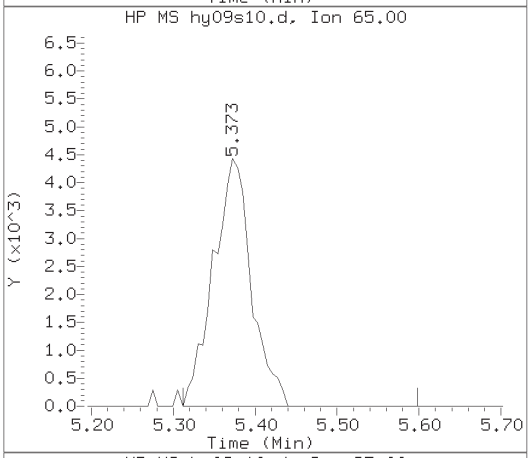
Reference Standard Spectrum for 1,1-Dichloroethane



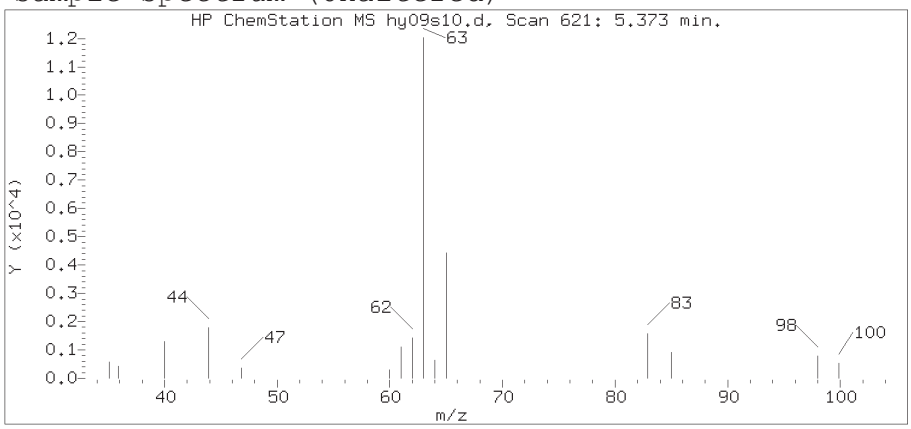


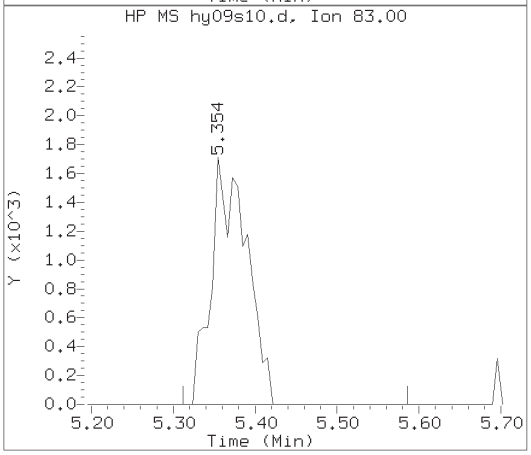
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

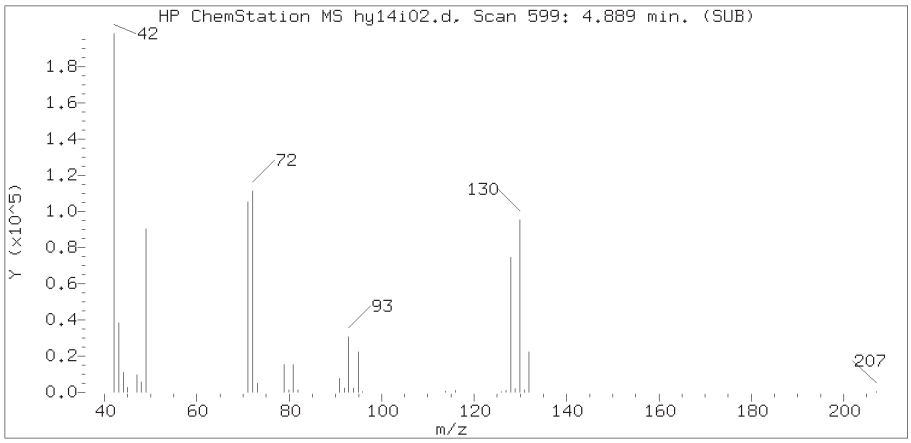
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

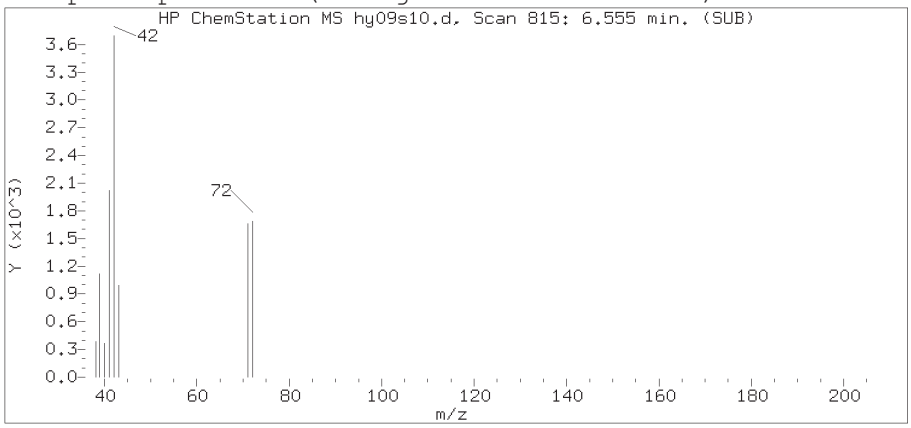
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 621
Retention Time (minutes): 5.373
Relative Retention Time :-0.00132
Quant Ion : 63.00
Area (flag) : 40689
On-Column Amount (ng) : 0.3234

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature [illegible]

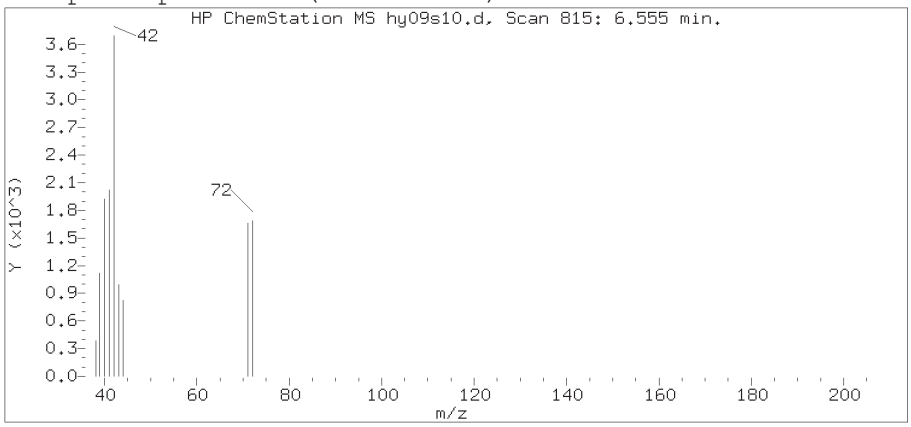
Reference Standard Spectrum for Tetrahydrofuran

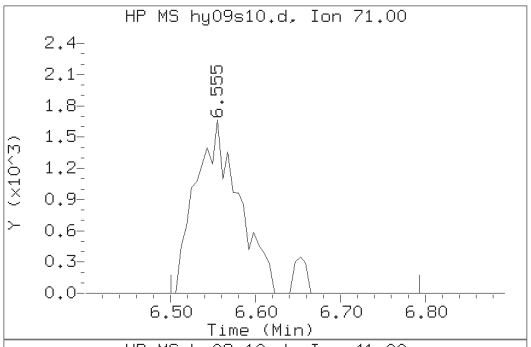


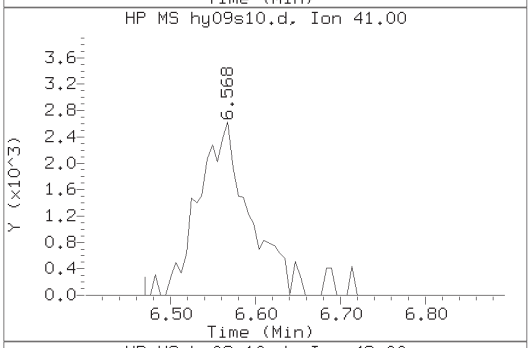
Sample Spectrum (Background Subtracted)

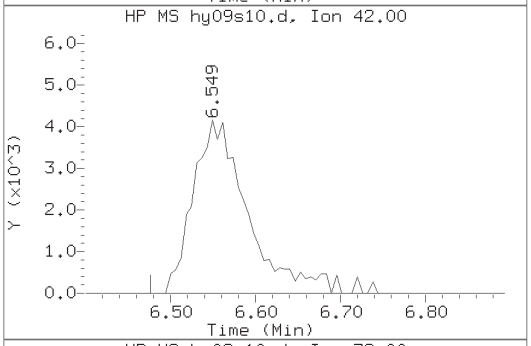


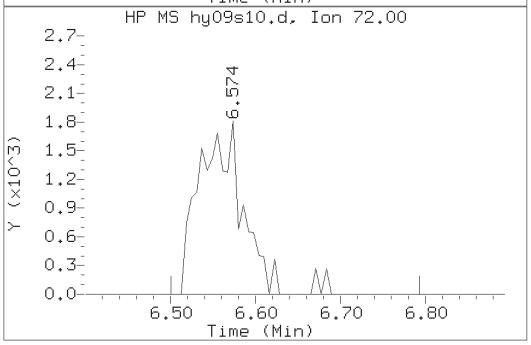
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s10.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:18 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6102 Lab Sample ID: 8354934

Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 815
Retention Time (minutes)	: 6.555
Relative Retention Time	: 0.00296
Quant Ion	: 71.00
Area (flag)	: 6231
On-Column Amount (ng)	: 2.1741

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:10.
Target 3.5 esignature [illegible]

E6103 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354935

Data file: /chem/HP09915.i/16may09a.b/ly09s33.d Injection date and time: **09-MAY-2016 16:56**
Data file Sample Info. Line: E6103;8354935;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 17:15 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.996	(0.000)	751	65	248522	(-1)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1509905	(0)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1141326	(-2)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	595758	(-5)	50.00	

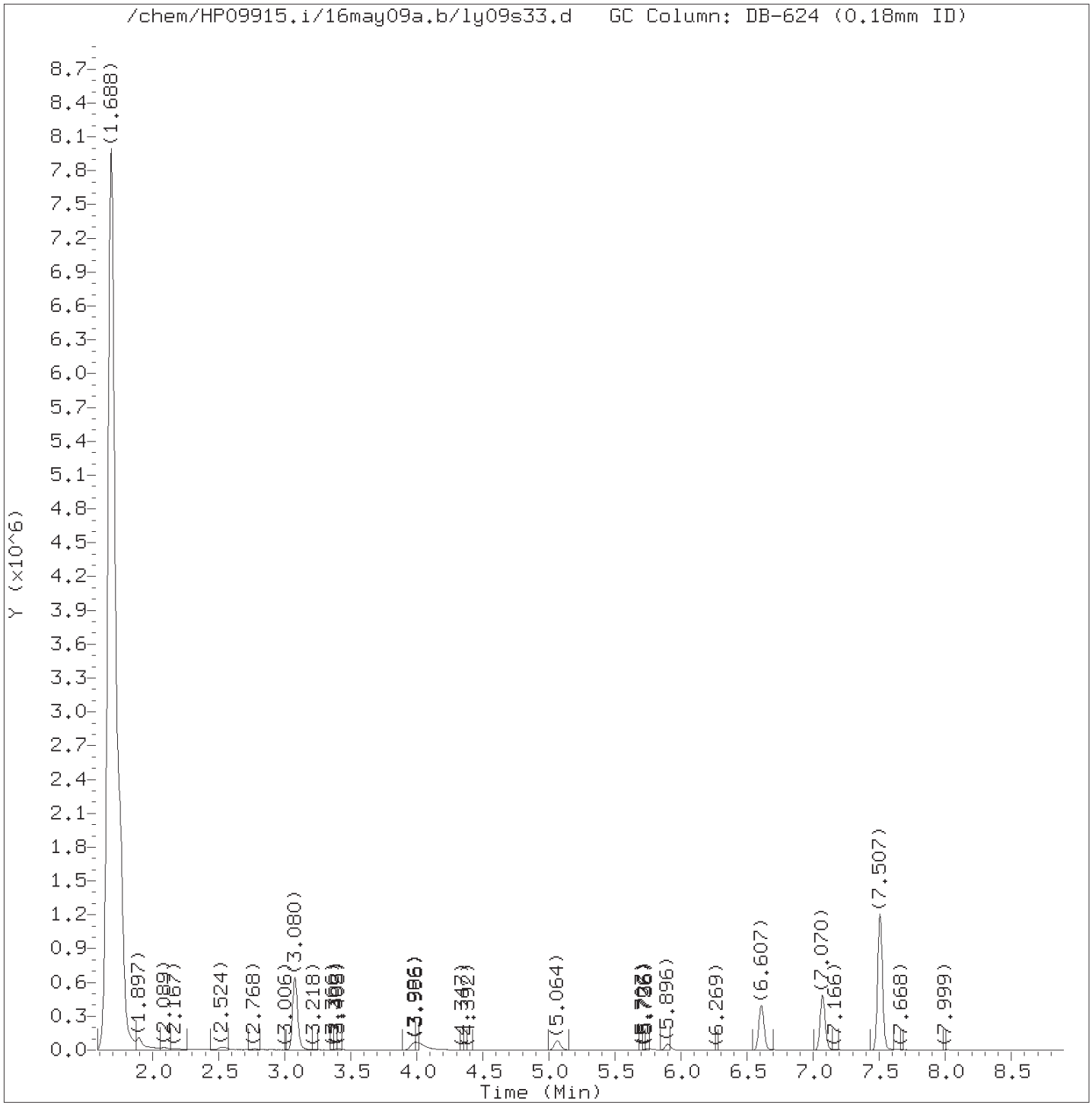
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	349837	48.770	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.070	(0.000)	102	90180	49.797	100%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1484771	49.700	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.057	(0.000)	95	560881	50.734	101%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 18:28. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:59. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

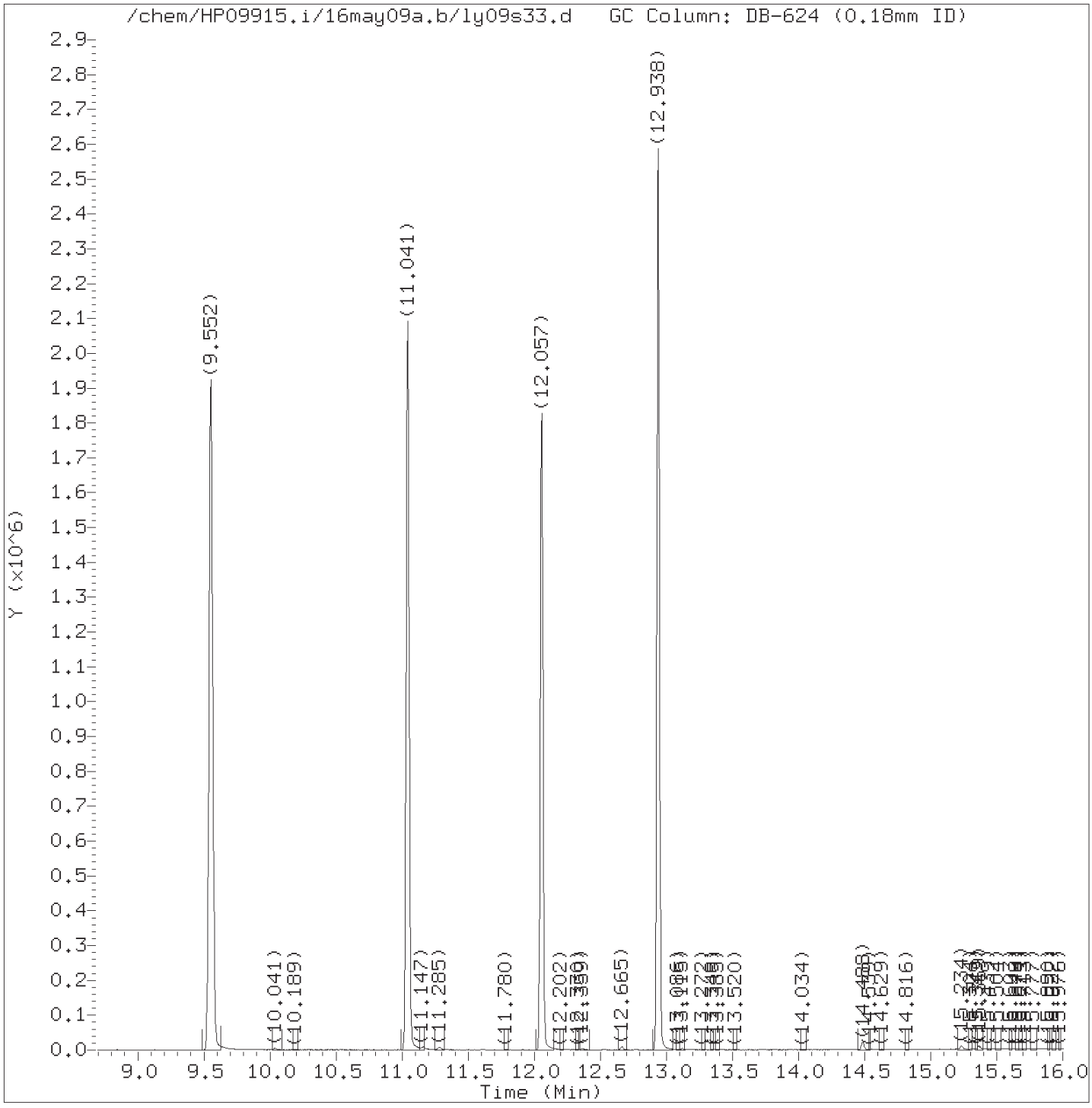
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s33.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 16:56 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:15 Automation

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s33.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 16:56 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:15 Automation

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s33.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 16:56 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:15 Automation

Sample Name: E6103 Lab Sample ID: 8354935

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.996	65	248522	250.000
52)$Dibromofluoromethane	(2)	6.610	113	349837	48.770
57)$1,2-Dichloroethane-d4	(2)	7.070	102	90180	49.797
66)*Fluorobenzene	(2)	7.507	96	1509905	50.000
83)$Toluene-d8	(3)	9.552	98	1484771	49.700
100)*Chlorobenzene-d5	(3)	11.041	117	1141326	50.000
114)$4-Bromofluorobenzene	(3)	12.057	95	560881	50.734
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	595758	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494

E6103 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354935

Data file: /chem2/HP19094.i/16may09a.b/hy09s19.d Injection date and time: **09-MAY-2016 17:21**
Data file Sample Info. Line: E6103;8354935;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269(-0.006)	440	65	81306 (-9)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2441167 (1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1709907 (-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	743326 (-15)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	592454	10.299	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	99320	10.424	104%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2425419	9.957	100%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	718658	9.153	92%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.105(-0.000)	45	69599M	0.830	0.83		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)	2.300(-0.000)	62	12050	0.157	0.16		J	0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.733(-0.001)	64	158053	3.339	3.34			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.312(-0.000)	59	3144486	76.199	76.20		E	1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)	3.629(-0.000)	96	16833	0.293	0.29		J	0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.373(-0.000)	63	1144619	9.087	9.09			0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s19.d Injection date and time: **09-MAY-2016 17:21**
Data file Sample Info. Line: E6103;8354935;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

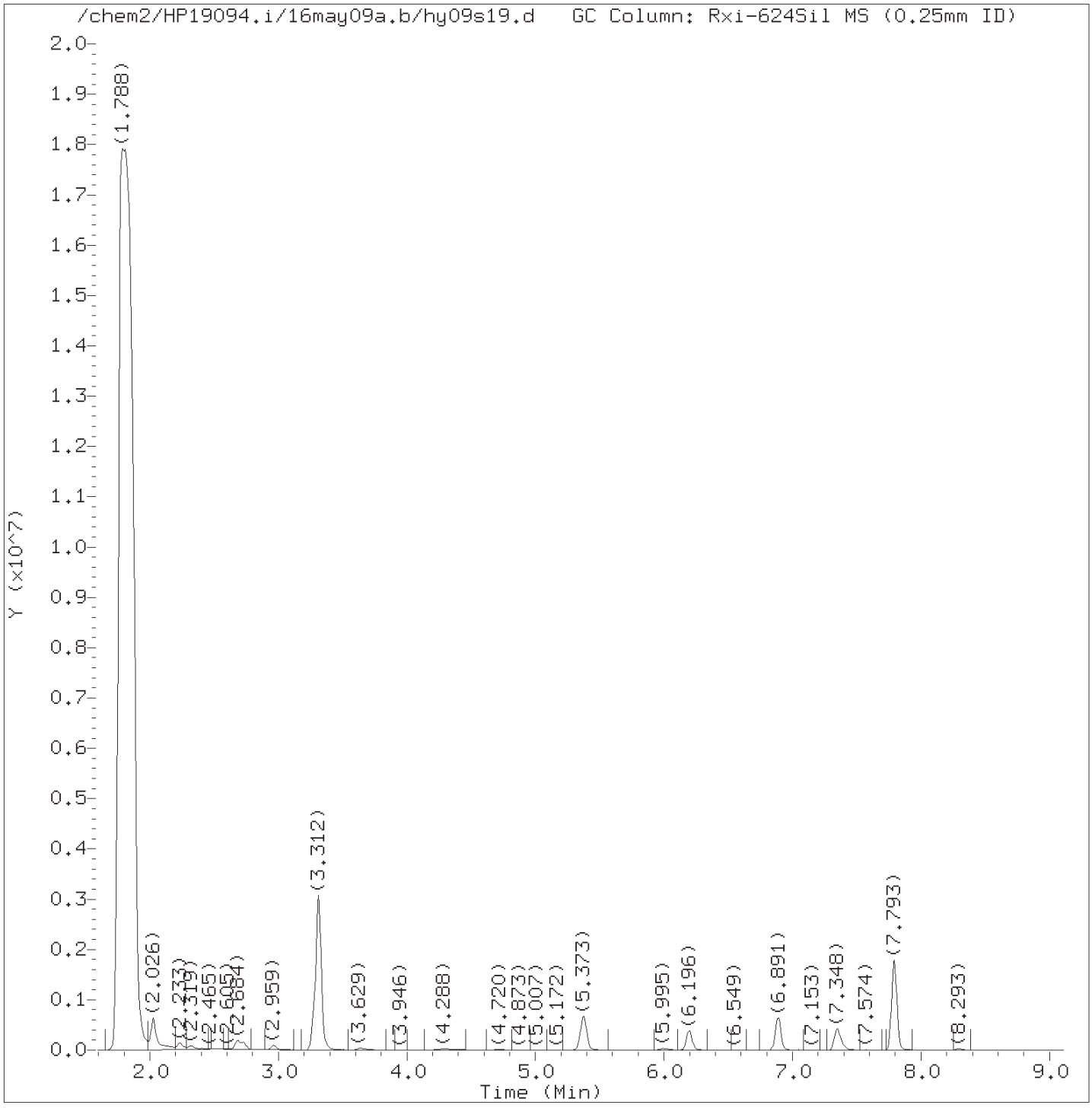
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)	7.397(-0.000)	78	99964	0.381	0.38		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

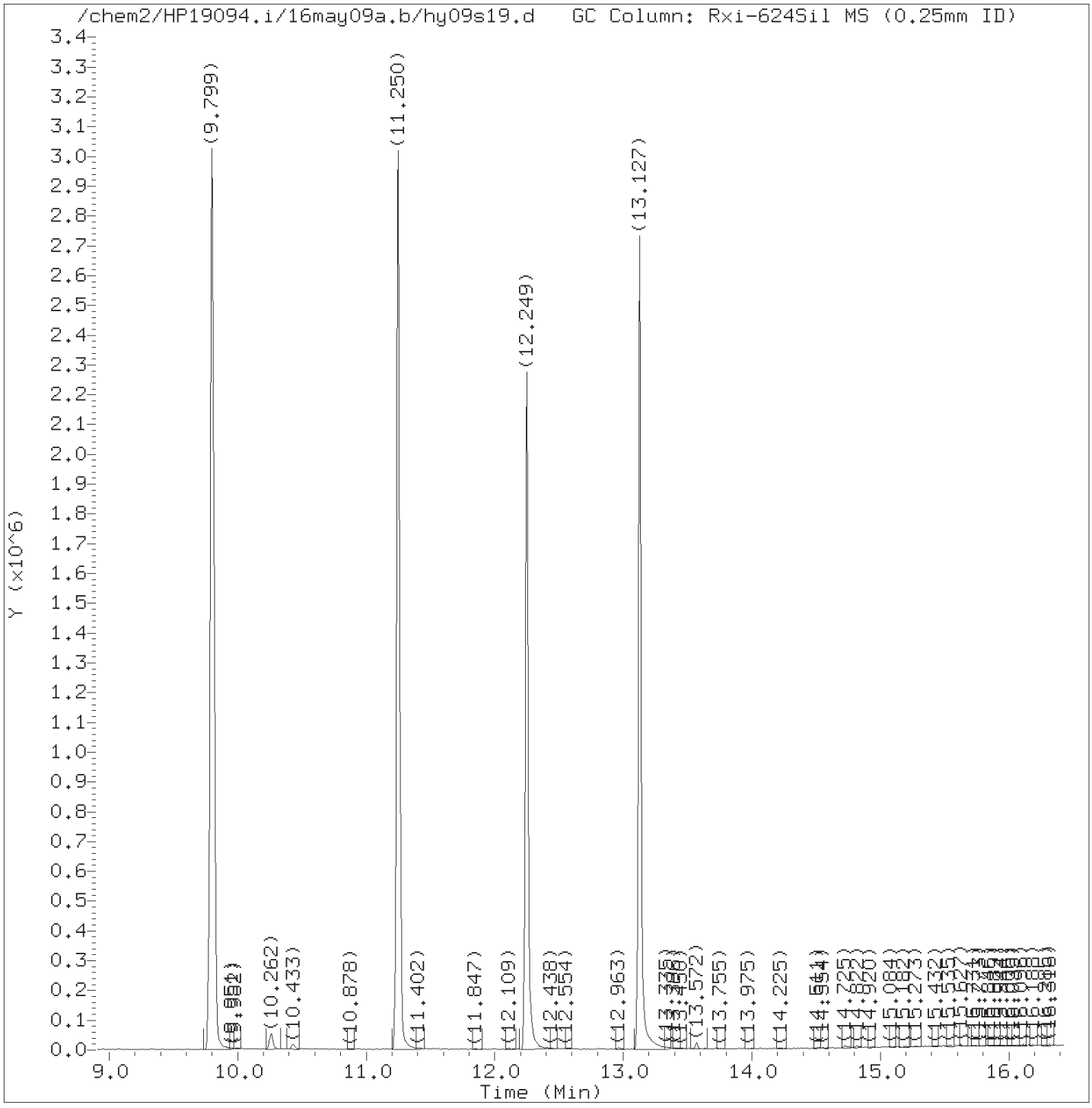
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

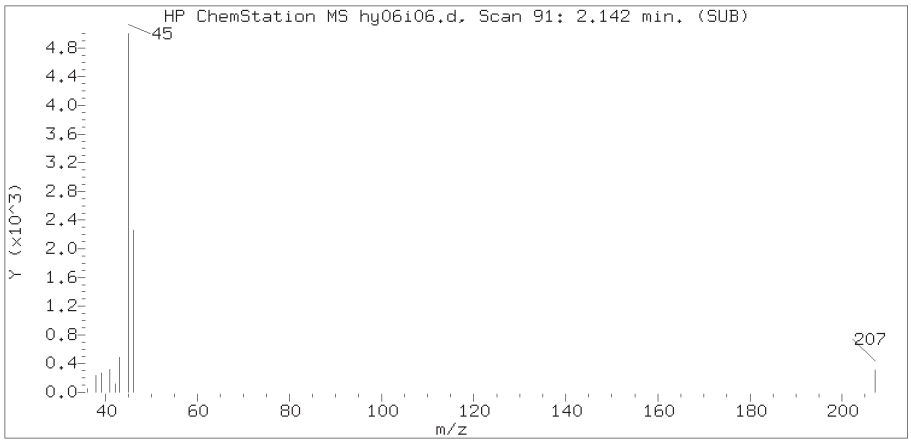
Sample Name: E6103 Lab Sample ID: 8354935

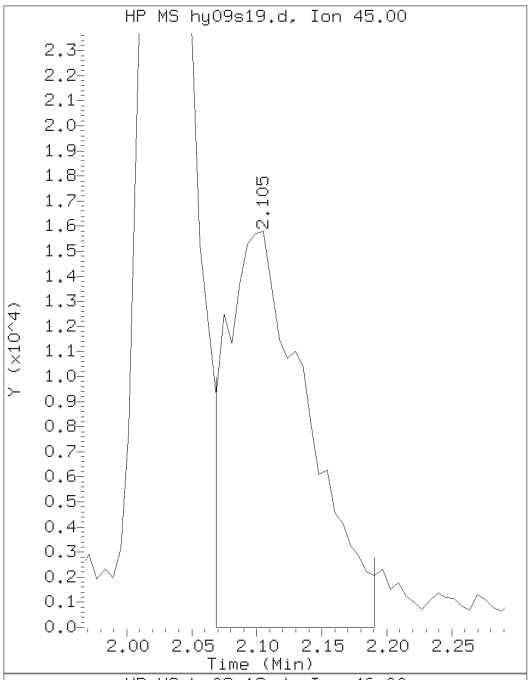
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	69599M	0.830
5) Vinyl Chloride	(2)	2.300	62	12050	0.157
8) Chloroethane	(2)	2.733	64	158053	3.339
11) Ethyl ether	(2)	3.312	59	3144486	76.199
15) 1,1-Dichloroethene	(2)	3.629	96	16833	0.293
26)*t-Butyl Alcohol-d10	(1)	4.269	65	81306	50.000
33) 1,1-Dichloroethane	(2)	5.373	63	1144619	9.087
50)$Dibromofluoromethane	(2)	6.891	113	592454	10.299
57)$1,2-Dichloroethane-d4	(2)	7.348	102	99320	10.424
58) Benzene	(2)	7.397	78	99964	0.381
63)*Fluorobenzene	(2)	7.793	96	2441167	10.000
82)$Toluene-d8	(3)	9.799	98	2425419	9.957
97)*Chlorobenzene-d5	(3)	11.250	117	1709907	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	718658	9.153
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	743326	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

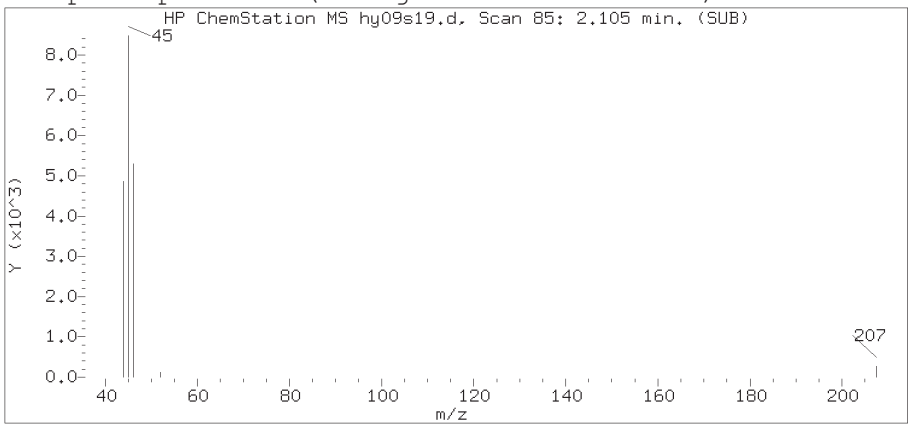
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

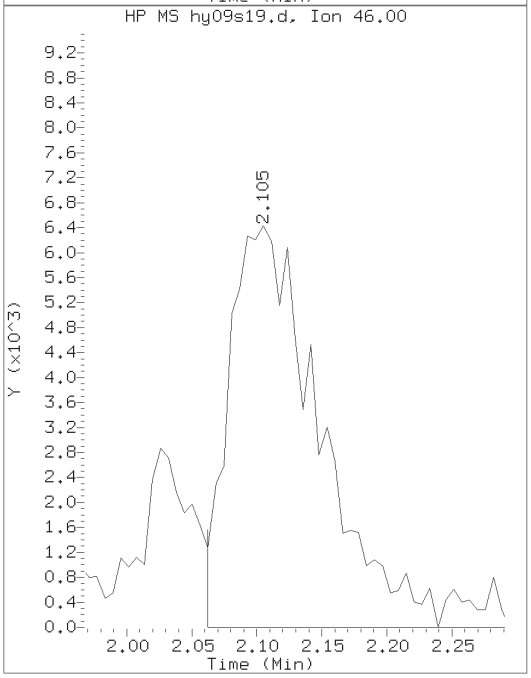
Reference Standard Spectrum for Dimethyl ether



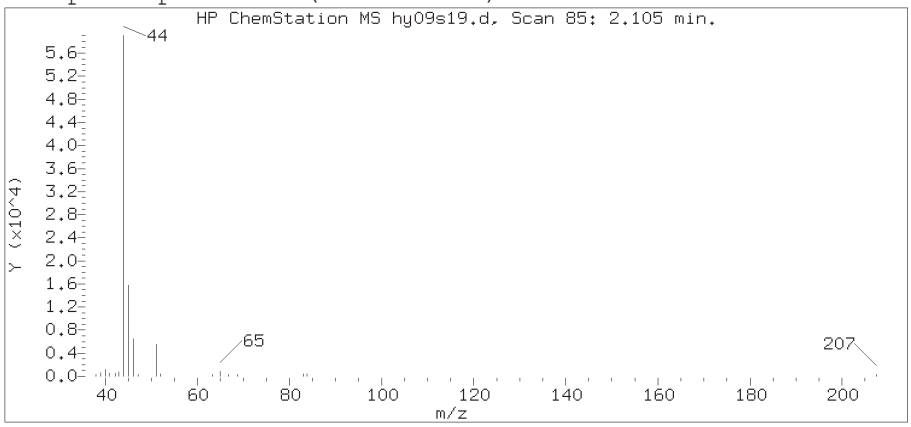


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

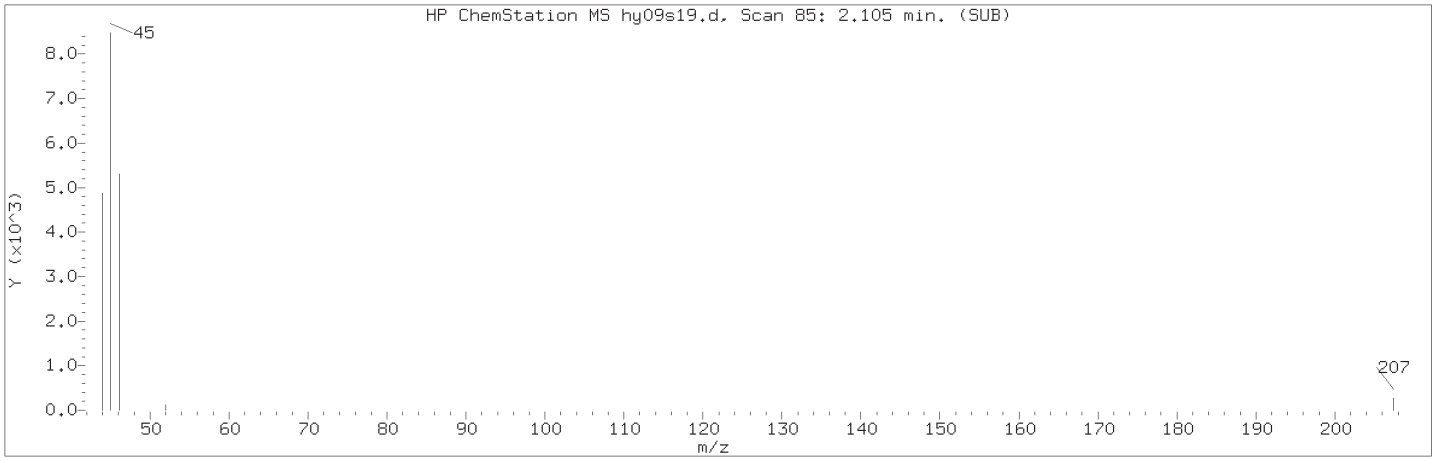
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

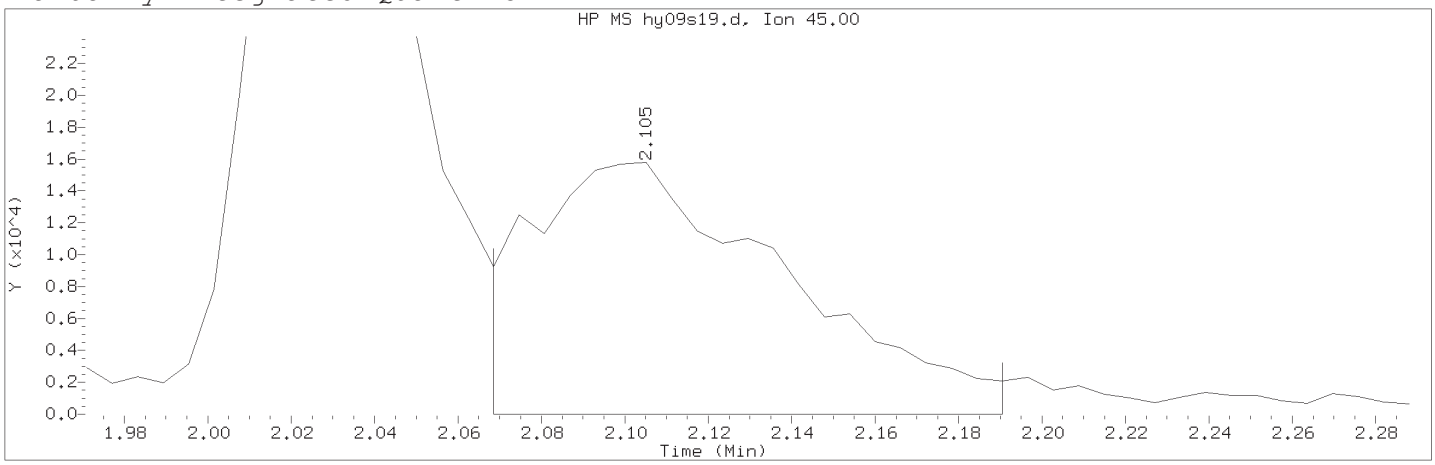
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Relative Retention Time :-0.00078
Quant Ion : 45.00
Area (flag) : 69599M
On-Column Amount (ng) : 0.8302

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

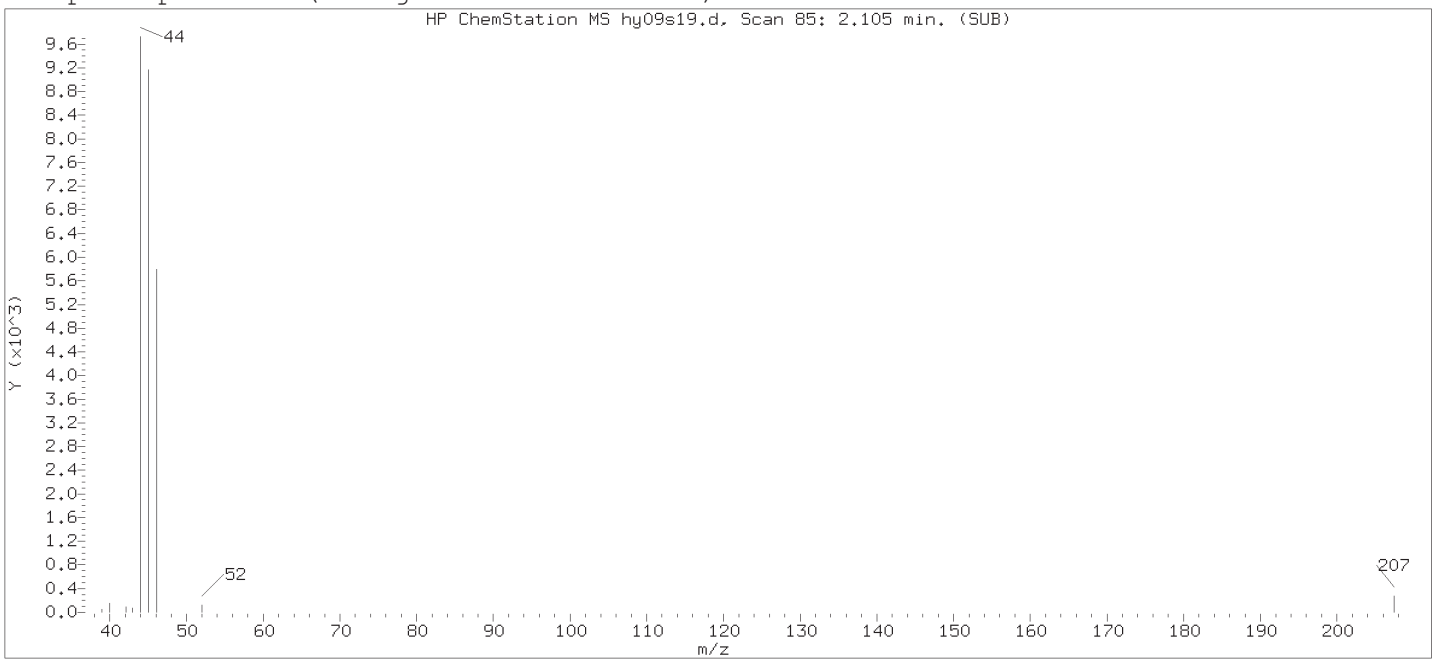
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 85		
Retention Time (minutes)	: 2.105		
Quant Ion	: 45.00		
Area (flag)	: 69599M		
On-Column Amount (ng)	: 0.8302		
Integration start scan	: 78	Integration stop scan:	98
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

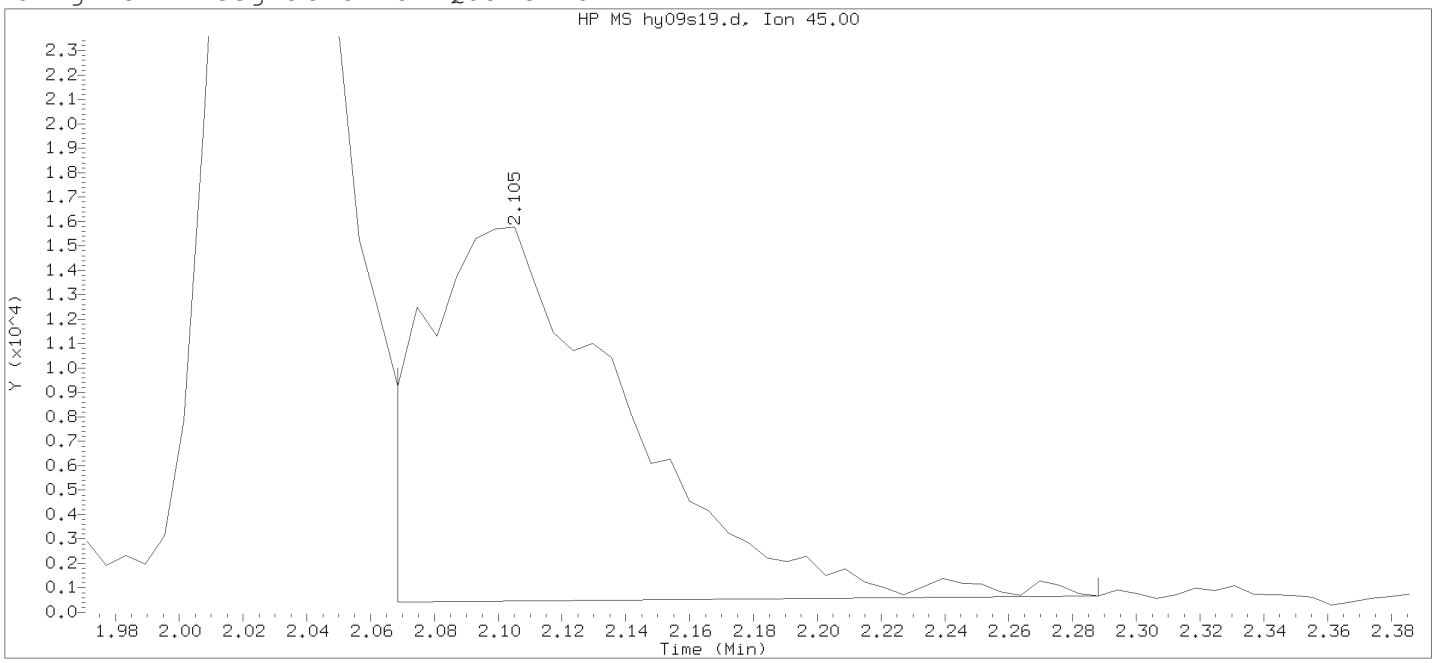
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

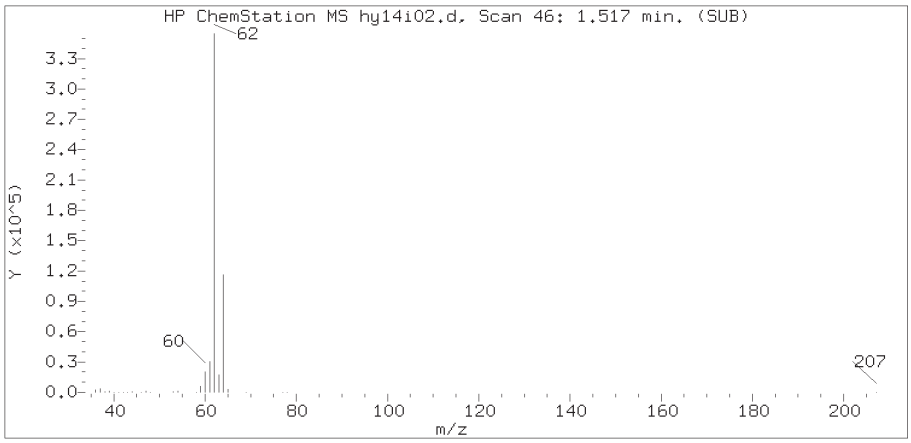
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 17:40 Automation

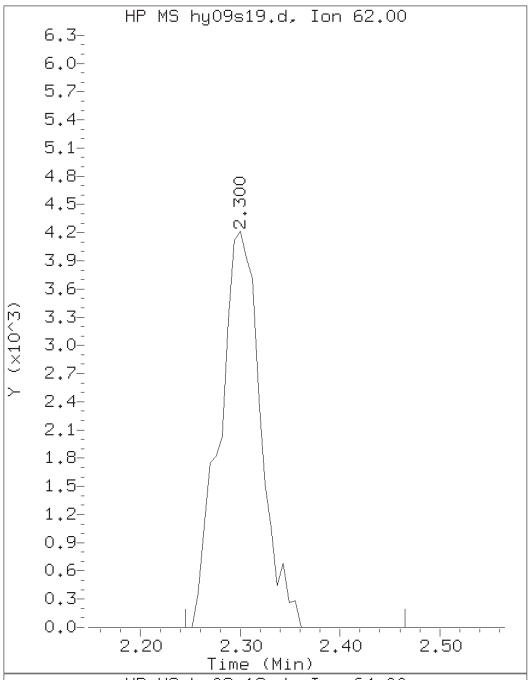
Sample Name: E6103 Lab Sample ID: 8354935

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 85		
Retention Time (minutes)	: 2.105		
Quant Ion	: 45.00		
Area	: 67546		
On-column Amount (ng)	: 0.8057		
Integration start scan	: 78	Integration stop scan:	114
Y at integration start	: 416	Y at integration end:	658

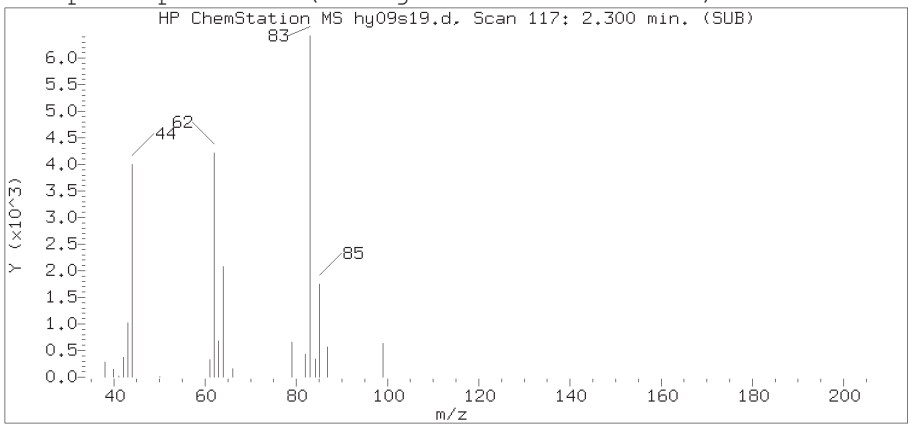
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

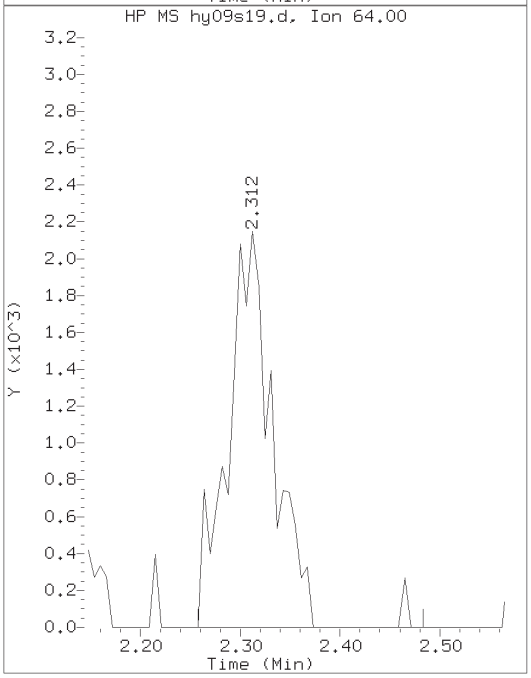
Reference Standard Spectrum for Vinyl Chloride



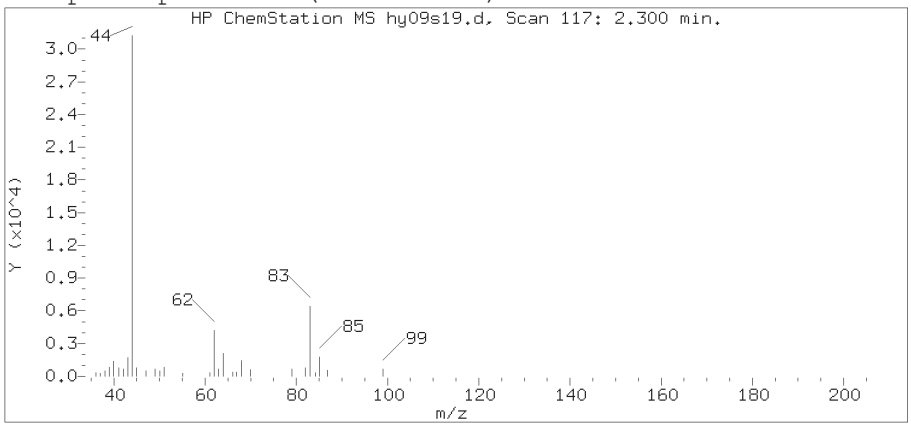


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

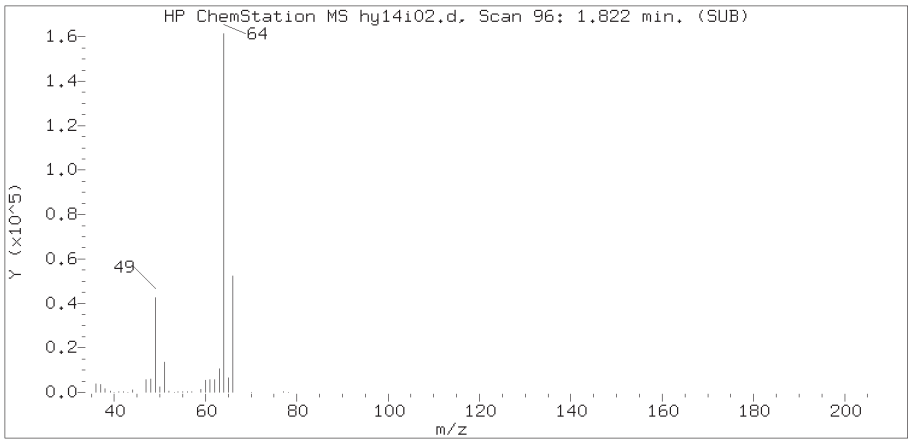
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

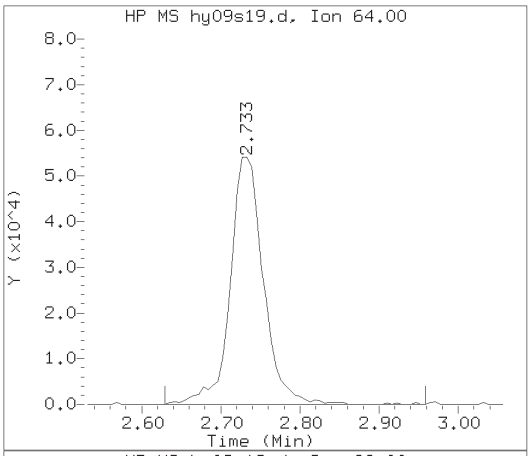
Sample Name: E6103 Lab Sample ID: 8354935

Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 117
Retention Time (minutes): 2.300
Relative Retention Time :-0.00080
Quant Ion : 62.00
Area (flag) : 12050
On-Column Amount (ng) : 0.1569

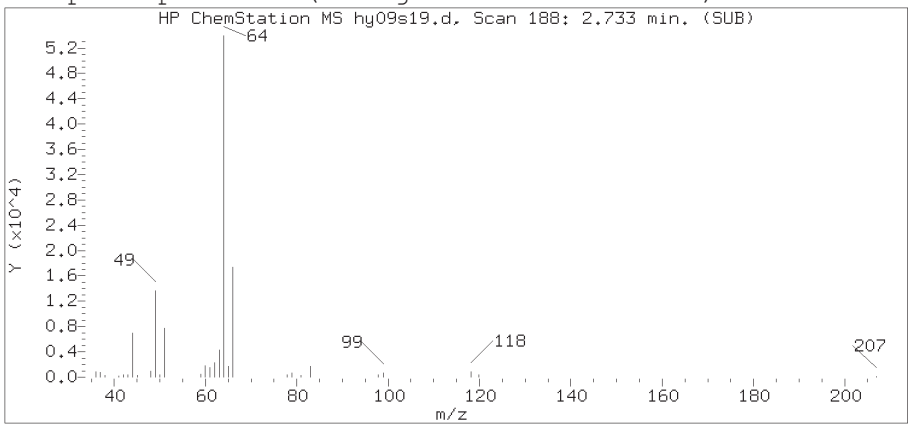
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

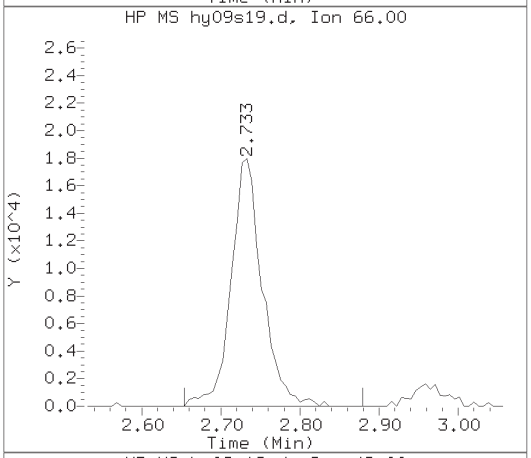
Reference Standard Spectrum for Chloroethane



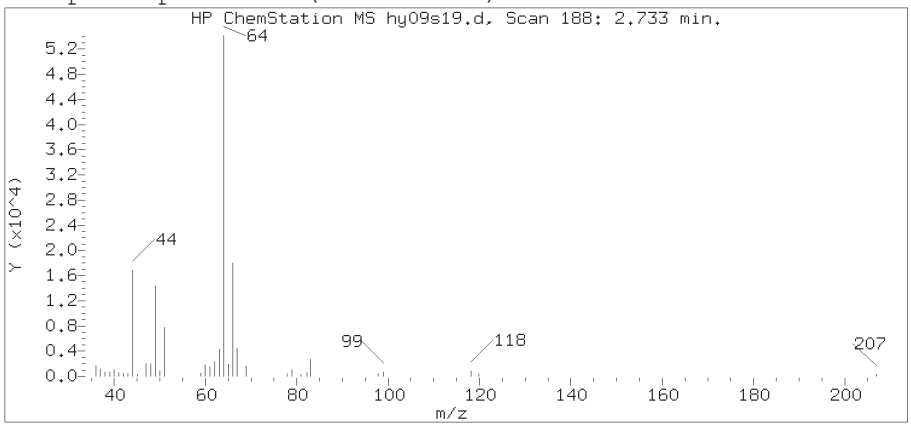


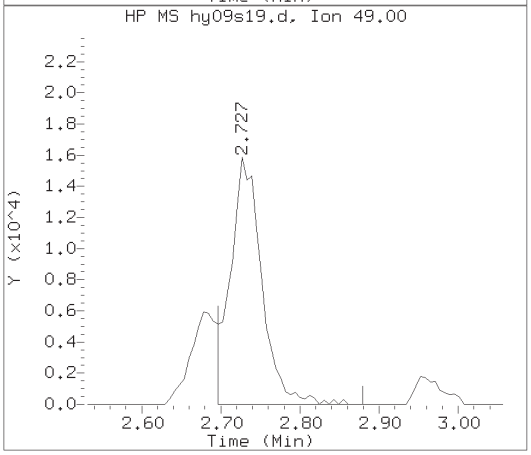
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

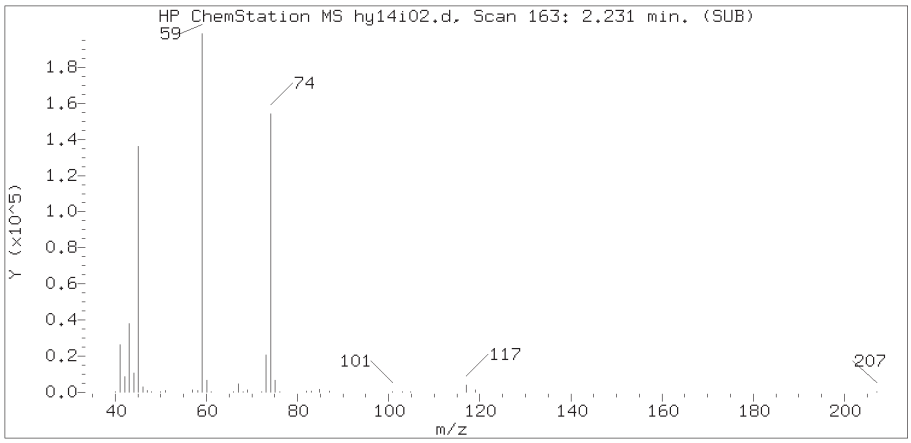
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

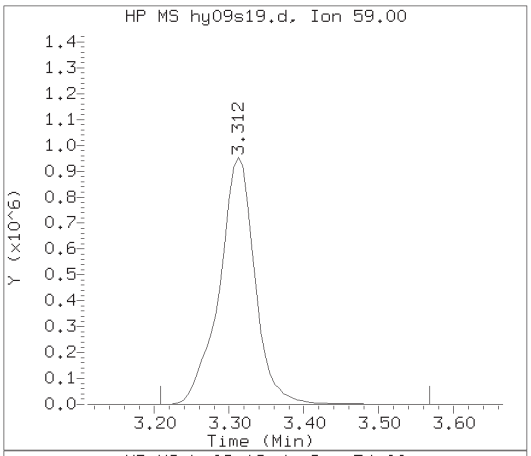
Sample Name: E6103 Lab Sample ID: 8354935

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00158
Quant Ion : 64.00
Area (flag) : 158053
On-Column Amount (ng) : 3.3393

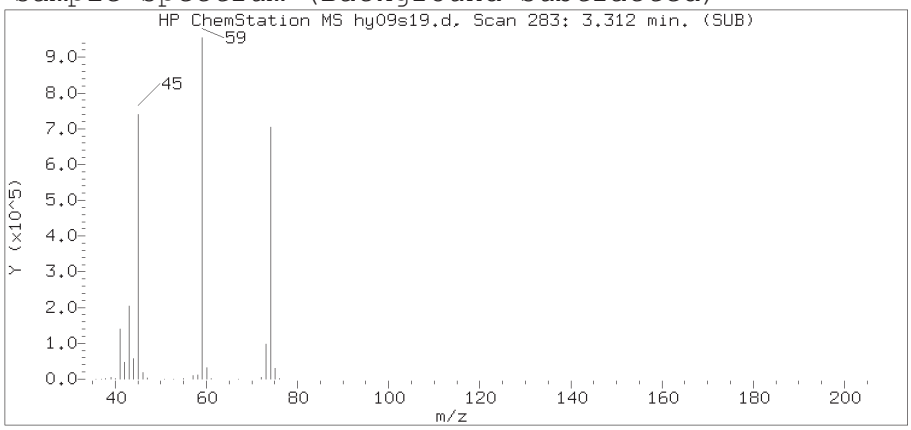
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

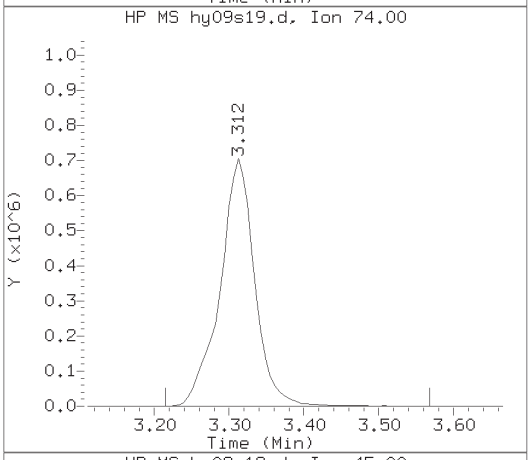
Reference Standard Spectrum for Ethyl ether



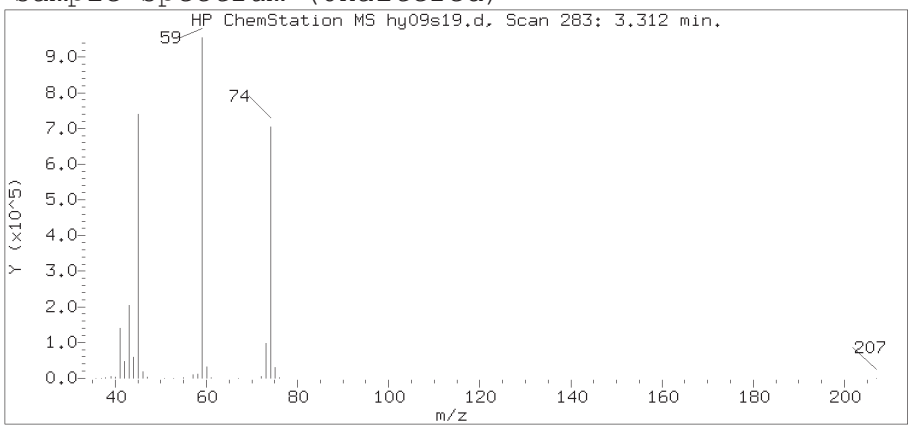


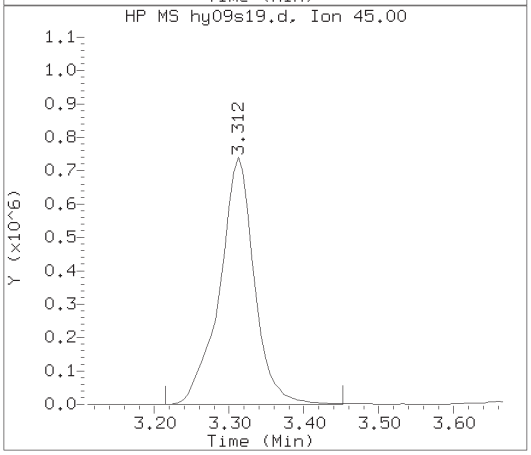
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

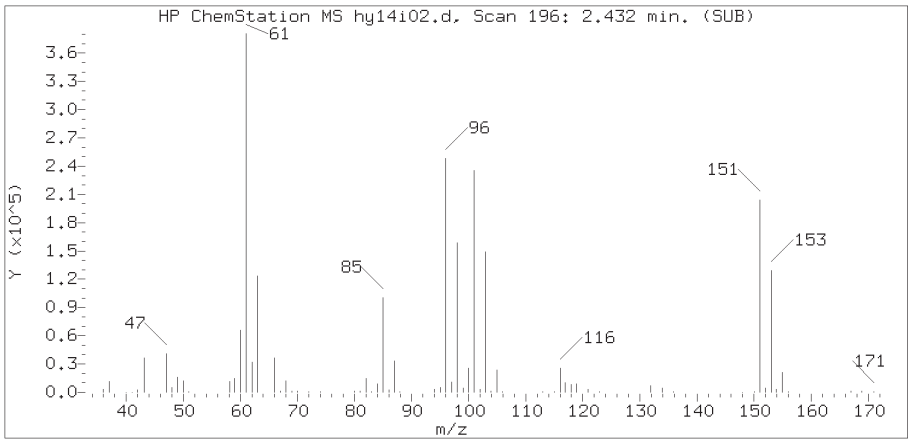
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

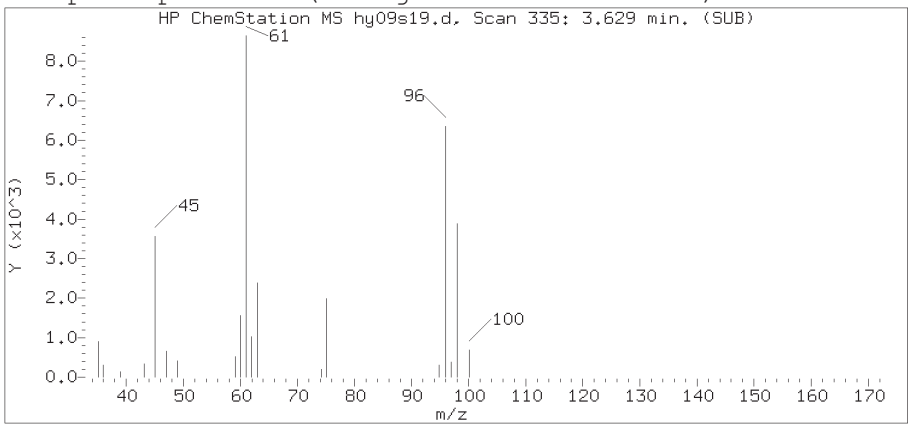
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 283
Retention Time (minutes): 3.312
Relative Retention Time :-0.00080
Quant Ion : 59.00
Area (flag) : 3144486
On-Column Amount (ng) : 76.1991

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

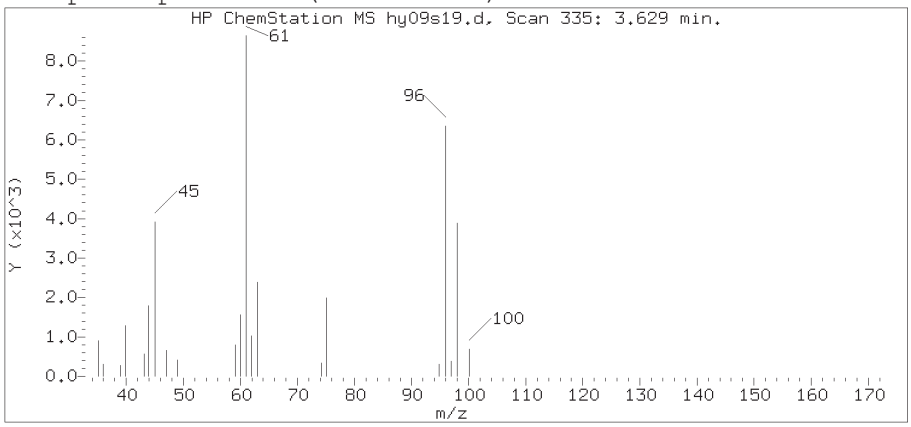
Reference Standard Spectrum for 1,1-Dichloroethene

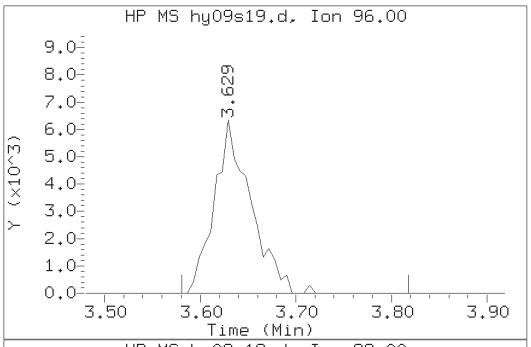


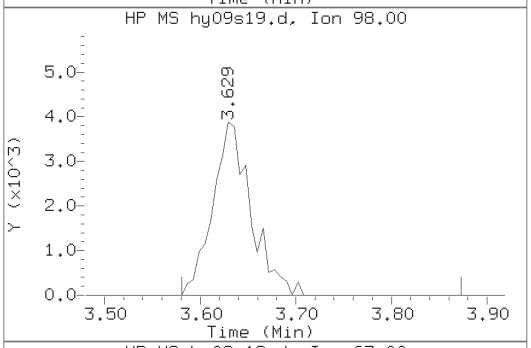
Sample Spectrum (Background Subtracted)

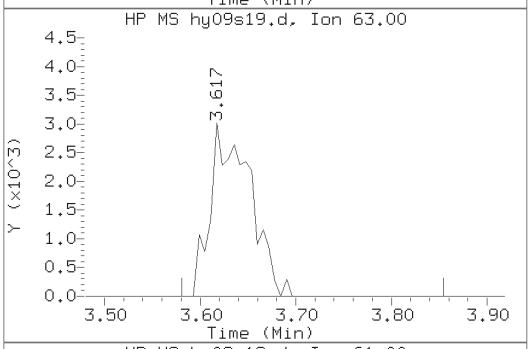


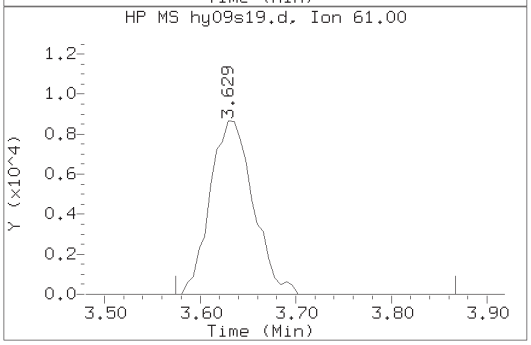
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 335
Retention Time (minutes): 3.629
Relative Retention Time :-0.00001
Quant Ion : 96.00
Area (flag) : 16833
On-Column Amount (ng) : 0.2933

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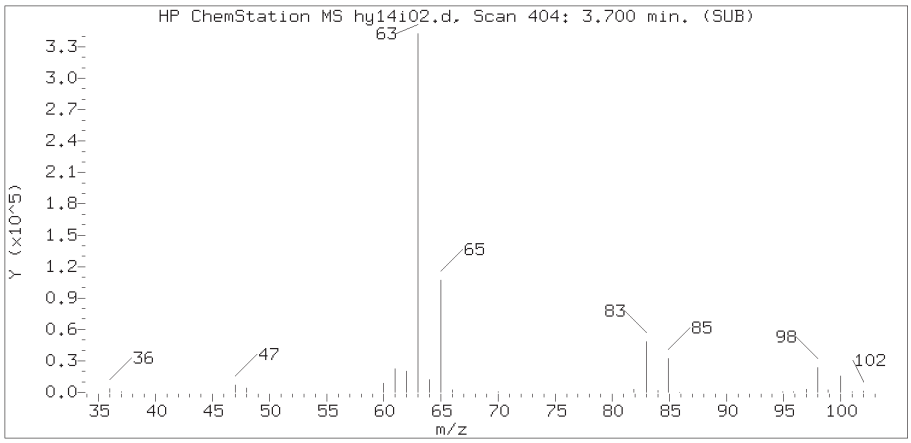
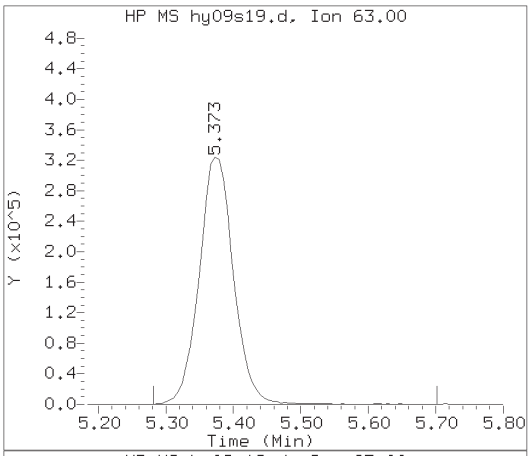
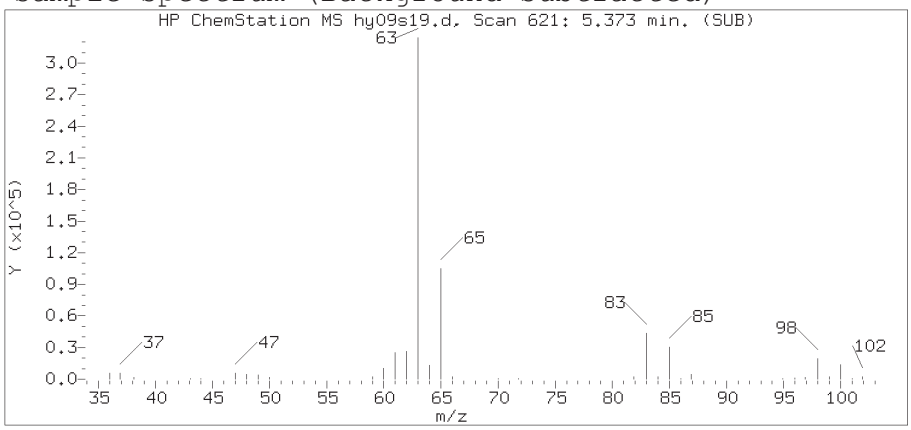
Target 3.5 esignature [illegible]

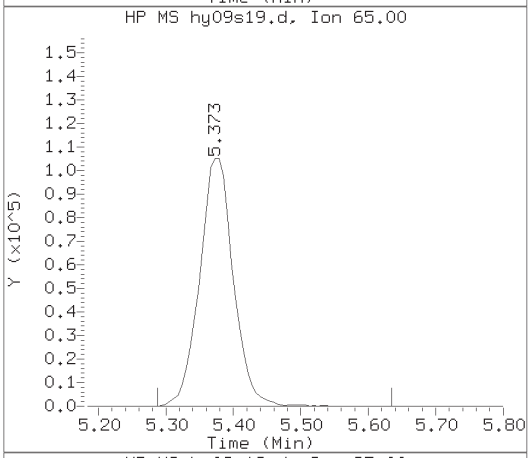
Reference Standard Spectrum for 1,1-Dichloroethane



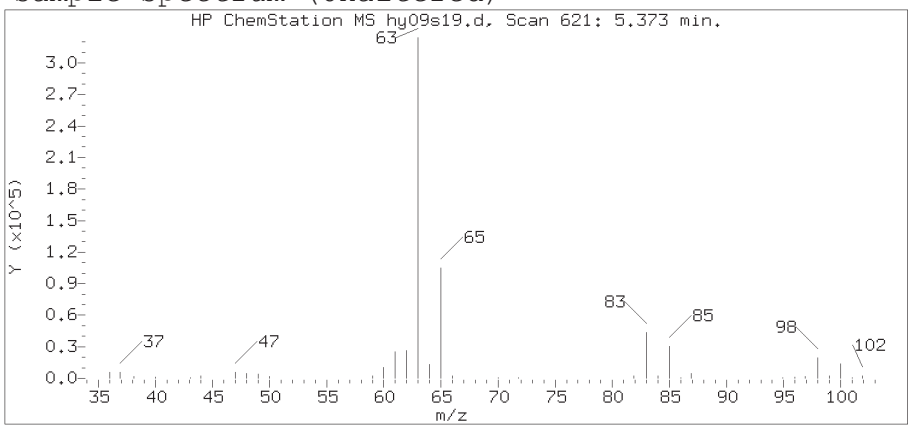


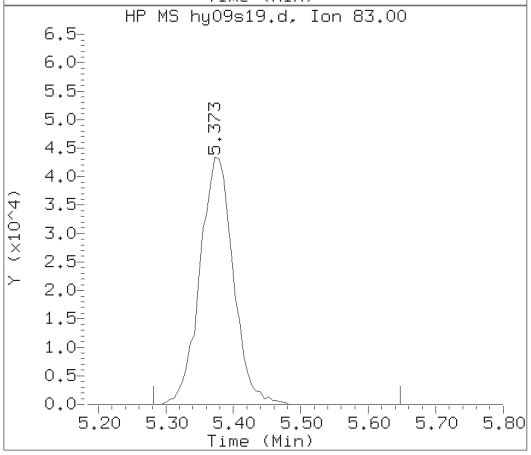
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 621
Retention Time (minutes): 5.373
Relative Retention Time :-0.00079
Quant Ion : 63.00
Area (flag) : 1144619
On-Column Amount (ng) : 9.0867

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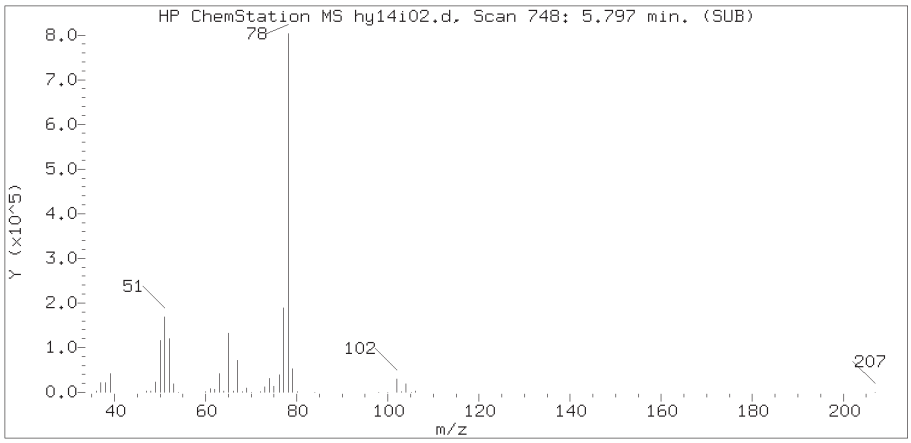
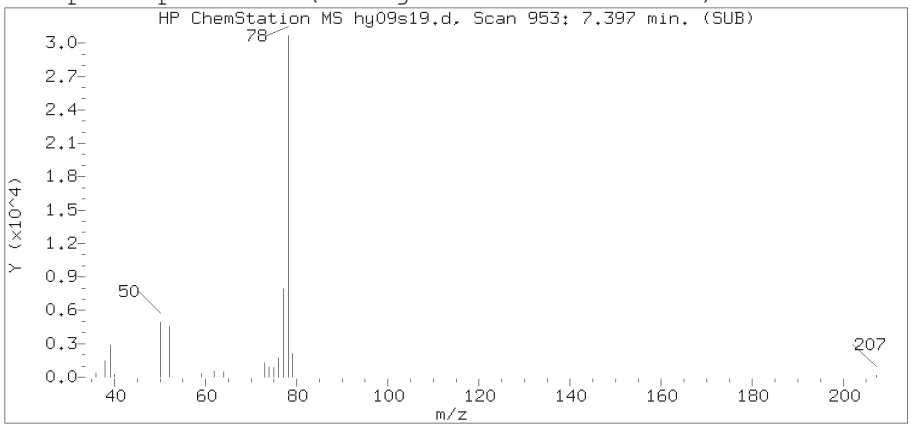
Target 3.5 esignature [illegible]

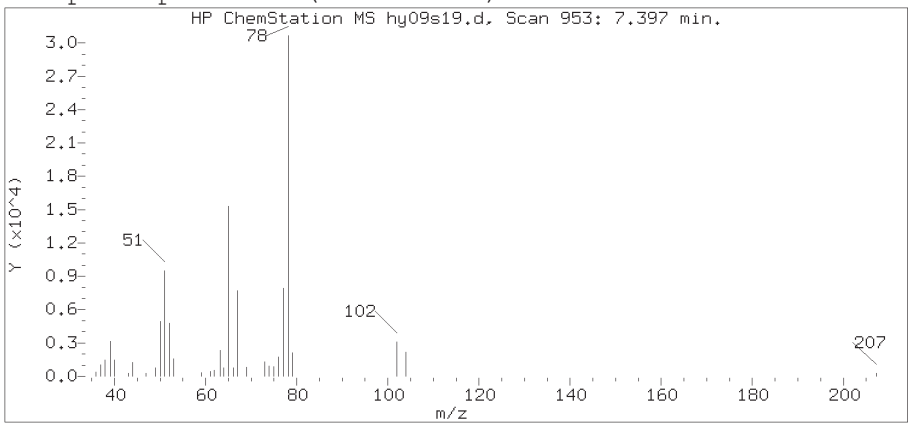
Reference Standard Spectrum for Benzene

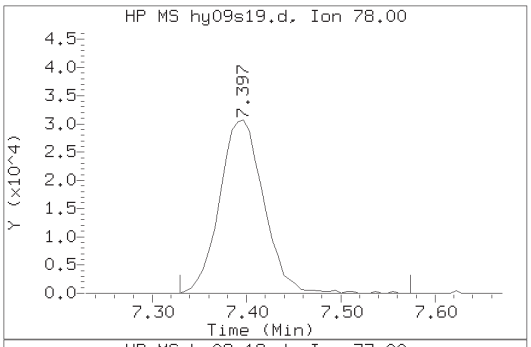


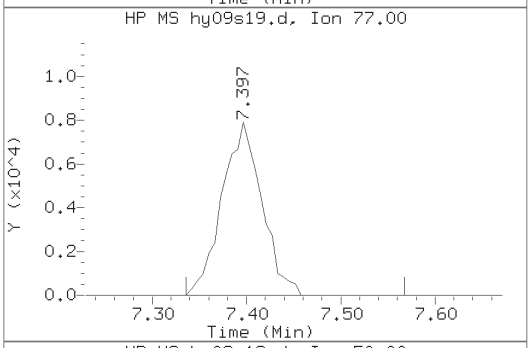
Sample Spectrum (Background Subtracted)

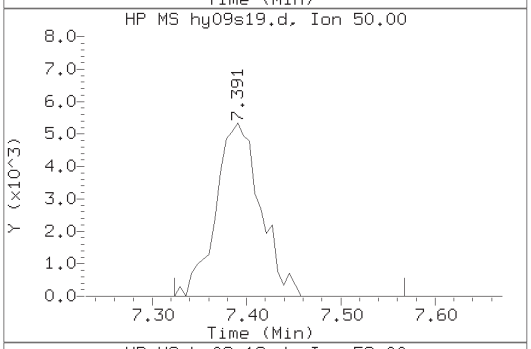


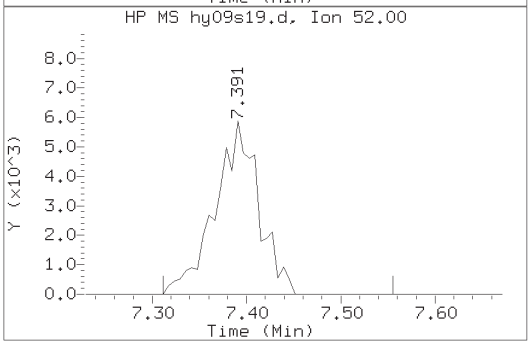
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s19.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103 Lab Sample ID: 8354935

Compound Number : 58
Compound Name : Benzene
Scan Number : 953
Retention Time (minutes): 7.397
Relative Retention Time :-0.00078
Quant Ion : 78.00
Area (flag) : 99964
On-Column Amount (ng) : 0.3810

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s20.d Injection date and time: **09-MAY-2016 17:41**
Data file Sample Info. Line: E6103DL;8354935DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294(-0.031)	444	65	83712 (-7)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2421677 (0)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1676388 (-11)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	718817 (-18)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	590990	10.356	104%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	92383	9.774	98%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2447439	10.248	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	702636	9.128	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					1	10
4) Dimethyl ether	(2)			Not Detected					1	130
2) Chloromethane	(2)			Not Detected					2	10
5) Vinyl Chloride	(2)			Not Detected					2	10
7) Bromomethane	(2)			Not Detected					5	10
8) Chloroethane	(2)	2.739(-0.002)	64	13289	0.283	2.83		J	1	10
10) Trichlorofluoromethane	(2)			Not Detected					2	10
11) Ethyl ether	(2)	3.318(-0.001)	59	287282	7.018	70.18		J	11	130
13) Acrolein	(1)			Not Detected					50	250
15) 1,1-Dichloroethene	(2)			Not Detected					2	10
16) Freon 113	(2)			Not Detected					2	10
14) Acetone	(1)			Not Detected					30	100
17) Methyl Iodide	(2)			Not Detected					6	100
18) Carbon Disulfide	(2)			Not Detected					4	100
25) Acetonitrile	(1)			Not Detected					320	1000
22) Allyl Chloride	(2)			Not Detected					8	100
23) Methylene Chloride	(2)			Not Detected					2	10
29) Acrylonitrile	(1)			Not Detected					10	100
31) trans-1,2-Dichloroethene	(2)			Not Detected					2	10
33) 1,1-Dichloroethane	(2)	5.379(-0.001)	63	91908	0.735	7.35		J	1	10
36) Vinyl Acetate	(2)			Not Detected					33	100
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					5	100
38) 2-Butanone	(1)			Not Detected					10	100
42) Propionitrile	(1)			Not Detected					100	1000
45) Methacrylonitrile	(1)			Not Detected					98	1000
48) Tetrahydrofuran	(1)			Not Detected					20	250
49) Chloroform	(2)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					1	10
54) Carbon Tetrachloride	(2)			Not Detected					2	10
56) Isobutyl Alcohol	(1)			Not Detected					100	2000

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s20.d Injection date and time: **09-MAY-2016 17:41**
Data file Sample Info. Line: E6103DL;8354935DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

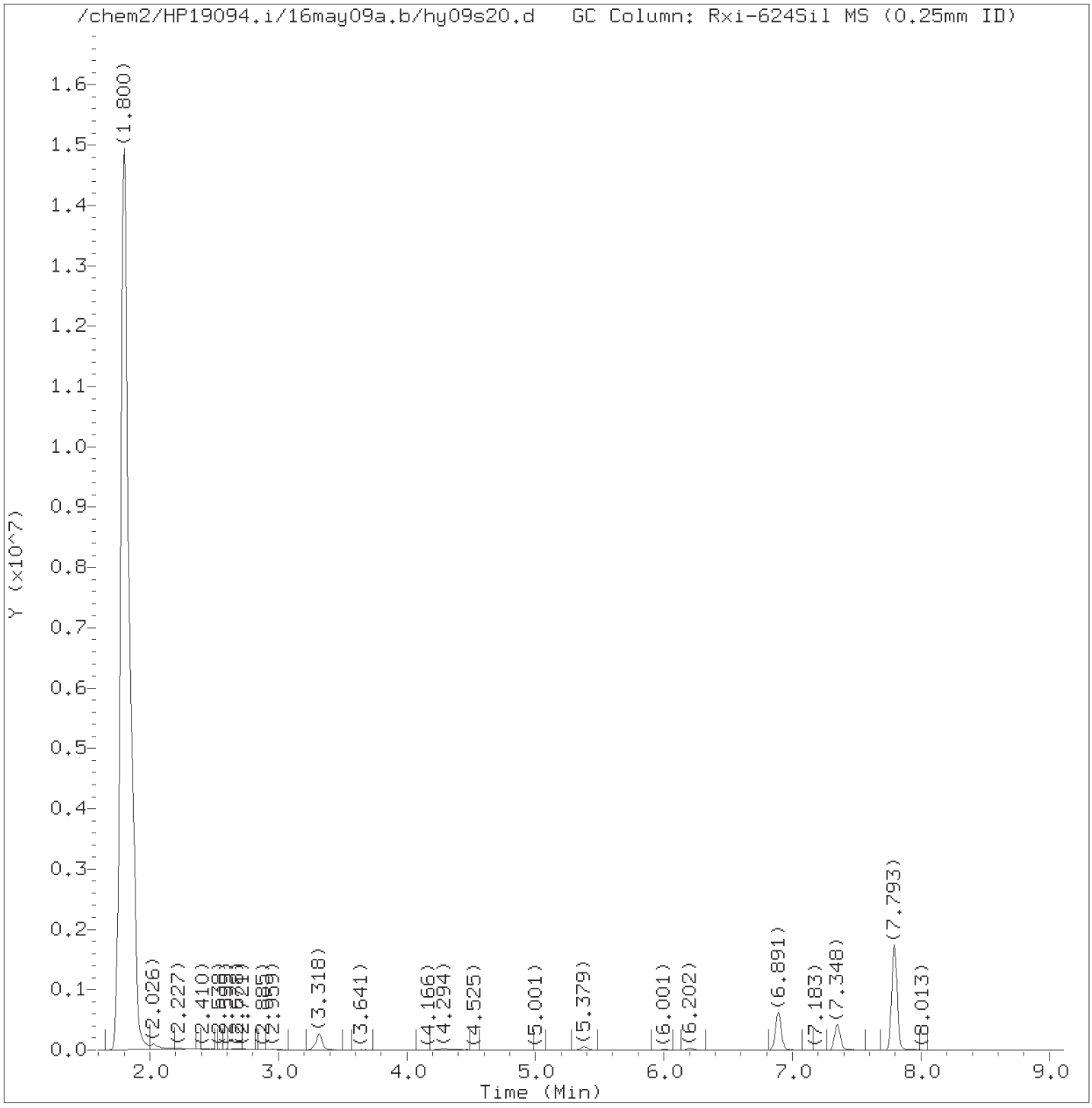
Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					1	10
59) 1,2-Dichloroethane	(2)				Not Detected					1	10
67) Trichloroethene	(2)				Not Detected					2	10
70) 1,2-Dichloropropane	(2)				Not Detected					1	10
71) Methyl Methacrylate	(1)				Not Detected					36	100
73) Dibromomethane	(2)				Not Detected					1	10
72) 1,4-Dioxane	(1)				Not Detected					450	2000
74) Bromodichloromethane	(2)				Not Detected					1	10
81) 4-Methyl-2-Pentanone	(1)				Not Detected					10	100
83) Toluene	(3)				Not Detected					1	10
84) trans-1,3-Dichloropropene	(3)				Not Detected					1	10
86) Ethyl Methacrylate	(3)				Not Detected					8	100
88) 1,1,2-Trichloroethane	(3)				Not Detected					1	10
89) Tetrachloroethene	(3)				Not Detected					1	10
90) 1,3-Dichloropropane	(3)				Not Detected					1	10
91) 2-Hexanone	(1)				Not Detected					10	100
93) Dibromochloromethane	(3)				Not Detected					1	10
95) 1,2-Dibromoethane	(3)				Not Detected					1	10
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	10
100) Ethylbenzene	(3)				Not Detected					1	10
101) m+p-Xylene	(3)				Not Detected					1	30
104) o-Xylene	(3)				Not Detected					1	30
105) Xylene (Total)	(3)				Not Detected					2	30
106) Styrene	(3)				Not Detected					1	10
107) Bromoform	(3)				Not Detected					1	10
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					2	10
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					10	100
116) 1,2,3-Trichloropropane	(4)				Not Detected					3	10
126) Pentachloroethane	(4)				Not Detected					8	100
131) 1,3-Dichlorobenzene	(4)				Not Detected					1	10
134) 1,4-Dichlorobenzene	(4)				Not Detected					1	10
139) 1,2-Dichlorobenzene	(4)				Not Detected					1	10
142) Hexachloroethane	(4)				Not Detected					1	100
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					2	10
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	10
146) Hexachlorobutadiene	(4)				Not Detected					1	10
147) Naphthalene	(4)				Not Detected					1	10

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

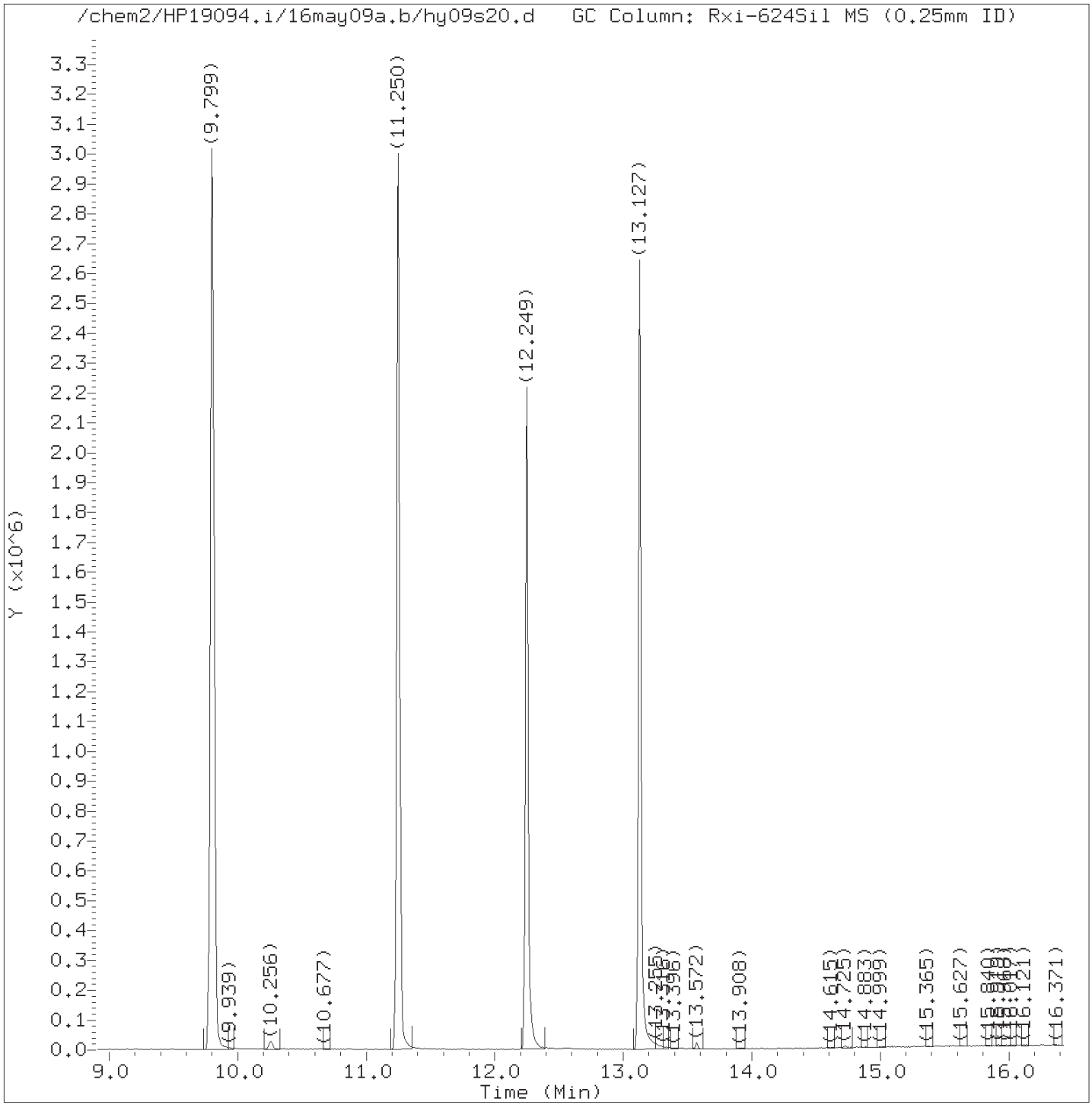
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103DL Lab Sample ID: 8354935DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103DL Lab Sample ID: 8354935DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

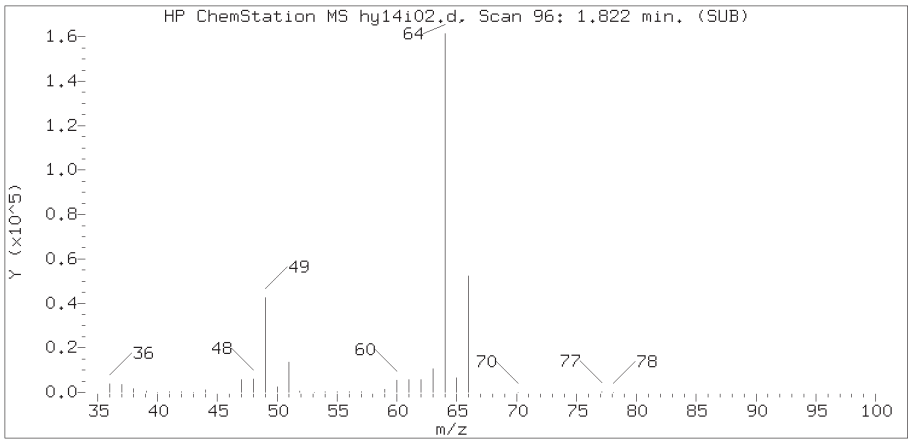
Sample Name: E6103DL Lab Sample ID: 8354935DL

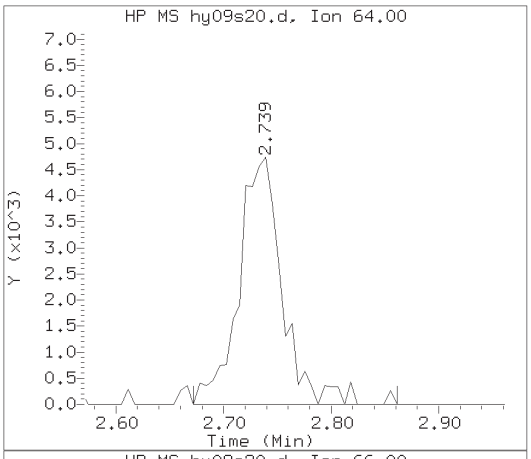
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
8) Chloroethane	(2)	2.739	64	13289	0.283
11) Ethyl ether	(2)	3.318	59	287282	7.018
26)*t-Butyl Alcohol-d10	(1)	4.294	65	83712	50.000
33) 1,1-Dichloroethane	(2)	5.379	63	91908	0.735
50)$Dibromofluoromethane	(2)	6.891	113	590990	10.356
57)$1,2-Dichloroethane-d4	(2)	7.348	102	92383	9.774
63)*Fluorobenzene	(2)	7.793	96	2421677	10.000
82)$Toluene-d8	(3)	9.799	98	2447439	10.248
97)*Chlorobenzene-d5	(3)	11.250	117	1676388	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	702636	9.128
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	718817	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

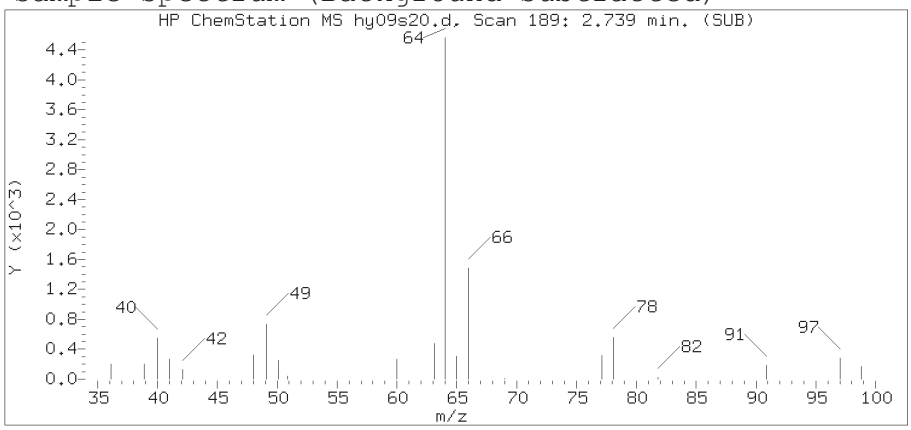
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

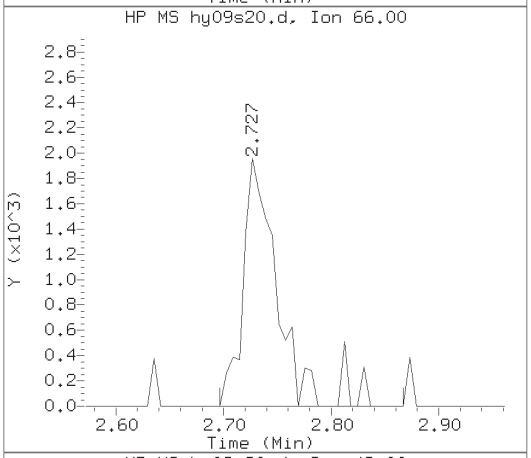
Reference Standard Spectrum for Chloroethane



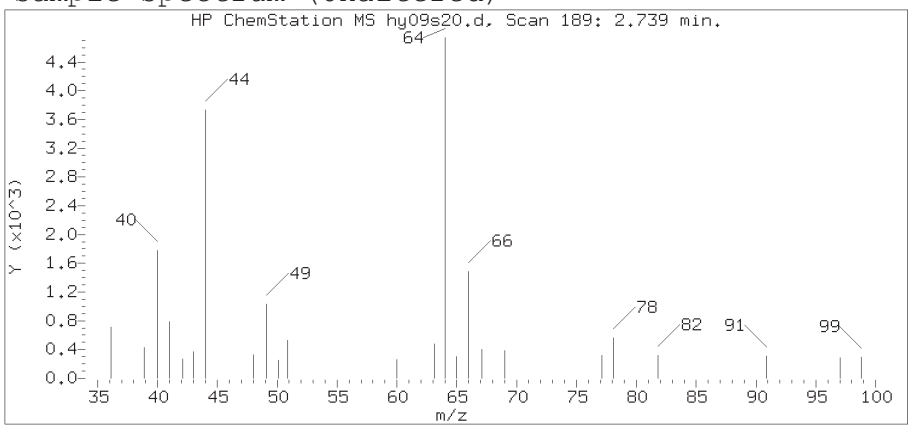


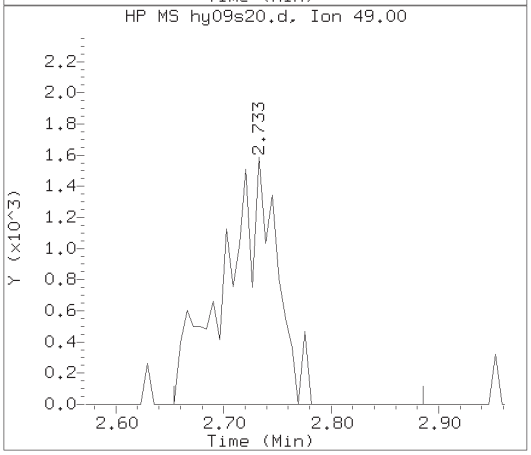
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

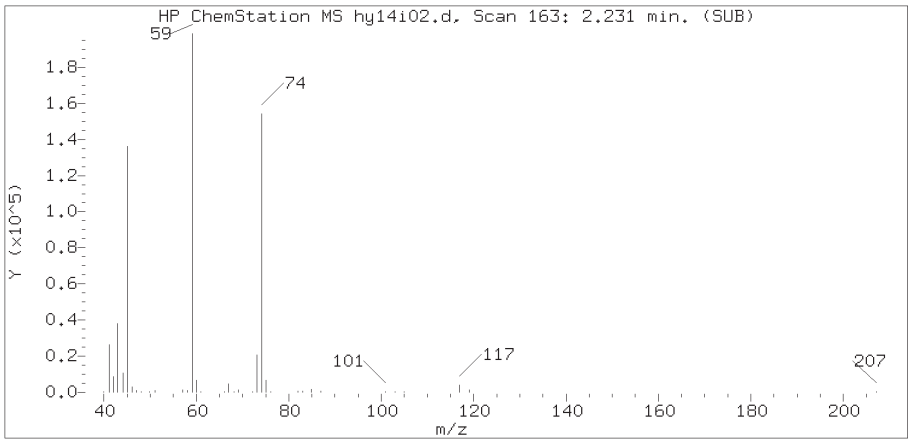
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

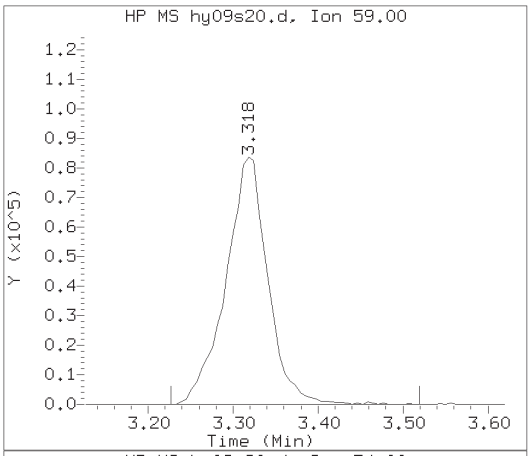
Sample Name: E6103DL Lab Sample ID: 8354935DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 189
Retention Time (minutes): 2.739
Relative Retention Time :-0.00236
Quant Ion : 64.00
Area (flag) : 13289
On-Column Amount (ng) : 0.2830

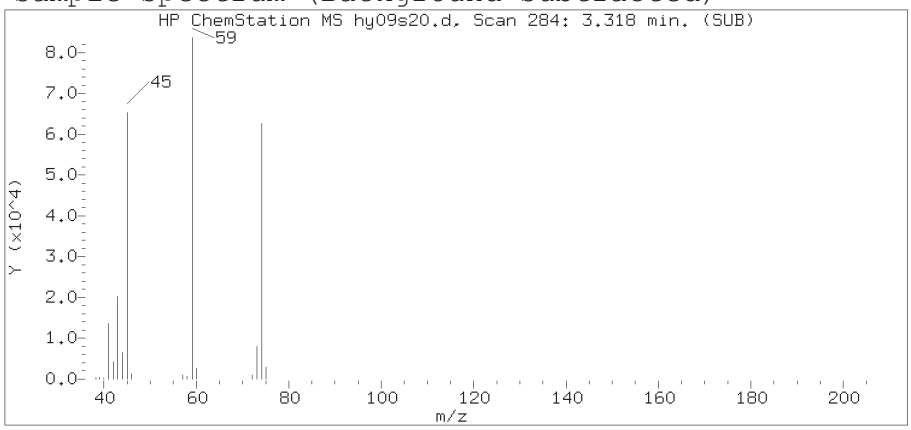
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

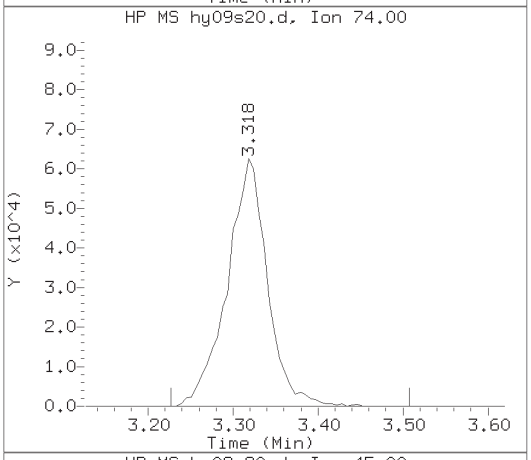
Reference Standard Spectrum for Ethyl ether



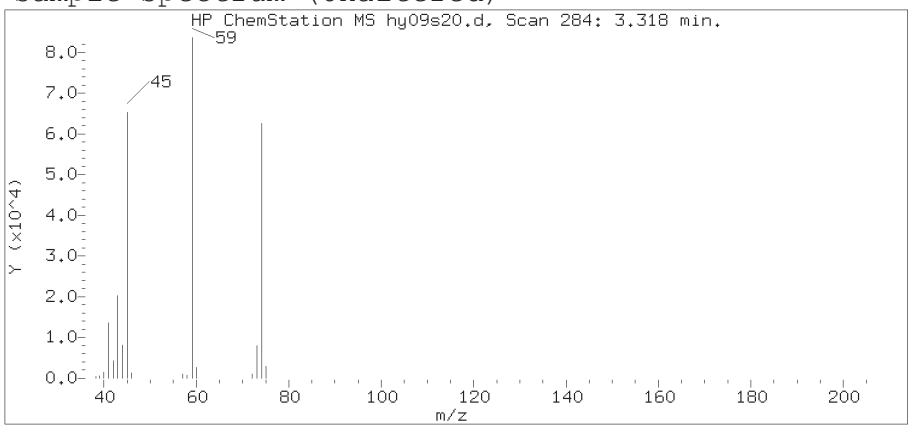


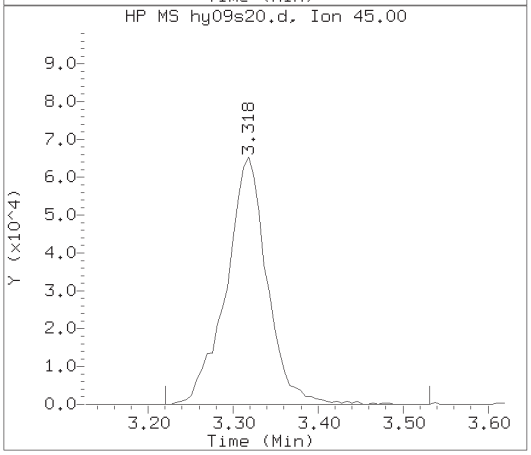
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

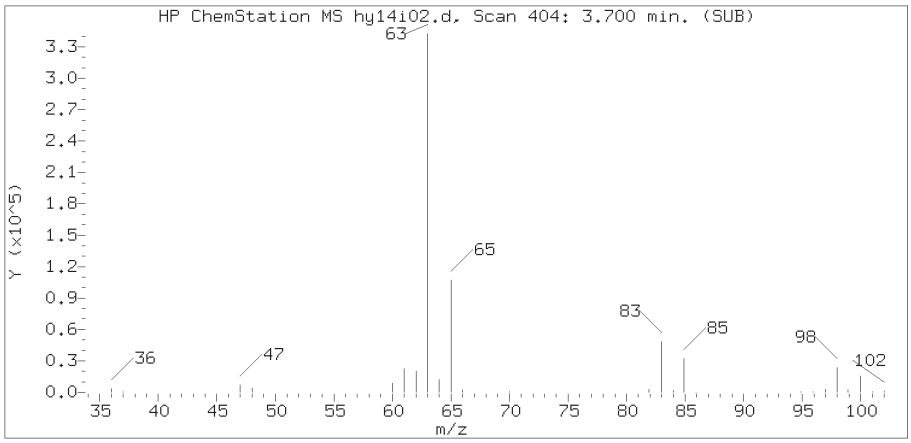
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

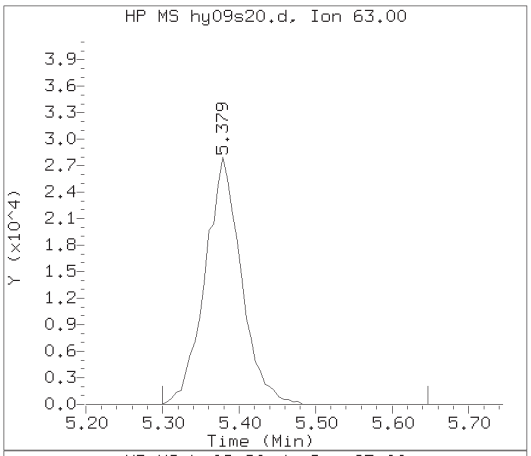
Sample Name: E6103DL Lab Sample ID: 8354935DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 284
Retention Time (minutes): 3.318
Relative Retention Time :-0.00158
Quant Ion : 59.00
Area (flag) : 287282
On-Column Amount (ng) : 7.0176

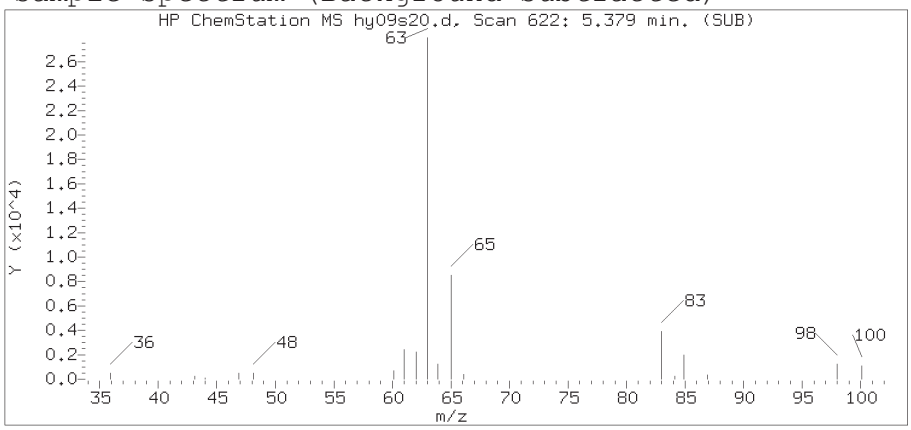
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

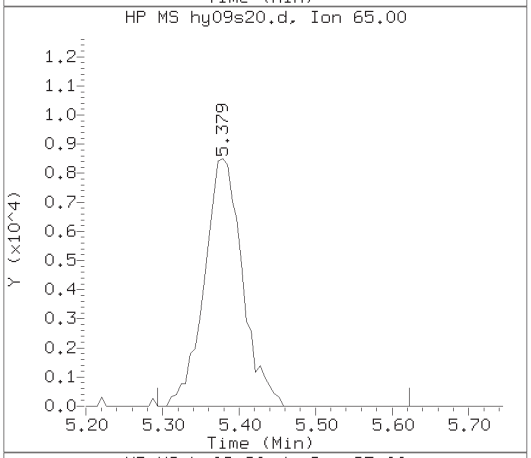
Reference Standard Spectrum for 1,1-Dichloroethane



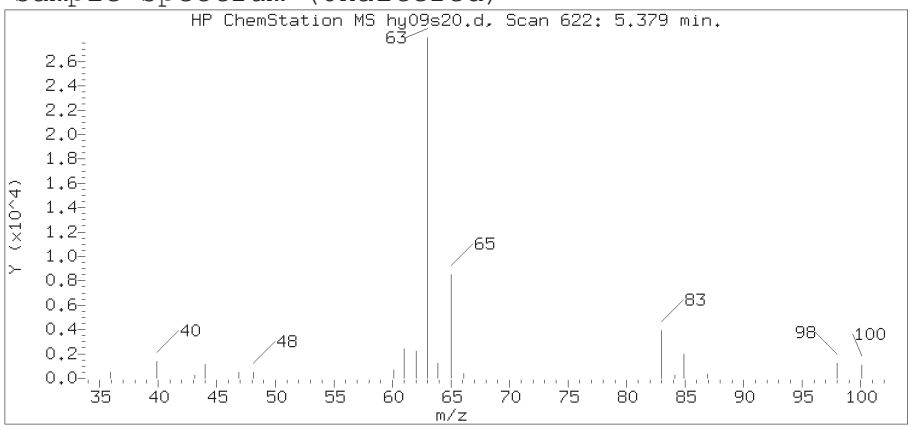


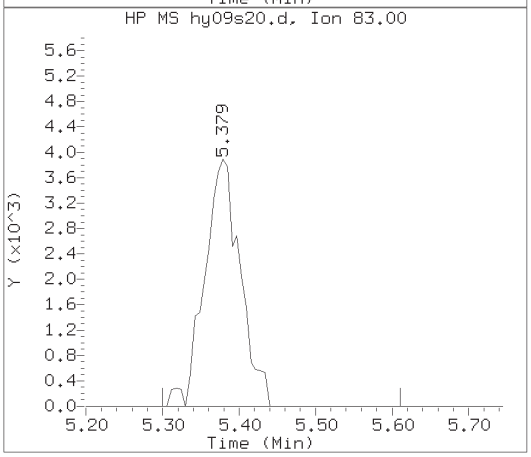
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s20.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 17:41 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6103DL Lab Sample ID: 8354935DL

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 622
Retention Time (minutes): 5.379
Relative Retention Time :-0.00157
Quant Ion : 63.00
Area (flag) : 91908
On-Column Amount (ng) : 0.7355

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

E6104 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354936

Data file: /chem/HP09915.i/16may09a.b/ly09s34.d Injection date and time: **09-MAY-2016 17:18**
Data file Sample Info. Line: E6104;8354936;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 17:37 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.990	(0.006)	749	65	243188	(-3)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1468191	(-3)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1113483	(-4)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	576923	(-8)	50.00	

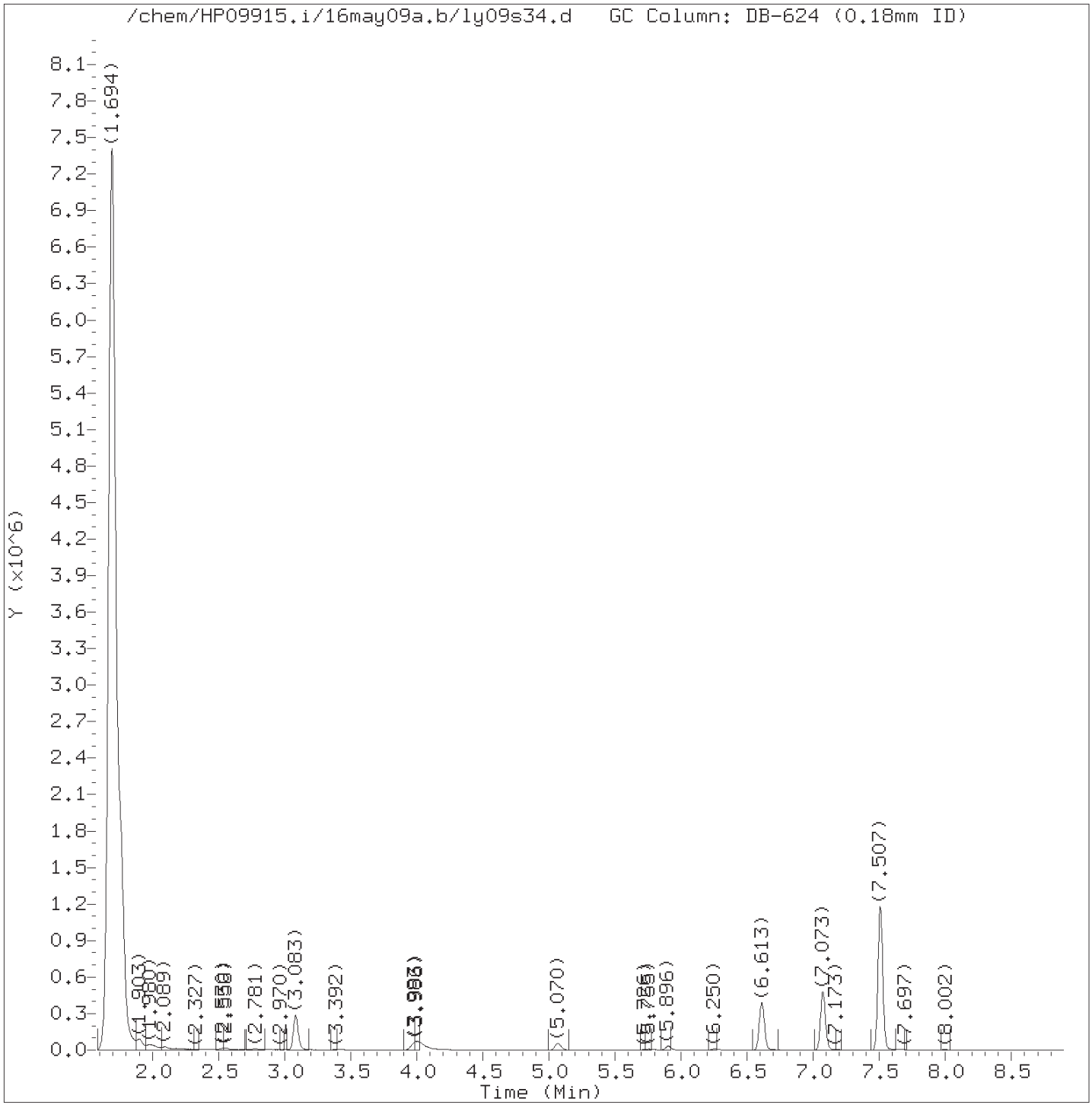
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.613	(0.000)	113	340557	48.825	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.073	(0.000)	102	88451	50.230	100%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1442343	49.487	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.057	(0.000)	95	541162	50.175	100%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 18:28. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:59. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

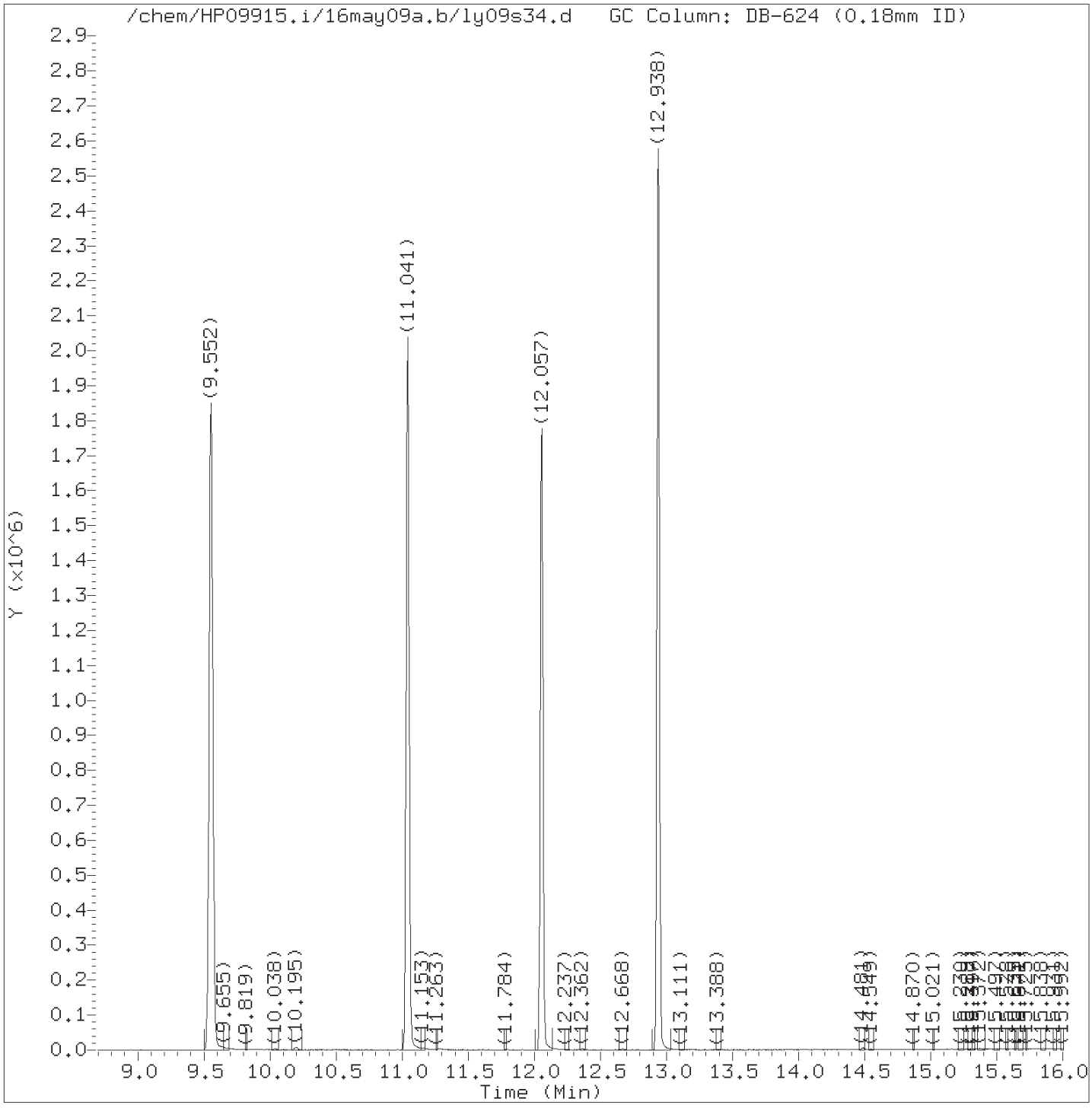
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s34.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:18 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:37 Automation

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s34.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:18 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:37 Automation

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc0749

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s34.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:18 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 17:37 Automation

Sample Name: E6104 Lab Sample ID: 8354936

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.990	65	243188	250.000
52)$Dibromofluoromethane	(2)	6.613	113	340557	48.825
57)$1,2-Dichloroethane-d4	(2)	7.073	102	88451	50.230
66)*Fluorobenzene	(2)	7.507	96	1468191	50.000
83)$Toluene-d8	(3)	9.552	98	1442343	49.487
100)*Chlorobenzene-d5	(3)	11.041	117	1113483	50.000
114)$4-Bromofluorobenzene	(3)	12.057	95	541162	50.175
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	576923	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494

E6104 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354936

Data file: /chem2/HP19094.i/16may09a.b/hy09s04.d Injection date and time: **09-MAY-2016 12:17**
Data file Sample Info. Line: E6104;8354936;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274 9179

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.300(-0.037)	445	65	75830	(-15)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2355756	(-2)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1748547	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	784451	(-11)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	613546	11.053	111%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	101090	10.995	110%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2392312	9.604	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	757340	9.432	94%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.105(-0.000)	45	393580	4.865	4.86		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)	2.306(-0.001)	62	17027	0.230	0.23		J	0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.733(-0.001)	64	110299	2.415	2.41			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.318(-0.001)	59	1315568	33.035	33.04		E	1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)	4.294(-0.001)	84	25564	0.432	0.43		J	0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.385(-0.002)	63	726371	5.975	5.98			0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)	6.543(0.014)	71	11694	4.553	4.55		J	2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s04.d Injection date and time: **09-MAY-2016 12:17**
Data file Sample Info. Line: E6104;8354936;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

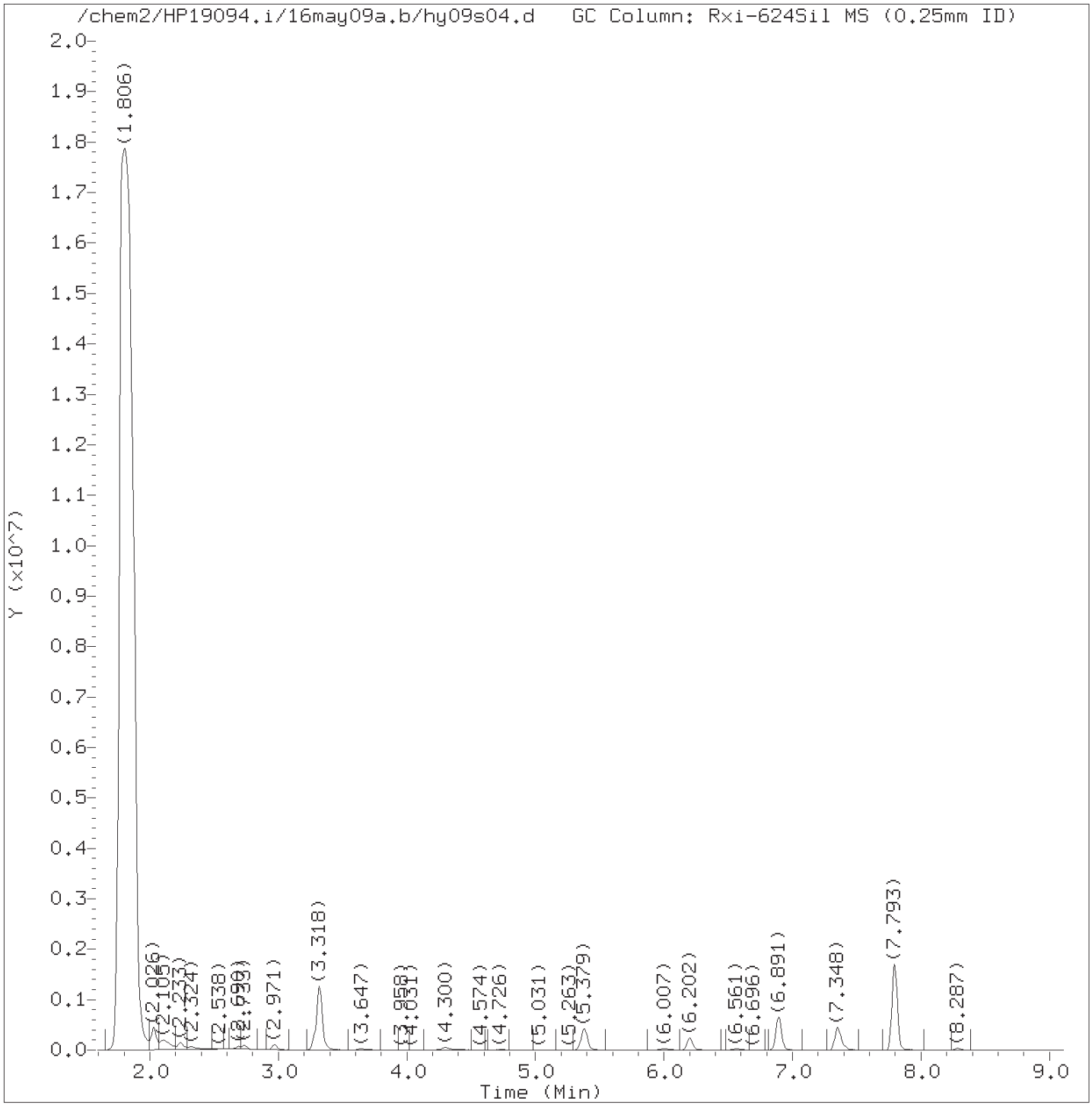
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)	7.397(-0.000)	78	90292	0.357	0.36		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)	8.281(-0.000)	95	14638	0.222	0.22		J	0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.439(-0.001)	166	23218	0.293	0.29		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:19. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

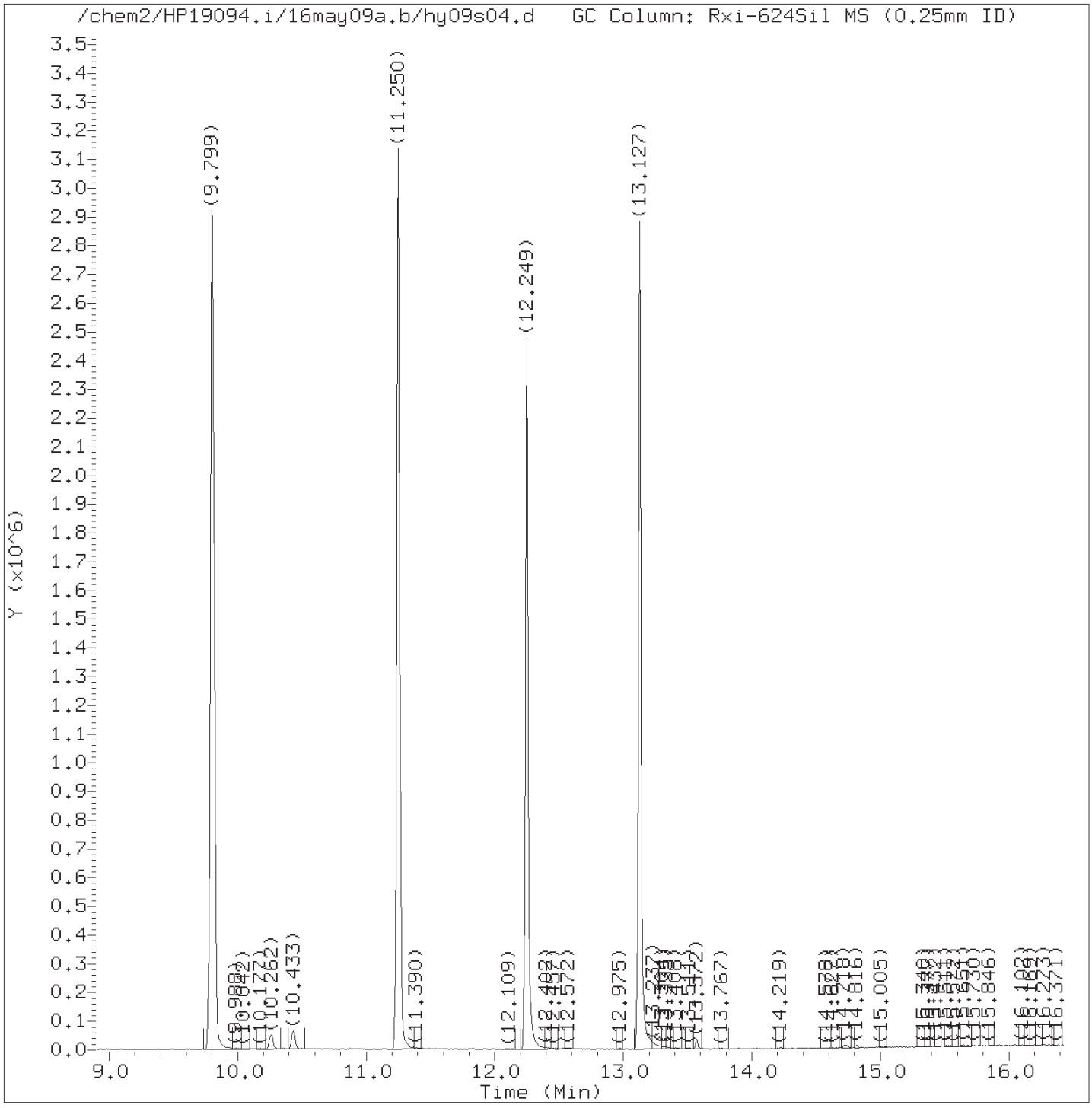
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

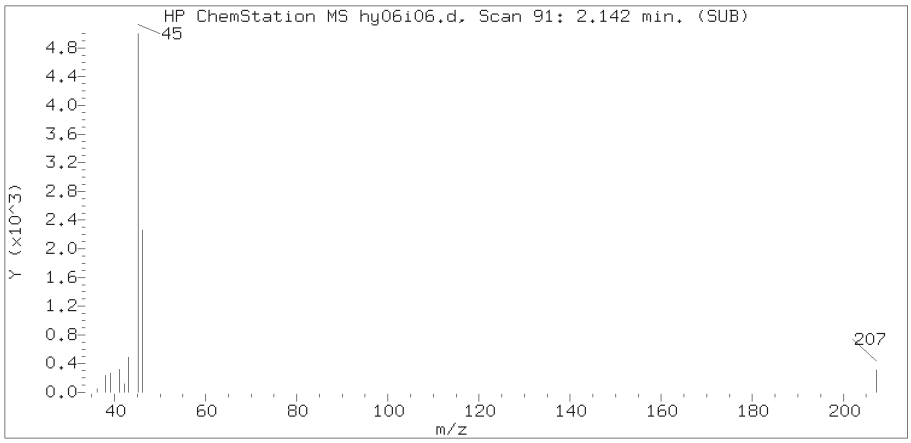
Sample Name: E6104 Lab Sample ID: 8354936

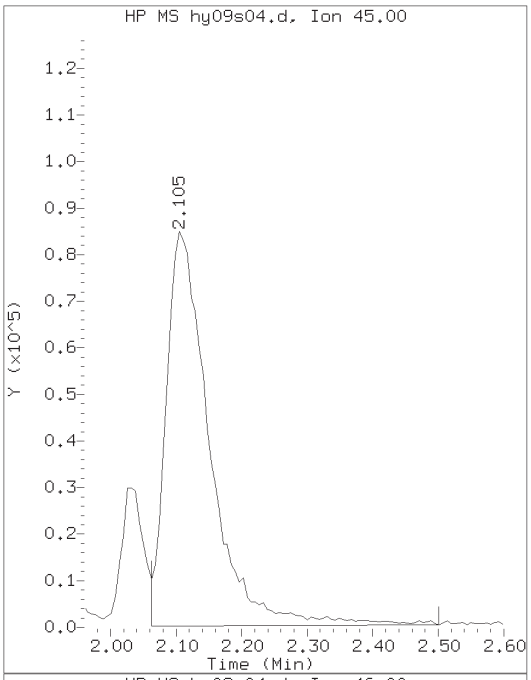
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	393580	4.865
5) Vinyl Chloride	(2)	2.306	62	17027	0.230
8) Chloroethane	(2)	2.733	64	110299	2.415
11) Ethyl ether	(2)	3.318	59	1315568	33.035
23) Methylene Chloride	(2)	4.294	84	25564	0.432
26)*t-Butyl Alcohol-d10	(1)	4.300	65	75830	50.000
33) 1,1-Dichloroethane	(2)	5.385	63	726371	5.975
48) Tetrahydrofuran	(1)	6.543	71	11694	4.553
50)$Dibromofluoromethane	(2)	6.891	113	613546	11.053
57)$1,2-Dichloroethane-d4	(2)	7.348	102	101090	10.995
58) Benzene	(2)	7.397	78	90292	0.357
63)*Fluorobenzene	(2)	7.793	96	2355756	10.000
67) Trichloroethene	(2)	8.281	95	14638	0.222
82)$Toluene-d8	(3)	9.799	98	2392312	9.604
89) Tetrachloroethene	(3)	10.439	166	23218	0.293
97)*Chlorobenzene-d5	(3)	11.250	117	1748547	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	757340	9.432
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	784451	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

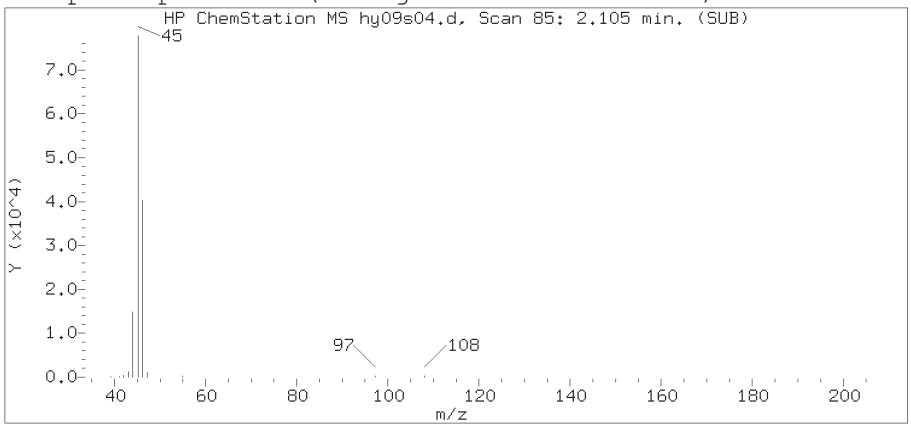
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

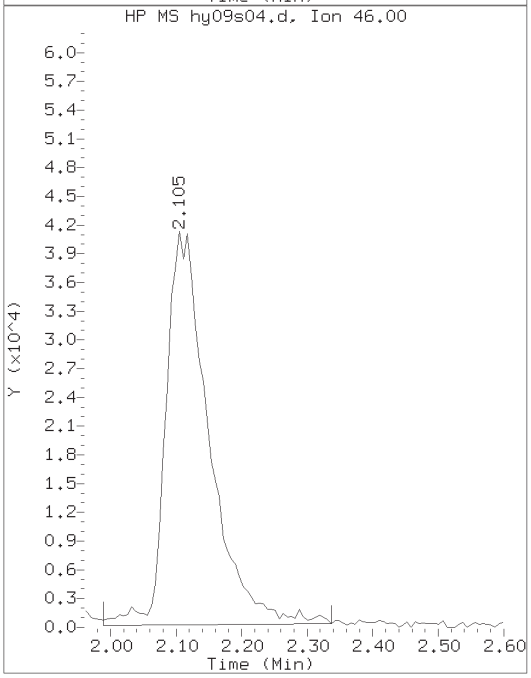
Reference Standard Spectrum for Dimethyl ether



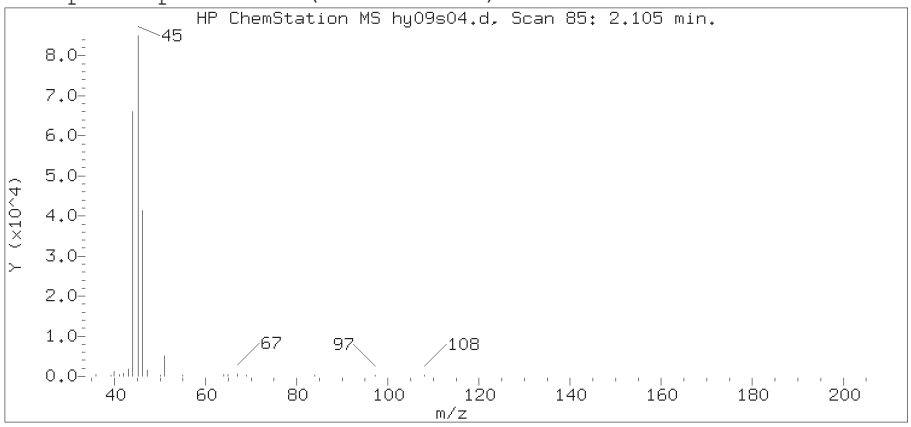


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

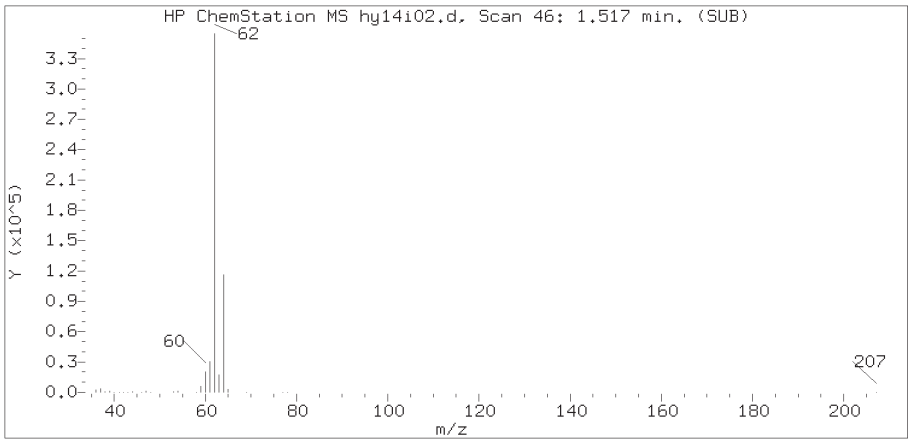
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

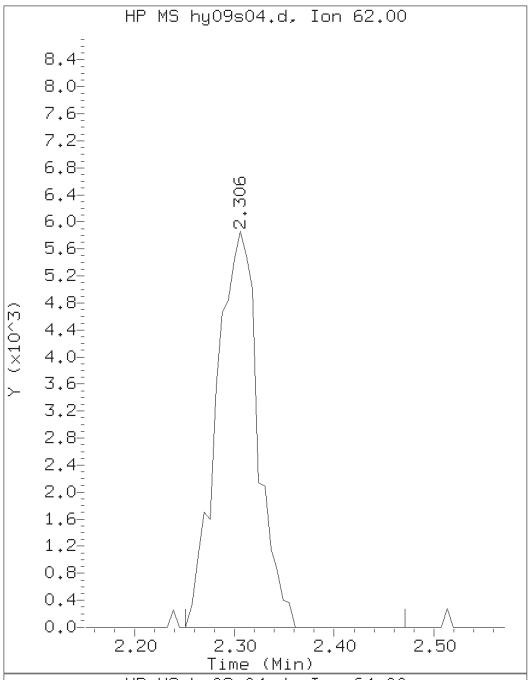
Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Relative Retention Time :-0.00077
Quant Ion : 45.00
Area (flag) : 393580
On-Column Amount (ng) : 4.8647

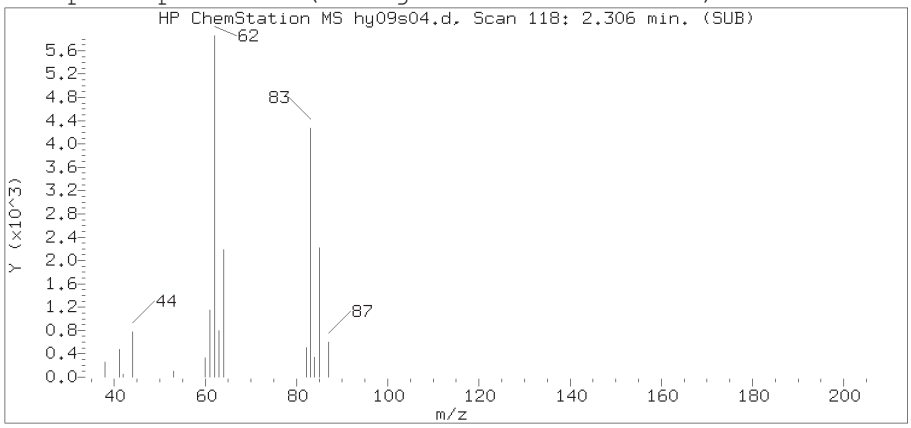
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible]

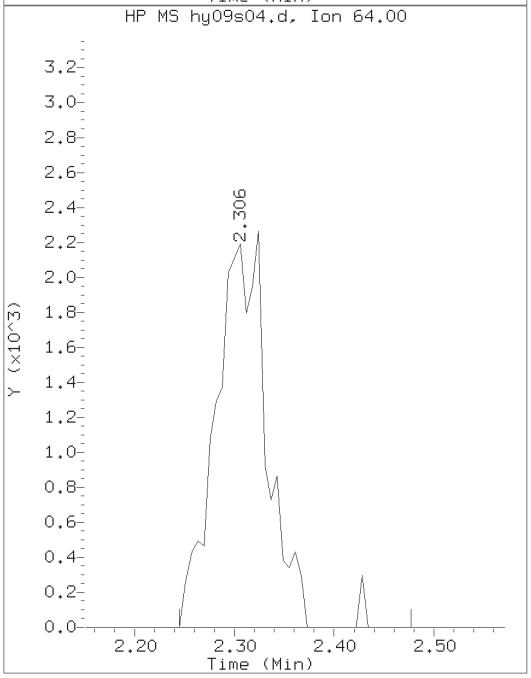
Reference Standard Spectrum for Vinyl Chloride



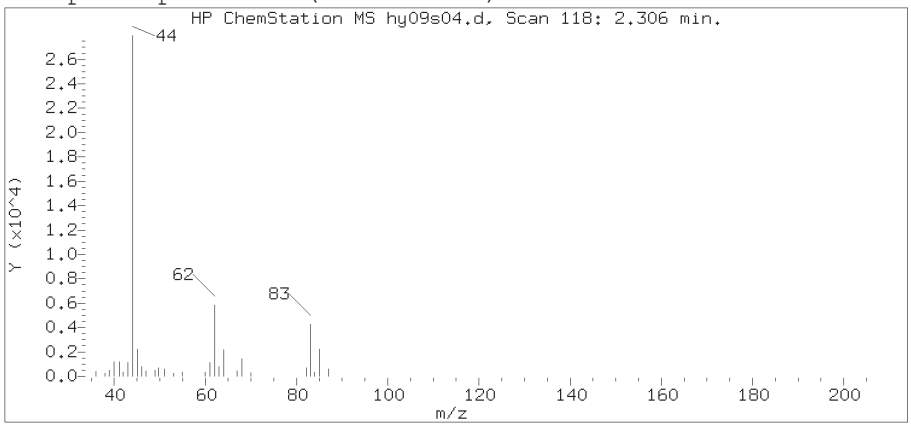


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

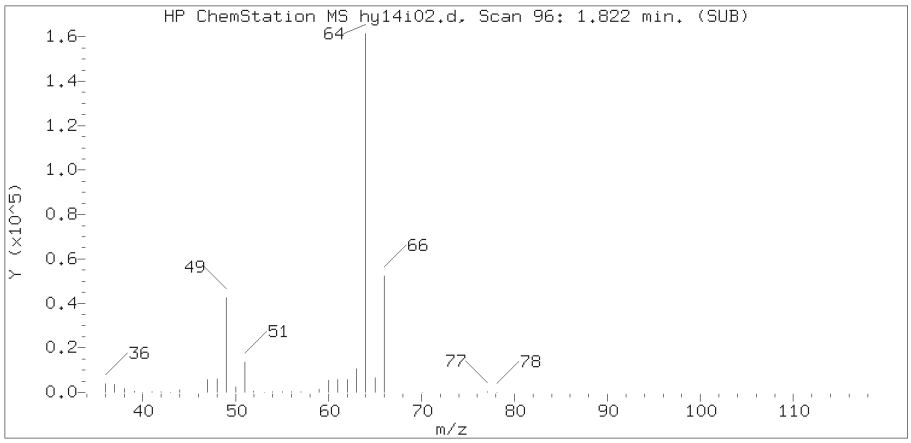
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

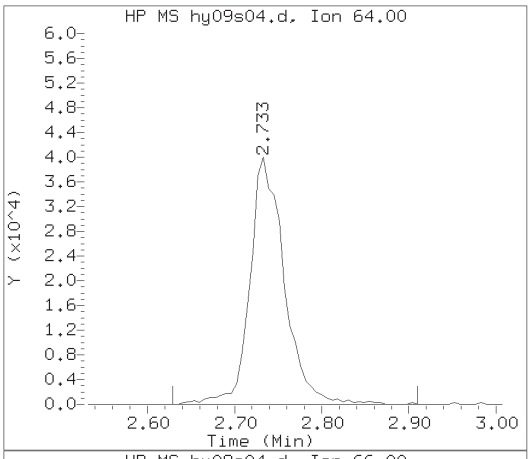
Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 118
Retention Time (minutes): 2.306
Relative Retention Time :-0.00157
Quant Ion : 62.00
Area (flag) : 17027
On-Column Amount (ng) : 0.2298

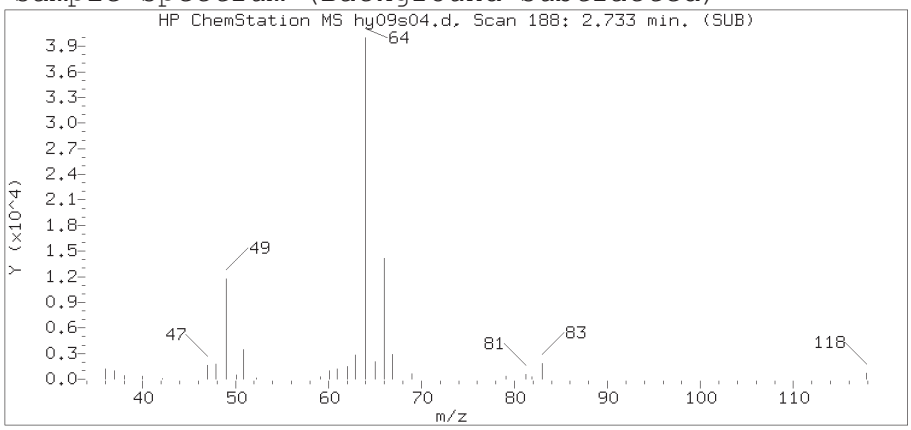
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible] Date: 2016.05.12 08:08:13

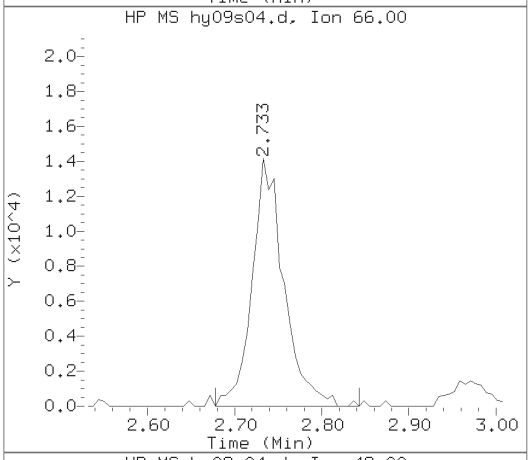
Reference Standard Spectrum for Chloroethane



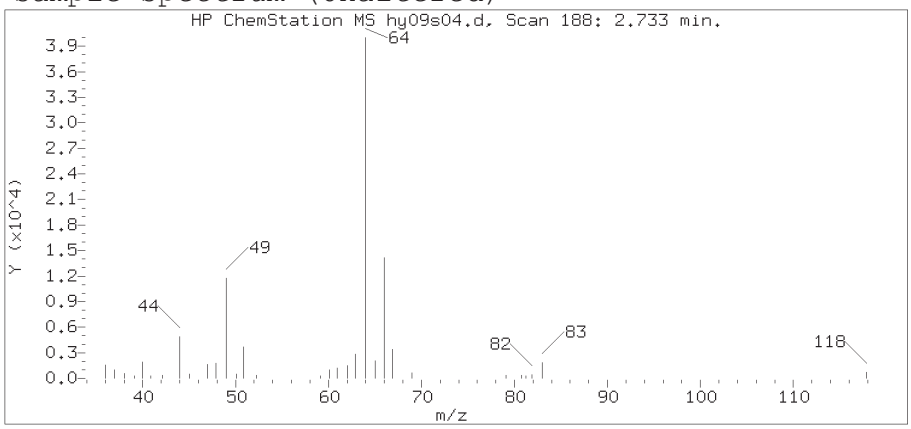


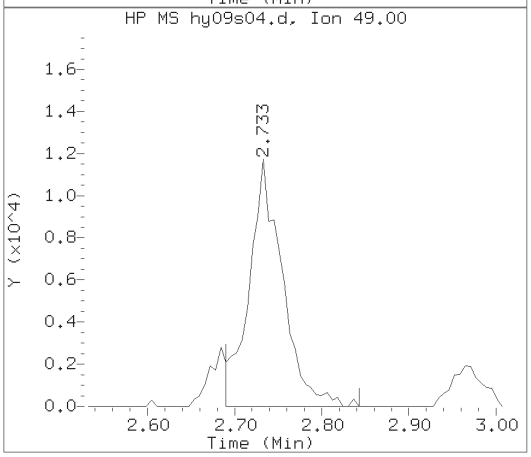
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00157
Quant Ion : 64.00
Area (flag) : 110299
On-Column Amount (ng) : 2.4149

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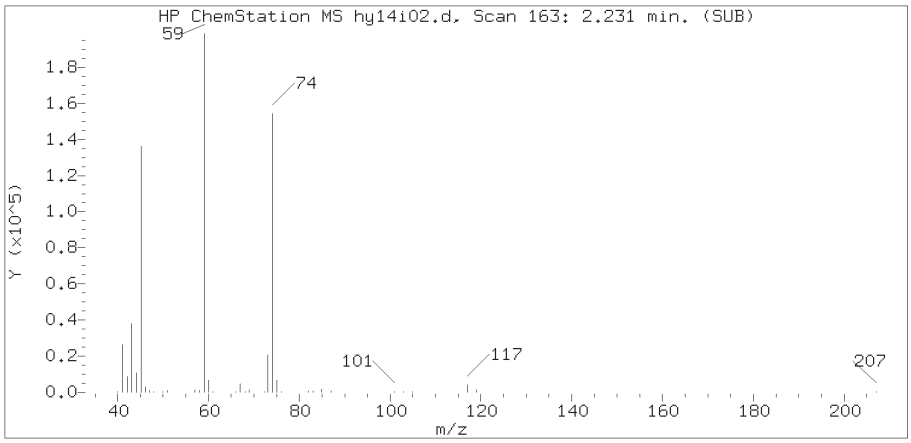
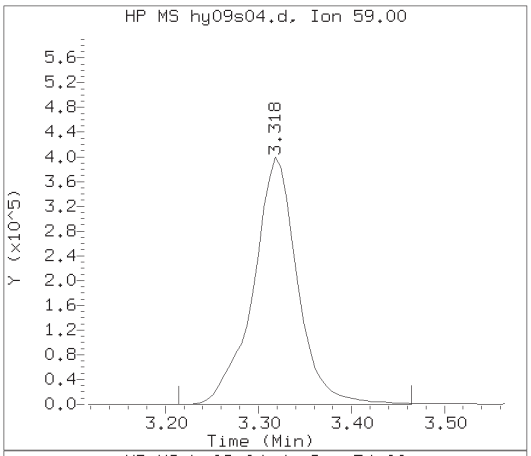
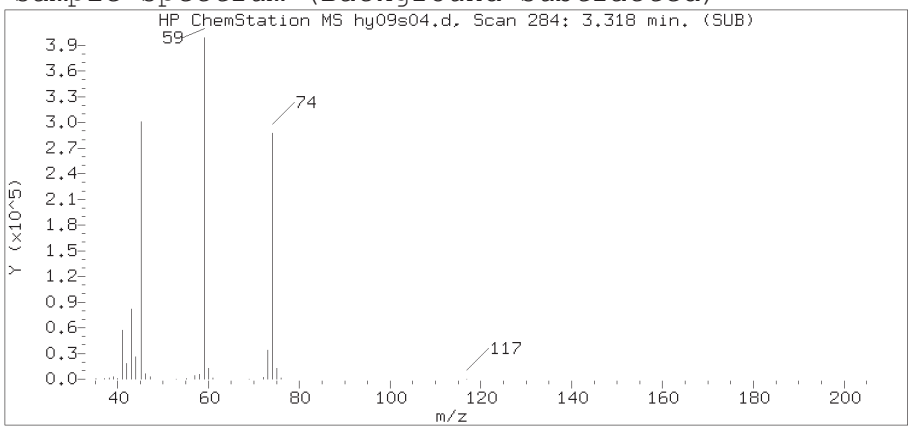
Target 3.5 esignature [illegible]

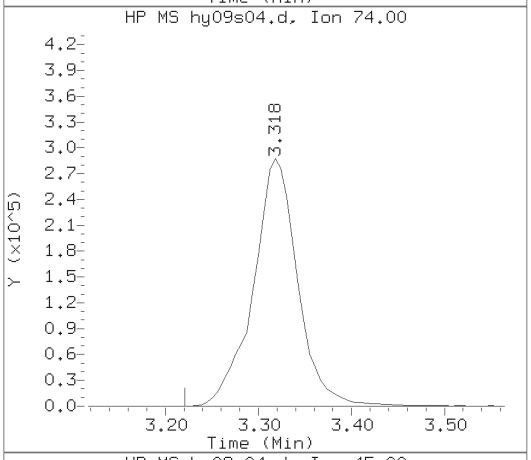
Reference Standard Spectrum for Ethyl ether



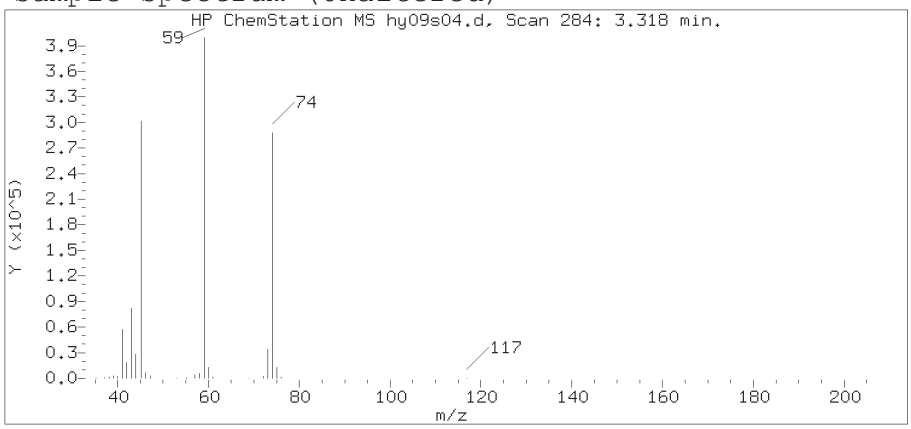


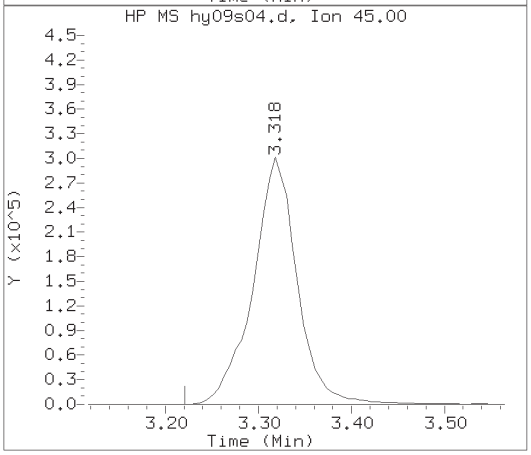
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

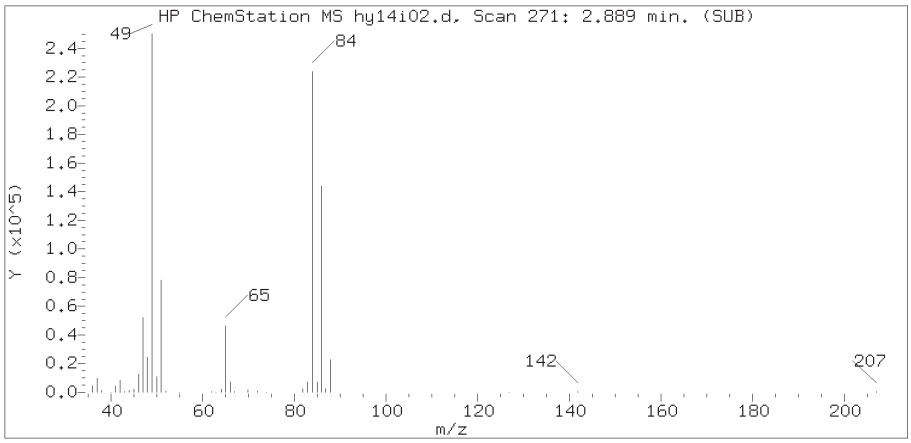
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

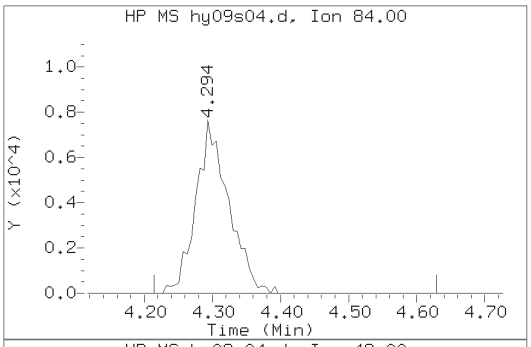
Sample Name: E6104 Lab Sample ID: 8354936

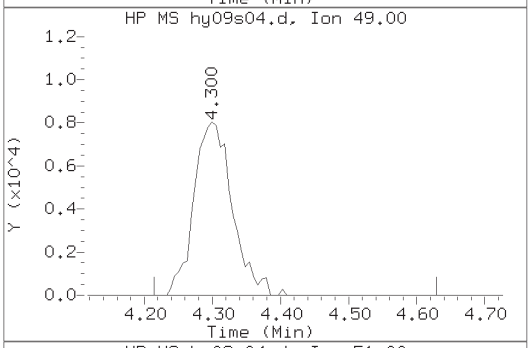
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 284
Retention Time (minutes): 3.318
Relative Retention Time :-0.00157
Quant Ion : 59.00
Area (flag) : 1315568
On-Column Amount (ng) : 33.0355

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible] 2016 07:13

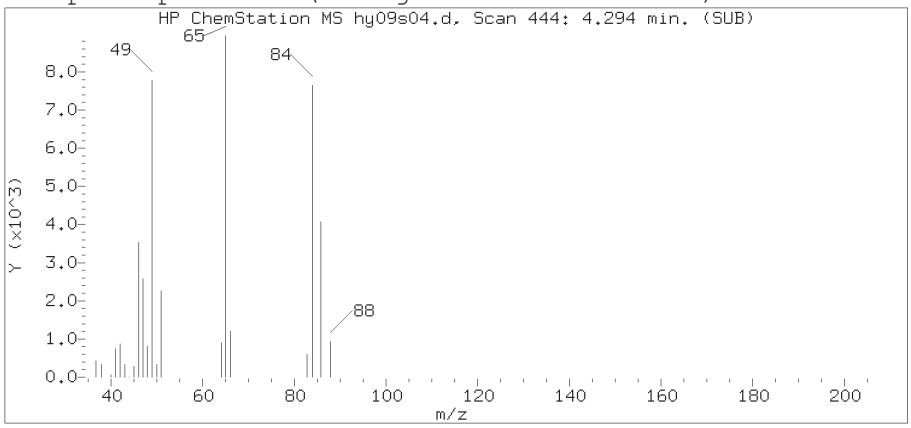
Reference Standard Spectrum for Methylene Chloride

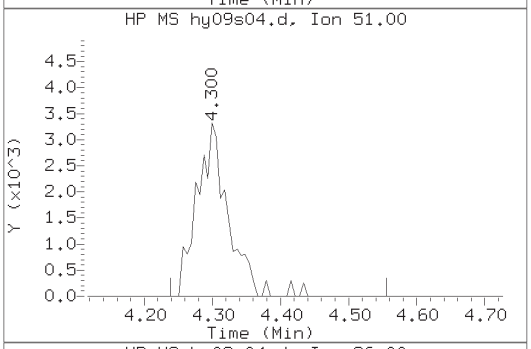




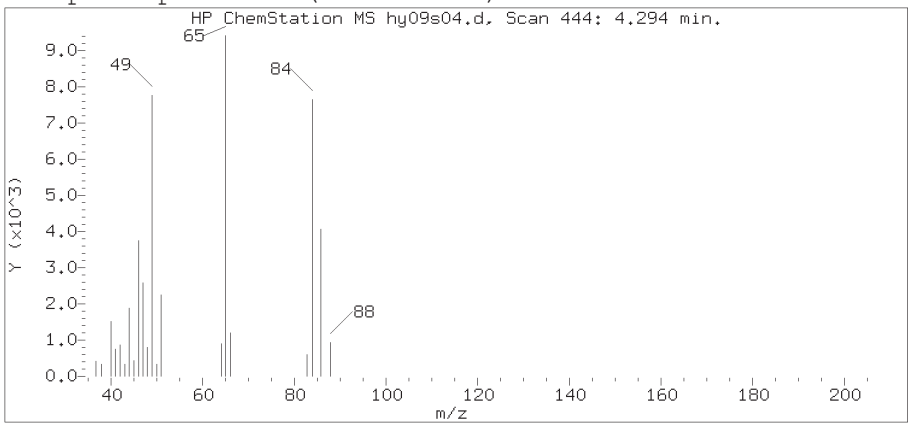


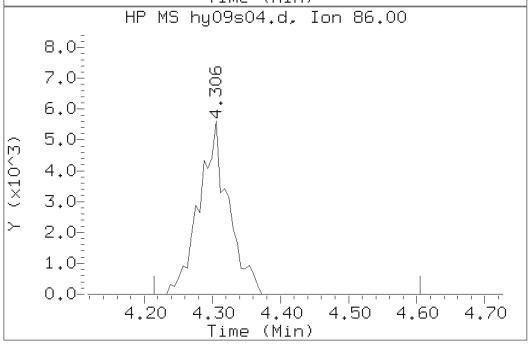
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

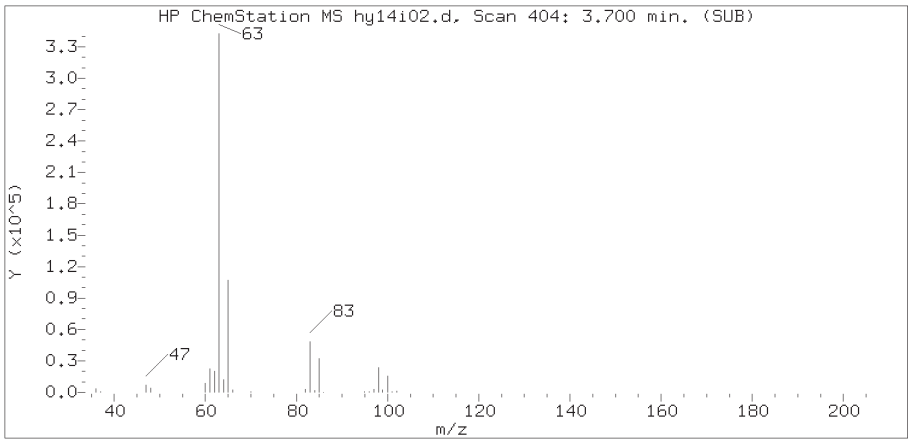
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

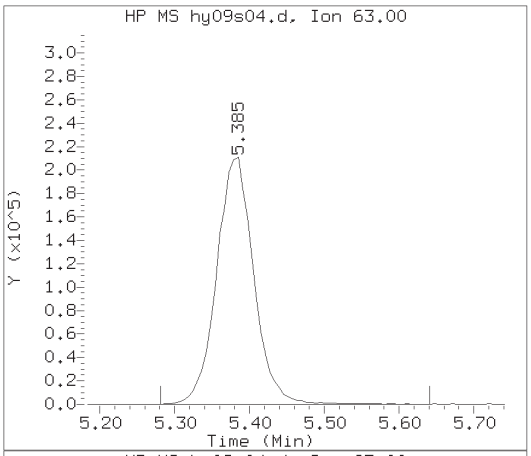
Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 444
Retention Time (minutes): 4.294
Relative Retention Time :-0.00157
Quant Ion : 84.00
Area (flag) : 25564
On-Column Amount (ng) : 0.4319

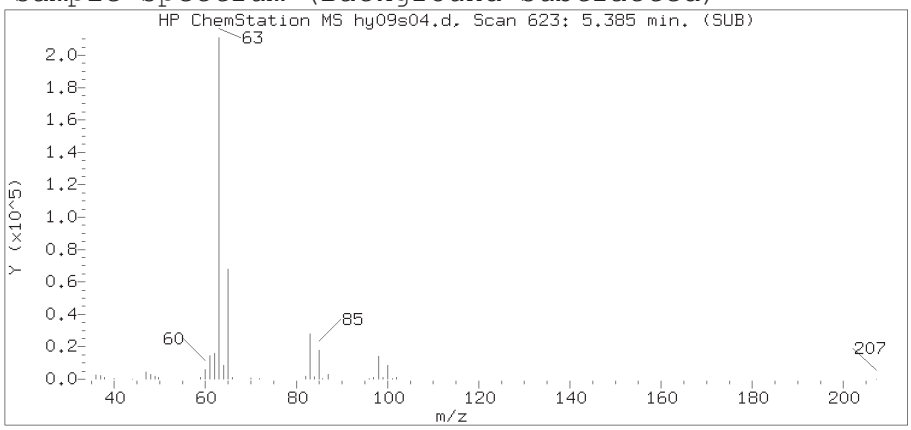
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible] Date: 2016.05.12

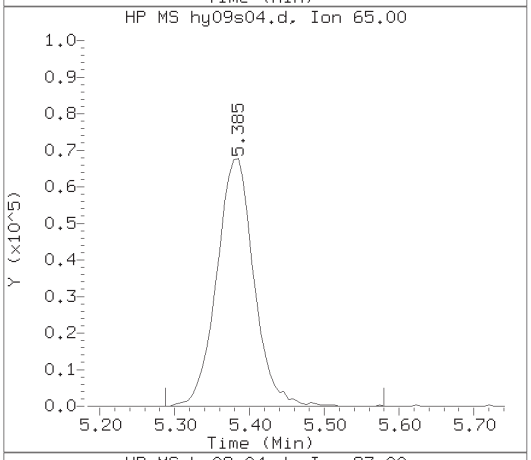
Reference Standard Spectrum for 1,1-Dichloroethane



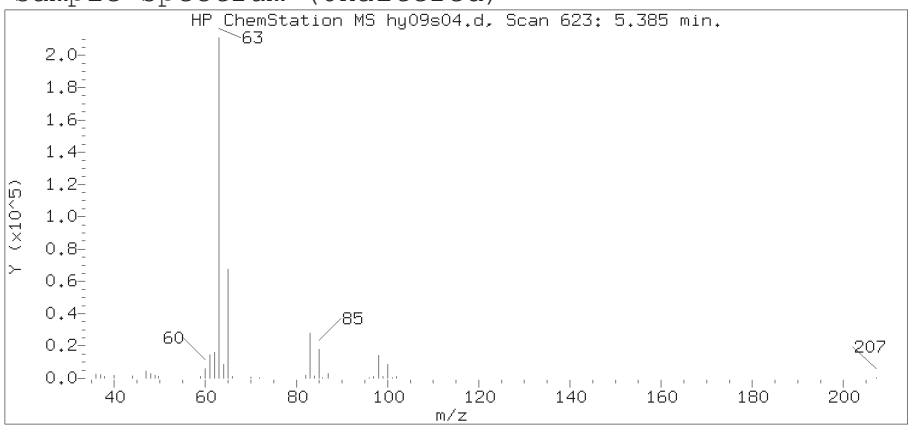


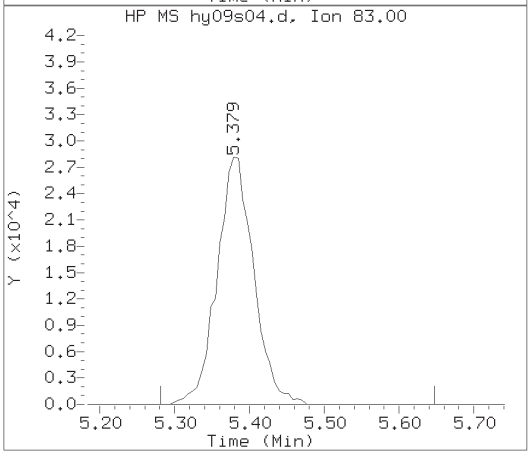
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 623
Retention Time (minutes): 5.385
Relative Retention Time :-0.00235
Quant Ion : 63.00
Area (flag) : 726371
On-Column Amount (ng) : 5.9754

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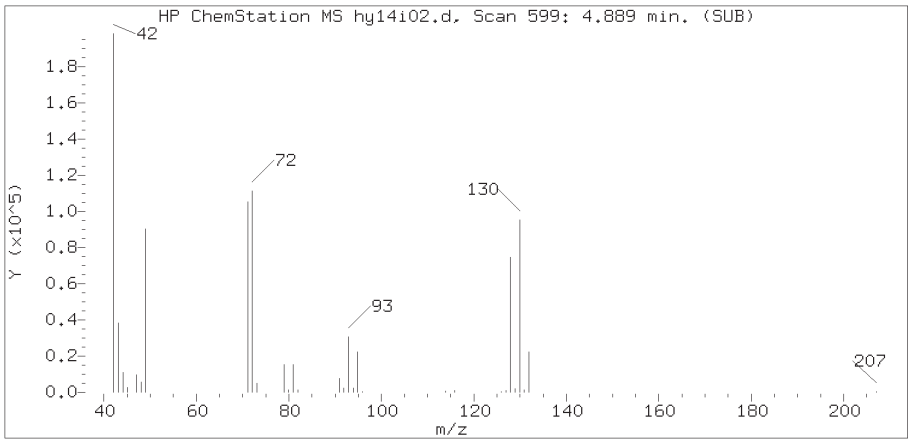
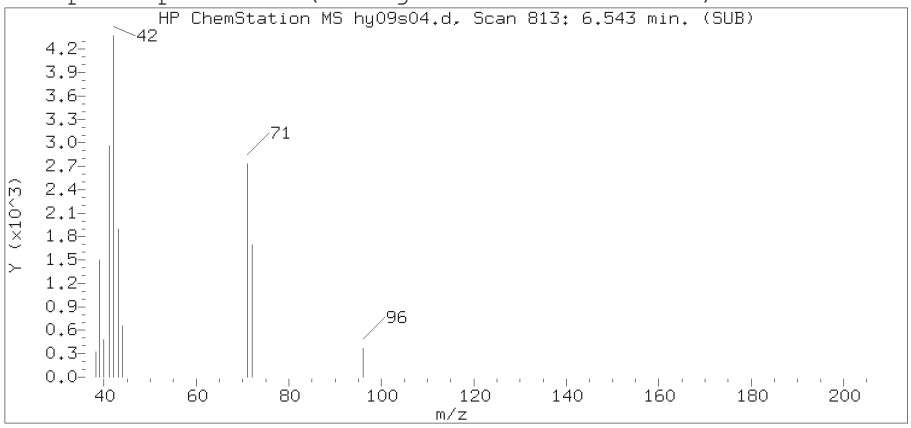
Target 3.5 esignature [illegible] 2016.07.13

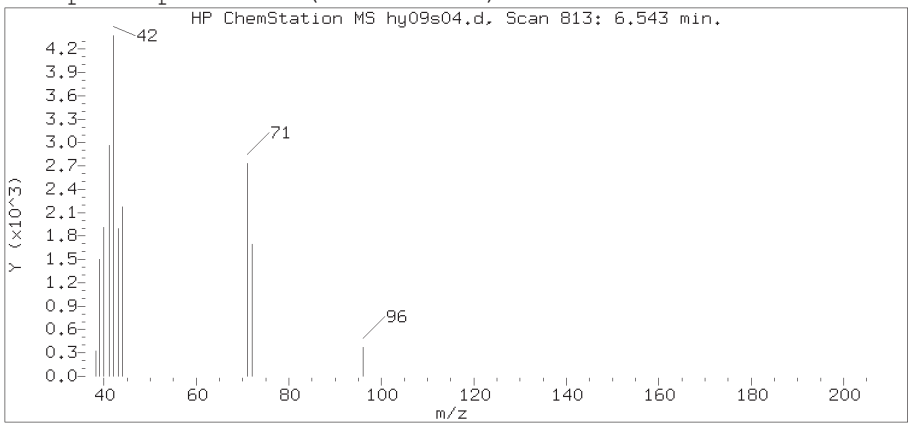
Reference Standard Spectrum for Tetrahydrofuran

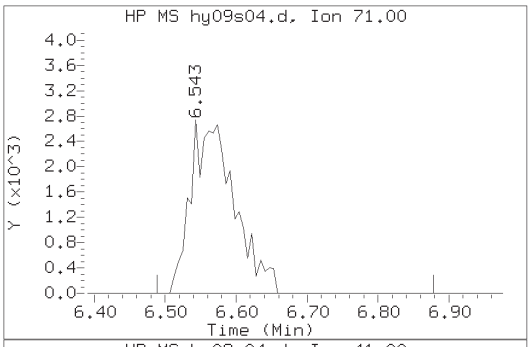


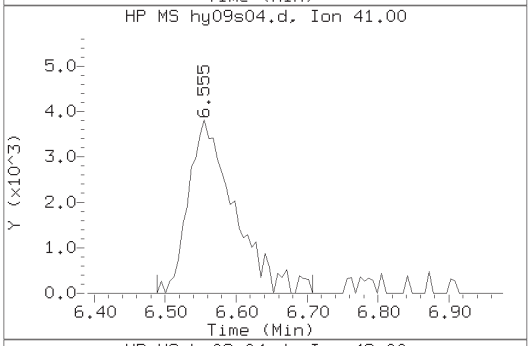
Sample Spectrum (Background Subtracted)

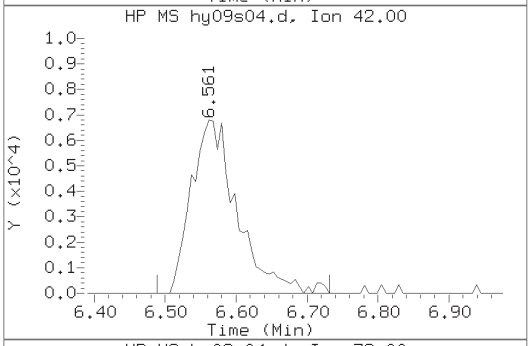


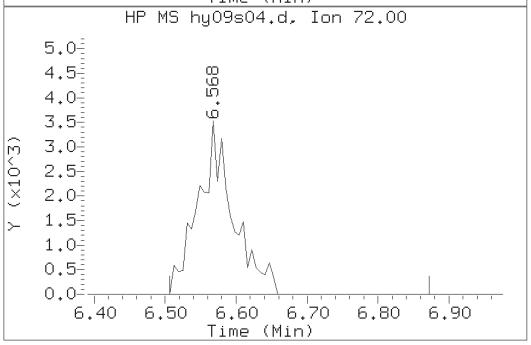
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 813
Retention Time (minutes): 6.543
Relative Retention Time : 0.01449
Quant Ion : 71.00
Area (flag) : 11694
On-Column Amount (ng) : 4.5534

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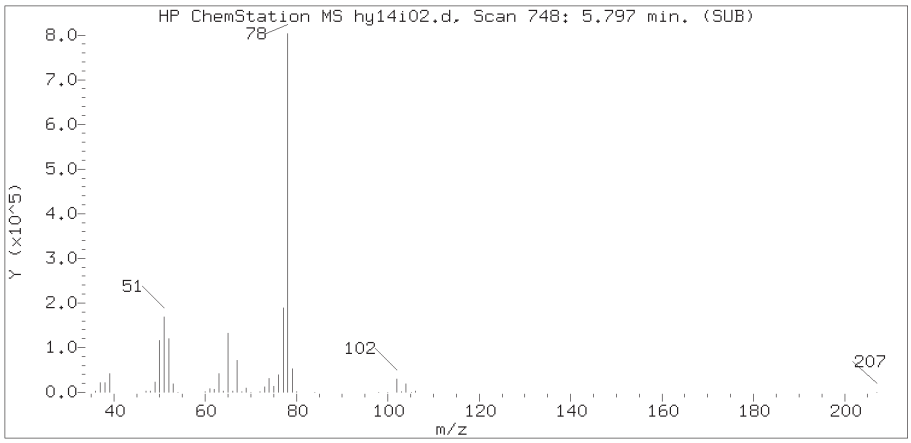
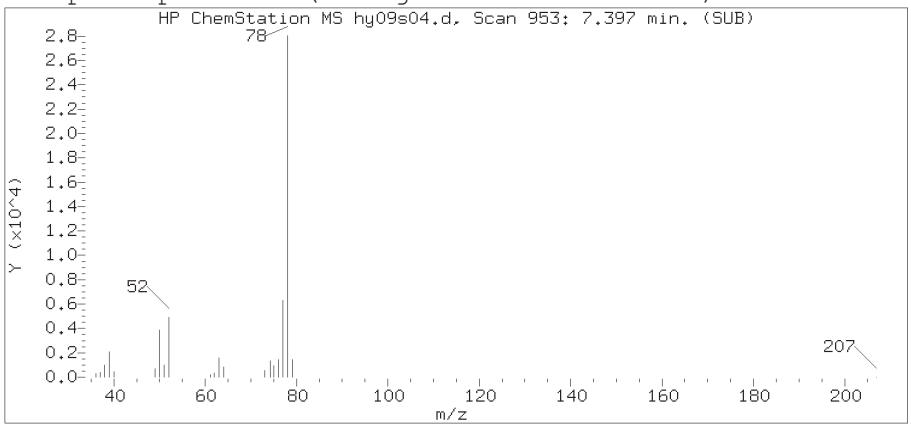
Target 3.5 esignature [illegible] 2016 07:13

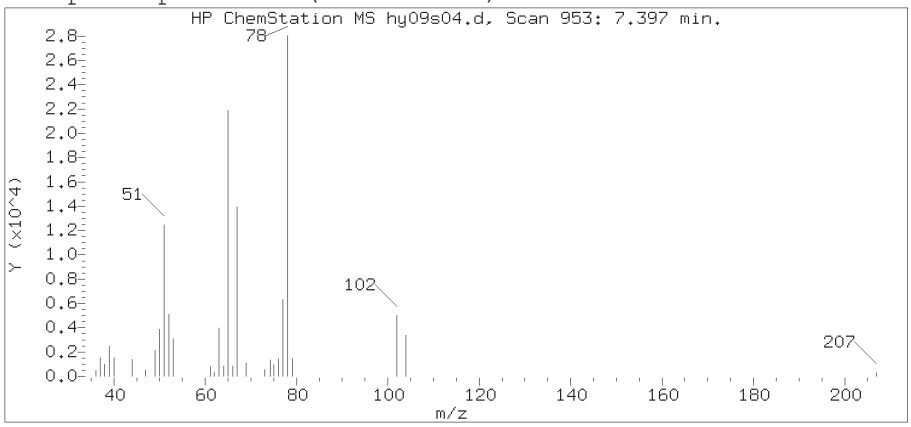
Reference Standard Spectrum for Benzene

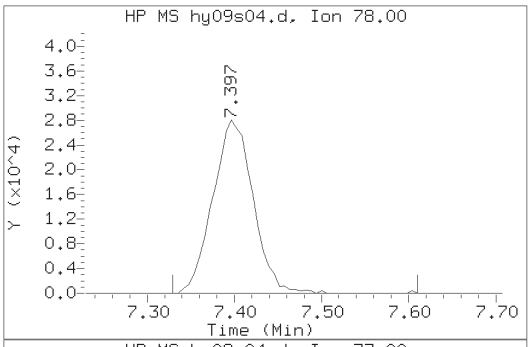


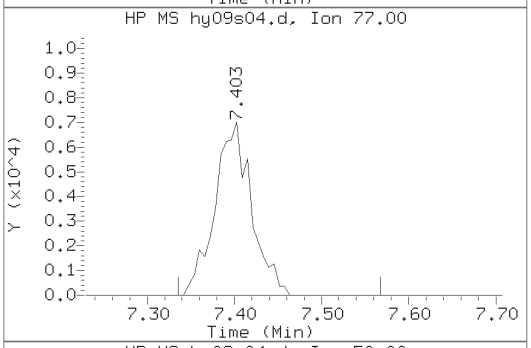
Sample Spectrum (Background Subtracted)

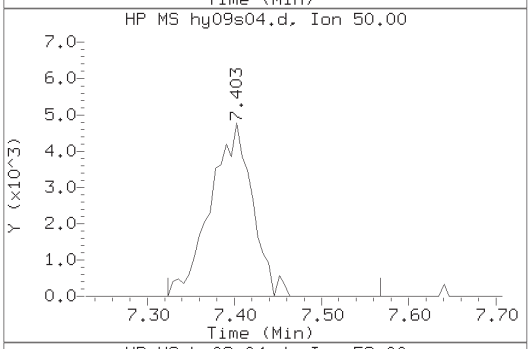


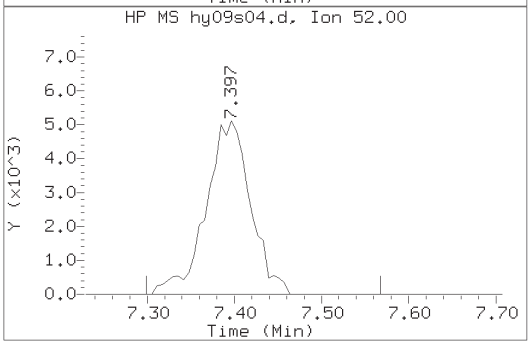
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

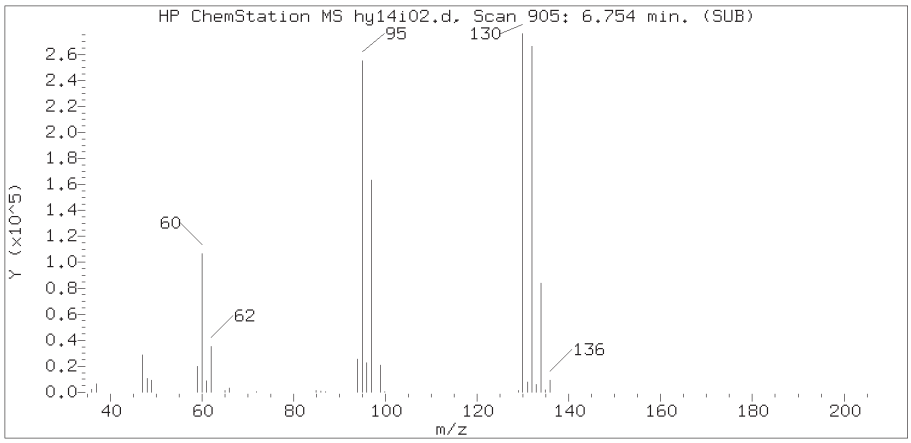
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

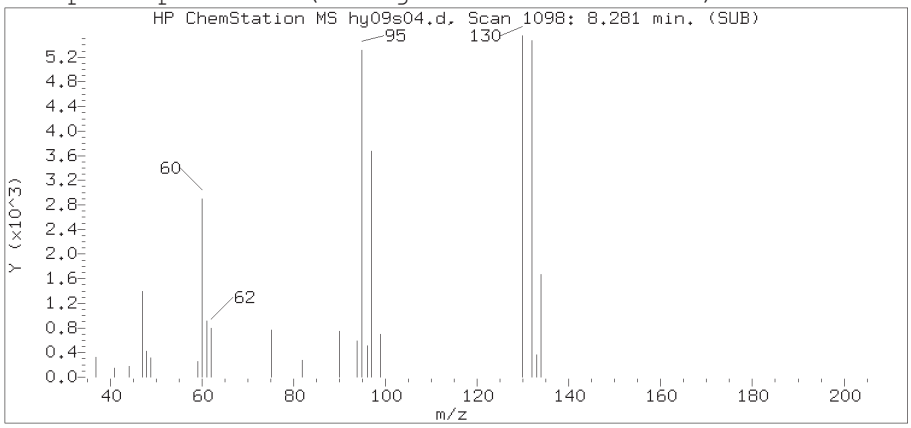
Compound Number : 58
Compound Name : Benzene
Scan Number : 953
Retention Time (minutes): 7.397
Relative Retention Time :-0.00078
Quant Ion : 78.00
Area (flag) : 90292
On-Column Amount (ng) : 0.3566

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible]

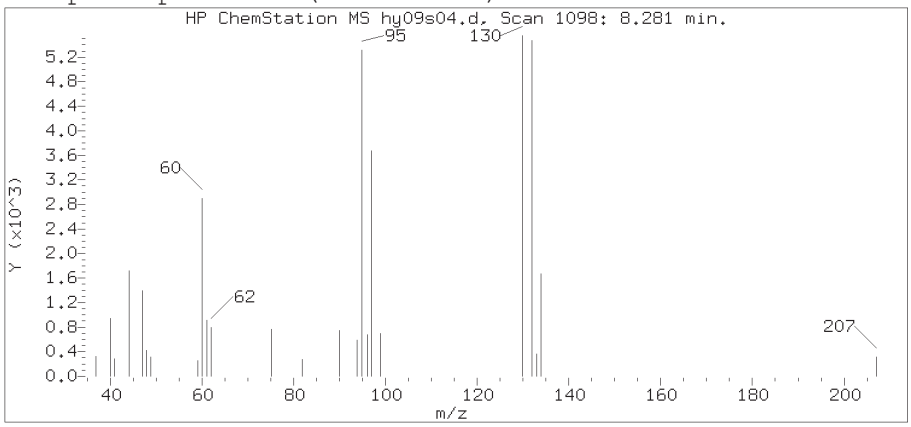
Reference Standard Spectrum for Trichloroethene

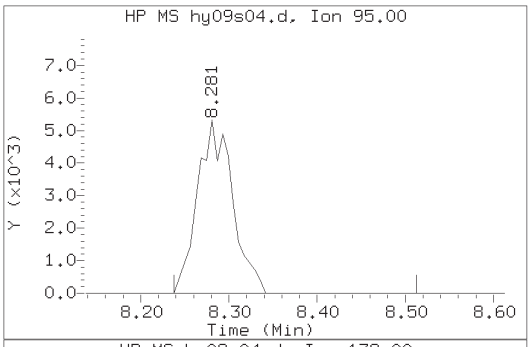


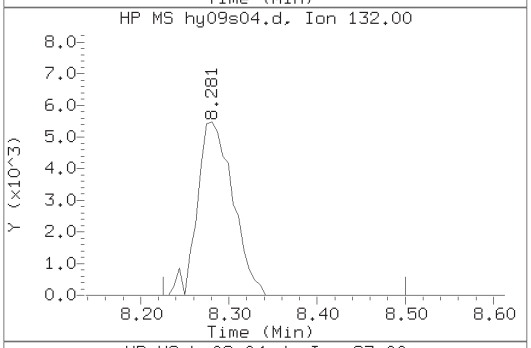
Sample Spectrum (Background Subtracted)

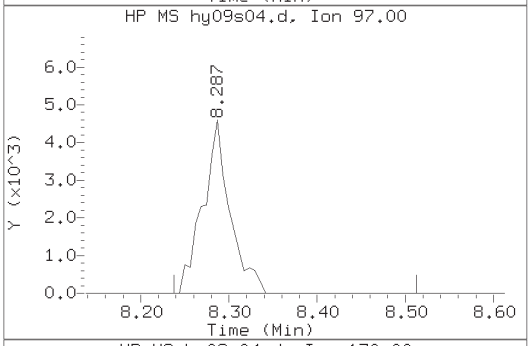


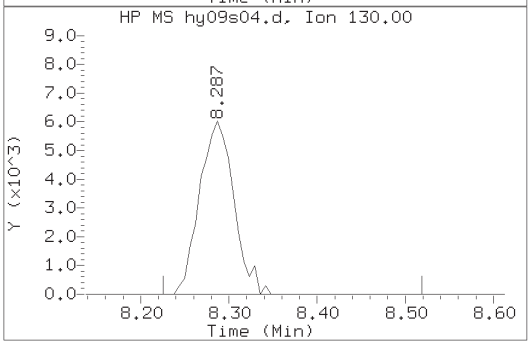
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1098
Retention Time (minutes): 8.281
Relative Retention Time :-0.00078
Quant Ion : 95.00
Area (flag) : 14638
On-Column Amount (ng) : 0.2218

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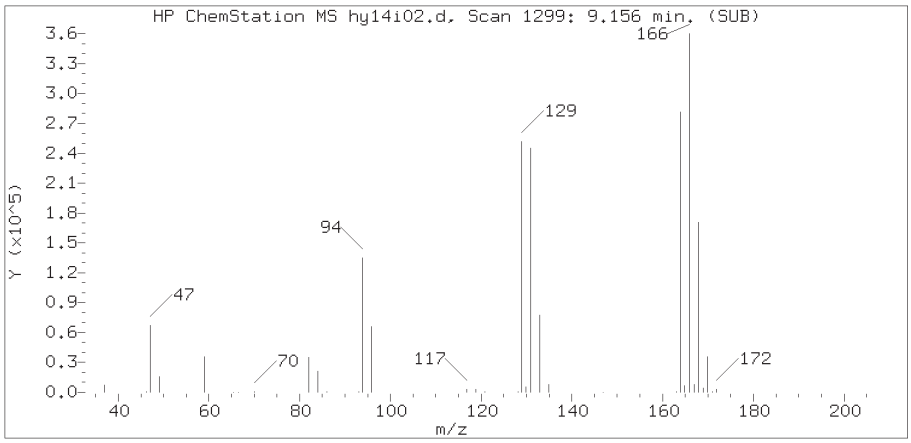
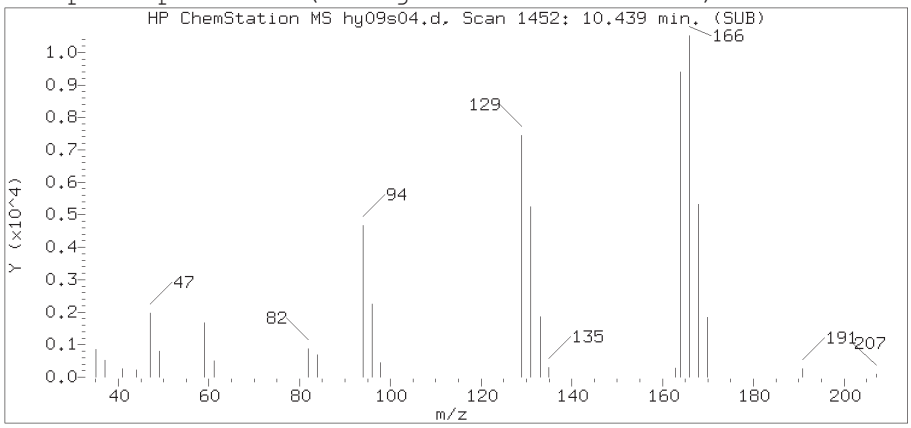
Target 3.5 esignature [illegible]

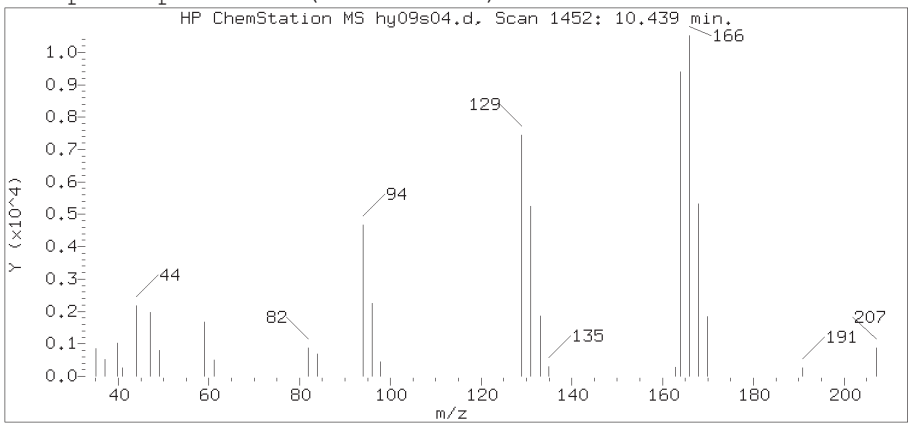
Reference Standard Spectrum for Tetrachloroethene

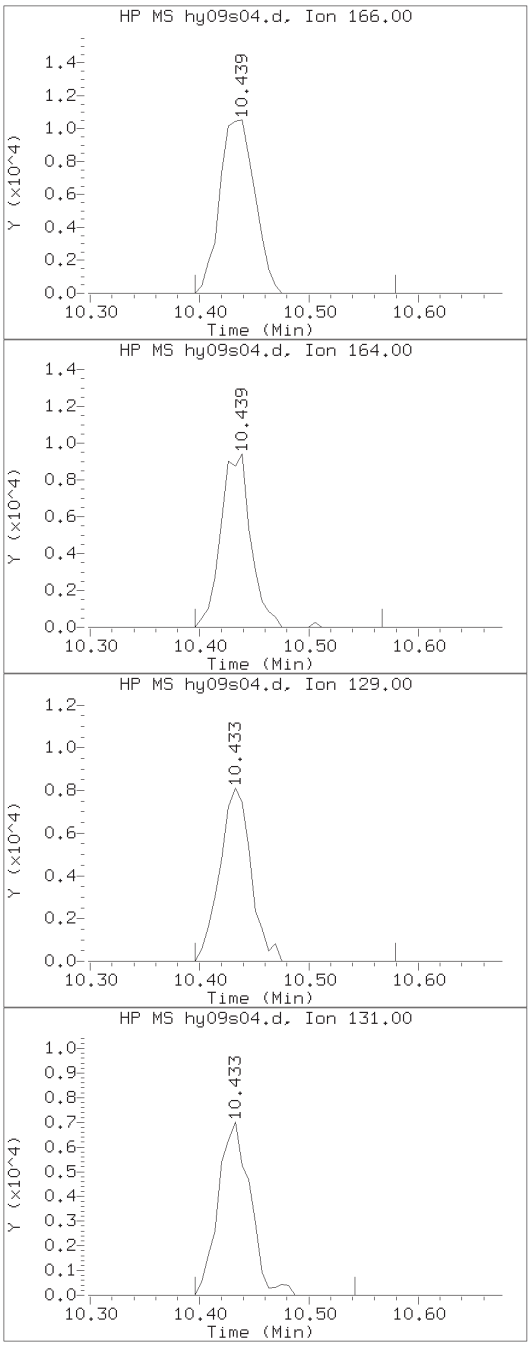


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s04.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104 Lab Sample ID: 8354936

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1452
Retention Time (minutes): 10.439
Relative Retention Time :-0.00108
Quant Ion : 166.00
Area (flag) : 23218
On-Column Amount (ng) : 0.2930

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible]

Data file: /chem2/HP19094.i/16may09a.b/hy09s21.d Injection date and time: **09-MAY-2016 18:02**
Data file Sample Info. Line: E6104DL;8354936DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294(-0.031)	444	65	68995 (-23)	50.00	
63) Fluorobenzene	7.787(0.006)	1017	96	2430528 (1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1695421 (-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	715899 (-19)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885(0.000)	113	599794	10.472	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342(0.000)	102	96638	10.187	102%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2437142	10.091	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	694471	8.920	89%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					1	10
4) Dimethyl ether	(2)	2.093(0.000)	45	43928M	0.526	5.26		J	1	130
2) Chloromethane	(2)			Not Detected					2	10
5) Vinyl Chloride	(2)			Not Detected					2	10
7) Bromomethane	(2)			Not Detected					5	10
8) Chloroethane	(2)	2.721(-0.000)	64	9249	0.196	1.96		J	1	10
10) Trichlorofluoromethane	(2)			Not Detected					2	10
11) Ethyl ether	(2)	3.306(-0.000)	59	116079	2.825	28.25		J	11	130
13) Acrolein	(1)			Not Detected					50	250
15) 1,1-Dichloroethene	(2)			Not Detected					2	10
16) Freon 113	(2)			Not Detected					2	10
14) Acetone	(1)			Not Detected					30	100
17) Methyl Iodide	(2)			Not Detected					6	100
18) Carbon Disulfide	(2)			Not Detected					4	100
25) Acetonitrile	(1)			Not Detected					320	1000
22) Allyl Chloride	(2)			Not Detected					8	100
23) Methylene Chloride	(2)			Not Detected					2	10
29) Acrylonitrile	(1)			Not Detected					10	100
31) trans-1,2-Dichloroethene	(2)			Not Detected					2	10
33) 1,1-Dichloroethane	(2)	5.373(-0.001)	63	61894	0.494	4.94		J	1	10
36) Vinyl Acetate	(2)			Not Detected					33	100
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					5	100
38) 2-Butanone	(1)			Not Detected					10	100
42) Propionitrile	(1)			Not Detected					100	1000
45) Methacrylonitrile	(1)			Not Detected					98	1000
48) Tetrahydrofuran	(1)			Not Detected					20	250
49) Chloroform	(2)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					1	10
54) Carbon Tetrachloride	(2)			Not Detected					2	10
56) Isobutyl Alcohol	(1)			Not Detected					100	2000

M = Compound was manually integrated.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s21.d Injection date and time: **09-MAY-2016 18:02**
Data file Sample Info. Line: E6104DL;8354936DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

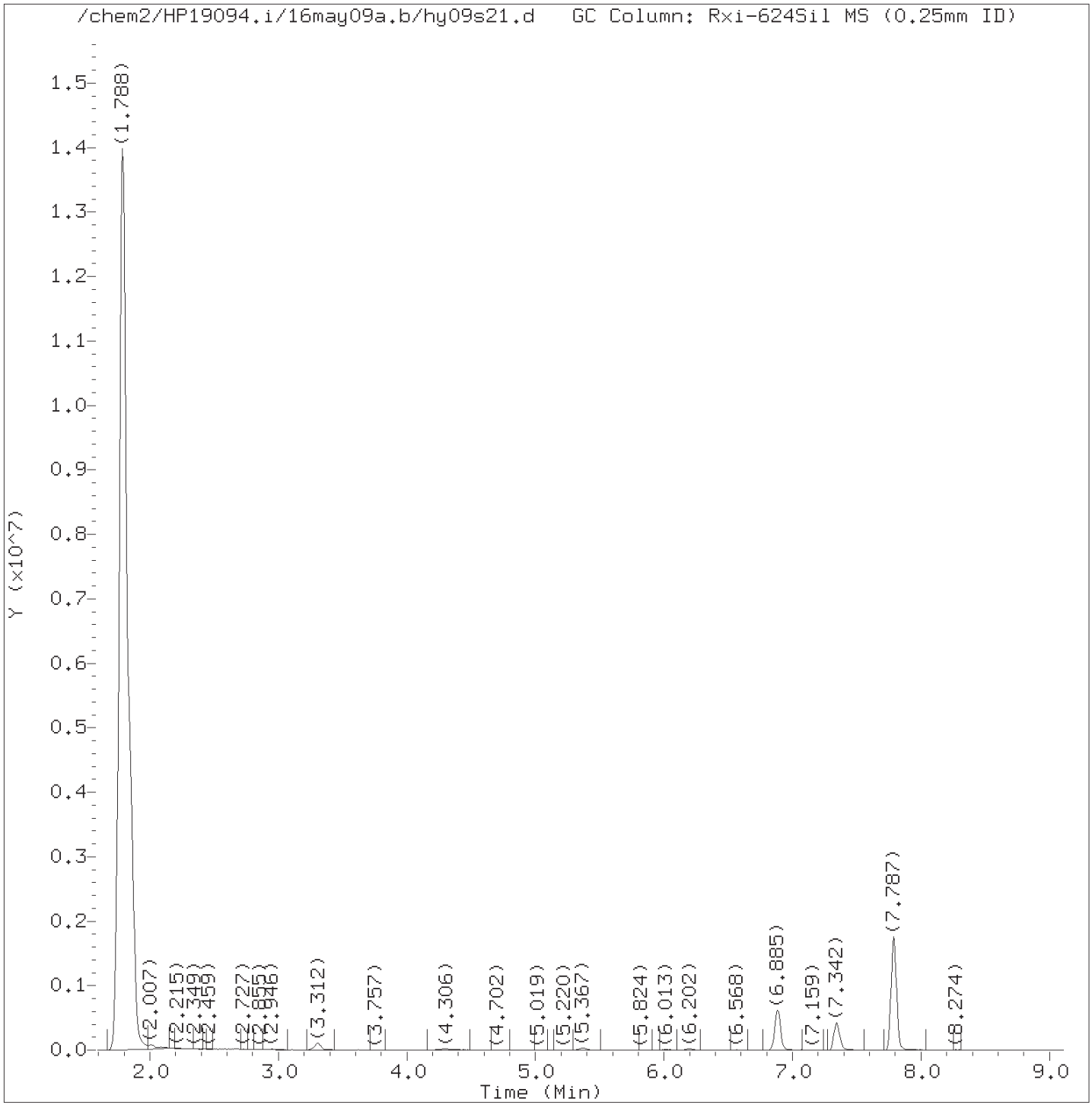
Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)				Not Detected					1	10
59) 1,2-Dichloroethane	(2)				Not Detected					1	10
67) Trichloroethene	(2)				Not Detected					2	10
70) 1,2-Dichloropropane	(2)				Not Detected					1	10
71) Methyl Methacrylate	(1)				Not Detected					36	100
73) Dibromomethane	(2)				Not Detected					1	10
72) 1,4-Dioxane	(1)				Not Detected					450	2000
74) Bromodichloromethane	(2)				Not Detected					1	10
81) 4-Methyl-2-Pentanone	(1)				Not Detected					10	100
83) Toluene	(3)				Not Detected					1	10
84) trans-1,3-Dichloropropene	(3)				Not Detected					1	10
86) Ethyl Methacrylate	(3)				Not Detected					8	100
88) 1,1,2-Trichloroethane	(3)				Not Detected					1	10
89) Tetrachloroethene	(3)				Not Detected					1	10
90) 1,3-Dichloropropane	(3)				Not Detected					1	10
91) 2-Hexanone	(1)				Not Detected					10	100
93) Dibromochloromethane	(3)				Not Detected					1	10
95) 1,2-Dibromoethane	(3)				Not Detected					1	10
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	10
100) Ethylbenzene	(3)				Not Detected					1	10
101) m+p-Xylene	(3)				Not Detected					1	30
104) o-Xylene	(3)				Not Detected					1	30
105) Xylene (Total)	(3)				Not Detected					2	30
106) Styrene	(3)				Not Detected					1	10
107) Bromoform	(3)				Not Detected					1	10
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					2	10
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					10	100
116) 1,2,3-Trichloropropane	(4)				Not Detected					3	10
126) Pentachloroethane	(4)				Not Detected					8	100
131) 1,3-Dichlorobenzene	(4)				Not Detected					1	10
134) 1,4-Dichlorobenzene	(4)				Not Detected					1	10
139) 1,2-Dichlorobenzene	(4)				Not Detected					1	10
142) Hexachloroethane	(4)				Not Detected					1	100
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					2	10
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	10
146) Hexachlorobutadiene	(4)				Not Detected					1	10
147) Naphthalene	(4)				Not Detected					1	10

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

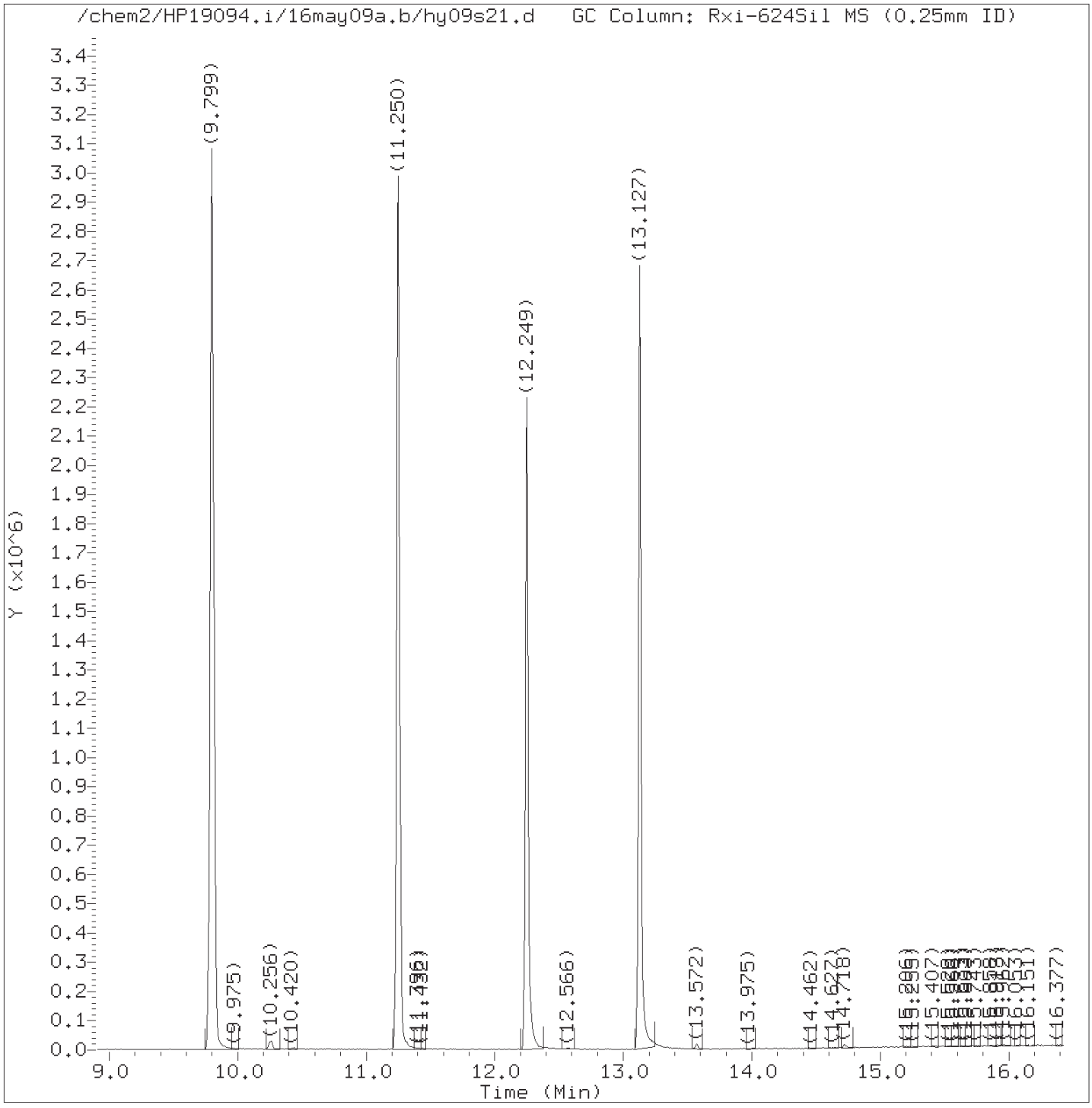
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6104DL Lab Sample ID: 8354936DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6104DL Lab Sample ID: 8354936DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

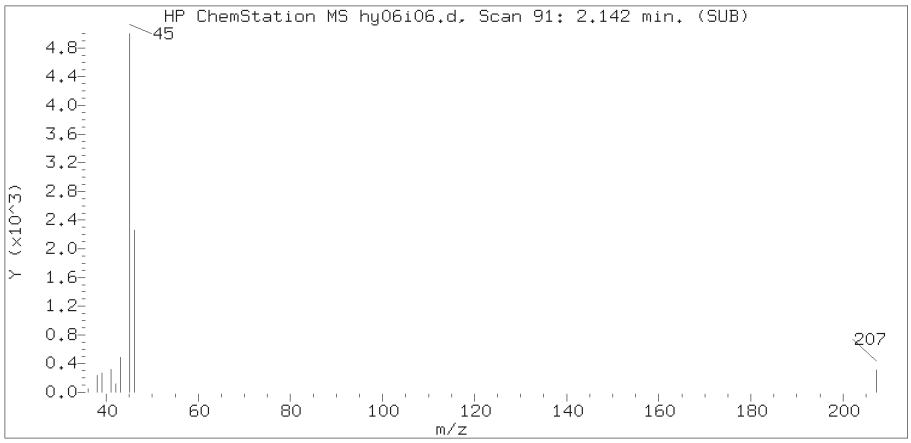
Sample Name: E6104DL Lab Sample ID: 8354936DL

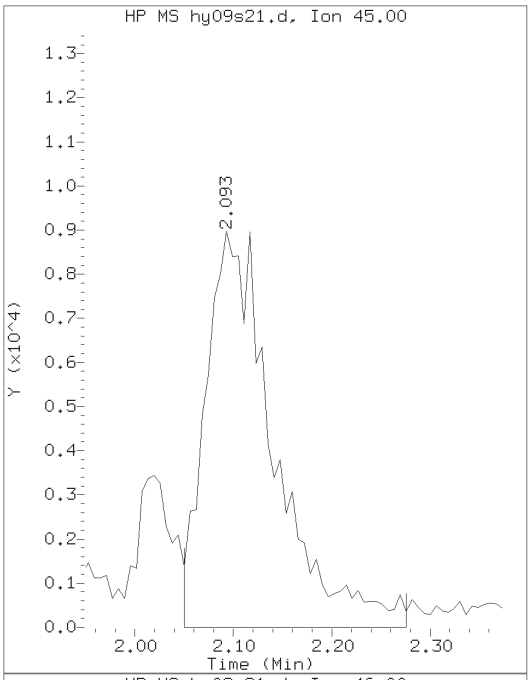
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	43928M	0.526
8) Chloroethane	(2)	2.721	64	9249	0.196
11) Ethyl ether	(2)	3.306	59	116079	2.825
26)*t-Butyl Alcohol-d10	(1)	4.294	65	68995	50.000
33) 1,1-Dichloroethane	(2)	5.373	63	61894	0.494
50)$Dibromofluoromethane	(2)	6.885	113	599794	10.472
57)$1,2-Dichloroethane-d4	(2)	7.342	102	96638	10.187
63)*Fluorobenzene	(2)	7.787	96	2430528	10.000
82)$Toluene-d8	(3)	9.799	98	2437142	10.091
97)*Chlorobenzene-d5	(3)	11.250	117	1695421	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	694471	8.920
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	715899	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

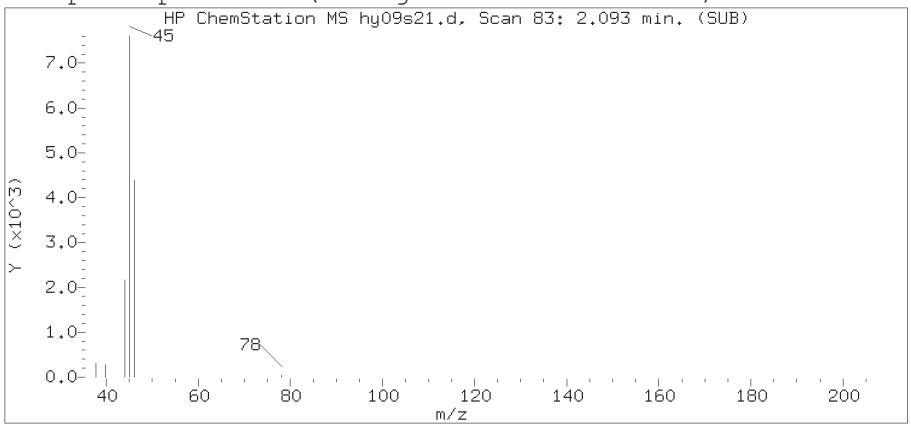
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

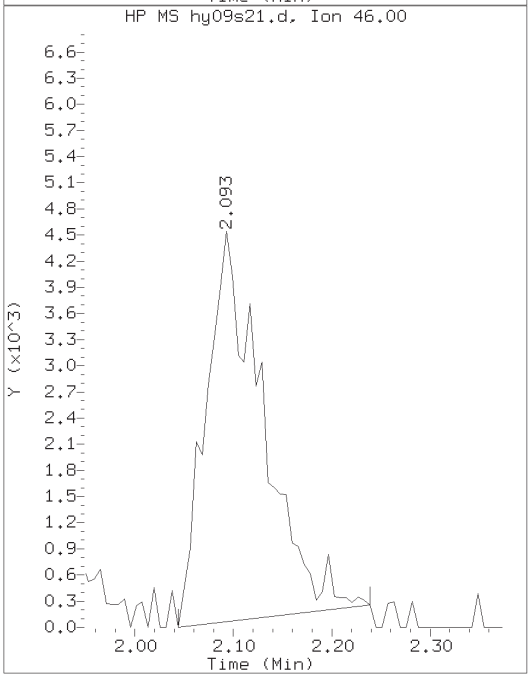
Reference Standard Spectrum for Dimethyl ether



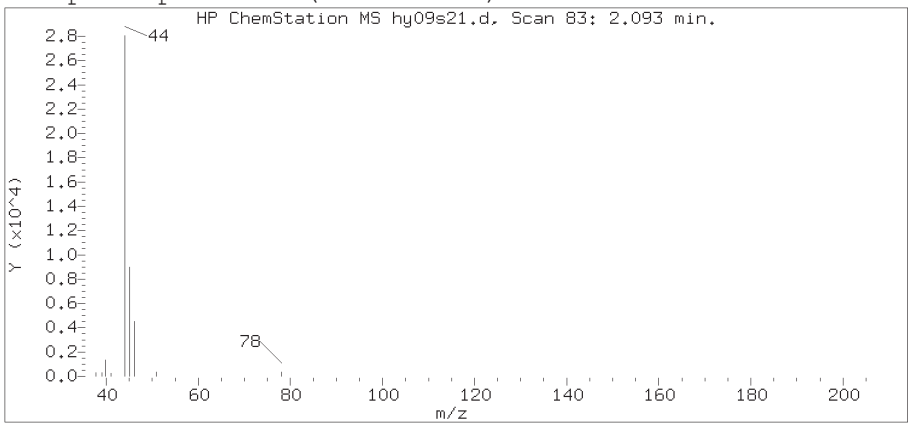


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

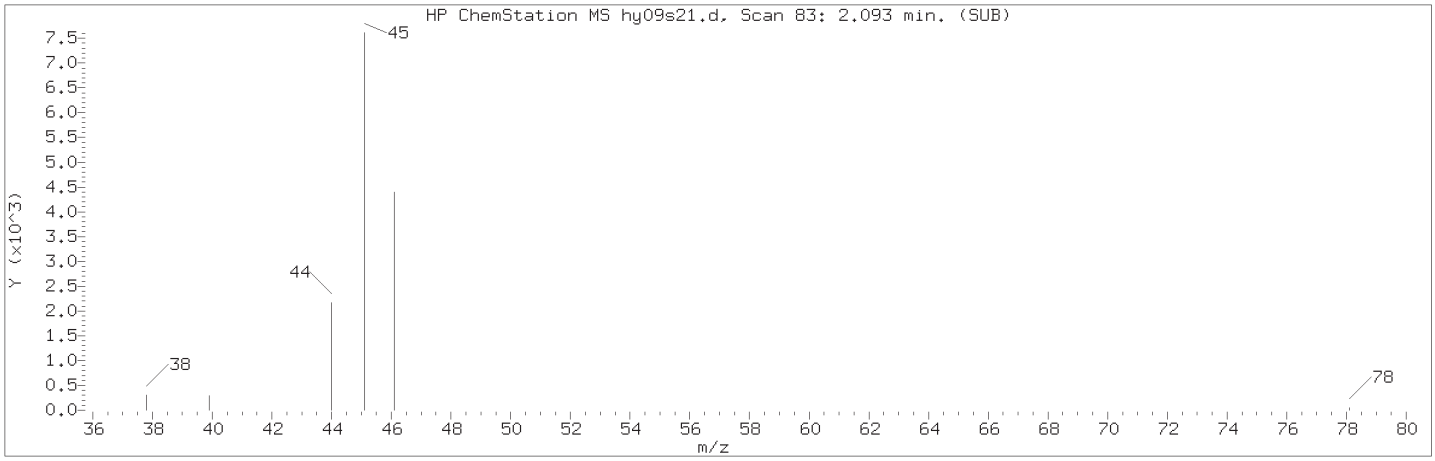
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6104DL Lab Sample ID: 8354936DL

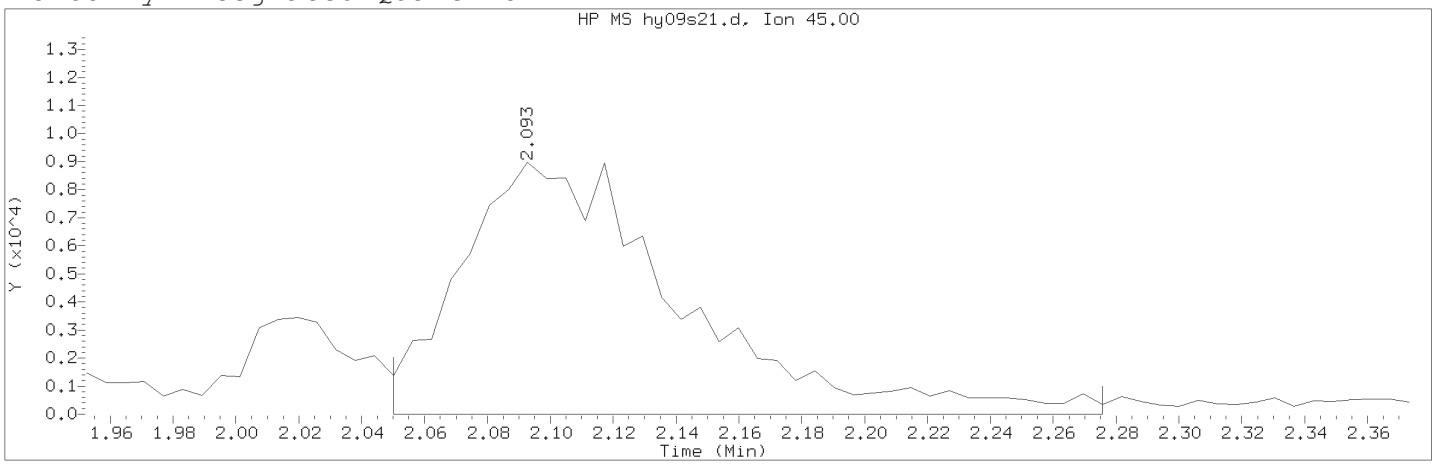
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Relative Retention Time : 0.00058
Quant Ion : 45.00
Area (flag) : 43928M
On-Column Amount (ng) : 0.5263

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6104DL Lab Sample ID: 8354936DL

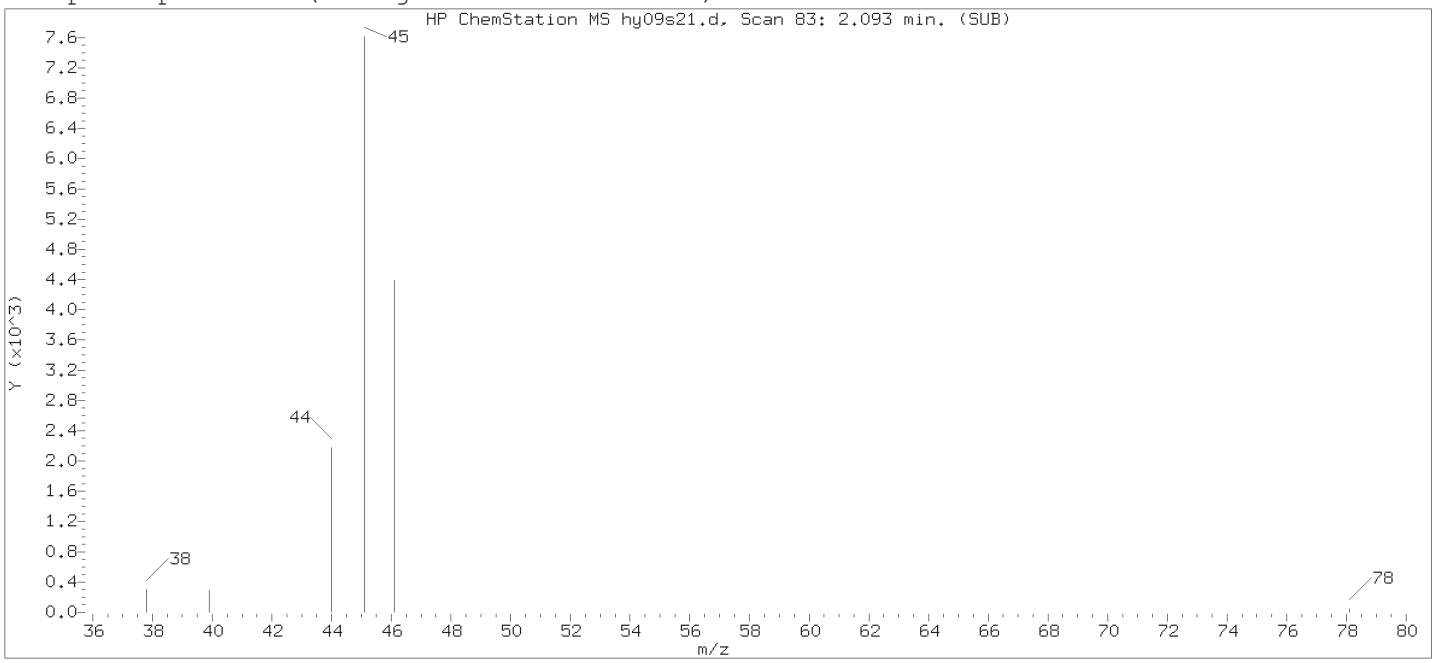
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 43928M
On-Column Amount (ng) : 0.5263
Integration start scan : 75 Integration stop scan: 112
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

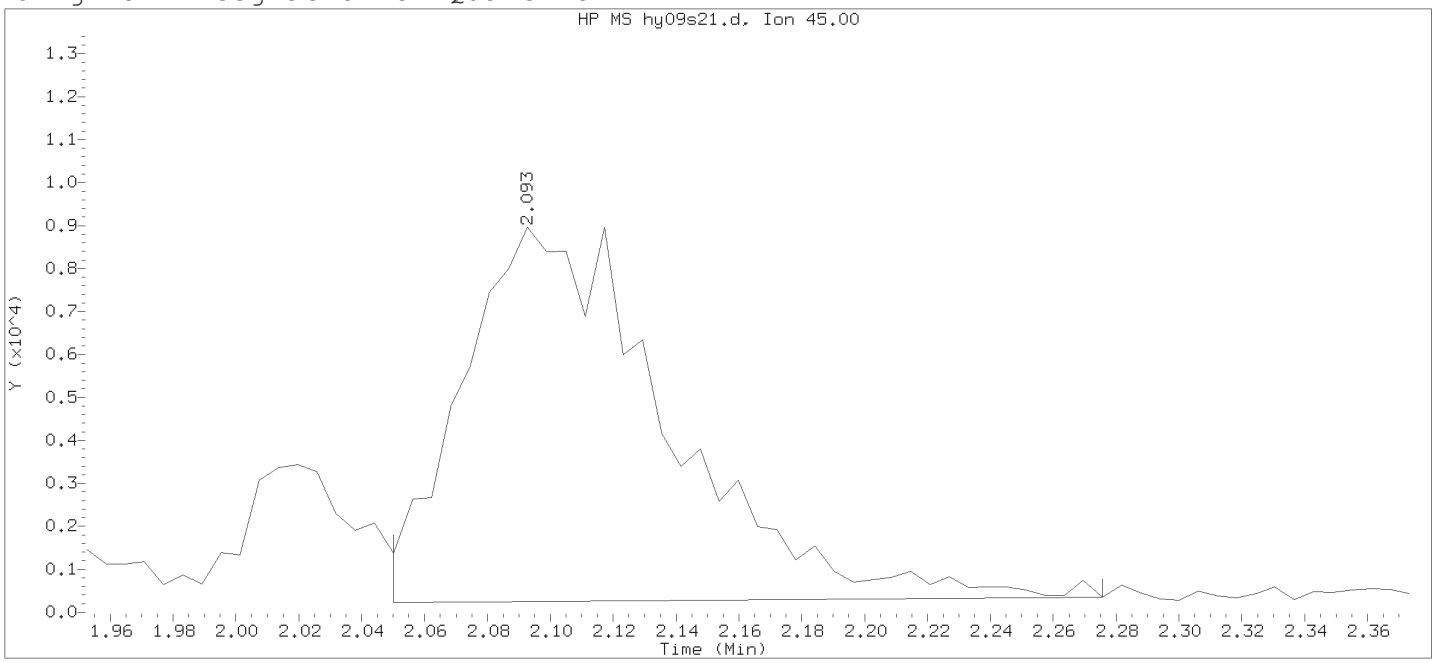
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

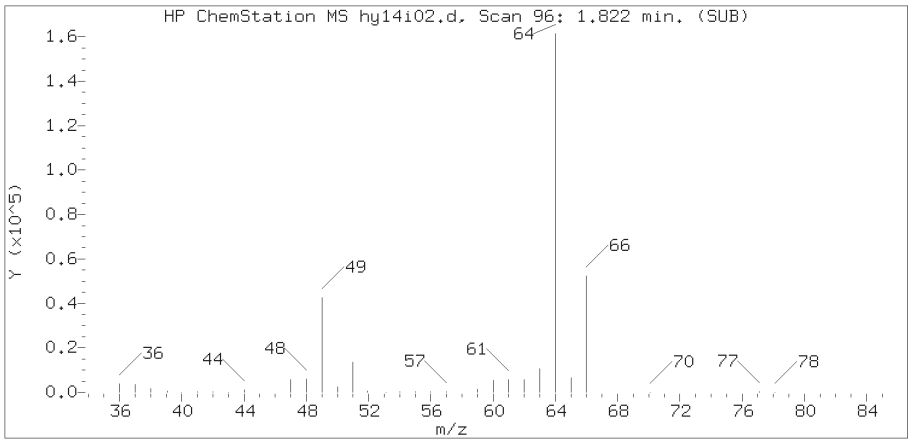
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 18:21 Automation

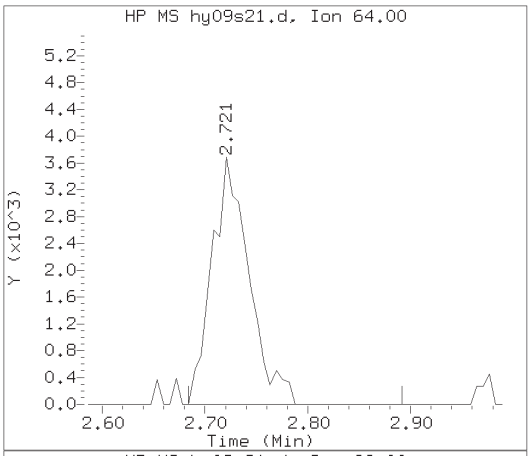
Sample Name: E6104DL Lab Sample ID: 8354936DL

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 83		
Retention Time (minutes)	: 2.093		
Quant Ion	: 45.00		
Area	: 39733		
On-column Amount (ng)	: 0.4760		
Integration start scan	: 75	Integration stop scan:	112
Y at integration start	: 218	Y at integration end:	355

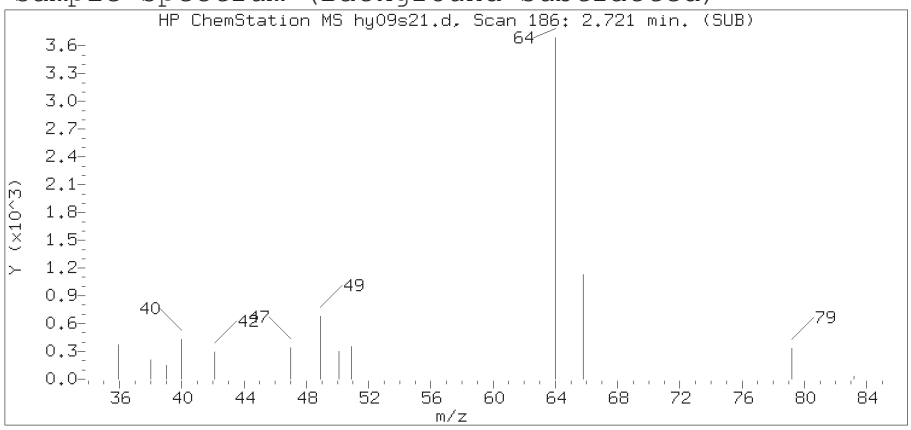
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

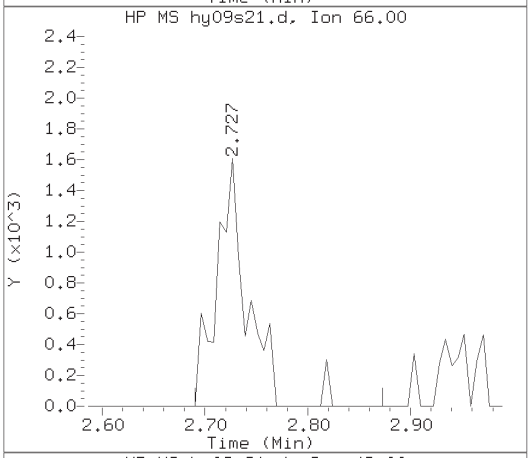
Reference Standard Spectrum for Chloroethane



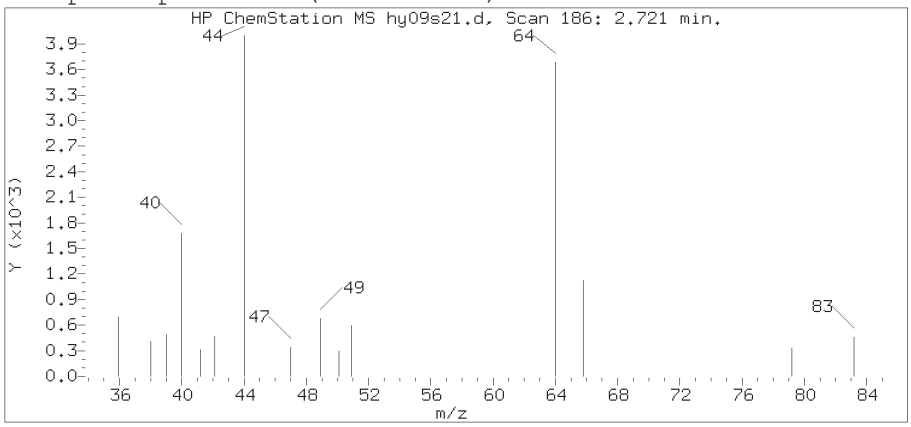


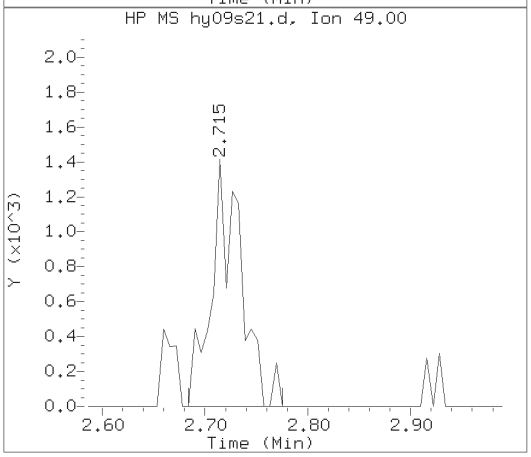
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

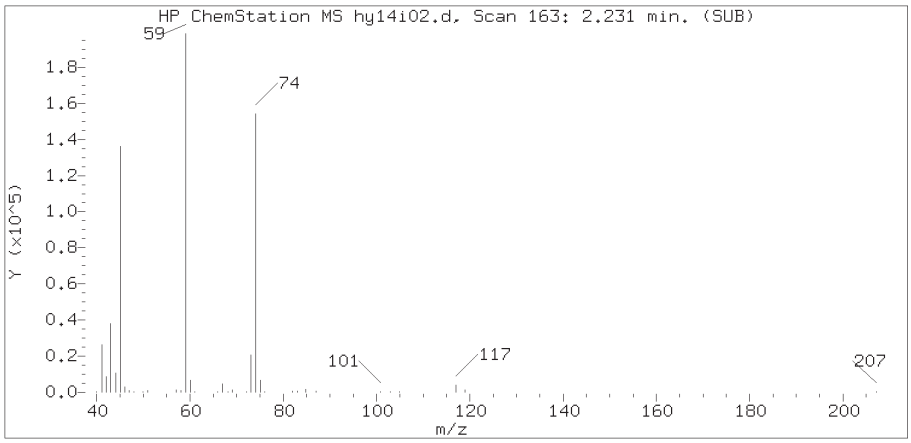
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

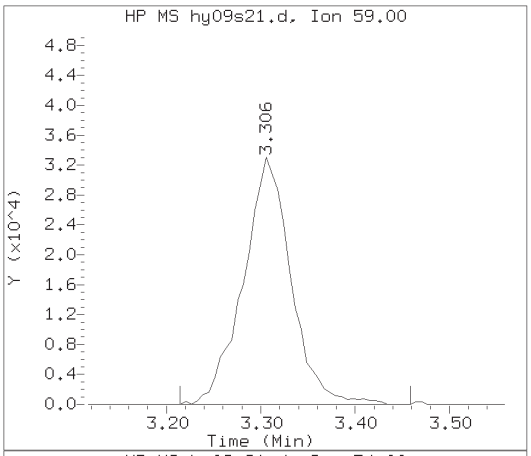
Sample Name: E6104DL Lab Sample ID: 8354936DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 186
Retention Time (minutes): 2.721
Relative Retention Time :-0.00028
Quant Ion : 64.00
Area (flag) : 9249
On-Column Amount (ng) : 0.1963

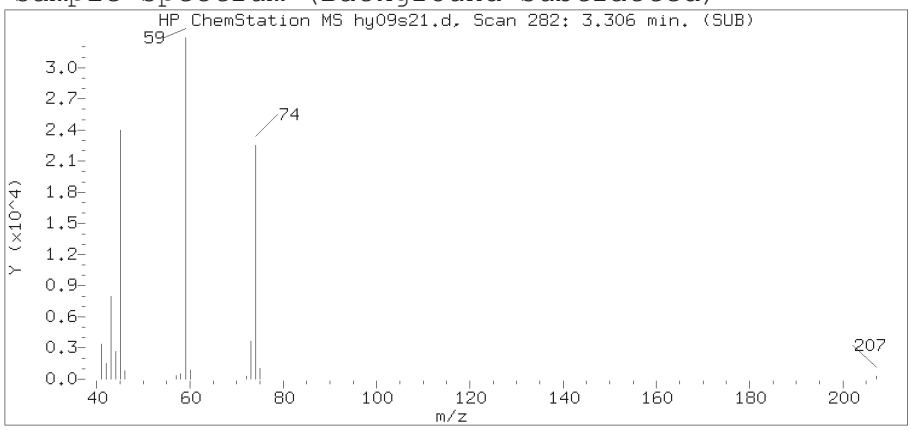
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible] Date: 2016.05.12 08:11:13

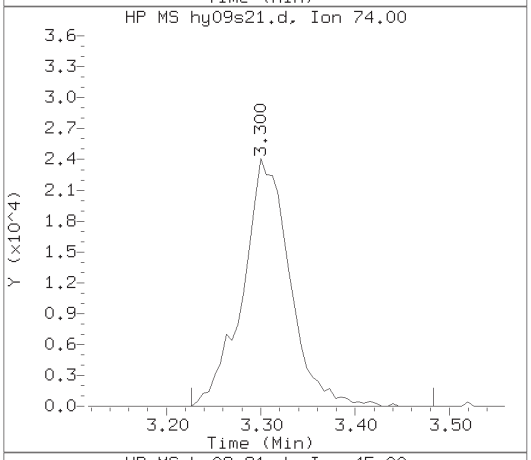
Reference Standard Spectrum for Ethyl ether



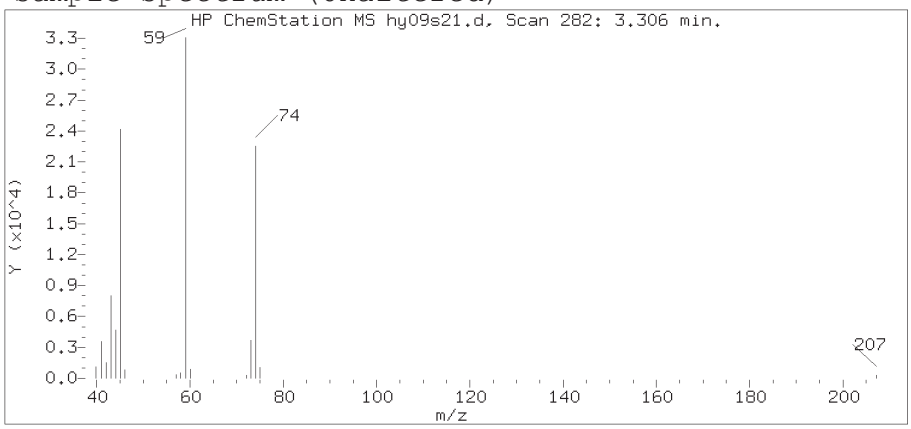


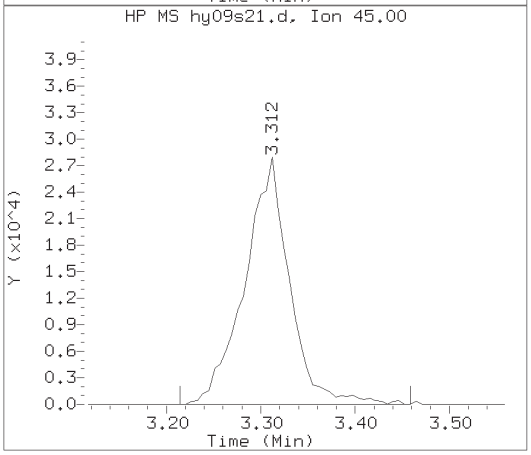
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

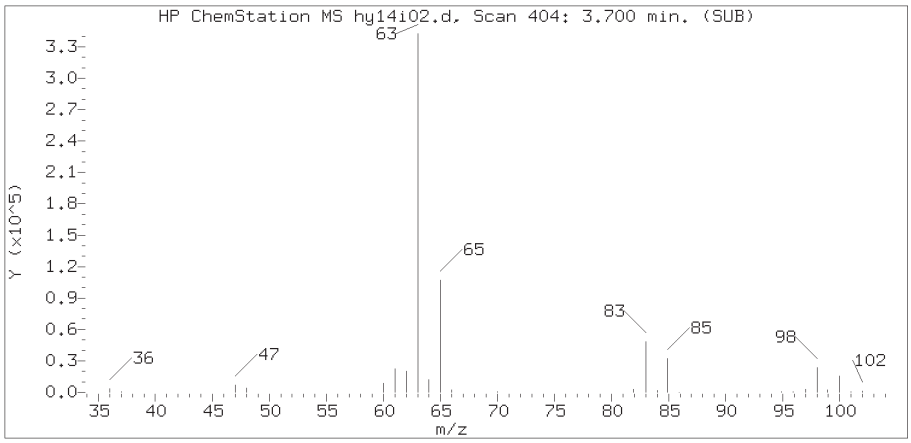
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

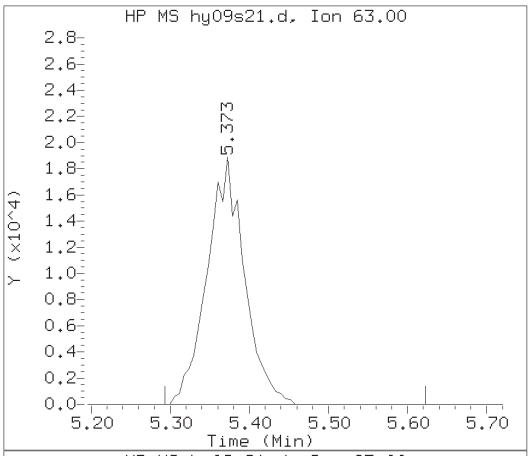
Sample Name: E6104DL Lab Sample ID: 8354936DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 282
Retention Time (minutes): 3.306
Relative Retention Time :-0.00034
Quant Ion : 59.00
Area (flag) : 116079
On-Column Amount (ng) : 2.8252

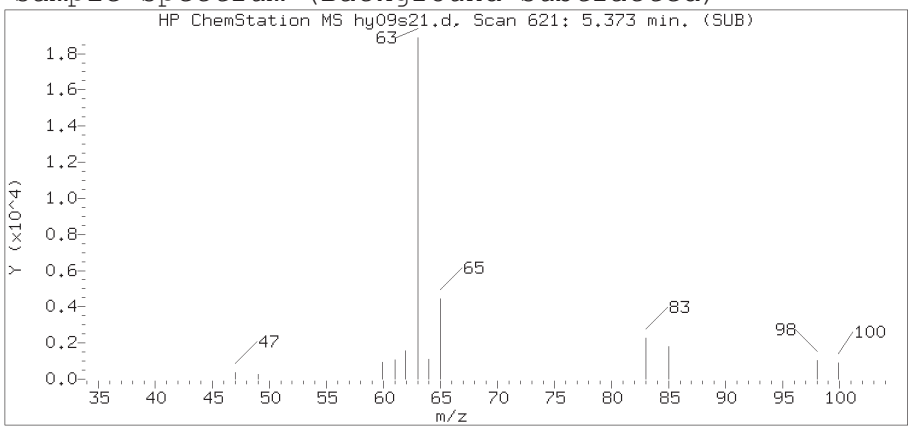
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

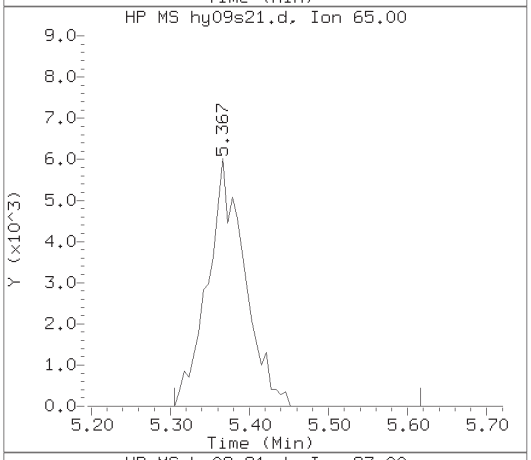
Reference Standard Spectrum for 1,1-Dichloroethane



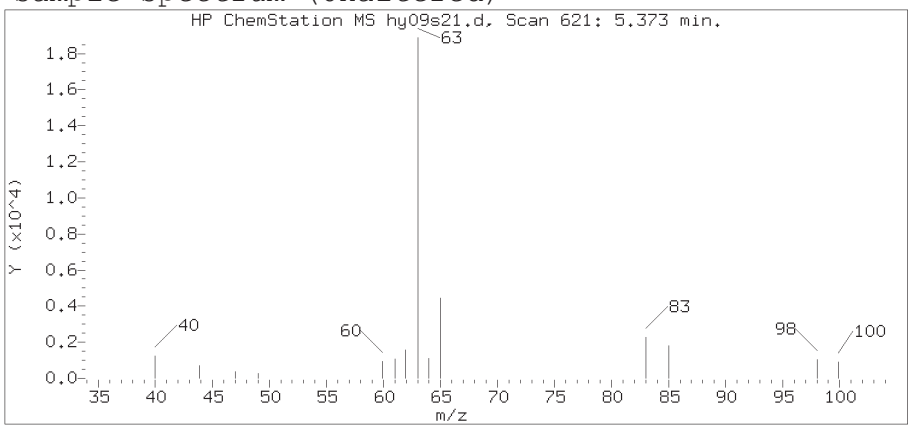


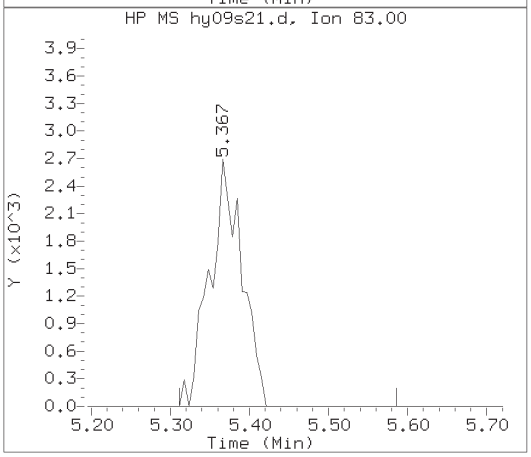
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s21.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6104DL Lab Sample ID: 8354936DL

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 621
Retention Time (minutes): 5.373
Relative Retention Time :-0.00132
Quant Ion : 63.00
Area (flag) : 61894
On-Column Amount (ng) : 0.4935

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

E6105 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354939

Data file: /chem/HP09915.i/16may09a.b/ly09s39.d Injection date and time: **09-MAY-2016 19:08**
Data file Sample Info. Line: E6105;8354939;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 19:27 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.990	(0.006)	749	65	237632	(-5)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1501097	(-1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1129286	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	584674	(-7)	50.00	

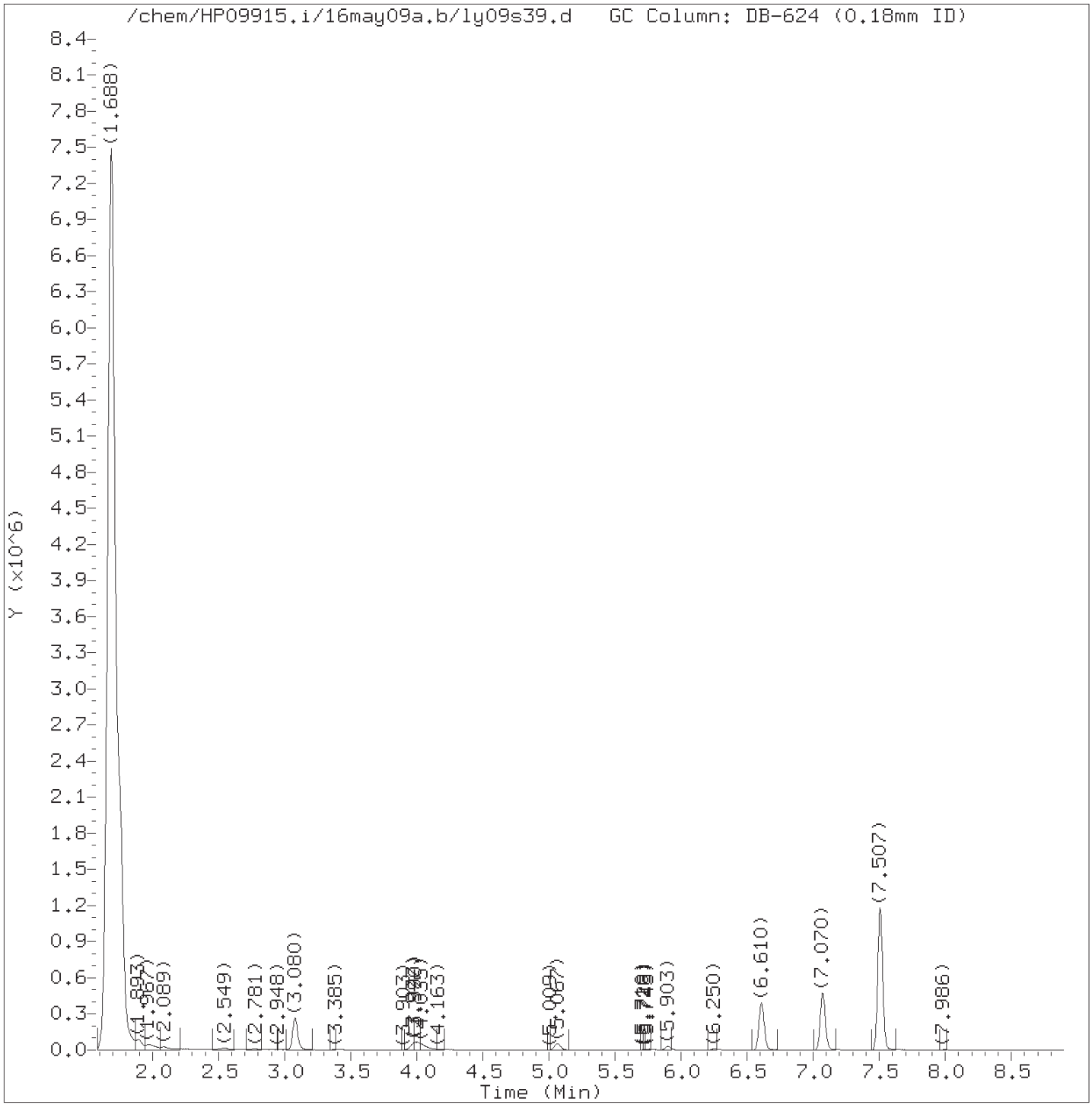
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	346978	48.655	97%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.070	(0.000)	102	90419	50.222	100%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1467028	49.630	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.054	(0.000)	95	550319	50.310	101%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 19:41. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:02. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

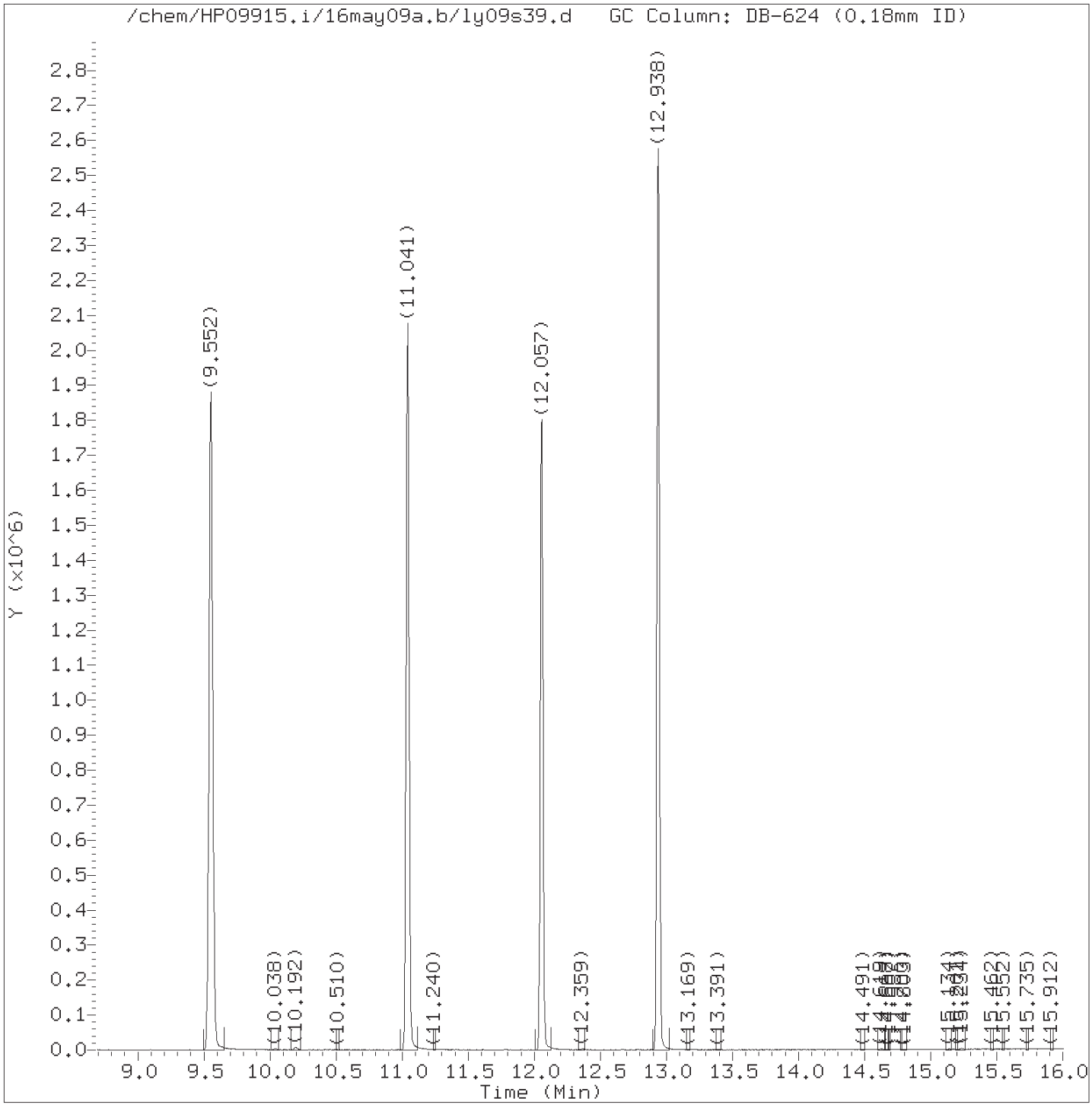
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s39.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:08 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:27 Automation

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s39.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:08 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:27 Automation

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s39.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:08 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:27 Automation

Sample Name: E6105 Lab Sample ID: 8354939

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.990	65	237632	250.000
52)$Dibromofluoromethane	(2)	6.610	113	346978	48.655
57)$1,2-Dichloroethane-d4	(2)	7.070	102	90419	50.222
66)*Fluorobenzene	(2)	7.507	96	1501097	50.000
83)$Toluene-d8	(3)	9.552	98	1467028	49.630
100)*Chlorobenzene-d5	(3)	11.041	117	1129286	50.000
114)$4-Bromofluorobenzene	(3)	12.054	95	550319	50.310
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	584674	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 19:41.
Target 3.5 esignature user ID: cmc07494

Data file: /chem2/HP19094.i/16may09a.b/hy09s09.d Injection date and time: **09-MAY-2016 13:58**
Data file Sample Info. Line: E6105;8354939;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.293(-0.030)	444	65	94191 (5)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2426827 (1)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1638797 (-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	702261 (-20)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	581992	10.177	102%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354(-0.001)	102	97986	10.345	103%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2389030	10.233	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	701492	9.322	93%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.020(-0.001)	85	13347	0.160	0.16		J	0.1	1
4) Dimethyl ether	(2)	2.105(-0.000)	45	380391	4.564	4.56		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)	2.306(-0.001)	62	17976	0.235	0.24		J	0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)	2.733(-0.001)	64	112709	2.395	2.40			0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)	3.312(-0.000)	59	1272444	31.017	31.02		E	1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)	4.294(-0.001)	84	24552	0.403	0.40		J	0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.379(-0.001)	63	737700	5.891	5.89			0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)	6.561(0.008)	71	12514	3.923	3.92		J	2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s09.d Injection date and time: **09-MAY-2016 13:58**
Data file Sample Info. Line: E6105;8354939;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

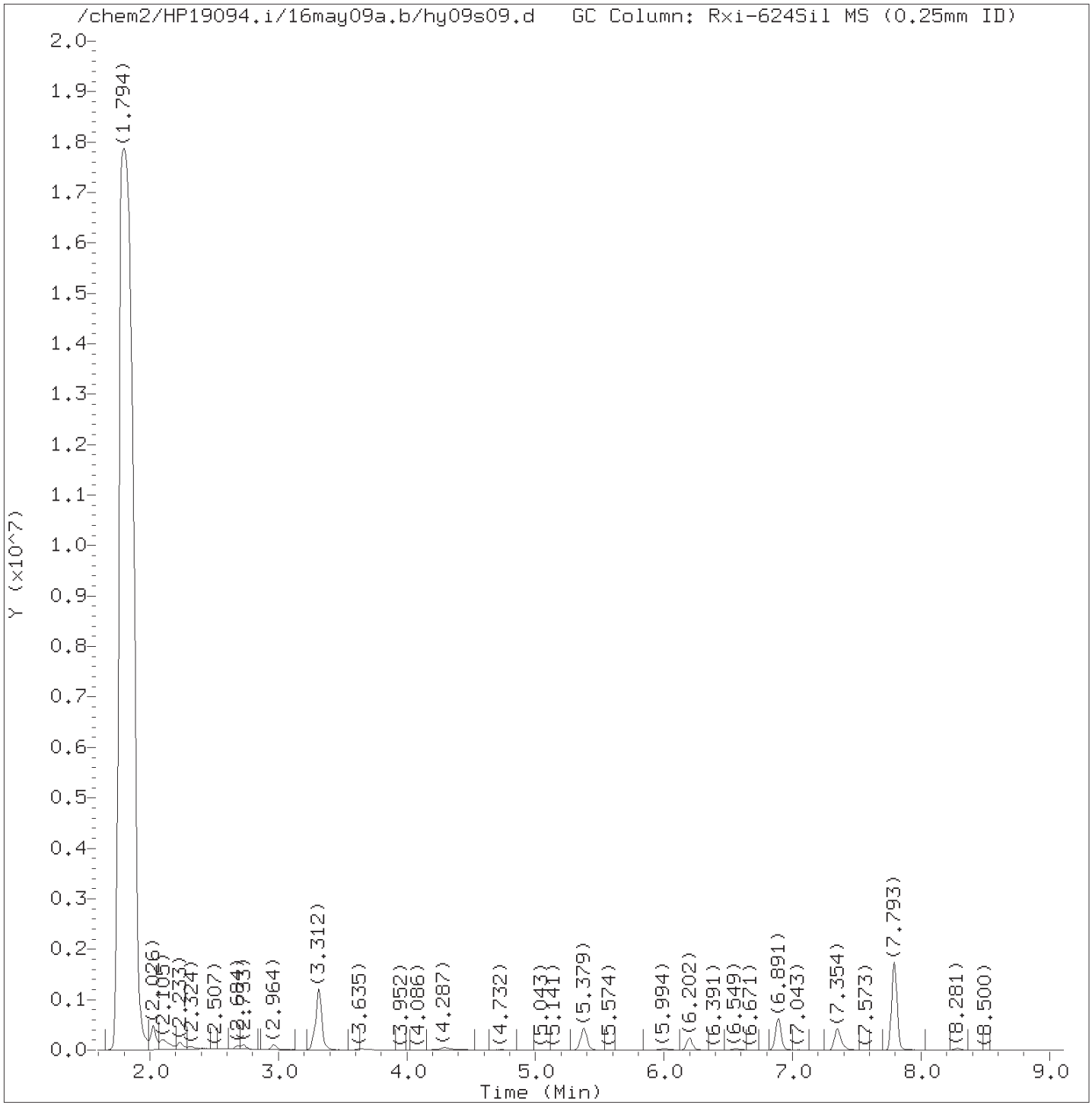
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)	7.396(-0.000)	78	91220	0.350	0.35		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)	8.280(-0.000)	95	16308	0.240	0.24		J	0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.432(-0.000)	166	22316	0.300	0.30		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

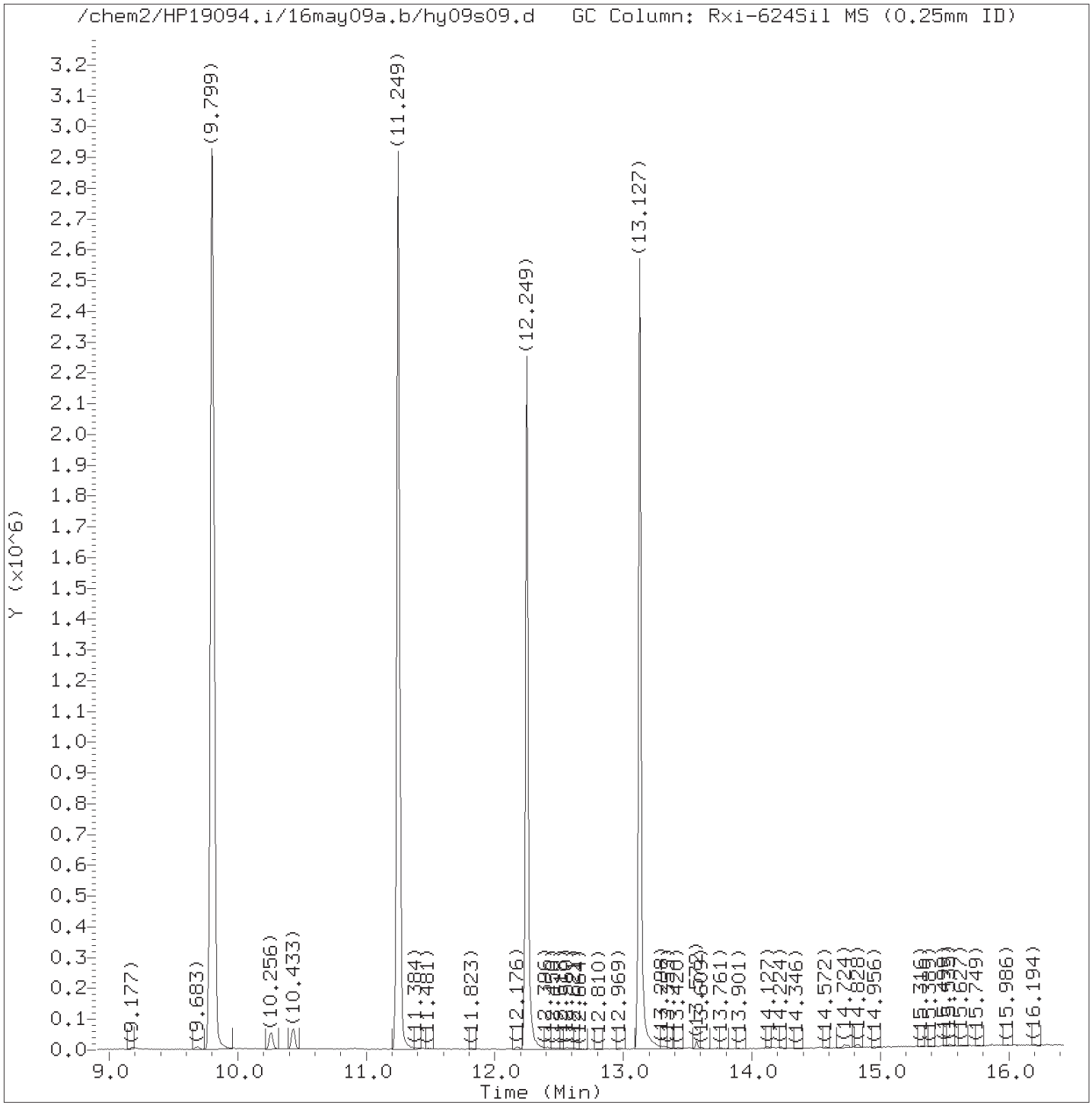
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

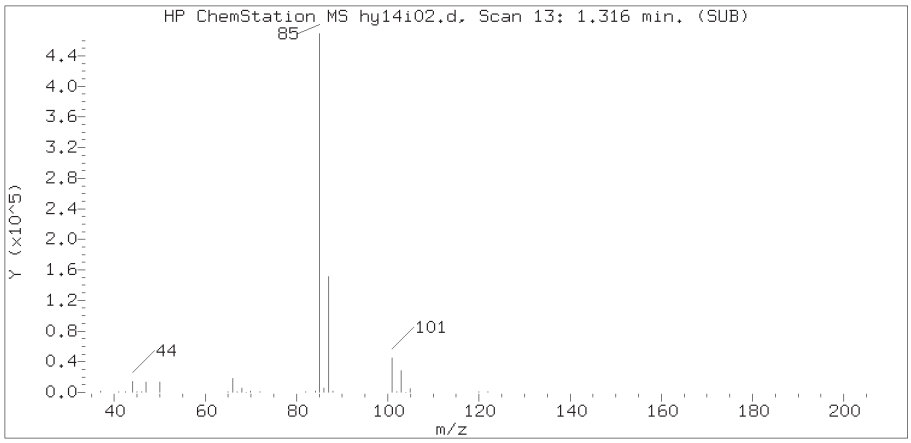
Sample Name: E6105 Lab Sample ID: 8354939

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.020	85	13347	0.160
4) Dimethyl ether	(2)	2.105	45	380391	4.564
5) Vinyl Chloride	(2)	2.306	62	17976	0.235
8) Chloroethane	(2)	2.733	64	112709	2.395
11) Ethyl ether	(2)	3.312	59	1272444	31.017
23) Methylene Chloride	(2)	4.293	84	24552	0.403
26)*t-Butyl Alcohol-d10	(1)	4.293	65	94191	50.000
33) 1,1-Dichloroethane	(2)	5.379	63	737700	5.891
48) Tetrahydrofuran	(1)	6.561	71	12514	3.923
50)$Dibromofluoromethane	(2)	6.891	113	581992	10.177
57)$1,2-Dichloroethane-d4	(2)	7.354	102	97986	10.345
58) Benzene	(2)	7.397	78	91220	0.350
63)*Fluorobenzene	(2)	7.793	96	2426827	10.000
67) Trichloroethene	(2)	8.281	95	16308	0.240
82)$Toluene-d8	(3)	9.799	98	2389030	10.233
89) Tetrachloroethene	(3)	10.433	166	22316	0.300
97)*Chlorobenzene-d5	(3)	11.249	117	1638797	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	701492	9.322
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	702261	10.000

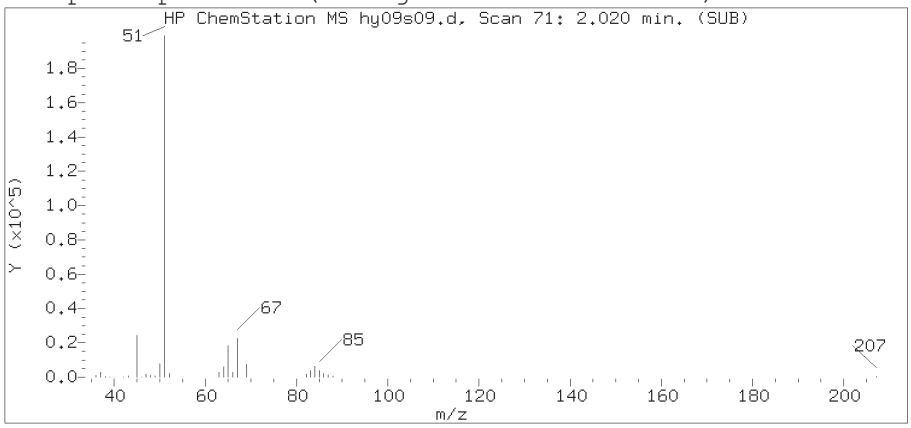
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

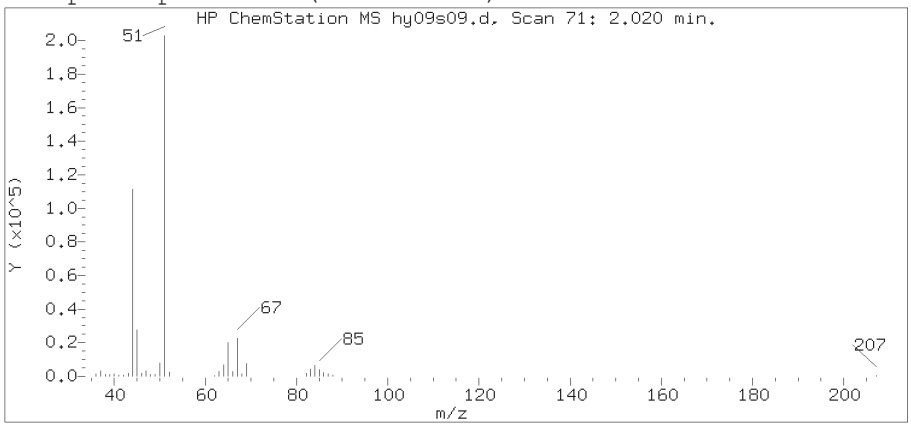
Reference Standard Spectrum for Dichlorodifluoromethane

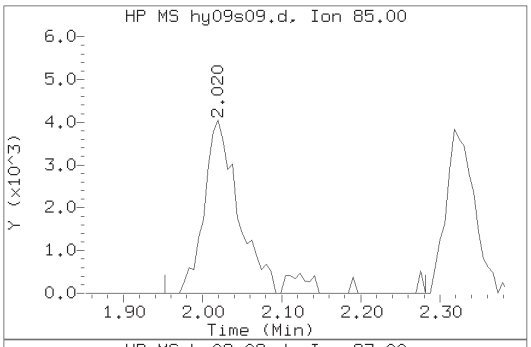


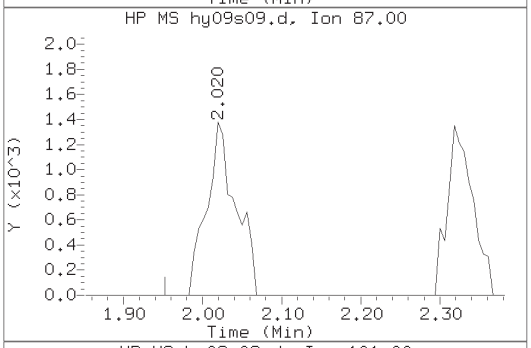
Sample Spectrum (Background Subtracted)

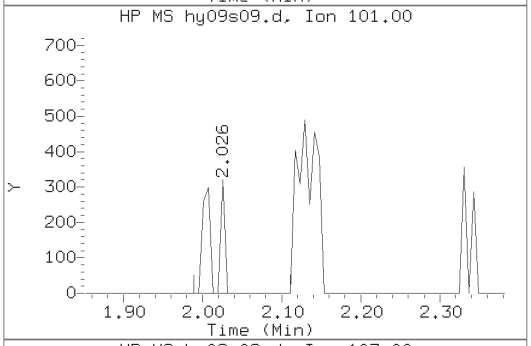


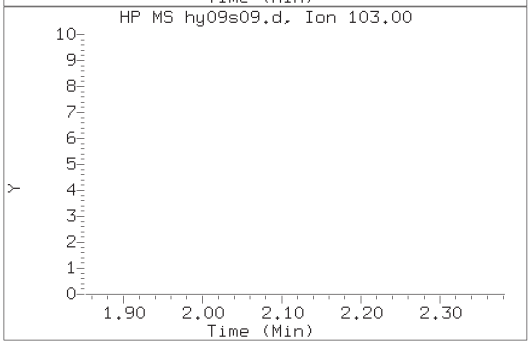
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

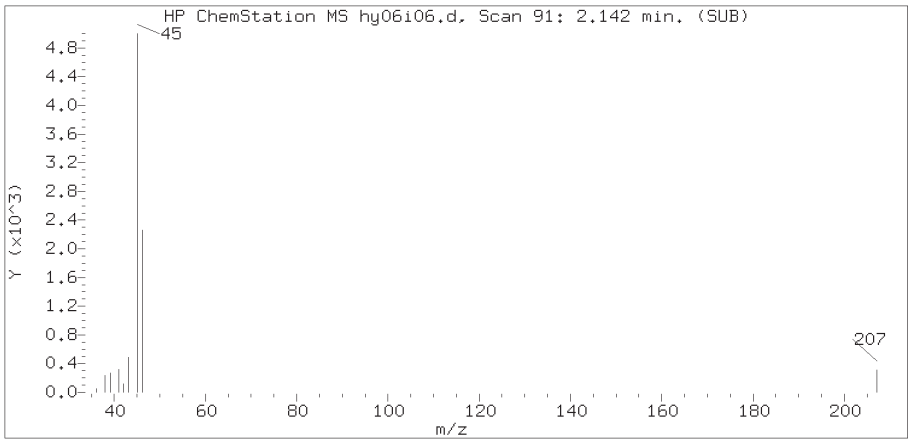
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

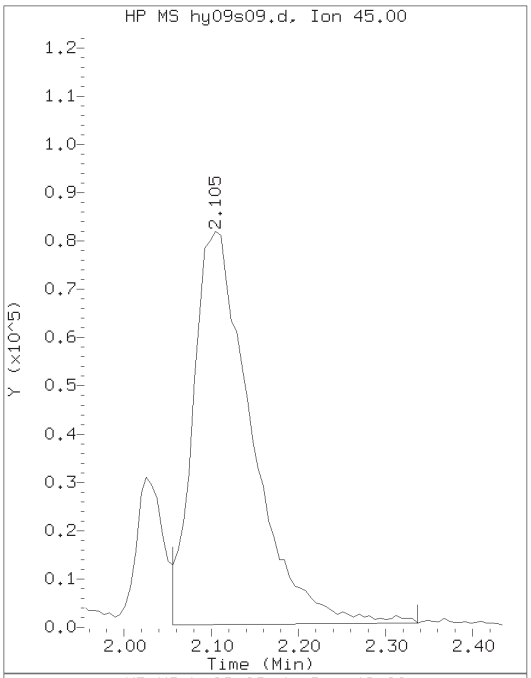
Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 71
Retention Time (minutes): 2.020
Relative Retention Time :-0.00156
Quant Ion : 85.00
Area (flag) : 13347
On-Column Amount (ng) : 0.1595

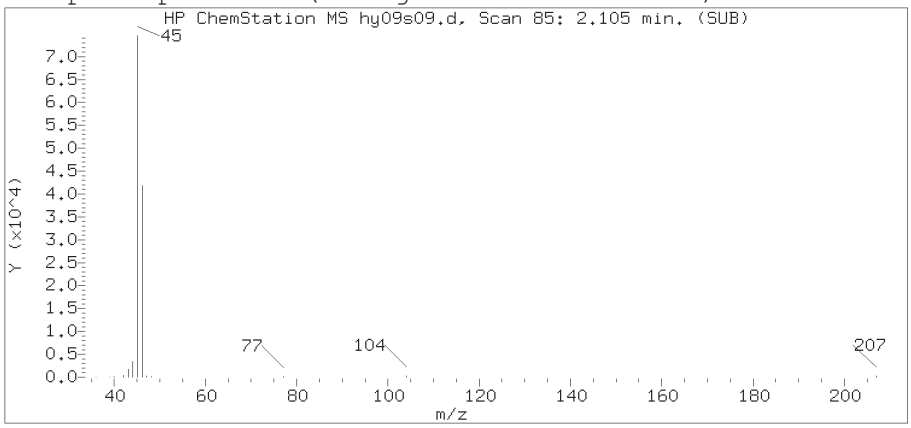
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

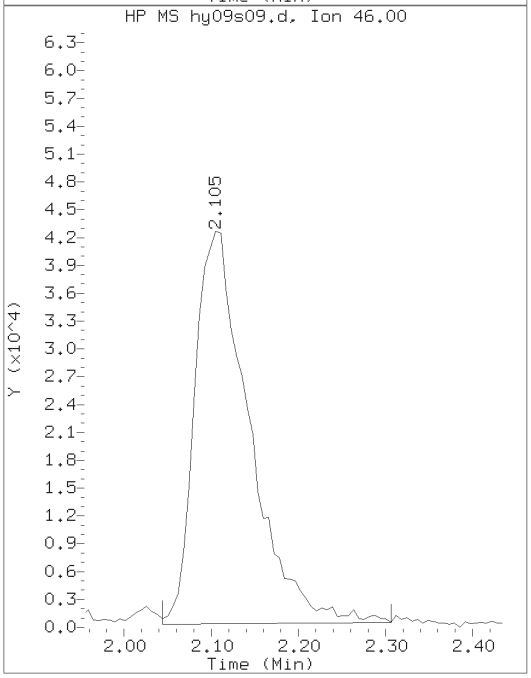
Reference Standard Spectrum for Dimethyl ether



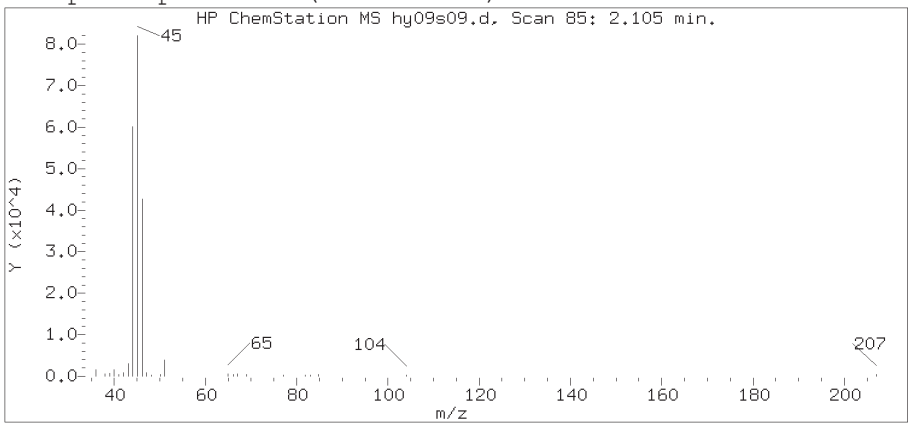


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

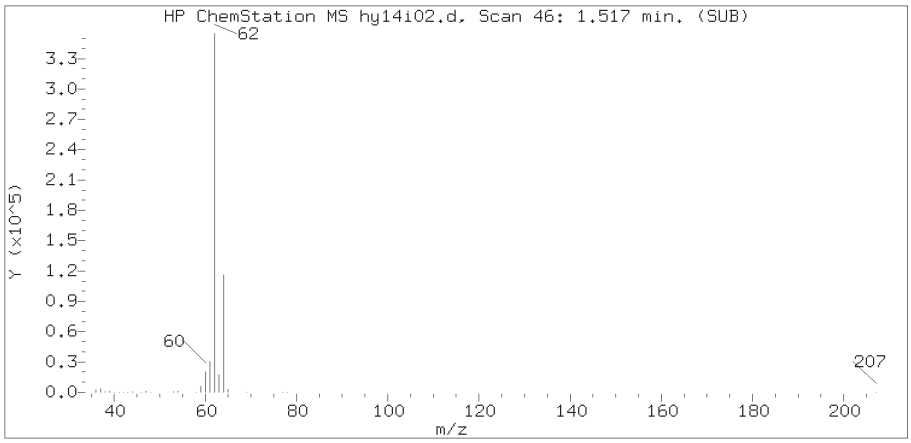
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

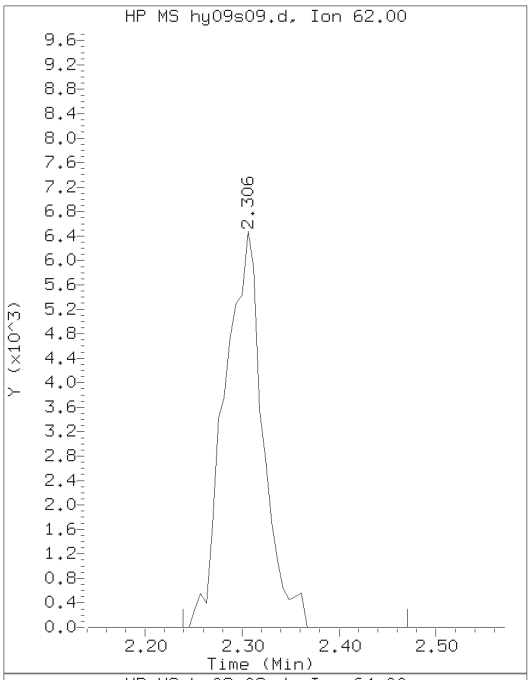
Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Relative Retention Time :-0.00076
Quant Ion : 45.00
Area (flag) : 380391
On-Column Amount (ng) : 4.5640

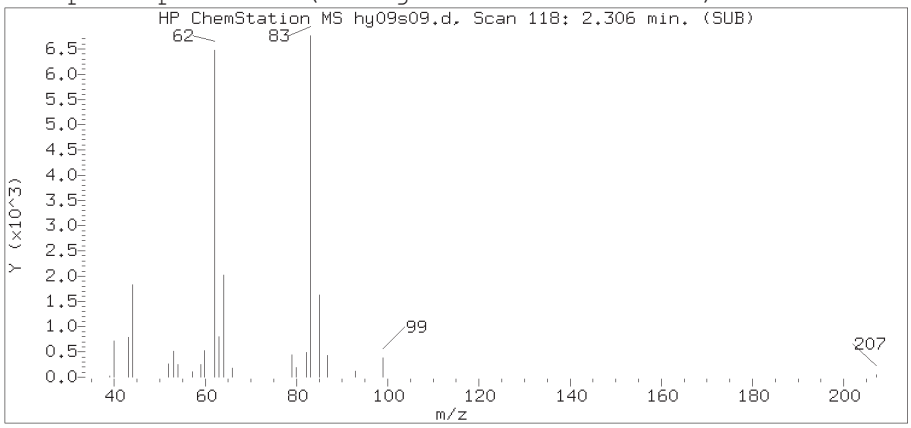
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

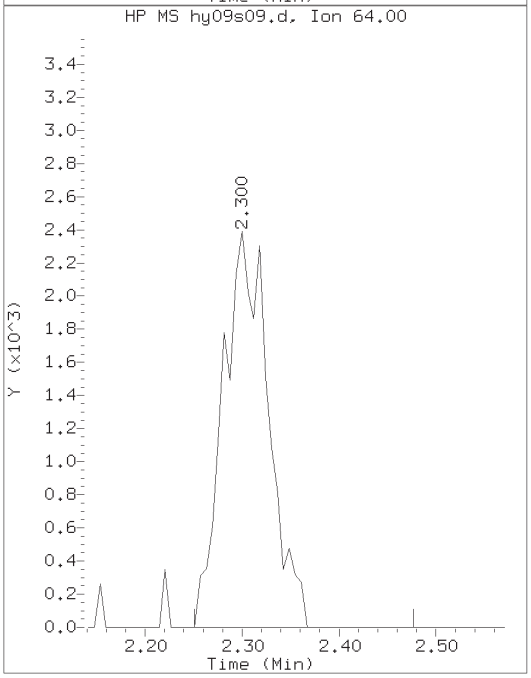
Reference Standard Spectrum for Vinyl Chloride



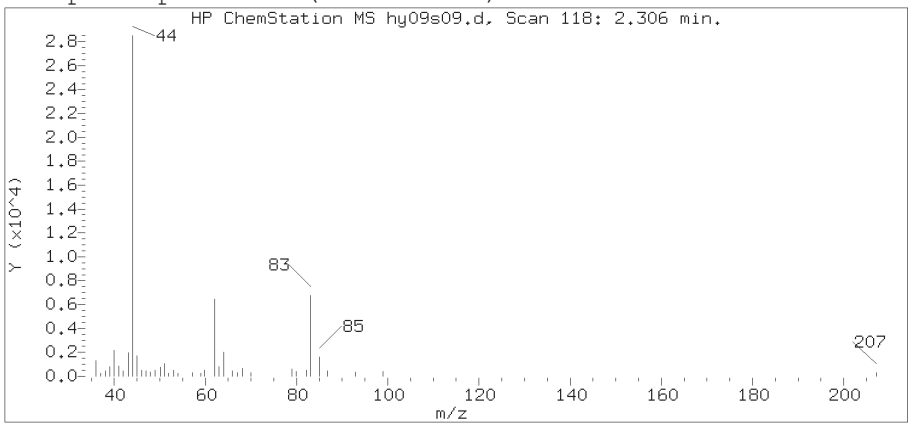


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

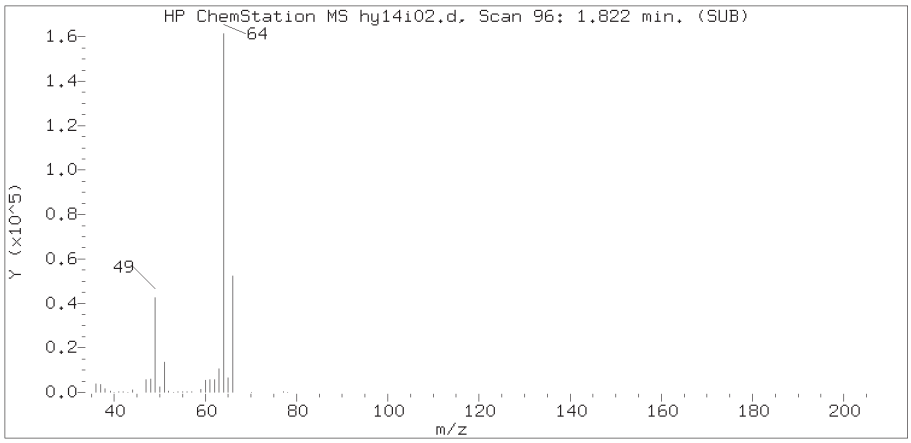
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

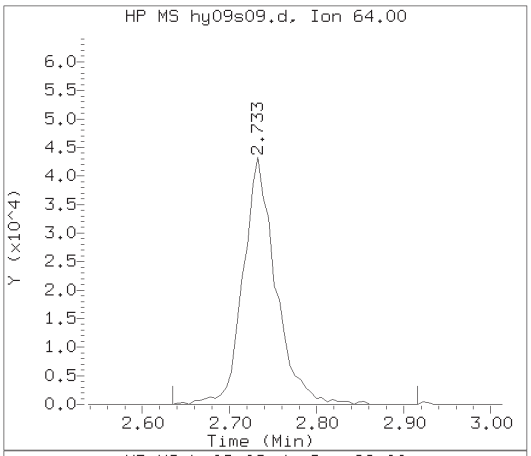
Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 118
Retention Time (minutes): 2.306
Relative Retention Time :-0.00156
Quant Ion : 62.00
Area (flag) : 17976
On-Column Amount (ng) : 0.2355

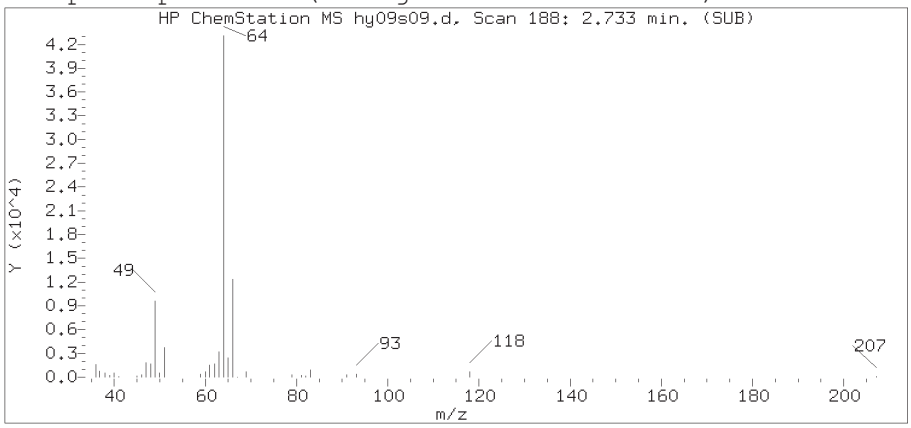
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

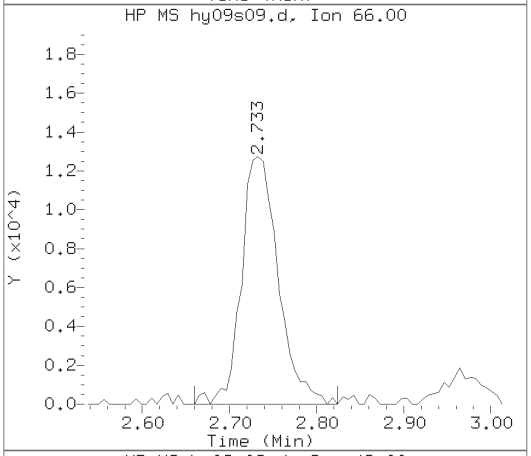
Reference Standard Spectrum for Chloroethane



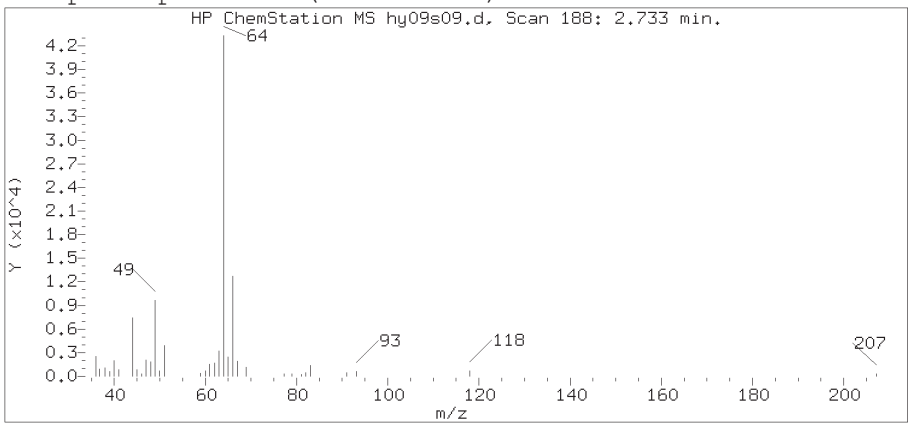


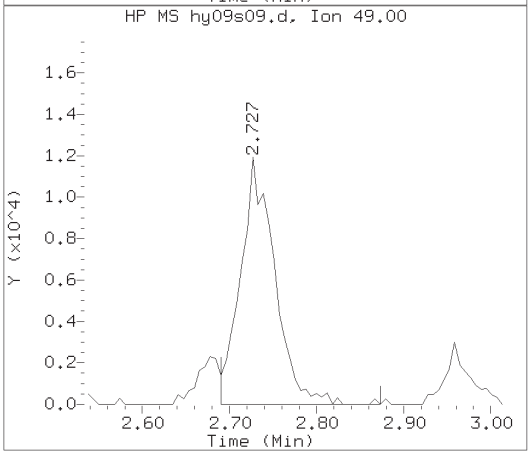
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 188
Retention Time (minutes): 2.733
Relative Retention Time :-0.00156
Quant Ion : 64.00
Area (flag) : 112709
On-Column Amount (ng) : 2.3954

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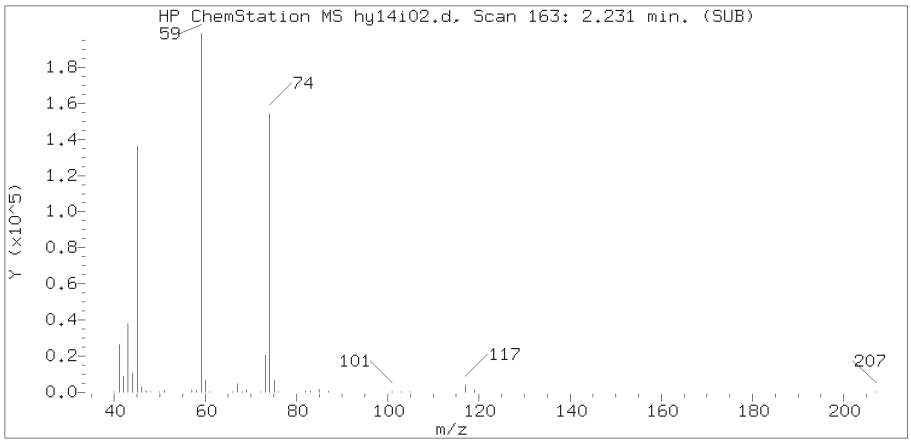
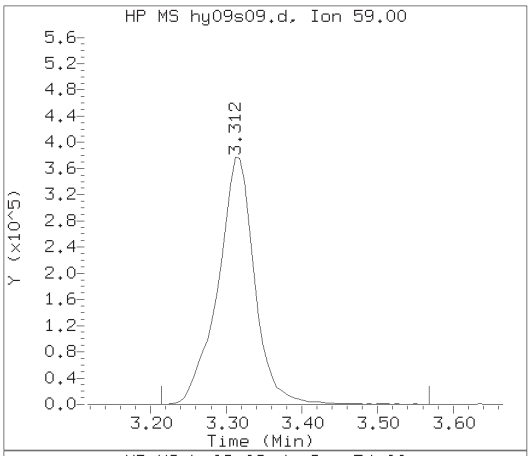
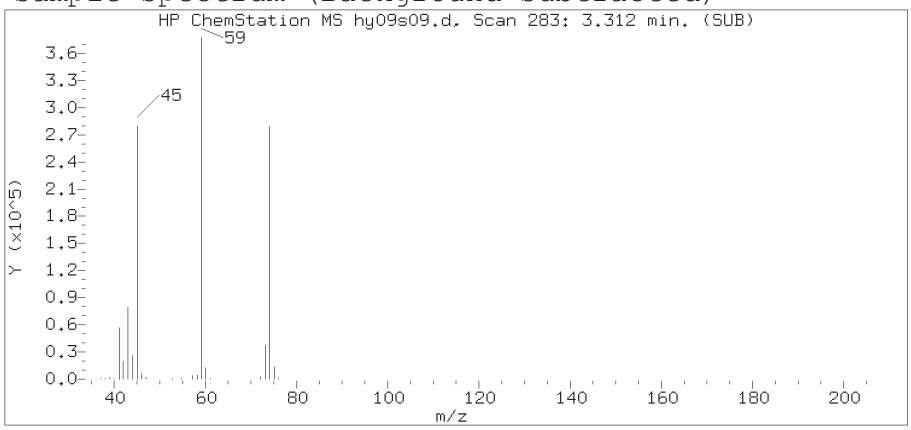
Target 3.5 esignature [illegible]

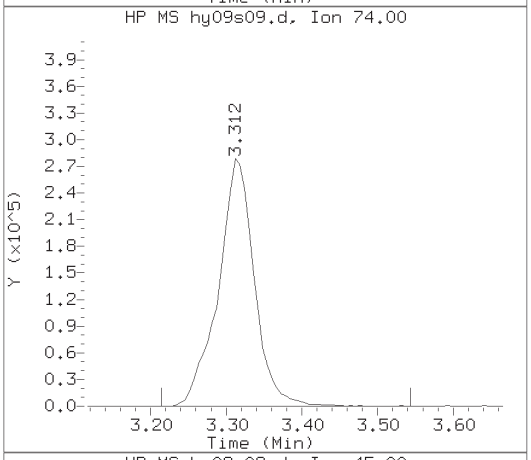
Reference Standard Spectrum for Ethyl ether



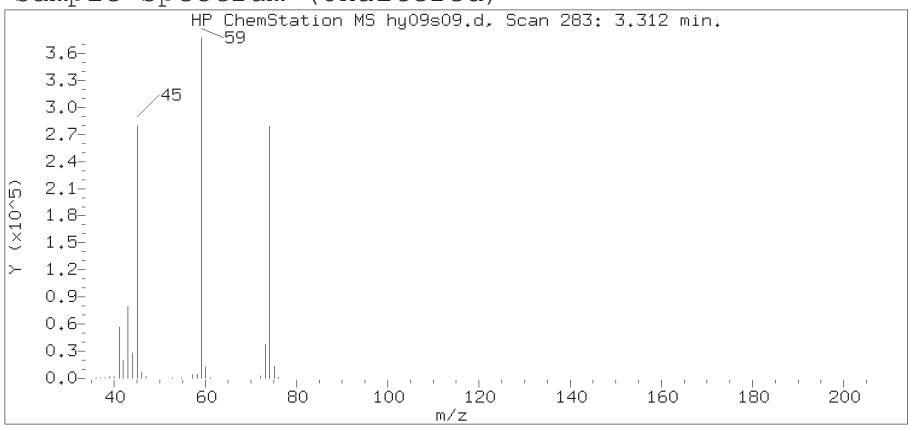


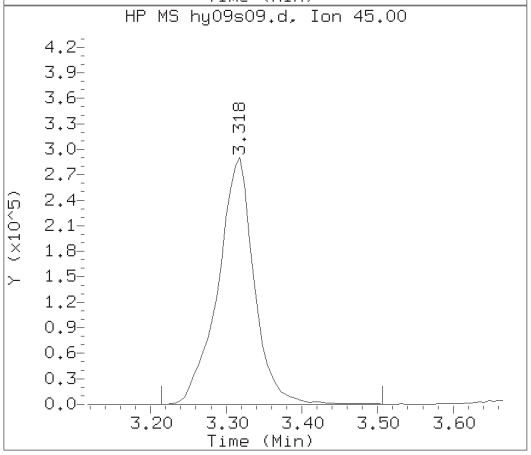
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 283
Retention Time (minutes): 3.312
Relative Retention Time :-0.00078
Quant Ion : 59.00
Area (flag) : 1272444
On-Column Amount (ng) : 31.0168

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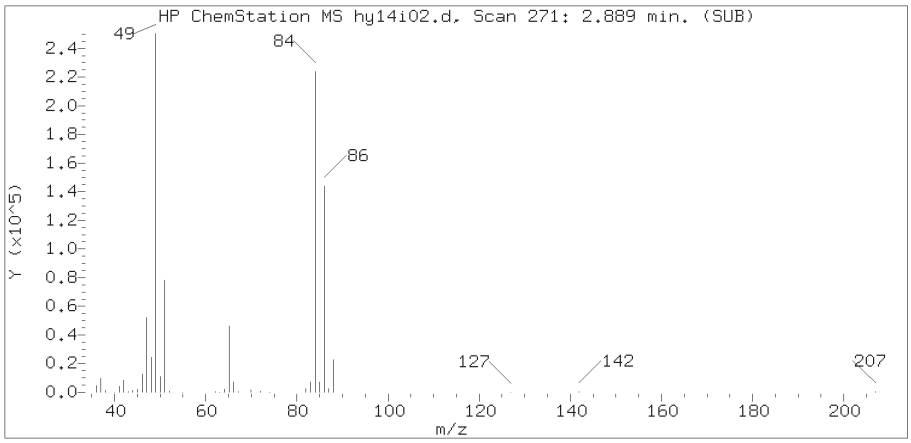
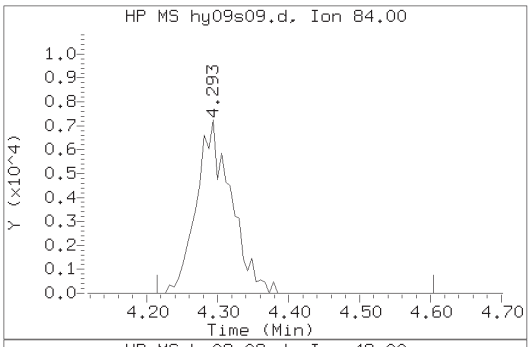
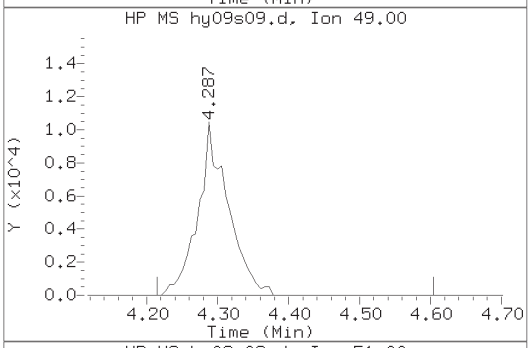
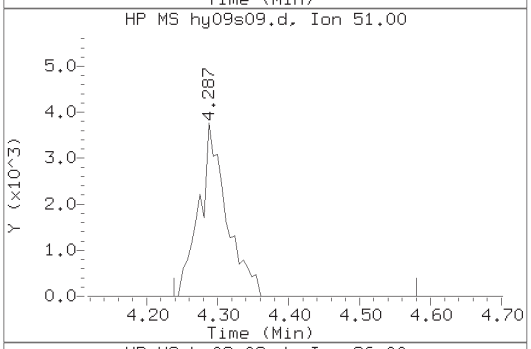
Target 3.5 esignature [illegible]

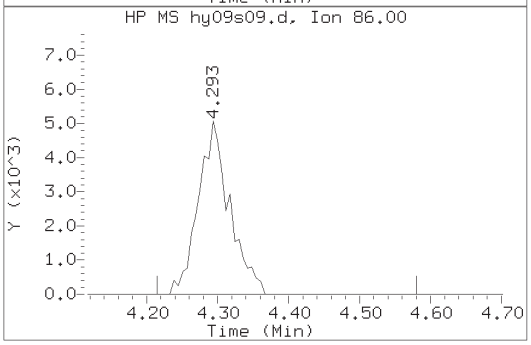
Reference Standard Spectrum for Methylene Chloride



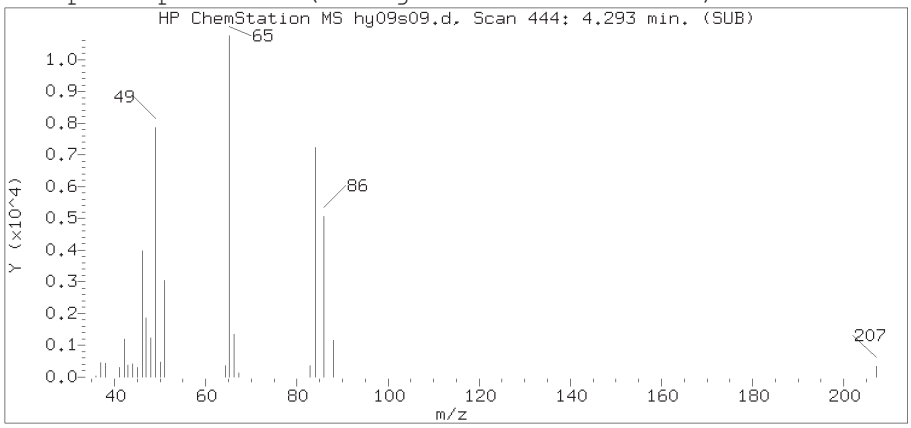




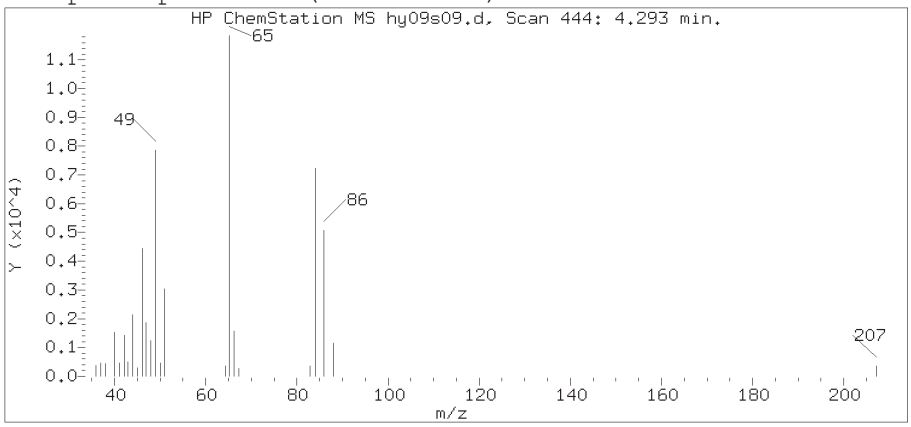




Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 444
Retention Time (minutes): 4.293
Relative Retention Time :-0.00156
Quant Ion : 84.00
Area (flag) : 24552
On-Column Amount (ng) : 0.4026

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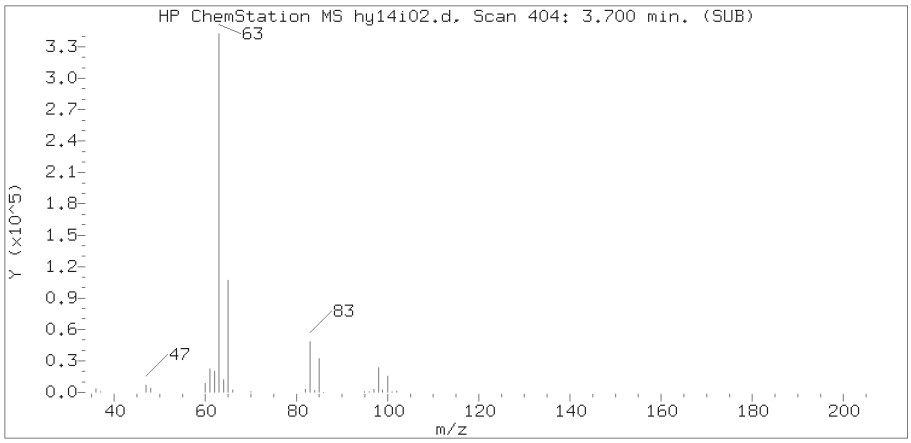
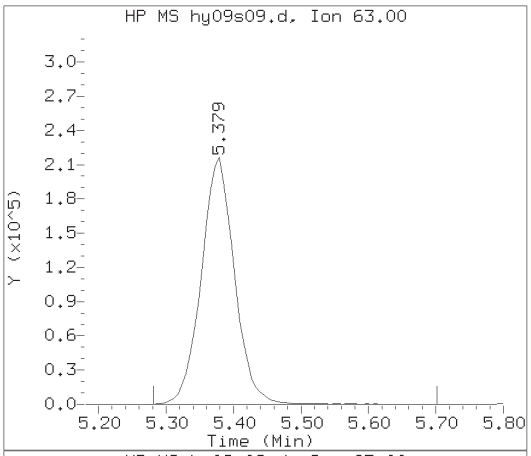
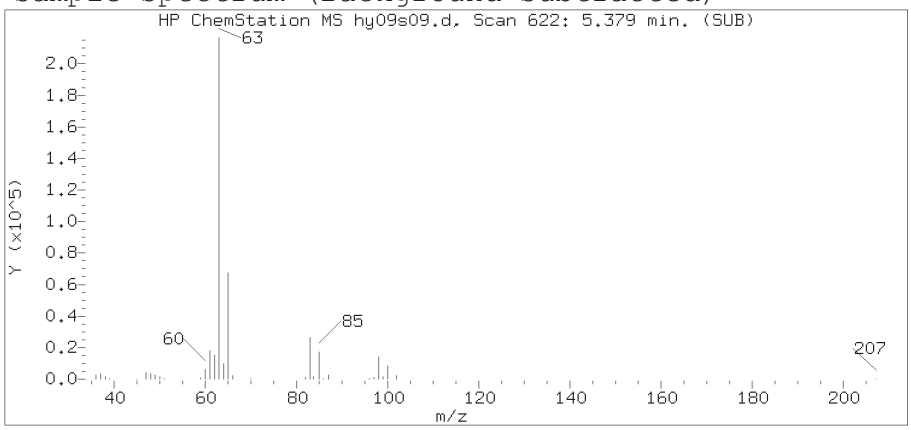
Target 3.5 esignature [illegible]

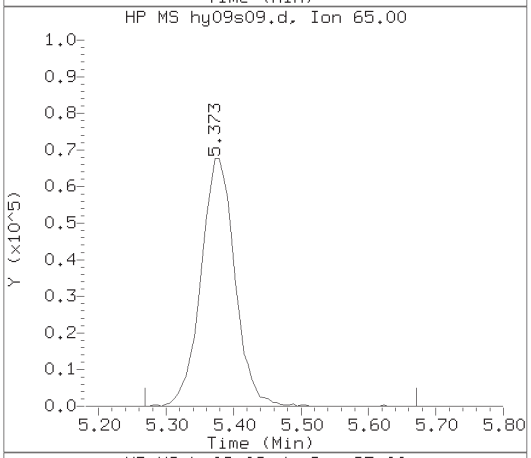
Reference Standard Spectrum for 1,1-Dichloroethane



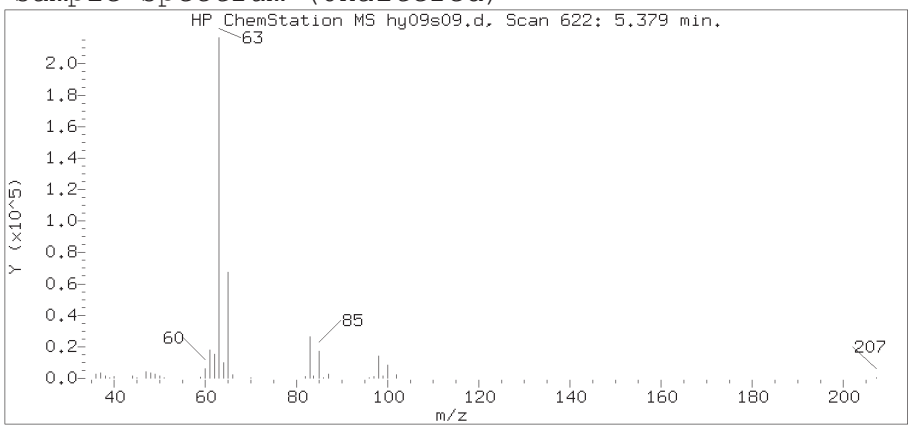


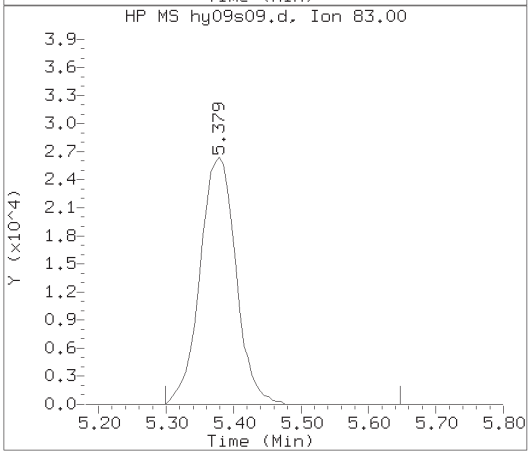
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

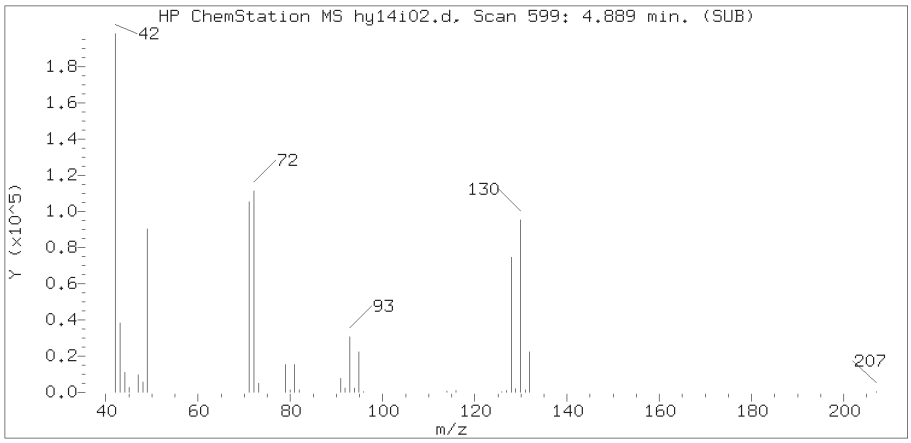
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

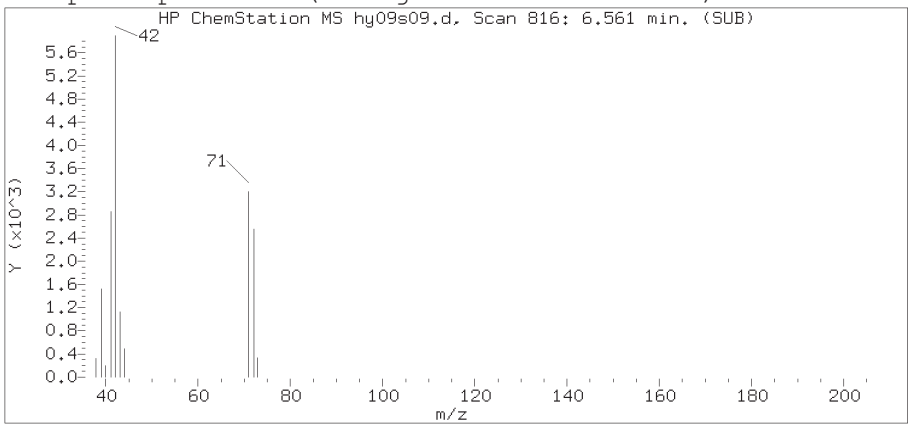
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 622
Retention Time (minutes): 5.379
Relative Retention Time :-0.00156
Quant Ion : 63.00
Area (flag) : 737700
On-Column Amount (ng) : 5.8909

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] Date: 2016.05.12 08:13:

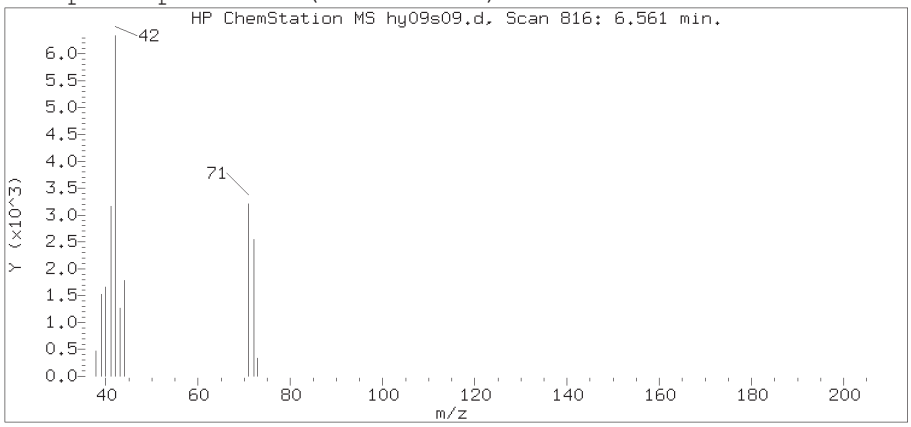
Reference Standard Spectrum for Tetrahydrofuran

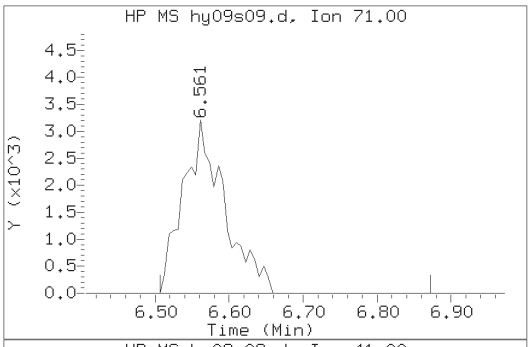


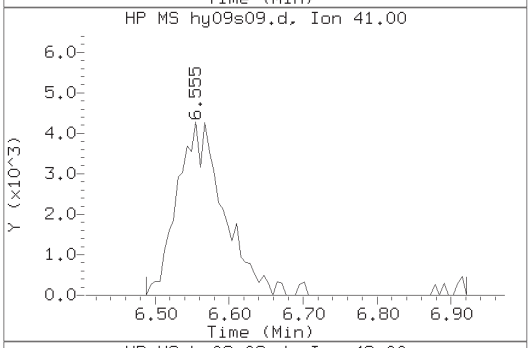
Sample Spectrum (Background Subtracted)

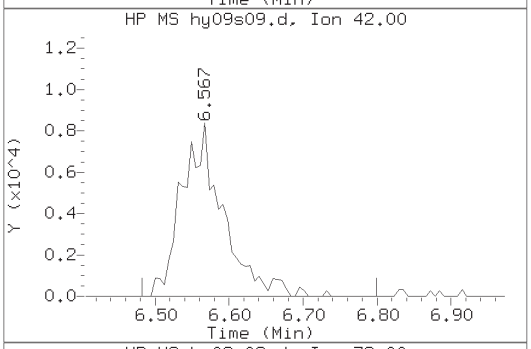


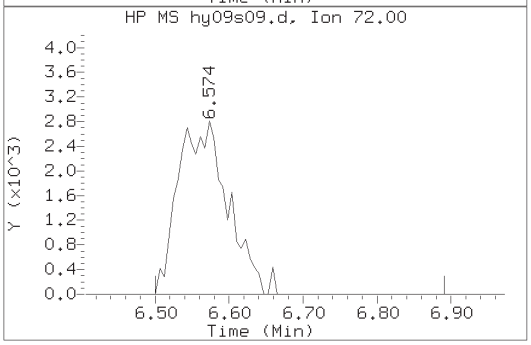
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

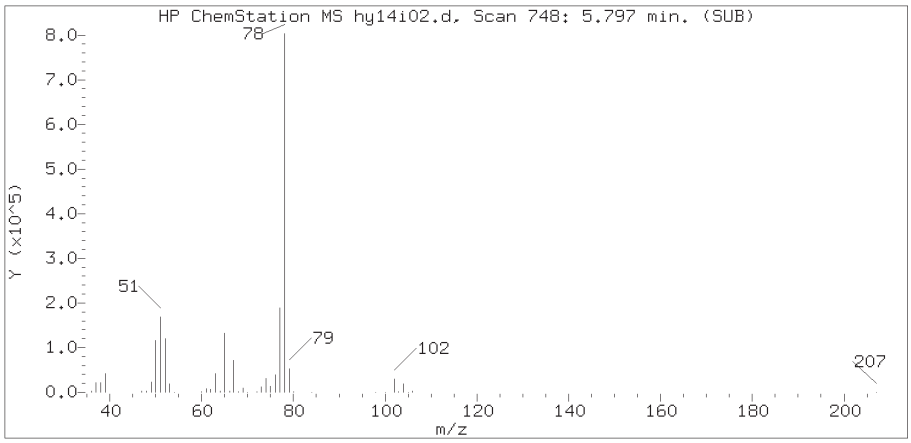
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

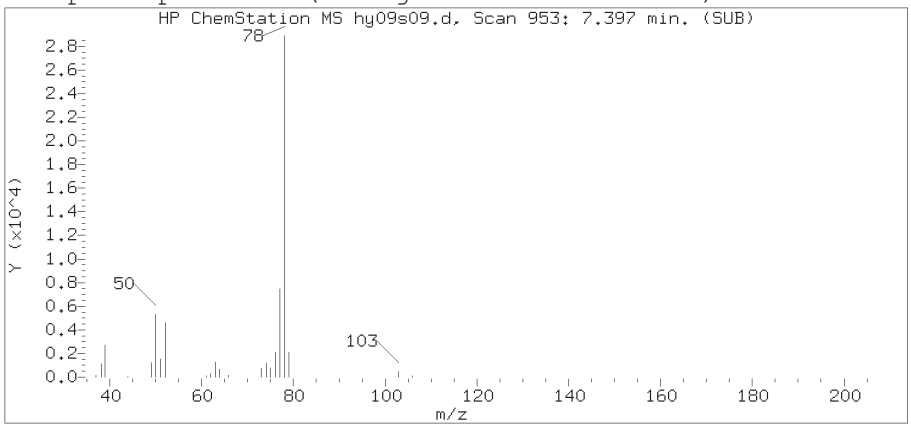
Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 816
Retention Time (minutes)	: 6.561
Relative Retention Time	: 0.00806
Quant Ion	: 71.00
Area (flag)	: 12514
On-Column Amount (ng)	: 3.9228

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

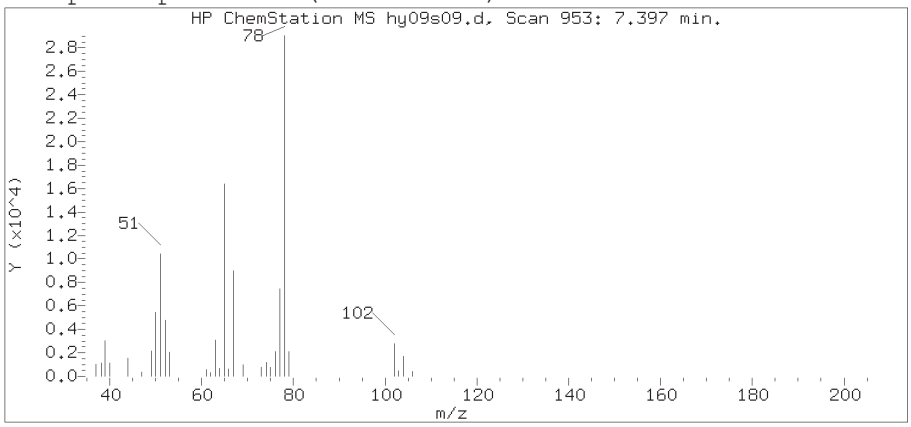
Reference Standard Spectrum for Benzene

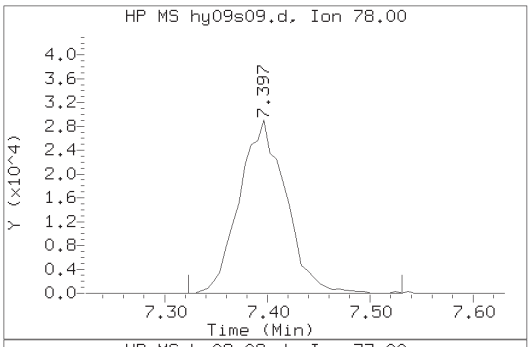


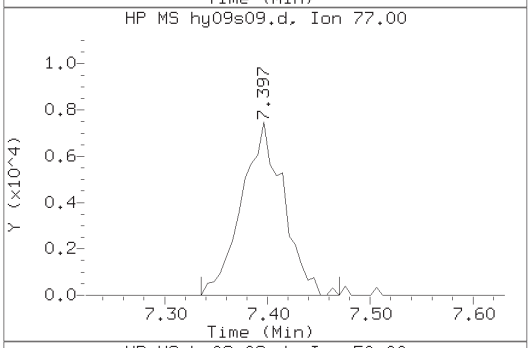
Sample Spectrum (Background Subtracted)

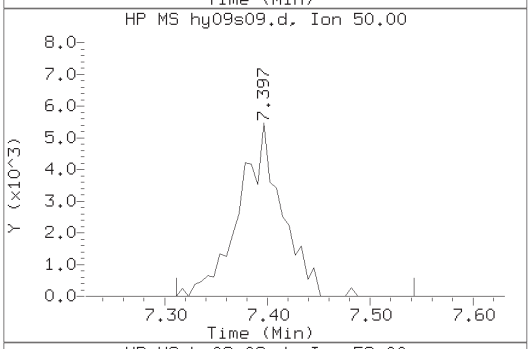


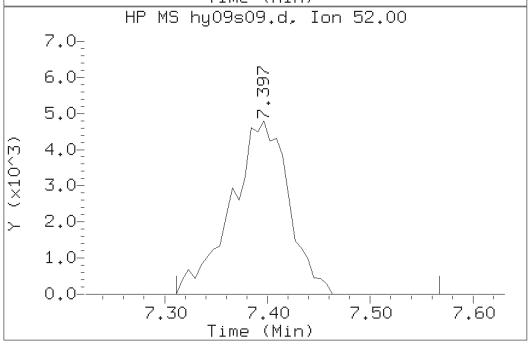
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

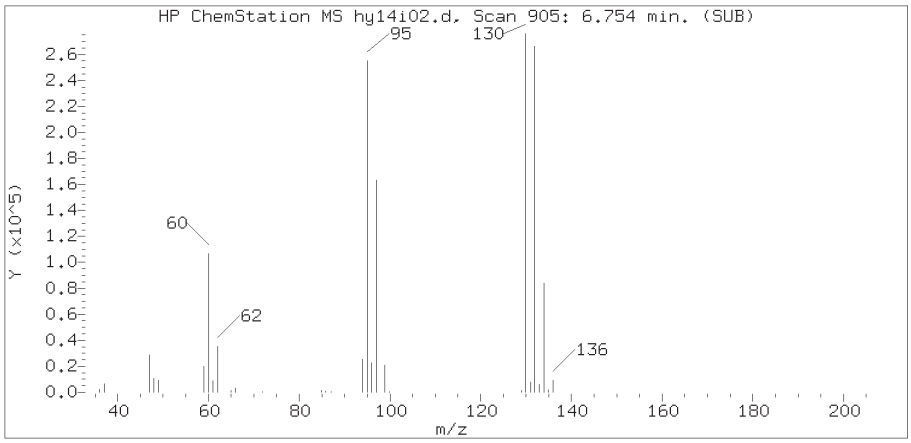
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

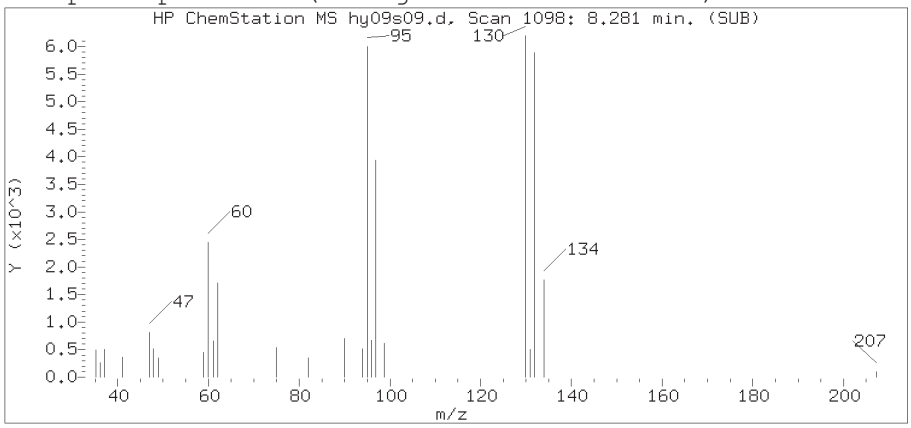
Compound Number : 58
Compound Name : Benzene
Scan Number : 953
Retention Time (minutes): 7.397
Relative Retention Time :-0.00078
Quant Ion : 78.00
Area (flag) : 91220
On-Column Amount (ng) : 0.3497

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] Date: 2016.05.12

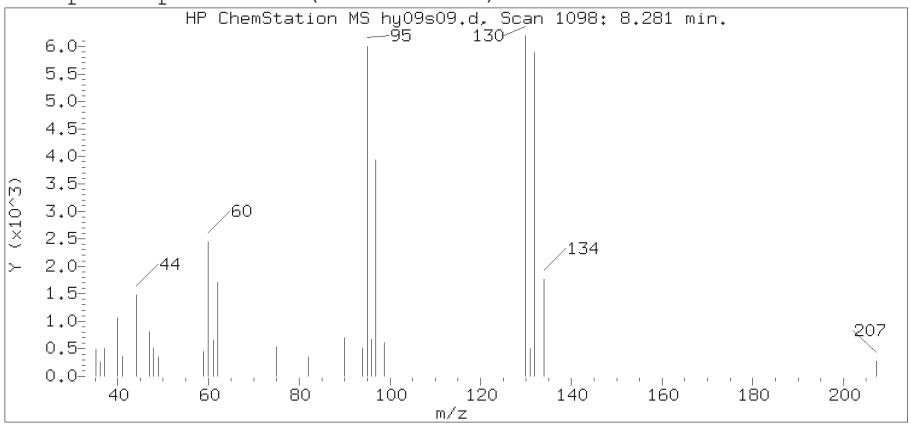
Reference Standard Spectrum for Trichloroethene

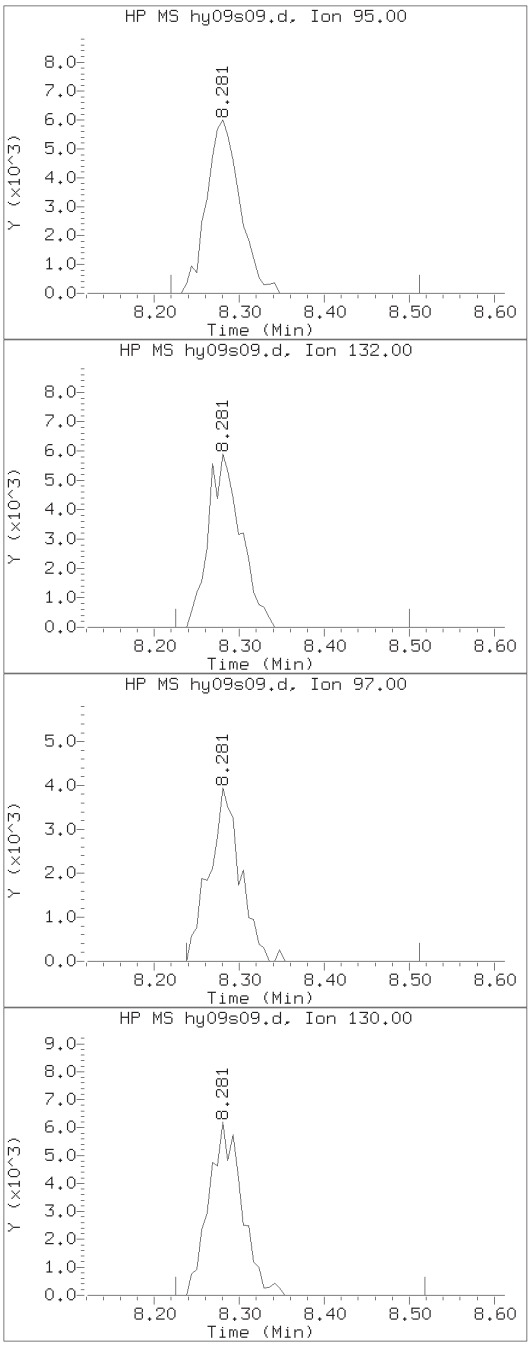


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1098
Retention Time (minutes): 8.281
Relative Retention Time :-0.00078
Quant Ion : 95.00
Area (flag) : 16308
On-Column Amount (ng) : 0.2399

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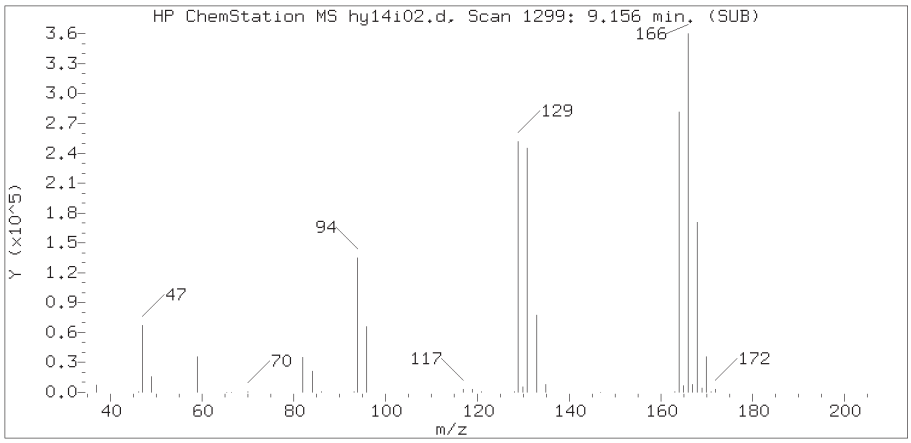
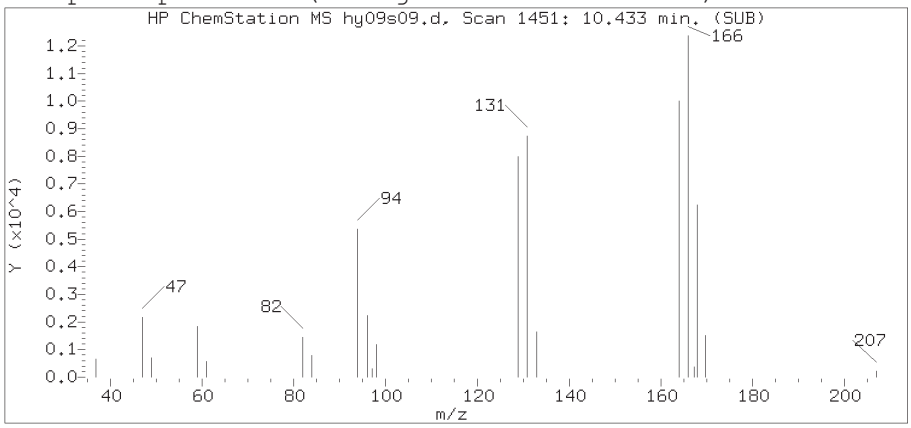
Target 3.5 esignature [illegible] 05/12/16

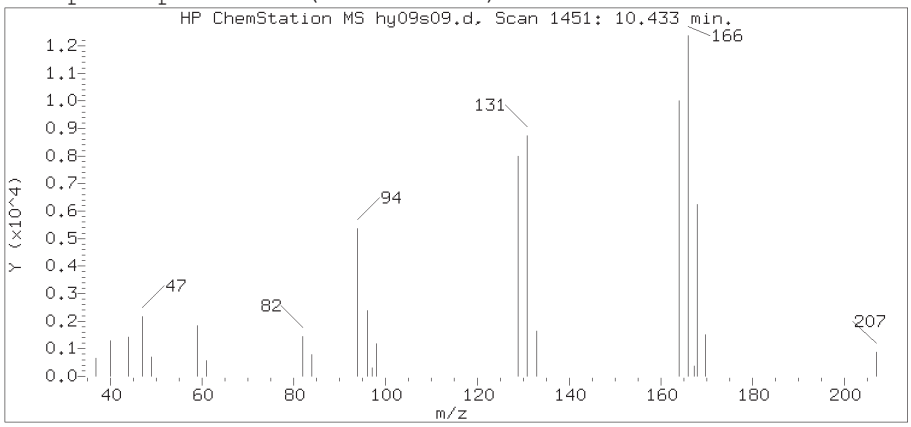
Reference Standard Spectrum for Tetrachloroethene

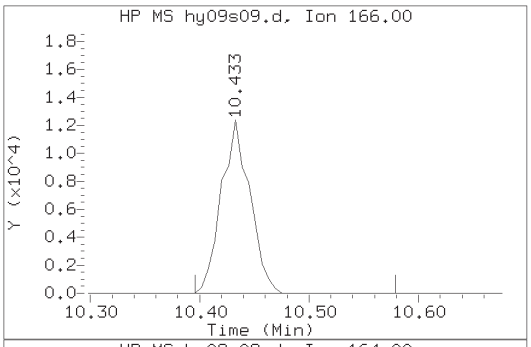


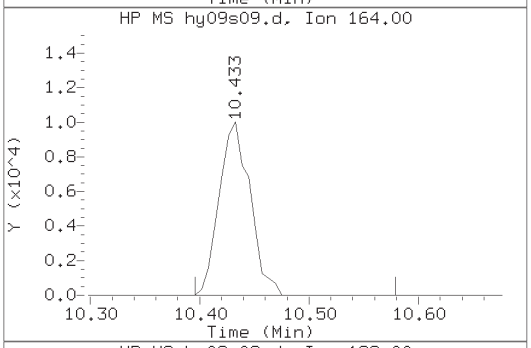
Sample Spectrum (Background Subtracted)

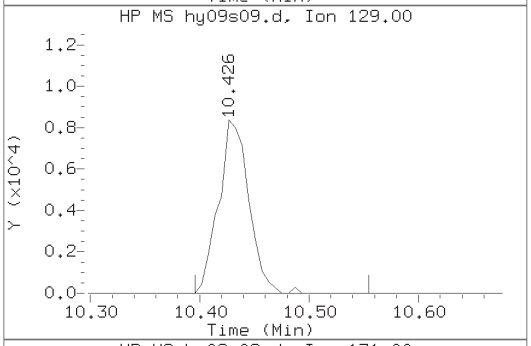


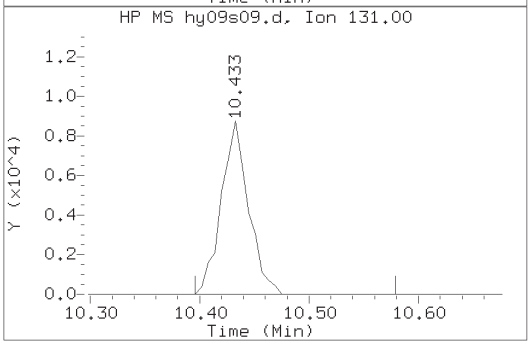
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s09.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6105 Lab Sample ID: 8354939

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1451
Retention Time (minutes): 10.433
Relative Retention Time :-0.00054
Quant Ion : 166.00
Area (flag) : 22316
On-Column Amount (ng) : 0.3005

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

Data file: /chem2/HP19094.i/16may09a.b/hy09s22.d Injection date and time: **09-MAY-2016 18:22**
Data file Sample Info. Line: E6105DL;8354939DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.287(-0.024)	443	65	72244	(-19)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2414168	(0)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1685334	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	713185	(-19)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	591892	10.405	104%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	92429	9.810	98%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2408674	10.033	100%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	707096	9.137	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					1	10
4) Dimethyl ether	(2)	2.099(0.000)	45	41610M	0.502	5.02		J	1	130
2) Chloromethane	(2)			Not Detected					2	10
5) Vinyl Chloride	(2)			Not Detected					2	10
7) Bromomethane	(2)			Not Detected					5	10
8) Chloroethane	(2)	2.727(-0.000)	64	10170	0.217	2.17		J	1	10
10) Trichlorofluoromethane	(2)			Not Detected					2	10
11) Ethyl ether	(2)	3.324(-0.002)	59	117368	2.876	28.76		J	11	130
13) Acrolein	(1)			Not Detected					50	250
15) 1,1-Dichloroethene	(2)			Not Detected					2	10
16) Freon 113	(2)			Not Detected					2	10
14) Acetone	(1)			Not Detected					30	100
17) Methyl Iodide	(2)			Not Detected					6	100
18) Carbon Disulfide	(2)			Not Detected					4	100
25) Acetonitrile	(1)			Not Detected					320	1000
22) Allyl Chloride	(2)			Not Detected					8	100
23) Methylene Chloride	(2)			Not Detected					2	10
29) Acrylonitrile	(1)			Not Detected					10	100
31) trans-1,2-Dichloroethene	(2)			Not Detected					2	10
33) 1,1-Dichloroethane	(2)	5.385(-0.002)	63	62311	0.500	5.00		J	1	10
36) Vinyl Acetate	(2)			Not Detected					33	100
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					5	100
38) 2-Butanone	(1)			Not Detected					10	100
42) Propionitrile	(1)			Not Detected					100	1000
45) Methacrylonitrile	(1)			Not Detected					98	1000
48) Tetrahydrofuran	(1)			Not Detected					20	250
49) Chloroform	(2)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					1	10
54) Carbon Tetrachloride	(2)			Not Detected					2	10
56) Isobutyl Alcohol	(1)			Not Detected					100	2000

M = Compound was manually integrated.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s22.d Injection date and time: **09-MAY-2016 18:22**
Data file Sample Info. Line: E6105DL;8354939DL;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **10.00**

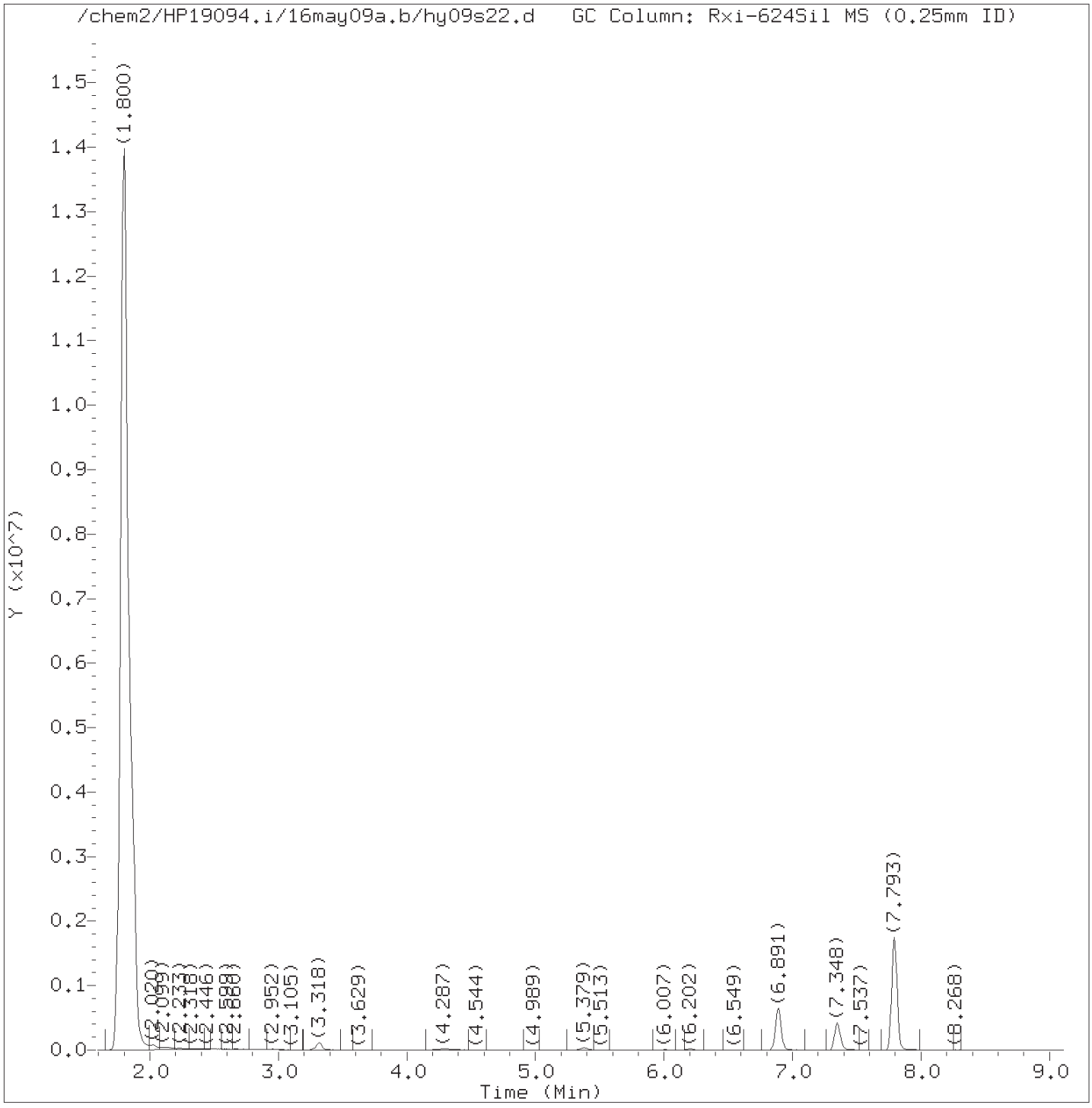
Volume Purged (Vt): 25 ml Sample Volume (Vo): 2.5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)				Not Detected					1	10
59) 1,2-Dichloroethane	(2)				Not Detected					1	10
67) Trichloroethene	(2)				Not Detected					2	10
70) 1,2-Dichloropropane	(2)				Not Detected					1	10
71) Methyl Methacrylate	(1)				Not Detected					36	100
73) Dibromomethane	(2)				Not Detected					1	10
72) 1,4-Dioxane	(1)				Not Detected					450	2000
74) Bromodichloromethane	(2)				Not Detected					1	10
81) 4-Methyl-2-Pentanone	(1)				Not Detected					10	100
83) Toluene	(3)				Not Detected					1	10
84) trans-1,3-Dichloropropene	(3)				Not Detected					1	10
86) Ethyl Methacrylate	(3)				Not Detected					8	100
88) 1,1,2-Trichloroethane	(3)				Not Detected					1	10
89) Tetrachloroethene	(3)				Not Detected					1	10
90) 1,3-Dichloropropane	(3)				Not Detected					1	10
91) 2-Hexanone	(1)				Not Detected					10	100
93) Dibromochloromethane	(3)				Not Detected					1	10
95) 1,2-Dibromoethane	(3)				Not Detected					1	10
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	10
100) Ethylbenzene	(3)				Not Detected					1	10
101) m+p-Xylene	(3)				Not Detected					1	30
104) o-Xylene	(3)				Not Detected					1	30
105) Xylene (Total)	(3)				Not Detected					2	30
106) Styrene	(3)				Not Detected					1	10
107) Bromoform	(3)				Not Detected					1	10
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					2	10
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					10	100
116) 1,2,3-Trichloropropane	(4)				Not Detected					3	10
126) Pentachloroethane	(4)				Not Detected					8	100
131) 1,3-Dichlorobenzene	(4)				Not Detected					1	10
134) 1,4-Dichlorobenzene	(4)				Not Detected					1	10
139) 1,2-Dichlorobenzene	(4)				Not Detected					1	10
142) Hexachloroethane	(4)				Not Detected					1	100
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					2	10
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	10
146) Hexachlorobutadiene	(4)				Not Detected					1	10
147) Naphthalene	(4)				Not Detected					1	10

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

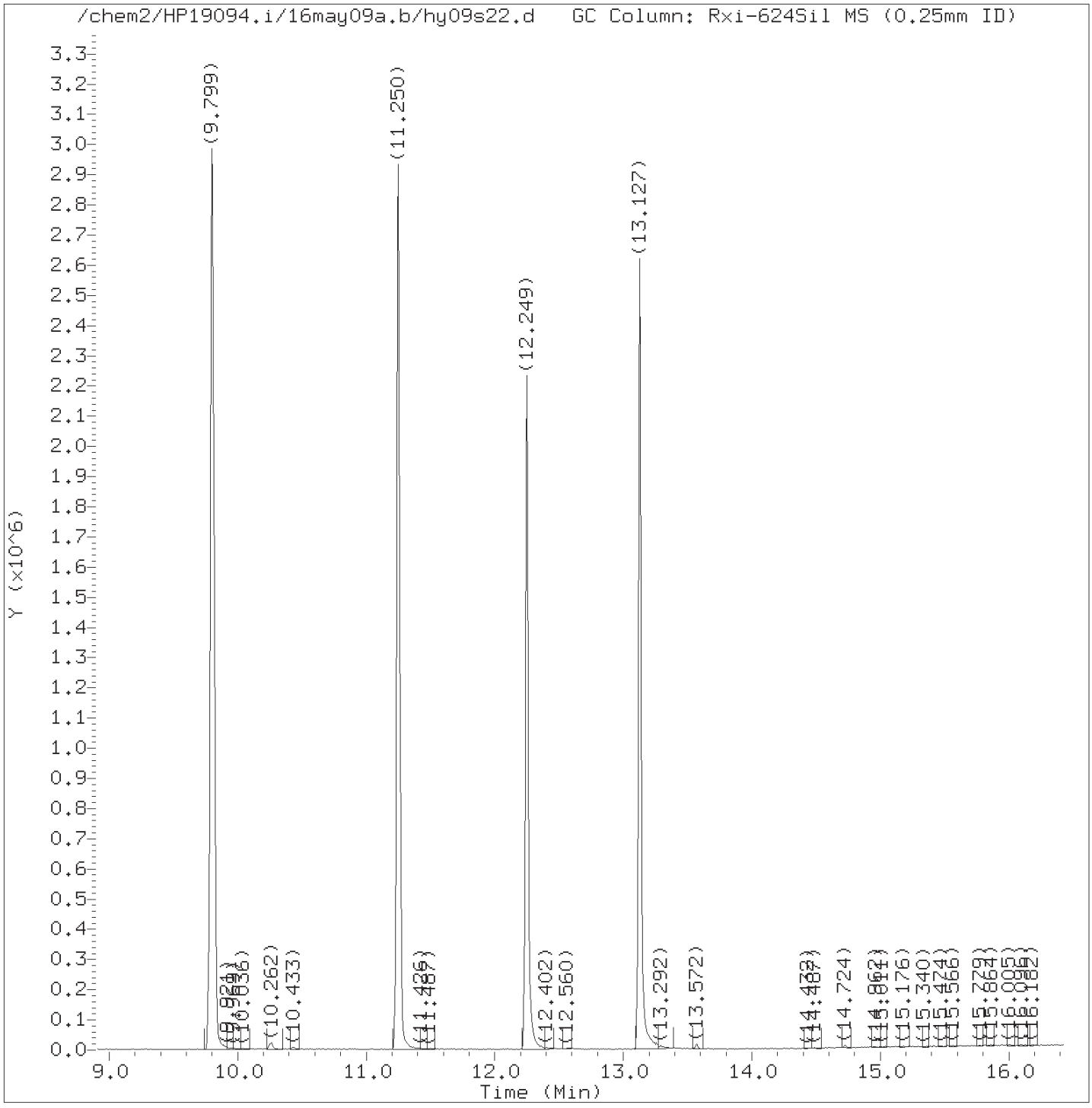
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6105DL Lab Sample ID: 8354939DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6105DL Lab Sample ID: 8354939DL

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

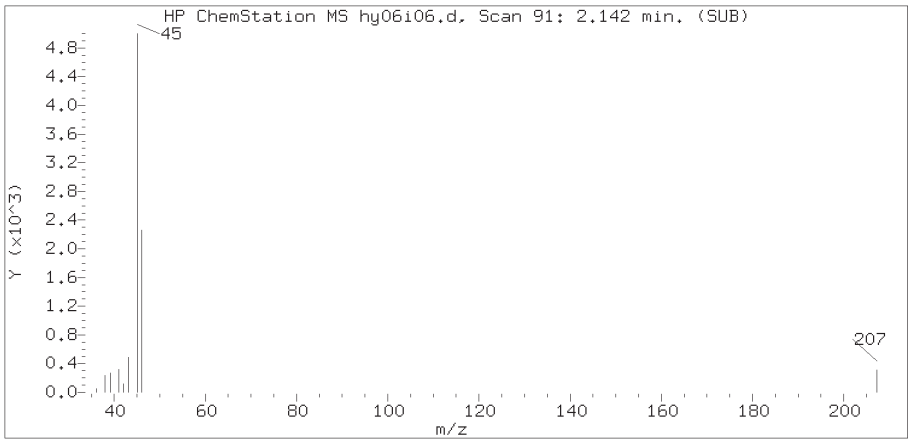
Sample Name: E6105DL Lab Sample ID: 8354939DL

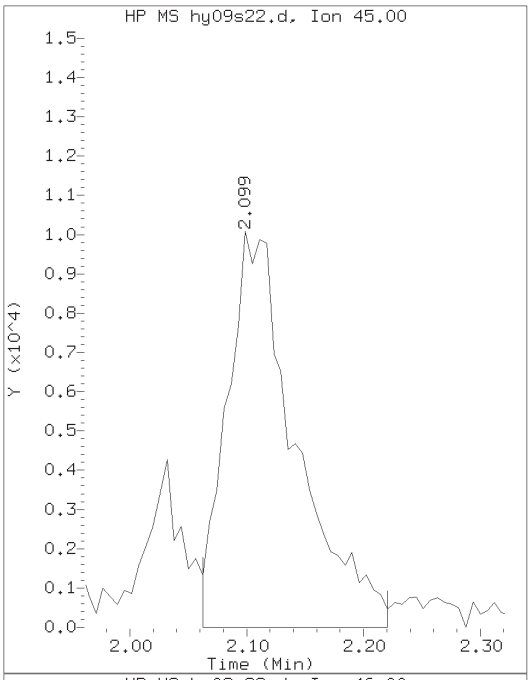
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	41610M	0.502
8) Chloroethane	(2)	2.727	64	10170	0.217
11) Ethyl ether	(2)	3.324	59	117368	2.876
26)*t-Butyl Alcohol-d10	(1)	4.287	65	72244	50.000
33) 1,1-Dichloroethane	(2)	5.385	63	62311	0.500
50)$Dibromofluoromethane	(2)	6.891	113	591892	10.405
57)$1,2-Dichloroethane-d4	(2)	7.348	102	92429	9.810
63)*Fluorobenzene	(2)	7.793	96	2414168	10.000
82)$Toluene-d8	(3)	9.799	98	2408674	10.033
97)*Chlorobenzene-d5	(3)	11.250	117	1685334	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	707096	9.137
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	713185	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

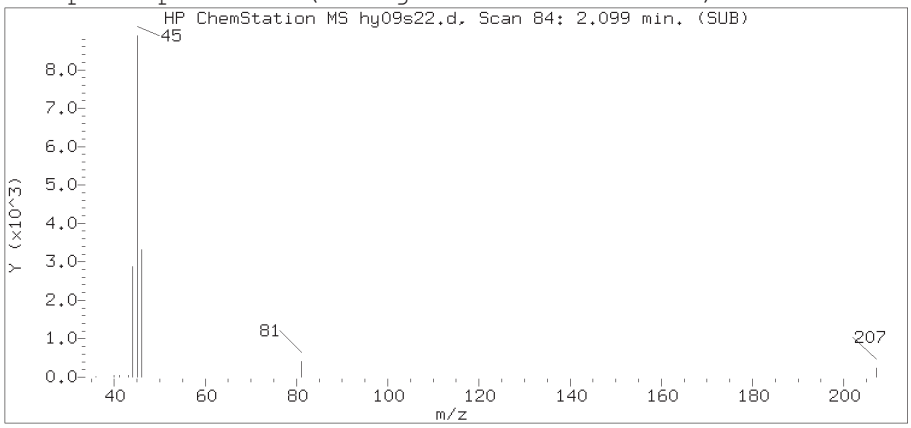
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

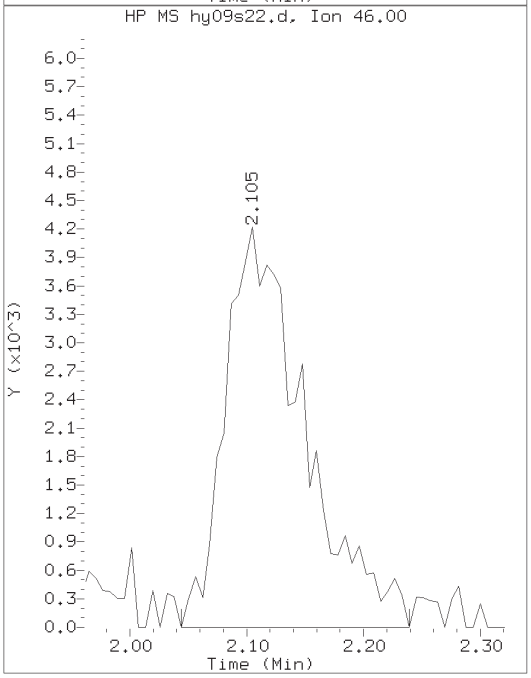
Reference Standard Spectrum for Dimethyl ether



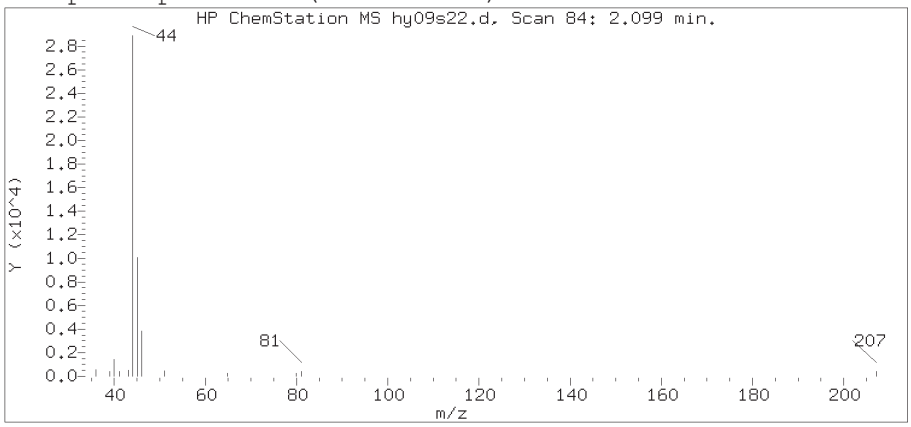


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

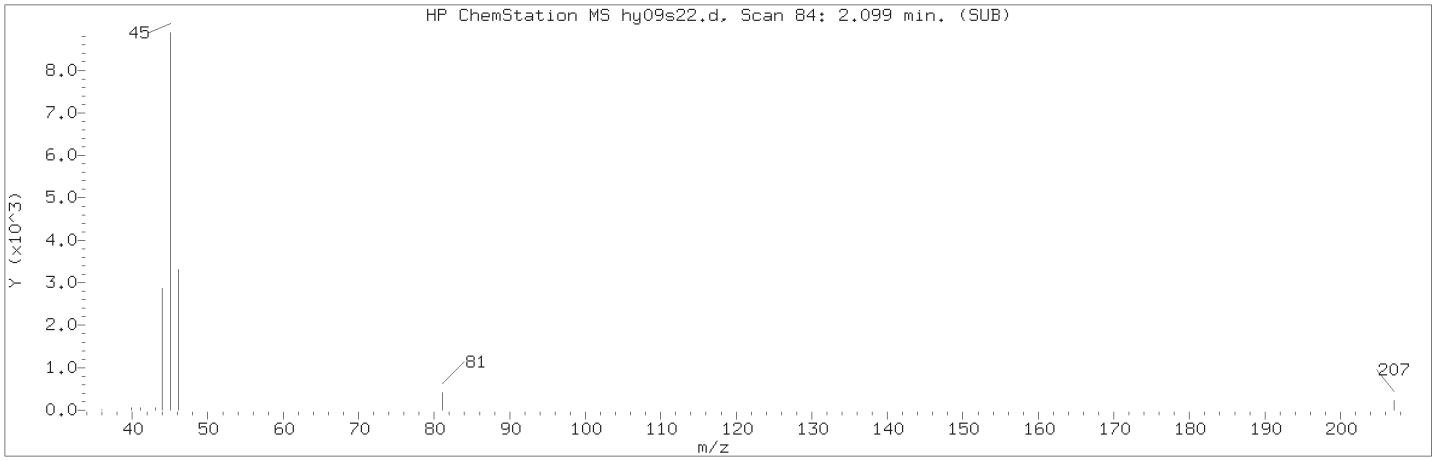
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6105DL Lab Sample ID: 8354939DL

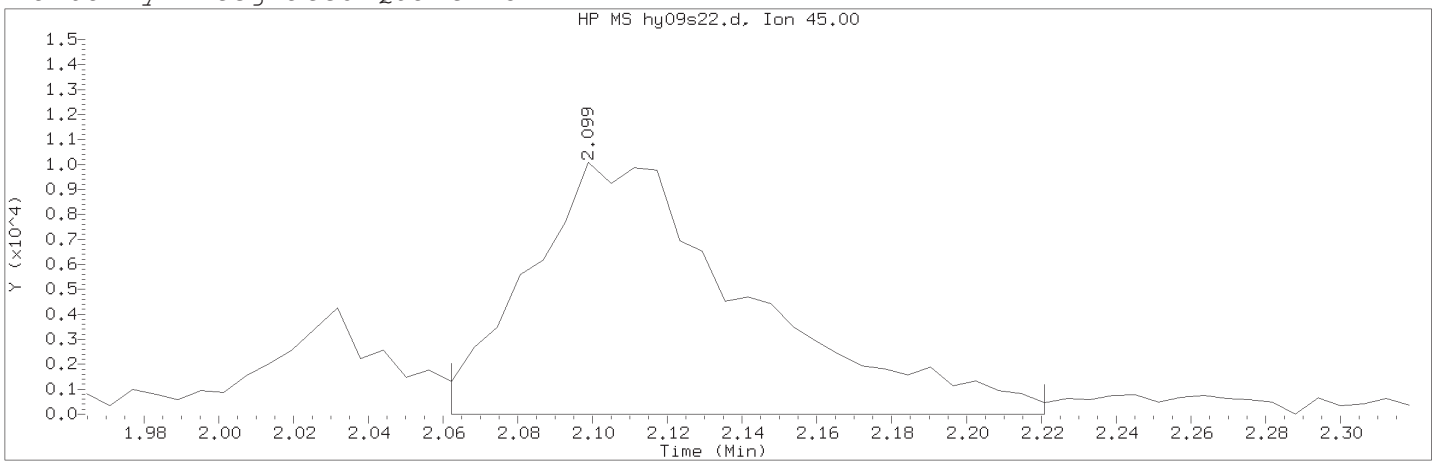
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Relative Retention Time : 0.00001
Quant Ion : 45.00
Area (flag) : 41610M
On-Column Amount (ng) : 0.5019

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6105DL Lab Sample ID: 8354939DL

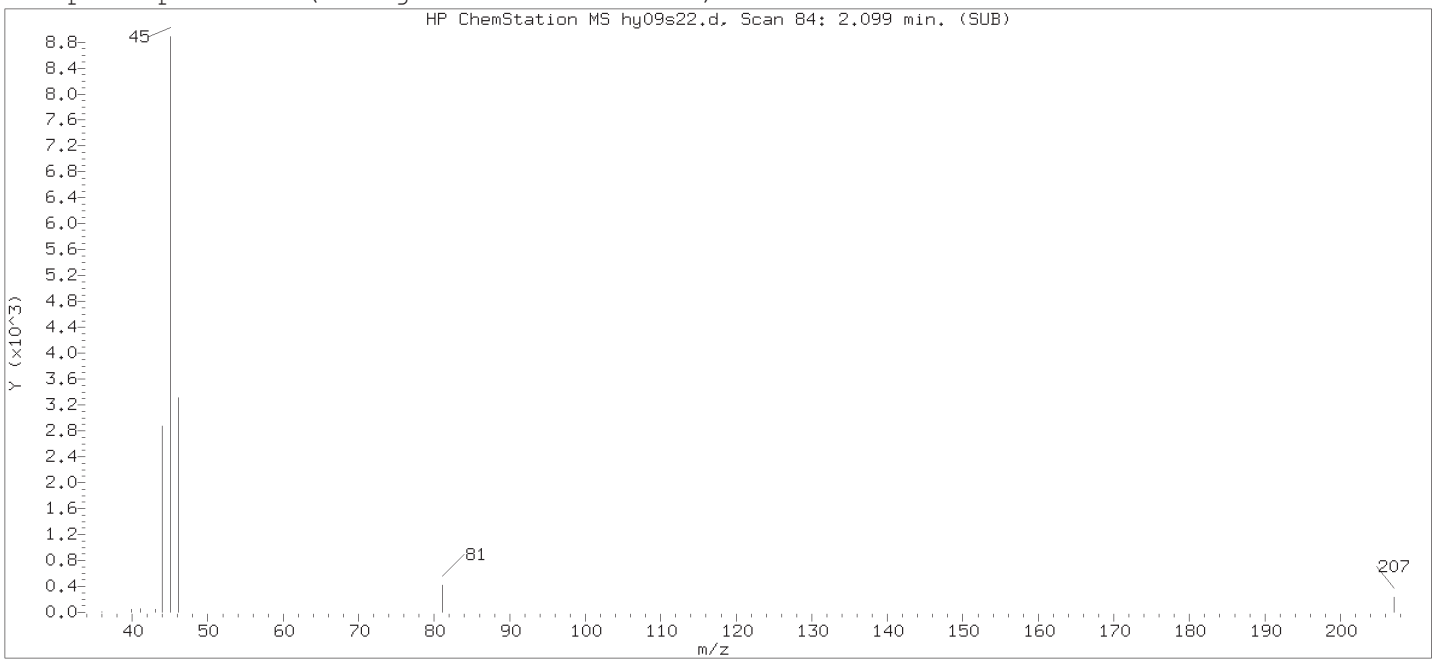
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 41610M
On-Column Amount (ng) : 0.5019
Integration start scan : 77 Integration stop scan: 103
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

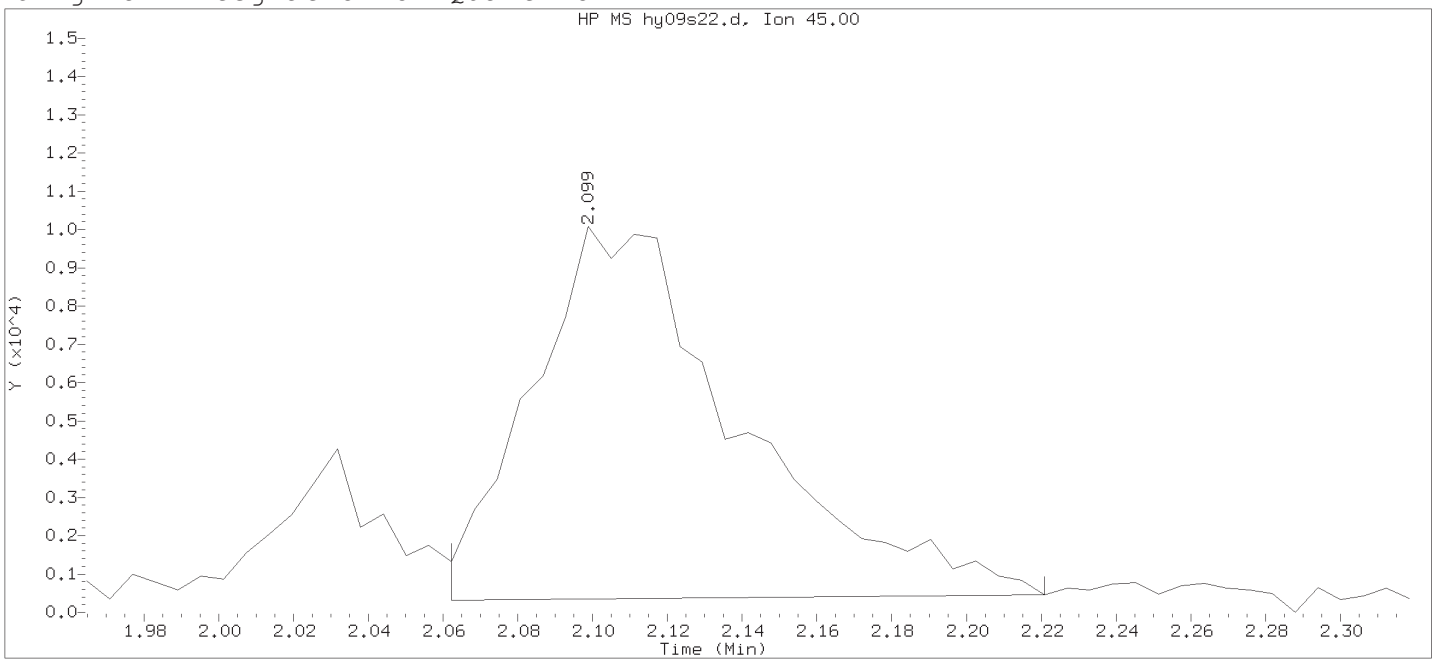
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

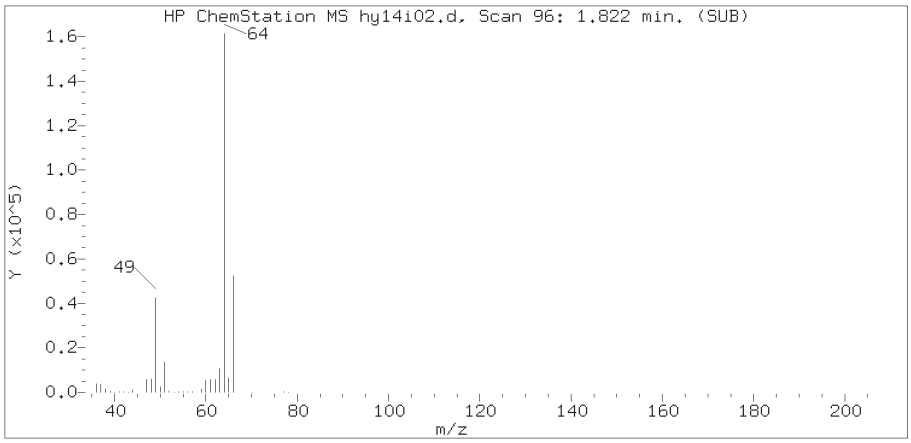
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 18:41 Automation

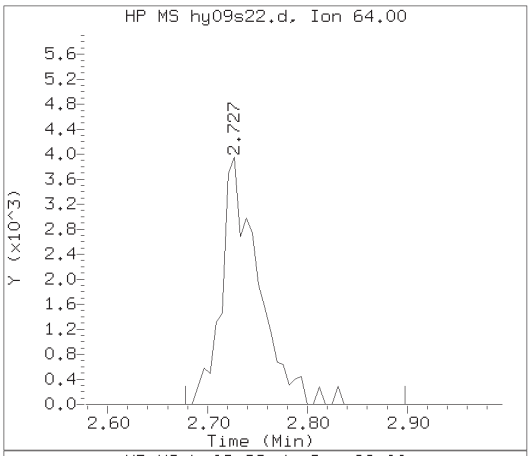
Sample Name: E6105DL Lab Sample ID: 8354939DL

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 37577		
On-column Amount (ng)	: 0.4532		
Integration start scan	: 77	Integration stop scan:	103
Y at integration start	: 319	Y at integration end:	461

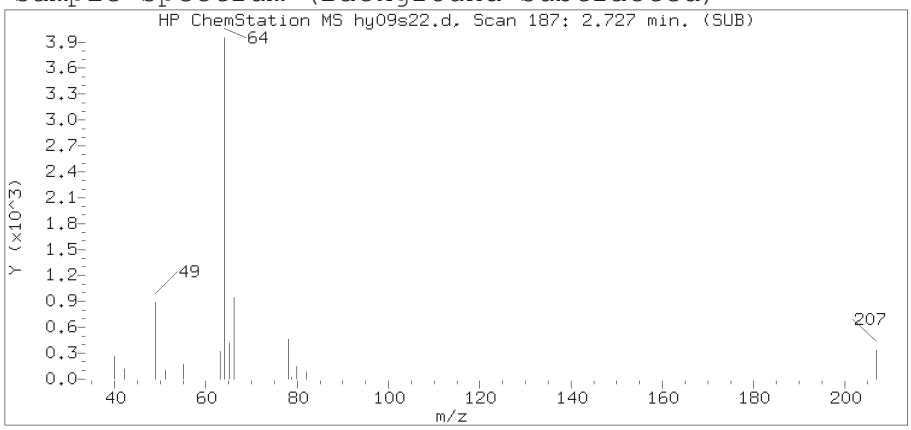
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

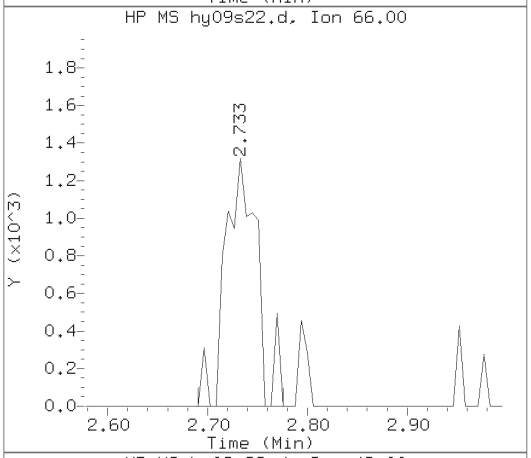
Reference Standard Spectrum for Chloroethane



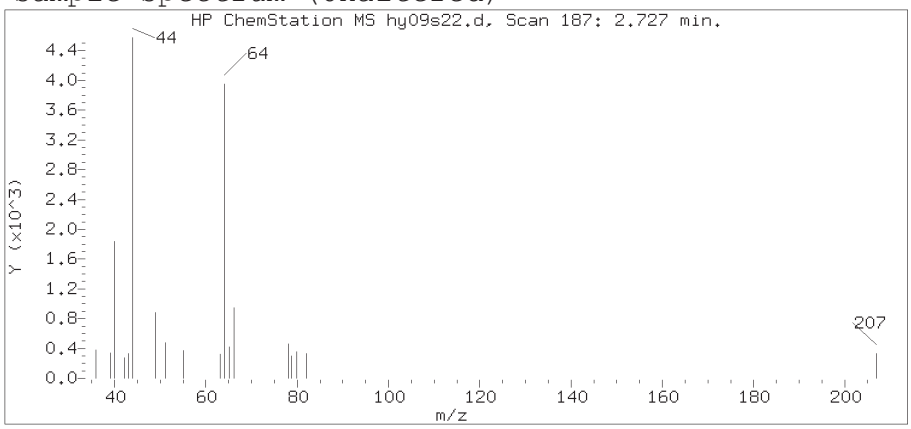


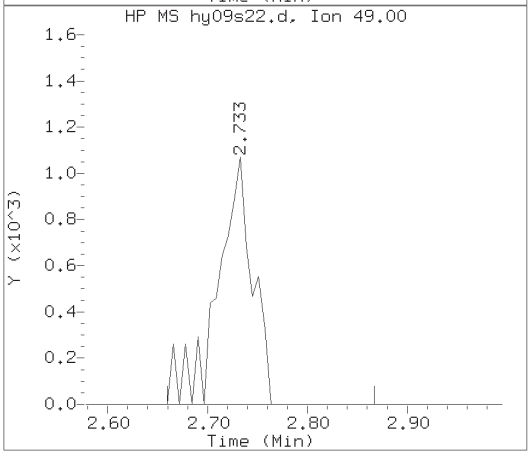
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

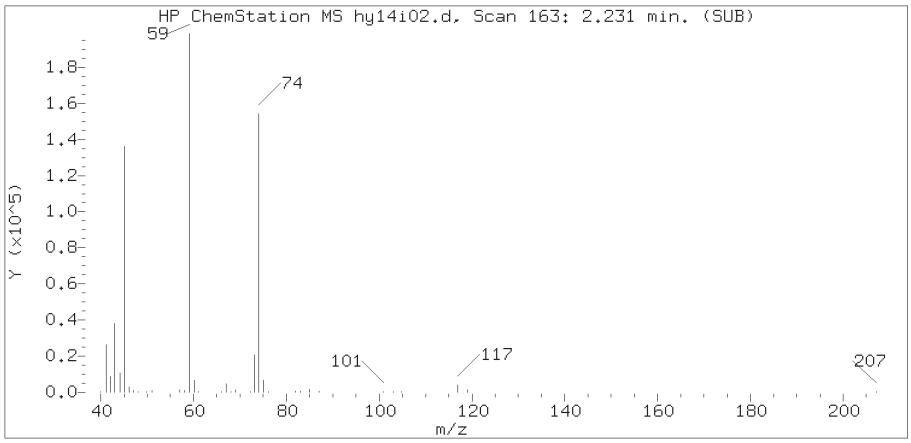
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

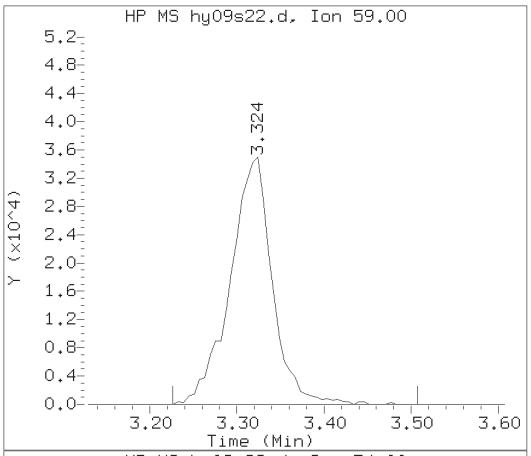
Sample Name: E6105DL Lab Sample ID: 8354939DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 187
Retention Time (minutes): 2.727
Relative Retention Time :-0.00079
Quant Ion : 64.00
Area (flag) : 10170
On-Column Amount (ng) : 0.2173

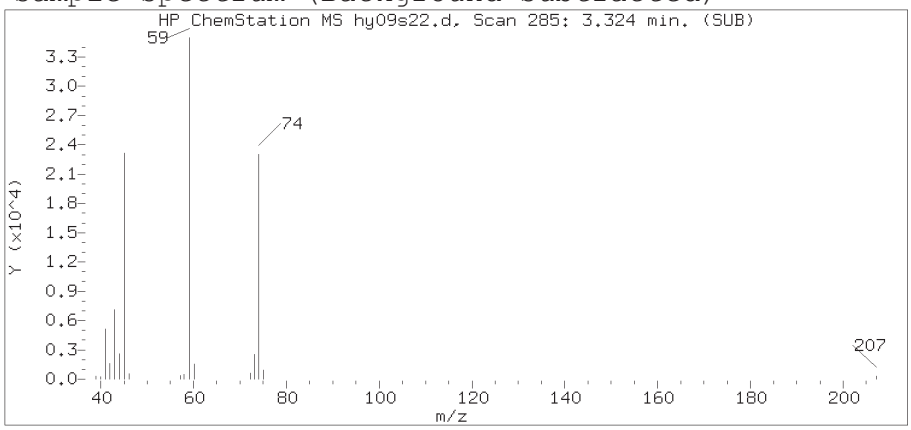
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

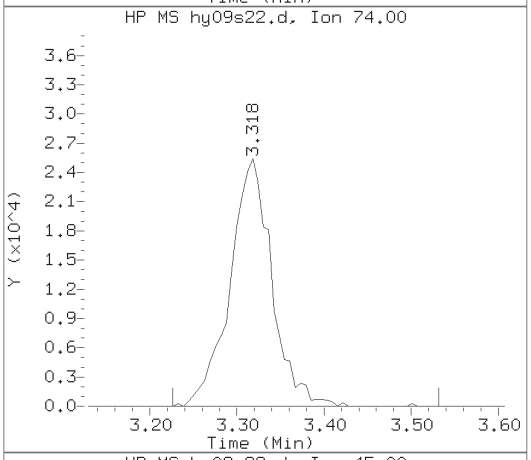
Reference Standard Spectrum for Ethyl ether



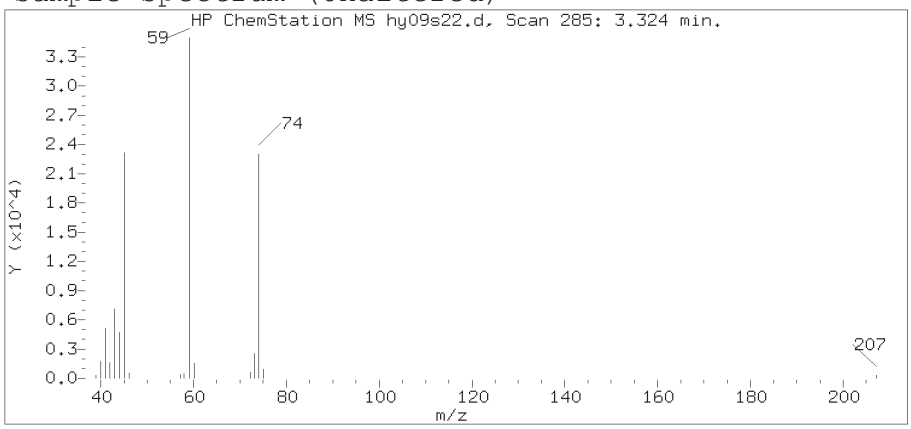


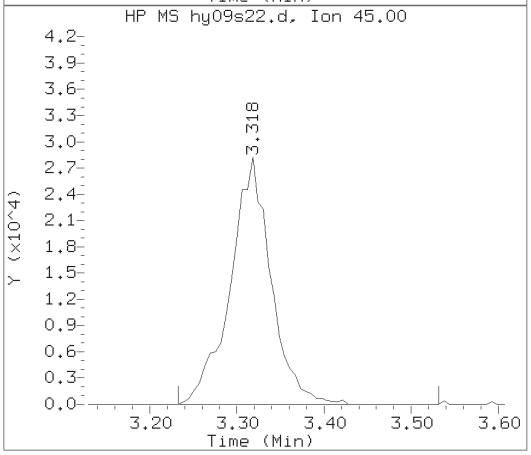
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

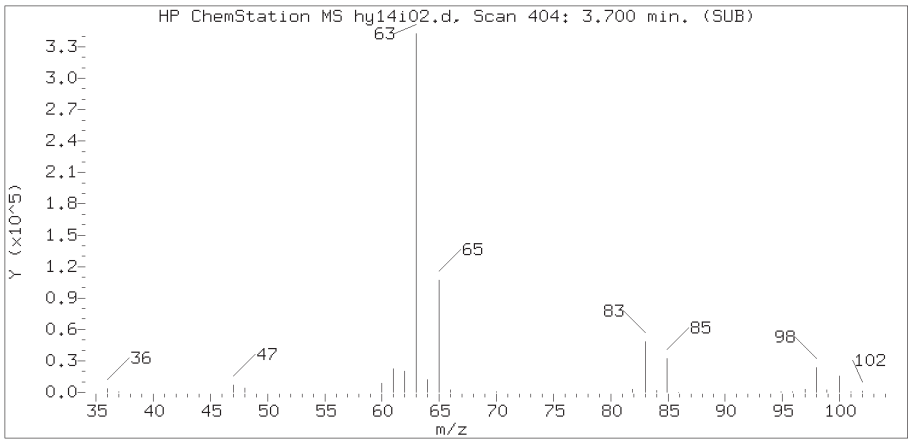
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

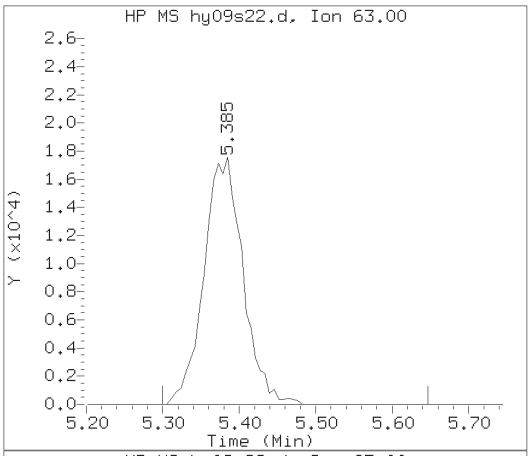
Sample Name: E6105DL Lab Sample ID: 8354939DL

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 285
Retention Time (minutes): 3.324
Relative Retention Time :-0.00235
Quant Ion : 59.00
Area (flag) : 117368
On-Column Amount (ng) : 2.8759

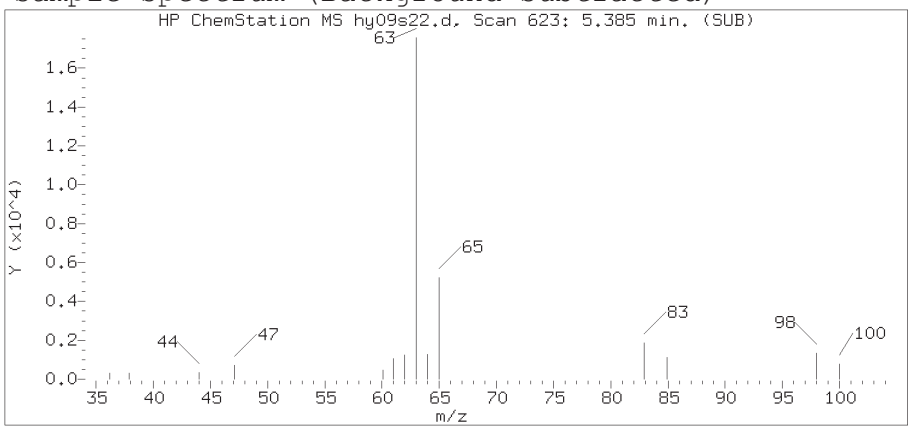
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

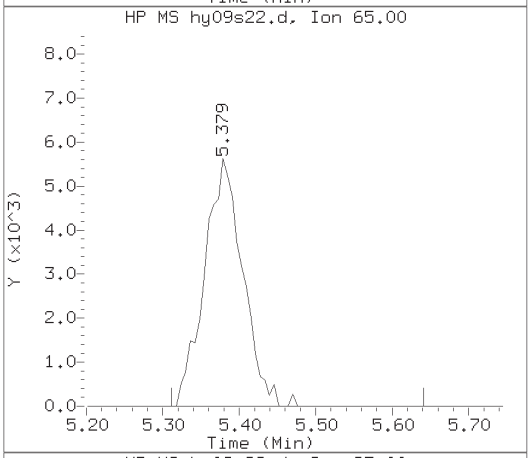
Reference Standard Spectrum for 1,1-Dichloroethane



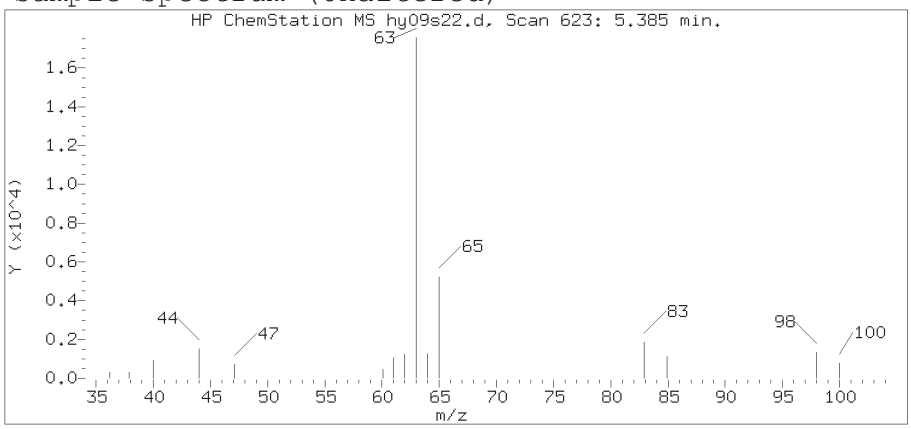


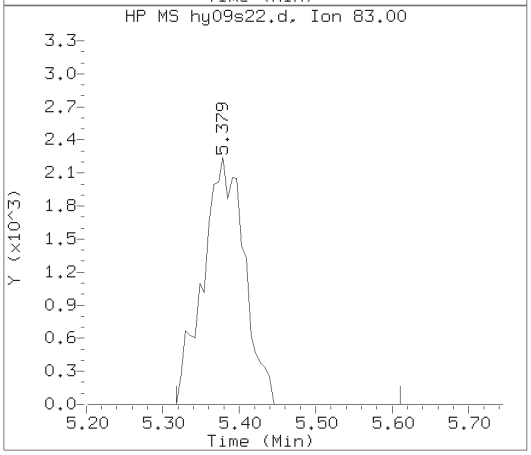
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s22.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 18:22 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6105DL Lab Sample ID: 8354939DL

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 623
Retention Time (minutes): 5.385
Relative Retention Time :-0.00235
Quant Ion : 63.00
Area (flag) : 62311
On-Column Amount (ng) : 0.5002

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature [illegible]

E6106 Lancaster Laboratories 8354940
Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/16may09a.b/ly09s40.d Injection date and time: **09-MAY-2016 19:30**
Data file Sample Info. Line: E6106;8354940;1;0;;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 19:49 Automation

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.999	(-0.003)	752	65	222440	(-12)	250.00	
66) Fluorobenzene	7.510	(0.003)	1844	96	1452083	(-4)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1091517	(-6)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	550555	(-12)	50.00	

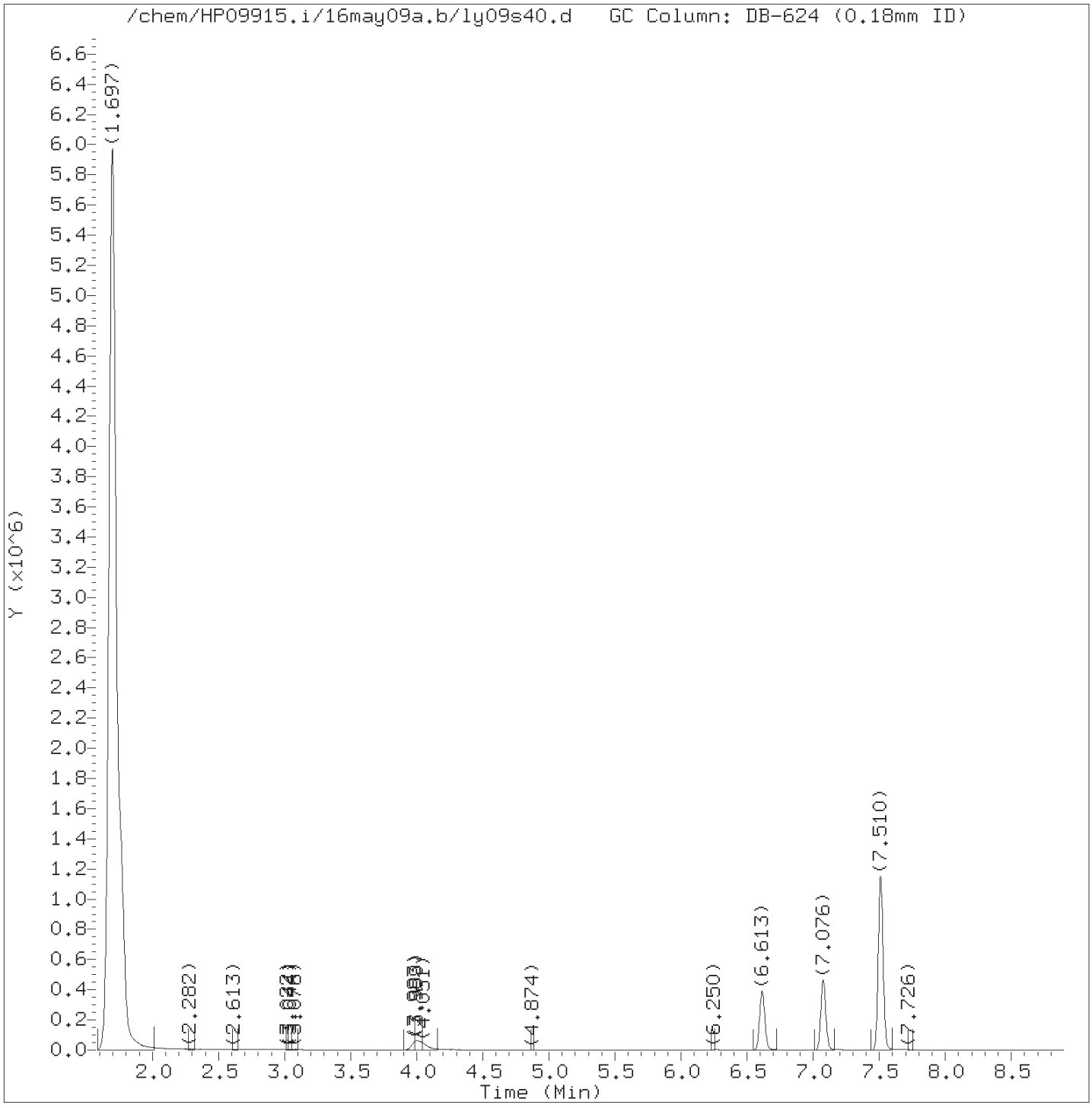
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.613	(0.000)	113	339314	49.186	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.076	(0.000)	102	87796	50.411	101%		77 - 113
83) Toluene-d8	(3)	9.555	(0.000)	98	1417524	49.614	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.057	(0.000)	95	527985	49.938	100%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 20:00. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:02. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

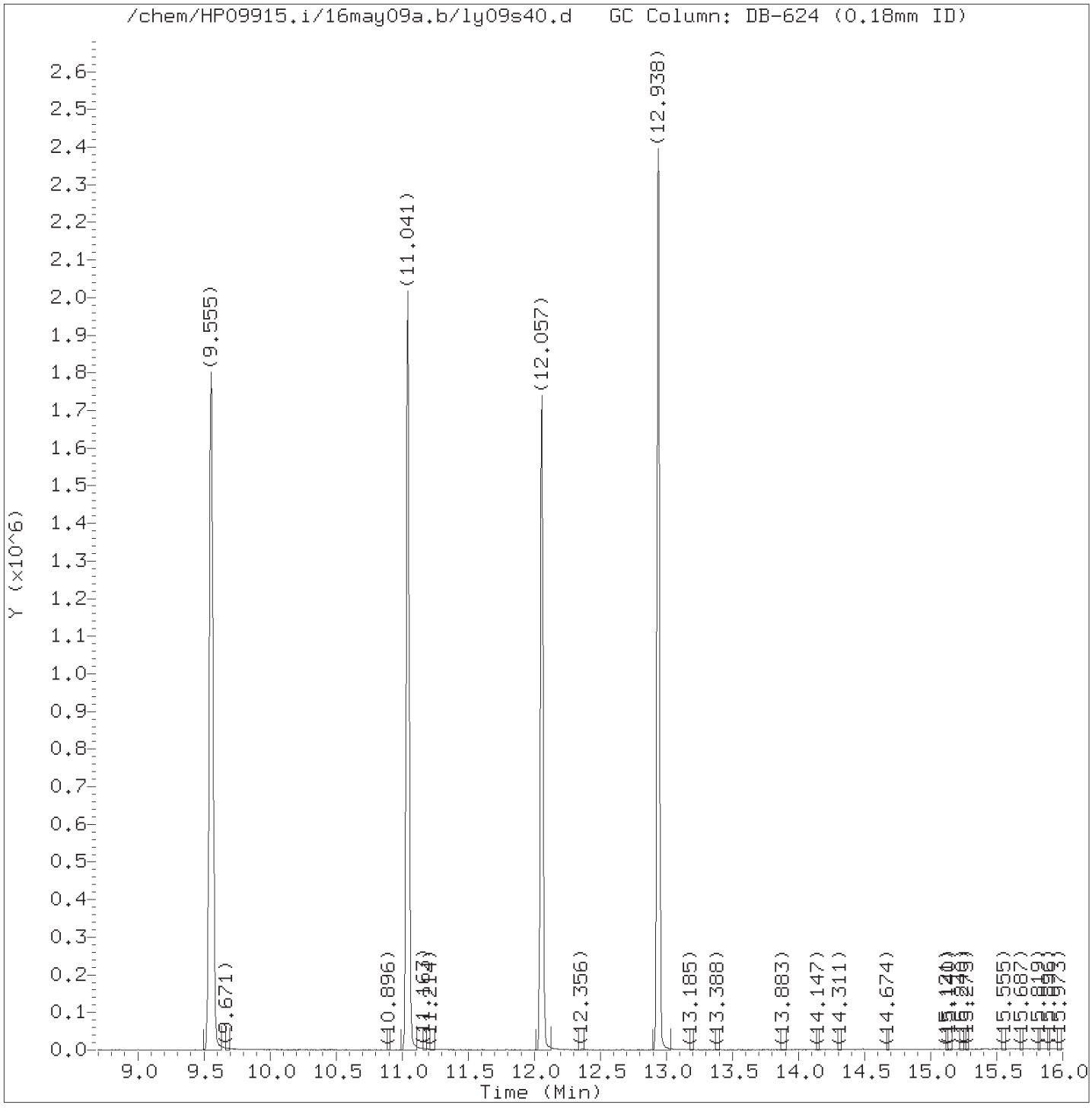
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s40.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:30 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:49 Automation

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 20:00.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s40.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:30 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:49 Automation

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 20:00.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s40.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 19:30 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 19:49 Automation

Sample Name: E6106 Lab Sample ID: 8354940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.999	65	222440	250.000
52)$Dibromofluoromethane	(2)	6.613	113	339314	49.186
57)$1,2-Dichloroethane-d4	(2)	7.076	102	87796	50.411
66)*Fluorobenzene	(2)	7.510	96	1452083	50.000
83)$Toluene-d8	(3)	9.555	98	1417524	49.614
100)*Chlorobenzene-d5	(3)	11.041	117	1091517	50.000
114)$4-Bromofluorobenzene	(3)	12.057	95	527985	49.938
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	550555	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 20:00.
Target 3.5 esignature user ID: cmc07494

E6106 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354940

Data file: /chem2/HP19094.i/16may09a.b/hy09s11.d Injection date and time: **09-MAY-2016 14:39**
Data file Sample Info. Line: E6106;8354940;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.281(-0.018)	442	65	74967	(-16)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2429713	(1)	10.00	
97) Chlorobenzene-d5	11.249(0.000)	1585	117	1662905	(-11)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	717907	(-18)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	580205	10.134	101%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(0.000)	102	91113	9.608	96%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2412715	10.185	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	697148	9.130	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	2.111(-0.001)	45	24641M	0.295	0.30		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

M = Compound was manually integrated.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s11.d Injection date and time: **09-MAY-2016 14:39**
Data file Sample Info. Line: E6106;8354940;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

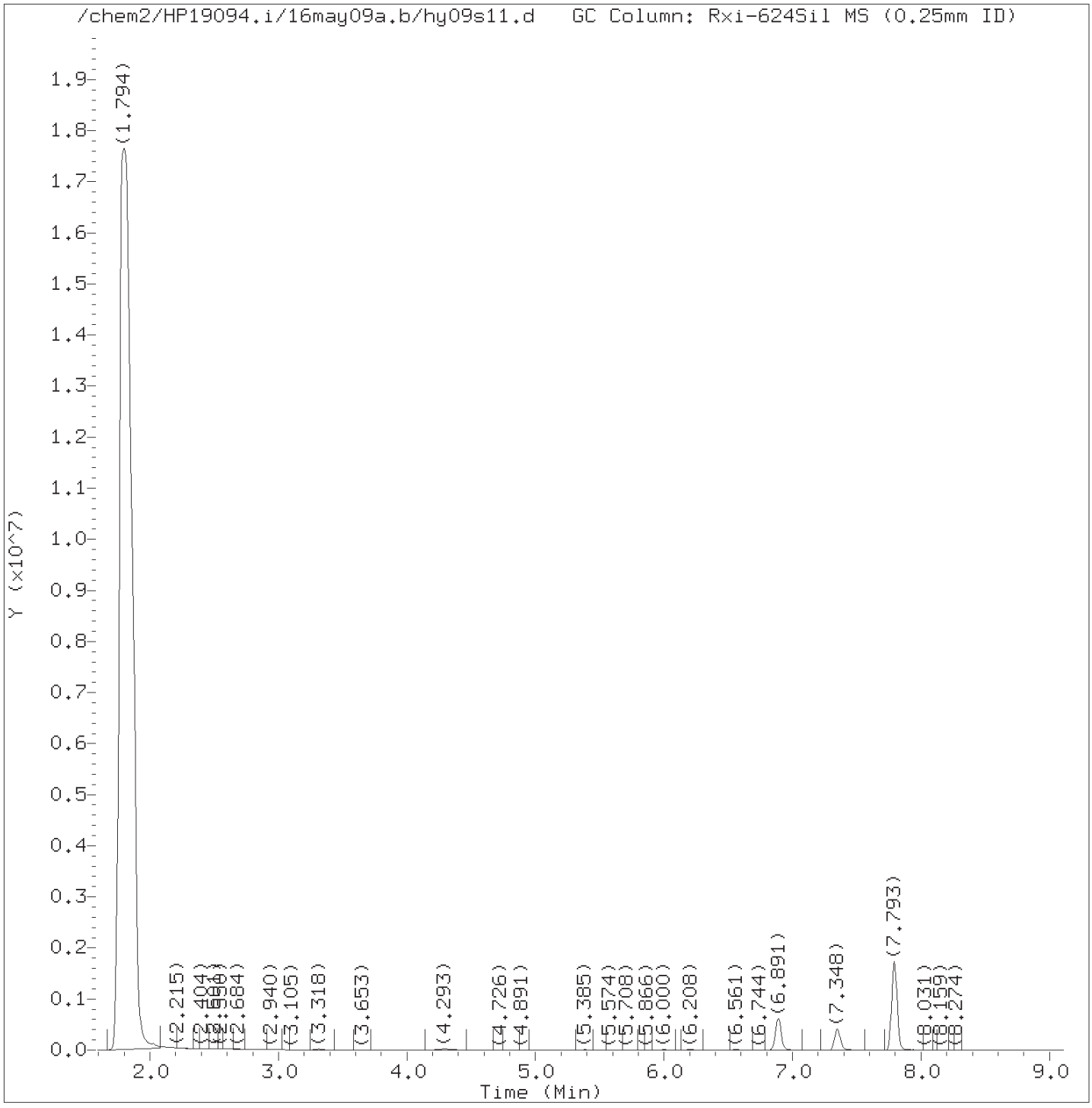
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

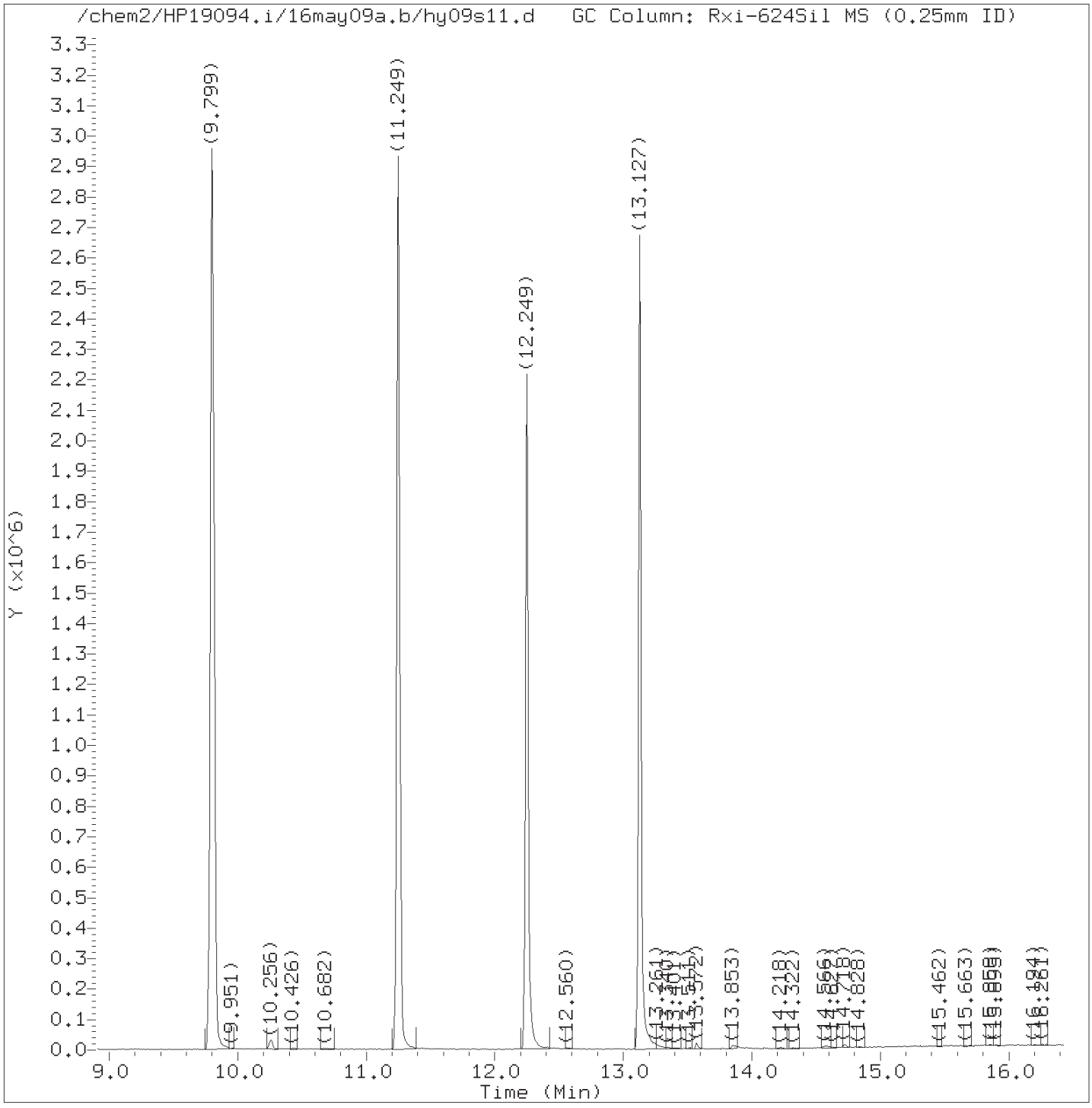
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

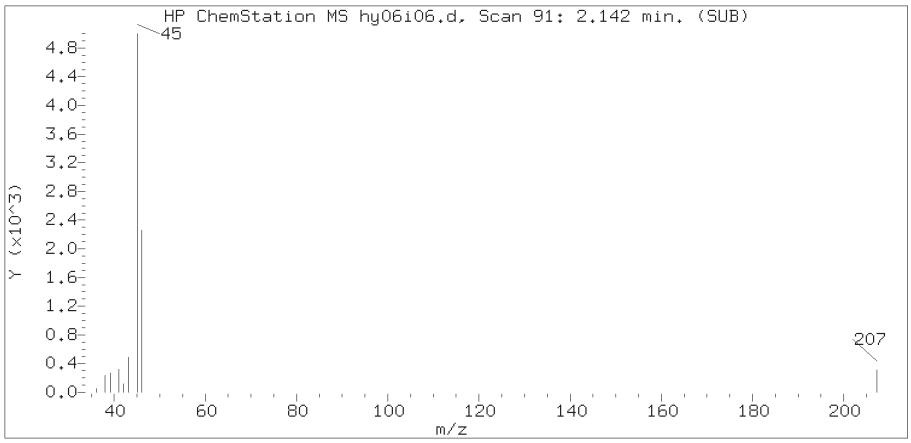
Sample Name: E6106 Lab Sample ID: 8354940

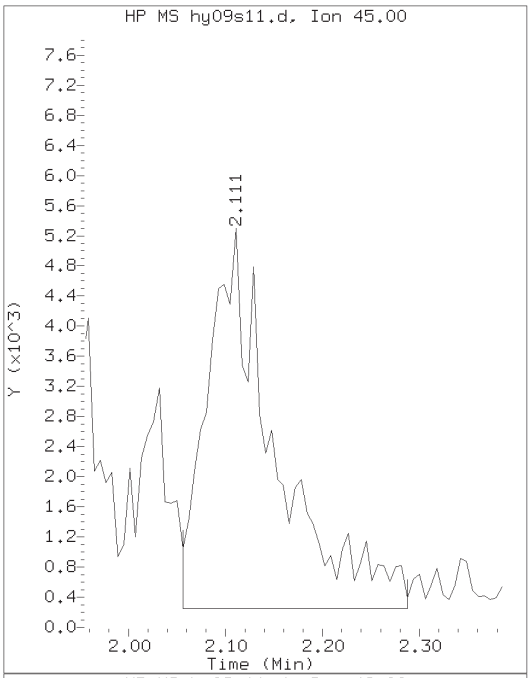
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.111	45	24641M	0.295
26)*t-Butyl Alcohol-d10	(1)	4.281	65	74967	50.000
50)$Dibromofluoromethane	(2)	6.891	113	580205	10.134
57)$1,2-Dichloroethane-d4	(2)	7.348	102	91113	9.608
63)*Fluorobenzene	(2)	7.793	96	2429713	10.000
82)$Toluene-d8	(3)	9.799	98	2412715	10.185
97)*Chlorobenzene-d5	(3)	11.249	117	1662905	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	697148	9.130
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	717907	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

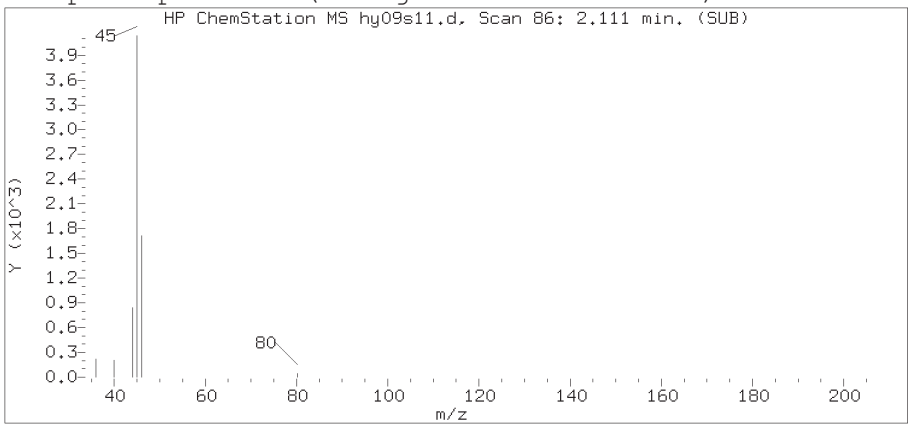
Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

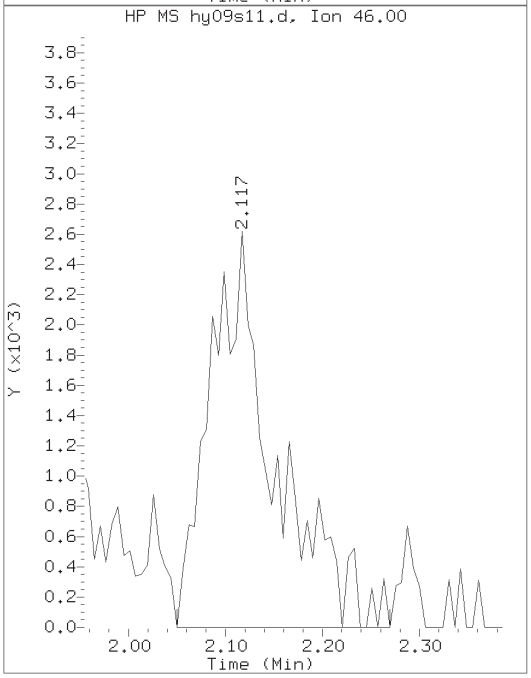
Reference Standard Spectrum for Dimethyl ether



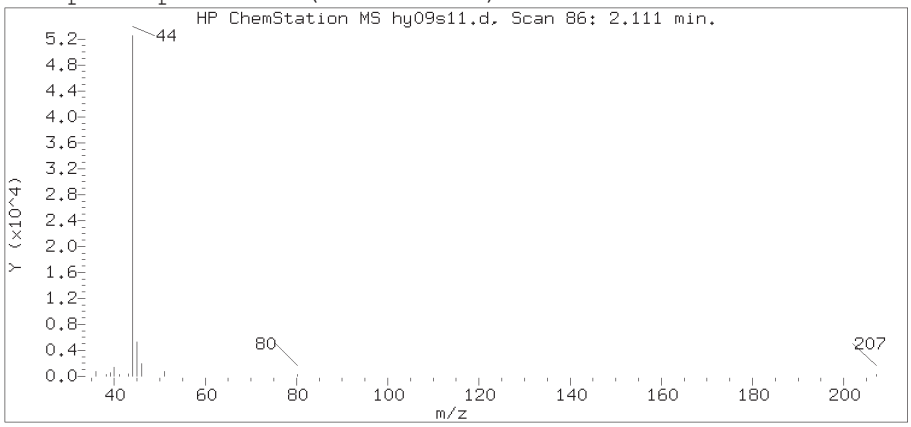


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

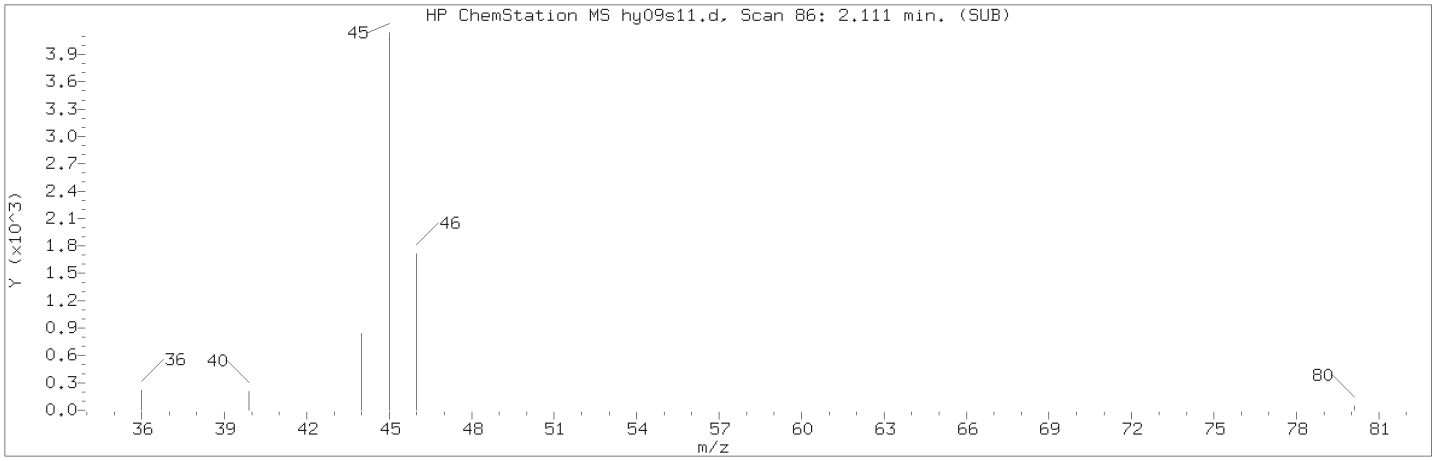
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6106 Lab Sample ID: 8354940

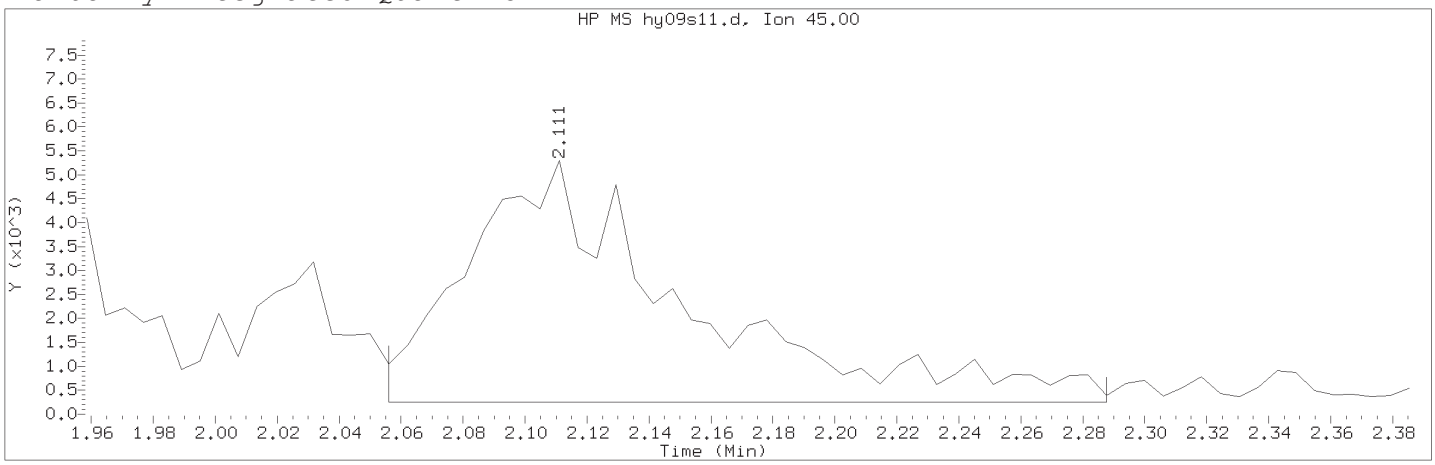
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 86
Retention Time (minutes): 2.111
Relative Retention Time :-0.00154
Quant Ion : 45.00
Area (flag) : 24641M
On-Column Amount (ng) : 0.2953

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature [illegible] Date: 2017.07.13

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6106 Lab Sample ID: 8354940

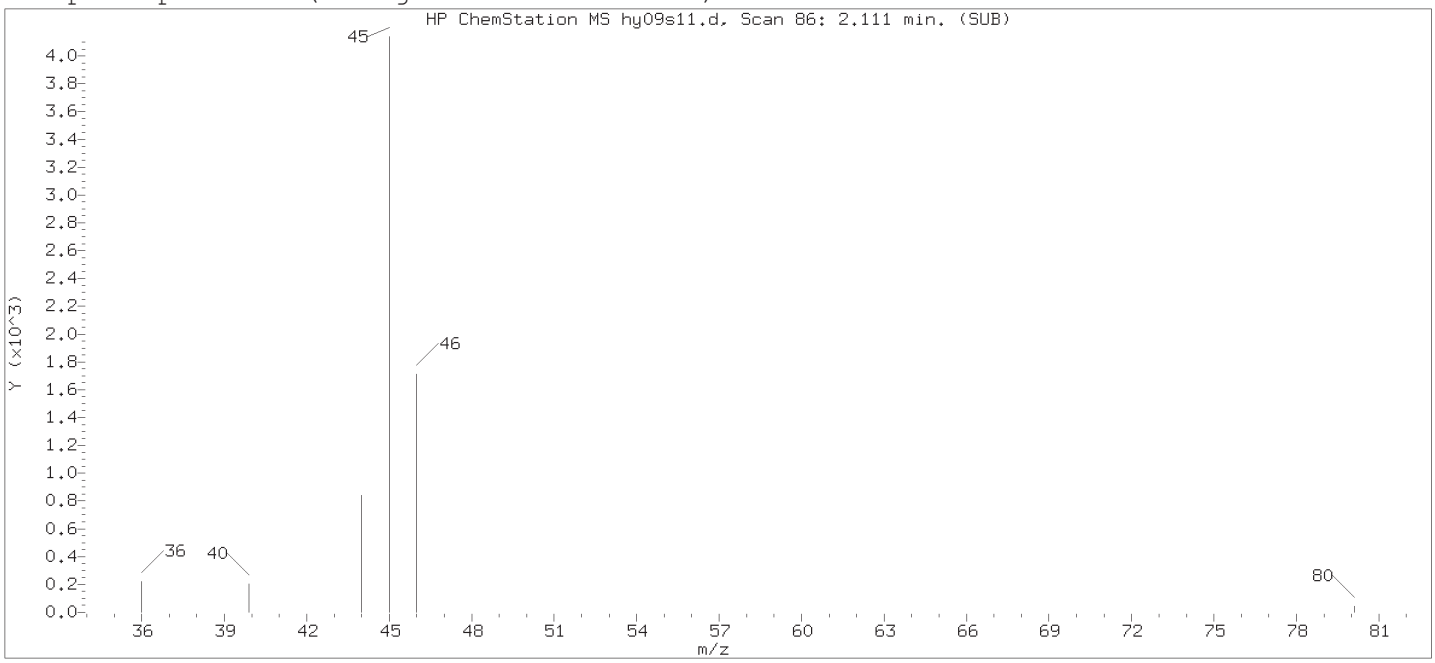
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 86
Retention Time (minutes): 2.111
Quant Ion : 45.00
Area (flag) : 24641M
On-Column Amount (ng) : 0.2953
Integration start scan : 76 Integration stop scan: 114
Y at integration start : 249 Y at integration end: 249

Reason for manual integration: improper integration

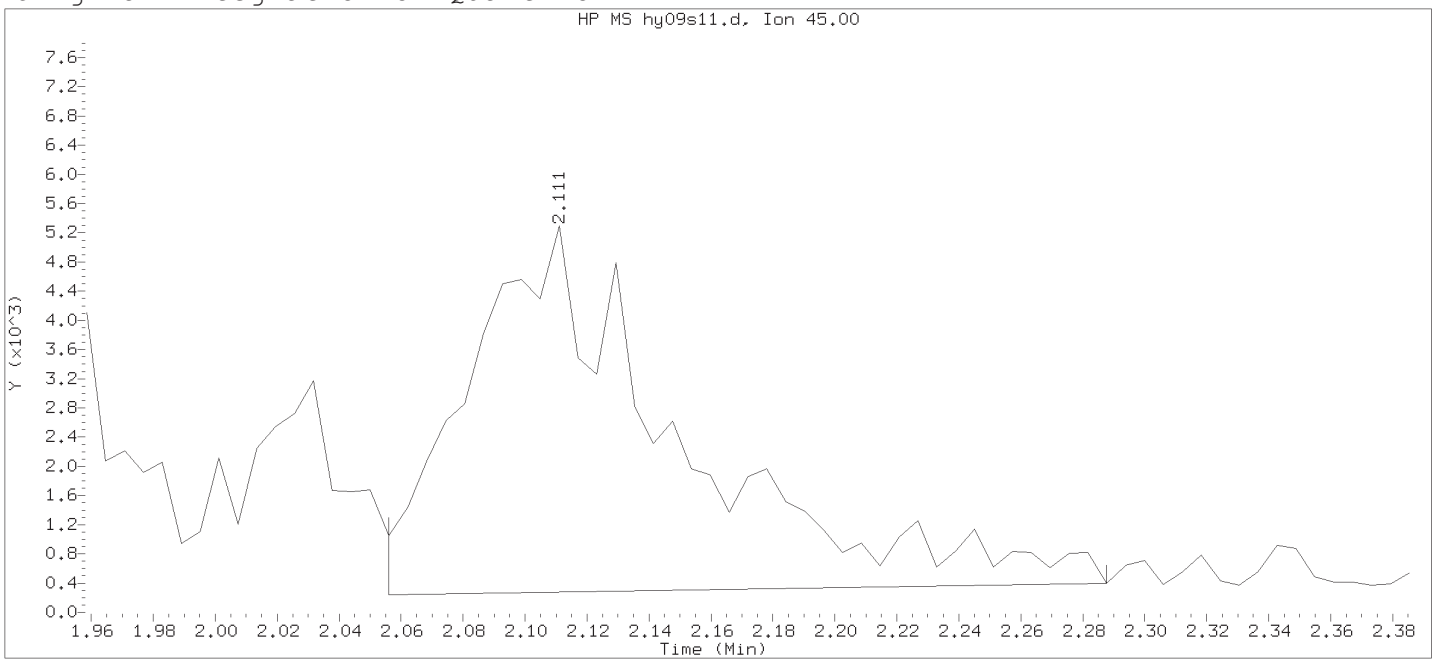
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s11.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 14:58 Automation

Sample Name: E6106 Lab Sample ID: 8354940

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 86		
Retention Time (minutes)	: 2.111		
Quant Ion	: 45.00		
Area	: 23530		
On-column Amount (ng)	: 0.2820		
Integration start scan	: 76	Integration stop scan:	114
Y at integration start	: 239	Y at integration end:	394

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s12.d Injection date and time: **09-MAY-2016 14:59**
Data file Sample Info. Line: E6107;8354941;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.257	(0.006)	438	65	74146	(-17)	50.00	
63) Fluorobenzene	7.787	(0.006)	1017	96	2423318	(0)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1656234	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	700699	(-20)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.000)	113	587862	10.295	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(-0.001)	102	94691	10.012	100%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2406705	10.200	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	690238	9.076	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s12.d Injection date and time: **09-MAY-2016 14:59**
Data file Sample Info. Line: E6107;8354941;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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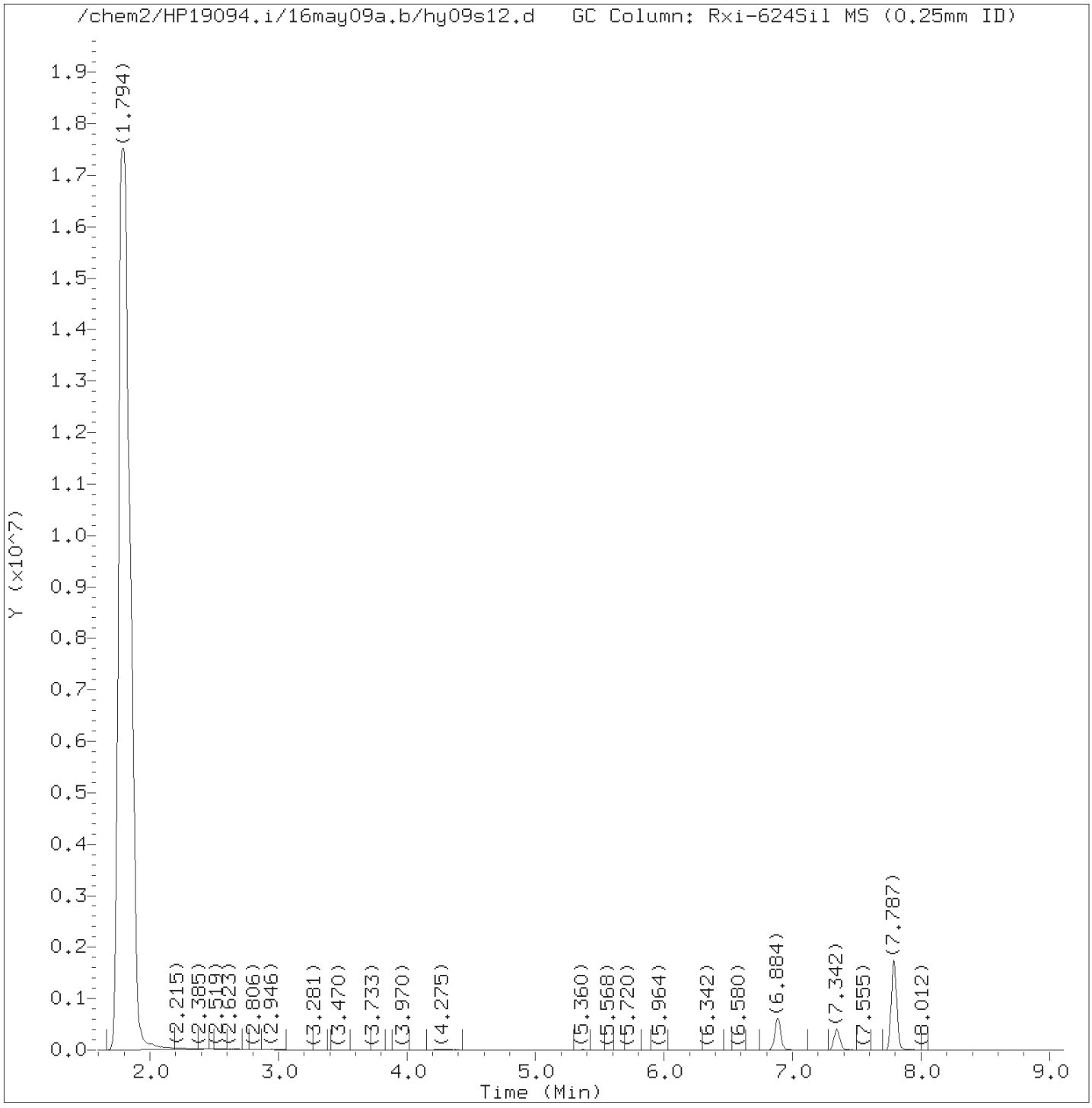
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

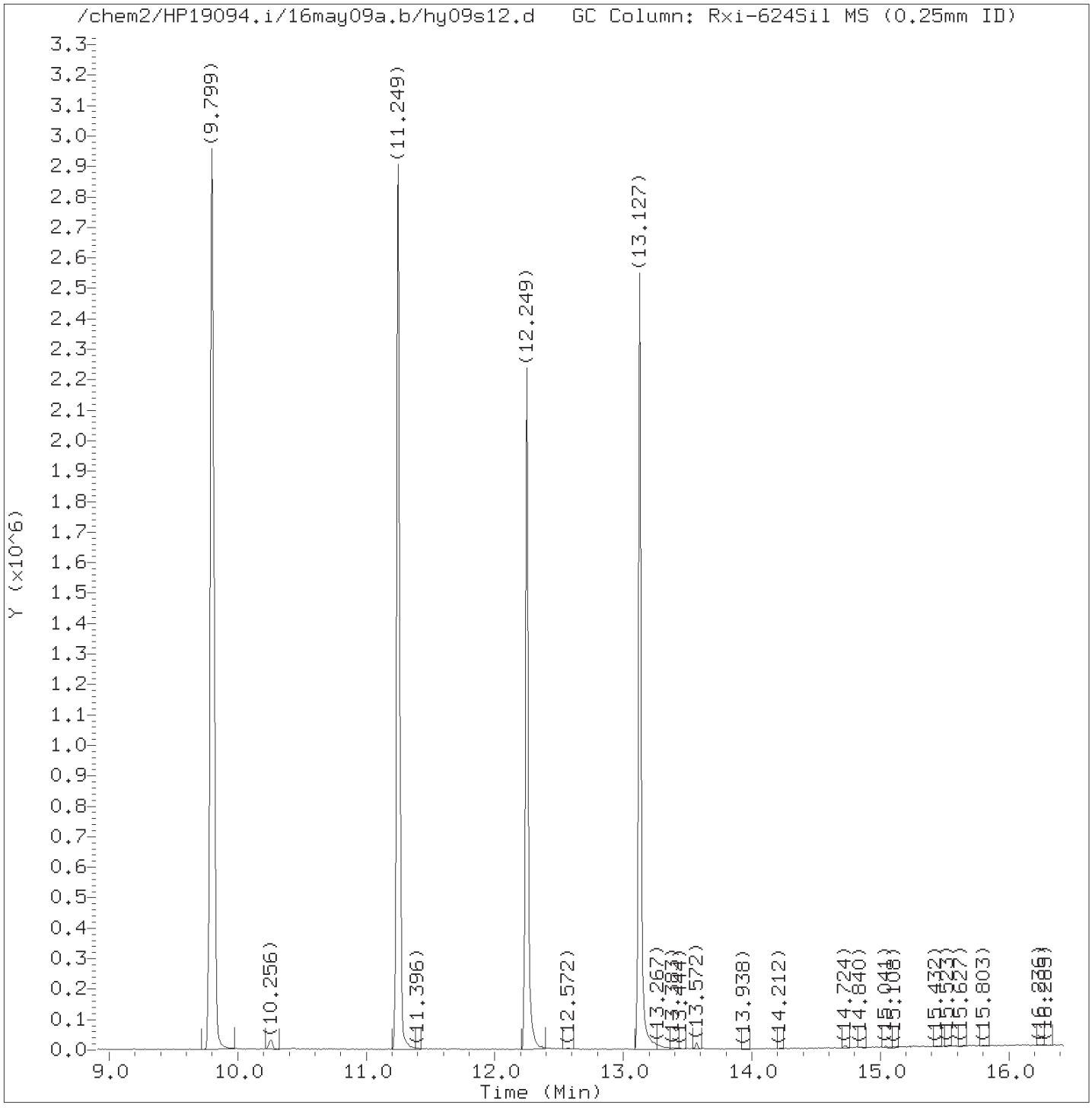
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s12.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6107 Lab Sample ID: 8354941

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s12.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6107 Lab Sample ID: 8354941

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s12.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 14:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6107 Lab Sample ID: 8354941

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	74146	50.000
50)$Dibromofluoromethane	(2)	6.884	113	587862	10.295
57)$1,2-Dichloroethane-d4	(2)	7.348	102	94691	10.012
63)*Fluorobenzene	(2)	7.787	96	2423318	10.000
82)$Toluene-d8	(3)	9.799	98	2406705	10.200
97)*Chlorobenzene-d5	(3)	11.249	117	1656234	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	690238	9.076
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	700699	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s13.d Injection date and time: **09-MAY-2016 15:20**
Data file Sample Info. Line: E6108;8354942;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294(-0.031)	444	65	63904 (-29)	50.00	
63) Fluorobenzene	7.787(0.006)	1017	96	2406764 (0)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1654583 (-12)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	673258 (-23)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(-0.001)	113	570872	10.066	101%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(-0.001)	102	89072	9.482	95%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2390108	10.140	101%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	683508	8.996	90%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.001(0.000)	85	28521	0.344	0.34		J	0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s13.d Injection date and time: **09-MAY-2016 15:20**
Data file Sample Info. Line: E6108;8354942;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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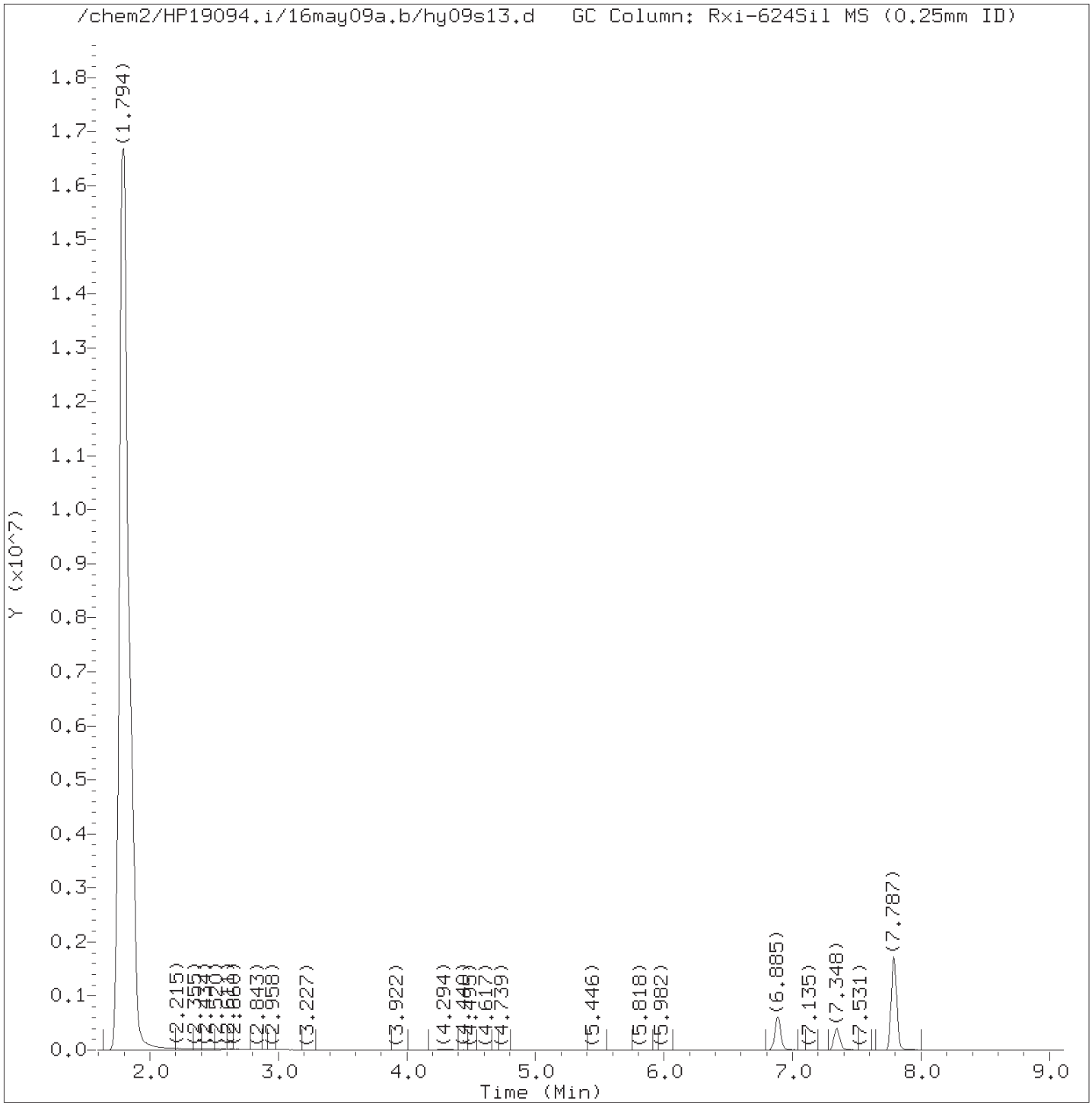
Total number of targets = 21

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

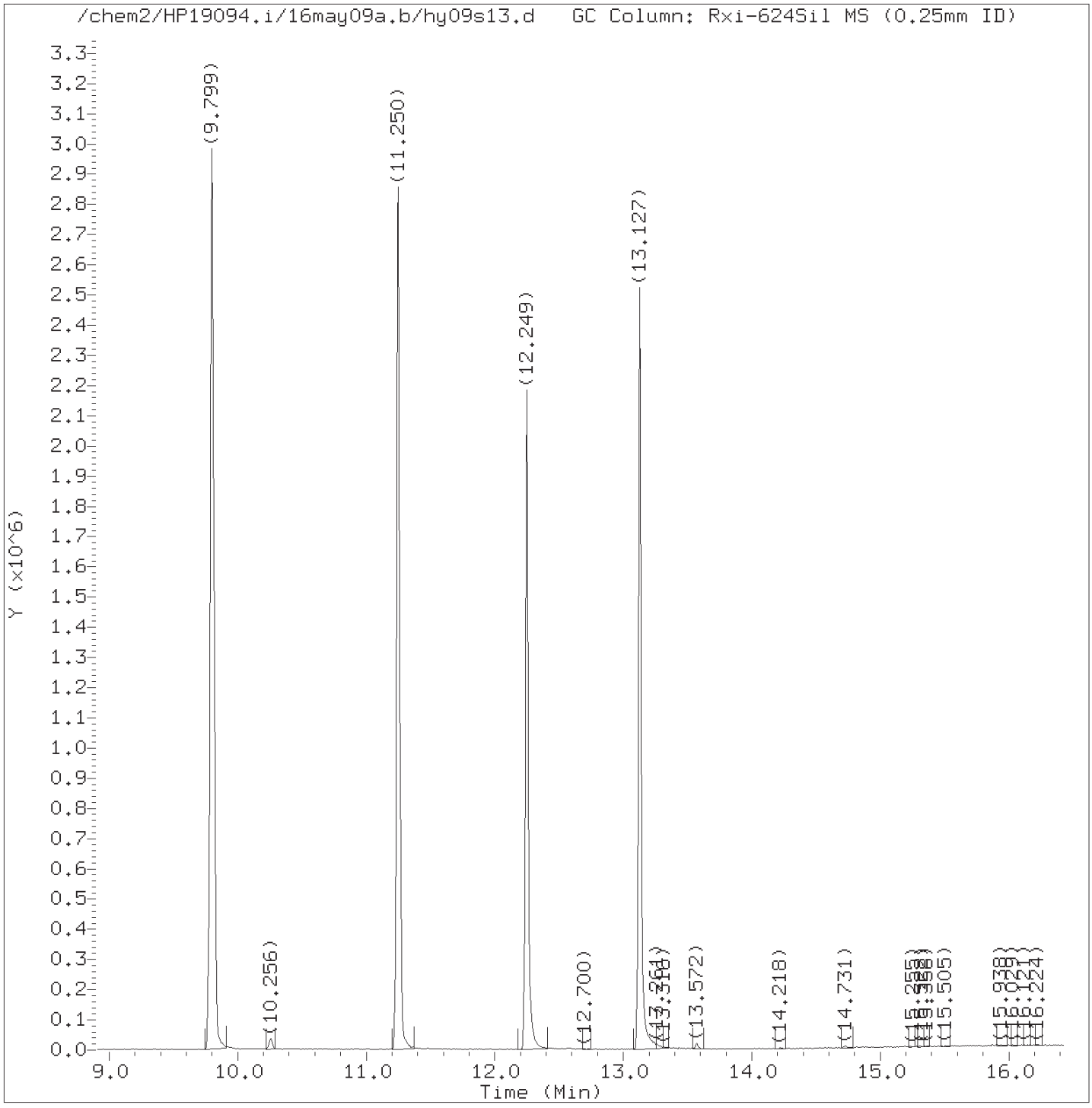
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s13.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6108 Lab Sample ID: 8354942

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s13.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6108 Lab Sample ID: 8354942

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s13.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6108 Lab Sample ID: 8354942

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.001	85	28521	0.344
26)*t-Butyl Alcohol-d10	(1)	4.294	65	63904	50.000
50)$Dibromofluoromethane	(2)	6.891	113	570872	10.066
57)$1,2-Dichloroethane-d4	(2)	7.348	102	89072	9.482
63)*Fluorobenzene	(2)	7.787	96	2406764	10.000
82)$Toluene-d8	(3)	9.799	98	2390108	10.140
97)*Chlorobenzene-d5	(3)	11.250	117	1654583	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	683508	8.996
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	673258	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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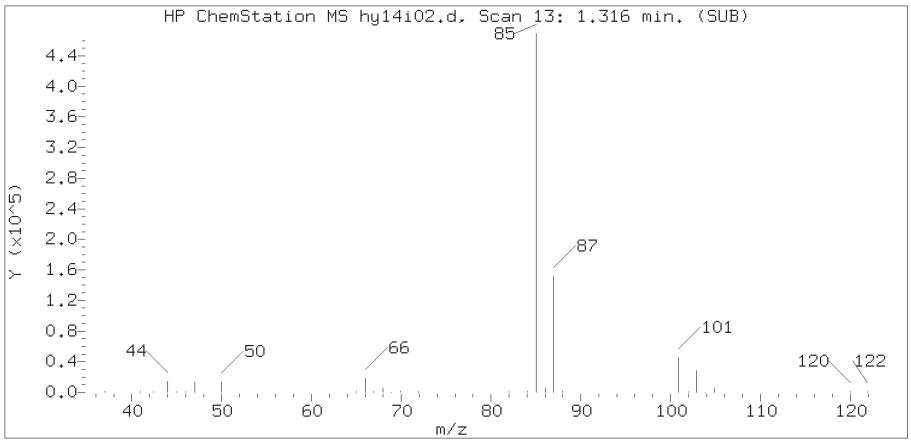
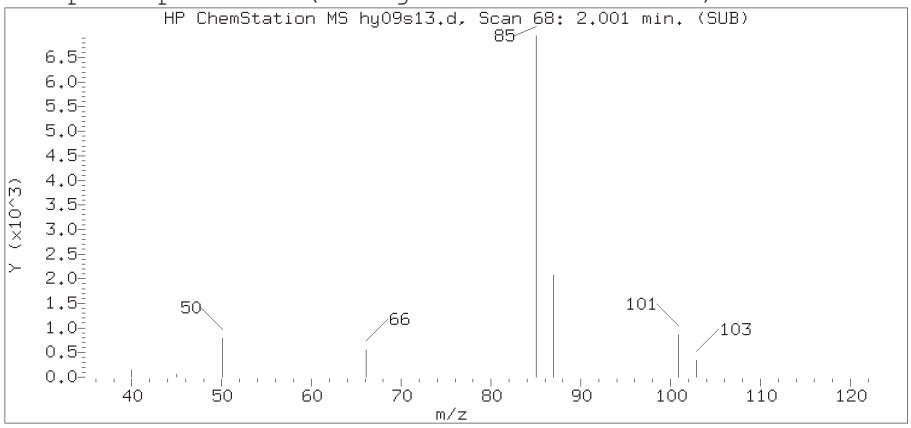
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

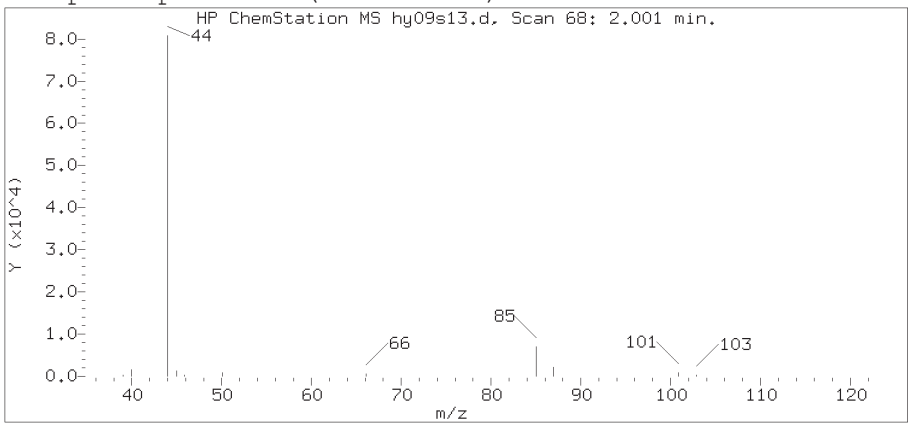
Reference Standard Spectrum for Dichlorodifluoromethane

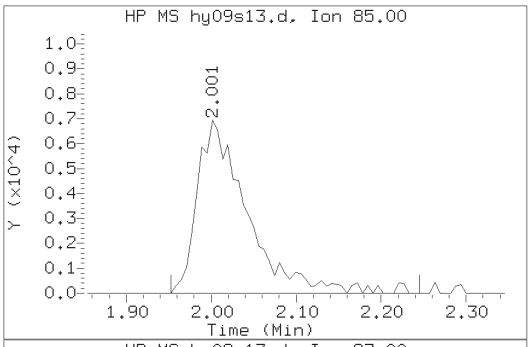


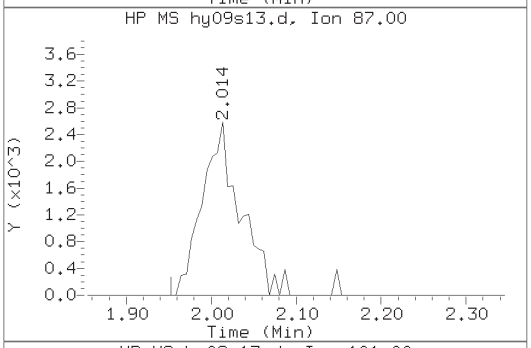
Sample Spectrum (Background Subtracted)

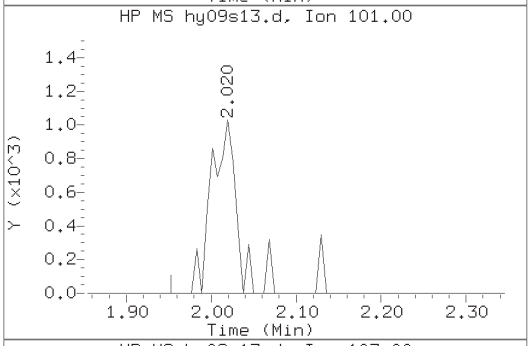


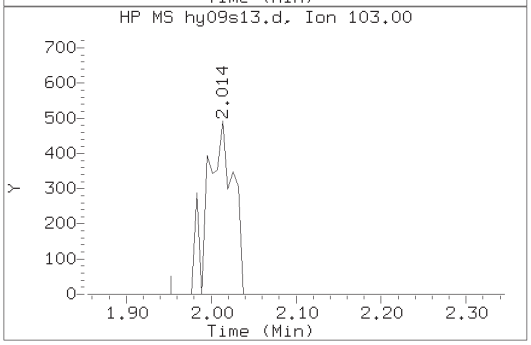
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/16may09a.b/hy09s13.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6108 Lab Sample ID: 8354942

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 68
Retention Time (minutes): 2.001
Relative Retention Time : 0.00058
Quant Ion : 85.00
Area (flag) : 28521
On-Column Amount (ng) : 0.3437

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible]

Data file: /chem2/HP19094.i/16may09a.b/hy09s14.d Injection date and time: **09-MAY-2016 15:40**
Data file Sample Info. Line: E6109;8354943;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294(-0.031)	444	65	82935 (-8)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2439074 (1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1750853 (-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	769329 (-12)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	616261	10.722	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342(0.001)	102	101314	10.643	106%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2439442	9.780	98%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	746709	9.288	93%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s14.d Injection date and time: **09-MAY-2016 15:40**
Data file Sample Info. Line: E6109;8354943;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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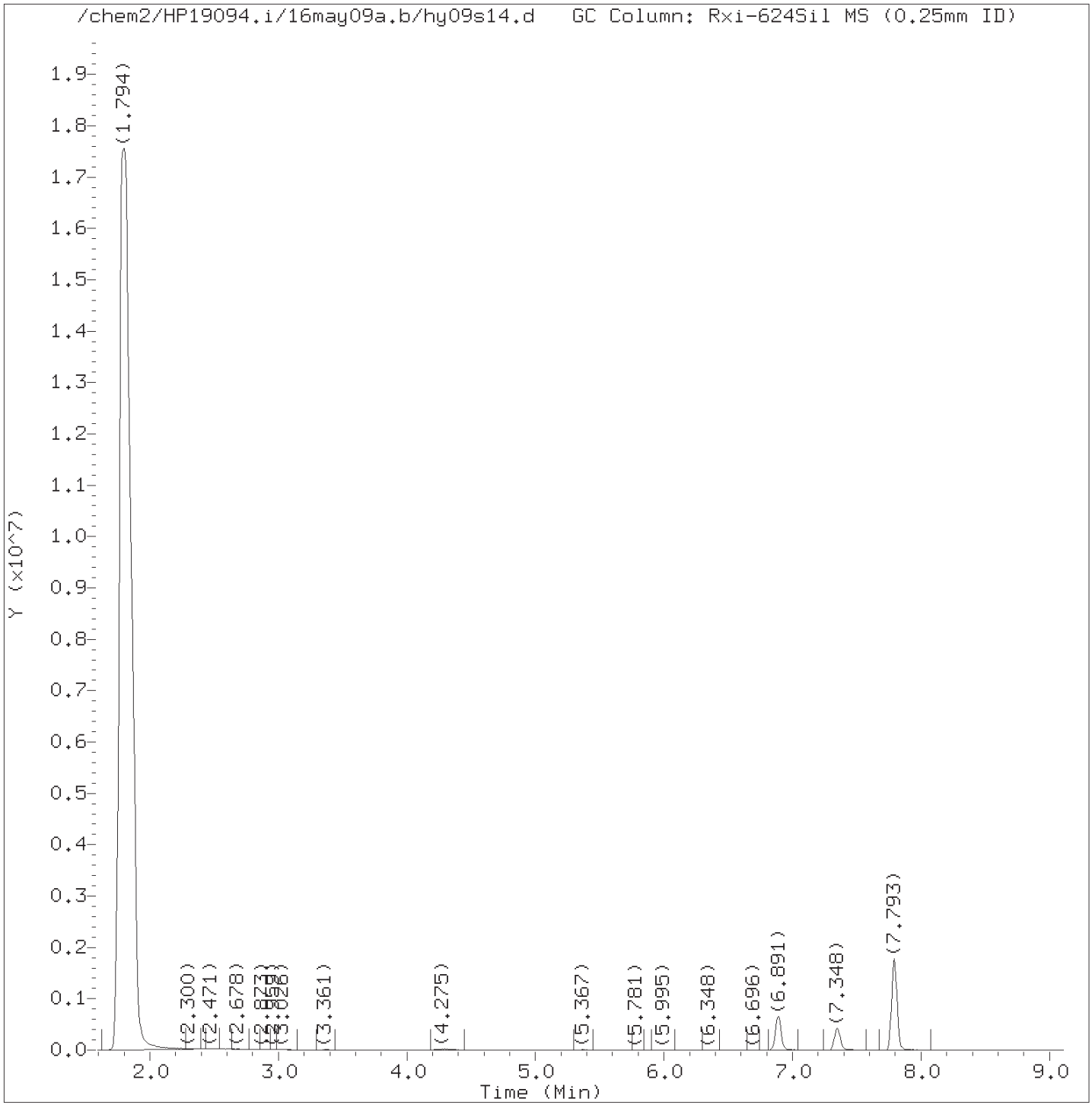
Total number of targets = 21

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

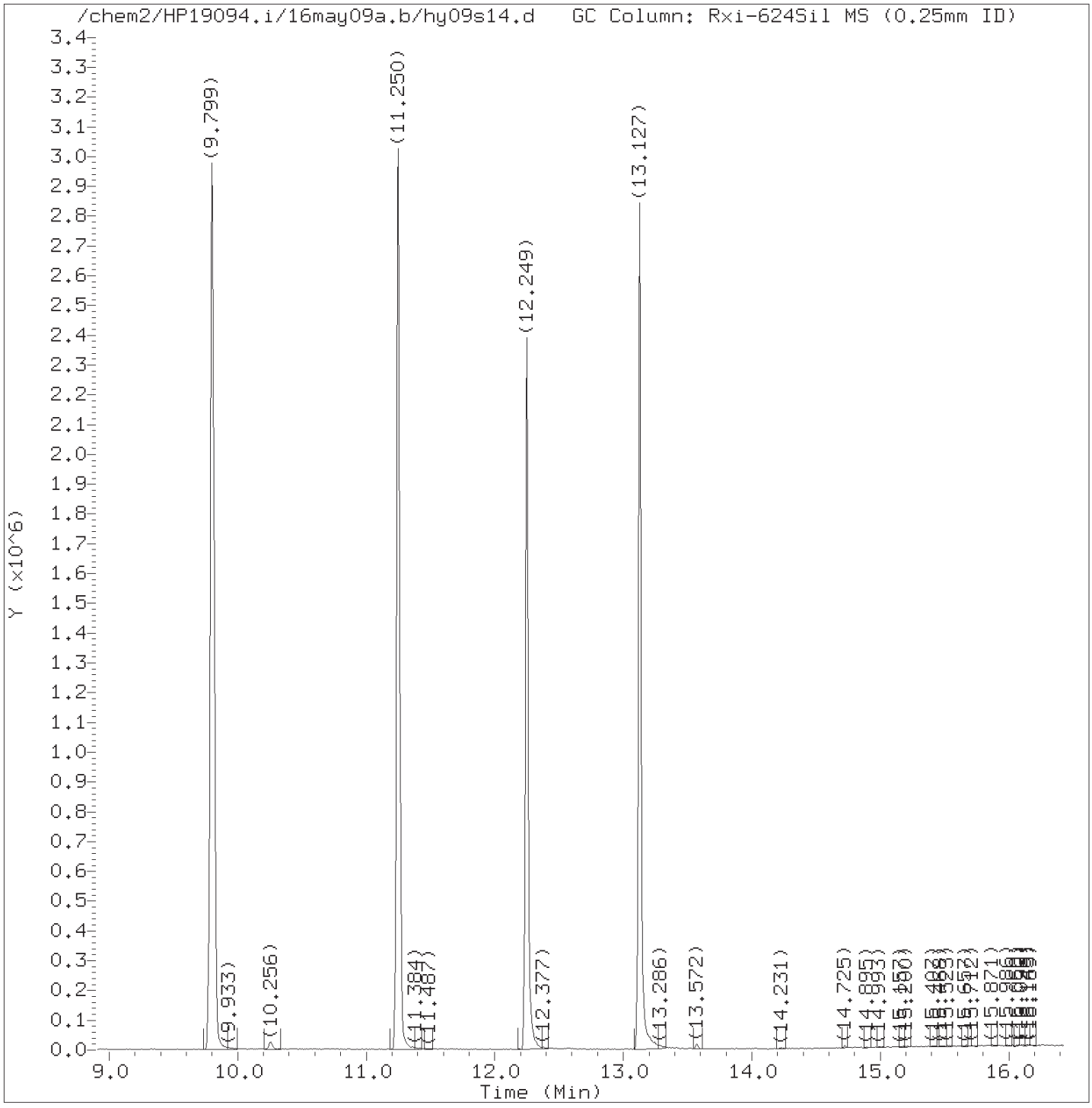
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s14.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6109 Lab Sample ID: 8354943

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s14.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6109 Lab Sample ID: 8354943

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s14.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 15:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6109 Lab Sample ID: 8354943

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.294	65	82935	50.000
50)$Dibromofluoromethane	(2)	6.891	113	616261	10.722
57)$1,2-Dichloroethane-d4	(2)	7.342	102	101314	10.643
63)*Fluorobenzene	(2)	7.793	96	2439074	10.000
82)$Toluene-d8	(3)	9.799	98	2439442	9.780
97)*Chlorobenzene-d5	(3)	11.250	117	1750853	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	746709	9.288
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	769329	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s15.d Injection date and time: **09-MAY-2016 16:00**
Data file Sample Info. Line: E6110;8354944;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.288(-0.025)	443	65	81131	(-10)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2452522	(2)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1736490	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	740959	(-16)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891(0.000)	113	616232	10.663	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354(-0.001)	102	99294	10.373	104%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2434974	9.843	98%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	750716	9.415	94%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s15.d Injection date and time: **09-MAY-2016 16:00**
Data file Sample Info. Line: E6110;8354944;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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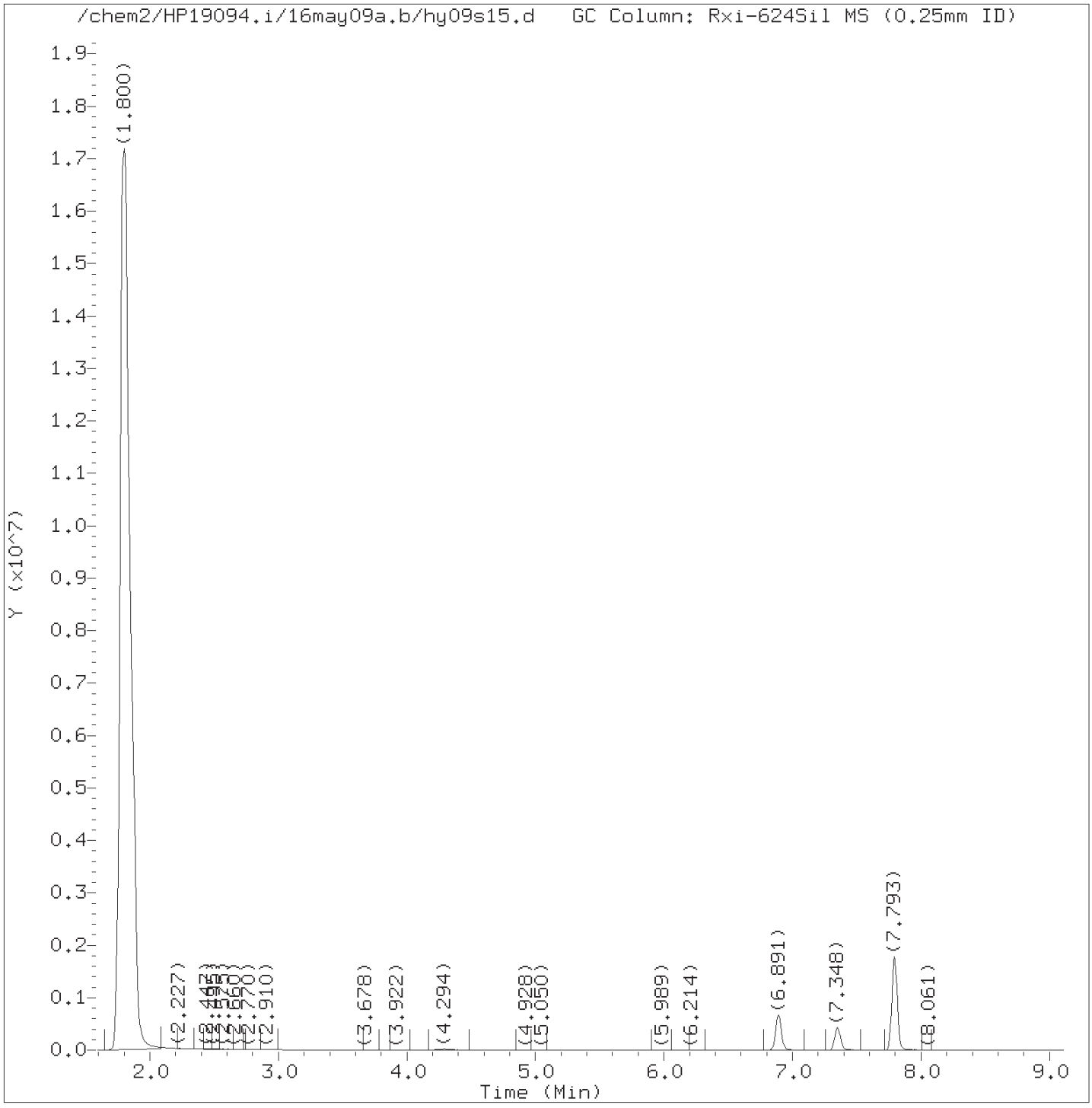
Total number of targets = 21

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

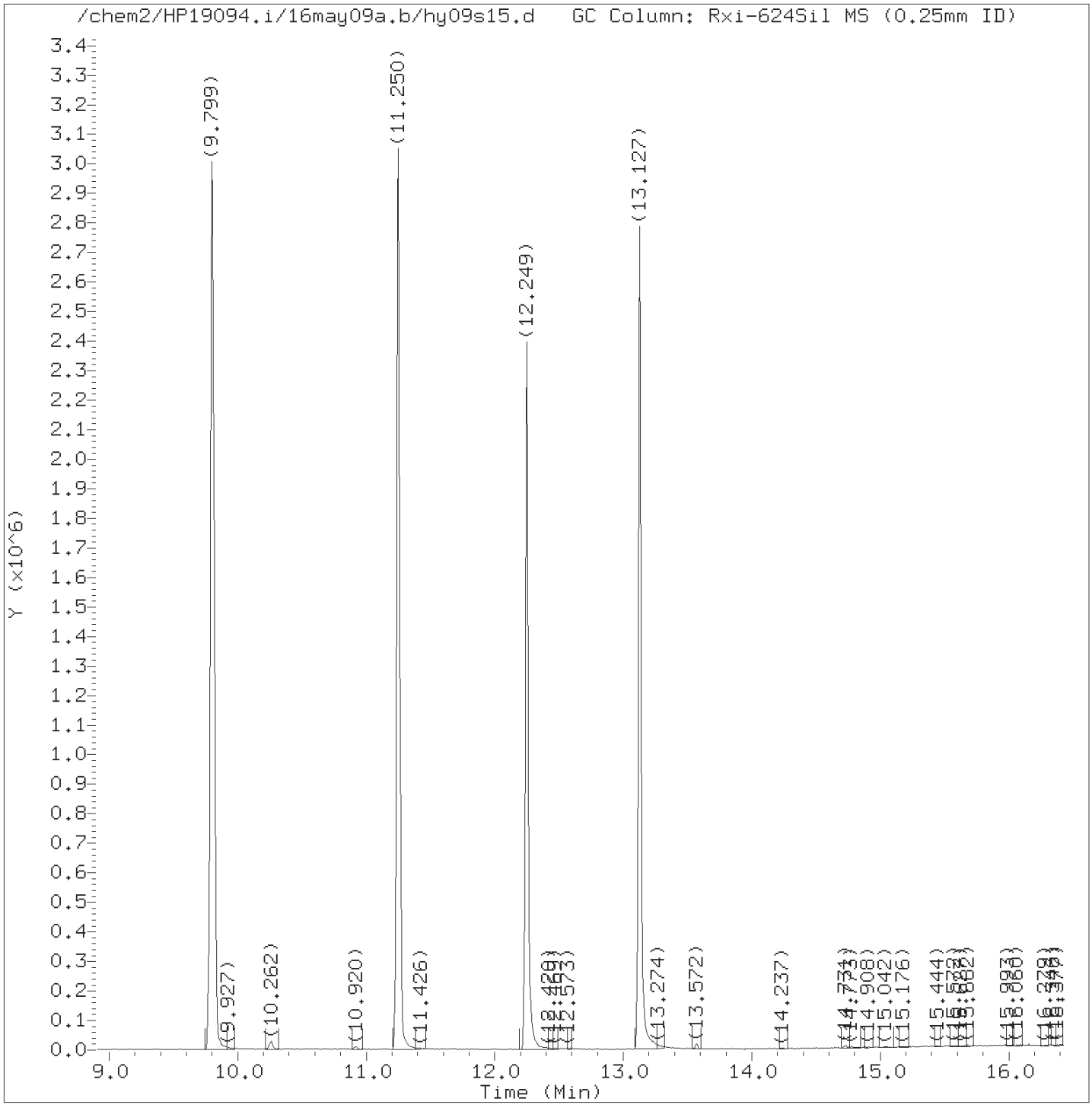
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s15.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6110 Lab Sample ID: 8354944

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s15.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6110 Lab Sample ID: 8354944

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s15.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6110 Lab Sample ID: 8354944

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.288	65	81131	50.000
50)$Dibromofluoromethane	(2)	6.891	113	616232	10.663
57)$1,2-Dichloroethane-d4	(2)	7.354	102	99294	10.373
63)*Fluorobenzene	(2)	7.793	96	2452522	10.000
82)$Toluene-d8	(3)	9.799	98	2434974	9.843
97)*Chlorobenzene-d5	(3)	11.250	117	1736490	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	750716	9.415
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	740959	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

E6111 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 8354945

Data file: /chem2/HP19094.i/16may09a.b/hy09s16.d Injection date and time: **09-MAY-2016 16:20**
Data file Sample Info. Line: E6111;8354945;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.281(-0.018)	442	65	73544	(-18)	50.00	
63) Fluorobenzene	7.787(0.006)	1017	96	2395952	(-1)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1595441	(-15)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	689918	(-21)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885(0.000)	113	561946	9.953	100%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348(-0.001)	102	90178	9.643	96%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2346318	10.323	103%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	665487	9.084	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)	3.056(-0.000)	101	10490	0.107	0.11		J	0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.373(-0.001)	63	41076	0.332	0.33		J	0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	3
104) o-Xylene	(3)			Not Detected					0.1	3
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s16.d Injection date and time: **09-MAY-2016 16:20**
Data file Sample Info. Line: E6111;8354945;1;0;;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **11995**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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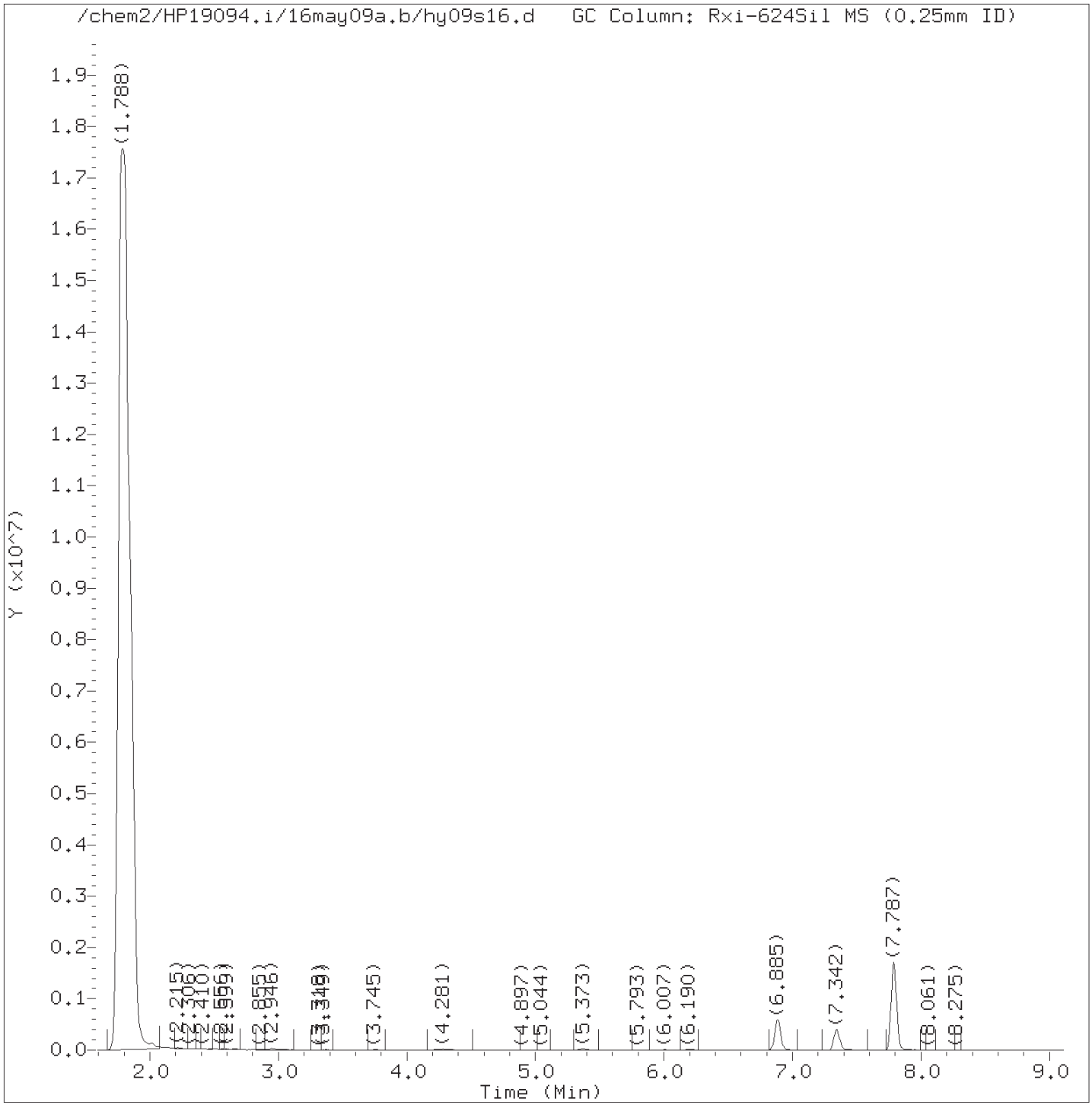
Total number of targets = 21

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

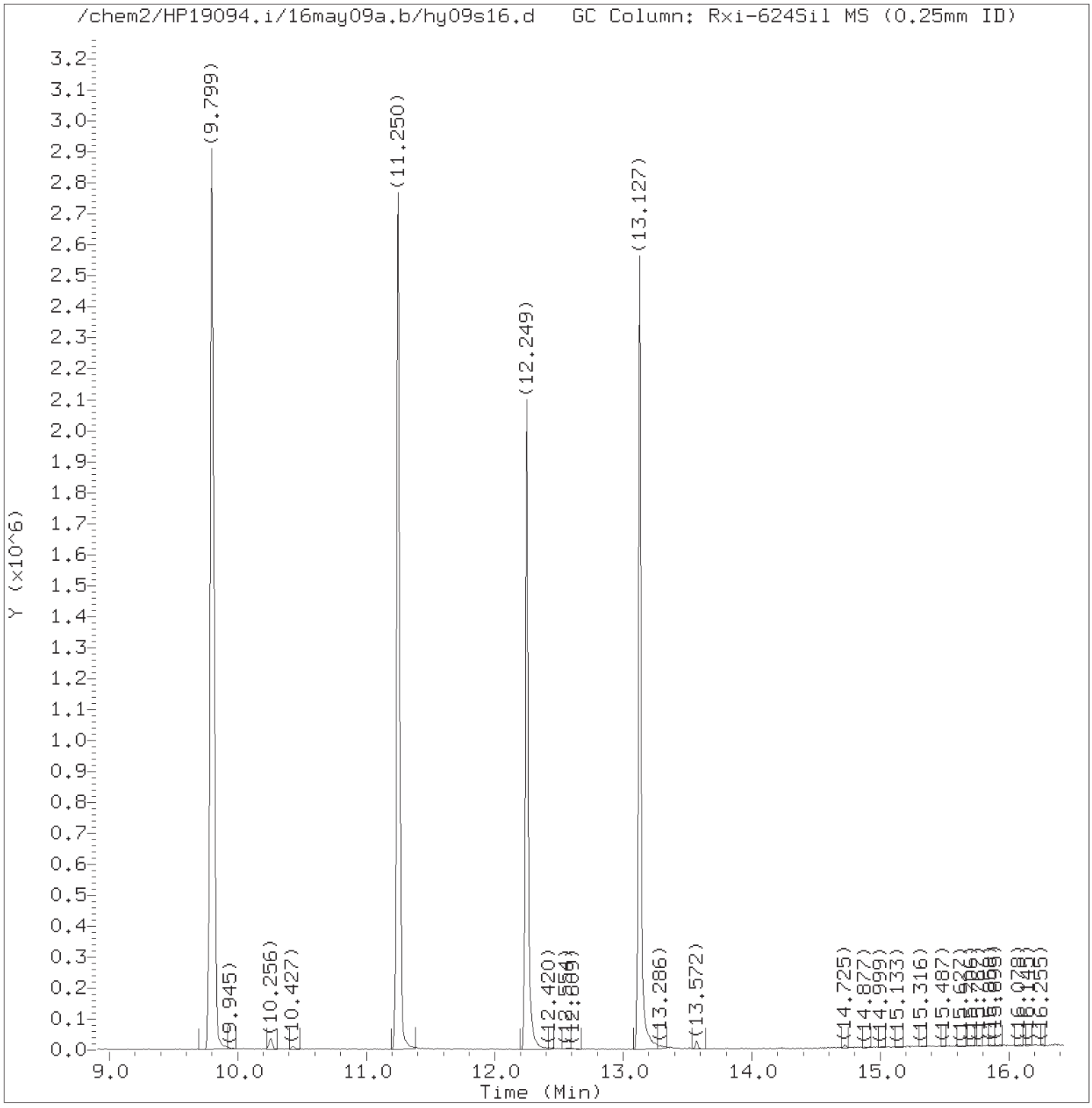
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s16.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6111 Lab Sample ID: 8354945

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s16.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6111 Lab Sample ID: 8354945

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s16.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6111 Lab Sample ID: 8354945

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
10) Trichlorofluoromethane	(2)	3.056	101	10490	0.107
26)*t-Butyl Alcohol-d10	(1)	4.281	65	73544	50.000
33) 1,1-Dichloroethane	(2)	5.373	63	41076	0.332
50)$Dibromofluoromethane	(2)	6.885	113	561946	9.953
57)$1,2-Dichloroethane-d4	(2)	7.348	102	90178	9.643
63)*Fluorobenzene	(2)	7.787	96	2395952	10.000
82)$Toluene-d8	(3)	9.799	98	2346318	10.323
97)*Chlorobenzene-d5	(3)	11.250	117	1595441	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	665487	9.084
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	689918	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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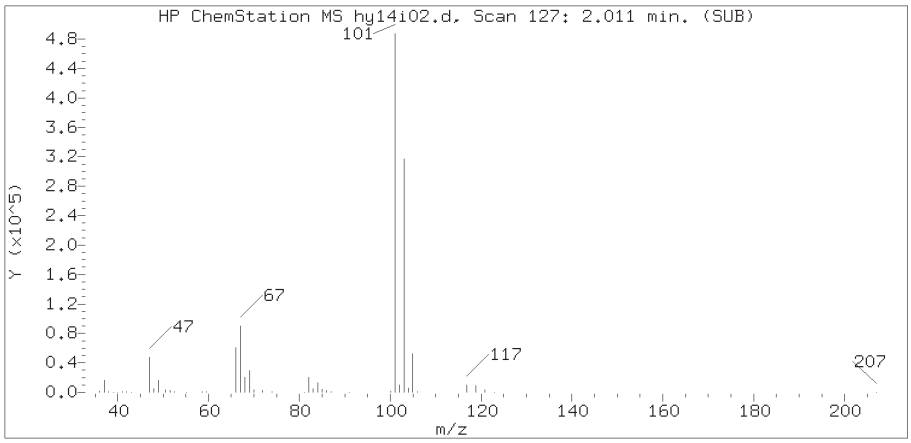
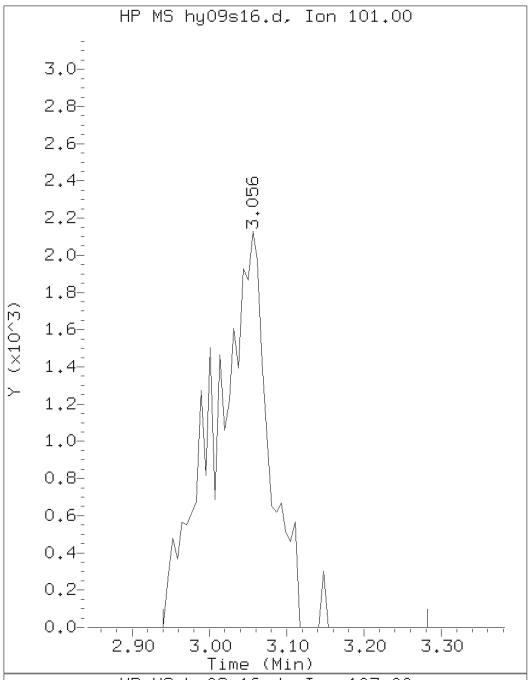
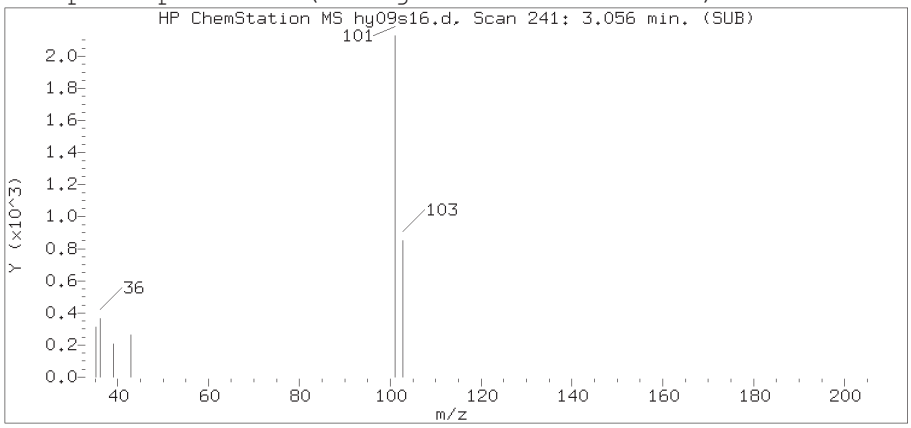
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

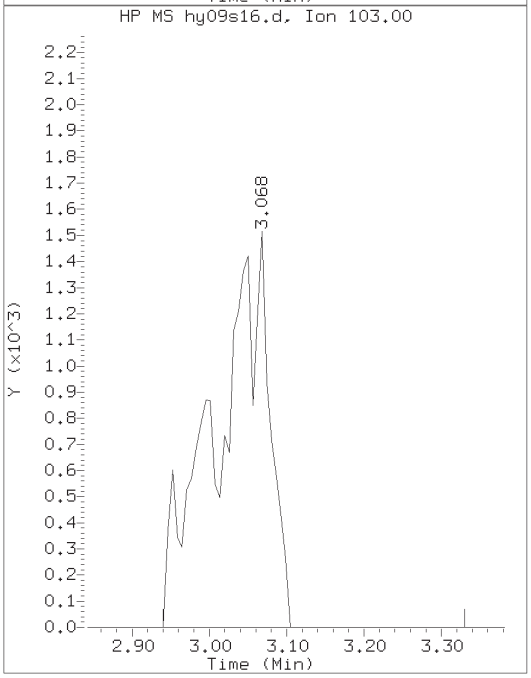
Reference Standard Spectrum for Trichlorofluoromethane



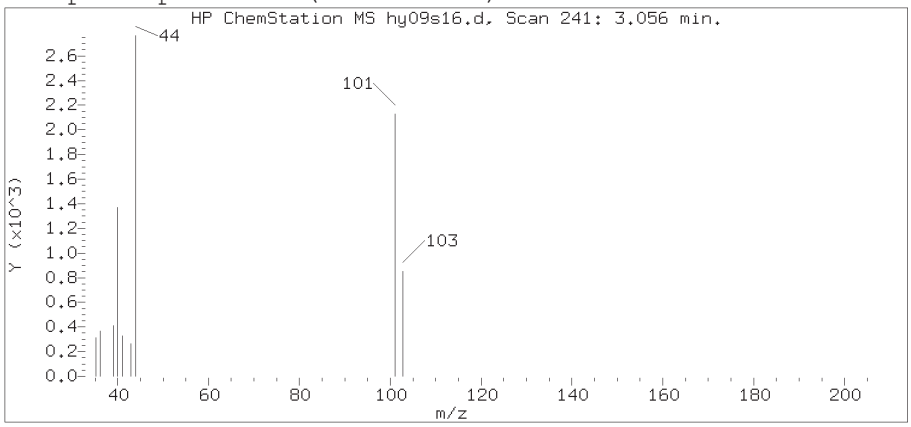


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/16may09a.b/hy09s16.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:20 Analyst ID: kel01973

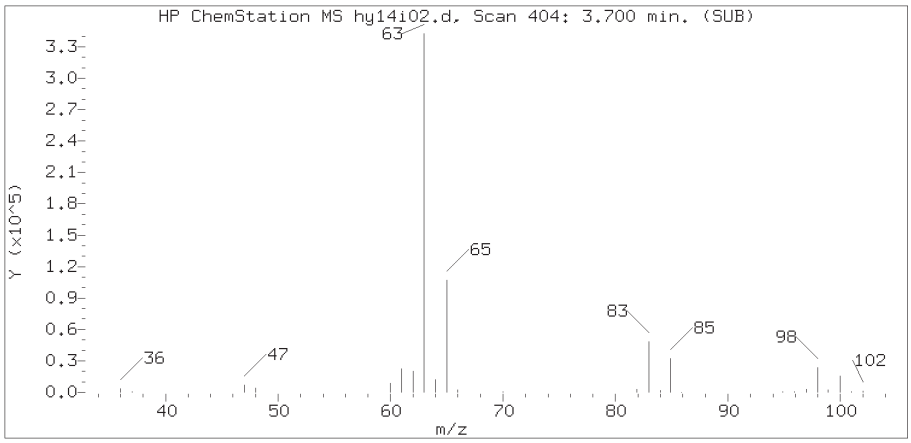
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

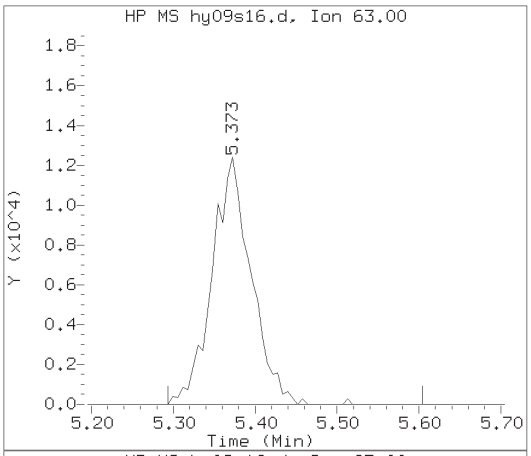
Sample Name: E6111 Lab Sample ID: 8354945

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 241
Retention Time (minutes): 3.056
Relative Retention Time :-0.00032
Quant Ion : 101.00
Area (flag) : 10490
On-Column Amount (ng) : 0.1068

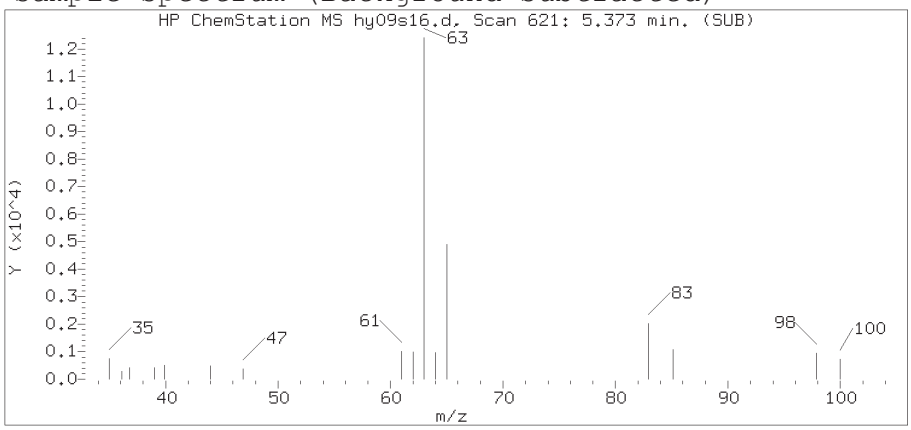
Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] 01973

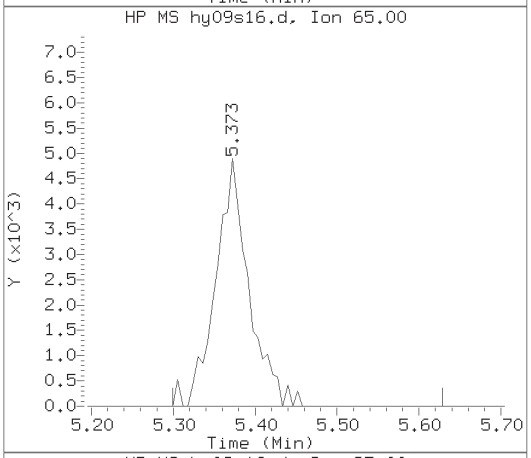
Reference Standard Spectrum for 1,1-Dichloroethane



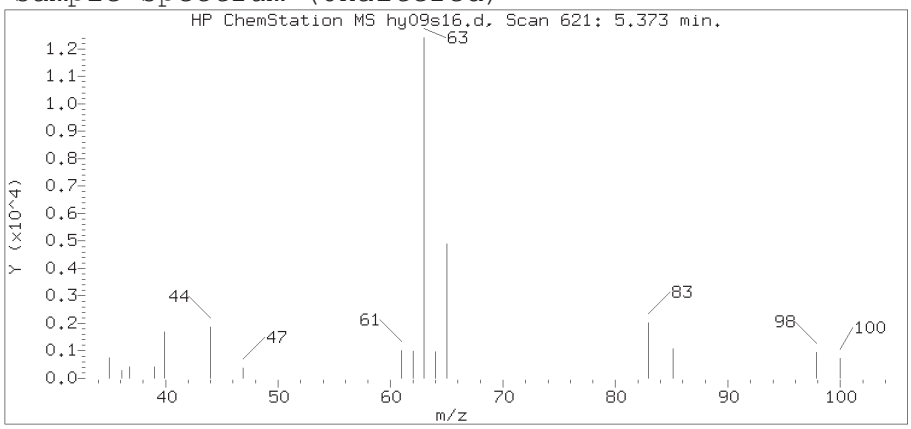


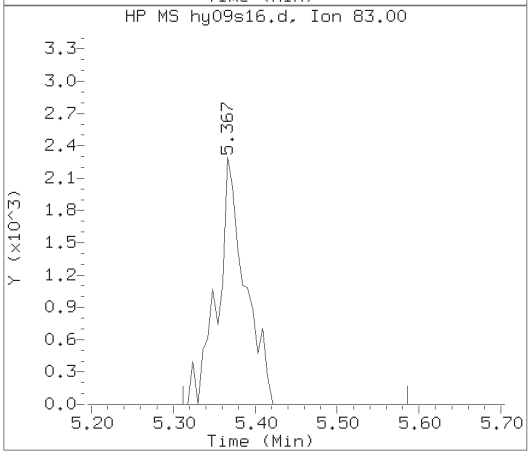
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16may09a.b/hy09s16.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 16:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 11995
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:02 kel01973

Sample Name: E6111 Lab Sample ID: 8354945

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 621
Retention Time (minutes): 5.373
Relative Retention Time :-0.00133
Quant Ion : 63.00
Area (flag) : 41076
On-Column Amount (ng) : 0.3322

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature [illegible] Dk: 217 87 13

Data file: /chem2/HP19094.i/16may09a.b/hy09s01.d Injection date and time: **09-MAY-2016 11:16**
Data file Sample Info. Line: E6112;8354946;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9159-ND

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.012)	441	65	147746	(65)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2547558	(6)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1770749	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	783926	(-11)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	618989	10.311	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	110035	11.067	111%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2517407	9.980	100%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	748605	9.207	92%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

Digitally signed by Sara E. Johnson on 05/13/2016 at 17:59. Target 3.5 esignature user ID: sej02002

Data file: /chem2/HP19094.i/16may09a.b/hy09s01.d Injection date and time: **09-MAY-2016 11:16**
Data file Sample Info. Line: E6112;8354946;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

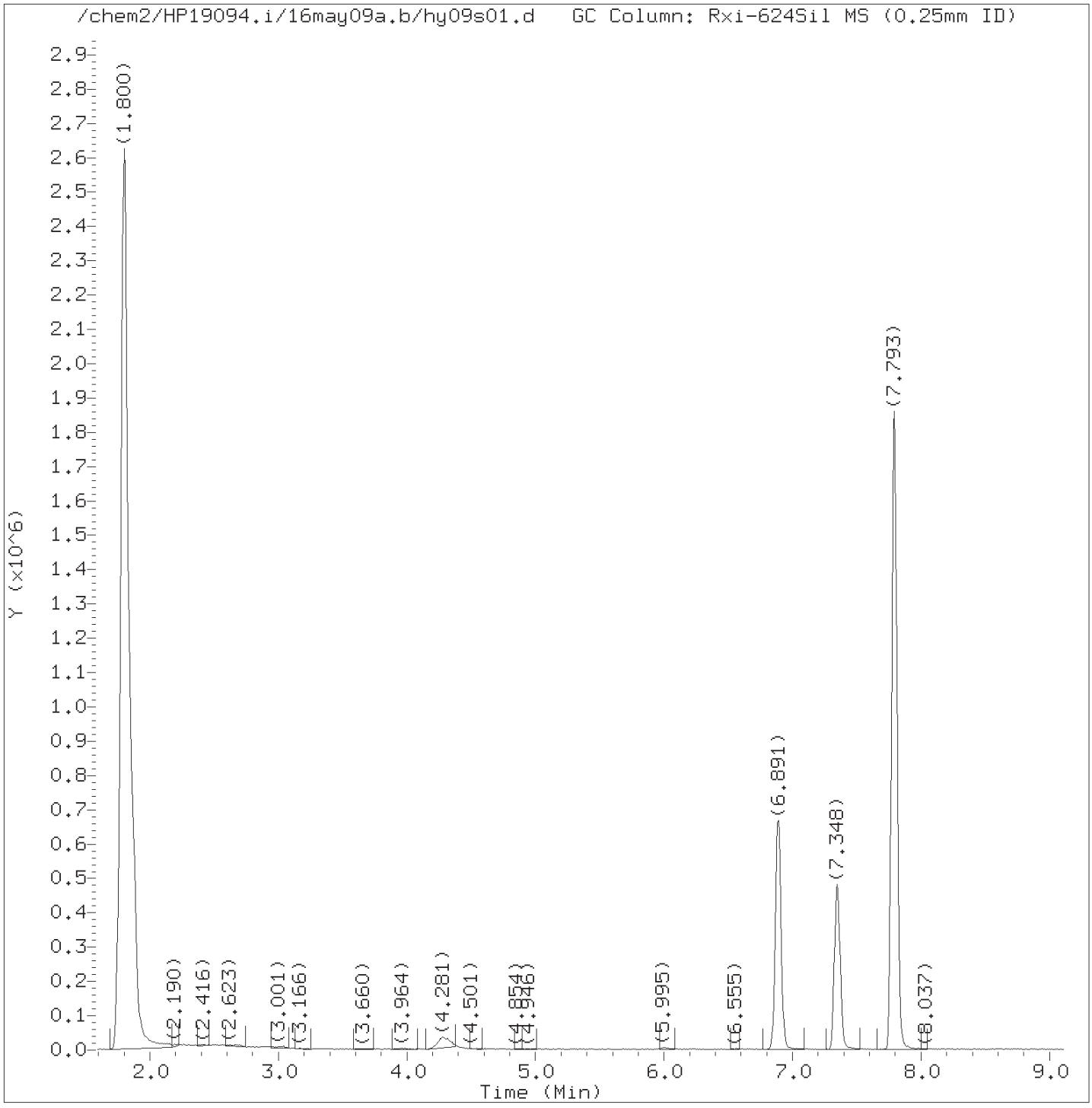
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Sara E. Johnson on 05/13/2016 at 17:59. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 05/13/2016 at 18:36. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

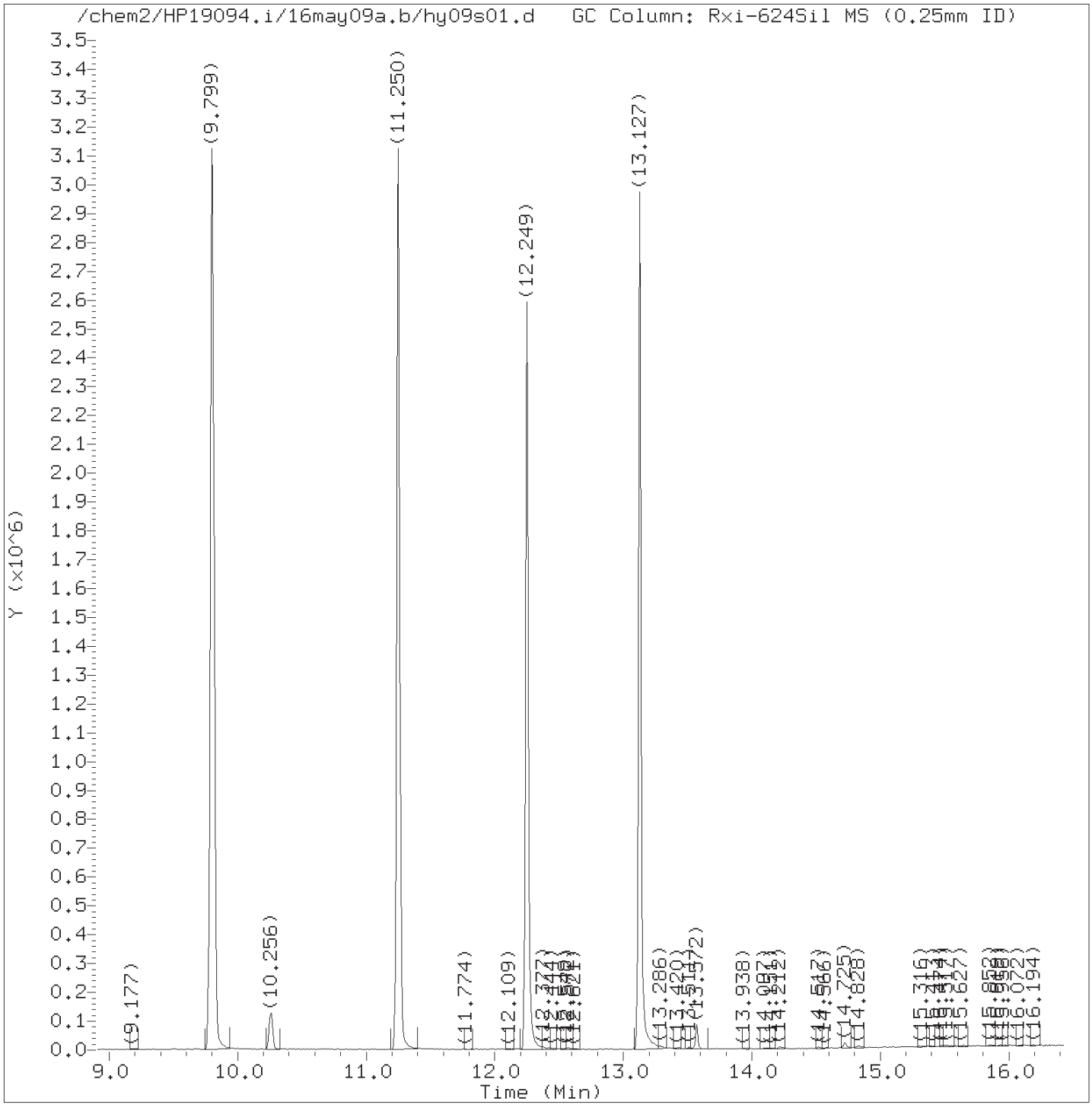
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6112 Lab Sample ID: 8354946

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6112 Lab Sample ID: 8354946

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6112 Lab Sample ID: 8354946

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	147746	50.000
50)$Dibromofluoromethane	(2)	6.891	113	618989	10.311
57)$1,2-Dichloroethane-d4	(2)	7.342	102	110035	11.067
63)*Fluorobenzene	(2)	7.793	96	2547558	10.000
82)$Toluene-d8	(3)	9.799	98	2517407	9.980
97)*Chlorobenzene-d5	(3)	11.250	117	1770749	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	748605	9.207
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	783926	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002

E6113 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354947

Data file: /chem2/HP19094.i/16may09a.b/hy09s02.d Injection date and time: **09-MAY-2016 11:36**
Data file Sample Info. Line: E6113;8354947;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9159-ND

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294	(-0.031)	444	65	93837	(5)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2447159	(1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1725111	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	733986	(-16)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	606906	10.525	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(-0.001)	102	102014	10.681	107%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2457729	10.001	100%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	724380	9.144	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

Digitally signed by Sara E. Johnson on 05/13/2016 at 17:59. Target 3.5 esignature user ID: sej02002

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s02.d Injection date and time: **09-MAY-2016 11:36**
Data file Sample Info. Line: E6113;8354947;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

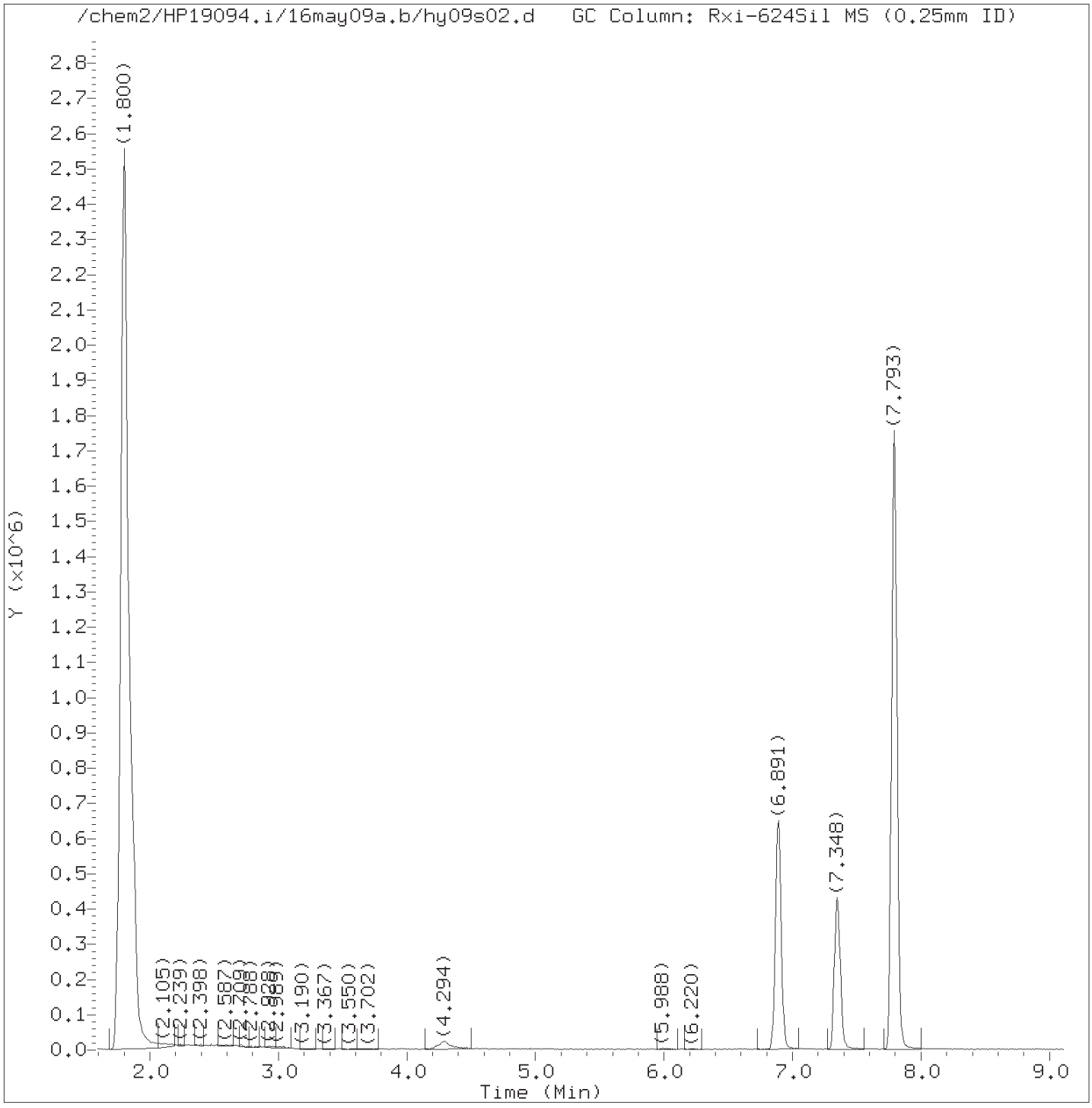
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Sara E. Johnson on 05/13/2016 at 17:59. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 05/13/2016 at 18:36. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

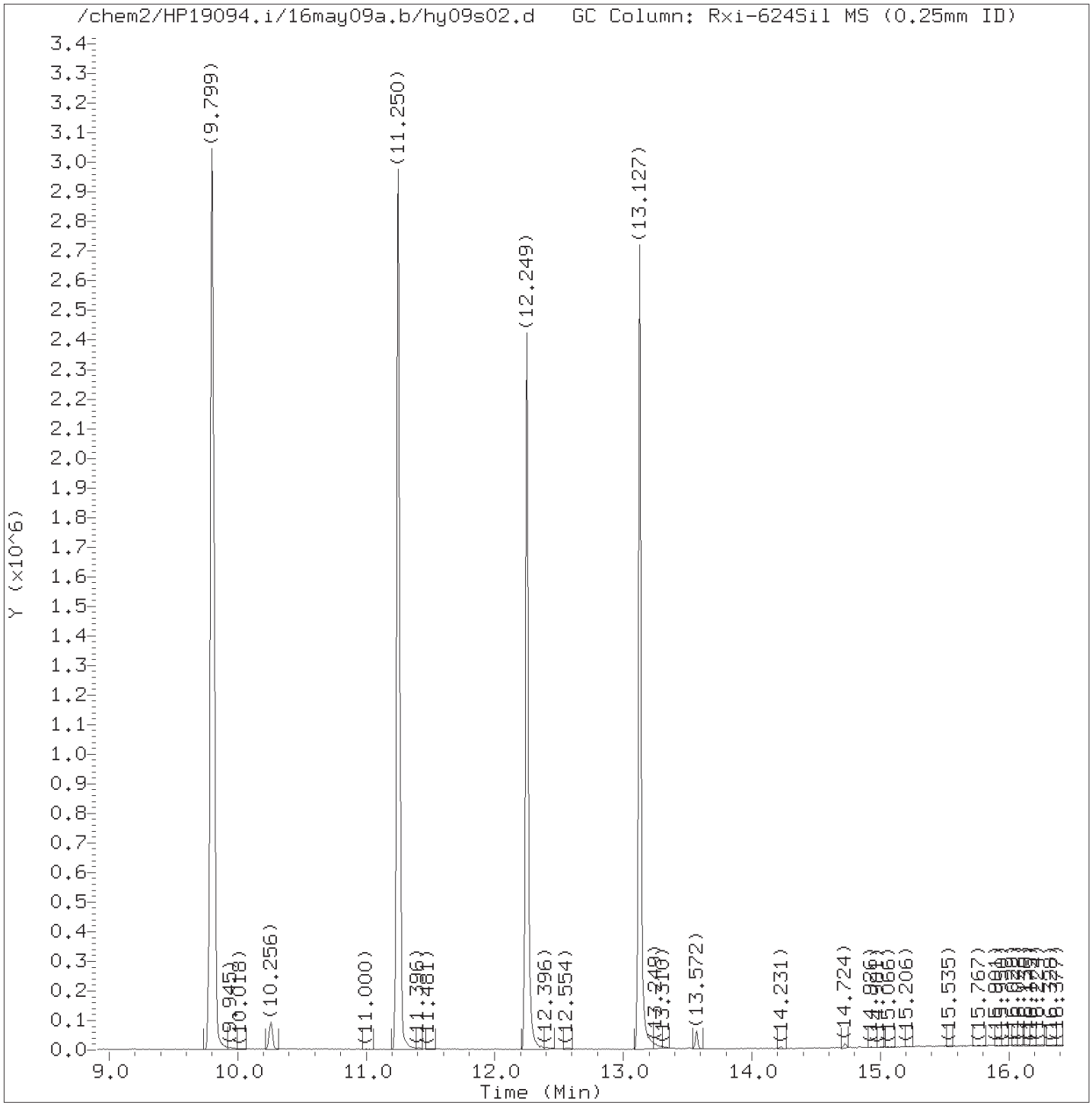
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6113 Lab Sample ID: 8354947

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6113 Lab Sample ID: 8354947

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:16 msl01251

Sample Name: E6113 Lab Sample ID: 8354947

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.294	65	93837	50.000
50)$Dibromofluoromethane	(2)	6.891	113	606906	10.525
57)$1,2-Dichloroethane-d4	(2)	7.354	102	102014	10.681
63)*Fluorobenzene	(2)	7.793	96	2447159	10.000
82)$Toluene-d8	(3)	9.799	98	2457729	10.001
97)*Chlorobenzene-d5	(3)	11.250	117	1725111	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	724380	9.144
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	733986	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/13/2016 at 17:59.
Target 3.5 esignature user ID: sej02002

E6114 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8354948

Data file: /chem2/HP19094.i/16may09a.b/hy09s03.d Injection date and time: **09-MAY-2016 11:57**
Data file Sample Info. Line: E6114;8354948;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:17 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.300(-0.037)	445	65	97468 (9)	50.00	
63) Fluorobenzene	7.793(0.000)	1018	96	2366643 (-2)	10.00	
97) Chlorobenzene-d5	11.250(0.000)	1585	117	1609933 (-14)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127(0.000)	1893	152	681948 (-22)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885(0.001)	113	566711	10.162	102%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354(-0.001)	102	95393	10.327	103%		74 - 113
82) Toluene-d8	(3)	9.799(0.000)	98	2330981	10.164	102%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249(-0.001)	95	674448	9.123	91%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

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Data file: /chem2/HP19094.i/16may09a.b/hy09s03.d Injection date and time: **09-MAY-2016 11:57**
Data file Sample Info. Line: E6114;8354948;1;0;;RAE61;DAA3568;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 13-May-2016 16:17 msl01251

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

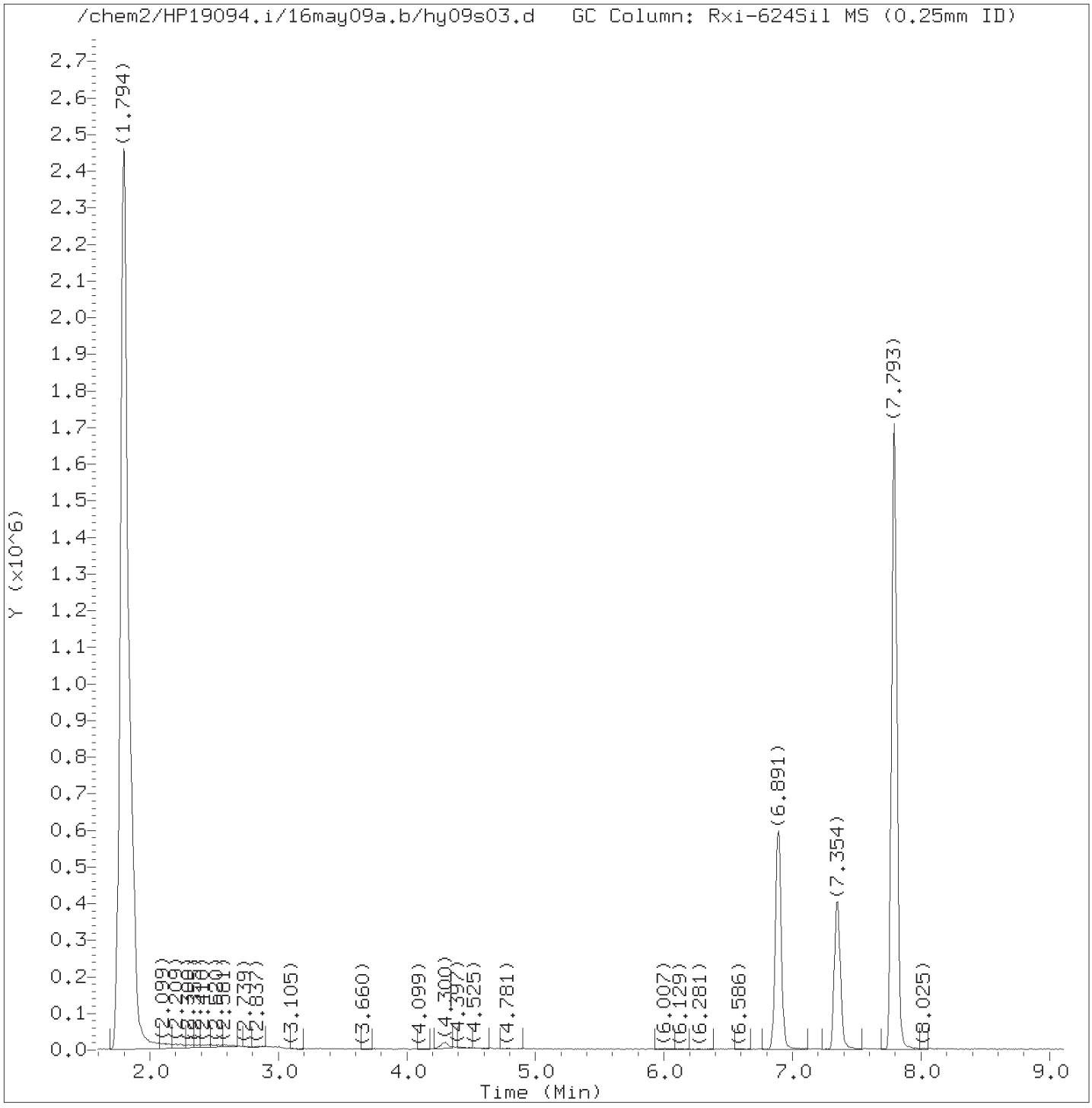
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Sara E. Johnson on 05/13/2016 at 18:36. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Marla S. Brewer on 05/13/2016 at 18:36. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

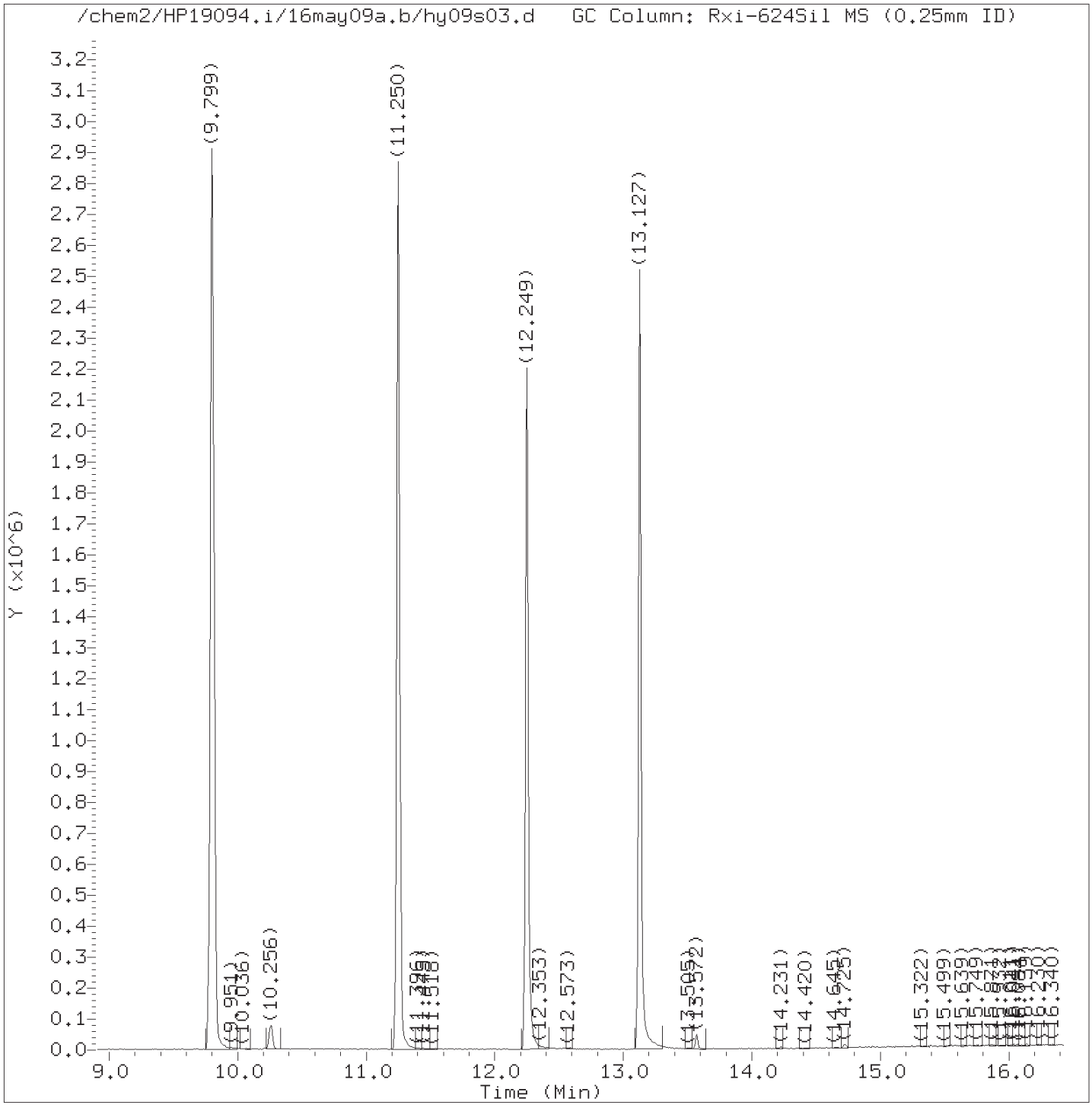
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s03.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:17 msl01251

Sample Name: E6114 Lab Sample ID: 8354948

Digitally signed by Sara E. Johnson
on 05/13/2016 at 18:36.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s03.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:17 msl01251

Sample Name: E6114 Lab Sample ID: 8354948

Digitally signed by Sara E. Johnson
on 05/13/2016 at 18:36.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s03.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 11:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 13-May-2016 16:17 msl01251

Sample Name: E6114 Lab Sample ID: 8354948

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.300	65	97468	50.000
50)$Dibromofluoromethane	(2)	6.885	113	566711	10.162
57)$1,2-Dichloroethane-d4	(2)	7.354	102	95393	10.327
63)*Fluorobenzene	(2)	7.793	96	2366643	10.000
82)$Toluene-d8	(3)	9.799	98	2330981	10.164
97)*Chlorobenzene-d5	(3)	11.250	117	1609933	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	674448	9.123
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	681948	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 05/13/2016 at 18:36.
Target 3.5 esignature user ID: sej02002

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\DATA\16MAR14A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kel01973	hm14t01.D	bfb FEB23-16	03/14/2016	10:34		
kel01973	HM14X05.D	blk	03/14/2016	11:10		
kel01973	HM14i11.D	VSTD025	03/14/2016	11:30		
kel01973	HM14i12.D	VSTD010	03/14/2016	11:51		
kel01973	HM14i13.D	VSTD005	03/14/2016	12:11		
kel01973	HM14i14.D	VSTD002	03/14/2016	12:31		
kel01973	HM14i15.D	VSTD001	03/14/2016	12:51		
kel01973	HM14i16.D	VSTD0.5	03/14/2016	13:12		
kel01973	HM14i17.D	VSTD0.2	03/14/2016	13:32		
kel01973	HM14m11.D	MDL0.1	03/14/2016	13:53		
kel01973	HM14cv11.D	LCSHSM	03/14/2016	14:13		
kel01973	HM14X06.D	blk	03/14/2016	14:33		
kel01973	HM14i01.D	VSTD025	03/14/2016	14:53		
kel01973	HM14i02.D	VSTD010	03/14/2016	15:14		
kel01973	HM14i03.D	VSTD005	03/14/2016	15:34		
kel01973	HM14i04.D	VSTD002	03/14/2016	15:54		
kel01973	HM14i05.D	VSTD001	03/14/2016	16:15		
kel01973	HM14i06.D	VSTD0.5	03/14/2016	16:35		
kel01973	HM14i07.D	VSTD0.2	03/14/2016	16:55		
kel01973	HM14m01.D	MDL0.1	03/14/2016	17:16		
kel01973	HM14m02.D	MDL0.4	03/14/2016	17:36		
kel01973	HM14cv1.D	LCSHLG	03/14/2016	17:56		
kel01973	HM14X07.D	blk	03/14/2016	18:58		
kel01973	HM14cv12.D	LCSHSM	03/14/2016	19:18		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\DATA\16MAY07A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kel01973	hy07t01.D	bfb FEB23-16	05/07/2016	11:57		
kel01973	HY07X03.D	blk	05/07/2016	12:18		
kel01973	HY07i01.D	VSTD025	05/07/2016	12:38		
kel01973	HY07i02.D	VSTD010	05/07/2016	12:59		
kel01973	HY07i03.D	VSTD005	05/07/2016	13:19		
kel01973	HY07i04.D	VSTD002	05/07/2016	13:39		
kel01973	HY07i05.D	VSTD001	05/07/2016	13:59		
kel01973	HY07i06.D	VSTD0.5	05/07/2016	14:20		
kel01973	HY07i07.D	VSTD0.2	05/07/2016	14:40		
kel01973	HY07m01.D	MDL0.1	05/07/2016	15:00		
kel01973	HY07cv01.D	LCSHSM	05/07/2016	15:21		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\DATA\16MAY09A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kel01973	hy09t01.D	bfb FEB23-16	05/09/2016	08:10		
kel01973	HY09X01.D	BLK	05/09/2016	08:38	H161301AA	
kel01973	HY09C01.D	VSTD010	05/09/2016	08:58	H161301AA	
kel01973	HY09C02.D	VSTD010	05/09/2016	09:19	H161301AA	
kel01973	HY09L01.D	LCSH92	05/09/2016	09:39	H161301AA	
kel01973	HY09M01.D	MDLH92	05/09/2016	09:59	H161301AA	
kel01973	HY09L02.D	LCSH93	05/09/2016	10:19	H161301AA	
kel01973	HY09B01.D	VBLKH92	05/09/2016	10:40	H161301AA	
kel01973	HY09S01.D	8354946	05/09/2016	11:16	H161301AA	
kel01973	HY09S02.D	8354947	05/09/2016	11:36	H161301AA	
kel01973	HY09S03.D	8354948	05/09/2016	11:57	H161301AA	
kel01973	HY09S04.D	8354936	05/09/2016	12:17	H161301AA	
kel01973	HY09S05.D	8354937MS	05/09/2016	12:37	H161301AA	
kel01973	HY09S06.D	8354938MSD	05/09/2016	12:57	H161301AA	
kel01973	HY09S07.D	8354937MS	05/09/2016	13:17	H161301AA	
kel01973	HY09S08.D	8354938MS	05/09/2016	13:38	H161301AA	
kel01973	HY09S09.D	8354939	05/09/2016	13:58	H161301AA	
kel01973	HY09S10.D	8354934	05/09/2016	14:18	H161301AA	
kel01973	HY09S11.D	8354940	05/09/2016	14:39	H161301AA	
kel01973	HY09S12.D	8354941	05/09/2016	14:59	H161301AA	
kel01973	HY09S13.D	8354942	05/09/2016	15:20	H161301AA	
kel01973	HY09S14.D	8354943	05/09/2016	15:40	H161301AA	
kel01973	HY09S15.D	8354944	05/09/2016	16:00	H161301AA	
kel01973	HY09S16.D	8354945	05/09/2016	16:20	H161301AA	
kel01973	HY09S17.D	8354933	05/09/2016	16:41	H161301AA	
kel01973	HY09S18.D	8354933DL	05/09/2016	17:01	H161301AA	10
kel01973	HY09S19.D	8354935	05/09/2016	17:21	H161301AA	
kel01973	HY09S20.D	8354935DL	05/09/2016	17:41	H161301AA	10
kel01973	HY09S21.D	8354936DL	05/09/2016	18:02	H161301AA	10
kel01973	HY09S22.D	8354939DL	05/09/2016	18:22	H161301AA	10

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - d:\data\16APR22I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
BWK03231	LA22T01.D	50NGBFB	04/22/2016	09:13		
BWK03231	LA22X01.D	BLK	04/22/2016	09:33		
BWK03231	LA22I01.D	VSTD300	04/22/2016	09:55		
BWK03231	LA22I02.D	VSTD100	04/22/2016	10:17		
BWK03231	LA22I03.D	VSTD050	04/22/2016	10:39		
BWK03231	LA22I04.D	VSTD020	04/22/2016	11:01		
BWK03231	LA22I05.D	VSTD010	04/22/2016	11:23		
BWK03231	LA22I06.D	VSTD004	04/22/2016	11:45		
BWK03231	LA22I07.D	VSTD001	04/22/2016	12:07		
BWK03231	LA22M01.D	MDL0.5	04/22/2016	12:29		
BWK03231	LA22V01.D	LCS01	04/22/2016	12:51		
BWK03231	LA22X02.D	BLK	04/22/2016	13:43		
BWK03231	LA22I11.D	VSTD300	04/22/2016	14:05		
BWK03231	LA22I12.D	VSTD100	04/22/2016	14:27		
BWK03231	LA22I13.D	VSTD050	04/22/2016	14:49		
BWK03231	LA22I14.D	VSTD020	04/22/2016	15:11		
BWK03231	LA22I15.D	VSTD010	04/22/2016	15:33		
BWK03231	LA22I16.D	VSTD004	04/22/2016	15:55		
BWK03231	LA22M02.D	MDL001	04/22/2016	16:17		
BWK03231	LA22V02.D	LCS02	04/22/2016	16:39		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - d:\data\16MAY09A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
BWK03231	LY09T01.D	50NGBFB	05/09/2016	08:35		
BWK03231	LY09X01.D	BLANK	05/09/2016	08:52	L161301AA	
BWK03231	LY09C01.D	VSTD050	05/09/2016	09:14	L161301AA	
BWK03231	LY09B01.D	VBLKL82	05/09/2016	09:36	L161301AA	
BWK03231	LY09S01.D	LCSL82	05/09/2016	09:58	L161301AA	
BWK03231	LY09S02.D	LCDL82	05/09/2016	10:22	L161301AA	
BWK03231	LY09S03.D	8370084	05/09/2016	11:06	L161301AA	
BWK03231	LY09S04.D	8370086	05/09/2016	11:28	L161301AA	
BWK03231	LY09S05.D	8357925	05/09/2016	11:50	L161301AA	
BWK03231	LY09S06.D	8357926	05/09/2016	12:11	L161301AA	
BWK03231	LY09S07.D	8357927	05/09/2016	12:34	L161301AA	
BWK03231	LY09S08.D	8357928	05/09/2016	12:56	L161301AA	
BWK03231	LY09S09.D	8357929	05/09/2016	13:18	L161301AA	
BWK03231	LY09S10.D	8357931	05/09/2016	13:40	L161301AA	
BWK03231	LY09S11.D	8357933	05/09/2016	14:02	L161301AA	
BWK03231	LY09S12.D	8357934	05/09/2016	14:23	L161301AA	
BWK03231	LY09S13.D	8357932	05/09/2016	14:45	L161301AA	
BWK03231	LY09S14.D	8357932DL	05/09/2016	15:07	L161301AA	10
BWK03231	LY09S15.D	8357930	05/09/2016	15:29	L161301AA	10
BWK03231	LY09S16.D	8357930DL	05/09/2016	15:51	L161301AA	100
BWK03231	LY09S17.D	8357935	05/09/2016	16:12	L161301AA	5
BWK03231	LY09S18.D	8357935DL	05/09/2016	16:34	L161301AA	50
BWK03231	LY09S33.D	8354935	05/09/2016	16:56	L161302AA	
BWK03231	LY09S34.D	8354936	05/09/2016	17:18	L161302AA	
BWK03231	LY09S35.D	8354937MS	05/09/2016	17:40	L161302AA	
BWK03231	LY09S36.D	8354938MSD	05/09/2016	18:02	L161302AA	
BWK03231	LY09S37.D	8354933	05/09/2016	18:23	L161302AA	
BWK03231	LY09S38.D	8354934	05/09/2016	18:46	L161302AA	
BWK03231	LY09S39.D	8354939	05/09/2016	19:08	L161302AA	
BWK03231	LY09S40.D	8354940	05/09/2016	19:30	L161302AA	

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

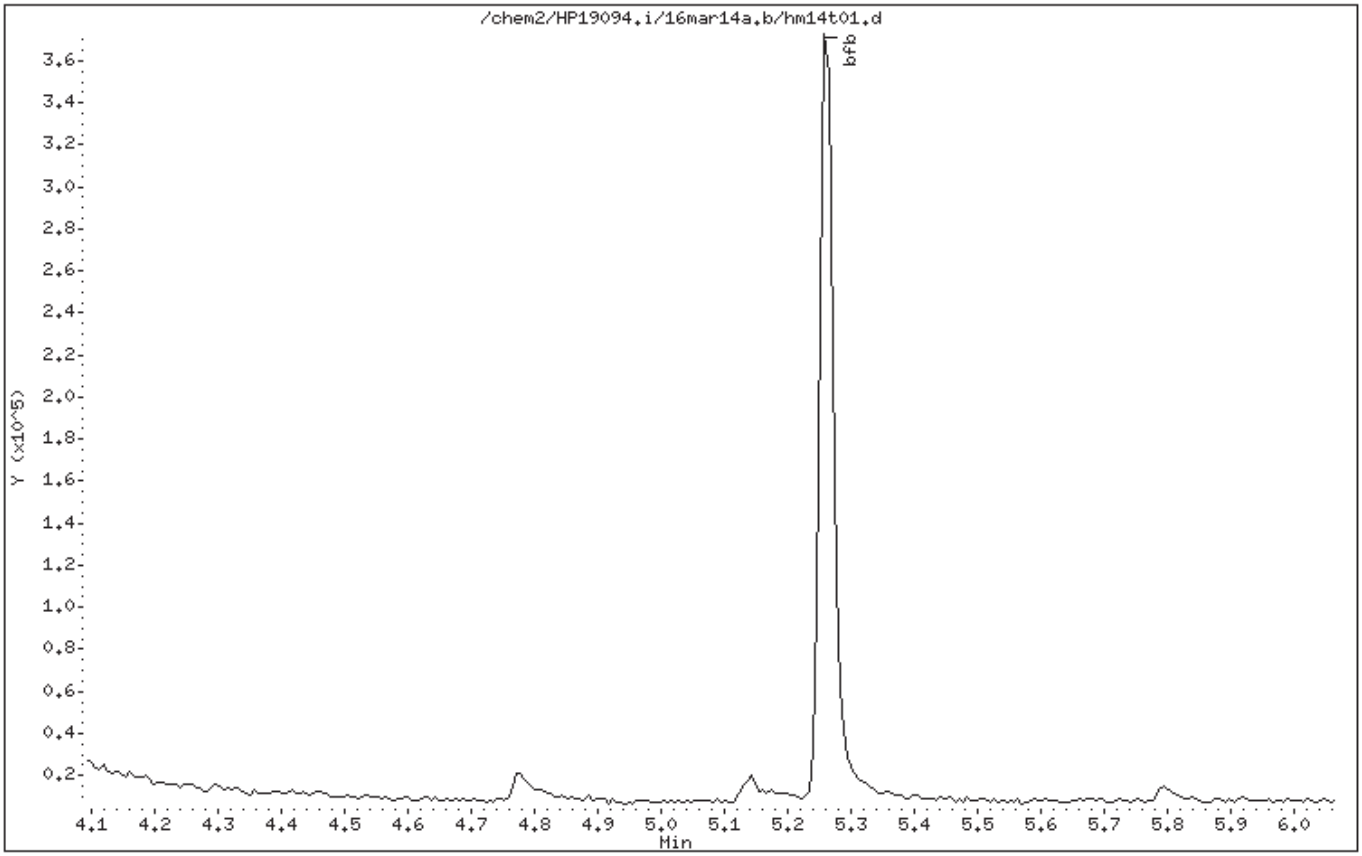
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

Instrument: HP19094.i

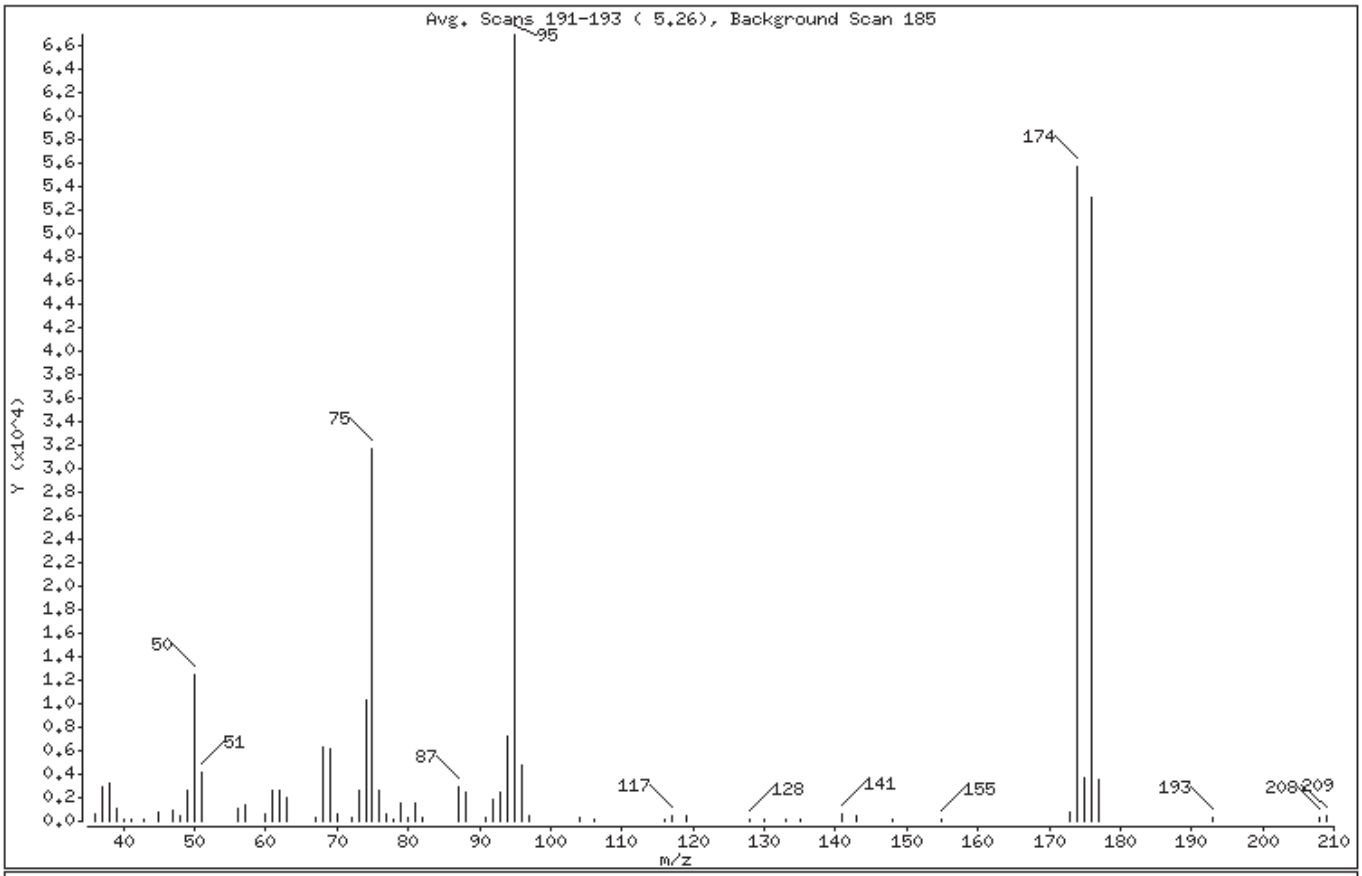
Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.66
75	30.00 - 60.00% of mass 95	47.24
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	1.08 (1.29)
174	50.00 - 100.00% of mass 95	83.27
175	5.00 - 9.00% of mass 174	5.47 (6.57)
176	95.00 - 101.00% of mass 174	79.30 (95.23)
177	5.00 - 9.00% of mass 176	5.20 (6.56)

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Target 3.5 esignature user ID: kel01973

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hm14t01.d
Spectrum: Avg. Scans 191-193 (5.26), Background Scan 185
Location of Maximum: 95.00
Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	568	62.00	2690	87.00	2937	135.00	88
37.00	2915	63.00	1978	88.00	2489	141.00	601
38.00	3227	67.00	295	91.00	352	143.00	452
39.00	1041	68.00	6248	92.00	1831	148.00	106
40.00	211	69.00	6175	93.00	2405	155.00	102
41.00	138	70.00	603	94.00	7195	173.00	721
43.00	80	72.00	384	95.00	66888	174.00	55696
45.00	819	73.00	2572	96.00	4710	175.00	3661
47.00	979	74.00	10334	97.00	454	176.00	53040
48.00	502	75.00	31600	104.00	282	177.00	3478
49.00	2564	76.00	2635	106.00	220	193.00	329
50.00	12480	77.00	553	116.00	198	208.00	291
51.00	4076	78.00	227	117.00	435	209.00	398
56.00	1053	79.00	1490	119.00	416		
57.00	1417	80.00	341	128.00	174		
60.00	691	81.00	1539	130.00	130		
61.00	2576	82.00	332	133.00	162		

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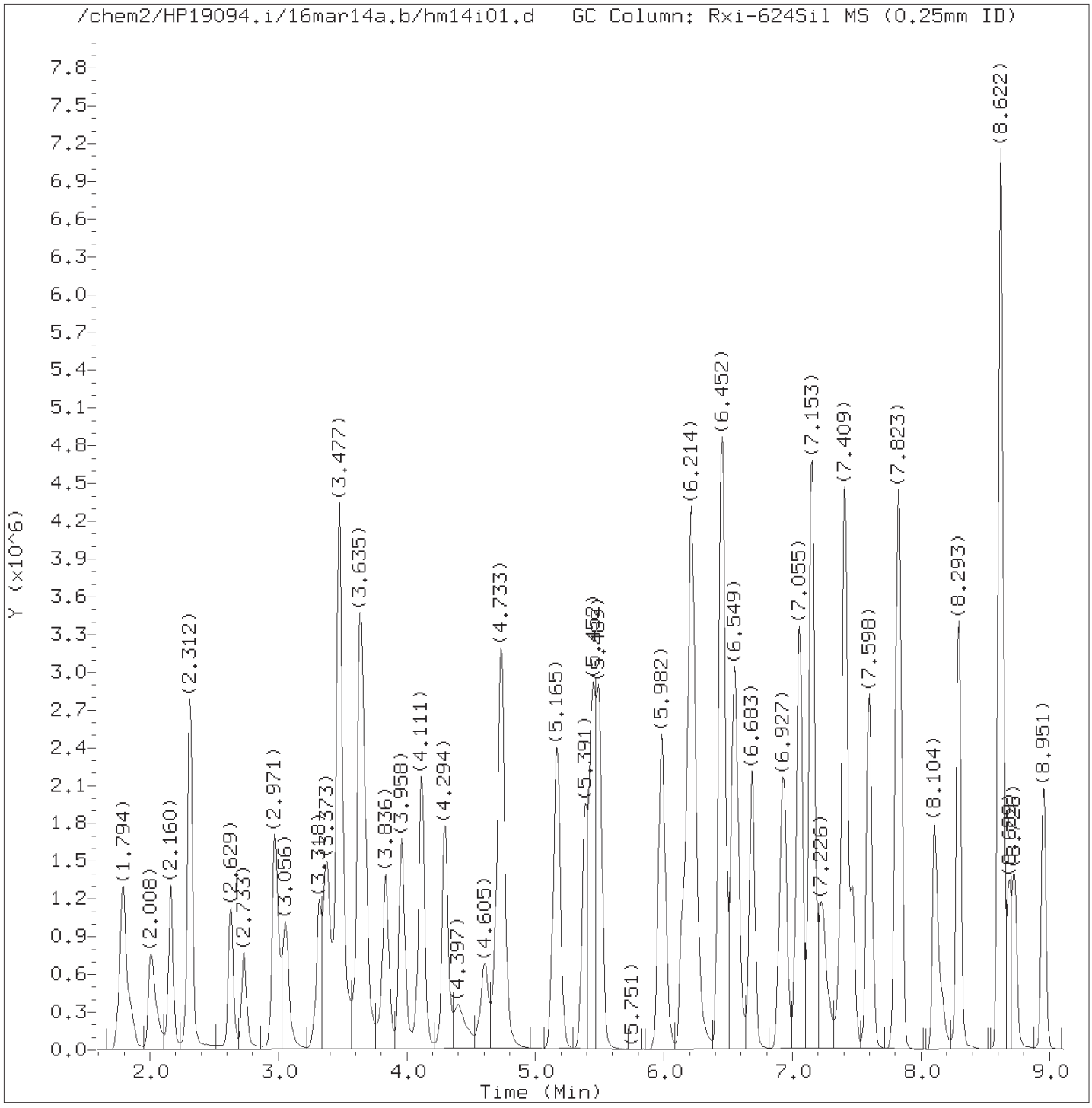
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

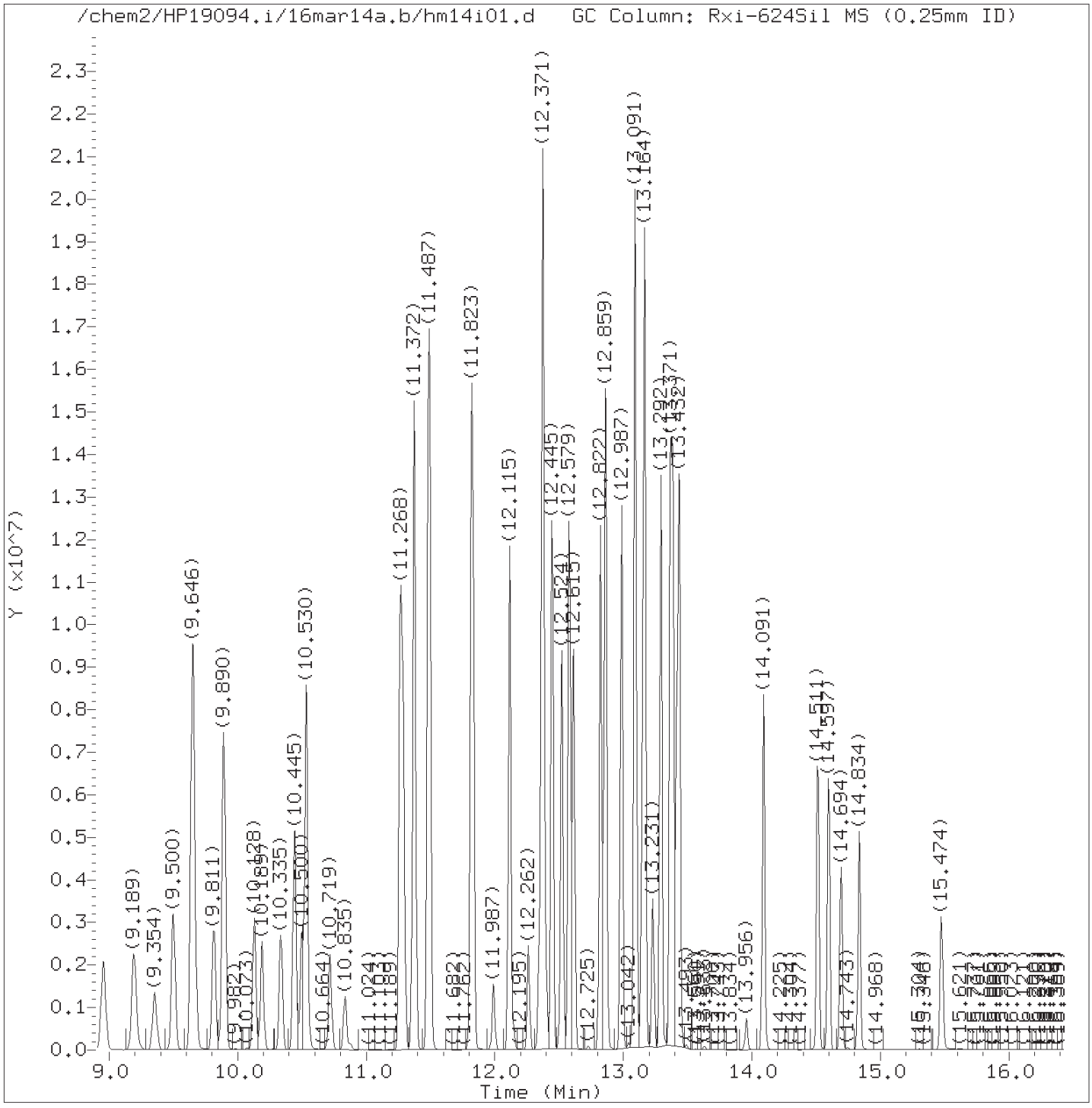
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	2008997	25.815
2) Chloromethane	(2)	2.160	50	1930677	25.291
5) Vinyl Chloride	(2)	2.300	62	1782605	25.108
6) 1,3-Butadiene	(2)	2.318	39	1259167	23.448
7) Bromomethane	(2)	2.629	94	1127283	23.922
8) Chloroethane	(2)	2.733	64	1011870	23.121
9) Dichlorofluoromethane	(2)	2.971	67	2377573	23.939
10) Trichlorofluoromethane	(2)	3.056	101	2325783	25.146
11) Ethyl ether	(2)	3.312	59	976265	25.585
12) Freon 123a	(2)	3.373	67	1755457	24.811
13) Acrolein	(1)	3.477	56	7761893	1224.807
15) 1,1-Dichloroethene	(2)	3.629	96	1309324	24.672
14) Acetone	(1)	3.641	43	2085385	238.809
16) Freon 113	(2)	3.666	101	1386666	25.128
17) Methyl Iodide	(2)	3.836	142	2464824	25.088
18) Carbon Disulfide	(2)	3.958	76	3988224	24.337
21) Methyl Acetate	(1)	4.080	43	548869	22.378
22) Allyl Chloride	(2)	4.117	41	2503549	24.949
26)*t-Butyl Alcohol-d10	(1)	4.281	65	111147M	50.000
23) Methylene Chloride	(2)	4.300	84	1415279	24.953
28) t-Butyl Alcohol	(1)	4.403	59	1530138	512.007
29) Acrylonitrile	(1)	4.605	53	1344372	128.306
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	3131373	25.573
31) trans-1,2-Dichloroethene	(2)	4.739	96	1409407	24.663
32) n-Hexane	(2)	5.165	57	2389053	24.629
33) 1,1-Dichloroethane	(2)	5.385	63	2935899	25.206
34) di-Isopropyl Ether	(2)	5.446	45	5169991	25.428
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	2387583	24.972
37) Ethyl t-butyl ether	(2)	5.982	59	4335697	25.288
40) 1,2-Dichloroethene (Total)	(2)		96	2995941	49.726
38) 2-Butanone	(1)	6.153	43	3666599	246.413
39) cis-1,2-Dichloroethene	(2)	6.208	96	1586534	25.063
42) Propionitrile	(1)	6.220	54	1894772	510.674
41) 2,2-Dichloropropane	(2)	6.232	77	2291981	24.594
45) Methacrylonitrile	(1)	6.452	67	3145891	247.630
47) Bromochloromethane	(2)	6.543	128	630660	26.187
48) Tetrahydrofuran	(1)	6.562	71	914371	242.906
49) Chloroform	(2)	6.690	83	2629287	24.697

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546108	10.267
50)$Dibromofluoromethane	(2)	6.903	111	562451	10.277
51) 1,1,1-Trichloroethane	(2)	6.933	97	2254077	24.822
52) Cyclohexane	(2)	7.055	56	2810155	23.681
52) Cyclohexane	(2)	7.055	84	2186157	24.061
52) Cyclohexane	(2)	7.055	69	821906	24.214
55) 1,1-Dichloropropene	(2)	7.147	75	2187719	25.099
54) Carbon Tetrachloride	(2)	7.159	117	2081377	25.209
56) Isobutyl Alcohol	(1)	7.226	41	1297190	1225.034
57)$1,2-Dichloroethane-d4	(2)	7.366	102	89493	10.158
57)$1,2-Dichloroethane-d4	(2)	7.366	65	462443	10.282
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57884	10.406
58) Benzene	(2)	7.409	78	5997923	24.725
59) 1,2-Dichloroethane	(2)	7.470	62	1572413M	25.017
60) t-Amyl methyl ether	(2)	7.598	73	3533776	25.222
63)*Fluorobenzene	(2)	7.805	96	2257211	10.000
62) n-Heptane	(2)	7.836	43	2647219	24.144
65) n-Butanol	(1)	8.104	56	2053515	2409.417
67) Trichloroethene	(2)	8.293	95	1580529	24.997
70) 1,2-Dichloropropane	(2)	8.616	63	1581786	25.042
69) Methylcyclohexane	(2)	8.622	83	2616789	25.266
71) Methyl Methacrylate	(1)	8.683	69	672245	25.327
72) 1,4-Dioxane	(1)	8.707	88	205013M	1220.938
73) Dibromomethane	(2)	8.726	93	658959	25.328
74) Bromodichloromethane	(2)	8.951	83	1891232	26.035
76) 2-Nitropropane	(1)	9.189	41	2013504	236.646
80) cis-1,3-Dichloropropene	(2)	9.500	75	2312738	25.907
81) 4-Methyl-2-Pentanone	(1)	9.646	43	9014052	246.150
82)$Toluene-d8	(3)	9.811	98	2224229	9.764
82)$Toluene-d8	(3)	9.811	100	1444488	9.796
83) Toluene	(3)	9.890	92	3677619	23.967
84) trans-1,3-Dichloropropene	(3)	10.128	75	1849106	25.712
85) 1,3-Dichloropropene (total)	(3)		75	4161844	51.619
86) Ethyl Methacrylate	(3)	10.189	69	1408940	25.467
88) 1,1,2-Trichloroethane	(3)	10.335	97	907741	24.424
89) Tetrachloroethene	(3)	10.445	166	1732530	23.909
90) 1,3-Dichloropropane	(3)	10.500	76	1664933	24.914
91) 2-Hexanone	(1)	10.530	43	6183877	238.836

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$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	1238486	25.994
95) 1,2-Dibromoethane	(3)	10.835	107	882013	25.195
97)*Chlorobenzene-d5	(3)	11.262	117	1599038	10.000
98) Chlorobenzene	(3)	11.286	112	4053298	24.267
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	1433933	25.027
100) Ethylbenzene	(3)	11.378	91	7188062	23.933
101) m+p-Xylene	(3)	11.487	106	5520871	48.193
105) Xylene (Total)	(3)		106	8218402	72.456
104) o-Xylene	(3)	11.817	106	2697531	24.266
106) Styrene	(3)	11.829	104	4363621	24.536
107) Bromoform	(3)	11.987	173	702183	26.571
108) Isopropylbenzene	(3)	12.115	105	7093094	24.076
111)$4-Bromofluorobenzene	(3)	12.262	95	749580	10.209
111)$4-Bromofluorobenzene	(3)	12.262	174	624138	10.195
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	1073753M	23.250
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	2892089	256.466
114) Bromobenzene	(4)	12.377	156	1611323	23.425
116) 1,2,3-Trichloropropane	(4)	12.396	110	276663	23.862
117) n-Propylbenzene	(4)	12.445	91	8486136	22.809
119) 2-Chlorotoluene	(4)	12.524	126	1665528	23.216
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	6020587	23.211
122) 4-Chlorotoluene	(4)	12.615	126	1687462	23.082
125) tert-Butylbenzene	(4)	12.822	134	1287997M	23.293
126) Pentachloroethane	(4)	12.853	167	1054918	25.278
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	6025338	23.232
128) sec-Butylbenzene	(4)	12.987	105	7704726	22.942
131) 1,3-Dichlorobenzene	(4)	13.085	146	3165482	23.527
132) p-Isopropyltoluene	(4)	13.097	119	6646807	23.380
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	737864	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	3101519	22.689
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	2480382	23.061
136) Benzyl Chloride	(4)	13.231	126	466327	25.487
138) n-Butylbenzene	(4)	13.383	92	3339202	24.011
139) 1,2-Dichlorobenzene	(4)	13.420	146	2740022	22.928
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	148809	25.580
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	1922561	22.489
146) Hexachlorobutadiene	(4)	14.597	225	1095991	24.535
147) Naphthalene	(4)	14.694	128	2932131	19.951

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.834	180	1493780	21.877

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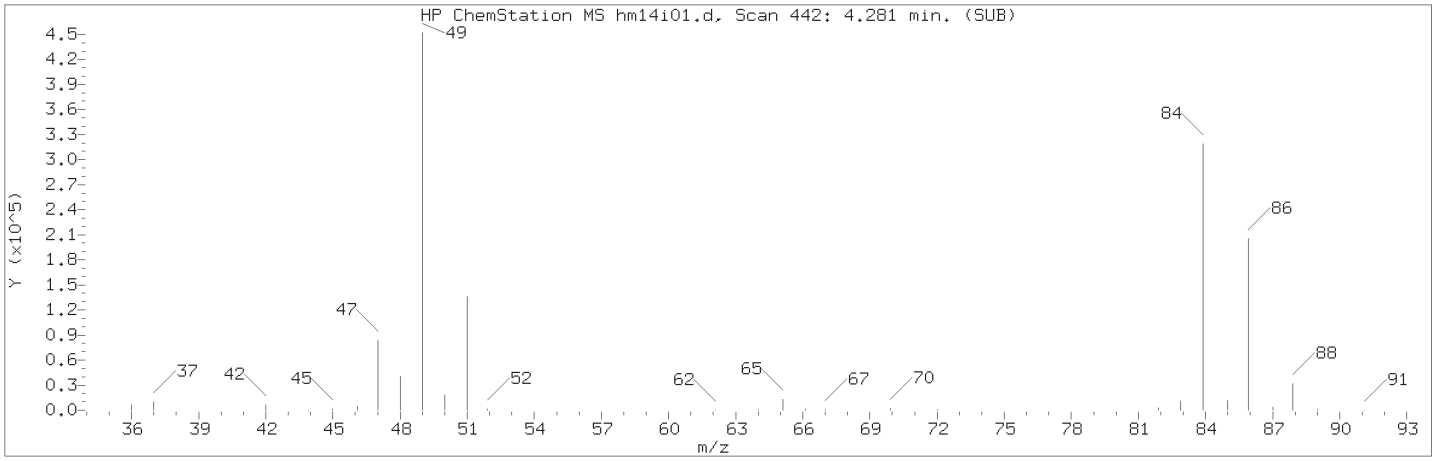
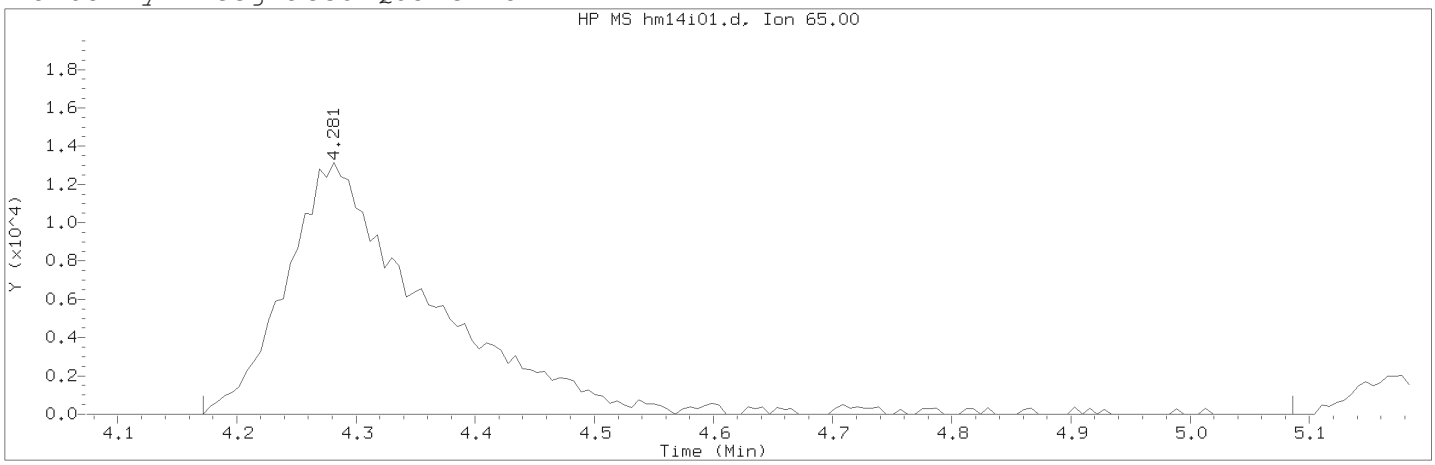
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

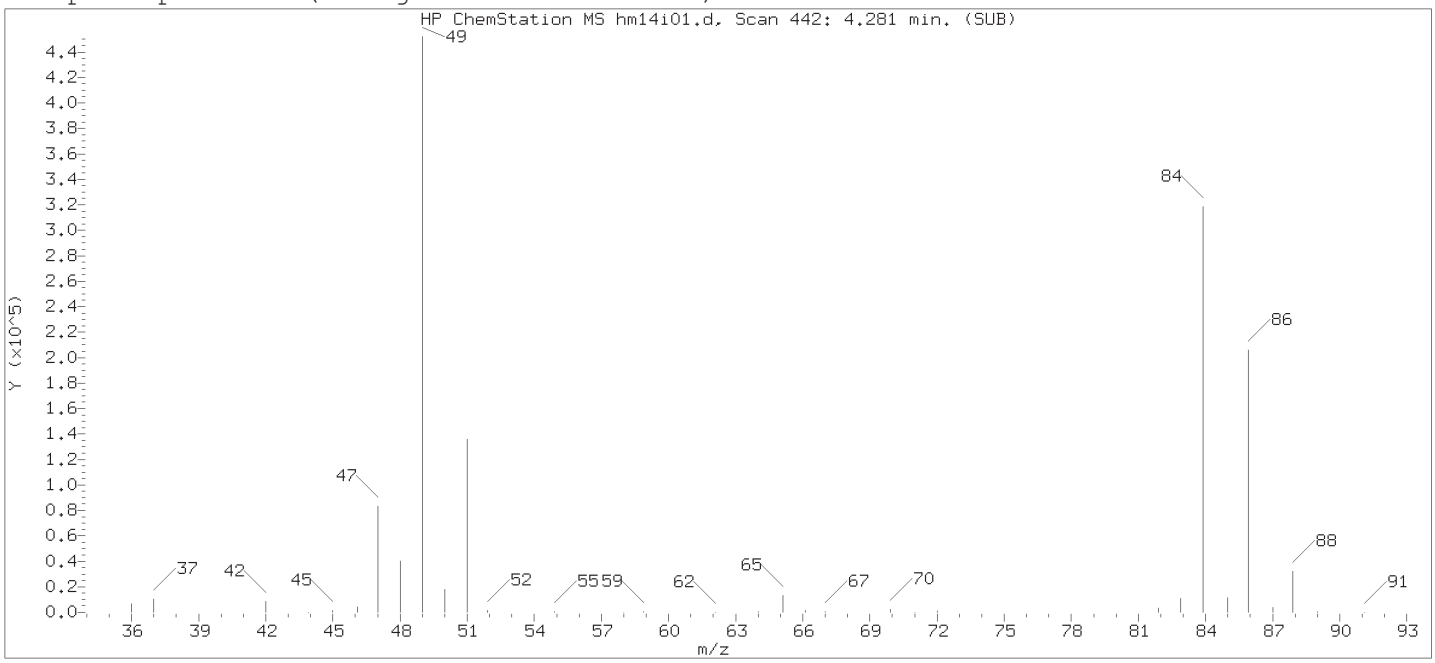
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 111147M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

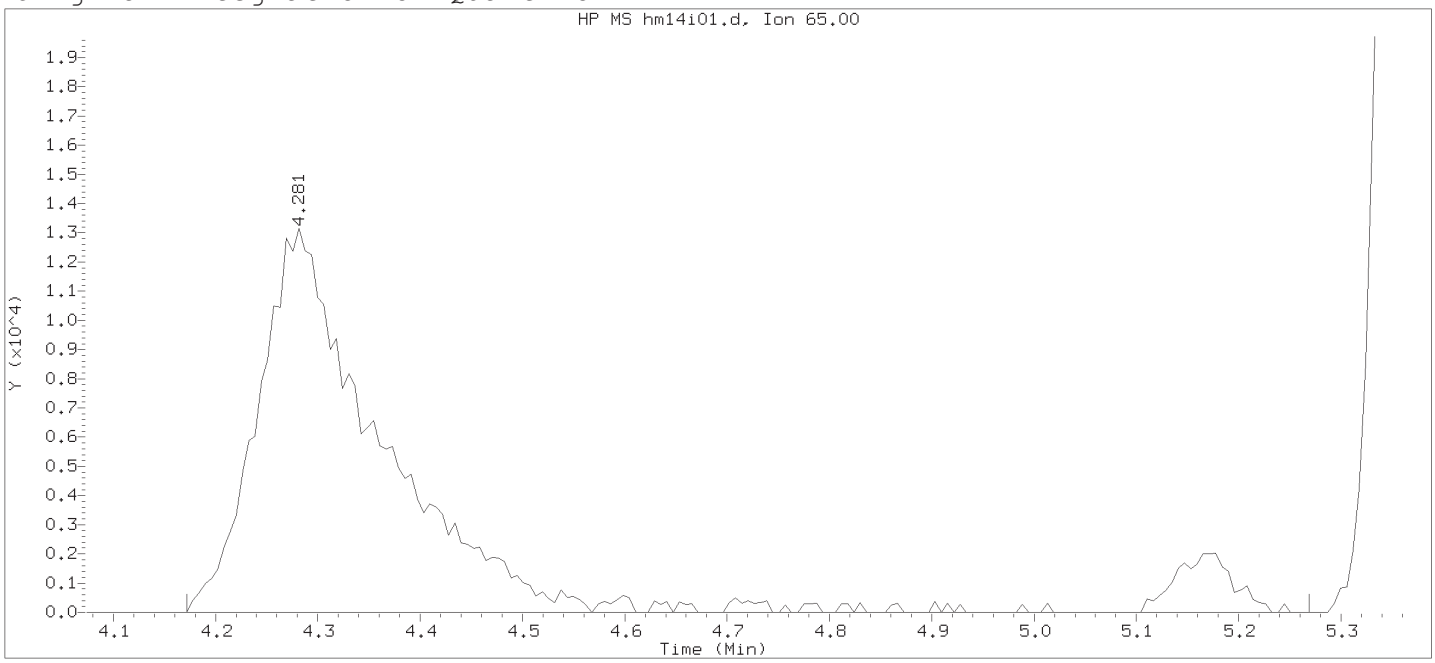
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

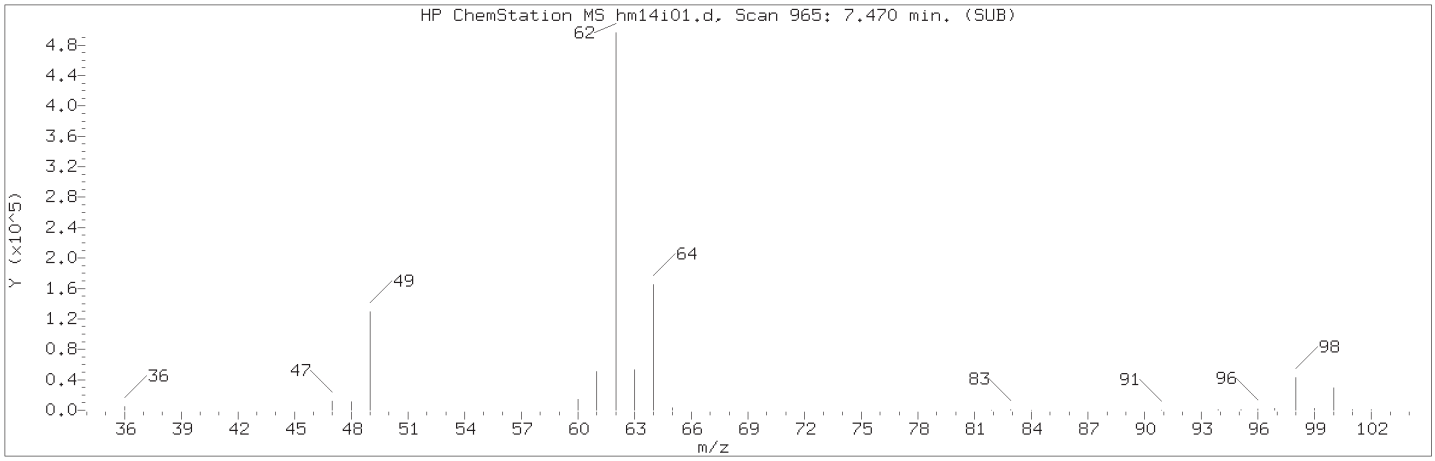
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

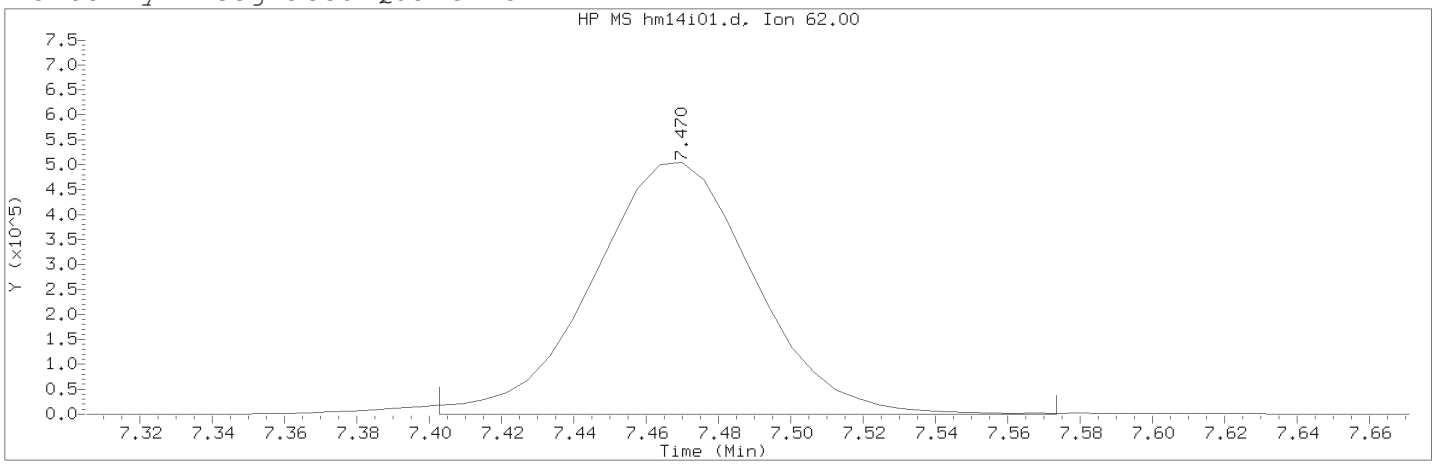
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 119286
On-column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature date: 03/14/2016 15:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

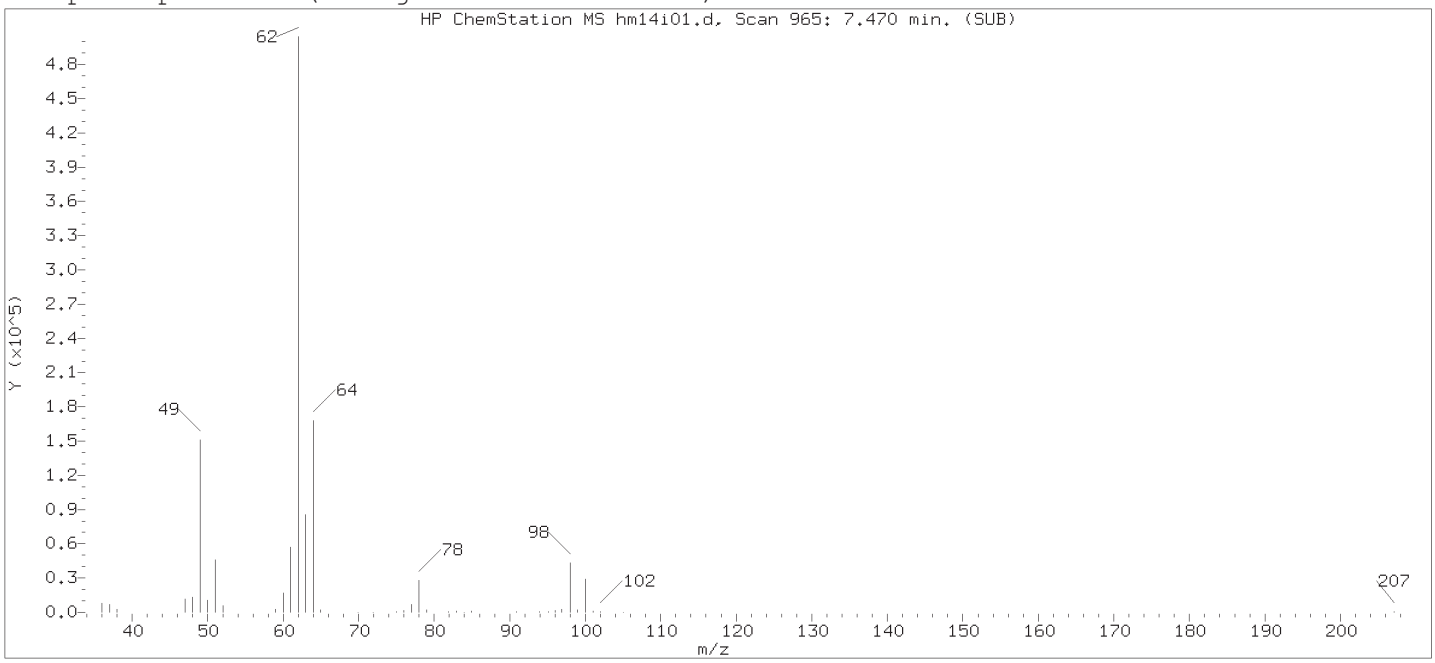
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 1572413M
On-Column Amount (ng) : 25.0167
Integration start scan : 953 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

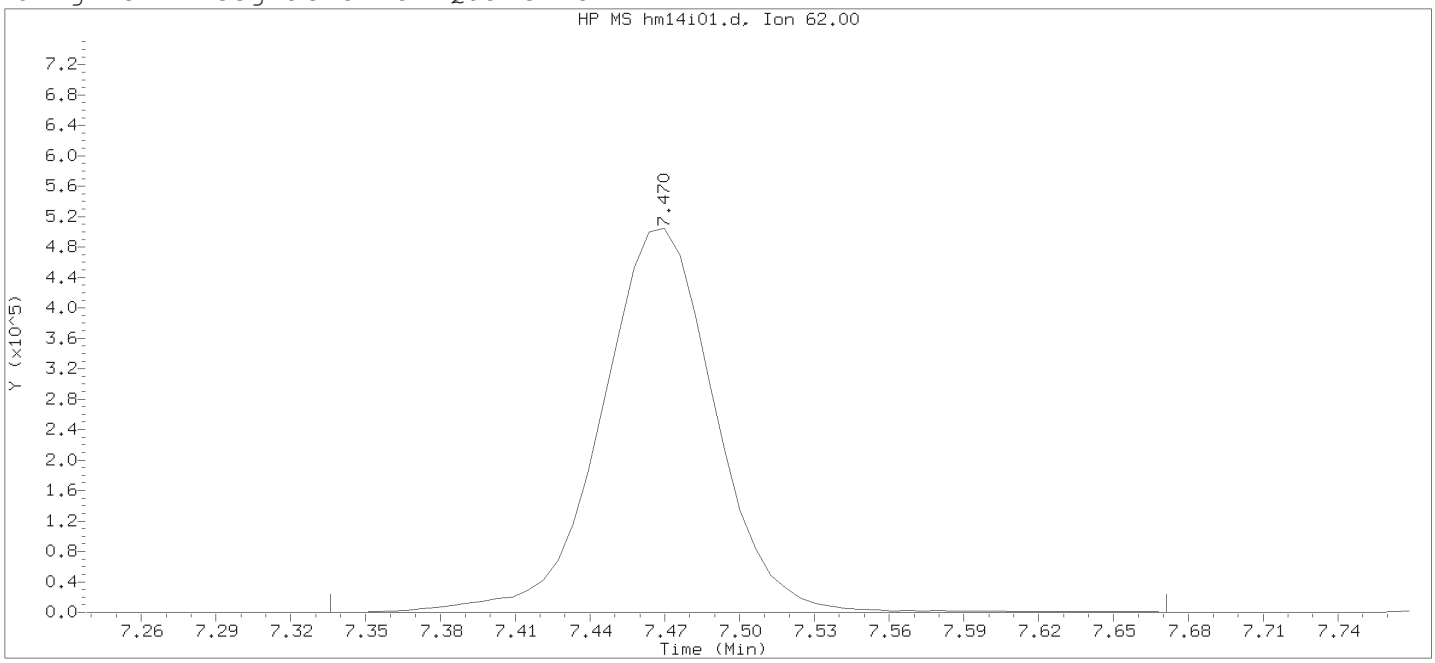
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

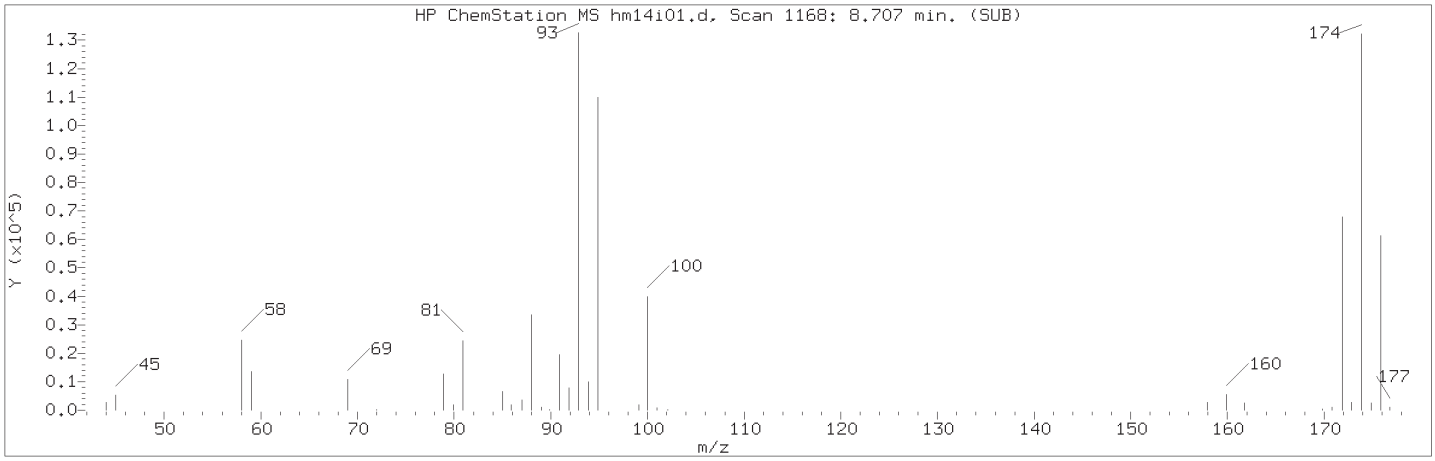
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

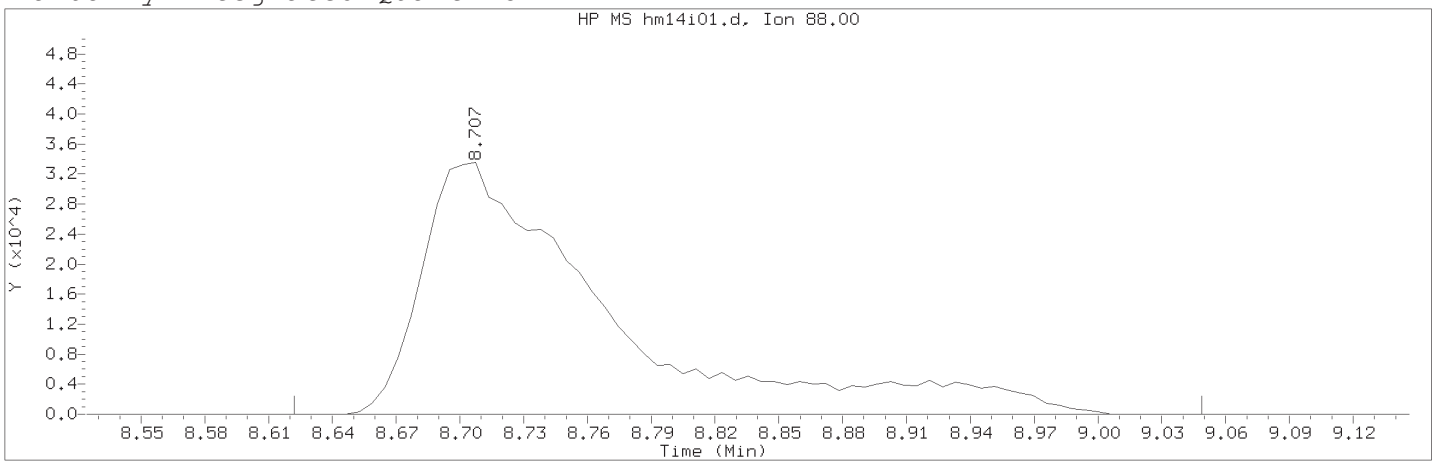
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 1596005
On-column Amount (ng) : 25.0000
Integration start scan : 942 Integration stop scan: 997
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

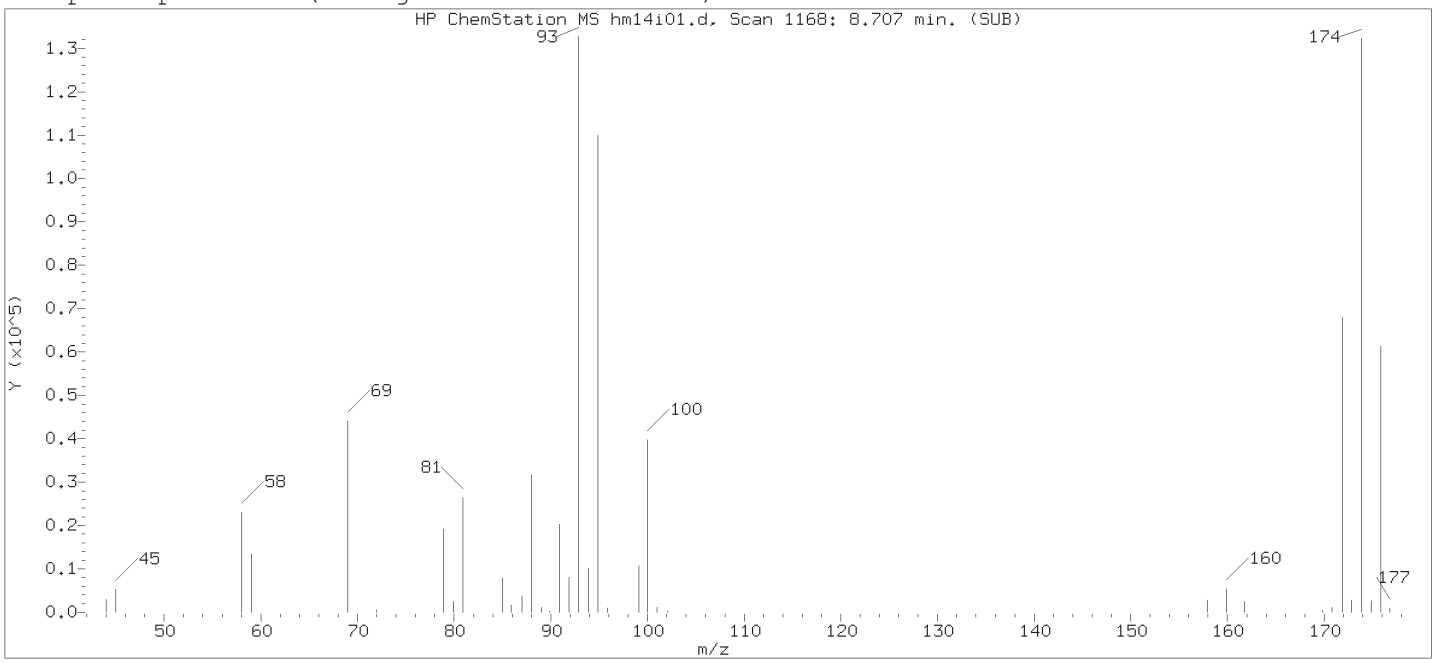
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area (flag) : 205013M
On-Column Amount (ng) : 1220.9383
Integration start scan : 1153 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

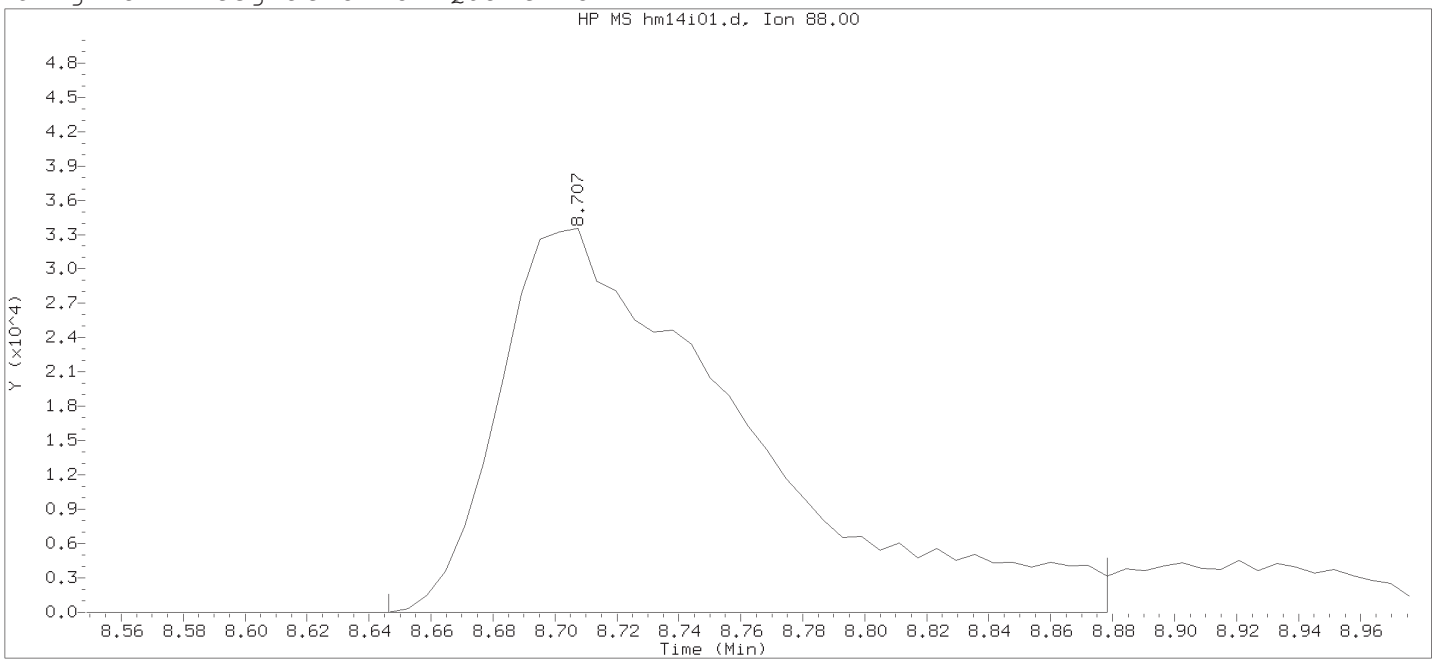
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

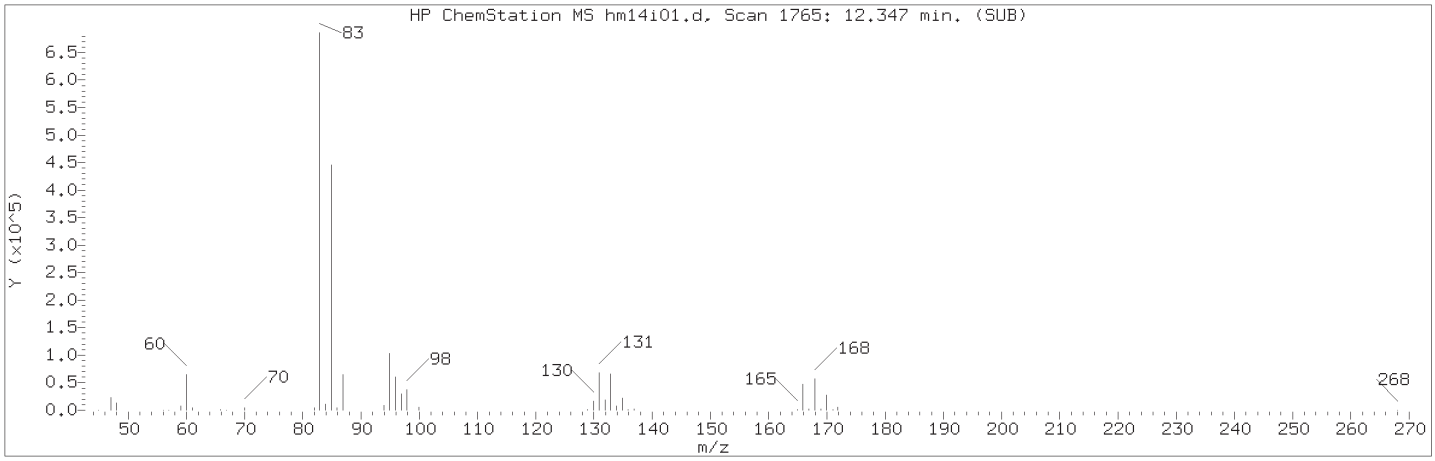
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

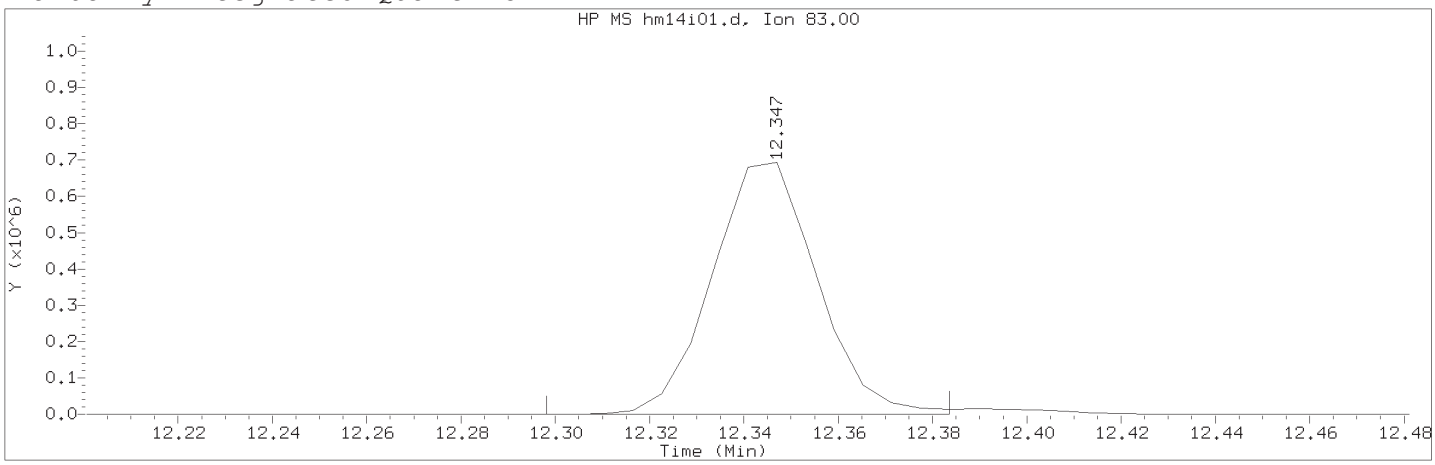
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area : 182586
On-column Amount (ng) : 1250.0000
Integration start scan : 1157 Integration stop scan: 1195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

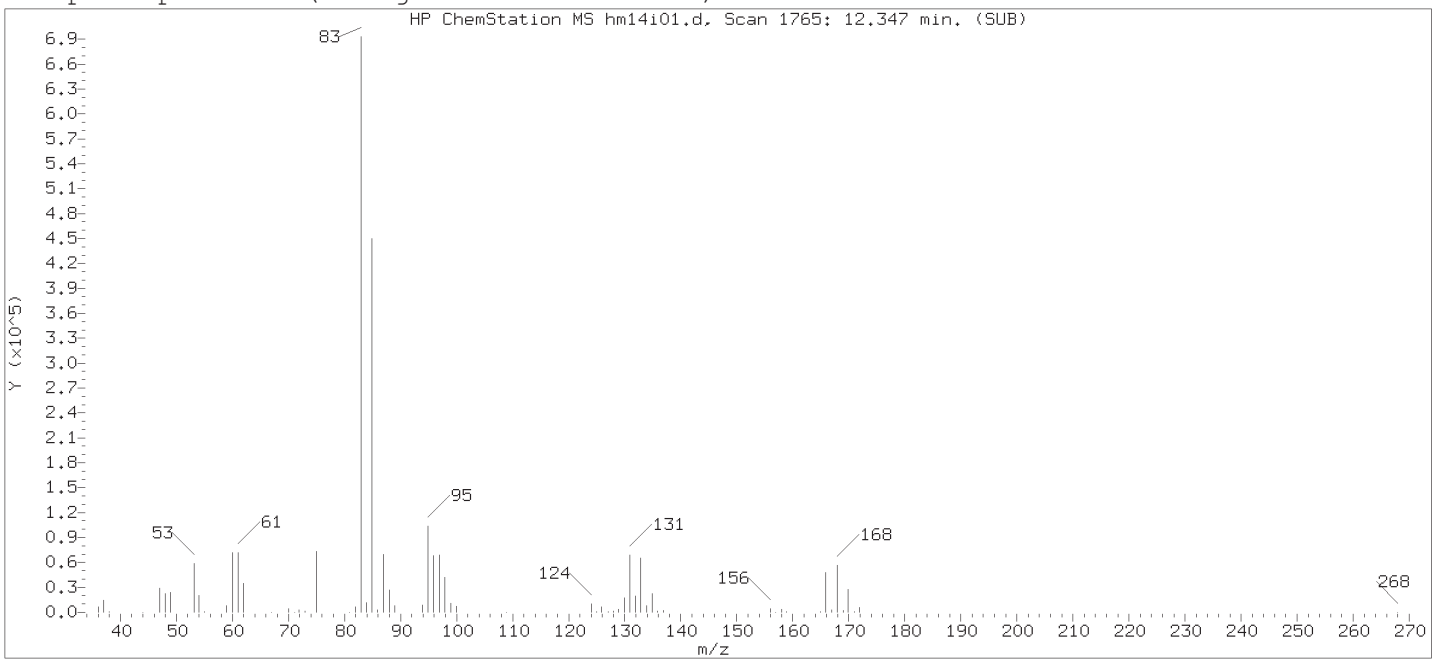
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 1073753M
On-Column Amount (ng) : 23.2501
Integration start scan : 1756 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

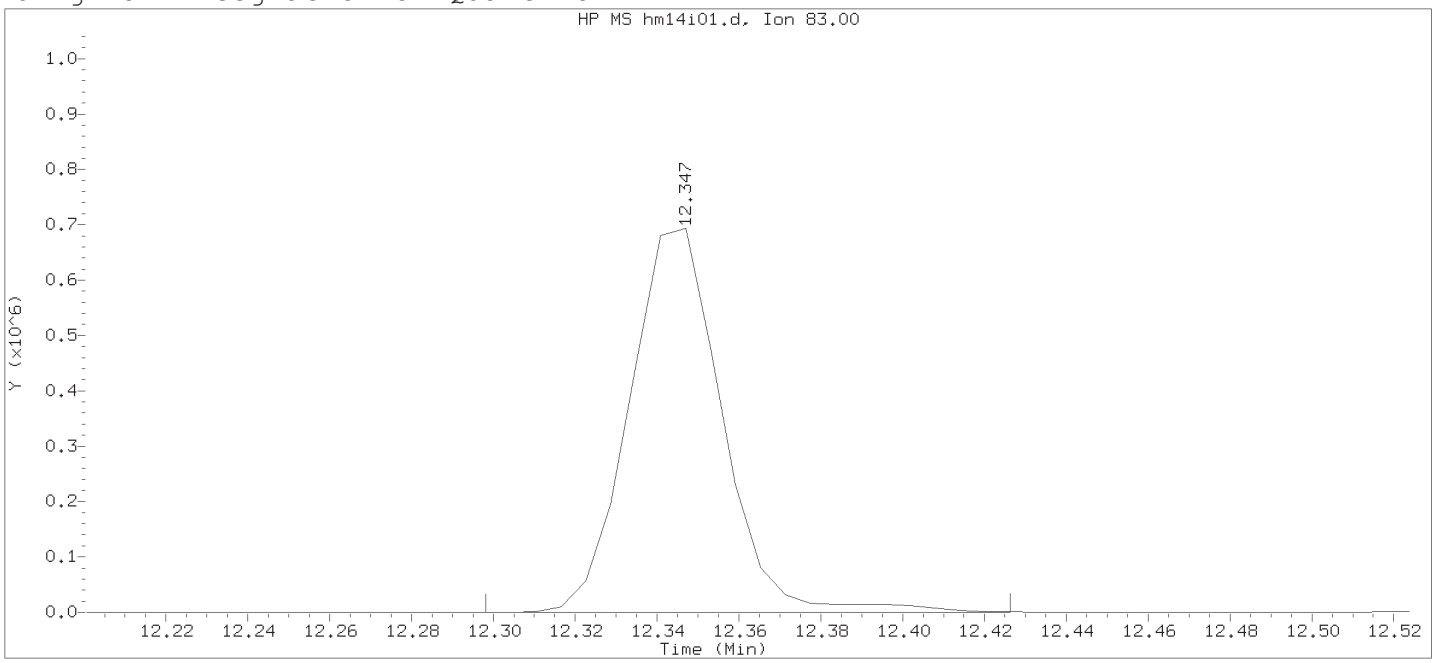
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

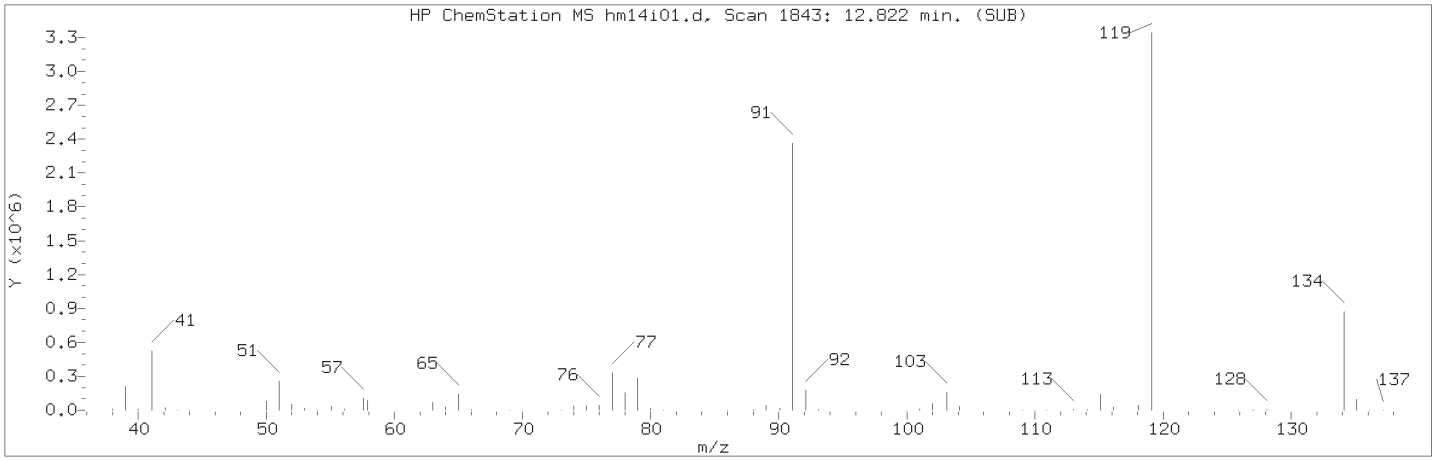
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

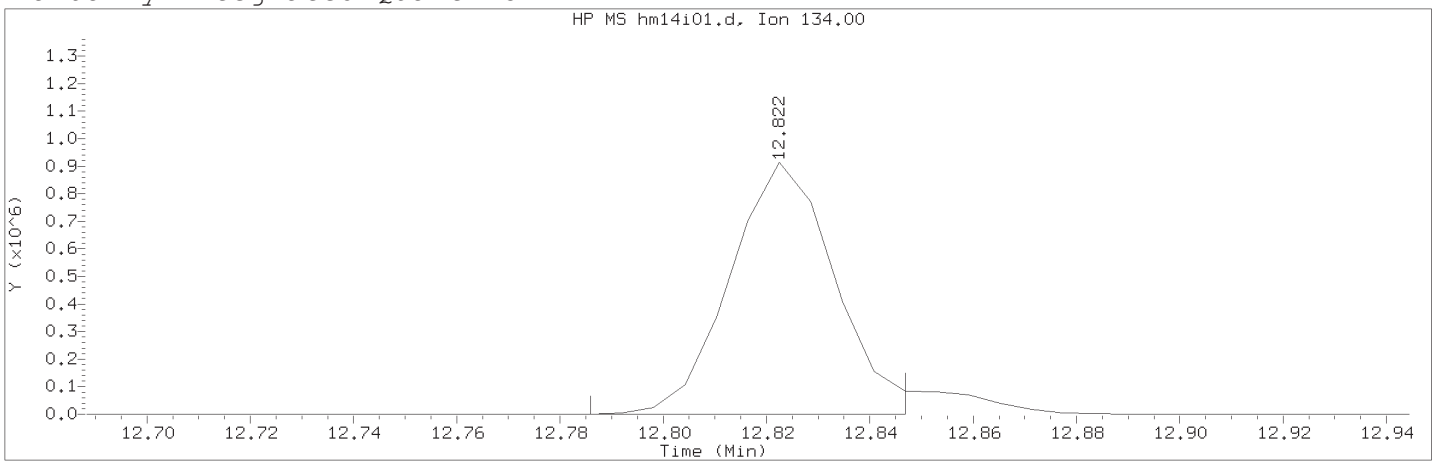
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 1092930
On-column Amount (ng) : 25.0000
Integration start scan : 1756 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

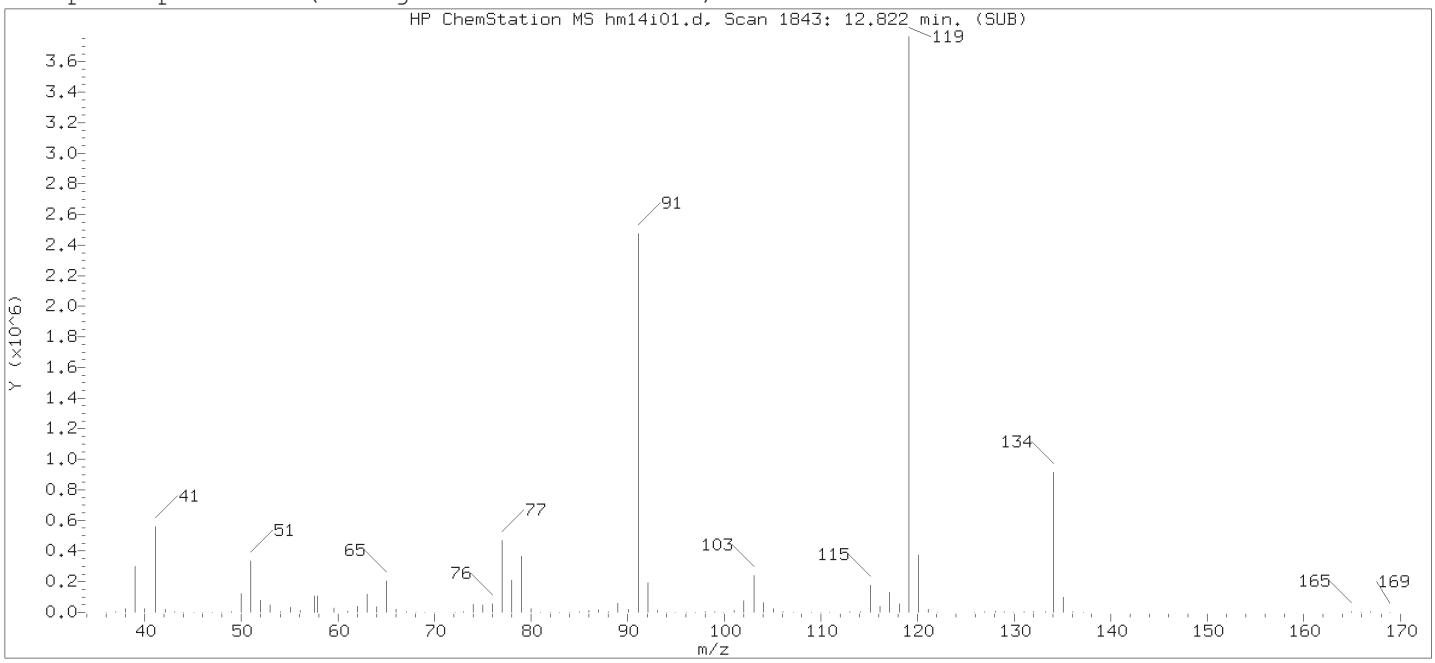
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 1287997M
On-Column Amount (ng) : 23.2927
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

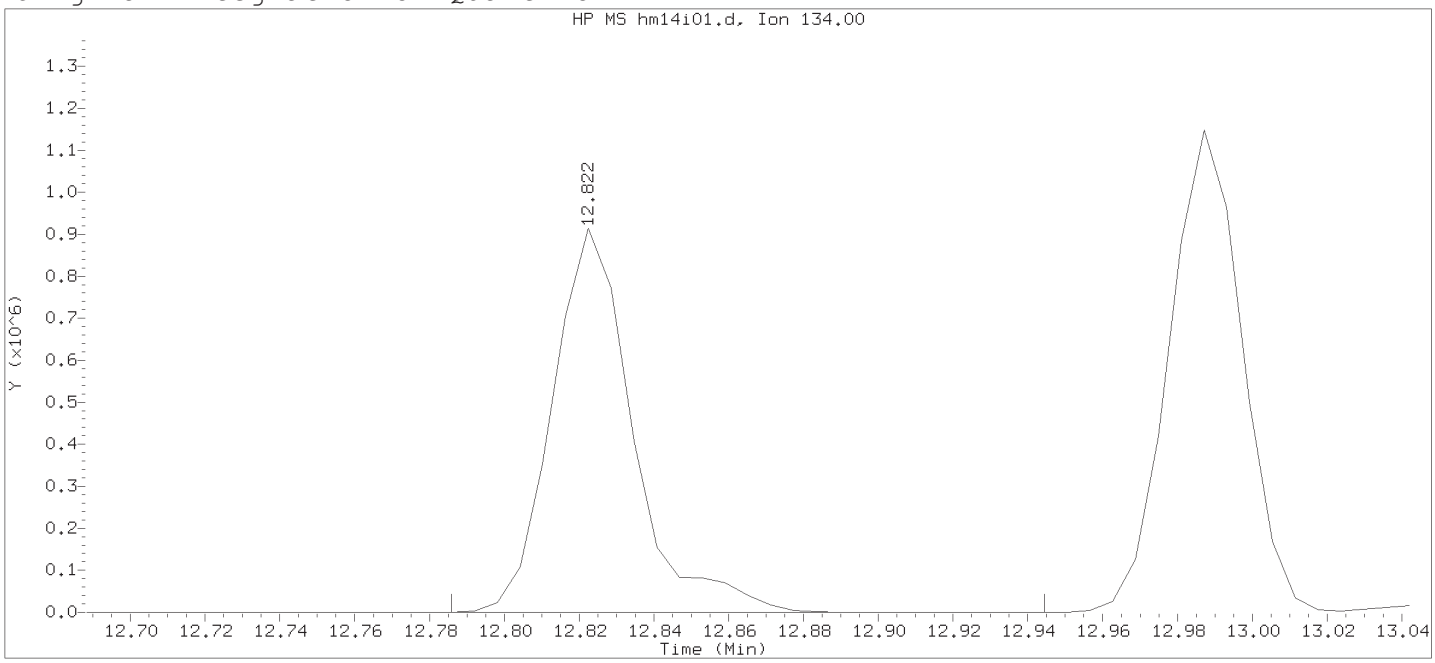
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



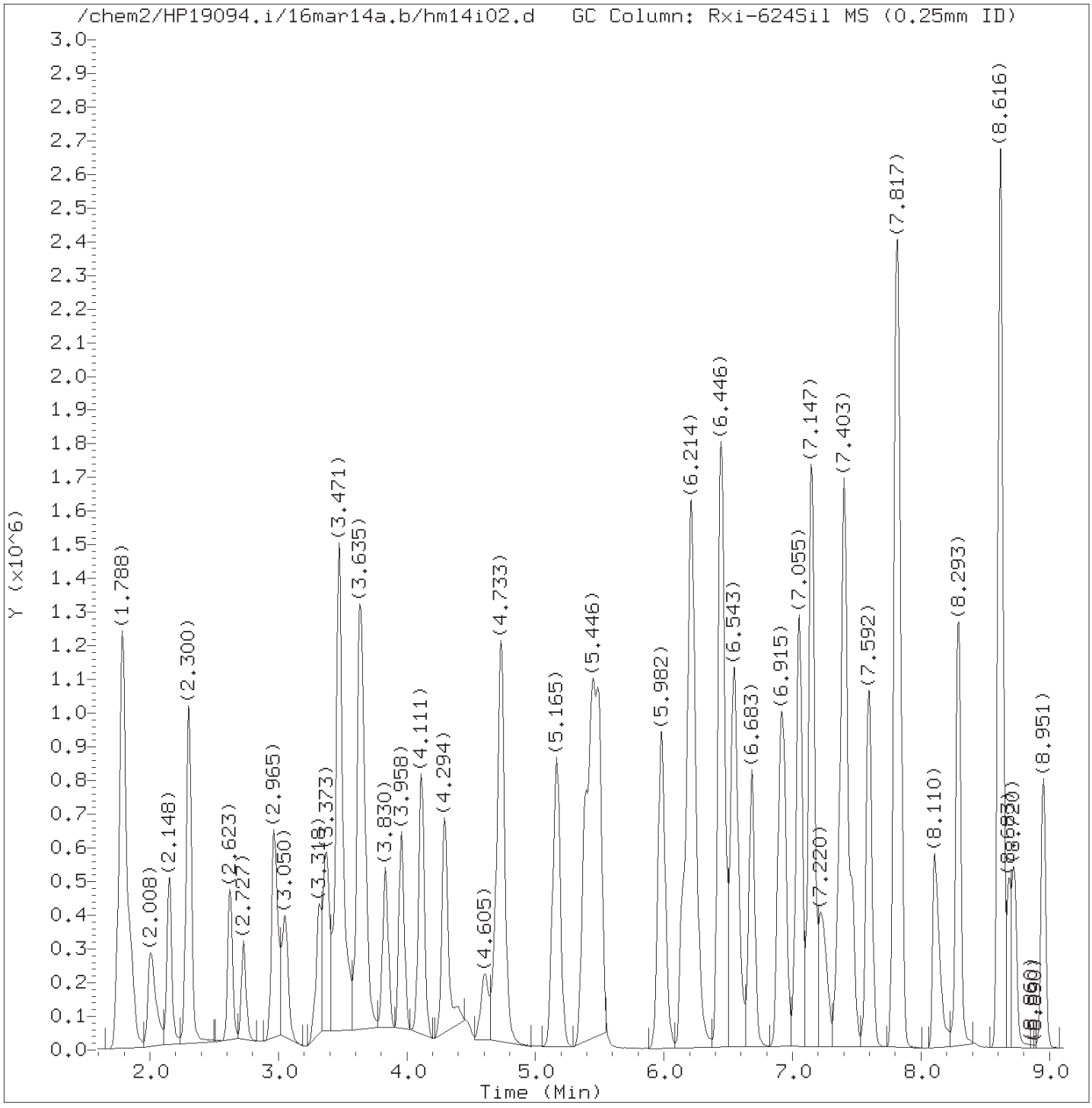
Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 1366807
On-column Amount (ng) : 25.0000
Integration start scan : 1836 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

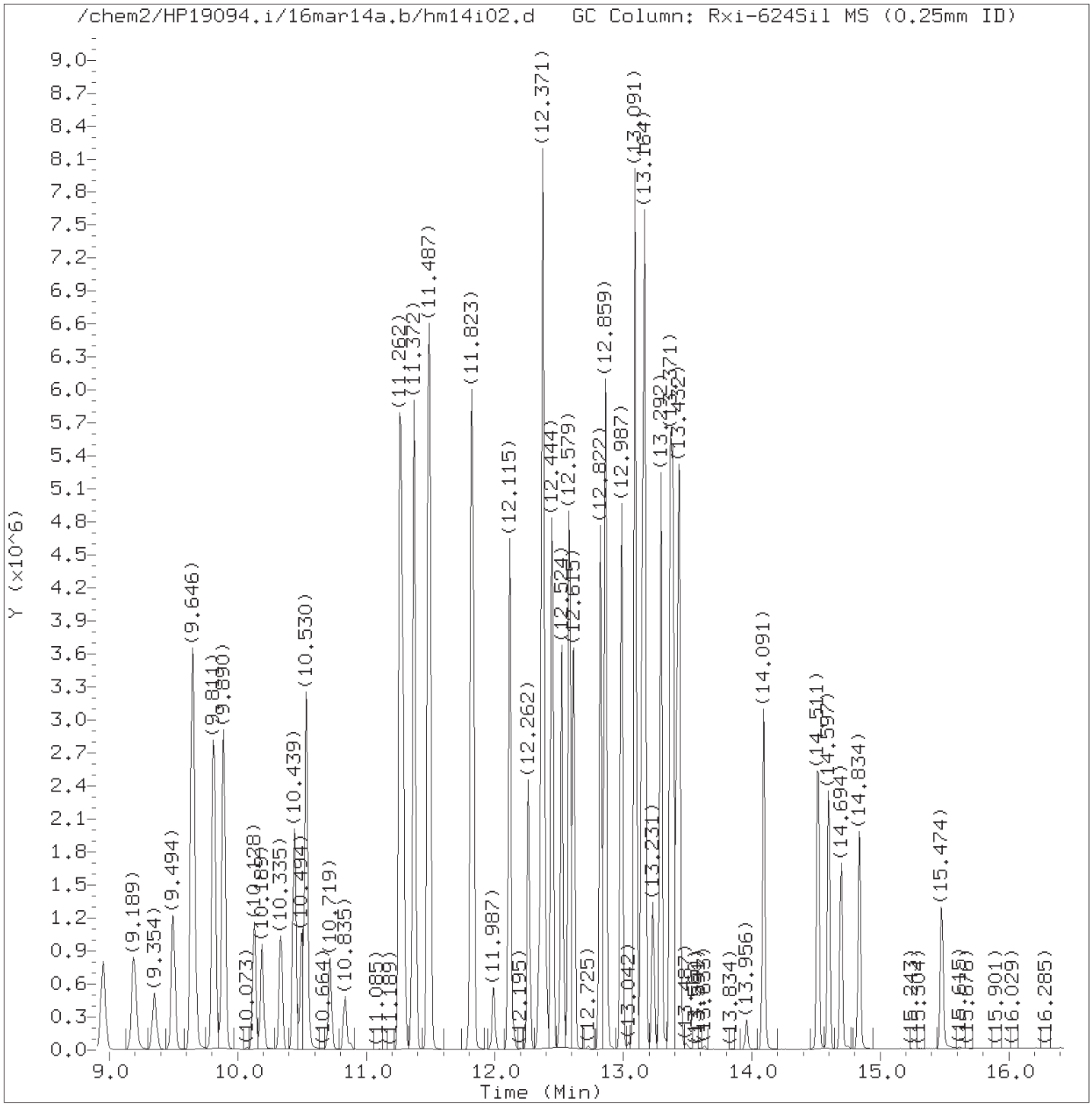
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	758272	9.685
2) Chloromethane	(2)	2.148	50	744162	9.690
5) Vinyl Chloride	(2)	2.288	62	678425	9.498
6) 1,3-Butadiene	(2)	2.306	39	482193	8.926
7) Bromomethane	(2)	2.623	94	450112	9.495
8) Chloroethane	(2)	2.727	64	393994	8.949
9) Dichlorofluoromethane	(2)	2.965	67	909527	9.103
10) Trichlorofluoromethane	(2)	3.056	101	879230	9.449
11) Ethyl ether	(2)	3.312	59	372383	9.701
12) Freon 123a	(2)	3.367	67	665574	9.351
13) Acrolein	(1)	3.471	56	2957969	488.236
15) 1,1-Dichloroethene	(2)	3.629	96	500183	9.369
14) Acetone	(1)	3.641	43	761515M	91.218
16) Freon 113	(2)	3.660	101	527043	9.493
17) Methyl Iodide	(2)	3.830	142	943626	9.547
18) Carbon Disulfide	(2)	3.958	76	1517826	9.207
21) Methyl Acetate	(1)	4.074	43	211309	9.012
22) Allyl Chloride	(2)	4.111	41	951813	9.428
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106258M	50.000
23) Methylene Chloride	(2)	4.294	84	543334	9.522
28) t-Butyl Alcohol	(1)	4.403	59	521660	182.586
29) Acrylonitrile	(1)	4.605	53	497658	49.681
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	1188852	9.651
31) trans-1,2-Dichloroethene	(2)	4.739	96	544914	9.478
32) n-Hexane	(2)	5.165	57	908578	9.311
33) 1,1-Dichloroethane	(2)	5.385	63	1125385	9.604
34) di-Isopropyl Ether	(2)	5.446	45	1974977	9.656
35) 2-Chloro-1,3-Butadiene	(2)	5.495	53	919425	9.559
37) Ethyl t-butyl ether	(2)	5.982	59	1664806	9.652
40) 1,2-Dichloroethene (Total)	(2)		96	1158873	19.119
38) 2-Butanone	(1)	6.147	43	1396262	98.153
39) cis-1,2-Dichloroethene	(2)	6.208	96	613959	9.641
42) Propionitrile	(1)	6.220	54	705816	198.982
41) 2,2-Dichloropropane	(2)	6.232	77	884733	9.437
45) Methacrylonitrile	(1)	6.446	67	1197973	98.638
47) Bromochloromethane	(2)	6.537	128	239261	9.875
48) Tetrahydrofuran	(1)	6.549	71	350126	97.292
49) Chloroform	(2)	6.683	83	1016040	9.487

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546085	10.205
50)$Dibromofluoromethane	(2)	6.903	111	562057	10.208
51) 1,1,1-Trichloroethane	(2)	6.933	97	871071	9.535
52) Cyclohexane	(2)	7.055	56	1074292	8.999
52) Cyclohexane	(2)	7.055	84	835438	9.140
52) Cyclohexane	(2)	7.049	69	314832	9.220
55) 1,1-Dichloropropene	(2)	7.147	75	836378	9.538
54) Carbon Tetrachloride	(2)	7.159	117	791512	9.529
56) Isobutyl Alcohol	(1)	7.226	41	458659M	453.075
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91172M	10.287
57)$1,2-Dichloroethane-d4	(2)	7.360	65	459039	10.145
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57870	10.341
58) Benzene	(2)	7.403	78	2313730	9.481
59) 1,2-Dichloroethane	(2)	7.464	62	607813M	9.612
60) t-Amyl methyl ether	(2)	7.598	73	1356799	9.626
63)*Fluorobenzene	(2)	7.805	96	2270797	10.000
62) n-Heptane	(2)	7.830	43	1002679	9.090
65) n-Butanol	(1)	8.110	56	768455	943.123
67) Trichloroethene	(2)	8.293	95	608730	9.570
70) 1,2-Dichloropropane	(2)	8.616	63	603857	9.503
69) Methylcyclohexane	(2)	8.622	83	992242	9.523
71) Methyl Methacrylate	(1)	8.683	69	253966M	10.008
72) 1,4-Dioxane	(1)	8.720	88	82405	513.336
73) Dibromomethane	(2)	8.726	93	251750	9.618
74) Bromodichloromethane	(2)	8.951	83	721713	9.876
76) 2-Nitropropane	(1)	9.189	41	767062	94.300
80) cis-1,3-Dichloropropene	(2)	9.494	75	886193	9.868
81) 4-Methyl-2-Pentanone	(1)	9.646	43	3461188	98.865
82)$Toluene-d8	(3)	9.811	98	2246008	9.748
82)$Toluene-d8	(3)	9.811	100	1462137	9.804
83) Toluene	(3)	9.890	92	1425153	9.183
84) trans-1,3-Dichloropropene	(3)	10.128	75	692682	9.523
85) 1,3-Dichloropropene (total)	(3)		75	1578875	19.391
86) Ethyl Methacrylate	(3)	10.189	69	531314	9.495
88) 1,1,2-Trichloroethane	(3)	10.335	97	349734	9.304
89) Tetrachloroethene	(3)	10.439	166	667231	9.104
90) 1,3-Dichloropropane	(3)	10.500	76	640156	9.471
91) 2-Hexanone	(1)	10.530	43	2399359	96.933

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	468929	9.731
95) 1,2-Dibromoethane	(3)	10.835	107	338365	9.556
97)*Chlorobenzene-d5	(3)	11.262	117	1617323	10.000
98) Chlorobenzene	(3)	11.286	112	1572207	9.306
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	544790	9.401
100) Ethylbenzene	(3)	11.372	91	2796238	9.205
101) m+p-Xylene	(3)	11.487	106	2144836	18.511
105) Xylene (Total)	(3)		106	3198492	27.880
104) o-Xylene	(3)	11.817	106	1053656	9.371
106) Styrene	(3)	11.829	104	1694211	9.419
107) Bromoform	(3)	11.993	173	262691	9.828
108) Isopropylbenzene	(3)	12.115	105	2746137	9.216
111)$4-Bromofluorobenzene	(3)	12.262	95	746740	10.055
111)$4-Bromofluorobenzene	(3)	12.262	174	624403	10.084
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	416614M	9.181
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	1118677	103.767
114) Bromobenzene	(4)	12.377	156	626886	9.275
116) 1,2,3-Trichloropropane	(4)	12.396	110	106766	9.372
117) n-Propylbenzene	(4)	12.444	91	3327479	9.102
119) 2-Chlorotoluene	(4)	12.524	126	649916	9.220
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	2337991	9.173
122) 4-Chlorotoluene	(4)	12.615	126	656708	9.142
125) tert-Butylbenzene	(4)	12.822	134	497778M	9.162
126) Pentachloroethane	(4)	12.853	167	399158	9.734
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	2350492	9.223
128) sec-Butylbenzene	(4)	12.987	105	3026768	9.172
131) 1,3-Dichlorobenzene	(4)	13.091	146	1228582	9.293
132) p-Isopropyltoluene	(4)	13.097	119	2593636	9.285
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	725016	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	1202986	8.956
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	965211	9.133
136) Benzyl Chloride	(4)	13.231	126	176407	9.812
138) n-Butylbenzene	(4)	13.383	92	1292257	9.457
139) 1,2-Dichlorobenzene	(4)	13.420	146	1071844	9.128
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	57131	10.273
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	752893	8.963
146) Hexachlorobutadiene	(4)	14.597	225	403240	9.187
147) Naphthalene	(4)	14.694	128	1206602	8.356

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	594025	8.854

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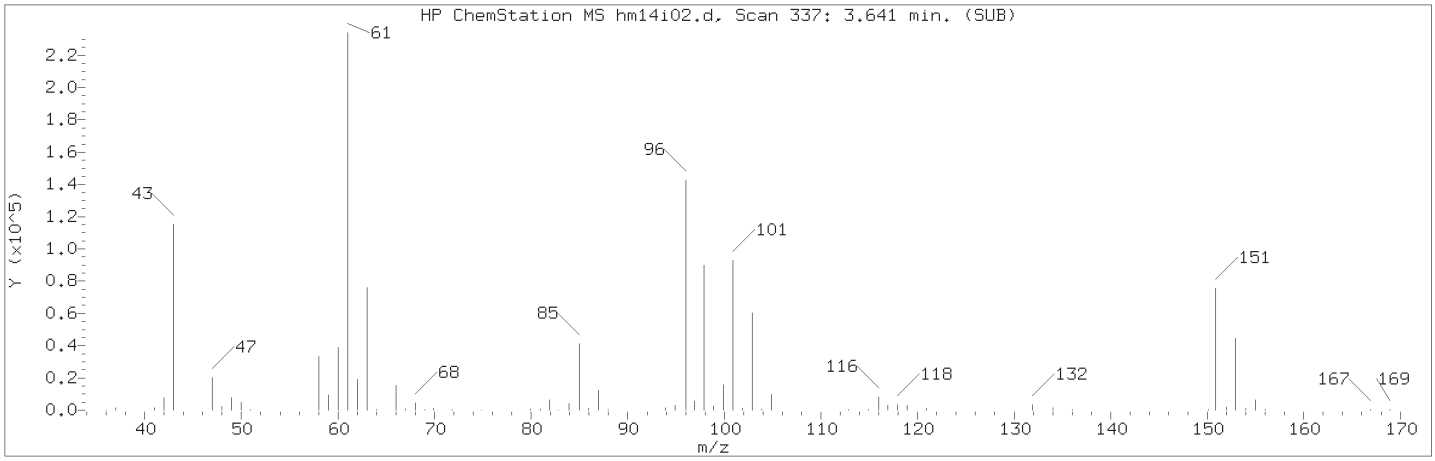
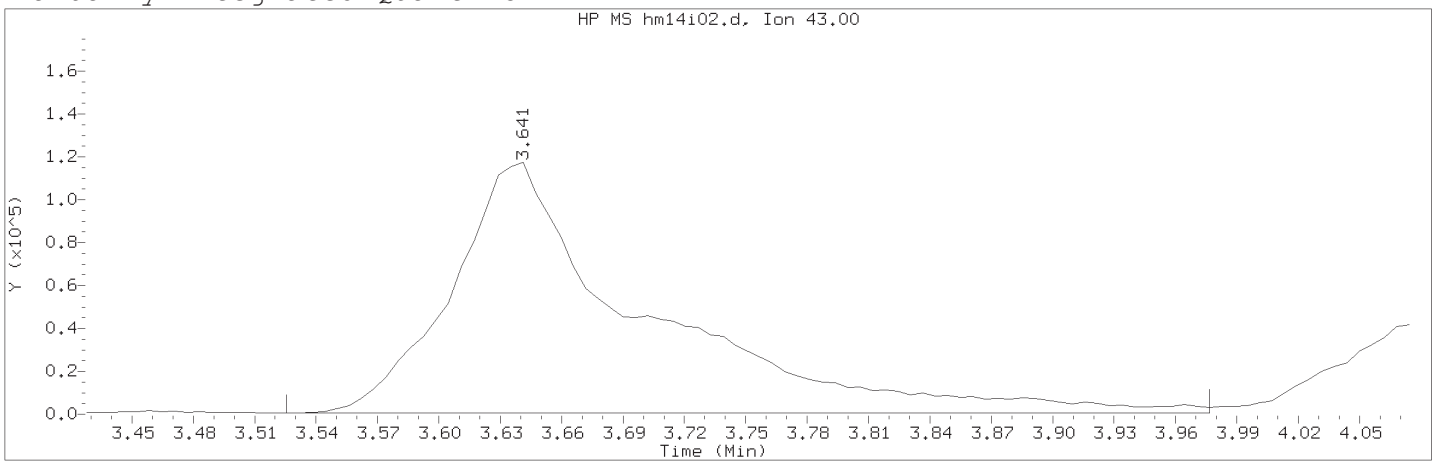
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

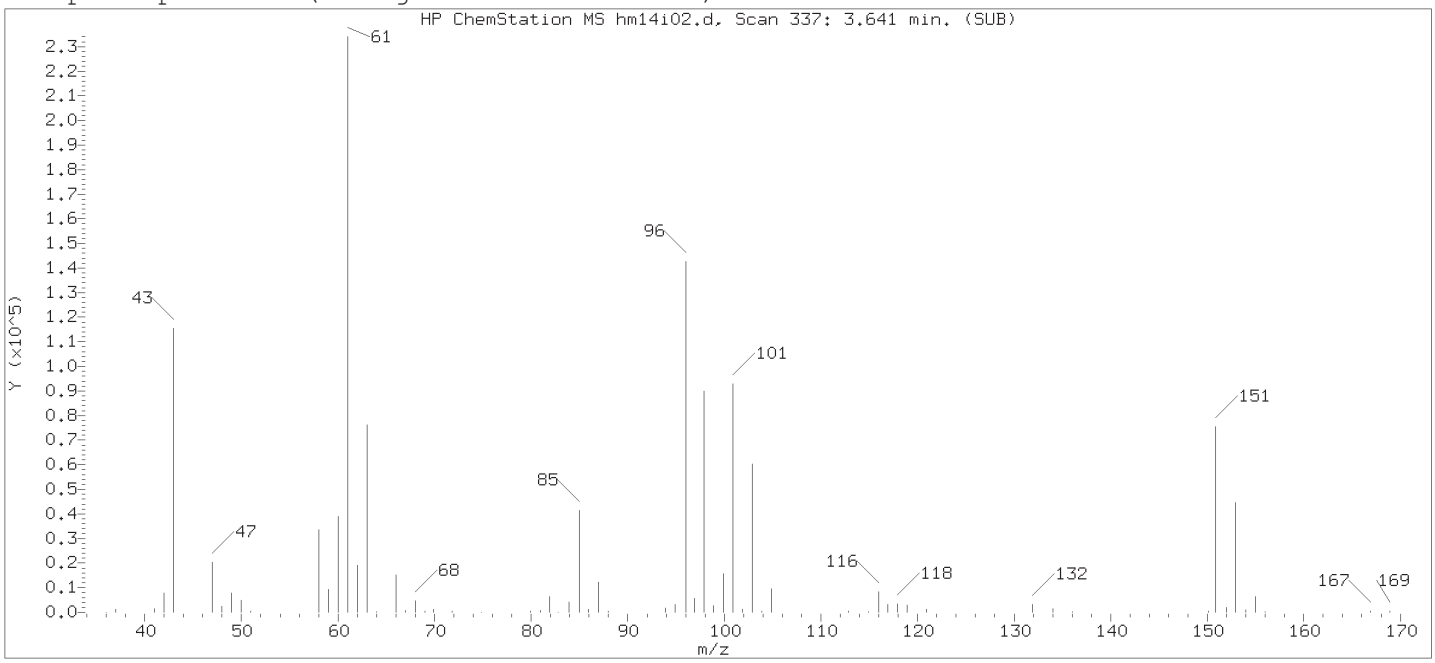
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 761515M
On-Column Amount (ng) : 91.2179
Integration start scan : 317 Integration stop scan: 391
Y at integration start : 433 Y at integration end: 433

Reason for manual integration: improper integration

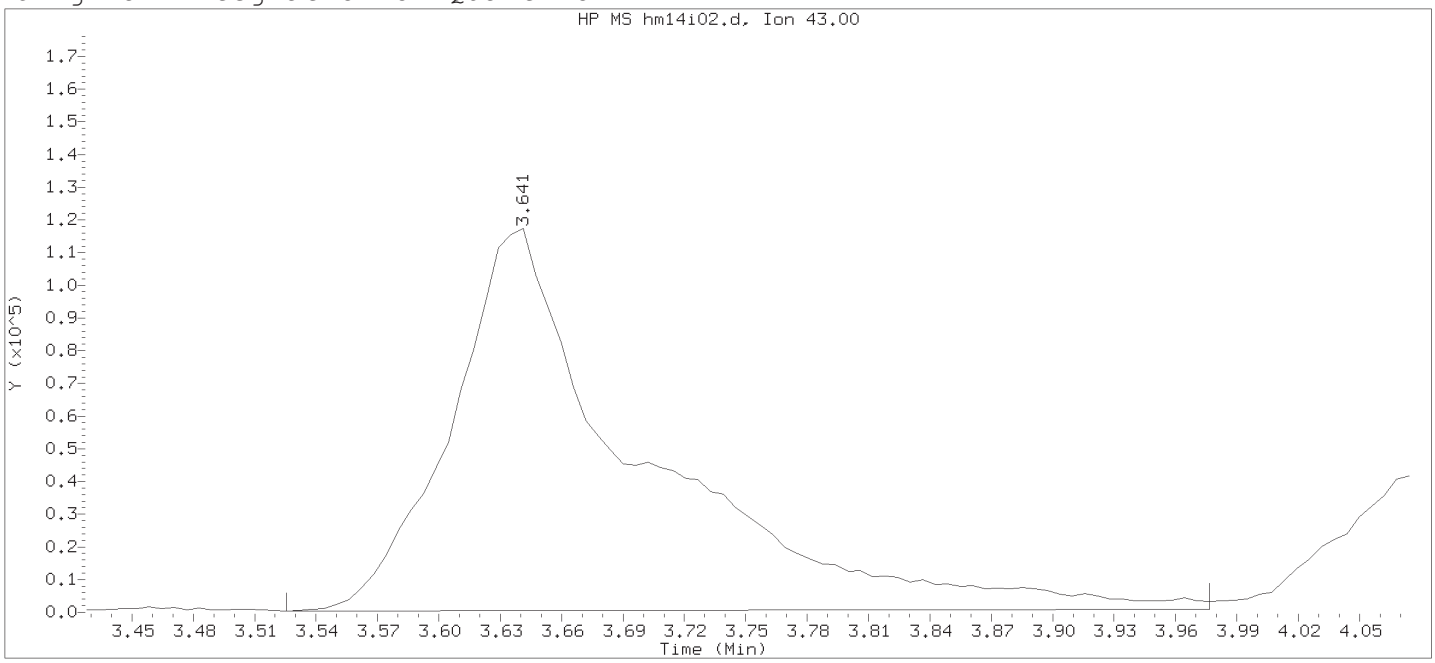
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

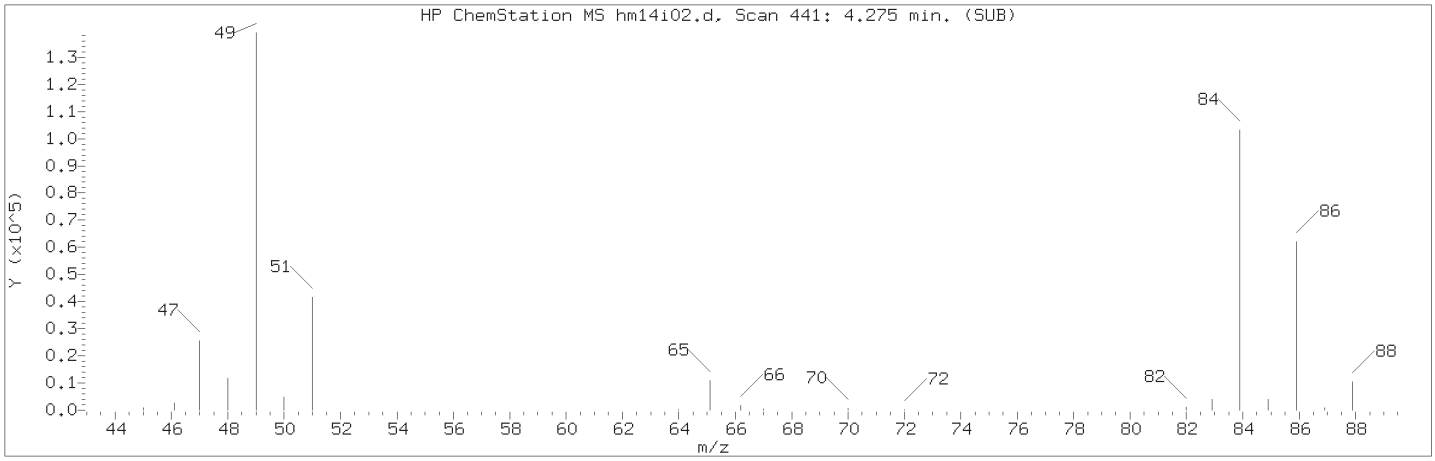
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

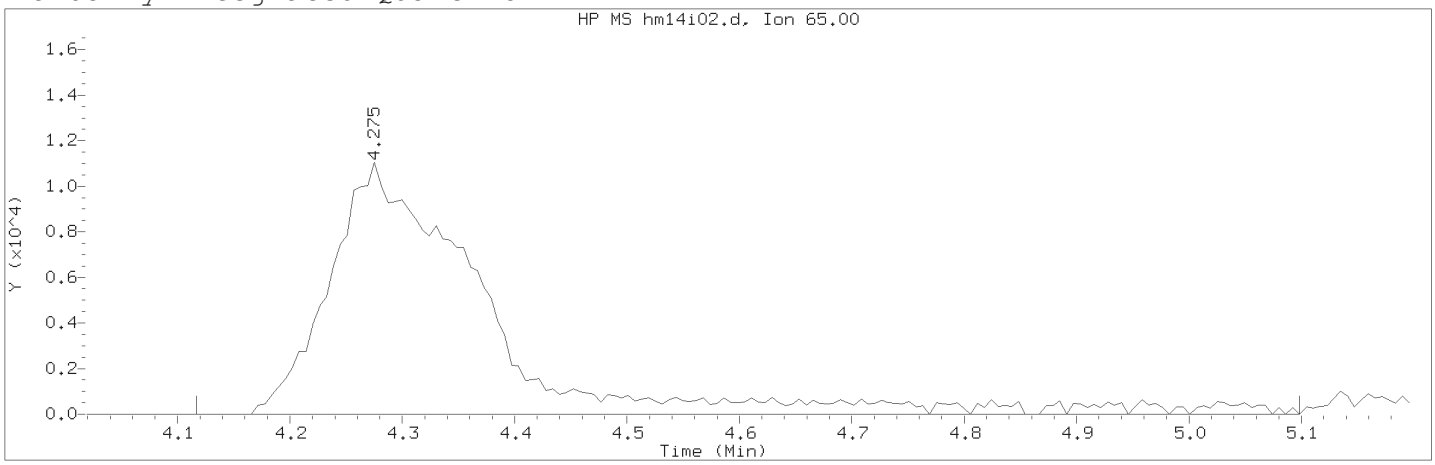
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area : 753577
On-column Amount (ng) : 98.9310
Integration start scan : 317 Integration stop scan: 391
Y at integration start : 443 Y at integration end: 971

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature data: HM:kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

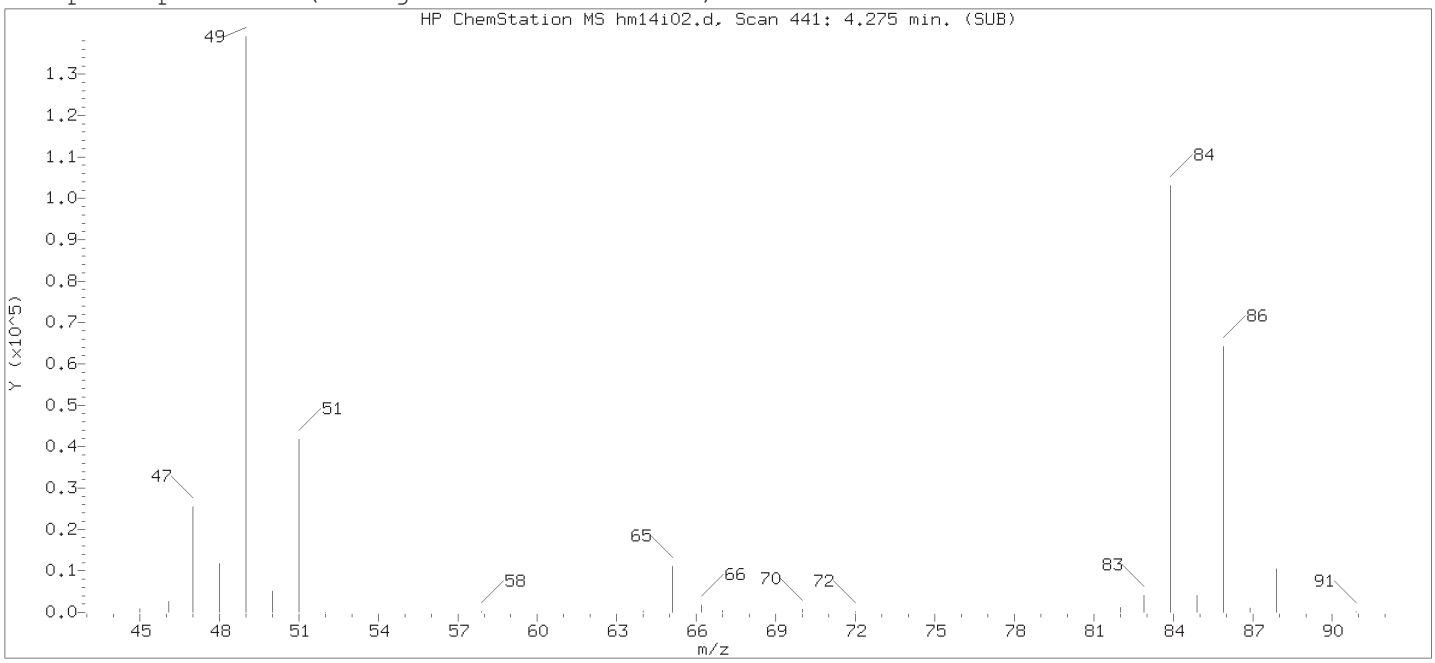
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 106258M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 575
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

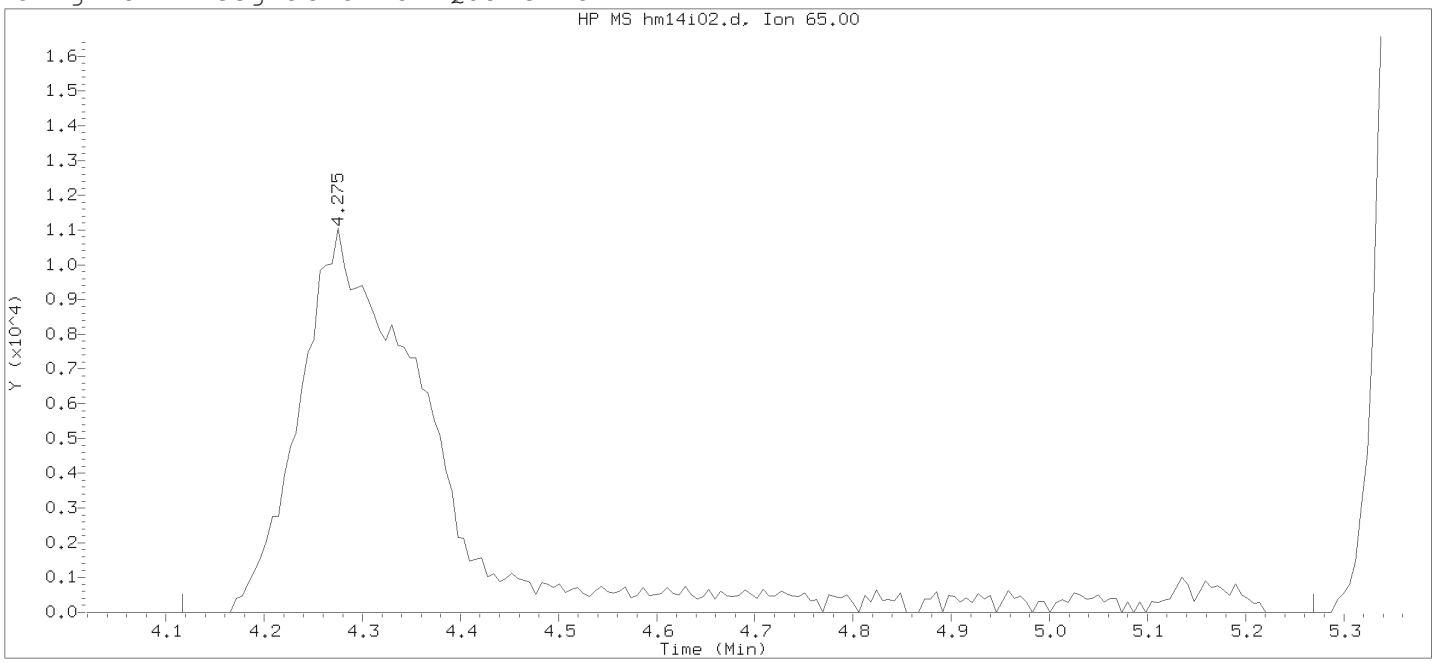
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

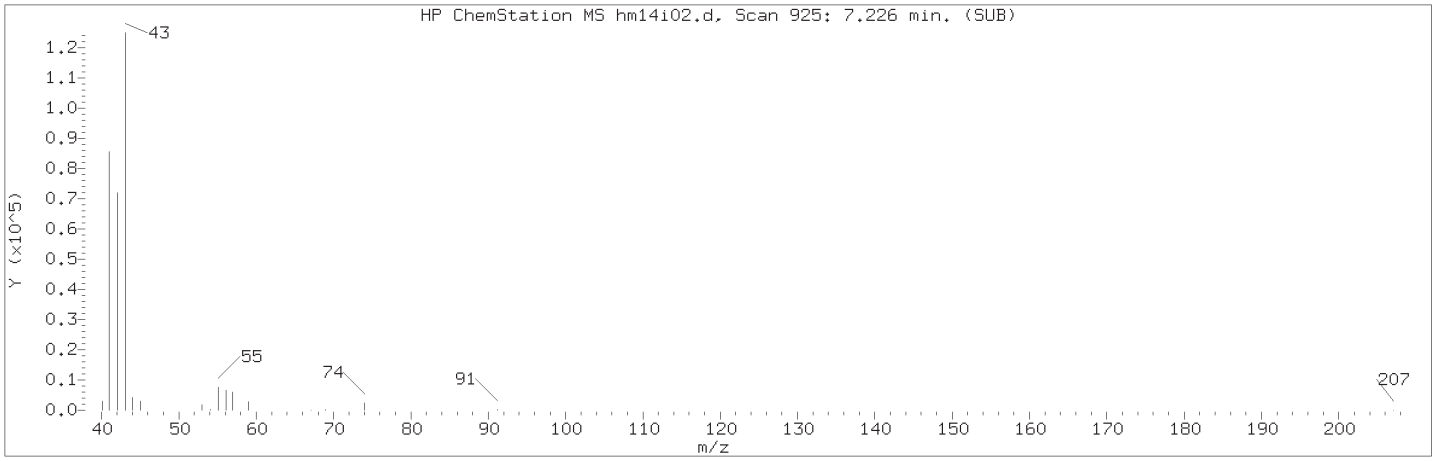
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

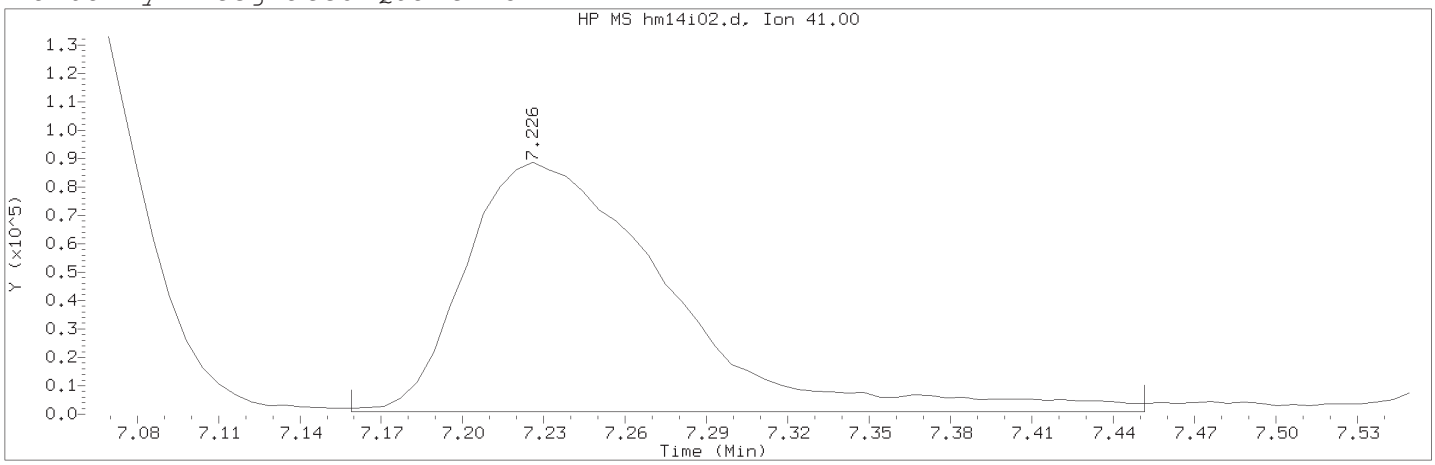
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area : 110092
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature date: 14-MAR-2016 15:33

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

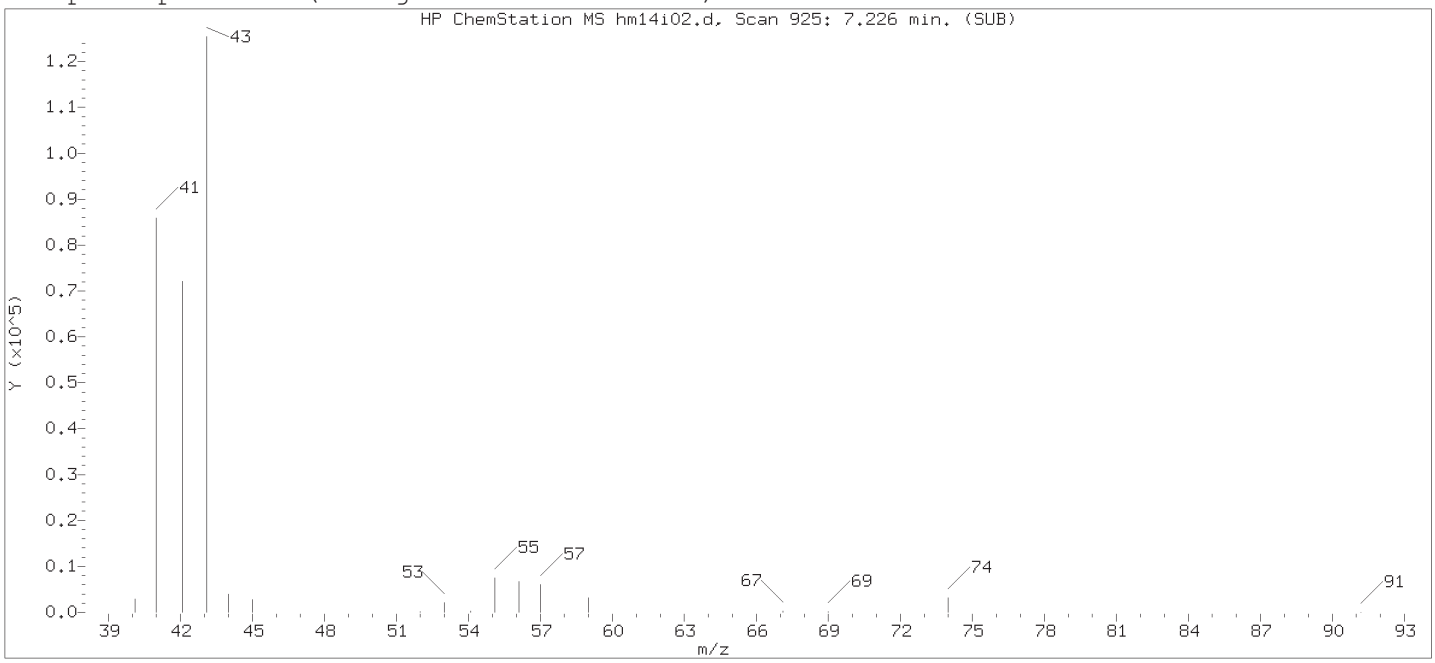
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 458659M
On-Column Amount (ng) : 453.0753
Integration start scan : 913 Integration stop scan: 961
Y at integration start : 855 Y at integration end: 855

Reason for manual integration: improper integration

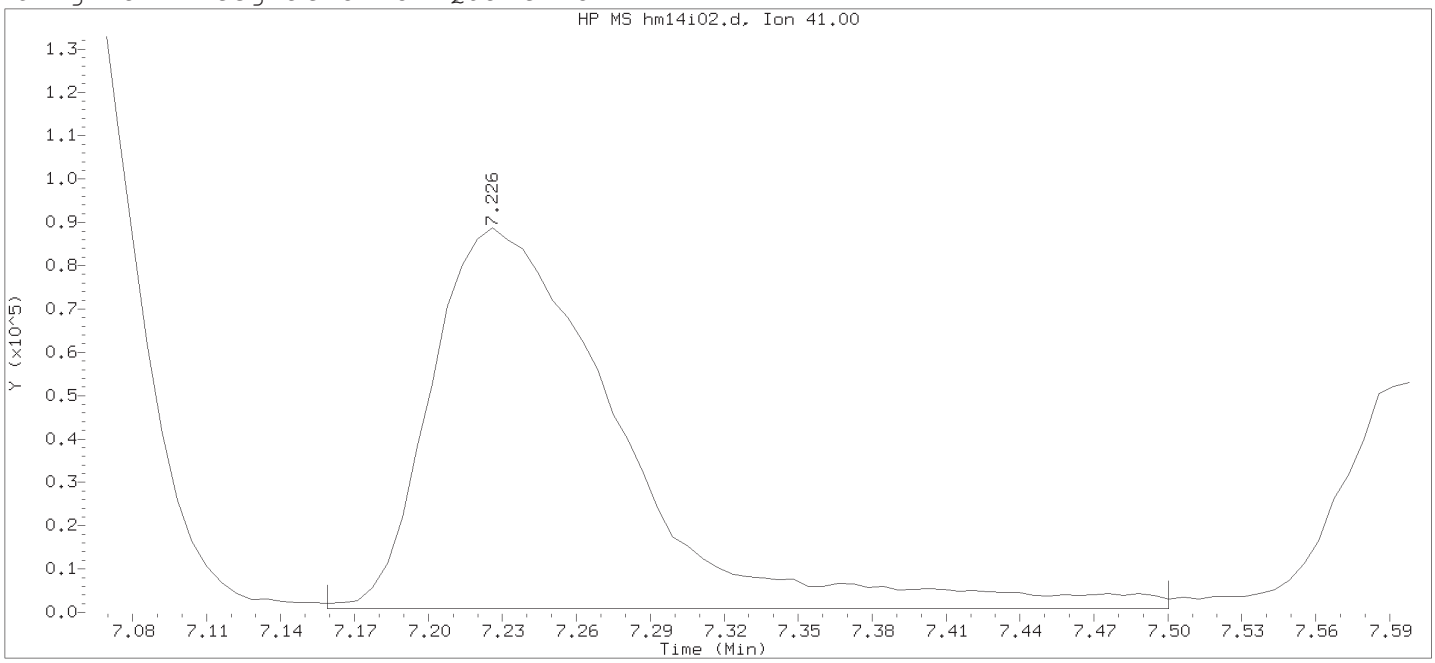
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

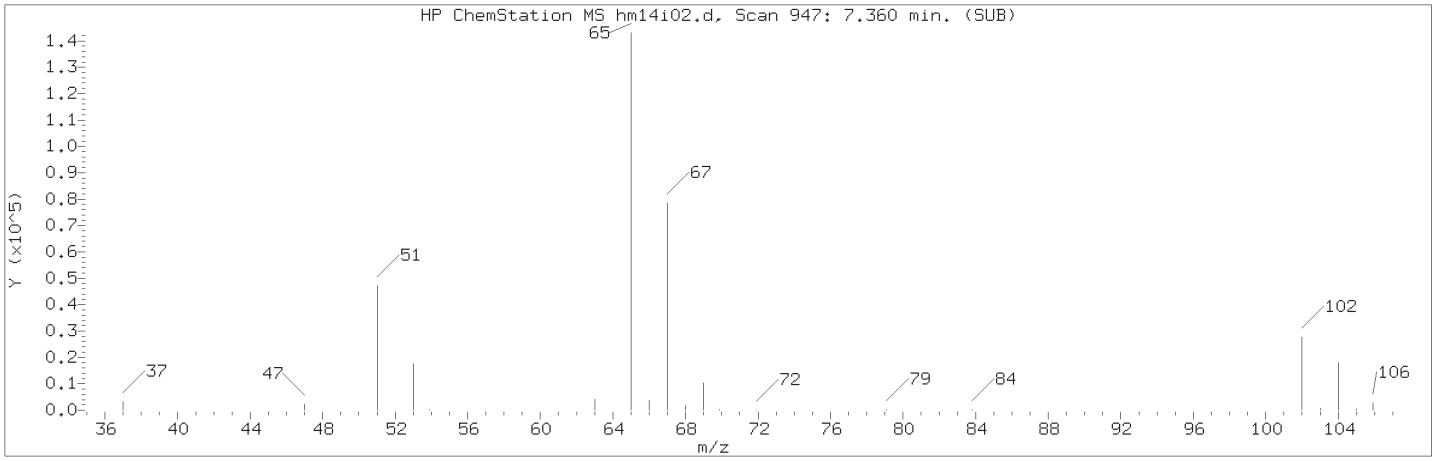
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

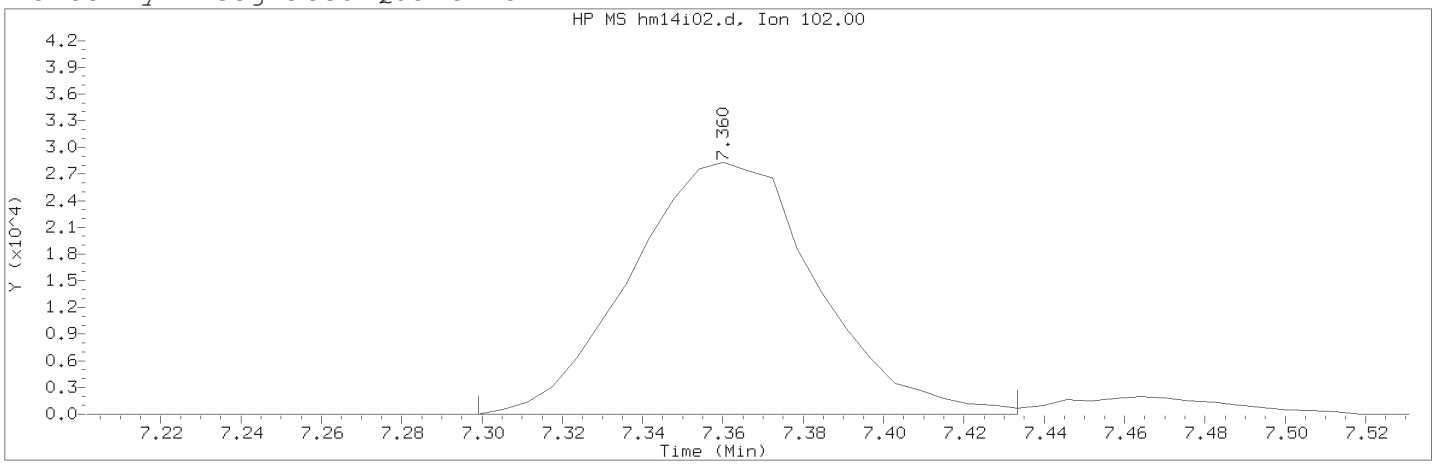
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 467057
On-column Amount (ng) : 493.7484
Integration start scan : 913 Integration stop scan: 969
Y at integration start : 855 Y at integration end: 855

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

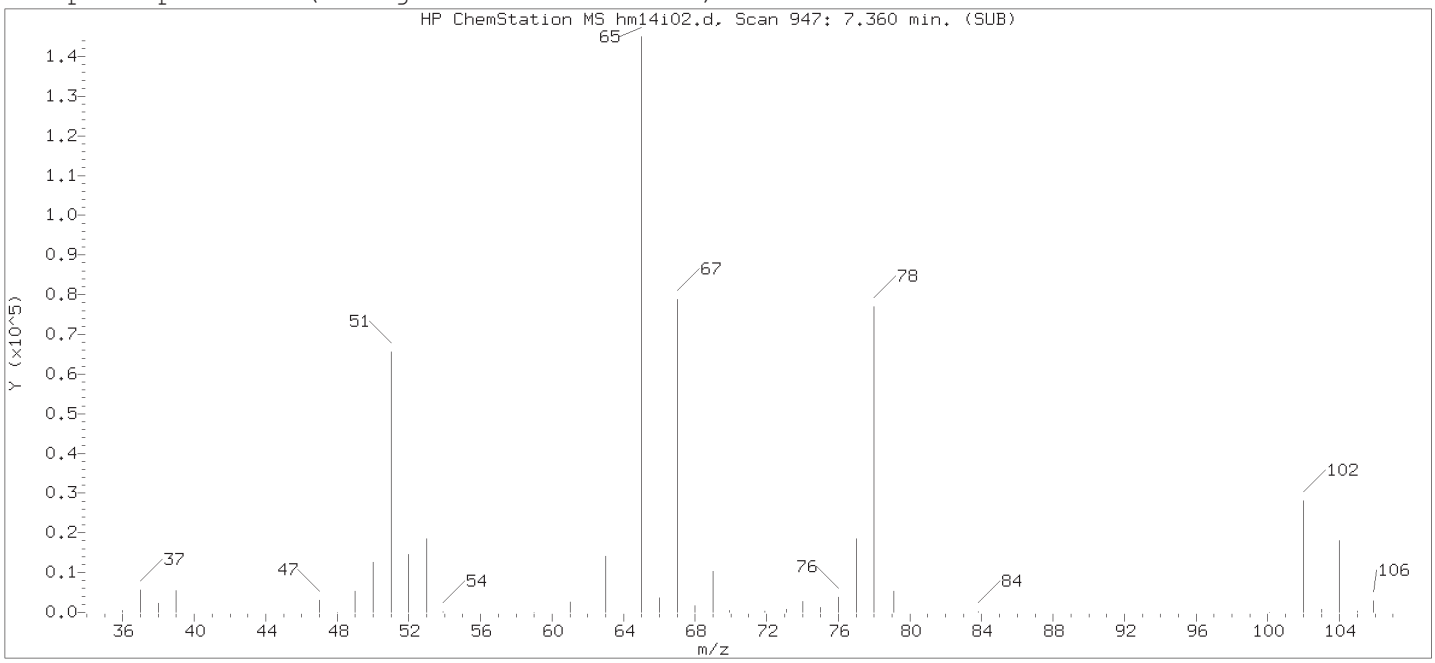
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 91172M
On-Column Amount (ng) : 10.2870
Integration start scan : 936 Integration stop scan: 958
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

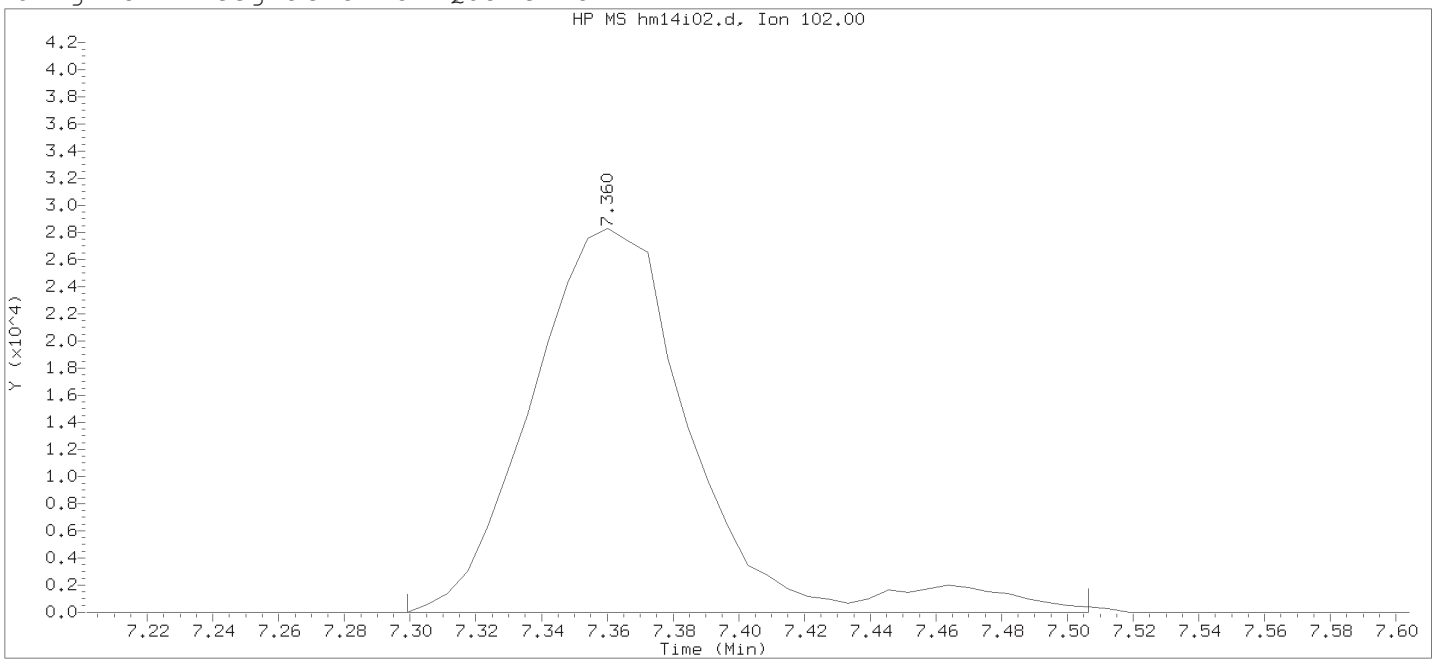
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

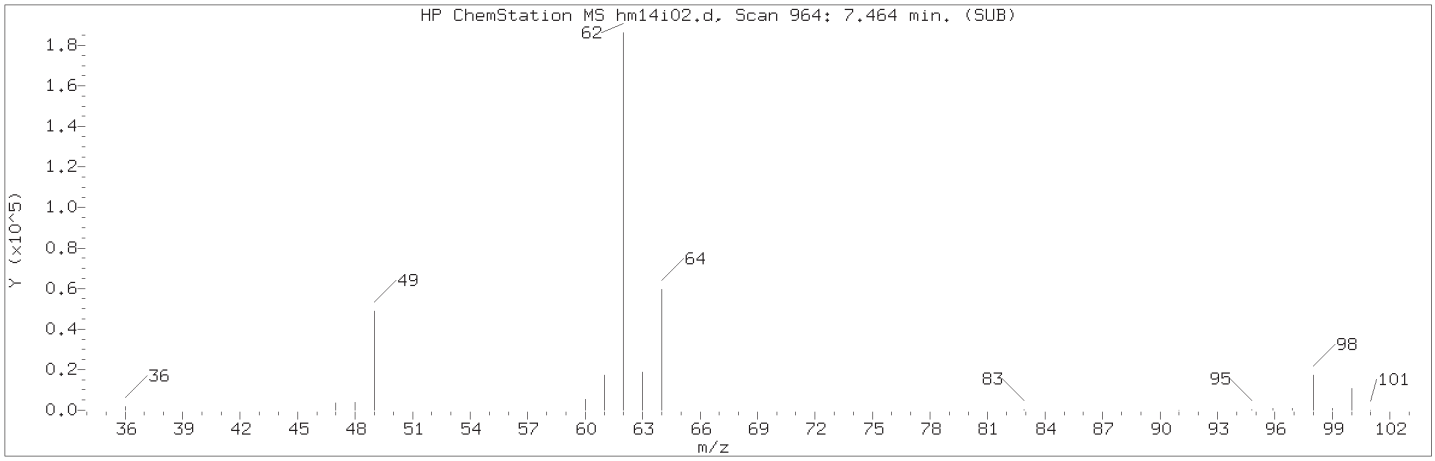
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

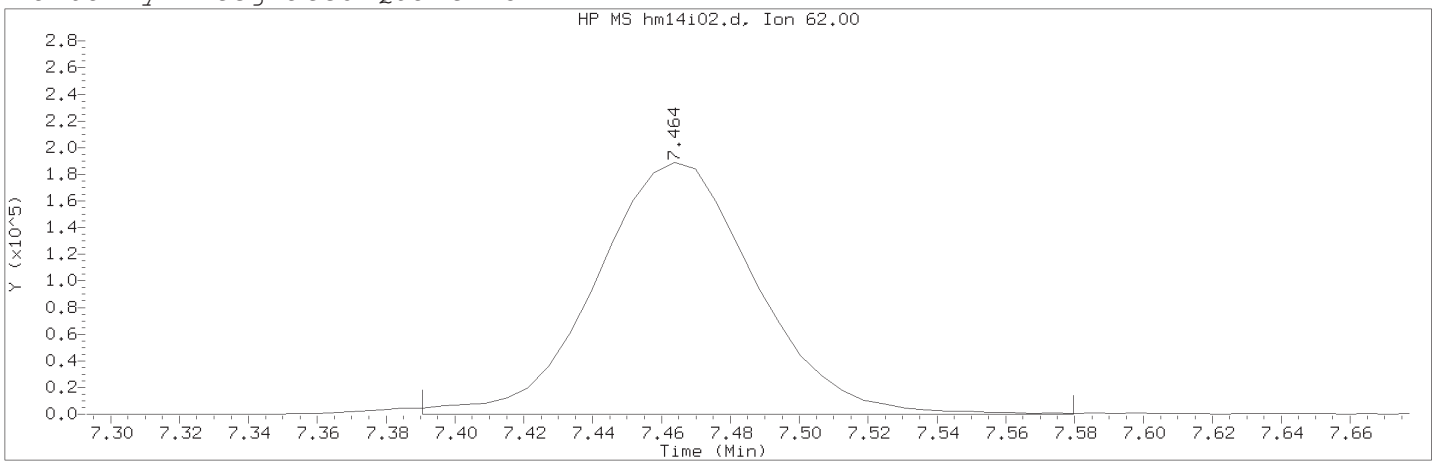
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 96625
On-column Amount (ng) : 10.3533
Integration start scan : 936 Integration stop scan: 970
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature date: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

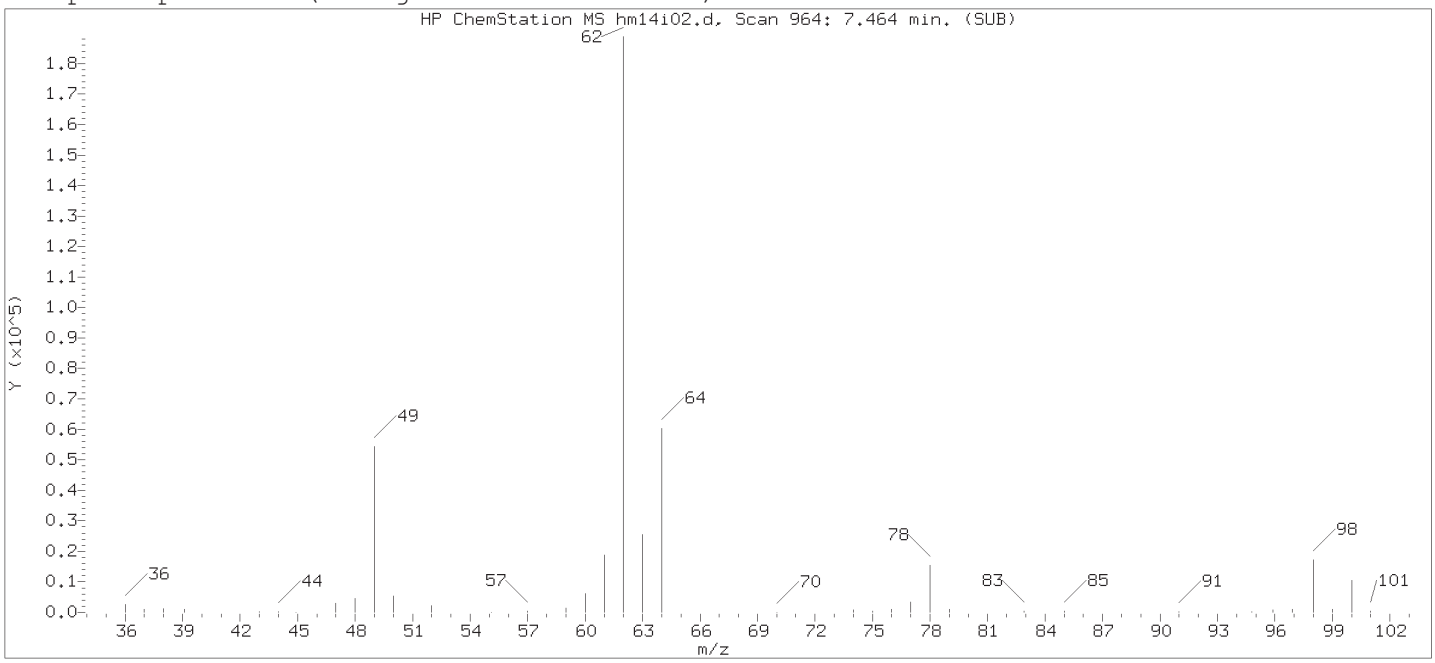
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 607813M
On-Column Amount (ng) : 9.6123
Integration start scan : 951 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

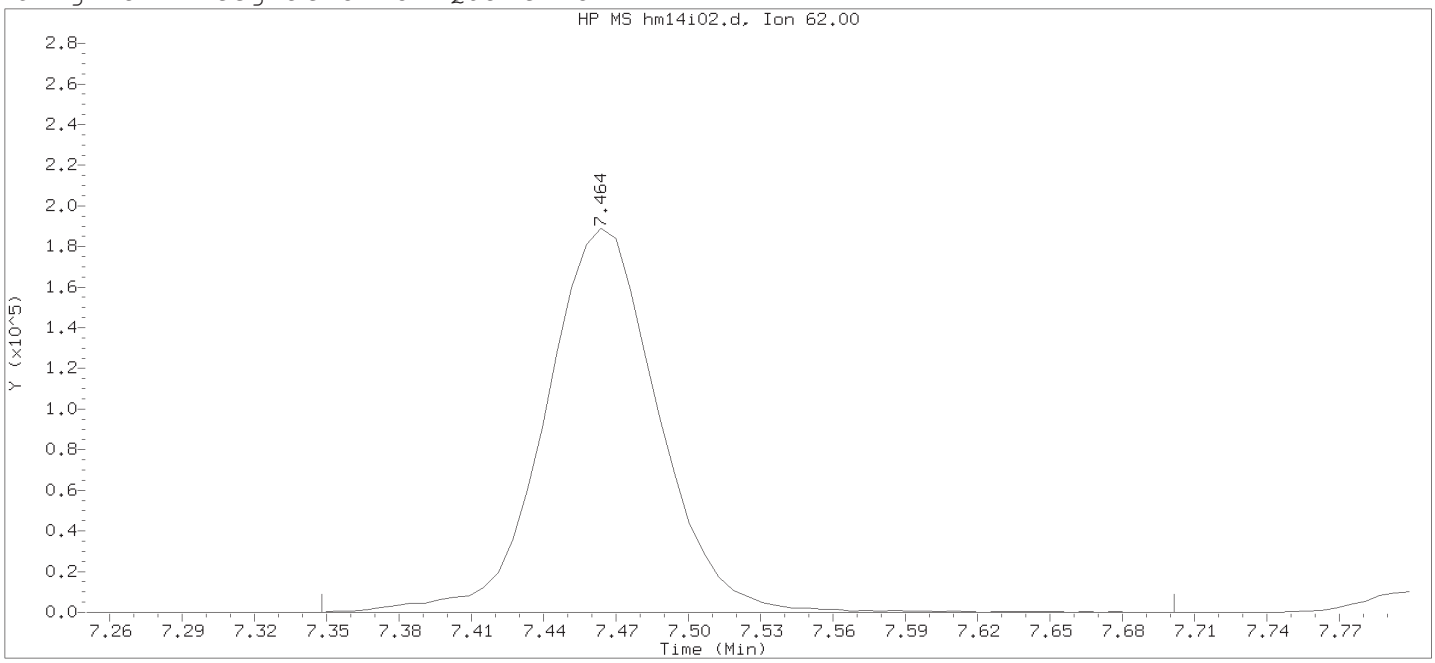
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

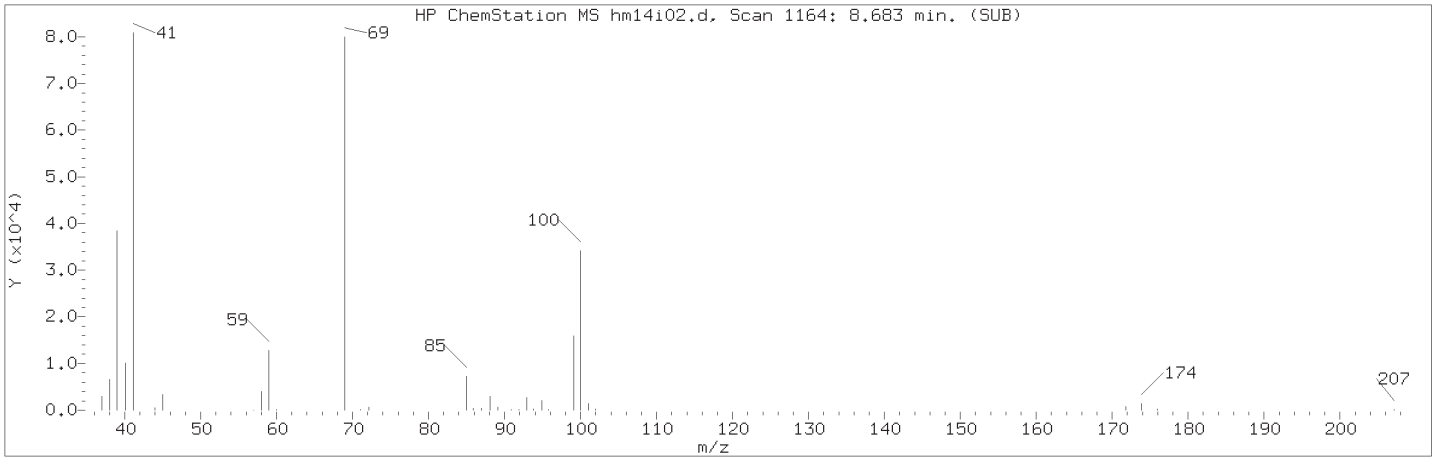
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

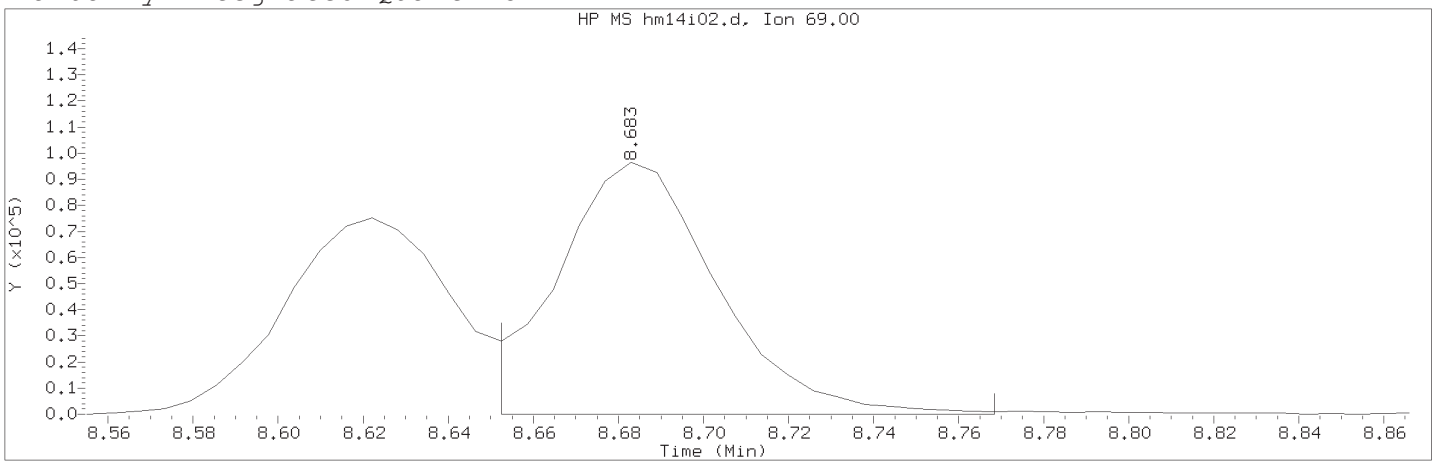
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 614292
On-column Amount (ng) : 9.7775
Integration start scan : 944 Integration stop scan: 1002
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature data: hm14i01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

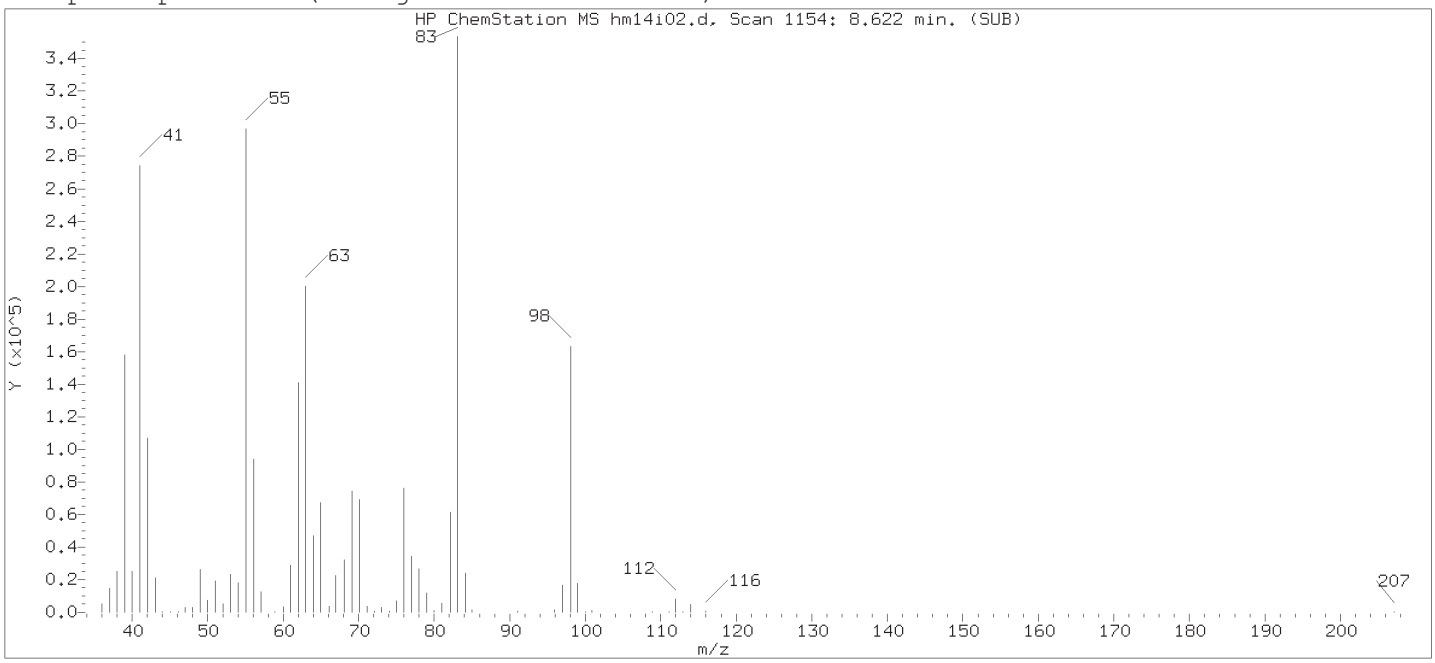
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 253966M
On-Column Amount (ng) : 10.0084
Integration start scan : 1158 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

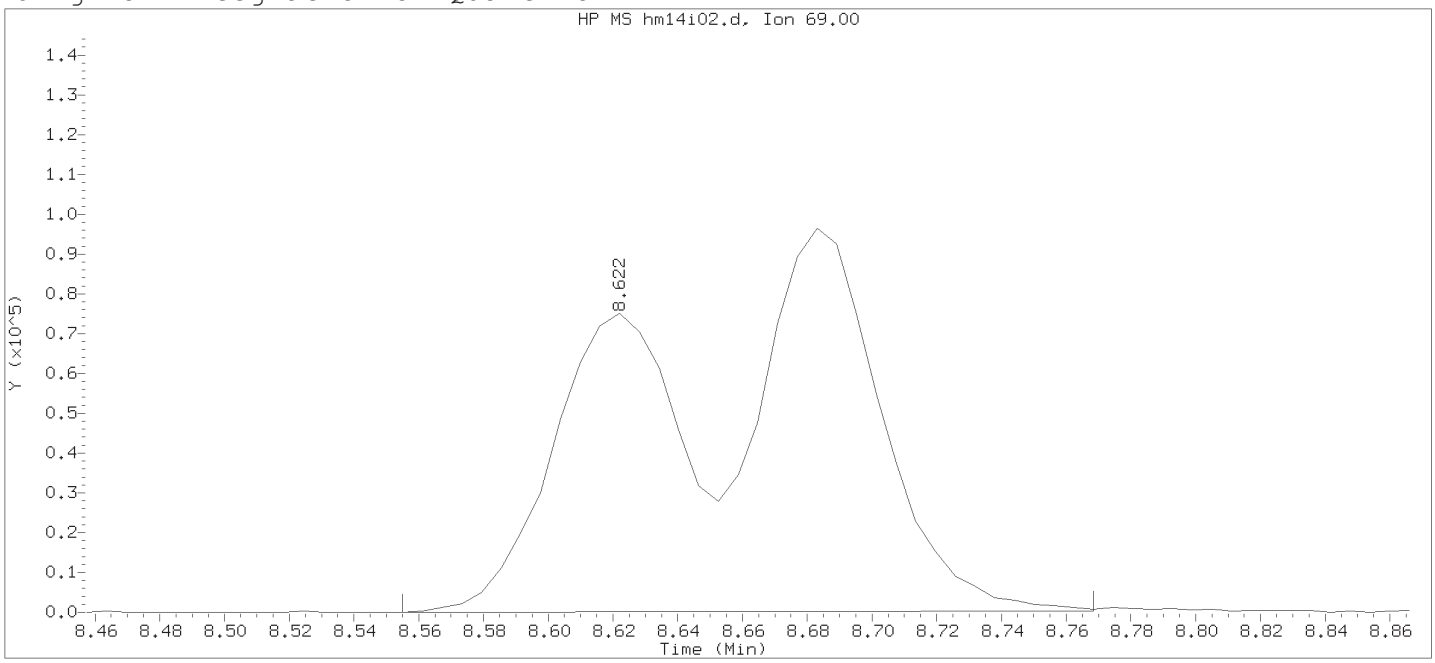
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

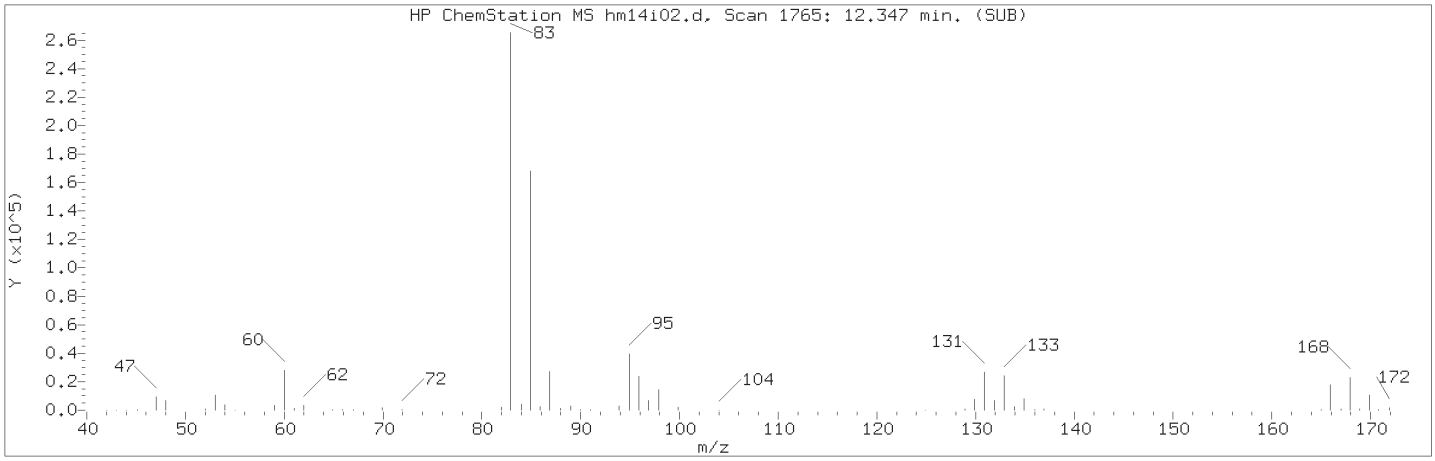
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

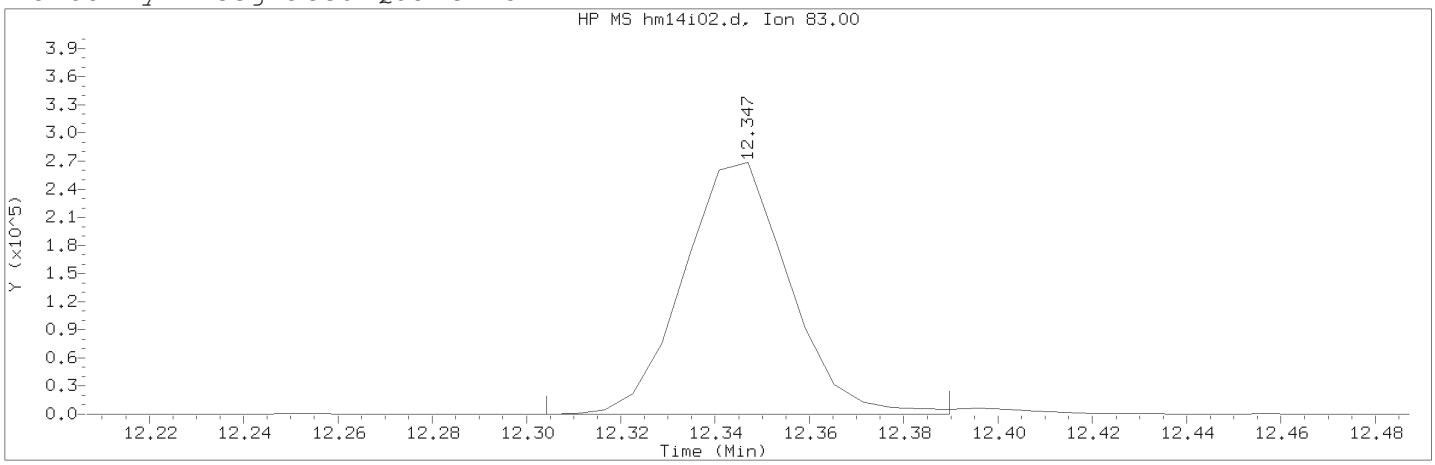
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 448439
On-column Amount (ng) : 12.8749
Integration start scan : 1142 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 342

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

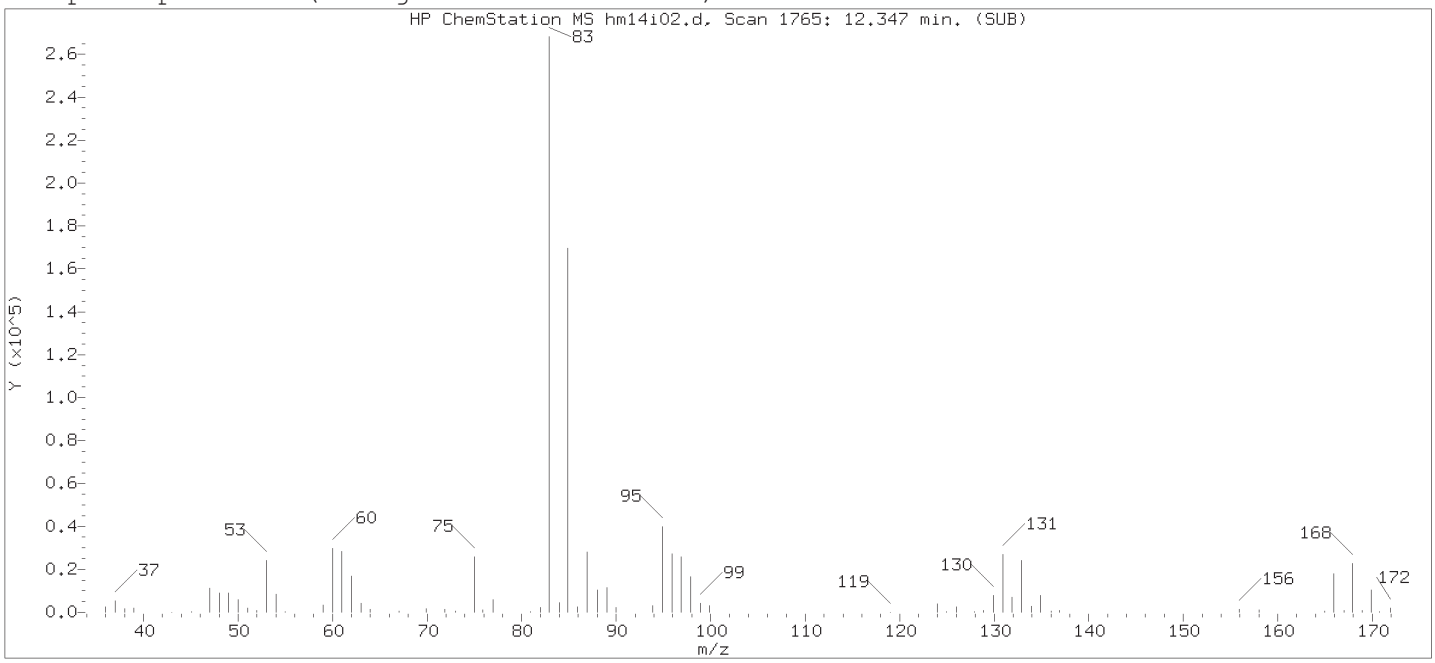
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 416614M
On-Column Amount (ng) : 9.1808
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

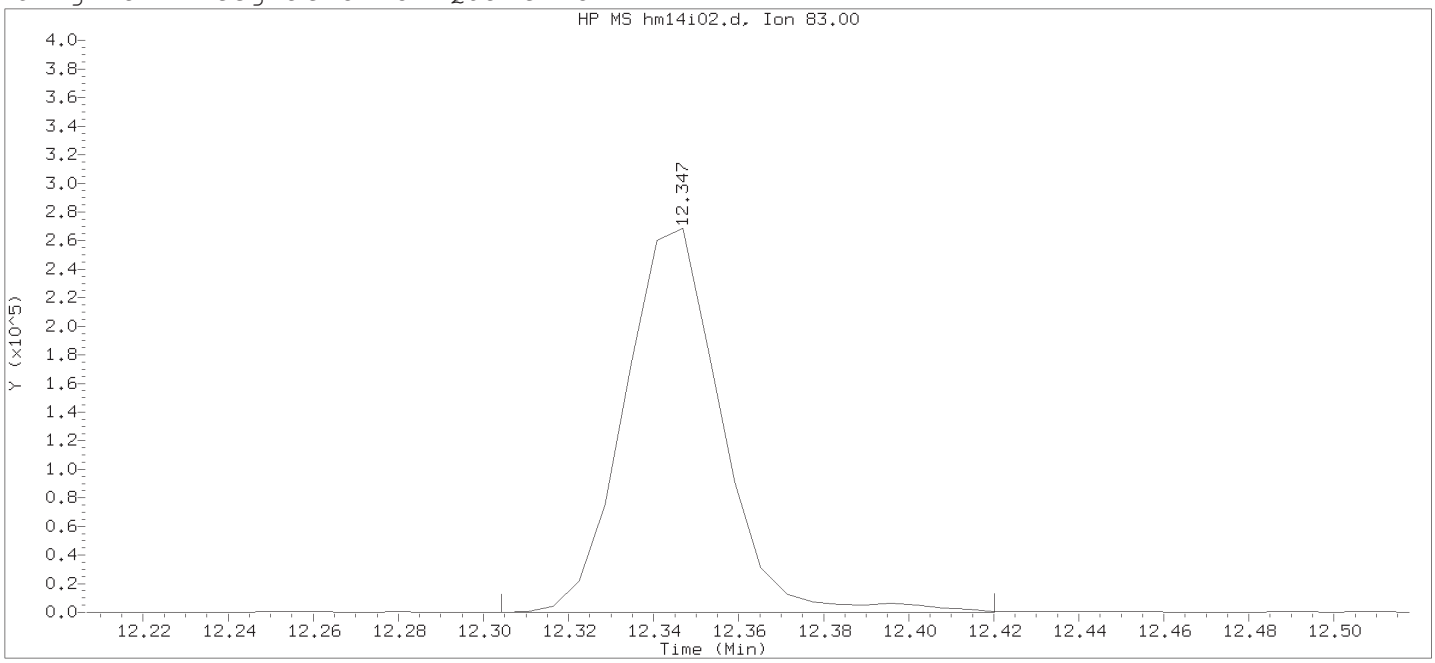
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

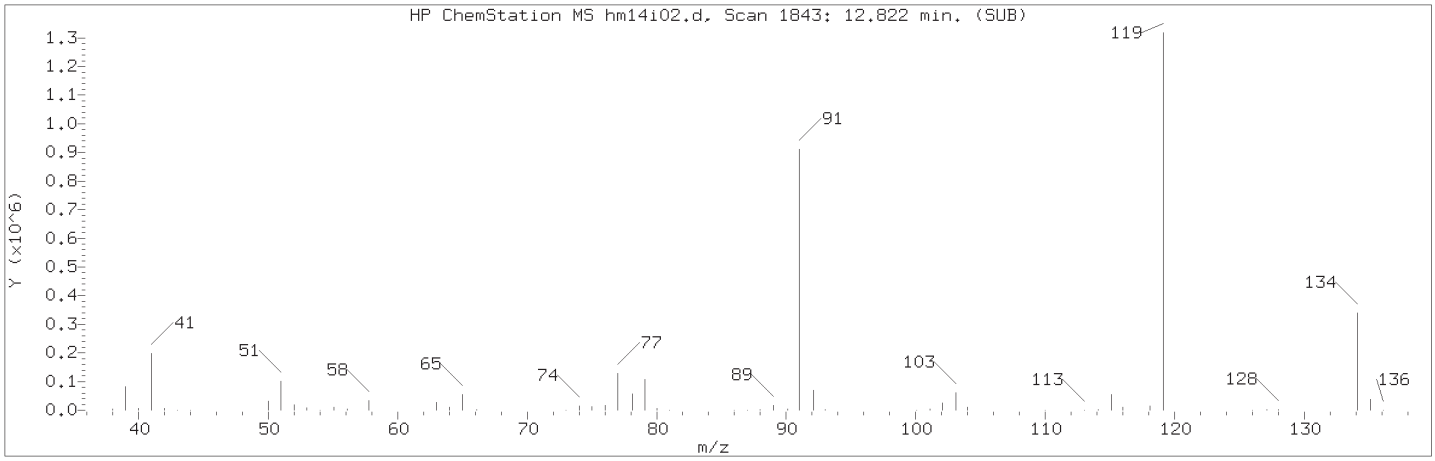
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

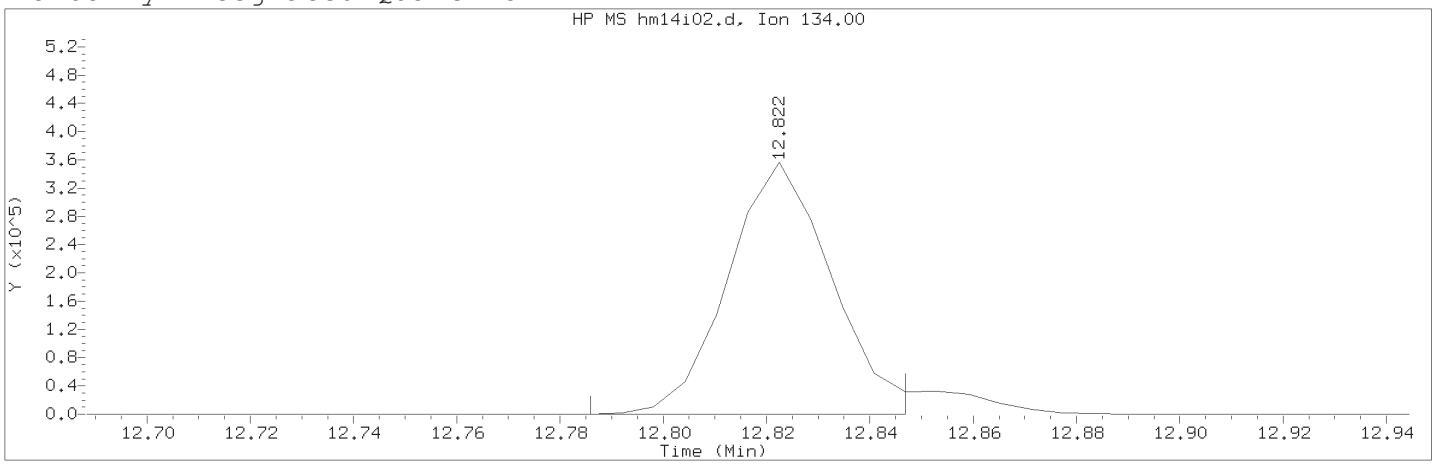
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 422693
On-column Amount (ng) : 9.9194
Integration start scan : 1757 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

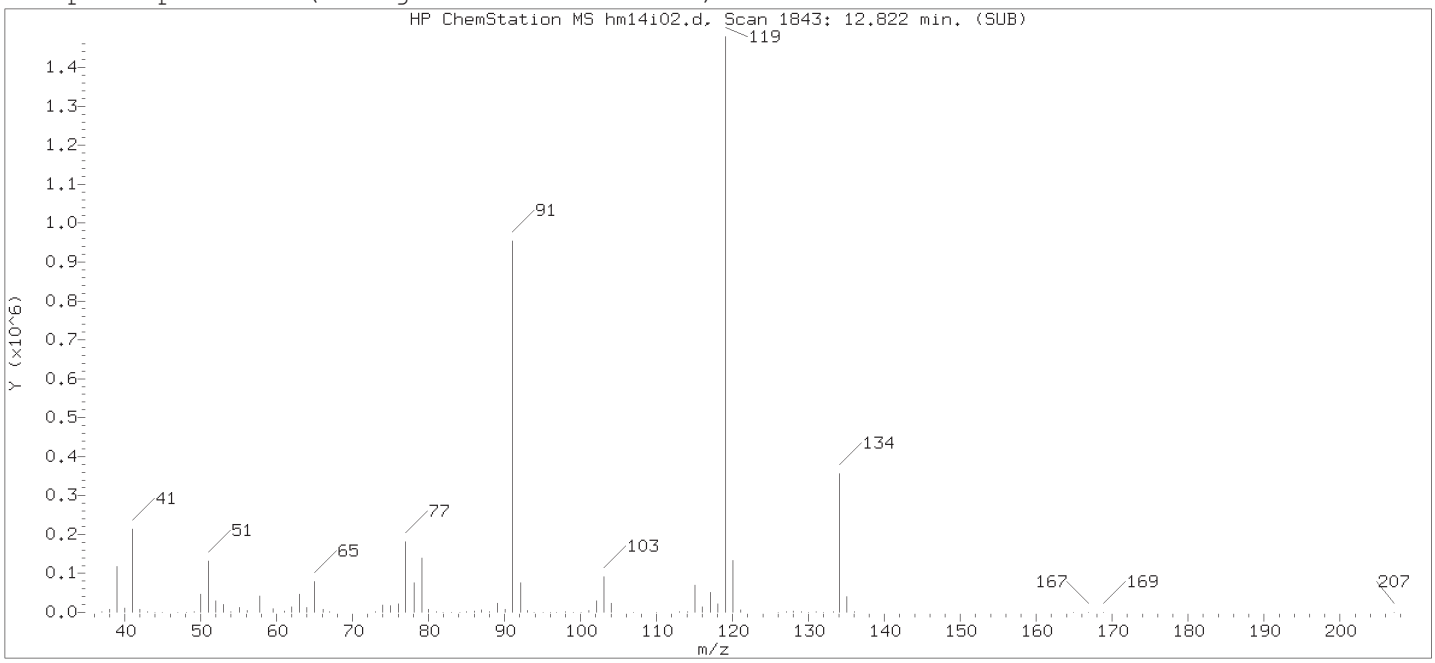
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 497778M
On-Column Amount (ng) : 9.1615
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

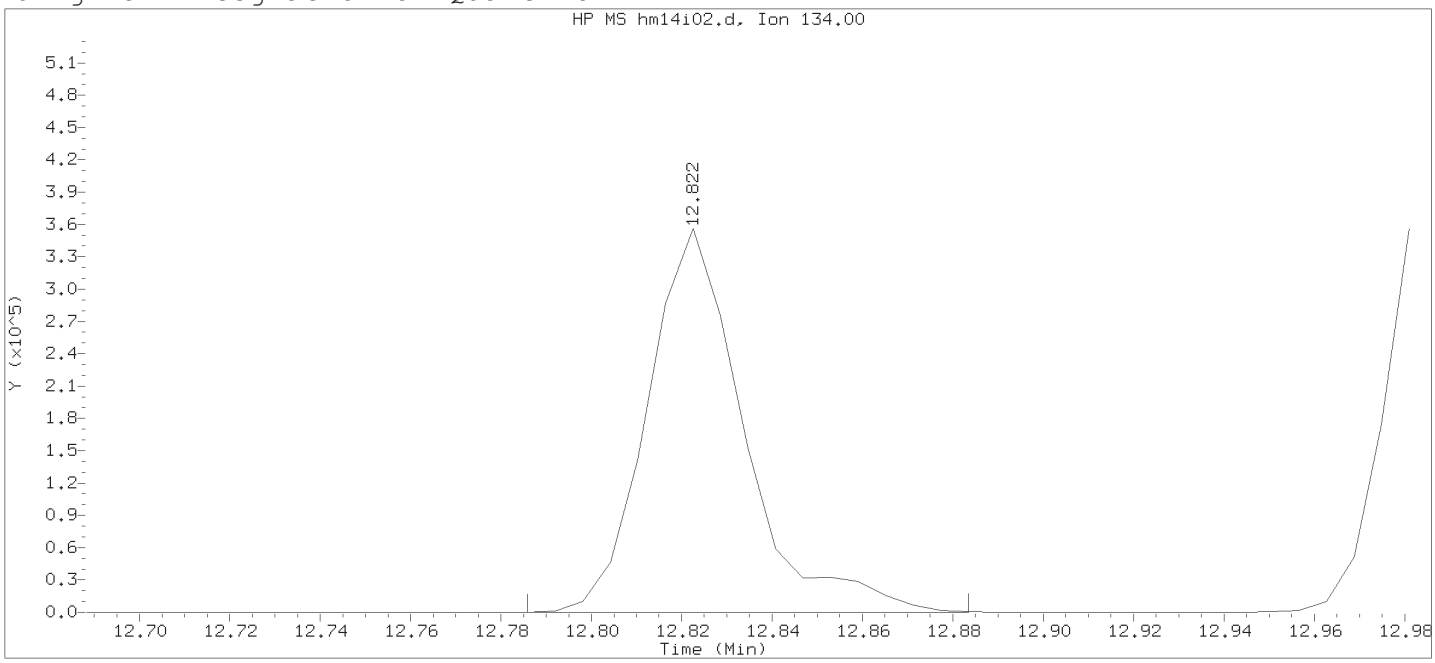
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



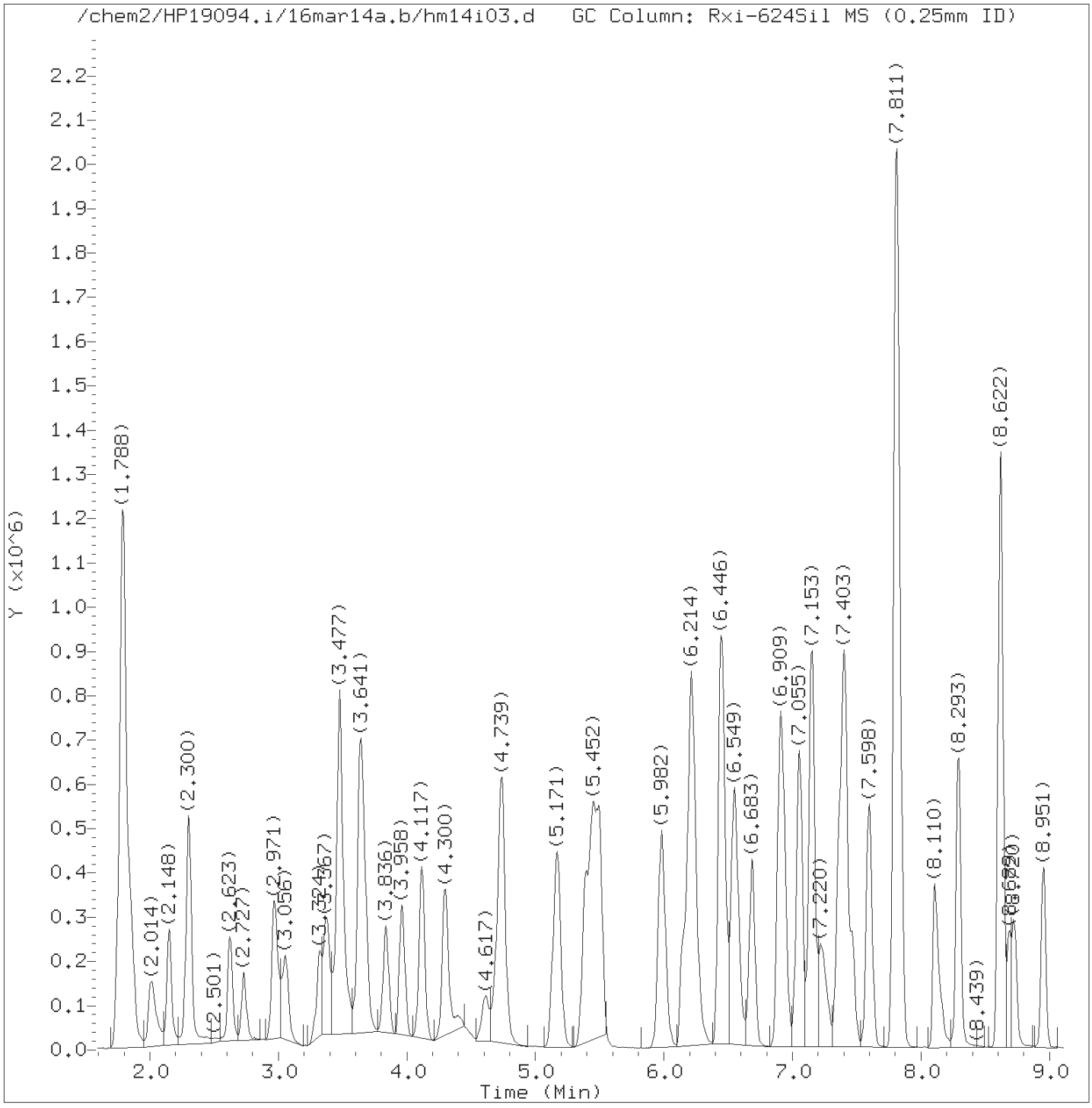
Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 528844
On-column Amount (ng) : 9.9216
Integration start scan : 1836 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

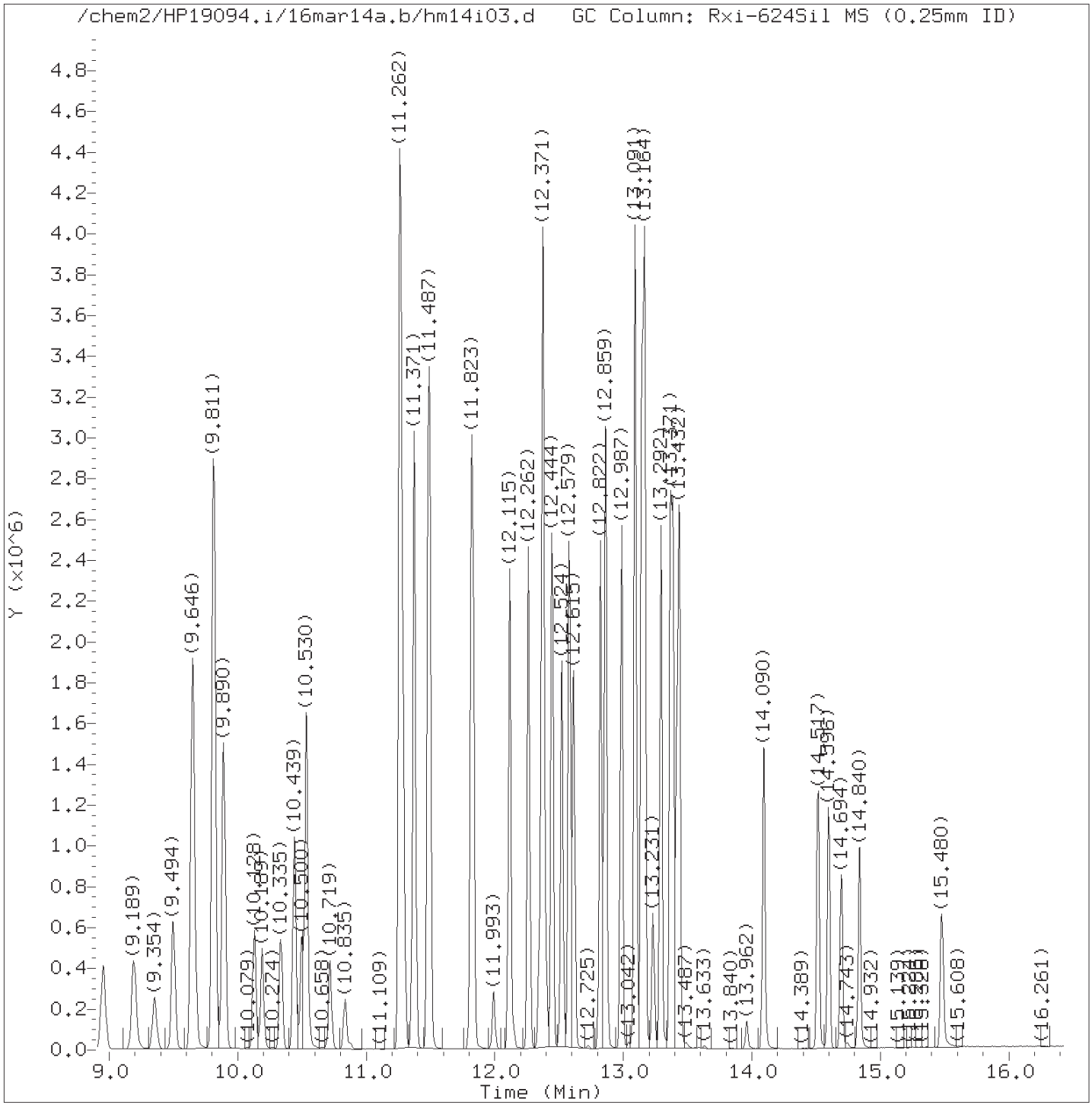
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	371892	4.607
2) Chloromethane	(2)	2.148	50	371363	4.690
5) Vinyl Chloride	(2)	2.288	62	334404	4.541
6) 1,3-Butadiene	(2)	2.306	39	237702	4.268
7) Bromomethane	(2)	2.623	94	230727	4.721
8) Chloroethane	(2)	2.727	64	195395	4.305
9) Dichlorofluoromethane	(2)	2.965	67	455840	4.425
10) Trichlorofluoromethane	(2)	3.056	101	439145	4.578
11) Ethyl ether	(2)	3.318	59	186575	4.714
12) Freon 123a	(2)	3.373	67	334257	4.555
13) Acrolein	(1)	3.477	56	1520359	232.115
15) 1,1-Dichloroethene	(2)	3.635	96	264048	4.797
14) Acetone	(1)	3.641	43	407008M	45.095
16) Freon 113	(2)	3.666	101	274365	4.794
17) Methyl Iodide	(2)	3.836	142	484906	4.759
18) Carbon Disulfide	(2)	3.958	76	788356	4.638
21) Methyl Acetate	(1)	4.086	43	103223	4.072
22) Allyl Chloride	(2)	4.117	41	471192	4.527
26)*t-Butyl Alcohol-d10	(1)	4.281	65	114879M	50.000
23) Methylene Chloride	(2)	4.300	84	280635	4.770
28) t-Butyl Alcohol	(1)	4.415	59	294800	95.440
29) Acrylonitrile	(1)	4.617	53	260911	24.092
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	610597	4.808
31) trans-1,2-Dichloroethene	(2)	4.739	96	284034	4.792
32) n-Hexane	(2)	5.171	57	471915	4.691
33) 1,1-Dichloroethane	(2)	5.385	63	575491	4.764
34) di-Isopropyl Ether	(2)	5.446	45	1012862	4.803
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	471646	4.756
37) Ethyl t-butyl ether	(2)	5.982	59	852742	4.795
40) 1,2-Dichloroethene (Total)	(2)		96	599149	9.592
38) 2-Butanone	(1)	6.153	43	724555	47.112
39) cis-1,2-Dichloroethene	(2)	6.208	96	315115	4.800
42) Propionitrile	(1)	6.220	54	373531	97.403
41) 2,2-Dichloropropane	(2)	6.232	77	453046	4.687
45) Methacrylonitrile	(1)	6.452	67	623555	47.489
47) Bromochloromethane	(2)	6.543	128	118335	4.737
48) Tetrahydrofuran	(1)	6.549	71	180949	46.508
49) Chloroform	(2)	6.683	83	525408	4.758

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	561160	10.172
50)$Dibromofluoromethane	(2)	6.903	111	570981	10.059
51) 1,1,1-Trichloroethane	(2)	6.933	97	450232	4.780
52) Cyclohexane	(2)	7.055	56	558514	4.538
52) Cyclohexane	(2)	7.055	84	435746	4.624
52) Cyclohexane	(2)	7.049	69	163572	4.646
55) 1,1-Dichloropropene	(2)	7.147	75	433185	4.792
54) Carbon Tetrachloride	(2)	7.159	117	409702	4.784
56) Isobutyl Alcohol	(1)	7.220	41	248139M	226.723
57)$1,2-Dichloroethane-d4	(2)	7.360	102	94691	10.363
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476757	10.220
57)$1,2-Dichloroethane-d4	(2)	7.360	104	58559	10.150
58) Benzene	(2)	7.409	78	1197894	4.761
59) 1,2-Dichloroethane	(2)	7.464	62	311010M	4.771
60) t-Amyl methyl ether	(2)	7.598	73	700009	4.817
63)*Fluorobenzene	(2)	7.805	96	2341151	10.000
62) n-Heptane	(2)	7.829	43	530860	4.668
65) n-Butanol	(1)	8.110	56	416627	472.954
67) Trichloroethene	(2)	8.293	95	312040	4.758
70) 1,2-Dichloropropane	(2)	8.616	63	313225	4.781
69) Methylcyclohexane	(2)	8.622	83	490226	4.564
71) Methyl Methacrylate	(1)	8.683	69	131470A	4.792
72) 1,4-Dioxane	(1)	8.713	88	46287	266.703
73) Dibromomethane	(2)	8.726	93	129894	4.814
74) Bromodichloromethane	(2)	8.951	83	367976	4.884
76) 2-Nitropropane	(1)	9.189	41	388746	44.205
80) cis-1,3-Dichloropropene	(2)	9.494	75	451220	4.873
81) 4-Methyl-2-Pentanone	(1)	9.646	43	1792678	47.363
82)$Toluene-d8	(3)	9.811	98	2307236	9.900
82)$Toluene-d8	(3)	9.811	100	1489785	9.876
83) Toluene	(3)	9.890	92	738213	4.702
84) trans-1,3-Dichloropropene	(3)	10.128	75	351450	4.777
85) 1,3-Dichloropropene (total)	(3)		75	802670	9.650
86) Ethyl Methacrylate	(3)	10.189	69	275188	4.862
88) 1,1,2-Trichloroethane	(3)	10.335	97	180447	4.746
89) Tetrachloroethene	(3)	10.445	166	350153	4.723
90) 1,3-Dichloropropane	(3)	10.500	76	330475	4.834
91) 2-Hexanone	(1)	10.530	43	1250901	46.743

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	239573	4.915
95) 1,2-Dibromoethane	(3)	10.835	107	173349	4.840
97)*Chlorobenzene-d5	(3)	11.262	117	1635921	10.000
98) Chlorobenzene	(3)	11.286	112	807623	4.726
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	279929	4.776
100) Ethylbenzene	(3)	11.371	91	1451953	4.725
101) m+p-Xylene	(3)	11.487	106	1099307	9.380
105) Xylene (Total)	(3)		106	1638133	14.117
104) o-Xylene	(3)	11.816	106	538826	4.738
106) Styrene	(3)	11.829	104	870981	4.787
107) Bromoform	(3)	11.993	173	131706	4.872
108) Isopropylbenzene	(3)	12.115	105	1420386	4.712
111)$4-Bromofluorobenzene	(3)	12.262	95	755184	10.053
111)$4-Bromofluorobenzene	(3)	12.262	174	631325	10.080
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	214047M	4.677
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	572735	49.139
114) Bromobenzene	(4)	12.377	156	317033	4.651
116) 1,2,3-Trichloropropane	(4)	12.396	110	55006M	4.788
117) n-Propylbenzene	(4)	12.444	91	1715901	4.654
119) 2-Chlorotoluene	(4)	12.524	126	331681	4.666
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	1197091	4.658
122) 4-Chlorotoluene	(4)	12.615	126	338136	4.668
125) tert-Butylbenzene	(4)	12.822	134	256144M	4.675
126) Pentachloroethane	(4)	12.853	167	194984	4.715
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1205906	4.692
128) sec-Butylbenzene	(4)	12.987	105	1546890	4.648
131) 1,3-Dichlorobenzene	(4)	13.091	146	618407	4.638
132) p-Isopropyltoluene	(4)	13.097	119	1332677	4.731
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	731141	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	619072	4.570
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	484232	4.544
136) Benzyl Chloride	(4)	13.231	126	90666	5.001
138) n-Butylbenzene	(4)	13.383	92	652357	4.734
139) 1,2-Dichlorobenzene	(4)	13.420	146	549041	4.637
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27916	4.643
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	379175	4.476
146) Hexachlorobutadiene	(4)	14.596	225	204443	4.619
147) Naphthalene	(4)	14.694	128	628588	4.316

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	311205	4.600

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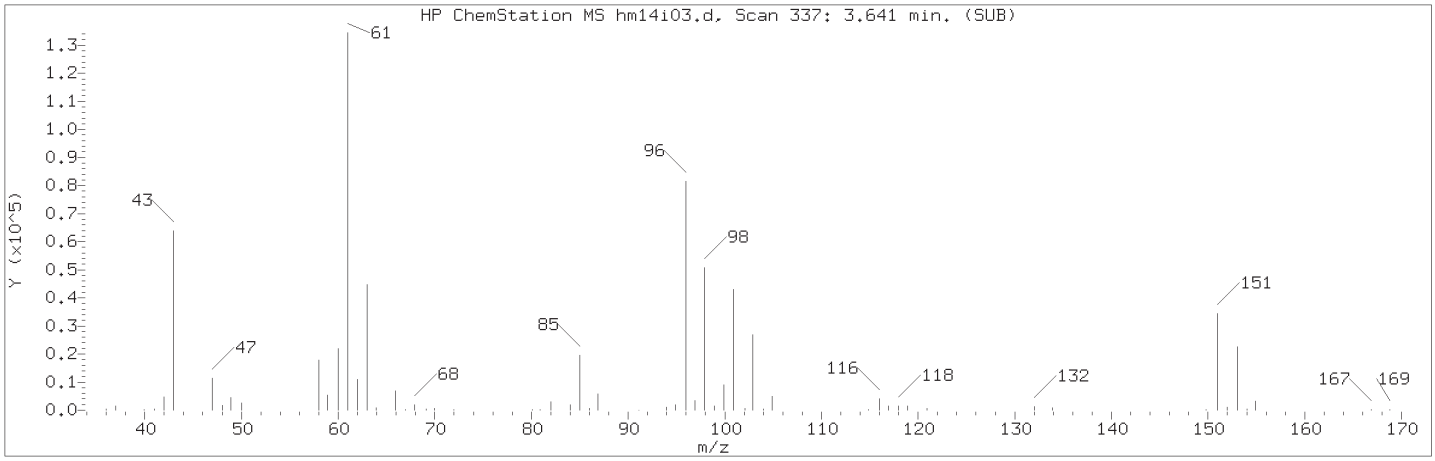
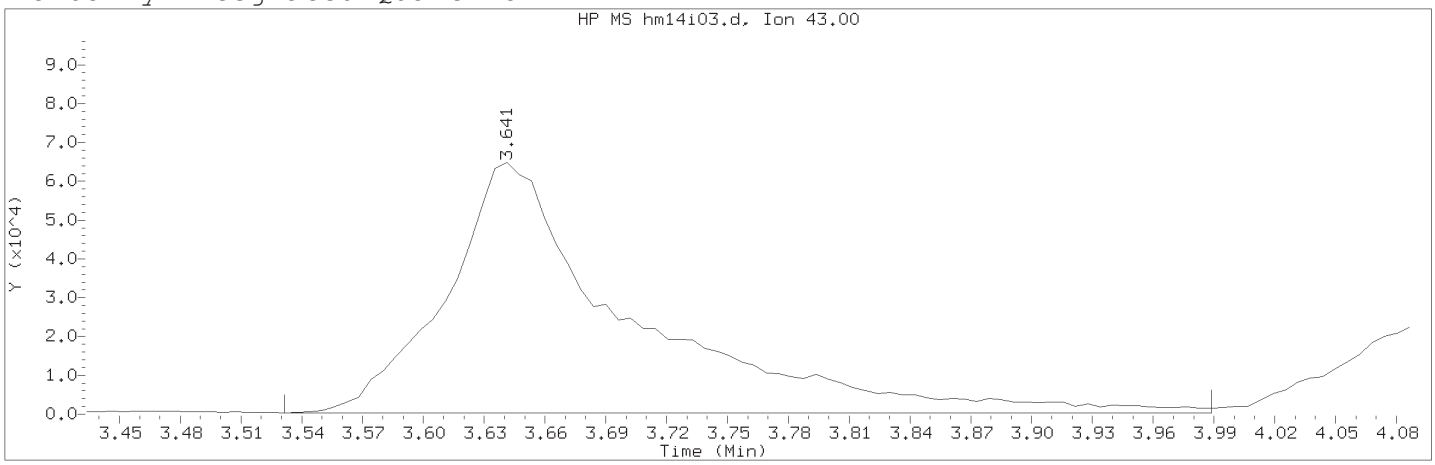
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

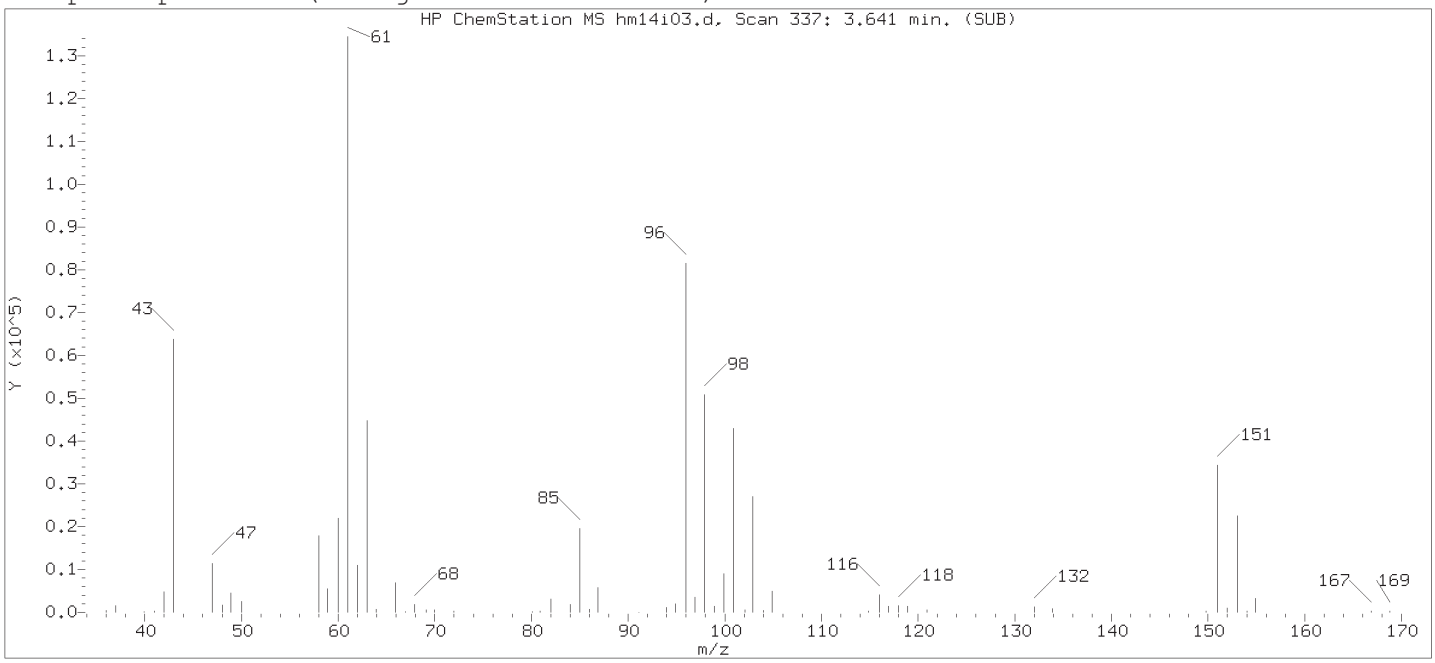
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 407008M
On-Column Amount (ng) : 45.0947
Integration start scan : 318 Integration stop scan: 393
Y at integration start : 297 Y at integration end: 297

Reason for manual integration: improper integration

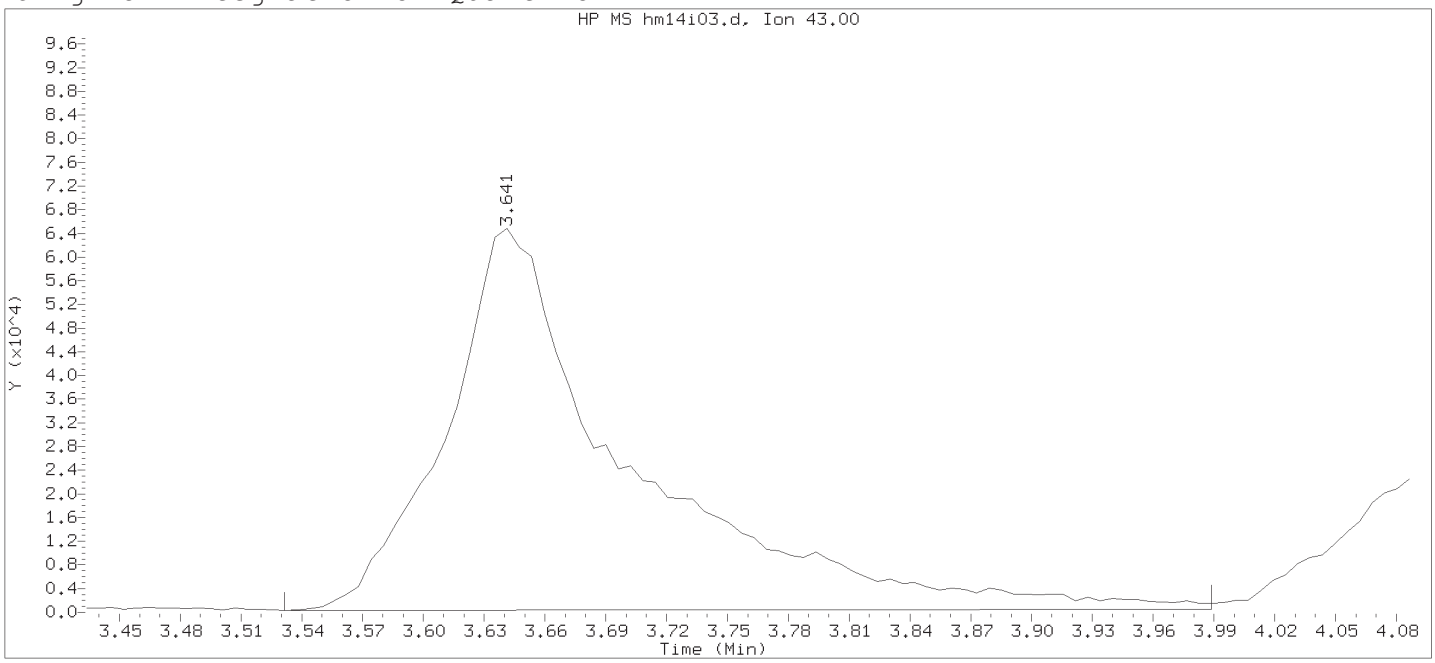
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

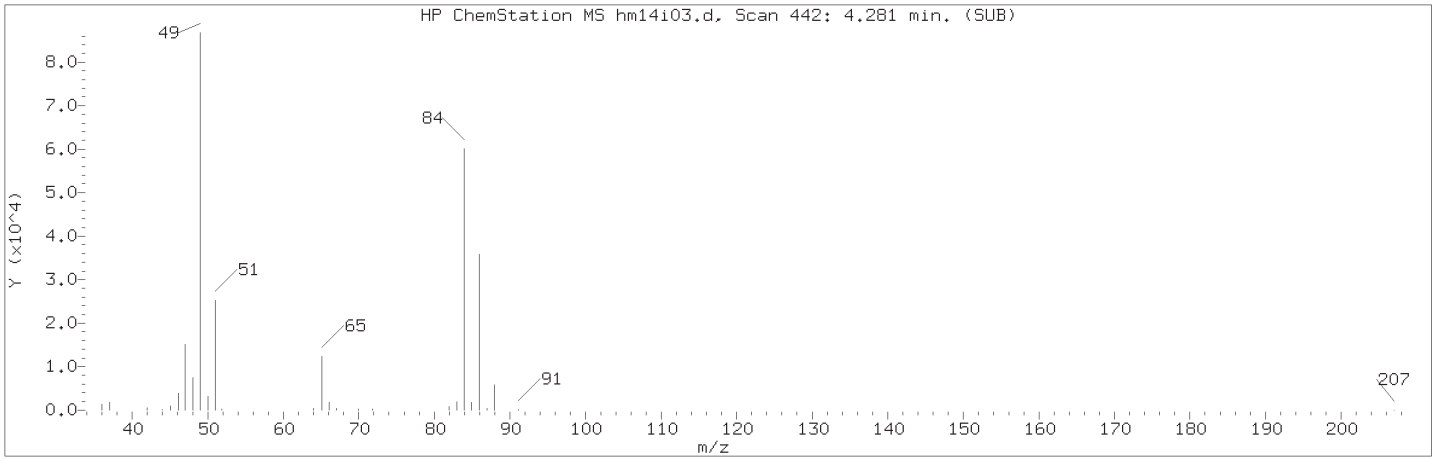
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

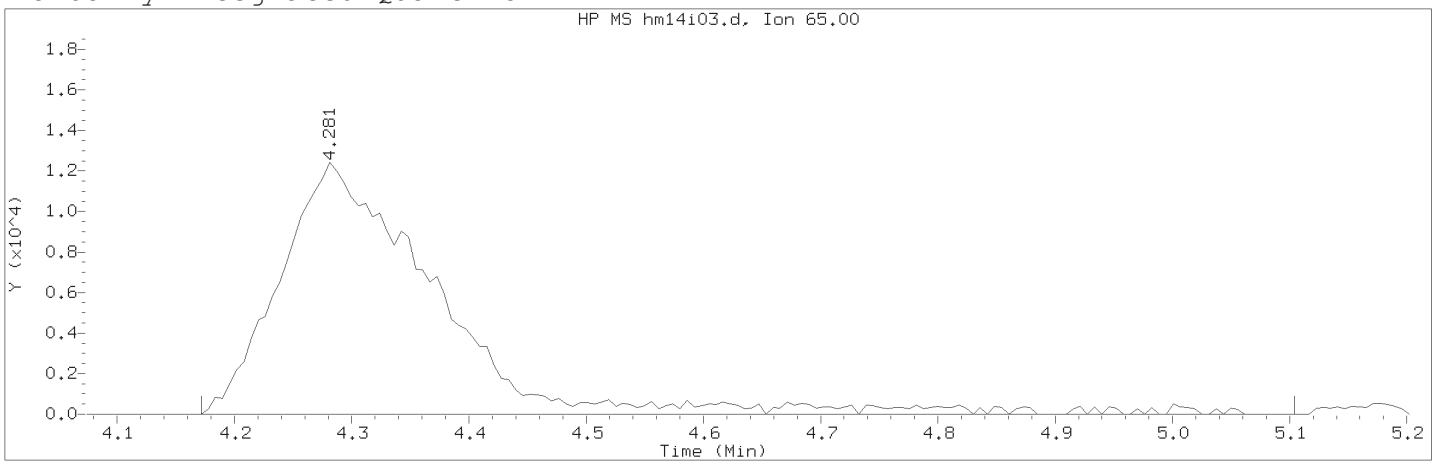
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area : 403107
On-column Amount (ng) : 49.9647
Integration start scan : 318 Integration stop scan: 393
Y at integration start : 309 Y at integration end: 553

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature data: HM:kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

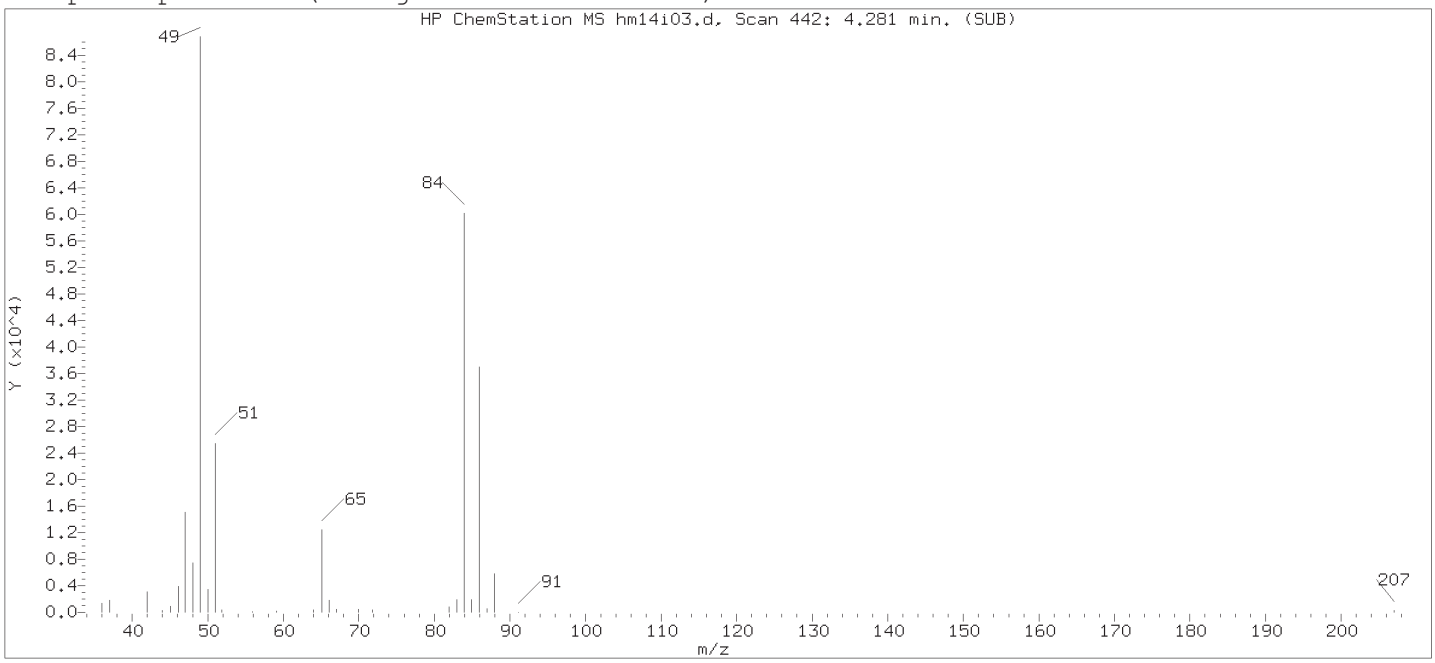
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 114879M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

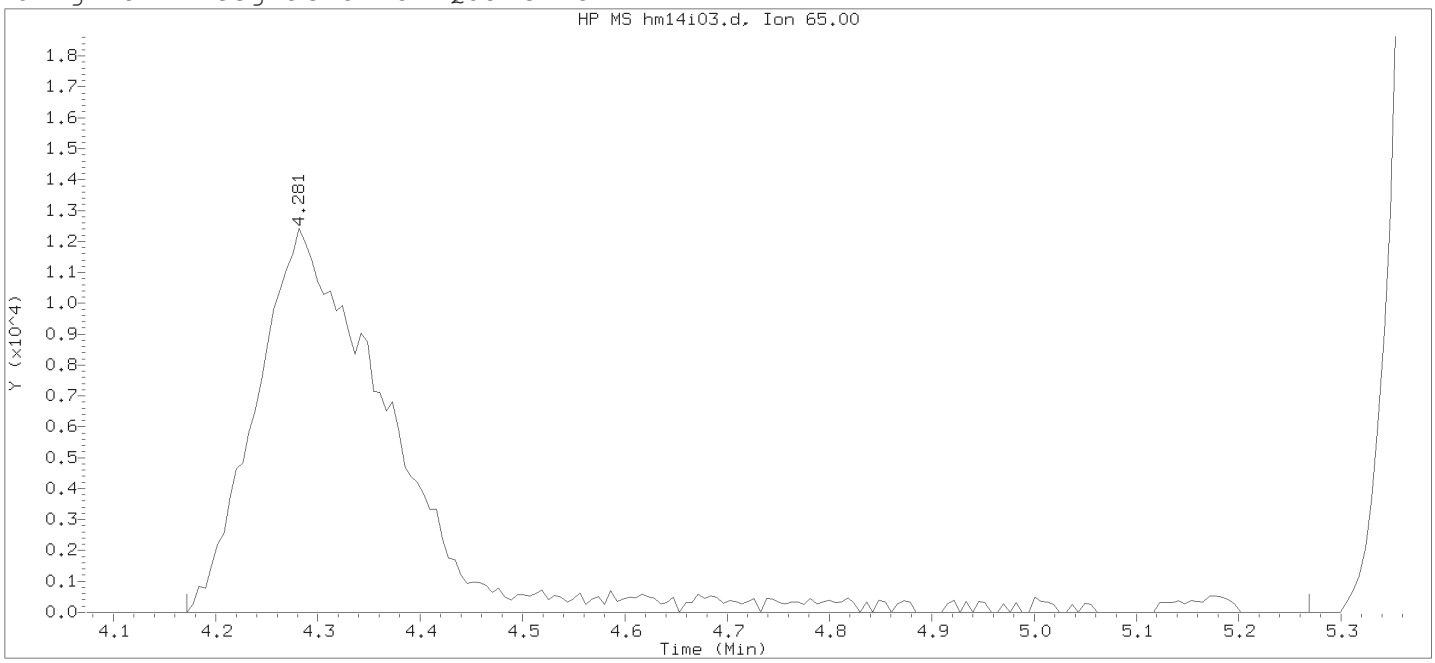
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

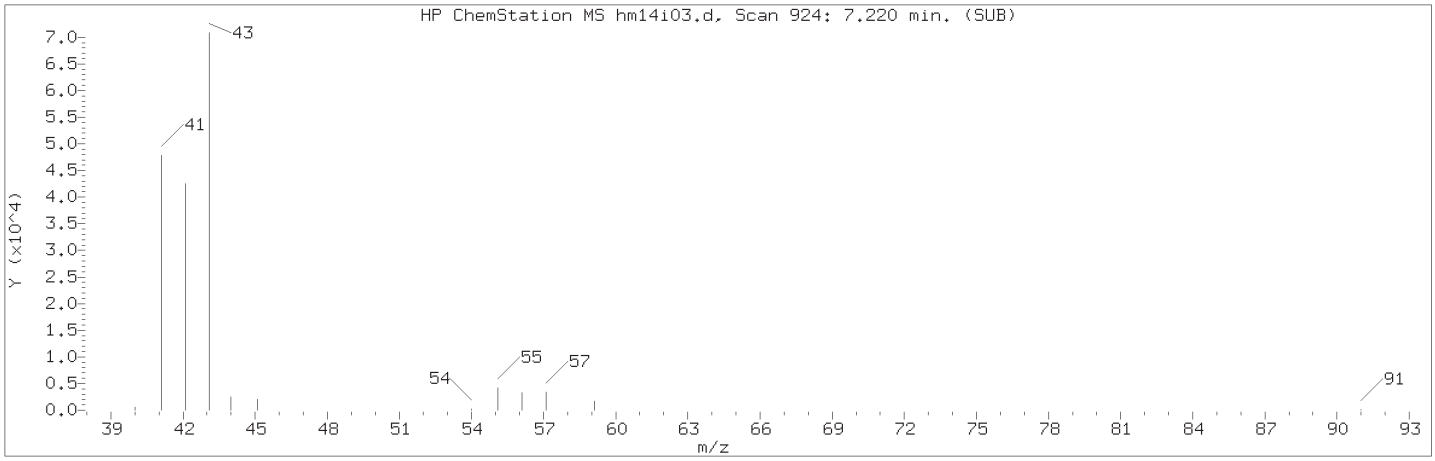
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

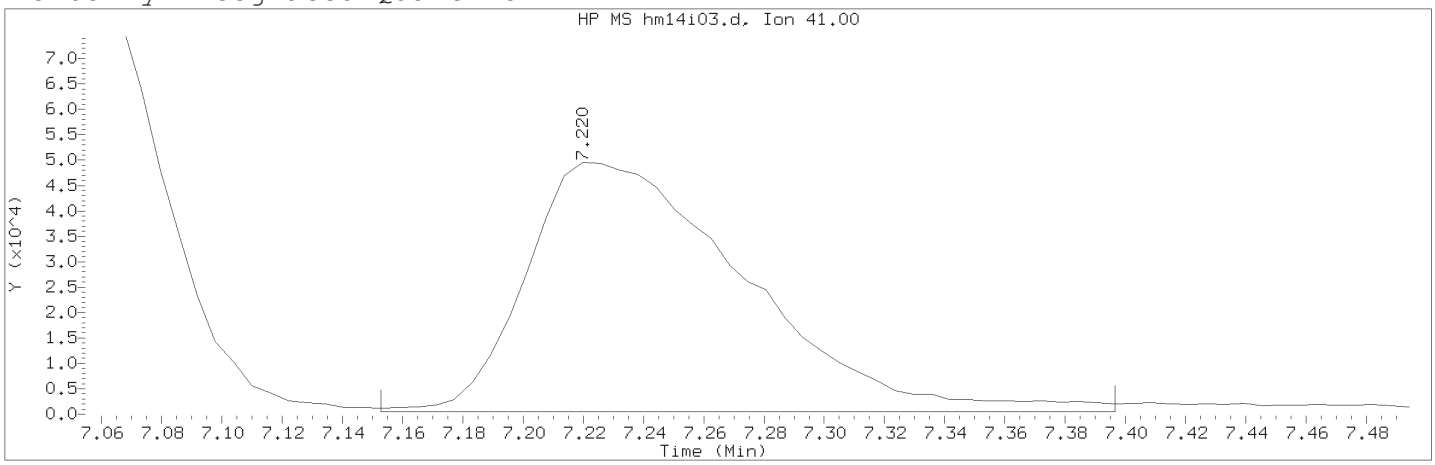
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 116646
On-column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

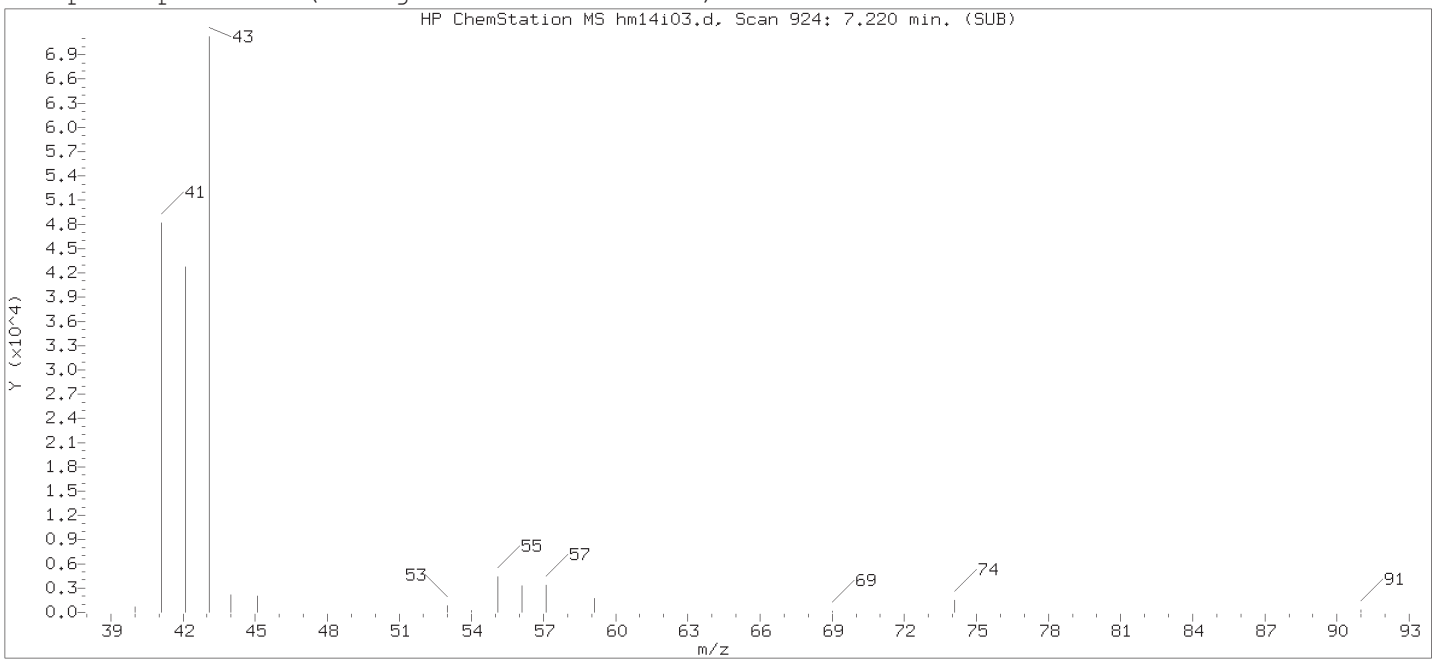
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area (flag) : 248139M
On-Column Amount (ng) : 226.7235
Integration start scan : 912 Integration stop scan: 952
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

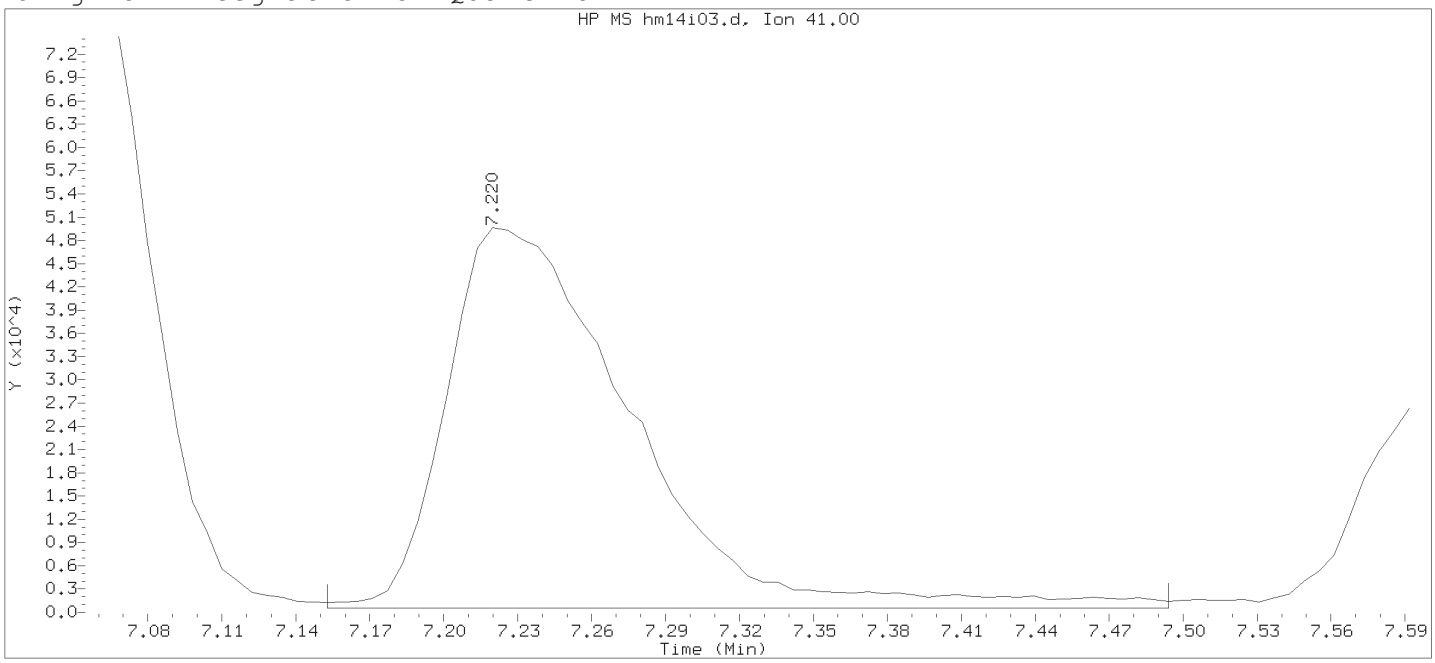
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

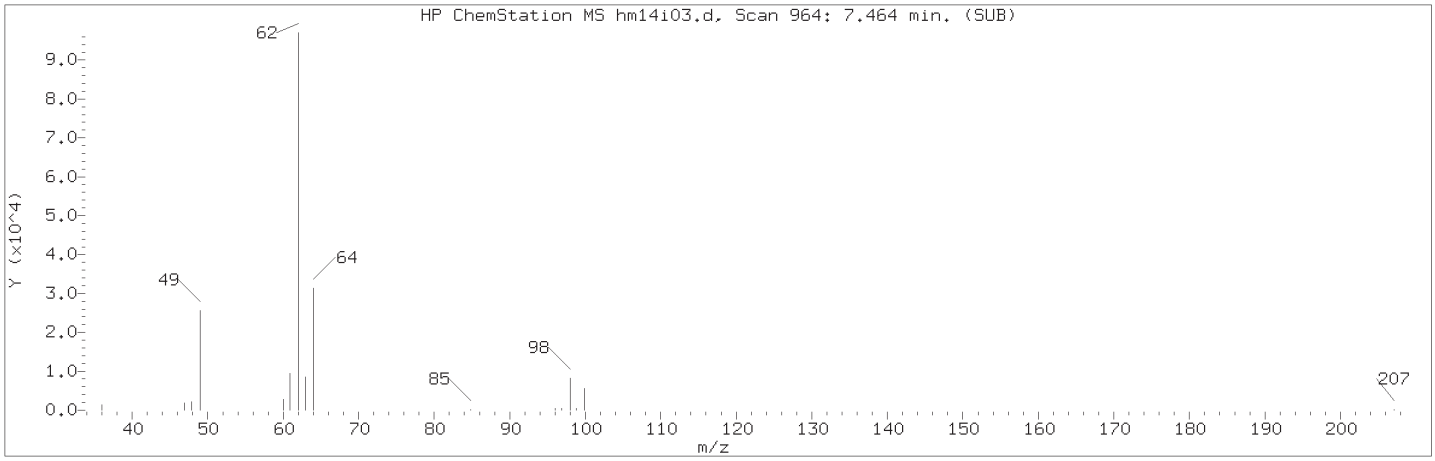
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

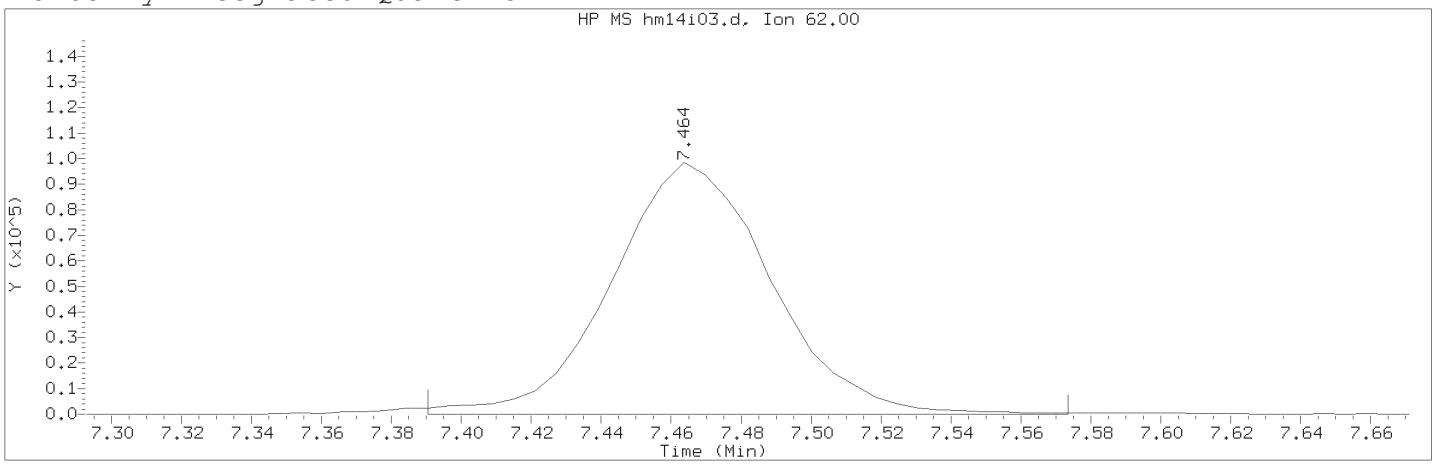
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area : 255850
On-column Amount (ng) : 253.4913
Integration start scan : 912 Integration stop scan: 968
Y at integration start : 518 Y at integration end: 518

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

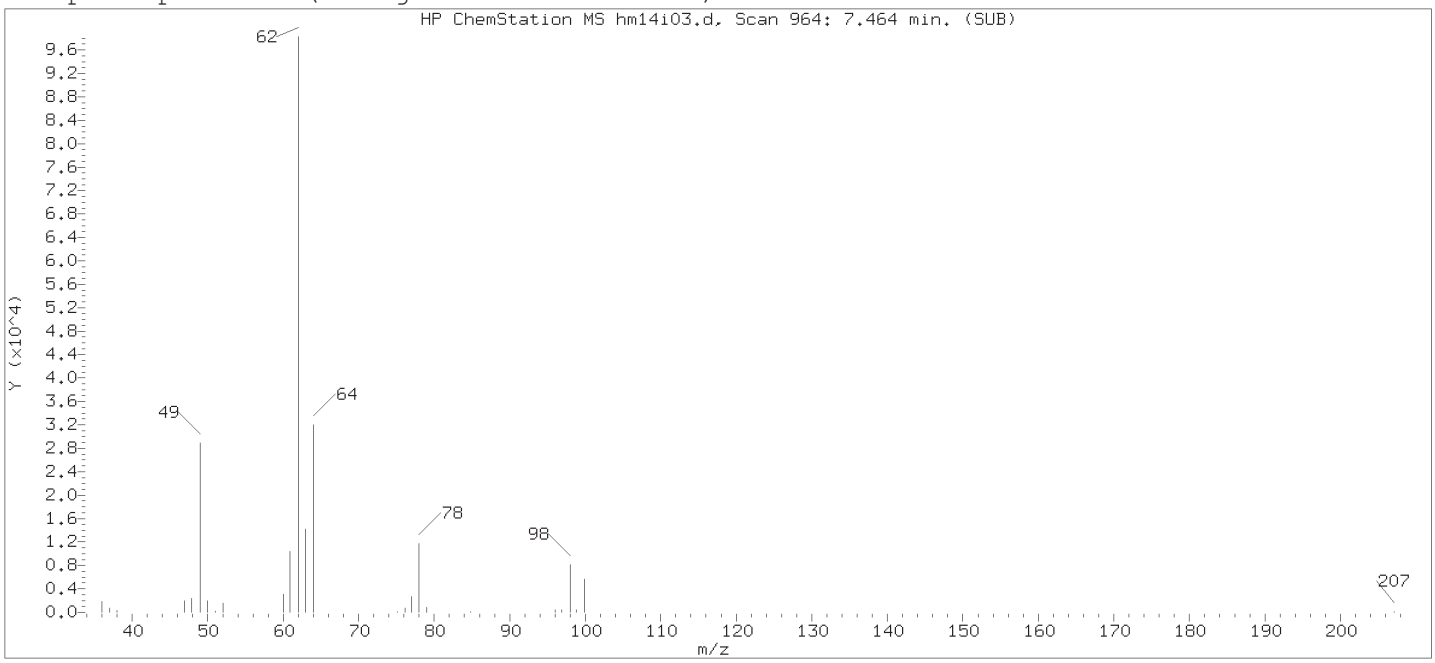
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 311010M
On-Column Amount (ng) : 4.7707
Integration start scan : 951 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

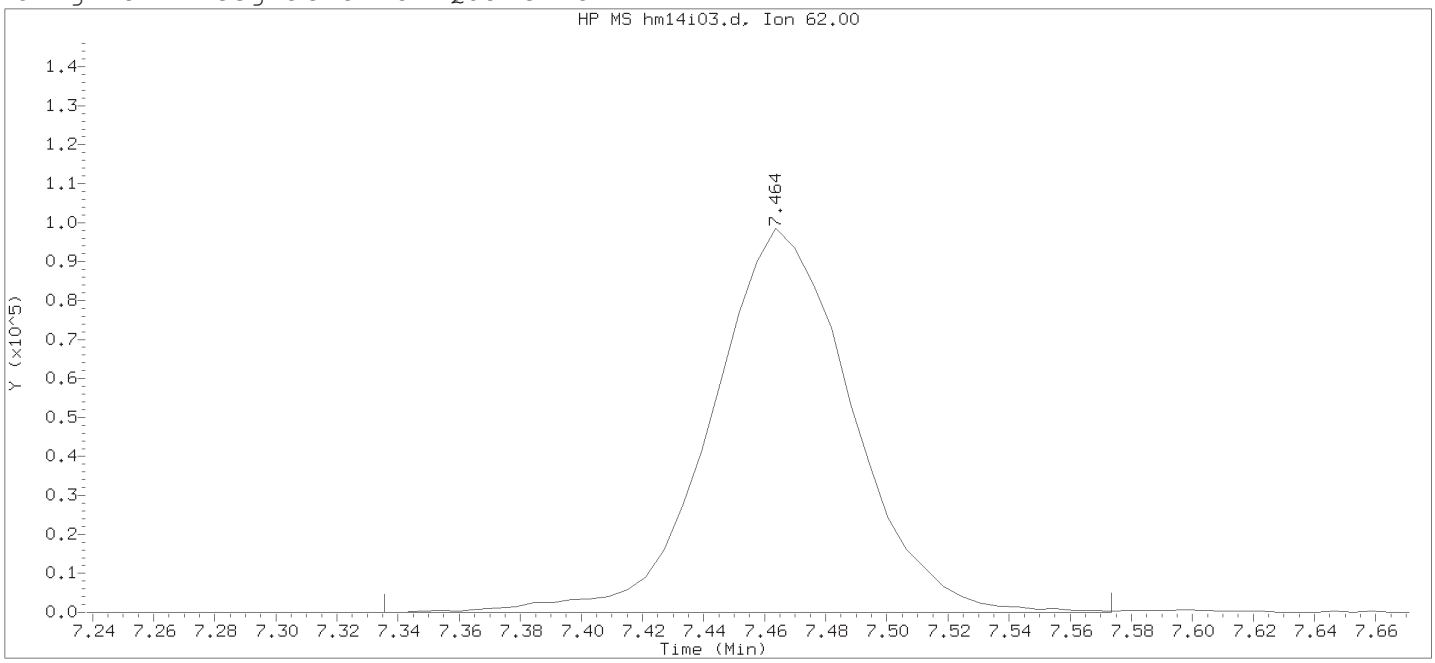
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

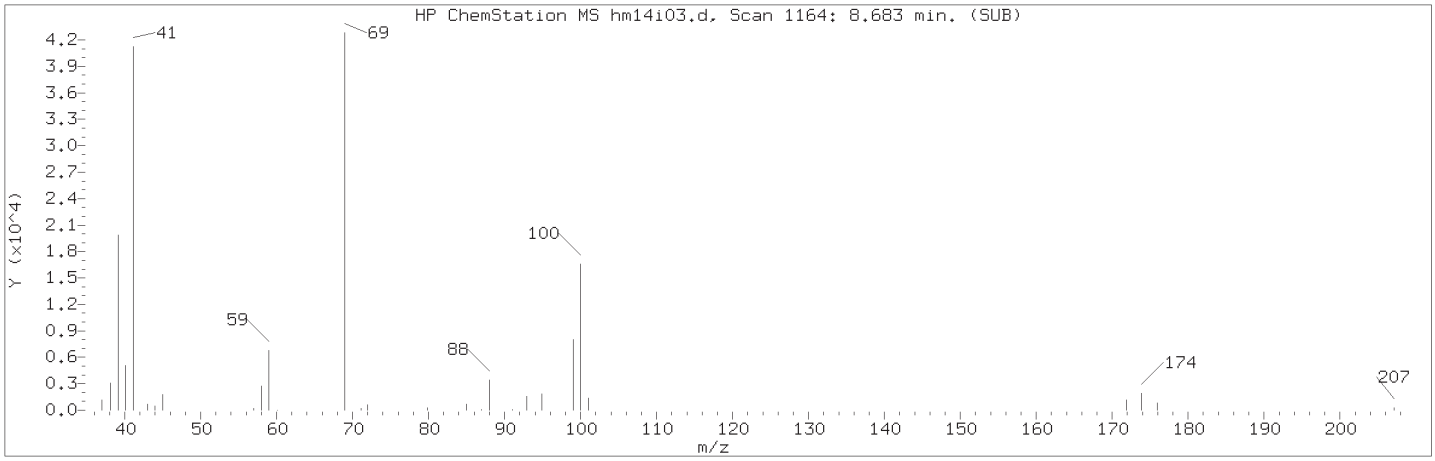
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

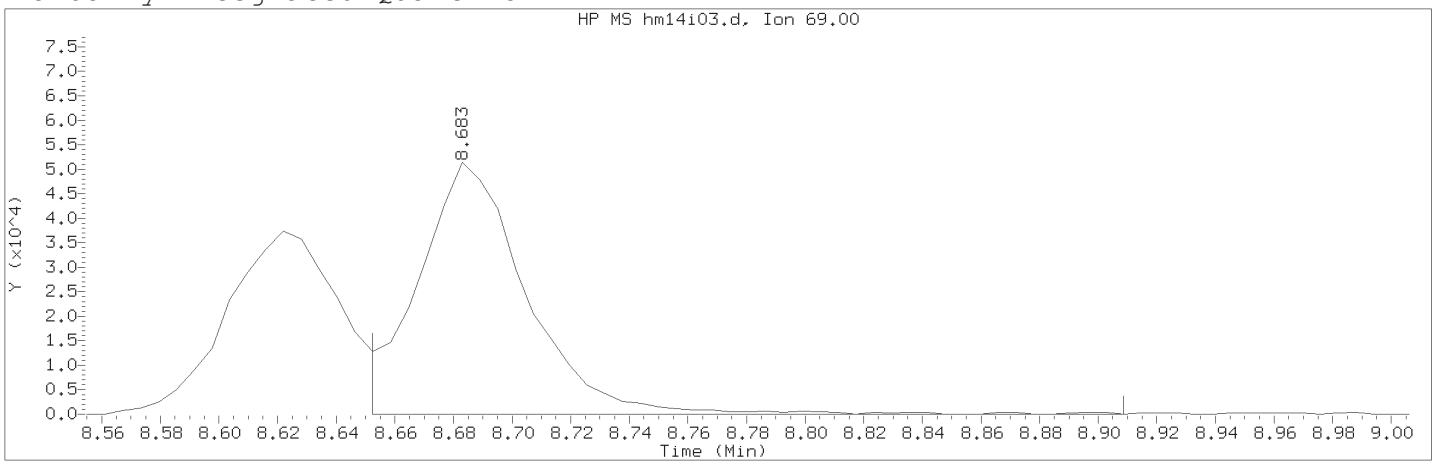
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 313394
On-column Amount (ng) : 4.8910
Integration start scan : 942 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

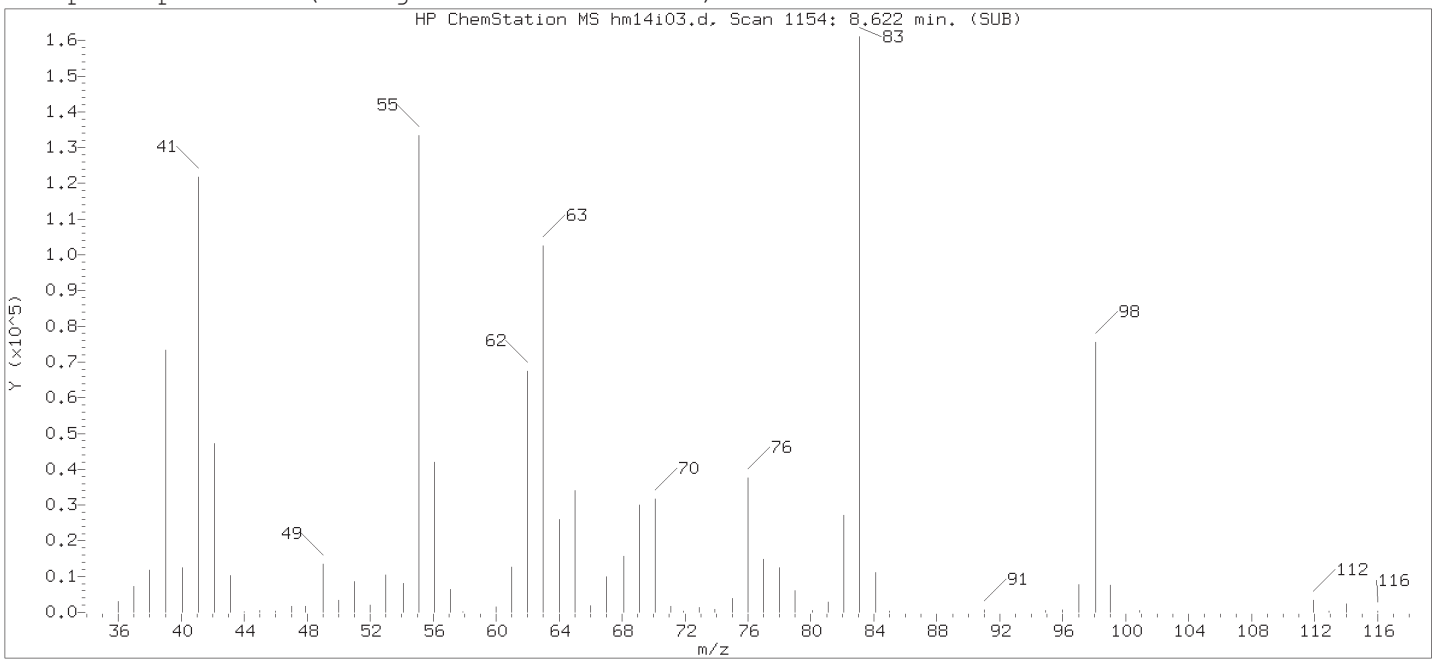
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 131470A
On-Column Amount (ng) : 4.7922
Integration start scan : 1158 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

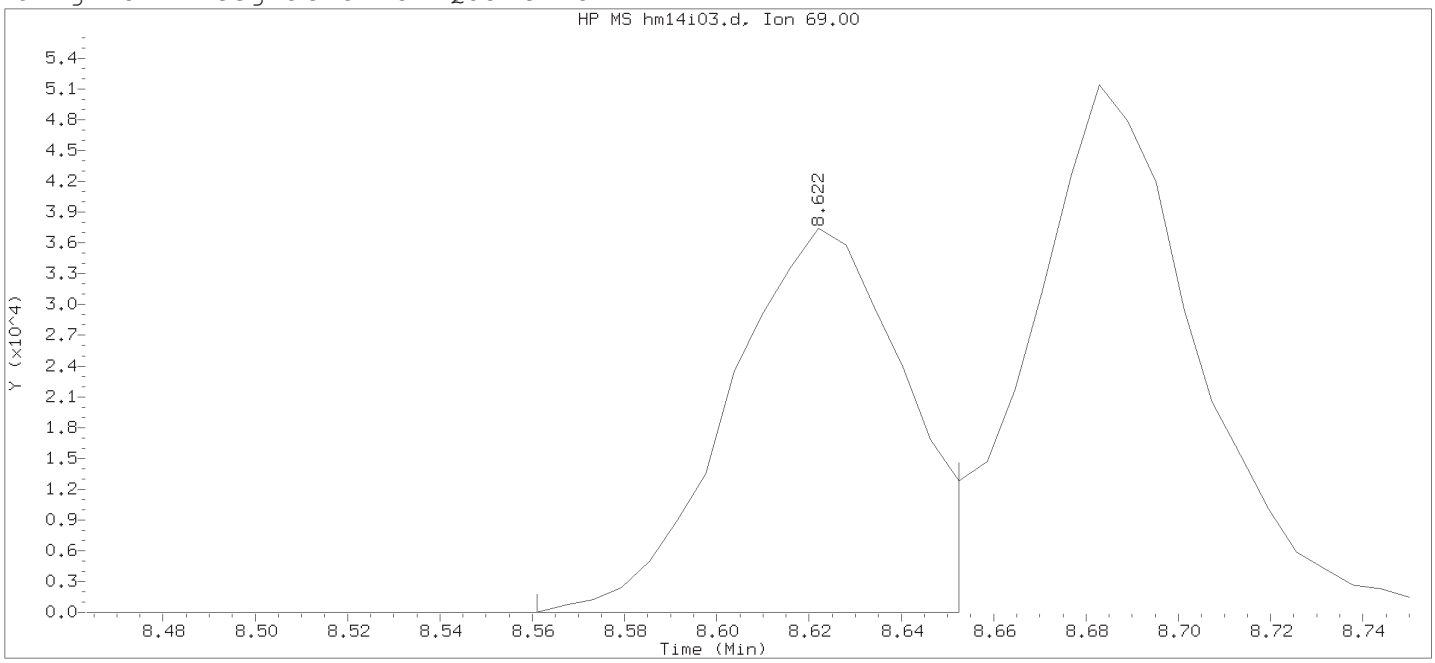
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

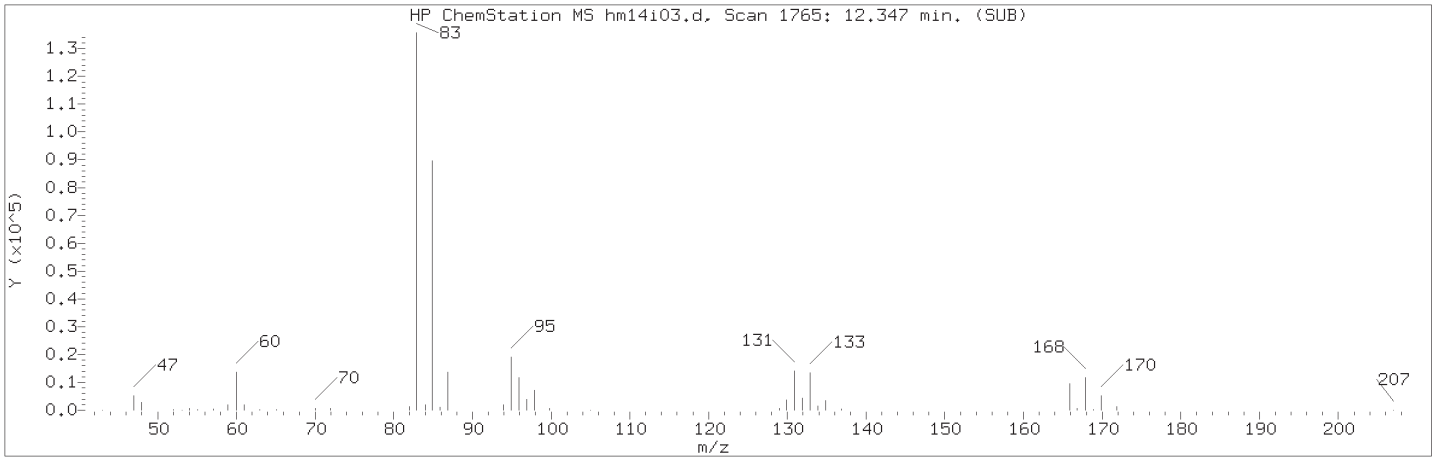
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

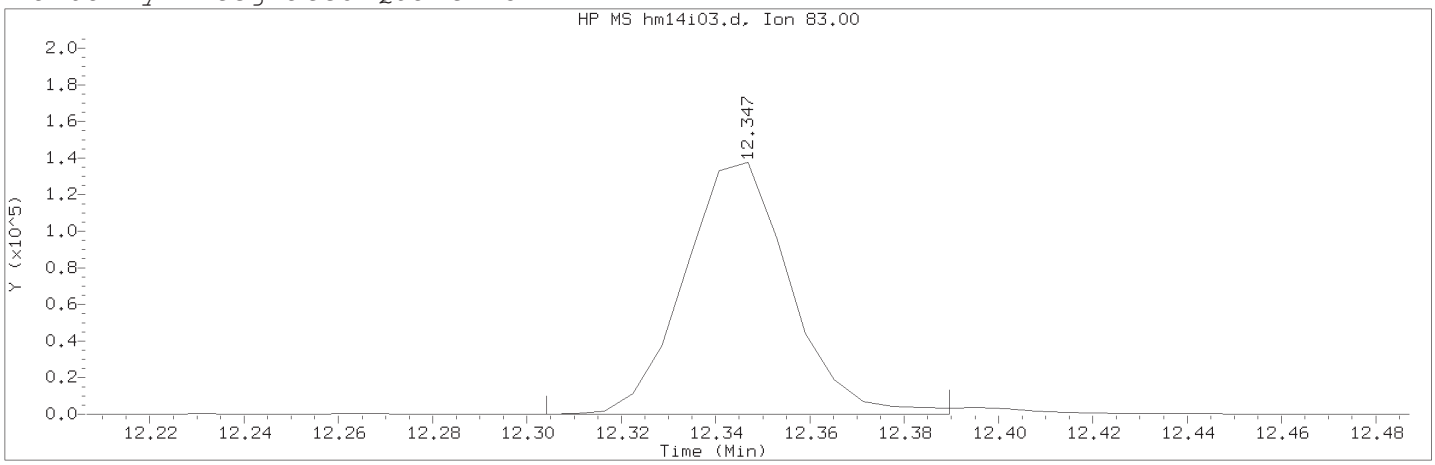
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 97947
On-column Amount (ng) : 3.1461
Integration start scan : 1143 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

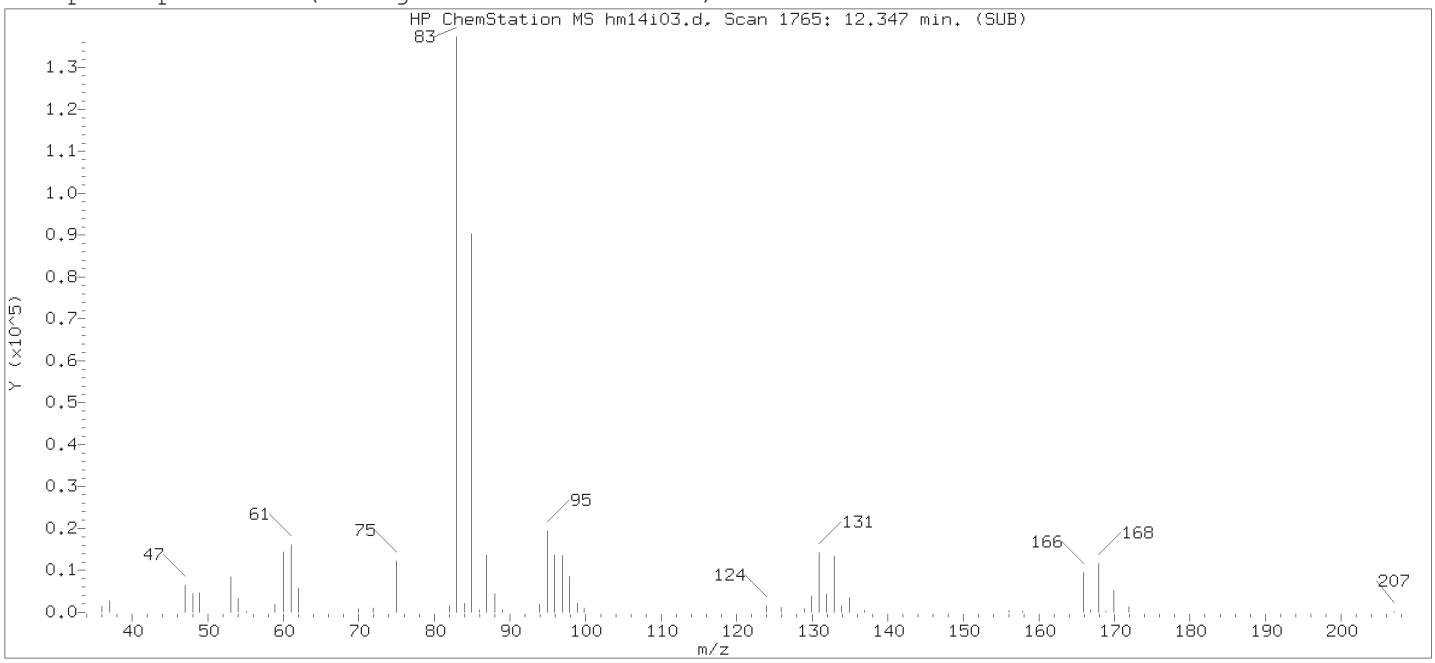
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 214047M
On-Column Amount (ng) : 4.6774
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

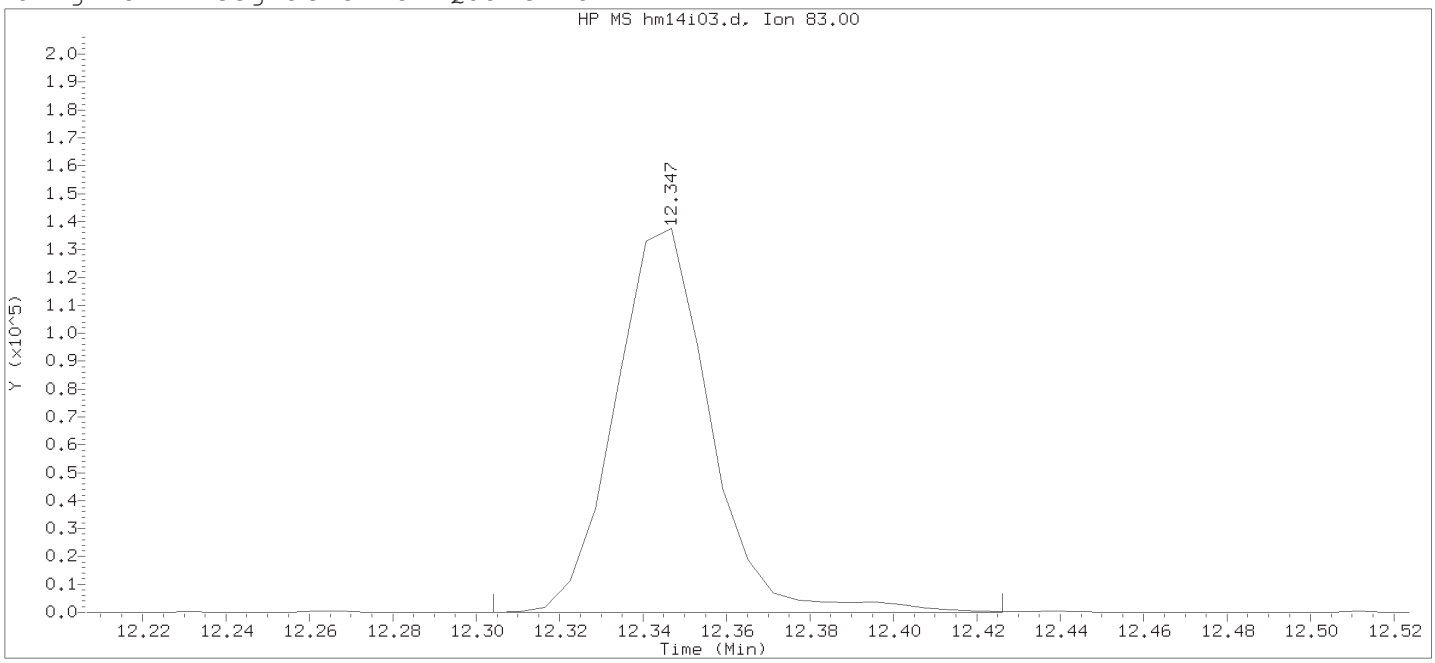
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

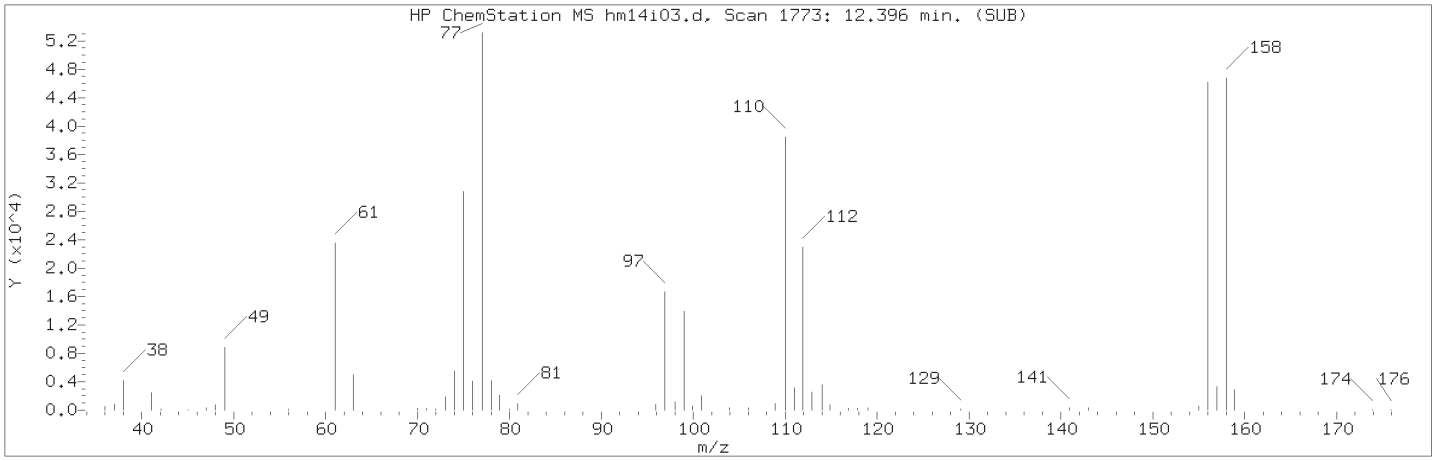
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

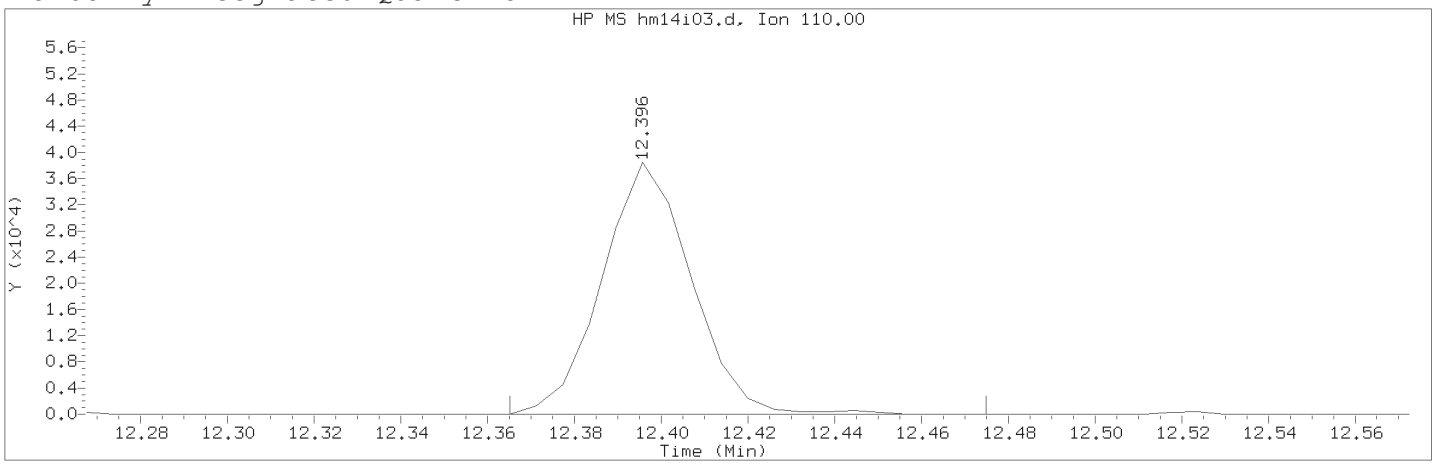
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 217575
On-column Amount (ng) : 5.0419
Integration start scan : 1757 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

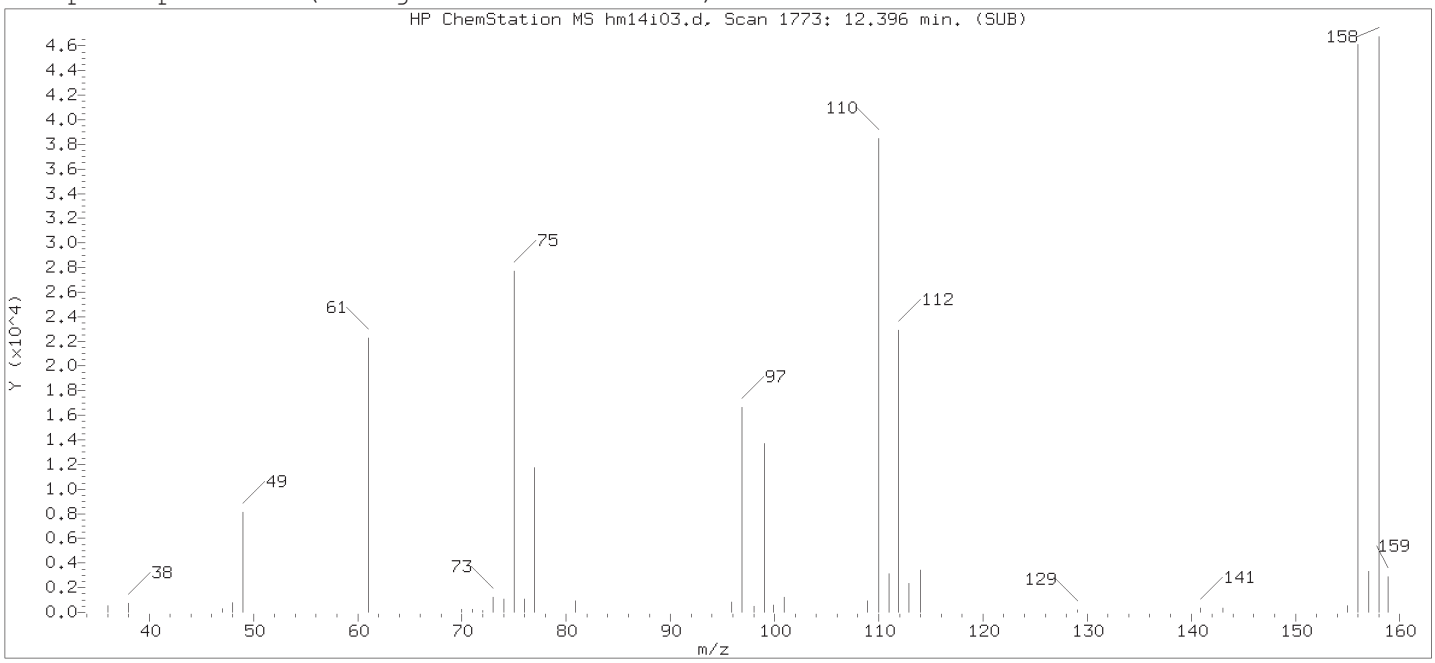
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area (flag) : 55006M
On-Column Amount (ng) : 4.7878
Integration start scan : 1767 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

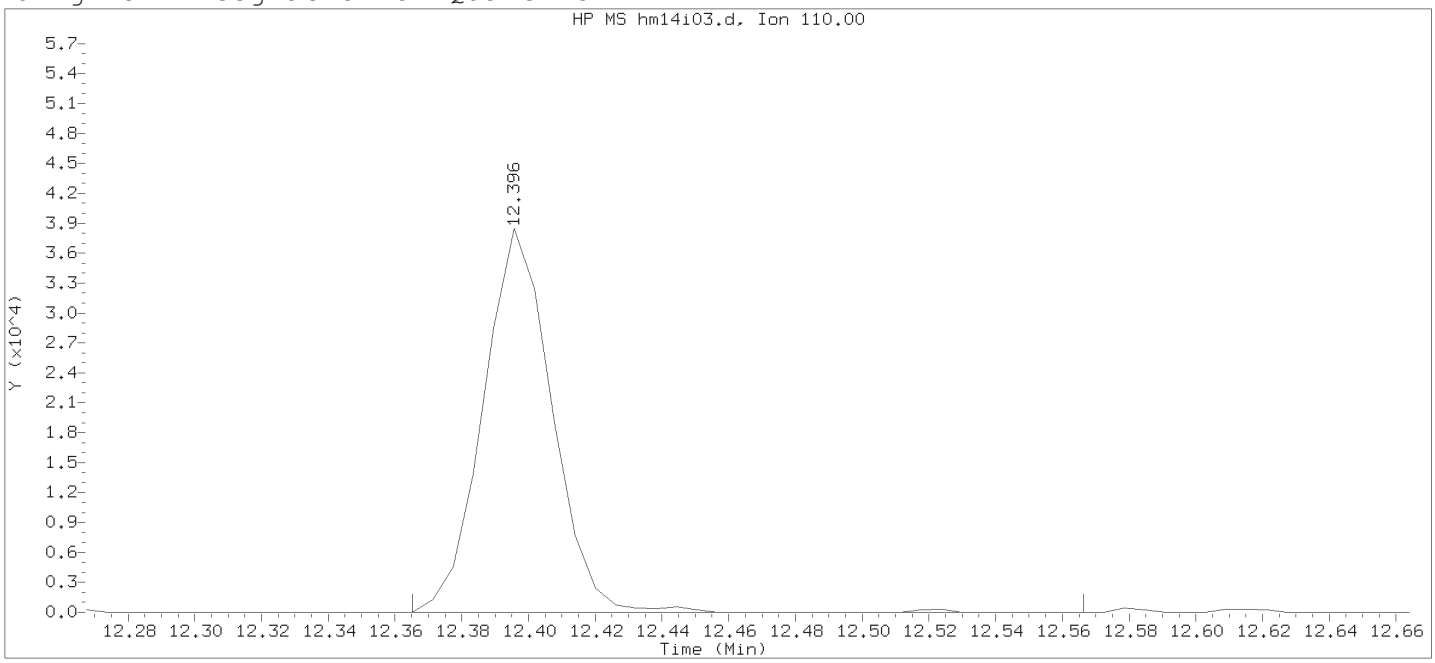
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

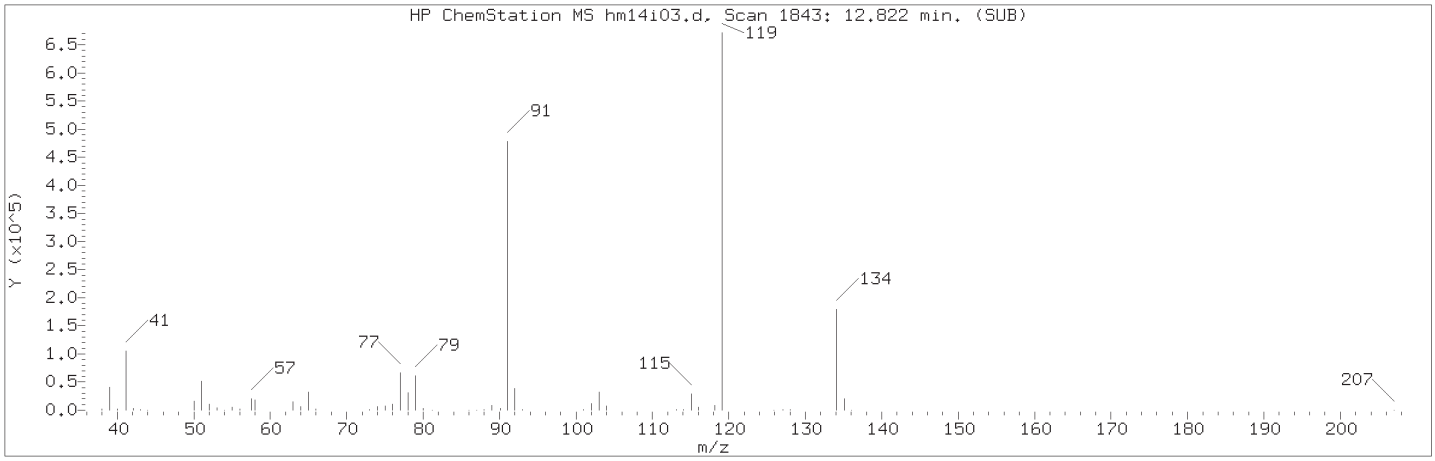
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

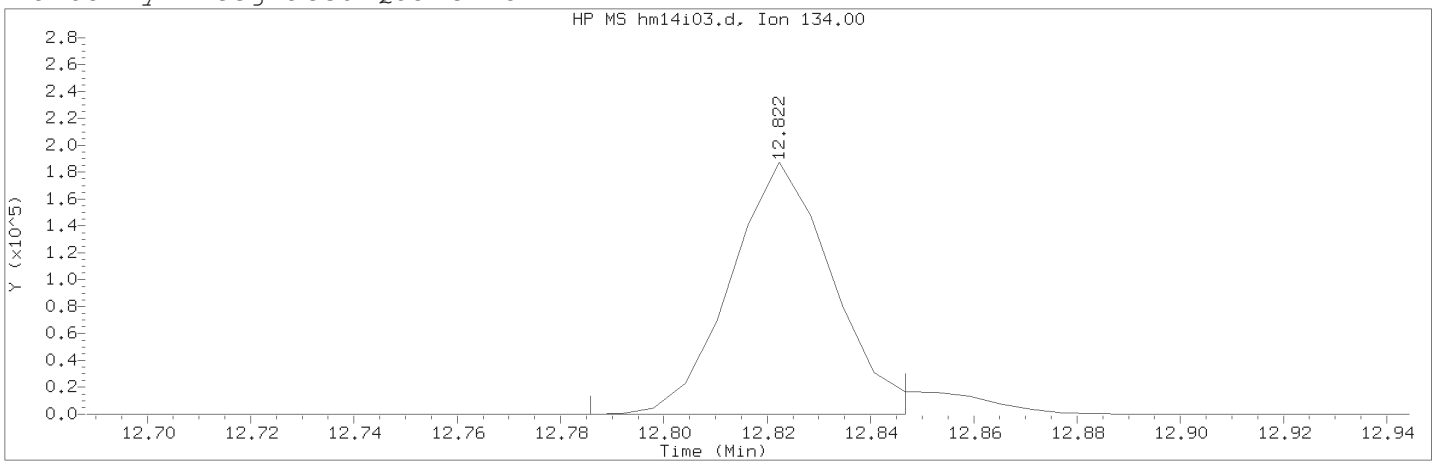
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area : 55224
On-column Amount (ng) : 5.0545
Integration start scan : 1767 Integration stop scan: 1800
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

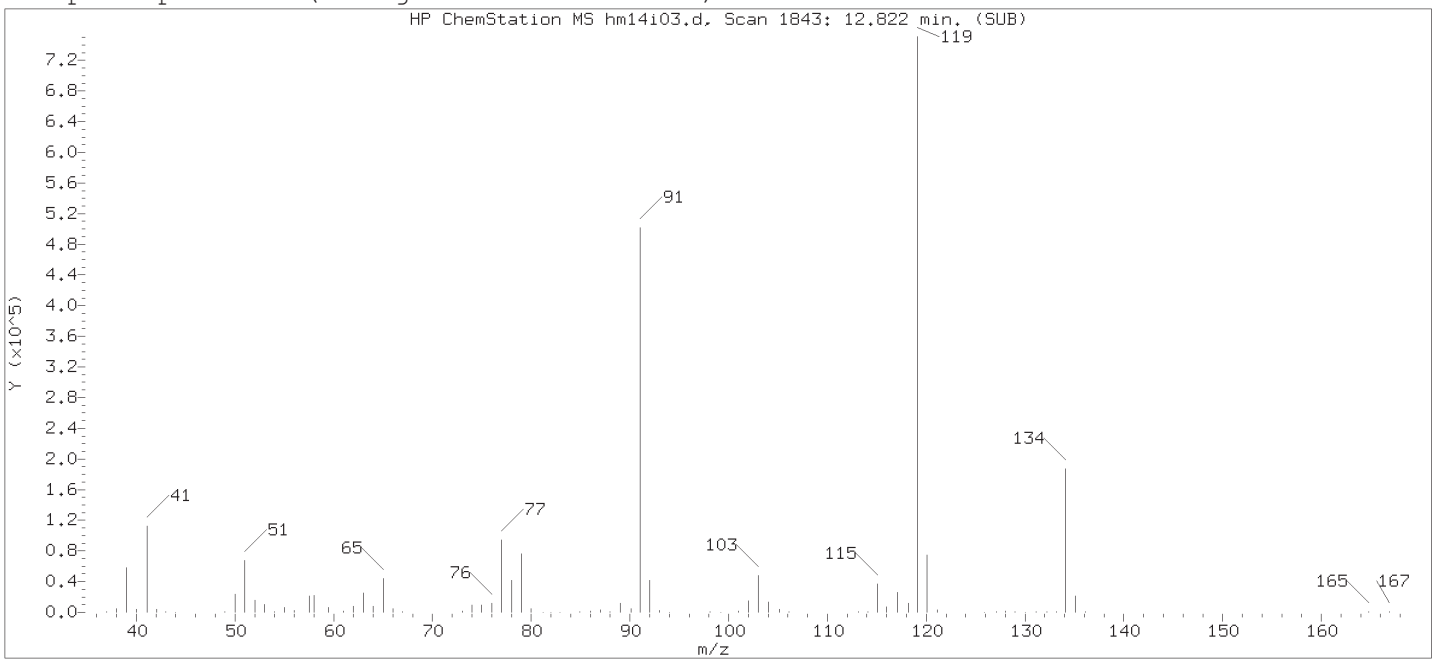
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 256144M
On-Column Amount (ng) : 4.6748
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

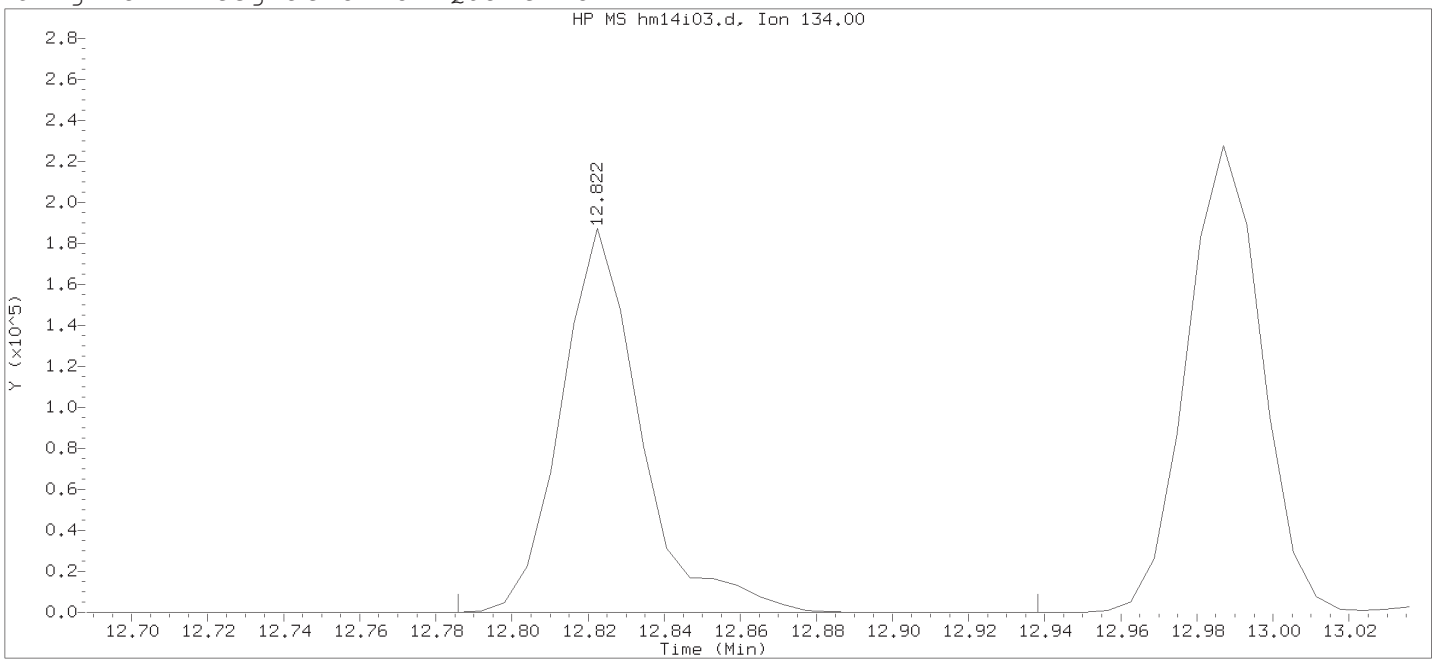
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



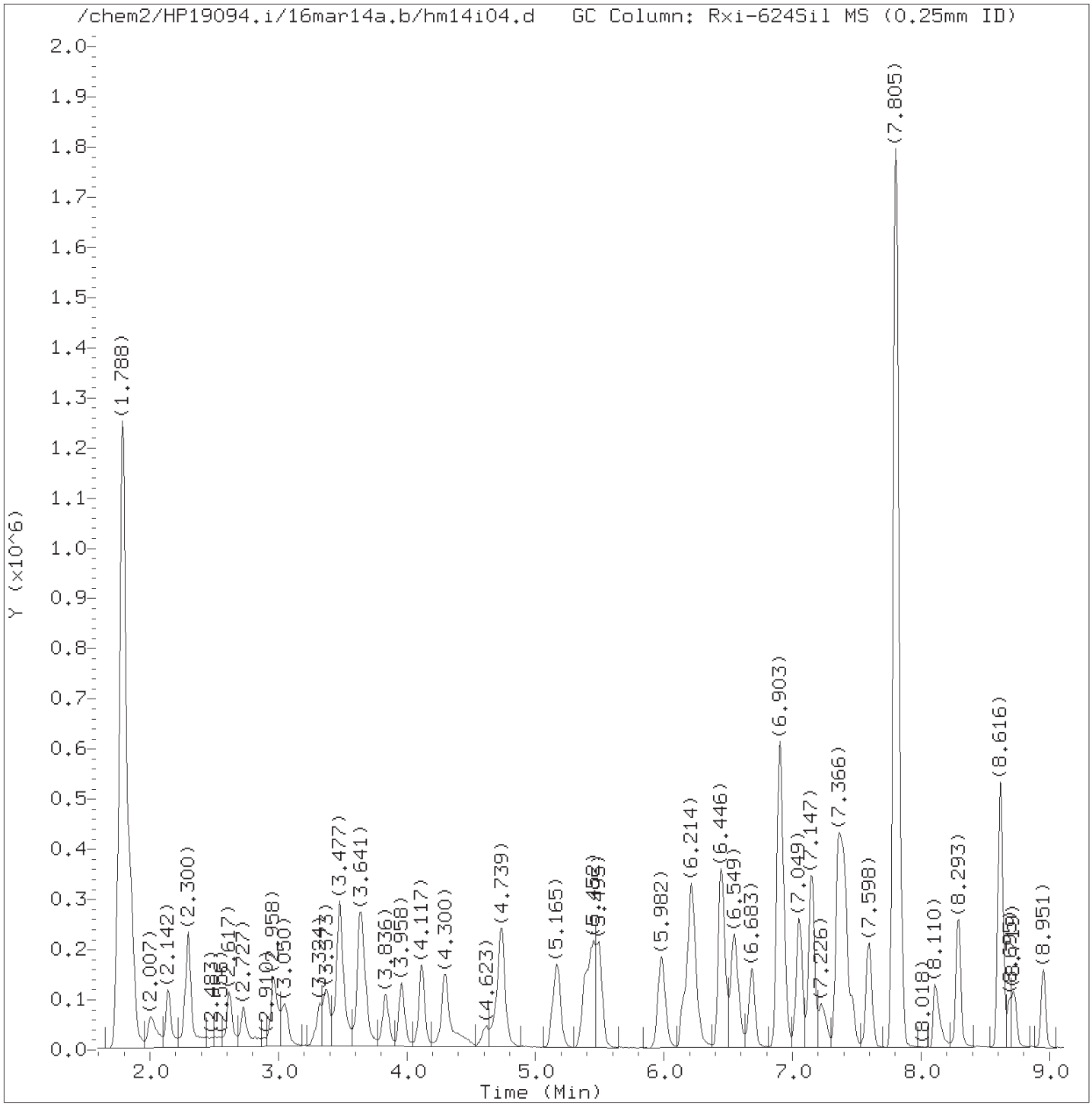
Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 271684
On-column Amount (ng) : 5.0361
Integration start scan : 1836 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

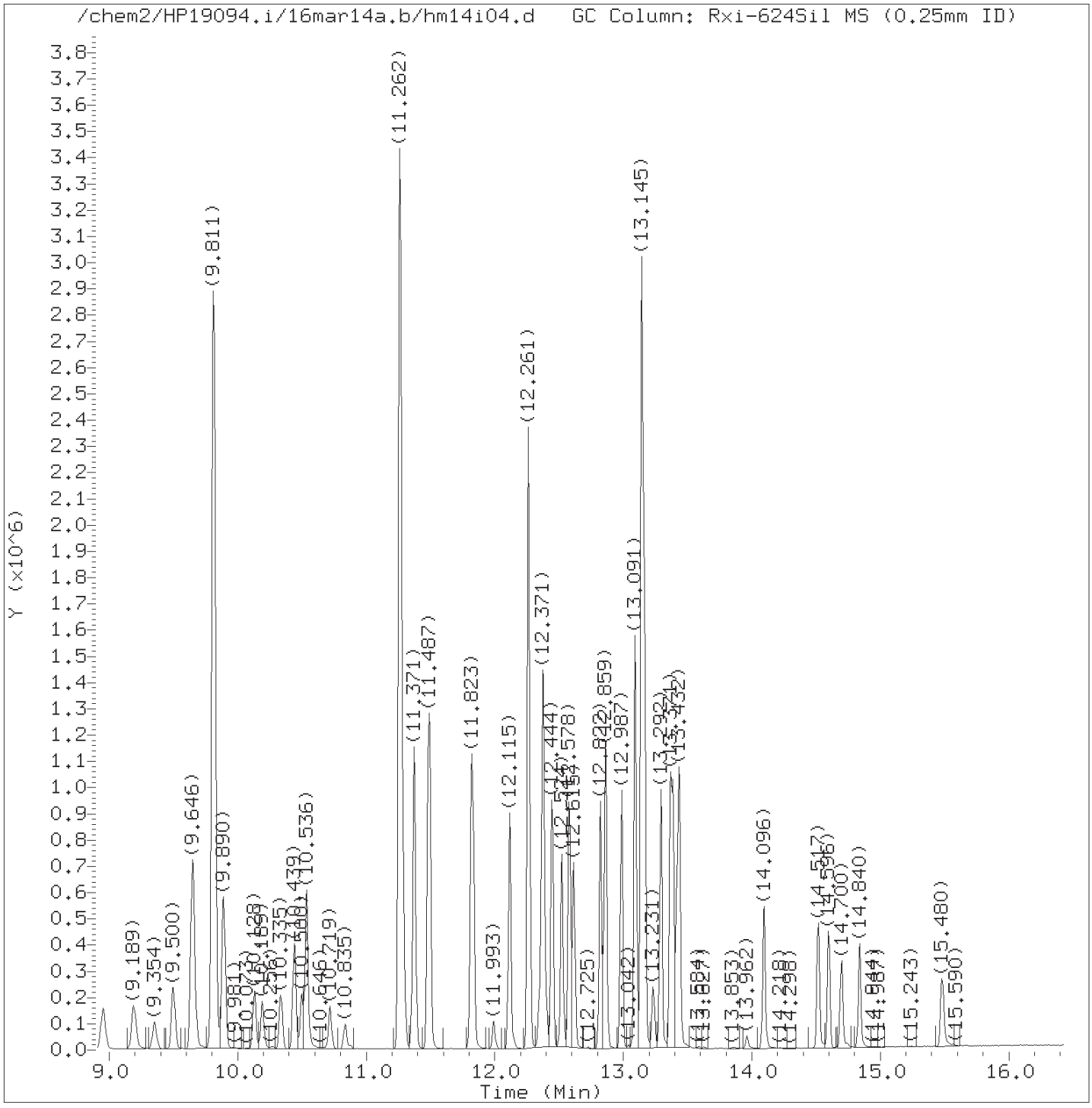
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	139885	1.724
2) Chloromethane	(2)	2.142	50	142464	1.790
5) Vinyl Chloride	(2)	2.282	62	129023	1.743
6) 1,3-Butadiene	(2)	2.300	39	103398	1.847
7) Bromomethane	(2)	2.617	94	88576	1.803
8) Chloroethane	(2)	2.727	64	79594	1.744
9) Dichlorofluoromethane	(2)	2.958	67	184744	1.784
10) Trichlorofluoromethane	(2)	3.050	101	171114	1.775
11) Ethyl ether	(2)	3.318	59	74208	1.865
12) Freon 123a	(2)	3.373	67	130927	1.775
13) Acrolein	(1)	3.477	56	574998	92.252
15) 1,1-Dichloroethene	(2)	3.635	96	100525	1.817
14) Acetone	(1)	3.641	43	162401	18.909
16) Freon 113	(2)	3.653	101	106894	1.858
17) Methyl Iodide	(2)	3.830	142	187827	1.834
18) Carbon Disulfide	(2)	3.958	76	307437	1.800
21) Methyl Acetate	(1)	4.086	43	44285	1.836
22) Allyl Chloride	(2)	4.111	41	189683	1.813
26)*t-Butyl Alcohol-d10	(1)	4.281	65	109317M	50.000
23) Methylene Chloride	(2)	4.306	84	107068	1.811
28) t-Butyl Alcohol	(1)	4.415	59	105430	35.869
29) Acrylonitrile	(1)	4.623	53	95995	9.315
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	233893	1.832
31) trans-1,2-Dichloroethene	(2)	4.739	96	109284	1.834
32) n-Hexane	(2)	5.165	57	181618	1.796
33) 1,1-Dichloroethane	(2)	5.385	63	223342	1.839
34) di-Isopropyl Ether	(2)	5.452	45	389368	1.837
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	181278	1.819
37) Ethyl t-butyl ether	(2)	5.982	59	329916	1.846
40) 1,2-Dichloroethene (Total)	(2)		96	230554	3.672
38) 2-Butanone	(1)	6.153	43	278494	19.029
39) cis-1,2-Dichloroethene	(2)	6.208	96	121270	1.838
42) Propionitrile	(1)	6.220	54	133985	36.716
41) 2,2-Dichloropropane	(2)	6.226	77	177302	1.825
45) Methacrylonitrile	(1)	6.446	67	238023	19.050
47) Bromochloromethane	(2)	6.543	128	47663	1.898
48) Tetrahydrofuran	(1)	6.543	71	69113	18.667
49) Chloroform	(2)	6.683	83	200949	1.811

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	541274	9.761
50)$Dibromofluoromethane	(2)	6.897	111	560925	9.831
51) 1,1,1-Trichloroethane	(2)	6.933	97	172678	1.824
52) Cyclohexane	(2)	7.049	56	215153	1.739
52) Cyclohexane	(2)	7.055	84	167560	1.769
52) Cyclohexane	(2)	7.049	69	63301	1.789
55) 1,1-Dichloropropene	(2)	7.147	75	167116	1.839
54) Carbon Tetrachloride	(2)	7.153	117	157879	1.834
56) Isobutyl Alcohol	(1)	7.232	41	88204M	84.692
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88937M	9.683
57)$1,2-Dichloroethane-d4	(2)	7.354	65	464876	9.914
57)$1,2-Dichloroethane-d4	(2)	7.360	104	57550	9.924
58) Benzene	(2)	7.403	78	466216	1.843
59) 1,2-Dichloroethane	(2)	7.464	62	120356M	1.837
60) t-Amyl methyl ether	(2)	7.598	73	268537	1.838
63)*Fluorobenzene	(2)	7.805	96	2353241	10.000
62) n-Heptane	(2)	7.836	43	207480	1.815
65) n-Butanol	(1)	8.116	56	152979	182.497
67) Trichloroethene	(2)	8.287	95	120987	1.835
70) 1,2-Dichloropropane	(2)	8.610	63	119785	1.819
69) Methylcyclohexane	(2)	8.616	83	198138	1.835
71) Methyl Methacrylate	(1)	8.689	69	49722A	1.905
72) 1,4-Dioxane	(1)	8.701	88	16792	101.677
73) Dibromomethane	(2)	8.719	93	49857	1.838
74) Bromodichloromethane	(2)	8.951	83	139727	1.845
76) 2-Nitropropane	(1)	9.189	41	147718	17.652
80) cis-1,3-Dichloropropene	(2)	9.494	75	172194	1.850
81) 4-Methyl-2-Pentanone	(1)	9.646	43	686835	19.070
82)$Toluene-d8	(3)	9.811	98	2297550	10.107
82)$Toluene-d8	(3)	9.811	100	1486837	10.105
83) Toluene	(3)	9.890	92	285003	1.861
84) trans-1,3-Dichloropropene	(3)	10.128	75	134261	1.871
85) 1,3-Dichloropropene (total)	(3)		75	306455	3.721
86) Ethyl Methacrylate	(3)	10.189	69	105288	1.907
88) 1,1,2-Trichloroethane	(3)	10.335	97	69730	1.880
89) Tetrachloroethene	(3)	10.445	166	132643	1.834
90) 1,3-Dichloropropane	(3)	10.500	76	124831	1.872
91) 2-Hexanone	(1)	10.536	43	481671	18.915

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	87977	1.850
95) 1,2-Dibromoethane	(3)	10.835	107	66221	1.896
97)*Chlorobenzene-d5	(3)	11.262	117	1595701	10.000
98) Chlorobenzene	(3)	11.286	112	312300	1.874
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	106742	1.867
100) Ethylbenzene	(3)	11.371	91	555580	1.854
101) m+p-Xylene	(3)	11.487	106	430889	3.769
105) Xylene (Total)	(3)		106	638092	5.637
104) o-Xylene	(3)	11.816	106	207203	1.868
106) Styrene	(3)	11.829	104	333612	1.880
107) Bromoform	(3)	11.987	173	48461	1.838
108) Isopropylbenzene	(3)	12.115	105	550002	1.871
111)$4-Bromofluorobenzene	(3)	12.261	95	727976	9.935
111)$4-Bromofluorobenzene	(3)	12.261	174	608350	9.958
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	82205M	1.877
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	210710	18.998
114) Bromobenzene	(4)	12.377	156	121698	1.865
116) 1,2,3-Trichloropropane	(4)	12.396	110	21388	1.945
117) n-Propylbenzene	(4)	12.444	91	653852	1.853
119) 2-Chlorotoluene	(4)	12.524	126	127817	1.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	460865	1.873
122) 4-Chlorotoluene	(4)	12.615	126	131416	1.895
125) tert-Butylbenzene	(4)	12.822	134	98583M	1.880
126) Pentachloroethane	(4)	12.853	167	74073	1.871
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	463124	1.883
128) sec-Butylbenzene	(4)	12.987	105	591046	1.855
131) 1,3-Dichlorobenzene	(4)	13.091	146	241904	1.896
132) p-Isopropyltoluene	(4)	13.097	119	505380	1.874
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	699859	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	241546	1.863
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	193916	1.901
136) Benzyl Chloride	(4)	13.237	126	33133	1.909
138) n-Butylbenzene	(4)	13.389	92	244250	1.852
139) 1,2-Dichlorobenzene	(4)	13.420	146	212444	1.874
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	10949	1.914
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	147571	1.820
146) Hexachlorobutadiene	(4)	14.596	225	74368	1.755
147) Naphthalene	(4)	14.700	128	255107	1.830

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	124736	1.926

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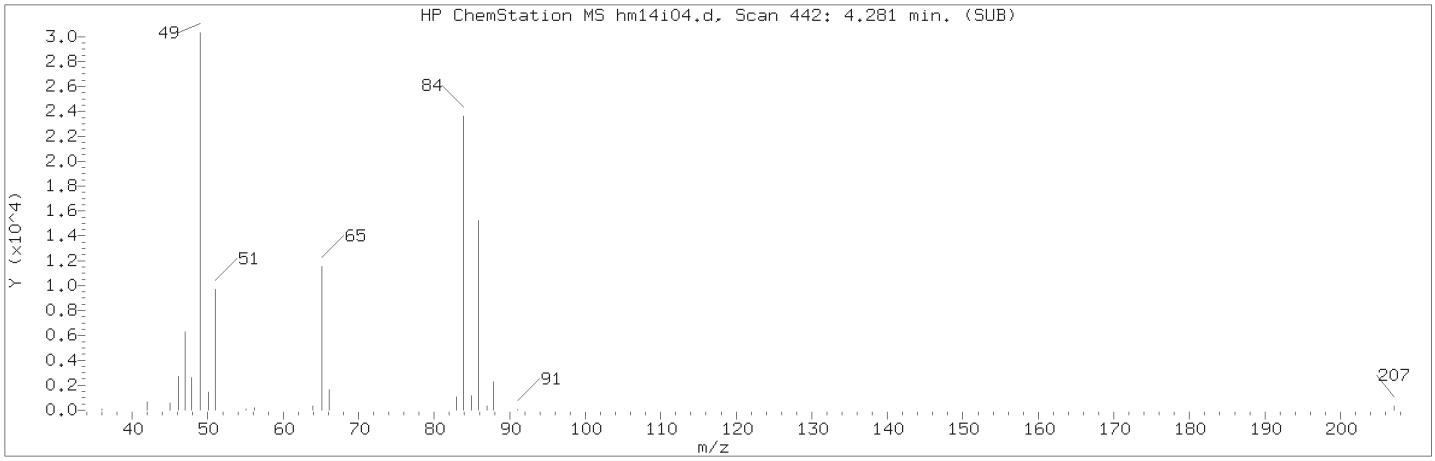
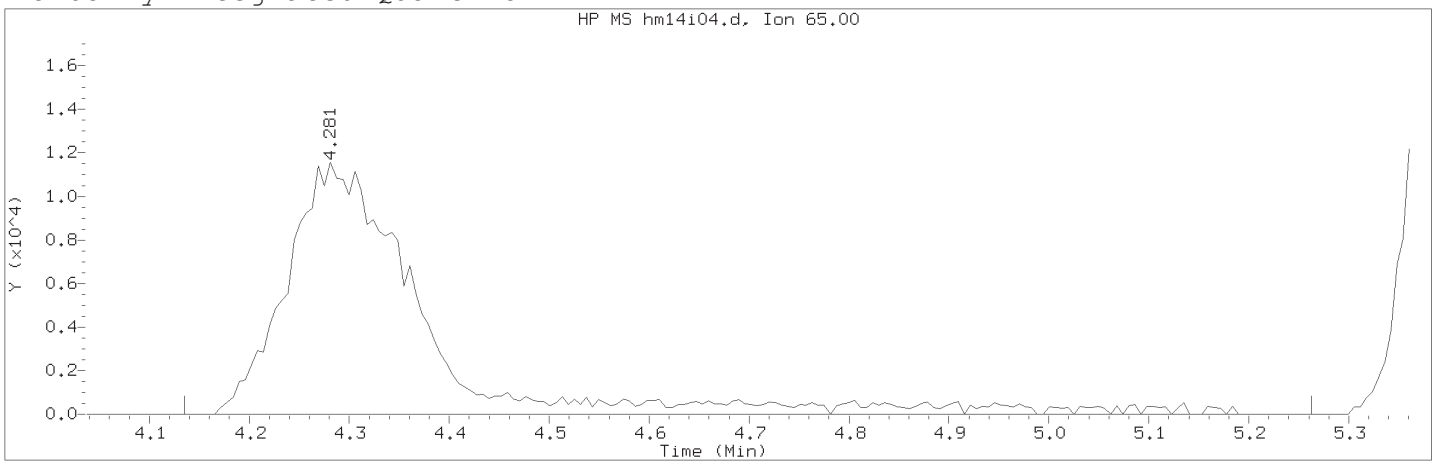
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

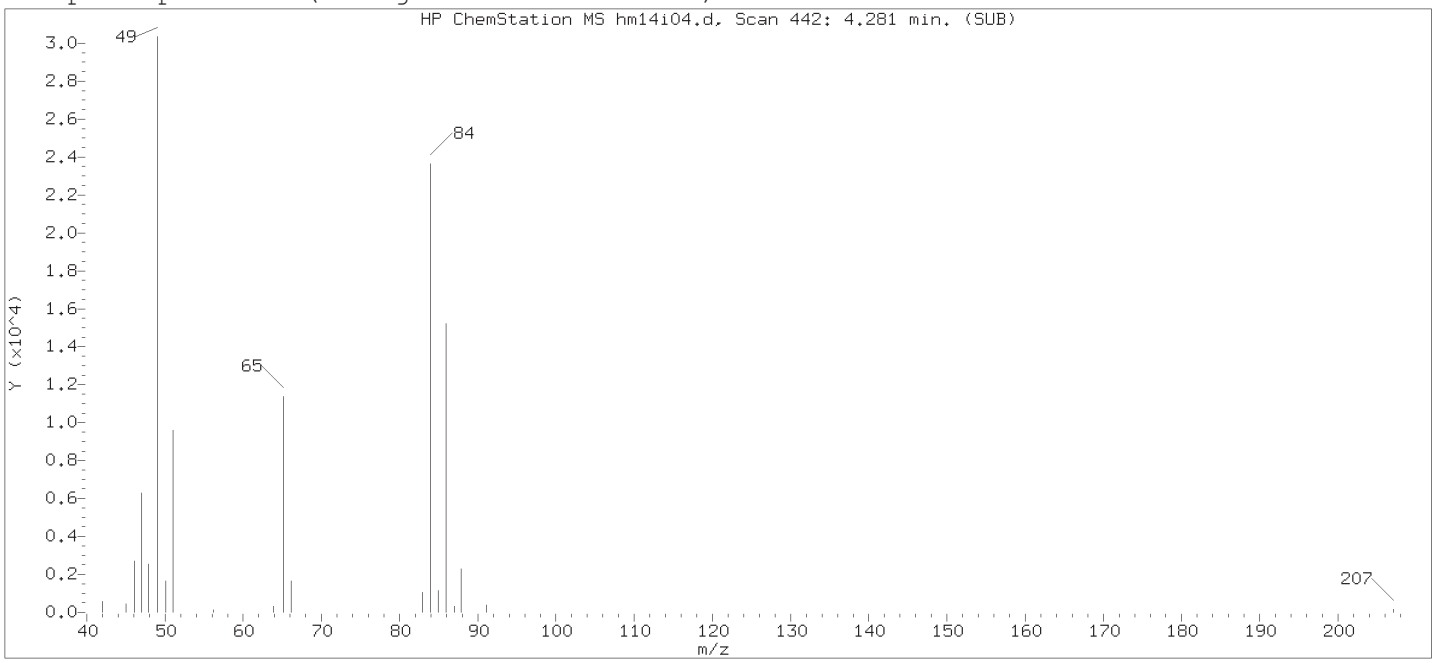
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 109317M
On-Column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

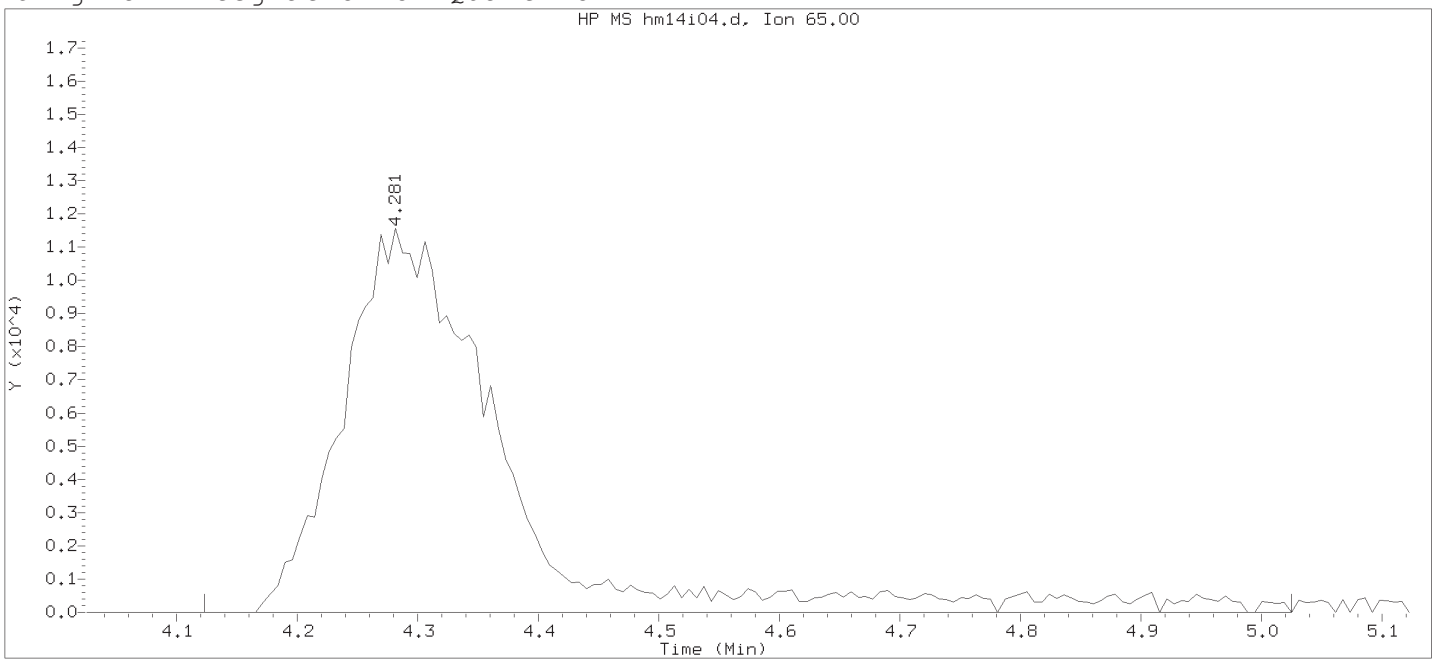
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

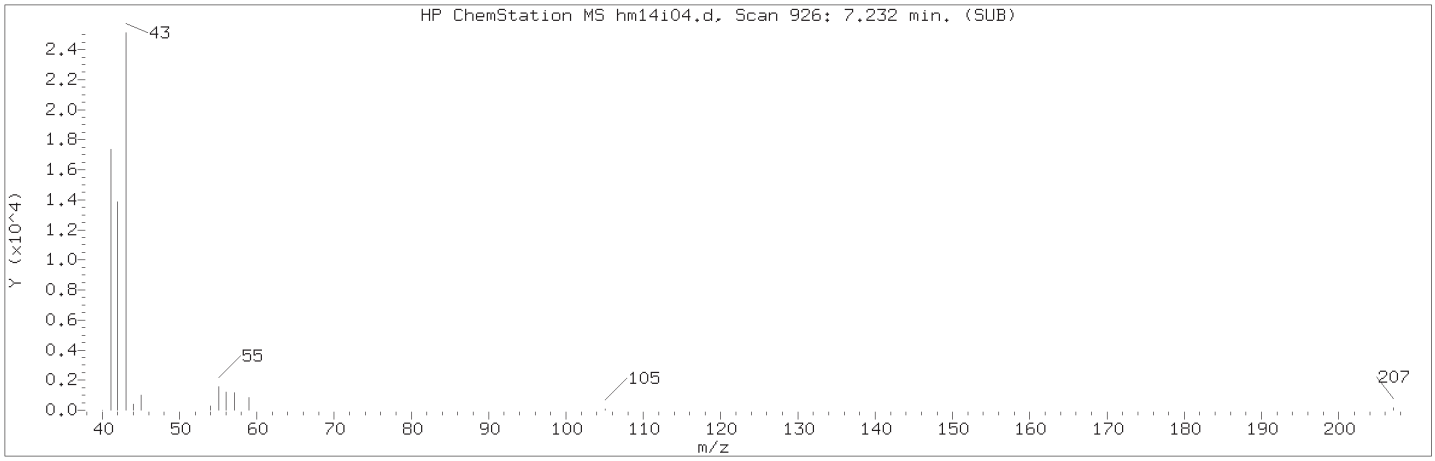
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

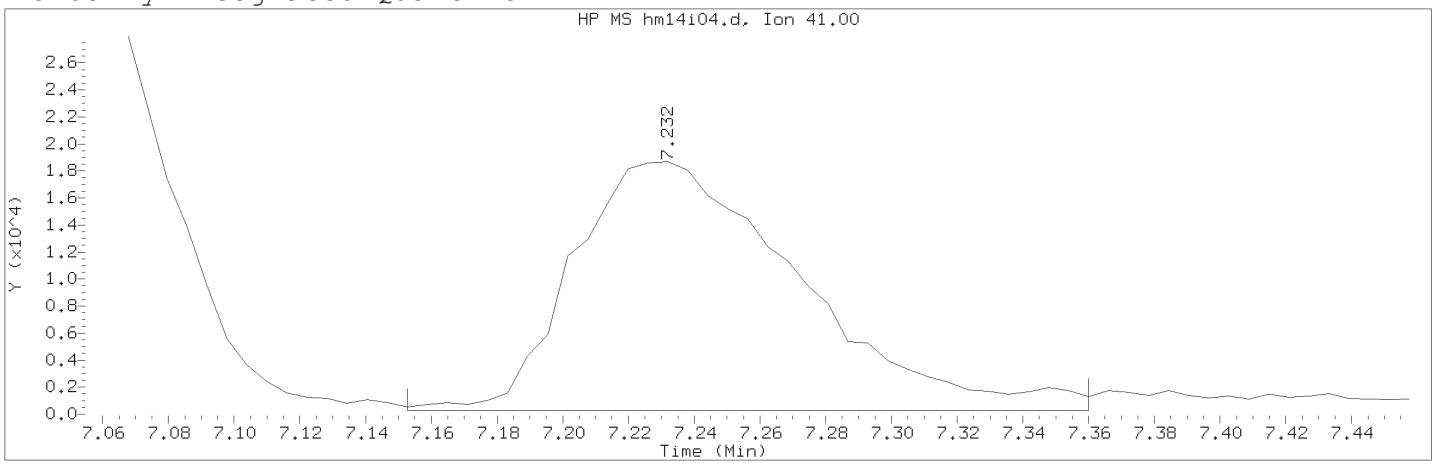
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 107024
On-column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

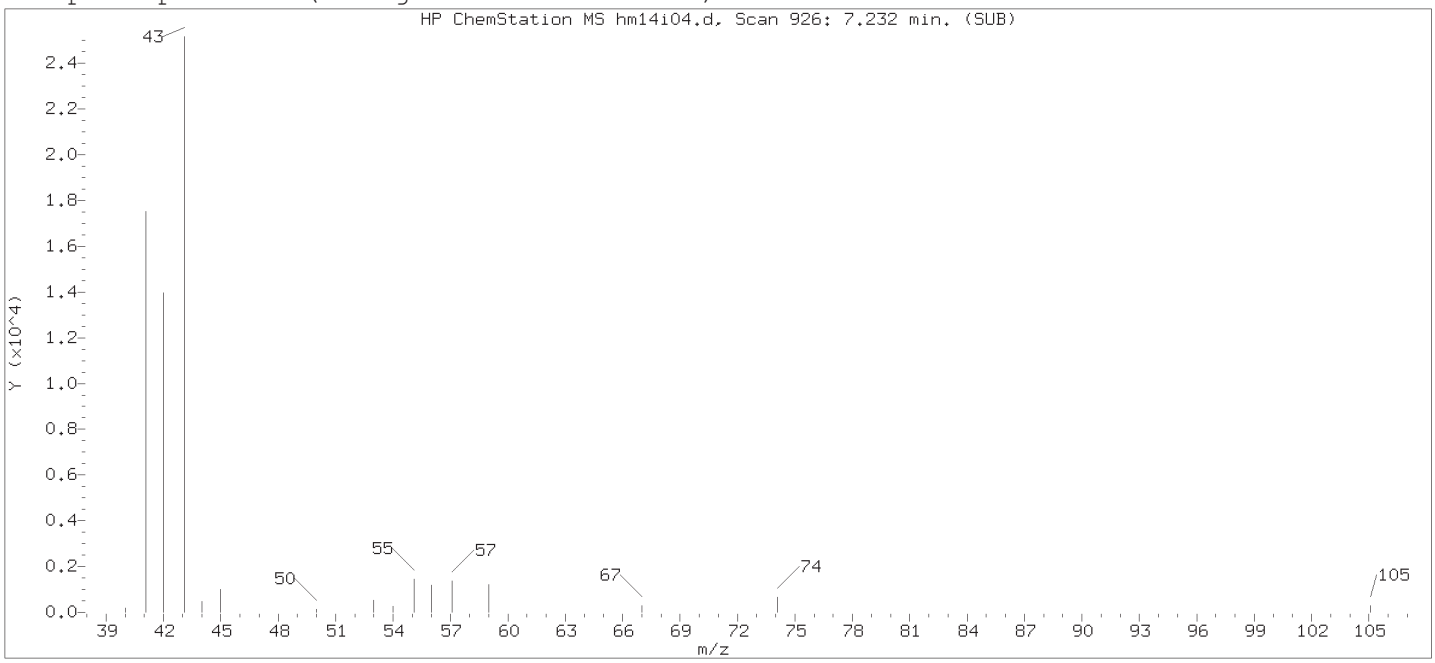
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area (flag) : 88204M
On-Column Amount (ng) : 84.6921
Integration start scan : 912 Integration stop scan: 946
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

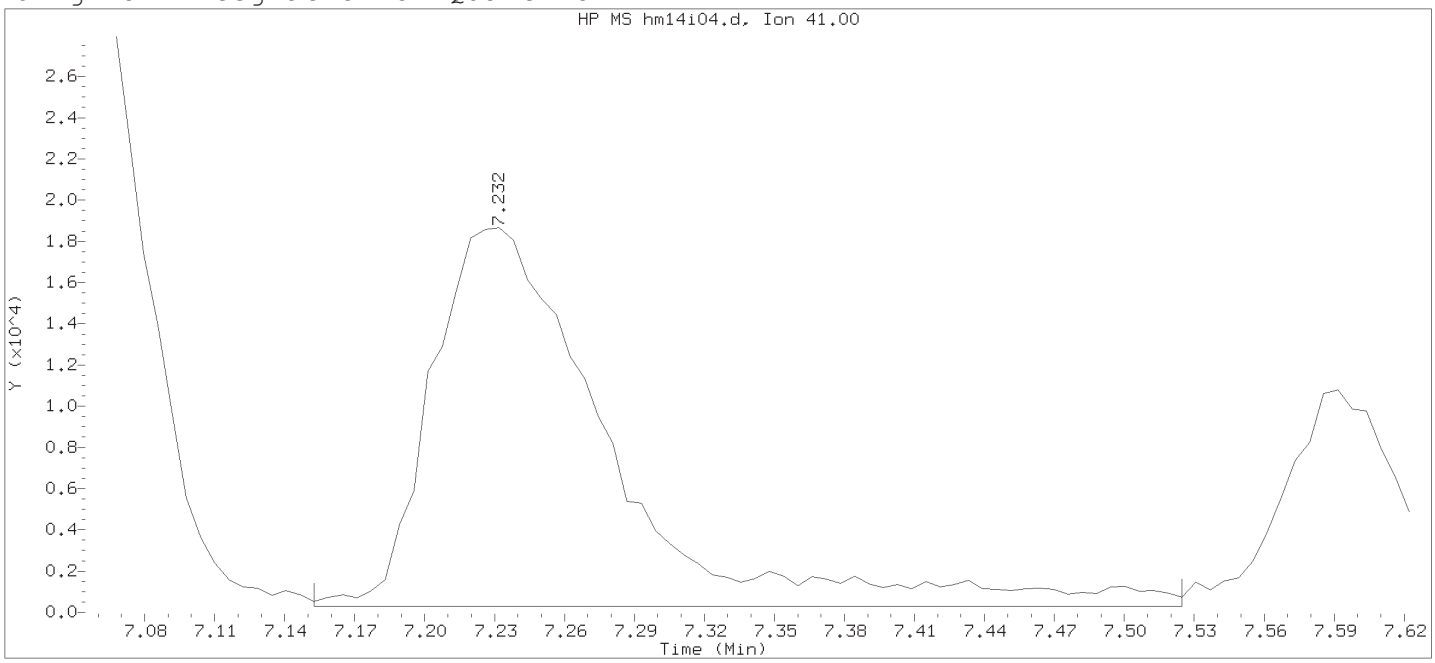
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

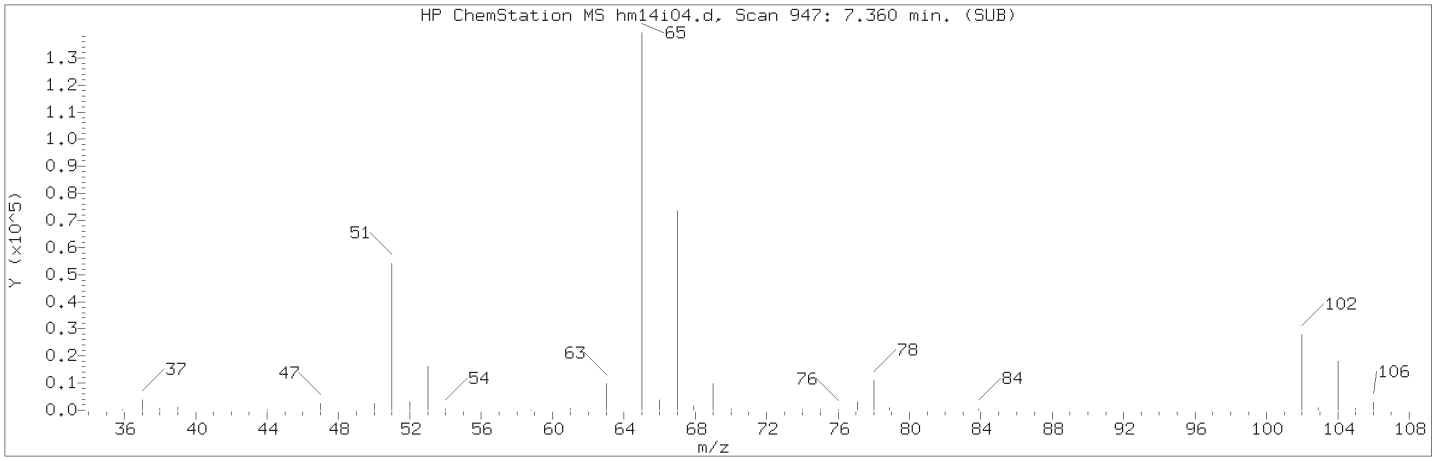
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

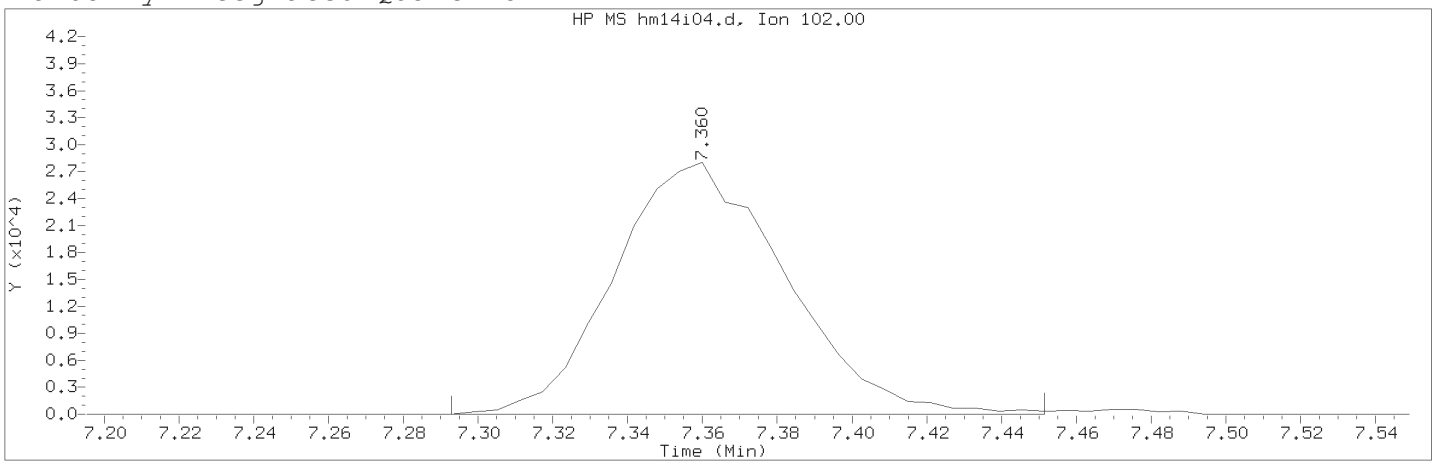
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area : 97287
On-column Amount (ng) : 103.7447
Integration start scan : 912 Integration stop scan: 973
Y at integration start : 285 Y at integration end: 285

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

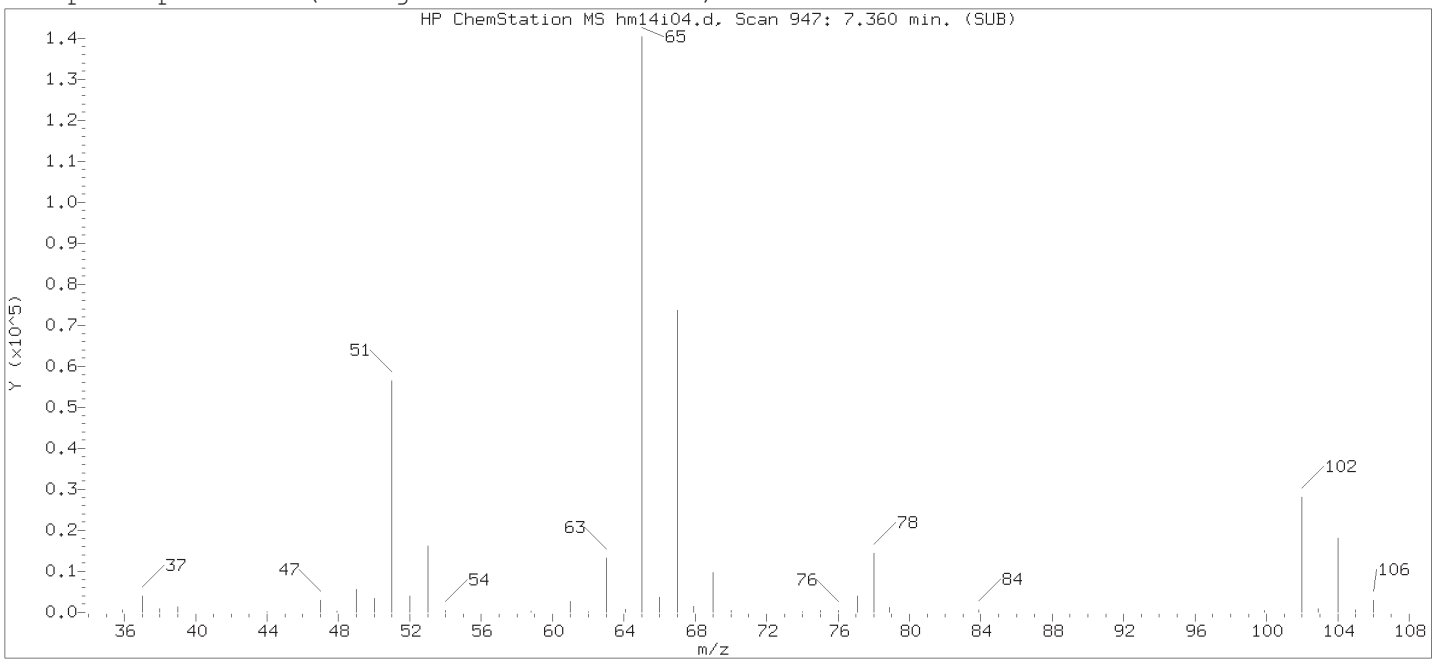
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 88937M
On-Column Amount (ng) : 9.6833
Integration start scan : 935 Integration stop scan: 961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

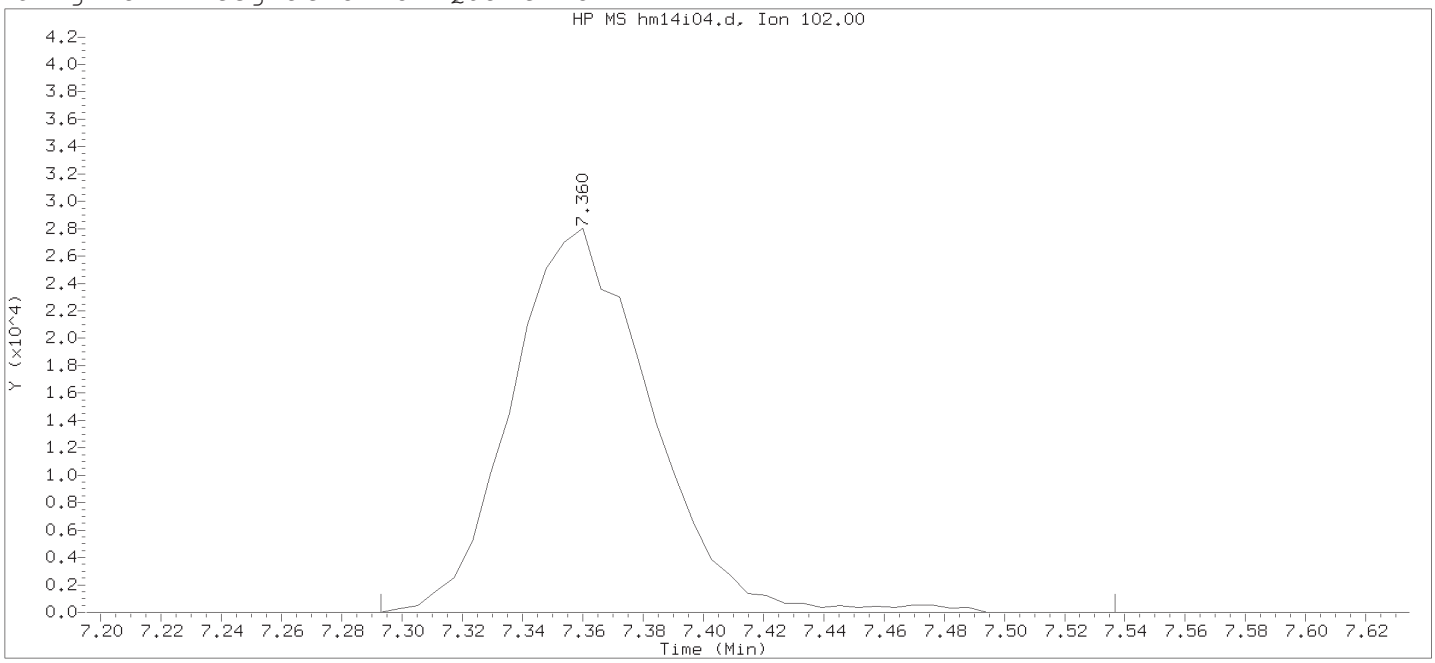
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

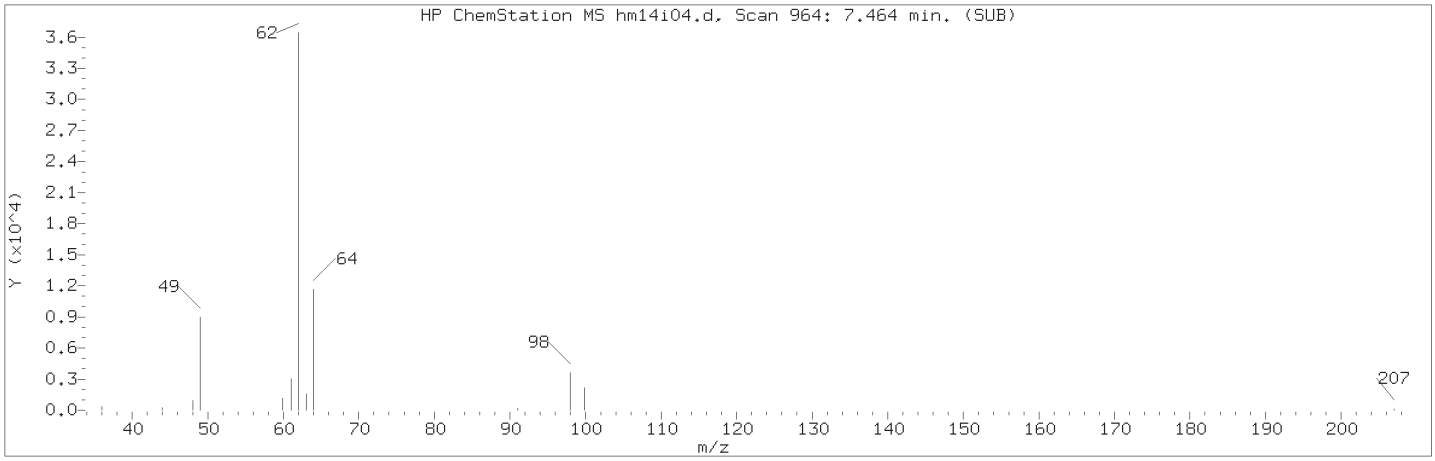
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

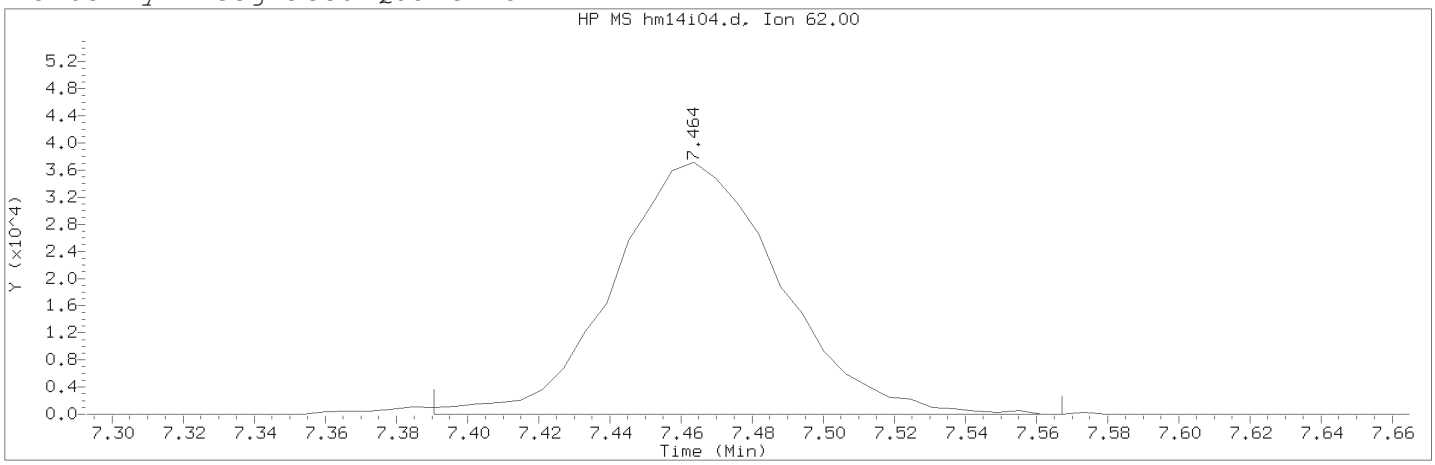
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 89840
On-column Amount (ng) : 9.4955
Integration start scan : 935 Integration stop scan: 975
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

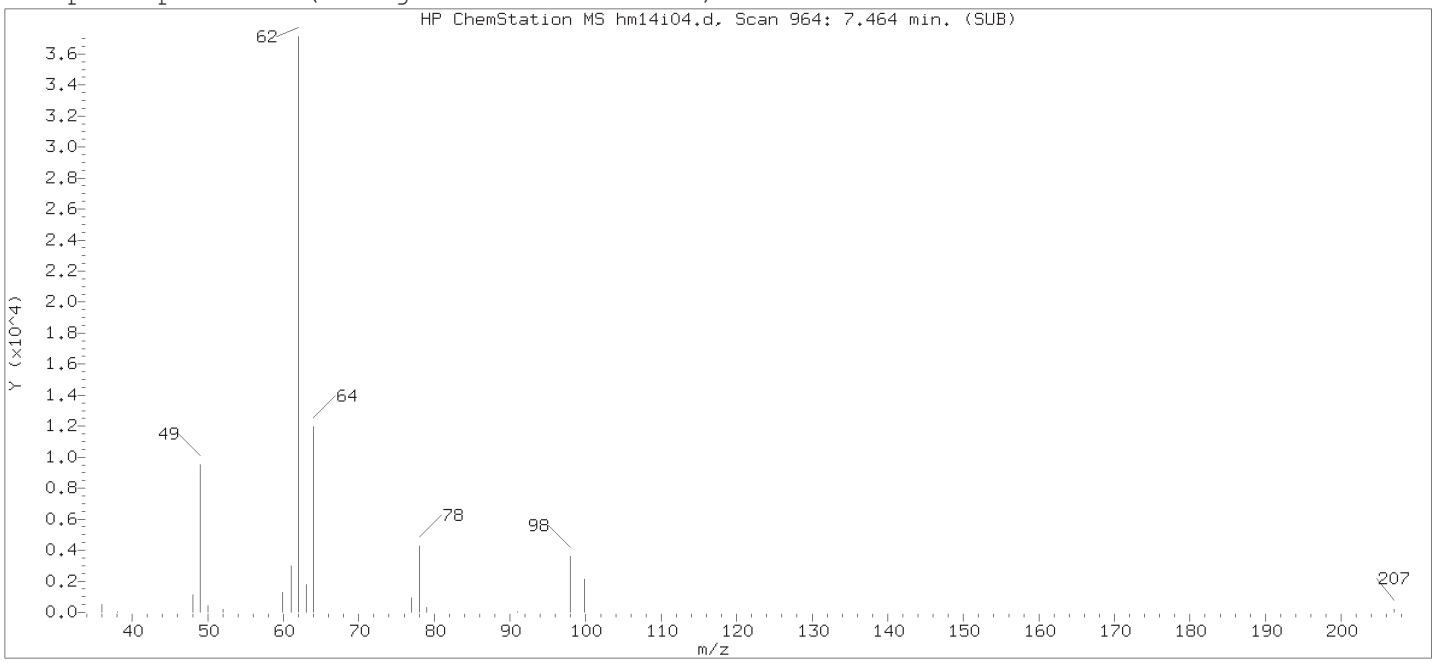
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 120356M
On-Column Amount (ng) : 1.8367
Integration start scan : 951 Integration stop scan: 980
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

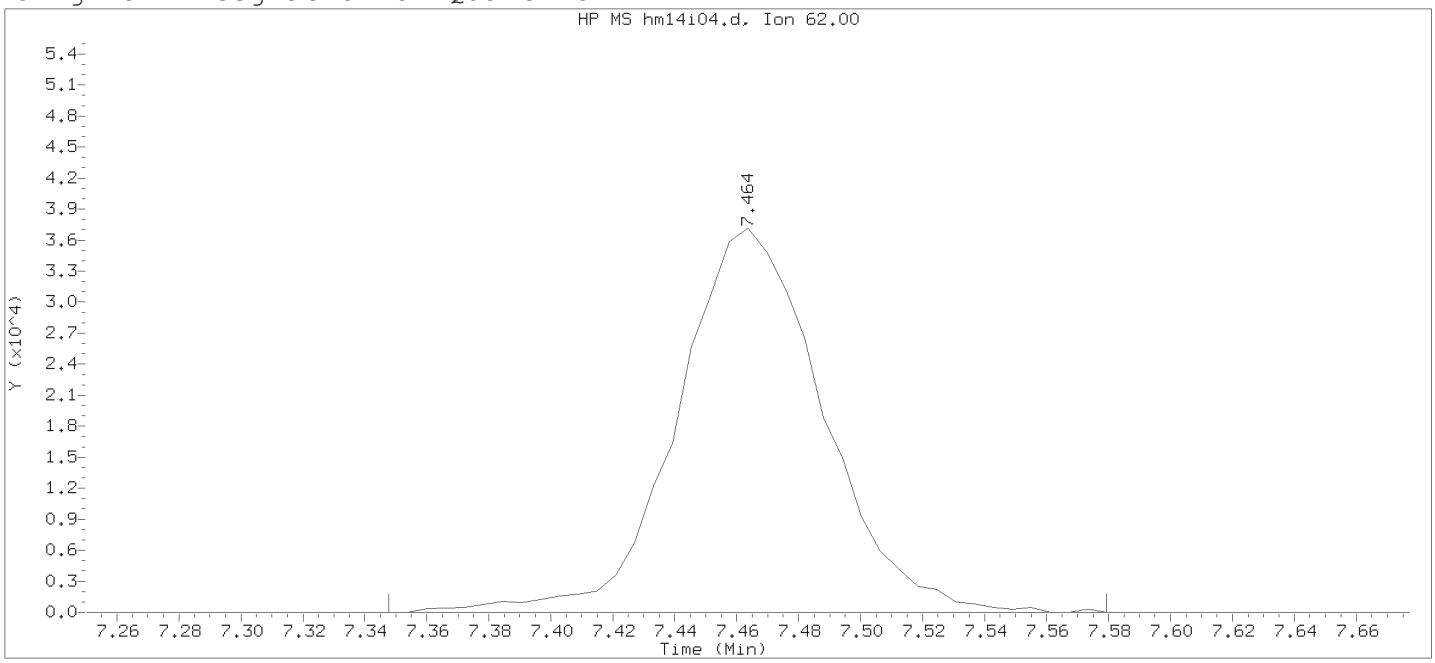
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

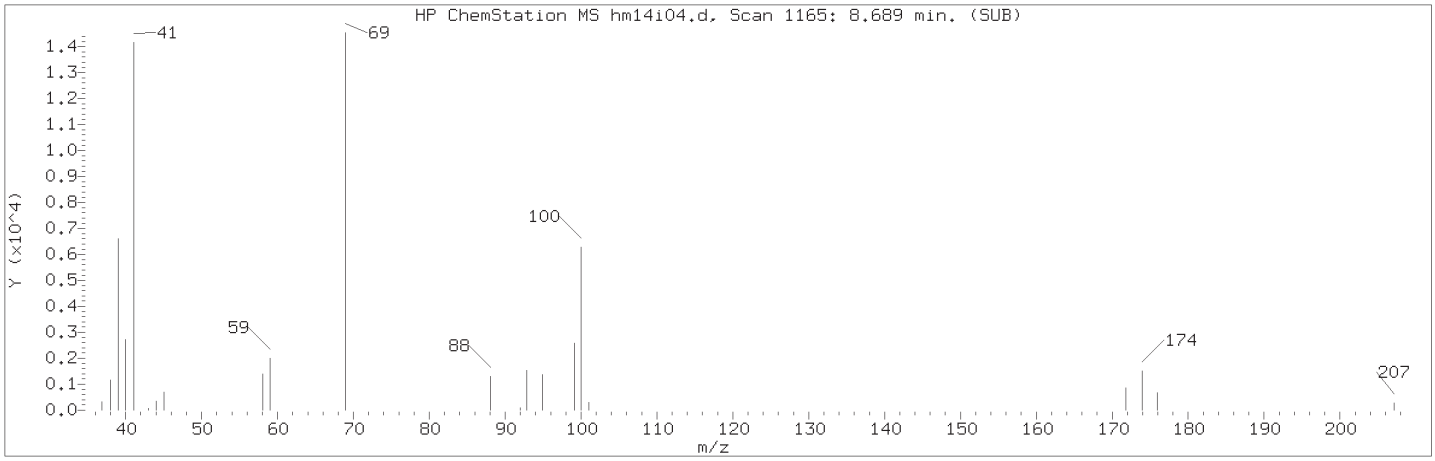
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

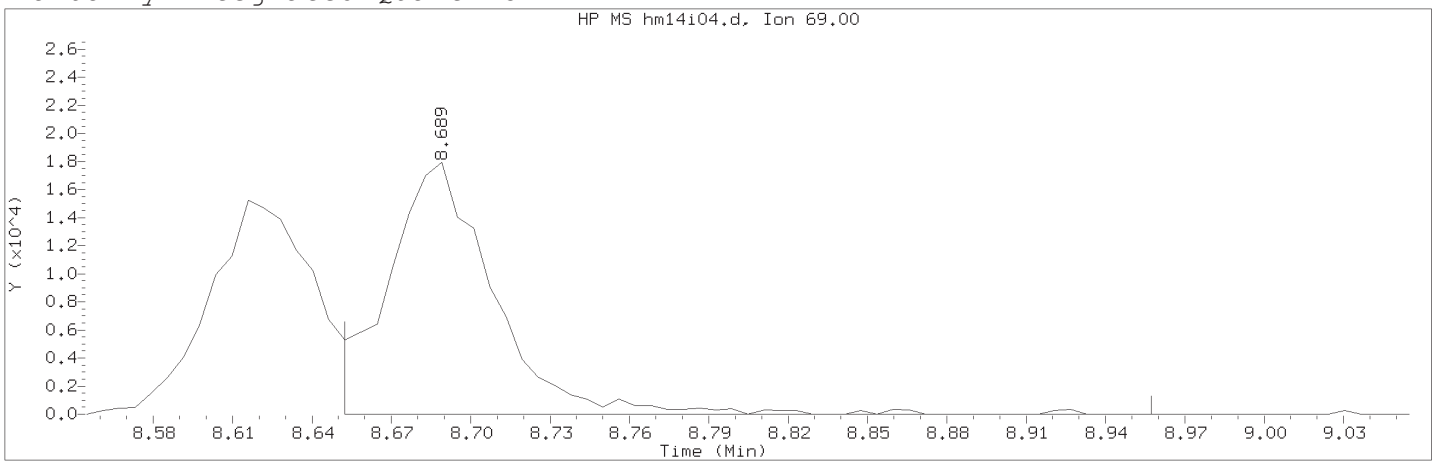
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 121600
On-column Amount (ng) : 1.9148
Integration start scan : 944 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

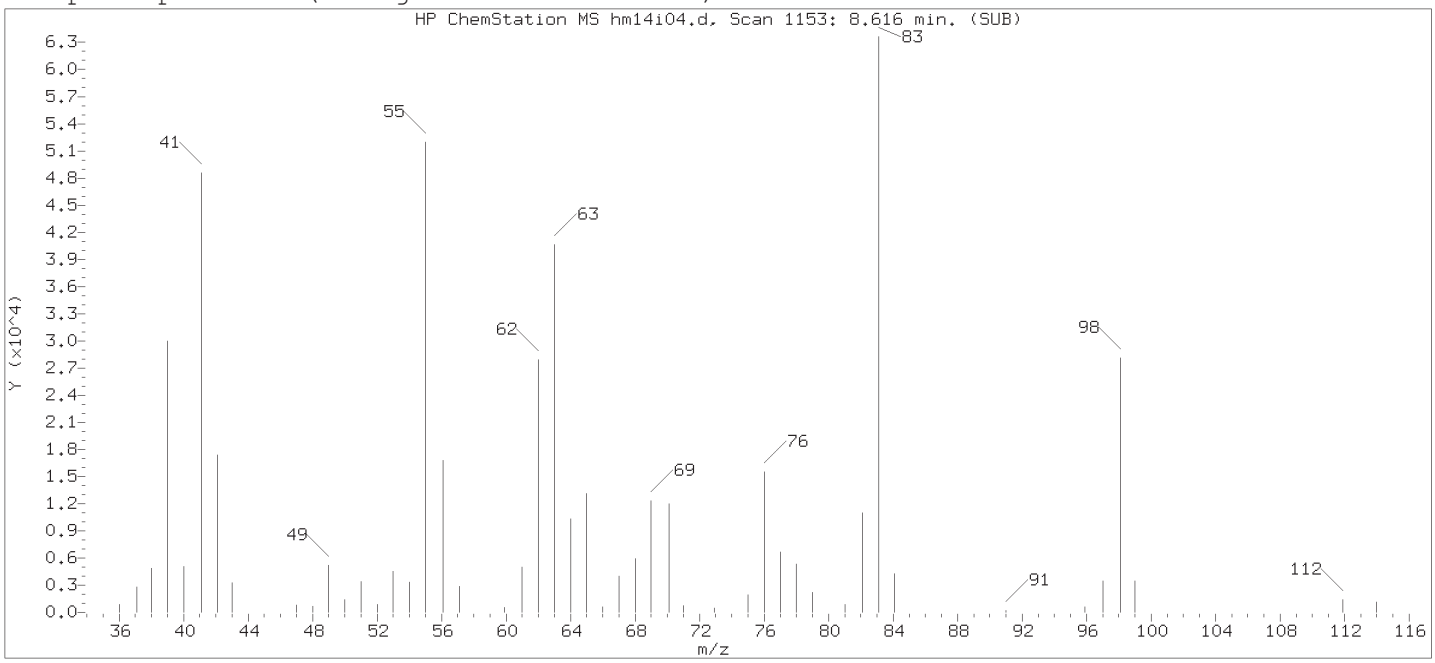
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 49722A
On-Column Amount (ng) : 1.9046
Integration start scan : 1158 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

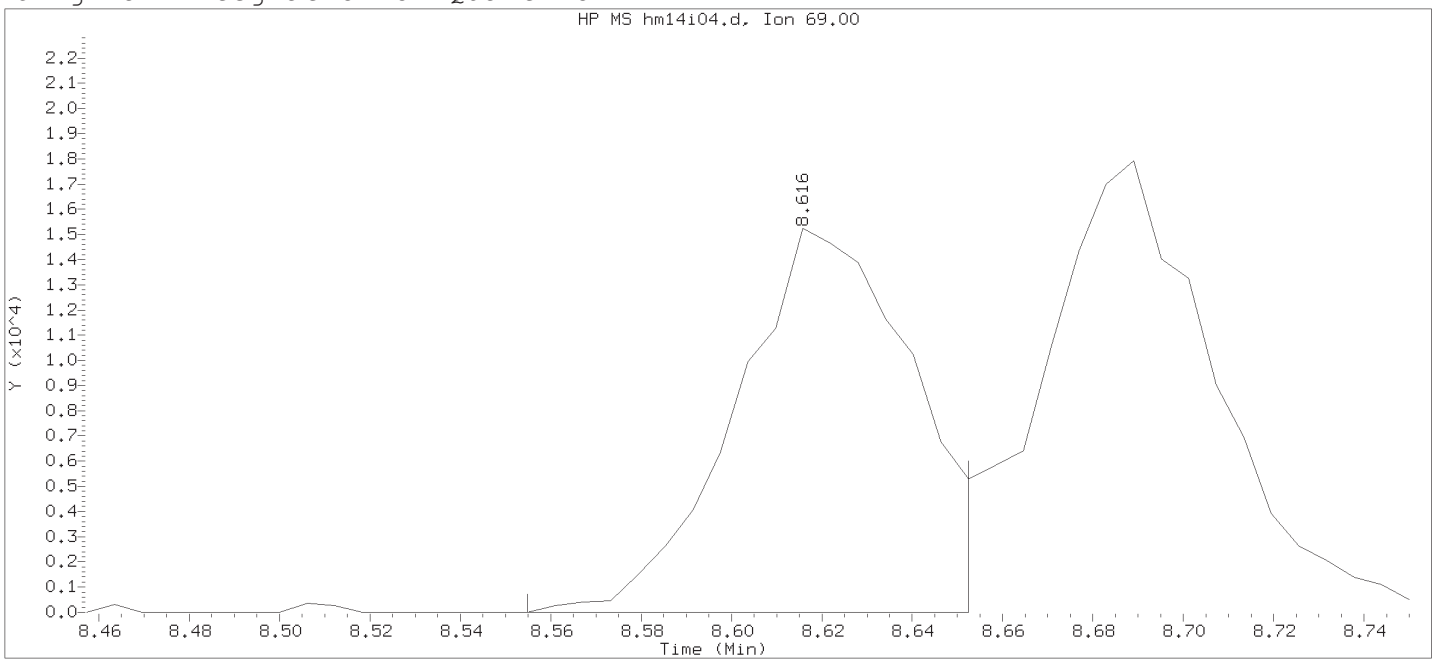
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

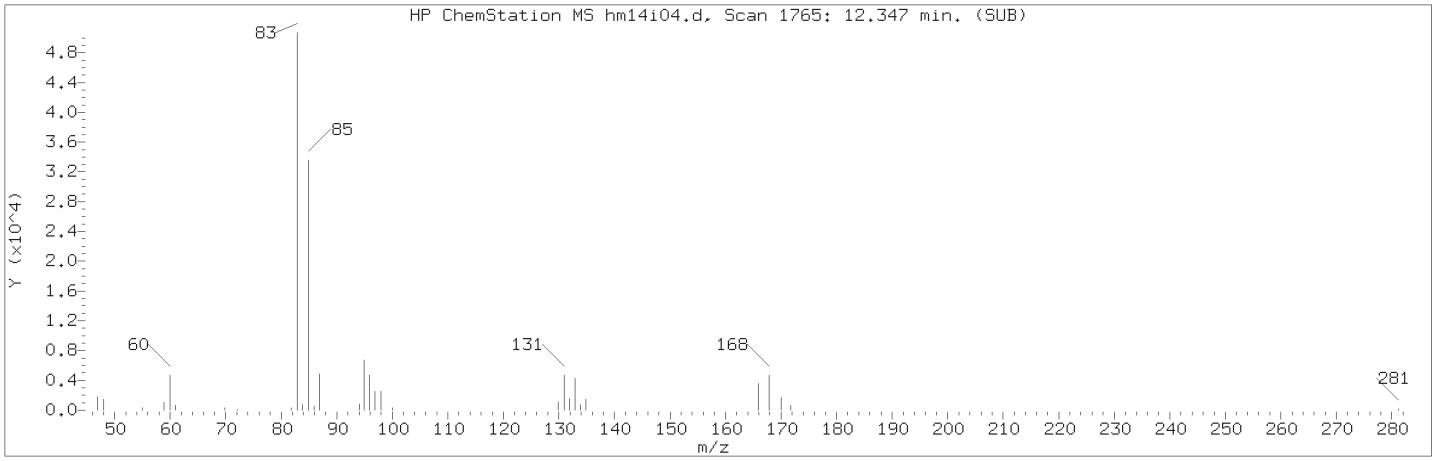
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

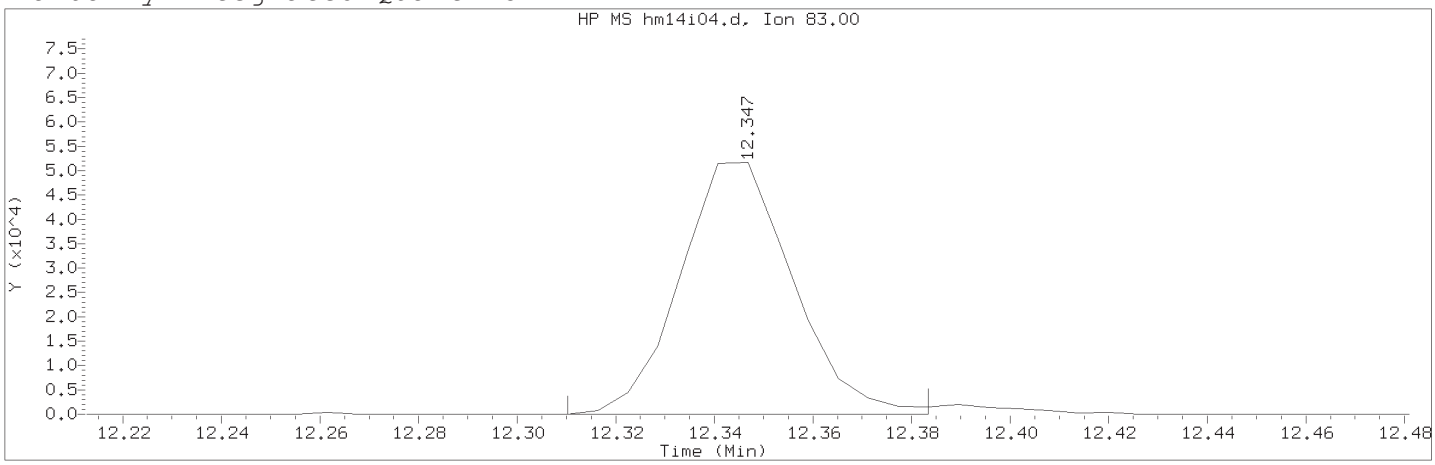
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1153
Retention Time (minutes): 8.616
Quant Ion : 69.00
Area : 40958
On-column Amount (ng) : 1.5431
Integration start scan : 1142 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

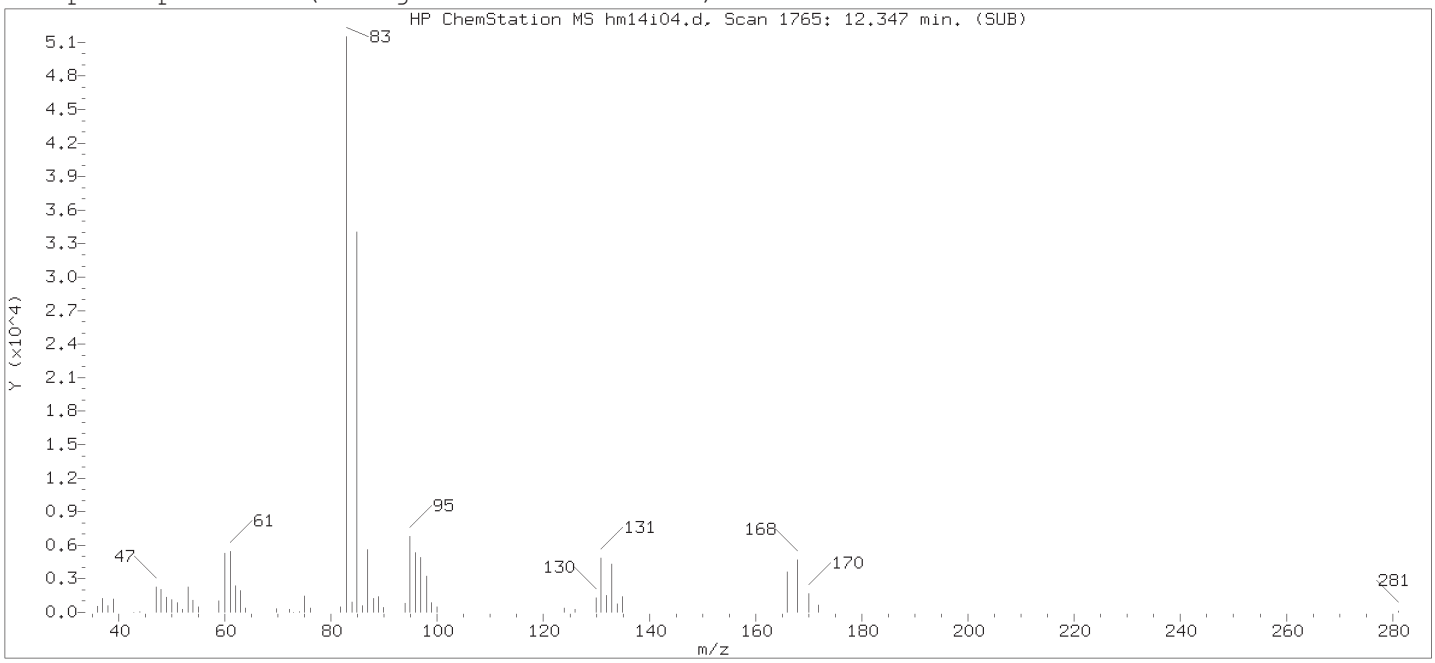
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 82205M
On-Column Amount (ng) : 1.8767
Integration start scan : 1758 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

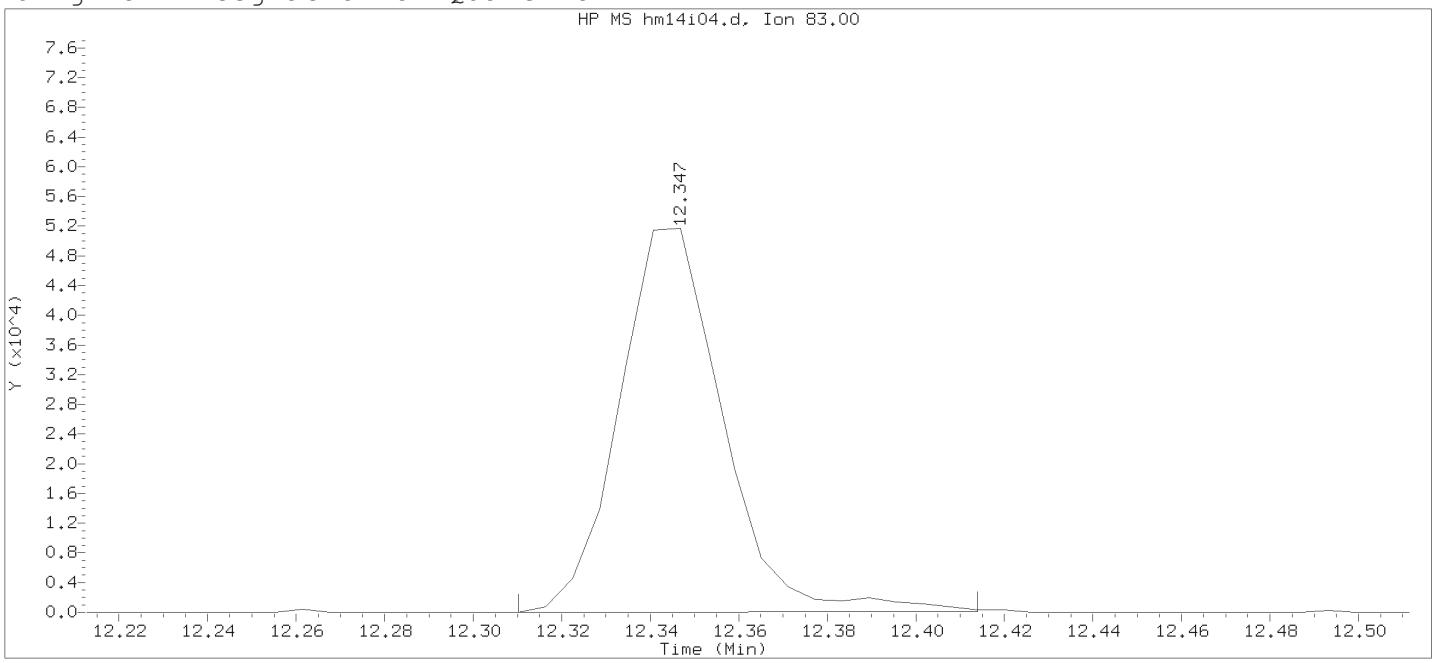
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

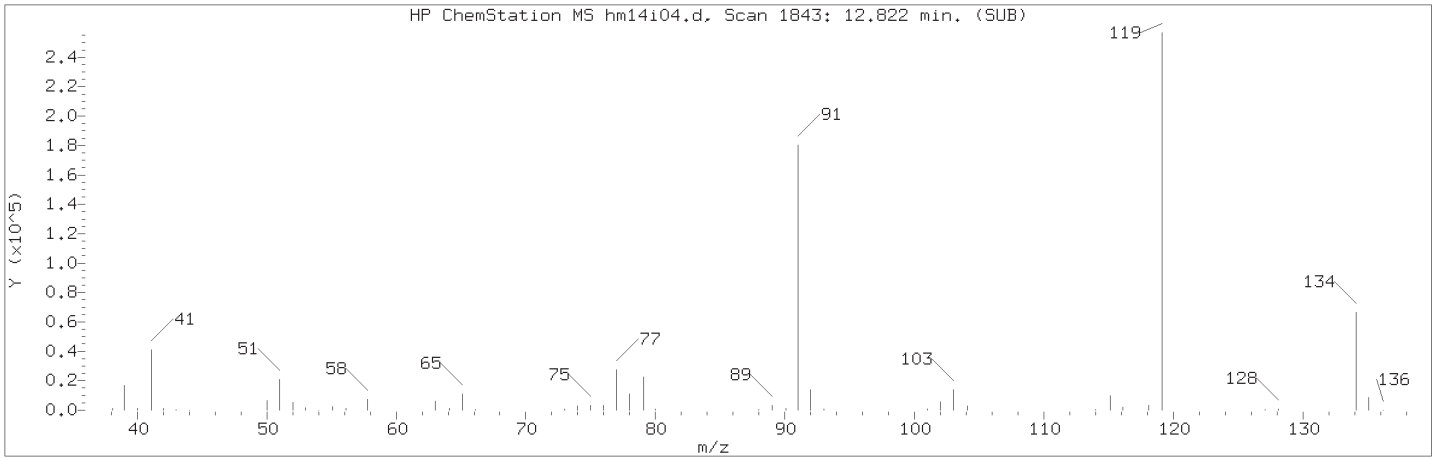
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

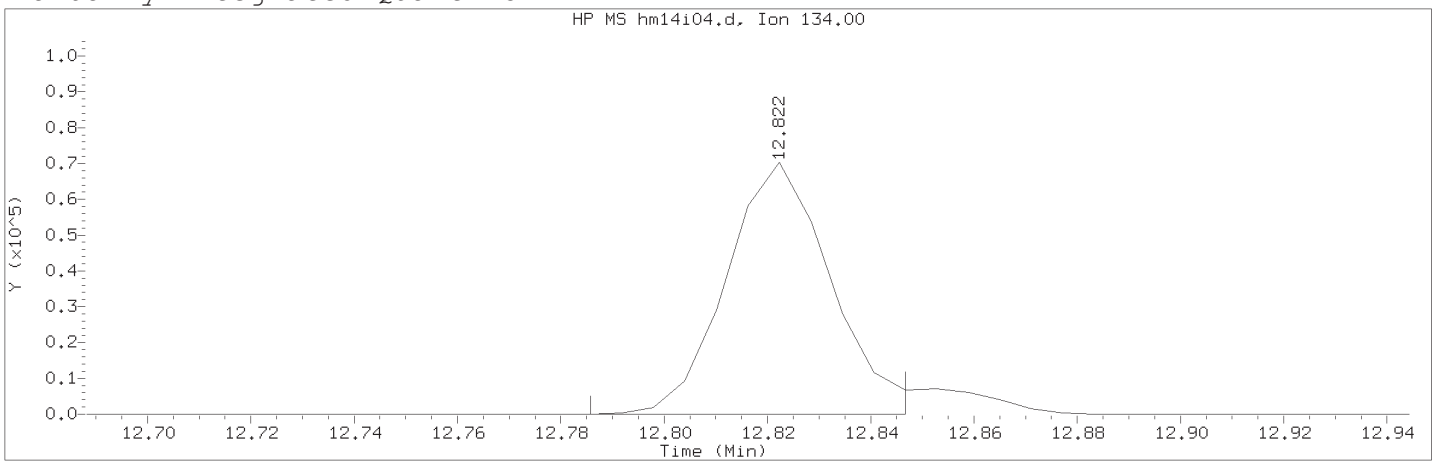
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 83949
On-column Amount (ng) : 2.0241
Integration start scan : 1758 Integration stop scan: 1775
Y at integration start : 0 Y at integration end: 78

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

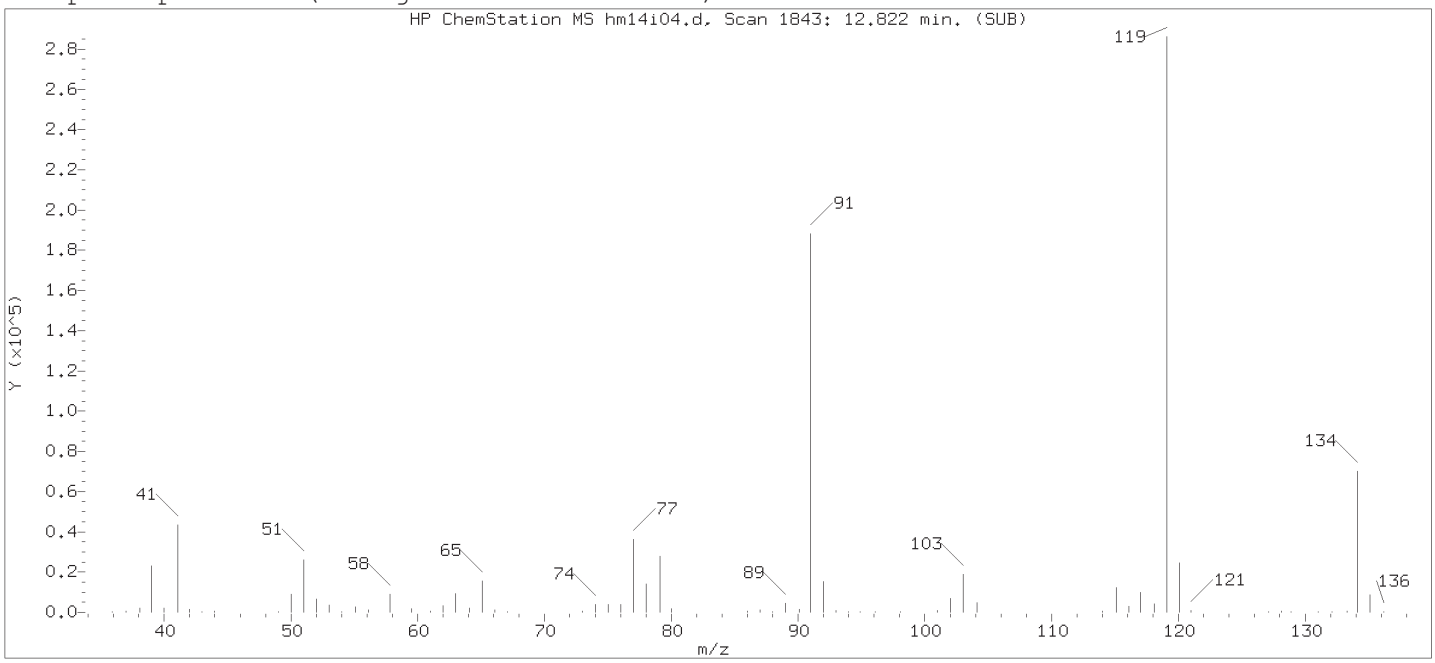
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 98583M
On-Column Amount (ng) : 1.8796
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

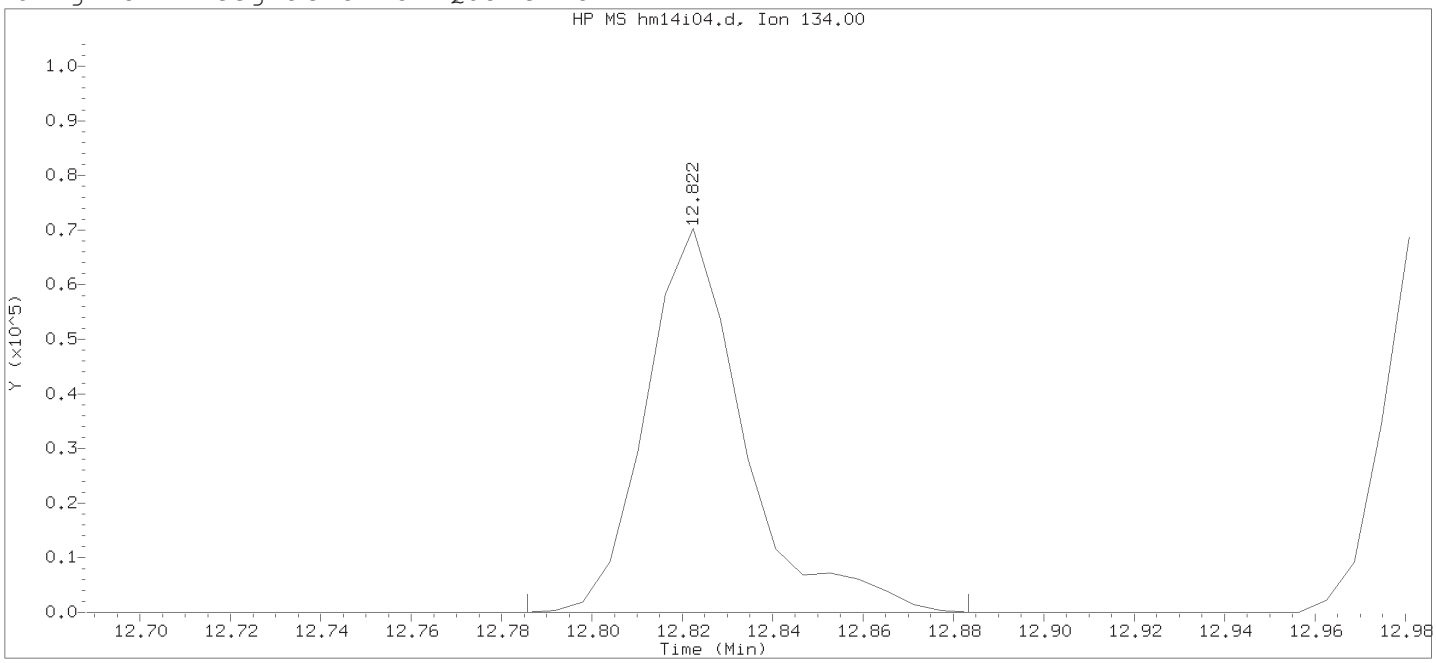
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



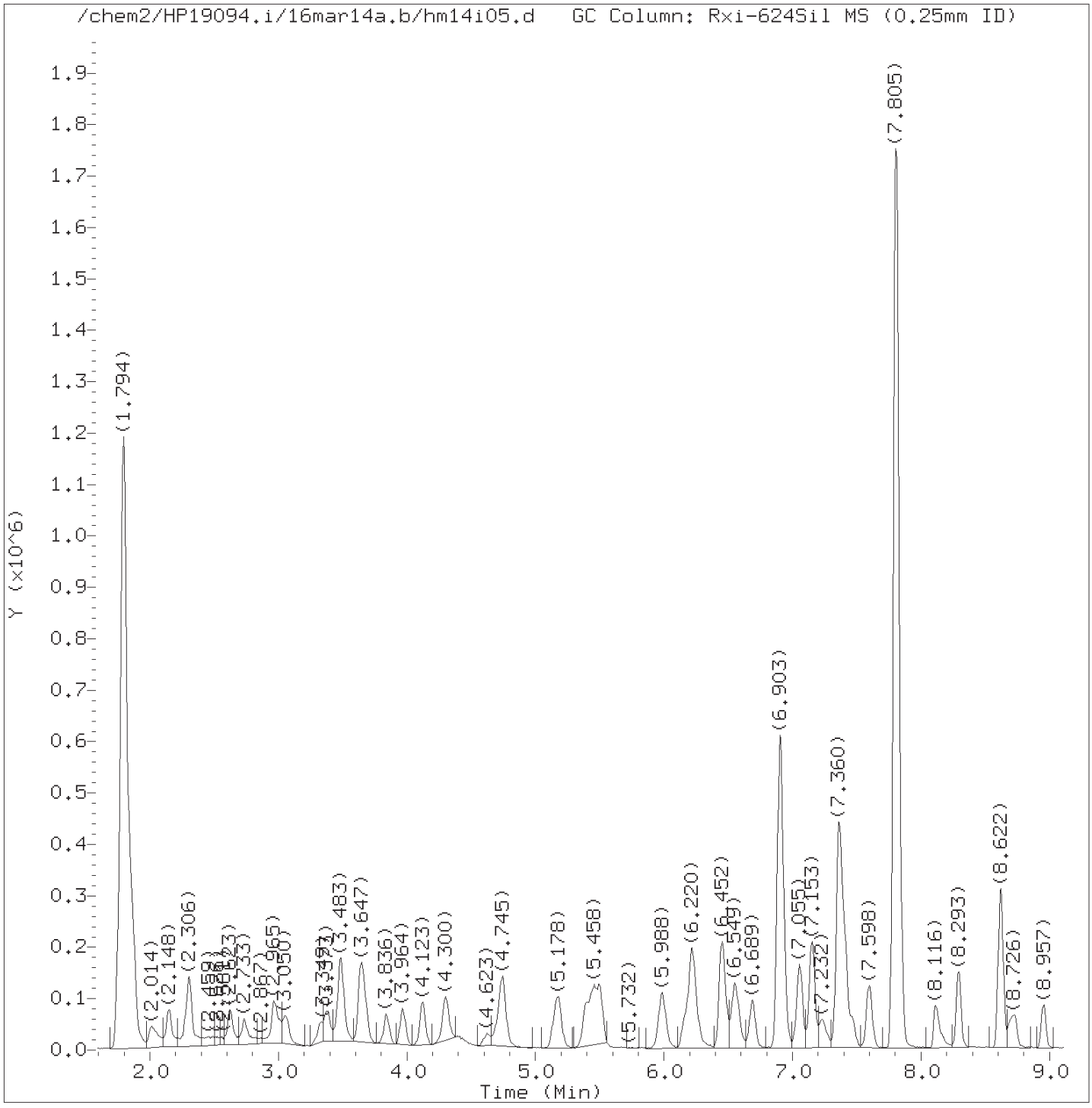
Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 105559
On-column Amount (ng) : 2.0329
Integration start scan : 1836 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature used: kel01973



Total Ion Chromatogram (TIC)

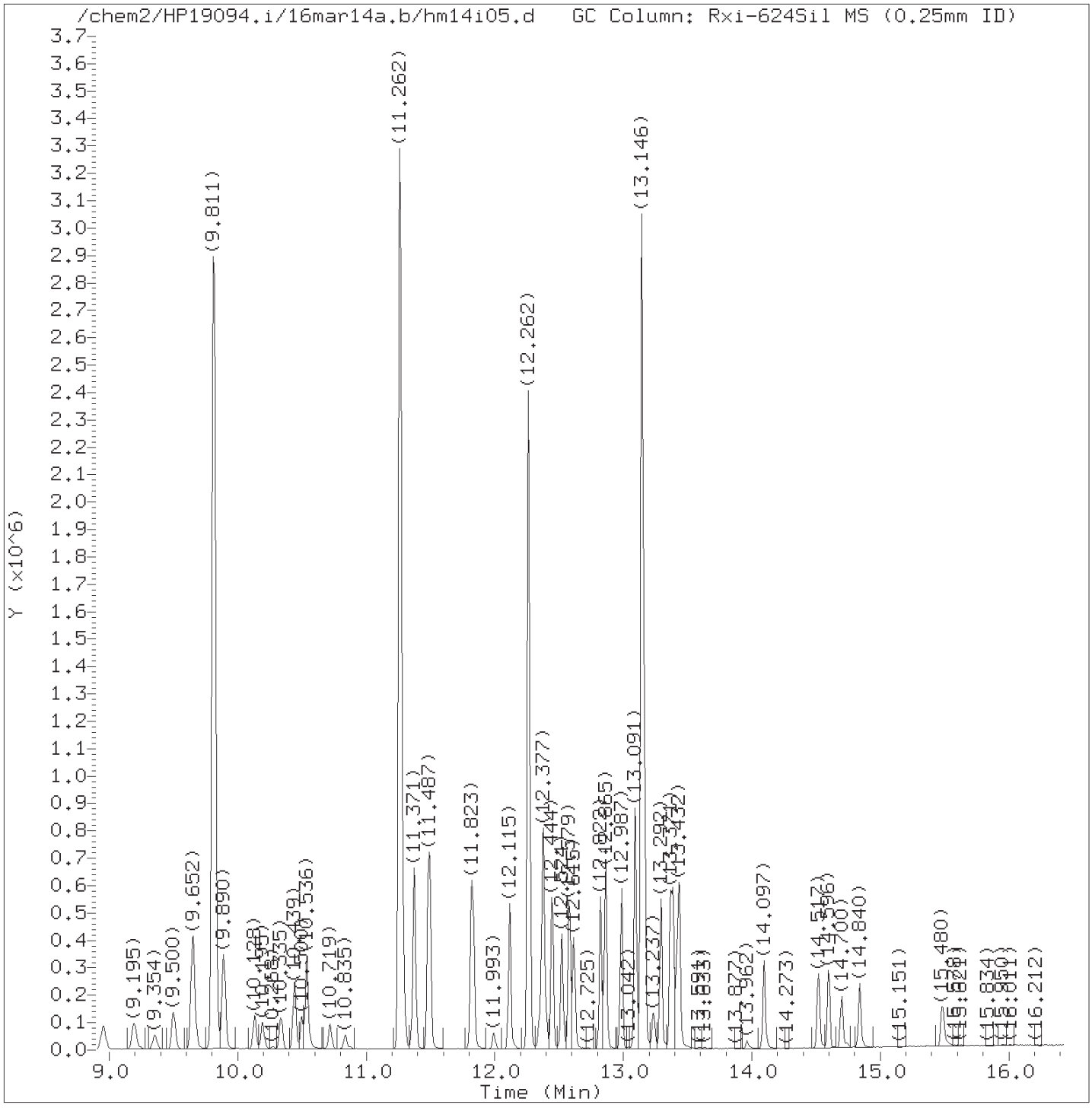
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	90824	1.117
2) Chloromethane	(2)	2.148	50	86848	1.089
5) Vinyl Chloride	(2)	2.282	62	77575	1.046
6) 1,3-Butadiene	(2)	2.306	39	58441M	1.041
7) Bromomethane	(2)	2.617	94	51798	1.052
8) Chloroethane	(2)	2.739	64	48041	1.050
9) Dichlorofluoromethane	(2)	2.965	67	111313	1.073
10) Trichlorofluoromethane	(2)	3.050	101	102392	1.059
11) Ethyl ether	(2)	3.318	59	39723	0.996
12) Freon 123a	(2)	3.385	67	81176	1.098
13) Acrolein	(1)	3.483	56	338250	51.511
15) 1,1-Dichloroethene	(2)	3.635	96	58799	1.060
14) Acetone	(1)	3.647	43	92940M	10.271
16) Freon 113	(2)	3.666	101	62827	1.089
17) Methyl Iodide	(2)	3.836	142	110580	1.077
18) Carbon Disulfide	(2)	3.964	76	180063	1.052
21) Methyl Acetate	(1)	4.092	43	22761	0.896
22) Allyl Chloride	(2)	4.123	41	102626	0.979
26)*t-Butyl Alcohol-d10	(1)	4.288	65	115170	50.000
23) Methylene Chloride	(2)	4.306	84	64037	1.080
28) t-Butyl Alcohol	(1)	4.416	59	66690M	21.536
29) Acrylonitrile	(1)	4.623	53	55580	5.119
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	133271	1.042
31) trans-1,2-Dichloroethene	(2)	4.751	96	64235	1.076
32) n-Hexane	(2)	5.178	57	111465	1.100
33) 1,1-Dichloroethane	(2)	5.391	63	125312	1.030
34) di-Isopropyl Ether	(2)	5.458	45	221898	1.044
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	106915	1.070
37) Ethyl t-butyl ether	(2)	5.988	59	188215M	1.051
40) 1,2-Dichloroethene (Total)	(2)		96	134411	2.137
38) 2-Butanone	(1)	6.165	43	155295	10.072
39) cis-1,2-Dichloroethene	(2)	6.214	96	70176	1.061
42) Propionitrile	(1)	6.226	54	79710	20.733
41) 2,2-Dichloropropane	(2)	6.232	77	103830	1.066
45) Methacrylonitrile	(1)	6.458	67	130992	9.951
47) Bromochloromethane	(2)	6.549	128	25933	1.030
48) Tetrahydrofuran	(1)	6.555	71	39184	10.046
49) Chloroform	(2)	6.689	83	117044	1.052

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	558930	10.056
50)$Dibromofluoromethane	(2)	6.903	111	575455	10.062
51) 1,1,1-Trichloroethane	(2)	6.939	97	98160	1.034
52) Cyclohexane	(2)	7.061	56	133716	1.078
52) Cyclohexane	(2)	7.055	84	102626	1.081
52) Cyclohexane	(2)	7.055	69	38732	1.092
55) 1,1-Dichloropropene	(2)	7.147	75	97878	1.075
54) Carbon Tetrachloride	(2)	7.159	117	92169	1.068
56) Isobutyl Alcohol	(1)	7.232	41	56777	51.746
57)$1,2-Dichloroethane-d4	(2)	7.360	102	92087	10.003
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476091	10.130
57)$1,2-Dichloroethane-d4	(2)	7.360	104	59190	10.183
58) Benzene	(2)	7.409	78	266449	1.051
59) 1,2-Dichloroethane	(2)	7.464	62	69113M	1.052
60) t-Amyl methyl ether	(2)	7.598	73	155840	1.064
63)*Fluorobenzene	(2)	7.805	96	2358734	10.000
62) n-Heptane	(2)	7.830	43	129863	1.133
65) n-Butanol	(1)	8.116	56	96518	109.290
67) Trichloroethene	(2)	8.293	95	70014	1.060
70) 1,2-Dichloropropane	(2)	8.622	63	70333	1.066
69) Methylcyclohexane	(2)	8.628	83	114418	1.057
71) Methyl Methacrylate	(1)	8.695	69	26979A	0.981
72) 1,4-Dioxane	(1)	8.713	88	10458	60.106
73) Dibromomethane	(2)	8.732	93	28208	1.038
74) Bromodichloromethane	(2)	8.957	83	79407	1.046
76) 2-Nitropropane	(1)	9.195	41	90337	10.246
80) cis-1,3-Dichloropropene	(2)	9.500	75	96651	1.036
81) 4-Methyl-2-Pentanone	(1)	9.652	43	387421	10.210
82)$Toluene-d8	(3)	9.811	98	2314810	9.954
82)$Toluene-d8	(3)	9.811	100	1492208	9.913
83) Toluene	(3)	9.890	92	165369	1.056
84) trans-1,3-Dichloropropene	(3)	10.128	75	75692	1.031
85) 1,3-Dichloropropene (total)	(3)		75	172343	2.067
86) Ethyl Methacrylate	(3)	10.195	69	58979M	1.044
88) 1,1,2-Trichloroethane	(3)	10.335	97	38621	1.018
89) Tetrachloroethene	(3)	10.445	166	77846	1.052
90) 1,3-Dichloropropane	(3)	10.500	76	71521	1.048
91) 2-Hexanone	(1)	10.536	43	279210	10.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	49840	1.025
95) 1,2-Dibromoethane	(3)	10.835	107	36641	1.025
97)*Chlorobenzene-d5	(3)	11.262	117	1632519	10.000
98) Chlorobenzene	(3)	11.292	112	178955	1.049
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	61163	1.046
100) Ethylbenzene	(3)	11.378	91	322880	1.053
101) m+p-Xylene	(3)	11.493	106	246499	2.108
105) Xylene (Total)	(3)		106	365764	3.159
104) o-Xylene	(3)	11.817	106	119265	1.051
106) Styrene	(3)	11.835	104	189698	1.045
107) Bromoform	(3)	11.993	173	27300	1.012
108) Isopropylbenzene	(3)	12.115	105	319515	1.062
111)$4-Bromofluorobenzene	(3)	12.262	95	759607	10.133
111)$4-Bromofluorobenzene	(3)	12.262	174	626593	10.025
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	47675	1.040
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	119030A	10.187
114) Bromobenzene	(4)	12.383	156	69551	1.019
116) 1,2,3-Trichloropropane	(4)	12.402	110	11715	1.018
117) n-Propylbenzene	(4)	12.444	91	384967	1.042
119) 2-Chlorotoluene	(4)	12.524	126	73519	1.032
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	270152	1.049
122) 4-Chlorotoluene	(4)	12.615	126	75710	1.043
125) tert-Butylbenzene	(4)	12.822	134	58224M	1.061
126) Pentachloroethane	(4)	12.853	167	41190	0.994
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	266450	1.035
128) sec-Butylbenzene	(4)	12.987	105	355663	1.067
131) 1,3-Dichlorobenzene	(4)	13.091	146	137619	1.030
132) p-Isopropyltoluene	(4)	13.097	119	291814	1.034
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	732410	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	139199	1.026
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	105569	0.989
136) Benzyl Chloride	(4)	13.231	126	18304	1.008
138) n-Butylbenzene	(4)	13.389	92	143045	1.036
139) 1,2-Dichlorobenzene	(4)	13.420	146	124256	1.047
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	5922	0.982
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	86509	1.019
146) Hexachlorobutadiene	(4)	14.596	225	48640	1.097
147) Naphthalene	(4)	14.700	128	150985	1.035

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

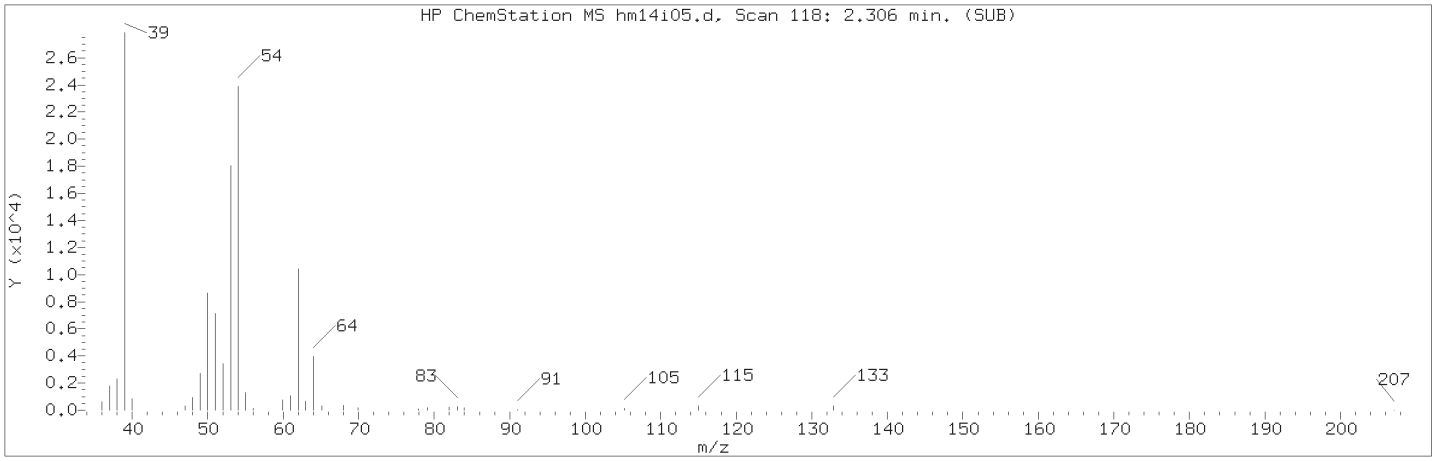
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

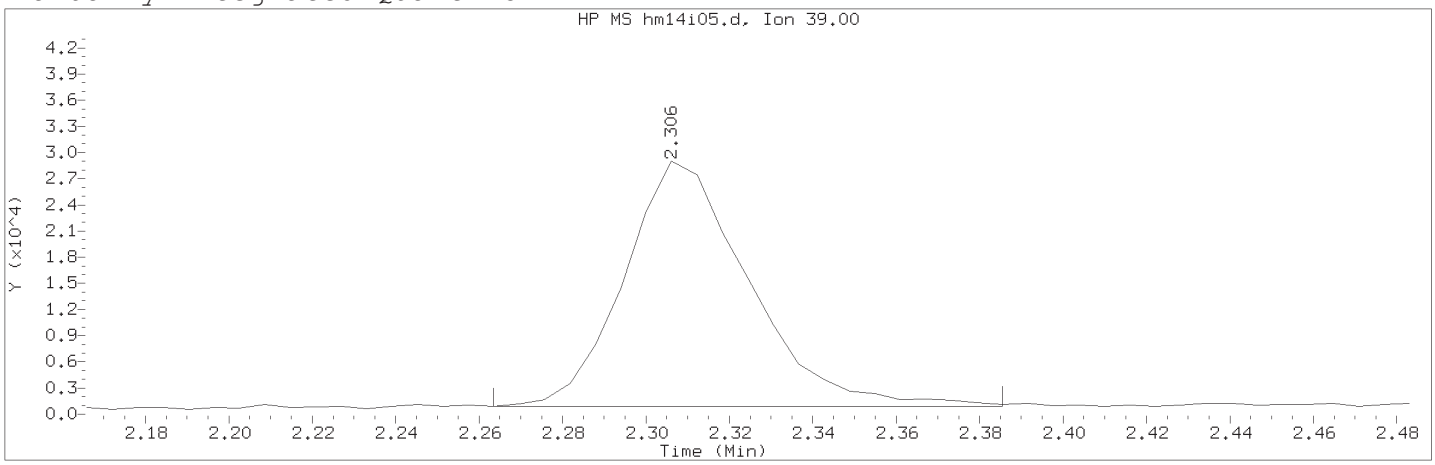
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	74970	1.106

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

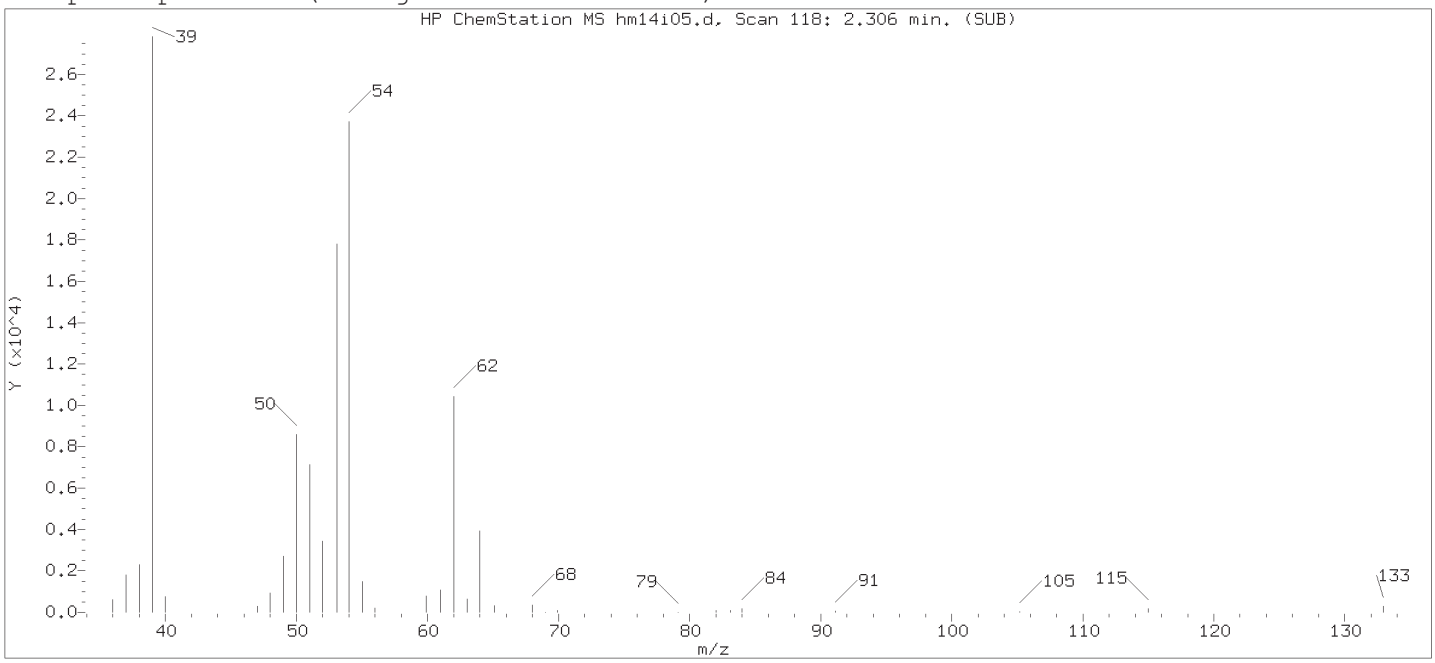
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 58441M
On-Column Amount (ng) : 1.0414
Integration start scan : 110 Integration stop scan: 130
Y at integration start : 866 Y at integration end: 866

Reason for manual integration: improper integration

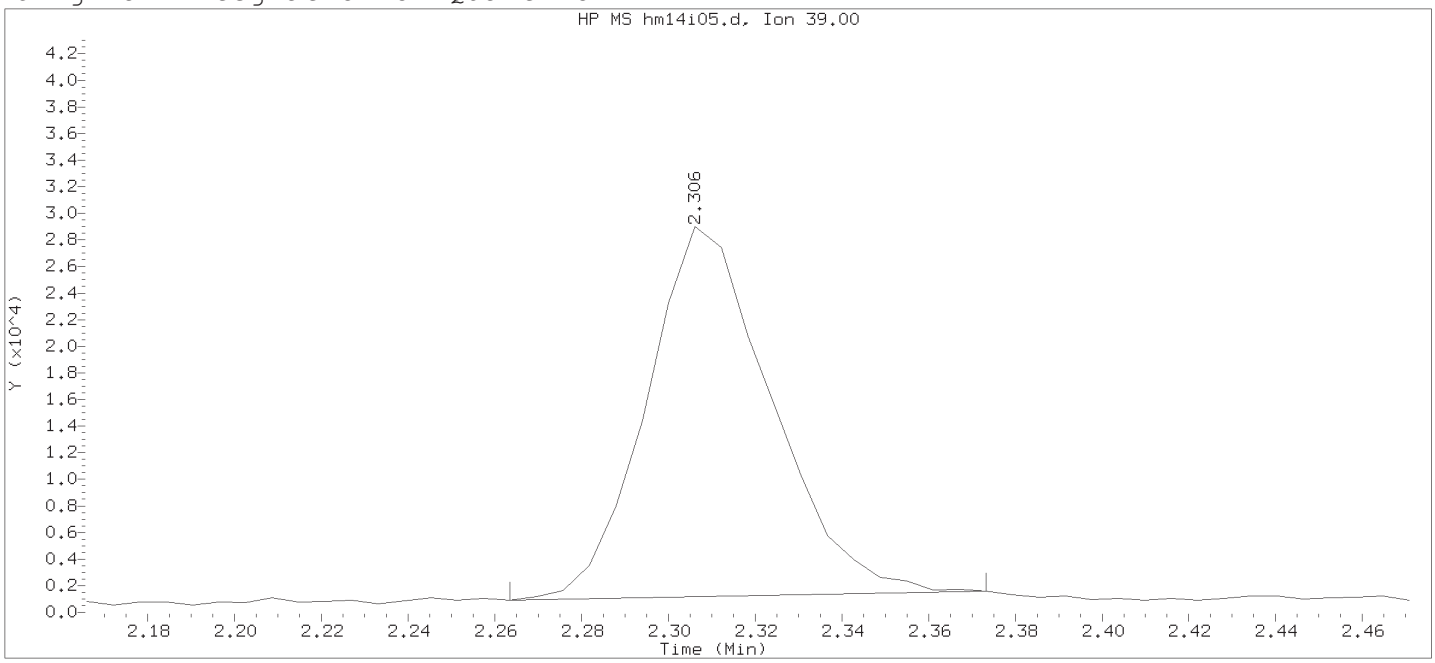
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

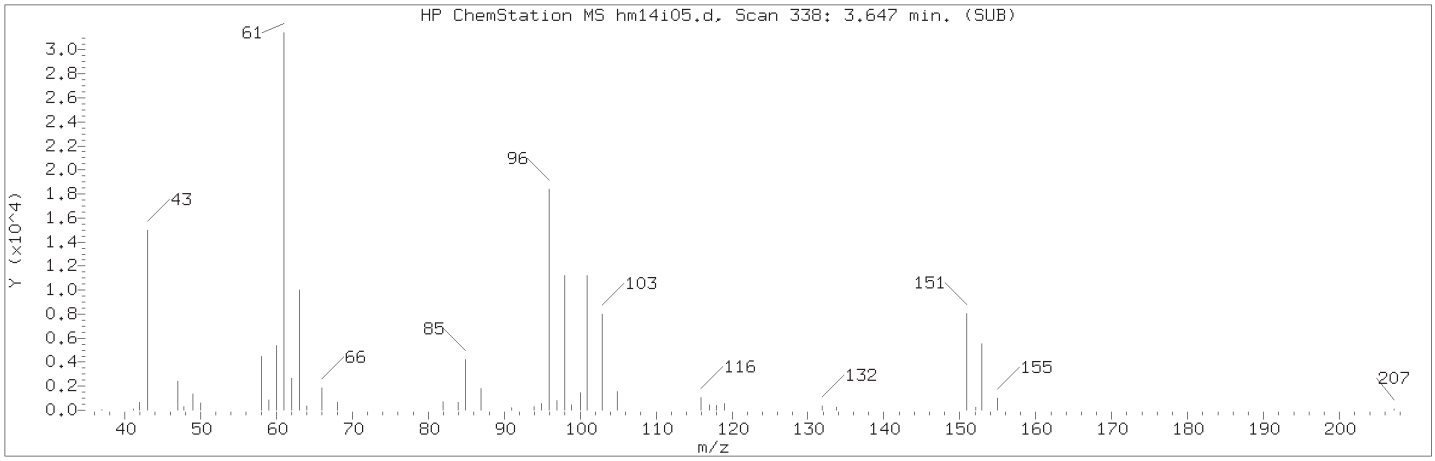
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

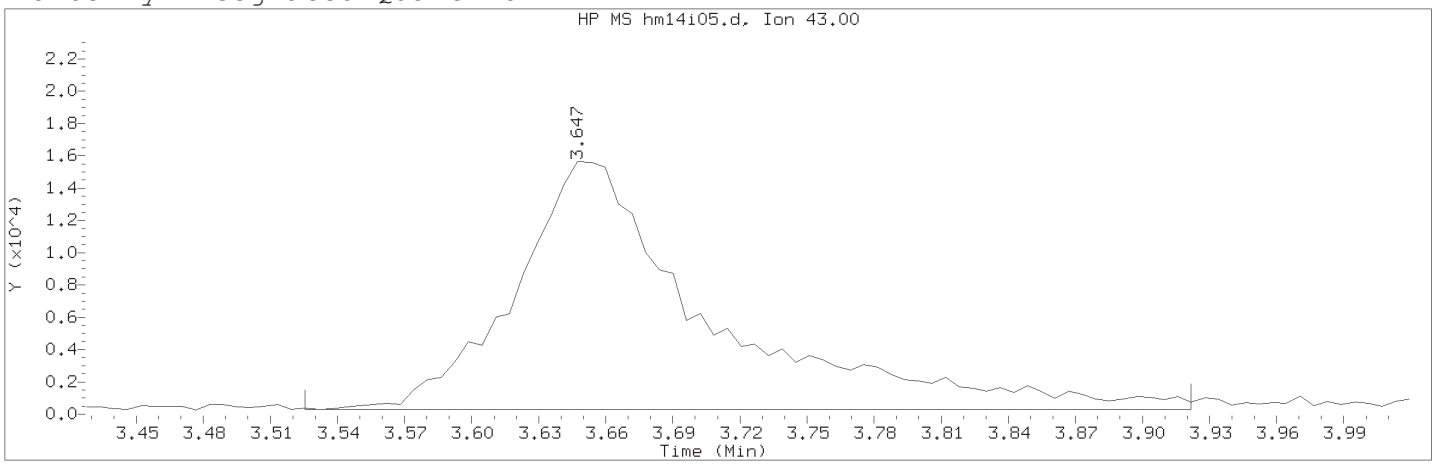
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 55576
On-column Amount (ng) : 1.0770
Integration start scan : 110 Integration stop scan: 128
Y at integration start : 903 Y at integration end: 1582

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

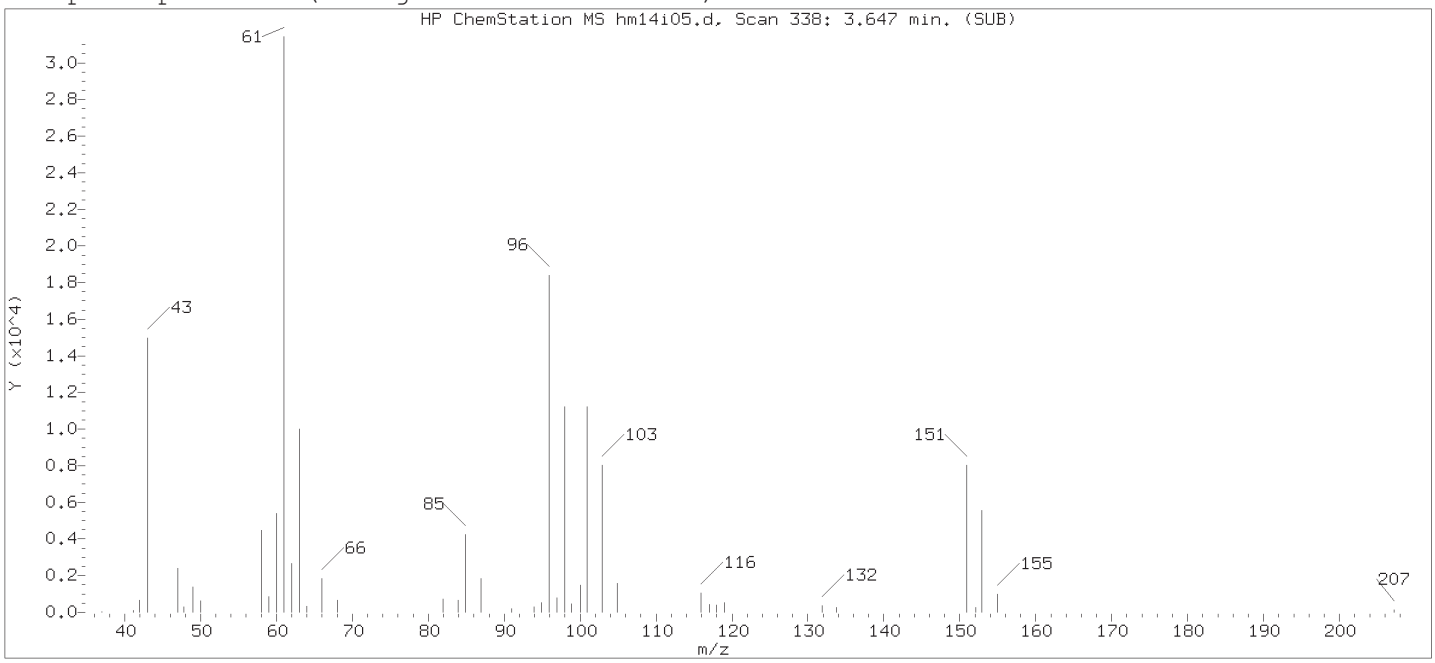
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 92940M
On-Column Amount (ng) : 10.2713
Integration start scan : 317 Integration stop scan: 382
Y at integration start : 282 Y at integration end: 282

Reason for manual integration: improper integration

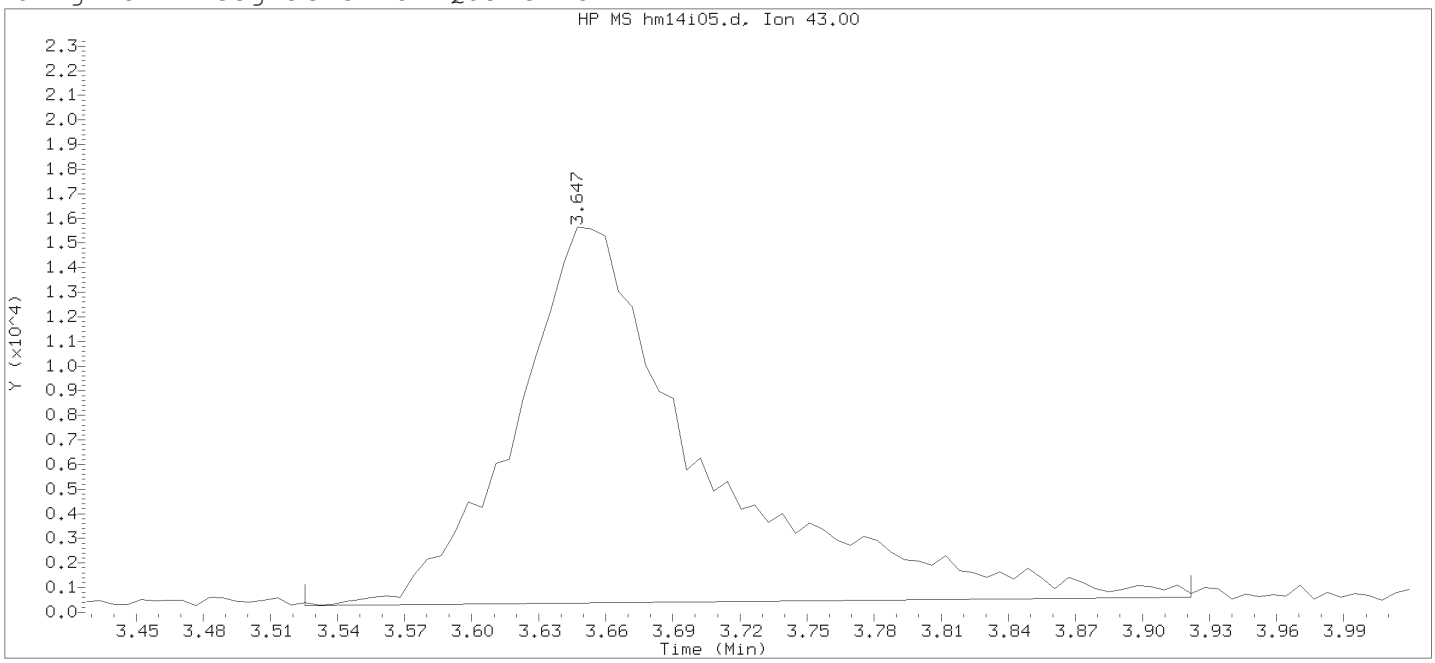
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

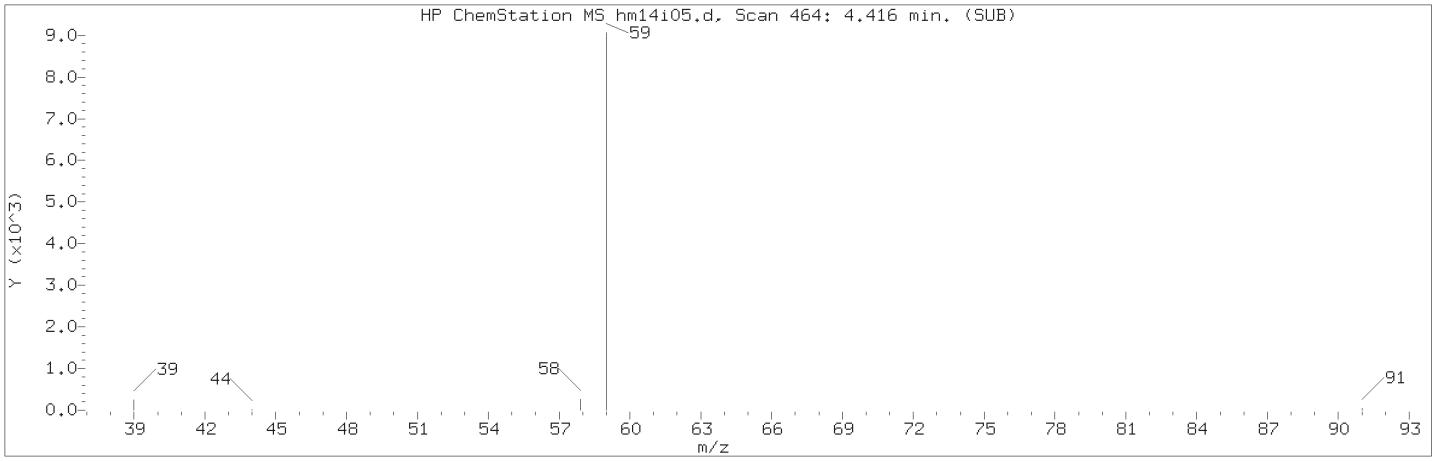
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

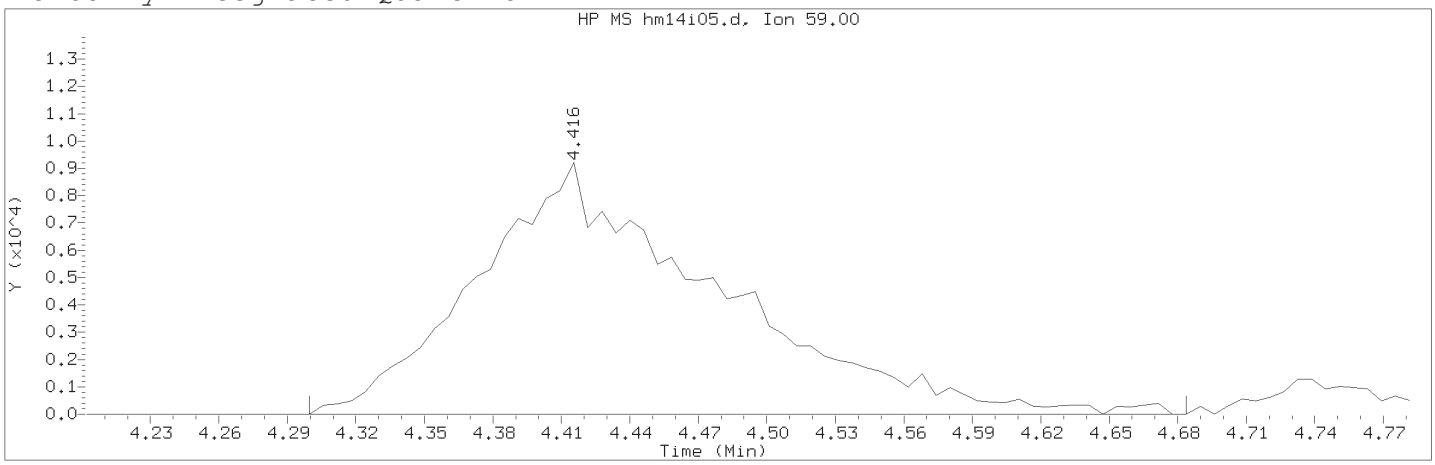
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 89041		
On-column Amount (ng)	: 10.7176		
Integration start scan	: 317	Integration stop scan:	382
Y at integration start	: 276	Y at integration end:	607

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

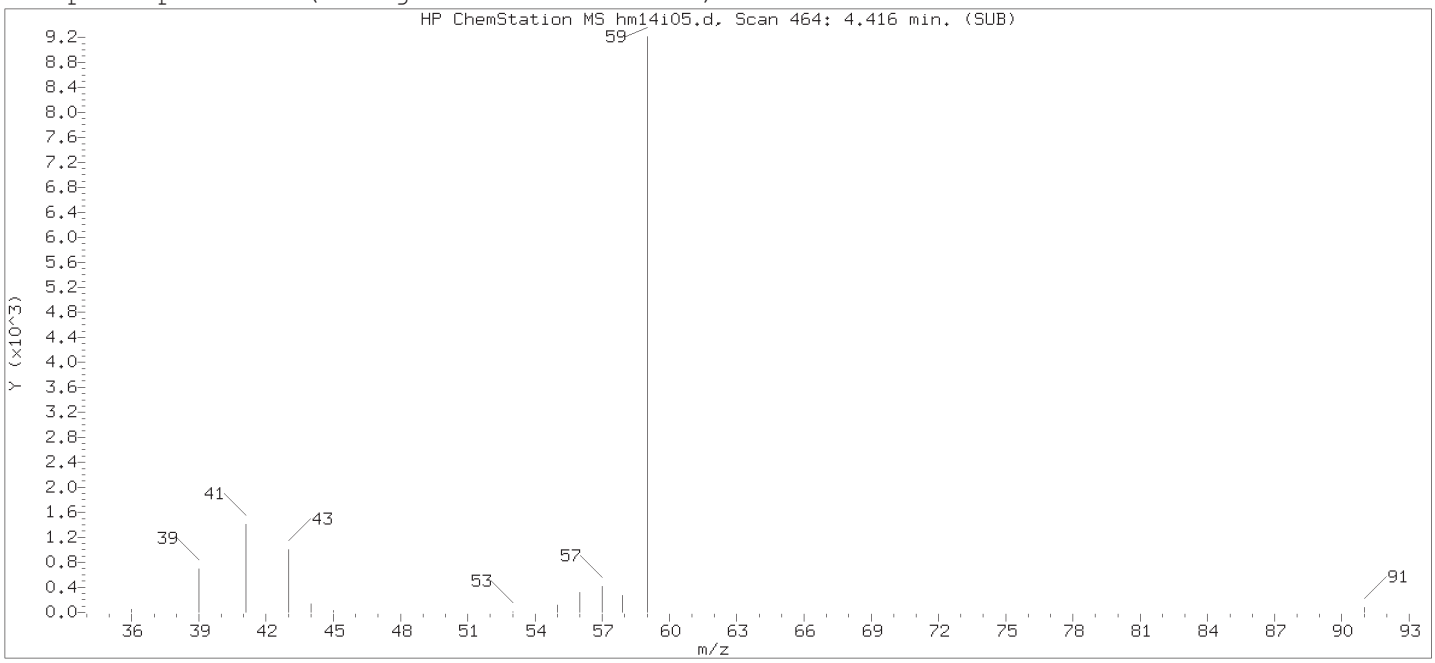
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area (flag) : 66690M
On-Column Amount (ng) : 21.5360
Integration start scan : 444 Integration stop scan: 507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

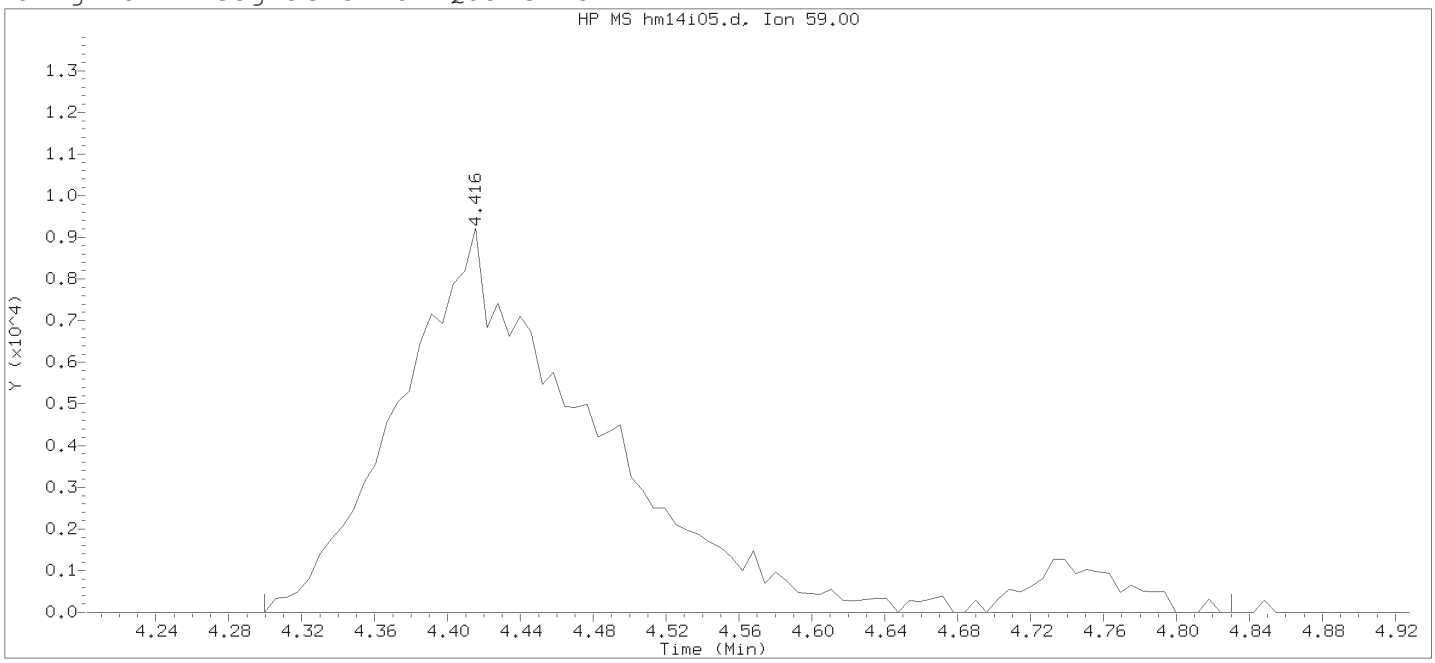
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

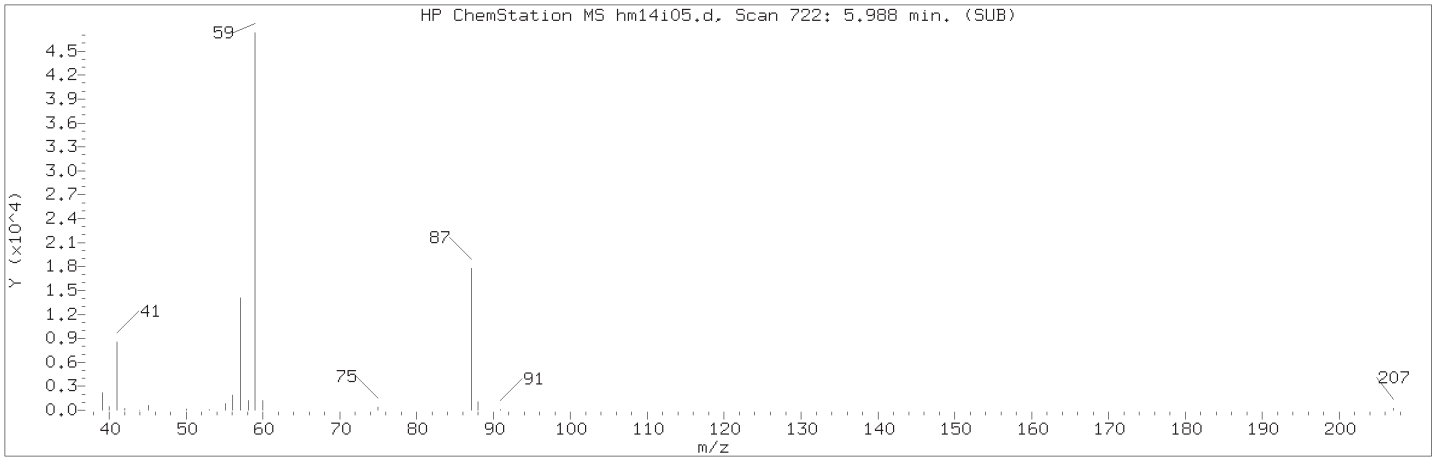
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

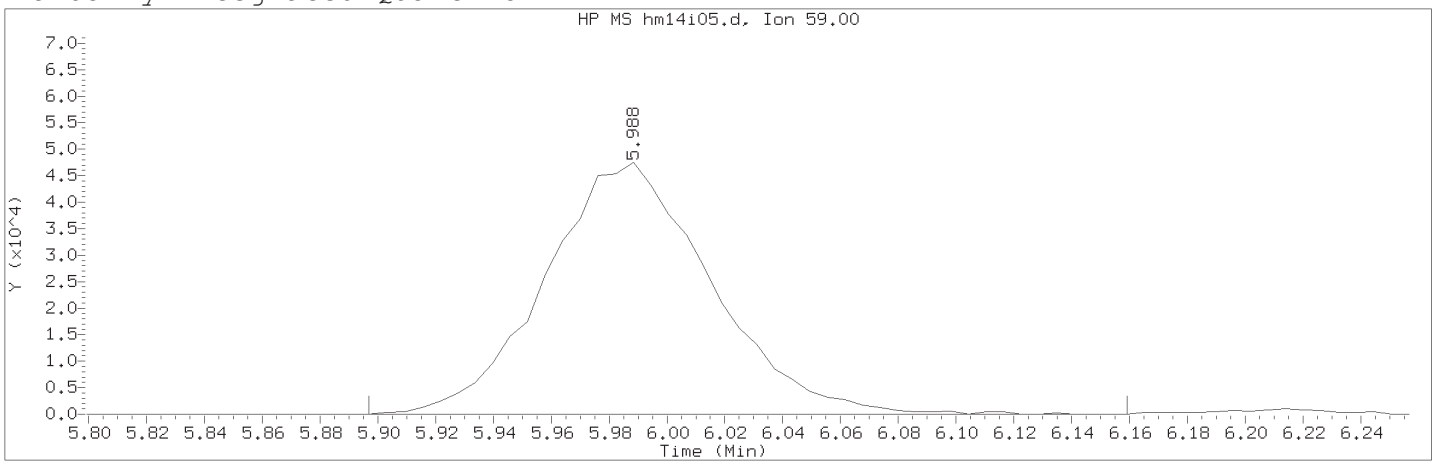
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area : 71245
On-column Amount (ng) : 23.7600
Integration start scan : 444 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: 14-MAR-2016 17:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

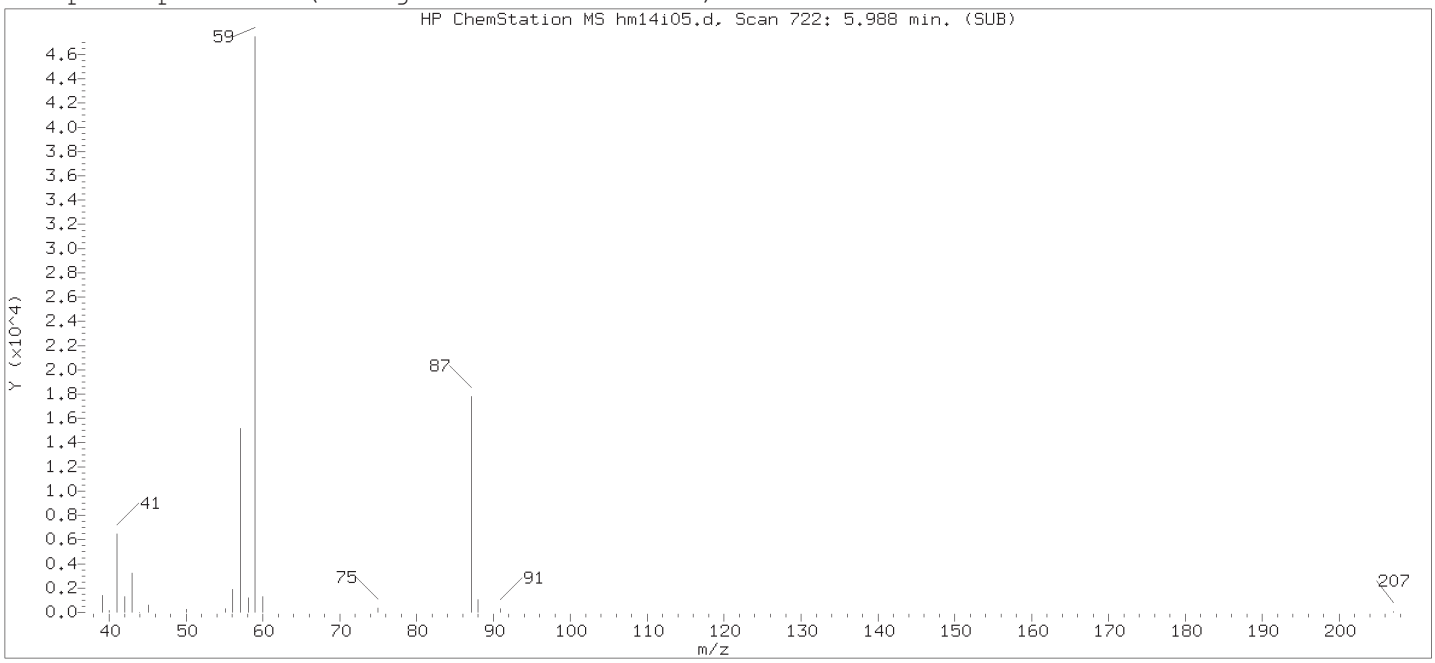
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 722
Retention Time (minutes): 5.988
Quant Ion : 59.00
Area (flag) : 188215M
On-Column Amount (ng) : 1.0505
Integration start scan : 706 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

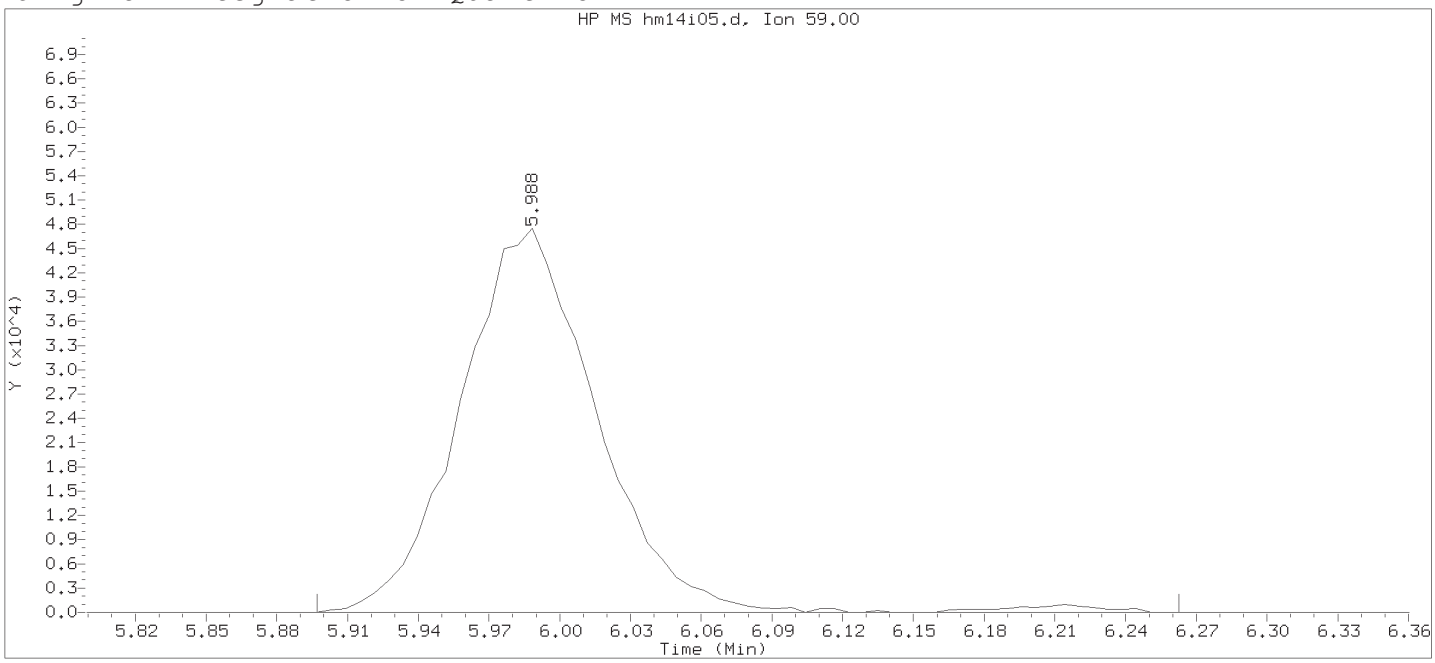
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

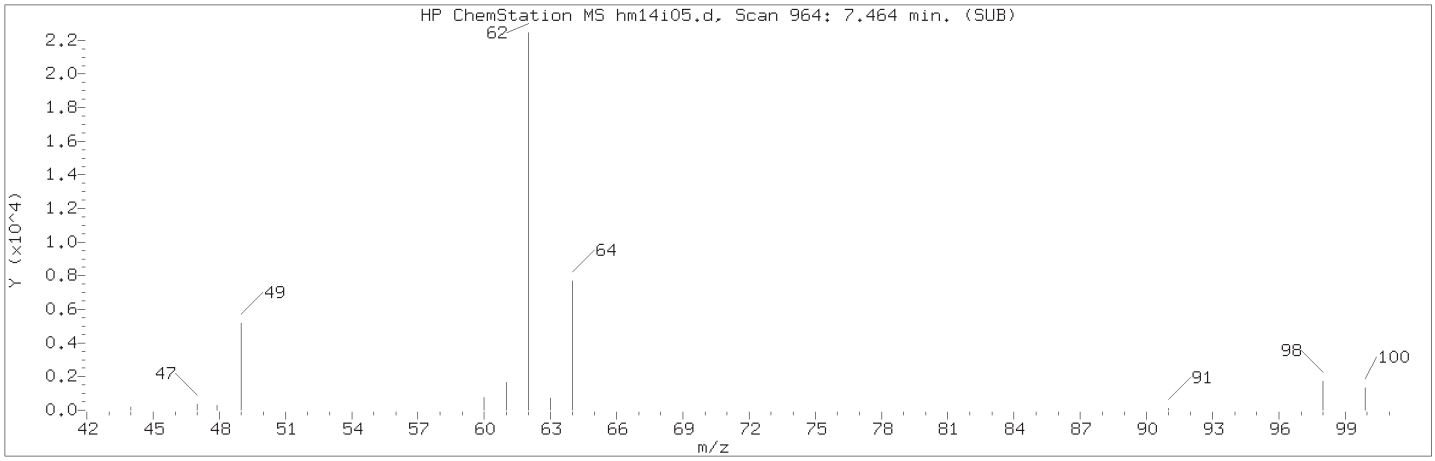
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

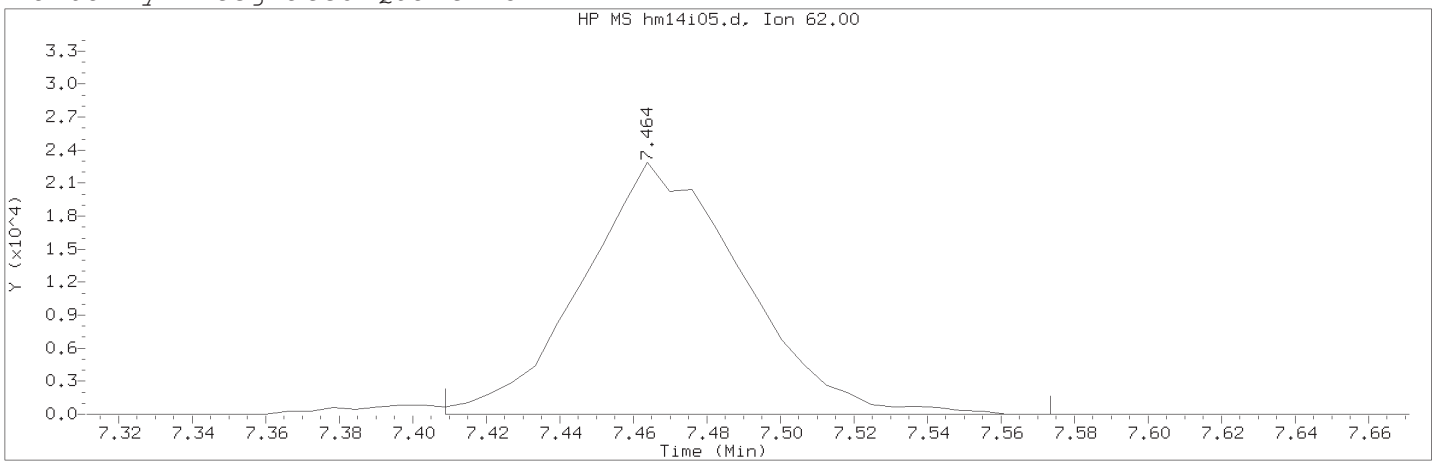
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 722
Retention Time (minutes): 5.988
Quant Ion : 59.00
Area : 190932
On-column Amount (ng) : 1.0821
Integration start scan : 706 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

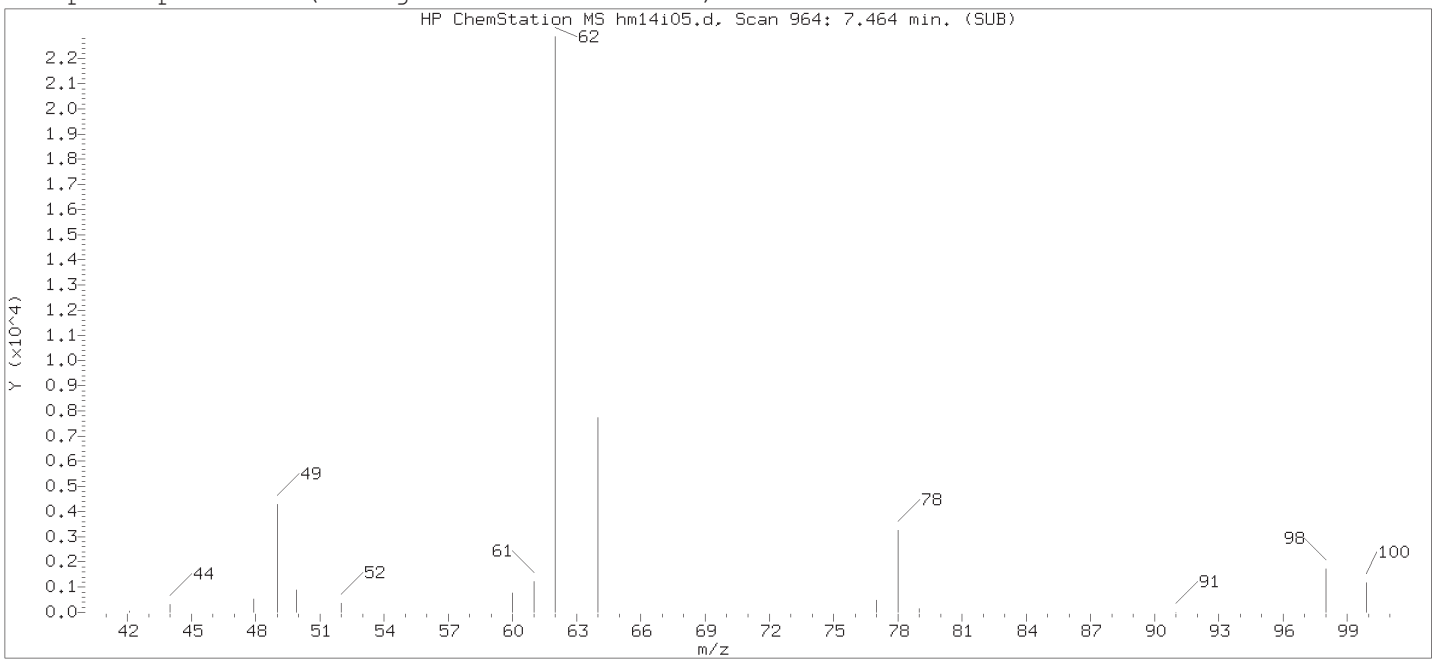
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 69113M
On-Column Amount (ng) : 1.0522
Integration start scan : 954 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

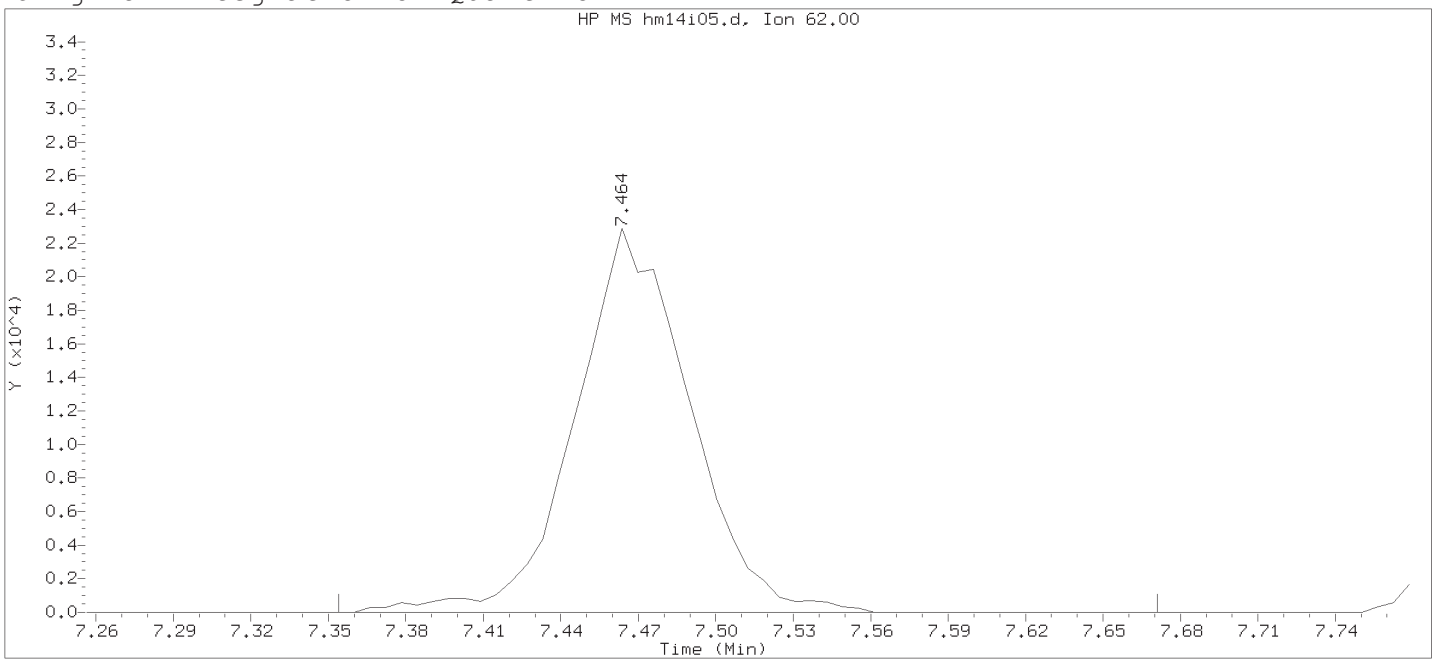
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

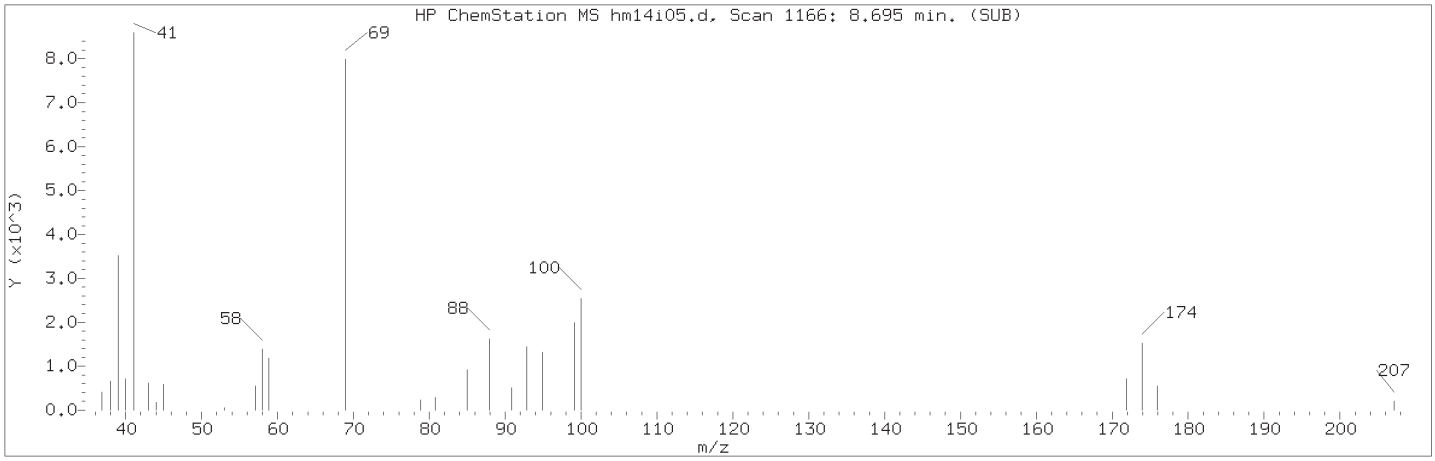
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

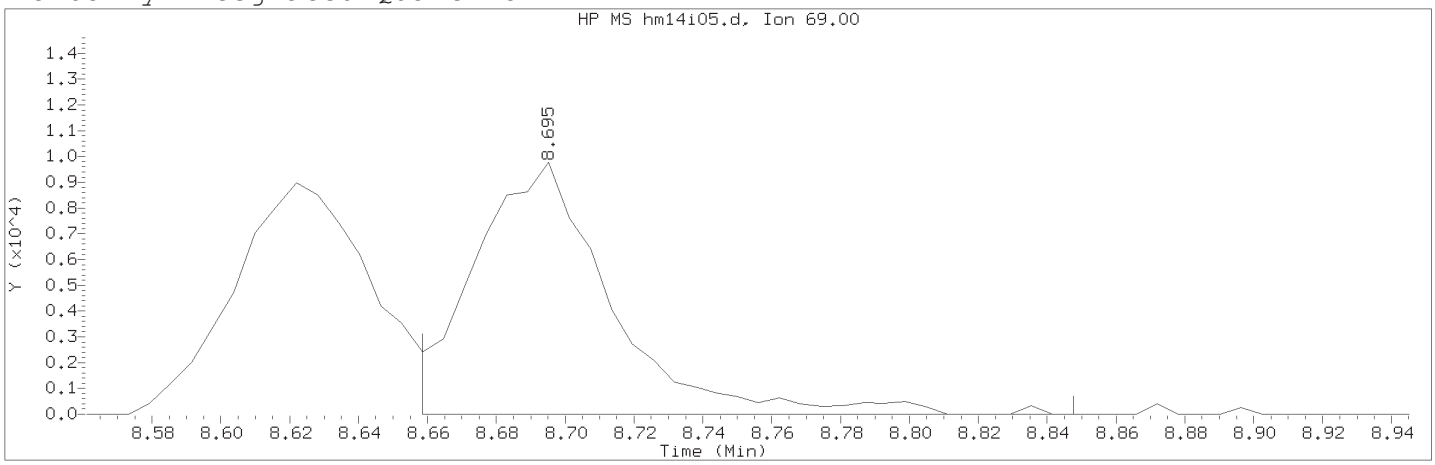
Compound Number	: 59		
Compound Name	: 1,2-Dichloroethane		
Scan Number	: 964		
Retention Time (minutes)	: 7.464		
Quant Ion	: 62.00		
Area	: 70540		
On-column Amount (ng)	: 1.0847		
Integration start scan	: 945	Integration stop scan:	997
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: 14-MAR-2016 17:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

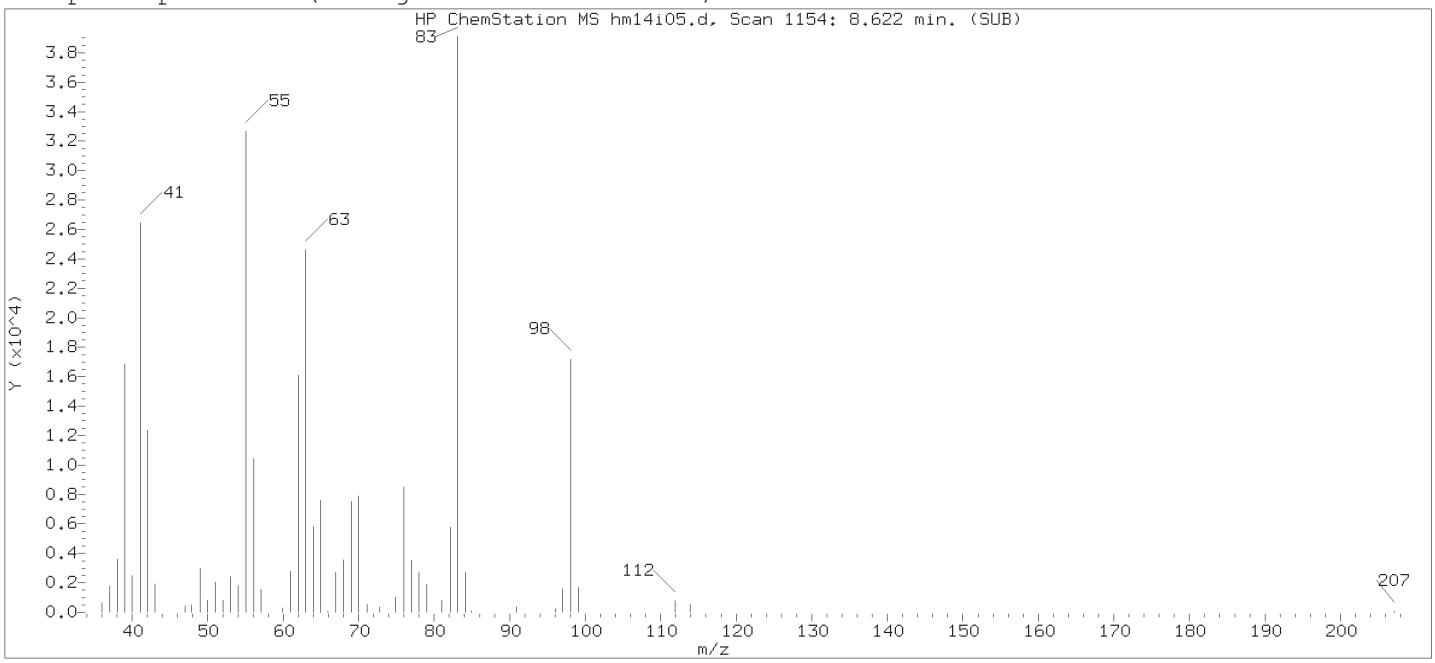
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 26979A
On-Column Amount (ng) : 0.9809
Integration start scan : 1159 Integration stop scan: 1190
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

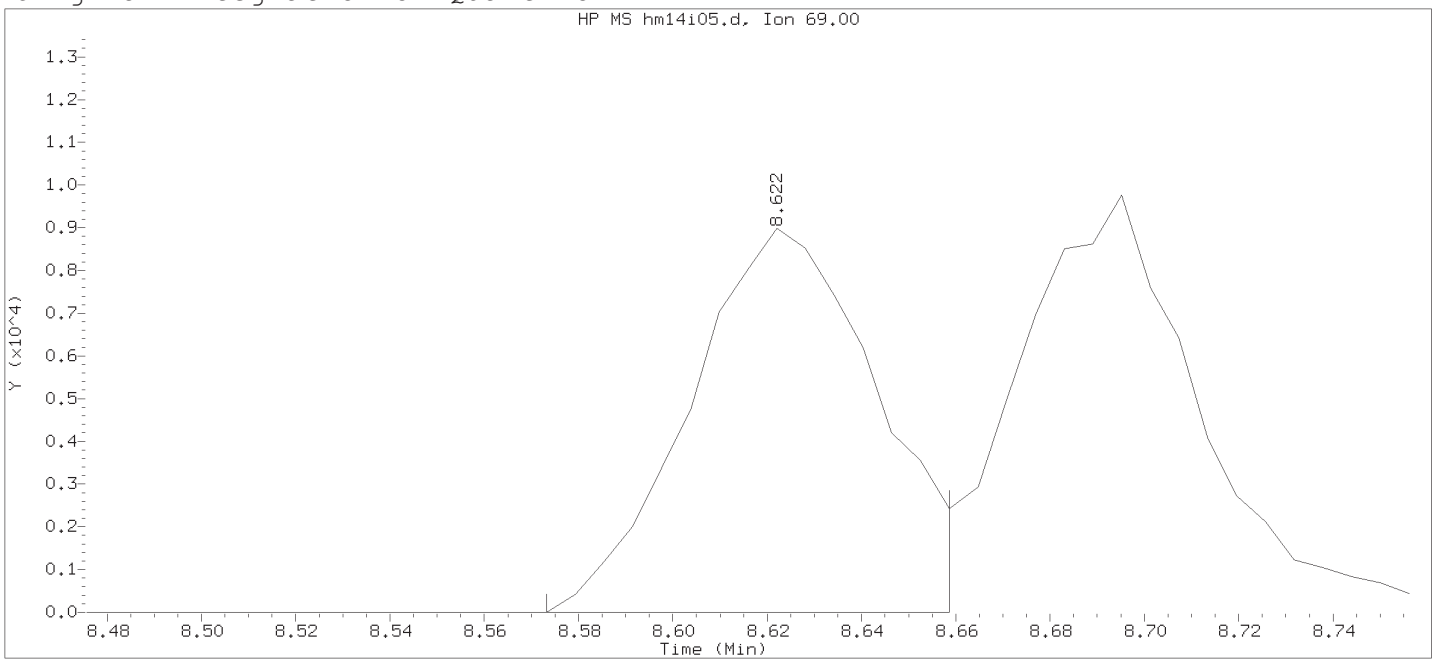
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

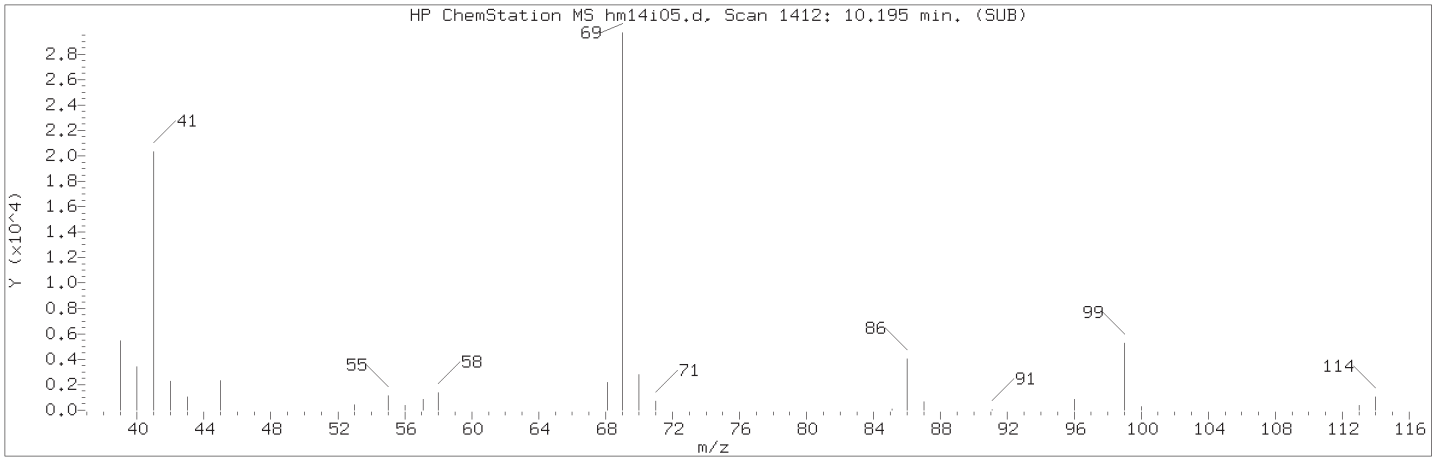
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

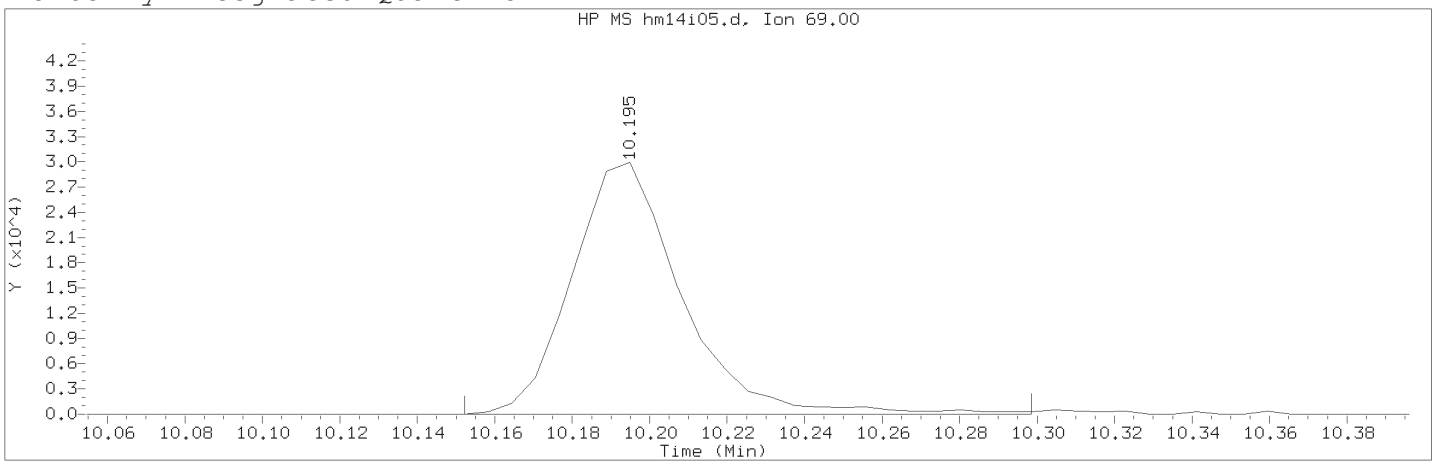
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 24473
On-column Amount (ng) : 0.8821
Integration start scan : 1145 Integration stop scan: 1159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

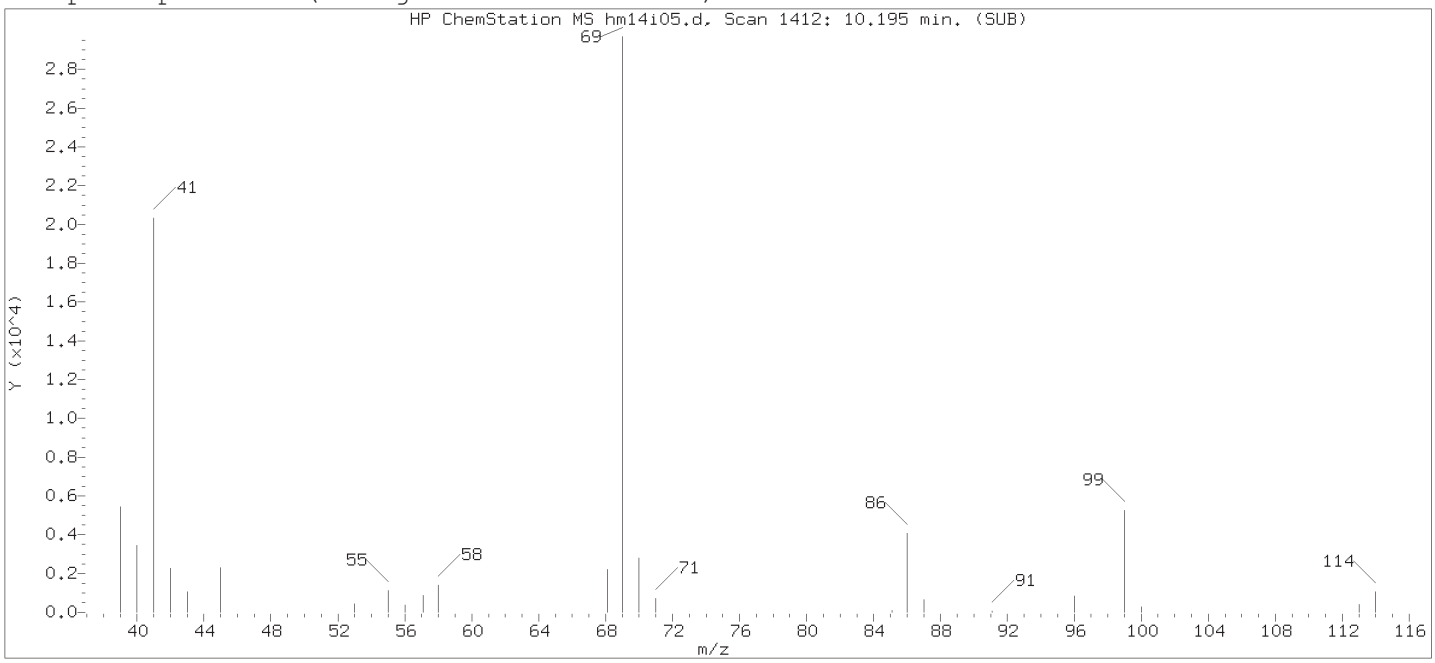
Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area (flag) : 58979M
On-Column Amount (ng) : 1.0442
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

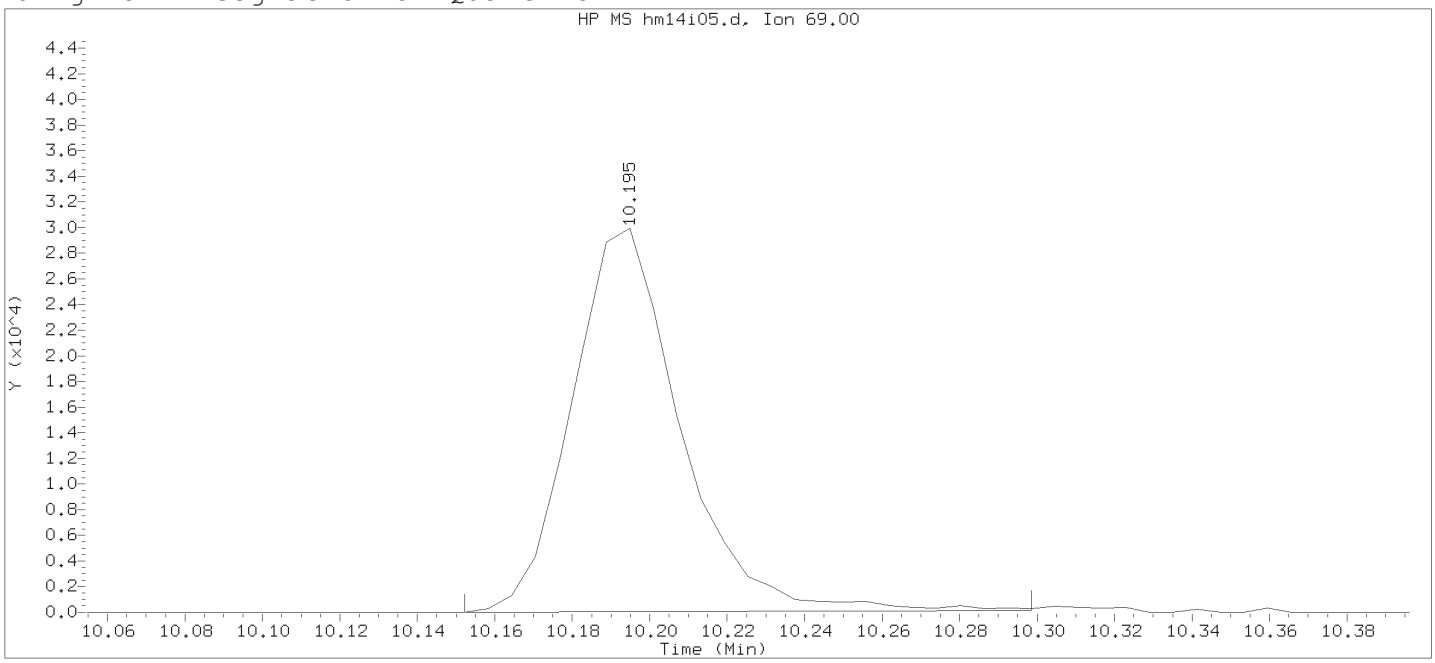
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

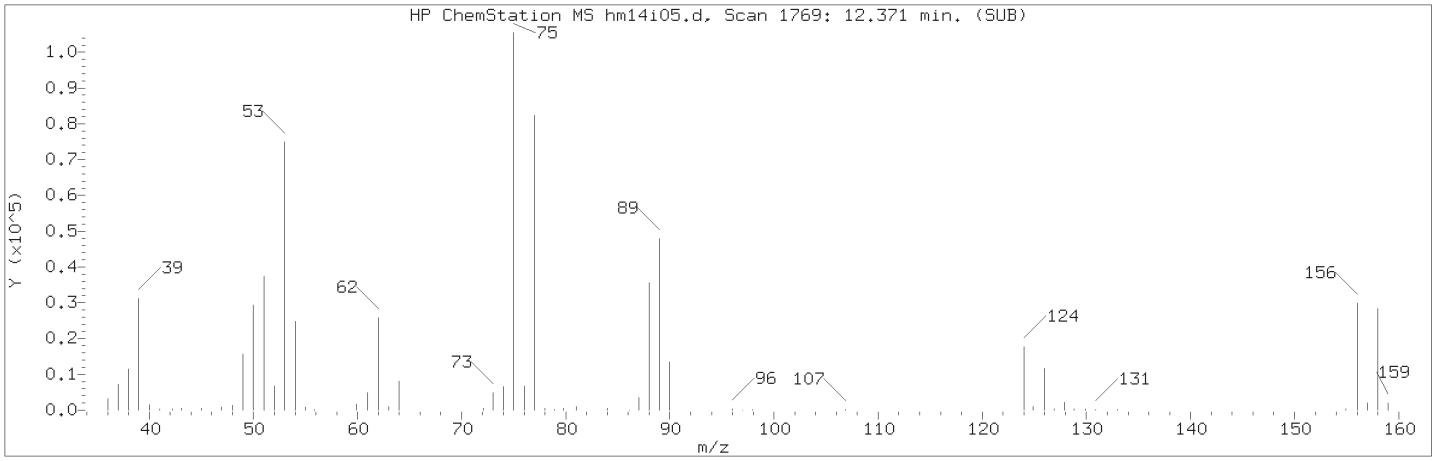
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

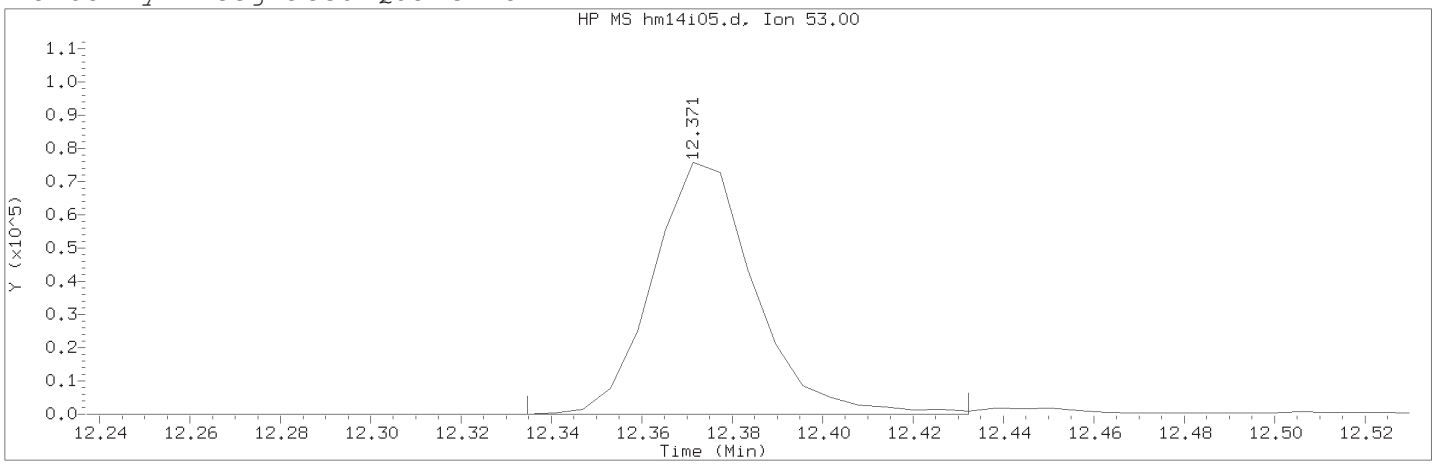
Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area : 58269
On-column Amount (ng) : 1.0472
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 149

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

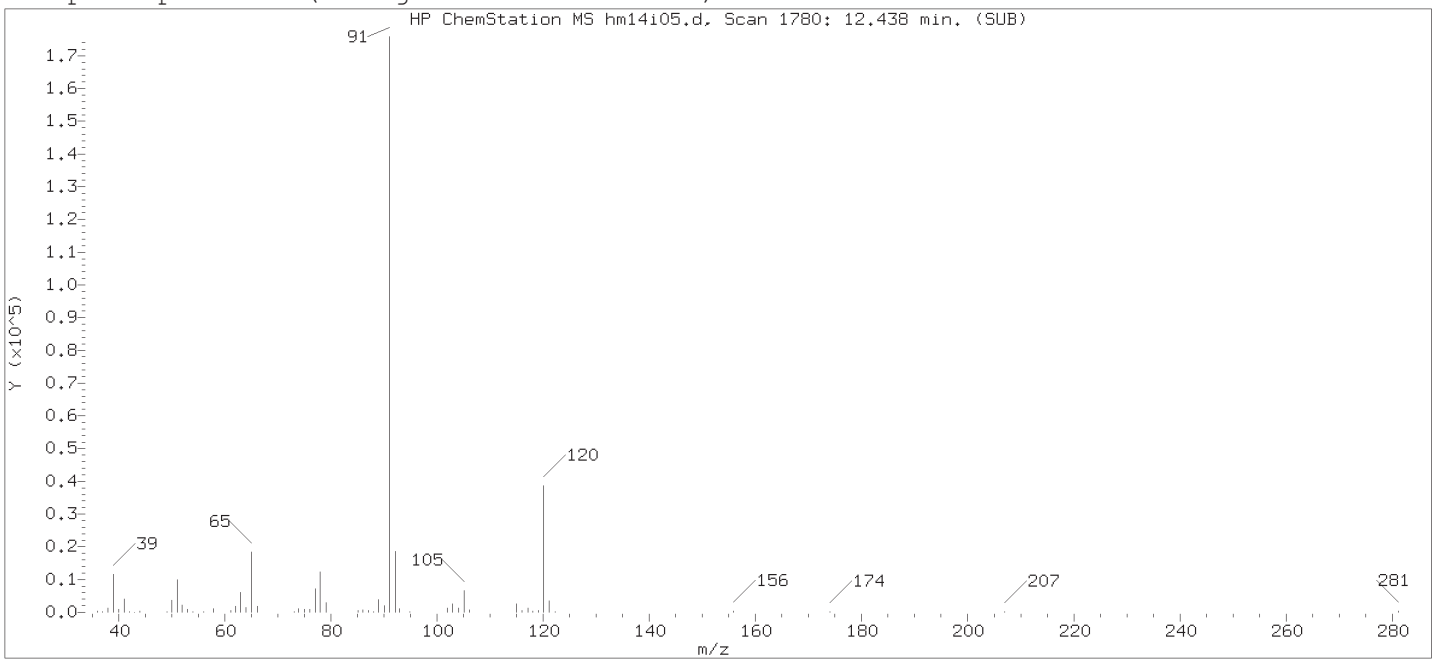
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1769
Retention Time (minutes): 12.371
Quant Ion : 53.00
Area (flag) : 119030A
On-Column Amount (ng) : 10.1867
Integration start scan : 1762 Integration stop scan: 1778
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

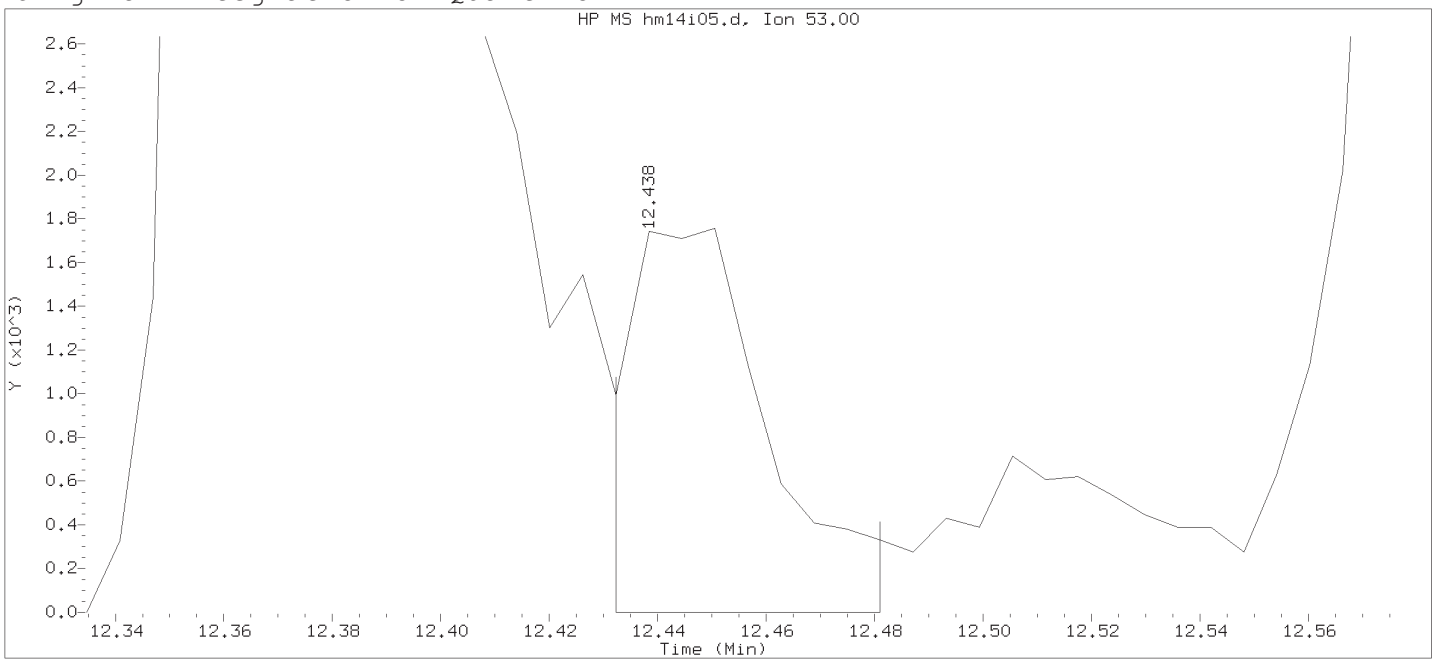
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

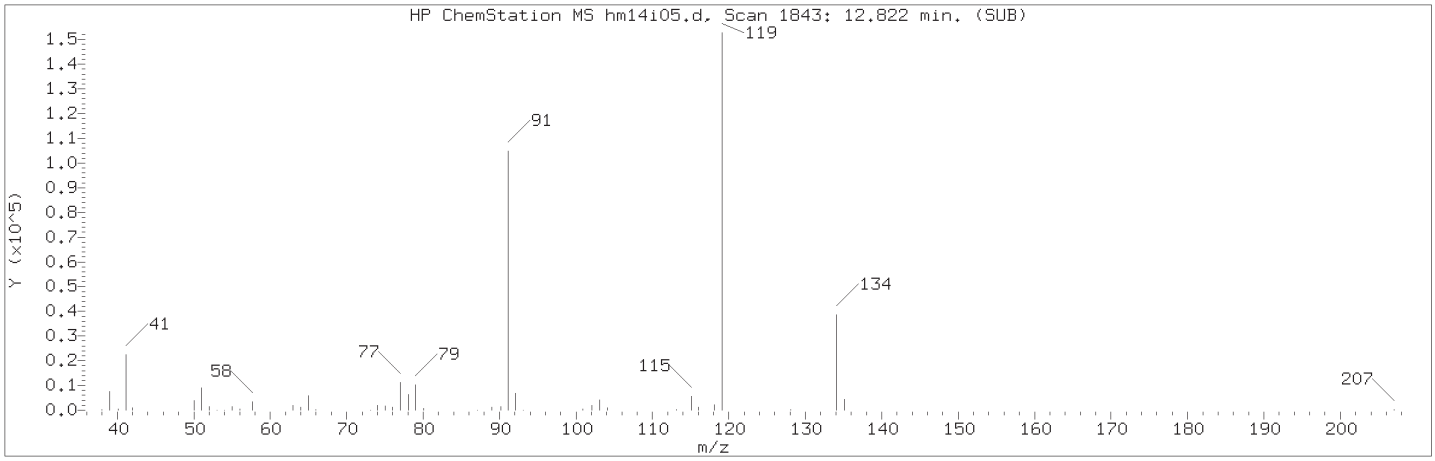
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

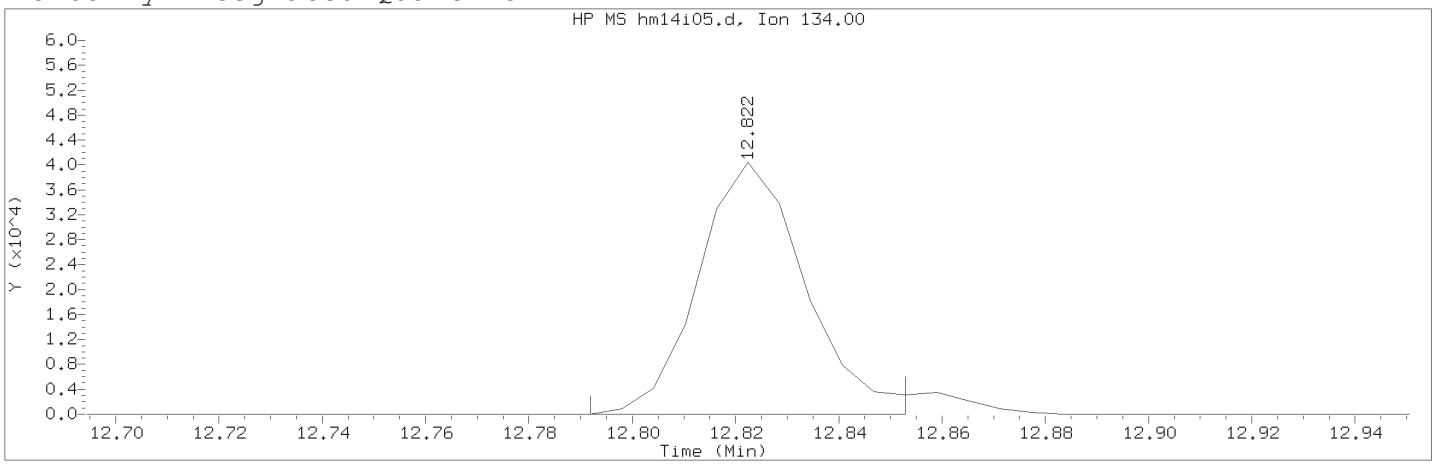
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1780
Retention Time (minutes): 12.438
Quant Ion : 53.00
Area : 3064
On-column Amount (ng) : 0.3344
Integration start scan : 1778 Integration stop scan: 1786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

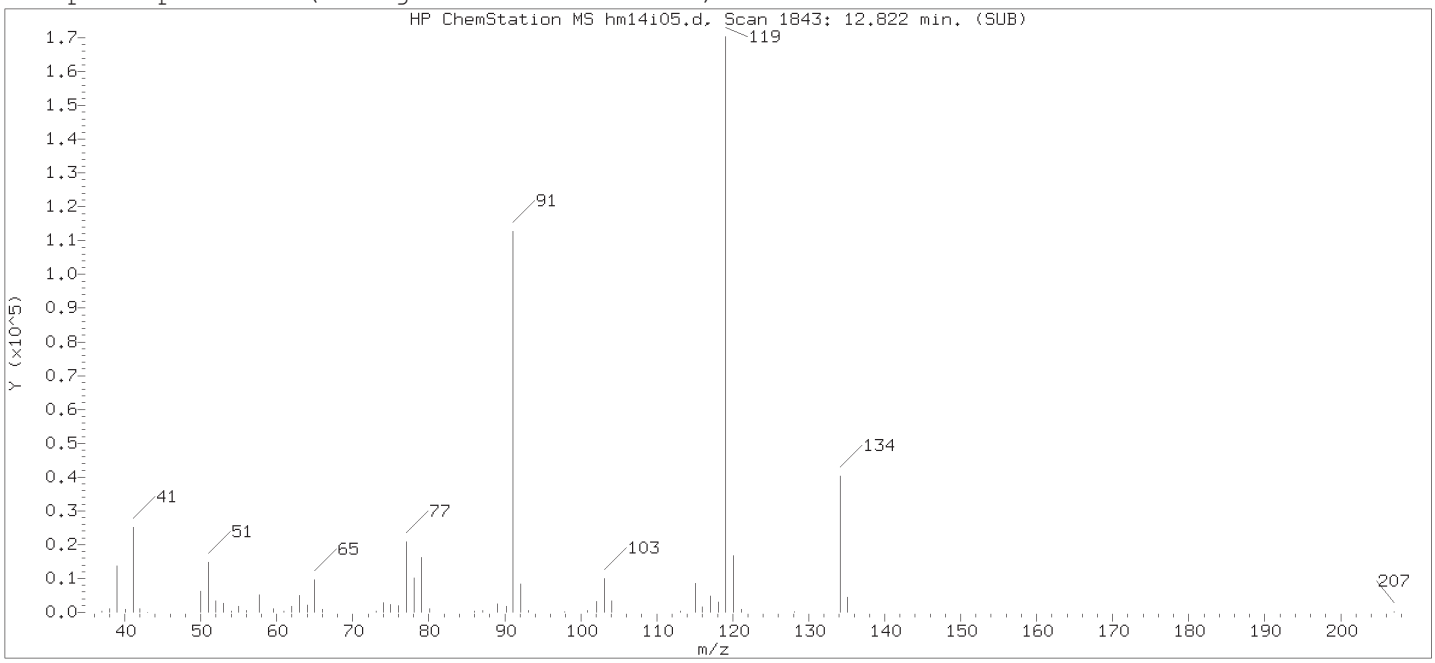
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 58224M
On-Column Amount (ng) : 1.0608
Integration start scan : 1837 Integration stop scan: 1847
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

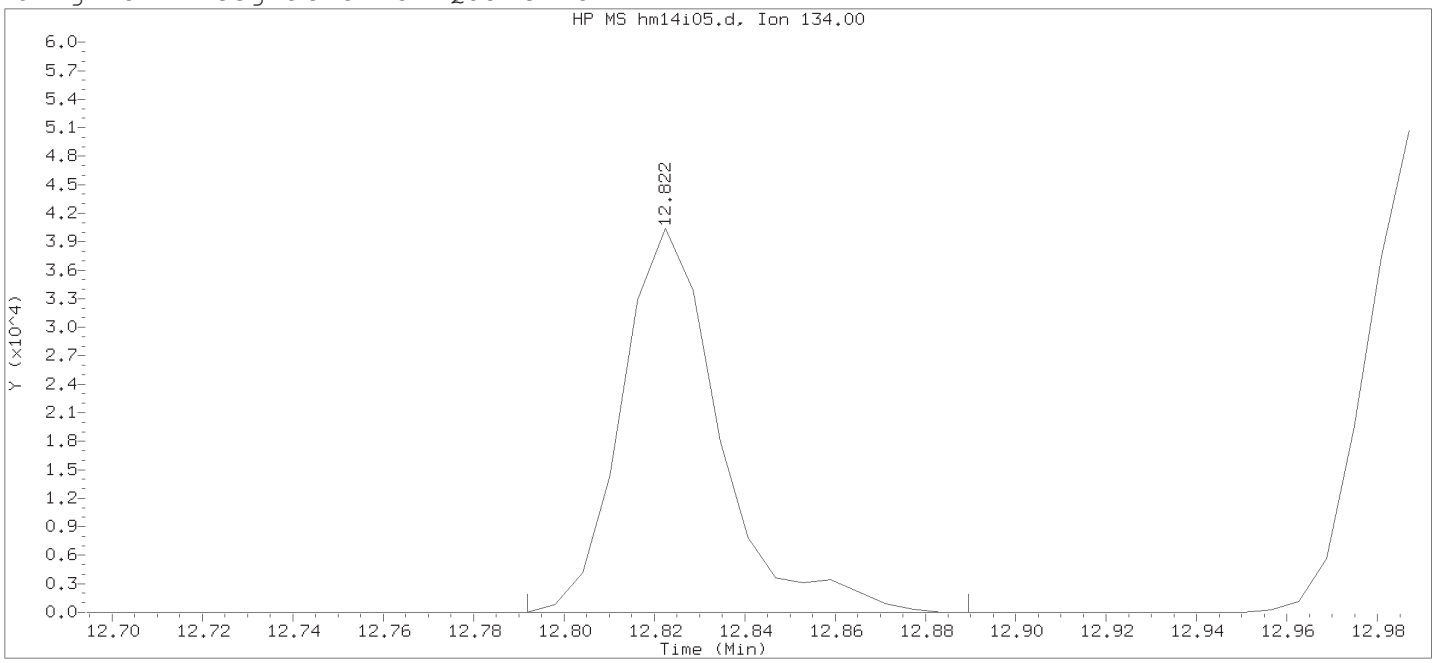
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



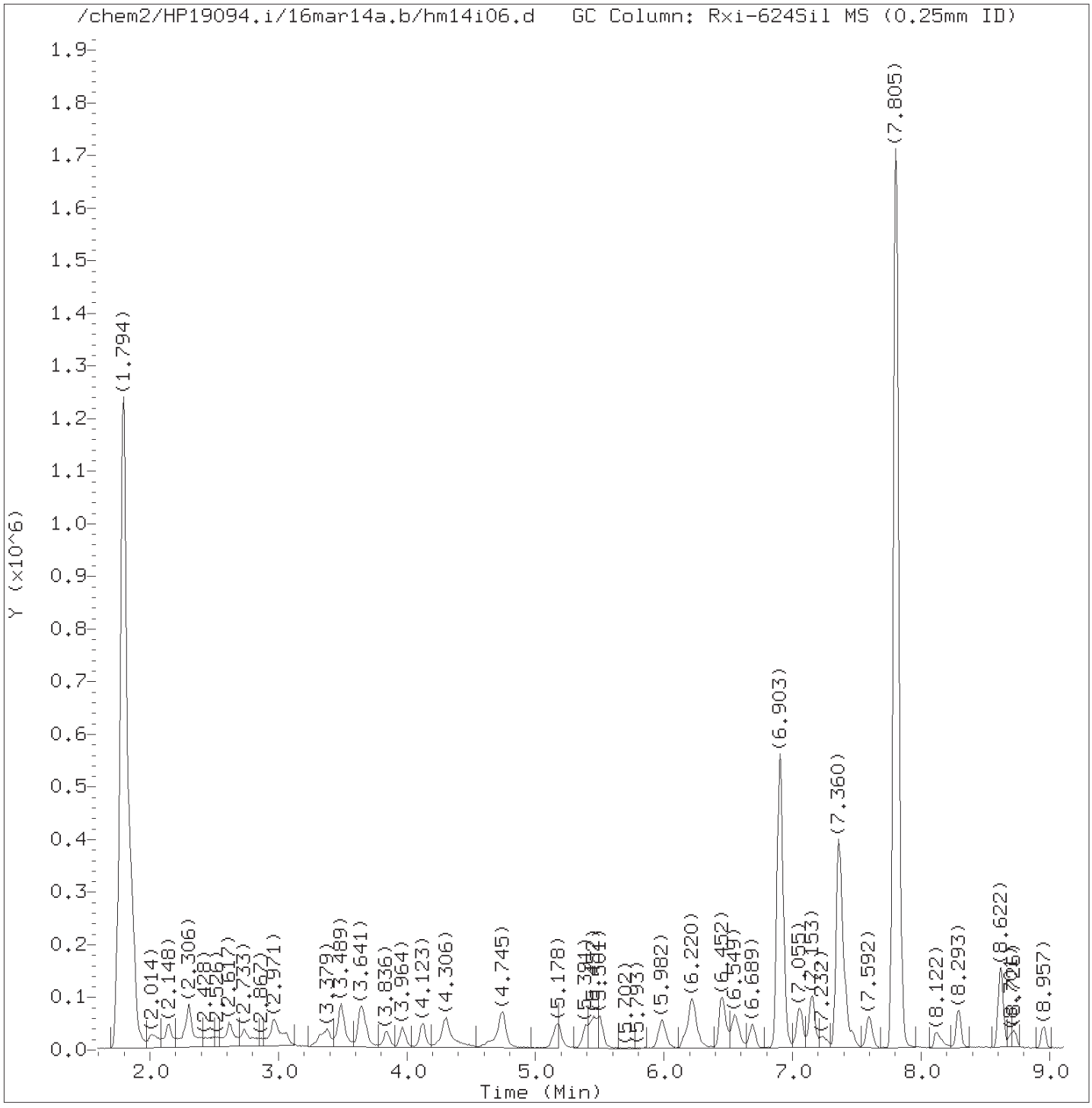
Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 60718
On-column Amount (ng) : 1.0918
Integration start scan : 1837 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: 03/14/2016 18:15



Total Ion Chromatogram (TIC)

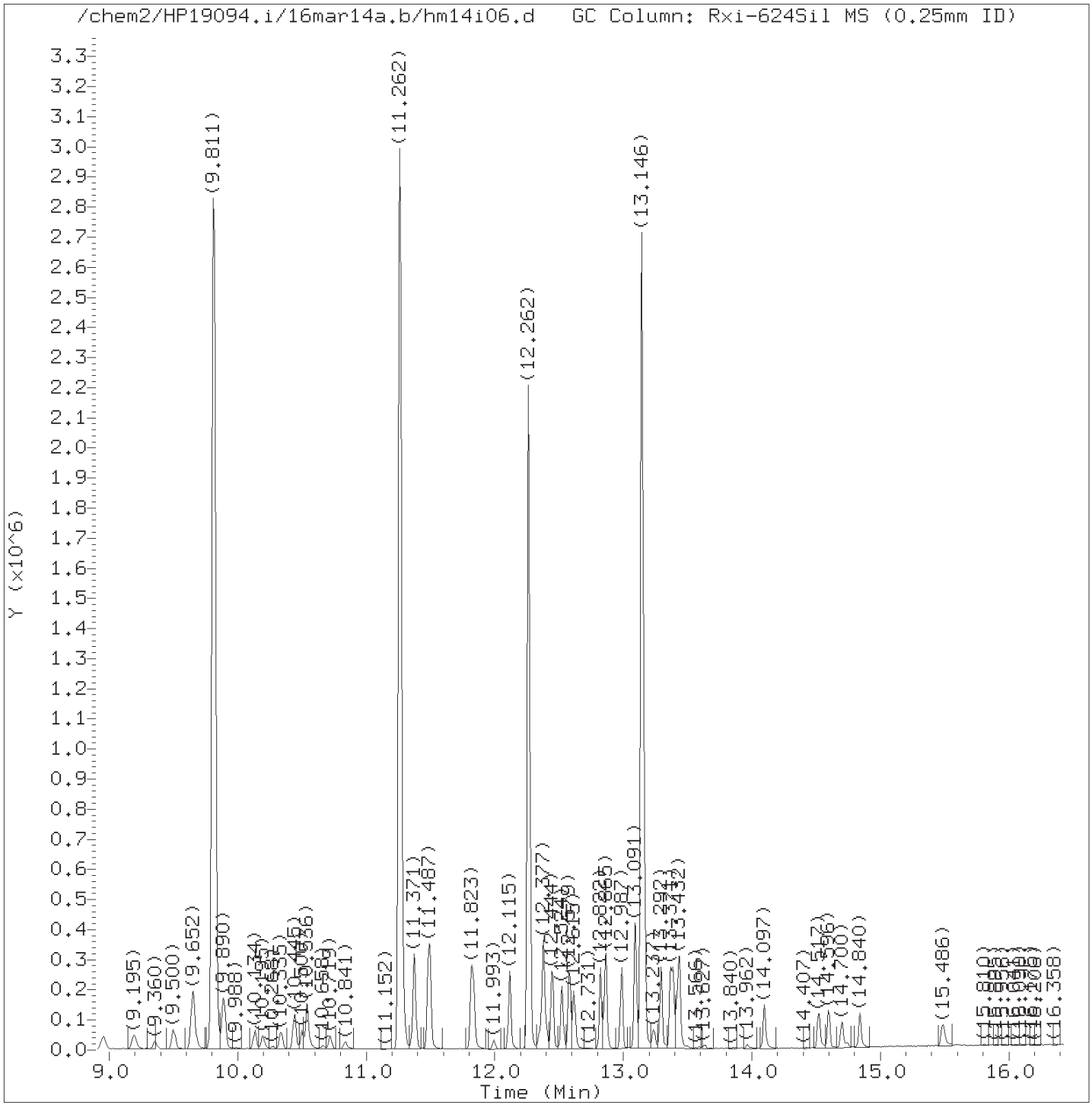
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	40184	0.499
2) Chloromethane	(2)	2.148	50	43348	0.549
5) Vinyl Chloride	(2)	2.282	62	37713	0.513
6) 1,3-Butadiene	(2)	2.306	39	31929M	0.575
7) Bromomethane	(2)	2.617	94	25727	0.528
8) Chloroethane	(2)	2.733	64	24311	0.537
9) Dichlorofluoromethane	(2)	2.965	67	54811	0.533
10) Trichlorofluoromethane	(2)	3.056	101	49676	0.519
11) Ethyl ether	(2)	3.324	59	20456	0.518
12) Freon 123a	(2)	3.373	67	38493	0.526
13) Acrolein	(1)	3.489	56	163912	27.044
15) 1,1-Dichloroethene	(2)	3.641	96	28901	0.526
16) Freon 113	(2)	3.660	101	30580	0.536
14) Acetone	(1)	3.660	43	52537	6.291
17) Methyl Iodide	(2)	3.842	142	53694	0.528
18) Carbon Disulfide	(2)	3.964	76	90535	0.534
21) Methyl Acetate	(1)	4.111	43	10225M	0.436
22) Allyl Chloride	(2)	4.129	41	57668	0.555
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106301	50.000
23) Methylene Chloride	(2)	4.300	84	31336	0.534
28) t-Butyl Alcohol	(1)	4.440	59	29714	10.396
29) Acrylonitrile	(1)	4.629	53	27034	2.698
30) Methyl Tertiary Butyl Ether	(2)	4.726	73	65484	0.517
31) trans-1,2-Dichloroethene	(2)	4.745	96	32032	0.542
32) n-Hexane	(2)	5.178	57	53126	0.529
33) 1,1-Dichloroethane	(2)	5.391	63	64178	0.533
34) di-Isopropyl Ether	(2)	5.452	45	110047	0.523
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	52860	0.534
37) Ethyl t-butyl ether	(2)	5.976	59	92475	0.521
40) 1,2-Dichloroethene (Total)	(2)		96	66546	1.069
38) 2-Butanone	(1)	6.165	43	75185	5.283
39) cis-1,2-Dichloroethene	(2)	6.214	96	34514	0.527
41) 2,2-Dichloropropane	(2)	6.226	77	52479	0.544
42) Propionitrile	(1)	6.238	54	36087	10.169
45) Methacrylonitrile	(1)	6.452	67	64613	5.318
47) Bromochloromethane	(2)	6.549	128	13099	0.526
48) Tetrahydrofuran	(1)	6.568	71	19570	5.436
49) Chloroform	(2)	6.683	83	57150	0.519

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	536851	9.755
50)$Dibromofluoromethane	(2)	6.903	111	554348	9.790
51) 1,1,1-Trichloroethane	(2)	6.939	97	50196	0.534
52) Cyclohexane	(2)	7.061	56	68514	0.558
52) Cyclohexane	(2)	7.055	84	56914	0.605
52) Cyclohexane	(2)	7.061	69	18877	0.537
55) 1,1-Dichloropropene	(2)	7.147	75	47498	0.527
54) Carbon Tetrachloride	(2)	7.159	117	44948	0.526
56) Isobutyl Alcohol	(1)	7.250	41	26068	25.740
57)$1,2-Dichloroethane-d4	(2)	7.360	102	89545	9.824
57)$1,2-Dichloroethane-d4	(2)	7.360	65	448273	9.633
57)$1,2-Dichloroethane-d4	(2)	7.360	104	54035	9.389
58) Benzene	(2)	7.409	78	133306	0.531
59) 1,2-Dichloroethane	(2)	7.470	62	33374M	0.513
60) t-Amyl methyl ether	(2)	7.598	73	73732	0.509
63)*Fluorobenzene	(2)	7.805	96	2335462	10.000
62) n-Heptane	(2)	7.829	43	60575M	0.534
65) n-Butanol	(1)	8.122	56	40331	49.478
67) Trichloroethene	(2)	8.293	95	33901	0.518
70) 1,2-Dichloropropane	(2)	8.610	63	34835	0.533
69) Methylcyclohexane	(2)	8.622	83	58941	0.550
71) Methyl Methacrylate	(1)	8.689	69	13601A	0.536
72) 1,4-Dioxane	(1)	8.713	88	2854	17.772
73) Dibromomethane	(2)	8.726	93	13961	0.519
74) Bromodichloromethane	(2)	8.957	83	38256	0.509
76) 2-Nitropropane	(1)	9.195	41	44943	5.523
80) cis-1,3-Dichloropropene	(2)	9.500	75	45238	0.490
81) 4-Methyl-2-Pentanone	(1)	9.652	43	186093	5.313
82)$Toluene-d8	(3)	9.811	98	2268918	10.243
82)$Toluene-d8	(3)	9.811	100	1473141	10.274
83) Toluene	(3)	9.890	92	81840	0.548
84) trans-1,3-Dichloropropene	(3)	10.134	75	36598	0.523
85) 1,3-Dichloropropene (total)	(3)		75	81836	1.013
86) Ethyl Methacrylate	(3)	10.195	69	28481	0.529
88) 1,1,2-Trichloroethane	(3)	10.335	97	19097	0.528
89) Tetrachloroethene	(3)	10.445	166	38977	0.553
90) 1,3-Dichloropropane	(3)	10.500	76	34375	0.529
91) 2-Hexanone	(1)	10.536	43	121611M	4.911

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	24621	0.531
95) 1,2-Dibromoethane	(3)	10.835	107	18616	0.547
97)*Chlorobenzene-d5	(3)	11.262	117	1554894	10.000
98) Chlorobenzene	(3)	11.286	112	87530	0.539
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	28920	0.519
100) Ethylbenzene	(3)	11.371	91	156551	0.536
101) m+p-Xylene	(3)	11.493	106	120935	1.086
105) Xylene (Total)	(3)		106	180074	1.633
104) o-Xylene	(3)	11.816	106	59139	0.547
106) Styrene	(3)	11.835	104	92822	0.537
107) Bromoform	(3)	11.993	173	12916	0.503
108) Isopropylbenzene	(3)	12.115	105	157247	0.549
111)$4-Bromofluorobenzene	(3)	12.262	95	701040	9.819
111)$4-Bromofluorobenzene	(3)	12.262	174	587578	9.870
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	21790M	0.525
114) Bromobenzene	(4)	12.377	156	34134	0.552
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	55039	5.103
116) 1,2,3-Trichloropropane	(4)	12.396	110	5897	0.566
117) n-Propylbenzene	(4)	12.444	91	185309	0.554
119) 2-Chlorotoluene	(4)	12.524	126	36274	0.562
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	130379	0.559
122) 4-Chlorotoluene	(4)	12.615	126	35686	0.543
125) tert-Butylbenzene	(4)	12.822	134	27825M	0.560
126) Pentachloroethane	(4)	12.853	167	19797	0.528
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	129293	0.555
128) sec-Butylbenzene	(4)	12.987	105	167062	0.553
131) 1,3-Dichlorobenzene	(4)	13.091	146	66114	0.547
132) p-Isopropyltoluene	(4)	13.097	119	141783	0.555
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	663285	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	68720	0.559
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	54688	0.566
136) Benzyl Chloride	(4)	13.237	126	9369	0.570
138) n-Butylbenzene	(4)	13.389	92	65180M	0.521
139) 1,2-Dichlorobenzene	(4)	13.420	146	60057	0.559
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	2698	0.485
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	42987	0.559
146) Hexachlorobutadiene	(4)	14.596	225	21047	0.524
147) Naphthalene	(4)	14.700	128	75793	0.574

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

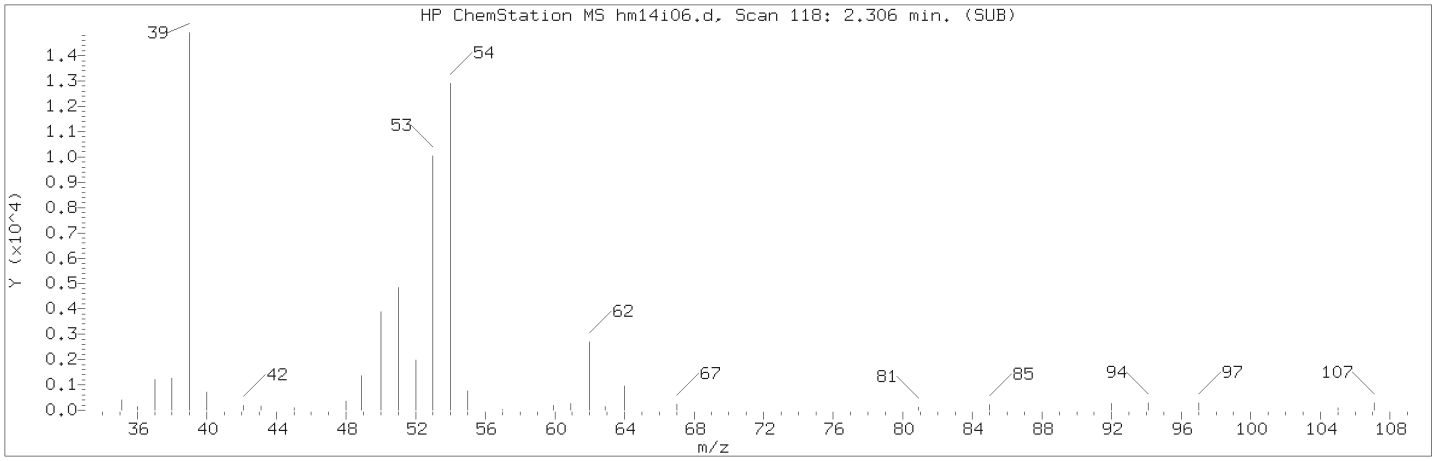
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

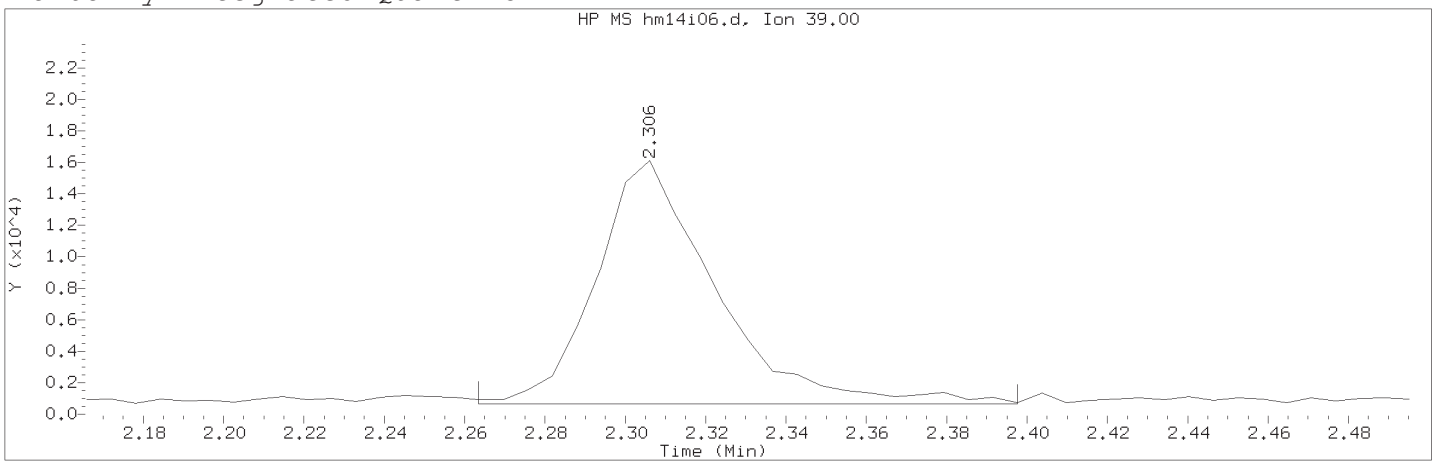
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	38375	0.625

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

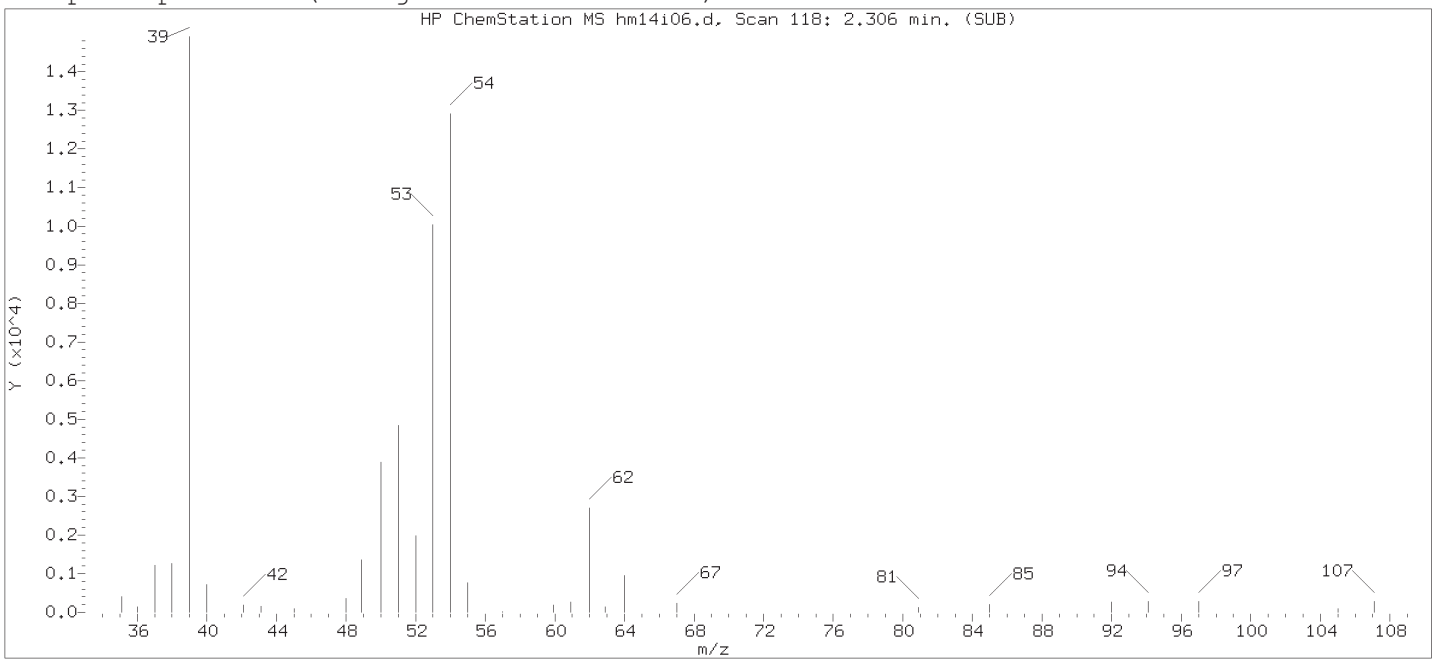
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 31929M
On-Column Amount (ng) : 0.5747
Integration start scan : 110 Integration stop scan: 132
Y at integration start : 658 Y at integration end: 658

Reason for manual integration: improper integration

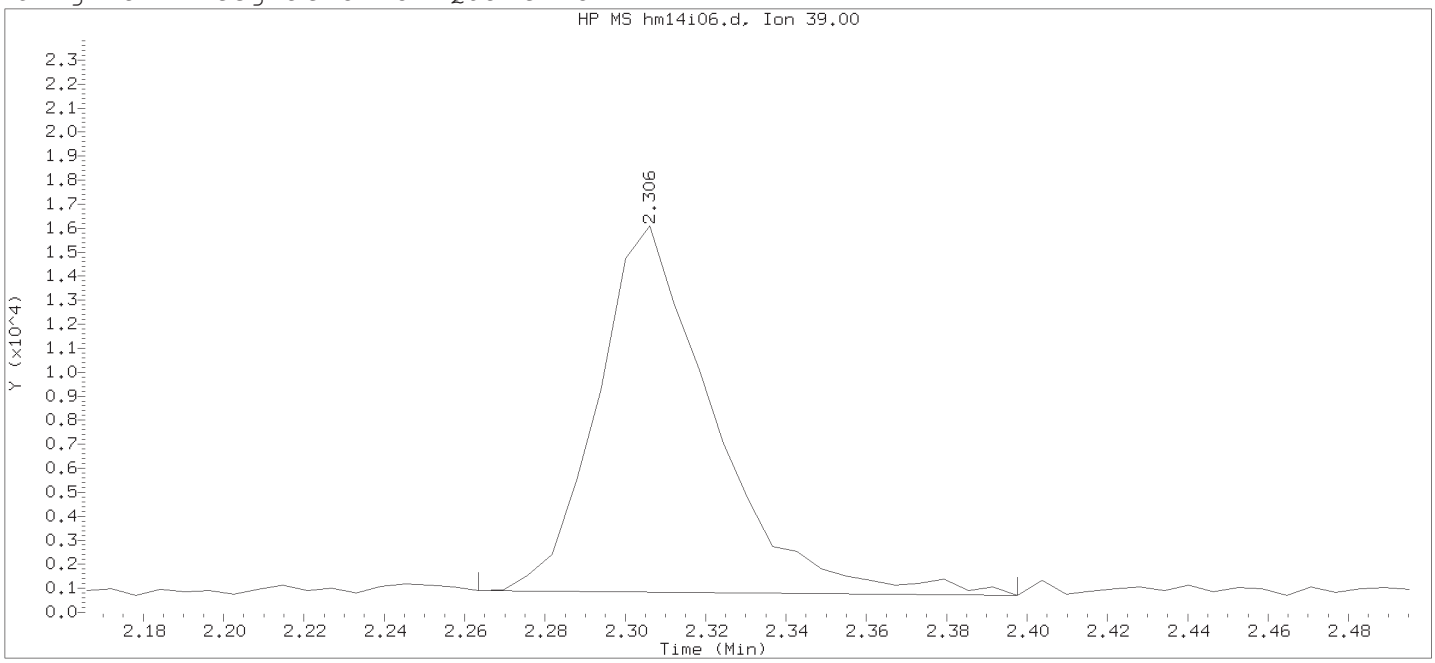
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

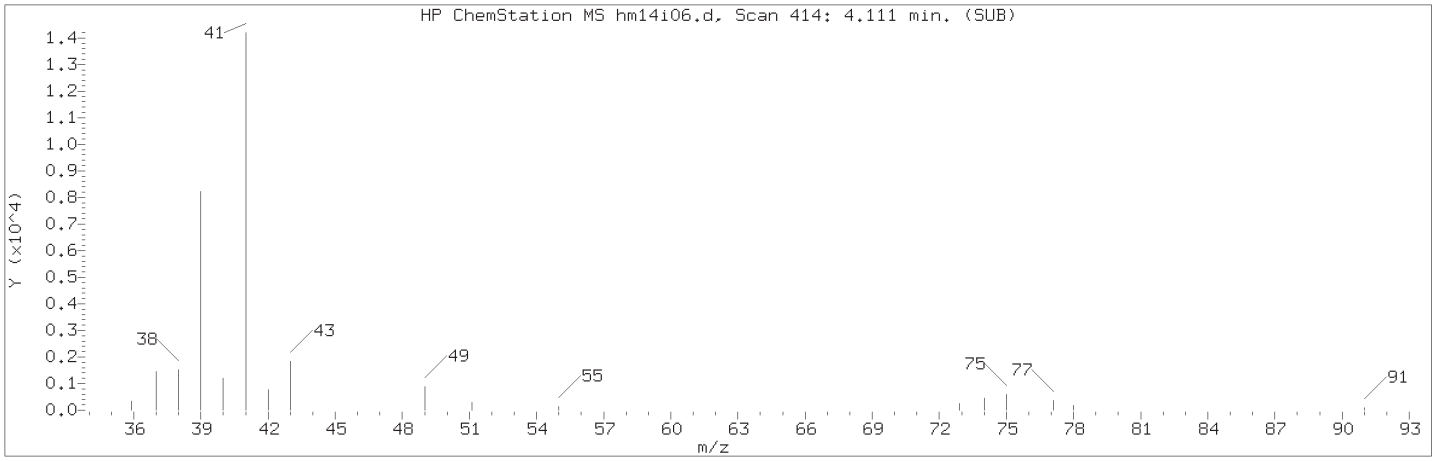
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

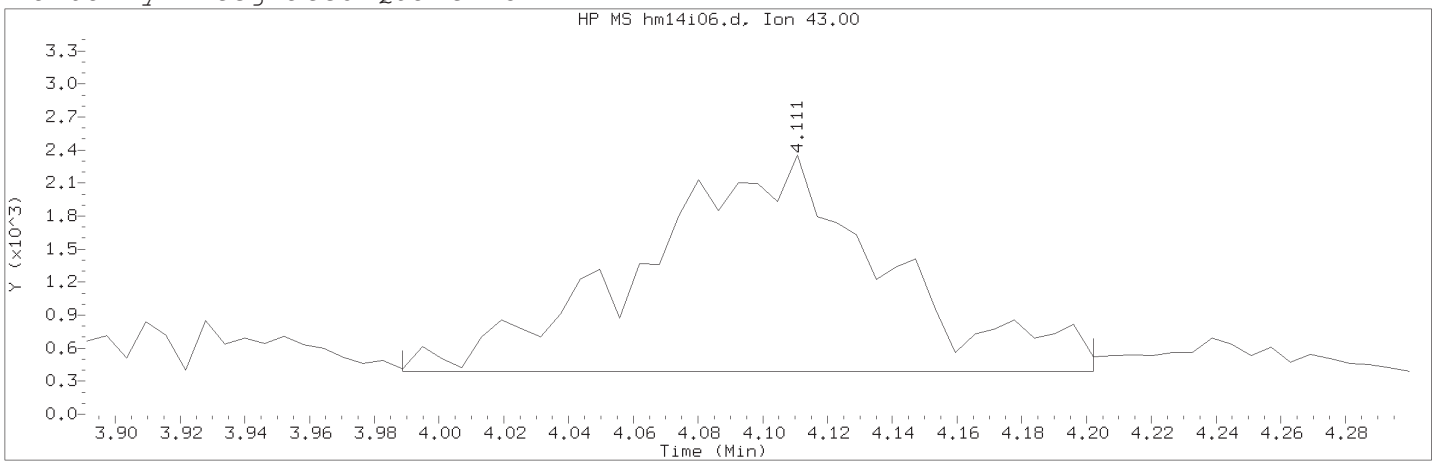
Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 118		
Retention Time (minutes)	: 2.306		
Quant Ion	: 39.00		
Area	: 30607		
On-column Amount (ng)	: 0.5799		
Integration start scan	: 110	Integration stop scan:	132
Y at integration start	: 916	Y at integration end:	714

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

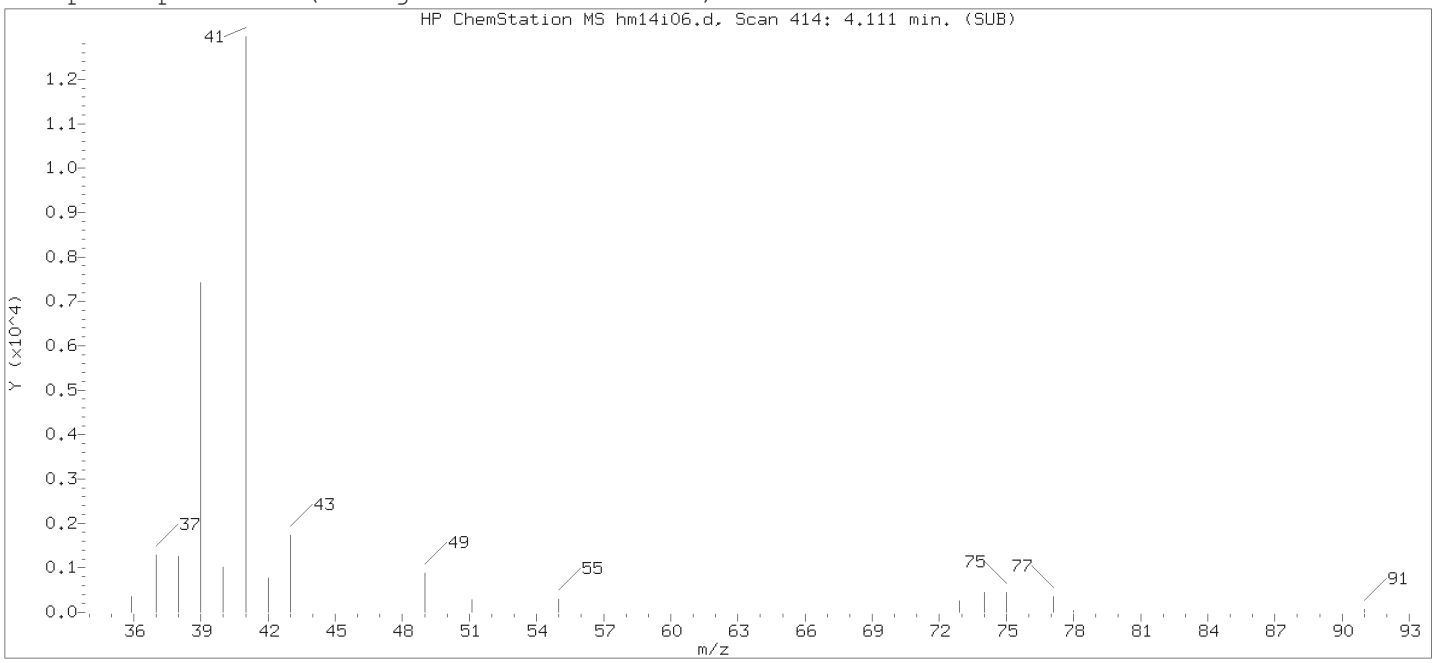
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area (flag) : 10225M
On-Column Amount (ng) : 0.4359
Integration start scan : 393 Integration stop scan: 428
Y at integration start : 392 Y at integration end: 392

Reason for manual integration: improper integration

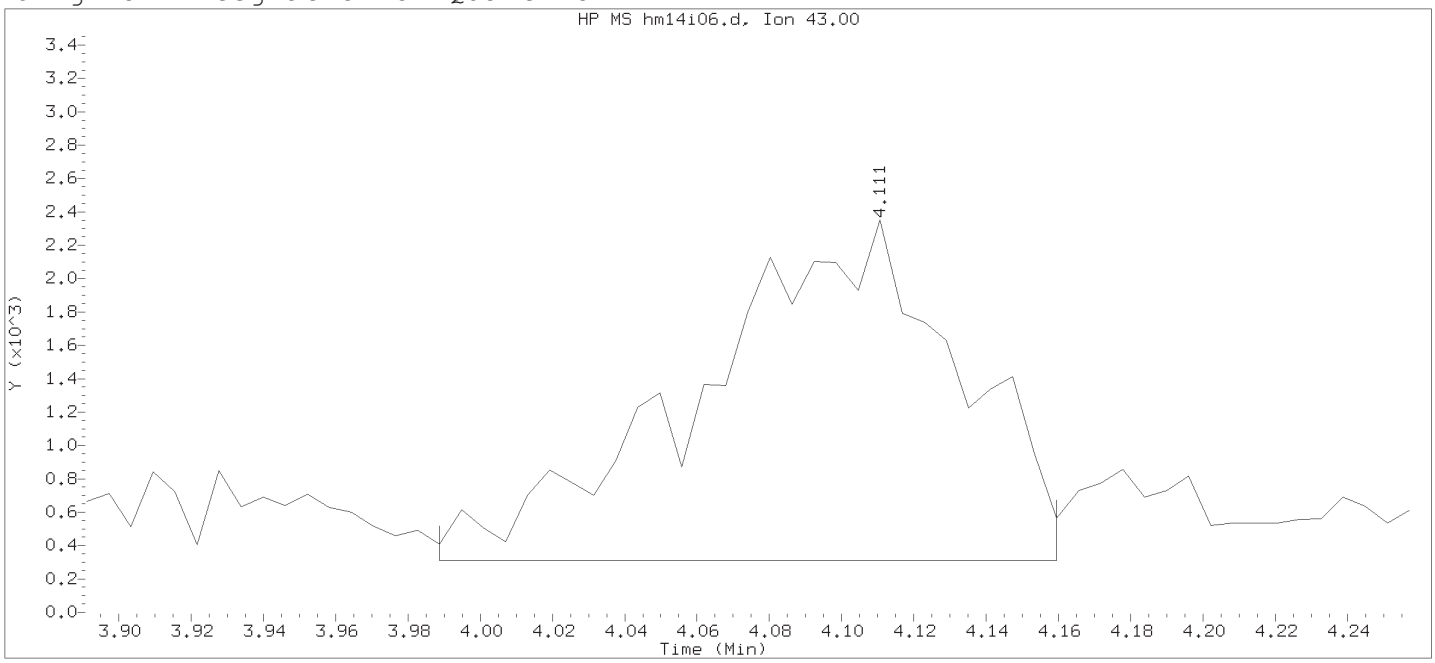
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

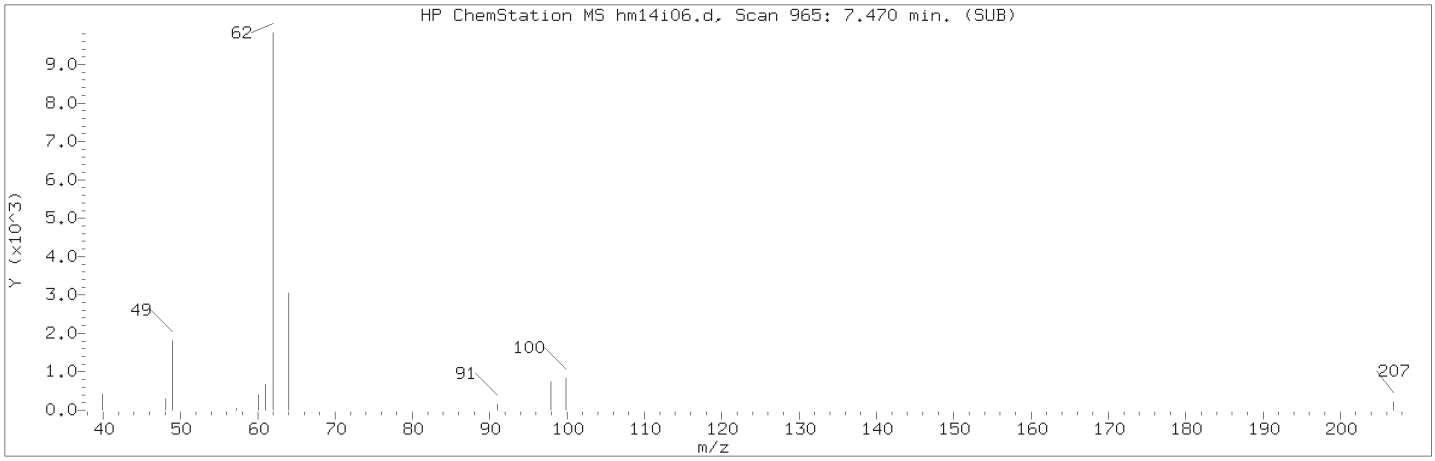
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

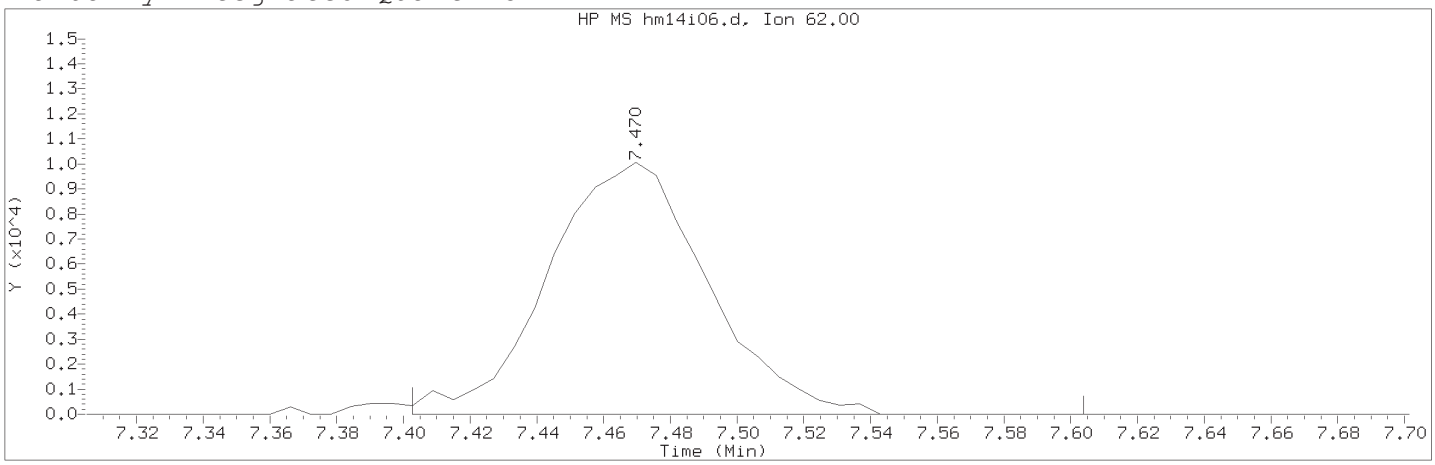
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area : 10172
On-column Amount (ng) : 0.4998
Integration start scan : 393 Integration stop scan: 421
Y at integration start : 309 Y at integration end: 309

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

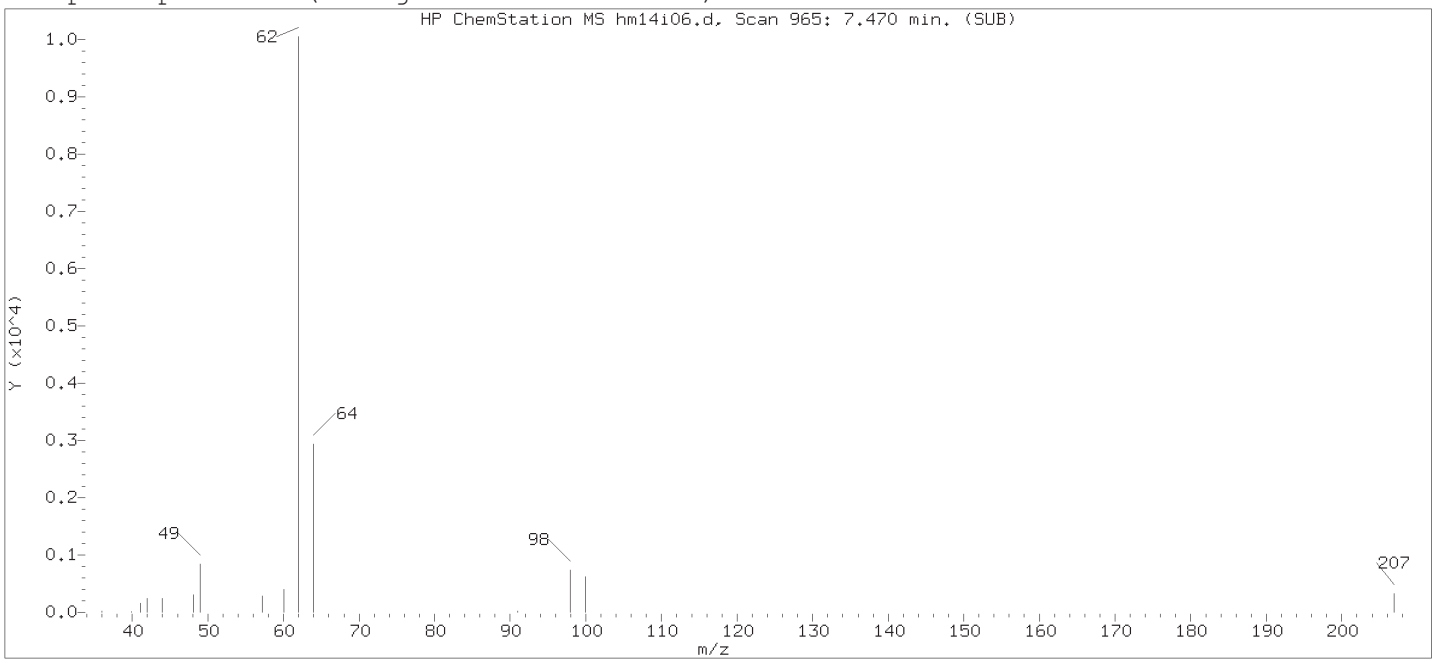
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 33374M
On-Column Amount (ng) : 0.5132
Integration start scan : 953 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

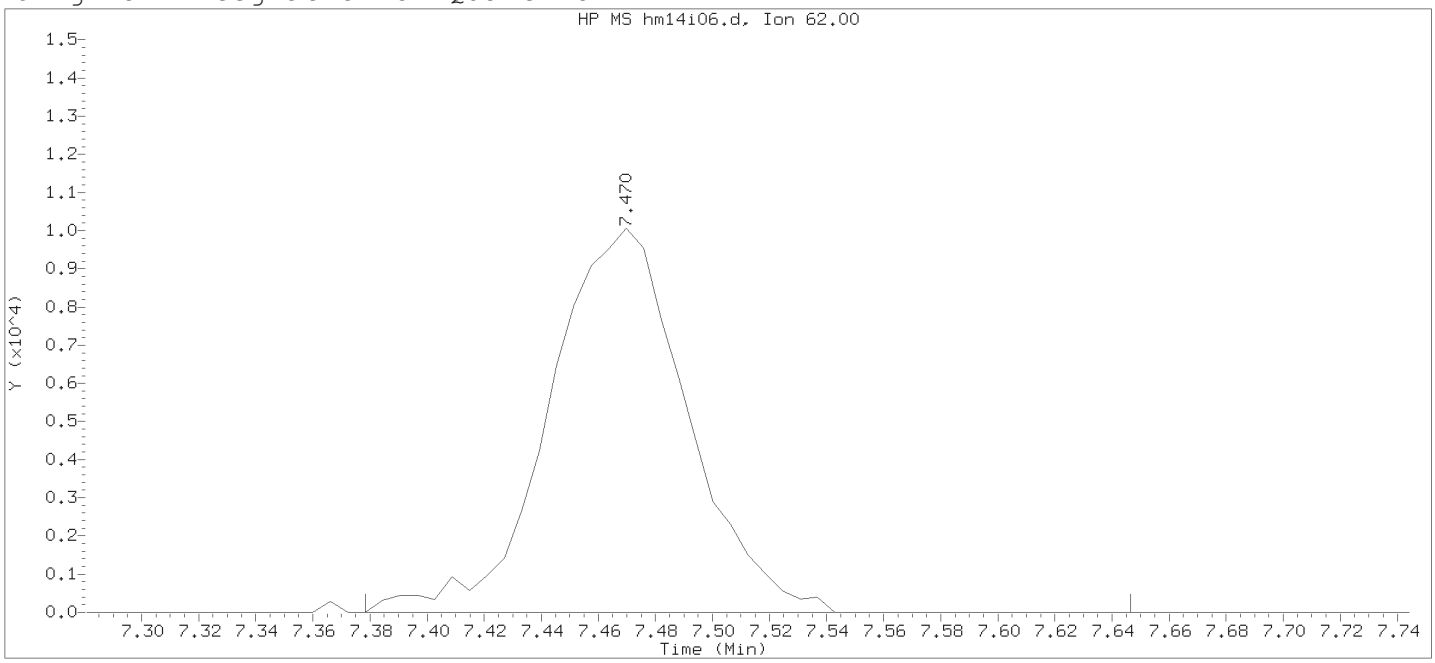
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

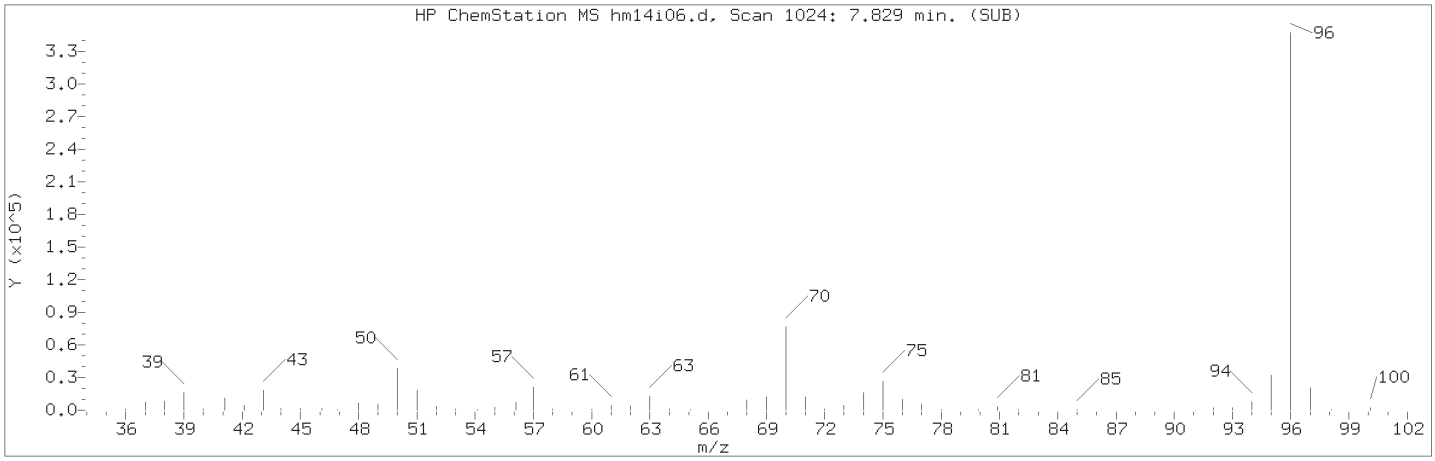
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

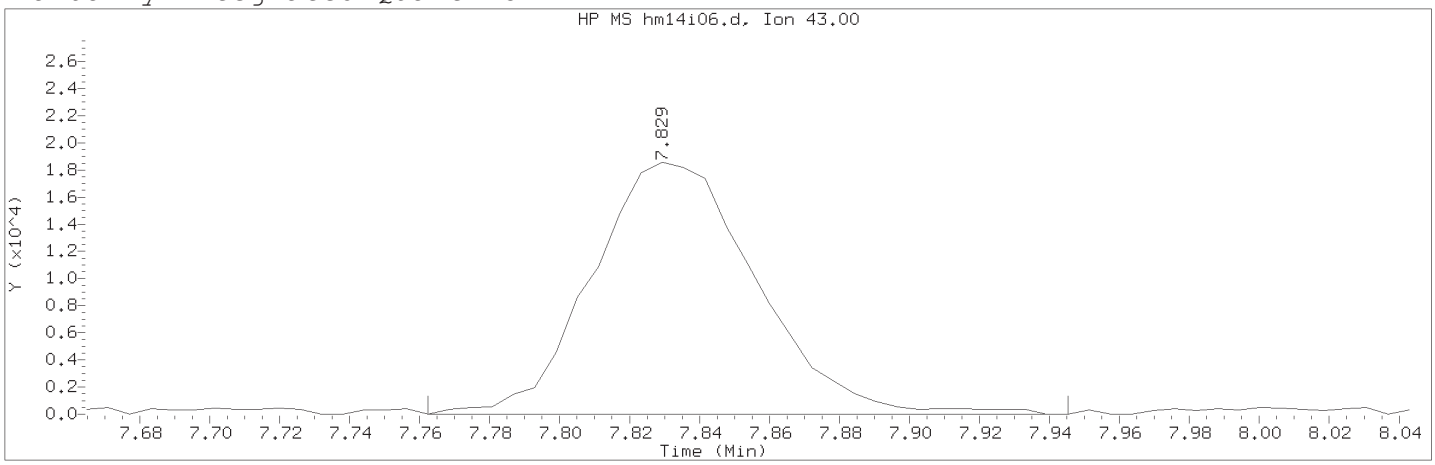
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 33809
On-column Amount (ng) : 0.5207
Integration start scan : 949 Integration stop scan: 993
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

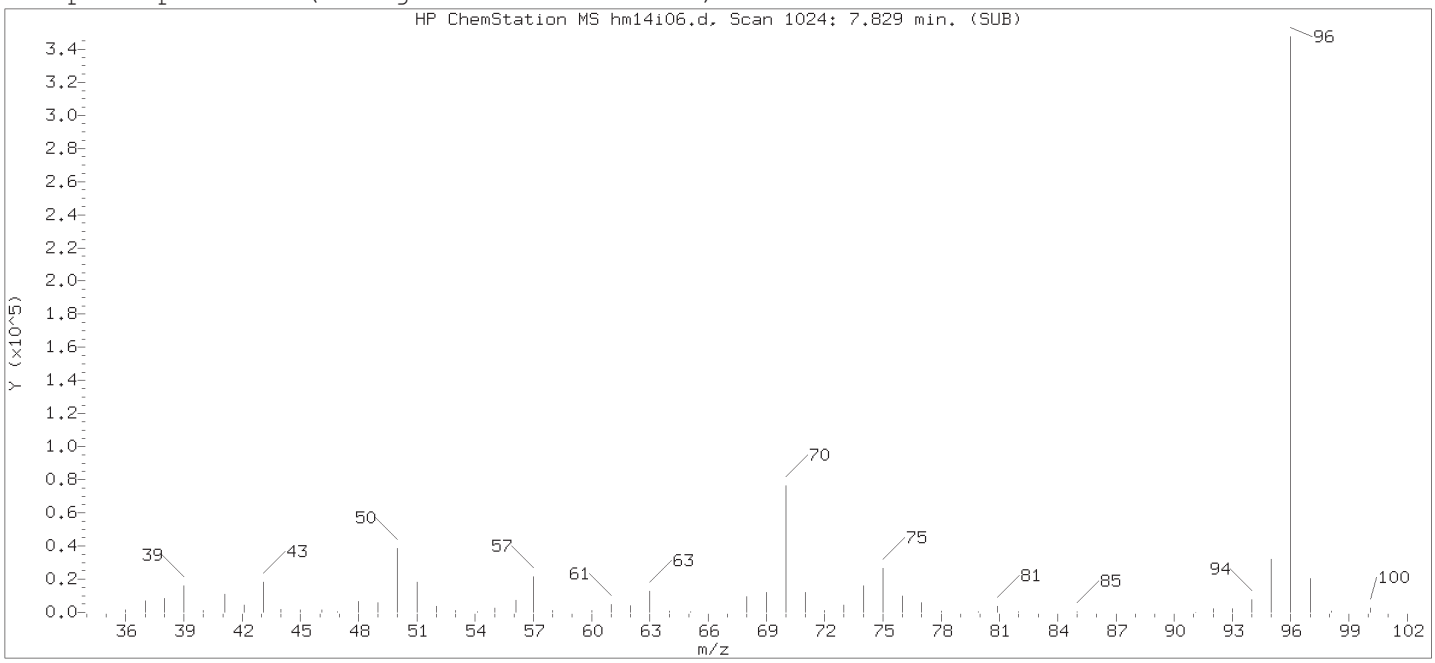
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area (flag) : 60575M
On-Column Amount (ng) : 0.5340
Integration start scan : 1012 Integration stop scan: 1042
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

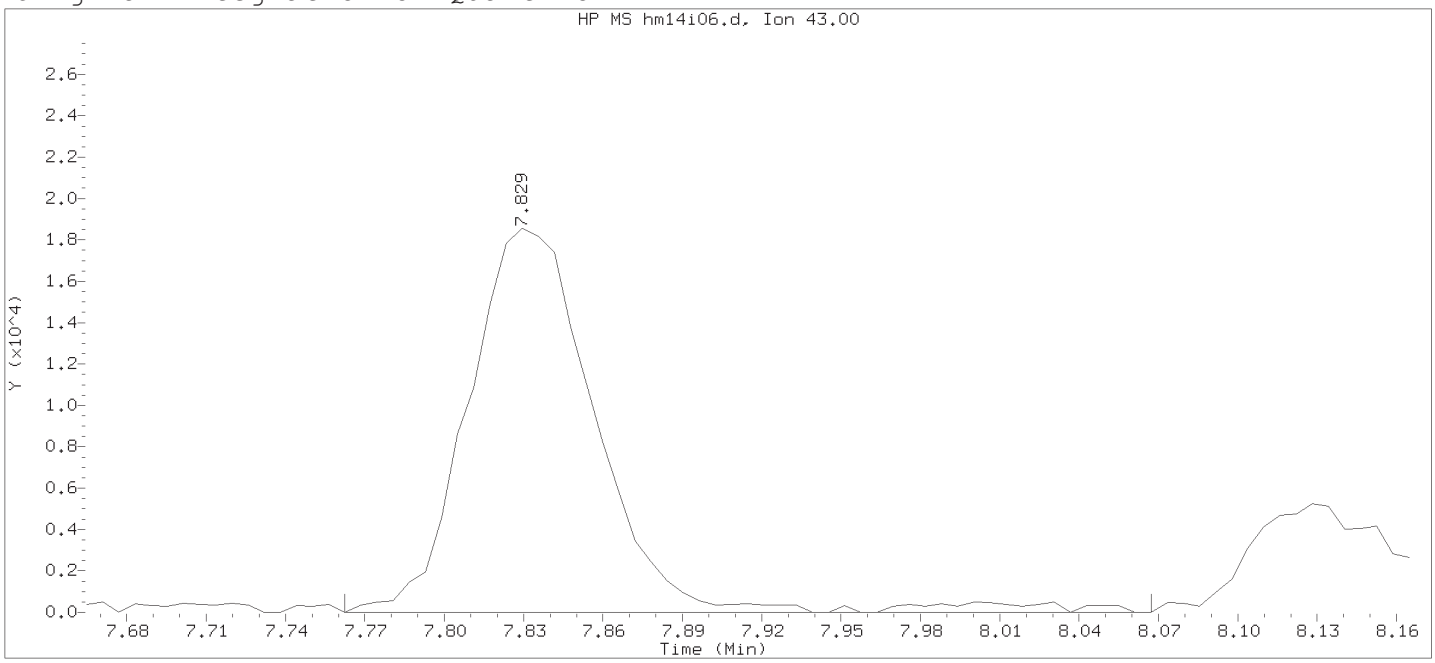
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

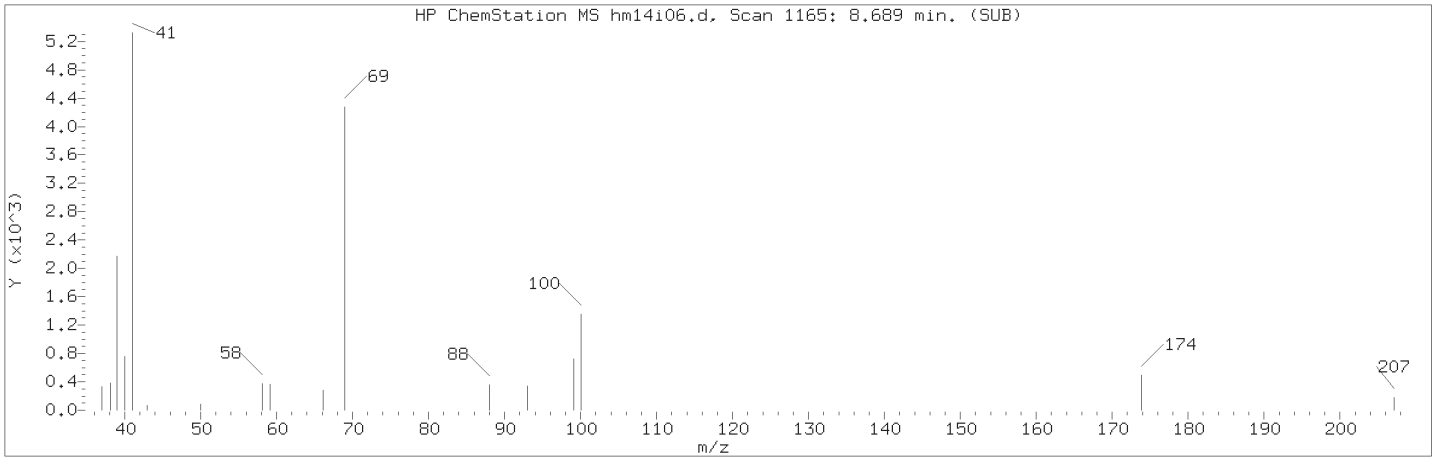
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

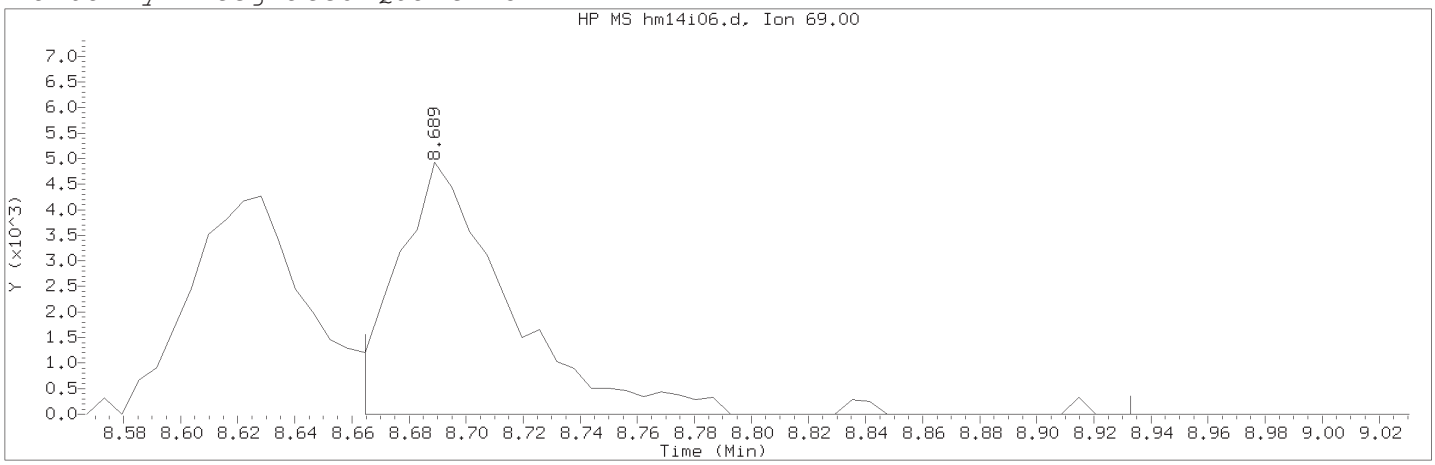
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area : 62549
On-column Amount (ng) : 0.5558
Integration start scan : 1012 Integration stop scan: 1062
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

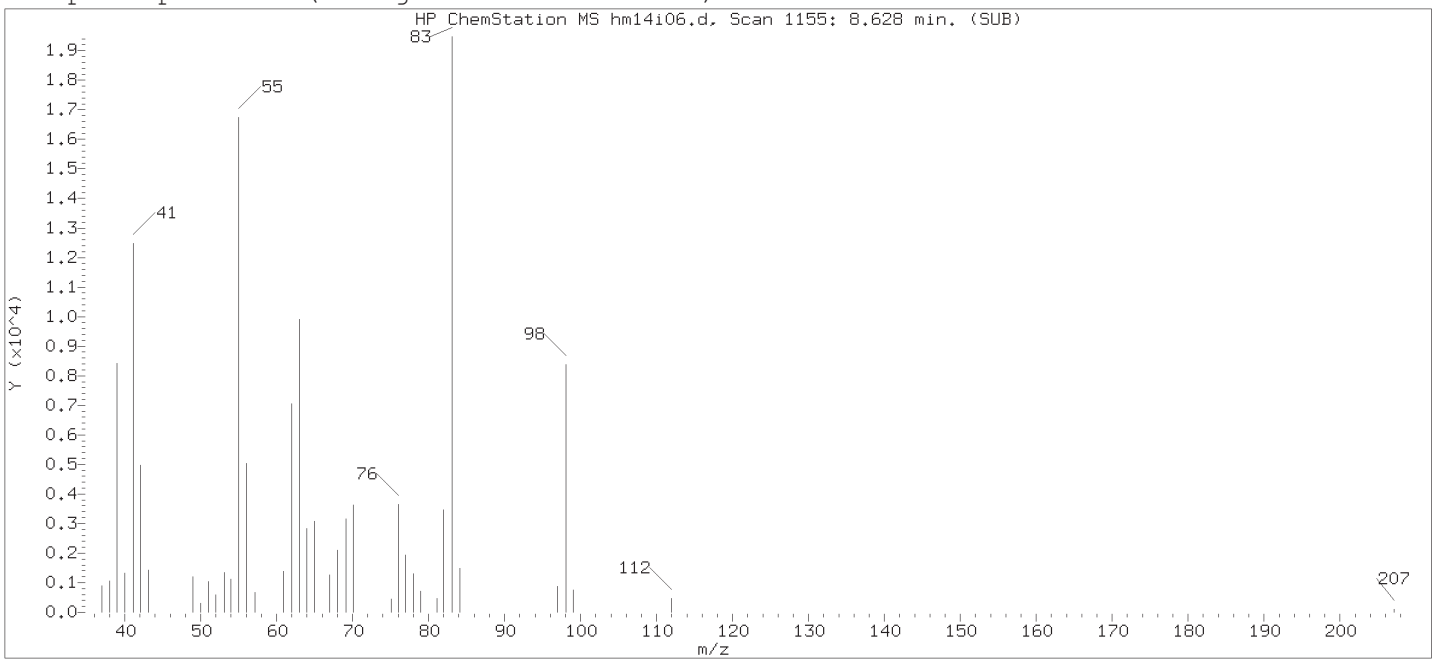
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 13601A
On-Column Amount (ng) : 0.5358
Integration start scan : 1160 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

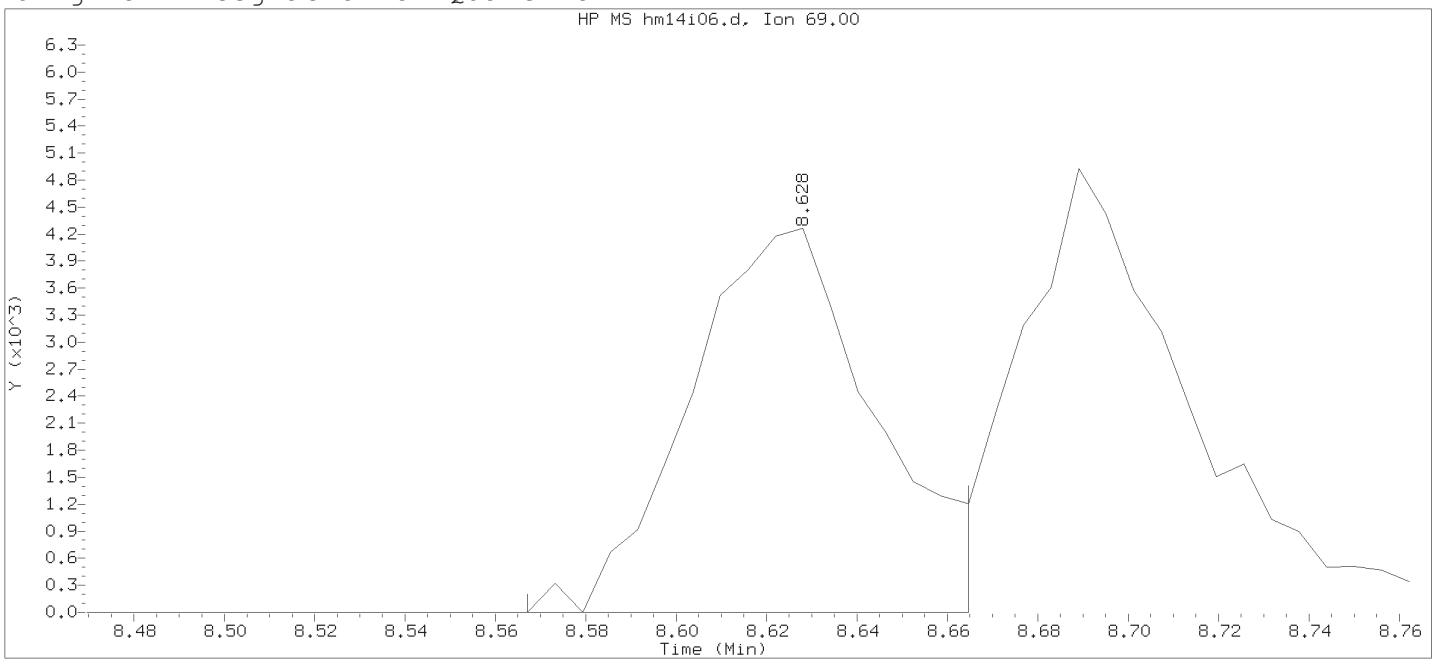
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

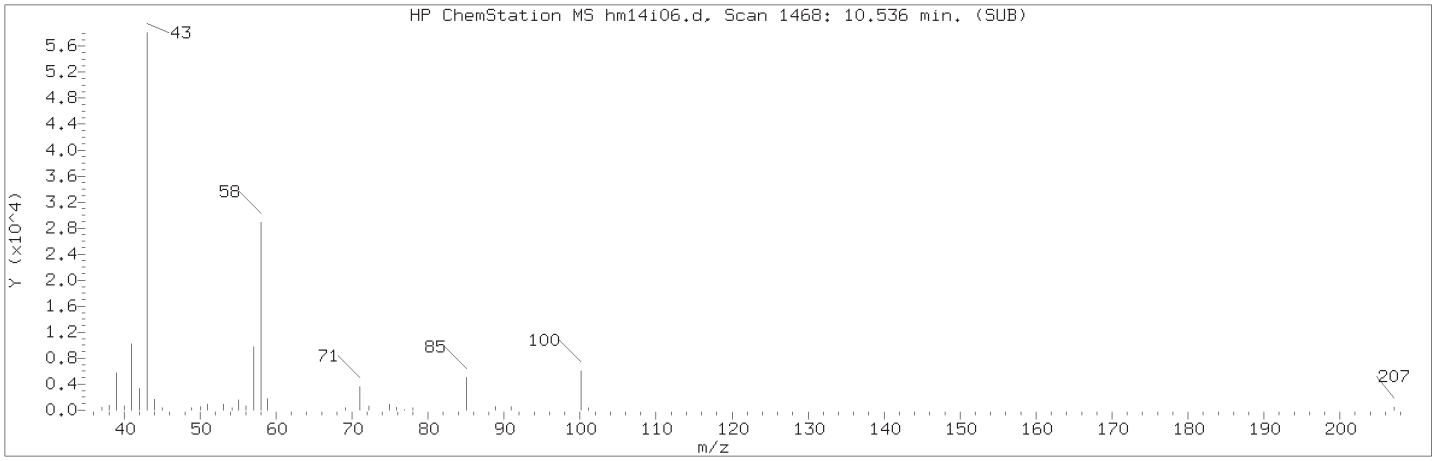
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

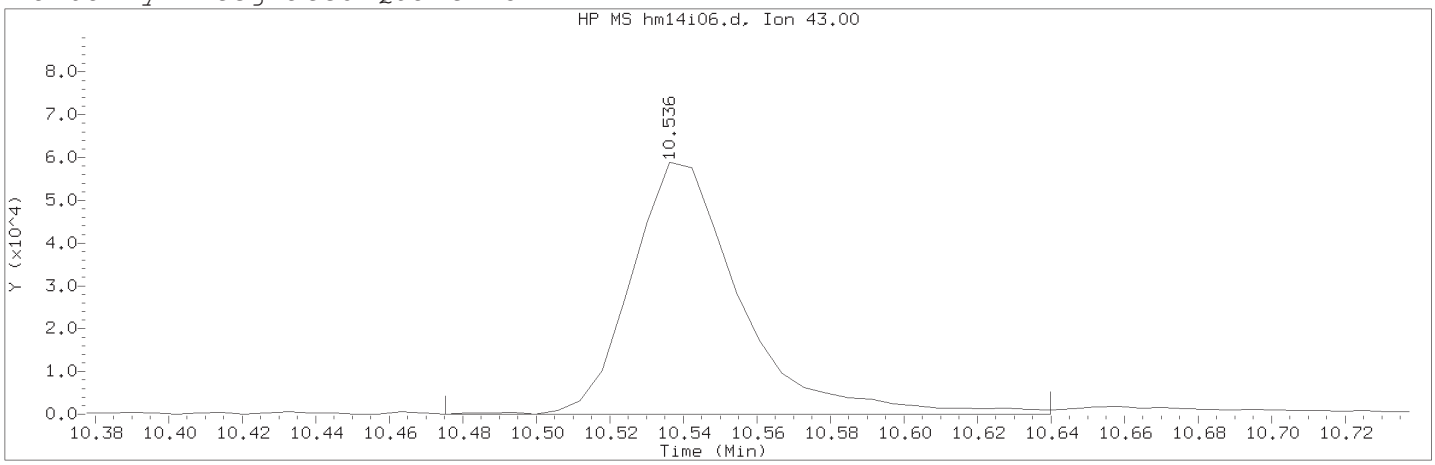
Compound Number	: 71		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1155		
Retention Time (minutes)	: 8.628		
Quant Ion	: 69.00		
Area	: 12059		
On-column Amount (ng)	: 0.4755		
Integration start scan	: 1144	Integration stop scan:	1160
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

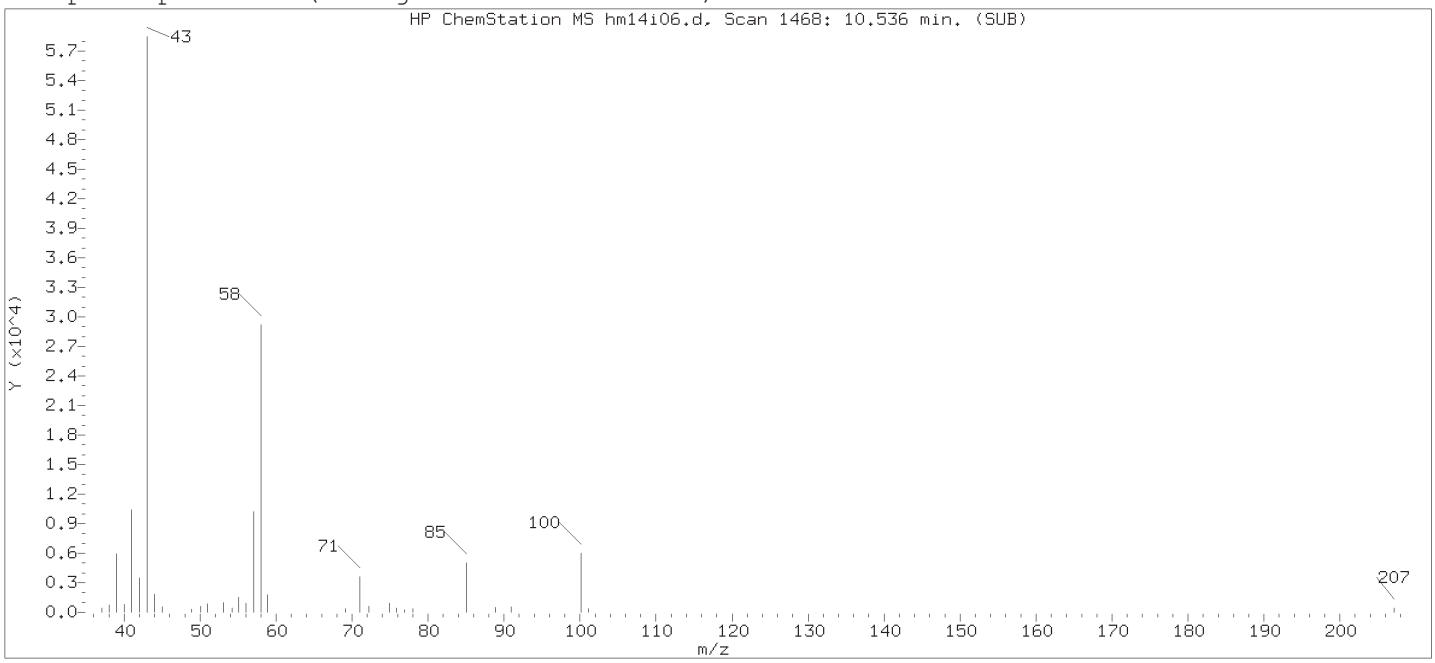
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area (flag) : 121611M
On-Column Amount (ng) : 4.9110
Integration start scan : 1457 Integration stop scan: 1484
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

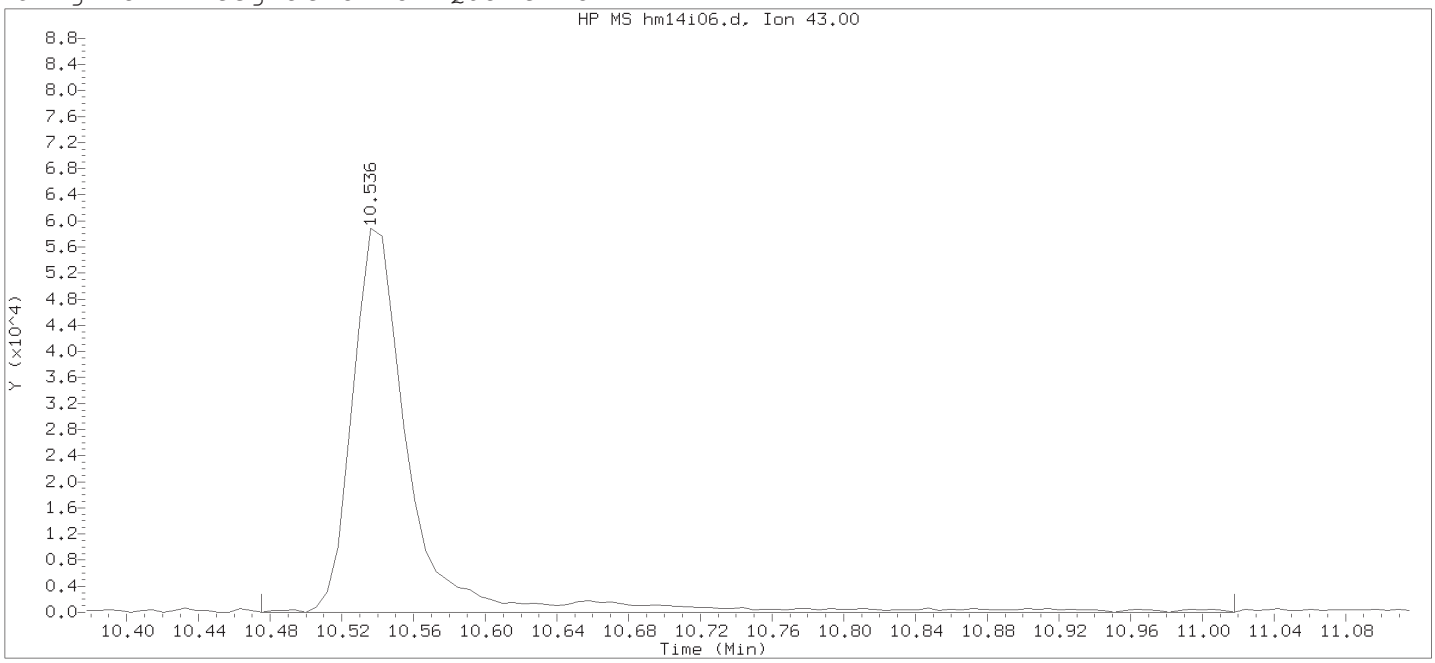
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

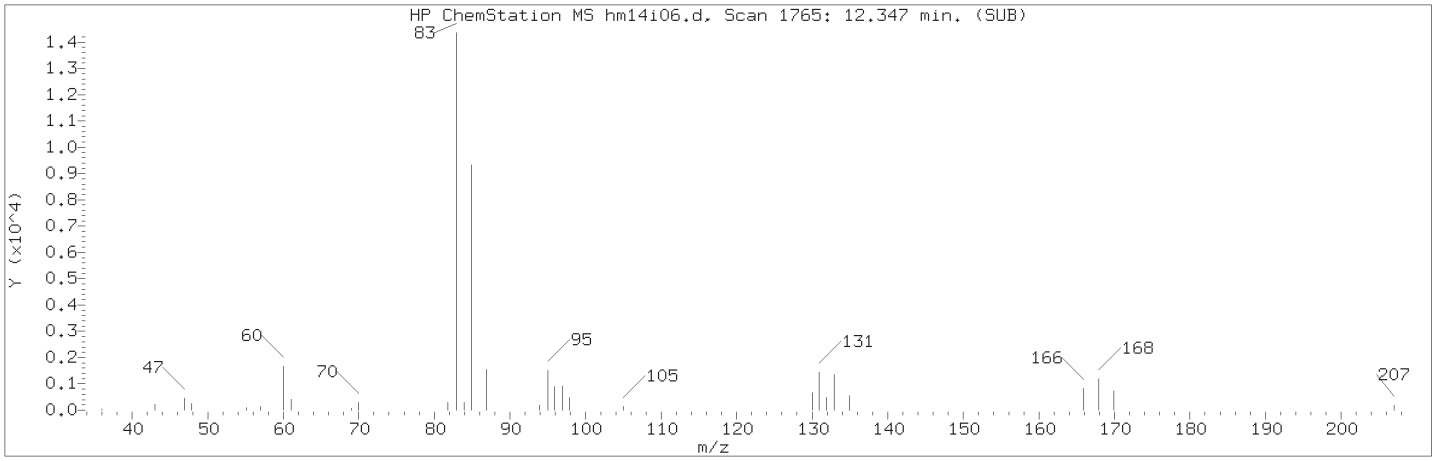
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

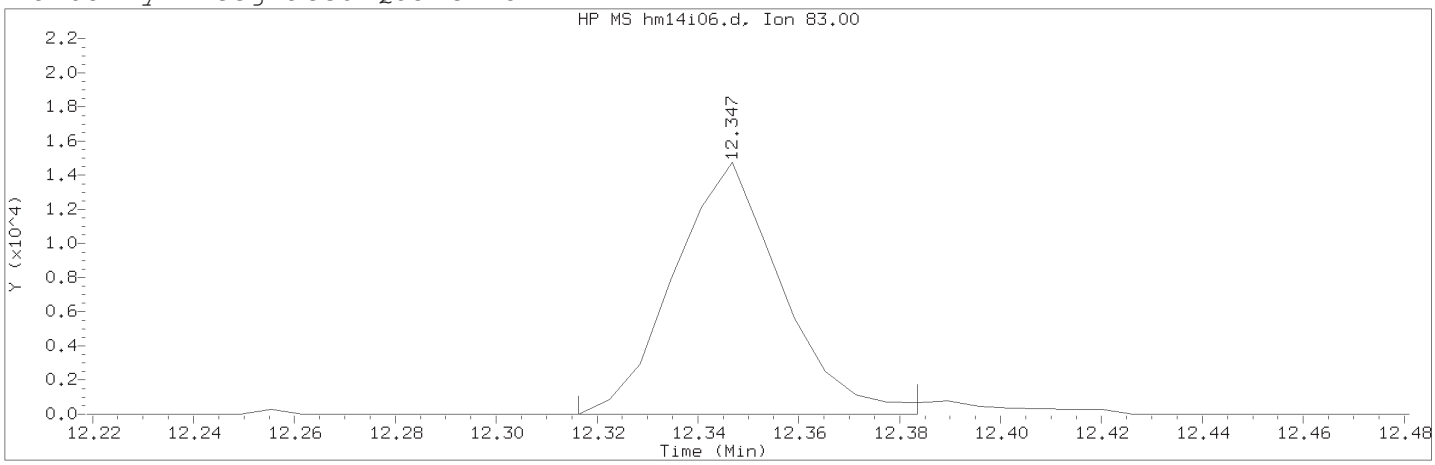
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area : 134712
On-column Amount (ng) : 5.5880
Integration start scan : 1457 Integration stop scan: 1546
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

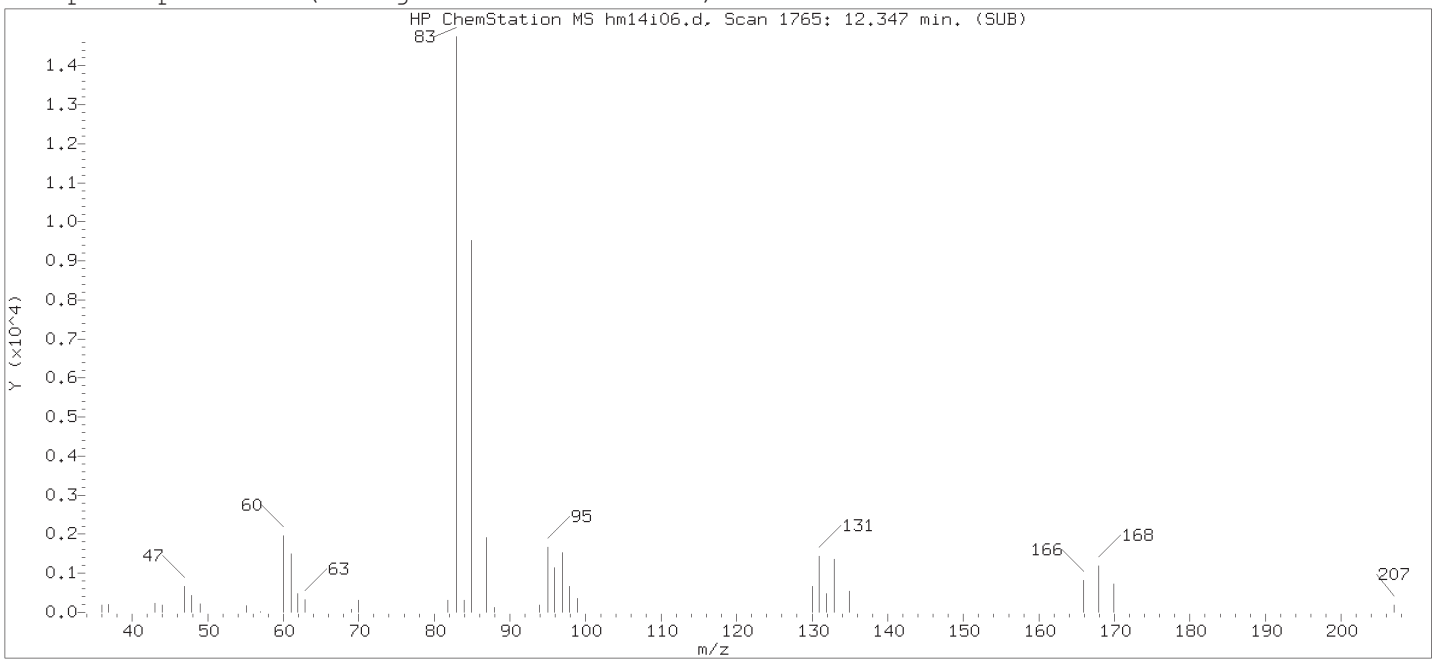
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 21790M
On-Column Amount (ng) : 0.5249
Integration start scan : 1759 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

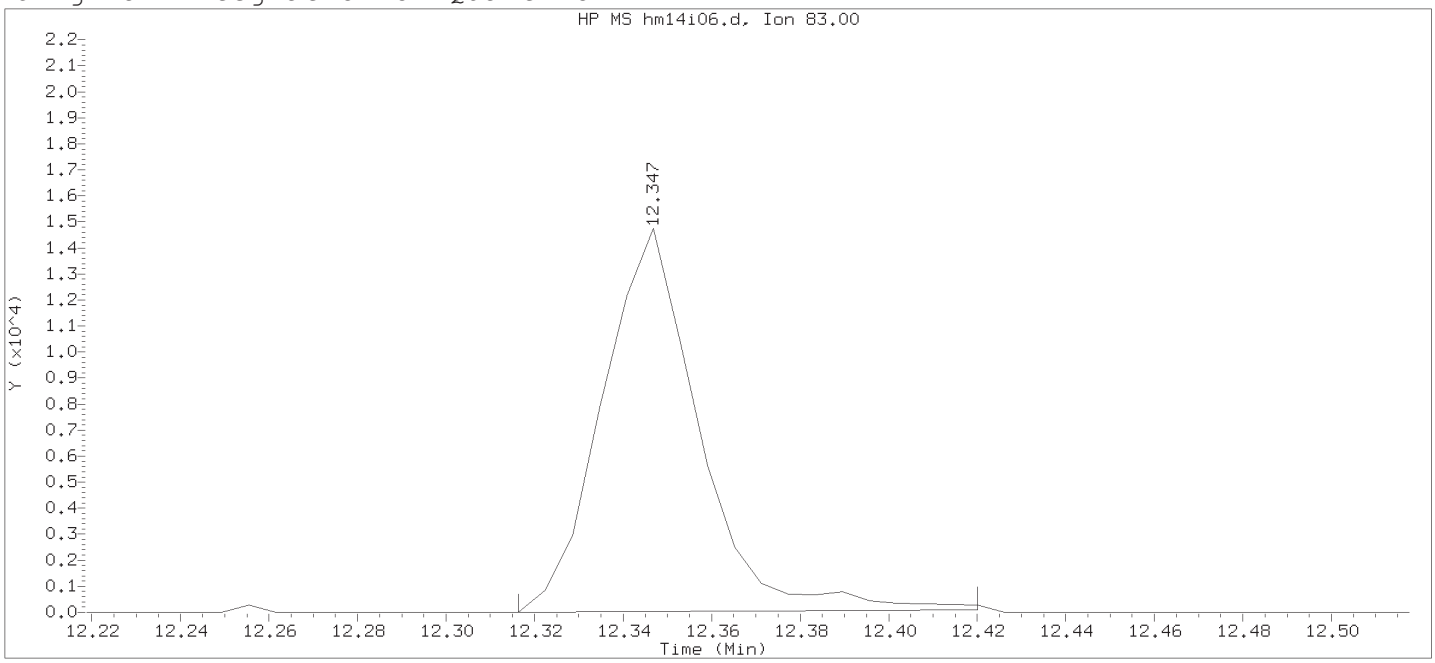
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

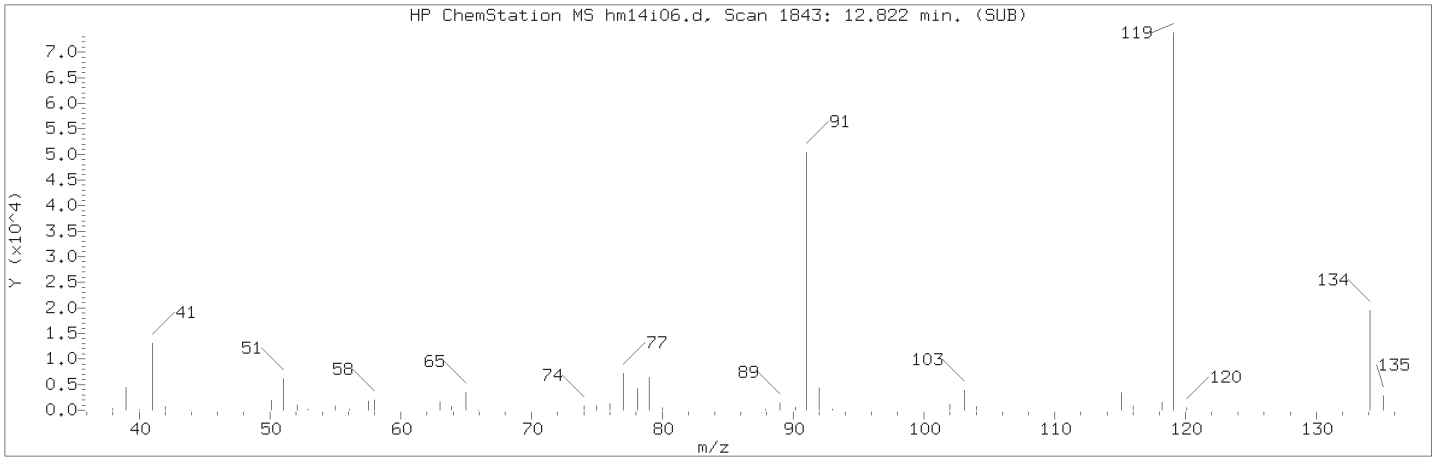
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

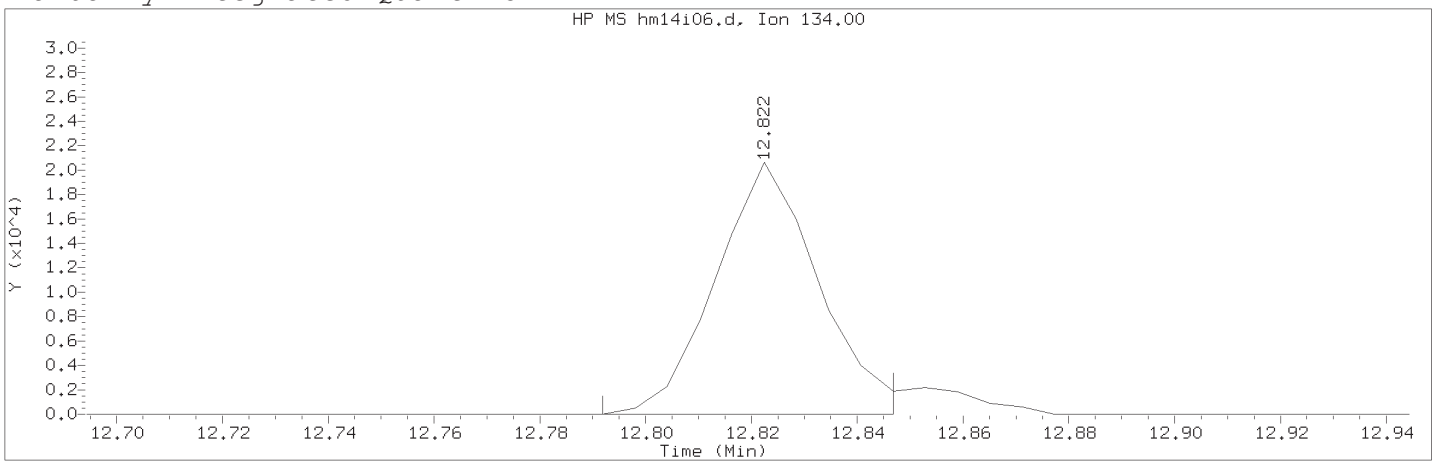
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area	: 22370		
On-column Amount (ng)	: 0.5475		
Integration start scan	: 1759	Integration stop scan:	1776
Y at integration start	: 0	Y at integration end:	87

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

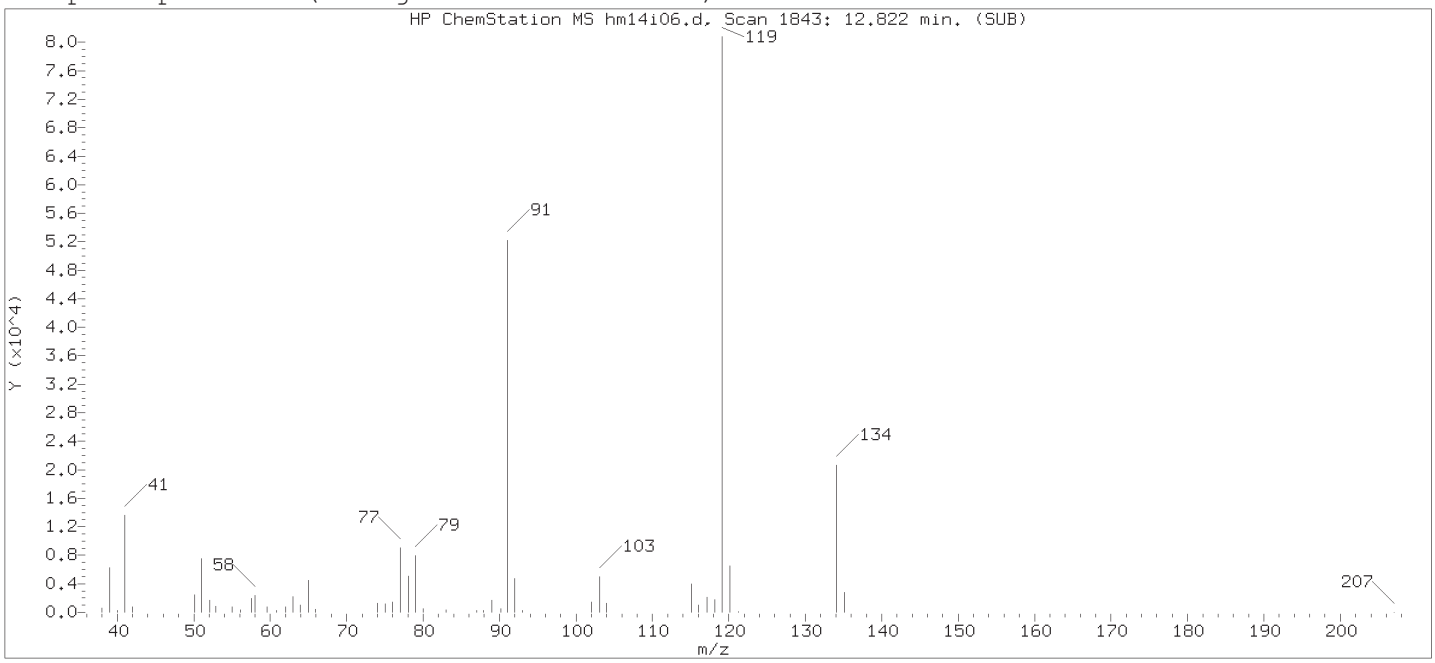
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 27825M
On-Column Amount (ng) : 0.5598
Integration start scan : 1837 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

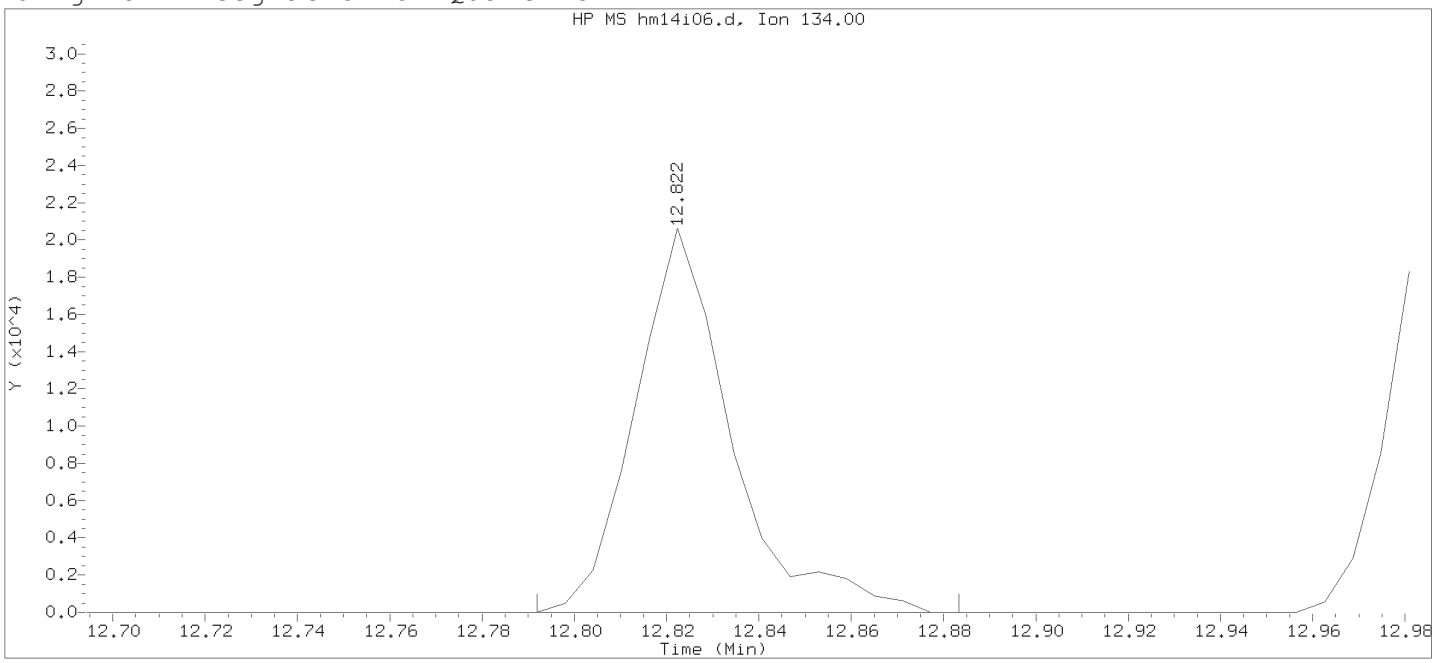
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

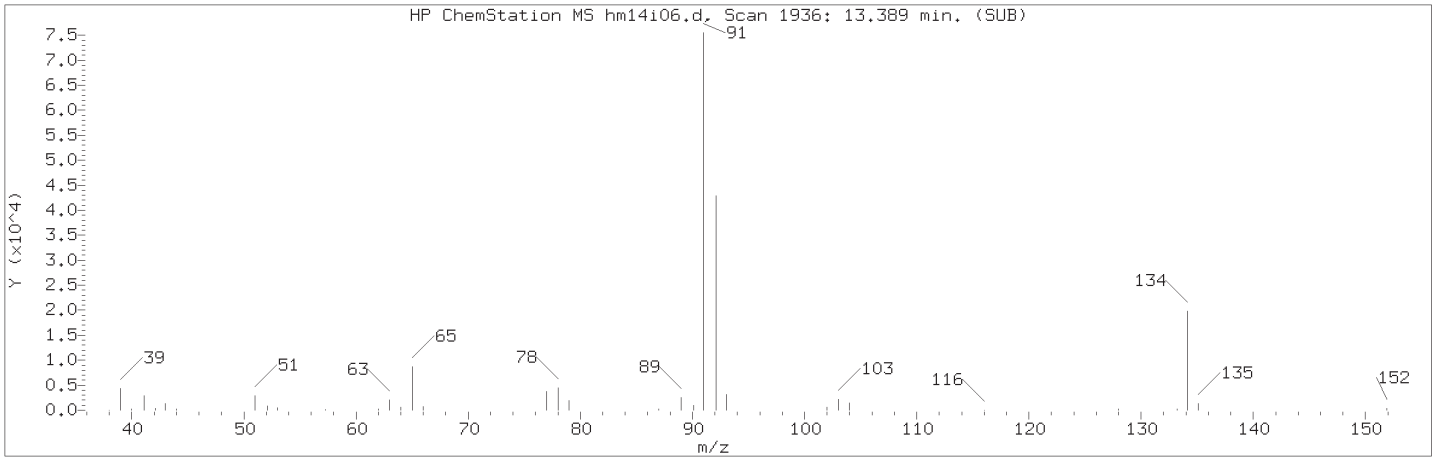
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

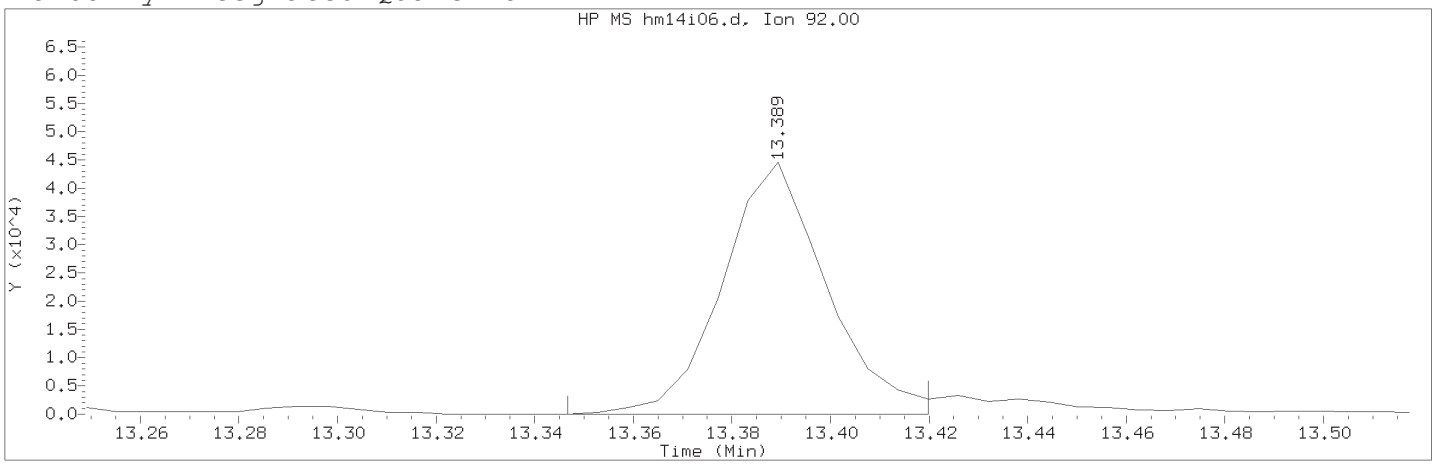
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 29830
On-column Amount (ng) : 0.5746
Integration start scan : 1837 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

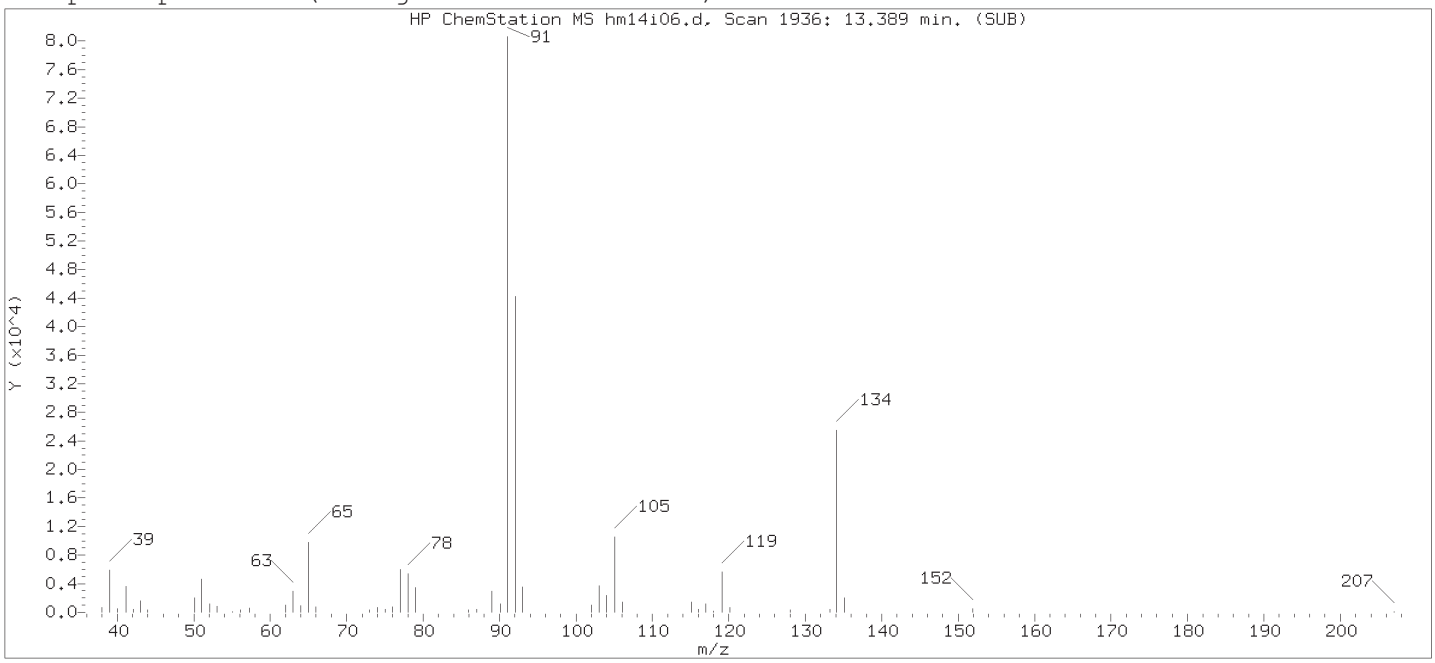
Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1936
Retention Time (minutes): 13.389
Quant Ion : 92.00
Area (flag) : 65180M
On-Column Amount (ng) : 0.5214
Integration start scan : 1928 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

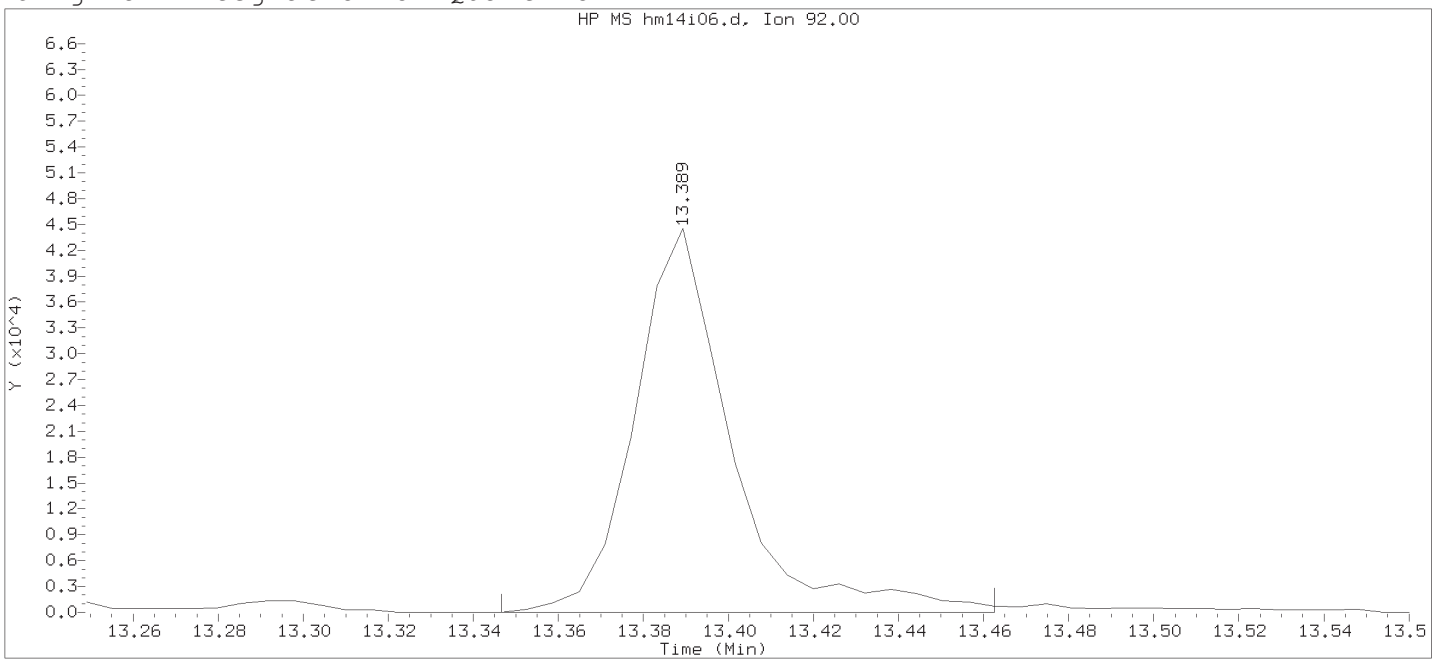
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



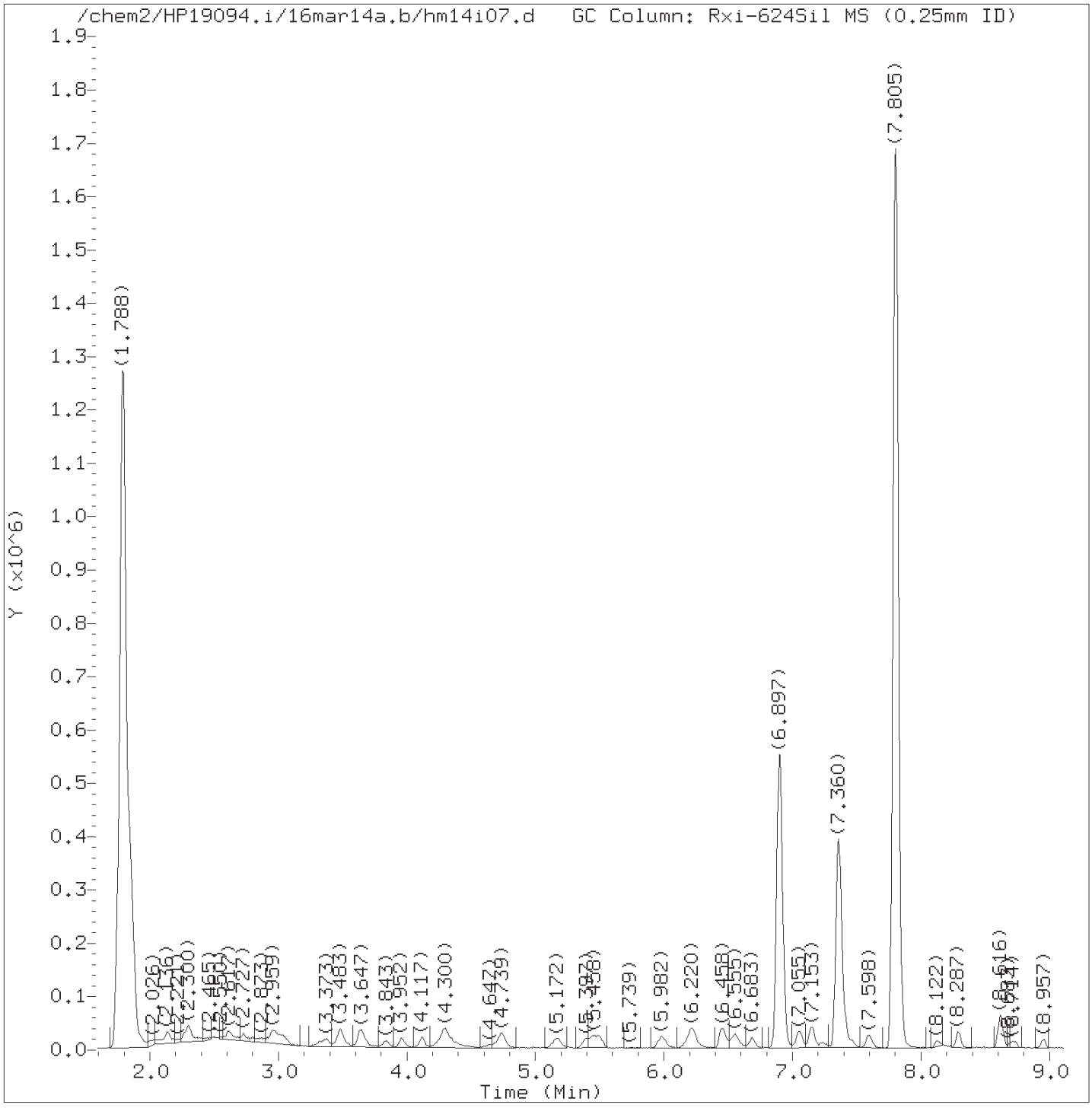
Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 138		
Compound Name	: n-Butylbenzene		
Scan Number	: 1936		
Retention Time (minutes)	: 13.389		
Quant Ion	: 92.00		
Area	: 70021		
On-column Amount (ng)	: 0.5662		
Integration start scan	: 1928	Integration stop scan:	1947
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

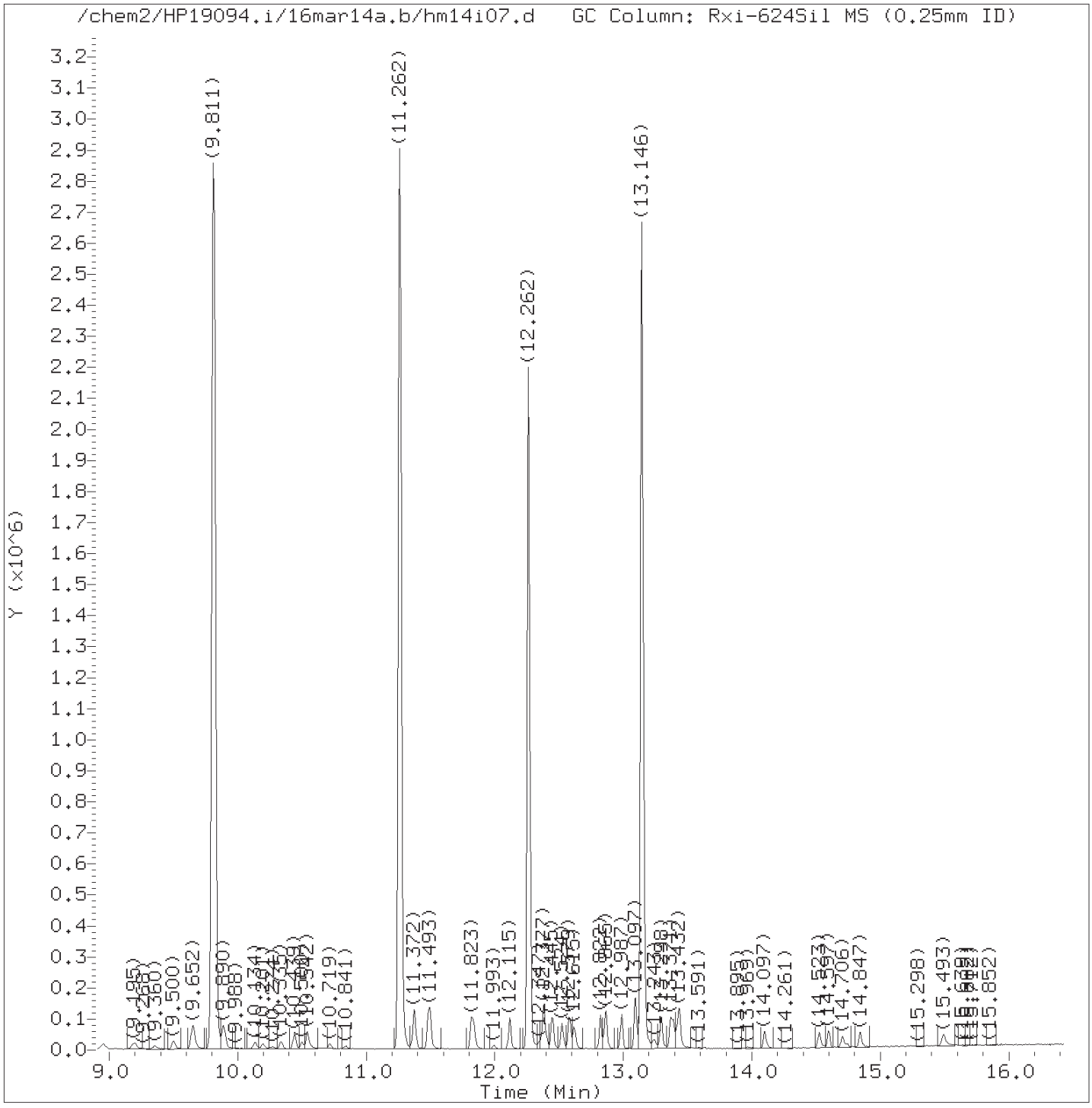
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	17775	0.220
2) Chloromethane	(2)	2.136	50	20194	0.255
5) Vinyl Chloride	(2)	2.276	62	17591	0.239
6) 1,3-Butadiene	(2)	2.300	39	13395M	0.240
7) Bromomethane	(2)	2.617	94	11157	0.228
8) Chloroethane	(2)	2.727	64	12016	0.265
9) Dichlorofluoromethane	(2)	2.965	67	25059	0.243
10) Trichlorofluoromethane	(2)	3.050	101	22054	0.230
11) Ethyl ether	(2)	3.318	59	8699	0.220
12) Freon 123a	(2)	3.367	67	16514	0.225
13) Acrolein	(1)	3.483	56	67076	10.807
15) 1,1-Dichloroethene	(2)	3.635	96	12065	0.219
14) Acetone	(1)	3.647	43	26660M	3.117
16) Freon 113	(2)	3.666	101	11422	0.199
17) Methyl Iodide	(2)	3.830	142	21202	0.208
18) Carbon Disulfide	(2)	3.952	76	39421	0.232
21) Methyl Acetate	(1)	4.068	43	8187	0.341
22) Allyl Chloride	(2)	4.117	41	24111	0.232
26)*t-Butyl Alcohol-d10	(1)	4.281	65	108855M	50.000
23) Methylene Chloride	(2)	4.300	84	12265	0.208
28) t-Butyl Alcohol	(1)	4.428	59	12826	4.382
29) Acrylonitrile	(1)	4.641	53	10075	0.982
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	26917	0.212
31) trans-1,2-Dichloroethene	(2)	4.739	96	12229	0.206
32) n-Hexane	(2)	5.172	57	21934	0.218
33) 1,1-Dichloroethane	(2)	5.385	63	25729	0.213
34) di-Isopropyl Ether	(2)	5.446	45	44211	0.210
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	20753	0.209
37) Ethyl t-butyl ether	(2)	5.988	59	37305	0.210
40) 1,2-Dichloroethene (Total)	(2)		96	25891	0.414
38) 2-Butanone	(1)	6.177	43	31340	2.151
39) cis-1,2-Dichloroethene	(2)	6.208	96	13662	0.208
41) 2,2-Dichloropropane	(2)	6.232	77	20656	0.214
42) Propionitrile	(1)	6.251	54	15091	4.153
45) Methacrylonitrile	(1)	6.458	67	26431	2.124
47) Bromochloromethane	(2)	6.543	128	4931	0.197
48) Tetrahydrofuran	(1)	6.568	71	8112	2.200
49) Chloroform	(2)	6.683	83	24677	0.223

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	540029	9.783
50)$Dibromofluoromethane	(2)	6.903	111	555065	9.773
51) 1,1,1-Trichloroethane	(2)	6.939	97	20406	0.217
52) Cyclohexane	(2)	7.061	56	29098	0.236
52) Cyclohexane	(2)	7.049	84	19283	0.205
52) Cyclohexane	(2)	7.043	69	7883	0.224
55) 1,1-Dichloropropene	(2)	7.147	75	18750	0.207
54) Carbon Tetrachloride	(2)	7.159	117	17892	0.209
56) Isobutyl Alcohol	(1)	7.226	41	13435M	12.955
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88516	9.682
57)$1,2-Dichloroethane-d4	(2)	7.354	65	451656	9.676
57)$1,2-Dichloroethane-d4	(2)	7.360	104	55455	9.607
58) Benzene	(2)	7.403	78	54162	0.215
59) 1,2-Dichloroethane	(2)	7.464	62	14181	0.217
60) t-Amyl methyl ether	(2)	7.598	73	30946	0.213
63)*Fluorobenzene	(2)	7.805	96	2342480	10.000
62) n-Heptane	(2)	7.823	43	24636	0.217
65) n-Butanol	(1)	8.134	56	19236	23.045
67) Trichloroethene	(2)	8.287	95	14143	0.216
70) 1,2-Dichloropropane	(2)	8.616	63	13776	0.210
69) Methylcyclohexane	(2)	8.628	83	22564	0.210
71) Methyl Methacrylate	(1)	8.695	69	5318M	0.205
72) 1,4-Dioxane	(1)	8.714	88	1121	6.817
73) Dibromomethane	(2)	8.732	93	5770	0.214
74) Bromodichloromethane	(2)	8.951	83	15194	0.202
76) 2-Nitropropane	(1)	9.195	41	20241	2.429
80) cis-1,3-Dichloropropene	(2)	9.494	75	19669	0.212
81) 4-Methyl-2-Pentanone	(1)	9.652	43	74767	2.085
82)$Toluene-d8	(3)	9.811	98	2288811	10.283
82)$Toluene-d8	(3)	9.811	100	1474233	10.232
83) Toluene	(3)	9.890	92	32967	0.220
84) trans-1,3-Dichloropropene	(3)	10.134	75	14768	0.210
85) 1,3-Dichloropropene (total)	(3)		75	34437	0.422
86) Ethyl Methacrylate	(3)	10.201	69	10842	0.201
88) 1,1,2-Trichloroethane	(3)	10.341	97	8199	0.226
89) Tetrachloroethene	(3)	10.439	166	15760	0.223
90) 1,3-Dichloropropane	(3)	10.500	76	13680	0.209
91) 2-Hexanone	(1)	10.542	43	59429	2.344

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	9231	0.198
95) 1,2-Dibromoethane	(3)	10.841	107	6853	0.200
97)*Chlorobenzene-d5	(3)	11.262	117	1562481	10.000
98) Chlorobenzene	(3)	11.292	112	35561	0.218
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	12166	0.217
100) Ethylbenzene	(3)	11.378	91	66043	0.225
101) m+p-Xylene	(3)	11.487	106	48843	0.436
105) Xylene (Total)	(3)		106	71996	0.650
104) o-Xylene	(3)	11.817	106	23153	0.213
106) Styrene	(3)	11.835	104	36879	0.212
107) Bromoform	(3)	11.993	173	5392	0.209
108) Isopropylbenzene	(3)	12.115	105	62034	0.215
111)$4-Bromofluorobenzene	(3)	12.262	95	702914	9.797
111)$4-Bromofluorobenzene	(3)	12.262	174	585424	9.787
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	9763	0.238
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	21303M	1.929
114) Bromobenzene	(4)	12.377	156	14069	0.230
116) 1,2,3-Trichloropropane	(4)	12.402	110	2122	0.206
117) n-Propylbenzene	(4)	12.451	91	77405	0.234
119) 2-Chlorotoluene	(4)	12.530	126	14287	0.224
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	51612	0.224
122) 4-Chlorotoluene	(4)	12.621	126	14982	0.230
125) tert-Butylbenzene	(4)	12.822	134	10791M	0.219
126) Pentachloroethane	(4)	12.853	167	8069	0.217
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	51879	0.225
128) sec-Butylbenzene	(4)	12.987	105	67745	0.227
131) 1,3-Dichlorobenzene	(4)	13.091	146	27056	0.226
132) p-Isopropyltoluene	(4)	13.097	119	56112	0.222
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	656295	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	29351	0.241
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	22673M	0.237
136) Benzyl Chloride	(4)	13.237	126	2921	0.179
138) n-Butylbenzene	(4)	13.389	92	28261	0.228
139) 1,2-Dichlorobenzene	(4)	13.426	146	24236	0.228
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	1267	0.222
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	19174	0.252
146) Hexachlorobutadiene	(4)	14.603	225	9164	0.231
147) Naphthalene	(4)	14.706	128	36748	0.281

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

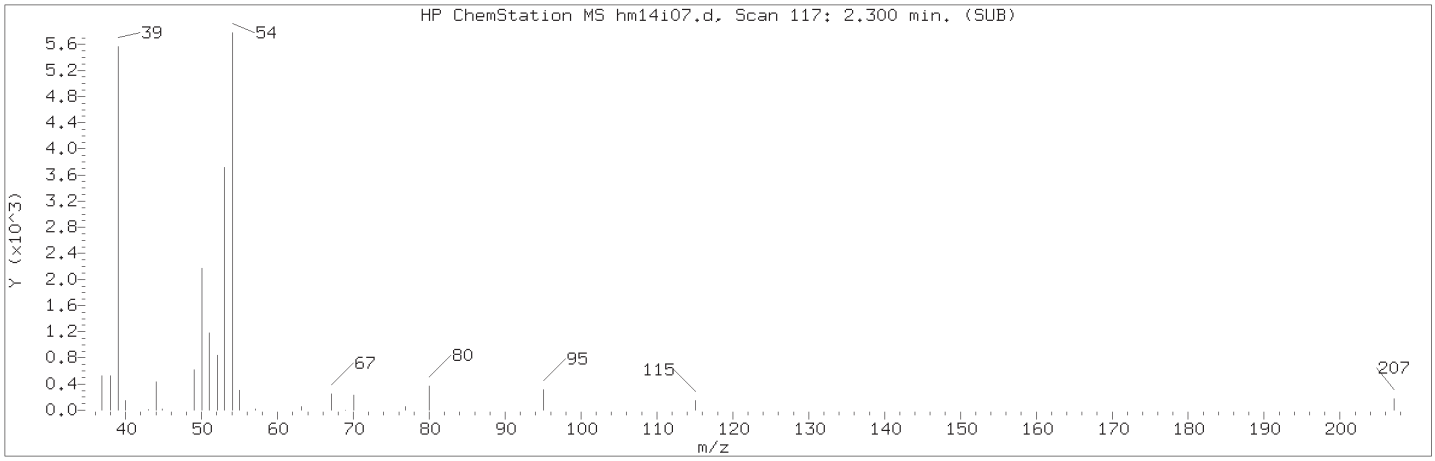
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

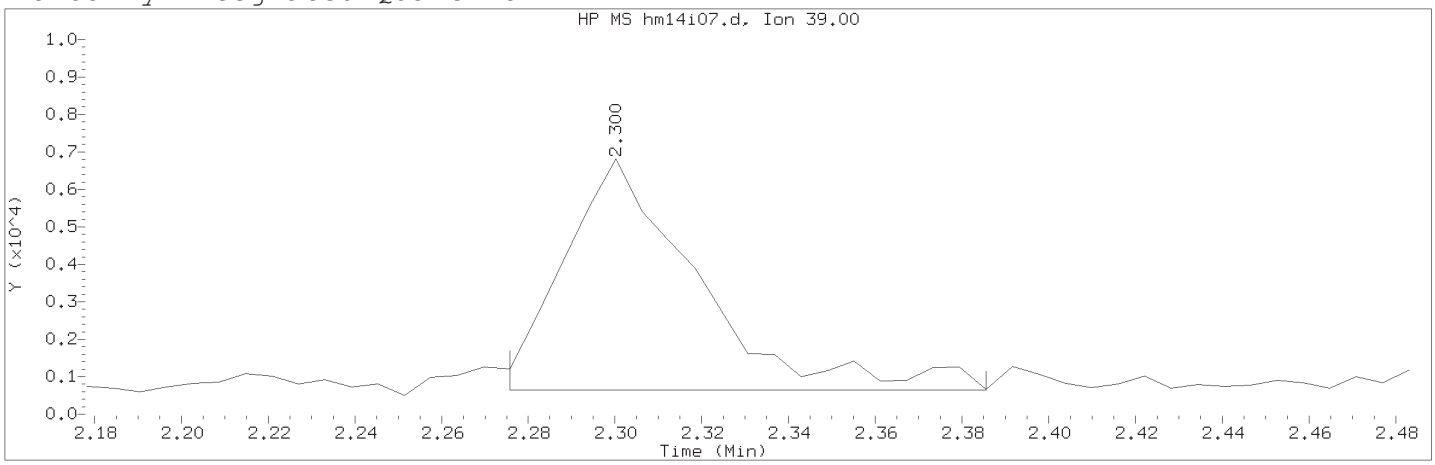
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.847	180	18503	0.305

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

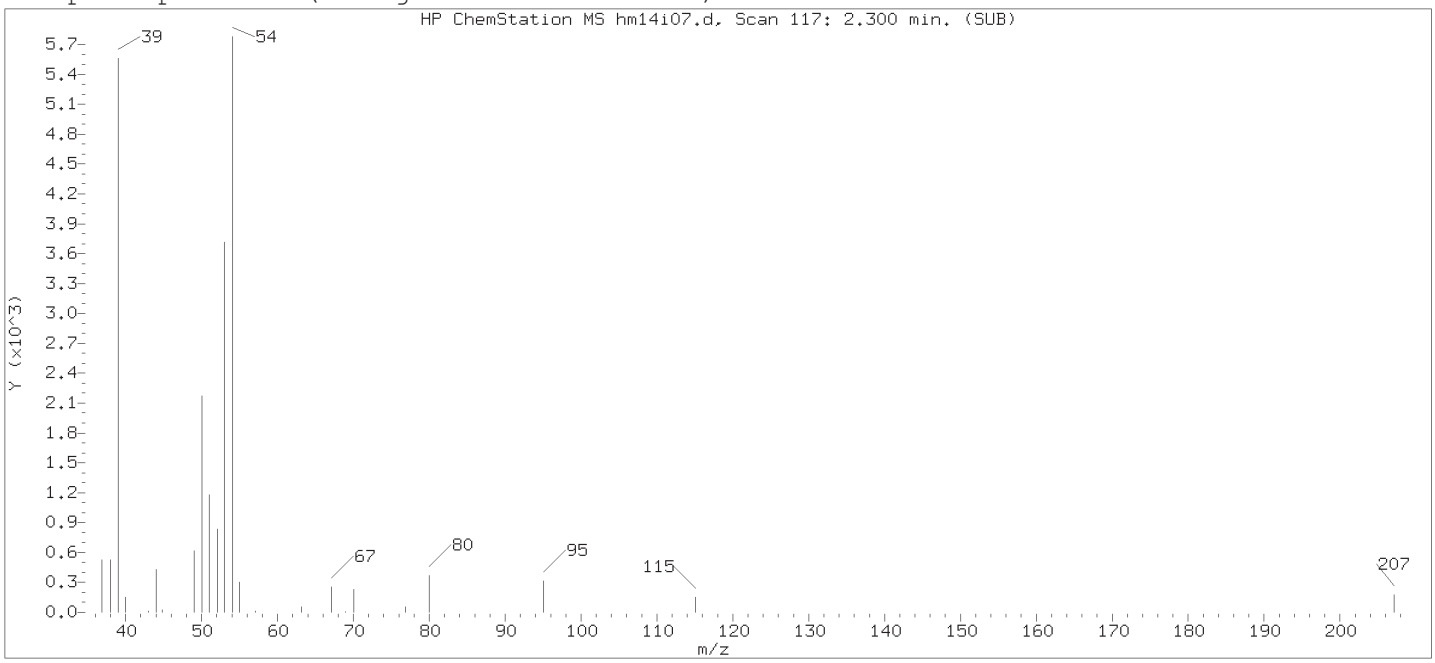
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area (flag) : 13395M
On-Column Amount (ng) : 0.2404
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 637 Y at integration end: 637

Reason for manual integration: improper integration

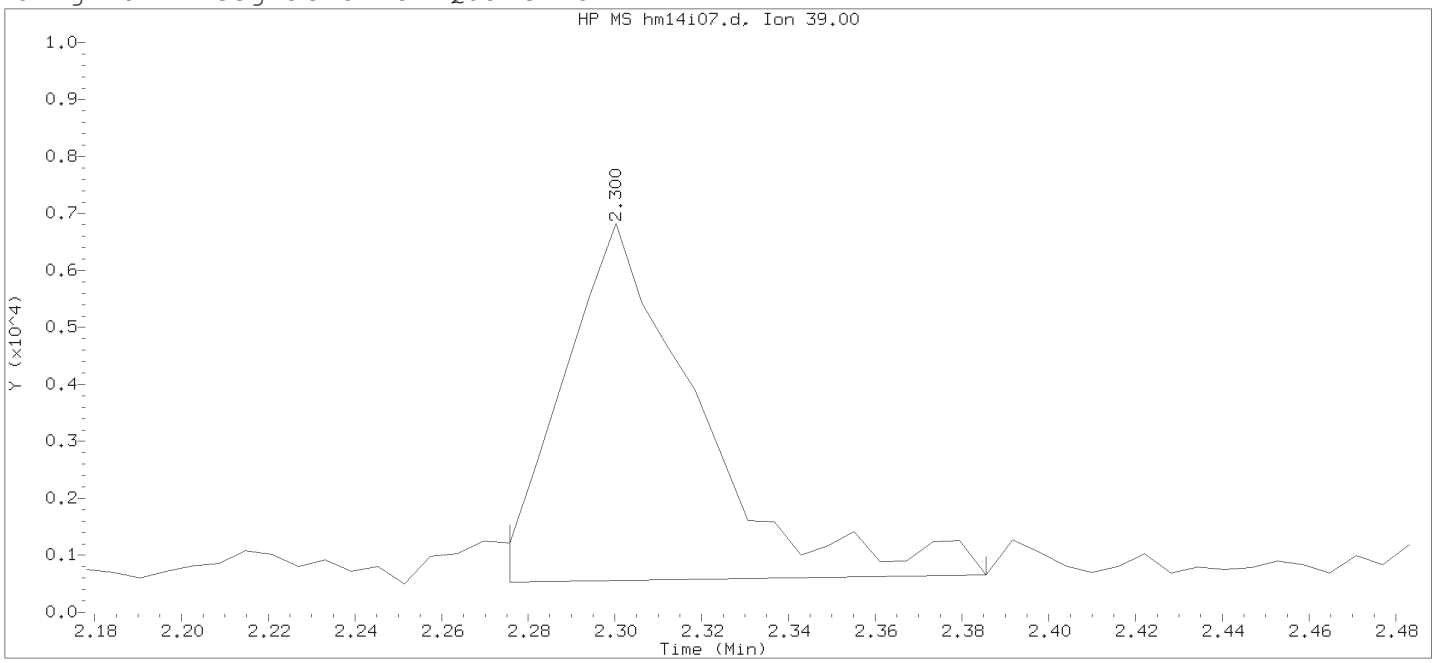
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

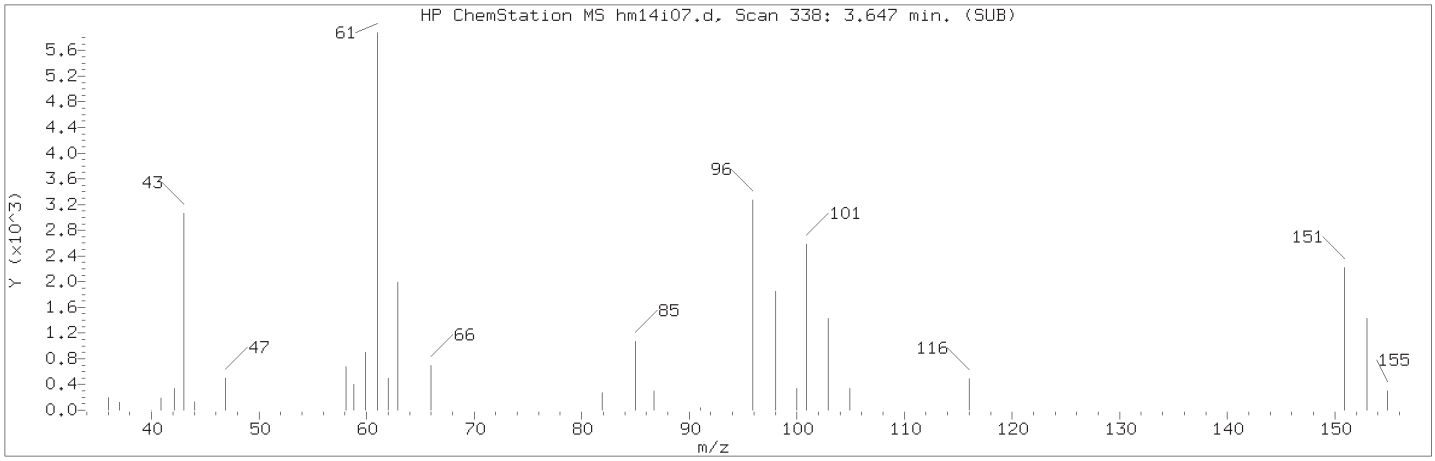
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

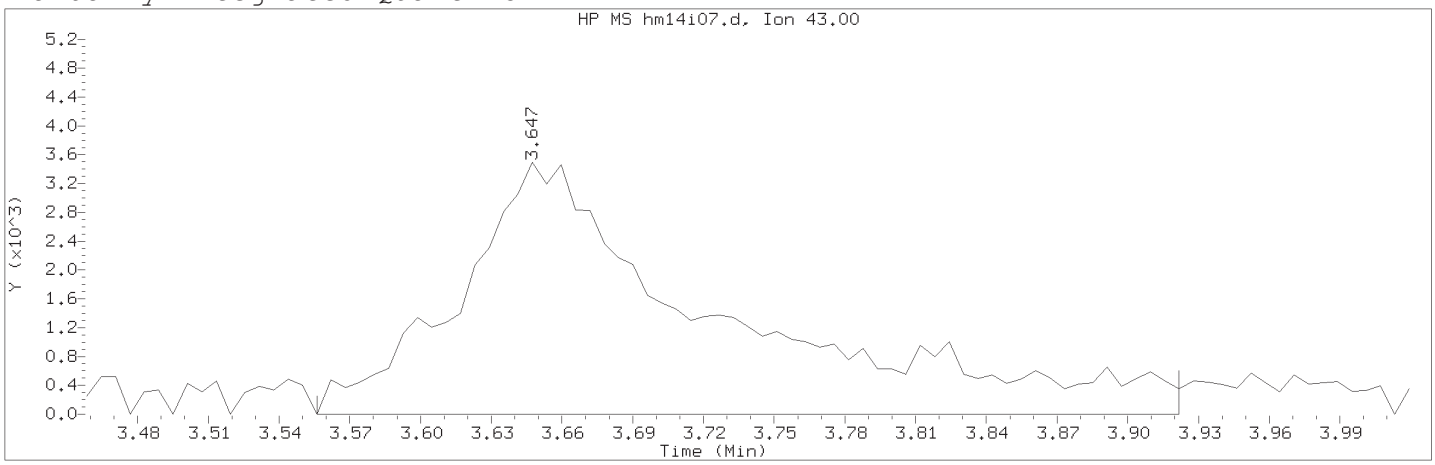
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area : 13576
On-column Amount (ng) : 0.2465
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 529 Y at integration end: 657

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

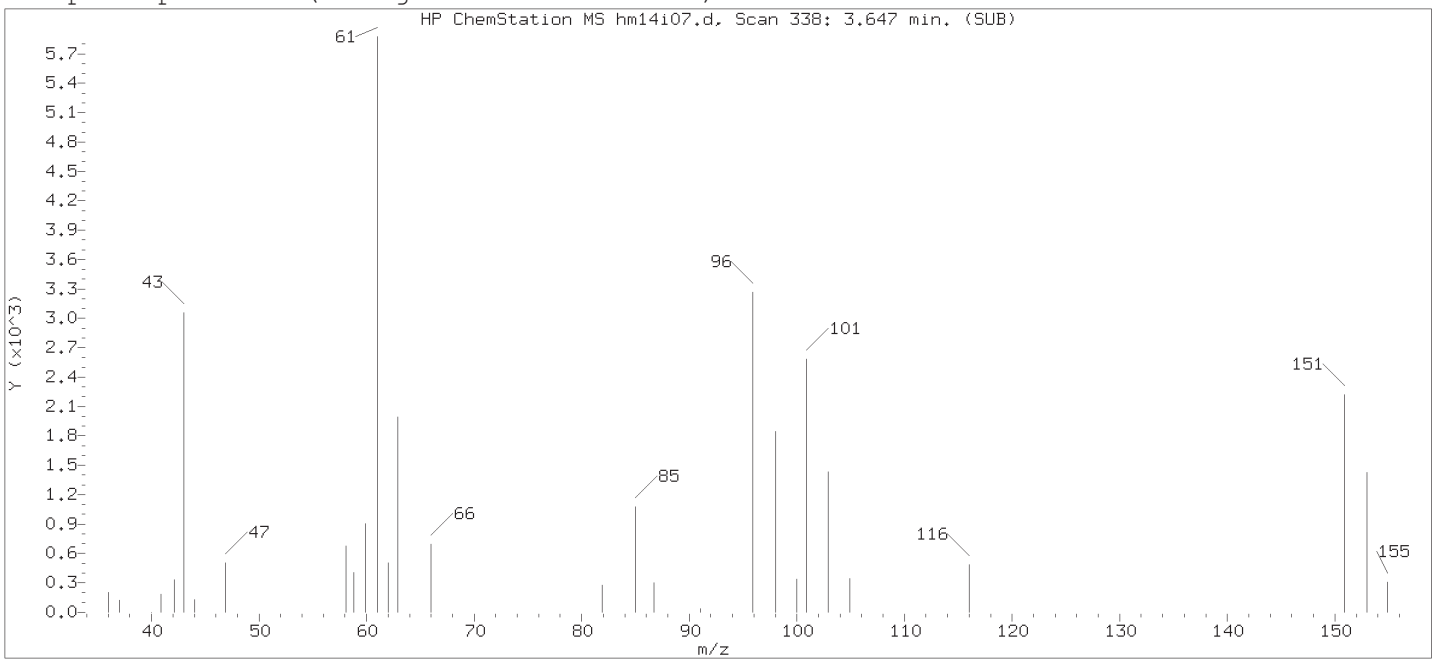
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 26660M
On-Column Amount (ng) : 3.1173
Integration start scan : 322 Integration stop scan: 382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

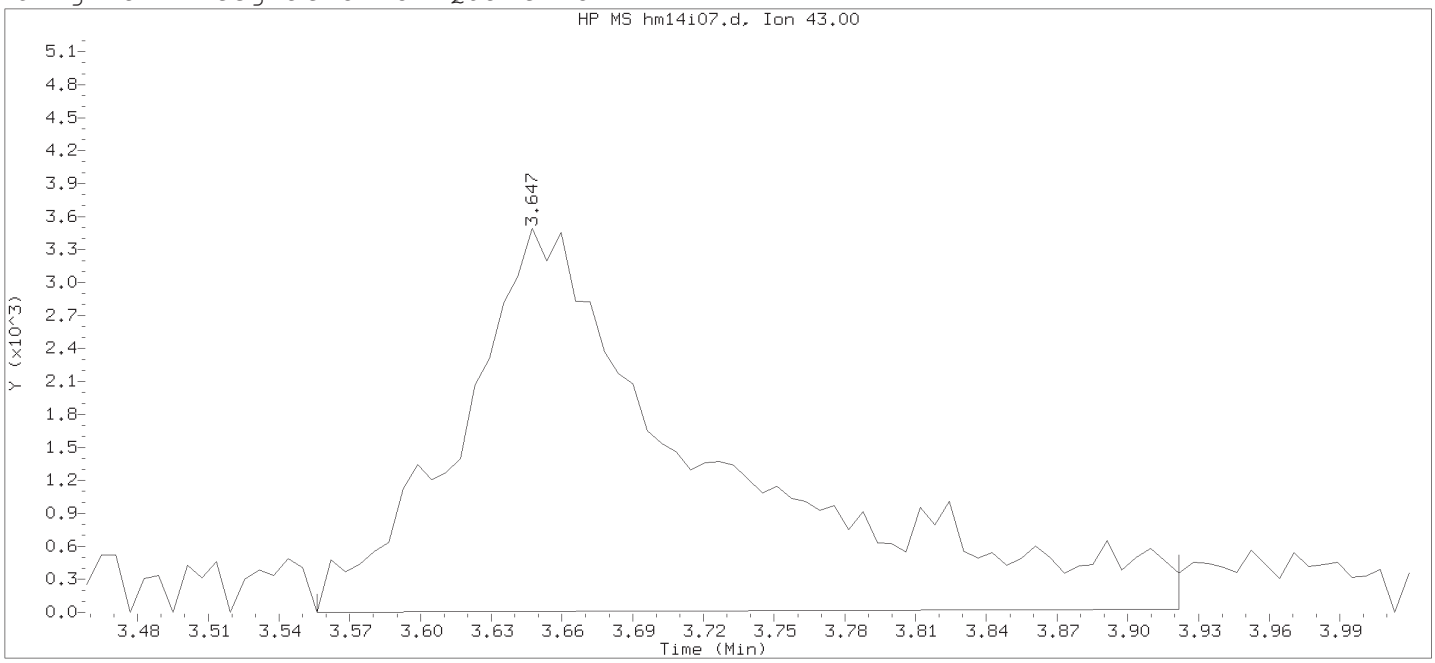
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

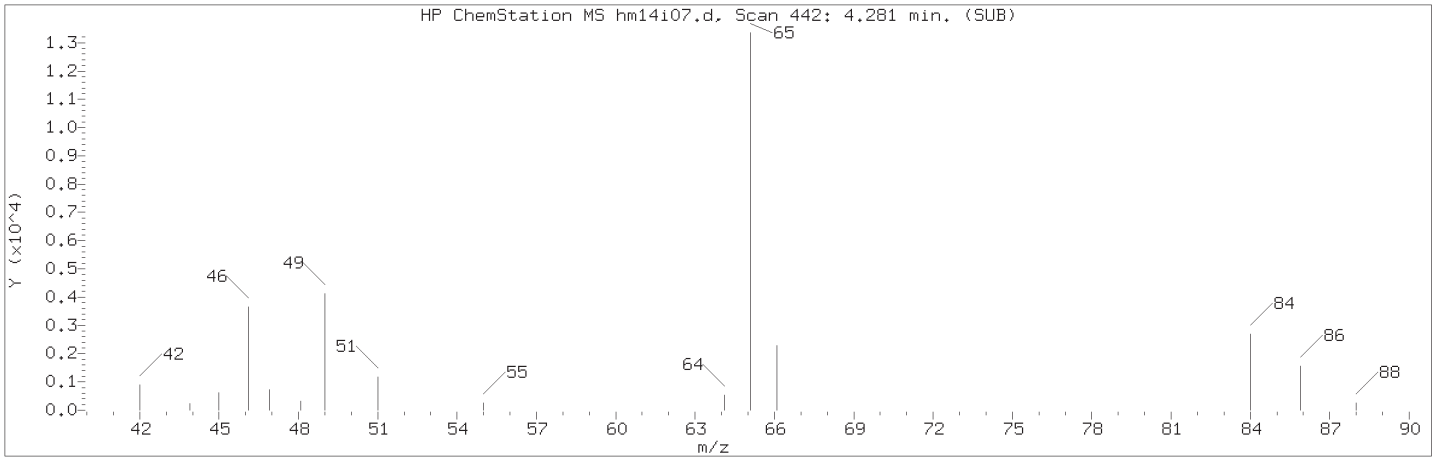
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

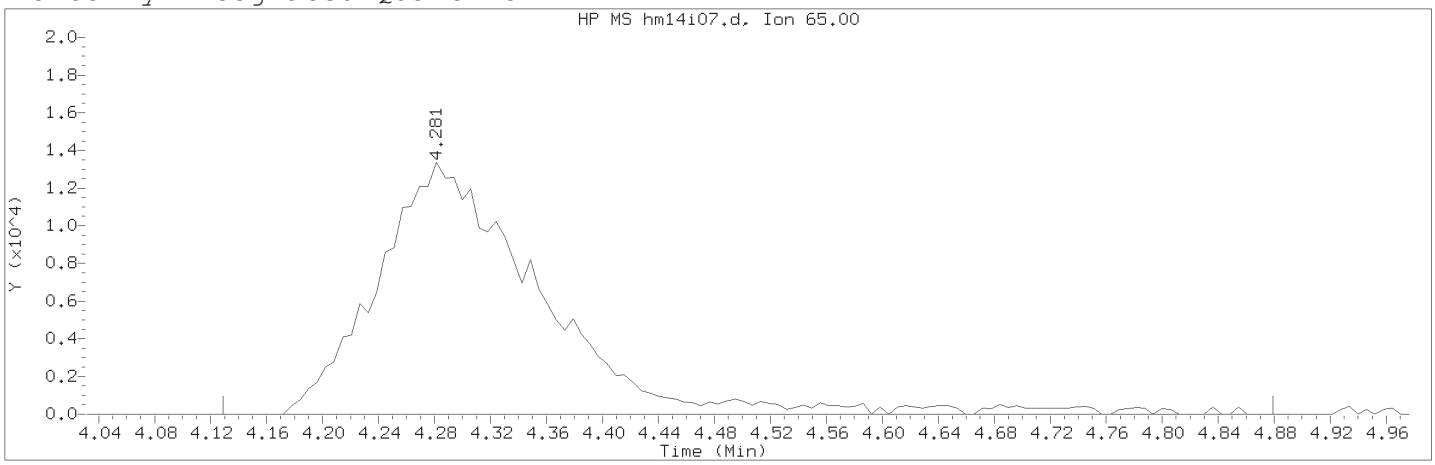
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 26310		
On-column Amount (ng)	: 3.2378		
Integration start scan	: 322	Integration stop scan:	382
Y at integration start	: 0	Y at integration end:	26

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: 14-MAR-16 17:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

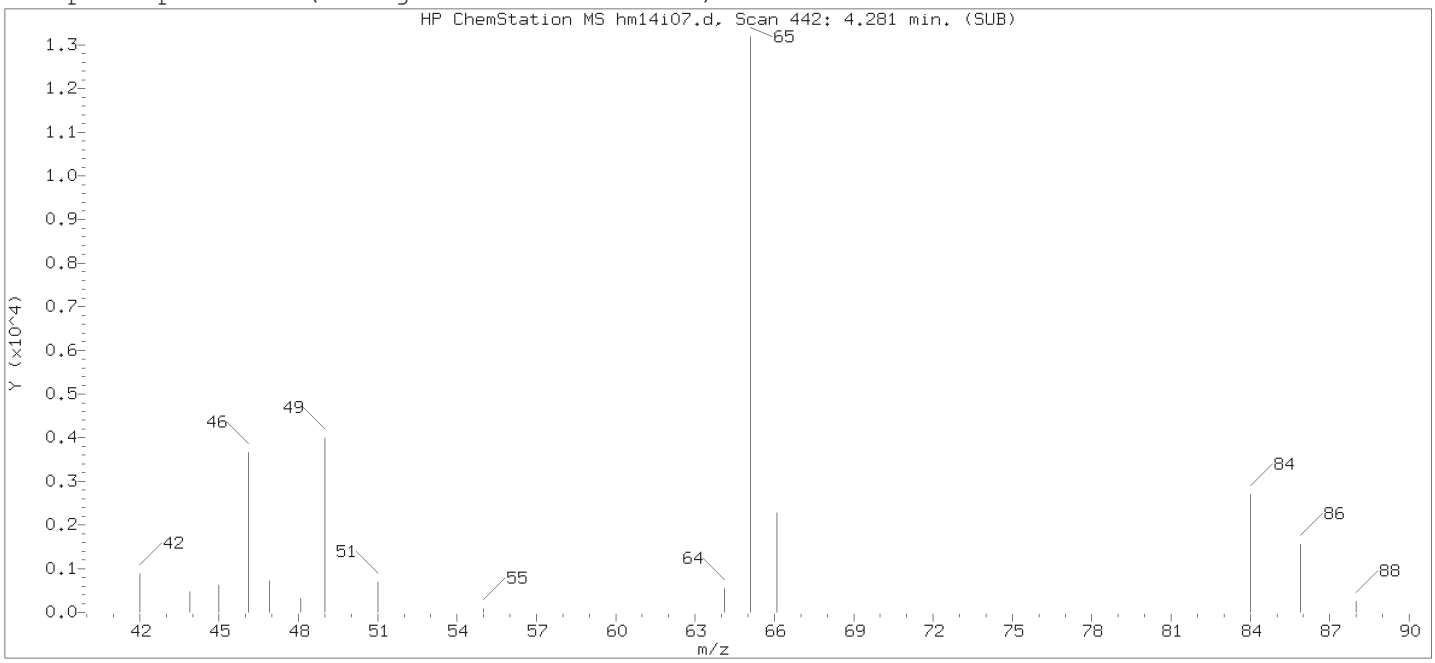
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 108855M
On-Column Amount (ng) : 50.0000
Integration start scan : 416 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

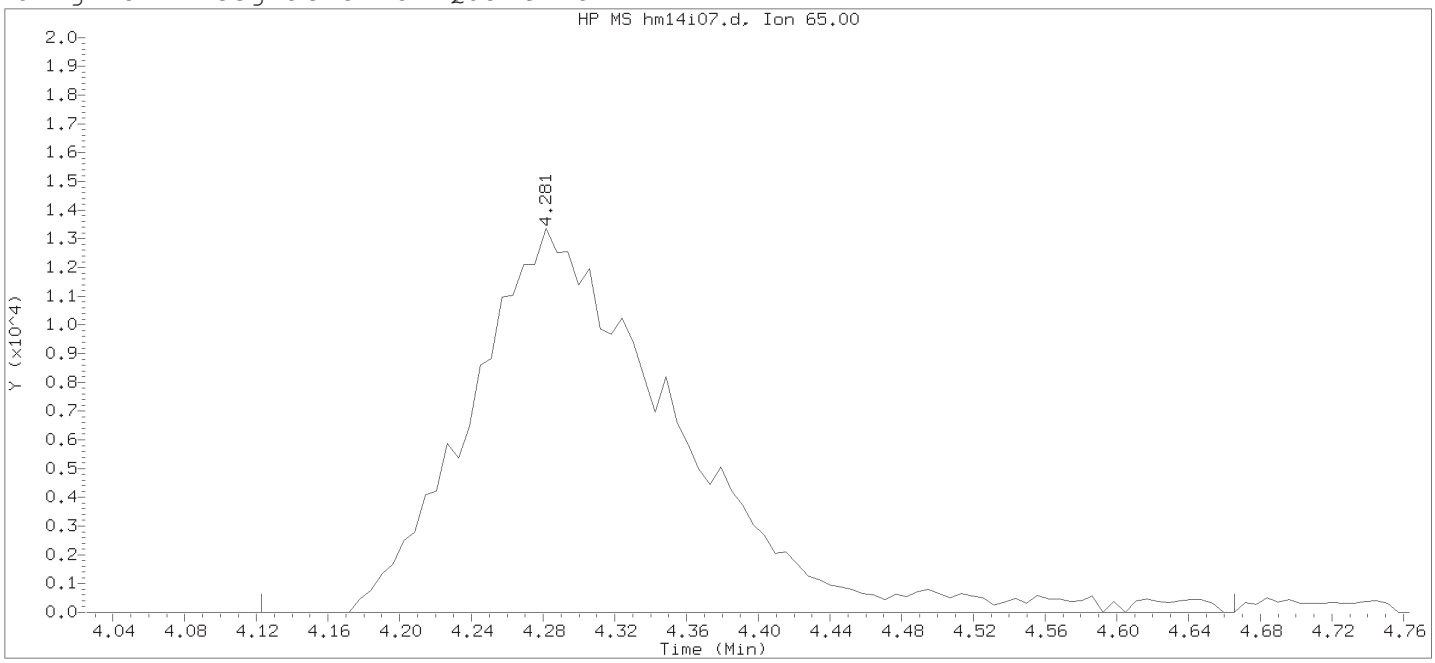
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

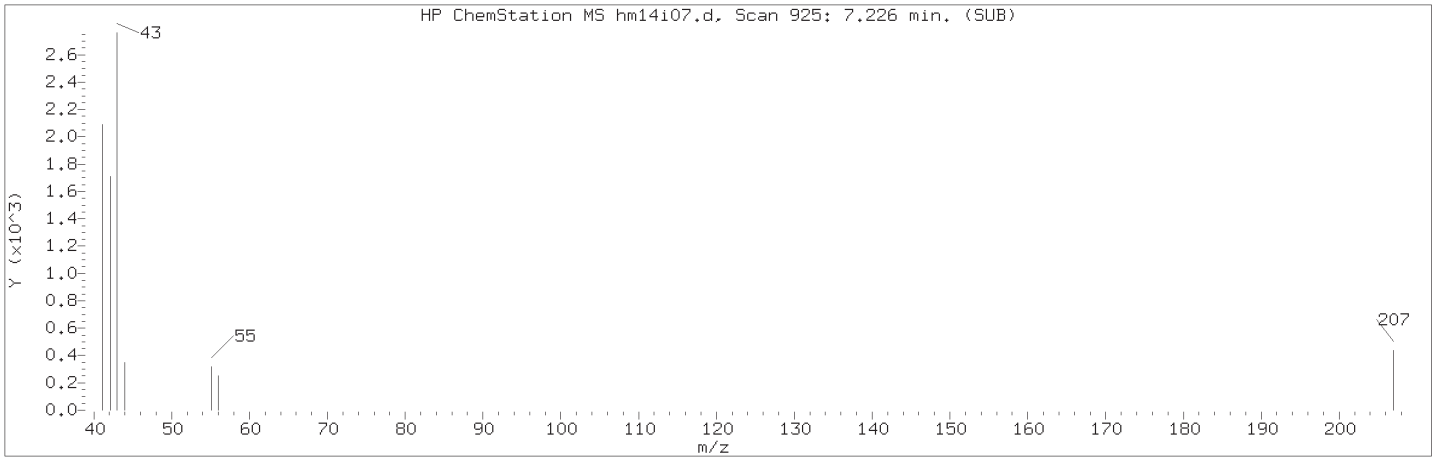
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

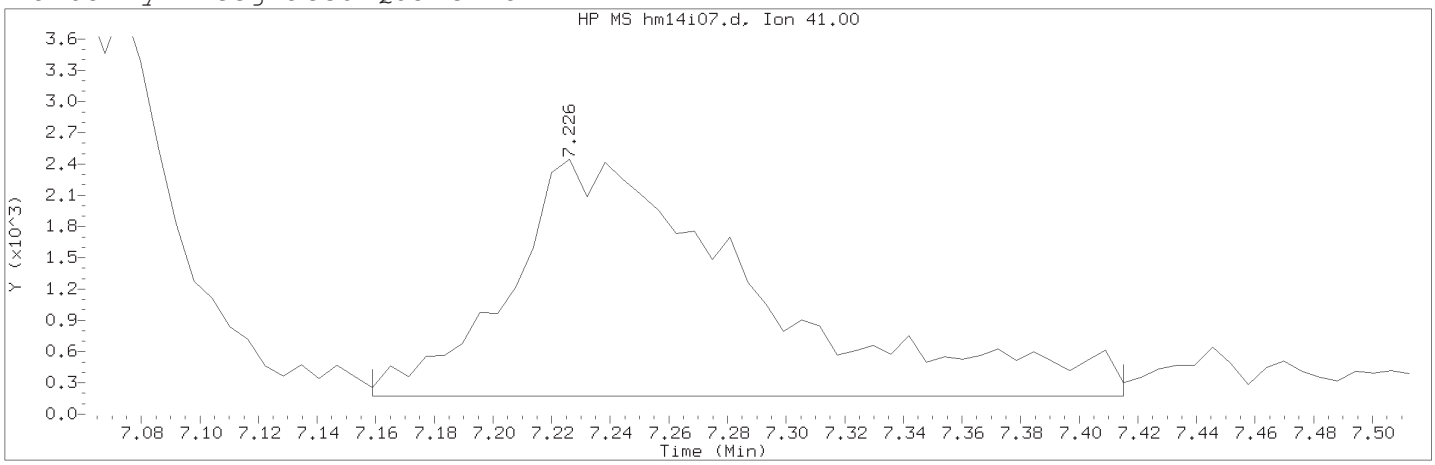
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 442		
Retention Time (minutes)	: 4.281		
Quant Ion	: 65.00		
Area	: 106099		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 415	Integration stop scan:	504
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature date: 14-MAR-16 17:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

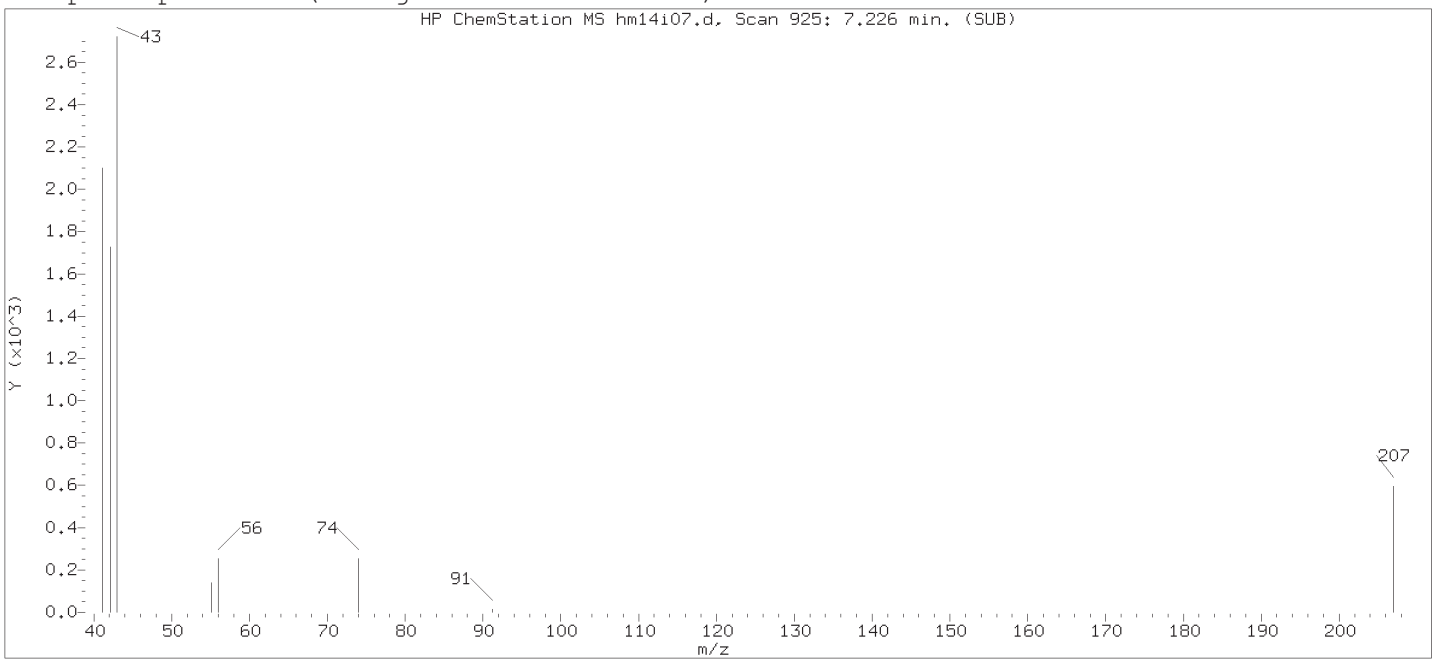
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 13435M
On-Column Amount (ng) : 12.9548
Integration start scan : 913 Integration stop scan: 955
Y at integration start : 173 Y at integration end: 173

Reason for manual integration: improper integration

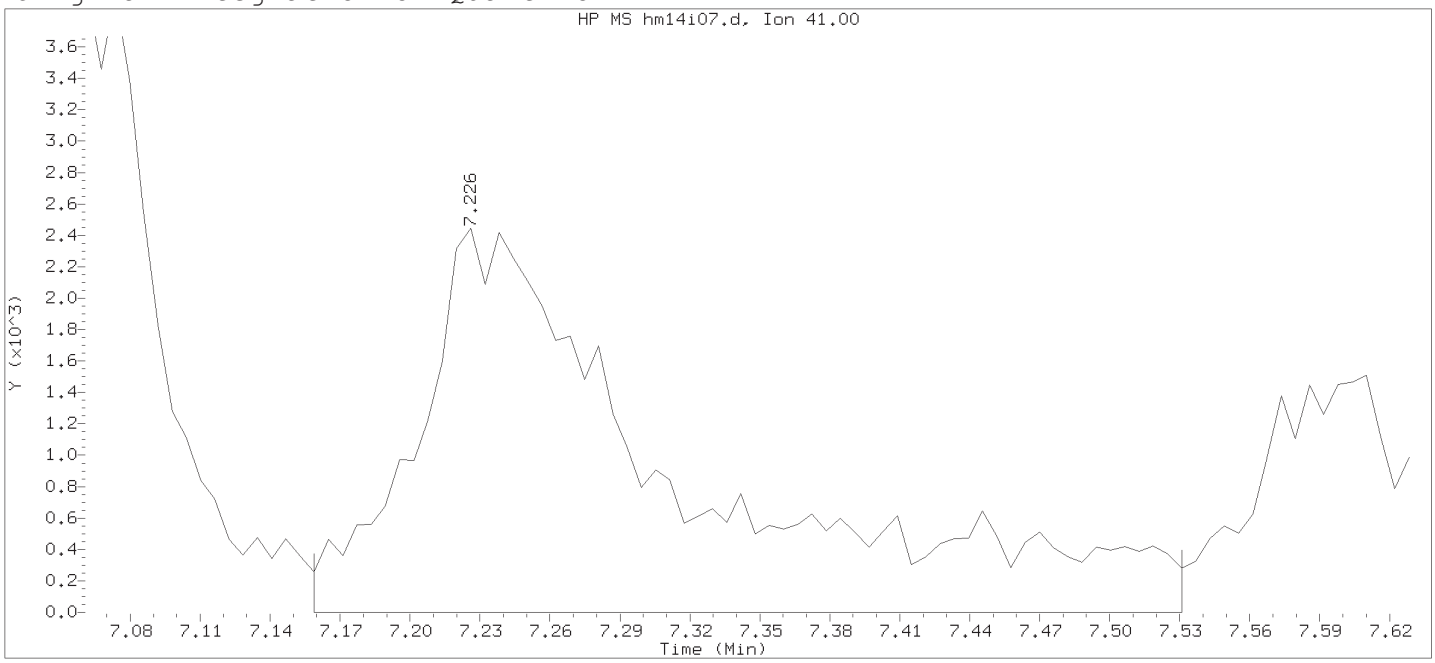
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

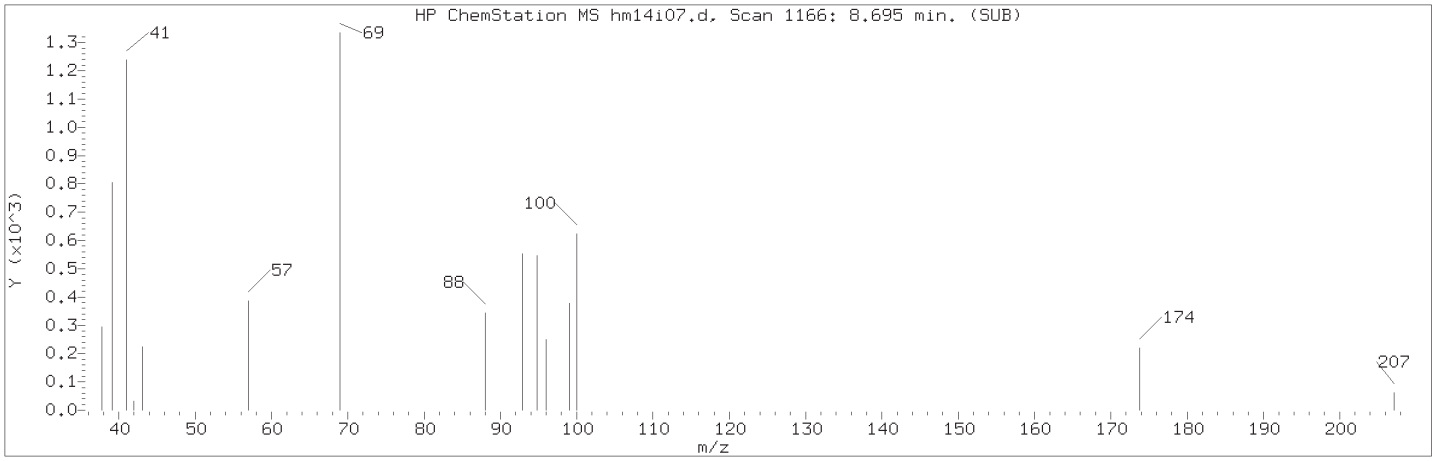
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

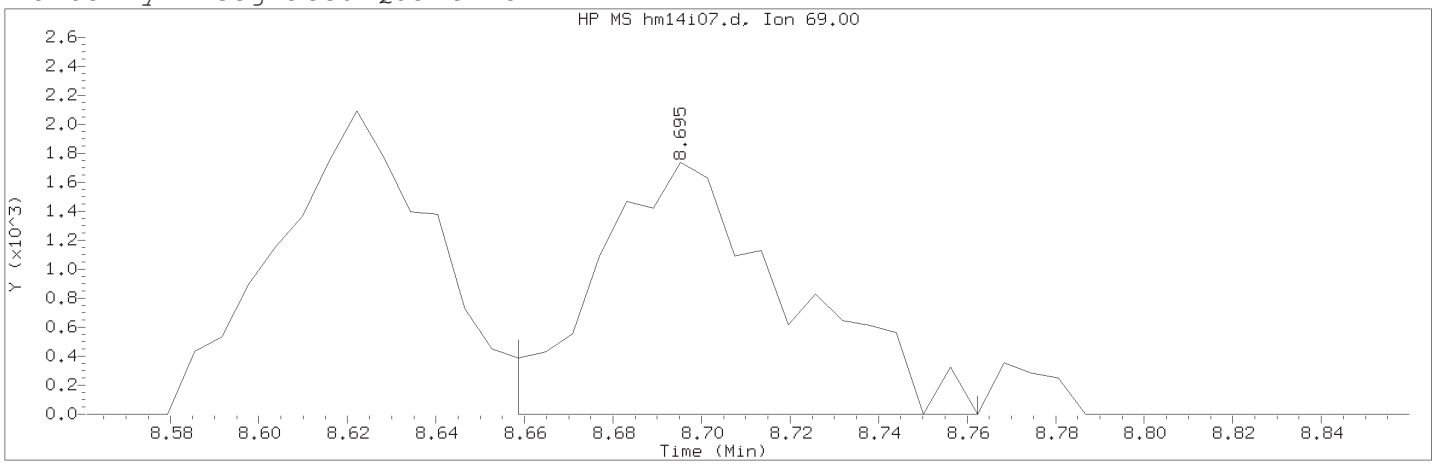
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 18938
On-column Amount (ng) : 17.2181
Integration start scan : 913 Integration stop scan: 974
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

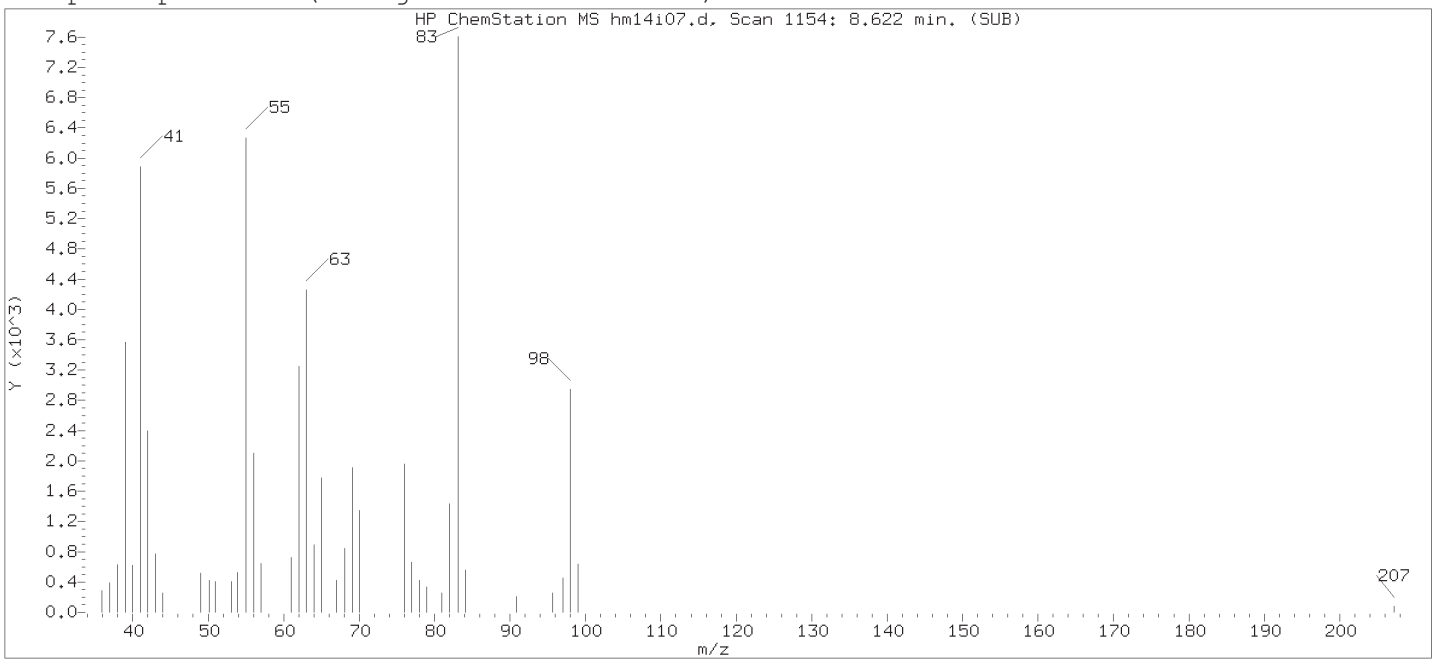
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 5318M
On-Column Amount (ng) : 0.2046
Integration start scan : 1159 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

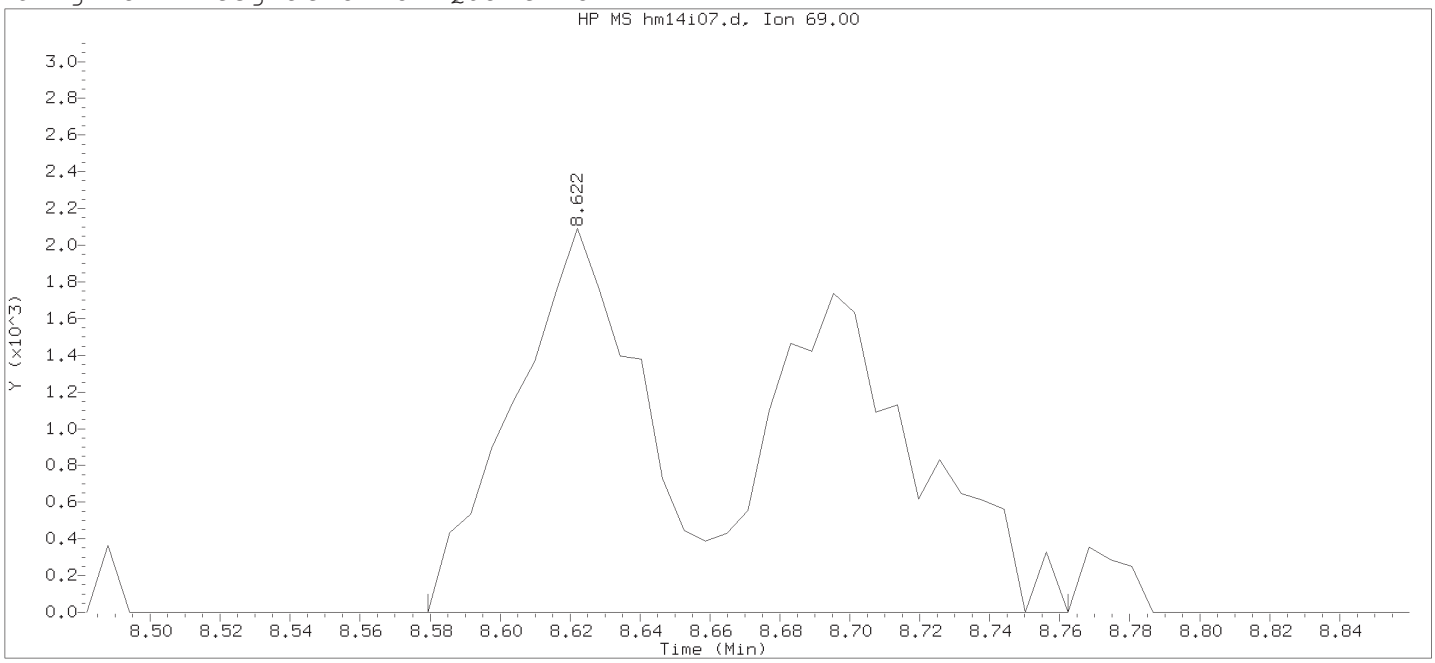
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

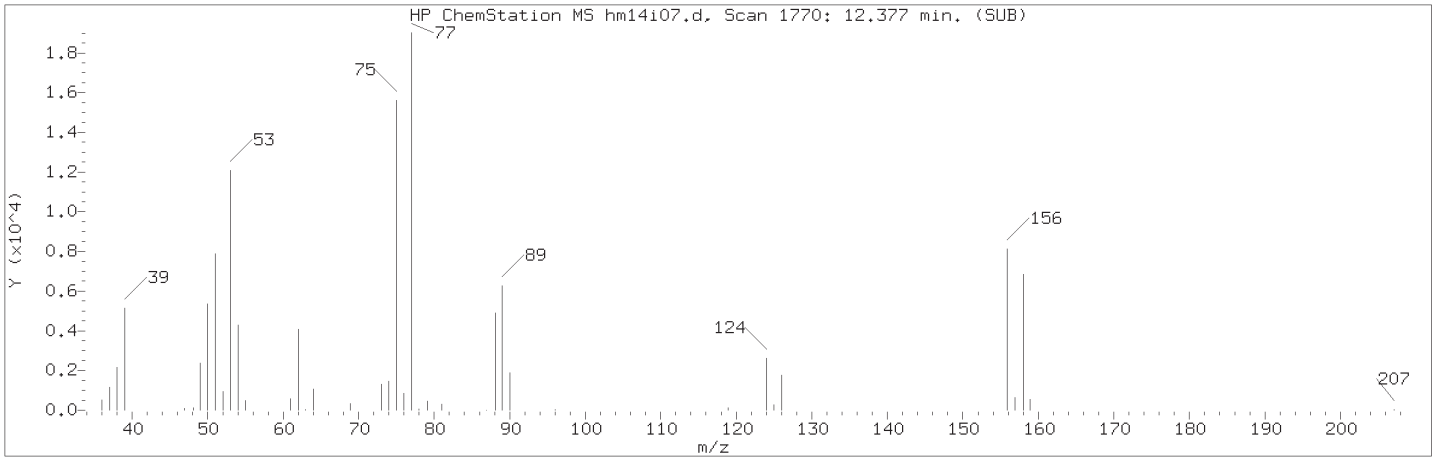
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

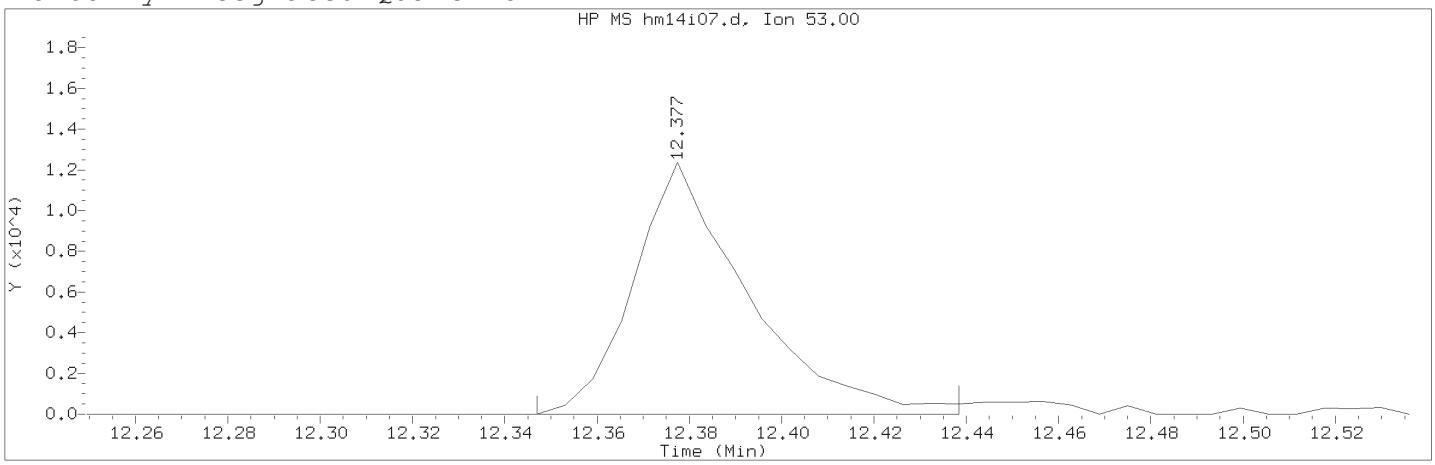
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 10420
On-column Amount (ng) : 0.3576
Integration start scan : 1146 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

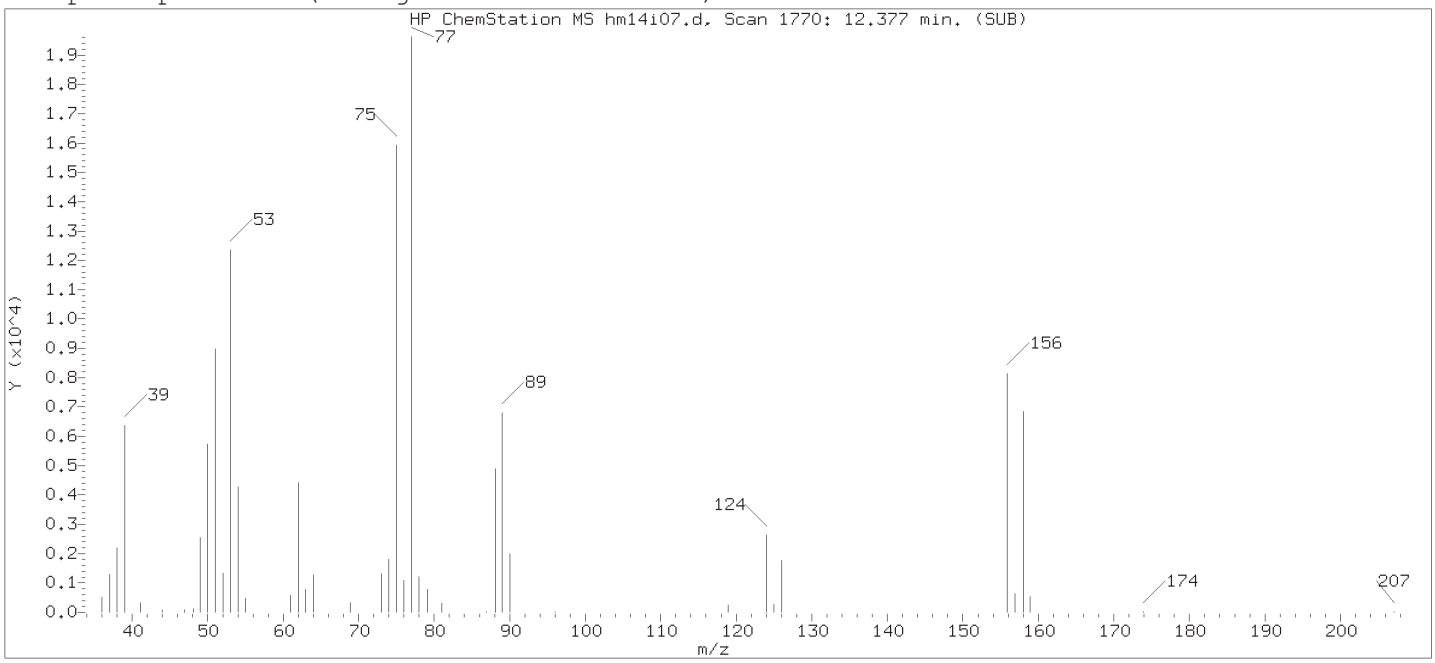
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area (flag) : 21303M
On-Column Amount (ng) : 1.9289
Integration start scan : 1764 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

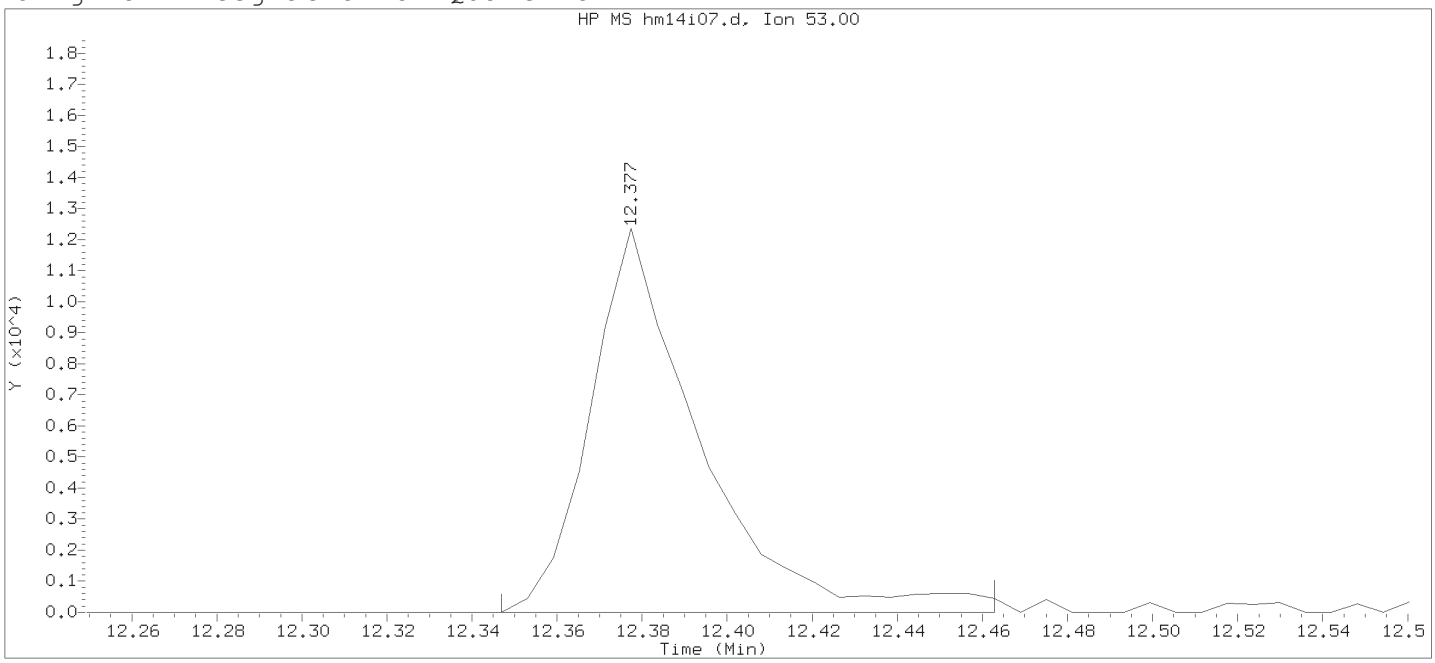
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

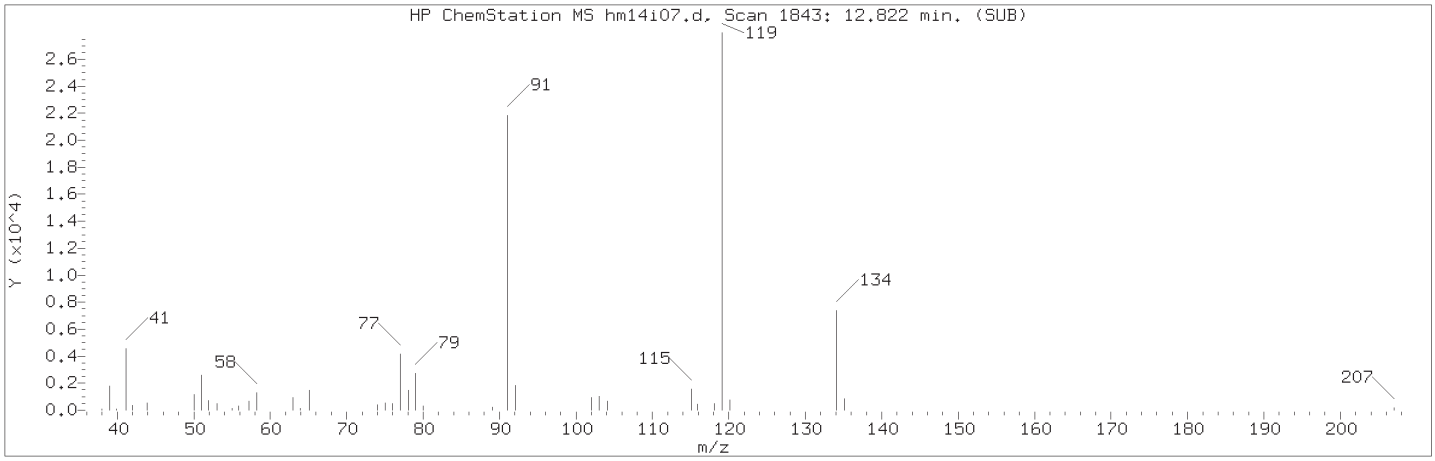
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

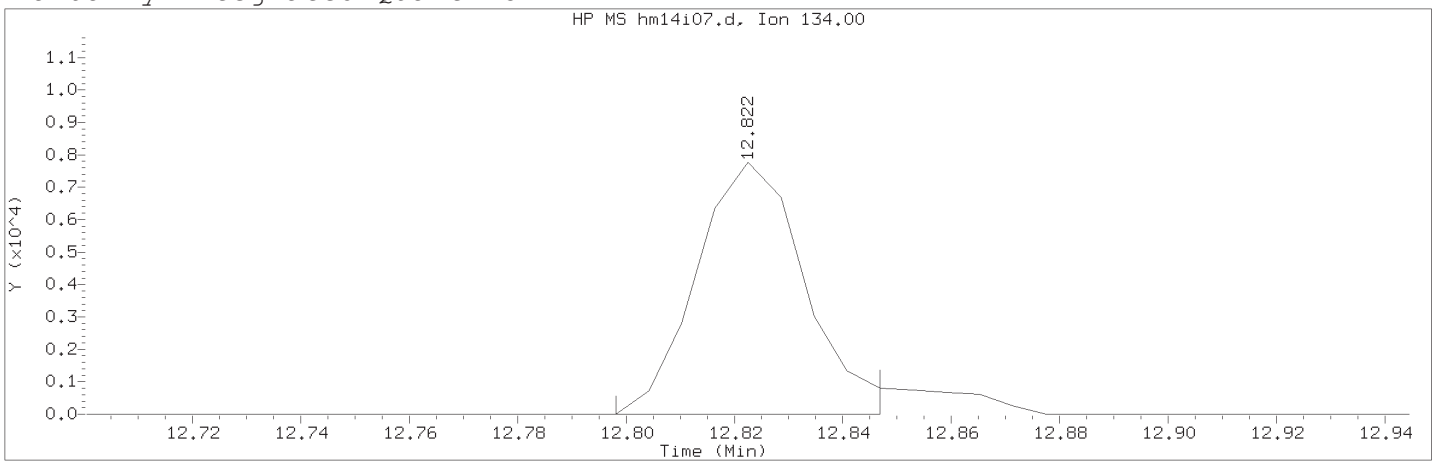
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 22042
On-column Amount (ng) : 2.4024
Integration start scan : 1764 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

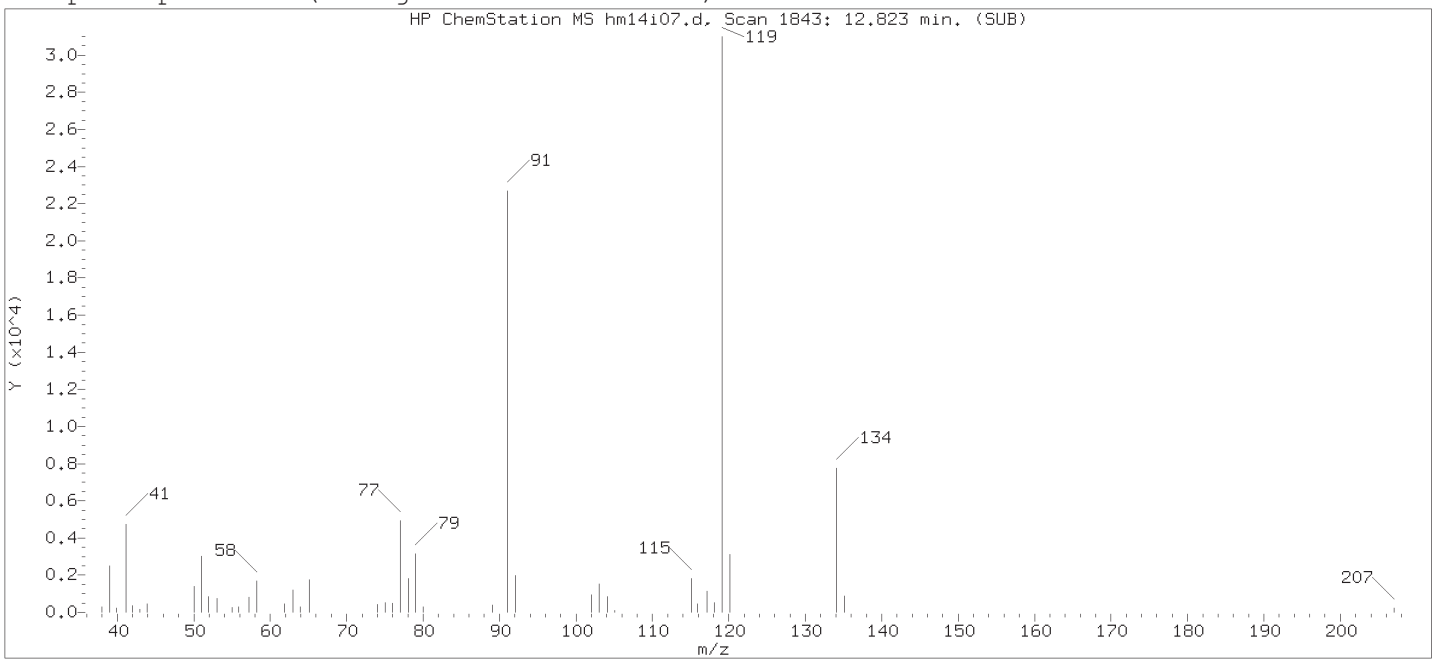
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 10791M
On-Column Amount (ng) : 0.2194
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

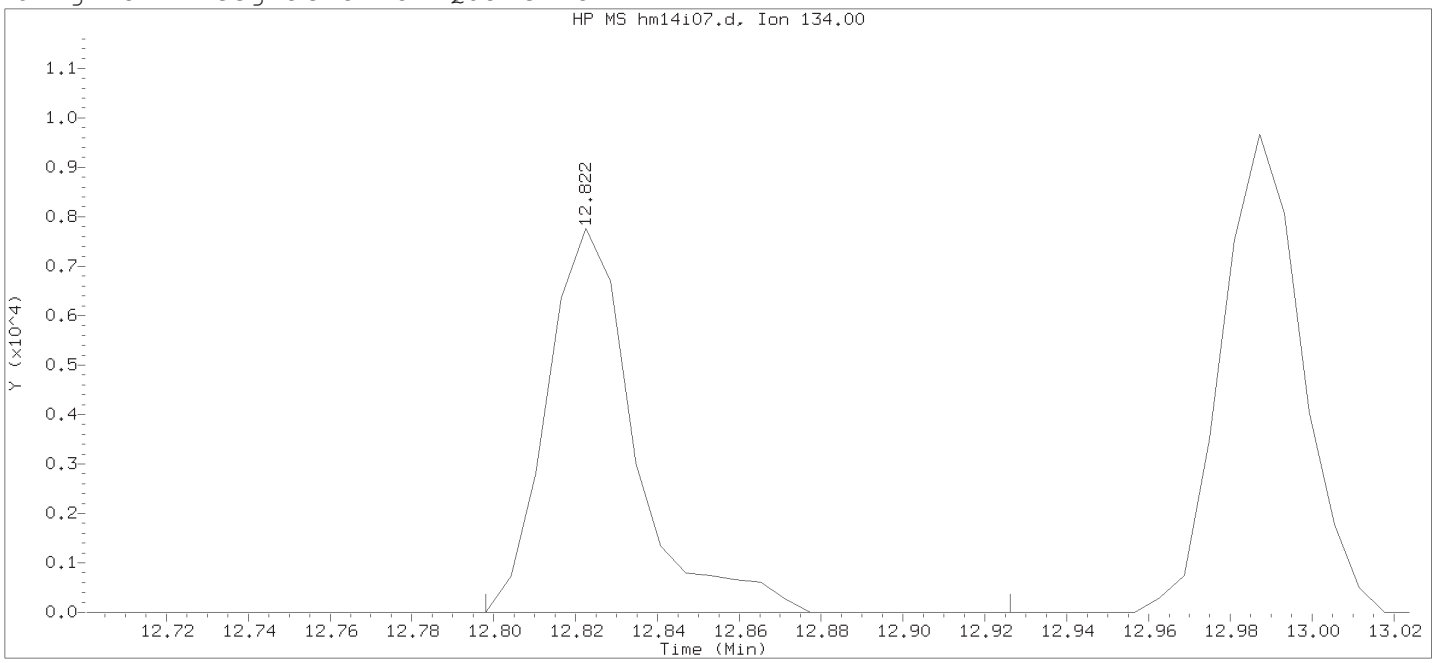
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

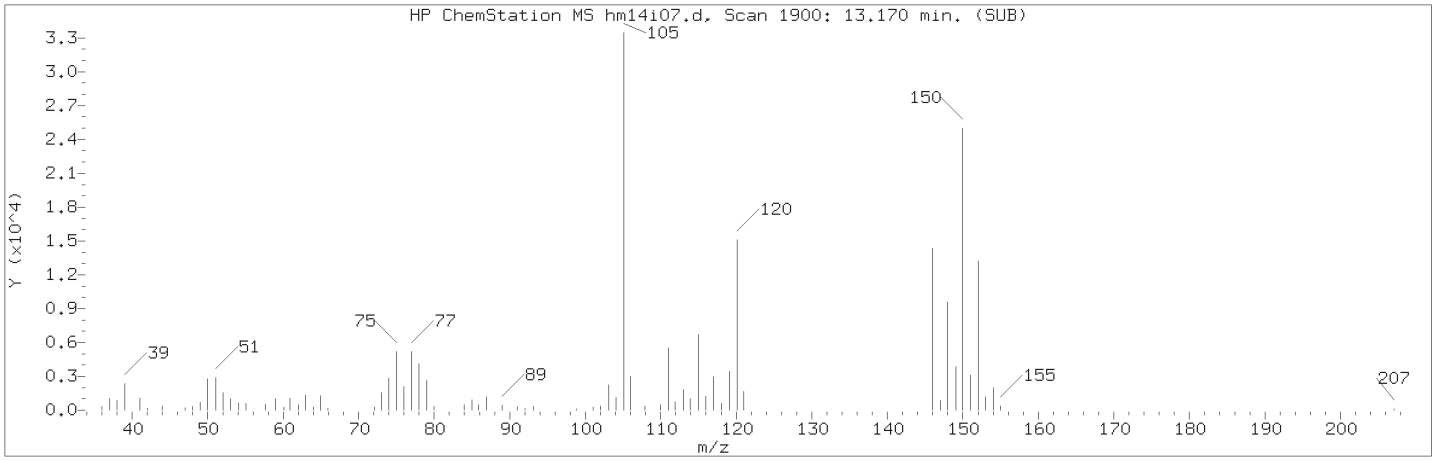
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

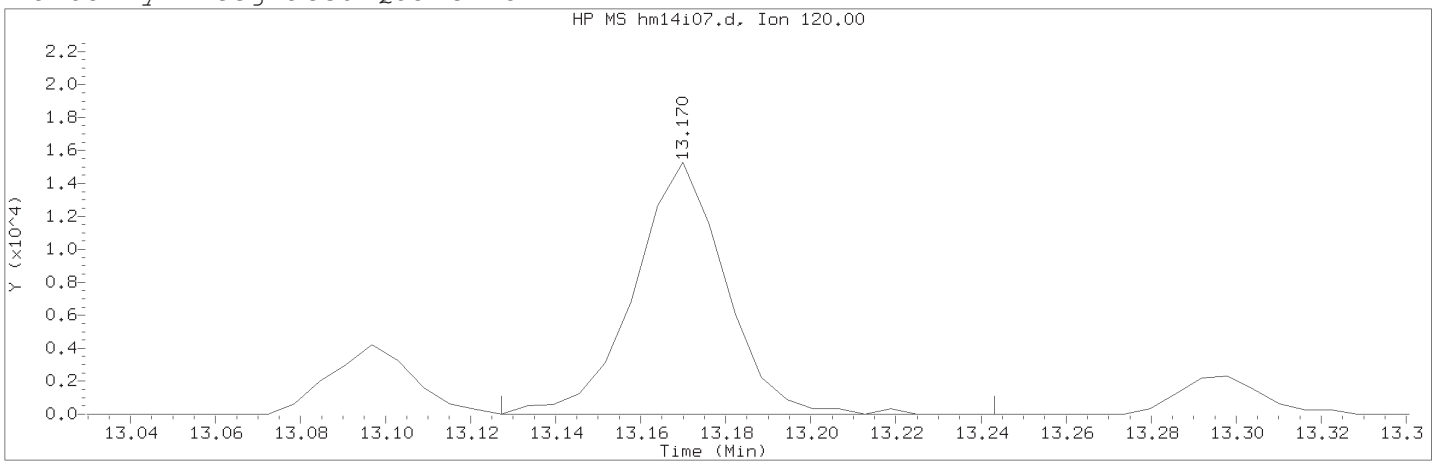
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 11628
On-column Amount (ng) : 0.2222
Integration start scan : 1838 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

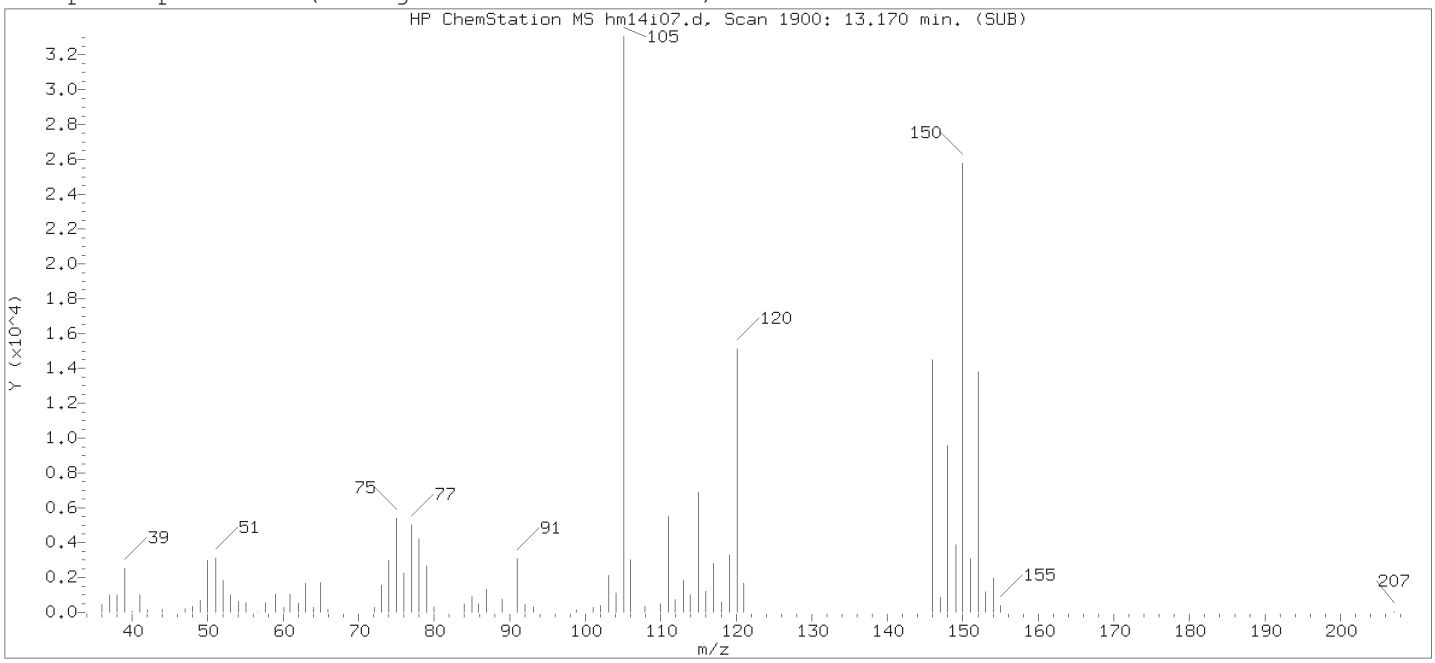
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 22673M
On-Column Amount (ng) : 0.2370
Integration start scan : 1892 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

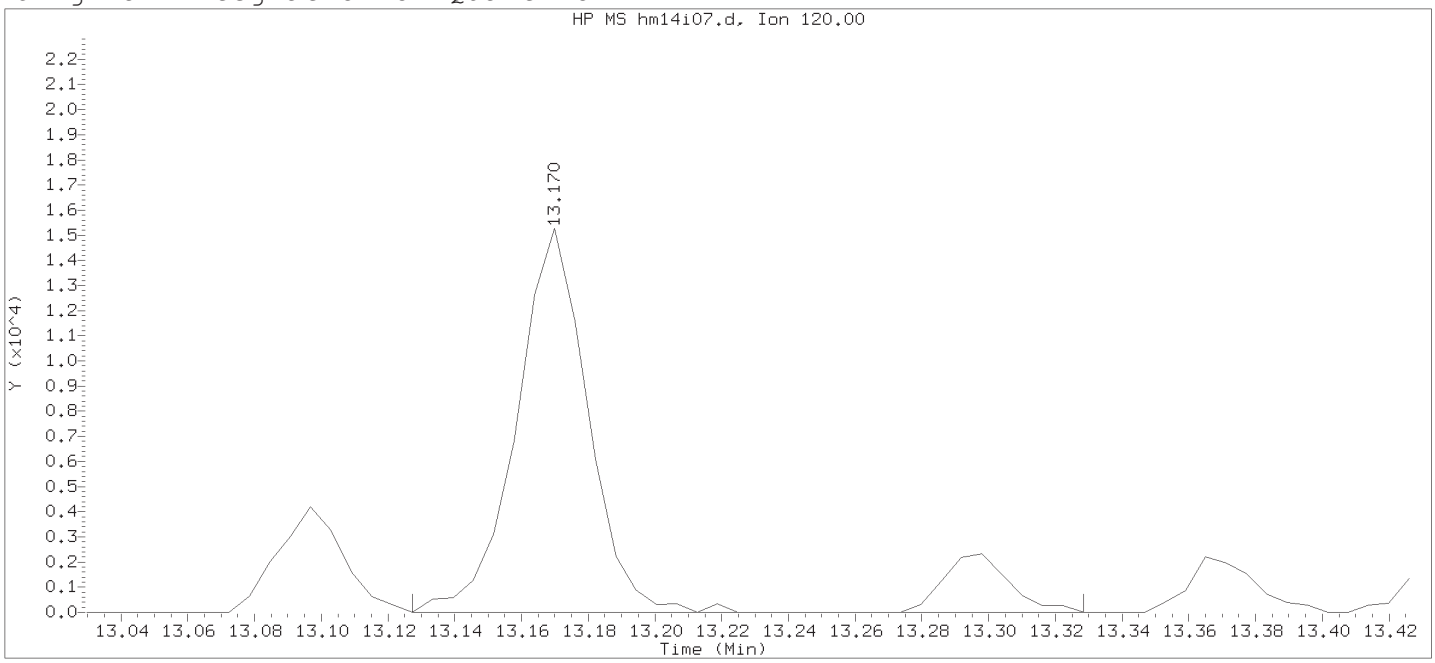
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



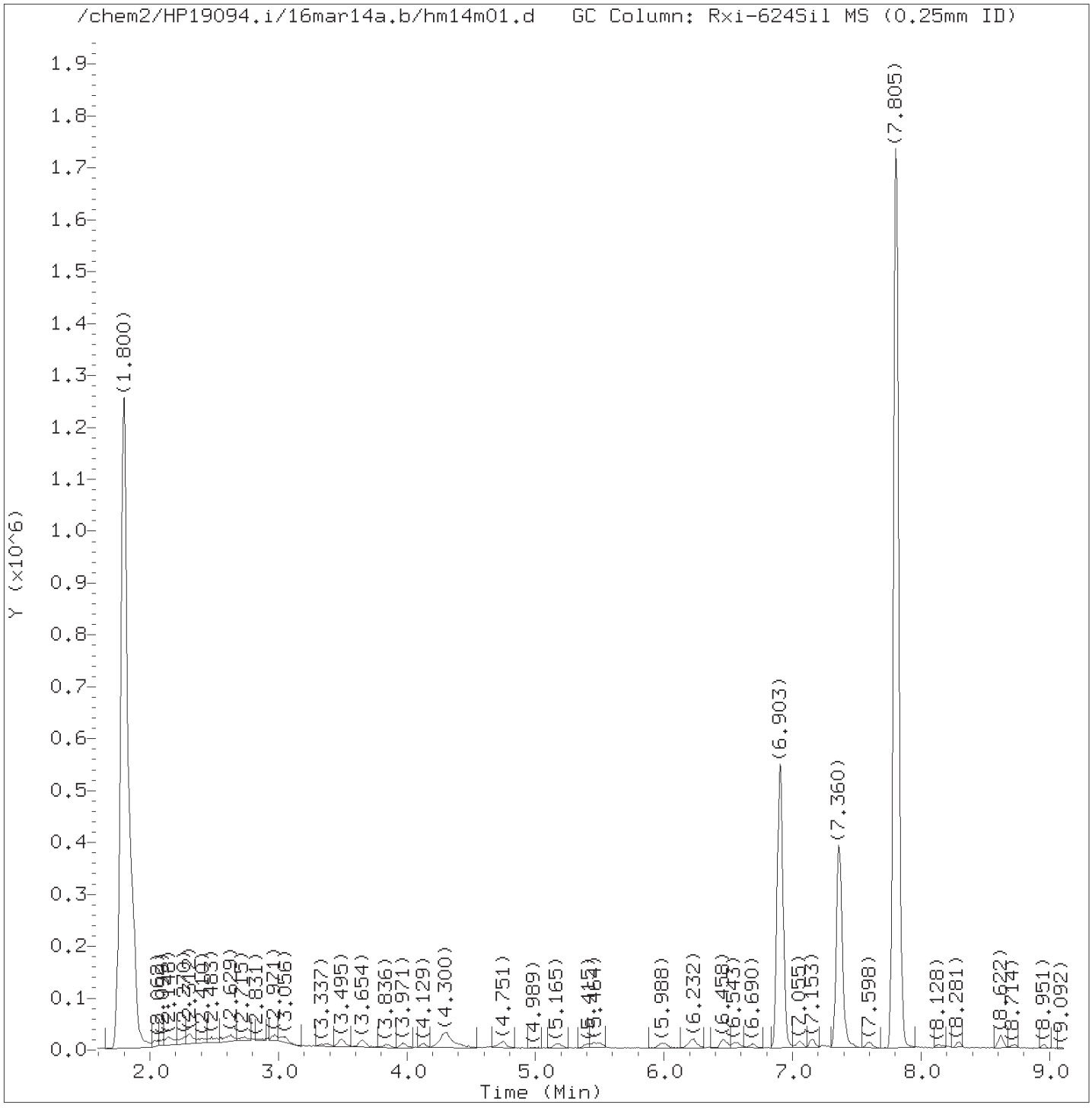
Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 25865
On-column Amount (ng) : 0.2641
Integration start scan : 1892 Integration stop scan: 1925
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

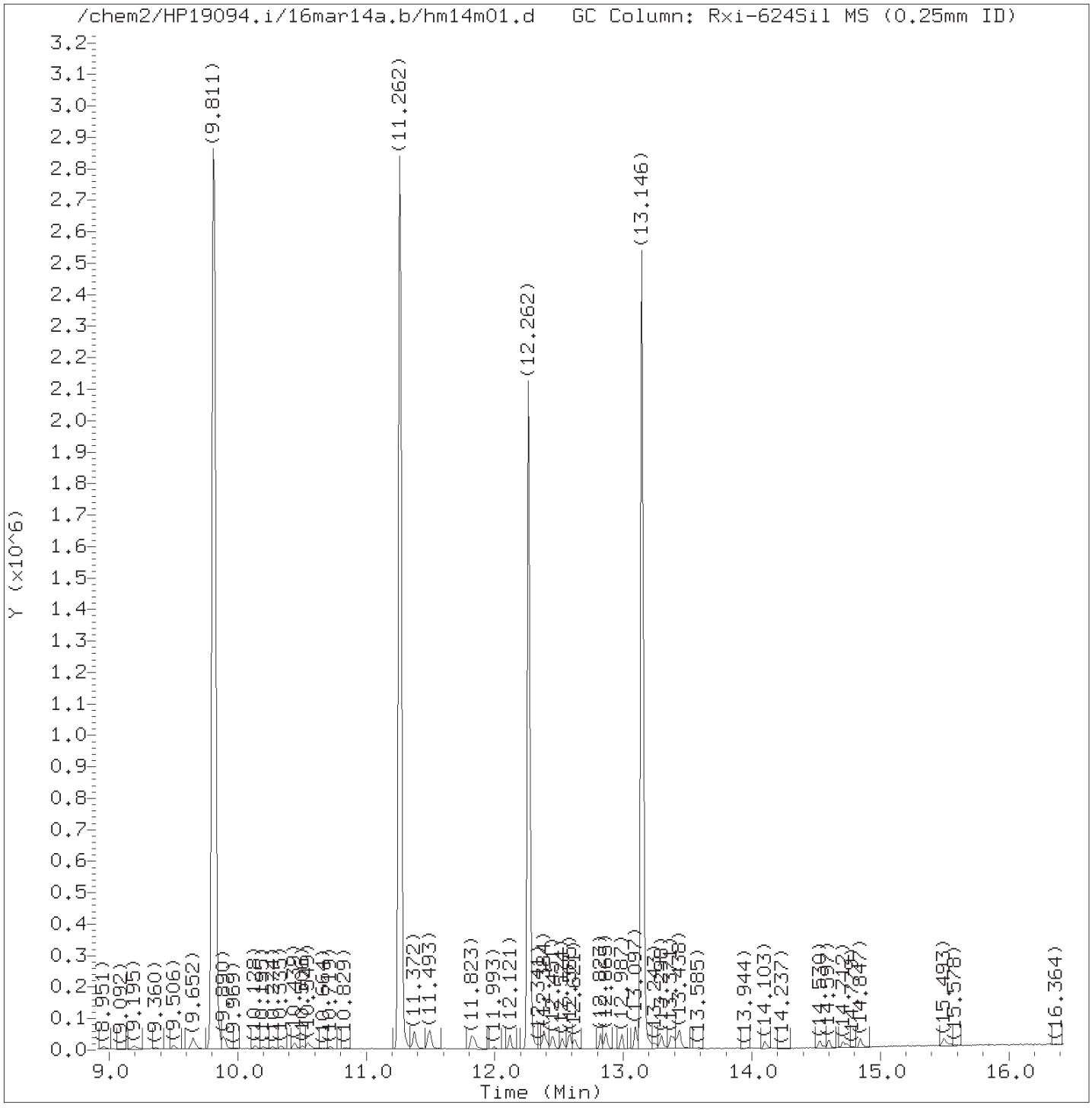
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.026	85	6696	0.082
2) Chloromethane	(2)	2.148	50	9614	0.121
5) Vinyl Chloride	(2)	2.276	62	7085	0.096
6) 1,3-Butadiene	(2)	2.306	39	5670M	0.101
7) Bromomethane	(2)	2.623	94	4812	0.098
8) Chloroethane	(2)	2.727	64	5751	0.126
9) Dichlorofluoromethane	(2)	2.971	67	10742M	0.104
10) Trichlorofluoromethane	(2)	3.038	101	7789	0.081
11) Ethyl ether	(2)	3.337	59	3631	0.091
12) Freon 123a	(2)	3.379	67	7477	0.101
13) Acrolein	(1)	3.495	56	32120	5.112
15) 1,1-Dichloroethene	(2)	3.647	96	4952	0.089
16) Freon 113	(2)	3.666	101	4280	0.074
14) Acetone	(1)	3.666	43	14842	1.714
17) Methyl Iodide	(2)	3.855	142	8881	0.087
18) Carbon Disulfide	(2)	3.971	76	18311	0.107
21) Methyl Acetate	(1)	4.105	43	1472M	0.069
22) Allyl Chloride	(2)	4.129	41	15054	0.144
26)*t-Butyl Alcohol-d10	(1)	4.300	65	110195	50.000
23) Methylene Chloride	(2)	4.306	84	5972	0.101
28) t-Butyl Alcohol	(1)	4.416	59	5844	1.972
29) Acrylonitrile	(1)	4.653	53	3931	0.378
30) Methyl Tertiary Butyl Ether	(2)	4.727	73	12091	0.095
31) trans-1,2-Dichloroethene	(2)	4.751	96	6174	0.103
32) n-Hexane	(2)	5.172	57	9215	0.091
33) 1,1-Dichloroethane	(2)	5.397	63	10893	0.090
34) di-Isopropyl Ether	(2)	5.458	45	20098	0.095
35) 2-Chloro-1,3-Butadiene	(2)	5.513	53	9367	0.094
37) Ethyl t-butyl ether	(2)	5.976	59	15662	0.088
40) 1,2-Dichloroethene (Total)	(2)		96	12317	0.196
38) 2-Butanone	(1)	6.171	43	14238	0.965
39) cis-1,2-Dichloroethene	(2)	6.214	96	6143	0.093
41) 2,2-Dichloropropane	(2)	6.232	77	9828	0.101
42) Propionitrile	(1)	6.251	54	5878	1.598
45) Methacrylonitrile	(1)	6.458	67	11576	0.919
47) Bromochloromethane	(2)	6.543	128	2206	0.088
48) Tetrahydrofuran	(1)	6.574	71	3515	0.942
49) Chloroform	(2)	6.702	83	10638	0.096

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	530960	9.562
51) 1,1,1-Trichloroethane	(2)	6.933	97	8879	0.094
52) Cyclohexane	(2)	7.055	56	11628	0.094
55) 1,1-Dichloropropene	(2)	7.147	75	8426	0.093
54) Carbon Tetrachloride	(2)	7.165	117	7632	0.089
56) Isobutyl Alcohol	(1)	7.232	41	9169	9.186
57)$1,2-Dichloroethane-d4	(2)	7.354	102	87351	9.498
58) Benzene	(2)	7.403	78	23626	0.093
59) 1,2-Dichloroethane	(2)	7.470	62	7033	0.107
60) t-Amyl methyl ether	(2)	7.598	73	13048	0.089
63)*Fluorobenzene	(2)	7.805	96	2356396	10.000
62) n-Heptane	(2)	7.836	43	11952	0.104
65) n-Butanol	(1)	8.140	56	8938M	10.579
67) Trichloroethene	(2)	8.299	95	6124	0.093
69) Methylcyclohexane	(2)	8.616	83	8271	0.076
70) 1,2-Dichloropropane	(2)	8.616	63	5958	0.090
71) Methyl Methacrylate	(1)	8.714	69	2158M	0.082
72) 1,4-Dioxane	(1)	8.732	88	326	1.958
73) Dibromomethane	(2)	8.738	93	2535	0.093
74) Bromodichloromethane	(2)	8.957	83	6776	0.089
76) 2-Nitropropane	(1)	9.201	41	10978M	1.301
80) cis-1,3-Dichloropropene	(2)	9.506	75	7727	0.083
81) 4-Methyl-2-Pentanone	(1)	9.652	43	33110	0.912
82)$Toluene-d8	(3)	9.811	98	2286073	10.383
83) Toluene	(3)	9.896	92	14724	0.099
84) trans-1,3-Dichloropropene	(3)	10.134	75	6281	0.090
85) 1,3-Dichloropropene (total)	(3)		75	14008	0.173
86) Ethyl Methacrylate	(3)	10.201	69	5026	0.094
88) 1,1,2-Trichloroethane	(3)	10.335	97	3199	0.089
89) Tetrachloroethene	(3)	10.445	166	6977	0.100
90) 1,3-Dichloropropane	(3)	10.500	76	5803	0.090
91) 2-Hexanone	(1)	10.549	43	22438M	0.874
93) Dibromochloromethane	(3)	10.719	129	4035	0.088
95) 1,2-Dibromoethane	(3)	10.841	107	2950	0.087
97)*Chlorobenzene-d5	(3)	11.262	117	1545583	10.000
98) Chlorobenzene	(3)	11.292	112	15041	0.093
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	5096	0.092
100) Ethylbenzene	(3)	11.378	91	29367	0.101

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on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.500	106	20833	0.188
105) Xylene (Total)	(3)		106	31010	0.283
104) o-Xylene	(3)	11.823	106	10177	0.095
106) Styrene	(3)	11.841	104	15819	0.092
107) Bromoform	(3)	11.993	173	2673	0.105
108) Isopropylbenzene	(3)	12.121	105	27703	0.097
111)$4-Bromofluorobenzene	(3)	12.262	95	688635	9.703
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	4168	0.103
115) trans-1,4-Dichloro-2-butene	(1)	12.384	53	9161	0.819
114) Bromobenzene	(4)	12.384	156	6169	0.102
116) 1,2,3-Trichloropropane	(4)	12.402	110	637	0.062
117) n-Propylbenzene	(4)	12.445	91	32243	0.098
119) 2-Chlorotoluene	(4)	12.524	126	6039	0.096
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	23290	0.102
122) 4-Chlorotoluene	(4)	12.621	126	6581	0.102
125) tert-Butylbenzene	(4)	12.823	134	4695M	0.096
126) Pentachloroethane	(4)	12.853	167	3455	0.094
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	22439	0.098
128) sec-Butylbenzene	(4)	12.987	105	29894	0.101
131) 1,3-Dichlorobenzene	(4)	13.097	146	11583	0.098
132) p-Isopropyltoluene	(4)	13.097	119	23890	0.095
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	649366	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	12863	0.107
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	10366M	0.110
136) Benzyl Chloride	(4)	13.249	126	1282	0.080
138) n-Butylbenzene	(4)	13.396	92	9637	0.079
139) 1,2-Dichlorobenzene	(4)	13.426	146	10813	0.103
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	358	0.062
145) 1,2,4-Trichlorobenzene	(4)	14.530	180	9978	0.133
146) Hexachlorobutadiene	(4)	14.597	225	4369	0.111
147) Naphthalene	(4)	14.712	128	19939	0.165
148) 1,2,3-Trichlorobenzene	(4)	14.853	180	10320	0.172

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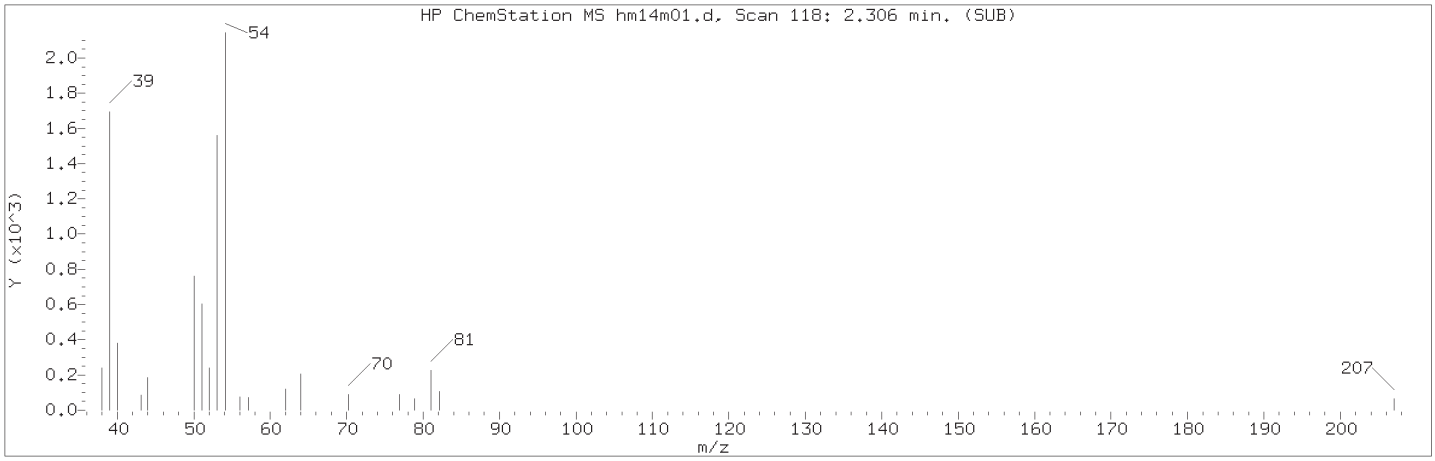
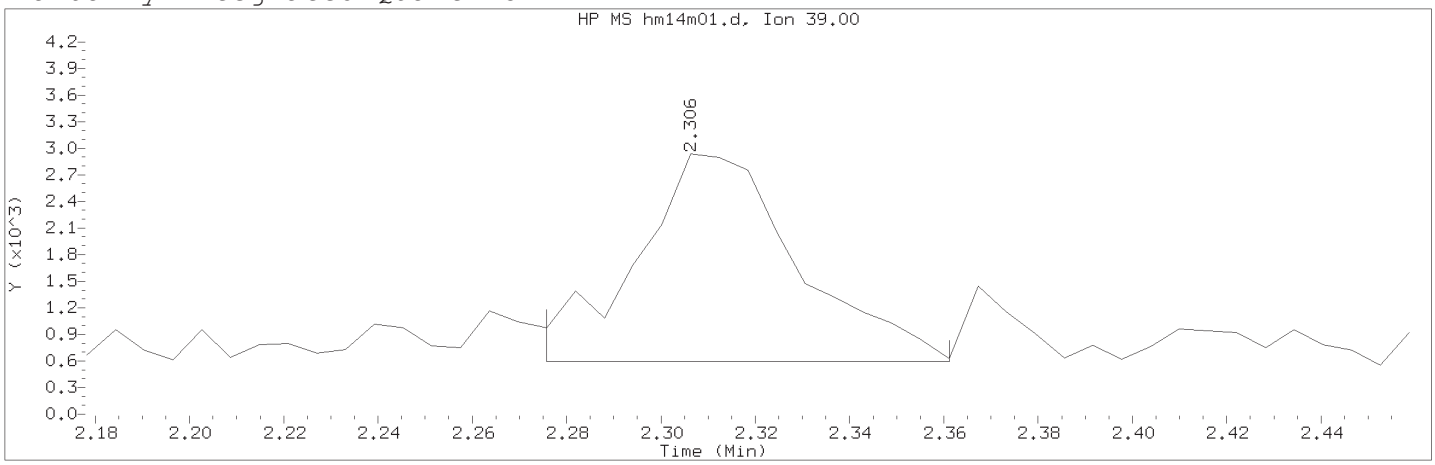
Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

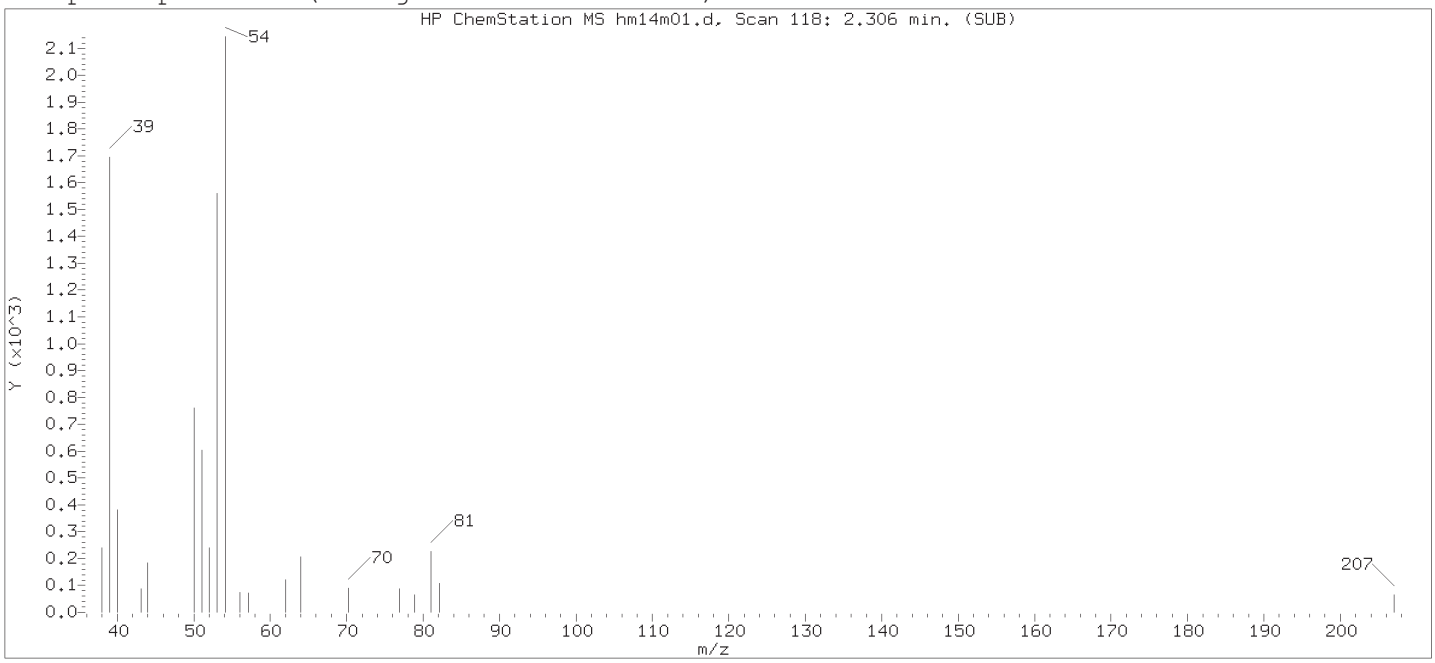
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 5670M
On-Column Amount (ng) : 0.1012
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 590 Y at integration end: 590

Reason for manual integration: improper integration

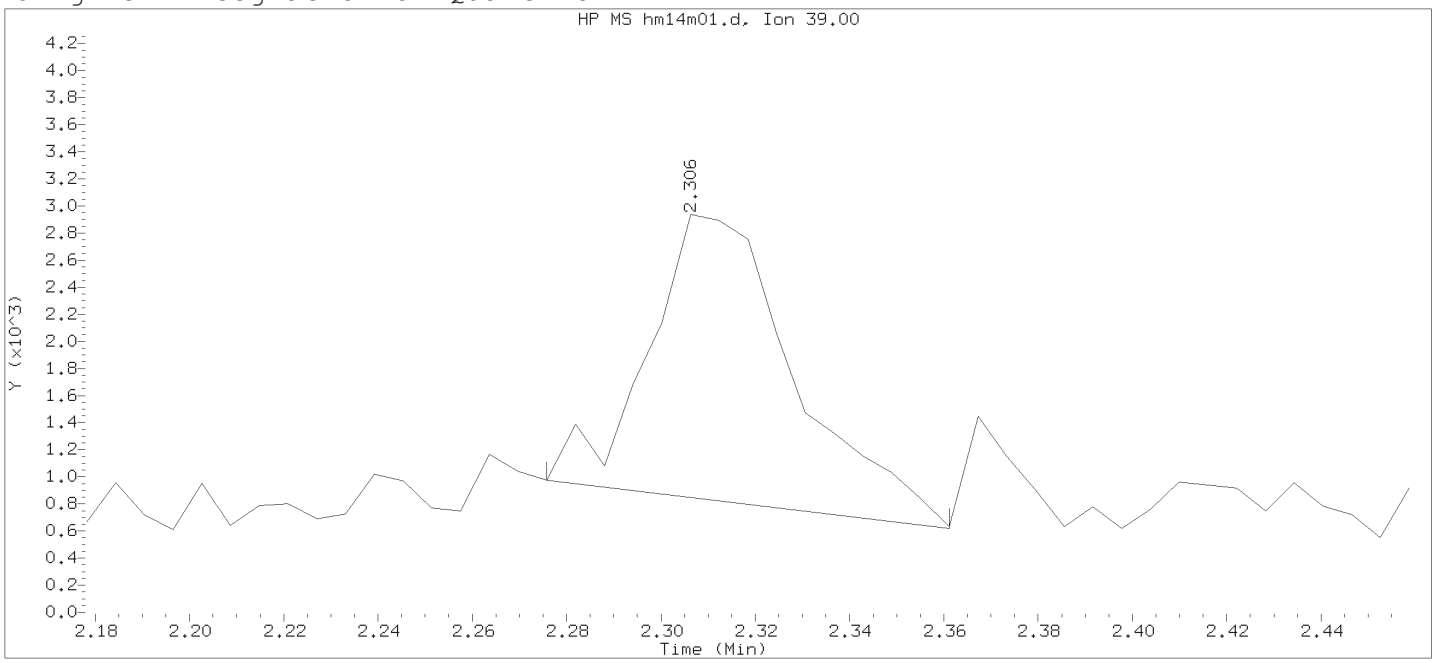
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

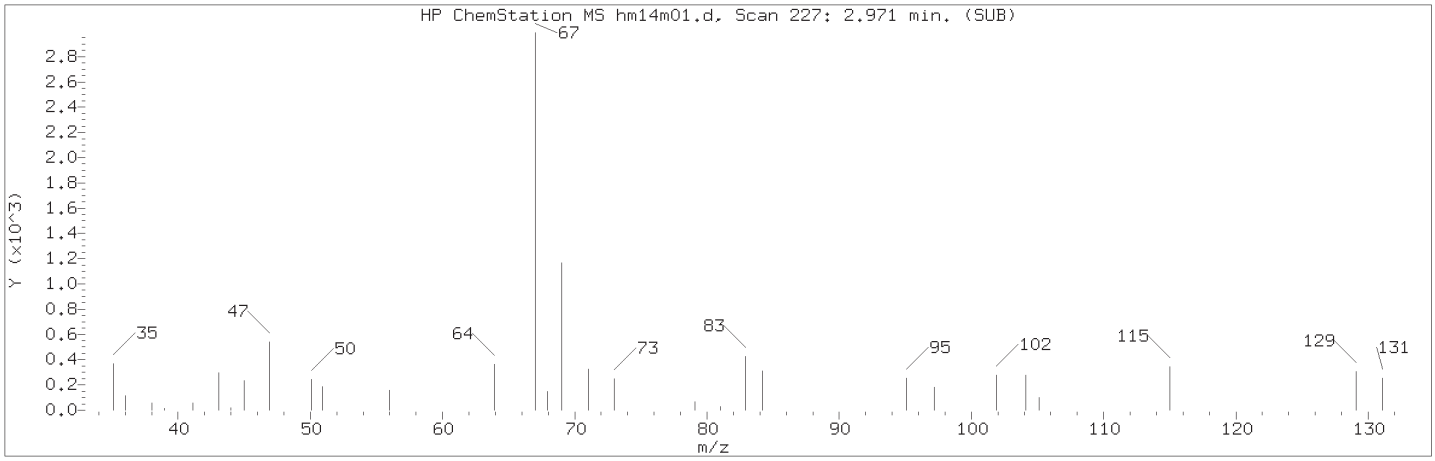
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

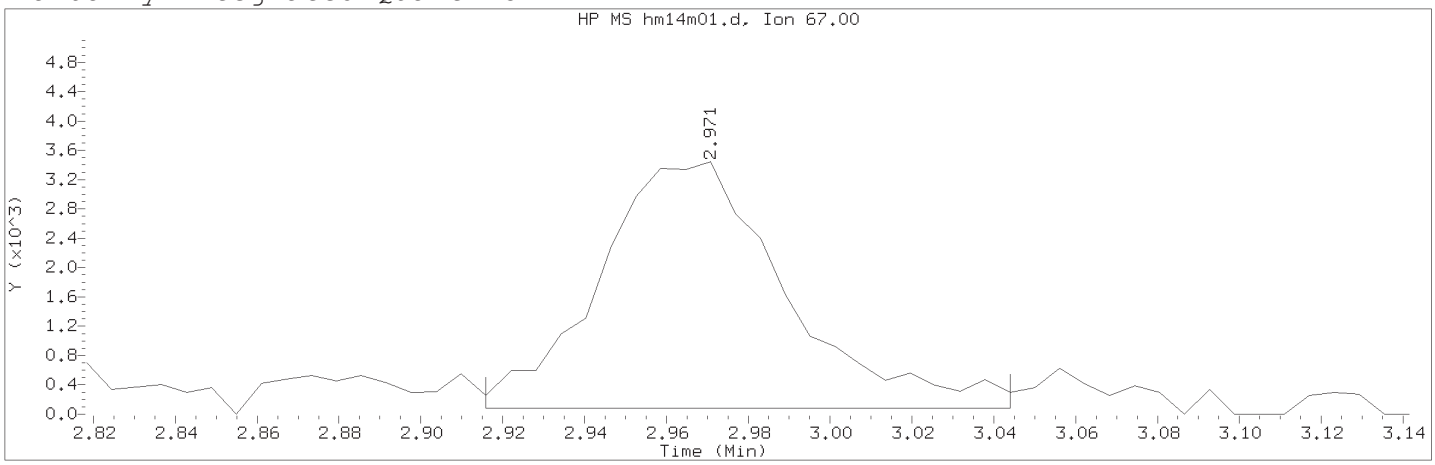
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 4538
On-column Amount (ng) : 0.0810
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 973 Y at integration end: 619

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature data: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

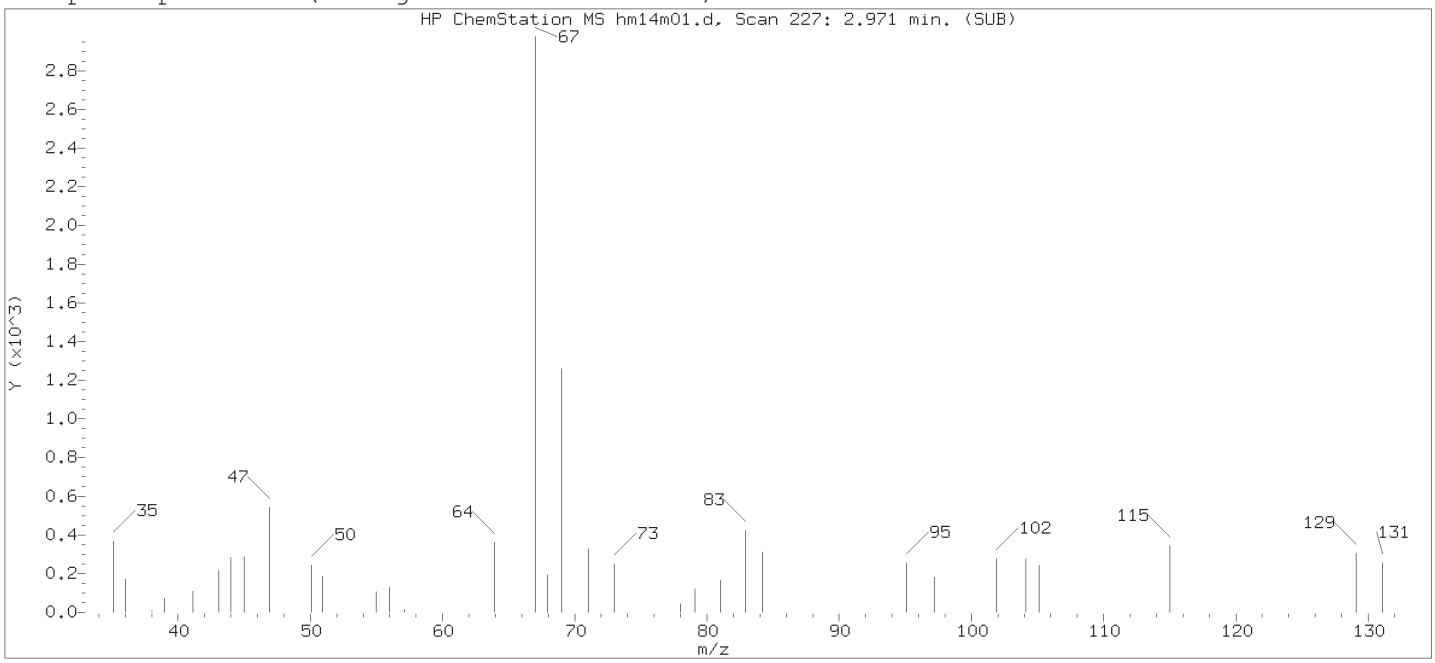
Compound Number : 9
Compound Name : Dichlorofluoromethane
Scan Number : 227
Retention Time (minutes): 2.971
Quant Ion : 67.00
Area (flag) : 10742M
On-Column Amount (ng) : 0.1036
Integration start scan : 217 Integration stop scan: 238
Y at integration start : 82 Y at integration end: 82

Reason for manual integration: improper integration

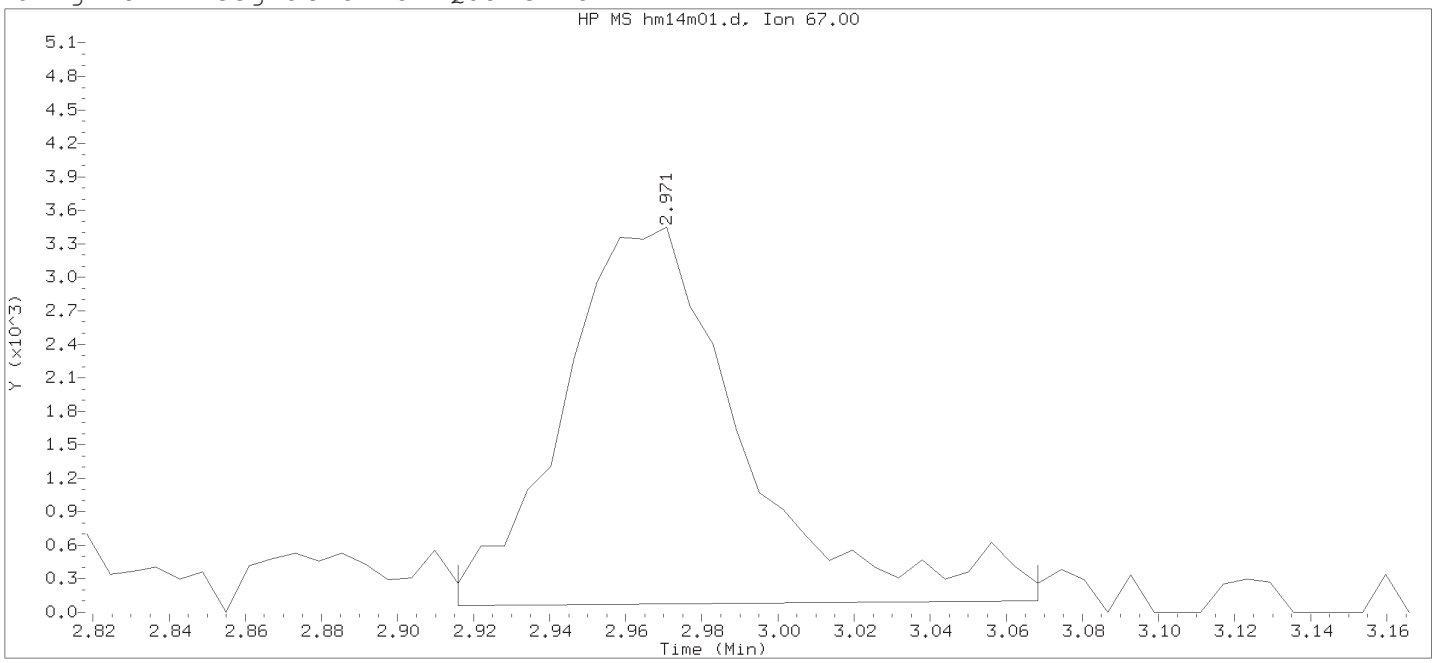
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

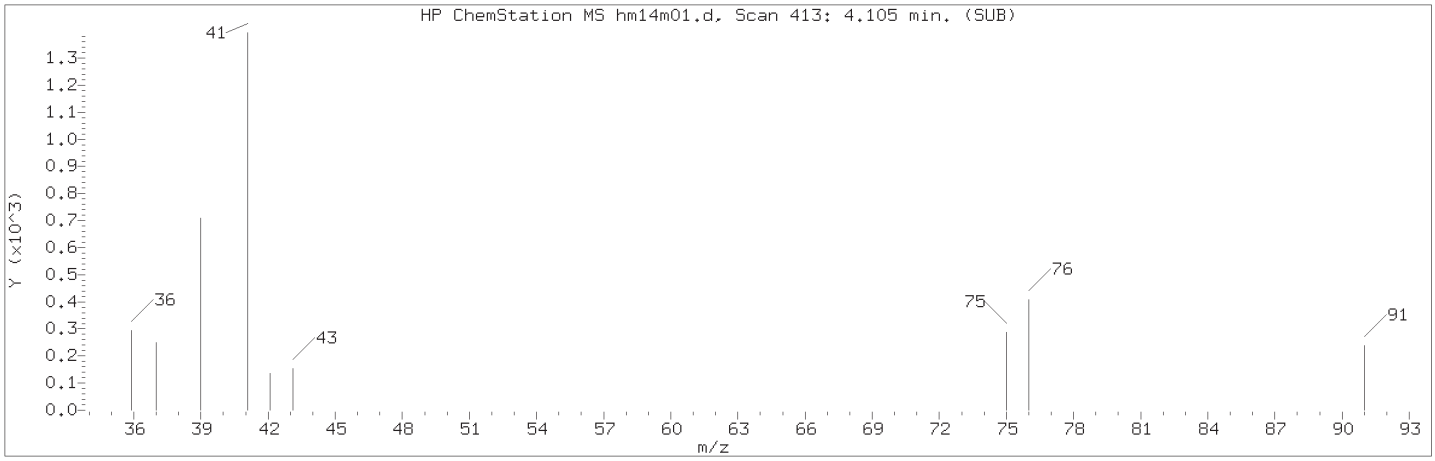
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

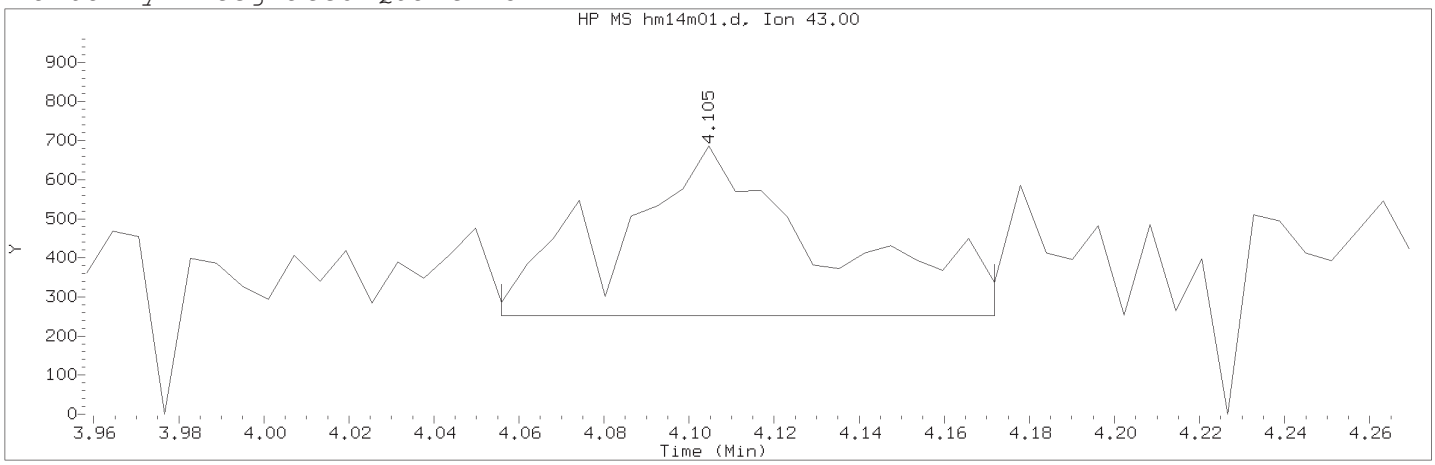
Compound Number : 9
Compound Name : Dichlorofluoromethane
Scan Number : 227
Retention Time (minutes): 2.971
Quant Ion : 67.00
Area : 11158
On-column Amount (ng) : 0.1076
Integration start scan : 217 Integration stop scan: 242
Y at integration start : 62 Y at integration end: 103

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

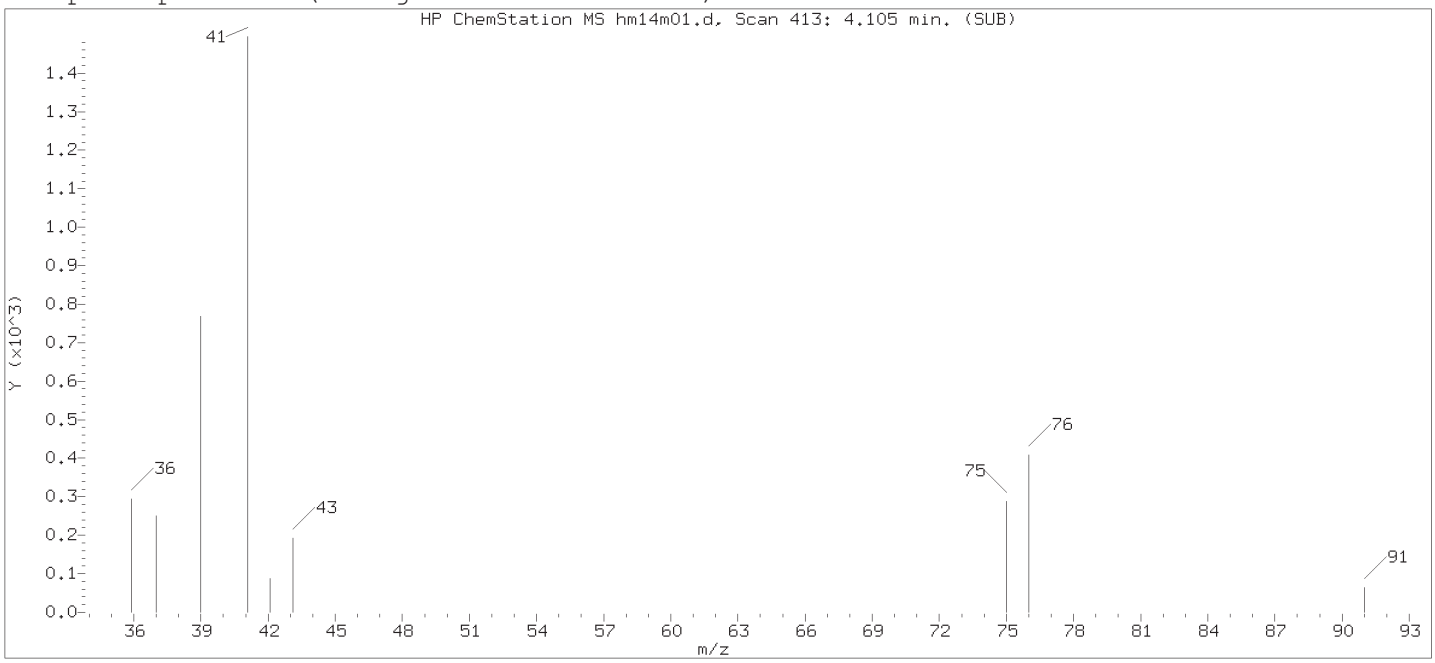
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area (flag) : 1472M
On-Column Amount (ng) : 0.0686
Integration start scan : 404 Integration stop scan: 423
Y at integration start : 252 Y at integration end: 252

Reason for manual integration: improper integration

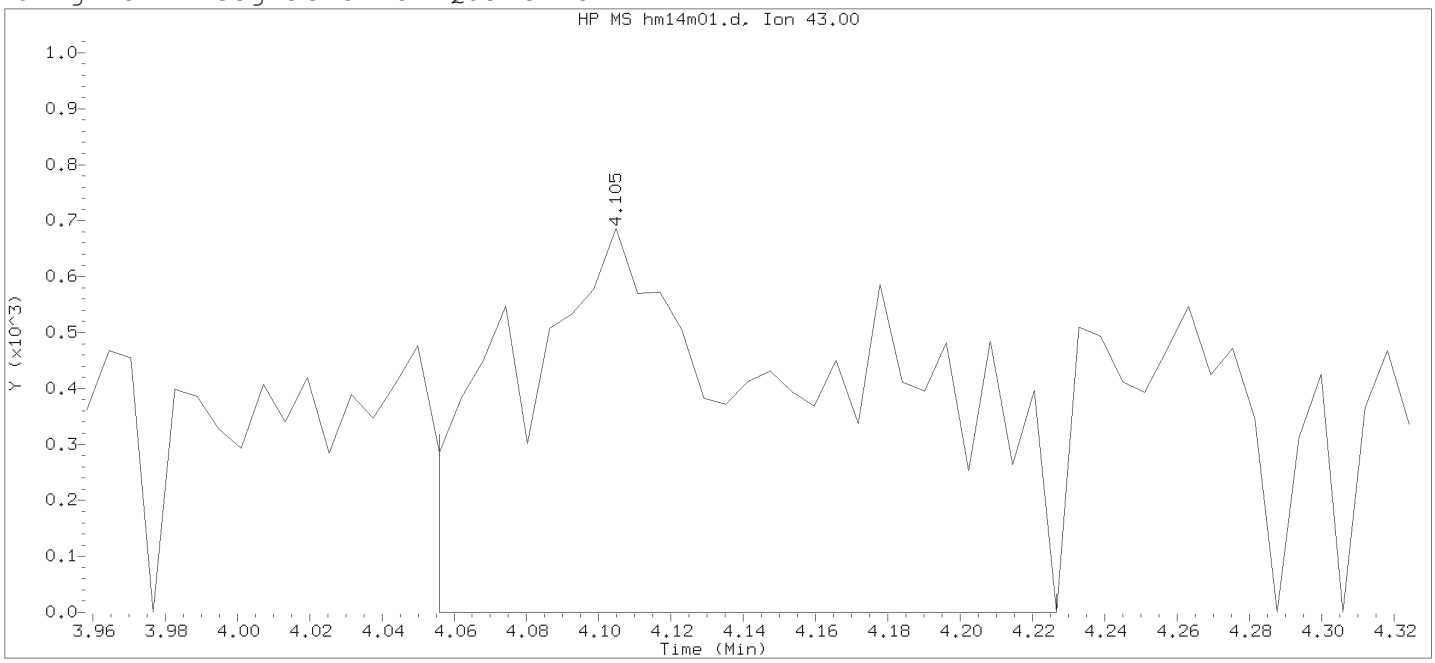
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

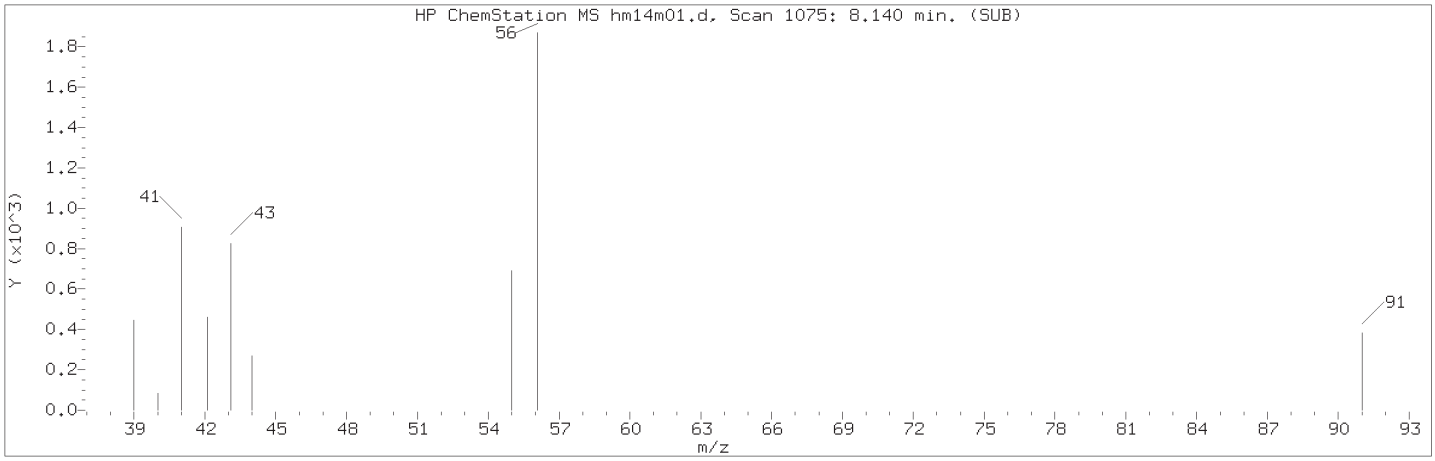
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

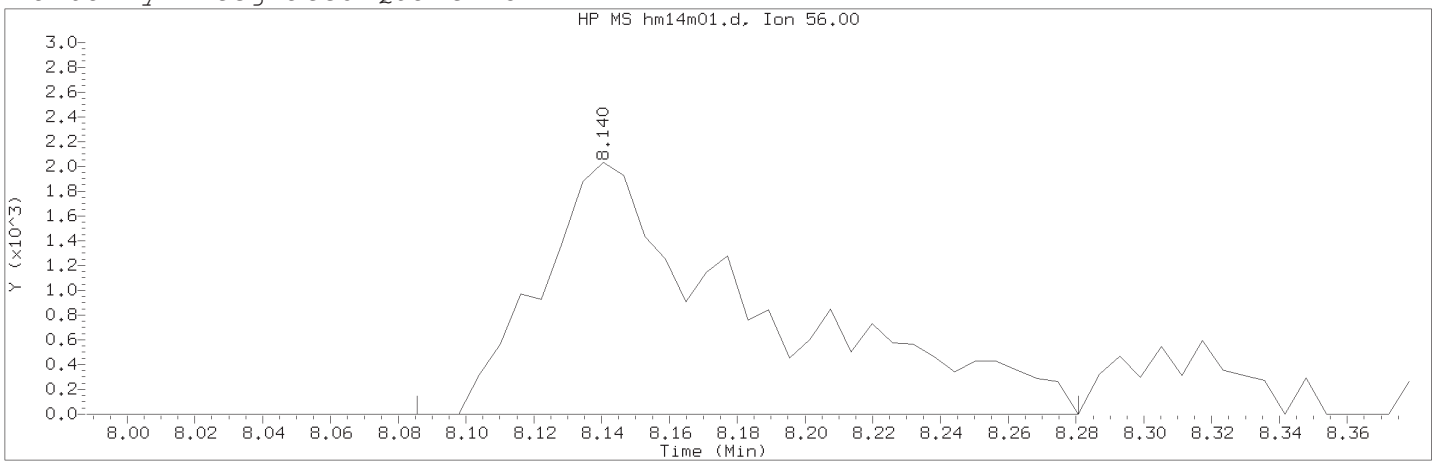
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area : 4461
On-column Amount (ng) : 0.2079
Integration start scan : 404 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

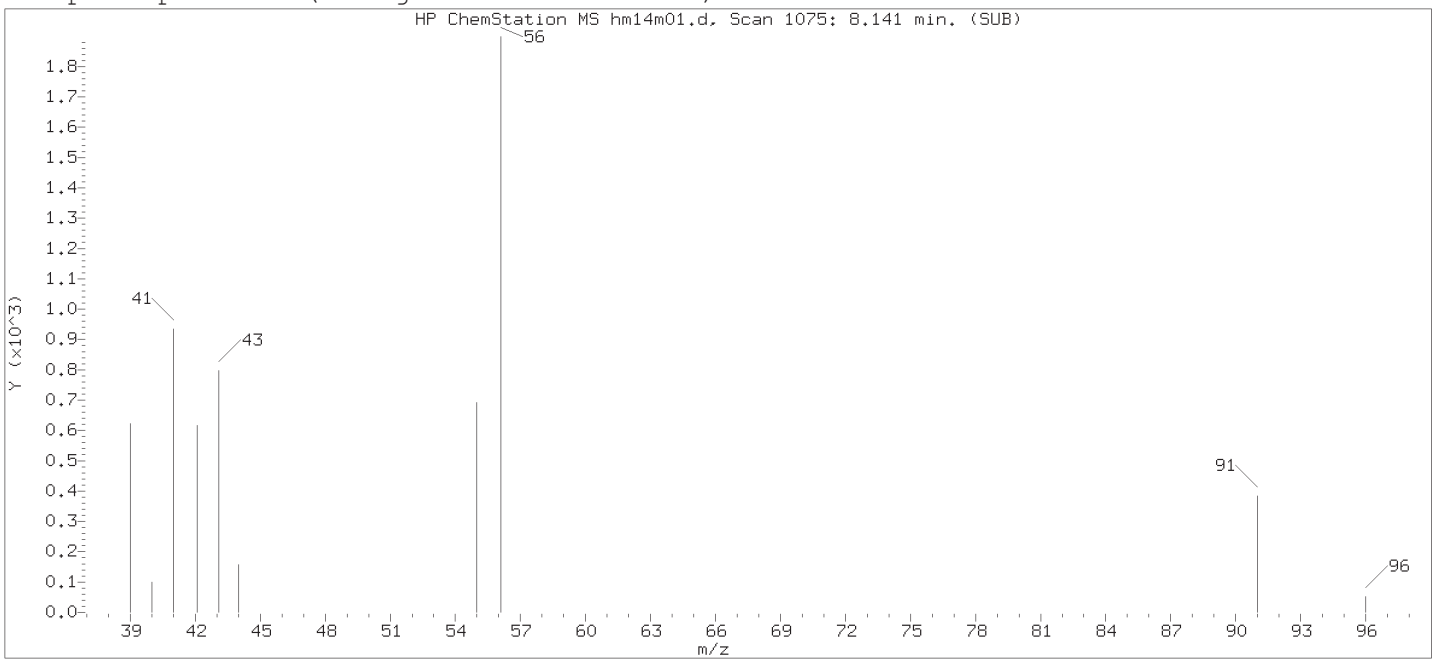
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area (flag) : 8938M
On-Column Amount (ng) : 10.5787
Integration start scan : 1065 Integration stop scan: 1097
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

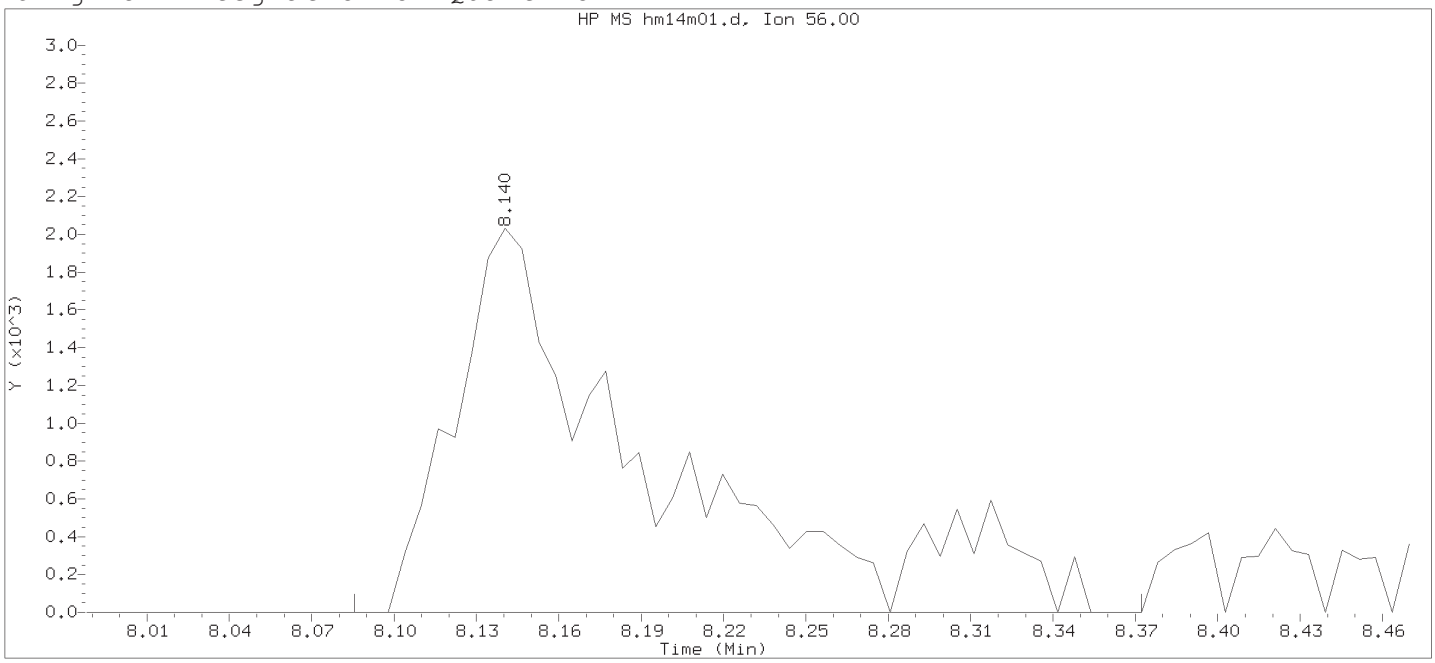
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

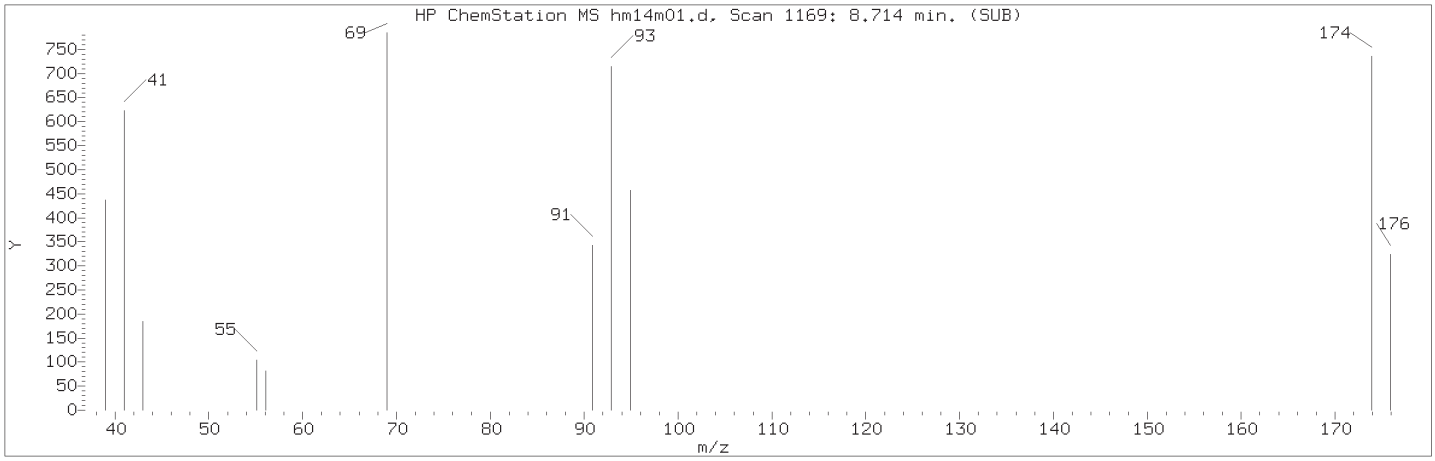
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

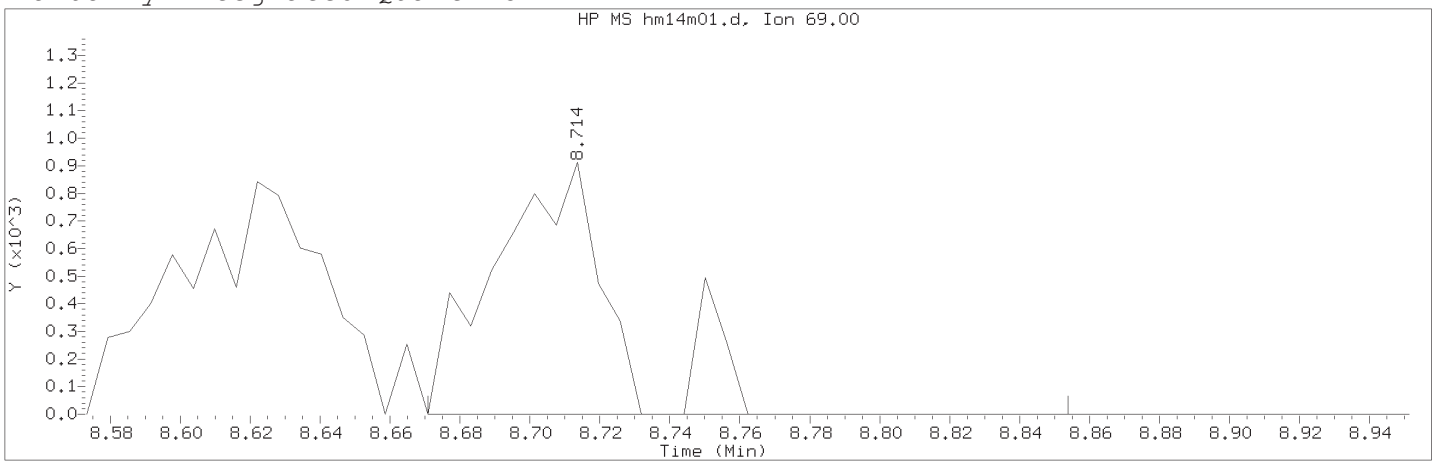
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area : 10317
On-column Amount (ng) : 12.2097
Integration start scan : 1065 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

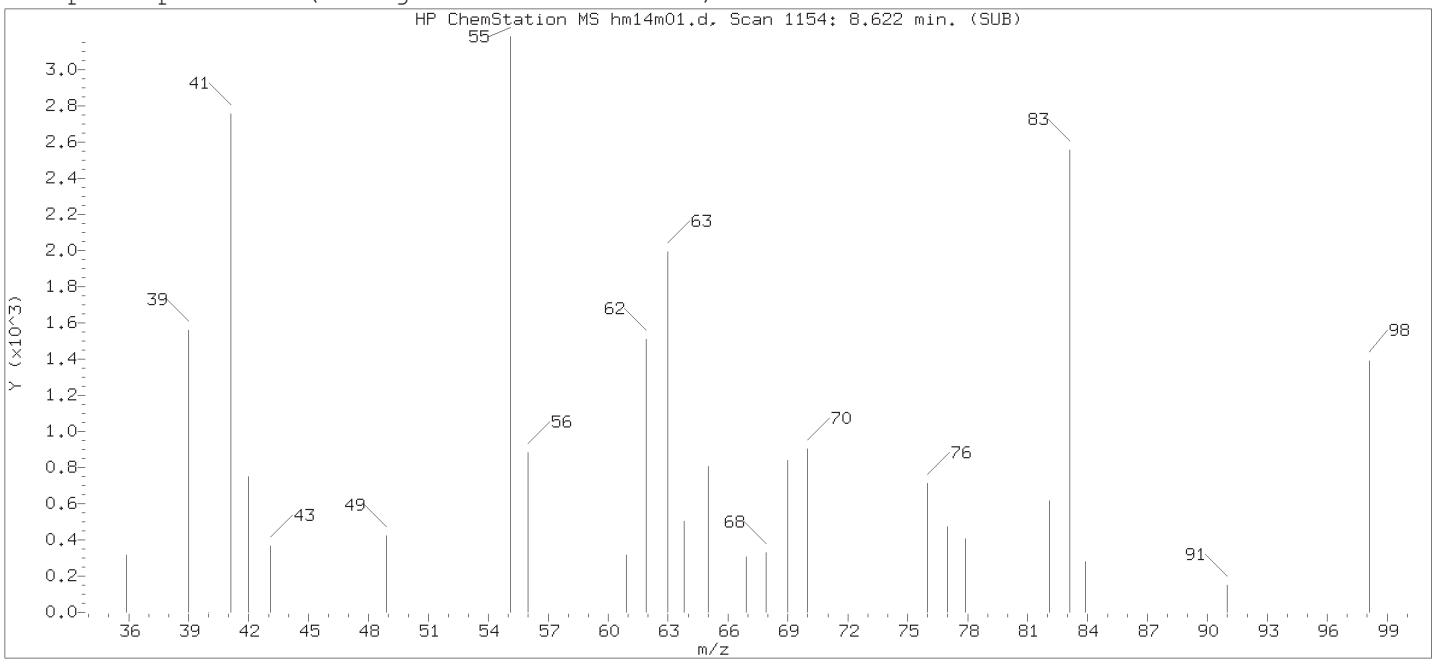
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1169
Retention Time (minutes): 8.714
Quant Ion : 69.00
Area (flag) : 2158M
On-Column Amount (ng) : 0.0820
Integration start scan : 1161 Integration stop scan: 1191
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

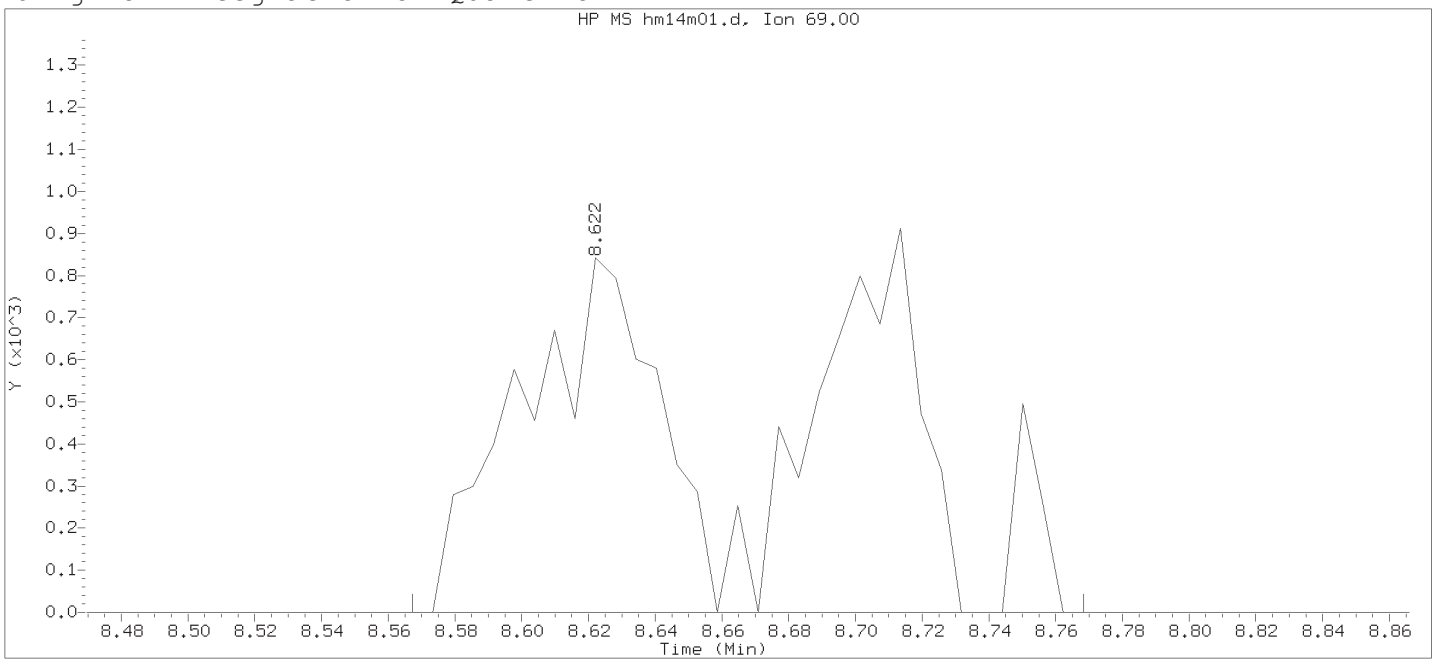
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

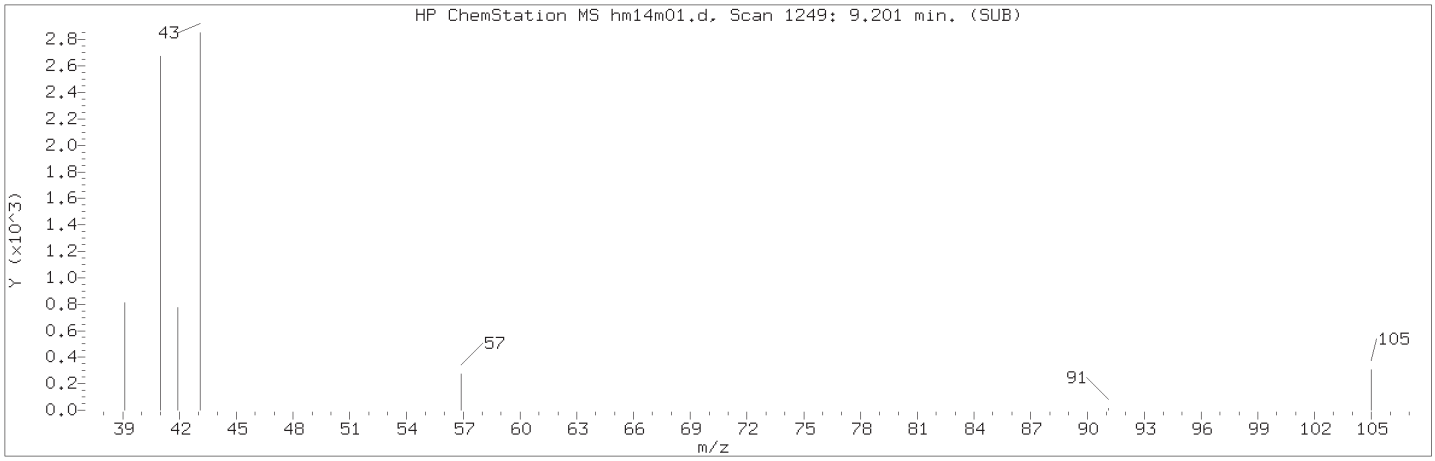
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

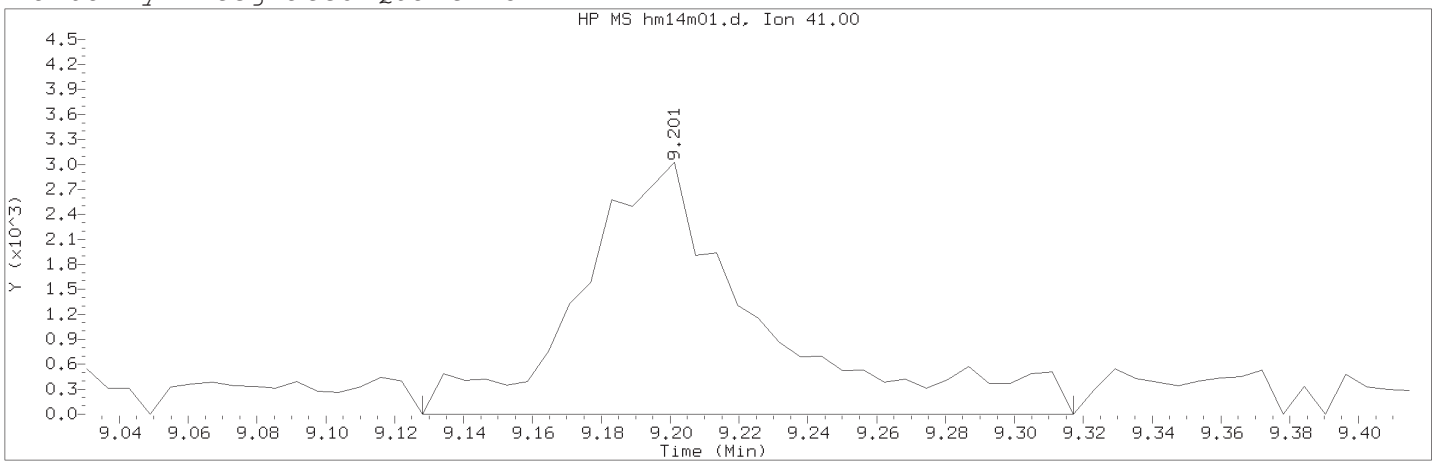
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 4664
On-column Amount (ng) : 0.1772
Integration start scan : 1144 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

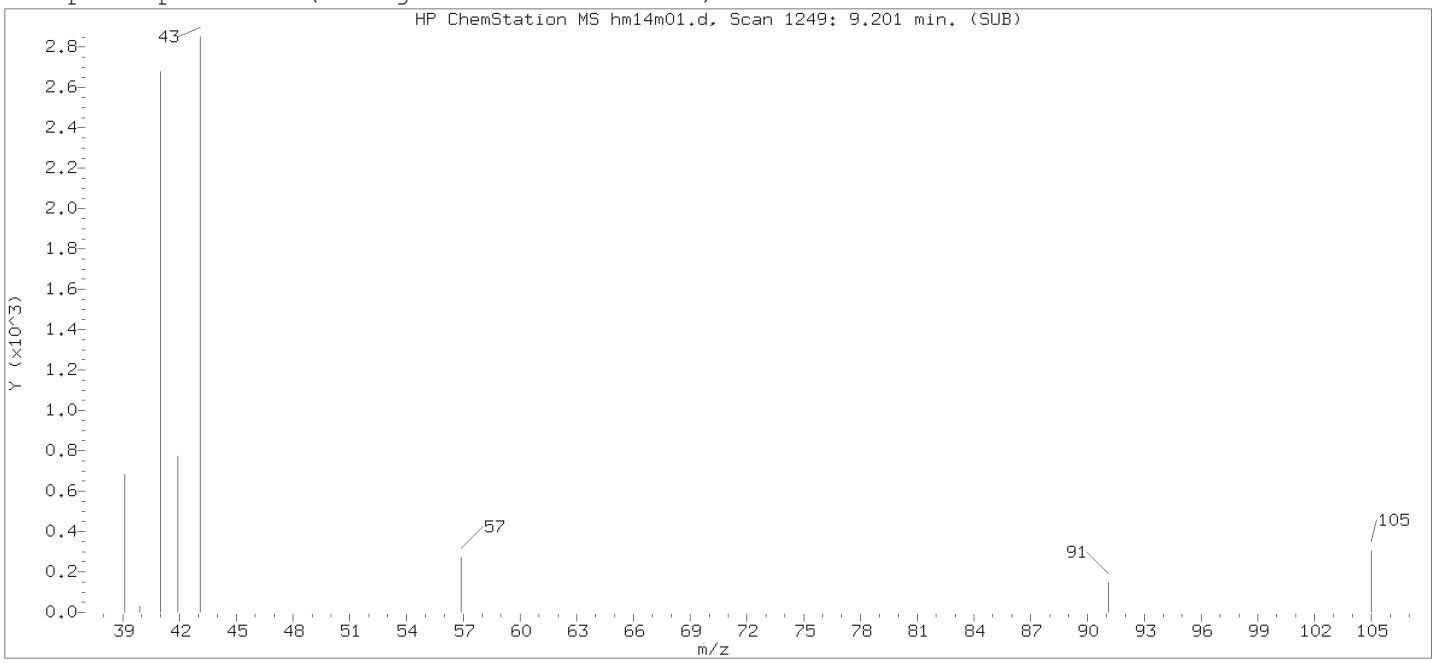
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area (flag) : 10978M
On-Column Amount (ng) : 1.3014
Integration start scan : 1236 Integration stop scan: 1267
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

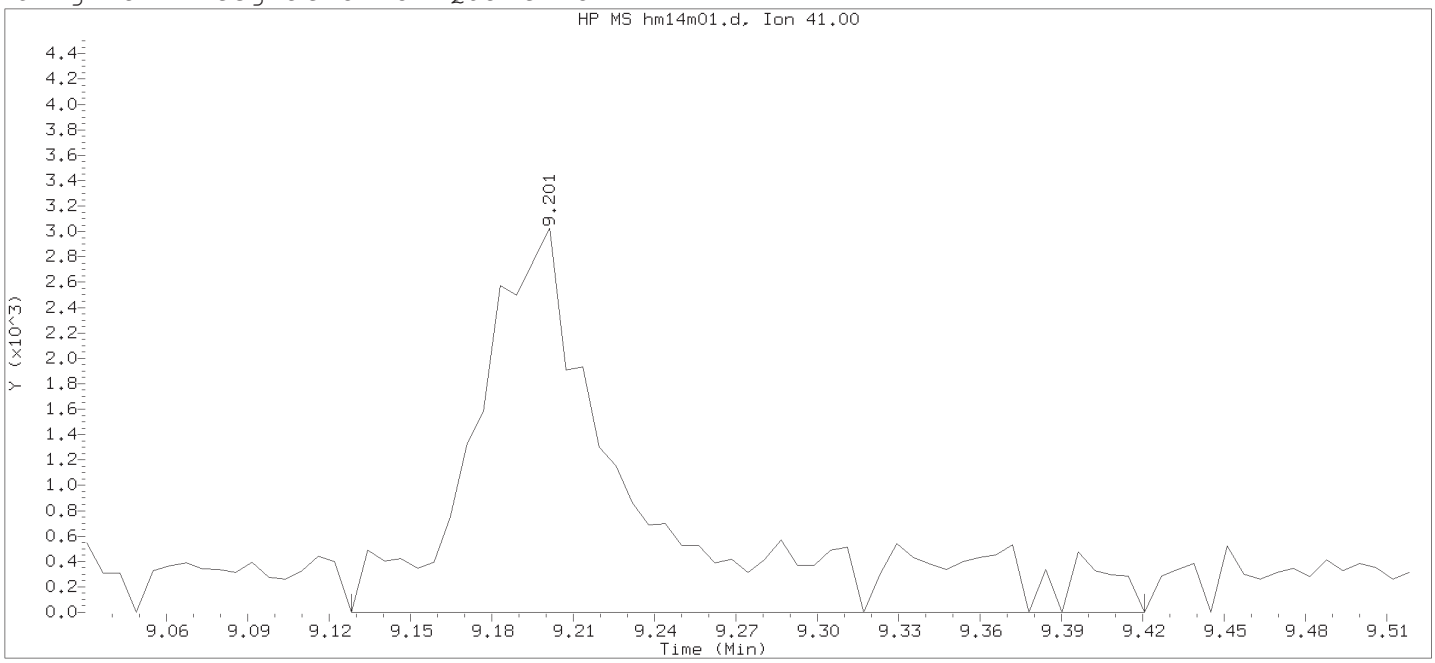
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

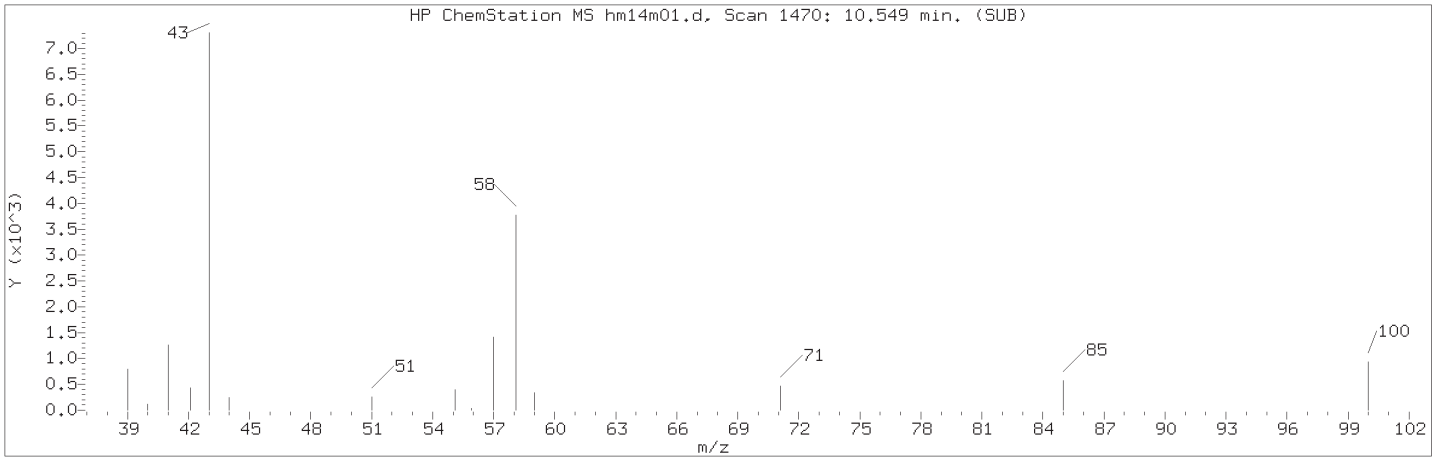
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

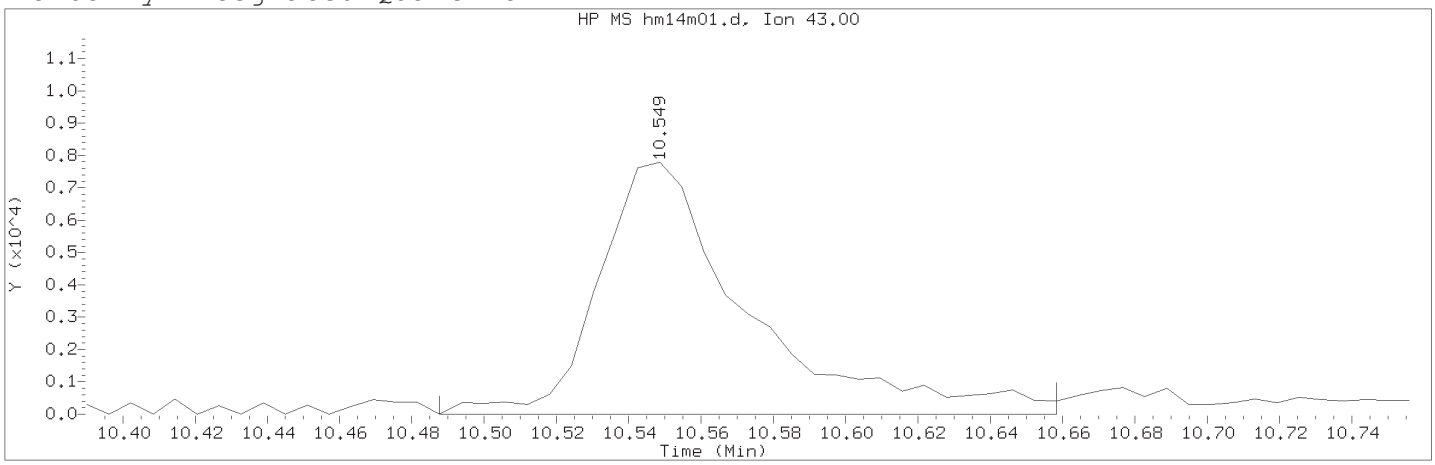
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area : 12999
On-column Amount (ng) : 1.5410
Integration start scan : 1236 Integration stop scan: 1284
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

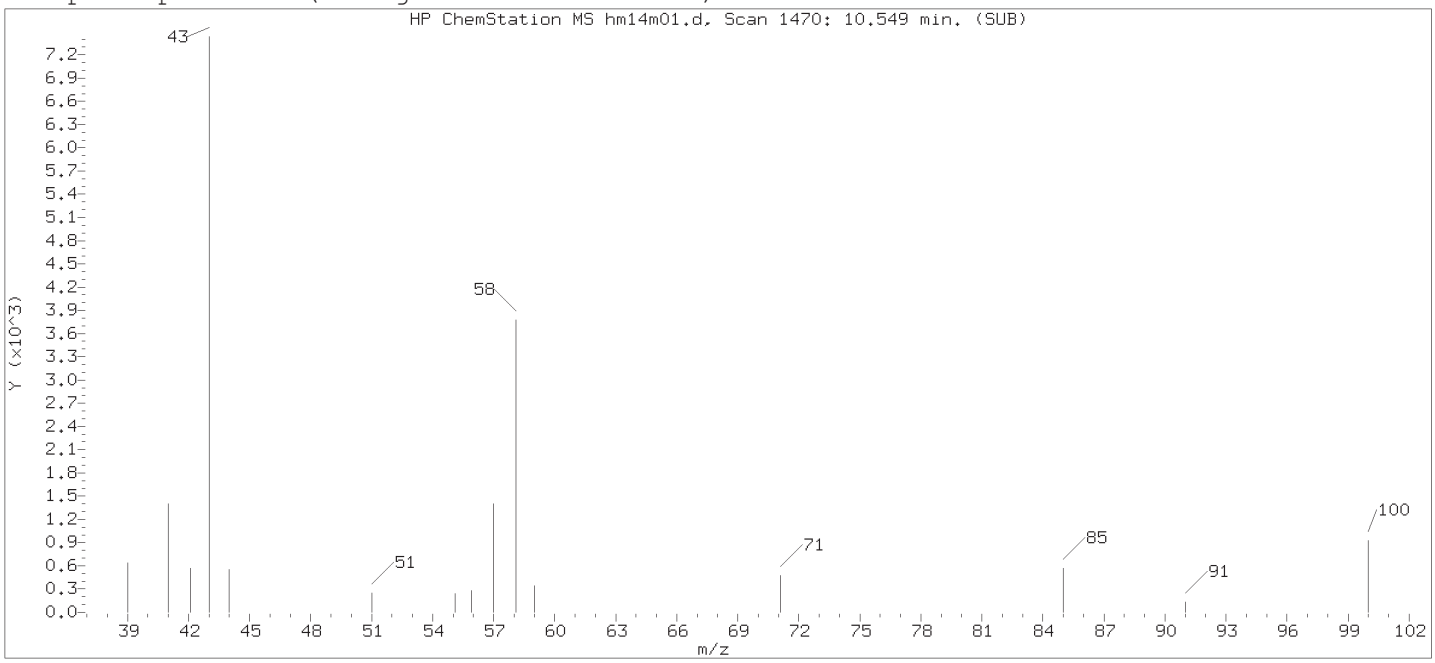
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area (flag) : 22438M
On-Column Amount (ng) : 0.8741
Integration start scan : 1459 Integration stop scan: 1487
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

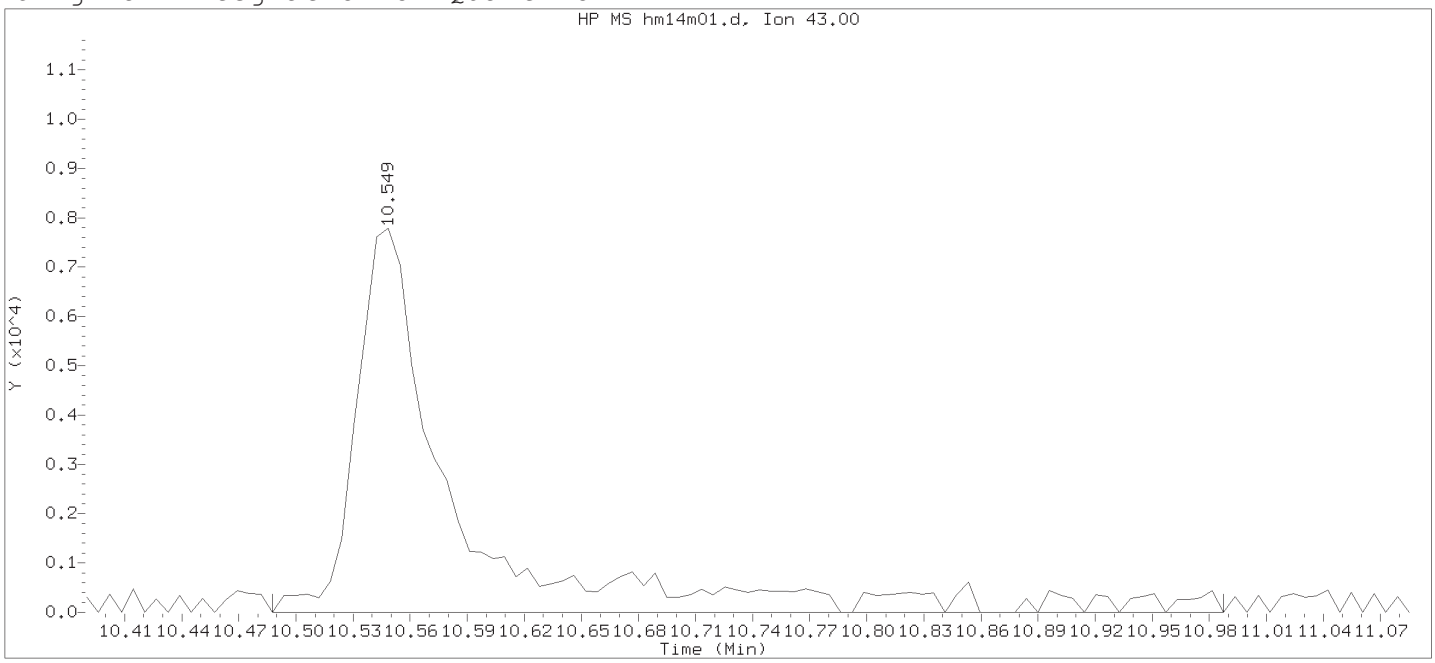
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

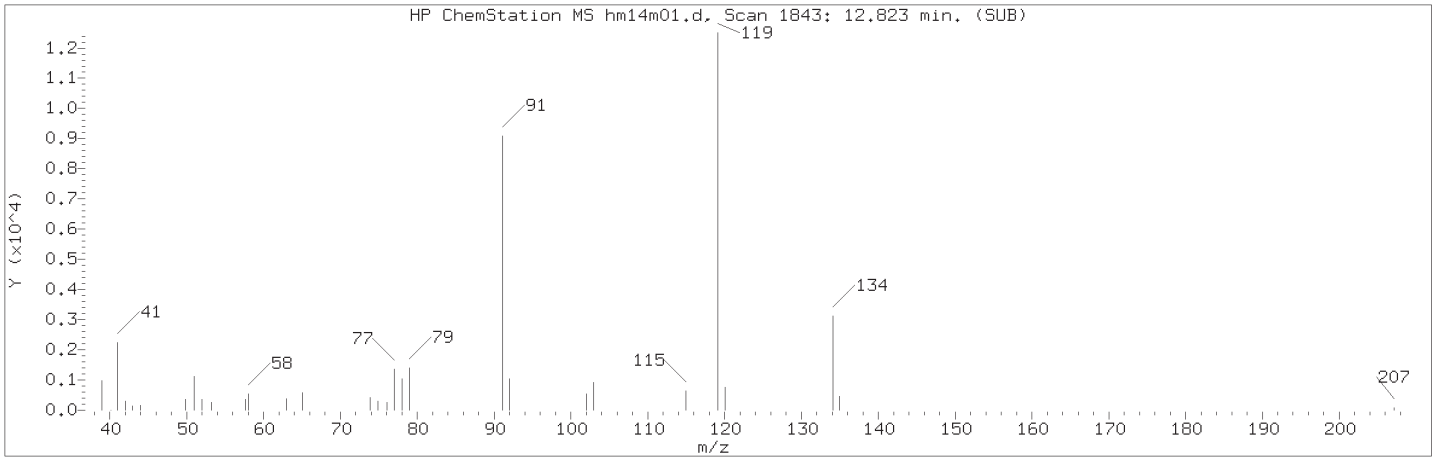
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

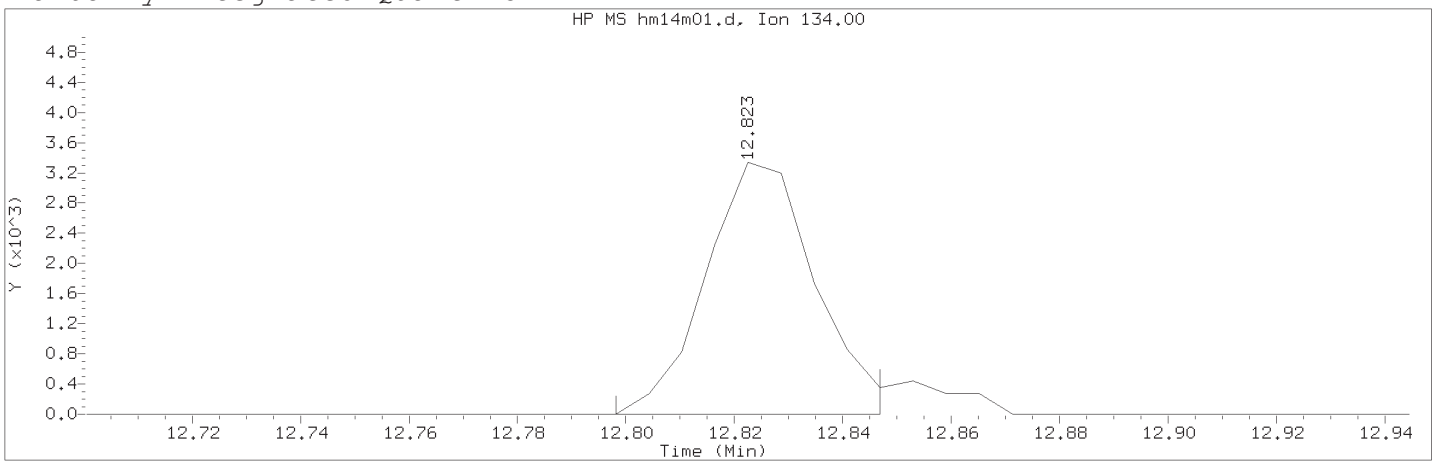
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area : 28808
On-column Amount (ng) : 1.1223
Integration start scan : 1459 Integration stop scan: 1541
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

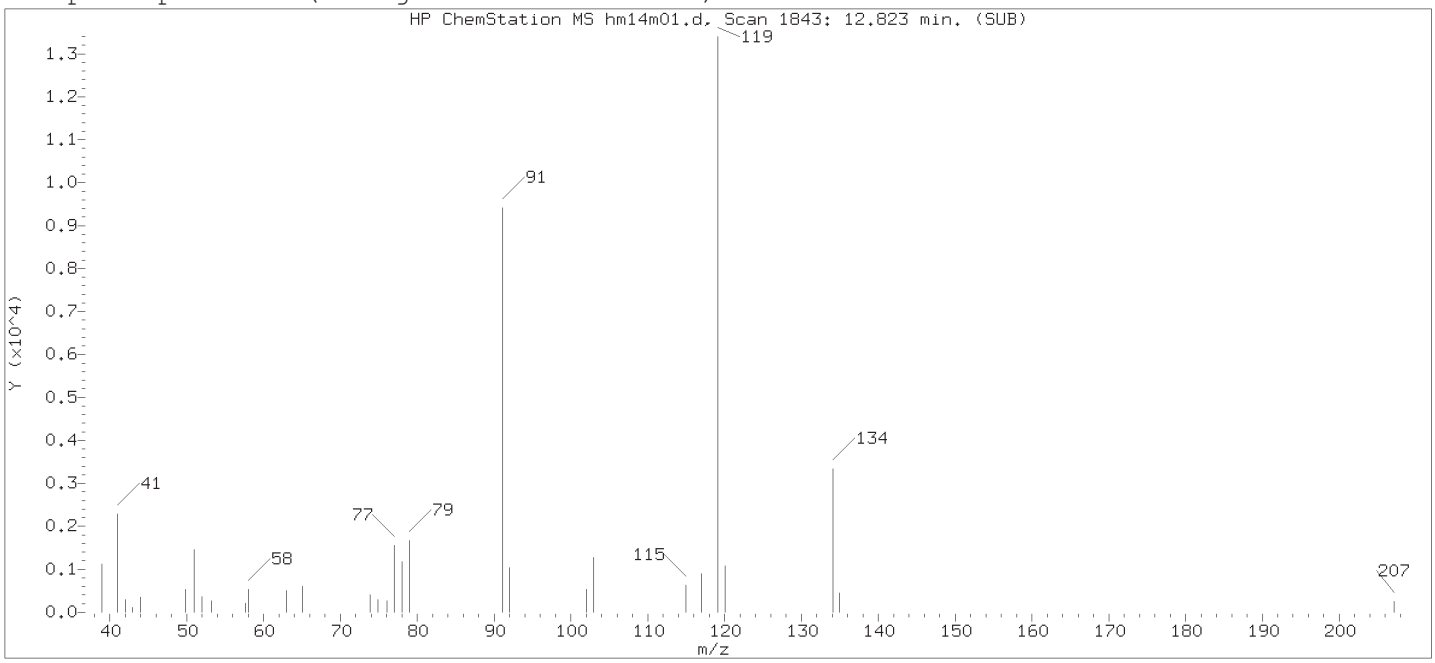
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area (flag) : 4695M
On-Column Amount (ng) : 0.0965
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

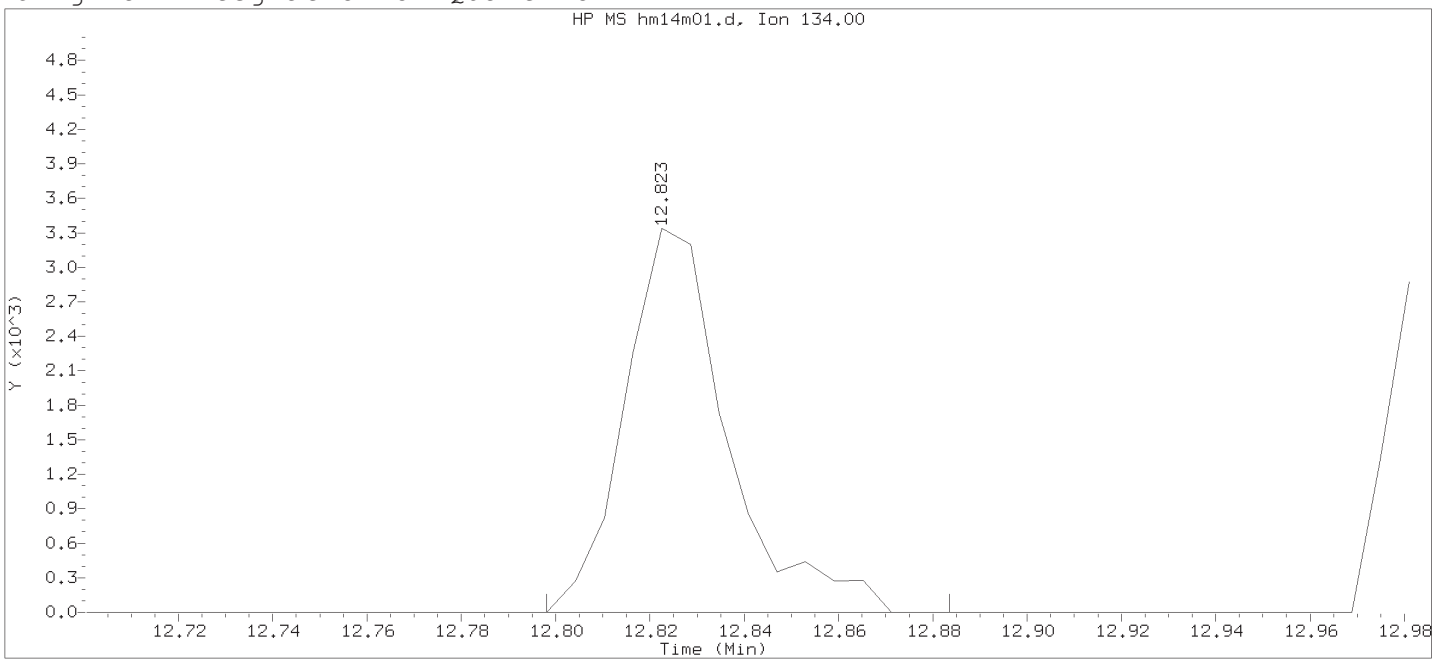
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

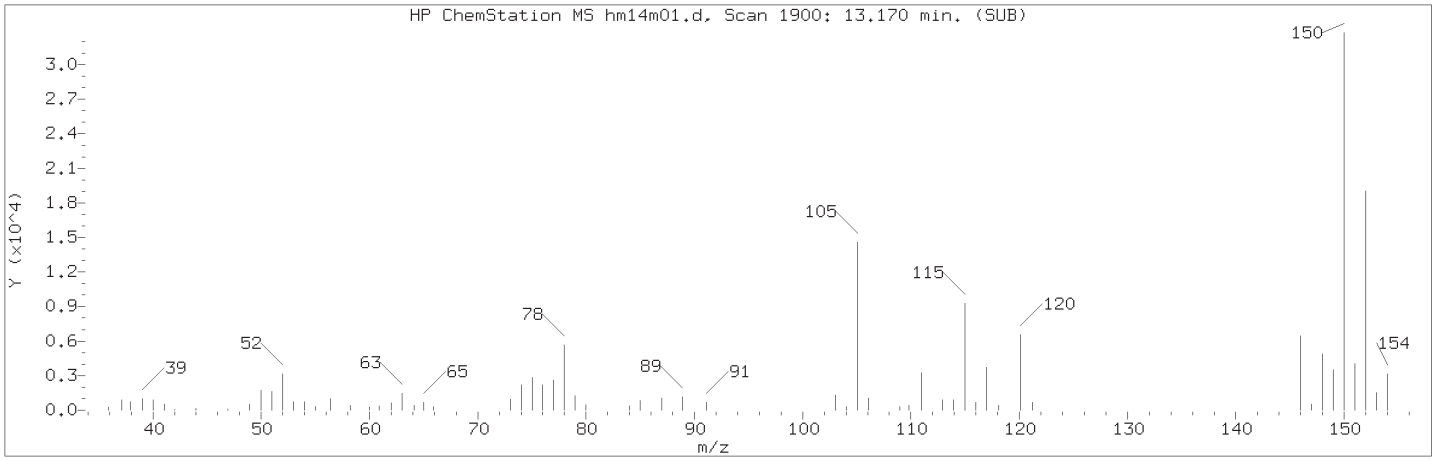
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

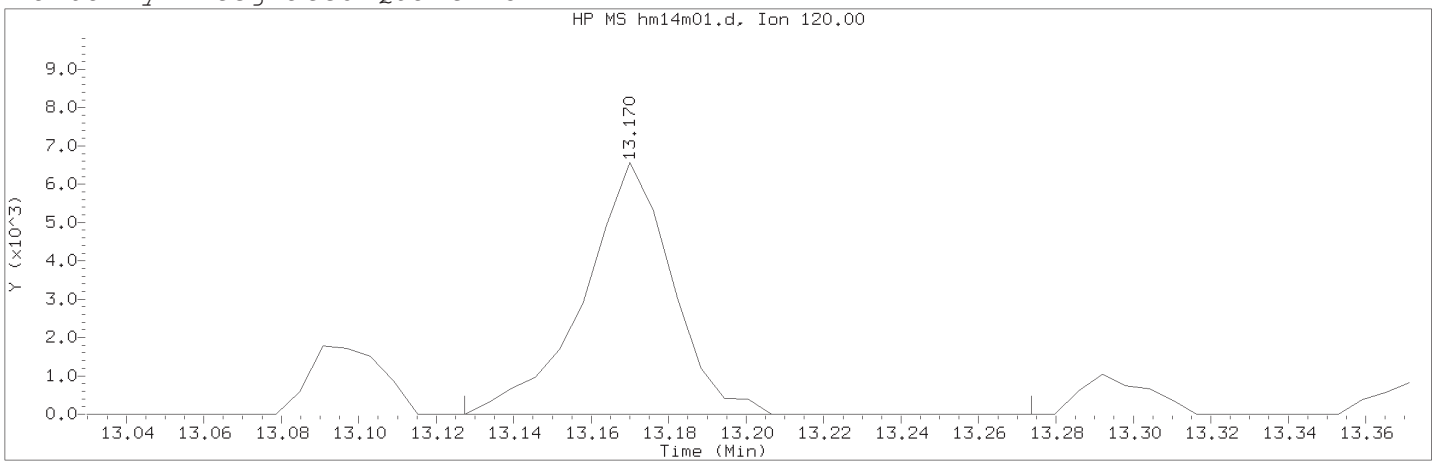
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area : 5056
On-column Amount (ng) : 0.1039
Integration start scan : 1838 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

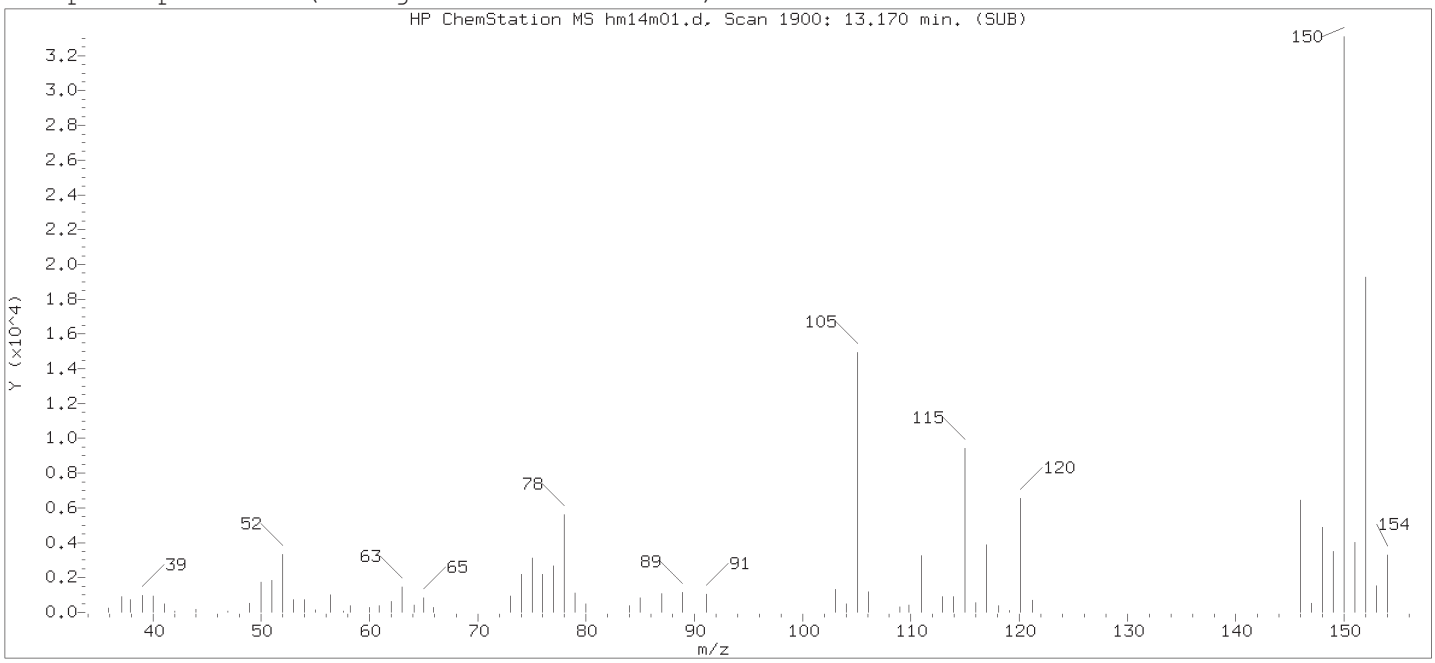
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 10366M
On-Column Amount (ng) : 0.1095
Integration start scan : 1892 Integration stop scan: 1916
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

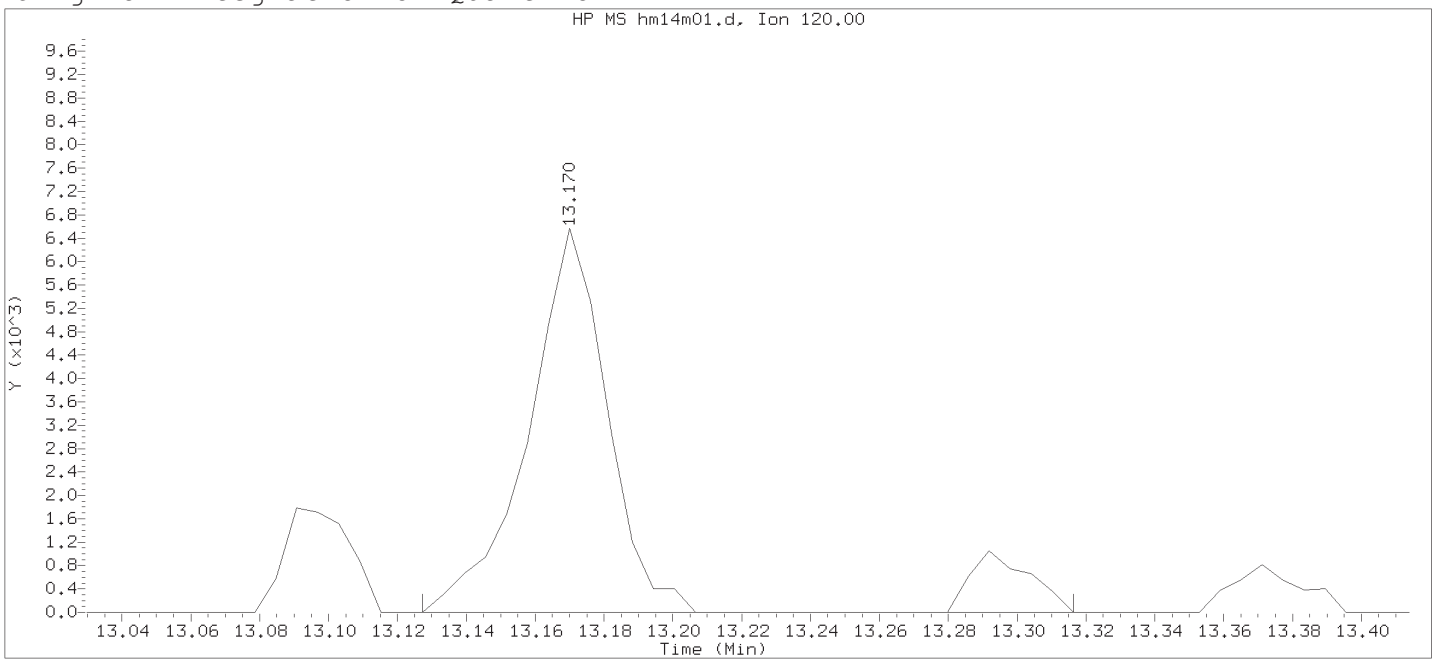
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



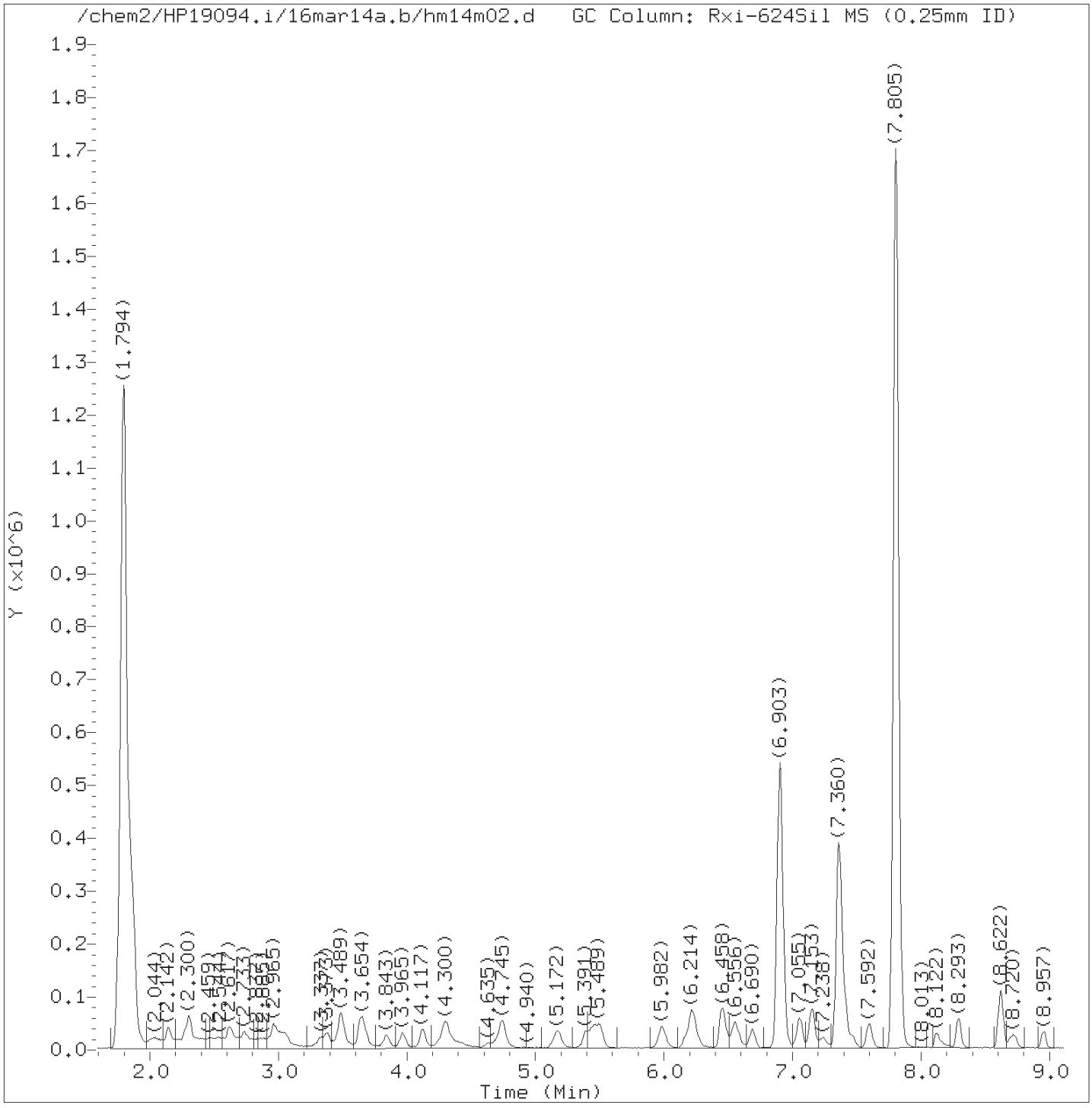
Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 11622
On-column Amount (ng) : 0.1228
Integration start scan : 1892 Integration stop scan: 1923
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

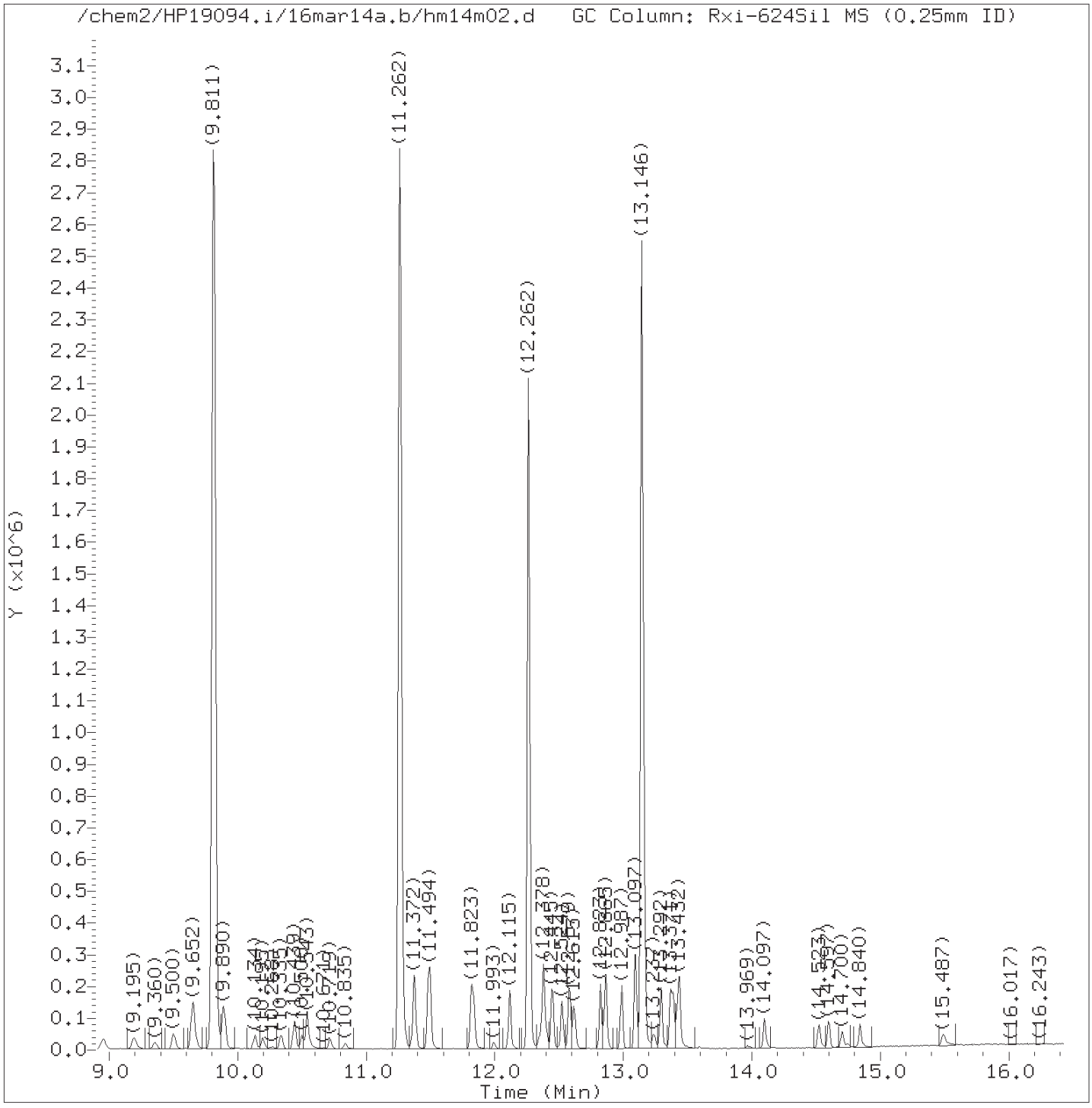
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.294	65	110415	50.000
50)$Dibromofluoromethane	(2)	6.903	113	514833	9.537
57)$1,2-Dichloroethane-d4	(2)	7.360	102	85992	9.618
63)*Fluorobenzene	(2)	7.805	96	2290874	10.000
72) 1,4-Dioxane	(1)	8.708	88	2930	17.567
82)$Toluene-d8	(3)	9.811	98	2229175	10.562
97)*Chlorobenzene-d5	(3)	11.262	117	1481588	10.000
111)$4-Bromofluorobenzene	(3)	12.262	95	671822	9.875
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	624400	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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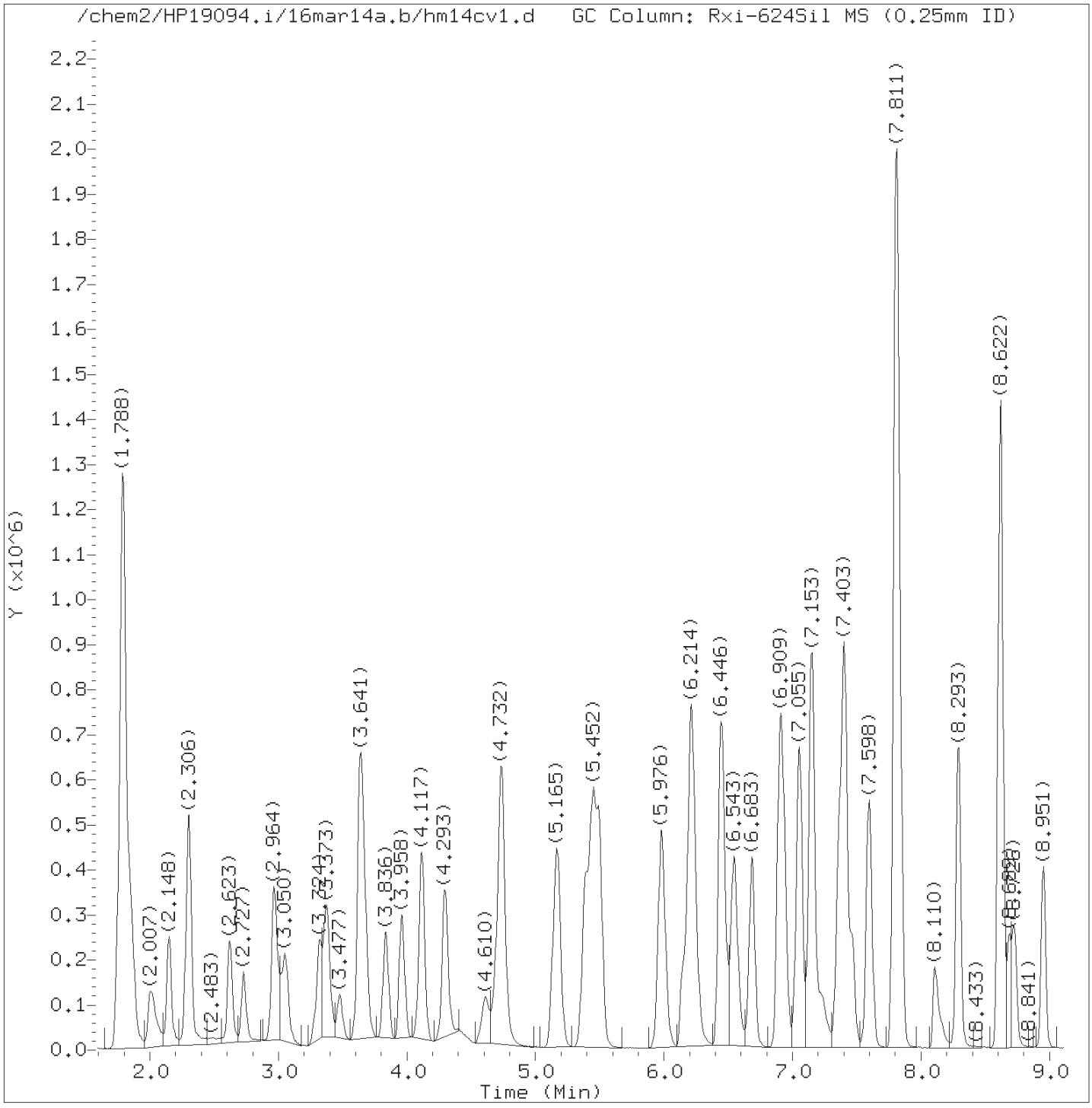
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

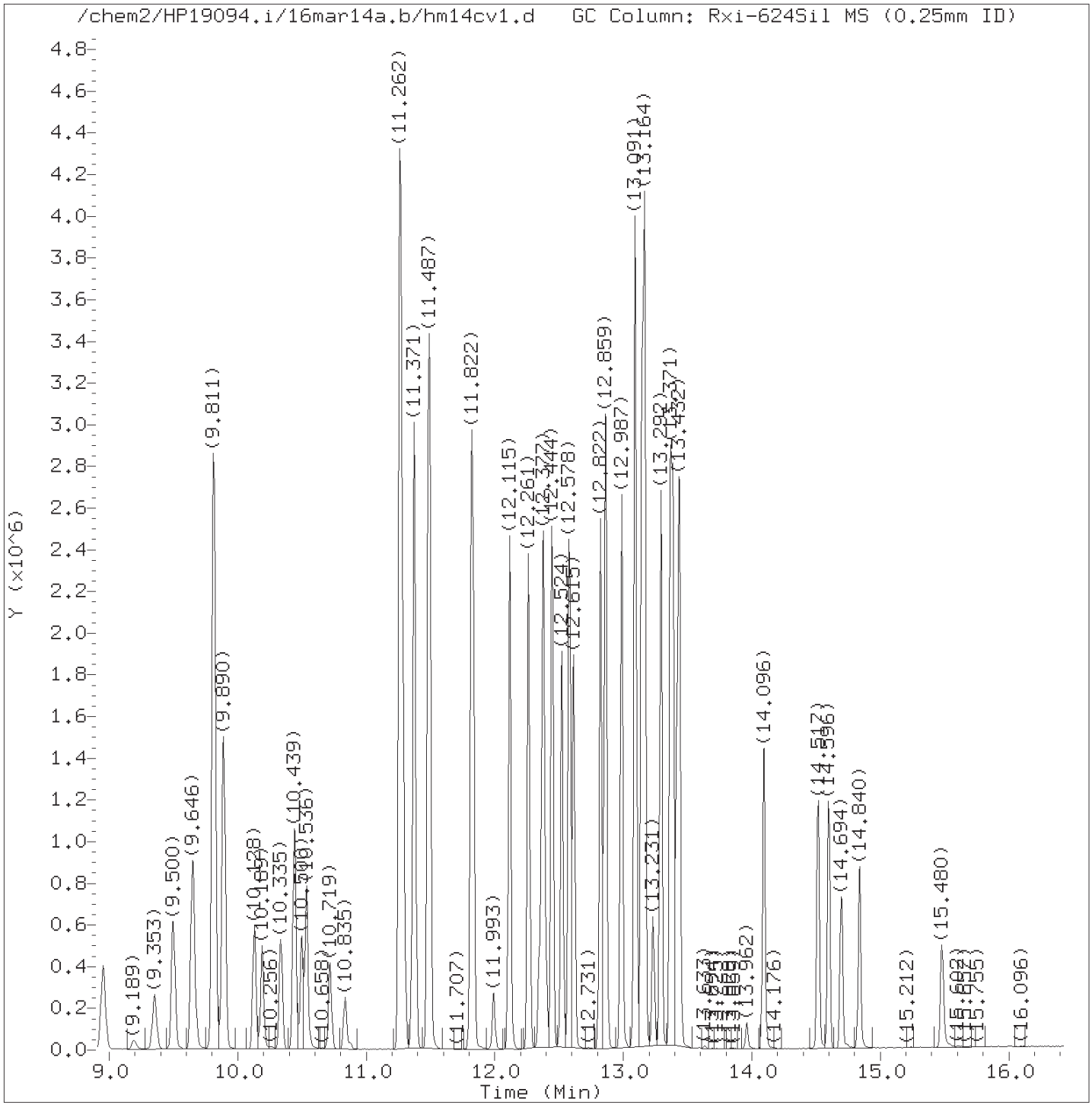
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	328771	4.161
2) Chloromethane	(2)	2.148	50	344269	4.442
5) Vinyl Chloride	(2)	2.288	62	322391	4.473
6) 1,3-Butadiene	(2)	2.306	39	243952	4.474
7) Bromomethane	(2)	2.623	94	213394	4.460
8) Chloroethane	(2)	2.727	64	193746	4.360
9) Dichlorofluoromethane	(2)	2.964	67	497189	4.931
10) Trichlorofluoromethane	(2)	3.050	101	445190	4.741
11) Ethyl ether	(2)	3.318	59	205267	5.299
12) Freon 123a	(2)	3.373	67	353620	4.923
13) Acrolein	(1)	3.477	56	218457	34.882
15) 1,1-Dichloroethene	(2)	3.629	96	254825	4.730
14) Acetone	(1)	3.641	43	281922	32.668
16) Freon 113	(2)	3.666	101	269029	4.802
17) Methyl Iodide	(2)	3.836	142	475759	4.770
18) Carbon Disulfide	(2)	3.958	76	713266	4.287
21) Methyl Acetate	(1)	4.086	43	99062	4.630
22) Allyl Chloride	(2)	4.117	41	511077	5.016
26)*t-Butyl Alcohol-d10	(1)	4.275	65	109841	50.000
23) Methylene Chloride	(2)	4.300	84	271623	4.717
28) t-Butyl Alcohol	(1)	4.397	59	151885	51.427
29) Acrylonitrile	(1)	4.604	53	250122	24.155
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	597823	4.809
31) trans-1,2-Dichloroethene	(2)	4.739	96	285728	4.925
32) n-Hexane	(2)	5.165	57	469293	4.765
33) 1,1-Dichloroethane	(2)	5.385	63	567103	4.796
34) di-Isopropyl Ether	(2)	5.446	45	1046719	5.071
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	439660	4.529
37) Ethyl t-butyl ether	(2)	5.982	59	844012	4.849
40) 1,2-Dichloroethene (Total)	(2)		96	600327	9.820
38) 2-Butanone	(1)	6.147	43	526550	35.807
39) cis-1,2-Dichloroethene	(2)	6.208	96	314599	4.895
42) Propionitrile	(1)	6.220	54	133510	36.411
41) 2,2-Dichloropropane	(2)	6.226	77	454613	4.805
45) Methacrylonitrile	(1)	6.452	67	472050	37.599
47) Bromochloromethane	(2)	6.543	128	124104	5.076
48) Tetrahydrofuran	(1)	6.555	71	86049	23.131
49) Chloroform	(2)	6.683	83	525783	4.864

* = Compound is an internal standard.

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on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	539982	9.999
51) 1,1,1-Trichloroethane	(2)	6.933	97	450922	4.891
52) Cyclohexane	(2)	7.055	56	556433	4.619
55) 1,1-Dichloropropene	(2)	7.147	75	411399	4.649
54) Carbon Tetrachloride	(2)	7.159	117	413241	4.930
56) Isobutyl Alcohol	(1)	7.232	41	129013	129.671
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91183	10.195
58) Benzene	(2)	7.403	78	1194211	4.849
59) 1,2-Dichloroethane	(2)	7.464	62	312832M	4.902
60) t-Amyl methyl ether	(2)	7.598	73	694215	4.880
63)*Fluorobenzene	(2)	7.805	96	2291680	10.000
62) n-Heptane	(2)	7.835	43	541861	4.868
65) n-Butanol	(1)	8.110	56	196761	233.607
67) Trichloroethene	(2)	8.287	95	320611	4.994
70) 1,2-Dichloropropane	(2)	8.616	63	316169	4.930
69) Methylcyclohexane	(2)	8.622	83	526322	5.005
71) Methyl Methacrylate	(1)	8.689	69	130240	4.965
72) 1,4-Dioxane	(1)	8.713	88	23162	139.580
73) Dibromomethane	(2)	8.726	93	125402	4.747
74) Bromodichloromethane	(2)	8.951	83	362079	4.909
76) 2-Nitropropane	(1)	9.195	41	37539M	4.465
80) cis-1,3-Dichloropropene	(2)	9.500	75	447003	4.932
81) 4-Methyl-2-Pentanone	(1)	9.646	43	859279M	23.744
82)$Toluene-d8	(3)	9.811	98	2249744	10.002
83) Toluene	(3)	9.890	92	742657	4.902
84) trans-1,3-Dichloropropene	(3)	10.128	75	356461	5.020
85) 1,3-Dichloropropene (total)	(3)		75	803464	9.952
86) Ethyl Methacrylate	(3)	10.189	69	277034	5.071
88) 1,1,2-Trichloroethane	(3)	10.335	97	176312	4.804
89) Tetrachloroethene	(3)	10.445	166	351918	4.918
90) 1,3-Dichloropropane	(3)	10.500	76	323115	4.897
91) 2-Hexanone	(1)	10.536	43	615079	24.038
93) Dibromochloromethane	(3)	10.719	129	228064	4.848
95) 1,2-Dibromoethane	(3)	10.835	107	175678	5.082
97)*Chlorobenzene-d5	(3)	11.262	117	1578909	10.000
98) Chlorobenzene	(3)	11.286	112	804977	4.881
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	278208	4.918
100) Ethylbenzene	(3)	11.371	91	1456679	4.912

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.487	106	1105802	9.776
105) Xylene (Total)	(3)		106	1636412	14.610
104) o-Xylene	(3)	11.816	106	530610	4.834
106) Styrene	(3)	11.829	104	866196	4.933
107) Bromoform	(3)	11.993	173	124959	4.789
108) Isopropylbenzene	(3)	12.115	105	1447902	4.977
111)$4-Bromofluorobenzene	(3)	12.261	95	726691	10.023
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	205716M	4.686
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	273261	24.520
114) Bromobenzene	(4)	12.377	156	316623	4.843
116) 1,2,3-Trichloropropane	(4)	12.396	110	54629	4.957
117) n-Propylbenzene	(4)	12.444	91	1736744	4.911
119) 2-Chlorotoluene	(4)	12.524	126	332613	4.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	1202820	4.878
122) 4-Chlorotoluene	(4)	12.615	126	333089	4.793
125) tert-Butylbenzene	(4)	12.822	134	261563M	4.976
126) Pentachloroethane	(4)	12.853	167	199481	5.029
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1202340	4.877
128) sec-Butylbenzene	(4)	12.987	105	1570903	4.921
131) 1,3-Dichlorobenzene	(4)	13.091	146	610401	4.773
132) p-Isopropyltoluene	(4)	13.097	119	1315146	4.867
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	701377	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	611552	4.706
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	492432	4.817
136) Benzyl Chloride	(4)	13.231	126	85413	4.911
138) n-Butylbenzene	(4)	13.389	92	661432	5.003
139) 1,2-Dichlorobenzene	(4)	13.420	146	539092	4.746
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27547	4.792
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	348528	4.289
146) Hexachlorobutadiene	(4)	14.596	225	205577	4.842
147) Naphthalene	(4)	14.694	128	555174	4.262
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	270242	4.164

M = Compound was manually integrated.
* = Compound is an internal standard.
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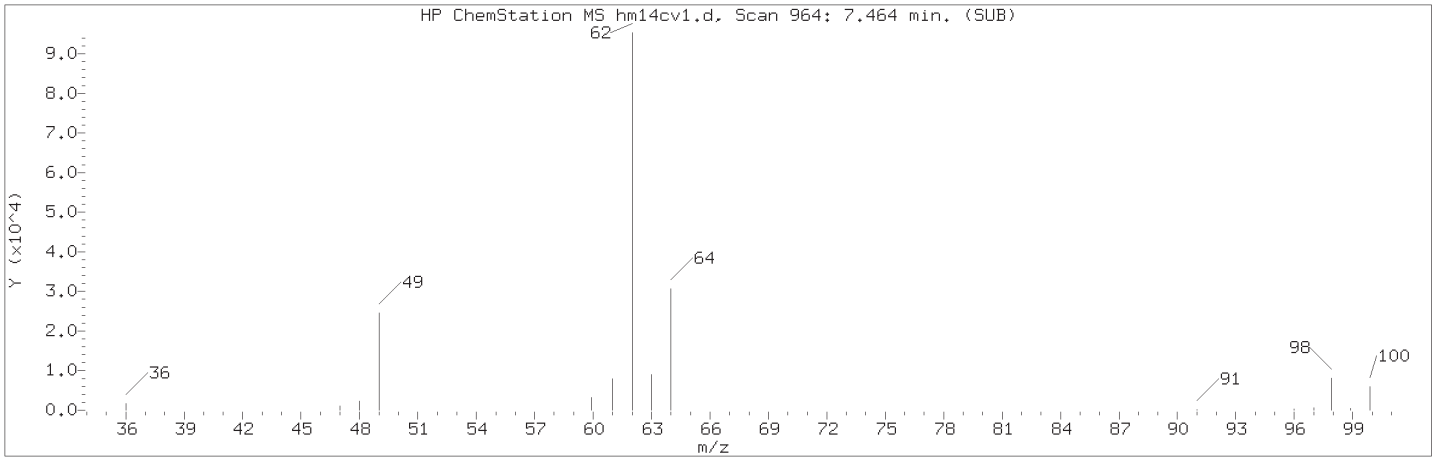
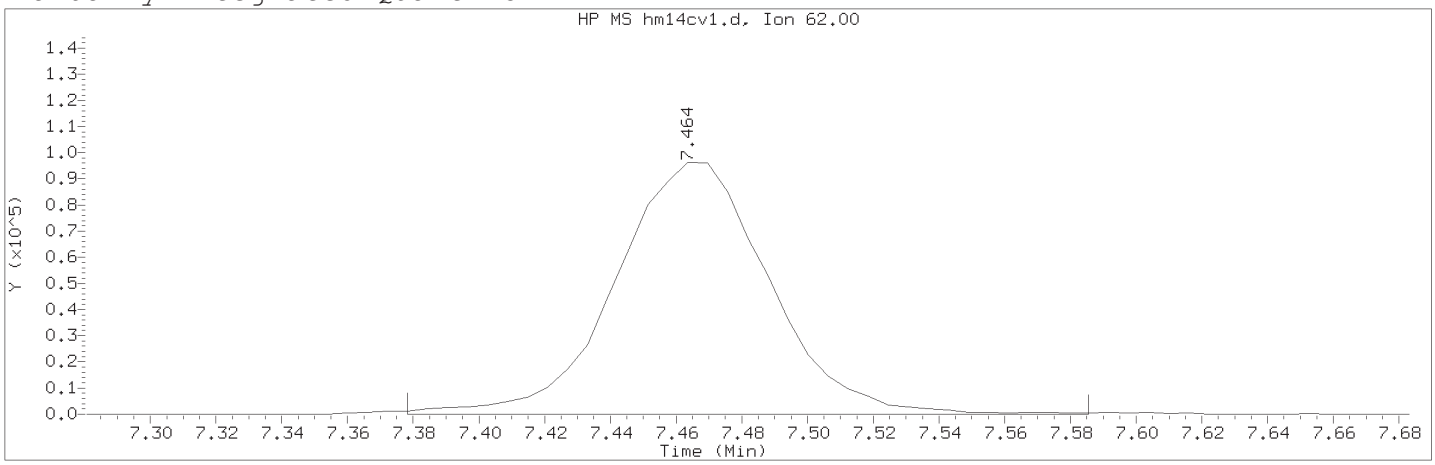
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

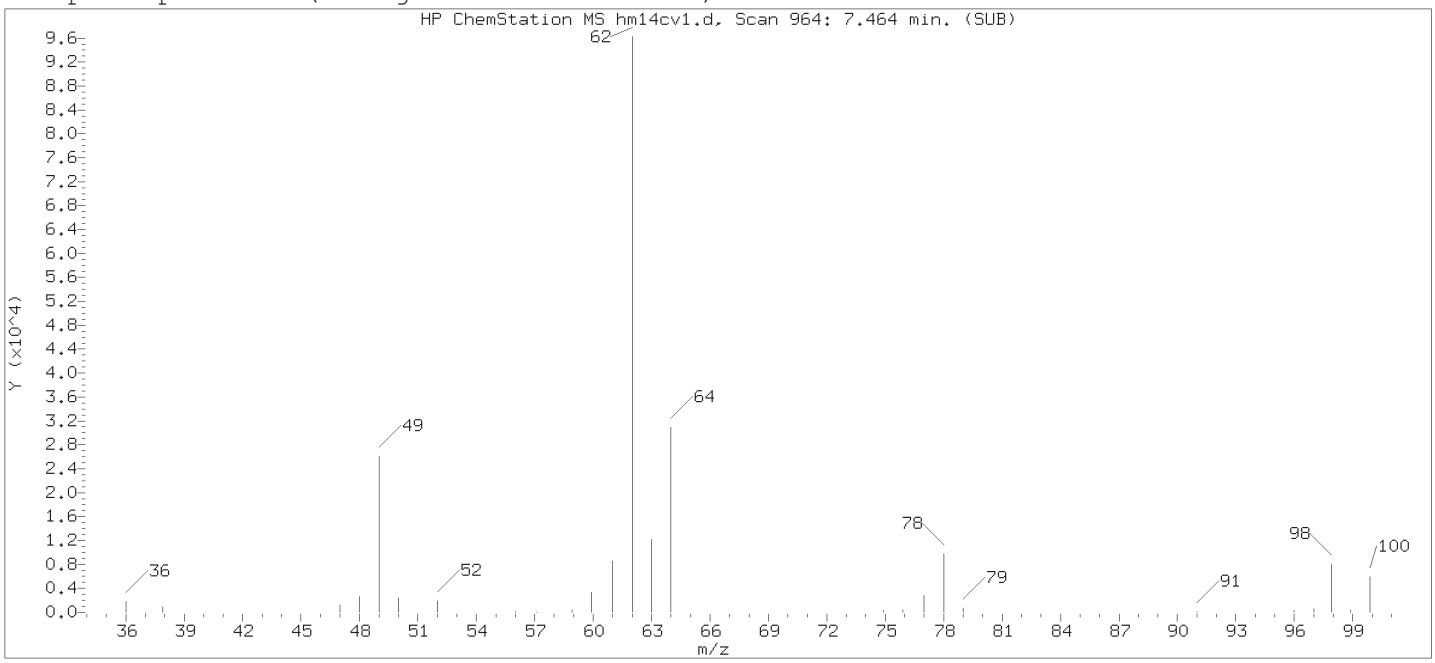
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 312832M
On-Column Amount (ng) : 4.9022
Integration start scan : 949 Integration stop scan: 983
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

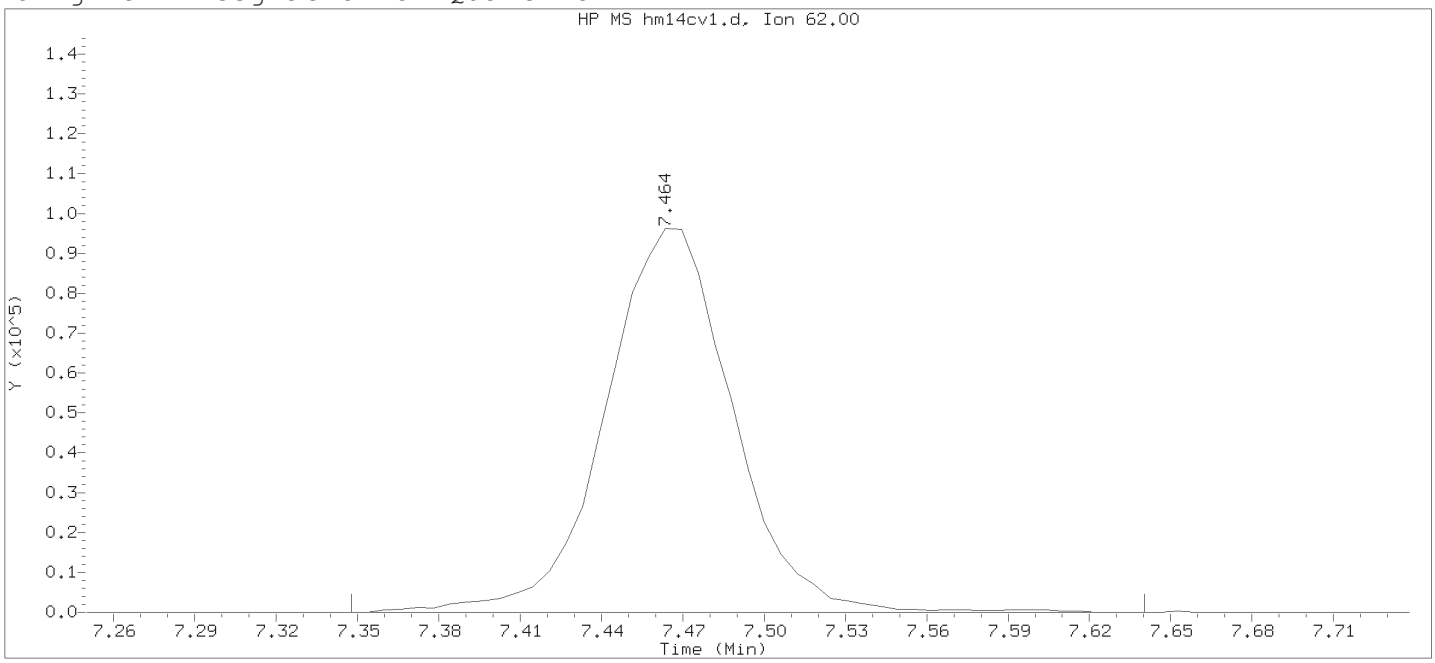
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

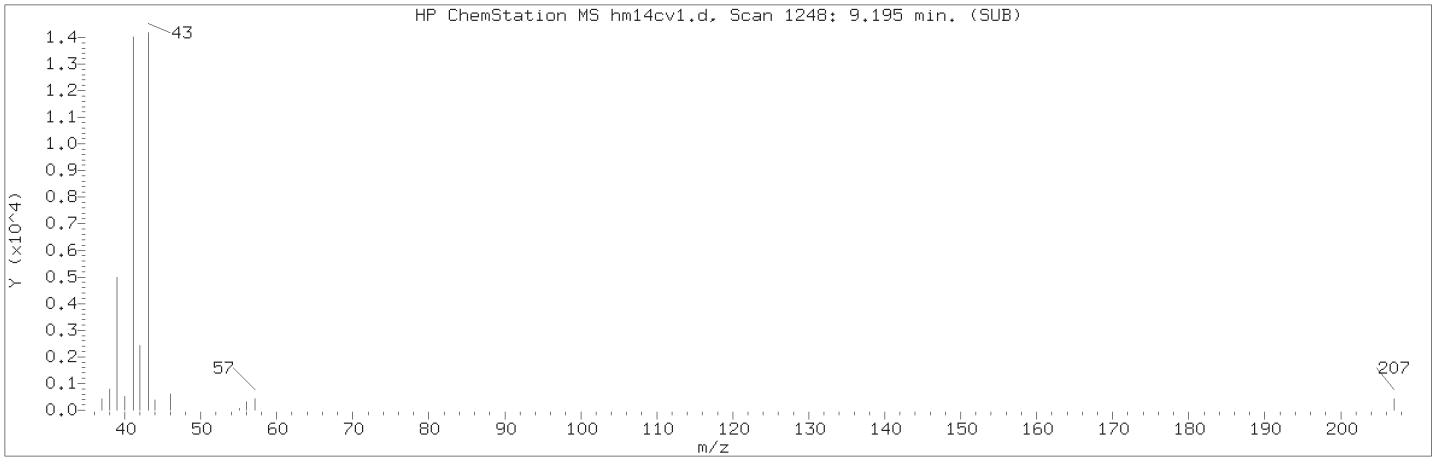
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

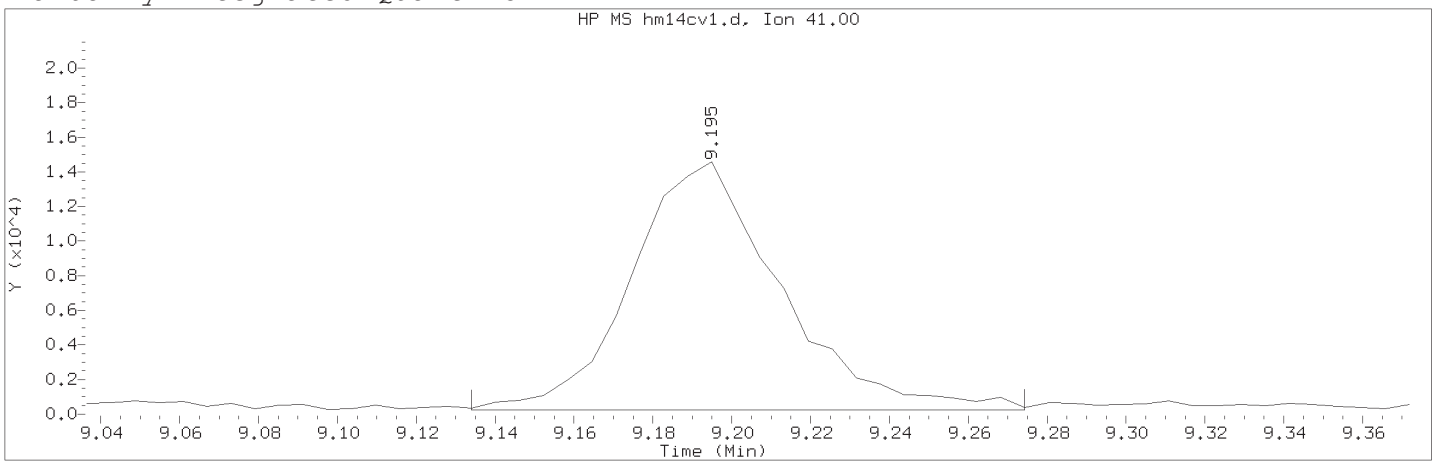
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 314656
On-column Amount (ng) : 4.9308
Integration start scan : 944 Integration stop scan: 992
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

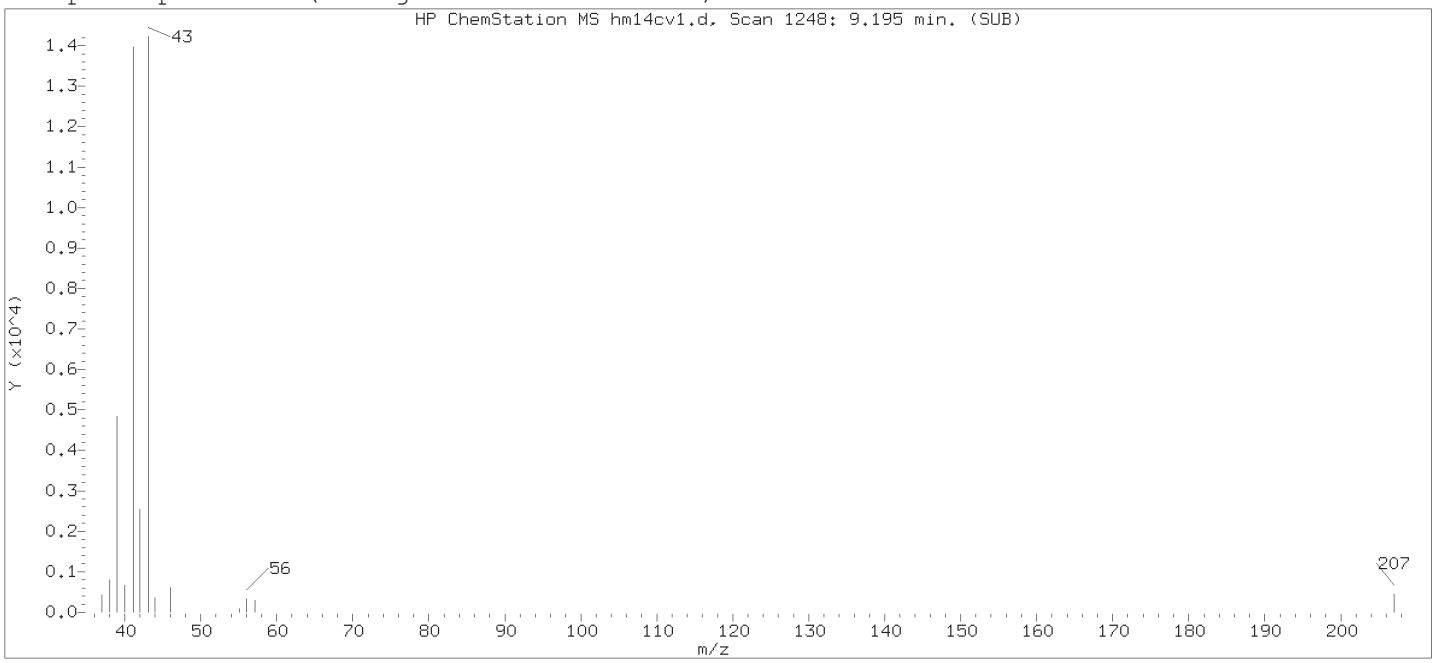
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area (flag) : 37539M
On-Column Amount (ng) : 4.4645
Integration start scan : 1237 Integration stop scan: 1260
Y at integration start : 259 Y at integration end: 259

Reason for manual integration: improper integration

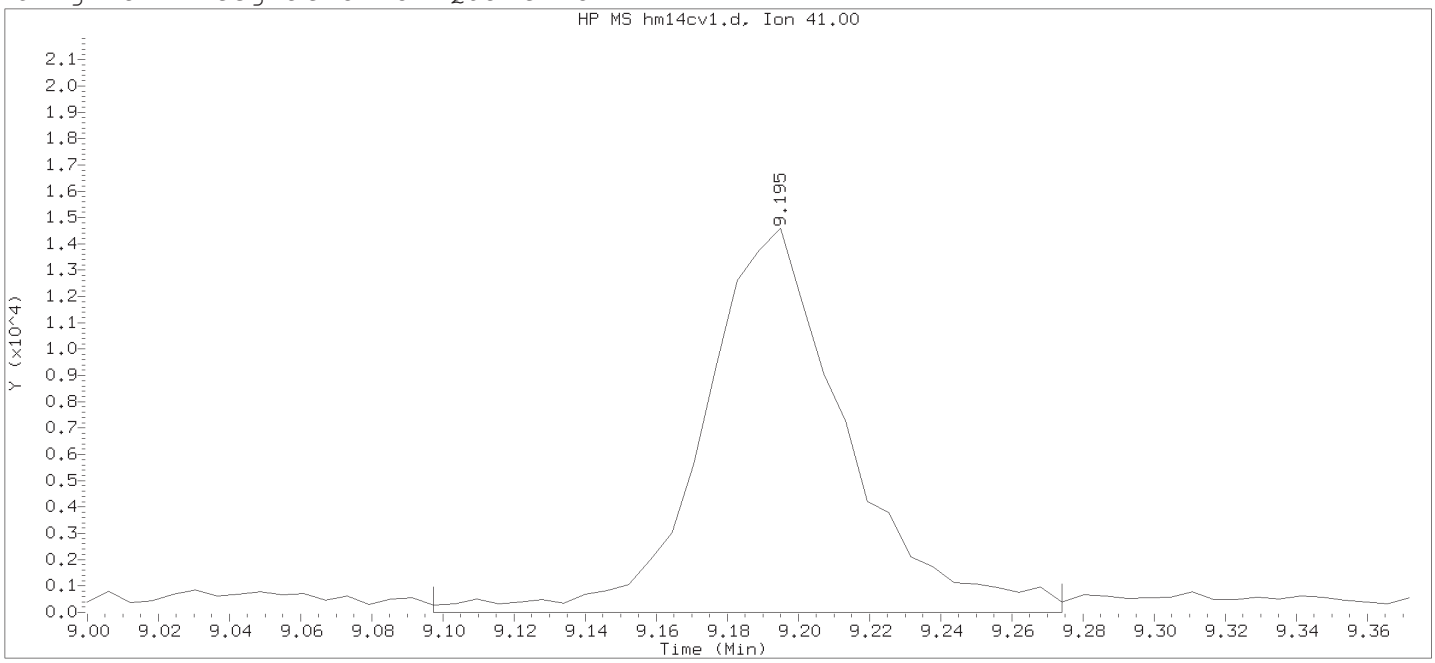
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

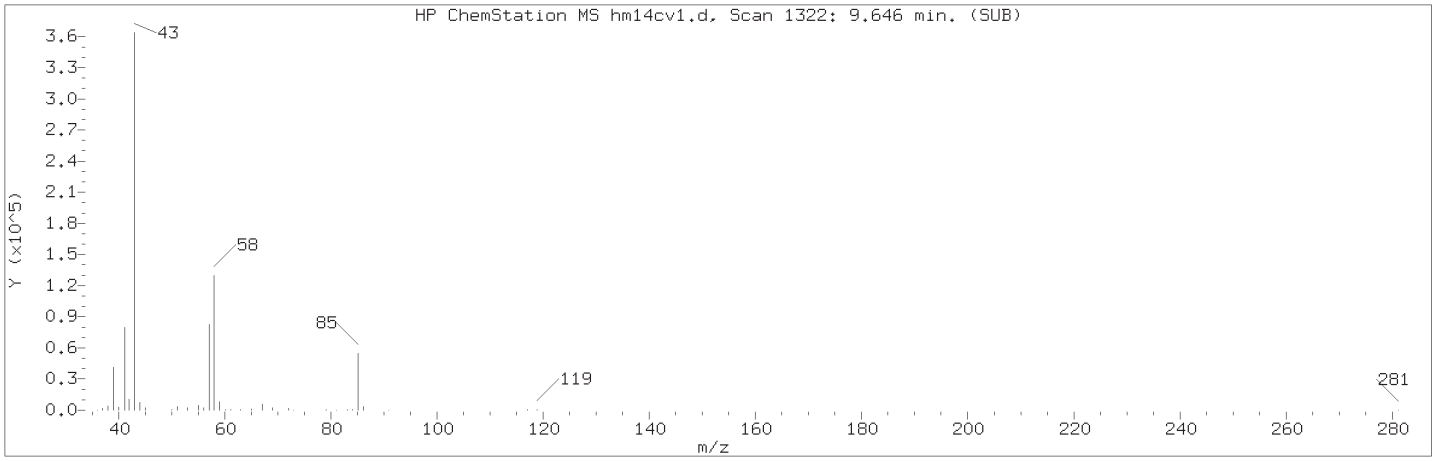
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

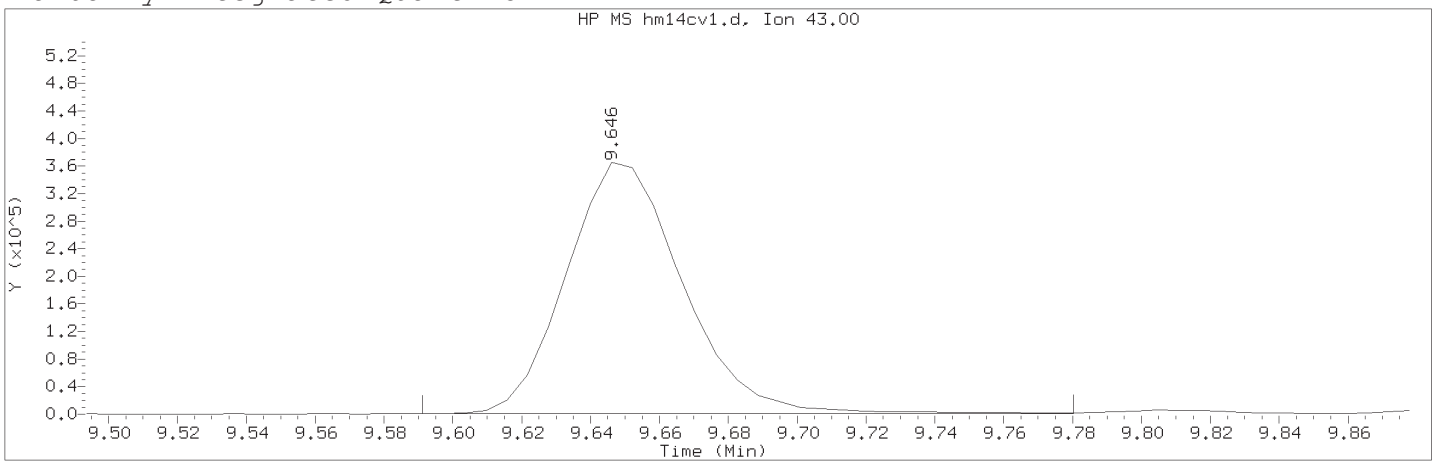
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area : 40531
On-column Amount (ng) : 4.8202
Integration start scan : 1231 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

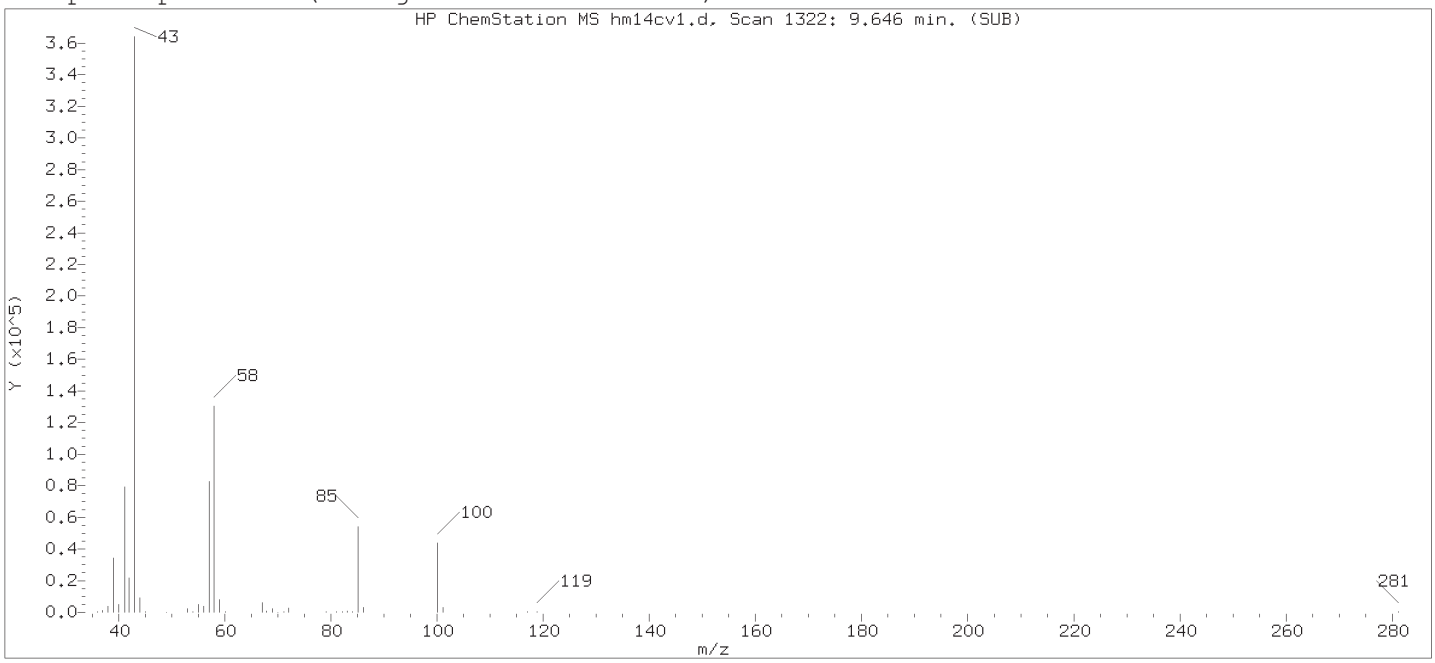
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area (flag) : 859279M
On-Column Amount (ng) : 23.7437
Integration start scan : 1312 Integration stop scan: 1343
Y at integration start : 445 Y at integration end: 445

Reason for manual integration: improper integration

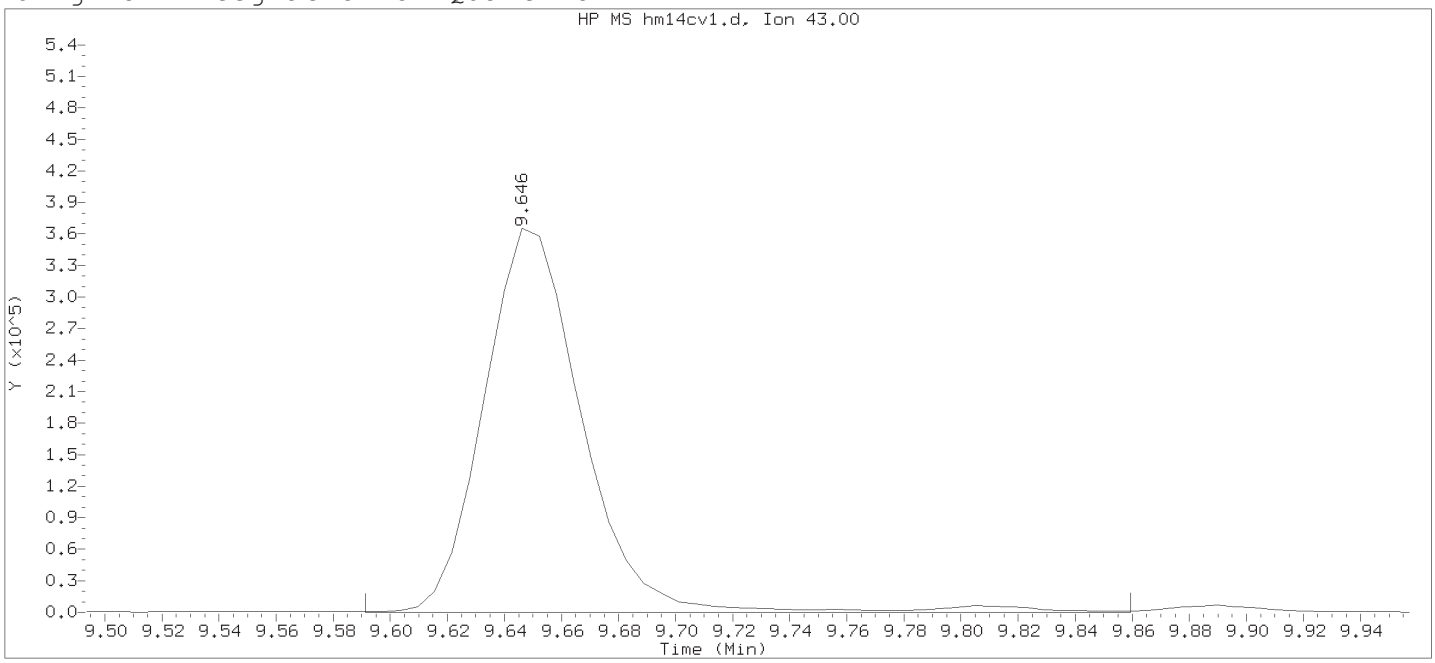
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

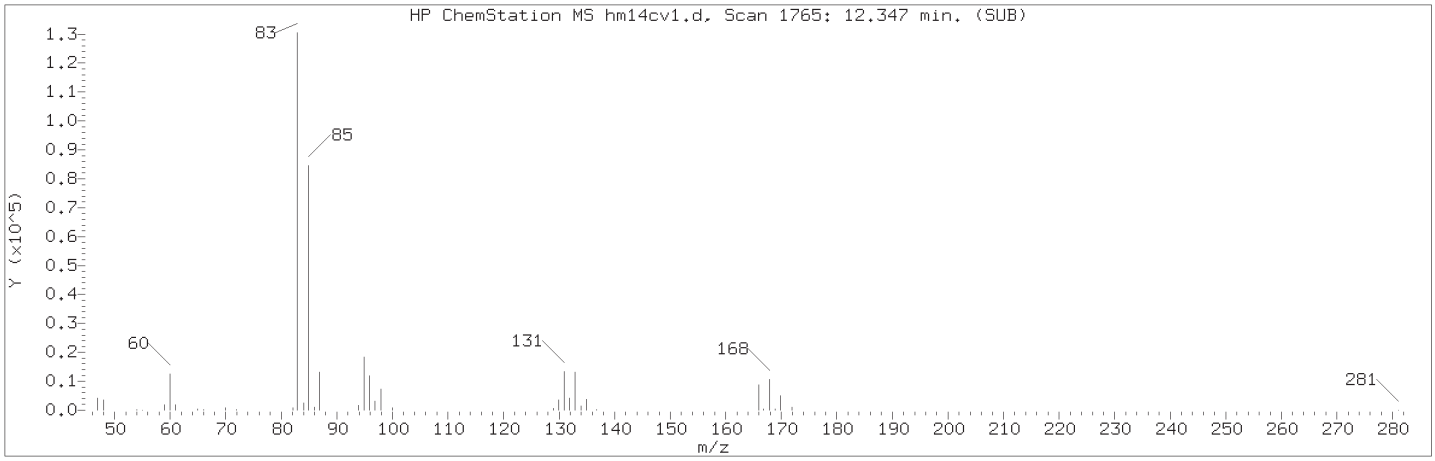
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

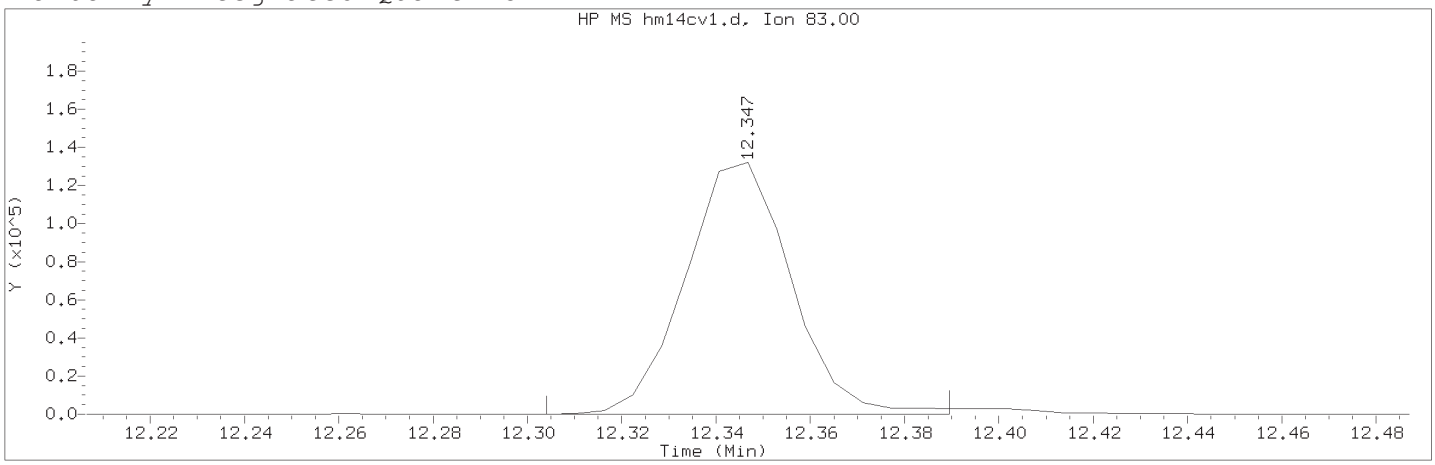
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area : 879138
On-column Amount (ng) : 24.2924
Integration start scan : 1312 Integration stop scan: 1356
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

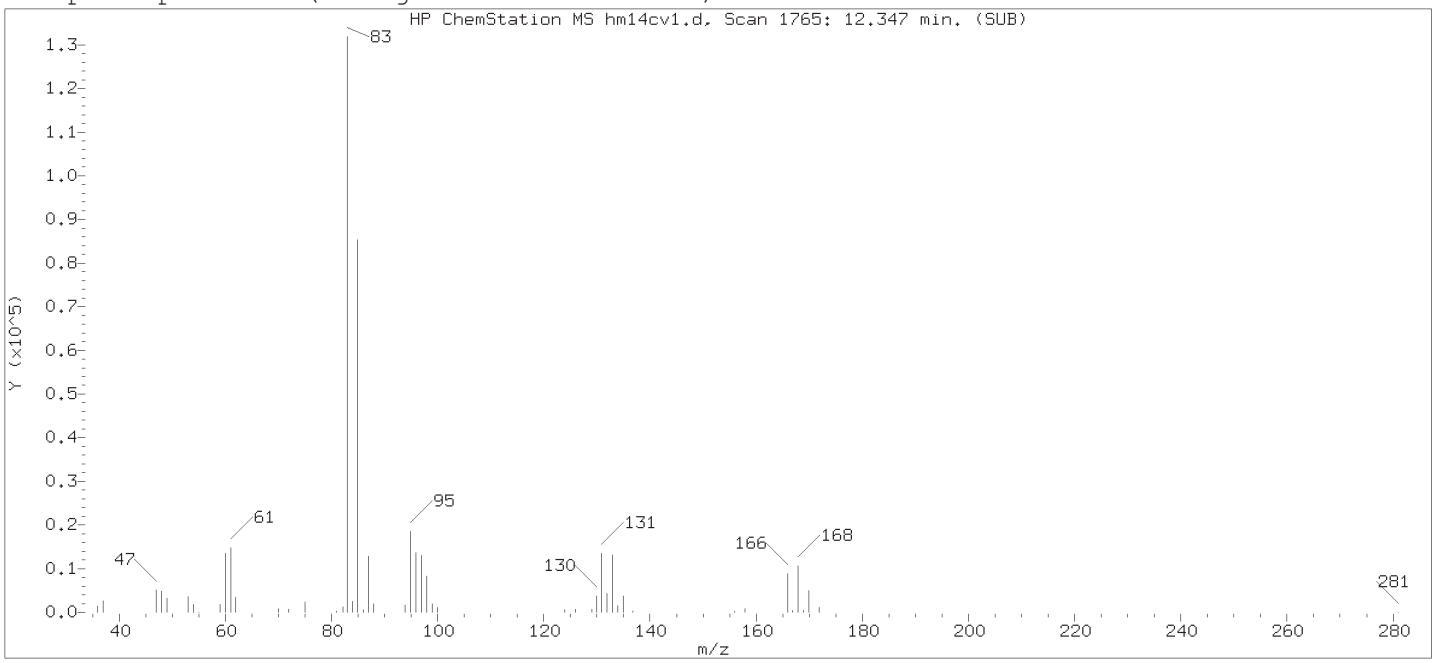
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 205716M
On-Column Amount (ng) : 4.6861
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

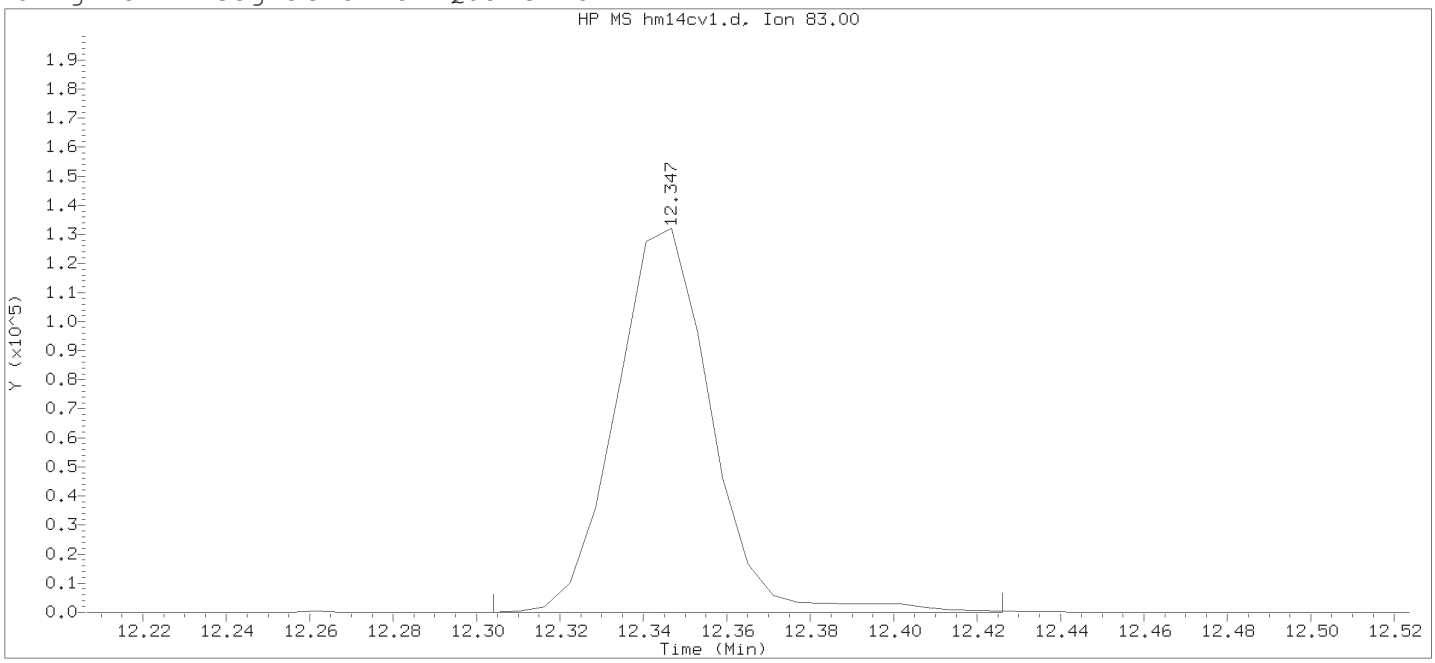
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

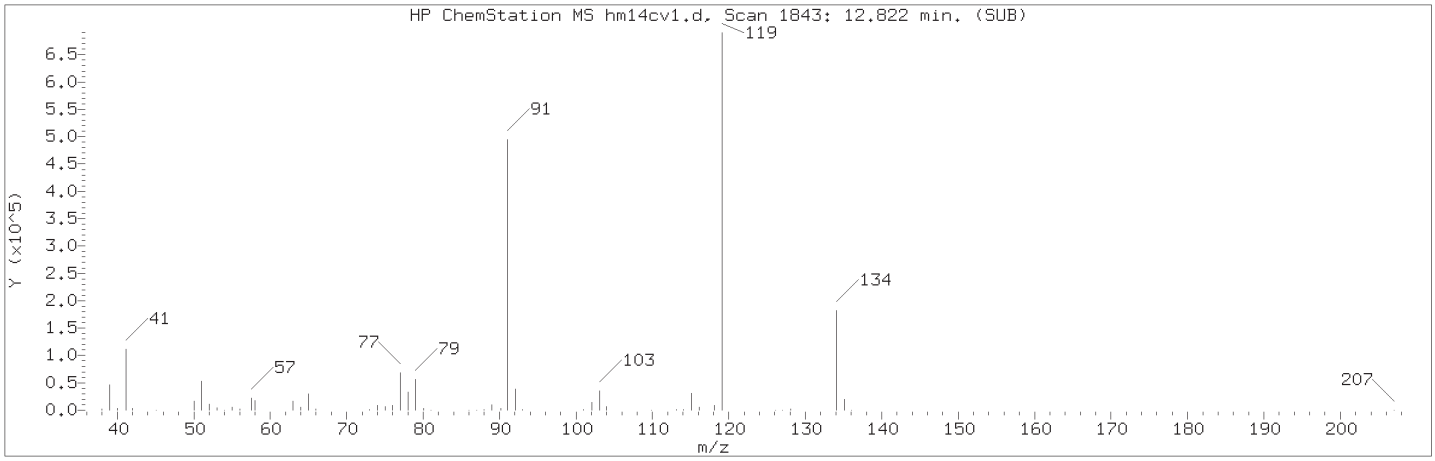
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

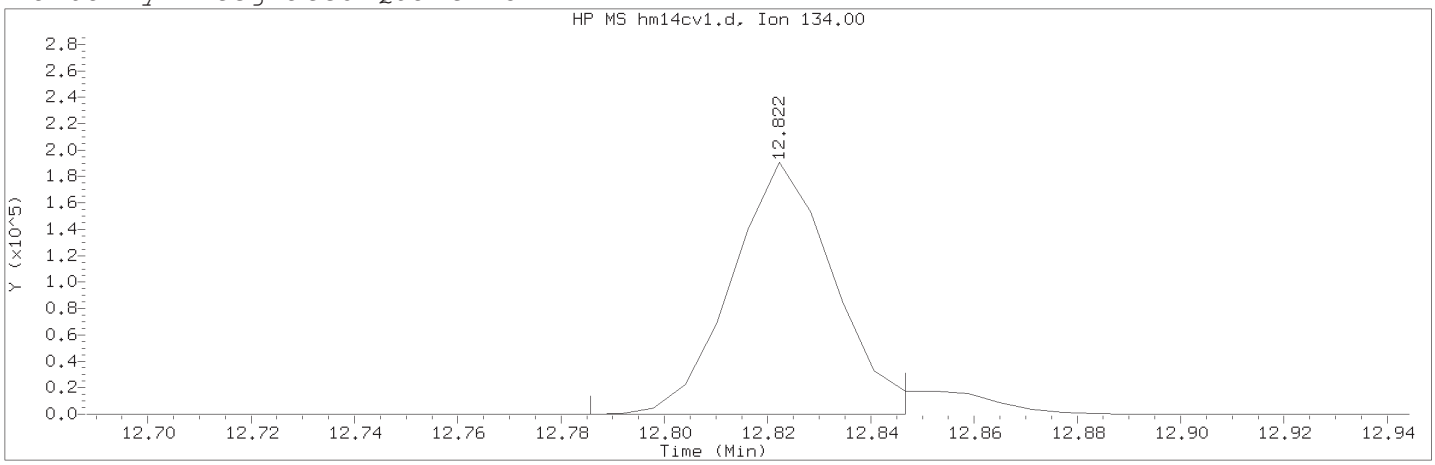
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 208705
On-column Amount (ng) : 4.7542
Integration start scan : 1757 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 95

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature date: 14-MAR-2016 17:56

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

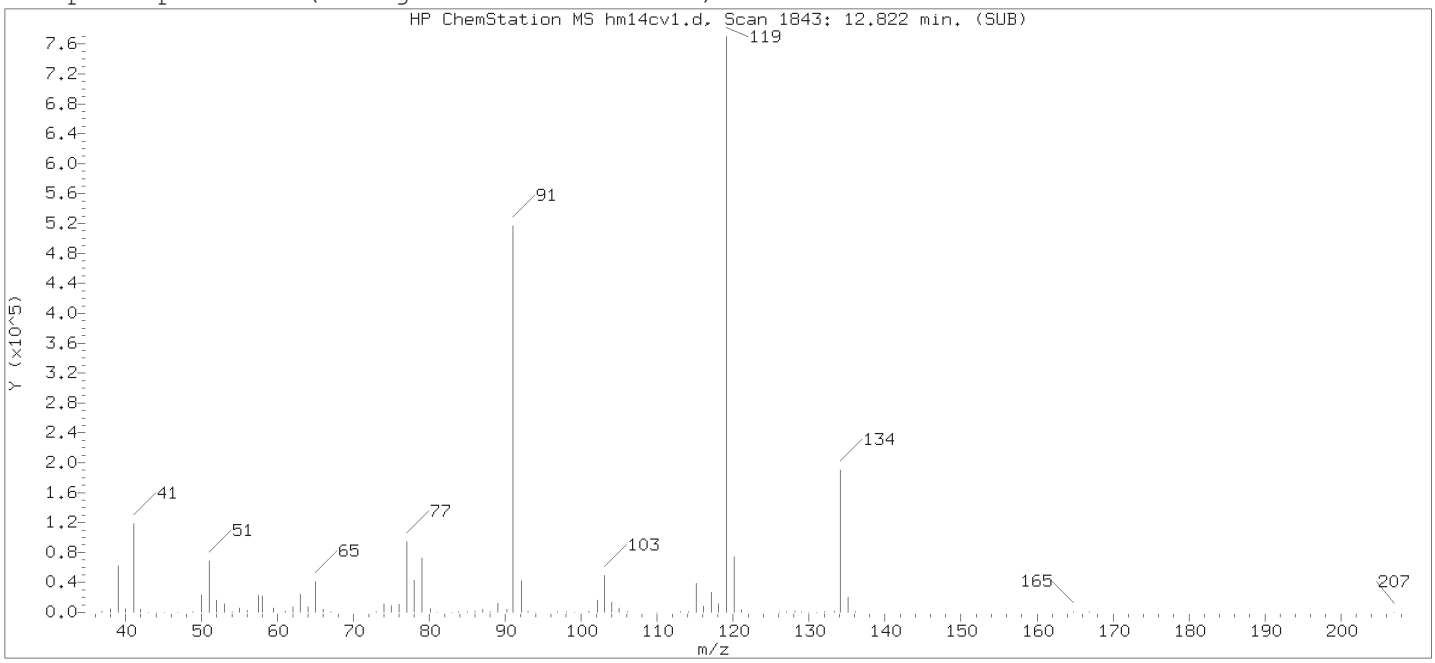
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 261563M
On-Column Amount (ng) : 4.9763
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

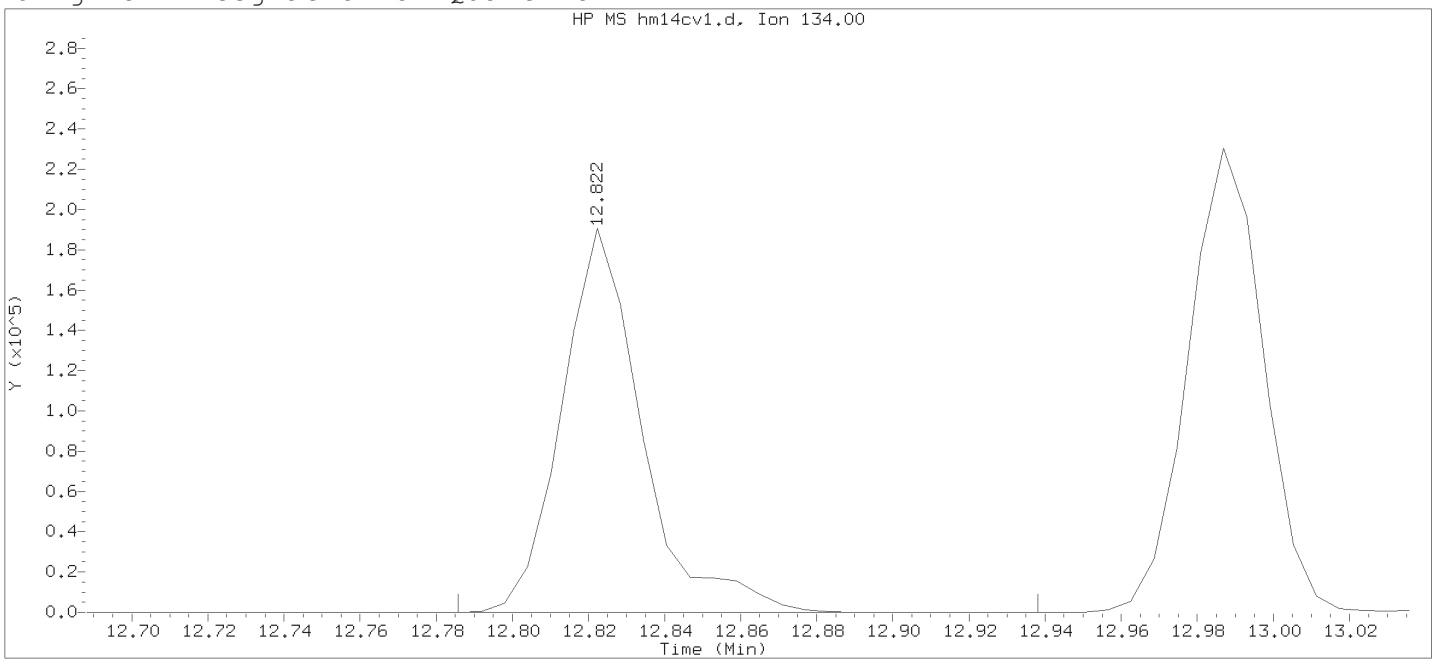
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1843		
Retention Time (minutes)	: 12.822		
Quant Ion	: 134.00		
Area	: 278761		
On-column Amount (ng)	: 5.3035		
Integration start scan	: 1836	Integration stop scan:	1861
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16may07a.b/hy07t01.d

Date : 07-MAY-2016 11:57

Client ID: bfb 50ng

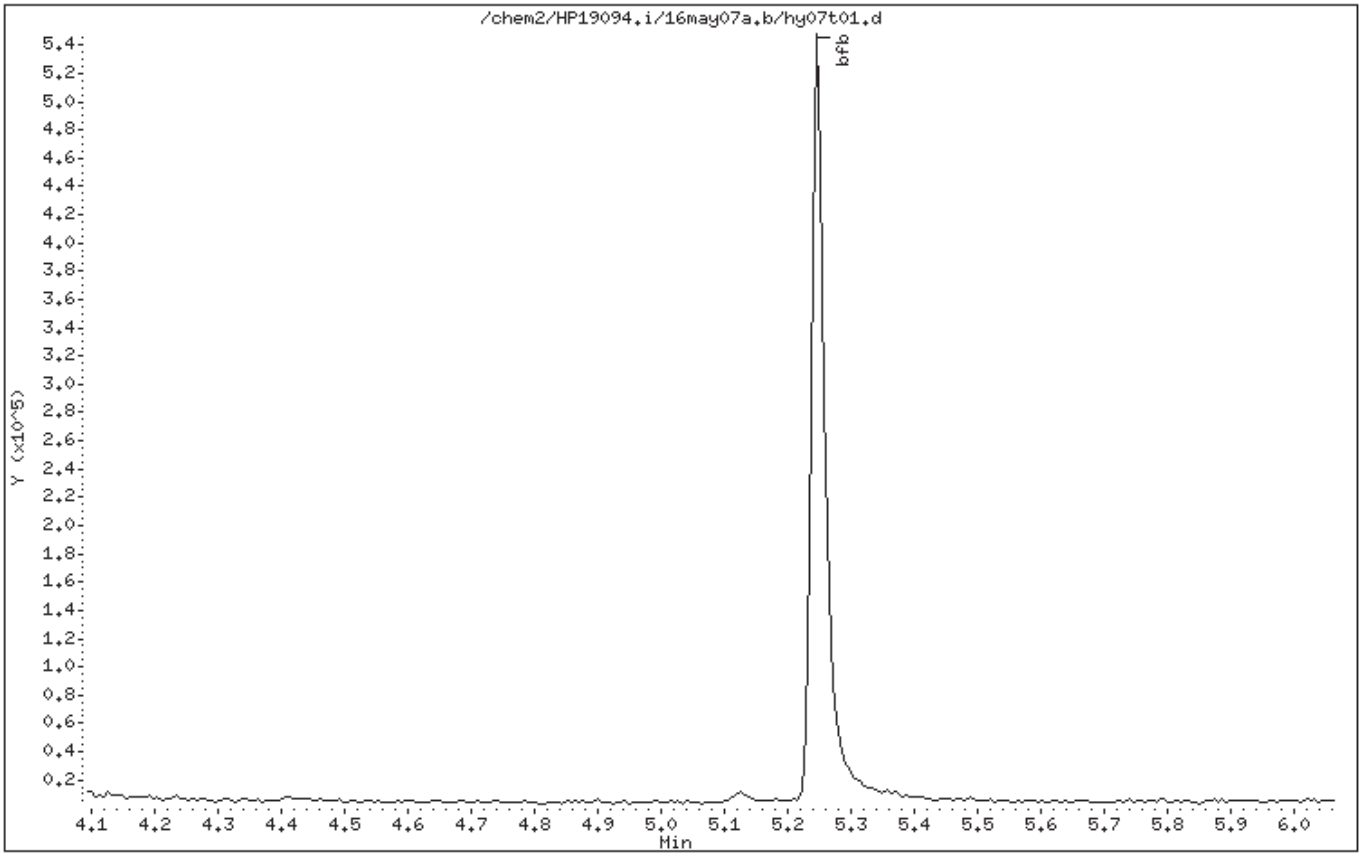
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 12:04.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16may07a.b/hy07t01.d

Date : 07-MAY-2016 11:57

Client ID: bfb 50ng

Instrument: HP19094.i

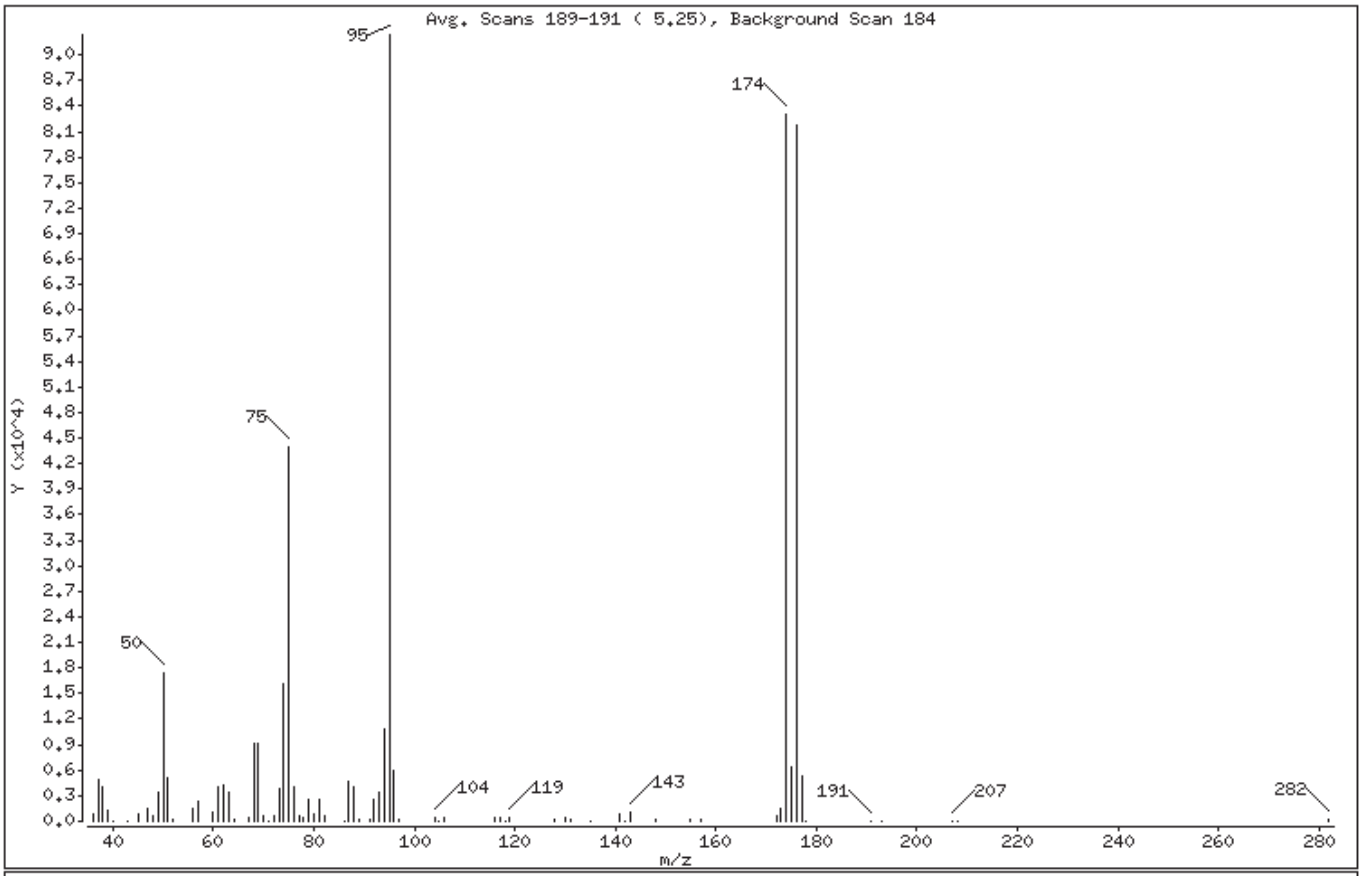
Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.77
75	30.00 - 60.00% of mass 95	47.56
96	5.00 - 9.00% of mass 95	6.55
173	Less than 2.00% of mass 174	1.55 (1.73)
174	50.00 - 100.00% of mass 95	89.79
175	5.00 - 9.00% of mass 174	6.85 (7.63)
176	95.00 - 101.00% of mass 174	88.40 (98.44)
177	5.00 - 9.00% of mass 176	5.70 (6.45)

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 12:04.
Target 3.5 esignature user ID: kel01973

Date : 07-MAY-2016 11:57

Client ID: bfb 50ng Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

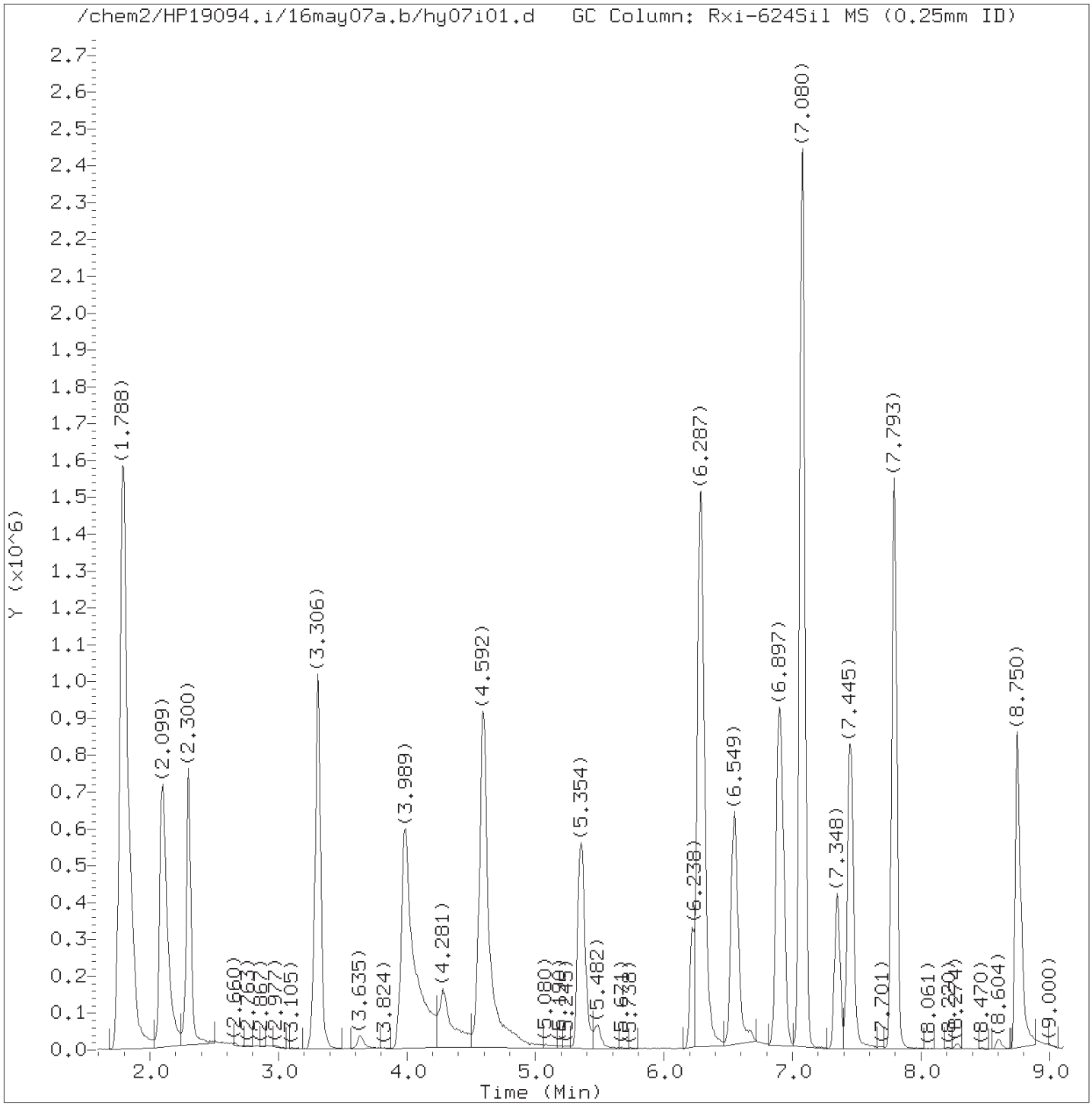
Operator: kel01973

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hy07t01.d
Spectrum: Avg. Scans 189-191 (5.25), Background Scan 184
Location of Maximum: 95.00
Number of points: 76

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	873	67.00	448	91.00	263	143.00	1022
37.00	4868	68.00	9218	92.00	2648	148.00	203
38.00	4075	69.00	9157	93.00	3423	155.00	174
39.00	1369	70.00	541	94.00	10791	157.00	116
40.00	19	71.00	106	95.00	92376	172.00	646
43.00	88	72.00	710	96.00	6048	173.00	1432
45.00	896	73.00	3908	97.00	134	174.00	82944
47.00	1524	74.00	16237	104.00	483	175.00	6331
48.00	721	75.00	43936	105.00	95	176.00	81656
49.00	3309	76.00	4073	106.00	460	177.00	5265
50.00	17336	77.00	692	116.00	362	178.00	84
51.00	5083	78.00	375	117.00	445	191.00	103
52.00	195	79.00	2526	118.00	103	193.00	96
56.00	1434	80.00	848	119.00	528	207.00	96
57.00	2314	81.00	2514	128.00	127	208.00	12
60.00	1070	82.00	709	130.00	359	282.00	127
61.00	4097	86.00	91	131.00	257		
62.00	4211	87.00	4731	135.00	88		
63.00	3450	88.00	3929	141.00	845		
64.00	280	89.00	215	142.00	95		

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 12:04.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

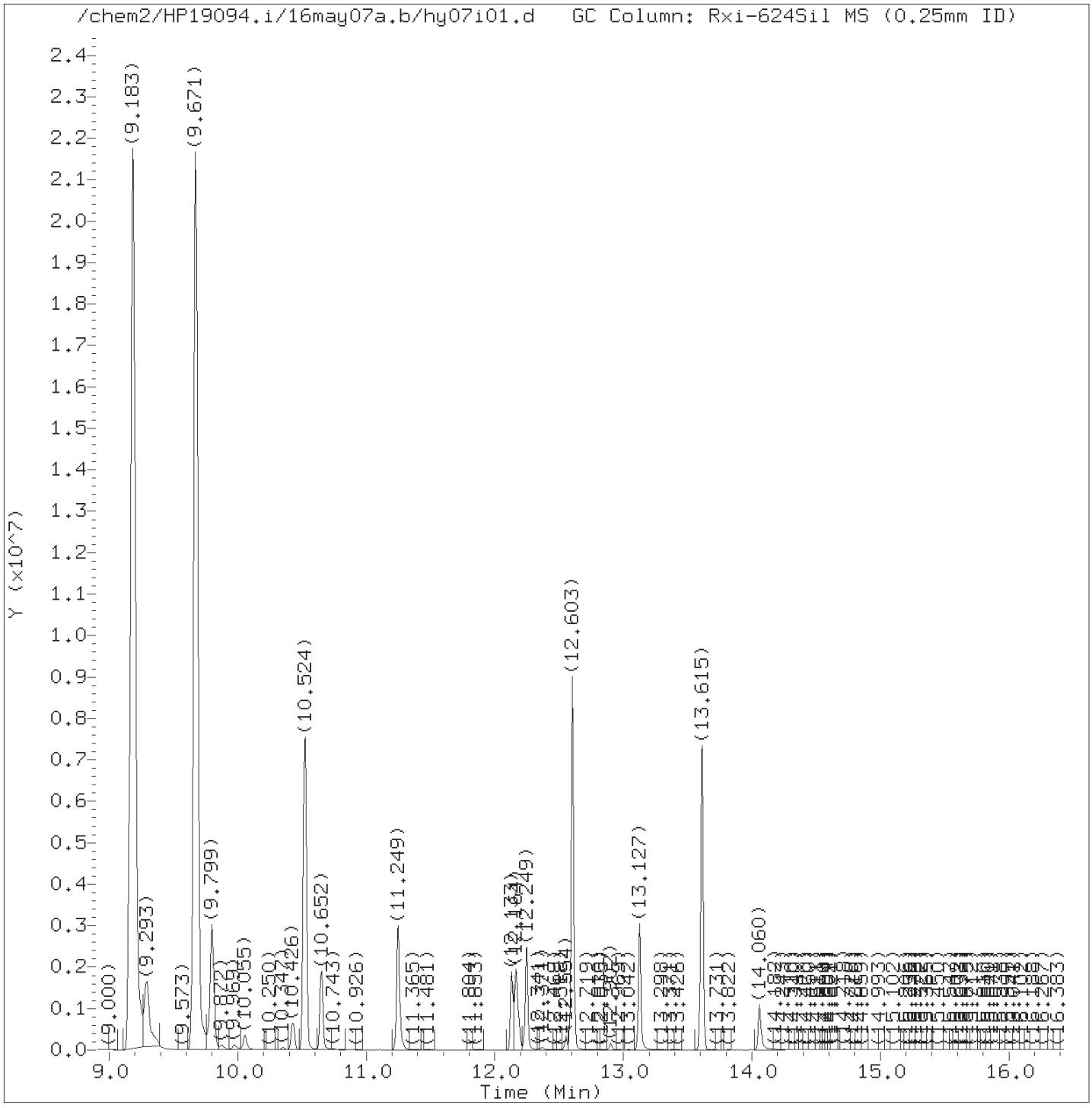
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

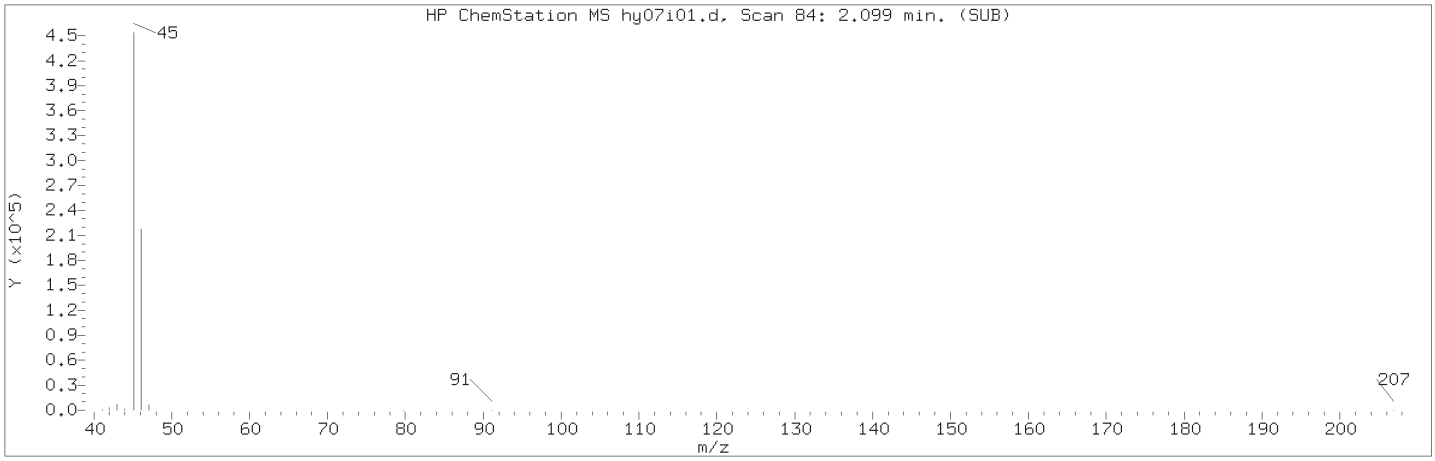
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	1944949M	27.707
25) Acetonitrile	(1)	3.983	41	3069685M	1017.332
26)*t-Butyl Alcohol-d10	(1)	4.263	65	79793	50.000
36) Vinyl Acetate	(2)	5.354	43	1815857M	32.796
43) Methyl Acrylate	(2)	6.287	55	3439289	156.289
53) 1-Chlorobutane	(2)	7.080	56	2883141	26.079
63)*Fluorobenzene	(2)	7.793	96	2044001	10.000
77) Chloroacetonitrile	(2)	9.207	75	1503277	1593.349
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	627292	32.066
97)*Chlorobenzene-d5	(3)	11.249	117	1698842	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.133	88	418012	60.693
112) Cyclohexanone	(1)	12.164	55	966089M	1147.481
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	784161	10.000
142) Hexachloroethane	(4)	13.609	117	1306321	24.930

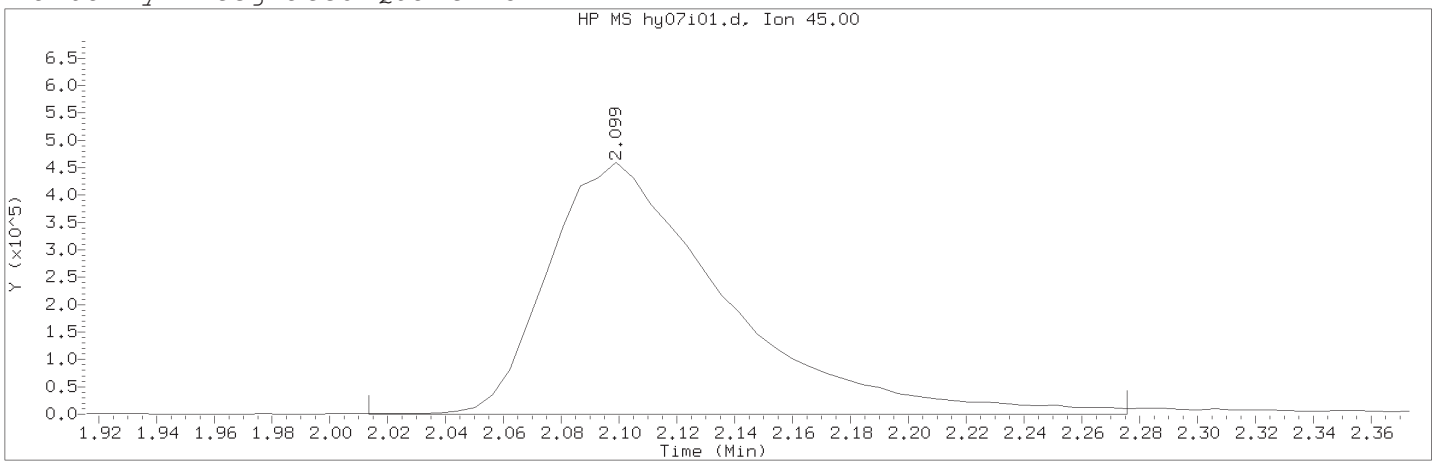
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

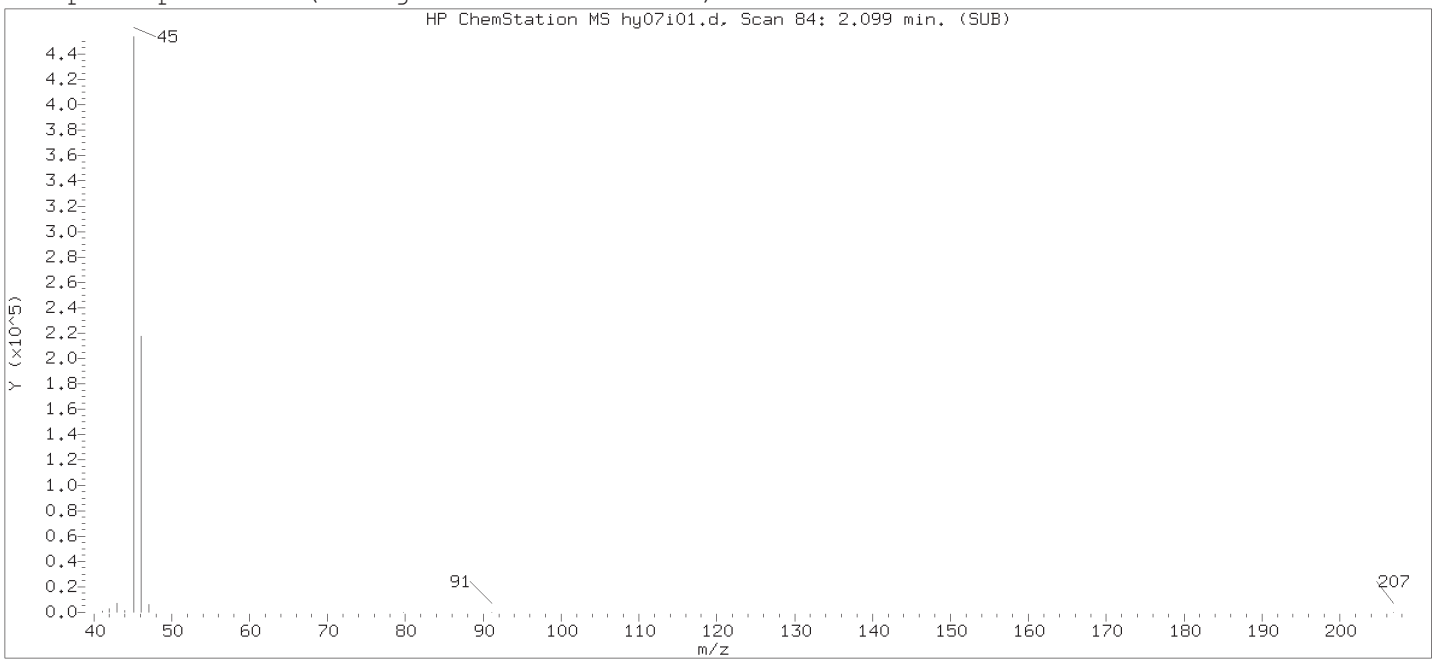
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 1944949M
On-Column Amount (ng) : 27.7067
Integration start scan : 69 Integration stop scan: 112
Y at integration start : 268 Y at integration end: 268

Reason for manual integration: improper integration

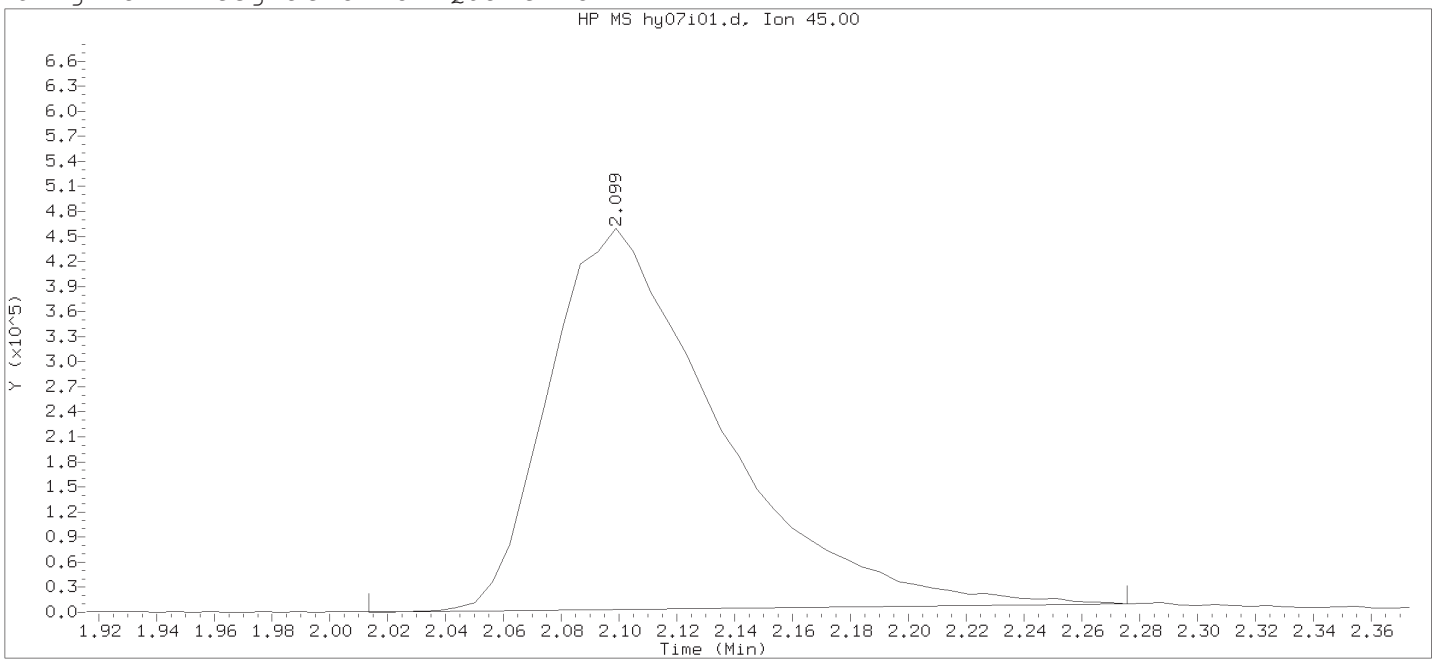
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

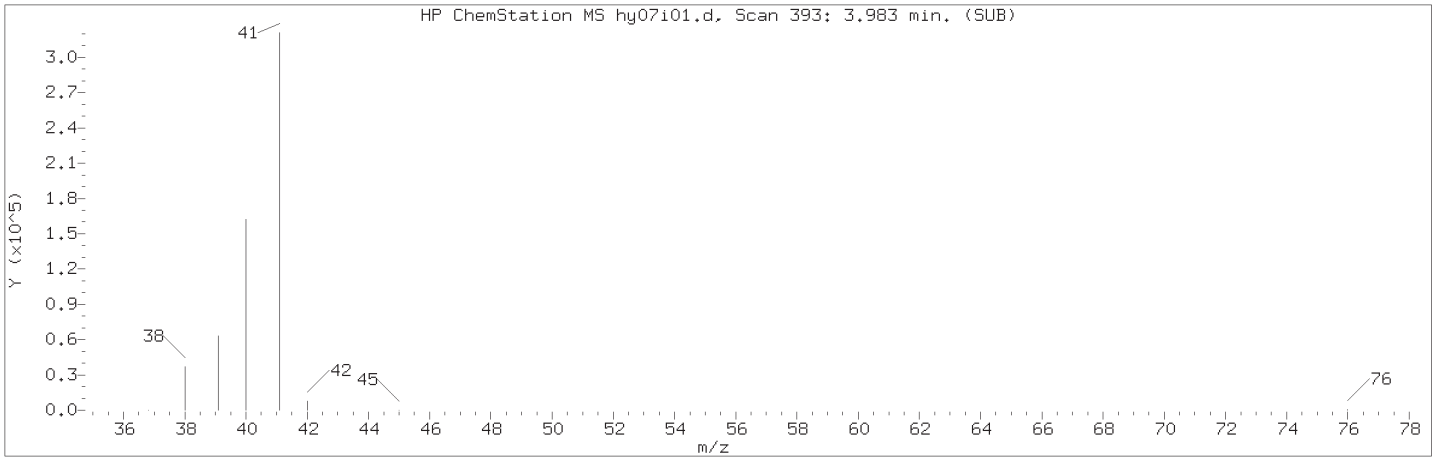
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 12:57
Date, time and analyst ID of latest file update: 07-May-2016 12:57 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

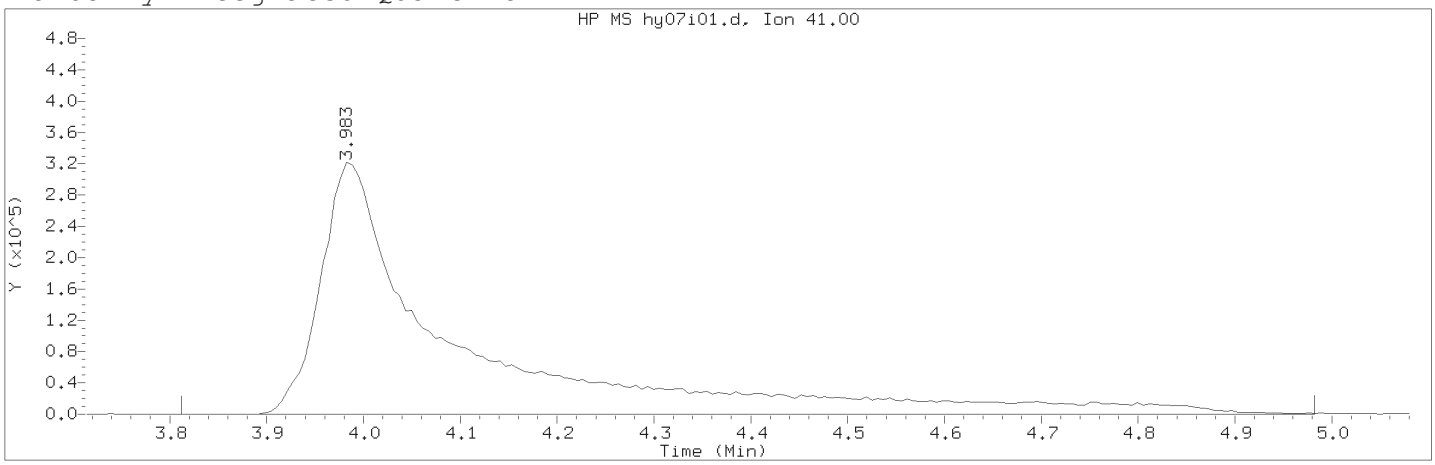
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 1865939		
On-column Amount (ng)	: 25.0000		
Integration start scan	: 69	Integration stop scan:	112
Y at integration start	: 291	Y at integration end:	10054

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

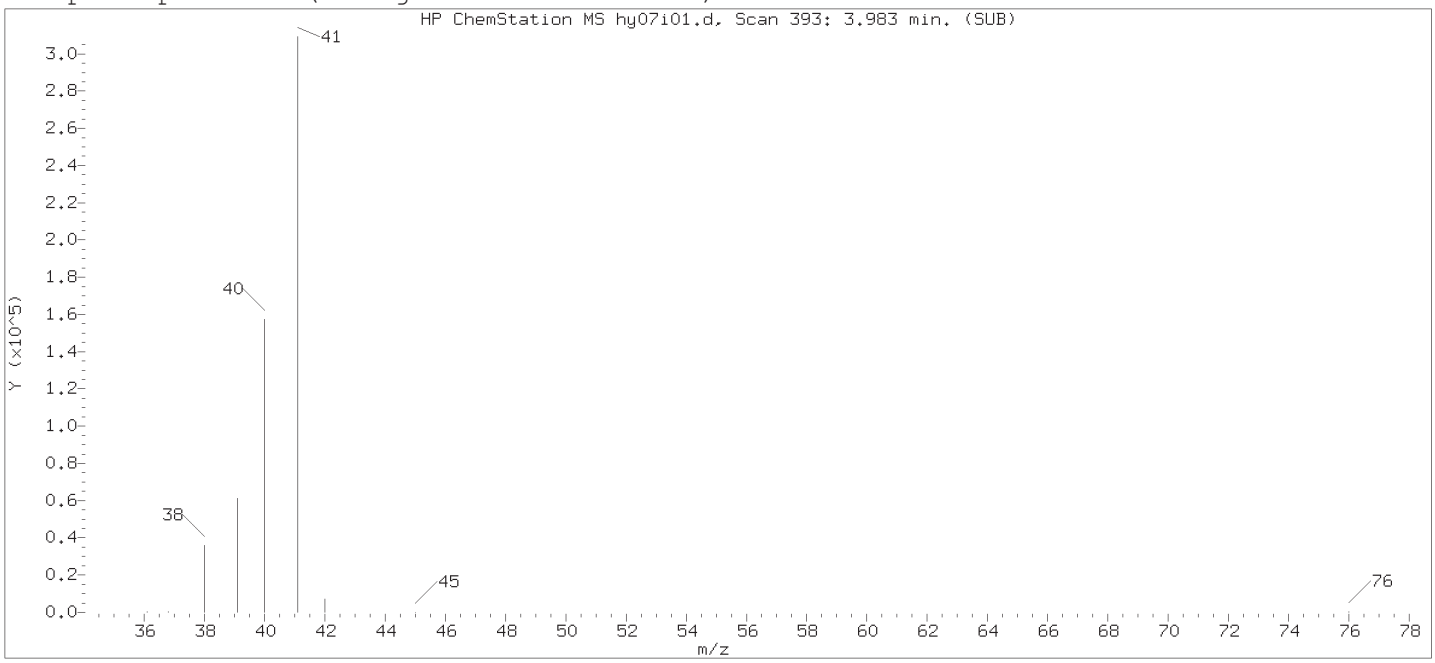
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area (flag) : 3069685M
On-Column Amount (ng) : 1017.3322
Integration start scan : 364 Integration stop scan: 556
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

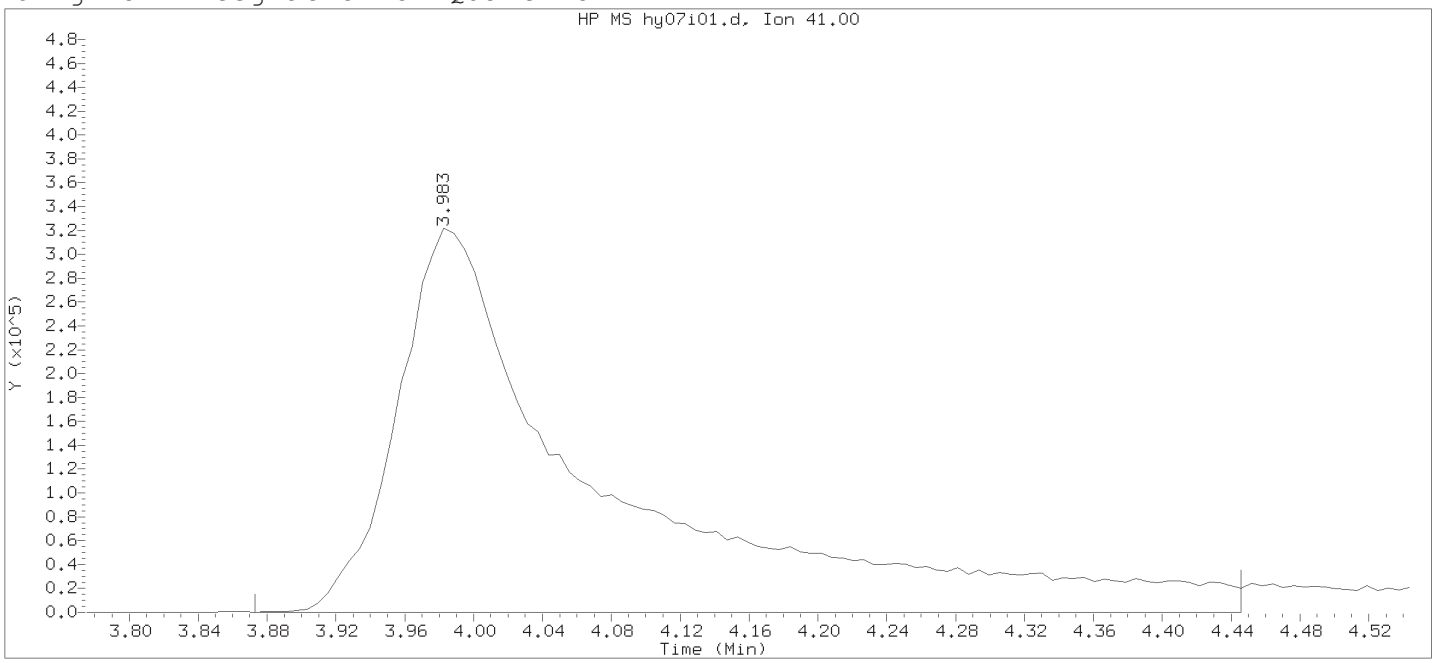
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

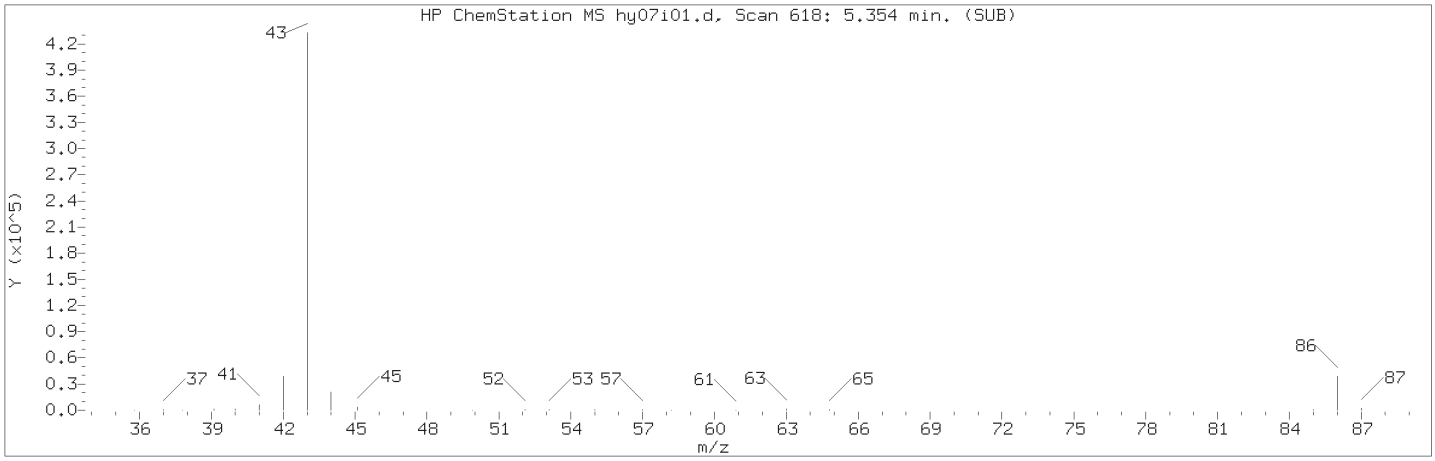
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 12:57
Date, time and analyst ID of latest file update: 07-May-2016 12:57 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

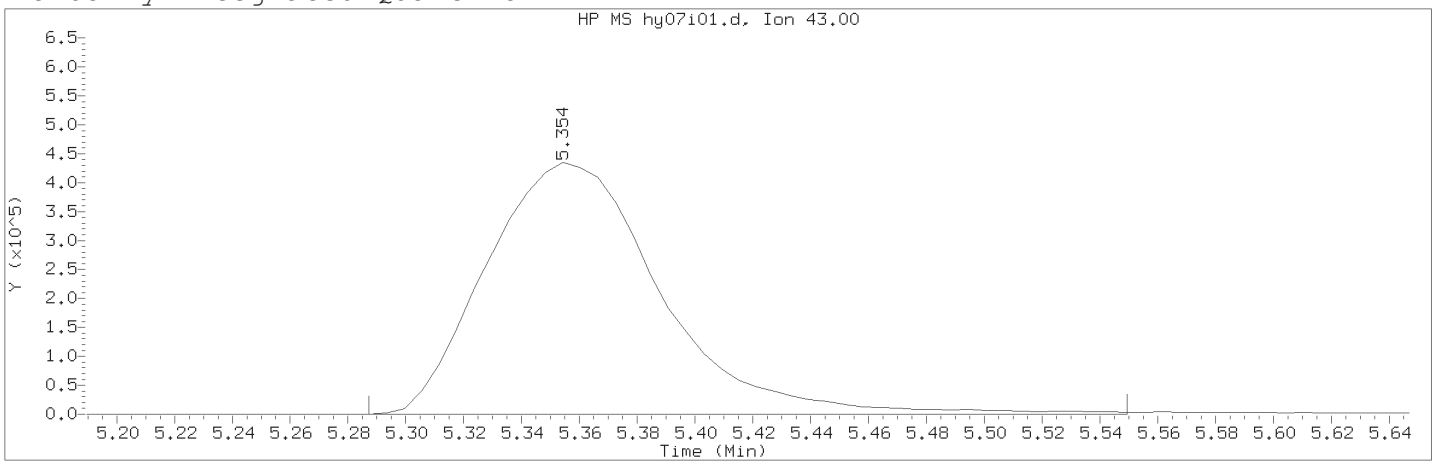
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 393
Retention Time (minutes): 3.983
Quant Ion : 41.00
Area : 2653401
On-column Amount (ng) : 1022.2280
Integration start scan : 374 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016 15:15

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

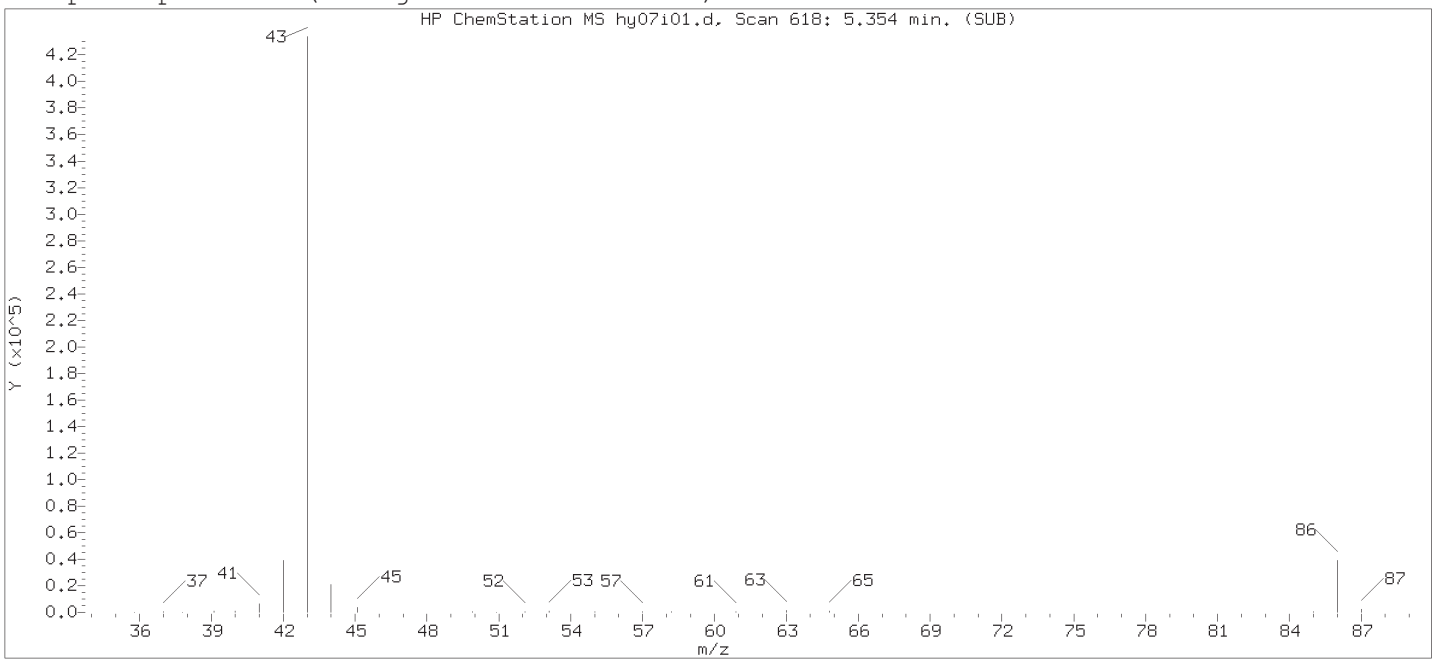
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 618
Retention Time (minutes): 5.354
Quant Ion : 43.00
Area (flag) : 1815857M
On-Column Amount (ng) : 32.7960
Integration start scan : 606 Integration stop scan: 649
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

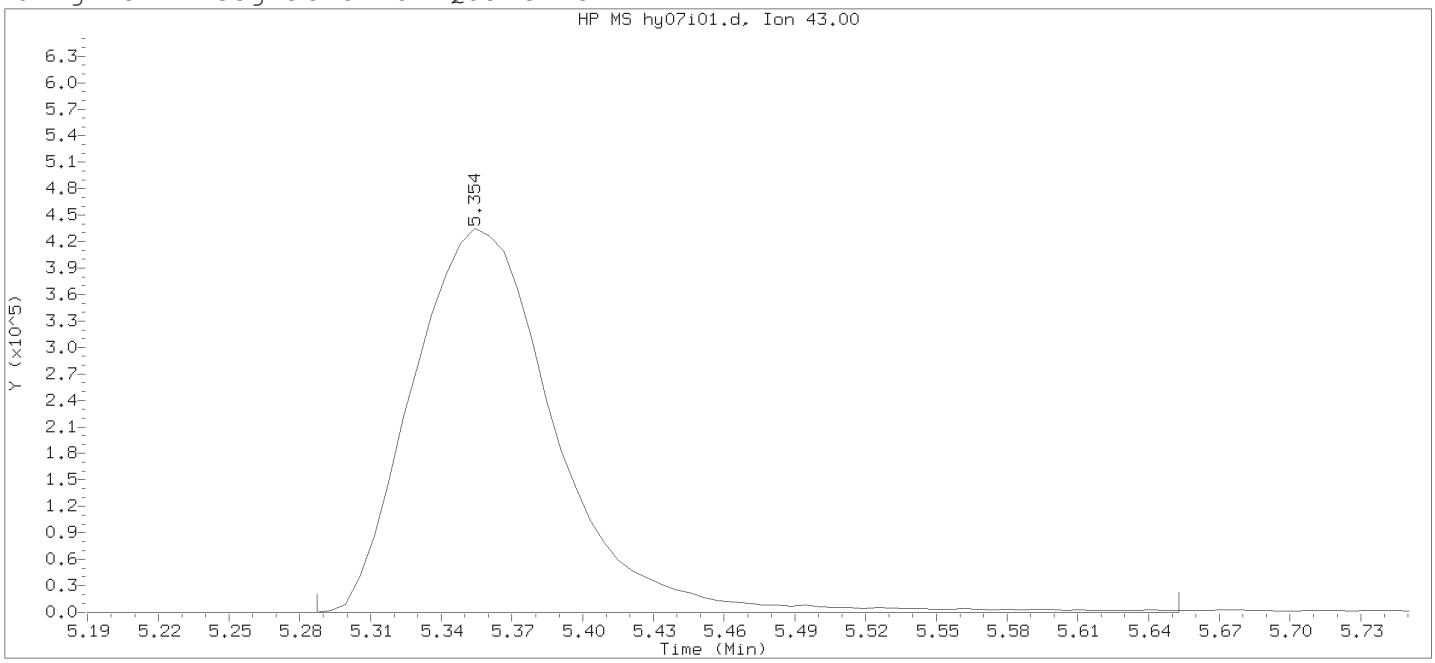
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

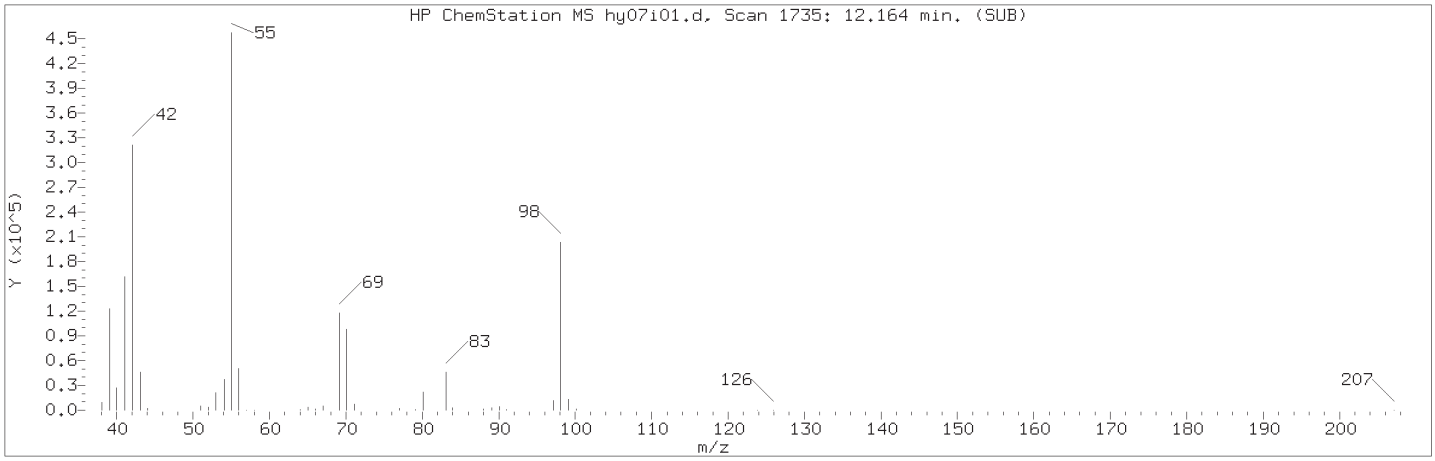
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 12:57
Date, time and analyst ID of latest file update: 07-May-2016 12:57 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

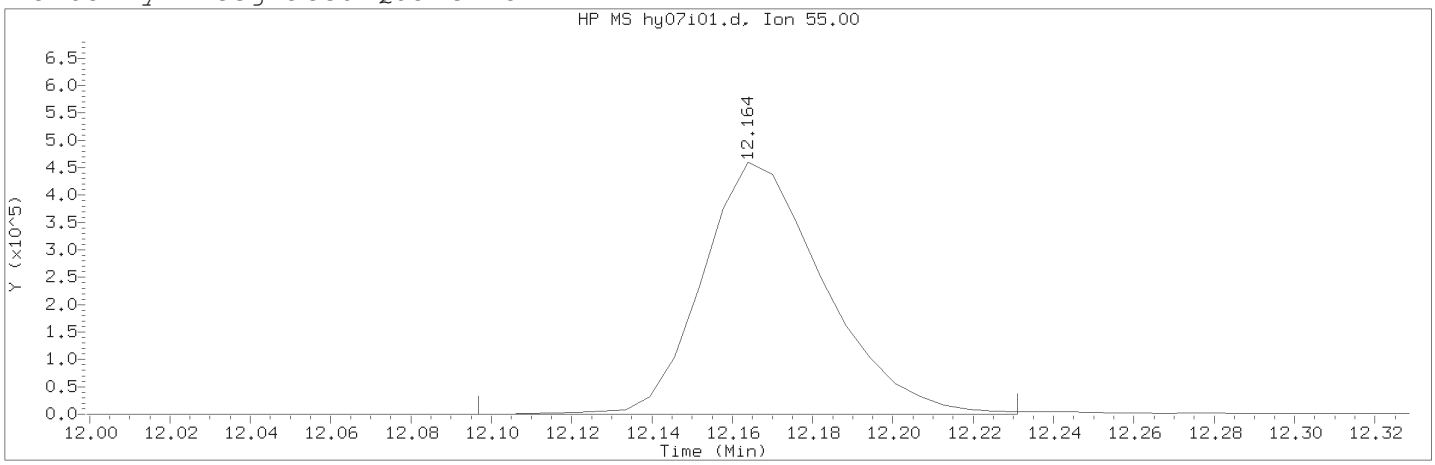
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 618
Retention Time (minutes): 5.354
Quant Ion : 43.00
Area : 1832465
On-column Amount (ng) : 26.0727
Integration start scan : 606 Integration stop scan: 666
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature data: HP19094.i

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

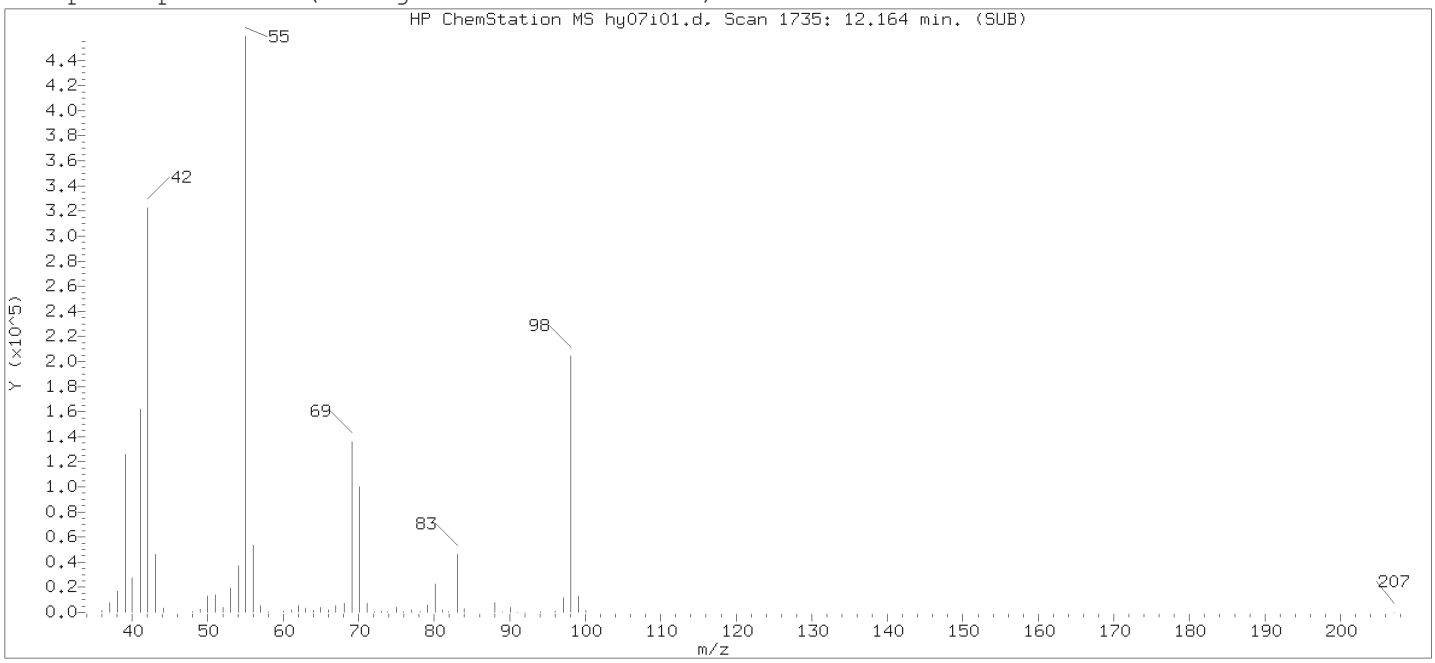
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area (flag) : 966089M
On-Column Amount (ng) : 1147.4809
Integration start scan : 1723 Integration stop scan: 1745
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

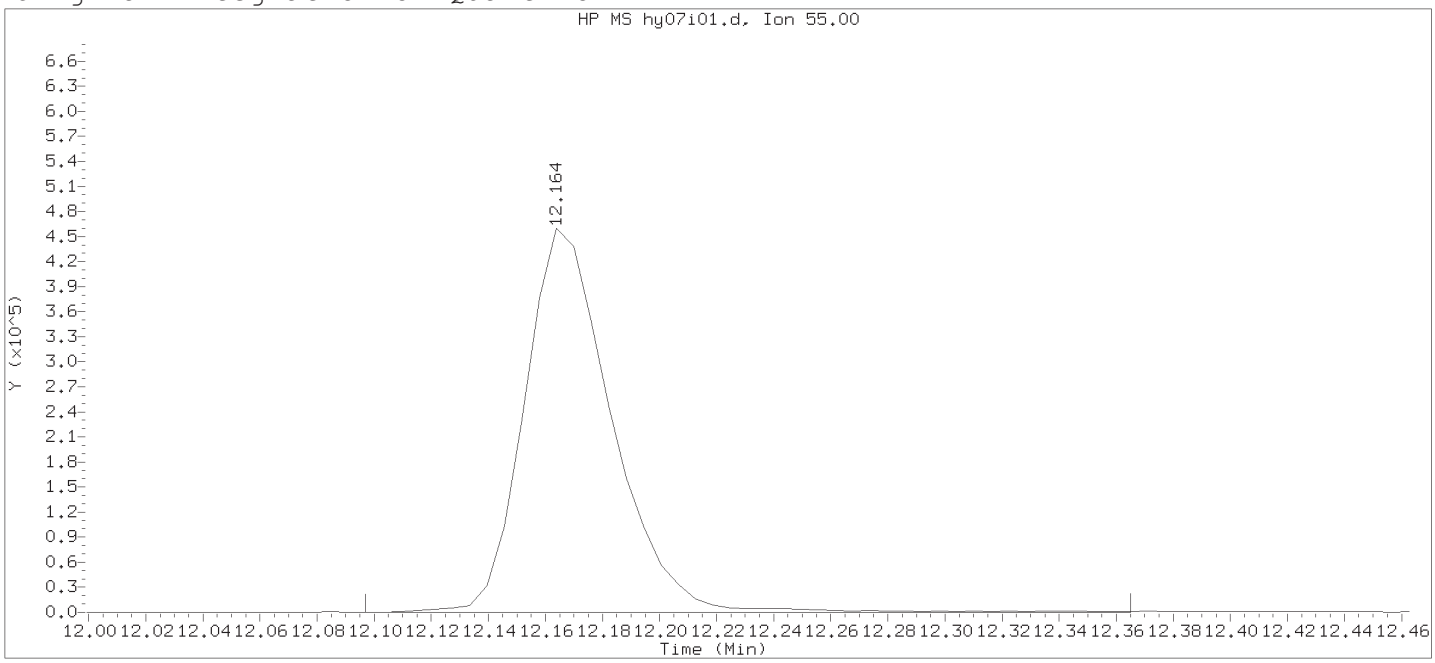
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



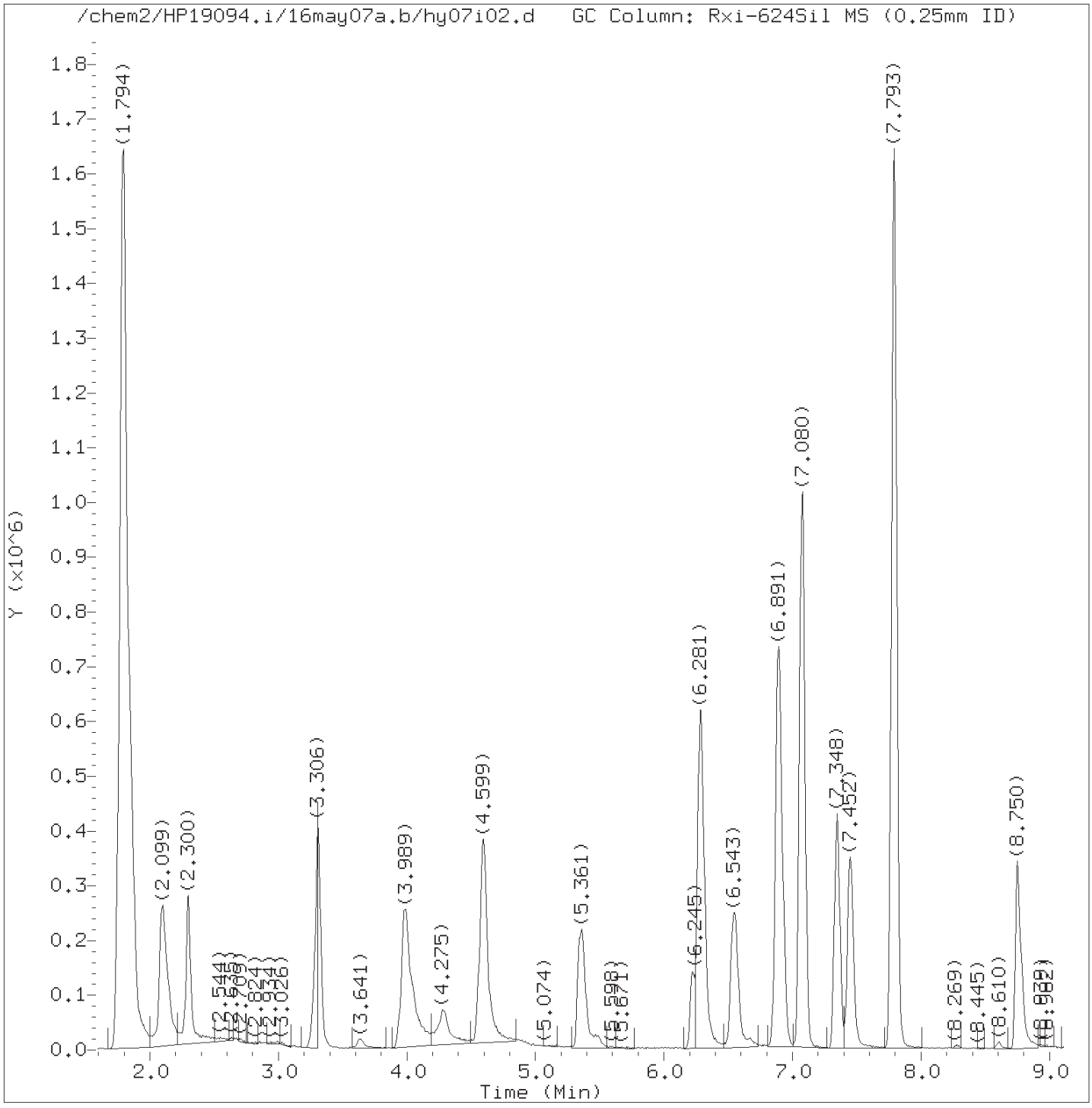
Data File: /chem2/HP19094.i/16may07a.b/hy07i01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 12:57
Date, time and analyst ID of latest file update: 07-May-2016 12:57 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area : 979543
On-column Amount (ng) : 931.7330
Integration start scan : 1723 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016



Total Ion Chromatogram (TIC)

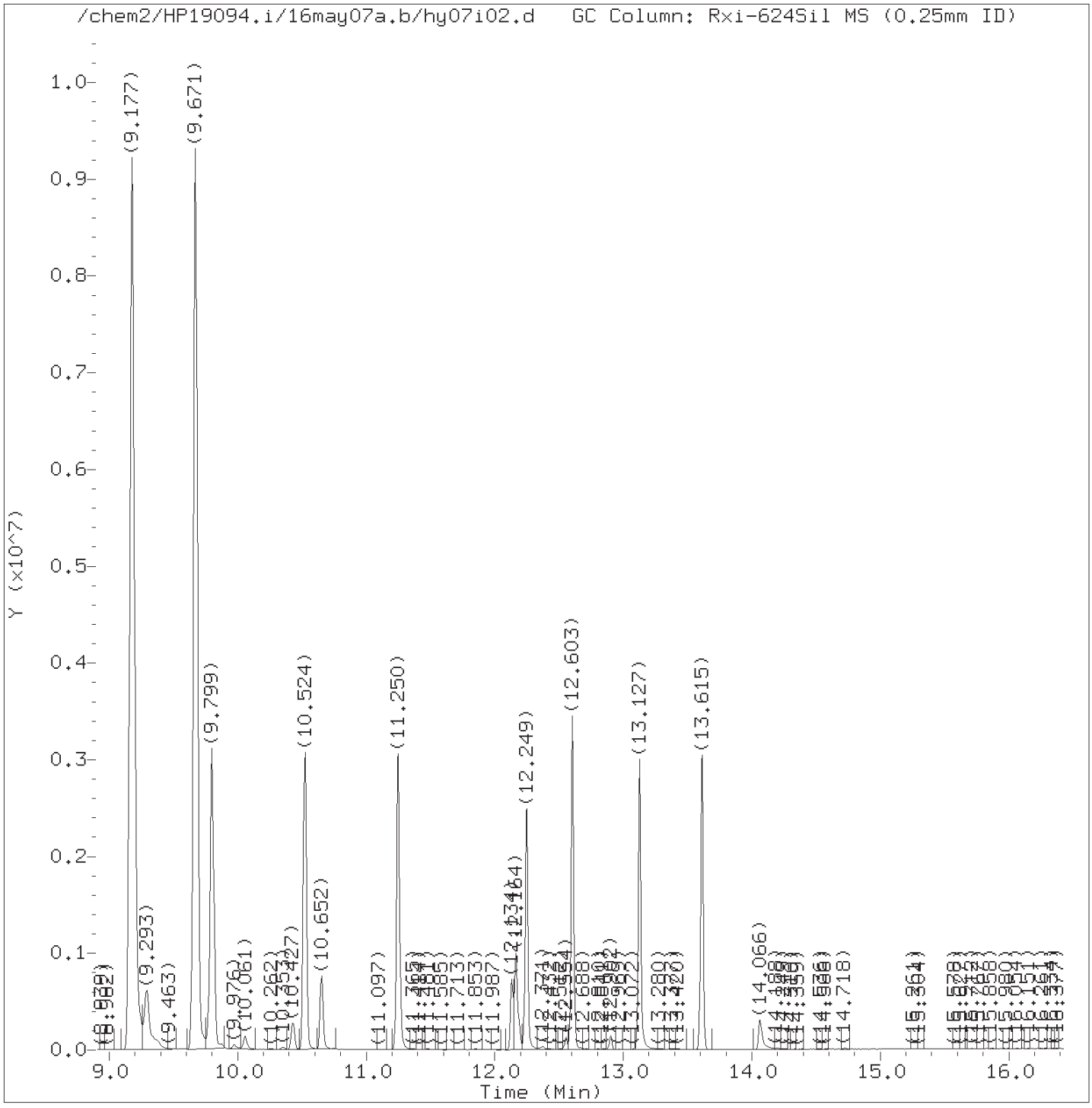
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

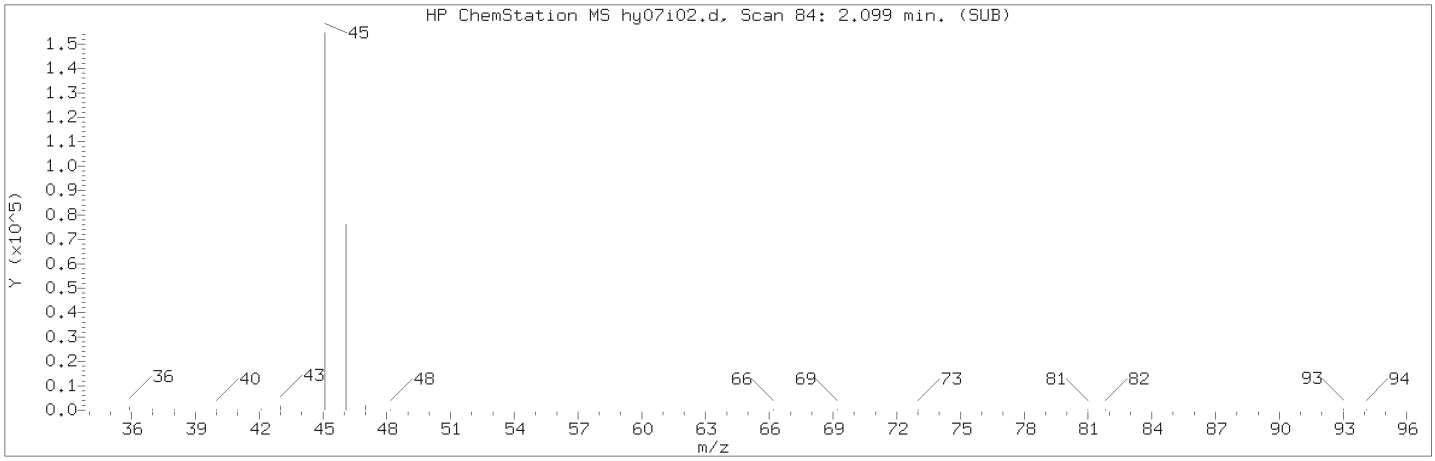
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	696827M	9.103
25) Acetonitrile	(1)	3.989	41	1133866M	364.863
26)*t-Butyl Alcohol-d10	(1)	4.269	65	82180M	50.000
36) Vinyl Acetate	(2)	5.361	43	727551M	12.049
43) Methyl Acrylate	(2)	6.281	55	1345792	56.079
53) 1-Chlorobutane	(2)	7.080	56	1247683	10.349
63)*Fluorobenzene	(2)	7.793	96	2229044	10.000
77) Chloroacetonitrile	(2)	9.207	75	593577	576.915
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	246450	11.552
97)*Chlorobenzene-d5	(3)	11.250	117	1752410	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	165288	23.302
112) Cyclohexanone	(1)	12.164	55	466189M	537.637
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	785691	10.000
142) Hexachloroethane	(4)	13.609	117	537685	10.241

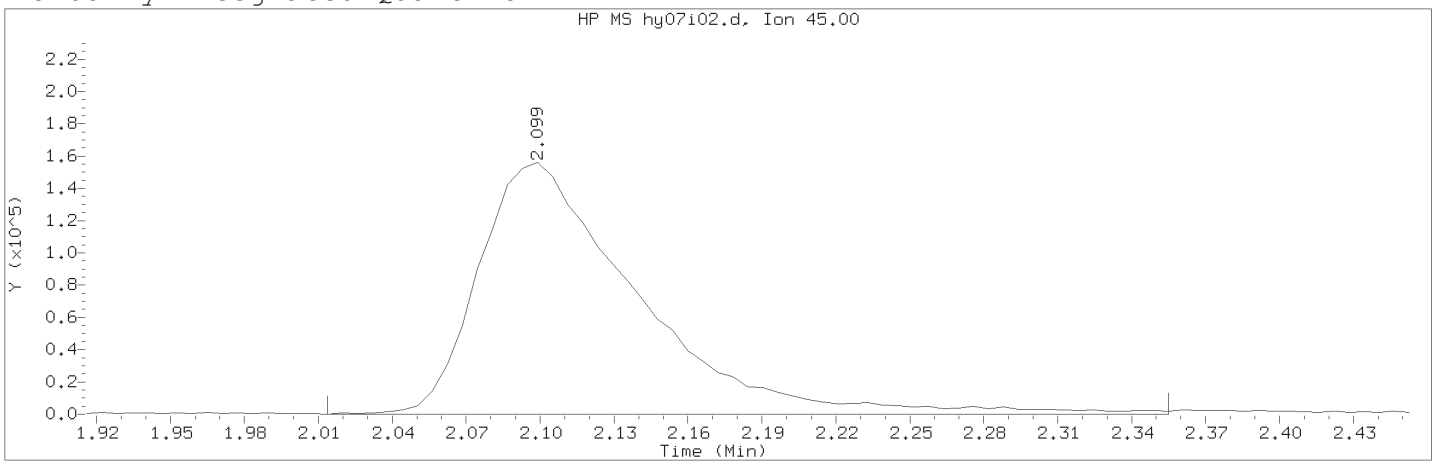
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

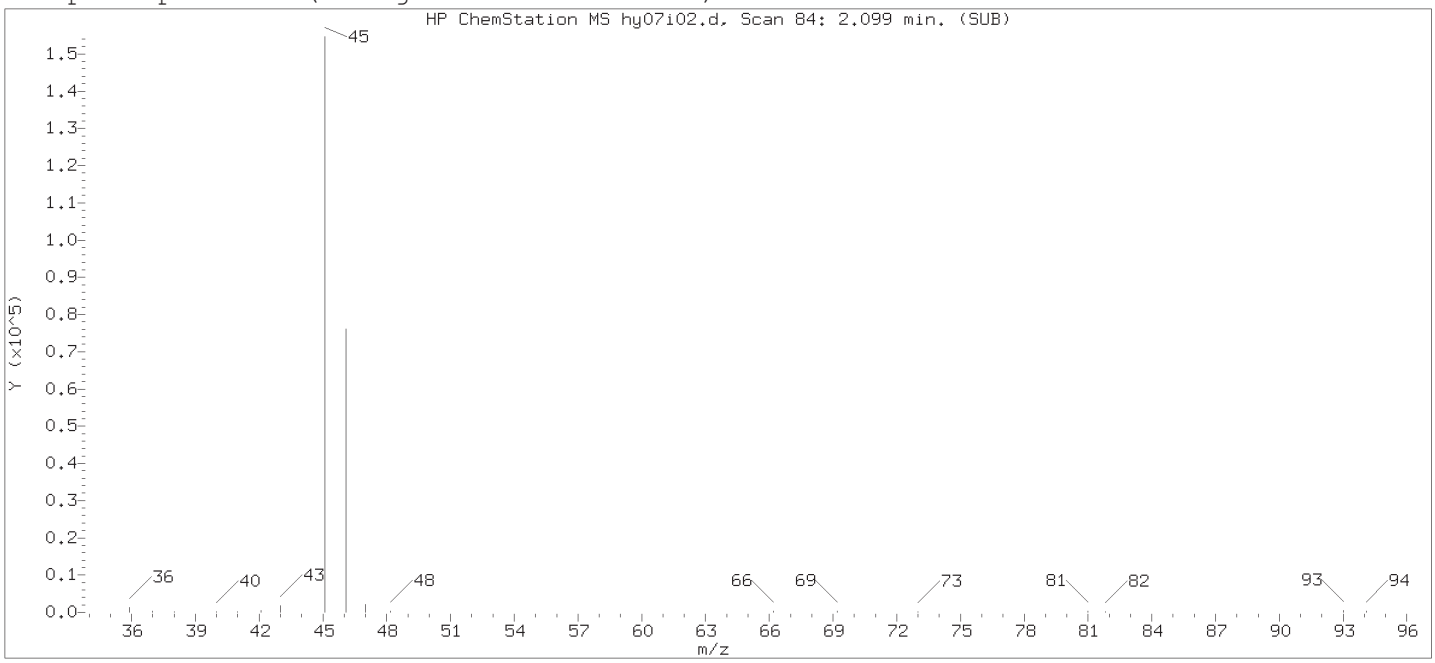
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 696827M
On-Column Amount (ng) : 9.1026
Integration start scan : 69 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

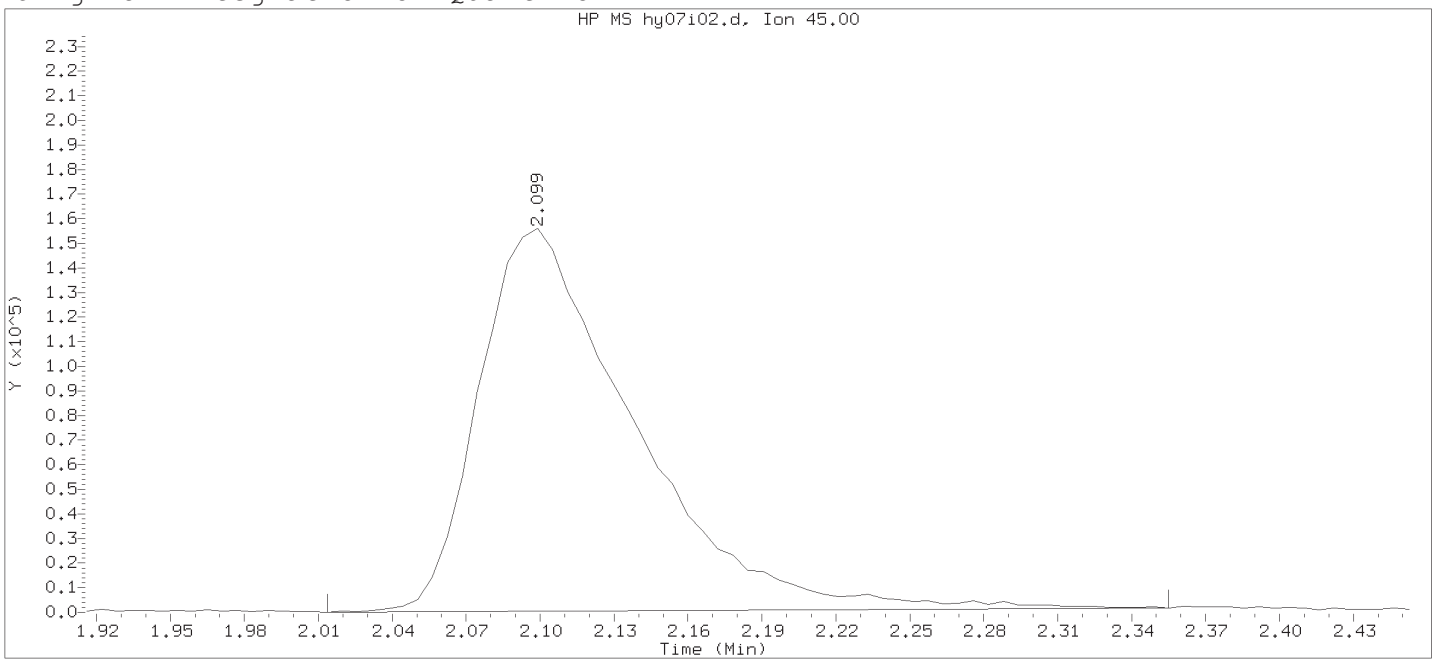
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

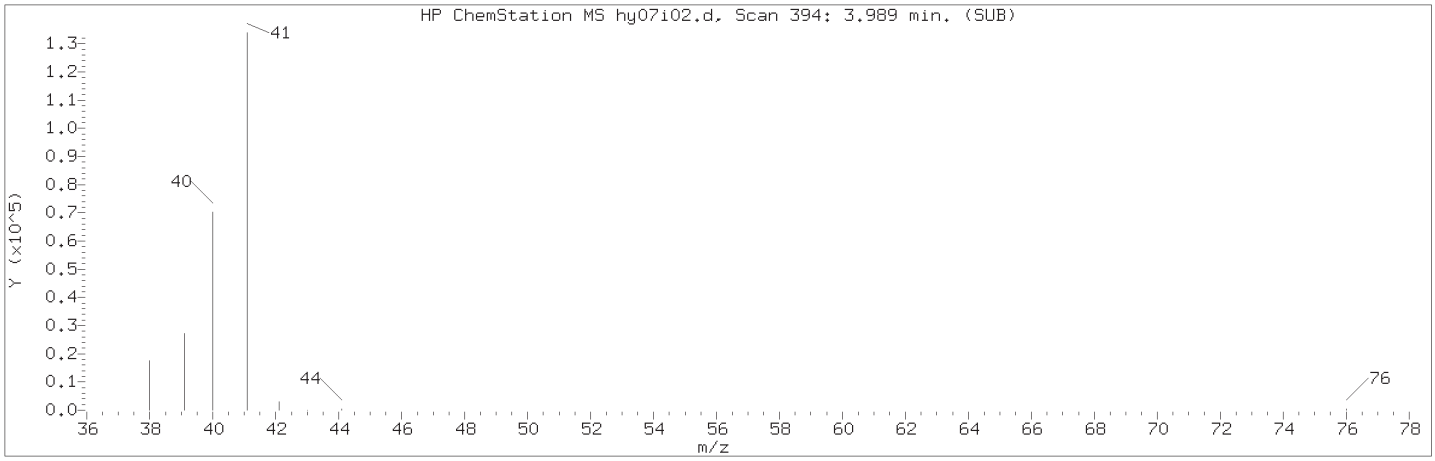
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:11
Date, time and analyst ID of latest file update: 07-May-2016 15:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

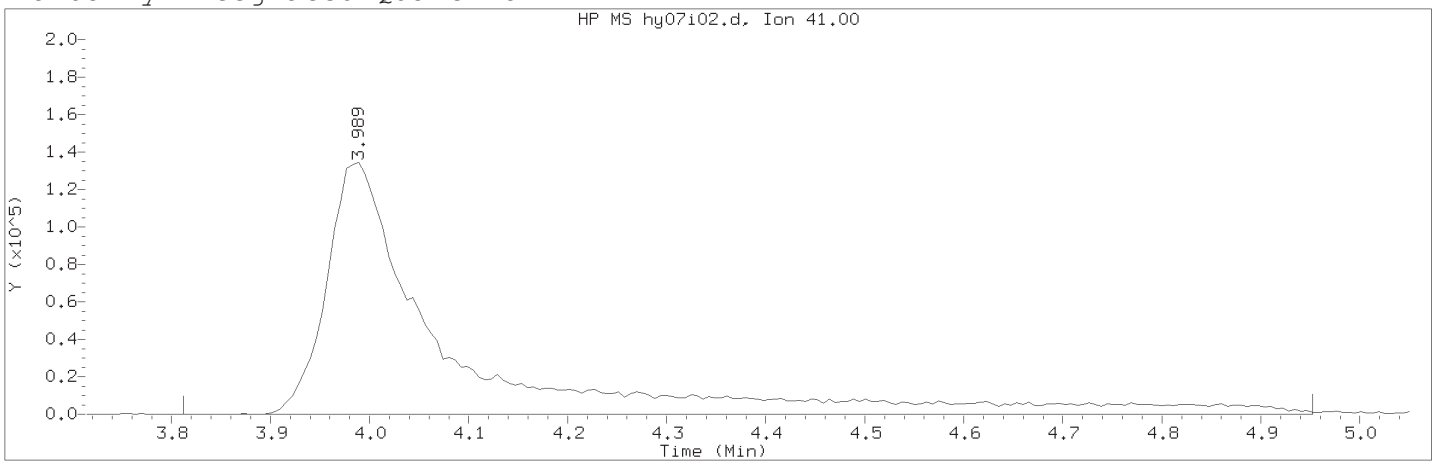
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area : 678887
On-column Amount (ng) : 10.0000
Integration start scan : 69 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 1721

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

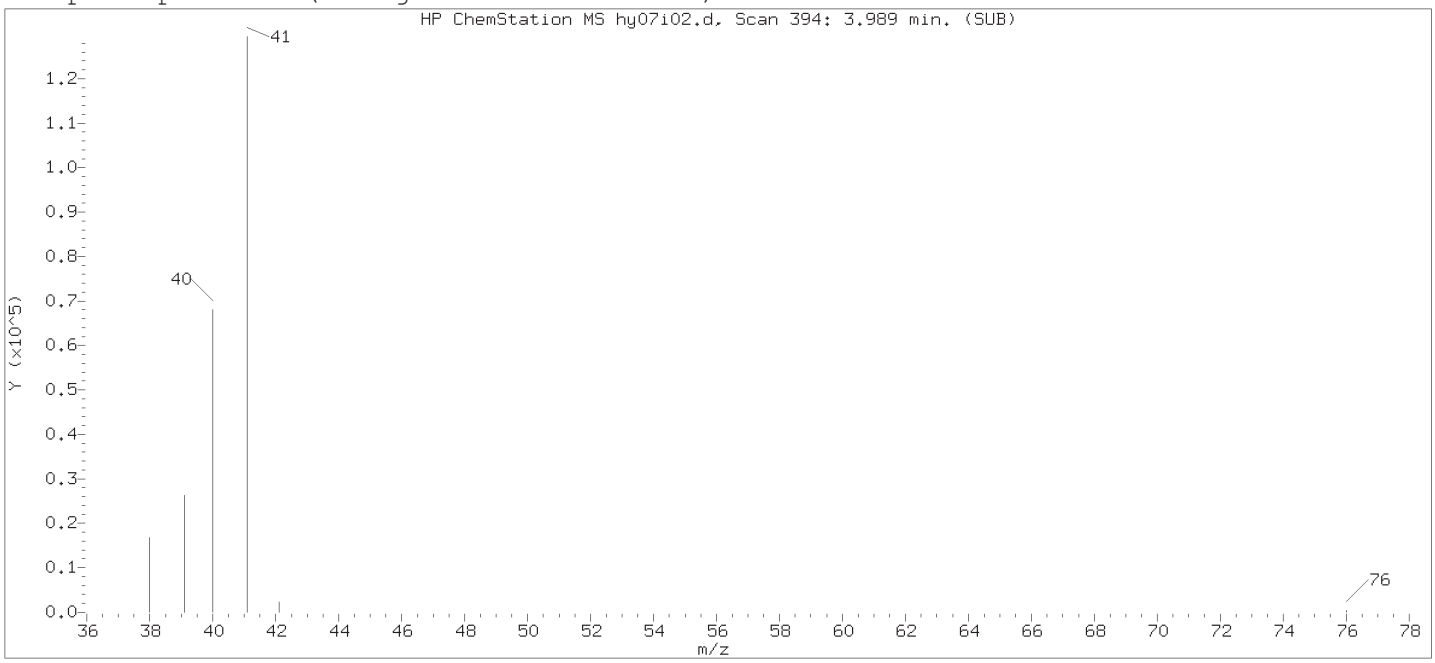
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 41.00
Area (flag) : 1133866M
On-Column Amount (ng) : 364.8626
Integration start scan : 364 Integration stop scan: 551
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

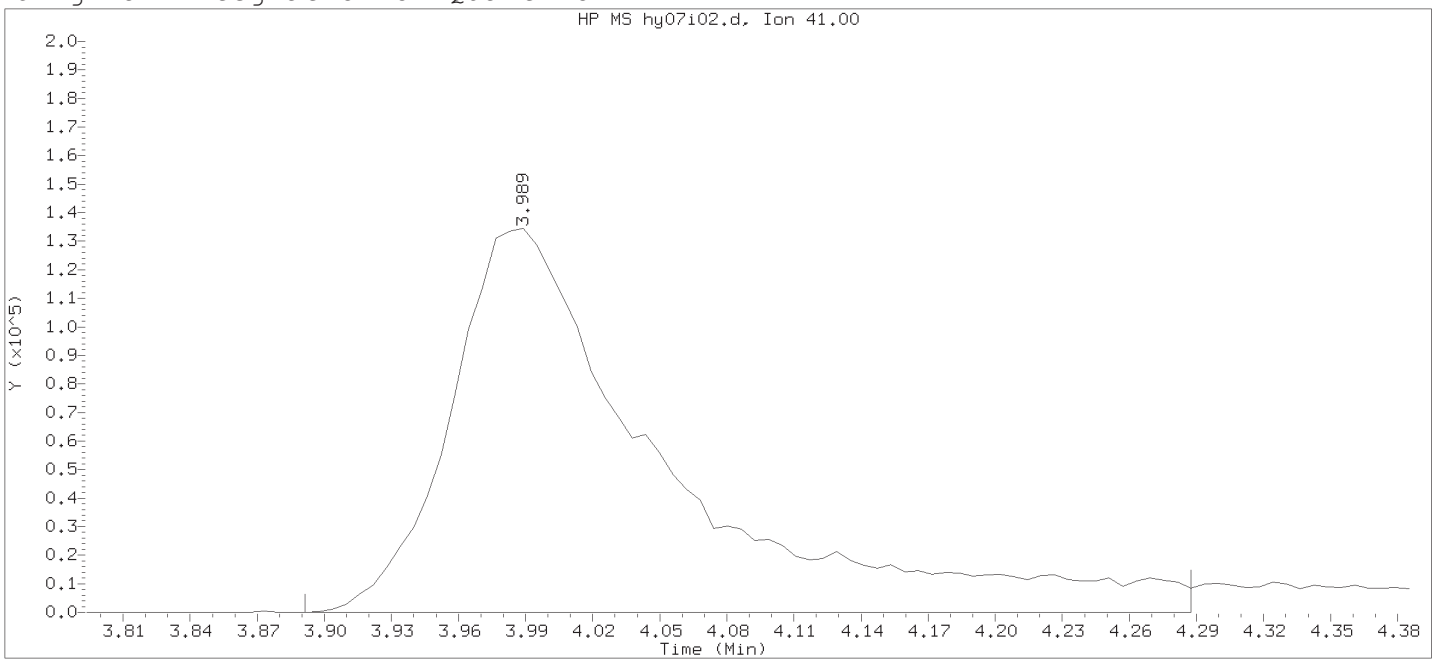
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

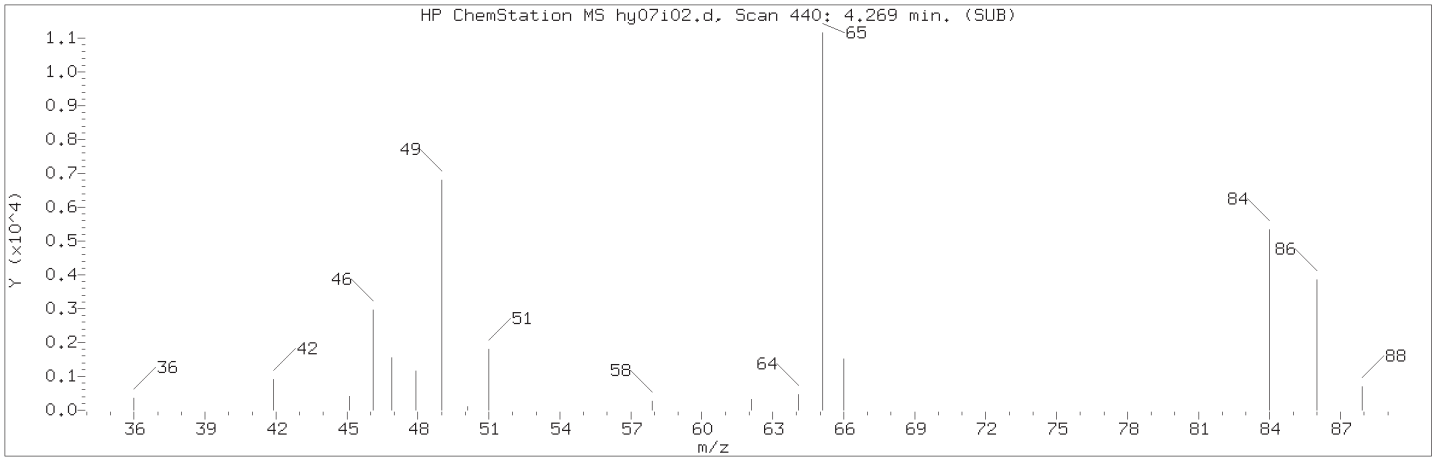
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:11
Date, time and analyst ID of latest file update: 07-May-2016 15:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

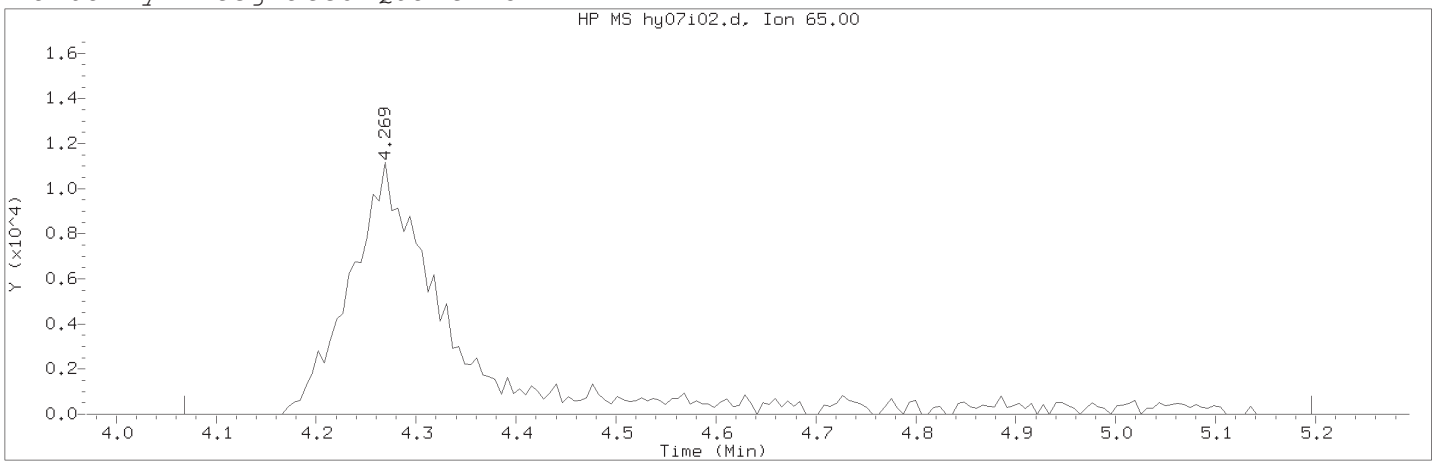
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 41.00
Area : 891680
On-column Amount (ng) : 400.0000
Integration start scan : 377 Integration stop scan: 442
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

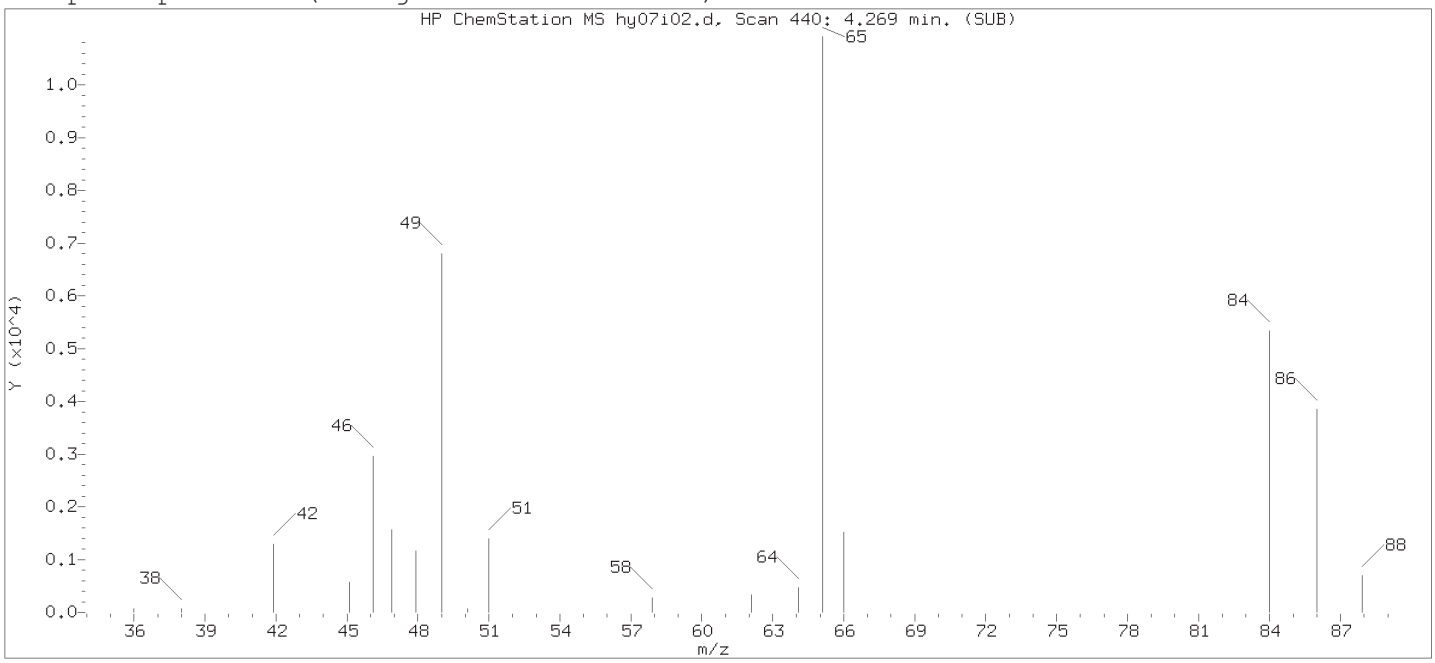
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area (flag) : 82180M
On-Column Amount (ng) : 50.0000
Integration start scan : 406 Integration stop scan: 591
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

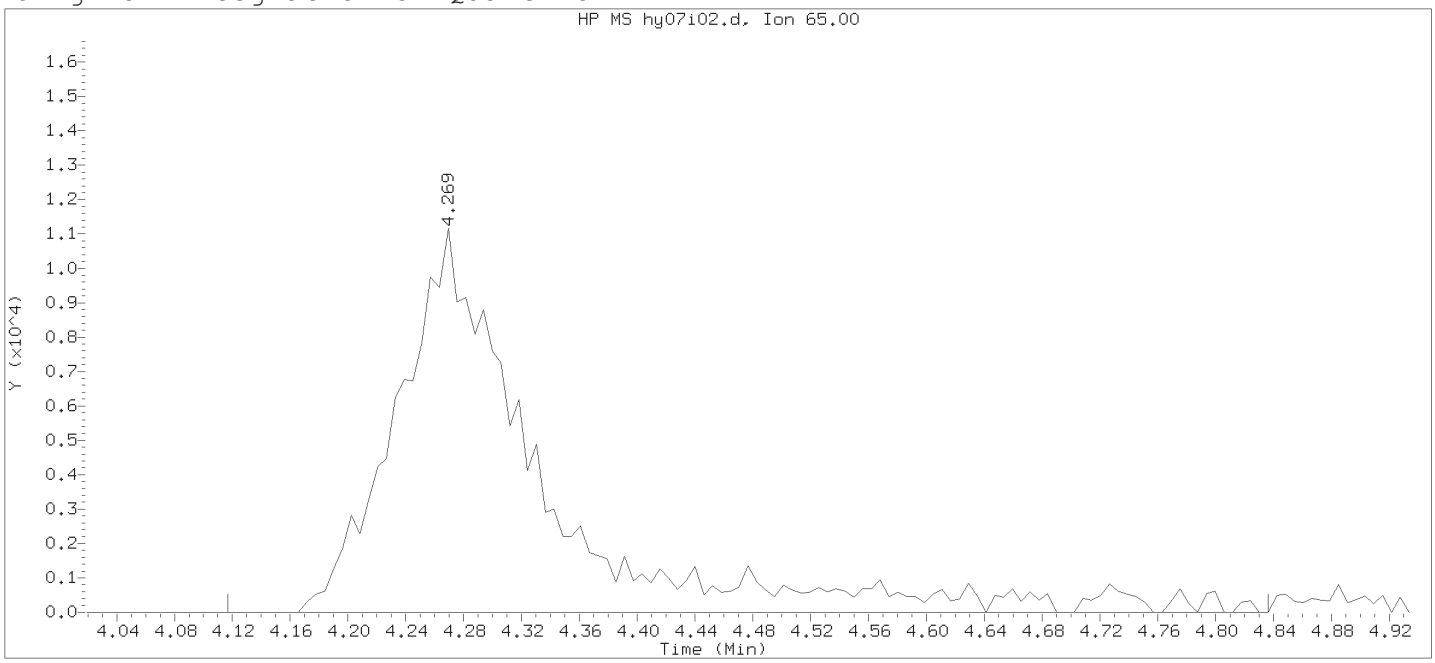
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

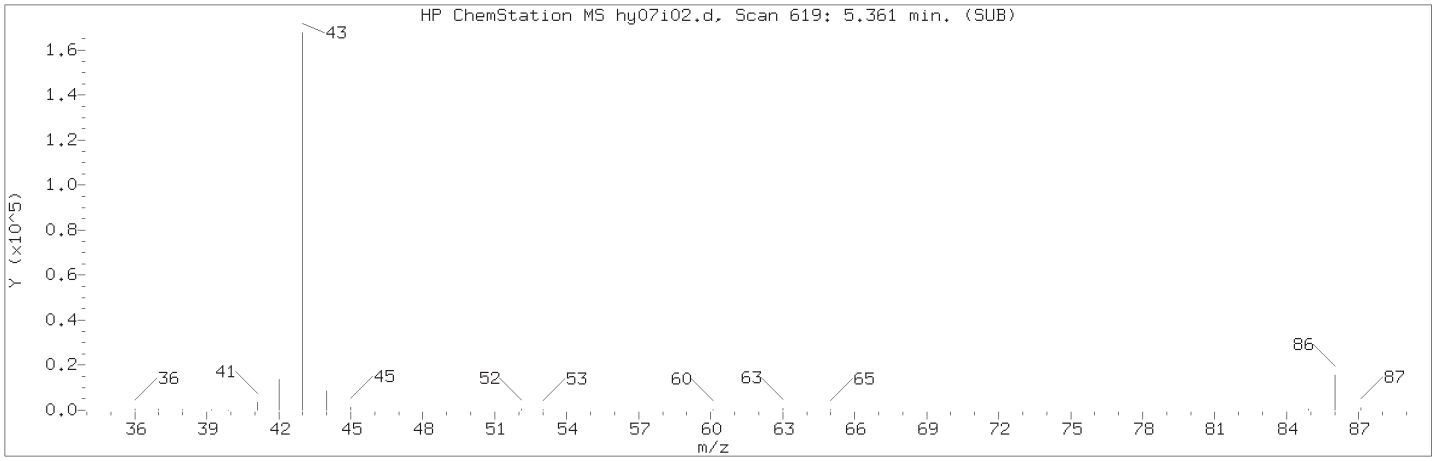
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:11
Date, time and analyst ID of latest file update: 07-May-2016 15:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

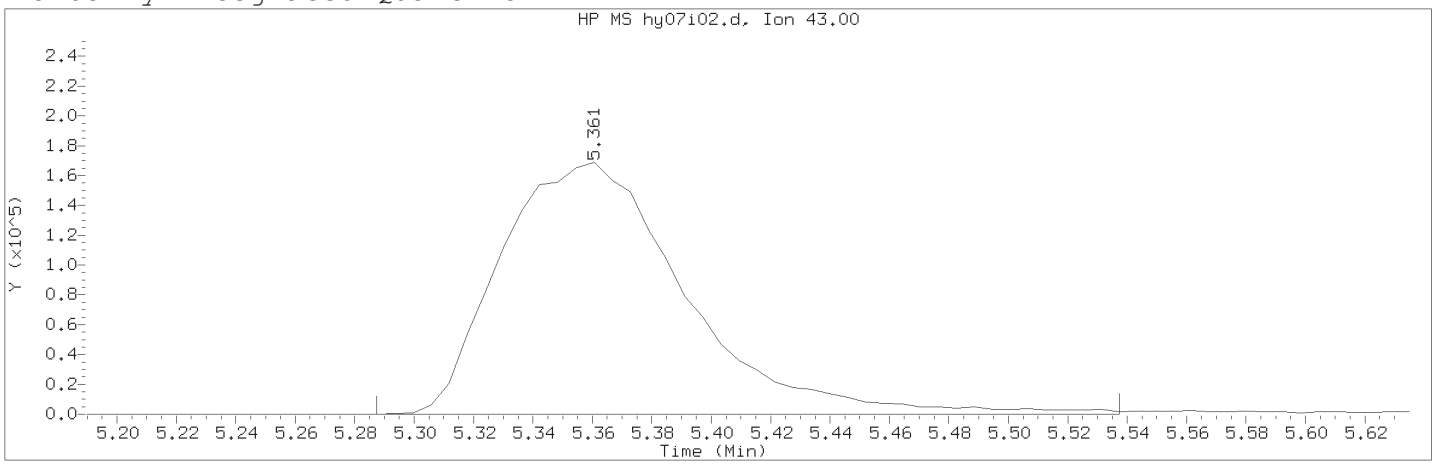
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area : 76415
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

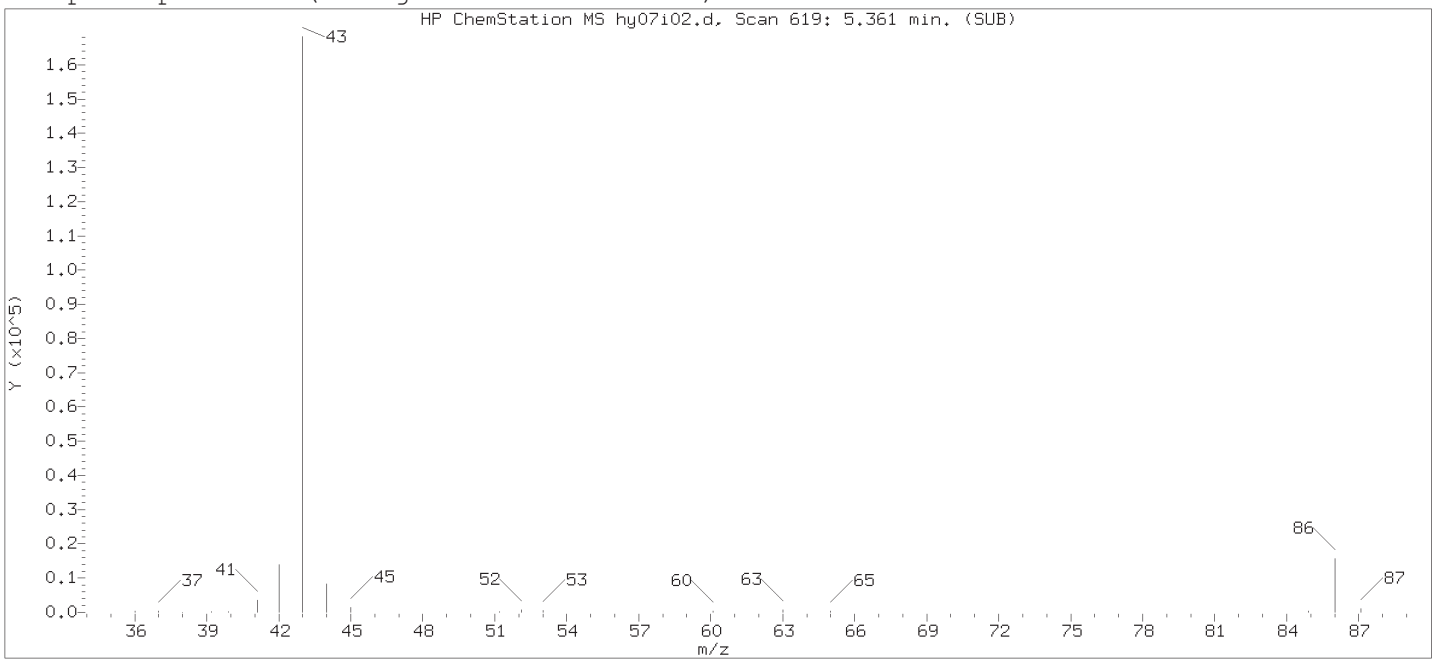
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 619
Retention Time (minutes): 5.361
Quant Ion : 43.00
Area (flag) : 727551M
On-Column Amount (ng) : 12.0494
Integration start scan : 606 Integration stop scan: 647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

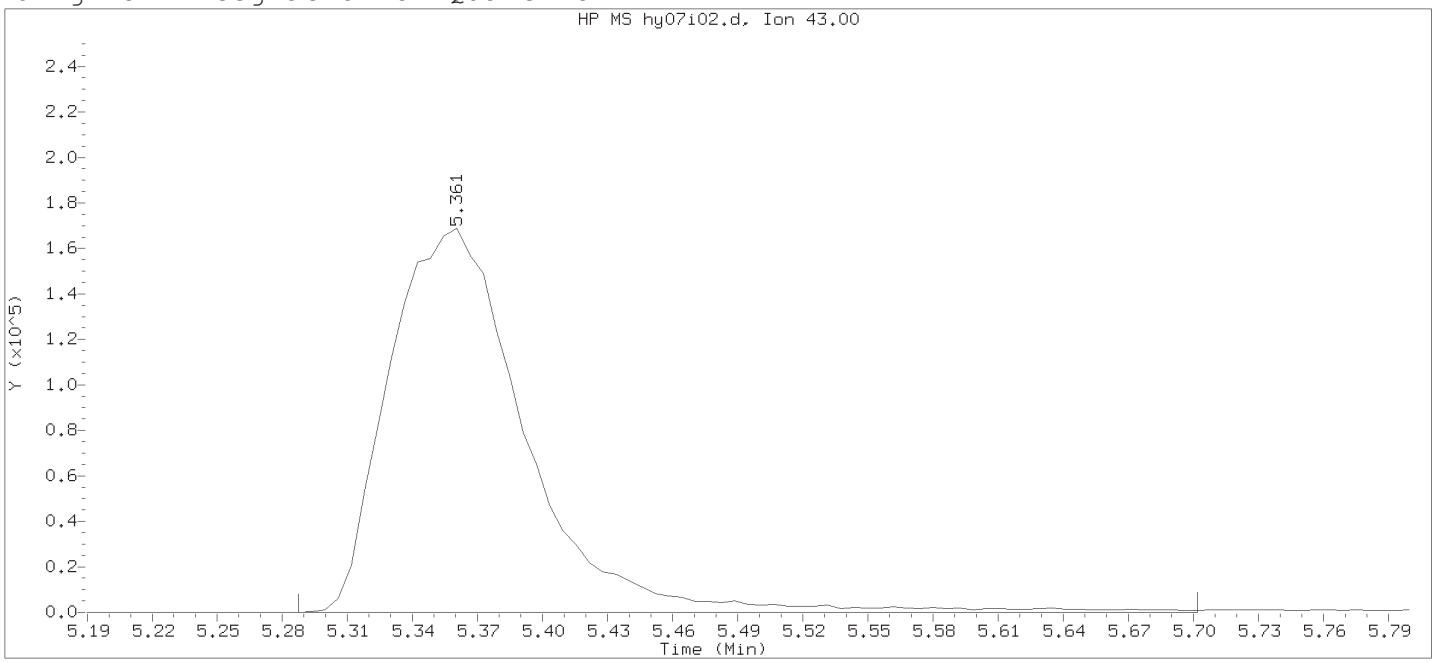
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

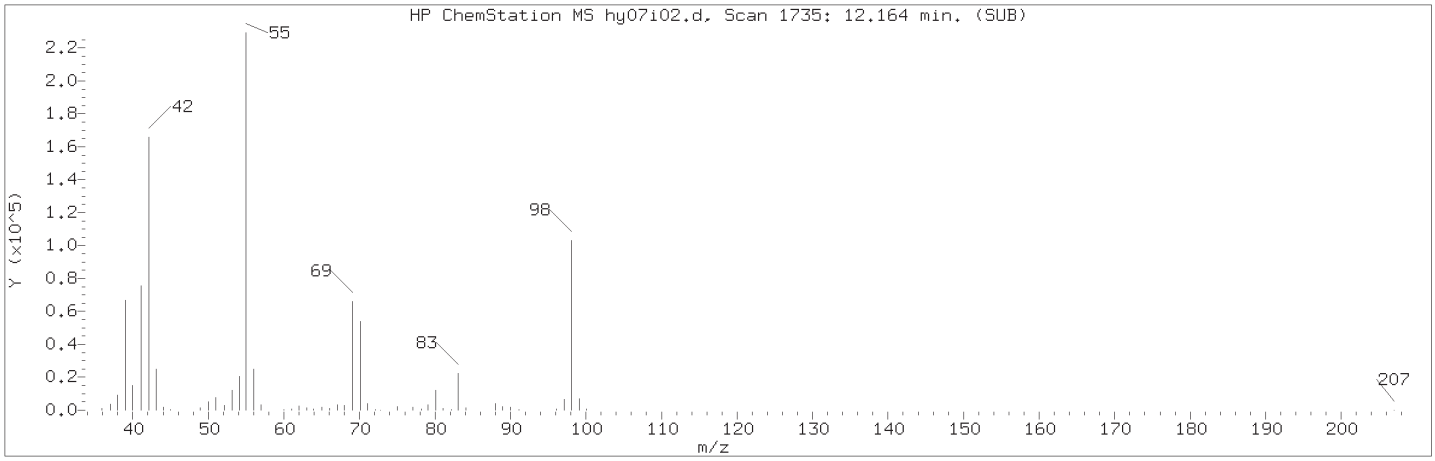
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:11
Date, time and analyst ID of latest file update: 07-May-2016 15:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

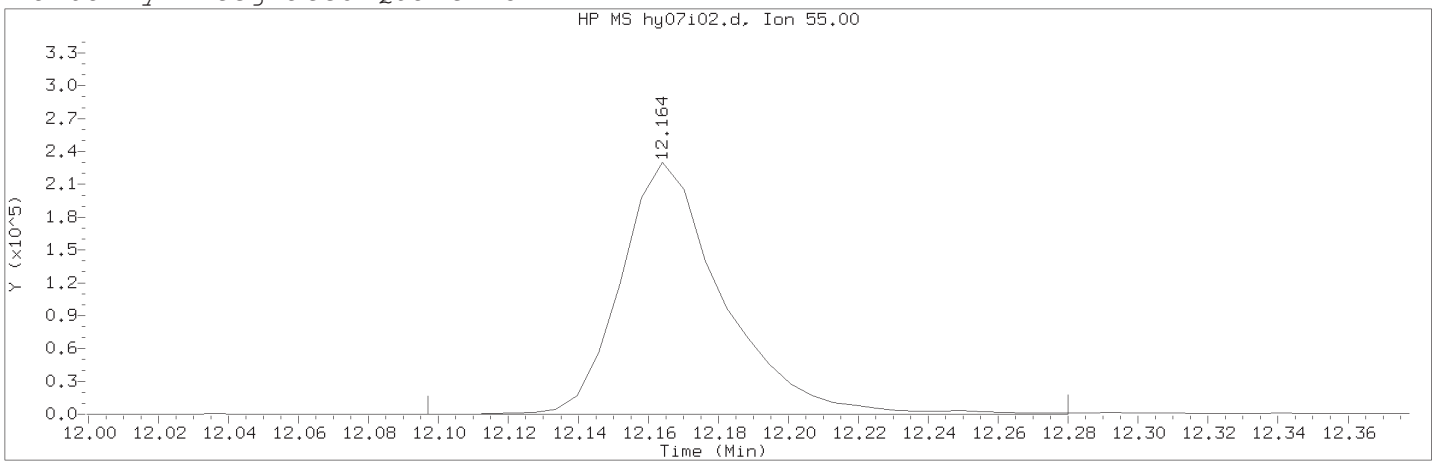
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 619
Retention Time (minutes): 5.361
Quant Ion : 43.00
Area : 741685
On-column Amount (ng) : 10.0000
Integration start scan : 606 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016 15:11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

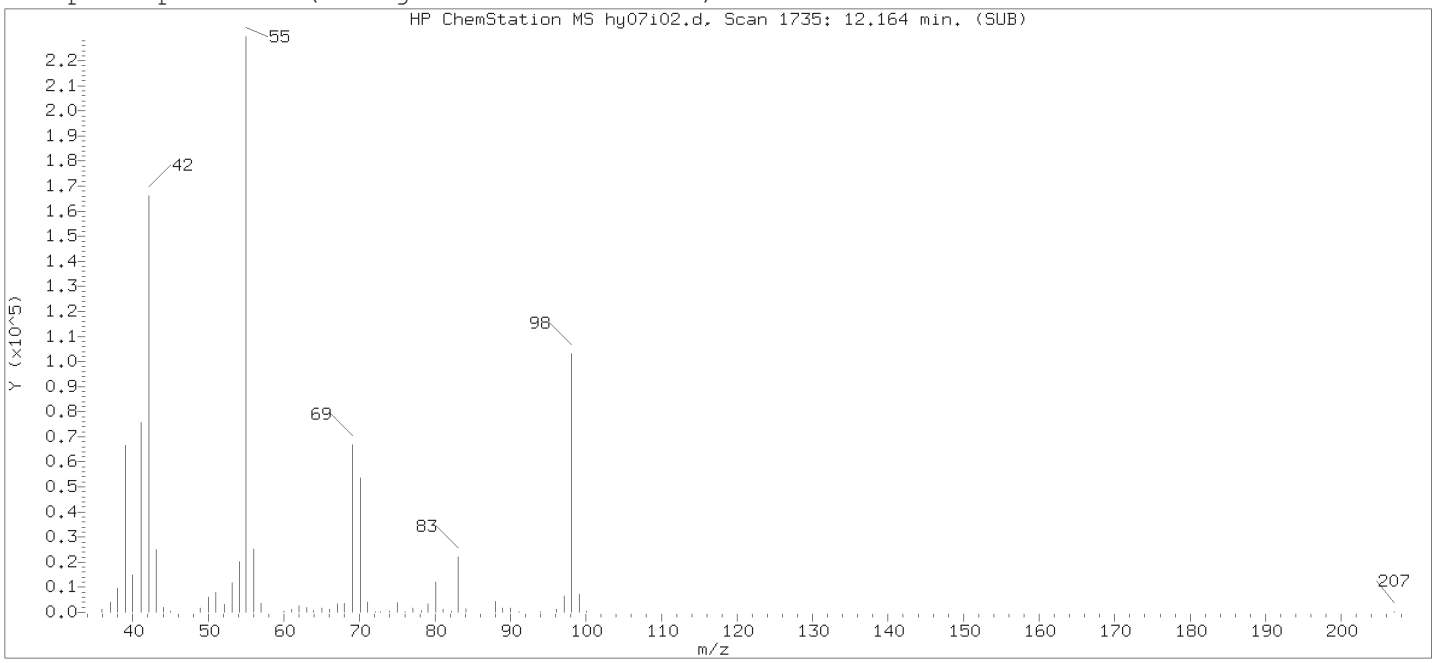
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area (flag) : 466189M
On-Column Amount (ng) : 537.6368
Integration start scan : 1723 Integration stop scan: 1753
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

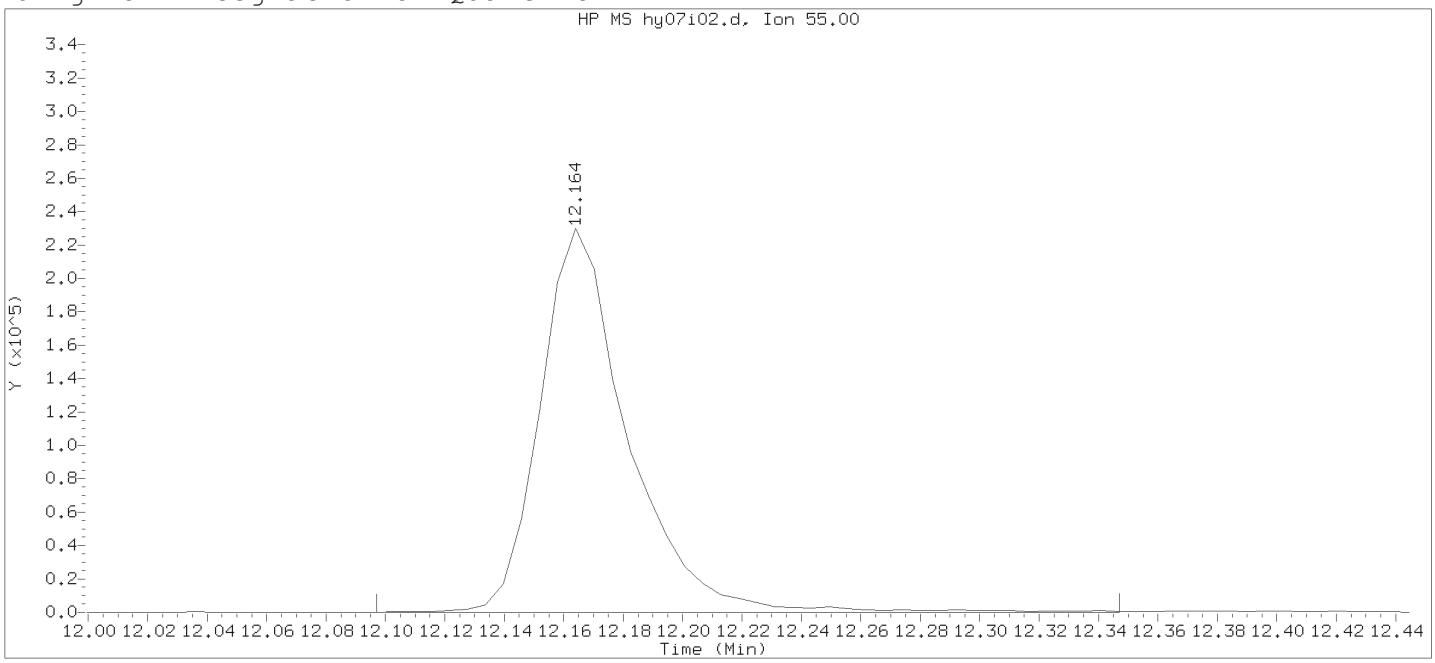
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



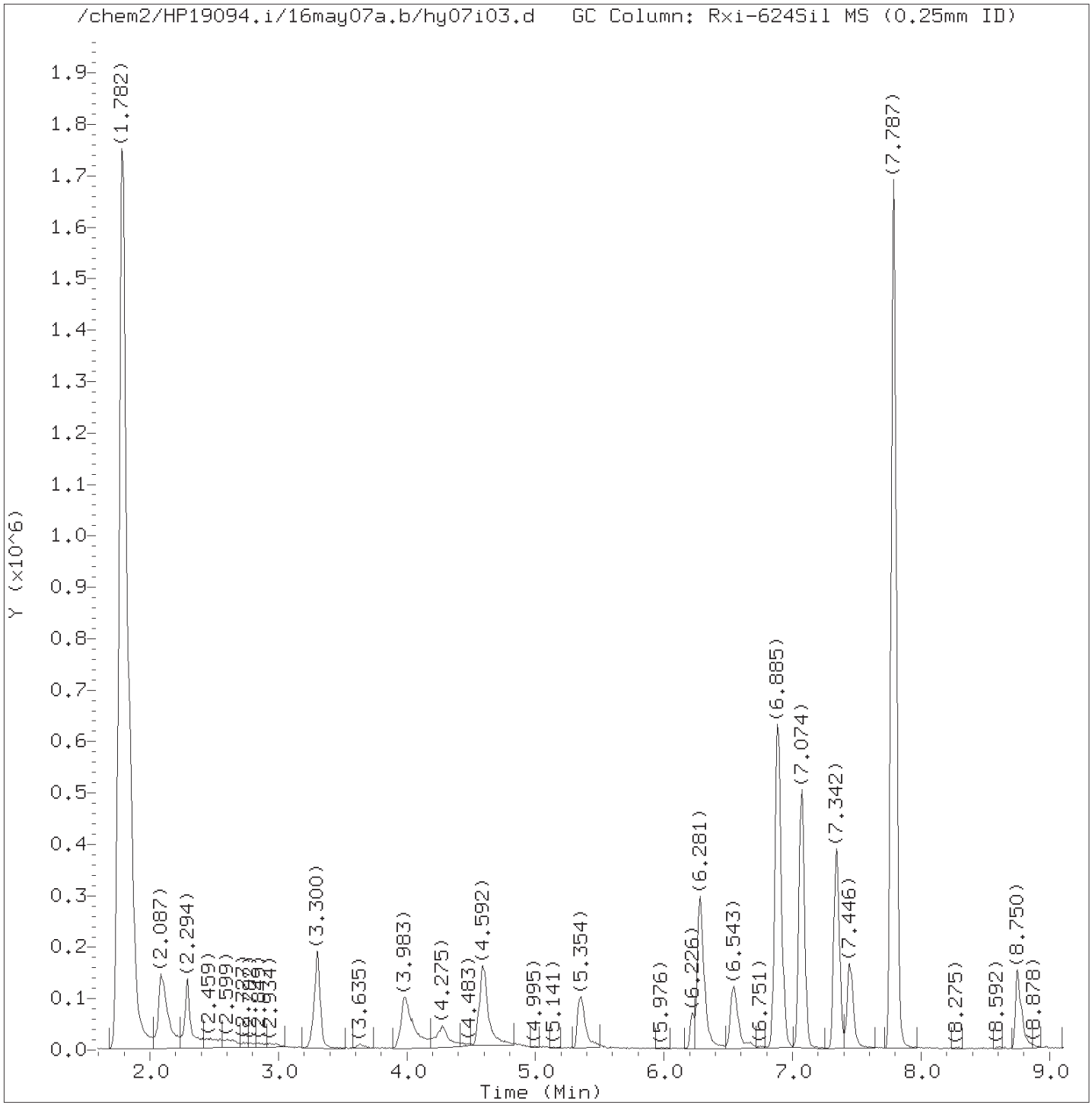
Data File: /chem2/HP19094.i/16may07a.b/hy07i02.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 12:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:11
Date, time and analyst ID of latest file update: 07-May-2016 15:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area : 469680
On-column Amount (ng) : 500.0000
Integration start scan : 1723 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

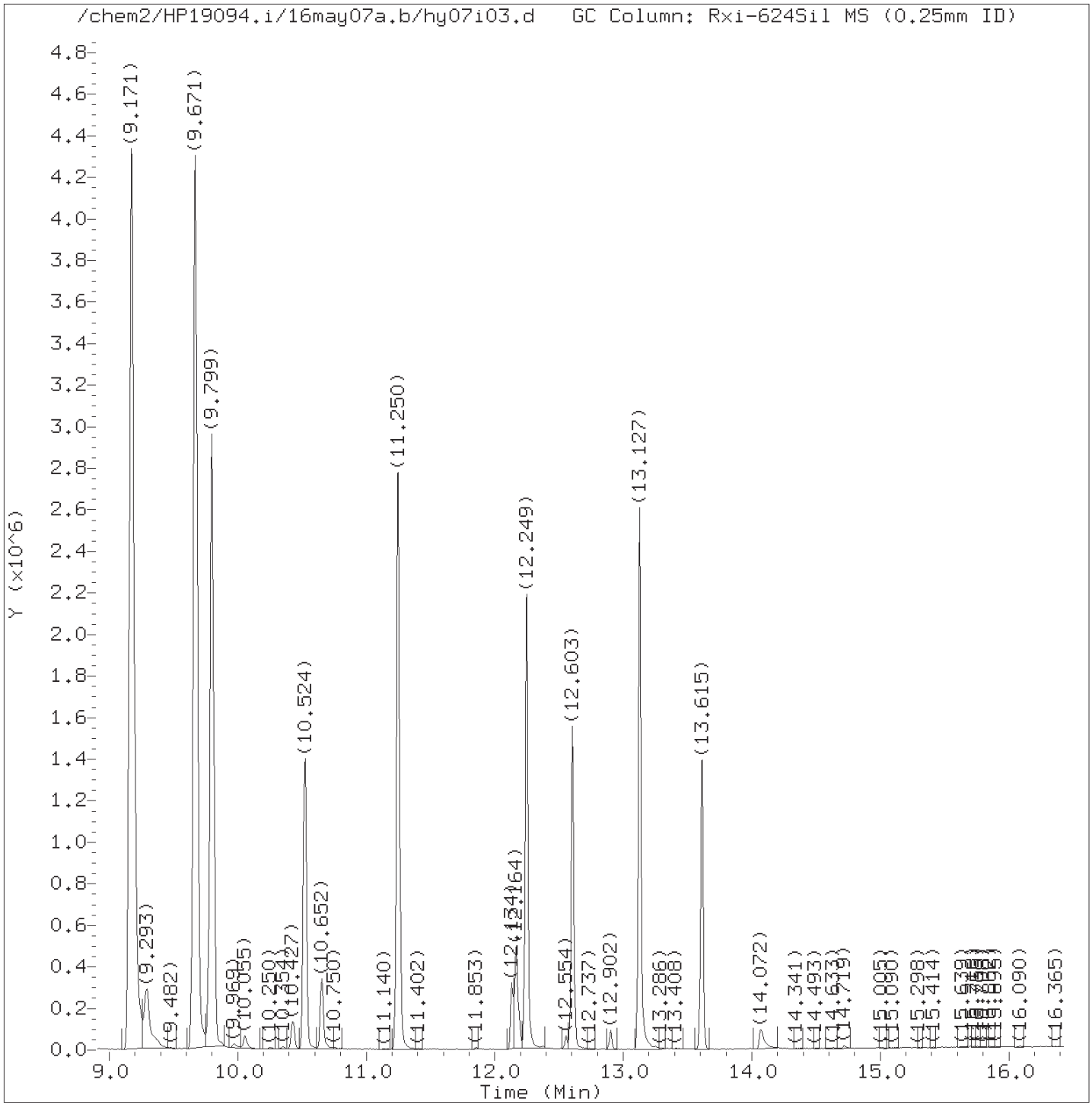
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

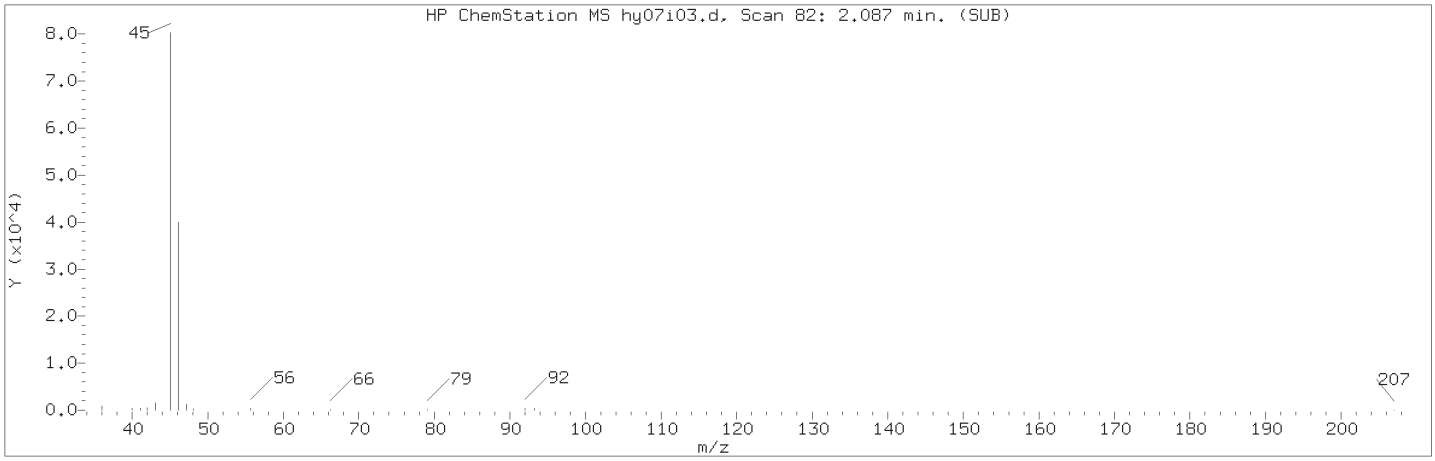
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	356318M	4.513
25) Acetonitrile	(1)	3.989	41	527066M	176.727
26)*t-Butyl Alcohol-d10	(1)	4.263	65	78867M	50.000
36) Vinyl Acetate	(2)	5.354	43	332905M	5.345
43) Methyl Acrylate	(2)	6.281	55	634726	25.643
53) 1-Chlorobutane	(2)	7.074	56	610245	4.907
63)*Fluorobenzene	(2)	7.787	96	2299109	10.000
77) Chloroacetonitrile	(2)	9.213	75	268715	253.213
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	117786	5.353
97)*Chlorobenzene-d5	(3)	11.250	117	1608272	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	75823	11.138
112) Cyclohexanone	(1)	12.164	55	237208	285.054
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	696946	10.000
142) Hexachloroethane	(4)	13.615	117	247612	5.317

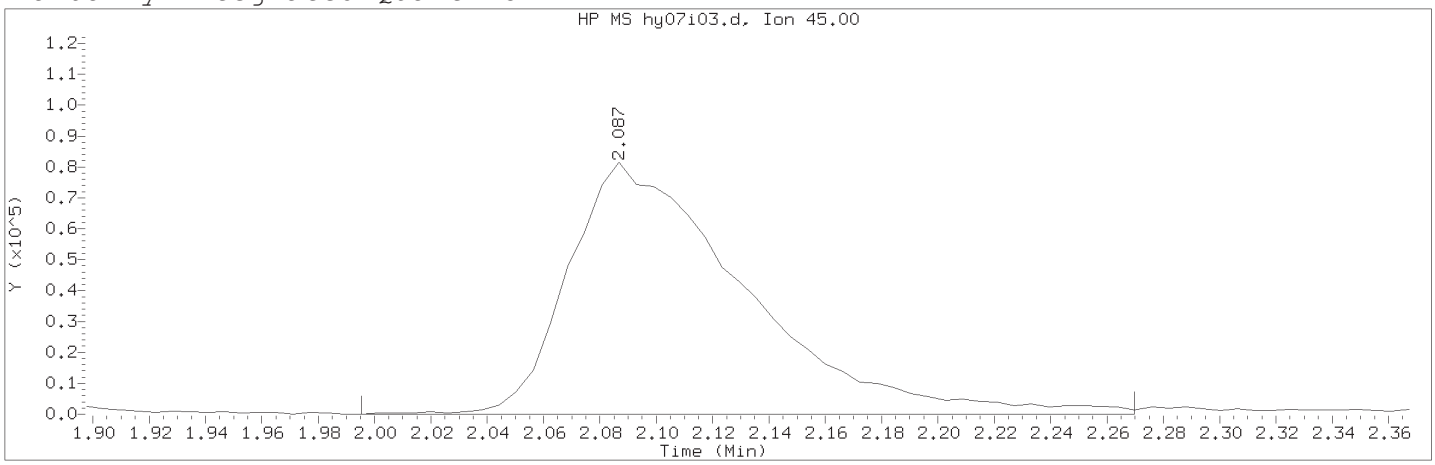
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

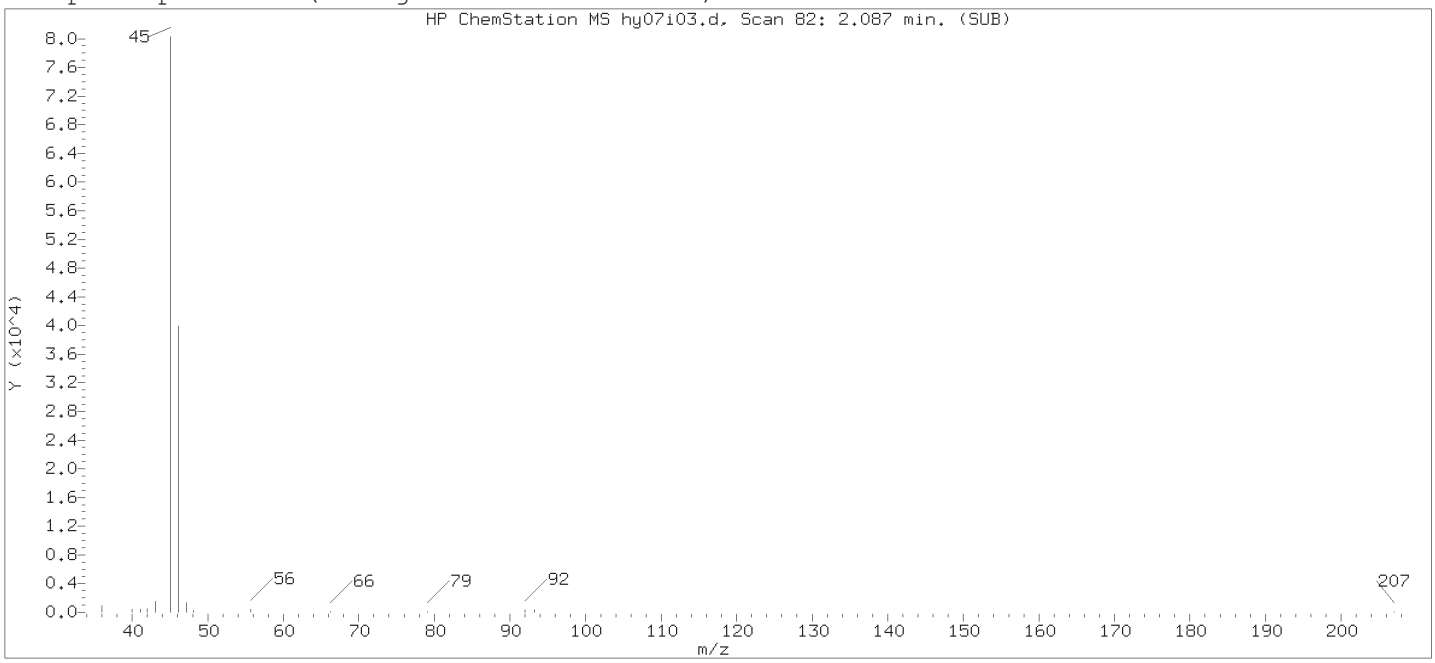
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 82
Retention Time (minutes): 2.087
Quant Ion : 45.00
Area (flag) : 356318M
On-Column Amount (ng) : 4.5127
Integration start scan : 66 Integration stop scan: 111
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

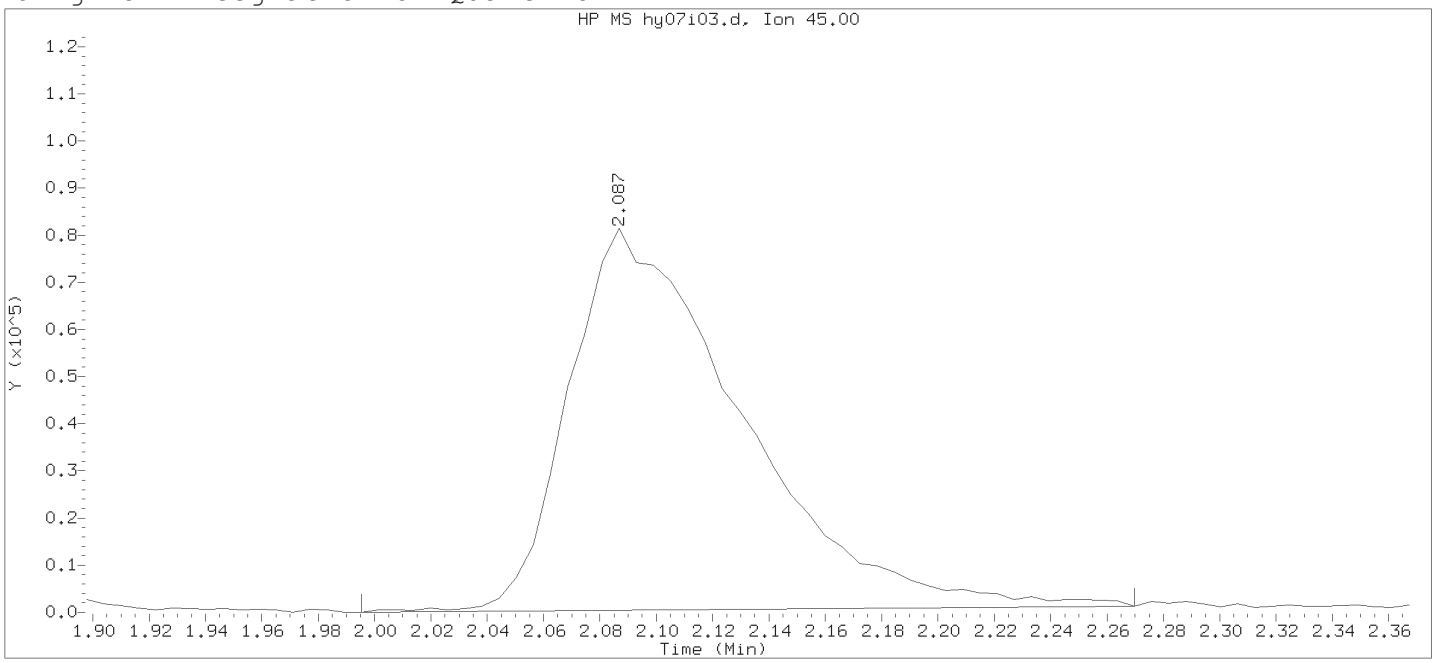
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

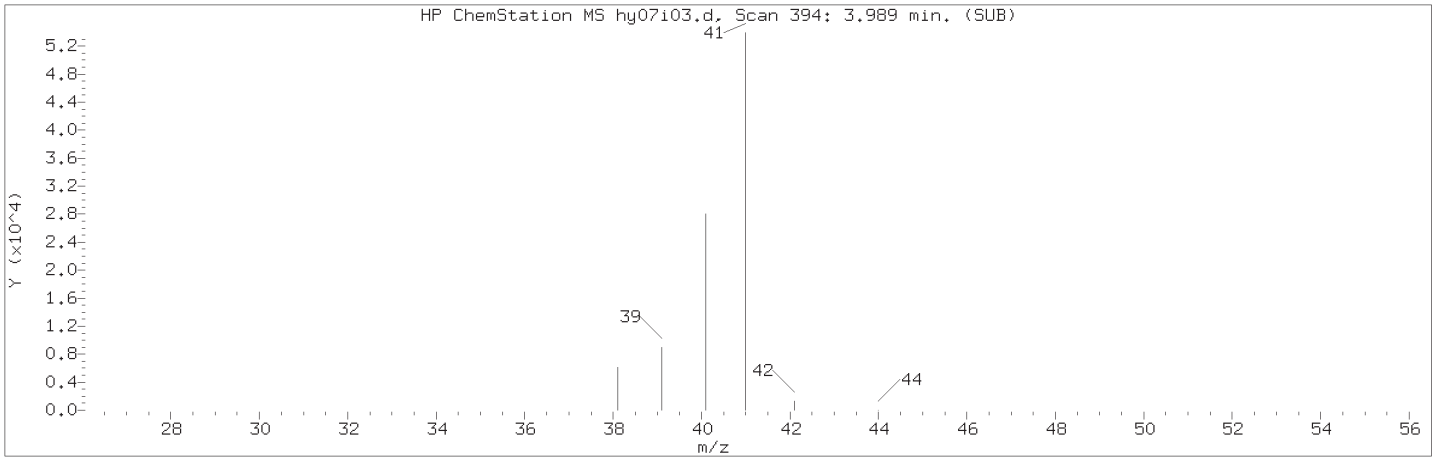
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:38
Date, time and analyst ID of latest file update: 07-May-2016 13:38 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

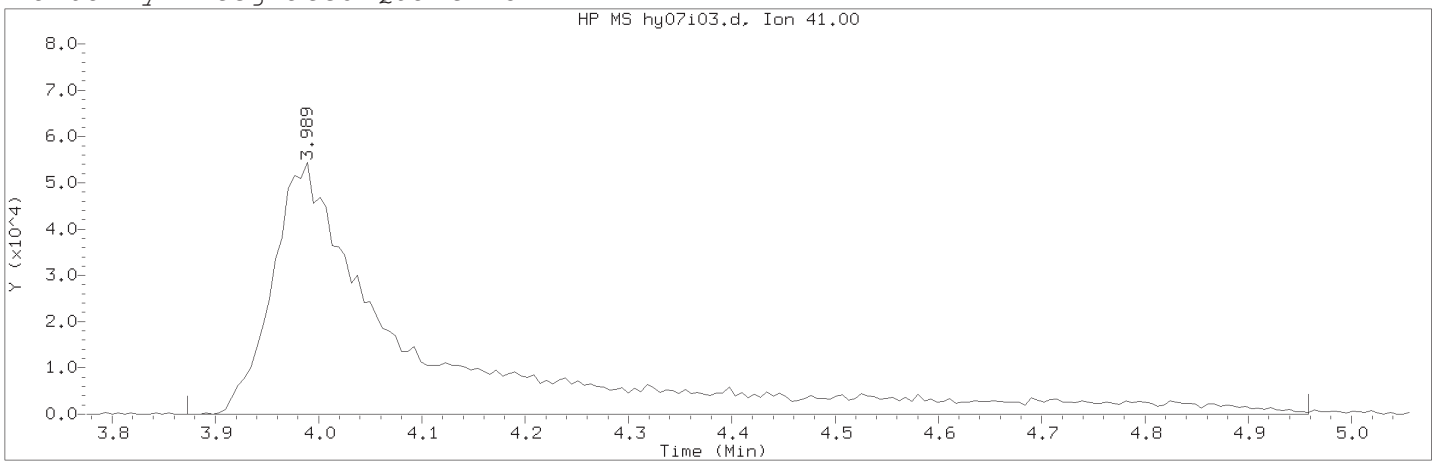
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area	: 345112		
On-column Amount (ng)	: 5.3098		
Integration start scan	: 66	Integration stop scan:	111
Y at integration start	: 0	Y at integration end:	1332

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

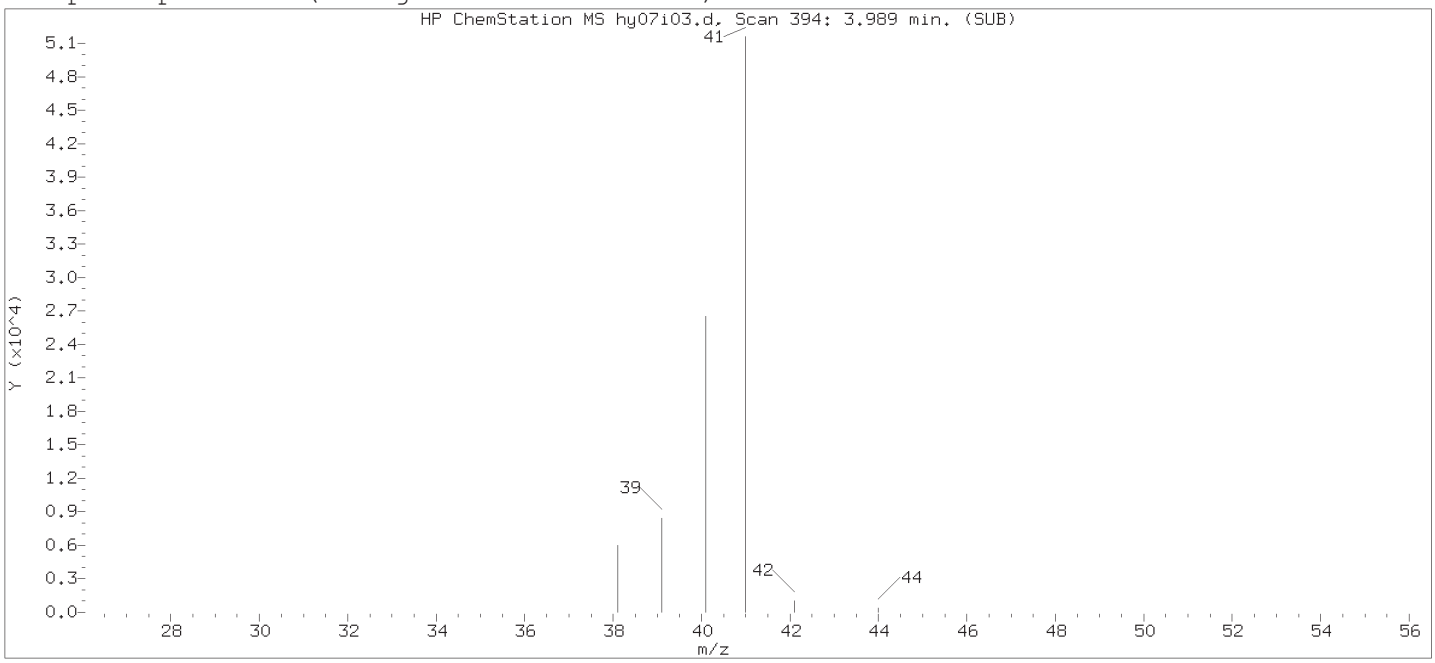
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 394
Retention Time (minutes): 3.989
Quant Ion : 41.00
Area (flag) : 527066M
On-Column Amount (ng) : 176.7272
Integration start scan : 374 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

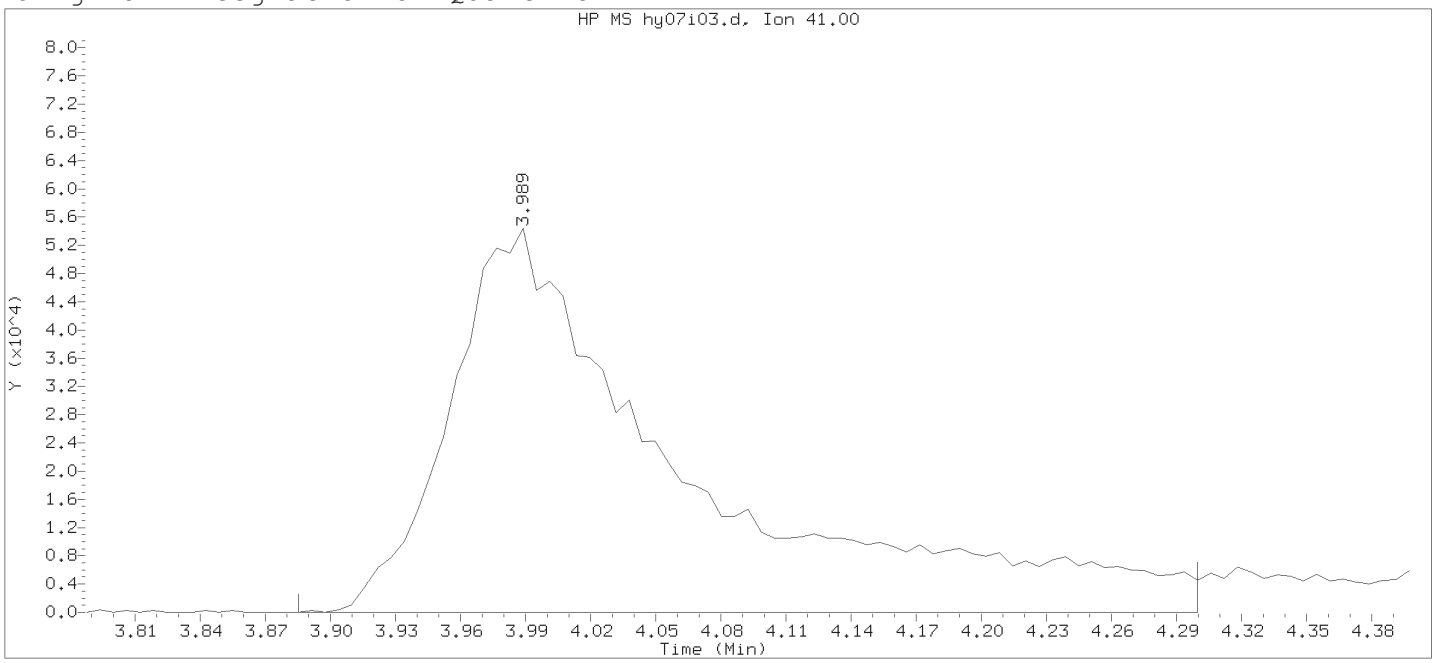
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

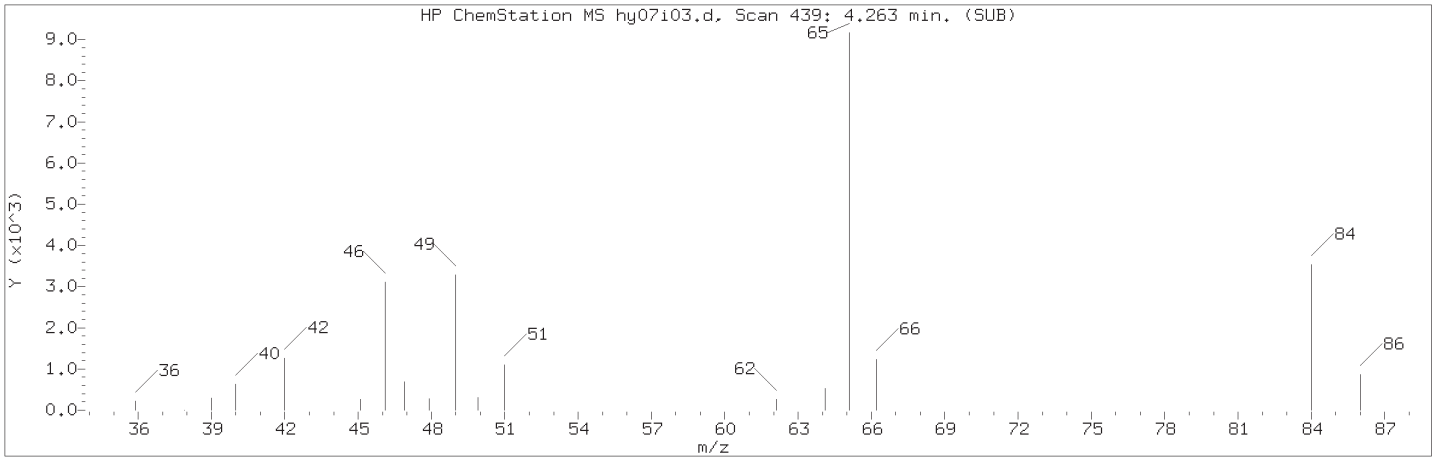
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:38
Date, time and analyst ID of latest file update: 07-May-2016 13:38 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

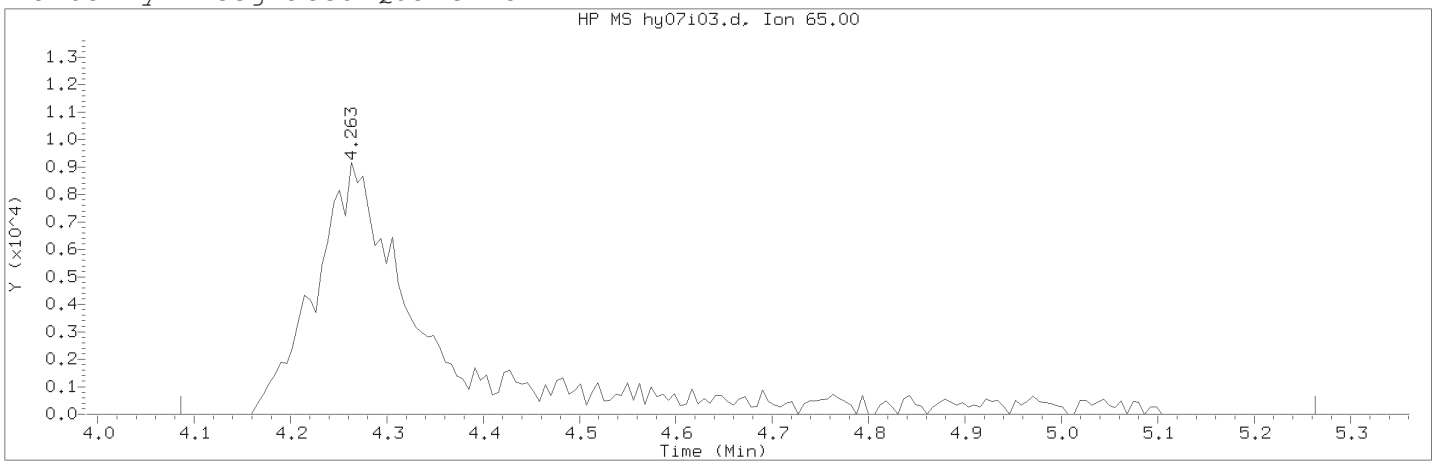
Compound Number	: 25
Compound Name	: Acetonitrile
Scan Number	: 394
Retention Time (minutes)	: 3.989
Quant Ion	: 41.00
Area	: 405450
On-column Amount (ng)	: 173.9550
Integration start scan	: 376 Integration stop scan: 444
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

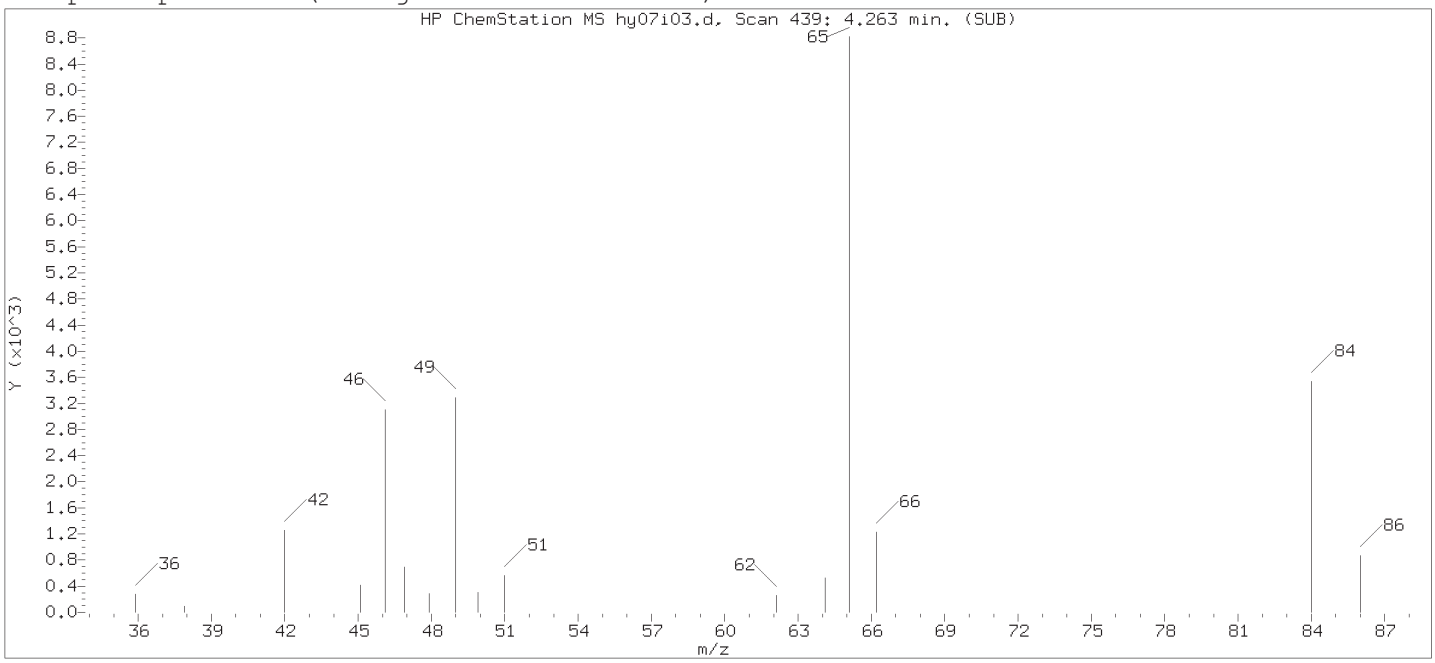
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 439
Retention Time (minutes): 4.263
Quant Ion : 65.00
Area (flag) : 78867M
On-Column Amount (ng) : 50.0000
Integration start scan : 409 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

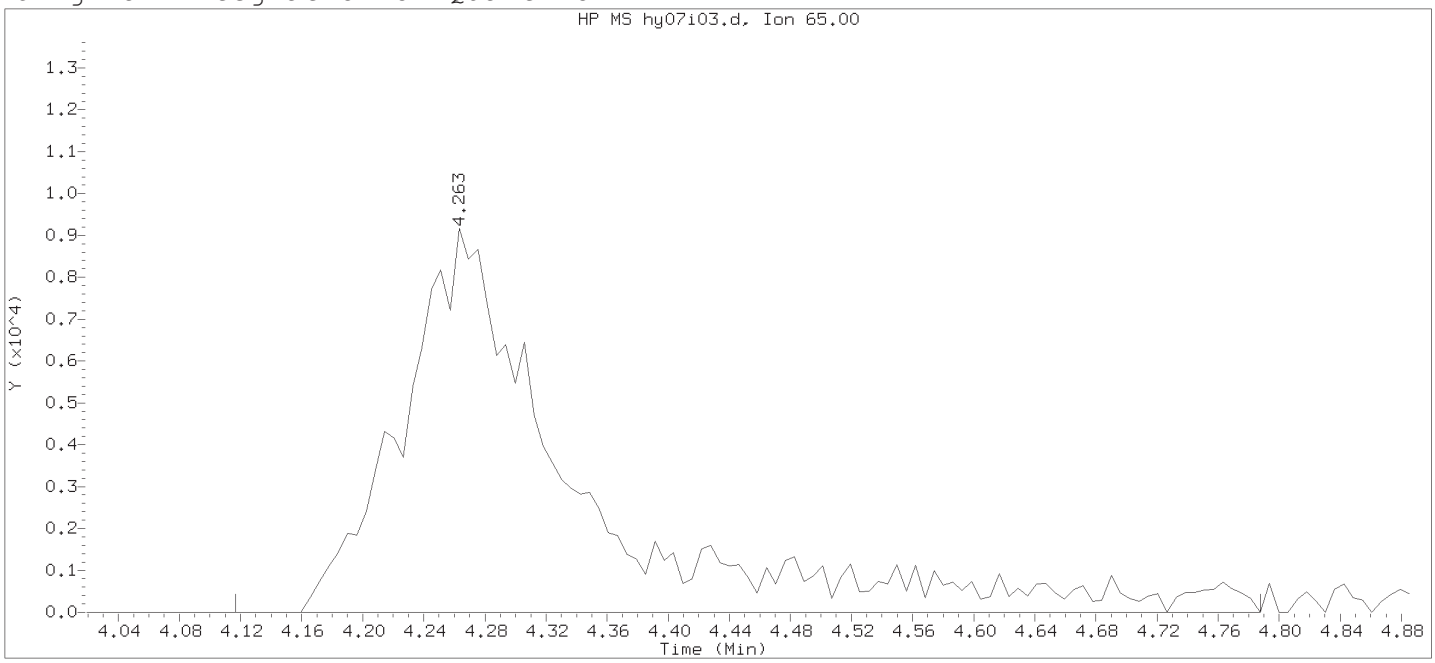
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

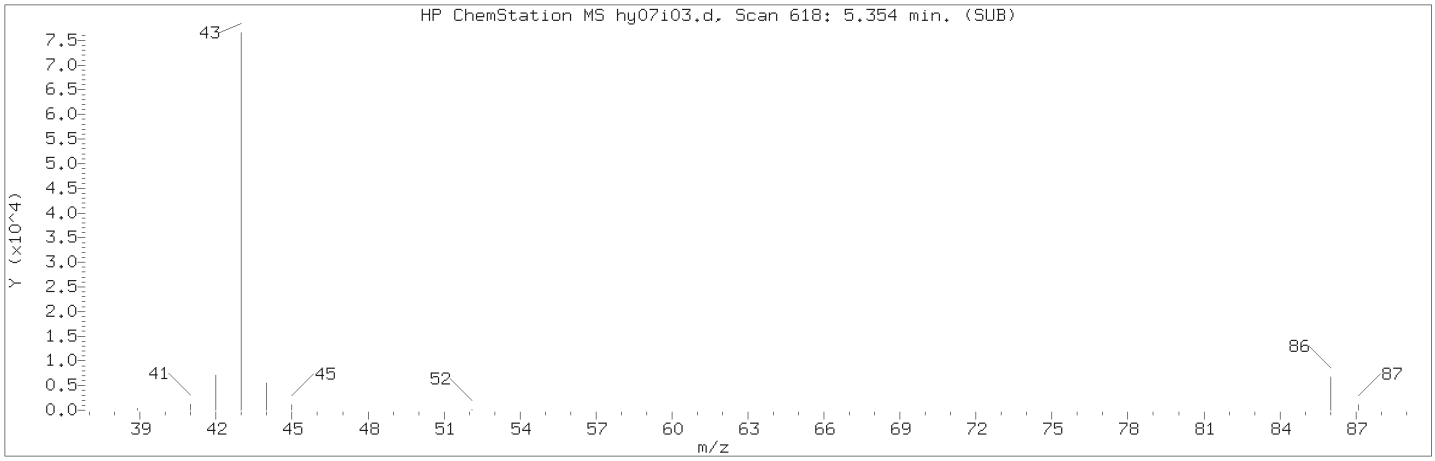
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:38
Date, time and analyst ID of latest file update: 07-May-2016 13:38 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

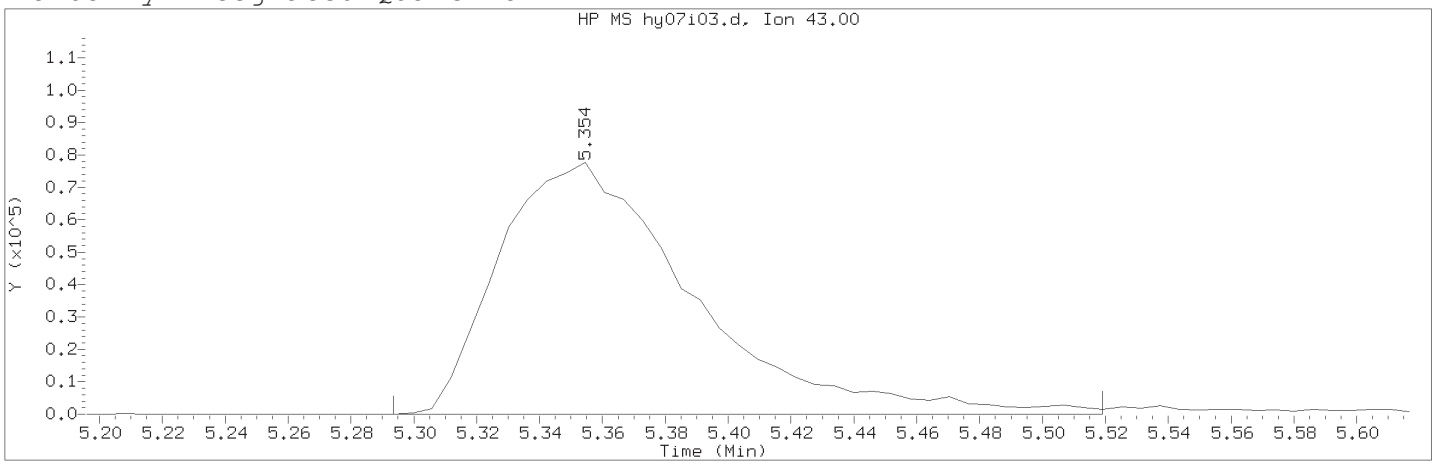
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 439		
Retention Time (minutes)	: 4.263		
Quant Ion	: 65.00		
Area	: 72530		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 414	Integration stop scan:	524
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016 15:28

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

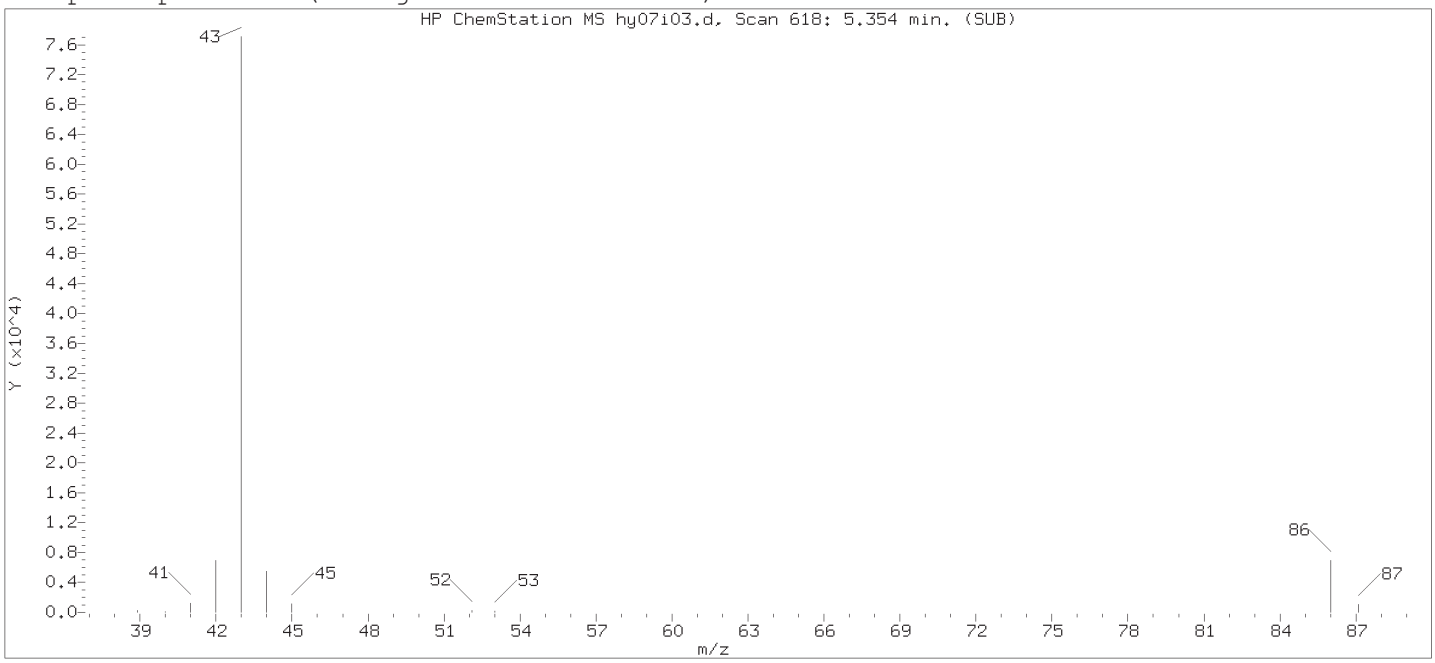
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 618
Retention Time (minutes): 5.354
Quant Ion : 43.00
Area (flag) : 332905M
On-Column Amount (ng) : 5.3454
Integration start scan : 607 Integration stop scan: 644
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

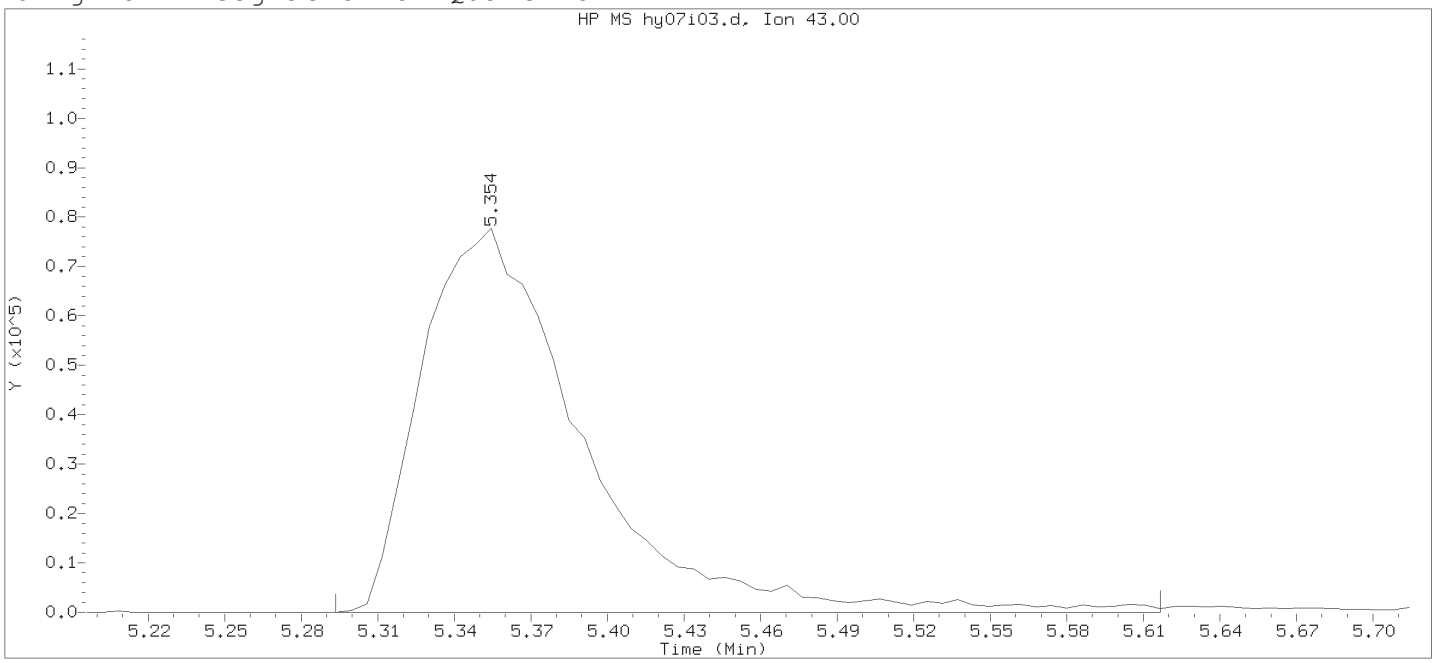
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



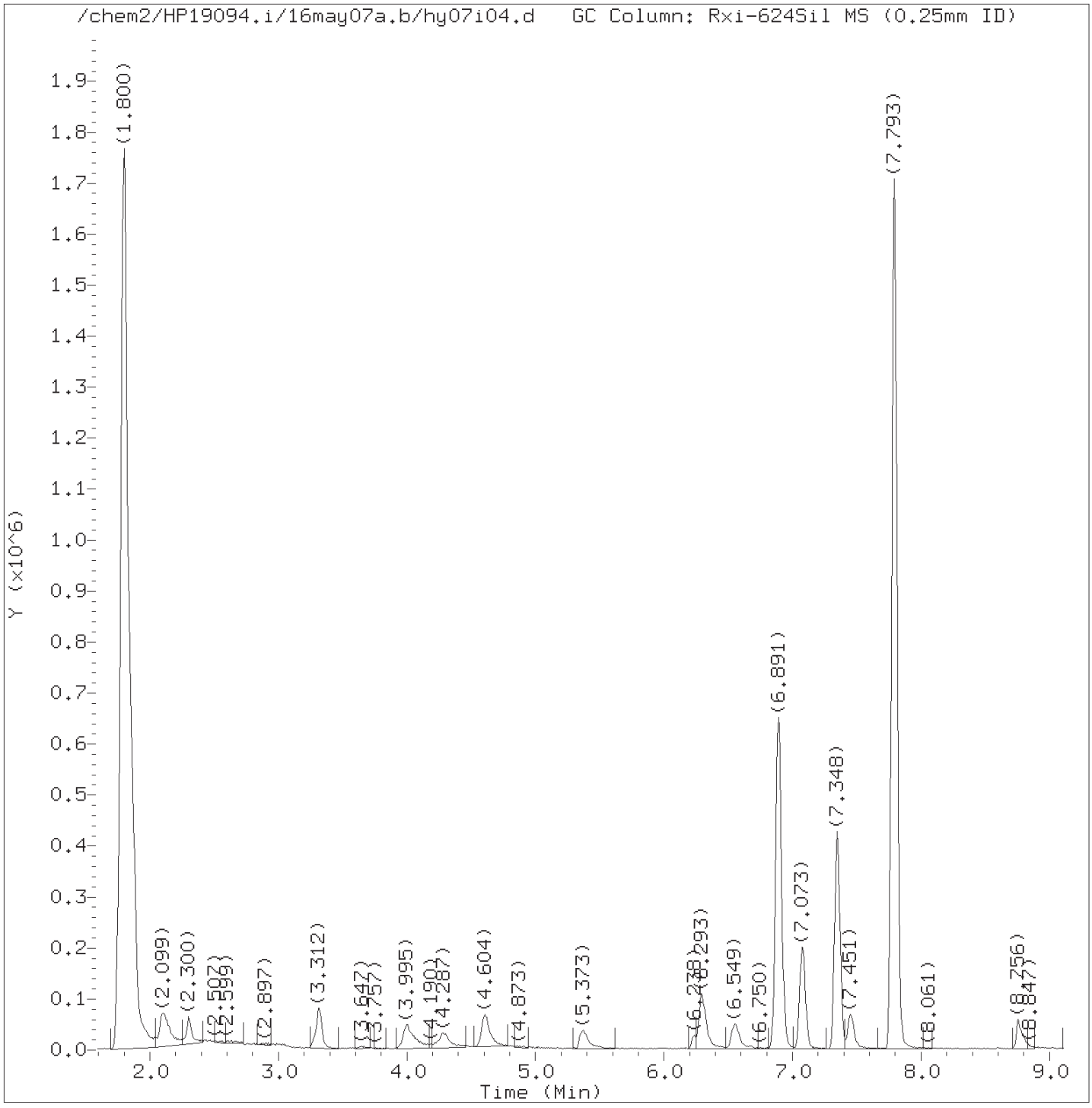
Data File: /chem2/HP19094.i/16may07a.b/hy07i03.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:38
Date, time and analyst ID of latest file update: 07-May-2016 13:38 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 618
Retention Time (minutes): 5.354
Quant Ion : 43.00
Area : 341298
On-column Amount (ng) : 4.3875
Integration start scan : 607 Integration stop scan: 660
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

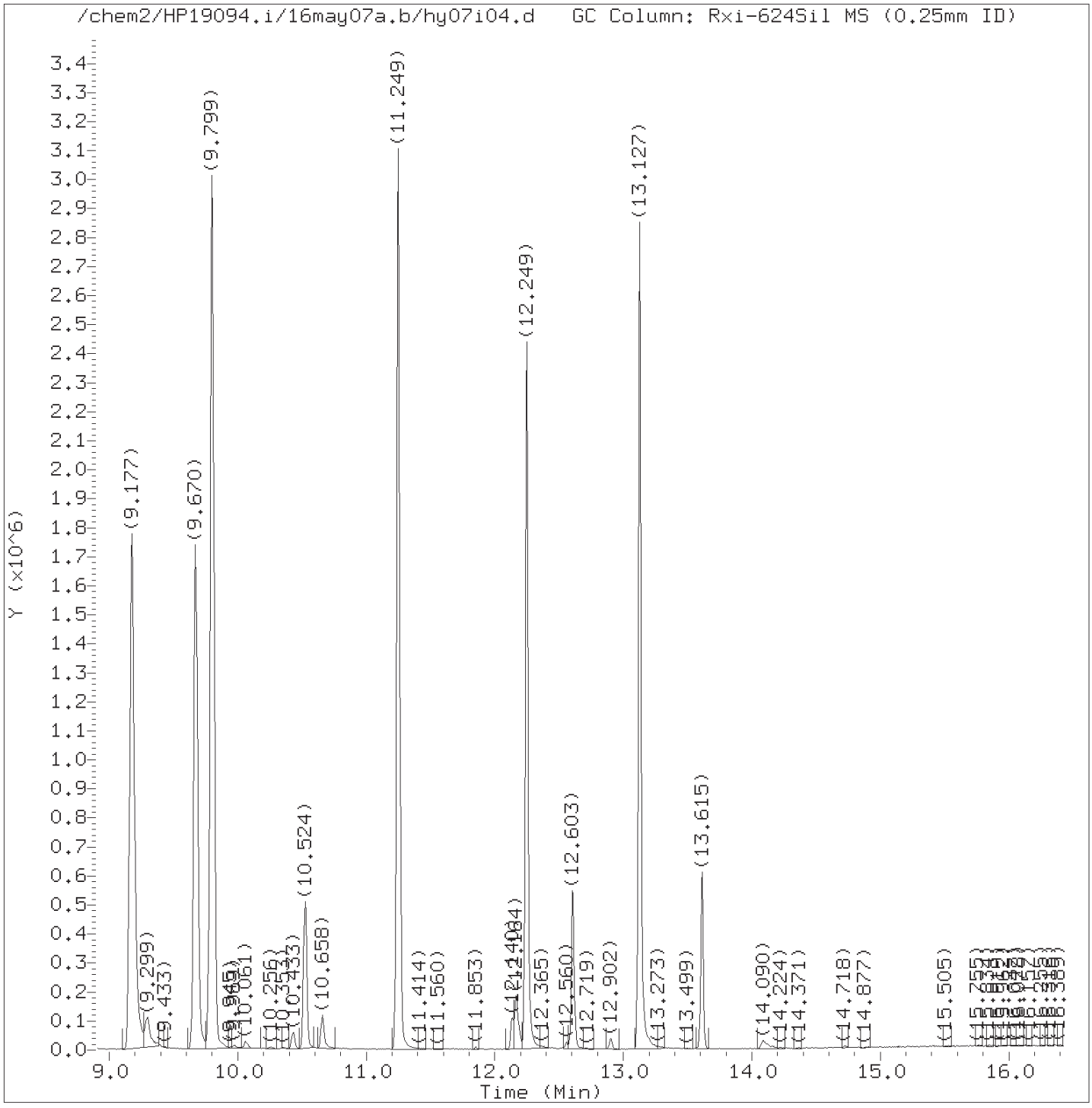
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

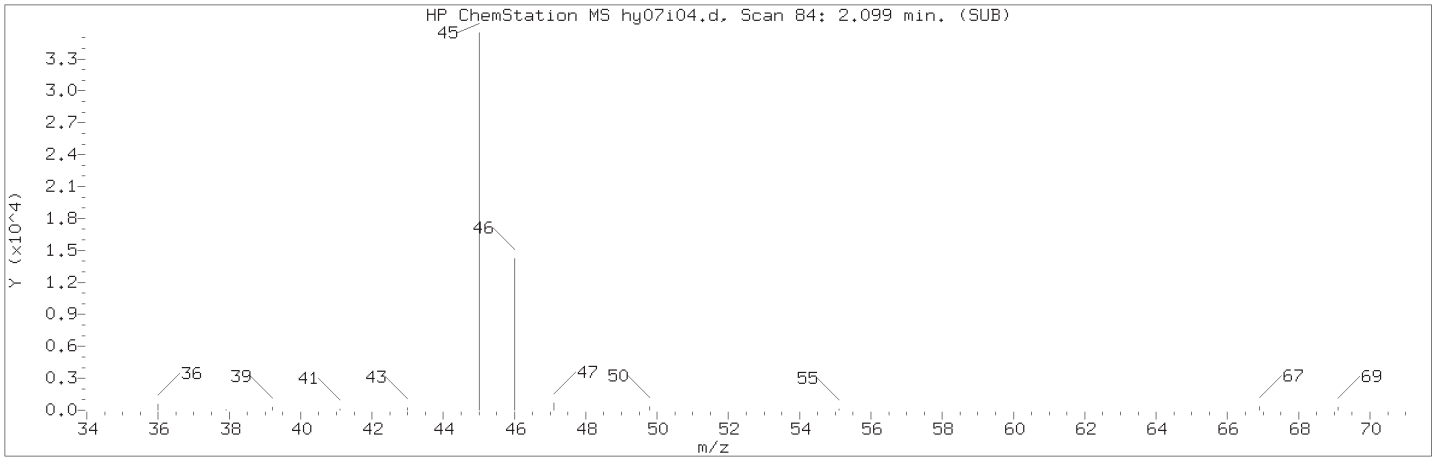
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	154912M	1.934
25) Acetonitrile	(1)	4.001	41	234406M	73.981
26)*t-Butyl Alcohol-d10	(1)	4.287	65	83788M	50.000
36) Vinyl Acetate	(2)	5.373	43	120929	1.914
43) Methyl Acrylate	(2)	6.287	55	243649	9.704
53) 1-Chlorobutane	(2)	7.080	56	244320	1.937
63)*Fluorobenzene	(2)	7.793	96	2332147	10.000
77) Chloroacetonitrile	(2)	9.213	75	116245	107.987
78) 2-Chloroethyl vinyl ether	(2)	9.299	63	43171	1.934
97)*Chlorobenzene-d5	(3)	11.249	117	1734238	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.133	88	28591A	3.953
112) Cyclohexanone	(1)	12.170	55	91799	103.836
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	760998	10.000
142) Hexachloroethane	(4)	13.615	117	99306	1.953

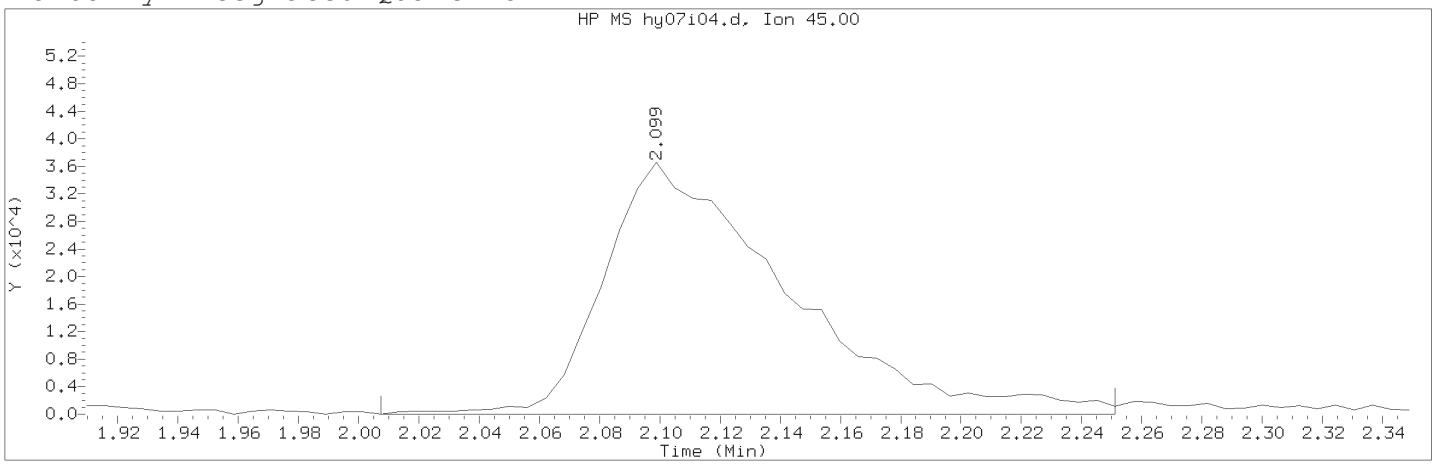
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

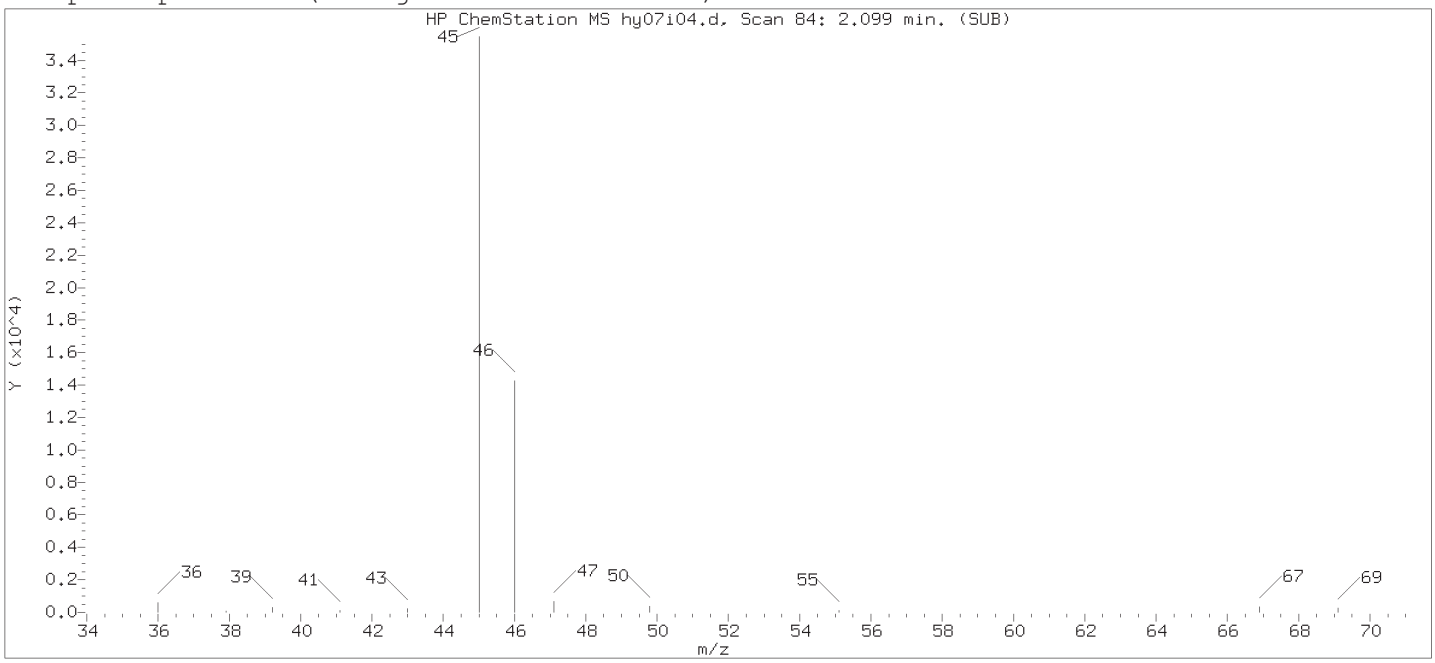
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 154912M
On-Column Amount (ng) : 1.9341
Integration start scan : 68 Integration stop scan: 108
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

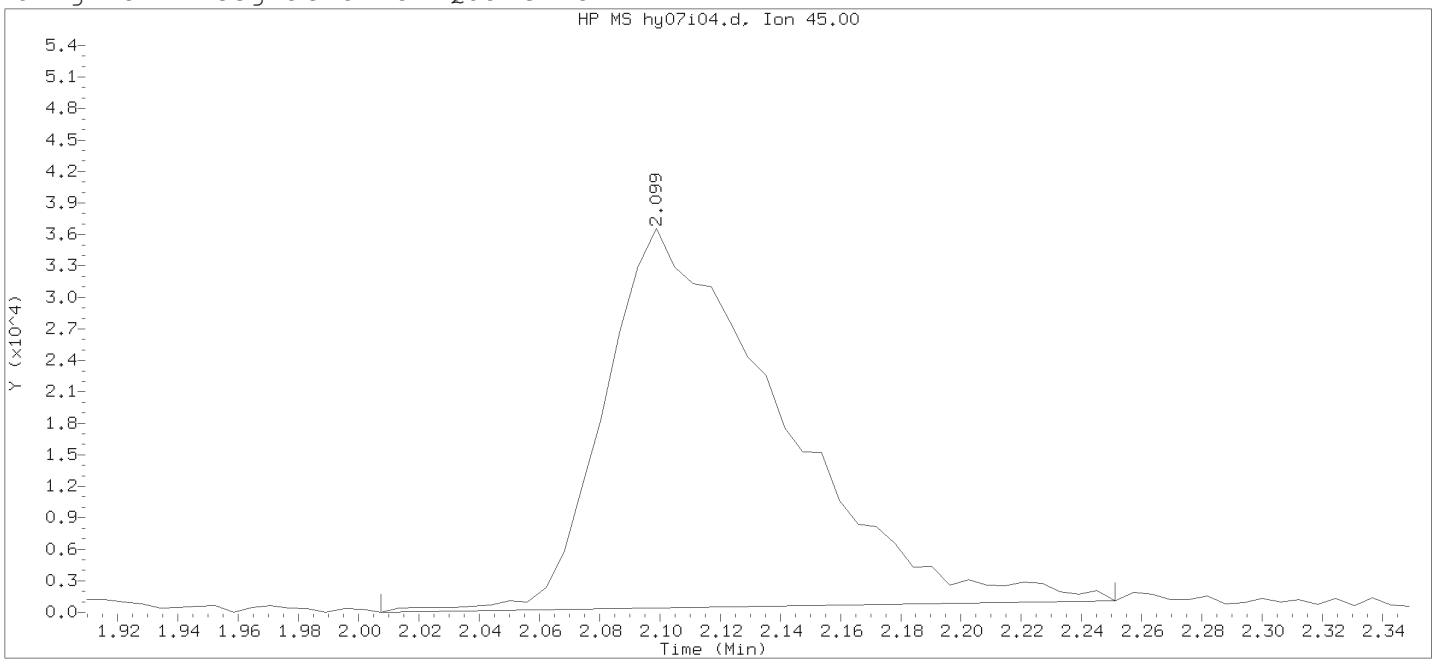
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

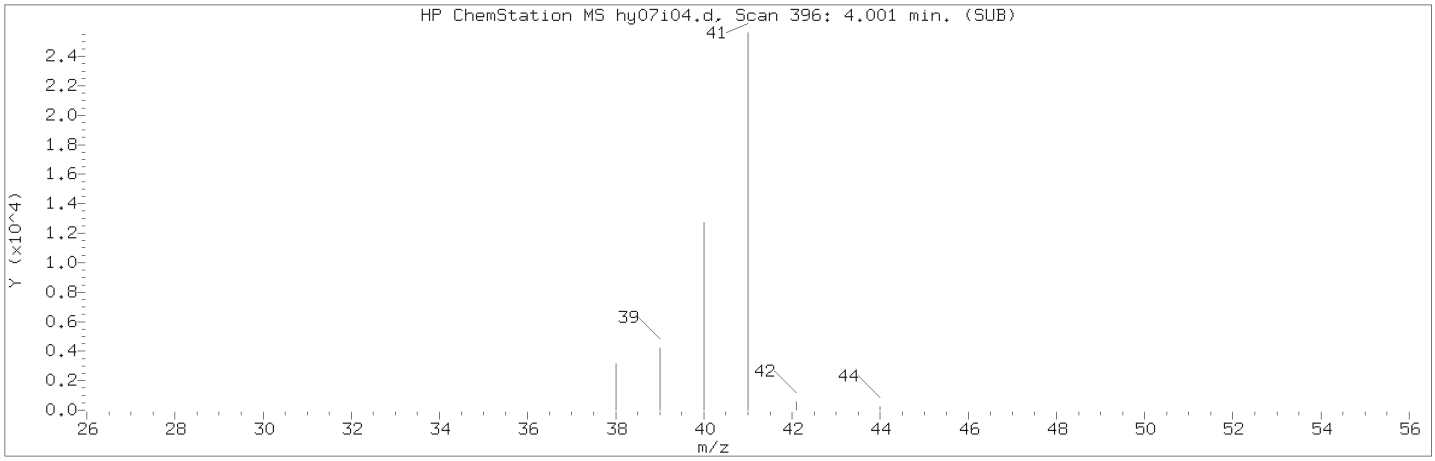
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:58
Date, time and analyst ID of latest file update: 07-May-2016 13:58 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

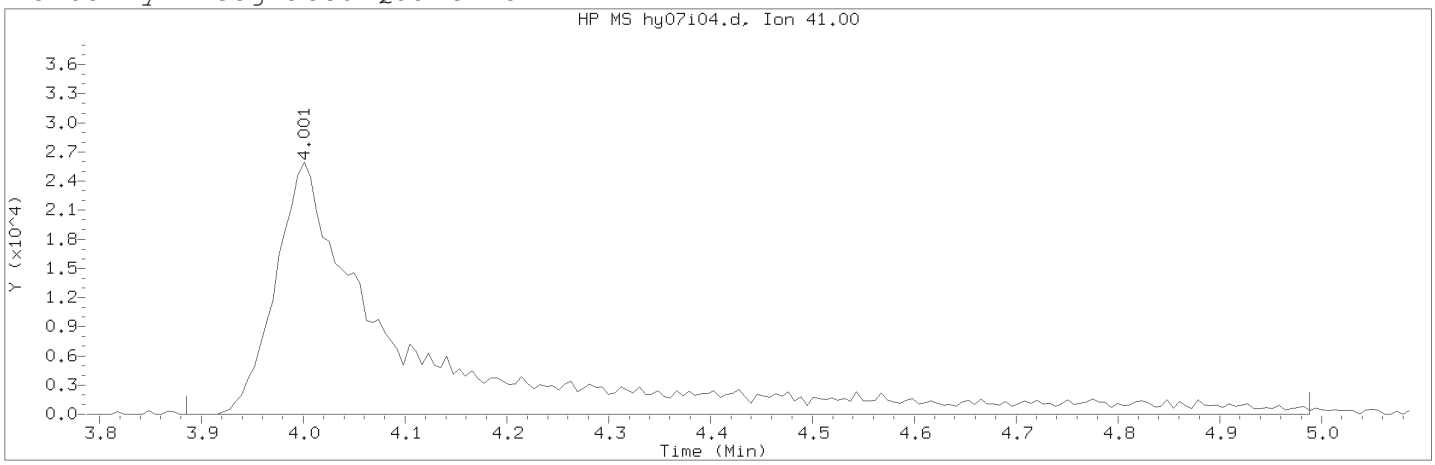
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 146595		
On-column Amount (ng)	: 2.1631		
Integration start scan	: 68	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	1109

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

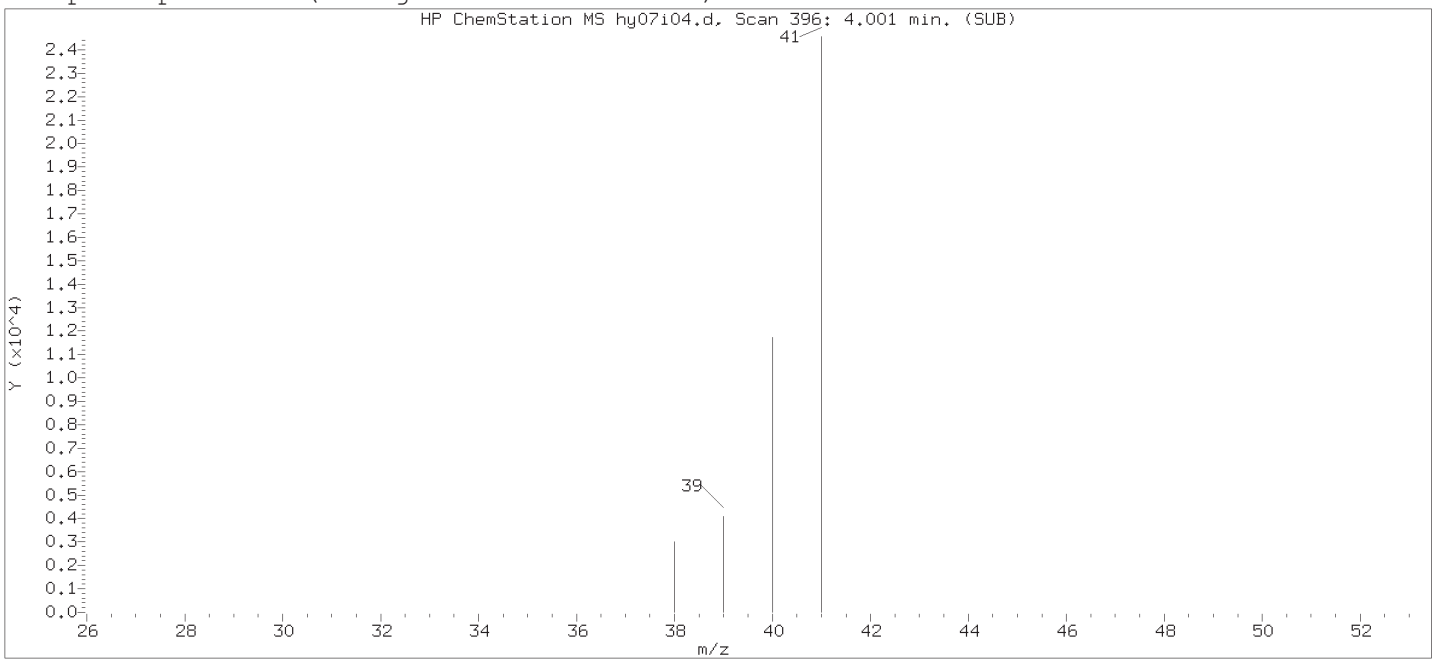
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area (flag) : 234406M
On-Column Amount (ng) : 73.9811
Integration start scan : 376 Integration stop scan: 557
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

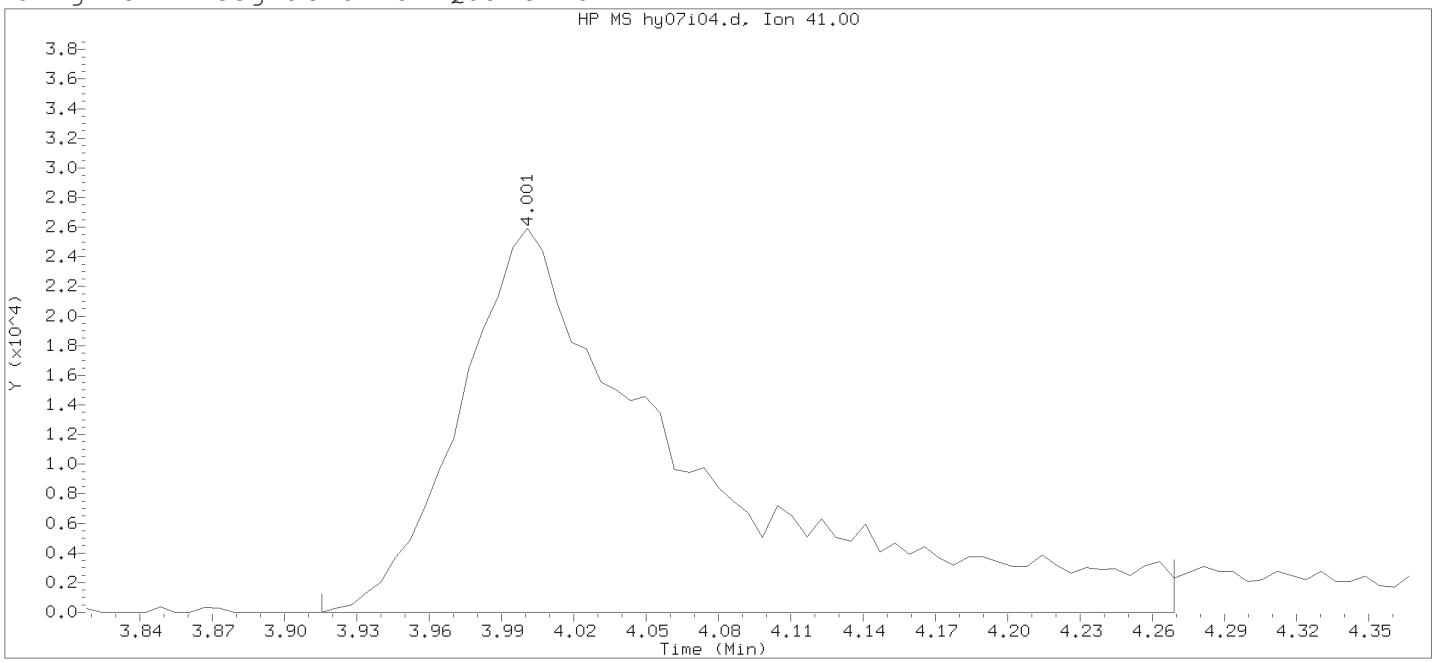
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

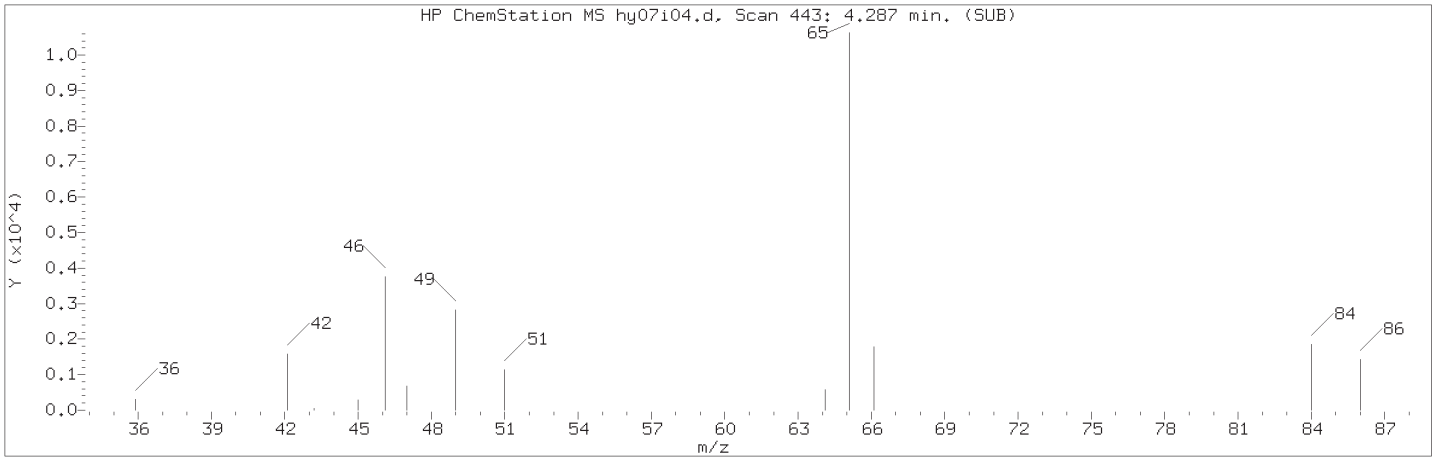
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:58
Date, time and analyst ID of latest file update: 07-May-2016 13:58 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

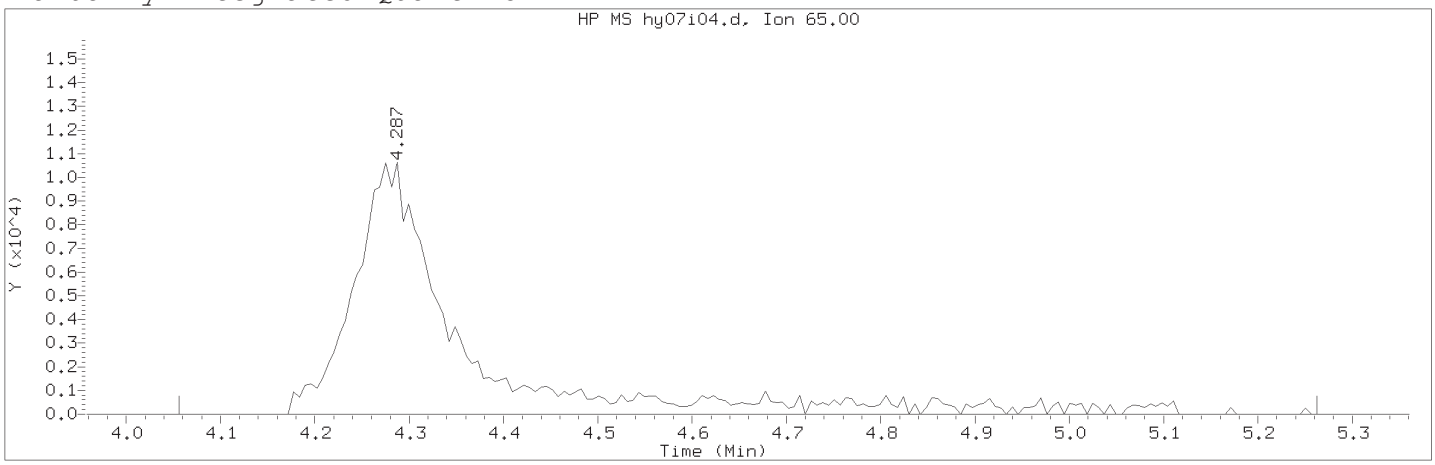
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 396		
Retention Time (minutes)	: 4.001		
Quant Ion	: 41.00		
Area	: 171990		
On-column Amount (ng)	: 74.8241		
Integration start scan	: 381	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

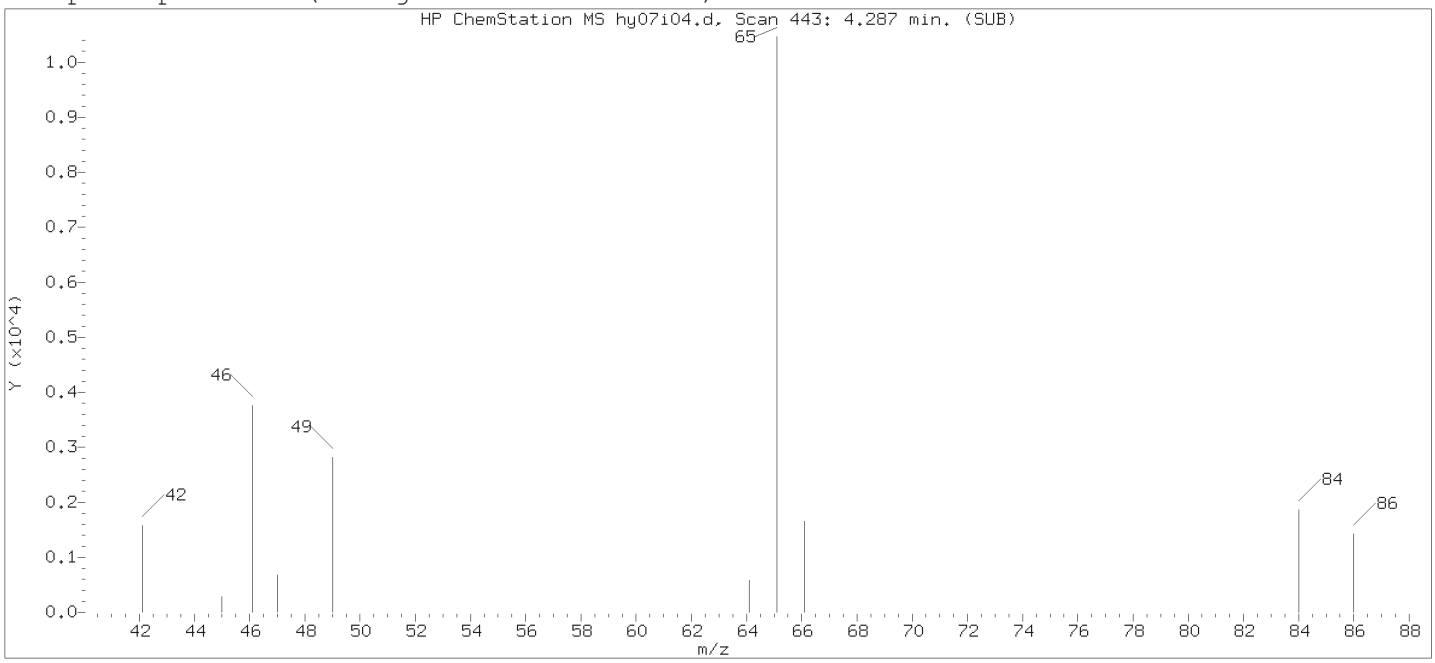
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 443
Retention Time (minutes): 4.287
Quant Ion : 65.00
Area (flag) : 83788M
On-Column Amount (ng) : 50.0000
Integration start scan : 404 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

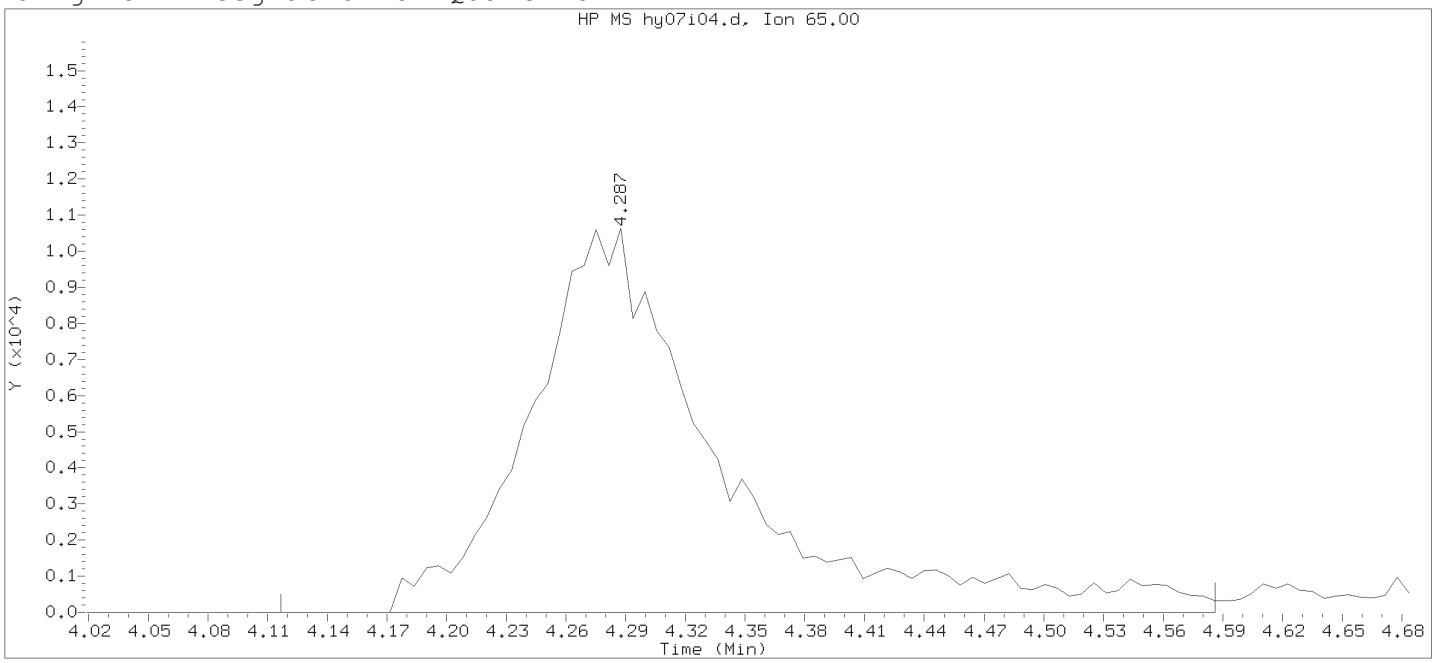
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

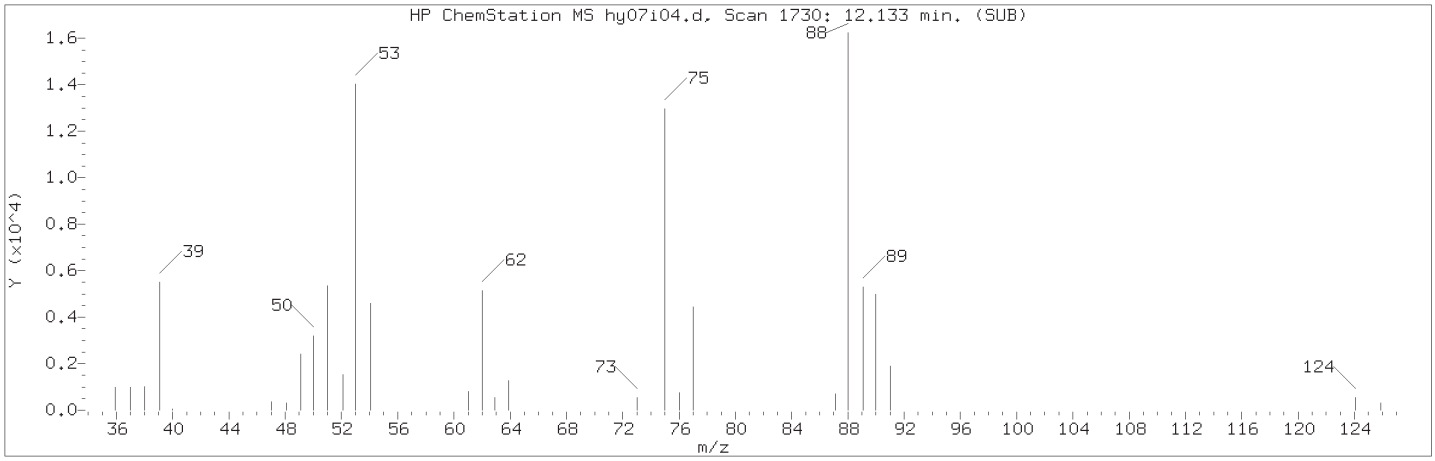
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:58
Date, time and analyst ID of latest file update: 07-May-2016 13:58 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

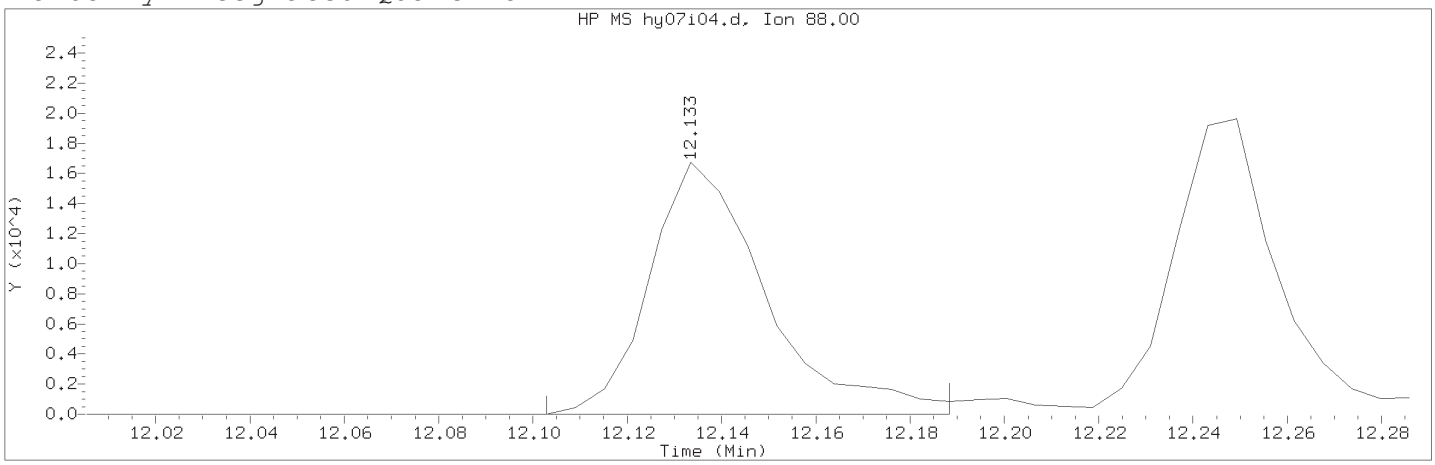
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 443
Retention Time (minutes): 4.287
Quant Ion : 65.00
Area : 71081
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 491
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

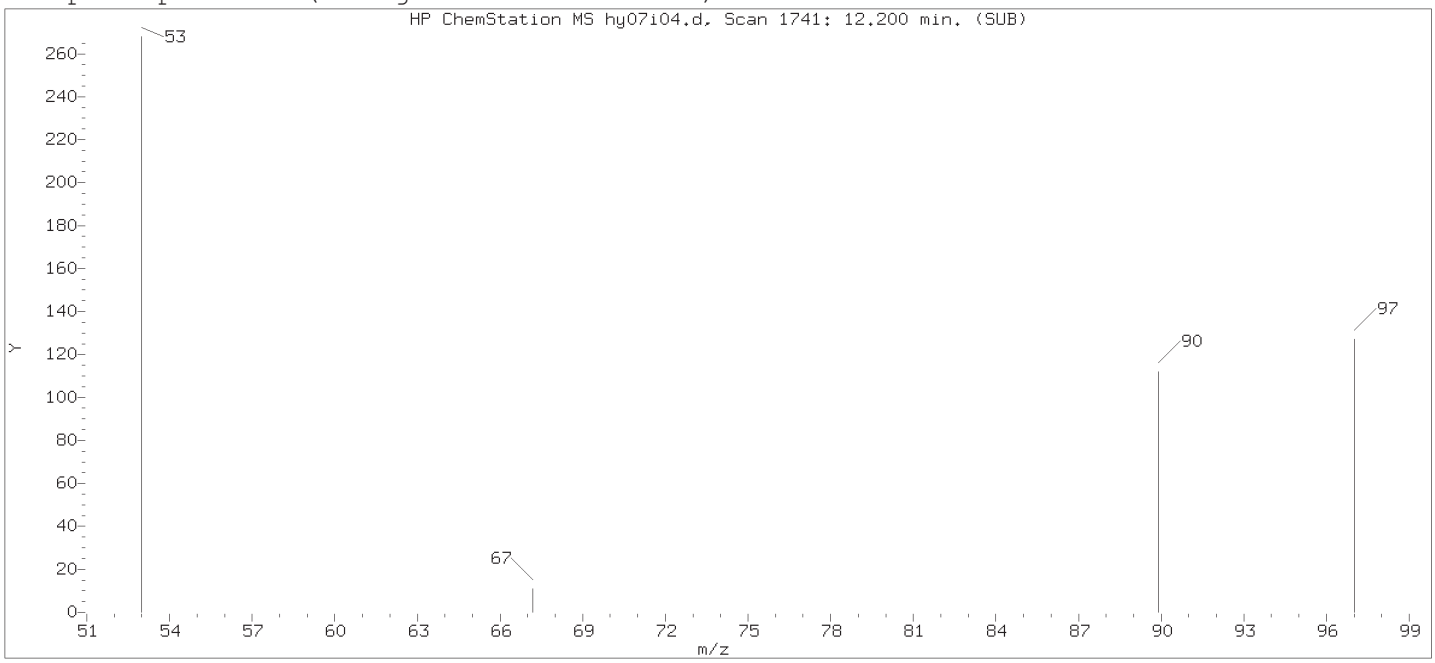
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1730
Retention Time (minutes): 12.133
Quant Ion : 88.00
Area (flag) : 28591A
On-Column Amount (ng) : 3.9533
Integration start scan : 1724 Integration stop scan: 1738
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

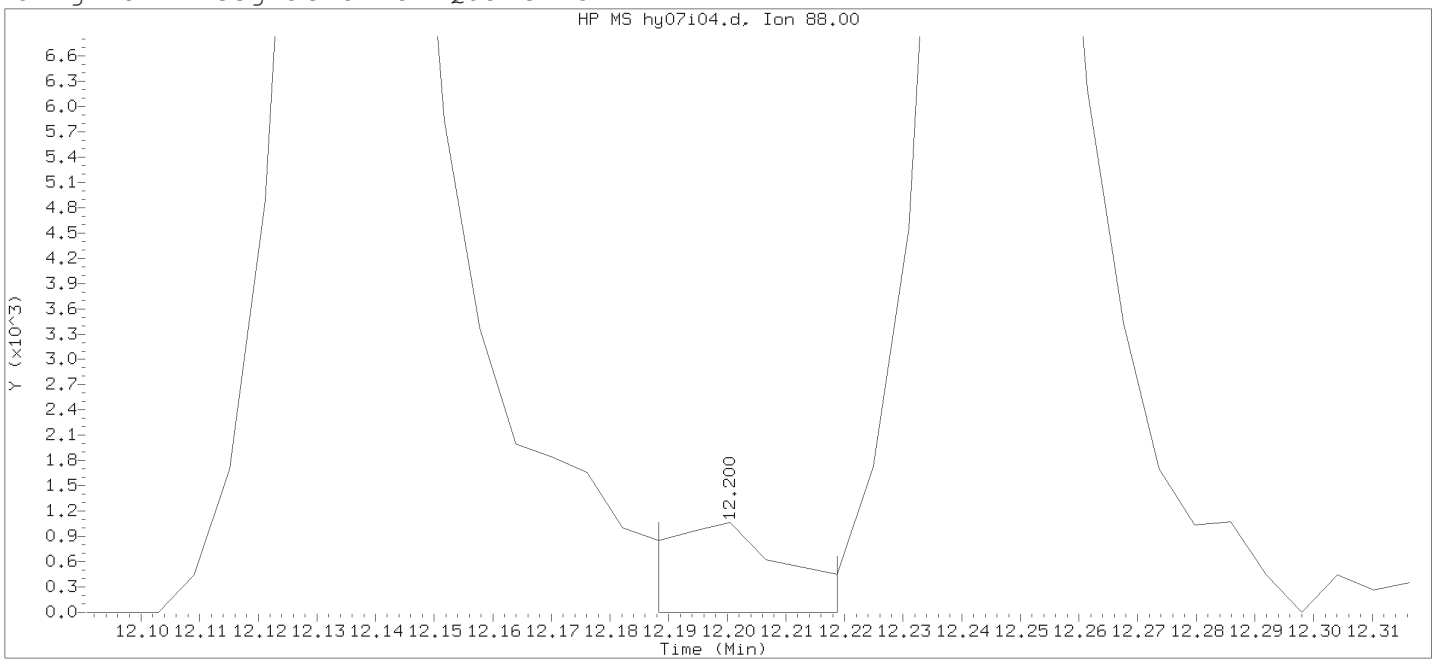
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



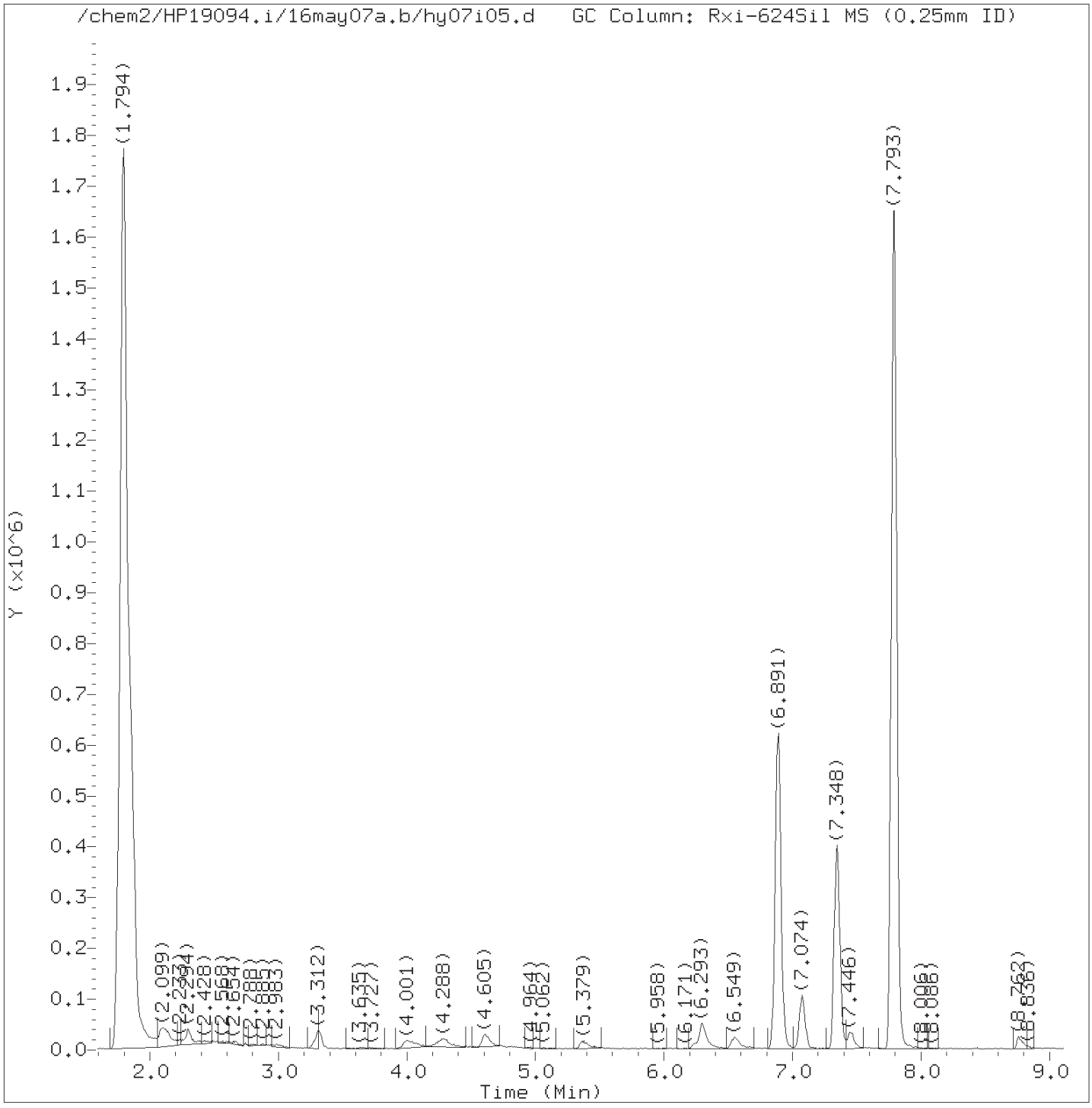
Data File: /chem2/HP19094.i/16may07a.b/hy07i04.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 13:58
Date, time and analyst ID of latest file update: 07-May-2016 13:58 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1741
Retention Time (minutes): 12.200
Quant Ion : 88.00
Area : 1400
On-column Amount (ng) : 0.2147
Integration start scan : 1738 Integration stop scan: 1743
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016 15:28



Total Ion Chromatogram (TIC)

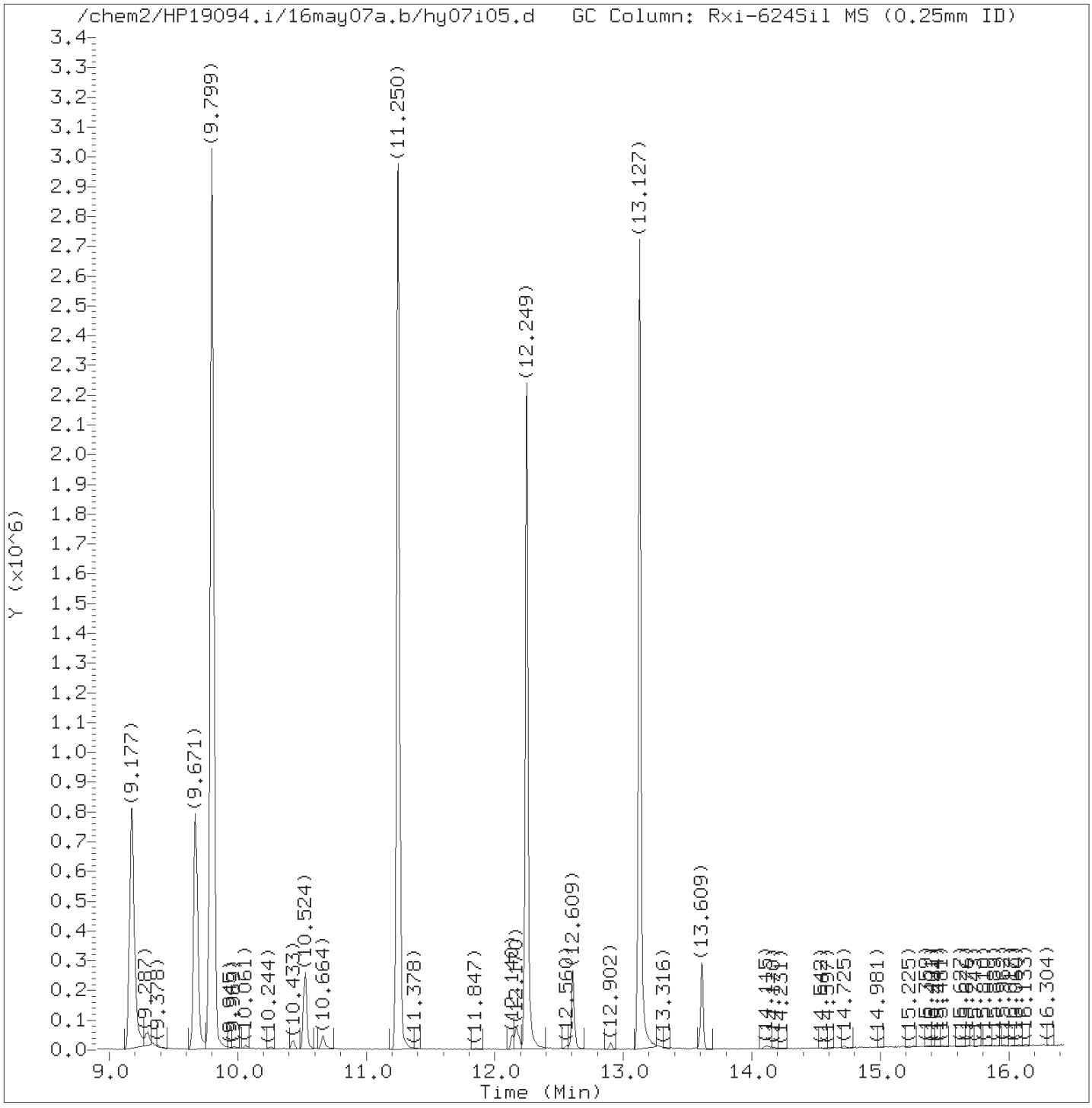
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

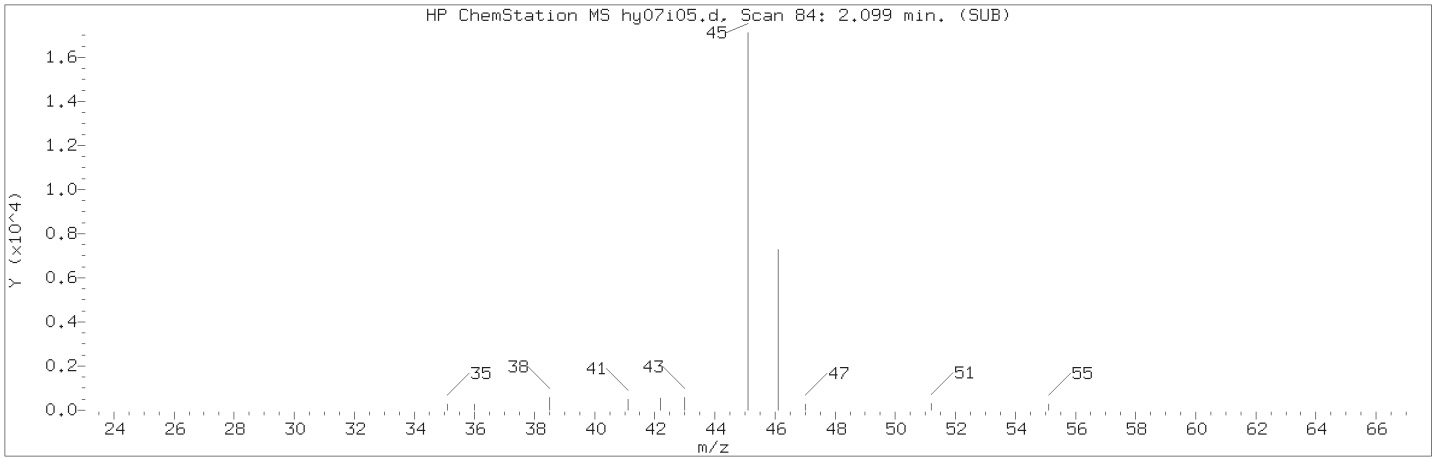
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	77220M	0.977
25) Acetonitrile	(1)	4.007	41	112825M	39.709
26)*t-Butyl Alcohol-d10	(1)	4.275	65	75137M	50.000
36) Vinyl Acetate	(2)	5.379	43	53841M	0.863
43) Methyl Acrylate	(2)	6.293	55	113210M	4.568
53) 1-Chlorobutane	(2)	7.074	56	123665	0.993
63)*Fluorobenzene	(2)	7.793	96	2301878	10.000
77) Chloroacetonitrile	(2)	9.232	75	48649M	45.787
78) 2-Chloroethyl vinyl ether	(2)	9.299	63	20928	0.950
97)*Chlorobenzene-d5	(3)	11.250	117	1698133	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	11220	1.730
112) Cyclohexanone	(1)	12.170	55	36552M	46.105
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	738464	10.000
142) Hexachloroethane	(4)	13.609	117	48112	0.975

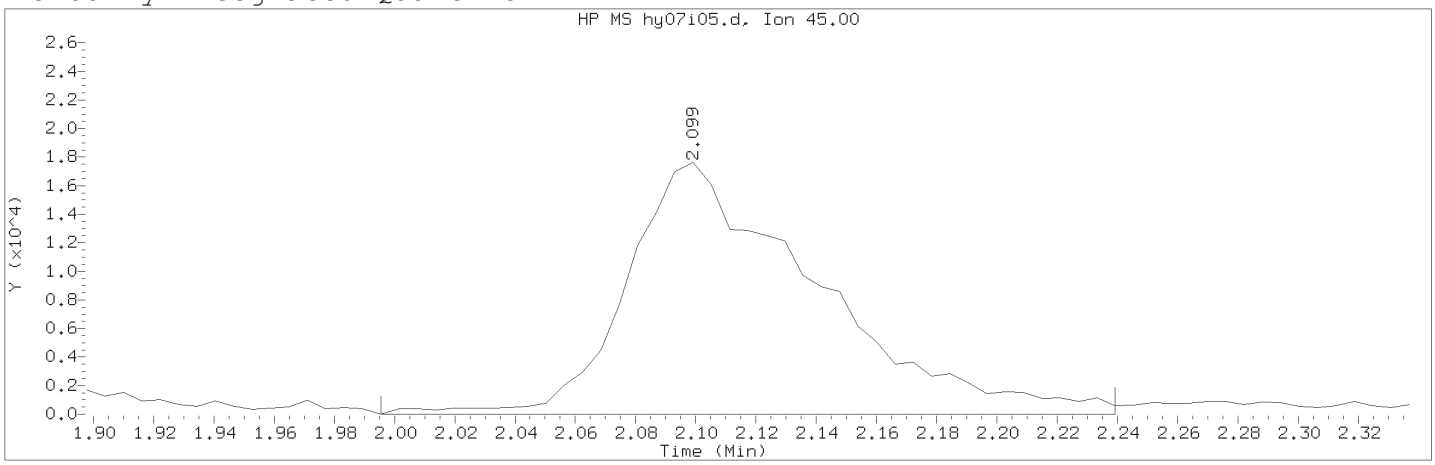
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

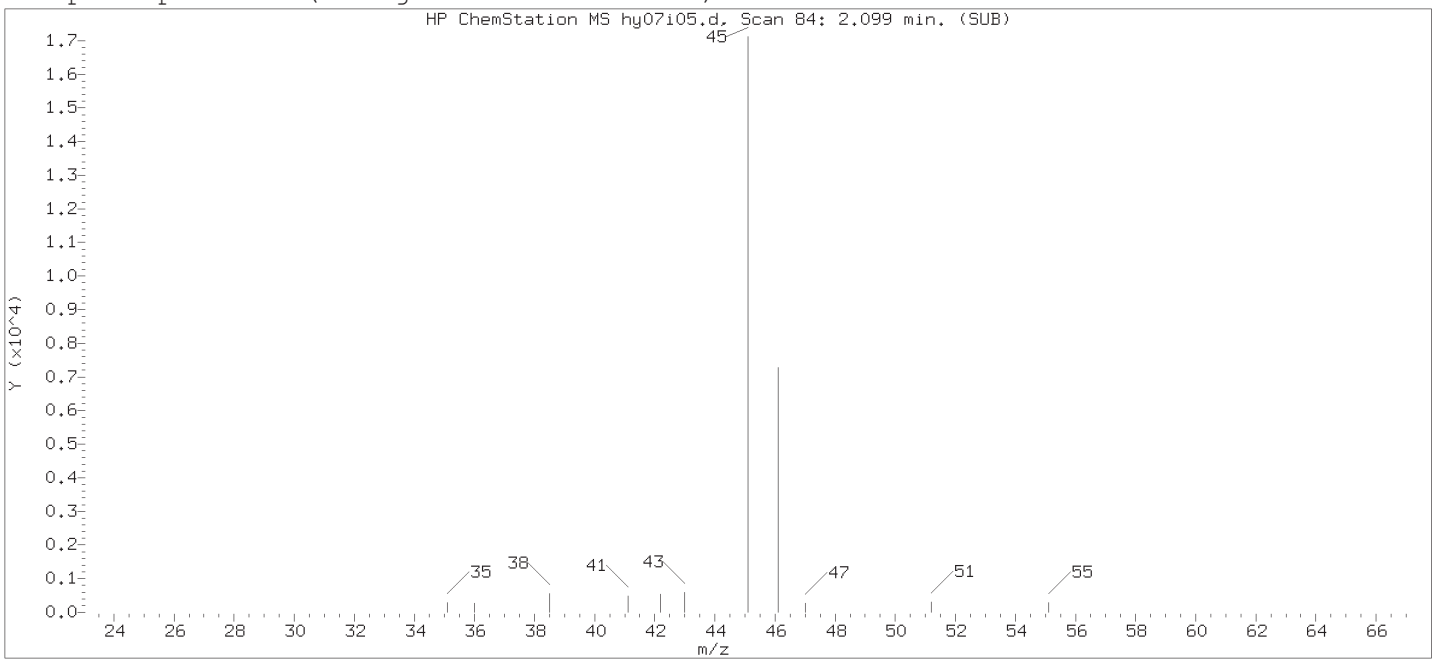
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 77220M
On-Column Amount (ng) : 0.9768
Integration start scan : 66 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

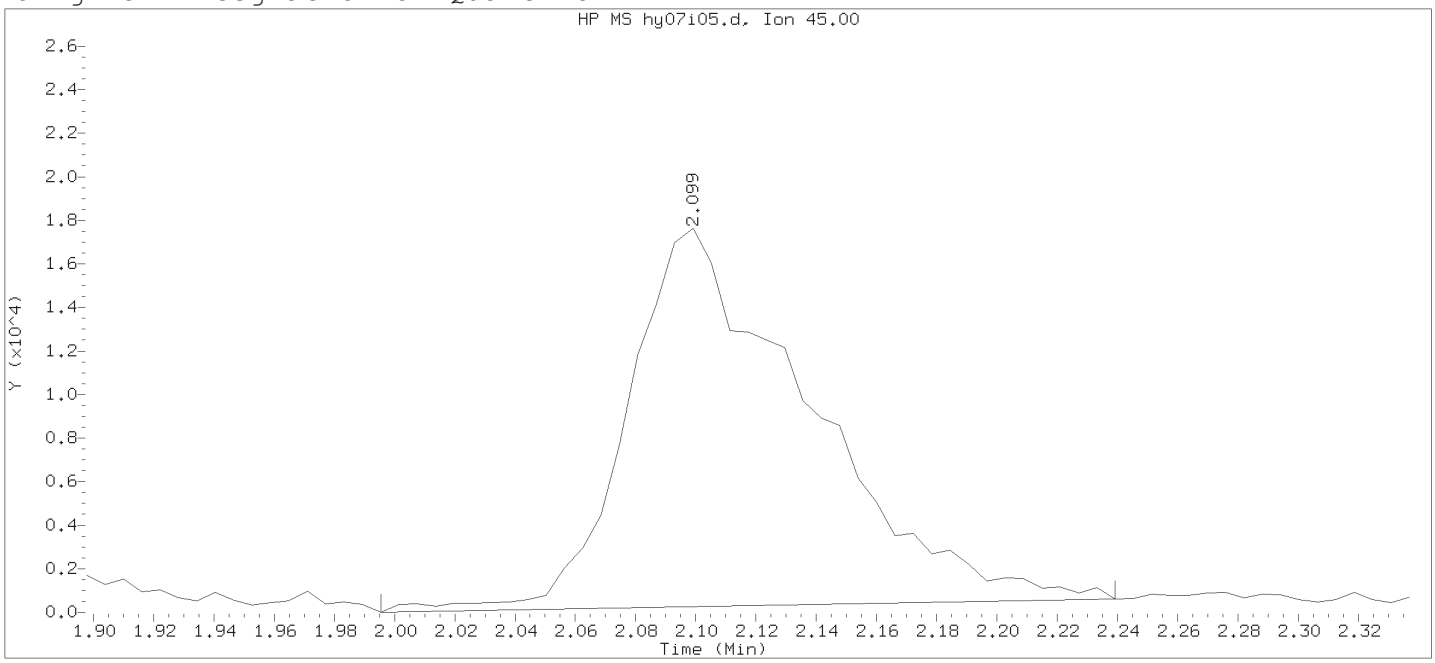
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

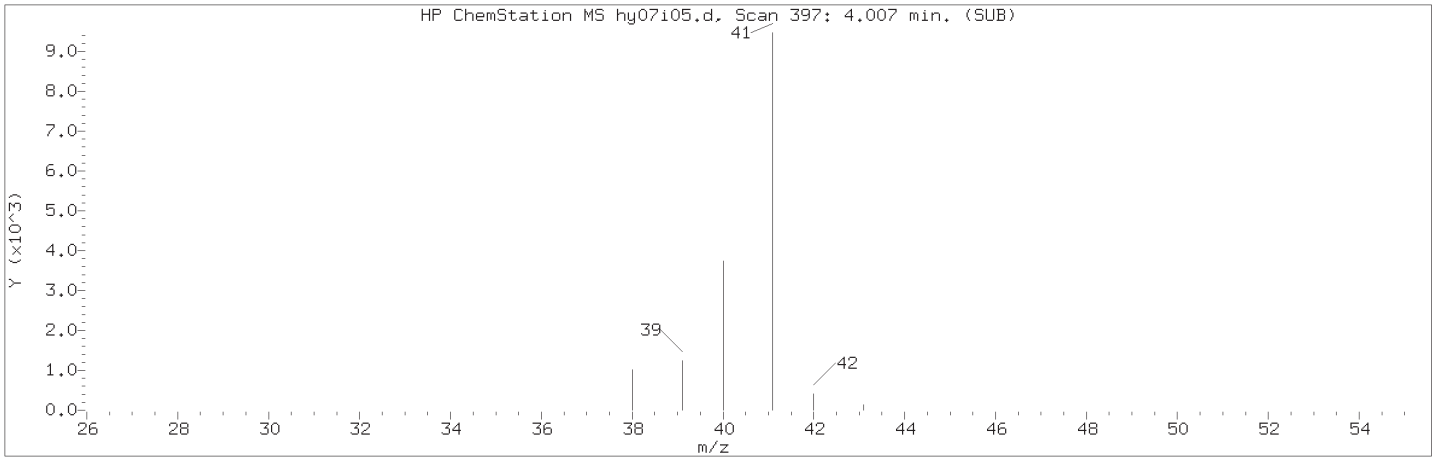
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

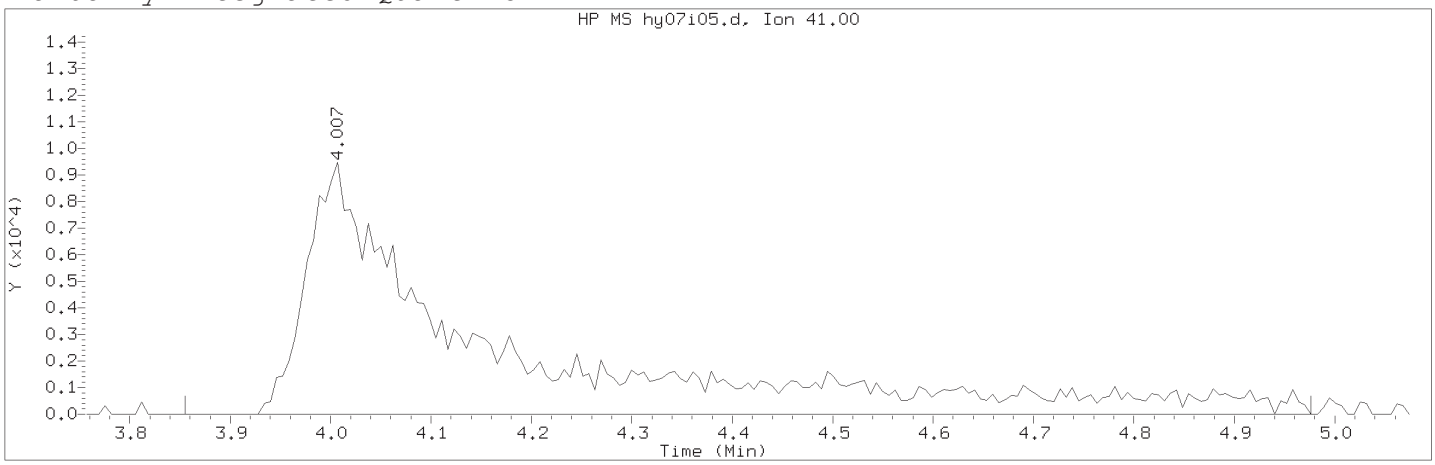
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 72708		
On-column Amount (ng)	: 1.0684		
Integration start scan	: 66	Integration stop scan:	106
Y at integration start	: 0	Y at integration end:	602

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

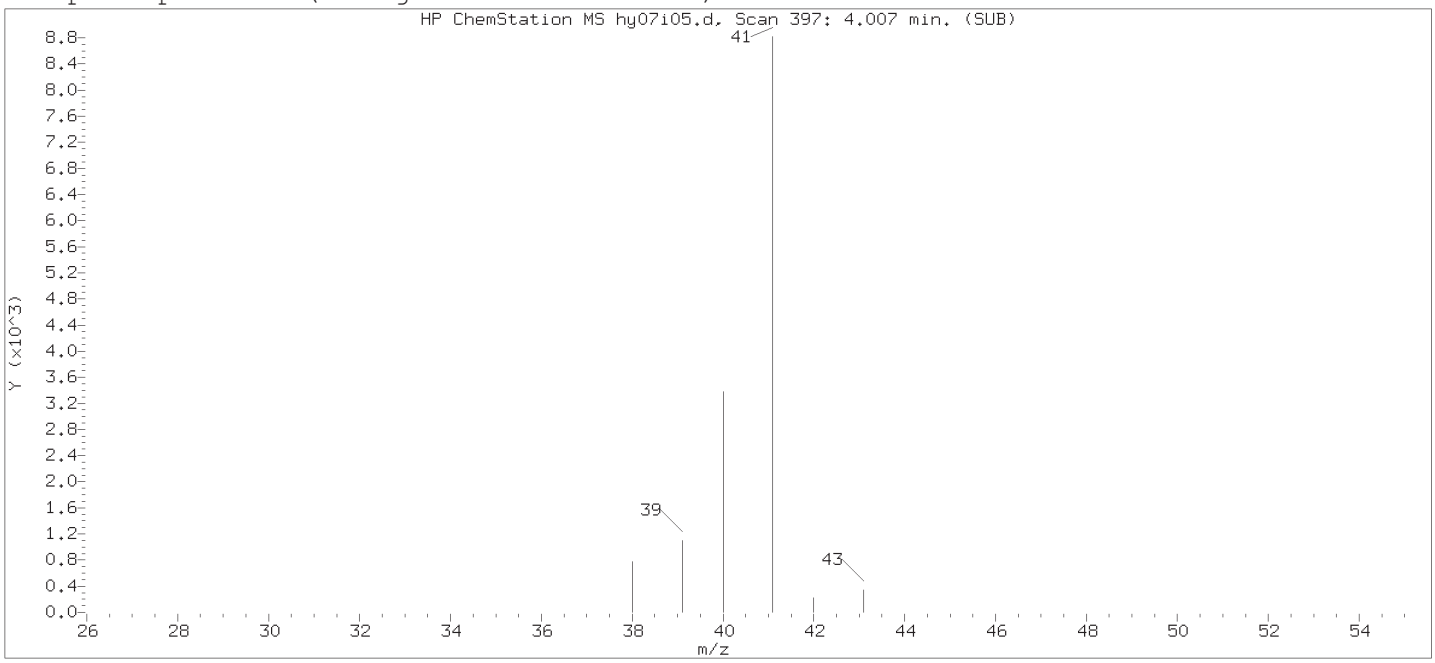
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 397
Retention Time (minutes): 4.007
Quant Ion : 41.00
Area (flag) : 112825M
On-Column Amount (ng) : 39.7087
Integration start scan : 371 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

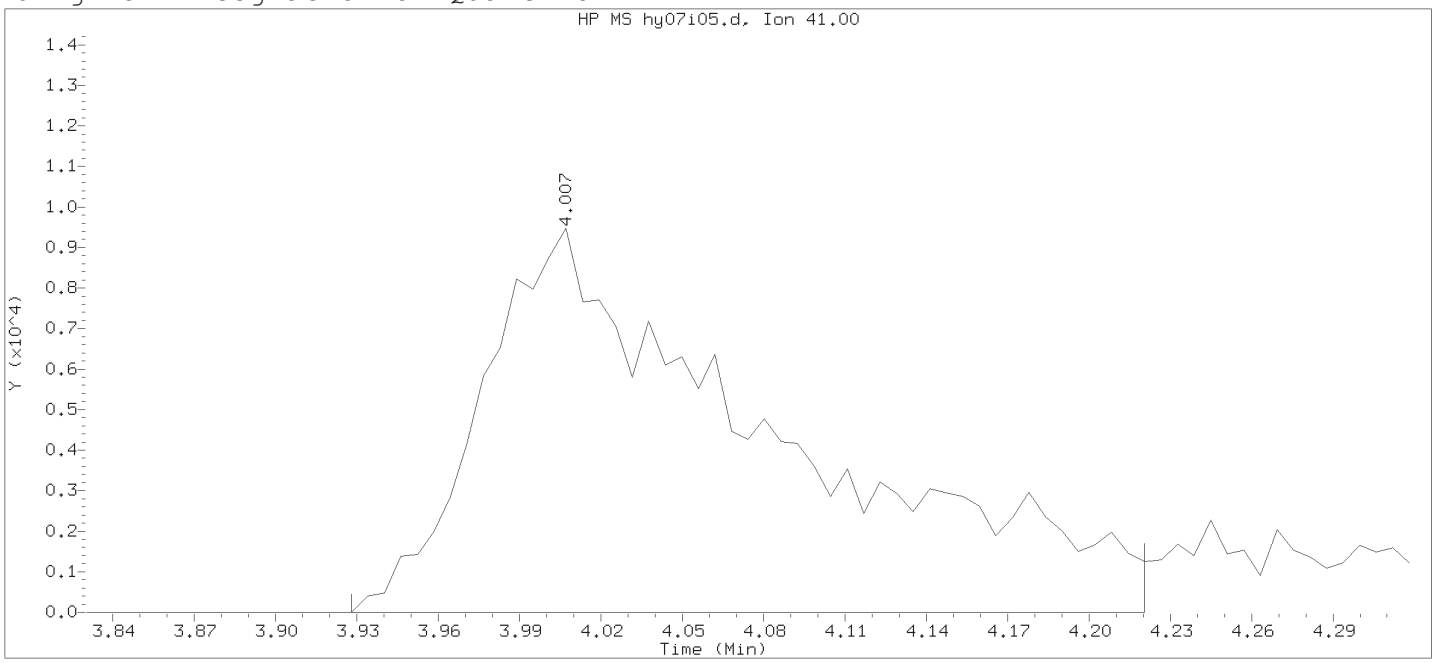
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

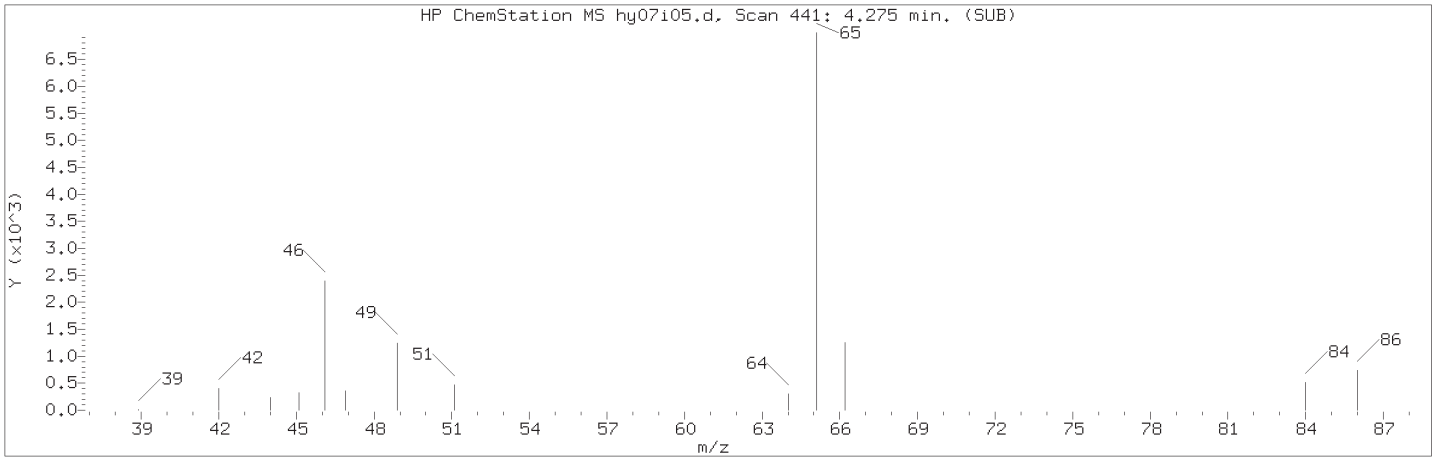
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

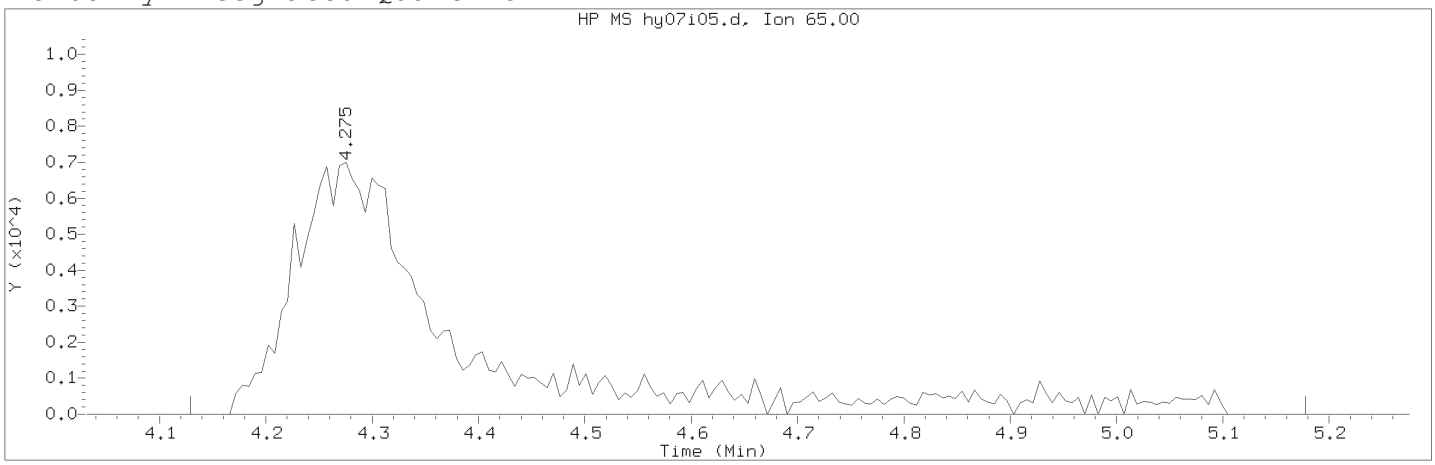
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 397		
Retention Time (minutes)	: 4.007		
Quant Ion	: 41.00		
Area	: 70350		
On-column Amount (ng)	: 31.3094		
Integration start scan	: 383	Integration stop scan:	431
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

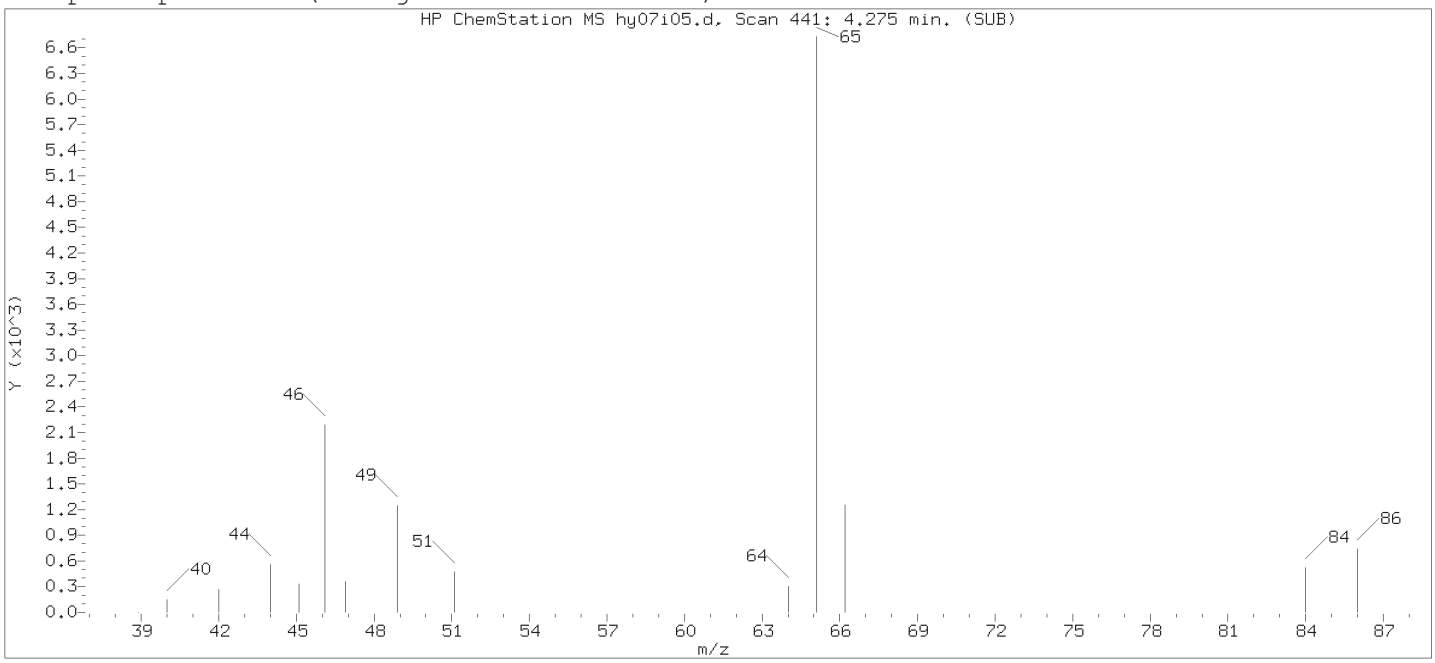
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 75137M
On-Column Amount (ng) : 50.0000
Integration start scan : 416 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

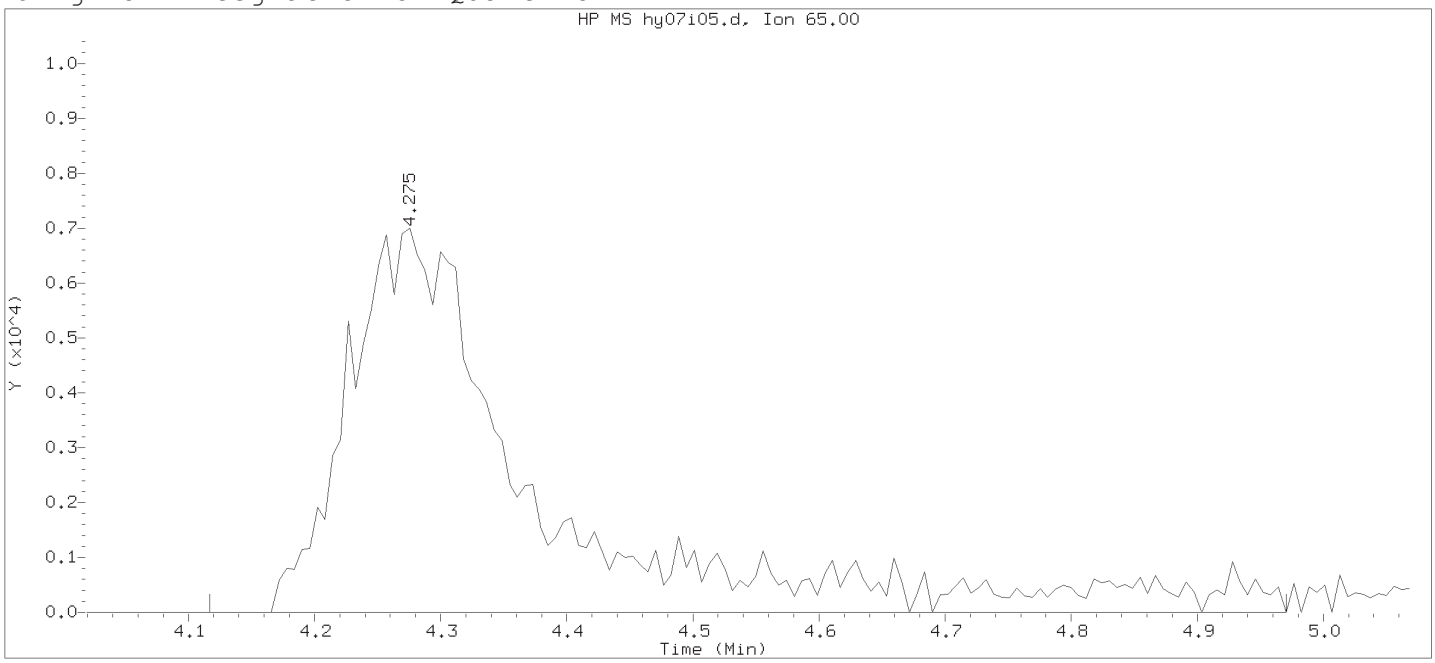
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

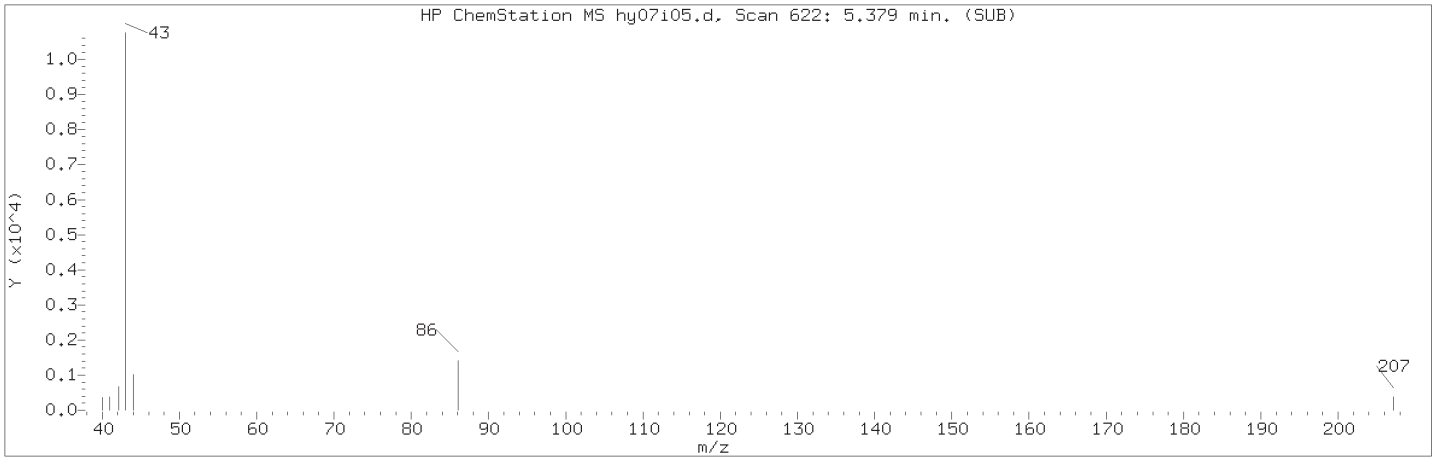
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

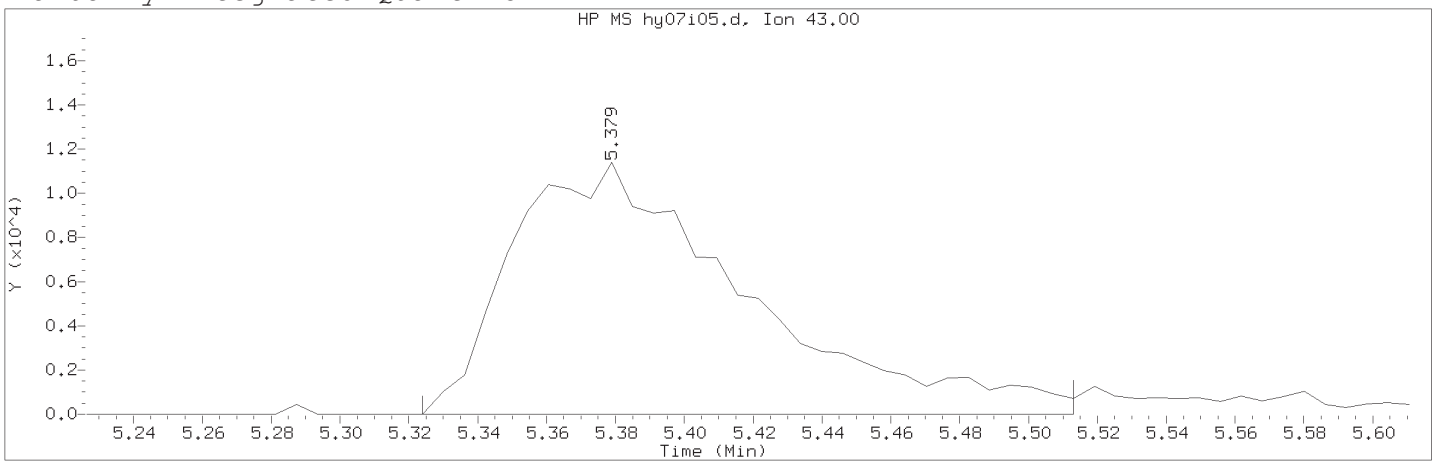
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area : 72248
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 554
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

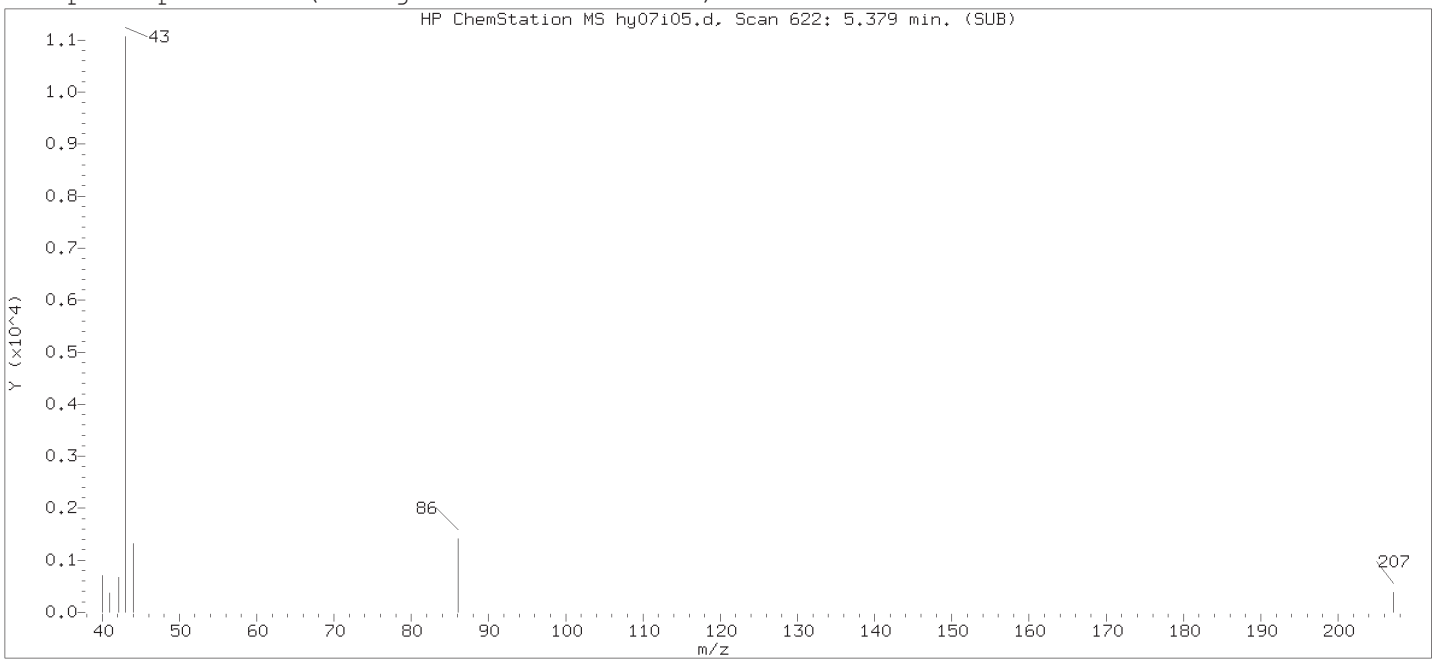
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 622
Retention Time (minutes): 5.379
Quant Ion : 43.00
Area (flag) : 53841M
On-Column Amount (ng) : 0.8635
Integration start scan : 612 Integration stop scan: 643
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

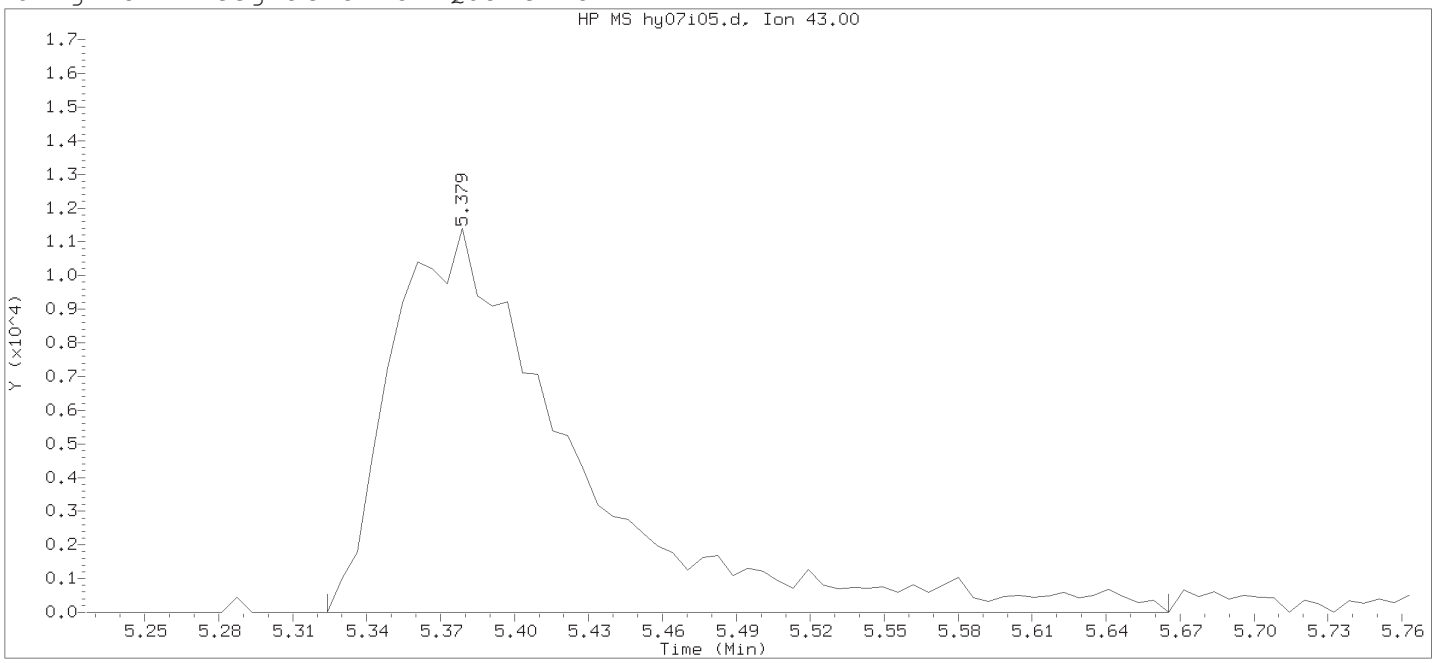
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

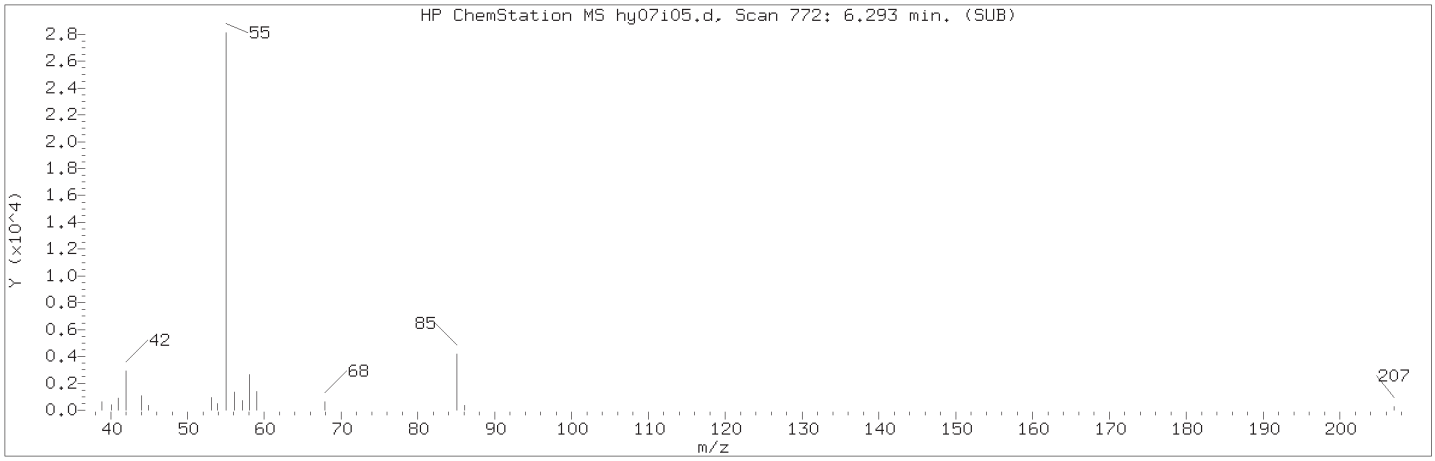
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

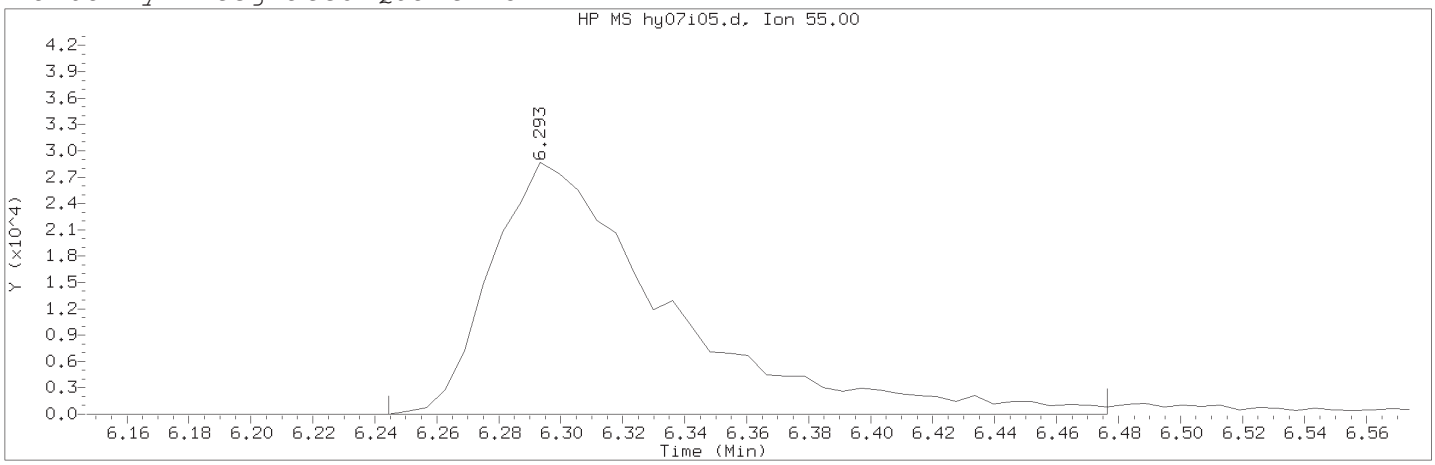
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 622		
Retention Time (minutes)	: 5.379		
Quant Ion	: 43.00		
Area	: 59243		
On-column Amount (ng)	: 0.8214		
Integration start scan	: 612	Integration stop scan:	668
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

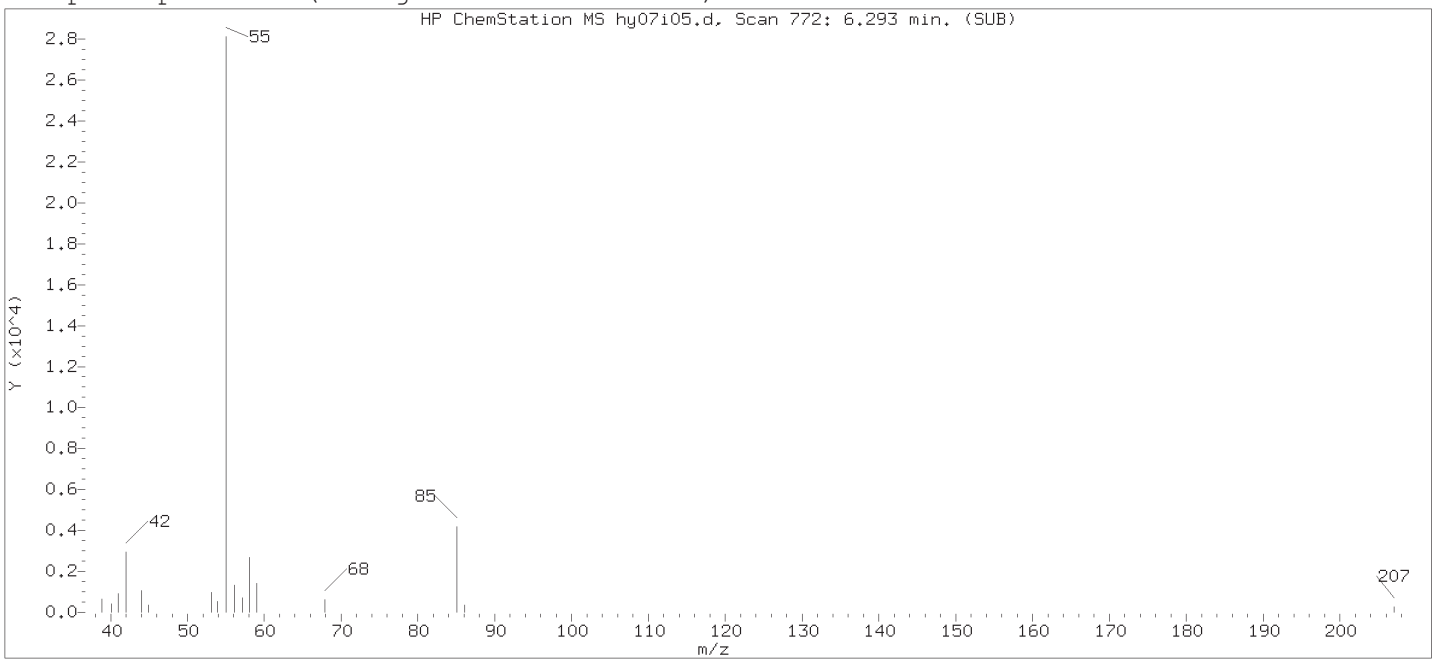
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 772
Retention Time (minutes): 6.293
Quant Ion : 55.00
Area (flag) : 113210M
On-Column Amount (ng) : 4.5682
Integration start scan : 763 Integration stop scan: 801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

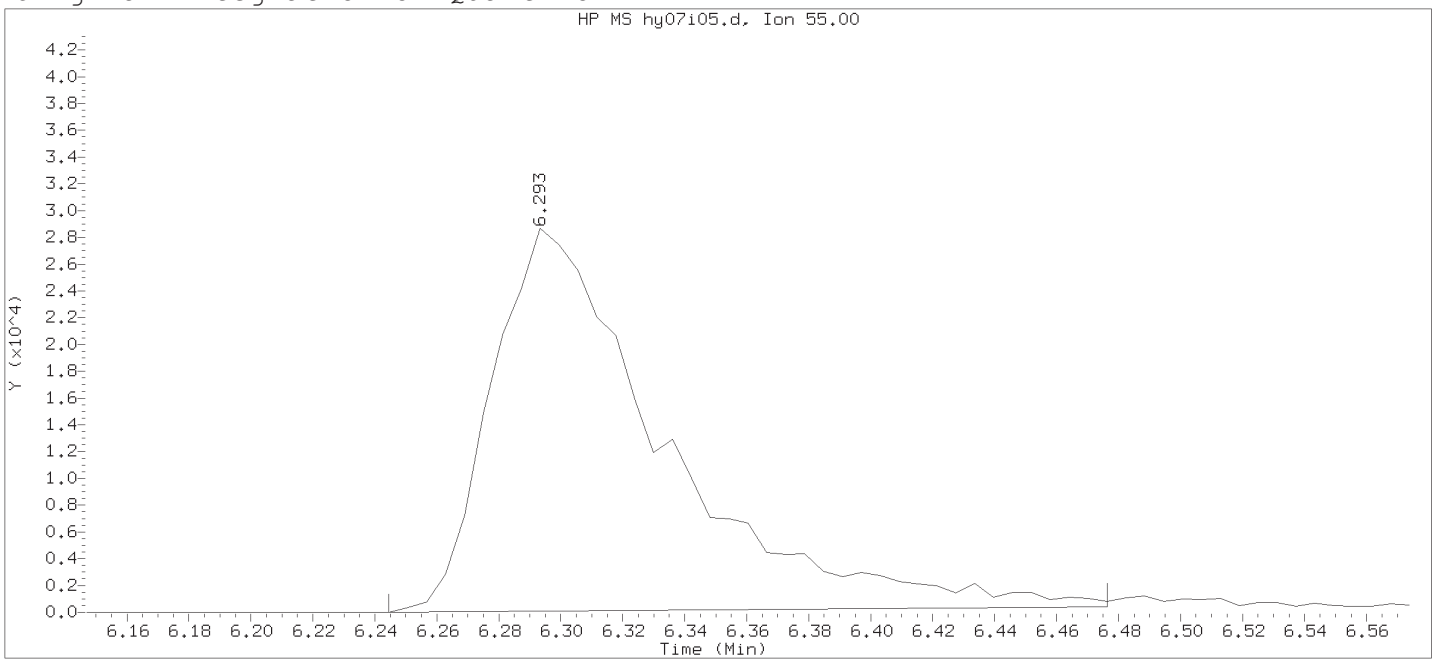
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

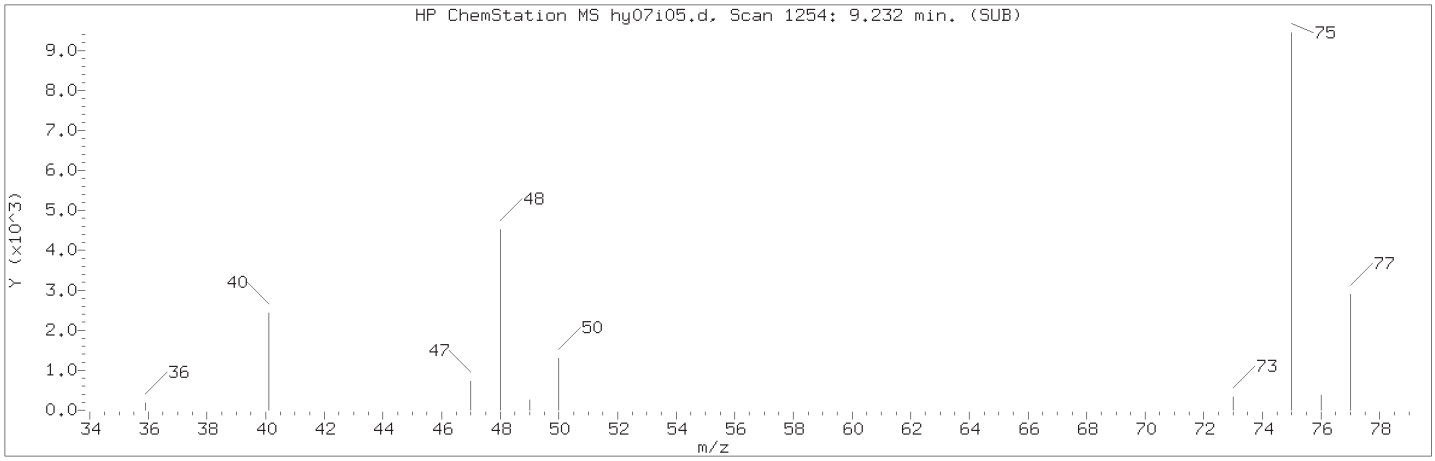
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

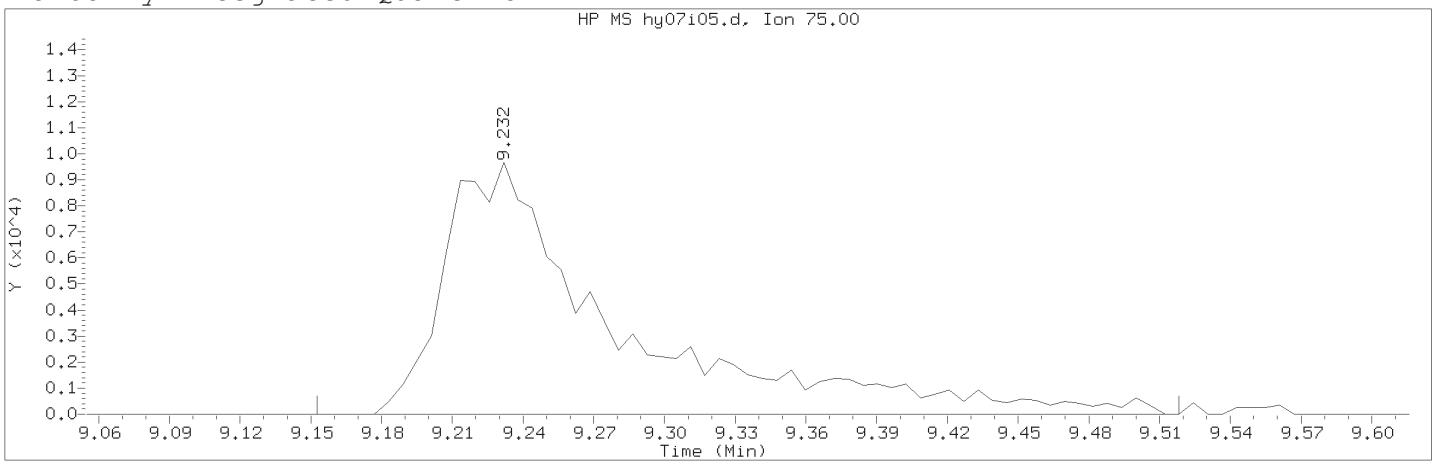
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 772
Retention Time (minutes): 6.293
Quant Ion : 55.00
Area : 110252
On-column Amount (ng) : 4.1059
Integration start scan : 763 Integration stop scan: 801
Y at integration start : 0 Y at integration end: 404

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

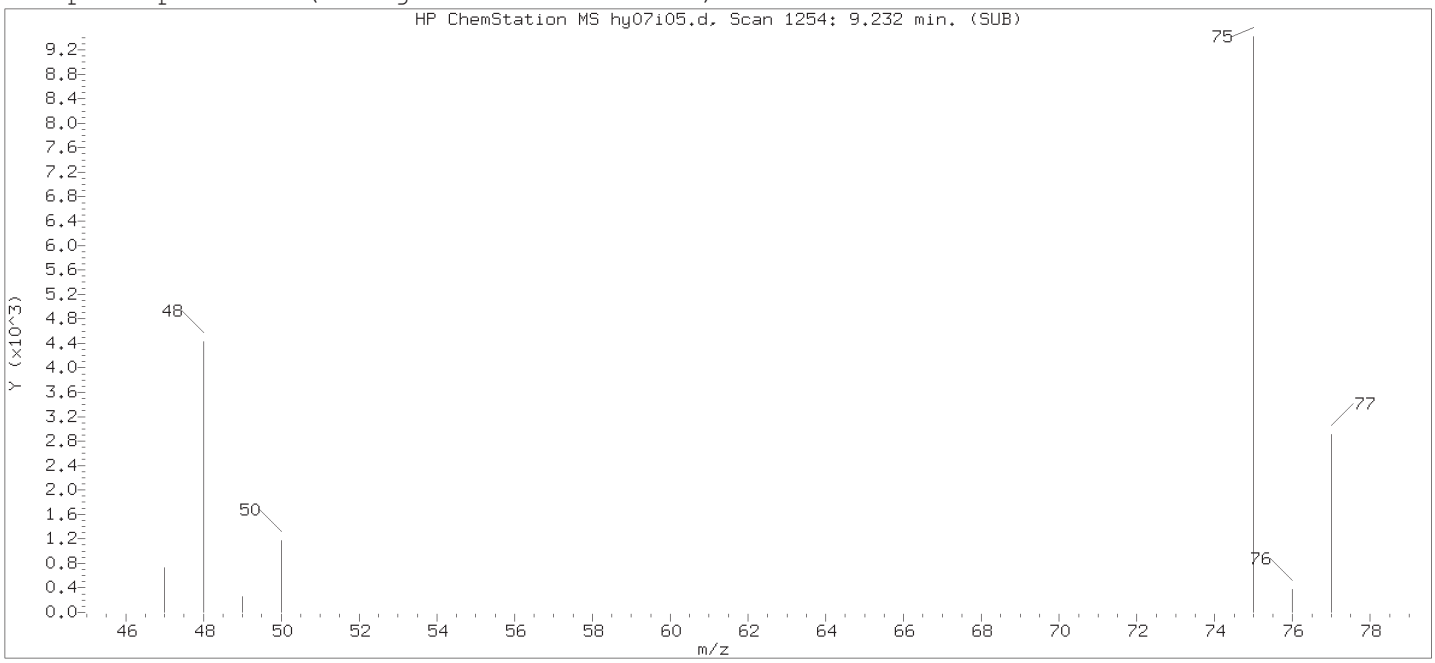
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1254
Retention Time (minutes): 9.232
Quant Ion : 75.00
Area (flag) : 48649M
On-Column Amount (ng) : 45.7873
Integration start scan : 1240 Integration stop scan: 1300
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

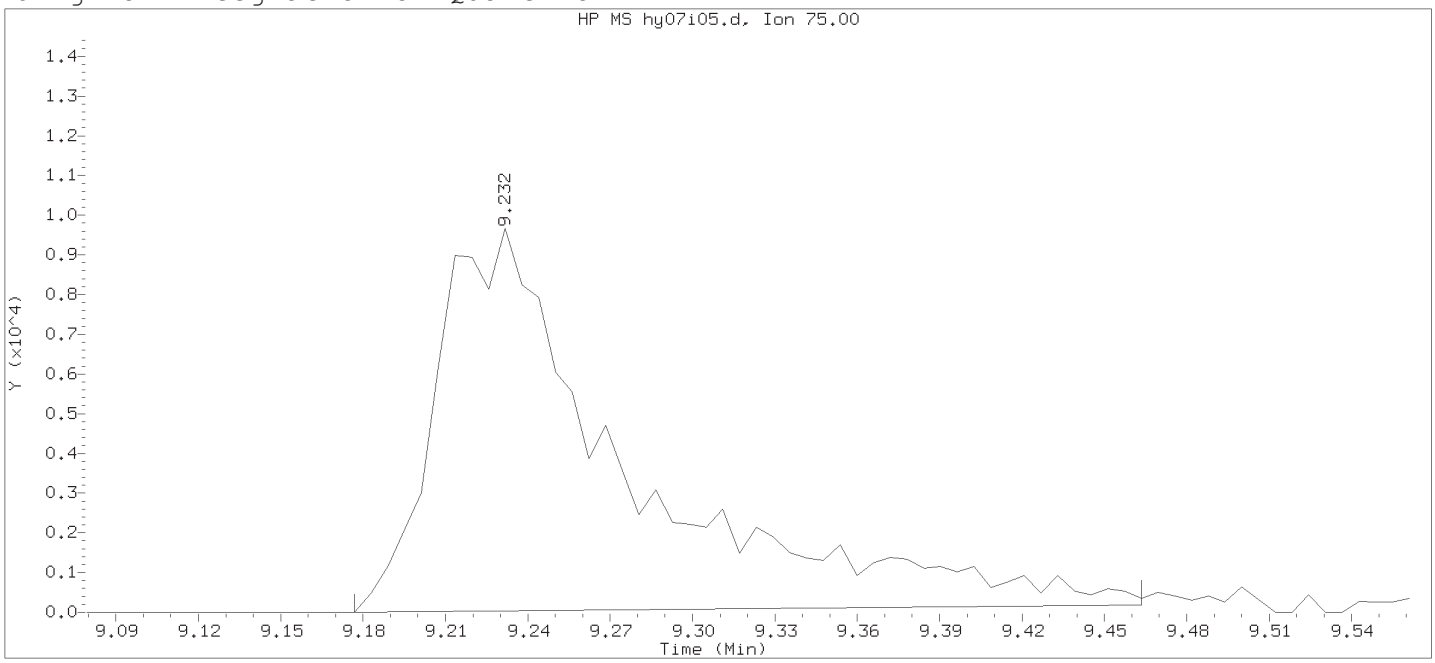
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

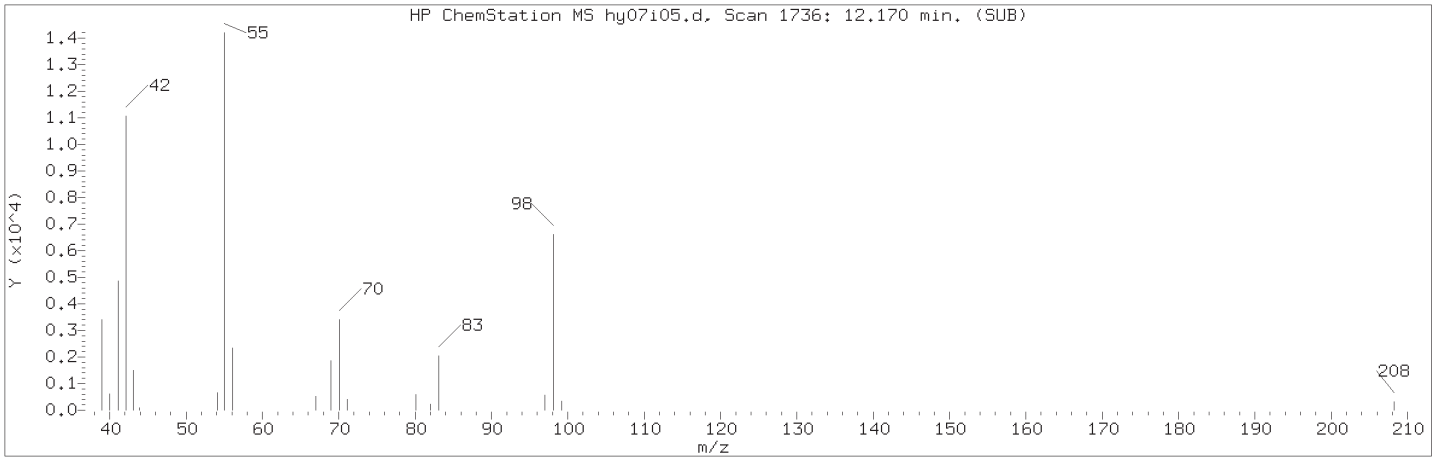
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

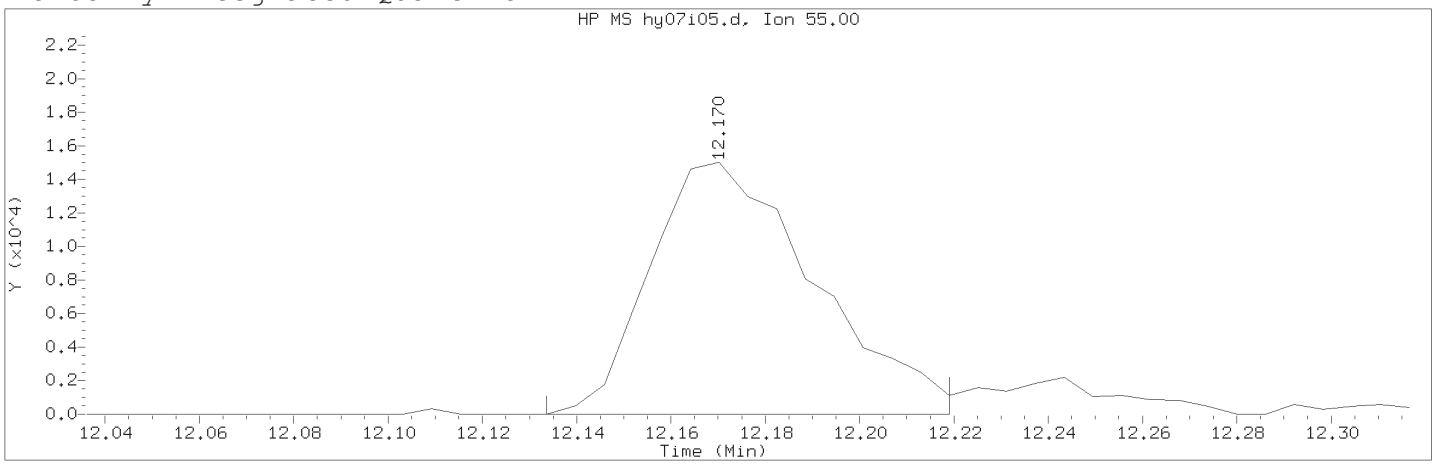
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1254
Retention Time (minutes): 9.232
Quant Ion : 75.00
Area : 46042
On-column Amount (ng) : 40.9536
Integration start scan : 1244 Integration stop scan: 1291
Y at integration start : 0 Y at integration end: 175

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 2016.05.07 15:

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

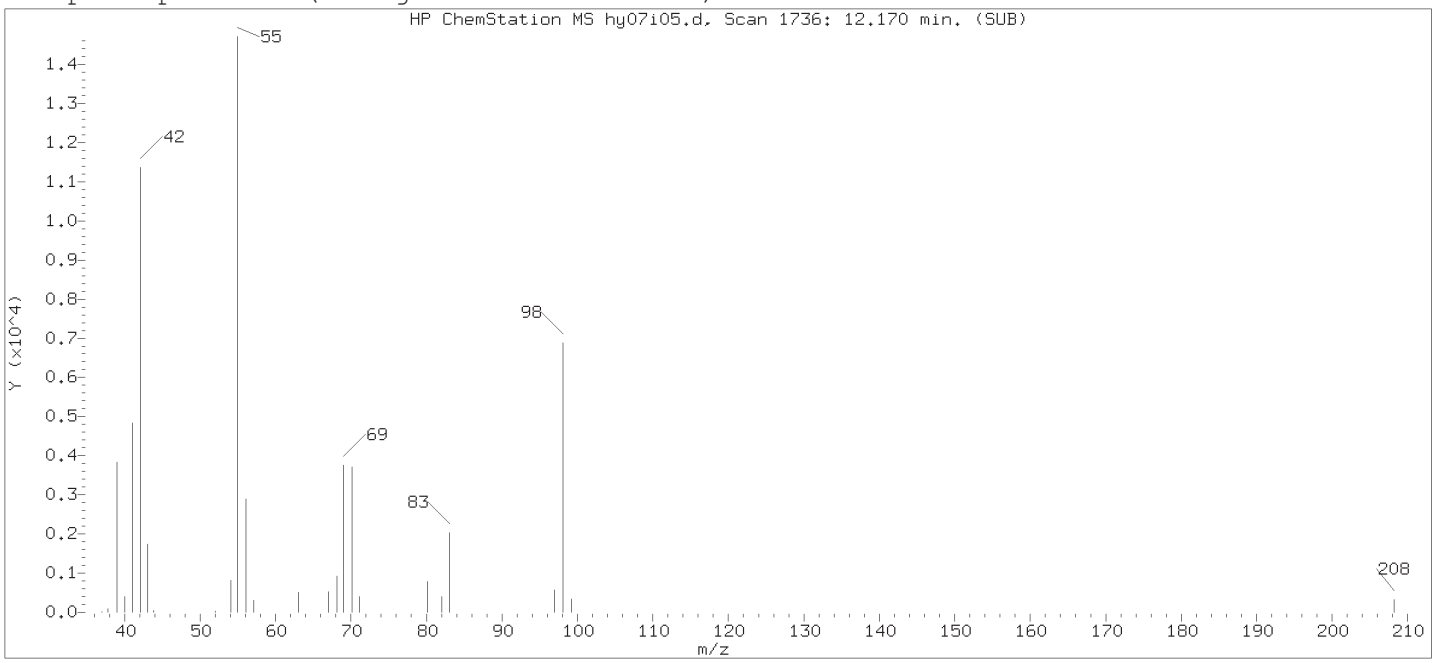
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1736
Retention Time (minutes): 12.170
Quant Ion : 55.00
Area (flag) : 36552M
On-Column Amount (ng) : 46.1053
Integration start scan : 1729 Integration stop scan: 1743
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

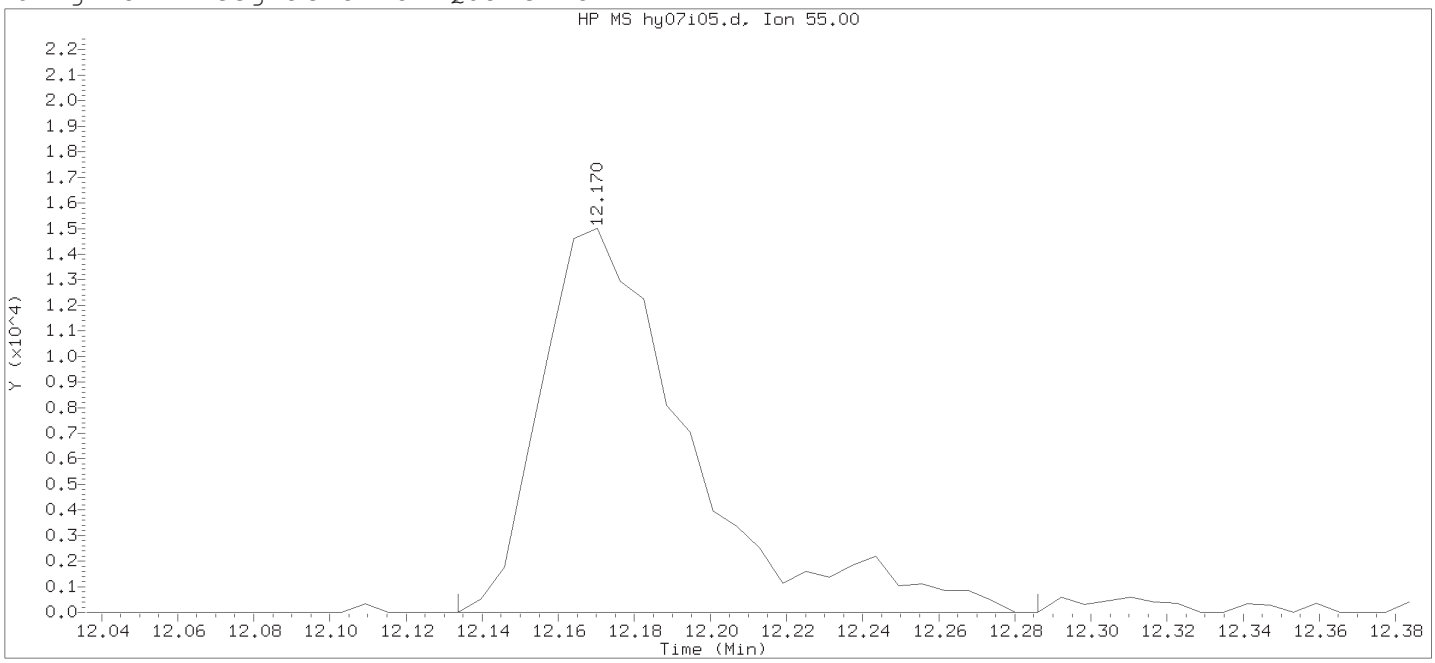
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



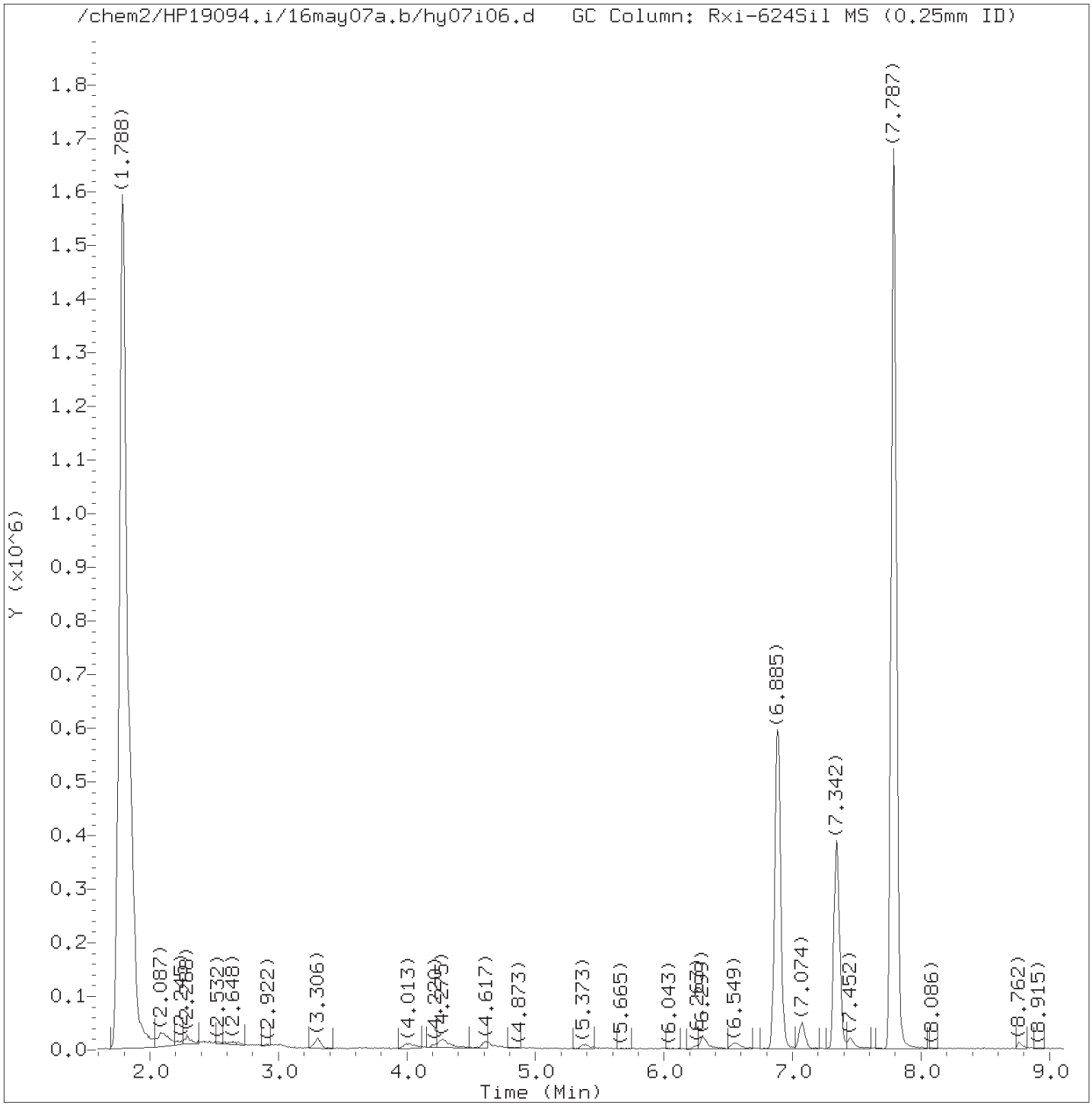
Data File: /chem2/HP19094.i/16may07a.b/hy07i05.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 13:59 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:18
Date, time and analyst ID of latest file update: 07-May-2016 14:18 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1736
Retention Time (minutes): 12.170
Quant Ion : 55.00
Area : 40691
On-column Amount (ng) : 46.1965
Integration start scan : 1729 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

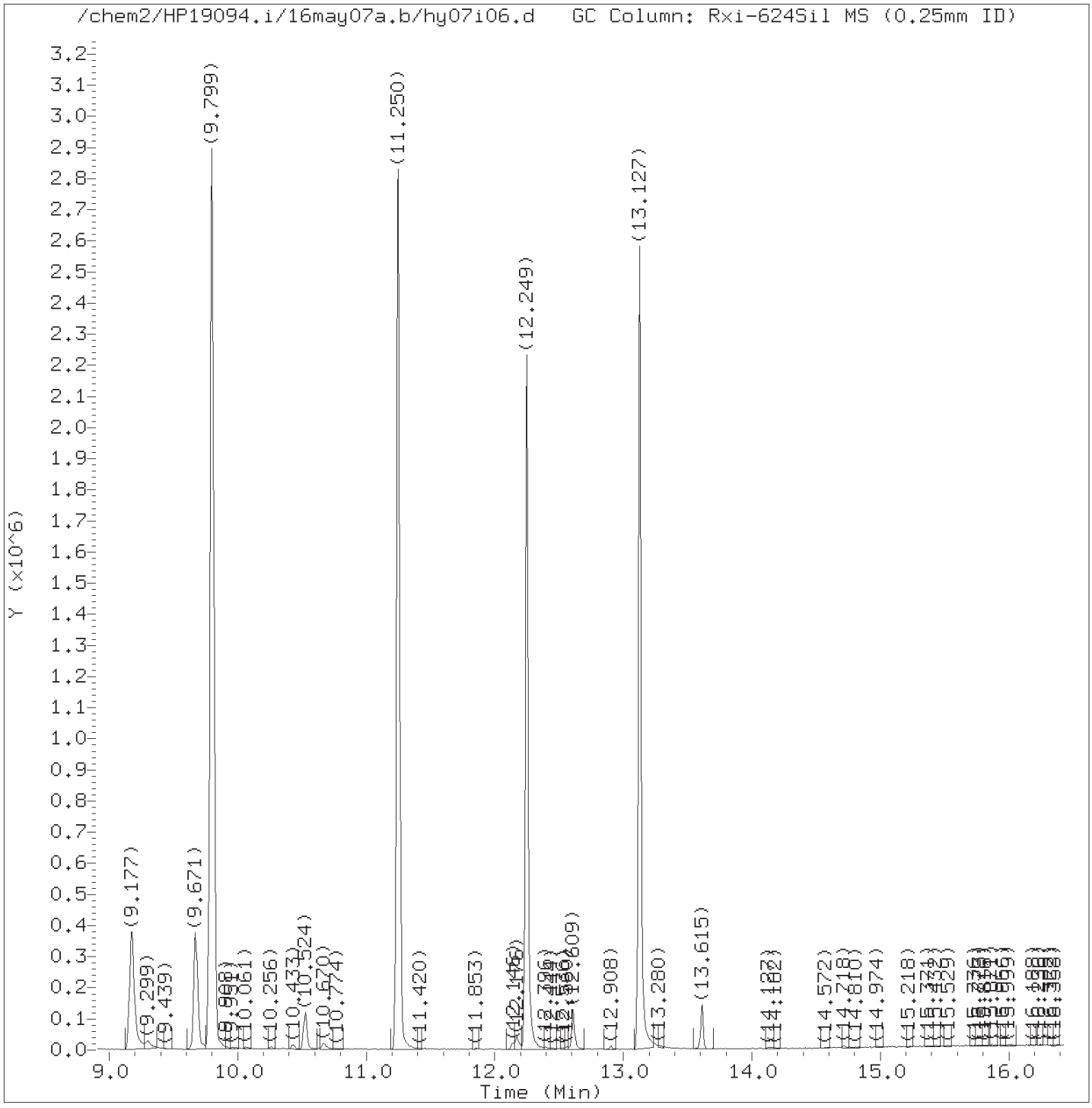
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

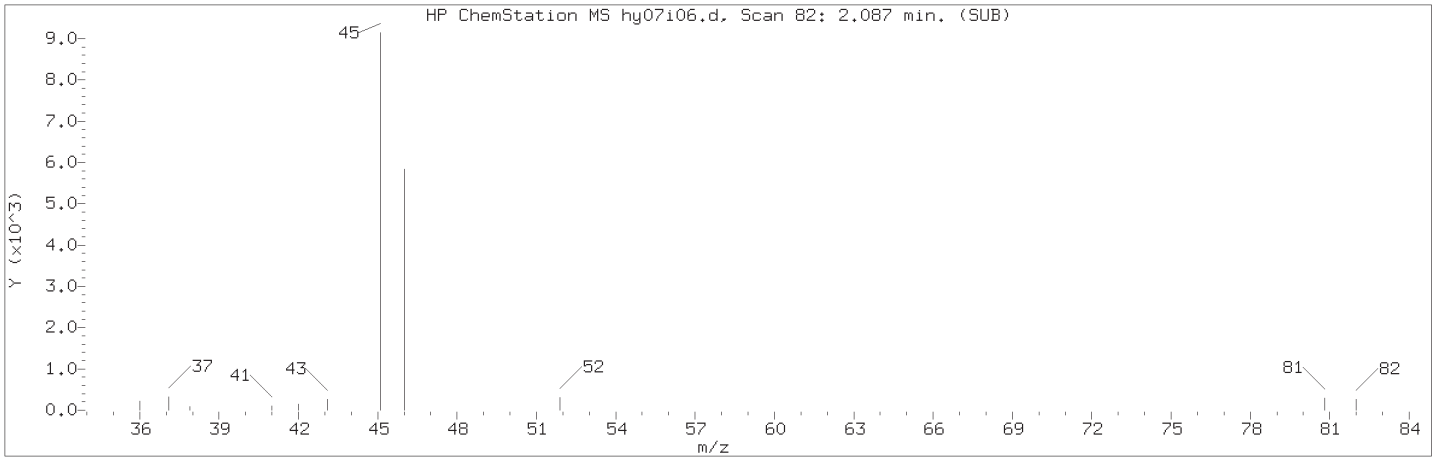
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.087	45	44713M	0.568
25) Acetonitrile	(1)	4.019	41	62209M	22.473
26)*t-Butyl Alcohol-d10	(1)	4.269	65	73203M	50.000
36) Vinyl Acetate	(2)	5.391	43	27420M	0.441
43) Methyl Acrylate	(2)	6.299	55	55138	2.233
53) 1-Chlorobutane	(2)	7.074	56	60158	0.485
63)*Fluorobenzene	(2)	7.787	96	2294017	10.000
77) Chloroacetonitrile	(2)	9.232	75	21891M	20.674
78) 2-Chloroethyl vinyl ether	(2)	9.299	63	9671	0.440
97)*Chlorobenzene-d5	(3)	11.250	117	1649322	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.140	88	5427	0.859
112) Cyclohexanone	(1)	12.170	55	18551	24.018
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	701611	10.000
142) Hexachloroethane	(4)	13.615	117	23072	0.492

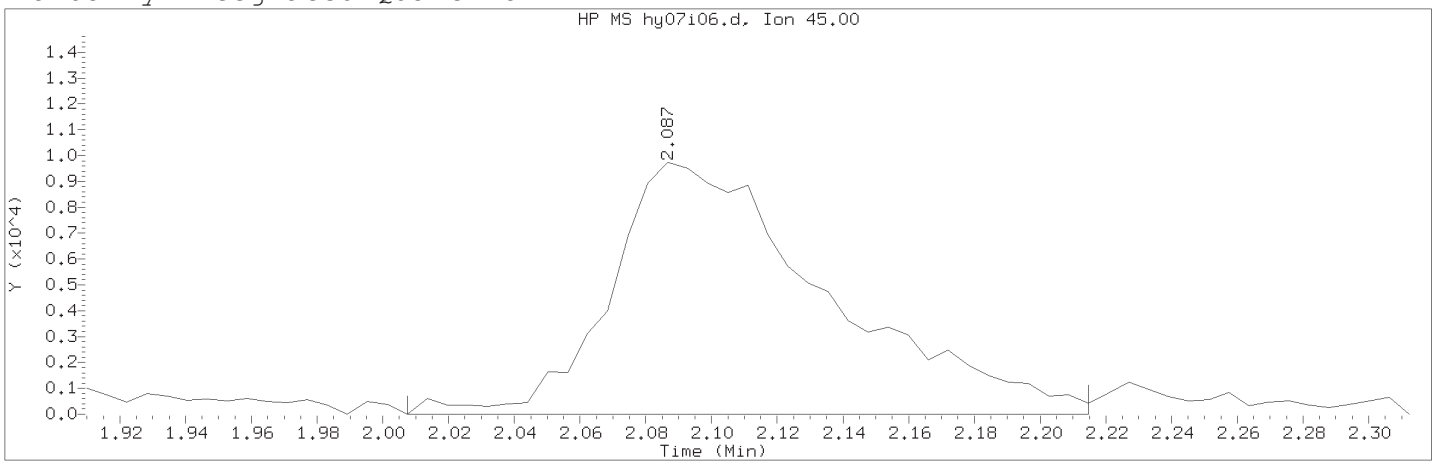
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

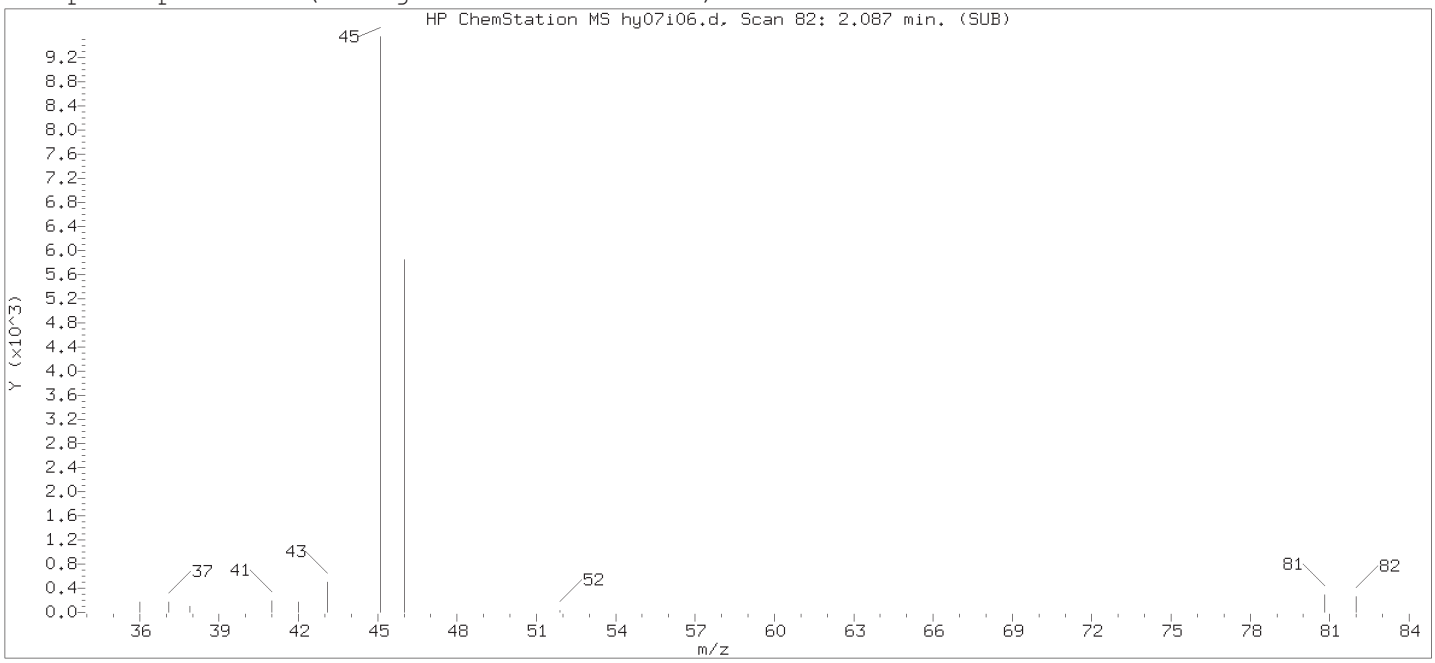
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 82
Retention Time (minutes): 2.087
Quant Ion : 45.00
Area (flag) : 44713M
On-Column Amount (ng) : 0.5675
Integration start scan : 68 Integration stop scan: 102
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

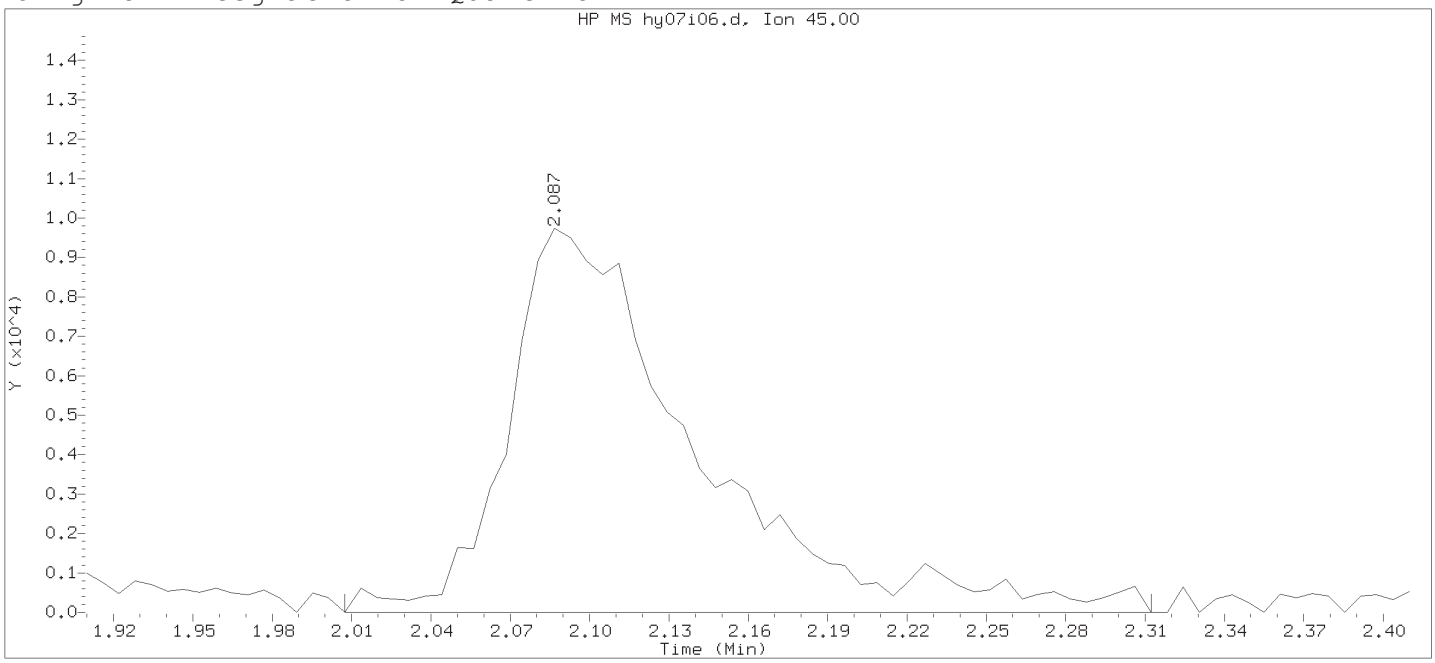
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

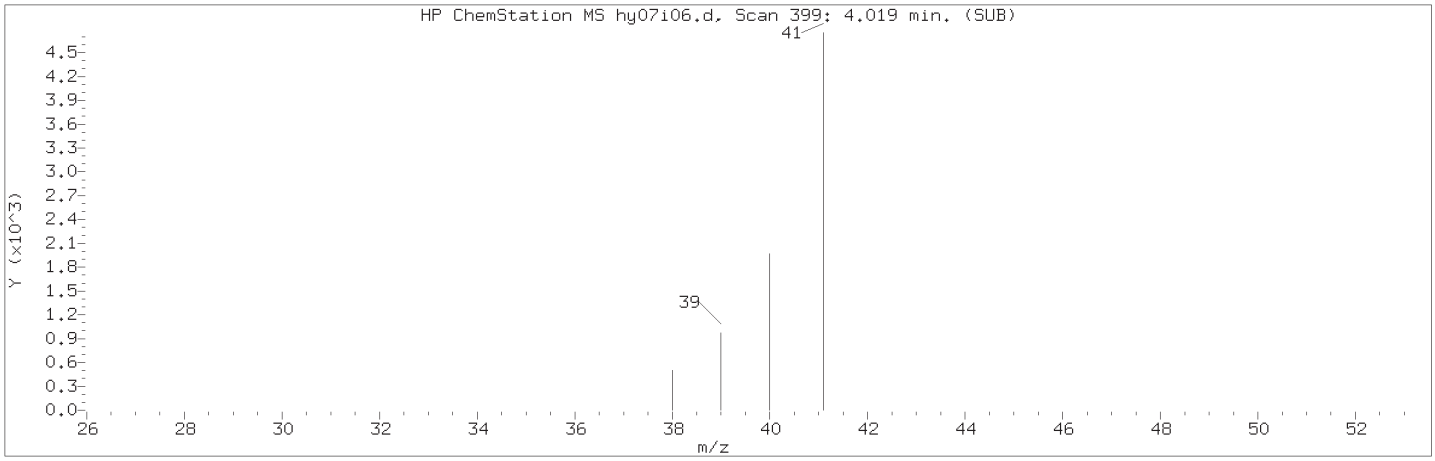
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:39
Date, time and analyst ID of latest file update: 07-May-2016 14:39 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

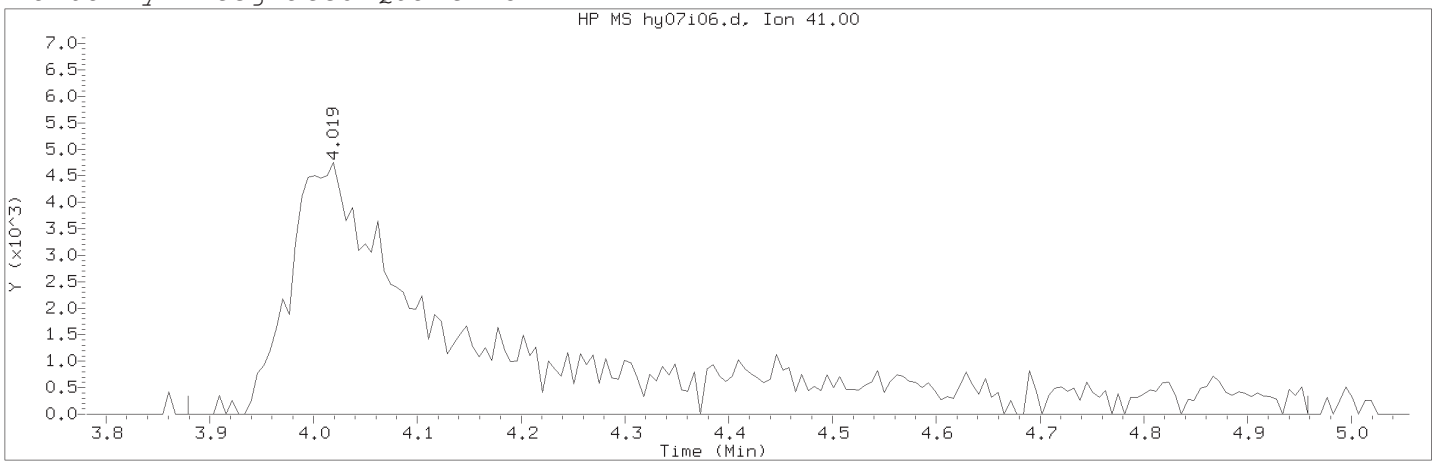
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area	: 48033		
On-column Amount (ng)	: 0.6623		
Integration start scan	: 68	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

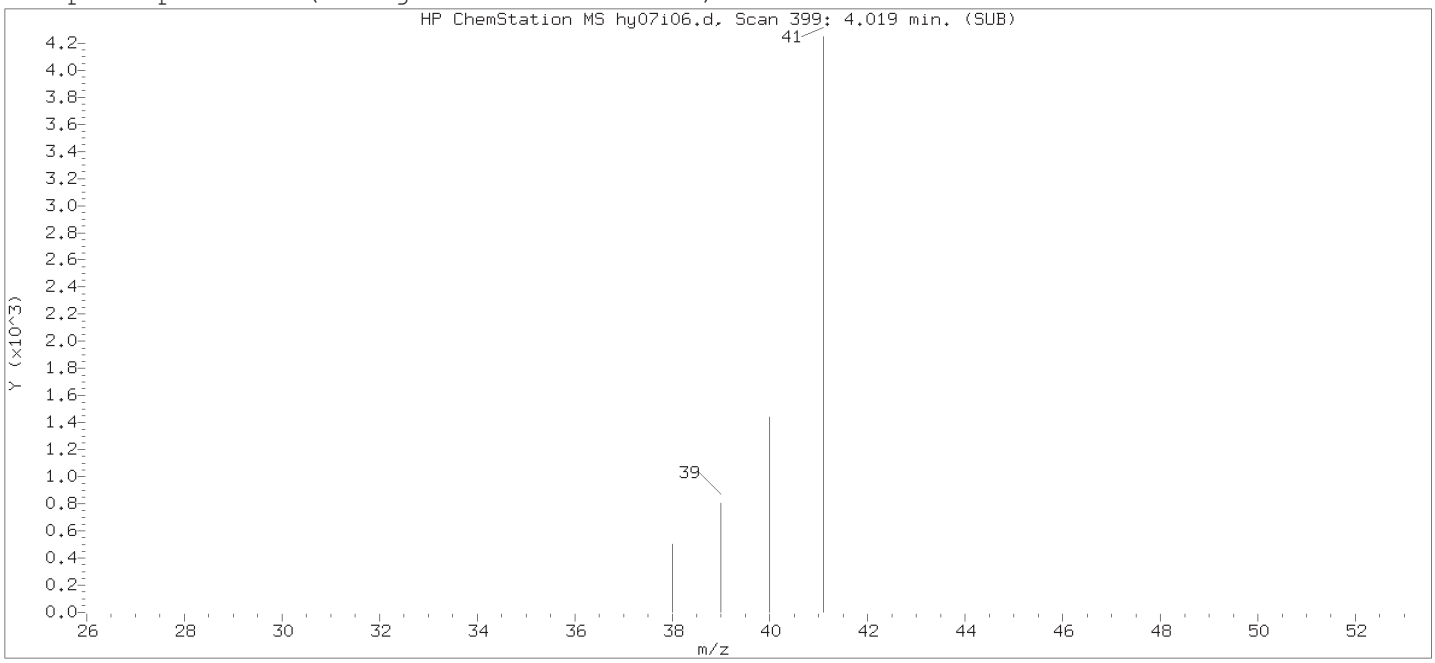
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 399
Retention Time (minutes): 4.019
Quant Ion : 41.00
Area (flag) : 62209M
On-Column Amount (ng) : 22.4728
Integration start scan : 375 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

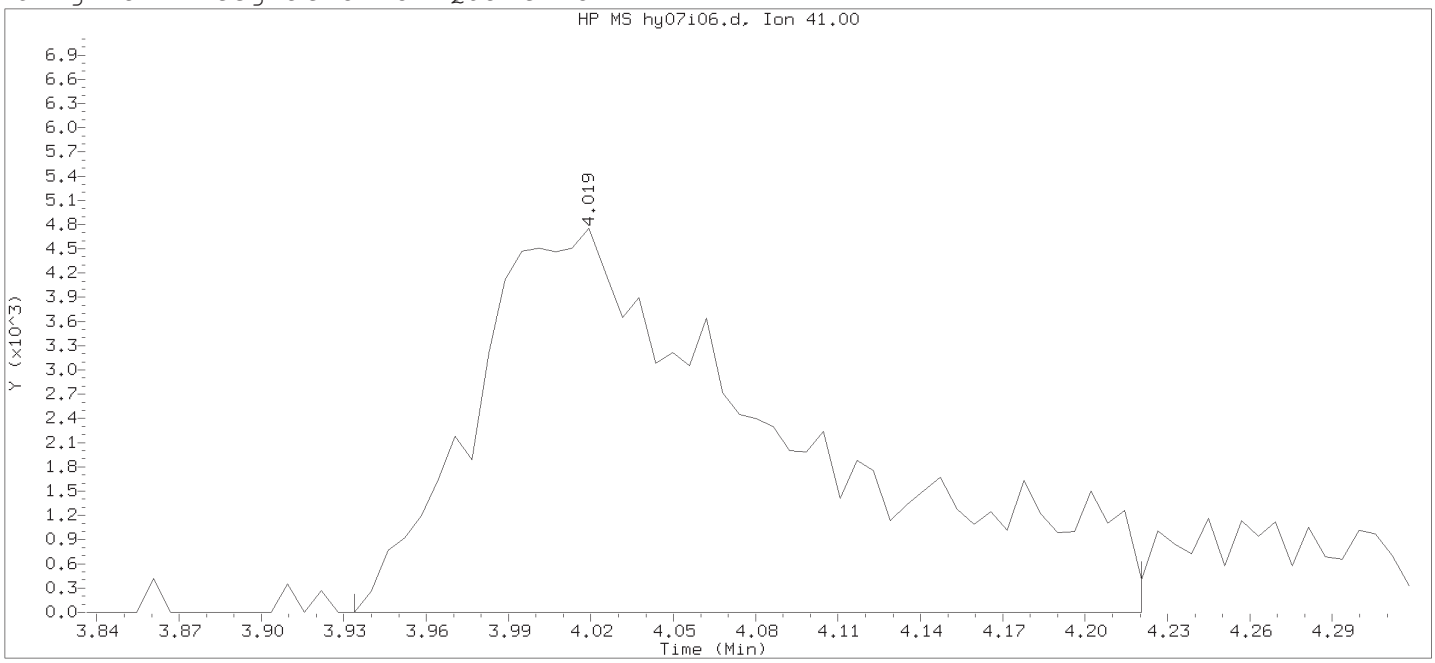
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

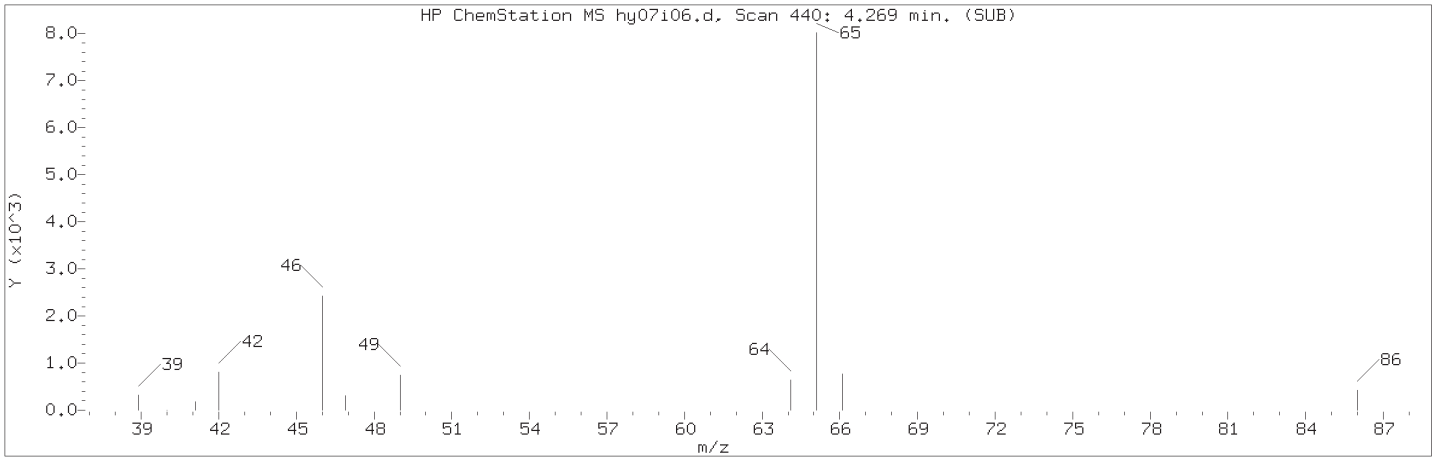
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:39
Date, time and analyst ID of latest file update: 07-May-2016 14:39 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

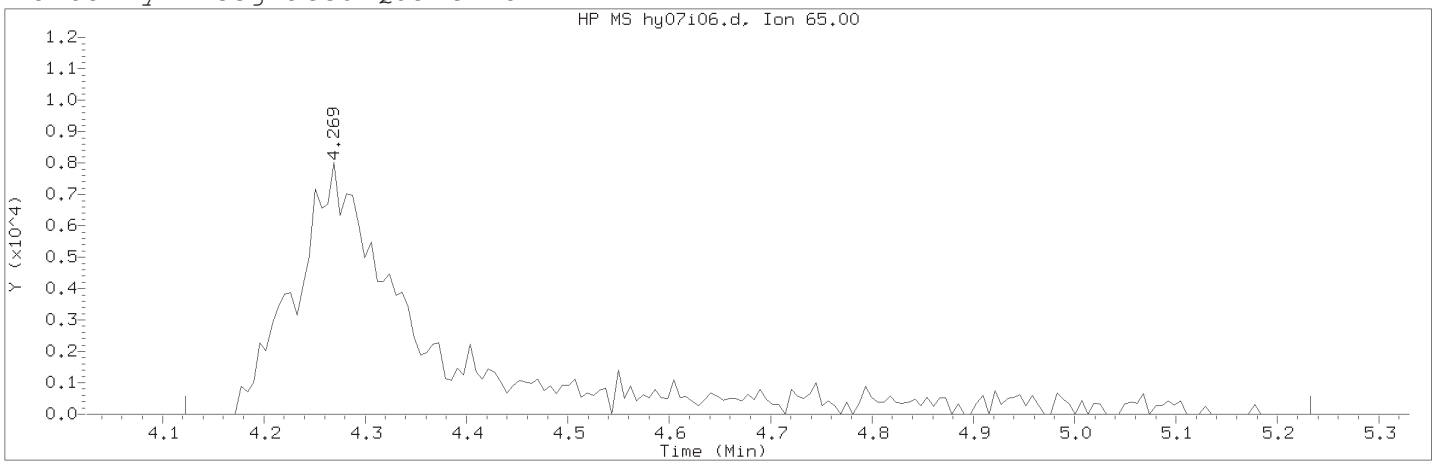
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 399		
Retention Time (minutes)	: 4.019		
Quant Ion	: 41.00		
Area	: 38018		
On-column Amount (ng)	: 18.4728		
Integration start scan	: 384	Integration stop scan:	431
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

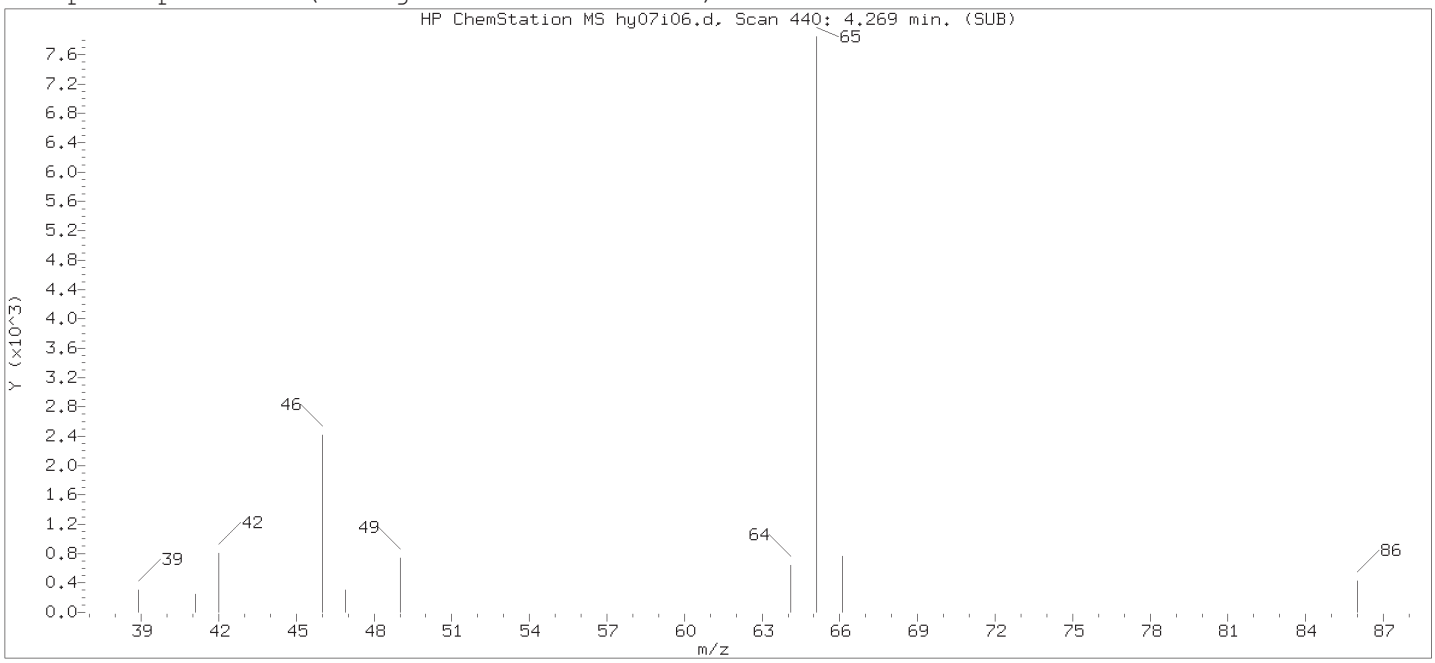
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area (flag) : 73203M
On-Column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

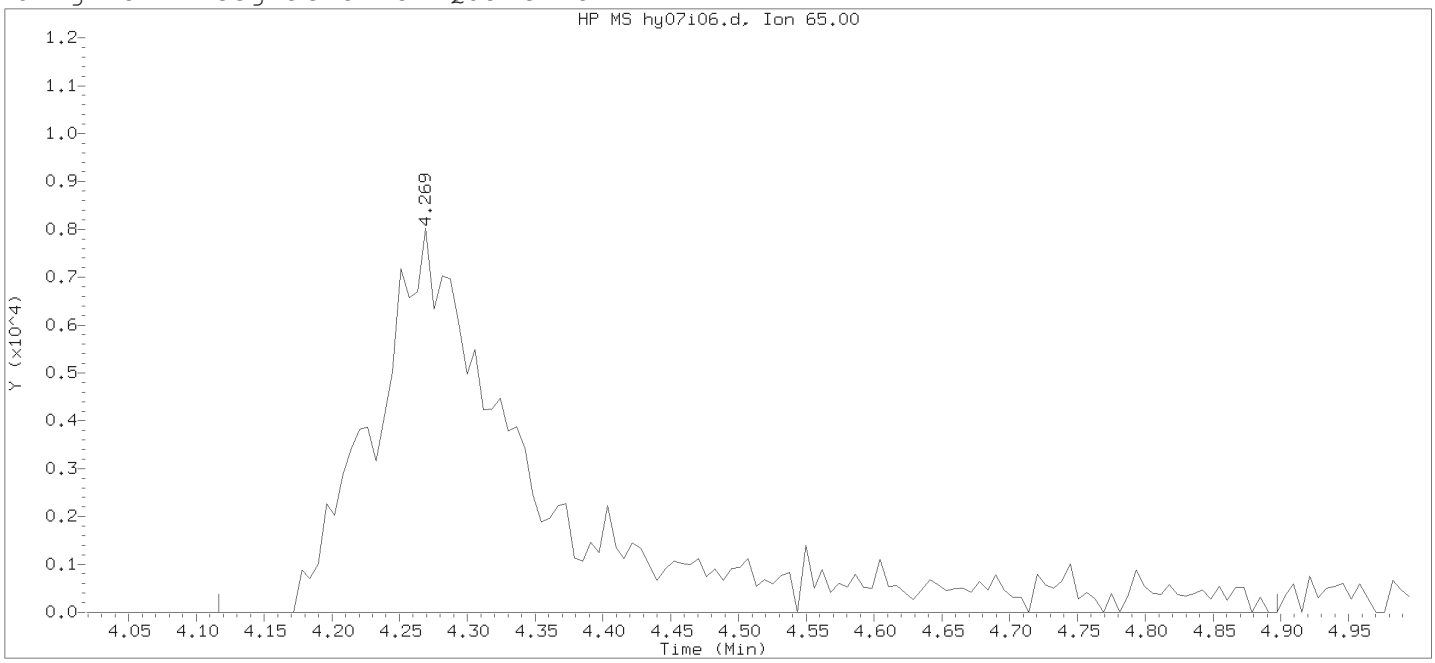
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

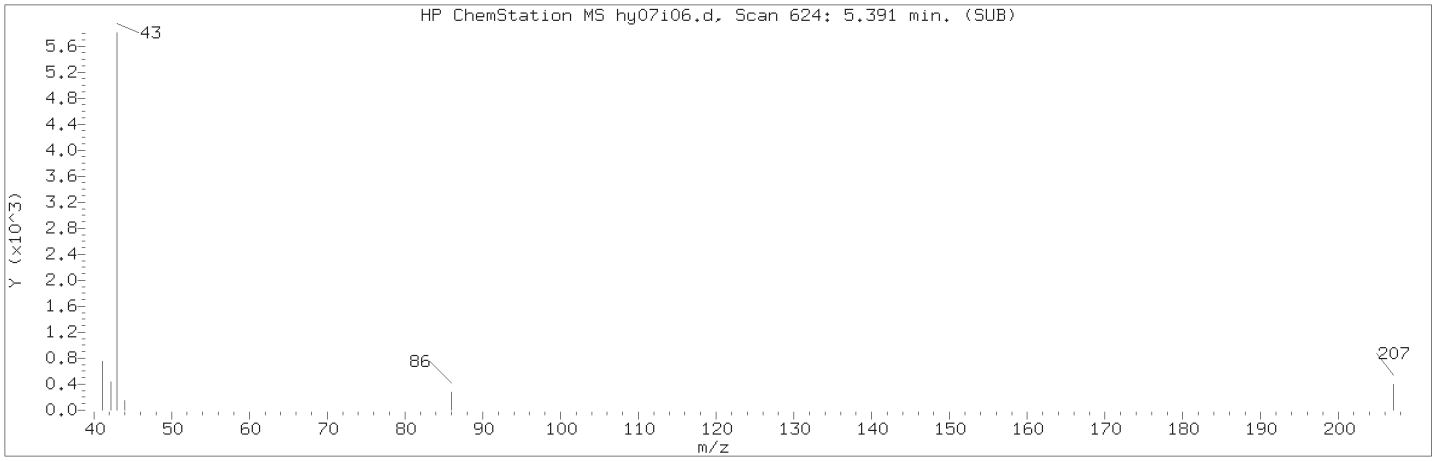
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:39
Date, time and analyst ID of latest file update: 07-May-2016 14:39 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

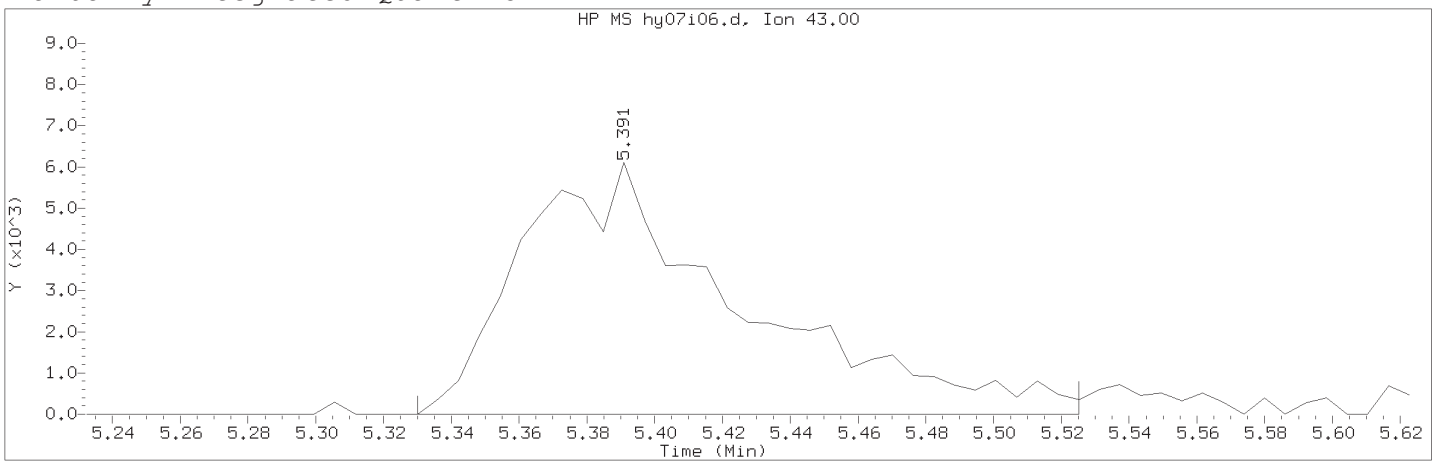
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area : 69063
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 542
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

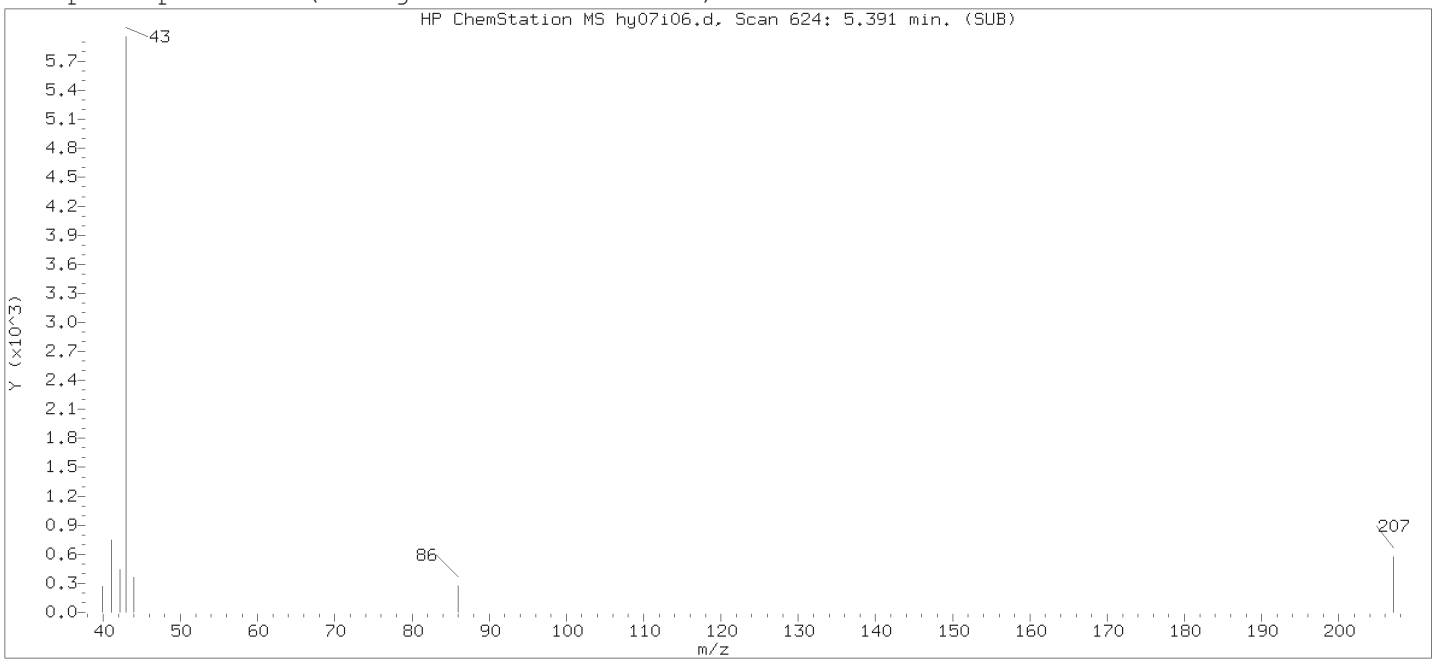
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 624
Retention Time (minutes): 5.391
Quant Ion : 43.00
Area (flag) : 27420M
On-Column Amount (ng) : 0.4413
Integration start scan : 613 Integration stop scan: 645
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

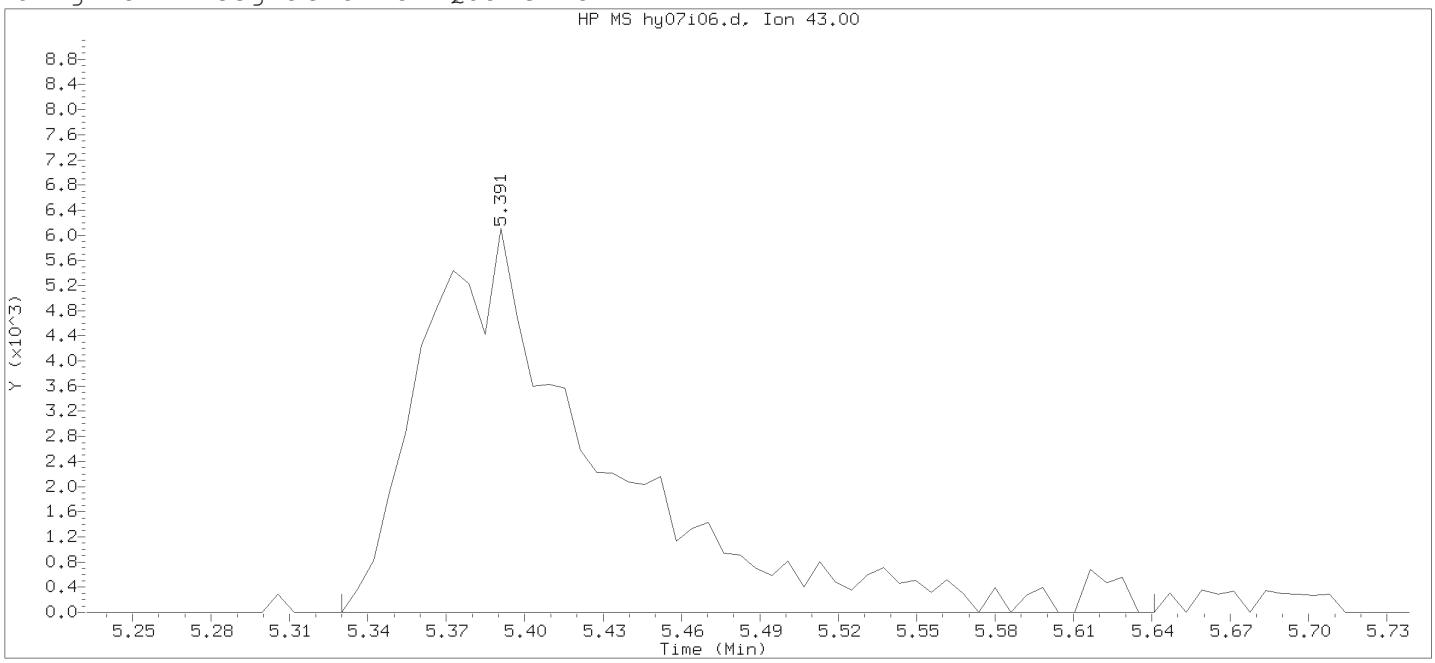
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

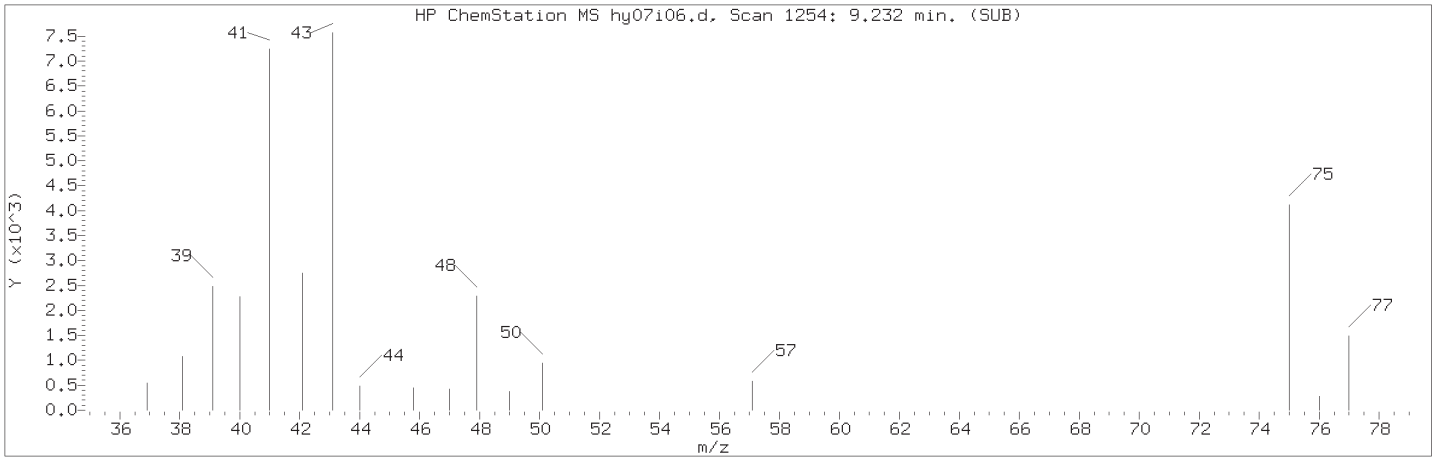
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:39
Date, time and analyst ID of latest file update: 07-May-2016 14:39 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

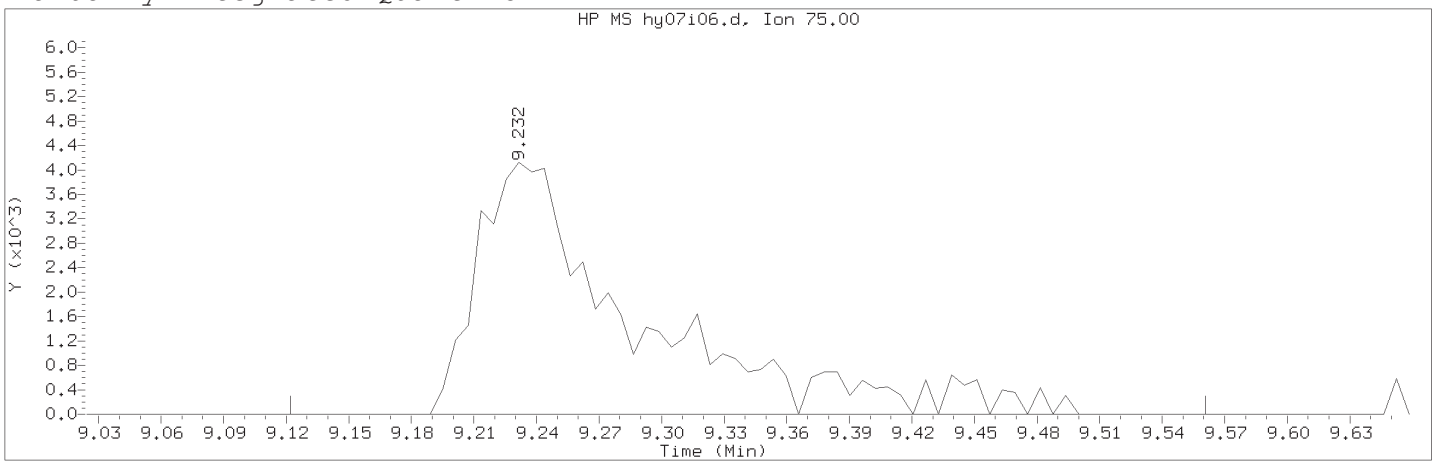
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 624
Retention Time (minutes): 5.391
Quant Ion : 43.00
Area : 29689
On-column Amount (ng) : 0.4299
Integration start scan : 613 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

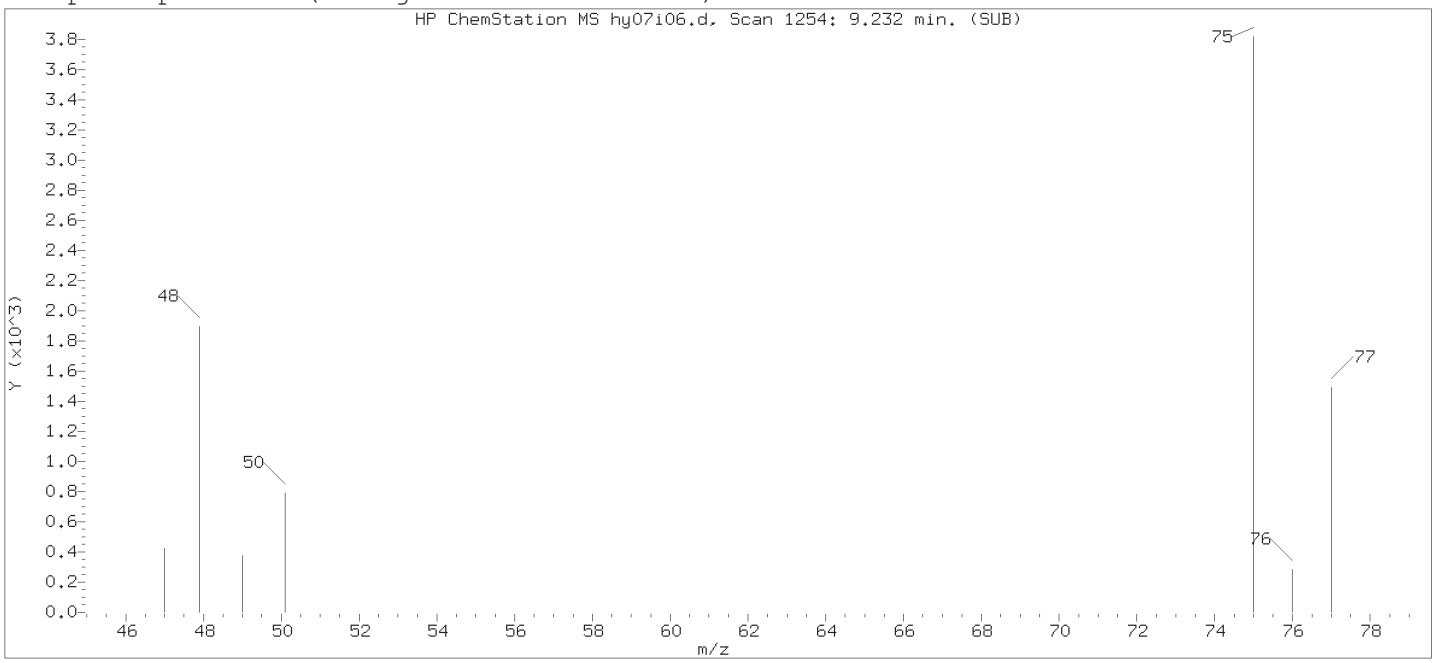
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1254
Retention Time (minutes): 9.232
Quant Ion : 75.00
Area (flag) : 21891M
On-Column Amount (ng) : 20.6739
Integration start scan : 1235 Integration stop scan: 1307
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

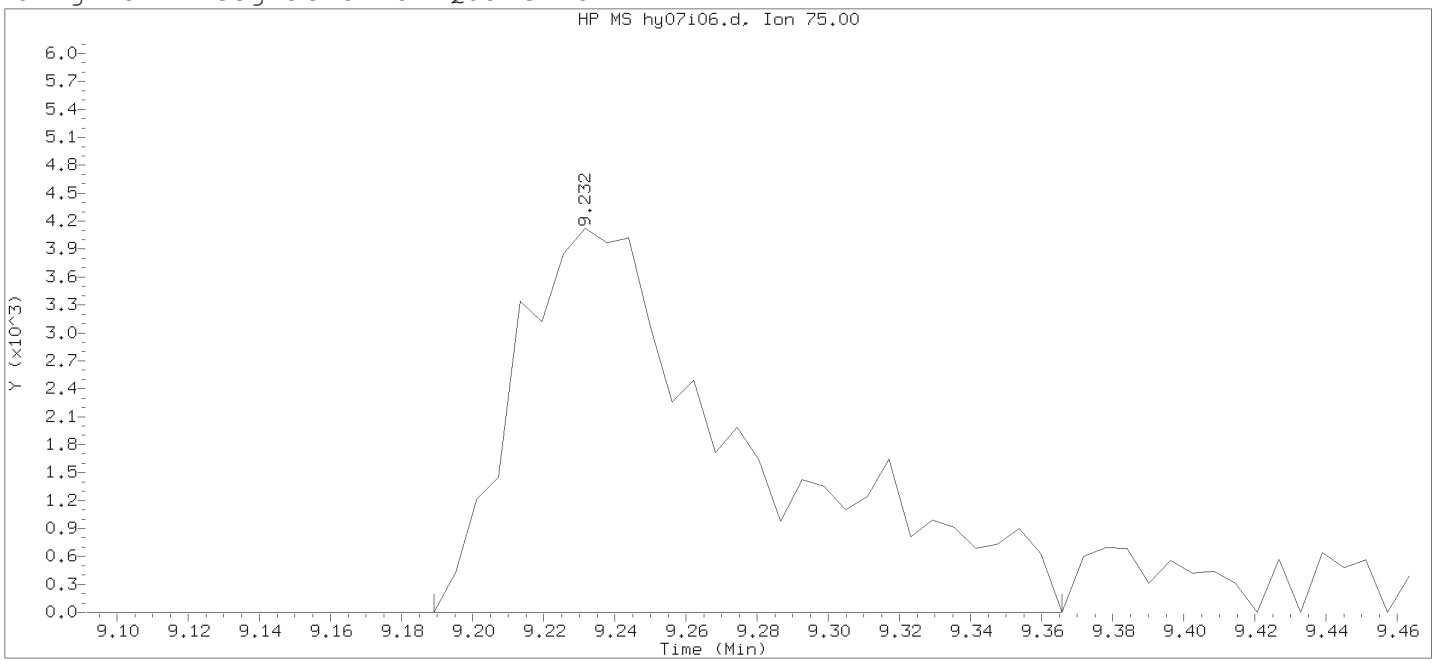
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



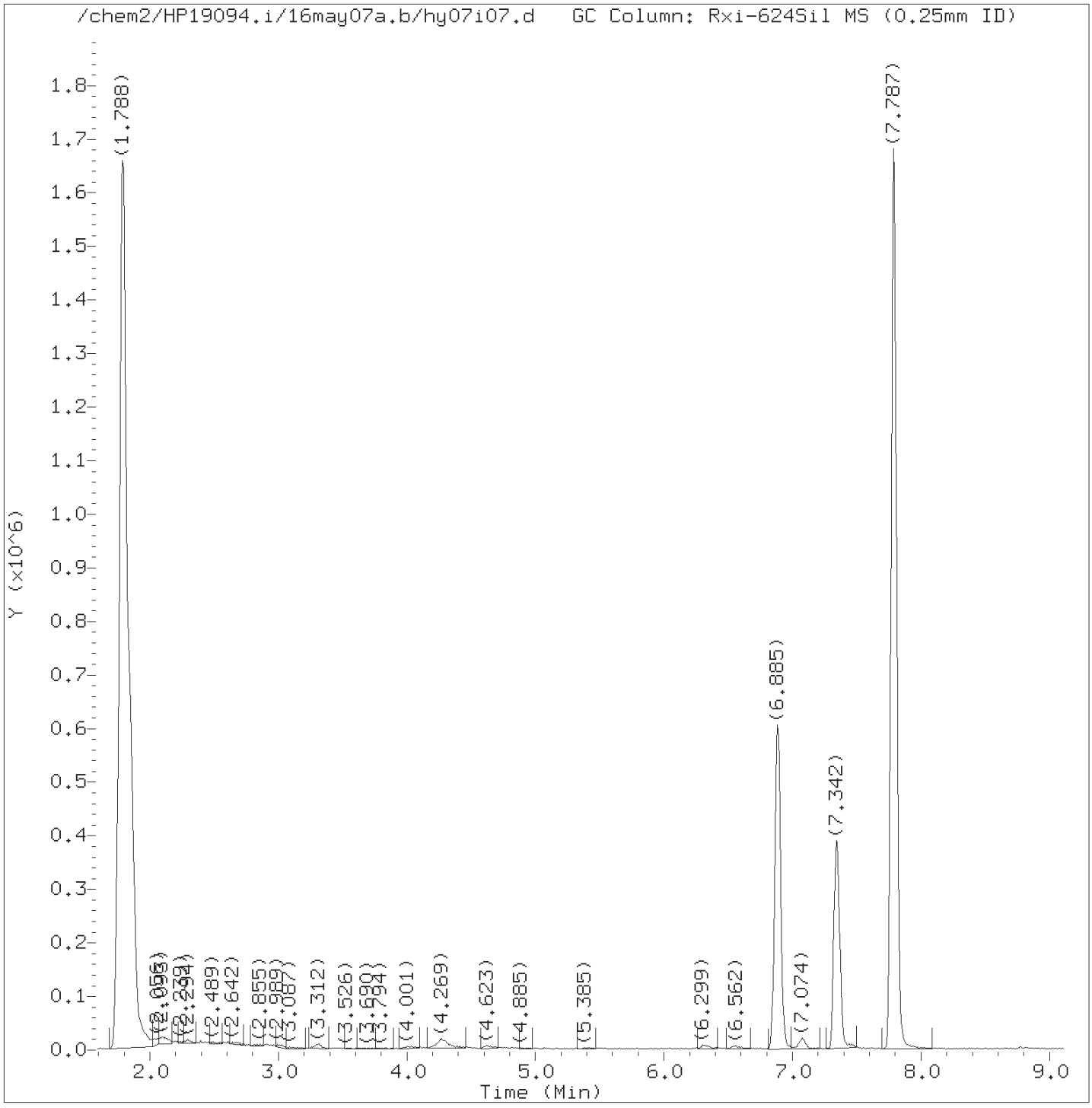
Data File: /chem2/HP19094.i/16may07a.b/hy07i06.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:20 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:39
Date, time and analyst ID of latest file update: 07-May-2016 14:39 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1254
Retention Time (minutes): 9.232
Quant Ion : 75.00
Area : 19049
On-column Amount (ng) : 17.8099
Integration start scan : 1246 Integration stop scan: 1275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature [illegible]



Total Ion Chromatogram (TIC)

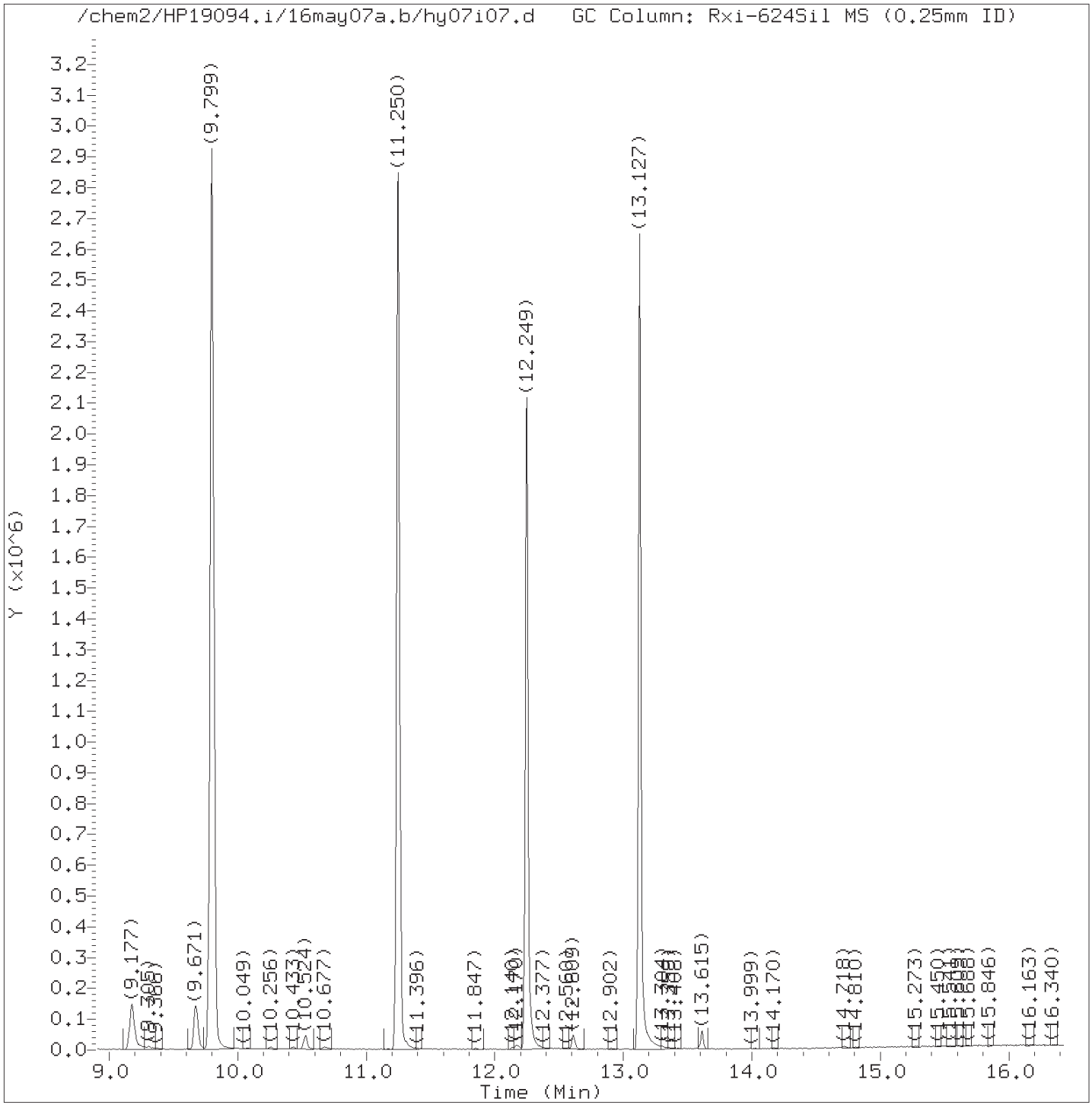
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

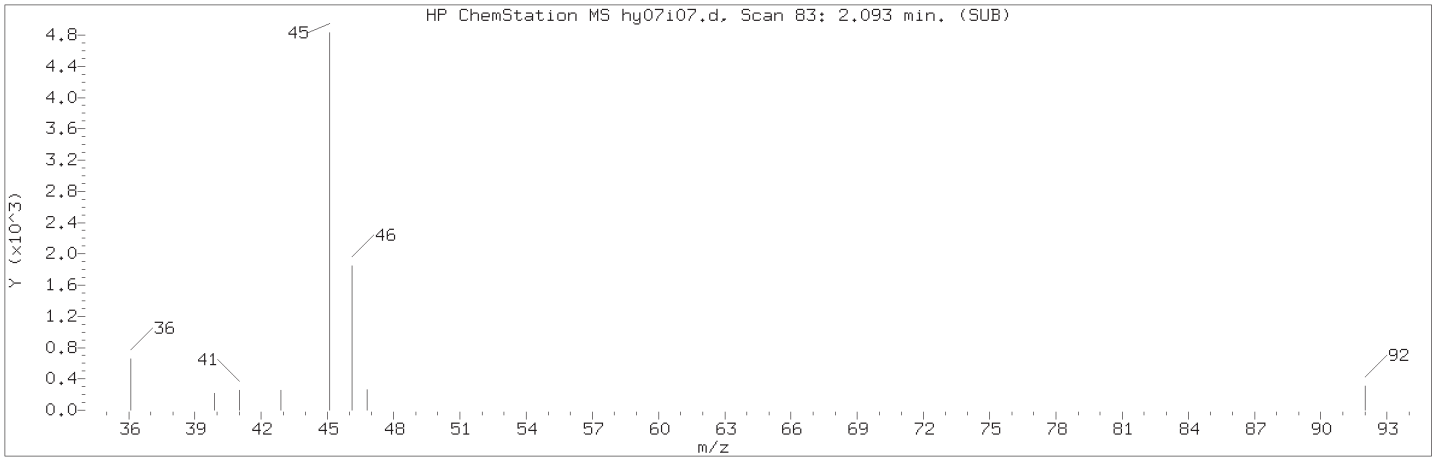
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.093	45	24138M	0.303
25) Acetonitrile	(1)	4.013	41	26698M	9.166
26)*t-Butyl Alcohol-d10	(1)	4.269	65	77025M	50.000
36) Vinyl Acetate	(2)	5.409	43	8933M	0.142
43) Methyl Acrylate	(2)	6.299	55	20606	0.825
53) 1-Chlorobutane	(2)	7.074	56	25311	0.202
63)*Fluorobenzene	(2)	7.787	96	2319023	10.000
77) Chloroacetonitrile	(2)	9.232	75	7879M	7.361
78) 2-Chloroethyl vinyl ether	(2)	9.299	63	3079	0.139
97)*Chlorobenzene-d5	(3)	11.250	117	1662229	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	2114	0.318
112) Cyclohexanone	(1)	12.176	55	7683	9.453
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	713858	10.000
142) Hexachloroethane	(4)	13.609	117	9345	0.196

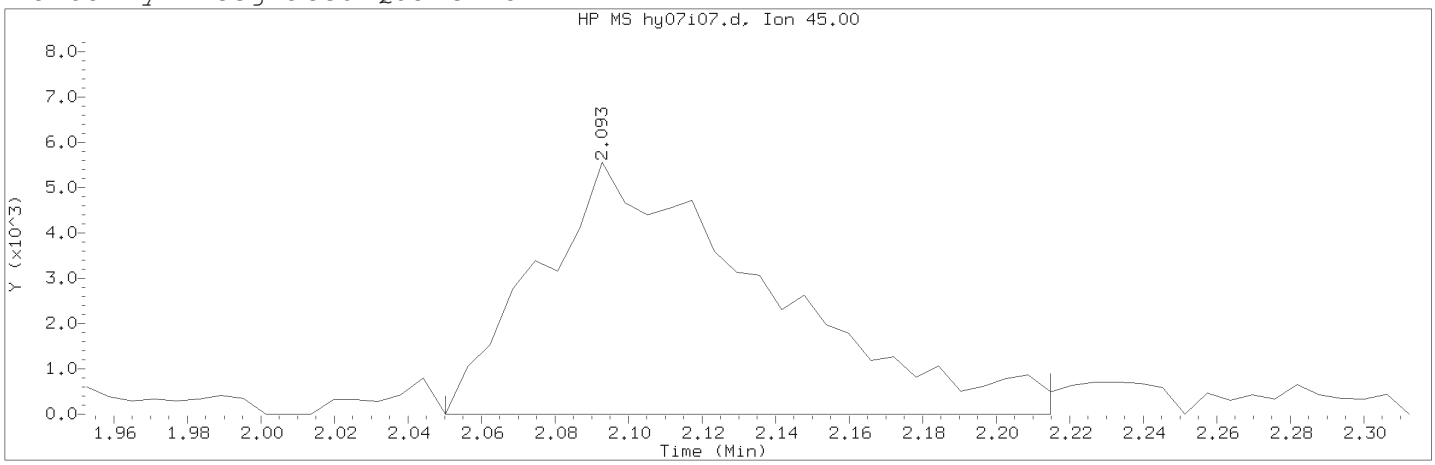
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

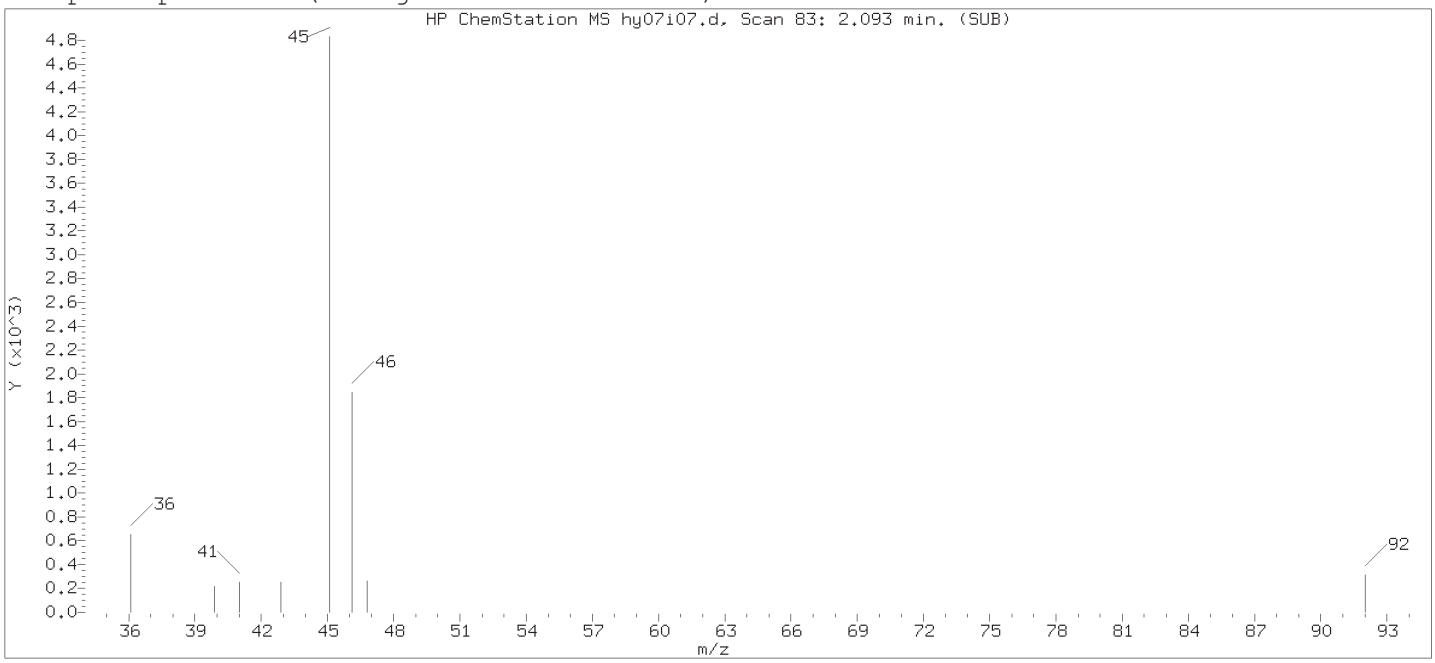
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 83
Retention Time (minutes): 2.093
Quant Ion : 45.00
Area (flag) : 24138M
On-Column Amount (ng) : 0.3031
Integration start scan : 75 Integration stop scan: 102
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

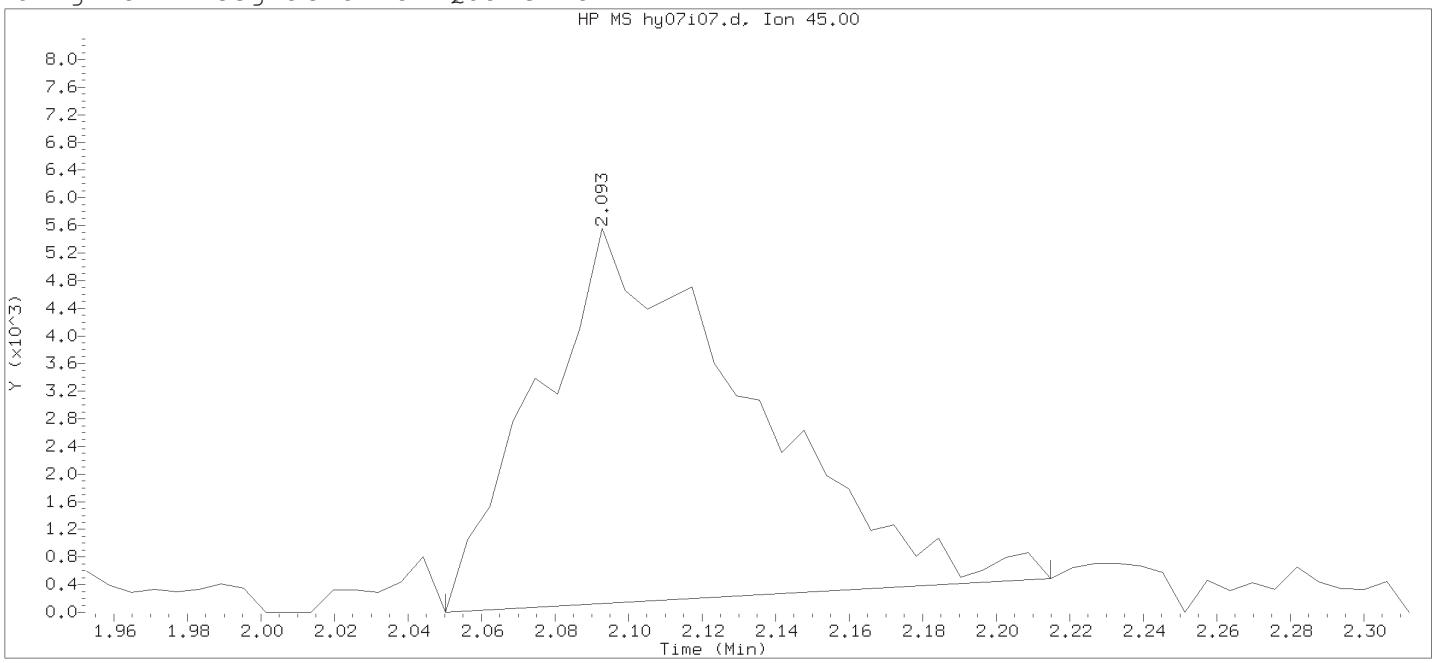
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

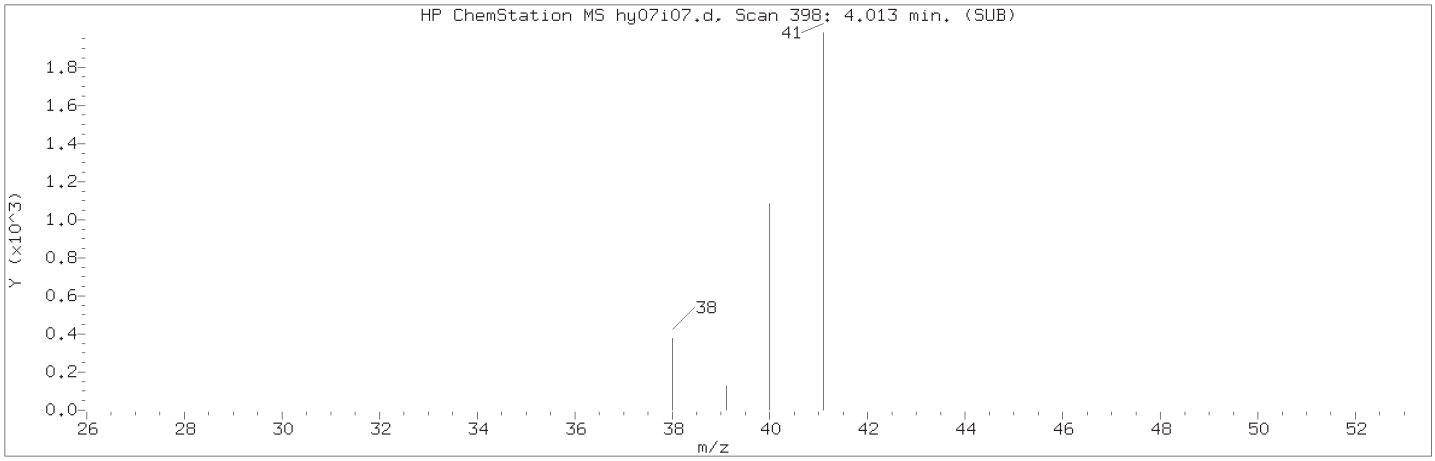
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:59
Date, time and analyst ID of latest file update: 07-May-2016 14:59 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

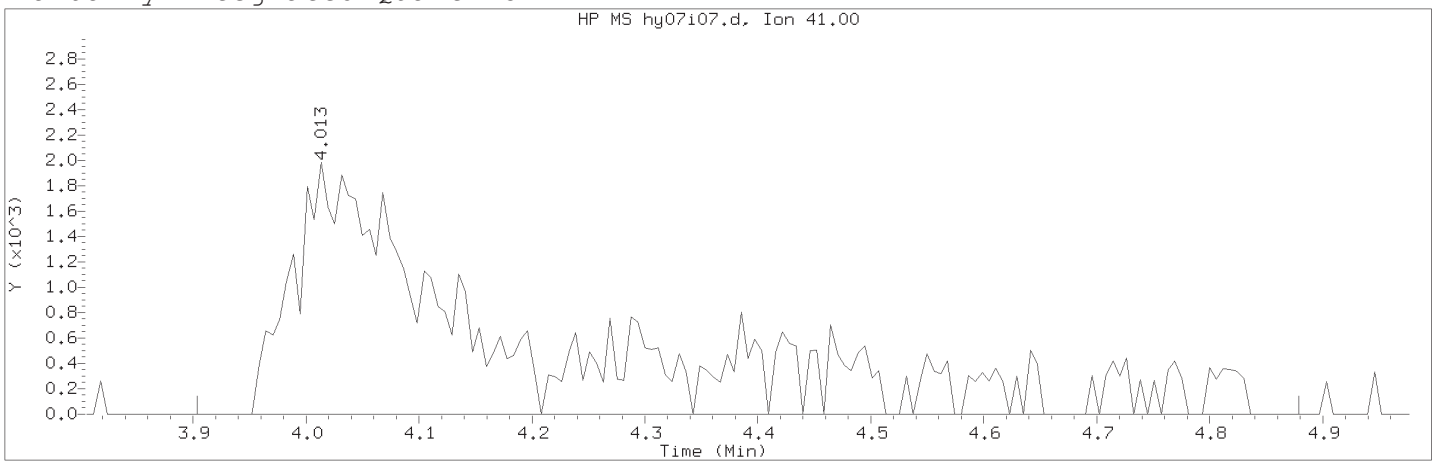
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 83		
Retention Time (minutes)	: 2.093		
Quant Ion	: 45.00		
Area	: 21639		
On-column Amount (ng)	: 0.2951		
Integration start scan	: 75	Integration stop scan:	102
Y at integration start	: 0	Y at integration end:	488

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

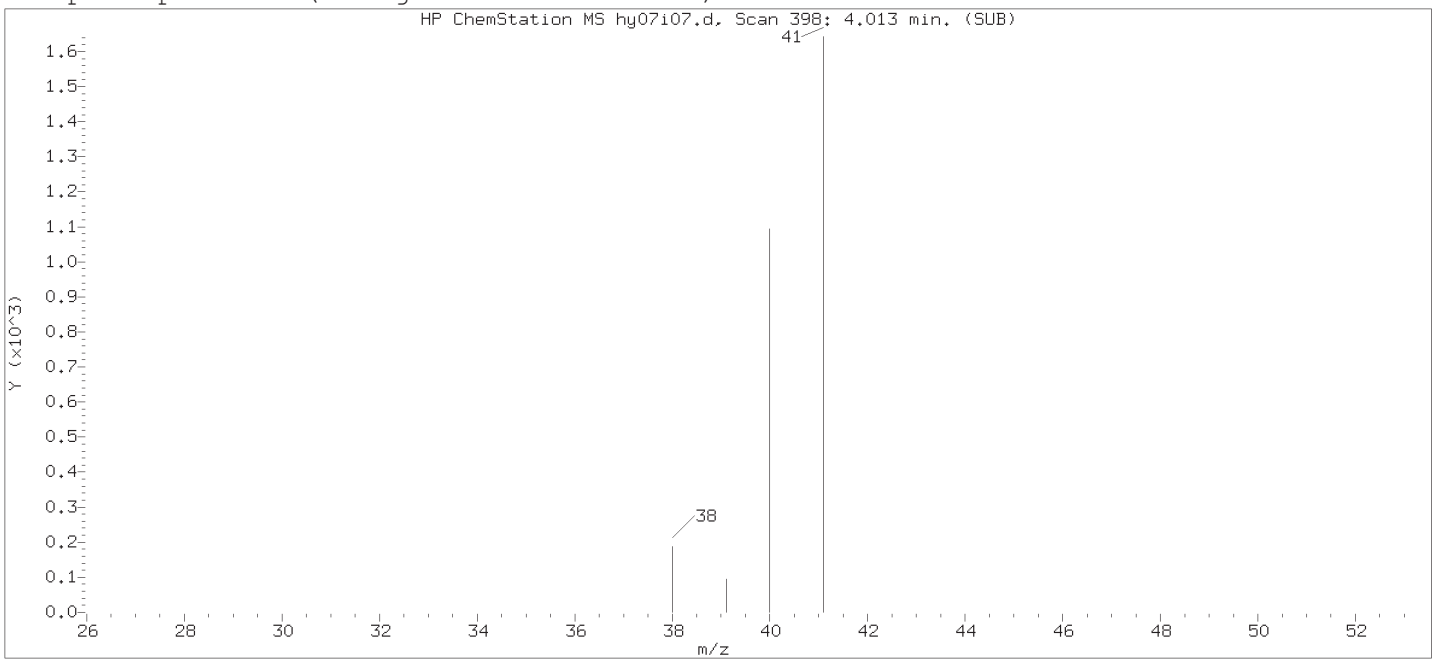
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 398
Retention Time (minutes): 4.013
Quant Ion : 41.00
Area (flag) : 26698M
On-Column Amount (ng) : 9.1660
Integration start scan : 379 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

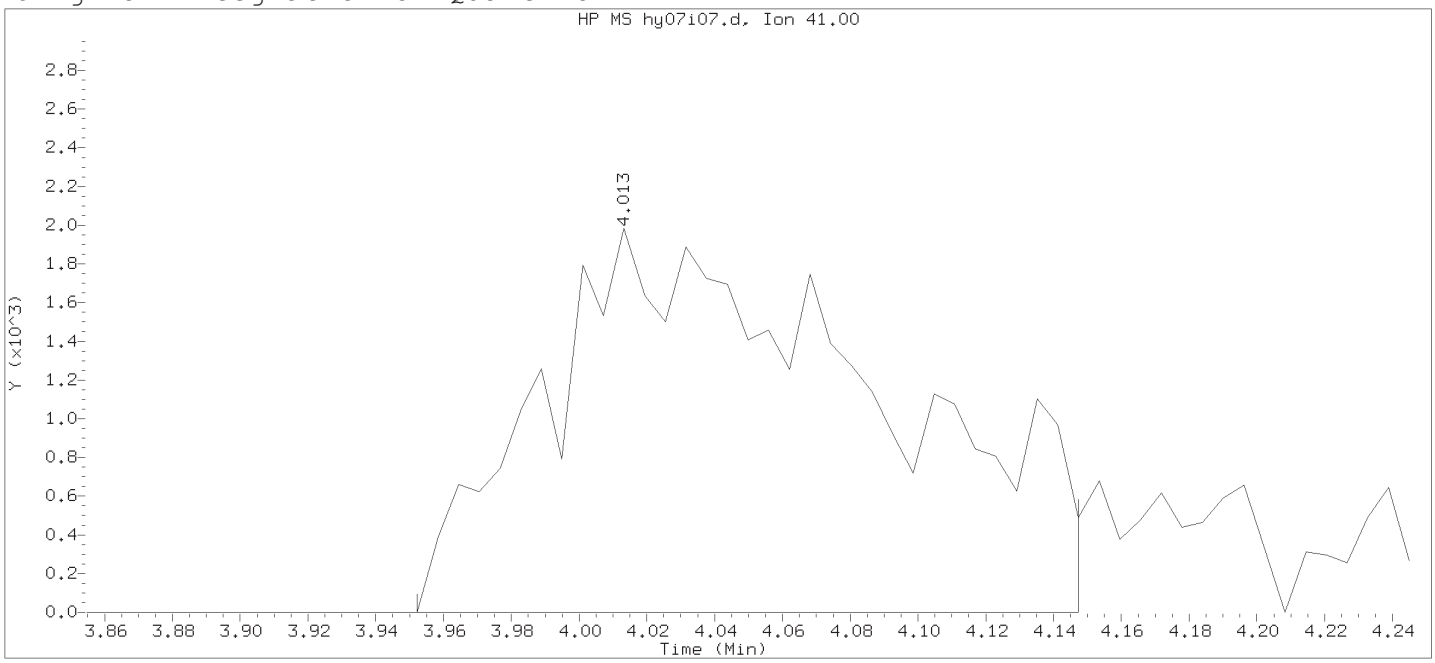
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

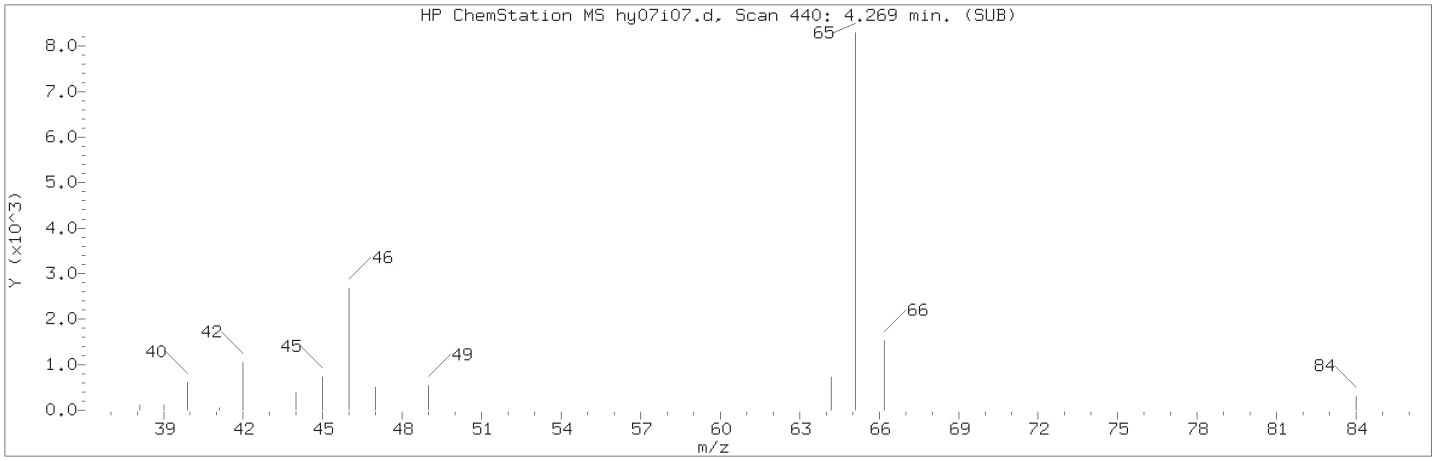
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:59
Date, time and analyst ID of latest file update: 07-May-2016 14:59 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

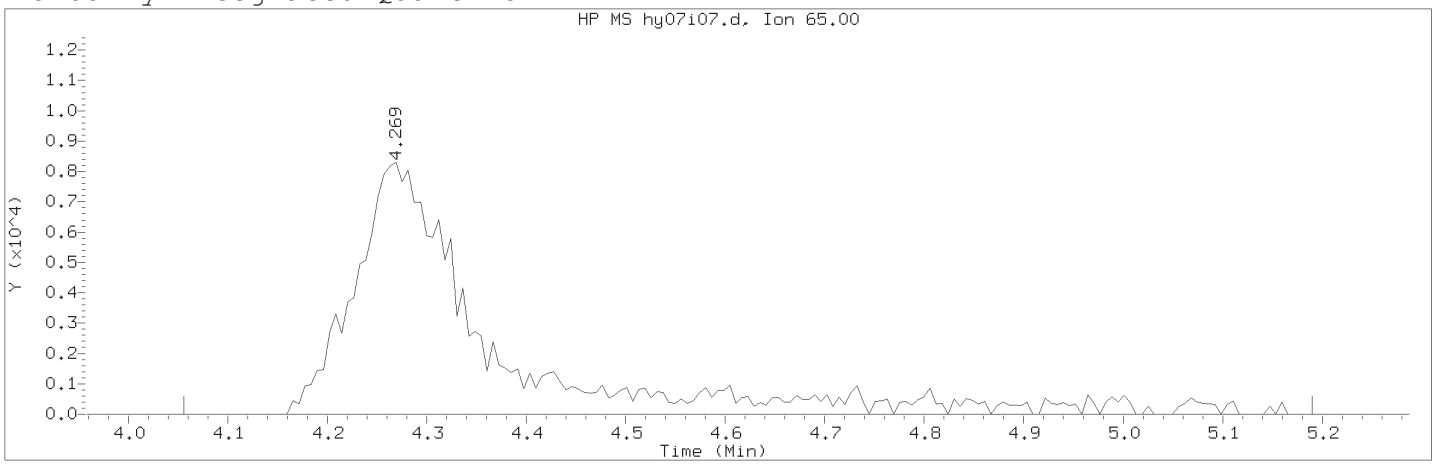
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 398		
Retention Time (minutes)	: 4.013		
Quant Ion	: 41.00		
Area	: 13668		
On-column Amount (ng)	: 7.0194		
Integration start scan	: 387	Integration stop scan:	419
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 2016/05/19 15:

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

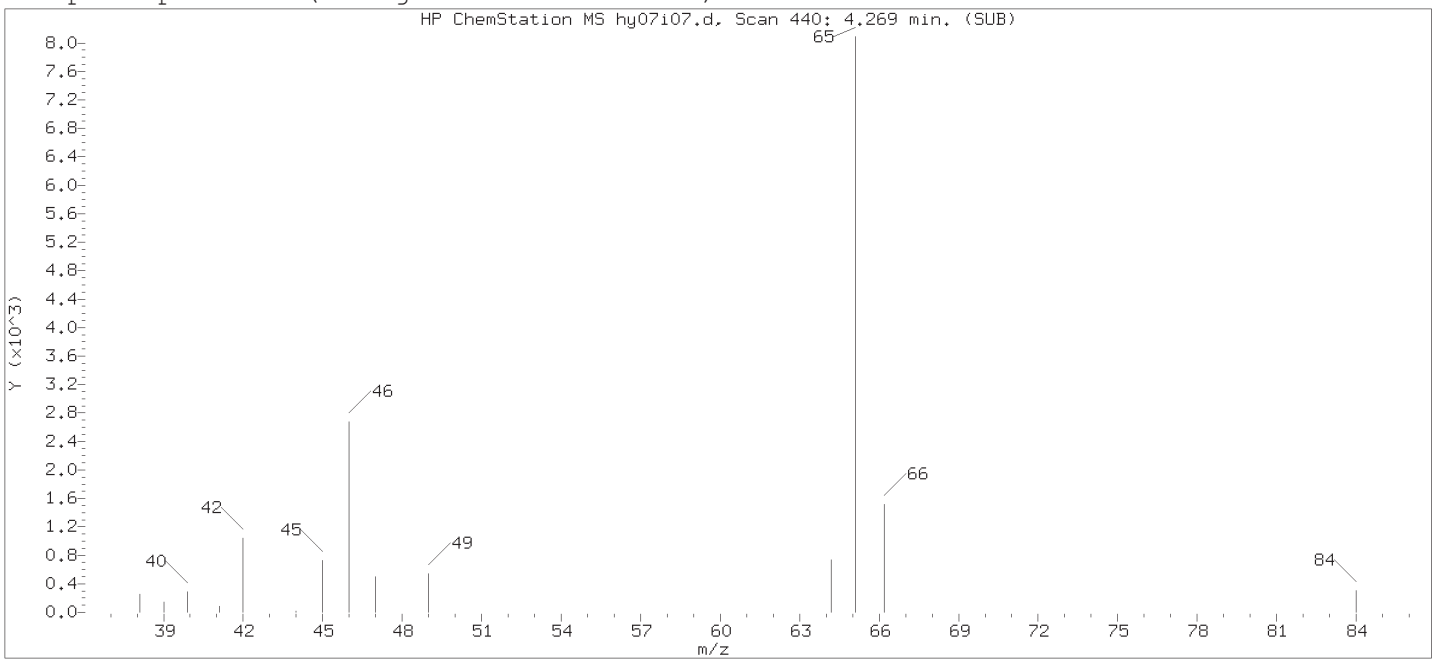
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area (flag) : 77025M
On-Column Amount (ng) : 50.0000
Integration start scan : 404 Integration stop scan: 590
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

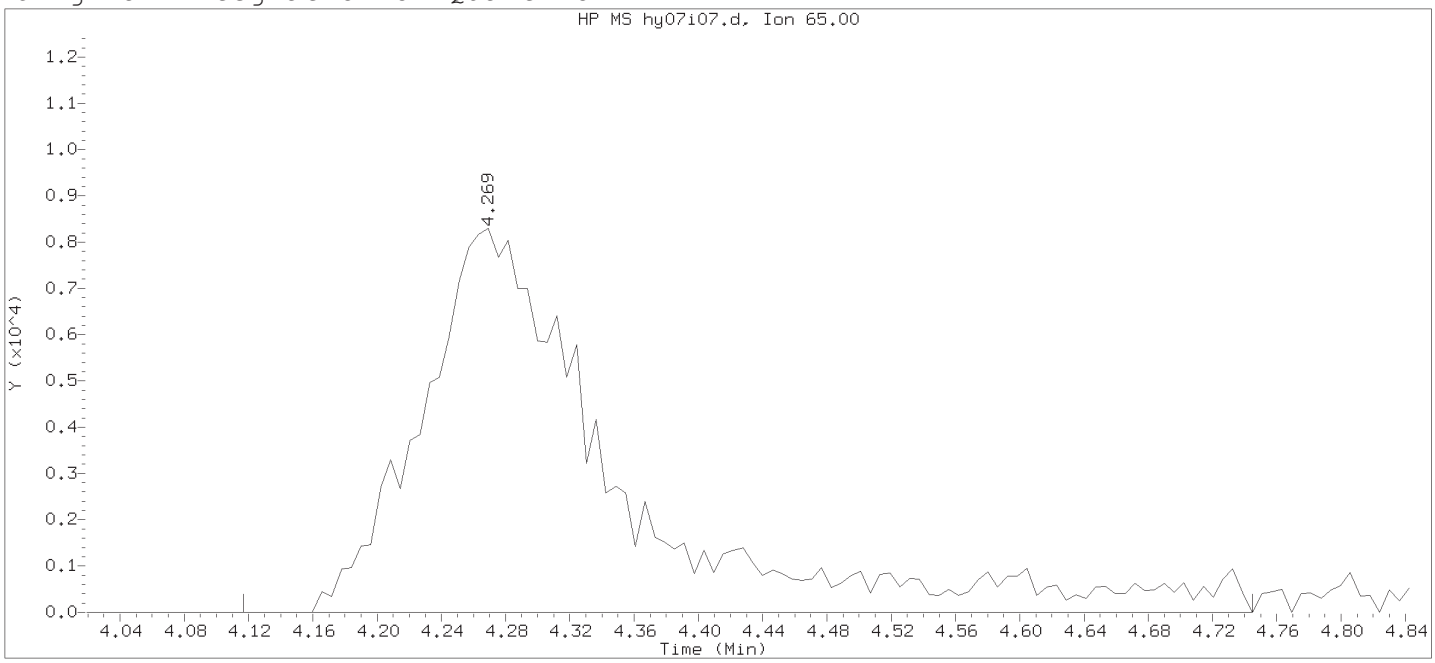
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

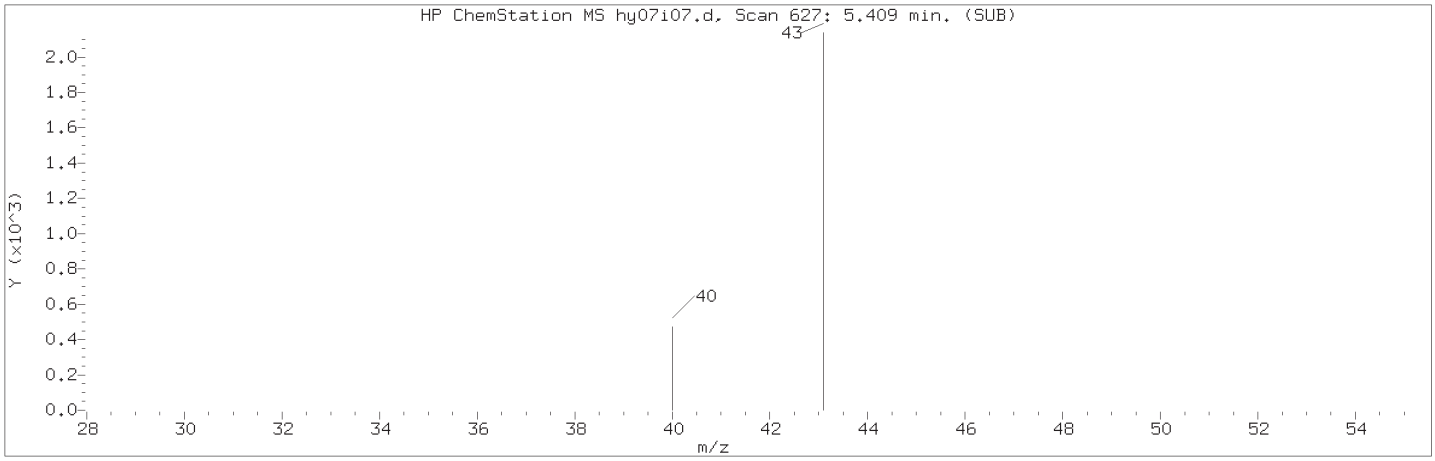
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:59
Date, time and analyst ID of latest file update: 07-May-2016 14:59 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

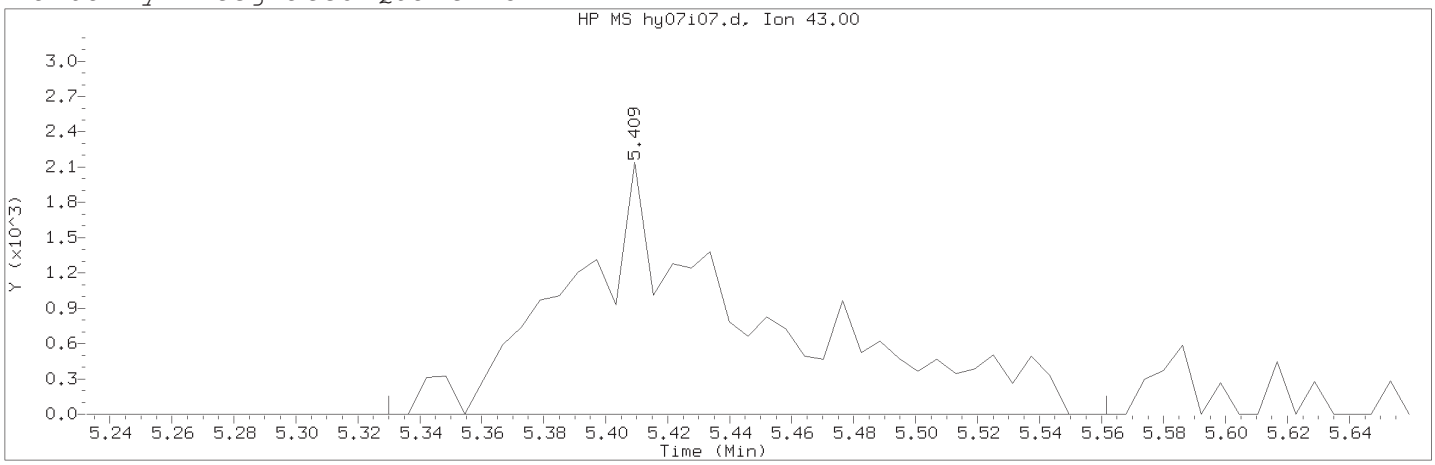
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 65.00
Area : 69950
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 517
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature date: 05/07/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

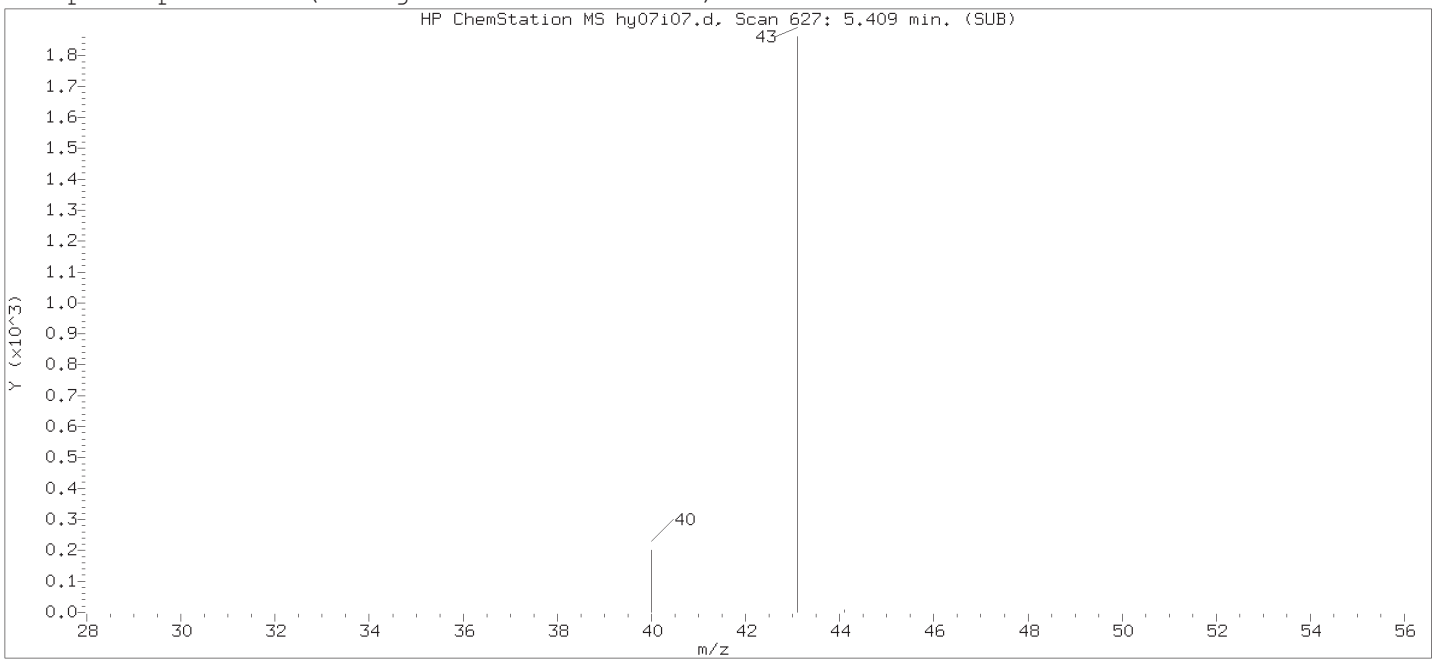
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 627
Retention Time (minutes): 5.409
Quant Ion : 43.00
Area (flag) : 8933M
On-Column Amount (ng) : 0.1422
Integration start scan : 613 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

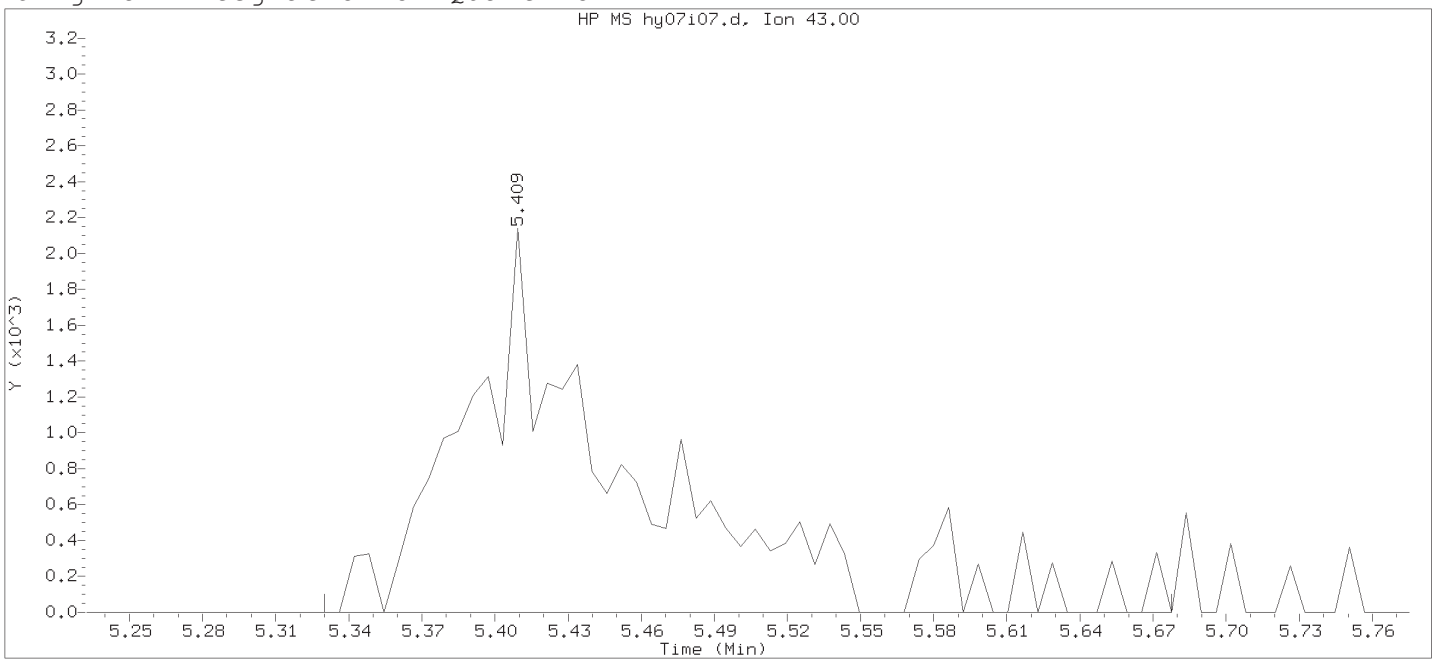
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

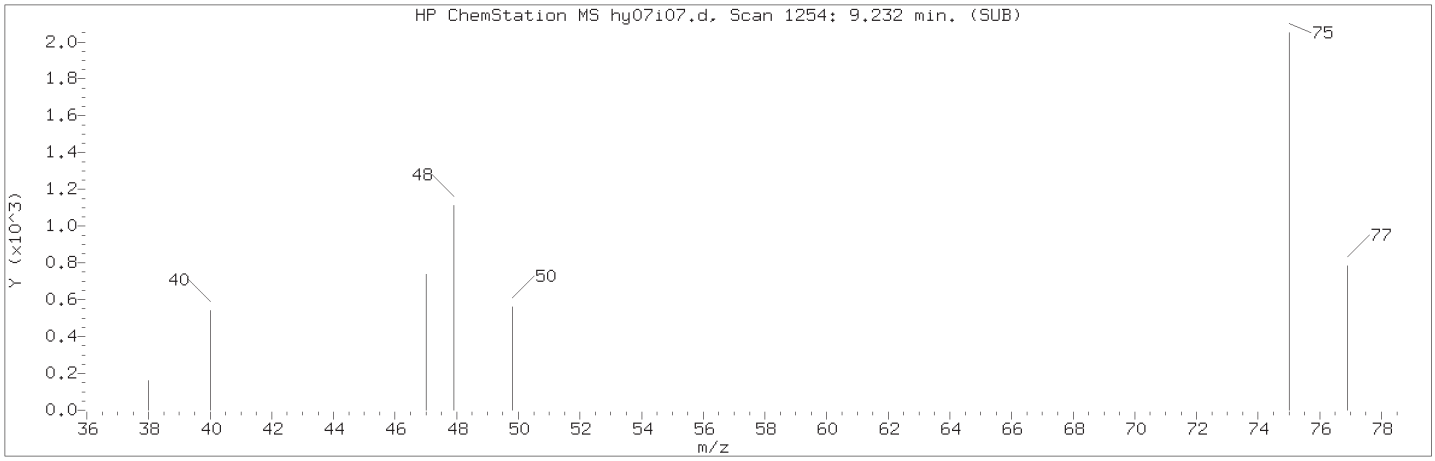
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:59
Date, time and analyst ID of latest file update: 07-May-2016 14:59 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

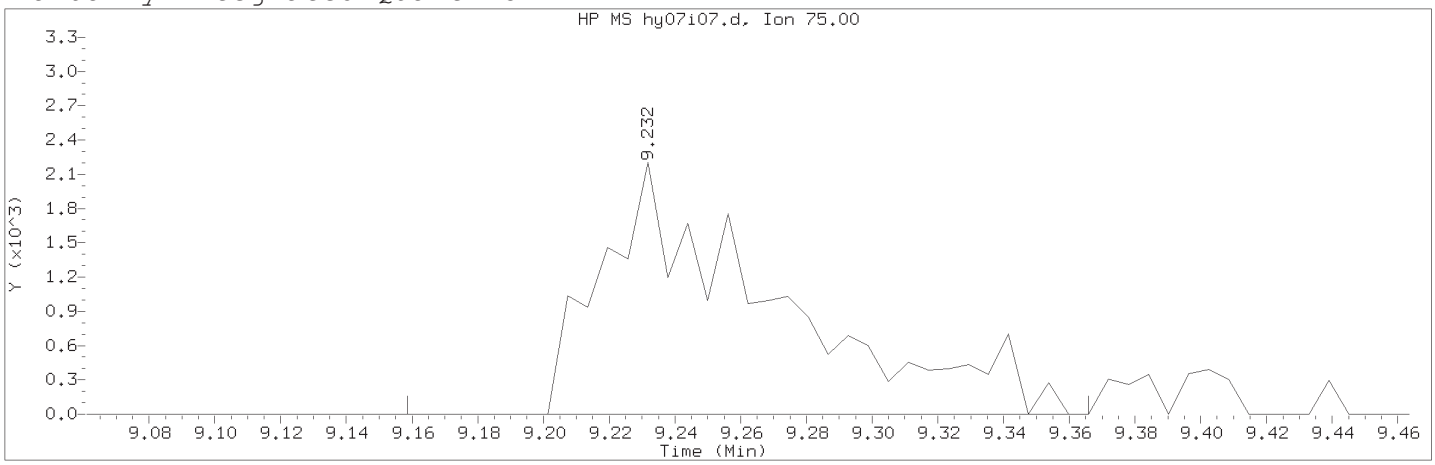
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 627		
Retention Time (minutes)	: 5.409		
Quant Ion	: 43.00		
Area	: 9980		
On-column Amount (ng)	: 0.1522		
Integration start scan	: 613	Integration stop scan:	670
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 15:26
Date, time and analyst ID of latest file update: 07-May-2016 15:26 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

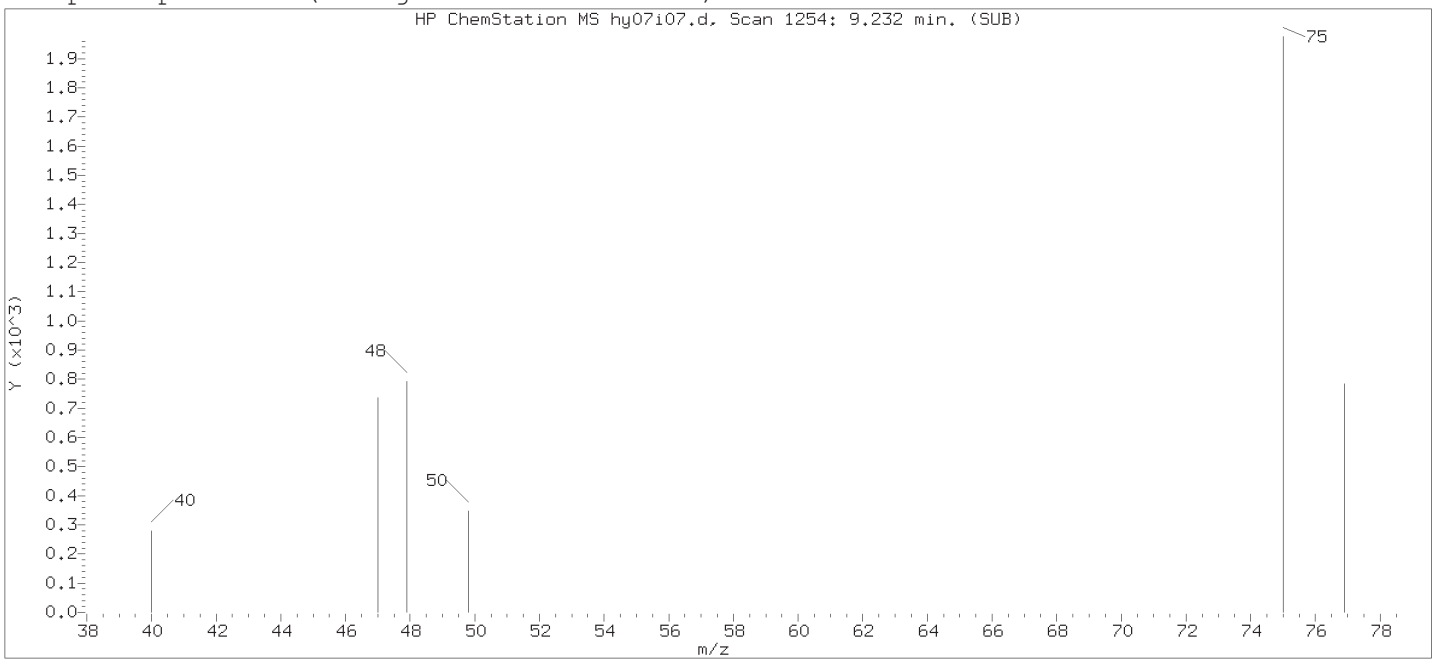
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1254
Retention Time (minutes): 9.232
Quant Ion : 75.00
Area (flag) : 7879M
On-Column Amount (ng) : 7.3607
Integration start scan : 1241 Integration stop scan: 1275
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

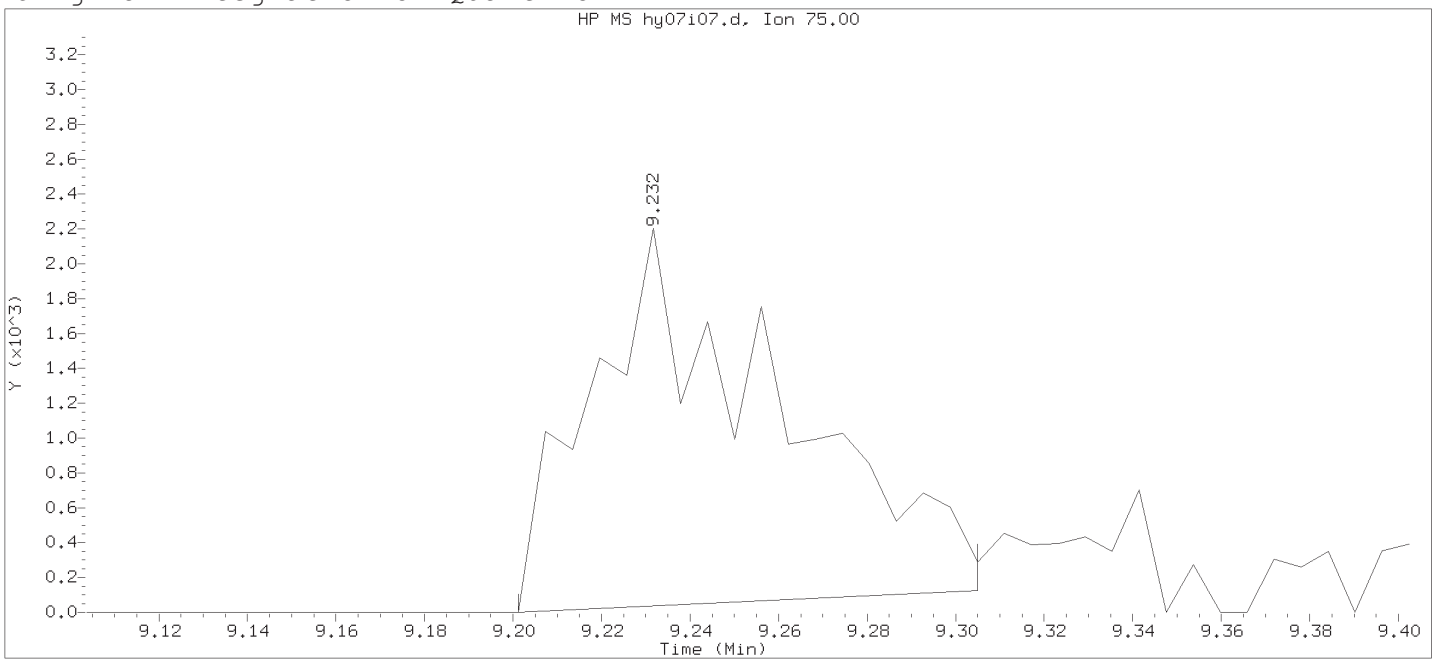
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:11.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



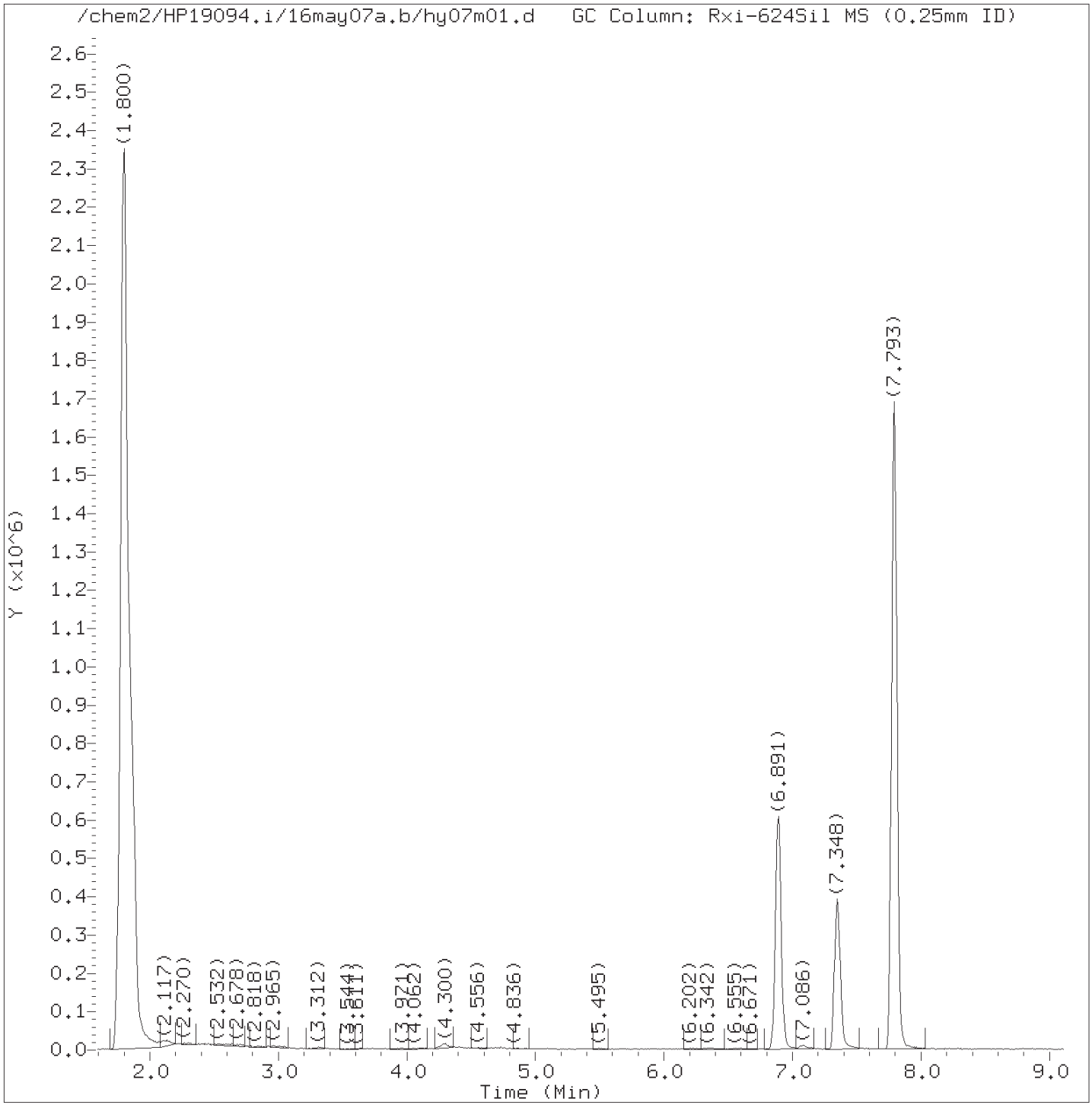
Data File: /chem2/HP19094.i/16may07a.b/hy07i07.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 14:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 07-MAY-2016 14:59
Date, time and analyst ID of latest file update: 07-May-2016 14:59 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 77		
Compound Name	: Chloroacetonitrile		
Scan Number	: 1254		
Retention Time (minutes)	: 9.232		
Quant Ion	: 75.00		
Area	: 6346		
On-column Amount (ng)	: 6.1817		
Integration start scan	: 1248	Integration stop scan:	1265
Y at integration start	: 0	Y at integration end:	124

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:28.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

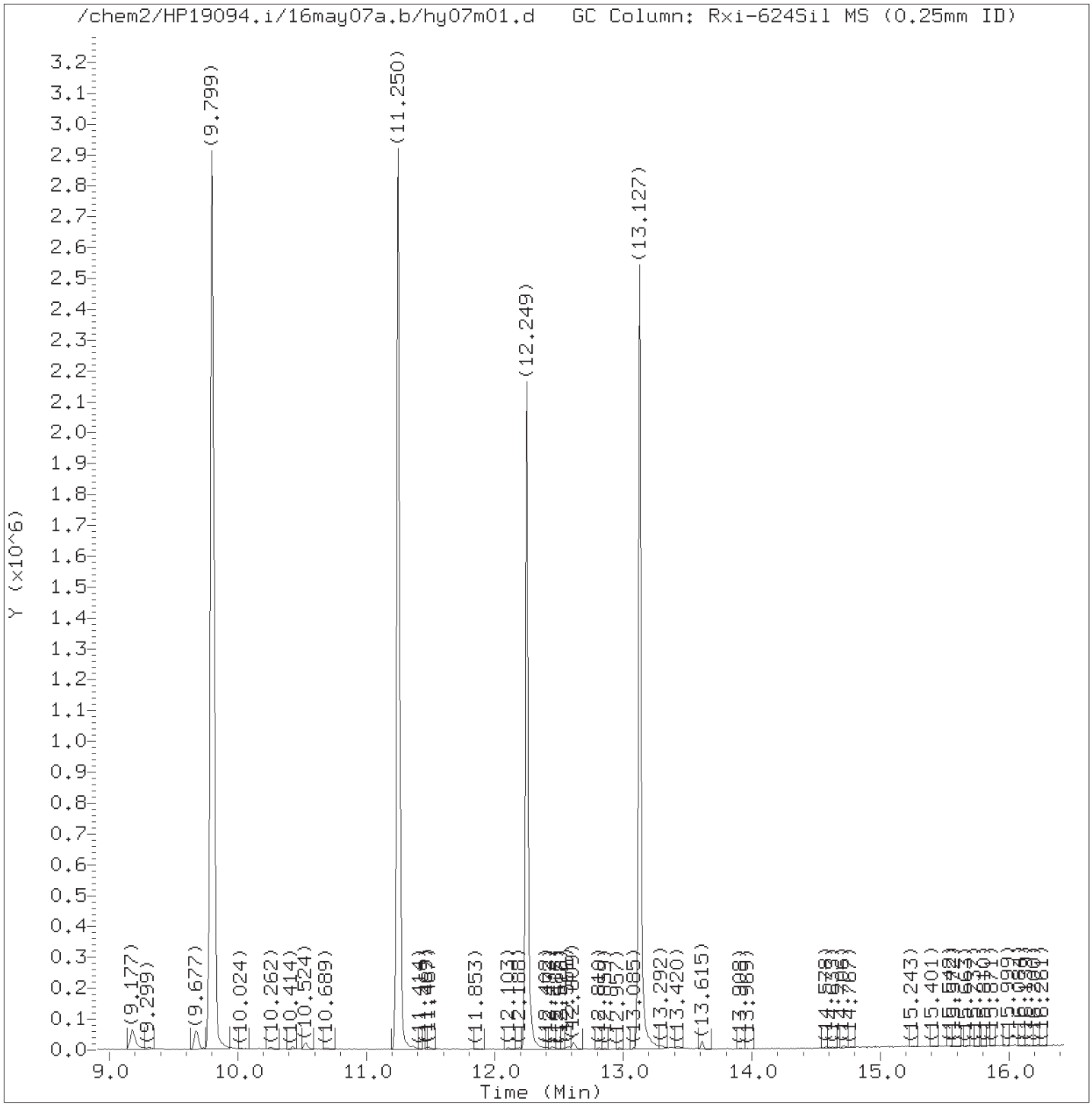
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

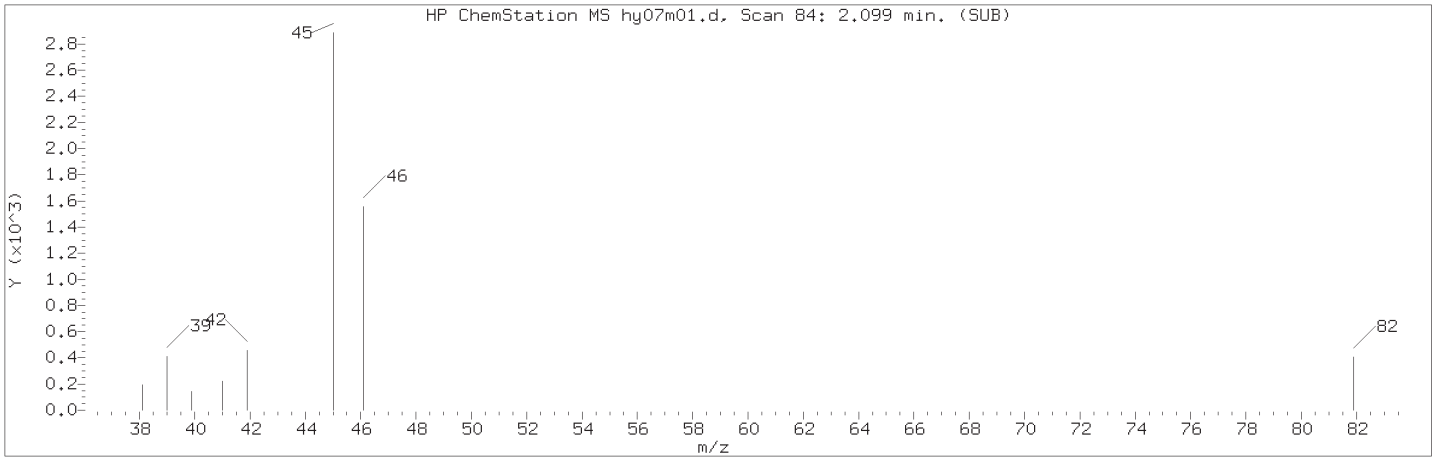
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	16083M	0.200
25) Acetonitrile	(1)	4.105	41	17944M	5.956
26)*t-Butyl Alcohol-d10	(1)	4.300	65	79665M	50.000
36) Vinyl Acetate	(2)	5.422	43	5190	0.078
43) Methyl Acrylate	(2)	6.342	55	9714	0.385
50)$Dibromofluoromethane	(2)	6.891	113	571867	0.000
53) 1-Chlorobutane	(2)	7.080	56	10919	0.086
57)$1,2-Dichloroethane-d4	(2)	7.348	102	89555	0.000
63)*Fluorobenzene	(2)	7.793	96	2344235	10.000
77) Chloroacetonitrile	(2)	9.268	75	2555	2.361
78) 2-Chloroethyl vinyl ether	(2)	9.323	63	971	0.043
82)$Toluene-d8	(3)	9.799	98	2371012	0.000
97)*Chlorobenzene-d5	(3)	11.250	117	1653470	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.146	88	724A	0.105
112) Cyclohexanone	(1)	12.182	55	3809	4.531
111)$4-Bromofluorobenzene	(3)	12.249	95	681048	0.000
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	695415	10.000
142) Hexachloroethane	(4)	13.615	117	4450M	0.096

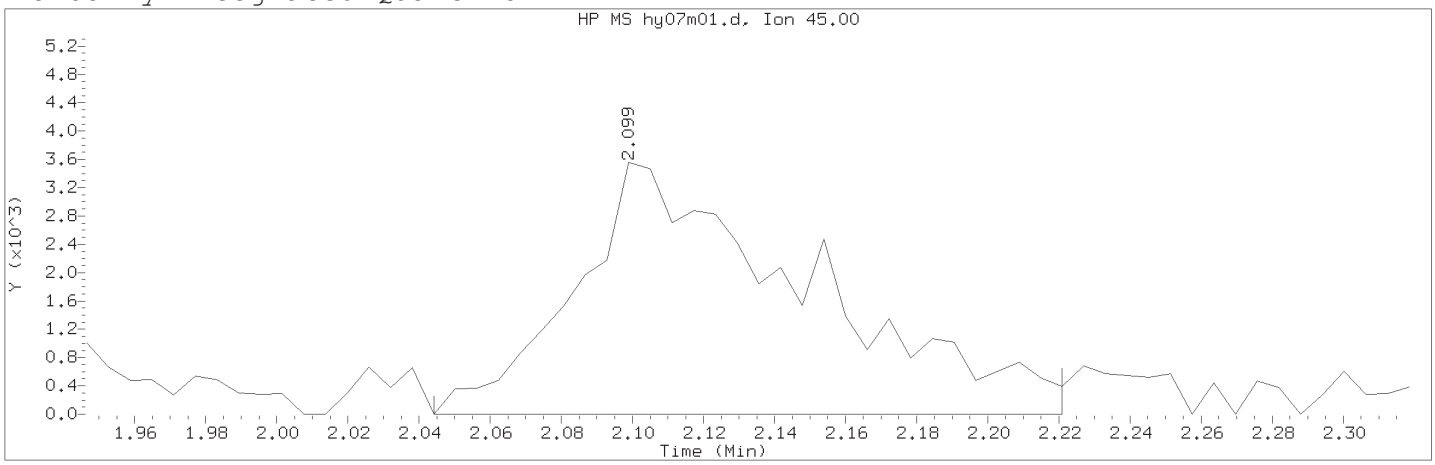
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

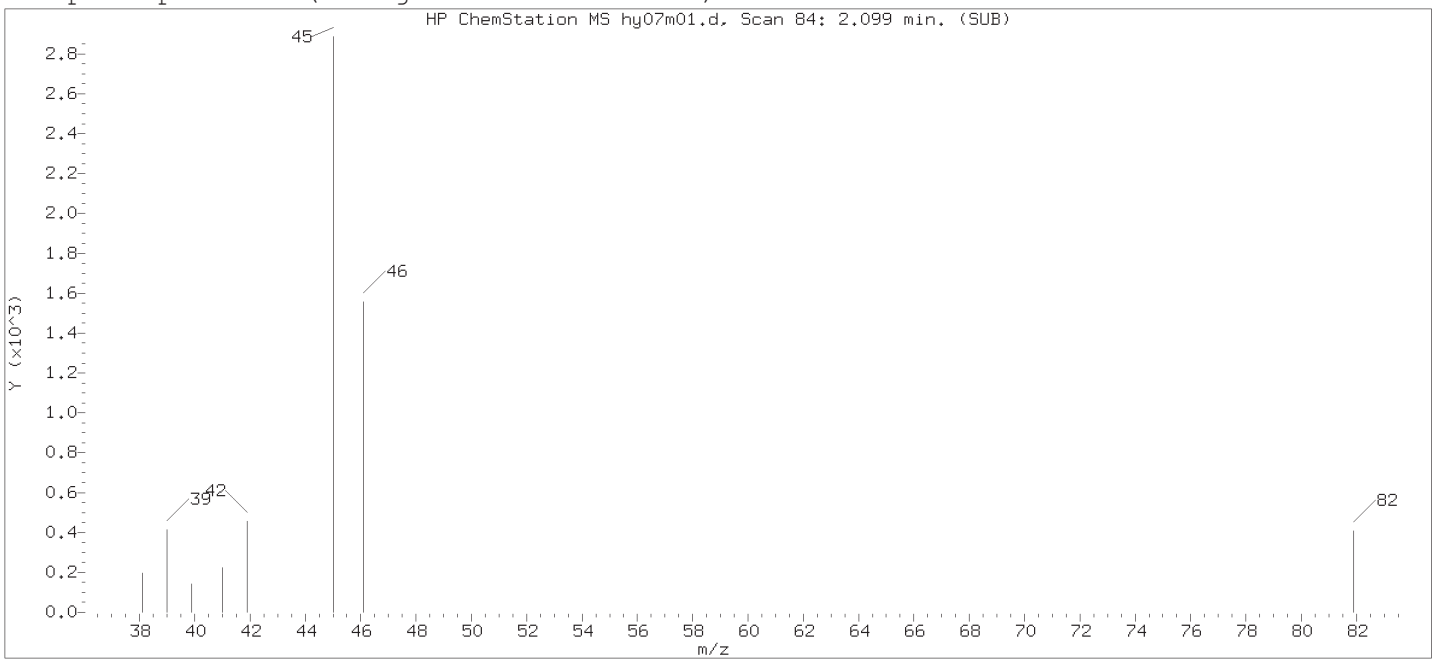
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 16083M
On-Column Amount (ng) : 0.1998
Integration start scan : 74 Integration stop scan: 103
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

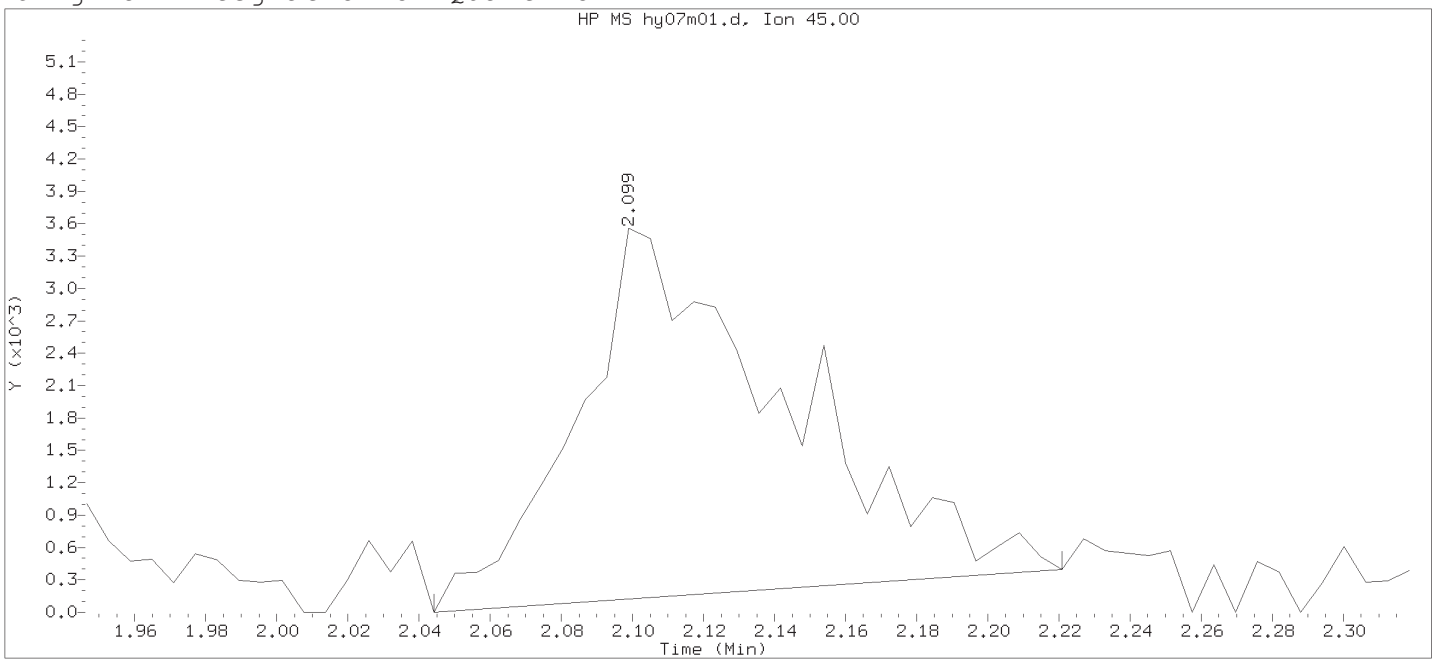
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

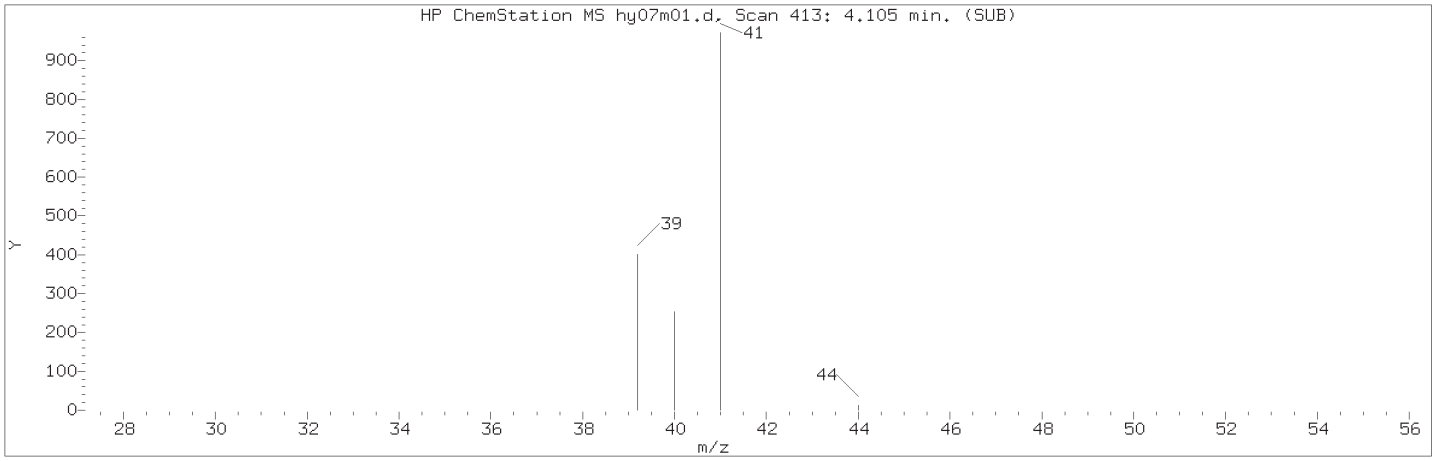
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:19
Date, time and analyst ID of latest file update: 07-May-2016 15:20 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

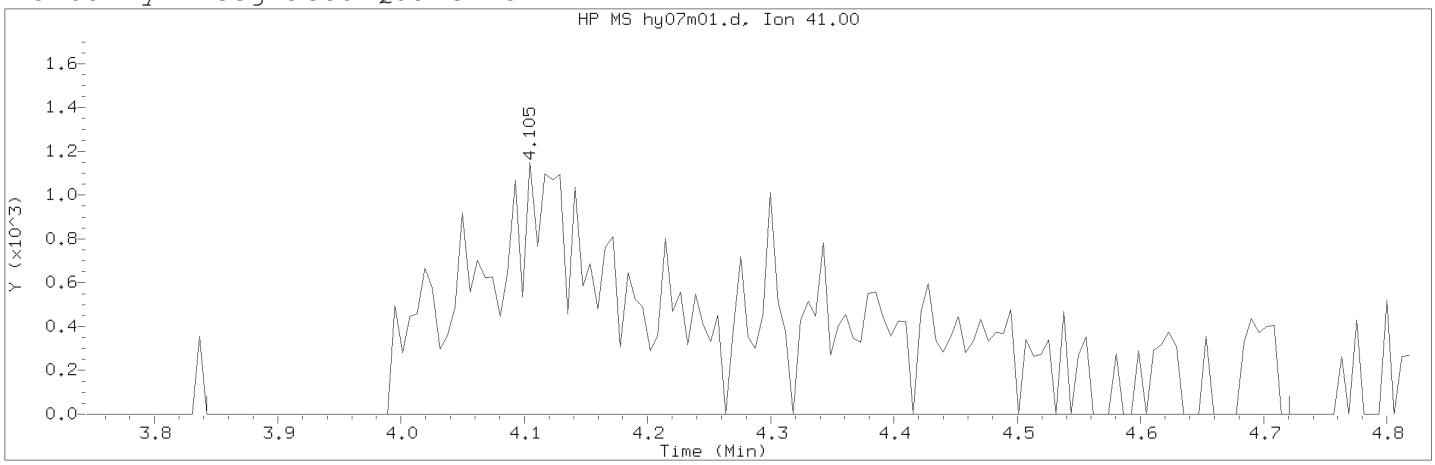
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 13915		
On-column Amount (ng)	: 0.1728		
Integration start scan	: 74	Integration stop scan:	103
Y at integration start	: 0	Y at integration end:	395

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

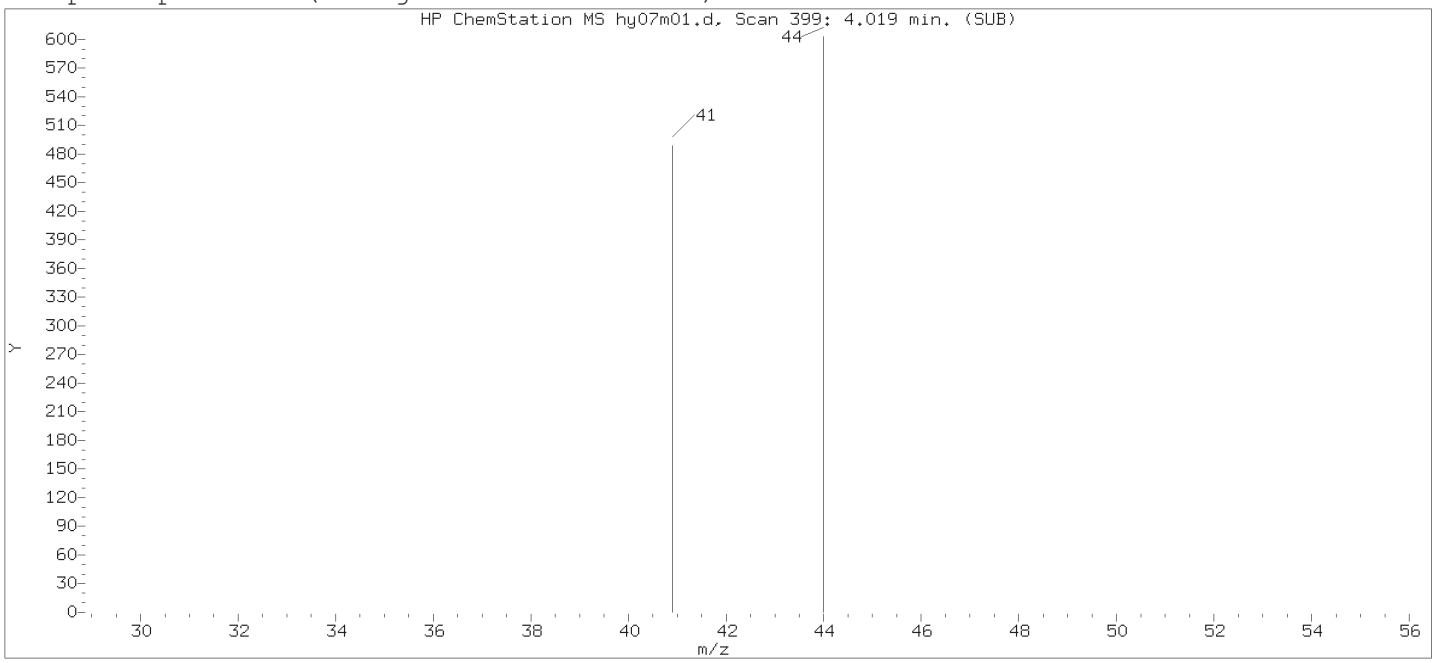
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 41.00
Area (flag) : 17944M
On-Column Amount (ng) : 5.9564
Integration start scan : 369 Integration stop scan: 513
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

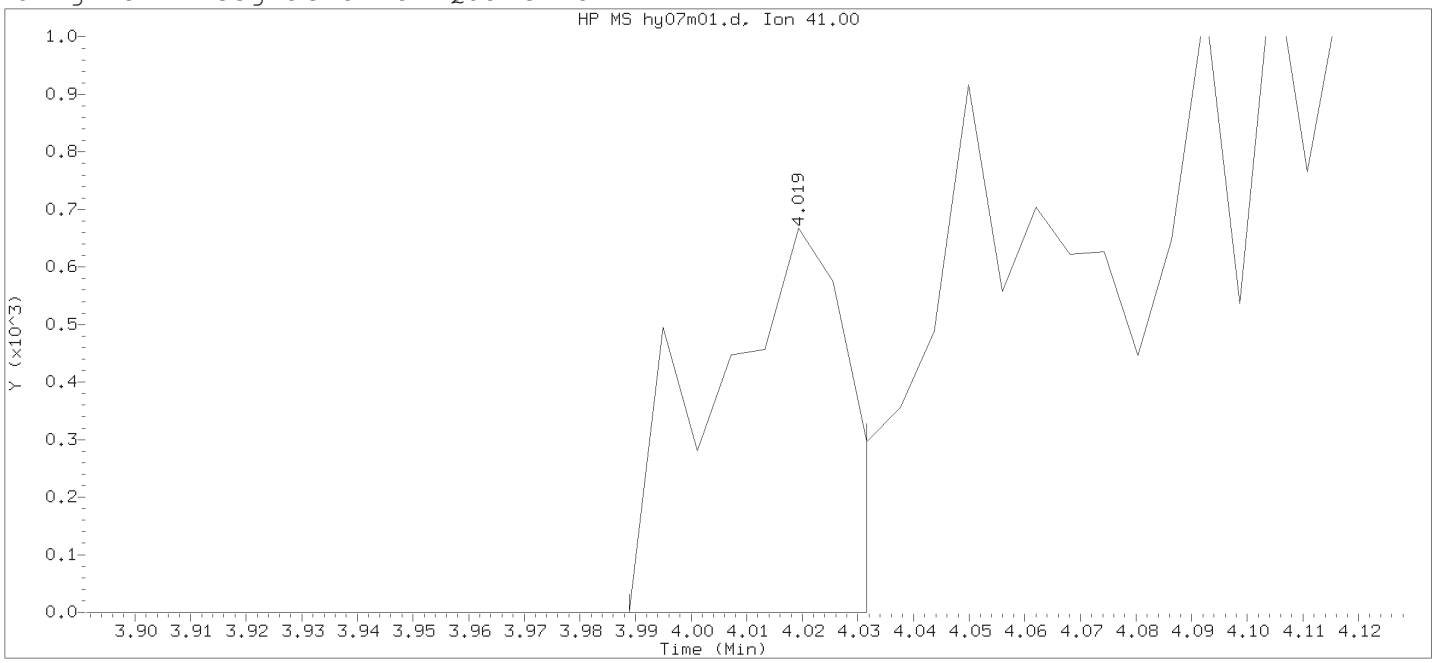
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

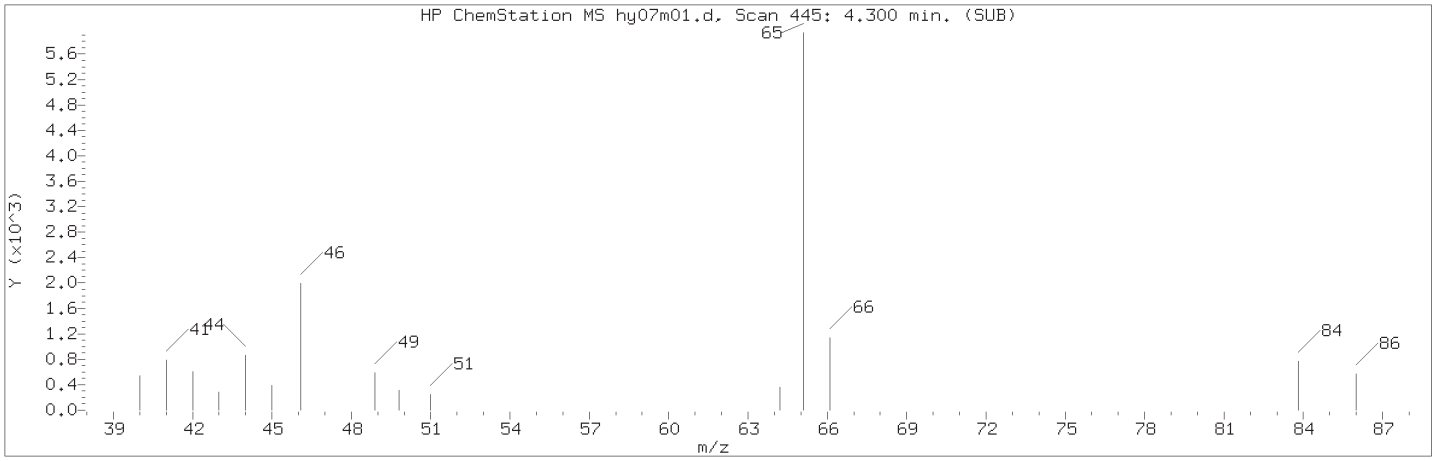
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:19
Date, time and analyst ID of latest file update: 07-May-2016 15:20 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

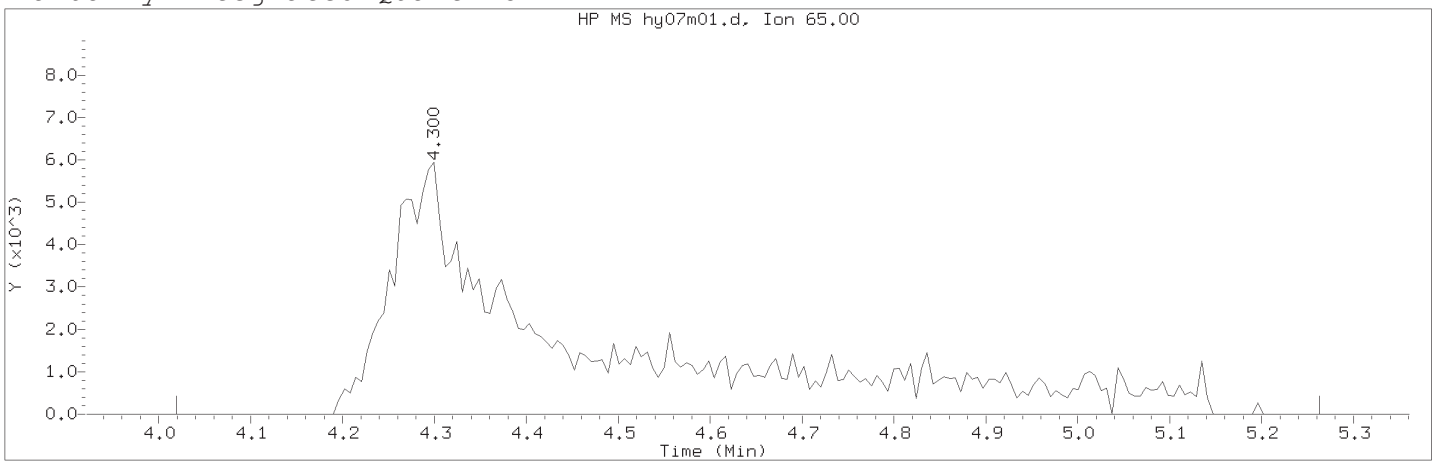
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 399
Retention Time (minutes): 4.019
Quant Ion : 41.00
Area : 1123
On-column Amount (ng) : 0.4470
Integration start scan : 393 Integration stop scan: 400
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature date: 05/07/2016 15:41

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

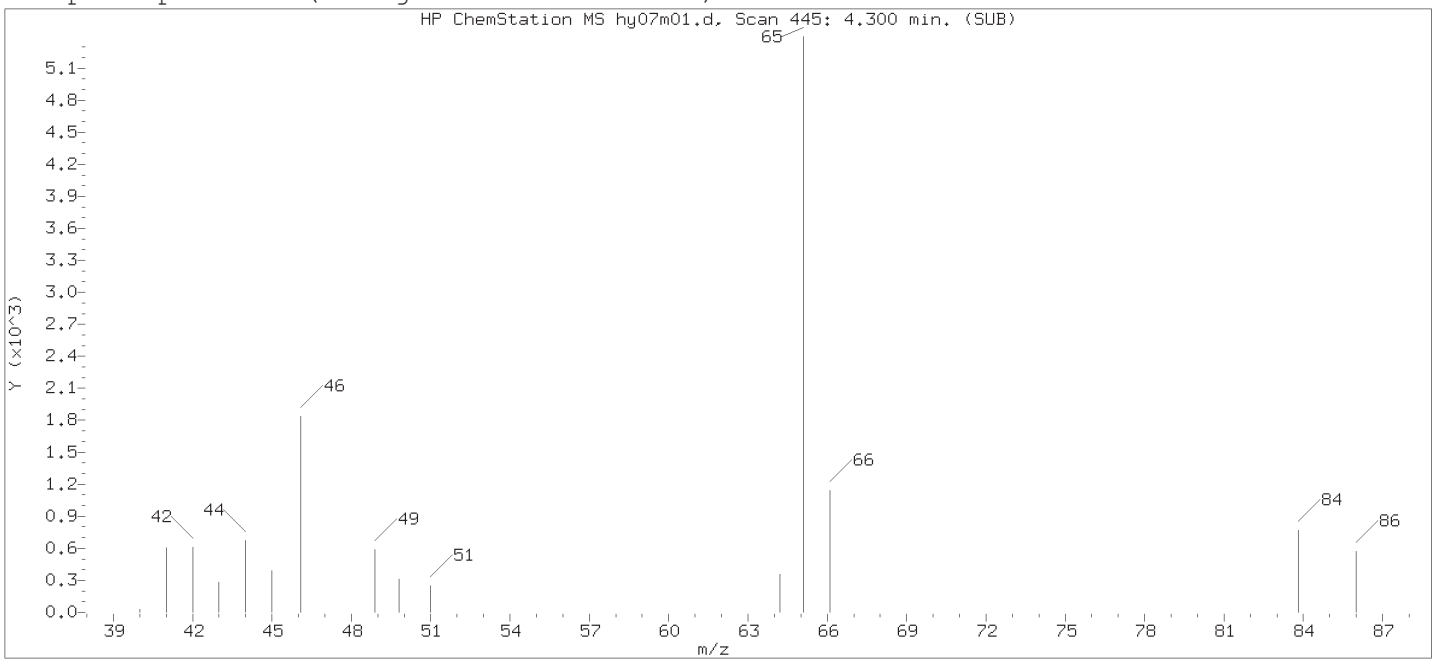
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 445
Retention Time (minutes): 4.300
Quant Ion : 65.00
Area (flag) : 79665M
On-Column Amount (ng) : 50.0000
Integration start scan : 398 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

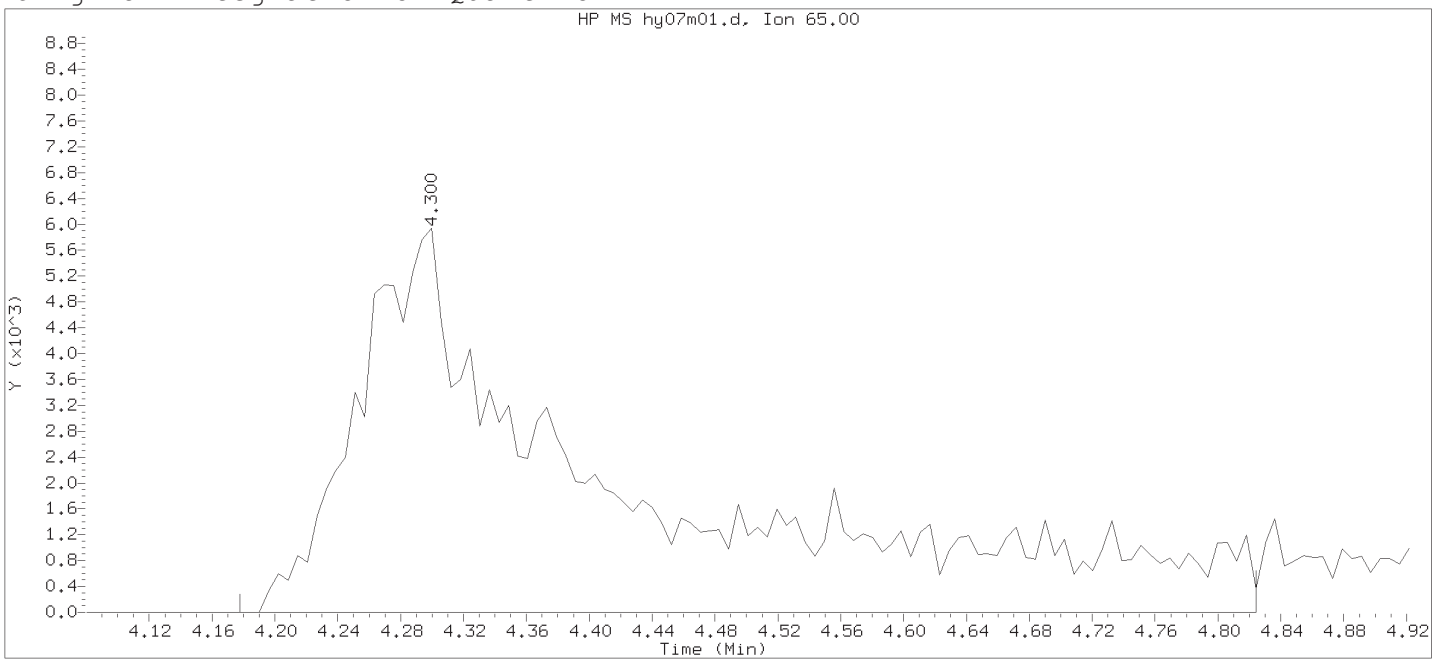
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

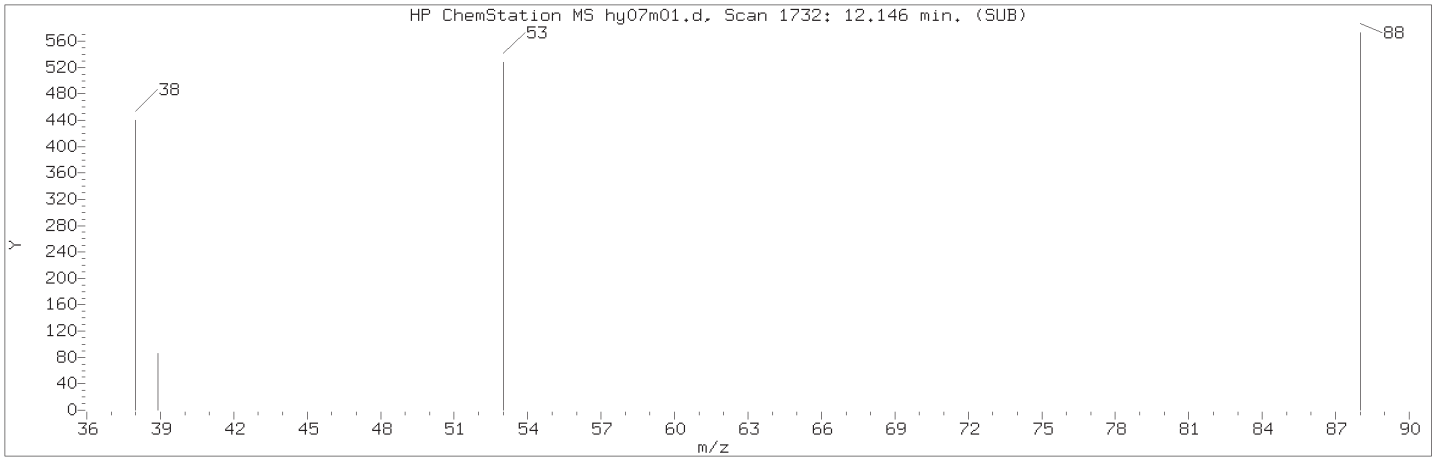
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:19
Date, time and analyst ID of latest file update: 07-May-2016 15:20 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

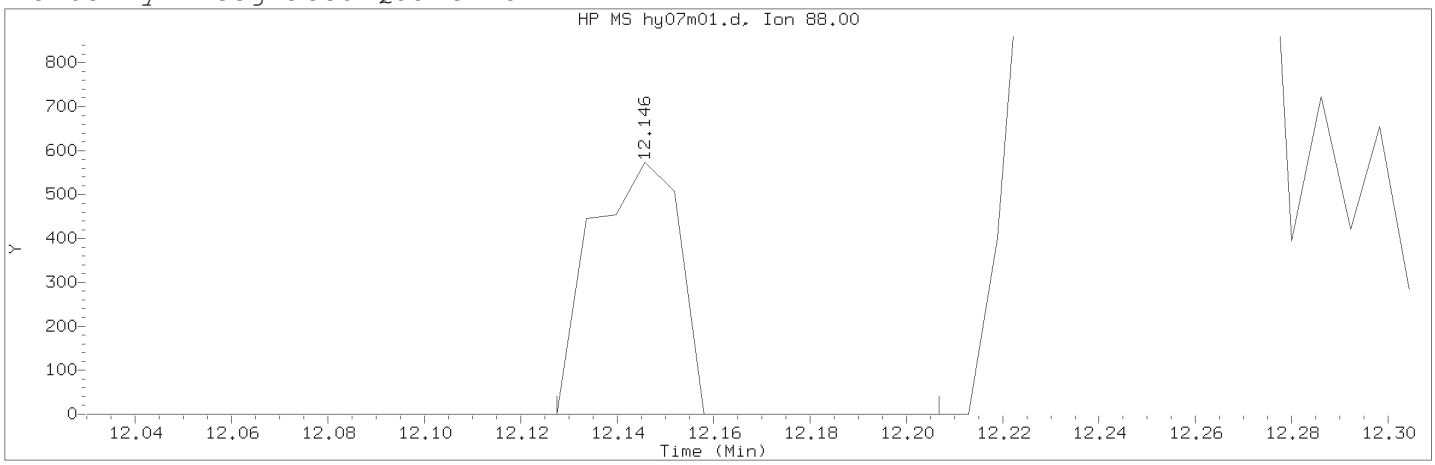
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 445
Retention Time (minutes): 4.300
Quant Ion : 65.00
Area : 66462
On-column Amount (ng) : 50.0000
Integration start scan : 424 Integration stop scan: 530
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

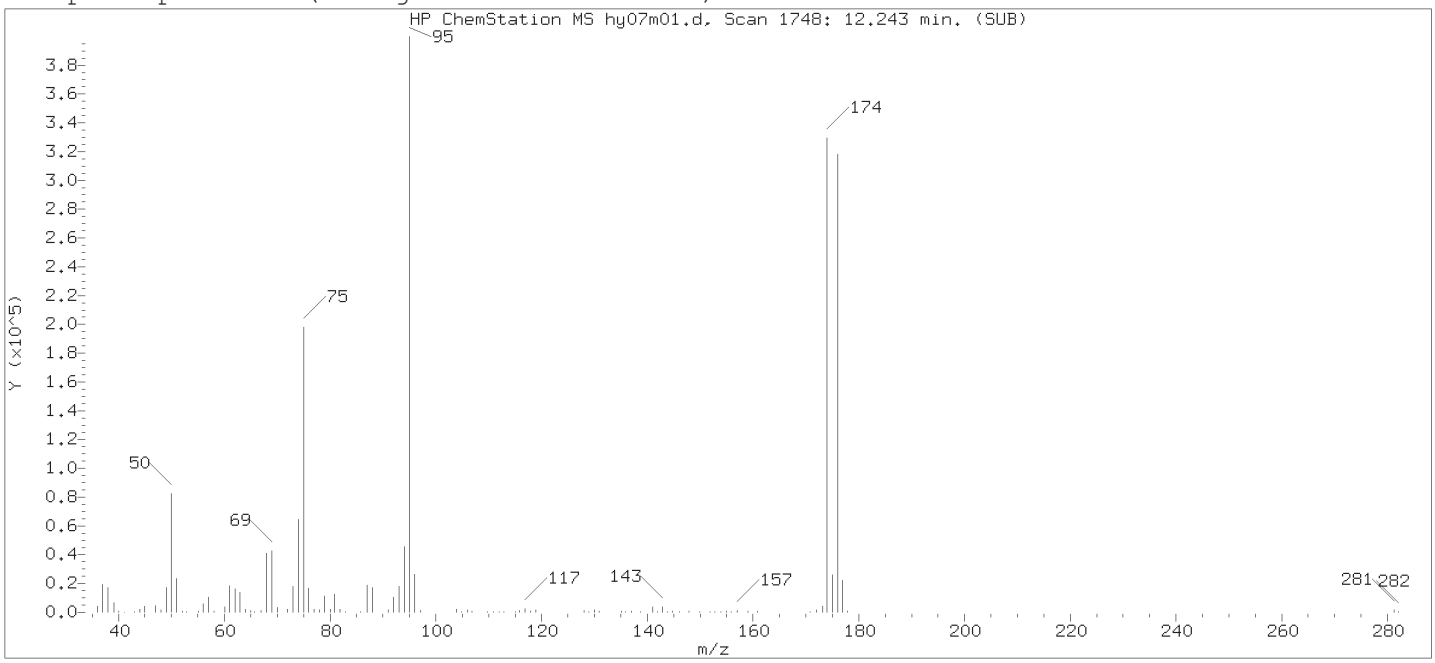
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1732
Retention Time (minutes): 12.146
Quant Ion : 88.00
Area (flag) : 724A
On-Column Amount (ng) : 0.1053
Integration start scan : 1728 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

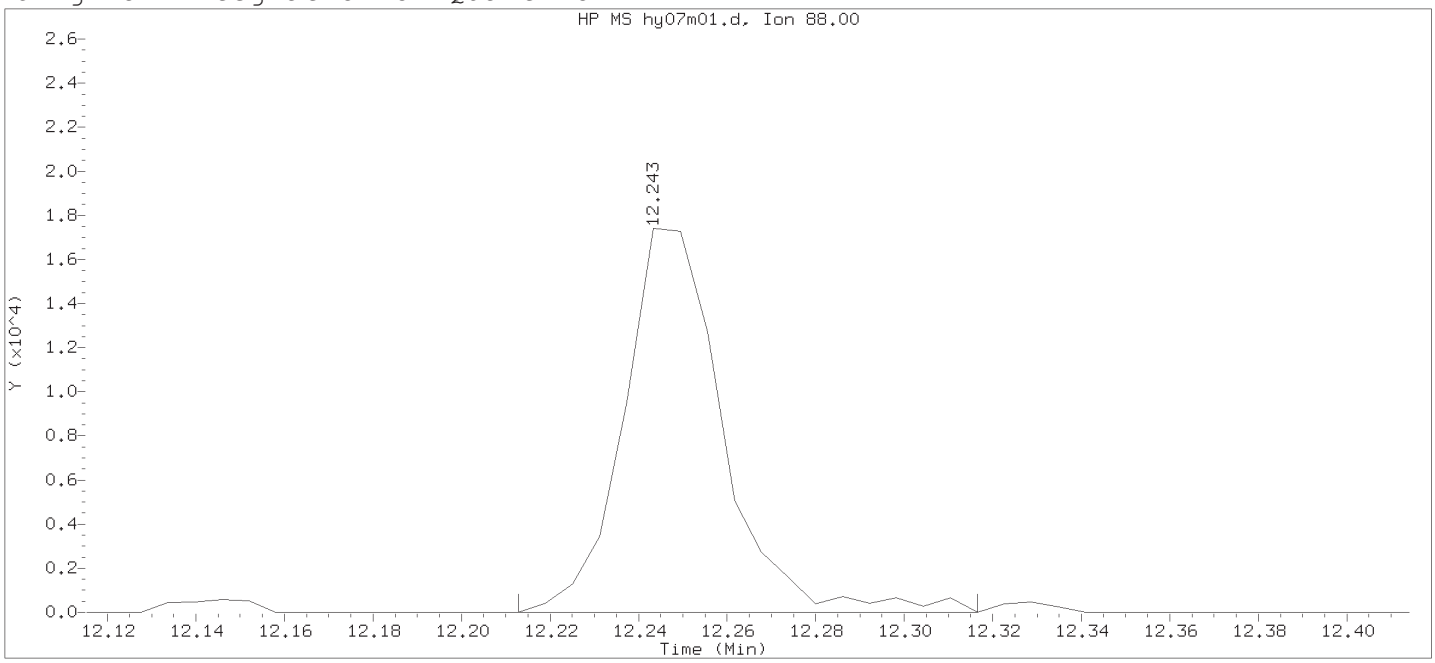
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

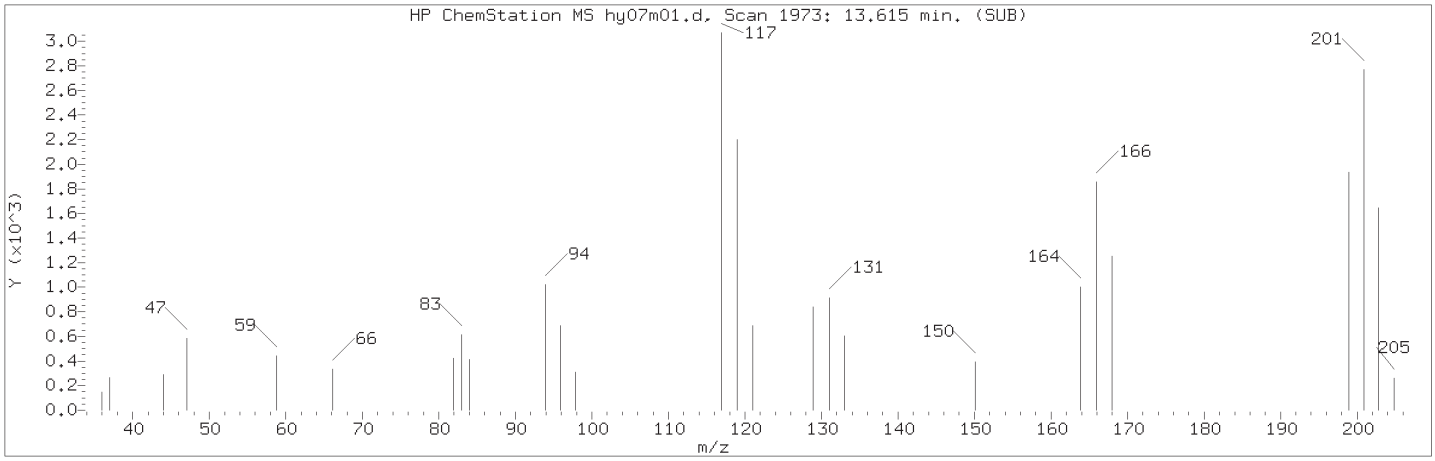
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:19
Date, time and analyst ID of latest file update: 07-May-2016 15:20 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

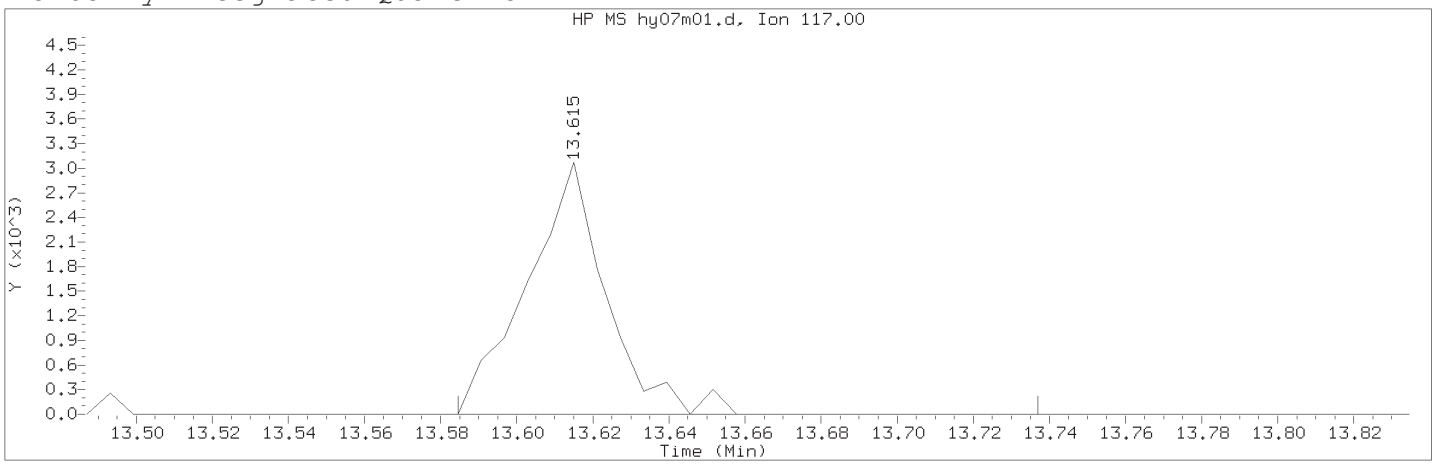
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1748
Retention Time (minutes): 12.243
Quant Ion : 88.00
Area : 27287
On-column Amount (ng) : 4.7567
Integration start scan : 1742 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:29 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

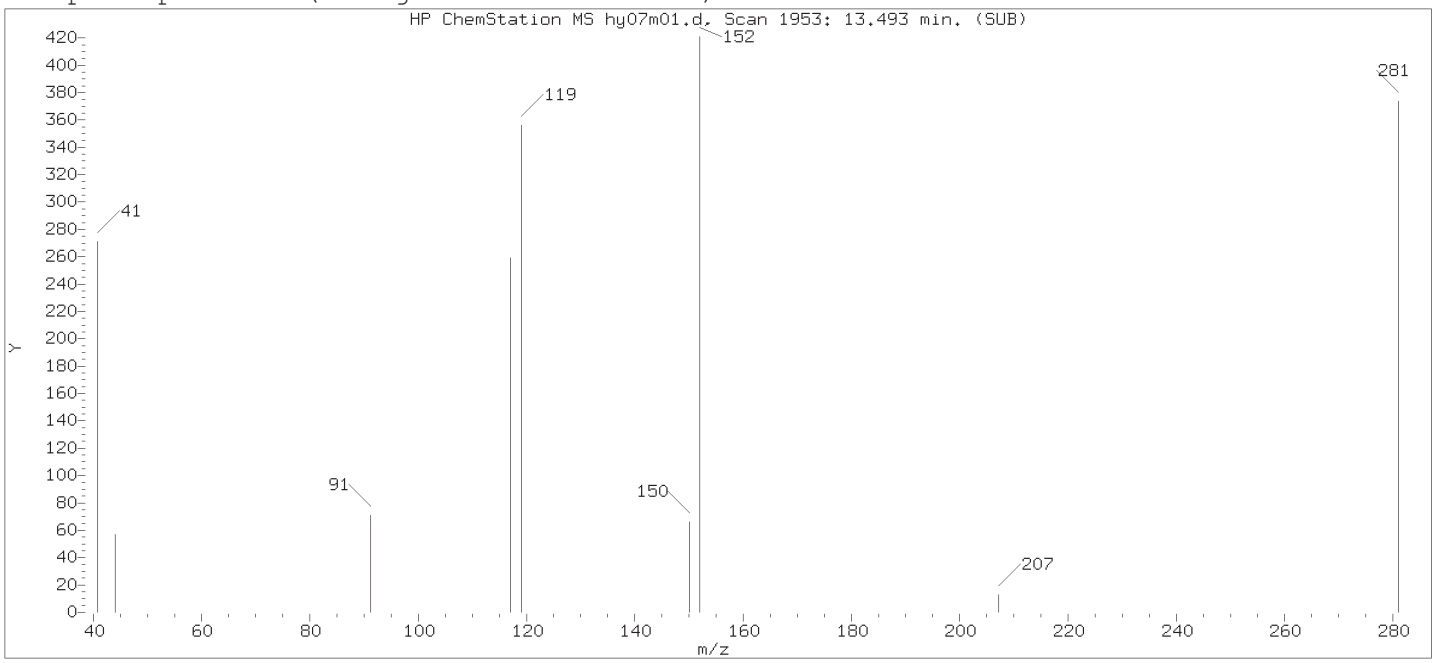
Compound Number : 142
Compound Name : Hexachloroethane
Scan Number : 1973
Retention Time (minutes): 13.615
Quant Ion : 117.00
Area (flag) : 4450M
On-Column Amount (ng) : 0.0958
Integration start scan : 1967 Integration stop scan: 1992
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

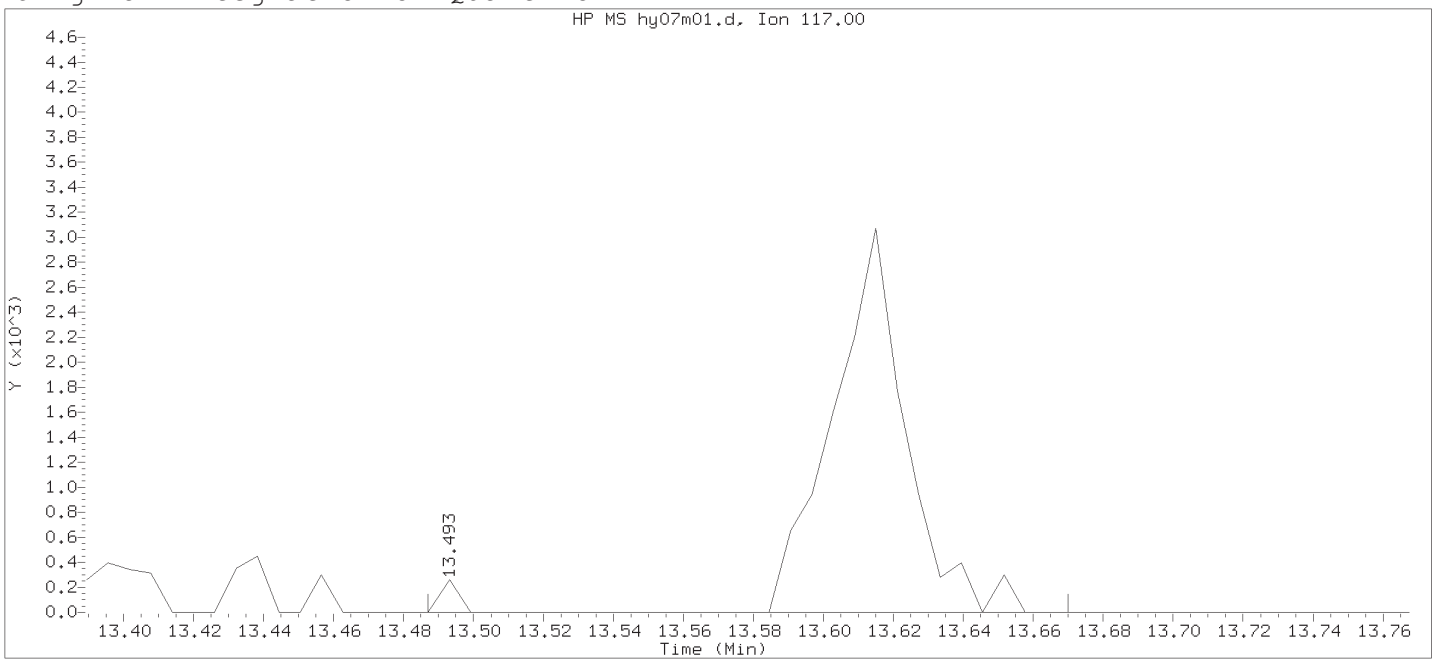
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



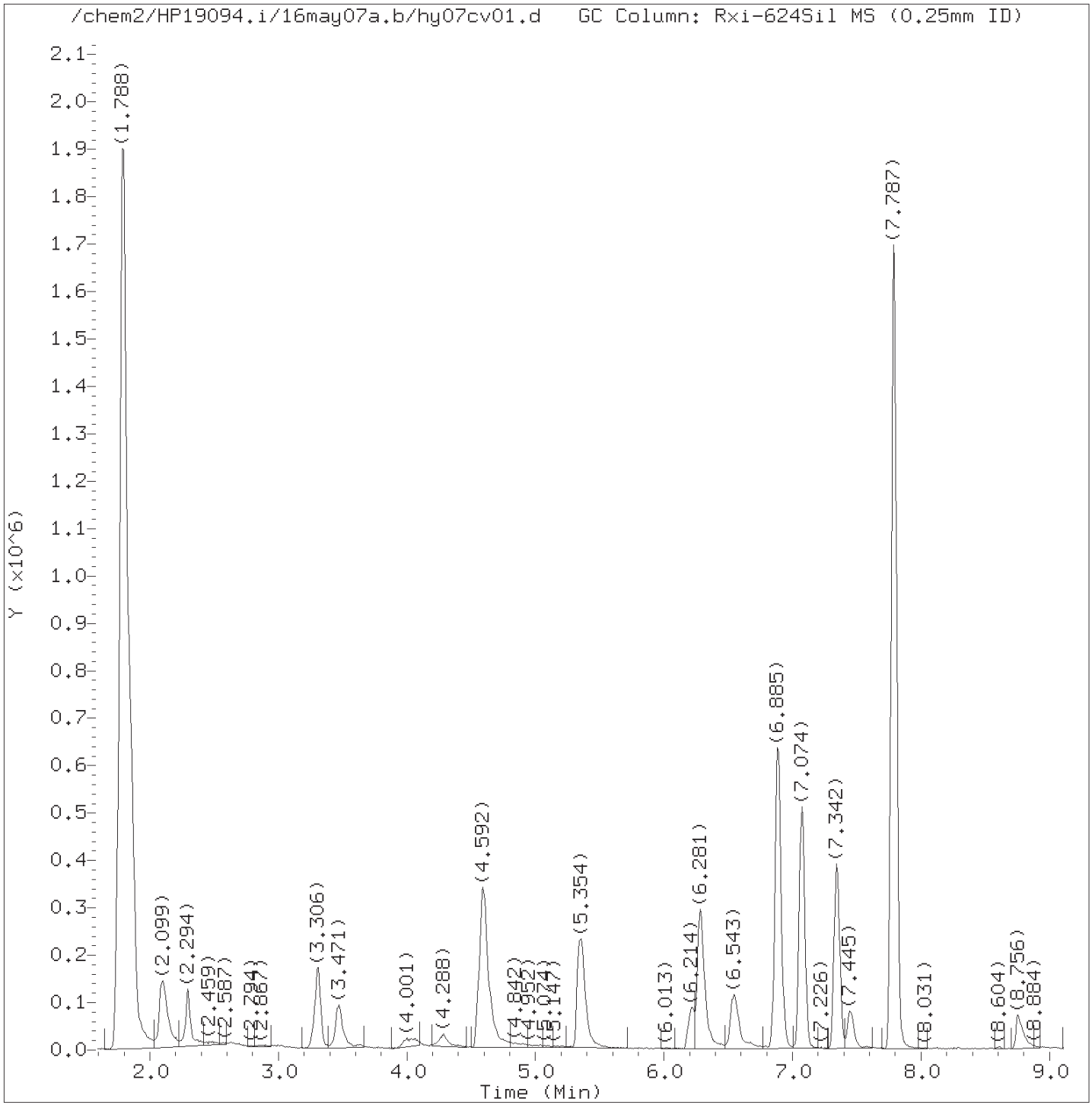
Data File: /chem2/HP19094.i/16may07a.b/hy07m01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:00 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:19
Date, time and analyst ID of latest file update: 07-May-2016 15:20 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 142
Compound Name : Hexachloroethane
Scan Number : 1953
Retention Time (minutes): 13.493
Quant Ion : 117.00
Area : 4545
On-column Amount (ng) : 0.0978
Integration start scan : 1951 Integration stop scan: 1981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:41.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

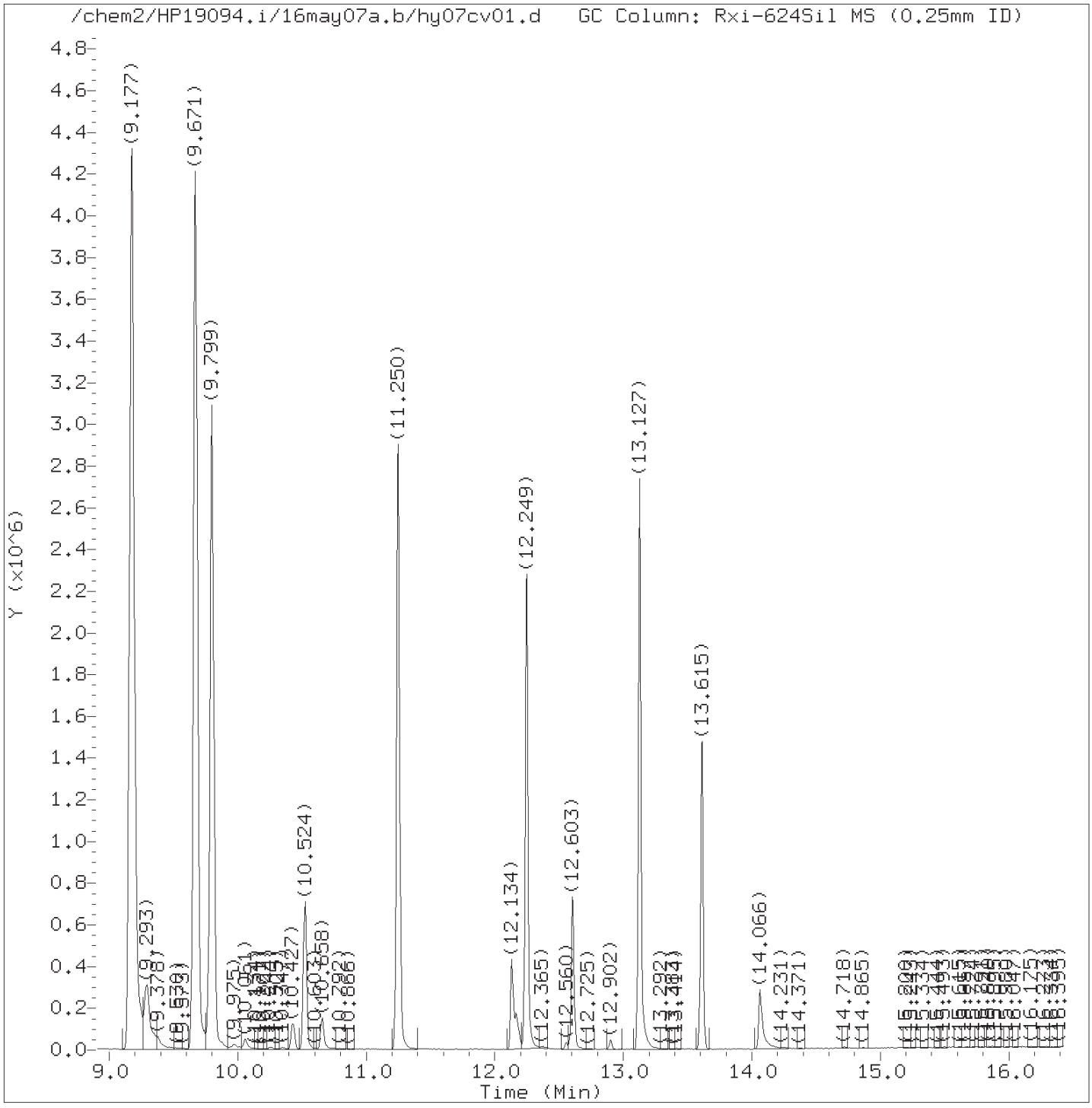
Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

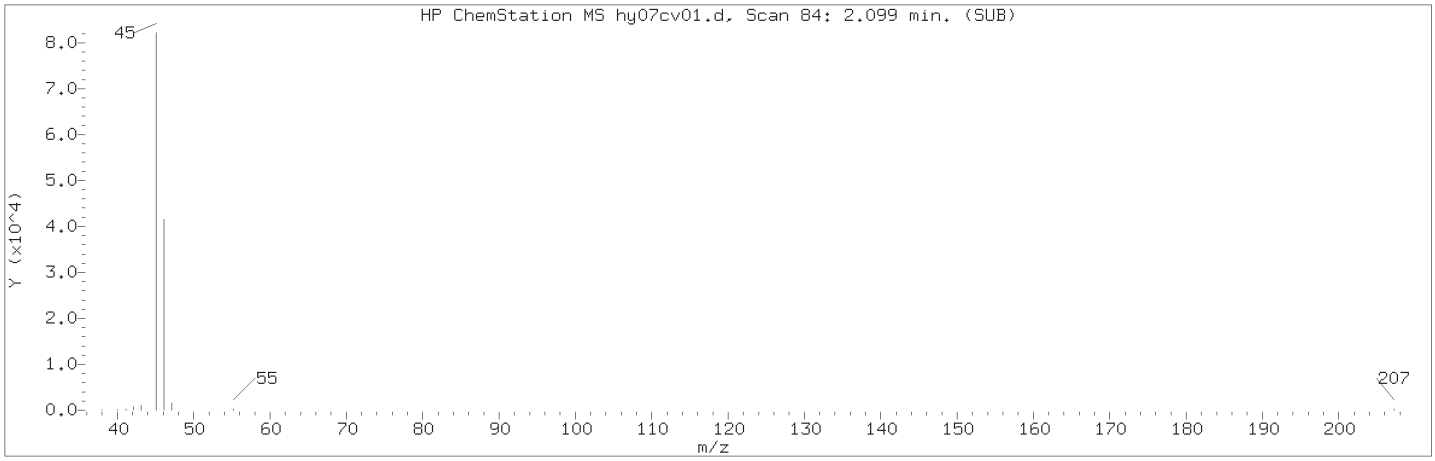
Sample Name: LCSHSM Lab Sample ID: LCSHSM

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	379565M	4.764
25) Acetonitrile	(1)	4.001	41	135865M	48.932
26)*t-Butyl Alcohol-d10	(1)	4.275	65	73425M	50.000
36) Vinyl Acetate	(2)	5.348	43	817763	12.415
43) Methyl Acrylate	(2)	6.281	55	660988	26.463
50)$Dibromofluoromethane	(2)	6.885	113	562071	0.000
53) 1-Chlorobutane	(2)	7.080	56	627749	5.003
57)$1,2-Dichloroethane-d4	(2)	7.336	102	87496	0.000
63)*Fluorobenzene	(2)	7.787	96	2320011	10.000
77) Chloroacetonitrile	(2)	9.213	75	247242	230.879
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	119827	5.397
82)$Toluene-d8	(3)	9.799	98	2403670	0.000
97)*Chlorobenzene-d5	(3)	11.250	117	1677045	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	101648	16.039
112) Cyclohexanone	(1)	12.164	55	79222M	102.257
111)$4-Bromofluorobenzene	(3)	12.243	95	715550	0.000
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	720015	10.000
142) Hexachloroethane	(4)	13.609	117	249330	5.182

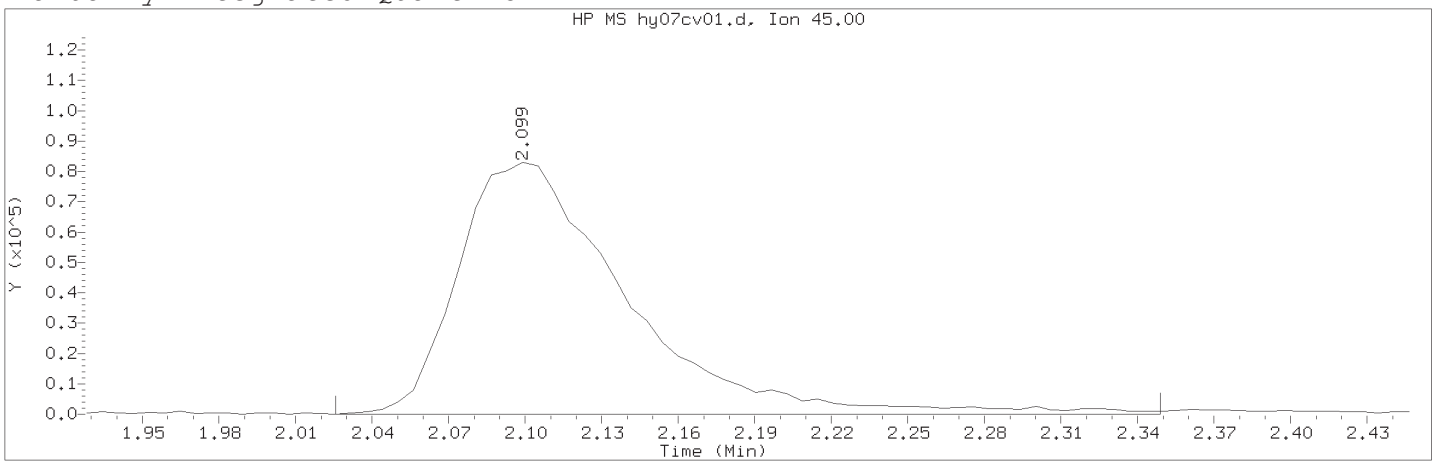
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

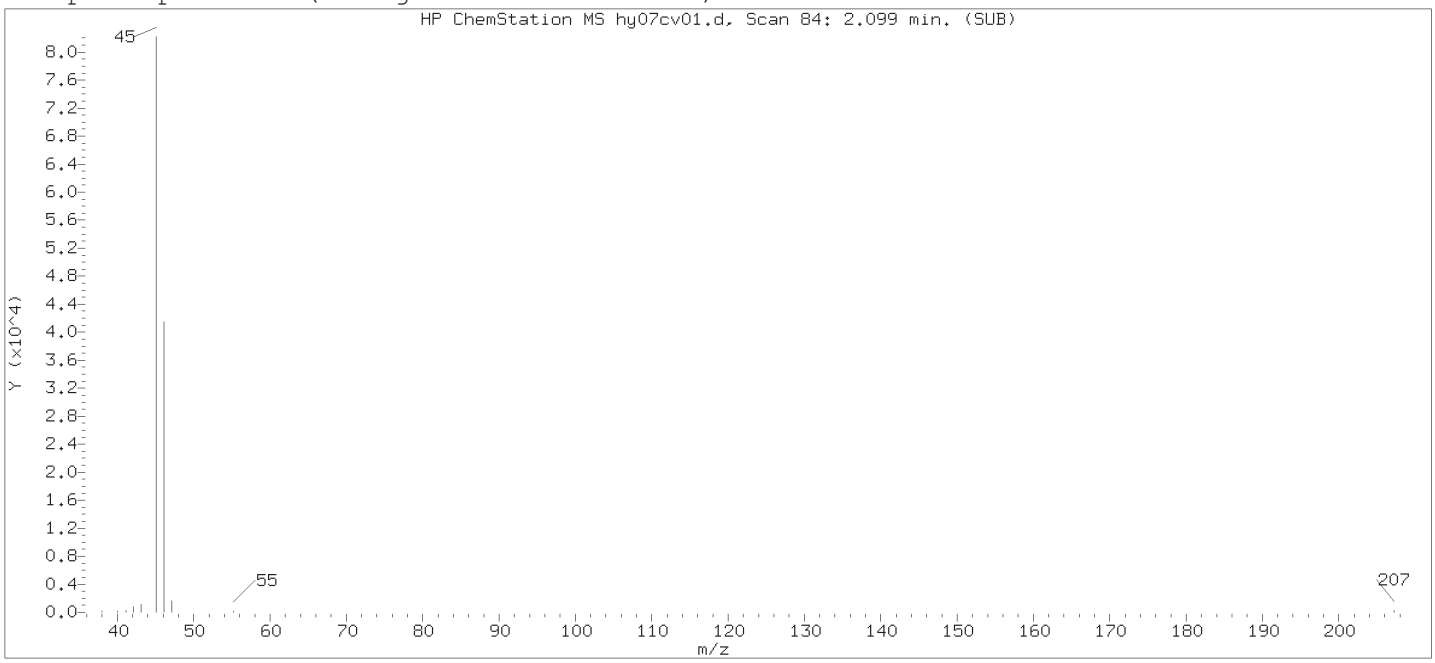
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 379565M
On-Column Amount (ng) : 4.7638
Integration start scan : 71 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

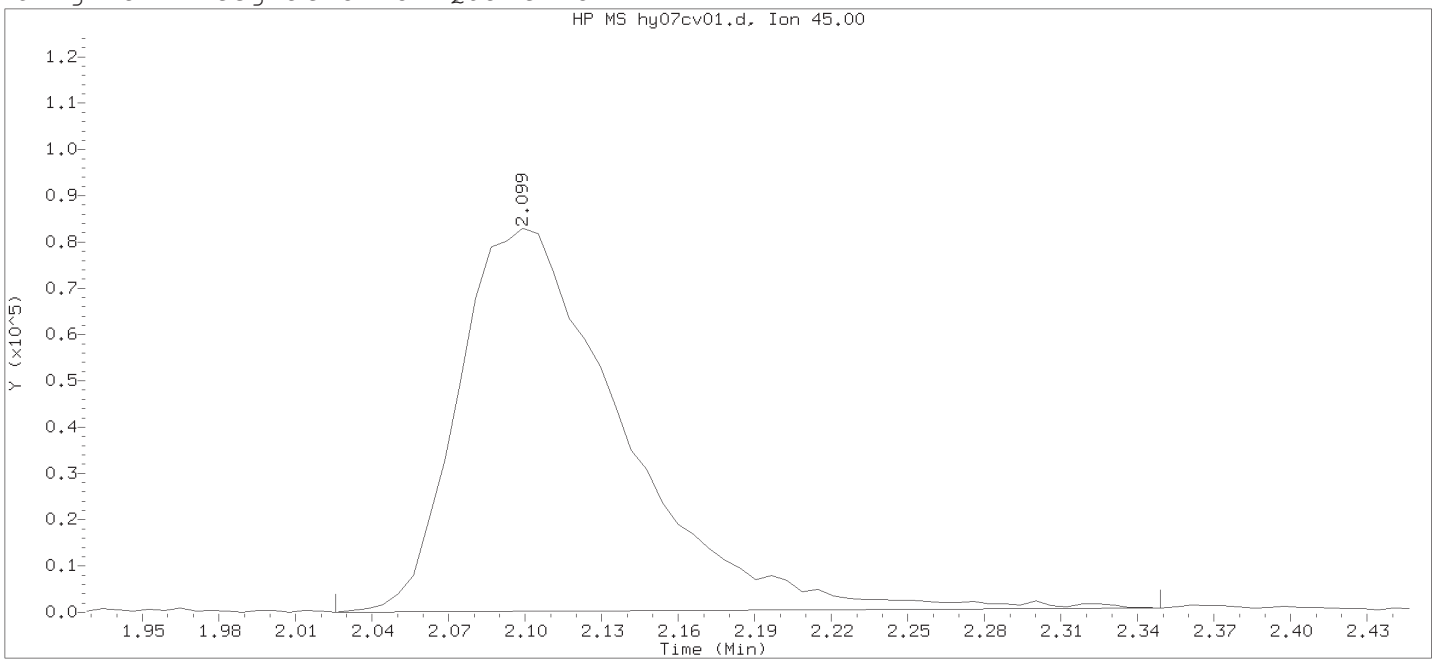
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

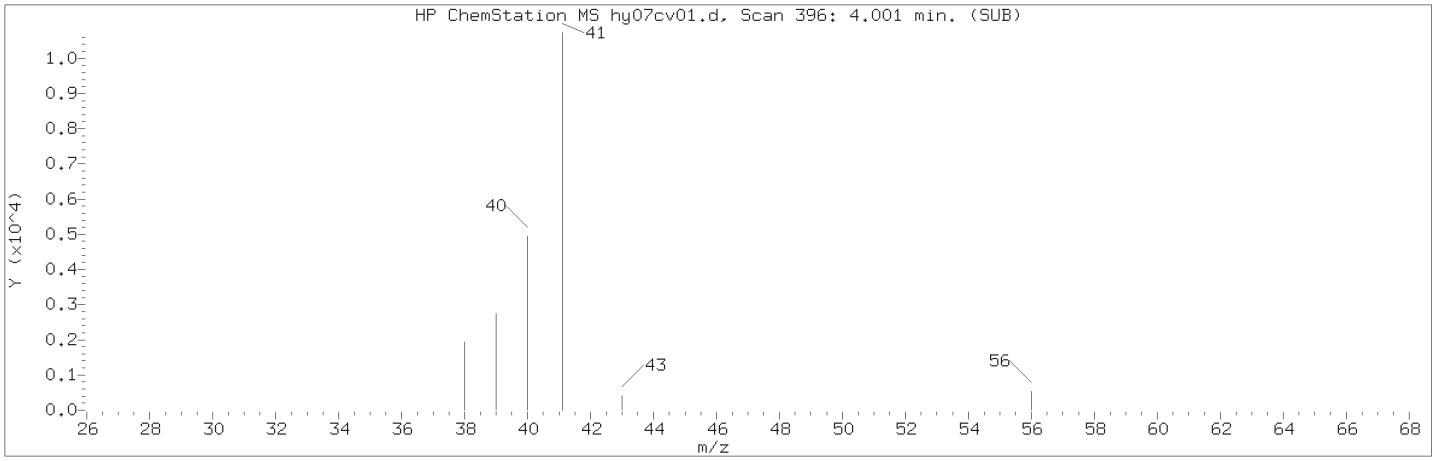
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:40 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

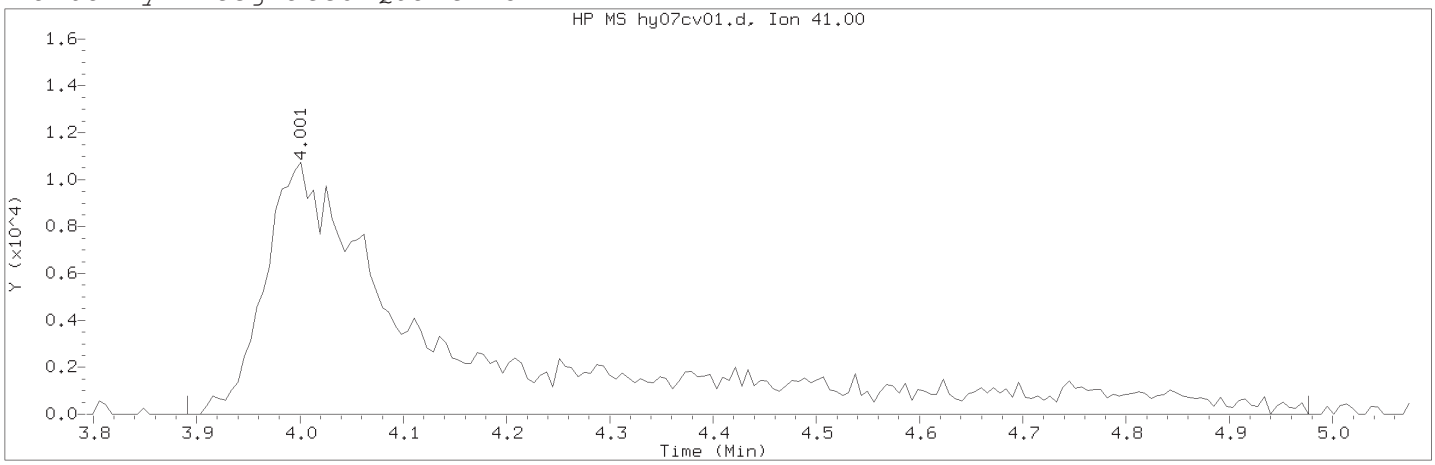
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 84		
Retention Time (minutes)	: 2.099		
Quant Ion	: 45.00		
Area	: 370420		
On-column Amount (ng)	: 4.6490		
Integration start scan	: 71	Integration stop scan:	124
Y at integration start	: 0	Y at integration end:	926

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

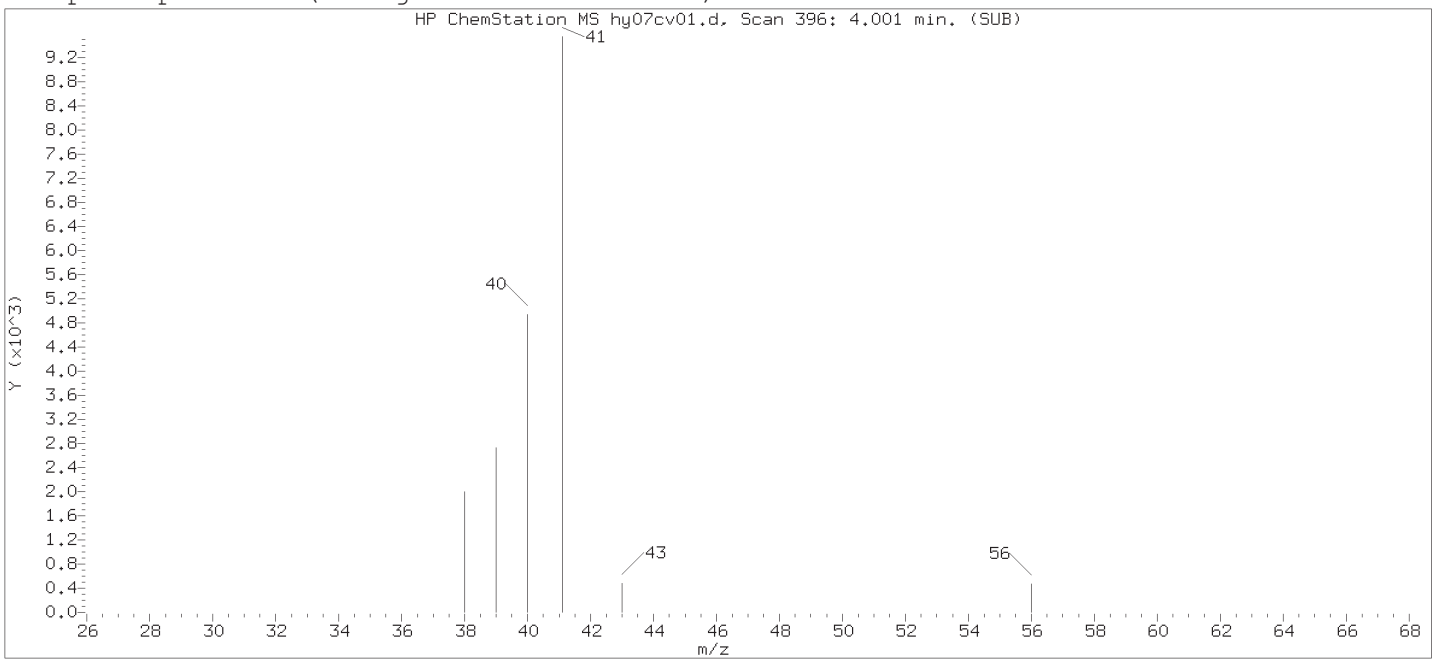
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area (flag) : 135865M
On-Column Amount (ng) : 48.9325
Integration start scan : 377 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

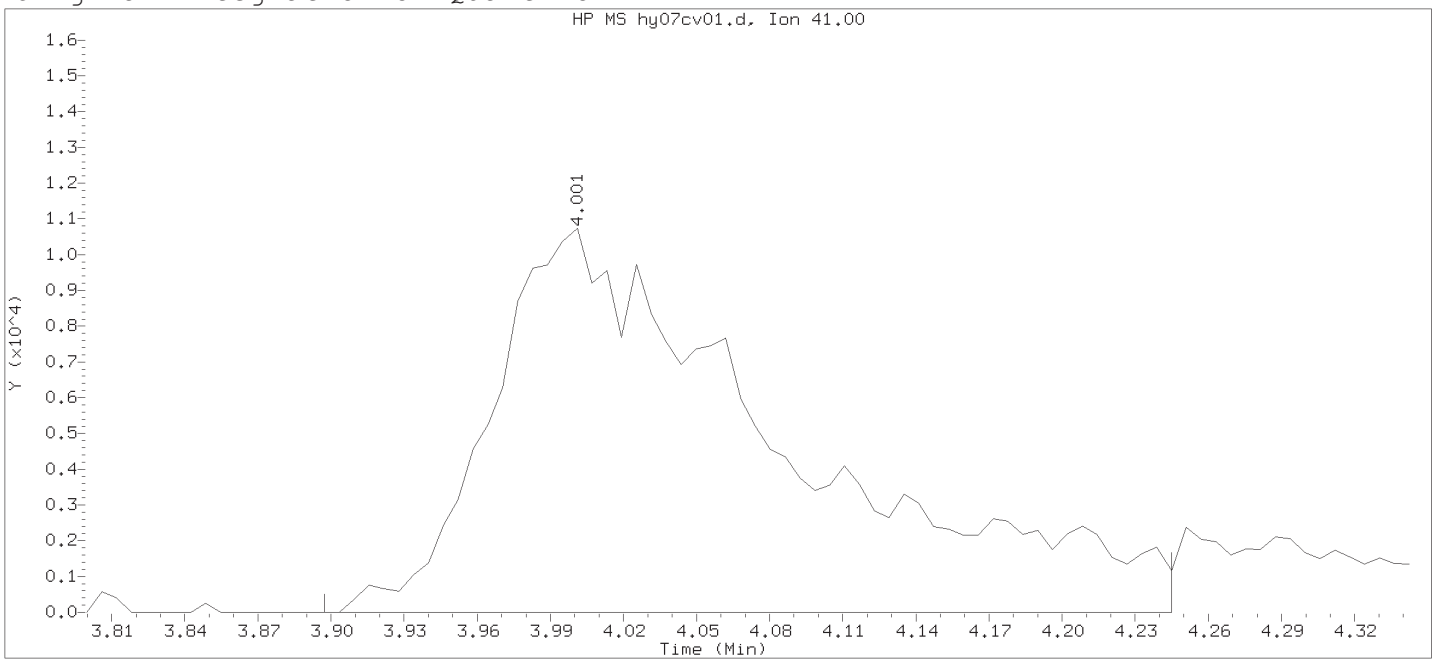
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

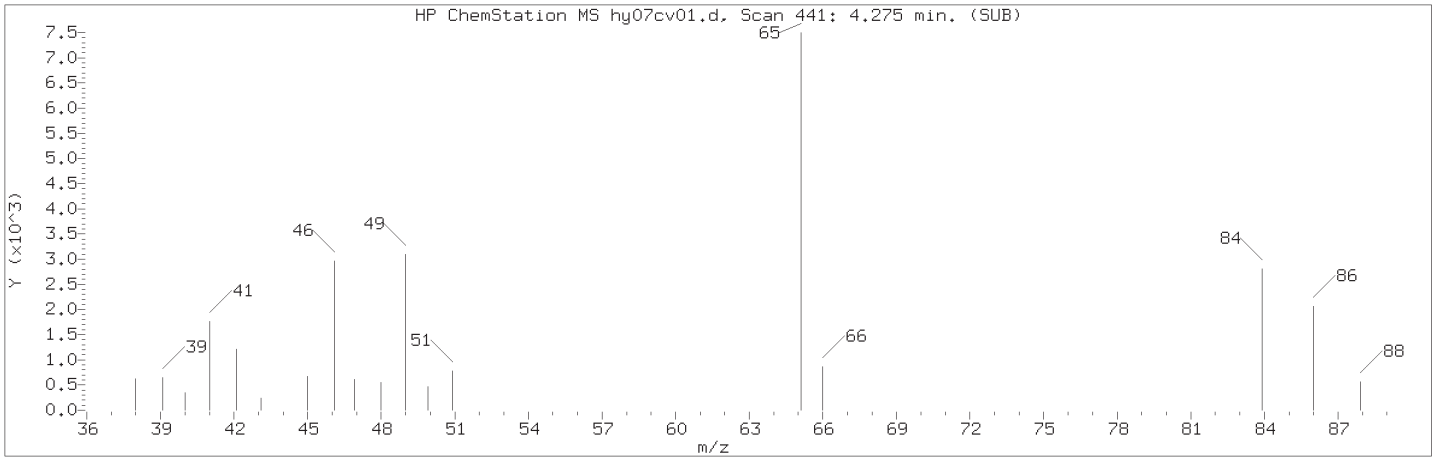
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:40 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

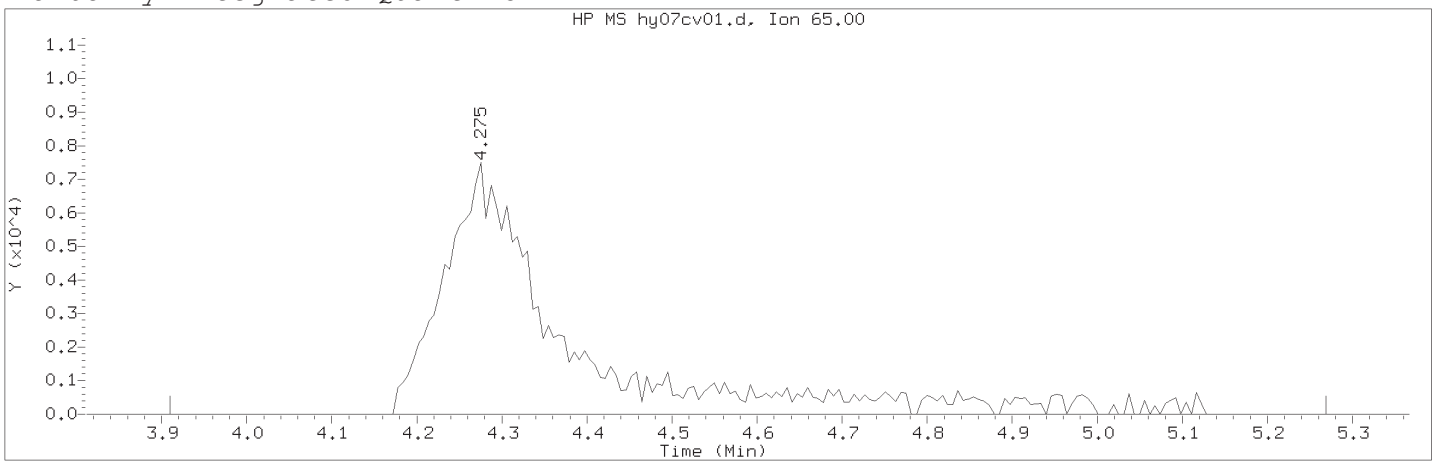
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area : 88344
On-column Amount (ng) : 34.8184
Integration start scan : 378 Integration stop scan: 435
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature date: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

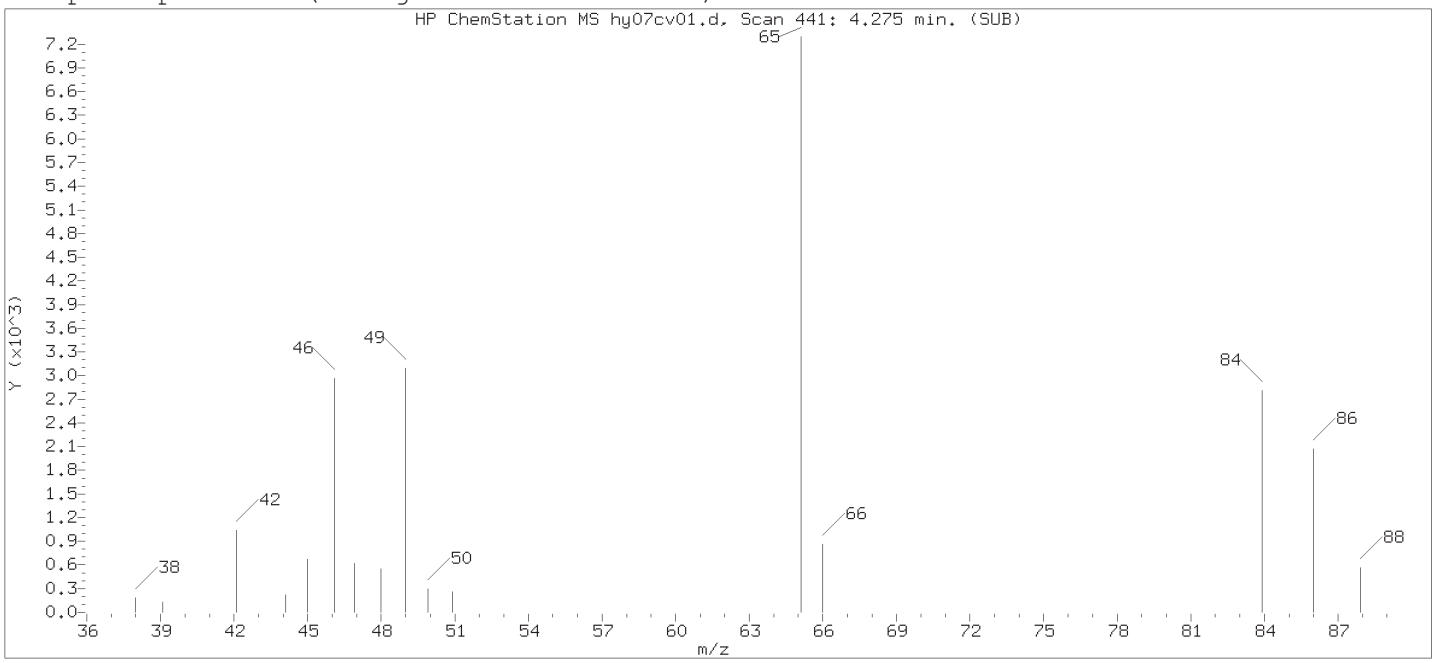
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 73425M
On-Column Amount (ng) : 50.0000
Integration start scan : 380 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

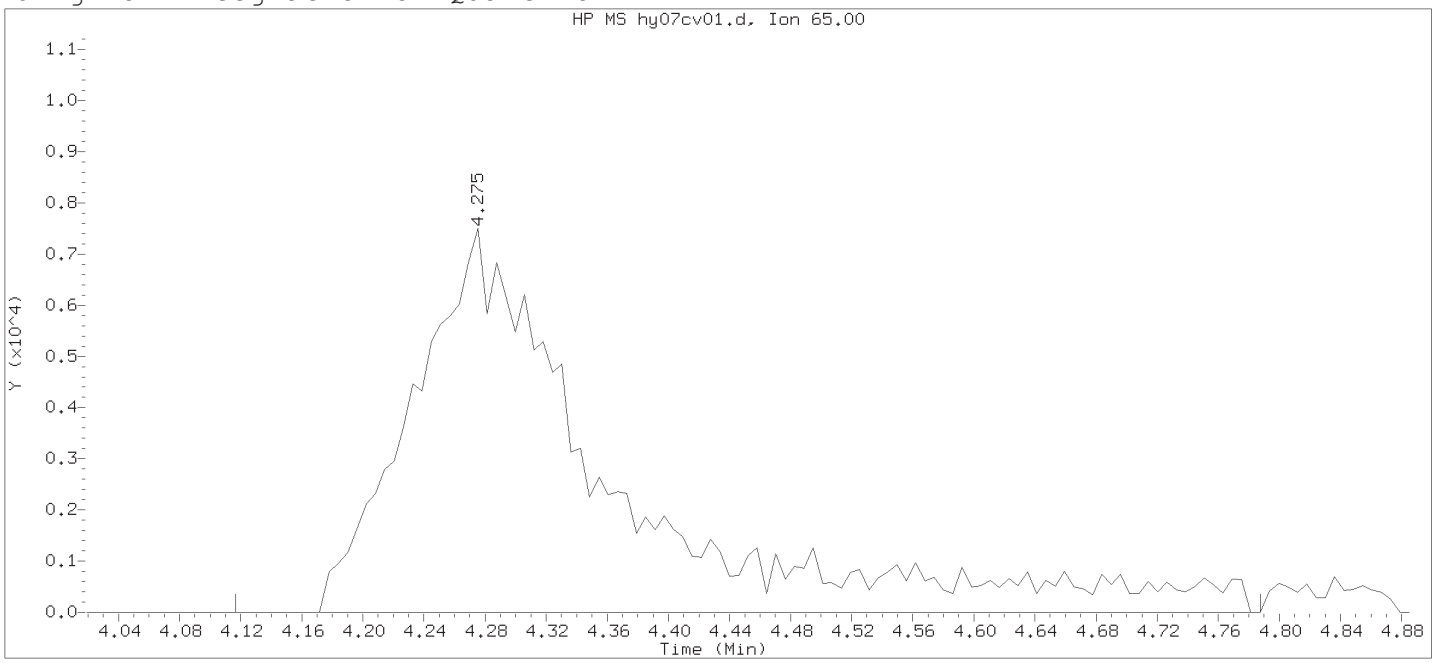
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

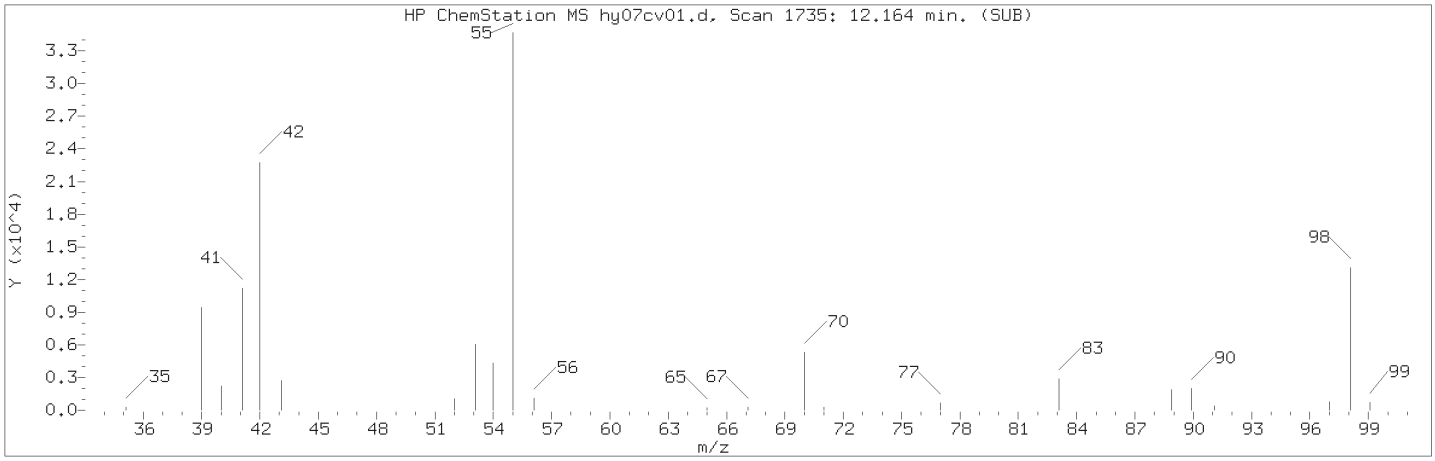
Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:40 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

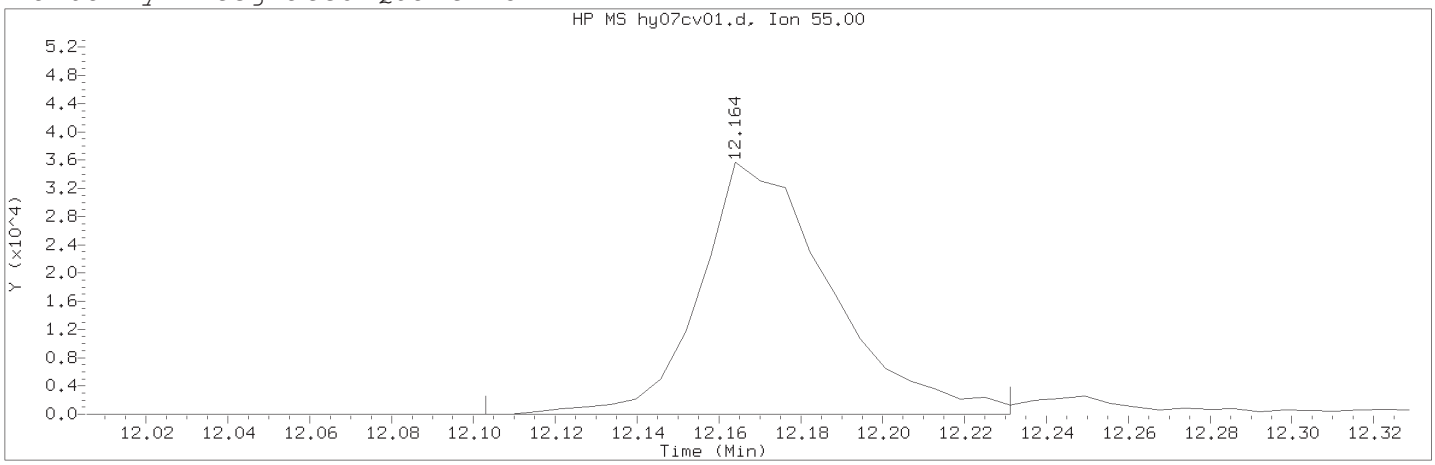
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 441
Retention Time (minutes)	: 4.275
Quant Ion	: 65.00
Area	: 67097
On-column Amount (ng)	: 50.0000
Integration start scan	: 414 Integration stop scan: 524
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature date: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:42 kel01973

Sample Name: LCSHSM Lab Sample ID: LCSHSM

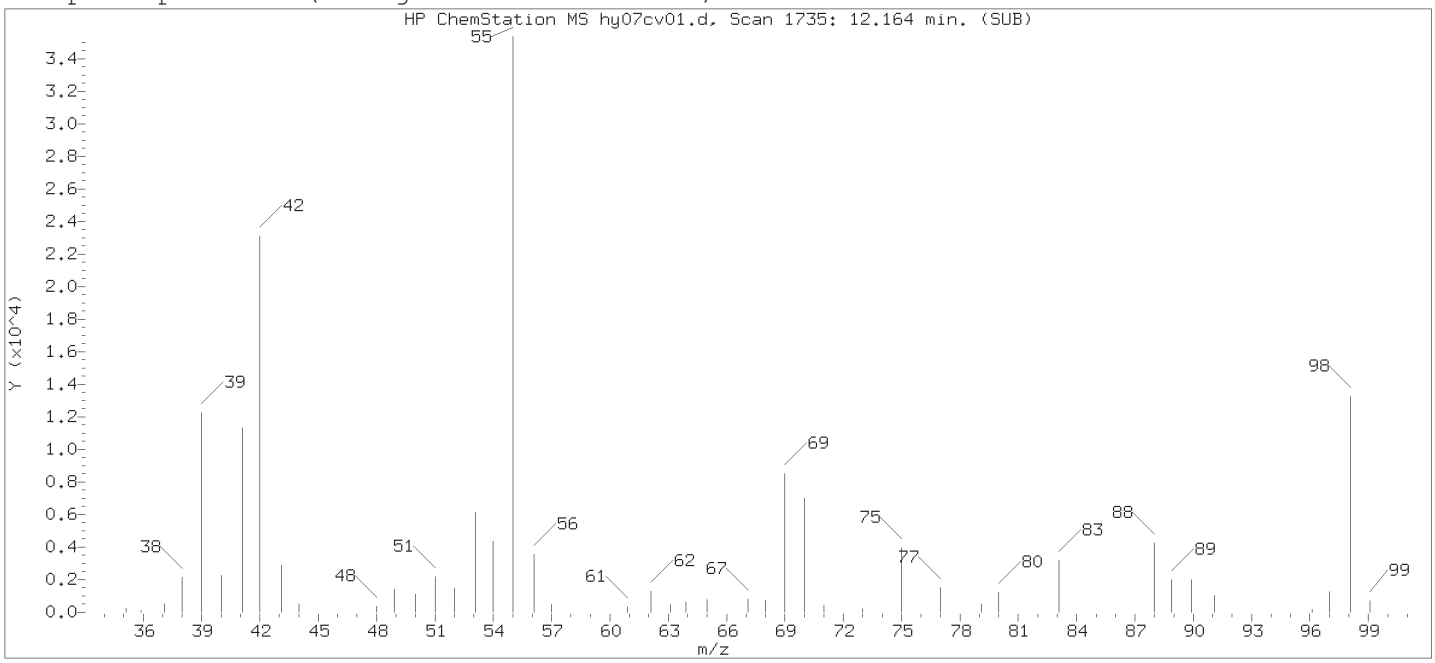
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area (flag) : 79222M
On-Column Amount (ng) : 102.2571
Integration start scan : 1724 Integration stop scan: 1745
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

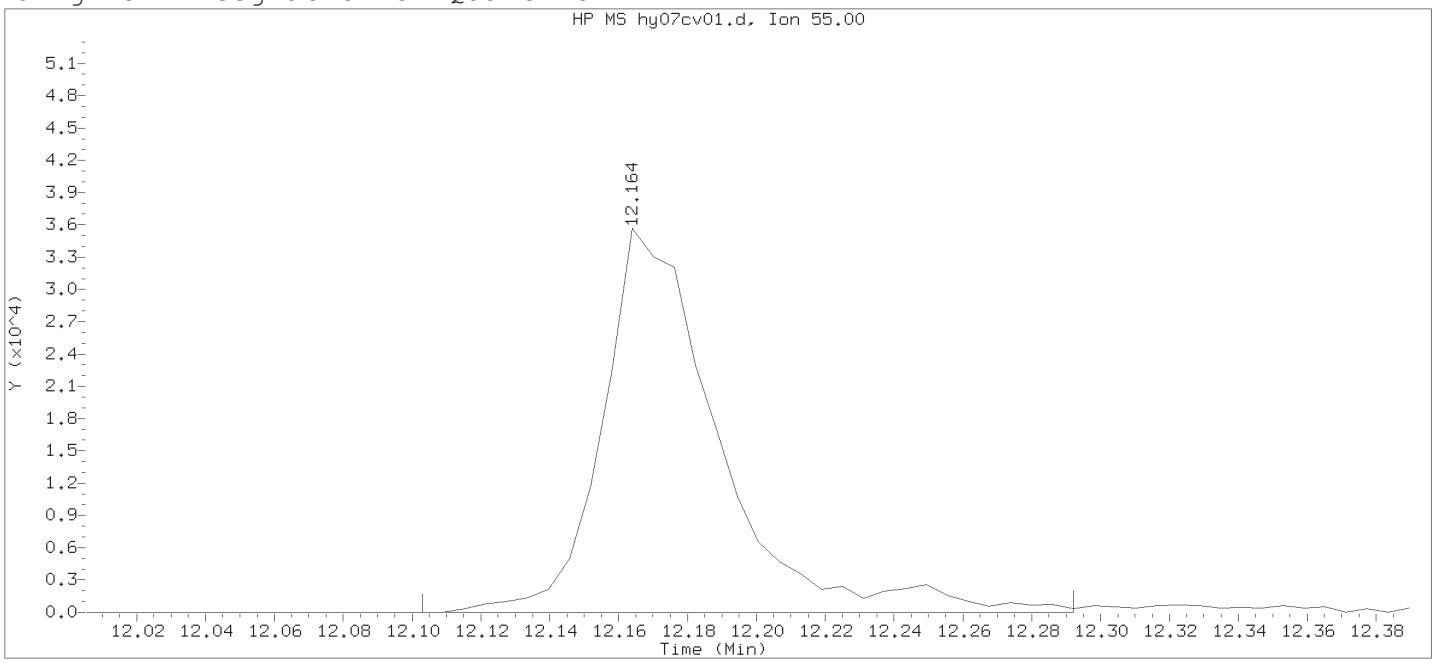
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/10/2016 at 17:12.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may07a.b/hy07cv01.d Instrument ID: HP19094.i
Injection date and time: 07-MAY-2016 15:21 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may07a.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 07-MAY-2016 15:28
Date, time and analyst ID of latest file update: 07-May-2016 15:40 Automation

Sample Name: LCSHSM Lab Sample ID: LCSHSM

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area : 83742
On-column Amount (ng) : 118.2865
Integration start scan : 1724 Integration stop scan: 1755
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/07/2016 at 15:42.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16may09a.b/hy09t01.d

Date : 09-MAY-2016 08:10

Client ID: bfb 50ng

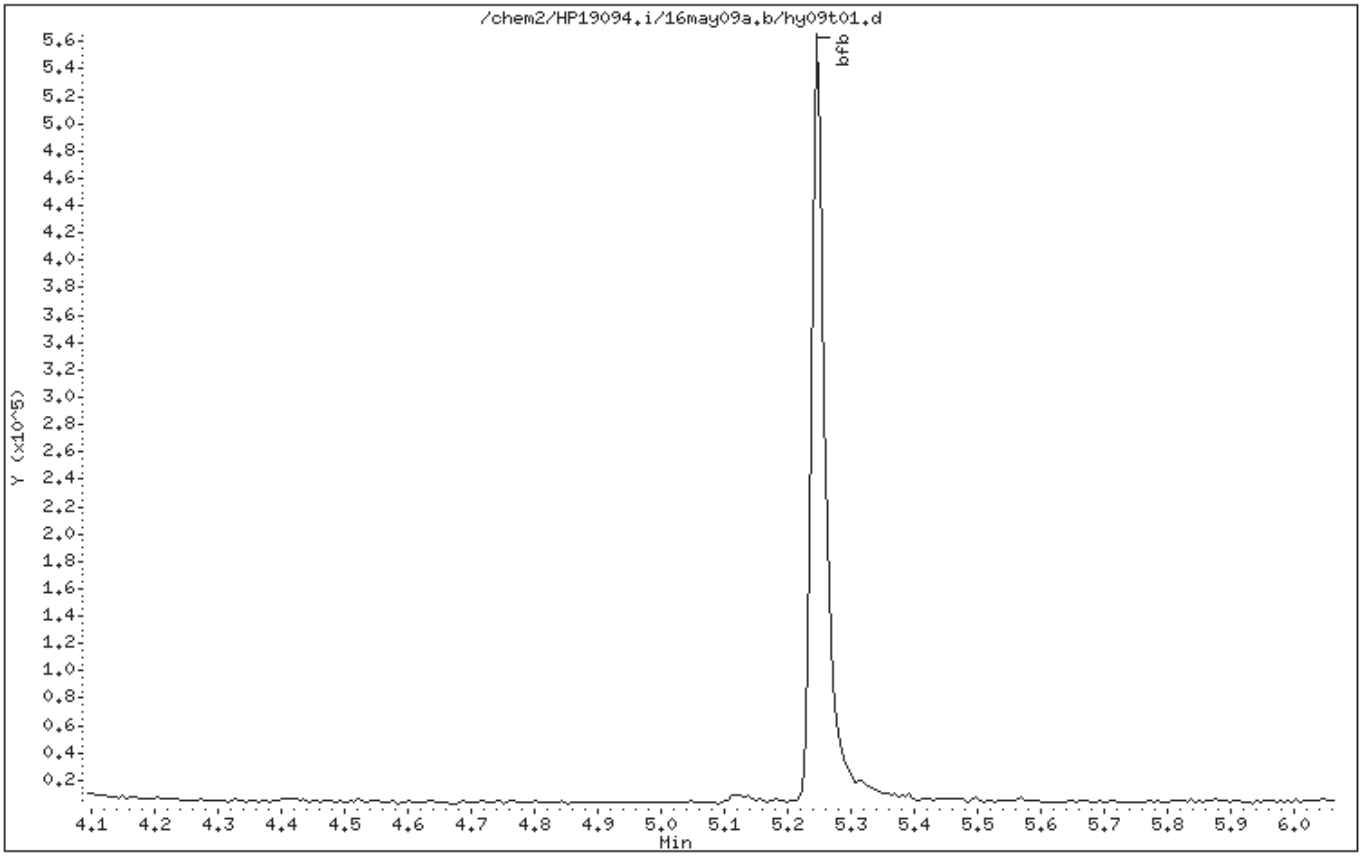
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kerri E. Koch Legerlotz on 05/09/2016 at 08:17.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16may09a.b/hy09t01.d

Date : 09-MAY-2016 08:10

Client ID: bfb 50ng

Instrument: HP19094.i

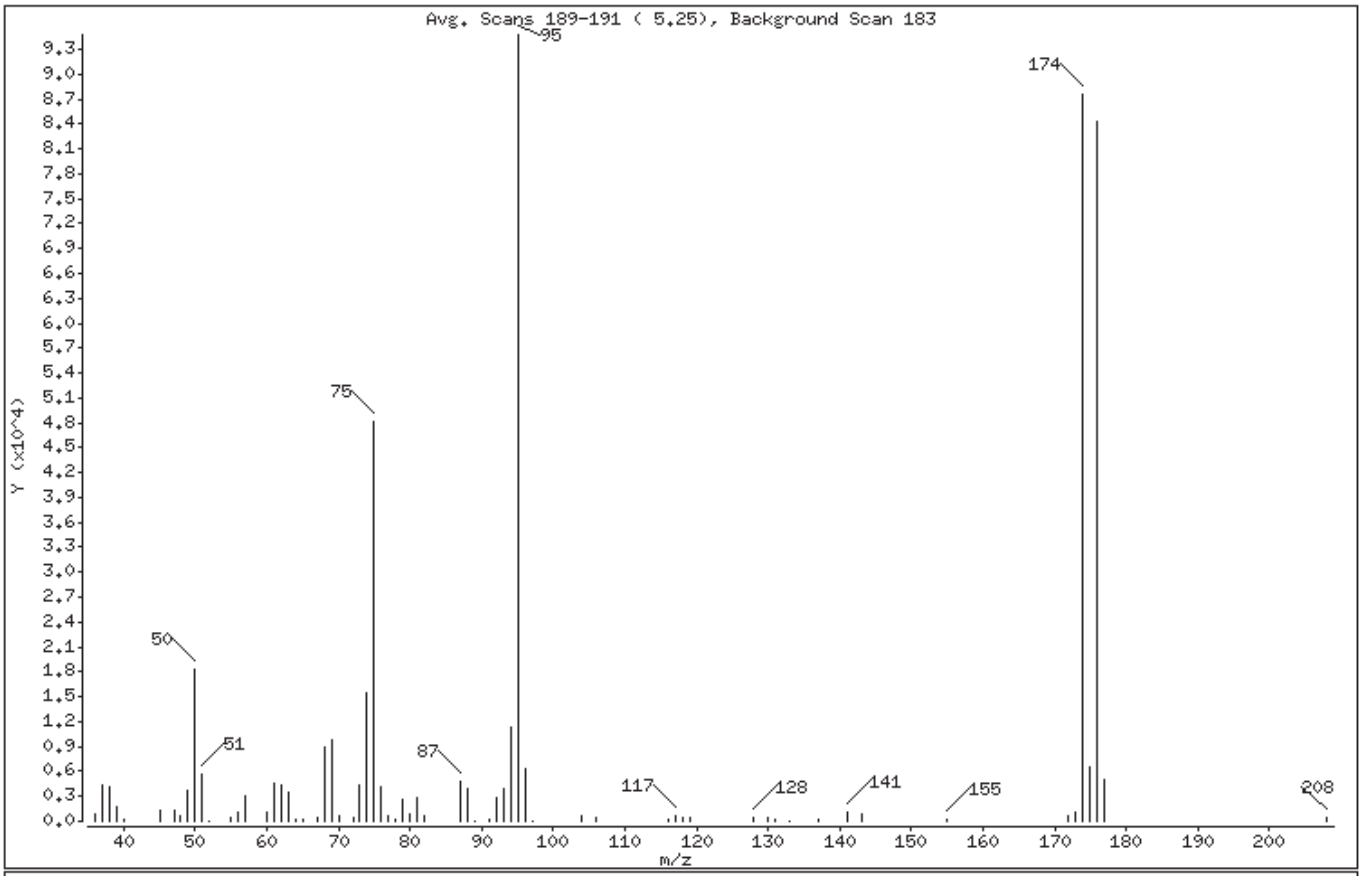
Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.42
75	30.00 - 60.00% of mass 95	50.82
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	1.14 (1.23)
174	50.00 - 100.00% of mass 95	92.44
175	5.00 - 9.00% of mass 174	6.87 (7.43)
176	95.00 - 101.00% of mass 174	88.95 (96.22)
177	5.00 - 9.00% of mass 176	5.40 (6.07)

Digitally signed by Kerri E. Koch Legerlotz on 05/09/2016 at 08:17.
Target 3.5 esignature user ID: kel01973

Date : 09-MAY-2016 08:10

Client ID: bfb 50ng Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

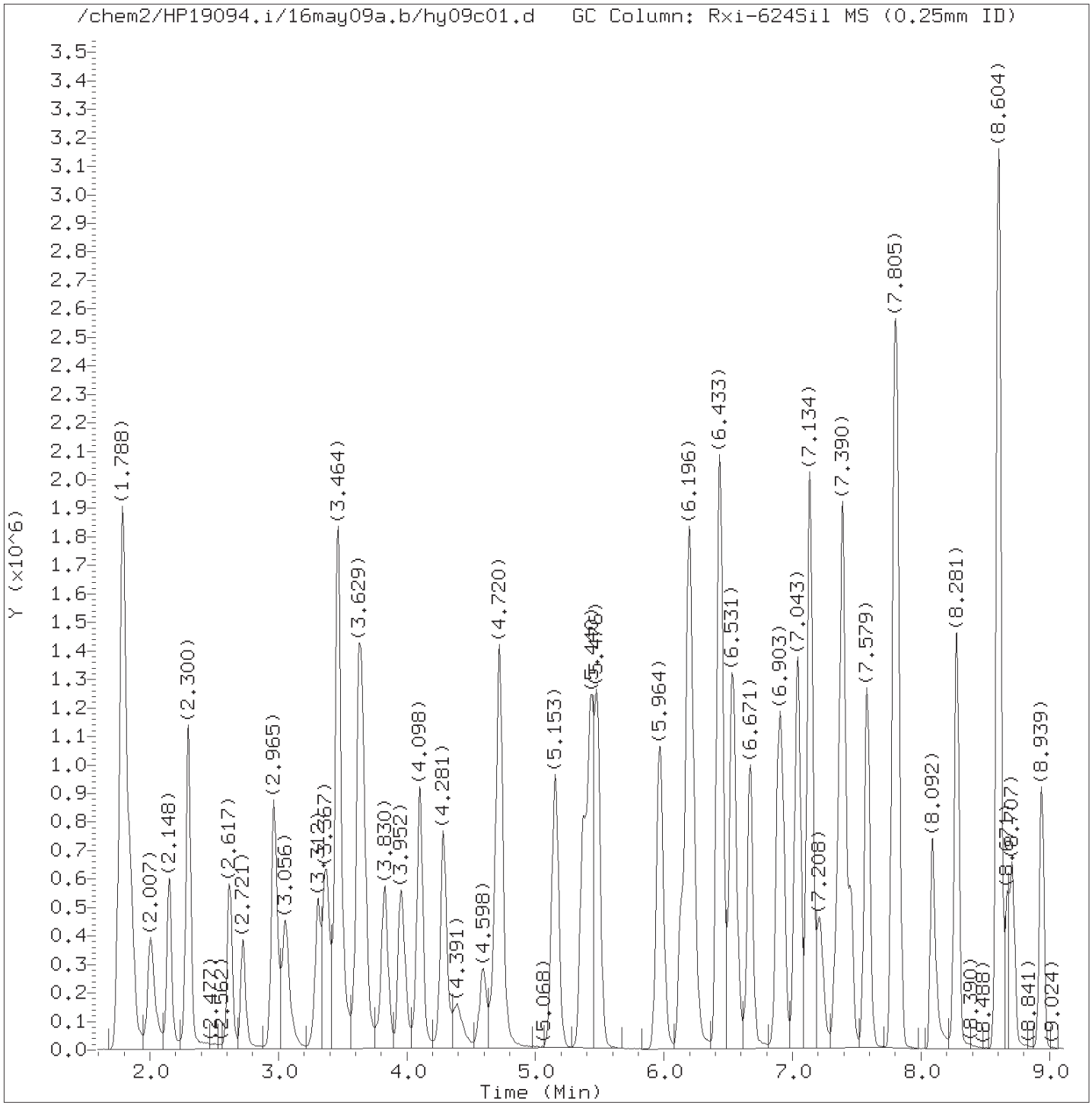
Operator: kel01973

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hy09t01.d
Spectrum: Avg. Scans 189-191 (5.25), Background Scan 183
Location of Maximum: 95.00
Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	835	62.00	4271	81.00	2745	119.00	483
37.00	4411	63.00	3581	82.00	683	128.00	374
38.00	4156	64.00	322	87.00	4797	130.00	370
39.00	1837	65.00	190	88.00	3829	131.00	120
40.00	222	67.00	463	89.00	101	133.00	94
45.00	1205	68.00	8988	91.00	279	137.00	137
47.00	1215	69.00	9888	92.00	2726	141.00	1118
48.00	661	70.00	685	93.00	3873	143.00	975
49.00	3701	72.00	498	94.00	11284	155.00	202
50.00	18400	73.00	4423	95.00	94744	172.00	600
51.00	5654	74.00	15521	96.00	6381	173.00	1076
52.00	89	75.00	48152	97.00	87	174.00	87584
55.00	378	76.00	4161	104.00	549	175.00	6505
56.00	1102	77.00	706	106.00	487	176.00	84272
57.00	2961	78.00	167	116.00	298	177.00	5118
60.00	1197	79.00	2698	117.00	651	208.00	395
61.00	4541	80.00	849	118.00	471		

Digitally signed by Kerri E. Koch Legerlotz on 05/09/2016 at 08:17.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

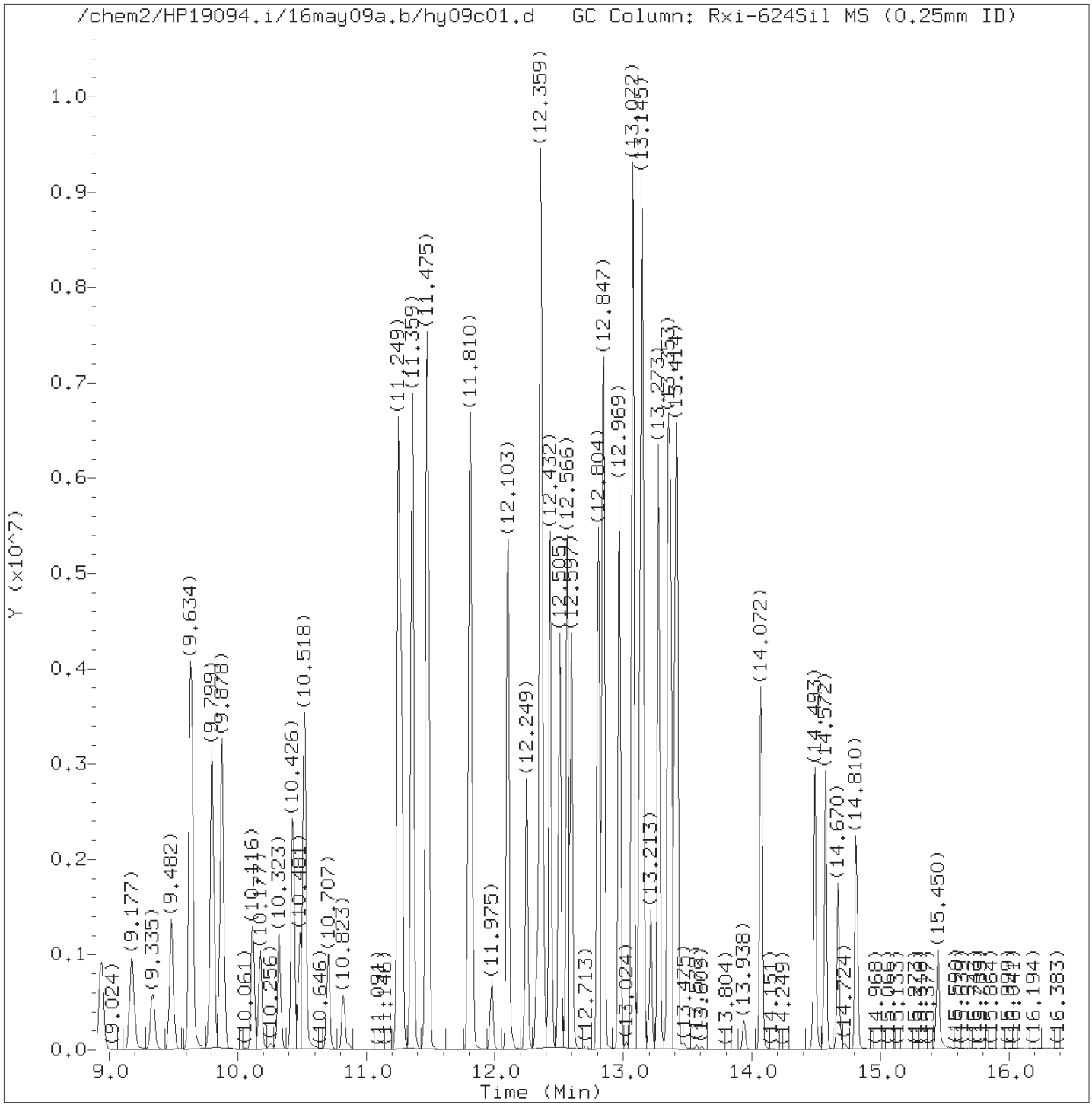
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	861095	10.347
2) Chloromethane	(2)	2.148	50	901669	11.045
5) Vinyl Chloride	(2)	2.294	62	864127	11.381
6) 1,3-Butadiene	(2)	2.306	39	417201M	7.265
7) Bromomethane	(2)	2.623	94	586569	11.640
8) Chloroethane	(2)	2.721	64	498483	10.651
9) Dichlorofluoromethane	(2)	2.965	67	1200356	11.302
10) Trichlorofluoromethane	(2)	3.056	101	1154865	11.676
11) Ethyl ether	(2)	3.306	59	434503	10.648
12) Freon 123a	(2)	3.373	67	752050	9.939
13) Acrolein	(1)	3.464	56	3034826	593.283
14) Acetone	(1)	3.629	43	780839	110.778
15) 1,1-Dichloroethene	(2)	3.629	96	557984	9.832
16) Freon 113	(2)	3.660	101	602059	10.202
17) Methyl Iodide	(2)	3.830	142	1084453	10.321
18) Carbon Disulfide	(2)	3.952	76	1556679	8.883
21) Methyl Acetate	(1)	4.068	43	230241	13.176
22) Allyl Chloride	(2)	4.105	41	996448	9.285
26)*t-Butyl Alcohol-d10	(1)	4.263	65	89716	50.000
23) Methylene Chloride	(2)	4.281	84	613609	10.116
28) t-Butyl Alcohol	(1)	4.391	59	476120	197.374
29) Acrylonitrile	(1)	4.598	53	525303	62.110
30) Methyl Tertiary Butyl Ether	(2)	4.696	73	1353462	10.336
31) trans-1,2-Dichloroethene	(2)	4.720	96	600140	9.820
32) n-Hexane	(2)	5.159	57	925023	8.917
33) 1,1-Dichloroethane	(2)	5.367	63	1234016	9.907
34) di-Isopropyl Ether	(2)	5.434	45	2053104	9.442
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	1042223	10.193
37) Ethyl t-butyl ether	(2)	5.964	59	1756169M	9.578
40) 1,2-Dichloroethene (Total)	(2)		96	1292684	20.050
38) 2-Butanone	(1)	6.141	43	1393972	116.060
39) cis-1,2-Dichloroethene	(2)	6.189	96	692544	10.230
42) Propionitrile	(1)	6.208	54	682959	228.039
41) 2,2-Dichloropropane	(2)	6.220	77	942339	9.456
45) Methacrylonitrile	(1)	6.439	67	1318738	128.602
47) Bromochloromethane	(2)	6.531	128	286819	11.137
48) Tetrahydrofuran	(1)	6.549	71	380675	125.285
49) Chloroform	(2)	6.671	83	1159045	10.180

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.891	113	619061	10.883
50)$Dibromofluoromethane	(2)	6.884	111	629650	10.758
51) 1,1,1-Trichloroethane	(2)	6.921	97	971782	10.007
52) Cyclohexane	(2)	7.037	56	1129412	8.900
52) Cyclohexane	(2)	7.043	84	928802	9.559
52) Cyclohexane	(2)	7.043	69	334742	9.222
55) 1,1-Dichloropropene	(2)	7.128	75	921290	9.884
54) Carbon Tetrachloride	(2)	7.147	117	898134	10.172
56) Isobutyl Alcohol	(1)	7.208	41	436835	537.554
57)$1,2-Dichloroethane-d4	(2)	7.348	102	98877	10.495
57)$1,2-Dichloroethane-d4	(2)	7.348	65	518374	10.777
57)$1,2-Dichloroethane-d4	(2)	7.354	104	65741	11.052
58) Benzene	(2)	7.390	78	2557173	9.857
59) 1,2-Dichloroethane	(2)	7.458	62	690761M	10.277
60) t-Amyl methyl ether	(2)	7.579	73	1504422	10.041
63)*Fluorobenzene	(2)	7.793	96	2413883	10.000
62) n-Heptane	(2)	7.817	43	1018397	8.686
65) n-Butanol	(1)	8.092	56	732624	1064.935
67) Trichloroethene	(2)	8.274	95	685552	10.139
70) 1,2-Dichloropropane	(2)	8.604	63	666382	9.865
69) Methylcyclohexane	(2)	8.610	83	1145088	10.338
71) Methyl Methacrylate	(1)	8.671	69	262529M	12.253
72) 1,4-Dioxane	(1)	8.683	88	79885	589.394
73) Dibromomethane	(2)	8.707	93	298697	10.736
74) Bromodichloromethane	(2)	8.939	83	828279	10.662
76) 2-Nitropropane	(1)	9.177	41	862886	125.640
80) cis-1,3-Dichloropropene	(2)	9.482	75	964473	10.103
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3577946	121.044
82)$Toluene-d8	(3)	9.799	98	2495091	9.350
82)$Toluene-d8	(3)	9.799	100	1592375	9.219
83) Toluene	(3)	9.878	92	1622045	9.023
84) trans-1,3-Dichloropropene	(3)	10.116	75	764739	9.077
85) 1,3-Dichloropropene (total)	(3)		75	1729212	19.180
86) Ethyl Methacrylate	(3)	10.177	69	560724	8.652
88) 1,1,2-Trichloroethane	(3)	10.323	97	411208	9.444
89) Tetrachloroethene	(3)	10.426	166	807723	9.515
90) 1,3-Dichloropropane	(3)	10.481	76	721023	9.210
91) 2-Hexanone	(1)	10.518	43	2480148	118.671

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Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	557758	9.993
95) 1,2-Dibromoethane	(3)	10.823	107	395632	9.647
97)*Chlorobenzene-d5	(3)	11.249	117	1873253	10.000
98) Chlorobenzene	(3)	11.274	112	1814127	9.271
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	647330	9.644
100) Ethylbenzene	(3)	11.359	91	3220273	9.153
101) m+p-Xylene	(3)	11.475	106	2487667	18.537
105) Xylene (Total)	(3)		106	3708487	27.909
104) o-Xylene	(3)	11.798	106	1220820	9.374
106) Styrene	(3)	11.816	104	1969676	9.454
107) Bromoform	(3)	11.975	173	326292	10.540
108) Isopropylbenzene	(3)	12.103	105	3196593	9.262
111)$4-Bromofluorobenzene	(3)	12.243	95	837132	9.732
111)$4-Bromofluorobenzene	(3)	12.249	174	758294	10.573
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	479041M	8.709
115) trans-1,4-Dichloro-2-butene	(1)	12.353	53	1313895	144.347
114) Bromobenzene	(4)	12.365	156	764040	9.326
116) 1,2,3-Trichloropropane	(4)	12.377	110	125696	9.102
117) n-Propylbenzene	(4)	12.432	91	3889710	8.778
119) 2-Chlorotoluene	(4)	12.505	126	750490	8.783
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	2726496	8.825
122) 4-Chlorotoluene	(4)	12.597	126	765582	8.792
125) tert-Butylbenzene	(4)	12.804	134	569165M	8.642
126) Pentachloroethane	(4)	12.841	167	483278	9.723
127) 1,2,4-Trimethylbenzene	(4)	12.847	105	2735998	8.857
128) sec-Butylbenzene	(4)	12.969	105	3548779	8.872
131) 1,3-Dichlorobenzene	(4)	13.072	146	1459762	9.109
132) p-Isopropyltoluene	(4)	13.078	119	3043674	8.989
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	878826	10.000
134) 1,4-Dichlorobenzene	(4)	13.145	146	1453030	8.924
135) 1,2,3-Trimethylbenzene	(4)	13.152	120	1148952	8.969
136) Benzyl Chloride	(4)	13.213	126	184526	8.467
138) n-Butylbenzene	(4)	13.365	92	1504991	9.086
139) 1,2-Dichlorobenzene	(4)	13.402	146	1291356	9.073
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	62828	13.380
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	875908	8.602
146) Hexachlorobutadiene	(4)	14.572	225	503601	9.466
147) Naphthalene	(4)	14.670	128	1281328	7.851

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Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.810	180	694759	8.543

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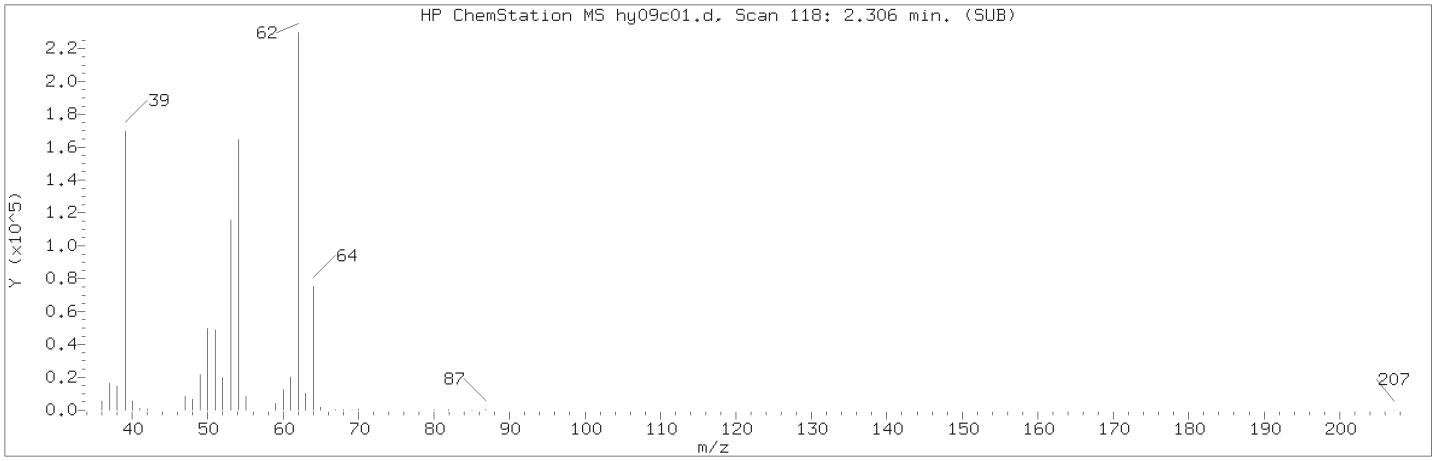
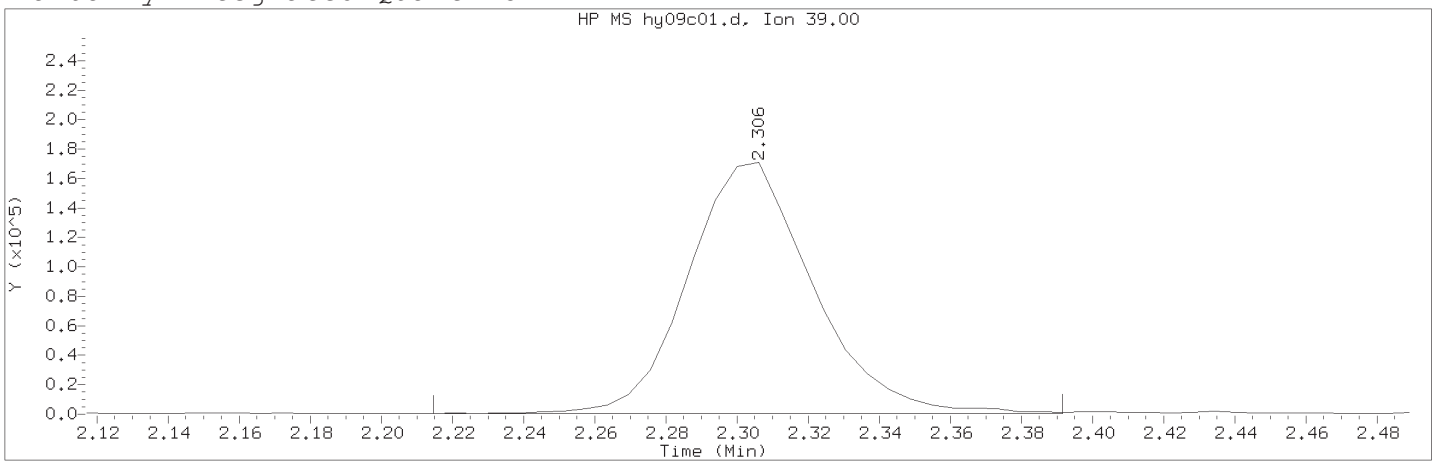
on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

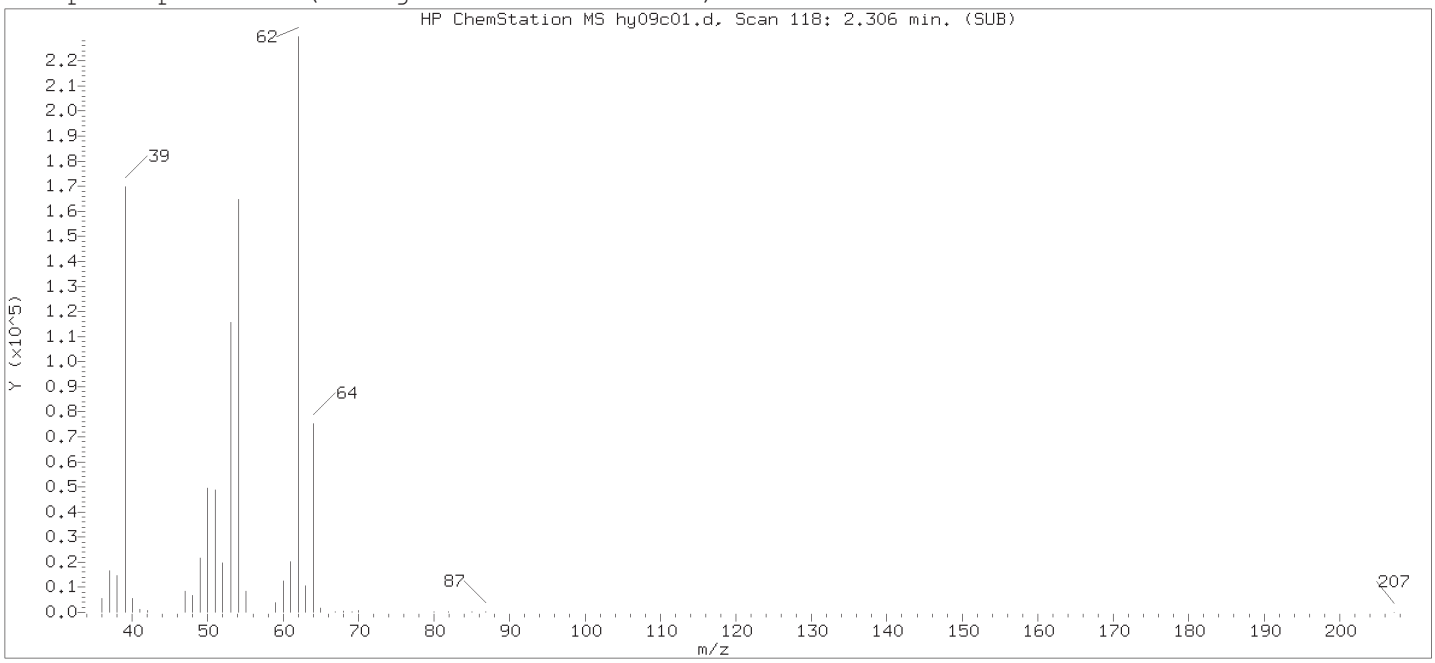
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 417201M
On-Column Amount (ng) : 7.2648
Integration start scan : 102 Integration stop scan: 131
Y at integration start : 280 Y at integration end: 280

Reason for manual integration: improper integration

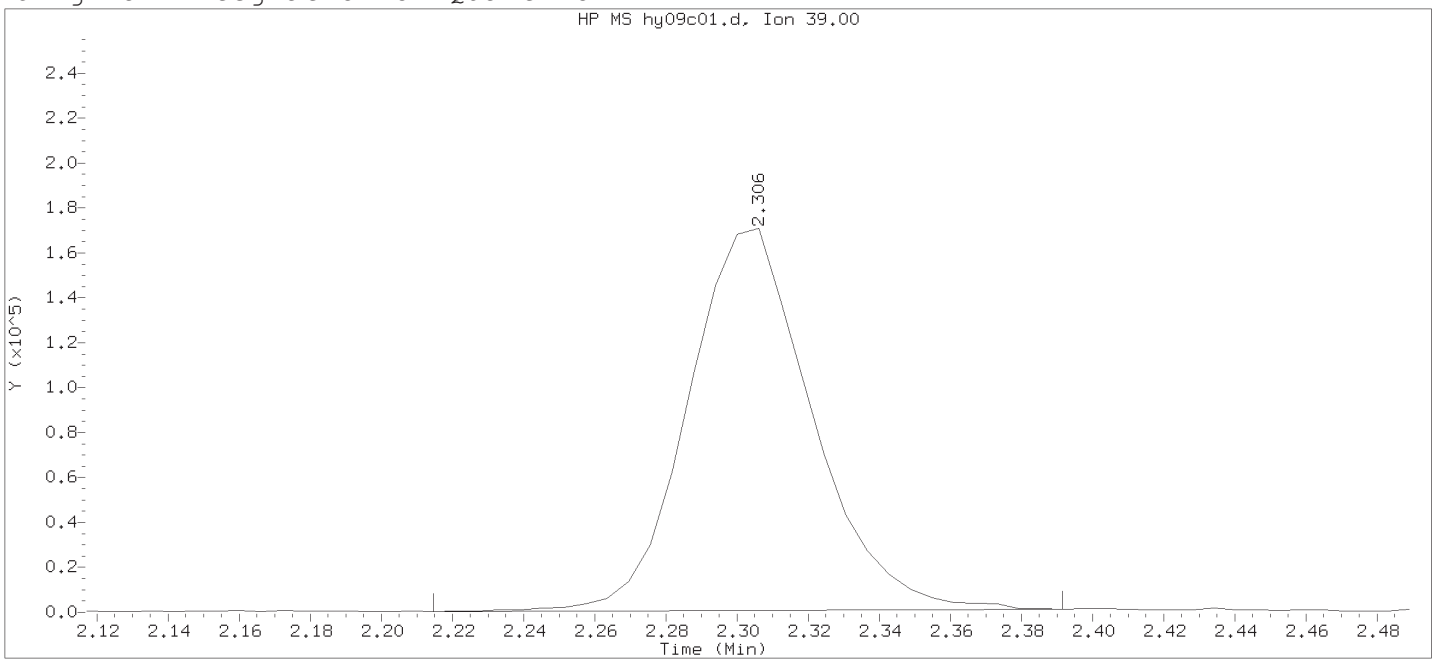
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

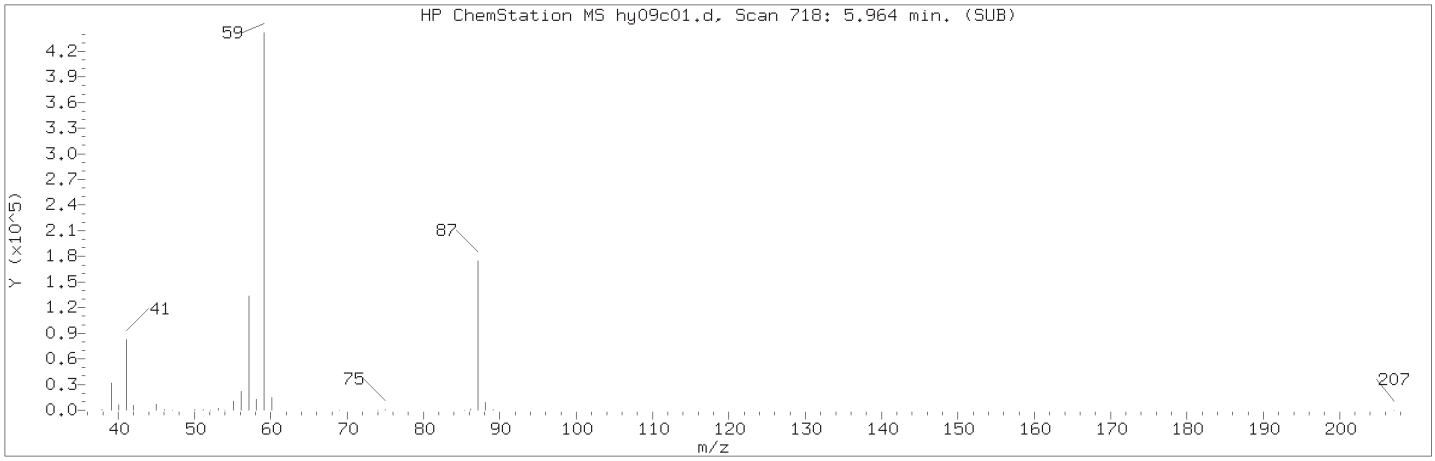
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

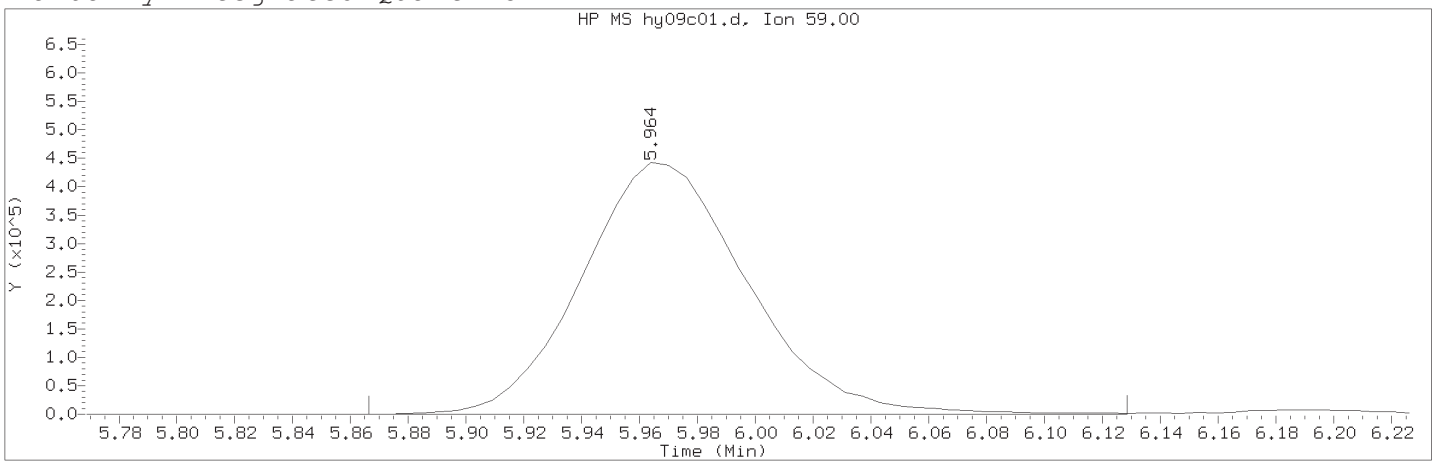
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 411146
On-column Amount (ng) : 7.1593
Integration start scan : 102 Integration stop scan: 131
Y at integration start : 370 Y at integration end: 1294

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

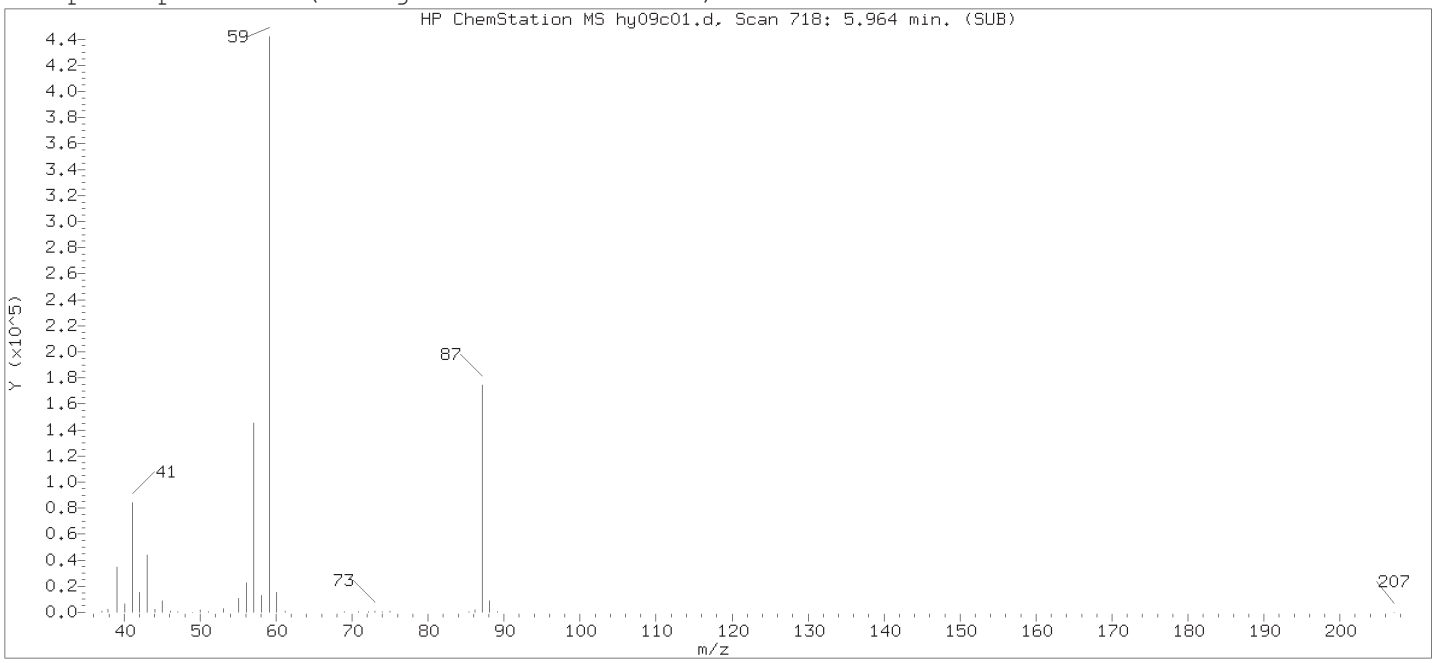
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 718
Retention Time (minutes): 5.964
Quant Ion : 59.00
Area (flag) : 1756169M
On-Column Amount (ng) : 9.5780
Integration start scan : 701 Integration stop scan: 744
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

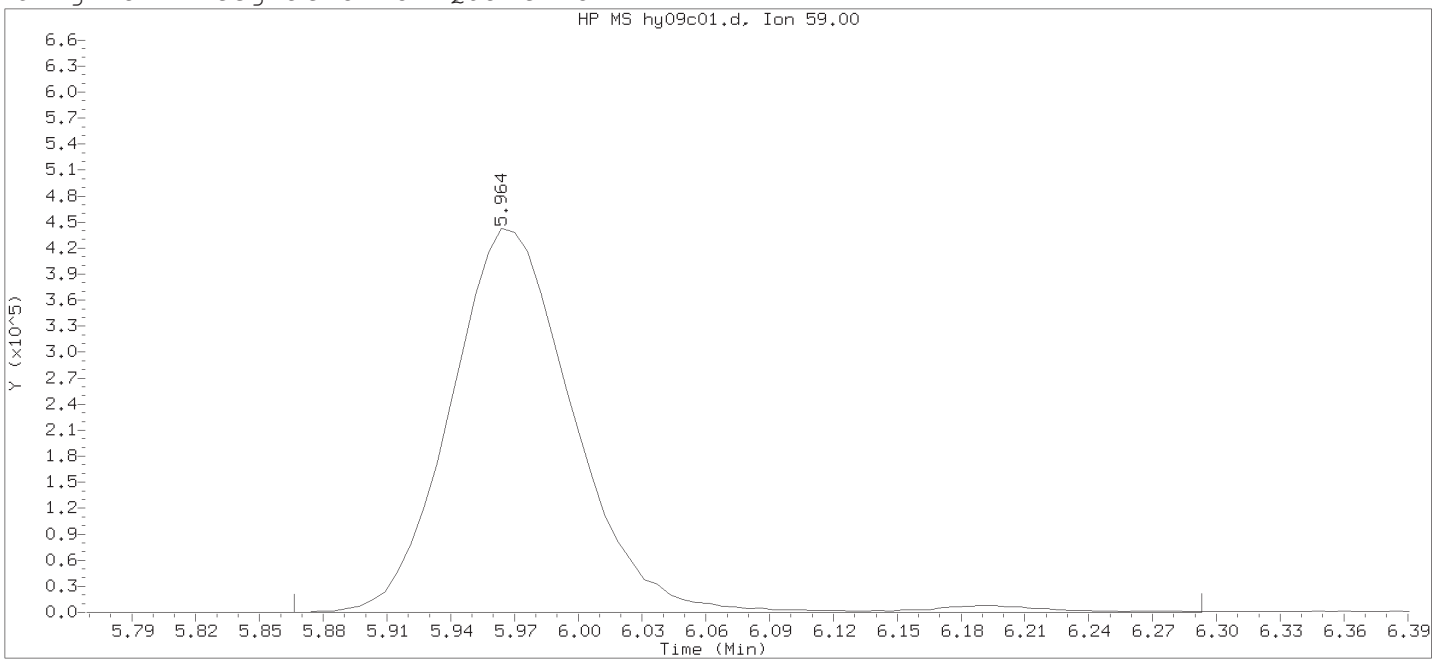
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

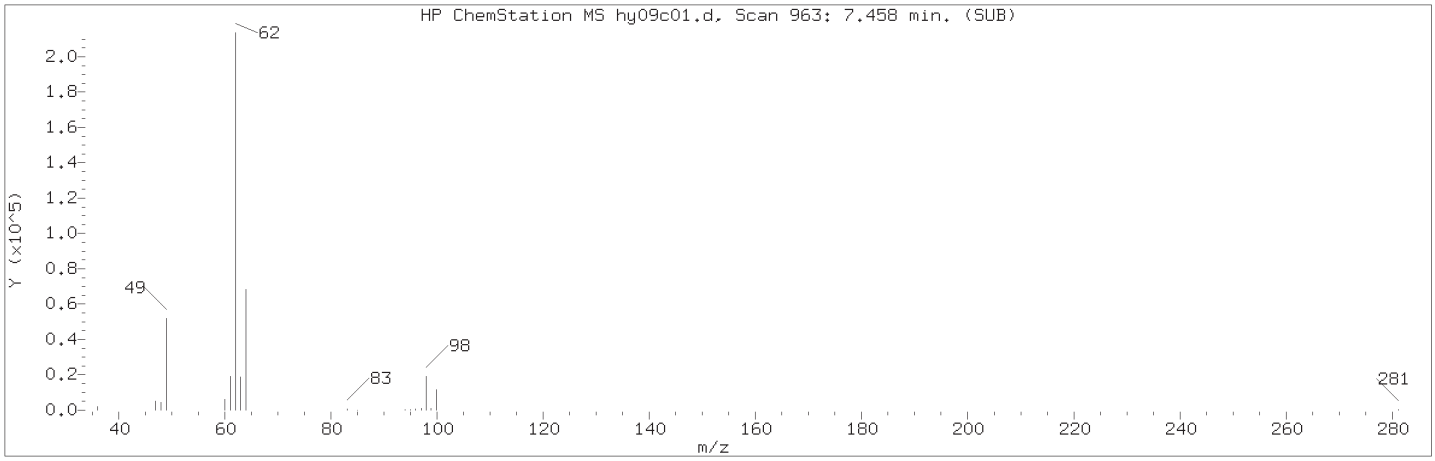
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

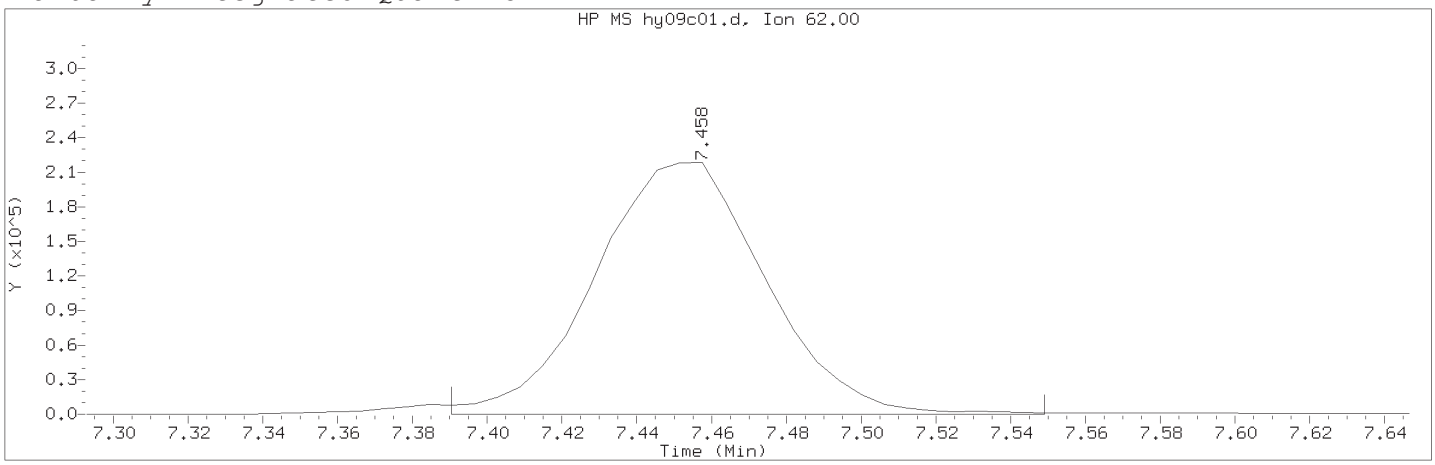
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 718
Retention Time (minutes): 5.964
Quant Ion : 59.00
Area : 1786154
On-column Amount (ng) : 9.7416
Integration start scan : 701 Integration stop scan: 771
Y at integration start : 0 Y at integration end: 117

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

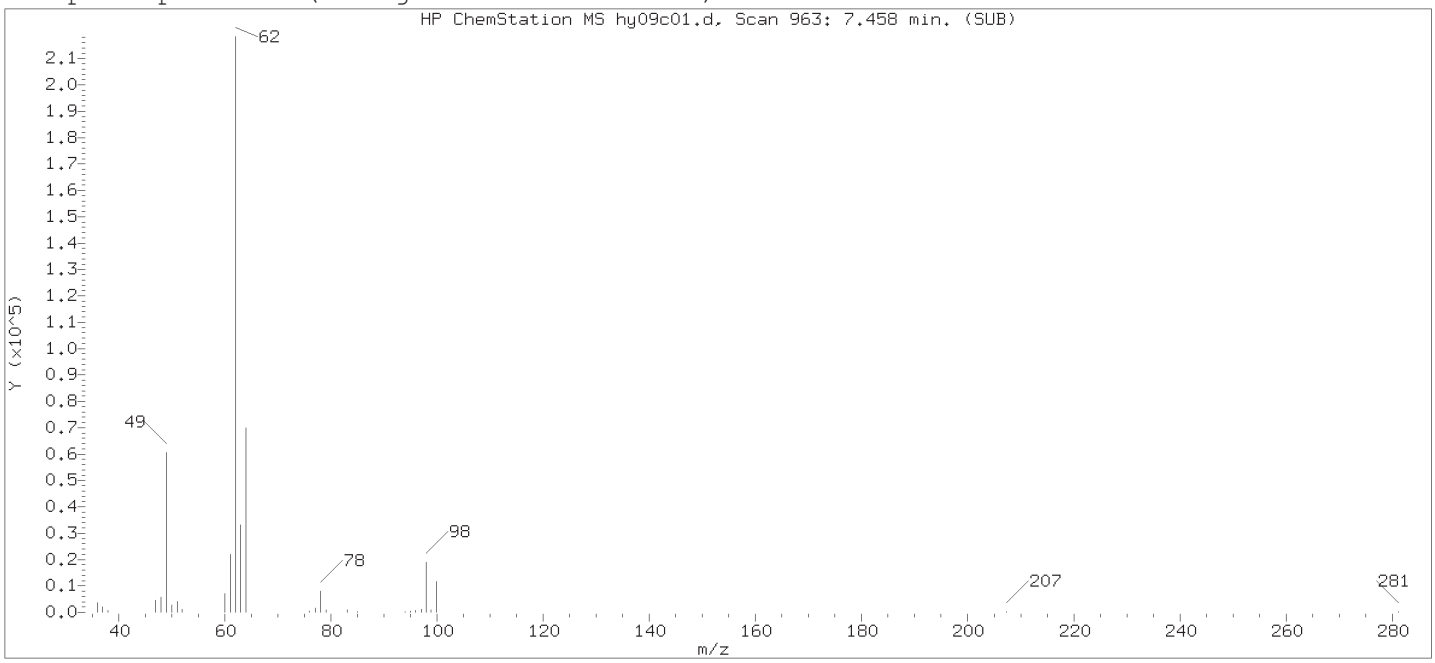
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 963
Retention Time (minutes): 7.458
Quant Ion : 62.00
Area (flag) : 690761M
On-Column Amount (ng) : 10.2765
Integration start scan : 951 Integration stop scan: 977
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

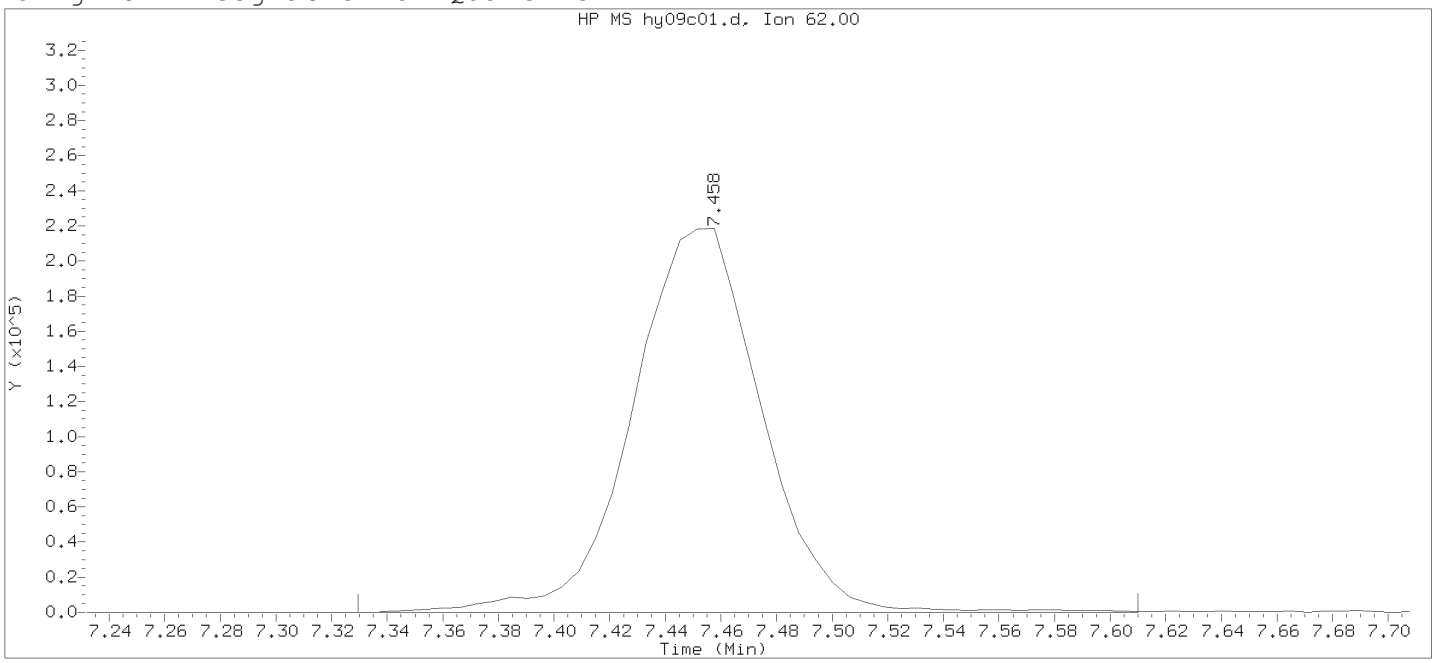
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

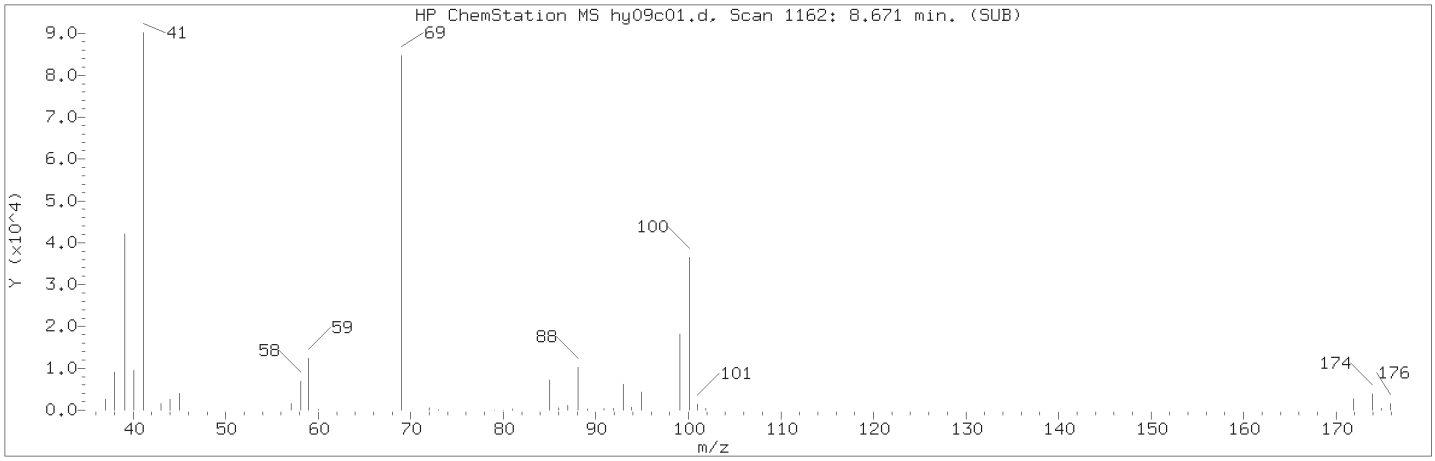
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

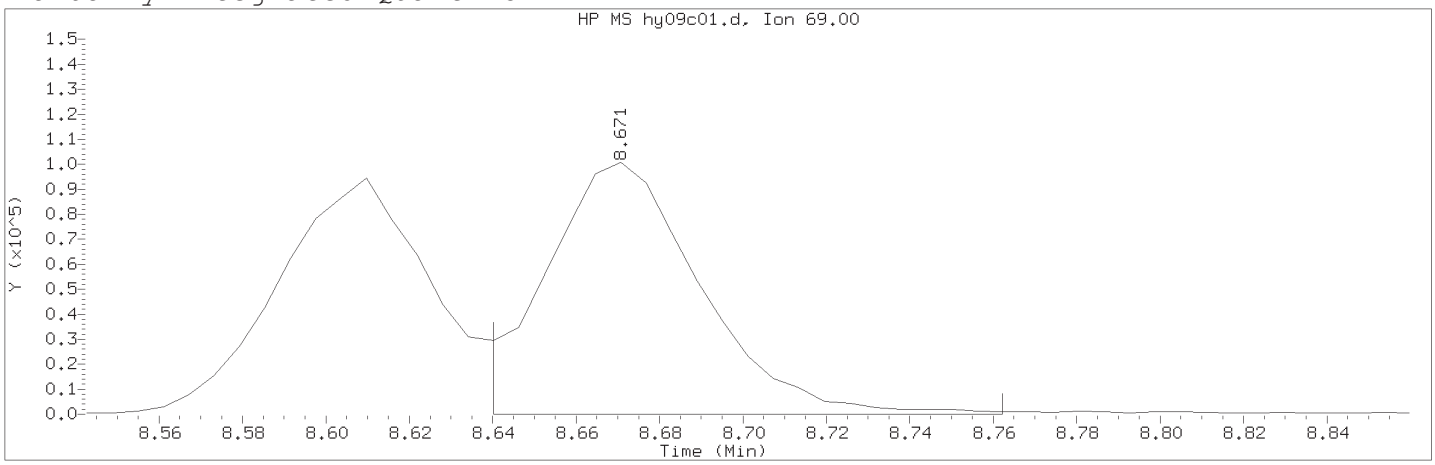
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 963
Retention Time (minutes): 7.458
Quant Ion : 62.00
Area : 704708
On-column Amount (ng) : 10.4840
Integration start scan : 941 Integration stop scan: 987
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

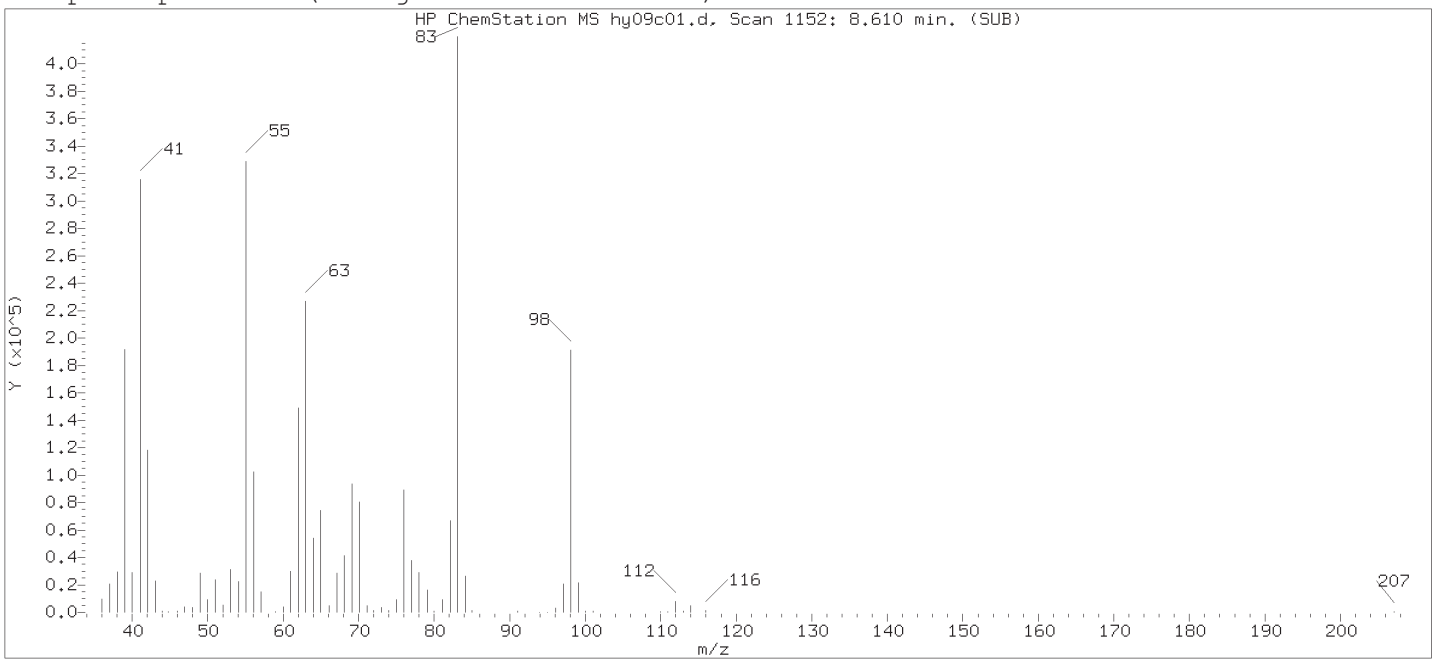
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1162
Retention Time (minutes): 8.671
Quant Ion : 69.00
Area (flag) : 262529M
On-Column Amount (ng) : 12.2534
Integration start scan : 1156 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

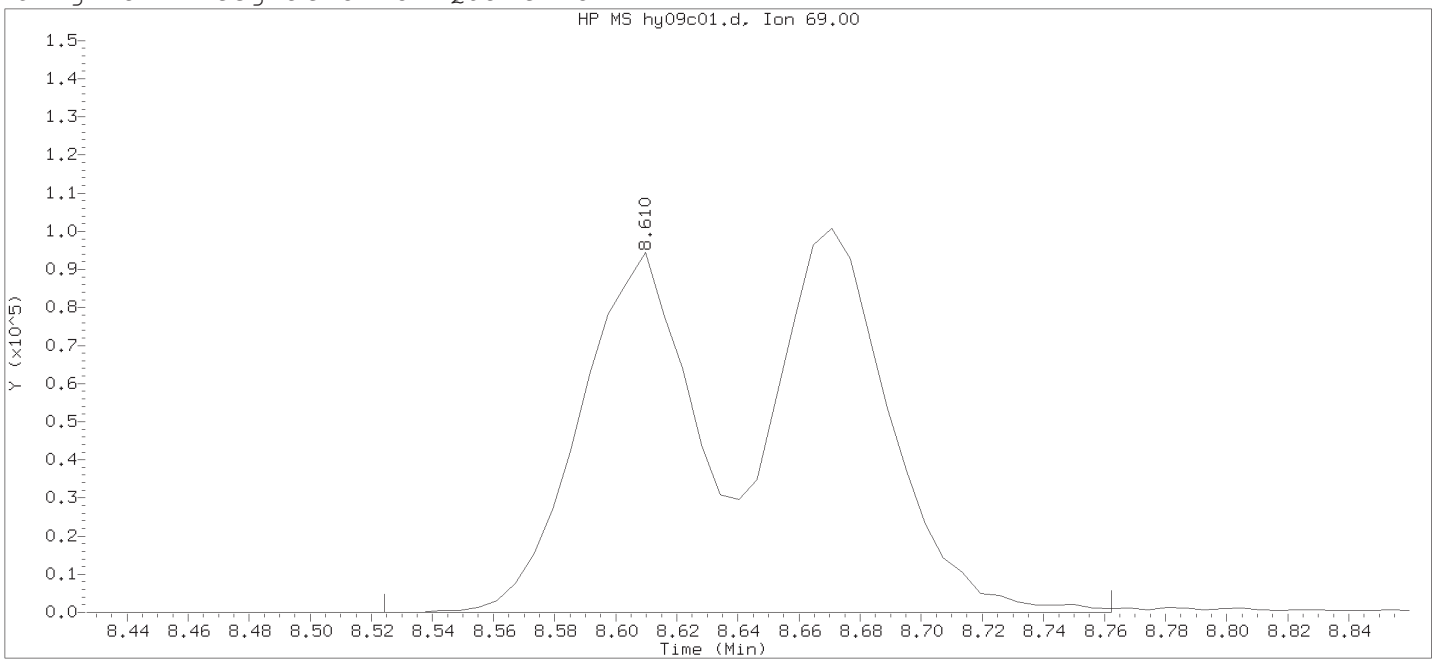
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

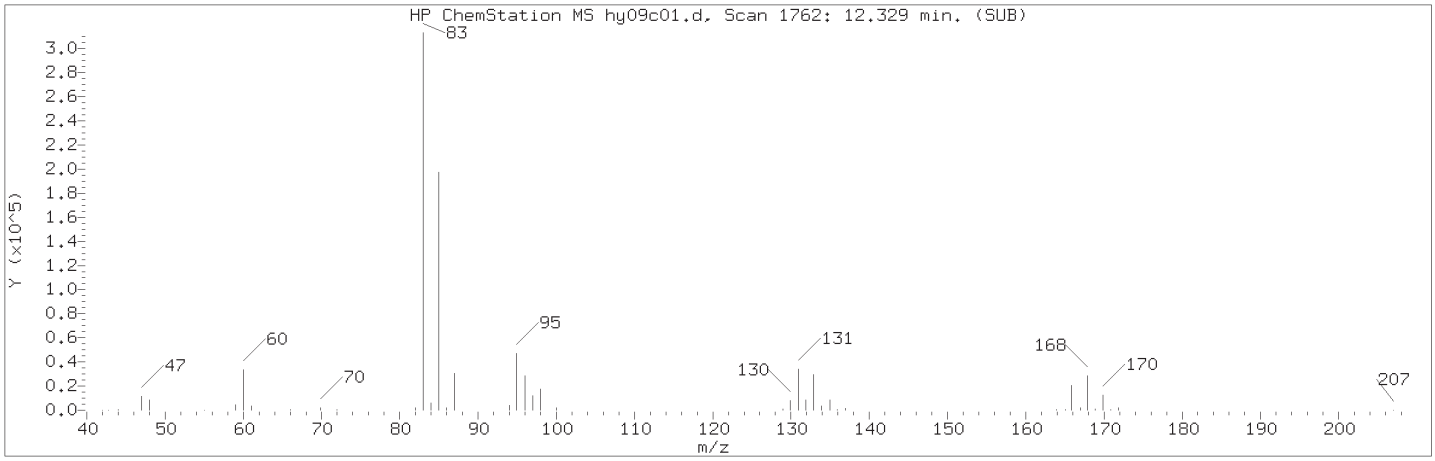
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

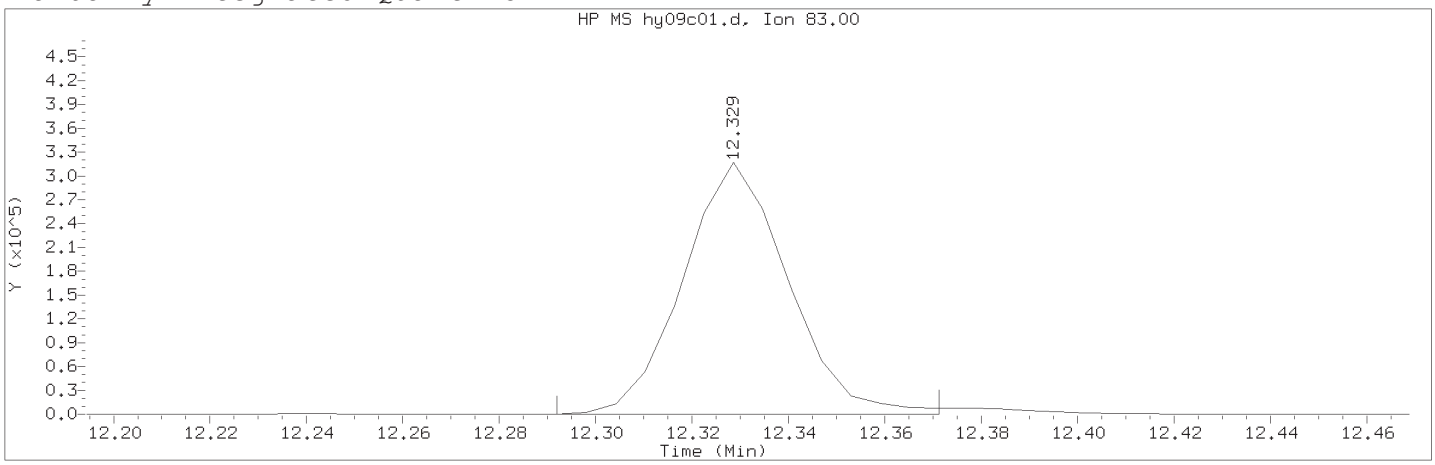
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 69.00
Area : 494824
On-column Amount (ng) : 23.0955
Integration start scan : 1137 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature date: 05/11/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

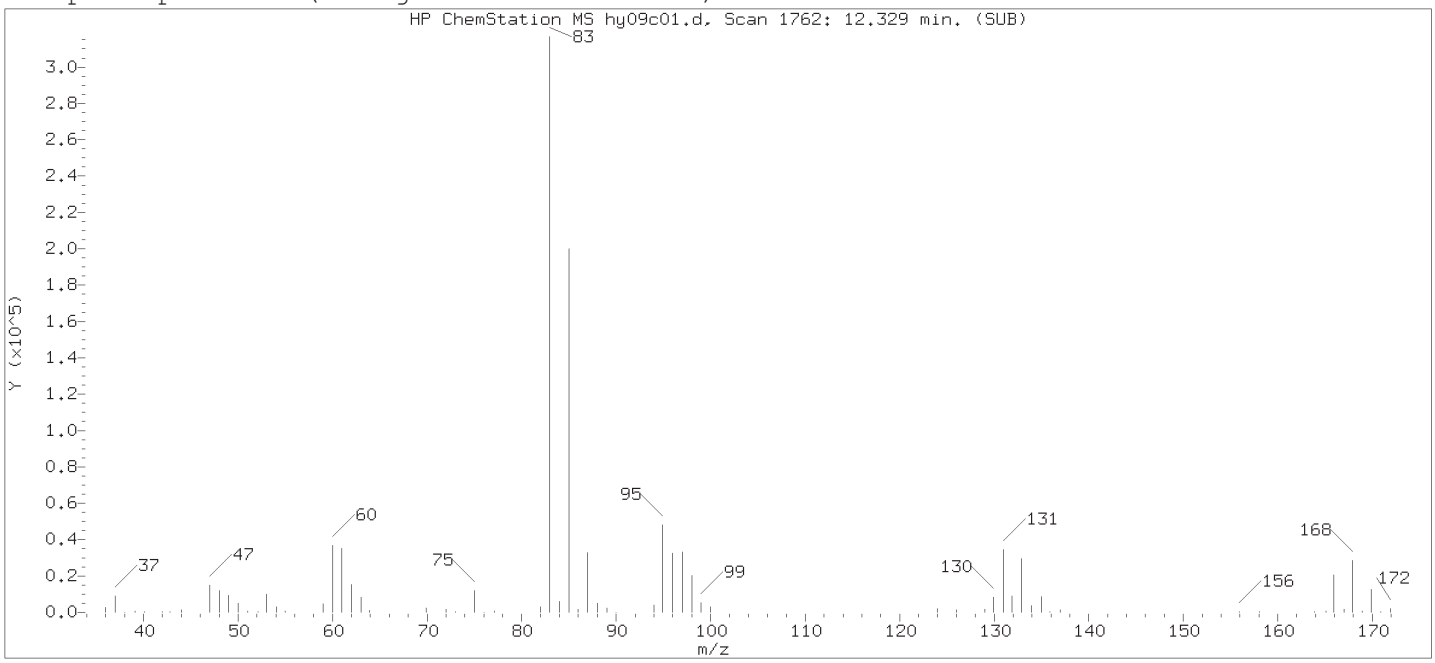
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area (flag) : 479041M
On-Column Amount (ng) : 8.7090
Integration start scan : 1755 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

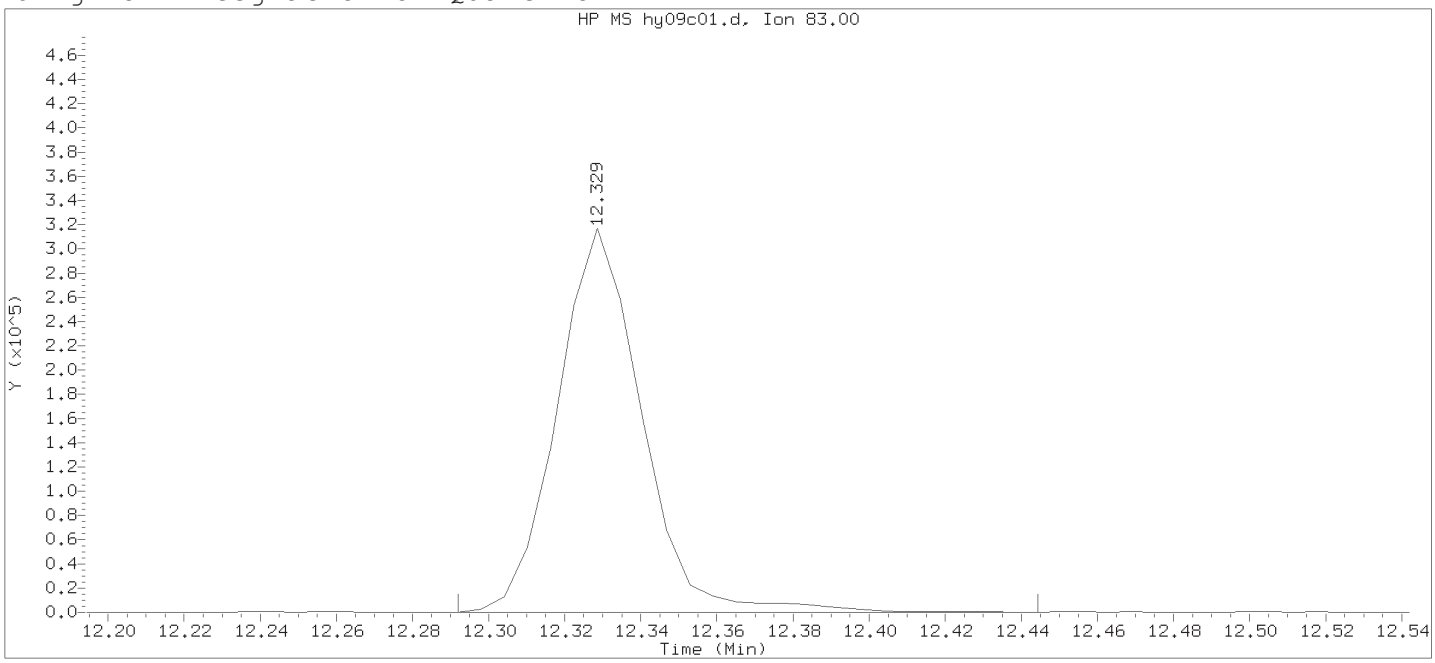
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

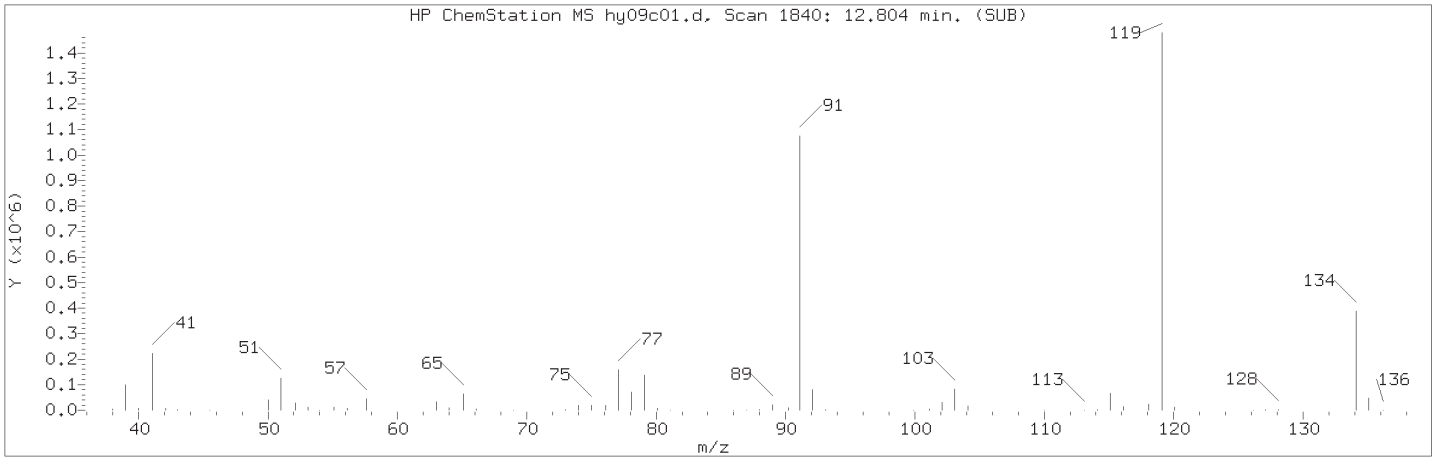
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

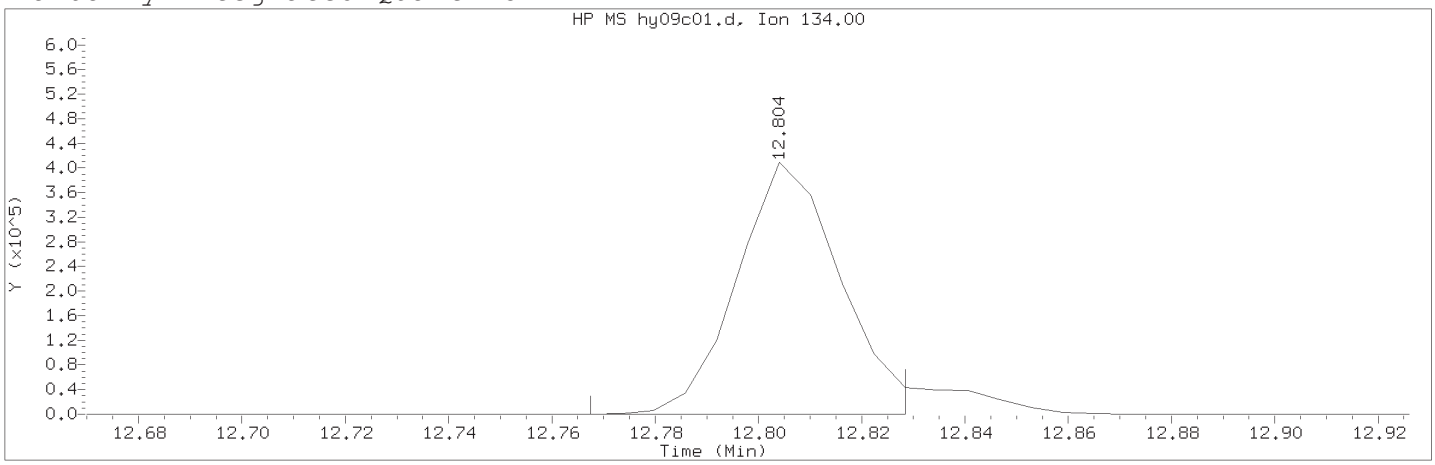
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area : 488139
On-column Amount (ng) : 8.8744
Integration start scan : 1755 Integration stop scan: 1780
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 11-MAY-2016 08:43
Date, time and analyst ID of latest file update: 11-May-2016 08:43 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

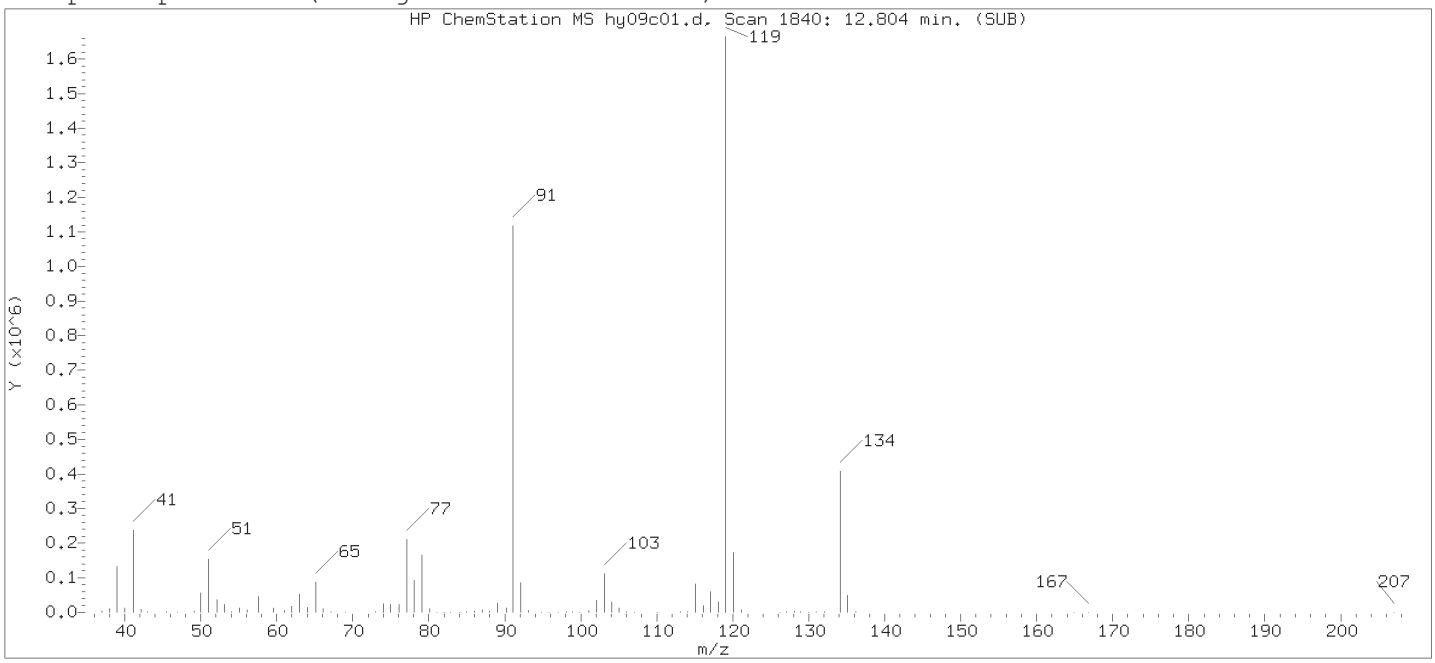
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area (flag) : 569165M
On-Column Amount (ng) : 8.6420
Integration start scan : 1833 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

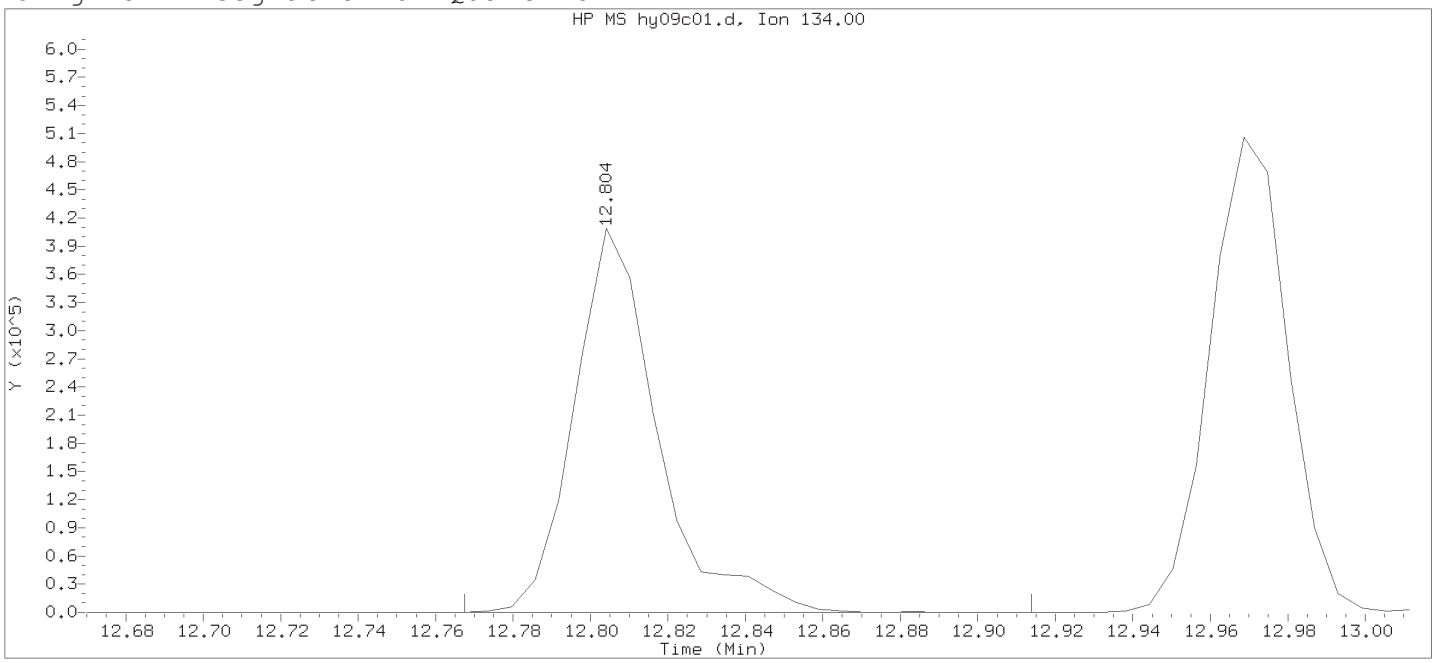
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 17:09.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



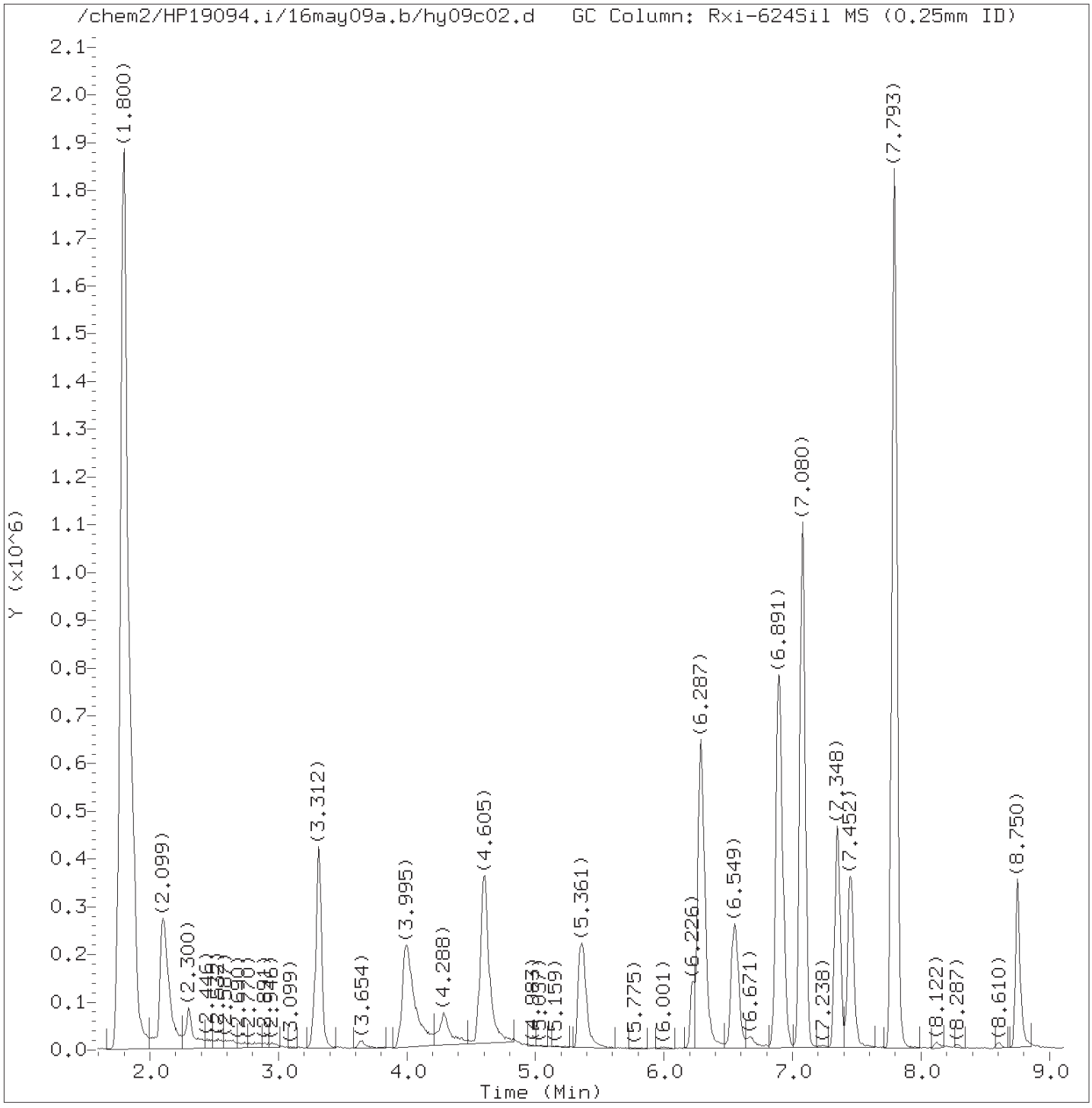
Data File: /chem2/HP19094.i/16may09a.b/hy09c01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 08:58 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 09-MAY-2016 09:18
Date, time and analyst ID of latest file update: 09-May-2016 09:18 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 612139
On-column Amount (ng) : 9.2945
Integration start scan : 1833 Integration stop scan: 1857
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:44.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

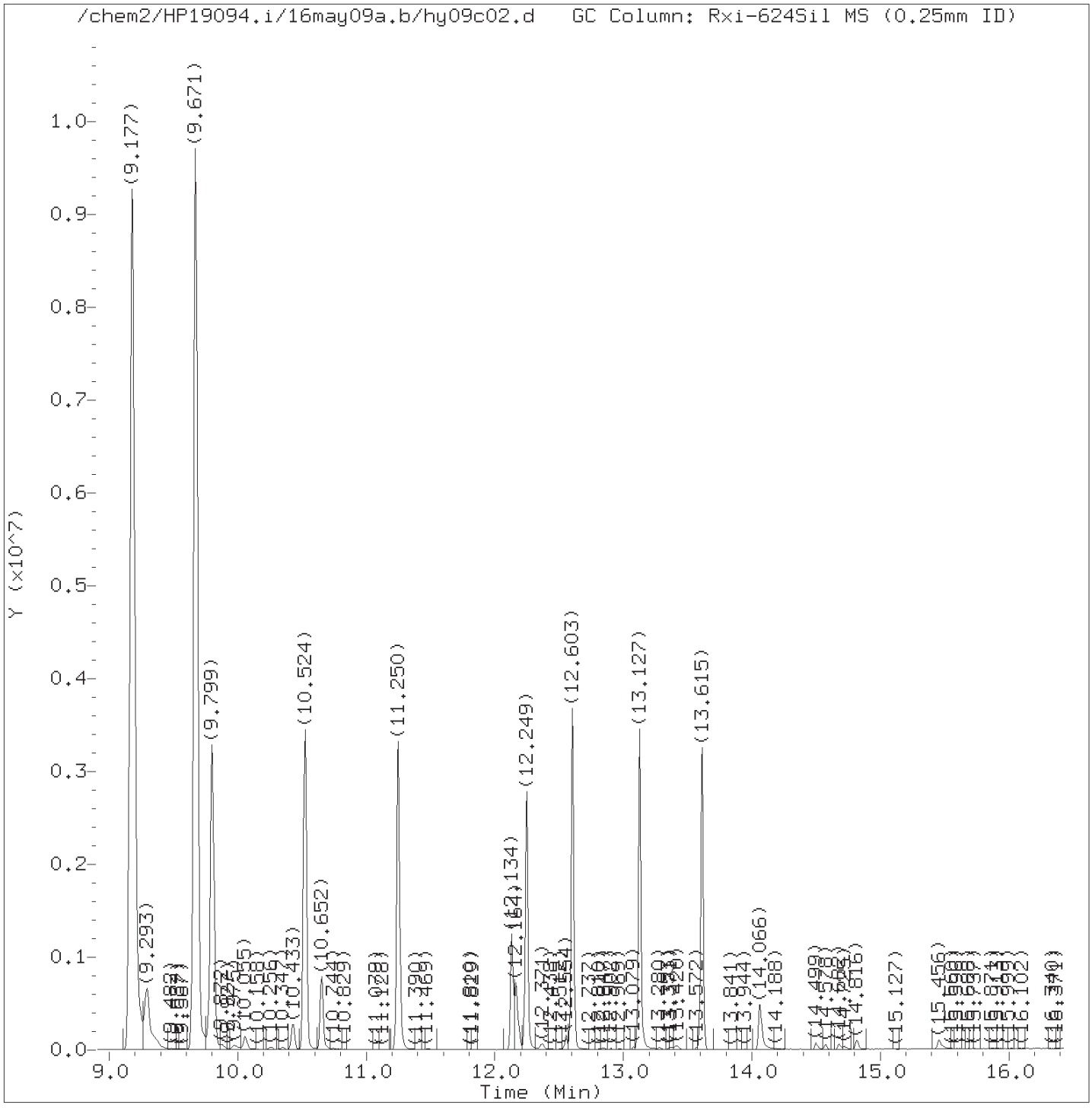
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

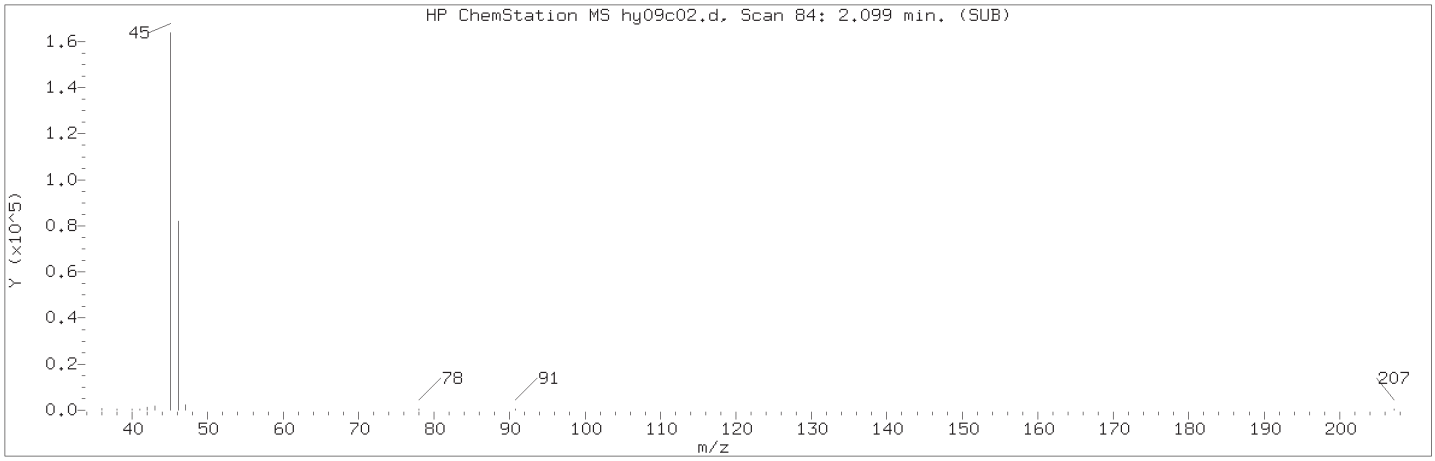
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	763861M	8.915
25) Acetonitrile	(1)	3.995	41	1095036M	373.829
26)*t-Butyl Alcohol-d10	(1)	4.281	65	77462	50.000
36) Vinyl Acetate	(2)	5.361	43	776476	10.961
43) Methyl Acrylate	(2)	6.287	55	1418833	52.823
53) 1-Chlorobutane	(2)	7.080	56	1333328	9.881
63)*Fluorobenzene	(2)	7.793	96	2494887	10.000
77) Chloroacetonitrile	(2)	9.213	75	663180	575.882
78) 2-Chloroethyl vinyl ether	(2)	9.293	63	264473	11.076
97)*Chlorobenzene-d5	(3)	11.250	117	1881397	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.134	88	287068	42.935
112) Cyclohexanone	(1)	12.164	55	333259M	407.743
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	862625	10.000
142) Hexachloroethane	(4)	13.609	117	577213	10.014

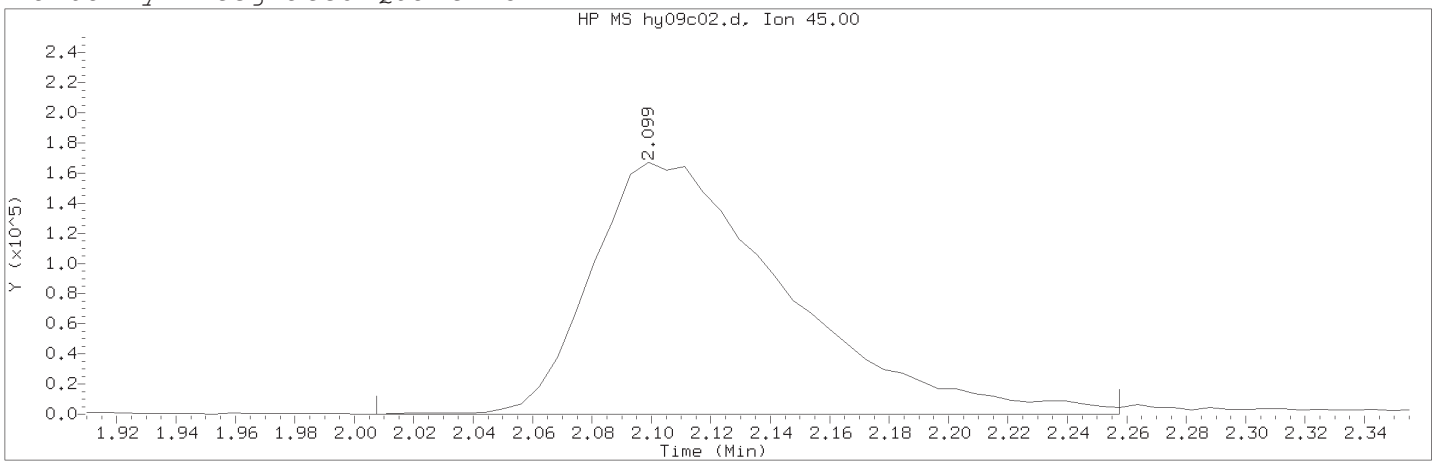
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

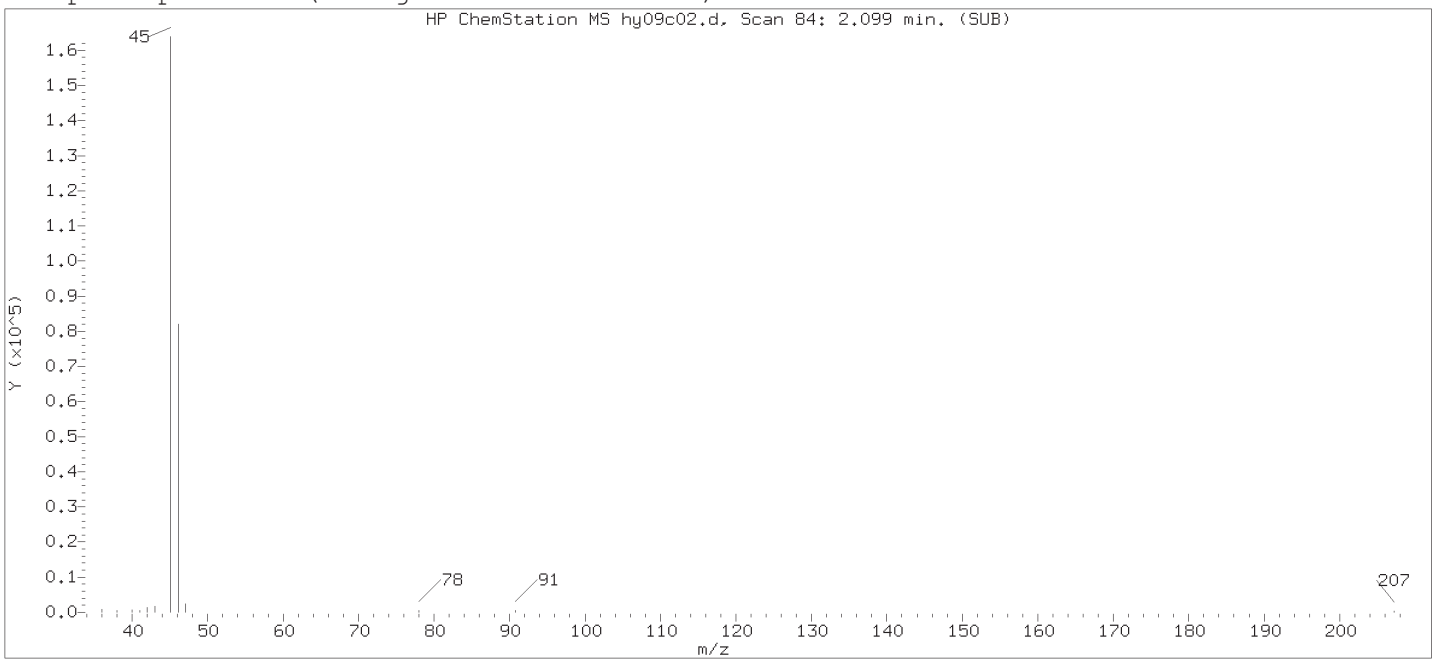
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 763861M
On-Column Amount (ng) : 8.9150
Integration start scan : 68 Integration stop scan: 109
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

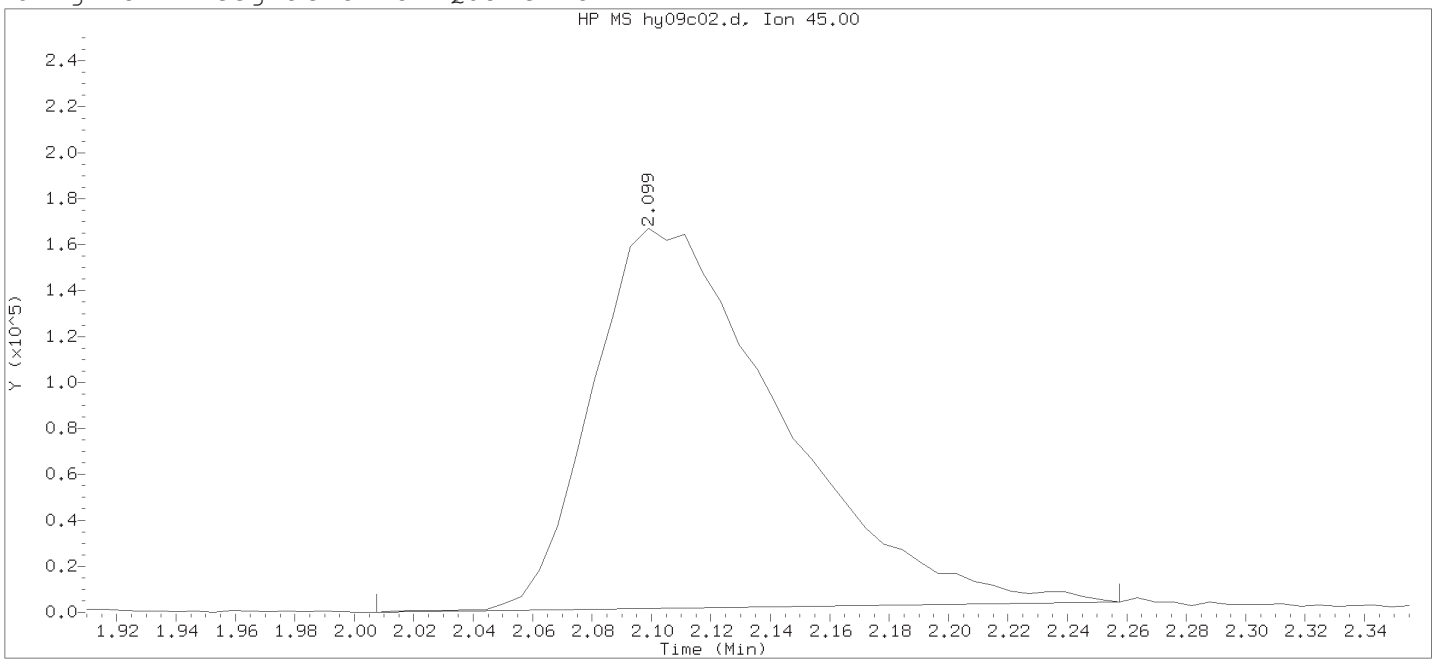
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 18:03.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

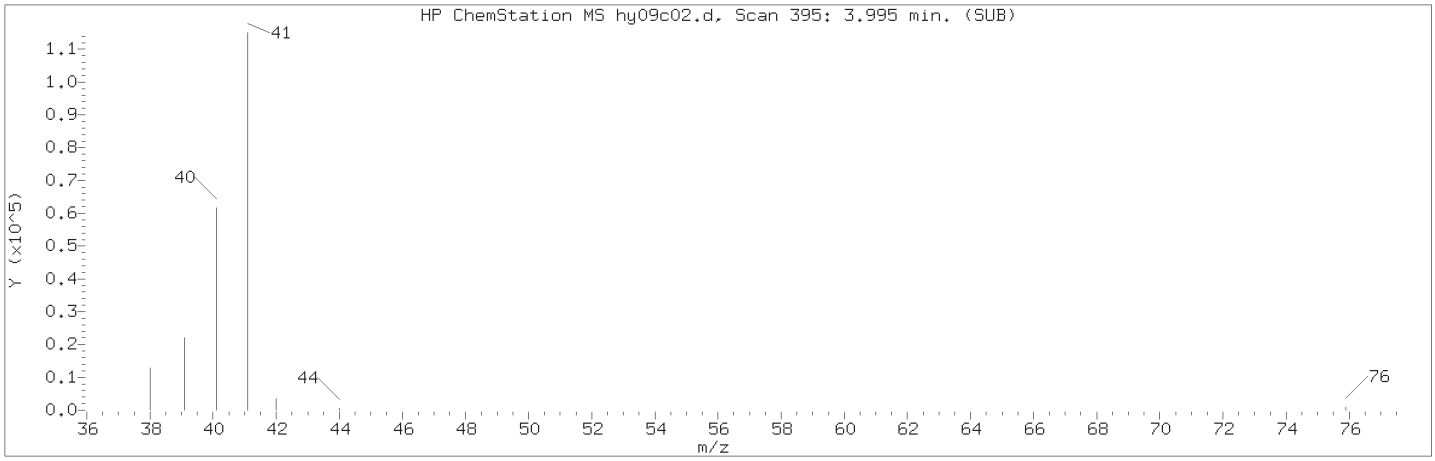
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:38 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

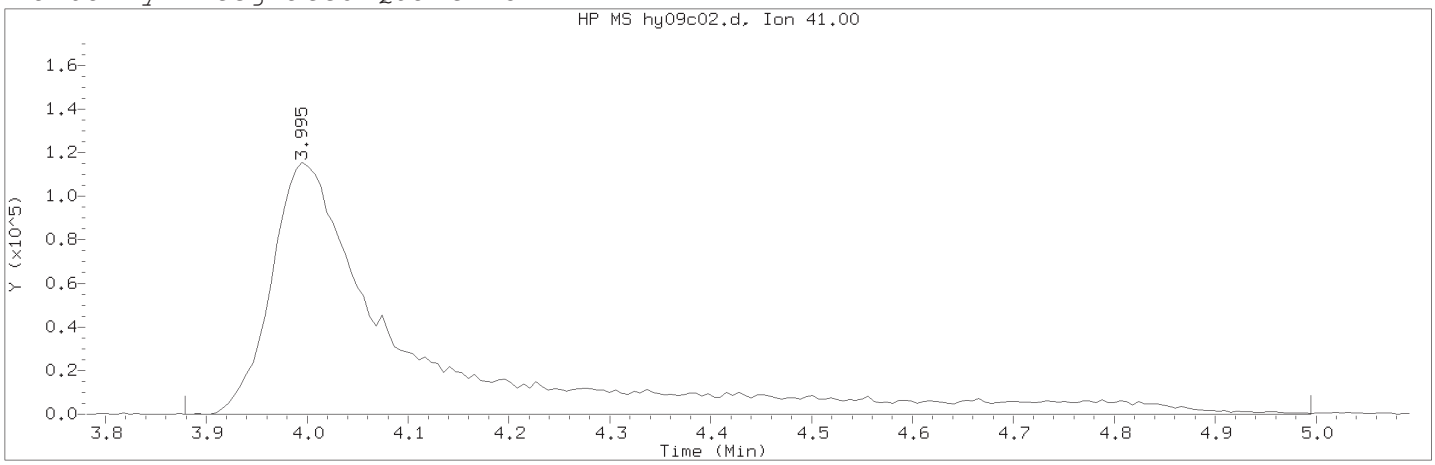
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 84
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area : 729651
On-column Amount (ng) : 8.5157
Integration start scan : 68 Integration stop scan: 109
Y at integration start : 0 Y at integration end: 4452

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature date: 05/11/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

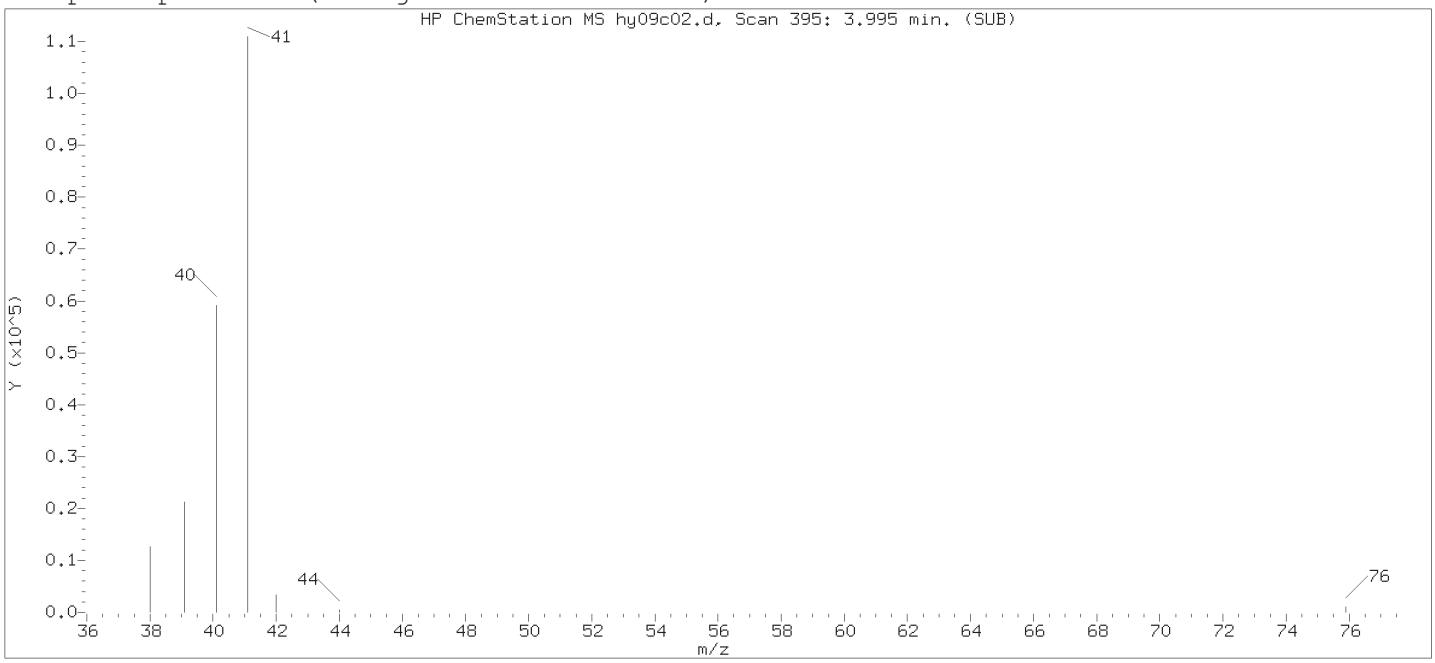
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 395
Retention Time (minutes): 3.995
Quant Ion : 41.00
Area (flag) : 1095036M
On-Column Amount (ng) : 373.8294
Integration start scan : 375 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

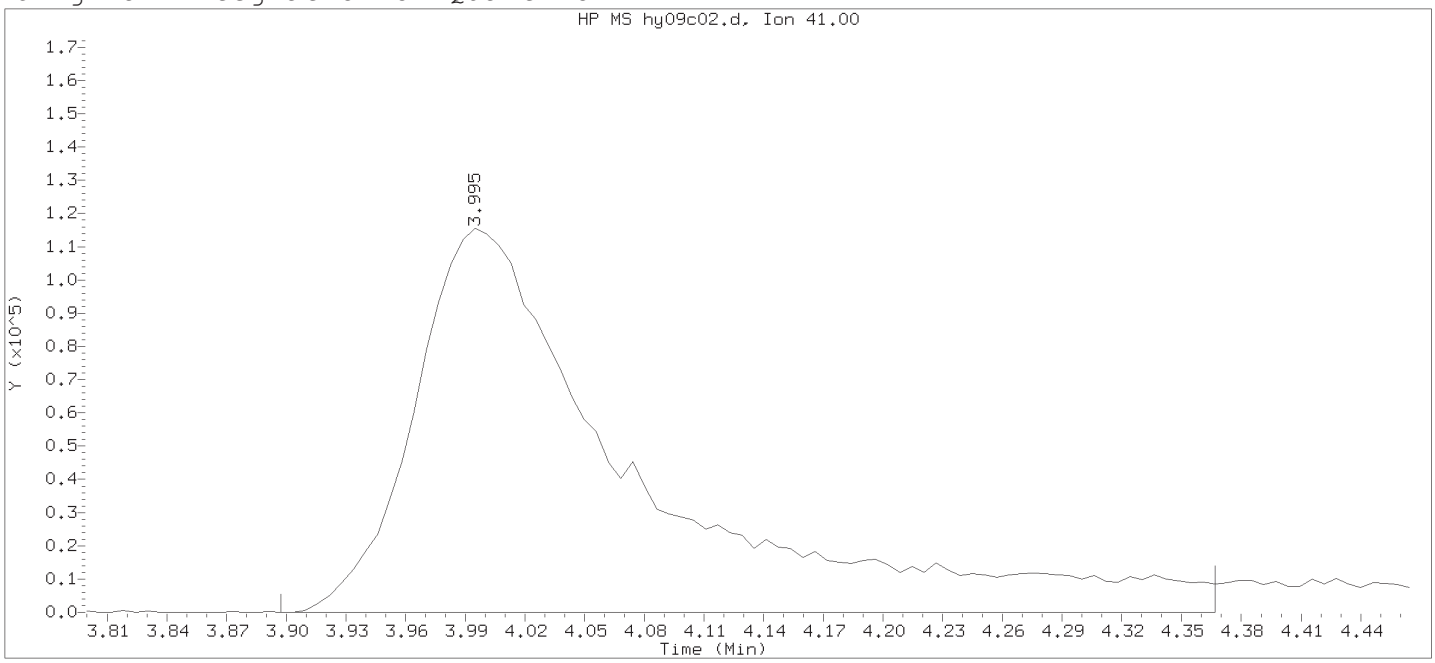
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 18:03.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

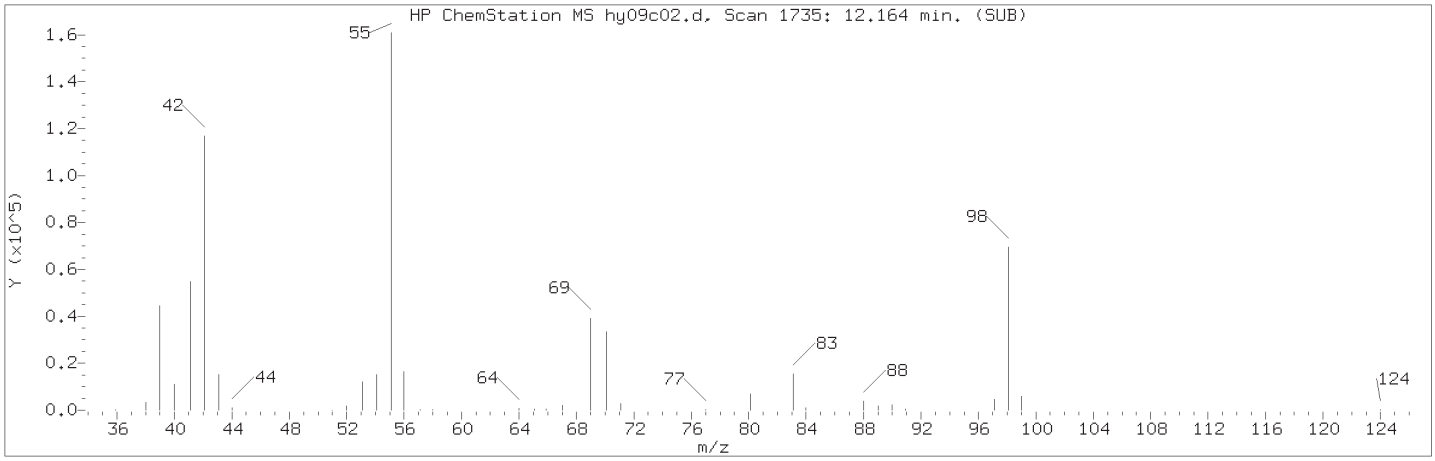
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:38 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

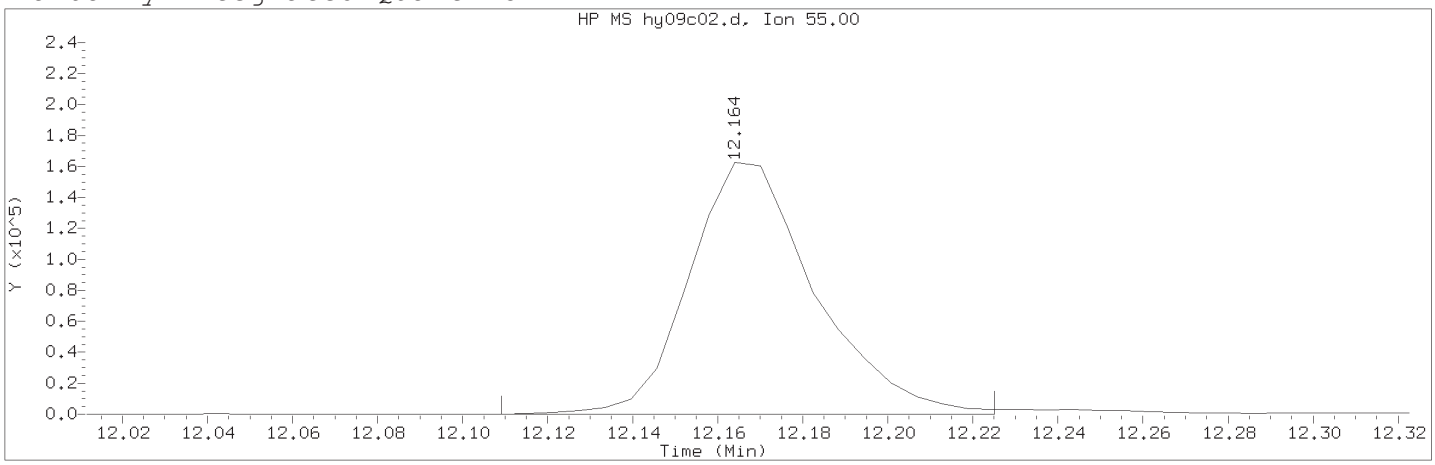
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 395
Retention Time (minutes): 3.995
Quant Ion : 41.00
Area : 892381
On-column Amount (ng) : 304.6435
Integration start scan : 378 Integration stop scan: 455
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature date: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 11-MAY-2016 08:23
Date, time and analyst ID of latest file update: 11-May-2016 08:23 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

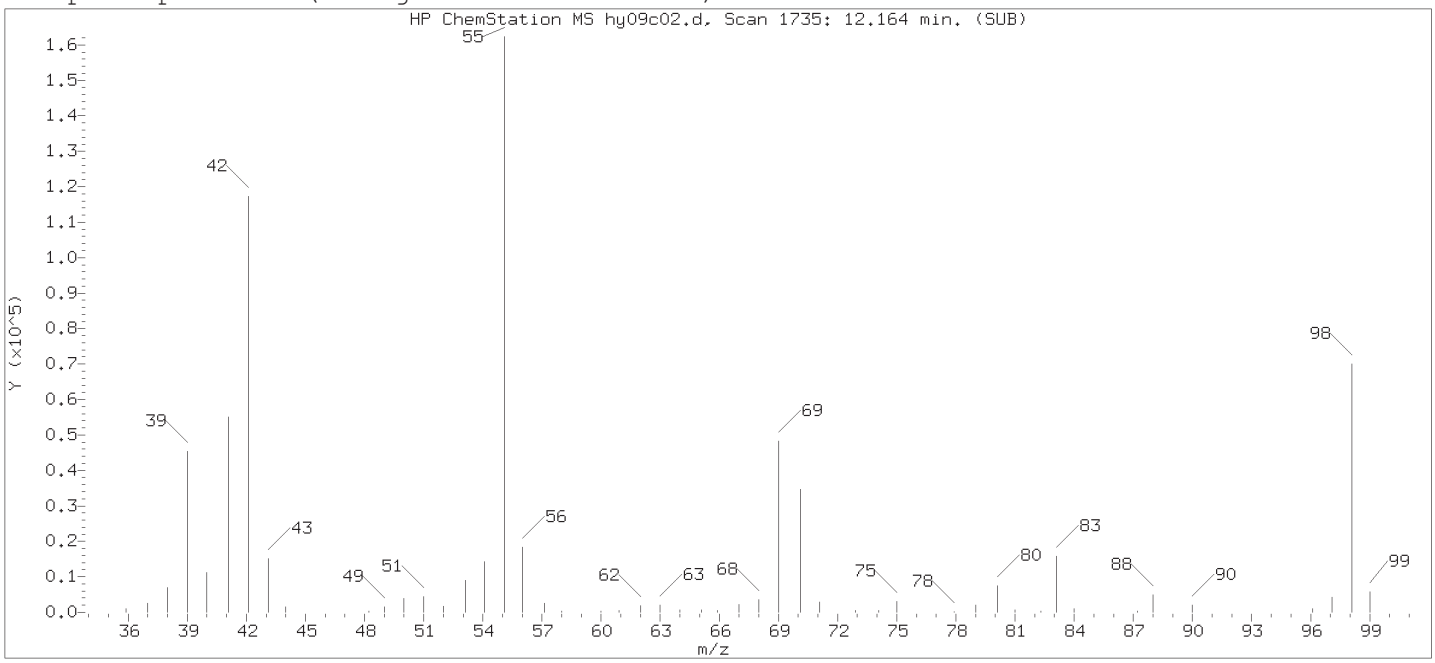
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area (flag) : 333259M
On-Column Amount (ng) : 407.7428
Integration start scan : 1725 Integration stop scan: 1744
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

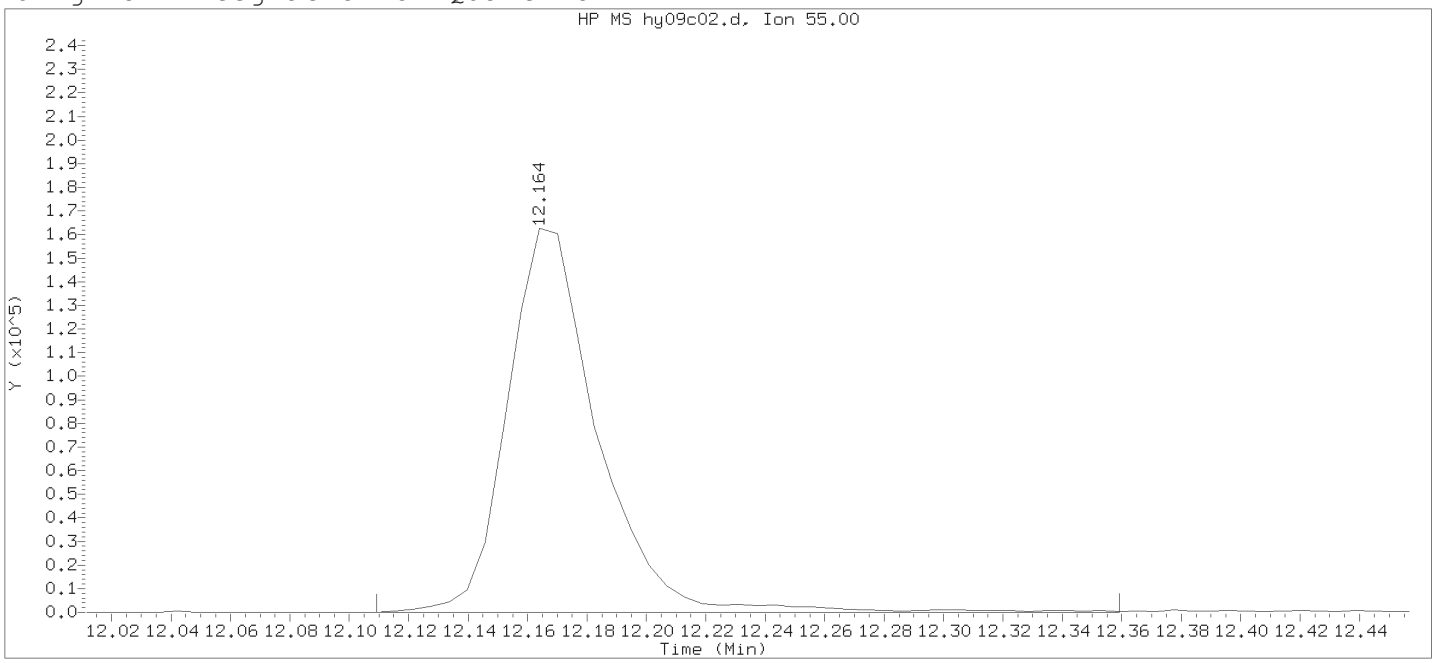
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/11/2016 at 18:03.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09c02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:38 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.164
Quant Ion : 55.00
Area : 342949
On-column Amount (ng) : 419.5947
Integration start scan : 1725 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/11/2016 at 08:23.
Target 3.5 esignature user ID: kel01973

Data File: /chem/HP09915.i/16apr22i.b/la22t01.d

Page 1

Date : 22-APR-2016 09:13

Client ID: BFBFEB23-16

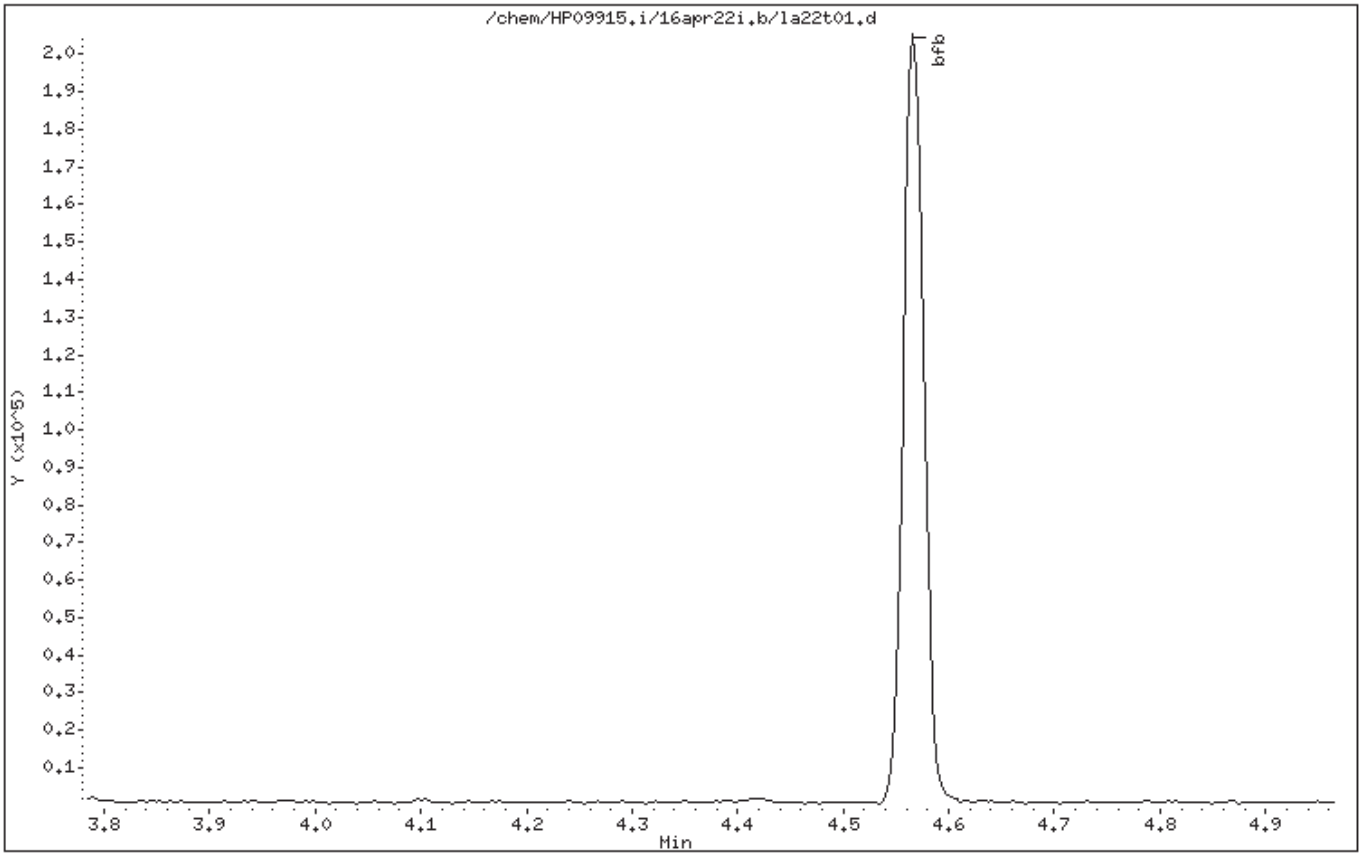
Instrument: HP09915.i

Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

Operator: BWK03231

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:47.
Target 3.5 esignature user ID: bwk03231

Data File: /chem/HP09915.i/16apr22i.b/la22t01.d

Date : 22-APR-2016 09:13

Client ID: BFBFEB23-16

Instrument: HP09915.i

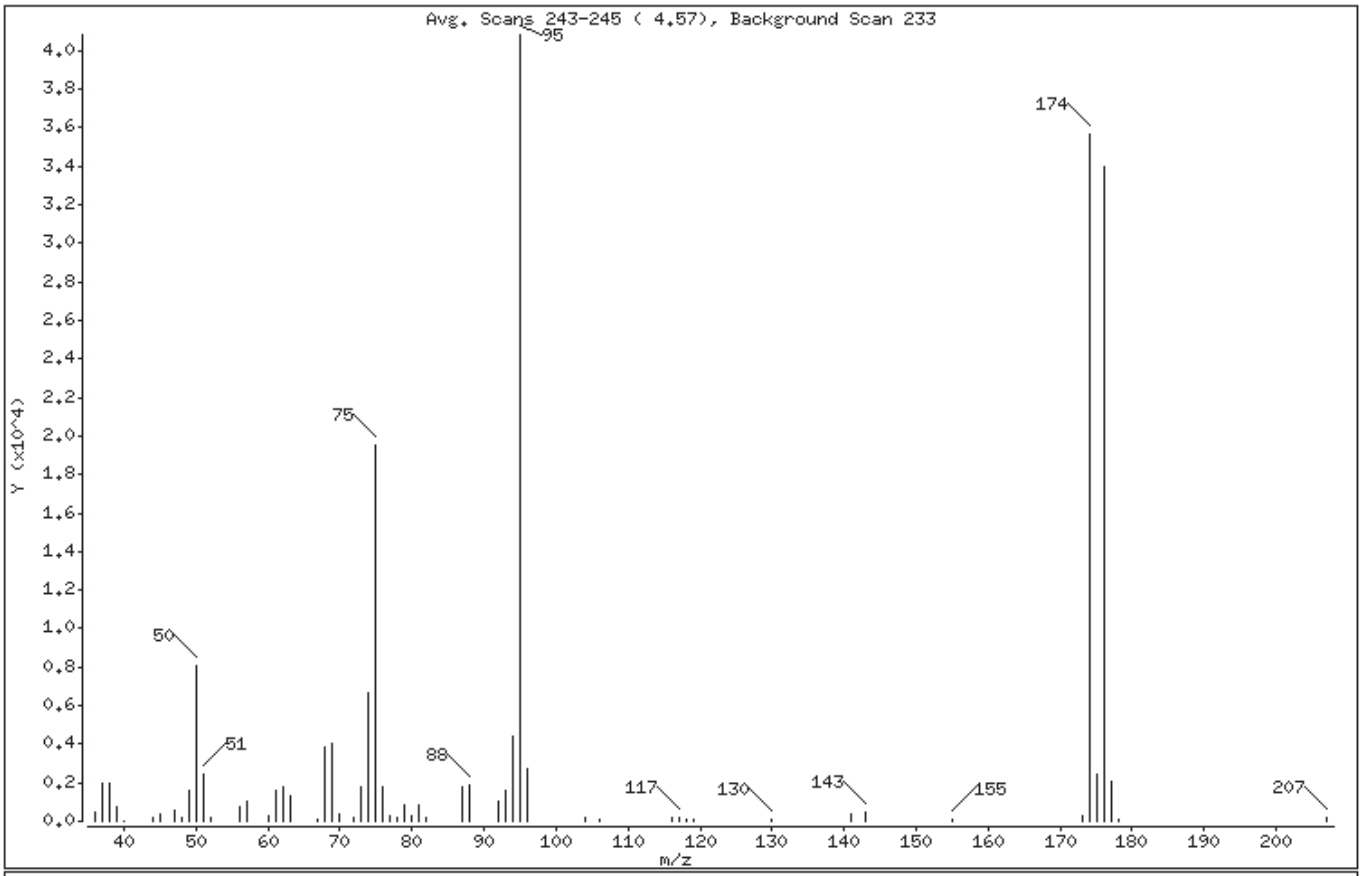
Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

Operator: BWK03231

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.66
75	30.00 - 60.00% of mass 95	47.86
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.58 (0.66)
174	50.00 - 100.00% of mass 95	87.40
175	5.00 - 9.00% of mass 174	5.94 (6.79)
176	95.00 - 101.00% of mass 174	83.17 (95.16)
177	5.00 - 9.00% of mass 176	5.11 (6.15)

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:47.
Target 3.5 esignature user ID: bwk03231

Date : 22-APR-2016 09:13

Client ID: BFBFEB23-16 Instrument: HP09915.i

Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

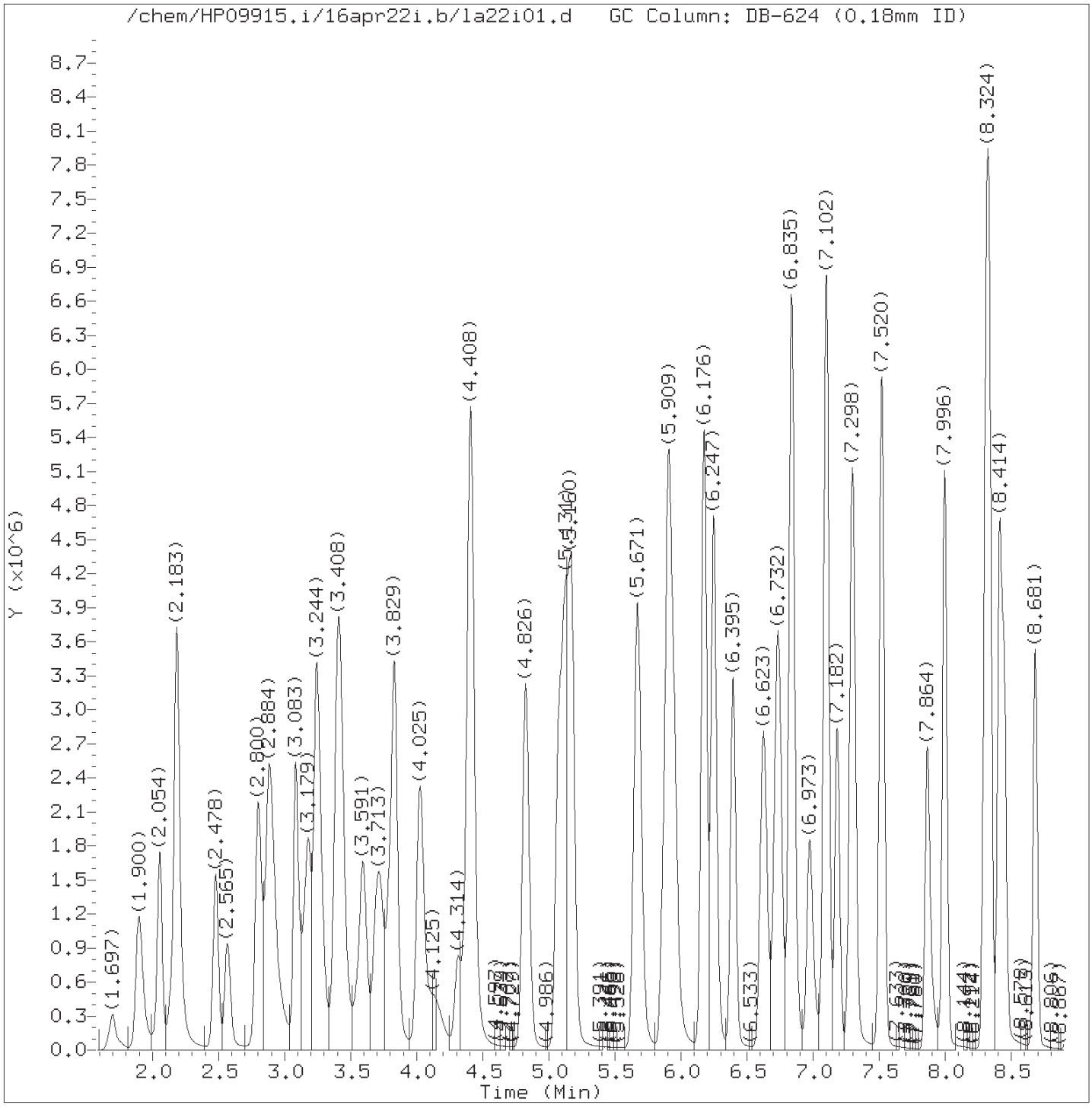
Operator: BWK03231

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: la22t01.d
Spectrum: Avg. Scans 243-245 (4.57), Background Scan 233
Location of Maximum: 95.00
Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	461	60.00	310	79.00	832	118.00	53
37.00	2007	61.00	1628	80.00	264	119.00	109
38.00	1990	62.00	1820	81.00	858	130.00	53
39.00	767	63.00	1360	82.00	179	141.00	334
40.00	25	67.00	102	87.00	1791	143.00	439
44.00	174	68.00	3889	88.00	1833	155.00	59
45.00	418	69.00	4010	92.00	1022	173.00	236
47.00	600	70.00	375	93.00	1615	174.00	35688
48.00	152	72.00	154	94.00	4434	175.00	2424
49.00	1633	73.00	1767	95.00	40832	176.00	33960
50.00	8028	74.00	6631	96.00	2740	177.00	2087
51.00	2483	75.00	19544	104.00	191	178.00	50
52.00	173	76.00	1788	106.00	134	207.00	153
56.00	723	77.00	259	116.00	203		
57.00	1010	78.00	182	117.00	211		

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:47.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

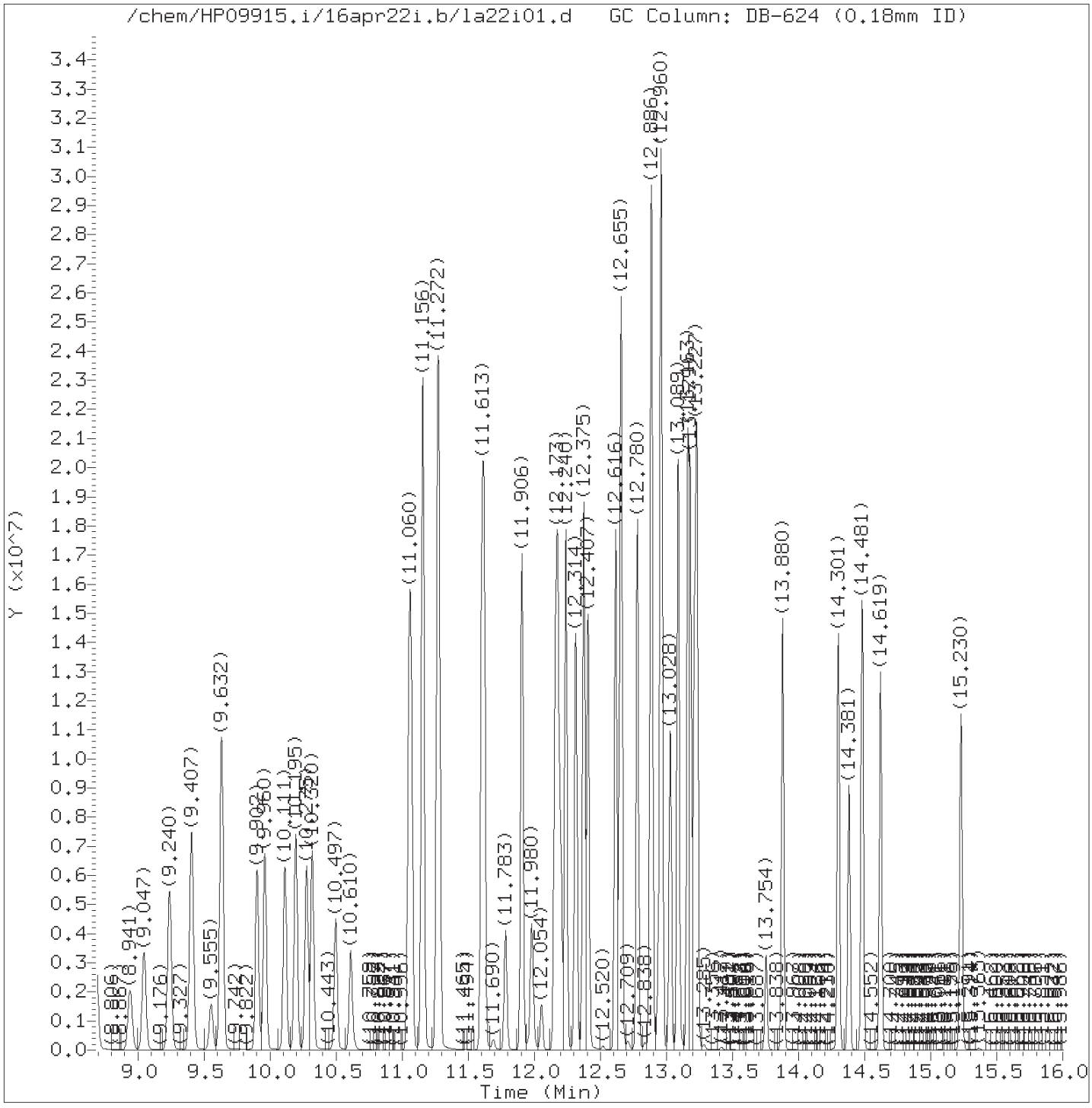
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.900	85	2789554	299.023
4) Chloromethane	(2)	2.054	50	2840939	303.220
6) Vinyl Chloride	(2)	2.176	62	2663174	301.247
5) 1,3-Butadiene	(2)	2.189	39	2311147	175.413
8) Bromomethane	(2)	2.478	94	1696691	296.010
9) Chloroethane	(2)	2.565	64	1403253	290.092
10) Dichlorofluoromethane	(2)	2.800	67	3426218	303.262
12) Trichlorofluoromethane	(2)	2.864	101	2868110	308.038
11) n-Pentane	(2)	2.890	43	2956125	277.365
14) Ethyl ether	(2)	3.083	59	2063833	312.484
15) Freon 123a	(2)	3.176	67	2283198	295.653
16) Acrolein	(1)	3.244	56	6114865	3096.688
18) Acetone	(1)	3.398	58	544497	616.006
17) 1,1-Dichloroethene	(2)	3.401	96	1744771	317.054
17) 1,1-Dichloroethene	(2)	3.404	63	925270	313.946
19) Freon 113	(2)	3.427	101	1628904	307.901
21) 2-Propanol	(1)	3.549	45	1044674	1541.151
22) Methyl Iodide	(2)	3.591	142	3355987	328.445
23) Carbon Disulfide	(2)	3.713	76	5948806	321.923
27) Methyl Acetate	(2)	3.793	43	2306419	311.156
25) Allyl Chloride	(2)	3.832	41	3462276	325.636
29)*t-Butyl alcohol-d10	(1)	4.012	65	230813	250.000
28) Methylene Chloride	(2)	4.025	84	2151384	317.025
30) t-Butyl alcohol	(1)	4.131	59	1657506	1507.819
31) Acrylonitrile	(2)	4.314	53	1185731	316.889
33) Methyl Tertiary Butyl Ether	(2)	4.404	73	6656608	312.874
32) trans-1,2-Dichloroethene	(2)	4.408	96	2025108	324.274
34) n-Hexane	(2)	4.826	57	3014684	312.346
36) 1,1-Dichloroethane	(2)	5.073	63	3990327	321.904
38) di-Isopropyl ether	(2)	5.128	45	7470104	313.814
39) 2-Chloro-1,3-butadiene	(2)	5.176	53	3233270	330.672
40) Ethyl t-butyl ether	(2)	5.668	59	6903790	318.478
44) 2-Butanone	(2)	5.867	43	3016615	626.174
42) cis-1,2-Dichloroethene	(2)	5.906	96	2276153	323.610
45) 2,2-Dichloropropane	(2)	5.935	77	2885921	335.332
47) Propionitrile	(1)	5.954	54	2189550	1538.629
43) 1,2-Dichloroethene (Total)	(2)		96	4301261	647.885
48) Methacrylonitrile	(2)	6.176	67	2899110	780.714

* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.244	128	1163888	324.527
50) Tetrahydrofuran	(1)	6.253	71	774358	650.571
51) Chloroform	(2)	6.395	83	3600908	319.685
52)$Dibromofluoromethane	(2)	6.613	113	298778	50.040
52)$Dibromofluoromethane	(2)	6.613	111	306150	50.087
53) 1,1,1-Trichloroethane	(2)	6.623	97	3100754	309.885
54) Cyclohexane	(2)	6.732	56	3595104	311.656
54) Cyclohexane	(2)	6.732	84	2781206	303.477
54) Cyclohexane	(2)	6.732	69	1056389	316.824
55) 1,1-Dichloropropene	(2)	6.835	75	2978999	323.333
56) Carbon Tetrachloride	(2)	6.842	117	2548986	340.192
58) Isobutyl Alcohol	(1)	6.977	41	1514626MA	3916.578
57)$1,2-Dichloroethane-d4	(2)	7.079	102	74070	49.138
57)$1,2-Dichloroethane-d4	(2)	7.073	65	382090	49.459
57)$1,2-Dichloroethane-d4	(2)	7.076	104	47098	49.211
60) Benzene	(2)	7.102	78	8479332	314.000
61) 1,2-Dichloroethane	(2)	7.182	62	3082824	308.613
61) 1,2-Dichloroethane	(2)	7.182	98	277104	318.513
65) t-Amyl methyl ether	(2)	7.298	73	6433258	320.348
66)*Fluorobenzene	(2)	7.510	96	1256794	50.000
67) n-Heptane	(2)	7.520	43	3146576	294.175
69) n-Butanol	(1)	7.864	56	2476810	8215.964
71) Trichloroethene	(2)	7.996	95	2205112	323.159
72) Methylcyclohexane	(2)	8.308	83	3593835	319.650
72) Methylcyclohexane	(2)	8.311	98	1623148	321.363
73) 1,2-Dichloropropane	(2)	8.333	63	2382333	320.456
76) Methyl Methacrylate	(2)	8.411	69	2097526	336.676
75) 1,4-Dioxane	(1)	8.423	88	398879M	3906.329
74) Dibromomethane	(2)	8.446	93	1485187	322.343
78) Bromodichloromethane	(2)	8.681	83	2908833	345.884
79) 2-Nitropropane	(2)	8.941	41	1665371	719.316
80) 2-Chloroethyl Vinyl Ether	(2)	9.047	63	1832065	345.350
81) cis-1,3-Dichloropropene	(2)	9.240	75	3769406	349.403
82) 4-Methyl-2-pentanone	(2)	9.407	43	6376517	644.988
83)$Toluene-d8	(3)	9.555	98	1241068	49.357
83)$Toluene-d8	(3)	9.555	100	811210	49.545
88) Toluene	(3)	9.632	92	5288633	309.392
89) trans-1,3-Dichloropropene	(3)	9.902	75	3547077	358.134

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.960	69	3662879	333.842
90) 1,3-Dichloropropene (total)	(3)		100	7316483	707.537
92) 1,1,2-Trichloroethane	(3)	10.111	97	2078552	312.965
93) Tetrachloroethene	(3)	10.195	166	2333844	322.550
94) 1,3-Dichloropropane	(3)	10.275	76	3693193	313.993
96) 2-Hexanone	(3)	10.320	43	4629504	637.884
97) Dibromochloromethane	(3)	10.497	129	2376464	364.307
99) 1,2-Dibromoethane	(3)	10.610	107	2323789	325.703
100)*Chlorobenzene-d5	(3)	11.041	117	960626	50.000
101) 1-Chlorohexane	(3)	11.050	91	2953104A	307.962
102) Chlorobenzene	(3)	11.070	112	6131366	316.961
103) 1,1,1,2-Tetrachloroethane	(3)	11.153	131	2196636	343.170
104) Ethylbenzene	(3)	11.156	91	10287242	311.941
106) m+p-Xylene	(3)	11.272	106	8032910	634.445
107) o-Xylene	(3)	11.603	106	4005746	321.663
109) Styrene	(3)	11.619	104	6824109	325.315
108) Xylene (Total)	(3)		106	12038656	956.108
110) Bromoform	(3)	11.783	173	1739524	387.274
111) Isopropylbenzene	(3)	11.906	105	9993513	315.231
112) Cyclohexanone	(1)	11.980	55	1843903	3915.683
114)$4-Bromofluorobenzene	(3)	12.054	95	459674	49.401
114)$4-Bromofluorobenzene	(3)	12.057	174	391236	49.410
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	3217486M	307.110
115) Bromobenzene	(4)	12.169	156	2838619	319.283
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	1798474	1287.832
117) 1,2,3-Trichloropropane	(4)	12.201	110	918841	303.662
119) n-Propylbenzene	(4)	12.240	91	11677865	293.771
120) 2-Chlorotoluene	(4)	12.314	126	2544975	315.667
122) 1,3,5-Trimethylbenzene	(4)	12.375	105	8784756	311.997
121) 4-Chlorotoluene	(4)	12.407	126	2668960	313.498
124) tert-Butylbenzene	(4)	12.616	134	1875027M	321.730
125) Pentachloroethane	(4)	12.652	167	1706906	354.771
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	9112031	311.216
127) sec-Butylbenzene	(4)	12.780	105	10625454	297.769
129) 1,3-Dichlorobenzene	(4)	12.880	146	5104086	305.170
130) p-Isopropyltoluene	(4)	12.890	119	9655207	311.107
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	517298	50.000
133) 1,4-Dichlorobenzene	(4)	12.957	146	5213643	298.370

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

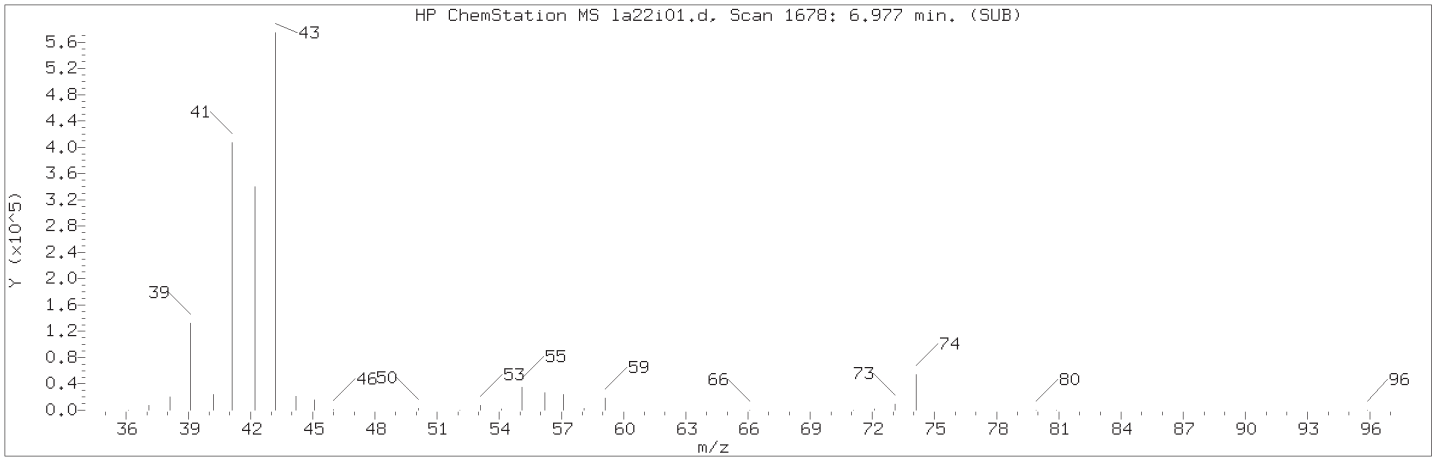
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

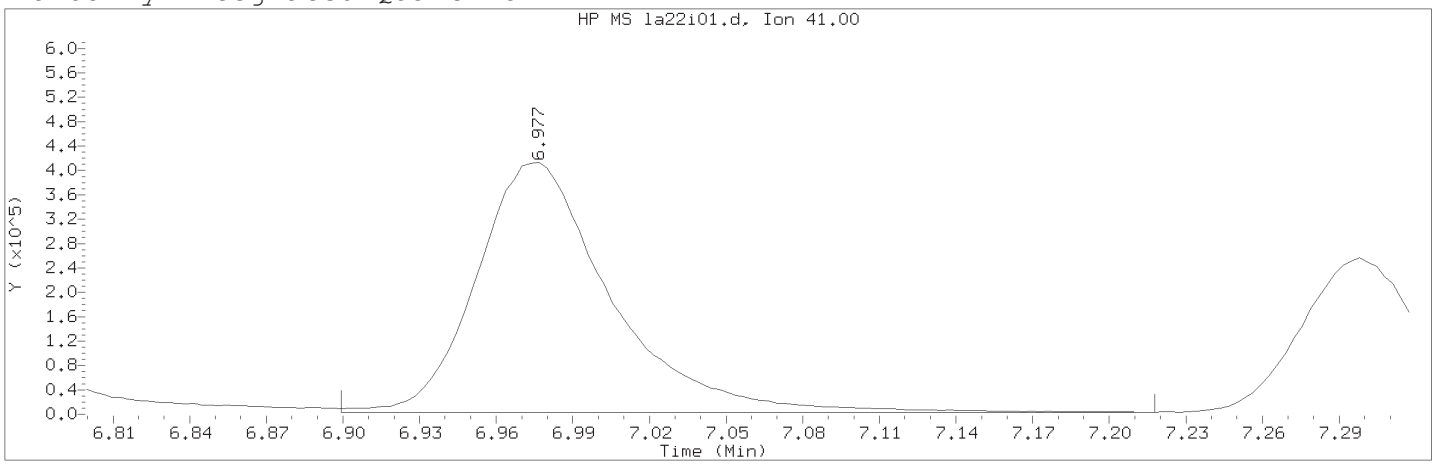
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.963	105	9338432	304.990
135) Benzyl Chloride	(4)	13.028	91	6661163	366.490
136) 1,3-Diethylbenzene	(4)	13.089	119	5770573	309.240
137) 1,4-Diethylbenzene	(4)	13.163	119	5943038	305.369
139) n-Butylbenzene	(4)	13.182	92	4630318	291.562
138) 1,2-Dichlorobenzene	(4)	13.211	146	5016999	302.599
140) 1,2-Diethylbenzene	(4)	13.230	119	4894912	307.526
141) Diethylbenzene (total)	(4)		100	16608523	922.135
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	687109	339.274
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	3971765	301.017
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	3820864	292.244
147) Hexachlorobutadiene	(4)	14.381	225	1473802	263.961
148) Naphthalene	(4)	14.481	128	10164754	288.593
149) 1,2,3-Trichlorobenzene	(4)	14.619	180	3495444	283.638
150) 2-Methylnaphthalene	(4)	15.230	142	5160587	235.010

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

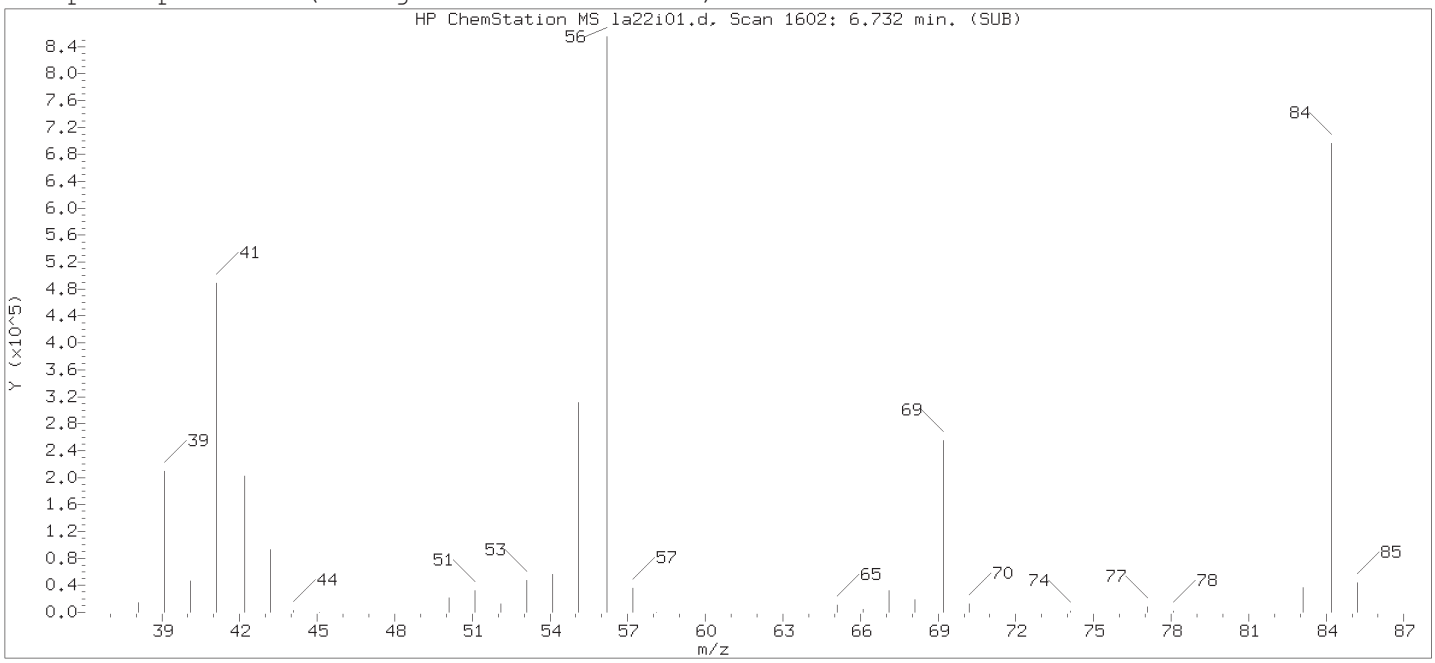
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1678
Retention Time (minutes): 6.977
Quant Ion : 41.00
Area (flag) : 1514626MA
On-Column Amount (ng) : 3916.5781
Integration start scan : 1653 Integration stop scan: 1752
Y at integration start : 2510 Y at integration end: 2510

Reason for manual integration: improper integration

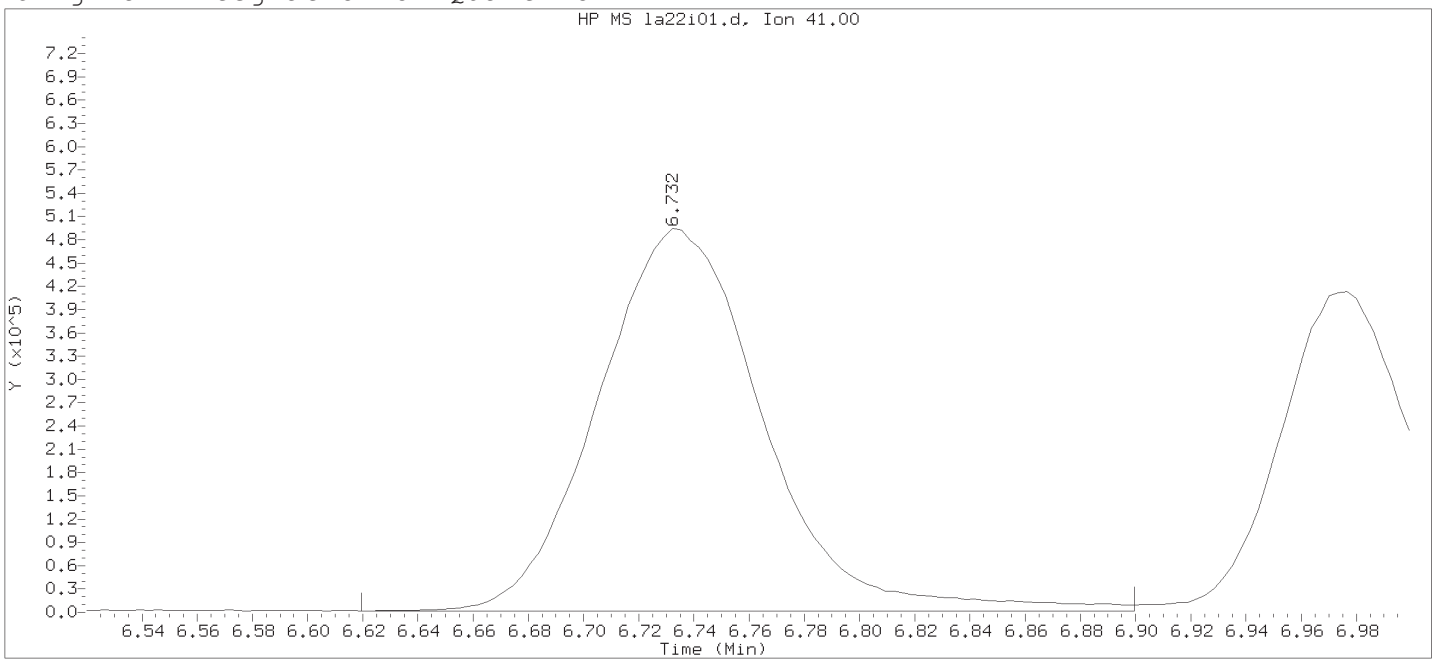
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

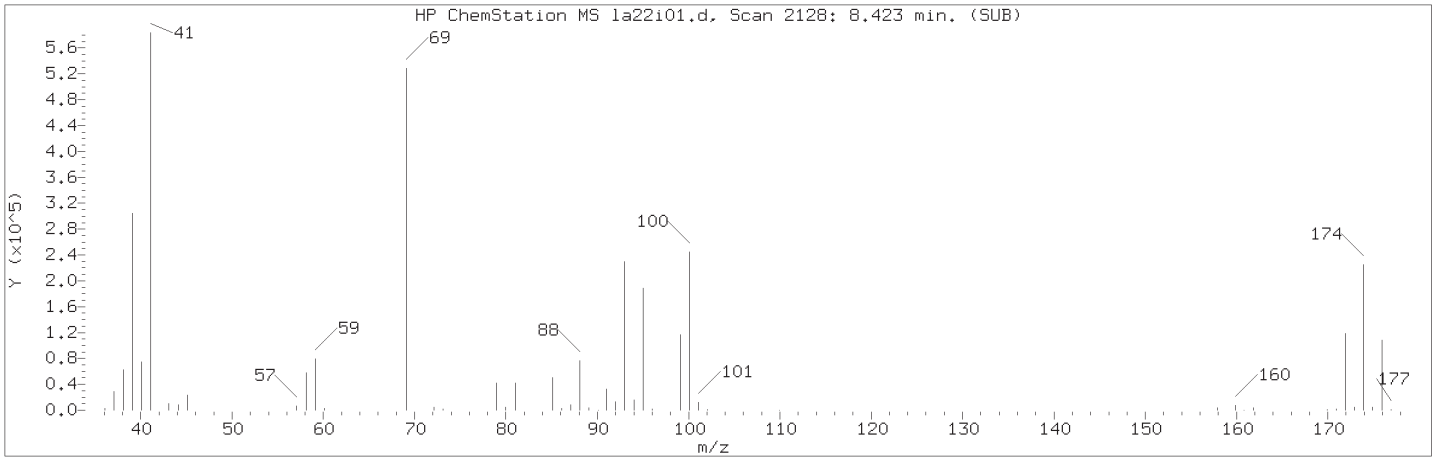
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

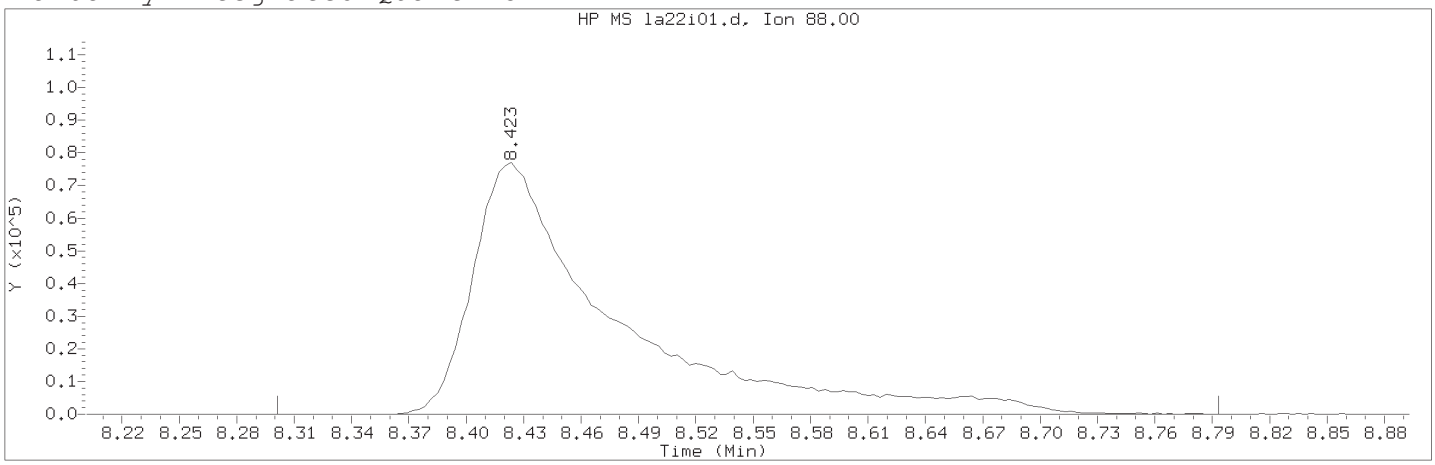
Compound Number	: 58		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 1602		
Retention Time (minutes)	: 6.732		
Quant Ion	: 41.00		
Area	: 2046838		
On-column Amount (ng)	: 4549.3919		
Integration start scan	: 1566	Integration stop scan:	1653
Y at integration start	: 1761	Y at integration end:	1761

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

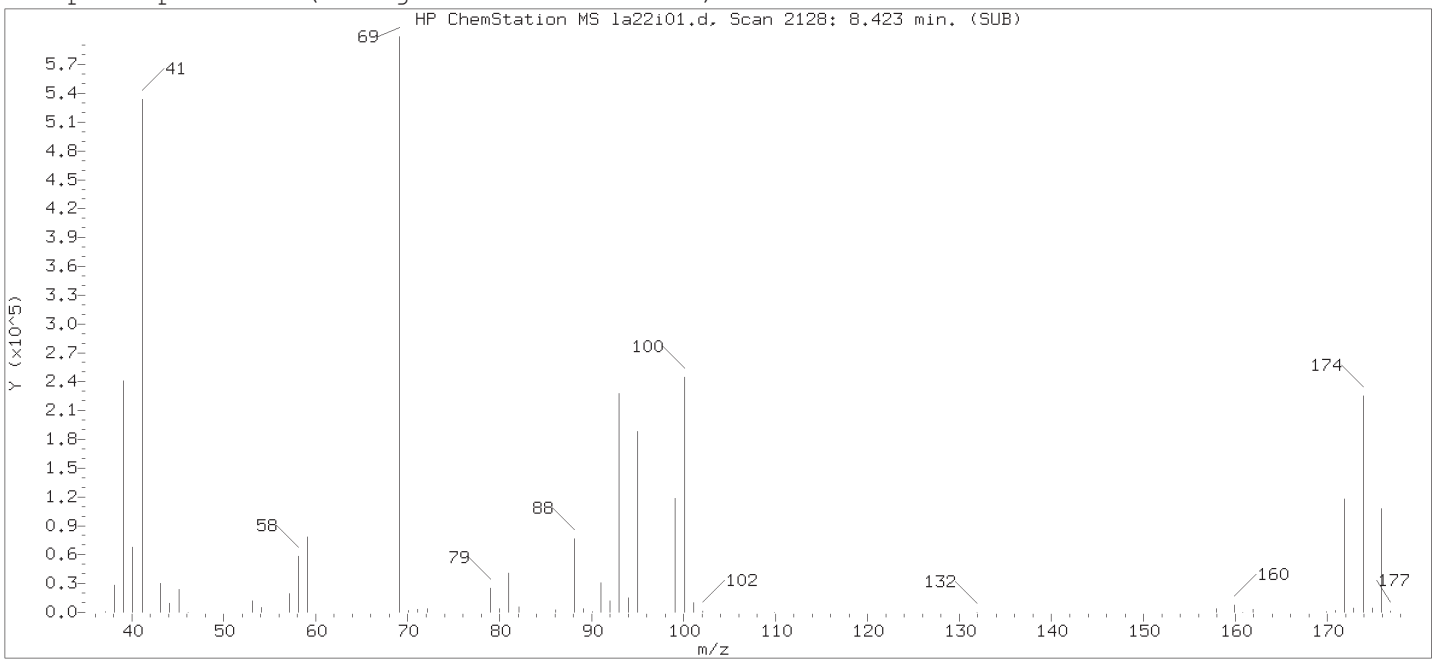
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area (flag) : 398879M
On-Column Amount (ng) : 3906.3289
Integration start scan : 2089 Integration stop scan: 2242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

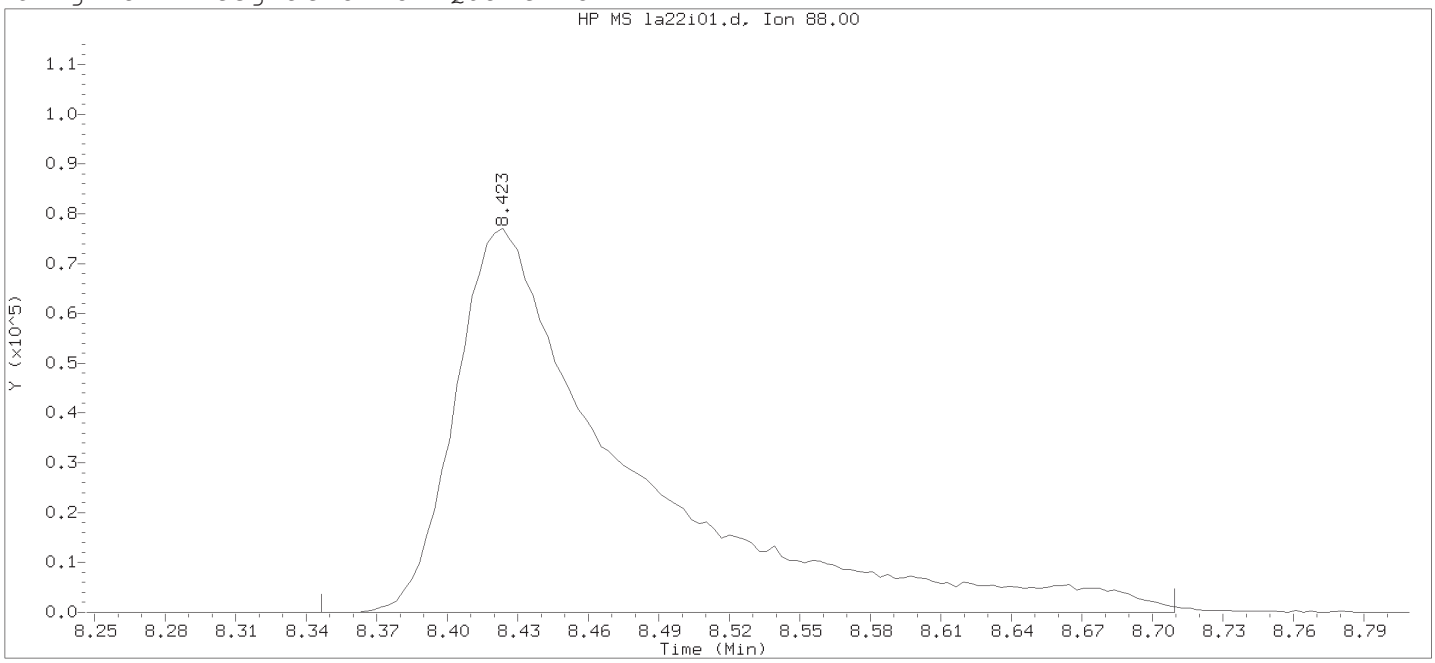
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

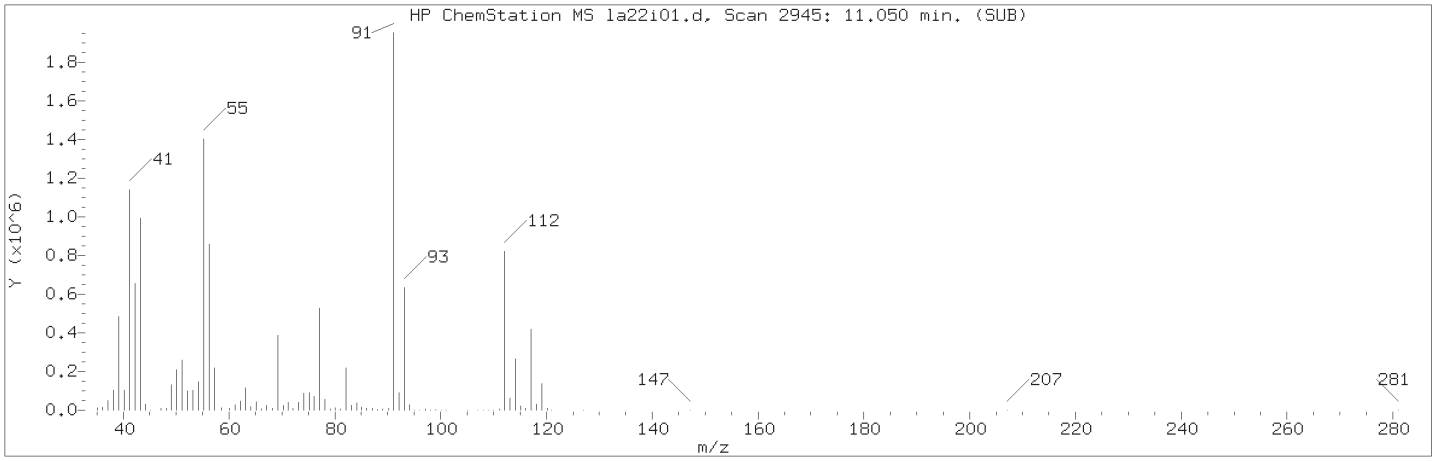
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

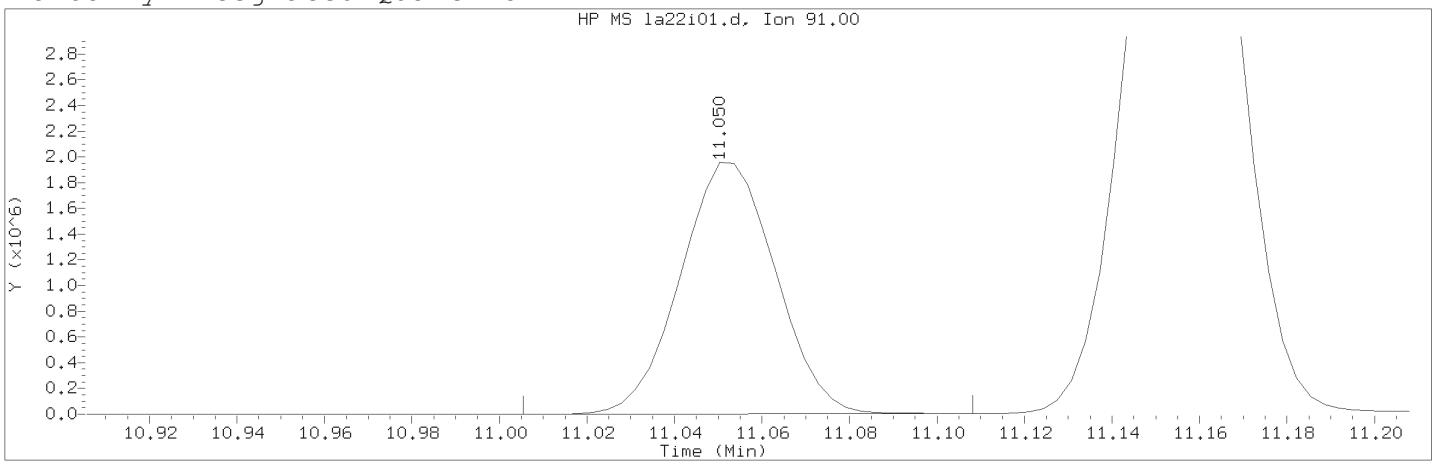
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area : 397538
On-column Amount (ng) : 4004.2632
Integration start scan : 2103 Integration stop scan: 2216
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

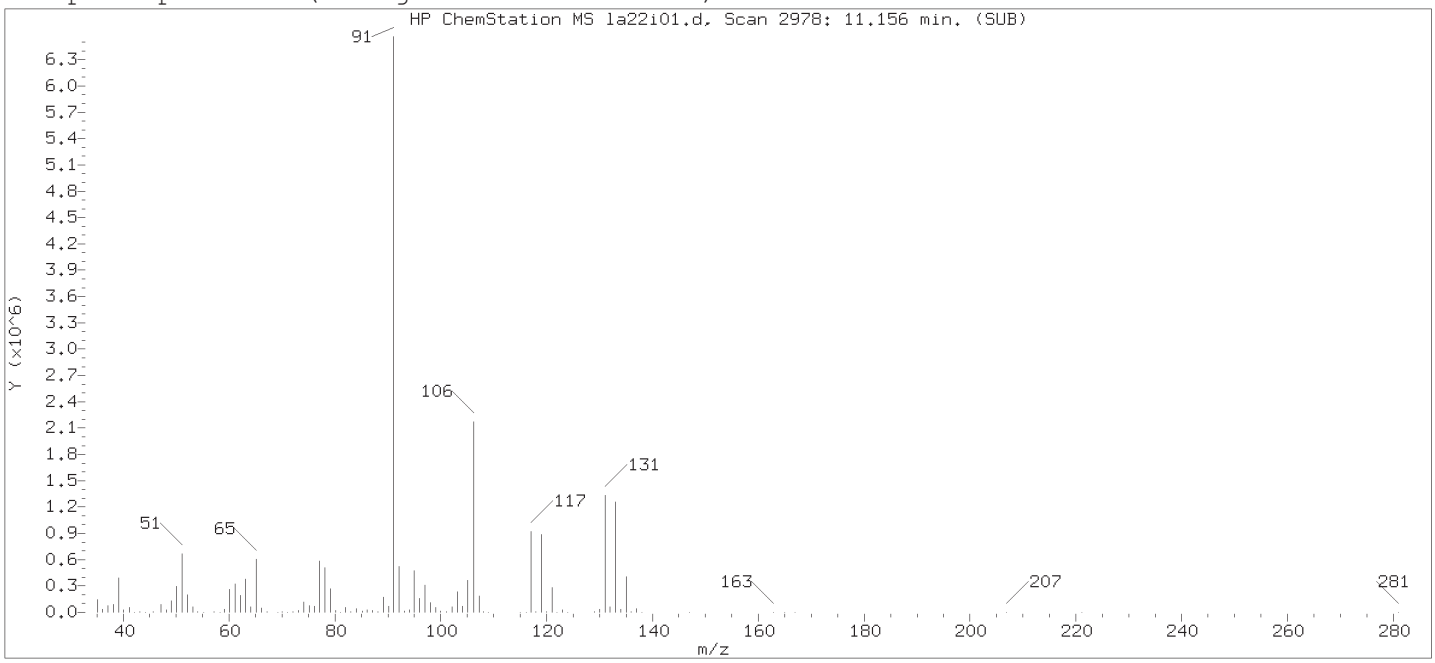
Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2945
Retention Time (minutes): 11.050
Quant Ion : 91.00
Area (flag) : 2953104A
On-Column Amount (ng) : 307.9616
Integration start scan : 2930 Integration stop scan: 2962
Y at integration start : 0 Y at integration end: 4088

Reason for manual integration: improper integration

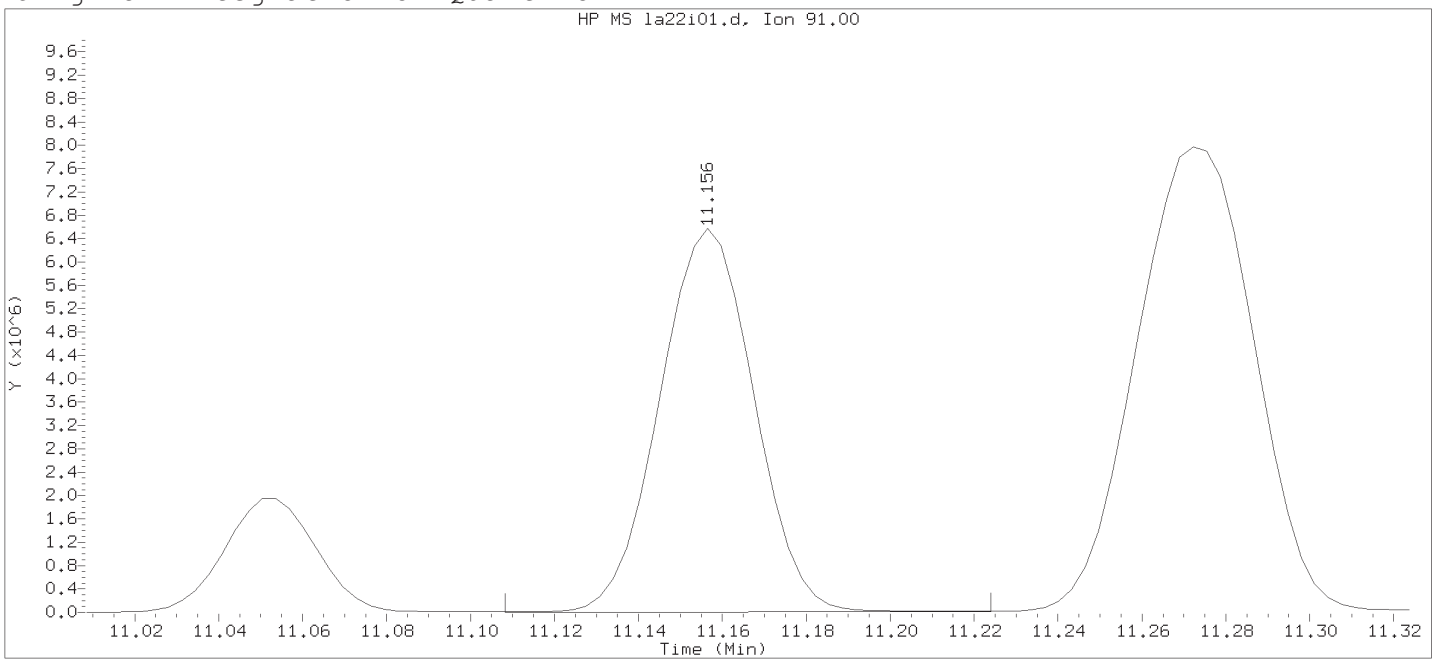
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2978
Retention Time (minutes): 11.156
Quant Ion : 91.00
Area : 10240007
On-column Amount (ng) : 84.7420
Integration start scan : 2962 Integration stop scan: 2998
Y at integration start : 4088 Y at integration end: 9515

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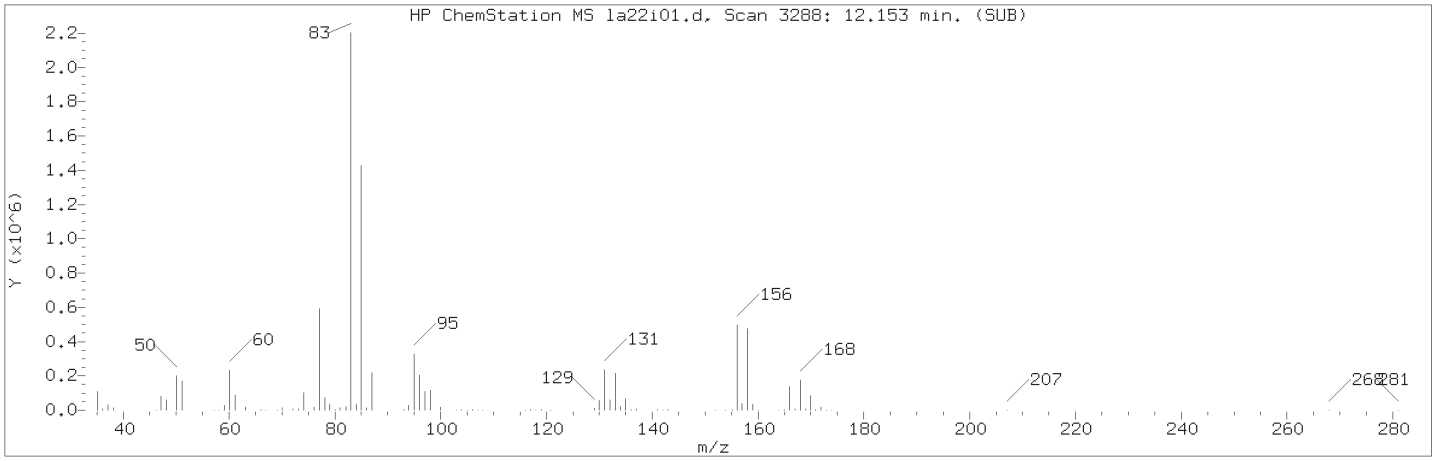
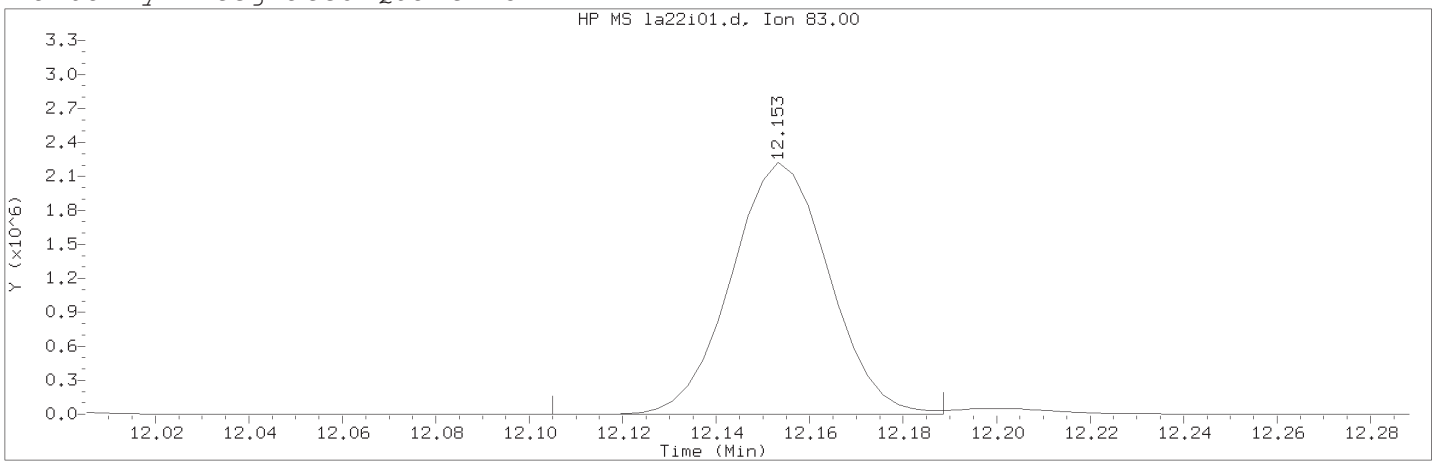
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

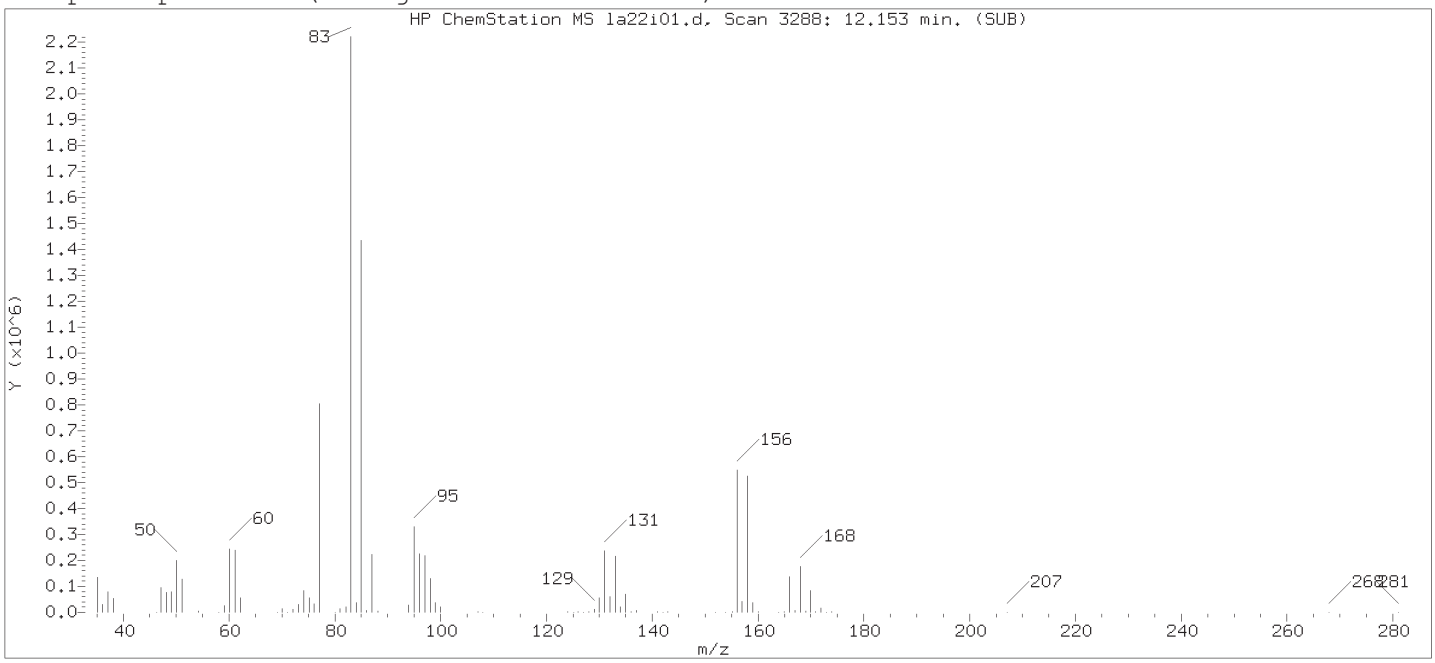
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area (flag) : 3217486M
On-Column Amount (ng) : 307.1096
Integration start scan : 3272 Integration stop scan: 3298
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

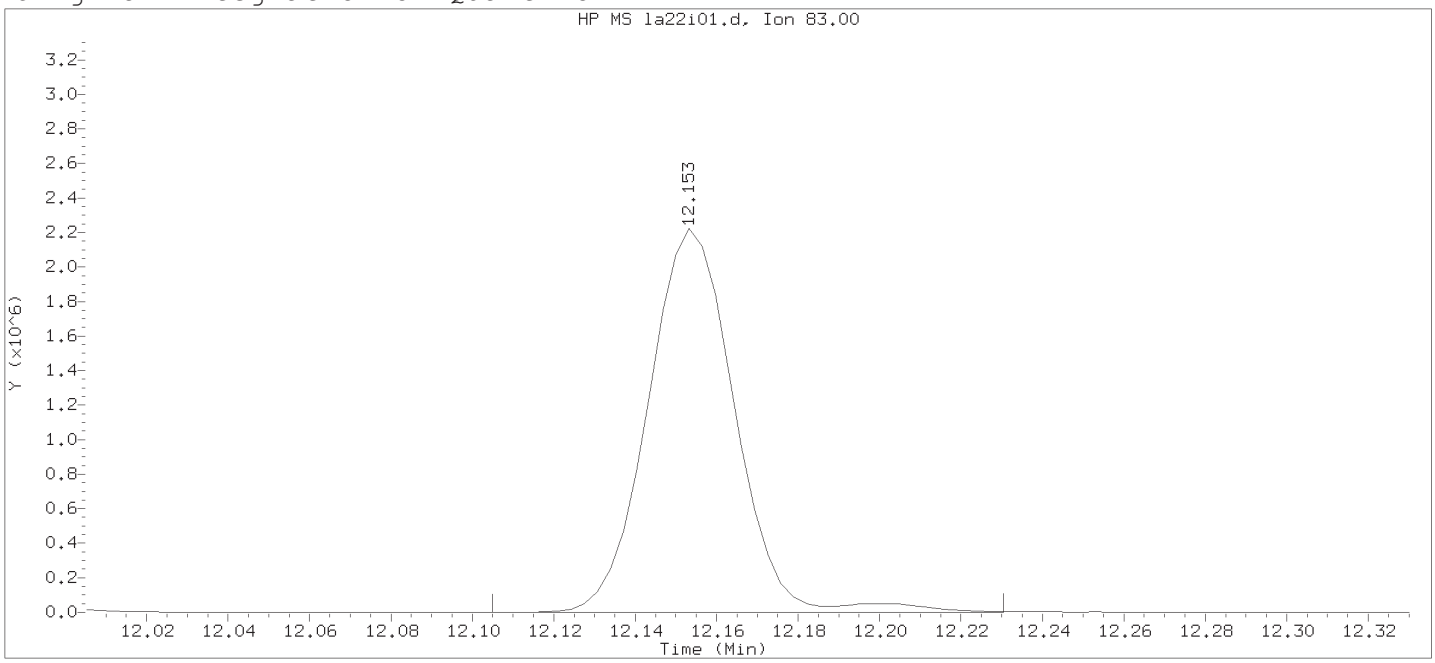
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

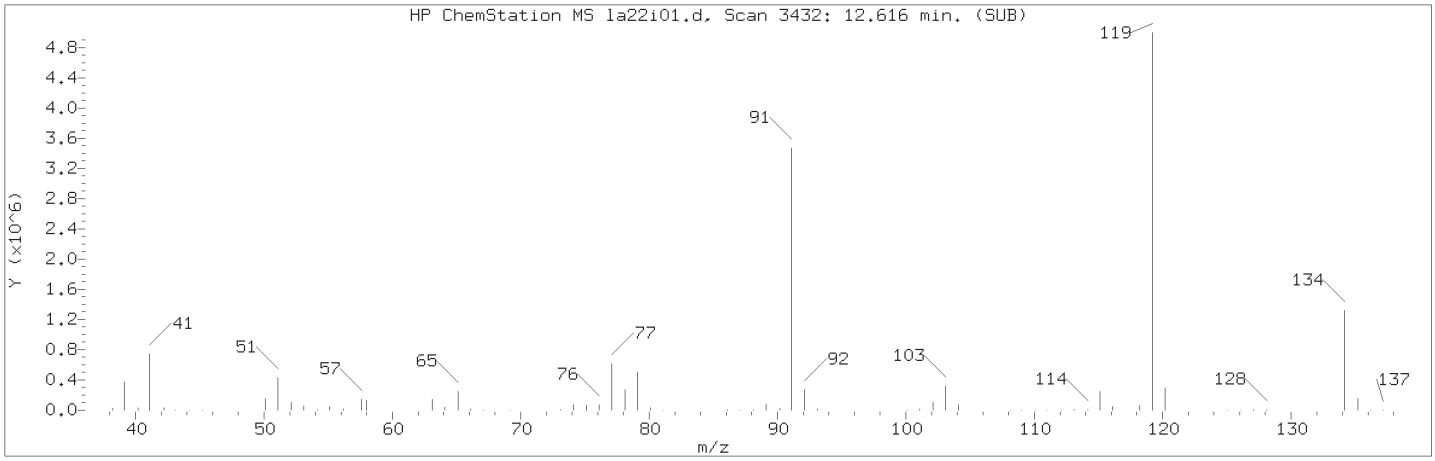
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

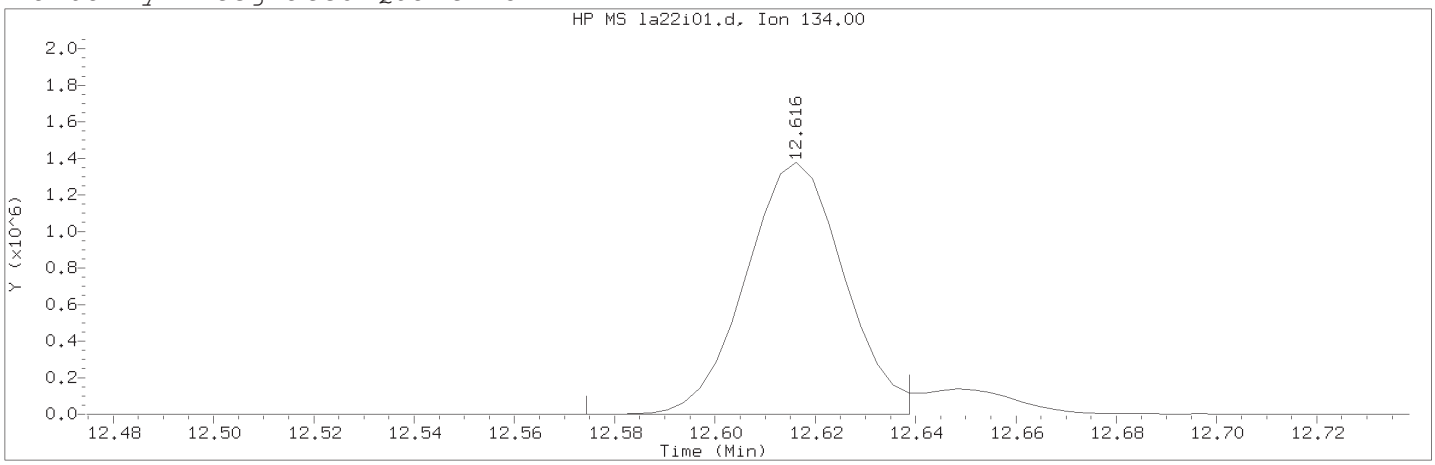
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area : 3287637
On-column Amount (ng) : 301.3605
Integration start scan : 3272 Integration stop scan: 3311
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

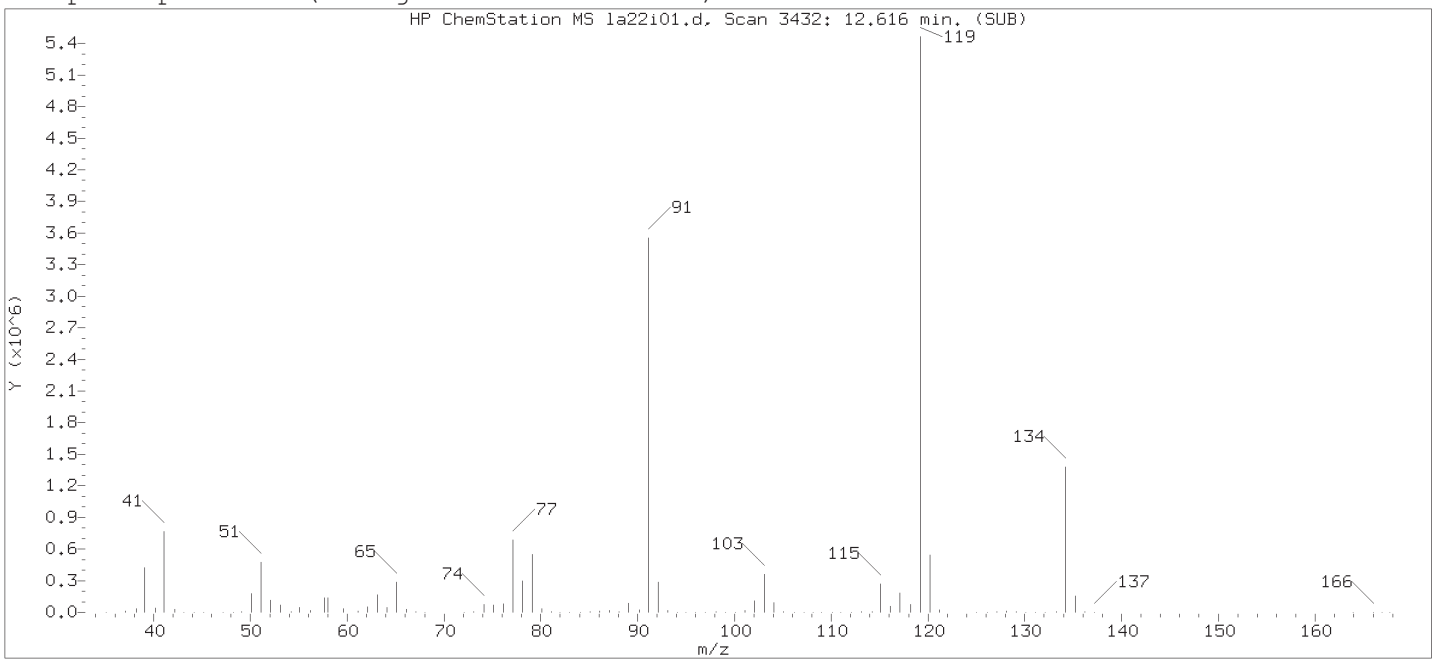
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3432
Retention Time (minutes): 12.616
Quant Ion : 134.00
Area (flag) : 1875027M
On-Column Amount (ng) : 321.7301
Integration start scan : 3418 Integration stop scan: 3438
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

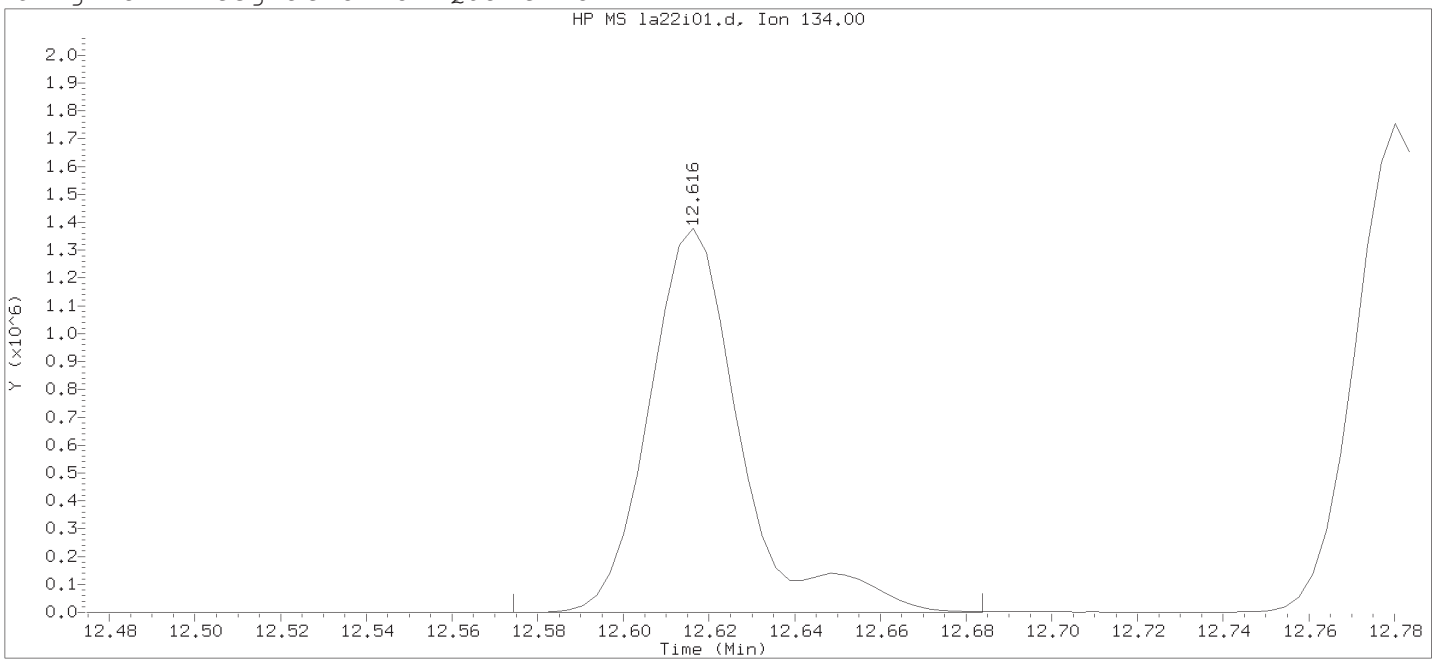
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



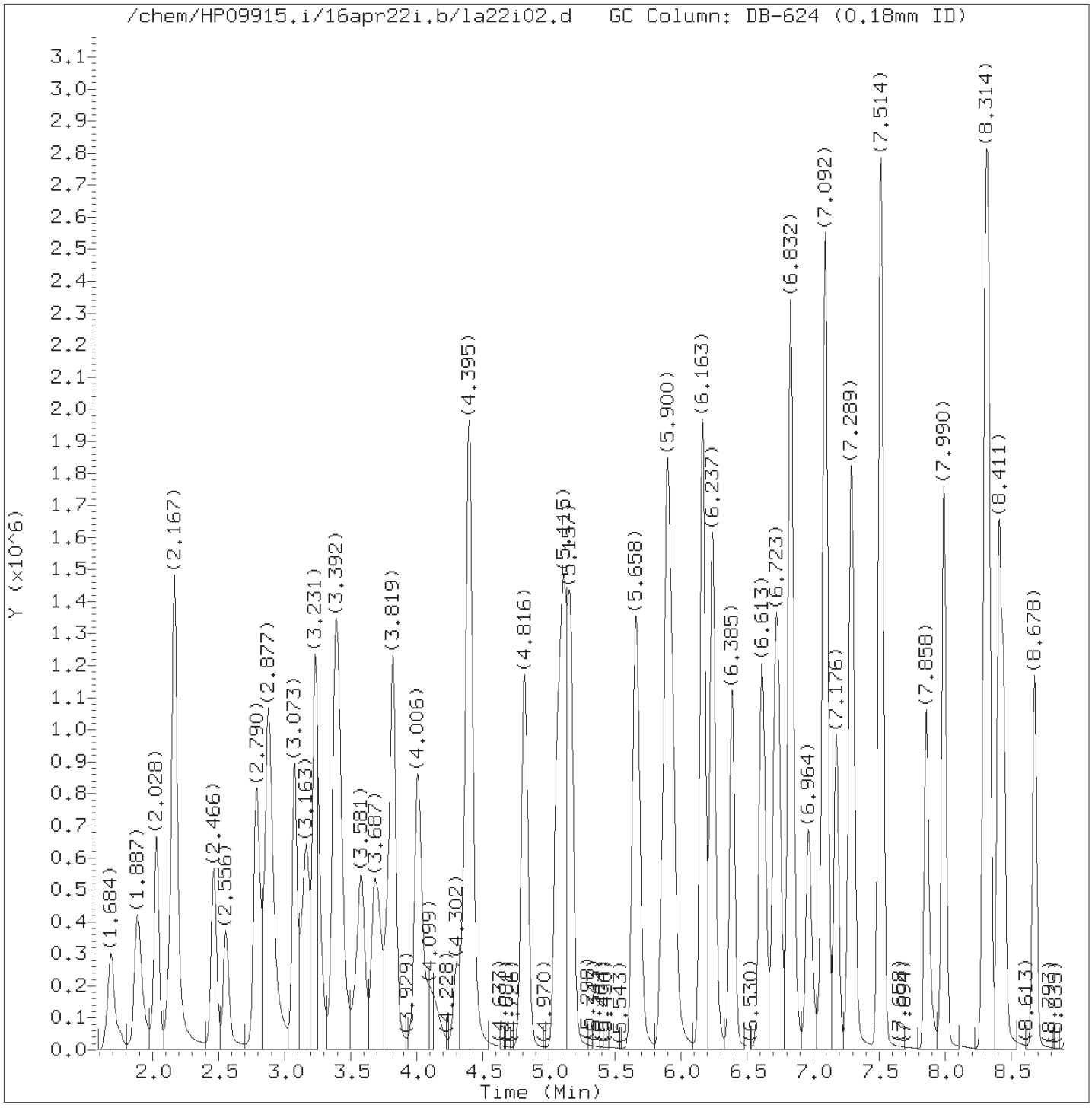
Data File: /chem/HP09915.i/16apr22i.b/la22i01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 09:55 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3432
Retention Time (minutes): 12.616
Quant Ion : 134.00
Area : 2047673
On-column Amount (ng) : 307.4203
Integration start scan : 3418 Integration stop scan: 3452
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data: BWK03231



Total Ion Chromatogram (TIC)

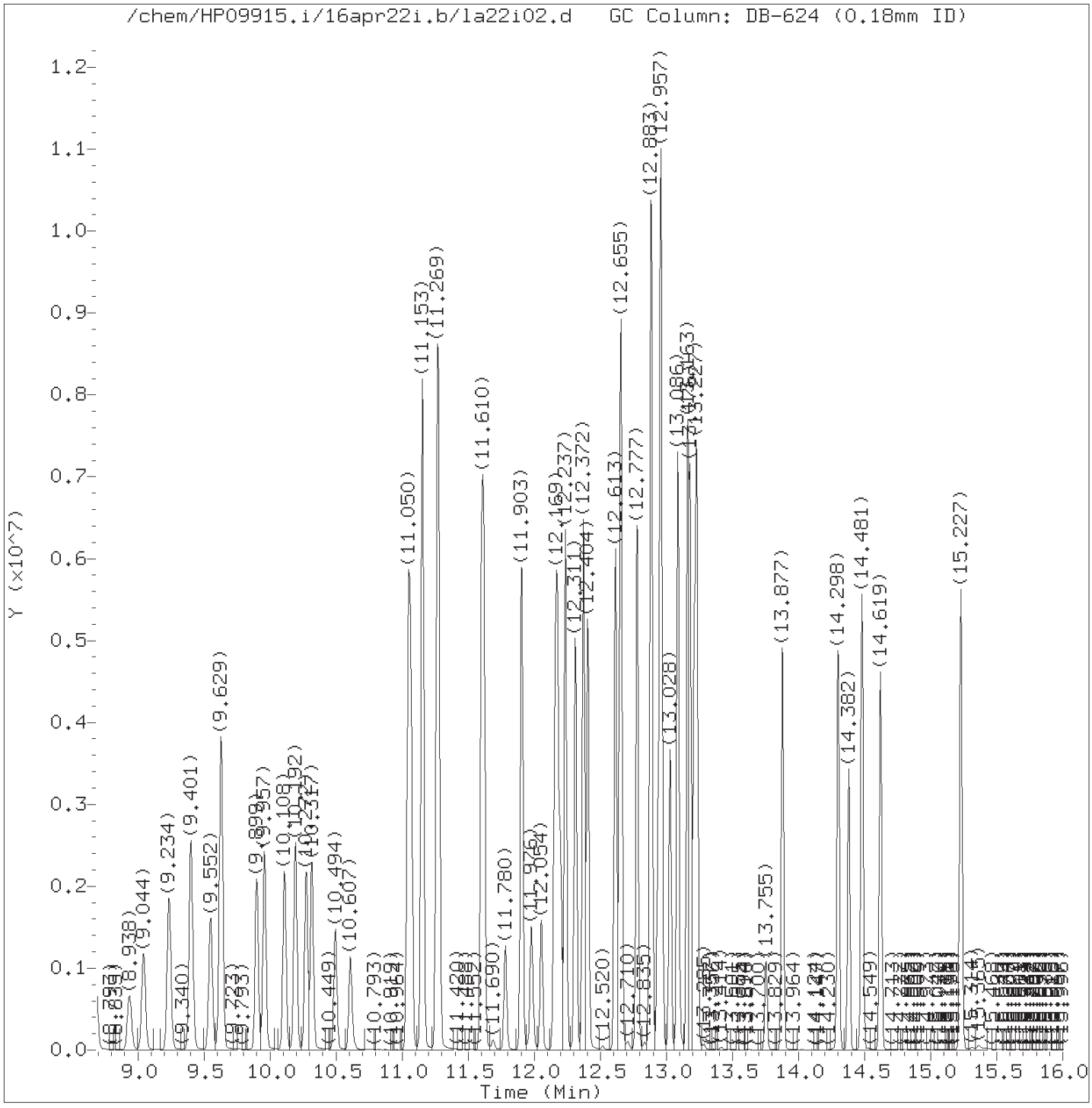
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.890	85	1014750	107.760
4) Chloromethane	(2)	2.028	50	1024176	108.293
6) Vinyl Chloride	(2)	2.157	62	982864	110.140
5) 1,3-Butadiene	(2)	2.170	39	919497	69.138
8) Bromomethane	(2)	2.466	94	618946	106.976
9) Chloroethane	(2)	2.556	64	518922	106.275
10) Dichlorofluoromethane	(2)	2.790	67	1200713	105.286
12) Trichlorofluoromethane	(2)	2.851	101	1011031	107.573
11) n-Pentane	(2)	2.884	43	1133372	105.349
14) Ethyl ether	(2)	3.077	59	703025	105.452
15) Freon 123a	(2)	3.167	67	800721	102.719
16) Acrolein	(1)	3.237	56	1986147	977.142
17) 1,1-Dichloroethene	(2)	3.382	96	593417	106.828
17) 1,1-Dichloroethene	(2)	3.382	63	318162	106.946
18) Acetone	(1)	3.388	58	177974	195.606
19) Freon 113	(2)	3.411	101	579114	108.445
21) 2-Propanol	(1)	3.540	45	364529	522.435
22) Methyl Iodide	(2)	3.581	142	1116474	108.248
23) Carbon Disulfide	(2)	3.687	76	2022972	108.453
27) Methyl Acetate	(2)	3.787	43	800394	106.973
25) Allyl Chloride	(2)	3.822	41	1203377	112.125
29)*t-Butyl alcohol-d10	(1)	3.993	65	237588	250.000
28) Methylene Chloride	(2)	4.006	84	719562	105.045
30) t-Butyl alcohol	(1)	4.109	59	578762M	511.481
31) Acrylonitrile	(2)	4.302	53	380434	100.723
33) Methyl Tertiary Butyl Ether	(2)	4.388	73	2272972	105.838
32) trans-1,2-Dichloroethene	(2)	4.398	96	687375	109.040
34) n-Hexane	(2)	4.816	57	1086604	111.531
36) 1,1-Dichloroethane	(2)	5.057	63	1365092	109.096
38) di-Isopropyl ether	(2)	5.115	45	2594605	107.981
39) 2-Chloro-1,3-butadiene	(2)	5.167	53	1106919	112.150
40) Ethyl t-butyl ether	(2)	5.658	59	2372544	108.427
44) 2-Butanone	(2)	5.858	43	989146	203.407
42) cis-1,2-Dichloroethene	(2)	5.896	96	770688	108.550
45) 2,2-Dichloropropane	(2)	5.922	77	994205	114.445
47) Propionitrile	(1)	5.938	54	761872	520.112
43) 1,2-Dichloroethene (Total)	(2)		96	1458063	217.590
48) Methacrylonitrile	(2)	6.163	67	994943	265.433

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.237	128	395105	109.139
50) Tetrahydrofuran	(1)	6.247	71	247845	202.287
51) Chloroform	(2)	6.385	83	1224165	107.666
52)$Dibromofluoromethane	(2)	6.607	113	304517	50.525
52)$Dibromofluoromethane	(2)	6.607	111	312550	50.657
53) 1,1,1-Trichloroethane	(2)	6.617	97	1049201	103.878
54) Cyclohexane	(2)	6.723	56	1290355	110.816
54) Cyclohexane	(2)	6.729	84	1007234	108.881
54) Cyclohexane	(2)	6.726	69	377661	112.208
55) 1,1-Dichloropropene	(2)	6.829	75	1027269	110.457
56) Carbon Tetrachloride	(2)	6.832	117	861179	113.862
58) Isobutyl Alcohol	(1)	6.967	41	527909M	1326.161
57)$1,2-Dichloroethane-d4	(2)	7.073	102	76622	50.357
57)$1,2-Dichloroethane-d4	(2)	7.070	65	391202	50.166
57)$1,2-Dichloroethane-d4	(2)	7.073	104	48328	50.025
60) Benzene	(2)	7.092	78	2944584	108.024
61) 1,2-Dichloroethane	(2)	7.176	62	1048703	104.003
61) 1,2-Dichloroethane	(2)	7.176	98	93397	106.352
65) t-Amyl methyl ether	(2)	7.289	73	2220556	109.542
66)*Fluorobenzene	(2)	7.504	96	1268629	50.000
67) n-Heptane	(2)	7.517	43	1178207	109.124
69) n-Butanol	(1)	7.858	56	866396	2792.017
71) Trichloroethene	(2)	7.990	95	748660	108.692
72) Methylcyclohexane	(2)	8.305	83	1275009M	112.346
72) Methylcyclohexane	(2)	8.301	98	572624	112.315
73) 1,2-Dichloropropane	(2)	8.327	63	818556	109.080
76) Methyl Methacrylate	(2)	8.408	69	713269	113.419
75) 1,4-Dioxane	(1)	8.420	88	142263M	1353.491
74) Dibromomethane	(2)	8.440	93	499383	107.374
78) Bromodichloromethane	(2)	8.674	83	962838	113.421
79) 2-Nitropropane	(2)	8.935	41	525304	224.776
80) 2-Chloroethyl Vinyl Ether	(2)	9.044	63	630636	117.768
81) cis-1,3-Dichloropropene	(2)	9.237	75	1261109	115.807
82) 4-Methyl-2-pentanone	(2)	9.401	43	2111640	211.601
83)$Toluene-d8	(3)	9.552	98	1266609	49.770
83)$Toluene-d8	(3)	9.552	100	826711	49.887
88) Toluene	(3)	9.629	92	1834303	106.025
89) trans-1,3-Dichloropropene	(3)	9.899	75	1183718	118.085

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.957	69	1261629	113.611
90) 1,3-Dichloropropene (total)	(3)		100	2444827	233.892
92) 1,1,2-Trichloroethane	(3)	10.108	97	709045	105.482
93) Tetrachloroethene	(3)	10.192	166	787901	107.589
94) 1,3-Dichloropropane	(3)	10.272	76	1267872	106.504
96) 2-Hexanone	(3)	10.317	43	1558546	212.177
97) Dibromochloromethane	(3)	10.494	129	762306	115.461
99) 1,2-Dibromoethane	(3)	10.607	107	782812	108.406
100)*Chlorobenzene-d5	(3)	11.041	117	972262	50.000
101) 1-Chlorohexane	(3)	11.050	91	1026847A	105.802
102) Chlorobenzene	(3)	11.067	112	2084395	106.463
103) 1,1,1,2-Tetrachloroethane	(3)	11.153	131	722029	111.449
104) Ethylbenzene	(3)	11.153	91	3622757	108.538
106) m+p-Xylene	(3)	11.269	106	2788607	217.610
107) o-Xylene	(3)	11.600	106	1377378	109.280
109) Styrene	(3)	11.620	104	2381157	112.155
108) Xylene (Total)	(3)		106	4165985	326.891
110) Bromoform	(3)	11.780	173	541532	119.120
111) Isopropylbenzene	(3)	11.906	105	3501281	109.121
112) Cyclohexanone	(1)	11.976	55	629696	1299.081
114)$4-Bromofluorobenzene	(3)	12.054	95	469637	49.868
114)$4-Bromofluorobenzene	(3)	12.054	174	395758	49.383
116) 1,1,2,2-Tetrachloroethane	(4)	12.150	83	1101046	106.699
115) Bromobenzene	(4)	12.166	156	940732	107.427
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	525736	382.209
117) 1,2,3-Trichloropropane	(4)	12.202	110	311550	104.534
119) n-Propylbenzene	(4)	12.237	91	4230166	108.039
120) 2-Chlorotoluene	(4)	12.311	126	849471	106.973
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	3032038	109.329
121) 4-Chlorotoluene	(4)	12.404	126	903490	107.744
124) tert-Butylbenzene	(4)	12.613	134	631021M	109.928
125) Pentachloroethane	(4)	12.649	167	561983	118.588
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	3144022	109.021
127) sec-Butylbenzene	(4)	12.777	105	3792914	107.916
129) 1,3-Dichlorobenzene	(4)	12.880	146	1754065	106.475
130) p-Isopropyltoluene	(4)	12.886	119	3346122	109.463
131)*1,4-Dichlorobenzene-d4	(4)	12.935	152	509521	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	1806897	104.985

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	3272355	108.505
135) Benzyl Chloride	(4)	13.028	91	2216846	123.830
136) 1,3-Diethylbenzene	(4)	13.086	119	1996770	108.638
137) 1,4-Diethylbenzene	(4)	13.160	119	2062150	107.576
139) n-Butylbenzene	(4)	13.179	92	1643893	105.093
138) 1,2-Dichlorobenzene	(4)	13.208	146	1696844	103.907
140) 1,2-Diethylbenzene	(4)	13.230	119	1682065	107.290
141) Diethylbenzene (total)	(4)		100	5740985	323.504
142) 1,2-Dibromo-3-chloropropane	(4)	13.755	75	227094	113.844
144) 1,3,5-Trichlorobenzene	(4)	13.877	180	1347998	103.723
146) 1,2,4-Trichlorobenzene	(4)	14.298	180	1328843	103.190
147) Hexachlorobutadiene	(4)	14.382	225	553944	100.727
148) Naphthalene	(4)	14.481	128	3729548	107.504
149) 1,2,3-Trichlorobenzene	(4)	14.619	180	1256231	103.493
150) 2-Methylnaphthalene	(4)	15.230	142	2458610	113.673

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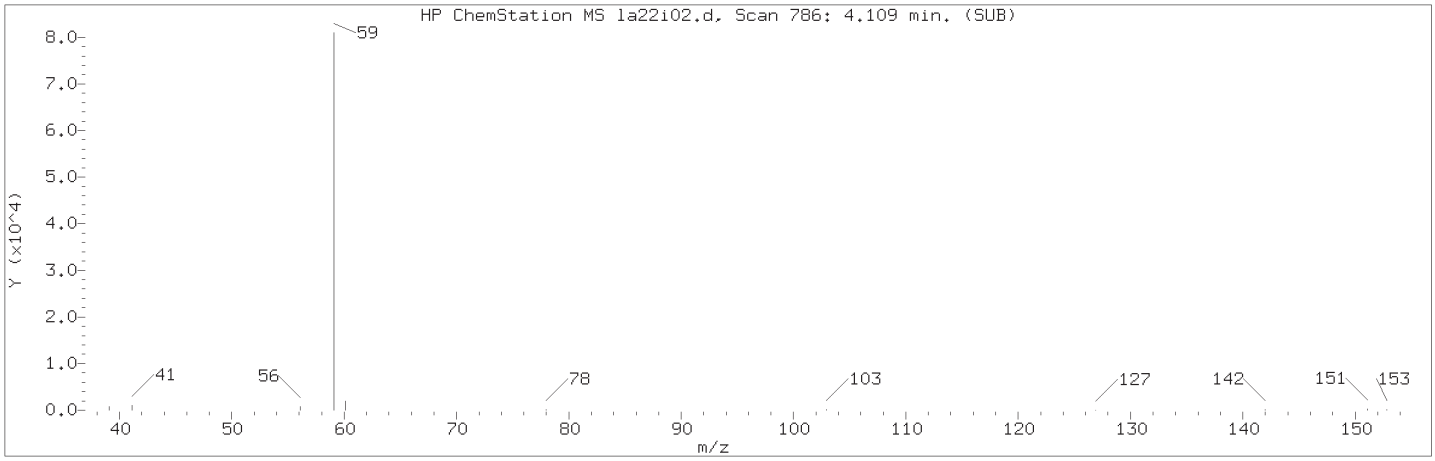
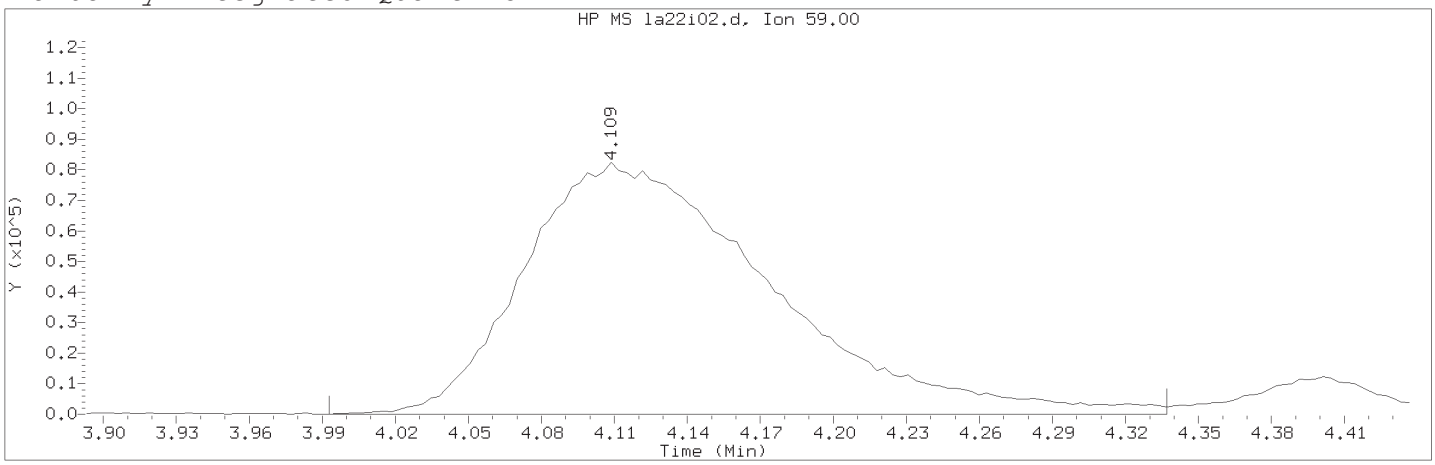
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

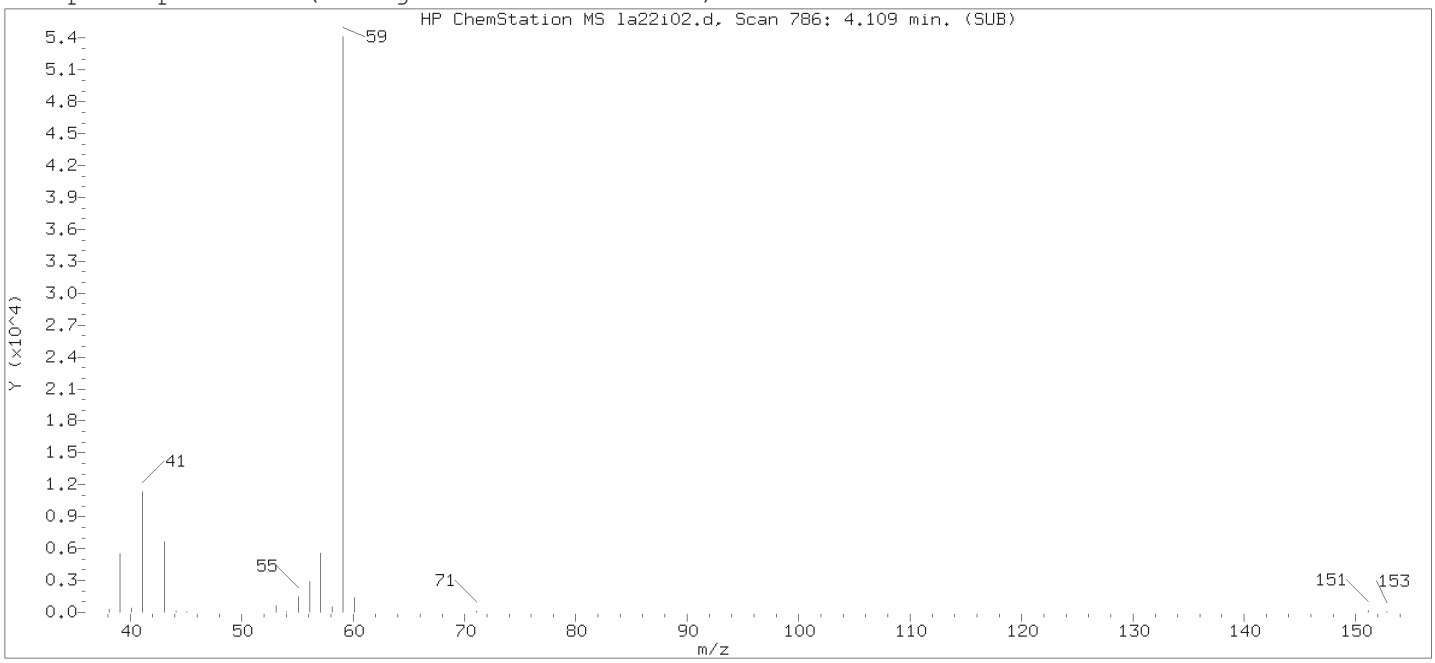
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.109
Quant Ion : 59.00
Area (flag) : 578762M
On-Column Amount (ng) : 511.4813
Integration start scan : 749 Integration stop scan: 856
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

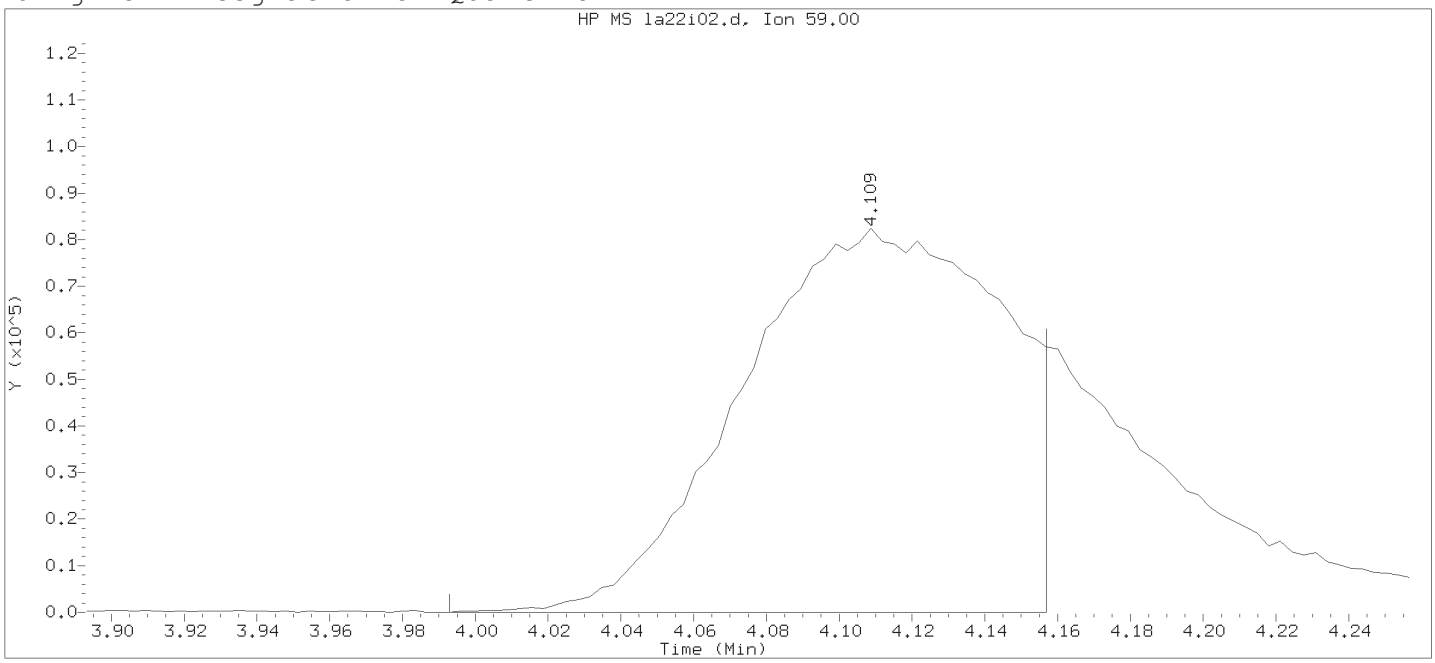
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

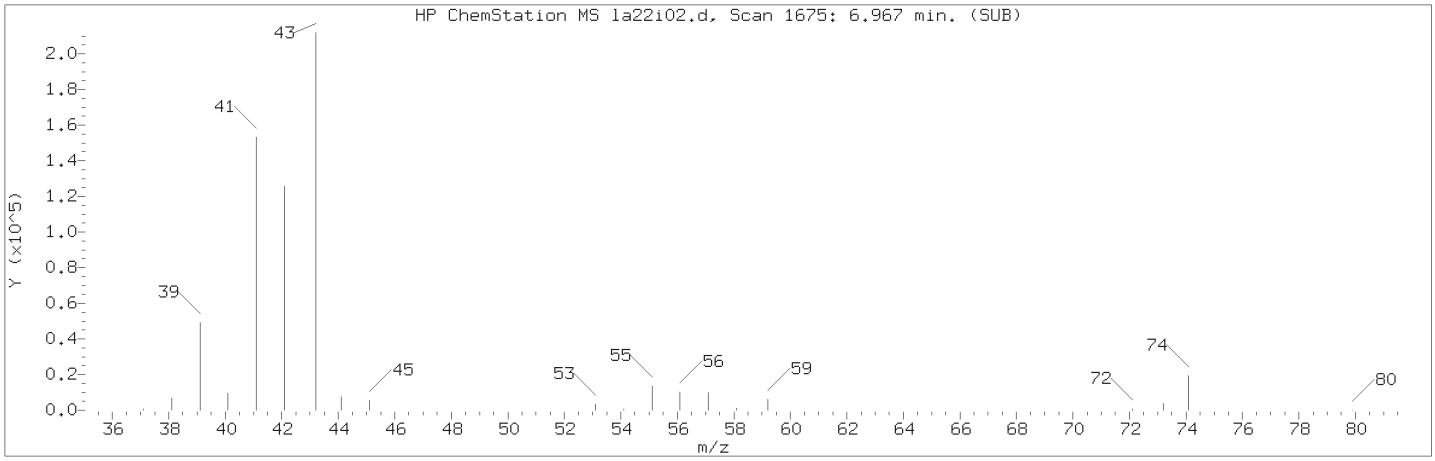
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

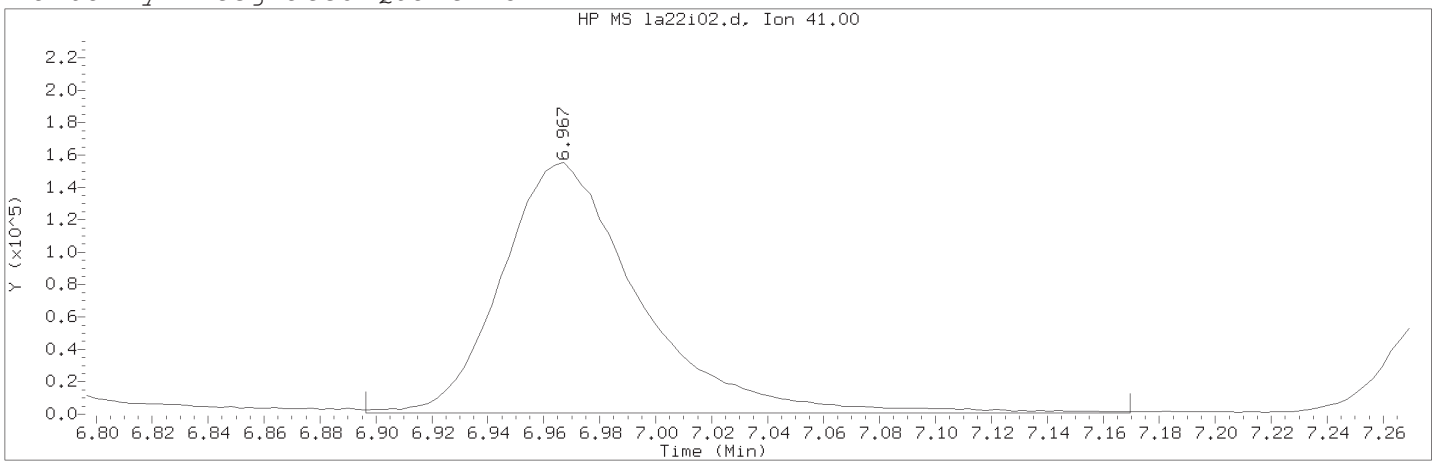
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.109
Quant Ion : 59.00
Area : 410094
On-column Amount (ng) : 452.2987
Integration start scan : 749 Integration stop scan: 800
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

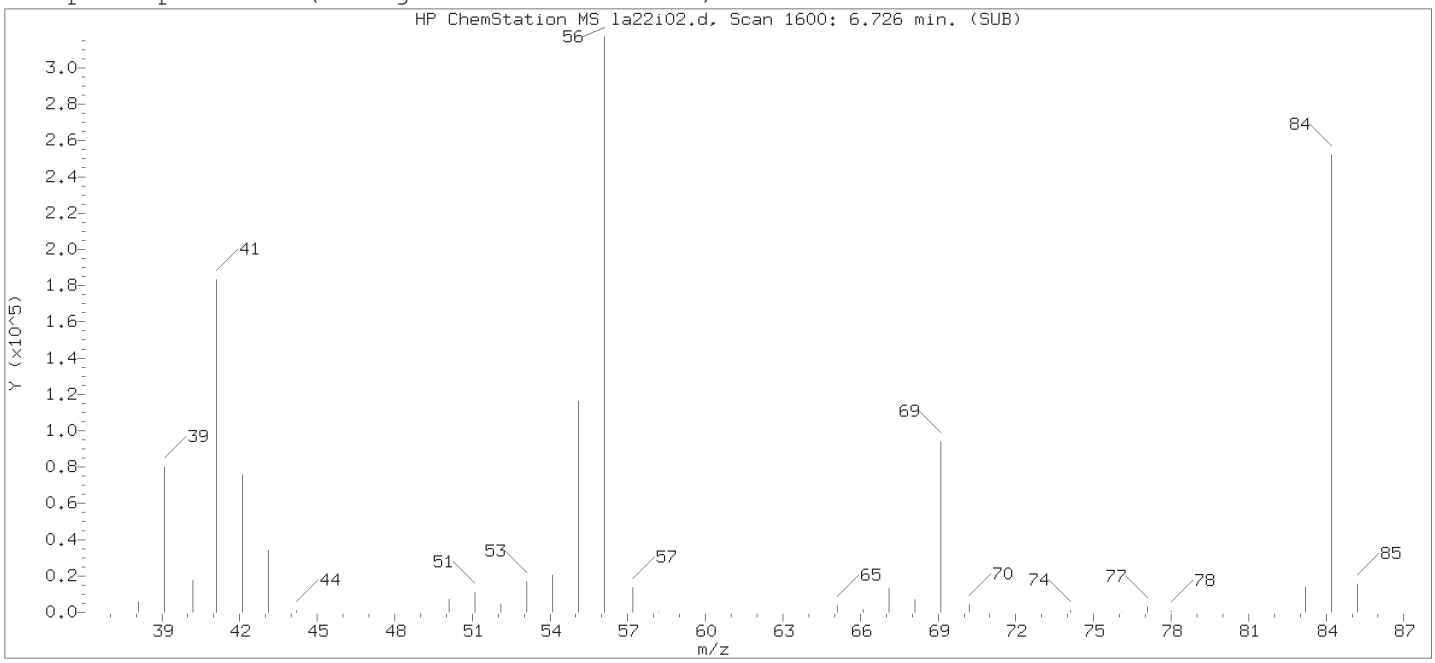
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1675
Retention Time (minutes): 6.967
Quant Ion : 41.00
Area (flag) : 527909M
On-Column Amount (ng) : 1326.1609
Integration start scan : 1652 Integration stop scan: 1737
Y at integration start : 899 Y at integration end: 899

Reason for manual integration: improper integration

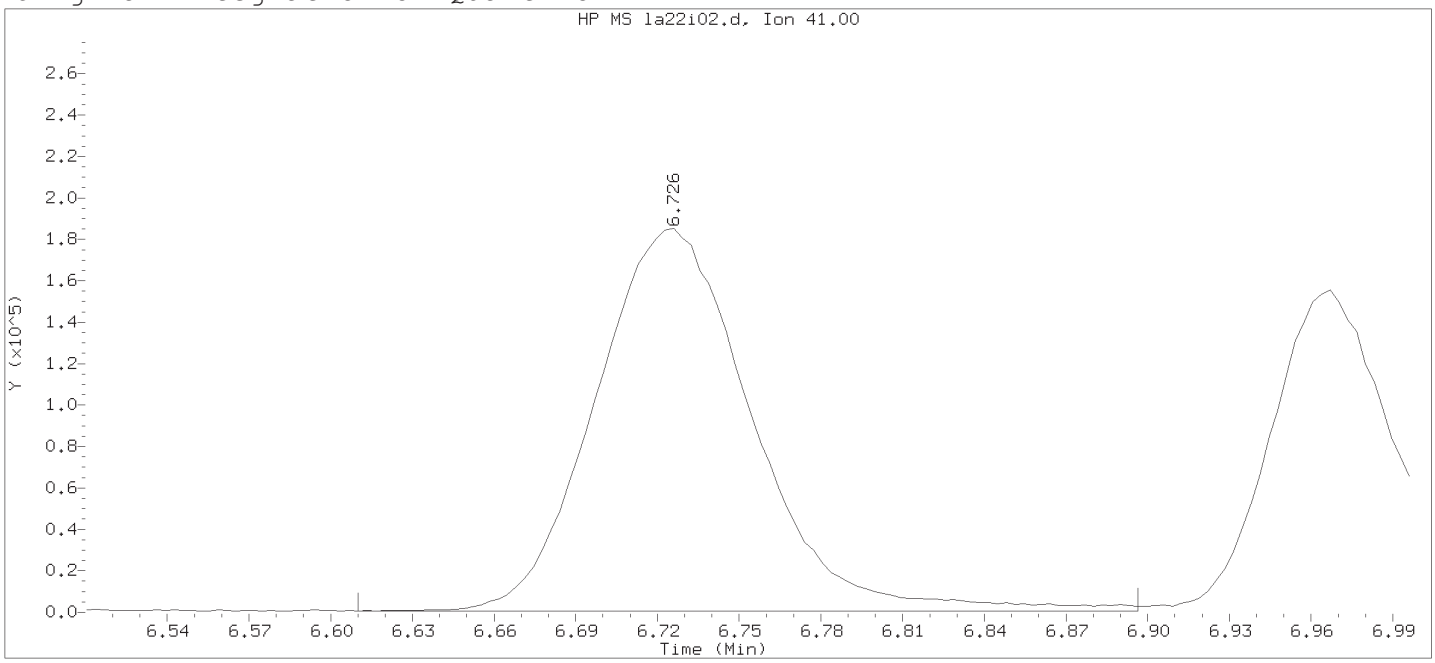
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

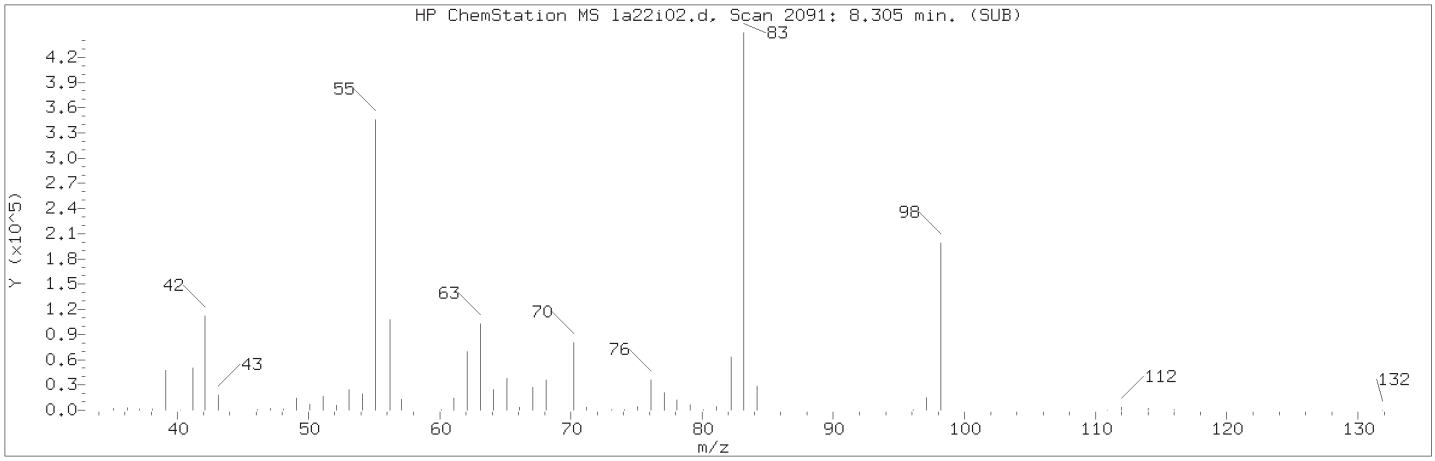
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

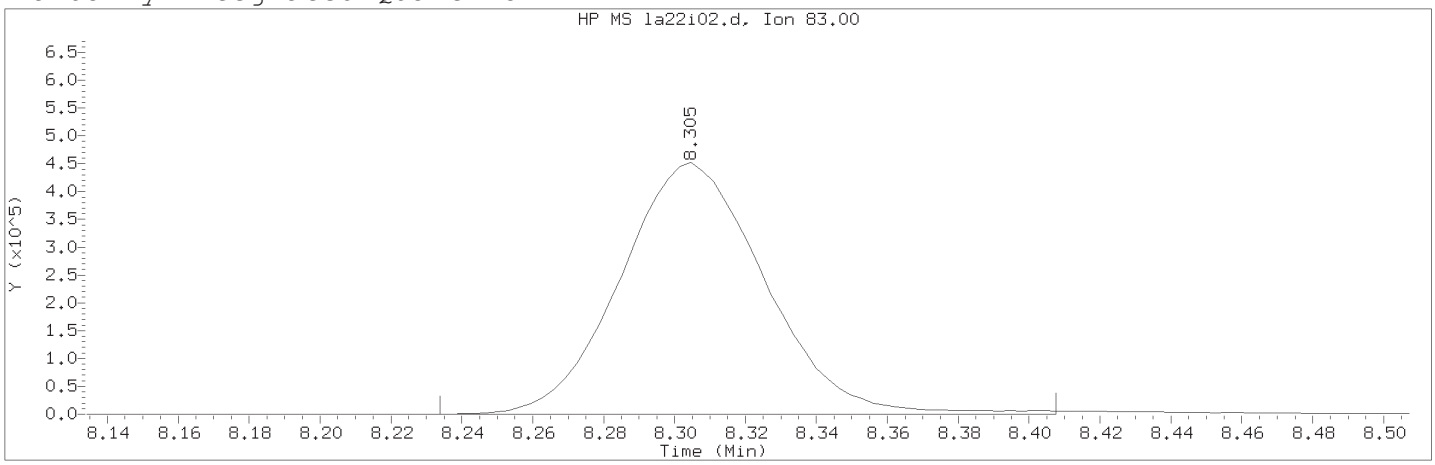
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1600
Retention Time (minutes): 6.726
Quant Ion : 41.00
Area : 738069
On-column Amount (ng) : 1701.8739
Integration start scan : 1563 Integration stop scan: 1652
Y at integration start : 591 Y at integration end: 591

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature used: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

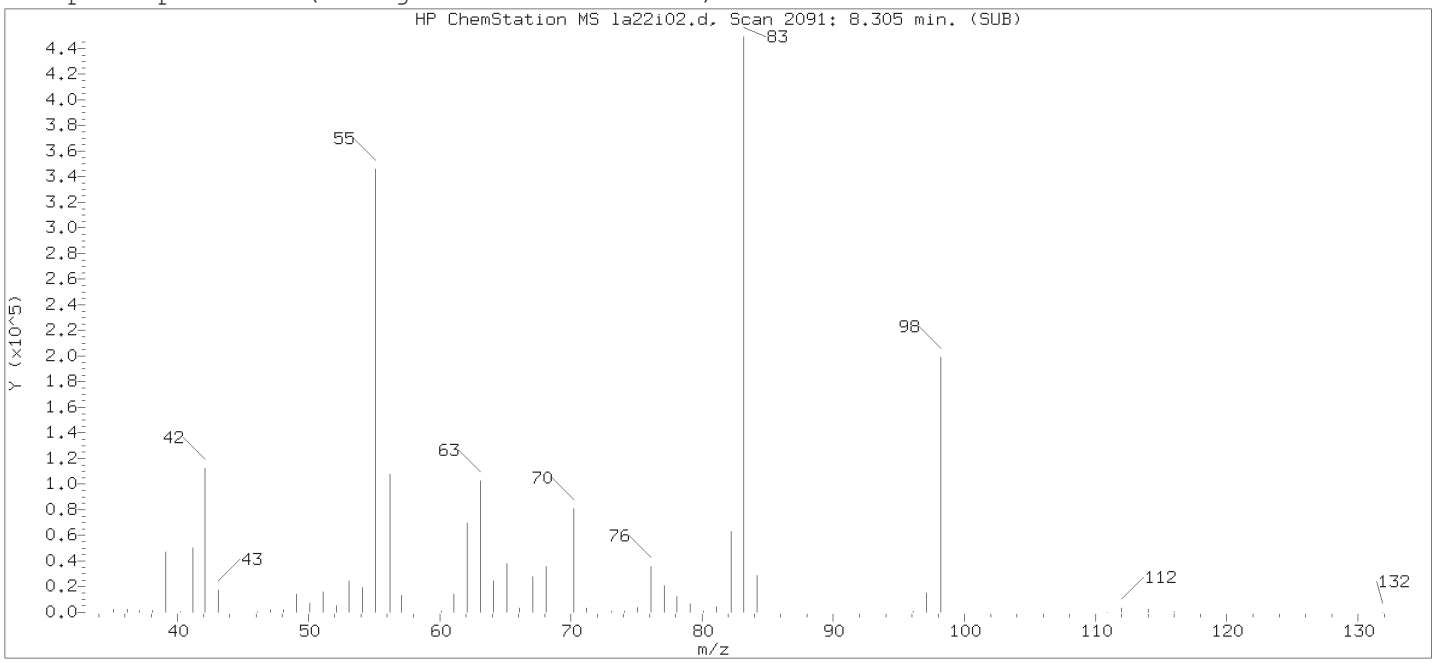
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 2091
Retention Time (minutes): 8.305
Quant Ion : 83.00
Area (flag) : 1275009M
On-Column Amount (ng) : 112.3464
Integration start scan : 2068 Integration stop scan: 2122
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

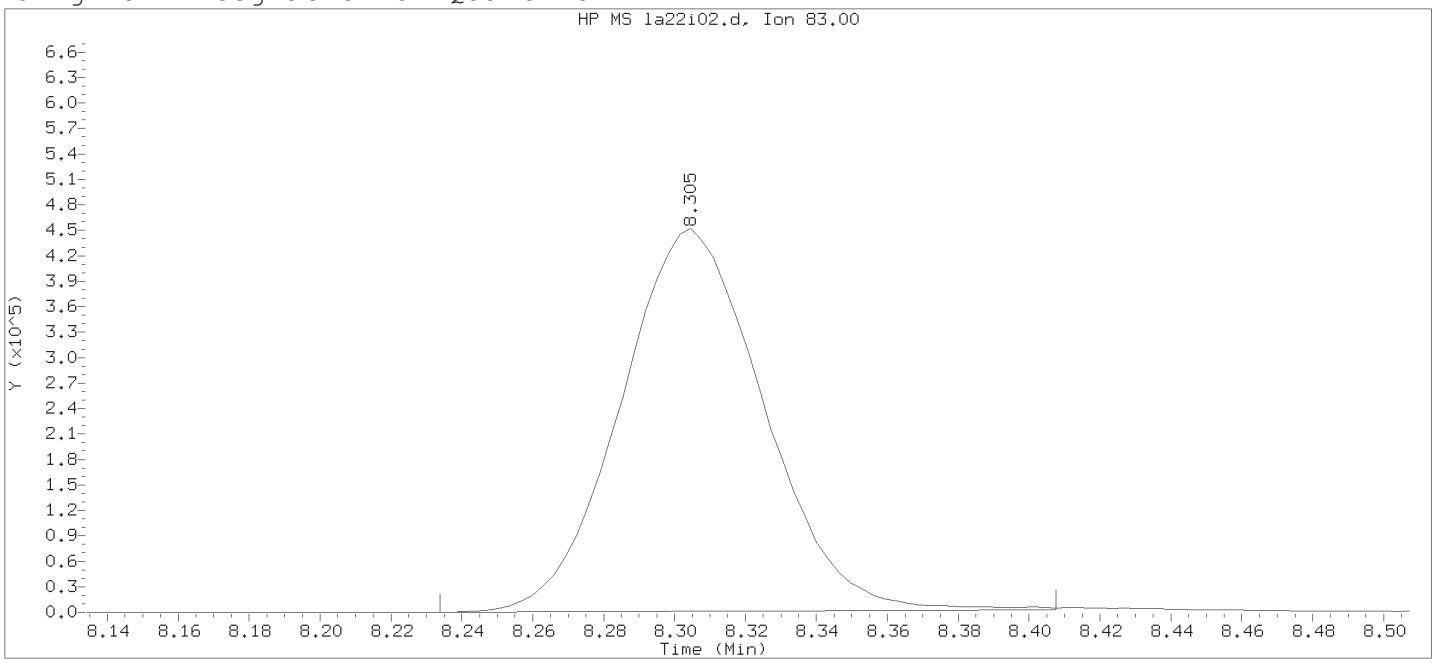
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

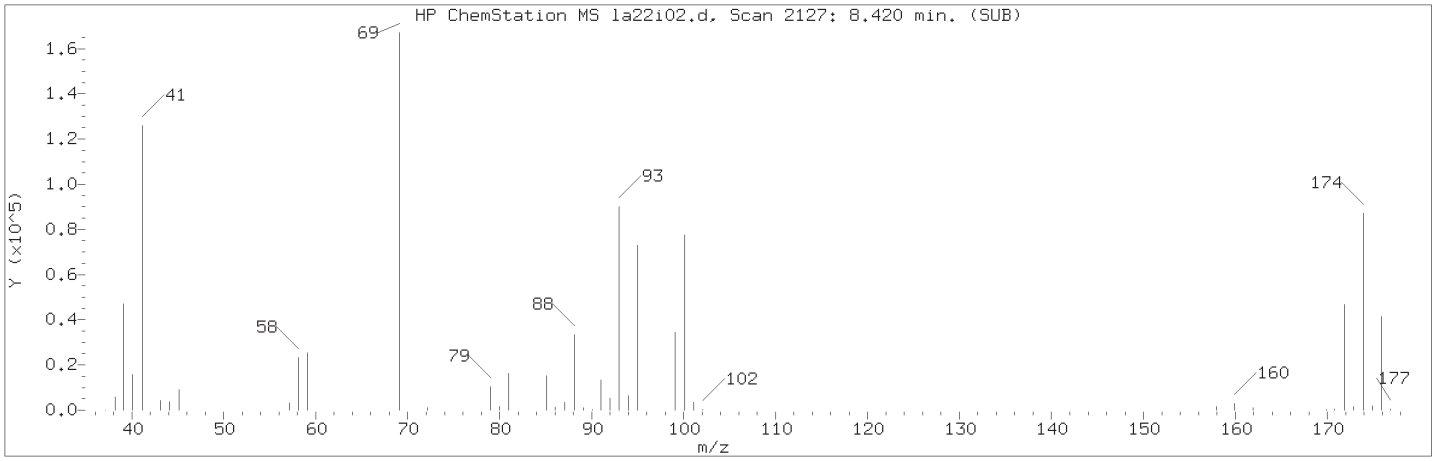
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

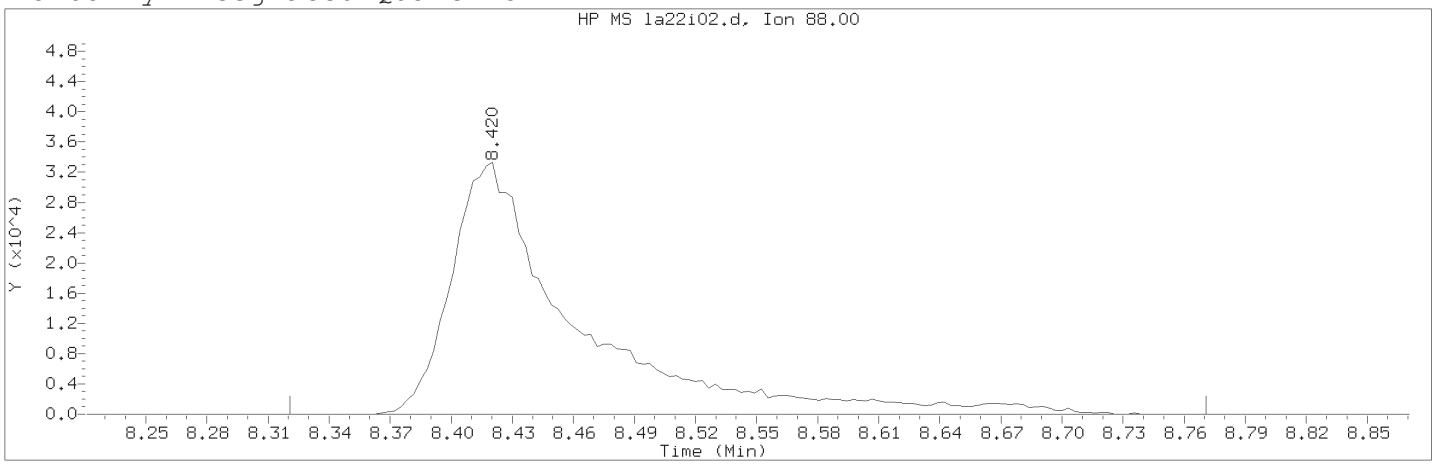
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 2091
Retention Time (minutes): 8.305
Quant Ion : 83.00
Area : 1260636
On-column Amount (ng) : 105.9628
Integration start scan : 2068 Integration stop scan: 2122
Y at integration start : 0 Y at integration end: 2658

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

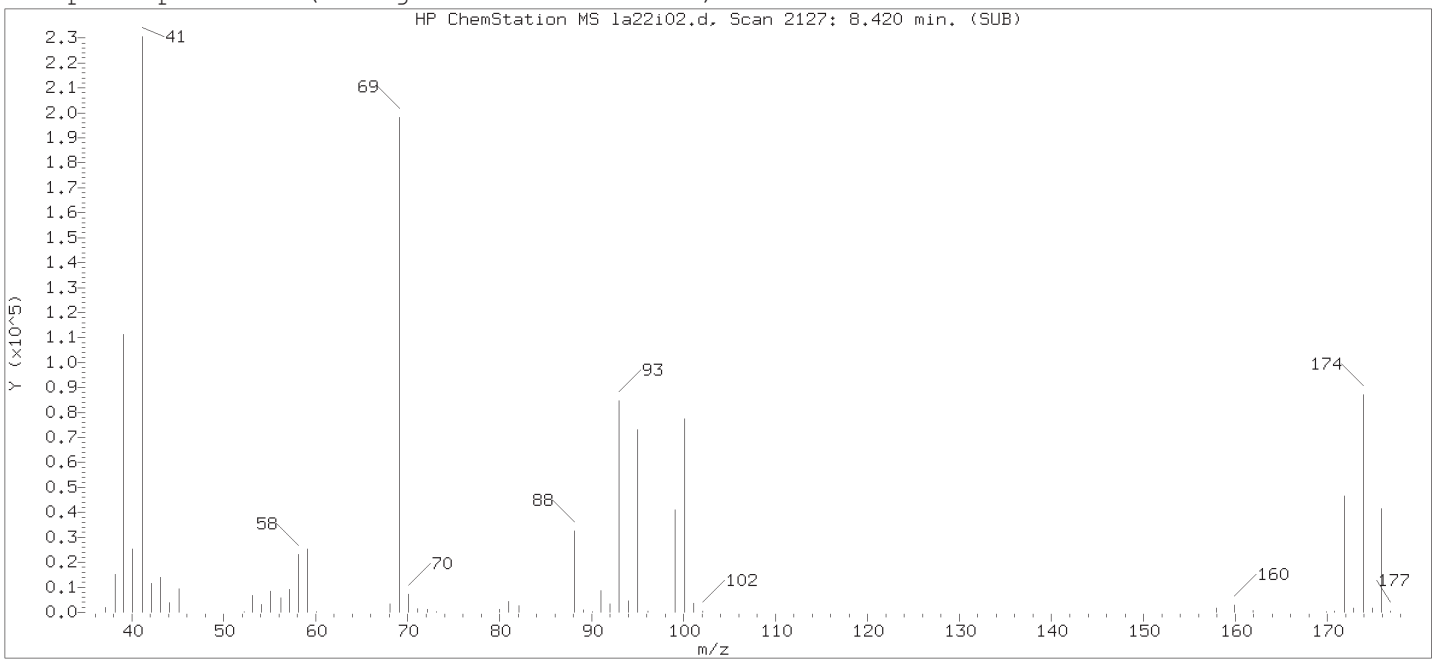
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area (flag) : 142263M
On-Column Amount (ng) : 1353.4909
Integration start scan : 2095 Integration stop scan: 2235
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

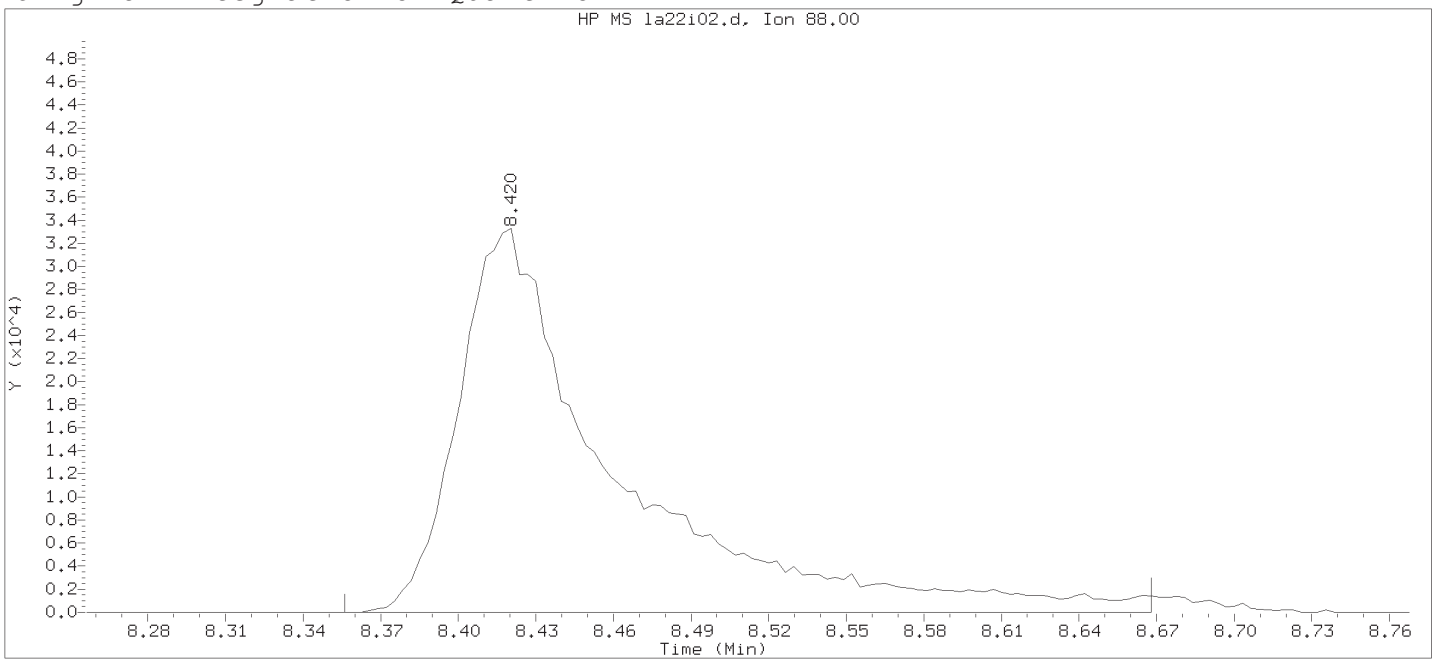
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

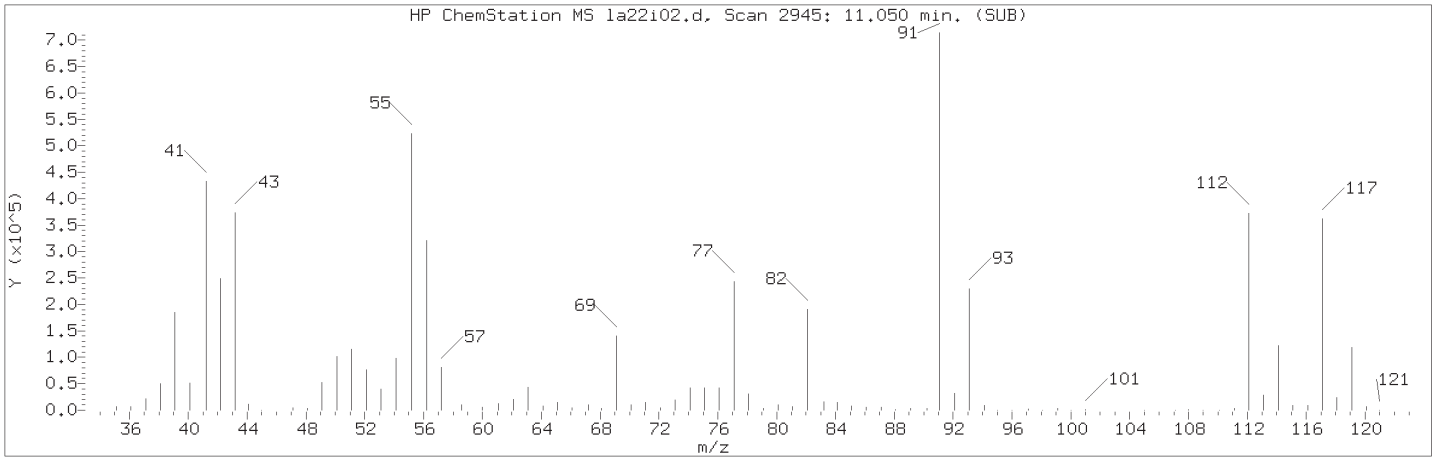
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

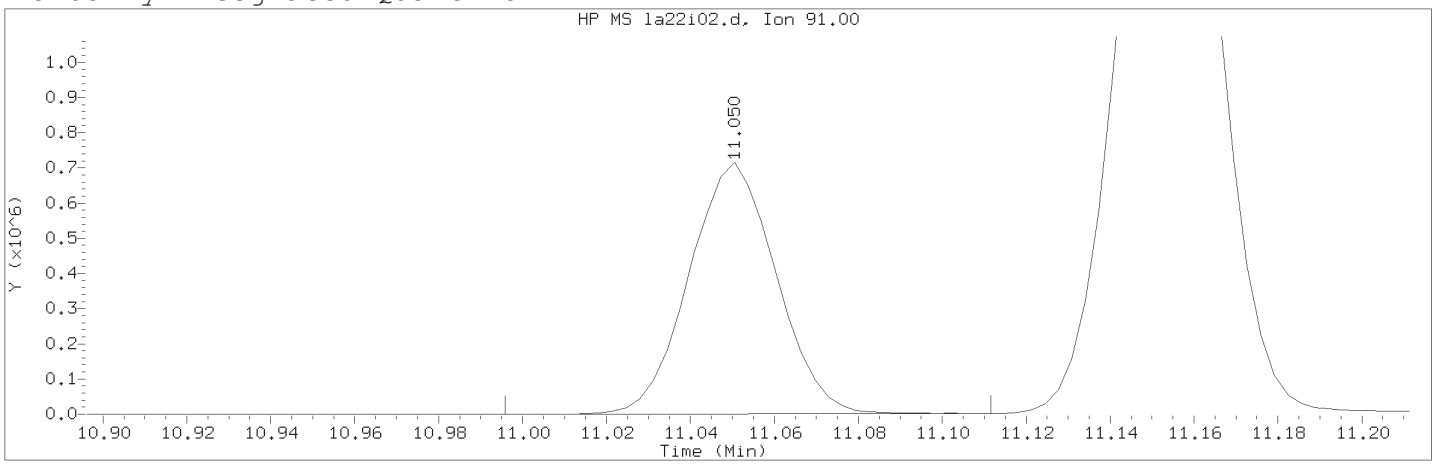
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area : 139761
On-column Amount (ng) : 1308.8459
Integration start scan : 2106 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

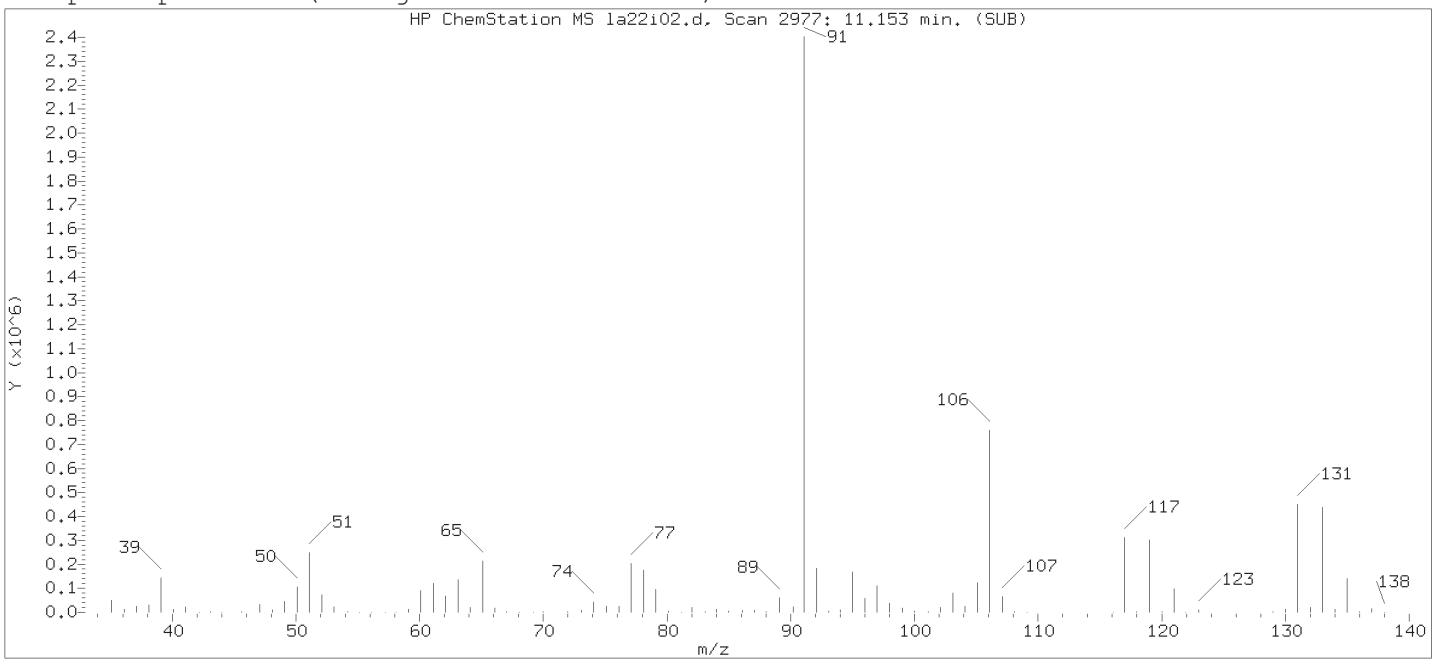
Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2945
Retention Time (minutes): 11.050
Quant Ion : 91.00
Area (flag) : 1026847A
On-Column Amount (ng) : 105.8022
Integration start scan : 2927 Integration stop scan: 2963
Y at integration start : 0 Y at integration end: 1457

Reason for manual integration: improper integration

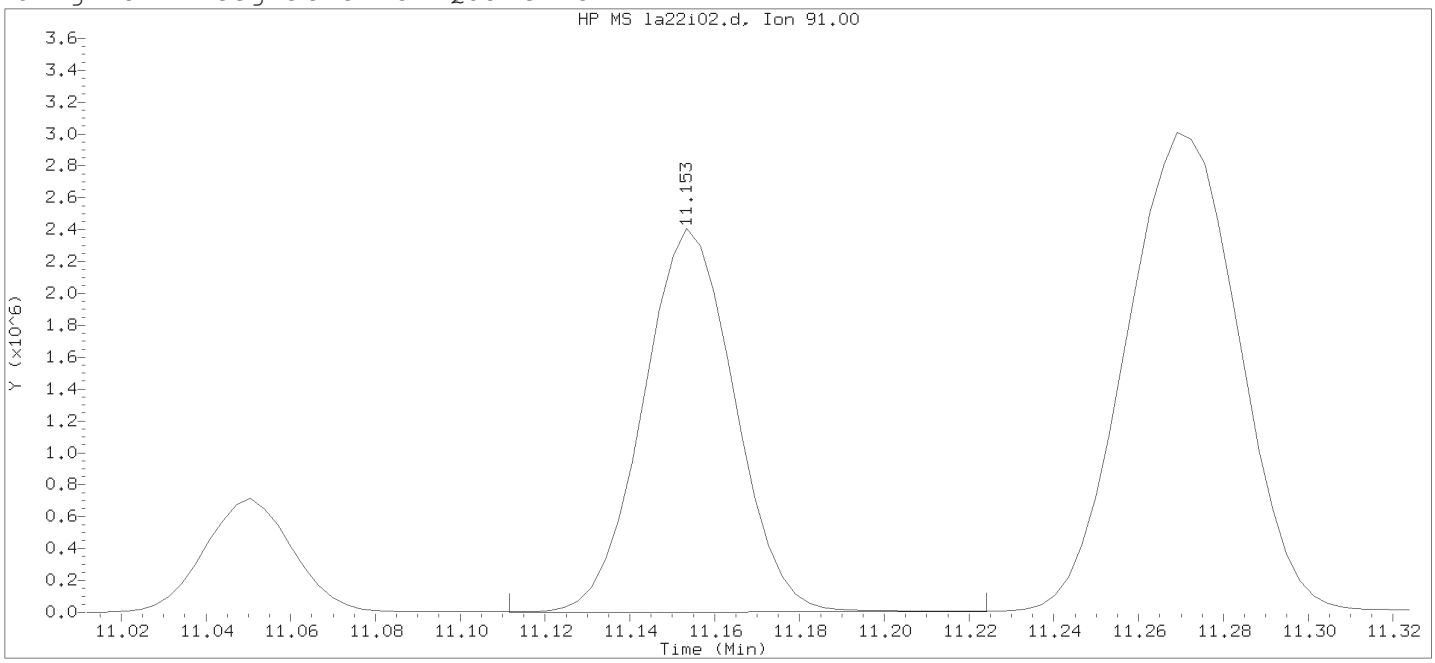
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

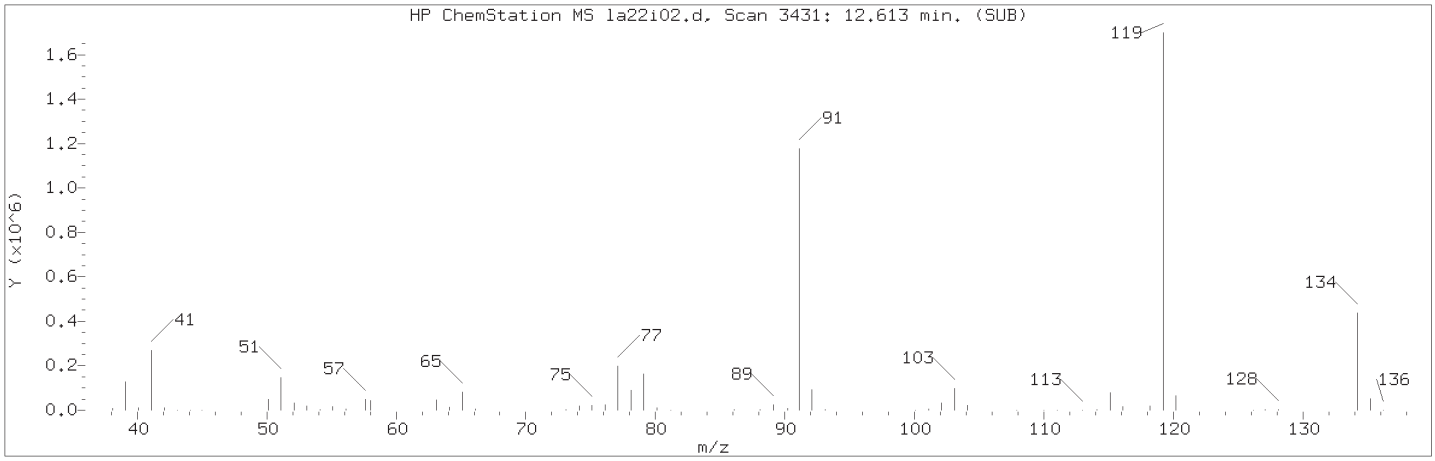
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

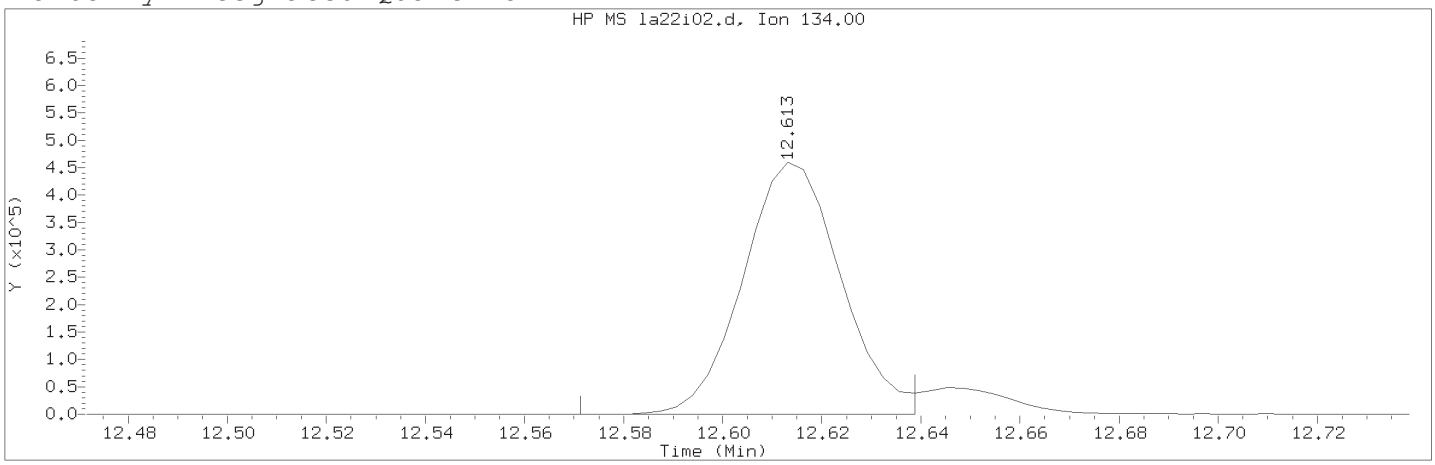
Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2977
Retention Time (minutes): 11.153
Quant Ion : 91.00
Area : 3606808
On-column Amount (ng) : 37.0620
Integration start scan : 2963 Integration stop scan: 2998
Y at integration start : 1457 Y at integration end: 3267

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature data: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

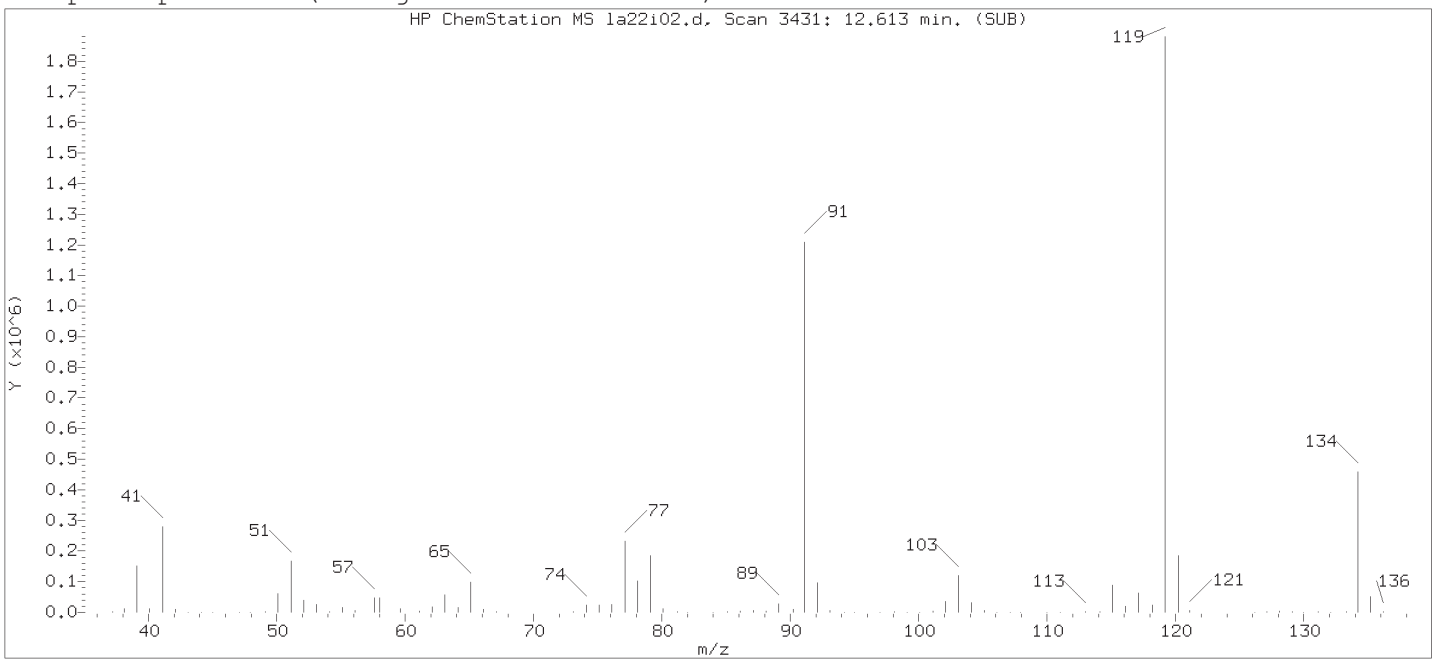
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area (flag) : 631021M
On-Column Amount (ng) : 109.9276
Integration start scan : 3417 Integration stop scan: 3438
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

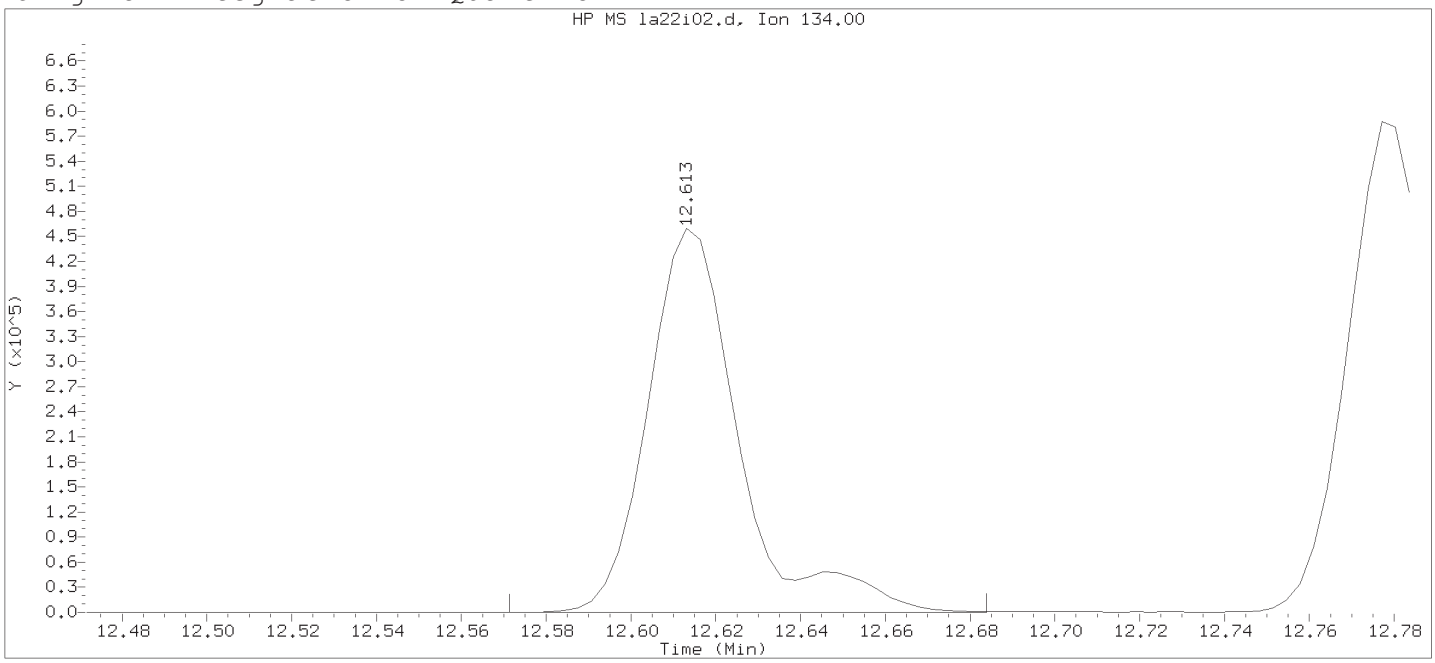
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



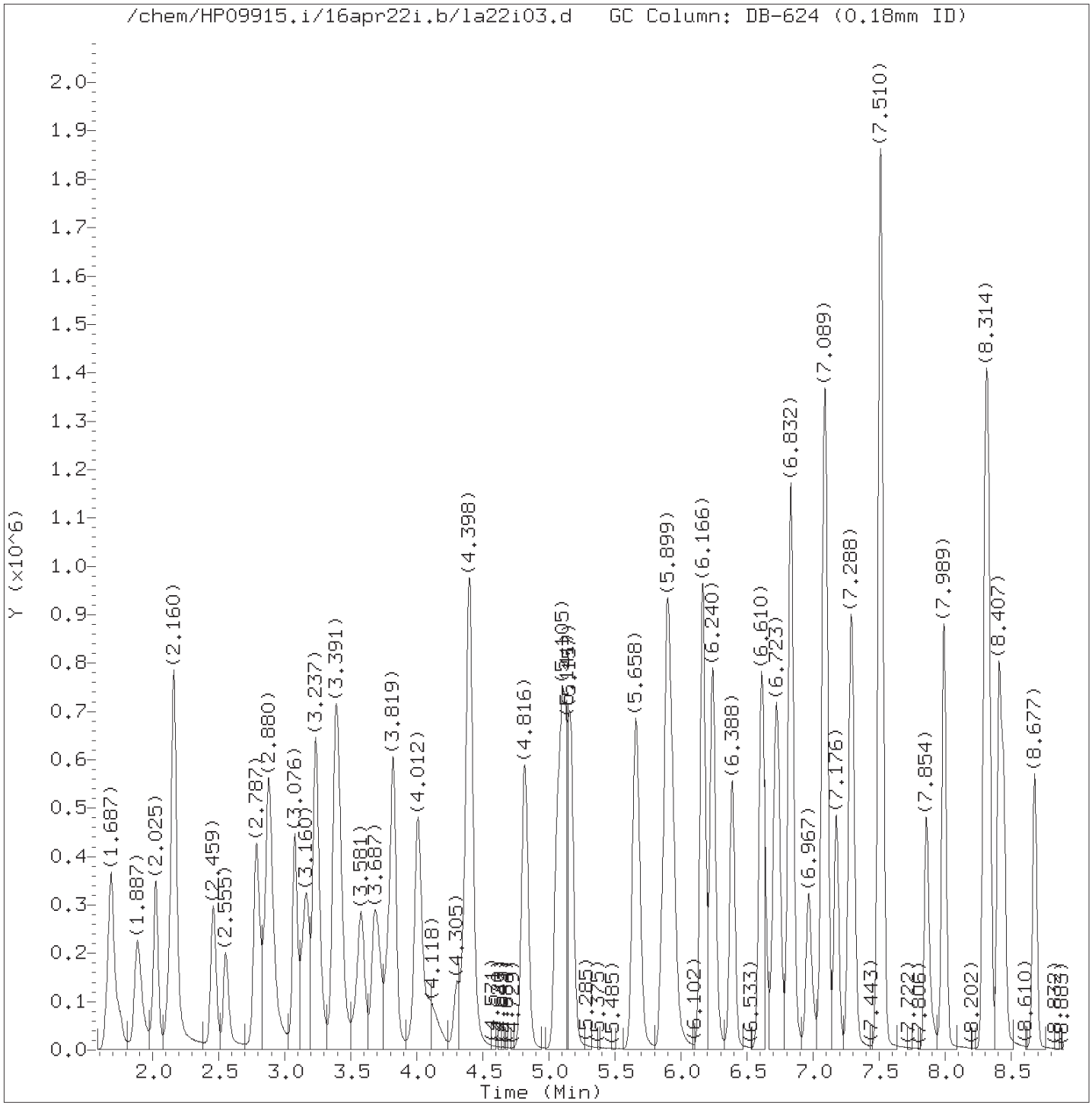
Data File: /chem/HP09915.i/16apr22i.b/la22i02.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:17 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:04
Date, time and analyst ID of latest file update: 22-Apr-2016 12:04 bwk03231

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 124		
Compound Name	: tert-Butylbenzene		
Scan Number	: 3431		
Retention Time (minutes)	: 12.613		
Quant Ion	: 134.00		
Area	: 686869		
On-column Amount (ng)	: 107.0365		
Integration start scan	: 3417	Integration stop scan:	3452
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:42.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

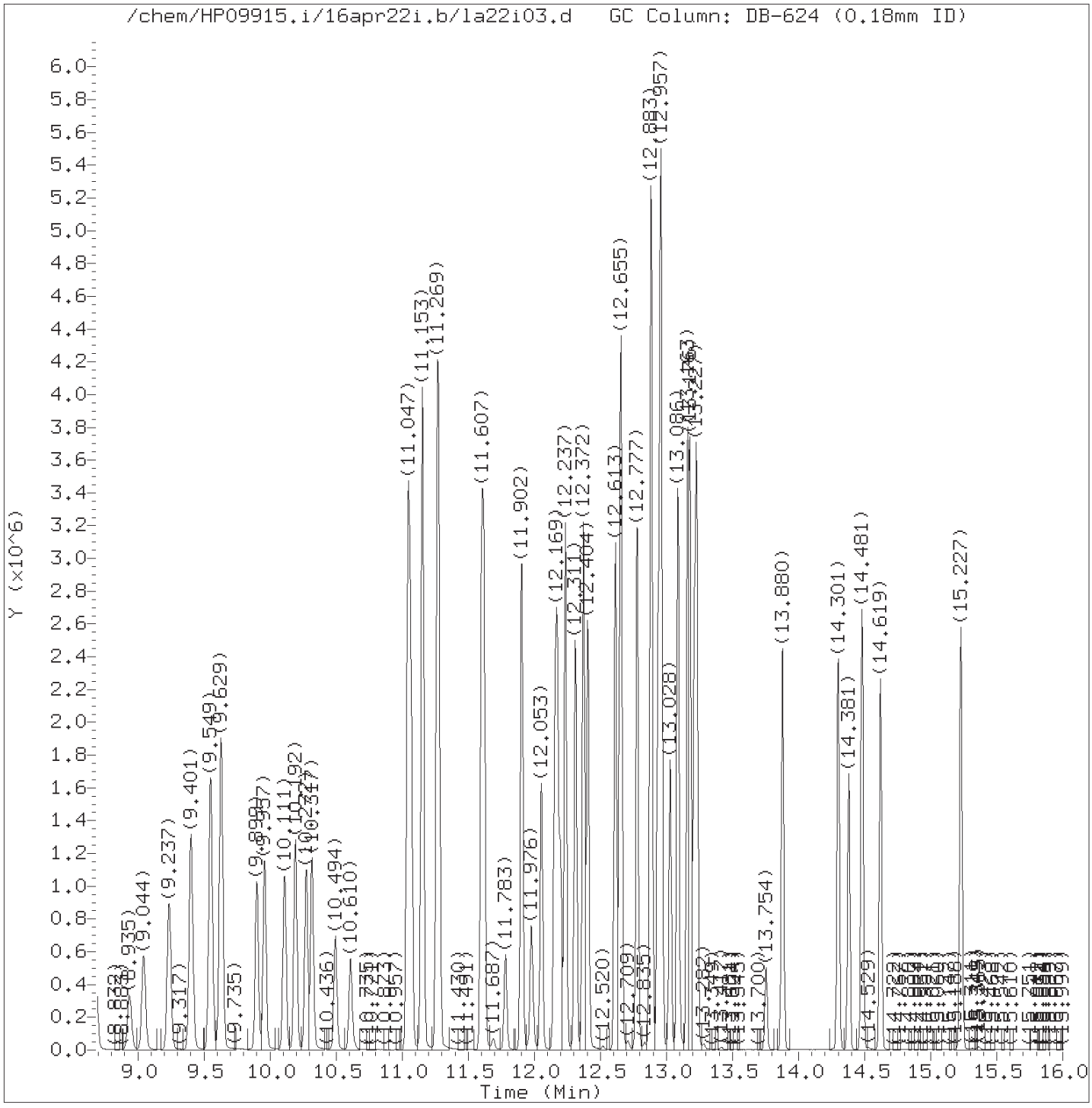
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.887	85	525246	54.905
4) Chloromethane	(2)	2.025	50	518362	53.952
6) Vinyl Chloride	(2)	2.150	62	485890	53.597
5) 1,3-Butadiene	(2)	2.163	39	503706MA	37.281
8) Bromomethane	(2)	2.459	94	311903	53.064
9) Chloroethane	(2)	2.552	64	266009	53.626
10) Dichlorofluoromethane	(2)	2.787	67	591862	51.086
12) Trichlorofluoromethane	(2)	2.845	101	518394	54.294
11) n-Pentane	(2)	2.883	43	584375	53.469
14) Ethyl ether	(2)	3.080	59	347871	51.363
15) Freon 123a	(2)	3.160	67	403995MA	51.015
16) Acrolein	(1)	3.237	56	1018197	497.743
17) 1,1-Dichloroethene	(2)	3.382	96	300424	53.237
17) 1,1-Dichloroethene	(2)	3.382	63	160847	53.221
18) Acetone	(1)	3.385	58	95088	103.843
19) Freon 113	(2)	3.414	101	291359	53.706
21) 2-Propanol	(1)	3.539	45	178881M	254.736
22) Methyl Iodide	(2)	3.581	142	555729	53.038
23) Carbon Disulfide	(2)	3.691	76	1019774	53.815
27) Methyl Acetate	(2)	3.787	43	390938	51.431
25) Allyl Chloride	(2)	3.822	41	587123	53.849
29)*t-Butyl alcohol-d10	(1)	3.990	65	239110	250.000
28) Methylene Chloride	(2)	4.009	84	360691	51.831
30) t-Butyl alcohol	(1)	4.118	59	281477M	247.172
31) Acrylonitrile	(2)	4.305	53	195764	51.019
33) Methyl Tertiary Butyl Ether	(2)	4.391	73	1134294	51.990
32) trans-1,2-Dichloroethene	(2)	4.401	96	340072	53.103
34) n-Hexane	(2)	4.813	57	542327	54.794
36) 1,1-Dichloroethane	(2)	5.060	63	686395	53.997
38) di-Isopropyl ether	(2)	5.115	45	1300373	53.271
39) 2-Chloro-1,3-butadiene	(2)	5.166	53	553044	55.156
40) Ethyl t-butyl ether	(2)	5.658	59	1185472	53.329
44) 2-Butanone	(2)	5.861	43	509569	103.148
42) cis-1,2-Dichloroethene	(2)	5.893	96	385577	53.458
45) 2,2-Dichloropropane	(2)	5.922	77	491028	55.639
47) Propionitrile	(1)	5.944	54	366468	248.586
43) 1,2-Dichloroethene (Total)	(2)		96	725649	106.561
48) Methacrylonitrile	(2)	6.163	67	491544	129.084

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Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.237	128	191863	52.169
50) Tetrahydrofuran	(1)	6.240	71	127311	103.248
51) Chloroform	(2)	6.388	83	608816	52.708
52)$Dibromofluoromethane	(2)	6.607	113	309794	50.597
52)$Dibromofluoromethane	(2)	6.607	111	314534	50.181
53) 1,1,1-Trichloroethane	(2)	6.616	97	521583	50.832
54) Cyclohexane	(2)	6.726	56	651295	55.058
54) Cyclohexane	(2)	6.726	84	504711	53.705
54) Cyclohexane	(2)	6.723	69	187280	54.773
55) 1,1-Dichloropropene	(2)	6.832	75	512810	54.277
56) Carbon Tetrachloride	(2)	6.832	117	425058	55.320
58) Isobutyl Alcohol	(1)	6.964	41	247939A	618.883
57)$1,2-Dichloroethane-d4	(2)	7.070	102	77731	50.286
57)$1,2-Dichloroethane-d4	(2)	7.070	65	401276	50.653
57)$1,2-Dichloroethane-d4	(2)	7.070	104	49698	50.638
60) Benzene	(2)	7.092	78	1467900	53.009
61) 1,2-Dichloroethane	(2)	7.176	62	518408	50.608
61) 1,2-Dichloroethane	(2)	7.173	98	46311	51.910
65) t-Amyl methyl ether	(2)	7.288	73	1090248	52.942
66)*Fluorobenzene	(2)	7.504	96	1288793	50.000
67) n-Heptane	(2)	7.517	43	584558	53.294
69) n-Butanol	(1)	7.854	56	407846MA	1305.944
71) Trichloroethene	(2)	7.989	95	374409	53.507
72) Methylcyclohexane	(2)	8.304	83	625254M	54.232
72) Methylcyclohexane	(2)	8.304	98	282308	54.506
73) 1,2-Dichloropropane	(2)	8.327	63	406049	53.263
76) Methyl Methacrylate	(2)	8.407	69	344627	53.943
75) 1,4-Dioxane	(1)	8.423	88	68966M	651.966
74) Dibromomethane	(2)	8.440	93	246095	52.086
78) Bromodichloromethane	(2)	8.677	83	469717	54.466
79) 2-Nitropropane	(2)	8.935	41	259744	109.405
80) 2-Chloroethyl Vinyl Ether	(2)	9.044	63	308932	56.789
81) cis-1,3-Dichloropropene	(2)	9.237	75	616736	55.749
82) 4-Methyl-2-pentanone	(2)	9.401	43	1094271A	107.938
83)$Toluene-d8	(3)	9.549	98	1278042A	49.949
83)$Toluene-d8	(3)	9.549	100	828075A	49.701
88) Toluene	(3)	9.629	92	922468A	53.033
89) trans-1,3-Dichloropropene	(3)	9.899	75	570627A	56.618

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Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.960	69	610931M	54.719
90) 1,3-Dichloropropene (total)	(3)		100	1187363	112.367
92) 1,1,2-Trichloroethane	(3)	10.111	97	354782A	52.496
93) Tetrachloroethene	(3)	10.192	166	393724A	53.474
94) 1,3-Dichloropropane	(3)	10.275	76	628557A	52.516
96) 2-Hexanone	(3)	10.317	43	799145	108.209
97) Dibromochloromethane	(3)	10.494	129	363894	54.820
99) 1,2-Dibromoethane	(3)	10.610	107	384586	52.972
100)*Chlorobenzene-d5	(3)	11.041	117	977519A	50.000
101) 1-Chlorohexane	(3)	11.050	91	515644A	52.844
102) Chlorobenzene	(3)	11.066	112	1043288A	53.001
103) 1,1,1,2-Tetrachloroethane	(3)	11.153	131	351068	53.898
104) Ethylbenzene	(3)	11.153	91	1811326A	53.976
106) m+p-Xylene	(3)	11.269	106	1390269A	107.907
107) o-Xylene	(3)	11.600	106	680406A	53.693
109) Styrene	(3)	11.619	104	1176806	55.131
108) Xylene (Total)	(3)		106	2070675	161.599
110) Bromoform	(3)	11.780	173	248331	54.331
111) Isopropylbenzene	(3)	11.906	105	1750633A	54.267
112) Cyclohexanone	(1)	11.976	55	311033MA	637.586
114)$4-Bromofluorobenzene	(3)	12.053	95	474477A	50.111
114)$4-Bromofluorobenzene	(3)	12.053	174	403181A	50.038
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	539019M	51.759
115) Bromobenzene	(4)	12.166	156	462028	52.281
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	211325	152.234
117) 1,2,3-Trichloropropane	(4)	12.198	110	152039	50.549
119) n-Propylbenzene	(4)	12.237	91	2133462	53.993
120) 2-Chlorotoluene	(4)	12.311	126	422005	52.659
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	1516143	54.171
121) 4-Chlorotoluene	(4)	12.404	126	447165	52.841
124) tert-Butylbenzene	(4)	12.613	134	309724	53.465
125) Pentachloroethane	(4)	12.648	167	263160	55.026
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	1562446	53.686
127) sec-Butylbenzene	(4)	12.777	105	1919961	54.129
129) 1,3-Dichlorobenzene	(4)	12.880	146	868580A	52.245
130) p-Isopropyltoluene	(4)	12.886	119	1662722	53.898
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	514202	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	897102	51.649

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Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

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Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	1600834	52.597
135) Benzyl Chloride	(4)	13.028	91	1046002	57.896
136) 1,3-Diethylbenzene	(4)	13.086	119	983955	53.047
137) 1,4-Diethylbenzene	(4)	13.160	119	1016149	52.527
139) n-Butylbenzene	(4)	13.179	92	830609	52.617
138) 1,2-Dichlorobenzene	(4)	13.211	146	842463	51.119
140) 1,2-Diethylbenzene	(4)	13.227	119	828192	52.345
141) Diethylbenzene (total)	(4)		100	2828296	157.919
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	106018	52.664
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	668466	50.967
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	649676	49.991
147) Hexachlorobutadiene	(4)	14.381	225	270642	48.764
148) Naphthalene	(4)	14.481	128	1805437	51.568
149) 1,2,3-Trichlorobenzene	(4)	14.619	180	611401	49.911
150) 2-Methylnaphthalene	(4)	15.227	142	1128213	51.688

Digitally signed by Brett W. Kenyon
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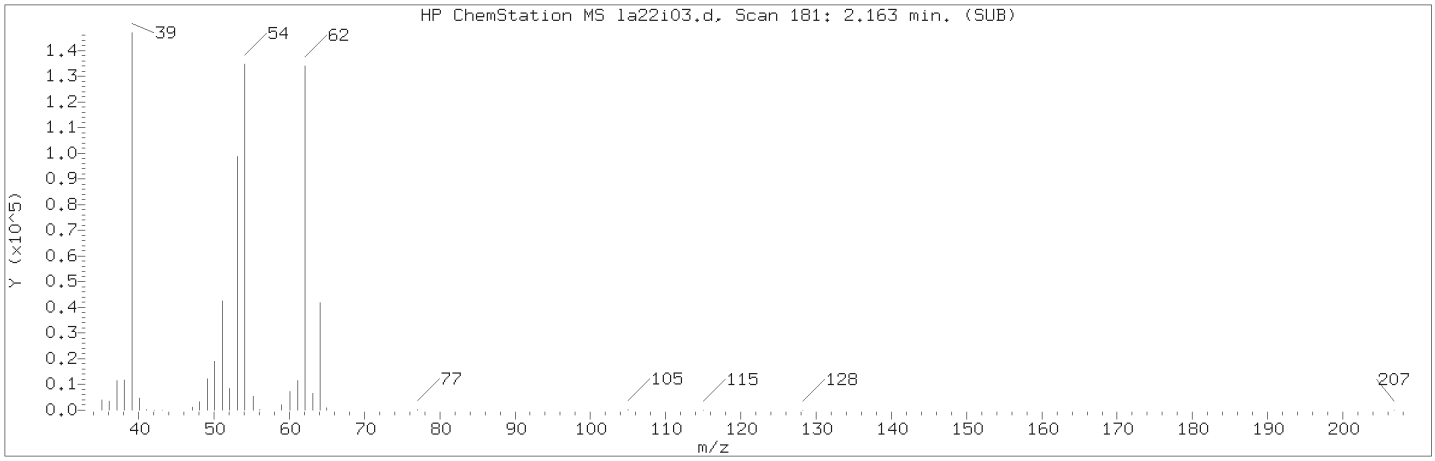
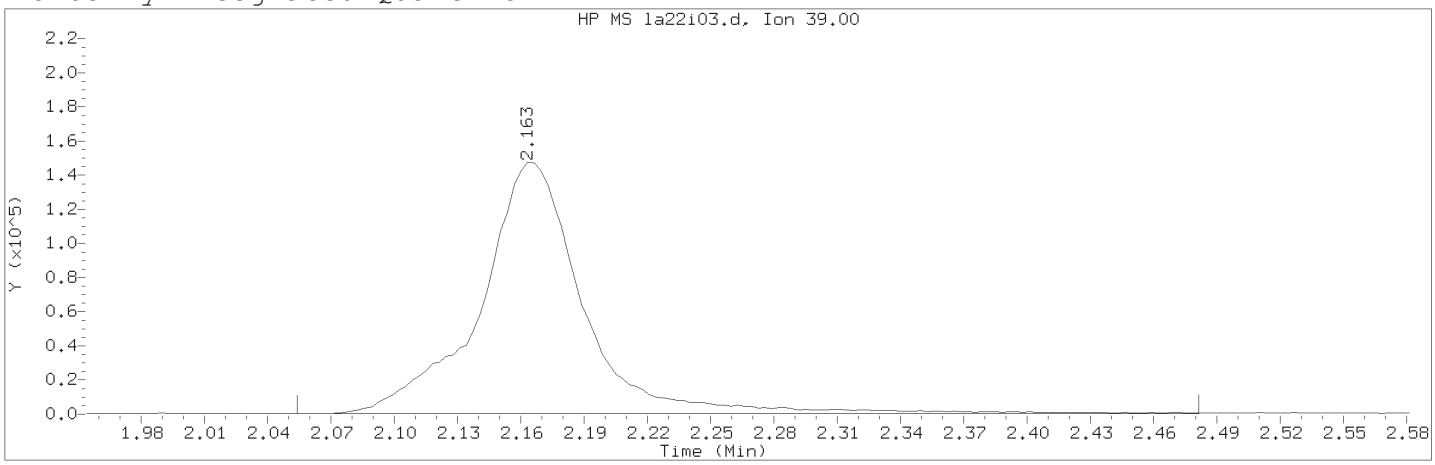
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

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Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

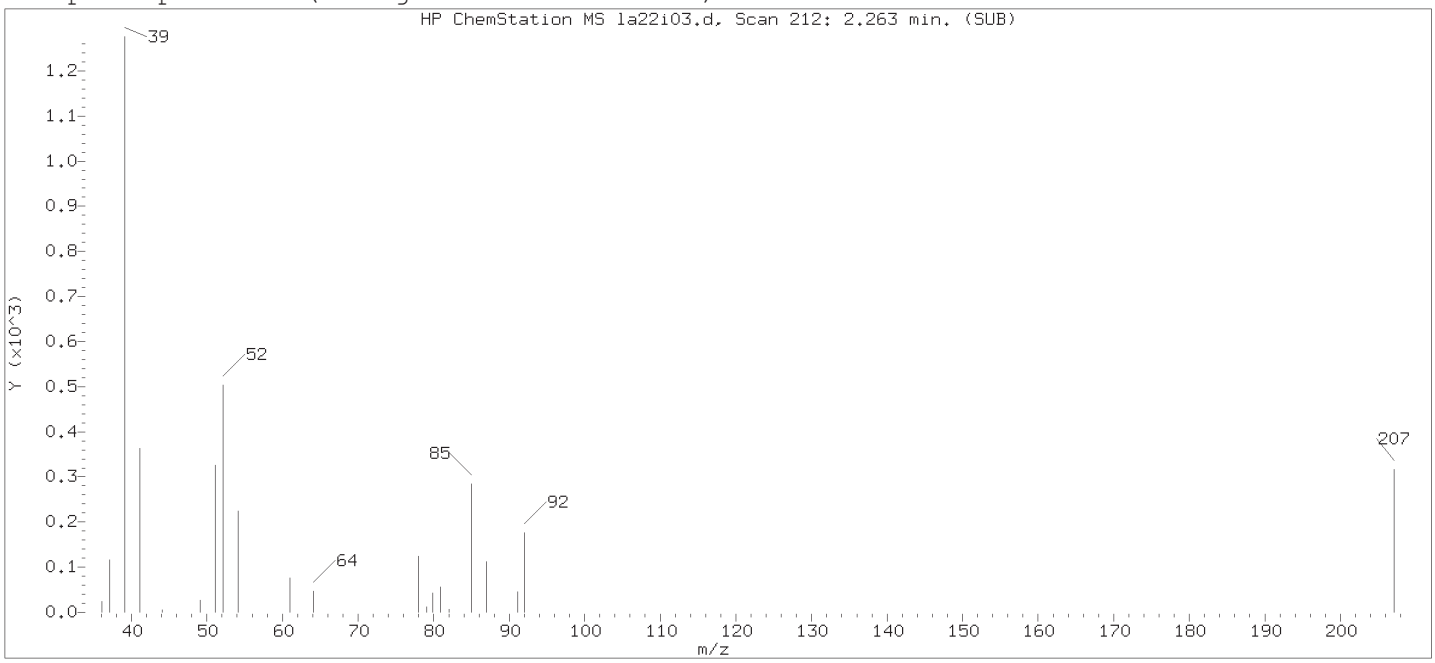
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 181
Retention Time (minutes): 2.163
Quant Ion : 39.00
Area (flag) : 503706MA
On-Column Amount (ng) : 37.2815
Integration start scan : 146 Integration stop scan: 279
Y at integration start : 207 Y at integration end: 207

Reason for manual integration: improper integration

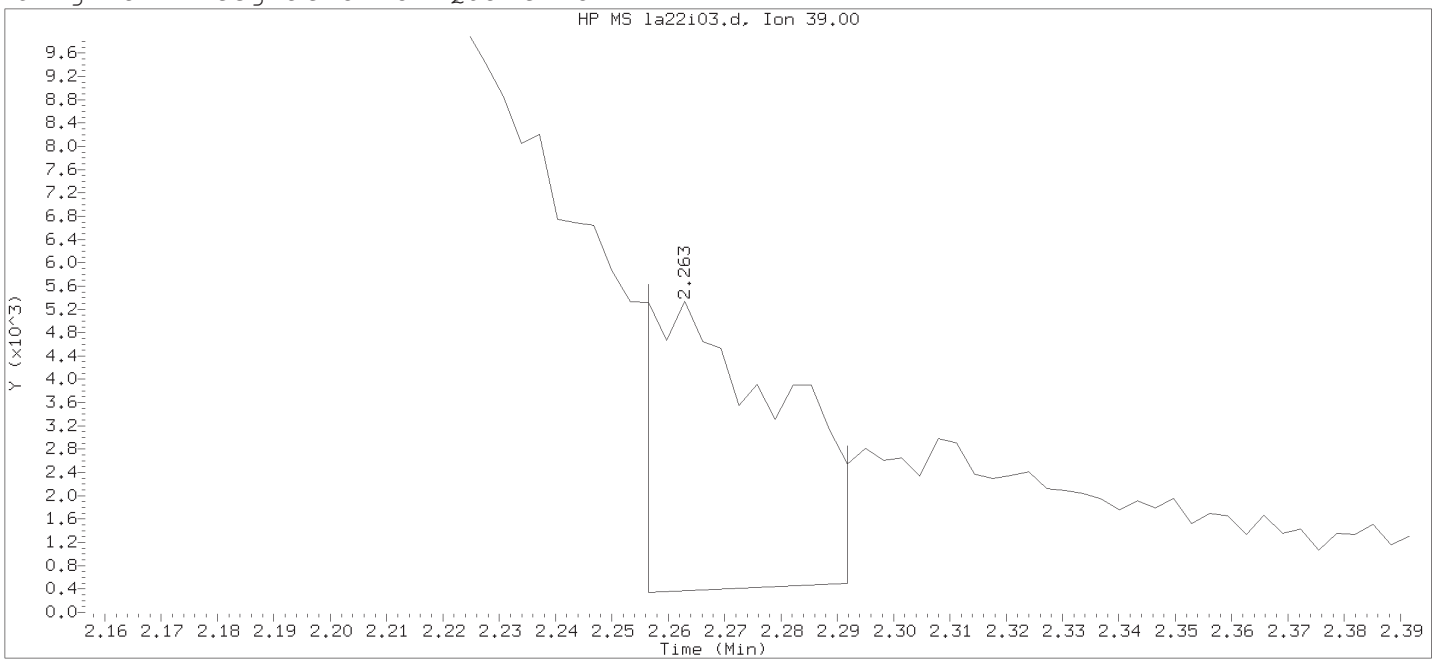
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

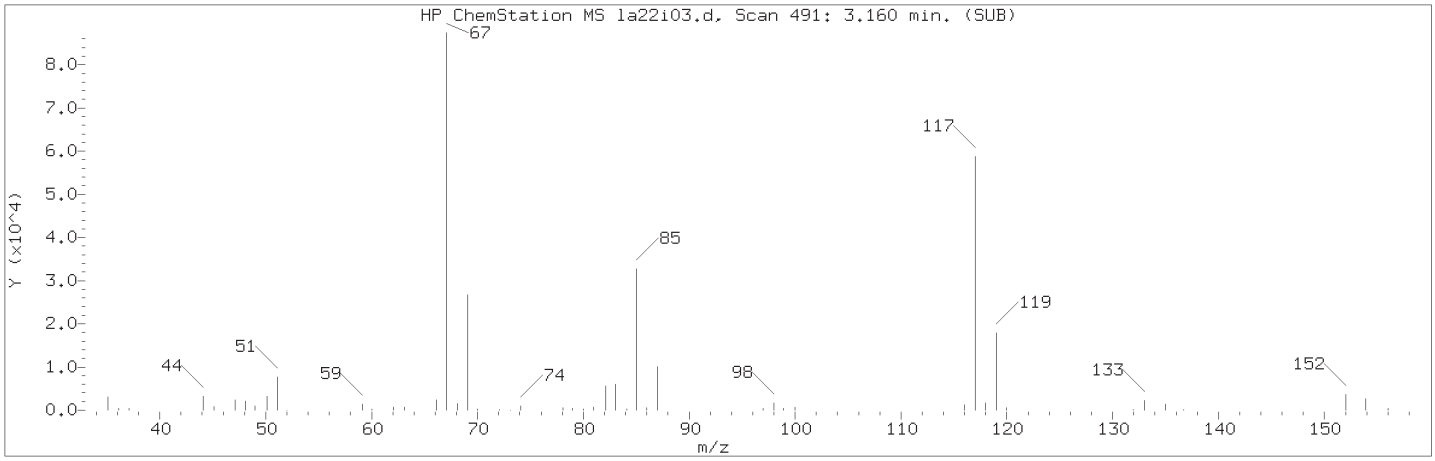
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

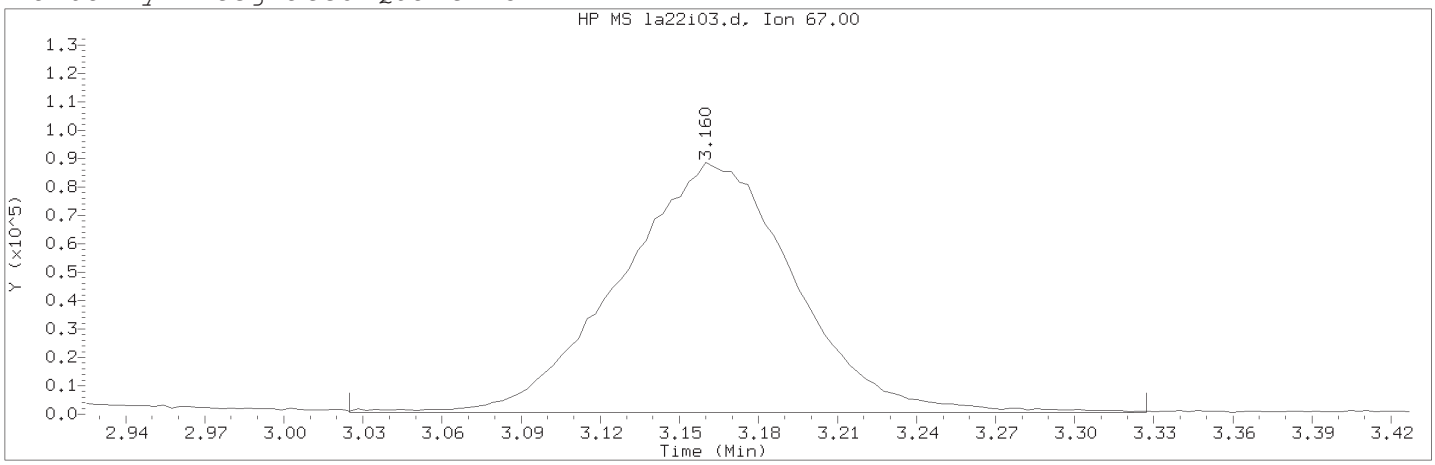
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 212
Retention Time (minutes): 2.263
Quant Ion : 39.00
Area : 7754
On-column Amount (ng) : 0.6379
Integration start scan : 209 Integration stop scan: 220
Y at integration start : 343 Y at integration end: 501

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

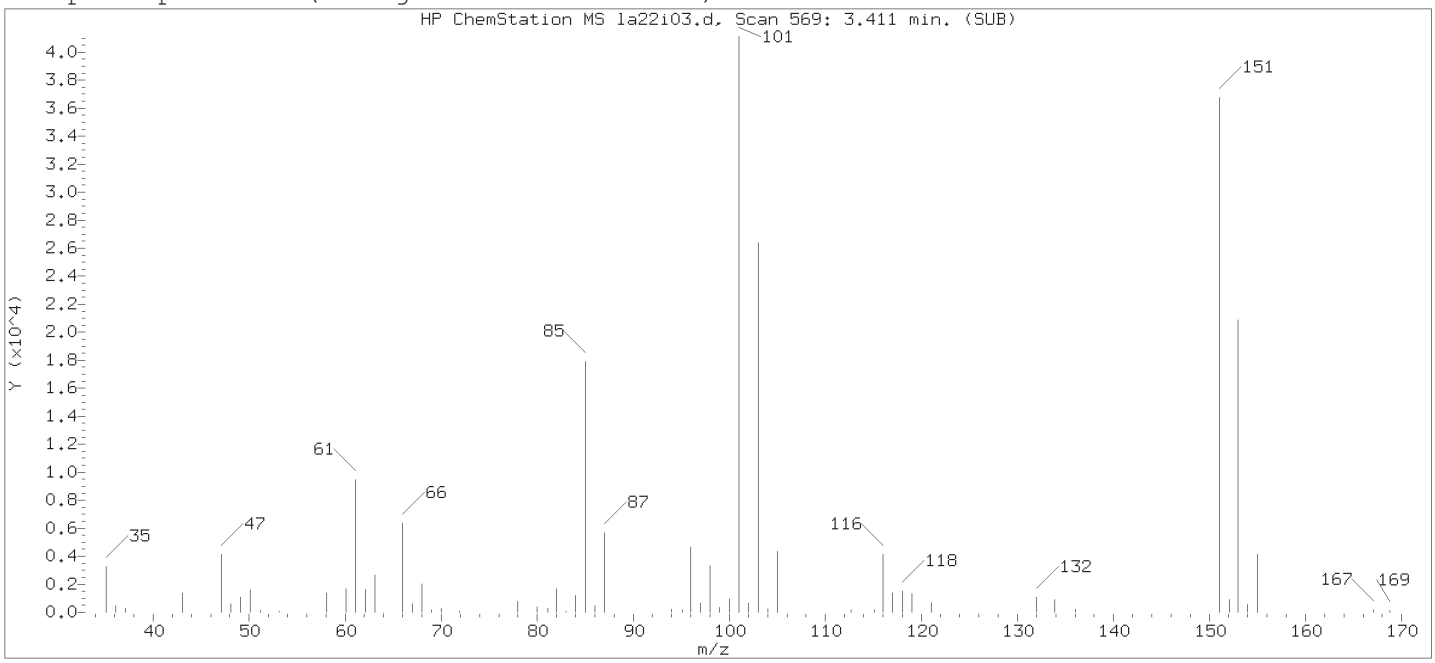
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 491
Retention Time (minutes): 3.160
Quant Ion : 67.00
Area (flag) : 403995MA
On-Column Amount (ng) : 51.0147
Integration start scan : 448 Integration stop scan: 542
Y at integration start : 676 Y at integration end: 676

Reason for manual integration: improper integration

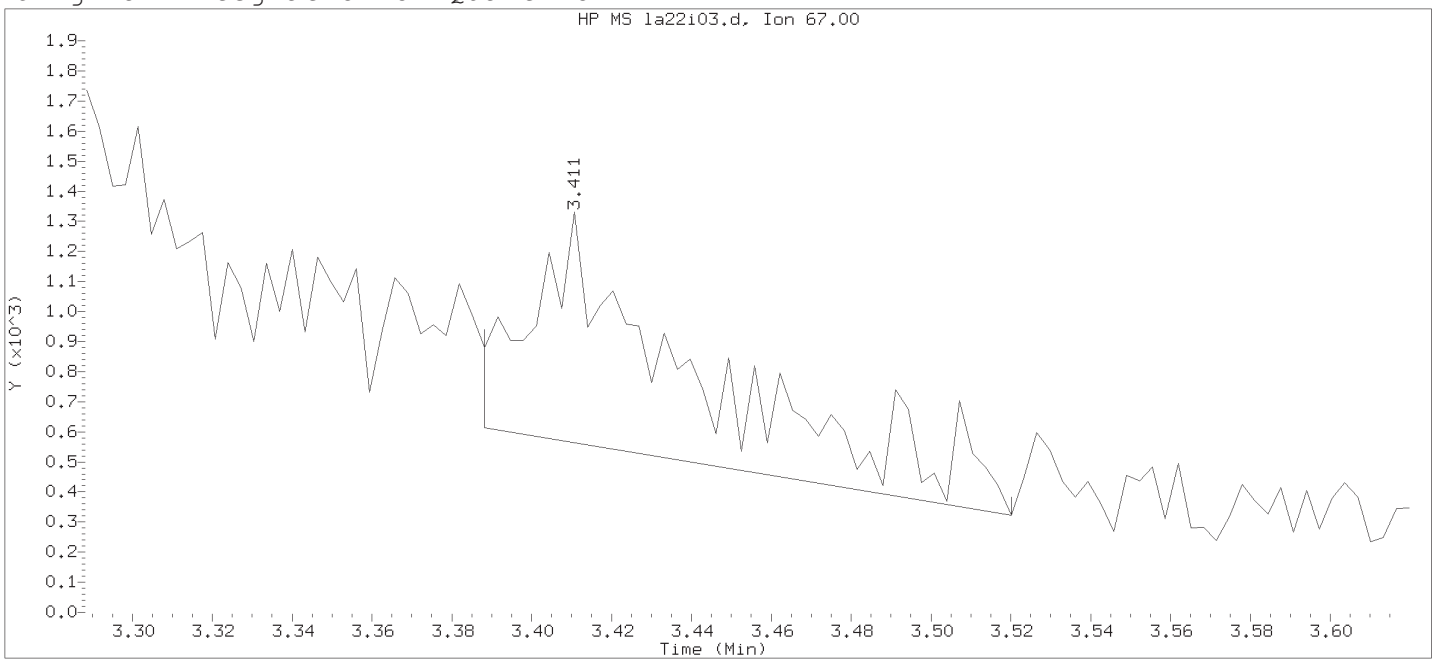
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

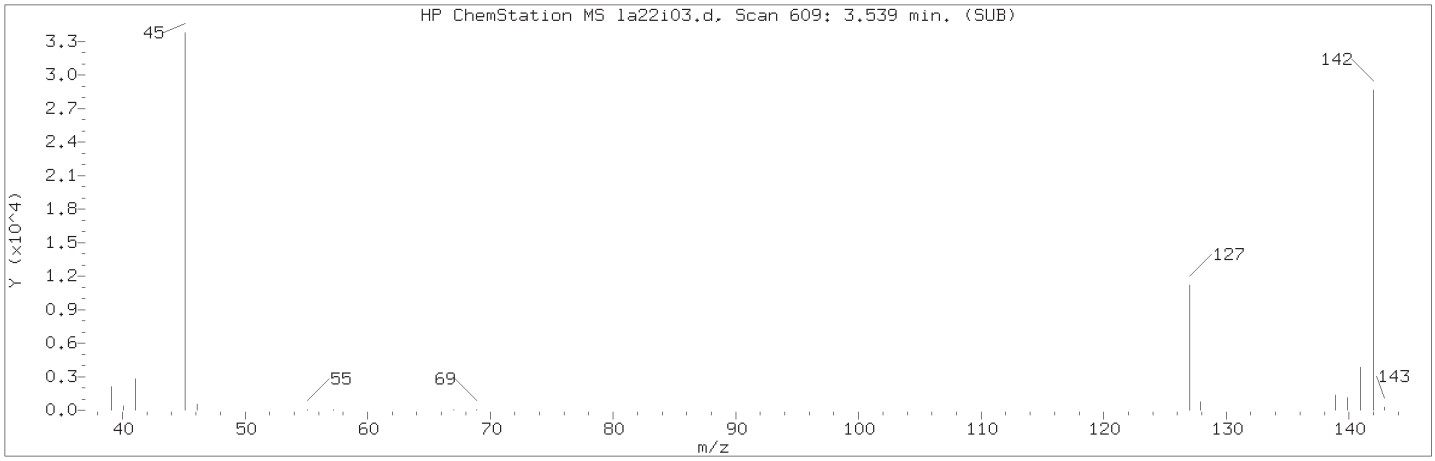
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

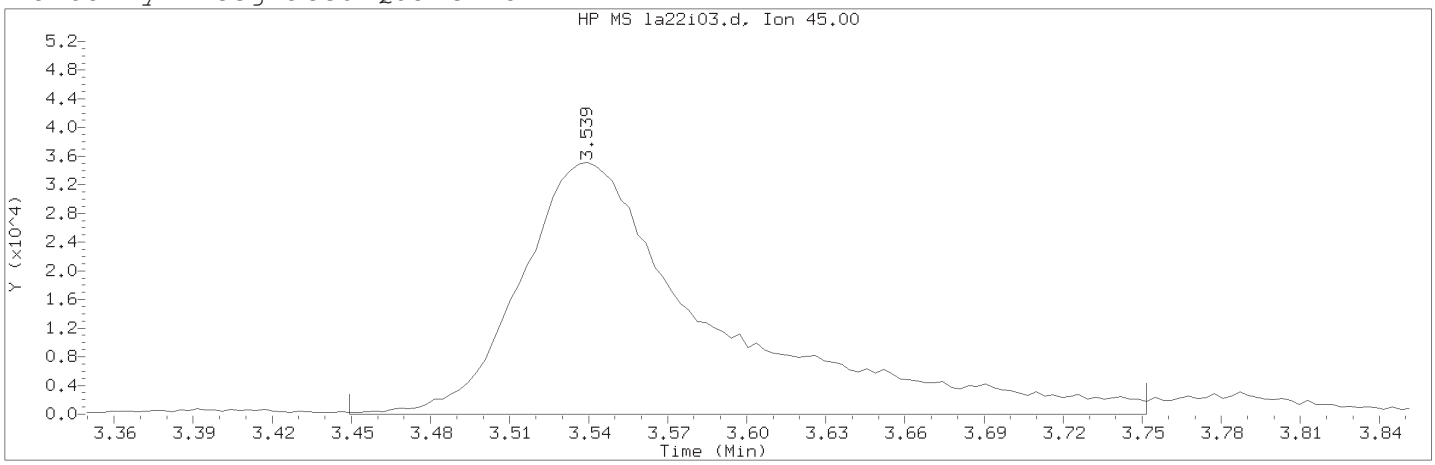
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 569
Retention Time (minutes): 3.411
Quant Ion : 67.00
Area : 2176
On-column Amount (ng) : 1.6423
Integration start scan : 561 Integration stop scan: 602
Y at integration start : 613 Y at integration end: 323

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

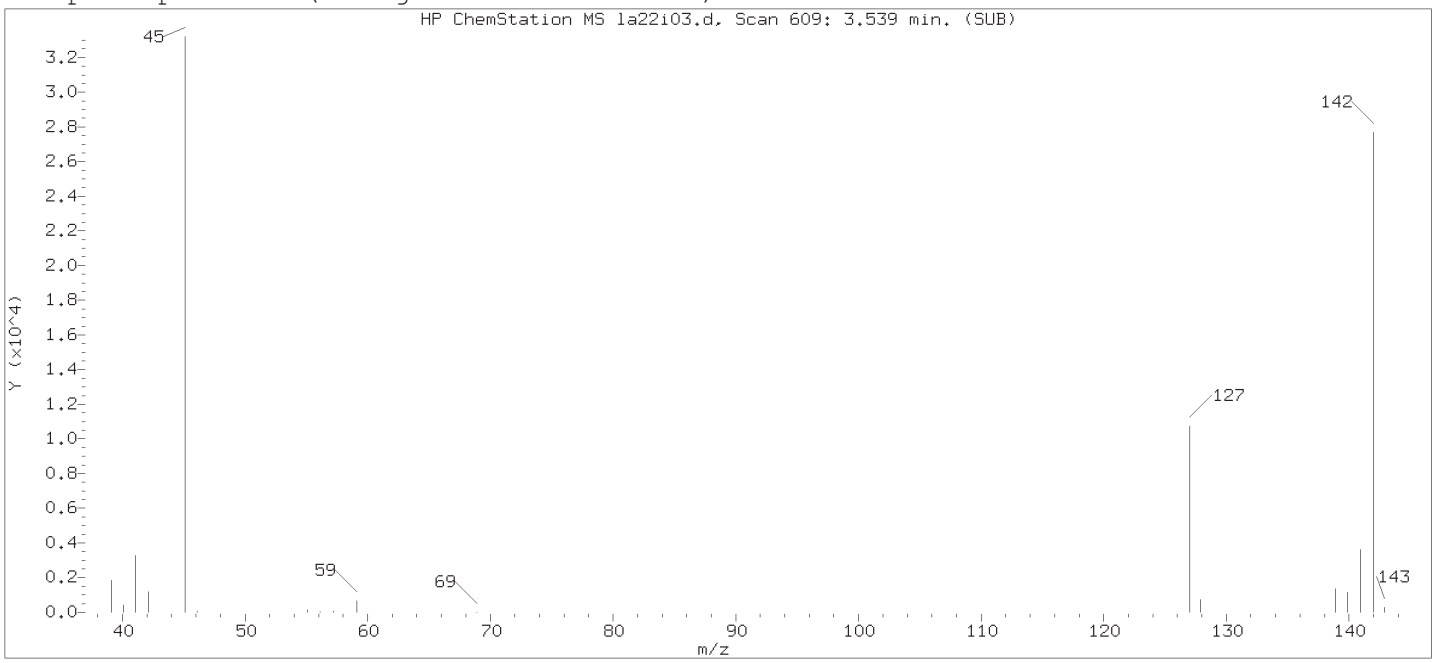
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 609
Retention Time (minutes): 3.539
Quant Ion : 45.00
Area (flag) : 178881M
On-Column Amount (ng) : 254.7364
Integration start scan : 580 Integration stop scan: 674
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

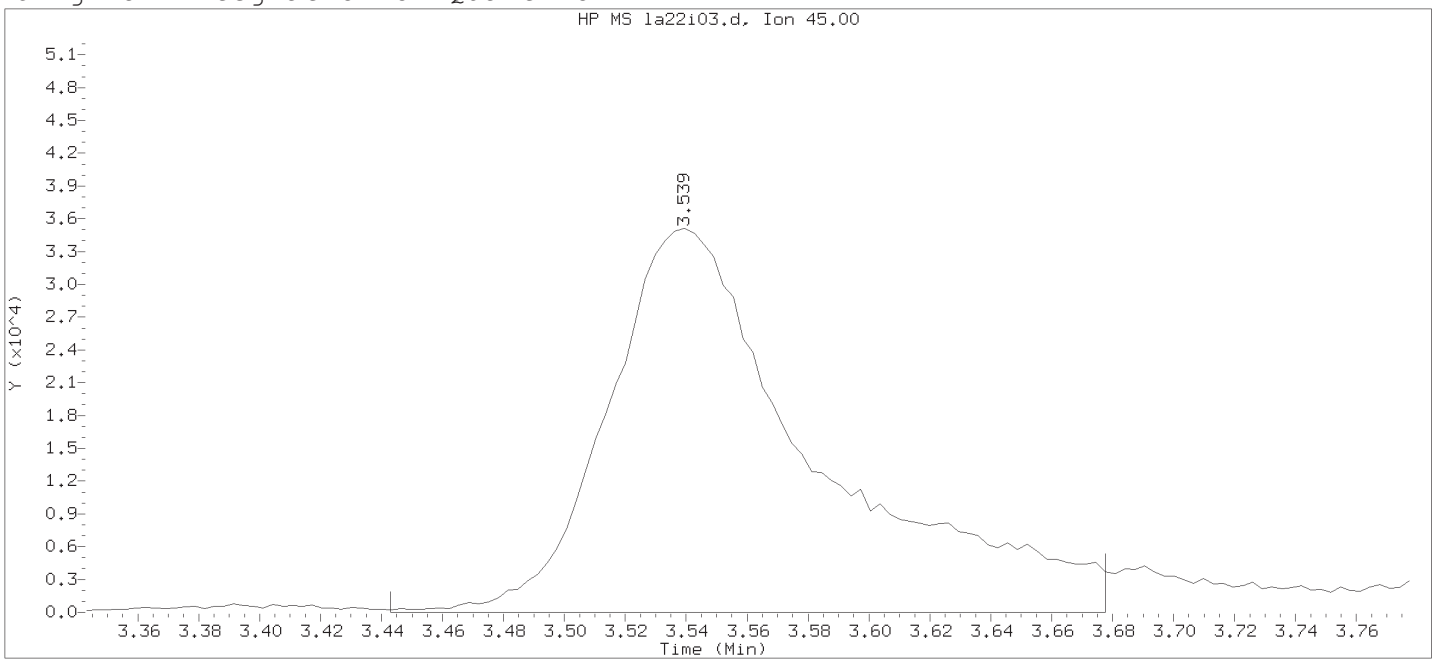
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

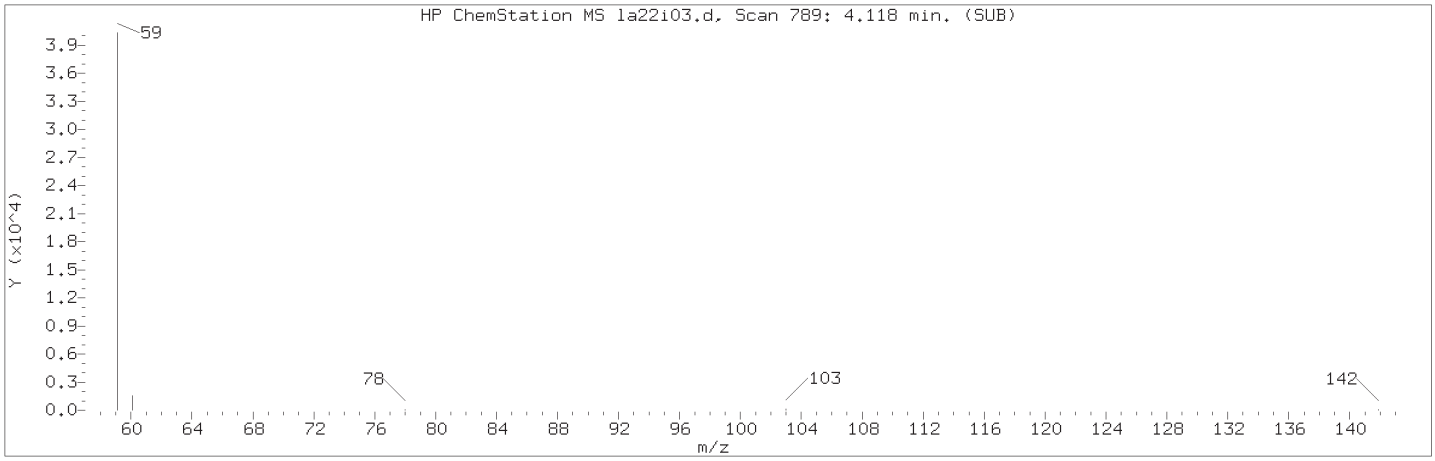
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

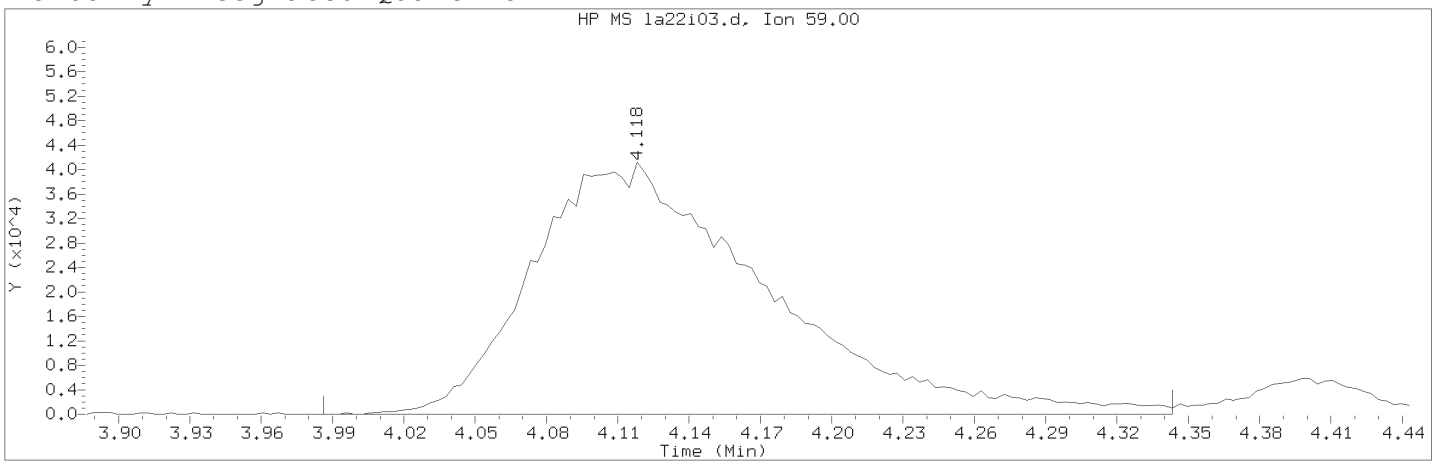
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 609
Retention Time (minutes): 3.539
Quant Ion : 45.00
Area : 166119
On-column Amount (ng) : 237.2010
Integration start scan : 578 Integration stop scan: 651
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

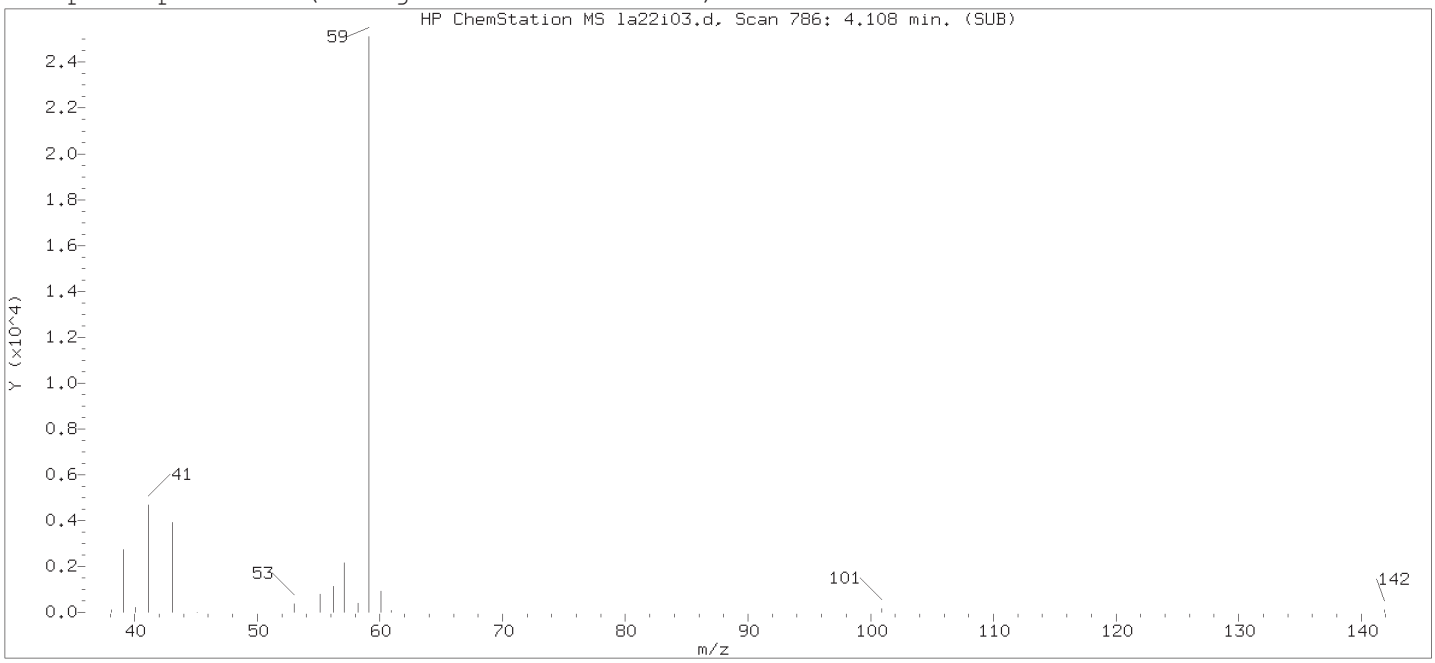
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 789
Retention Time (minutes): 4.118
Quant Ion : 59.00
Area (flag) : 281477M
On-Column Amount (ng) : 247.1721
Integration start scan : 747 Integration stop scan: 858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

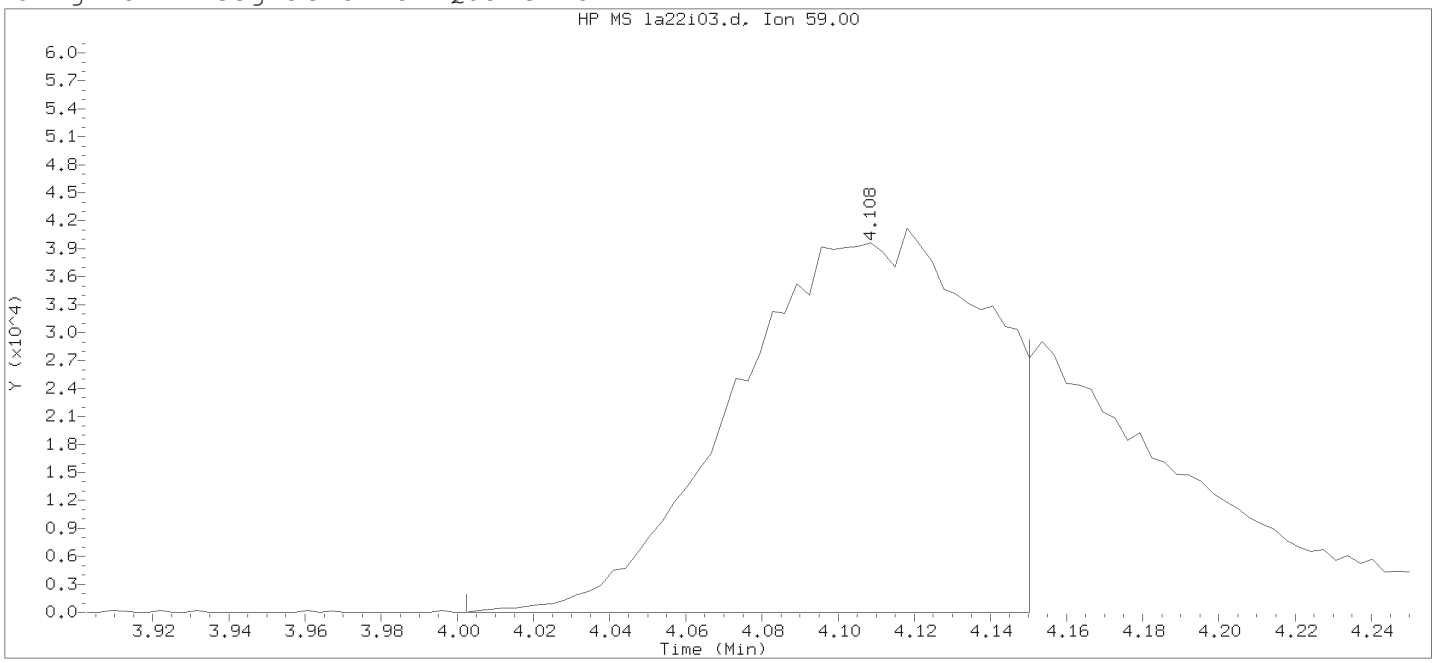
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

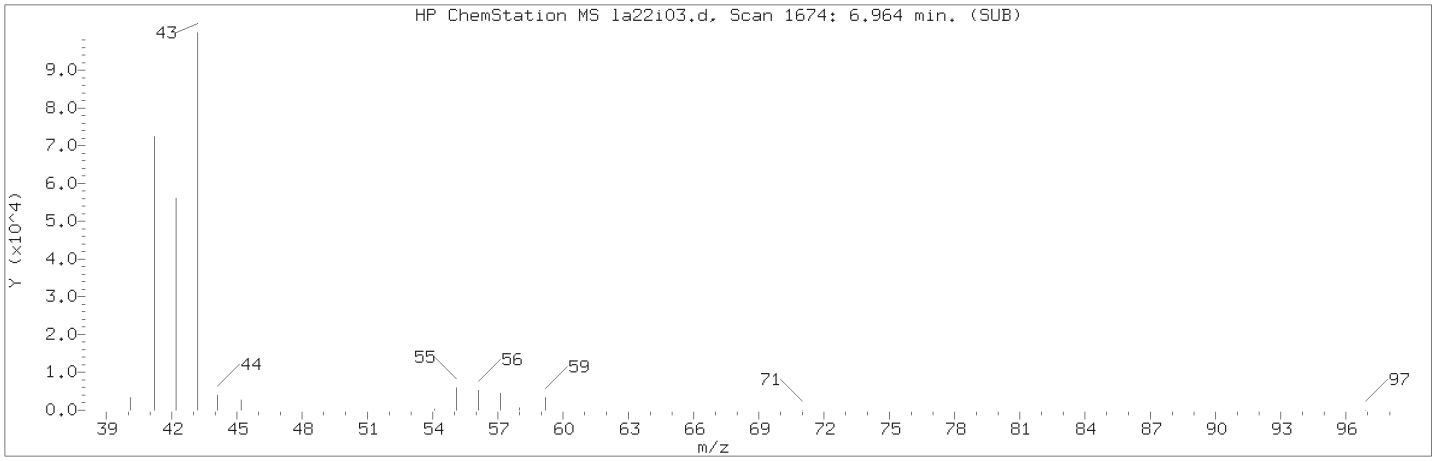
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

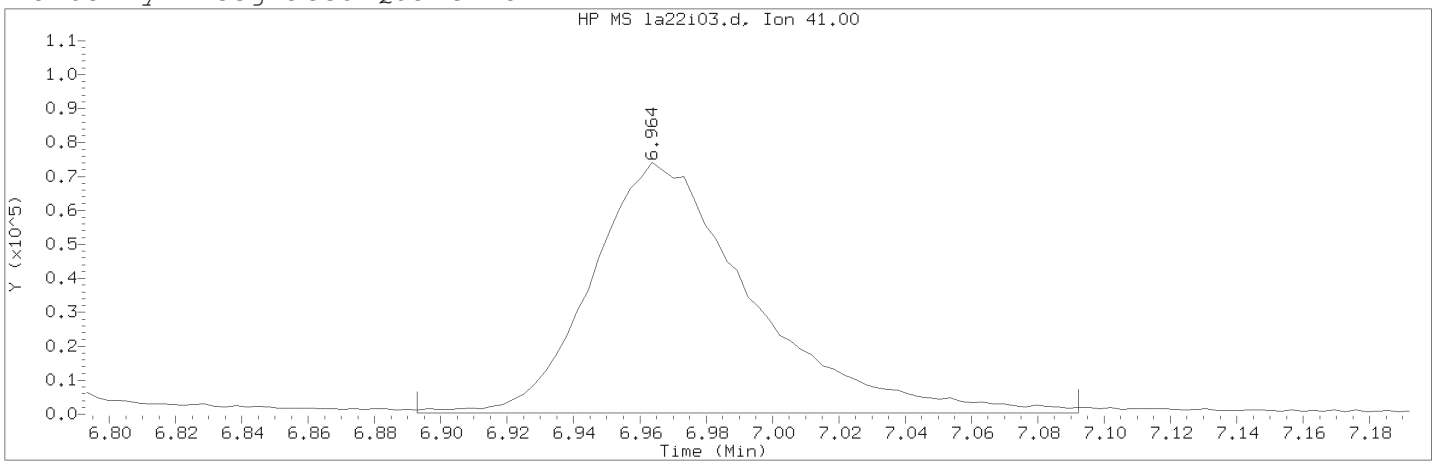
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.108
Quant Ion : 59.00
Area : 186701
On-column Amount (ng) : 184.0924
Integration start scan : 752 Integration stop scan: 798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

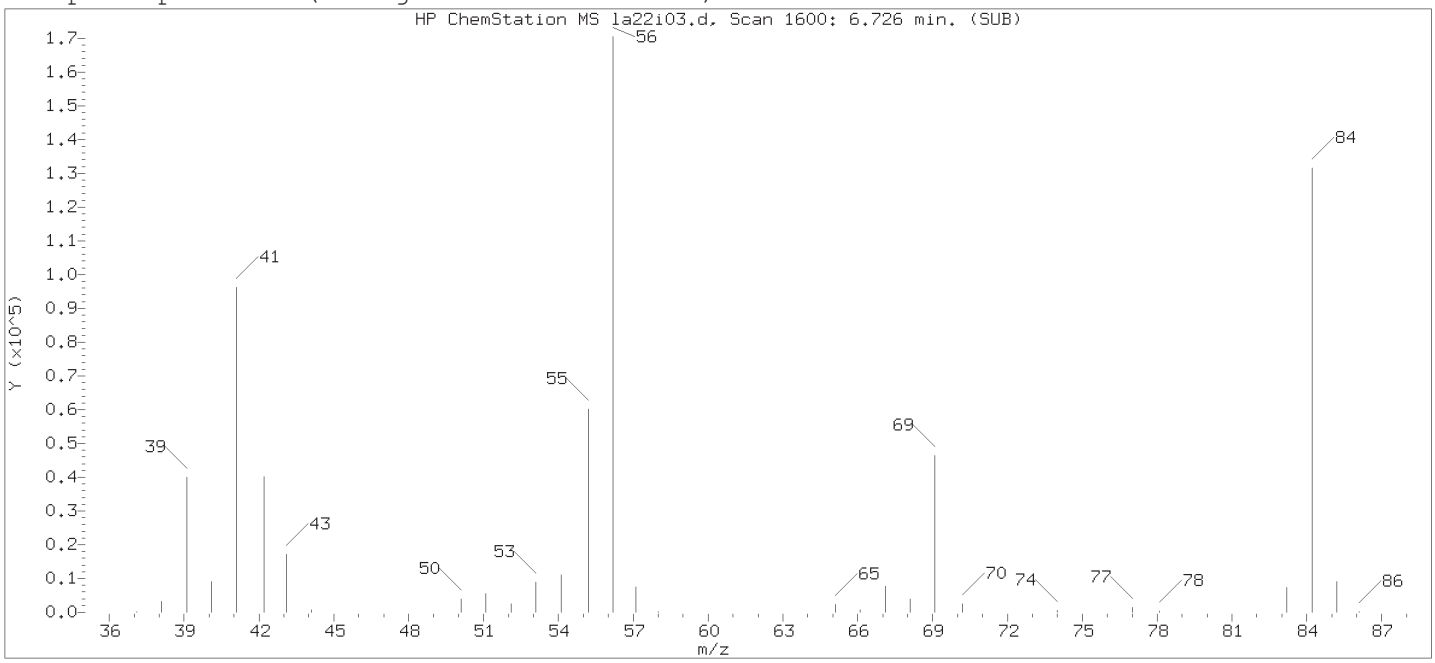
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1674
Retention Time (minutes): 6.964
Quant Ion : 41.00
Area (flag) : 247939A
On-Column Amount (ng) : 618.8833
Integration start scan : 1651 Integration stop scan: 1713
Y at integration start : 342 Y at integration end: 342

Reason for manual integration: improper integration

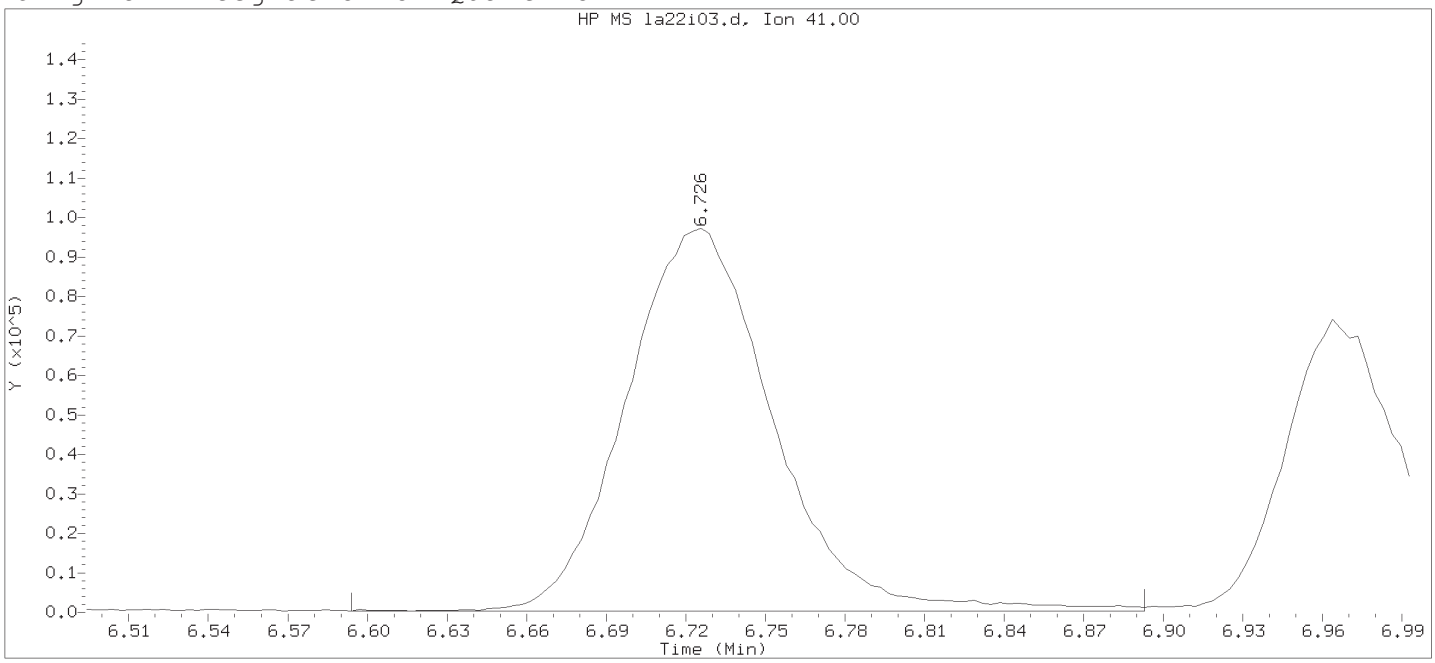
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

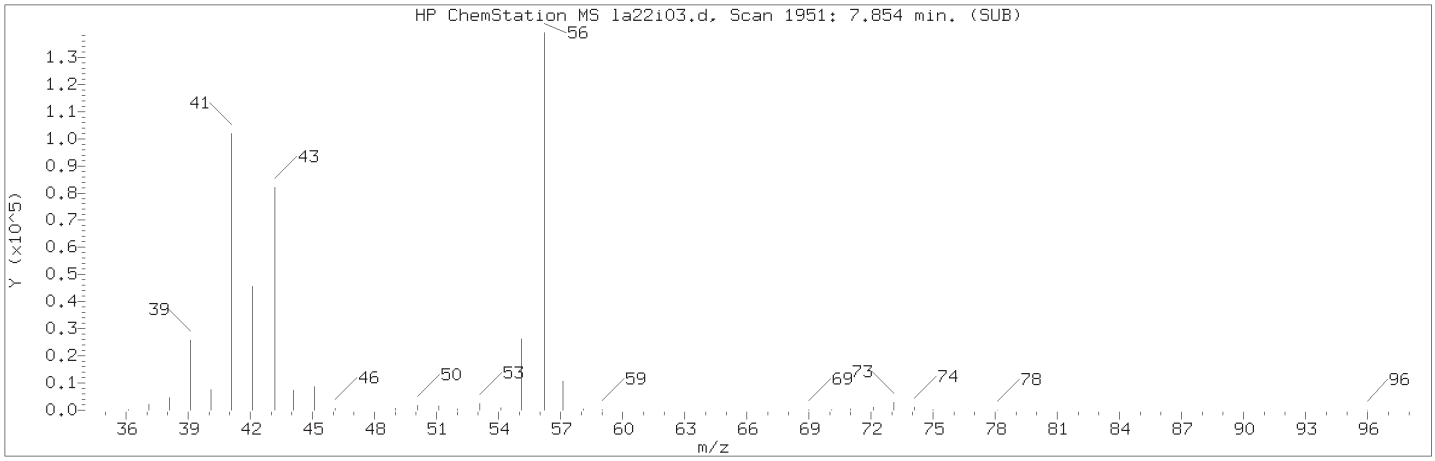
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

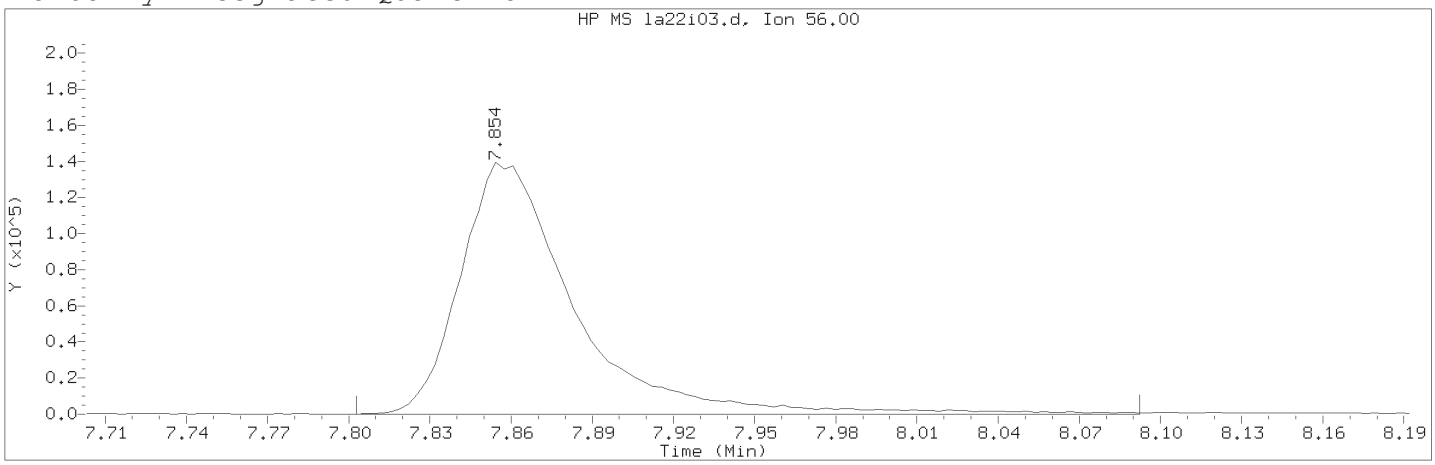
Compound Number	: 58		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 1600		
Retention Time (minutes)	: 6.726		
Quant Ion	: 41.00		
Area	: 372119		
On-column Amount (ng)	: 779.1448		
Integration start scan	: 1558	Integration stop scan:	1651
Y at integration start	: 342	Y at integration end:	342

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail Brownsville

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

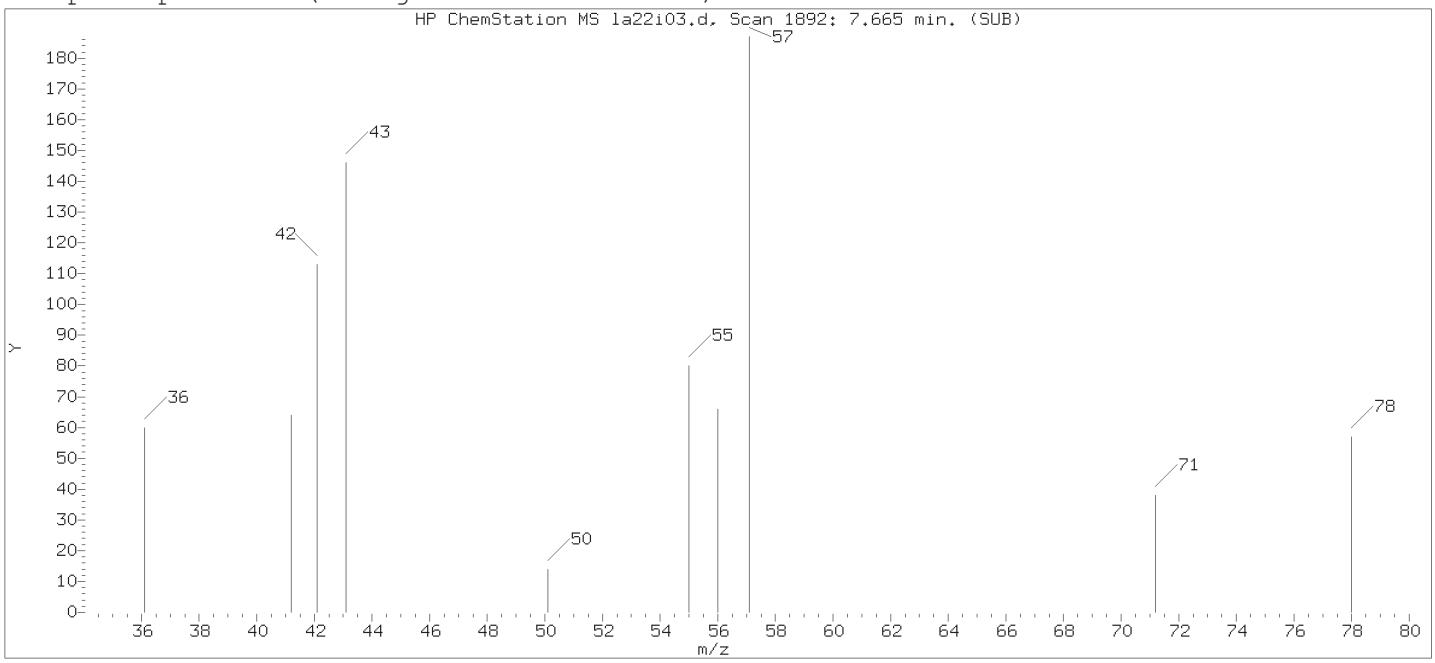
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1951
Retention Time (minutes): 7.854
Quant Ion : 56.00
Area (flag) : 407846MA
On-Column Amount (ng) : 1305.9440
Integration start scan : 1934 Integration stop scan: 2024
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

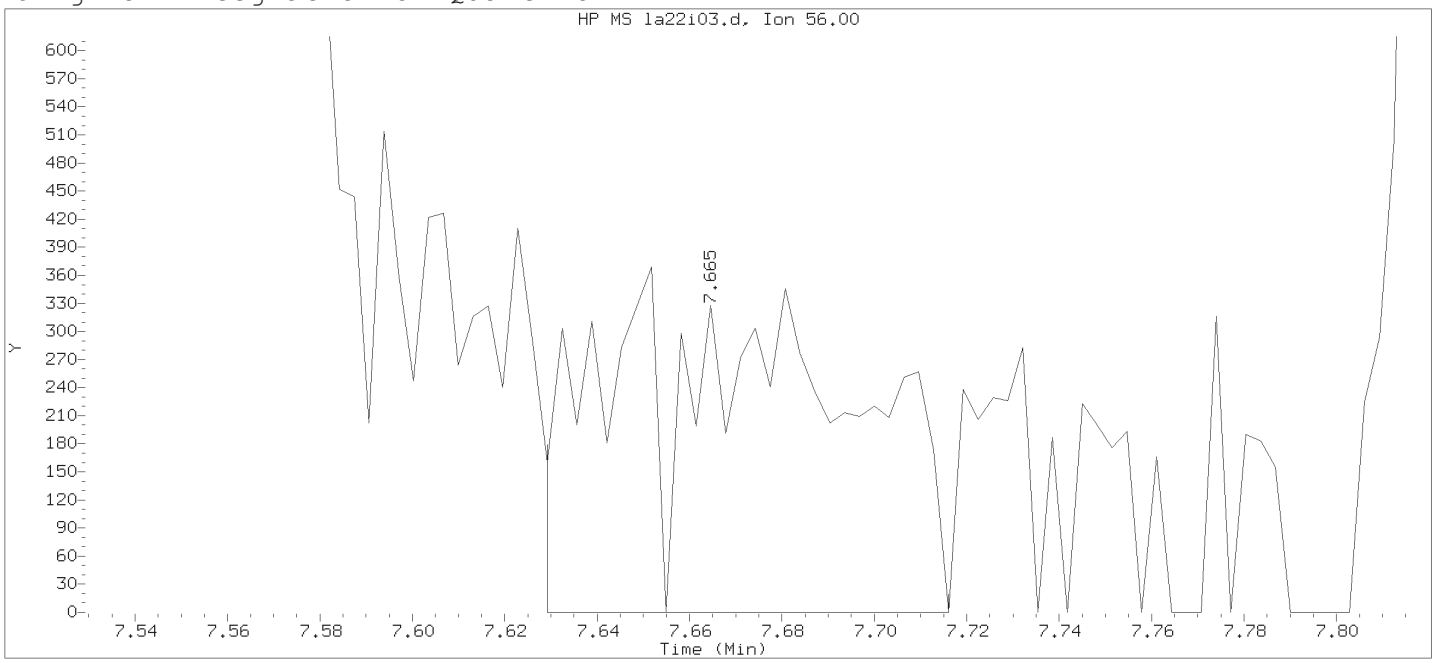
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

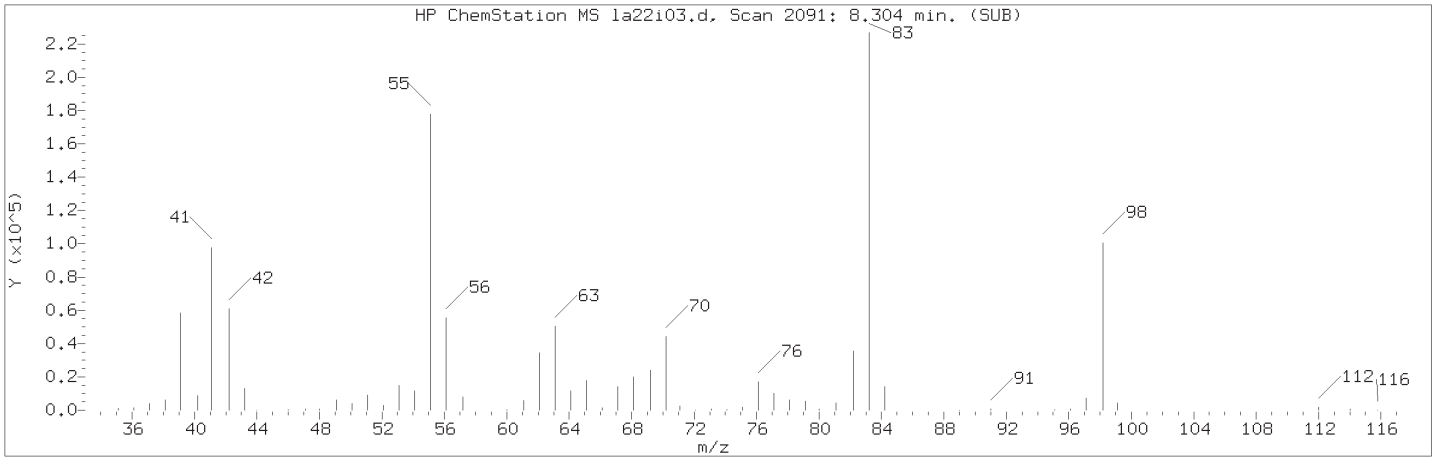
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

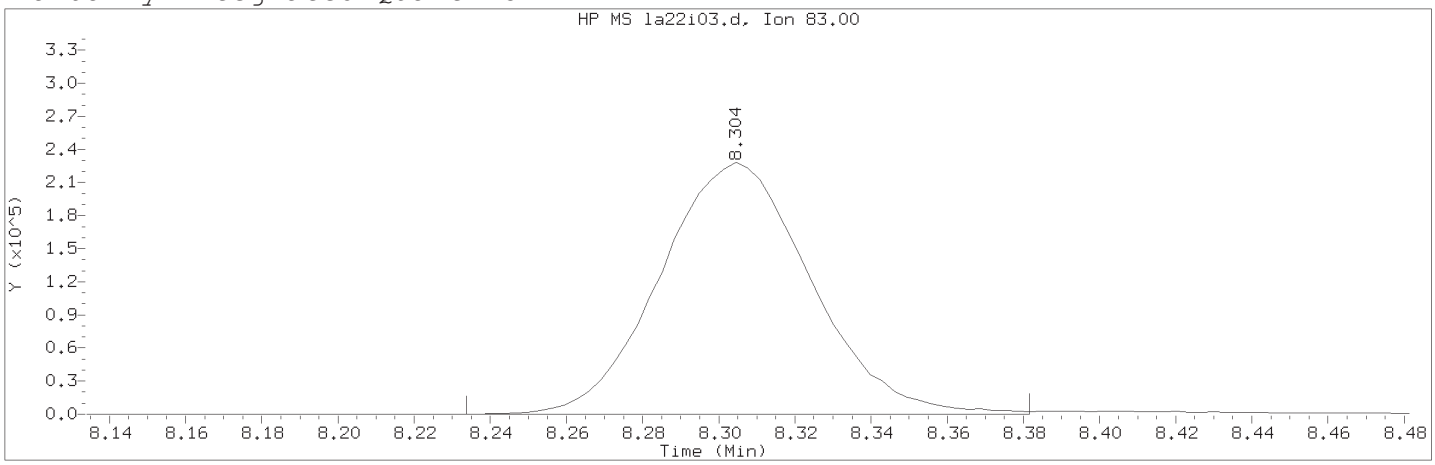
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1892
Retention Time (minutes): 7.665
Quant Ion : 56.00
Area : 1249
On-column Amount (ng) : 2445.7977
Integration start scan : 1880 Integration stop scan: 1907
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

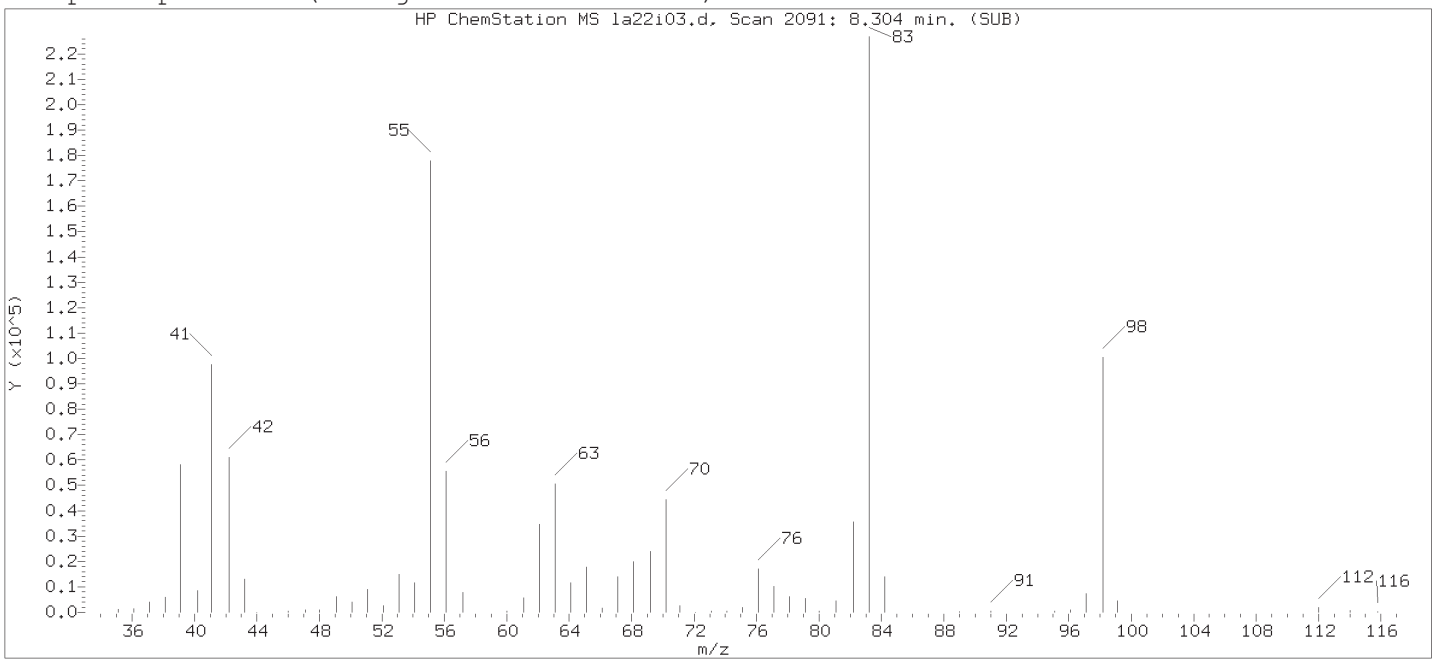
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 2091
Retention Time (minutes): 8.304
Quant Ion : 83.00
Area (flag) : 625254M
On-Column Amount (ng) : 54.2318
Integration start scan : 2068 Integration stop scan: 2114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

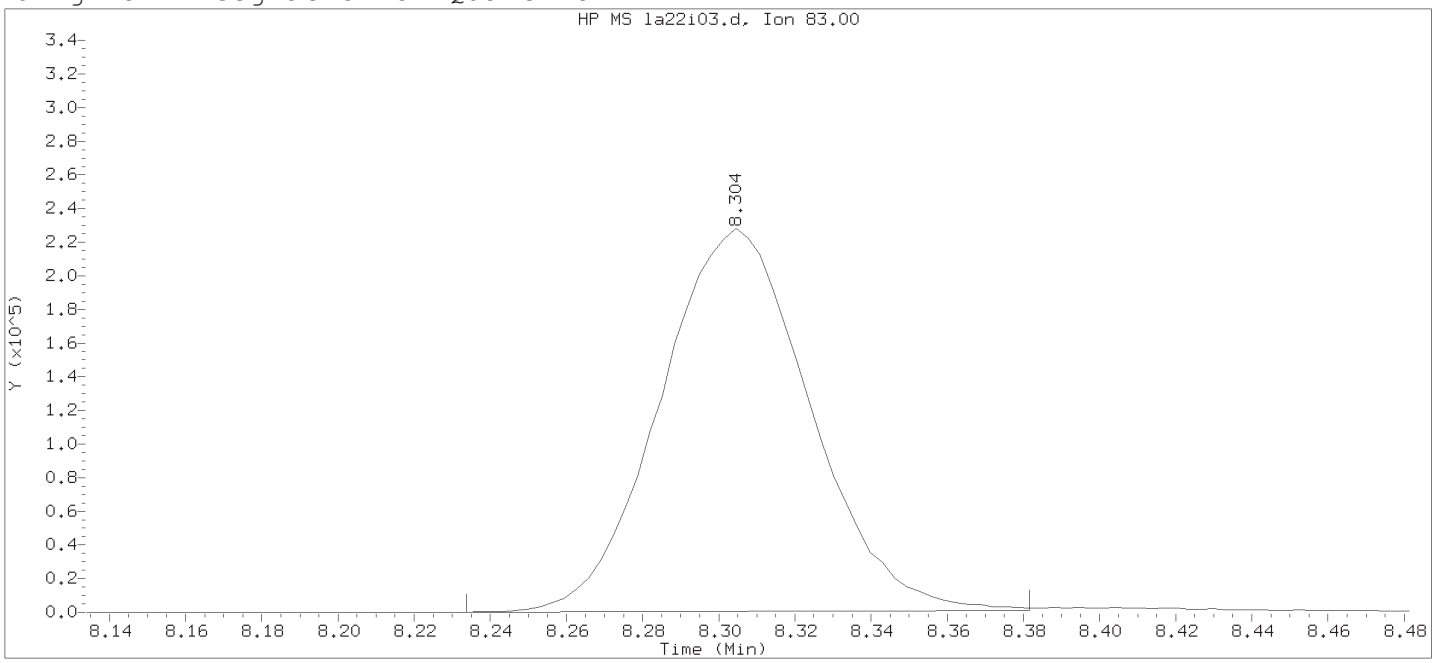
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

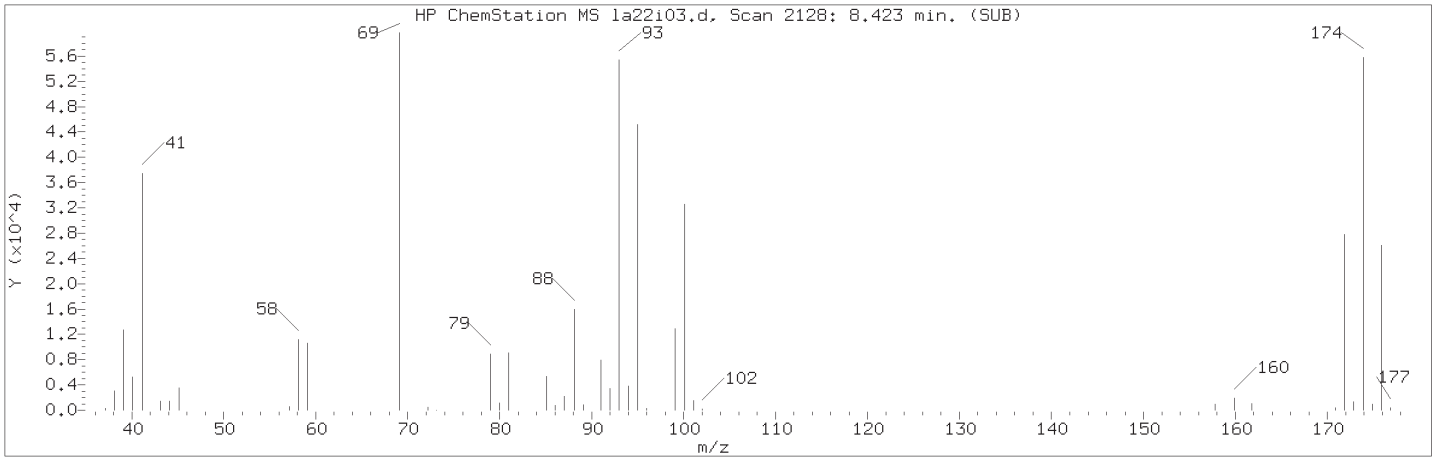
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

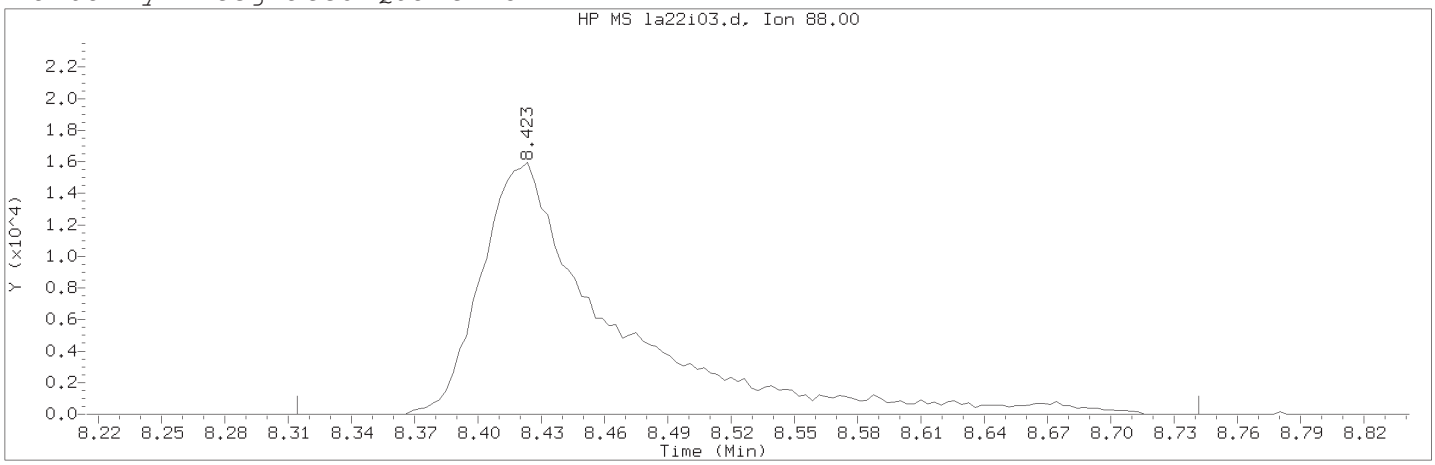
Compound Number : 72
Compound Name : Methylcyclohexane
Scan Number : 2091
Retention Time (minutes): 8.304
Quant Ion : 83.00
Area : 619768
On-column Amount (ng) : 0.6417
Integration start scan : 2068 Integration stop scan: 2114
Y at integration start : 0 Y at integration end: 1190

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

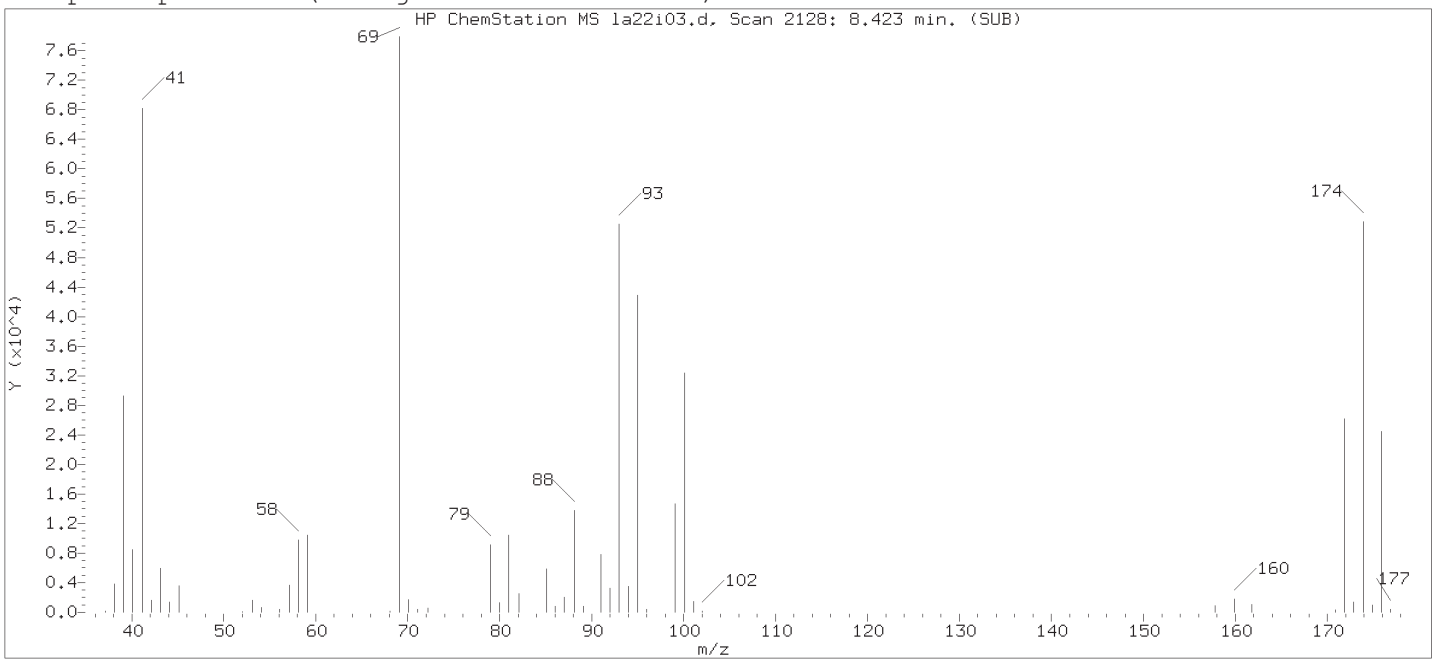
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area (flag) : 68966M
On-Column Amount (ng) : 651.9664
Integration start scan : 2093 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

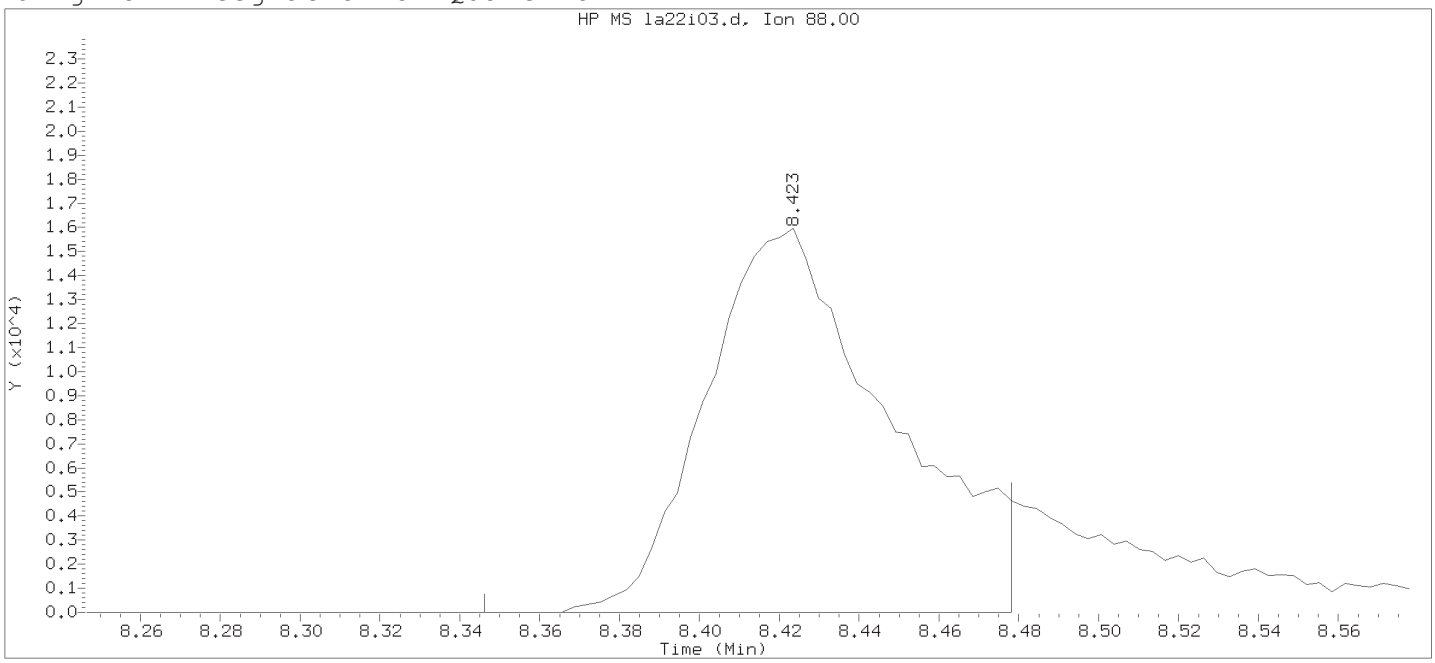
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

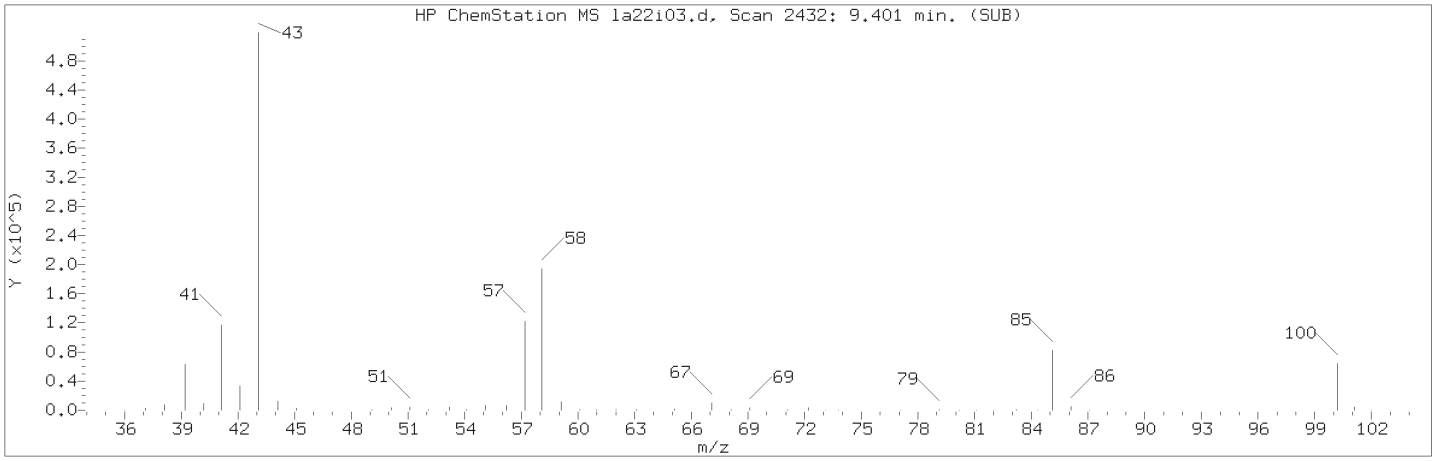
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

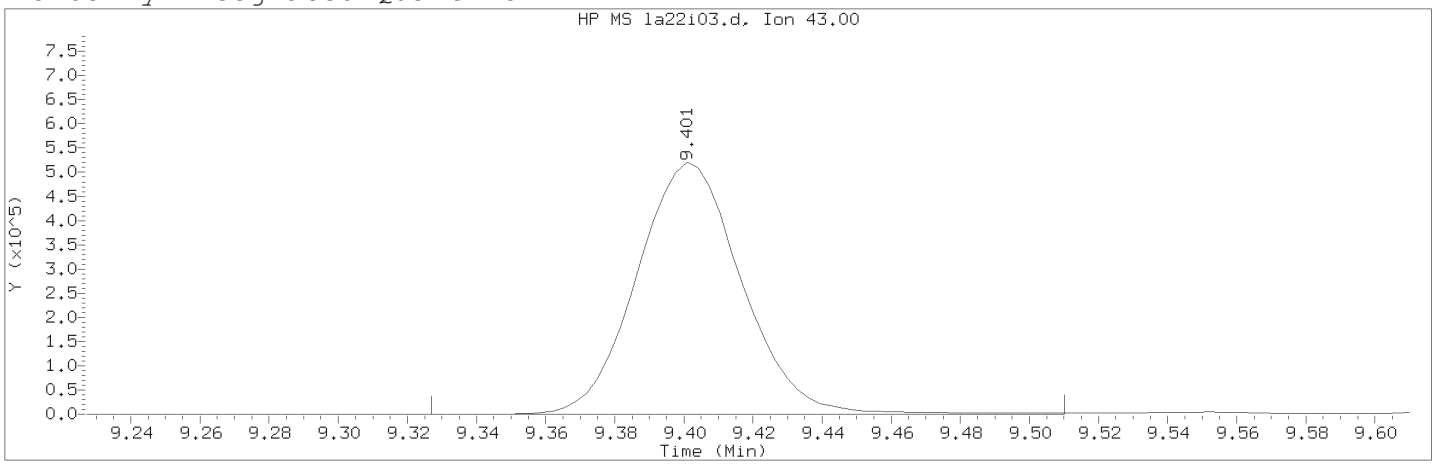
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area : 50804
On-column Amount (ng) : 591.3841
Integration start scan : 2103 Integration stop scan: 2144
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: la22i03.d: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

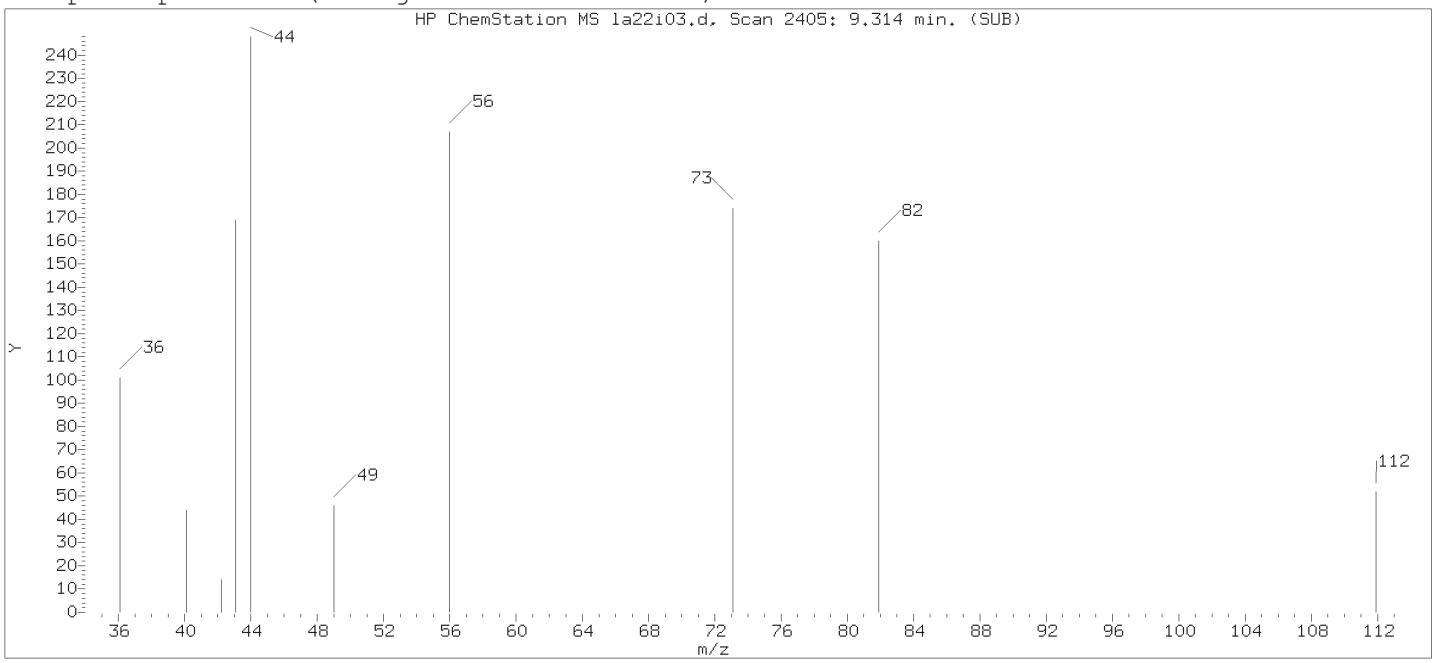
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 2432
Retention Time (minutes): 9.401
Quant Ion : 43.00
Area (flag) : 1094271A
On-Column Amount (ng) : 107.9378
Integration start scan : 2408 Integration stop scan: 2465
Y at integration start : 183 Y at integration end: 183

Reason for manual integration: improper integration

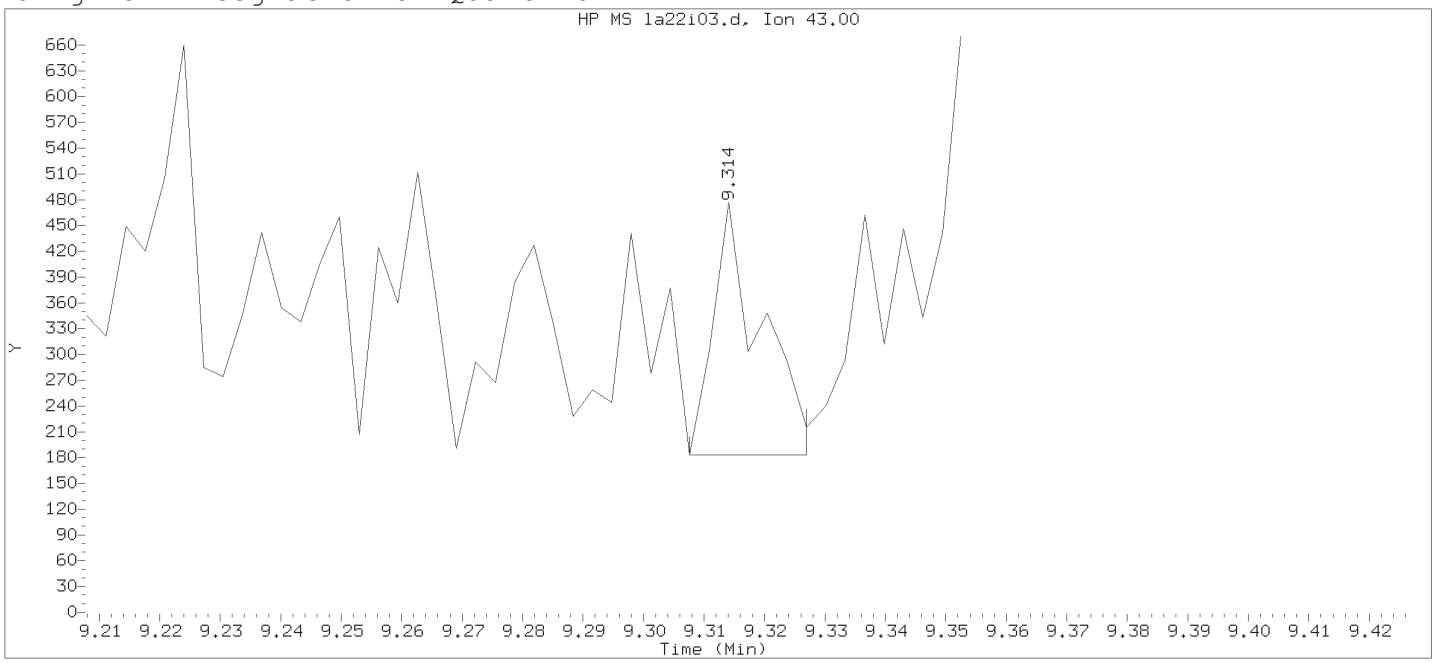
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

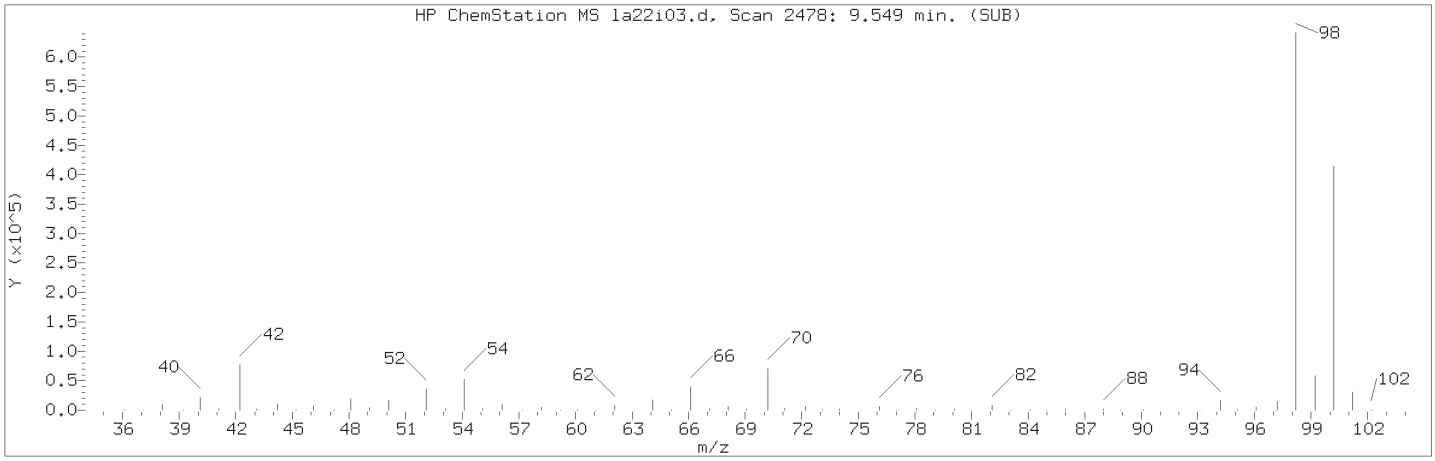
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

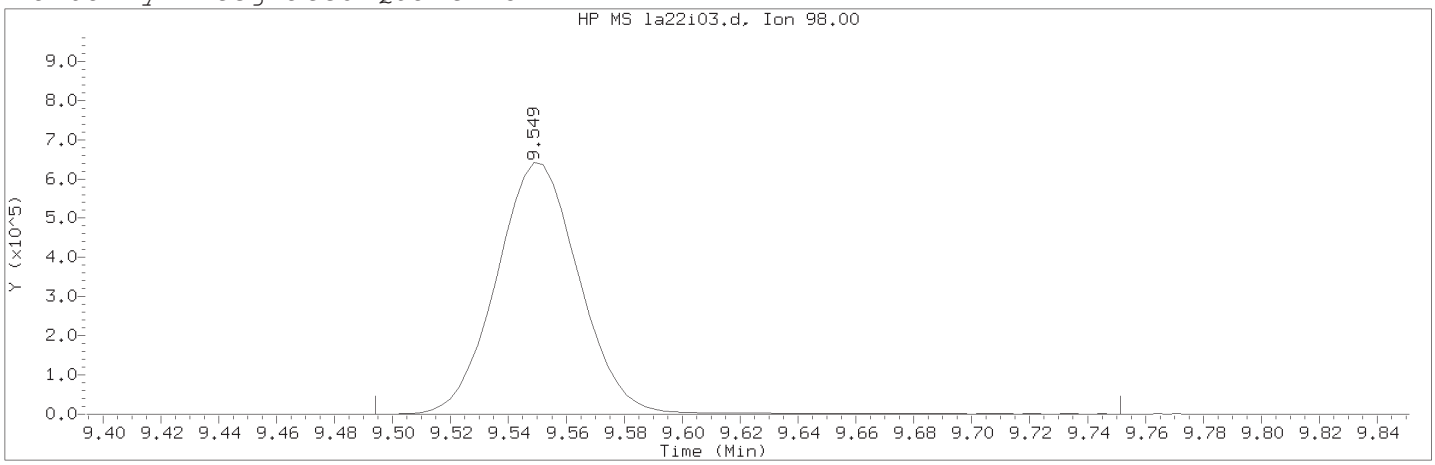
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 2405
Retention Time (minutes): 9.314
Quant Ion : 43.00
Area : 159
On-column Amount (ng) : 0.2140
Integration start scan : 2402 Integration stop scan: 2408
Y at integration start : 183 Y at integration end: 183

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

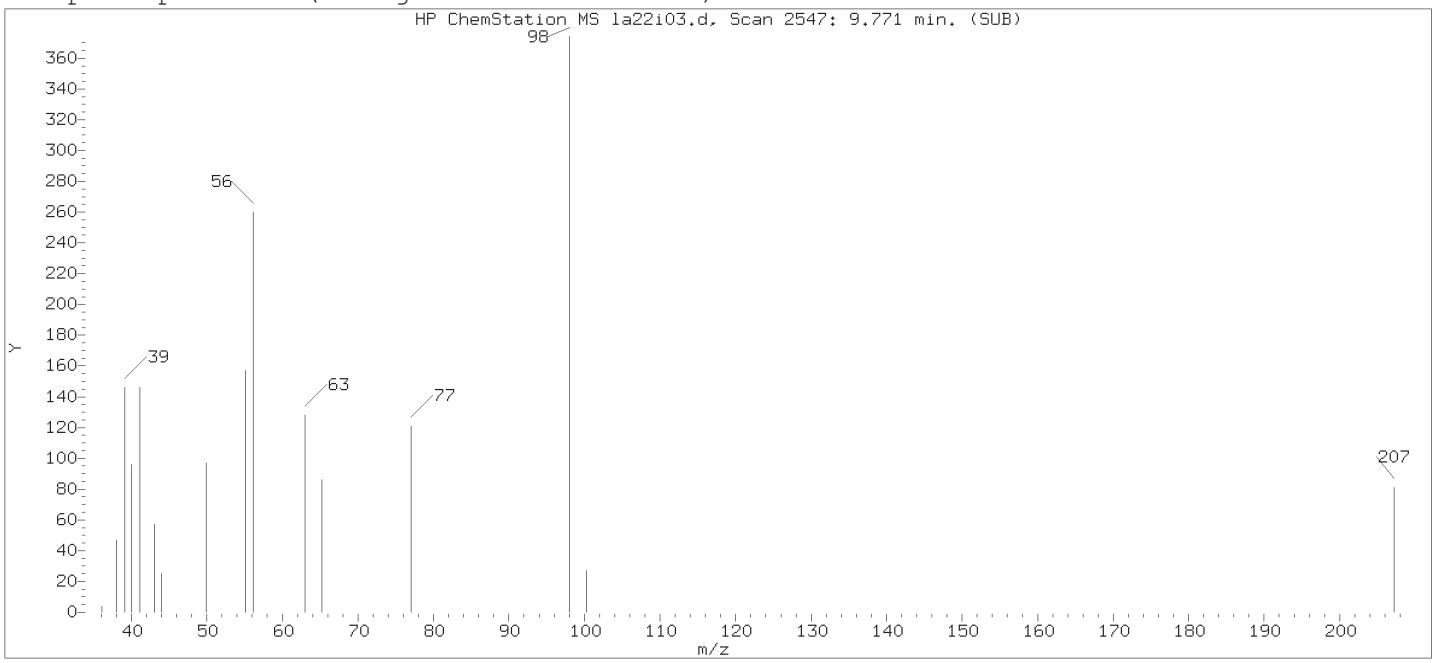
Compound Number : 83
Compound Name : Toluene-d8
Scan Number : 2478
Retention Time (minutes): 9.549
Quant Ion : 98.00
Area (flag) : 1278042A
On-Column Amount (ng) : 49.9491
Integration start scan : 2460 Integration stop scan: 2540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

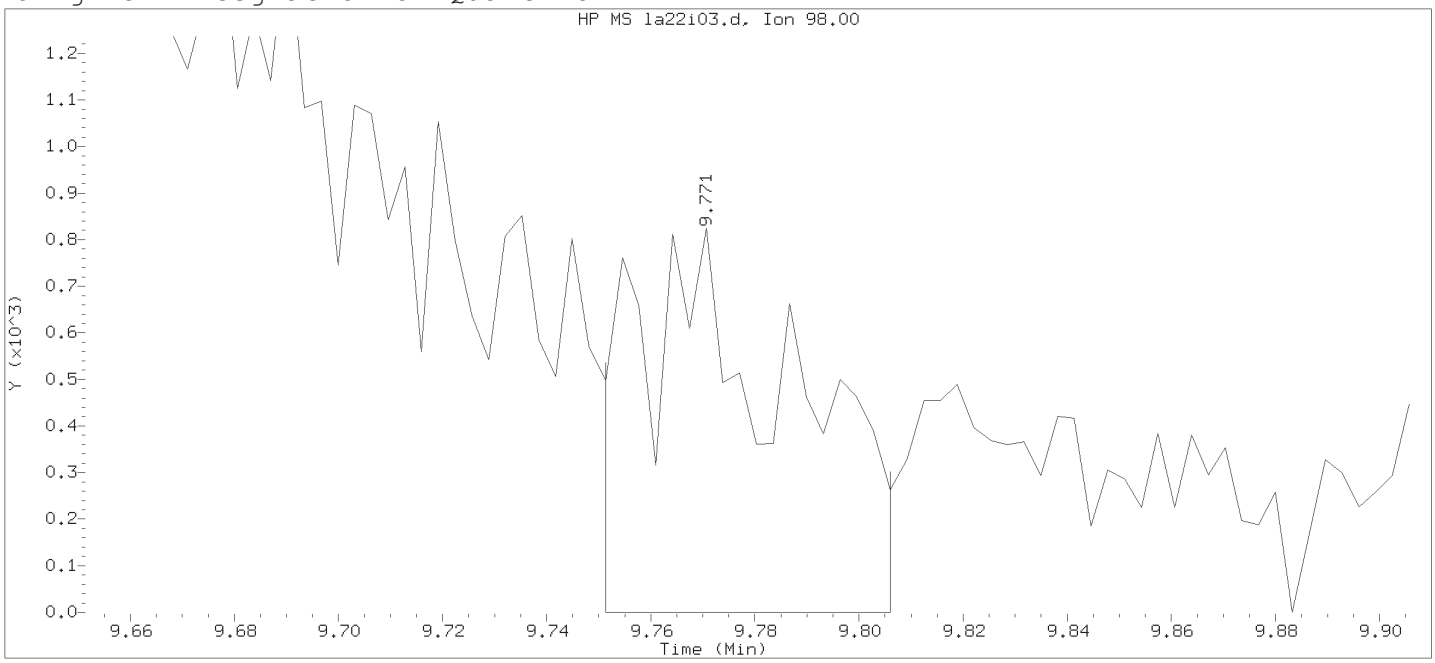
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

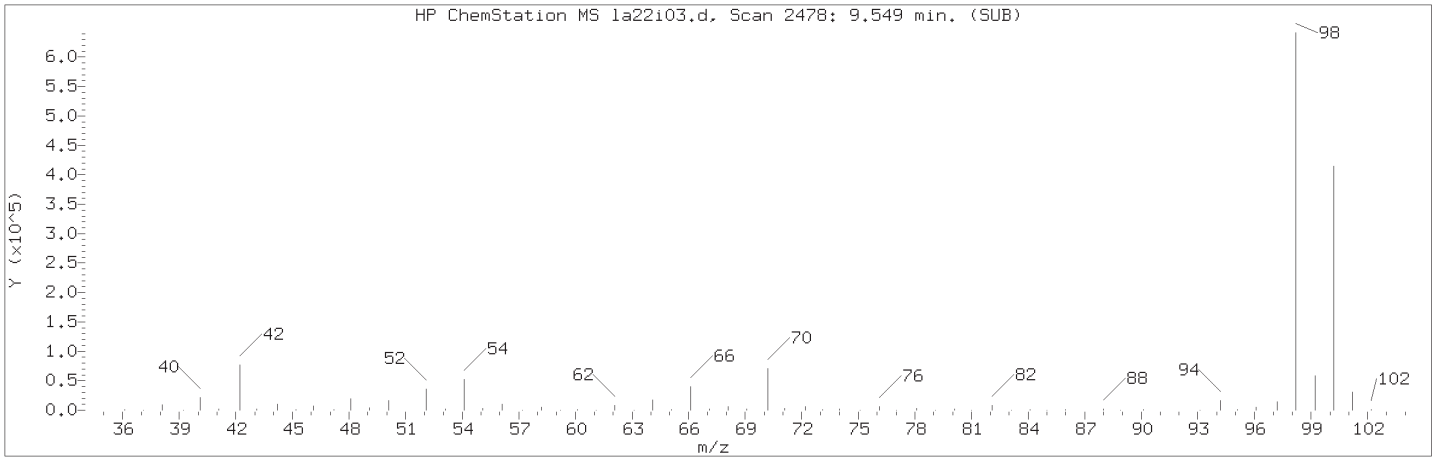
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

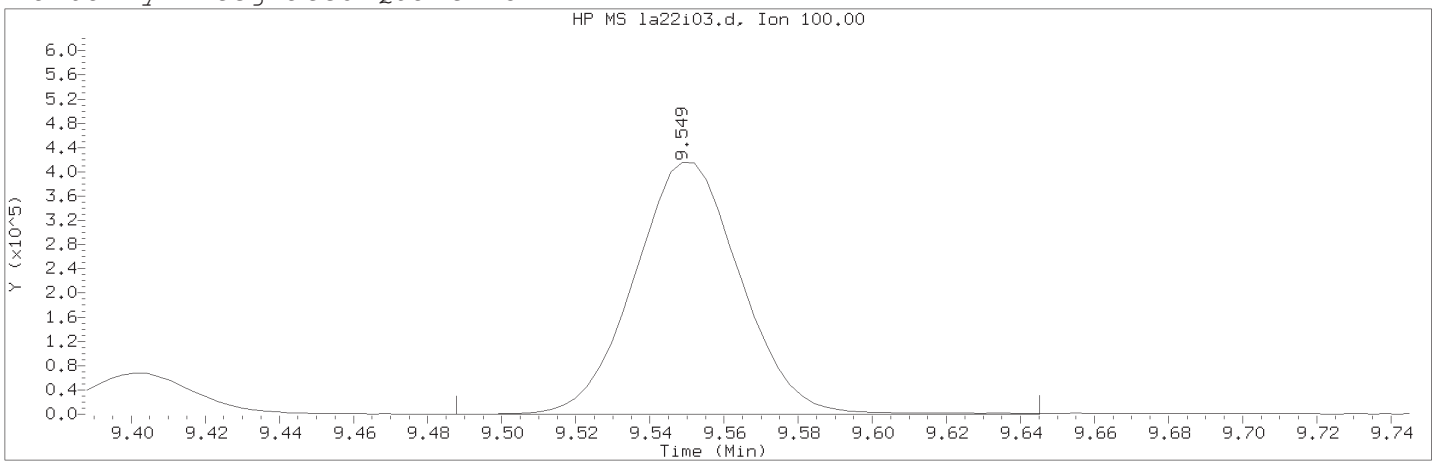
Compound Number : 83
Compound Name : Toluene-d8
Scan Number : 2547
Retention Time (minutes): 9.771
Quant Ion : 98.00
Area : 1726
On-column Amount (ng) : 0.4101
Integration start scan : 2540 Integration stop scan: 2557
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data Brett W. Kenyon 13231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

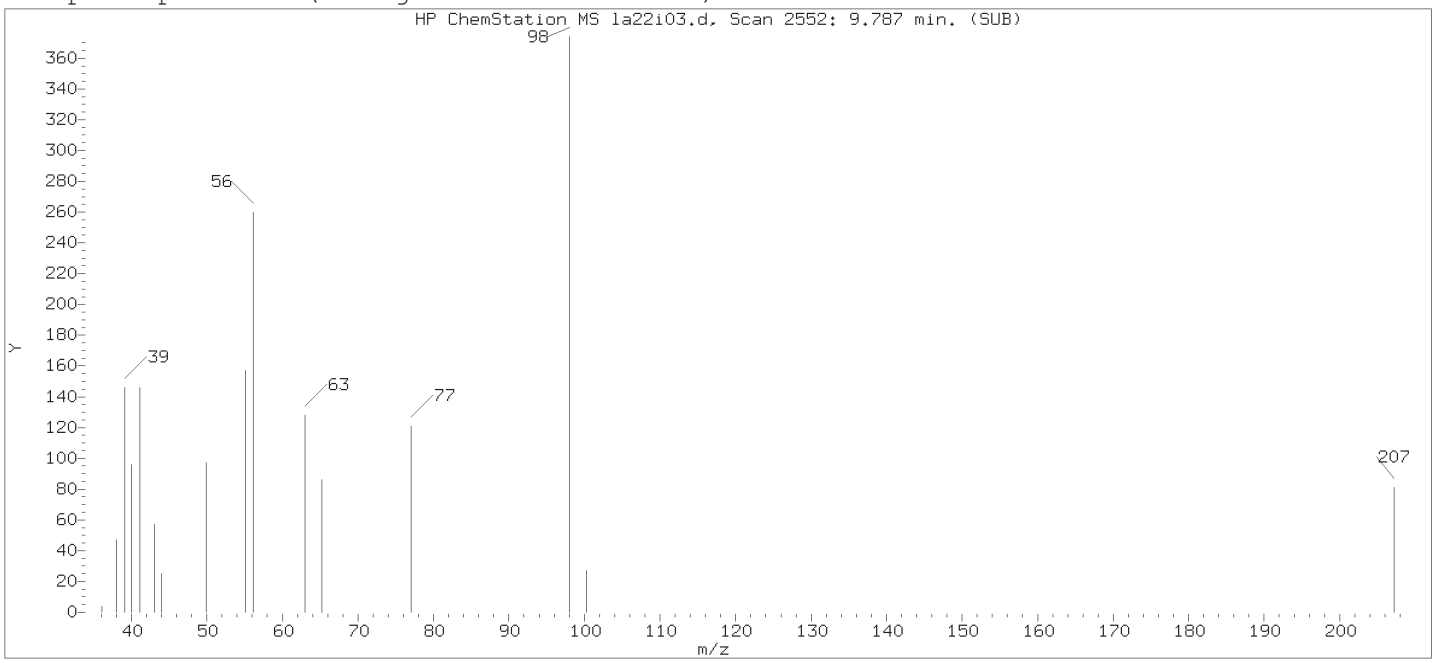
Compound Number : 83
Compound Name : Toluene-d8
Scan Number : 2478
Retention Time (minutes): 9.549
Quant Ion : 100.00
Area (flag) : 828075A
On-Column Amount (ng) : 49.7009
Integration start scan : 2458 Integration stop scan: 2507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

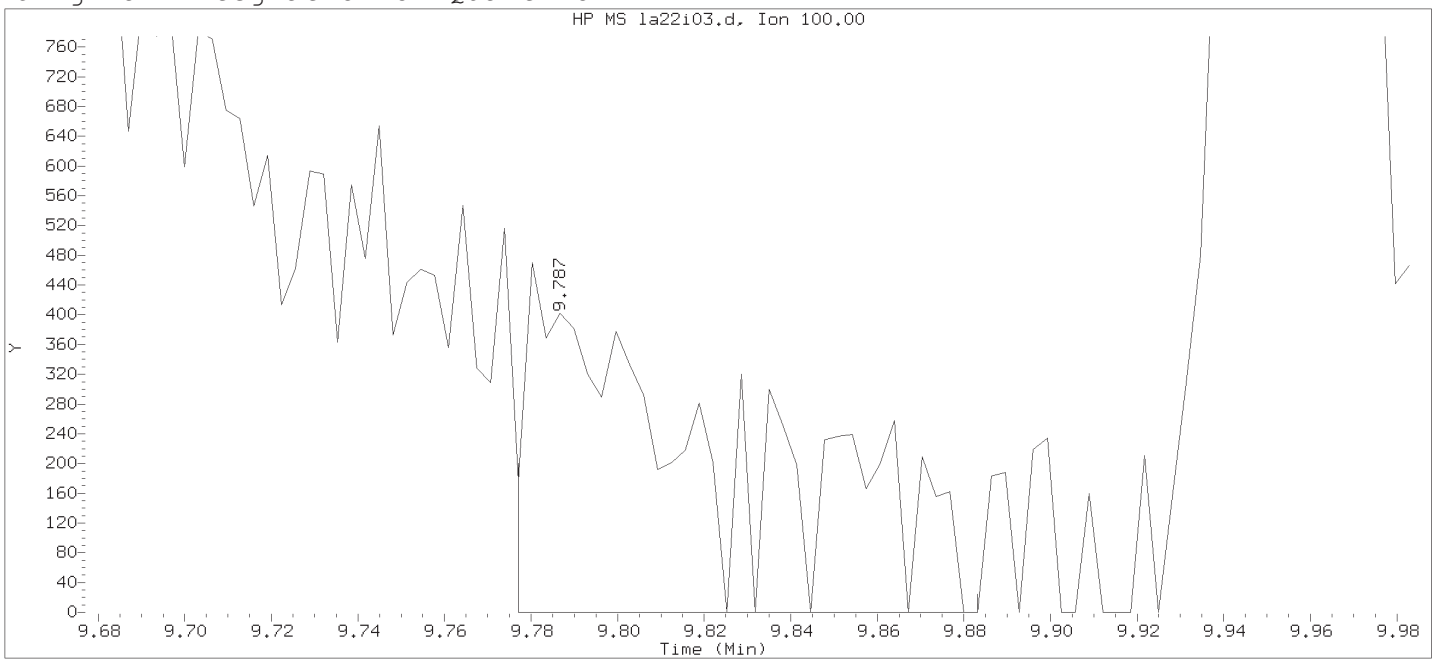
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

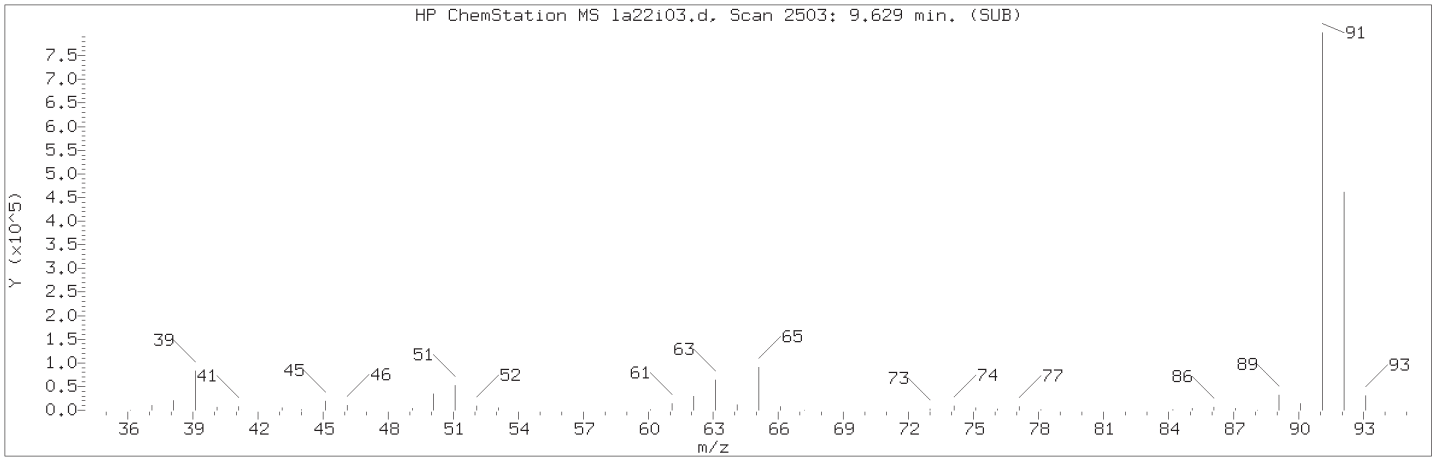
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

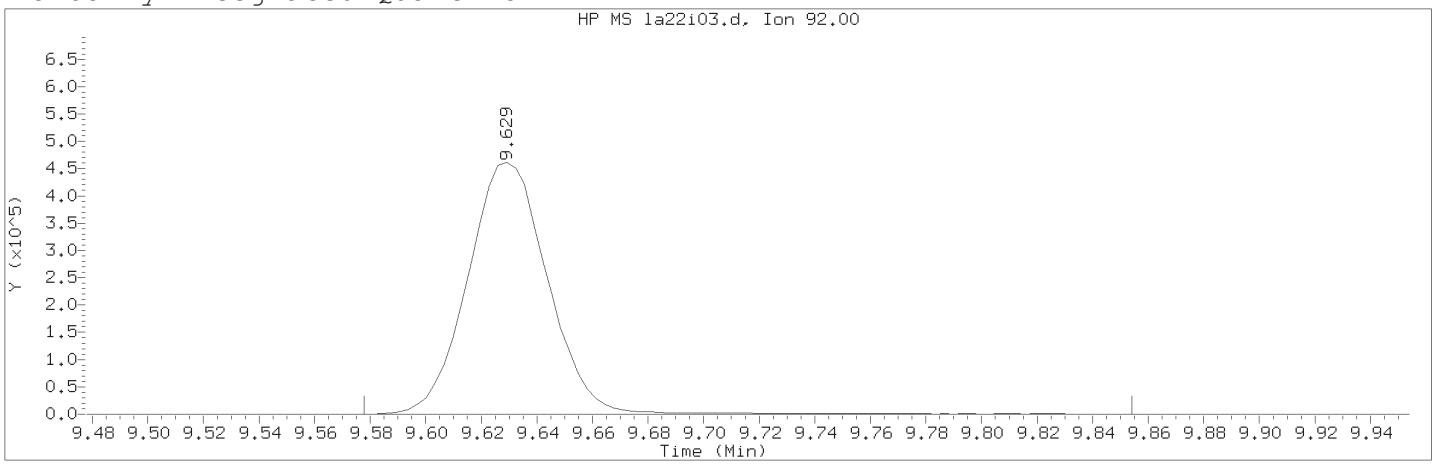
Compound Number : 83
Compound Name : Toluene-d8
Scan Number : 2552
Retention Time (minutes): 9.787
Quant Ion : 100.00
Area : 1416
On-column Amount (ng) : 0.5159
Integration start scan : 2548 Integration stop scan: 2581
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

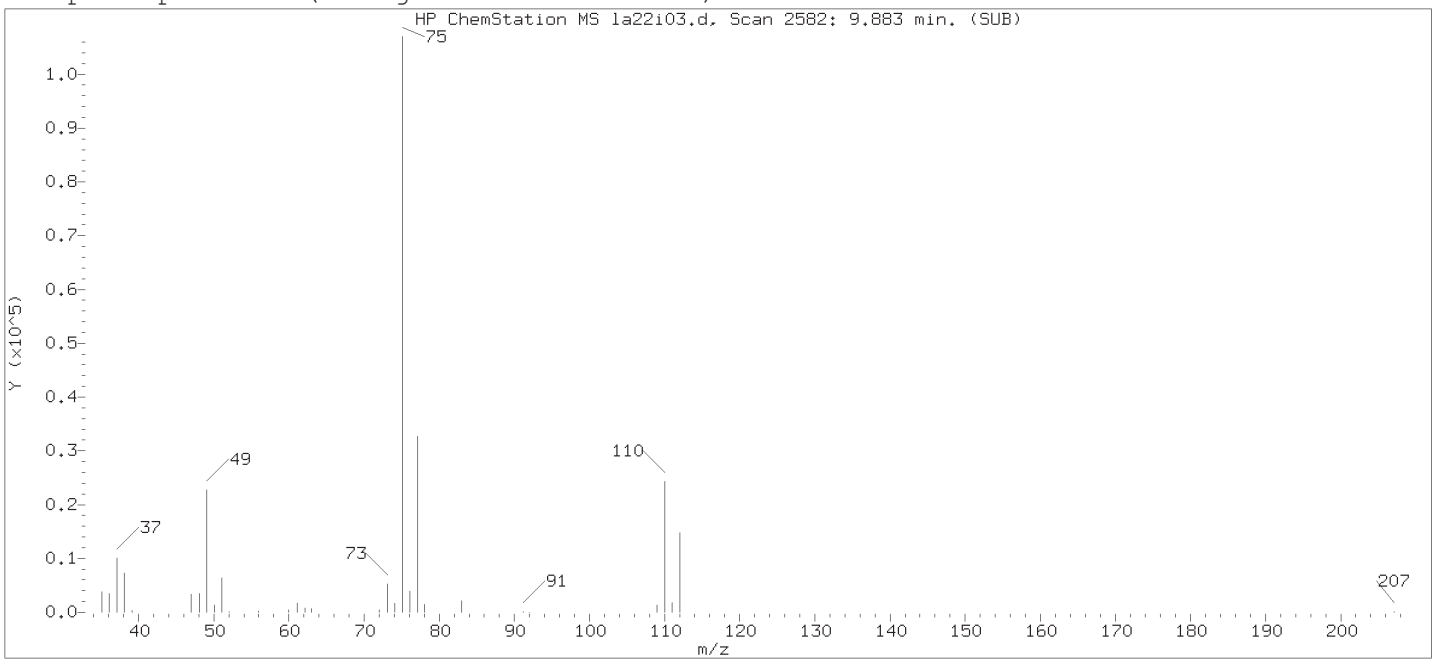
Compound Number : 88
Compound Name : Toluene
Scan Number : 2503
Retention Time (minutes): 9.629
Quant Ion : 92.00
Area (flag) : 922468A
On-Column Amount (ng) : 53.0330
Integration start scan : 2486 Integration stop scan: 2572
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

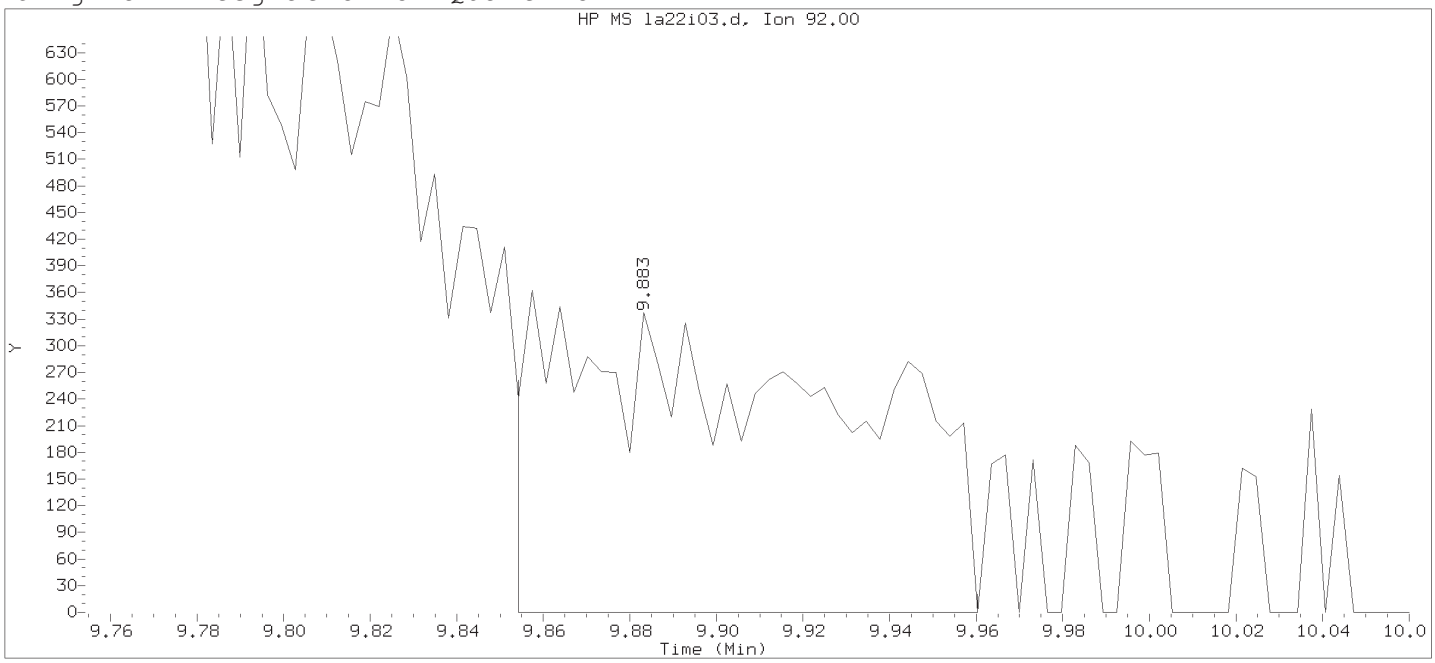
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

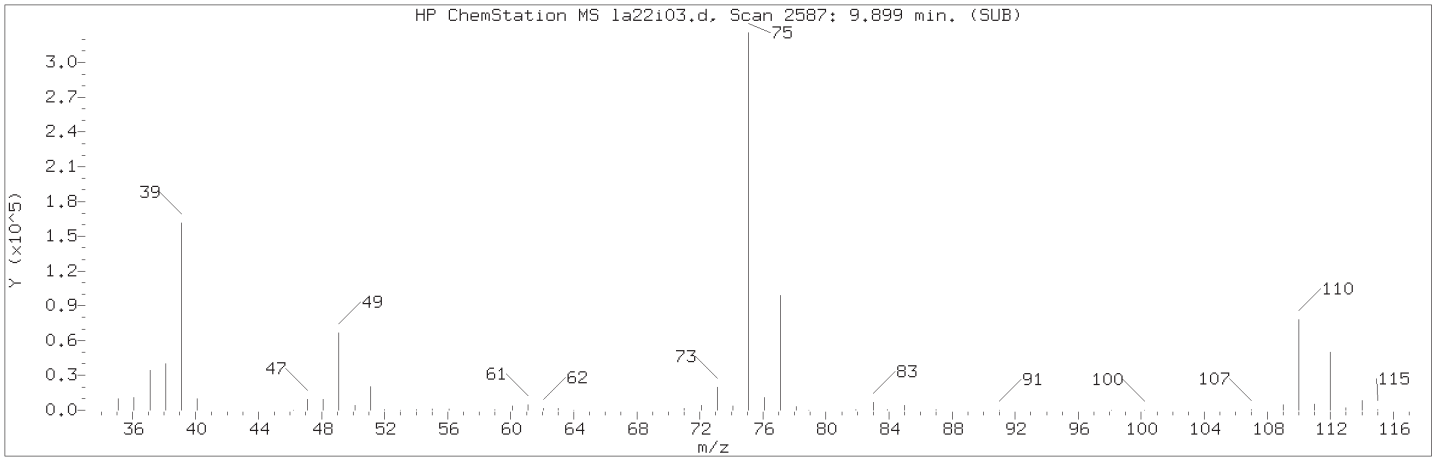
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

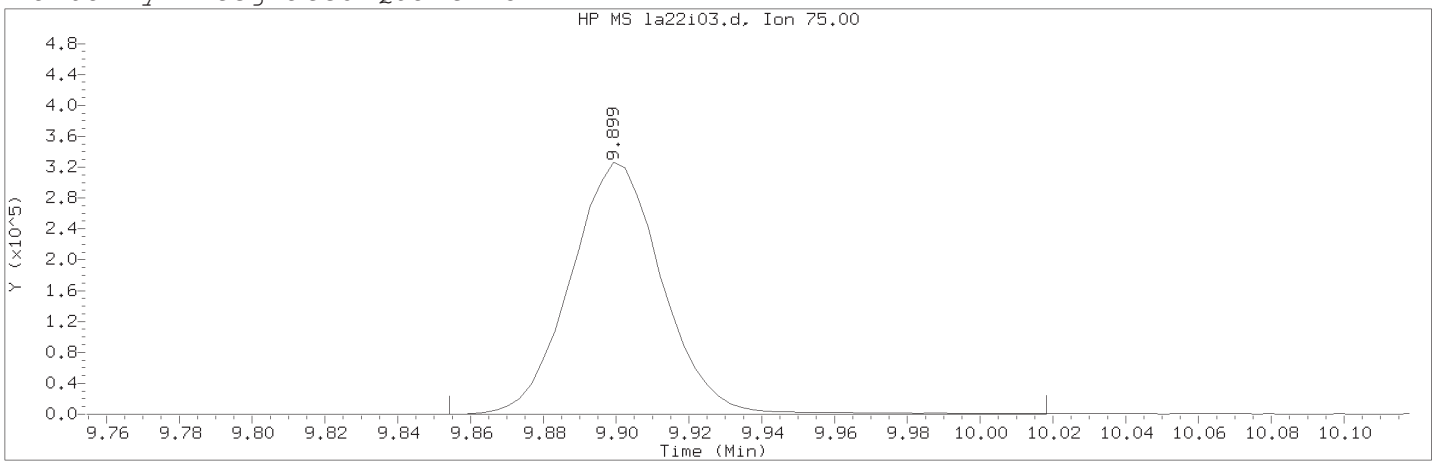
Compound Number	: 88		
Compound Name	: Toluene		
Scan Number	: 2582		
Retention Time (minutes)	: 9.883		
Quant Ion	: 92.00		
Area	: 1579		
On-column Amount (ng)	: 0.3941		
Integration start scan	: 2572	Integration stop scan:	2605
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature.dat: Unknown 3231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

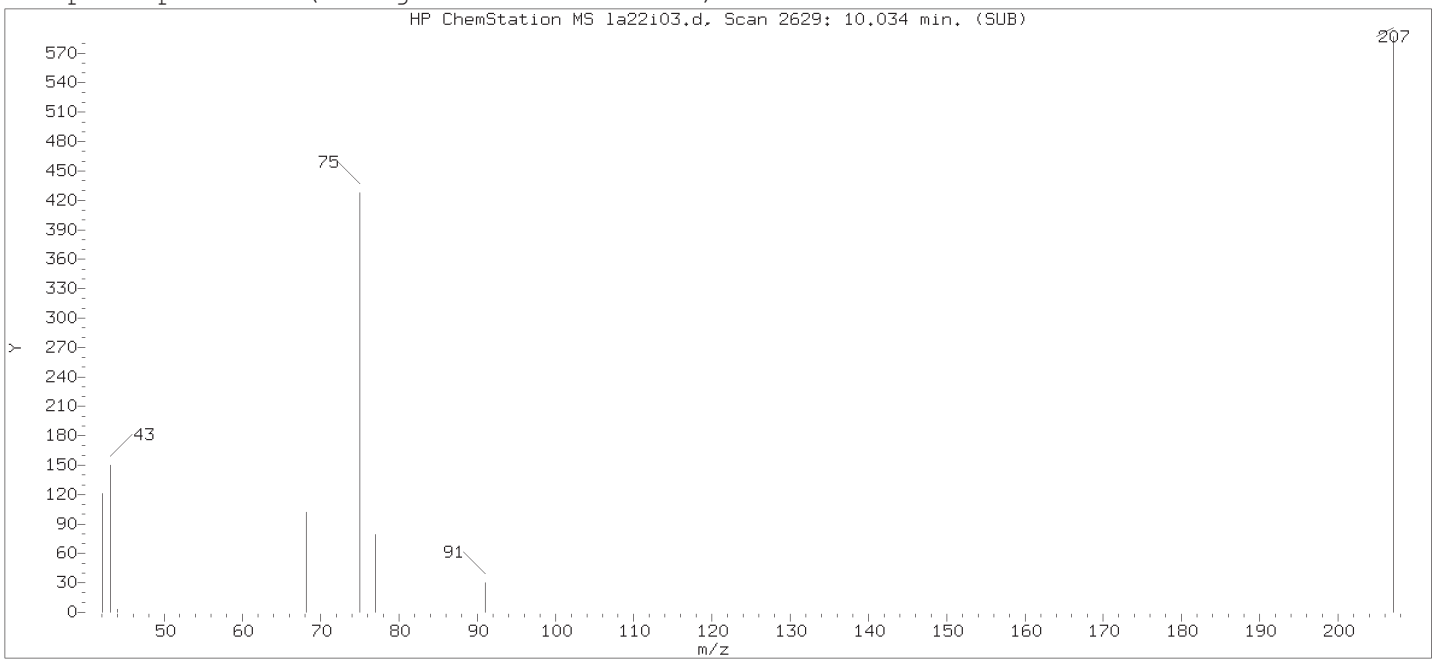
Compound Number : 89
Compound Name : trans-1,3-Dichloropropene
Scan Number : 2587
Retention Time (minutes): 9.899
Quant Ion : 75.00
Area (flag) : 570627A
On-Column Amount (ng) : 56.6183
Integration start scan : 2572 Integration stop scan: 2623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

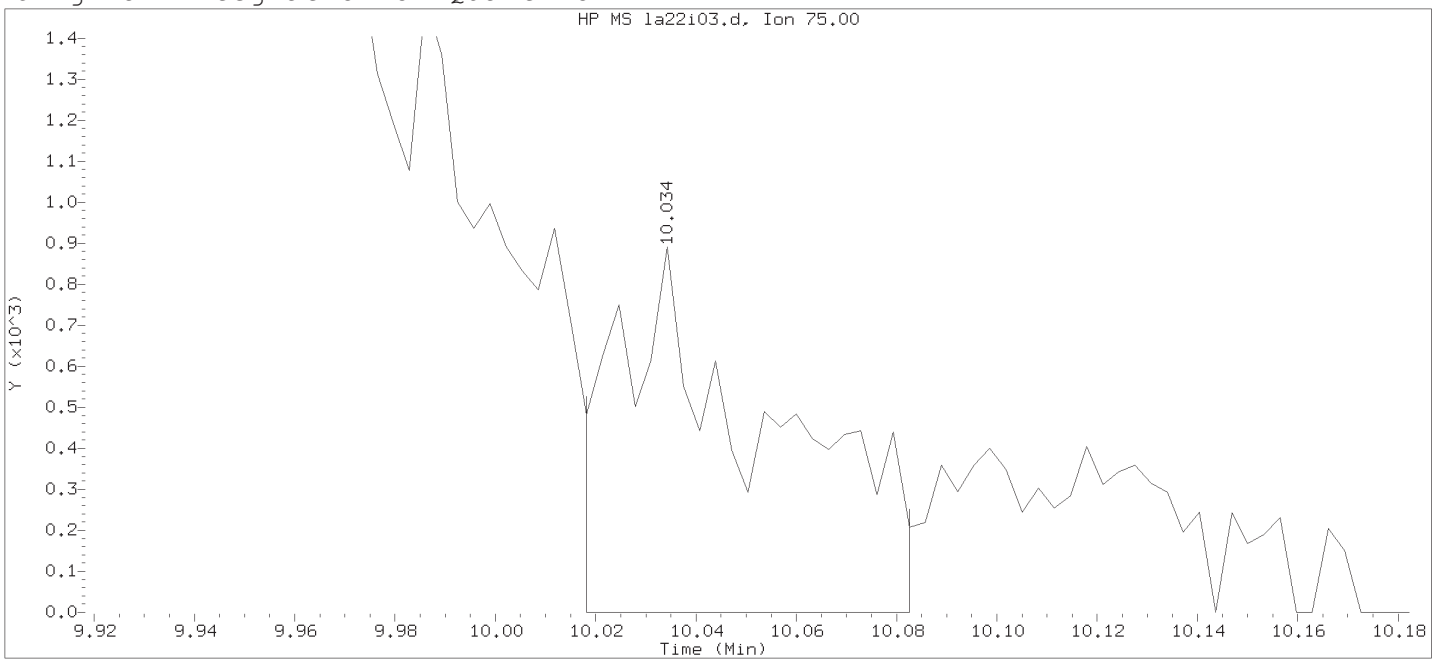
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

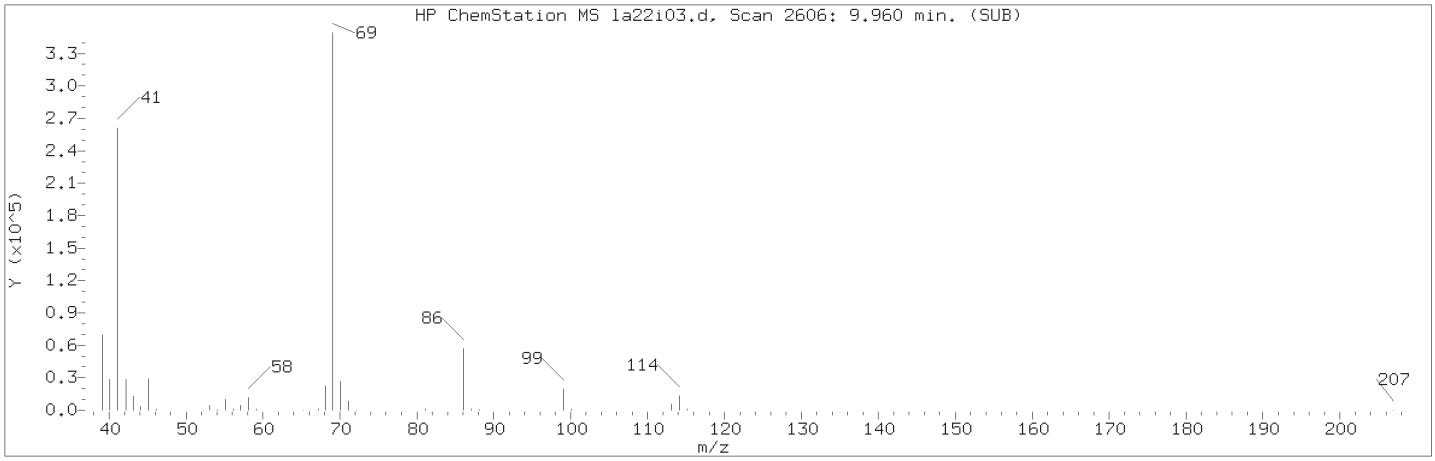
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

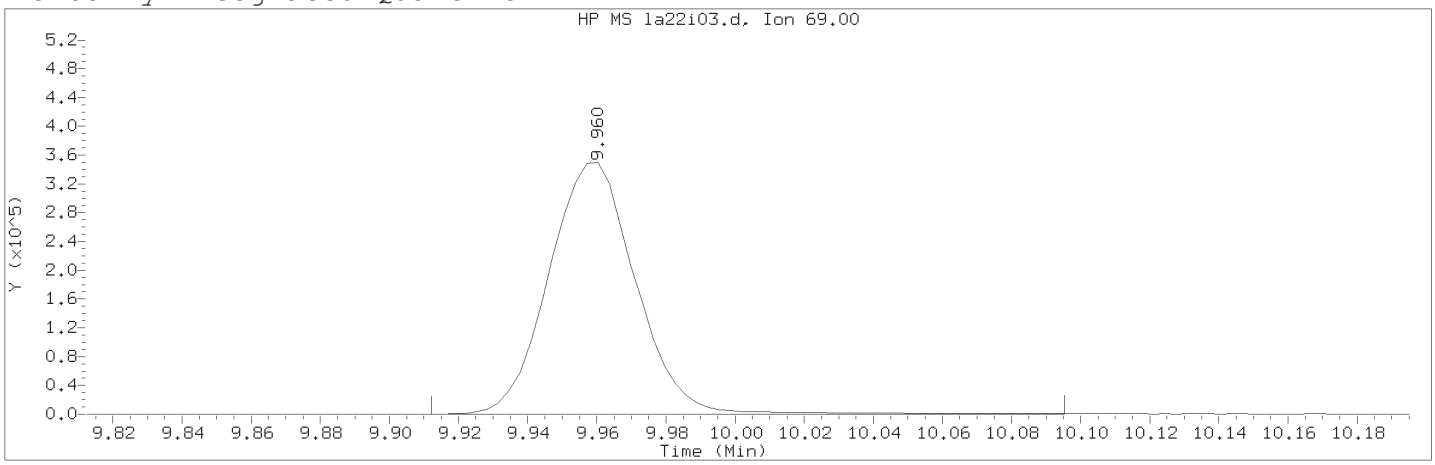
Compound Number : 89
Compound Name : trans-1,3-Dichloropropene
Scan Number : 2629
Retention Time (minutes): 10.034
Quant Ion : 75.00
Area : 1904
On-column Amount (ng) : 104.7705
Integration start scan : 2623 Integration stop scan: 2643
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

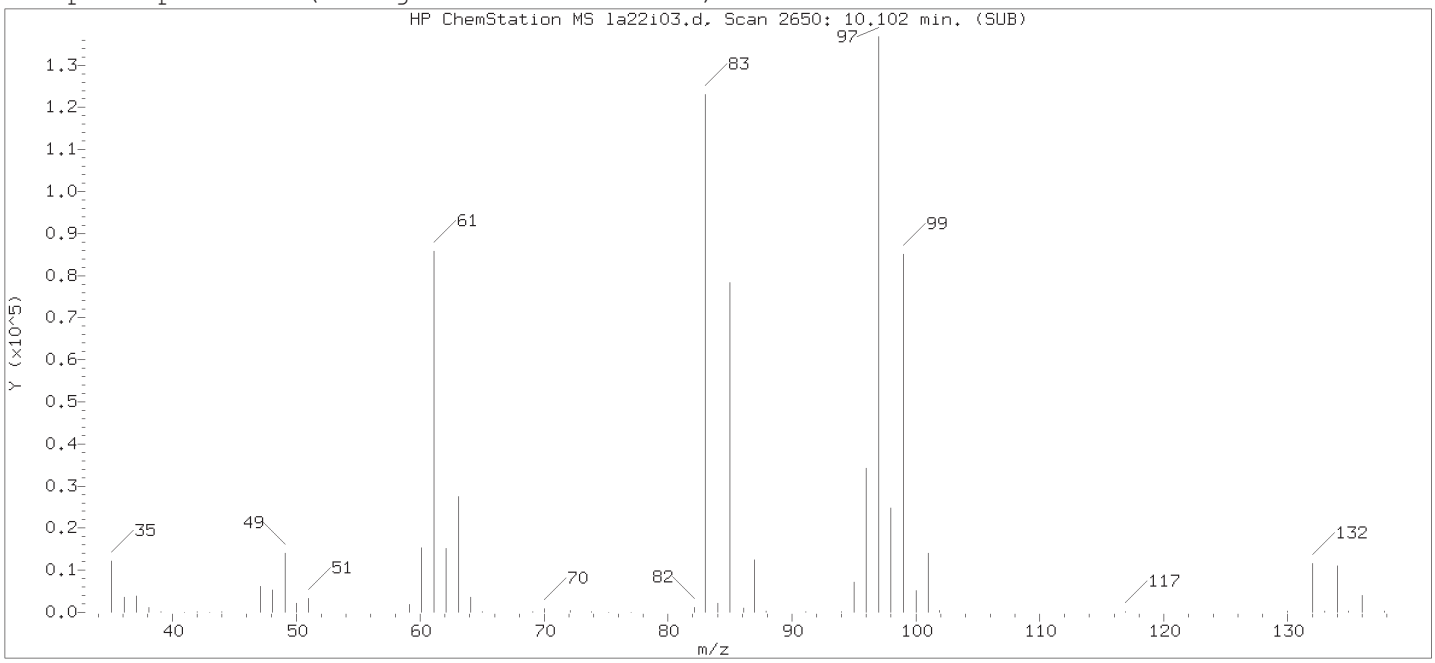
Compound Number : 91
Compound Name : Ethyl Methacrylate
Scan Number : 2606
Retention Time (minutes): 9.960
Quant Ion : 69.00
Area (flag) : 610931M
On-Column Amount (ng) : 54.7193
Integration start scan : 2590 Integration stop scan: 2647
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

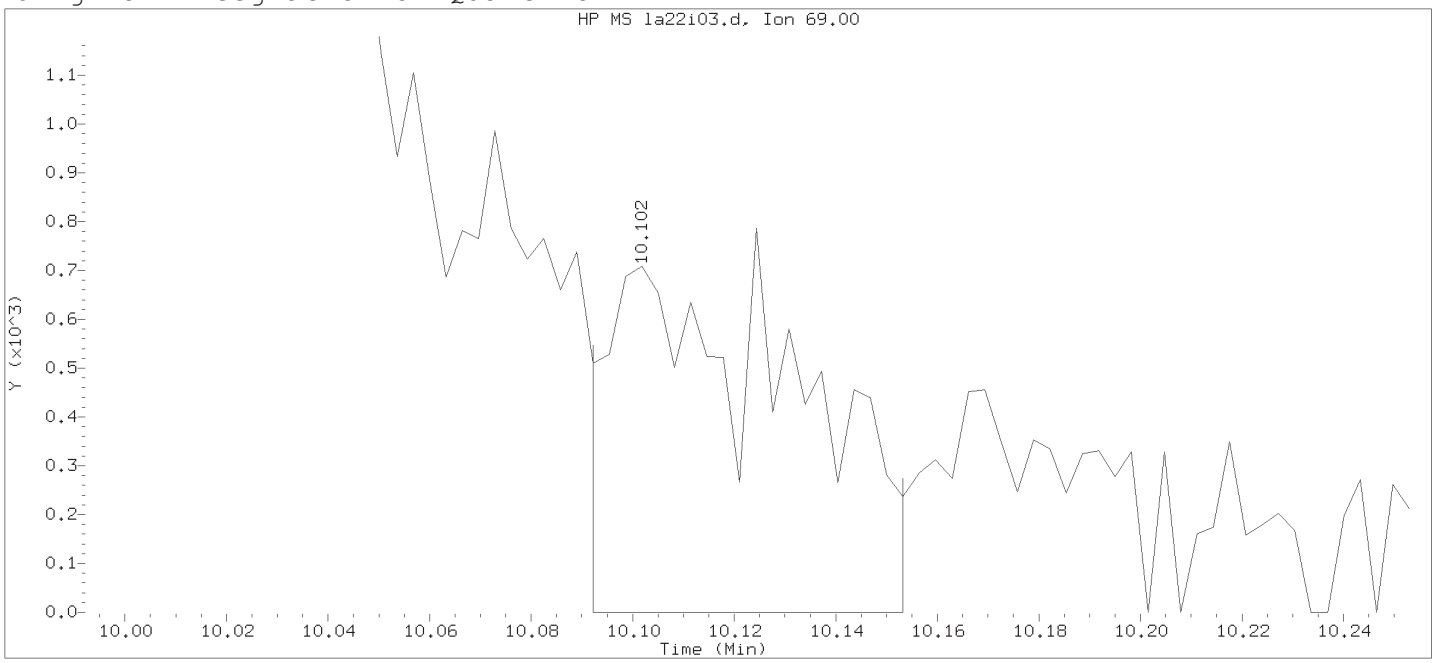
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

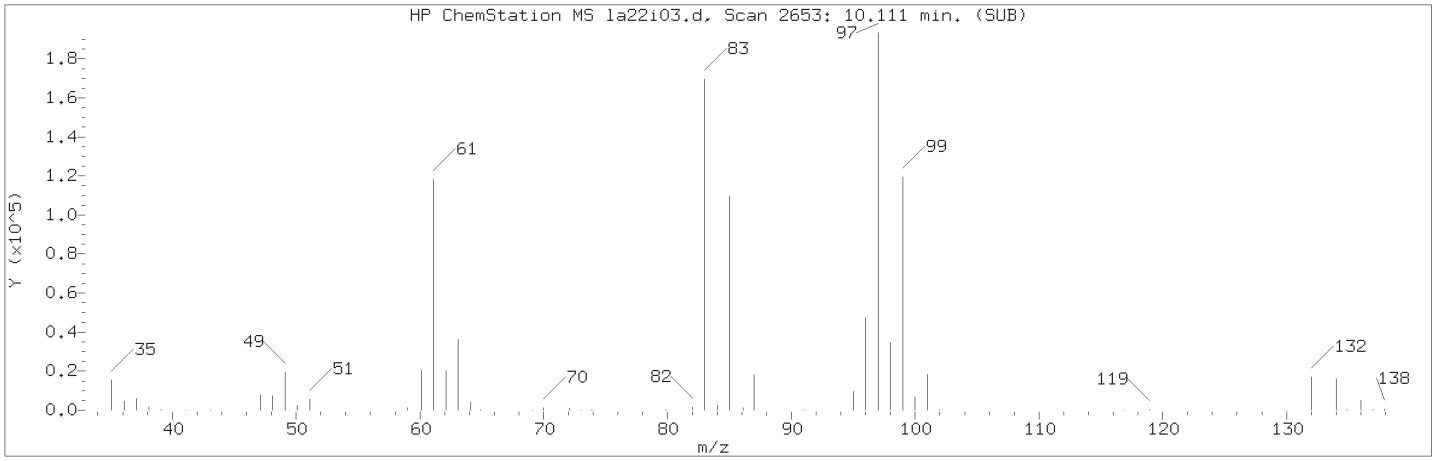
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

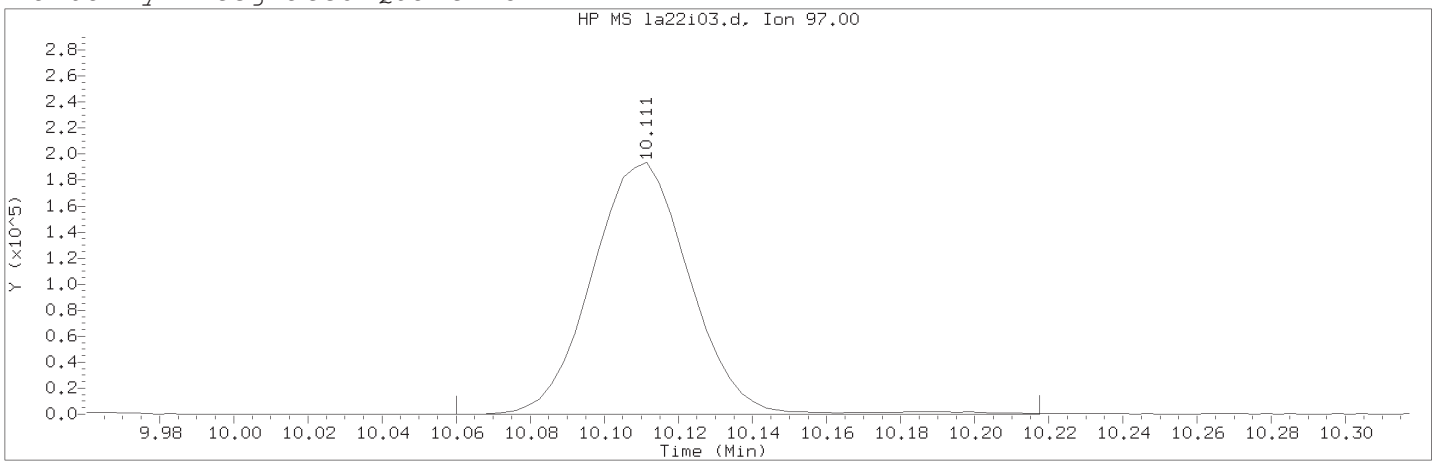
Compound Number	: 91		
Compound Name	: Ethyl Methacrylate		
Scan Number	: 2650		
Retention Time (minutes)	: 10.102		
Quant Ion	: 69.00		
Area	: 1840		
On-column Amount (ng)	: 2.7006		
Integration start scan	: 2646	Integration stop scan:	2665
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: 3231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

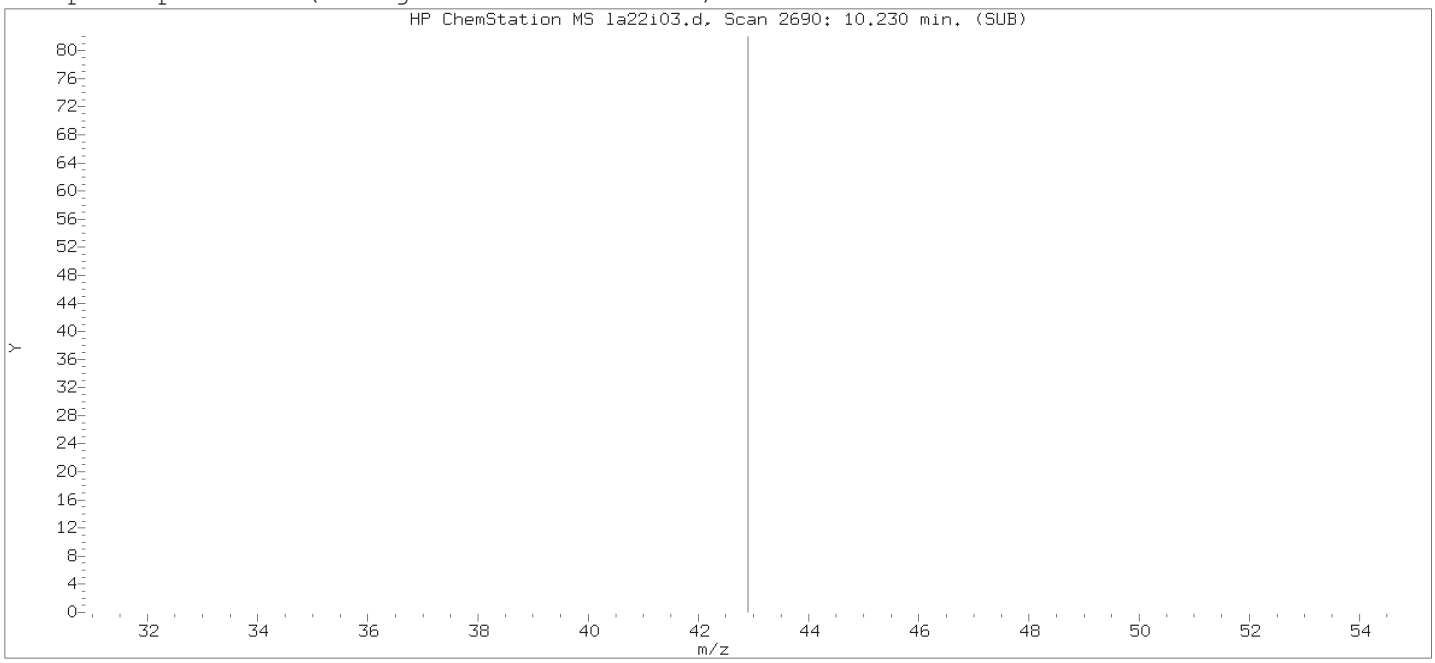
Compound Number : 92
Compound Name : 1,1,2-Trichloroethane
Scan Number : 2653
Retention Time (minutes): 10.111
Quant Ion : 97.00
Area (flag) : 354782A
On-Column Amount (ng) : 52.4959
Integration start scan : 2636 Integration stop scan: 2685
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

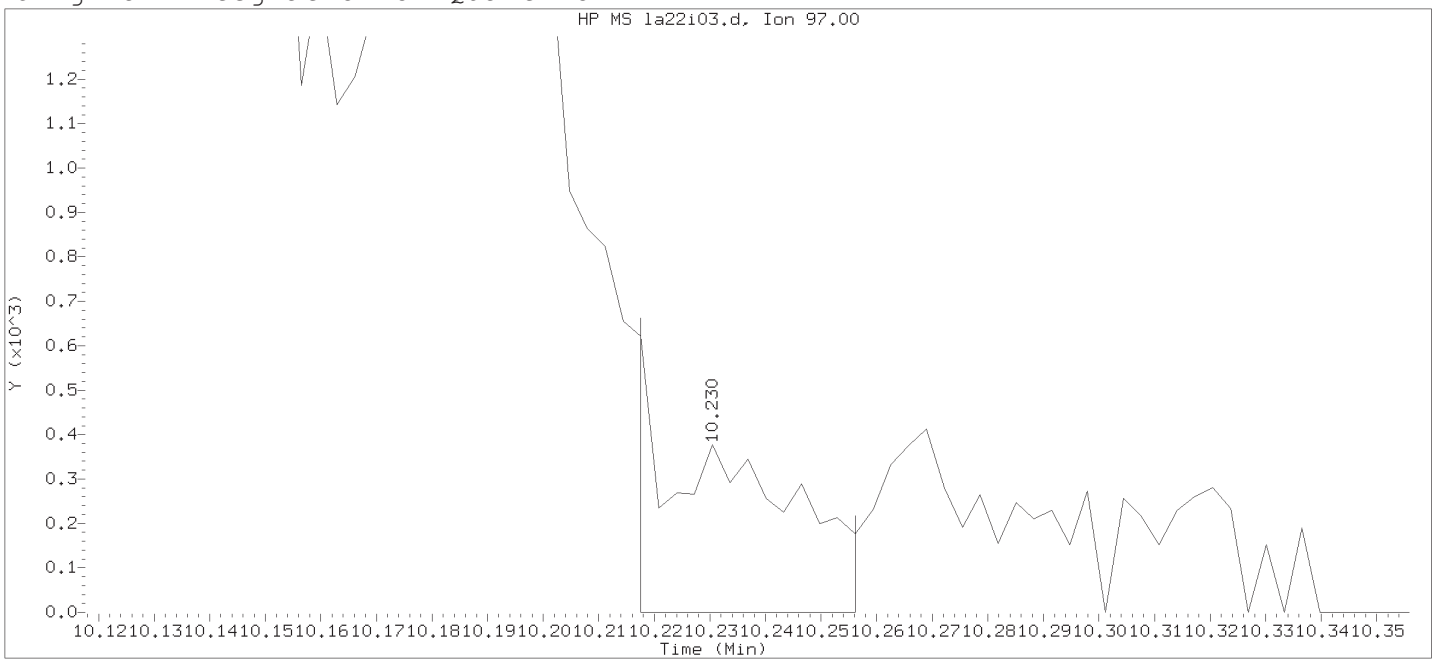
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

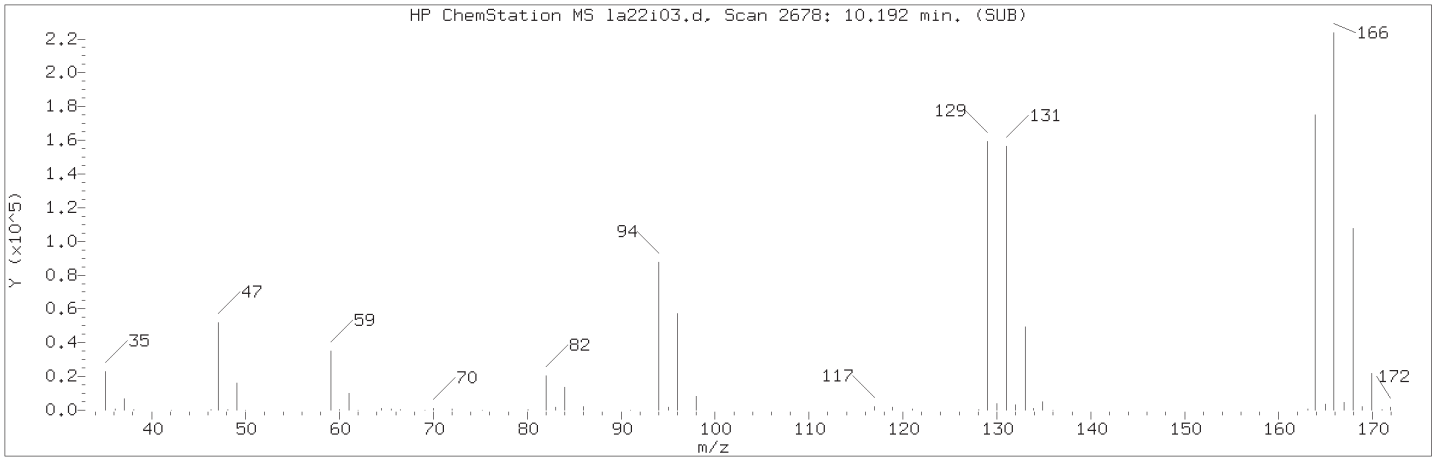
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

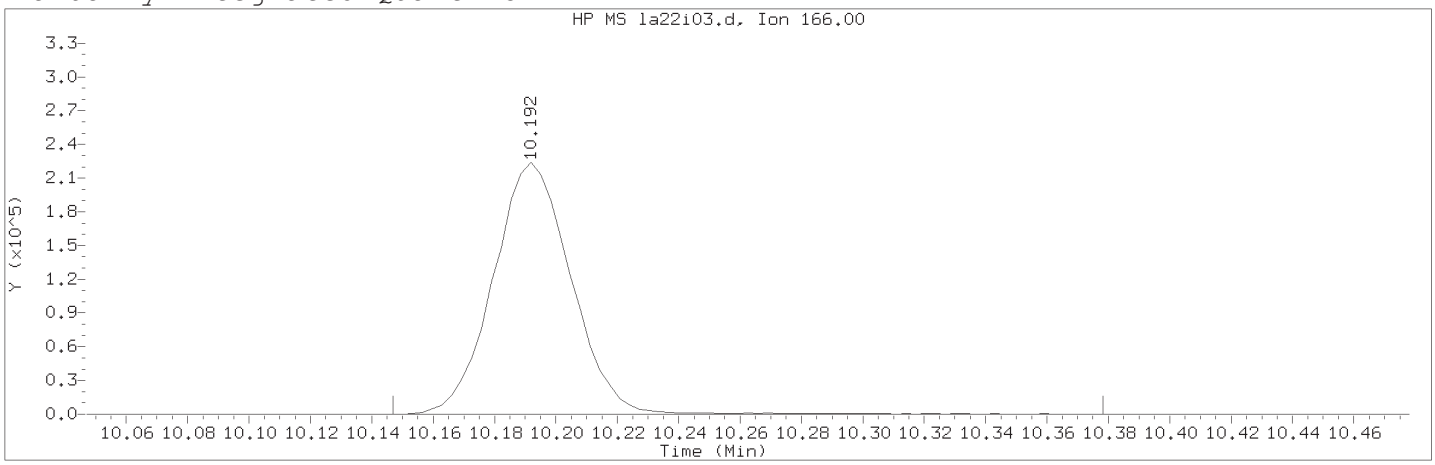
Compound Number : 92
Compound Name : 1,1,2-Trichloroethane
Scan Number : 2690
Retention Time (minutes): 10.230
Quant Ion : 97.00
Area : 649
On-column Amount (ng) : 51.8200
Integration start scan : 2685 Integration stop scan: 2697
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: la22i03.d31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

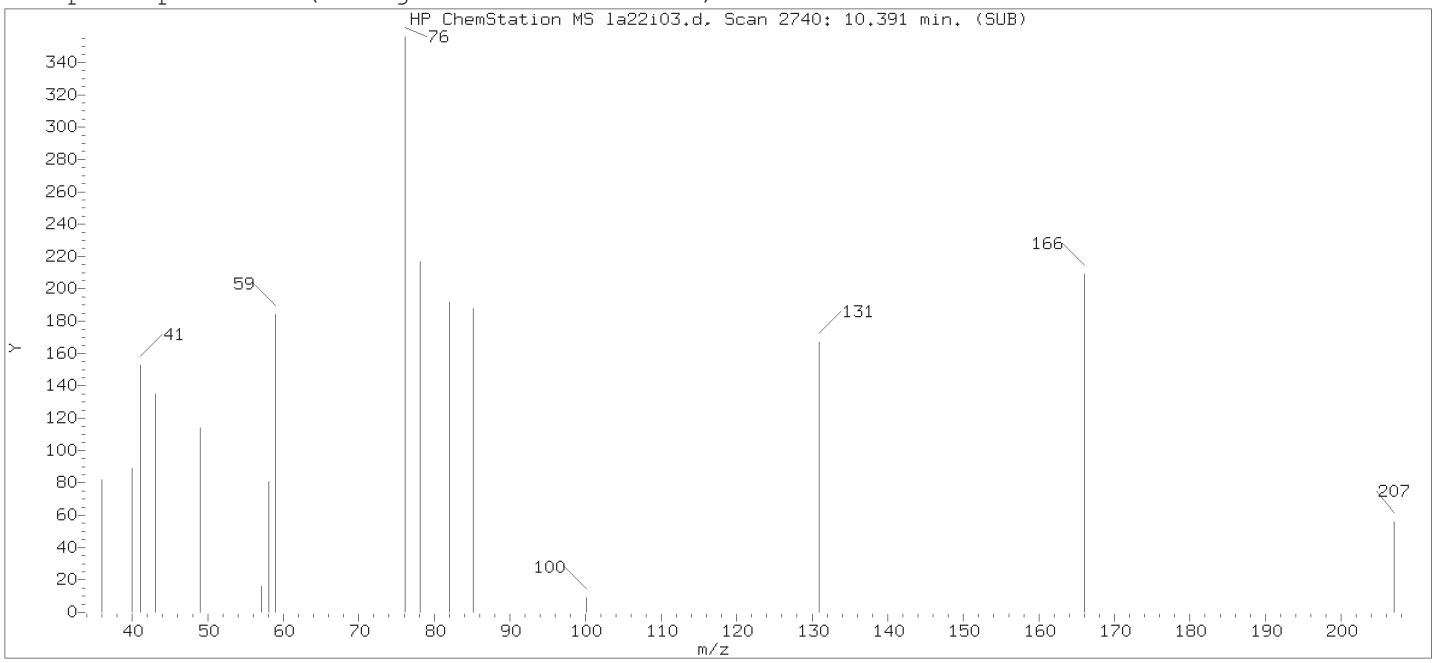
Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2678
Retention Time (minutes): 10.192
Quant Ion : 166.00
Area (flag) : 393724A
On-Column Amount (ng) : 53.4744
Integration start scan : 2663 Integration stop scan: 2735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

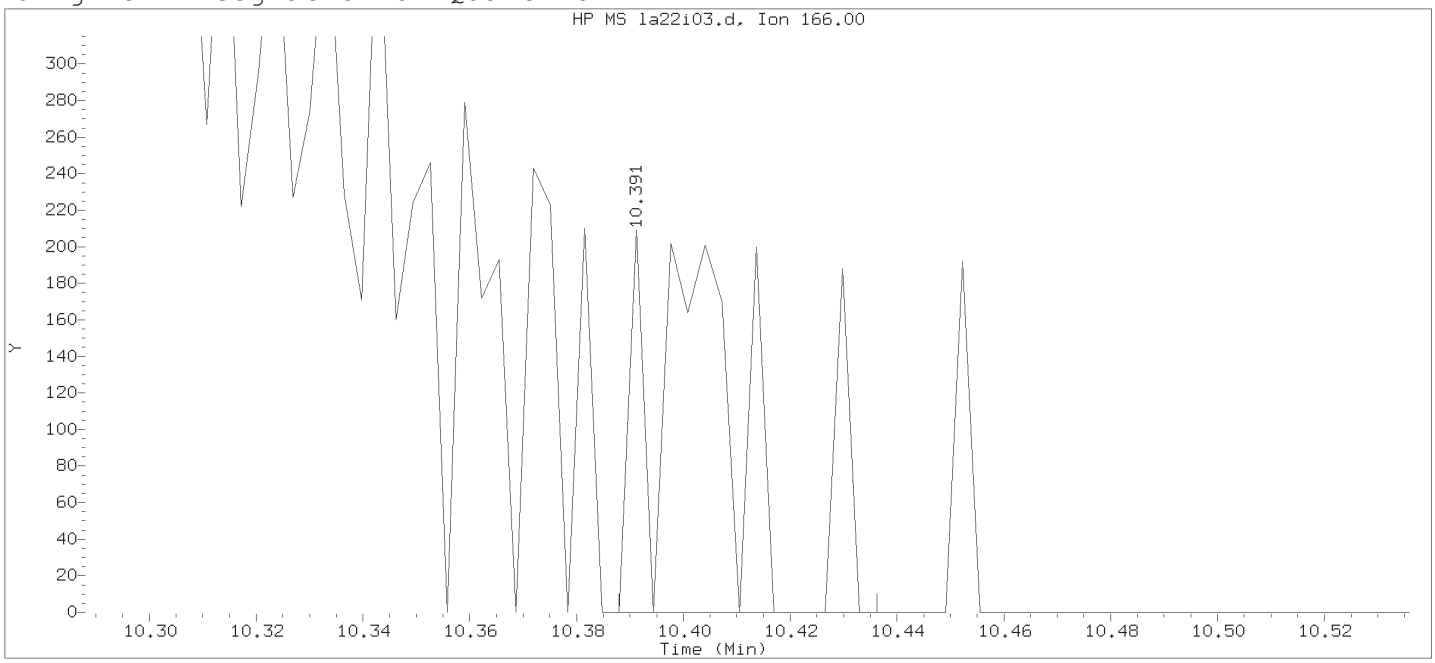
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

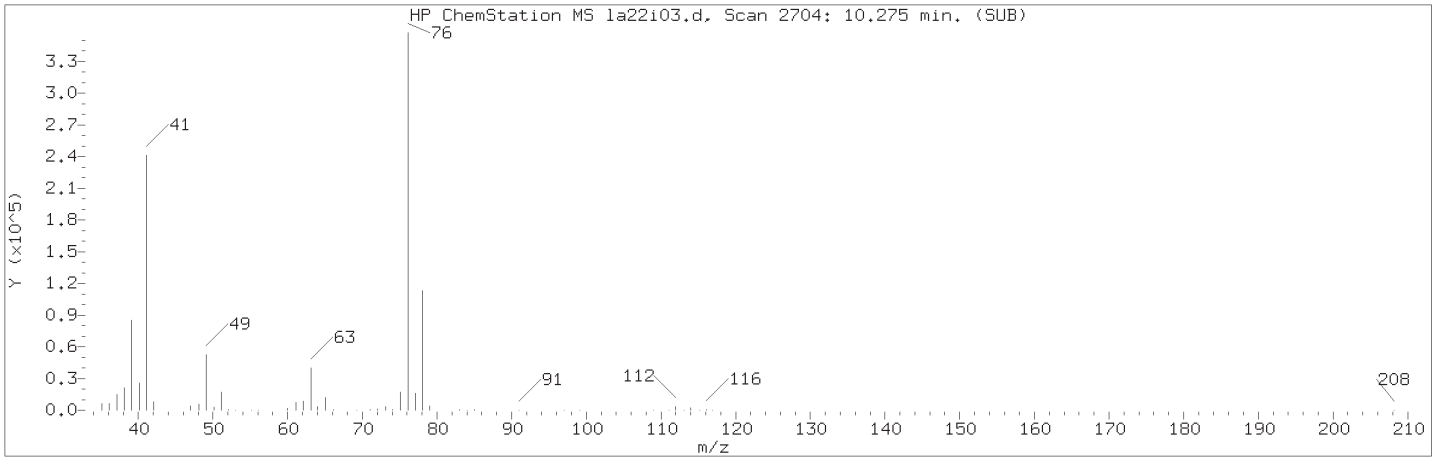
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

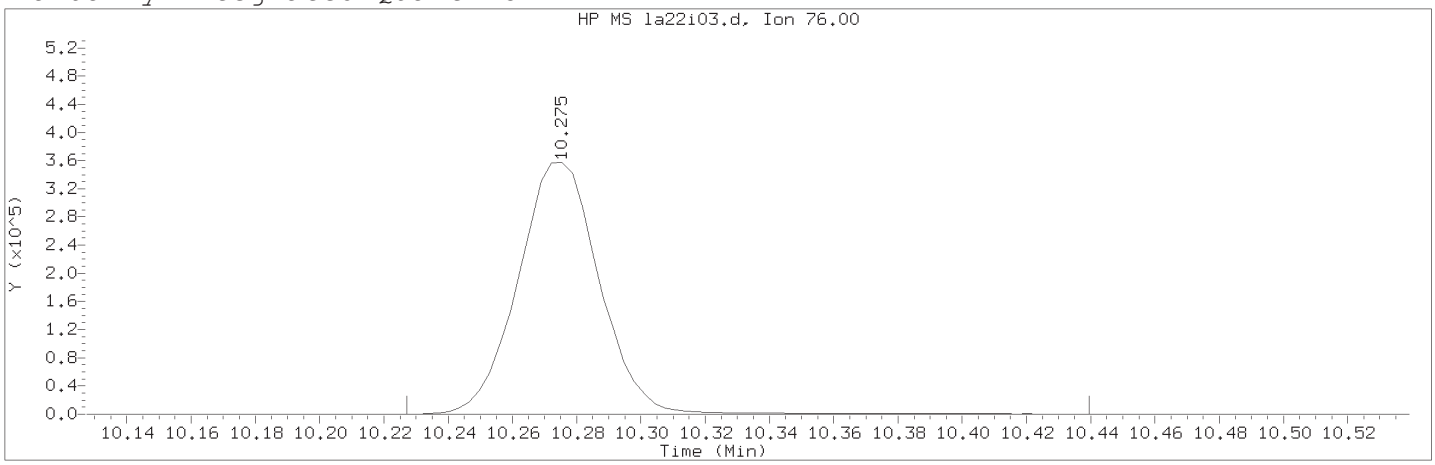
Compound Number	: 93		
Compound Name	: Tetrachloroethene		
Scan Number	: 2740		
Retention Time (minutes)	: 10.391		
Quant Ion	: 166.00		
Area	: 257		
On-column Amount (ng)	: 0.1484		
Integration start scan	: 2738	Integration stop scan:	2753
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

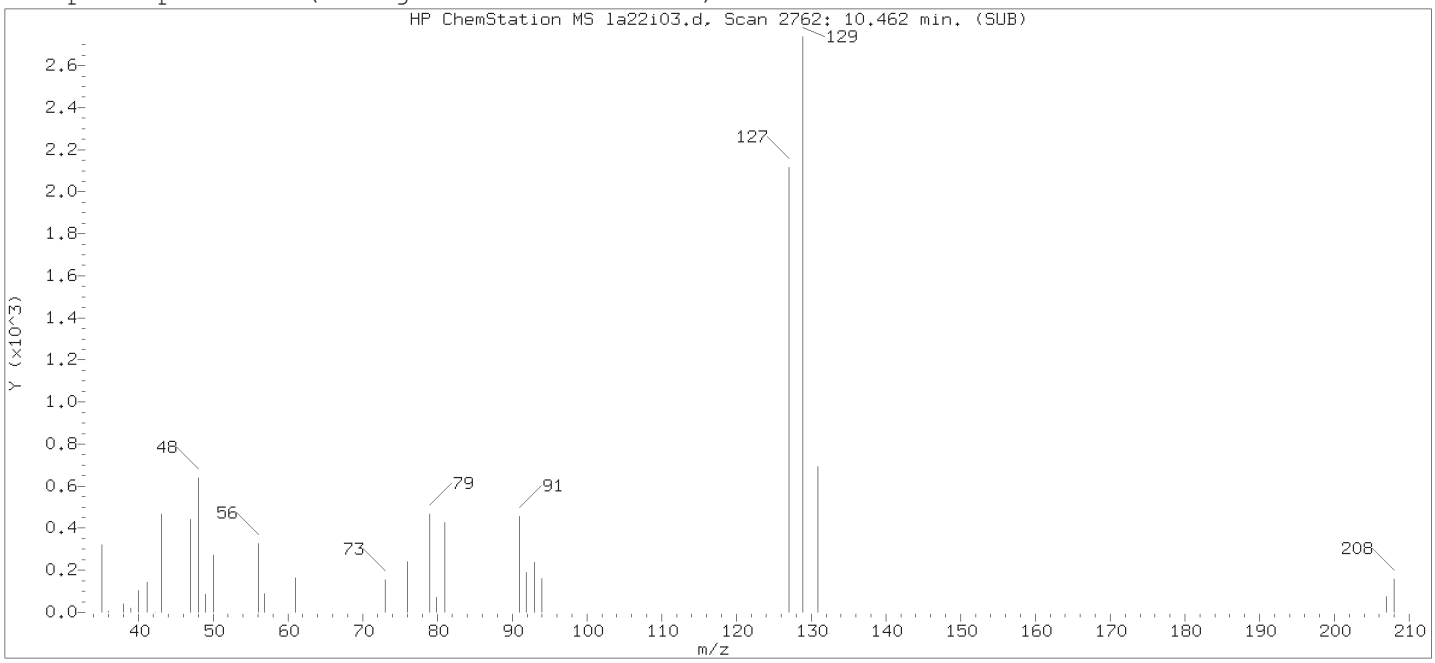
Compound Number : 94
Compound Name : 1,3-Dichloropropane
Scan Number : 2704
Retention Time (minutes): 10.275
Quant Ion : 76.00
Area (flag) : 628557A
On-Column Amount (ng) : 52.5160
Integration start scan : 2688 Integration stop scan: 2754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

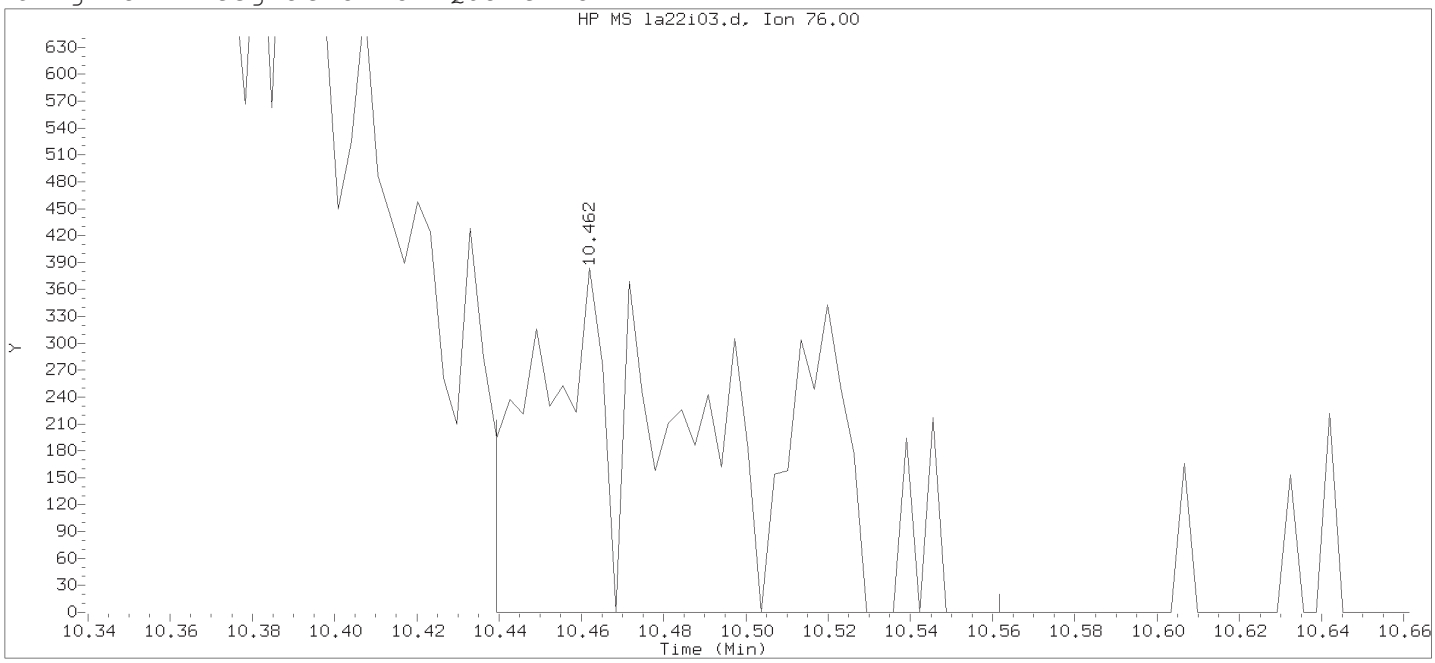
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

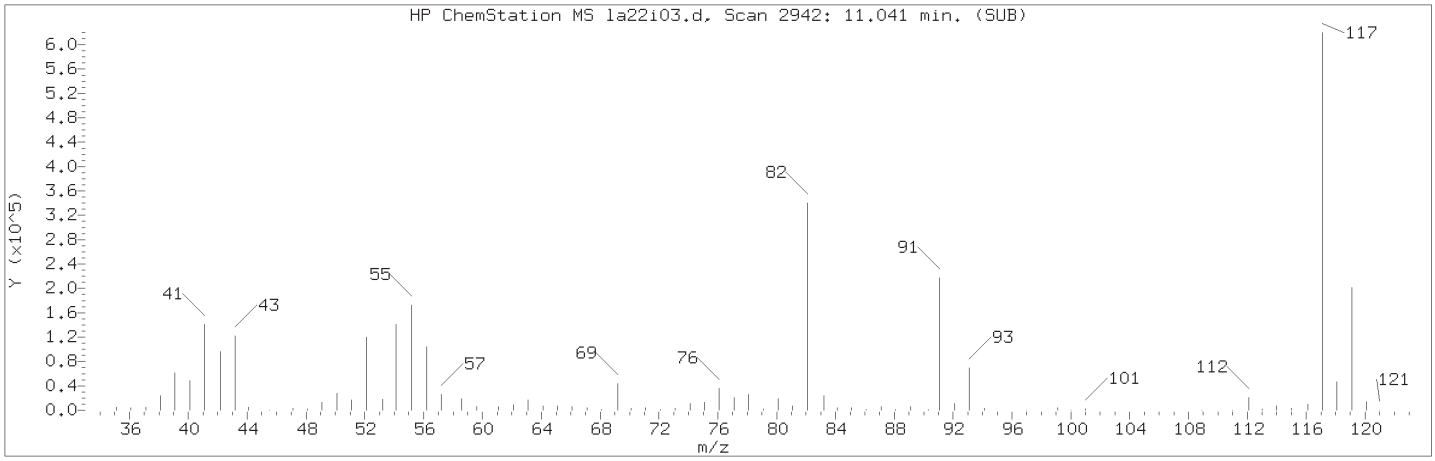
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

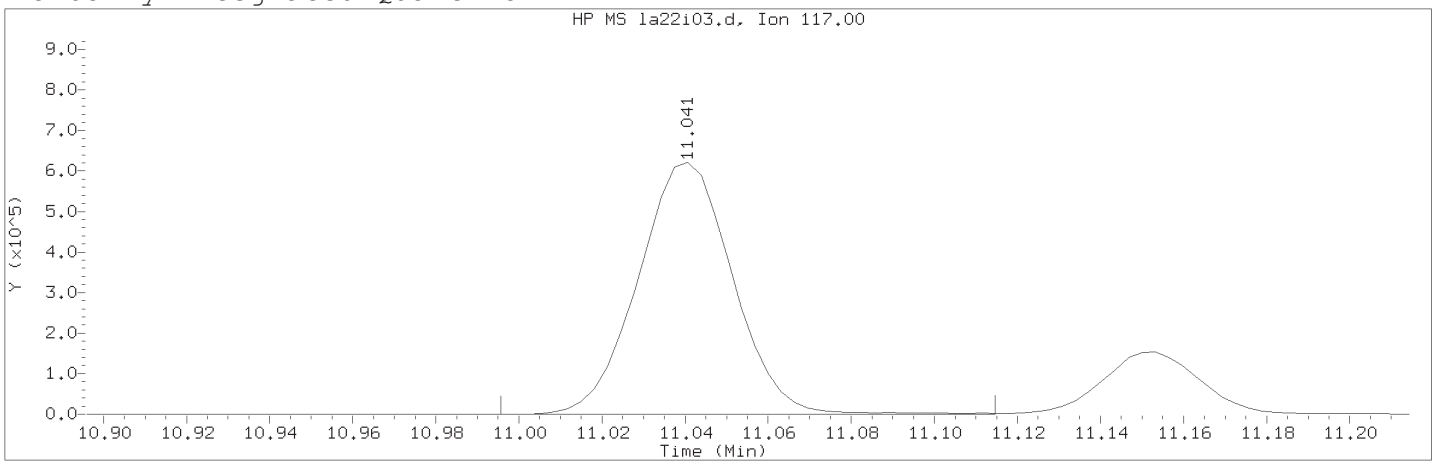
Compound Number : 94
Compound Name : 1,3-Dichloropropane
Scan Number : 2762
Retention Time (minutes): 10.462
Quant Ion : 76.00
Area : 1267
On-column Amount (ng) : 1.8592
Integration start scan : 2754 Integration stop scan: 2792
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

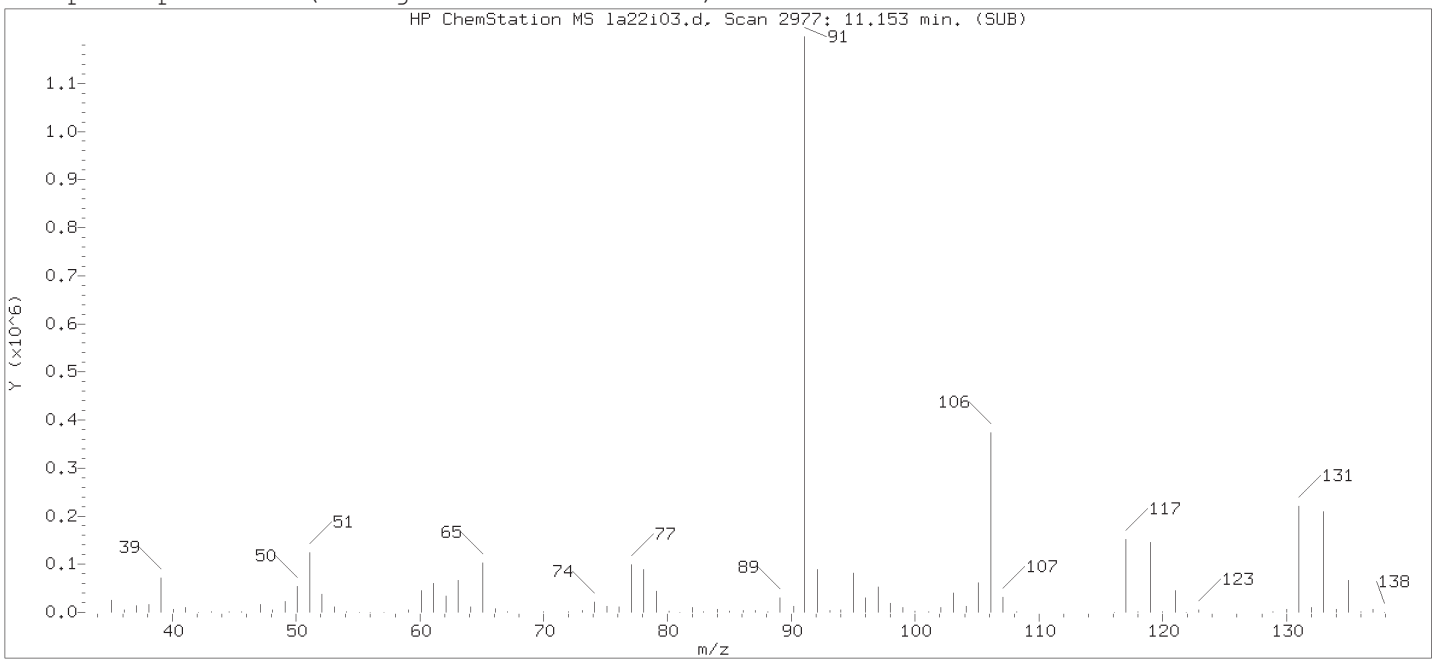
Compound Number : 100
Compound Name : Chlorobenzene-d5
Scan Number : 2942
Retention Time (minutes): 11.041
Quant Ion : 117.00
Area (flag) : 977519A
On-Column Amount (ng) : 50.0000
Integration start scan : 2927 Integration stop scan: 2964
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

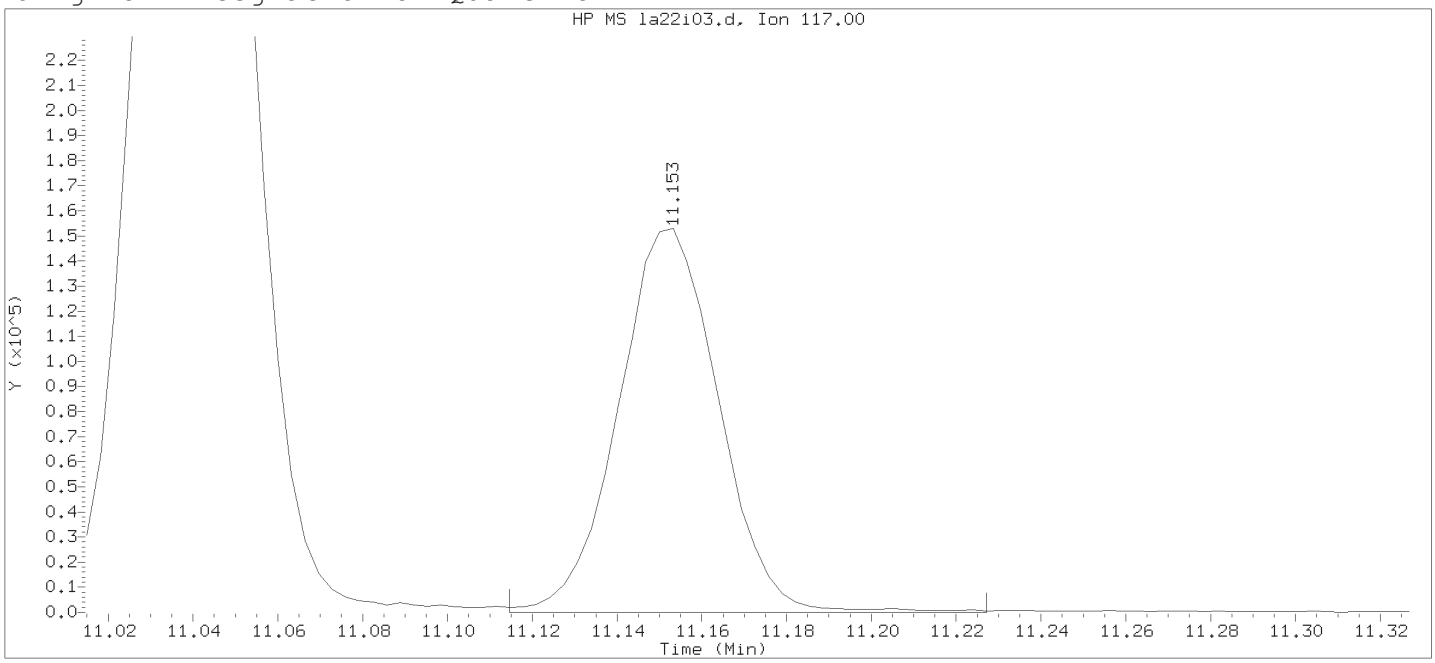
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

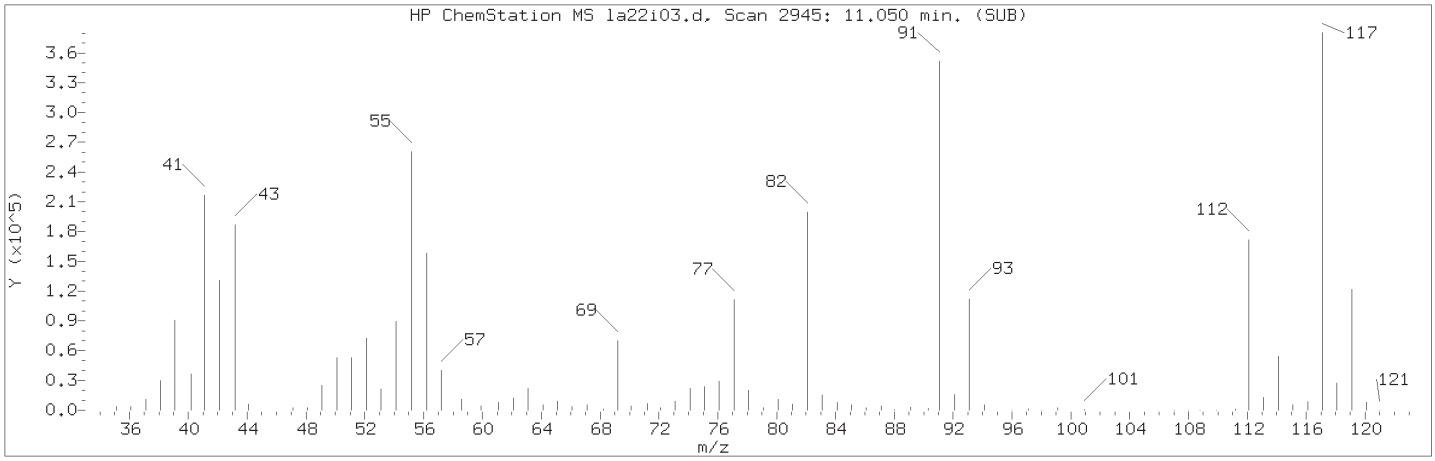
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

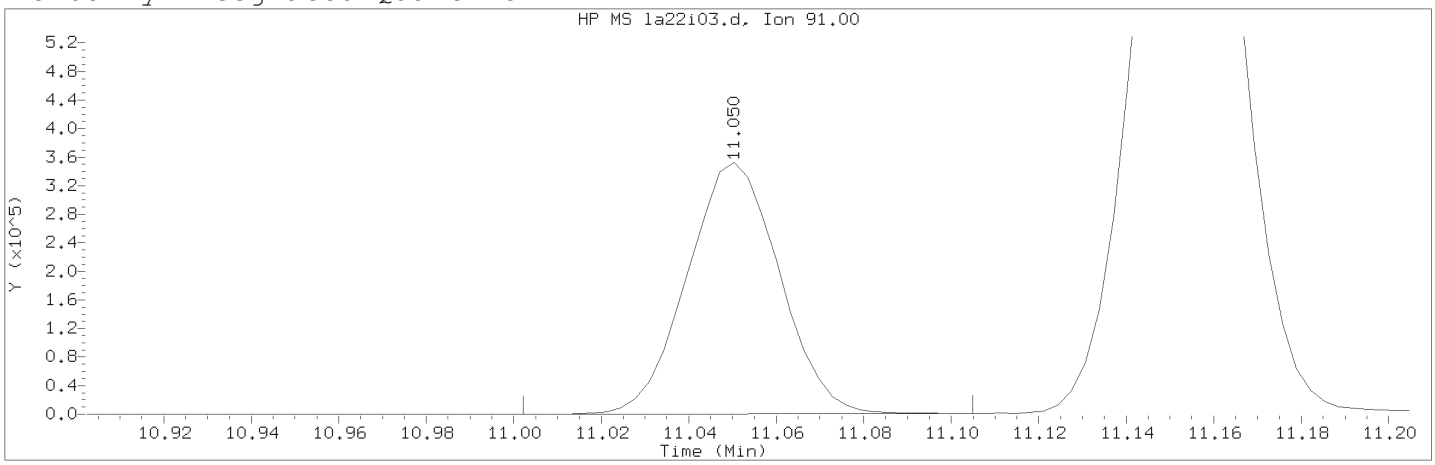
Compound Number : 100
Compound Name : Chlorobenzene-d5
Scan Number : 2977
Retention Time (minutes): 11.153
Quant Ion : 117.00
Area : 250578
On-column Amount (ng) : 50.0000
Integration start scan : 2964 Integration stop scan: 2999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: la22i03.d: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

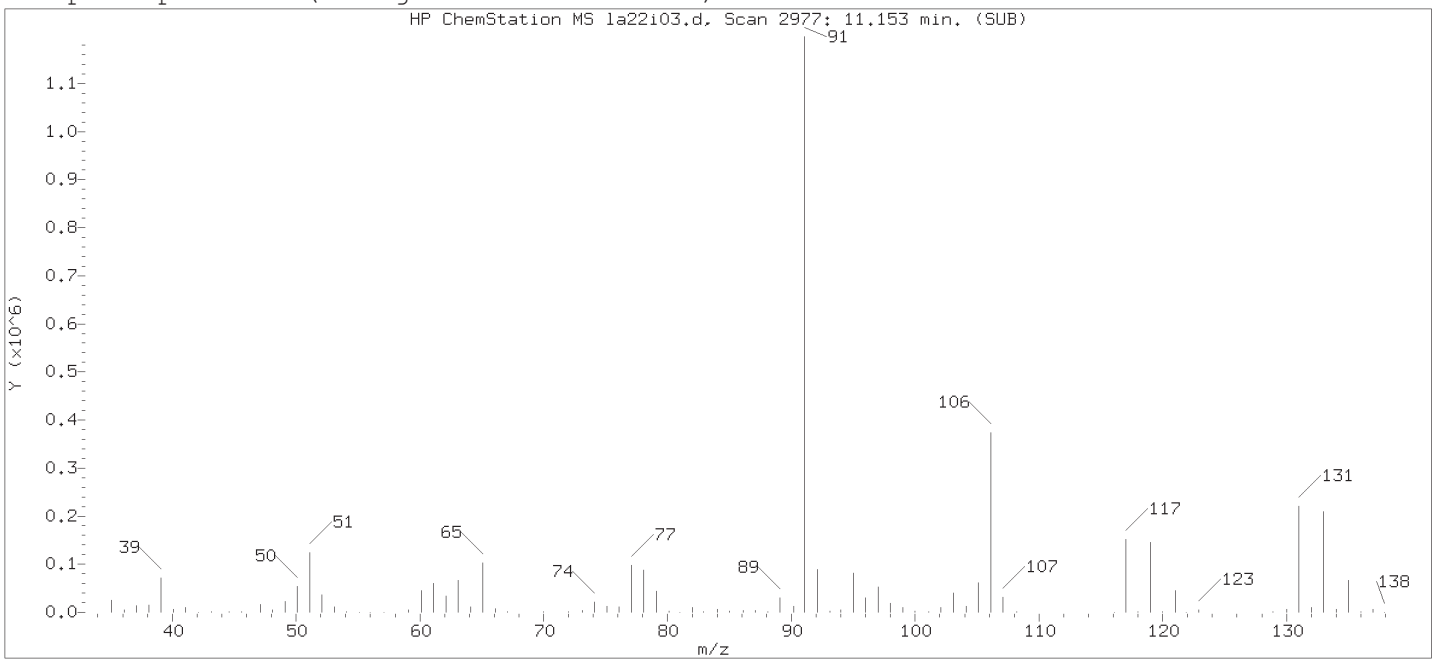
Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2945
Retention Time (minutes): 11.050
Quant Ion : 91.00
Area (flag) : 515644A
On-Column Amount (ng) : 52.8442
Integration start scan : 2929 Integration stop scan: 2961
Y at integration start : 0 Y at integration end: 824

Reason for manual integration: improper integration

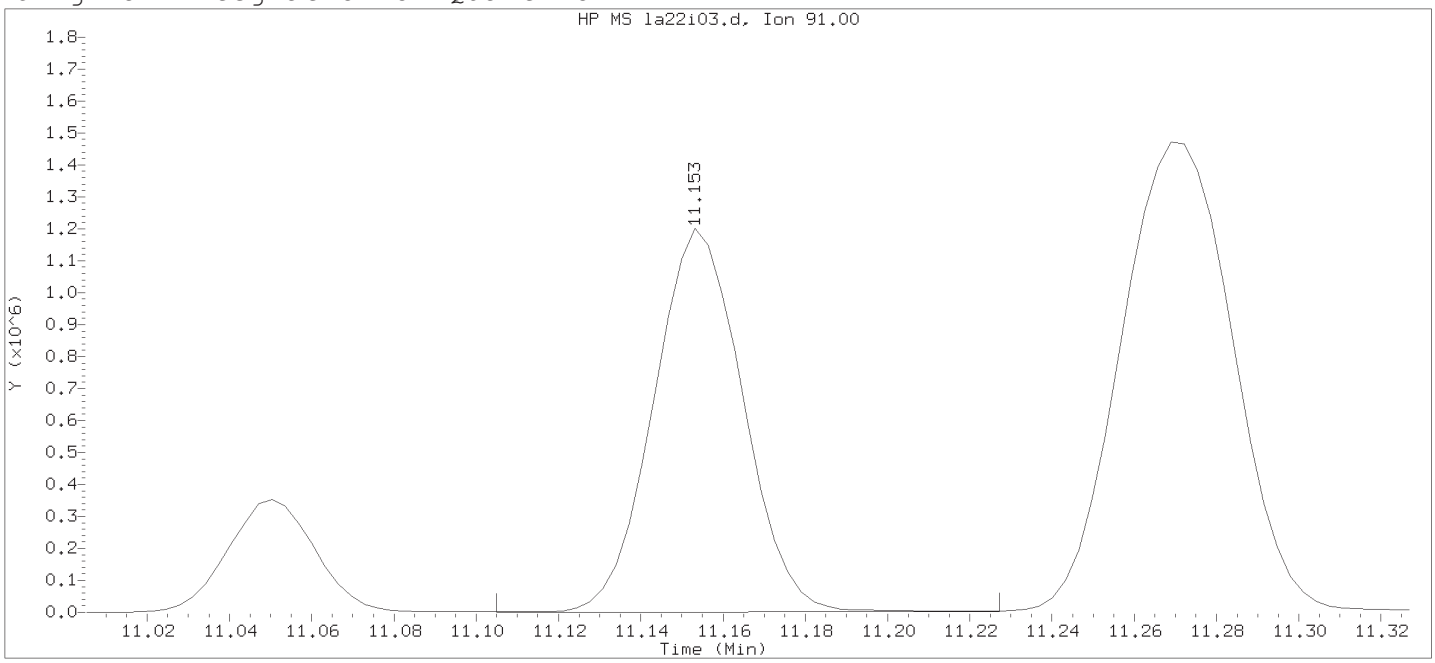
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

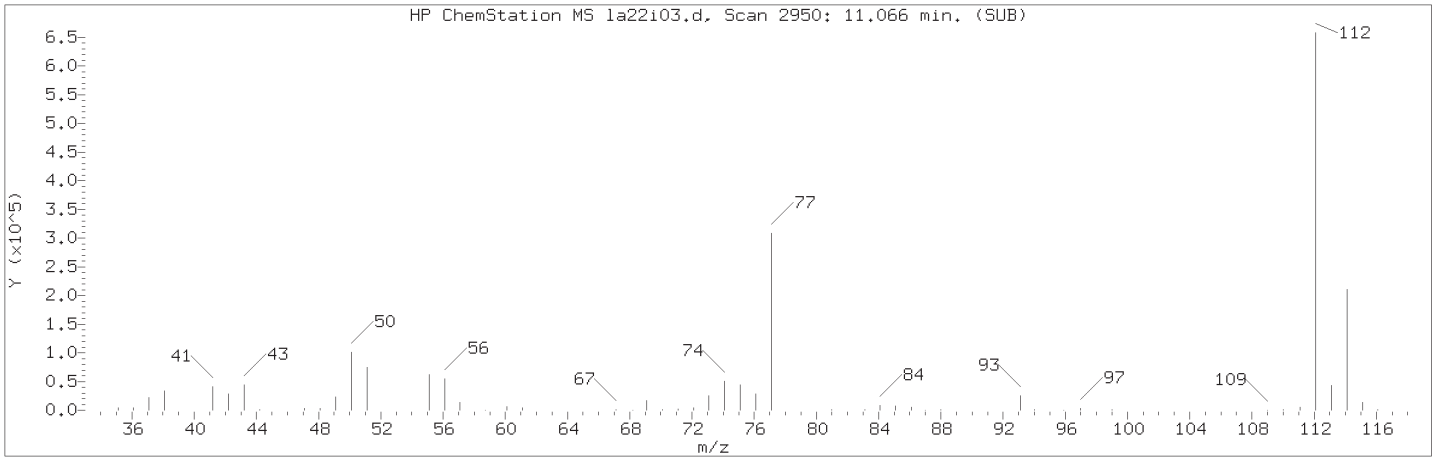
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

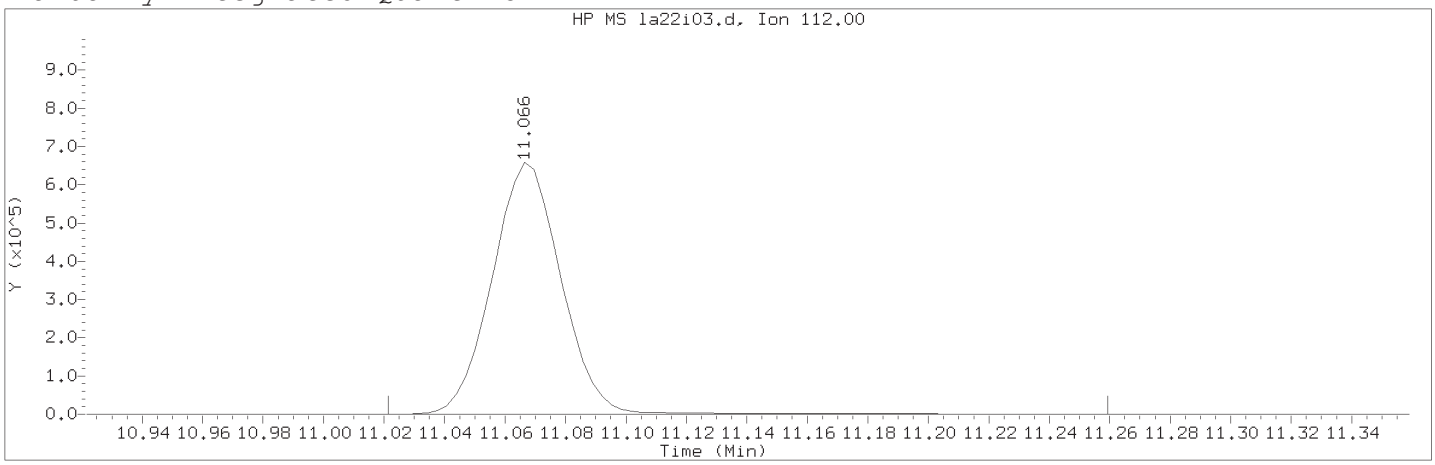
Compound Number : 101
Compound Name : 1-Chlorohexane
Scan Number : 2977
Retention Time (minutes): 11.153
Quant Ion : 91.00
Area : 1805049
On-column Amount (ng) : 90.8826
Integration start scan : 2961 Integration stop scan: 2999
Y at integration start : 824 Y at integration end: 1908

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 2016/03/31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

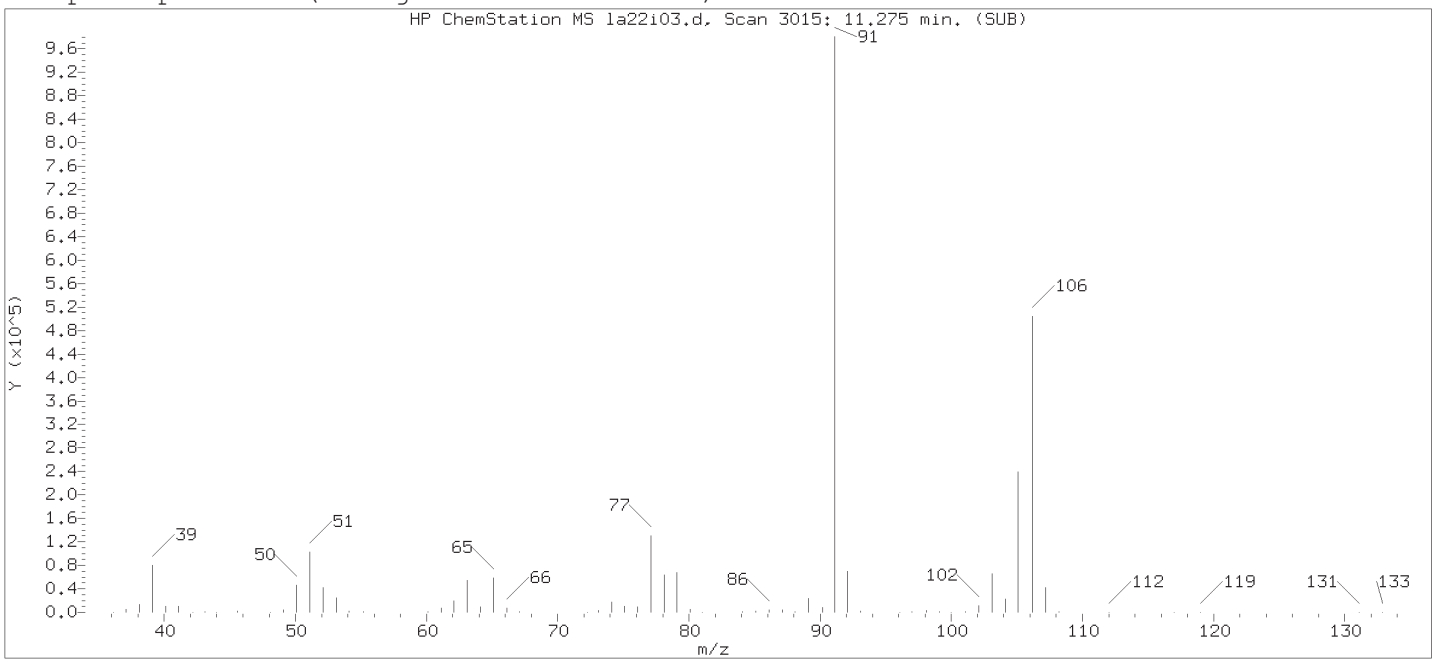
Compound Number : 102
Compound Name : Chlorobenzene
Scan Number : 2950
Retention Time (minutes): 11.066
Quant Ion : 112.00
Area (flag) : 1043288A
On-Column Amount (ng) : 53.0008
Integration start scan : 2935 Integration stop scan: 3009
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

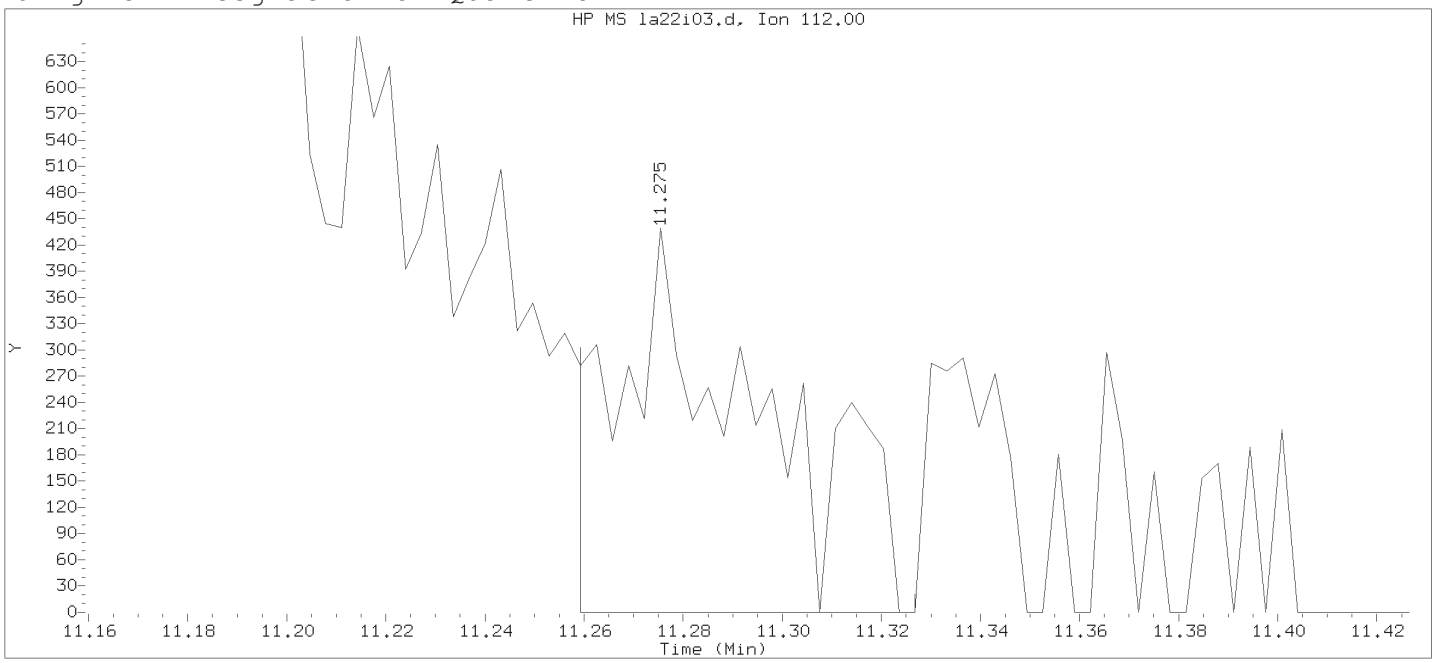
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

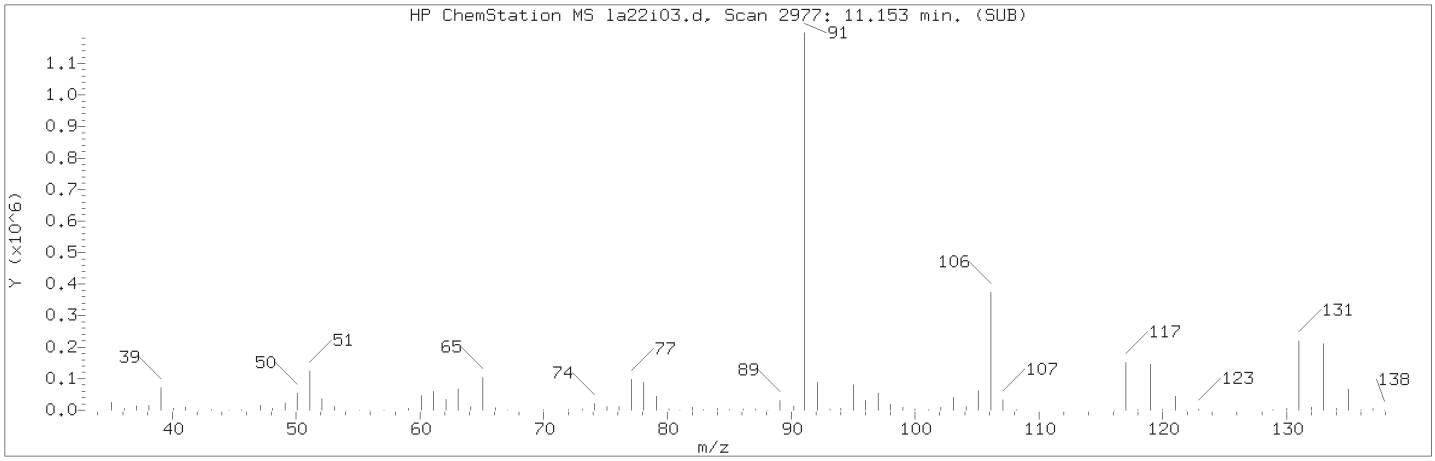
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

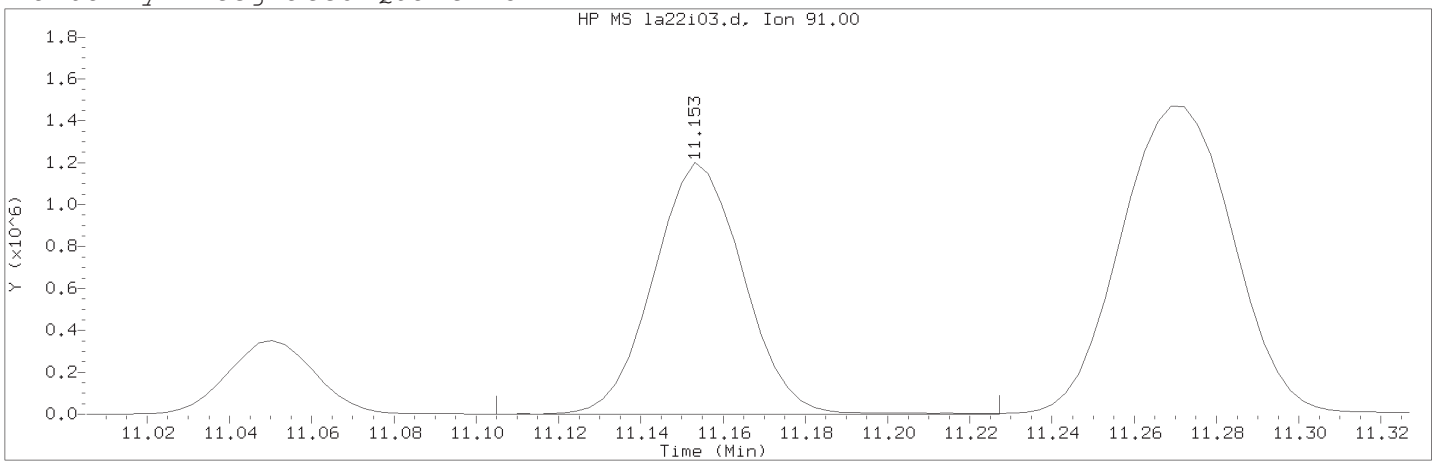
Compound Number : 102
Compound Name : Chlorobenzene
Scan Number : 3015
Retention Time (minutes): 11.275
Quant Ion : 112.00
Area : 886
On-column Amount (ng) : 0.7904
Integration start scan : 3009 Integration stop scan: 3030
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: la22i03.d 31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

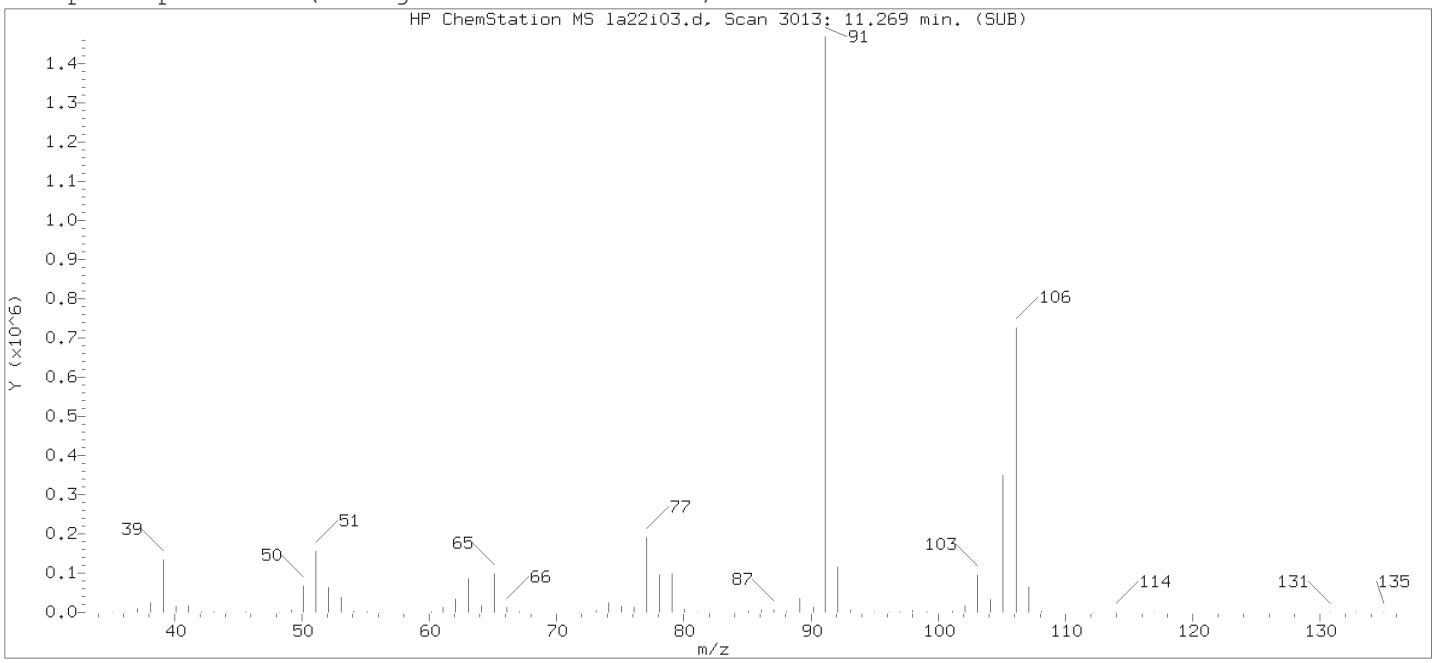
Compound Number : 104
Compound Name : Ethylbenzene
Scan Number : 2977
Retention Time (minutes): 11.153
Quant Ion : 91.00
Area (flag) : 1811326A
On-Column Amount (ng) : 53.9758
Integration start scan : 2961 Integration stop scan: 2999
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

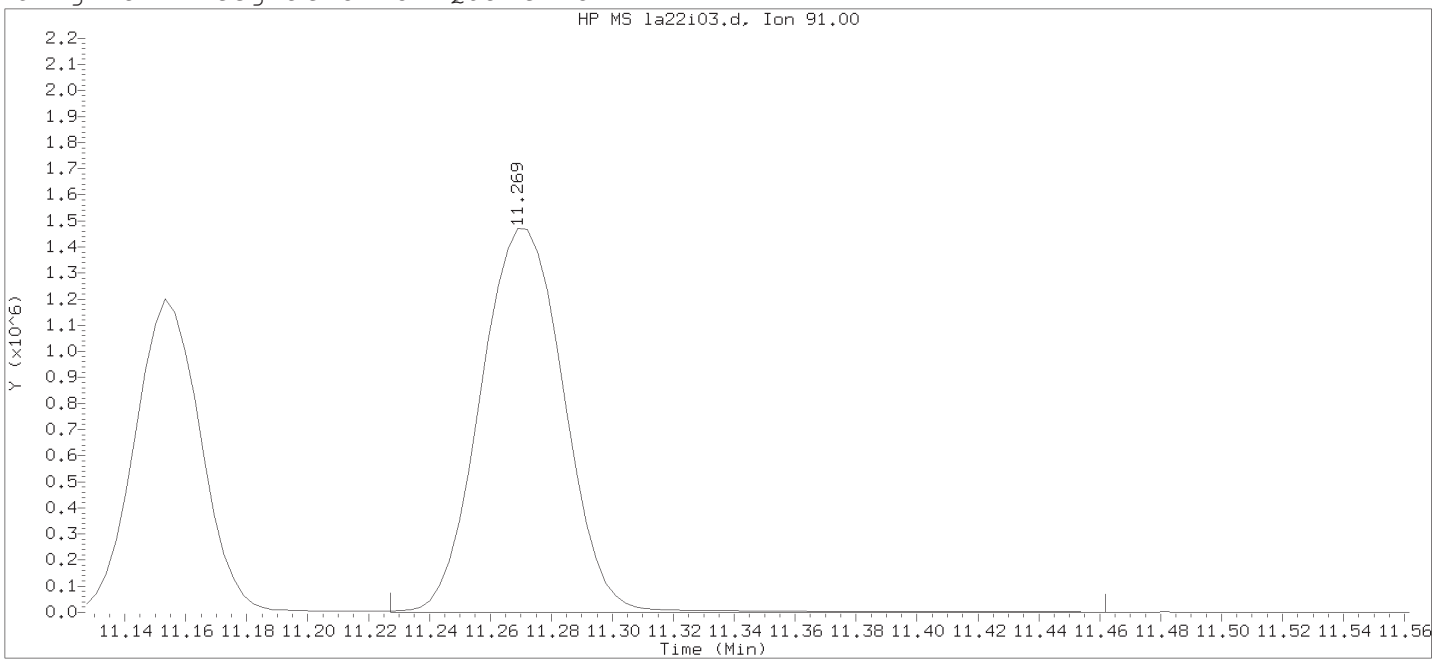
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

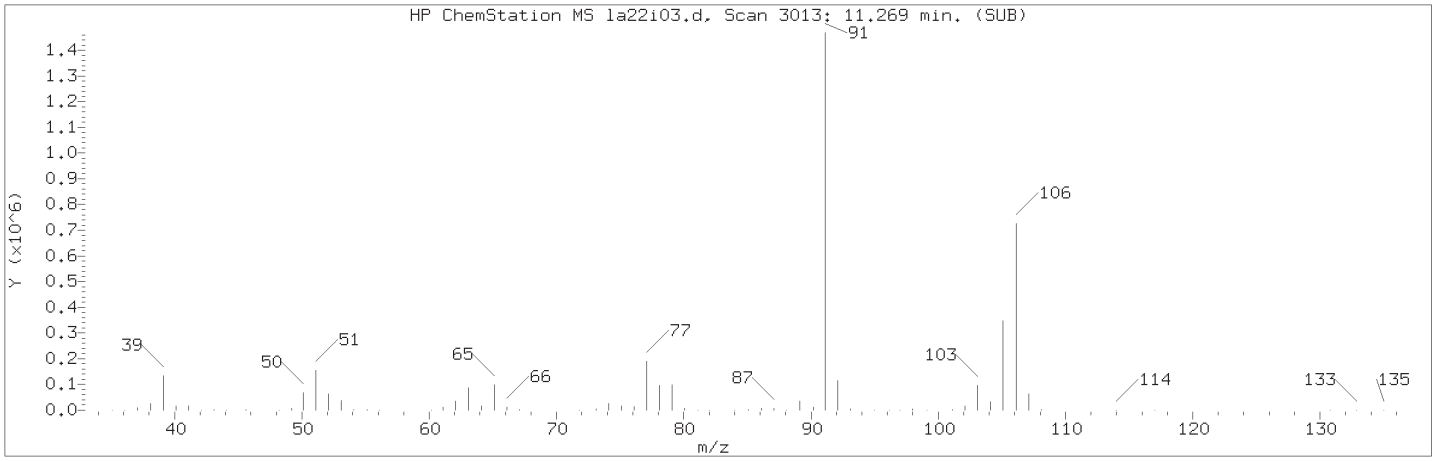
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

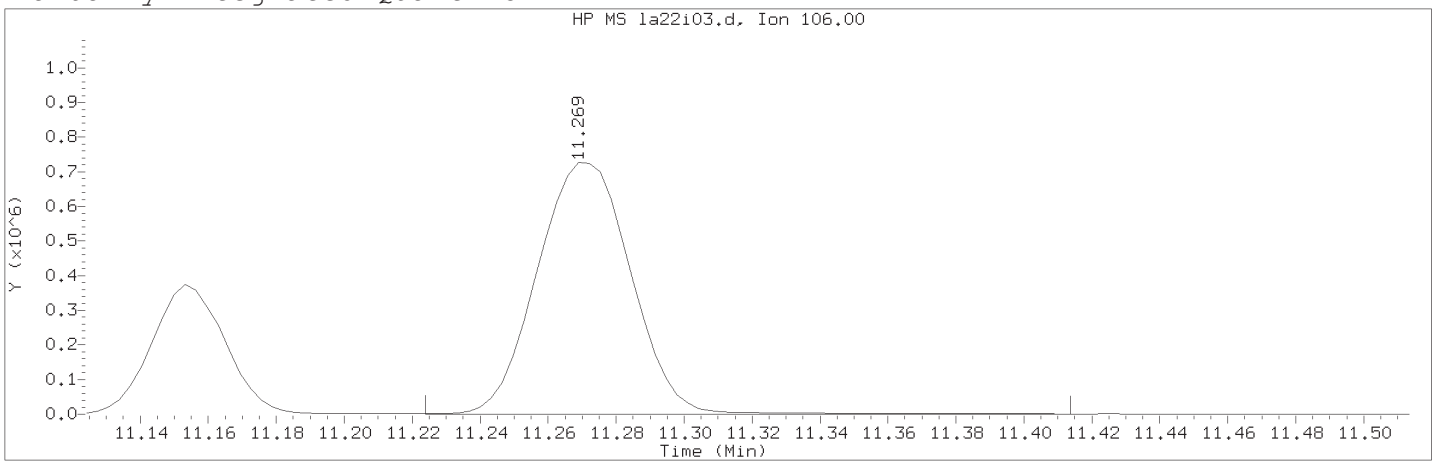
Compound Number : 104
Compound Name : Ethylbenzene
Scan Number : 3013
Retention Time (minutes): 11.269
Quant Ion : 91.00
Area : 2804933
On-column Amount (ng) : 91.0696
Integration start scan : 2999 Integration stop scan: 3072
Y at integration start : 518 Y at integration end: 518

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

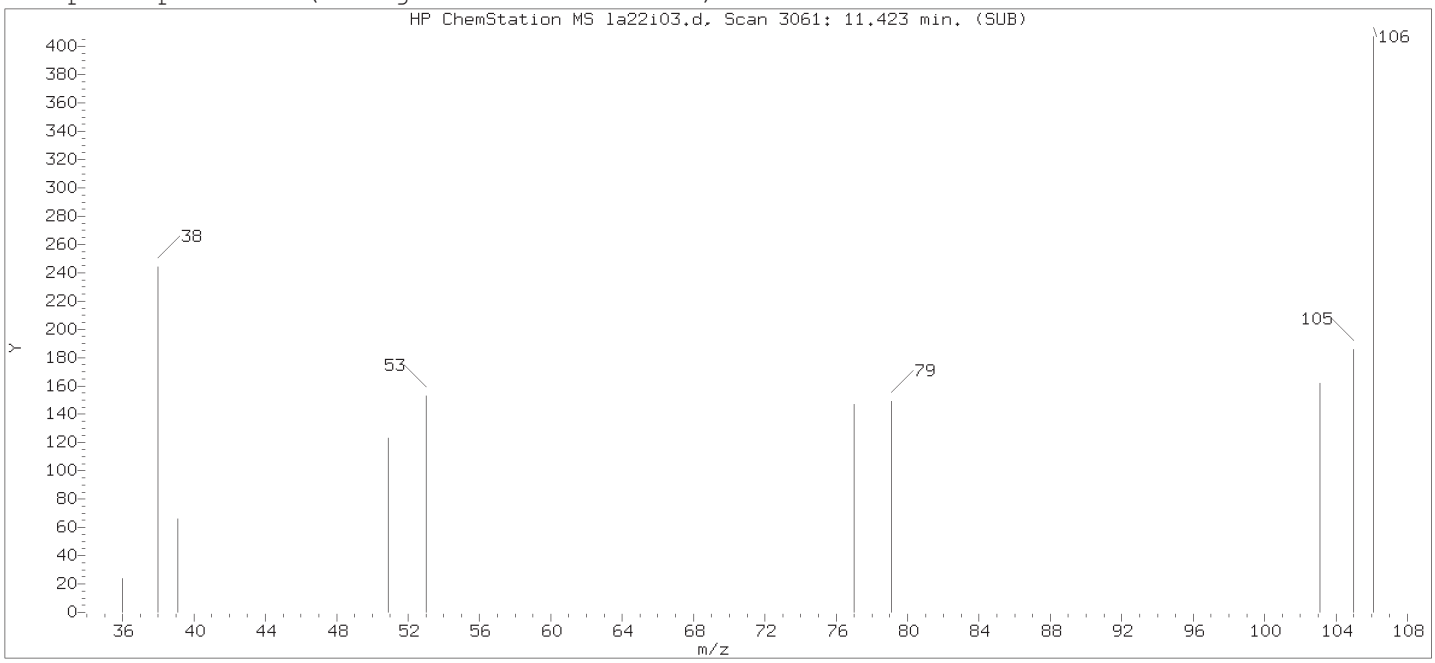
Compound Number : 106
Compound Name : m+p-Xylene
Scan Number : 3013
Retention Time (minutes): 11.269
Quant Ion : 106.00
Area (flag) : 1390269A
On-Column Amount (ng) : 107.9068
Integration start scan : 2998 Integration stop scan: 3057
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

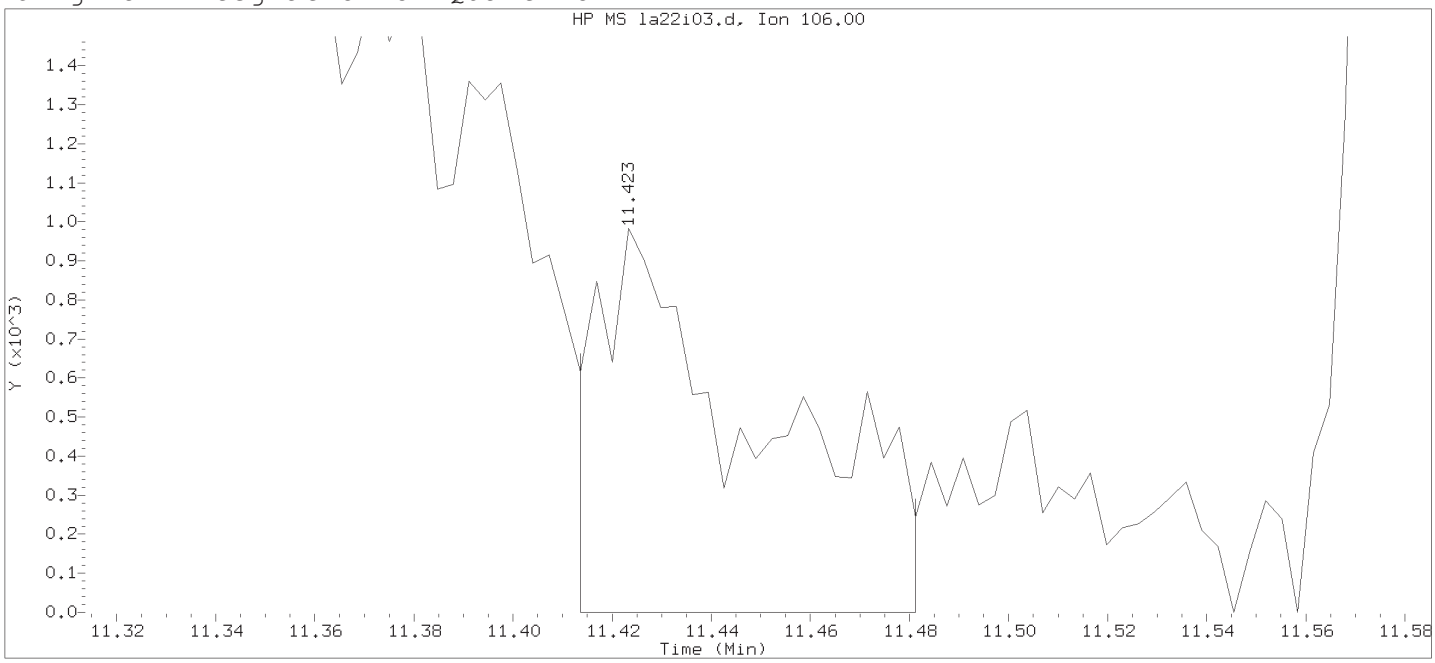
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

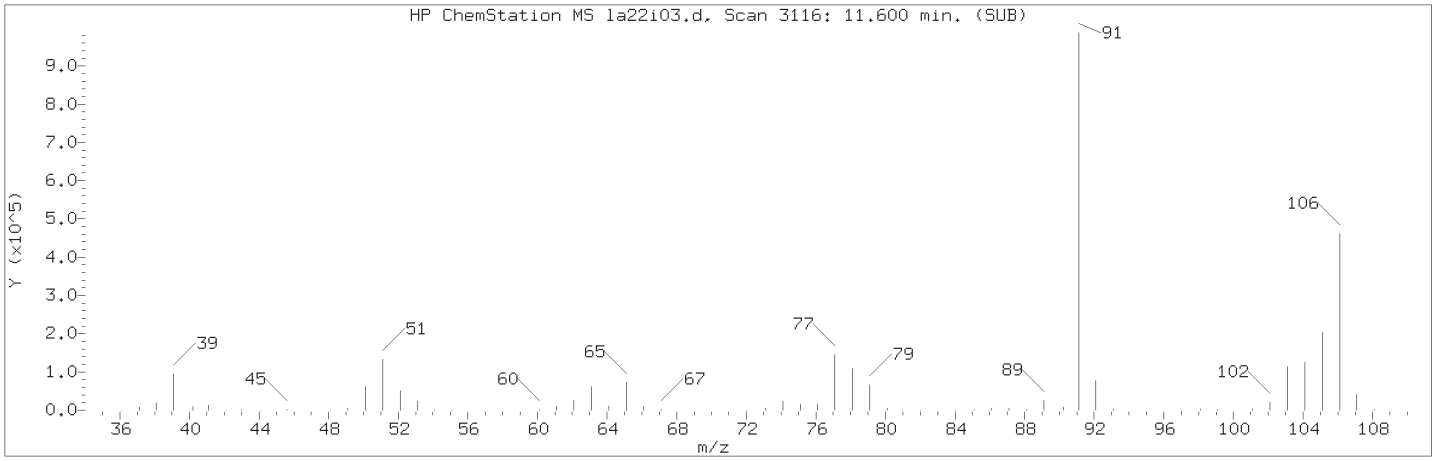
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

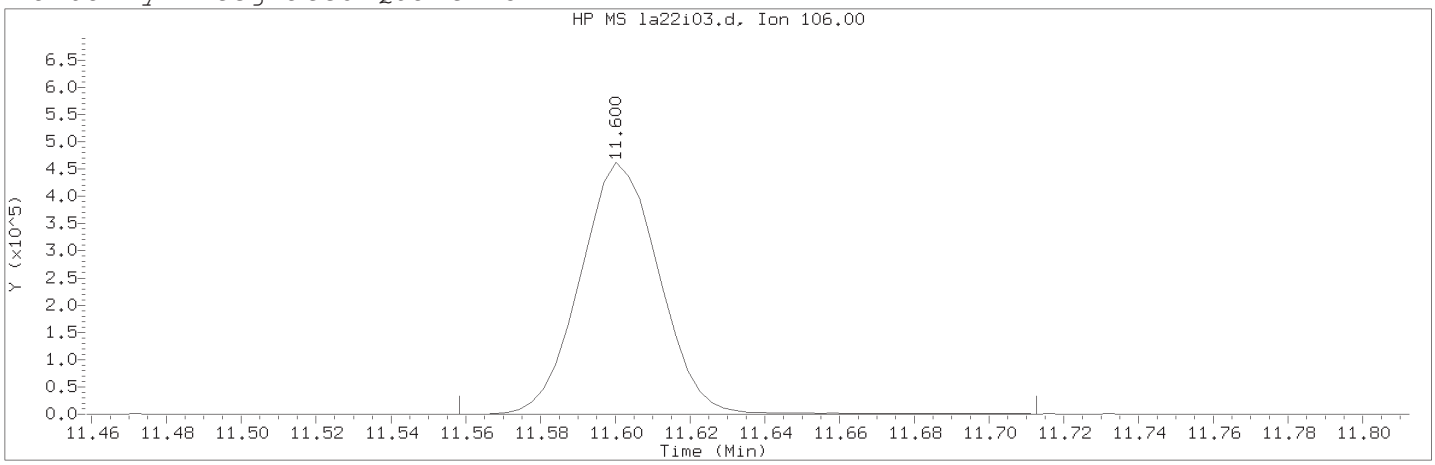
Compound Number : 106
Compound Name : m+p-Xylene
Scan Number : 3061
Retention Time (minutes): 11.423
Quant Ion : 106.00
Area : 2259
On-column Amount (ng) : 3.0698
Integration start scan : 3057 Integration stop scan: 3078
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

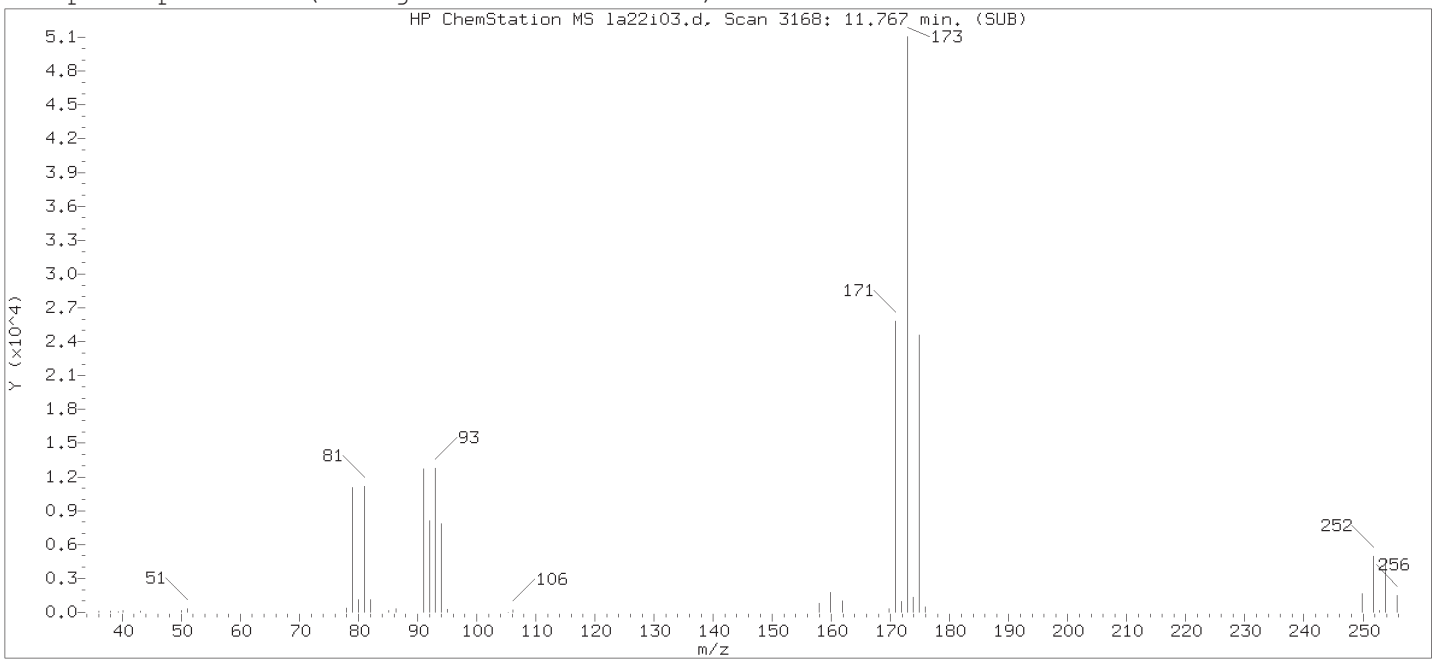
Compound Number : 107
Compound Name : o-Xylene
Scan Number : 3116
Retention Time (minutes): 11.600
Quant Ion : 106.00
Area (flag) : 680406A
On-Column Amount (ng) : 53.6927
Integration start scan : 3102 Integration stop scan: 3150
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

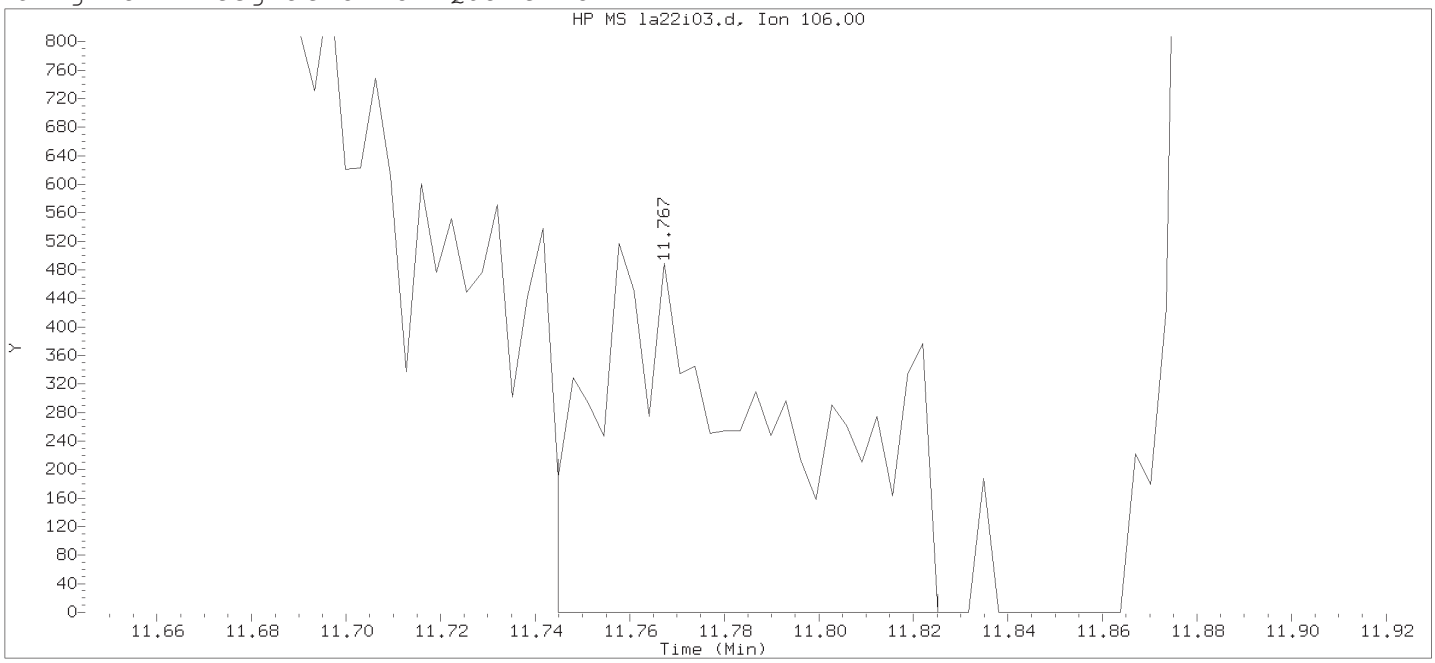
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

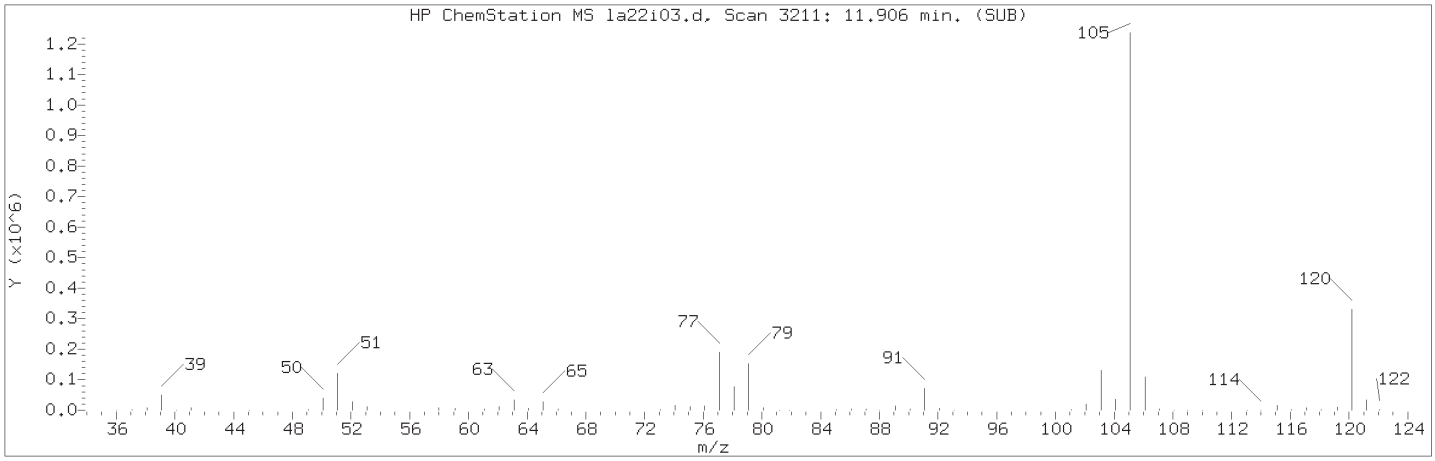
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

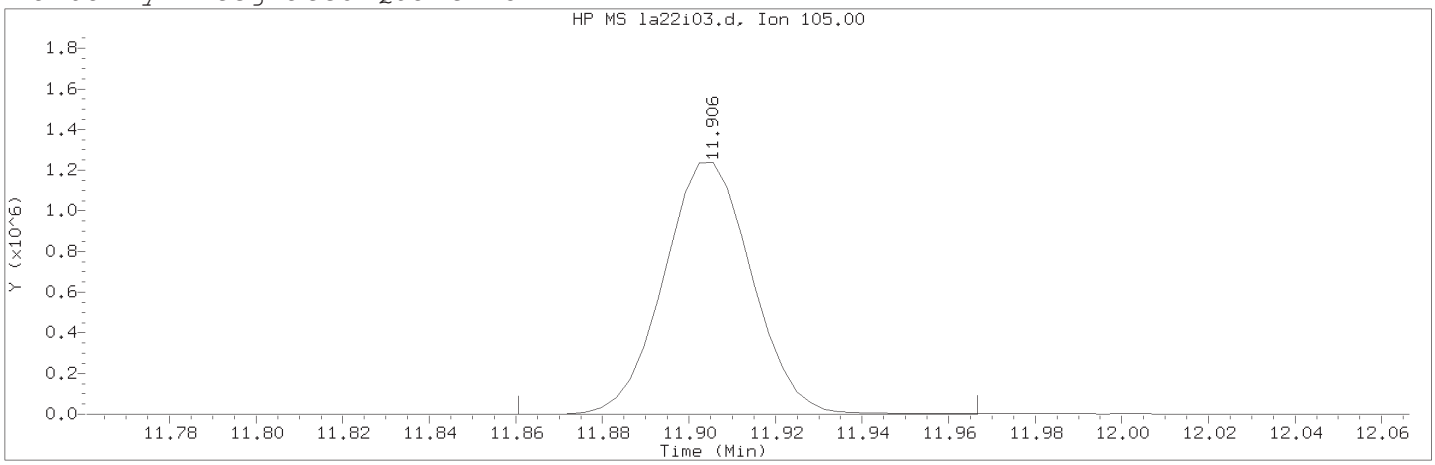
Compound Number	: 107		
Compound Name	: o-Xylene		
Scan Number	: 3168		
Retention Time (minutes)	: 11.767		
Quant Ion	: 106.00		
Area	: 1402		
On-column Amount (ng)	: 0.4647		
Integration start scan	: 3160	Integration stop scan:	3185
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

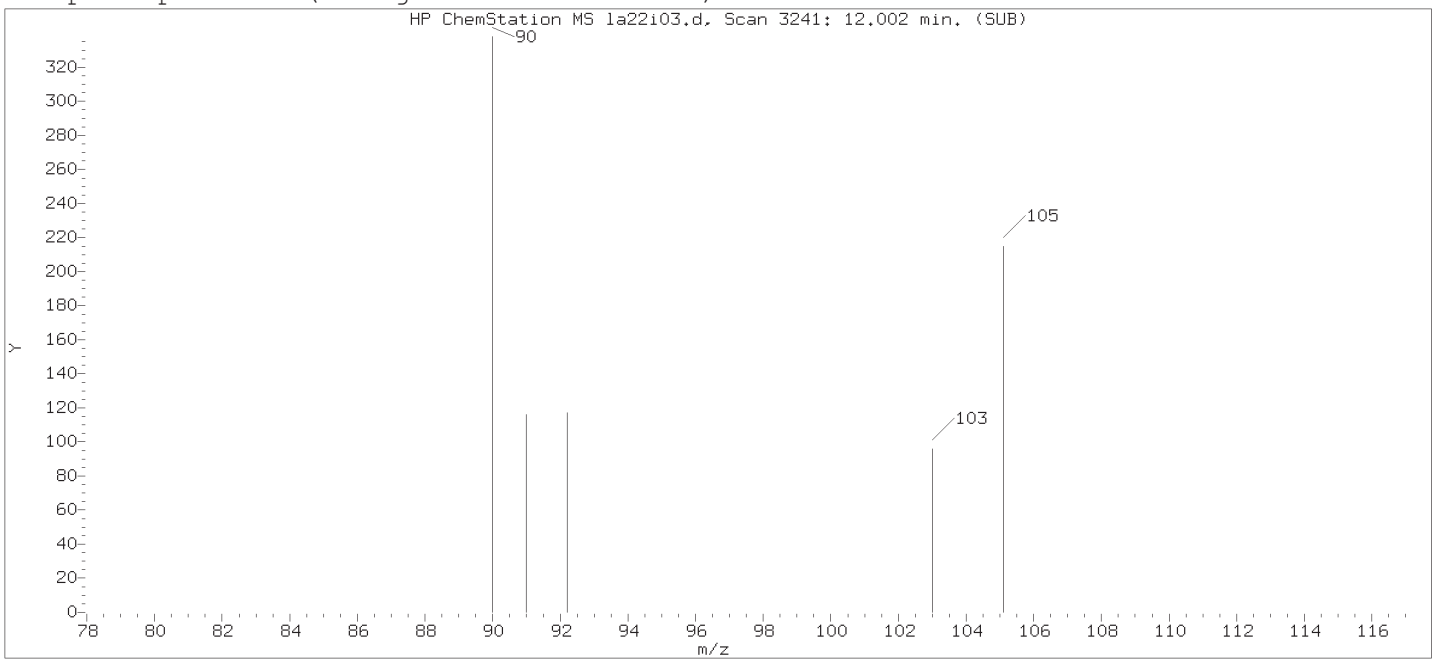
Compound Number : 111
Compound Name : Isopropylbenzene
Scan Number : 3211
Retention Time (minutes): 11.906
Quant Ion : 105.00
Area (flag) : 1750633A
On-Column Amount (ng) : 54.2668
Integration start scan : 3196 Integration stop scan: 3229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

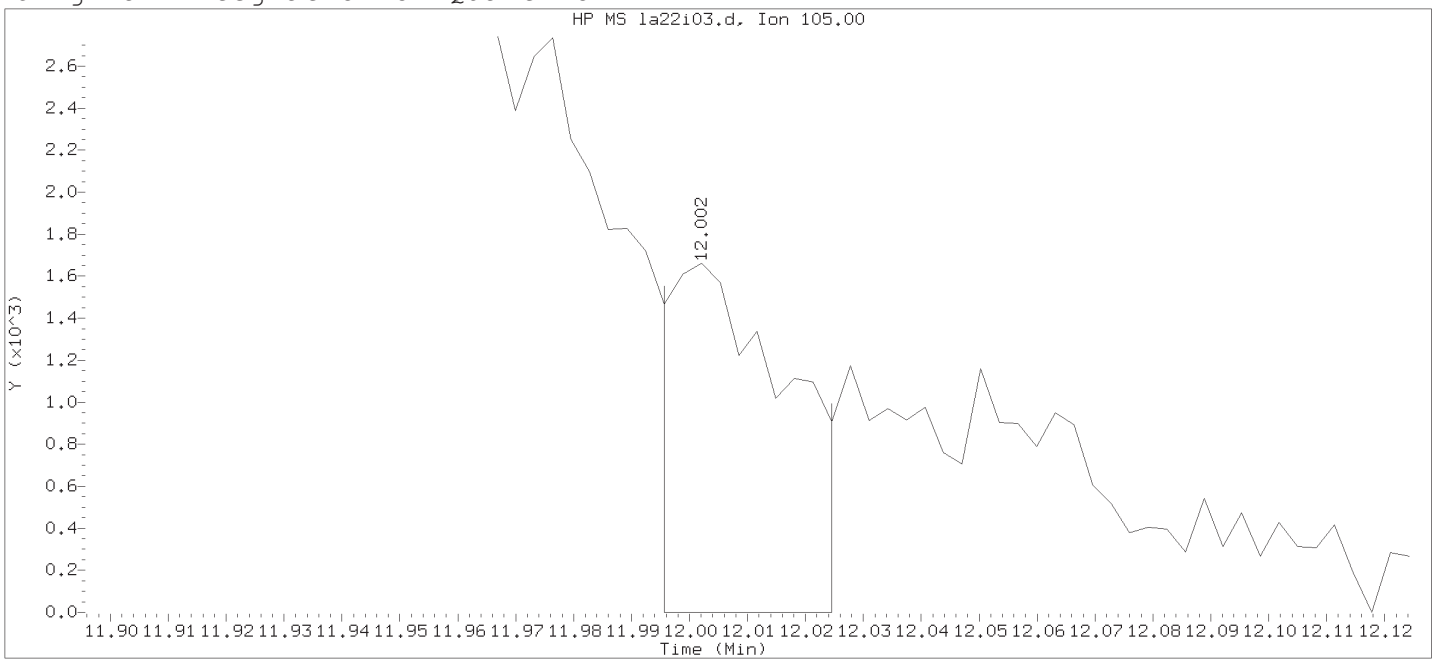
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

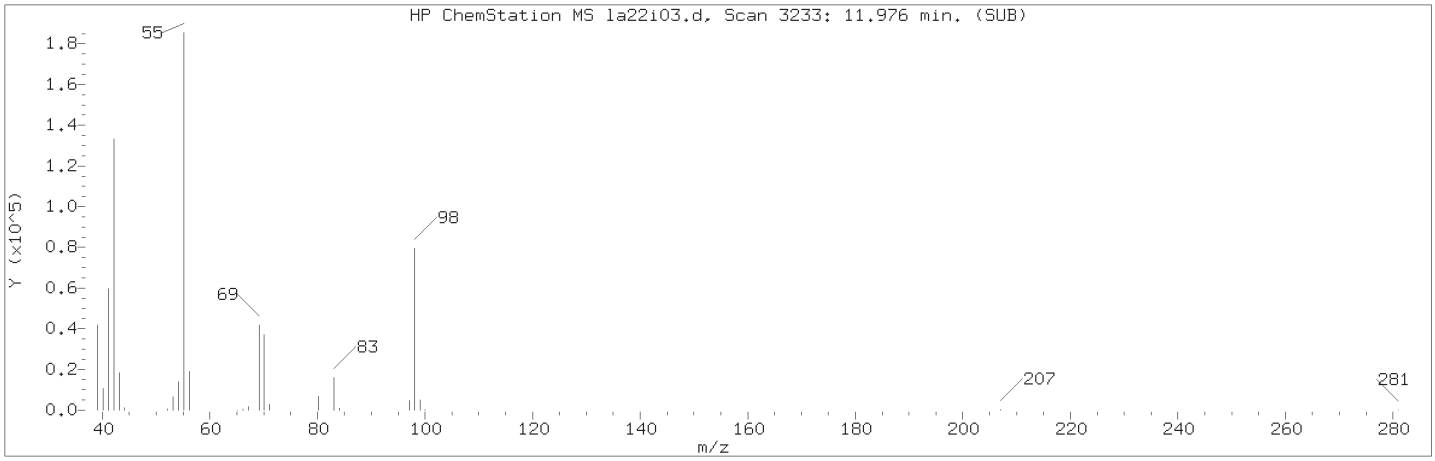
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

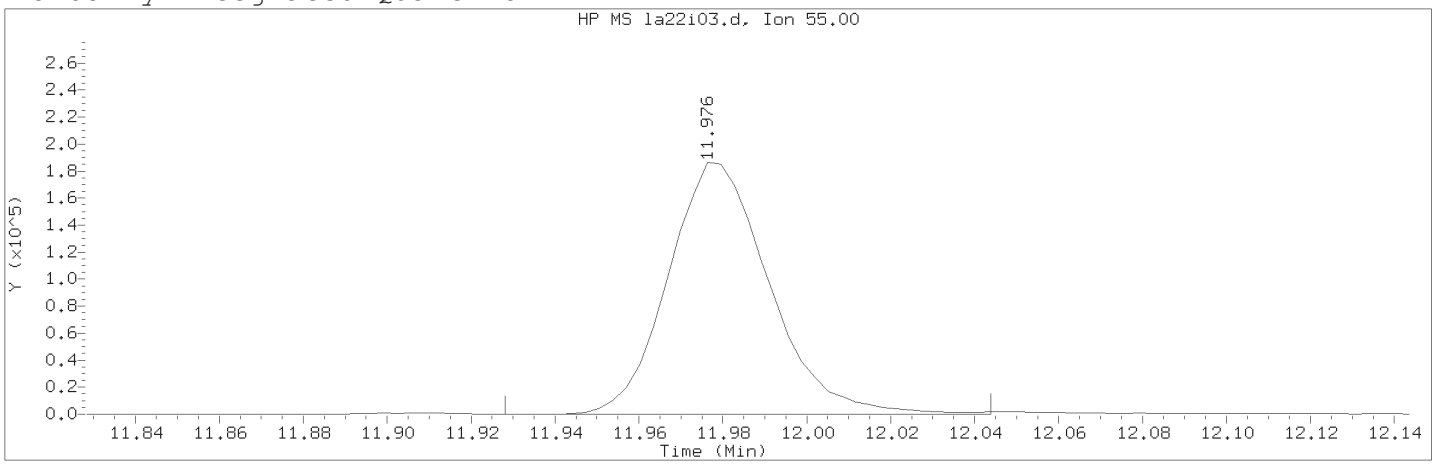
Compound Number : 111
Compound Name : Isopropylbenzene
Scan Number : 3241
Retention Time (minutes): 12.002
Quant Ion : 105.00
Area : 2279
On-column Amount (ng) : 114.6329
Integration start scan : 3238 Integration stop scan: 3247
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

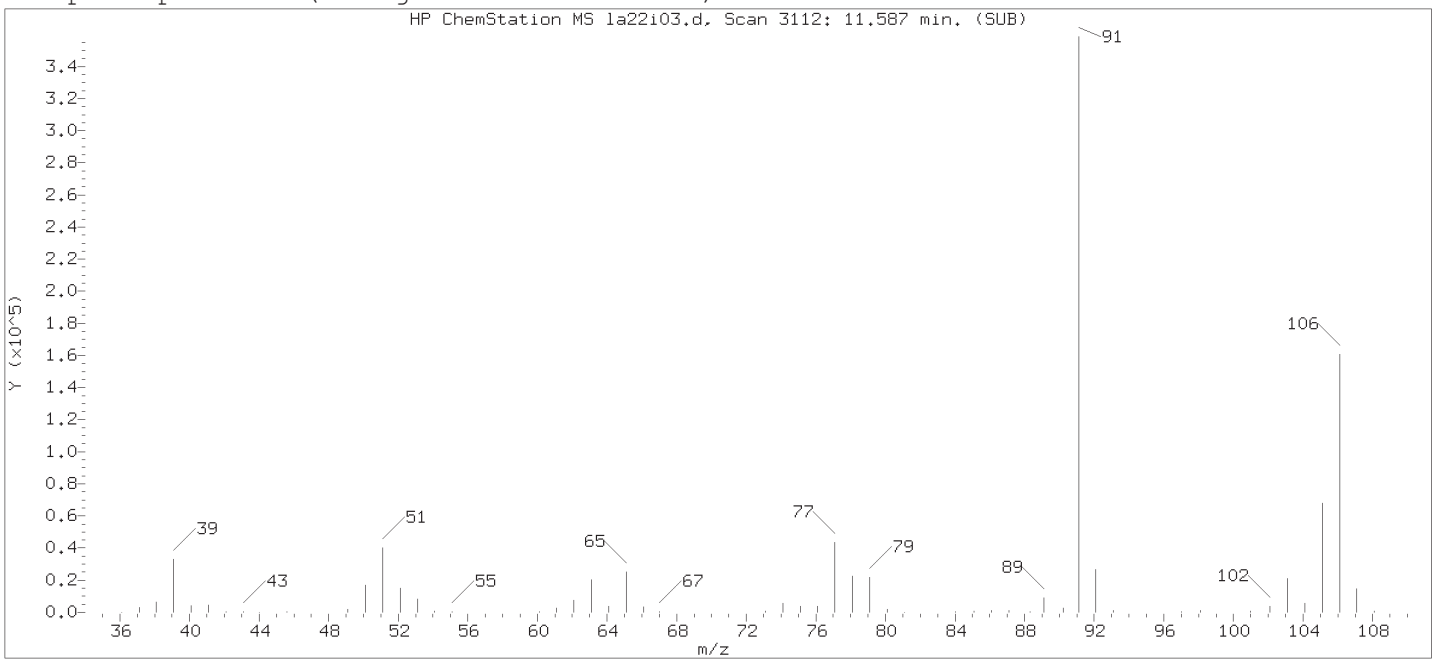
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3233
Retention Time (minutes): 11.976
Quant Ion : 55.00
Area (flag) : 311033MA
On-Column Amount (ng) : 637.5855
Integration start scan : 3217 Integration stop scan: 3253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

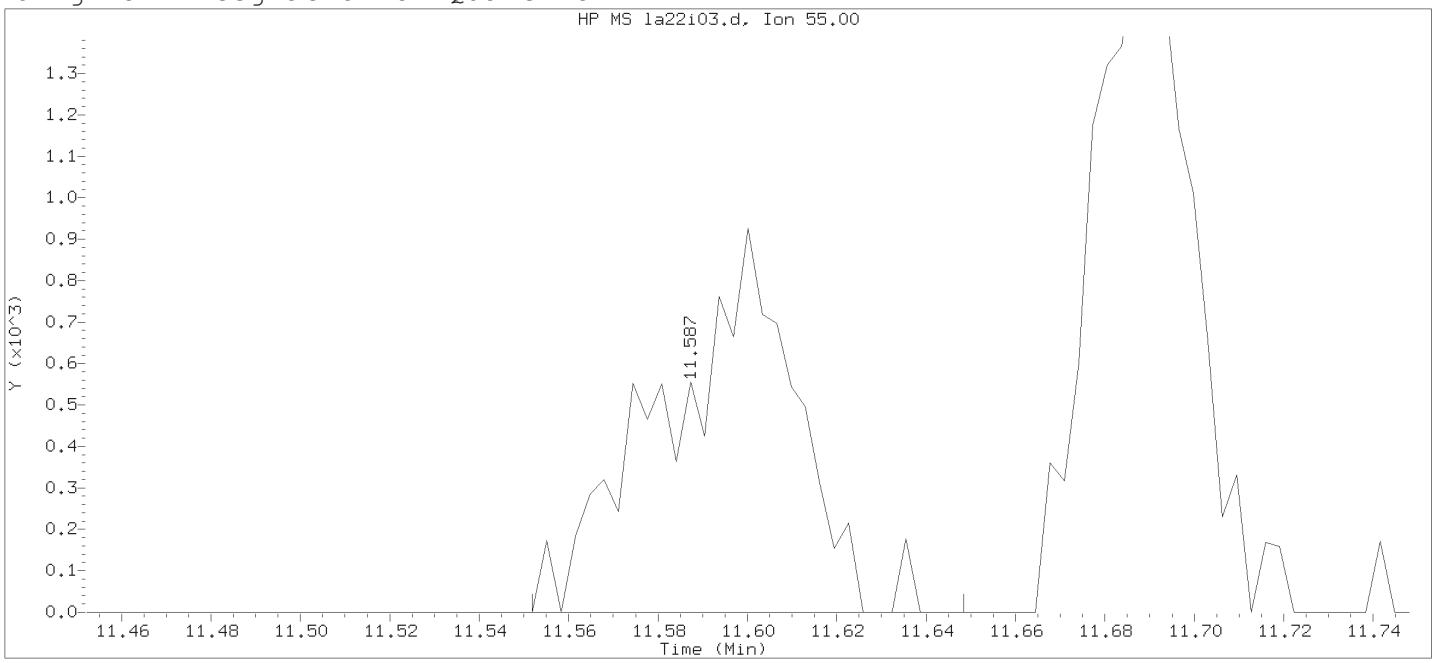
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

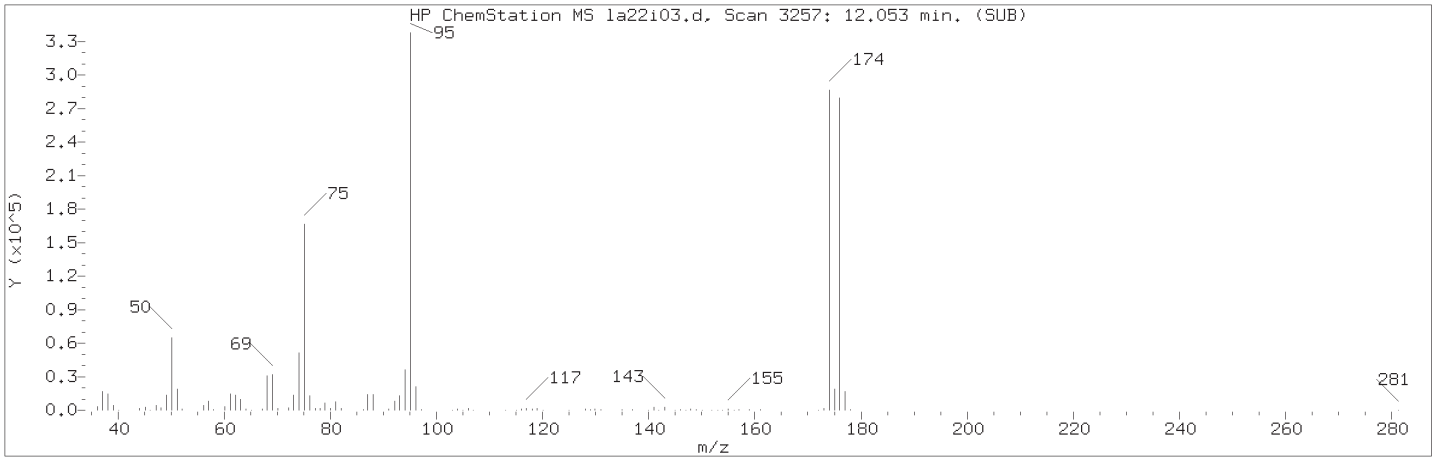
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

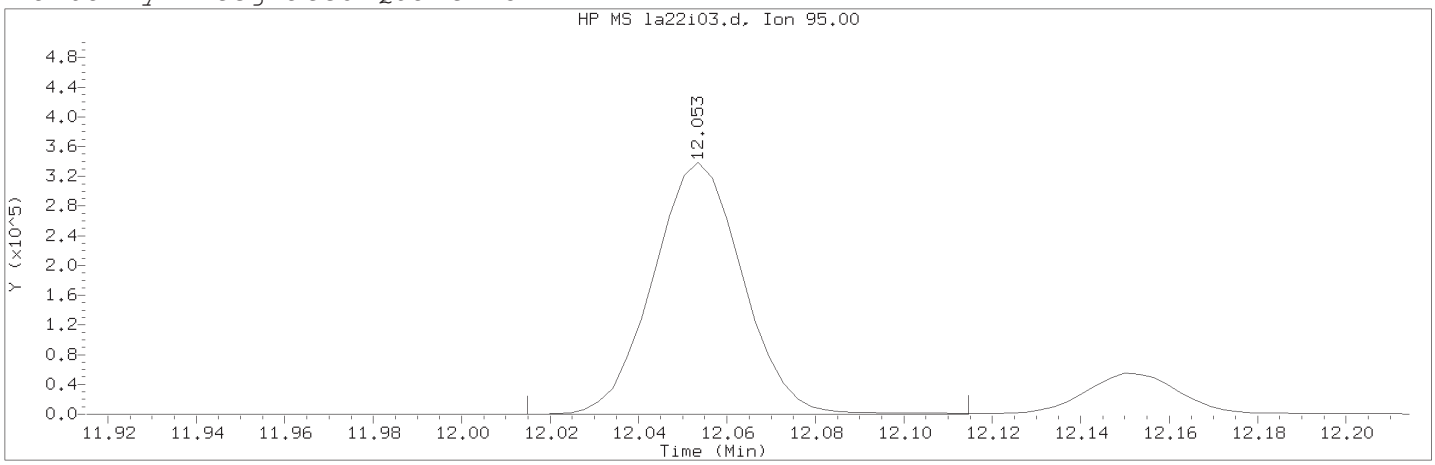
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3112
Retention Time (minutes): 11.587
Quant Ion : 55.00
Area : 1887
On-column Amount (ng) : 502.1249
Integration start scan : 3100 Integration stop scan: 3130
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

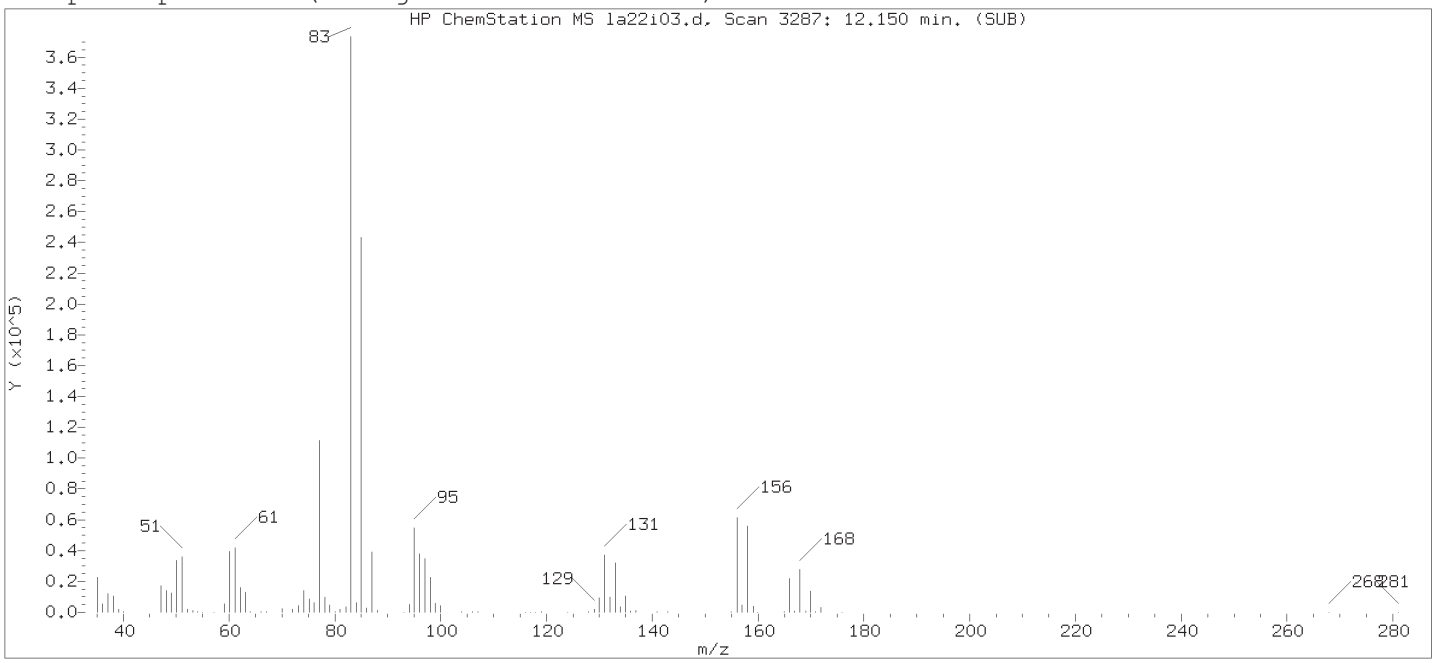
Compound Number : 114
Compound Name : 4-Bromofluorobenzene
Scan Number : 3257
Retention Time (minutes): 12.053
Quant Ion : 95.00
Area (flag) : 474477A
On-Column Amount (ng) : 50.1108
Integration start scan : 3244 Integration stop scan: 3275
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

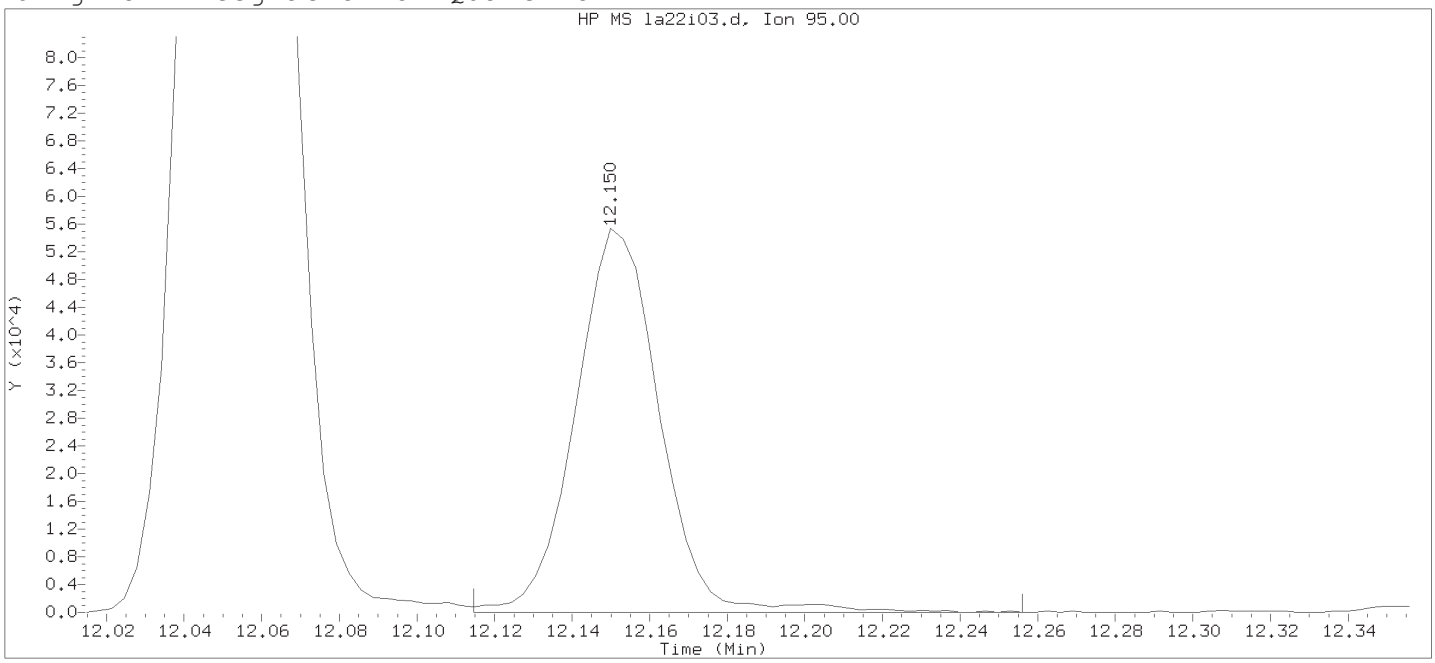
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

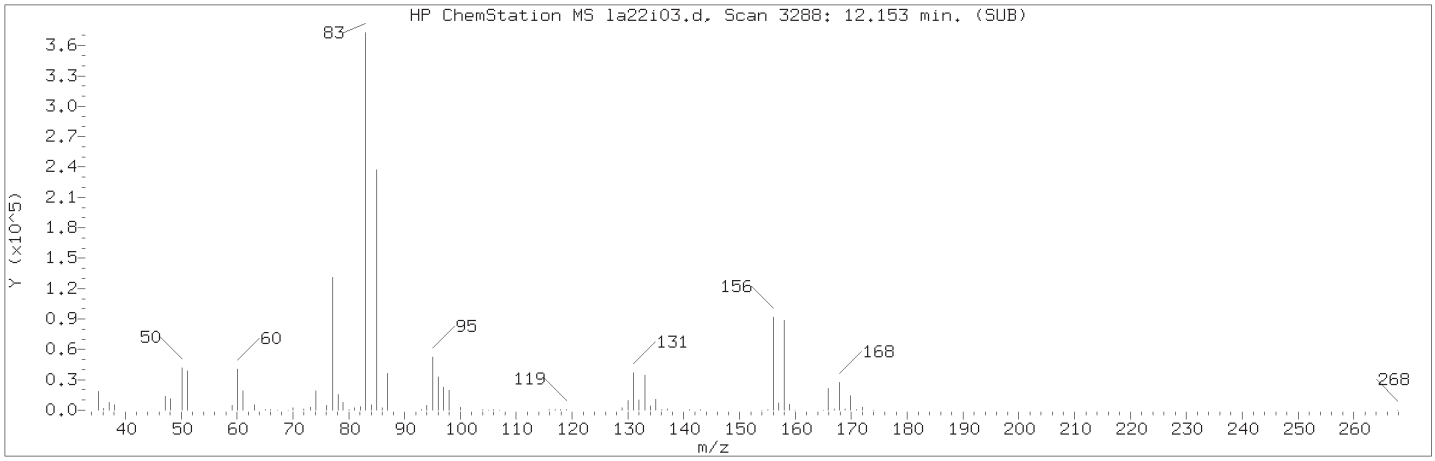
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

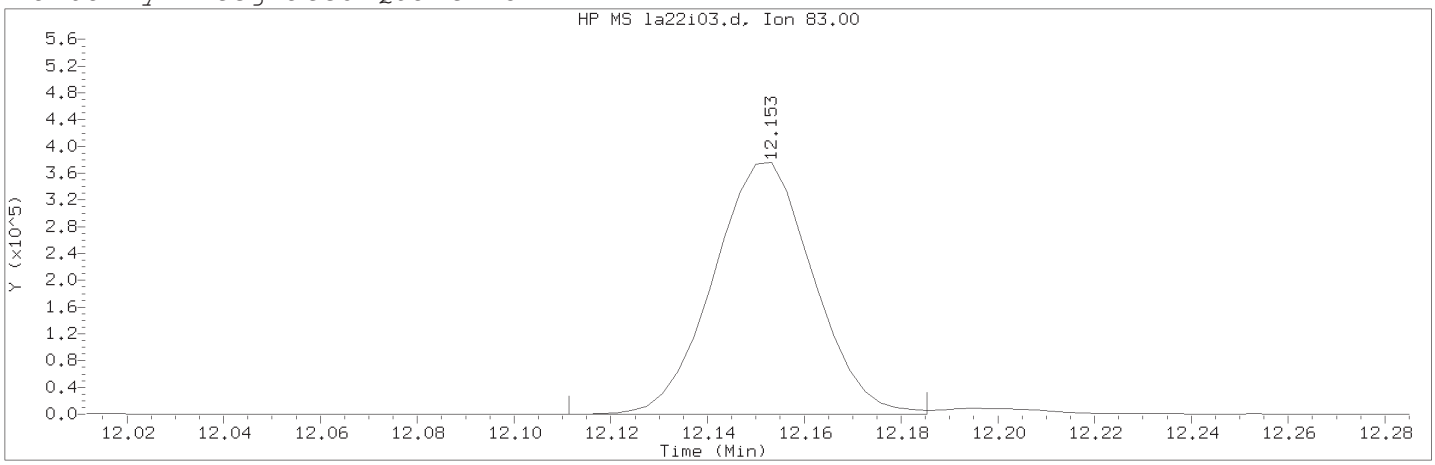
Compound Number	: 114		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 3287		
Retention Time (minutes)	: 12.150		
Quant Ion	: 95.00		
Area	: 83353		
On-column Amount (ng)	: 50.9908		
Integration start scan	: 3275	Integration stop scan:	3319
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

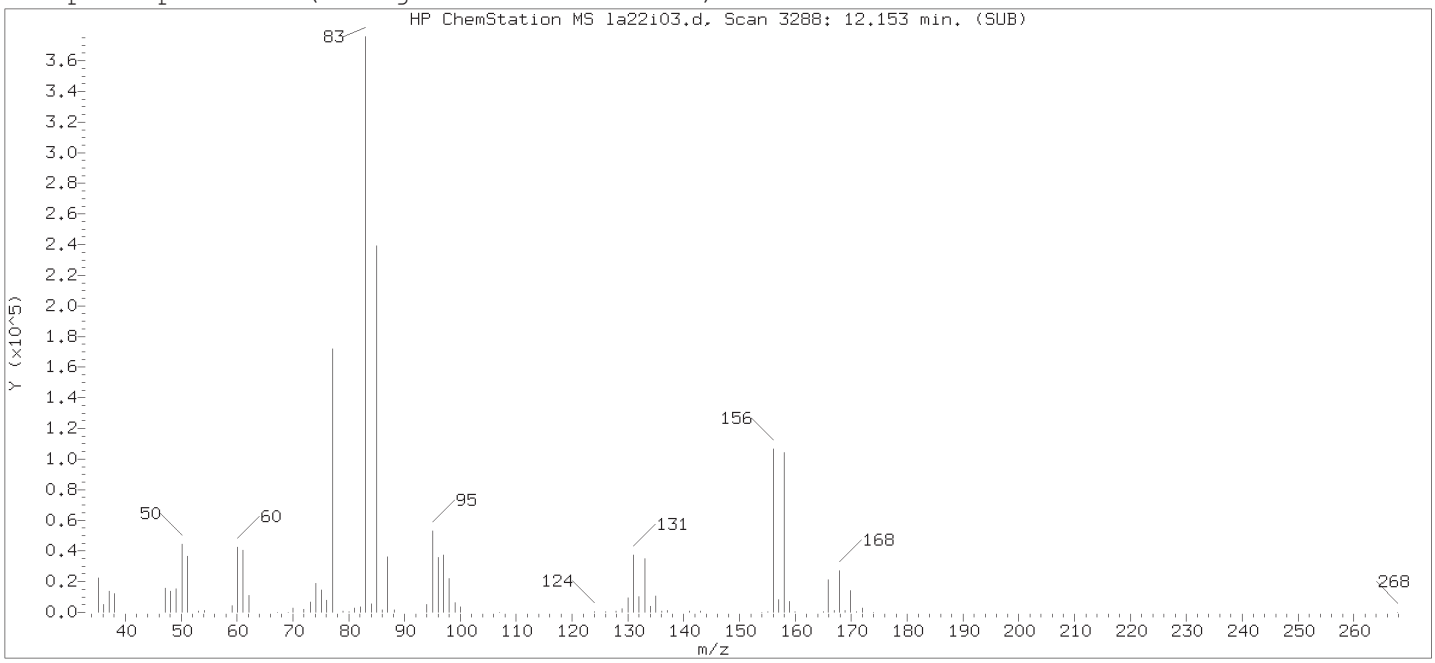
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area (flag) : 539019M
On-Column Amount (ng) : 51.7592
Integration start scan : 3274 Integration stop scan: 3297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

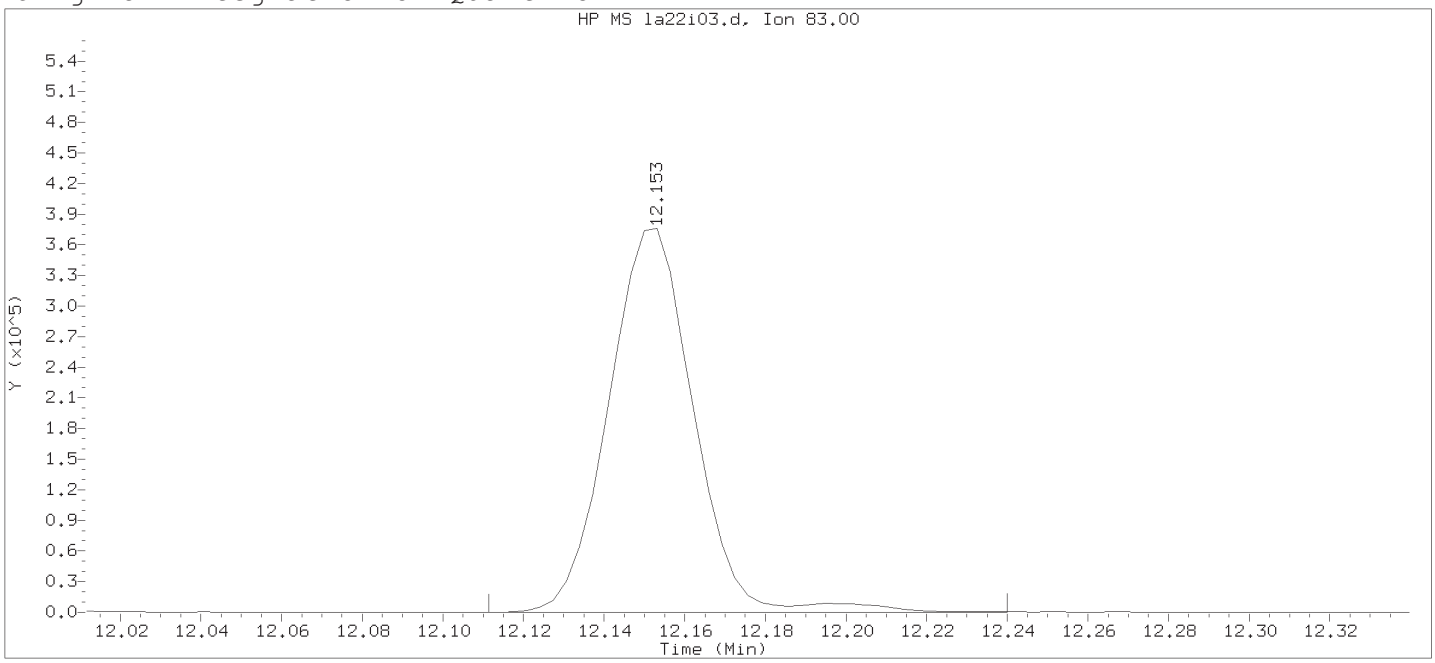
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



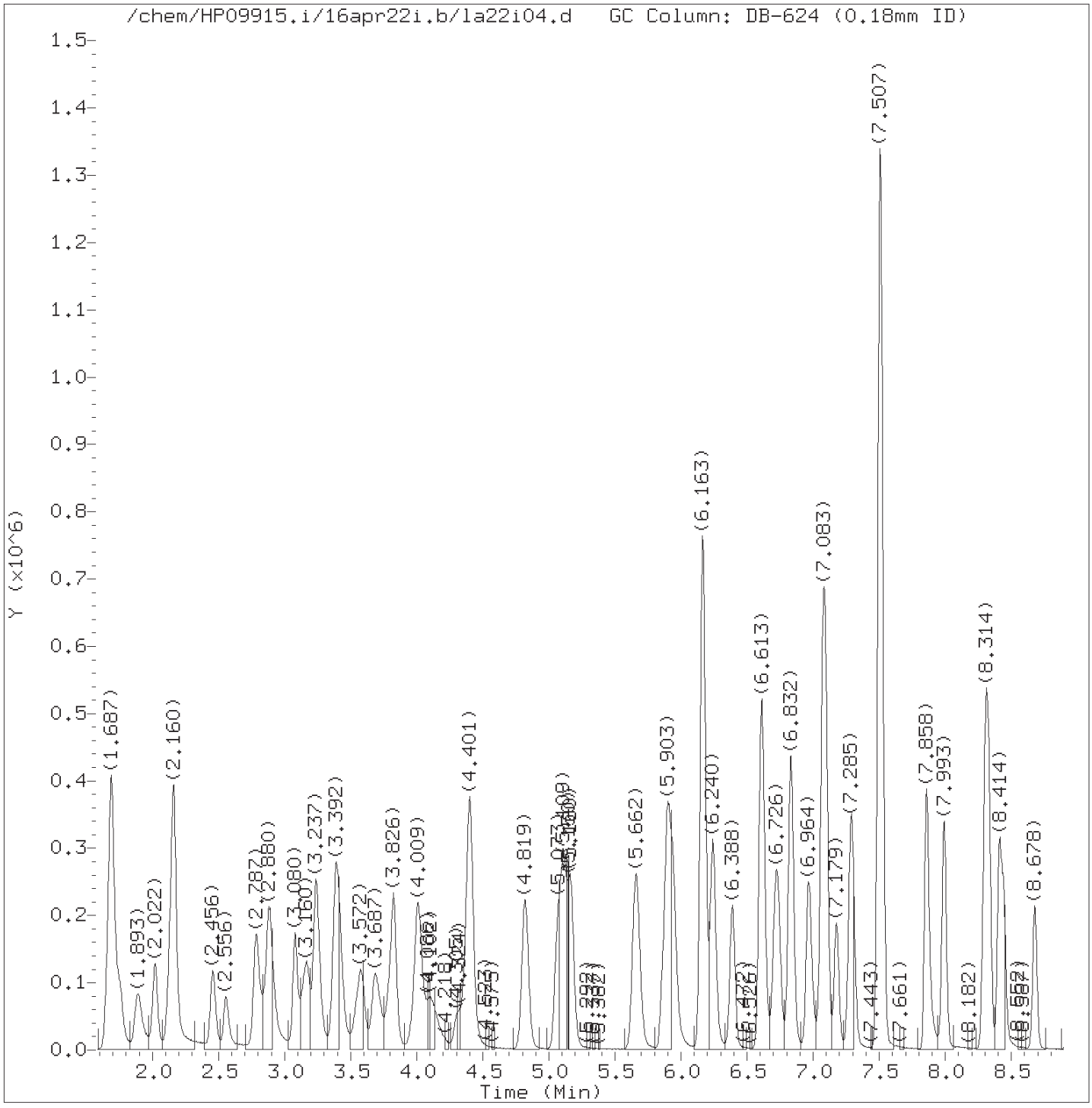
Data File: /chem/HP09915.i/16apr22i.b/la22i03.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 10:39 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 10:58
Date, time and analyst ID of latest file update: 22-Apr-2016 10:58 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area : 551930
On-column Amount (ng) : 50.1096
Integration start scan : 3274 Integration stop scan: 3314
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31



Total Ion Chromatogram (TIC)

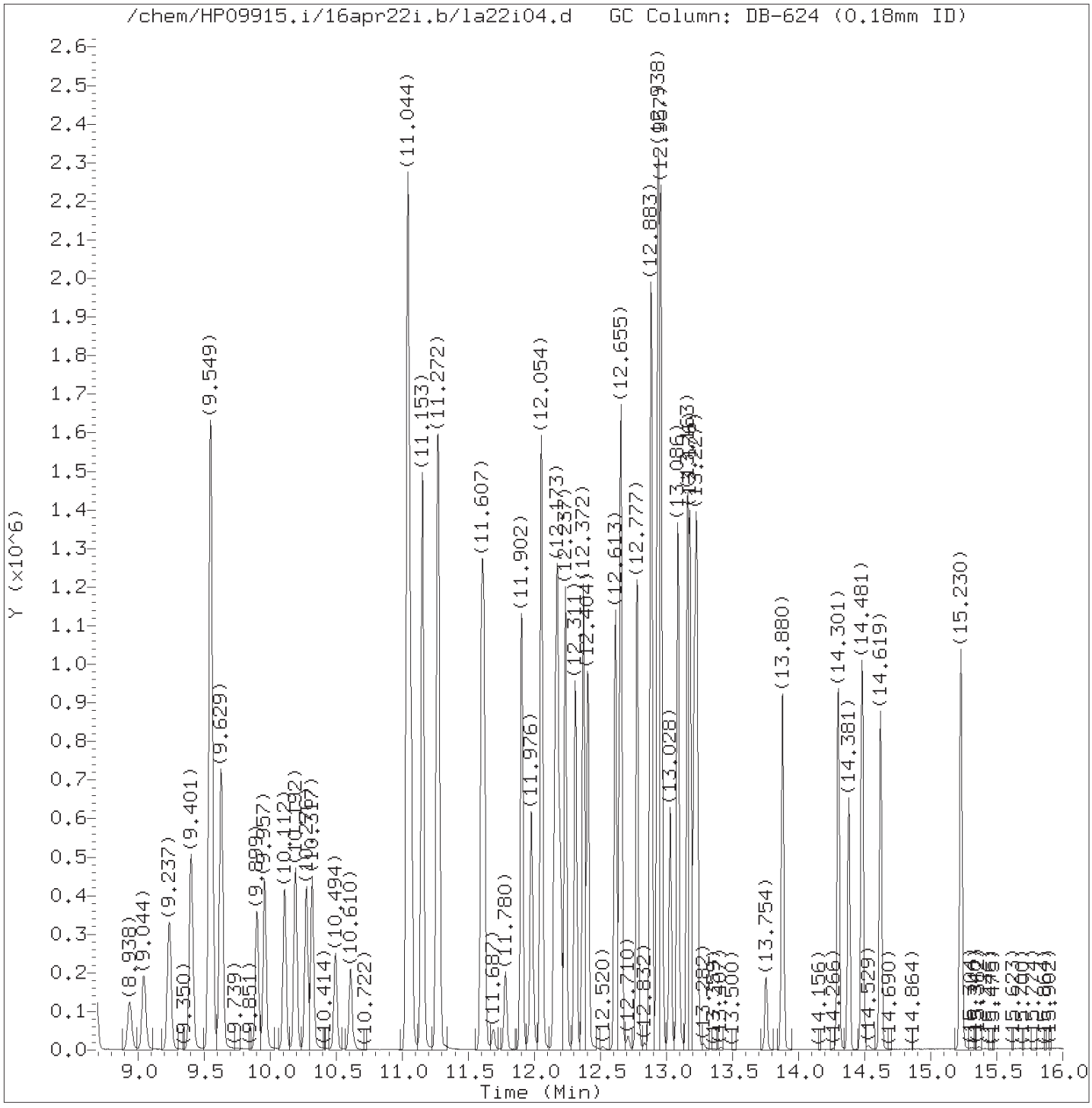
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.887	85	187294	19.476
4) Chloromethane	(2)	2.019	50	185305	19.186
6) Vinyl Chloride	(2)	2.144	62	175949	19.307
5) 1,3-Butadiene	(2)	2.163	39	278039	20.471
8) Bromomethane	(2)	2.456	94	116117M	19.652
9) Chloroethane	(2)	2.559	64	97470	19.547
10) Dichlorofluoromethane	(2)	2.784	67	238245	20.457
12) Trichlorofluoromethane	(2)	2.848	101	187204	19.504
11) n-Pentane	(2)	2.890	43	220774	20.095
14) Ethyl ether	(2)	3.080	59	132102	19.403
15) Freon 123a	(2)	3.166	67	160758M	20.194
16) Acrolein	(1)	3.237	56	394880	196.585
18) Acetone	(1)	3.388	58	36772M	40.896
17) 1,1-Dichloroethene	(2)	3.392	96	115143	20.297
17) 1,1-Dichloroethene	(2)	3.385	63	61154	20.129
19) Freon 113	(2)	3.411	101	110045	20.179
21) 2-Propanol	(1)	3.536	45	139432M	202.210
22) Methyl Iodide	(2)	3.581	142	210773	20.011
23) Carbon Disulfide	(2)	3.687	76	379743	19.935
27) Methyl Acetate	(2)	3.790	43	149438	19.557
25) Allyl Chloride	(2)	3.826	41	224748	20.506
29)*t-Butyl alcohol-d10	(1)	3.996	65	234793	250.000
28) Methylene Chloride	(2)	4.009	84	136696	19.541
30) t-Butyl alcohol	(1)	4.109	59	218070M	195.014
31) Acrylonitrile	(2)	4.305	53	76363	19.798
33) Methyl Tertiary Butyl Ether	(2)	4.388	73	433097	19.747
32) trans-1,2-Dichloroethene	(2)	4.401	96	129904	20.179
34) n-Hexane	(2)	4.822	57	207153	20.821
36) 1,1-Dichloroethane	(2)	5.064	63	258815	20.254
38) di-Isopropyl ether	(2)	5.115	45	494578	20.155
39) 2-Chloro-1,3-butadiene	(2)	5.173	53	205220	20.360
40) Ethyl t-butyl ether	(2)	5.662	59	445619	19.942
44) 2-Butanone	(2)	5.867	43	194920	39.250
42) cis-1,2-Dichloroethene	(2)	5.903	96	145844	20.115
45) 2,2-Dichloropropane	(2)	5.916	77	178902	20.166
47) Propionitrile	(1)	5.945	54	292424	202.007
43) 1,2-Dichloroethene (Total)	(2)		96	275748	40.294
48) Methacrylonitrile	(2)	6.163	67	384484	100.442

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.240	128	73063	19.763
50) Tetrahydrofuran	(1)	6.247	71	49052	40.512
51) Chloroform	(2)	6.388	83	231922	19.974
52)$Dibromofluoromethane	(2)	6.607	113	303425	49.298
52)$Dibromofluoromethane	(2)	6.607	111	309248	49.080
53) 1,1,1-Trichloroethane	(2)	6.617	97	207034	20.072
54) Cyclohexane	(2)	6.729	56	242527	20.395
54) Cyclohexane	(2)	6.726	84	187607	19.859
54) Cyclohexane	(2)	6.719	69	69969	20.357
55) 1,1-Dichloropropene	(2)	6.829	75	189331	19.935
56) Carbon Tetrachloride	(2)	6.835	117	155499	20.132
58) Isobutyl Alcohol	(1)	6.970	41	190948M	485.391
57)$1,2-Dichloroethane-d4	(2)	7.070	102	77040	49.579
57)$1,2-Dichloroethane-d4	(2)	7.070	65	390367	49.019
57)$1,2-Dichloroethane-d4	(2)	7.073	104	48653	49.315
60) Benzene	(2)	7.096	78	558606	20.067
61) 1,2-Dichloroethane	(2)	7.179	62	199982	19.421
61) 1,2-Dichloroethane	(2)	7.179	98	17894	19.953
65) t-Amyl methyl ether	(2)	7.292	73	415316	20.062
66)*Fluorobenzene	(2)	7.507	96	1295555	50.000
67) n-Heptane	(2)	7.517	43	225617	20.462
69) n-Butanol	(1)	7.861	56	312197	1018.051
71) Trichloroethene	(2)	7.993	95	140577	19.985
72) Methylcyclohexane	(2)	8.308	83	240190	20.724
72) Methylcyclohexane	(2)	8.301	98	105084	20.183
73) 1,2-Dichloropropane	(2)	8.330	63	154104	20.109
76) Methyl Methacrylate	(2)	8.407	69	130658M	20.345
75) 1,4-Dioxane	(1)	8.420	88	51738M	498.095
74) Dibromomethane	(2)	8.440	93	92811	19.541
78) Bromodichloromethane	(2)	8.678	83	169774	19.584
79) 2-Nitropropane	(2)	8.938	41	94845	39.740
80) 2-Chloroethyl Vinyl Ether	(2)	9.041	63	106283	19.435
81) cis-1,3-Dichloropropene	(2)	9.237	75	226619	20.378
82) 4-Methyl-2-pentanone	(2)	9.401	43	420090	41.221
83)$Toluene-d8	(3)	9.549	98	1272865	50.426
83)$Toluene-d8	(3)	9.549	100	829194	50.448
88) Toluene	(3)	9.629	92	351358	20.476
89) trans-1,3-Dichloropropene	(3)	9.899	75	206072	20.726

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$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.957	69	227865	20.688
90) 1,3-Dichloropropene (total)	(3)		100	432691	41.104
92) 1,1,2-Trichloroethane	(3)	10.112	97	131696	19.753
93) Tetrachloroethene	(3)	10.192	166	147208	20.266
94) 1,3-Dichloropropane	(3)	10.276	76	238744	20.220
96) 2-Hexanone	(3)	10.317	43	307059	42.145
97) Dibromochloromethane	(3)	10.494	129	132008	20.158
99) 1,2-Dibromoethane	(3)	10.610	107	144996	20.244
100)*Chlorobenzene-d5	(3)	11.041	117	964347	50.000
101) 1-Chlorohexane	(3)	11.050	91	193148	20.065
102) Chlorobenzene	(3)	11.070	112	394947	20.338
103) 1,1,1,2-Tetrachloroethane	(3)	11.150	131	130119	20.249
104) Ethylbenzene	(3)	11.153	91	683680	20.651
106) m+p-Xylene	(3)	11.272	106	525347	41.332
107) o-Xylene	(3)	11.600	106	256640	20.529
109) Styrene	(3)	11.620	104	441037	20.944
108) Xylene (Total)	(3)		106	781987	61.861
110) Bromoform	(3)	11.780	173	87589	19.425
111) Isopropylbenzene	(3)	11.902	105	664555	20.882
112) Cyclohexanone	(1)	11.976	55	249621	521.106
114)$4-Bromofluorobenzene	(3)	12.054	95	466374	49.928
114)$4-Bromofluorobenzene	(3)	12.054	174	397680	50.030
116) 1,1,2,2-Tetrachloroethane	(4)	12.150	83	206195M	20.365
115) Bromobenzene	(4)	12.166	156	174807	20.344
118) trans-1,4-Dichloro-2-butene	(4)	12.176	53	136146	100.874
117) 1,2,3-Trichloropropane	(4)	12.198	110	58174	19.893
119) n-Propylbenzene	(4)	12.237	91	812831	21.158
120) 2-Chlorotoluene	(4)	12.311	126	160858	20.645
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	572559	21.041
121) 4-Chlorotoluene	(4)	12.404	126	169508	20.602
124) tert-Butylbenzene	(4)	12.613	134	116625M	20.706
125) Pentachloroethane	(4)	12.648	167	95178	20.469
126) 1,2,4-Trimethylbenzene	(4)	12.655	105	589677	20.839
127) sec-Butylbenzene	(4)	12.777	105	729349	21.149
129) 1,3-Dichlorobenzene	(4)	12.880	146	330490	20.446
130) p-Isopropyltoluene	(4)	12.886	119	633022	21.105
131)*1,4-Dichlorobenzene-d4	(4)	12.935	152	499944	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	343120	20.318

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Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

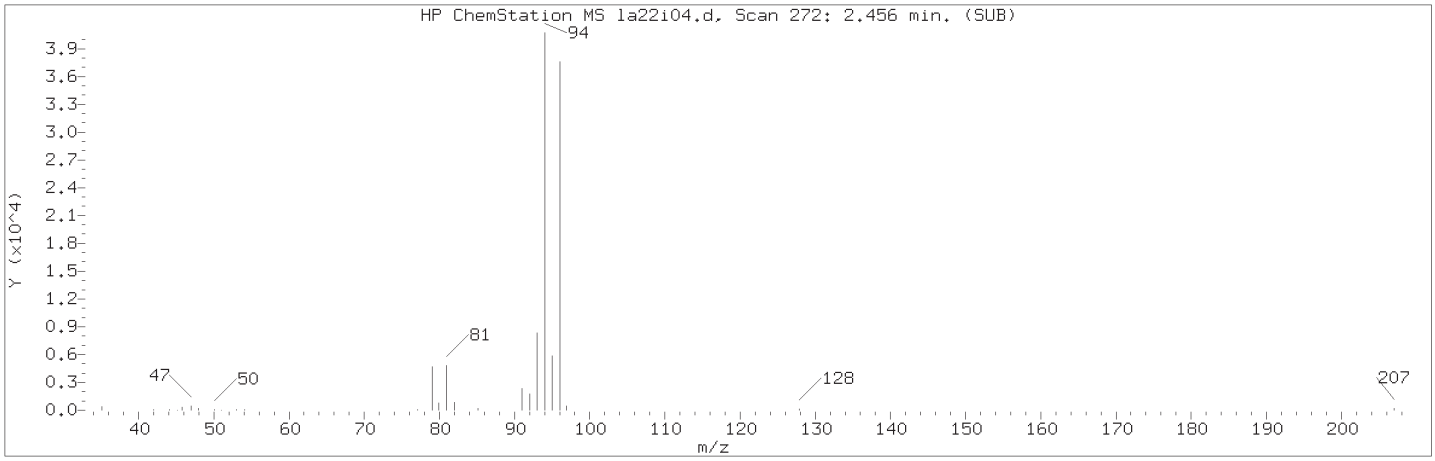
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

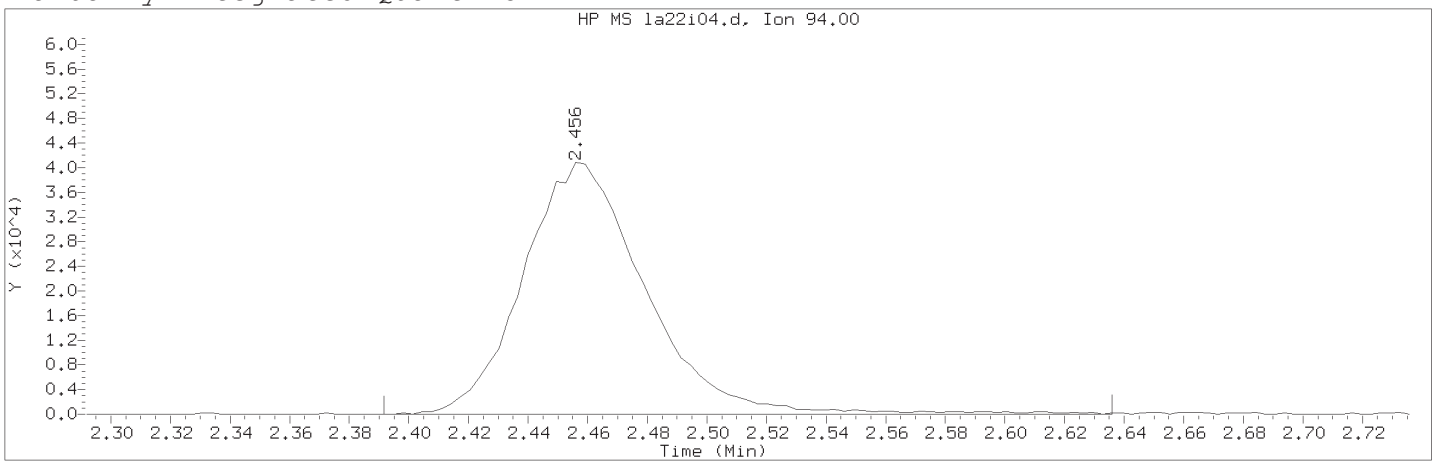
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	611197	20.654
135) Benzyl Chloride	(4)	13.028	91	366800	20.881
136) 1,3-Diethylbenzene	(4)	13.086	119	377107	20.910
137) 1,4-Diethylbenzene	(4)	13.160	119	392982	20.893
139) n-Butylbenzene	(4)	13.179	92	321539	20.949
138) 1,2-Dichlorobenzene	(4)	13.211	146	326169	20.356
140) 1,2-Diethylbenzene	(4)	13.230	119	319812	20.790
141) Diethylbenzene (total)	(4)		100	1089901	62.594
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	39592	20.228
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	258629	20.282
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	252574	19.989
147) Hexachlorobutadiene	(4)	14.381	225	109229	20.242
148) Naphthalene	(4)	14.481	128	702403	20.635
149) 1,2,3-Trichlorobenzene	(4)	14.619	180	239258	20.089
150) 2-Methylnaphthalene	(4)	15.230	142	455455	21.461

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

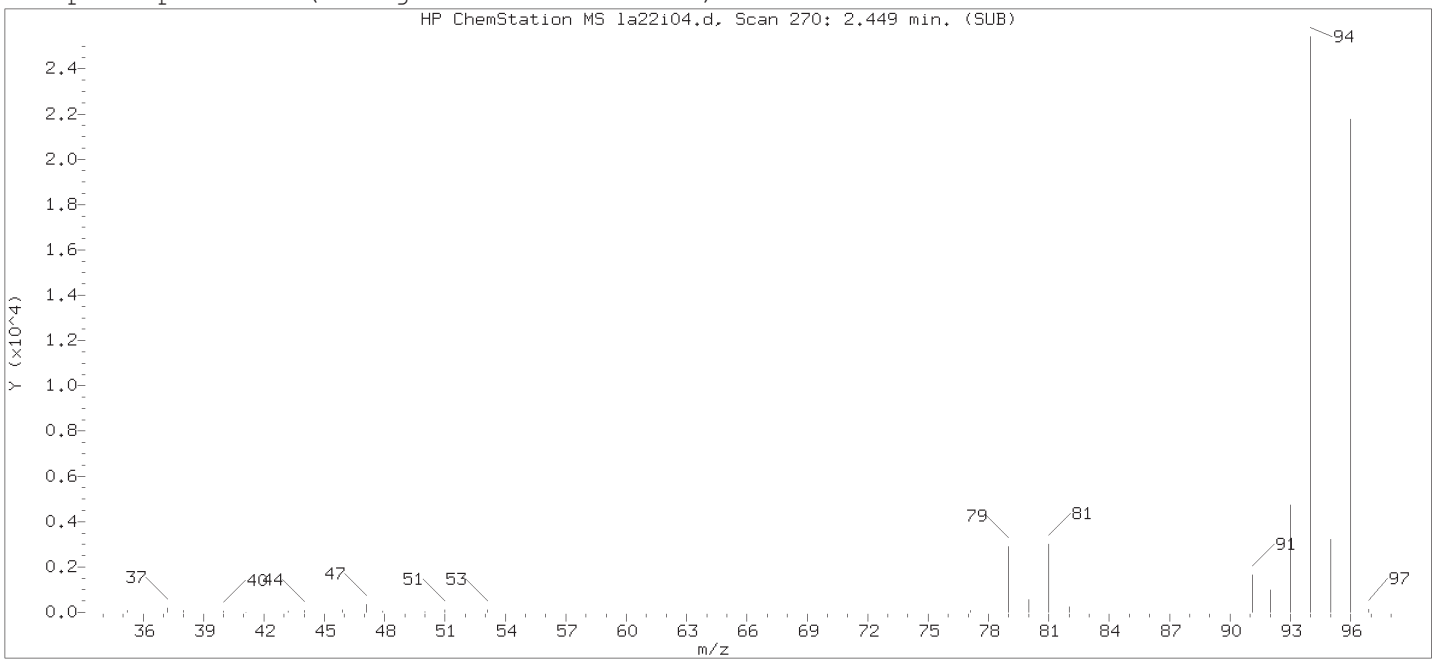
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 272
Retention Time (minutes): 2.456
Quant Ion : 94.00
Area (flag) : 116117M
On-Column Amount (ng) : 19.6520
Integration start scan : 251 Integration stop scan: 327
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

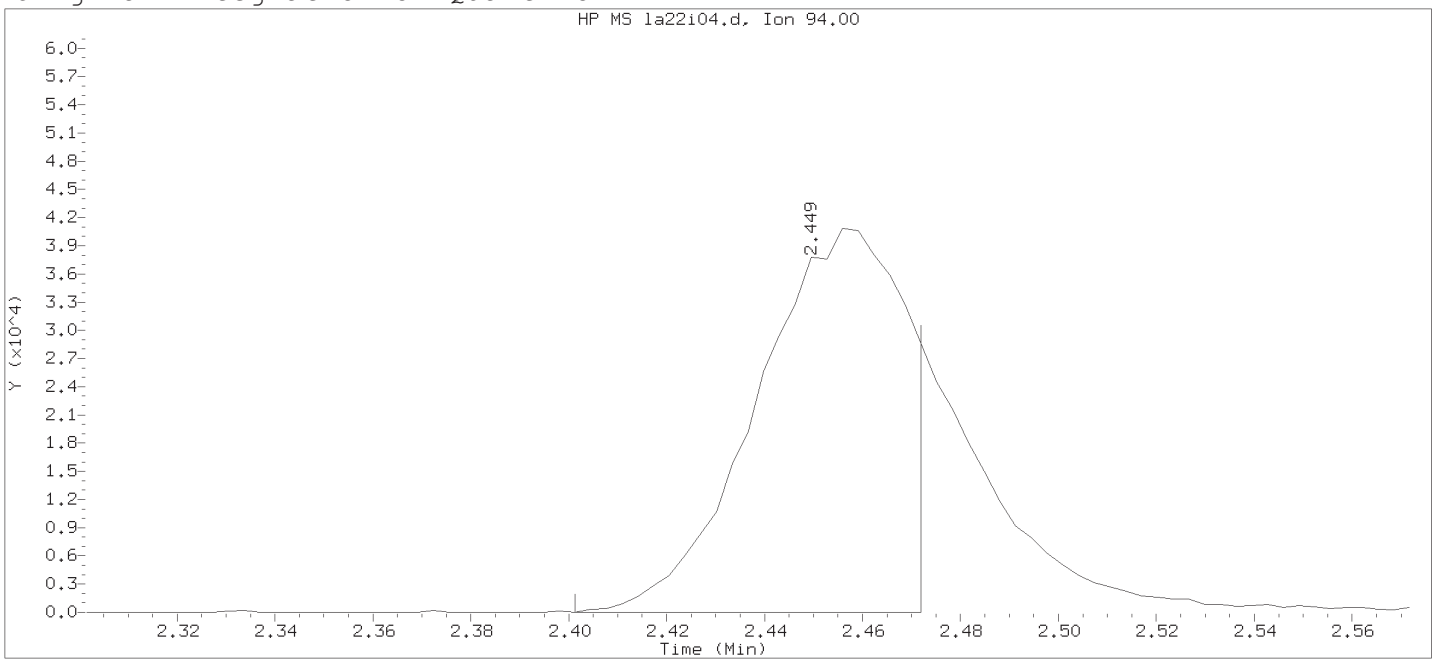
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

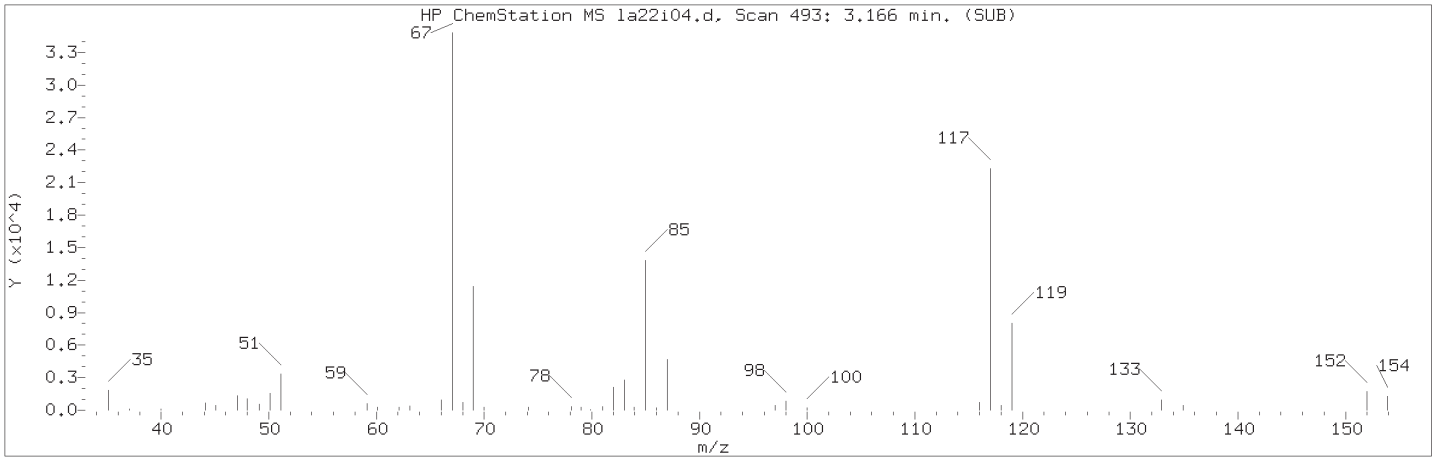
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

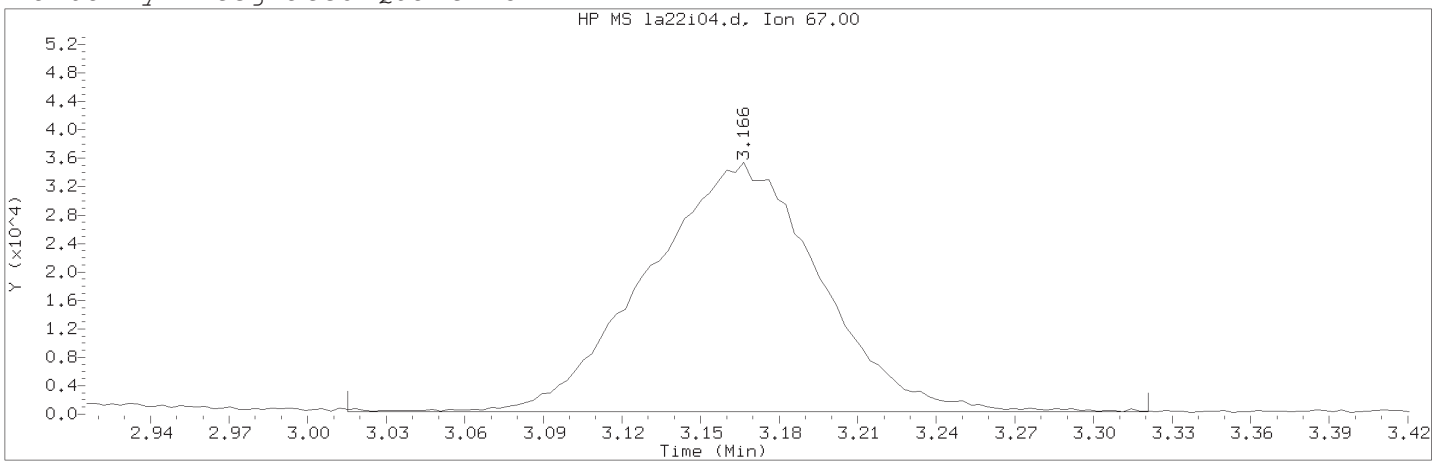
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 270
Retention Time (minutes): 2.449
Quant Ion : 94.00
Area : 84061
On-column Amount (ng) : 15.2851
Integration start scan : 254 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

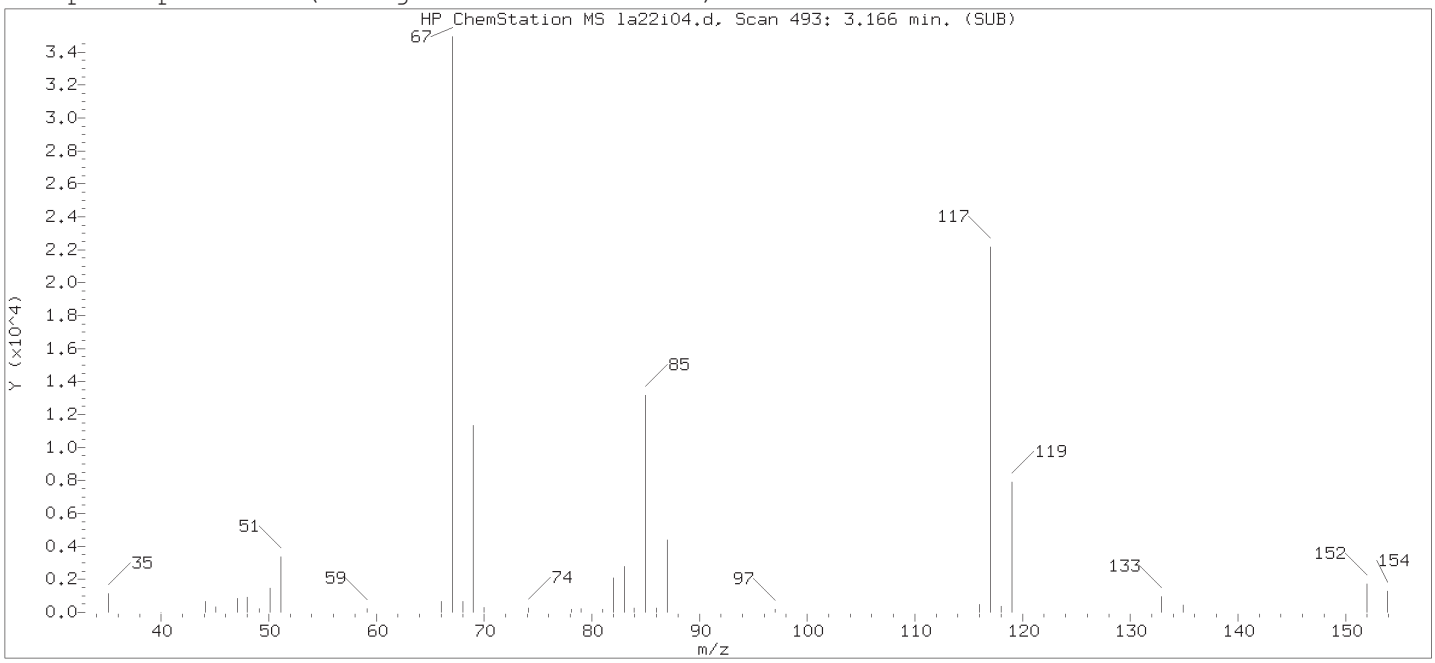
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 493
Retention Time (minutes): 3.166
Quant Ion : 67.00
Area (flag) : 160758M
On-Column Amount (ng) : 20.1939
Integration start scan : 445 Integration stop scan: 540
Y at integration start : 311 Y at integration end: 311

Reason for manual integration: improper integration

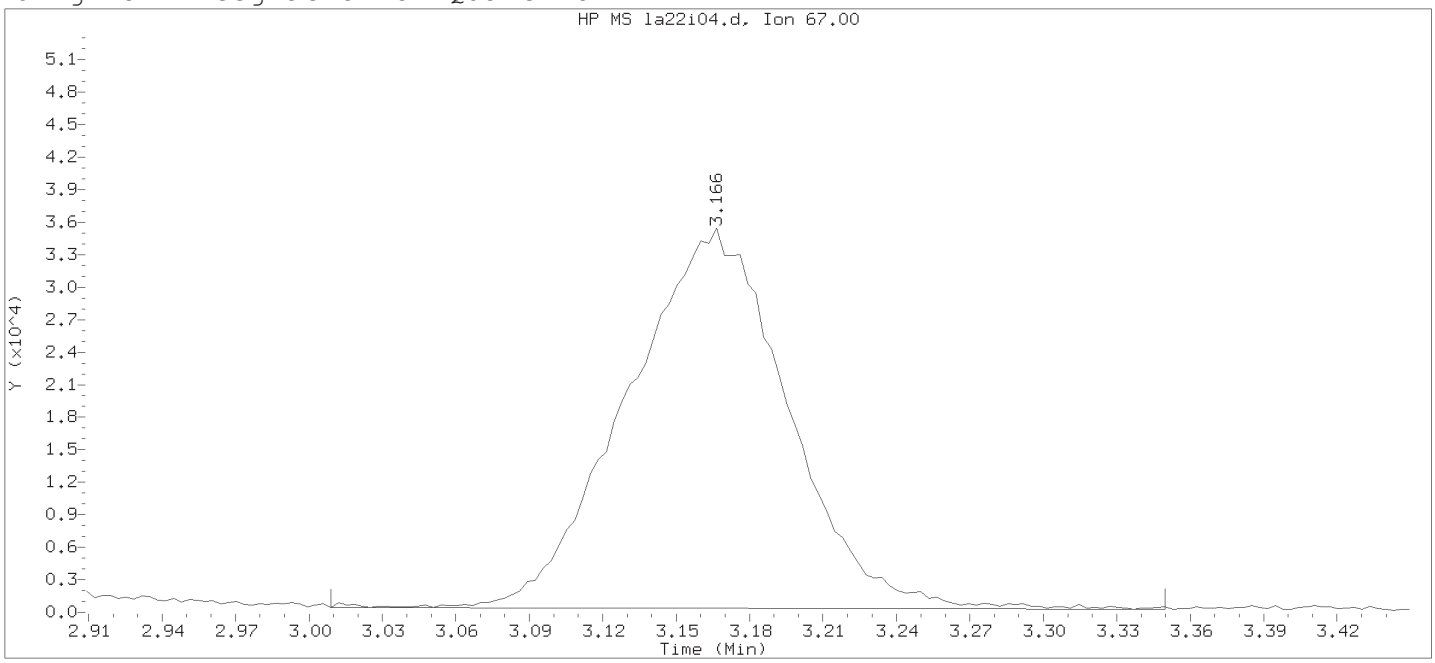
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

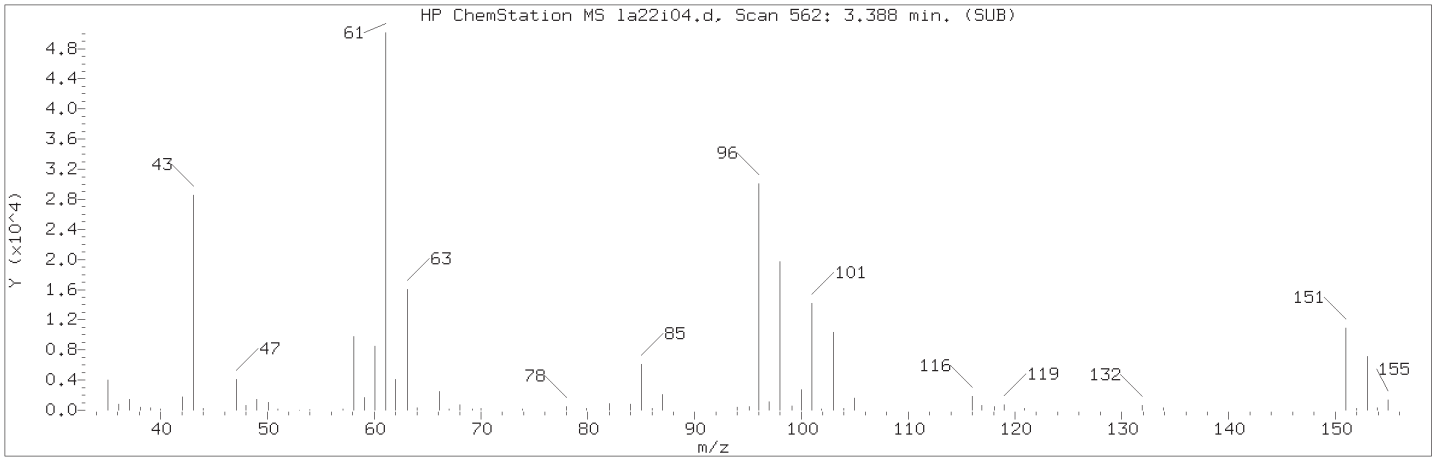
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

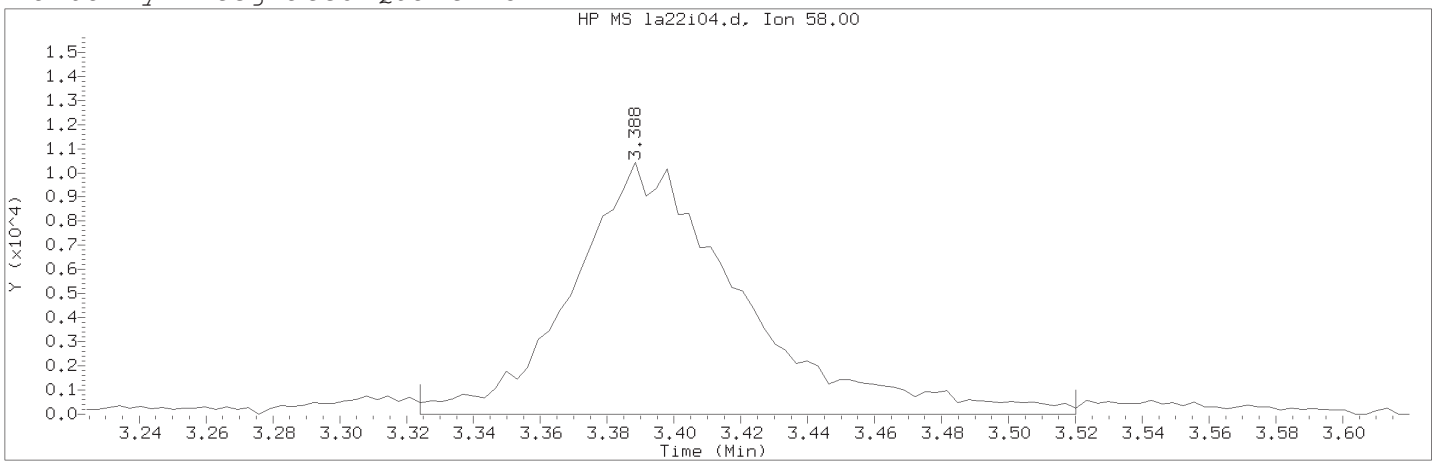
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 493		
Retention Time (minutes)	: 3.166		
Quant Ion	: 67.00		
Area	: 160235		
On-column Amount (ng)	: 20.0144		
Integration start scan	: 443	Integration stop scan:	549
Y at integration start	: 429	Y at integration end:	272

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: la22i04.d 31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

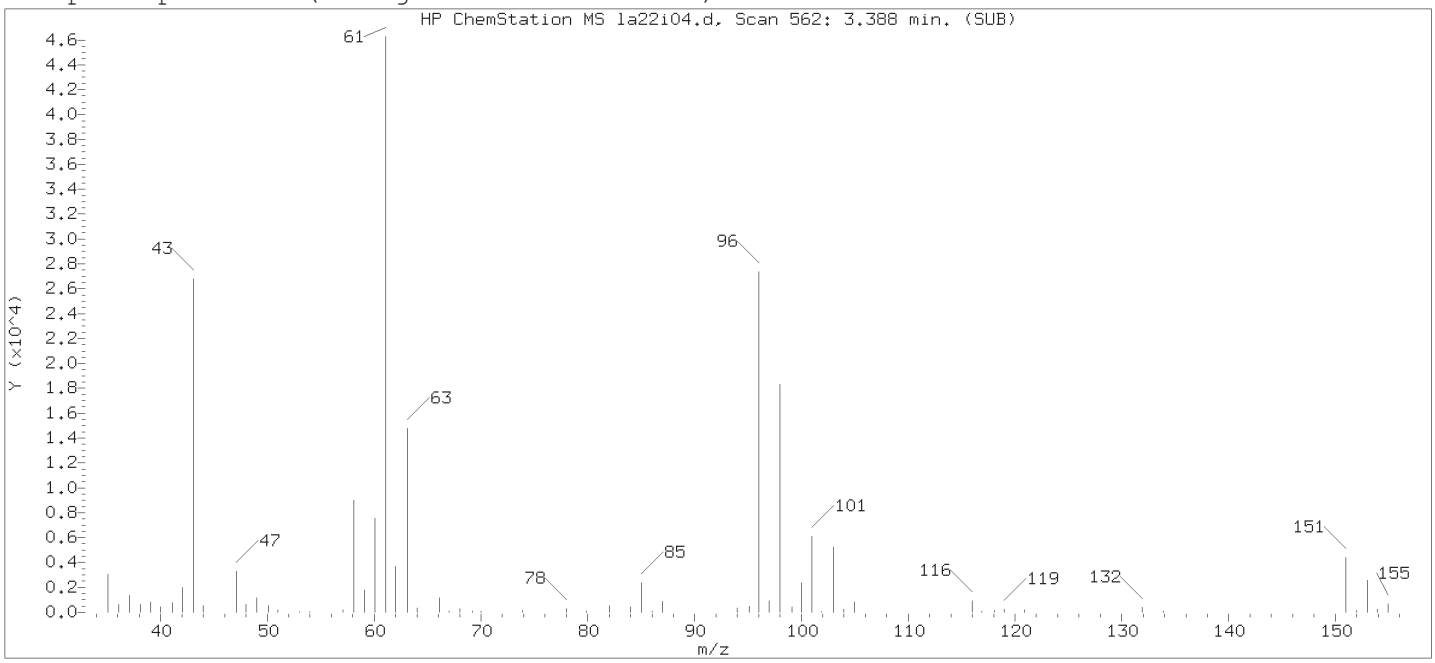
Compound Number : 18
Compound Name : Acetone
Scan Number : 562
Retention Time (minutes): 3.388
Quant Ion : 58.00
Area (flag) : 36772M
On-Column Amount (ng) : 40.8961
Integration start scan : 541 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

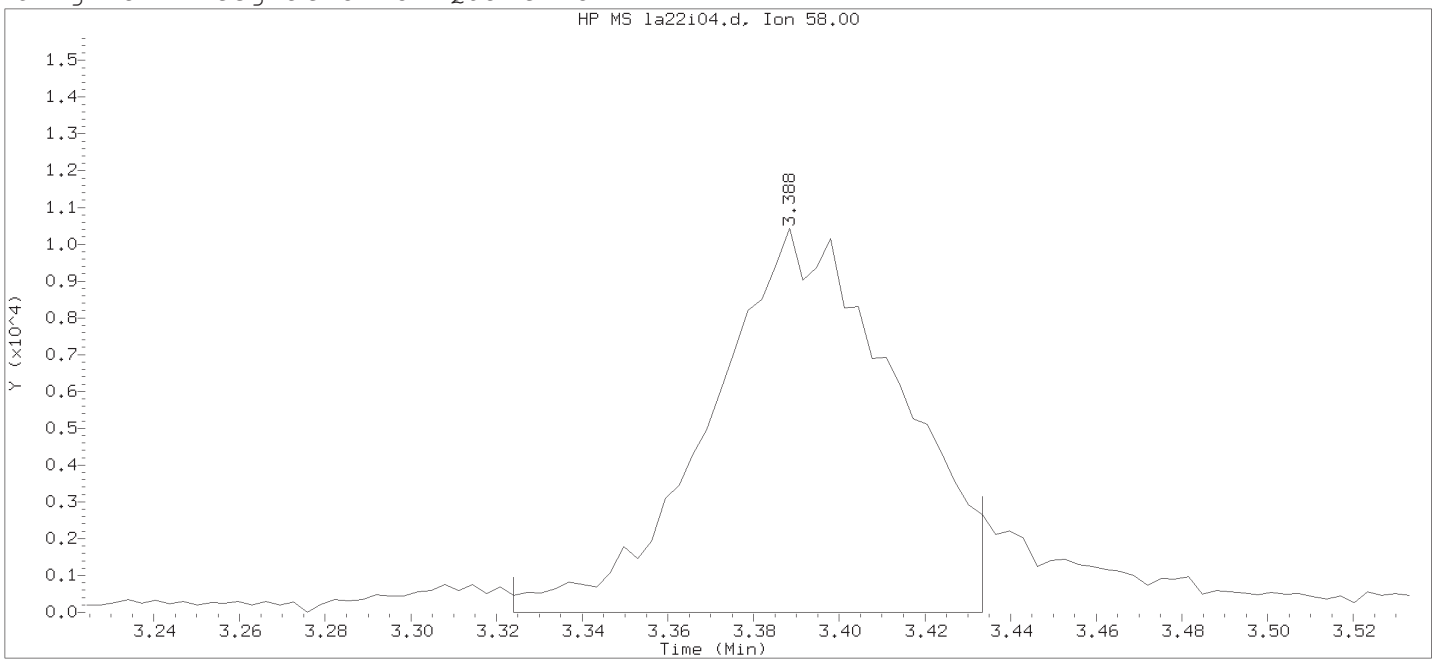
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

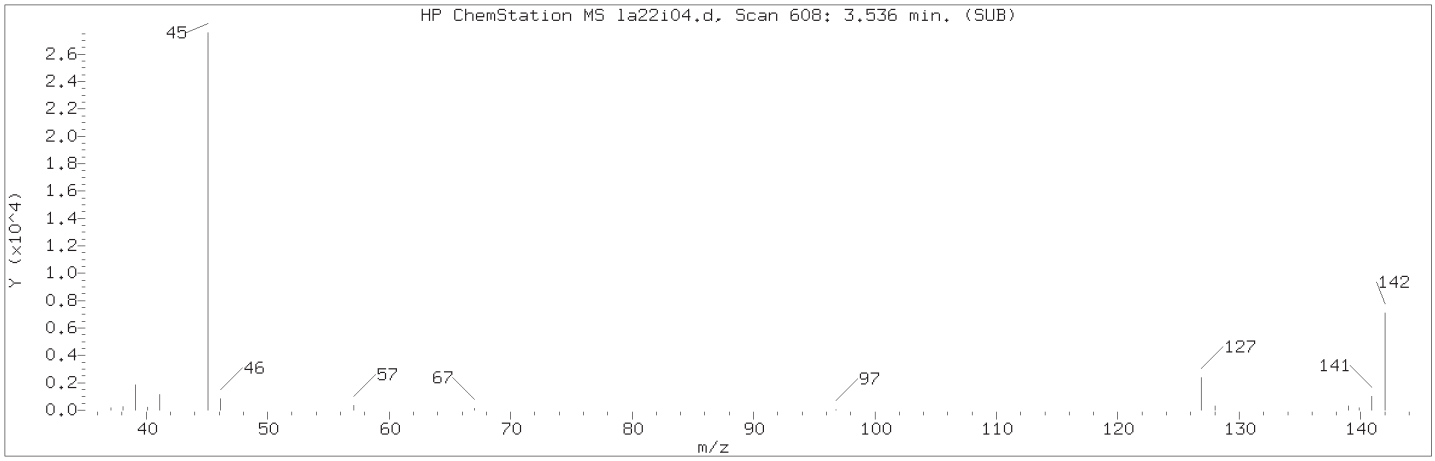
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

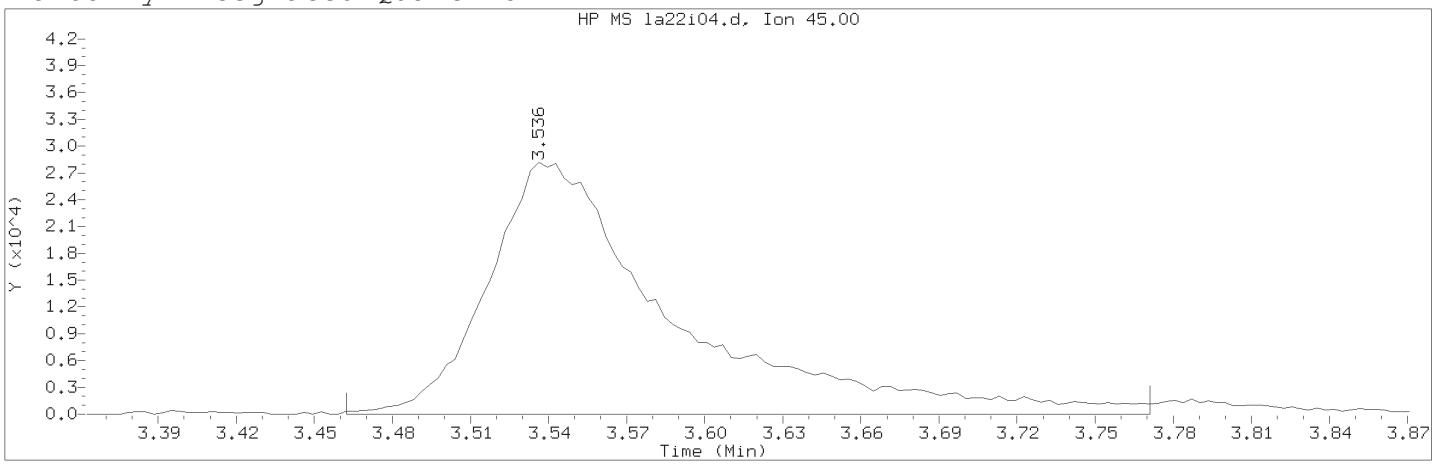
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 562		
Retention Time (minutes)	: 3.388		
Quant Ion	: 58.00		
Area	: 31564		
On-column Amount (ng)	: 35.0413		
Integration start scan	: 541	Integration stop scan:	575
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

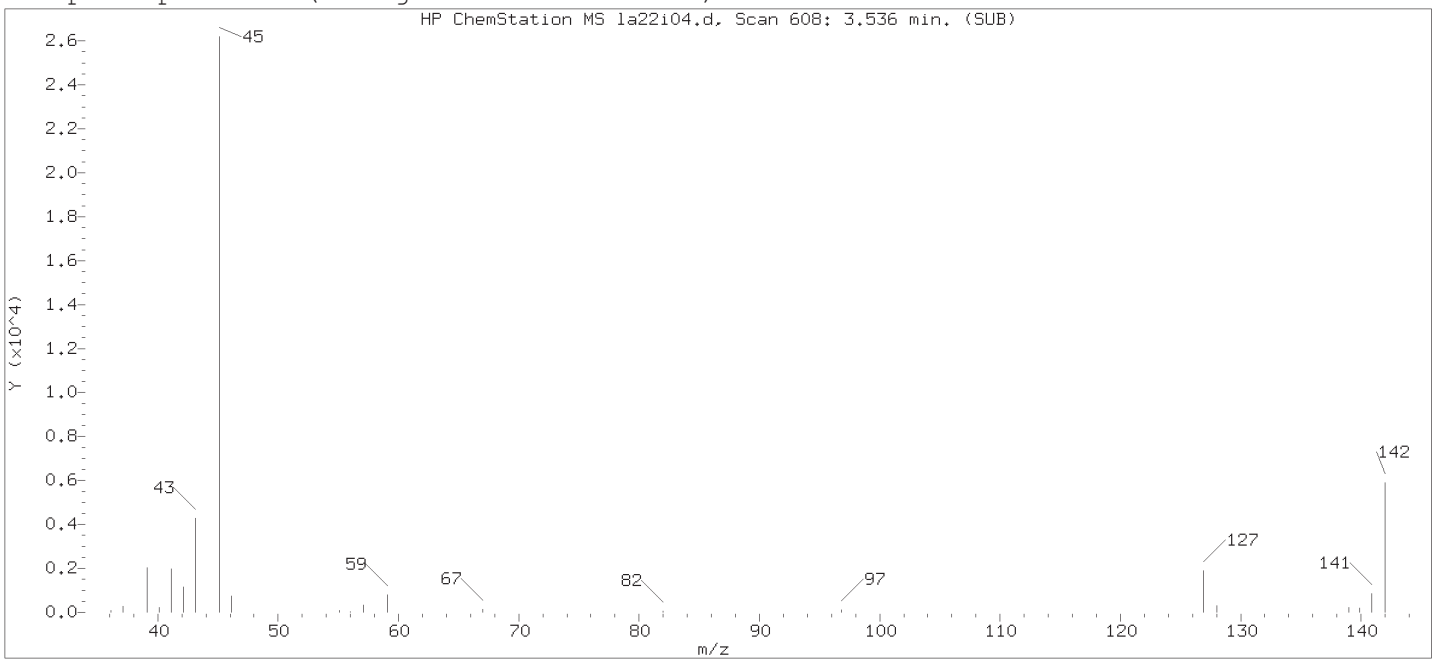
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 608
Retention Time (minutes): 3.536
Quant Ion : 45.00
Area (flag) : 139432M
On-Column Amount (ng) : 202.2096
Integration start scan : 584 Integration stop scan: 680
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

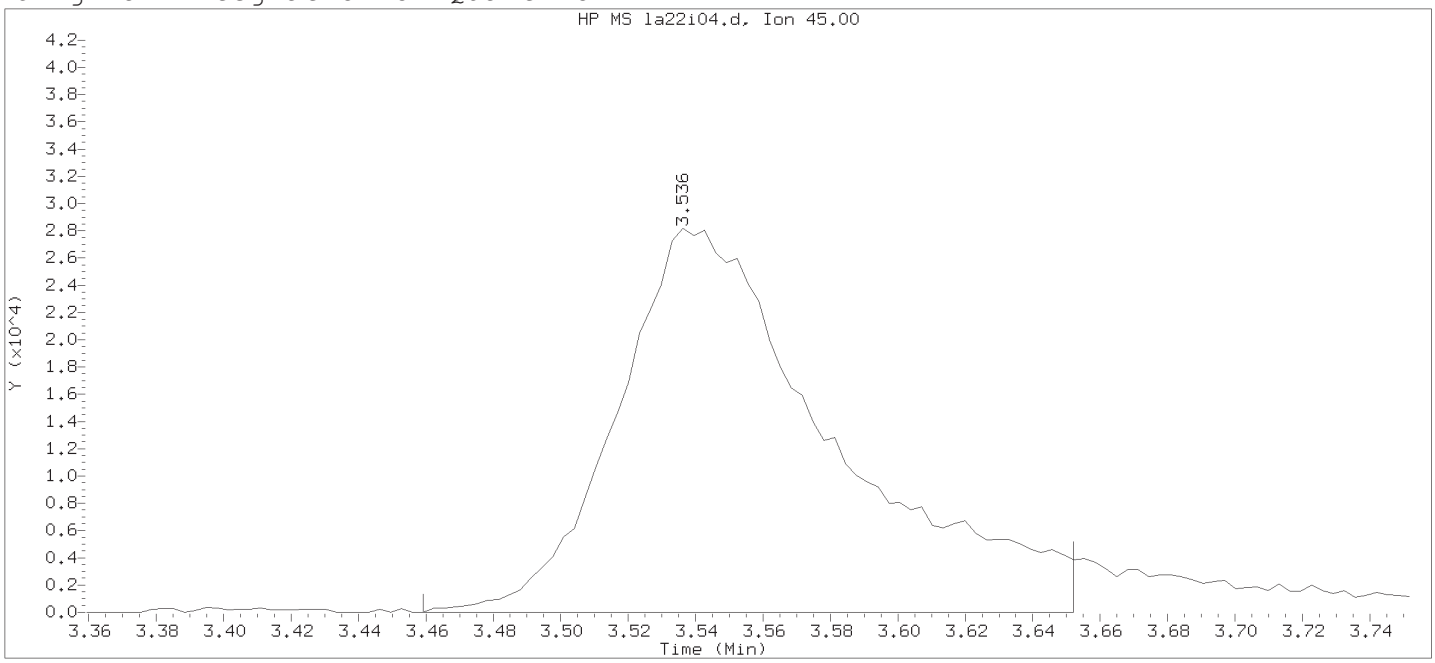
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

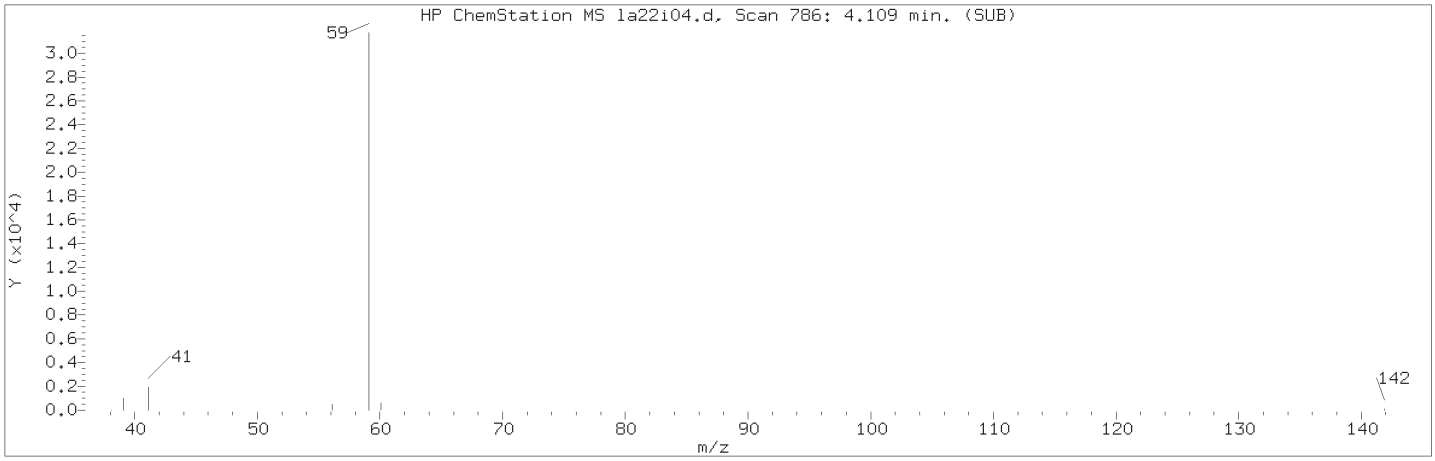
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

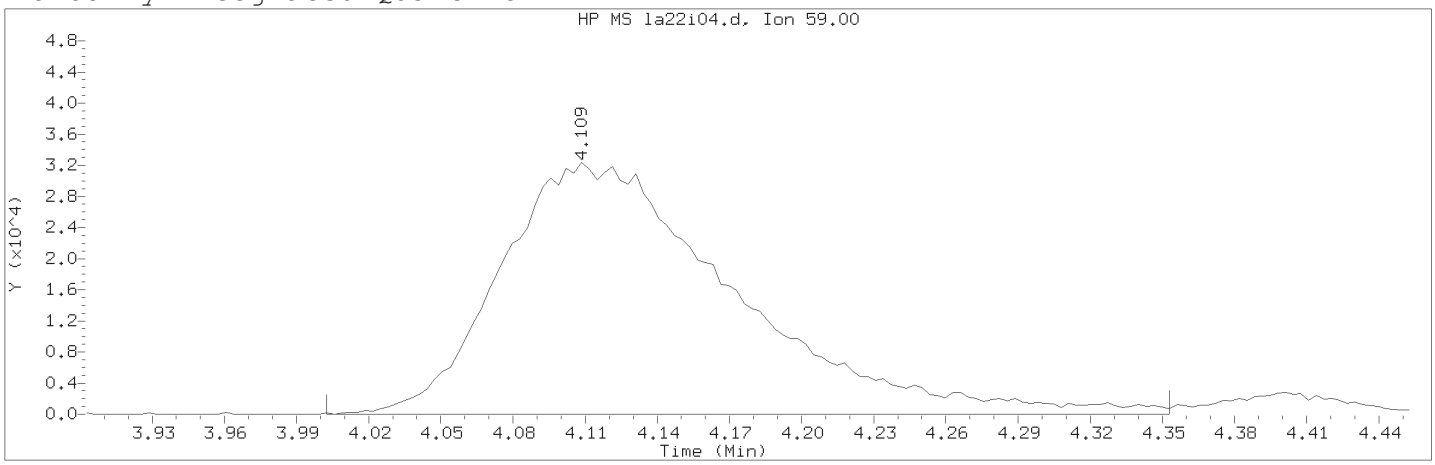
Compound Number	: 21		
Compound Name	: 2-Propanol		
Scan Number	: 608		
Retention Time (minutes)	: 3.536		
Quant Ion	: 45.00		
Area	: 125003		
On-column Amount (ng)	: 185.2940		
Integration start scan	: 583	Integration stop scan:	643
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

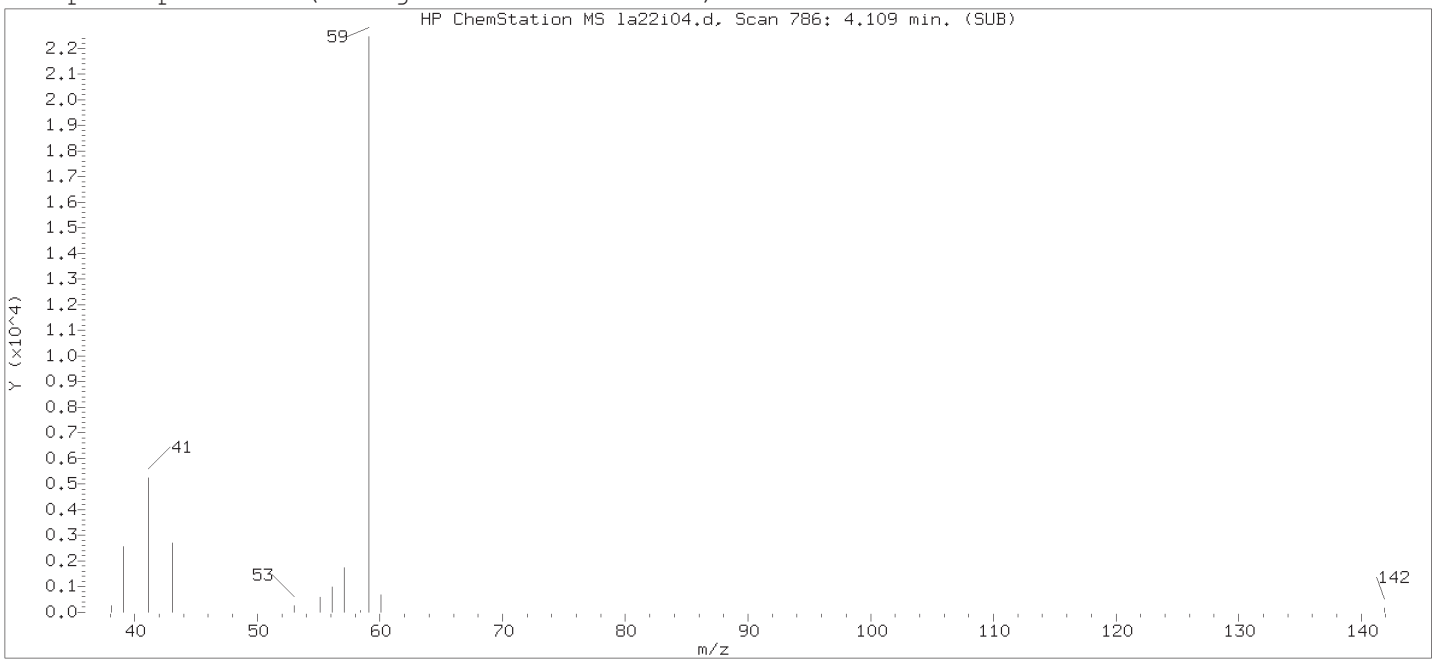
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.109
Quant Ion : 59.00
Area (flag) : 218070M
On-Column Amount (ng) : 195.0137
Integration start scan : 752 Integration stop scan: 861
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

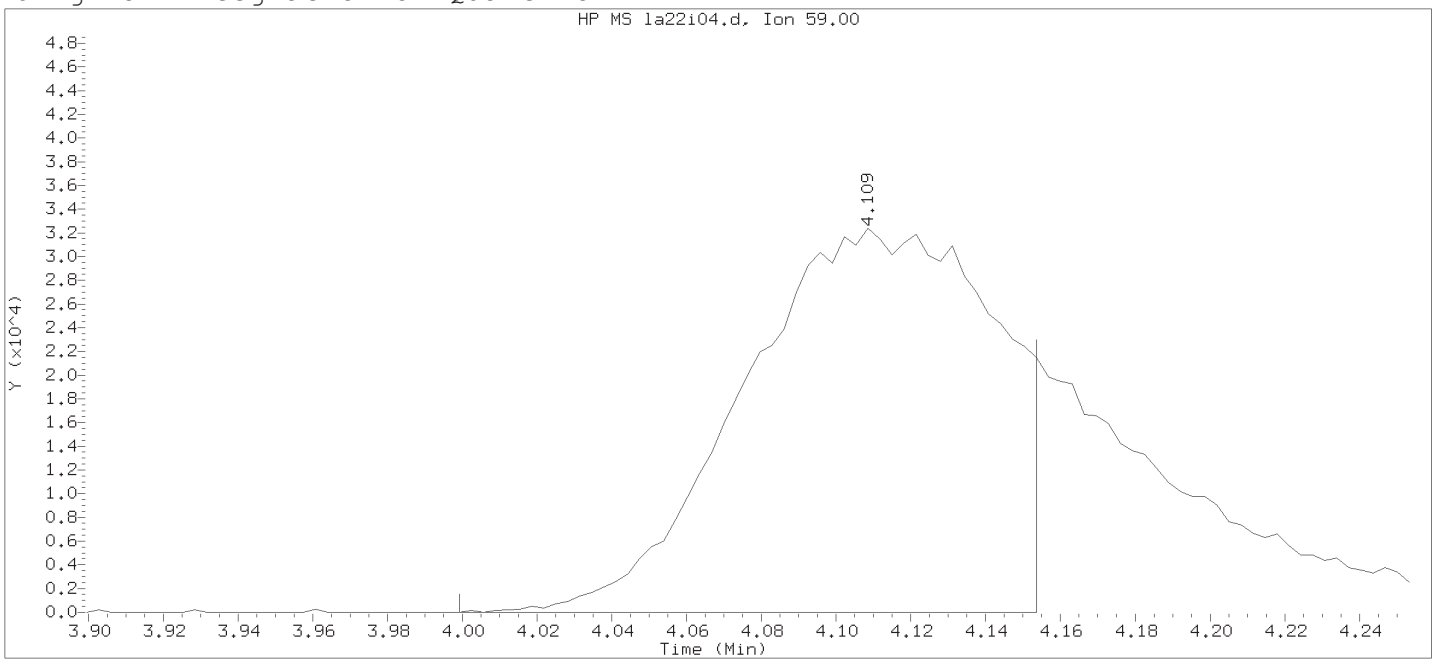
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

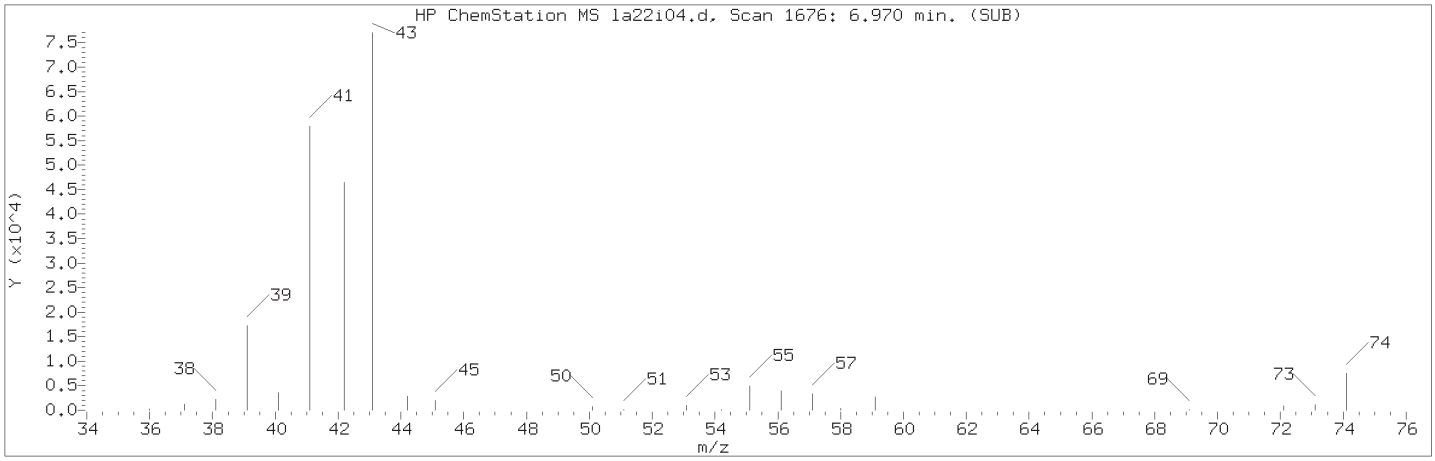
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

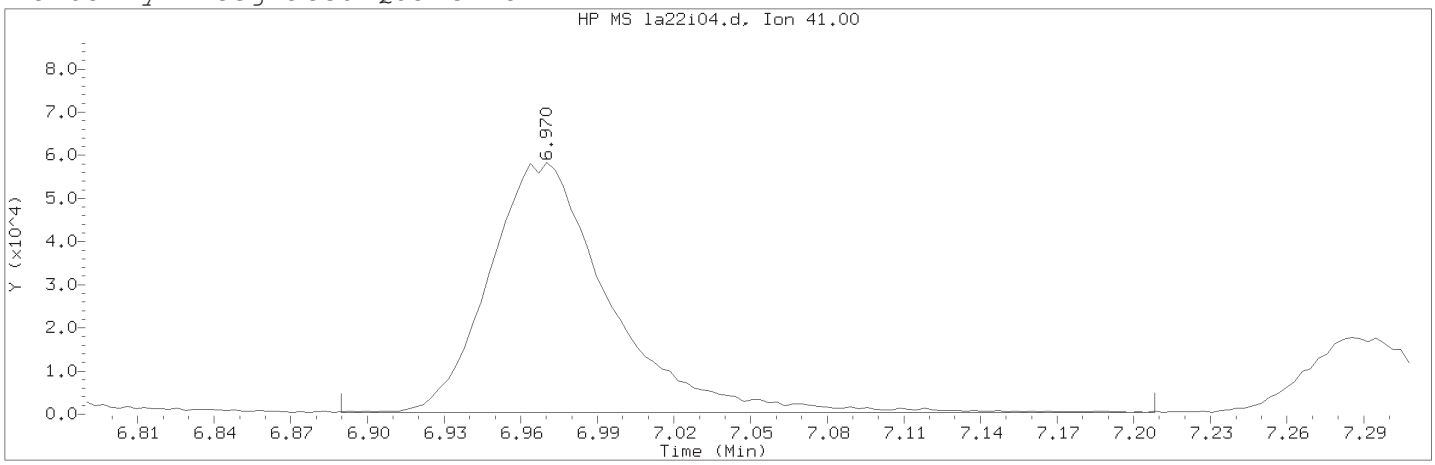
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.109
Quant Ion : 59.00
Area : 151004
On-column Amount (ng) : 153.2263
Integration start scan : 751 Integration stop scan: 799
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

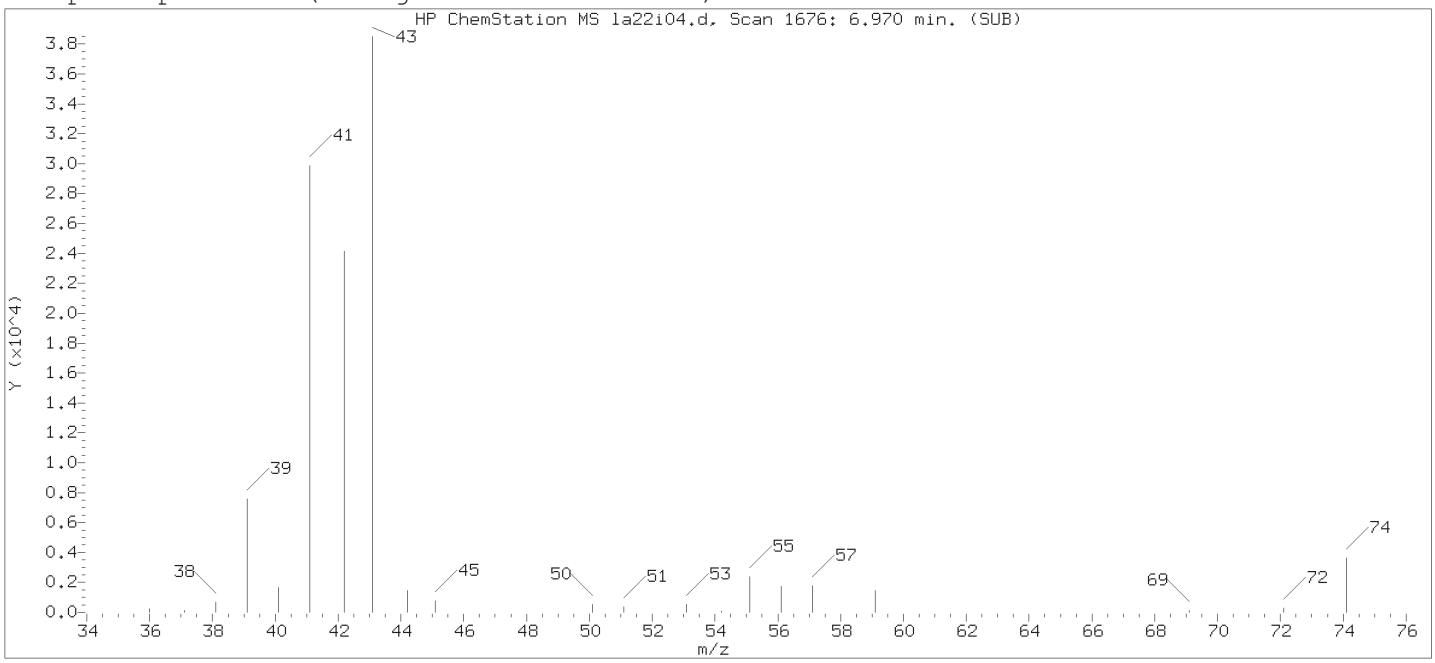
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1676
Retention Time (minutes): 6.970
Quant Ion : 41.00
Area (flag) : 190948M
On-Column Amount (ng) : 485.3909
Integration start scan : 1650 Integration stop scan: 1749
Y at integration start : 360 Y at integration end: 360

Reason for manual integration: improper integration

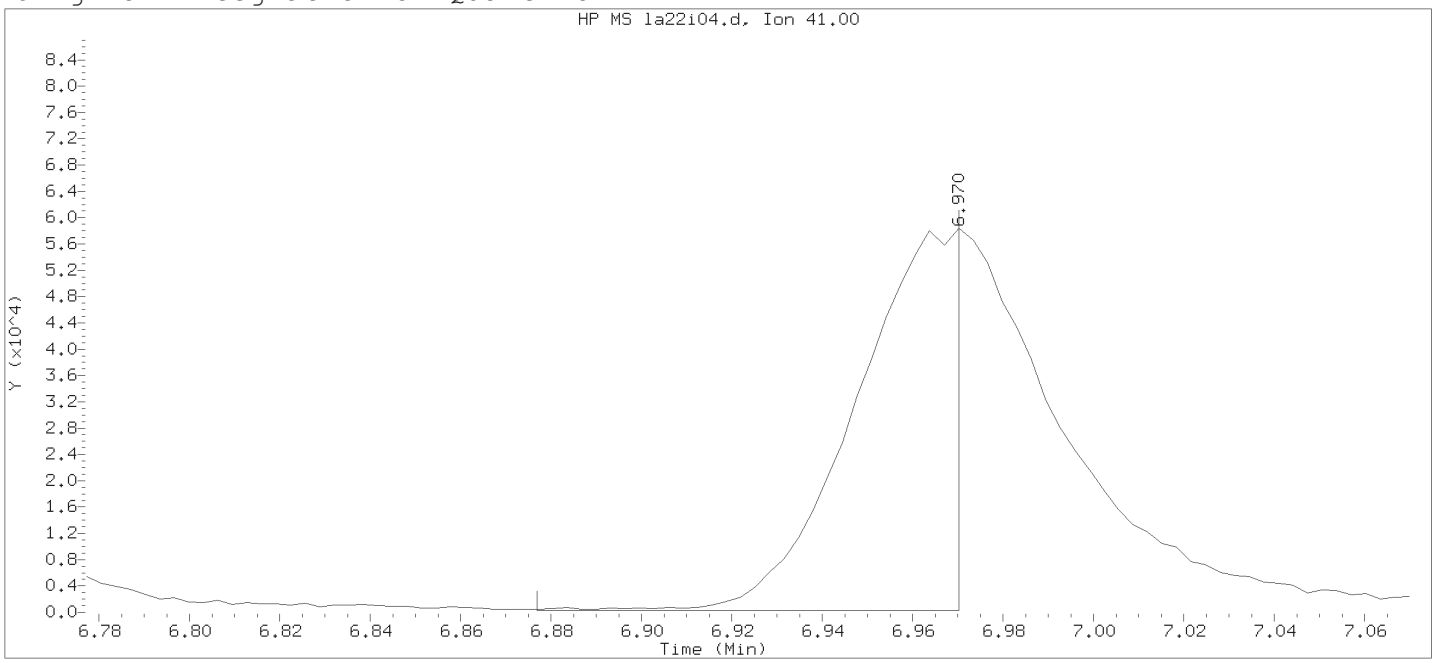
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

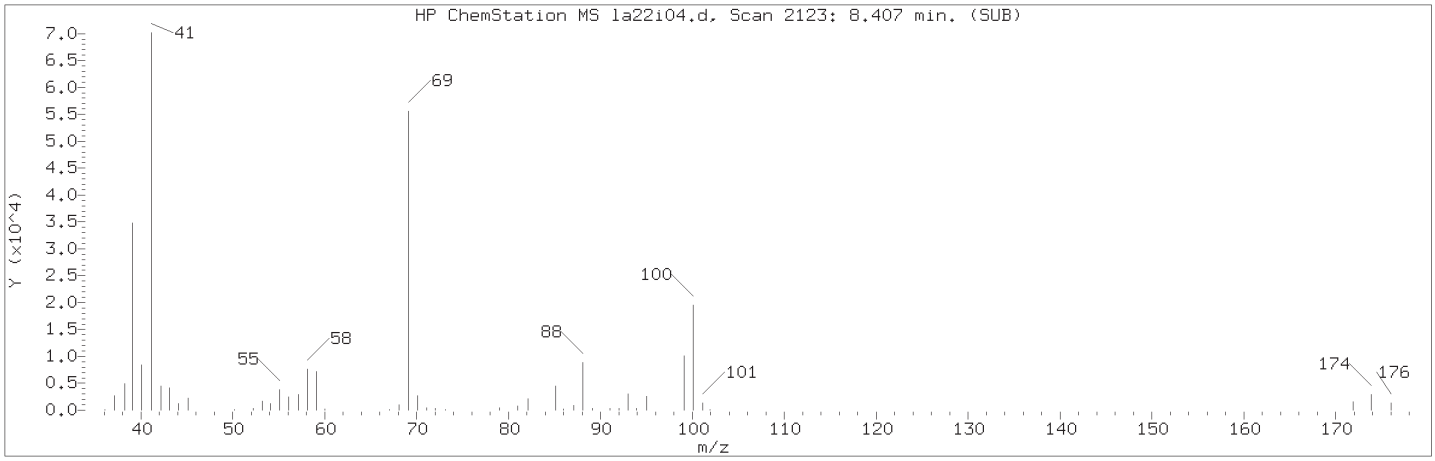
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

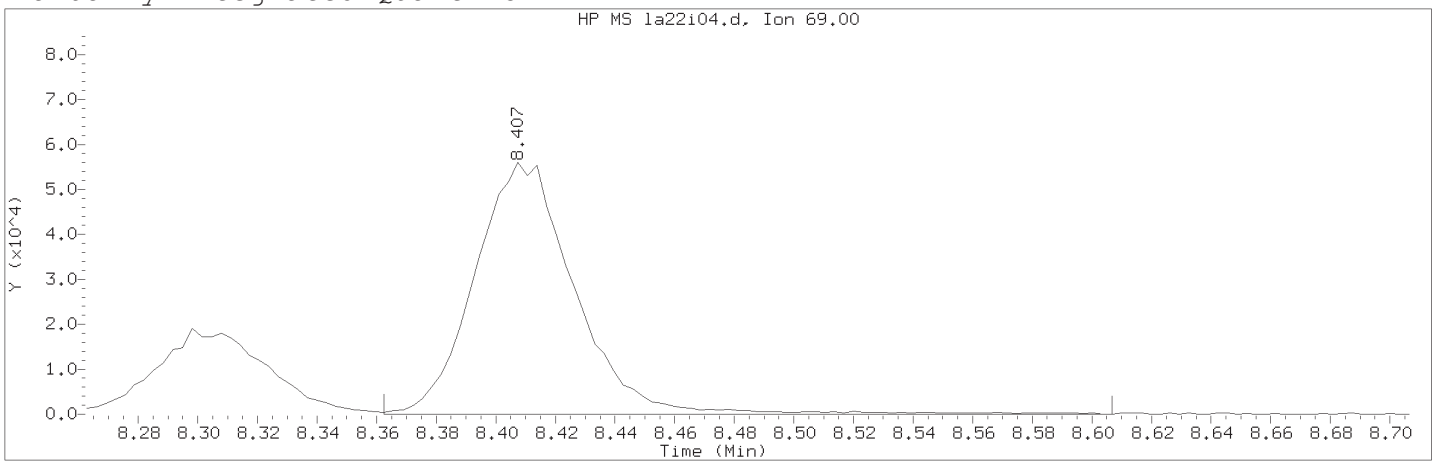
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1676
Retention Time (minutes): 6.970
Quant Ion : 41.00
Area : 88684
On-column Amount (ng) : 262.0537
Integration start scan : 1646 Integration stop scan: 1675
Y at integration start : 258 Y at integration end: 258

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

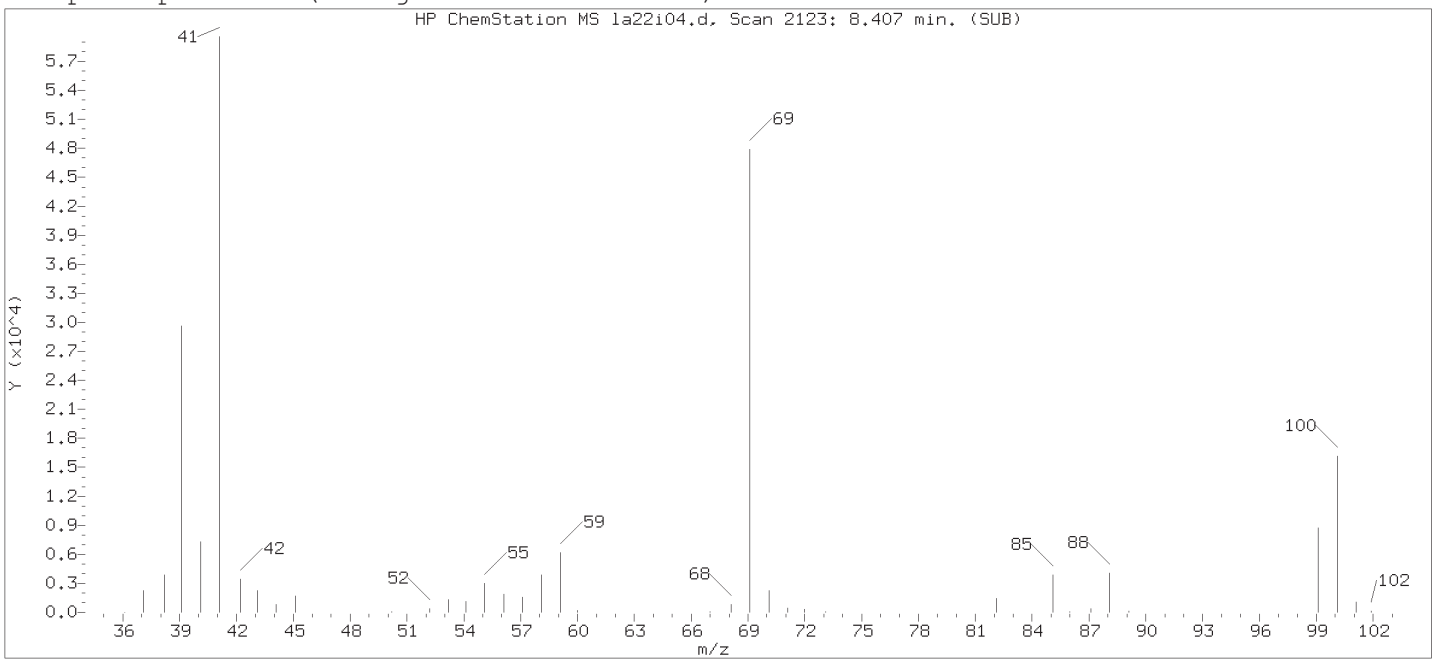
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2123
Retention Time (minutes): 8.407
Quant Ion : 69.00
Area (flag) : 130658M
On-Column Amount (ng) : 20.3446
Integration start scan : 2108 Integration stop scan: 2184
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

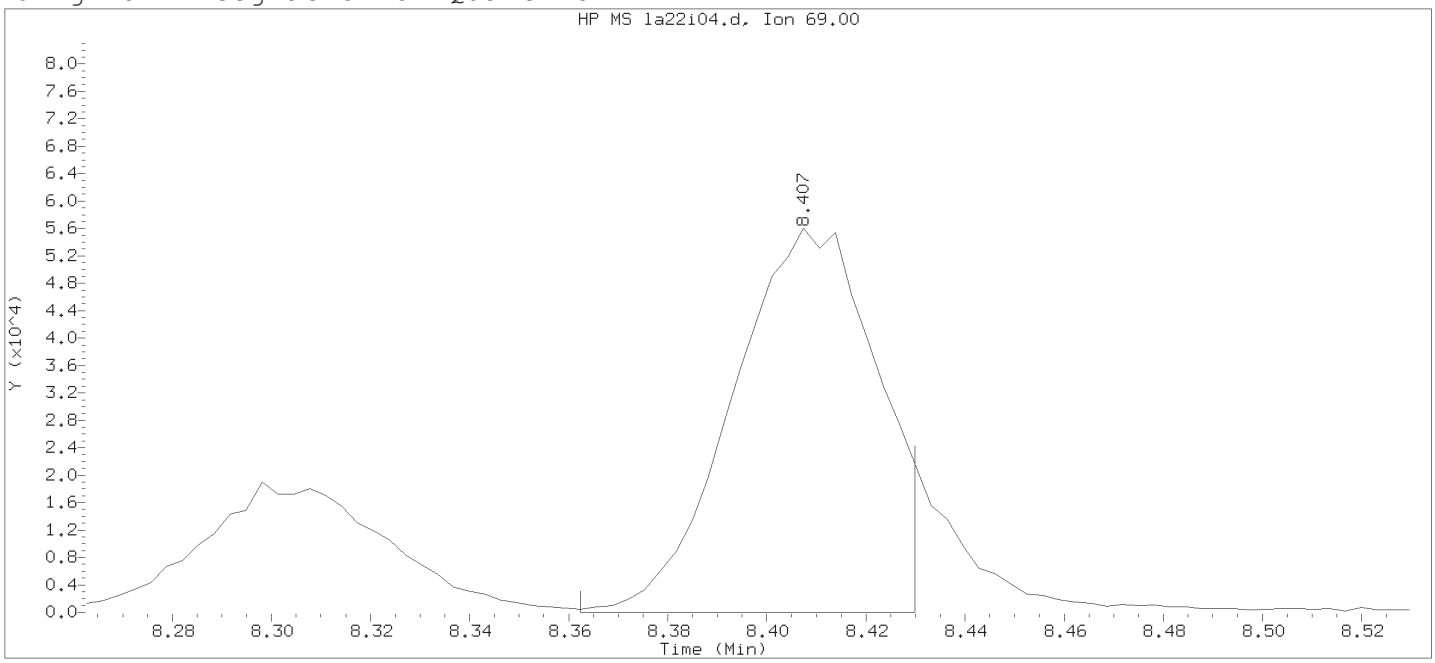
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

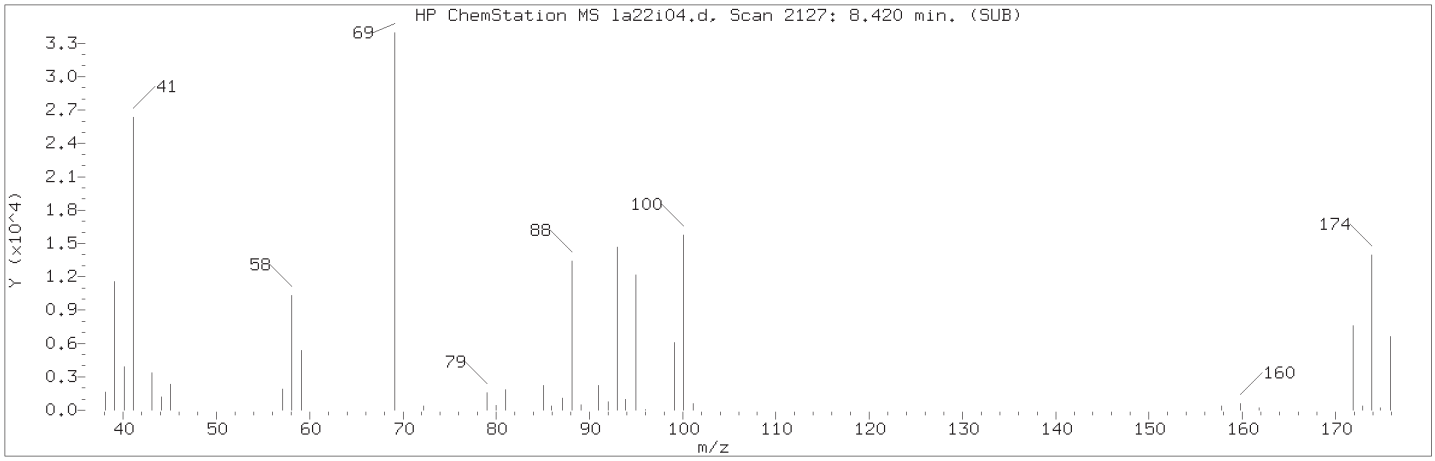
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

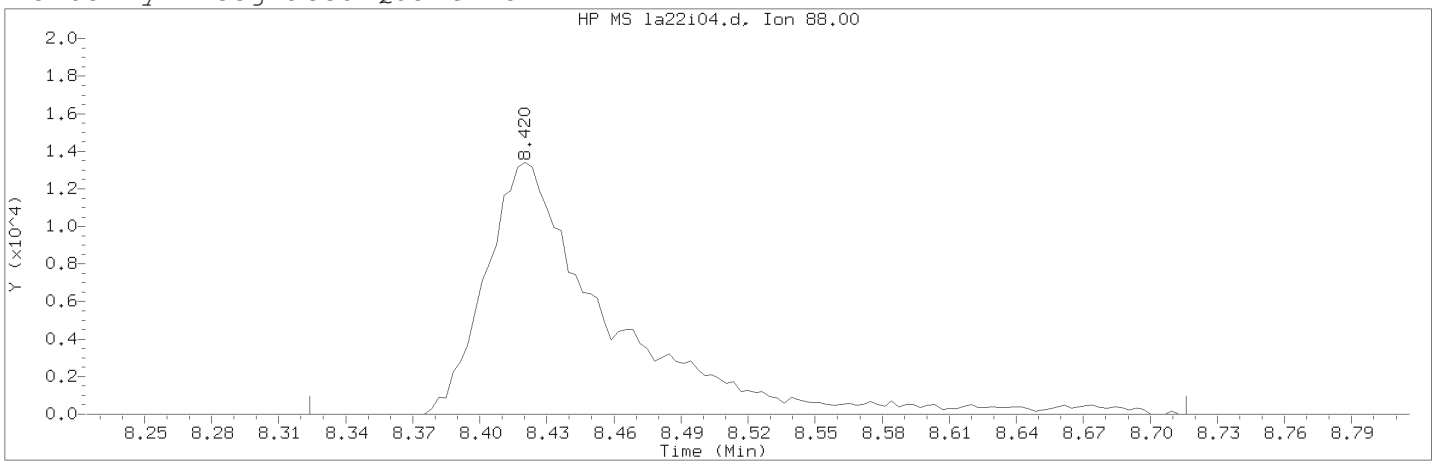
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2123
Retention Time (minutes): 8.407
Quant Ion : 69.00
Area : 112516
On-column Amount (ng) : 17.6496
Integration start scan : 2108 Integration stop scan: 2129
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

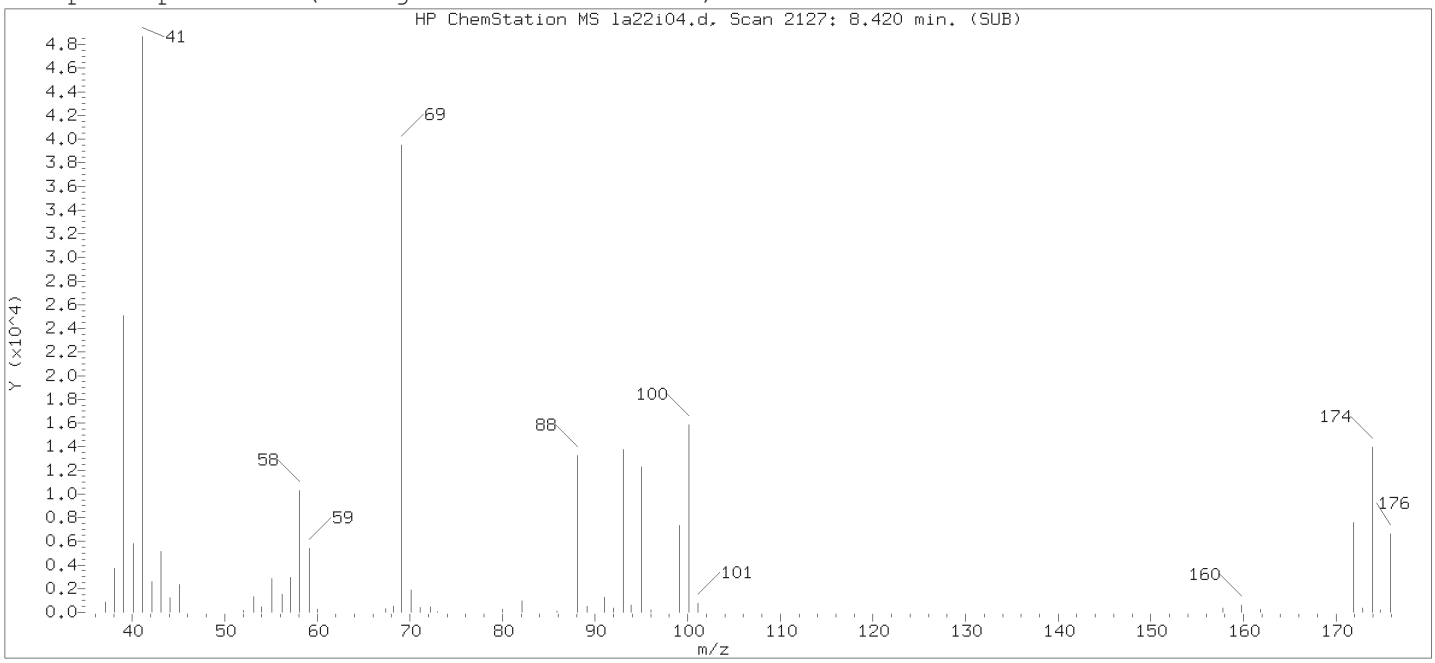
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area (flag) : 51738M
On-Column Amount (ng) : 498.0952
Integration start scan : 2096 Integration stop scan: 2218
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

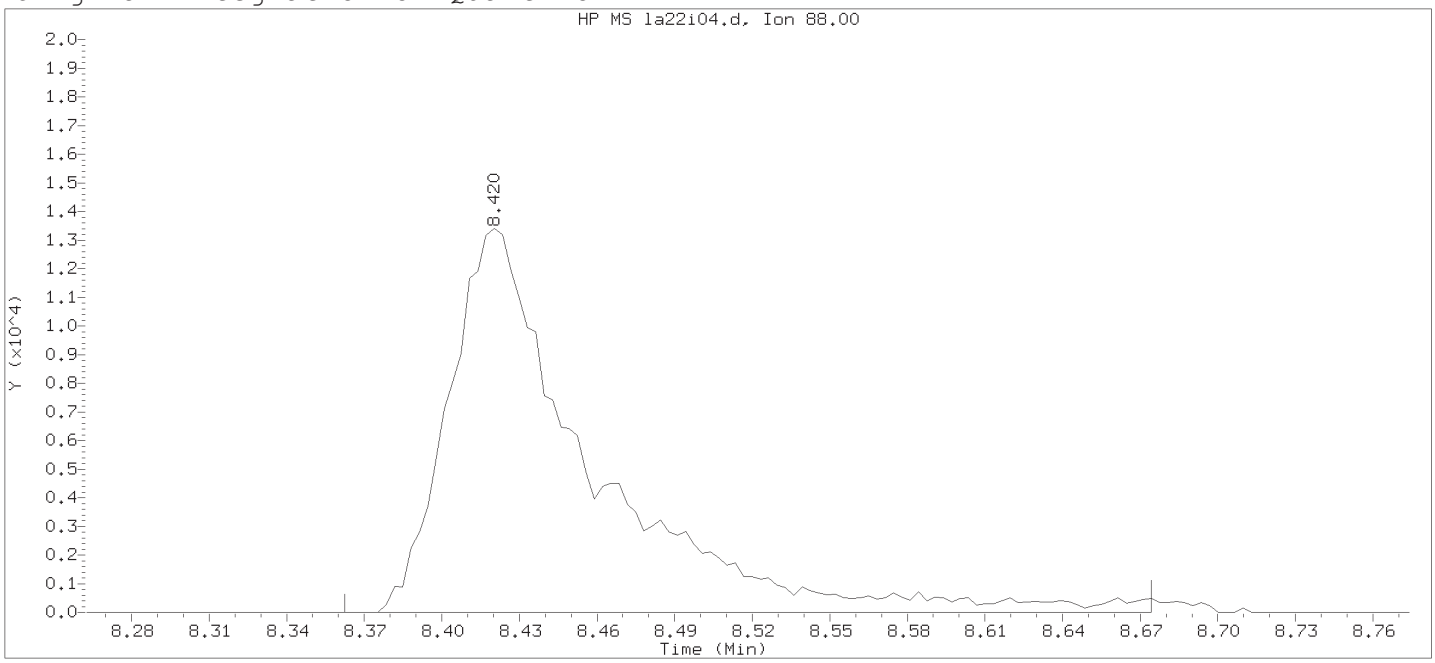
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

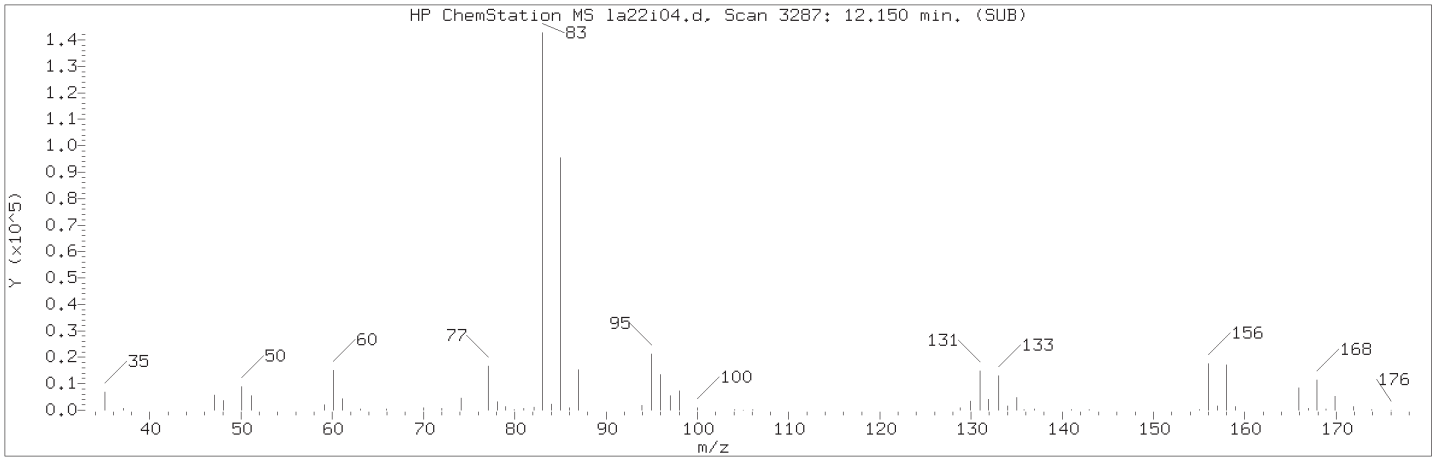
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

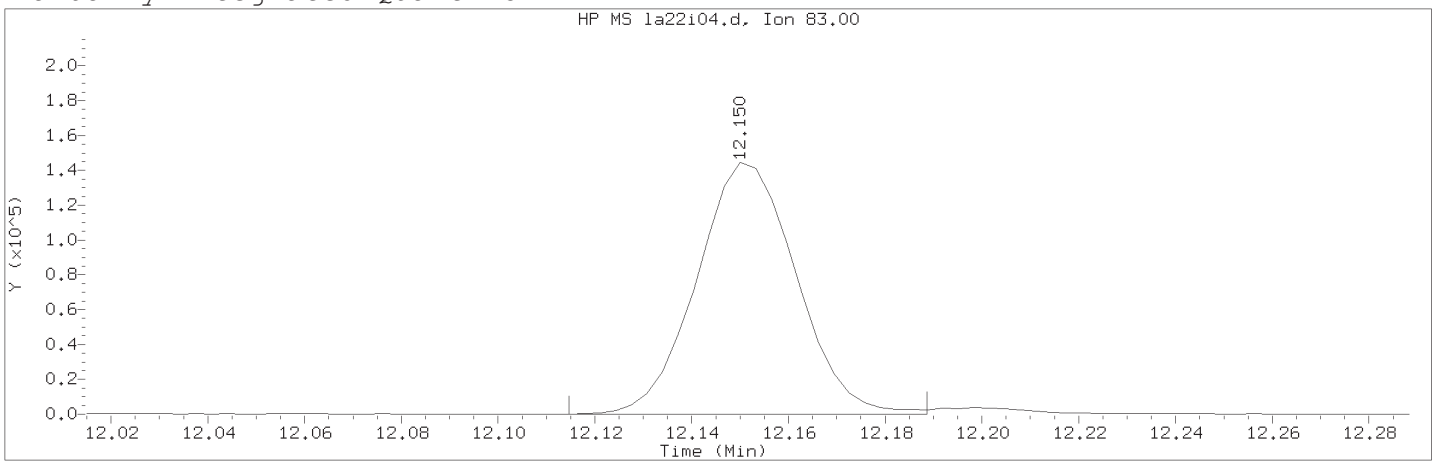
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area : 51236
On-column Amount (ng) : 481.2083
Integration start scan : 2108 Integration stop scan: 2205
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

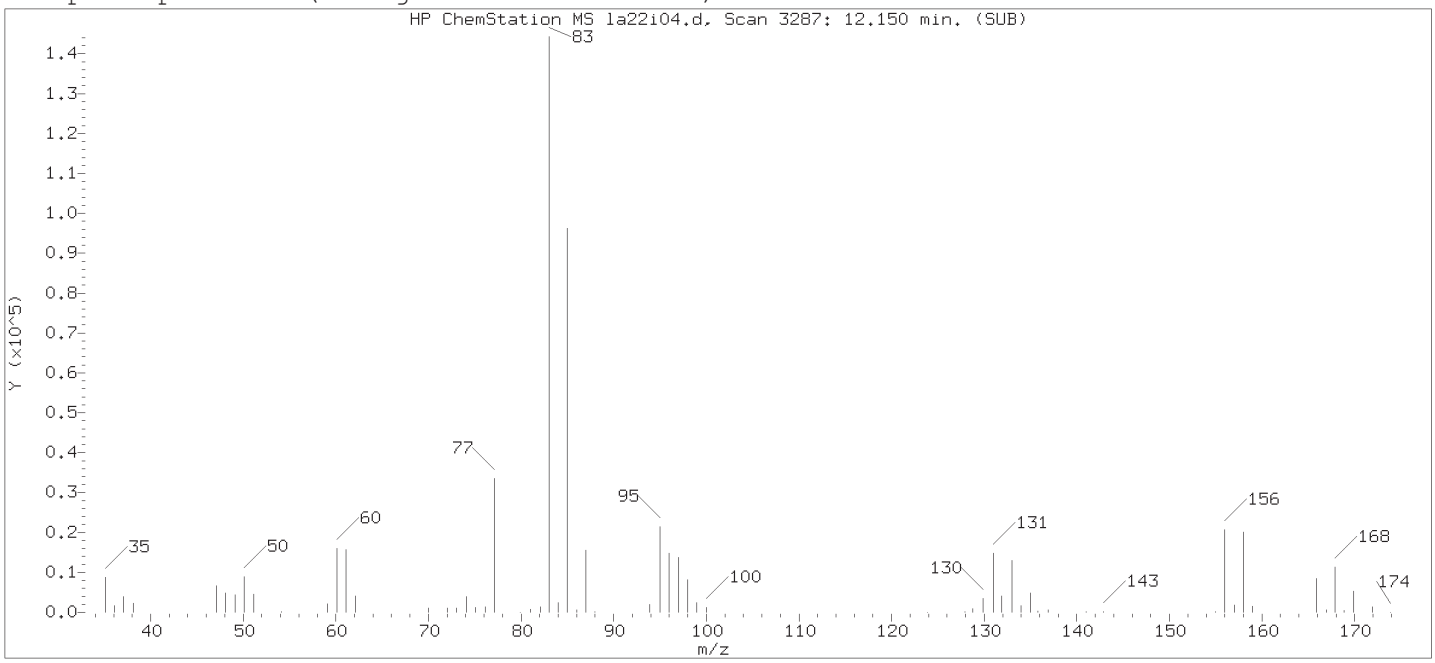
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3287
Retention Time (minutes): 12.150
Quant Ion : 83.00
Area (flag) : 206195M
On-Column Amount (ng) : 20.3645
Integration start scan : 3275 Integration stop scan: 3298
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

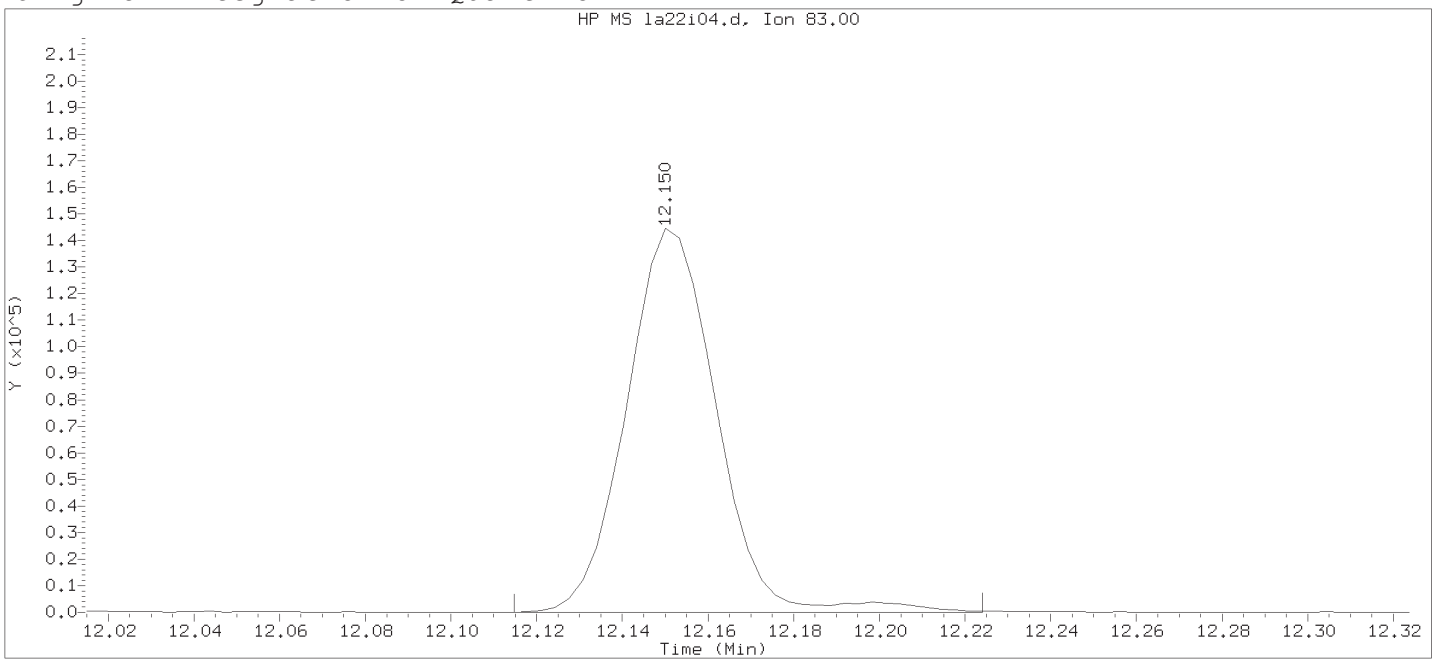
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

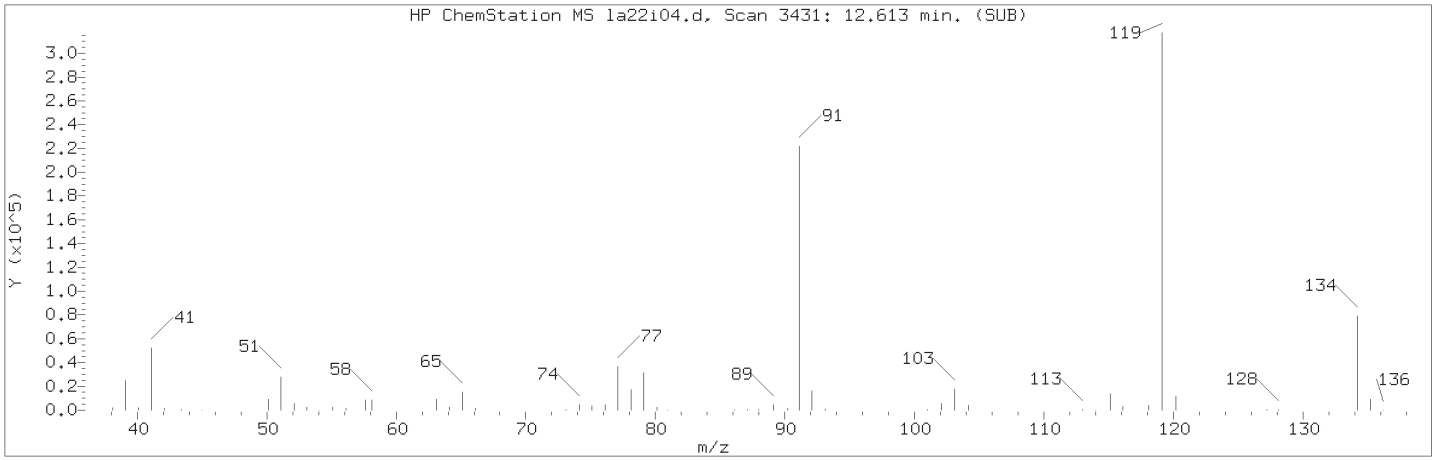
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

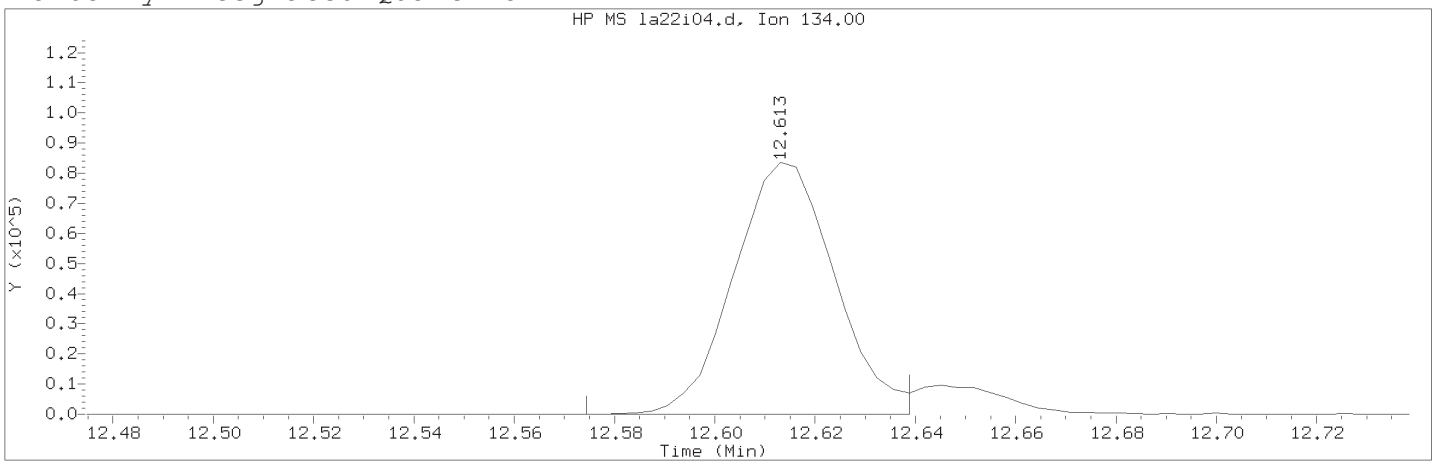
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3287
Retention Time (minutes): 12.150
Quant Ion : 83.00
Area : 210818
On-column Amount (ng) : 20.0079
Integration start scan : 3275 Integration stop scan: 3309
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

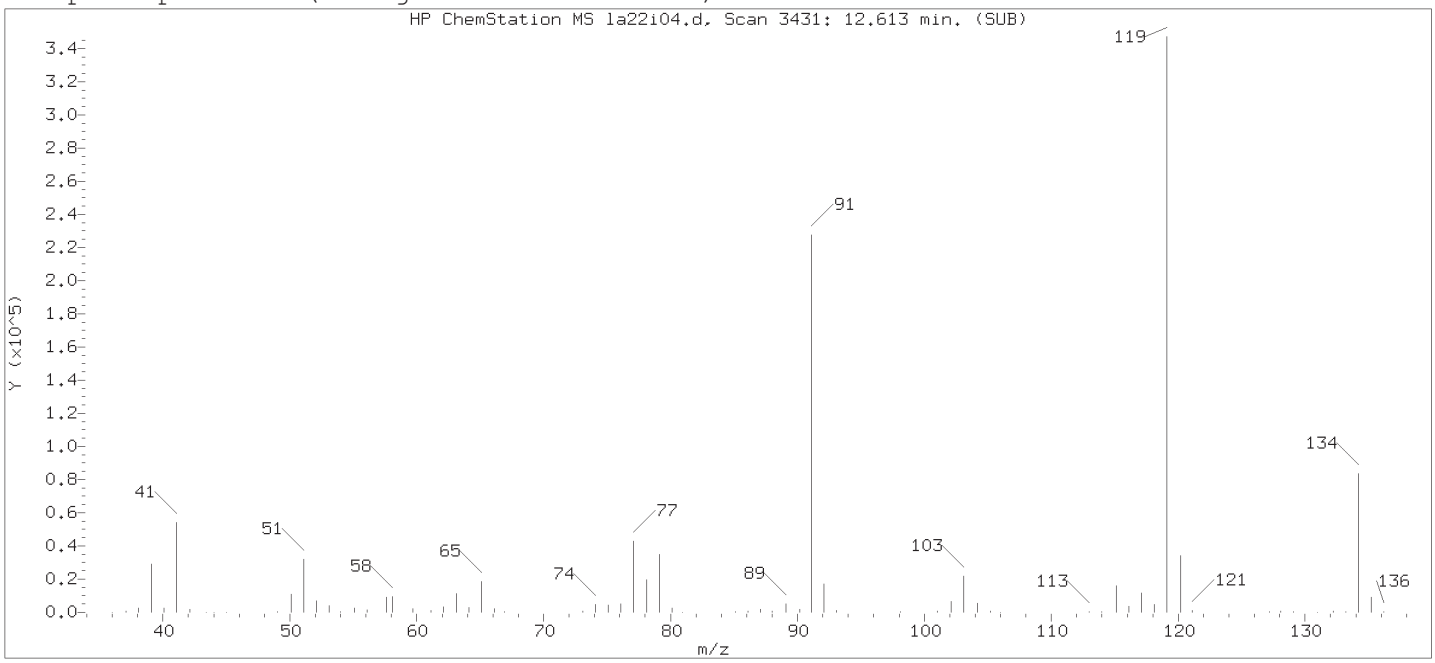
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area (flag) : 116625M
On-Column Amount (ng) : 20.7060
Integration start scan : 3418 Integration stop scan: 3438
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

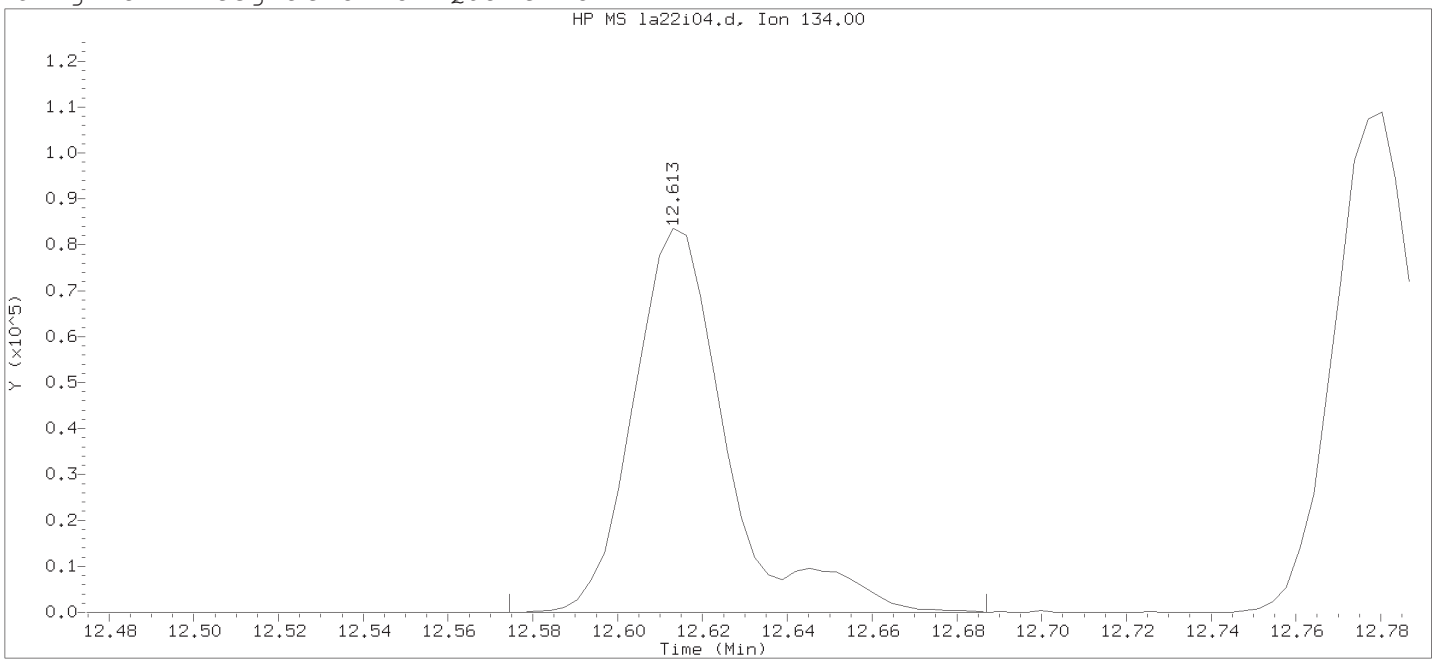
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



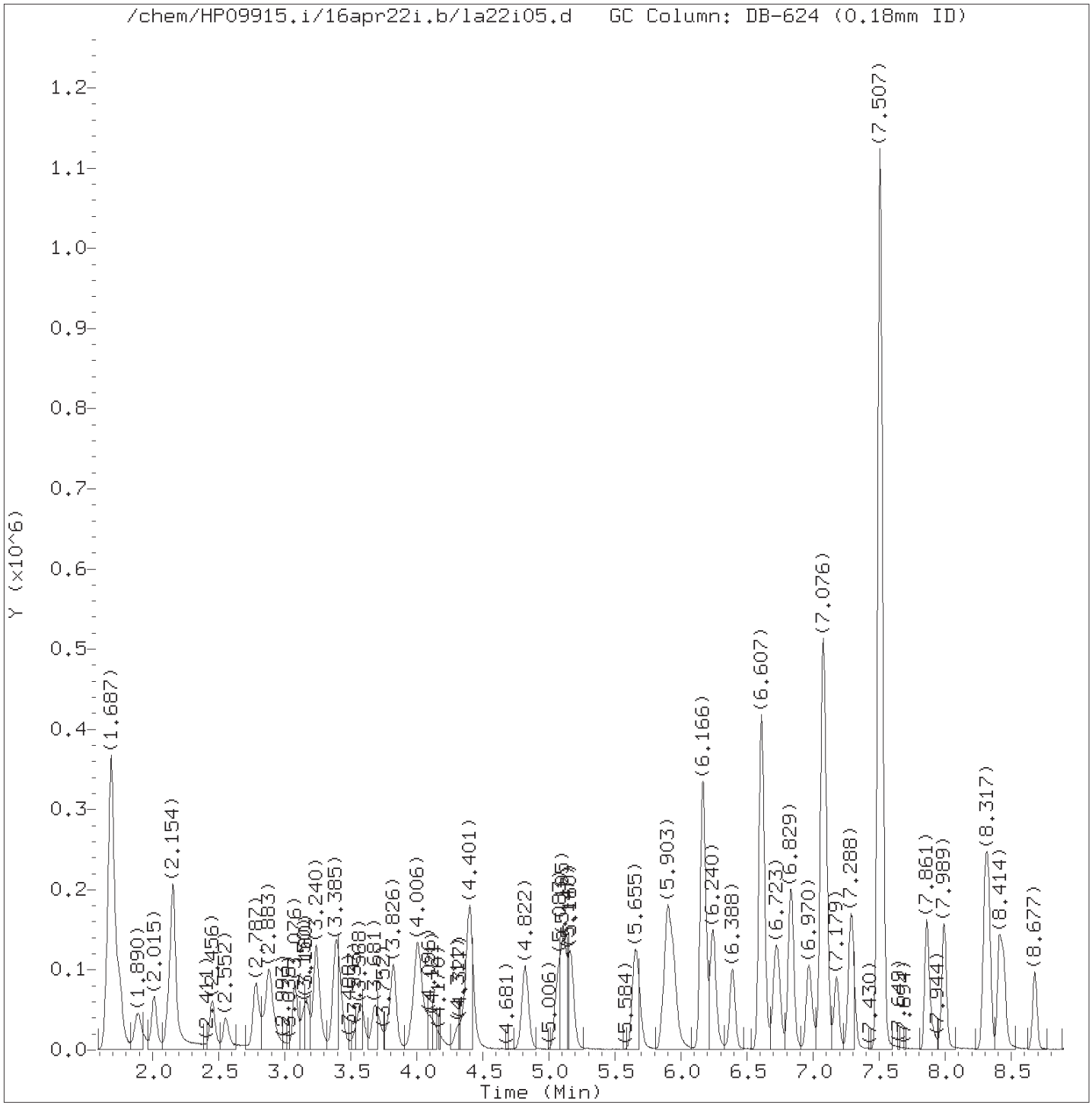
Data File: /chem/HP09915.i/16apr22i.b/la22i04.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:01 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area : 127839
On-column Amount (ng) : 20.7361
Integration start scan : 3418 Integration stop scan: 3453
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

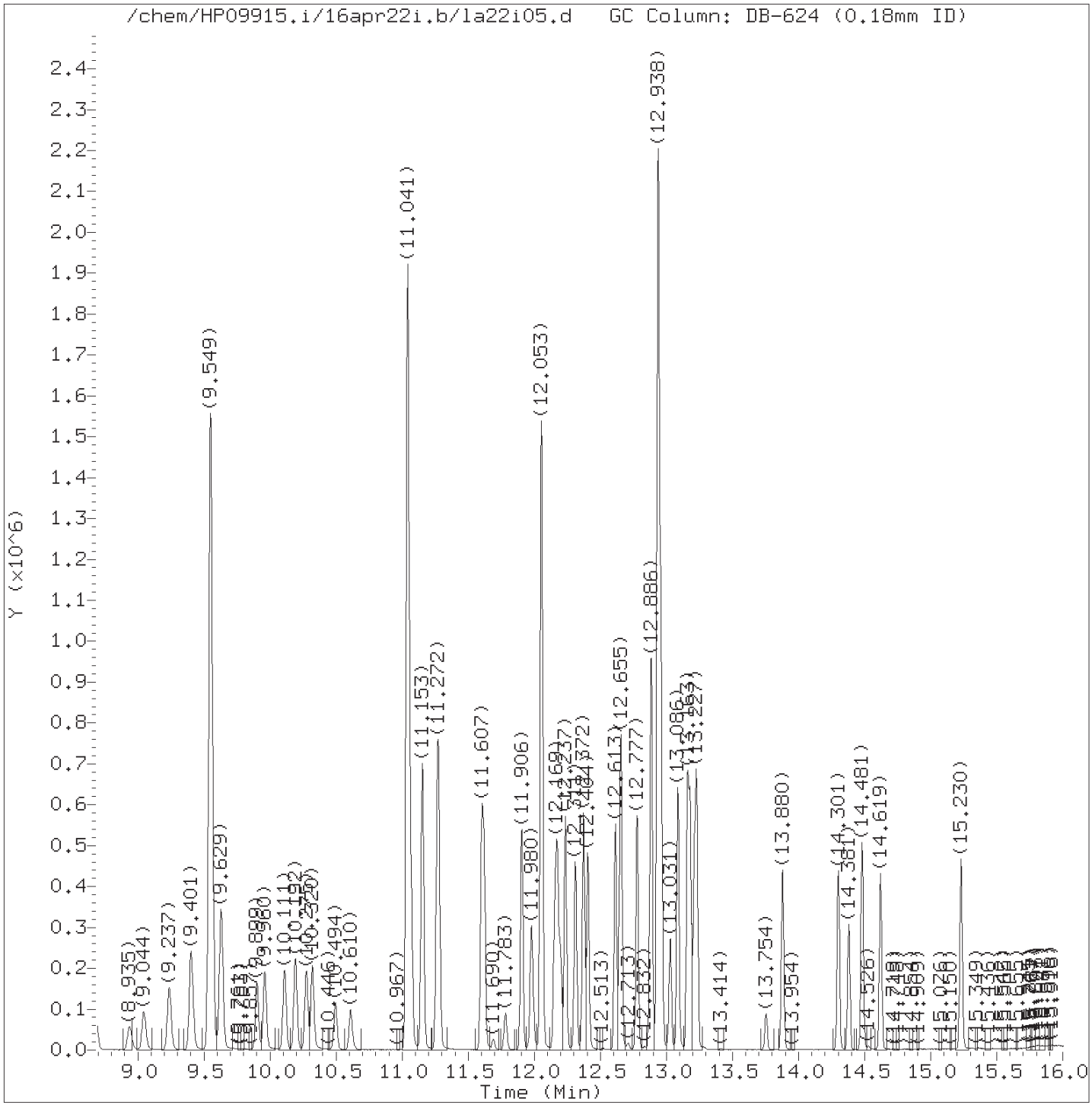
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.883	85	95859	10.491
4) Chloromethane	(2)	2.015	50	91435	9.963
6) Vinyl Chloride	(2)	2.138	62	88015	10.164
5) 1,3-Butadiene	(2)	2.157	39	138988	10.770
8) Bromomethane	(2)	2.456	94	58408M	10.403
9) Chloroethane	(2)	2.559	64	47309	9.985
10) Dichlorofluoromethane	(2)	2.784	67	107066	9.675
12) Trichlorofluoromethane	(2)	2.848	101	94820	10.397
11) n-Pentane	(2)	2.890	43	100803M	9.656
14) Ethyl ether	(2)	3.080	59	63793	9.861
15) Freon 123a	(2)	3.166	67	74812	9.890
16) Acrolein	(1)	3.237	56	201810	105.898
17) 1,1-Dichloroethene	(2)	3.382	96	54903	10.186
17) 1,1-Dichloroethene	(2)	3.382	63	29546	10.235
18) Acetone	(1)	3.388	58	18567	21.765
19) Freon 113	(2)	3.417	101	56244	10.854
21) 2-Propanol	(1)	3.539	45	58493	89.413
22) Methyl Iodide	(2)	3.584	142	100514	10.043
23) Carbon Disulfide	(2)	3.687	76	178169	9.844
27) Methyl Acetate	(2)	3.784	43	69914	9.629
25) Allyl Chloride	(2)	3.826	41	102544	9.846
29)*t-Butyl alcohol-d10	(1)	3.993	65	222755	250.000
28) Methylene Chloride	(2)	4.015	84	66132	9.949
30) t-Butyl alcohol	(1)	4.108	59	102625M	96.734
31) Acrylonitrile	(2)	4.311	53	38165	10.413
33) Methyl Tertiary Butyl Ether	(2)	4.385	73	211115	10.131
32) trans-1,2-Dichloroethene	(2)	4.404	96	62401	10.201
34) n-Hexane	(2)	4.819	57	94850	10.033
36) 1,1-Dichloroethane	(2)	5.067	63	119912	9.876
38) di-Isopropyl ether	(2)	5.108	45	236053	10.124
39) 2-Chloro-1,3-butadiene	(2)	5.170	53	96892	10.117
40) Ethyl t-butyl ether	(2)	5.655	59	213623	10.061
44) 2-Butanone	(2)	5.867	43	99213	21.025
42) cis-1,2-Dichloroethene	(2)	5.903	96	69297	10.059
45) 2,2-Dichloropropane	(2)	5.922	77	83823M	9.944
47) Propionitrile	(1)	5.948	54	135334	98.541
43) 1,2-Dichloroethene (Total)	(2)		96	131698	20.260
48) Methacrylonitrile	(2)	6.169	67	178478	49.070

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.240	128	34816	9.911
50) Tetrahydrofuran	(1)	6.243	71	24558	21.379
51) Chloroform	(2)	6.388	83	110411	10.007
52)$Dibromofluoromethane	(2)	6.610	113	294278	50.318
52)$Dibromofluoromethane	(2)	6.607	111	301360	50.336
53) 1,1,1-Trichloroethane	(2)	6.620	97	99436	10.146
54) Cyclohexane	(2)	6.726	56	114504	10.134
54) Cyclohexane	(2)	6.719	84	89947	10.020
54) Cyclohexane	(2)	6.716	69	33579	10.282
55) 1,1-Dichloropropene	(2)	6.829	75	90619	10.042
56) Carbon Tetrachloride	(2)	6.835	117	71321	9.718
58) Isobutyl Alcohol	(1)	6.970	41	89509M	239.829
57)$1,2-Dichloroethane-d4	(2)	7.073	102	74490	50.451
57)$1,2-Dichloroethane-d4	(2)	7.070	65	380624	50.301
57)$1,2-Dichloroethane-d4	(2)	7.073	104	46984	50.120
60) Benzene	(2)	7.092	78	268139	10.137
61) 1,2-Dichloroethane	(2)	7.176	62	98032	10.019
61) 1,2-Dichloroethane	(2)	7.179	98	8751	10.269
65) t-Amyl methyl ether	(2)	7.288	73	197743	10.053
66)*Fluorobenzene	(2)	7.507	96	1231017	50.000
67) n-Heptane	(2)	7.517	43	105689	10.088
69) n-Butanol	(1)	7.861	56	138031	474.433
71) Trichloroethene	(2)	7.993	95	66753	9.987
72) Methylcyclohexane	(2)	8.301	83	112075	10.177
72) Methylcyclohexane	(2)	8.301	98	50115	10.130
73) 1,2-Dichloropropane	(2)	8.330	63	73397	10.080
76) Methyl Methacrylate	(2)	8.414	69	61595M	10.094
75) 1,4-Dioxane	(1)	8.427	88	24046M	244.008
74) Dibromomethane	(2)	8.443	93	45432	10.067
78) Bromodichloromethane	(2)	8.677	83	80203	9.736
79) 2-Nitropropane	(2)	8.941	41	44567	19.653
80) 2-Chloroethyl Vinyl Ether	(2)	9.044	63	50742	9.765
81) cis-1,3-Dichloropropene	(2)	9.234	75	103826	9.826
82) 4-Methyl-2-pentanone	(2)	9.401	43	205049	21.175
83)$Toluene-d8	(3)	9.549	98	1219607	50.265
83)$Toluene-d8	(3)	9.549	100	792247	50.144
88) Toluene	(3)	9.629	92	167149	10.134
89) trans-1,3-Dichloropropene	(3)	9.899	75	91127	9.535

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on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.957	69	105822	9.995
90) 1,3-Dichloropropene (total)	(3)		100	194953	19.360
92) 1,1,2-Trichloroethane	(3)	10.111	97	65038	10.148
93) Tetrachloroethene	(3)	10.192	166	70774	10.137
94) 1,3-Dichloropropane	(3)	10.275	76	115371	10.165
96) 2-Hexanone	(3)	10.320	43	146187	20.874
97) Dibromochloromethane	(3)	10.494	129	60525	9.615
99) 1,2-Dibromoethane	(3)	10.607	107	68808	9.994
100)*Chlorobenzene-d5	(3)	11.041	117	926964	50.000
101) 1-Chlorohexane	(3)	11.050	91	92127	9.956
102) Chlorobenzene	(3)	11.066	112	188994	10.125
103) 1,1,1,2-Tetrachloroethane	(3)	11.150	131	60766	9.838
104) Ethylbenzene	(3)	11.153	91	325117	10.217
106) m+p-Xylene	(3)	11.272	106	251530	20.587
107) o-Xylene	(3)	11.600	106	123657	10.290
109) Styrene	(3)	11.619	104	206792	10.216
108) Xylene (Total)	(3)		106	375187	30.878
110) Bromoform	(3)	11.783	173	38726	8.935
111) Isopropylbenzene	(3)	11.906	105	316962	10.361
112) Cyclohexanone	(1)	11.980	55	129257	284.418
114)$4-Bromofluorobenzene	(3)	12.053	95	454442	50.612
114)$4-Bromofluorobenzene	(3)	12.053	174	385056	50.395
116) 1,1,2,2-Tetrachloroethane	(4)	12.150	83	101035M	10.137
115) Bromobenzene	(4)	12.169	156	83981	9.929
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	47364	35.652
117) 1,2,3-Trichloropropane	(4)	12.201	110	28515	9.906
119) n-Propylbenzene	(4)	12.237	91	389983	10.313
120) 2-Chlorotoluene	(4)	12.311	126	77028	10.043
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	273296	10.203
121) 4-Chlorotoluene	(4)	12.404	126	82416	10.176
124) tert-Butylbenzene	(4)	12.613	134	54360M	9.805
125) Pentachloroethane	(4)	12.648	167	43292	9.458
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	283585	10.181
127) sec-Butylbenzene	(4)	12.777	105	344784	10.157
129) 1,3-Dichlorobenzene	(4)	12.880	146	158441	9.958
130) p-Isopropyltoluene	(4)	12.886	119	298687	10.117
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	492114	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	168730	10.150

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Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

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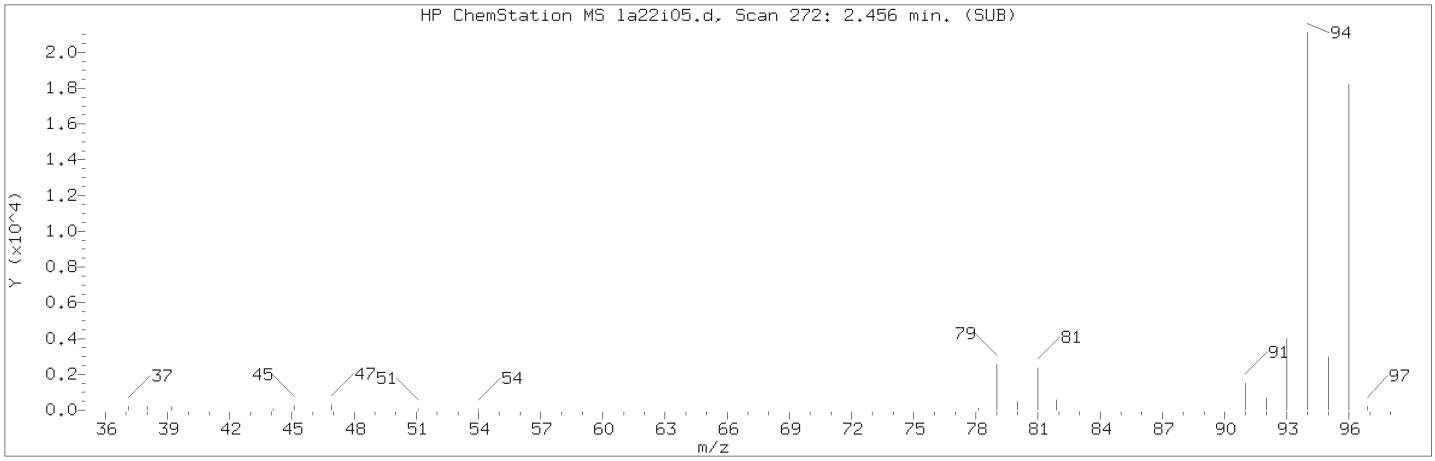
Sample Name: VSTD010 Lab Sample ID: VSTD010

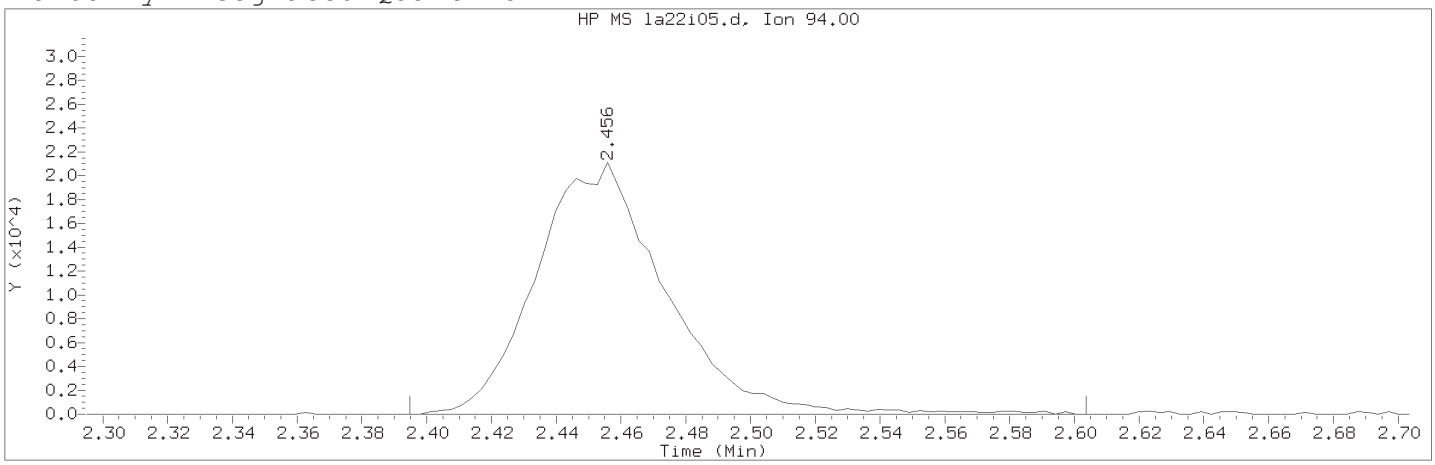
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	289476	9.938
135) Benzyl Chloride	(4)	13.031	91	162192	9.380
136) 1,3-Diethylbenzene	(4)	13.086	119	177740	10.012
137) 1,4-Diethylbenzene	(4)	13.160	119	186057	10.049
139) n-Butylbenzene	(4)	13.179	92	152280	10.079
138) 1,2-Dichlorobenzene	(4)	13.211	146	159942	10.141
140) 1,2-Diethylbenzene	(4)	13.230	119	151778	10.024
141) Diethylbenzene (total)	(4)		100	515575	30.085
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	19134	9.931
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	124851	9.947
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	121996	9.809
147) Hexachlorobutadiene	(4)	14.381	225	50409	9.490
148) Naphthalene	(4)	14.481	128	340608	10.165
149) 1,2,3-Trichlorobenzene	(4)	14.623	180	117904	10.057
150) 2-Methylnaphthalene	(4)	15.230	142	199858	9.567

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

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Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

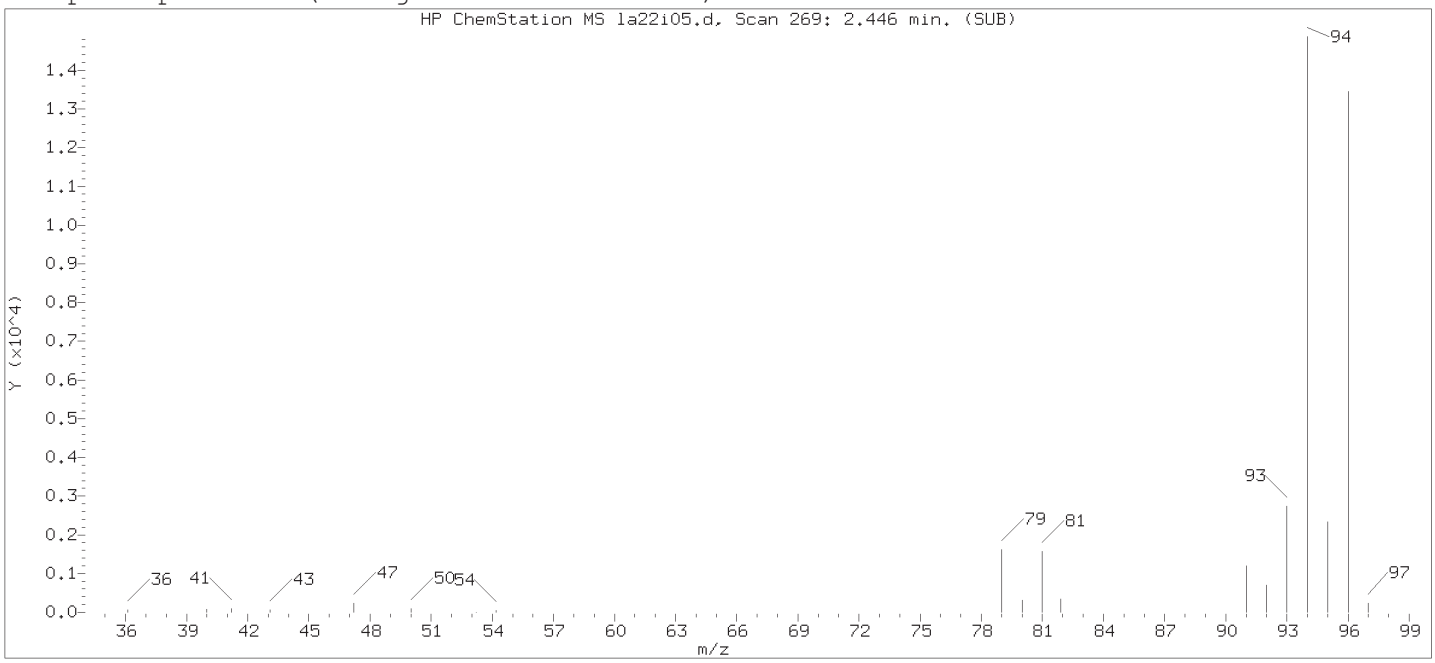
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 272
Retention Time (minutes): 2.456
Quant Ion : 94.00
Area (flag) : 58408M
On-Column Amount (ng) : 10.4034
Integration start scan : 252 Integration stop scan: 317
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

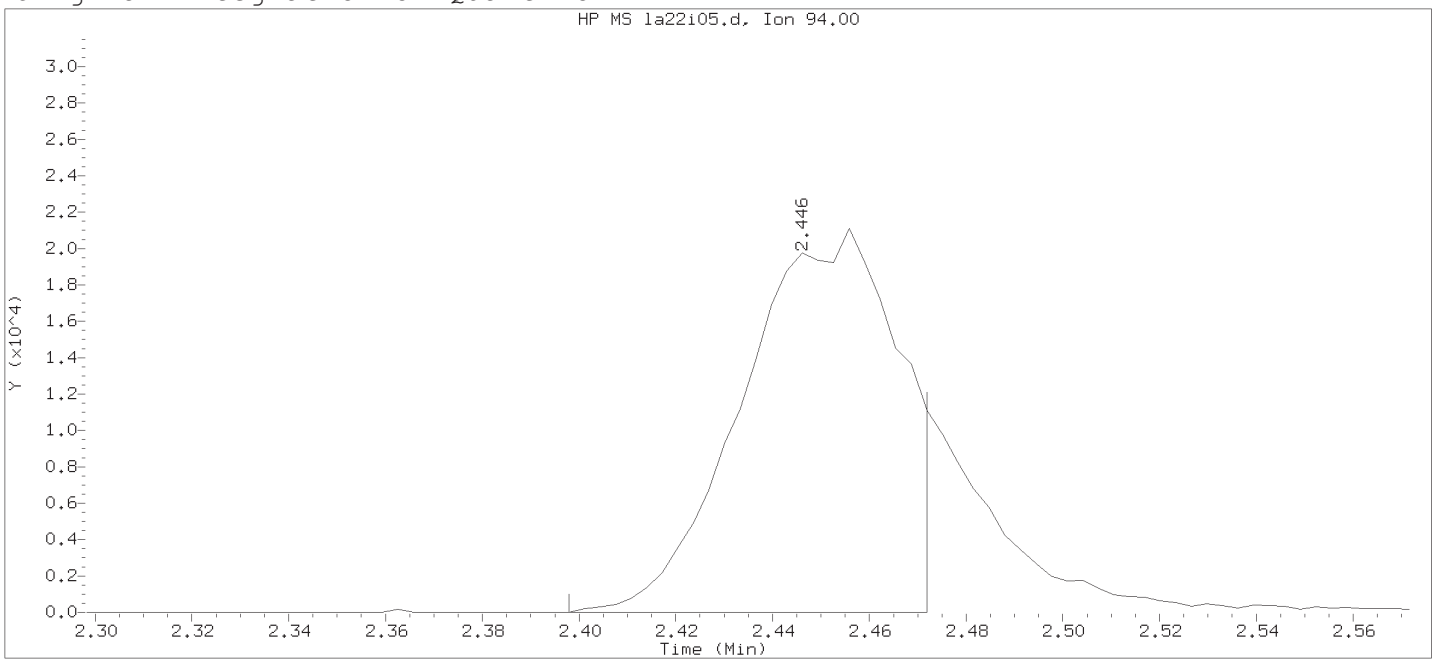
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

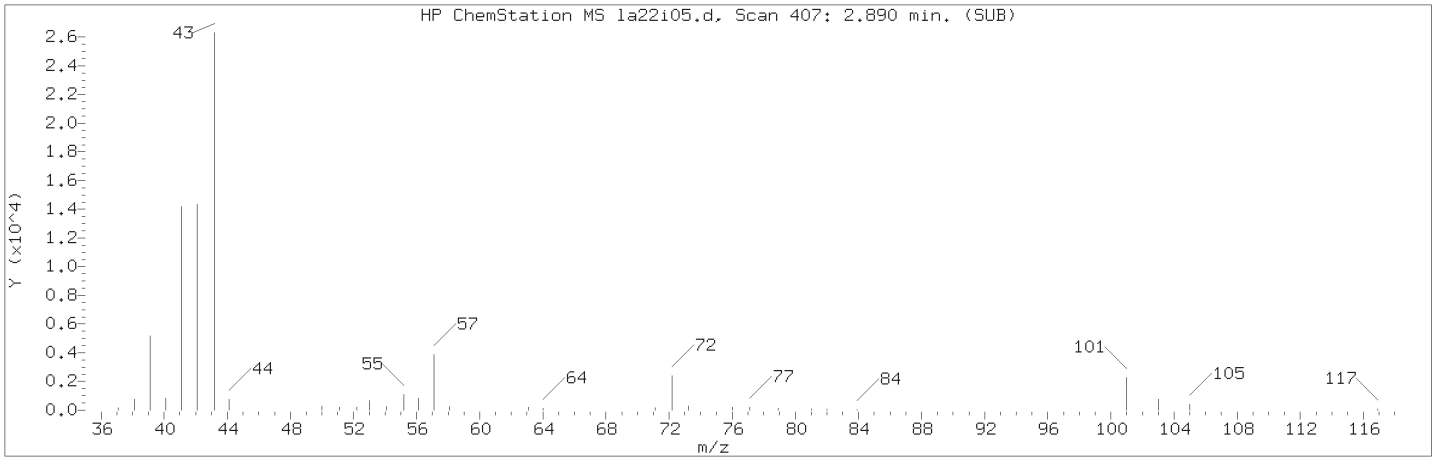
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

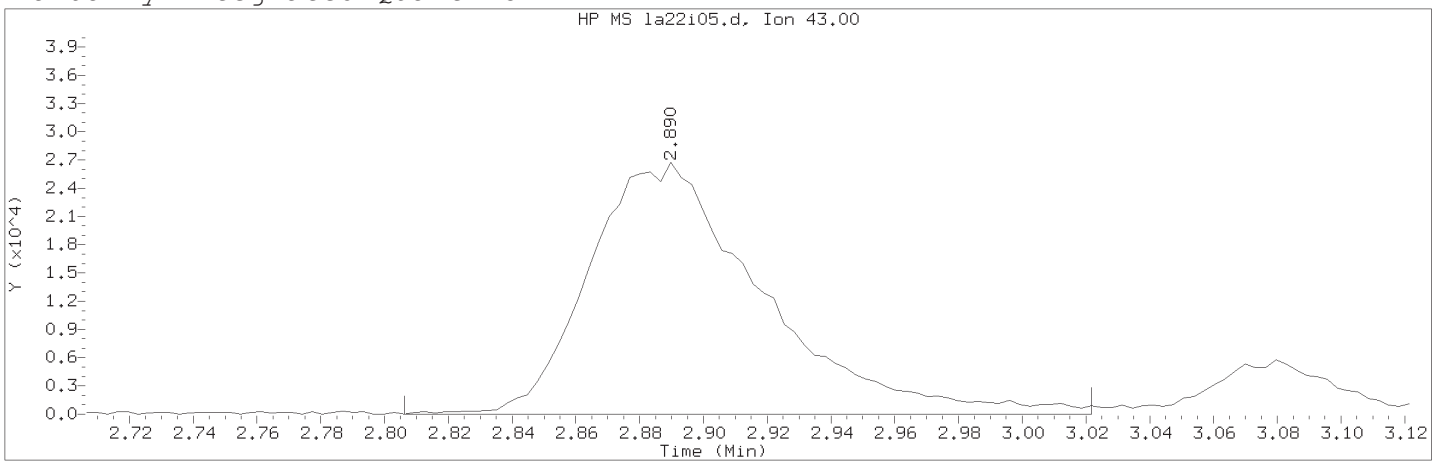
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 269
Retention Time (minutes): 2.446
Quant Ion : 94.00
Area : 46305
On-column Amount (ng) : 8.8611
Integration start scan : 253 Integration stop scan: 276
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

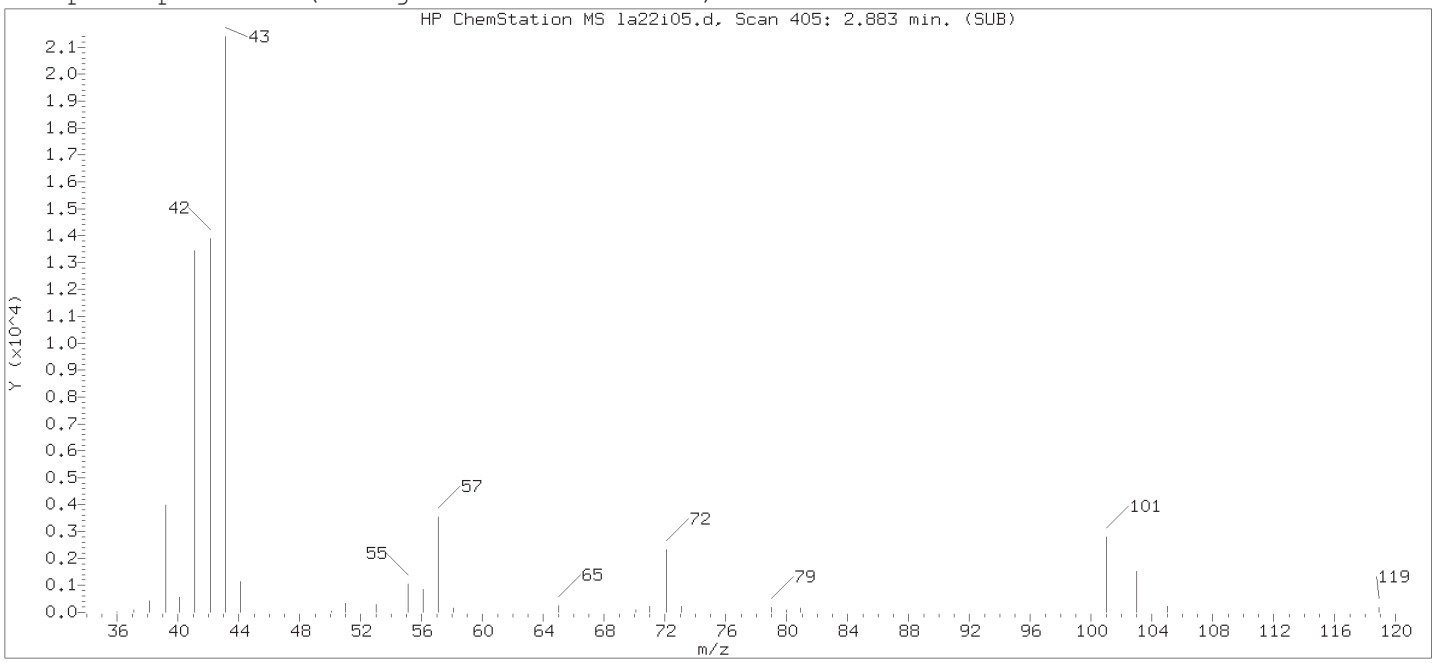
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 407
Retention Time (minutes): 2.890
Quant Ion : 43.00
Area (flag) : 100803M
On-Column Amount (ng) : 9.6561
Integration start scan : 380 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

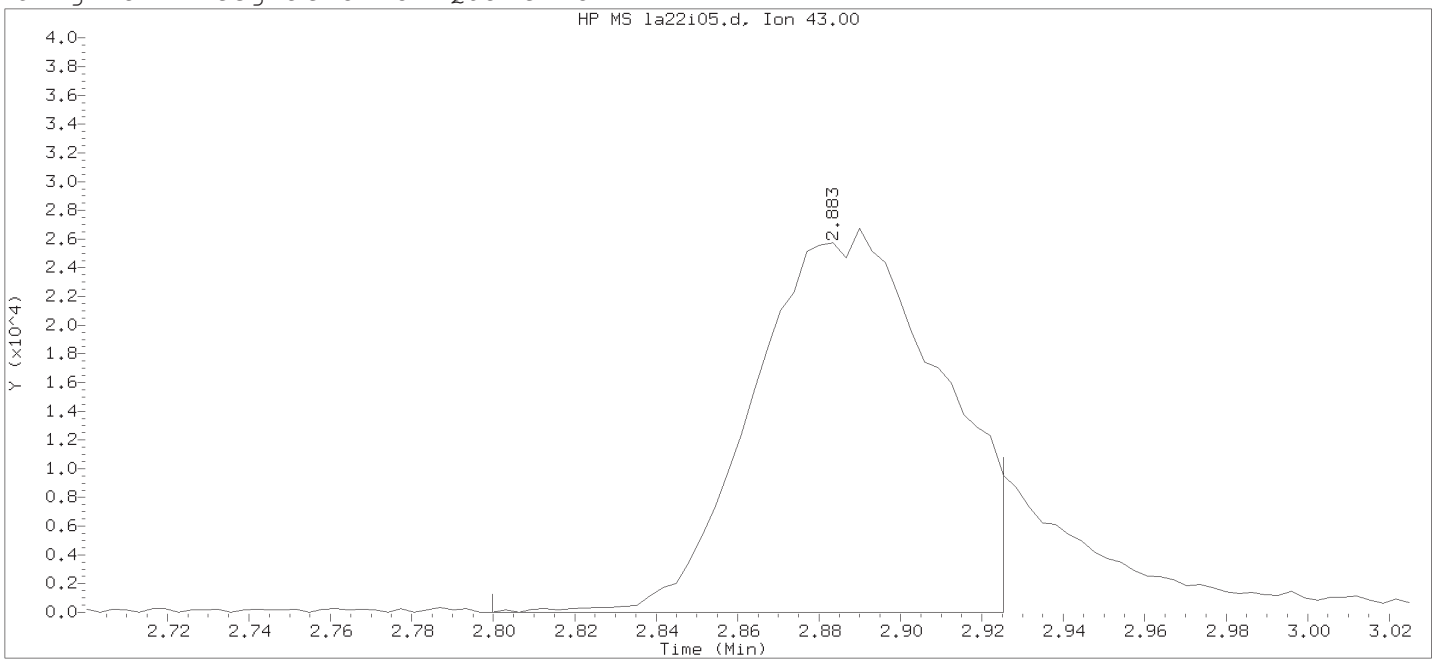
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

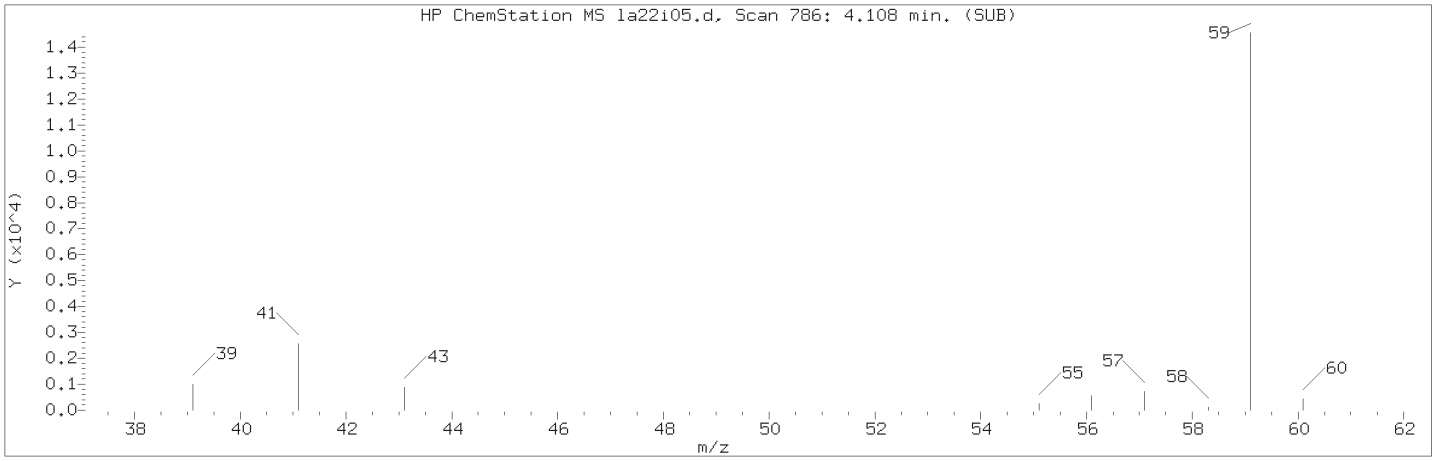
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

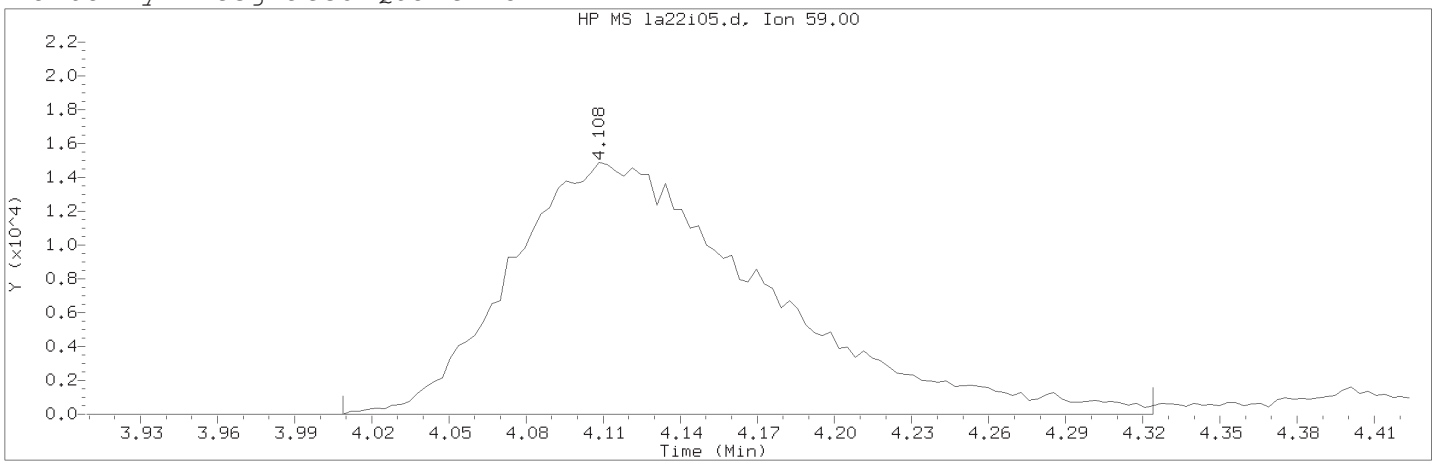
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 405
Retention Time (minutes): 2.883
Quant Ion : 43.00
Area : 84245
On-column Amount (ng) : 8.3039
Integration start scan : 378 Integration stop scan: 417
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/13/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

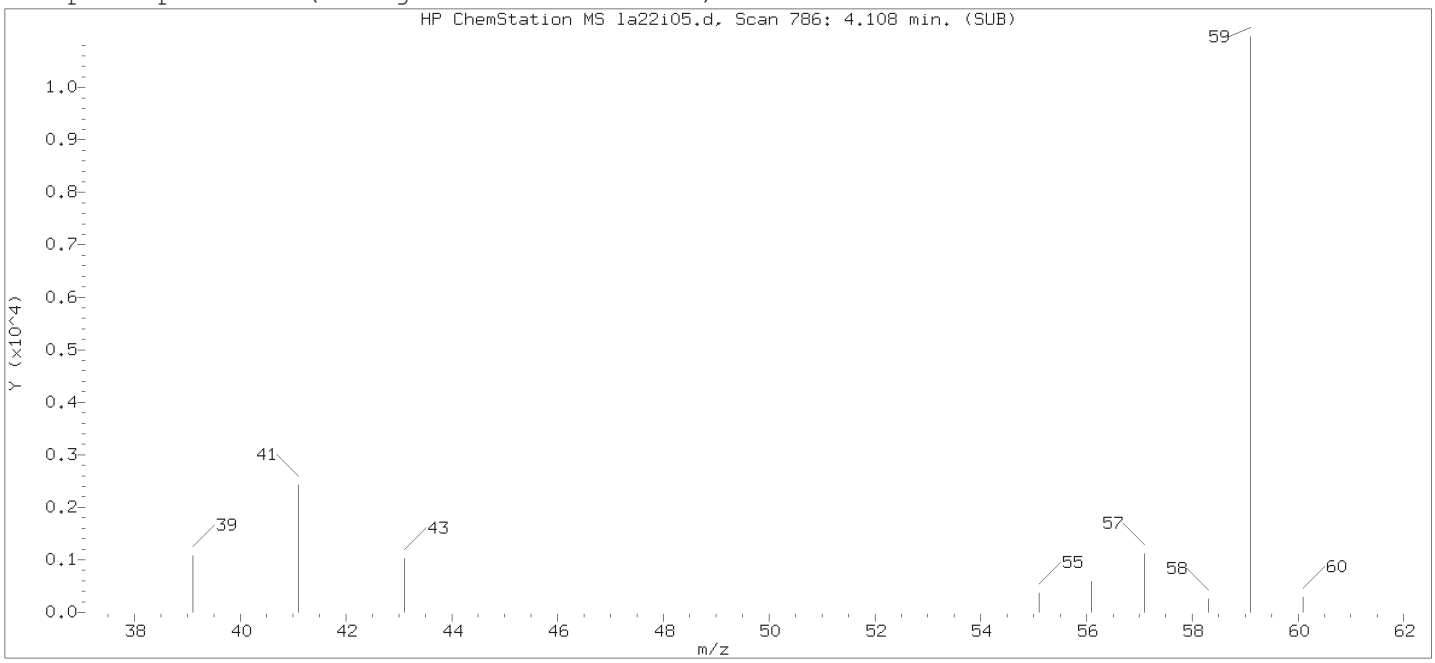
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.108
Quant Ion : 59.00
Area (flag) : 102625M
On-Column Amount (ng) : 96.7342
Integration start scan : 754 Integration stop scan: 852
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

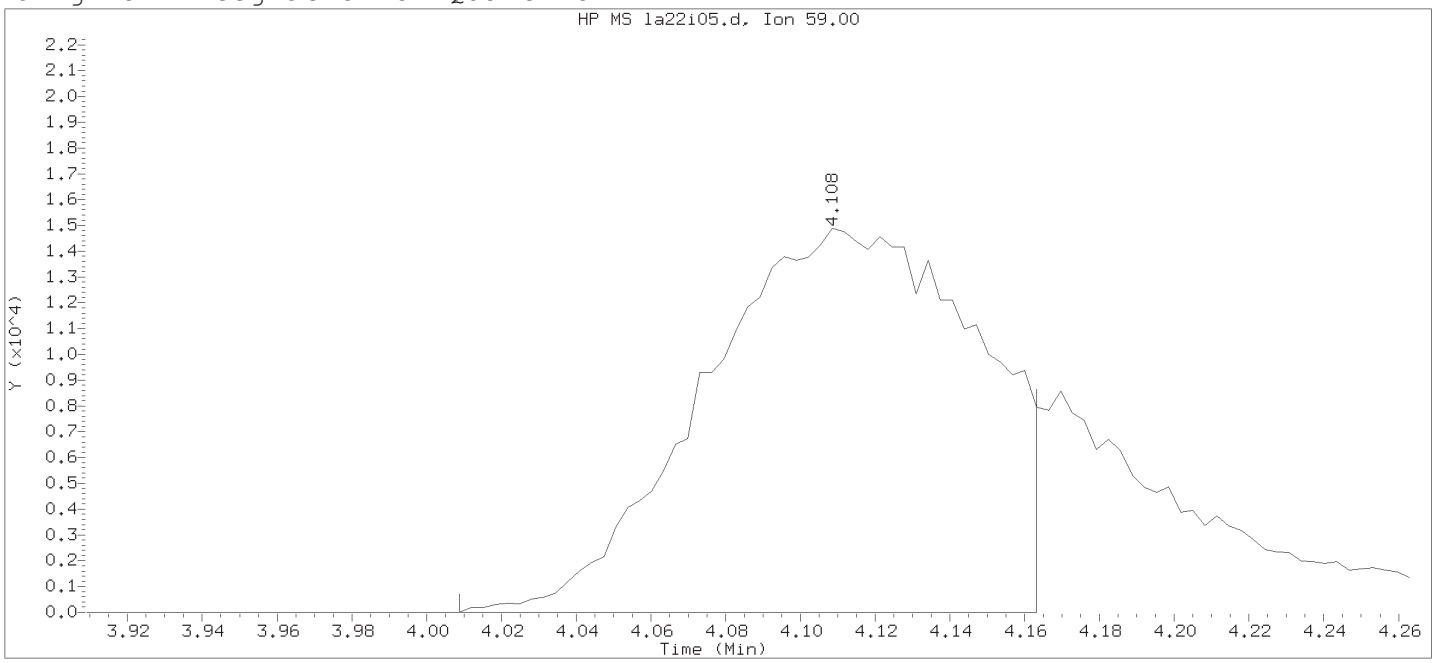
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

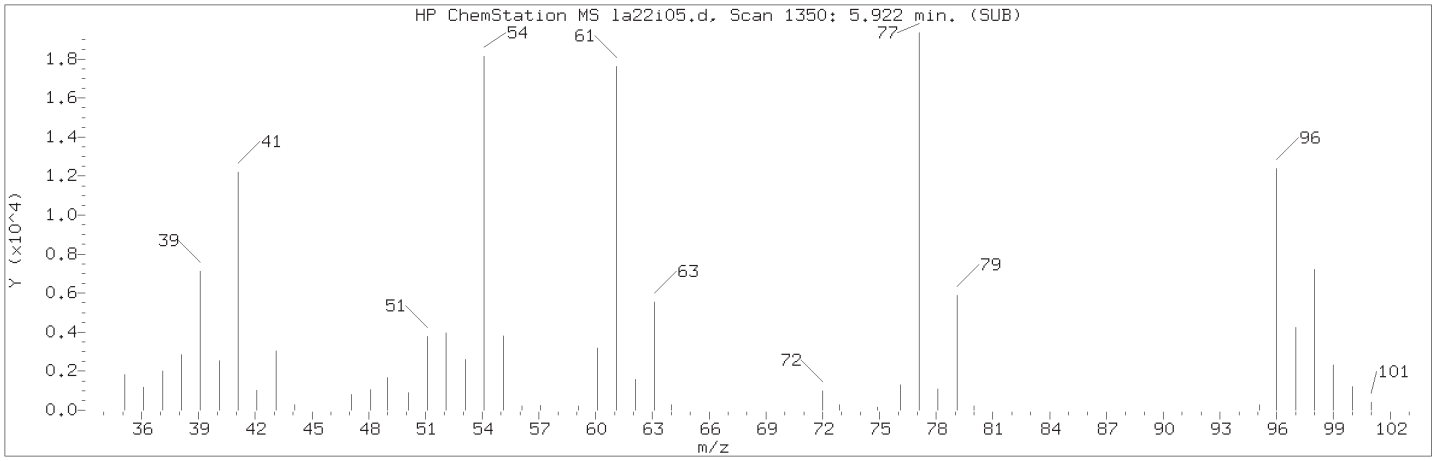
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

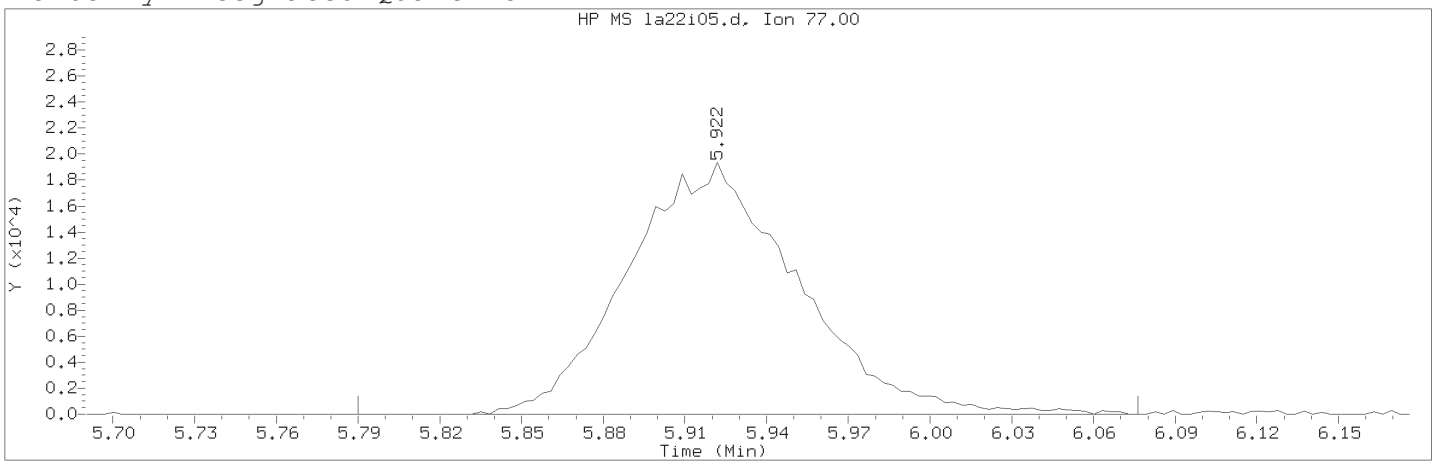
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 786
Retention Time (minutes): 4.108
Quant Ion : 59.00
Area : 75797
On-column Amount (ng) : 81.0694
Integration start scan : 754 Integration stop scan: 802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

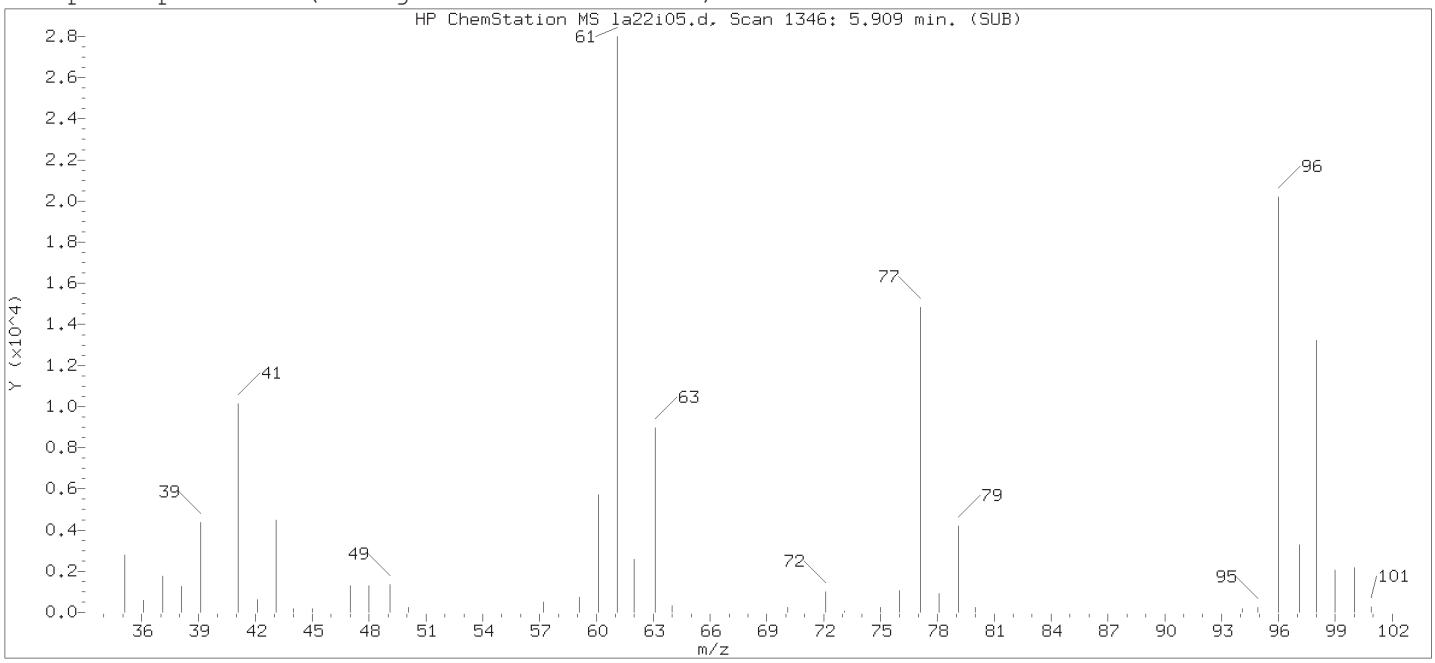
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1350
Retention Time (minutes): 5.922
Quant Ion : 77.00
Area (flag) : 83823M
On-Column Amount (ng) : 9.9438
Integration start scan : 1308 Integration stop scan: 1397
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

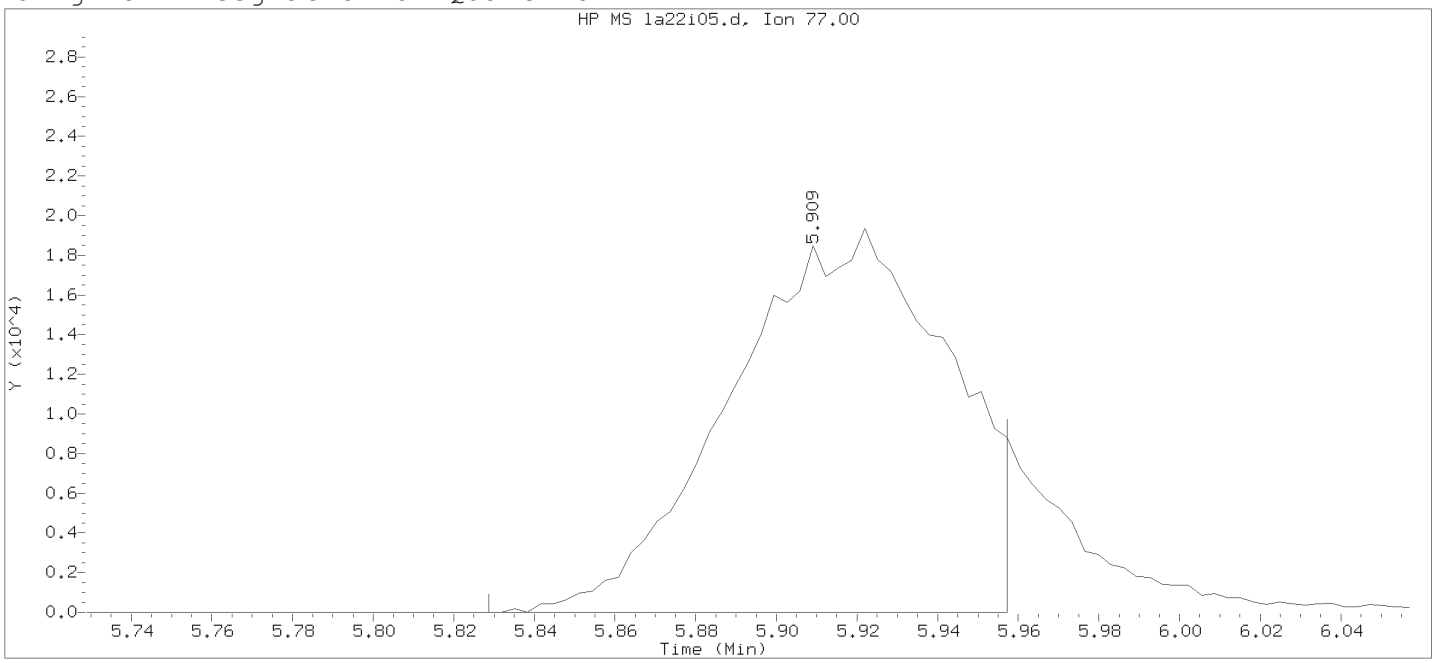
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

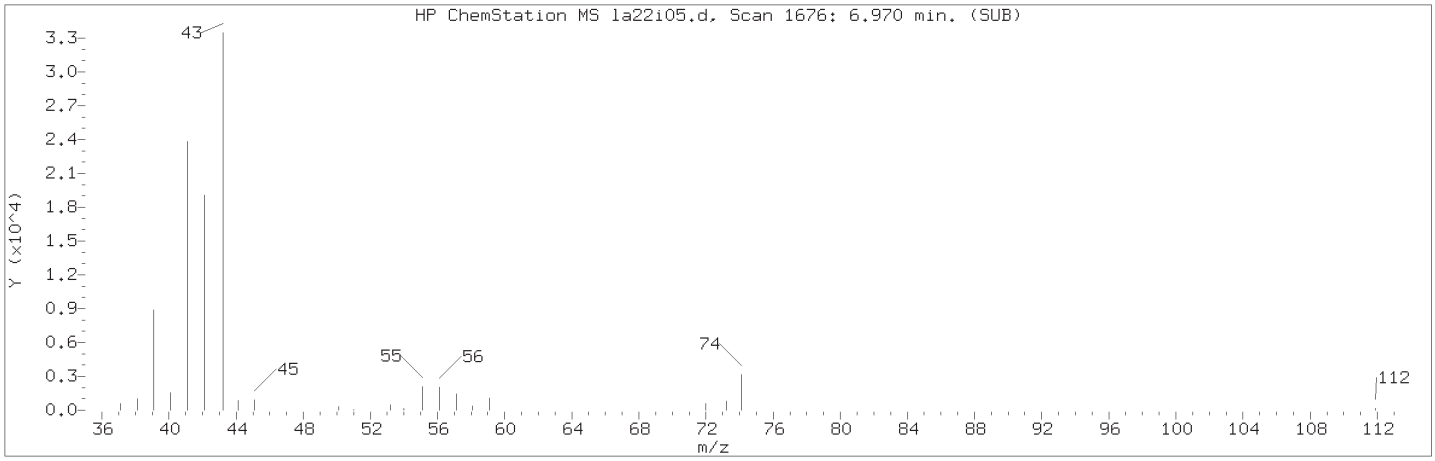
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

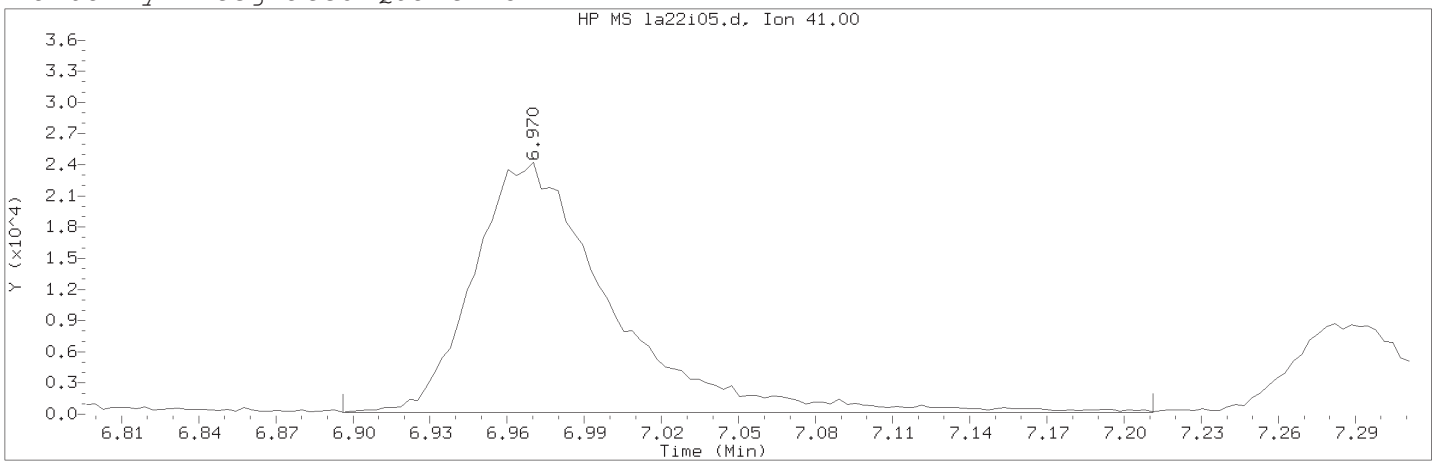
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1346
Retention Time (minutes): 5.909
Quant Ion : 77.00
Area : 72120
On-column Amount (ng) : 8.1655
Integration start scan : 1320 Integration stop scan: 1360
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

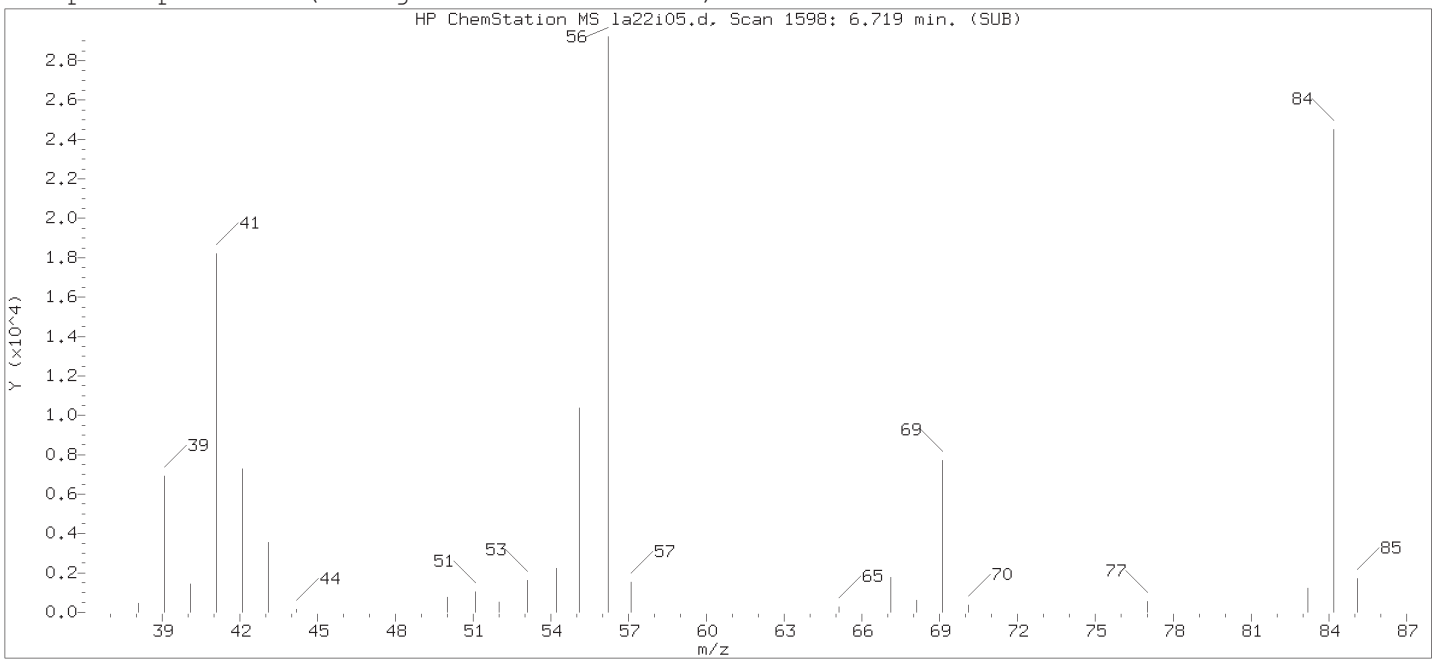
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1676
Retention Time (minutes): 6.970
Quant Ion : 41.00
Area (flag) : 89509M
On-Column Amount (ng) : 239.8286
Integration start scan : 1652 Integration stop scan: 1750
Y at integration start : 154 Y at integration end: 154

Reason for manual integration: improper integration

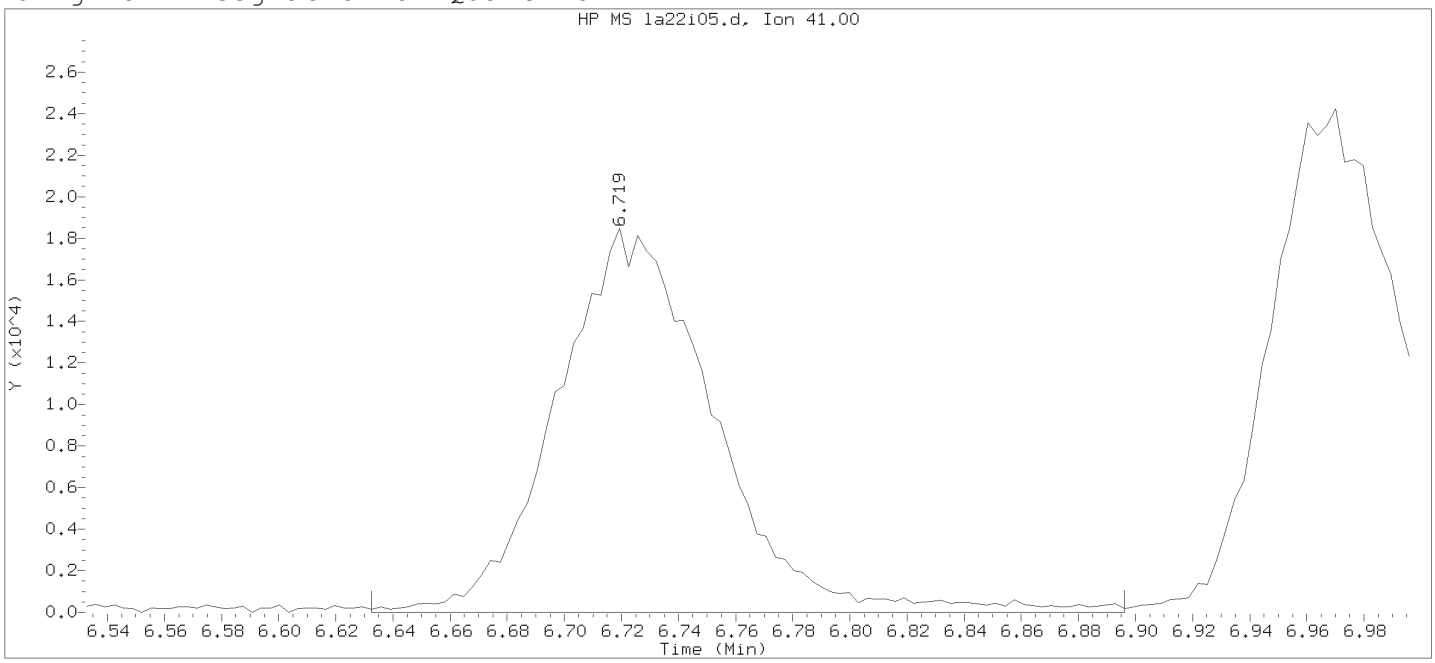
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

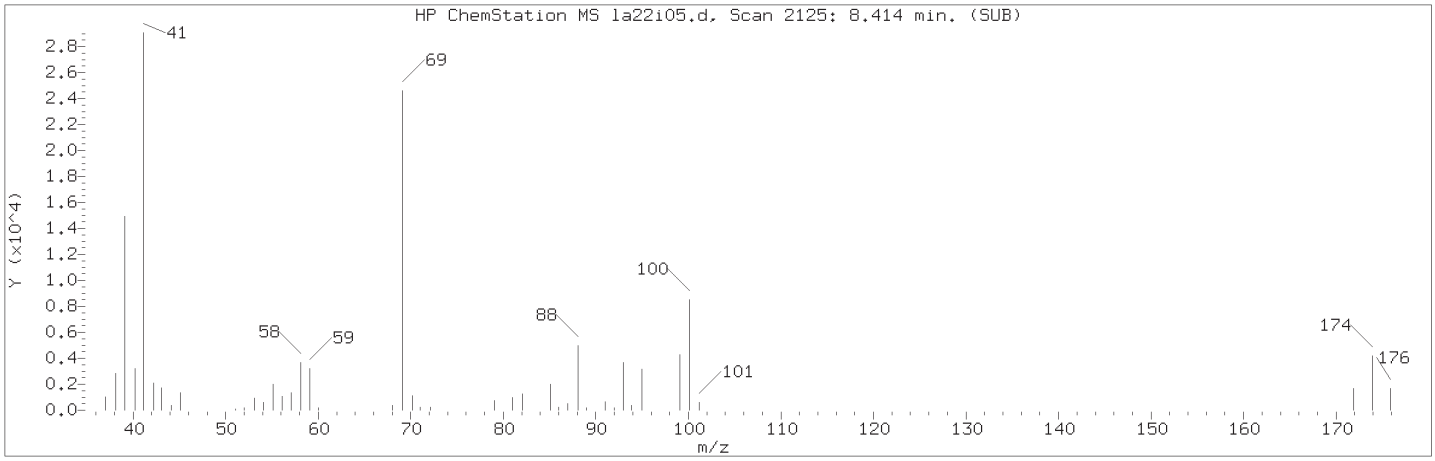
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

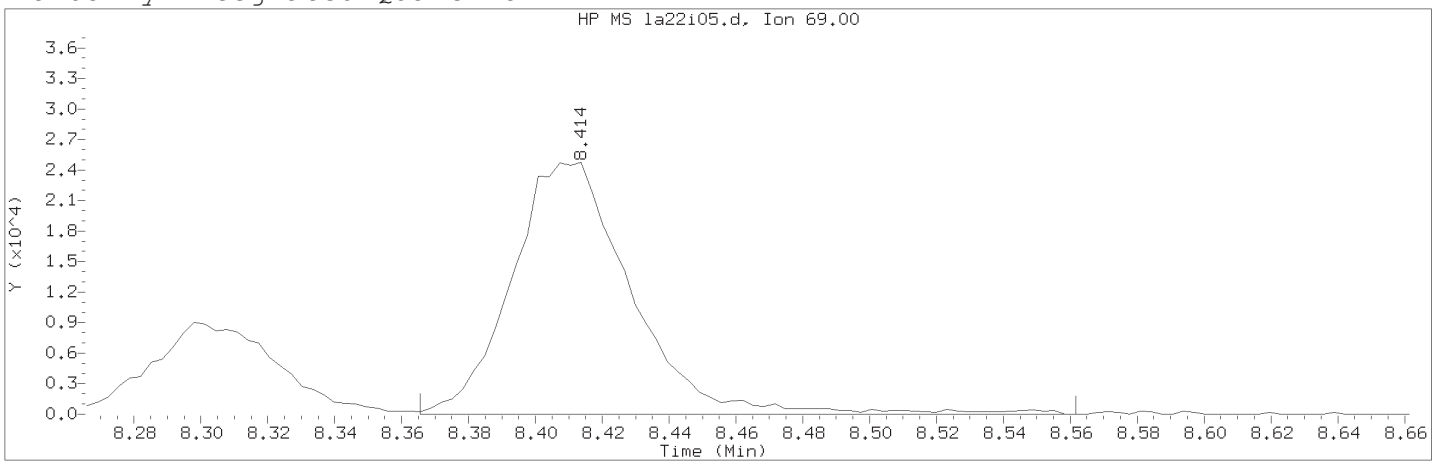
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1598
Retention Time (minutes): 6.719
Quant Ion : 41.00
Area : 70434
On-column Amount (ng) : 219.3748
Integration start scan : 1570 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature used: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

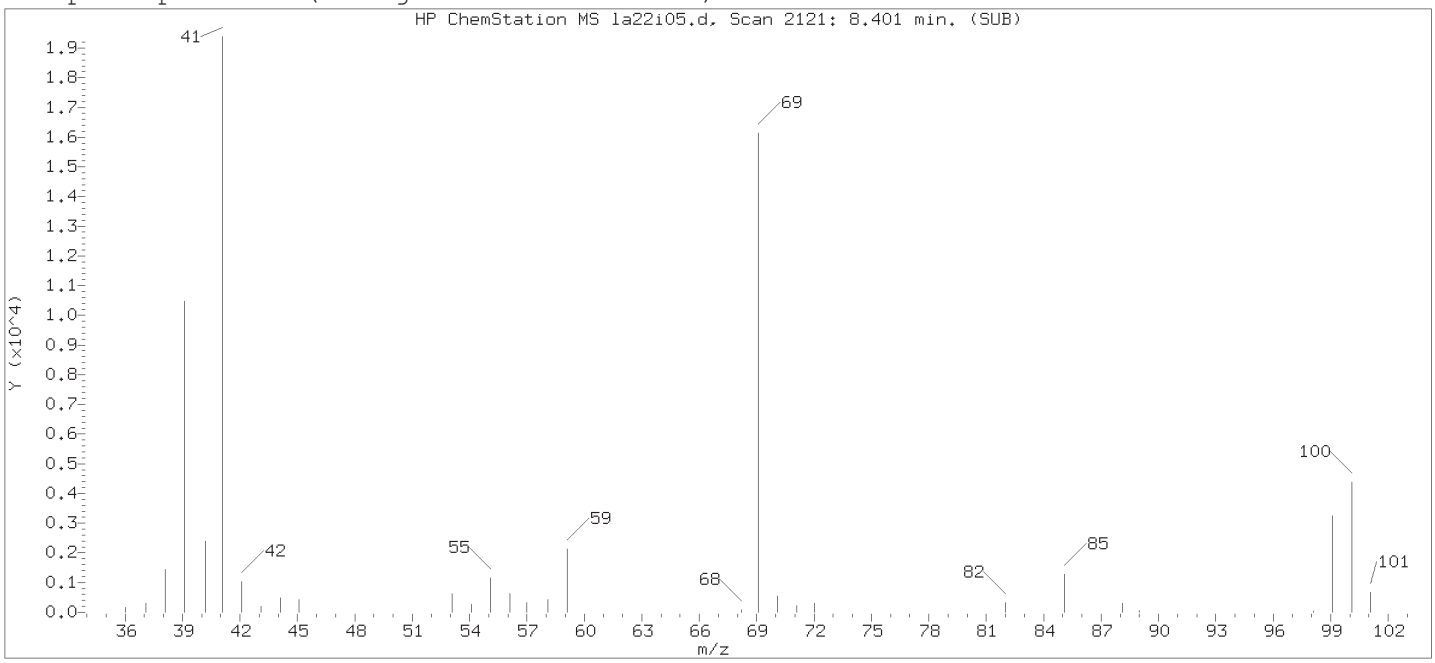
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2125
Retention Time (minutes): 8.414
Quant Ion : 69.00
Area (flag) : 61595M
On-Column Amount (ng) : 10.0937
Integration start scan : 2109 Integration stop scan: 2170
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

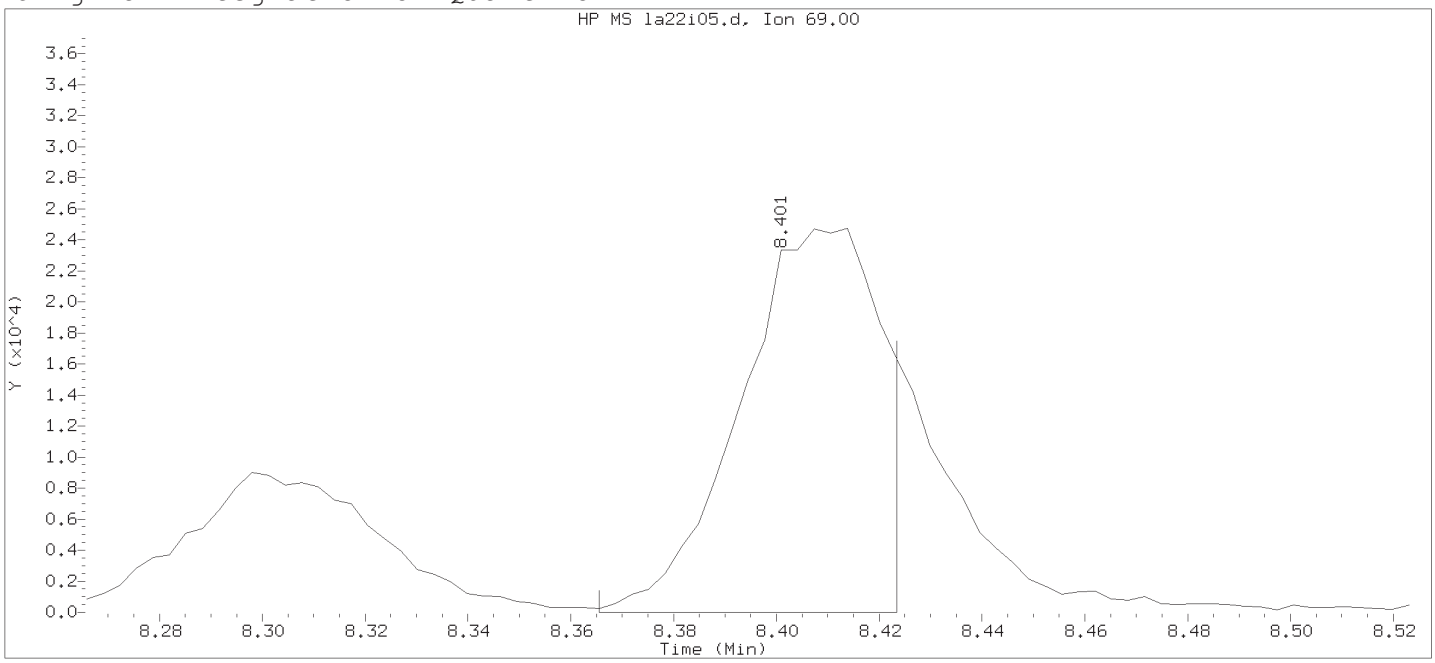
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

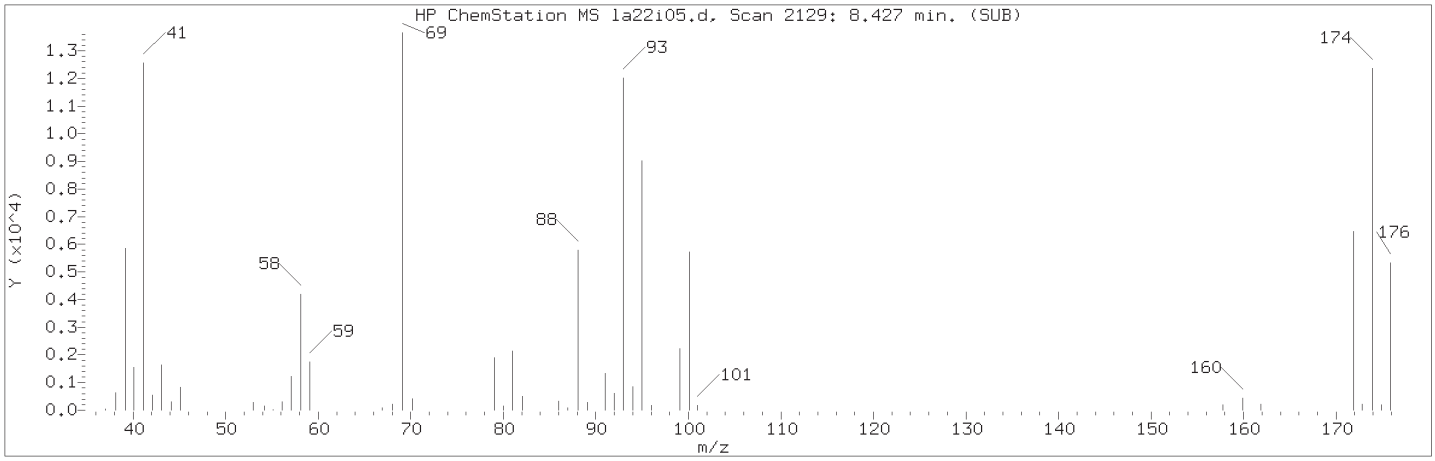
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

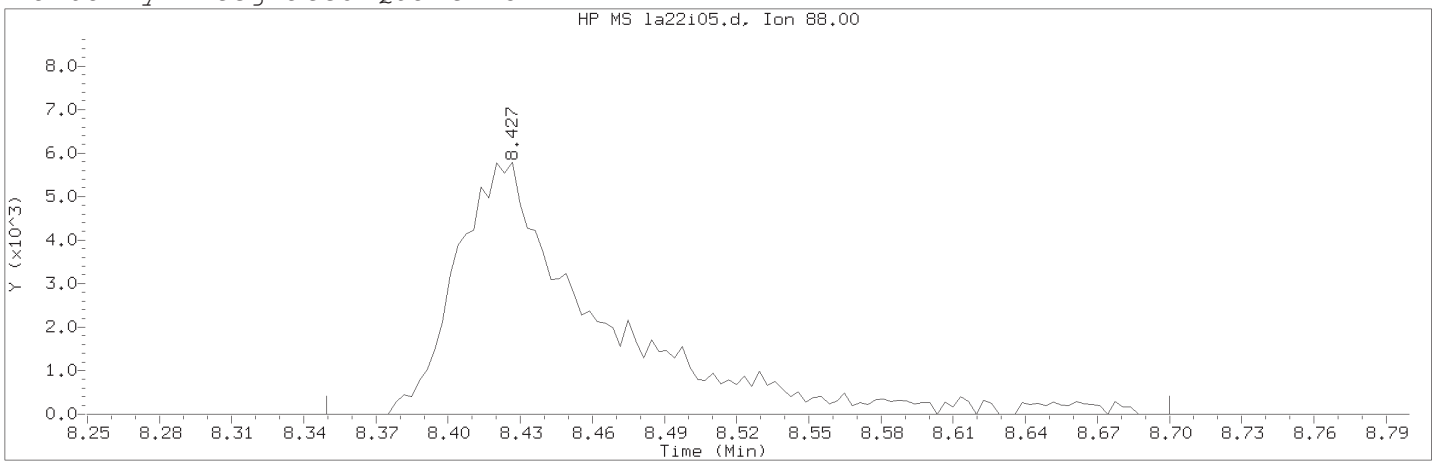
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2121
Retention Time (minutes): 8.401
Quant Ion : 69.00
Area : 45885
On-column Amount (ng) : 7.5751
Integration start scan : 2109 Integration stop scan: 2127
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

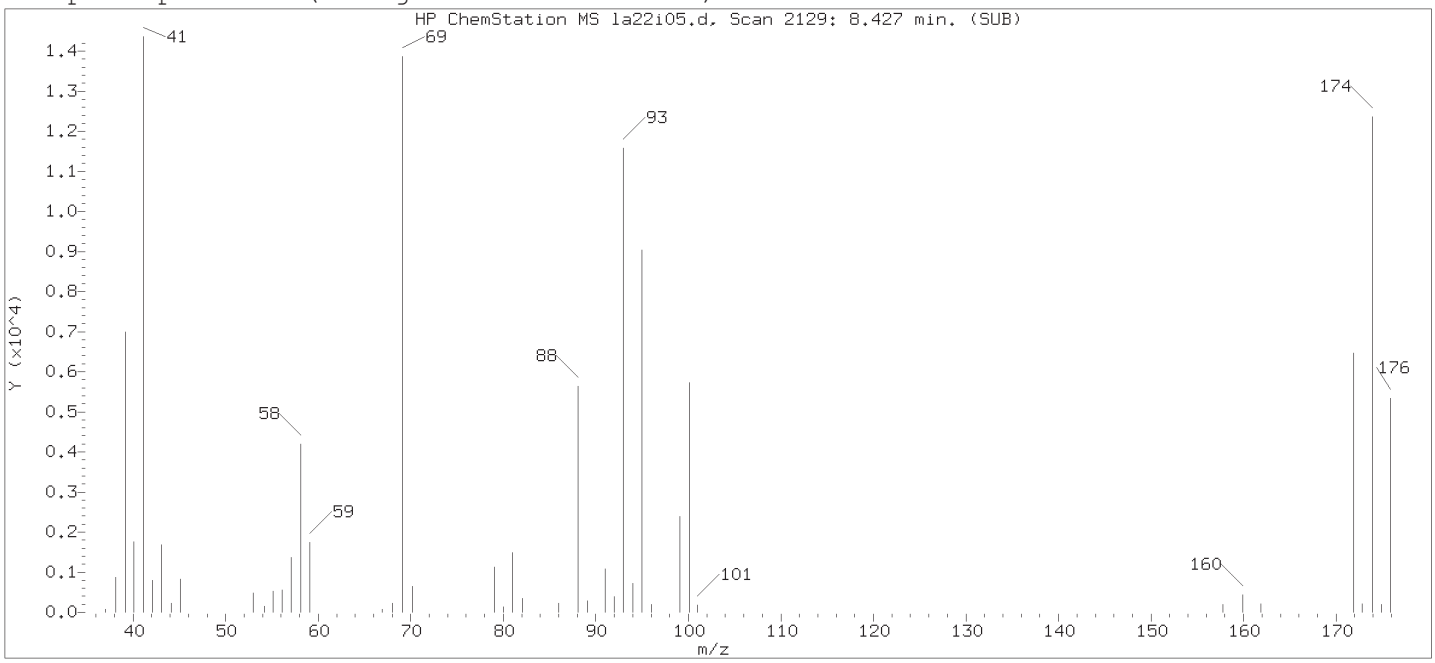
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2129
Retention Time (minutes): 8.427
Quant Ion : 88.00
Area (flag) : 24046M
On-Column Amount (ng) : 244.0076
Integration start scan : 2104 Integration stop scan: 2213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

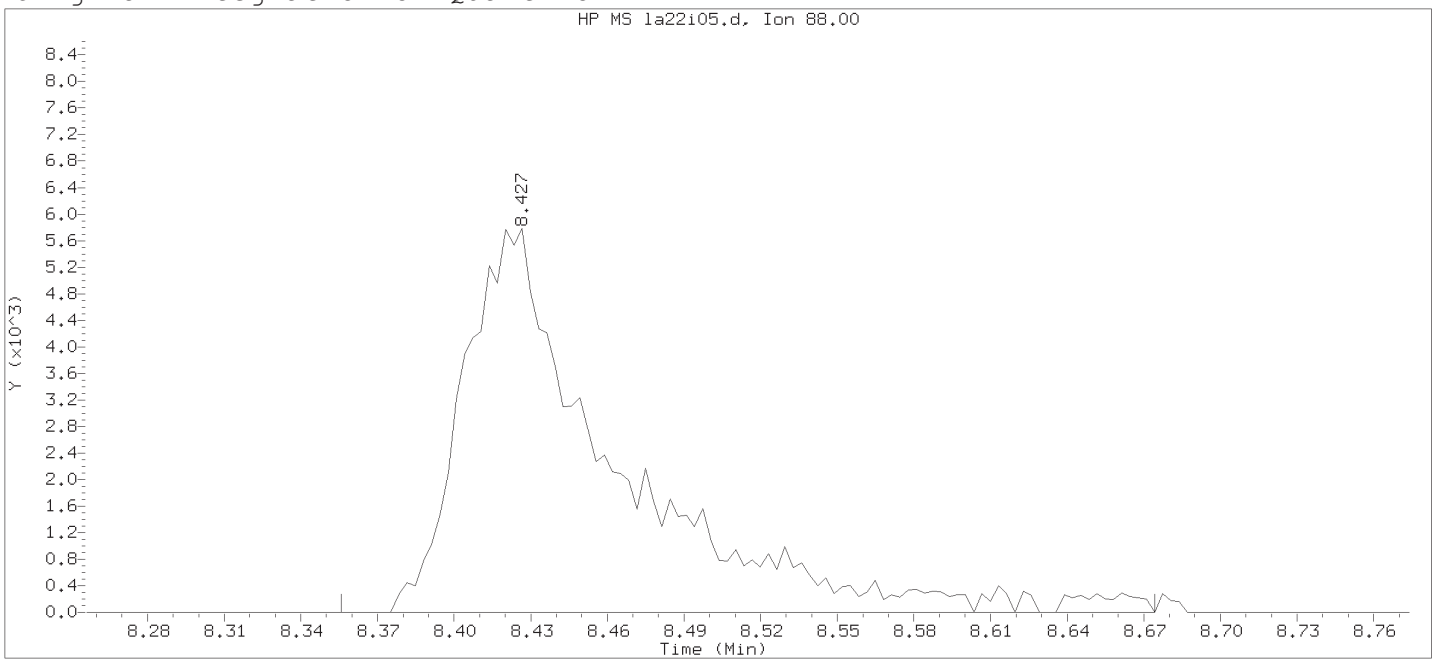
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

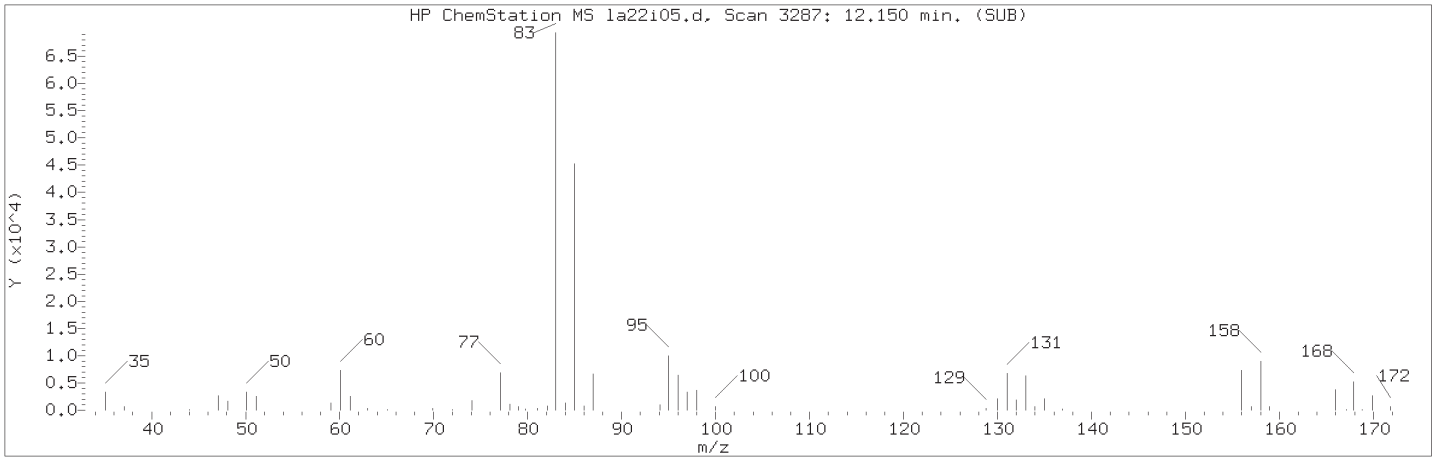
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

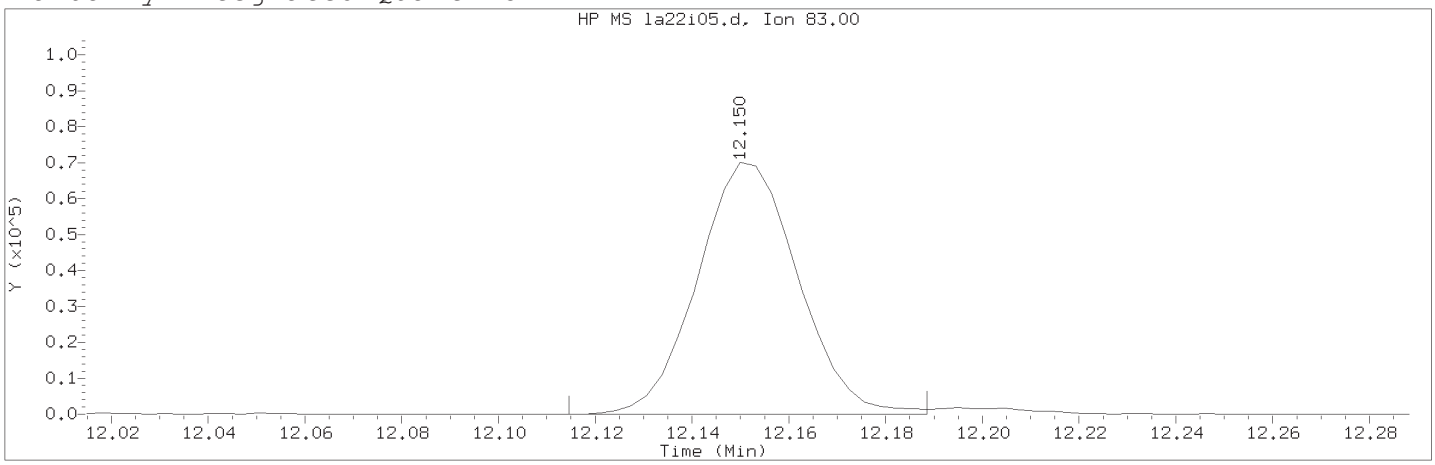
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2129
Retention Time (minutes): 8.427
Quant Ion : 88.00
Area : 23926
On-column Amount (ng) : 236.8546
Integration start scan : 2106 Integration stop scan: 2205
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

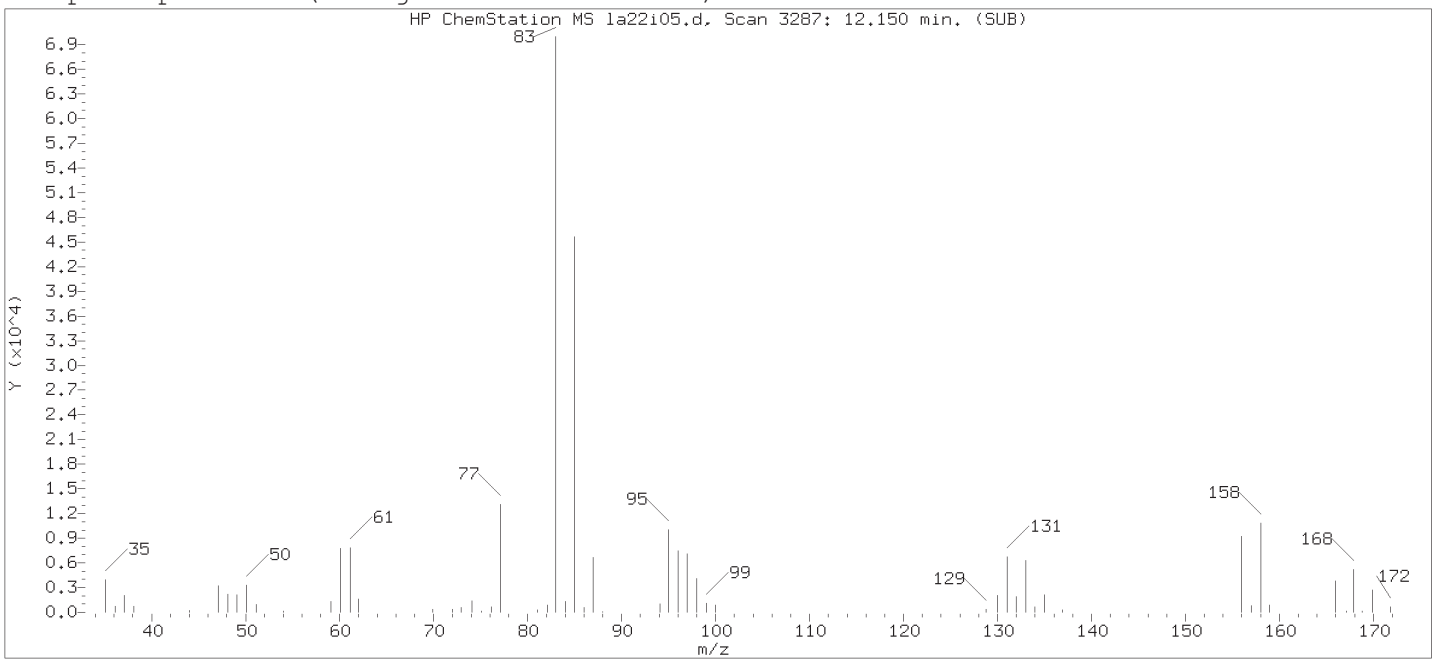
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3287
Retention Time (minutes): 12.150
Quant Ion : 83.00
Area (flag) : 101035M
On-Column Amount (ng) : 10.1373
Integration start scan : 3275 Integration stop scan: 3298
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

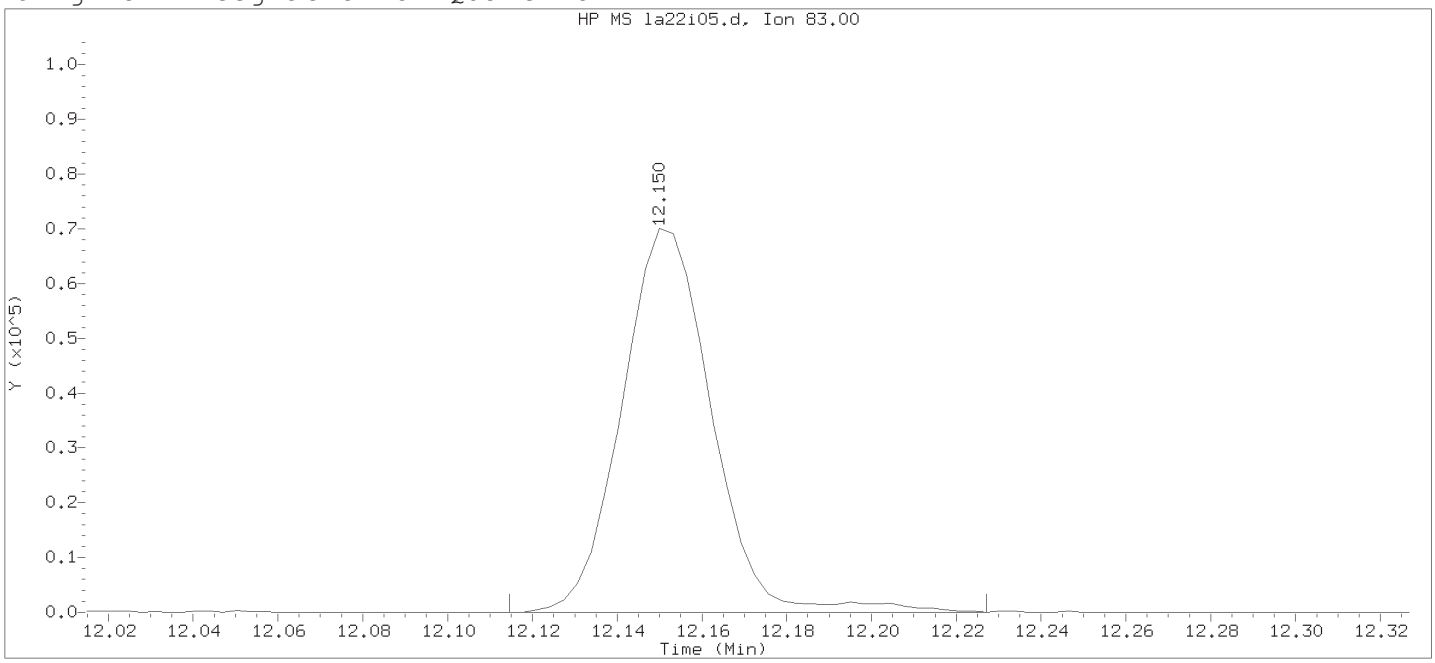
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

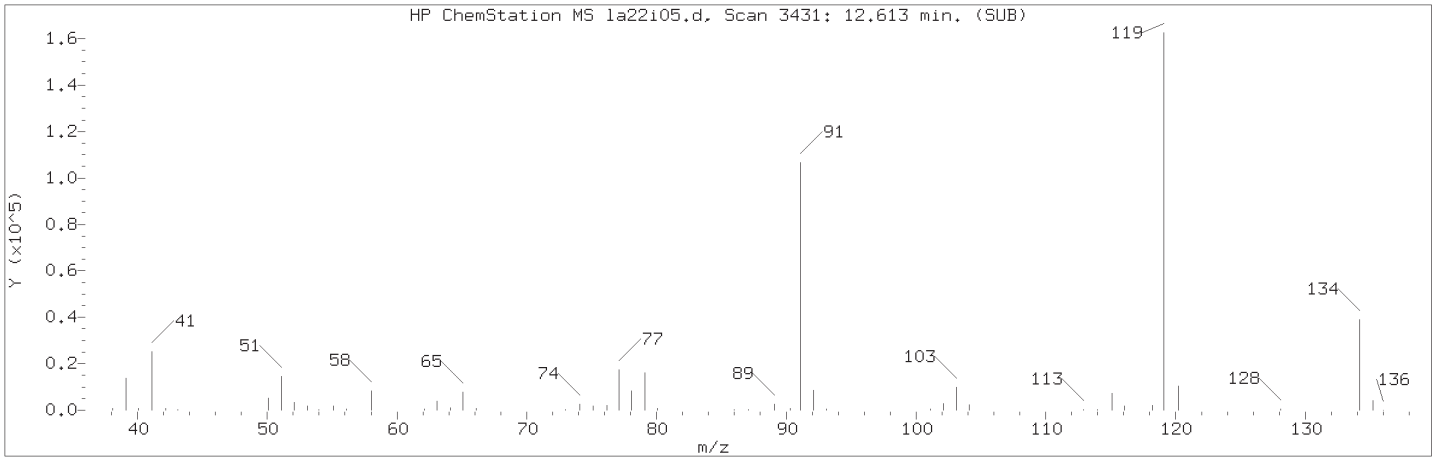
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

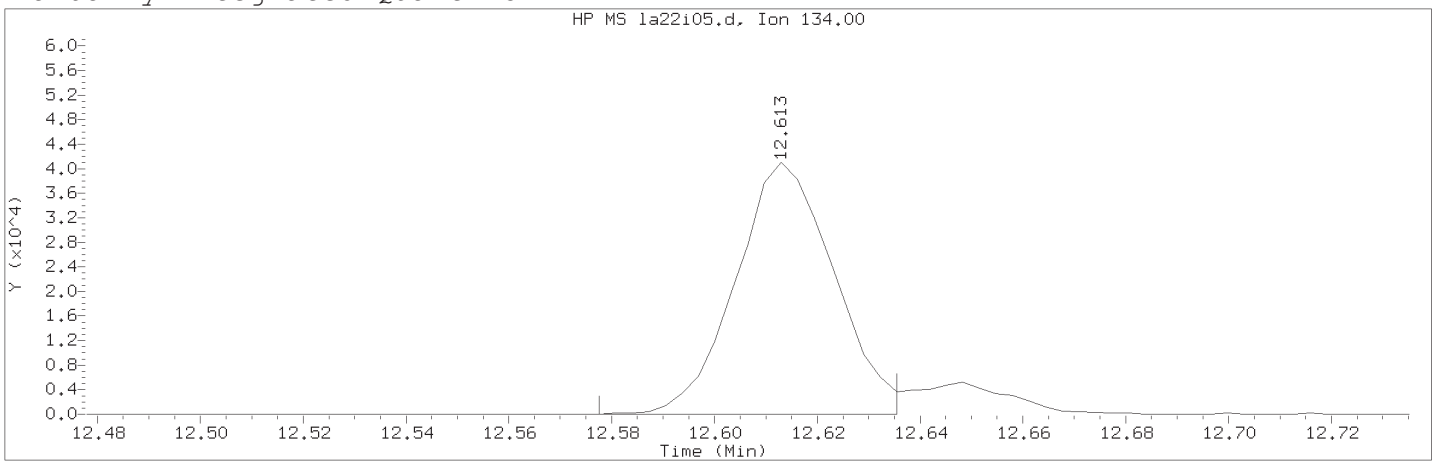
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3287
Retention Time (minutes): 12.150
Quant Ion : 83.00
Area : 103283
On-column Amount (ng) : 9.9582
Integration start scan : 3275 Integration stop scan: 3310
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

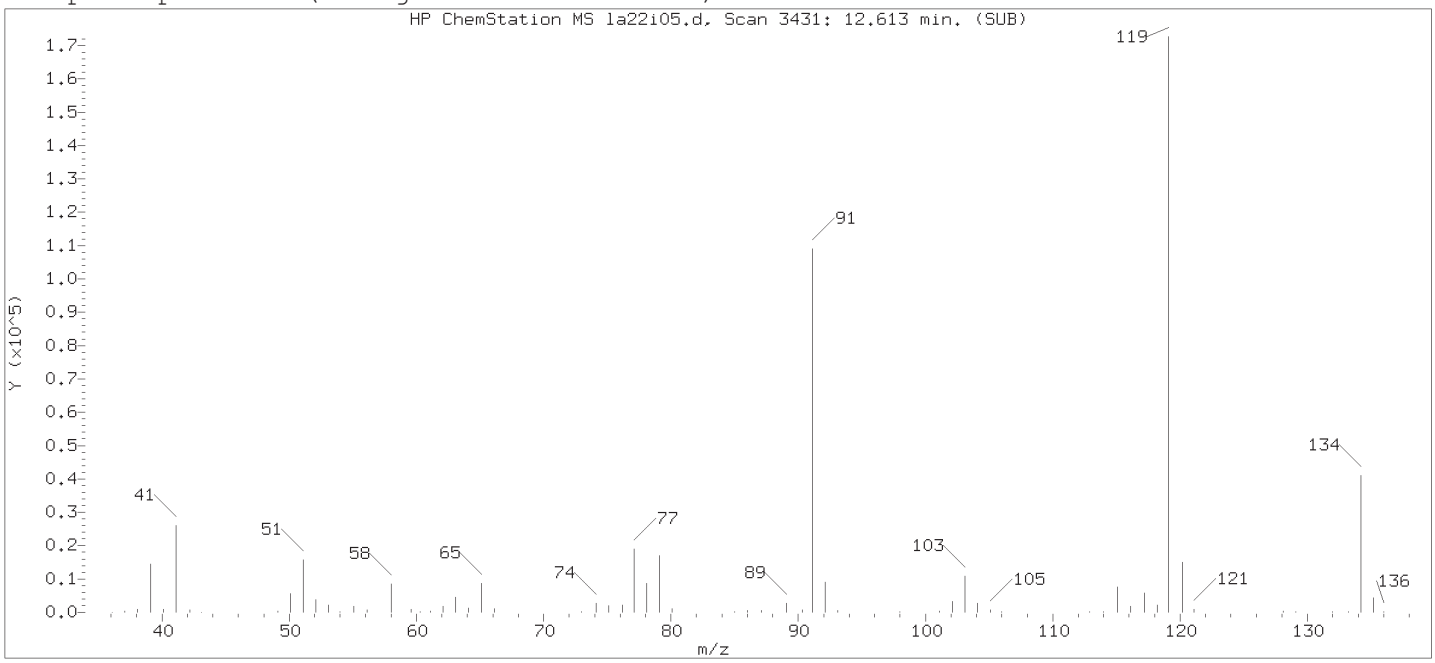
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area (flag) : 54360M
On-Column Amount (ng) : 9.8048
Integration start scan : 3419 Integration stop scan: 3437
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

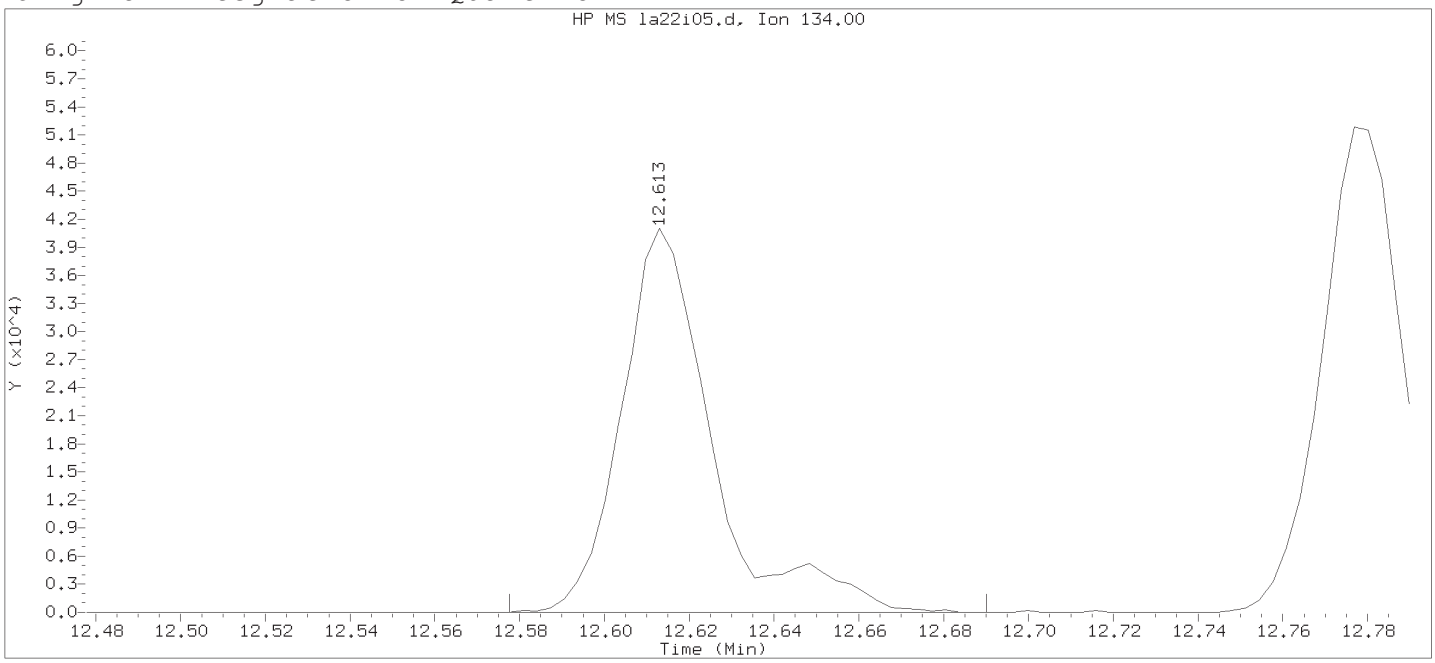
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



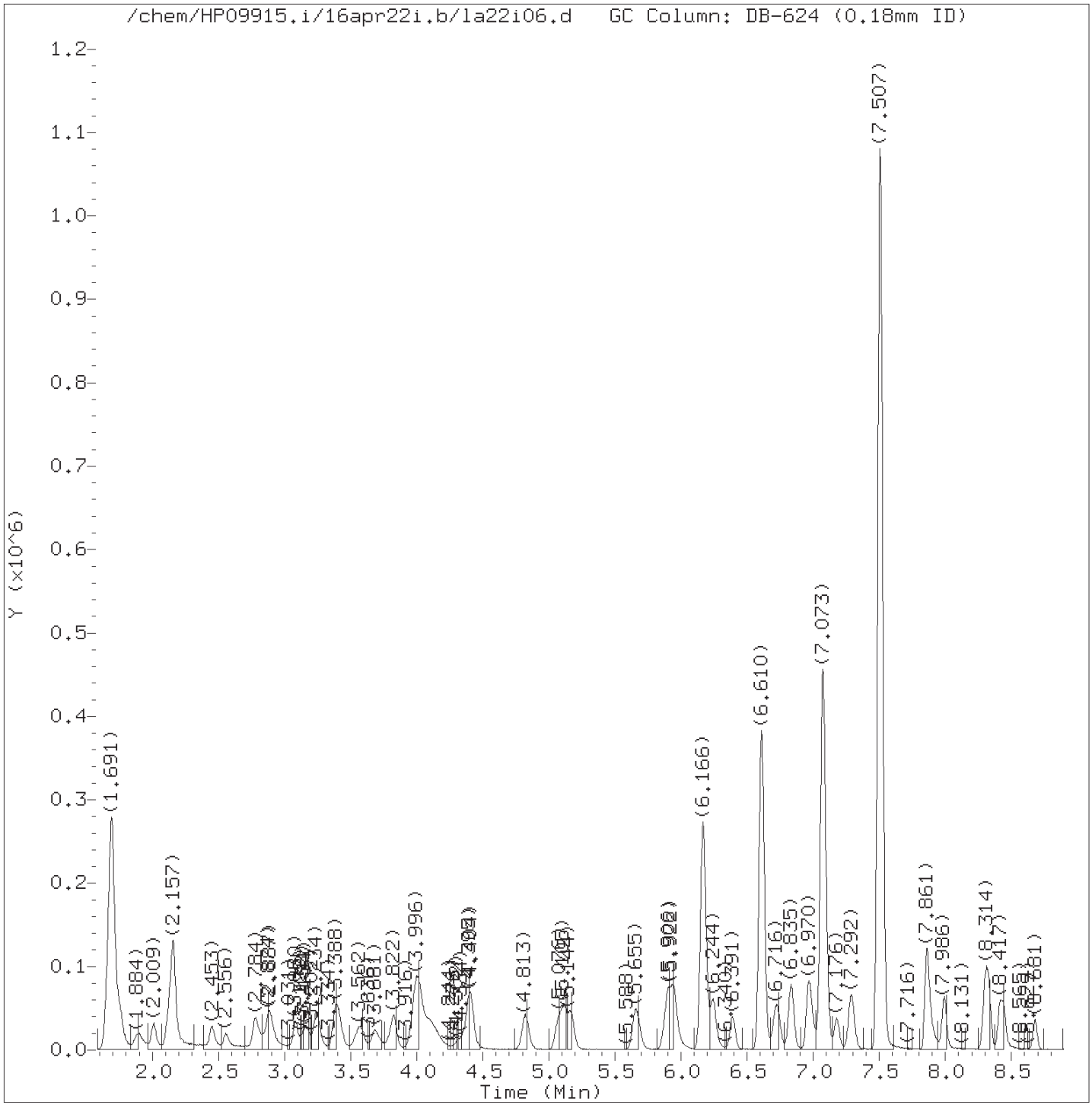
Data File: /chem/HP09915.i/16apr22i.b/la22i05.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:23 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:13
Date, time and analyst ID of latest file update: 22-Apr-2016 12:13 bwk03231

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area : 60819
On-column Amount (ng) : 10.0221
Integration start scan : 3419 Integration stop scan: 3454
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data ID: bwk03231



Total Ion Chromatogram (TIC)

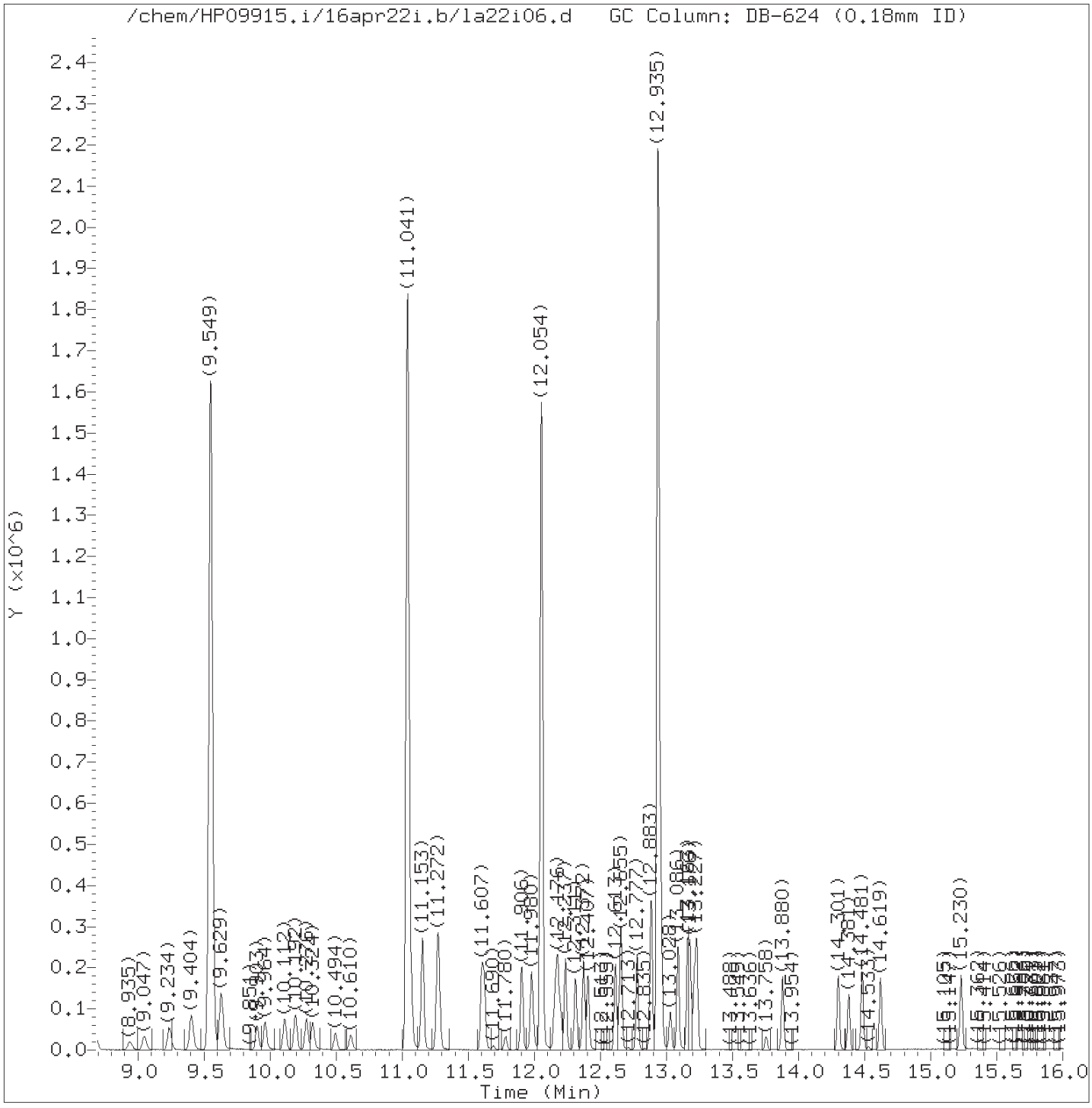
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.887	85	39766	4.126
4) Chloromethane	(2)	2.009	50	37981	3.923
6) Vinyl Chloride	(2)	2.134	62	36520	3.998
5) 1,3-Butadiene	(2)	2.157	39	102247	7.511
8) Bromomethane	(2)	2.453	94	23413M	3.953
9) Chloroethane	(2)	2.552	64	20215	4.045
10) Dichlorofluoromethane	(2)	2.781	67	47490	4.068
12) Trichlorofluoromethane	(2)	2.848	101	39776	4.135
11) n-Pentane	(2)	2.887	43	46892	4.258
14) Ethyl ether	(2)	3.080	59	26141	3.831
15) Freon 123a	(2)	3.167	67	33977	4.258
16) Acrolein	(1)	3.240	56	75004	38.231
17) 1,1-Dichloroethene	(2)	3.382	96	21971	3.864
17) 1,1-Dichloroethene	(2)	3.379	63	11799	3.875
18) Acetone	(1)	3.392	58	6650	7.572
19) Freon 113	(2)	3.411	101	21761	3.981
21) 2-Propanol	(1)	3.552	45	53043M	78.762
22) Methyl Iodide	(2)	3.575	142	39896	3.779
23) Carbon Disulfide	(2)	3.687	76	71459	3.743
27) Methyl Acetate	(2)	3.793	43	27737	3.622
25) Allyl Chloride	(2)	3.829	41	39938	3.635
29)*t-Butyl alcohol-d10	(1)	3.993	65	229317	250.000
28) Methylene Chloride	(2)	4.009	84	26406	3.766
30) t-Butyl alcohol	(1)	4.118	59	84916M	77.751
31) Acrylonitrile	(2)	4.318	53	14712	3.805
33) Methyl Tertiary Butyl Ether	(2)	4.385	73	81817	3.722
32) trans-1,2-Dichloroethene	(2)	4.408	96	24097	3.734
34) n-Hexane	(2)	4.819	57	39139	3.925
36) 1,1-Dichloroethane	(2)	5.067	63	47393	3.700
38) di-Isopropyl ether	(2)	5.115	45	90368	3.674
39) 2-Chloro-1,3-butadiene	(2)	5.173	53	36465	3.609
40) Ethyl t-butyl ether	(2)	5.662	59	82174	3.669
44) 2-Butanone	(2)	5.871	43	37468	7.527
42) cis-1,2-Dichloroethene	(2)	5.903	96	27308	3.758
45) 2,2-Dichloropropane	(2)	5.916	77	31452M	3.537
47) Propionitrile	(1)	5.948	54	111826	79.094
43) 1,2-Dichloroethene (Total)	(2)		96	51405	7.492
48) Methacrylonitrile	(2)	6.166	67	145320	37.875

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.244	128	13891	3.749
50) Tetrahydrofuran	(1)	6.247	71	9078	7.677
51) Chloroform	(2)	6.385	83	43282	3.719
52)$Dibromofluoromethane	(2)	6.610	113	303521	49.200
52)$Dibromofluoromethane	(2)	6.610	111	311969	49.397
53) 1,1,1-Trichloroethane	(2)	6.617	97	42269	4.088
54) Cyclohexane	(2)	6.723	56	46257	3.881
54) Cyclohexane	(2)	6.729	84	35552	3.755
54) Cyclohexane	(2)	6.723	69	13026	3.781
55) 1,1-Dichloropropene	(2)	6.832	75	34904	3.667
56) Carbon Tetrachloride	(2)	6.842	117	27336	3.531
58) Isobutyl Alcohol	(1)	6.977	41	75346M	196.104
57)$1,2-Dichloroethane-d4	(2)	7.073	102	77832	49.973
57)$1,2-Dichloroethane-d4	(2)	7.073	65	398669	49.945
57)$1,2-Dichloroethane-d4	(2)	7.073	104	49520	50.077
60) Benzene	(2)	7.092	78	104548	3.747
61) 1,2-Dichloroethane	(2)	7.179	62	39244	3.802
61) 1,2-Dichloroethane	(2)	7.173	98	3296	3.667
65) t-Amyl methyl ether	(2)	7.292	73	73403	3.538
66)*Fluorobenzene	(2)	7.507	96	1298555	50.000
67) n-Heptane	(2)	7.523	43	44476	4.024
69) n-Butanol	(1)	7.861	56	110688	369.565
71) Trichloroethene	(2)	7.996	95	26335	3.735
72) Methylcyclohexane	(2)	8.301	83	44321	3.815
72) Methylcyclohexane	(2)	8.308	98	19775	3.789
73) 1,2-Dichloropropane	(2)	8.330	63	28189	3.670
76) Methyl Methacrylate	(2)	8.417	69	22917M	3.560
75) 1,4-Dioxane	(1)	8.424	88	19491M	192.126
74) Dibromomethane	(2)	8.446	93	17786	3.736
78) Bromodichloromethane	(2)	8.681	83	29881	3.439
79) 2-Nitropropane	(2)	8.941	41	15645	6.540
80) 2-Chloroethyl Vinyl Ether	(2)	9.051	63	18746	3.420
81) cis-1,3-Dichloropropene	(2)	9.234	75	37223	3.339
82) 4-Methyl-2-pentanone	(2)	9.404	43	72766	7.124
83)$Toluene-d8	(3)	9.552	98	1276058	50.241
83)$Toluene-d8	(3)	9.549	100	833072	50.372
88) Toluene	(3)	9.629	92	64924	3.760
89) trans-1,3-Dichloropropene	(3)	9.903	75	32860	3.285

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* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.964	69	37748	3.406
90) 1,3-Dichloropropene (total)	(3)		100	70083	6.624
92) 1,1,2-Trichloroethane	(3)	10.108	97	24961	3.721
93) Tetrachloroethene	(3)	10.192	166	27314	3.737
94) 1,3-Dichloropropane	(3)	10.276	76	43742	3.682
96) 2-Hexanone	(3)	10.324	43	50899	6.943
97) Dibromochloromethane	(3)	10.494	129	21460	3.257
99) 1,2-Dibromoethane	(3)	10.613	107	26327	3.653
100)*Chlorobenzene-d5	(3)	11.041	117	970322	50.000
101) 1-Chlorohexane	(3)	11.050	91	36952	3.815
102) Chlorobenzene	(3)	11.070	112	71787	3.674
103) 1,1,1,2-Tetrachloroethane	(3)	11.150	131	22600	3.495
104) Ethylbenzene	(3)	11.153	91	123611	3.711
106) m+p-Xylene	(3)	11.272	106	92934	7.267
107) o-Xylene	(3)	11.600	106	45760	3.638
109) Styrene	(3)	11.623	104	75511	3.564
108) Xylene (Total)	(3)		106	138694	10.904
110) Bromoform	(3)	11.787	173	14218	3.134
111) Isopropylbenzene	(3)	11.906	105	119423	3.729
112) Cyclohexanone	(1)	11.980	55	79958	170.905
114)$4-Bromofluorobenzene	(3)	12.054	95	470477	50.057
114)$4-Bromofluorobenzene	(3)	12.054	174	402434	50.316
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	38096M	3.711
115) Bromobenzene	(4)	12.169	156	32389	3.718
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	28181	20.595
117) 1,2,3-Trichloropropane	(4)	12.202	110	11287	3.807
119) n-Propylbenzene	(4)	12.237	91	148620	3.816
120) 2-Chlorotoluene	(4)	12.311	126	29026	3.674
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	102369	3.711
121) 4-Chlorotoluene	(4)	12.404	126	31077	3.726
124) tert-Butylbenzene	(4)	12.613	134	21111M	3.697
125) Pentachloroethane	(4)	12.648	167	15979	3.390
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	106598	3.716
127) sec-Butylbenzene	(4)	12.780	105	135497	3.875
129) 1,3-Dichlorobenzene	(4)	12.880	146	61761	3.769
130) p-Isopropyltoluene	(4)	12.886	119	114310	3.759
131)*1,4-Dichlorobenzene-d4	(4)	12.935	152	506851	50.000
133) 1,4-Dichlorobenzene	(4)	12.957	146	65304	3.814

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Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

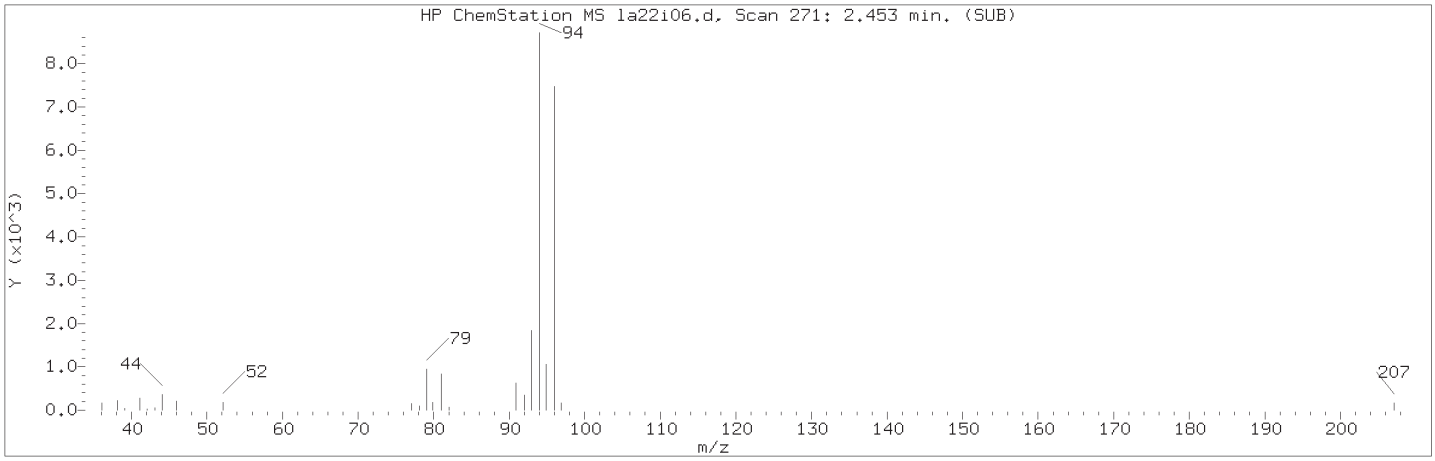
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

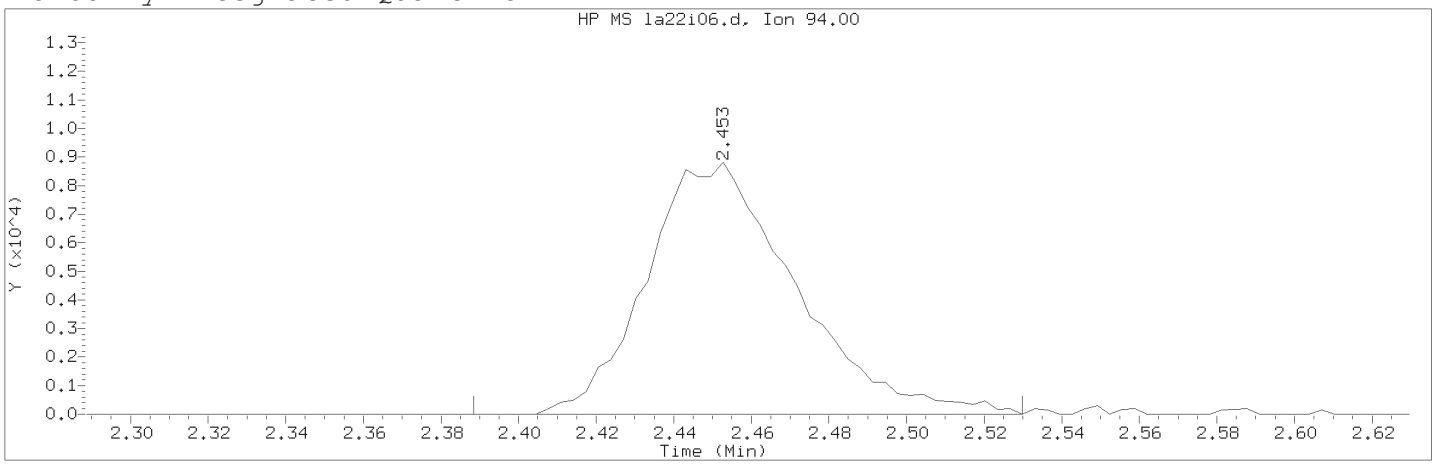
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	112253	3.742
135) Benzyl Chloride	(4)	13.031	91	55608	3.123
136) 1,3-Diethylbenzene	(4)	13.089	119	69638	3.809
137) 1,4-Diethylbenzene	(4)	13.160	119	73124	3.835
139) n-Butylbenzene	(4)	13.179	92	61007	3.921
138) 1,2-Dichlorobenzene	(4)	13.211	146	62125	3.824
140) 1,2-Diethylbenzene	(4)	13.230	119	59492	3.815
141) Diethylbenzene (total)	(4)		100	202254	11.458
142) 1,2-Dibromo-3-chloropropane	(4)	13.755	75	6894	3.474
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	48655	3.764
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	48960	3.822
147) Hexachlorobutadiene	(4)	14.381	225	21454	3.922
148) Naphthalene	(4)	14.481	128	130619	3.785
149) 1,2,3-Trichlorobenzene	(4)	14.623	180	46636	3.862
150) 2-Methylnaphthalene	(4)	15.230	142	80277	3.731

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

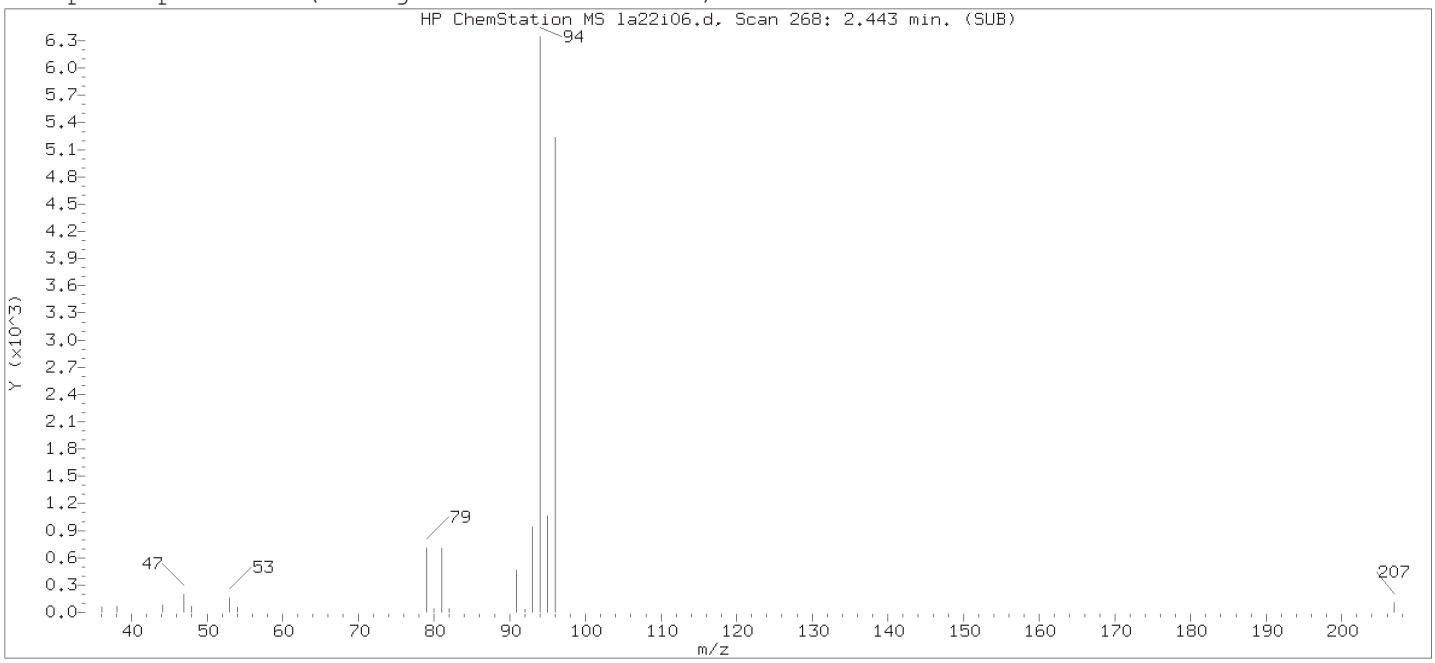
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 271
Retention Time (minutes): 2.453
Quant Ion : 94.00
Area (flag) : 23413M
On-Column Amount (ng) : 3.9533
Integration start scan : 250 Integration stop scan: 294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

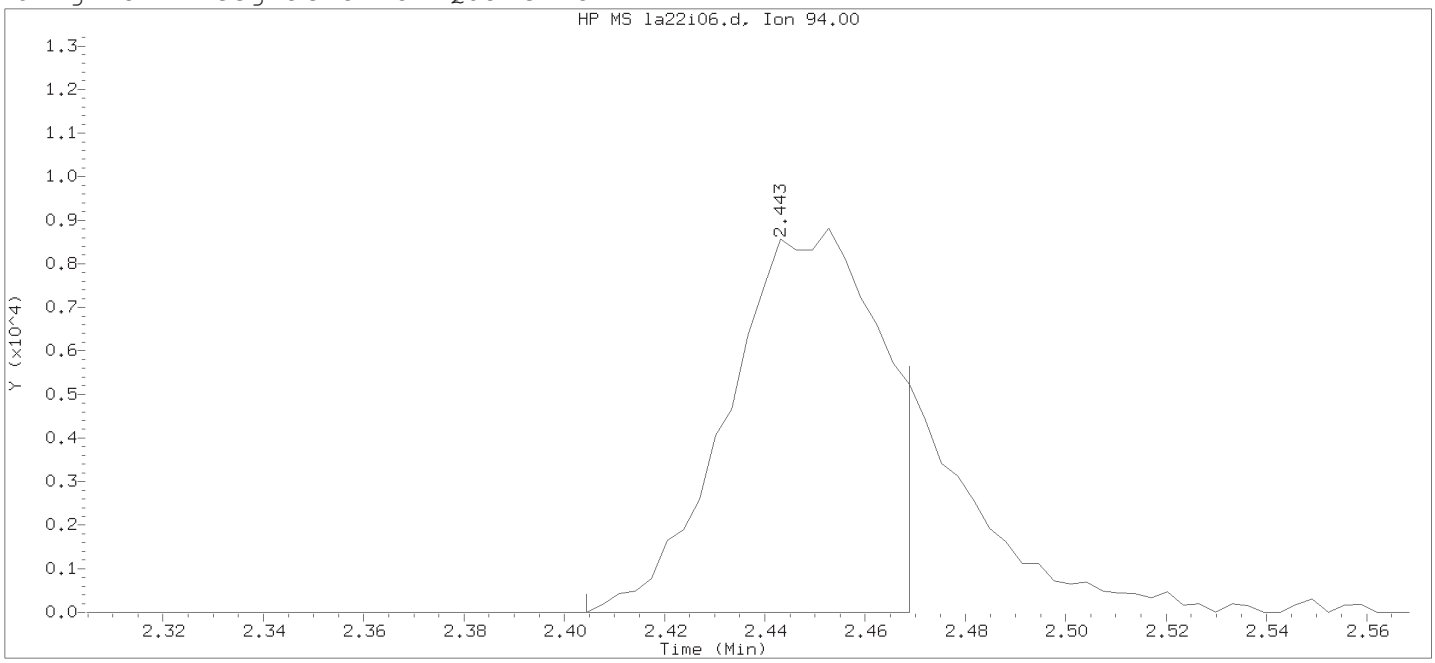
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

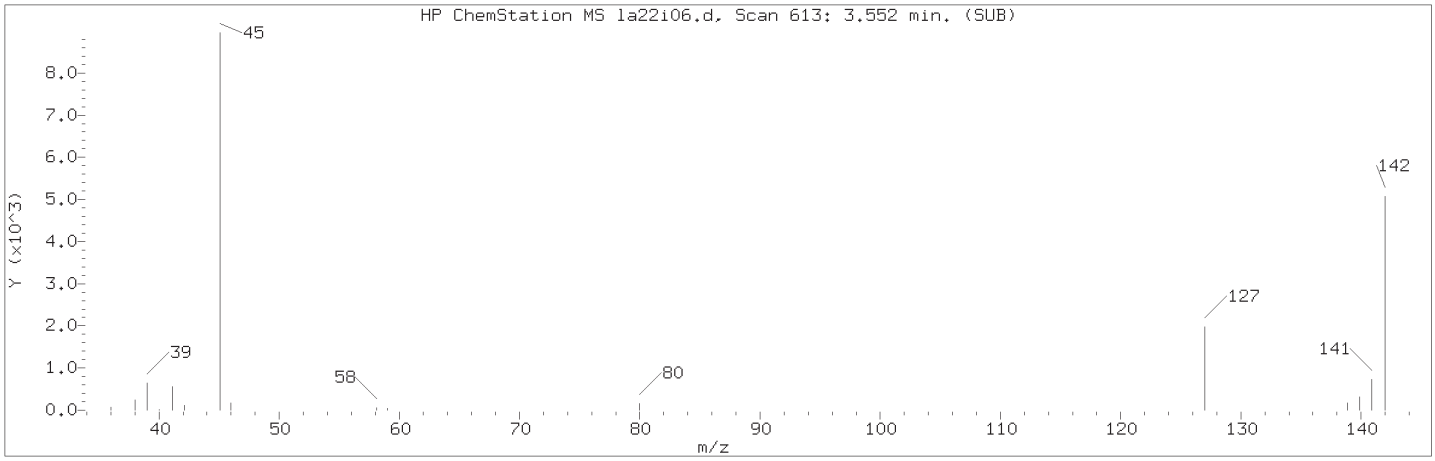
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

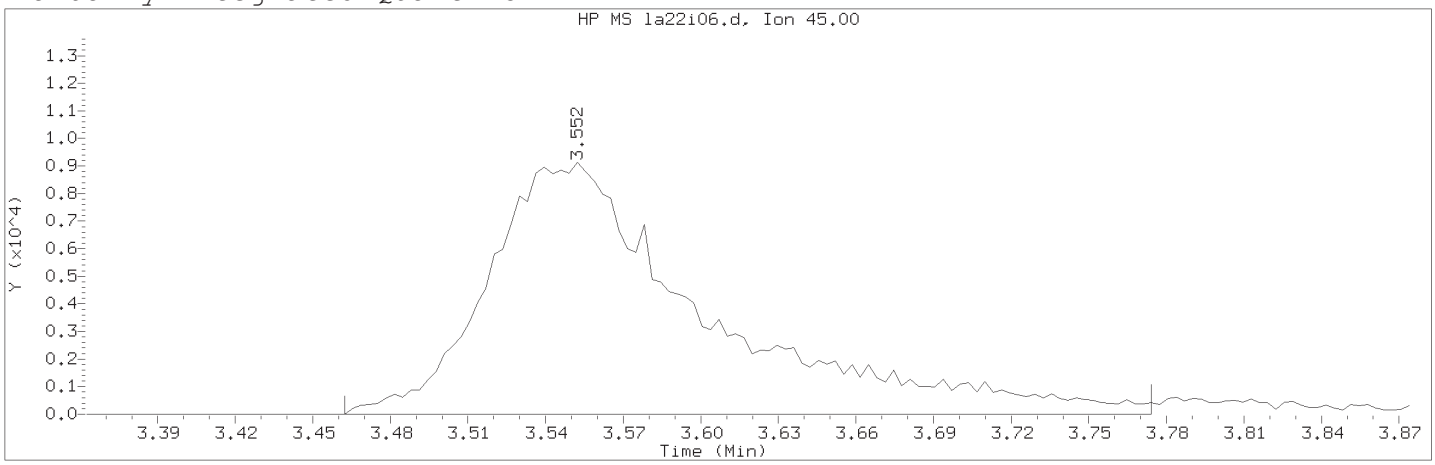
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 2.443
Quant Ion : 94.00
Area : 18298
On-column Amount (ng) : 3.1352
Integration start scan : 255 Integration stop scan: 275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature used: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

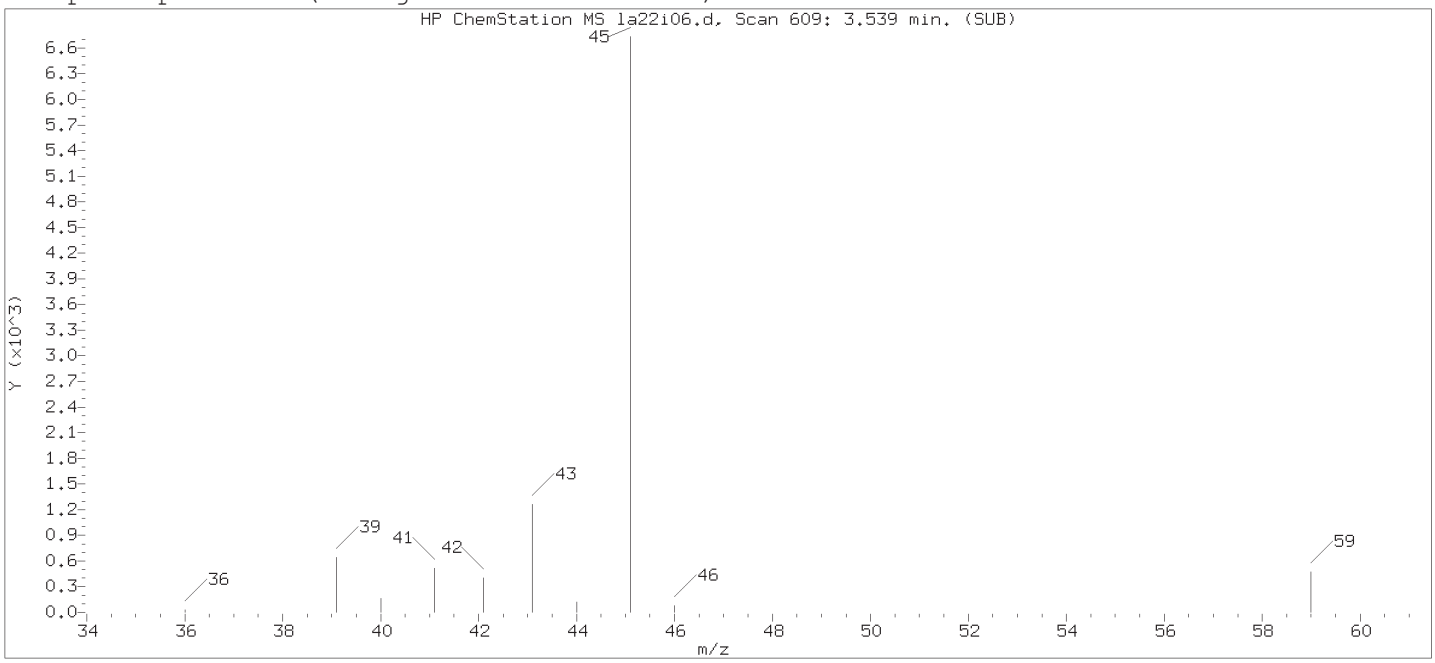
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 613
Retention Time (minutes): 3.552
Quant Ion : 45.00
Area (flag) : 53043M
On-Column Amount (ng) : 78.7619
Integration start scan : 584 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

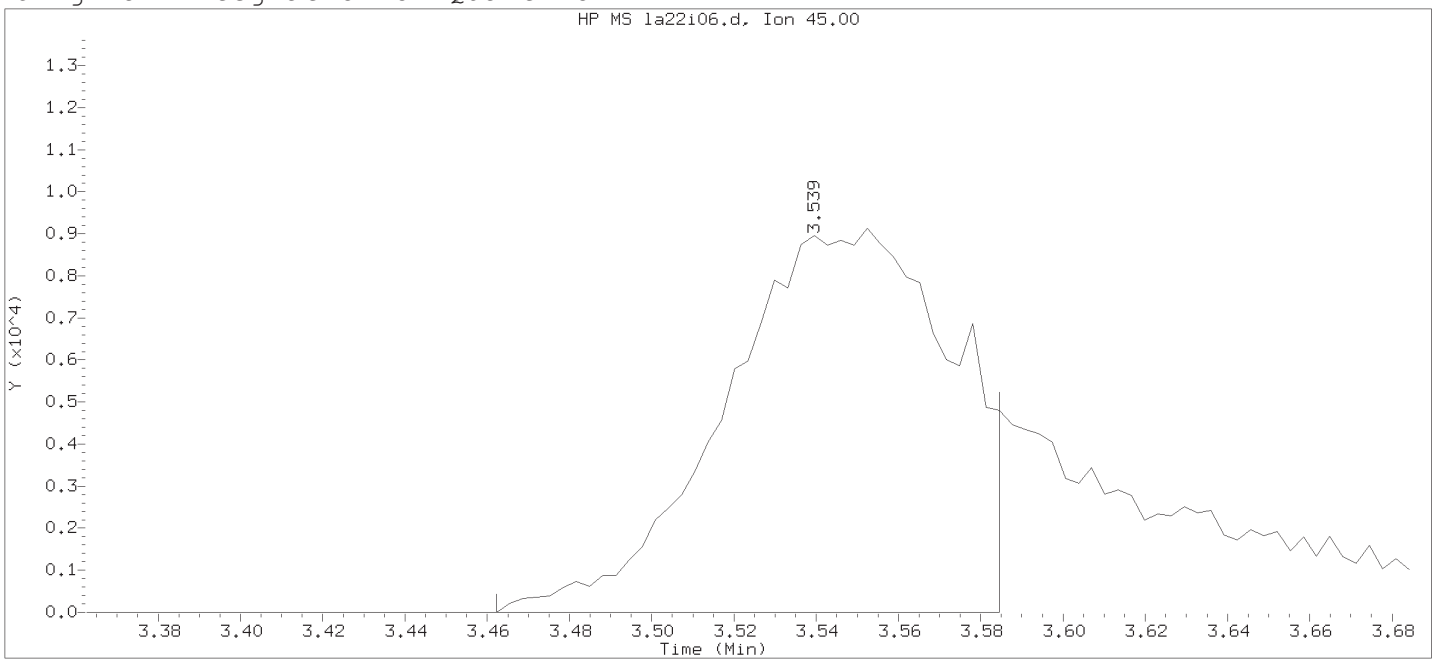
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

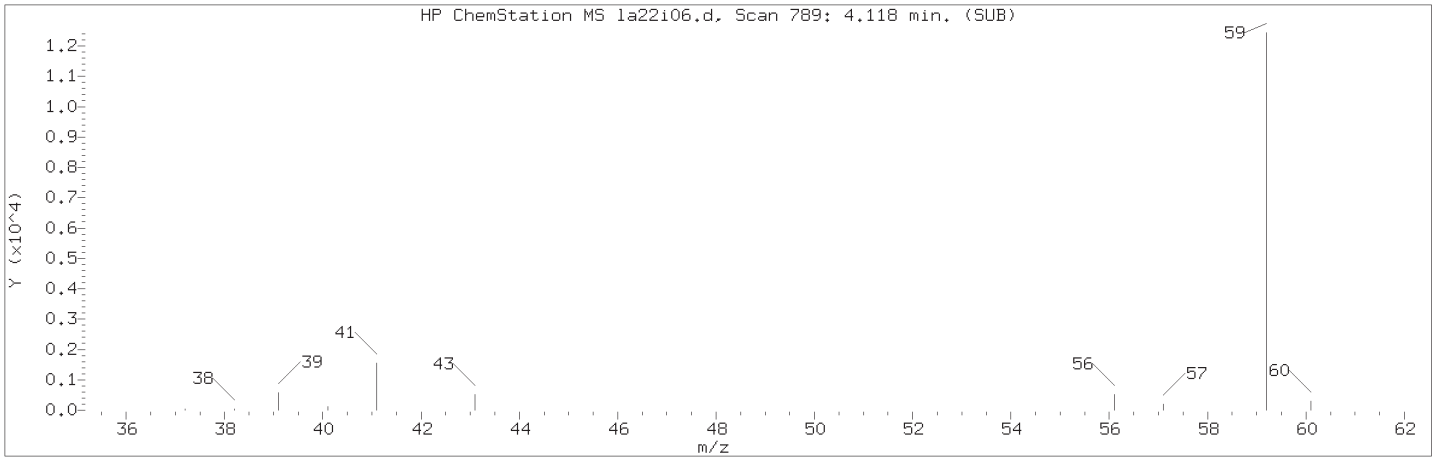
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

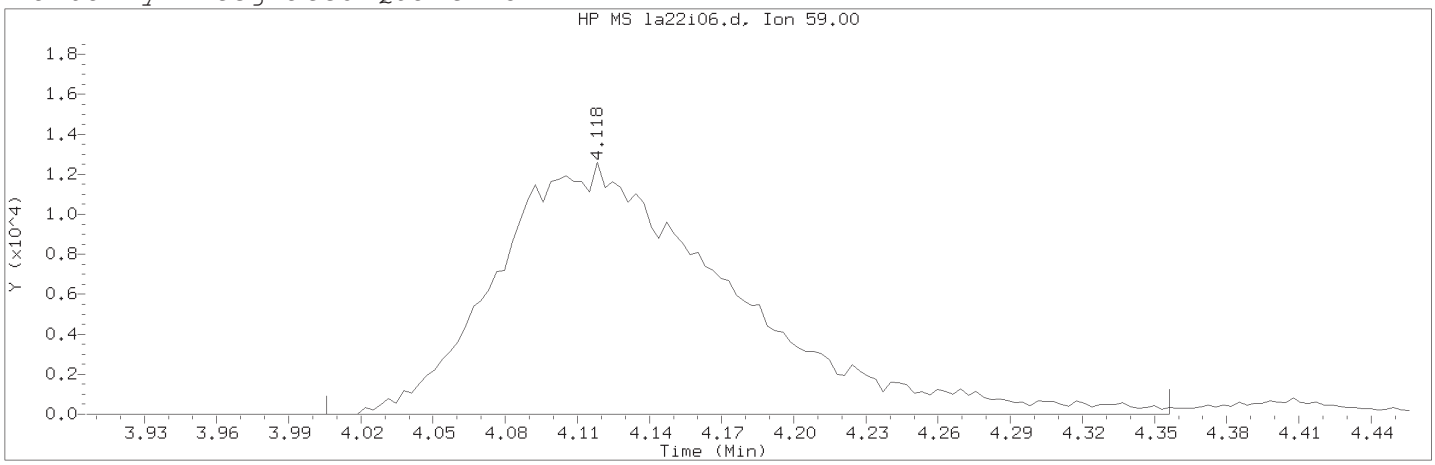
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 609
Retention Time (minutes): 3.539
Quant Ion : 45.00
Area : 34799
On-column Amount (ng) : 54.9476
Integration start scan : 584 Integration stop scan: 622
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

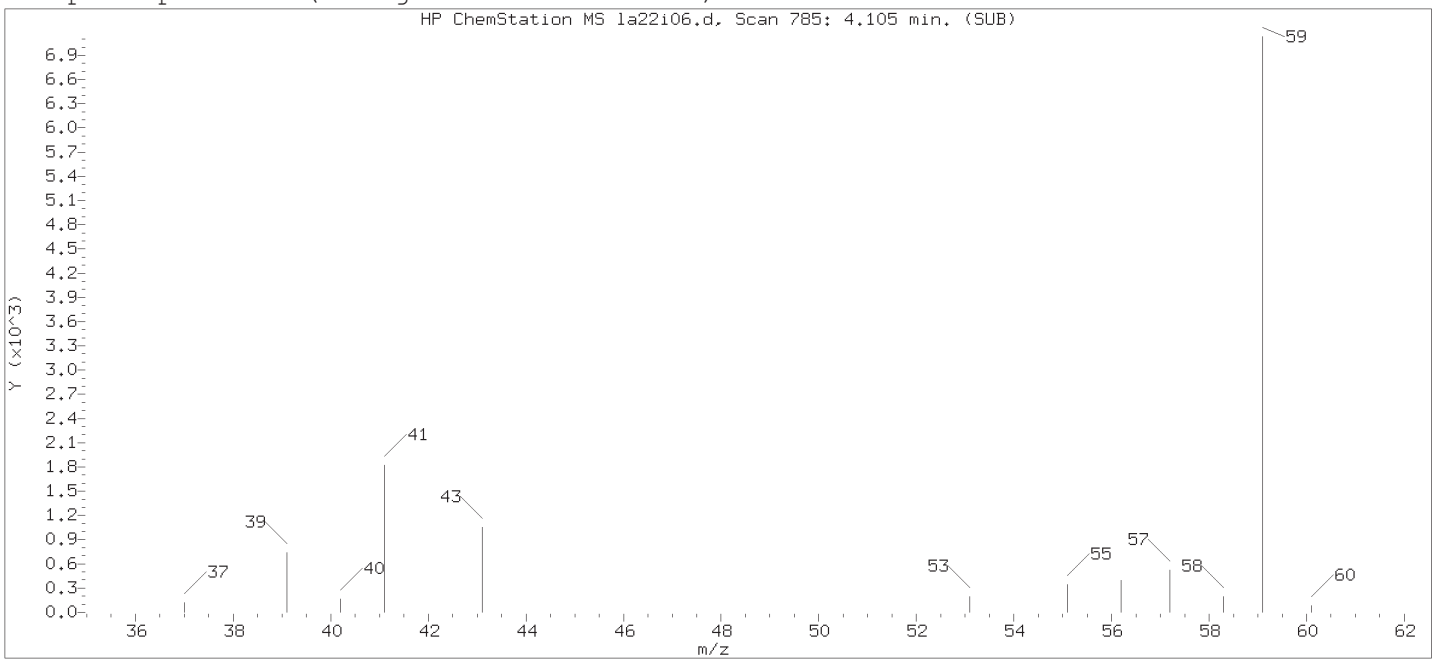
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 789
Retention Time (minutes): 4.118
Quant Ion : 59.00
Area (flag) : 84916M
On-Column Amount (ng) : 77.7513
Integration start scan : 753 Integration stop scan: 862
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

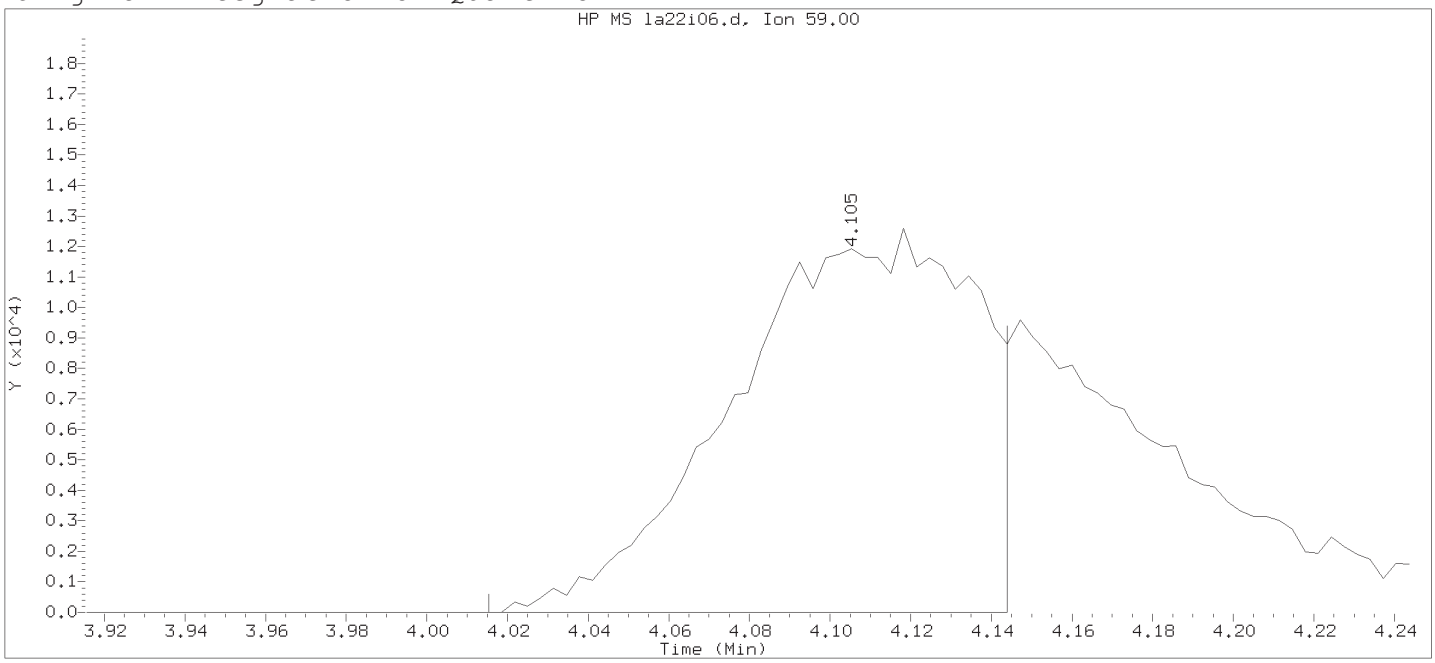
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

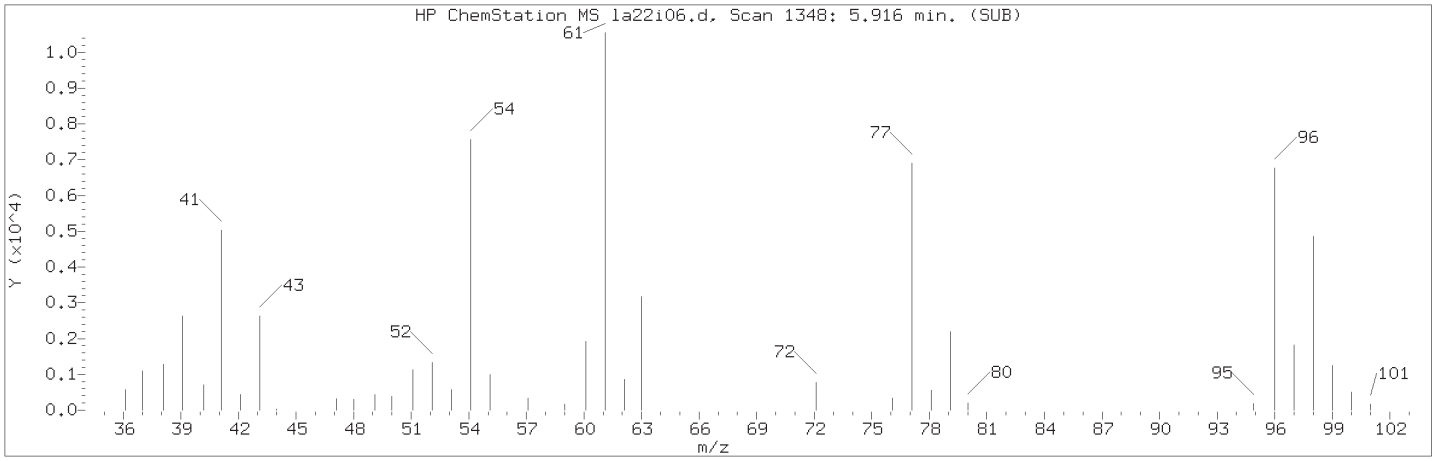
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

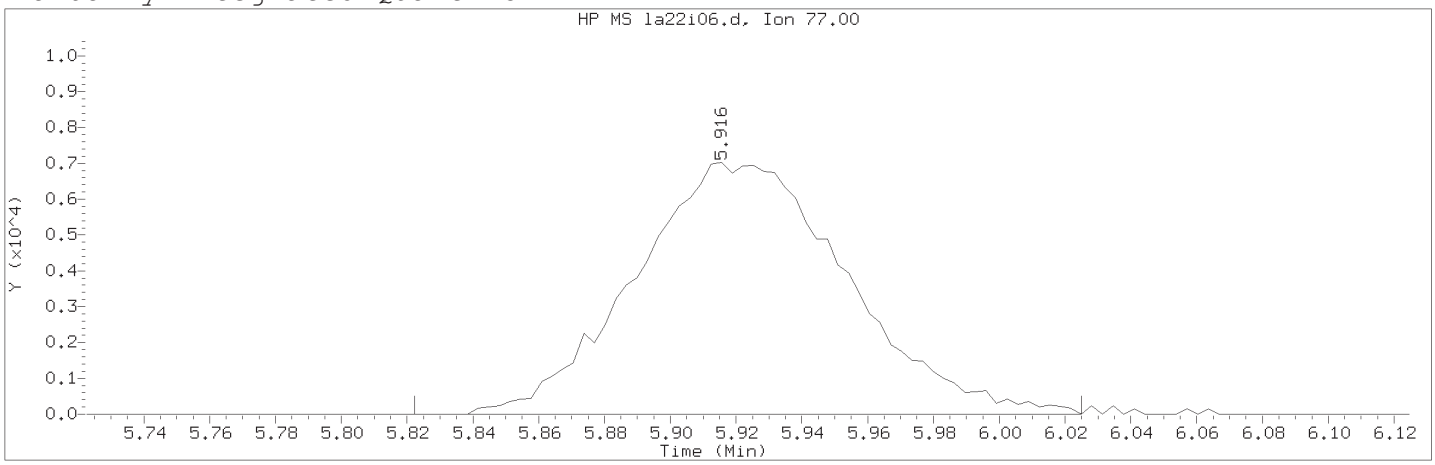
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 785
Retention Time (minutes): 4.105
Quant Ion : 59.00
Area : 51973
On-column Amount (ng) : 51.4081
Integration start scan : 756 Integration stop scan: 796
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

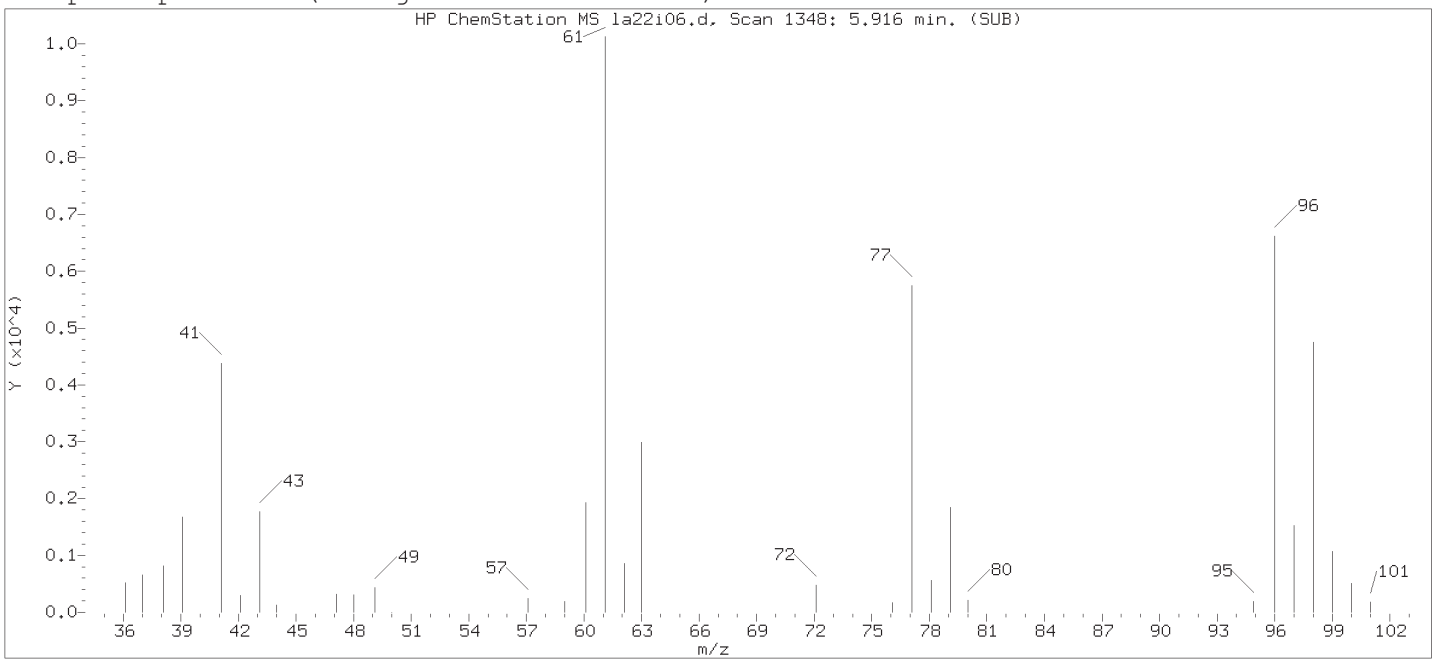
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1348
Retention Time (minutes): 5.916
Quant Ion : 77.00
Area (flag) : 31452M
On-Column Amount (ng) : 3.5371
Integration start scan : 1318 Integration stop scan: 1381
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

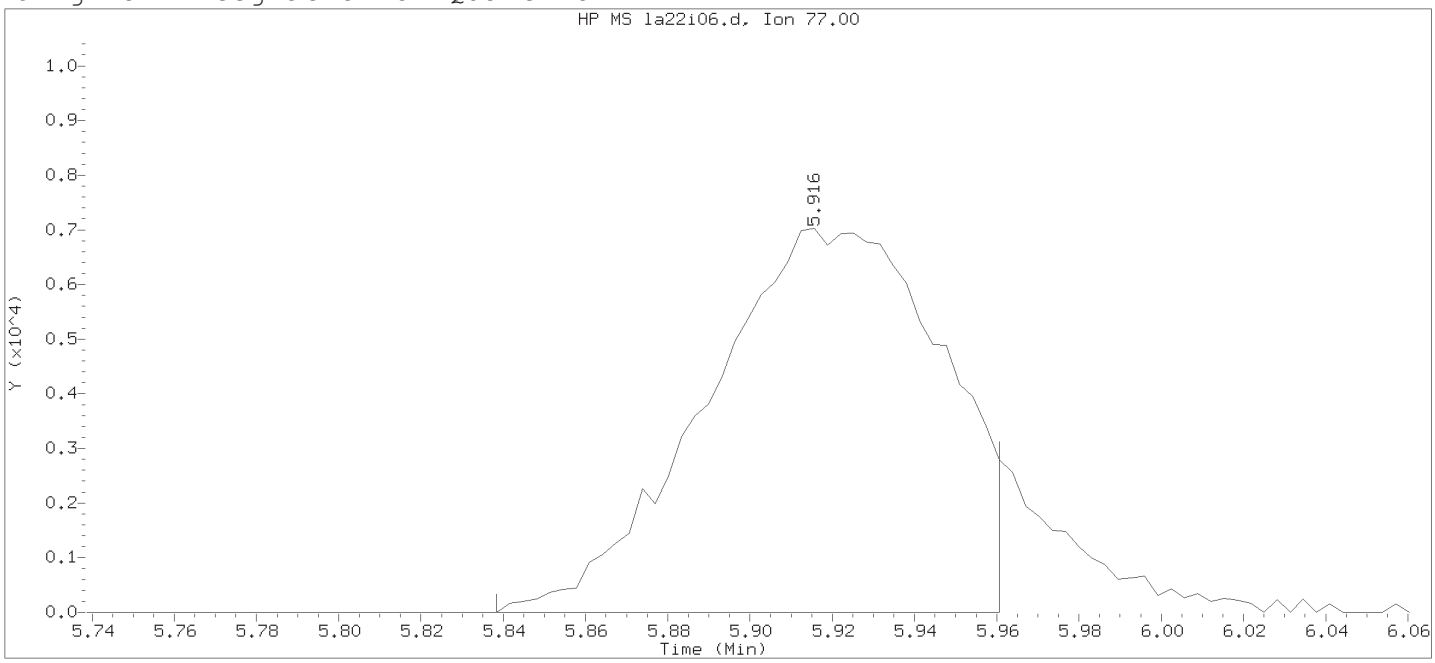
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

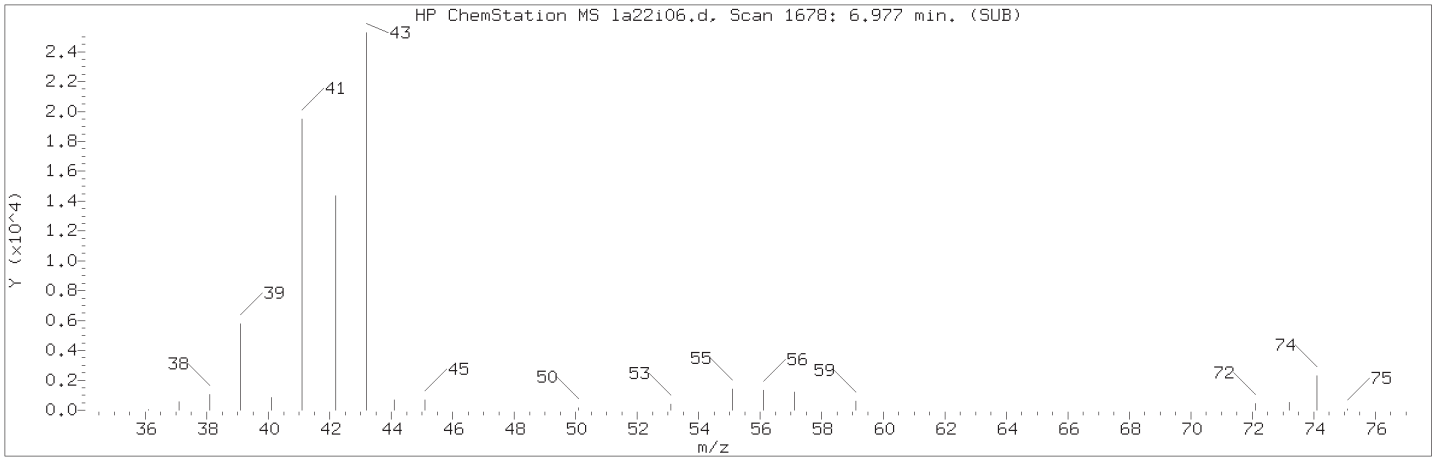
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

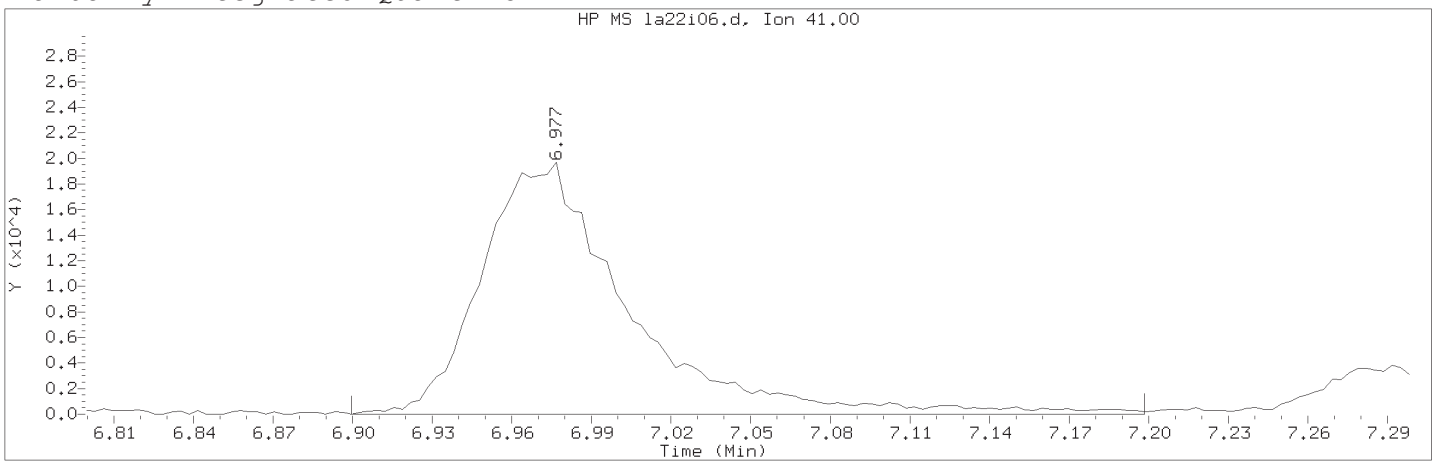
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1348
Retention Time (minutes): 5.916
Quant Ion : 77.00
Area : 28022
On-column Amount (ng) : 3.0668
Integration start scan : 1323 Integration stop scan: 1361
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

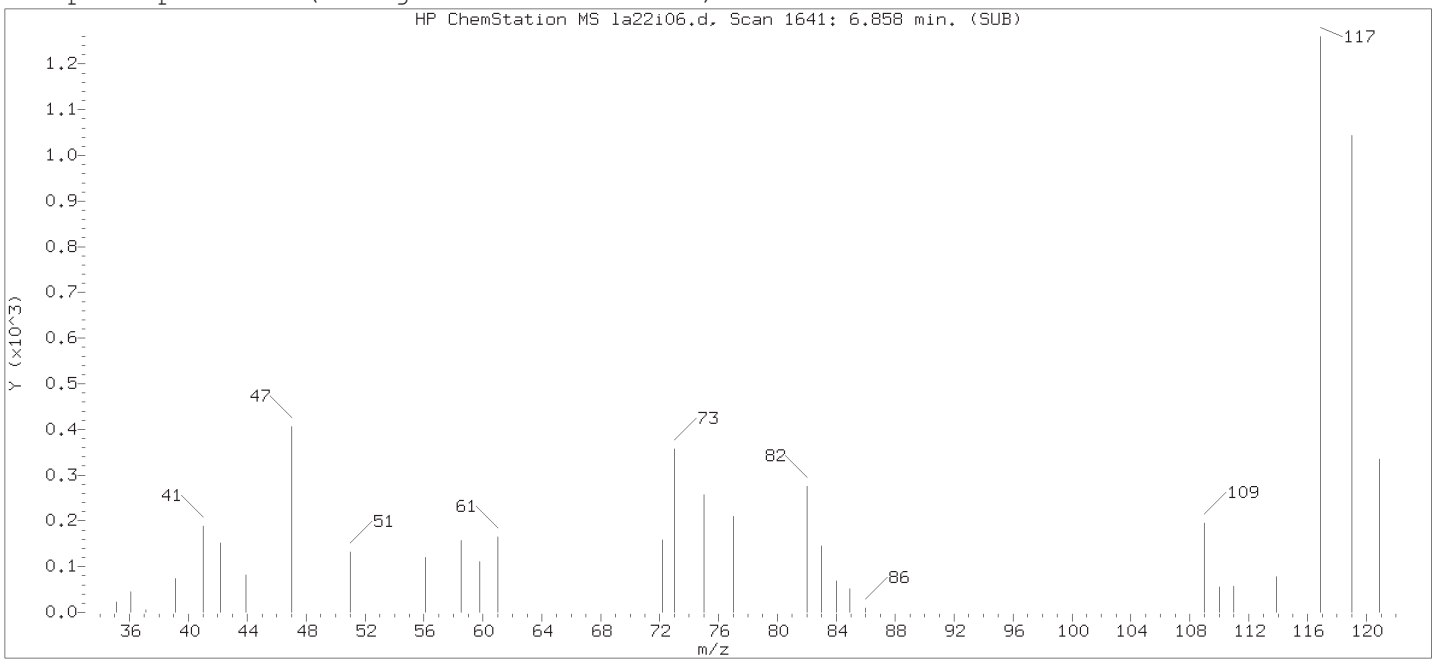
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1678
Retention Time (minutes): 6.977
Quant Ion : 41.00
Area (flag) : 75346M
On-Column Amount (ng) : 196.1036
Integration start scan : 1653 Integration stop scan: 1746
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

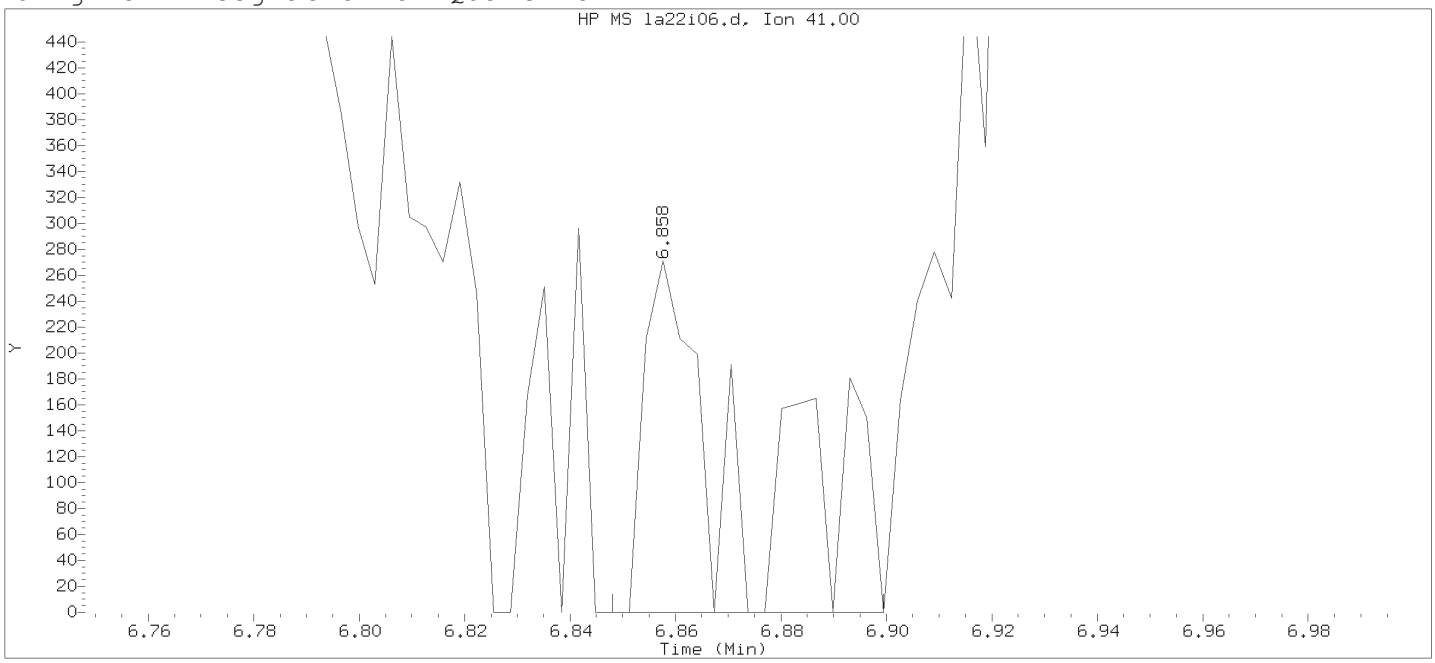
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

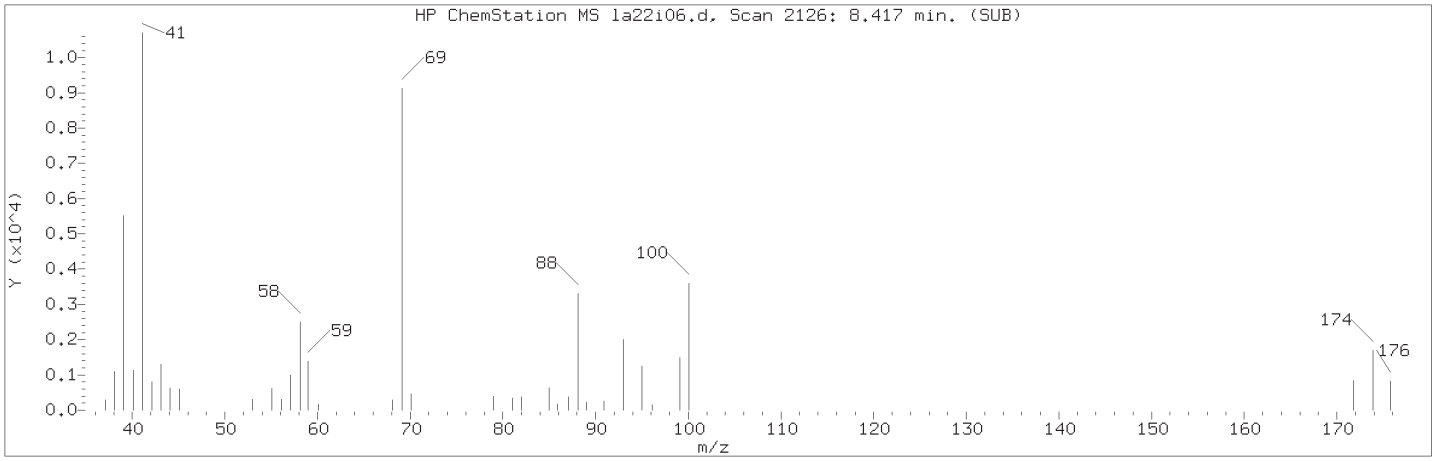
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

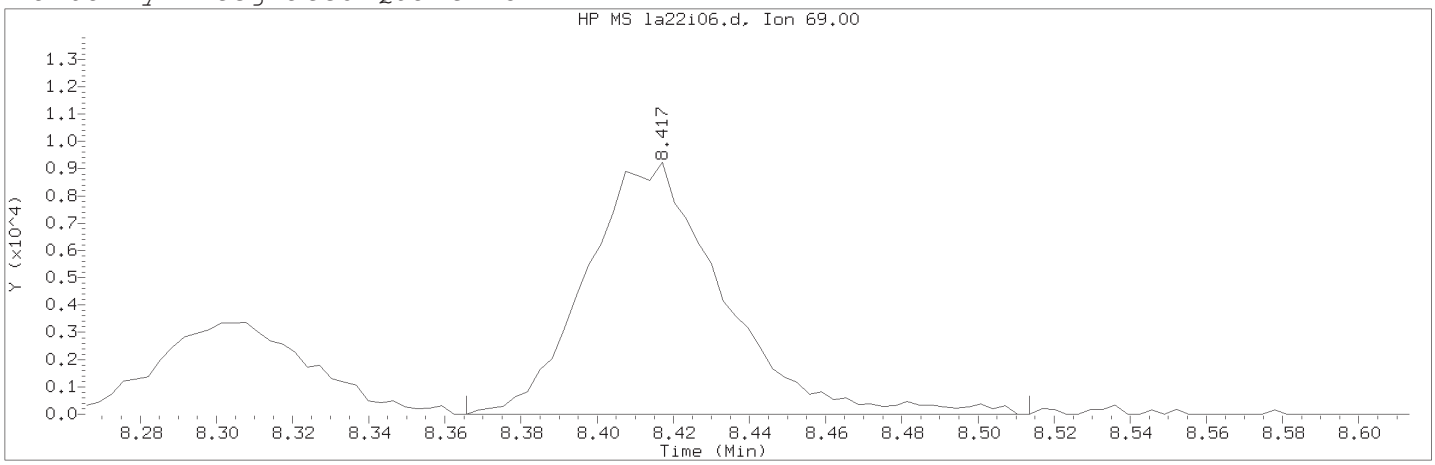
Compound Number	: 58		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 1641		
Retention Time (minutes)	: 6.858		
Quant Ion	: 41.00		
Area	: 365		
On-column Amount (ng)	: 1.1361		
Integration start scan	: 1637	Integration stop scan:	1653
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

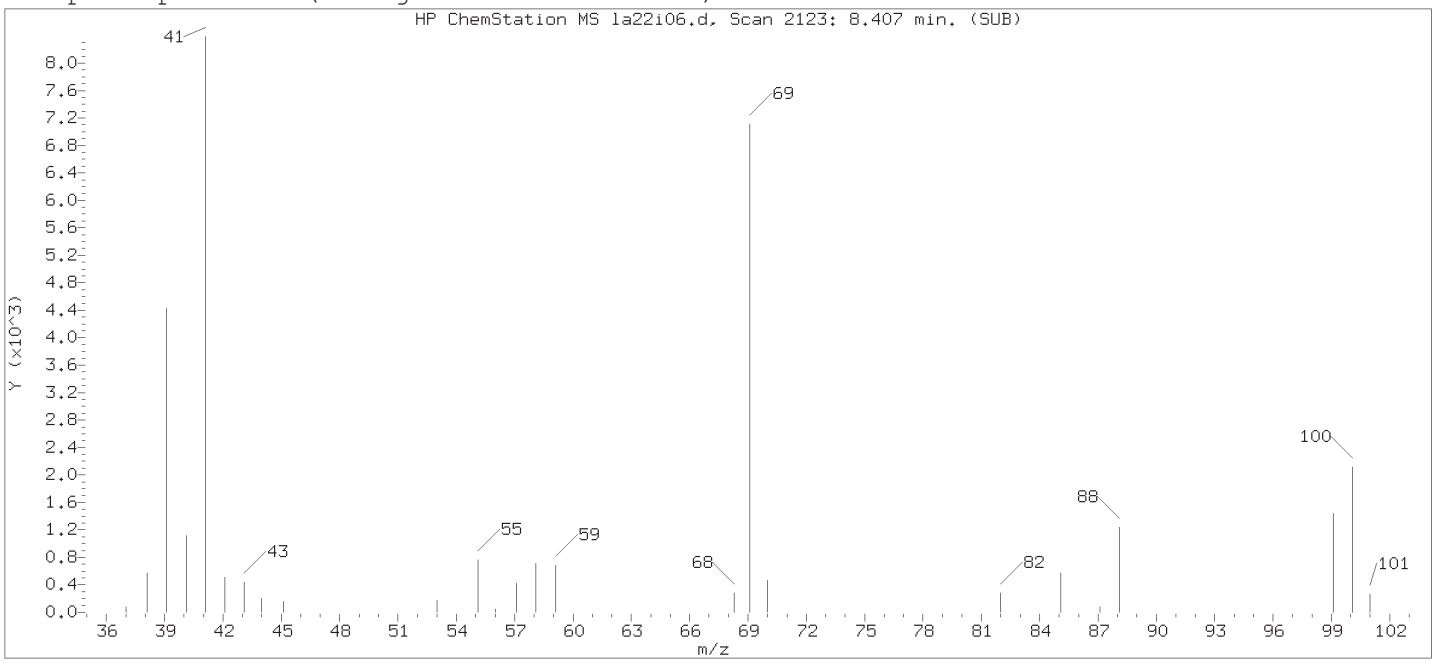
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2126
Retention Time (minutes): 8.417
Quant Ion : 69.00
Area (flag) : 22917M
On-Column Amount (ng) : 3.5601
Integration start scan : 2109 Integration stop scan: 2155
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

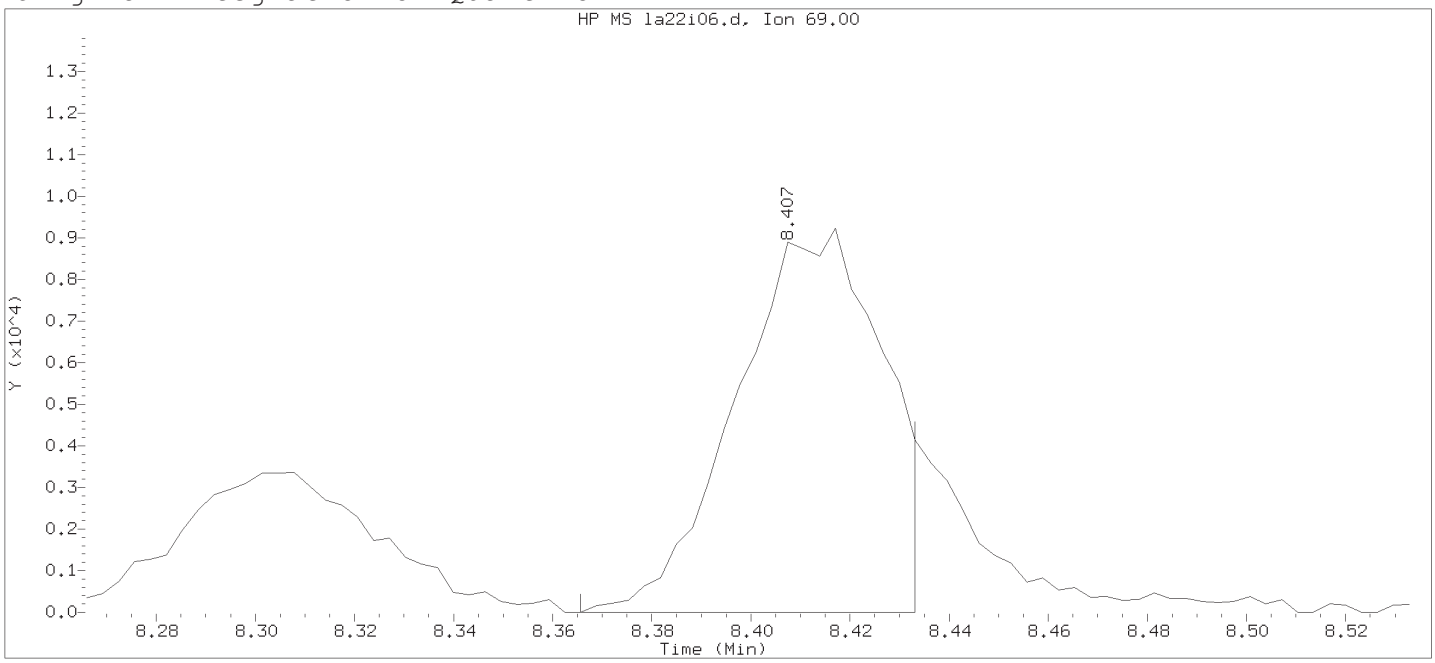
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

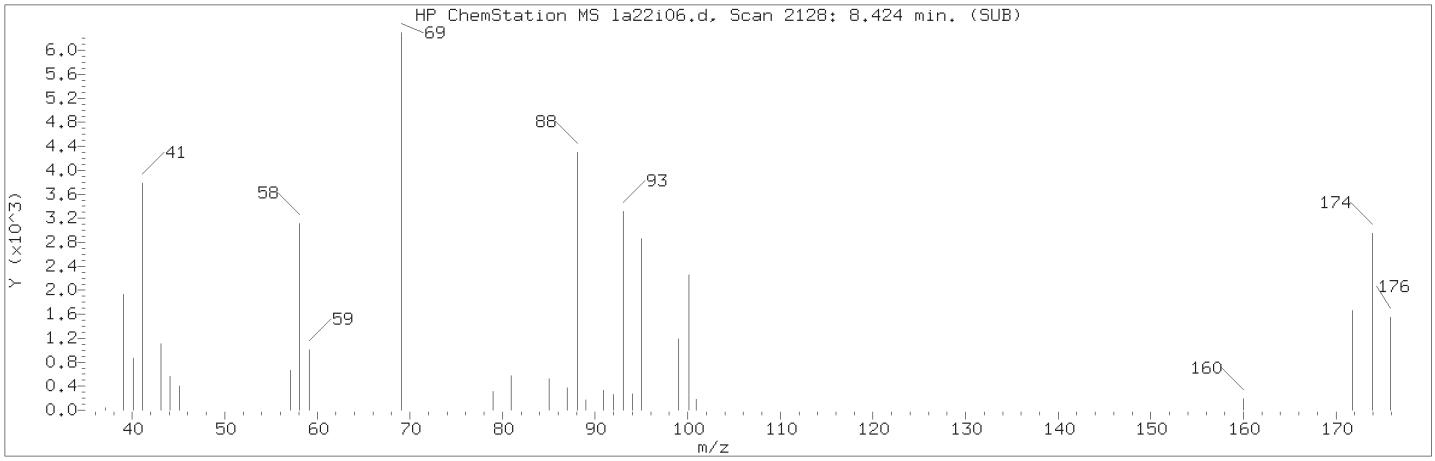
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

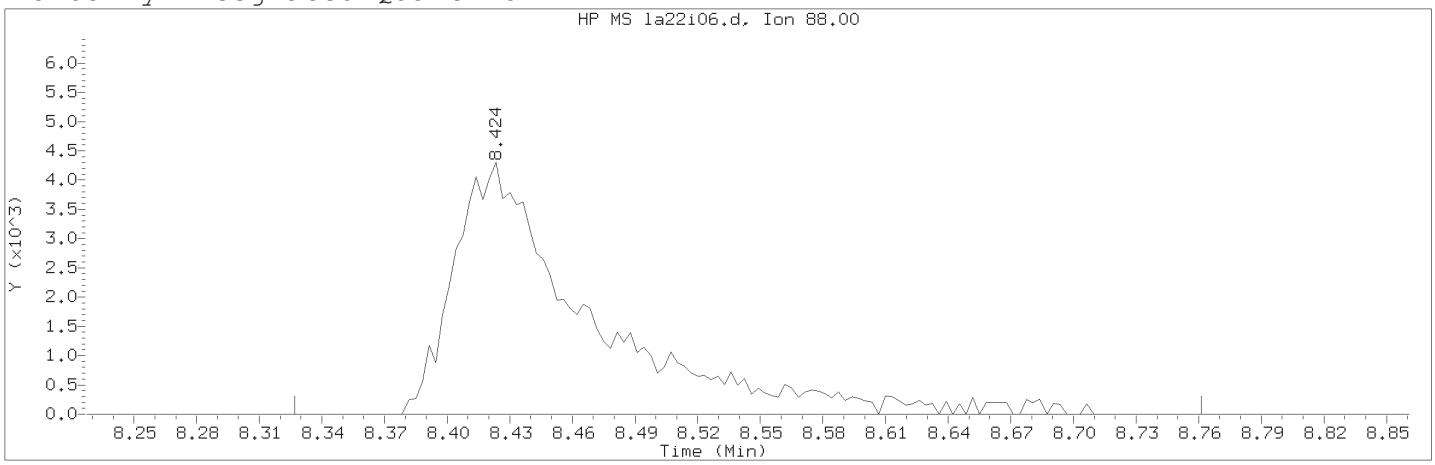
Compound Number	: 76		
Compound Name	: Methyl Methacrylate		
Scan Number	: 2123		
Retention Time (minutes)	: 8.407		
Quant Ion	: 69.00		
Area	: 18626		
On-column Amount (ng)	: 2.8530		
Integration start scan	: 2109	Integration stop scan:	2130
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

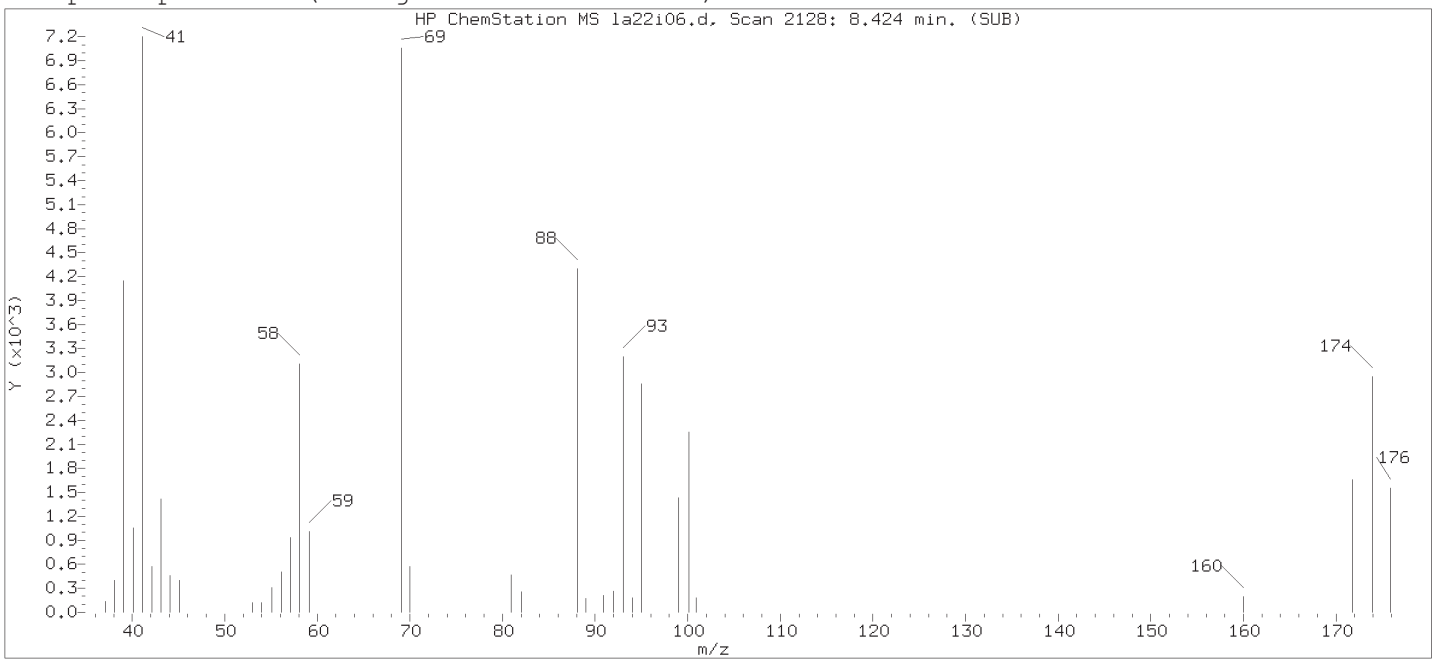
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.424
Quant Ion : 88.00
Area (flag) : 19491M
On-Column Amount (ng) : 192.1258
Integration start scan : 2097 Integration stop scan: 2232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

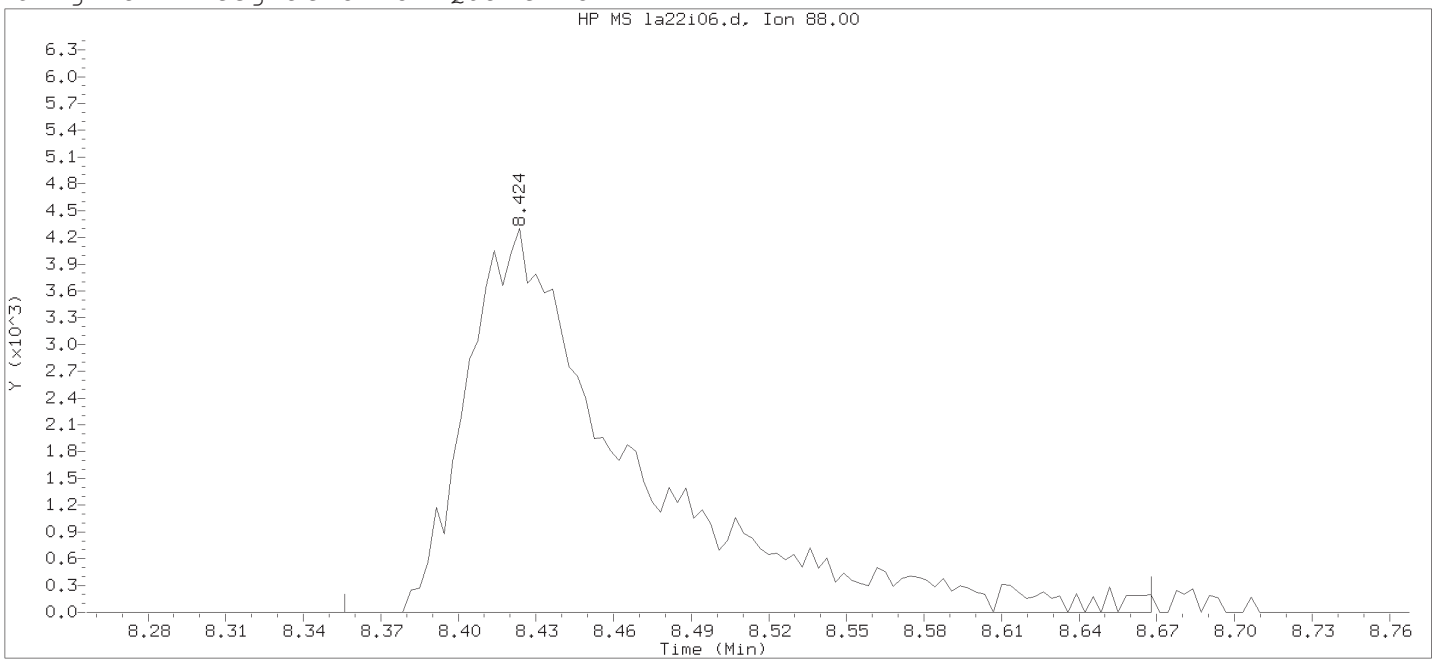
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

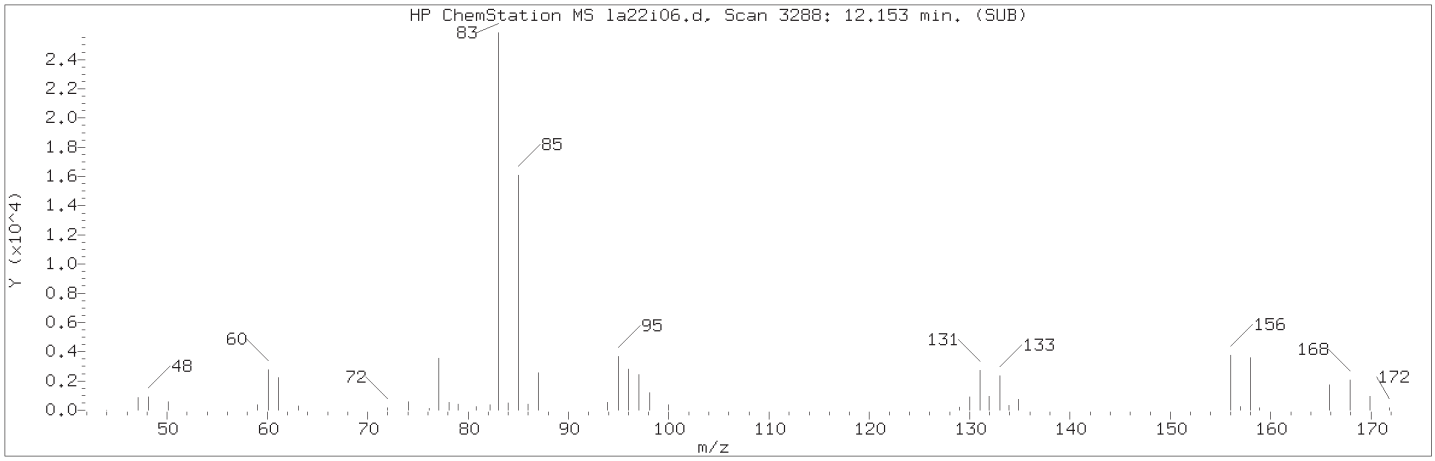
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

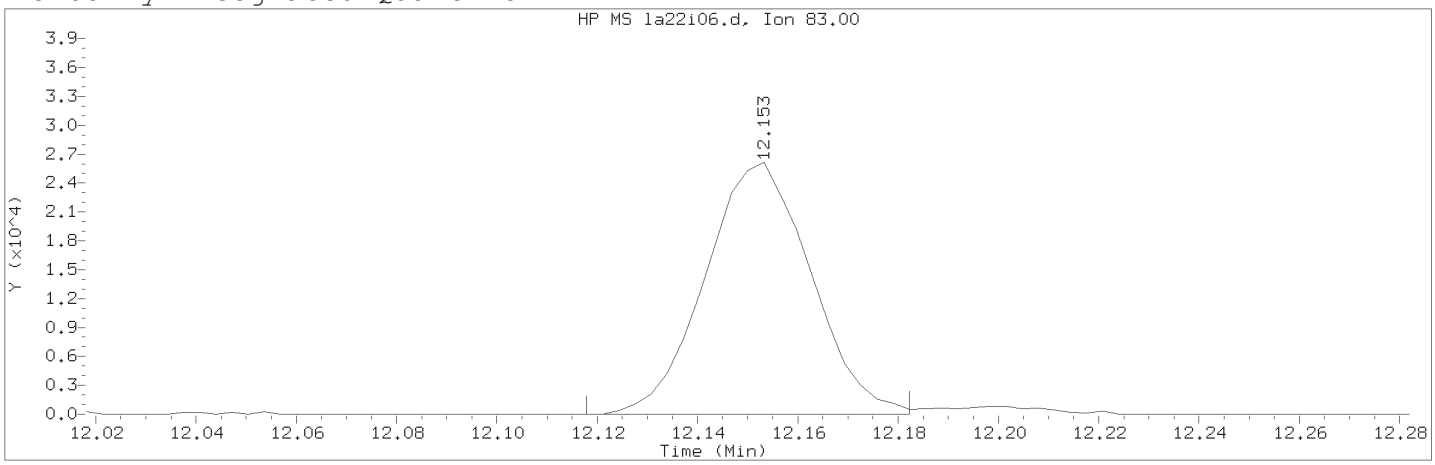
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.424
Quant Ion : 88.00
Area : 19235
On-column Amount (ng) : 186.8714
Integration start scan : 2106 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

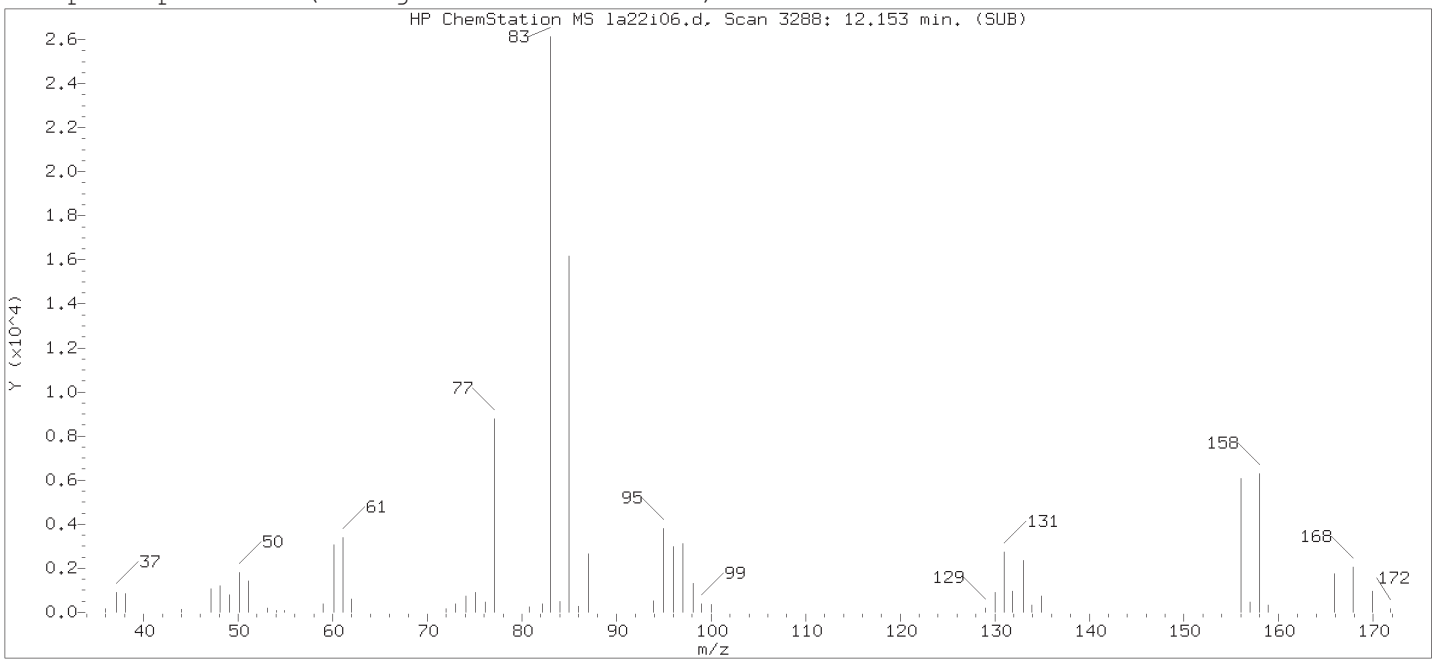
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area (flag) : 38096M
On-Column Amount (ng) : 3.7112
Integration start scan : 3276 Integration stop scan: 3296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

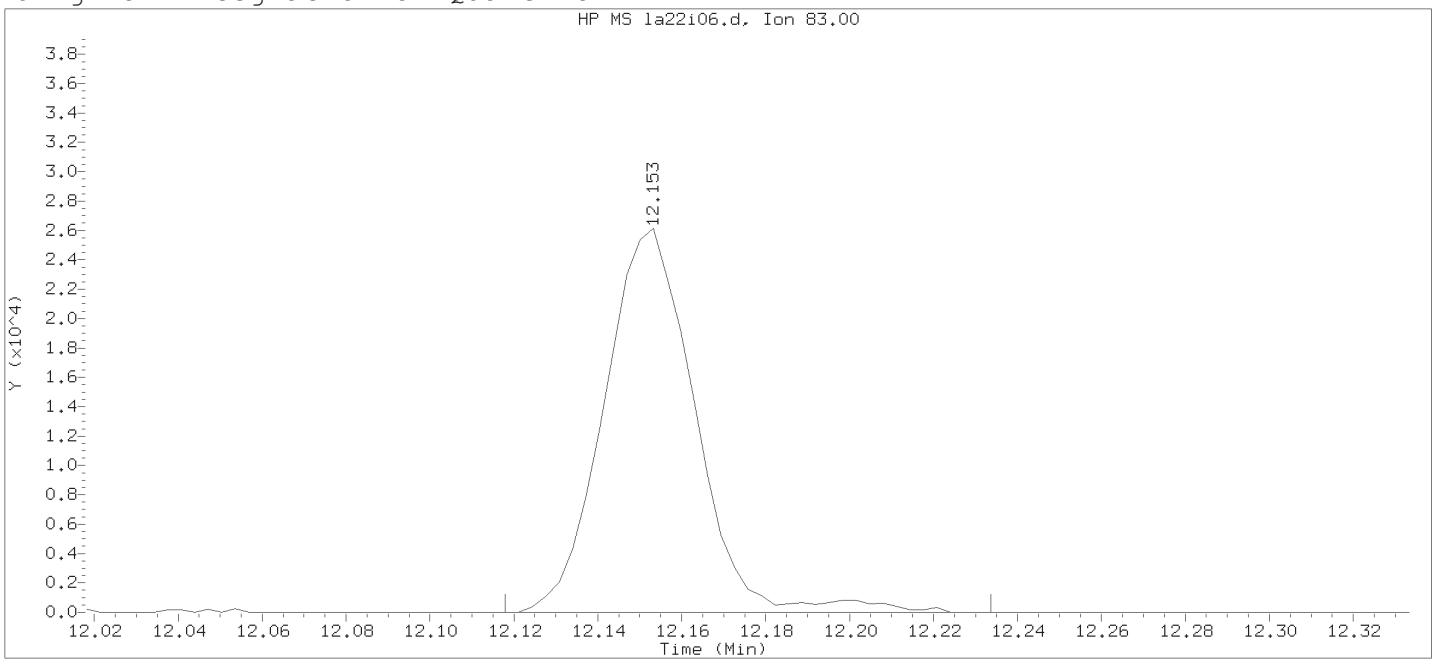
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

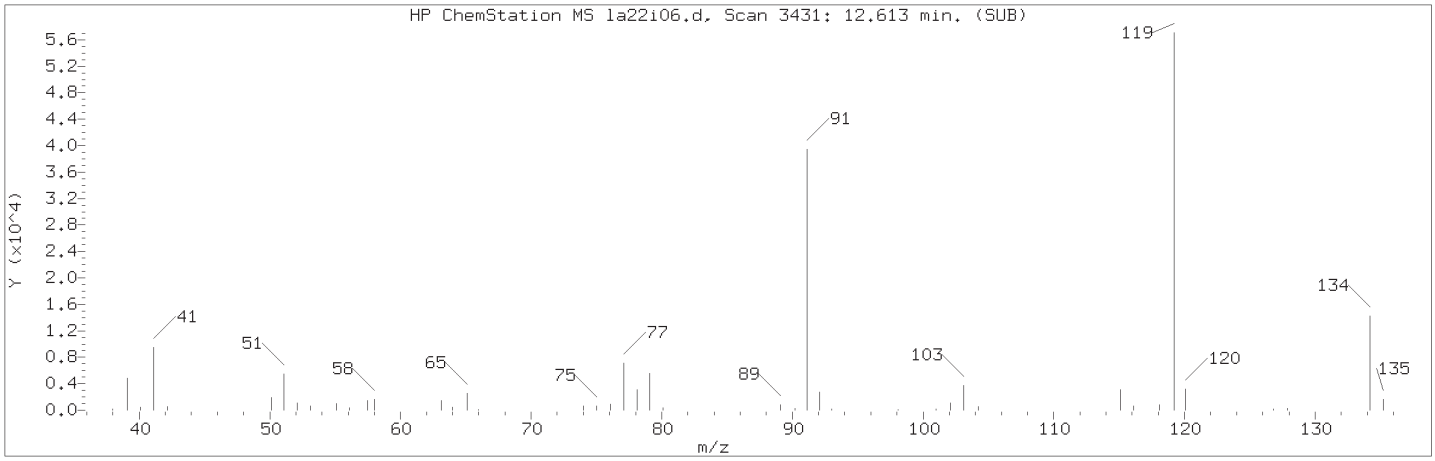
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

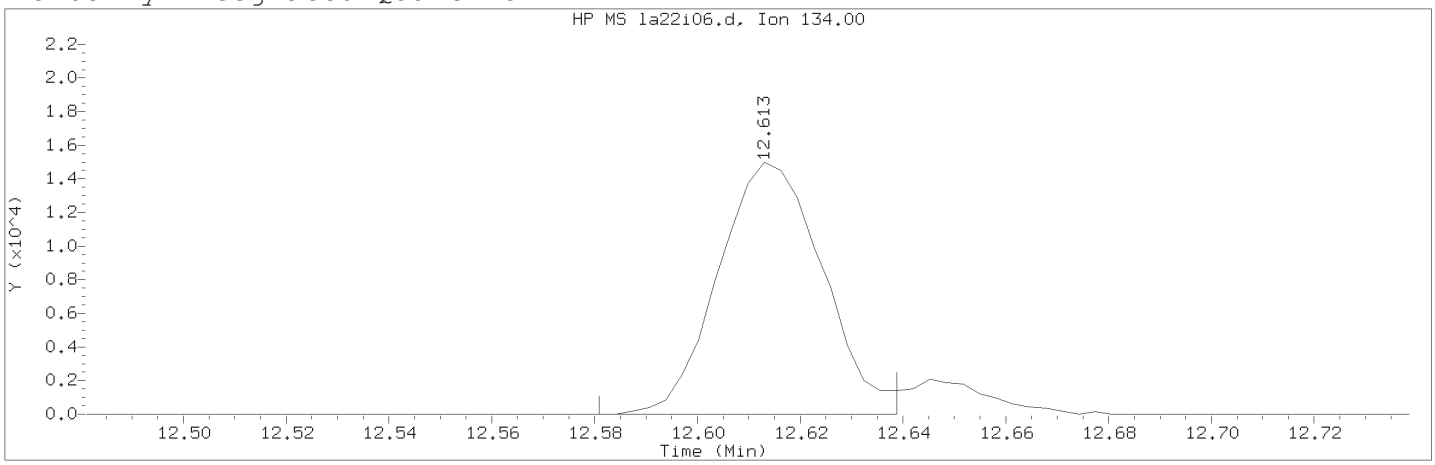
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area : 39319
On-column Amount (ng) : 3.7581
Integration start scan : 3276 Integration stop scan: 3312
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

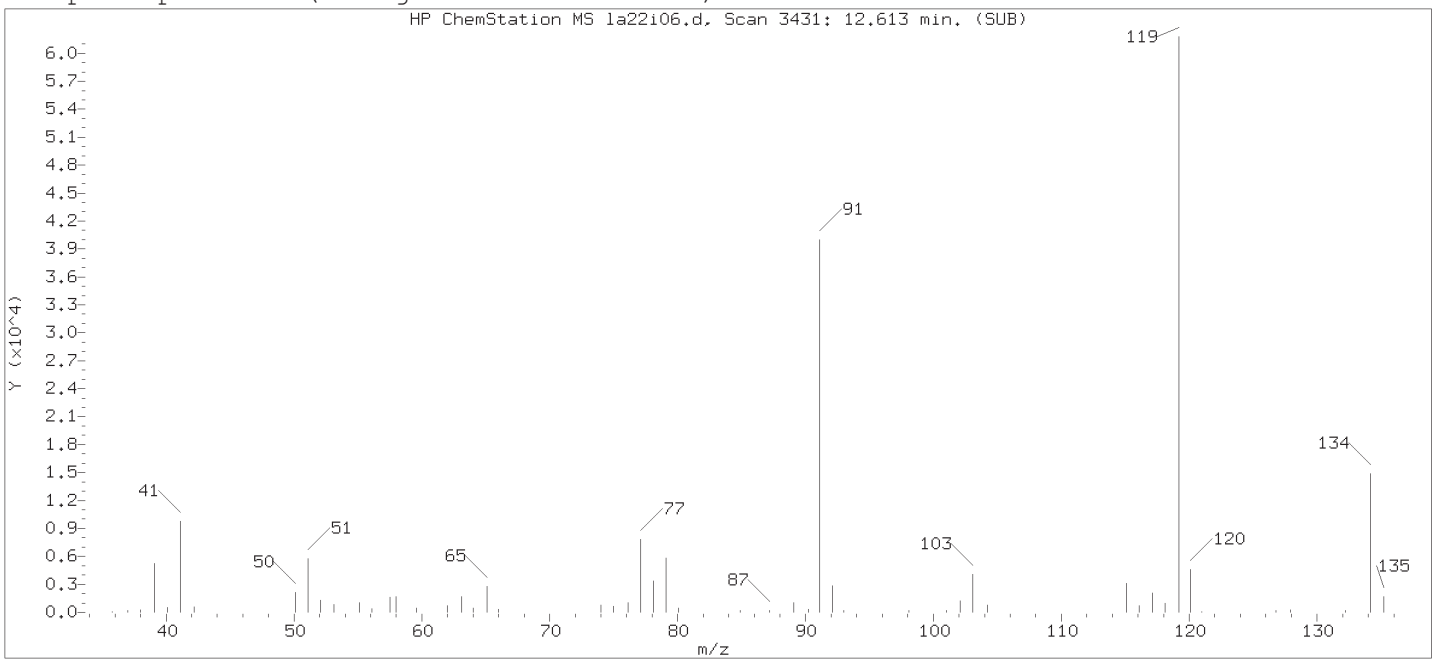
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area (flag) : 21111M
On-Column Amount (ng) : 3.6970
Integration start scan : 3420 Integration stop scan: 3438
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

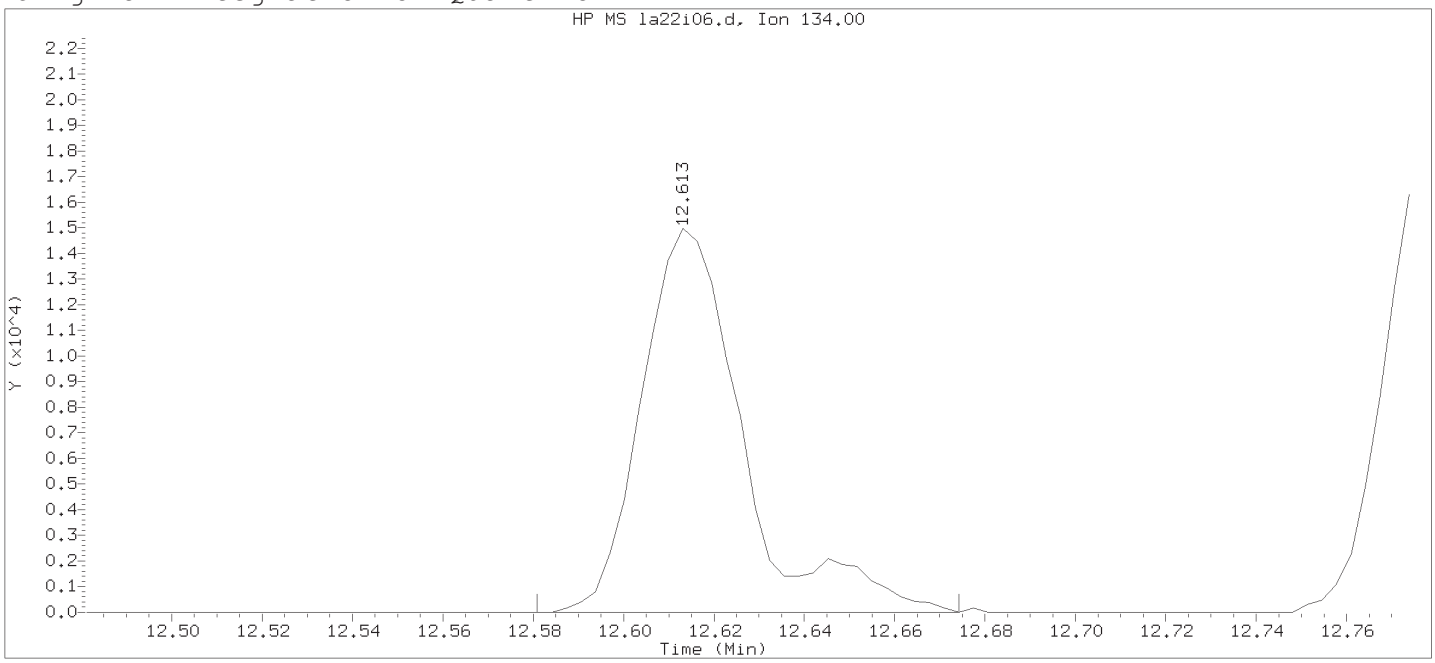
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



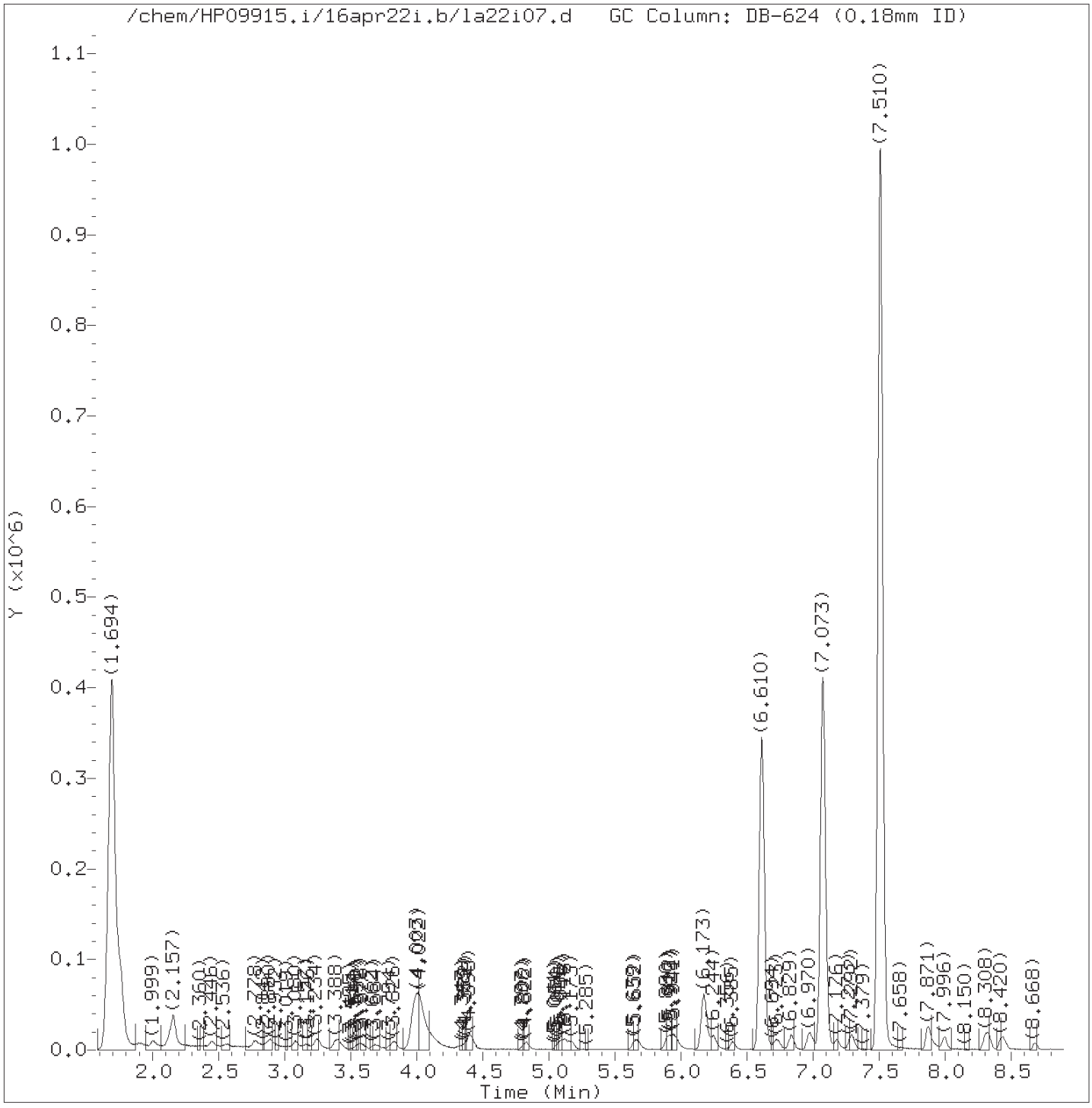
Data File: /chem/HP09915.i/16apr22i.b/la22i06.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 11:45 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:20
Date, time and analyst ID of latest file update: 22-Apr-2016 12:20 bwk03231

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 124		
Compound Name	: tert-Butylbenzene		
Scan Number	: 3431		
Retention Time (minutes)	: 12.613		
Quant Ion	: 134.00		
Area	: 23244		
On-column Amount (ng)	: 3.8926		
Integration start scan	: 3420	Integration stop scan:	3449
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data ID: bwk03231



Total Ion Chromatogram (TIC)

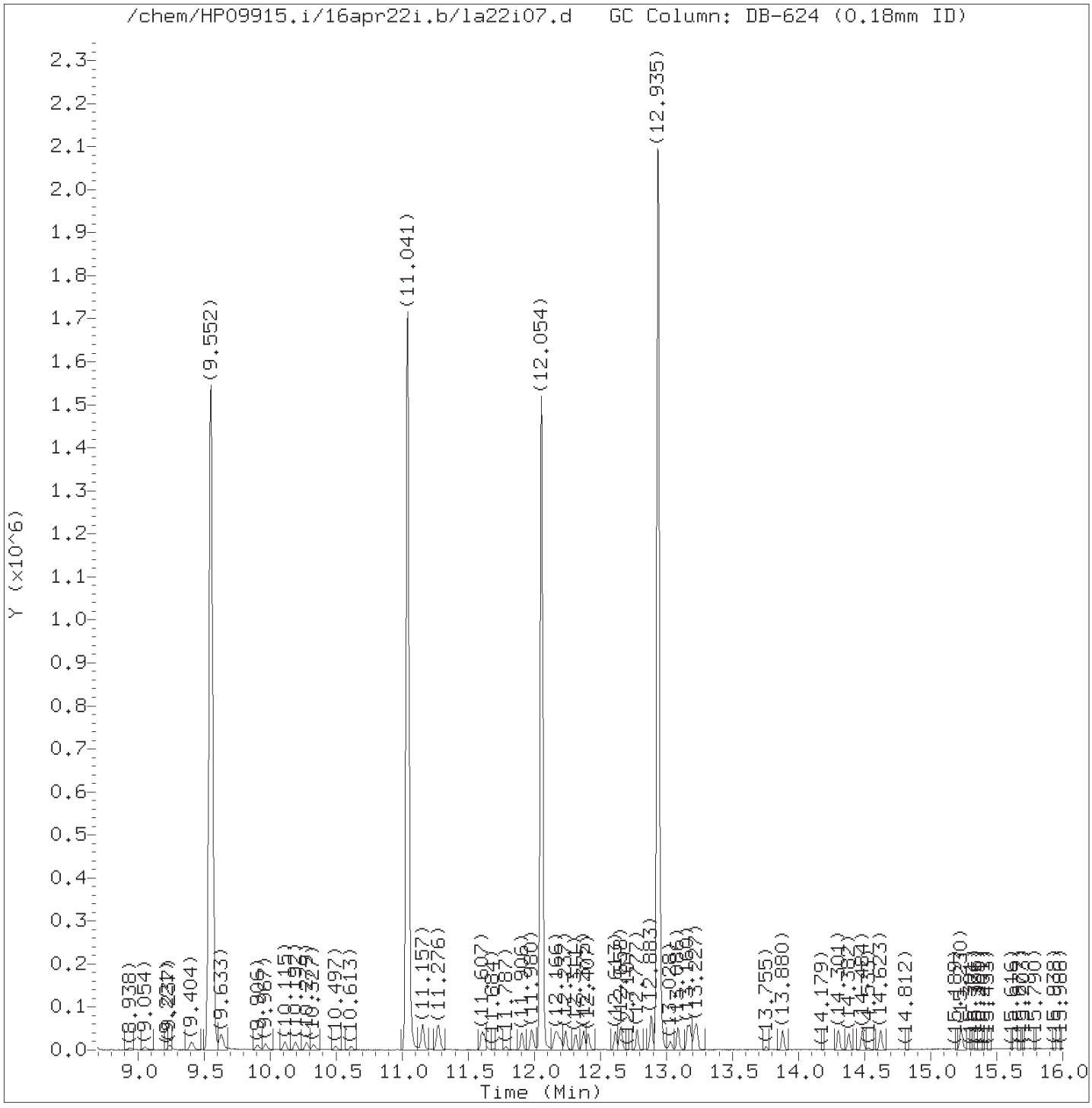
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.903	85	7131	0.773
4) Chloromethane	(2)	2.009	50	8250	0.891
6) Vinyl Chloride	(2)	2.131	62	7351	0.841
5) 1,3-Butadiene	(2)	2.154	39	28139M	2.161
8) Bromomethane	(2)	2.443	94	4935M	0.871
9) Chloroethane	(2)	2.552	64	4355	0.911
10) Dichlorofluoromethane	(2)	2.774	67	10131	0.907
12) Trichlorofluoromethane	(2)	2.851	101	7023	0.763
11) n-Pentane	(2)	2.893	43	9668	0.918
14) Ethyl ether	(2)	3.086	59	6285	0.963
15) Freon 123a	(2)	3.170	67	6899	0.904
16) Acrolein	(1)	3.244	56	18849M	9.975
17) 1,1-Dichloroethene	(2)	3.376	96	4410	0.811
17) 1,1-Dichloroethene	(2)	3.385	63	2392	0.821
18) Acetone	(1)	3.408	58	1522M	1.799
19) Freon 113	(2)	3.430	101	3794	0.725
21) 2-Propanol	(1)	3.549	45	13221M	20.381
22) Methyl Iodide	(2)	3.575	142	8205	0.812
23) Carbon Disulfide	(2)	3.691	76	15514M	0.849
27) Methyl Acetate	(2)	3.800	43	7461	1.018
25) Allyl Chloride	(2)	3.826	41	8382	0.798
29)*t-Butyl alcohol-d10	(1)	4.009	65	220884	250.000
28) Methylene Chloride	(2)	4.015	84	6324	0.943
30) t-Butyl alcohol	(1)	4.125	59	22488M	21.377
31) Acrylonitrile	(2)	4.324	53	3453	0.934
33) Methyl Tertiary Butyl Ether	(2)	4.392	73	19517	0.928
32) trans-1,2-Dichloroethene	(2)	4.404	96	4963	0.804
34) n-Hexane	(2)	4.835	57	6890M	0.722
36) 1,1-Dichloroethane	(2)	5.067	63	10179	0.831
38) di-Isopropyl ether	(2)	5.125	45	20472	0.870
39) 2-Chloro-1,3-butadiene	(2)	5.170	53	7163	0.741
40) Ethyl t-butyl ether	(2)	5.662	59	18582	0.867
44) 2-Butanone	(2)	5.874	43	8900	1.869
42) cis-1,2-Dichloroethene	(2)	5.900	96	5671	0.816
45) 2,2-Dichloropropane	(2)	5.922	77	6279M	0.738
47) Propionitrile	(1)	5.951	54	26026	19.111
43) 1,2-Dichloroethene (Total)	(2)		96	10634	1.620
48) Methacrylonitrile	(2)	6.173	67	34210	9.320

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	6.244	128	3074	0.867
50) Tetrahydrofuran	(1)	6.263	71	1892	1.661
51) Chloroform	(2)	6.392	83	9736	0.874
52)$Dibromofluoromethane	(2)	6.610	113	295239	50.022
52)$Dibromofluoromethane	(2)	6.610	111	303695	50.262
53) 1,1,1-Trichloroethane	(2)	6.623	97	8619	0.871
54) Cyclohexane	(2)	6.729	56	8534	0.748
54) Cyclohexane	(2)	6.723	84	8080	0.892
54) Cyclohexane	(2)	6.720	69	2423	0.735
55) 1,1-Dichloropropene	(2)	6.832	75	7419	0.815
56) Carbon Tetrachloride	(2)	6.845	117	5628	0.760
58) Isobutyl Alcohol	(1)	6.977	41	18390M	49.691
57)$1,2-Dichloroethane-d4	(2)	7.073	102	74825	50.215
57)$1,2-Dichloroethane-d4	(2)	7.073	65	385329	50.457
57)$1,2-Dichloroethane-d4	(2)	7.076	104	47886	50.615
60) Benzene	(2)	7.102	78	22932	0.859
61) 1,2-Dichloroethane	(2)	7.176	62	9831M	0.996
61) 1,2-Dichloroethane	(2)	7.189	98	770	0.895
65) t-Amyl methyl ether	(2)	7.295	73	17571	0.885
66)*Fluorobenzene	(2)	7.510	96	1242368	50.000
67) n-Heptane	(2)	7.523	43	8716	0.824
69) n-Butanol	(1)	7.871	56	24584	85.215
71) Trichloroethene	(2)	7.999	95	5625	0.834
72) Methylcyclohexane	(2)	8.301	83	7987	0.719
72) Methylcyclohexane	(2)	8.305	98	3725	0.746
73) 1,2-Dichloropropane	(2)	8.330	63	6209	0.845
76) Methyl Methacrylate	(2)	8.417	69	4607M	0.748
75) 1,4-Dioxane	(1)	8.420	88	4395	44.976
74) Dibromomethane	(2)	8.449	93	4064	0.892
78) Bromodichloromethane	(2)	8.681	83	6742	0.811
79) 2-Nitropropane	(2)	8.941	41	3614	1.579
80) 2-Chloroethyl Vinyl Ether	(2)	9.054	63	3839	0.732
81) cis-1,3-Dichloropropene	(2)	9.247	75	7742	0.726
82) 4-Methyl-2-pentanone	(2)	9.404	43	15791	1.616
83)$Toluene-d8	(3)	9.552	98	1223255	49.991
83)$Toluene-d8	(3)	9.552	100	795136	49.904
88) Toluene	(3)	9.629	92	14482	0.871
89) trans-1,3-Dichloropropene	(3)	9.906	75	6574	0.682

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	9.967	69	8235	0.771
90) 1,3-Dichloropropene (total)	(3)		100	14316	1.408
92) 1,1,2-Trichloroethane	(3)	10.115	97	5942	0.919
93) Tetrachloroethene	(3)	10.195	166	5761	0.818
94) 1,3-Dichloropropane	(3)	10.272	76	10188	0.890
96) 2-Hexanone	(3)	10.327	43	11705M	1.657
97) Dibromochloromethane	(3)	10.497	129	4767	0.751
99) 1,2-Dibromoethane	(3)	10.616	107	5873	0.846
100)*Chlorobenzene-d5	(3)	11.041	117	934821	50.000
101) 1-Chlorohexane	(3)	11.054	91	8454	0.906
102) Chlorobenzene	(3)	11.070	112	16395	0.871
103) 1,1,1,2-Tetrachloroethane	(3)	11.150	131	4943	0.794
104) Ethylbenzene	(3)	11.157	91	26103	0.813
106) m+p-Xylene	(3)	11.276	106	19824	1.609
107) o-Xylene	(3)	11.604	106	9649	0.796
109) Styrene	(3)	11.620	104	14937	0.732
108) Xylene (Total)	(3)		106	29473	2.405
110) Bromoform	(3)	11.784	173	3423	0.783
111) Isopropylbenzene	(3)	11.909	105	23451	0.760
112) Cyclohexanone	(1)	11.980	55	19423A	43.100
114)$4-Bromofluorobenzene	(3)	12.054	95	452961	50.023
114)$4-Bromofluorobenzene	(3)	12.054	174	388567	50.427
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	9092M	0.914
115) Bromobenzene	(4)	12.169	156	7393	0.876
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	3970	2.995
117) 1,2,3-Trichloropropane	(4)	12.198	110	2856	0.994
119) n-Propylbenzene	(4)	12.237	91	30841	0.817
120) 2-Chlorotoluene	(4)	12.314	126	6655	0.870
122) 1,3,5-Trimethylbenzene	(4)	12.375	105	20933	0.783
121) 4-Chlorotoluene	(4)	12.411	126	6801	0.842
124) tert-Butylbenzene	(4)	12.616	134	4530	0.819
125) Pentachloroethane	(4)	12.649	167	3262	0.714
126) 1,2,4-Trimethylbenzene	(4)	12.661	105	22499	0.810
127) sec-Butylbenzene	(4)	12.780	105	27220	0.804
129) 1,3-Dichlorobenzene	(4)	12.883	146	14491	0.913
130) p-Isopropyltoluene	(4)	12.886	119	23083	0.784
131)*1,4-Dichlorobenzene-d4	(4)	12.935	152	490975	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	15558	0.938

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

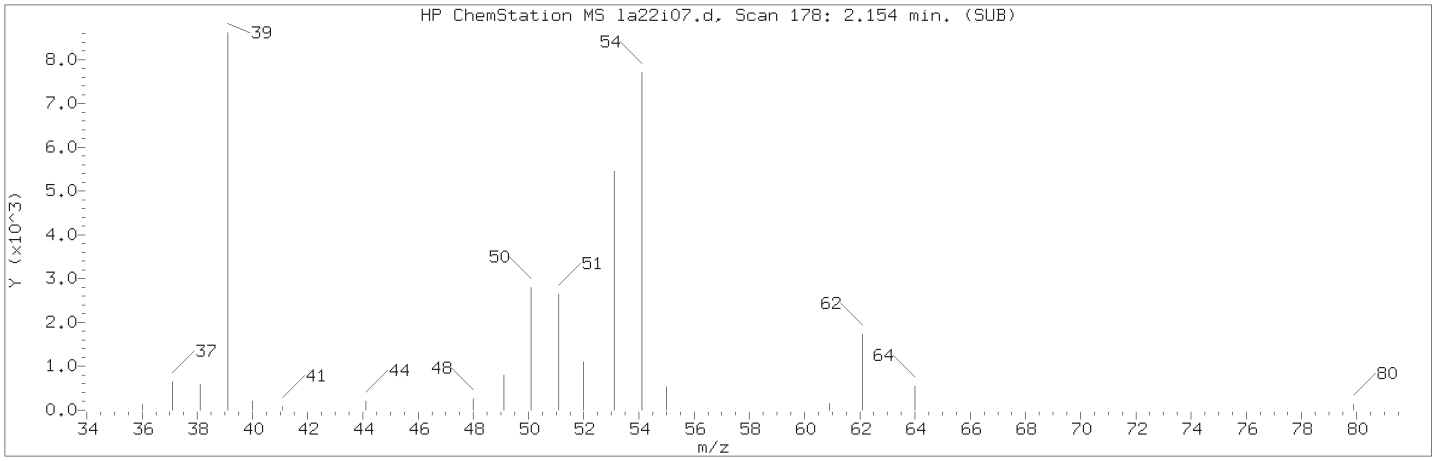
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

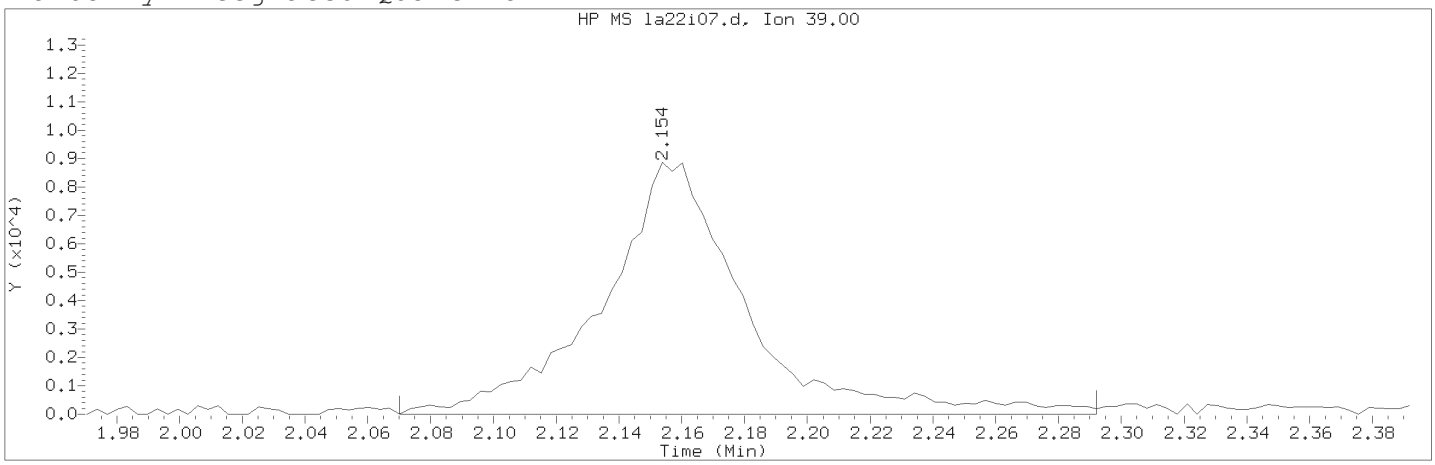
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,2,3-Trimethylbenzene	(4)	12.964	105	25702	0.884
135) Benzyl Chloride	(4)	13.031	91	10685	0.619
136) 1,3-Diethylbenzene	(4)	13.086	119	14575	0.823
137) 1,4-Diethylbenzene	(4)	13.160	119	15655	0.848
139) n-Butylbenzene	(4)	13.179	92	13404	0.889
138) 1,2-Dichlorobenzene	(4)	13.211	146	14823	0.942
140) 1,2-Diethylbenzene	(4)	13.230	119	12986	0.860
141) Diethylbenzene (total)	(4)		100	43216	2.530
142) 1,2-Dibromo-3-chloropropane	(4)	13.755	75	1546	0.804
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	12403	0.990
146) 1,2,4-Trichlorobenzene	(4)	14.304	180	13133	1.058
147) Hexachlorobutadiene	(4)	14.382	225	6338	1.196
148) Naphthalene	(4)	14.484	128	31328	0.937
149) 1,2,3-Trichlorobenzene	(4)	14.623	180	12231	1.046
150) 2-Methylnaphthalene	(4)	15.234	142	22584	1.084

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

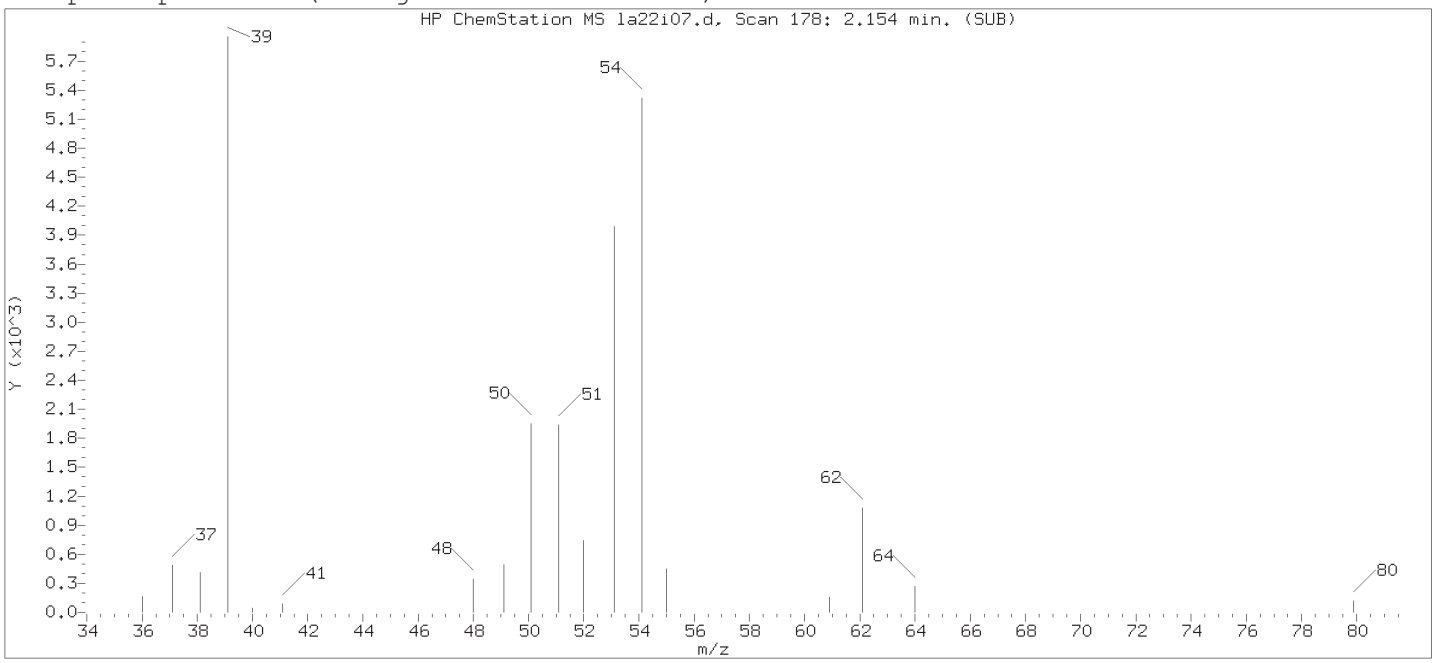
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 178
Retention Time (minutes): 2.154
Quant Ion : 39.00
Area (flag) : 28139M
On-Column Amount (ng) : 2.1605
Integration start scan : 151 Integration stop scan: 220
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

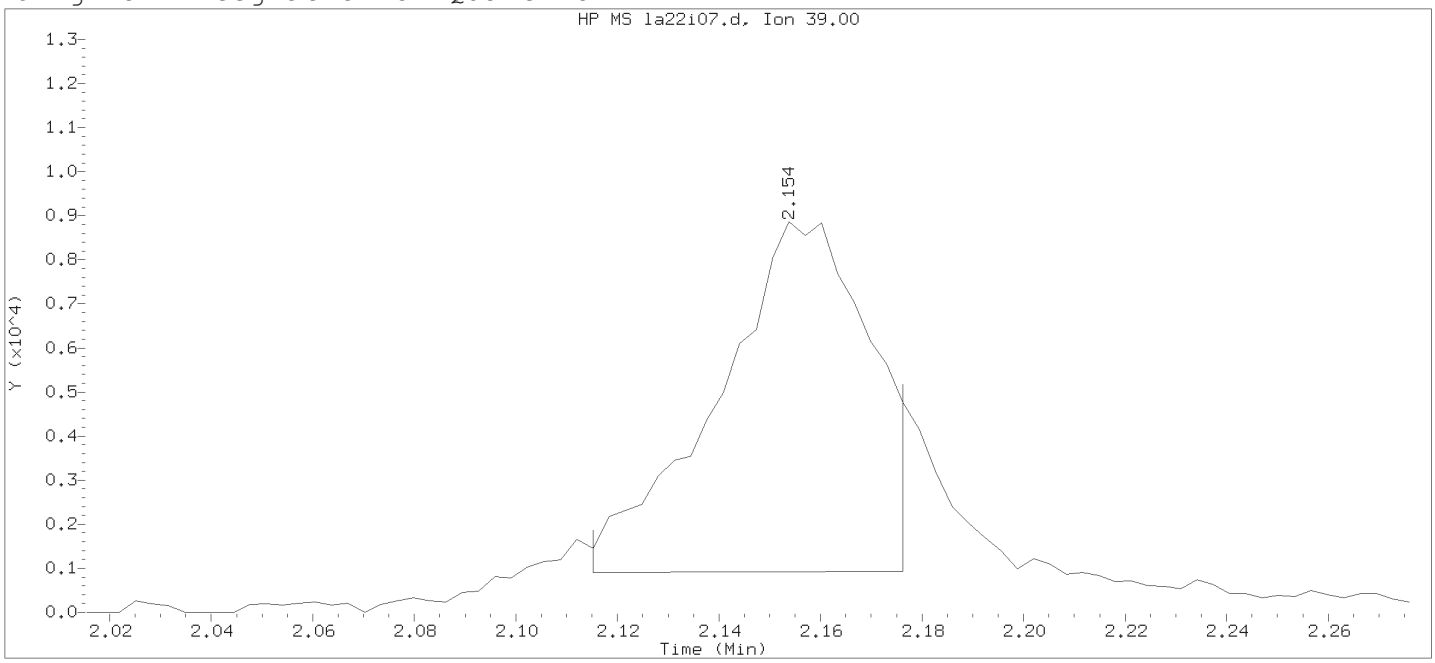
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 178		
Retention Time (minutes)	: 2.154		
Quant Ion	: 39.00		
Area	: 16465		
On-column Amount (ng)	: 1.2642		
Integration start scan	: 165	Integration stop scan:	184
Y at integration start	: 907	Y at integration end:	933

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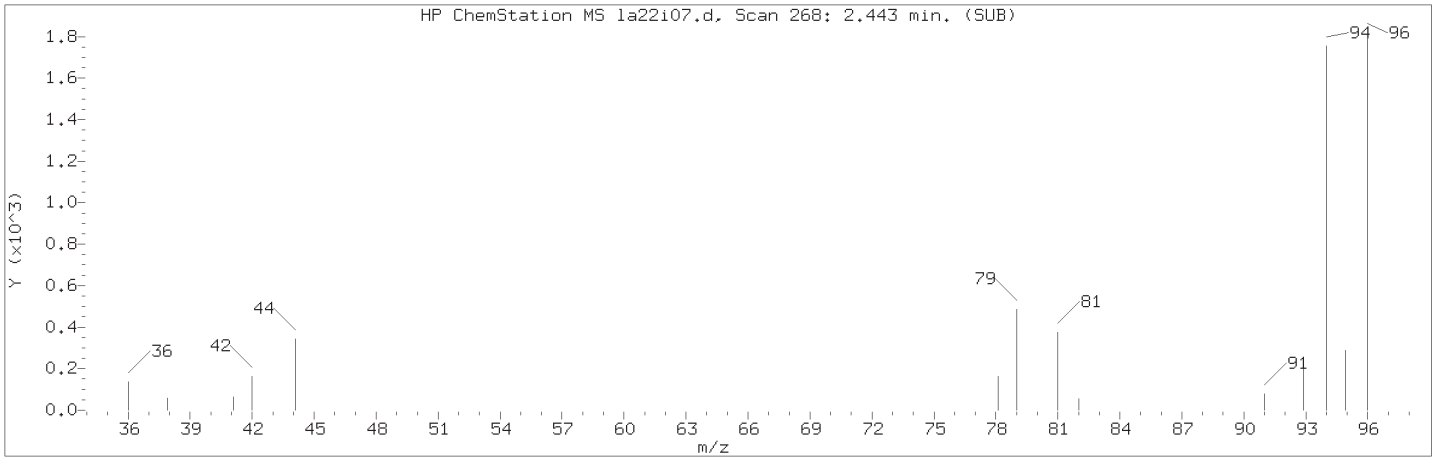
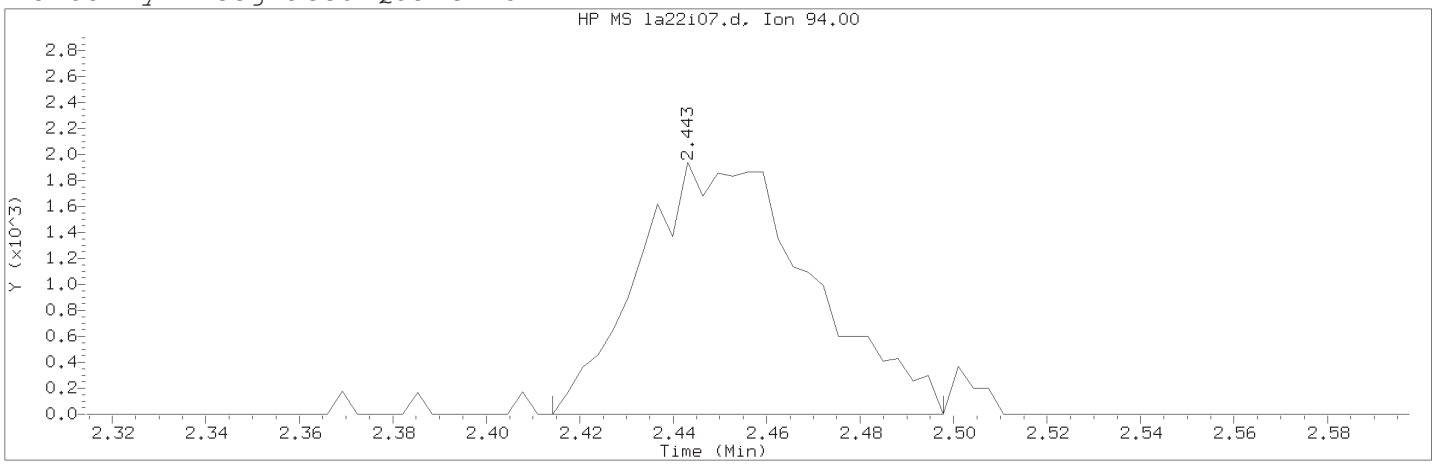
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

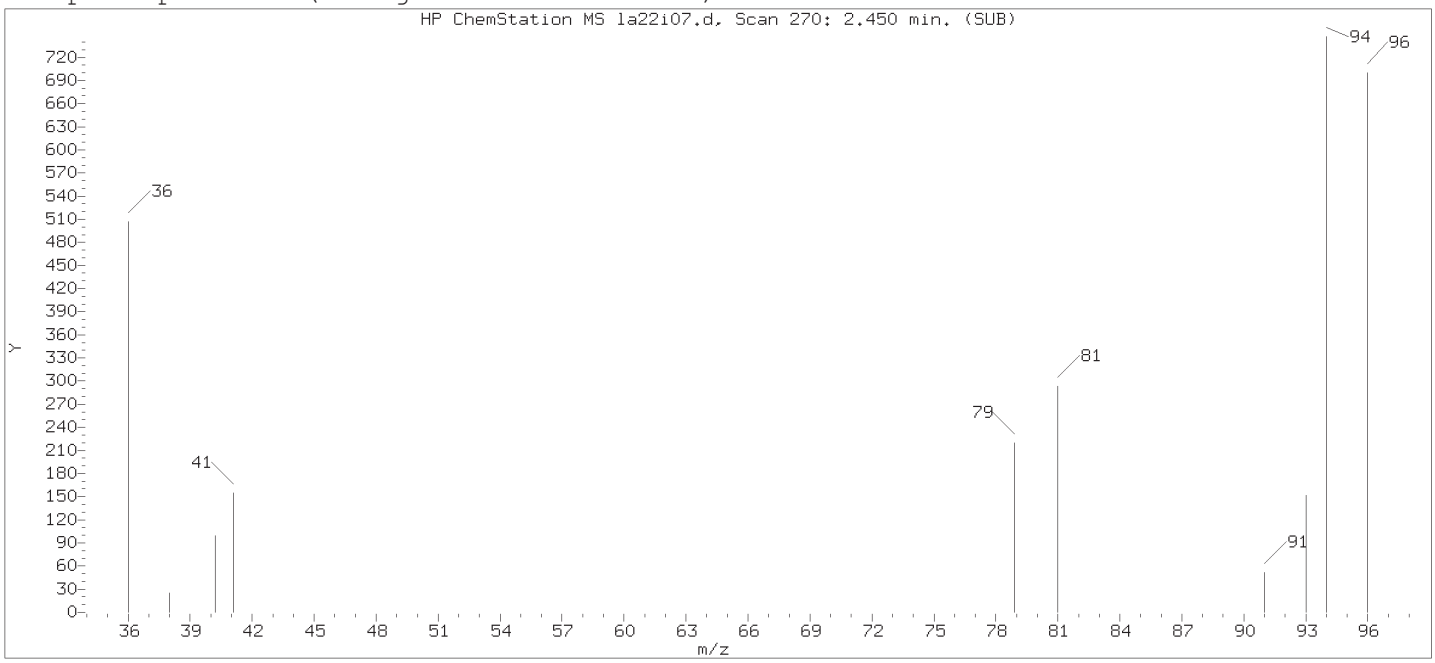
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 268
Retention Time (minutes): 2.443
Quant Ion : 94.00
Area (flag) : 4935M
On-Column Amount (ng) : 0.8710
Integration start scan : 258 Integration stop scan: 284
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

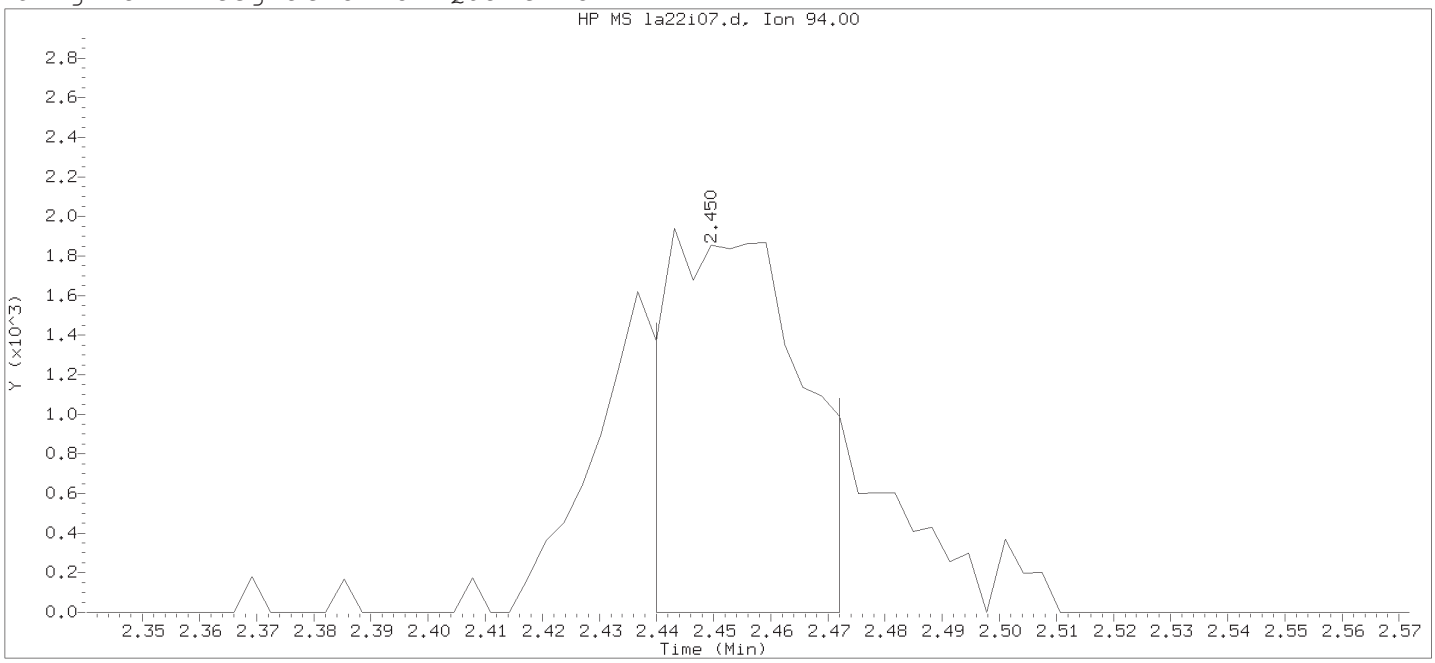
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

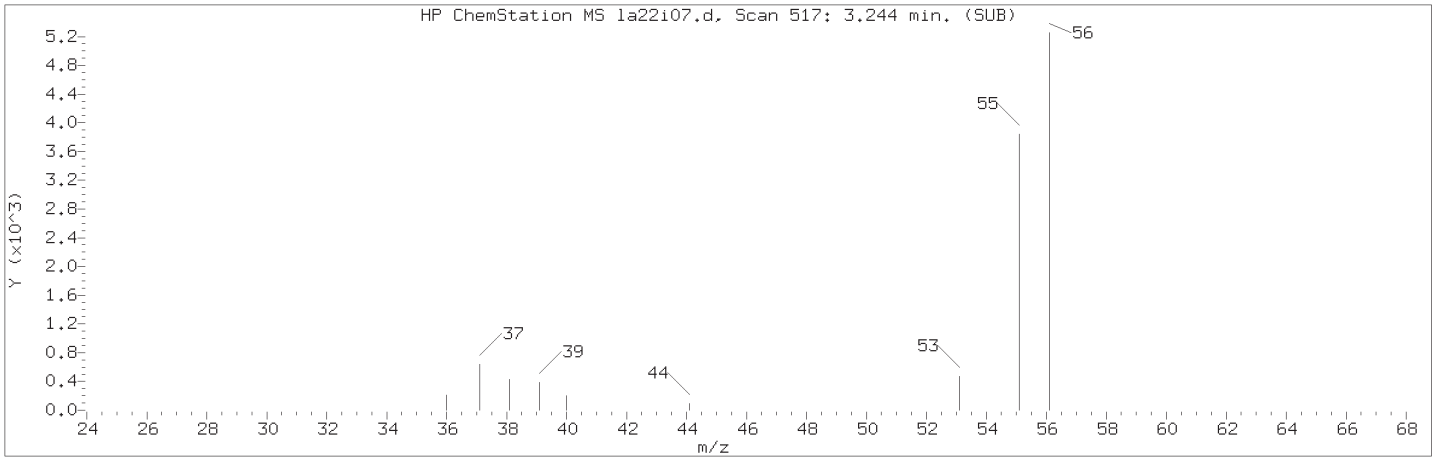
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

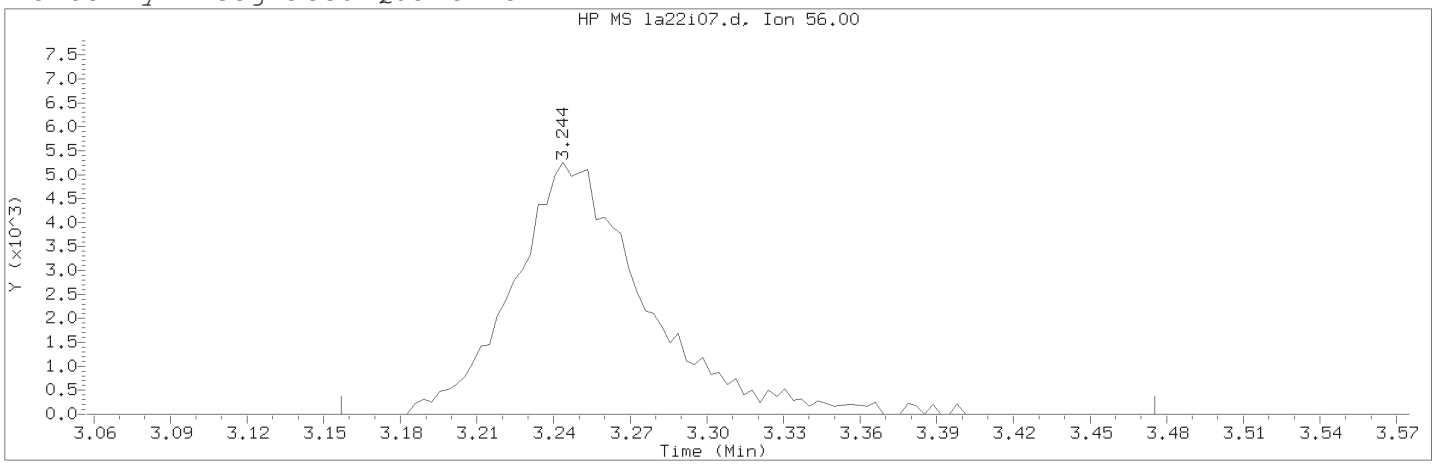
Compound Number	: 8		
Compound Name	: Bromomethane		
Scan Number	: 270		
Retention Time (minutes)	: 2.450		
Quant Ion	: 94.00		
Area	: 3048		
On-column Amount (ng)	: 0.5649		
Integration start scan	: 266	Integration stop scan:	276
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

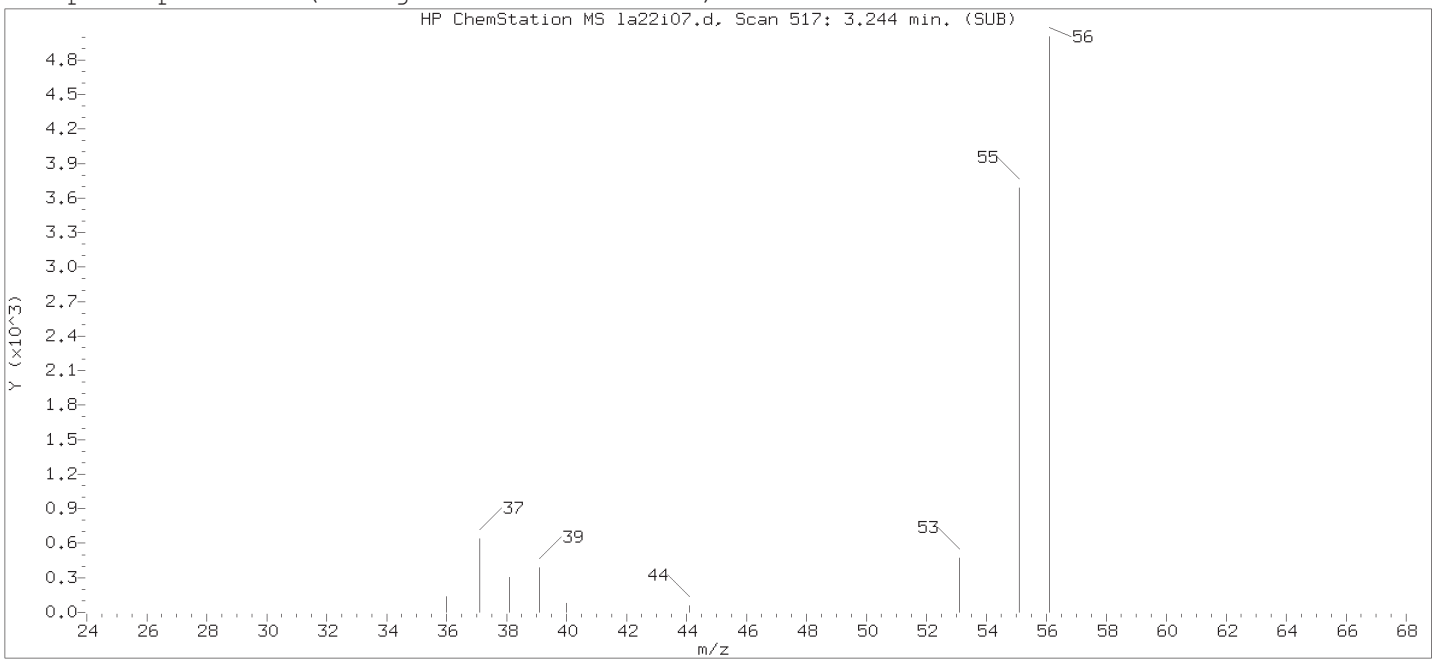
Compound Number : 16
Compound Name : Acrolein
Scan Number : 517
Retention Time (minutes): 3.244
Quant Ion : 56.00
Area (flag) : 18849M
On-Column Amount (ng) : 9.9746
Integration start scan : 489 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

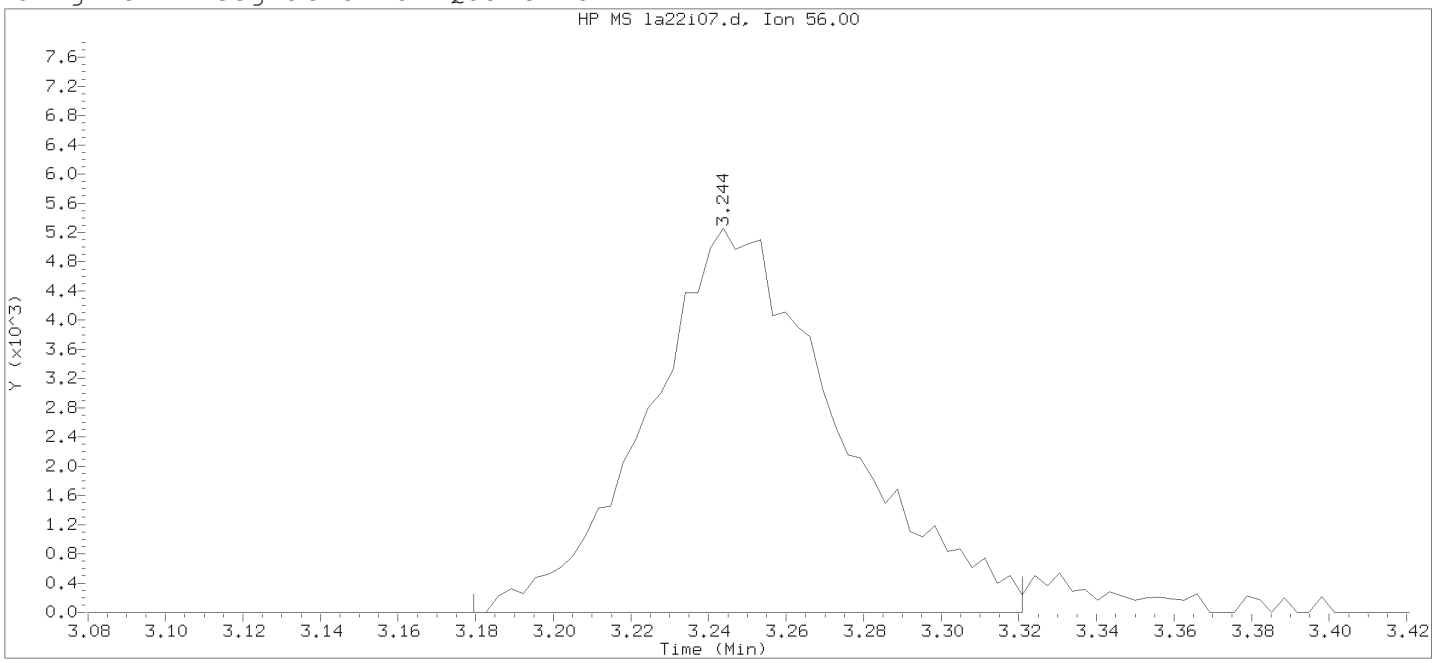
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

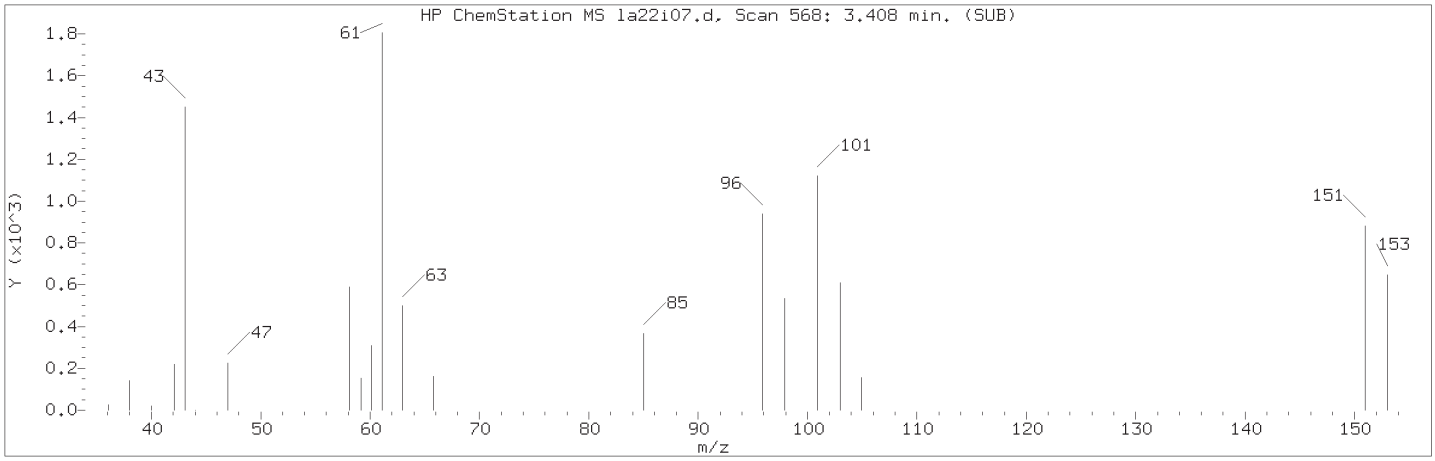
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

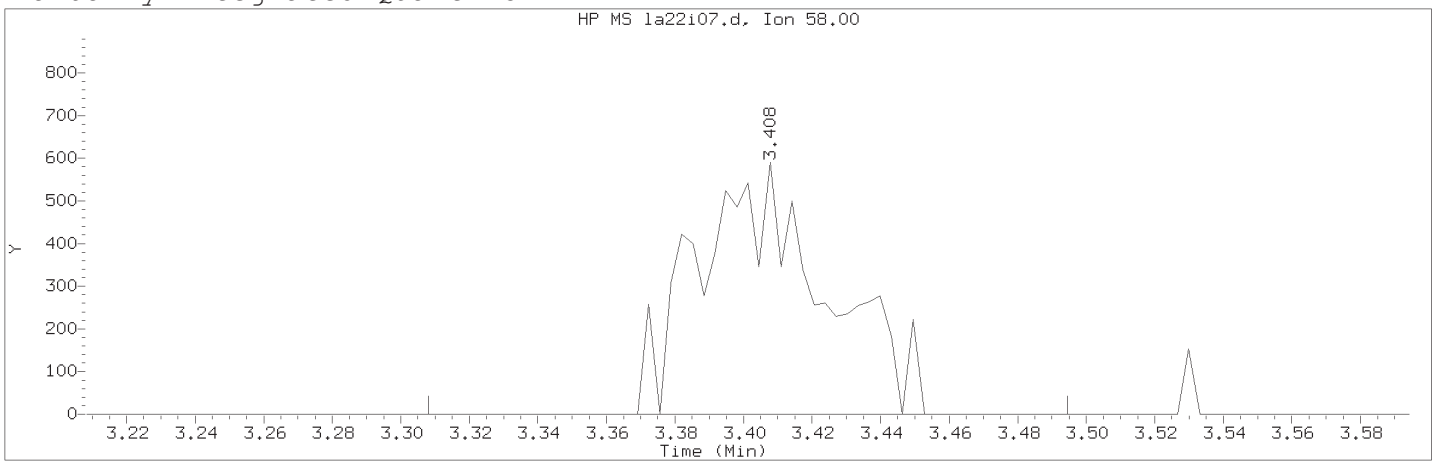
Compound Number	: 16		
Compound Name	: Acrolein		
Scan Number	: 517		
Retention Time (minutes)	: 3.244		
Quant Ion	: 56.00		
Area	: 17926		
On-column Amount (ng)	: 9.5530		
Integration start scan	: 496	Integration stop scan:	540
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature detail ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

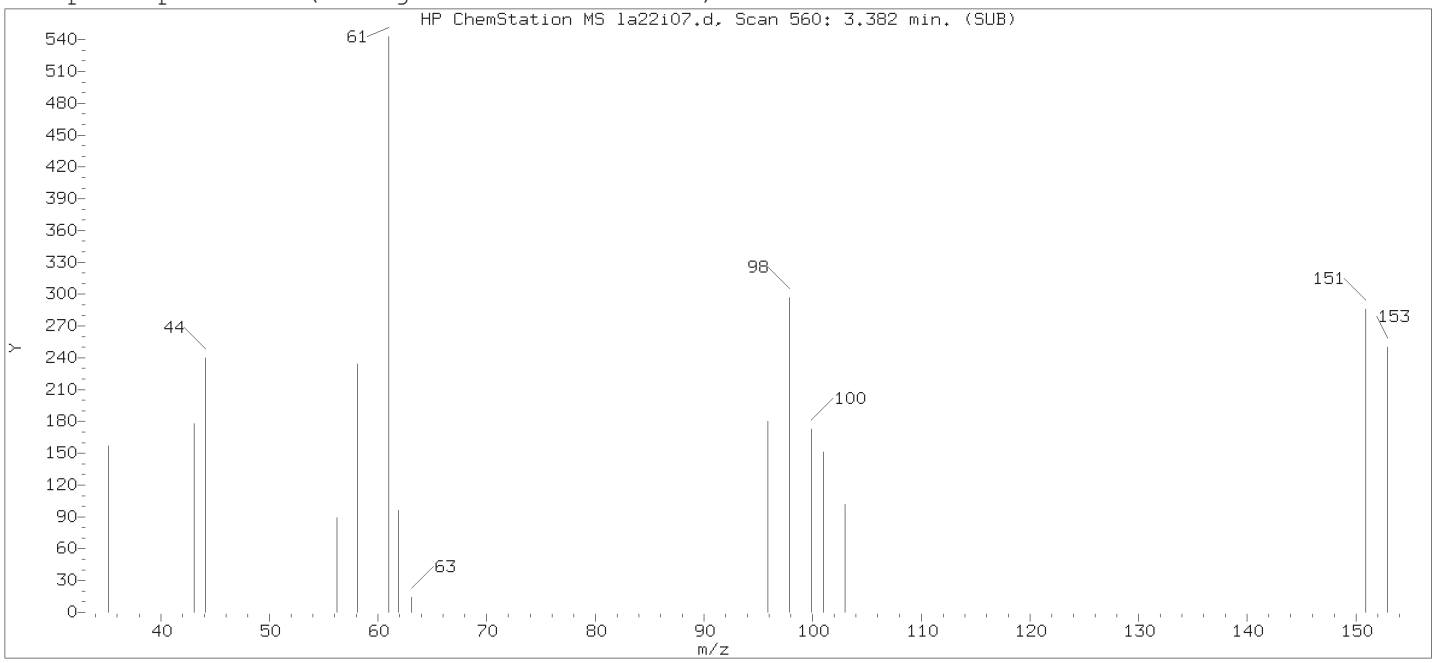
Compound Number : 18
Compound Name : Acetone
Scan Number : 568
Retention Time (minutes): 3.408
Quant Ion : 58.00
Area (flag) : 1522M
On-Column Amount (ng) : 1.7993
Integration start scan : 536 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

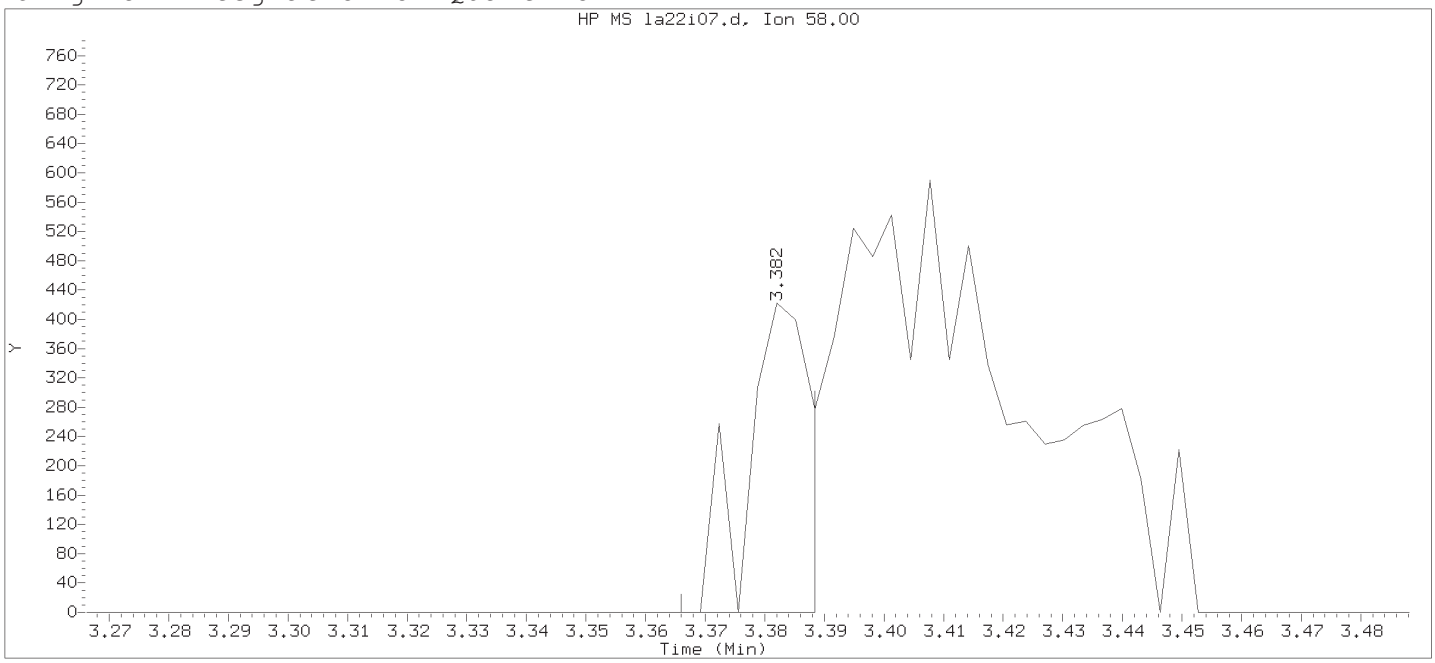
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

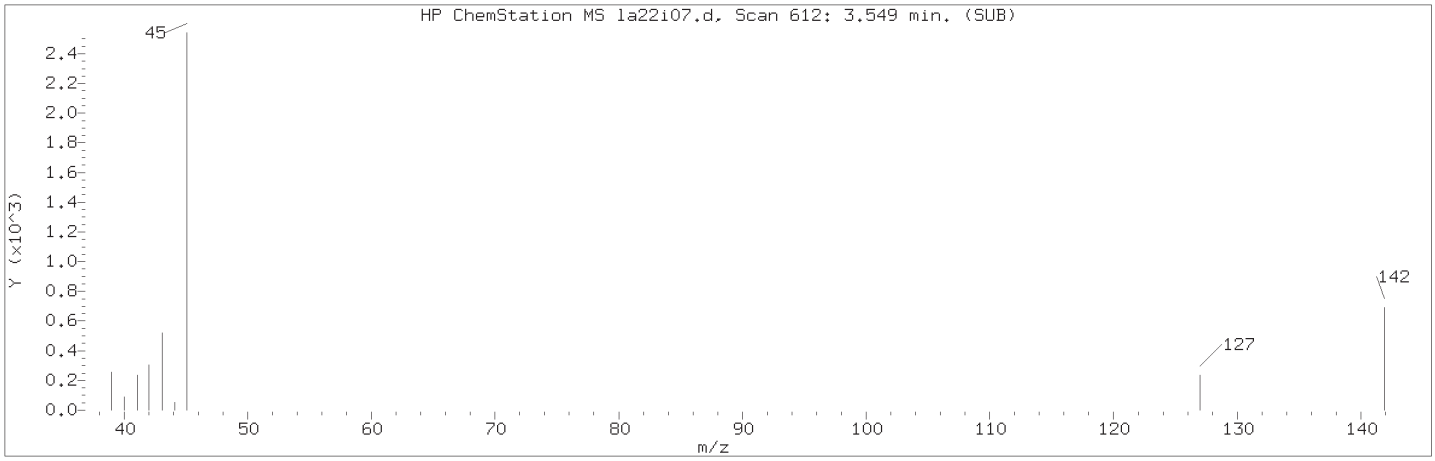
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

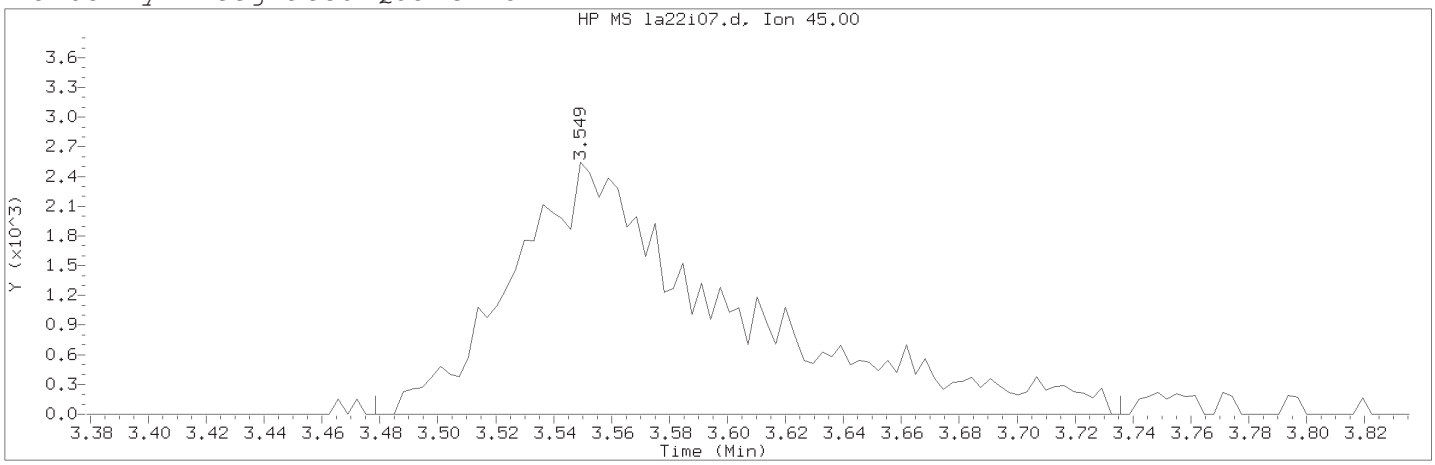
Compound Number	: 18		
Compound Name	: Acetone		
Scan Number	: 560		
Retention Time (minutes)	: 3.382		
Quant Ion	: 58.00		
Area	: 294		
On-column Amount (ng)	: 0.3879		
Integration start scan	: 554	Integration stop scan:	561
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

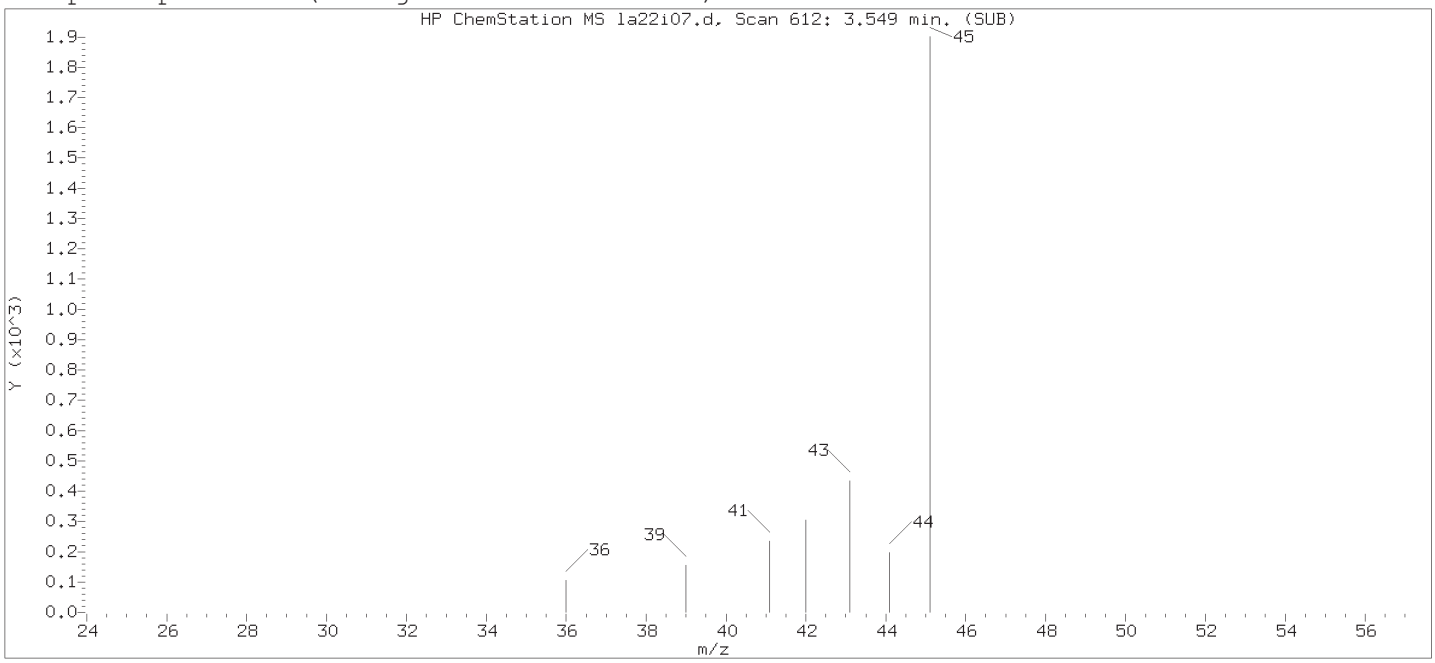
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 612
Retention Time (minutes): 3.549
Quant Ion : 45.00
Area (flag) : 13221M
On-Column Amount (ng) : 20.3810
Integration start scan : 589 Integration stop scan: 669
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

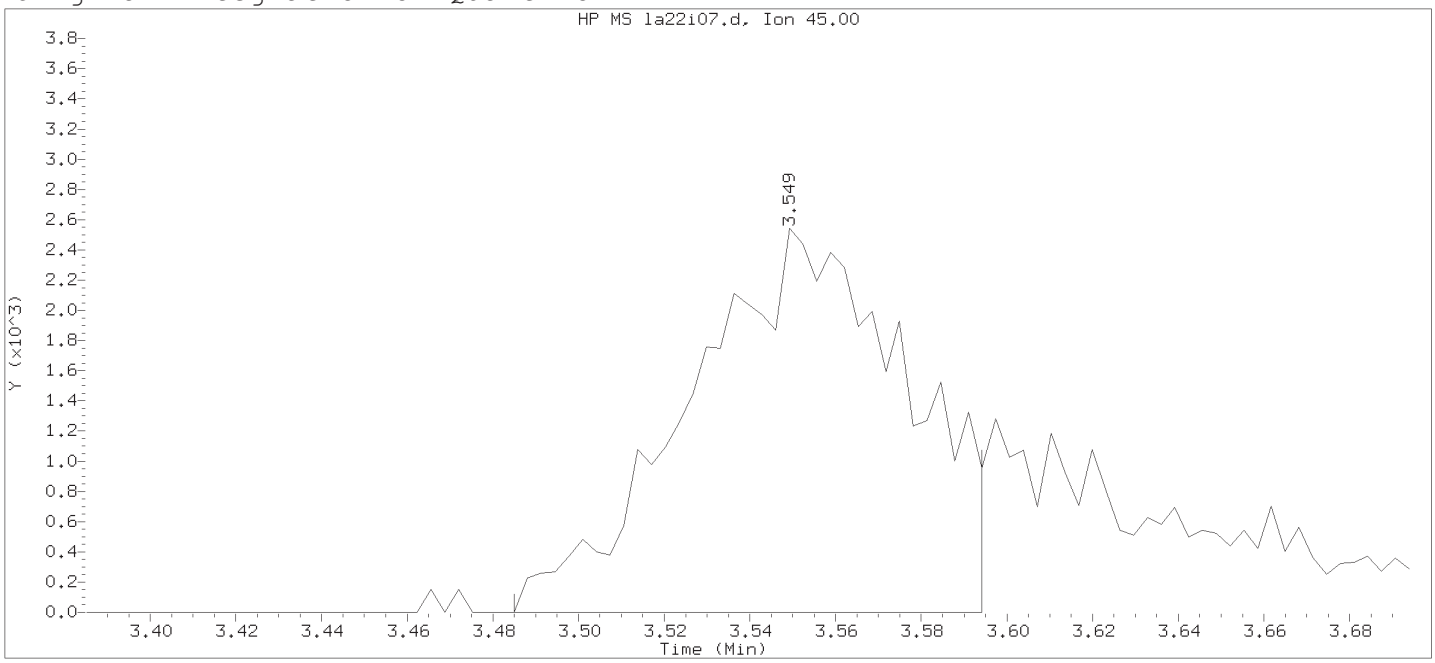
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

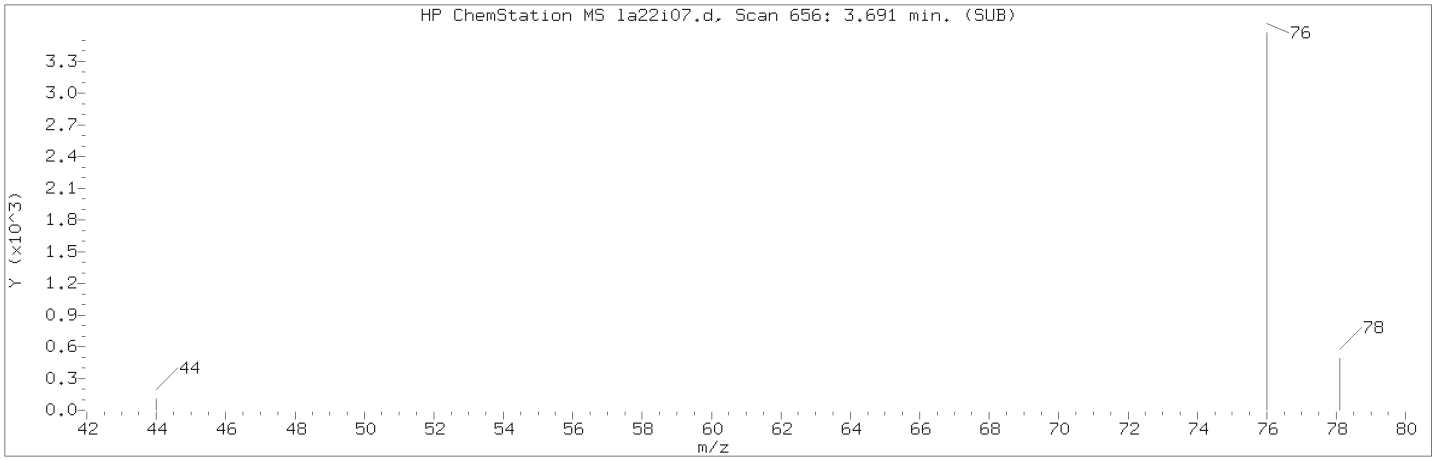
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

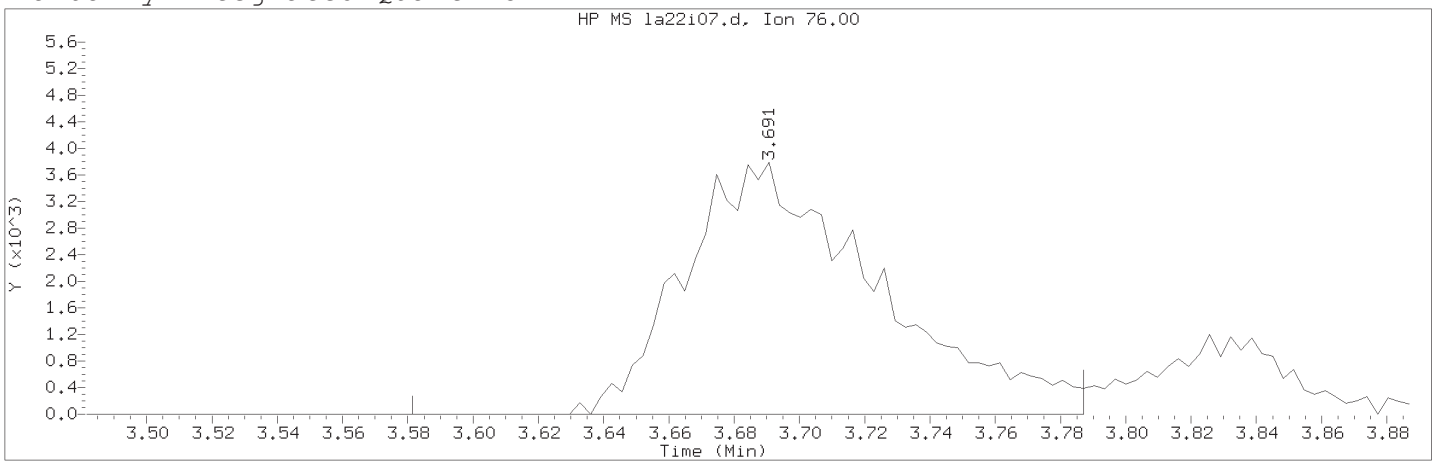
Compound Number	: 21		
Compound Name	: 2-Propanol		
Scan Number	: 612		
Retention Time (minutes)	: 3.549		
Quant Ion	: 45.00		
Area	: 8954		
On-column Amount (ng)	: 14.4842		
Integration start scan	: 591	Integration stop scan:	625
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature date: 04/22/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

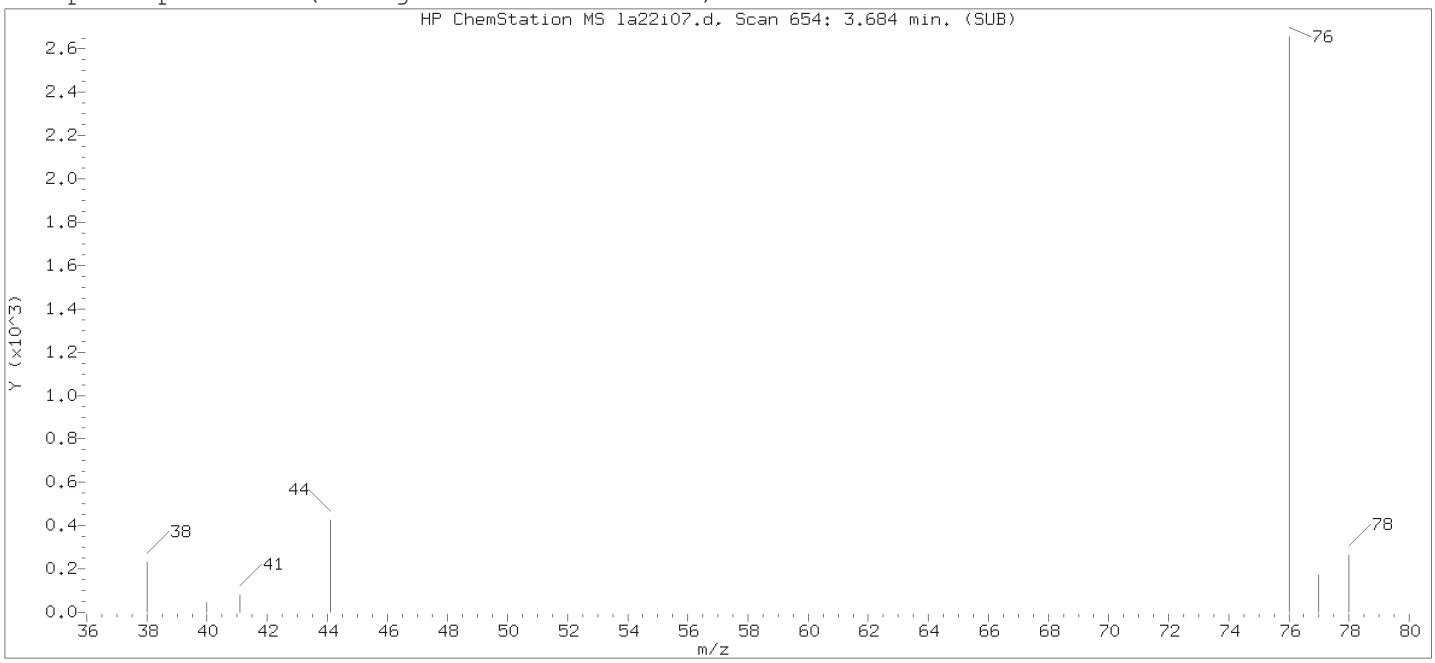
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 656
Retention Time (minutes): 3.691
Quant Ion : 76.00
Area (flag) : 15514M
On-Column Amount (ng) : 0.8493
Integration start scan : 621 Integration stop scan: 685
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

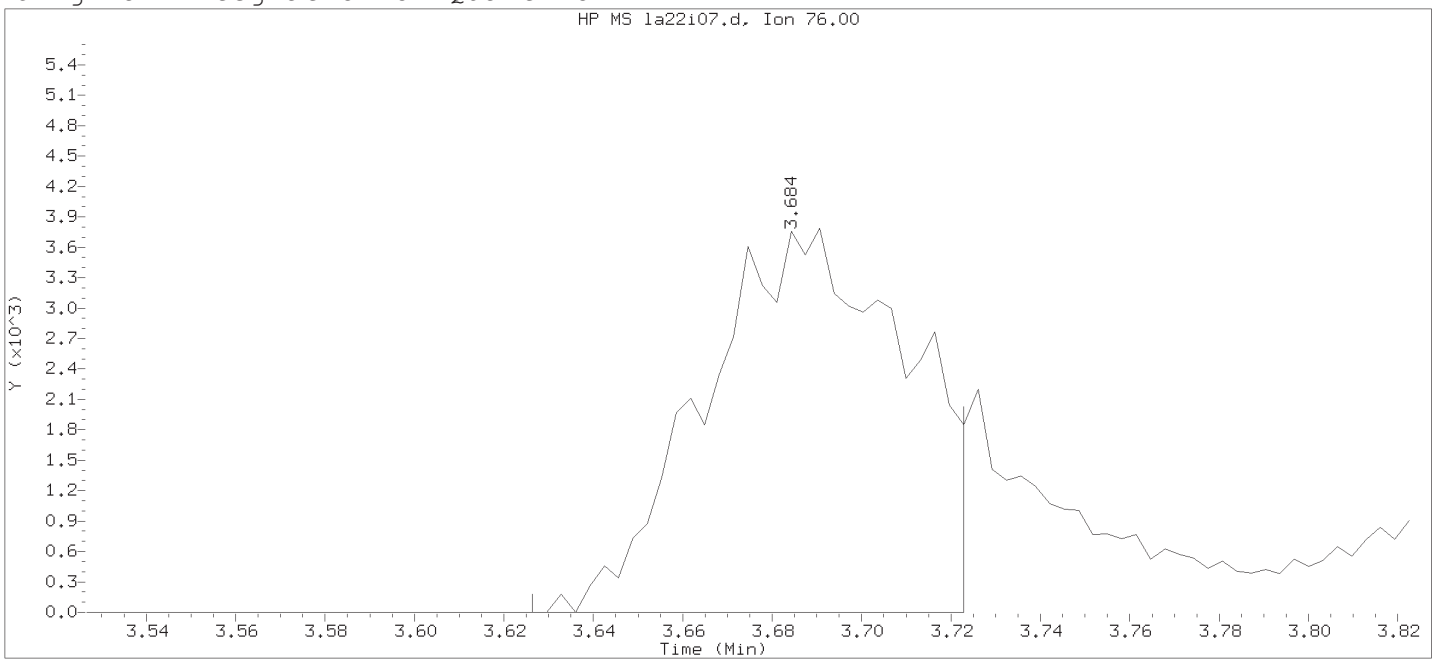
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

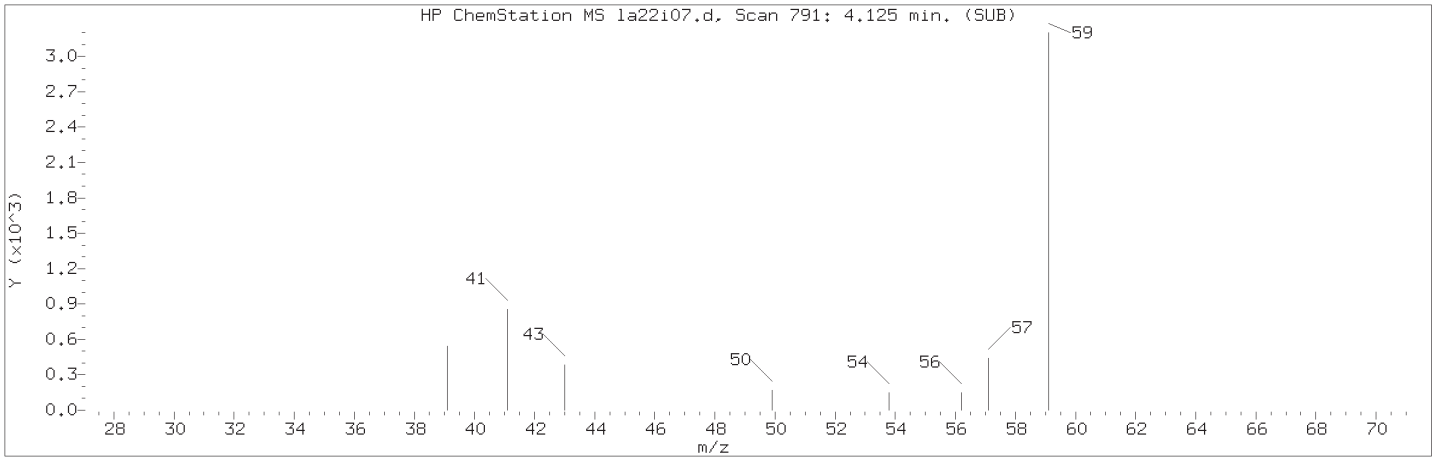
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

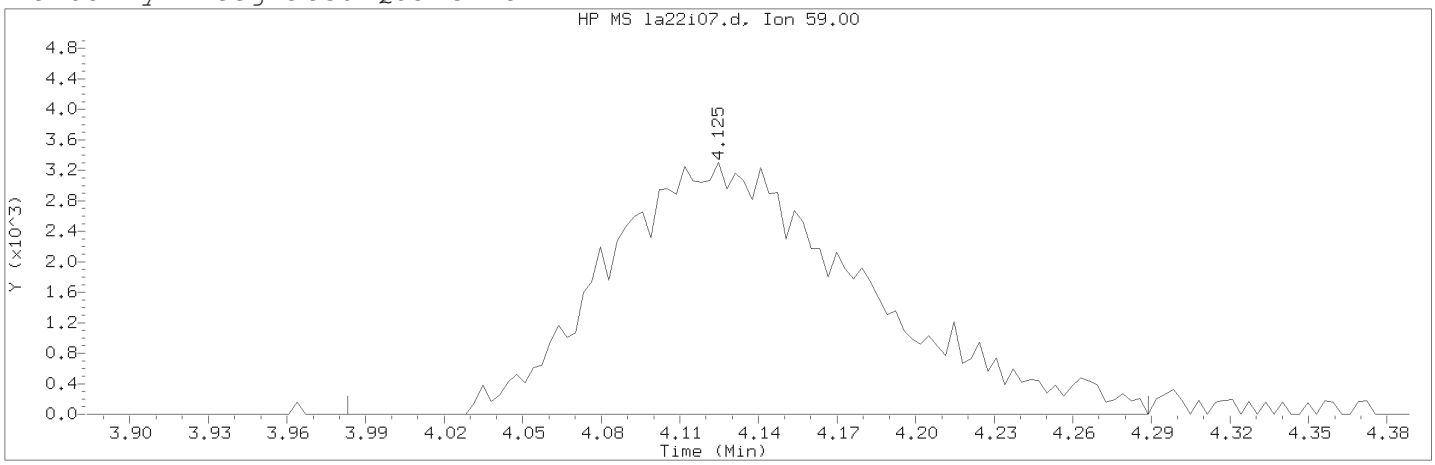
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 654
Retention Time (minutes): 3.684
Quant Ion : 76.00
Area : 11937
On-column Amount (ng) : 0.6723
Integration start scan : 635 Integration stop scan: 665
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature date: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

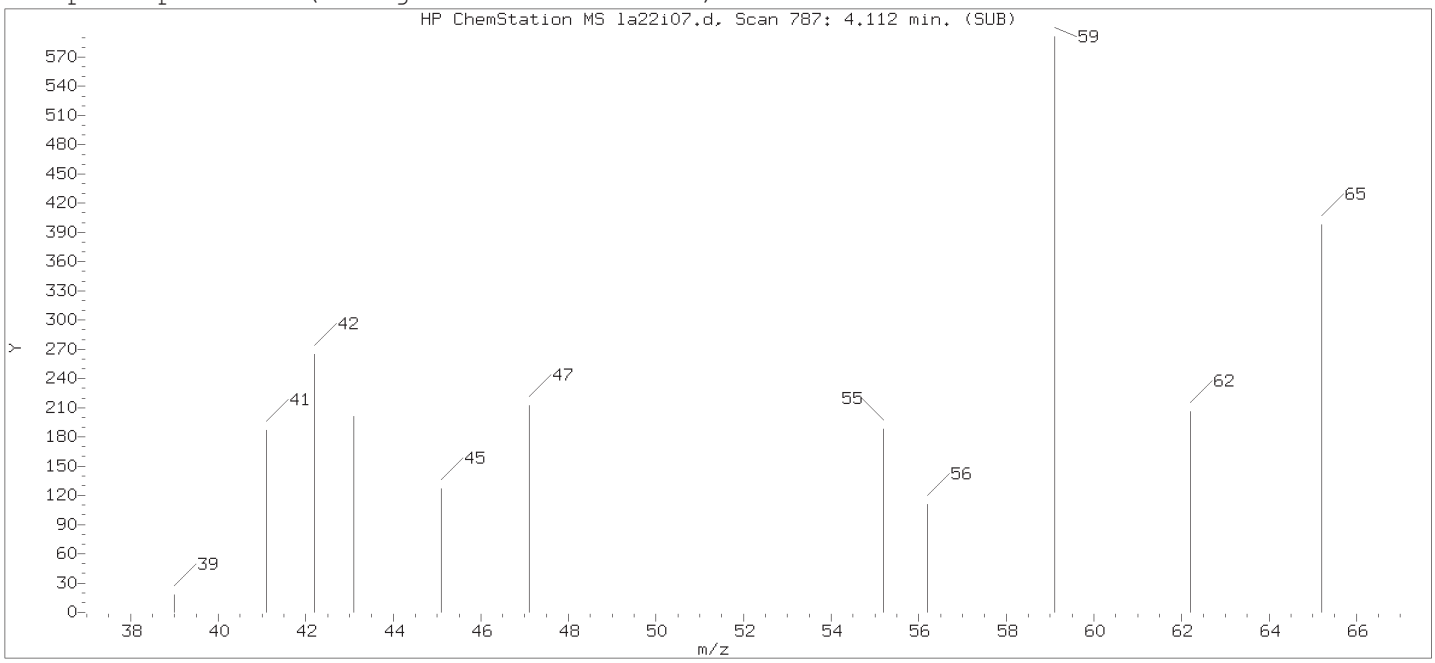
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 791
Retention Time (minutes): 4.125
Quant Ion : 59.00
Area (flag) : 22488M
On-Column Amount (ng) : 21.3767
Integration start scan : 746 Integration stop scan: 841
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

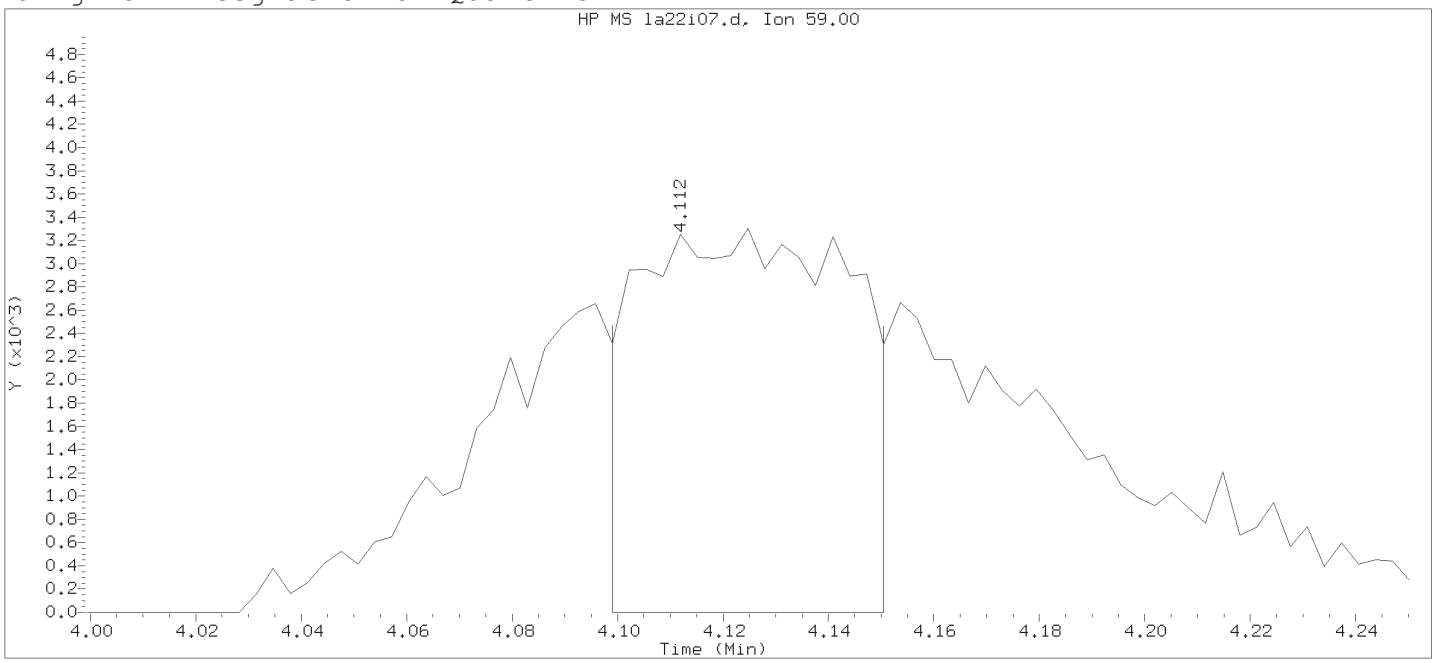
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

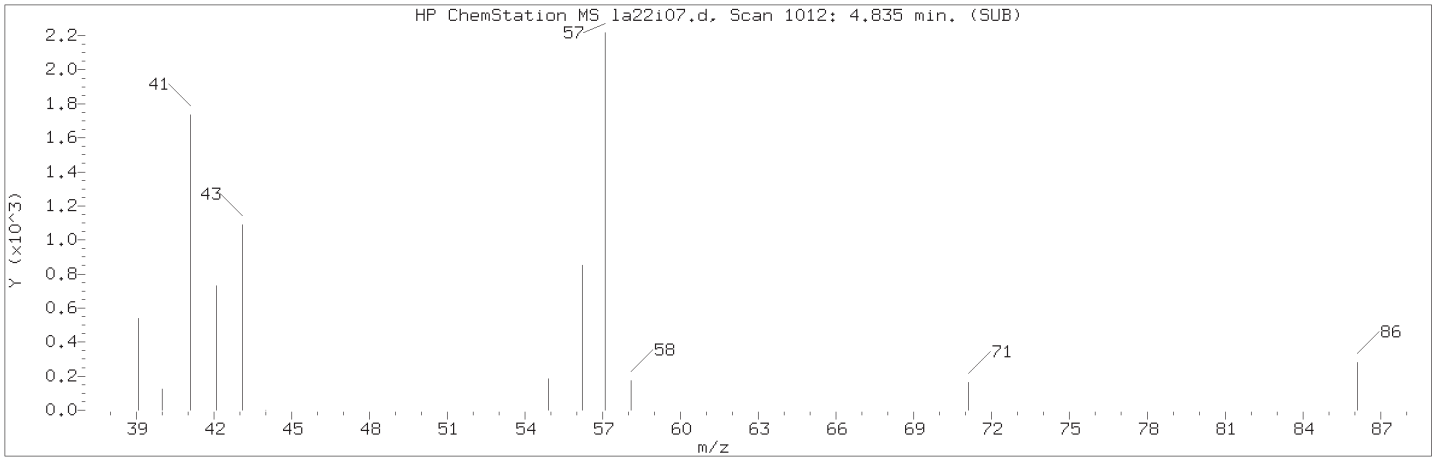
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

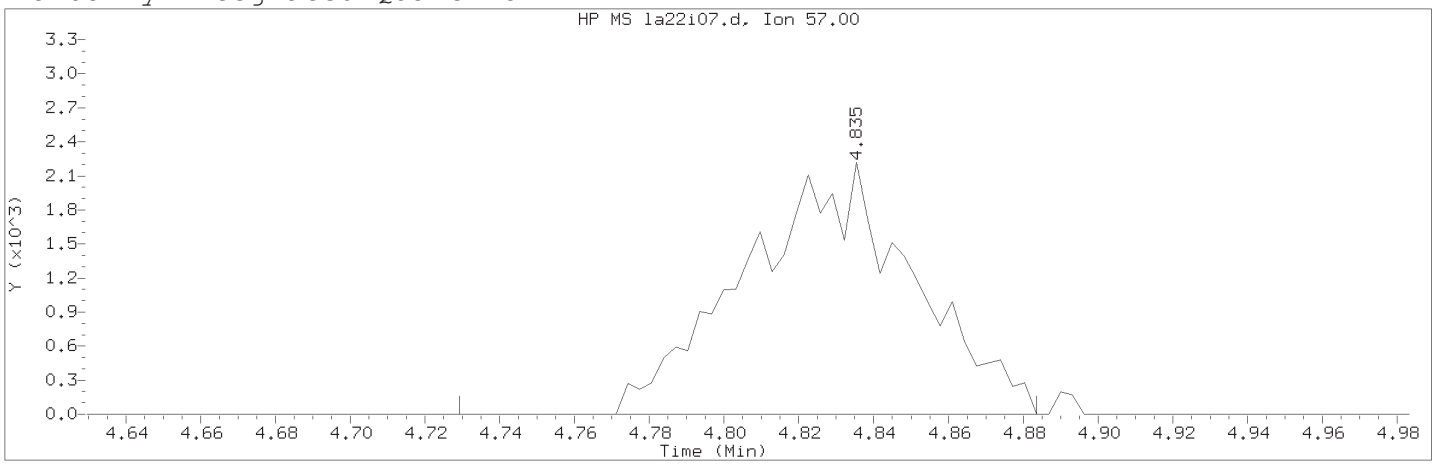
Compound Number	: 30		
Compound Name	: t-Butyl alcohol		
Scan Number	: 787		
Retention Time (minutes)	: 4.112		
Quant Ion	: 59.00		
Area	: 9231		
On-column Amount (ng)	: 9.6436		
Integration start scan	: 782	Integration stop scan:	798
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

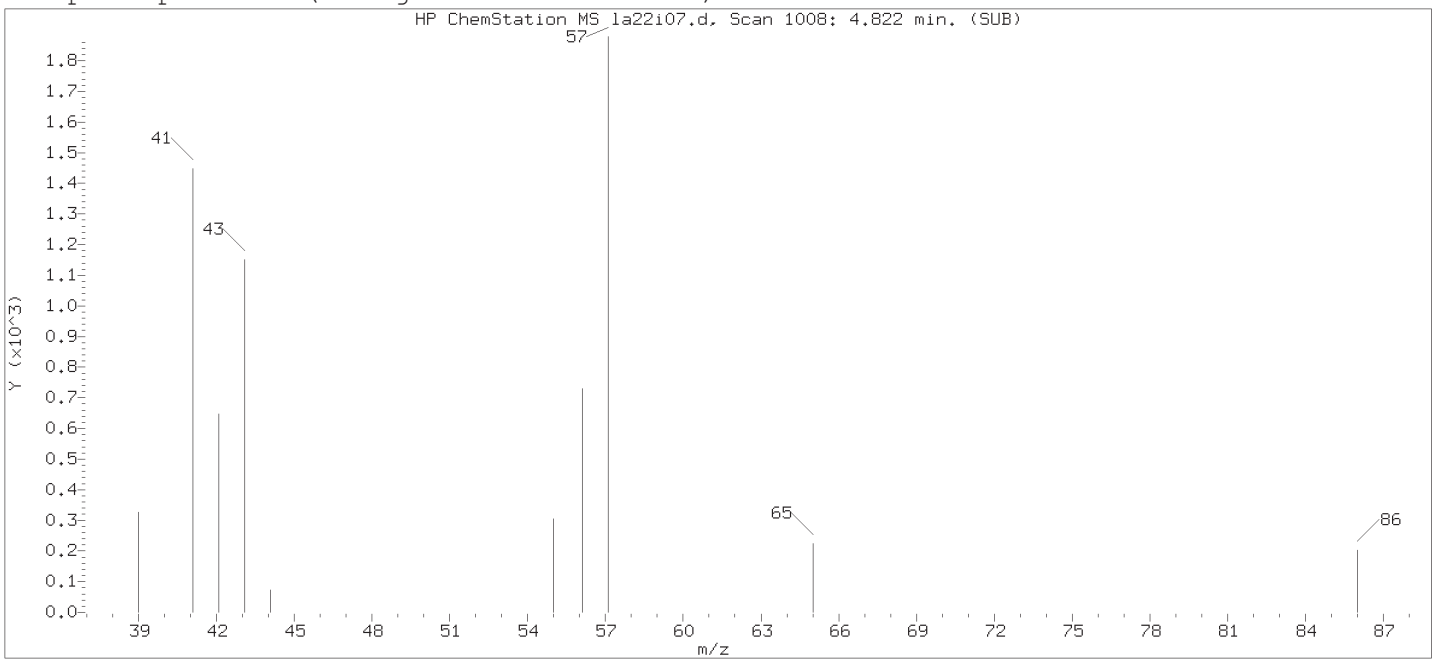
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1012
Retention Time (minutes): 4.835
Quant Ion : 57.00
Area (flag) : 6890M
On-Column Amount (ng) : 0.7221
Integration start scan : 978 Integration stop scan: 1026
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

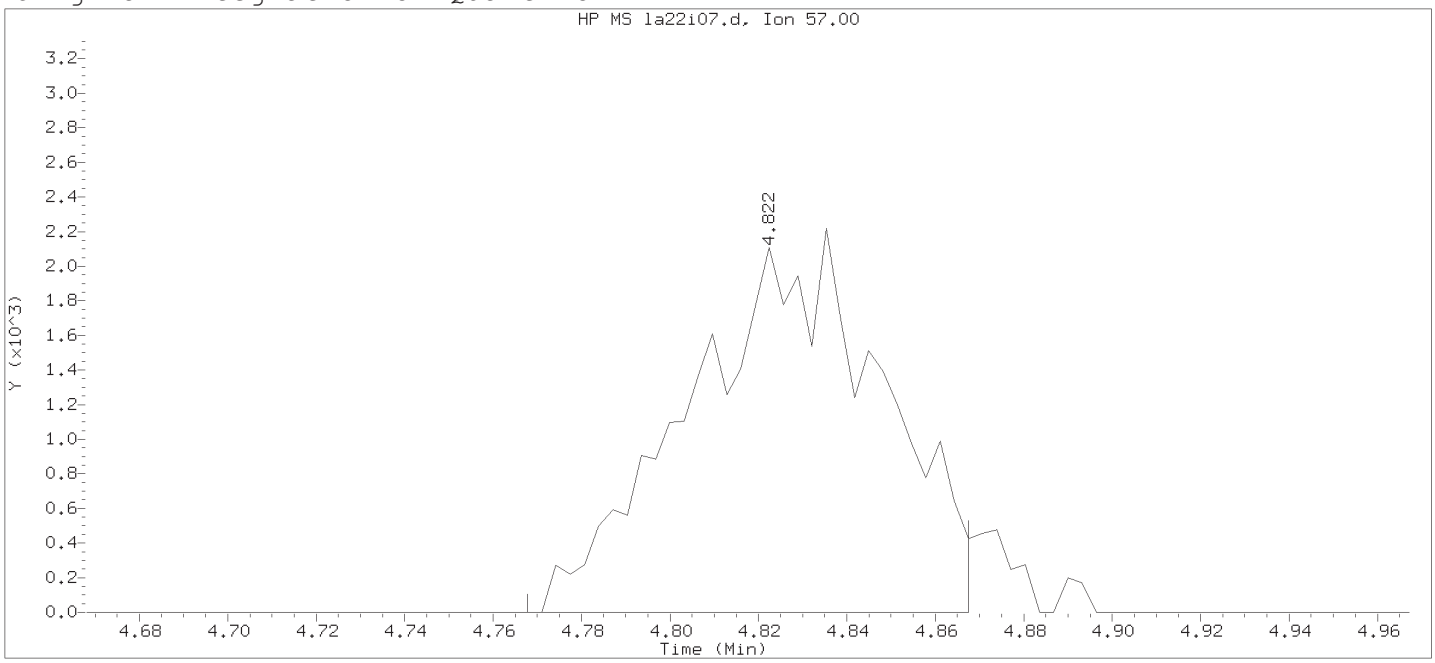
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

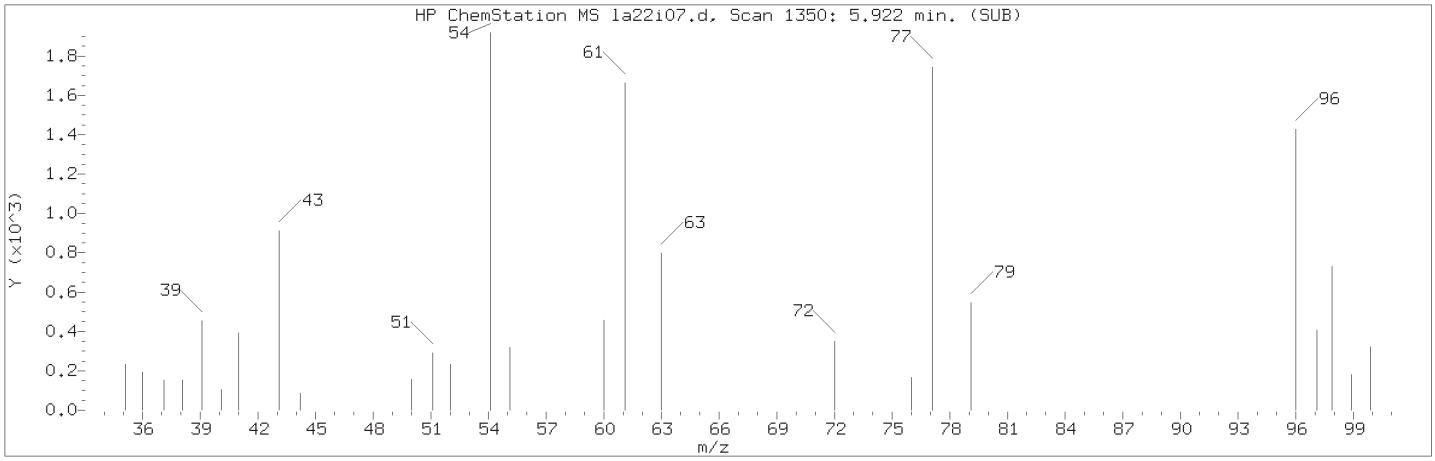
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

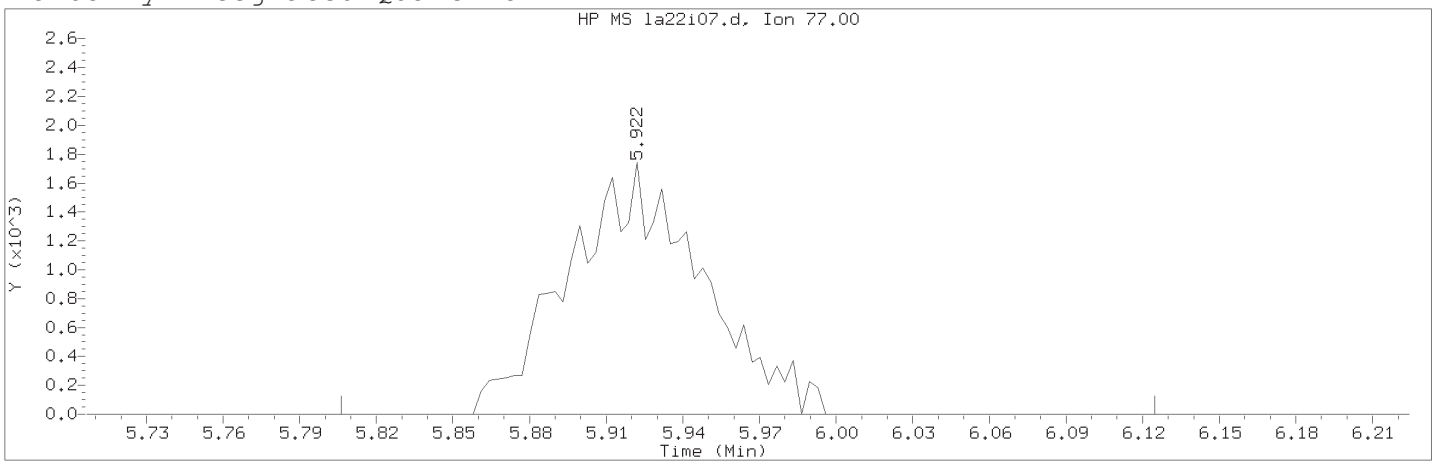
Compound Number	: 34		
Compound Name	: n-Hexane		
Scan Number	: 1008		
Retention Time (minutes)	: 4.822		
Quant Ion	: 57.00		
Area	: 6569		
On-column Amount (ng)	: 0.6919		
Integration start scan	: 990	Integration stop scan:	1021
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

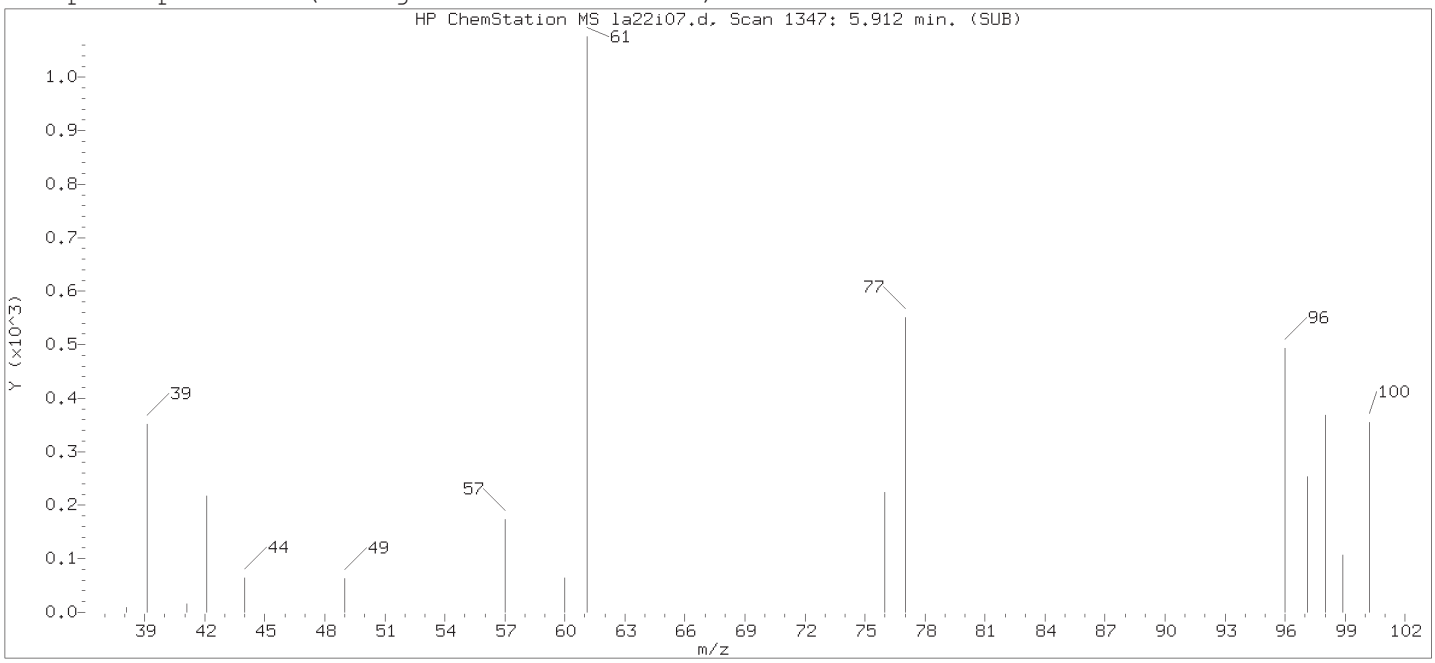
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1350
Retention Time (minutes): 5.922
Quant Ion : 77.00
Area (flag) : 6279M
On-Column Amount (ng) : 0.7381
Integration start scan : 1313 Integration stop scan: 1412
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

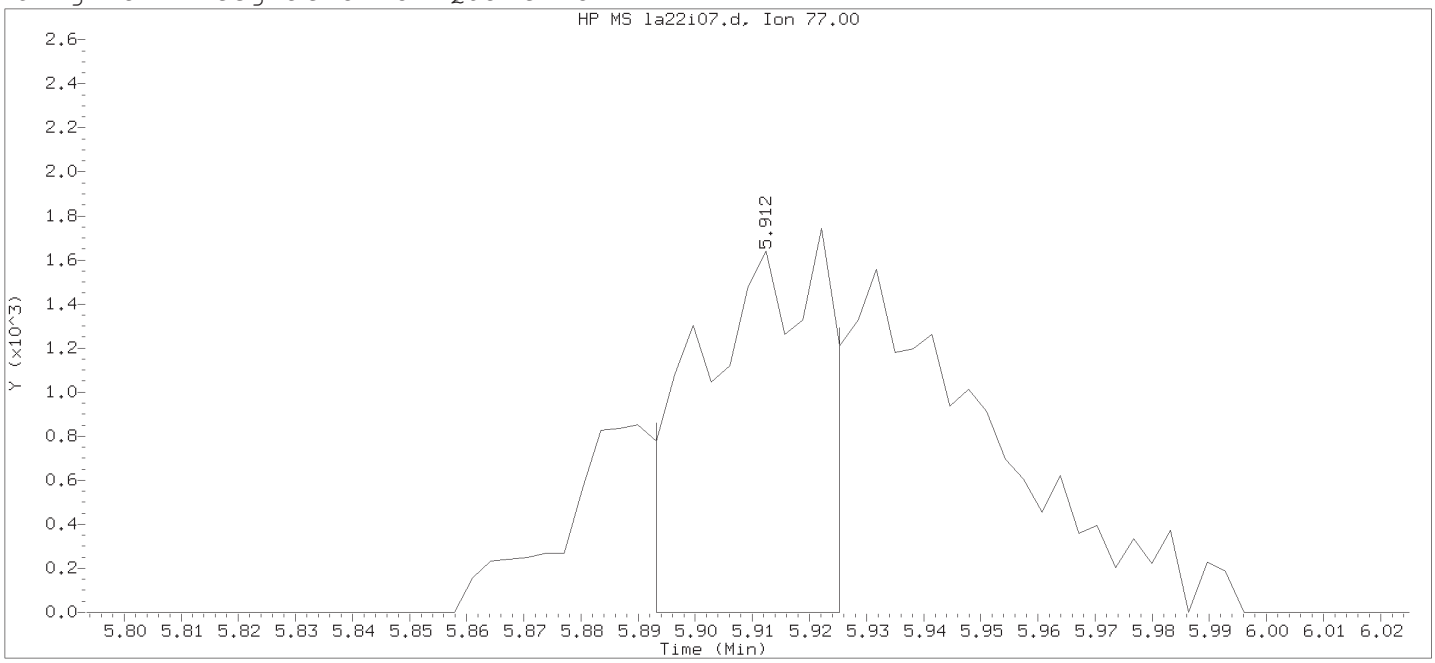
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

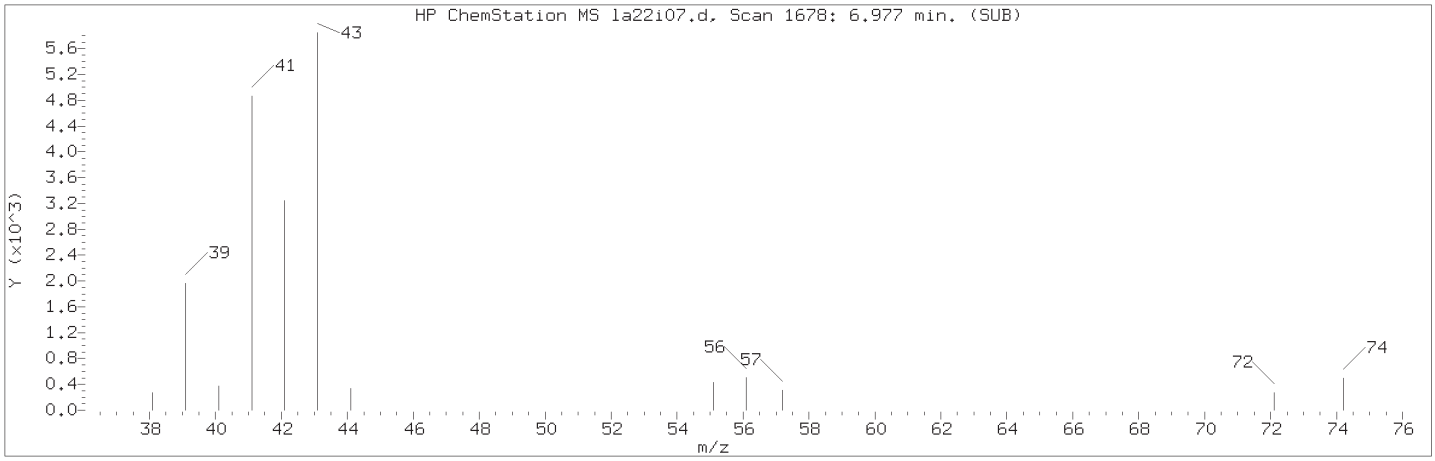
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

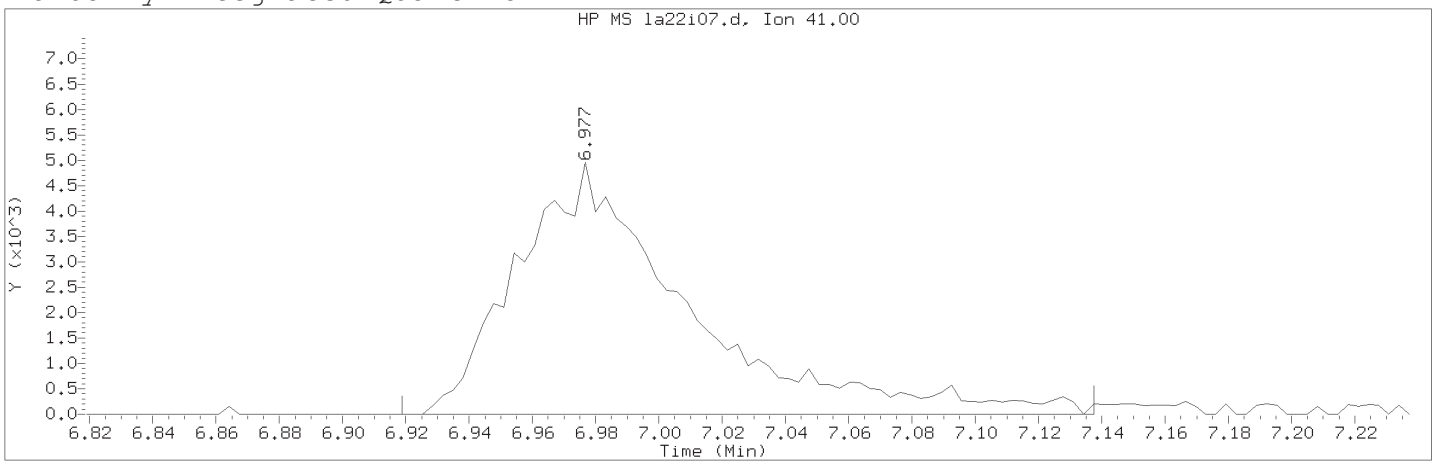
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1347
Retention Time (minutes): 5.912
Quant Ion : 77.00
Area : 2506
On-column Amount (ng) : 0.3146
Integration start scan : 1340 Integration stop scan: 1350
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

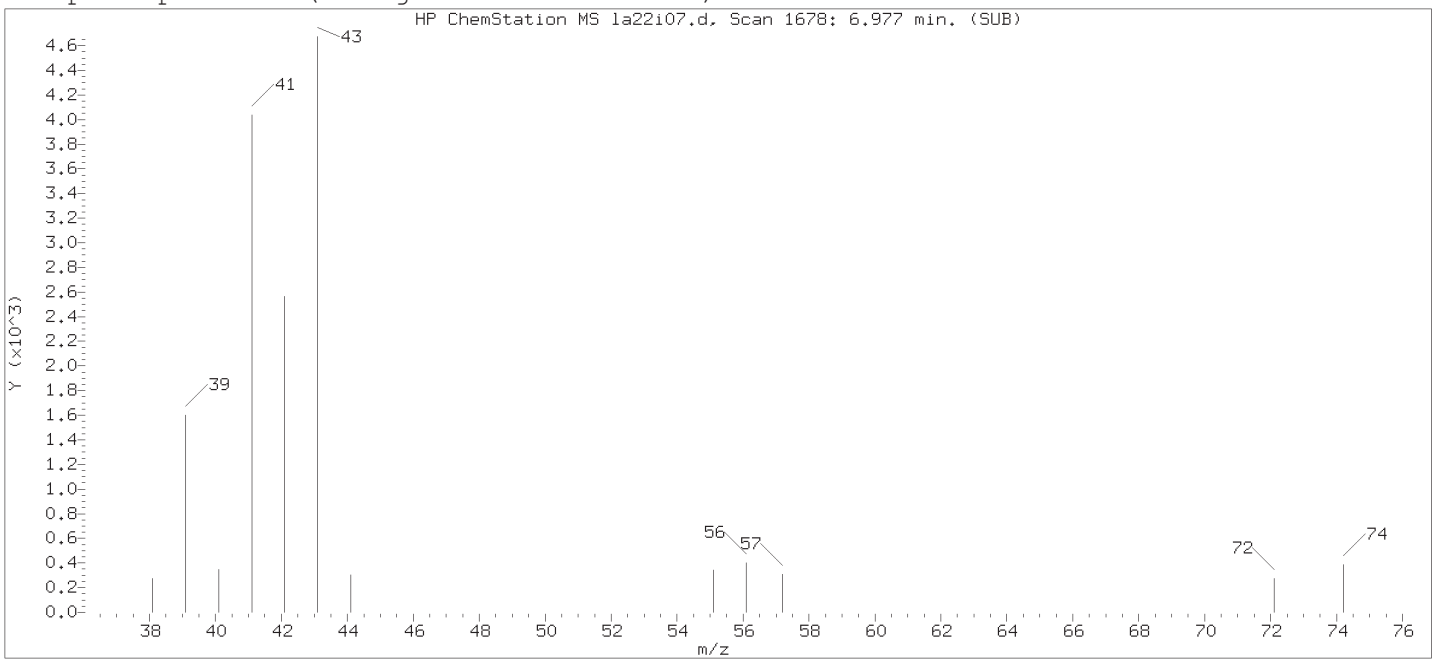
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1678
Retention Time (minutes): 6.977
Quant Ion : 41.00
Area (flag) : 18390M
On-Column Amount (ng) : 49.6912
Integration start scan : 1659 Integration stop scan: 1727
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

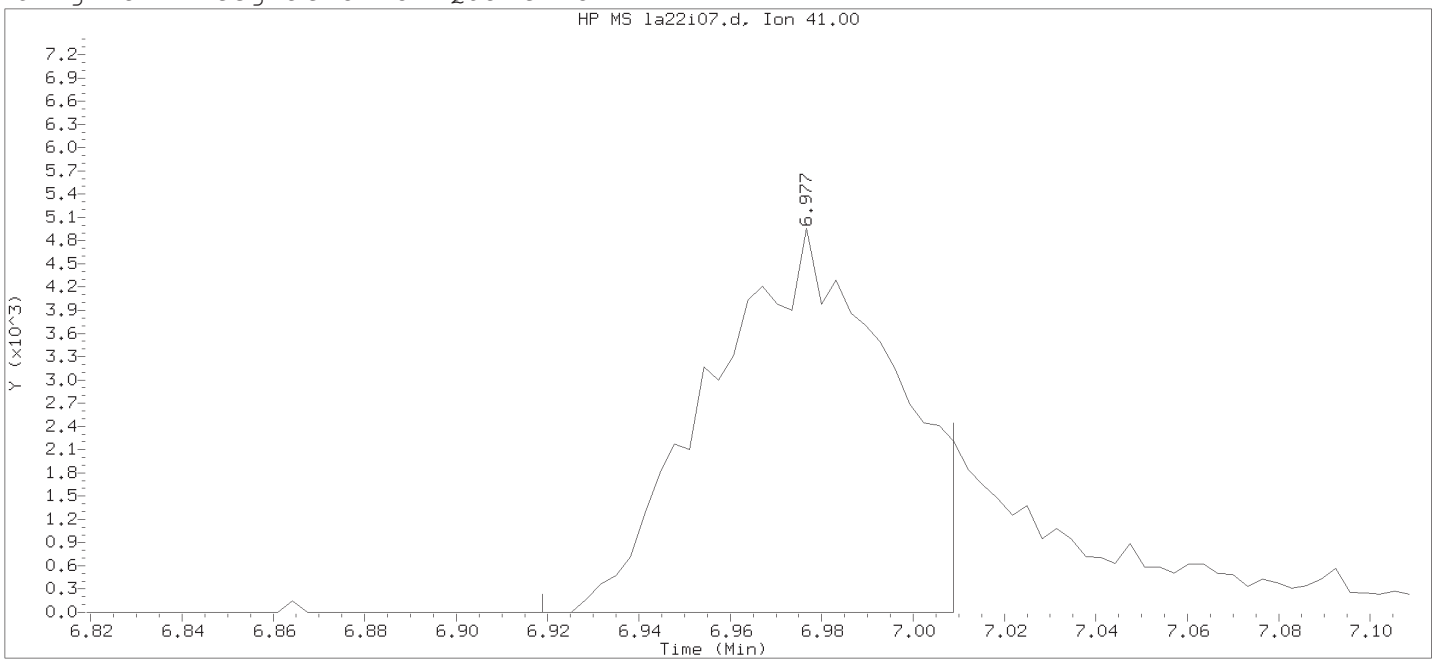
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

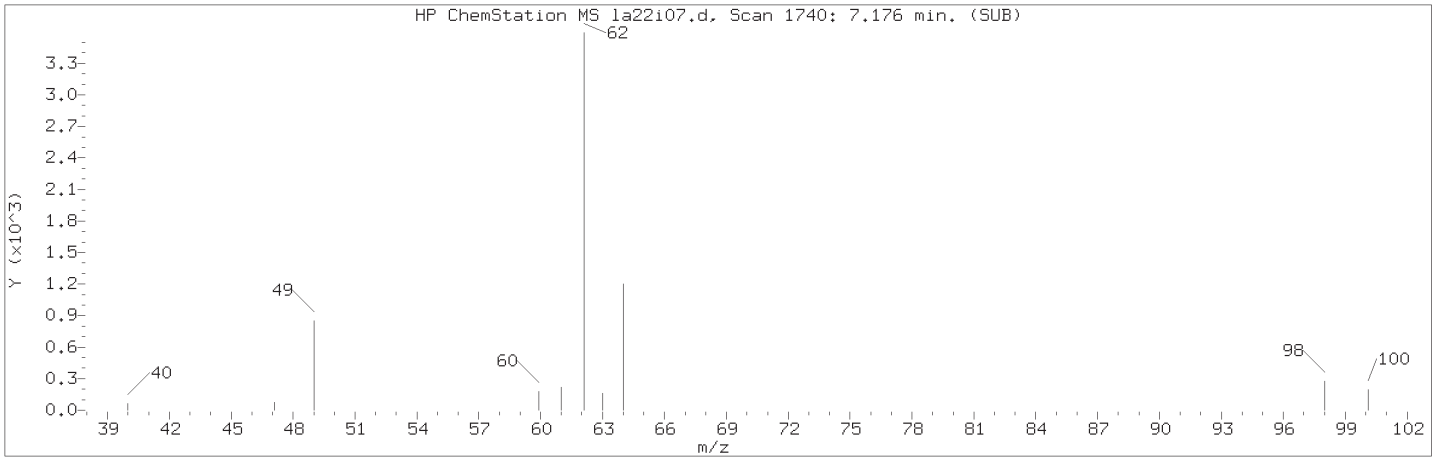
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

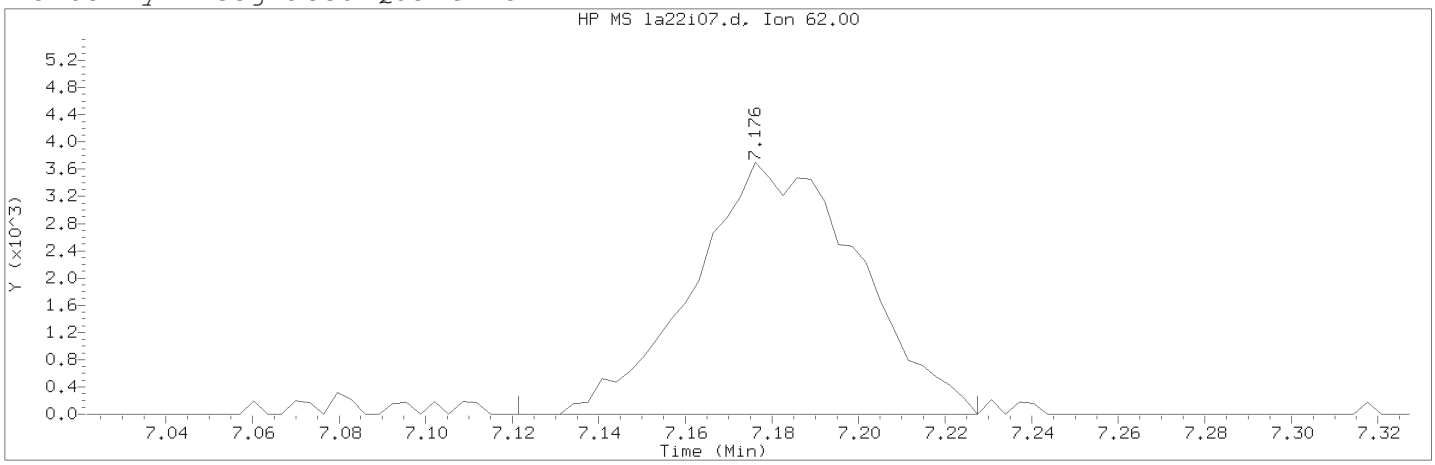
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1678
Retention Time (minutes): 6.977
Quant Ion : 41.00
Area : 13649
On-column Amount (ng) : 38.2835
Integration start scan : 1659 Integration stop scan: 1687
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

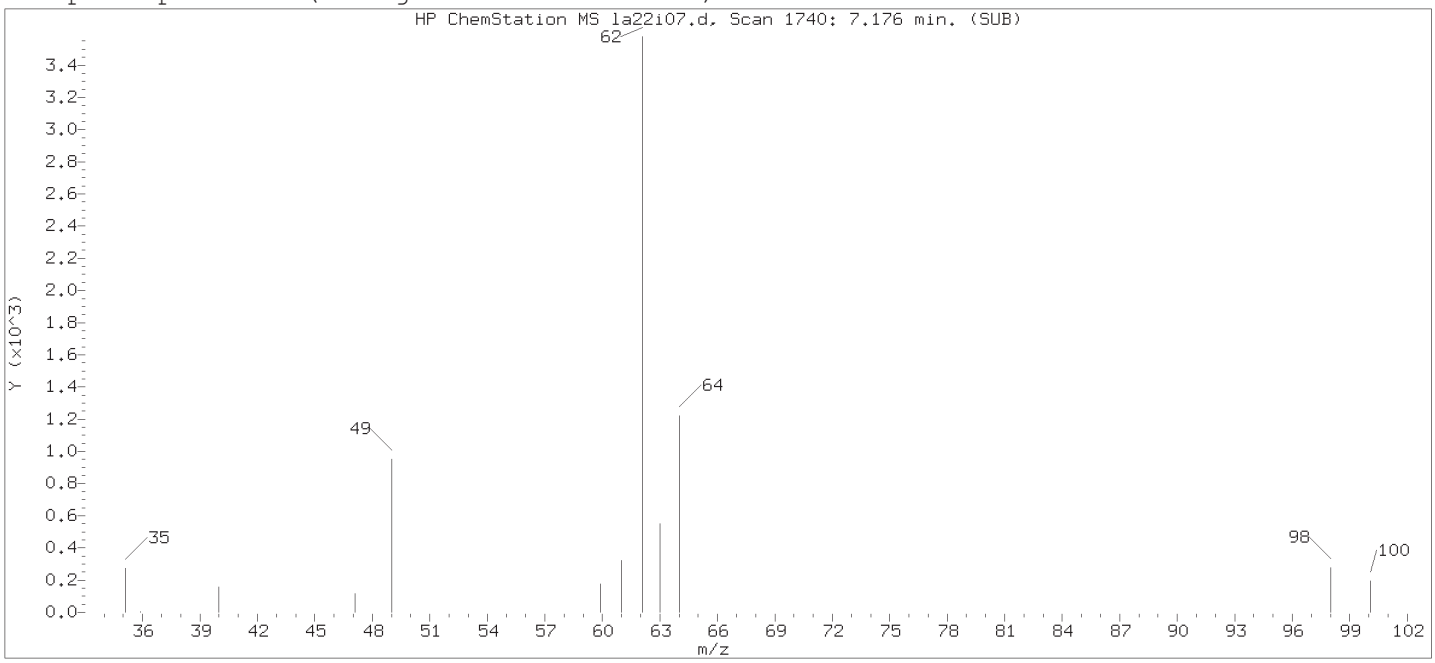
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Scan Number : 1740
Retention Time (minutes): 7.176
Quant Ion : 62.00
Area (flag) : 9831M
On-Column Amount (ng) : 0.9956
Integration start scan : 1722 Integration stop scan: 1755
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

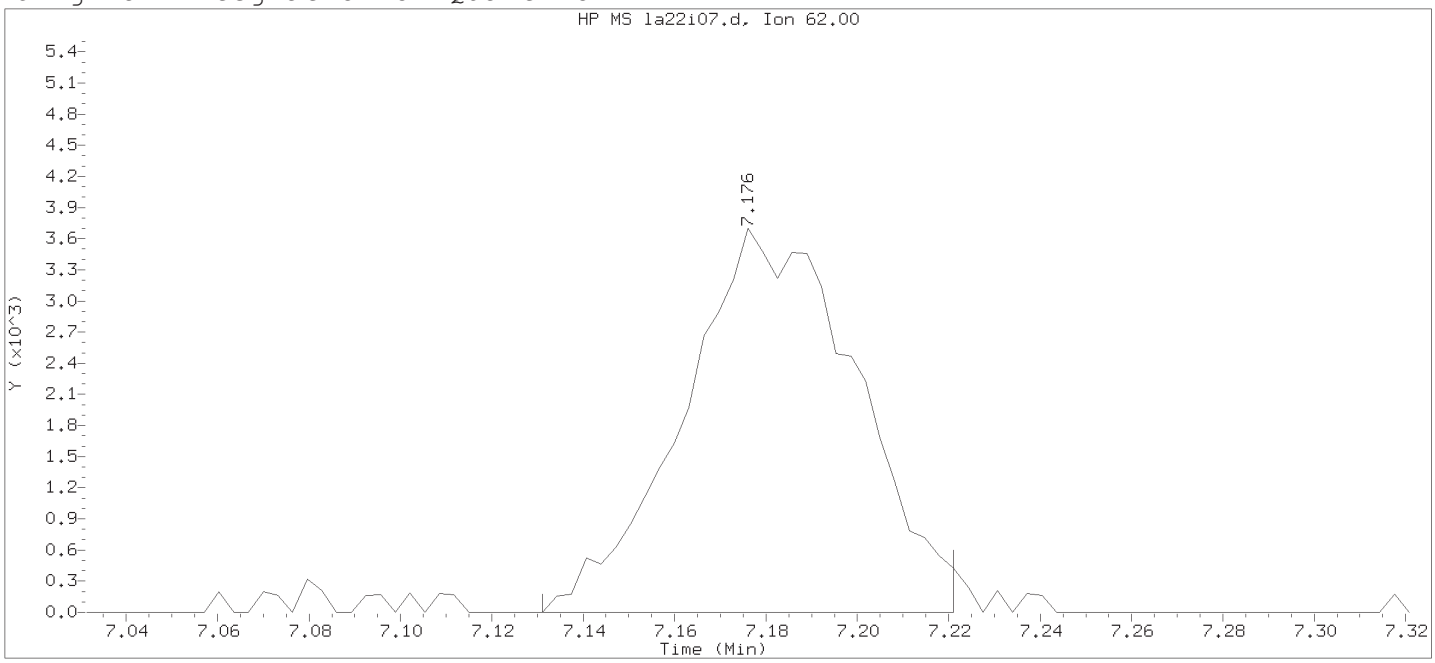
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

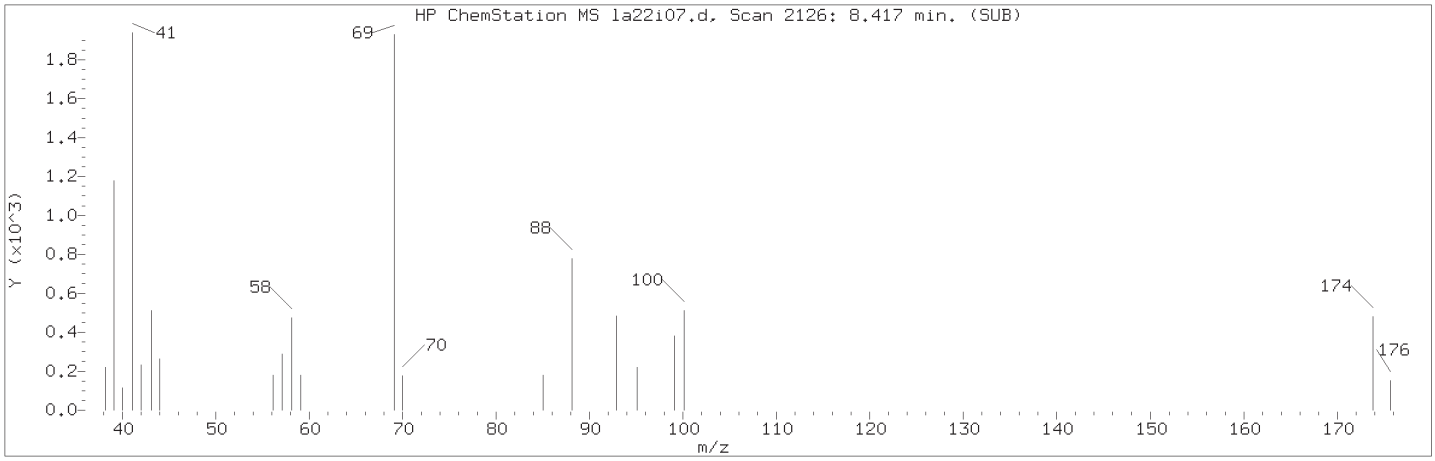
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

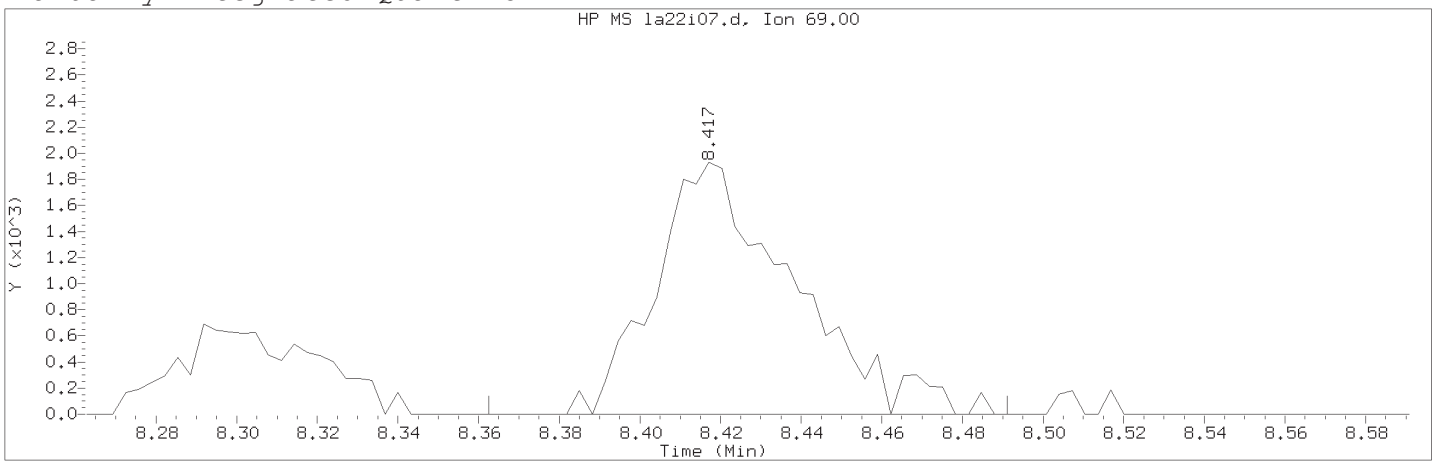
Compound Number	: 61		
Compound Name	: 1,2-Dichloroethane		
Scan Number	: 1740		
Retention Time (minutes)	: 7.176		
Quant Ion	: 62.00		
Area	: 9744		
On-column Amount (ng)	: 0.9880		
Integration start scan	: 1725	Integration stop scan:	1753
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

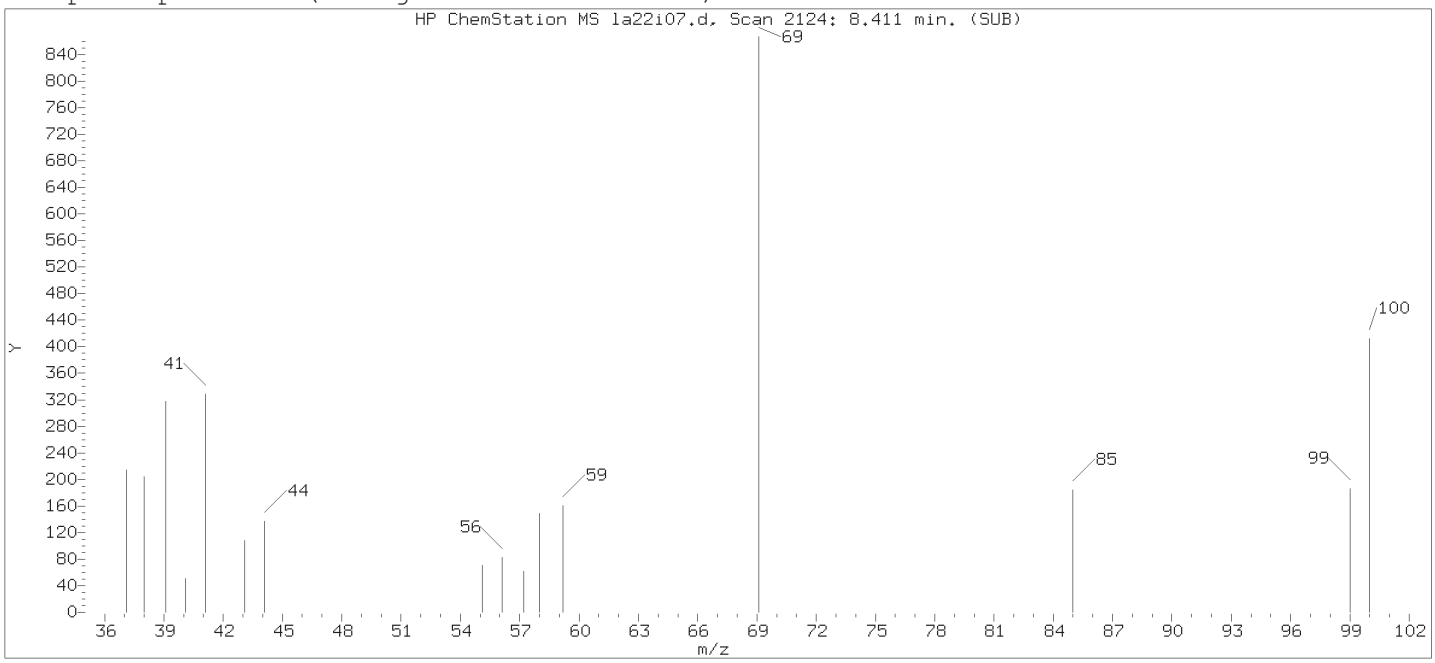
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2126
Retention Time (minutes): 8.417
Quant Ion : 69.00
Area (flag) : 4607M
On-Column Amount (ng) : 0.7481
Integration start scan : 2108 Integration stop scan: 2148
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

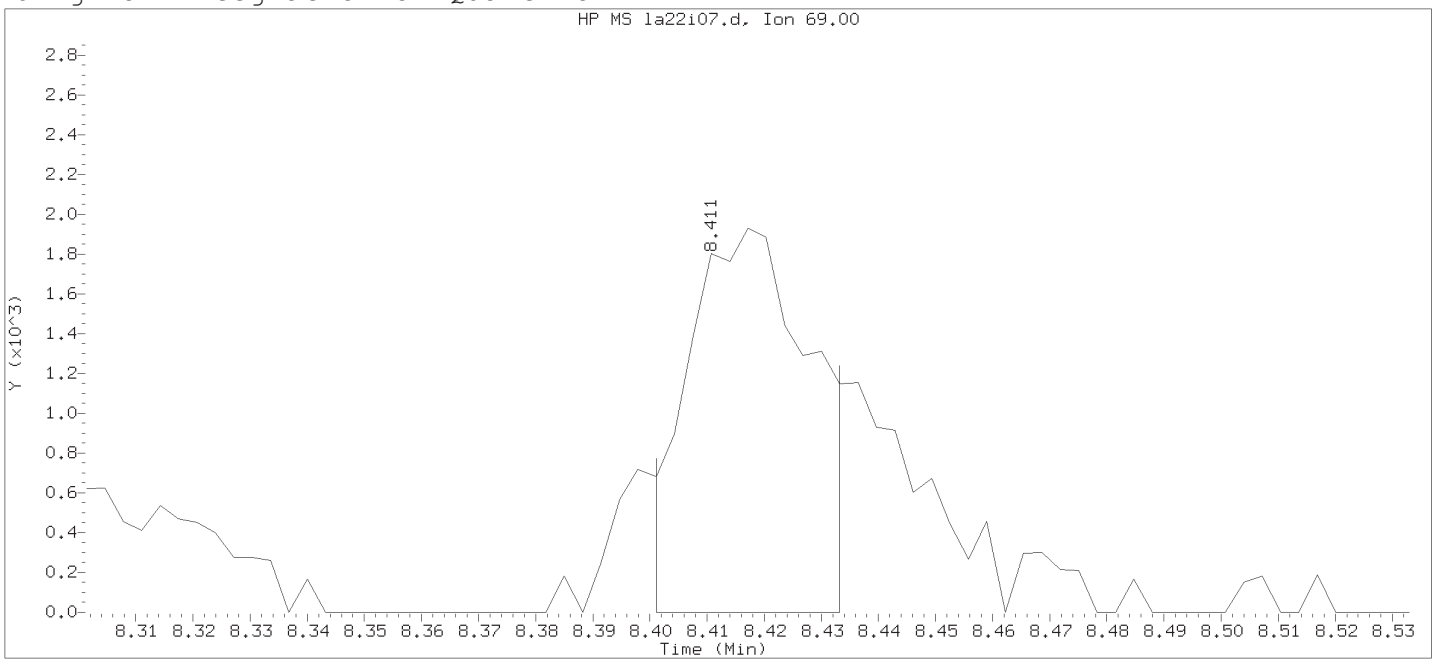
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

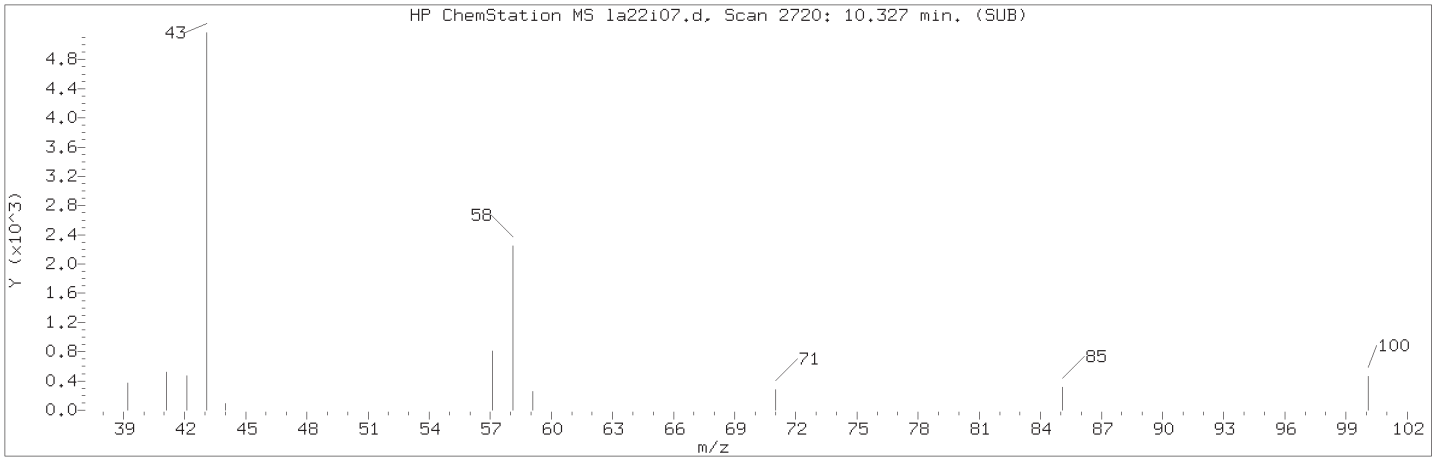
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

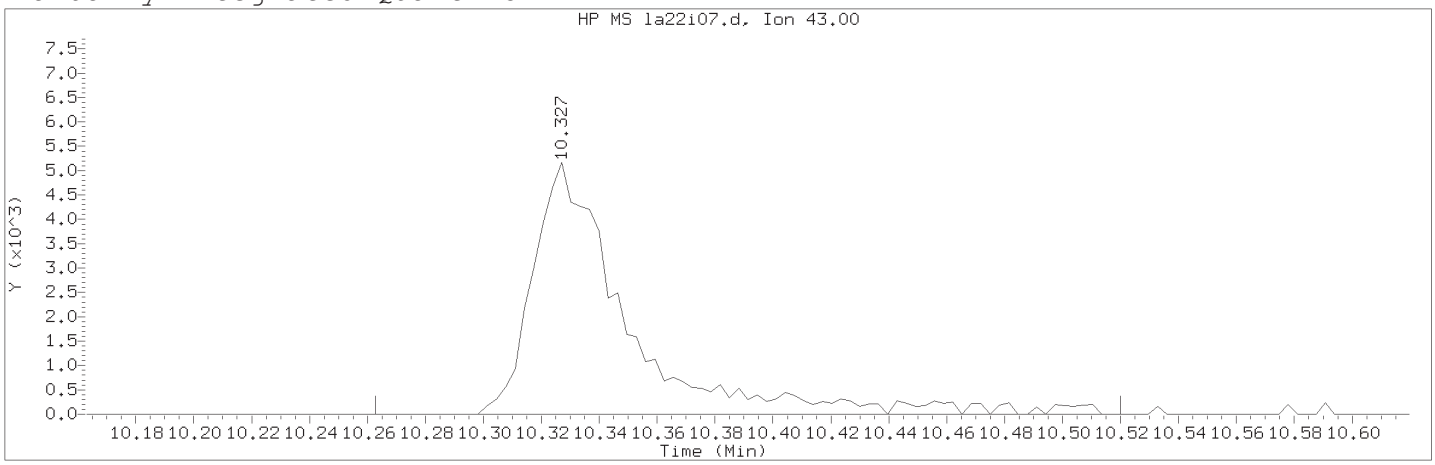
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2124
Retention Time (minutes): 8.411
Quant Ion : 69.00
Area : 2820
On-column Amount (ng) : 0.4778
Integration start scan : 2120 Integration stop scan: 2130
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

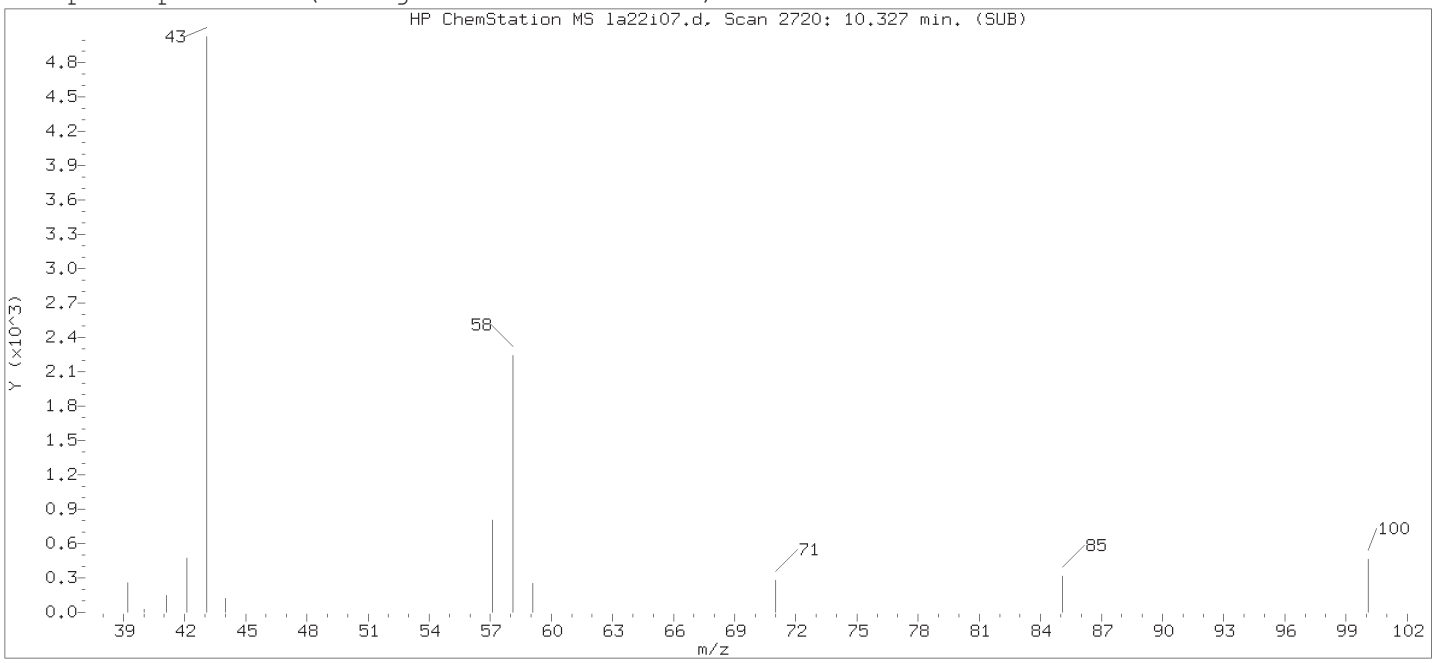
Compound Number : 96
Compound Name : 2-Hexanone
Scan Number : 2720
Retention Time (minutes): 10.327
Quant Ion : 43.00
Area (flag) : 11705M
On-Column Amount (ng) : 1.6573
Integration start scan : 2699 Integration stop scan: 2779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

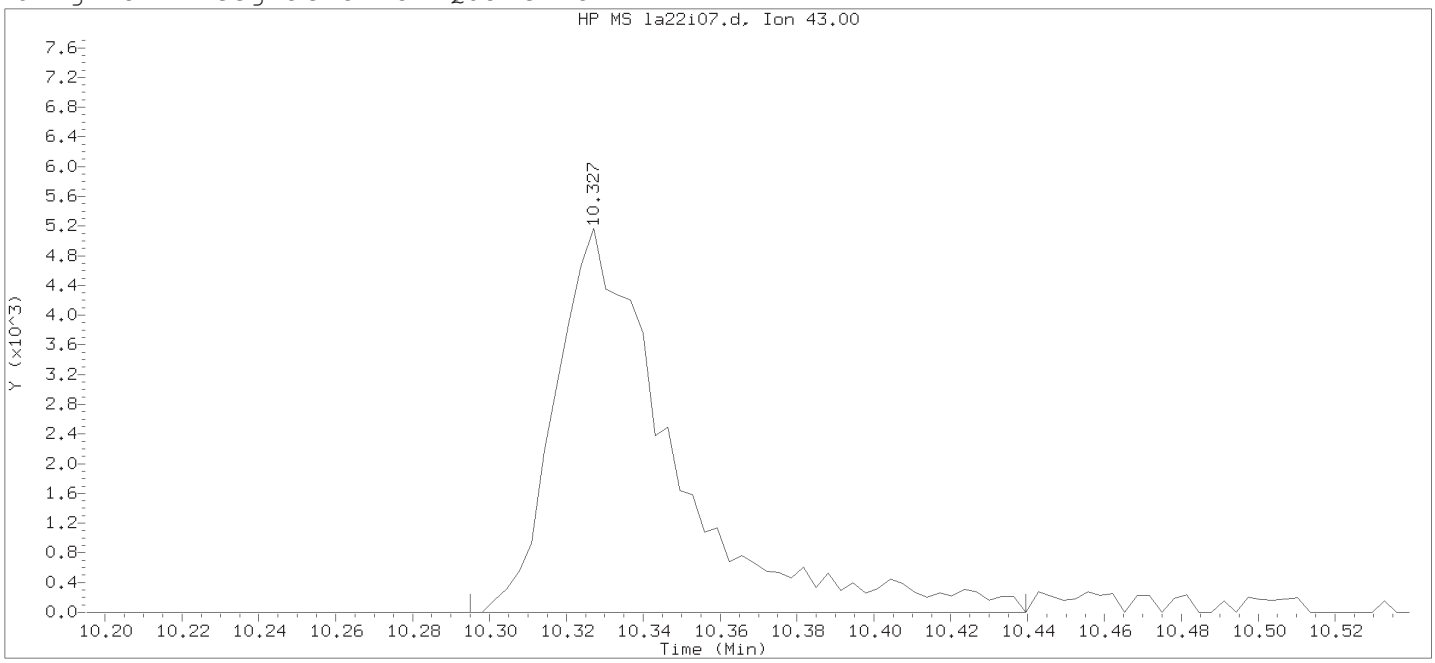
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

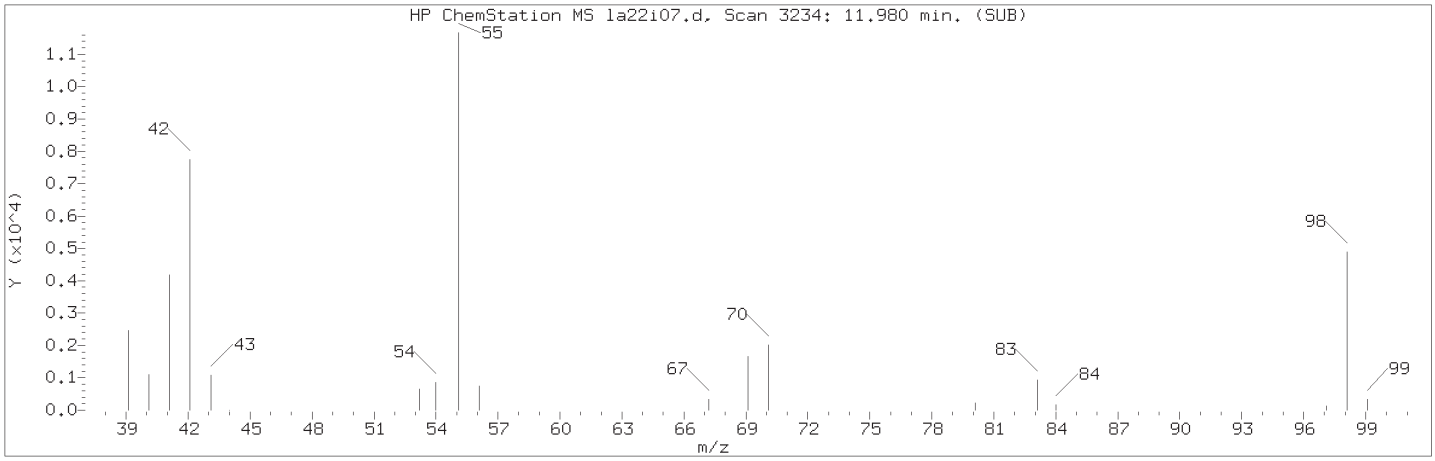
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

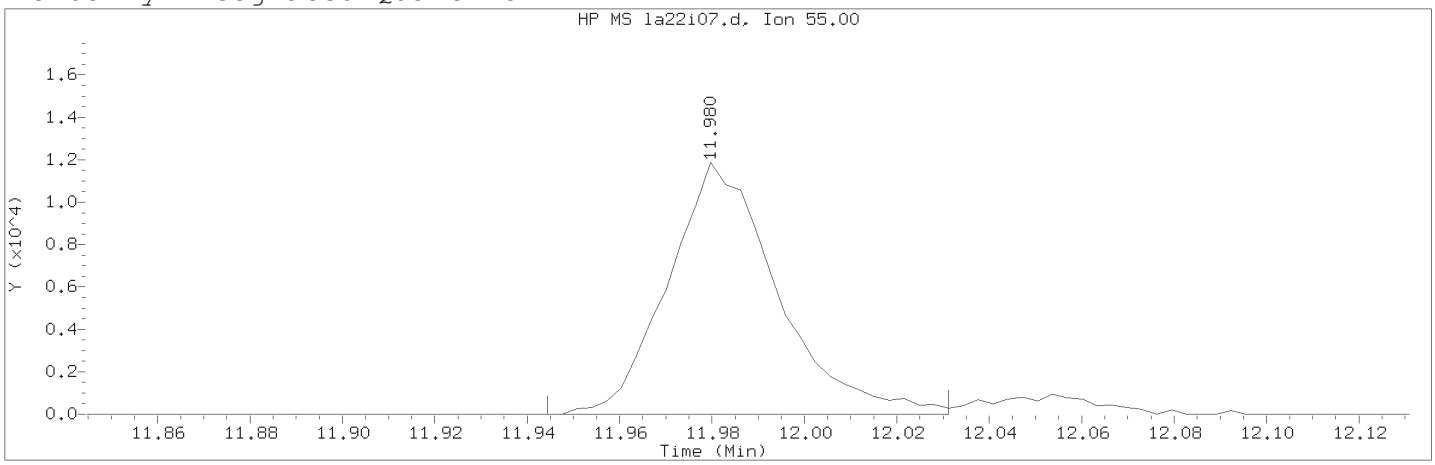
Compound Number : 96
Compound Name : 2-Hexanone
Scan Number : 2720
Retention Time (minutes): 10.327
Quant Ion : 43.00
Area : 11027
On-column Amount (ng) : 1.5722
Integration start scan : 2709 Integration stop scan: 2754
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature date: 04/13/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

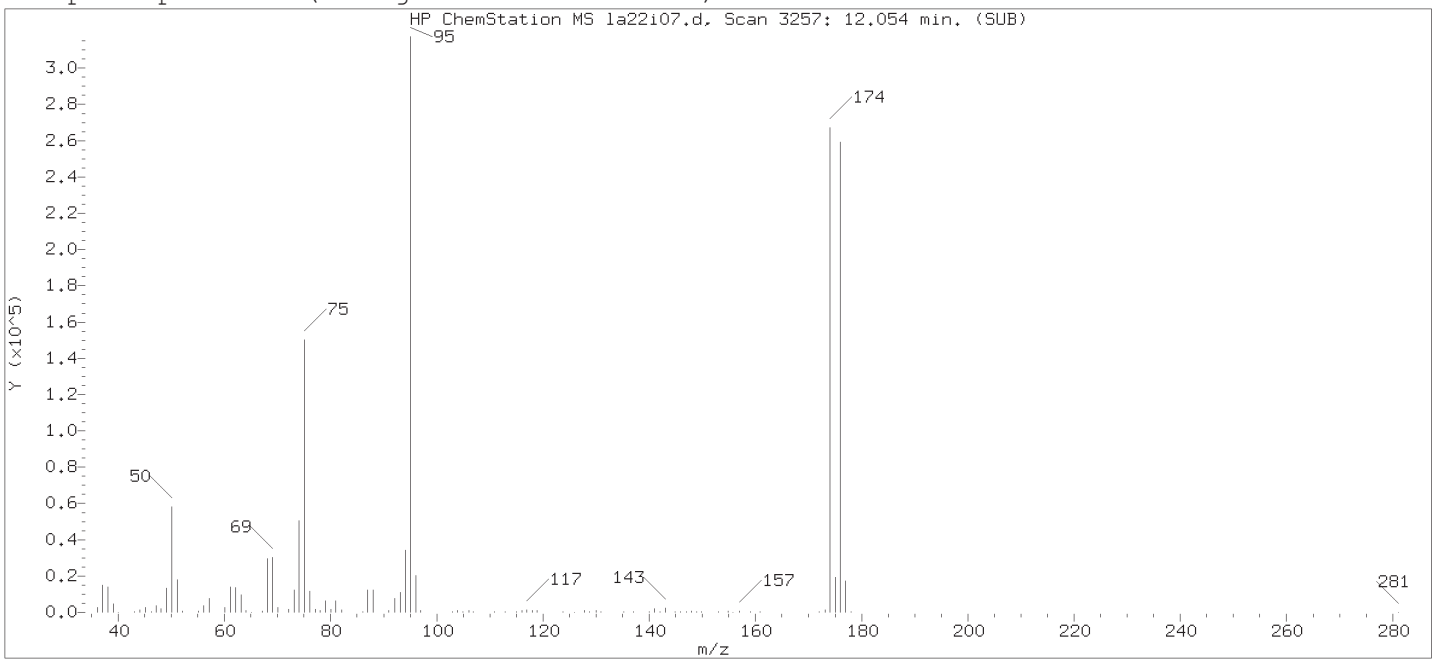
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3234
Retention Time (minutes): 11.980
Quant Ion : 55.00
Area (flag) : 19423A
On-Column Amount (ng) : 43.1004
Integration start scan : 3222 Integration stop scan: 3249
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

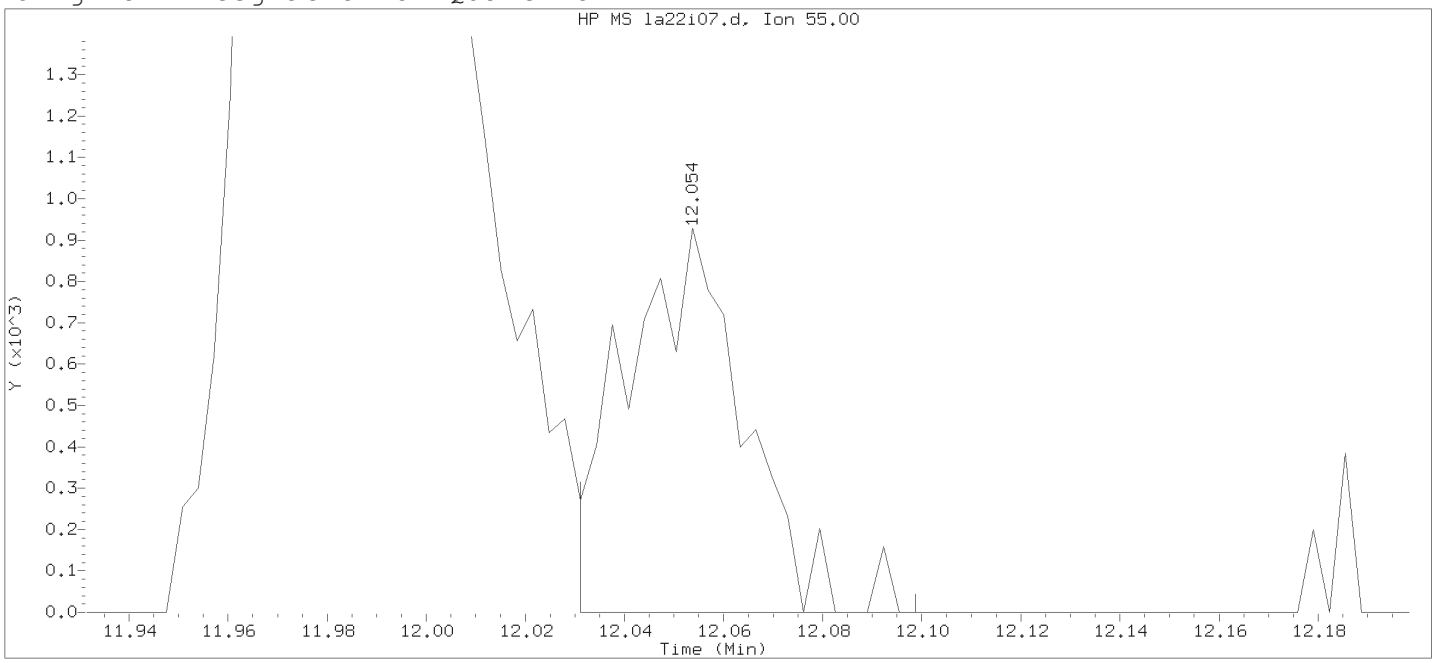
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

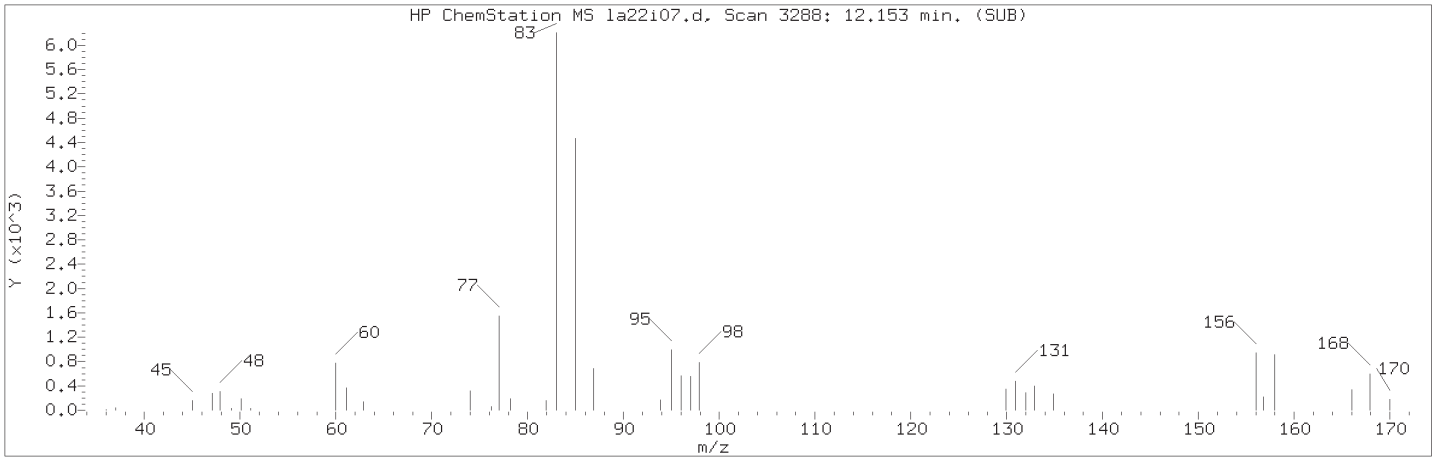
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

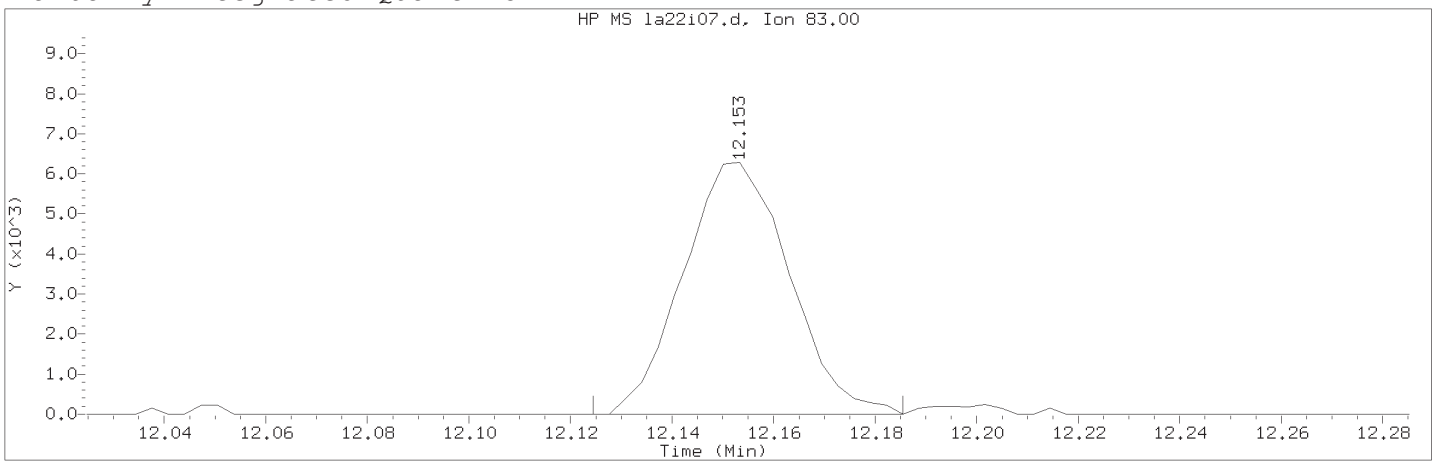
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 3257
Retention Time (minutes): 12.054
Quant Ion : 55.00
Area : 1554
On-column Amount (ng) : 3.8900
Integration start scan : 3249 Integration stop scan: 3270
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:35
Date, time and analyst ID of latest file update: 22-Apr-2016 12:35 bwk03231

Sample Name: VSTD001 Lab Sample ID: VSTD001

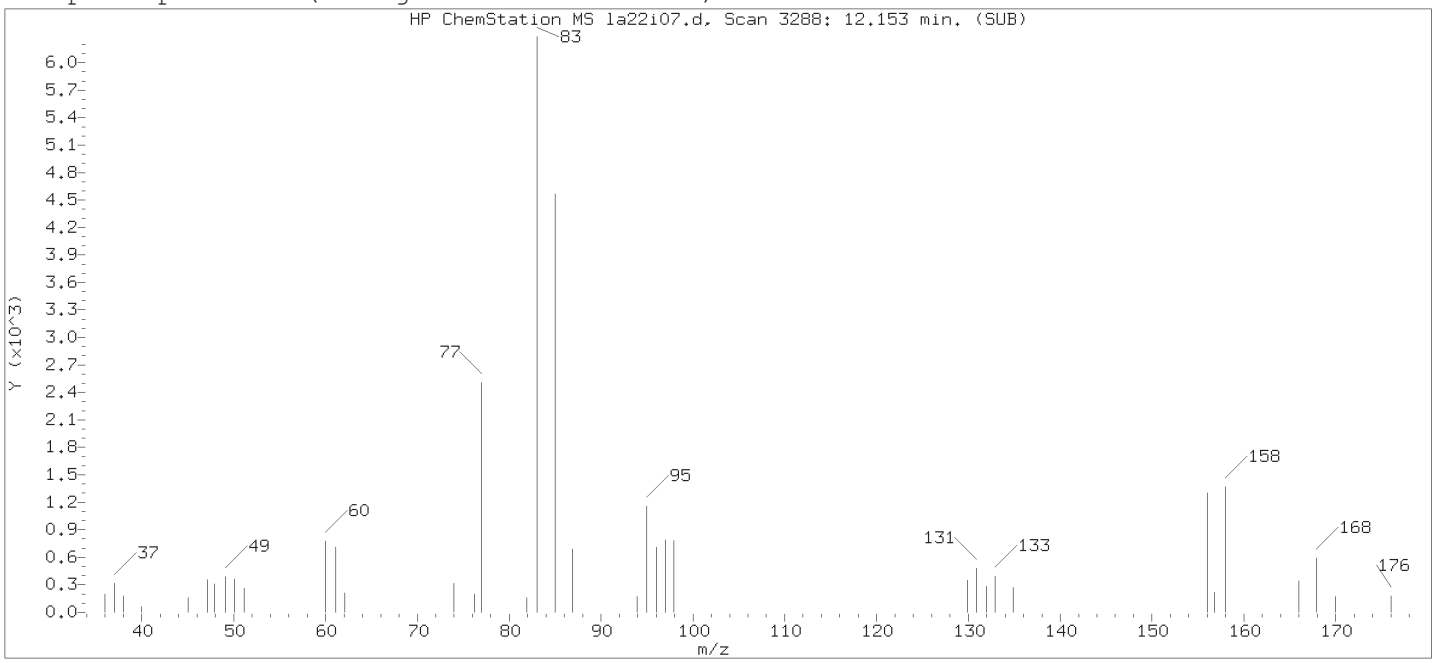
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area (flag) : 9092M
On-Column Amount (ng) : 0.9144
Integration start scan : 3278 Integration stop scan: 3297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

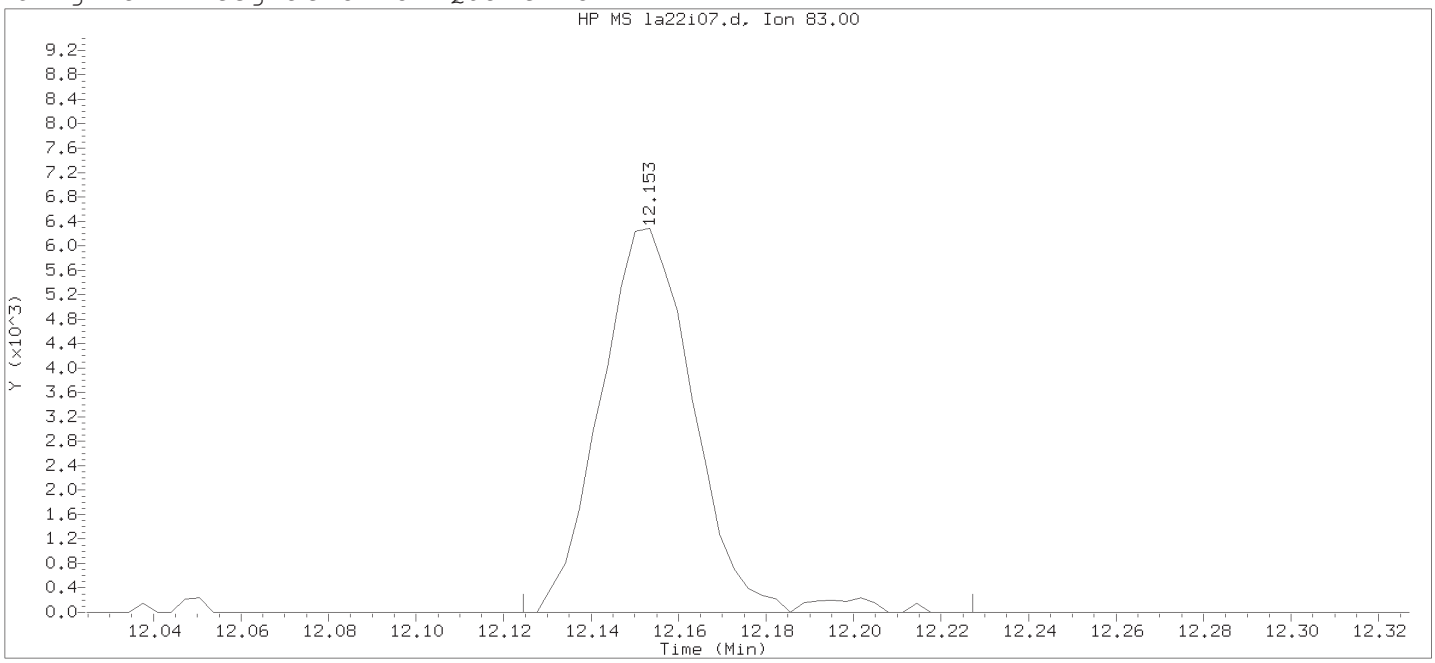
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:44.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



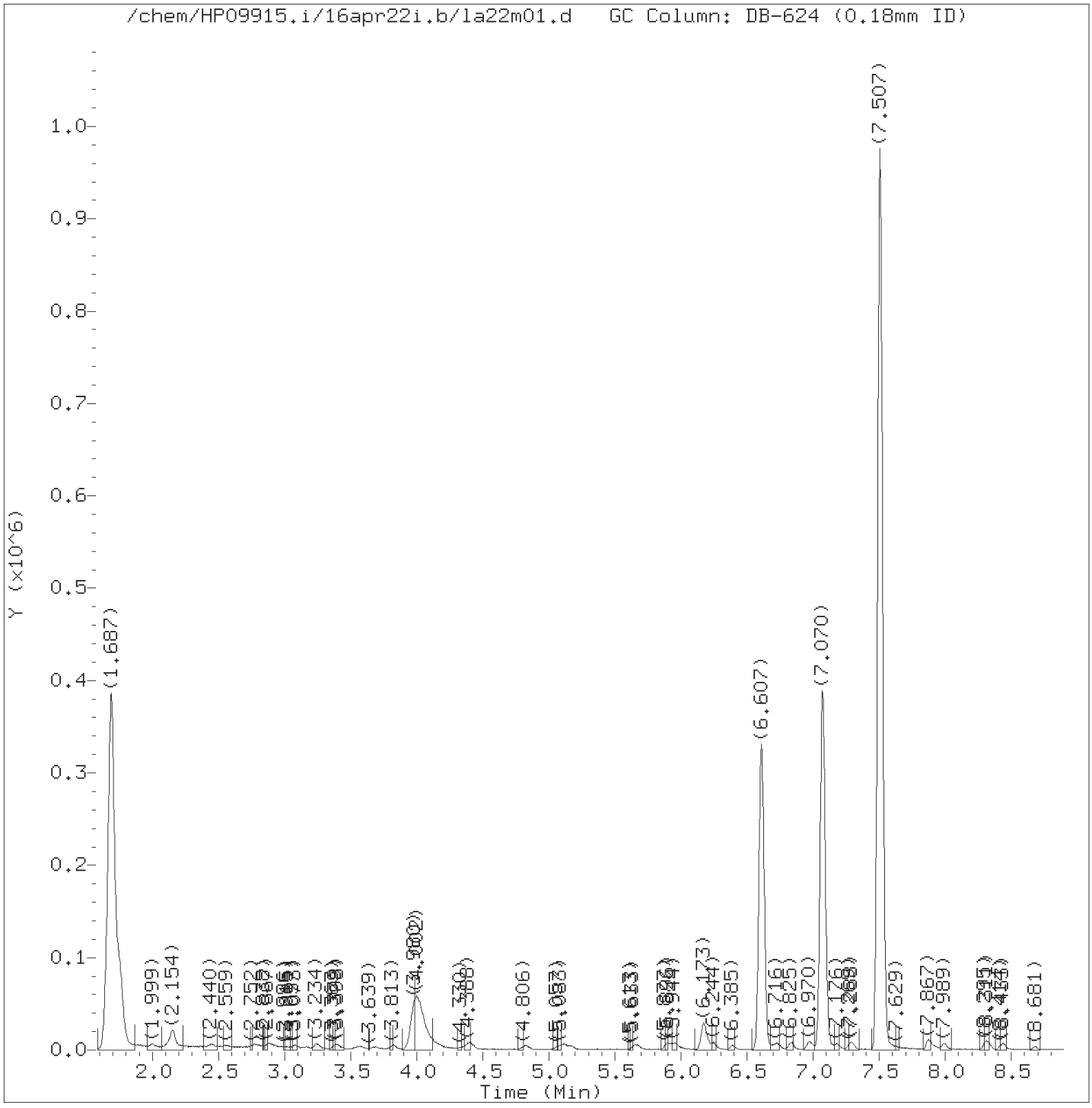
Data File: /chem/HP09915.i/16apr22i.b/la22i07.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:07 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:26
Date, time and analyst ID of latest file update: 22-Apr-2016 12:26 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area : 9336
On-column Amount (ng) : 0.9357
Integration start scan : 3278 Integration stop scan: 3310
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:44.
Target 3.5 esignature date: 04/22/2016 13:31



Total Ion Chromatogram (TIC)

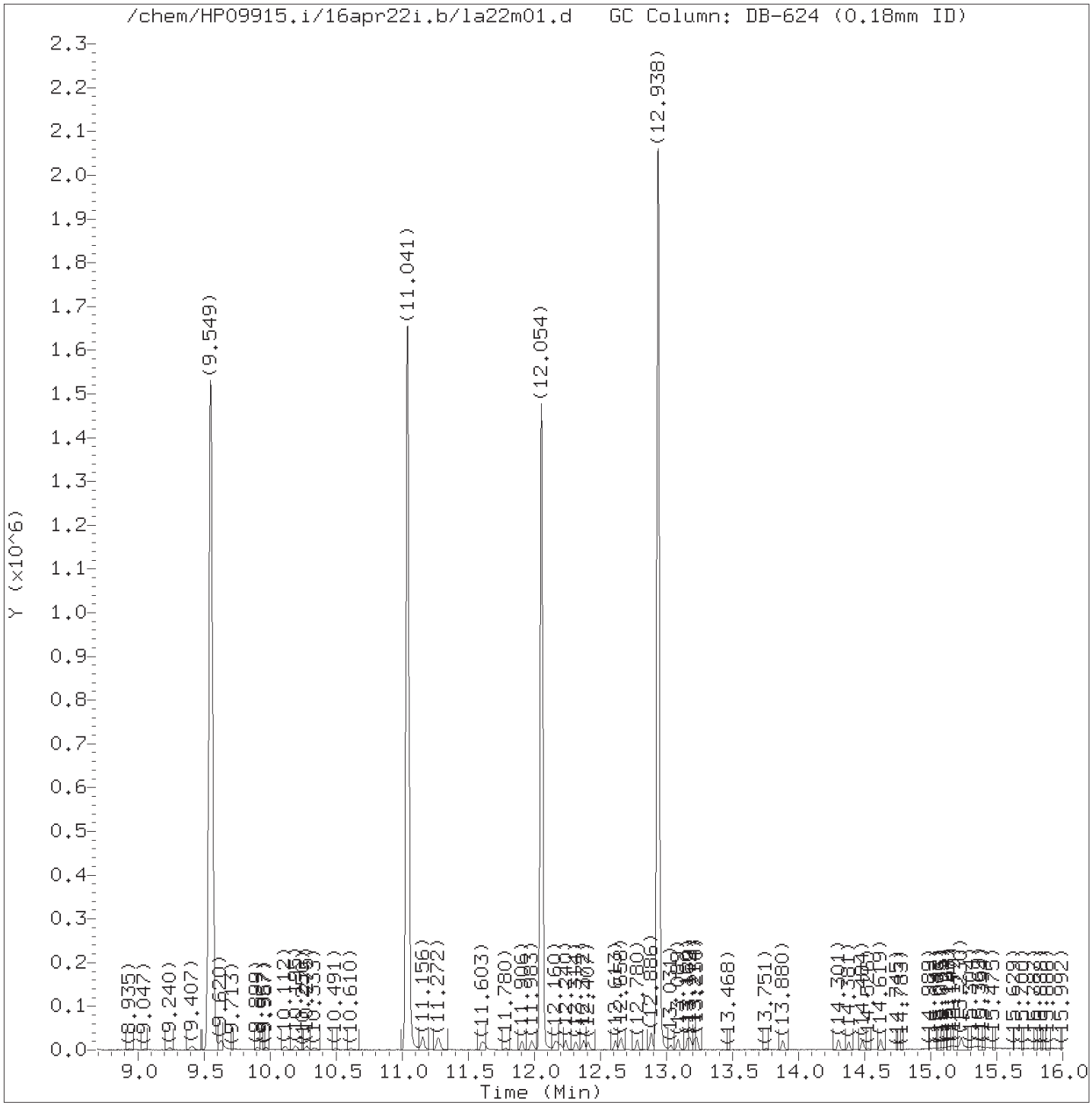
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.890	85	3384	0.368
4) Chloromethane	(2)	1.993	50	3865	0.418
6) Vinyl Chloride	(2)	2.128	62	3544	0.407
5) 1,3-Butadiene	(2)	2.147	39	14893M	0.983
8) Bromomethane	(2)	2.446	94	2296M	0.406
9) Chloroethane	(2)	2.556	64	2422M	0.508
10) Dichlorofluoromethane	(2)	2.768	67	4727	0.424
12) Trichlorofluoromethane	(2)	2.826	101	3539	0.386
11) n-Pentane	(2)	2.880	43	4977M	0.474
14) Ethyl ether	(2)	3.080	59	2940	0.451
15) Freon 123a	(2)	3.150	67	3174	0.417
16) Acrolein	(1)	3.244	56	9517	5.214
17) 1,1-Dichloroethene	(2)	3.375	96	2131	0.393
18) Acetone	(1)	3.392	58	698	0.854
19) Freon 113	(2)	3.408	101	2006	0.385
21) 2-Propanol	(1)	3.556	45	7033M	11.224
22) Methyl Iodide	(2)	3.578	142	3976	0.395
23) Carbon Disulfide	(2)	3.681	76	7276	0.399
27) Methyl Acetate	(2)	3.803	43	3385	0.463
25) Allyl Chloride	(2)	3.822	41	4173	0.398
29)*t-Butyl alcohol-d10	(1)	3.999	65	213353	250.000
28) Methylene Chloride	(2)	4.002	84	3199	0.478
30) t-Butyl alcohol	(1)	4.102	59	11615M	11.431
31) Acrylonitrile	(2)	4.327	53	1310	0.355
33) Methyl Tertiary Butyl Ether	(2)	4.385	73	9133	0.435
32) trans-1,2-Dichloroethene	(2)	4.411	96	2615	0.425
34) n-Hexane	(2)	4.826	57	3938M	0.414
36) 1,1-Dichloroethane	(2)	5.063	63	4971	0.407
38) di-Isopropyl ether	(2)	5.115	45	9785	0.417
39) 2-Chloro-1,3-butadiene	(2)	5.179	53	3225	0.335
40) Ethyl t-butyl ether	(2)	5.665	59	8613	0.403
44) 2-Butanone	(2)	5.883	43	4299	0.905
42) cis-1,2-Dichloroethene	(2)	5.896	96	3070	0.443
45) 2,2-Dichloropropane	(2)	5.909	77	3035M	0.358
47) Propionitrile	(1)	5.951	54	13018	9.897
43) 1,2-Dichloroethene (Total)	(2)		96	5685	0.867
48) Methacrylonitrile	(2)	6.170	67	16469	4.498
49) Bromochloromethane	(2)	6.231	128	1636	0.463

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.260	71	886	0.805
51) Chloroform	(2)	6.385	83	5096	0.459
52)$Dibromofluoromethane	(2)	6.610	113	285277	48.459
53) 1,1,1-Trichloroethane	(2)	6.616	97	3743	0.379
54) Cyclohexane	(2)	6.719	56	4648	0.409
55) 1,1-Dichloropropene	(2)	6.829	75	3511	0.387
56) Carbon Tetrachloride	(2)	6.838	117	2691	0.364
58) Isobutyl Alcohol	(1)	6.964	41	9427M	26.372
57)$1,2-Dichloroethane-d4	(2)	7.070	102	71737	48.268
60) Benzene	(2)	7.096	78	11143	0.419
61) 1,2-Dichloroethane	(2)	7.176	62	5624	0.571
65) t-Amyl methyl ether	(2)	7.295	73	8142M	0.411
66)*Fluorobenzene	(2)	7.507	96	1239152	50.000
67) n-Heptane	(2)	7.520	43	4788	0.454
69) n-Butanol	(1)	7.877	56	11495M	41.251
71) Trichloroethene	(2)	7.989	95	2992	0.445
72) Methylcyclohexane	(2)	8.311	83	4345	0.392
73) 1,2-Dichloropropane	(2)	8.333	63	2945	0.402
76) Methyl Methacrylate	(2)	8.423	69	2081M	0.339
75) 1,4-Dioxane	(1)	8.433	88	1749	18.530
74) Dibromomethane	(2)	8.446	93	1694	0.373
78) Bromodichloromethane	(2)	8.677	83	3365	0.406
79) 2-Nitropropane	(2)	8.941	41	1755	0.769
80) 2-Chloroethyl Vinyl Ether	(2)	9.063	63	1551	0.297
81) cis-1,3-Dichloropropene	(2)	9.243	75	3848	0.362
82) 4-Methyl-2-pentanone	(2)	9.407	43	7493	0.769
83)$Toluene-d8	(3)	9.549	98	1212177	50.681
88) Toluene	(3)	9.636	92	7239	0.445
89) trans-1,3-Dichloropropene	(3)	9.906	75	3142	0.334
91) Ethyl Methacrylate	(3)	9.967	69	3517	0.337
90) 1,3-Dichloropropene (total)	(3)		100	6990	0.695
92) 1,1,2-Trichloroethane	(3)	10.112	97	2871	0.454
93) Tetrachloroethene	(3)	10.195	166	2982	0.433
94) 1,3-Dichloropropane	(3)	10.282	76	4903	0.438
96) 2-Hexanone	(3)	10.337	43	4518M	0.654
97) Dibromochloromethane	(3)	10.491	129	2183	0.352
99) 1,2-Dibromoethane	(3)	10.613	107	2811	0.414
100)*Chlorobenzene-d5	(3)	11.041	117	913744	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.050	91	5394	0.591
102) Chlorobenzene	(3)	11.063	112	8120	0.441
103) 1,1,1,2-Tetrachloroethane	(3)	11.156	131	2484	0.408
104) Ethylbenzene	(3)	11.160	91	12797	0.408
106) m+p-Xylene	(3)	11.279	106	10000	0.830
107) o-Xylene	(3)	11.603	106	4684	0.395
109) Styrene	(3)	11.623	104	7342	0.368
108) Xylene (Total)	(3)		106	14684	1.226
110) Bromoform	(3)	11.787	173	1848	0.433
111) Isopropylbenzene	(3)	11.906	105	12110	0.402
112) Cyclohexanone	(1)	11.980	55	8761	20.127
114)$4-Bromofluorobenzene	(3)	12.054	95	443171	50.071
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	4535	0.472
115) Bromobenzene	(4)	12.169	156	3788	0.465
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	1531	25.406
117) 1,2,3-Trichloropropane	(4)	12.201	110	1282	0.462
119) n-Propylbenzene	(4)	12.237	91	15665	0.430
120) 2-Chlorotoluene	(4)	12.314	126	3080	0.417
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	10612	0.411
121) 4-Chlorotoluene	(4)	12.407	126	3302	0.423
124) tert-Butylbenzene	(4)	12.613	134	2258	0.423
125) Pentachloroethane	(4)	12.648	167	1682	0.381
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	11008	0.410
127) sec-Butylbenzene	(4)	12.780	105	13551	0.414
129) 1,3-Dichlorobenzene	(4)	12.883	146	7150	0.466
130) p-Isopropyltoluene	(4)	12.886	119	11526	0.405
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	474085	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	8235	0.514
134) 1,2,3-Trimethylbenzene	(4)	12.963	105	12697	0.452
135) Benzyl Chloride	(4)	13.034	91	5324	2.353
136) 1,3-Diethylbenzene	(4)	13.089	119	6996	0.409
137) 1,4-Diethylbenzene	(4)	13.160	119	7804	0.438
139) n-Butylbenzene	(4)	13.179	92	6616	0.455
138) 1,2-Dichlorobenzene	(4)	13.214	146	7594	0.500
140) 1,2-Diethylbenzene	(4)	13.227	119	6522	0.447
141) Diethylbenzene (total)	(4)		100	21322	1.294
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	806	0.434
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	6628	0.548

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

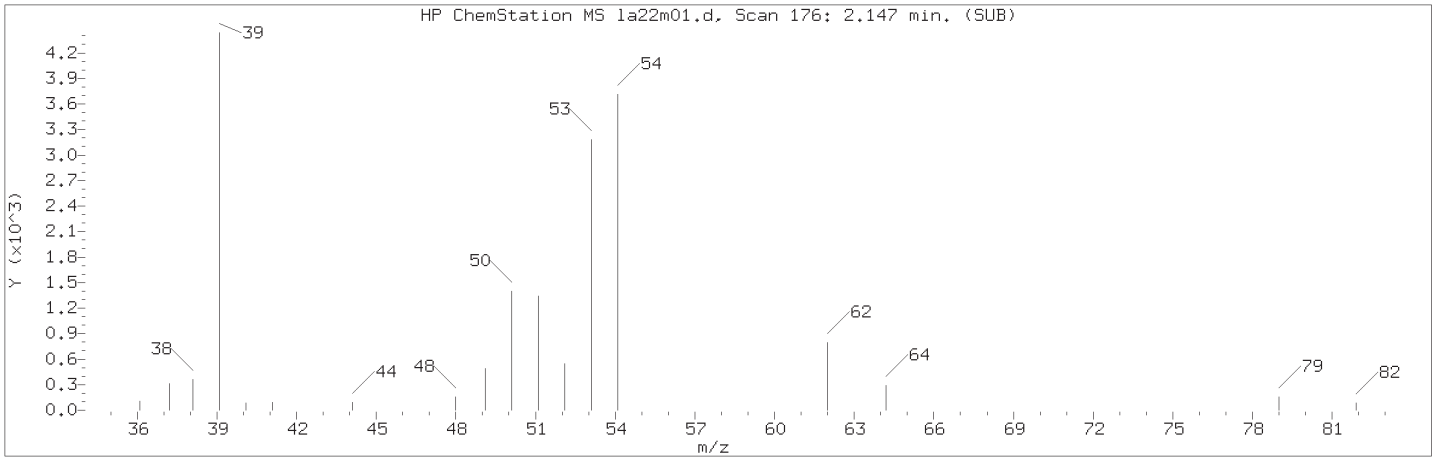
Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.304	180	6743	0.563
147) Hexachlorobutadiene	(4)	14.381	225	3039	0.594
148) Naphthalene	(4)	14.484	128	15880	0.492
149) 1,2,3-Trichlorobenzene	(4)	14.619	180	6845	0.606
150) 2-Methylnaphthalene	(4)	15.227	142	10686M	0.531

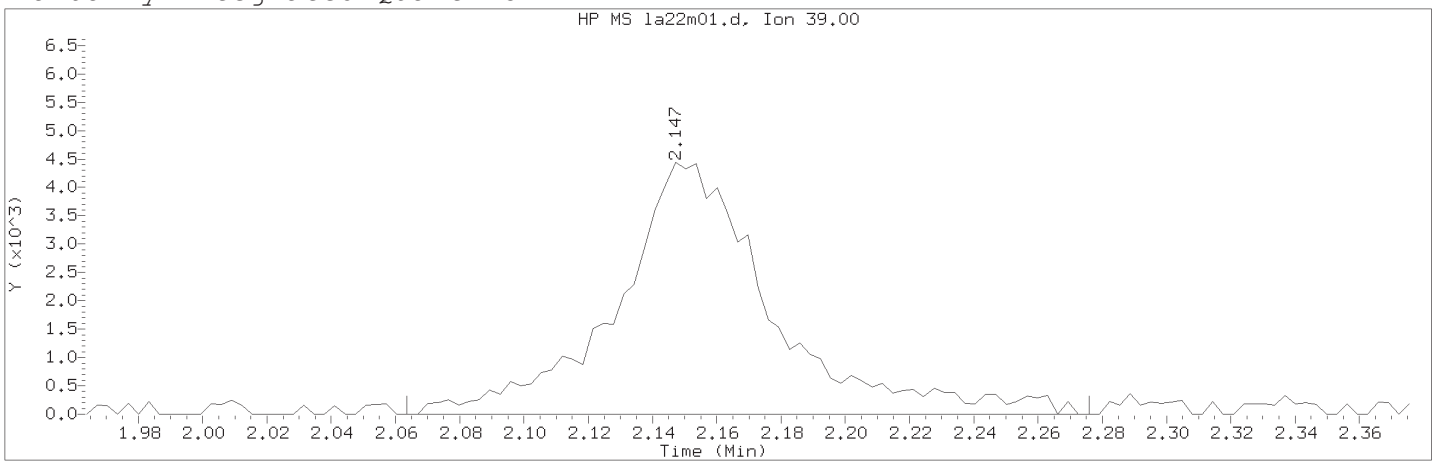
M = Compound was manually integrated.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

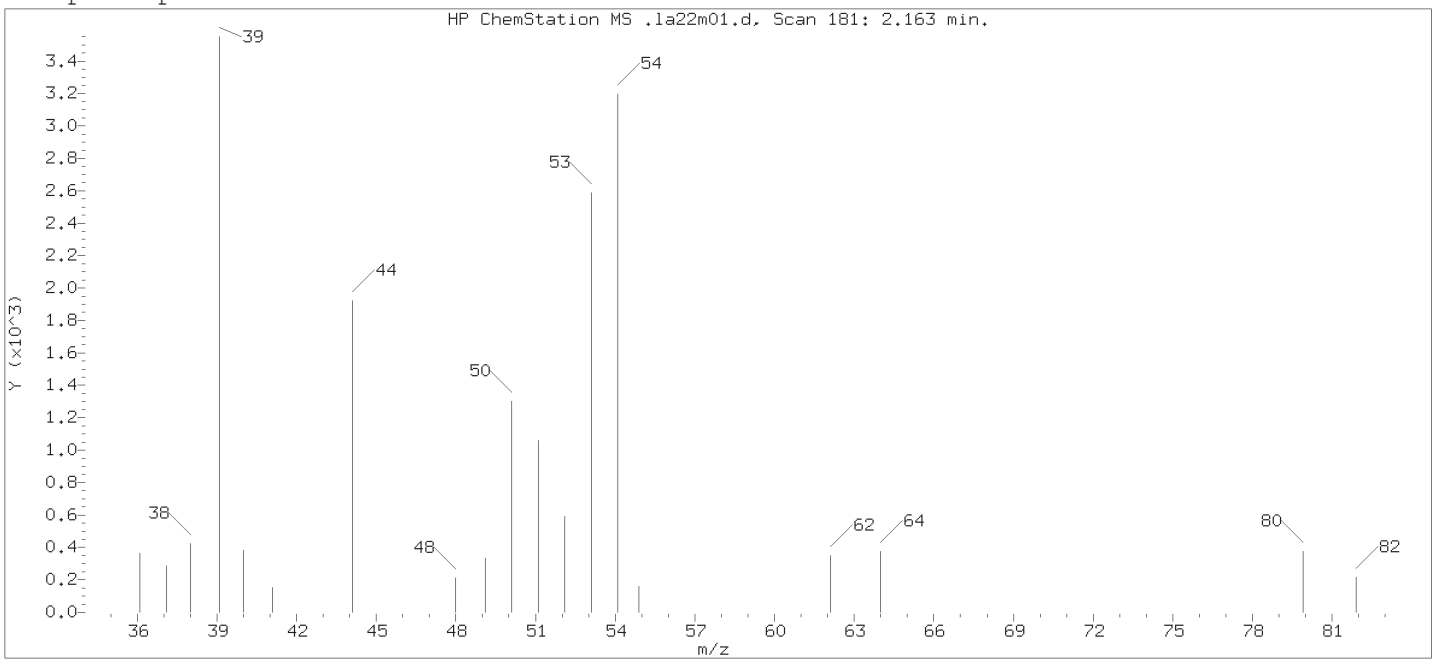
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 176
Retention Time (minutes): 2.147
Quant Ion : 39.00
Area (flag) : 14893M
On-Column Amount (ng) : 0.9834
Integration start scan : 149 Integration stop scan: 215
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

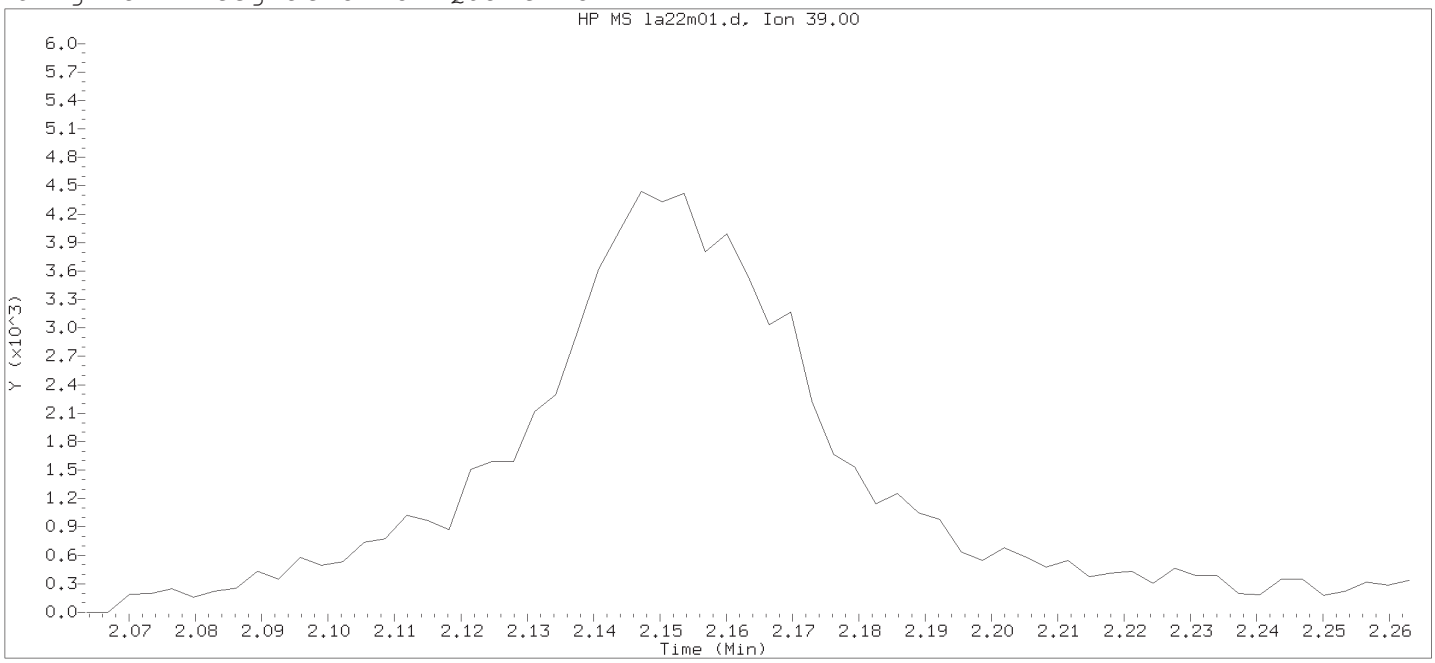
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

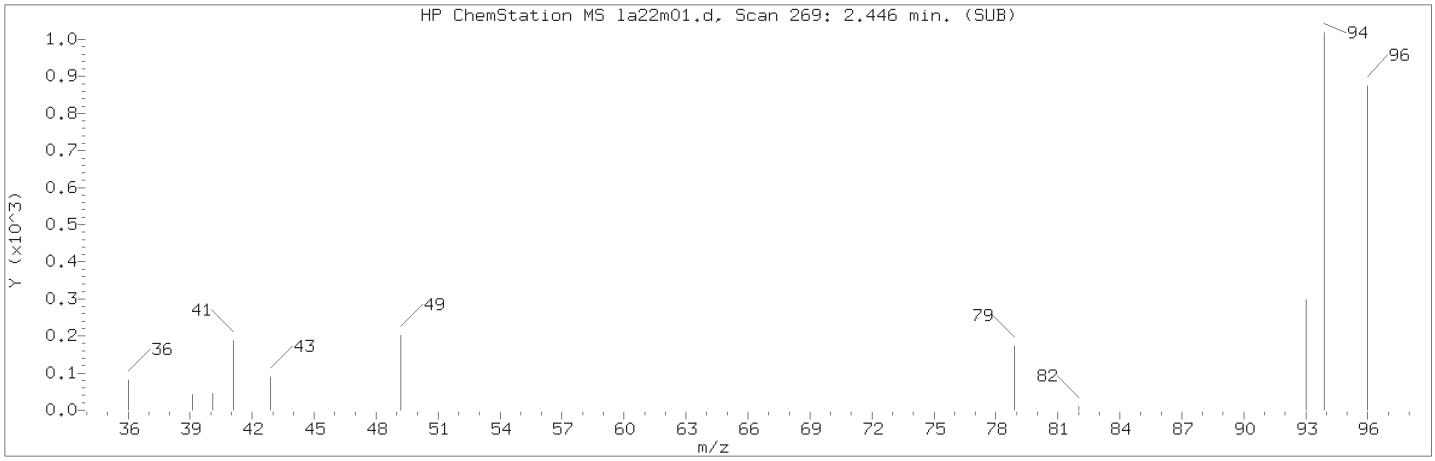
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

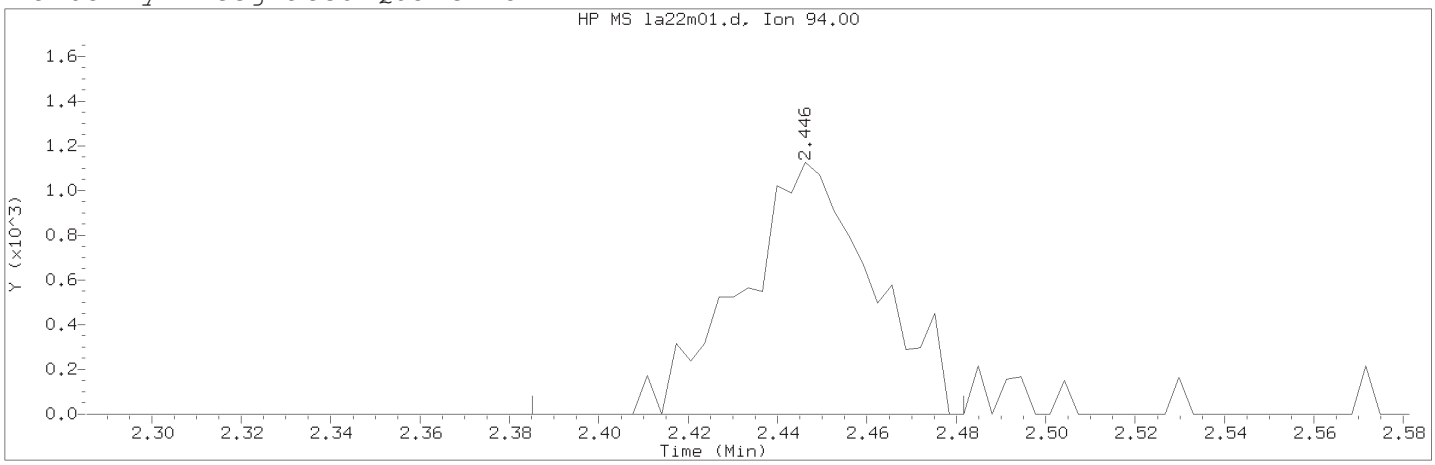
Compound Number : 5
Compound Name : 1,3-Butadiene
Expected RT (minutes) : 2.163
Quant Ion : 39.00

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

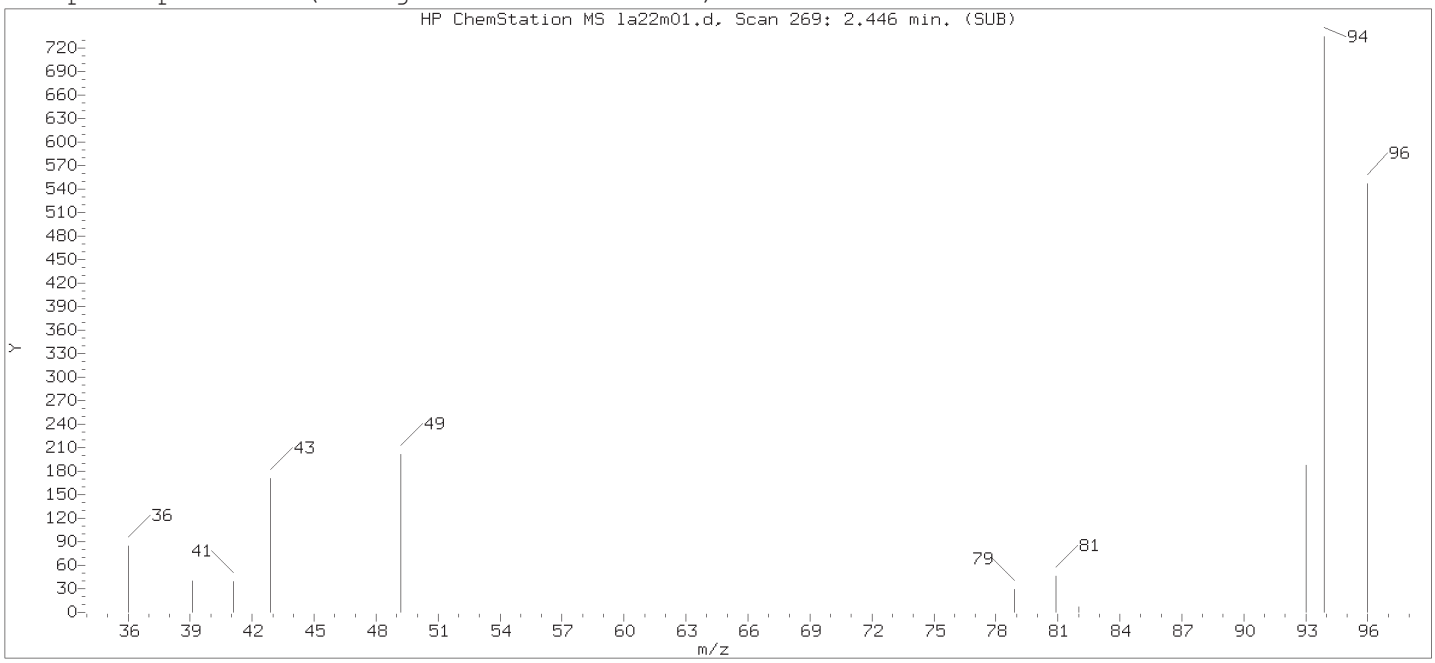
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 269
Retention Time (minutes): 2.446
Quant Ion : 94.00
Area (flag) : 2296M
On-Column Amount (ng) : 0.4063
Integration start scan : 249 Integration stop scan: 279
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

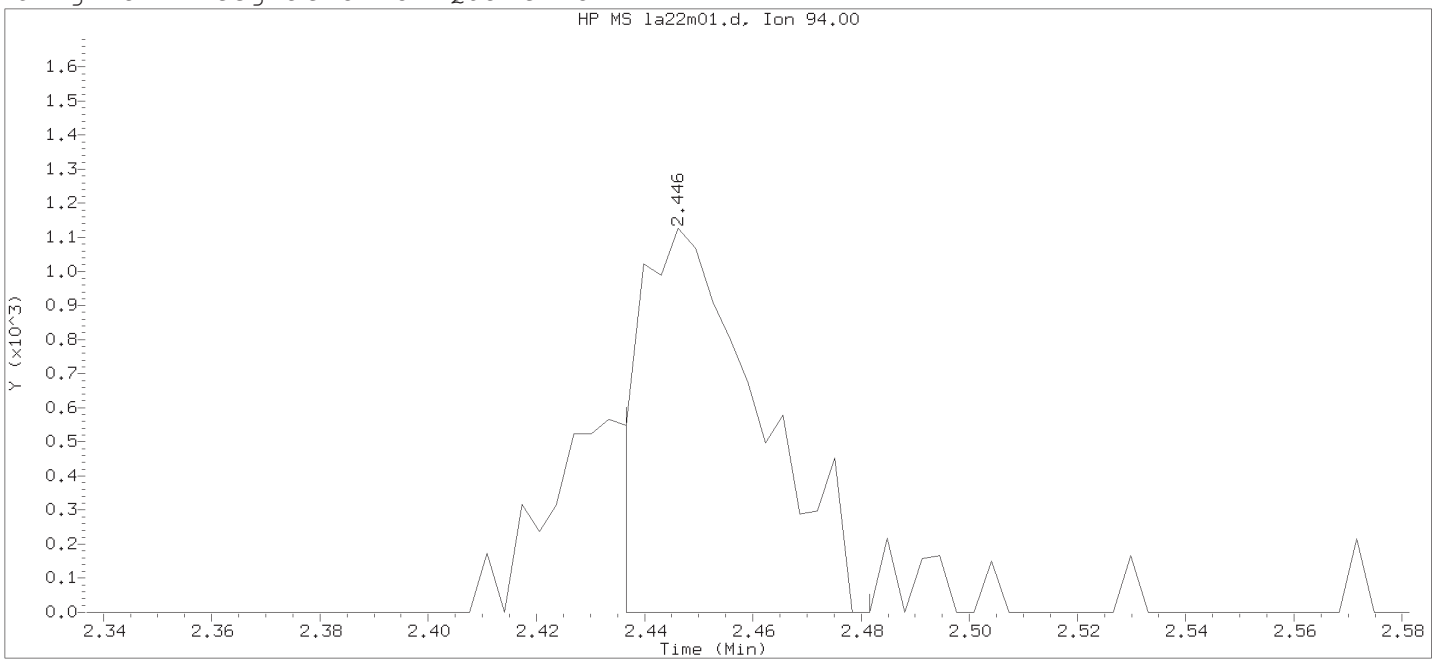
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

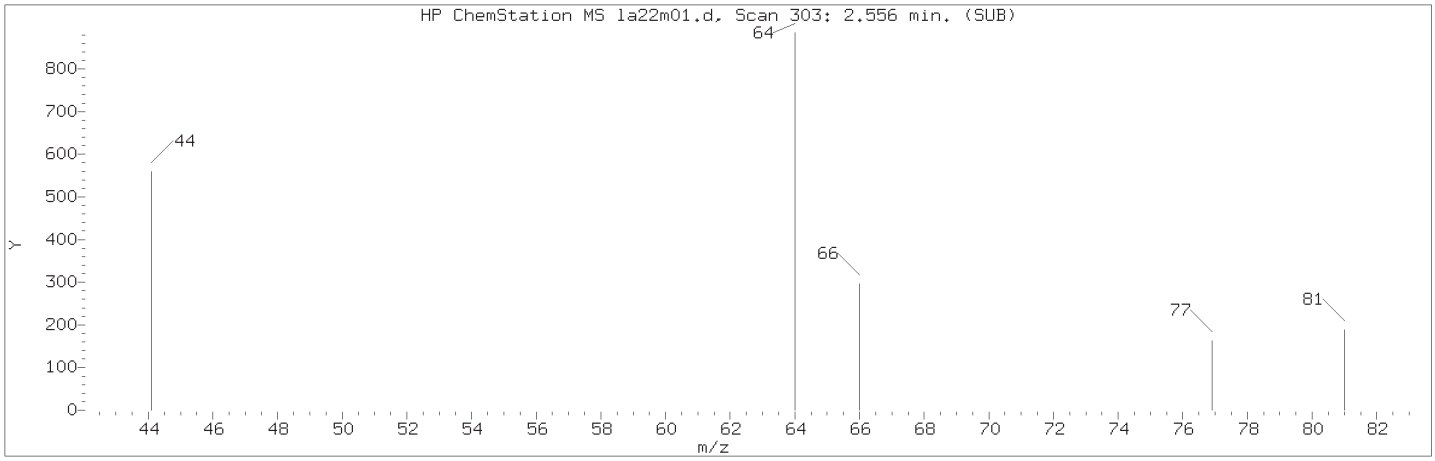
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

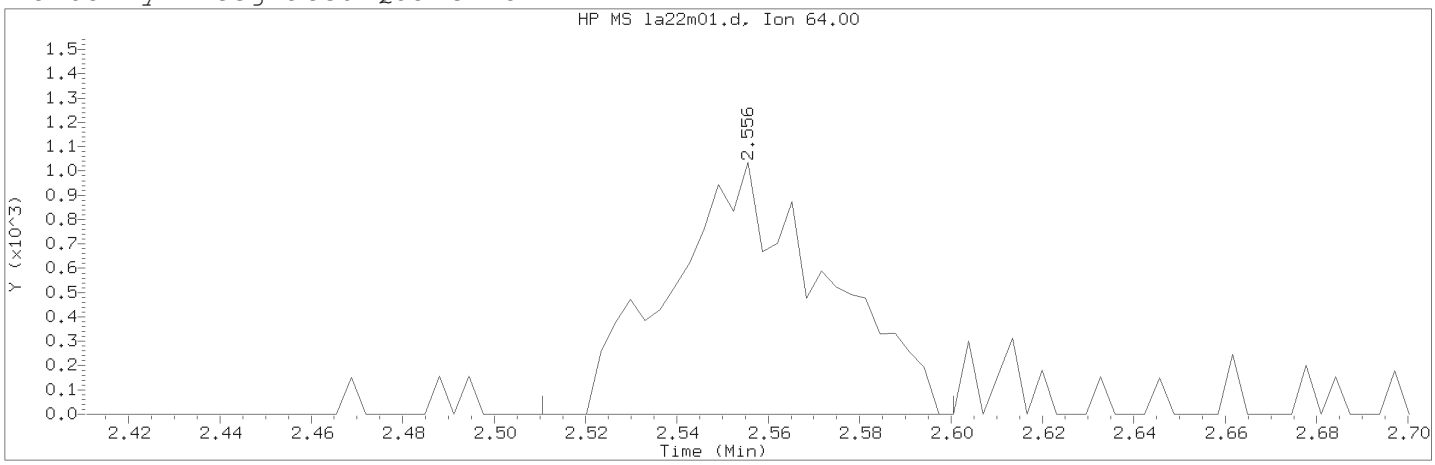
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 269
Retention Time (minutes): 2.446
Quant Ion : 94.00
Area : 1731
On-column Amount (ng) : 0.3064
Integration start scan : 265 Integration stop scan: 279
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

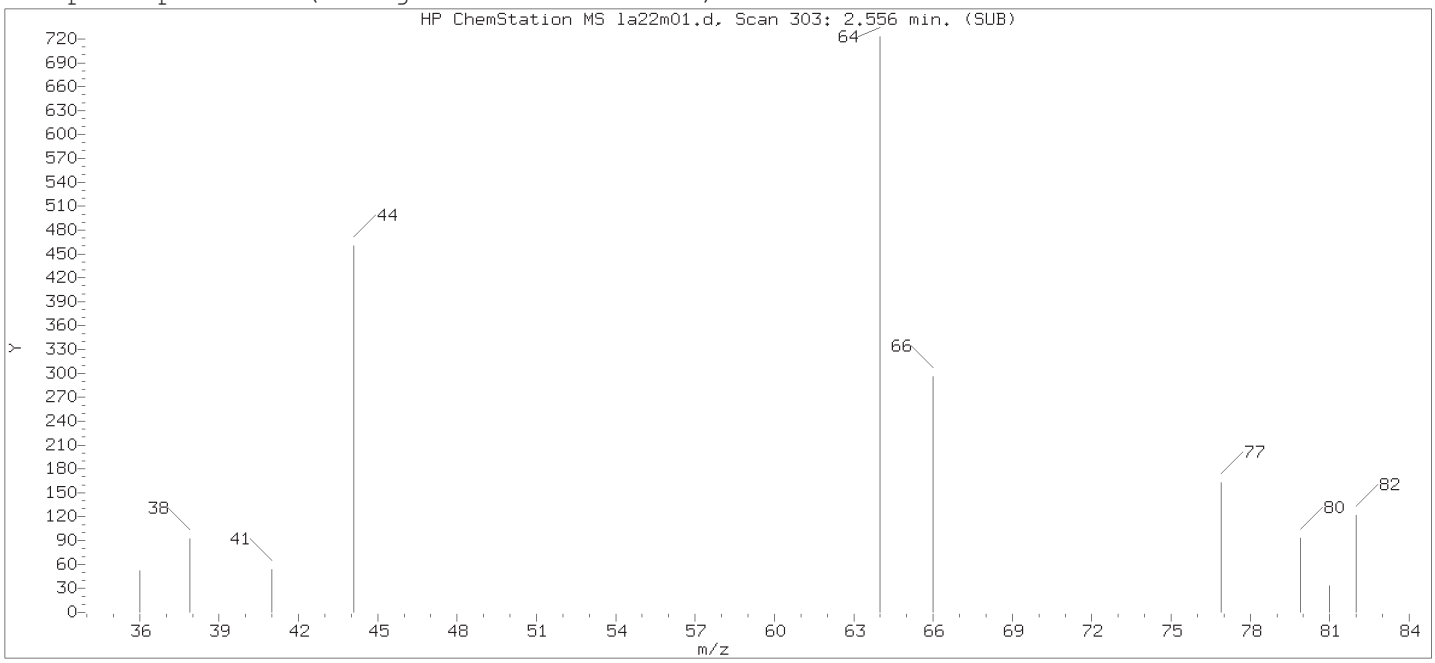
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 303
Retention Time (minutes): 2.556
Quant Ion : 64.00
Area (flag) : 2422M
On-Column Amount (ng) : 0.5078
Integration start scan : 288 Integration stop scan: 316
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

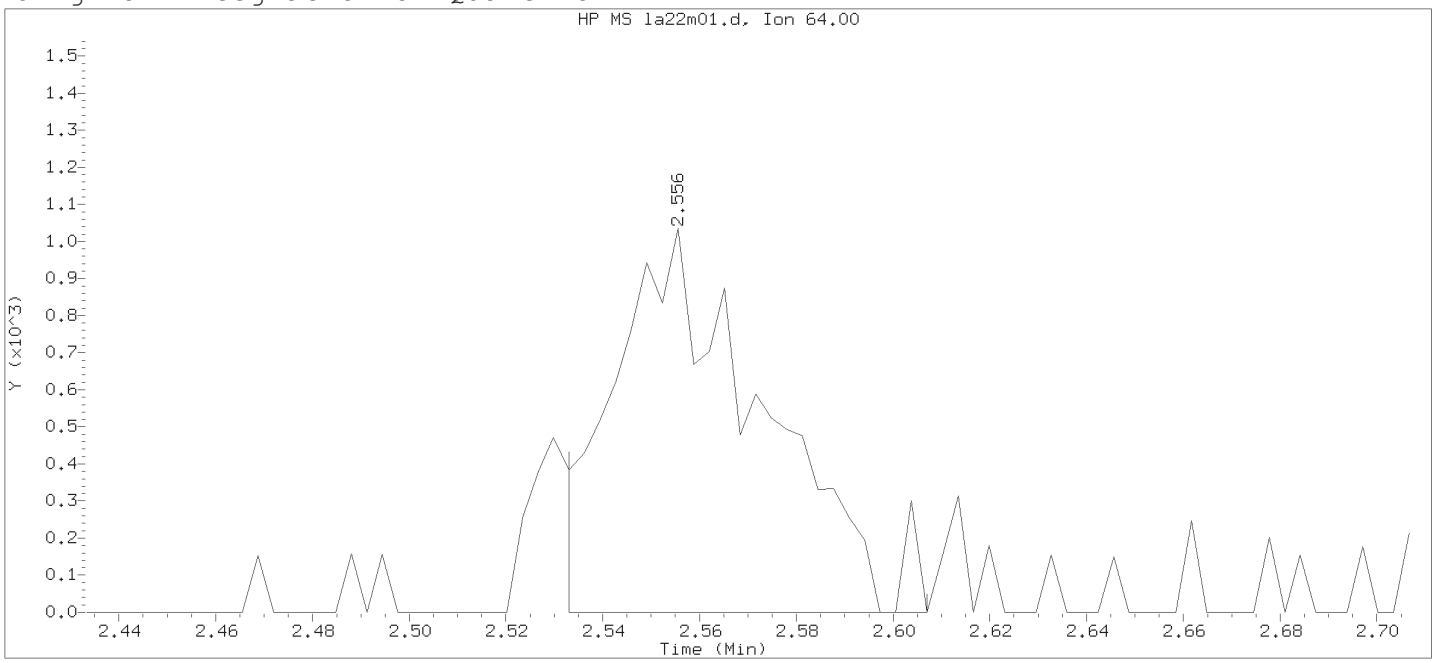
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

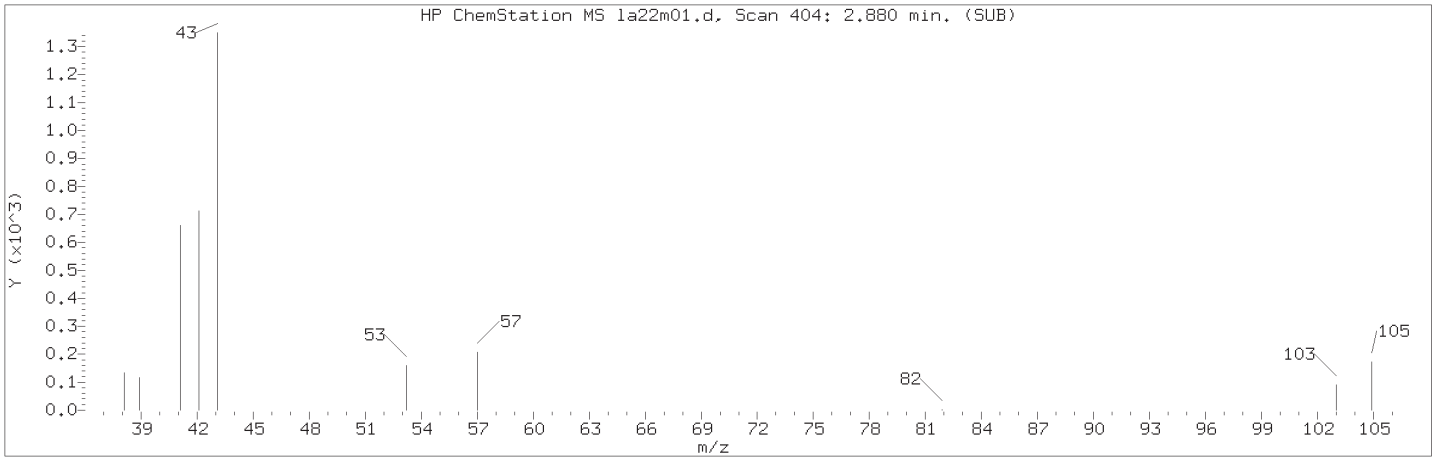
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

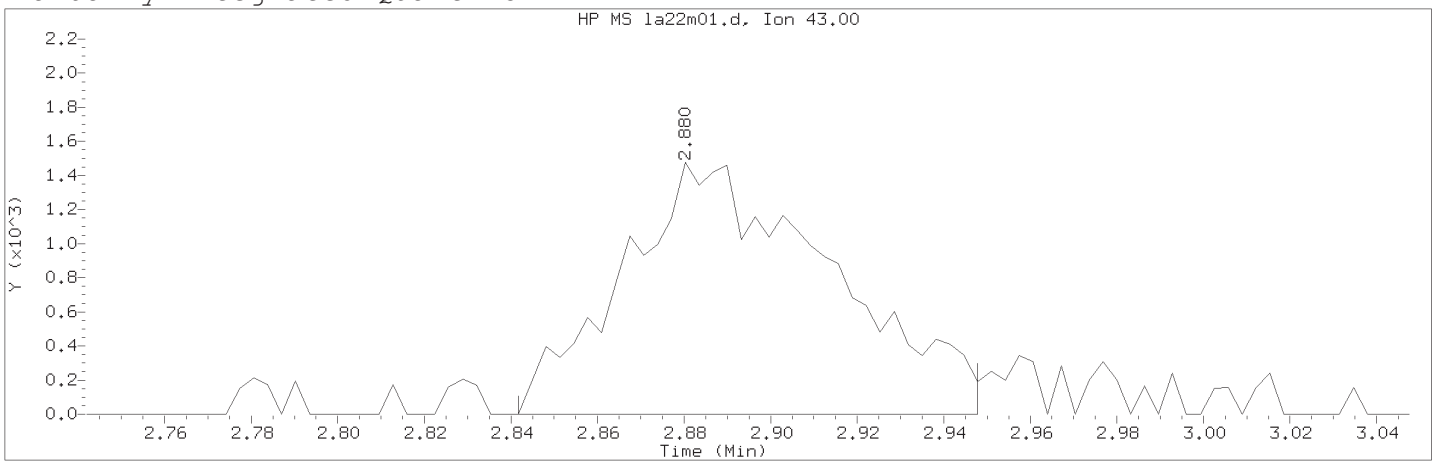
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 303
Retention Time (minutes): 2.556
Quant Ion : 64.00
Area : 2229
On-column Amount (ng) : 0.4676
Integration start scan : 295 Integration stop scan: 318
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

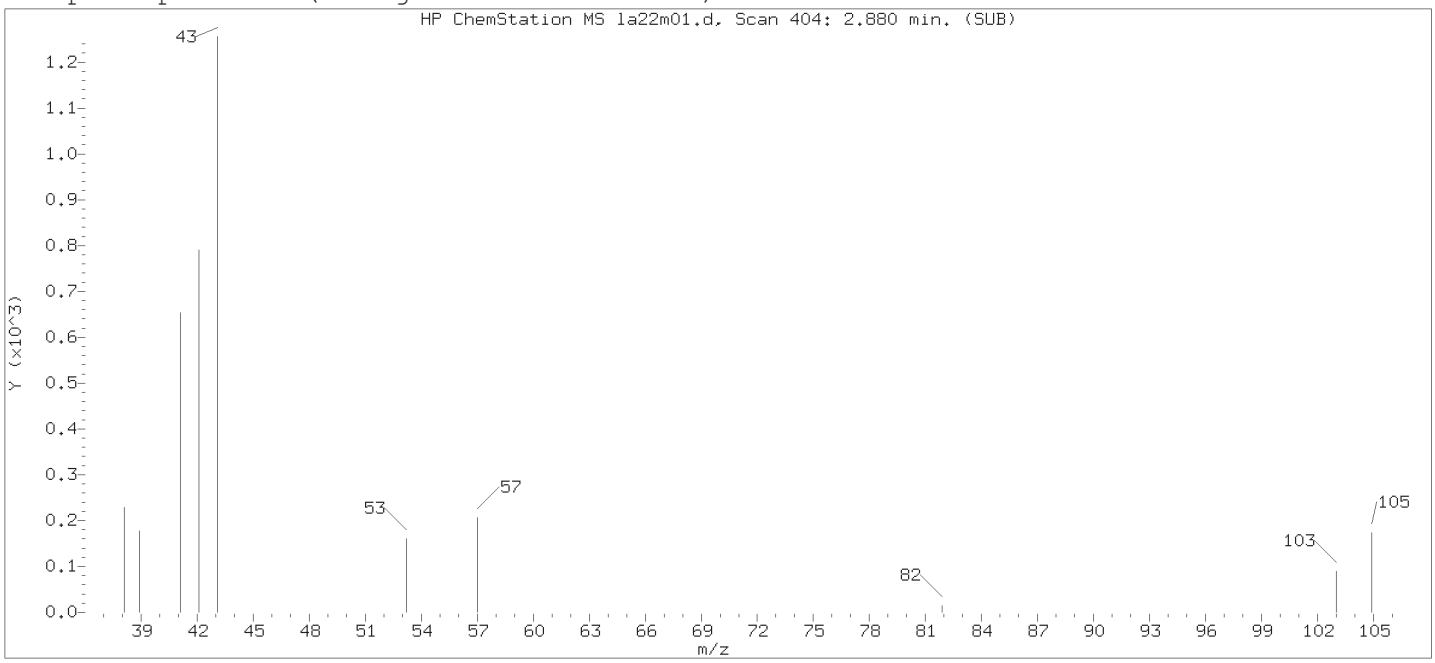
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 404
Retention Time (minutes): 2.880
Quant Ion : 43.00
Area (flag) : 4977M
On-Column Amount (ng) : 0.4736
Integration start scan : 391 Integration stop scan: 424
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

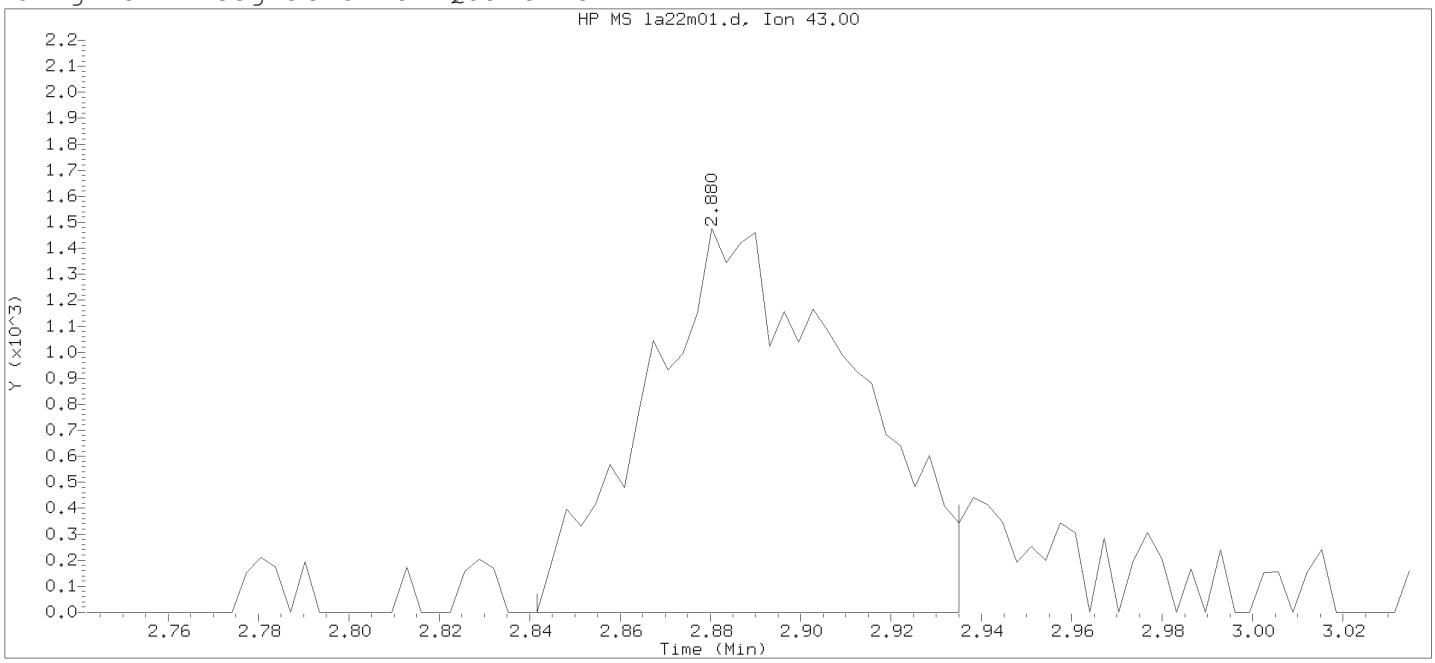
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

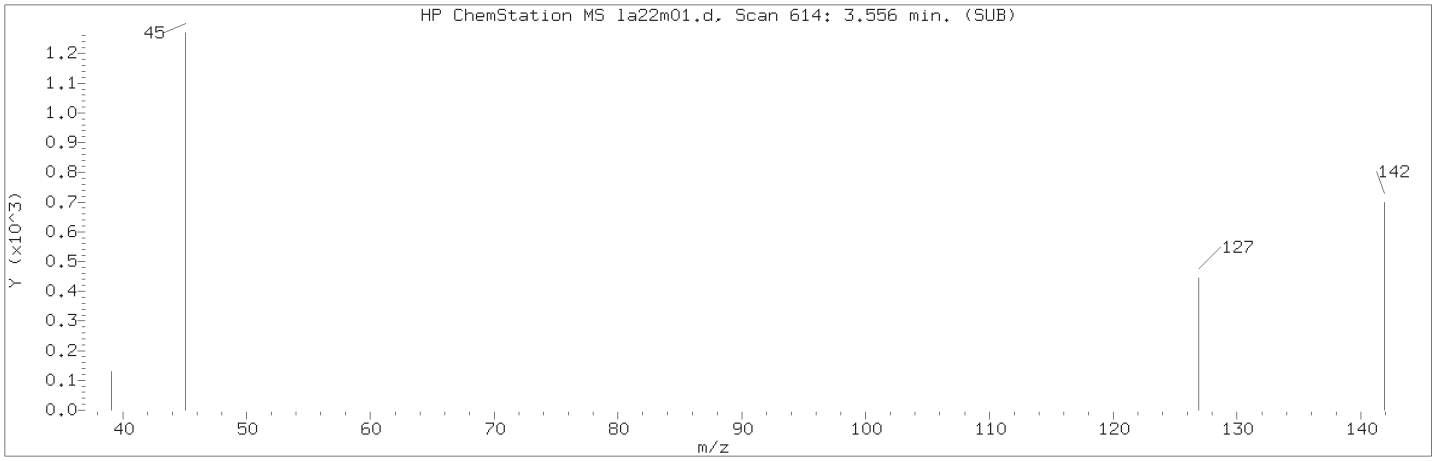
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

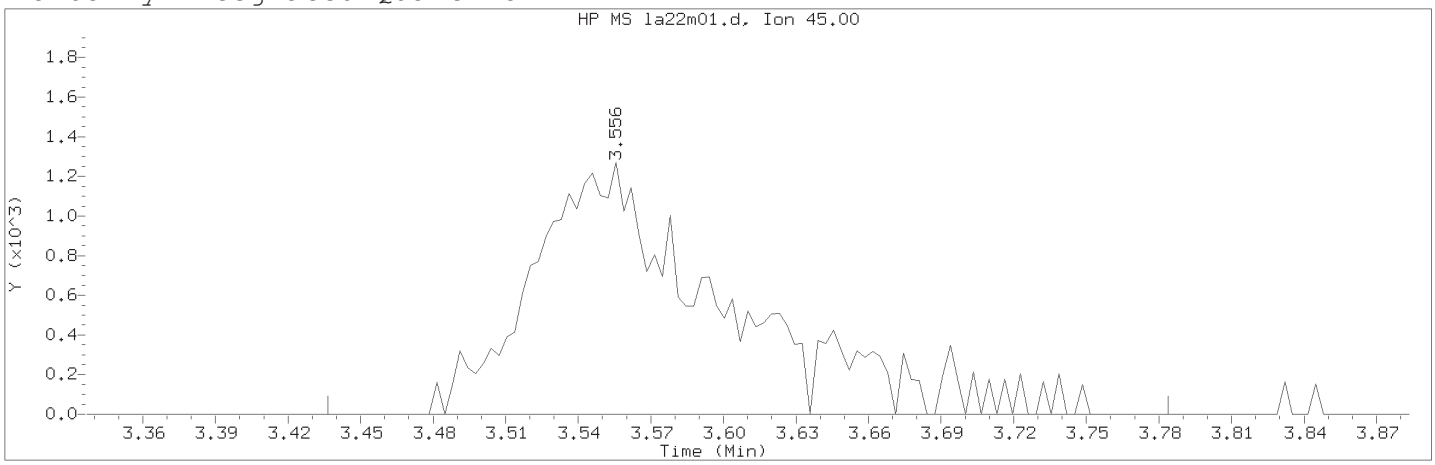
Compound Number	: 11		
Compound Name	: n-Pentane		
Scan Number	: 404		
Retention Time (minutes)	: 2.880		
Quant Ion	: 43.00		
Area	: 4675		
On-column Amount (ng)	: 0.4449		
Integration start scan	: 391	Integration stop scan:	420
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

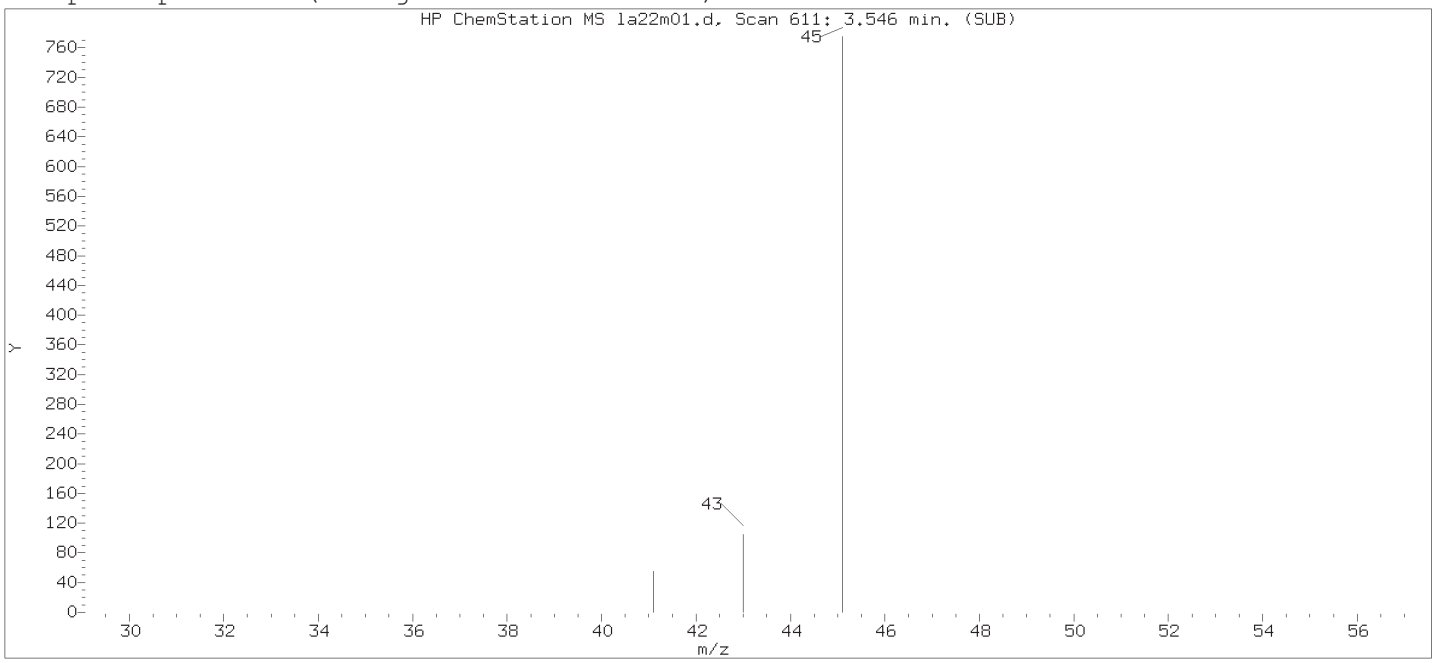
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 614
Retention Time (minutes): 3.556
Quant Ion : 45.00
Area (flag) : 7033M
On-Column Amount (ng) : 11.2245
Integration start scan : 576 Integration stop scan: 684
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

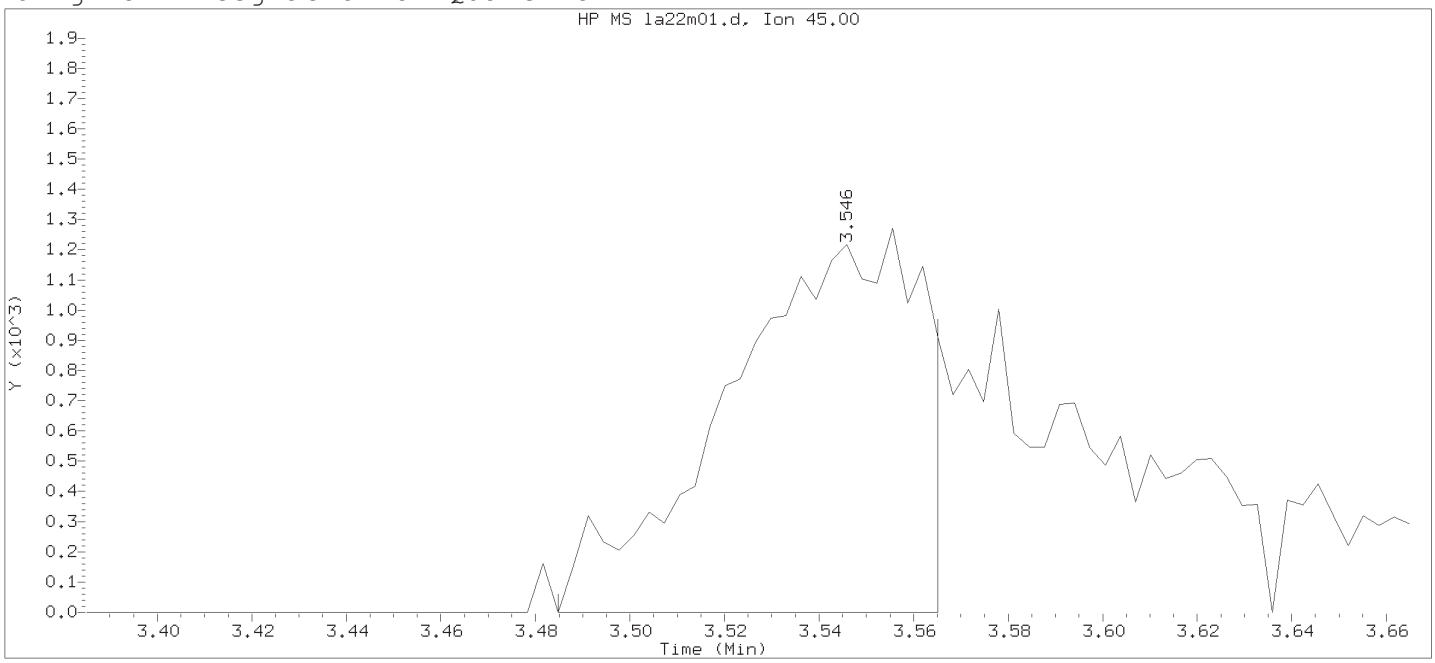
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

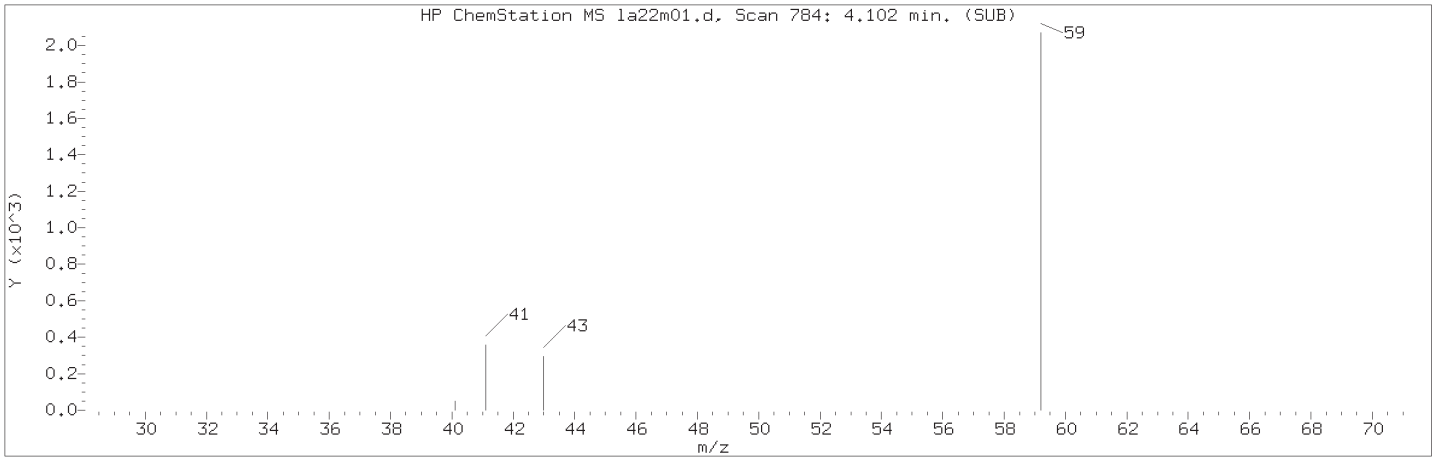
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

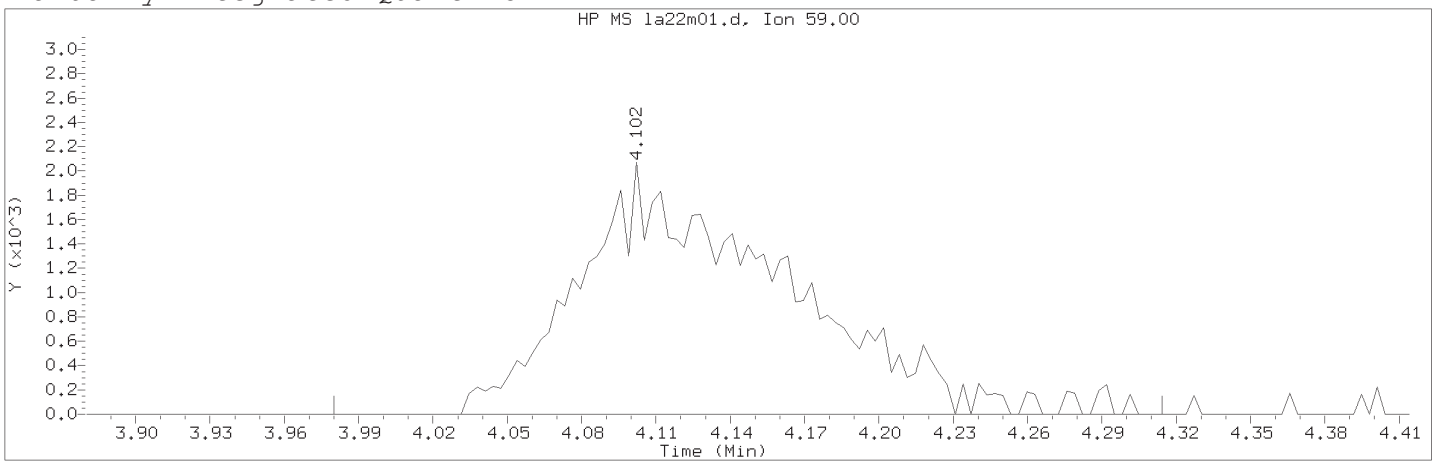
Compound Number	: 21		
Compound Name	: 2-Propanol		
Scan Number	: 611		
Retention Time (minutes)	: 3.546		
Quant Ion	: 45.00		
Area	: 3510		
On-column Amount (ng)	: 5.6033		
Integration start scan	: 591	Integration stop scan:	616
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

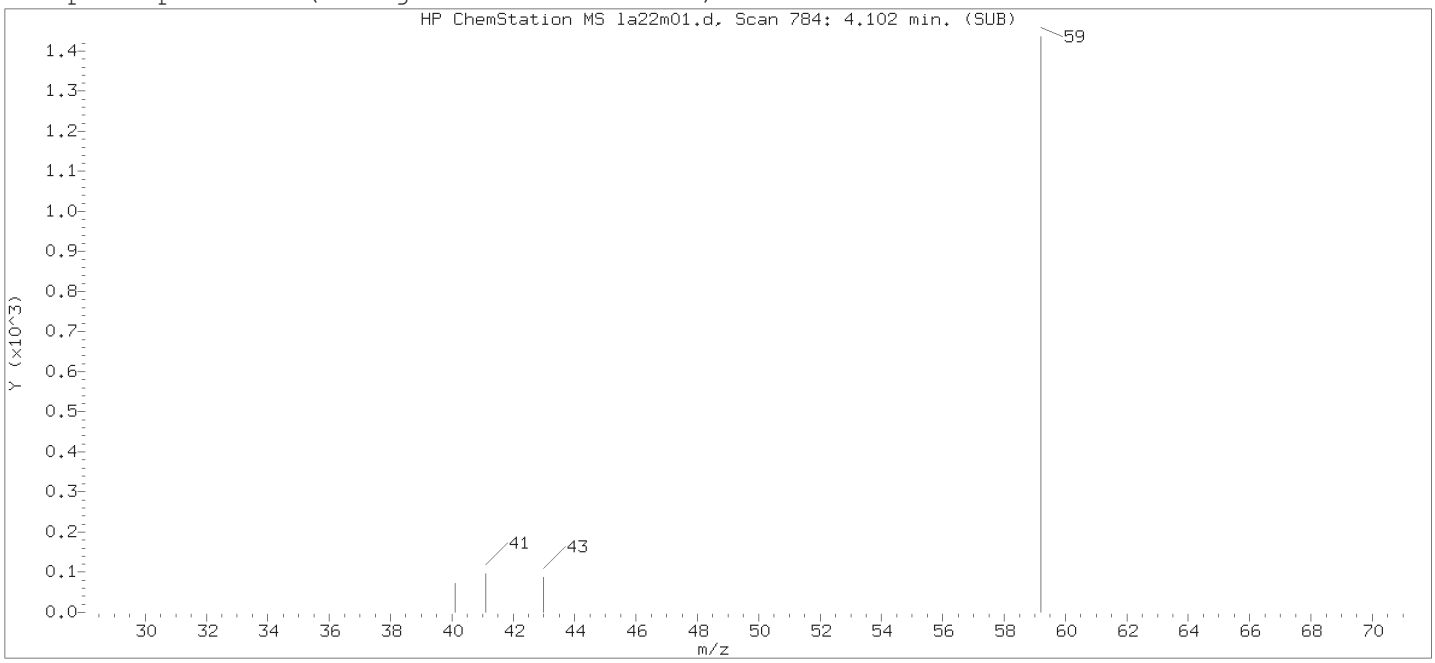
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 784
Retention Time (minutes): 4.102
Quant Ion : 59.00
Area (flag) : 11615M
On-Column Amount (ng) : 11.4307
Integration start scan : 745 Integration stop scan: 849
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

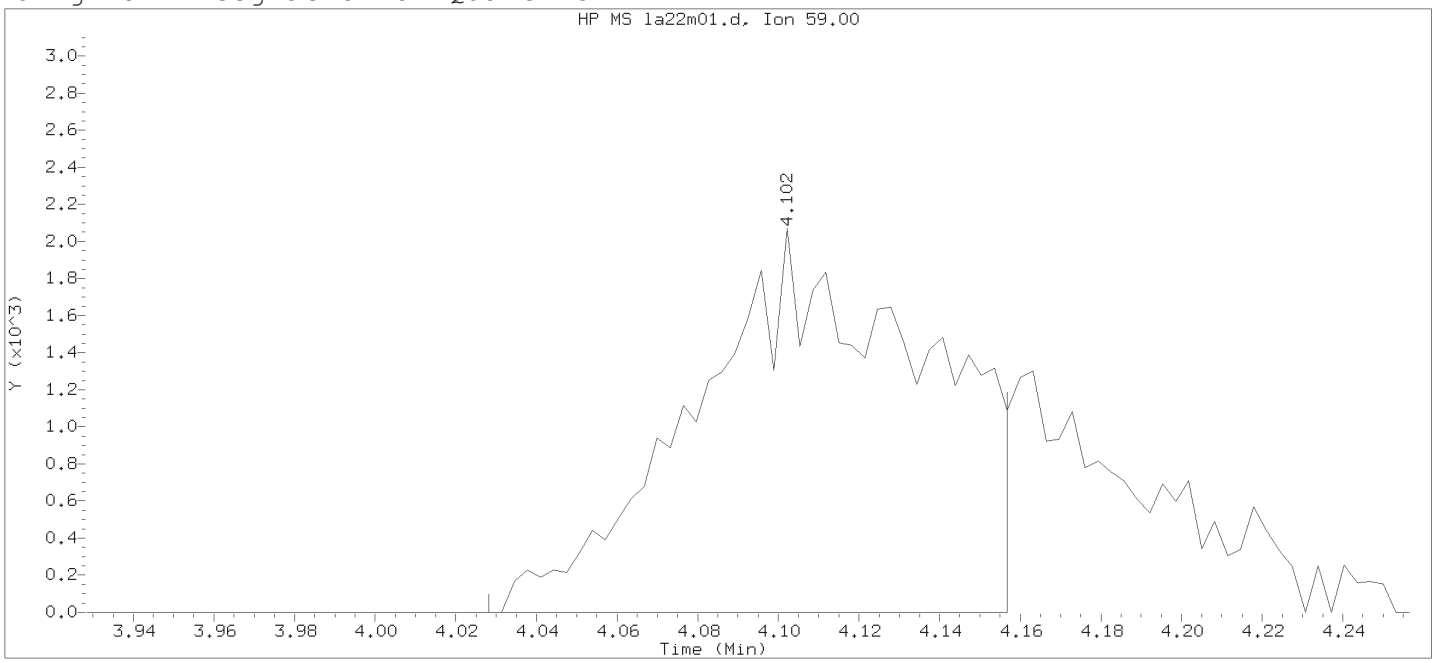
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

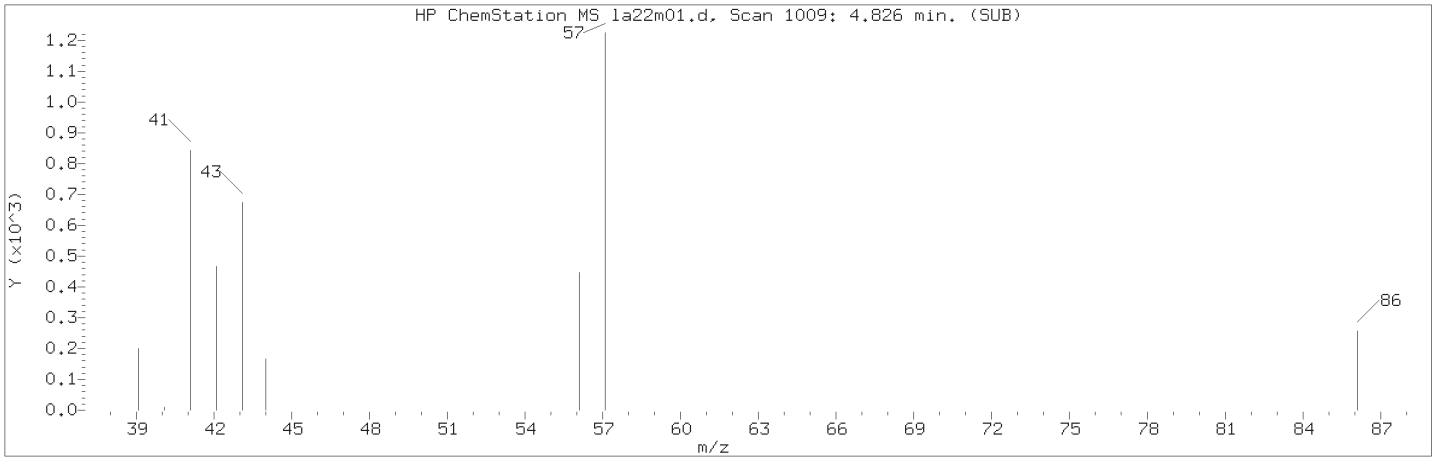
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

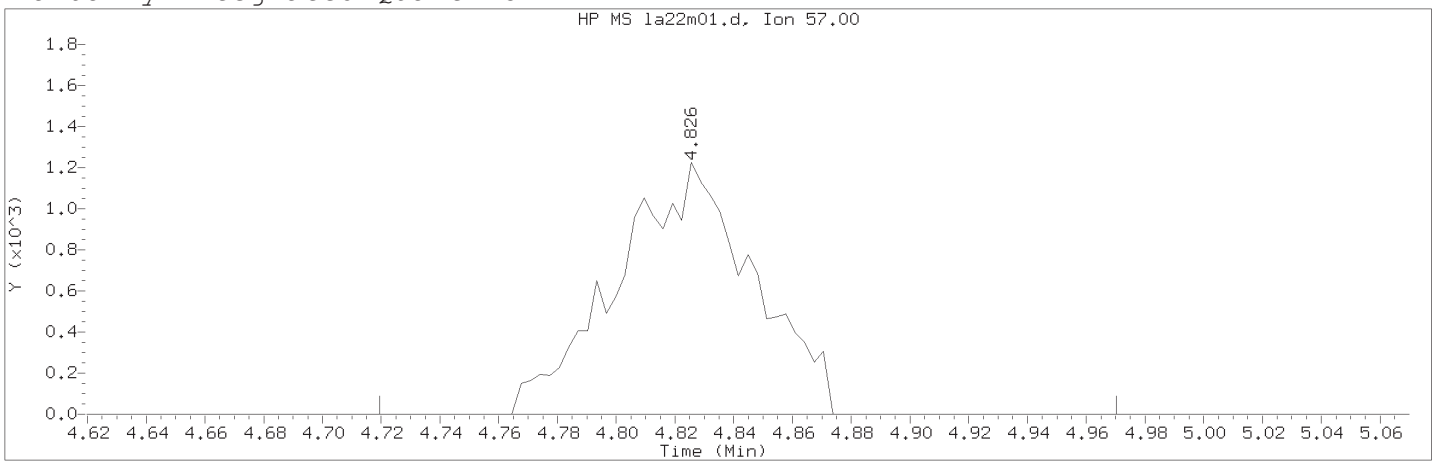
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 784
Retention Time (minutes): 4.102
Quant Ion : 59.00
Area : 8215
On-column Amount (ng) : 8.0848
Integration start scan : 760 Integration stop scan: 800
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

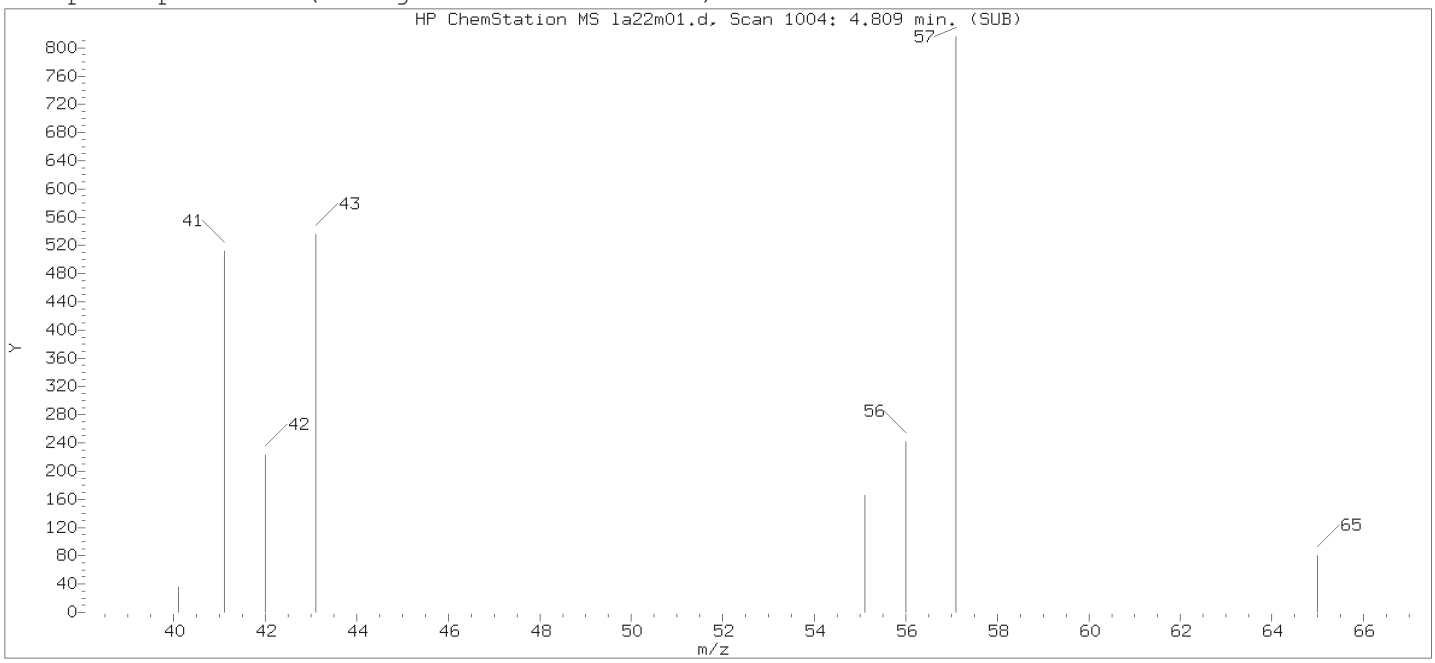
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1009
Retention Time (minutes): 4.826
Quant Ion : 57.00
Area (flag) : 3938M
On-Column Amount (ng) : 0.4138
Integration start scan : 975 Integration stop scan: 1053
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

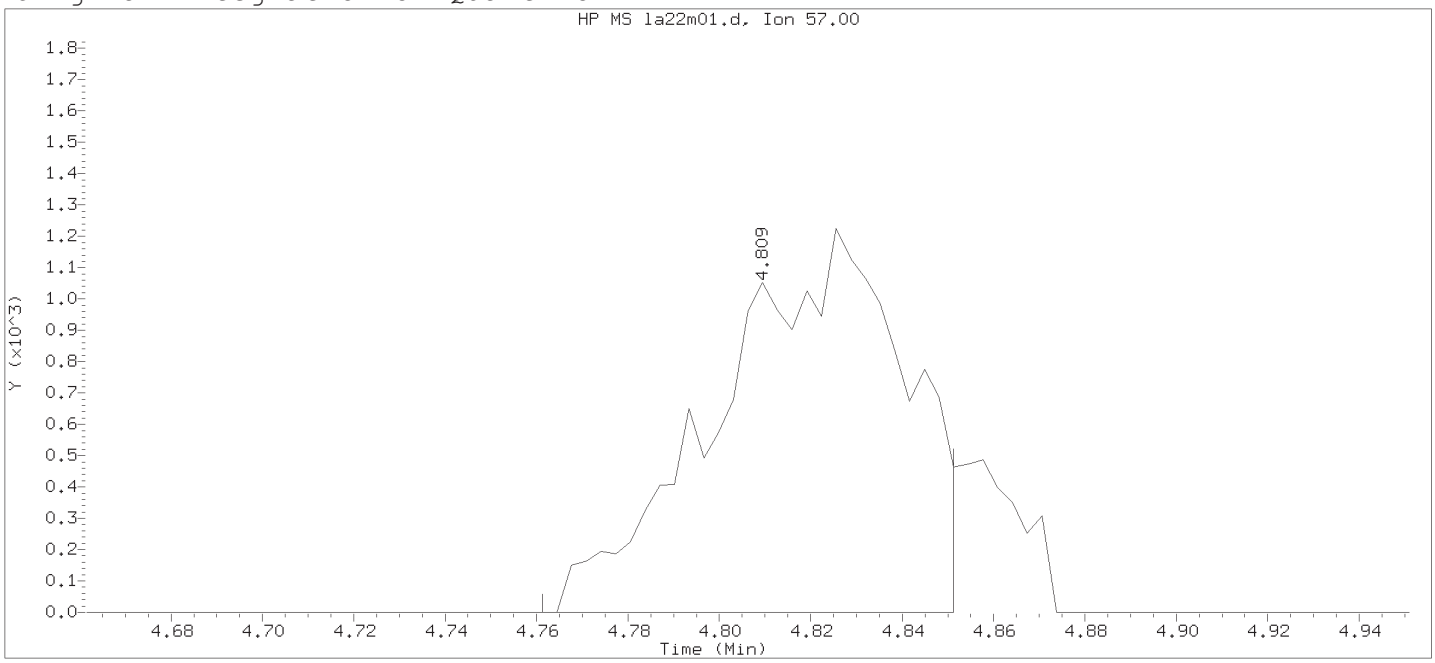
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

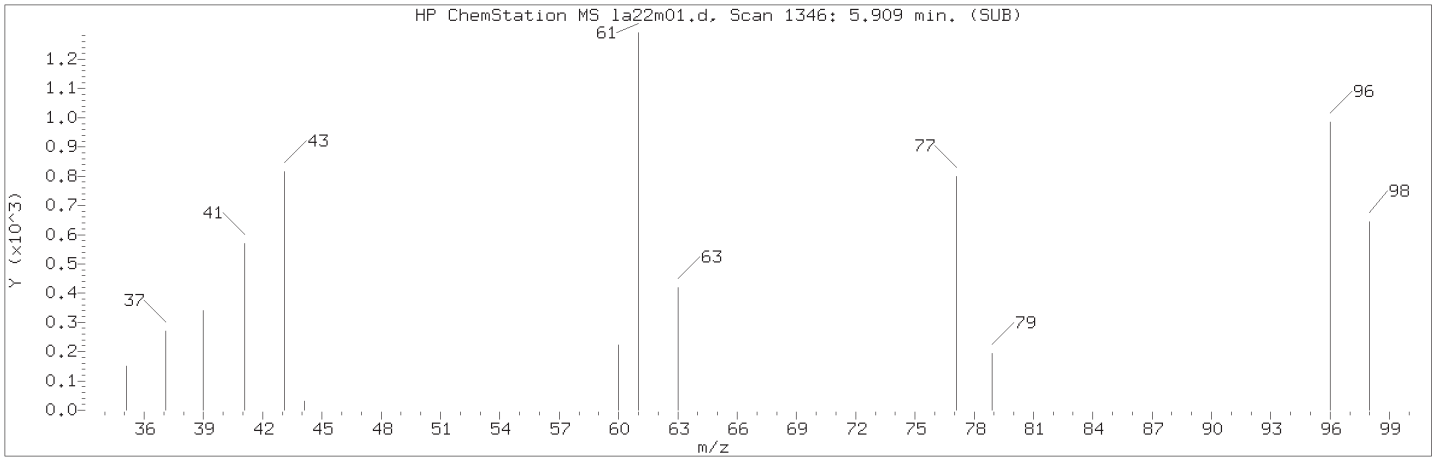
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

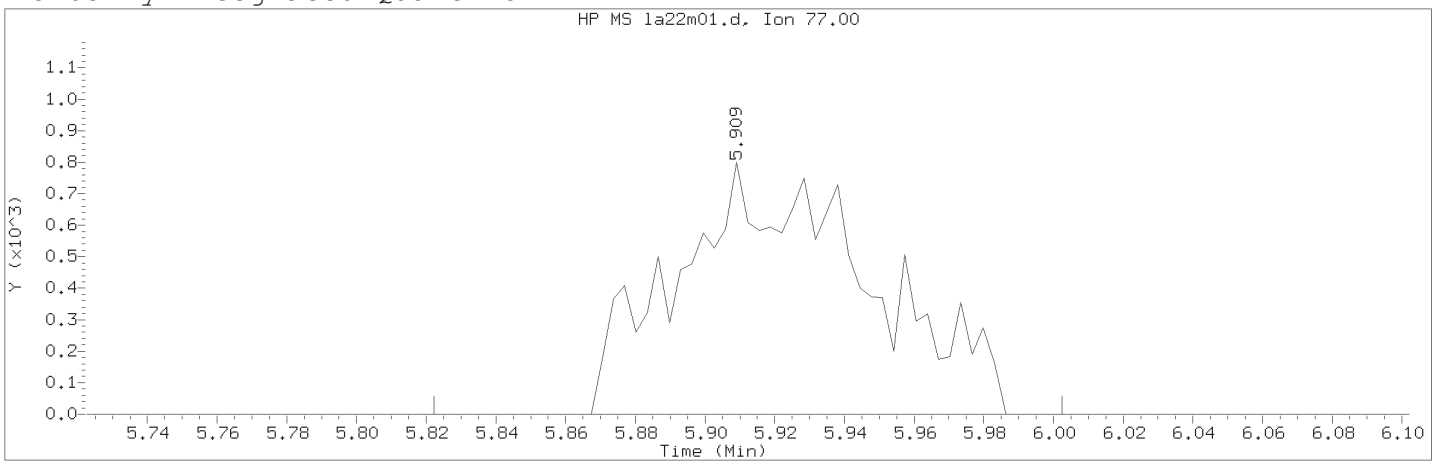
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 1004
Retention Time (minutes): 4.809
Quant Ion : 57.00
Area : 3455
On-column Amount (ng) : 0.3631
Integration start scan : 988 Integration stop scan: 1016
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

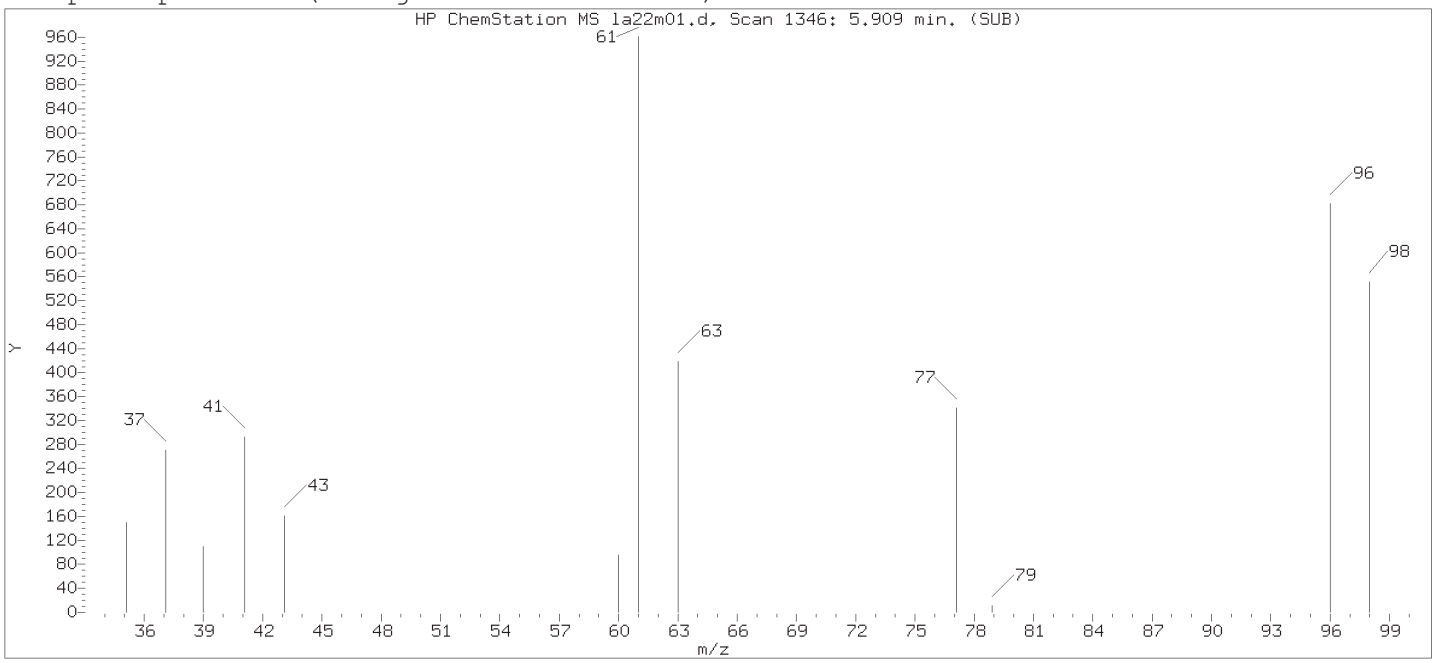
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1346
Retention Time (minutes): 5.909
Quant Ion : 77.00
Area (flag) : 3035M
On-Column Amount (ng) : 0.3577
Integration start scan : 1318 Integration stop scan: 1374
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

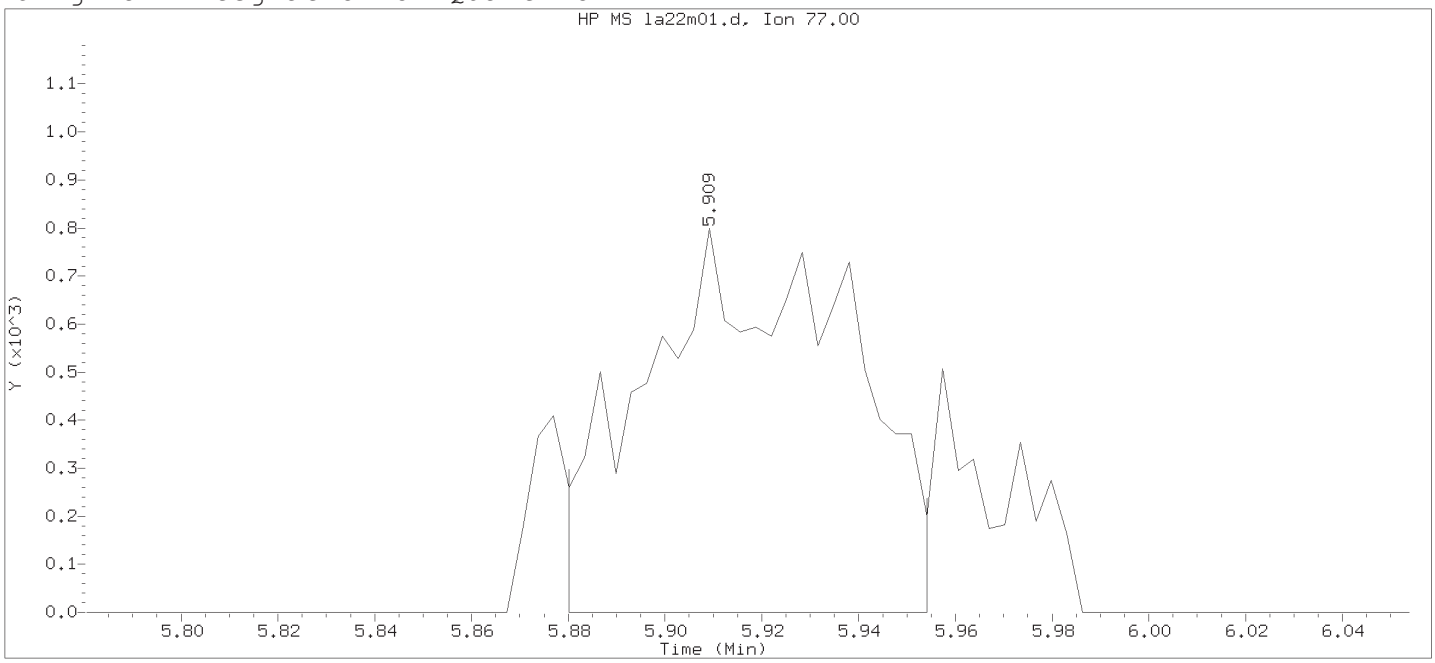
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

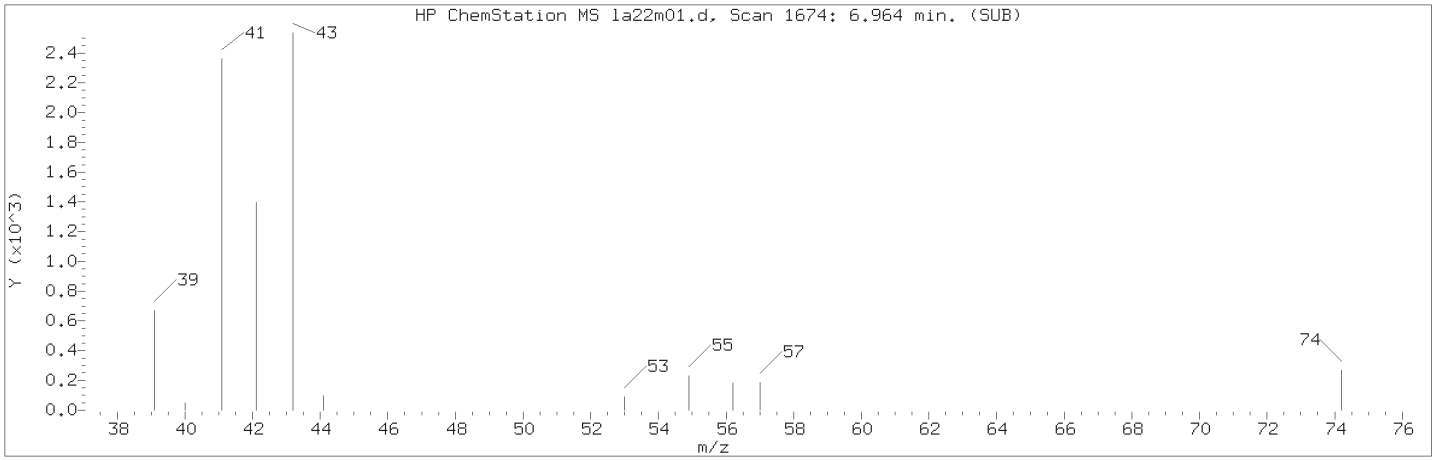
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

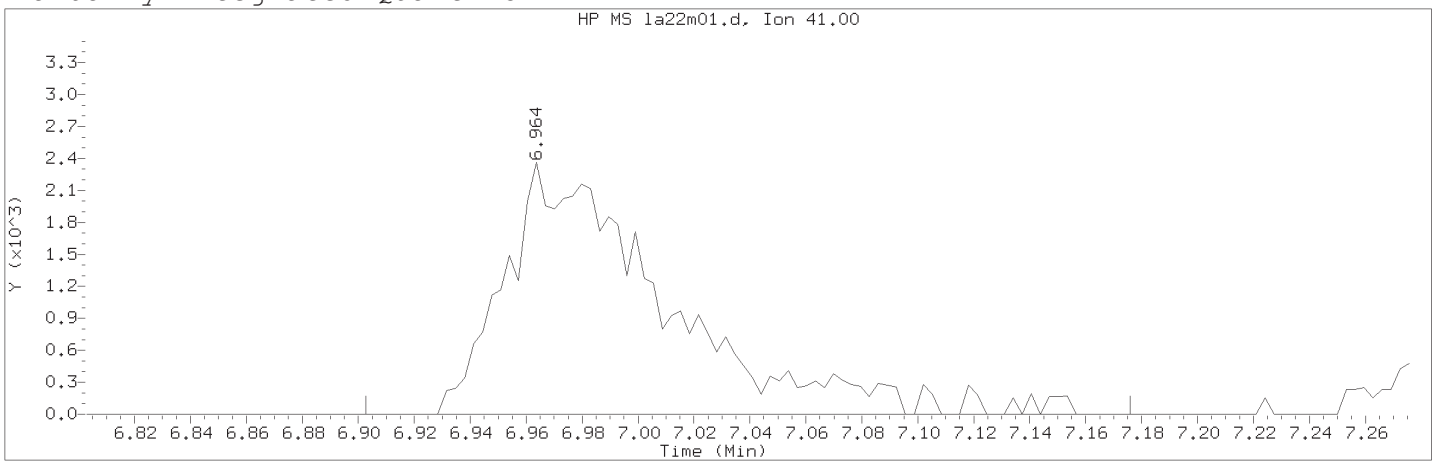
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 1346
Retention Time (minutes): 5.909
Quant Ion : 77.00
Area : 2334
On-column Amount (ng) : 0.2751
Integration start scan : 1336 Integration stop scan: 1359
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

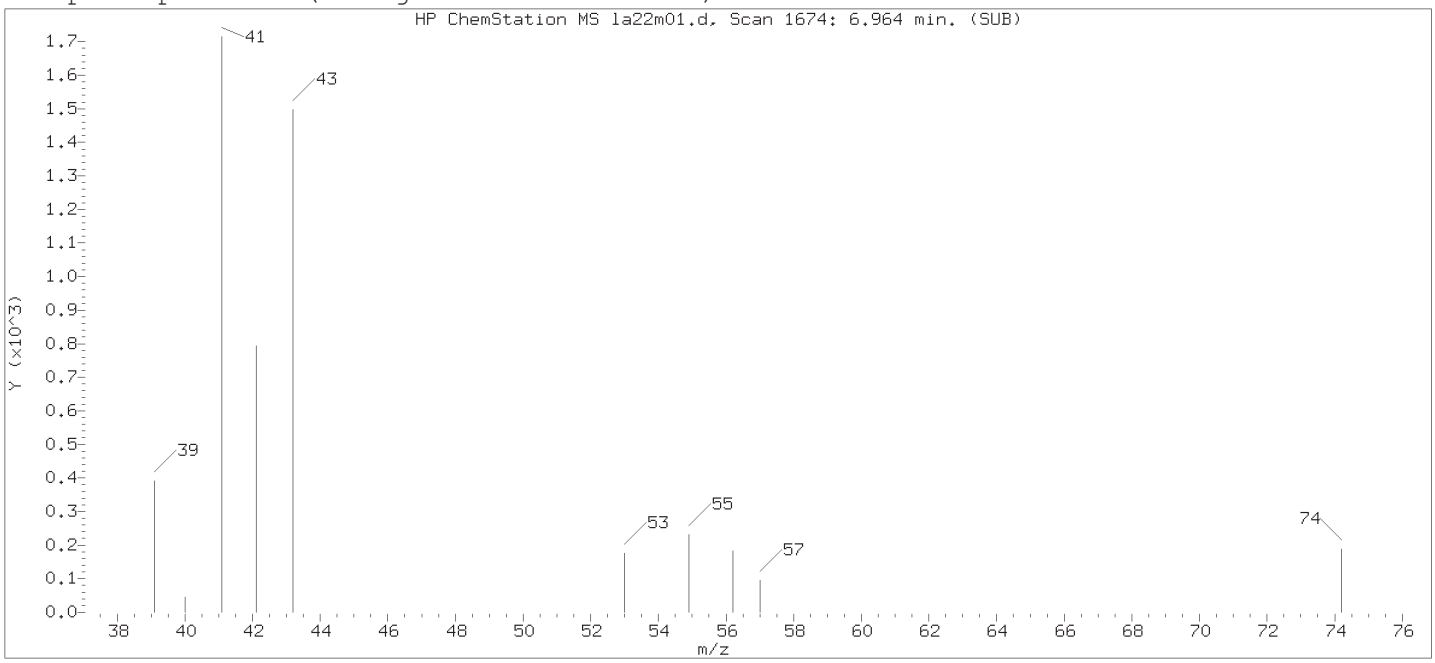
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1674
Retention Time (minutes): 6.964
Quant Ion : 41.00
Area (flag) : 9427M
On-Column Amount (ng) : 26.3716
Integration start scan : 1654 Integration stop scan: 1739
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

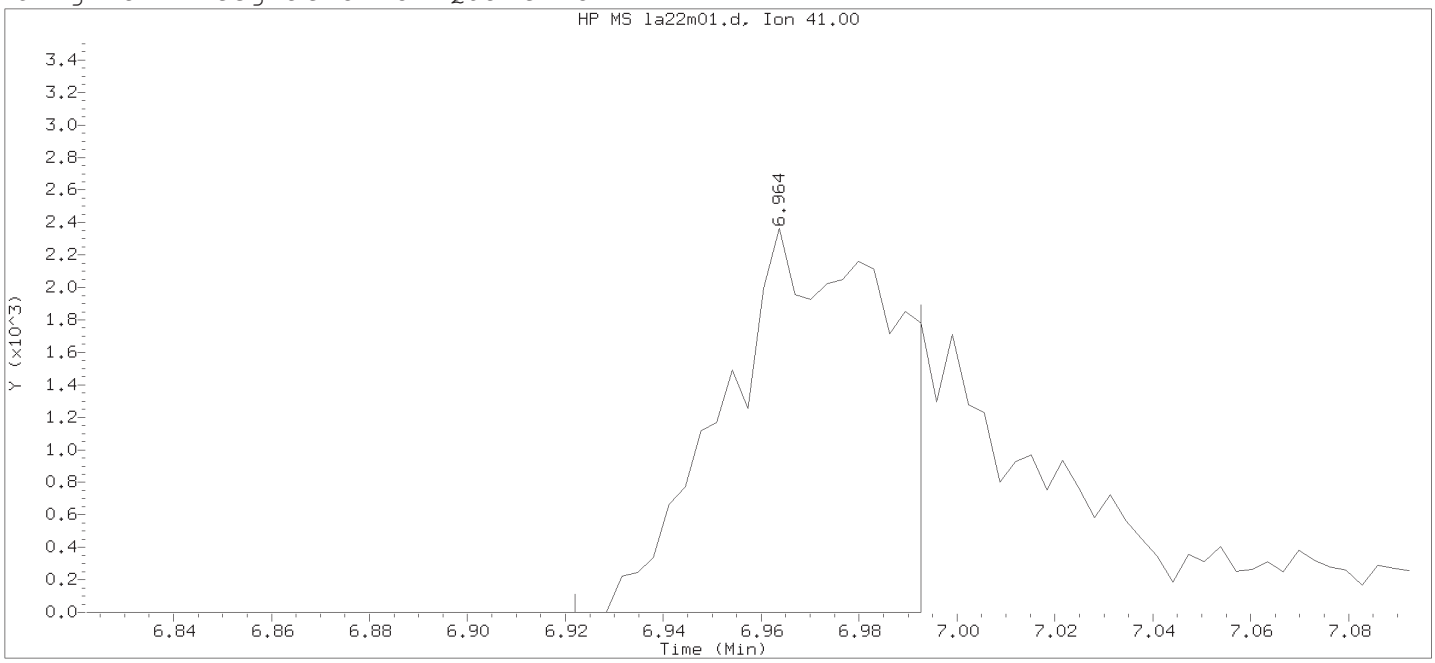
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

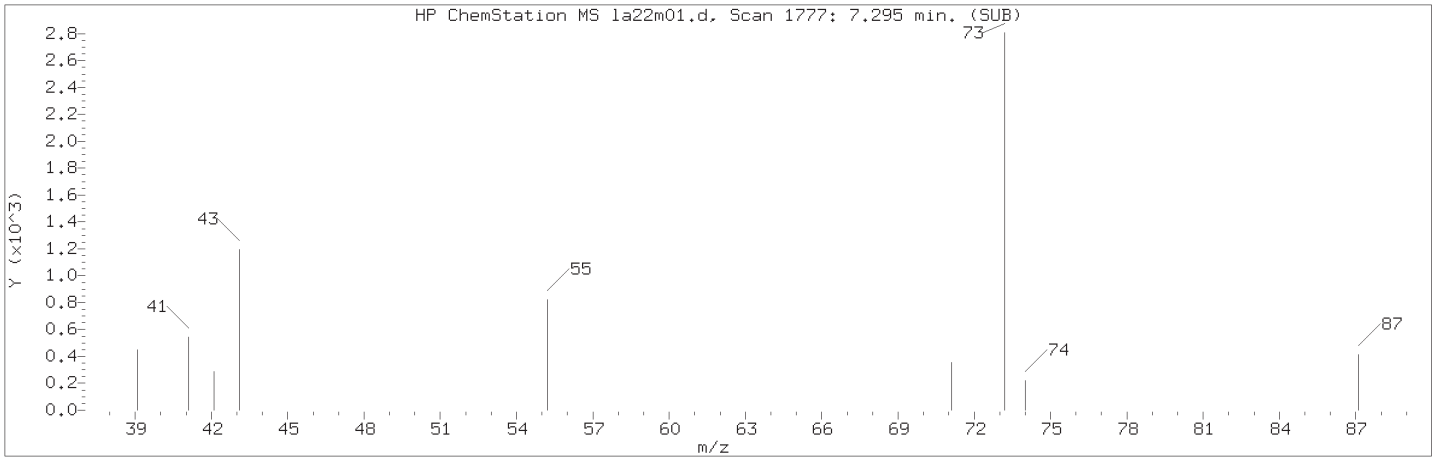
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

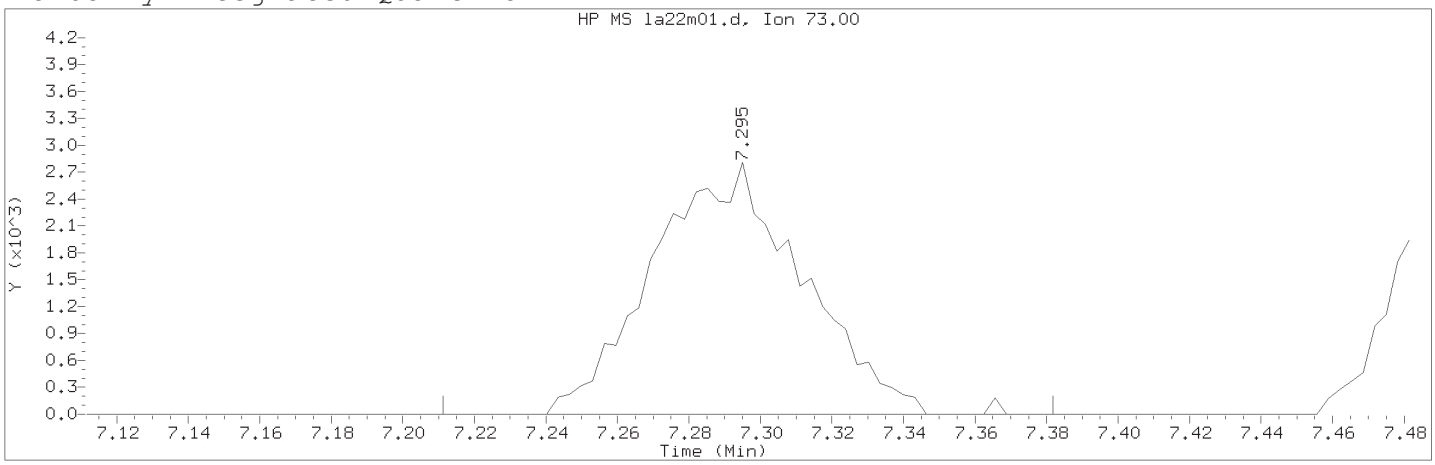
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1674
Retention Time (minutes): 6.964
Quant Ion : 41.00
Area : 5464
On-column Amount (ng) : 15.2871
Integration start scan : 1660 Integration stop scan: 1682
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

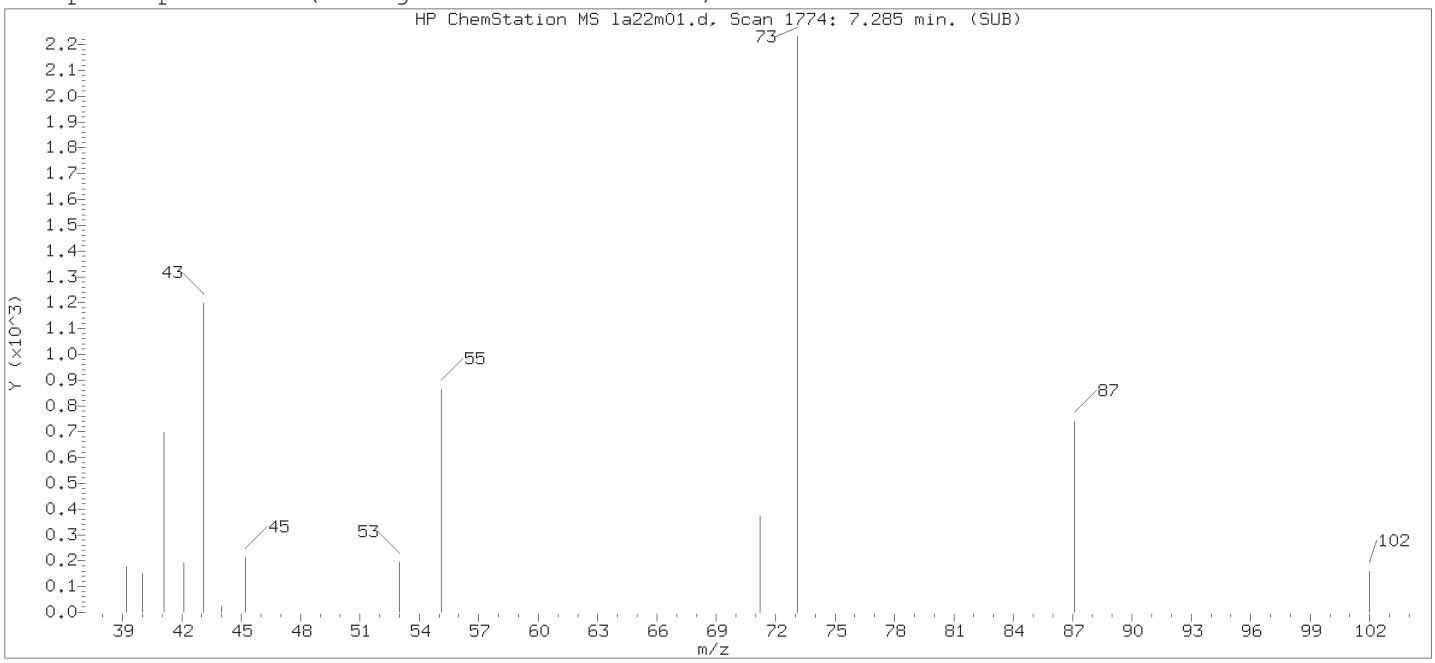
Compound Number : 65
Compound Name : t-Amyl methyl ether
Scan Number : 1777
Retention Time (minutes): 7.295
Quant Ion : 73.00
Area (flag) : 8142M
On-Column Amount (ng) : 0.4112
Integration start scan : 1750 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

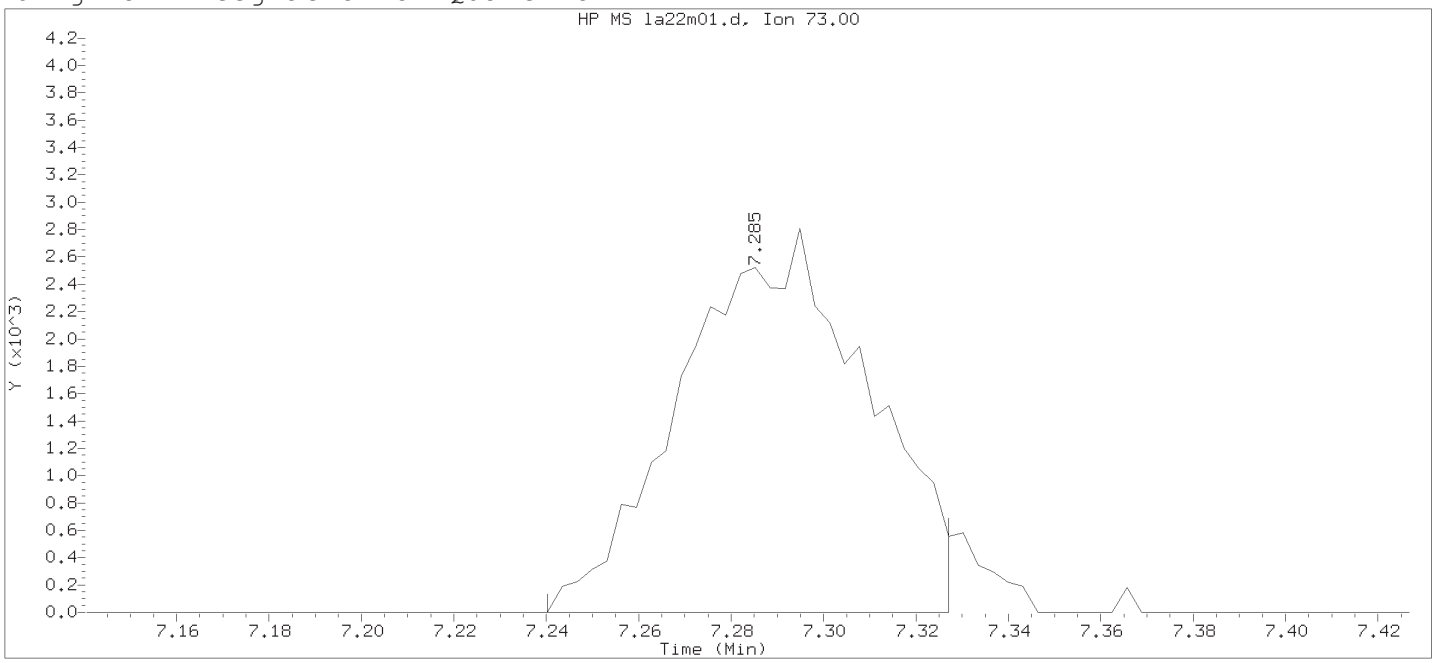
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

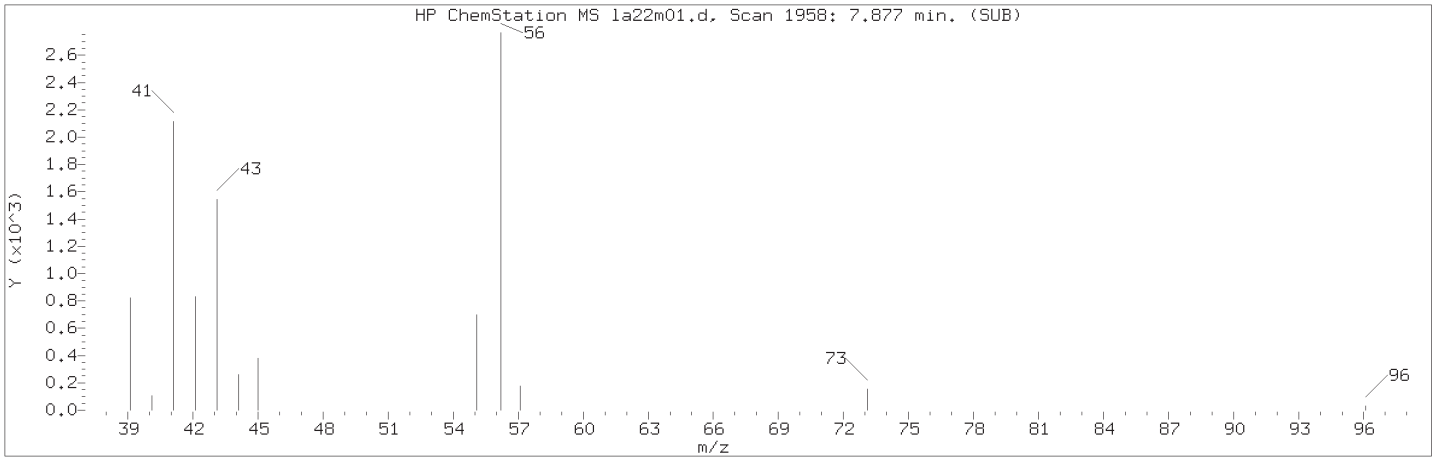
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

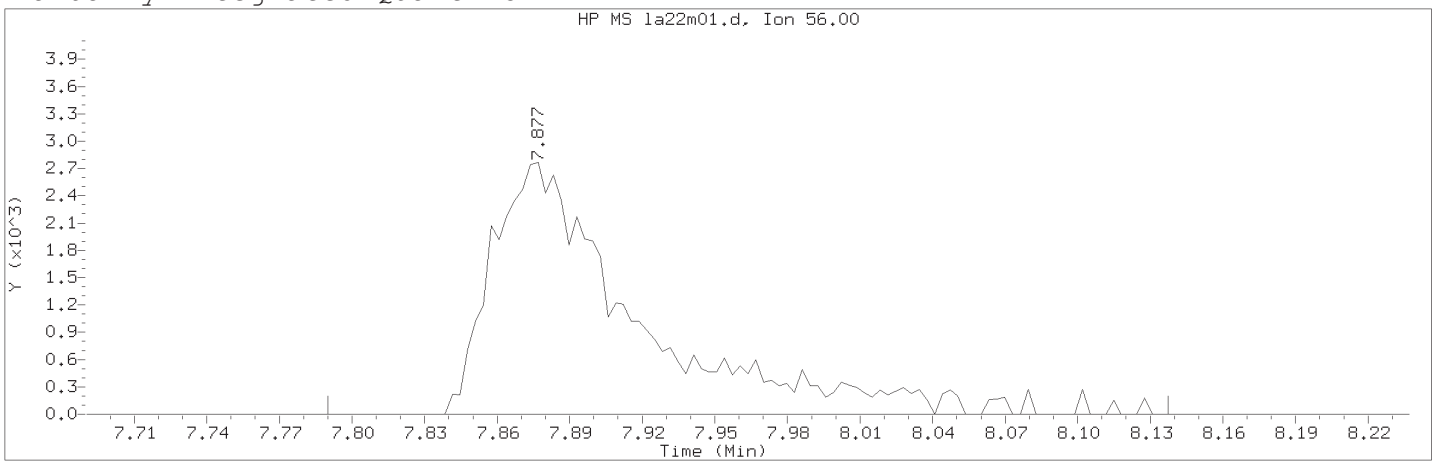
Compound Number : 65
Compound Name : t-Amyl methyl ether
Scan Number : 1774
Retention Time (minutes): 7.285
Quant Ion : 73.00
Area : 7739
On-column Amount (ng) : 0.3909
Integration start scan : 1759 Integration stop scan: 1786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 04/13/2016 13:31

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

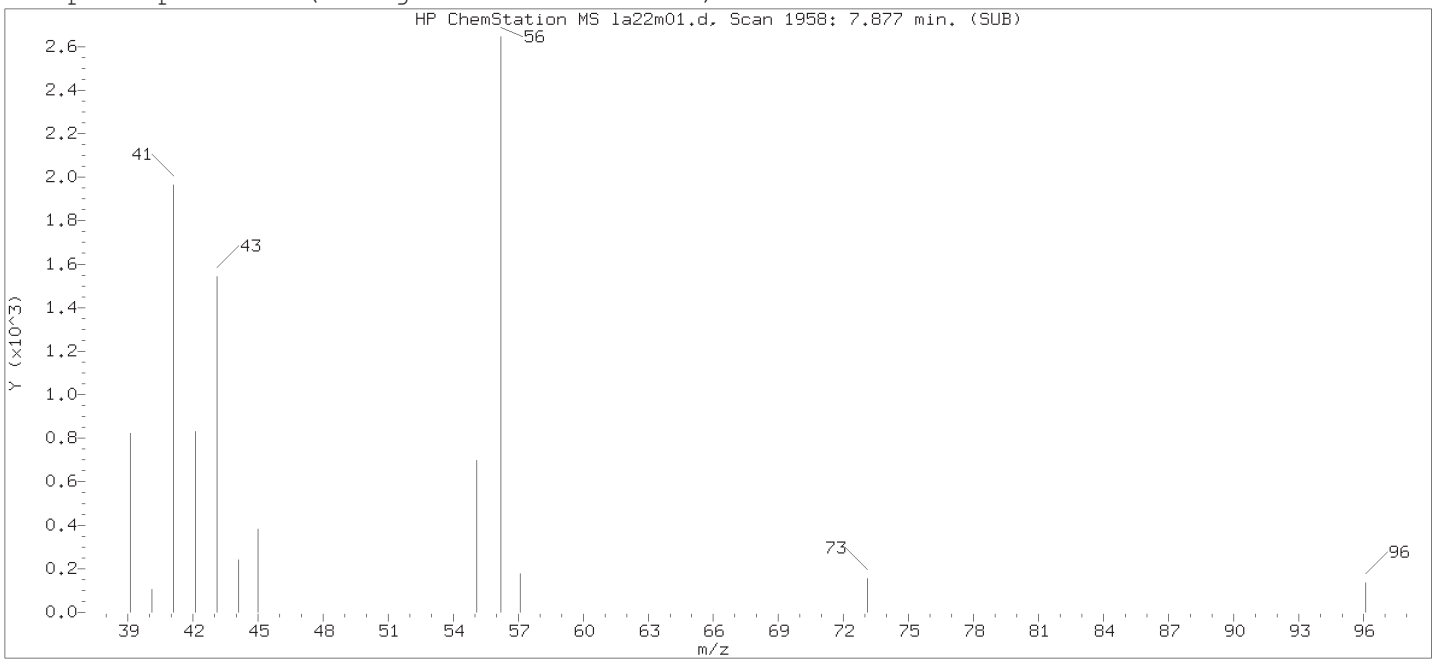
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1958
Retention Time (minutes): 7.877
Quant Ion : 56.00
Area (flag) : 11495M
On-Column Amount (ng) : 41.2512
Integration start scan : 1930 Integration stop scan: 2038
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

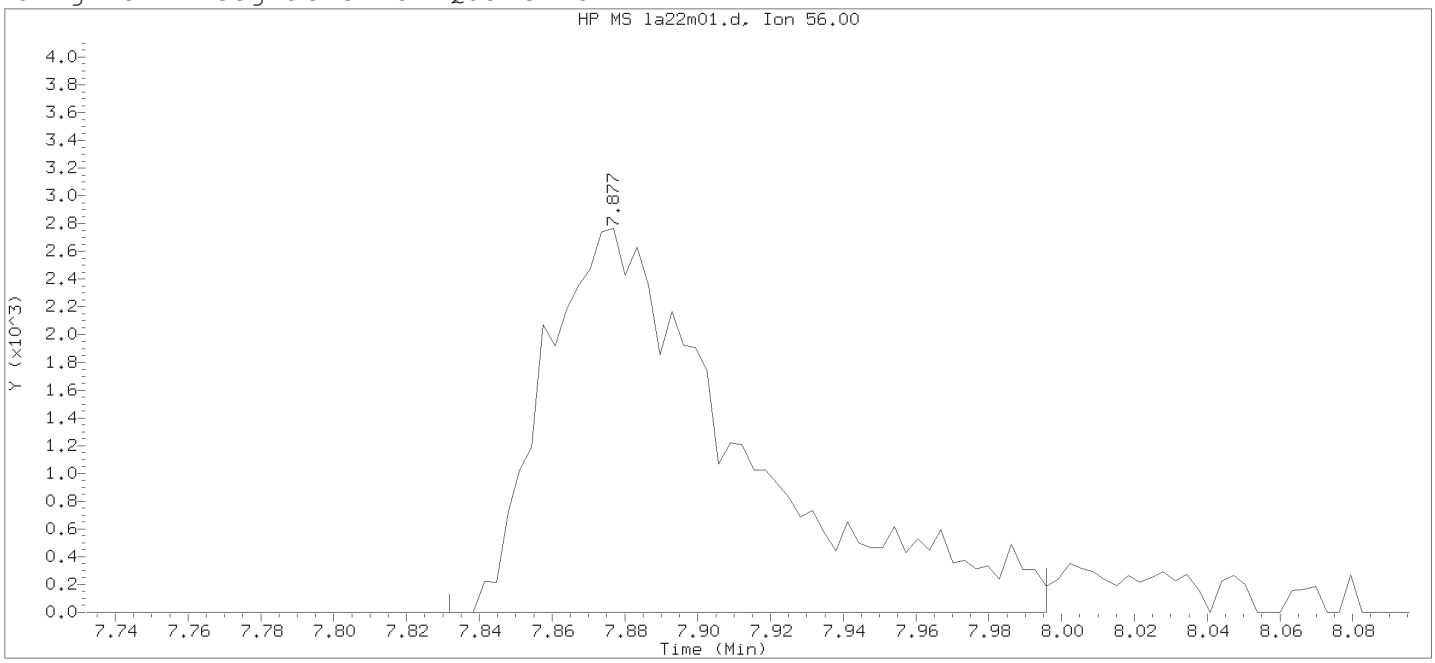
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

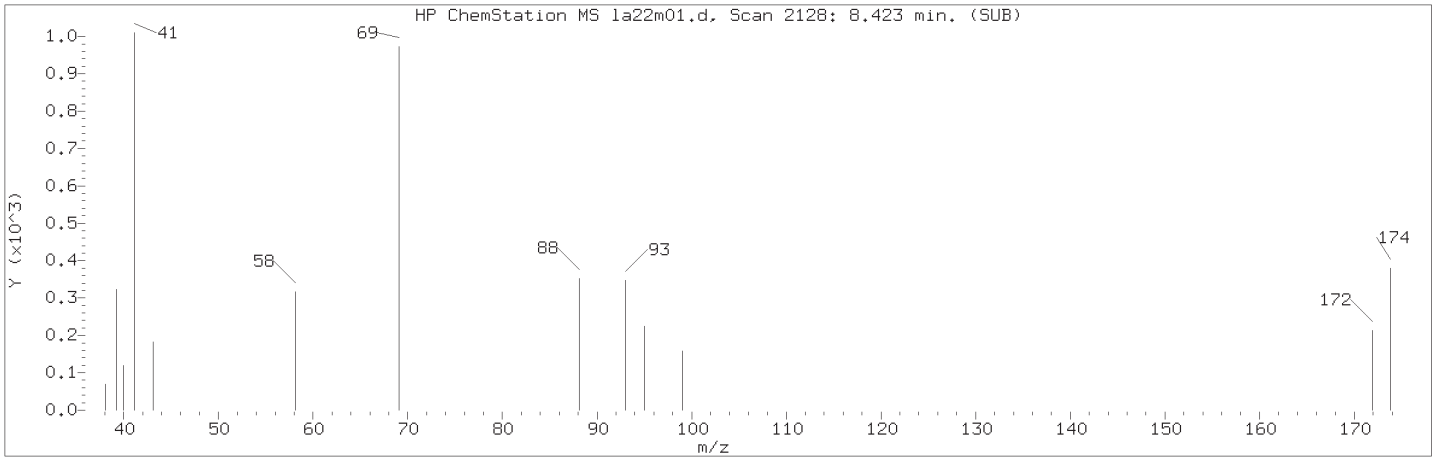
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

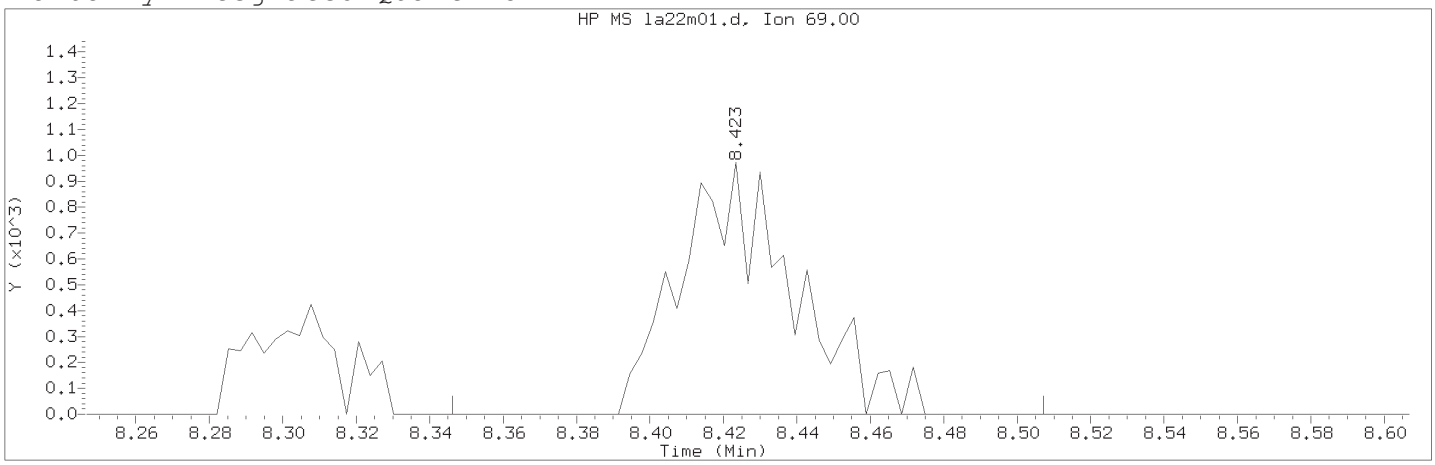
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 1958
Retention Time (minutes): 7.877
Quant Ion : 56.00
Area : 10440
On-column Amount (ng) : 37.4687
Integration start scan : 1943 Integration stop scan: 1994
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

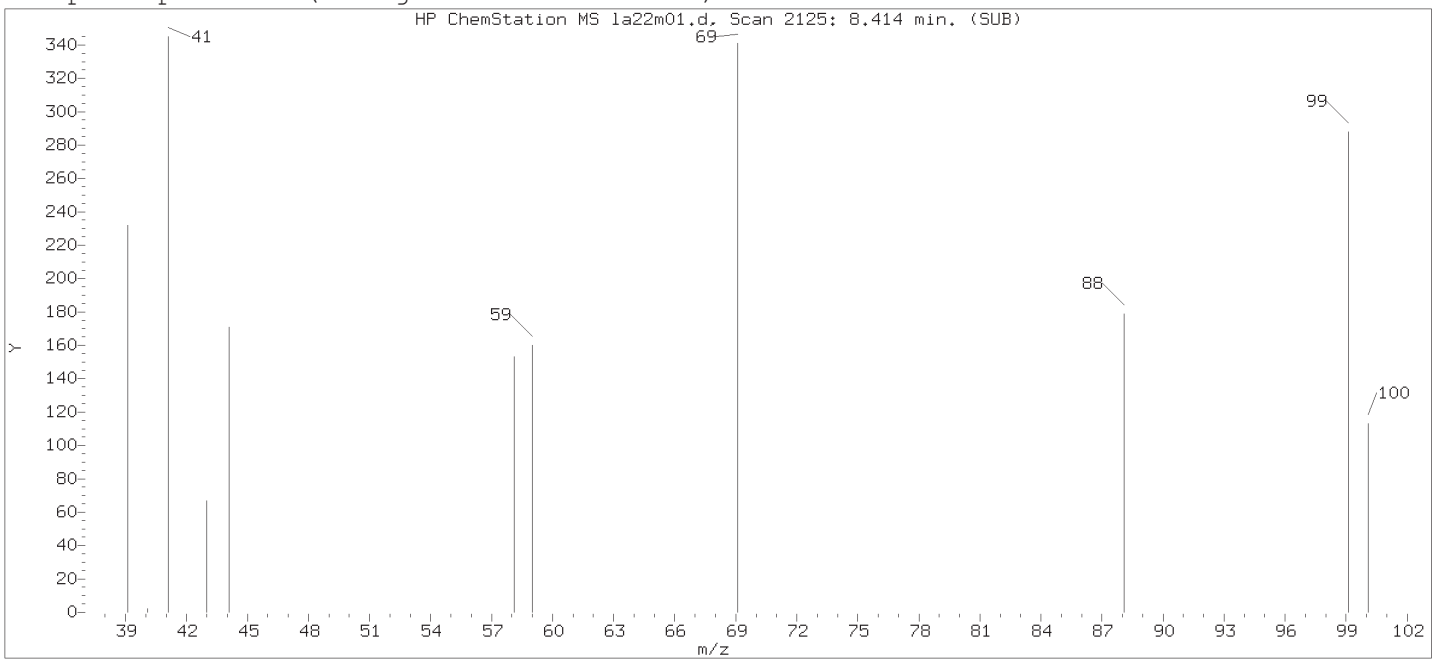
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 69.00
Area (flag) : 2081M
On-Column Amount (ng) : 0.3388
Integration start scan : 2103 Integration stop scan: 2153
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

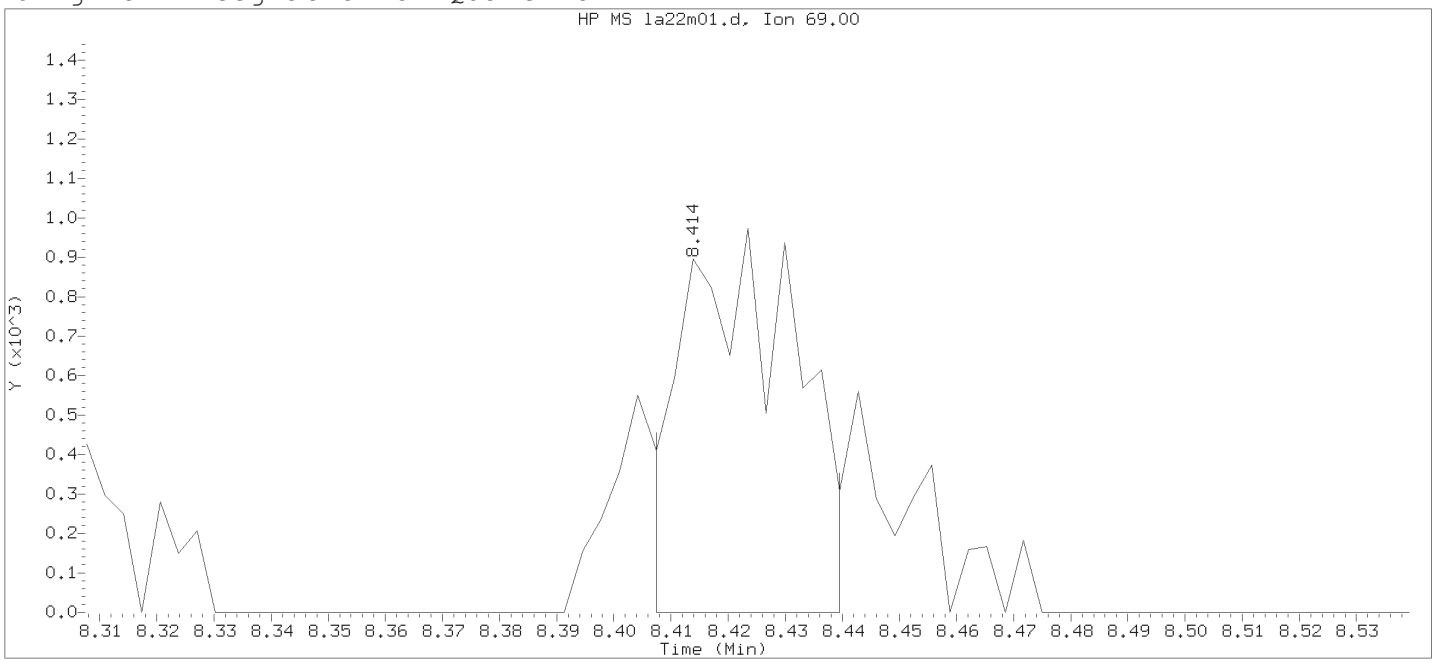
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

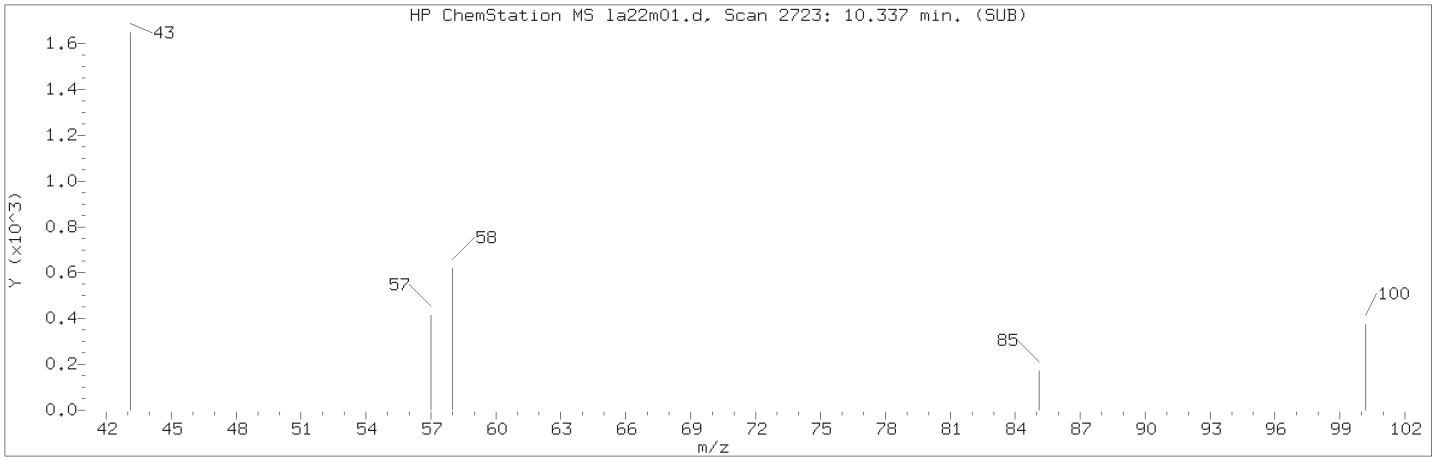
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

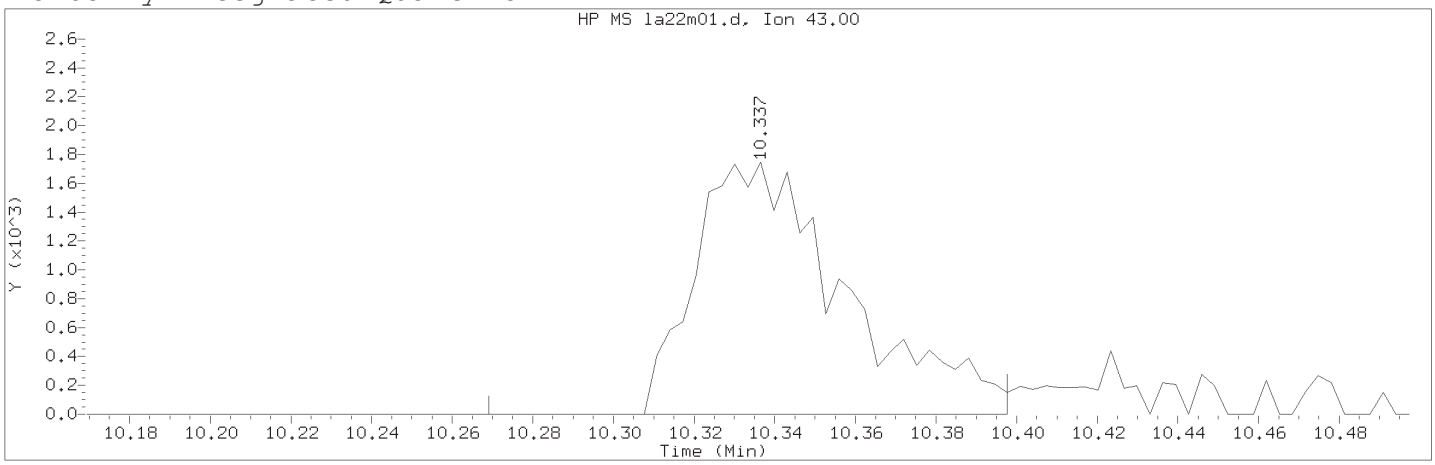
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 2125
Retention Time (minutes): 8.414
Quant Ion : 69.00
Area : 1334
On-column Amount (ng) : 0.2173
Integration start scan : 2122 Integration stop scan: 2132
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

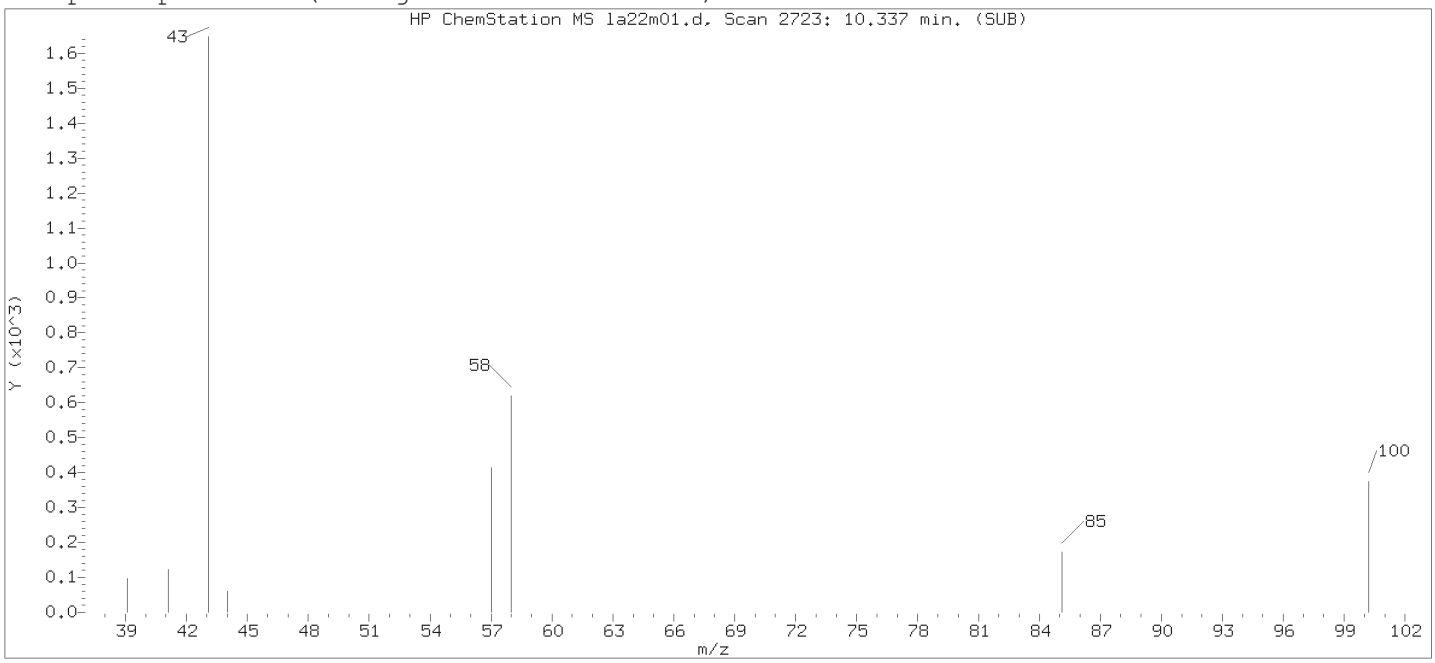
Compound Number : 96
Compound Name : 2-Hexanone
Scan Number : 2723
Retention Time (minutes): 10.337
Quant Ion : 43.00
Area (flag) : 4518M
On-Column Amount (ng) : 0.6545
Integration start scan : 2701 Integration stop scan: 2741
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

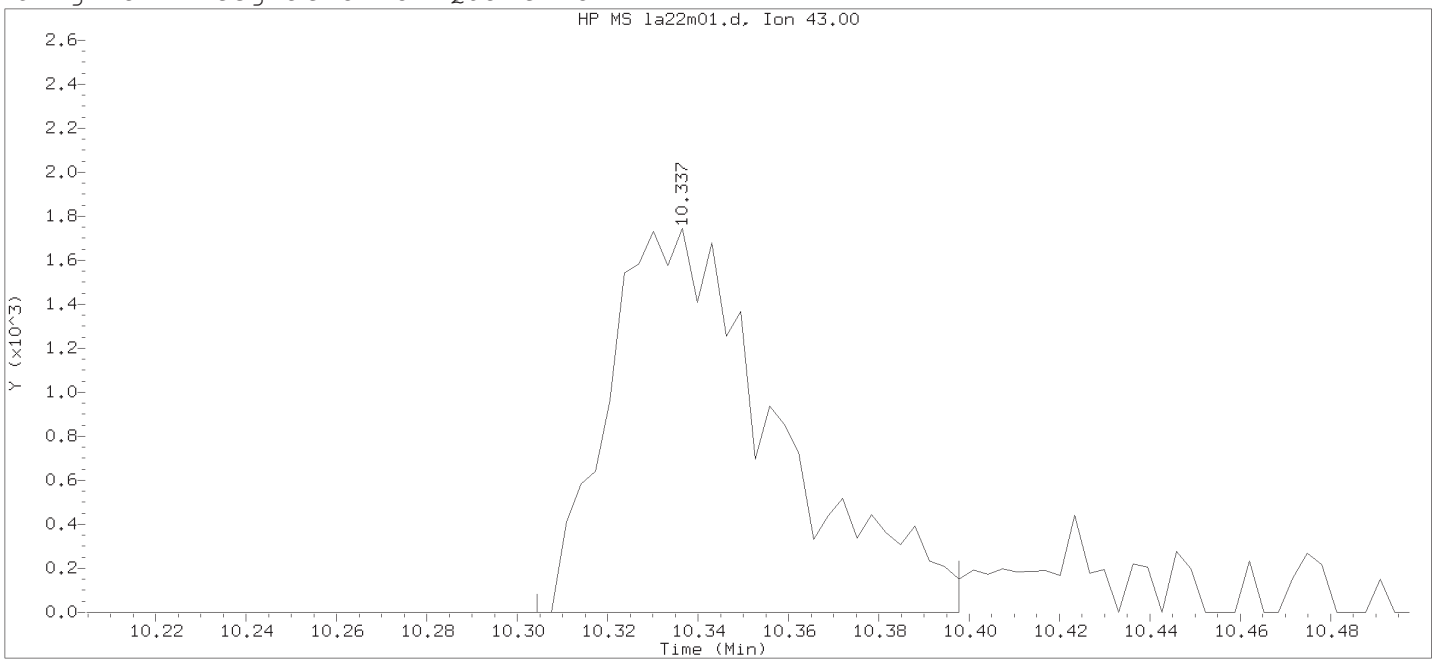
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

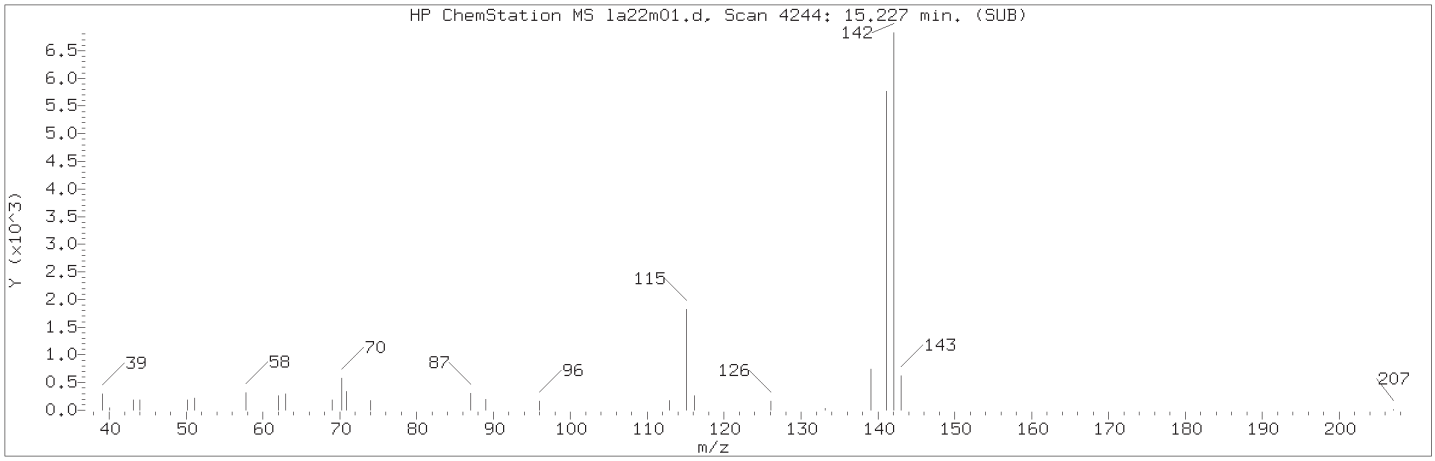
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

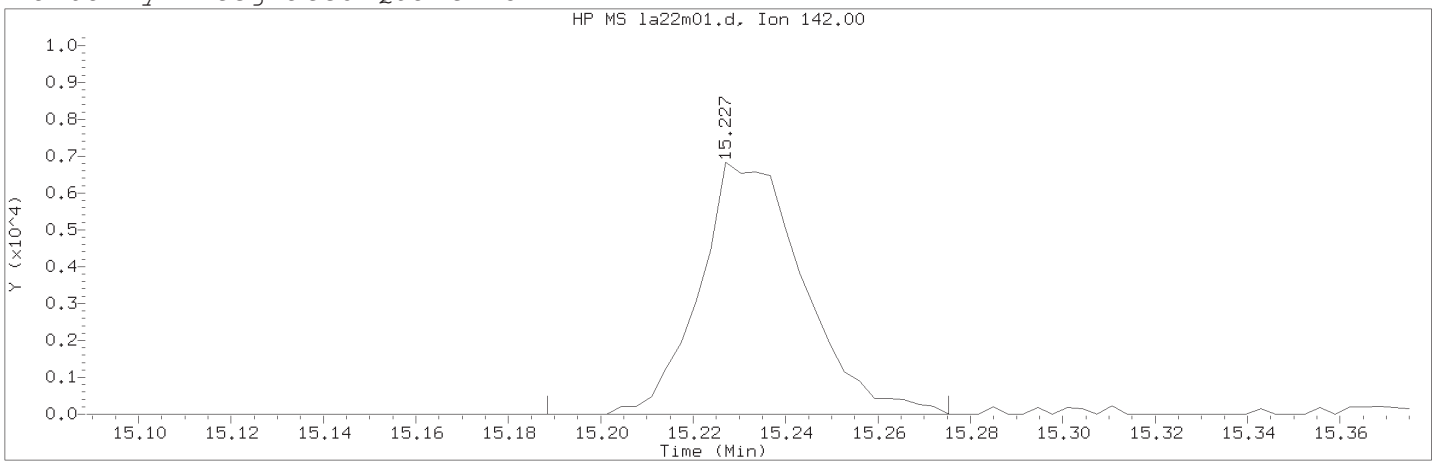
Compound Number : 96
Compound Name : 2-Hexanone
Scan Number : 2723
Retention Time (minutes): 10.337
Quant Ion : 43.00
Area : 4503
On-column Amount (ng) : 0.6524
Integration start scan : 2712 Integration stop scan: 2741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:00
Date, time and analyst ID of latest file update: 22-Apr-2016 13:01 bwk03231

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

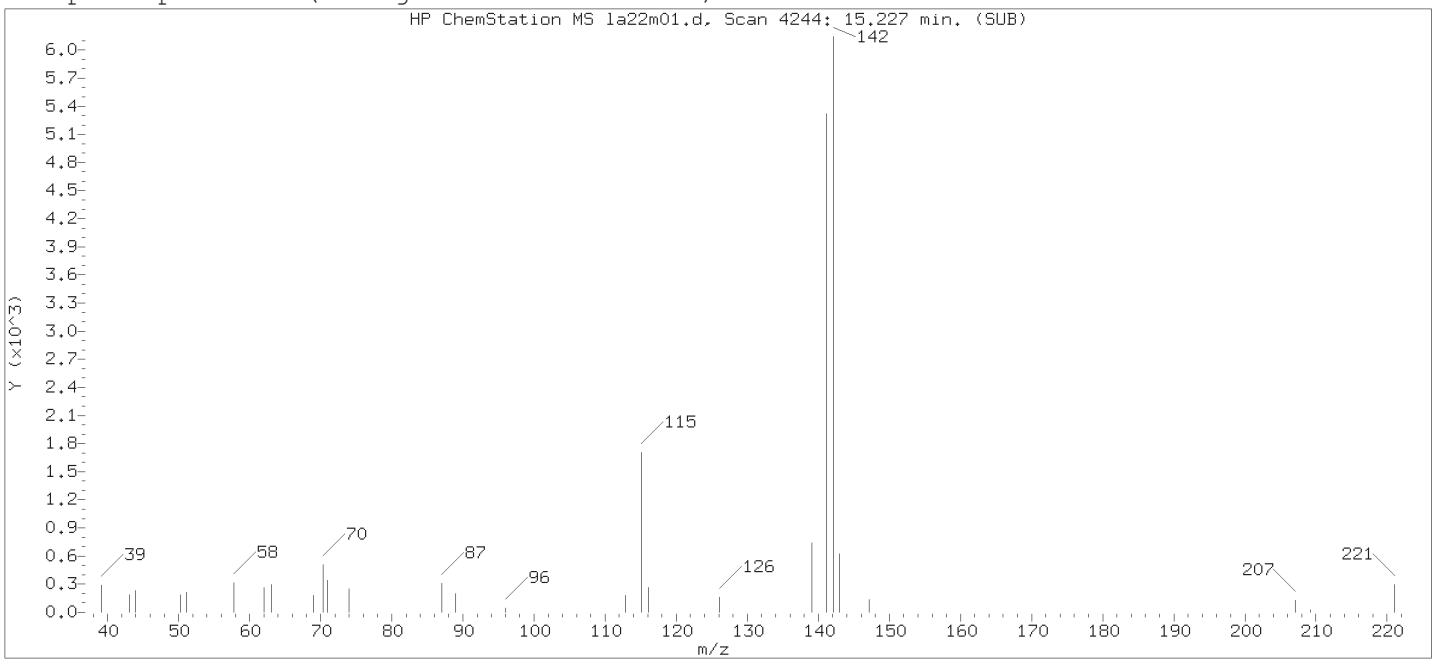
Compound Number : 150
Compound Name : 2-Methylnaphthalene
Scan Number : 4244
Retention Time (minutes): 15.227
Quant Ion : 142.00
Area (flag) : 10686M
On-Column Amount (ng) : 0.5310
Integration start scan : 4231 Integration stop scan: 4258
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

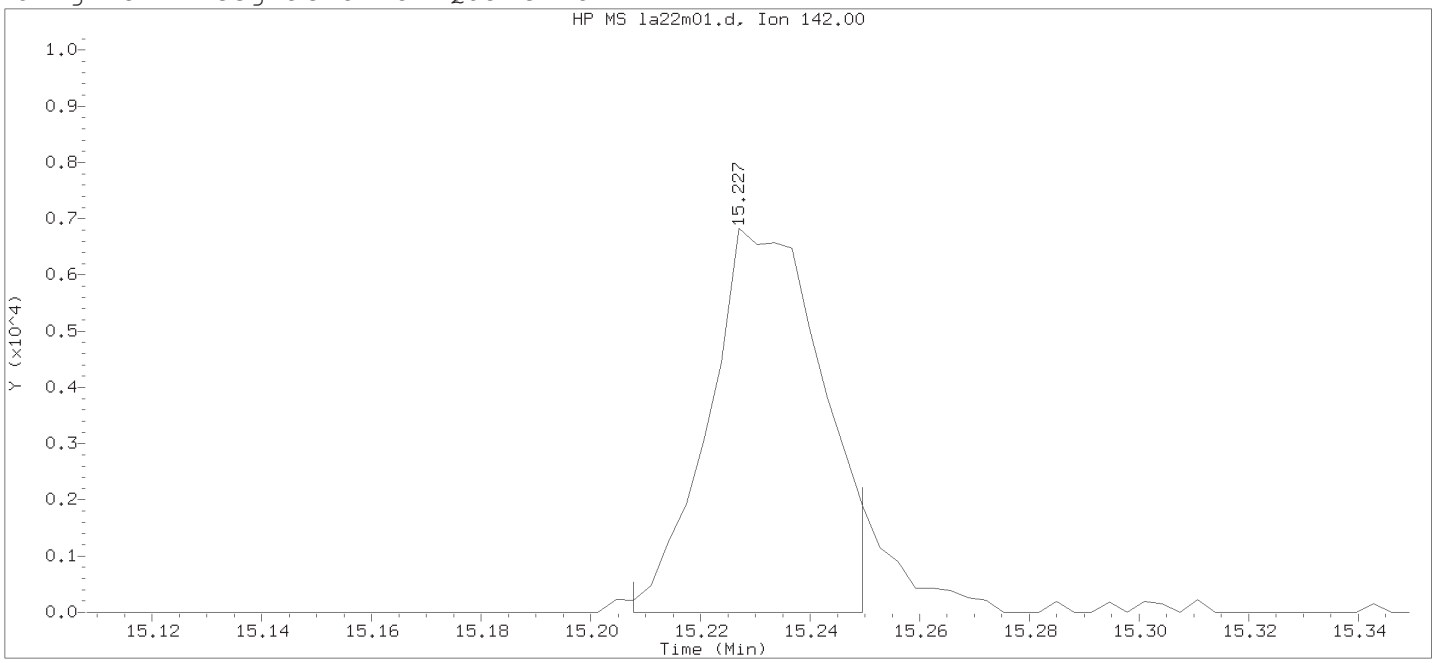
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



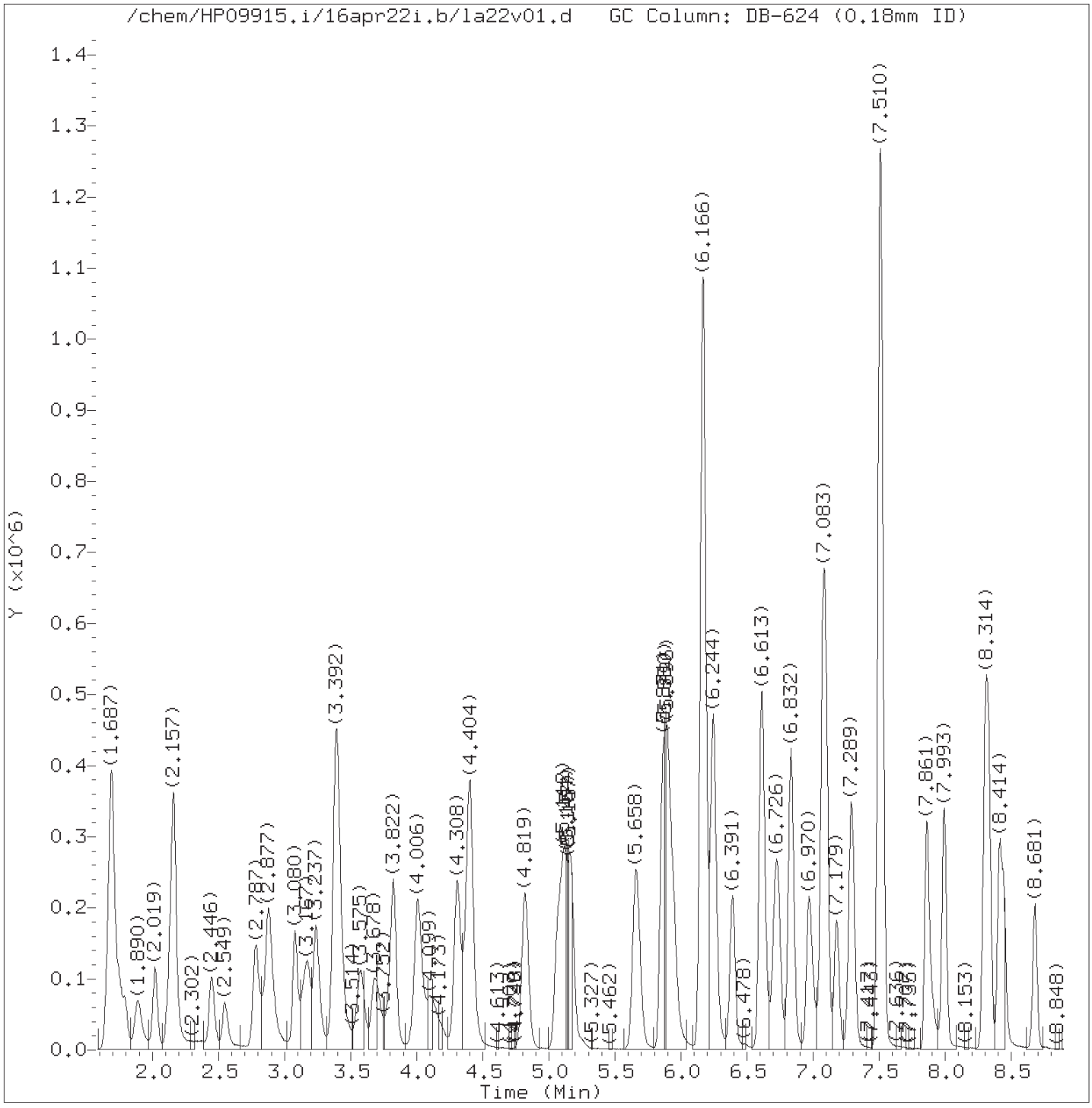
Data File: /chem/HP09915.i/16apr22i.b/la22m01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:29 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 12:43
Date, time and analyst ID of latest file update: 22-Apr-2016 12:48 Automation

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 150		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 4244		
Retention Time (minutes)	: 15.227		
Quant Ion	: 142.00		
Area	: 9715		
On-column Amount (ng)	: 0.4828		
Integration start scan	: 4237	Integration stop scan:	4250
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature date: 2016.03.31



Total Ion Chromatogram (TIC)

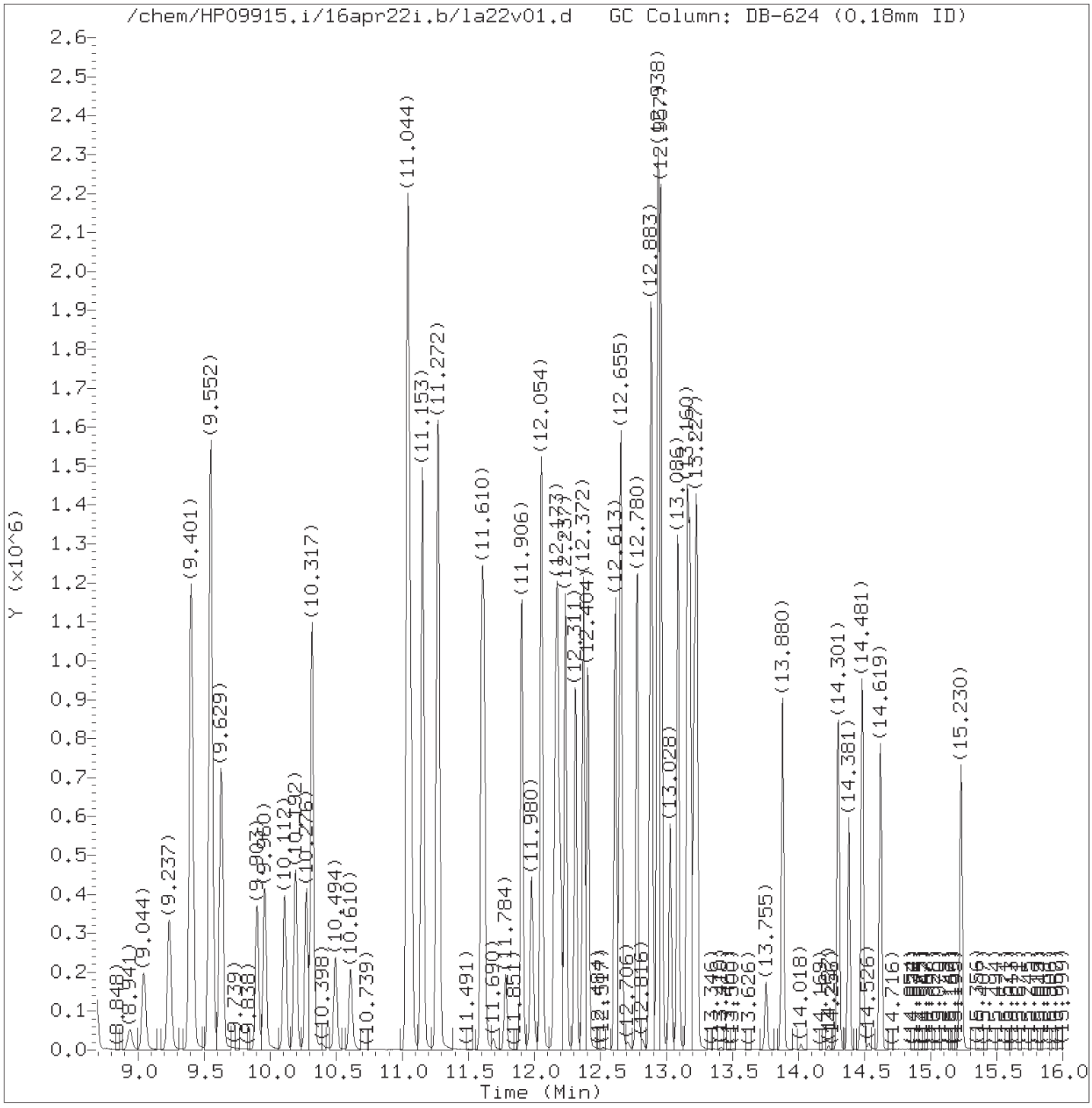
Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.887	85	154380	16.785
4) Chloromethane	(2)	2.019	50	165428	17.908
6) Vinyl Chloride	(2)	2.144	62	159430	18.291
5) 1,3-Butadiene	(2)	2.163	39	262328	17.323
8) Bromomethane	(2)	2.446	94	100661M	17.812
9) Chloroethane	(2)	2.549	64	85808	17.992
10) Dichlorofluoromethane	(2)	2.784	67	200600	18.009
12) Trichlorofluoromethane	(2)	2.855	101	179020	19.501
11) n-Pentane	(2)	2.880	43	211299	20.109
14) Ethyl ether	(2)	3.076	59	132255	20.310
15) Freon 123a	(2)	3.157	67	138960	18.251
16) Acrolein	(1)	3.237	56	272589	144.737
17) 1,1-Dichloroethene	(2)	3.388	96	111048	20.467
18) Acetone	(1)	3.388	58	172954	205.155
19) Freon 113	(2)	3.411	101	108538	20.809
21) 2-Propanol	(1)	3.549	45	98892M	152.964
22) Methyl Iodide	(2)	3.581	142	199893	19.842
23) Carbon Disulfide	(2)	3.691	76	348222	19.113
27) Methyl Acetate	(2)	3.787	43	145561	19.918
25) Allyl Chloride	(2)	3.822	41	226402	21.598
29)*t-Butyl alcohol-d10	(1)	3.993	65	220140	250.000
28) Methylene Chloride	(2)	4.006	84	135966	20.322
30) t-Butyl alcohol	(1)	4.125	59	209842	200.146
31) Acrylonitrile	(2)	4.308	53	357414	96.883
33) Methyl Tertiary Butyl Ether	(2)	4.395	73	417583	19.907
32) trans-1,2-Dichloroethene	(2)	4.404	96	134222	21.799
34) n-Hexane	(2)	4.816	57	203980	21.436
36) 1,1-Dichloroethane	(2)	5.067	63	251688	20.594
38) di-Isopropyl ether	(2)	5.118	45	493914	21.045
39) 2-Chloro-1,3-butadiene	(2)	5.170	53	218781	22.694
40) Ethyl t-butyl ether	(2)	5.662	59	433539	20.285
44) 2-Butanone	(2)	5.861	43	810828	170.709
42) cis-1,2-Dichloroethene	(2)	5.899	96	147285	21.239
45) 2,2-Dichloropropane	(2)	5.919	77	176485	20.799
47) Propionitrile	(1)	5.945	54	214689	158.179
43) 1,2-Dichloroethene (Total)	(2)		96	281507	43.038
48) Methacrylonitrile	(2)	6.166	67	574610	156.947
49) Bromochloromethane	(2)	6.240	128	72579	20.526

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	6.250	71	116716	102.812
51) Chloroform	(2)	6.391	83	232295	20.917
52)$Dibromofluoromethane	(2)	6.610	113	291354	49.493
53) 1,1,1-Trichloroethane	(2)	6.623	97	200221	20.295
54) Cyclohexane	(2)	6.726	56	239922	21.095
55) 1,1-Dichloropropene	(2)	6.832	75	181085	19.935
56) Carbon Tetrachloride	(2)	6.832	117	154895	20.968
58) Isobutyl Alcohol	(1)	6.970	41	185386MA	502.621
57)$1,2-Dichloroethane-d4	(2)	7.070	102	74238	49.952
60) Benzene	(2)	7.096	78	557033	20.922
61) 1,2-Dichloroethane	(2)	7.179	62	198463	20.151
65) t-Amyl methyl ether	(2)	7.289	73	399982	20.202
66)*Fluorobenzene	(2)	7.504	96	1239113	50.000
67) n-Heptane	(2)	7.520	43	217118	20.588
69) n-Butanol	(1)	7.861	56	293875	1022.091
71) Trichloroethene	(2)	7.993	95	143753	21.368
72) Methylcyclohexane	(2)	8.301	83	243160	21.936
73) 1,2-Dichloropropane	(2)	8.330	63	154685	21.104
76) Methyl Methacrylate	(2)	8.407	69	121888	19.844
75) 1,4-Dioxane	(1)	8.420	88	46662M	479.134
74) Dibromomethane	(2)	8.443	93	91190	20.074
78) Bromodichloromethane	(2)	8.681	83	167782	20.235
79) 2-Nitropropane	(2)	8.941	41	42537	18.635
80) 2-Chloroethyl Vinyl Ether	(2)	9.044	63	107761	20.603
81) cis-1,3-Dichloropropene	(2)	9.237	75	220839	20.763
82) 4-Methyl-2-pentanone	(2)	9.401	43	1014002	104.030
83)$Toluene-d8	(3)	9.552	98	1222917	50.060
88) Toluene	(3)	9.632	92	351644	21.175
89) trans-1,3-Dichloropropene	(3)	9.903	75	202202	21.014
91) Ethyl Methacrylate	(3)	9.960	69	224047	21.019
90) 1,3-Dichloropropene (total)	(3)		100	423041	41.776
92) 1,1,2-Trichloroethane	(3)	10.112	97	132014	20.460
93) Tetrachloroethene	(3)	10.192	166	149182	21.222
94) 1,3-Dichloropropane	(3)	10.276	76	231473	20.256
96) 2-Hexanone	(3)	10.317	43	772111	109.504
97) Dibromochloromethane	(3)	10.494	129	125956	19.875
99) 1,2-Dibromoethane	(3)	10.610	107	143203	20.660
100)*Chlorobenzene-d5	(3)	11.041	117	933275	50.000

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) 1-Chlorohexane	(3)	11.050	91	193618	20.783
102) Chlorobenzene	(3)	11.070	112	390608	20.784
103) 1,1,1,2-Tetrachloroethane	(3)	11.153	131	127908	20.568
104) Ethylbenzene	(3)	11.153	91	677443	21.144
106) m+p-Xylene	(3)	11.272	106	524584	42.646
107) o-Xylene	(3)	11.600	106	252665	20.884
109) Styrene	(3)	11.620	104	434942	21.342
108) Xylene (Total)	(3)		106	777249	63.530
110) Bromoform	(3)	11.784	173	82171	18.830
111) Isopropylbenzene	(3)	11.906	105	668060	21.691
112) Cyclohexanone	(1)	11.980	55	188692	420.131
114)$4-Bromofluorobenzene	(3)	12.054	95	452686	50.076
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	197667M	19.892
115) Bromobenzene	(4)	12.169	156	173356	20.557
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	127993	84.955
117) 1,2,3-Trichloropropane	(4)	12.198	110	57959	20.194
119) n-Propylbenzene	(4)	12.237	91	801485	21.257
120) 2-Chlorotoluene	(4)	12.311	126	160643	21.007
122) 1,3,5-Trimethylbenzene	(4)	12.372	105	570286	21.354
121) 4-Chlorotoluene	(4)	12.404	126	166322	20.597
124) tert-Butylbenzene	(4)	12.613	134	115975M	20.980
125) Pentachloroethane	(4)	12.648	167	95034	20.825
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	579937	20.883
127) sec-Butylbenzene	(4)	12.780	105	721559	21.319
129) 1,3-Dichlorobenzene	(4)	12.877	146	322028	20.299
130) p-Isopropyltoluene	(4)	12.886	119	611662	20.779
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	490659	50.000
133) 1,4-Dichlorobenzene	(4)	12.954	146	337873	20.386
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	614121	21.146
135) Benzyl Chloride	(4)	13.028	91	348122	18.182
136) 1,3-Diethylbenzene	(4)	13.086	119	371045	20.964
137) 1,4-Diethylbenzene	(4)	13.160	119	393673	21.326
139) n-Butylbenzene	(4)	13.179	92	310184	20.592
138) 1,2-Dichlorobenzene	(4)	13.211	146	317317	20.178
140) 1,2-Diethylbenzene	(4)	13.230	119	317726	21.045
141) Diethylbenzene (total)	(4)		100	1082444	63.335
142) 1,2-Dibromo-3-chloropropane	(4)	13.755	75	36794	19.154
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	246461	19.693

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

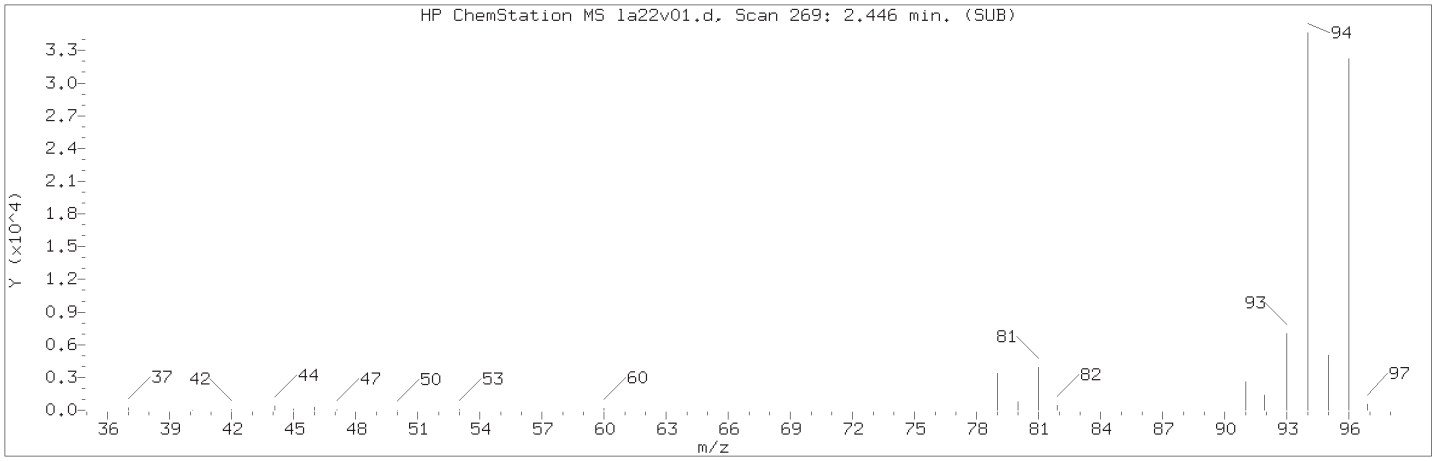
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

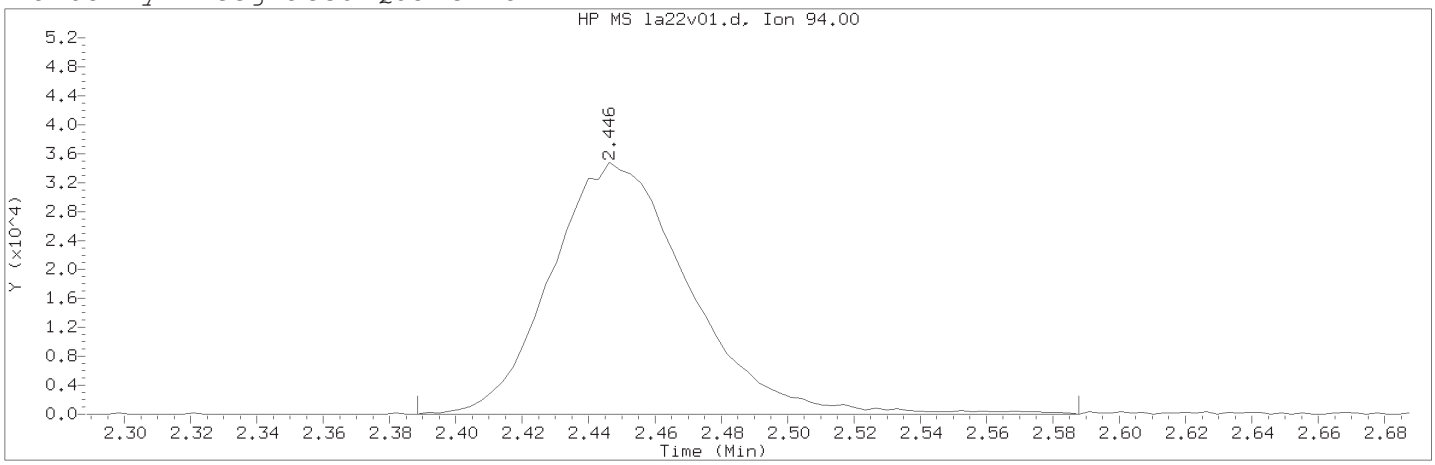
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	235897	19.022
147) Hexachlorobutadiene	(4)	14.381	225	95247	17.985
148) Naphthalene	(4)	14.481	128	643542	19.263
149) 1,2,3-Trichlorobenzene	(4)	14.623	180	215901	18.470
150) 2-Methylnaphthalene	(4)	15.230	142	314898	15.119

Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

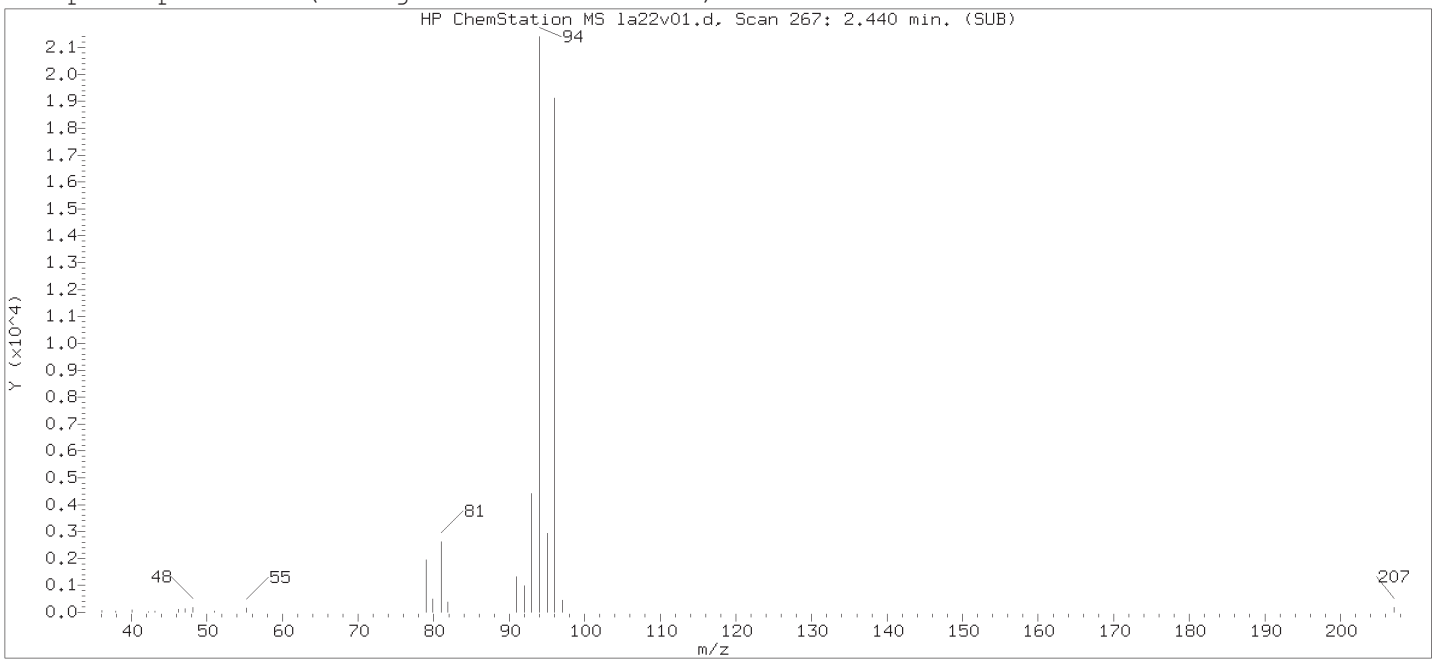
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 269
Retention Time (minutes): 2.446
Quant Ion : 94.00
Area (flag) : 100661M
On-Column Amount (ng) : 17.8123
Integration start scan : 250 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

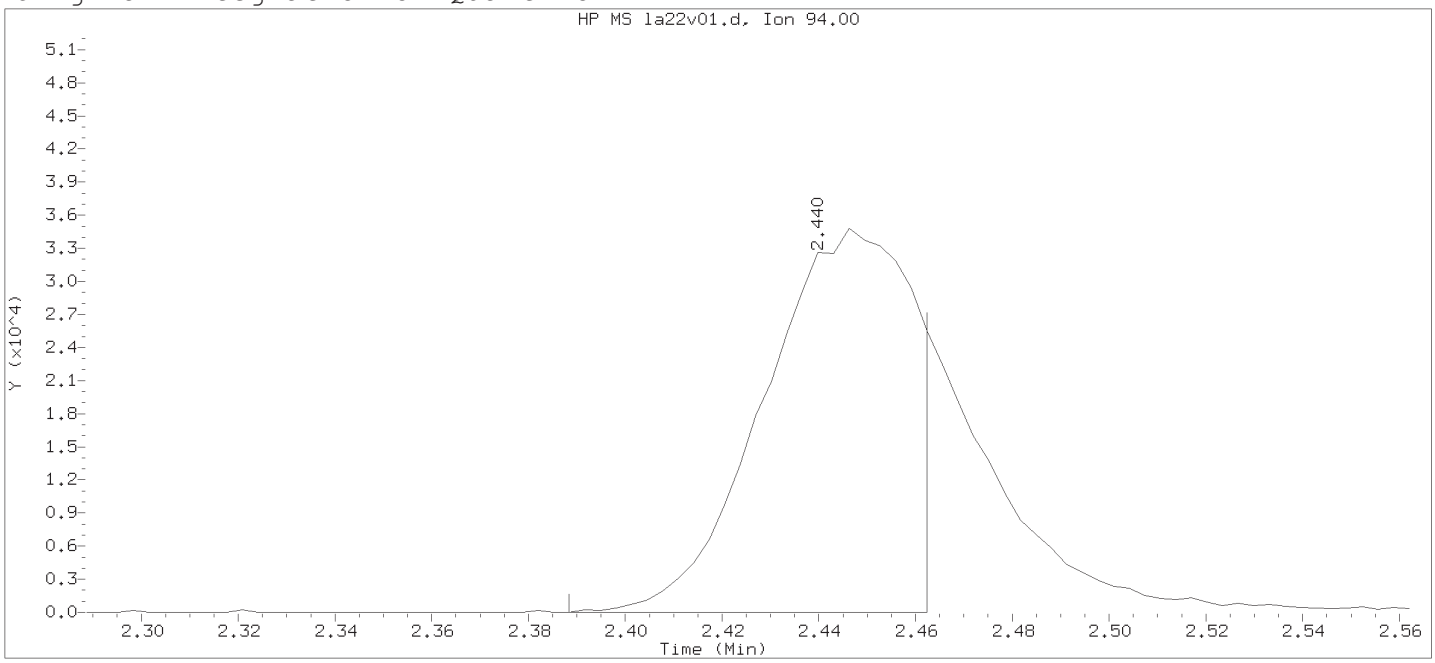
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

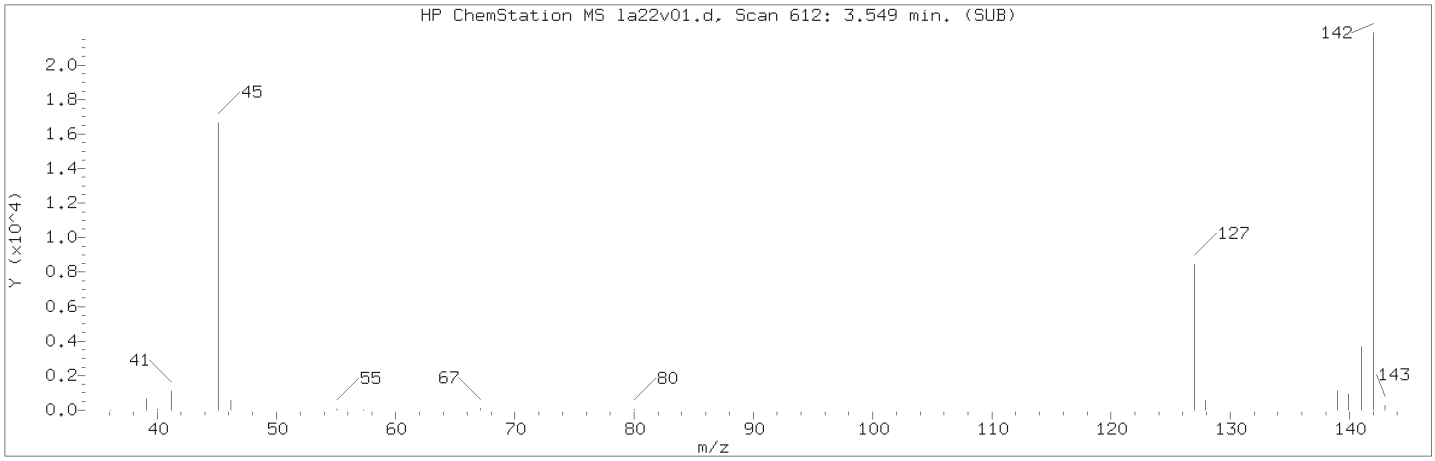
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

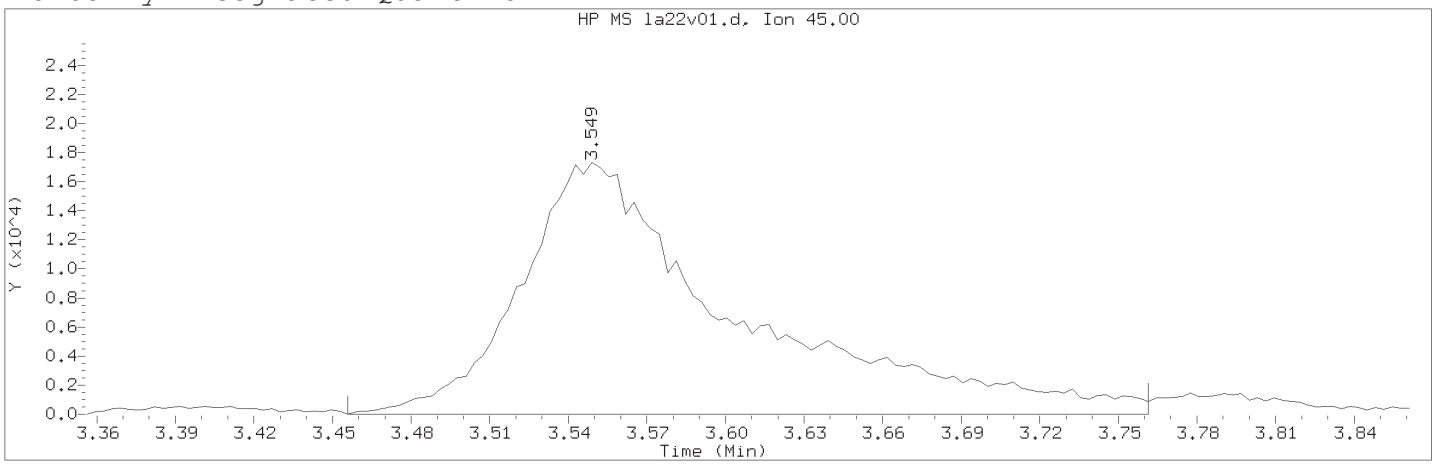
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 267
Retention Time (minutes): 2.440
Quant Ion : 94.00
Area : 72500
On-column Amount (ng) : 12.8292
Integration start scan : 250 Integration stop scan: 273
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

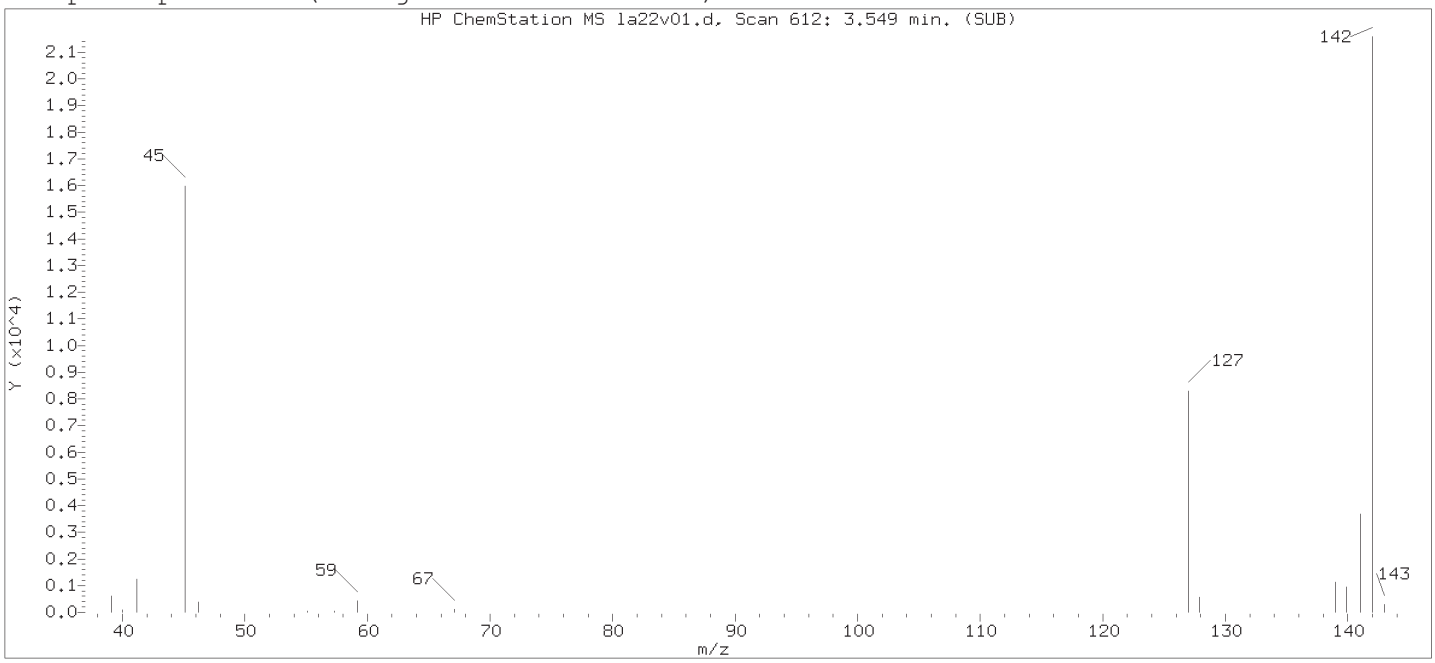
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 612
Retention Time (minutes): 3.549
Quant Ion : 45.00
Area (flag) : 98892M
On-Column Amount (ng) : 152.9641
Integration start scan : 582 Integration stop scan: 677
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

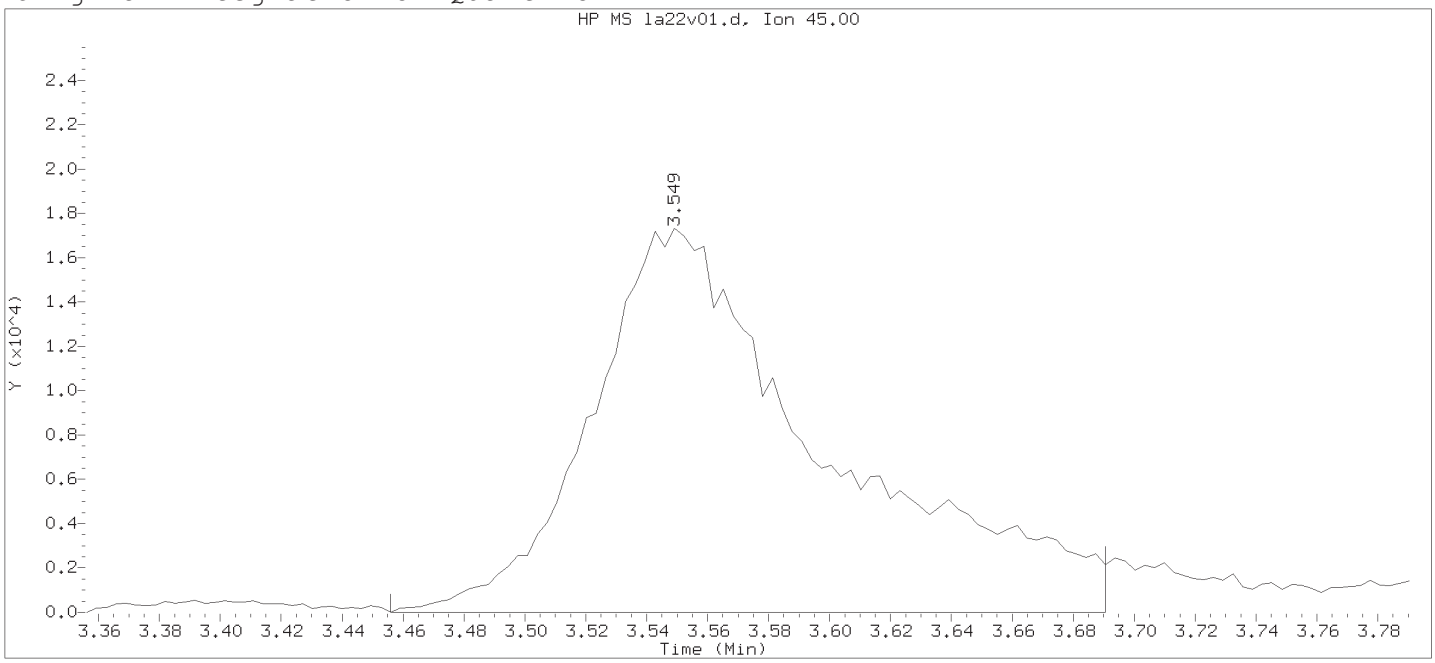
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

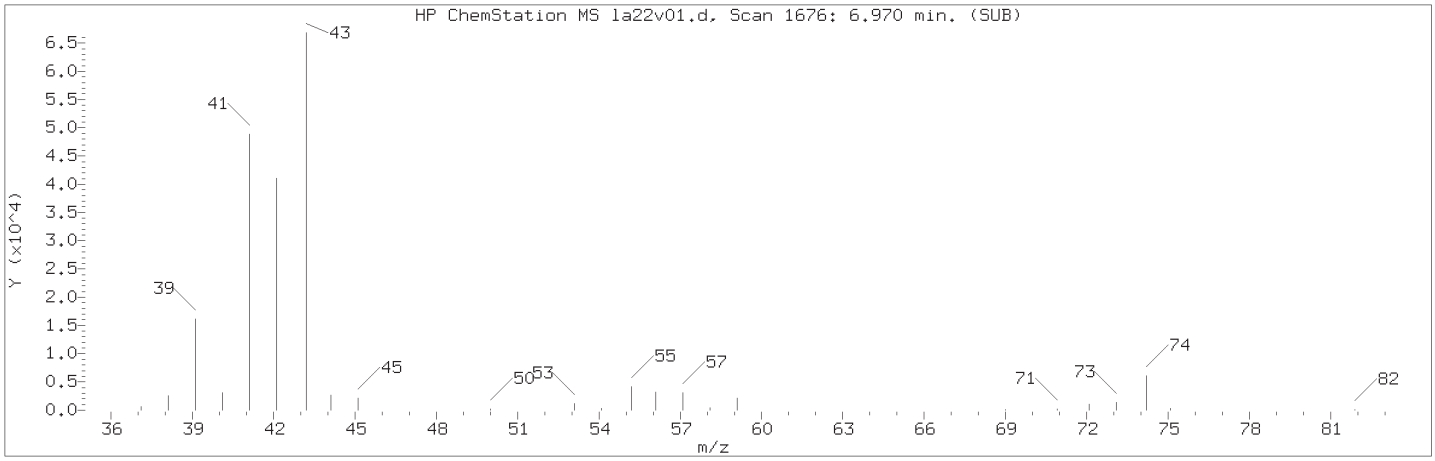
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

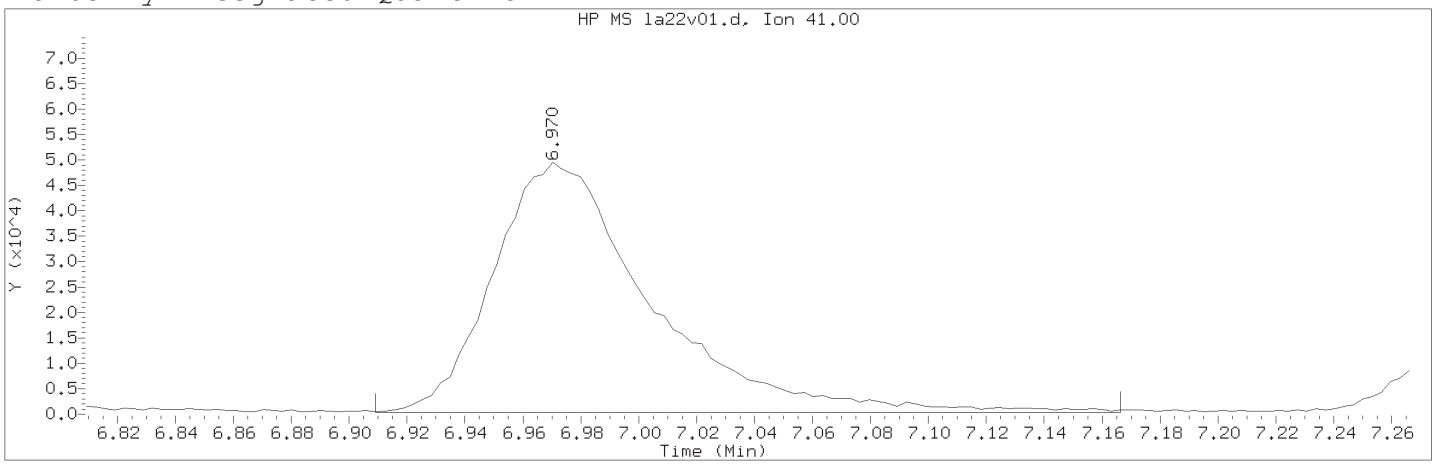
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 612
Retention Time (minutes): 3.549
Quant Ion : 45.00
Area : 92032
On-column Amount (ng) : 142.3528
Integration start scan : 582 Integration stop scan: 655
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

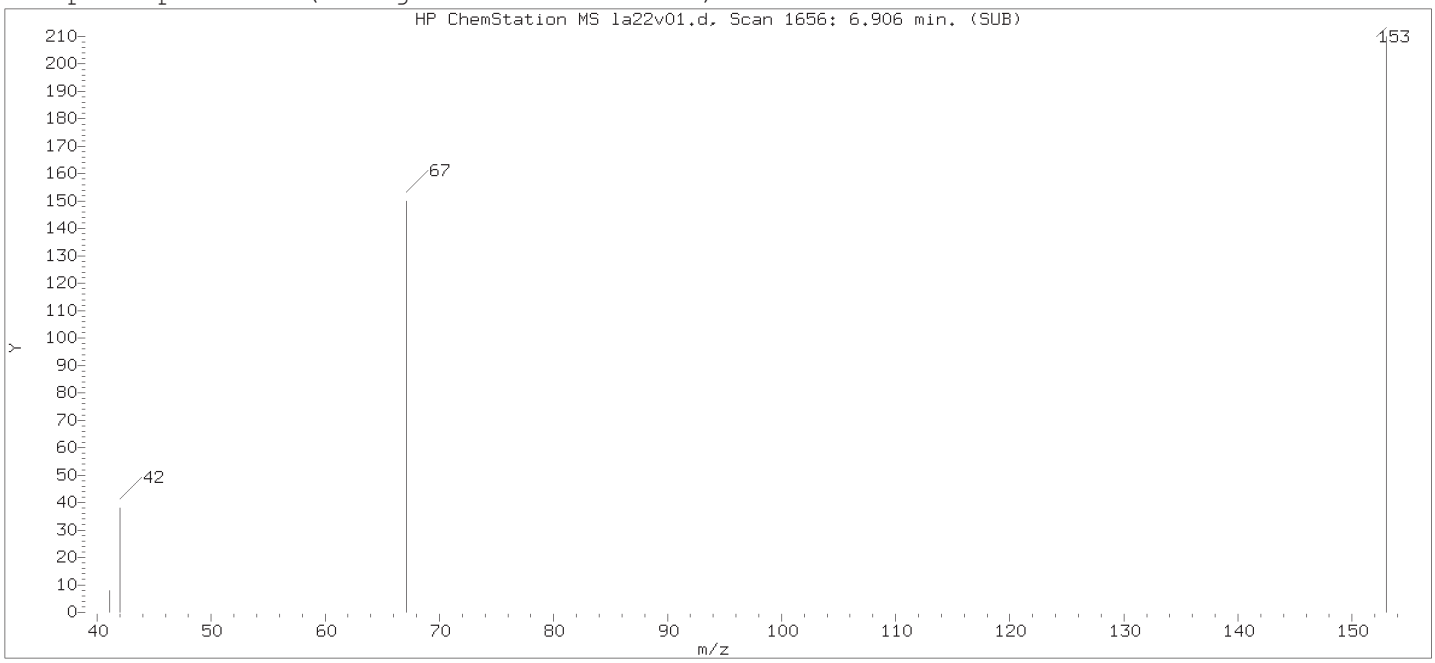
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1676
Retention Time (minutes): 6.970
Quant Ion : 41.00
Area (flag) : 185386MA
On-Column Amount (ng) : 502.6211
Integration start scan : 1656 Integration stop scan: 1736
Y at integration start : 337 Y at integration end: 337

Reason for manual integration: improper integration

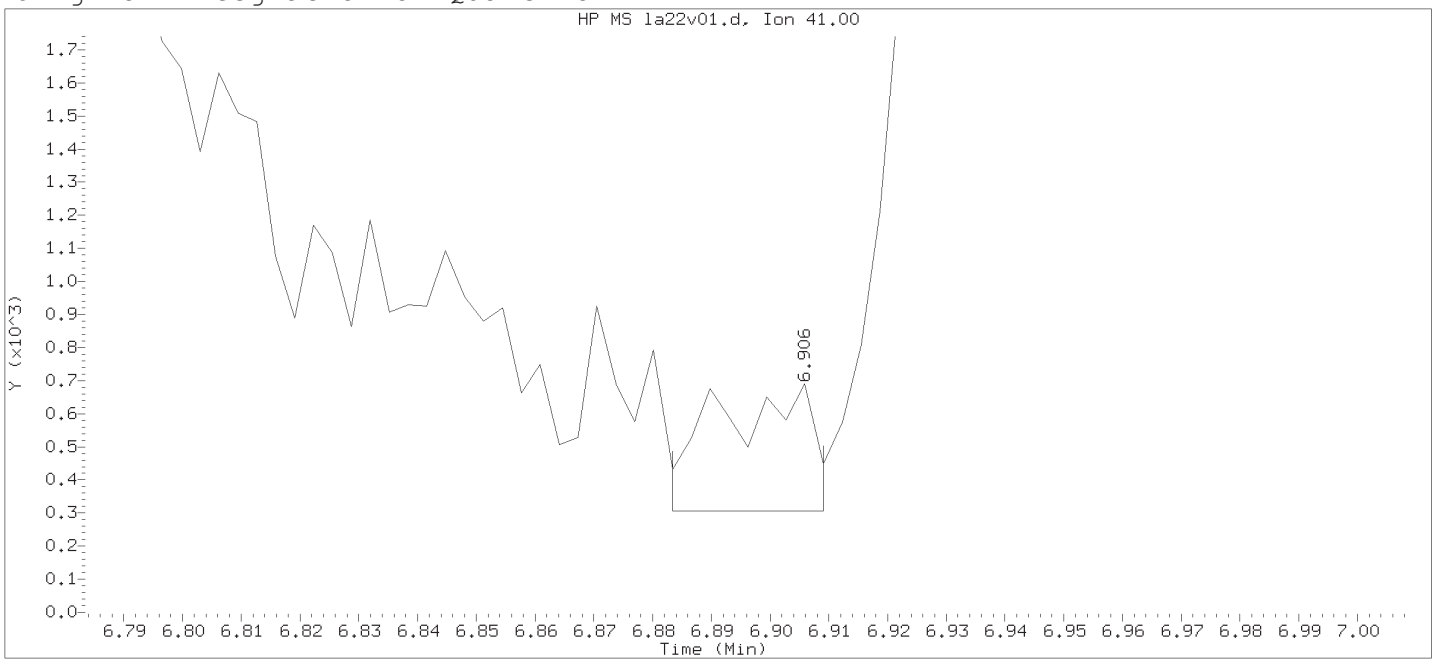
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

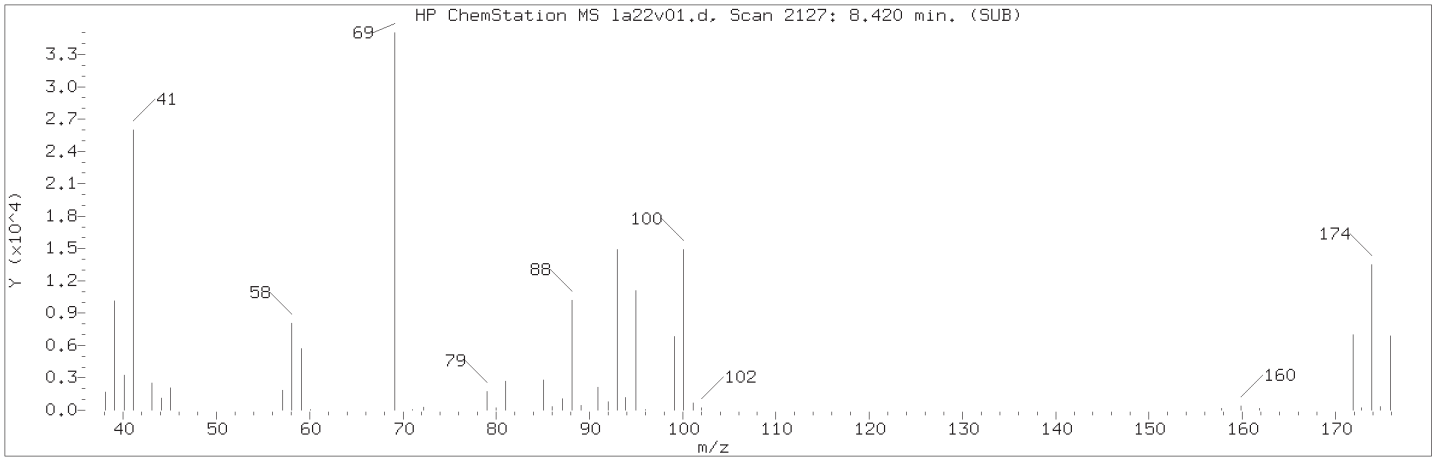
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

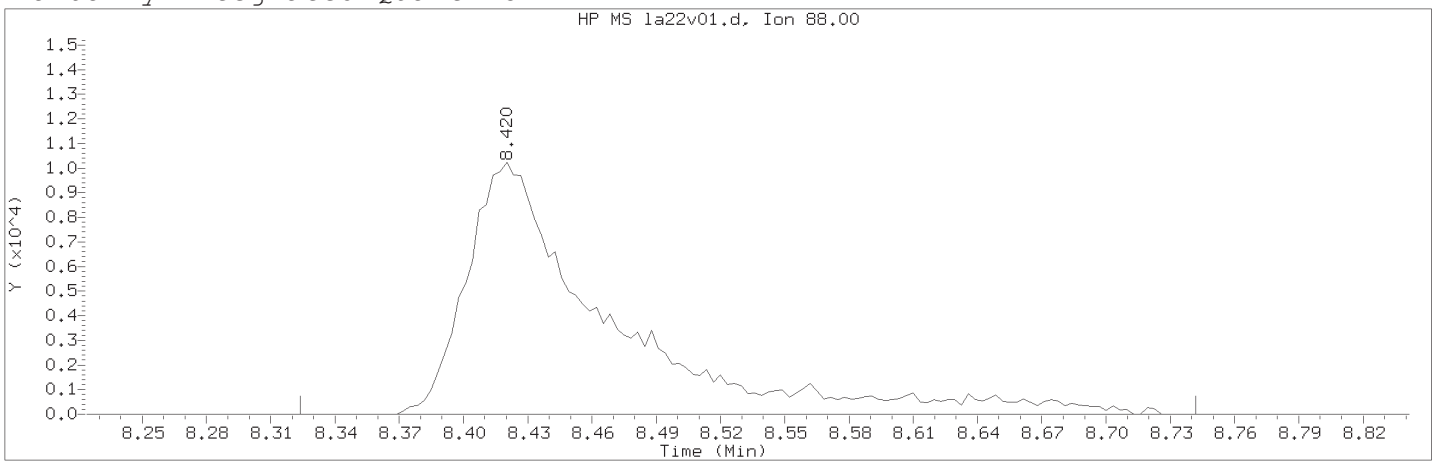
Compound Number	: 58		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 1656		
Retention Time (minutes)	: 6.906		
Quant Ion	: 41.00		
Area	: 424		
On-column Amount (ng)	: 1.1522		
Integration start scan	: 1648	Integration stop scan:	1656
Y at integration start	: 306	Y at integration end:	306

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

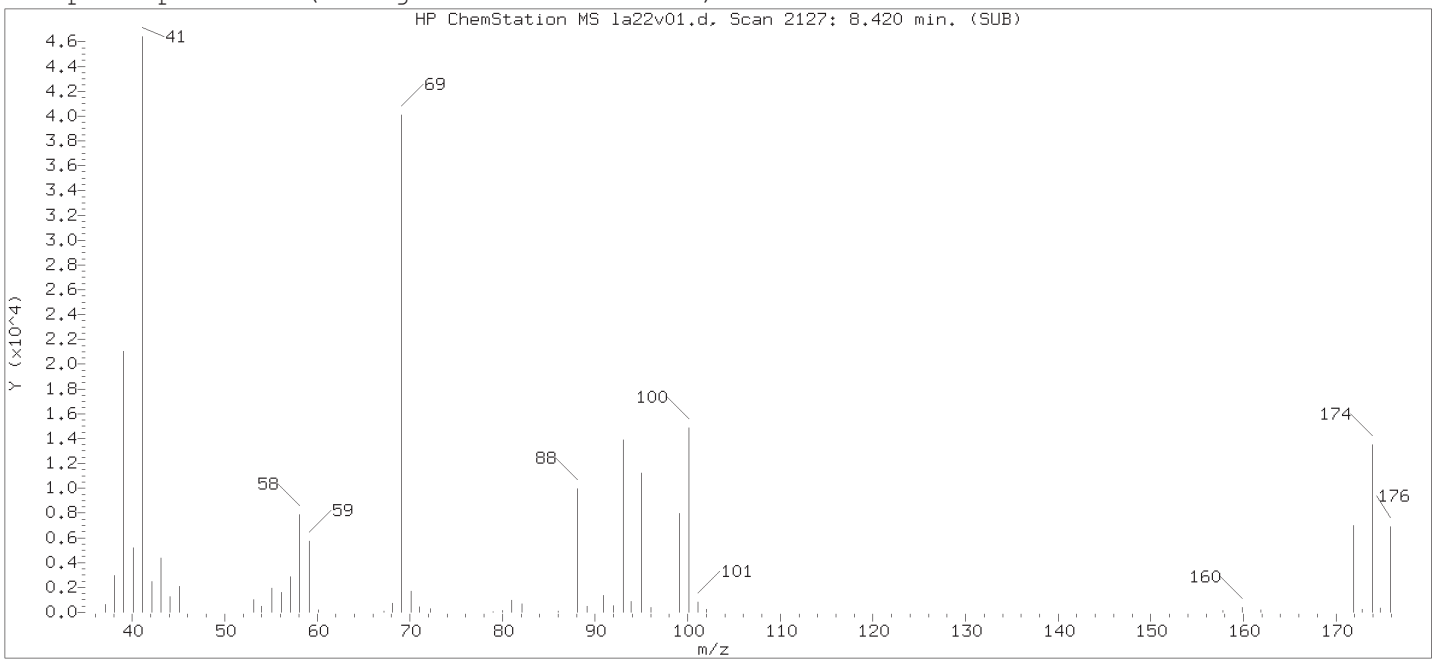
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area (flag) : 46662M
On-Column Amount (ng) : 479.1338
Integration start scan : 2096 Integration stop scan: 2226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

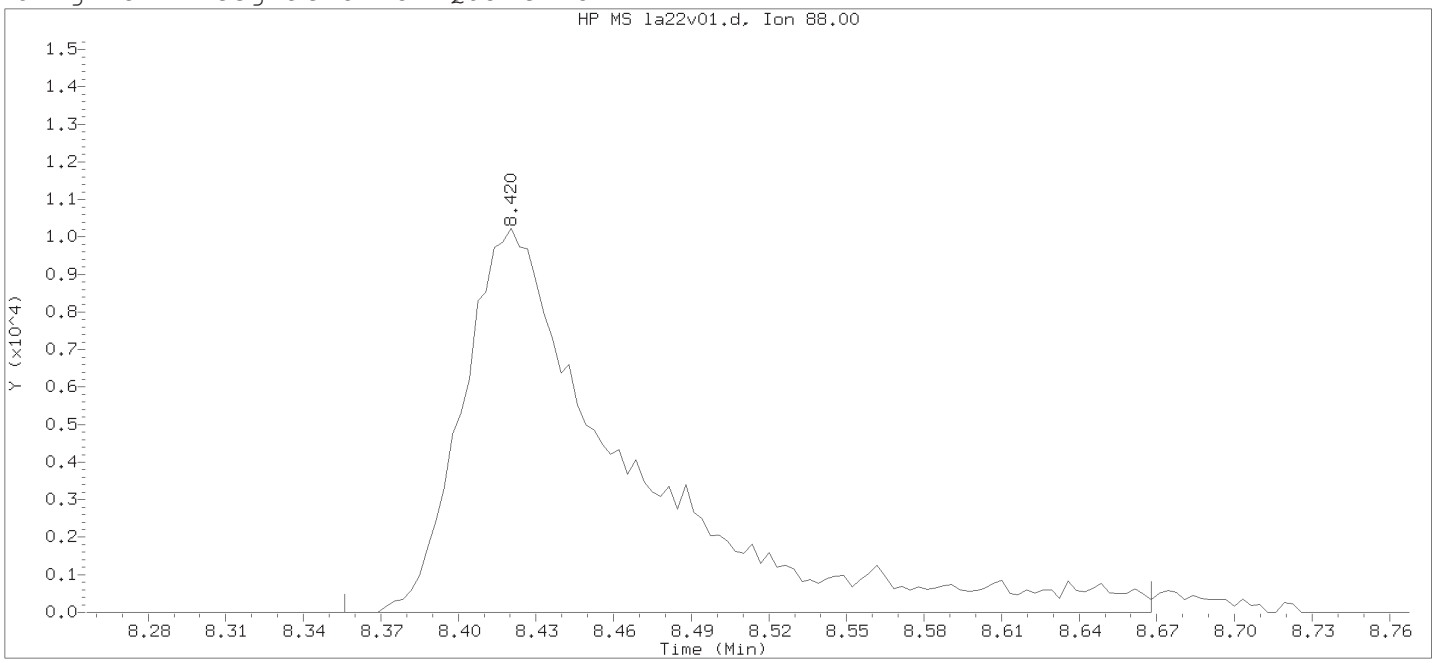
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

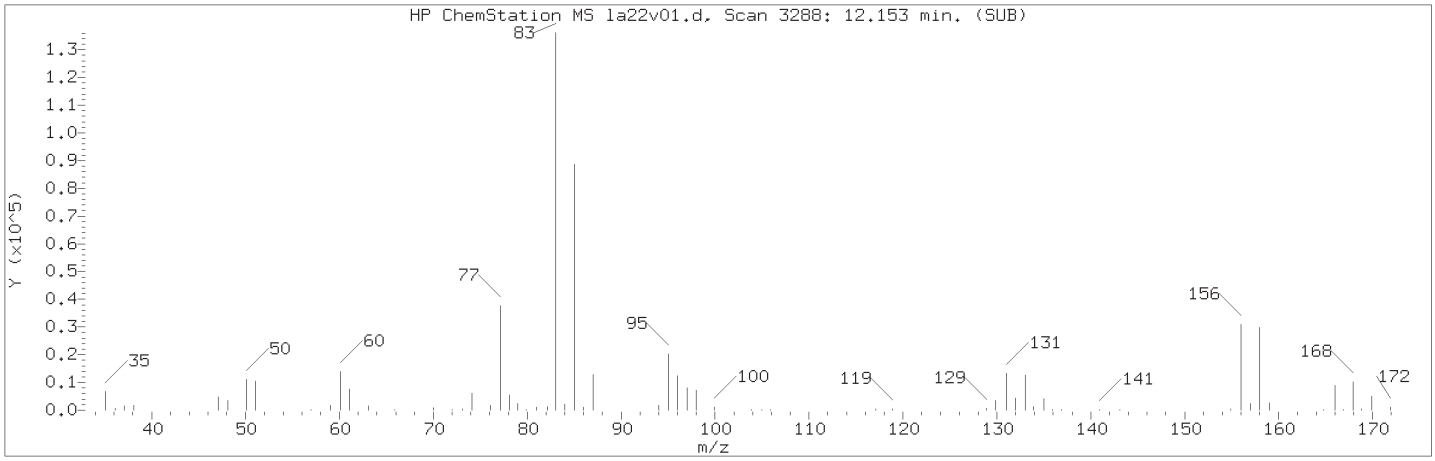
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

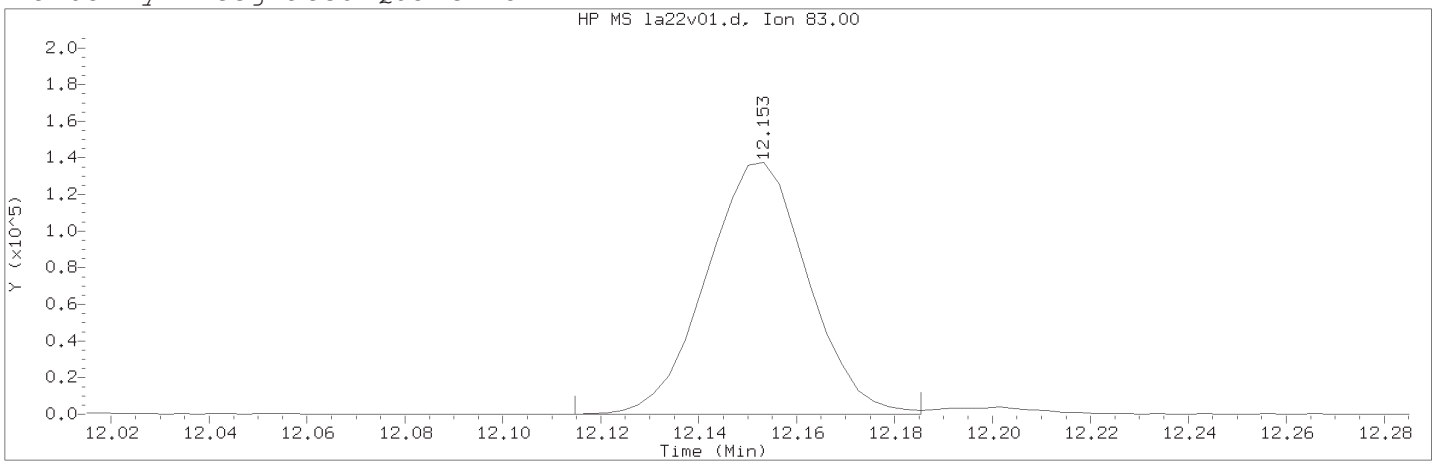
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2127
Retention Time (minutes): 8.420
Quant Ion : 88.00
Area : 45629
On-column Amount (ng) : 468.5228
Integration start scan : 2106 Integration stop scan: 2203
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

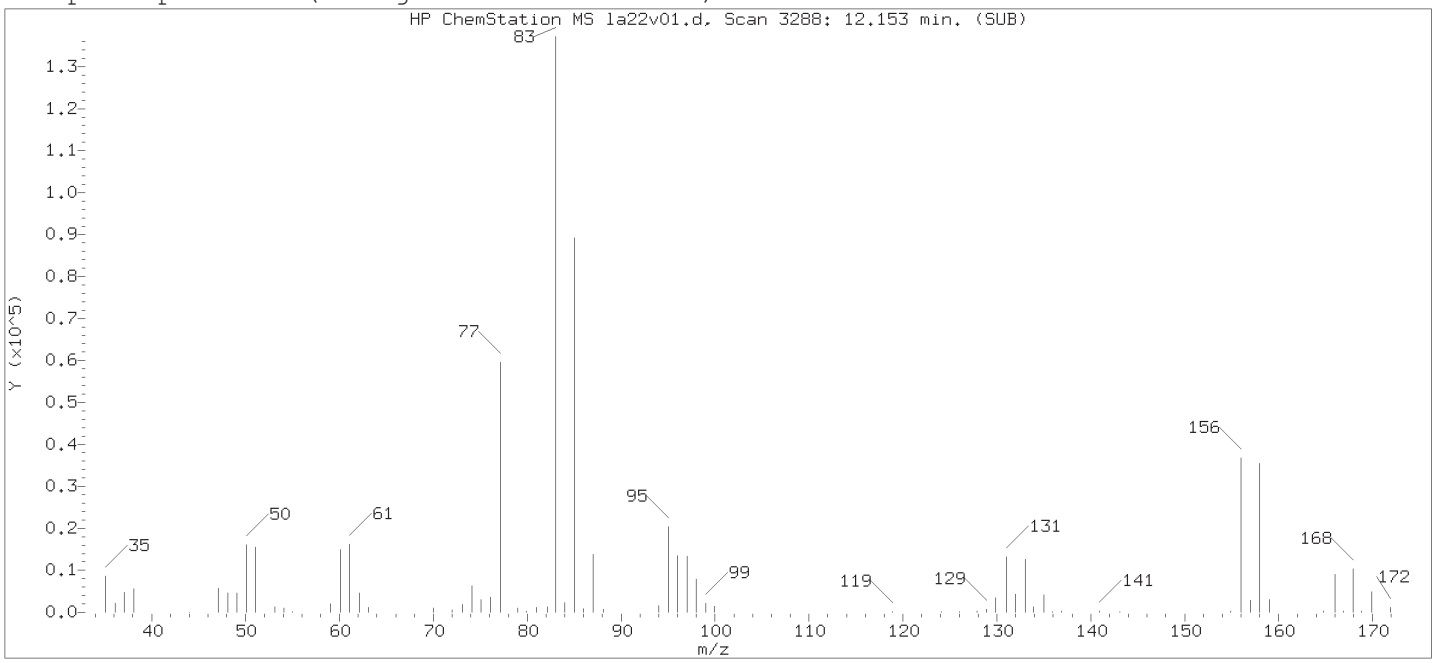
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area (flag) : 197667M
On-Column Amount (ng) : 19.8918
Integration start scan : 3275 Integration stop scan: 3297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

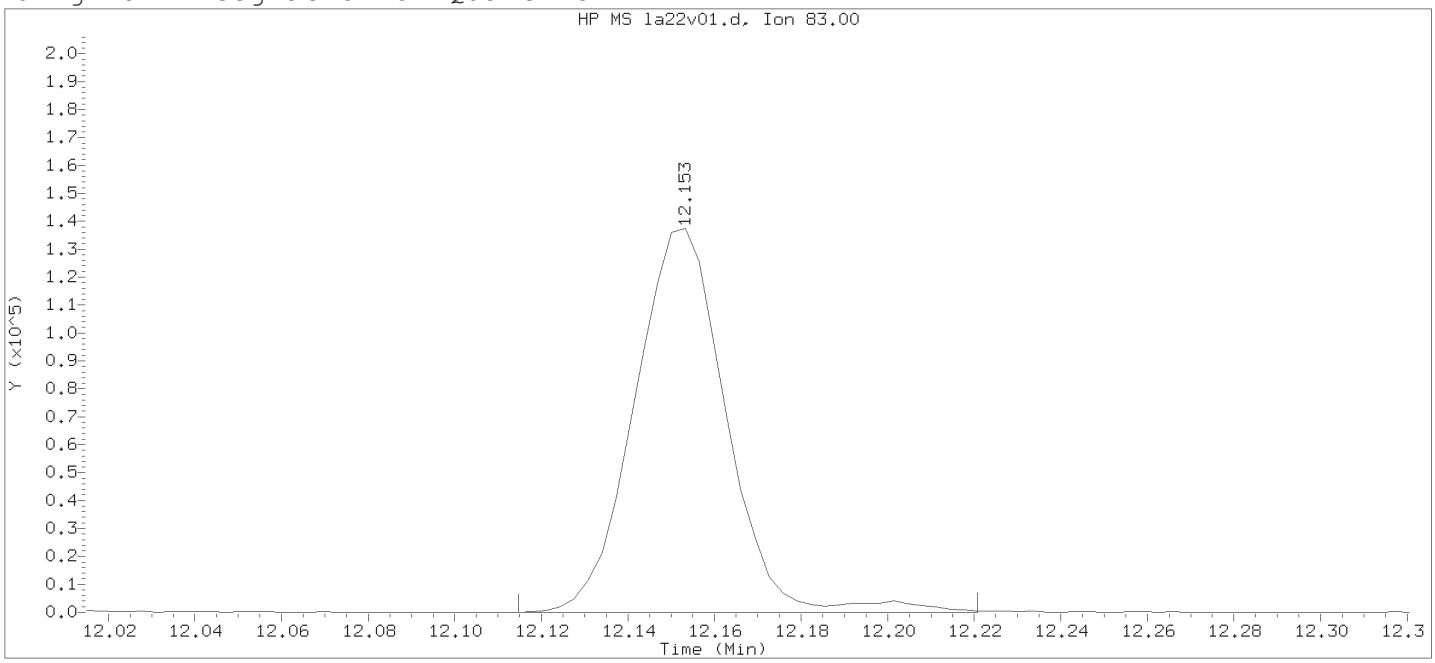
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

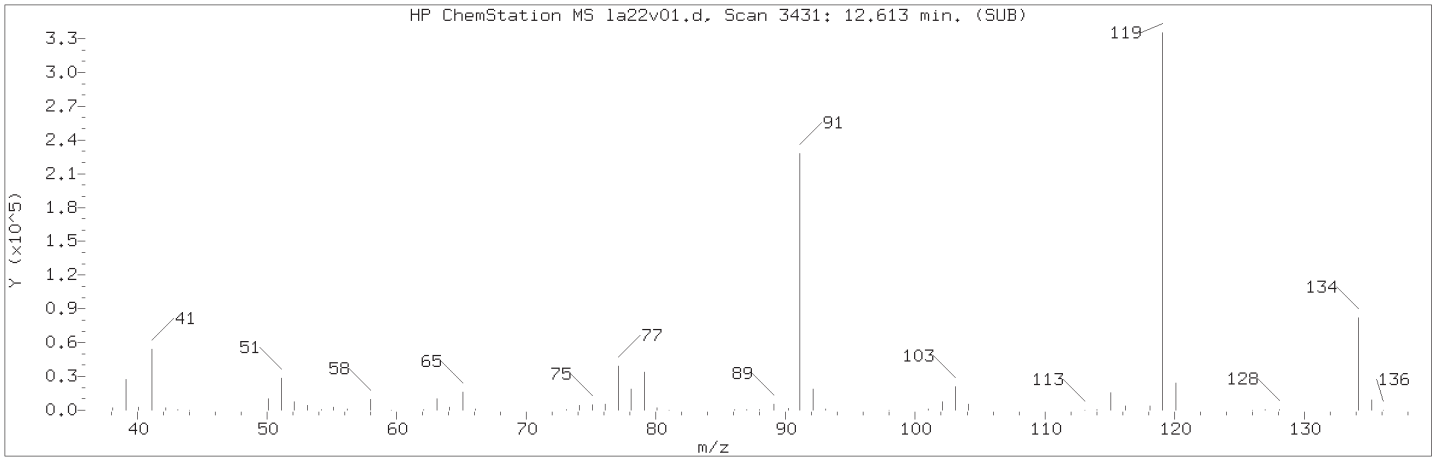
Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

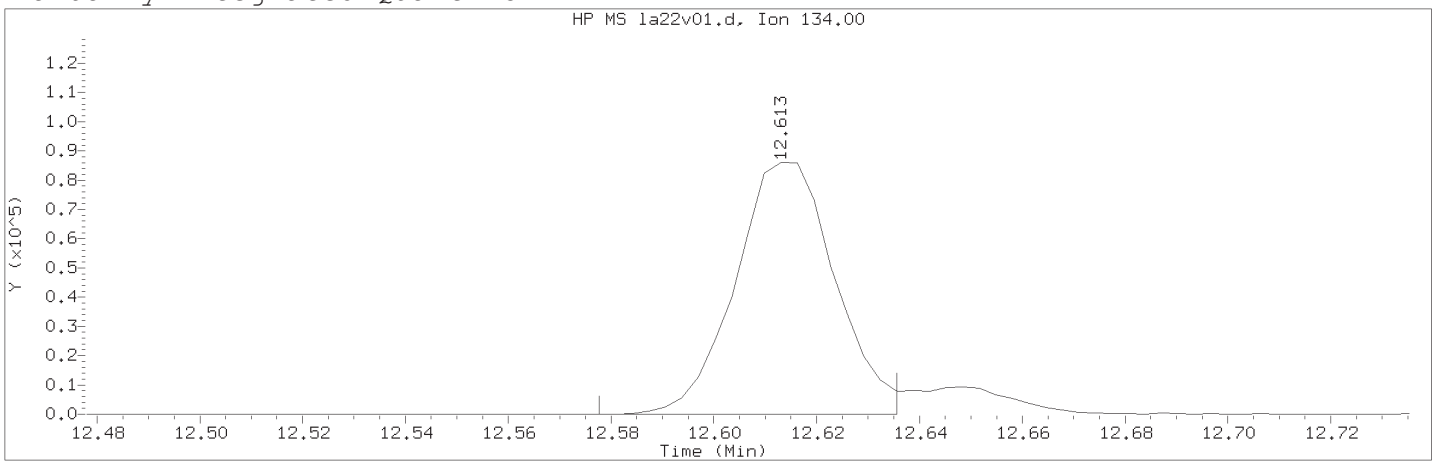
Compound Number : 116
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 3288
Retention Time (minutes): 12.153
Quant Ion : 83.00
Area : 202609
On-column Amount (ng) : 20.3891
Integration start scan : 3275 Integration stop scan: 3308
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature detail ID: BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:15 bwk03231

Sample Name: LCS01 Lab Sample ID: LCS01

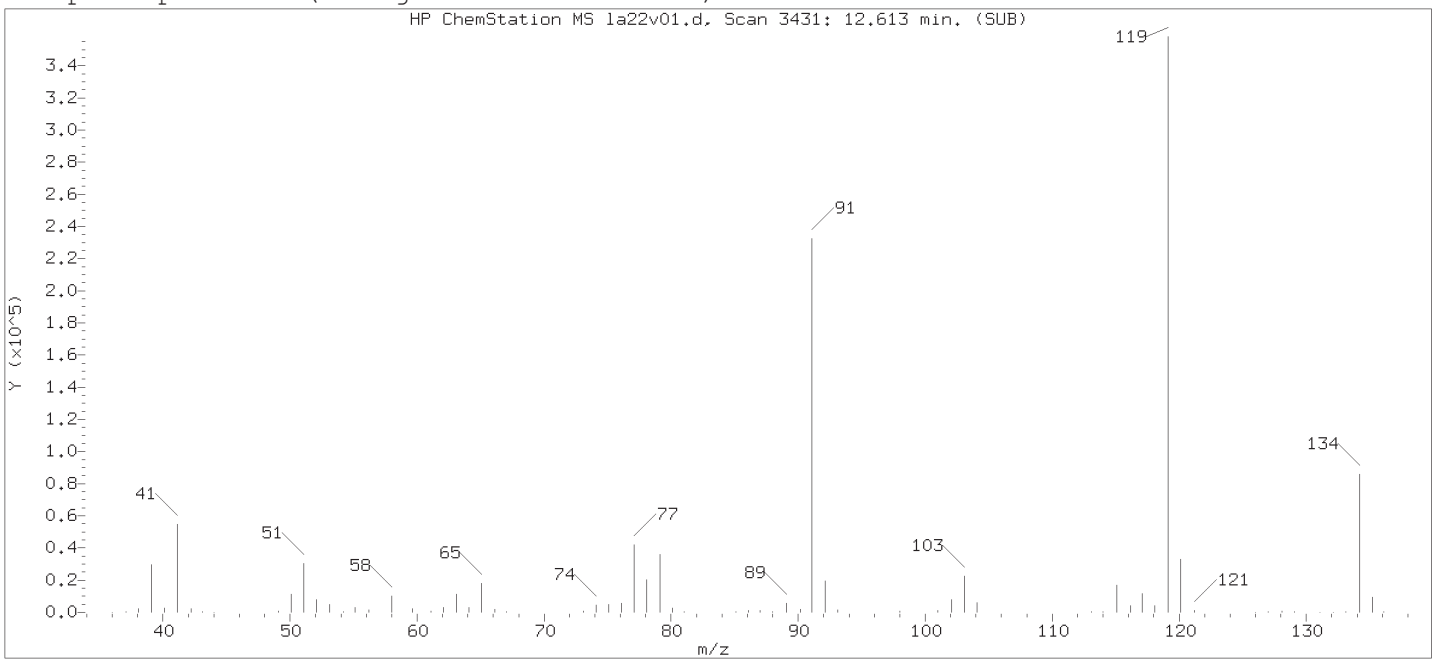
Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area (flag) : 115975M
On-Column Amount (ng) : 20.9803
Integration start scan : 3419 Integration stop scan: 3437
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

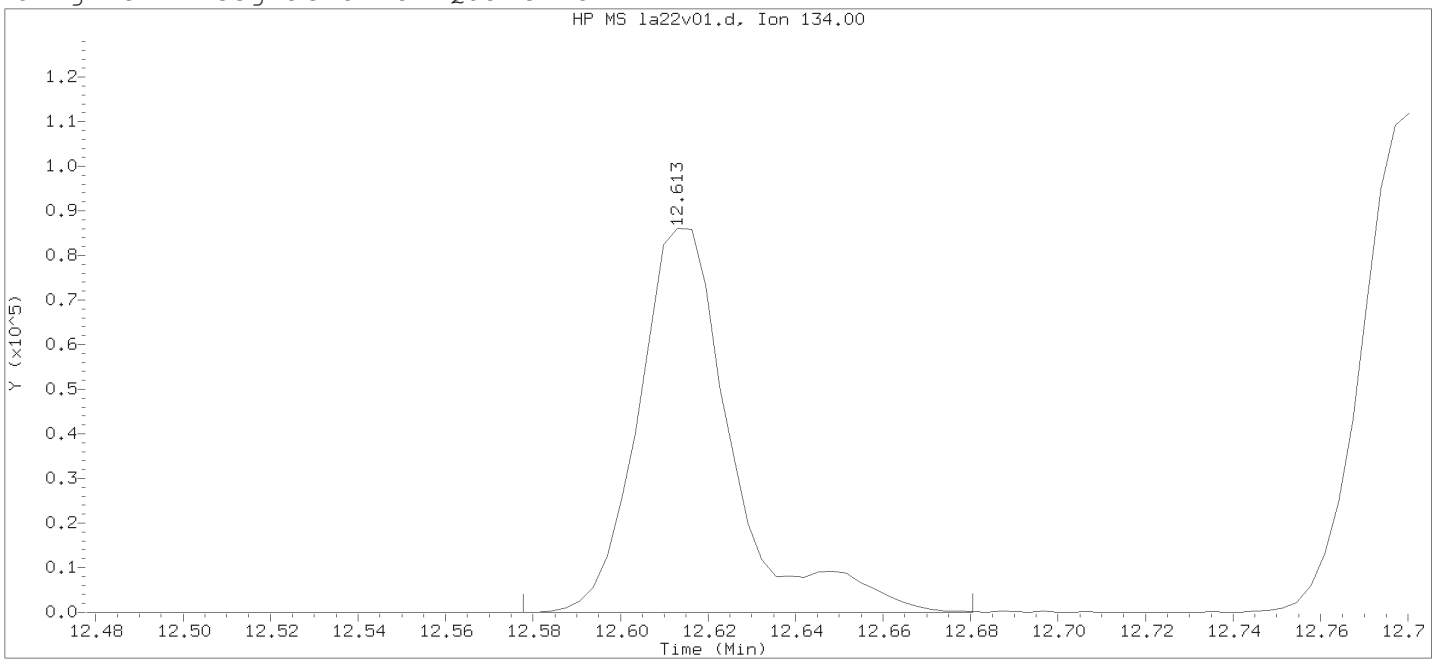
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 04/22/2016 at 13:43.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2016 at 11:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16apr22i.b/la22v01.d Instrument ID: HP09915.i
Injection date and time: 22-APR-2016 12:51 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16apr22i.b/m8260c5.m Sublist used: 8260W
Calibration date and time: 22-APR-2016 13:01
Date, time and analyst ID of latest file update: 22-Apr-2016 13:10 Automation

Sample Name: LCS01 Lab Sample ID: LCS01

Compound Number : 124
Compound Name : tert-Butylbenzene
Scan Number : 3431
Retention Time (minutes): 12.613
Quant Ion : 134.00
Area : 128238
On-column Amount (ng) : 23.1987
Integration start scan : 3419 Integration stop scan: 3451
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 04/22/2016 at 13:43.
Target 3.5 esignature data: BWK03231

Data File: /chem/HP09915.i/16may09a.b/ly09t01.d

Page 1

Date : 09-MAY-2016 08:35

Client ID: BFBFEB23-16

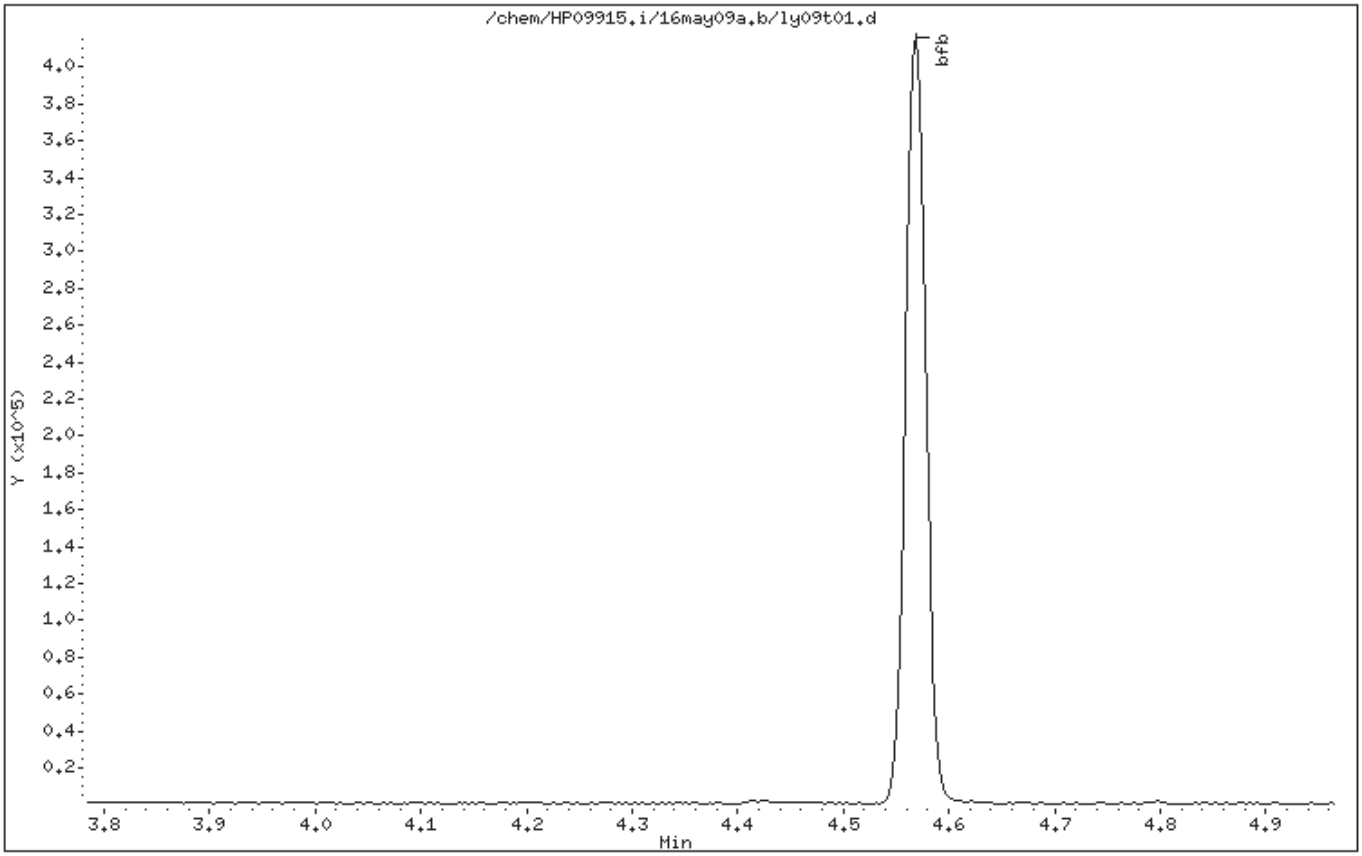
Instrument: HP09915.i

Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

Operator: BWK03231

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:44.
Target 3.5 esignature user ID: bwk03231

Data File: /chem/HP09915.i/16may09a.b/ly09t01.d

Date : 09-MAY-2016 08:35

Client ID: BFBFEB23-16

Instrument: HP09915.i

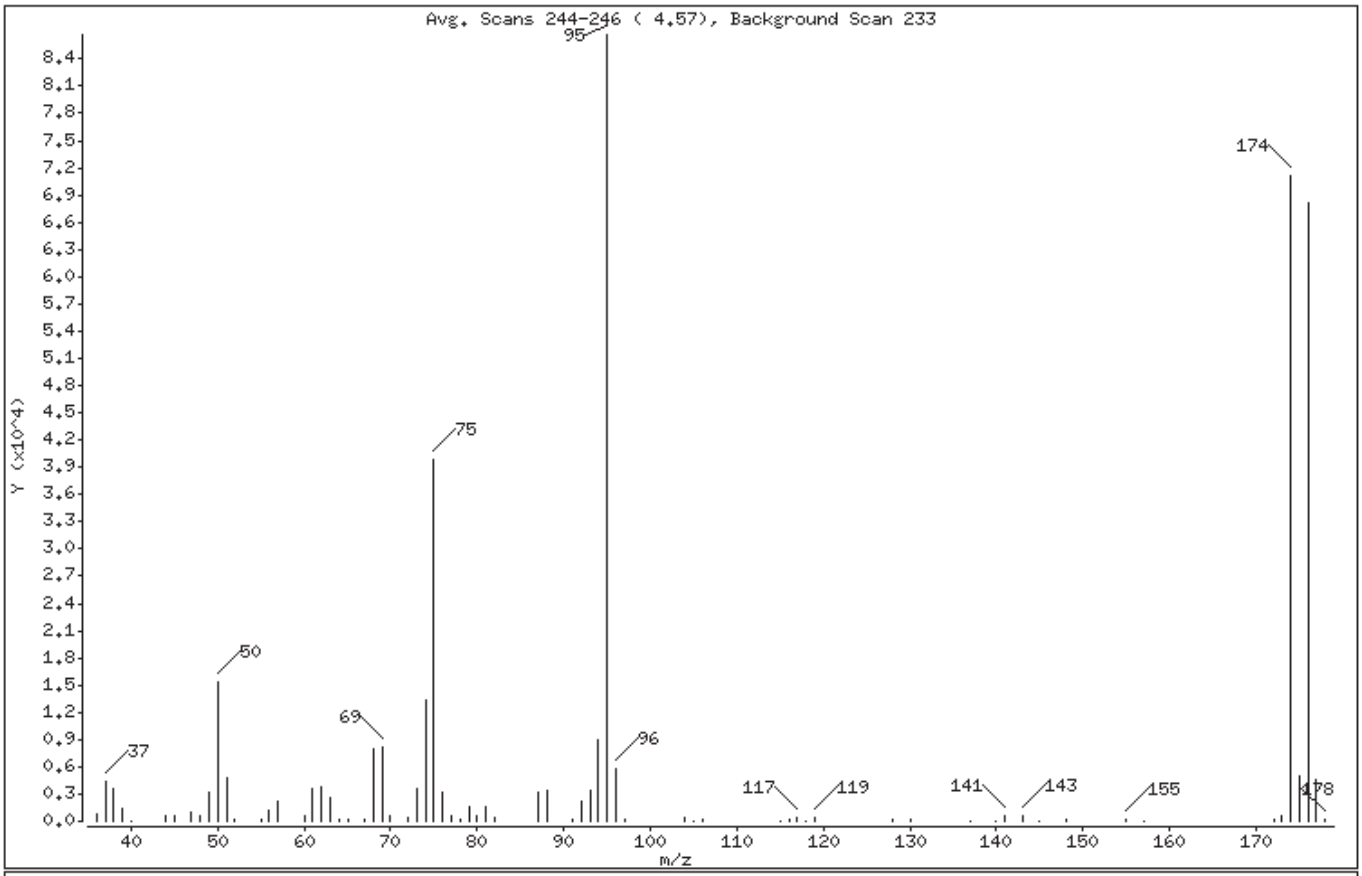
Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

Operator: BWK03231

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.68
75	30.00 - 60.00% of mass 95	45.95
96	5.00 - 9.00% of mass 95	6.76
173	Less than 2.00% of mass 174	0.59 (0.72)
174	50.00 - 100.00% of mass 95	81.97
175	5.00 - 9.00% of mass 174	5.73 (6.99)
176	95.00 - 101.00% of mass 174	78.67 (95.98)
177	5.00 - 9.00% of mass 176	5.39 (6.85)

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:44.
Target 3.5 esignature user ID: bwk03231

Date : 09-MAY-2016 08:35

Client ID: BFBFEB23-16 Instrument: HP09915.i

Sample Info: BFBFEB23-16;50NGBFB;1;3;;;;;;

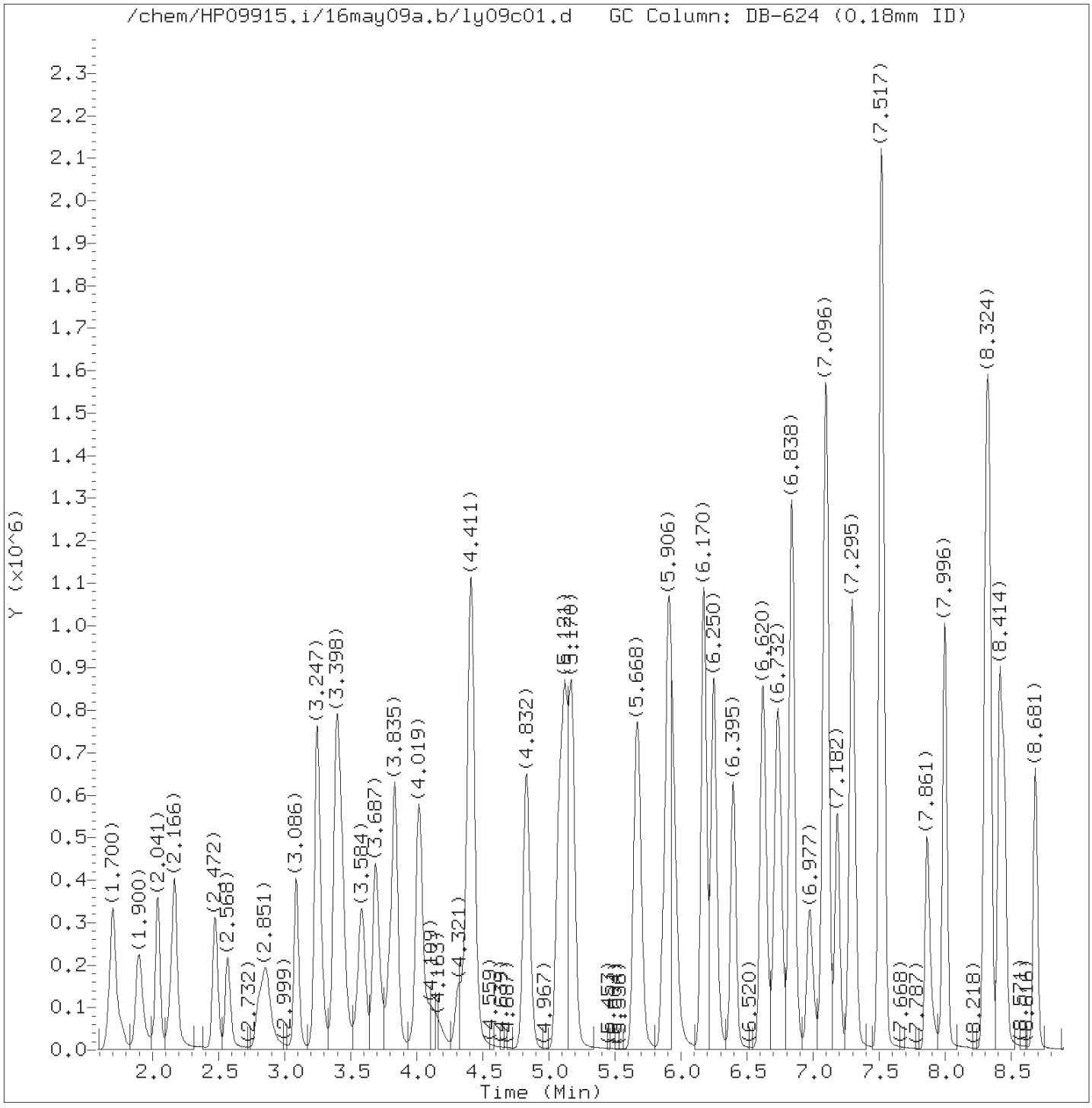
Operator: BWK03231

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ly09t01.d
Spectrum: Avg. Scans 244-246 (4.57), Background Scan 233
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	879	62.00	3688	82.00	344	128.00	265
37.00	4423	63.00	2645	87.00	3143	130.00	247
38.00	3543	64.00	242	88.00	3420	137.00	63
39.00	1429	65.00	130	91.00	275	140.00	58
40.00	74	67.00	226	92.00	2199	141.00	627
44.00	547	68.00	7954	93.00	3388	143.00	598
45.00	695	69.00	8097	94.00	8893	145.00	56
47.00	1083	70.00	646	95.00	86656	148.00	258
48.00	506	72.00	322	96.00	5862	155.00	129
49.00	3248	73.00	3625	97.00	213	157.00	53
50.00	15318	74.00	13354	104.00	311	172.00	283
51.00	4795	75.00	39816	105.00	54	173.00	513
52.00	152	76.00	3232	106.00	181	174.00	71032
55.00	220	77.00	509	115.00	60	175.00	4965
56.00	1123	78.00	216	116.00	267	176.00	68176
57.00	2191	79.00	1586	117.00	422	177.00	4667
60.00	607	80.00	587	118.00	66	178.00	127
61.00	3578	81.00	1647	119.00	457		

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:44.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

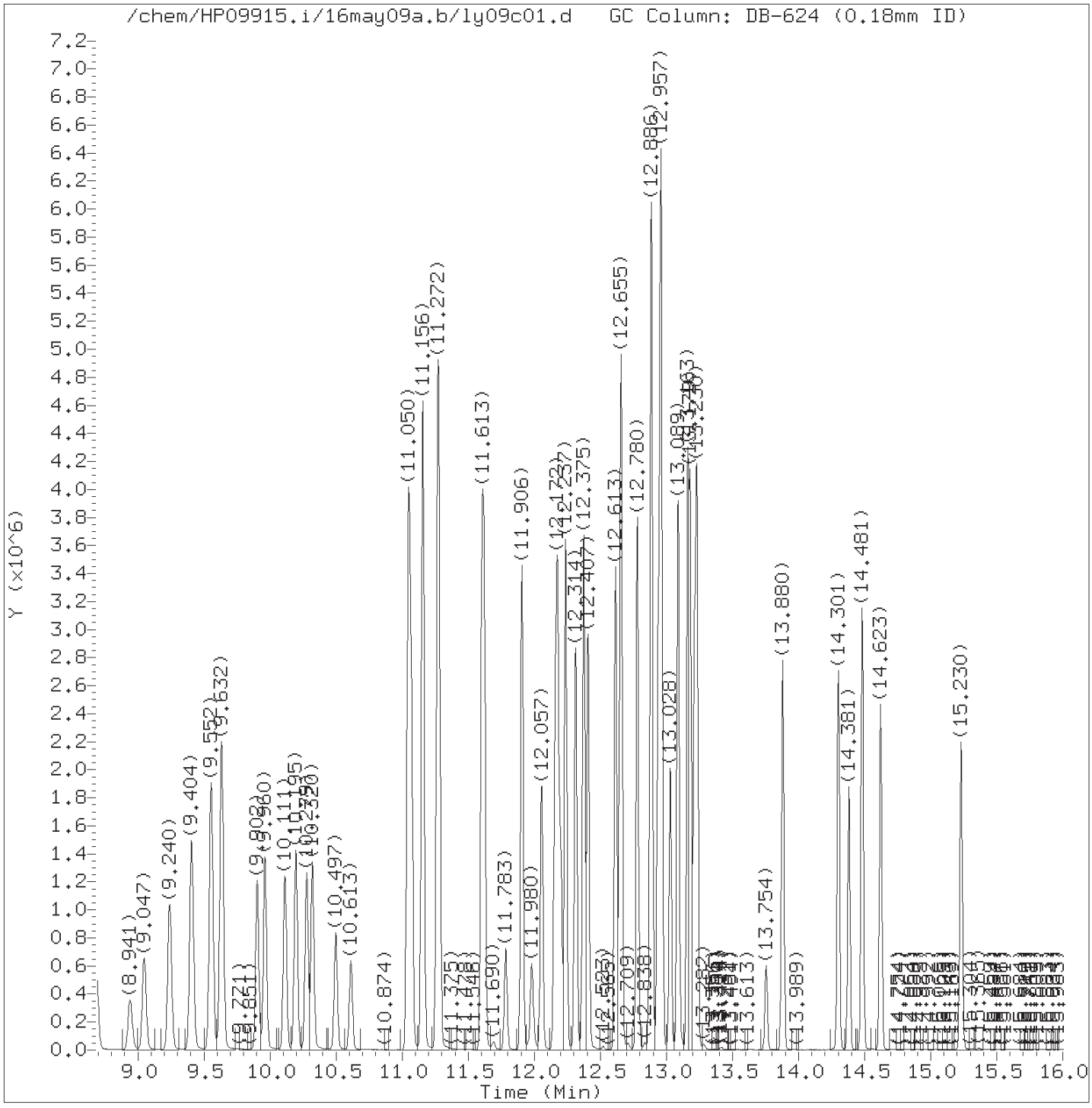
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.900	85	517550	46.084
4) Chloromethane	(2)	2.041	50	541873	48.042
6) Vinyl Chloride	(2)	2.166	62	513795	48.277
8) Bromomethane	(2)	2.472	94	333034M	48.264
9) Chloroethane	(2)	2.568	64	287964	49.450
12) Trichlorofluoromethane	(2)	2.851	101	533376	47.585
14) Ethyl ether	(2)	3.086	59	339182	42.659
16) Acrolein	(1)	3.244	56	1237944	575.455
17) 1,1-Dichloroethene	(2)	3.388	96	354736	53.546
17) 1,1-Dichloroethene	(2)	3.388	63	189436	53.392
18) Acetone	(1)	3.398	58	109249	113.451
19) Freon 113	(2)	3.427	101	345167	54.197
21) 2-Propanol	(1)	3.546	45	185296	250.917
22) Methyl Iodide	(2)	3.584	142	659077	53.581
23) Carbon Disulfide	(2)	3.687	76	1230535	55.315
27) Methyl Acetate	(2)	3.797	43	430600	48.255
25) Allyl Chloride	(2)	3.835	41	640829	50.066
29)*t-Butyl alcohol-d10	(1)	3.996	65	251455	250.000
28) Methylene Chloride	(2)	4.019	84	429423	52.564
30) t-Butyl alcohol	(1)	4.128	59	287960M	240.451
31) Acrylonitrile	(2)	4.314	53	231751	51.448
33) Methyl Tertiary Butyl Ether	(2)	4.401	73	1291669	50.431
32) trans-1,2-Dichloroethene	(2)	4.414	96	403359	53.652
34) n-Hexane	(2)	4.832	57	617084	53.109
36) 1,1-Dichloroethane	(2)	5.073	63	793991	53.206
38) di-Isopropyl ether	(2)	5.121	45	1520376	53.055
39) 2-Chloro-1,3-butadiene	(2)	5.179	53	678662	57.655
40) Ethyl t-butyl ether	(2)	5.668	59	1328674	50.914
44) 2-Butanone	(2)	5.871	43	581070	100.192
42) cis-1,2-Dichloroethene	(2)	5.903	96	452586	53.450
45) 2,2-Dichloropropane	(2)	5.932	77	542840	52.395
47) Propionitrile	(1)	5.951	54	437358	282.108
43) 1,2-Dichloroethene (Total)	(2)		96	855945	107.102
48) Methacrylonitrile	(2)	6.170	67	588219	131.581
49) Bromochloromethane	(2)	6.247	128	215234	49.851
50) Tetrahydrofuran	(1)	6.256	71	149730	115.468
51) Chloroform	(2)	6.395	83	707761	52.195
52)$Dibromofluoromethane	(2)	6.616	113	355473	49.454

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	6.613	111	364178	49.492
53) 1,1,1-Trichloroethane	(2)	6.626	97	571296	47.427
54) Cyclohexane	(2)	6.732	56	751836	54.140
54) Cyclohexane	(2)	6.732	84	589407	53.424
54) Cyclohexane	(2)	6.735	69	218724	54.490
55) 1,1-Dichloropropene	(2)	6.835	75	589052	53.108
56) Carbon Tetrachloride	(2)	6.838	117	471985	52.325
58) Isobutyl Alcohol	(1)	6.973	41	269409M	639.462
57)$1,2-Dichloroethane-d4	(2)	7.076	102	90907	50.096
57)$1,2-Dichloroethane-d4	(2)	7.079	65	449473	48.329
57)$1,2-Dichloroethane-d4	(2)	7.079	104	57382	49.804
60) Benzene	(2)	7.102	78	1730073	53.218
61) 1,2-Dichloroethane	(2)	7.182	62	597960	49.724
61) 1,2-Dichloroethane	(2)	7.189	98	54409	51.950
65) t-Amyl methyl ether	(2)	7.295	73	1246504	51.560
66)*Fluorobenzene	(2)	7.514	96	1512990	50.000
67) n-Heptane	(2)	7.523	43	672877	52.255
69) n-Butanol	(1)	7.861	56	443982	1351.858
71) Trichloroethene	(2)	7.996	95	435861	53.059
72) Methylcyclohexane	(2)	8.311	83	715661	52.875
72) Methylcyclohexane	(2)	8.311	98	317697	52.249
73) 1,2-Dichloropropane	(2)	8.333	63	482797	53.946
76) Methyl Methacrylate	(2)	8.414	69	405316	54.041
75) 1,4-Dioxane	(1)	8.423	88	73664M	662.190
74) Dibromomethane	(2)	8.446	93	289012	52.105
78) Bromodichloromethane	(2)	8.681	83	546566	53.986
79) 2-Nitropropane	(2)	8.941	41	278880	100.059
80) 2-Chloroethyl Vinyl Ether	(2)	9.047	63	359592	56.306
81) cis-1,3-Dichloropropene	(2)	9.240	75	729198	56.147
82) 4-Methyl-2-pentanone	(2)	9.404	43	1252919	105.273
83)$Toluene-d8	(3)	9.555	98	1524623	49.993
83)$Toluene-d8	(3)	9.552	100	1000317	50.373
88) Toluene	(3)	9.632	92	1076835	51.941
89) trans-1,3-Dichloropropene	(3)	9.902	75	666797	55.509
91) Ethyl Methacrylate	(3)	9.960	69	733427	55.115
90) 1,3-Dichloropropene (total)	(3)		100	1395995	111.656
92) 1,1,2-Trichloroethane	(3)	10.111	97	415409	51.571
93) Tetrachloroethene	(3)	10.195	166	444046	50.600

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on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
94) 1,3-Dichloropropane	(3)	10.279	76	742444	52.045
96) 2-Hexanone	(3)	10.320	43	907119	103.055
97) Dibromochloromethane	(3)	10.497	129	432143	54.621
99) 1,2-Dibromoethane	(3)	10.613	107	449511	51.947
100)*Chlorobenzene-d5	(3)	11.041	117	1165087	50.000
101) 1-Chlorohexane	(3)	11.054	91	588227	50.578
102) Chlorobenzene	(3)	11.070	112	1216324	51.844
103) 1,1,1,2-Tetrachloroethane	(3)	11.156	131	406694	52.386
104) Ethylbenzene	(3)	11.156	91	2096747	52.422
106) m+p-Xylene	(3)	11.272	106	1608741	104.762
107) o-Xylene	(3)	11.603	106	792711	52.484
109) Styrene	(3)	11.623	104	1371452	53.906
108) Xylene (Total)	(3)		106	2401452	157.246
110) Bromoform	(3)	11.783	173	310119	56.926
111) Isopropylbenzene	(3)	11.906	105	2025792	52.687
112) Cyclohexanone	(1)	11.980	55	263760	514.136
114)$4-Bromofluorobenzene	(3)	12.054	95	582372	51.604
114)$4-Bromofluorobenzene	(3)	12.057	174	483158	50.311
116) 1,1,2,2-Tetrachloroethane	(4)	12.153	83	640421	50.515
115) Bromobenzene	(4)	12.169	156	530600	49.319
118) trans-1,4-Dichloro-2-butene	(4)	12.179	53	337622	148.271
117) 1,2,3-Trichloropropane	(4)	12.201	110	178565	48.767
119) n-Propylbenzene	(4)	12.237	91	2460438	51.149
120) 2-Chlorotoluene	(4)	12.314	126	486414	49.857
122) 1,3,5-Trimethylbenzene	(4)	12.375	105	1748142	51.307
121) 4-Chlorotoluene	(4)	12.407	126	514753	49.965
124) tert-Butylbenzene	(4)	12.613	134	356258	50.516
125) Pentachloroethane	(4)	12.648	167	291975	50.149
126) 1,2,4-Trimethylbenzene	(4)	12.658	105	1808710	51.050
127) sec-Butylbenzene	(4)	12.780	105	2194993	50.833
129) 1,3-Dichlorobenzene	(4)	12.880	146	989817	48.905
130) p-Isopropyltoluene	(4)	12.890	119	1908755	50.825
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	625986	50.000
133) 1,4-Dichlorobenzene	(4)	12.957	146	1018405	48.163
134) 1,2,3-Trimethylbenzene	(4)	12.960	105	1821997	49.174
135) Benzyl Chloride	(4)	13.028	91	1197470	45.549
136) 1,3-Diethylbenzene	(4)	13.089	119	1115220	49.387
137) 1,4-Diethylbenzene	(4)	13.163	119	1154973	49.042

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on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

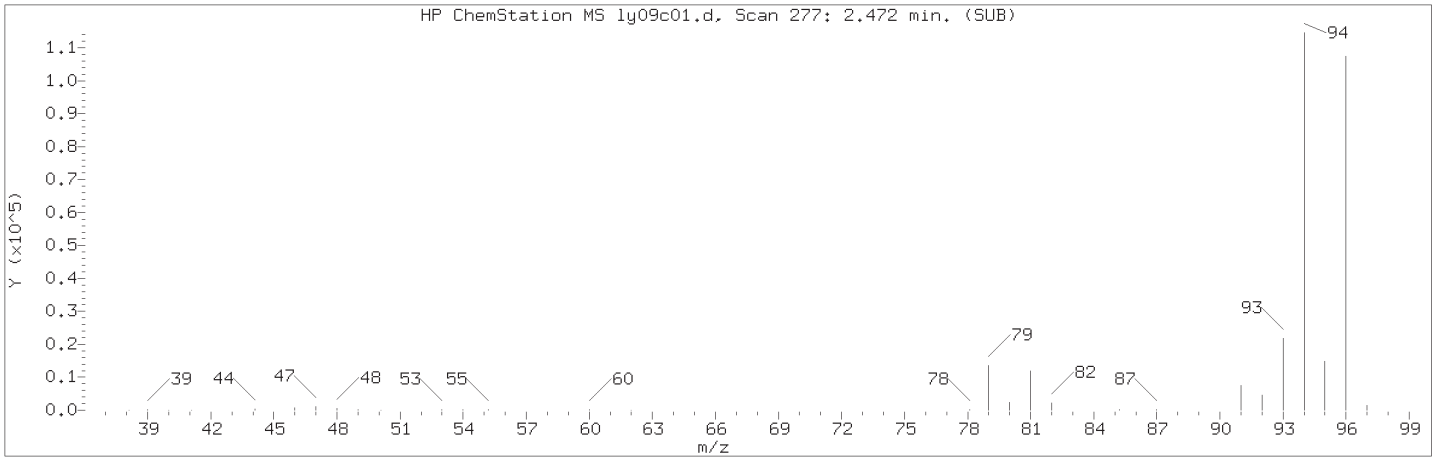
Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

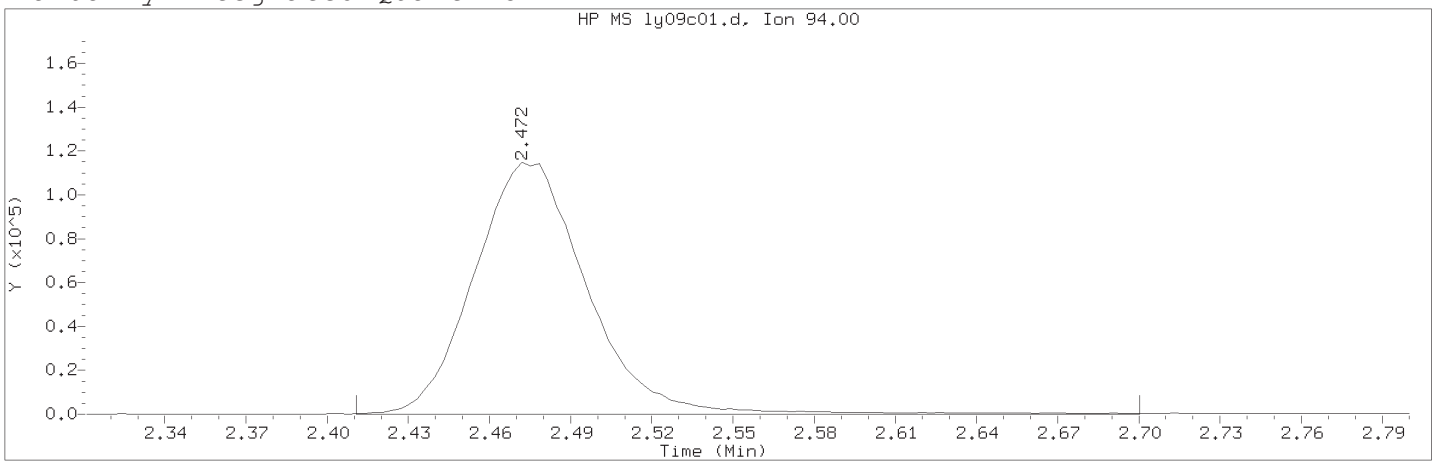
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
139) n-Butylbenzene	(4)	13.179	92	954548	49.670
138) 1,2-Dichlorobenzene	(4)	13.211	146	962880	47.992
140) 1,2-Diethylbenzene	(4)	13.230	119	941999	48.906
141) Diethylbenzene (total)	(4)		100	3212192	147.335
142) 1,2-Dibromo-3-chloropropane	(4)	13.754	75	126733	51.712
144) 1,3,5-Trichlorobenzene	(4)	13.880	180	746179	46.733
146) 1,2,4-Trichlorobenzene	(4)	14.301	180	719923	45.504
147) Hexachlorobutadiene	(4)	14.381	225	292976	43.362
148) Naphthalene	(4)	14.481	128	2024130	47.490
149) 1,2,3-Trichlorobenzene	(4)	14.623	180	664085	44.531
150) 2-Methylnaphthalene	(4)	15.230	142	953807	35.894

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

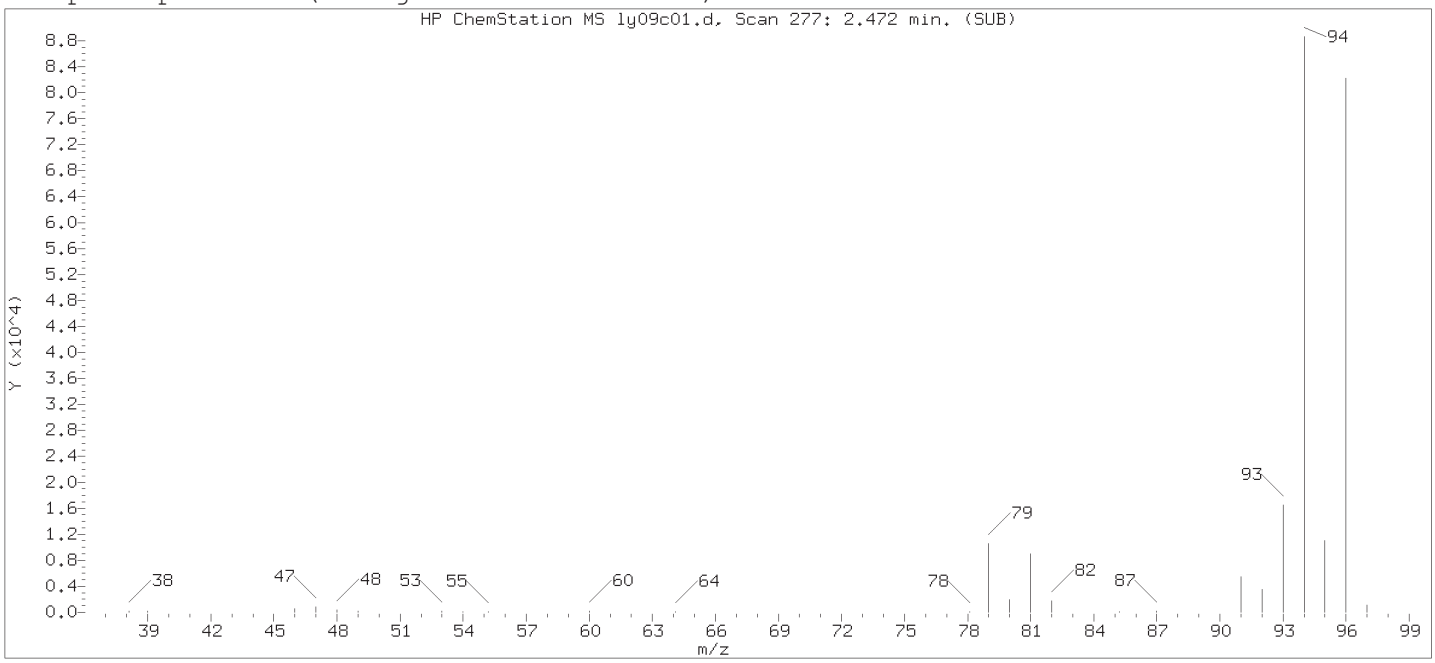
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 277
Retention Time (minutes): 2.472
Quant Ion : 94.00
Area (flag) : 333034M
On-Column Amount (ng) : 48.2637
Integration start scan : 257 Integration stop scan: 347
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

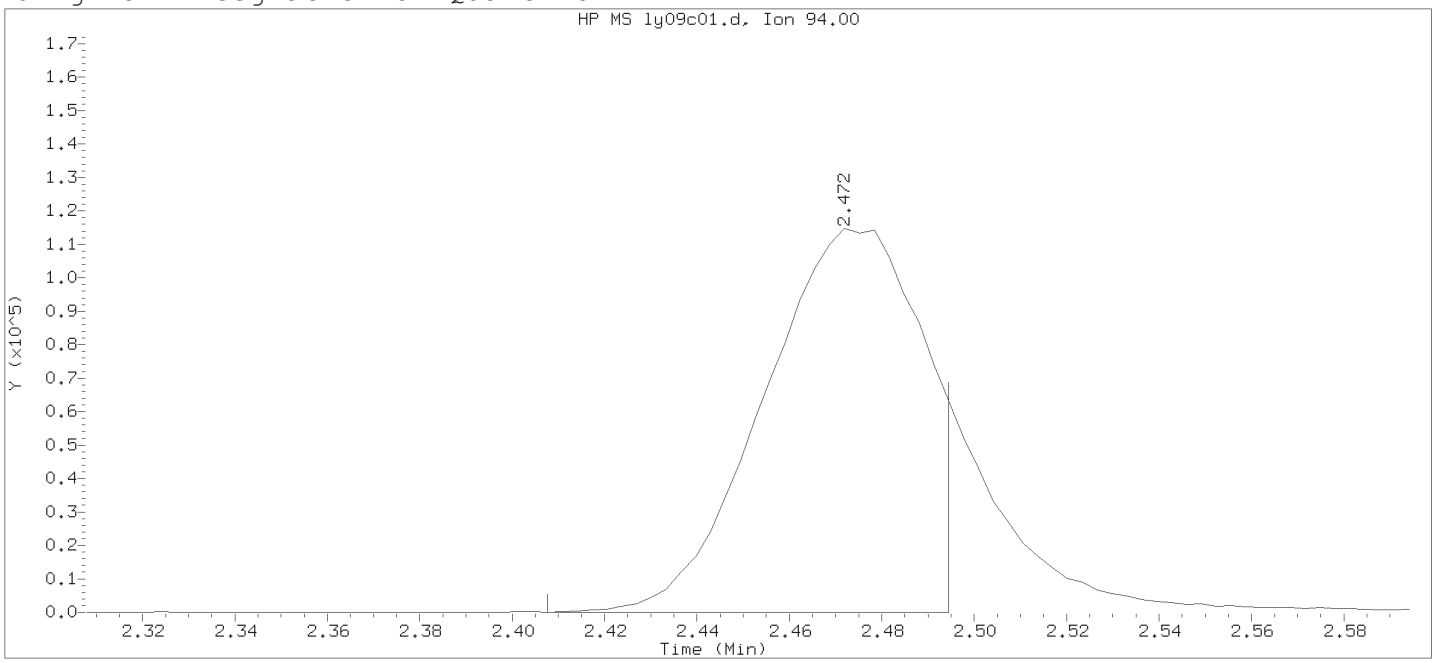
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 13:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

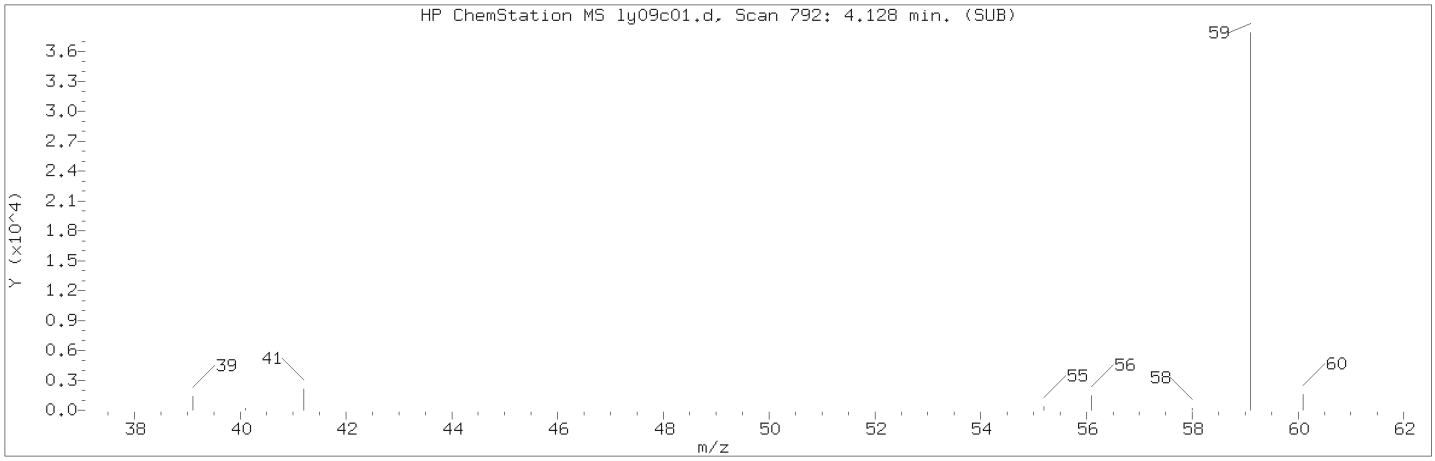
Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:42 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

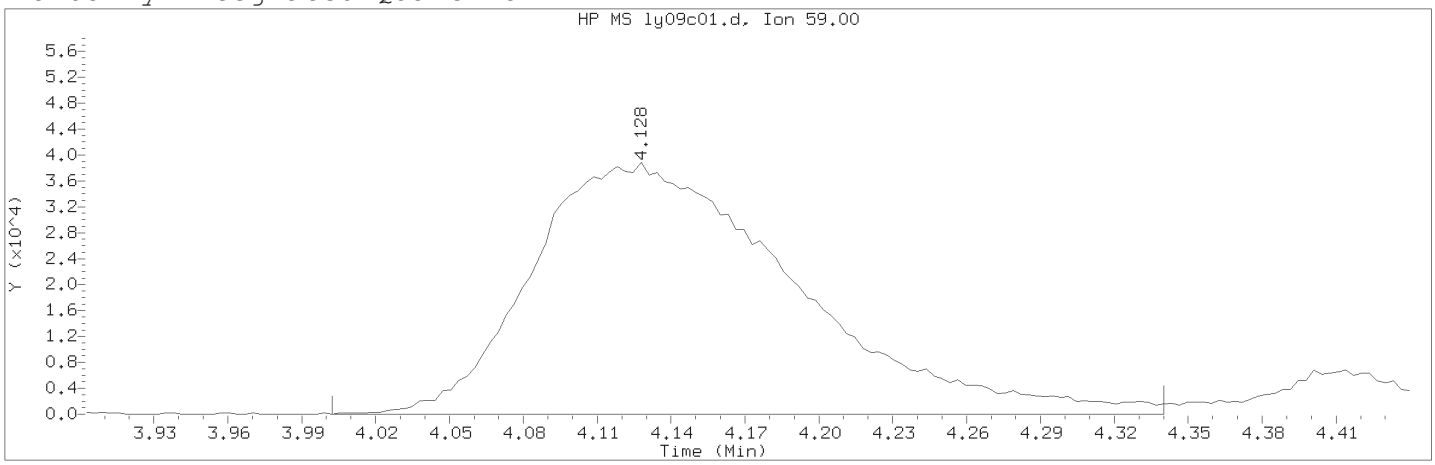
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 277
Retention Time (minutes): 2.472
Quant Ion : 94.00
Area : 270567
On-column Amount (ng) : 39.2109
Integration start scan : 256 Integration stop scan: 283
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

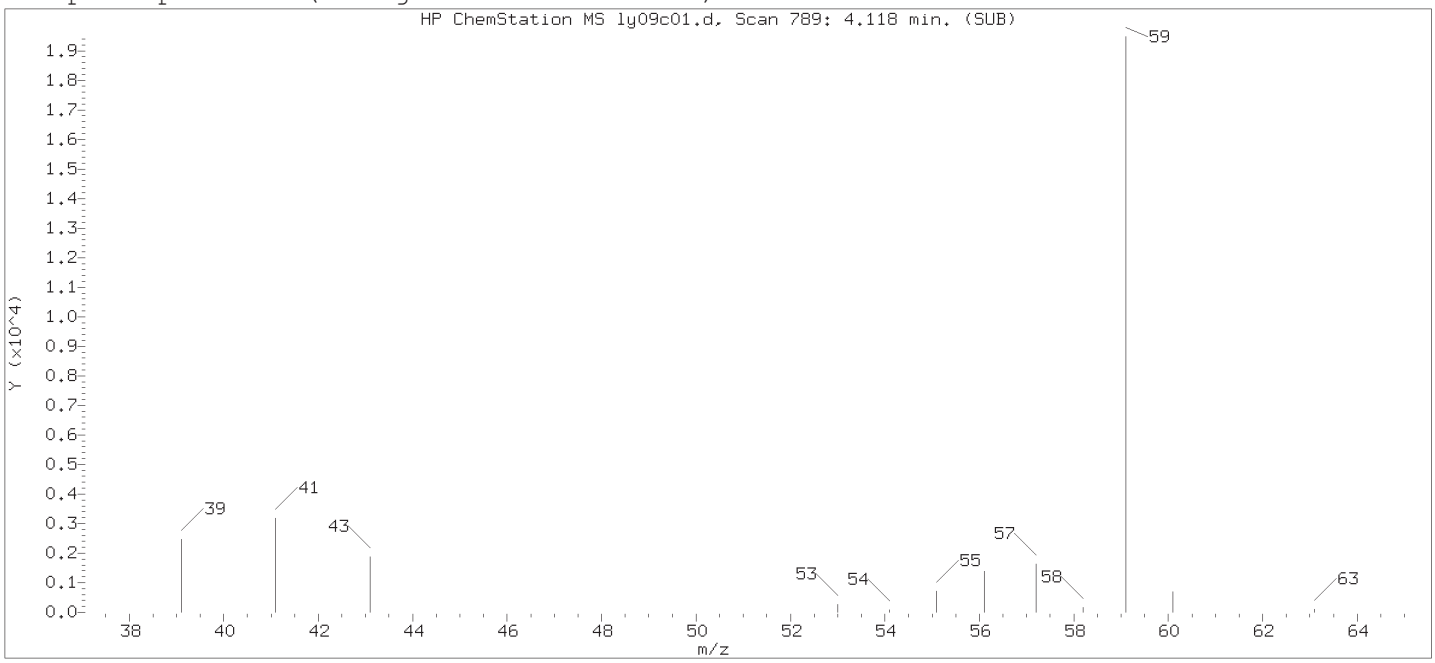
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 792
Retention Time (minutes): 4.128
Quant Ion : 59.00
Area (flag) : 287960M
On-Column Amount (ng) : 240.4508
Integration start scan : 752 Integration stop scan: 857
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

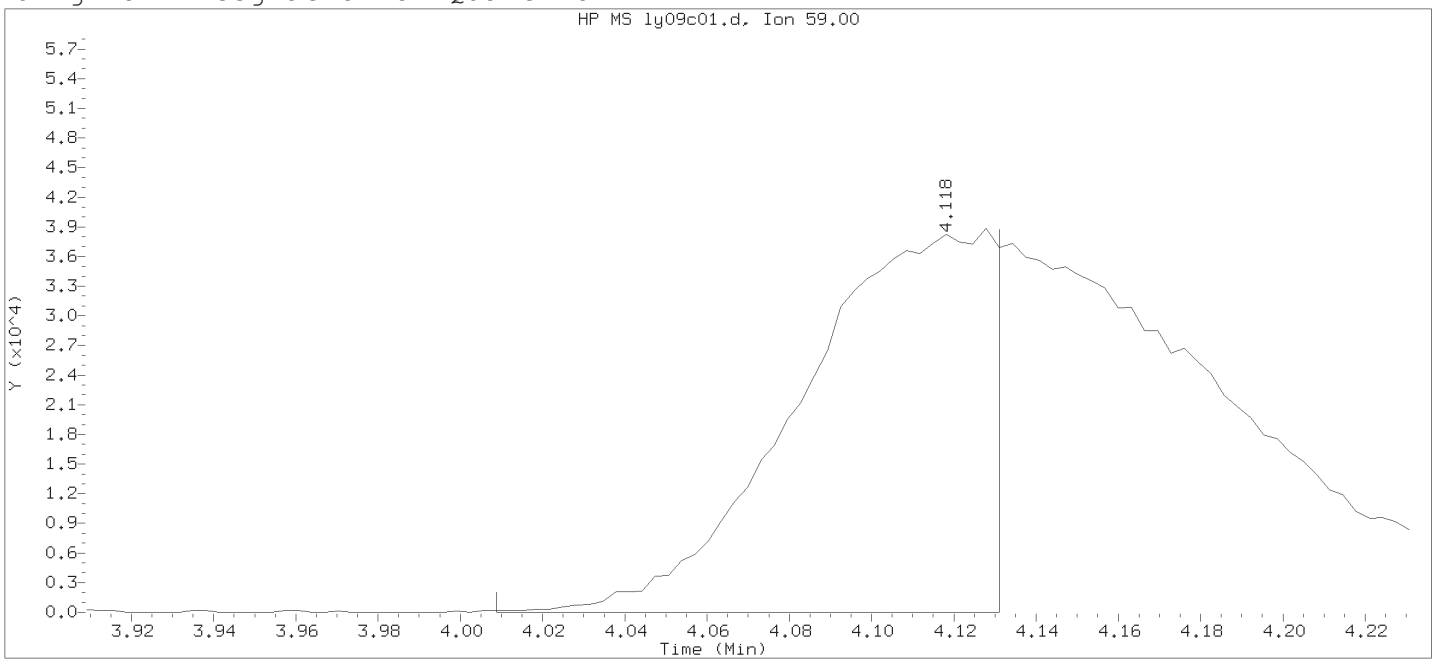
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 13:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

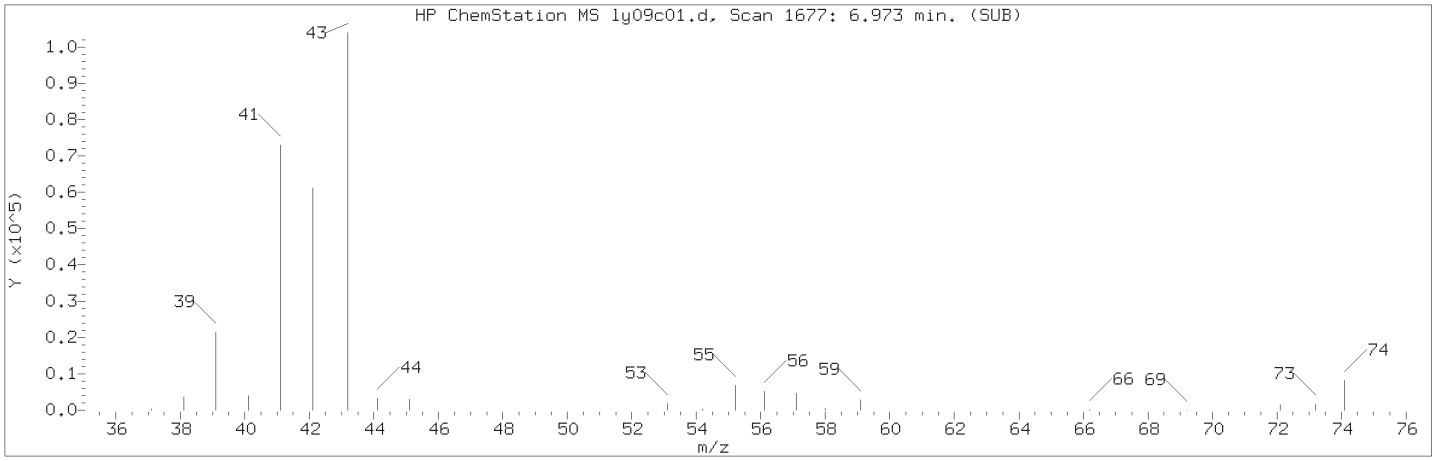
Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:42 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

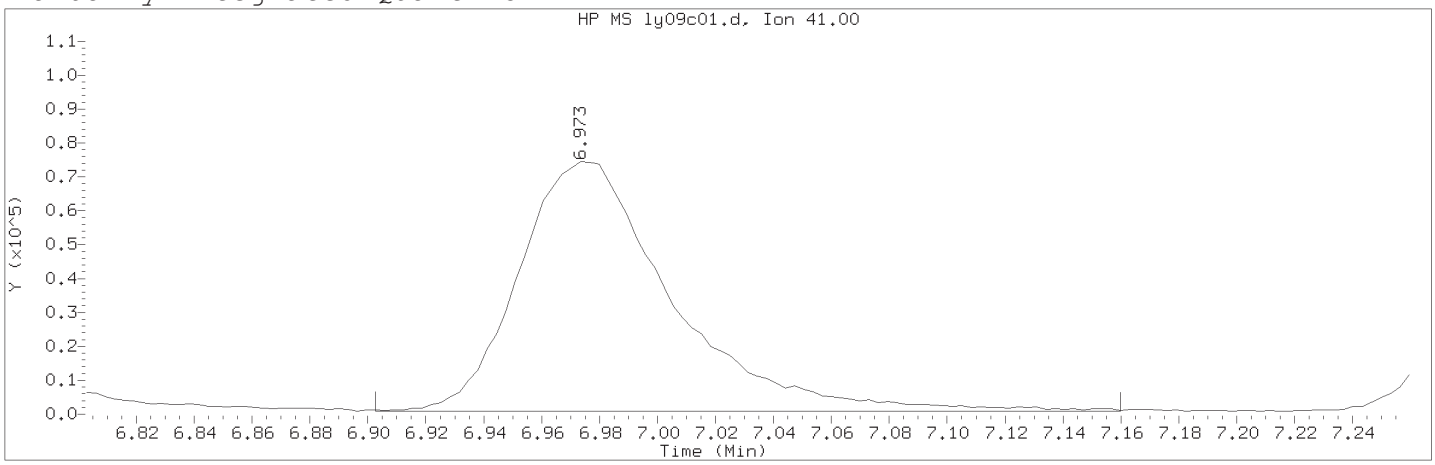
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 789
Retention Time (minutes): 4.118
Quant Ion : 59.00
Area : 123605
On-column Amount (ng) : 103.2117
Integration start scan : 754 Integration stop scan: 792
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

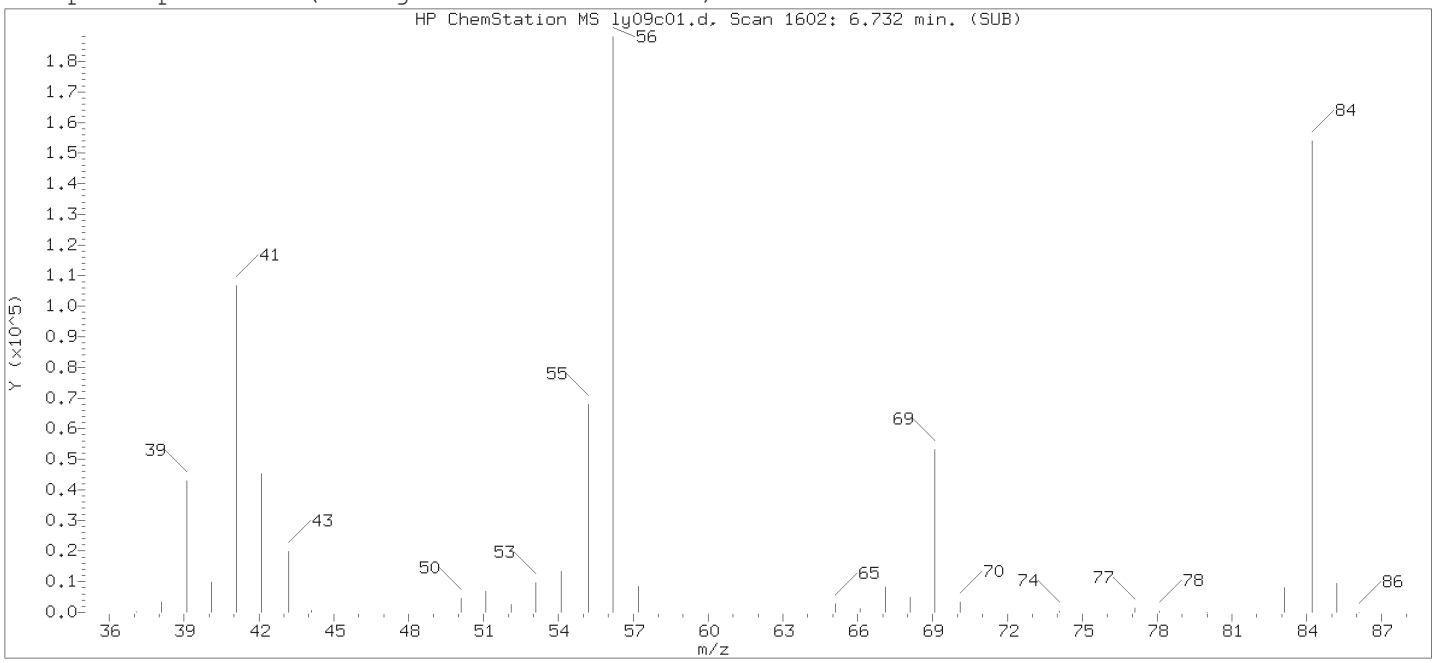
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1677
Retention Time (minutes): 6.973
Quant Ion : 41.00
Area (flag) : 269409M
On-Column Amount (ng) : 639.4622
Integration start scan : 1654 Integration stop scan: 1734
Y at integration start : 907 Y at integration end: 907

Reason for manual integration: improper integration

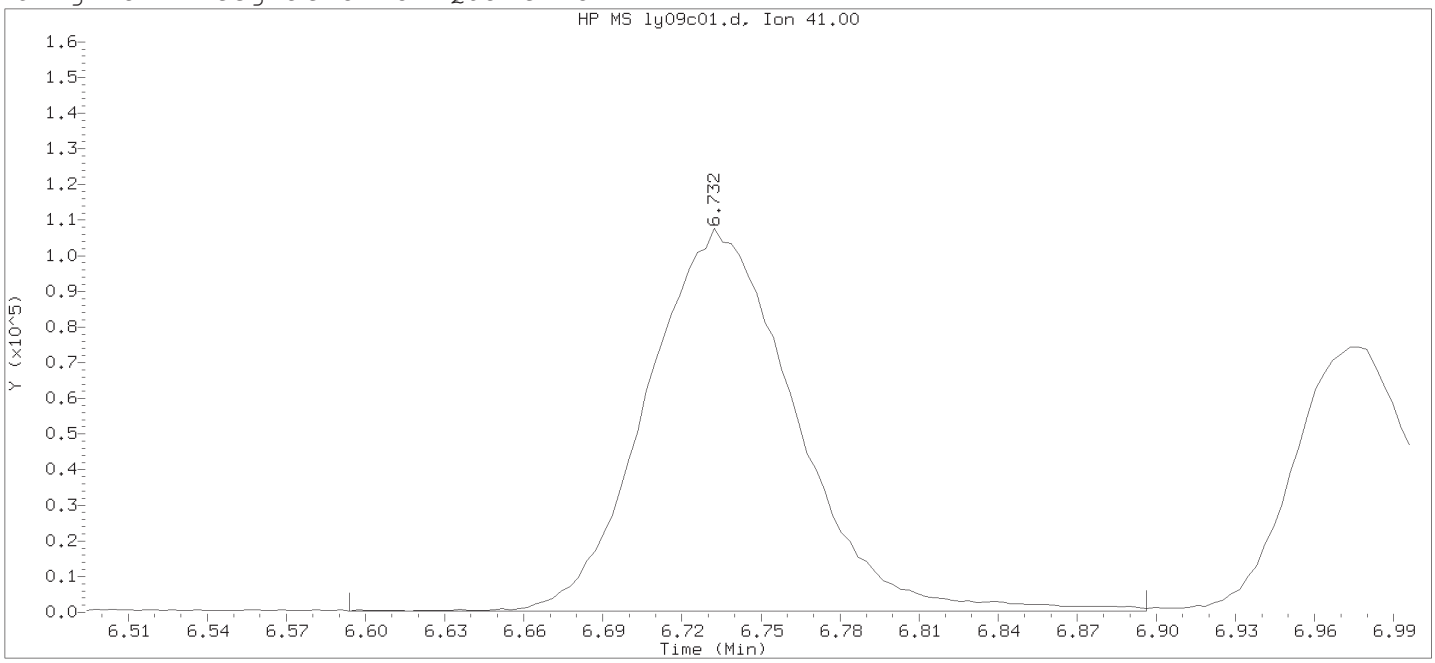
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 13:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

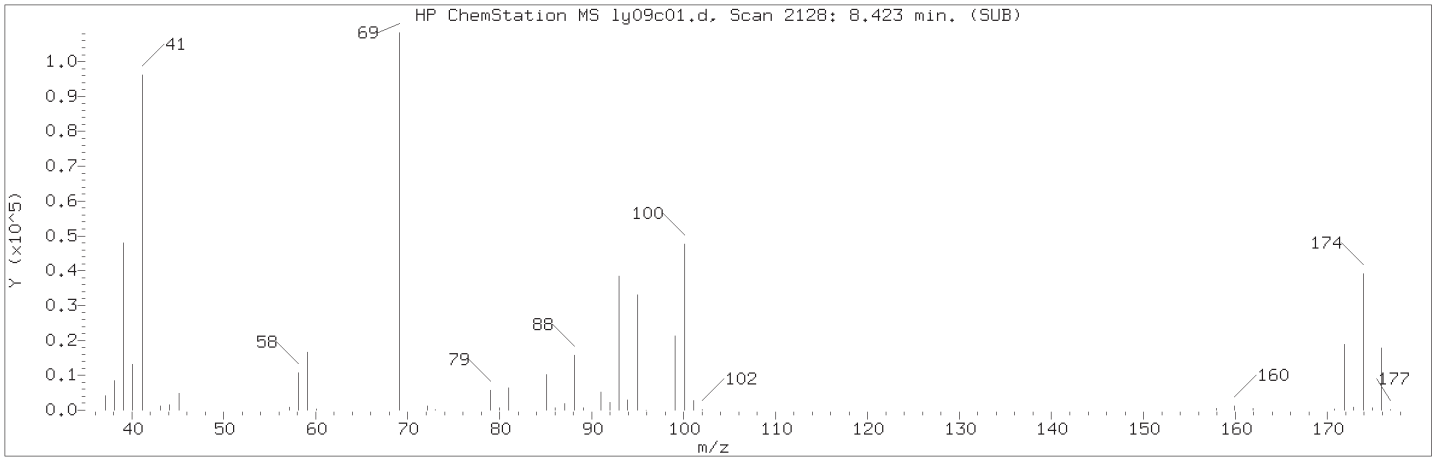
Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:42 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

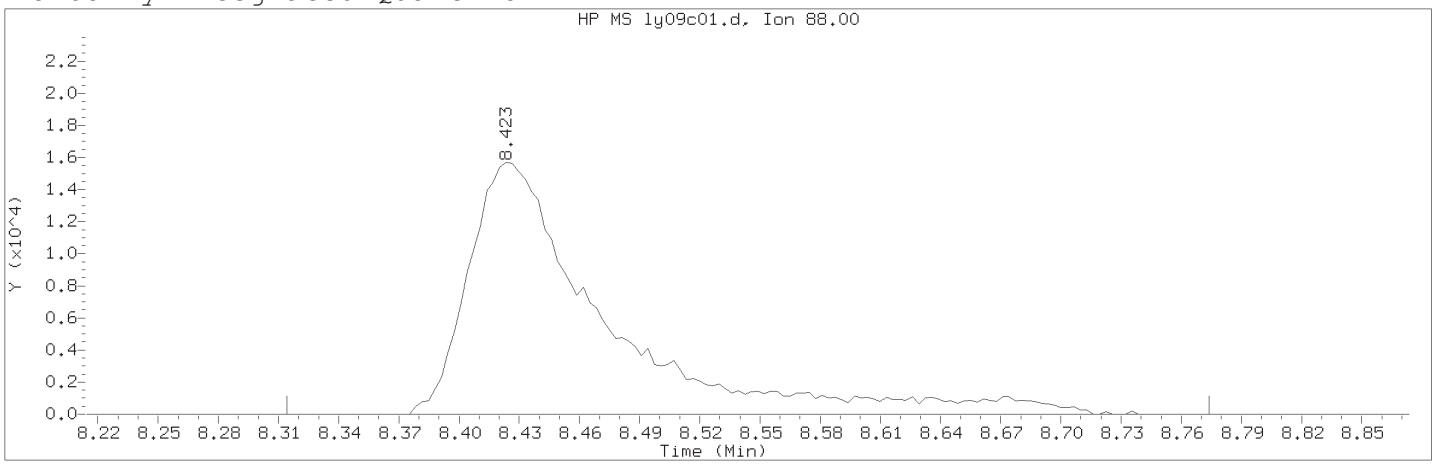
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1602
Retention Time (minutes): 6.732
Quant Ion : 41.00
Area : 418043
On-column Amount (ng) : 992.2508
Integration start scan : 1558 Integration stop scan: 1652
Y at integration start : 395 Y at integration end: 395

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:49.
Target 3.5 esignature used: HP09915.i BWK03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:49 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

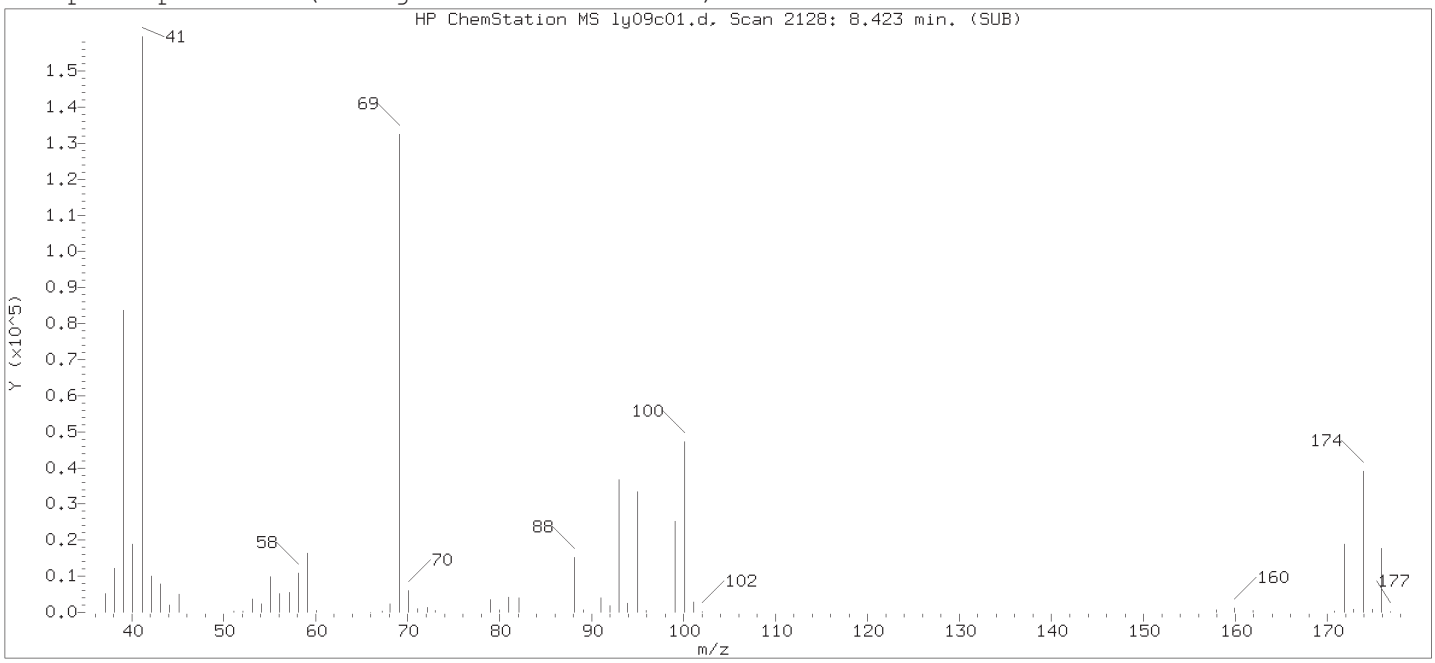
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area (flag) : 73664M
On-Column Amount (ng) : 662.1905
Integration start scan : 2093 Integration stop scan: 2236
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

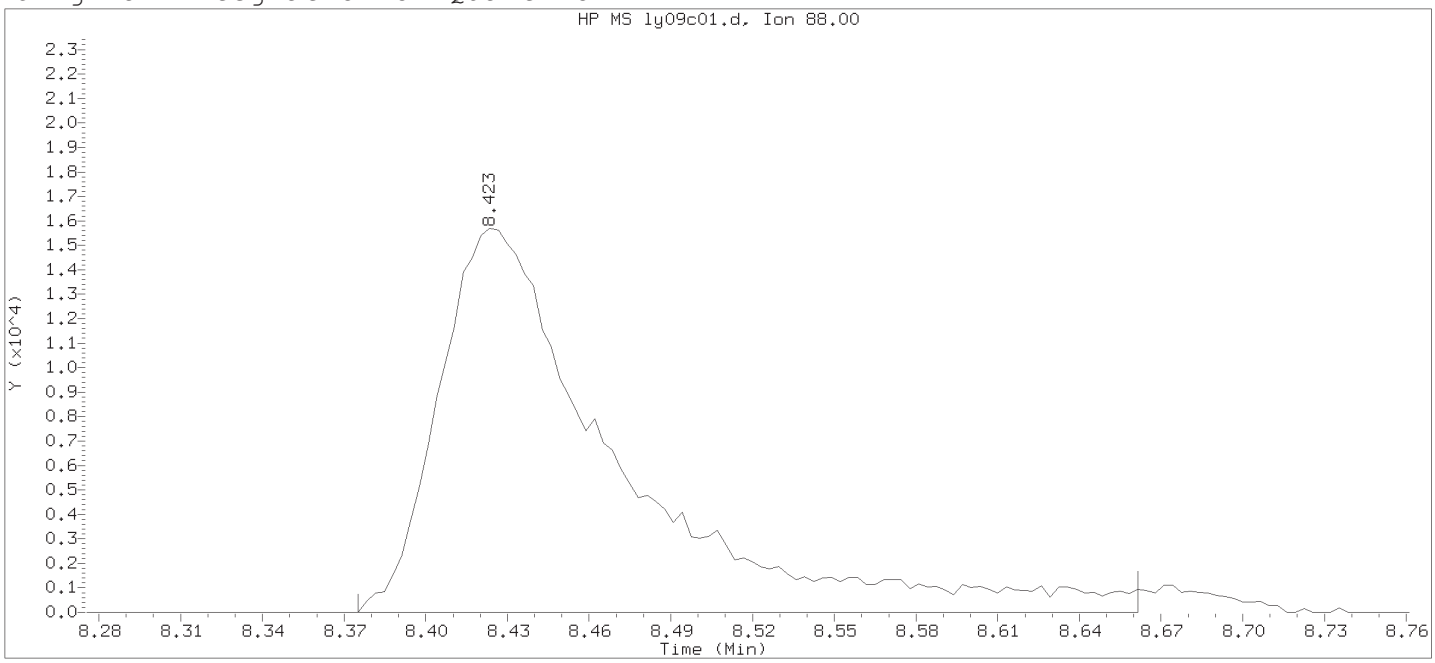
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Chad A. Moline on 05/09/2016 at 13:09.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09c01.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:14 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 8260W-X
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 09:42 bwk03231

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 2128
Retention Time (minutes): 8.423
Quant Ion : 88.00
Area : 71415
On-column Amount (ng) : 641.9742
Integration start scan : 2112 Integration stop scan: 2201
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 05/09/2016 at 09:49.
Target 3.5 esignature user ID: bwk03231

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/16may09a.b/ly09b05.d Injection date and time: **09-MAY-2016 09:36**
Data file Sample Info. Line: VBLKL83;VBLKL83;1;3;;;DRAPEREA;;; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 10:09 bwk03231

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.990	(0.006)	749	65	238176	(-5)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1529800	(1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1165099	(0)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	602934	(-4)	50.00	

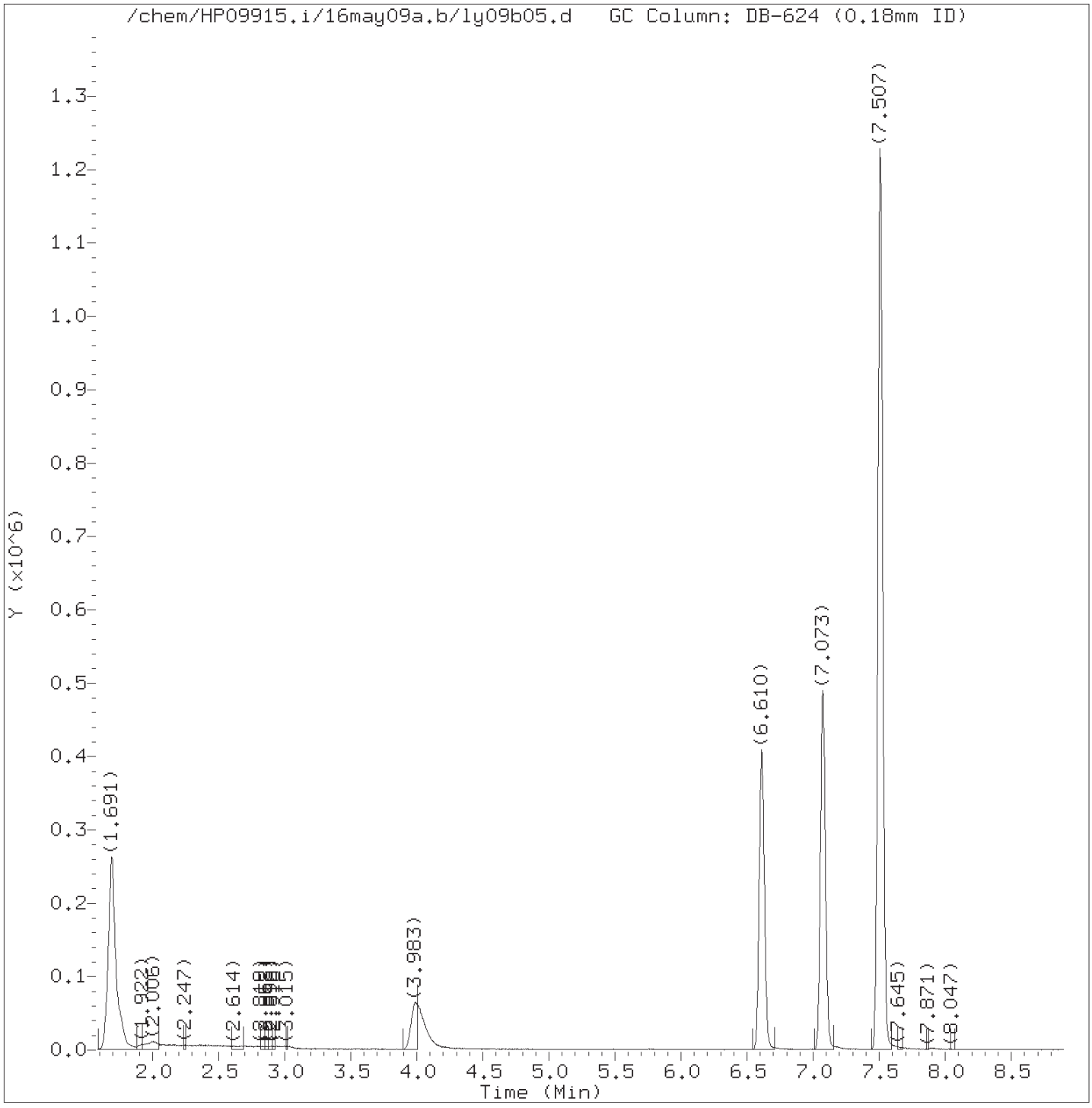
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	354821	48.821	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.073	(0.000)	102	92319	50.315	101%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1510585	49.532	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.054	(0.000)	95	570214	50.526	101%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Brett W. Kenyon on 05/09/2016 at 10:09. Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:56. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

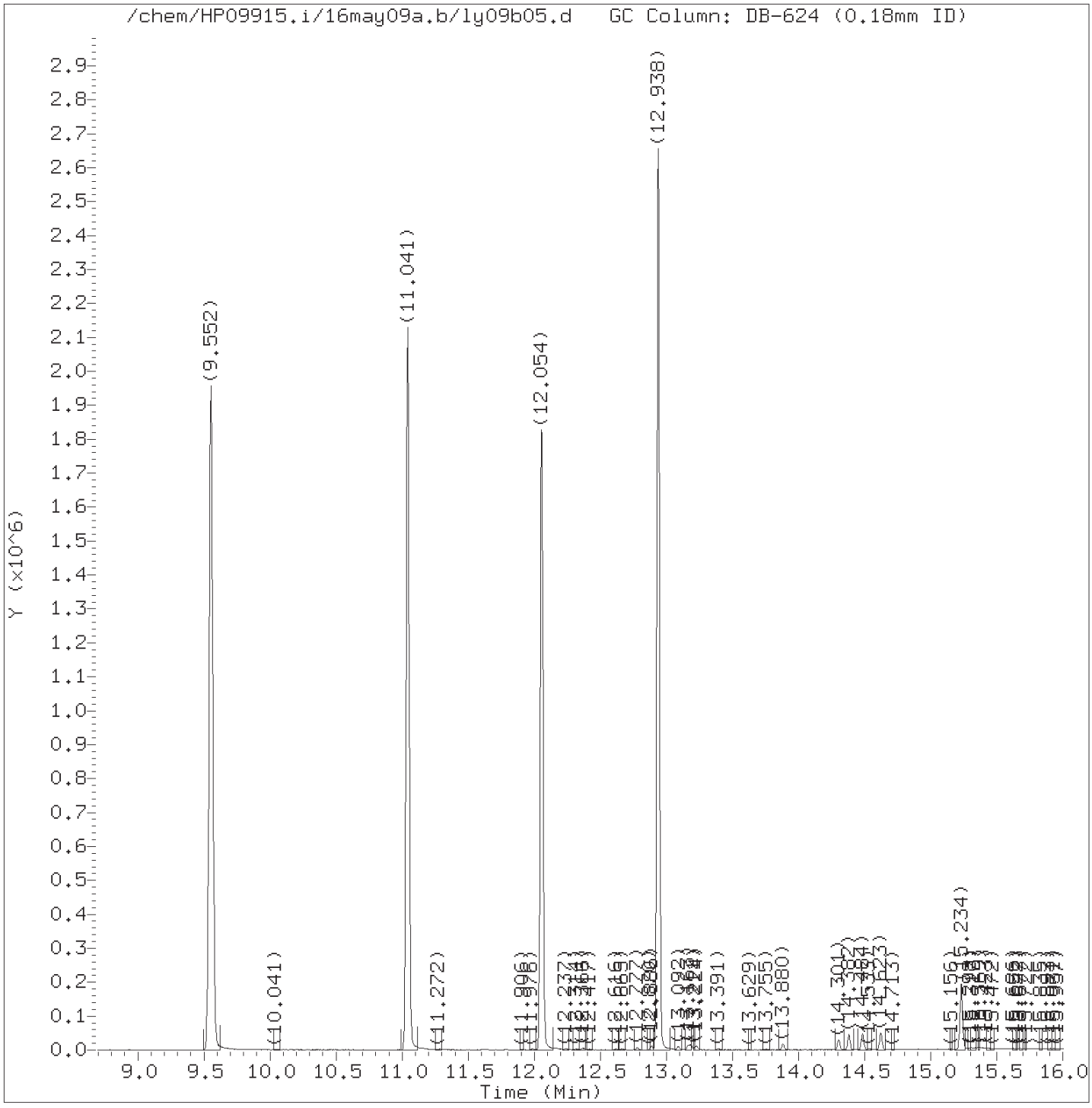
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09b05.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:36 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:09 bwk03231

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:09.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09b05.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:36 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:09 bwk03231

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:09.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09b05.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:36 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:09 bwk03231

Sample Name: VBLKL83 Lab Sample ID: VBLKL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.990	65	238176	250.000
52)$Dibromofluoromethane	(2)	6.610	113	354821	48.821
57)$1,2-Dichloroethane-d4	(2)	7.073	102	92319	50.315
66)*Fluorobenzene	(2)	7.507	96	1529800	50.000
83)$Toluene-d8	(3)	9.552	98	1510585	49.532
100)*Chlorobenzene-d5	(3)	11.041	117	1165099	50.000
114)$4-Bromofluorobenzene	(3)	12.054	95	570214	50.526
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	602934	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:09.
Target 3.5 esignature user ID: bwk03231

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09b01.d Injection date and time: **09-MAY-2016 10:40**
Data file Sample Info. Line: VBLKH92;VBLKH92;1;3;;;DRAPERJK;;; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.281	(-0.018)	442	65	92760	(3)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2425060	(0)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1633176	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	713361	(-19)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.001)	113	565593	9.898	99%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	98122	10.367	104%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2396297	10.300	103%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	696688	9.290	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200
58) Benzene	(2)				Not Detected					0.1	1

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09b01.d Injection date and time: **09-MAY-2016 10:40**
Data file Sample Info. Line: VBLKH92;VBLKH92;1;3;;;DRAPERJK;;; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

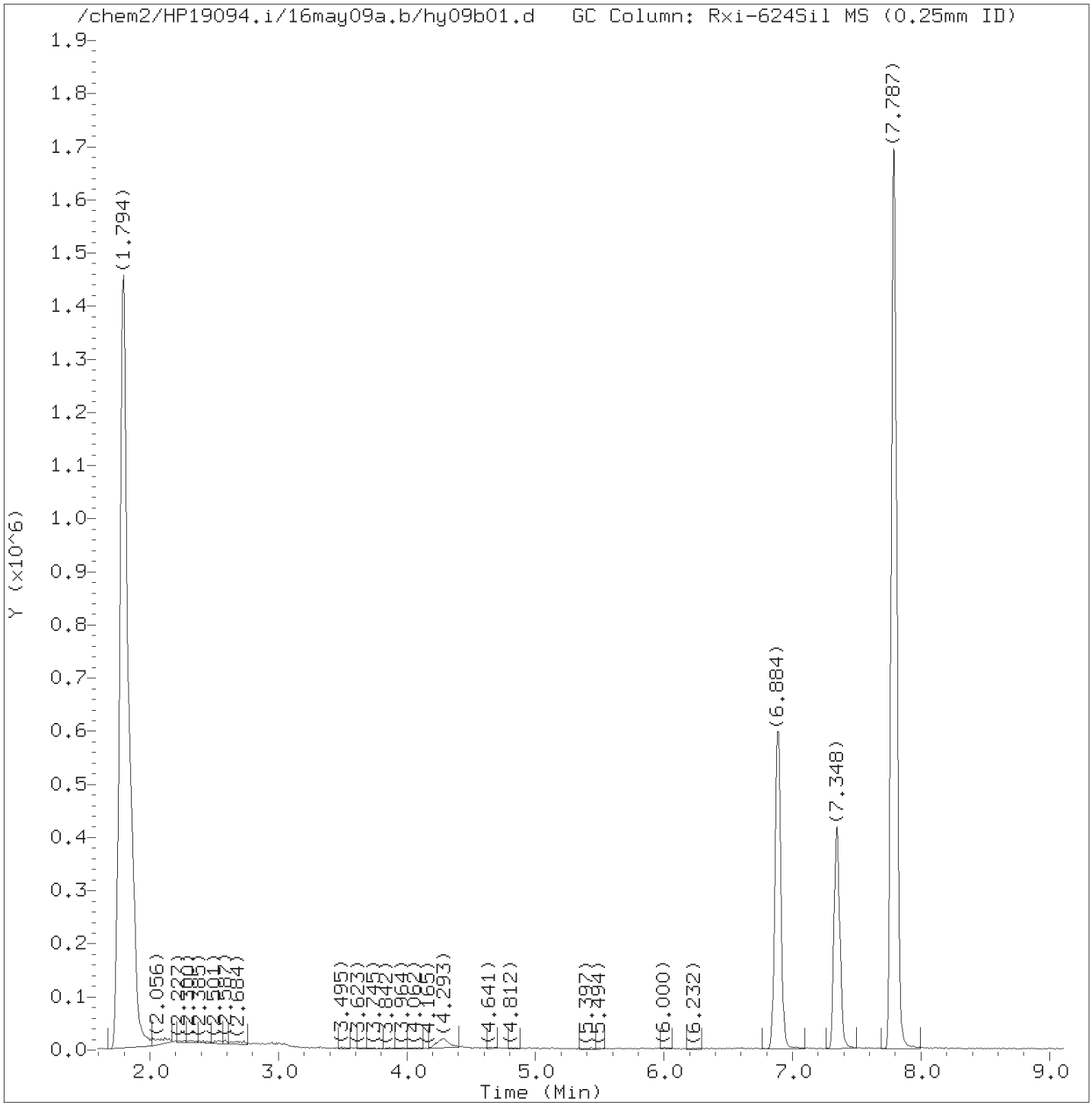
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	3
104) o-Xylene	(3)				Not Detected					0.1	3
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

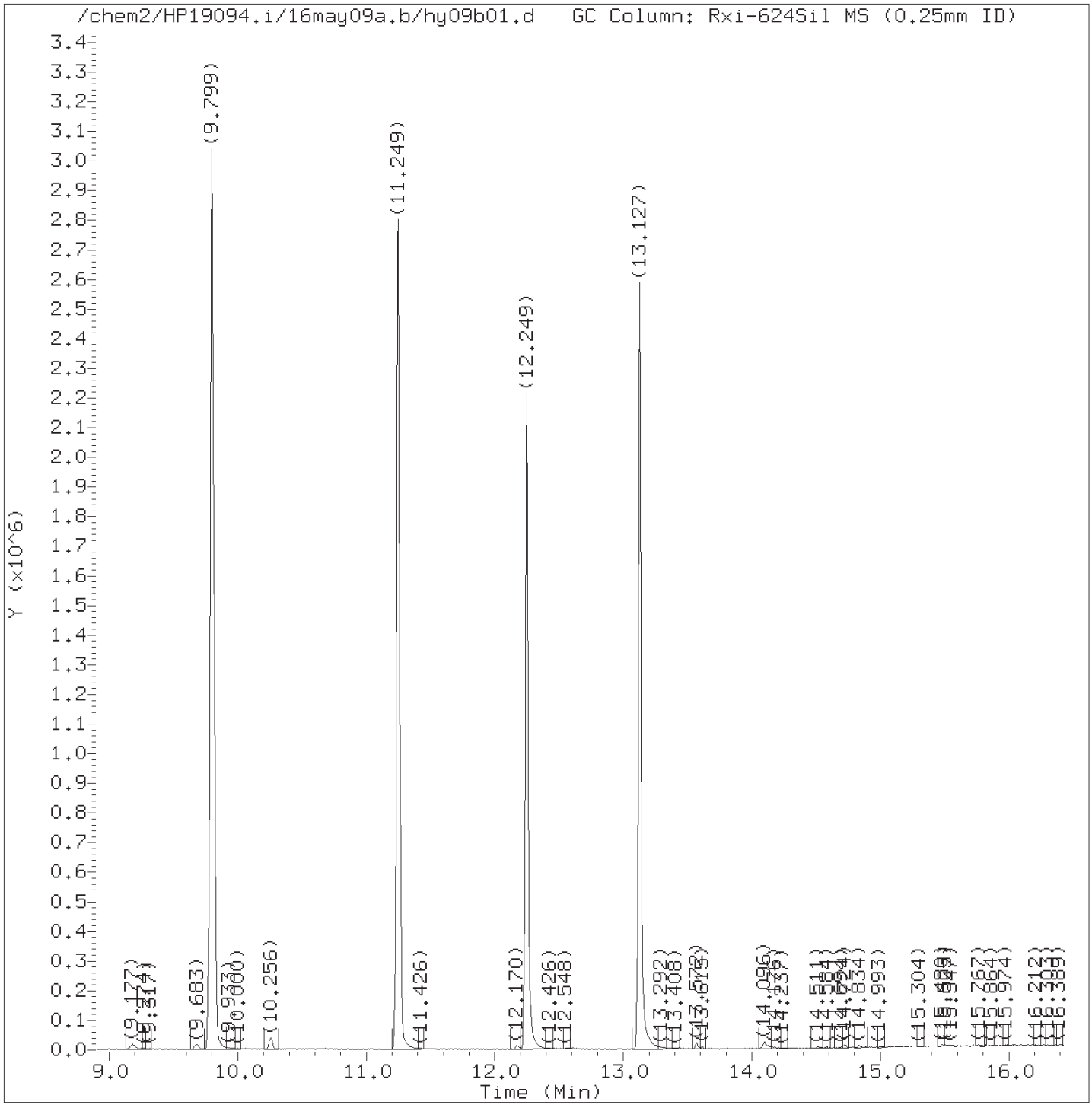
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09b01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: VBLKH92 Lab Sample ID: VBLKH92

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09b01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: VBLKH92 Lab Sample ID: VBLKH92

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09b01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:40 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: VBLKH92 Lab Sample ID: VBLKH92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.281	65	92760	50.000
50)$Dibromofluoromethane	(2)	6.884	113	565593	9.898
57)$1,2-Dichloroethane-d4	(2)	7.348	102	98122	10.367
63)*Fluorobenzene	(2)	7.793	96	2425060	10.000
82)$Toluene-d8	(3)	9.799	98	2396297	10.300
97)*Chlorobenzene-d5	(3)	11.249	117	1633176	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	696688	9.290
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	713361	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

E6104MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8354937MS

Data file: /chem/HP09915.i/16may09a.b/ly09s35.d Injection date and time: **09-MAY-2016 17:40**
Data file Sample Info. Line: E6104MS;8354937MS;1;3;MS;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 18:28 cmc07494

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.996	(0.000)	751	65	248930	(-1)	250.00	
66) Fluorobenzene	7.507	(0.006)	1843	96	1484207	(-2)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1111265	(-5)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	583619	(-7)	50.00	

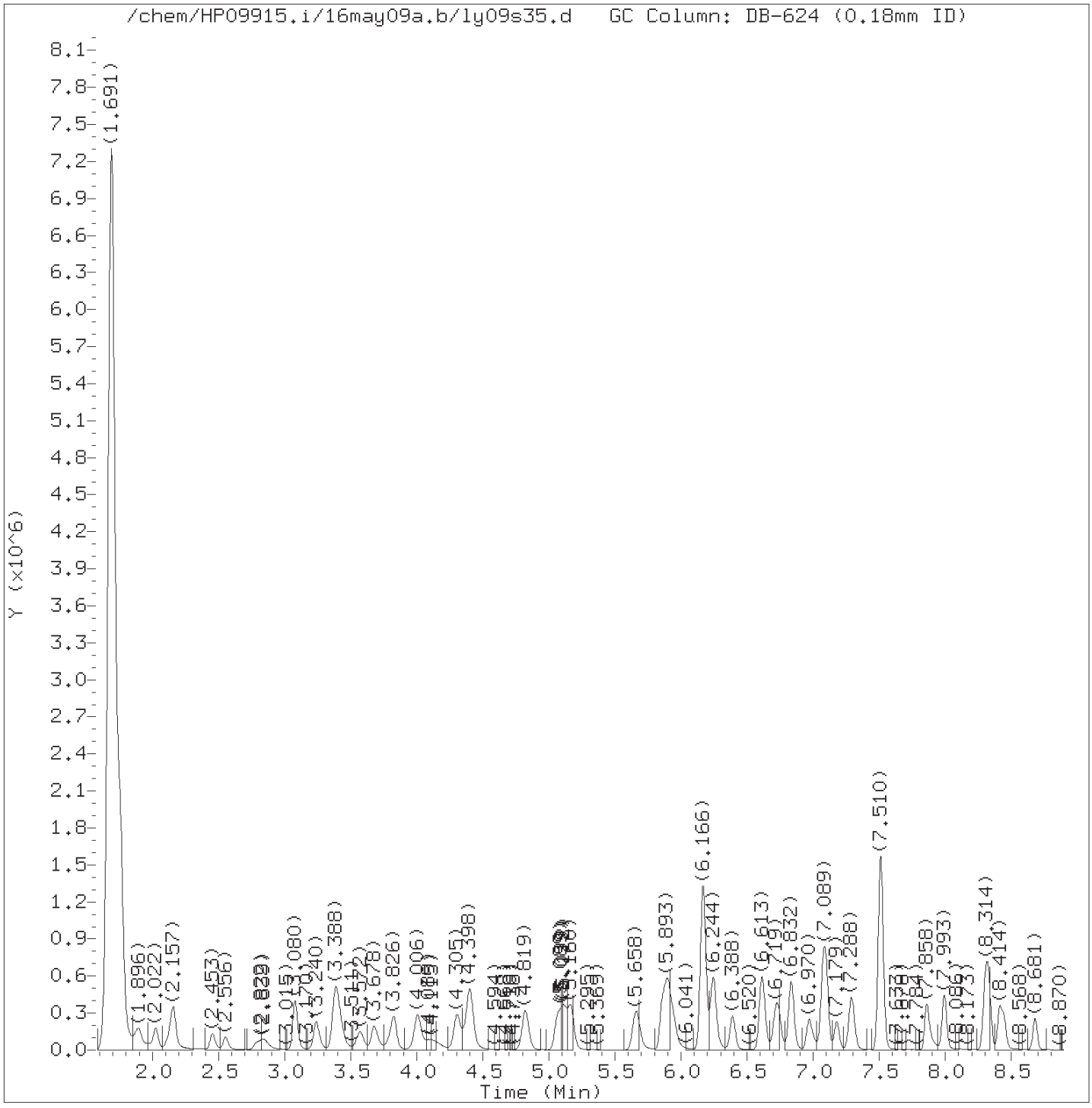
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	338174	47.960	96%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.073	(0.000)	102	87063	48.908	98%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1474246	50.683	101%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.054	(0.000)	95	546824	50.801	102%		78 - 113

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.546	(0.000)	45	103465	141.527	141.53			50	100

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 18:28. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:00. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

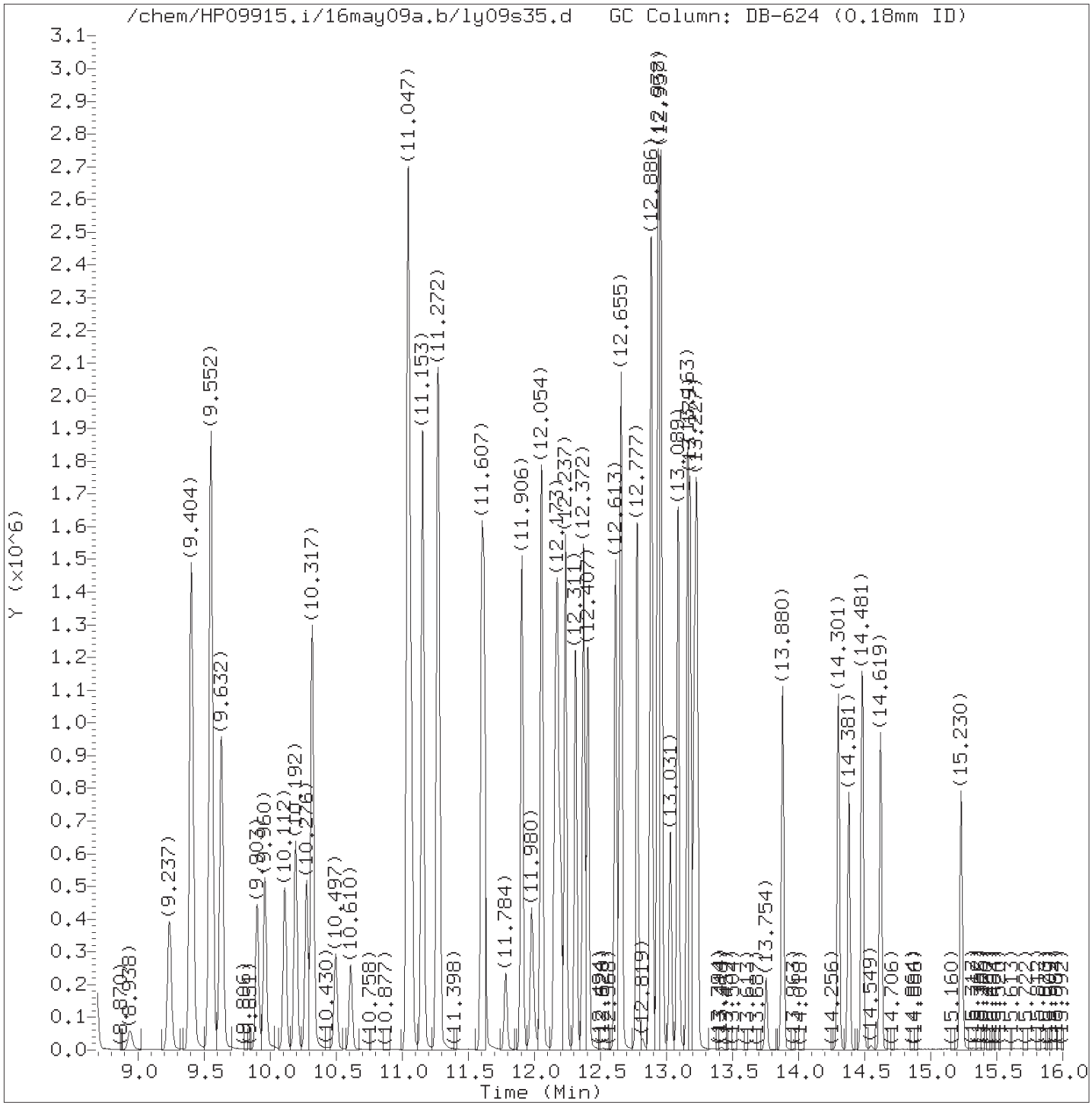
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s35.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:40 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:28 cmc07494

Sample Name: E6104MS Lab Sample ID: 8354937MS

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s35.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:40 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:28 cmc07494

Sample Name: E6104MS Lab Sample ID: 8354937MS

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s35.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 17:40 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:28 cmc07494

Sample Name: E6104MS Lab Sample ID: 8354937MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.546	45	103465	141.527
29)*t-Butyl alcohol-d10	(1)	3.996	65	248930	250.000
52)$Dibromofluoromethane	(2)	6.610	113	338174	47.960
57)$1,2-Dichloroethane-d4	(2)	7.073	102	87063	48.908
66)*Fluorobenzene	(2)	7.507	96	1484207	50.000
83)$Toluene-d8	(3)	9.552	98	1474246	50.683
100)*Chlorobenzene-d5	(3)	11.041	117	1111265	50.000
114)$4-Bromofluorobenzene	(3)	12.054	95	546824	50.801
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	583619	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:28.
Target 3.5 esignature user ID: cmc07494

E6104MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8354938MSD

Data file: /chem/HP09915.i/16may09a.b/ly09s36.d Injection date and time: **09-MAY-2016 18:02**
Data file Sample Info. Line: E6104MSD;8354938MSD;1;3;MSD;RAE61;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 18:29 cmc07494

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.012	(-0.016)	756	65	236261	(-6)	250.00	
66) Fluorobenzene	7.510	(0.003)	1844	96	1496154	(-1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1134754	(-3)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	589469	(-6)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.613	(0.000)	113	347796	48.931	98%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.076	(0.000)	102	89313	49.771	100%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1500594	50.521	101%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.054	(0.000)	95	557593	50.729	101%		78 - 113

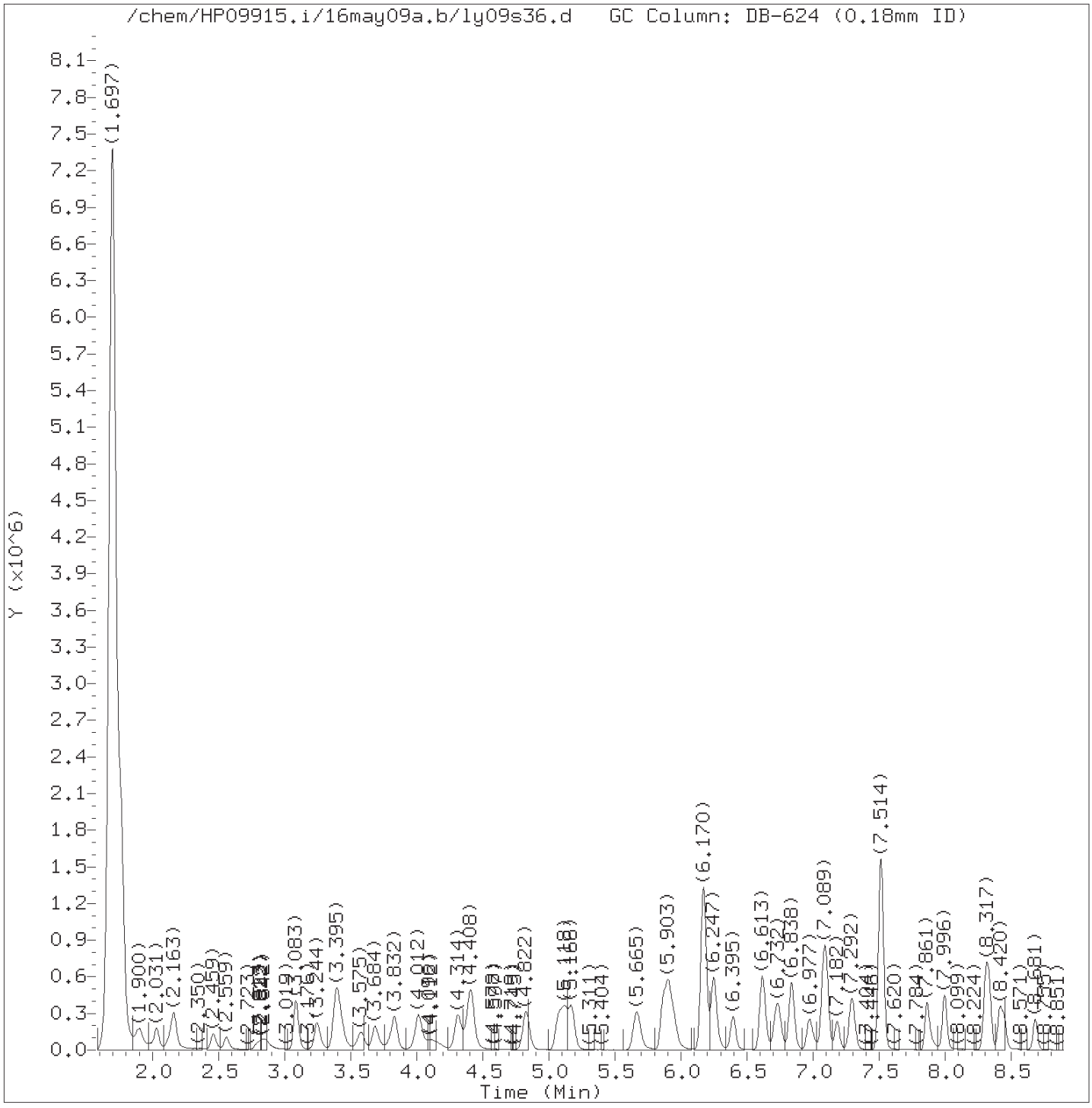
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.556	(0.001)	45	101911M	146.877	146.88			50	100

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 18:29. Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:00. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

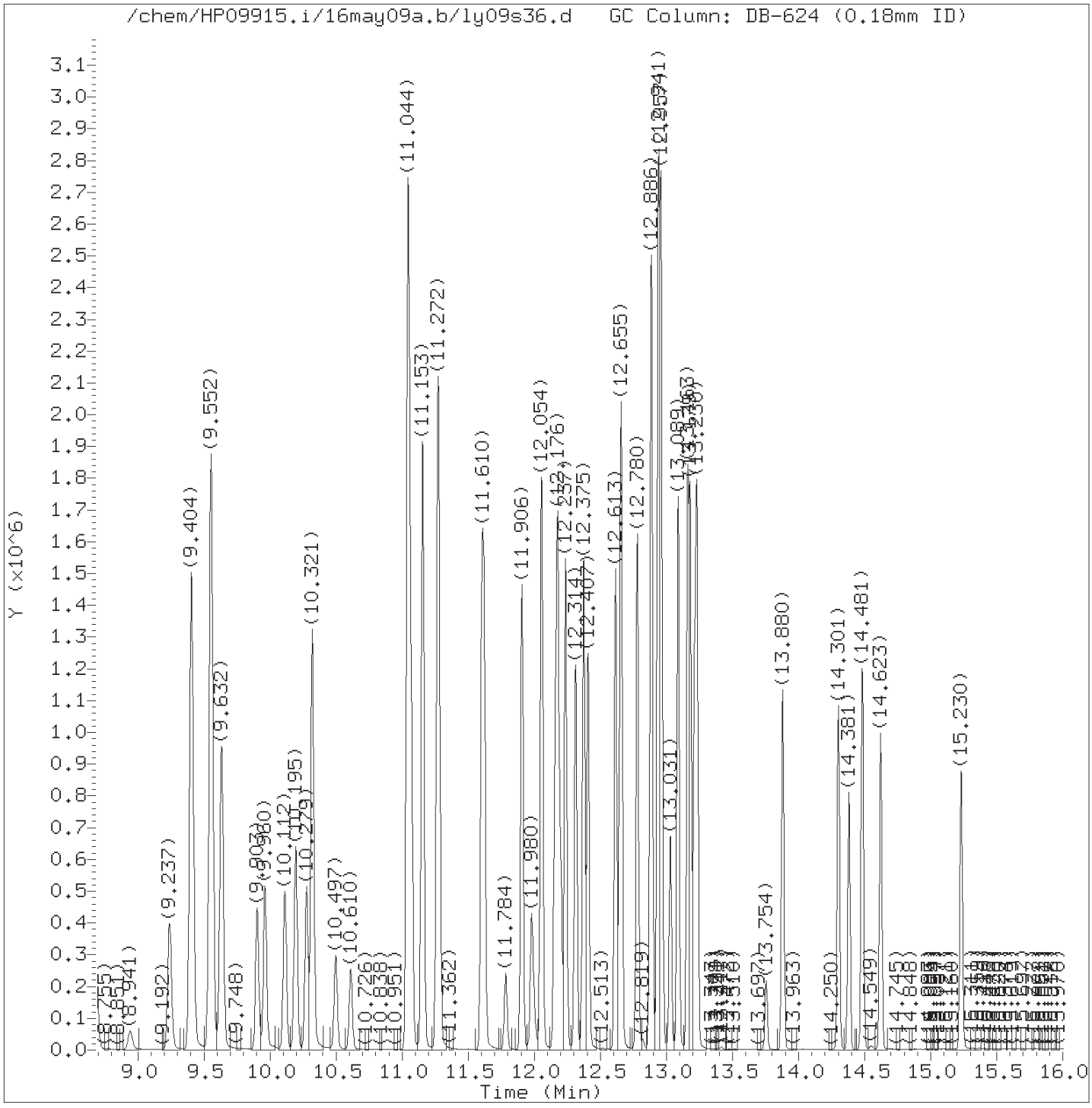
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s36.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:29 cmc07494

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:29.
Target 3.5 esignature user ID: cmc07494



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s36.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:29 cmc07494

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:29.
Target 3.5 esignature user ID: cmc07494

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s36.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:29 cmc07494

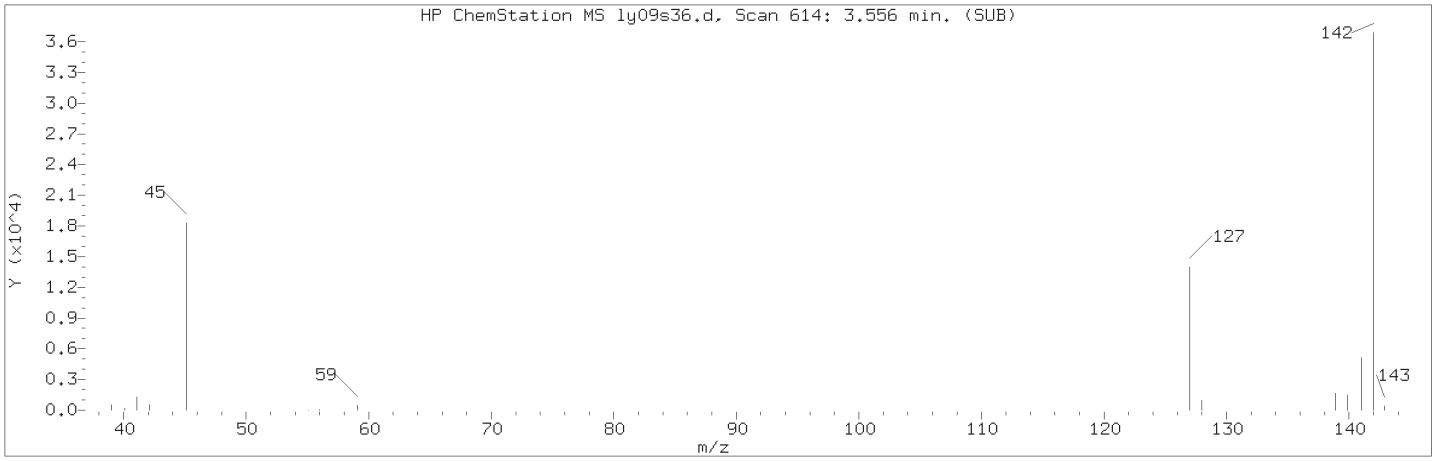
Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.556	45	101911M	146.877
29)*t-Butyl alcohol-d10	(1)	4.012	65	236261	250.000
52)$Dibromofluoromethane	(2)	6.613	113	347796	48.931
57)$1,2-Dichloroethane-d4	(2)	7.076	102	89313	49.771
66)*Fluorobenzene	(2)	7.510	96	1496154	50.000
83)$Toluene-d8	(3)	9.552	98	1500594	50.521
100)*Chlorobenzene-d5	(3)	11.041	117	1134754	50.000
114)$4-Bromofluorobenzene	(3)	12.054	95	557593	50.729
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	589469	50.000

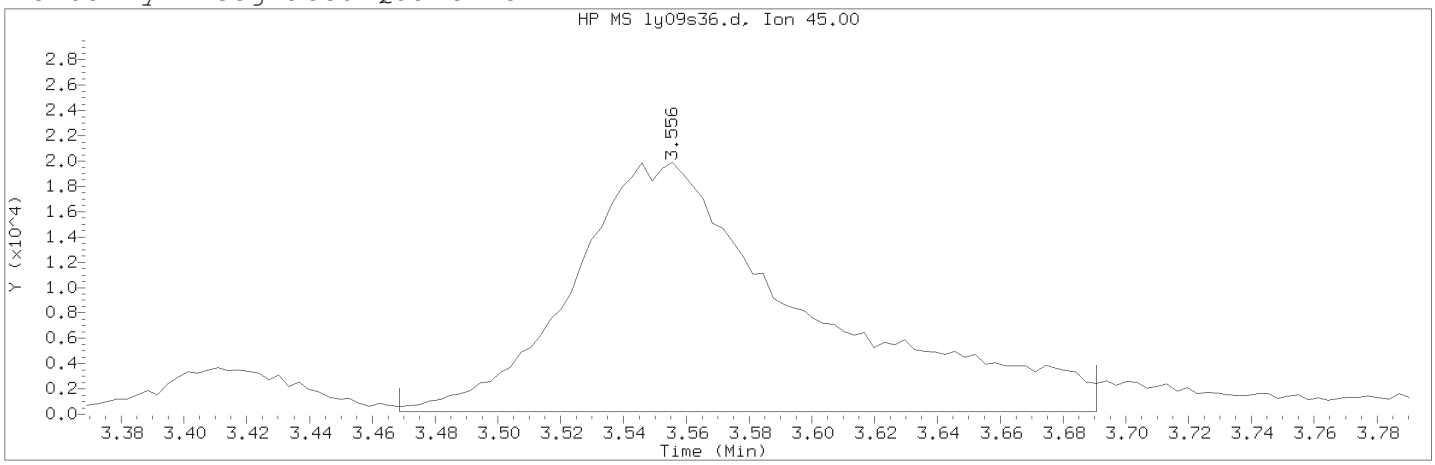
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:29.
Target 3.5 esignature user ID: cmc07494

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s36.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:29 cmc07494

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

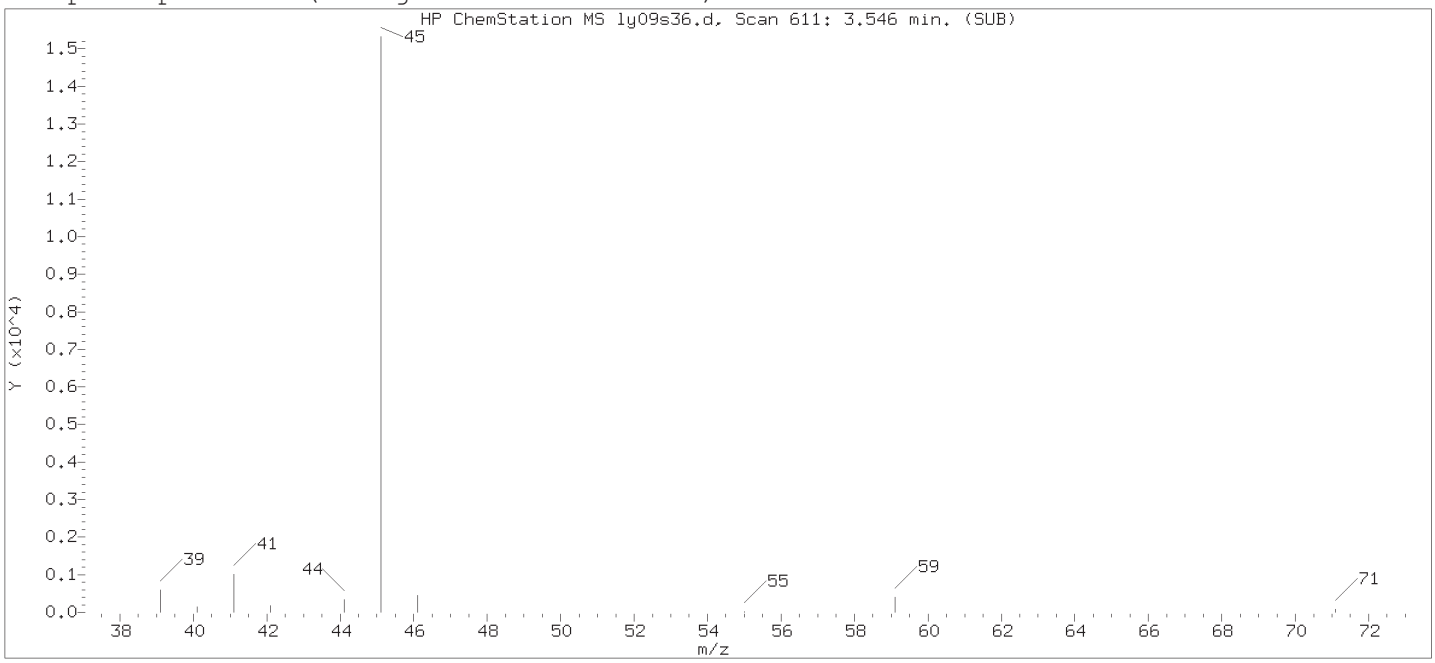
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 614
Retention Time (minutes): 3.556
Quant Ion : 45.00
Area (flag) : 101911M
On-Column Amount (ng) : 146.8769
Integration start scan : 586 Integration stop scan: 655
Y at integration start : 178 Y at integration end: 178

Reason for manual integration: improper integration

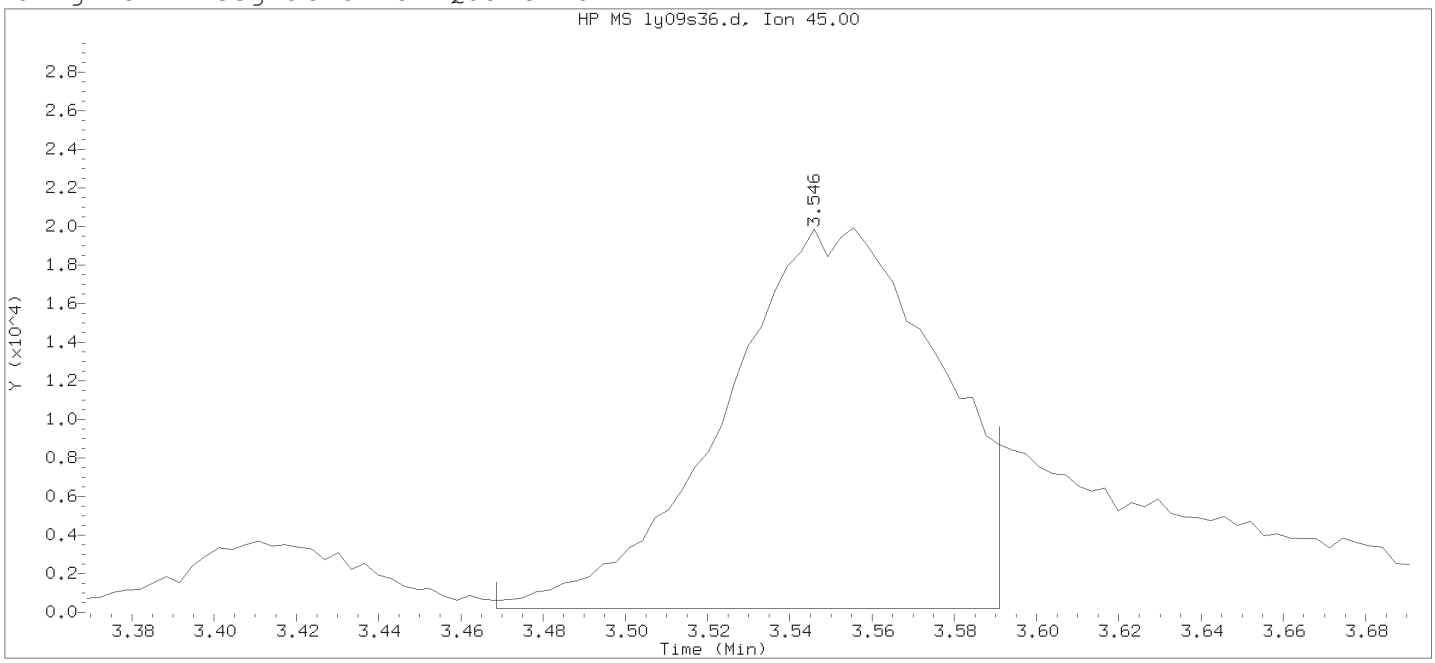
Analyst responsible for change: Digitally signed by Caitlin M. Carmody
on 05/09/2016 at 18:29.
Target 3.5 esignature user ID: cmc07494

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 11:00.
PARALLAX ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s36.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 18:02 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 18:21 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 611
Retention Time (minutes): 3.546
Quant Ion : 45.00
Area : 72005
On-column Amount (ng) : 103.7762
Integration start scan : 586 Integration stop scan: 624
Y at integration start : 181 Y at integration end: 181

Digitally signed by Caitlin M. Carmody on 05/09/2016 at 18:29.
Target 3.5 esignature [illegible]

Data file: /chem2/HP19094.i/16may09a.b/hy09s07.d Injection date and time: **09-MAY-2016 13:17**
Data file Sample Info. Line: E6104MS1;8354937MS;1;3;MS;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294	(-0.031)	444	65	80378	(-10)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2427719	(1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1774590	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	789955	(-10)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	605301	10.581	106%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	99653	10.517	105%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2477683	9.801	98%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	779049	9.560	96%		78 - 110

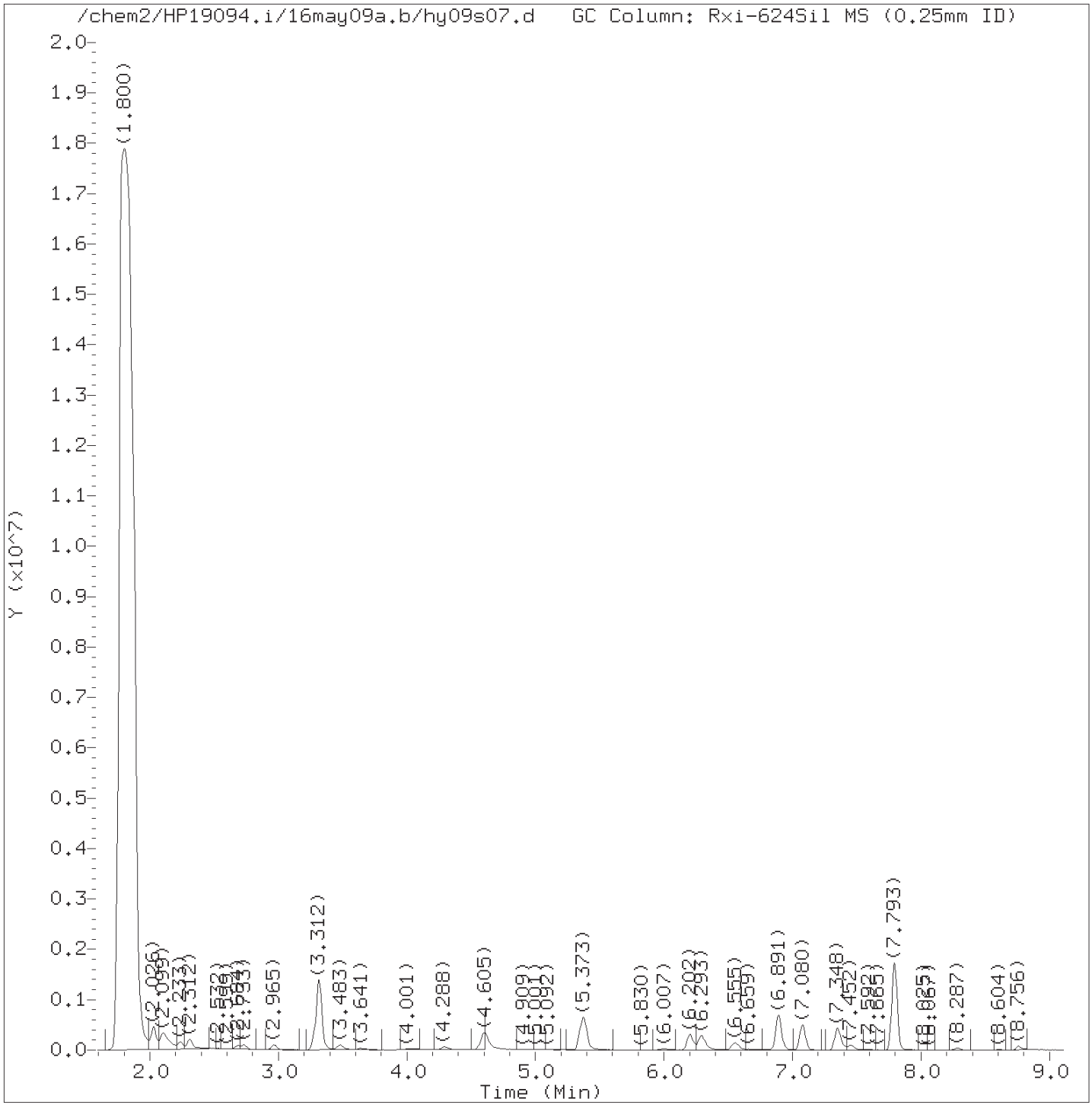
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
4) Dimethyl ether	(2)	2.105	(-0.000)	45	772815	9.269	9.27		J	0.1	13
25) Acetonitrile	(1)	4.007	(0.003)	41	146735M	48.276	48.28		J	32	100
36) Vinyl Acetate	(2)	5.354	(0.000)	43	886014	12.854	12.85			3	10
142) Hexachloroethane	(4)	13.615	(-0.000)	117	249205	4.721	4.72		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

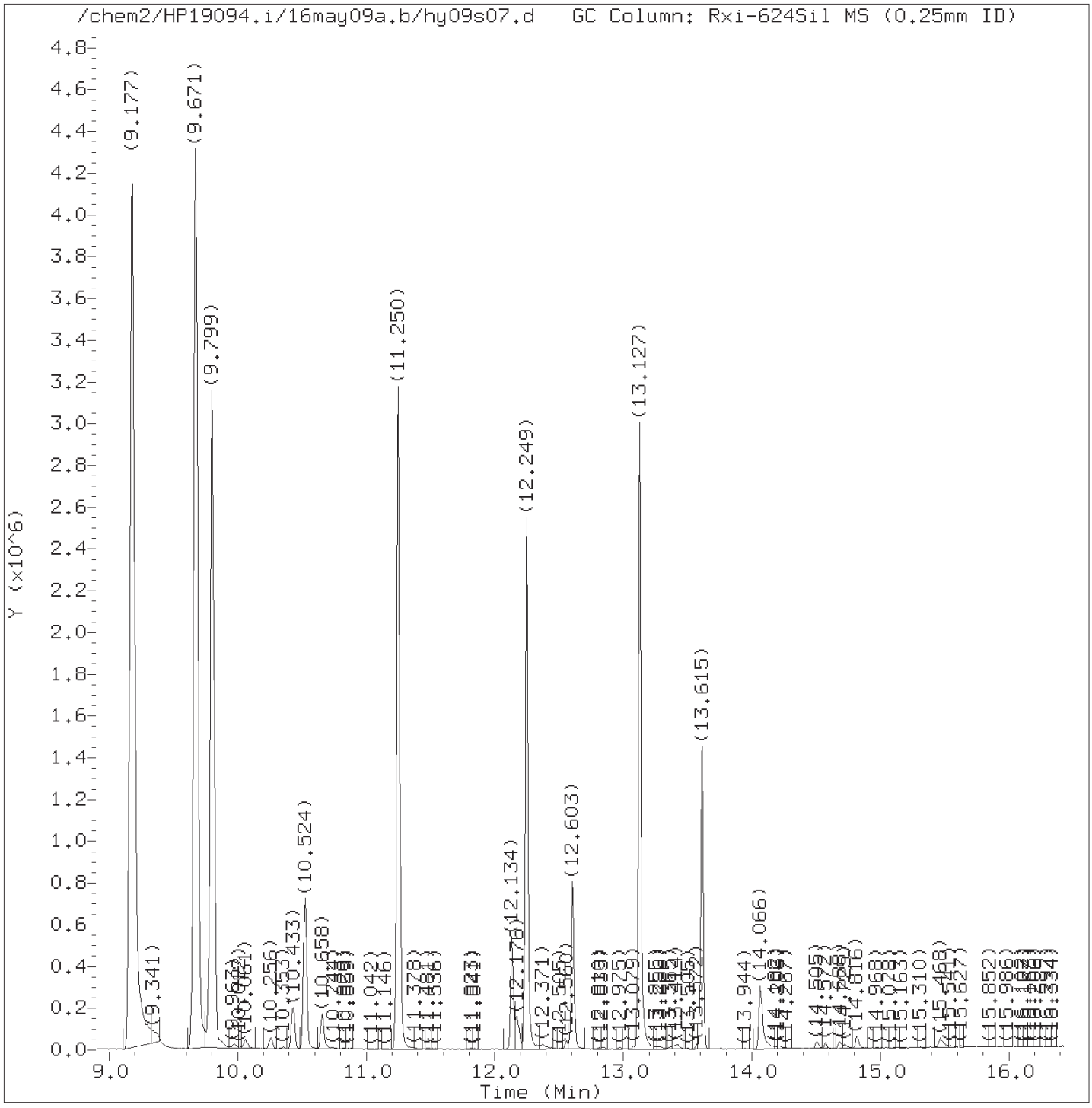
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s07.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS1 Lab Sample ID: 8354937MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s07.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS1 Lab Sample ID: 8354937MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s07.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

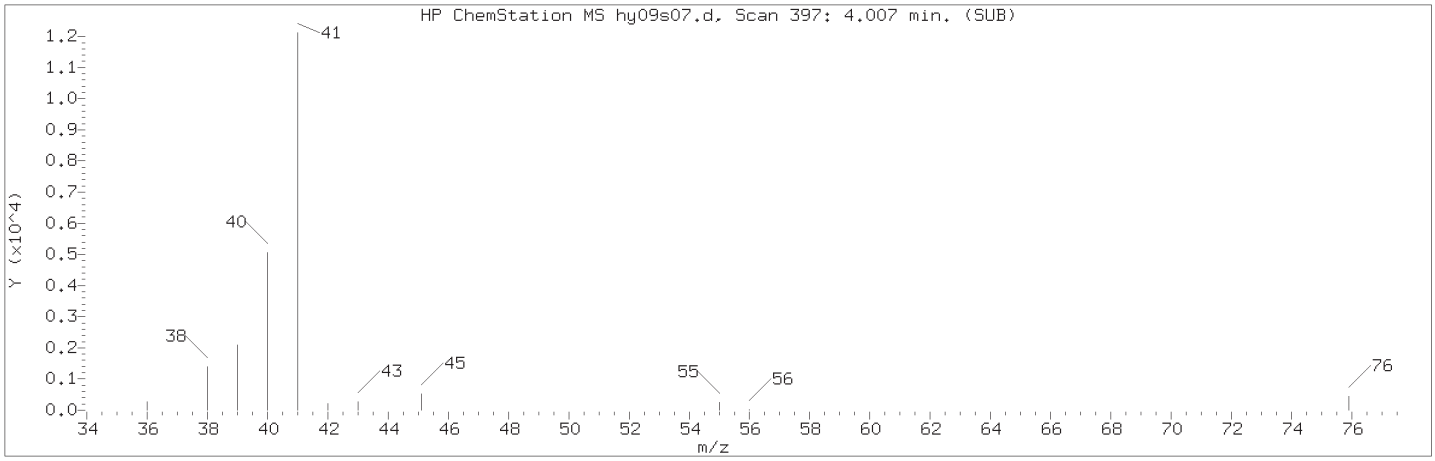
Sample Name: E6104MS1 Lab Sample ID: 8354937MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	772815	9.269
25) Acetonitrile	(1)	4.007	41	146735M	48.276
26)*t-Butyl Alcohol-d10	(1)	4.294	65	80378	50.000
36) Vinyl Acetate	(2)	5.354	43	886014	12.854
50)$Dibromofluoromethane	(2)	6.891	113	605301	10.581
57)$1,2-Dichloroethane-d4	(2)	7.348	102	99653	10.517
63)*Fluorobenzene	(2)	7.793	96	2427719	10.000
82)$Toluene-d8	(3)	9.799	98	2477683	9.801
97)*Chlorobenzene-d5	(3)	11.250	117	1774590	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	779049	9.560
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	789955	10.000
142) Hexachloroethane	(4)	13.615	117	249205	4.721

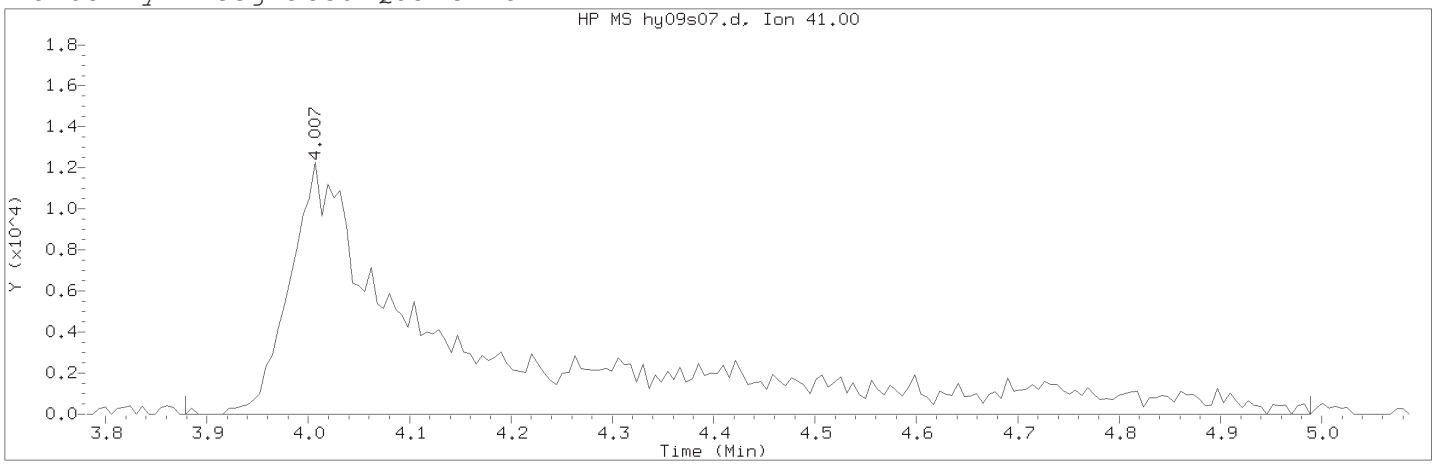
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s07.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS1 Lab Sample ID: 8354937MS

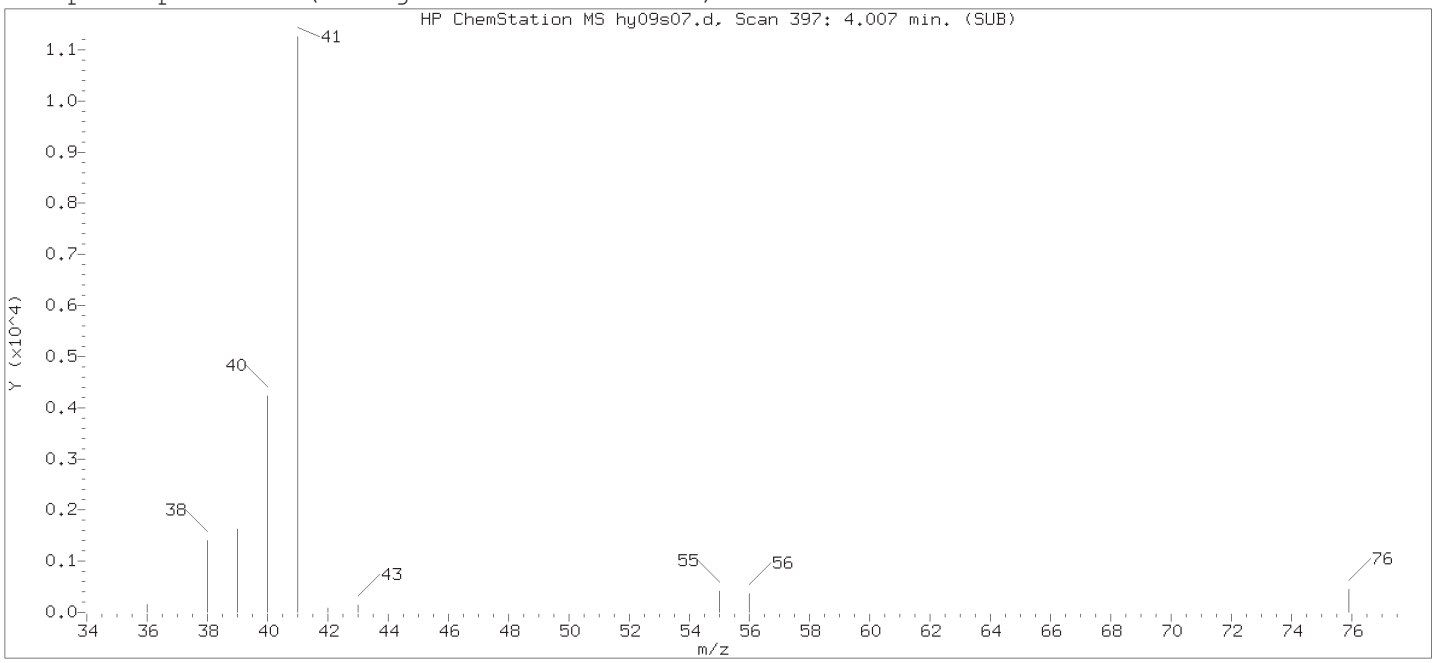
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 397
Retention Time (minutes): 4.007
Quant Ion : 41.00
Area (flag) : 146735M
On-Column Amount (ng) : 48.2759
Integration start scan : 375 Integration stop scan: 557
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

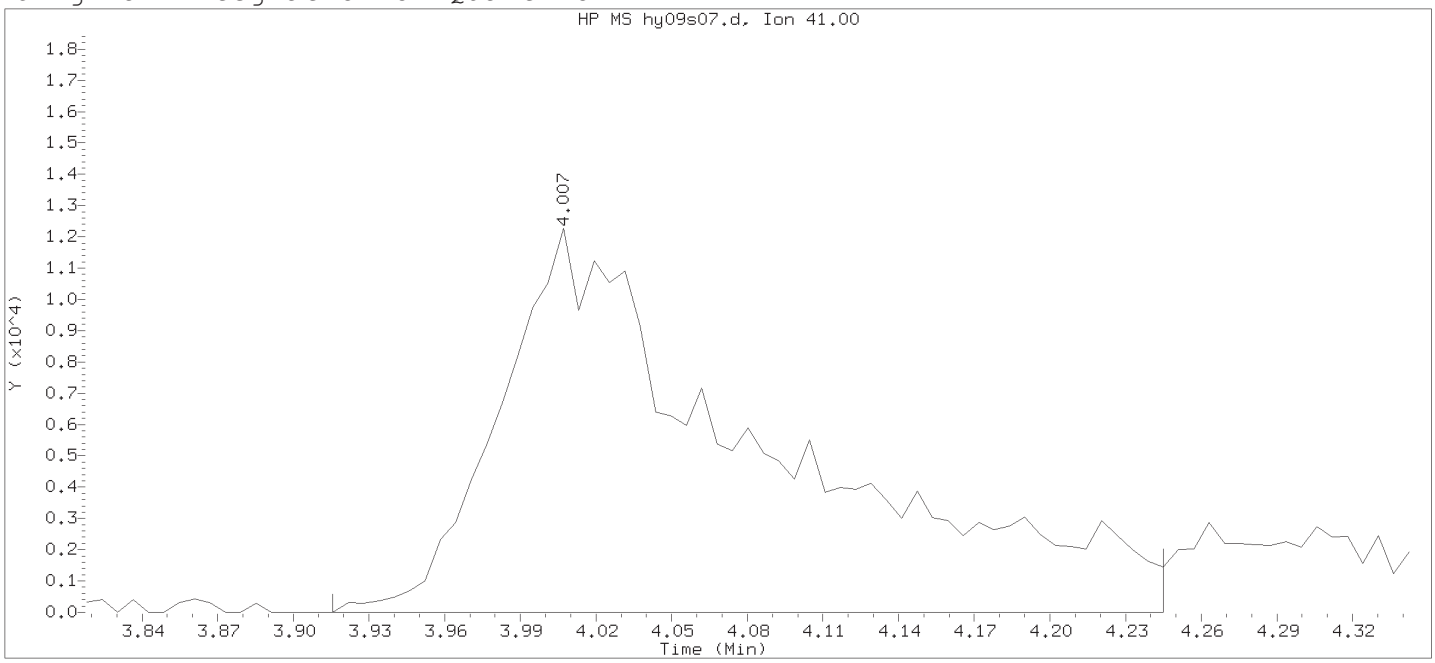
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s07.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:17 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:37 Automation

Sample Name: E6104MS1 Lab Sample ID: 8354937MS

Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 397		
Retention Time (minutes)	: 4.007		
Quant Ion	: 41.00		
Area	: 88941		
On-column Amount (ng)	: 29.2618		
Integration start scan	: 381	Integration stop scan:	435
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature date: 05/12/2016

Data file: /chem2/HP19094.i/16may09a.b/hy09s08.d Injection date and time: **09-MAY-2016 13:38**
Data file Sample Info. Line: E6104MSD1;8354938MS;1;3;MS;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.294	(-0.031)	444	65	80863	(-10)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2485420	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1773481	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	785927	(-11)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	609380	10.405	104%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	96112	9.908	99%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2499369	9.893	99%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	774750	9.513	95%		78 - 110

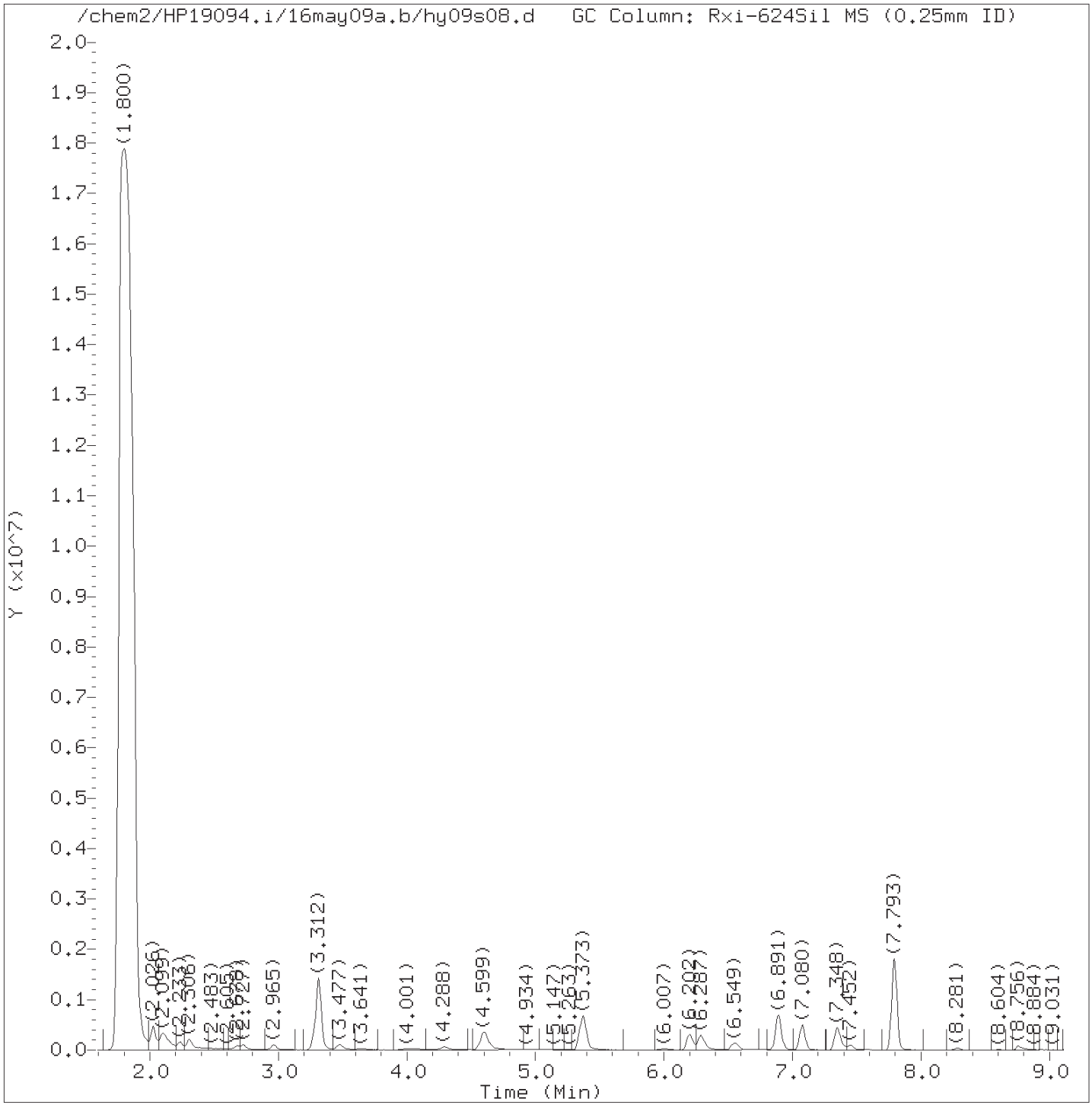
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
4) Dimethyl ether	(2)	2.099	(-0.000)	45	785611	9.204	9.20		J	0.1	13
25) Acetonitrile	(1)	4.001	(0.005)	41	157736M	51.584	51.58		J	32	100
36) Vinyl Acetate	(2)	5.360	(0.000)	43	904065	12.811	12.81			3	10
142) Hexachloroethane	(4)	13.609	(0.000)	117	241629	4.601	4.60		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

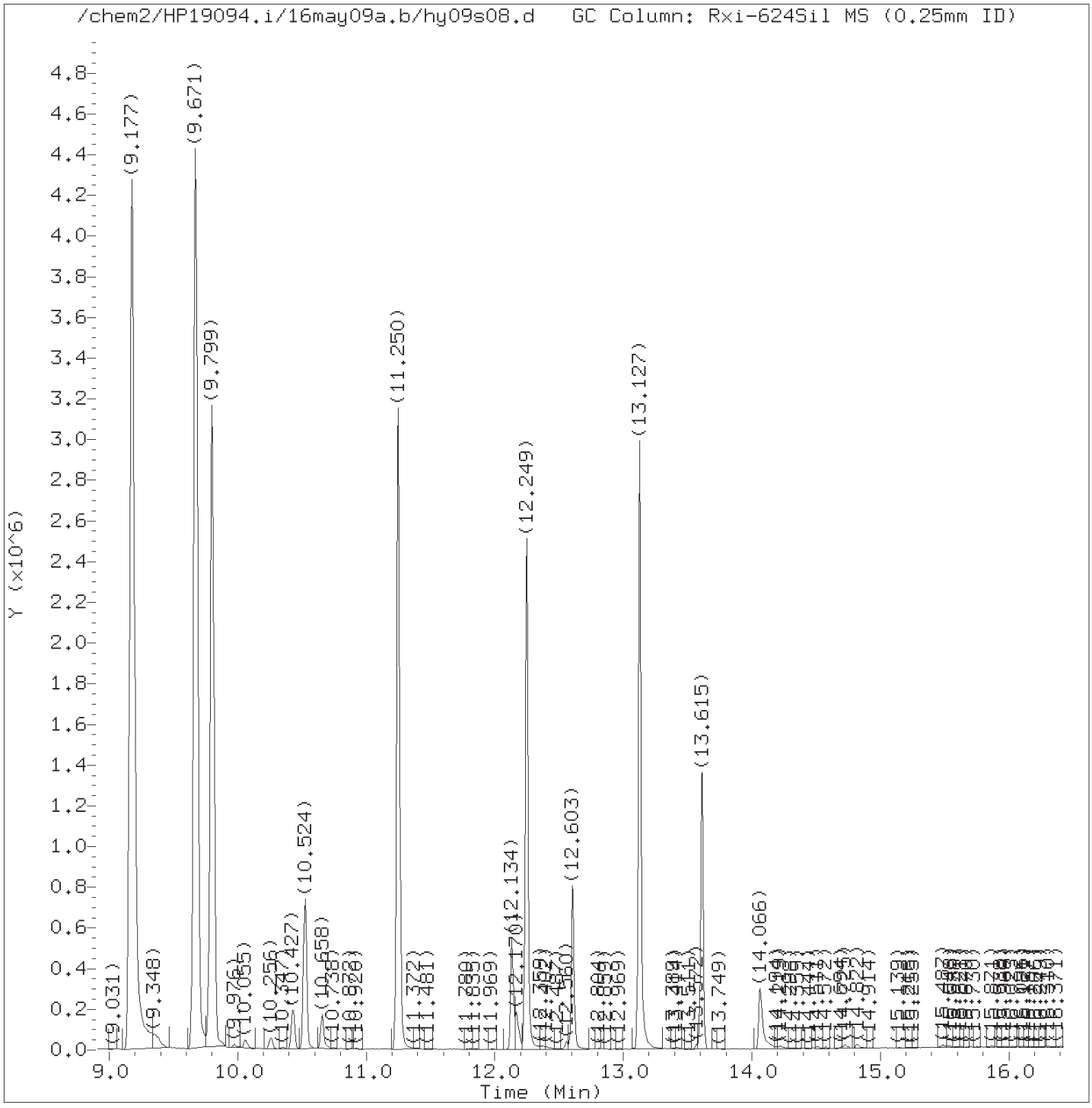
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s08.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD1 Lab Sample ID: 8354938MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s08.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD1 Lab Sample ID: 8354938MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s08.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD1 Lab Sample ID: 8354938MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.099	45	785611	9.204
25) Acetonitrile	(1)	4.001	41	157736M	51.584
26)*t-Butyl Alcohol-d10	(1)	4.294	65	80863	50.000
36) Vinyl Acetate	(2)	5.361	43	904065	12.811
50)$Dibromofluoromethane	(2)	6.891	113	609380	10.405
57)$1,2-Dichloroethane-d4	(2)	7.348	102	96112	9.908
63)*Fluorobenzene	(2)	7.793	96	2485420	10.000
82)$Toluene-d8	(3)	9.799	98	2499369	9.893
97)*Chlorobenzene-d5	(3)	11.250	117	1773481	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	774750	9.513
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	785927	10.000
142) Hexachloroethane	(4)	13.609	117	241629	4.601

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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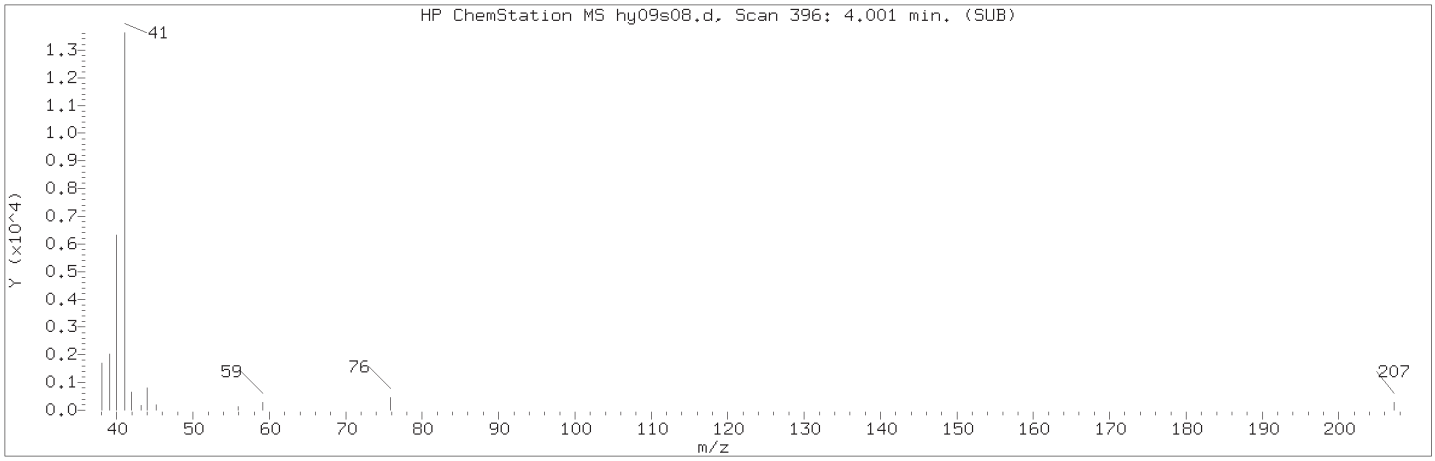
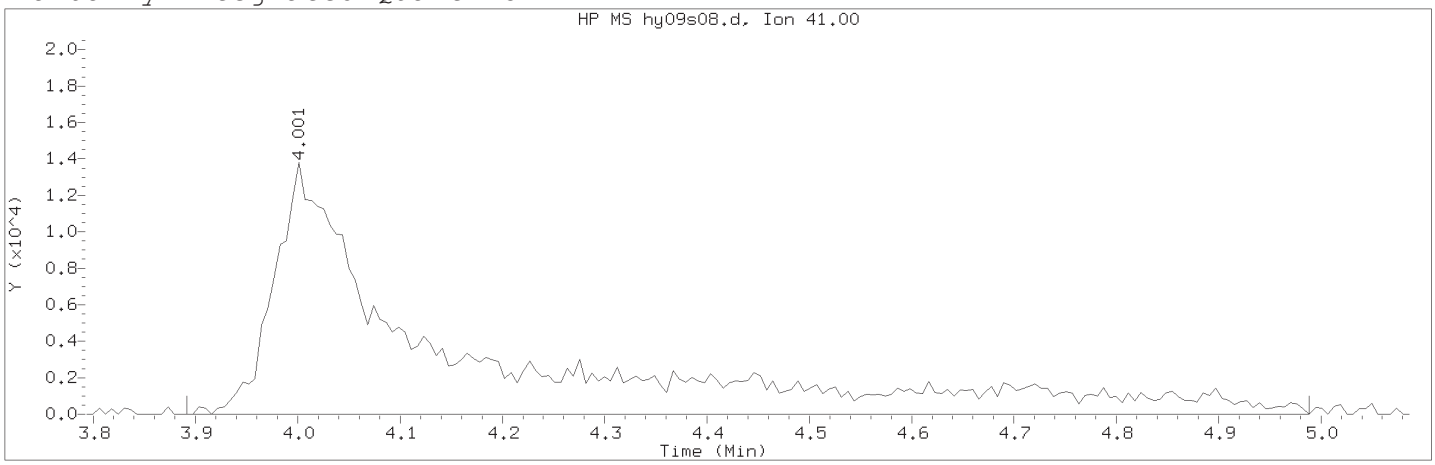
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s08.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD1 Lab Sample ID: 8354938MS

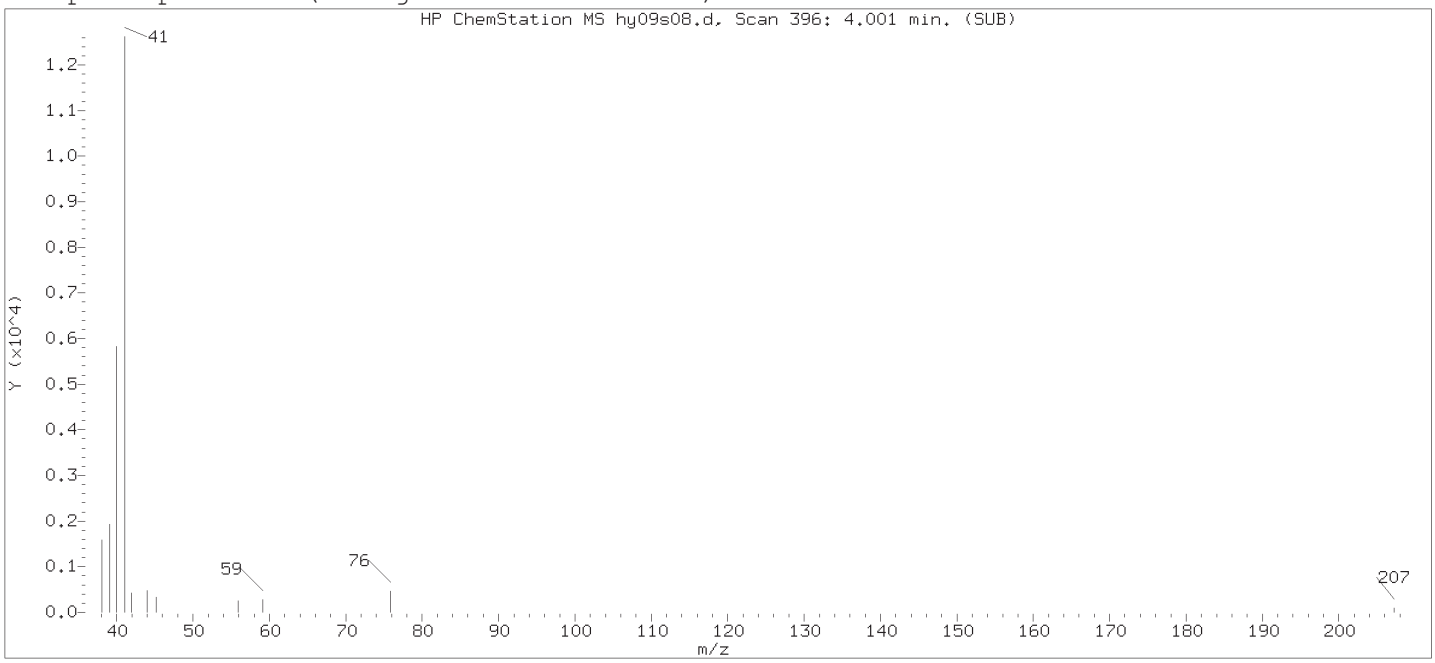
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 396
Retention Time (minutes): 4.001
Quant Ion : 41.00
Area (flag) : 157736M
On-Column Amount (ng) : 51.5840
Integration start scan : 377 Integration stop scan: 557
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

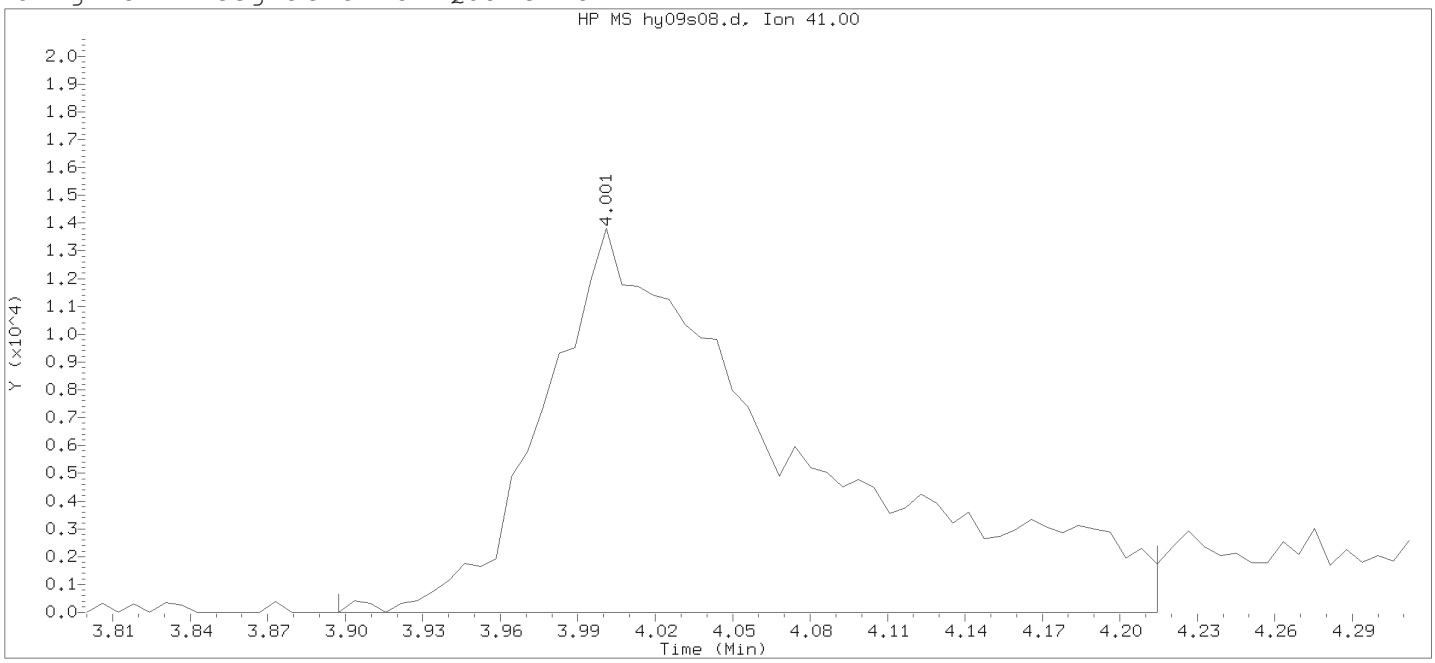
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s08.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 13:38 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:57 Automation

Sample Name: E6104MSD1 Lab Sample ID: 8354938MS

Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 396		
Retention Time (minutes)	: 4.001		
Quant Ion	: 41.00		
Area	: 94348		
On-column Amount (ng)	: 30.8544		
Integration start scan	: 378	Integration stop scan:	430
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature date: 2016/05/13

E6104MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8354937MS

Data file: /chem2/HP19094.i/16may09a.b/hy09s05.d Injection date and time: **09-MAY-2016 12:37**
Data file Sample Info. Line: E6104MS;8354937MS;1;3;MS;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.300	(-0.037)	445	65	87634	(-2)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2209641	(-8)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1730540	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	839759	(-4)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.884	(0.001)	113	606617	11.650	117%	*	77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(-0.001)	102	102416M	11.876	119%	*	74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2258190	9.160	92%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	782196	9.843	98%		78 - 110

M = Surrogate Standard was manually integrated. * = Surrogate Standard % recovery outside QC limits.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.007	(0.000)	85	332741M	4.368	4.37			0.1	1
2) Chloromethane	(2)	2.154	(-0.000)	50	403394	5.398	5.40			0.2	1
5) Vinyl Chloride	(2)	2.294	(0.000)	62	396603	5.706	5.71			0.2	1
7) Bromomethane	(2)	2.617	(0.000)	94	270472	5.863	5.86			0.5	1
8) Chloroethane	(2)	2.727	(-0.000)	64	332918	7.771	7.77			0.1	1
10) Trichlorofluoromethane	(2)	3.056	(0.000)	101	505434	5.582	5.58			0.2	1
11) Ethyl ether	(2)	3.306	(0.000)	59	1468566	39.316	39.32		E	1	13
13) Acrolein	(1)	3.470	(0.005)	56	208627	41.754	41.75			5	25
15) 1,1-Dichloroethene	(2)	3.629	(0.000)	96	281385	5.416	5.42			0.2	1
16) Freon 113	(2)	3.666	(-0.000)	101	283568	5.249	5.25			0.2	1
14) Acetone	(1)	3.629	(0.007)	43	282472	41.027	41.03			3	10
17) Methyl Iodide	(2)	3.824	(0.000)	142	503722	5.237	5.24		J	0.6	10
18) Carbon Disulfide	(2)	3.958	(-0.000)	76	760247	4.739	4.74		J	0.4	10
22) Allyl Chloride	(2)	4.104	(0.000)	41	480130	4.888	4.89		J	0.8	10
23) Methylene Chloride	(2)	4.287	(-0.000)	84	321626	5.793	5.79			0.2	1
29) Acrylonitrile	(1)	4.592	(0.010)	53	238938	28.923	28.92			1	10
31) trans-1,2-Dichloroethene	(2)	4.726	(-0.000)	96	301734	5.394	5.39			0.2	1
33) 1,1-Dichloroethane	(2)	5.372	(-0.000)	63	1275484	11.186	11.19			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.482	(-0.000)	53	491209	5.248	5.25		J	0.5	10
38) 2-Butanone	(1)	6.135	(0.013)	43	512551	43.688	43.69			1	10
42) Propionitrile	(1)	6.202	(0.013)	54	130272	44.531	44.53		J	10	100
45) Methacrylonitrile	(1)	6.433	(0.014)	67	492102	49.129	49.13		J	10	100
48) Tetrahydrofuran	(1)	6.543	(0.014)	71	98851	33.306	33.31			2	25
49) Chloroform	(2)	6.671	(0.000)	83	573990	5.508	5.51			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.921	(0.000)	97	469773	5.285	5.28			0.1	1
54) Carbon Tetrachloride	(2)	7.140	(0.000)	117	430284	5.324	5.32			0.2	1
56) Isobutyl Alcohol	(1)	7.214	(0.012)	41	113908	143.501	143.50		J	10	200
58) Benzene	(2)	7.390	(0.000)	78	1308791	5.511	5.51			0.1	1
59) 1,2-Dichloroethane	(2)	7.451	(0.000)	62	343580M	5.584	5.58			0.1	1
67) Trichloroethene	(2)	8.274	(-0.000)	95	351876	5.685	5.68			0.2	1

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s05.d Injection date and time: **09-MAY-2016 12:37**
Data file Sample Info. Line: E6104MS;8354937MS;1;3;MS;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

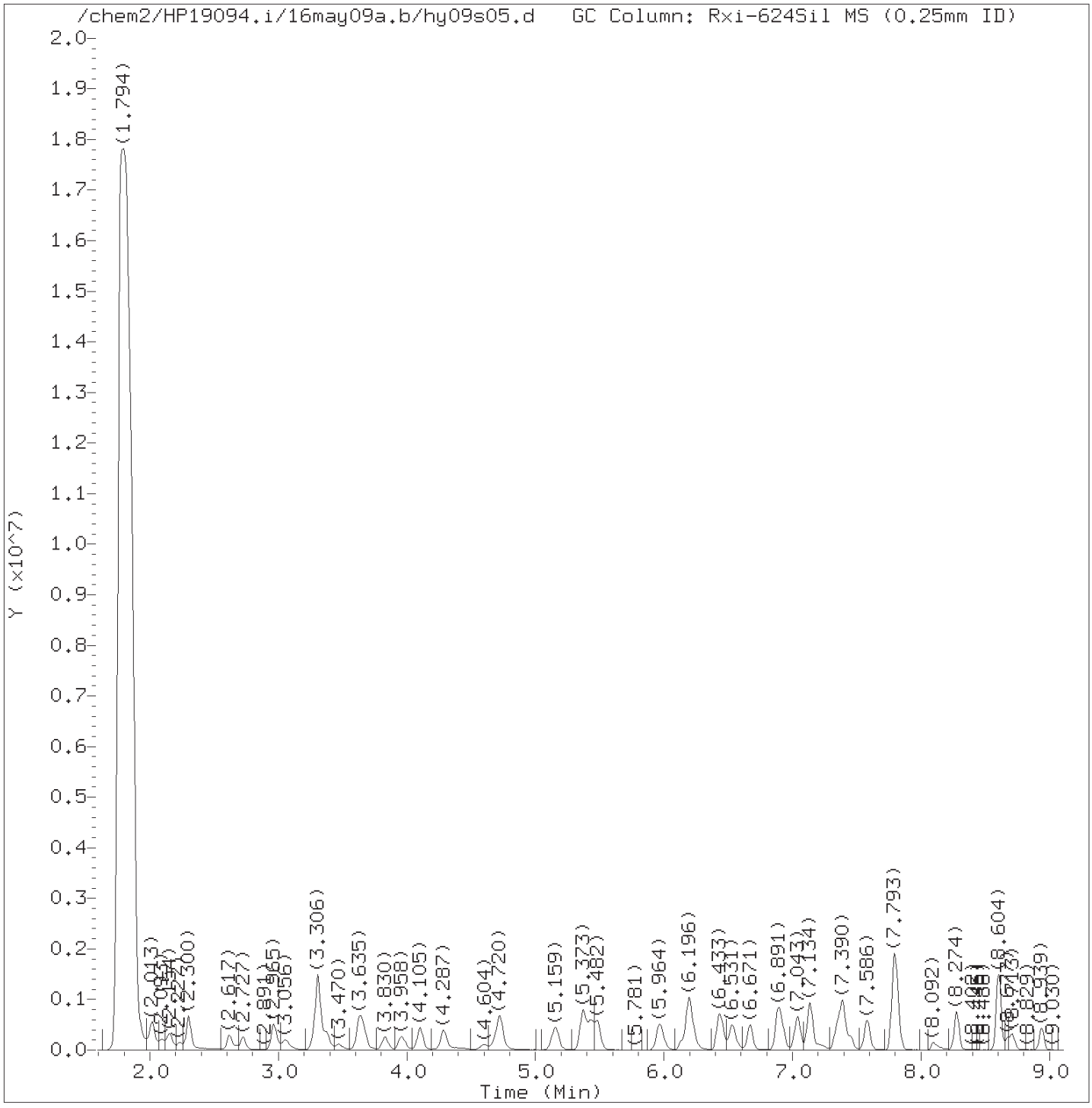
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
70) 1,2-Dichloropropane	(2)	8.598(0.000)	63	333279	5.390	5.39			0.1	1
71) Methyl Methacrylate	(1)	8.671(0.017)	69	123662	5.909	5.91		J	4	10
73) Dibromomethane	(2)	8.713(-0.000)	93	145383	5.708	5.71			0.1	1
72) 1,4-Dioxane	(1)	8.695(0.014)	88	22146	167.276	167.28		J	45	200
74) Bromodichloromethane	(2)	8.939(-0.000)	83	395270	5.558	5.56			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.634(0.019)	43	864757A	29.950	29.95			1	10
83) Toluene	(3)	9.878(0.000)	92	786945	4.739	4.74			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.116(0.000)	75	365546	4.697	4.70			0.1	1
86) Ethyl Methacrylate	(3)	10.176(0.000)	69	275579	4.603	4.60		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.323(0.000)	97	203826	5.067	5.07			0.1	1
89) Tetrachloroethene	(3)	10.426(0.000)	166	407613	5.198	5.20			0.1	1
90) 1,3-Dichloropropane	(3)	10.481(0.000)	76	358851	4.962	4.96			0.1	1
91) 2-Hexanone	(1)	10.524(0.019)	43	624673	30.600	30.60			1	10
93) Dibromochloromethane	(3)	10.701(0.000)	129	257573	4.995	5.00			0.1	1
95) 1,2-Dibromoethane	(3)	10.823(0.000)	107	198986	5.252	5.25			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.353(0.000)	131	315413	5.087	5.09			0.1	1
100) Ethylbenzene	(3)	11.359(0.000)	91	1560358	4.800	4.80			0.1	1
101) m+p-Xylene	(3)	11.475(0.000)	106	1195872	9.646	9.65			0.1	3
104) o-Xylene	(3)	11.804(-0.000)	106	586927	4.879	4.88			0.1	3
105) Xylene (Total)	(3)		106	1782799	14.524	14.52			0.2	3
106) Styrene	(3)	11.816(0.000)	104	962999	5.003	5.00			0.1	1
107) Bromoform	(3)	11.975(0.000)	173	138194	4.832	4.83			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.328(0.000)	83	239586M	4.558	4.56			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.359(0.023)	53	265060A	29.812	29.81			1	10
116) 1,2,3-Trichloropropane	(4)	12.383(-0.000)	110	65919M	4.996	5.00			0.3	1
126) Pentachloroethane	(4)	12.834(0.000)	167	227204	4.784	4.78		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	13.072(0.000)	146	728302M	4.756	4.76			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.145(0.000)	146	742940M	4.775	4.78			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.402(0.000)	146	639315	4.701	4.70			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.944(0.026)	155	30648A	6.682	6.68			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.493(0.000)	180	421695	4.334	4.33			0.1	1
146) Hexachlorobutadiene	(4)	14.572(0.000)	225	245690	4.833	4.83			0.1	1
147) Naphthalene	(4)	14.676(-0.000)	128	622411	3.991	3.99			0.1	1

A = User selected an alternate peak. M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

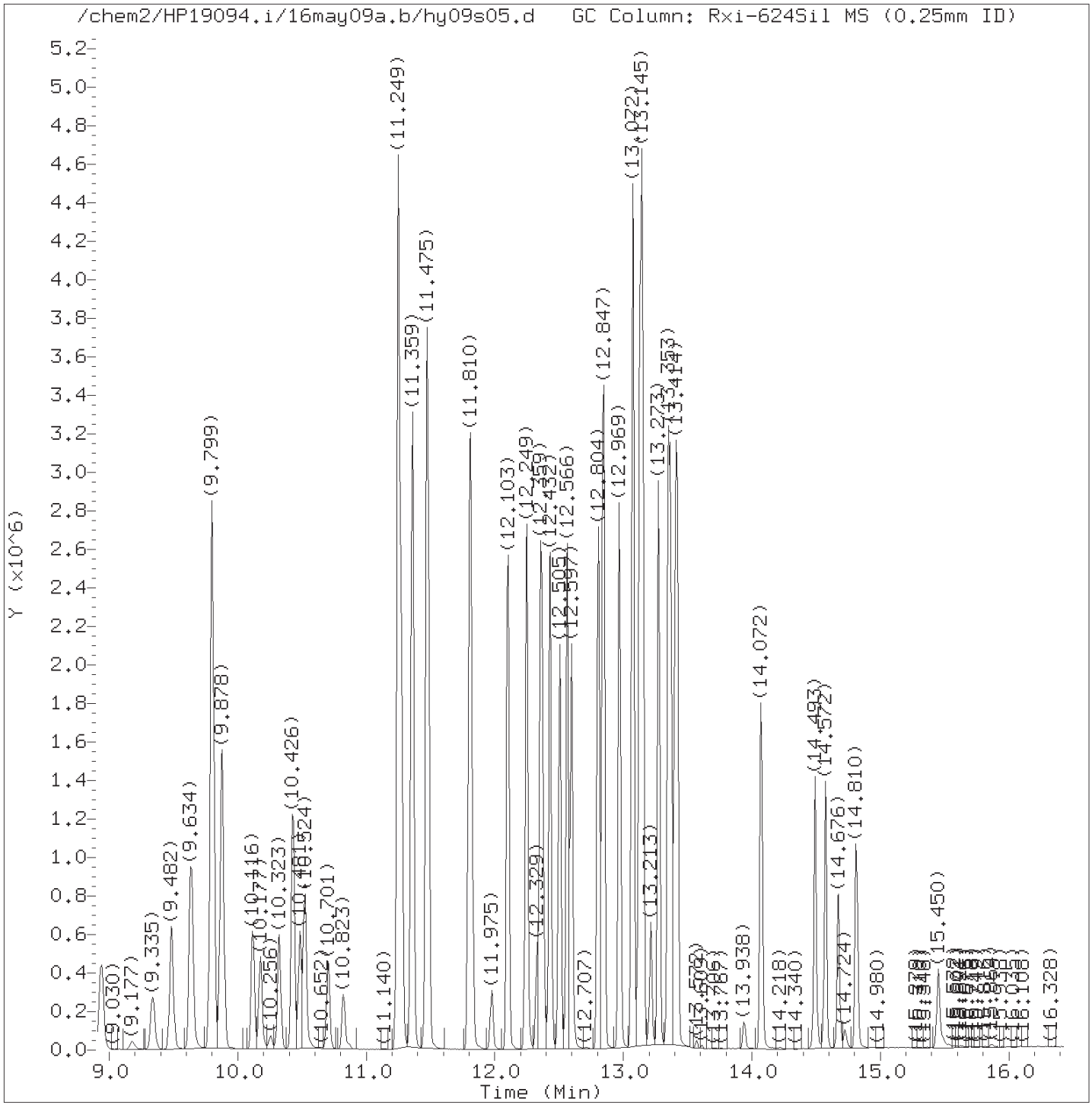
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	332741M	4.368
2) Chloromethane	(2)	2.154	50	403394	5.398
5) Vinyl Chloride	(2)	2.294	62	396603	5.706
7) Bromomethane	(2)	2.617	94	270472	5.863
8) Chloroethane	(2)	2.727	64	332918	7.771
10) Trichlorofluoromethane	(2)	3.056	101	505434	5.582
11) Ethyl ether	(2)	3.306	59	1468566	39.316
13) Acrolein	(1)	3.470	56	208627	41.754
15) 1,1-Dichloroethene	(2)	3.629	96	281385	5.416
14) Acetone	(1)	3.629	43	282472	41.027
16) Freon 113	(2)	3.666	101	283568	5.249
17) Methyl Iodide	(2)	3.824	142	503722	5.237
18) Carbon Disulfide	(2)	3.958	76	760247	4.739
22) Allyl Chloride	(2)	4.105	41	480130	4.888
23) Methylene Chloride	(2)	4.287	84	321626	5.793
26)*t-Butyl Alcohol-d10	(1)	4.300	65	87634	50.000
29) Acrylonitrile	(1)	4.592	53	238938	28.923
31) trans-1,2-Dichloroethene	(2)	4.726	96	301734	5.394
33) 1,1-Dichloroethane	(2)	5.373	63	1275484	11.186
35) 2-Chloro-1,3-Butadiene	(2)	5.482	53	491209	5.248
38) 2-Butanone	(1)	6.135	43	512551	43.688
42) Propionitrile	(1)	6.202	54	130272	44.531
45) Methacrylonitrile	(1)	6.433	67	492102	49.129
48) Tetrahydrofuran	(1)	6.543	71	98851	33.306
49) Chloroform	(2)	6.671	83	573990	5.508
50)$Dibromofluoromethane	(2)	6.884	113	606617	11.650
51) 1,1,1-Trichloroethane	(2)	6.921	97	469773	5.285
54) Carbon Tetrachloride	(2)	7.141	117	430284	5.324
56) Isobutyl Alcohol	(1)	7.214	41	113908	143.501
57)$1,2-Dichloroethane-d4	(2)	7.354	102	102416M	11.876
58) Benzene	(2)	7.390	78	1308791	5.511
59) 1,2-Dichloroethane	(2)	7.451	62	343580M	5.584
63)*Fluorobenzene	(2)	7.793	96	2209641	10.000
67) Trichloroethene	(2)	8.274	95	351876	5.685
70) 1,2-Dichloropropane	(2)	8.598	63	333279	5.390
71) Methyl Methacrylate	(1)	8.671	69	123662	5.909
72) 1,4-Dioxane	(1)	8.695	88	22146	167.276
73) Dibromomethane	(2)	8.713	93	145383	5.708

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

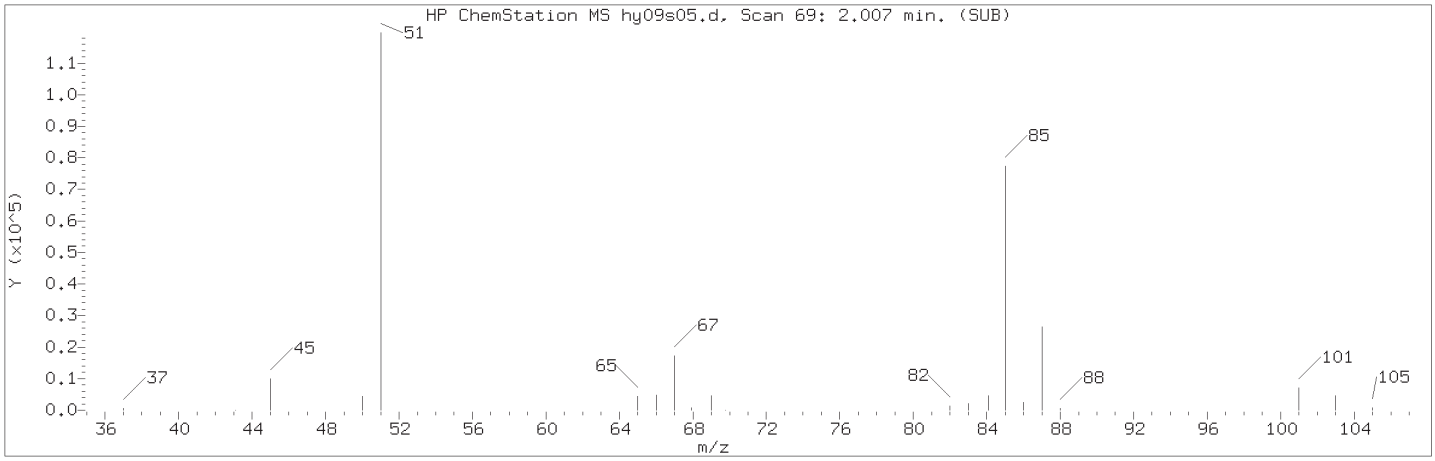
Sample Name: E6104MS Lab Sample ID: 8354937MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.939	83	395270	5.558
81) 4-Methyl-2-Pentanone	(1)	9.634	43	864757A	29.950
82)$Toluene-d8	(3)	9.799	98	2258190	9.160
83) Toluene	(3)	9.878	92	786945	4.739
84) trans-1,3-Dichloropropene	(3)	10.116	75	365546	4.697
86) Ethyl Methacrylate	(3)	10.177	69	275579	4.603
88) 1,1,2-Trichloroethane	(3)	10.323	97	203826	5.067
89) Tetrachloroethene	(3)	10.426	166	407613	5.198
90) 1,3-Dichloropropane	(3)	10.481	76	358851	4.962
91) 2-Hexanone	(1)	10.524	43	624673	30.600
93) Dibromochloromethane	(3)	10.701	129	257573	4.995
95) 1,2-Dibromoethane	(3)	10.823	107	198986	5.252
97)*Chlorobenzene-d5	(3)	11.249	117	1730540	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	315413	5.087
100) Ethylbenzene	(3)	11.359	91	1560358	4.800
101) m+p-Xylene	(3)	11.475	106	1195872	9.646
105) Xylene (Total)	(3)		106	1782799	14.524
104) o-Xylene	(3)	11.804	106	586927	4.879
106) Styrene	(3)	11.816	104	962999	5.003
107) Bromoform	(3)	11.975	173	138194	4.832
111)$4-Bromofluorobenzene	(3)	12.249	95	782196	9.843
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	239586M	4.558
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	265060A	29.812
116) 1,2,3-Trichloropropane	(4)	12.383	110	65919M	4.996
126) Pentachloroethane	(4)	12.835	167	227204	4.784
131) 1,3-Dichlorobenzene	(4)	13.072	146	728302M	4.756
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	839759	10.000
134) 1,4-Dichlorobenzene	(4)	13.145	146	742940M	4.775
139) 1,2-Dichlorobenzene	(4)	13.402	146	639315	4.701
143) 1,2-Dibromo-3-chloropropane	(1)	13.944	155	30648A	6.682
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	421695	4.334
146) Hexachlorobutadiene	(4)	14.572	225	245690	4.833
147) Naphthalene	(4)	14.676	128	622411	3.991

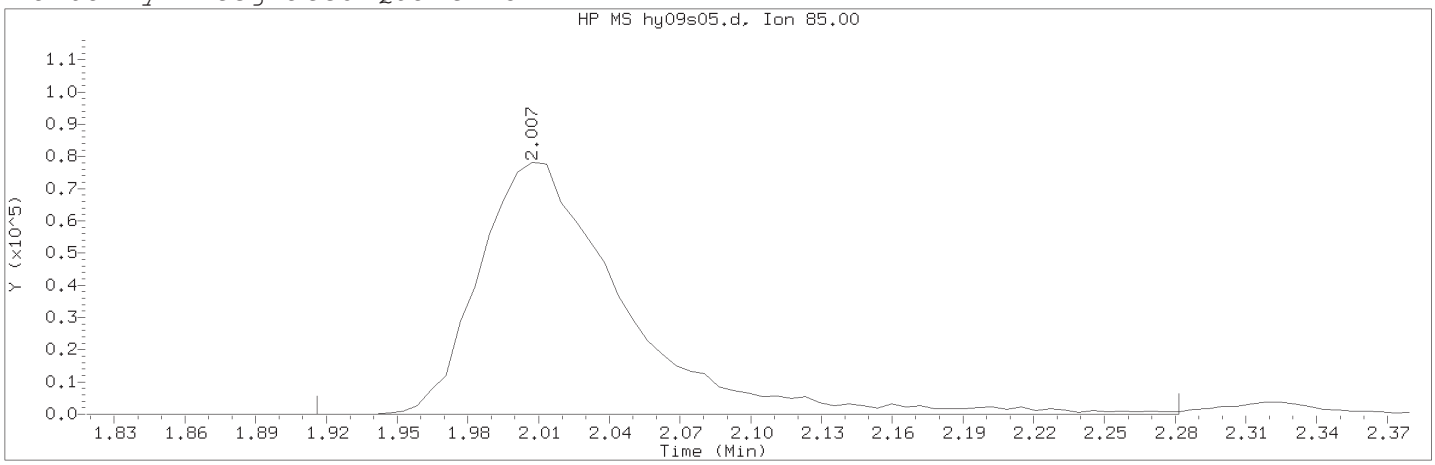
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

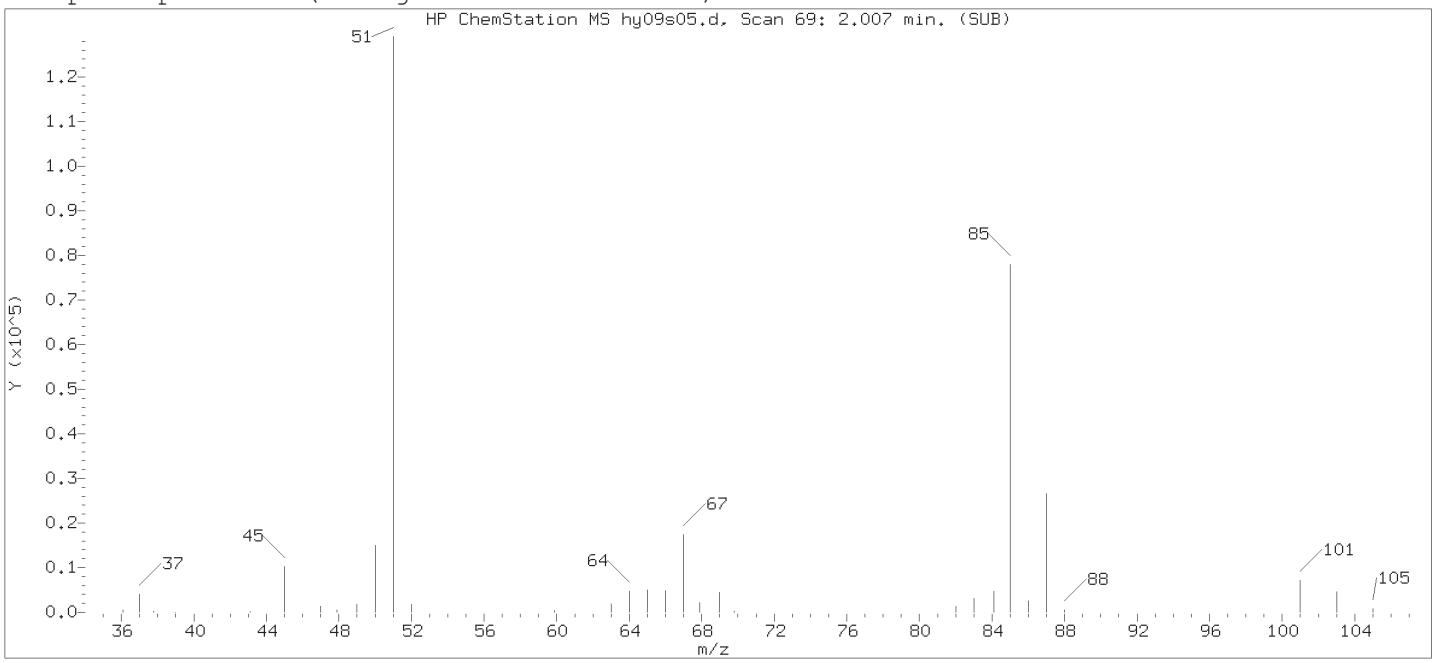
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.007
Quant Ion : 85.00
Area (flag) : 332741M
On-Column Amount (ng) : 4.3676
Integration start scan : 53 Integration stop scan: 113
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

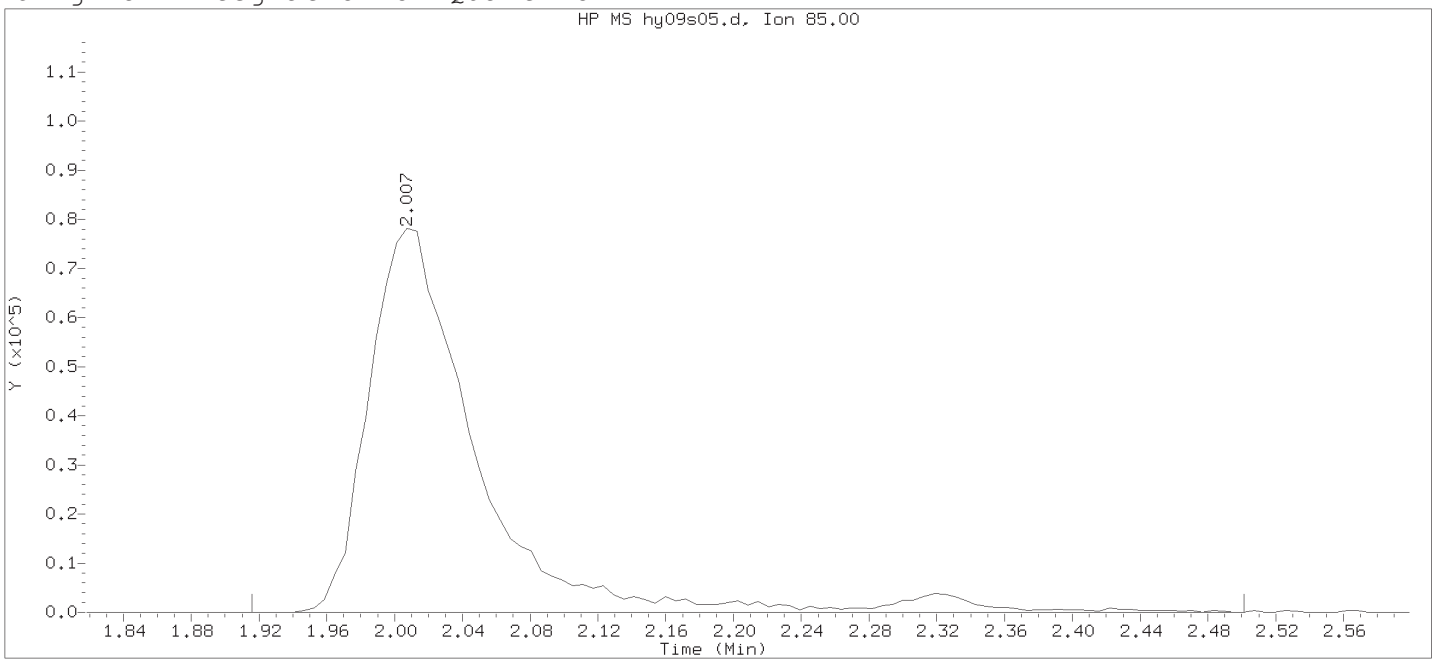
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

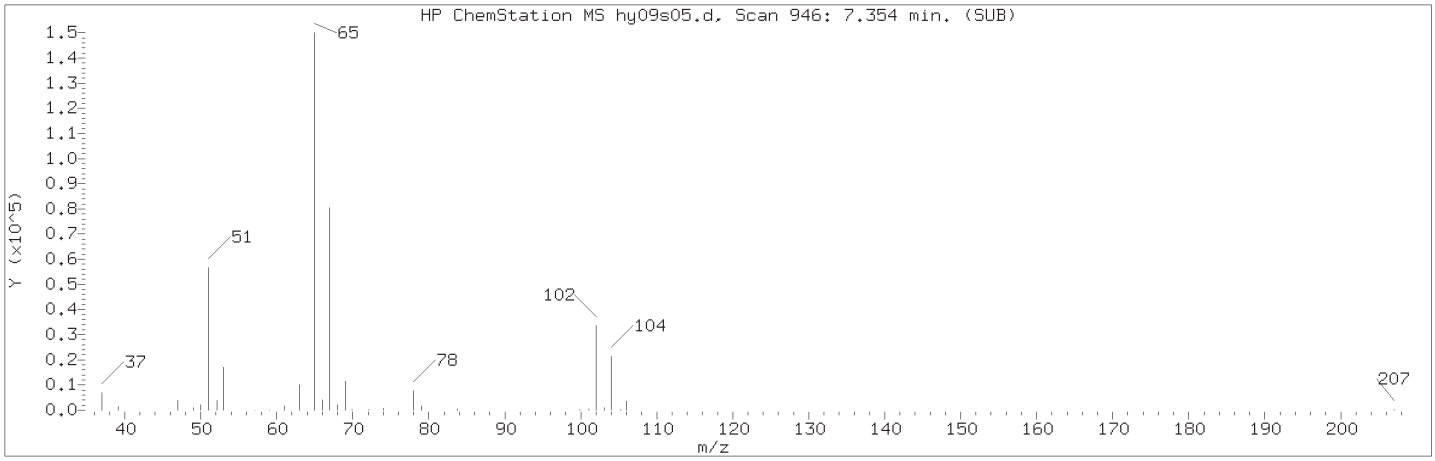
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

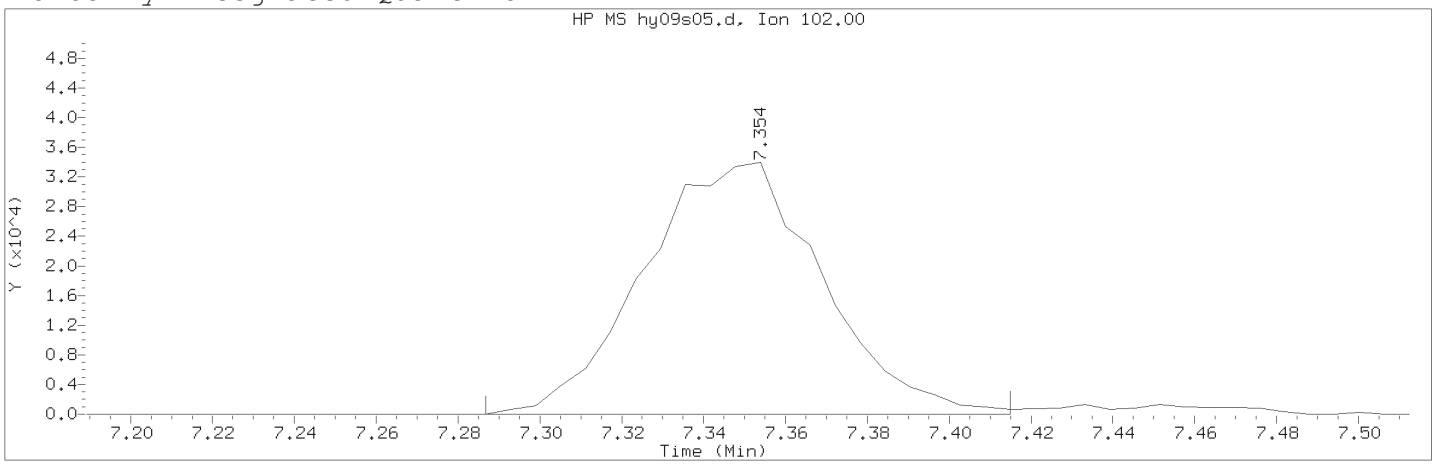
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.007
Quant Ion : 85.00
Area : 346774
On-column Amount (ng) : 4.5518
Integration start scan : 53 Integration stop scan: 149
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

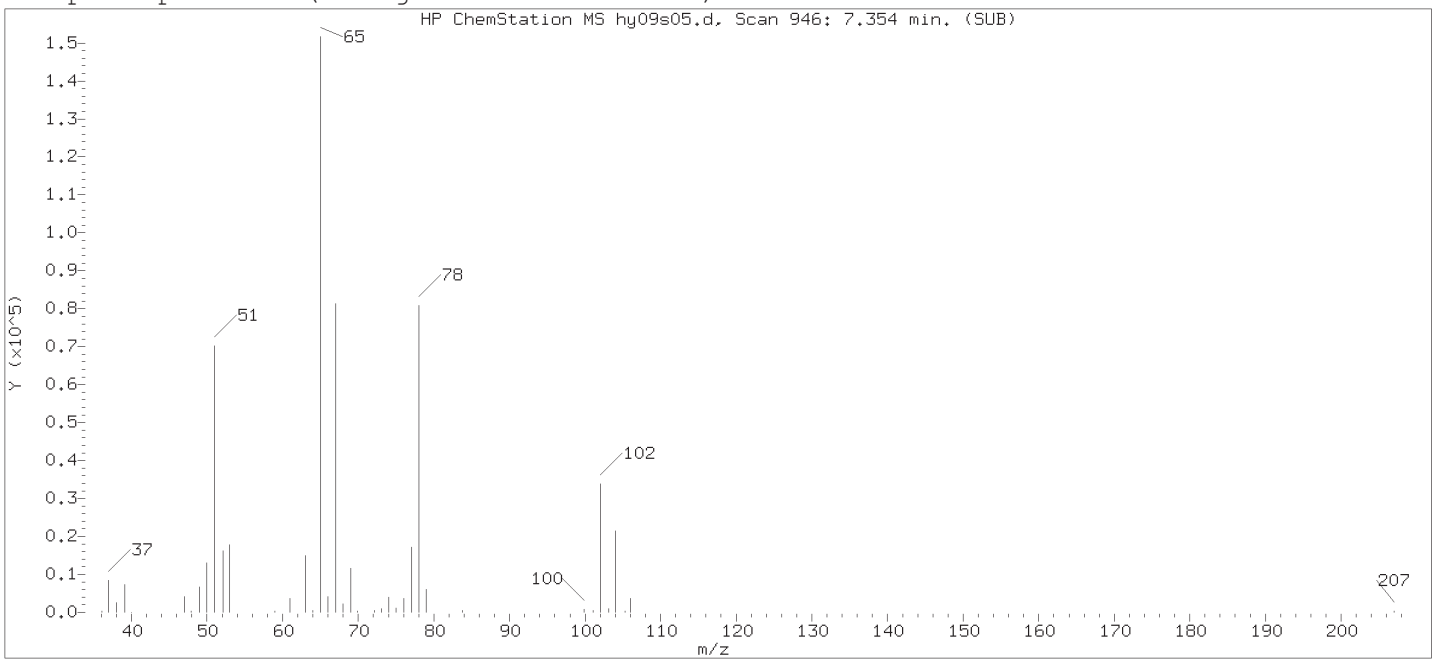
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 946
Retention Time (minutes): 7.354
Quant Ion : 102.00
Area (flag) : 102416M
On-Column Amount (ng) : 11.8755
Integration start scan : 934 Integration stop scan: 955
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

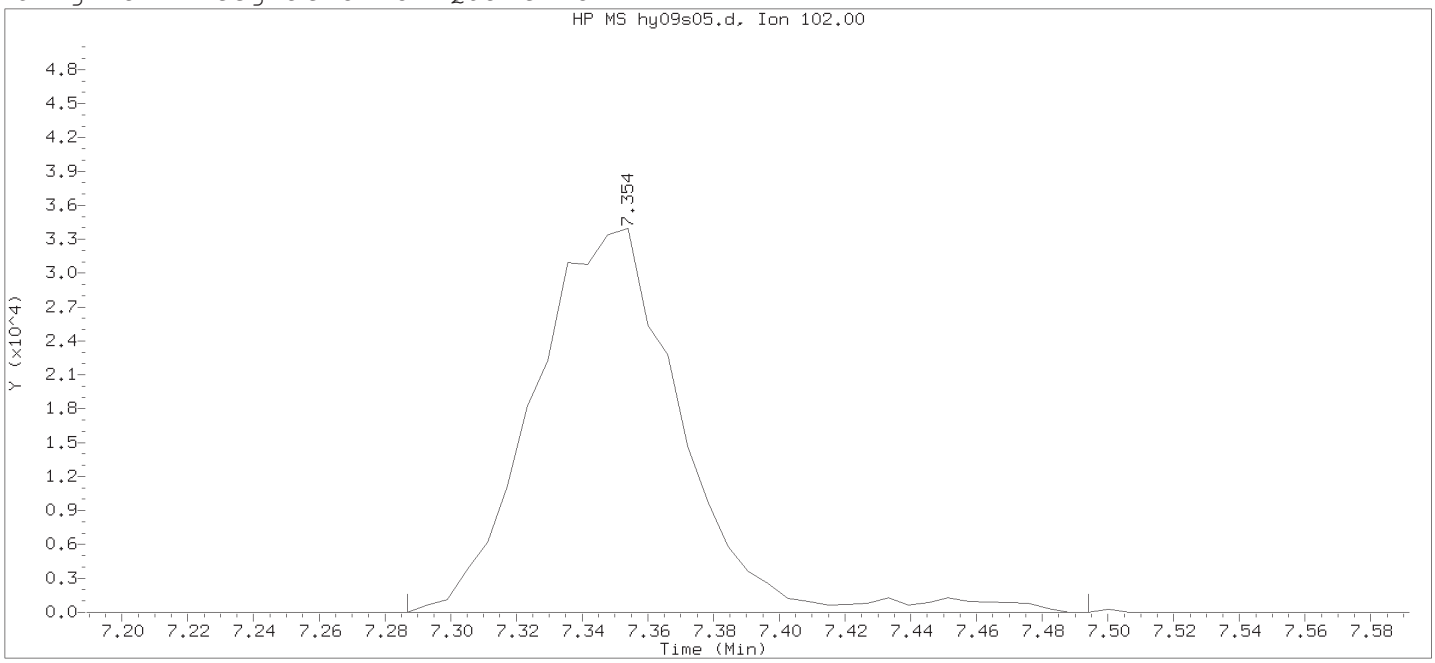
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

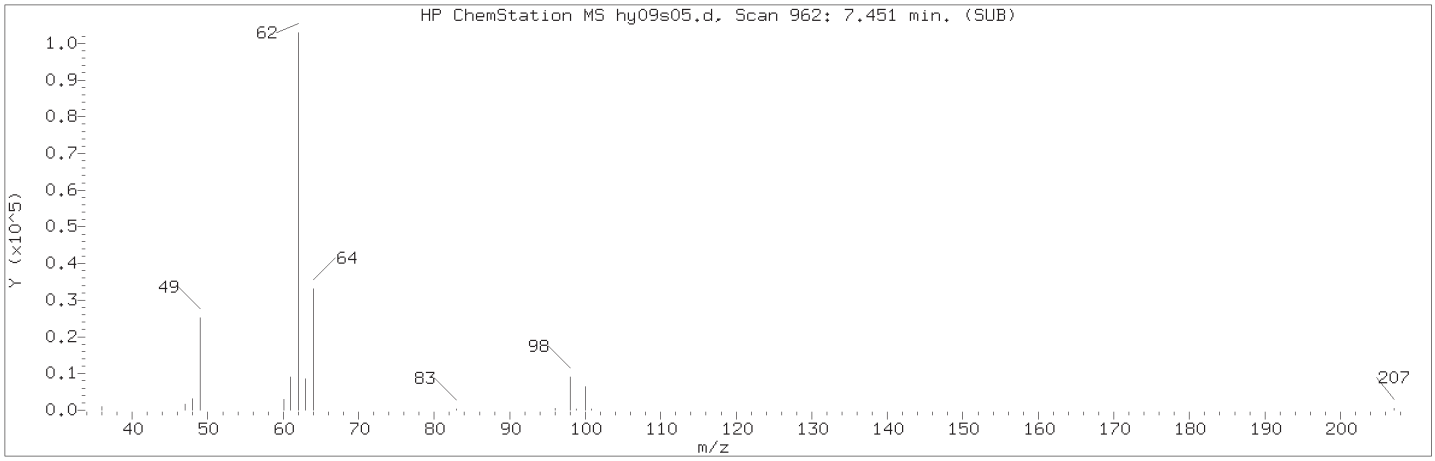
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

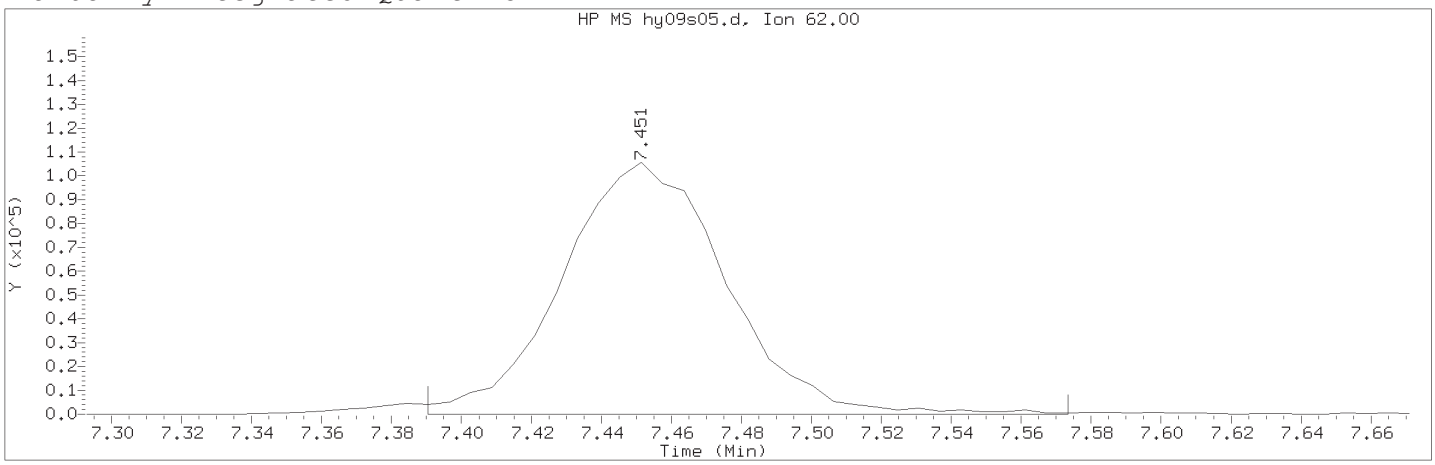
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 946
Retention Time (minutes): 7.354
Quant Ion : 102.00
Area : 105838
On-column Amount (ng) : 12.2724
Integration start scan : 934 Integration stop scan: 968
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature date: 05/12/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

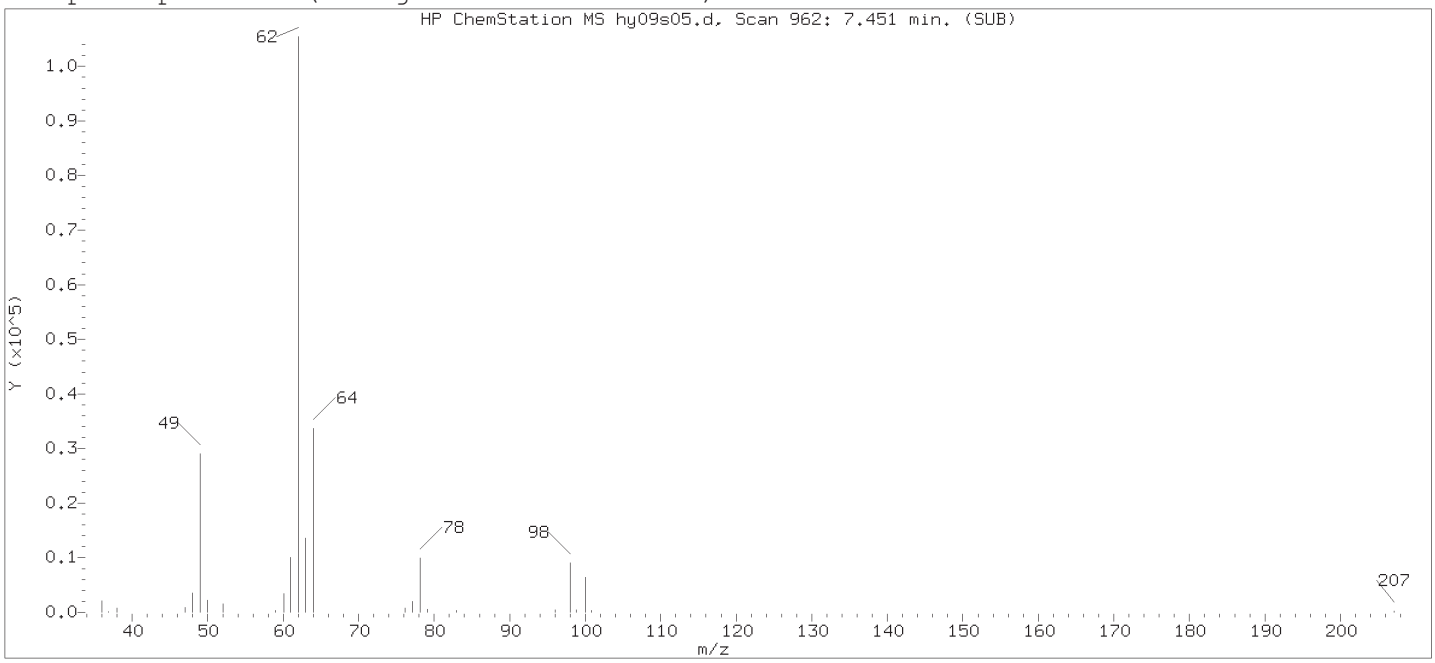
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.451
Quant Ion : 62.00
Area (flag) : 343580M
On-Column Amount (ng) : 5.5839
Integration start scan : 951 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

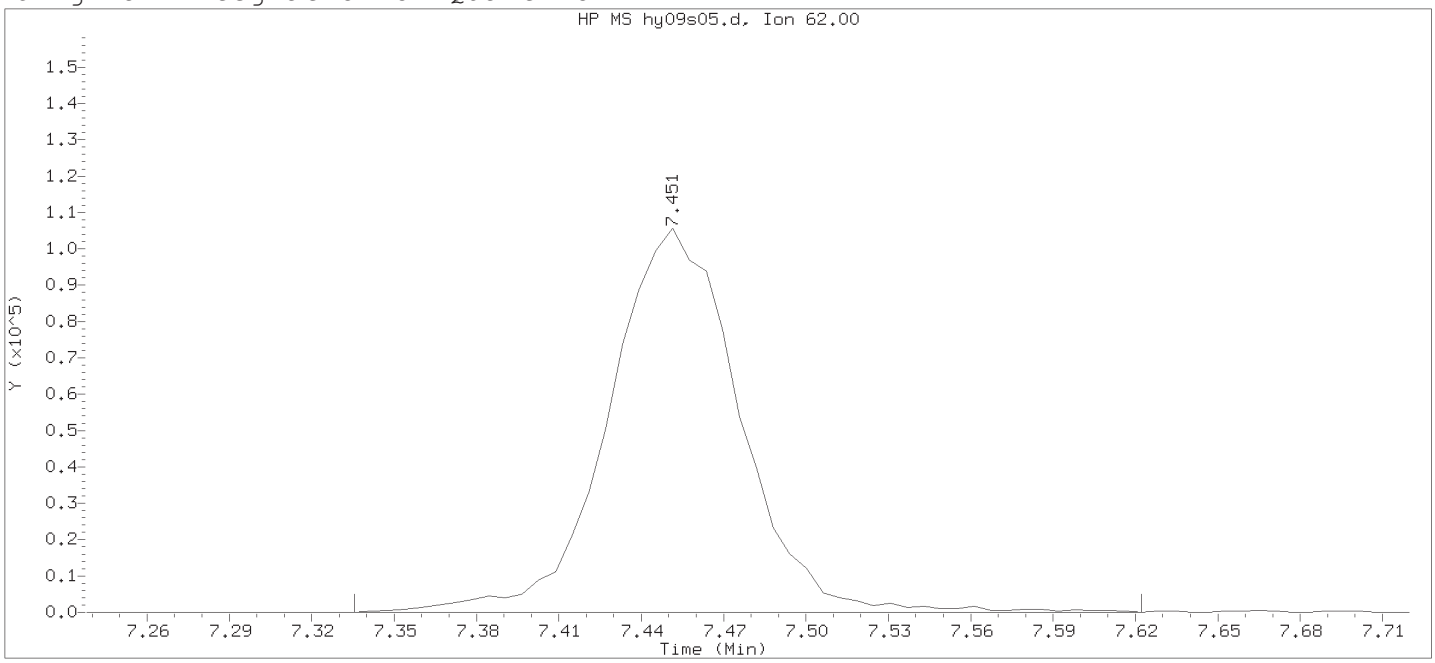
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

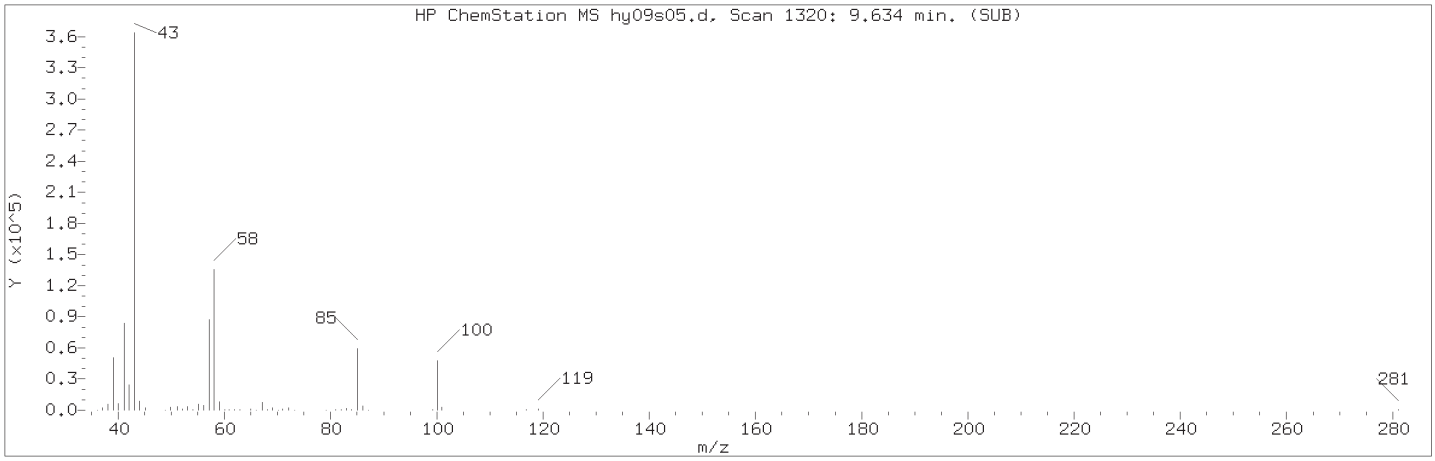
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

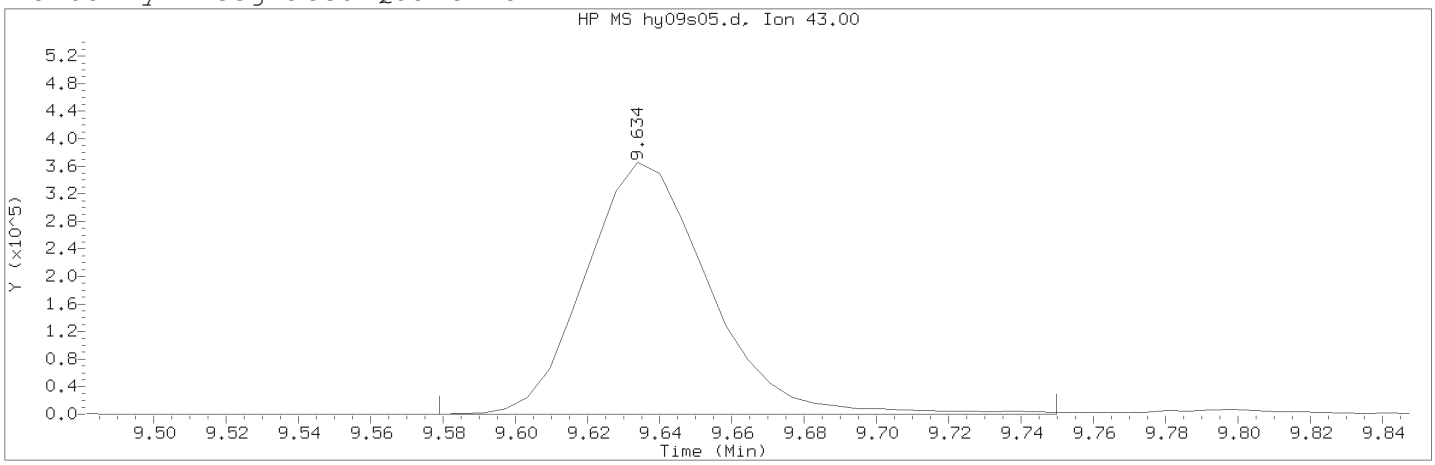
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.451
Quant Ion : 62.00
Area : 350718
On-column Amount (ng) : 5.7000
Integration start scan : 942 Integration stop scan: 989
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature date: 05/12/2016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

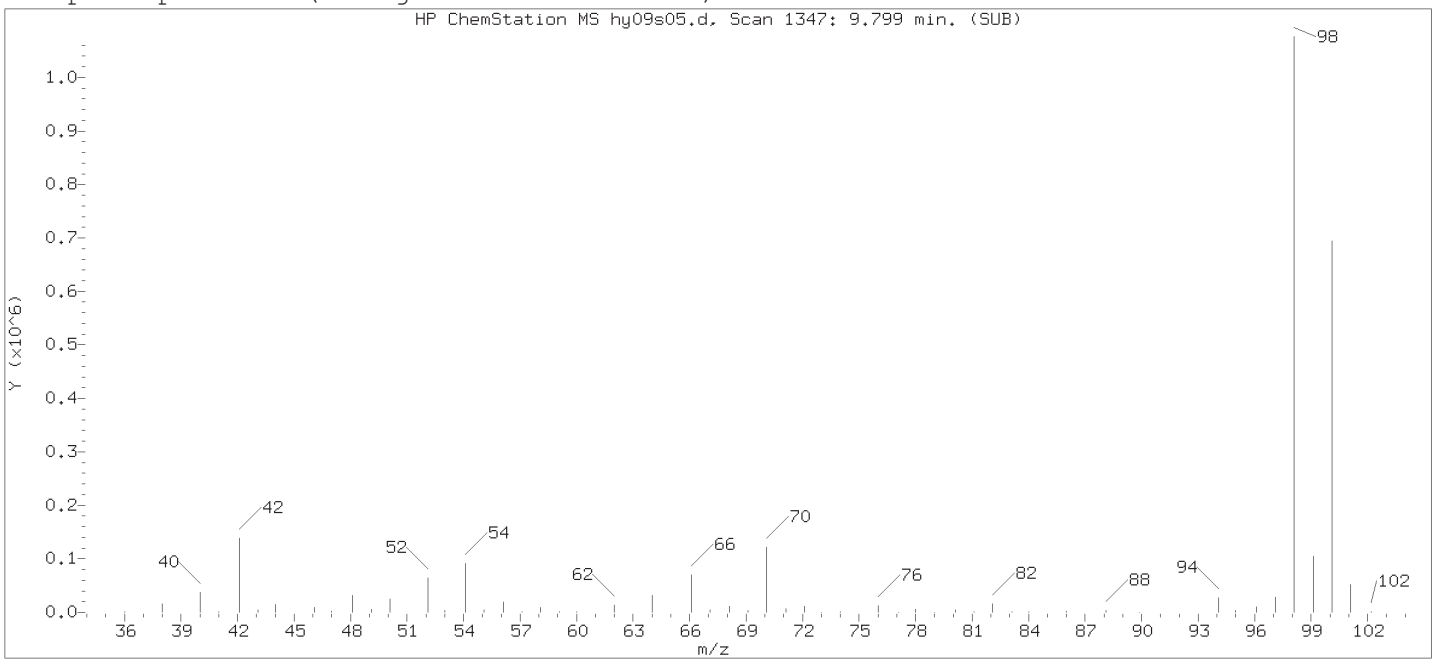
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1320
Retention Time (minutes): 9.634
Quant Ion : 43.00
Area (flag) : 864757A
On-Column Amount (ng) : 29.9502
Integration start scan : 1310 Integration stop scan: 1338
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

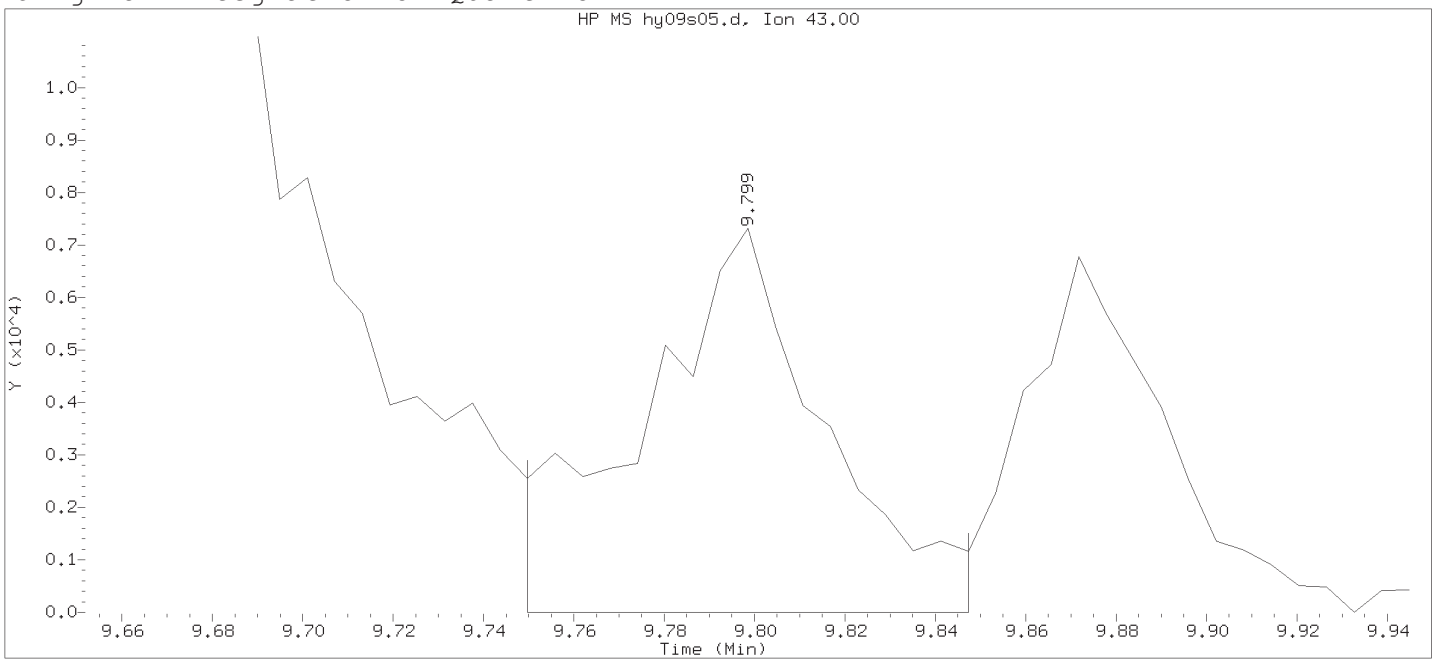
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

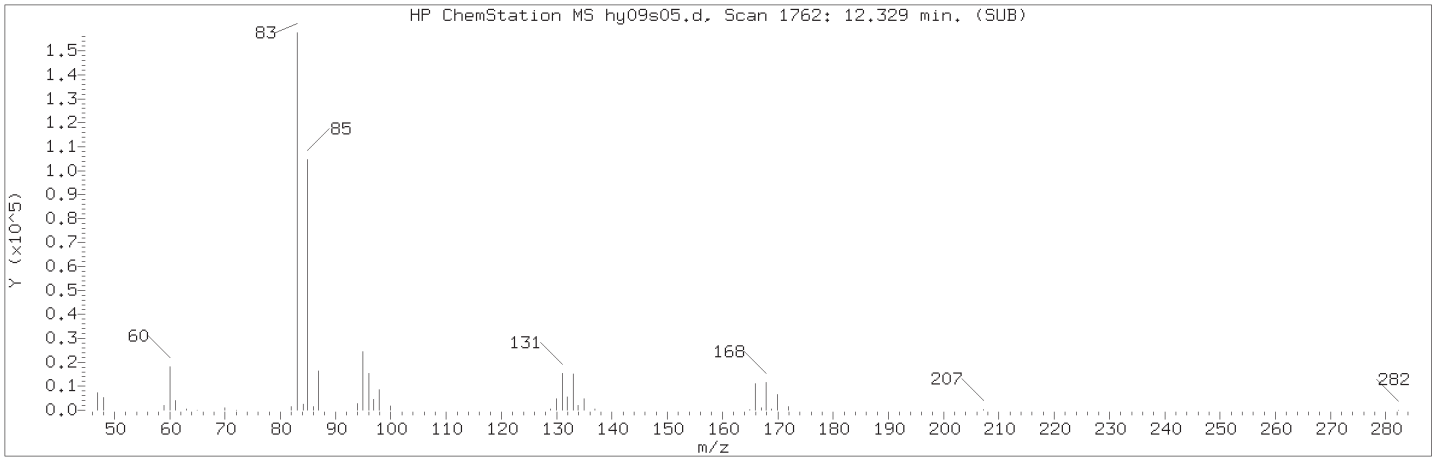
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

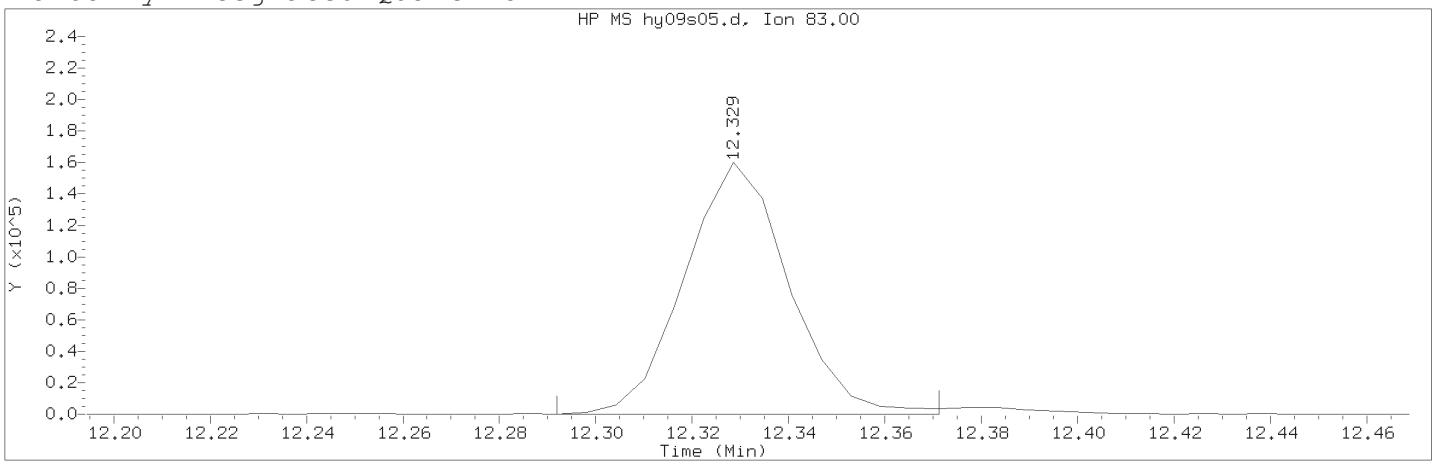
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1347
Retention Time (minutes): 9.799
Quant Ion : 43.00
Area : 20516
On-column Amount (ng) : 0.7106
Integration start scan : 1338 Integration stop scan: 1354
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

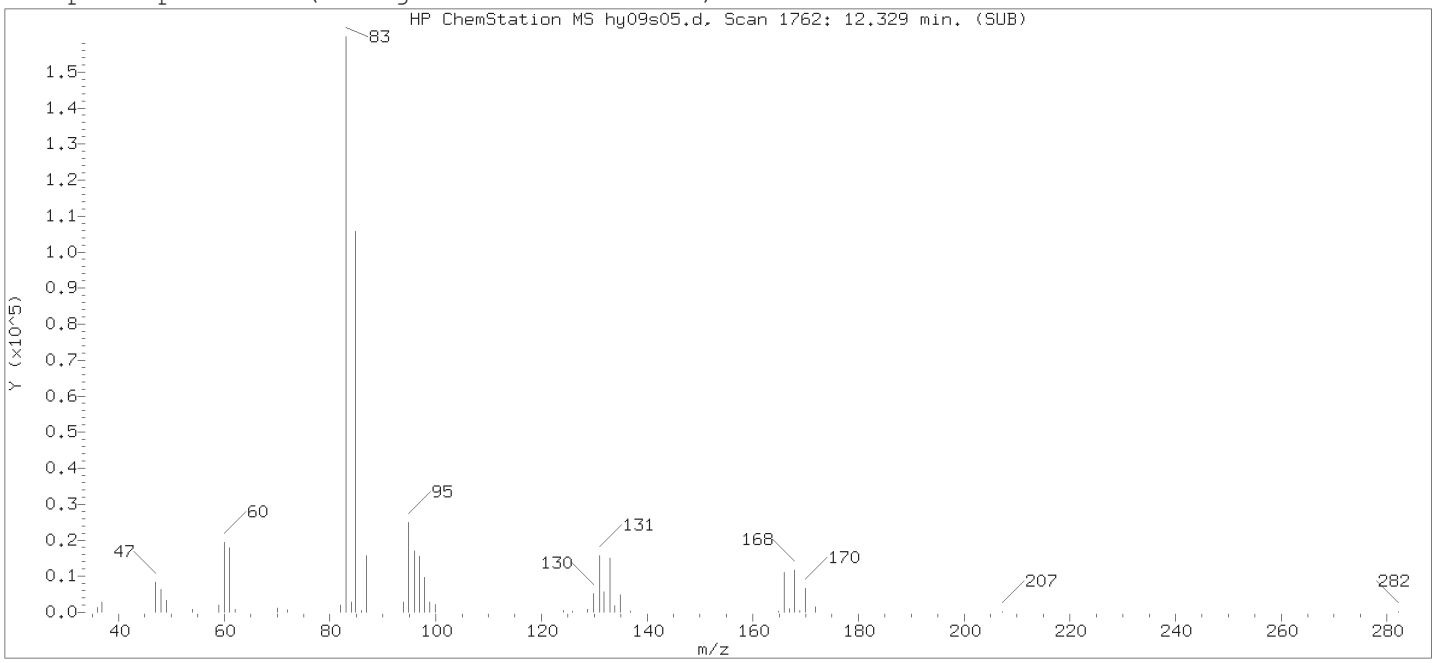
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area (flag) : 239586M
On-Column Amount (ng) : 4.5583
Integration start scan : 1755 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

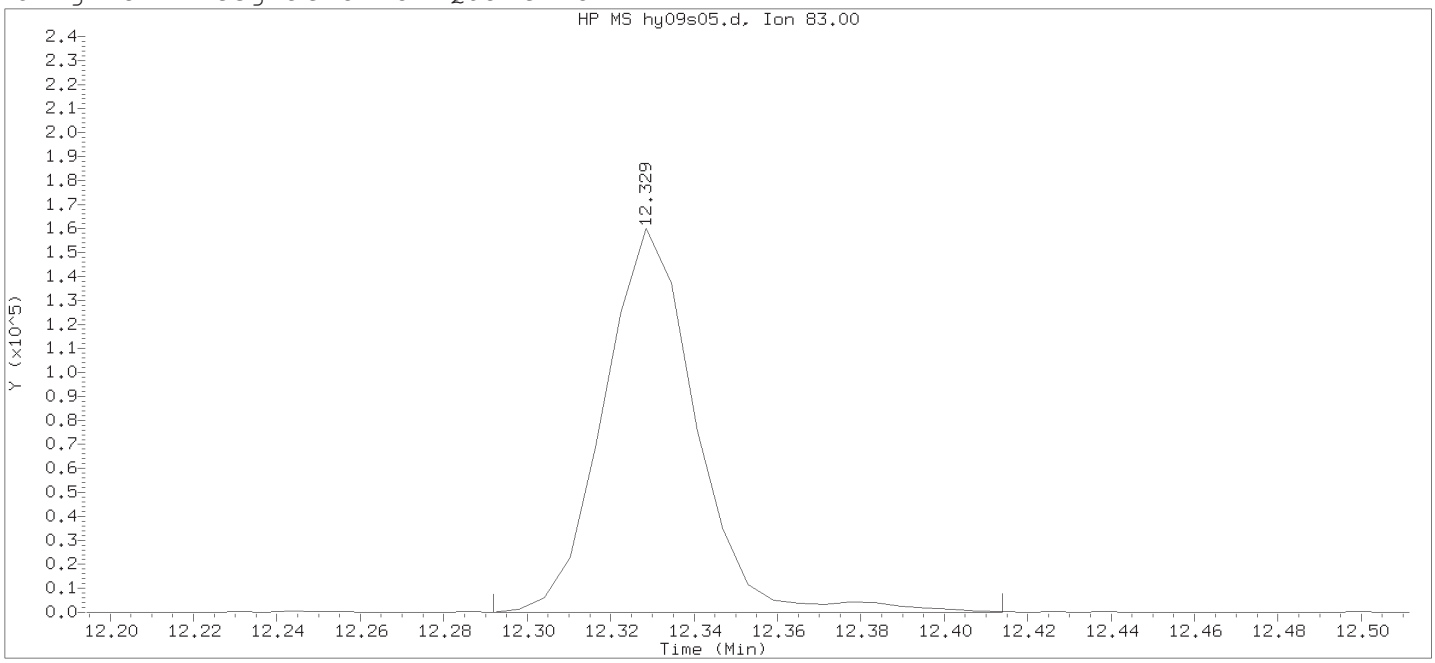
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

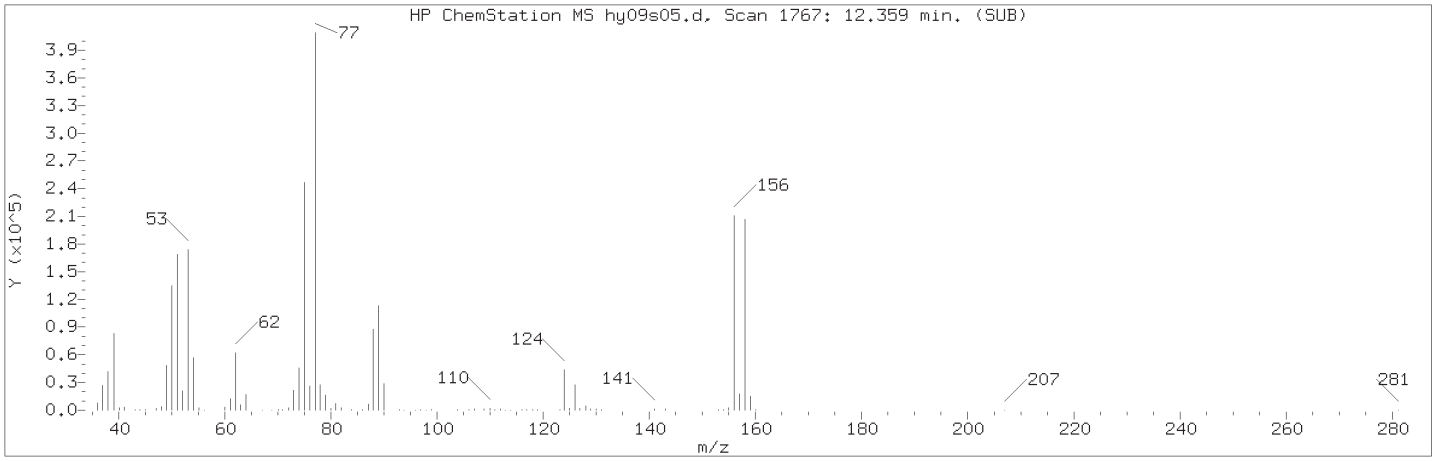
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

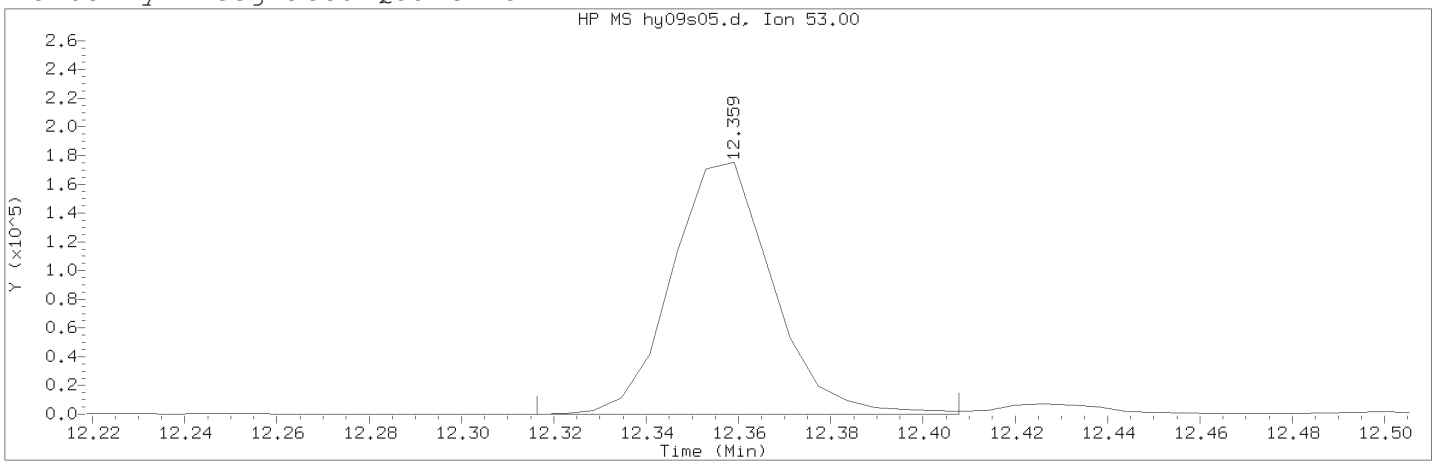
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area : 244988
On-column Amount (ng) : 4.6611
Integration start scan : 1755 Integration stop scan: 1775
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

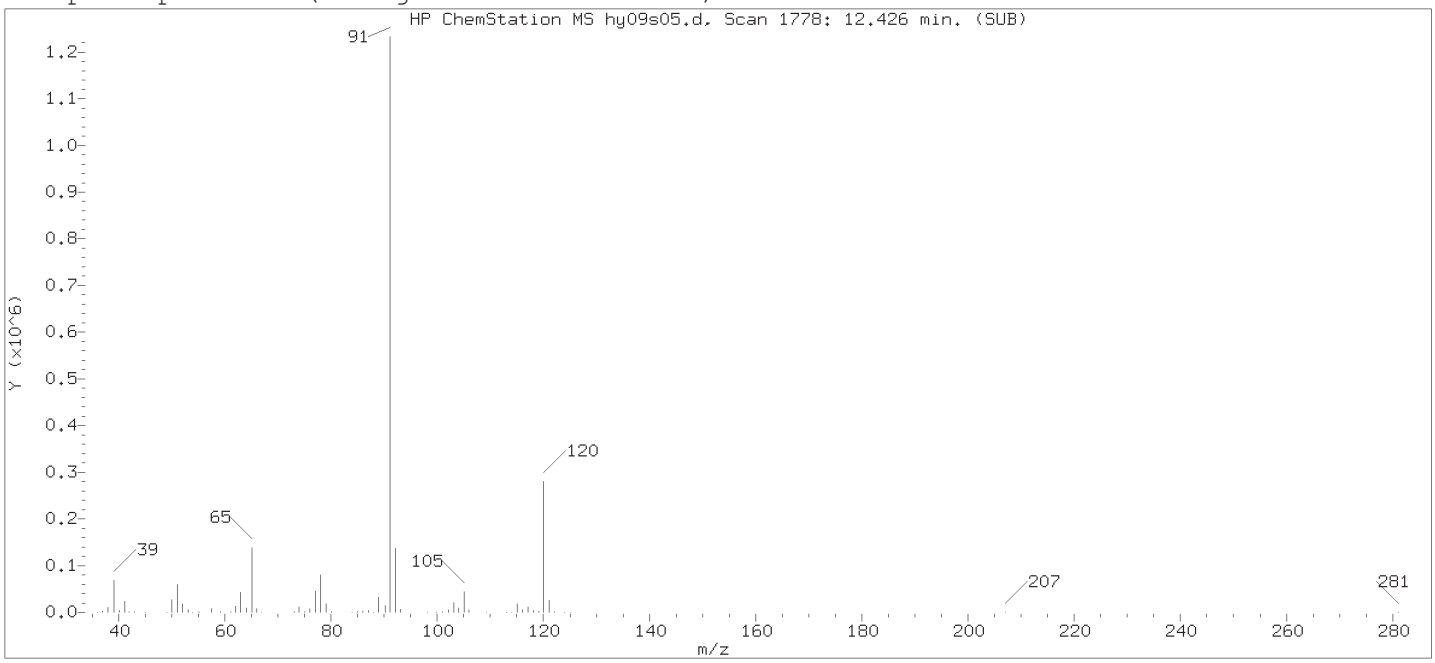
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1767
Retention Time (minutes): 12.359
Quant Ion : 53.00
Area (flag) : 265060A
On-Column Amount (ng) : 29.8117
Integration start scan : 1759 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

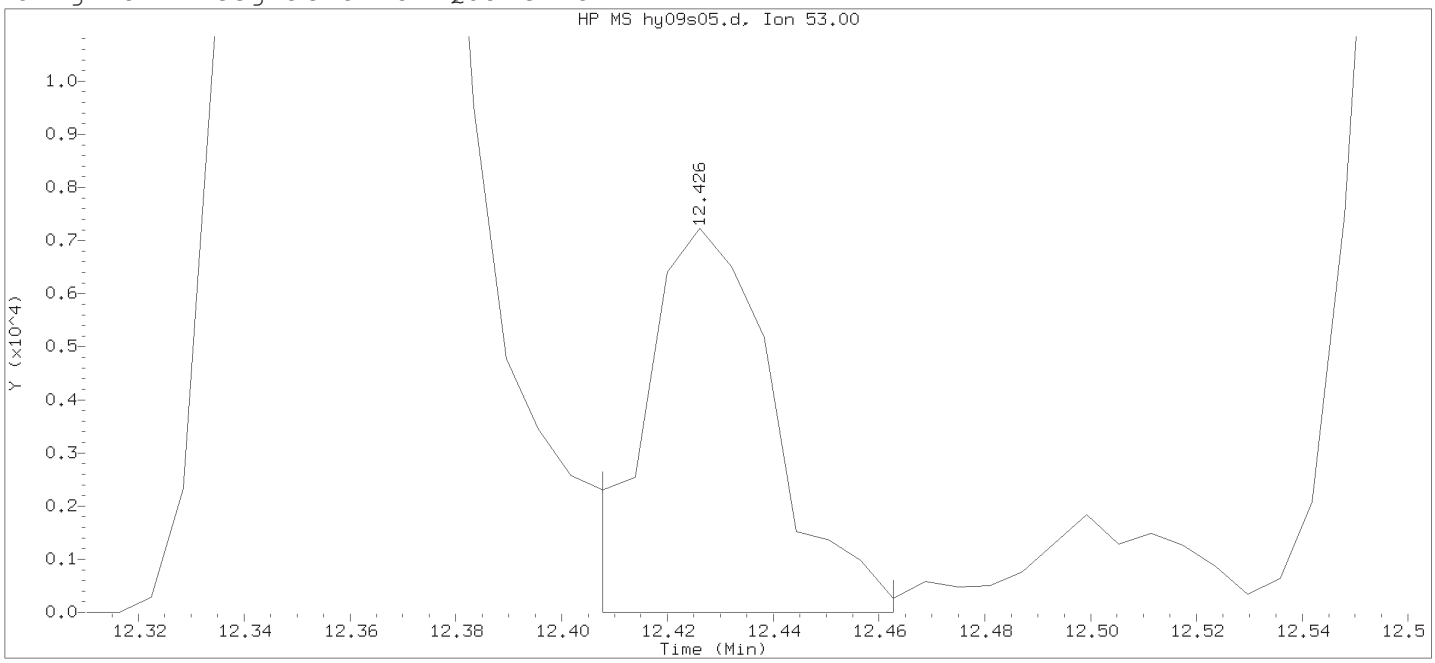
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

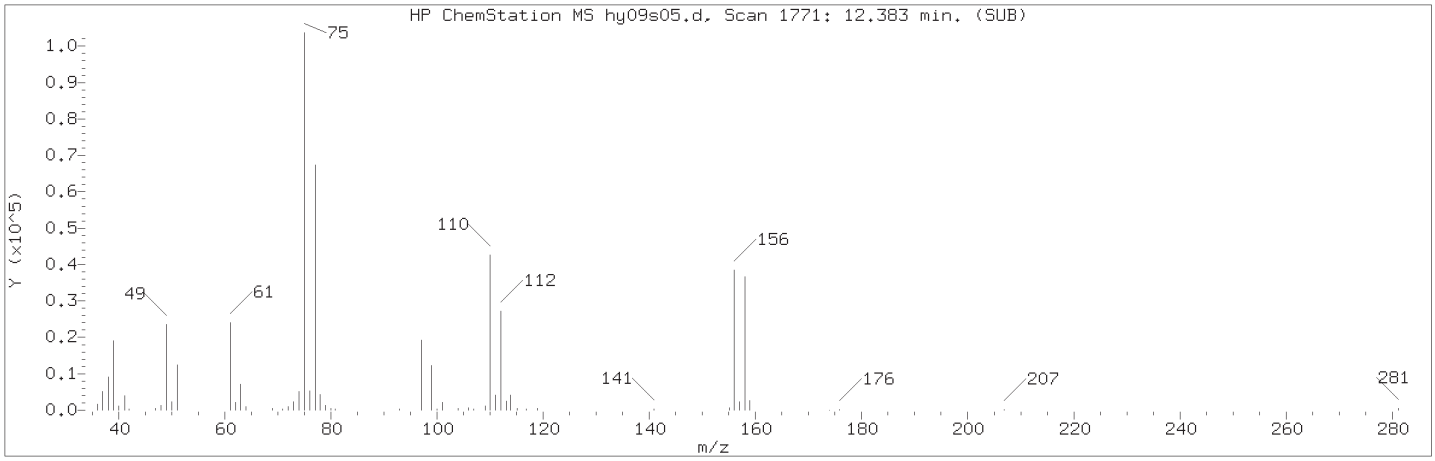
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

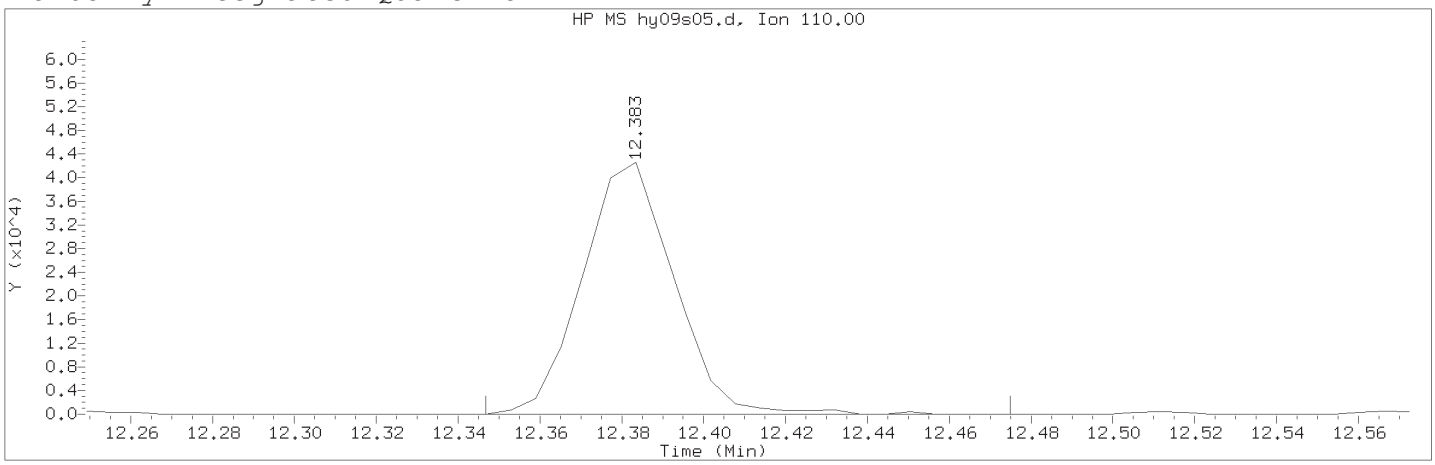
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1778
Retention Time (minutes): 12.426
Quant Ion : 53.00
Area : 12067
On-column Amount (ng) : 1.3573
Integration start scan : 1774 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

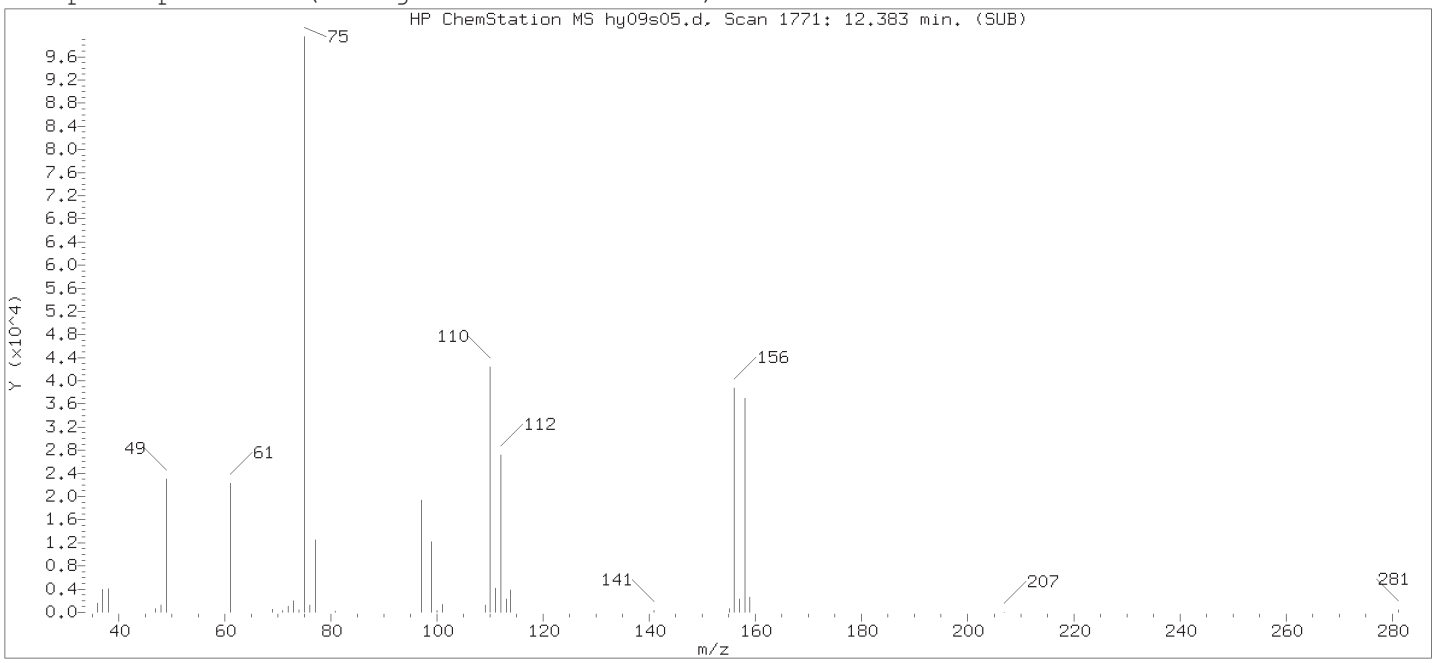
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.383
Quant Ion : 110.00
Area (flag) : 65919M
On-Column Amount (ng) : 4.9956
Integration start scan : 1764 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

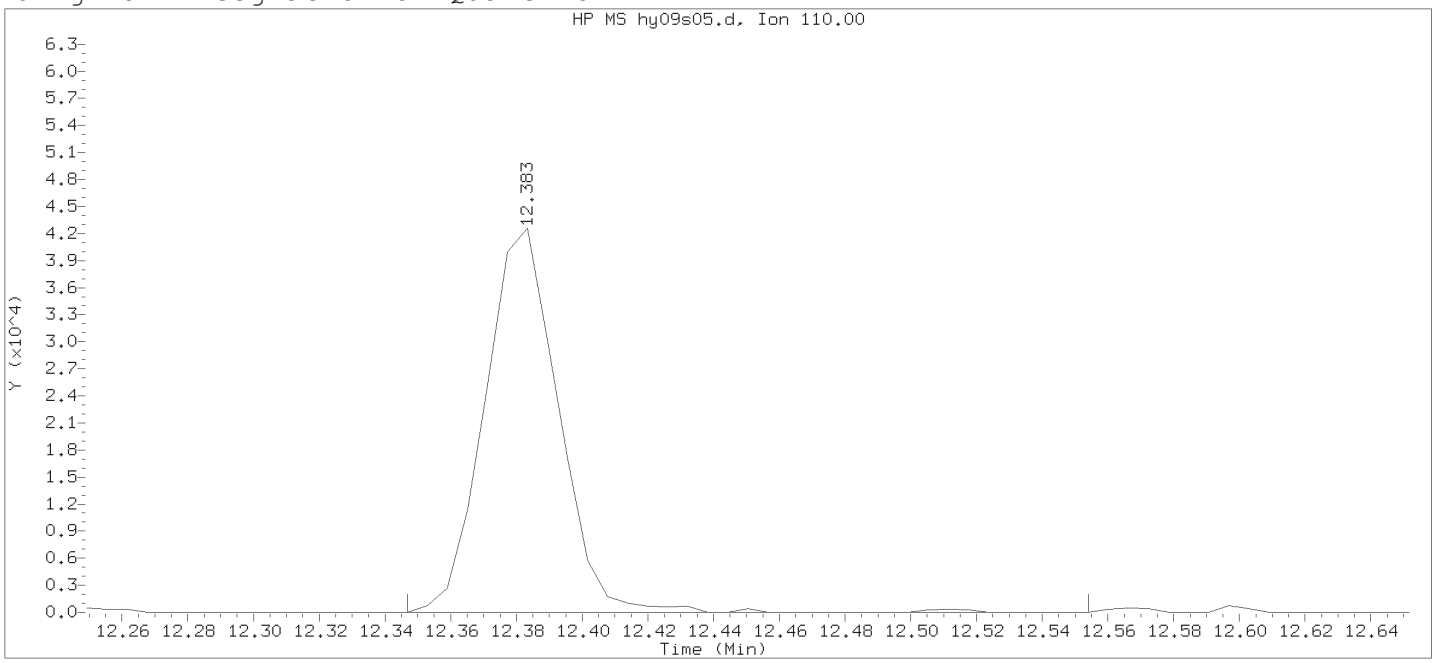
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

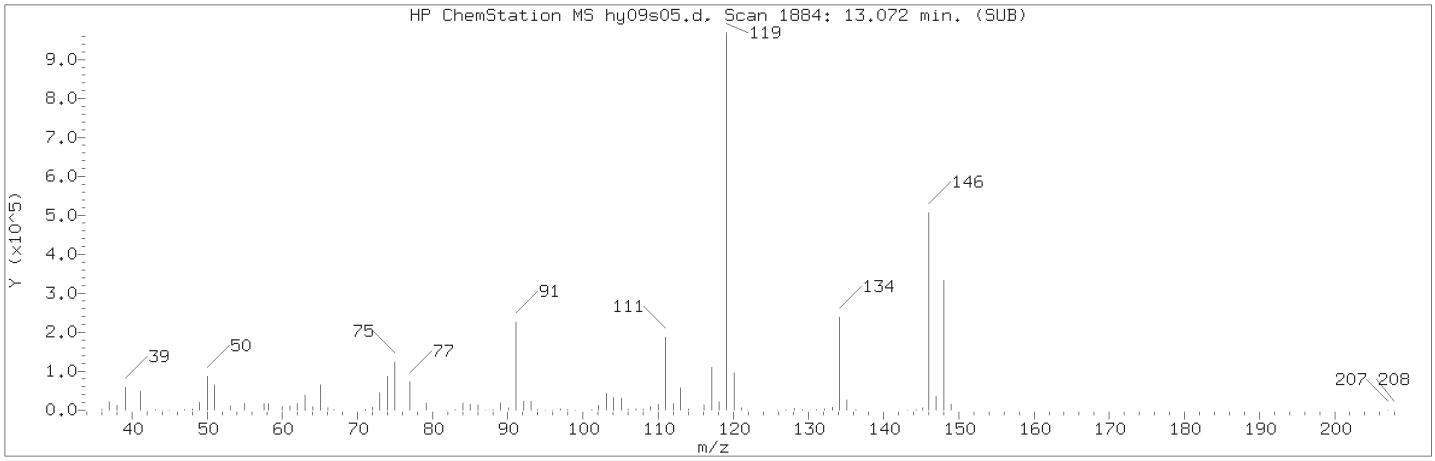
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

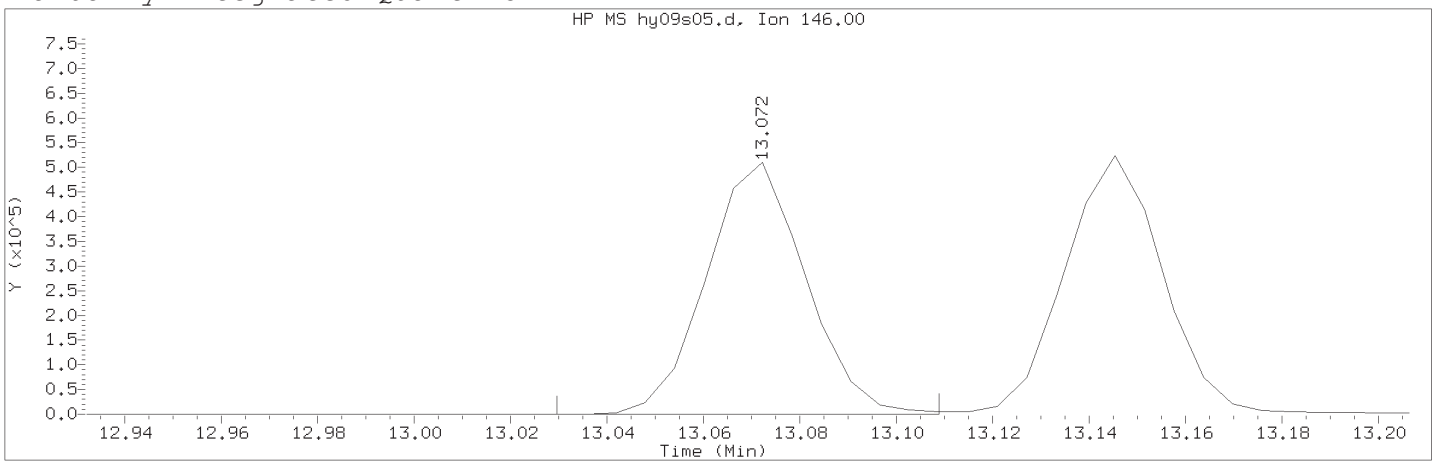
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.383
Quant Ion : 110.00
Area : 66247
On-column Amount (ng) : 5.0205
Integration start scan : 1764 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

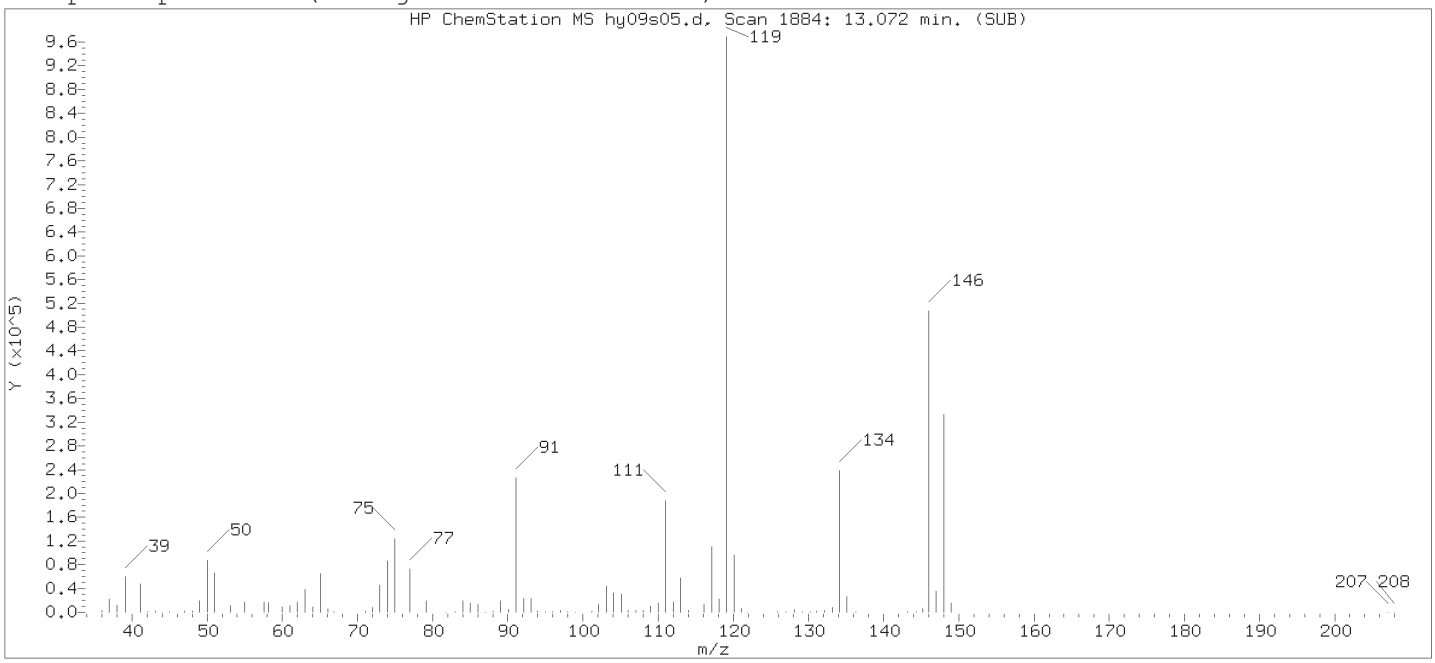
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1884
Retention Time (minutes): 13.072
Quant Ion : 146.00
Area (flag) : 728302M
On-Column Amount (ng) : 4.7562
Integration start scan : 1876 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

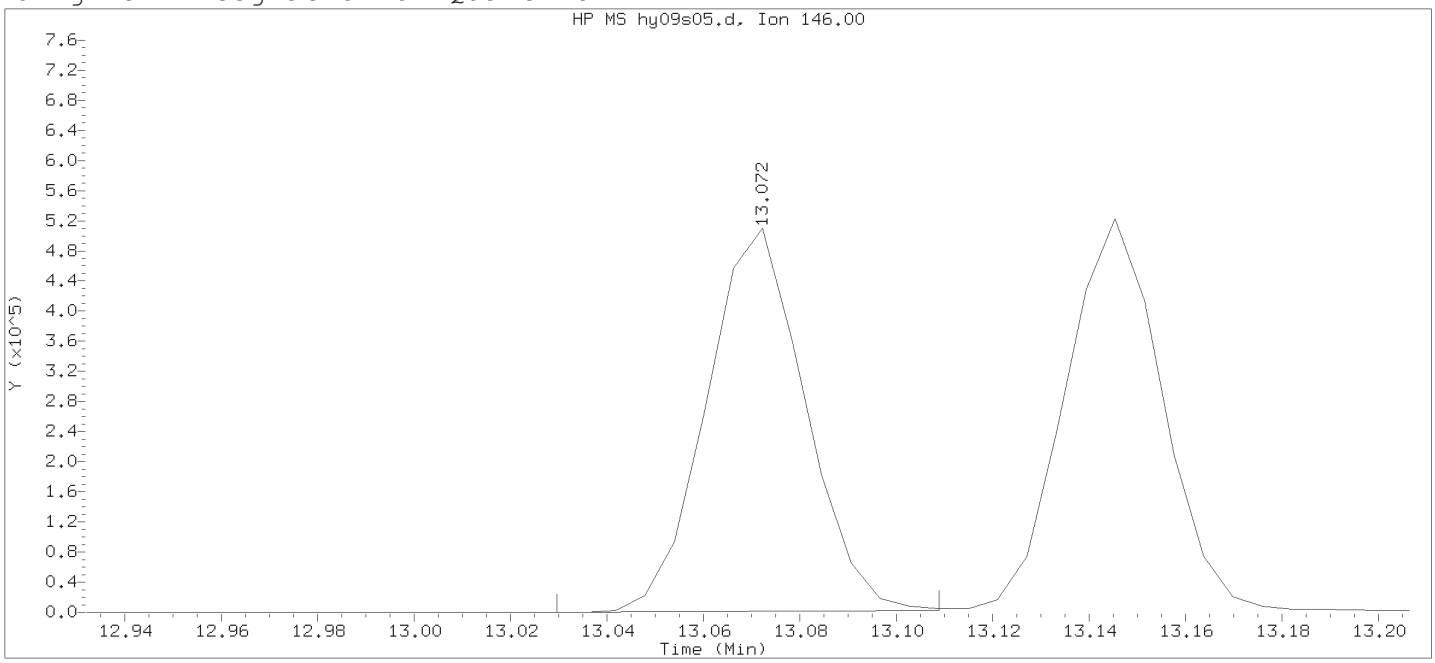
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

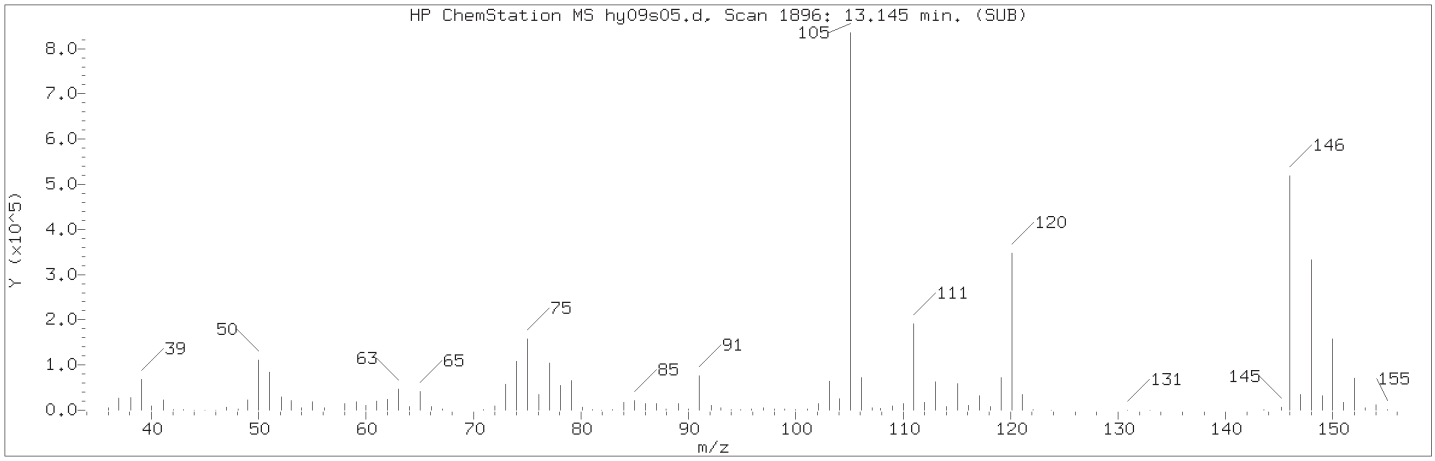
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

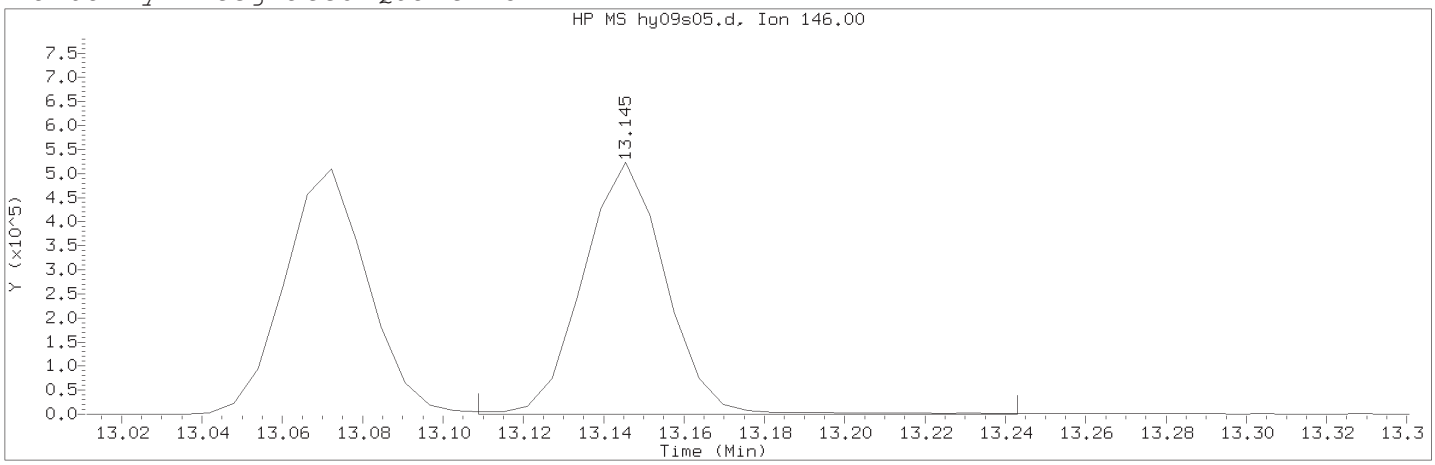
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1884
Retention Time (minutes): 13.072
Quant Ion : 146.00
Area : 721326
On-column Amount (ng) : 4.7106
Integration start scan : 1876 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 2554

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user id: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

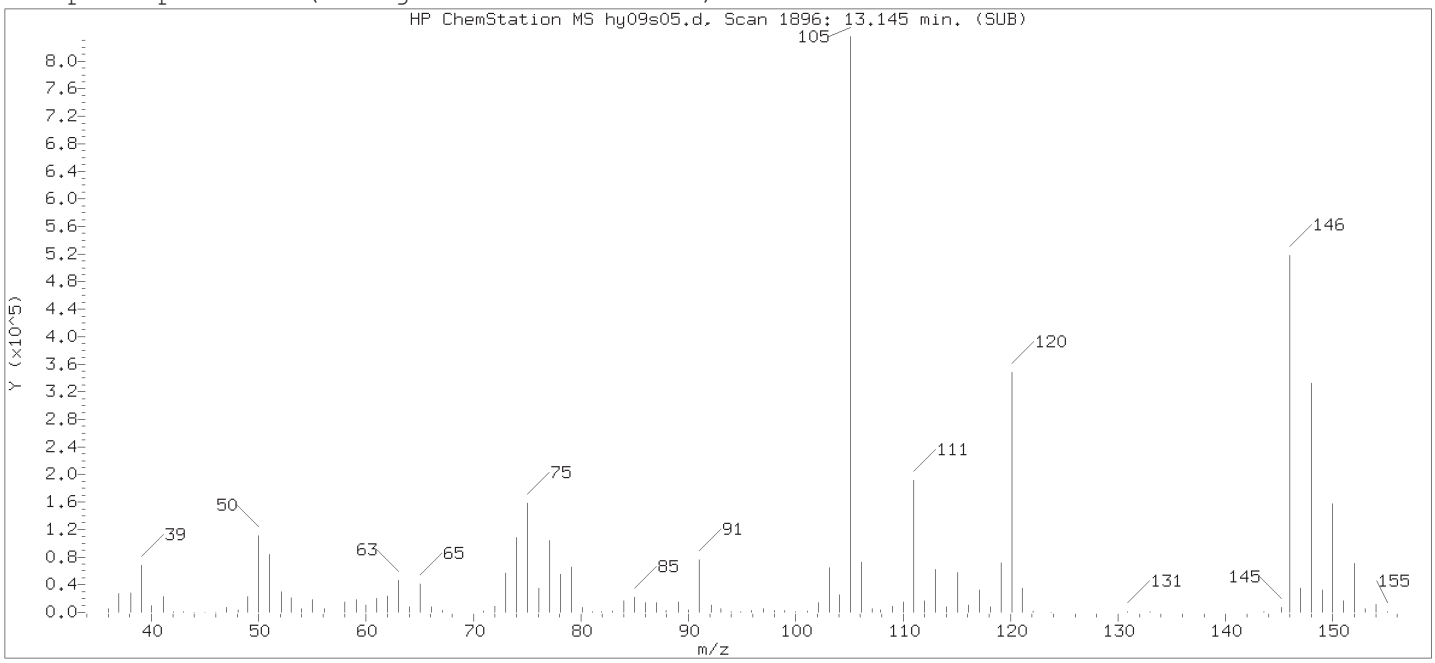
Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1896
Retention Time (minutes): 13.145
Quant Ion : 146.00
Area (flag) : 742940M
On-Column Amount (ng) : 4.7754
Integration start scan : 1889 Integration stop scan: 1911
Y at integration start : 580 Y at integration end: 580

Reason for manual integration: improper integration

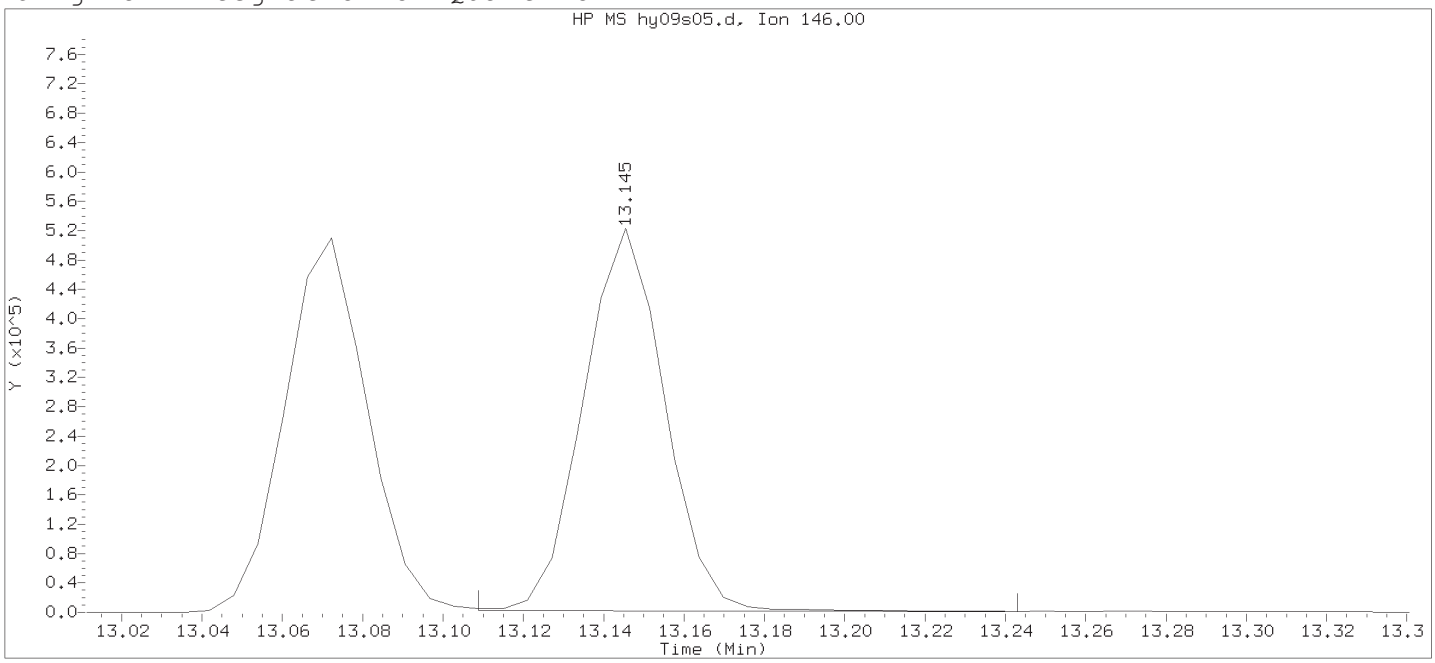
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

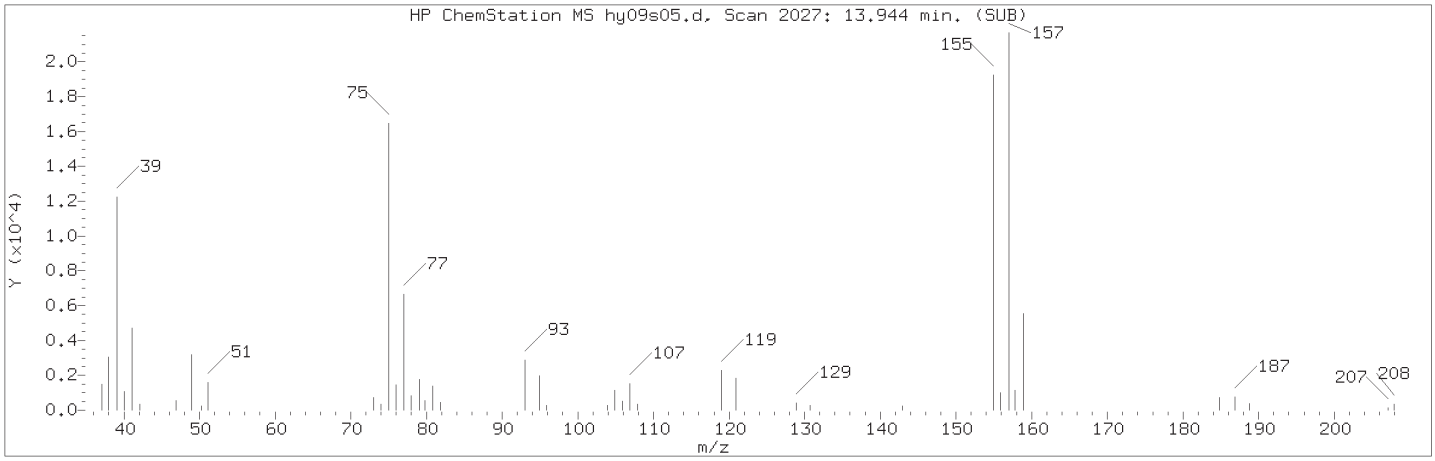
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

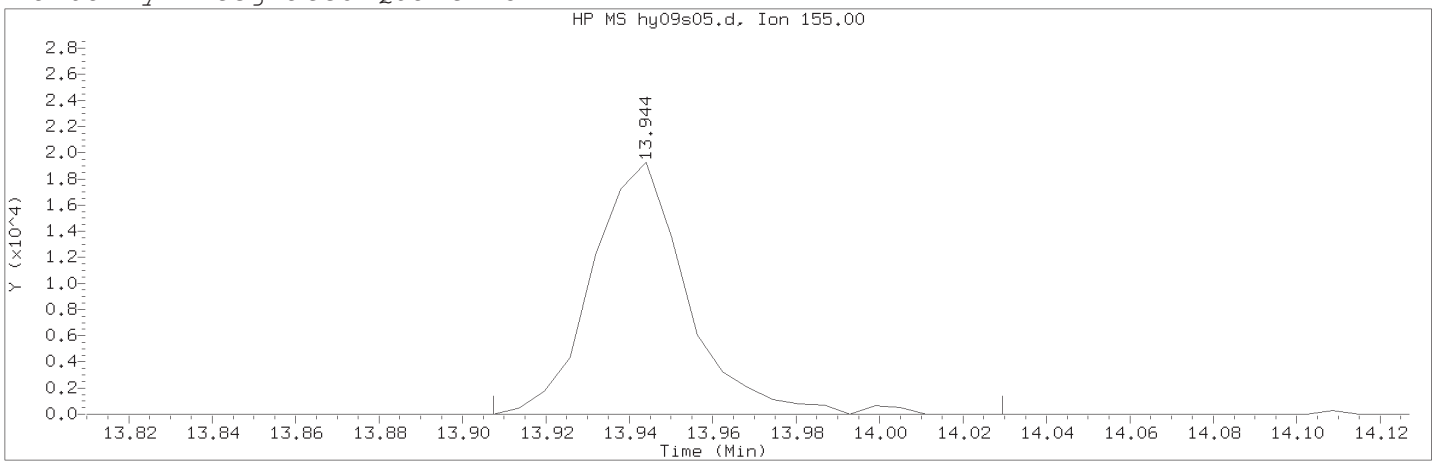
Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1896
Retention Time (minutes): 13.145
Quant Ion : 146.00
Area : 732856
On-column Amount (ng) : 4.7106
Integration start scan : 1889 Integration stop scan: 1911
Y at integration start : 2554 Y at integration end: 893

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MS Lab Sample ID: 8354937MS

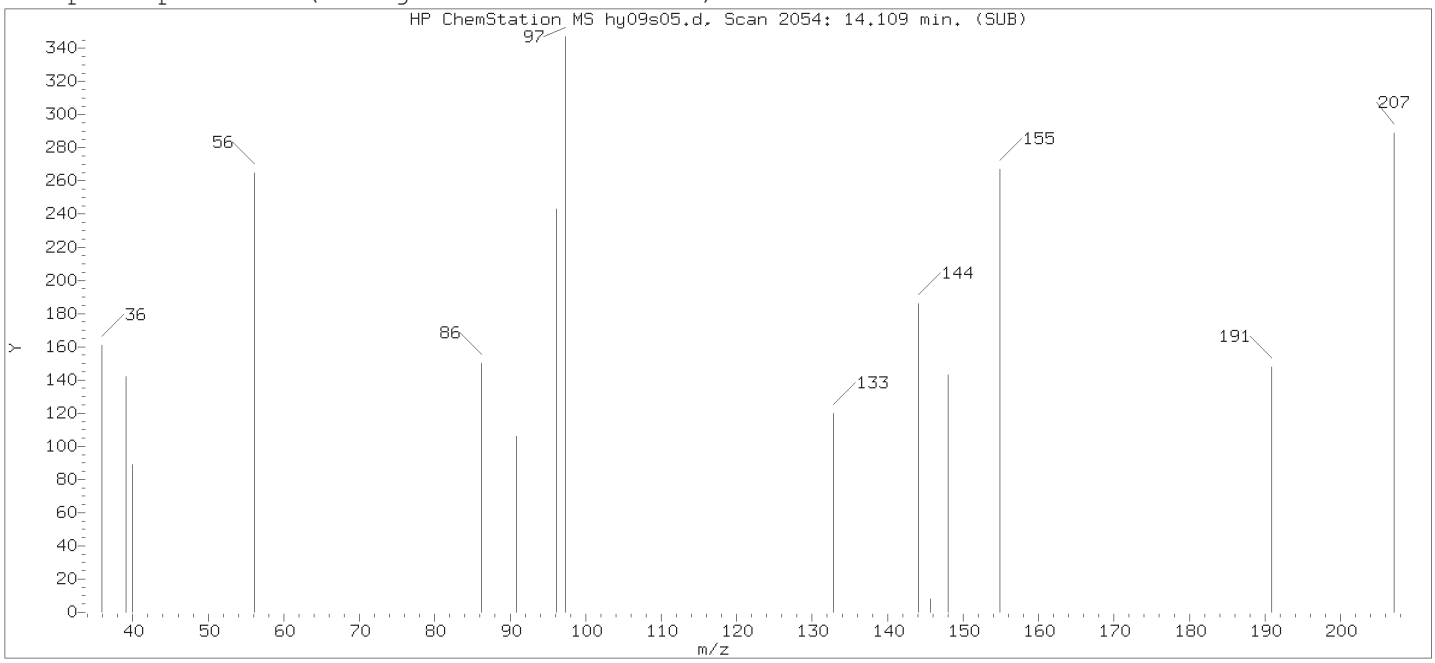
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2027
Retention Time (minutes): 13.944
Quant Ion : 155.00
Area (flag) : 30648A
On-Column Amount (ng) : 6.6819
Integration start scan : 2020 Integration stop scan: 2040
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

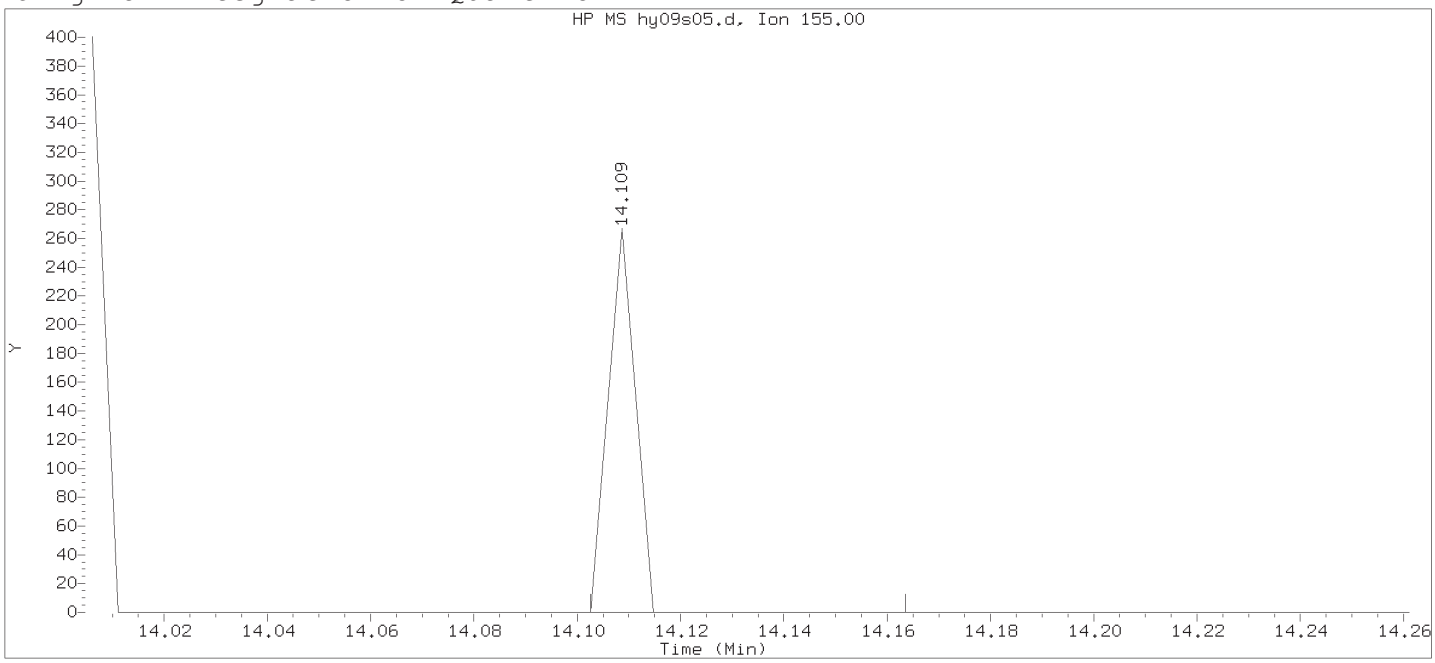
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s05.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:37 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 12:56 Automation

Sample Name: E6104MS Lab Sample ID: 8354937MS

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2054
Retention Time (minutes): 14.109
Quant Ion : 155.00
Area : 97
On-column Amount (ng) : 0.0213
Integration start scan : 2052 Integration stop scan: 2062
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:08.
Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09s06.d Injection date and time: **09-MAY-2016 12:57**
Data file Sample Info. Line: E6104MSD;8354938MSD;1;3;MSD;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.288	(-0.025)	443	65	94019	(5)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2441801	(1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1793407	(-4)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	821781	(-6)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	615306	10.694	107%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	95980	10.071	101%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2462358	9.638	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(0.000)	95	786106	9.546	95%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.008	(-0.000)	85	374048M	4.443	4.44			0.1	1
2) Chloromethane	(2)	2.160	(-0.001)	50	431906	5.230	5.23			0.2	1
5) Vinyl Chloride	(2)	2.300	(-0.000)	62	450348	5.864	5.86			0.2	1
7) Bromomethane	(2)	2.617	(0.000)	94	279755	5.488	5.49			0.5	1
8) Chloroethane	(2)	2.727	(-0.000)	64	347247	7.335	7.33			0.1	1
10) Trichlorofluoromethane	(2)	3.056	(-0.000)	101	583662	5.833	5.83			0.2	1
11) Ethyl ether	(2)	3.306	(-0.000)	59	1446552	35.045	35.04		E	1	13
13) Acrolein	(1)	3.471	(0.003)	56	198243	36.981	36.98			5	25
15) 1,1-Dichloroethene	(2)	3.629	(-0.000)	96	323779	5.640	5.64			0.2	1
16) Freon 113	(2)	3.666	(-0.000)	101	341244	5.716	5.72			0.2	1
14) Acetone	(1)	3.635	(0.003)	43	294800	39.909	39.91			3	10
17) Methyl Iodide	(2)	3.824	(0.000)	142	551073	5.185	5.18		J	0.6	10
18) Carbon Disulfide	(2)	3.958	(-0.000)	76	869047	4.902	4.90		J	0.4	10
22) Allyl Chloride	(2)	4.099	(0.000)	41	548924	5.057	5.06		J	0.8	10
23) Methylene Chloride	(2)	4.282	(-0.000)	84	333722	5.439	5.44			0.2	1
29) Acrylonitrile	(1)	4.598	(0.006)	53	252802	28.523	28.52			1	10
31) trans-1,2-Dichloroethene	(2)	4.726	(-0.000)	96	336477	5.443	5.44			0.2	1
33) 1,1-Dichloroethane	(2)	5.373	(-0.000)	63	1367591	10.854	10.85			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.482	(-0.000)	53	570422	5.515	5.52		J	0.5	10
38) 2-Butanone	(1)	6.135	(0.009)	43	563939	44.804	44.80			1	10
42) Propionitrile	(1)	6.208	(0.008)	54	143851	45.833	45.83		J	10	100
45) Methacrylonitrile	(1)	6.440	(0.008)	67	536080	49.885	49.89		J	10	100
48) Tetrahydrofuran	(1)	6.543	(0.010)	71	107509	33.763	33.76			2	25
49) Chloroform	(2)	6.671	(-0.000)	83	620389	5.387	5.39			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.915	(0.000)	97	533989	5.436	5.44			0.1	1
54) Carbon Tetrachloride	(2)	7.147	(-0.000)	117	502429	5.625	5.63			0.2	1
56) Isobutyl Alcohol	(1)	7.208	(0.009)	41	145801	171.206	171.21		J	10	200
58) Benzene	(2)	7.391	(-0.000)	78	1429894	5.449	5.45			0.1	1
59) 1,2-Dichloroethane	(2)	7.452	(0.000)	62	374324M	5.505	5.51			0.1	1
67) Trichloroethene	(2)	8.275	(0.000)	95	400687	5.858	5.86			0.2	1
70) 1,2-Dichloropropane	(2)	8.598	(0.000)	63	360659	5.278	5.28			0.1	1

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09s06.d Injection date and time: **09-MAY-2016 12:57**
Data file Sample Info. Line: E6104MSD;8354938MSD;1;3;MSD;RAE61;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

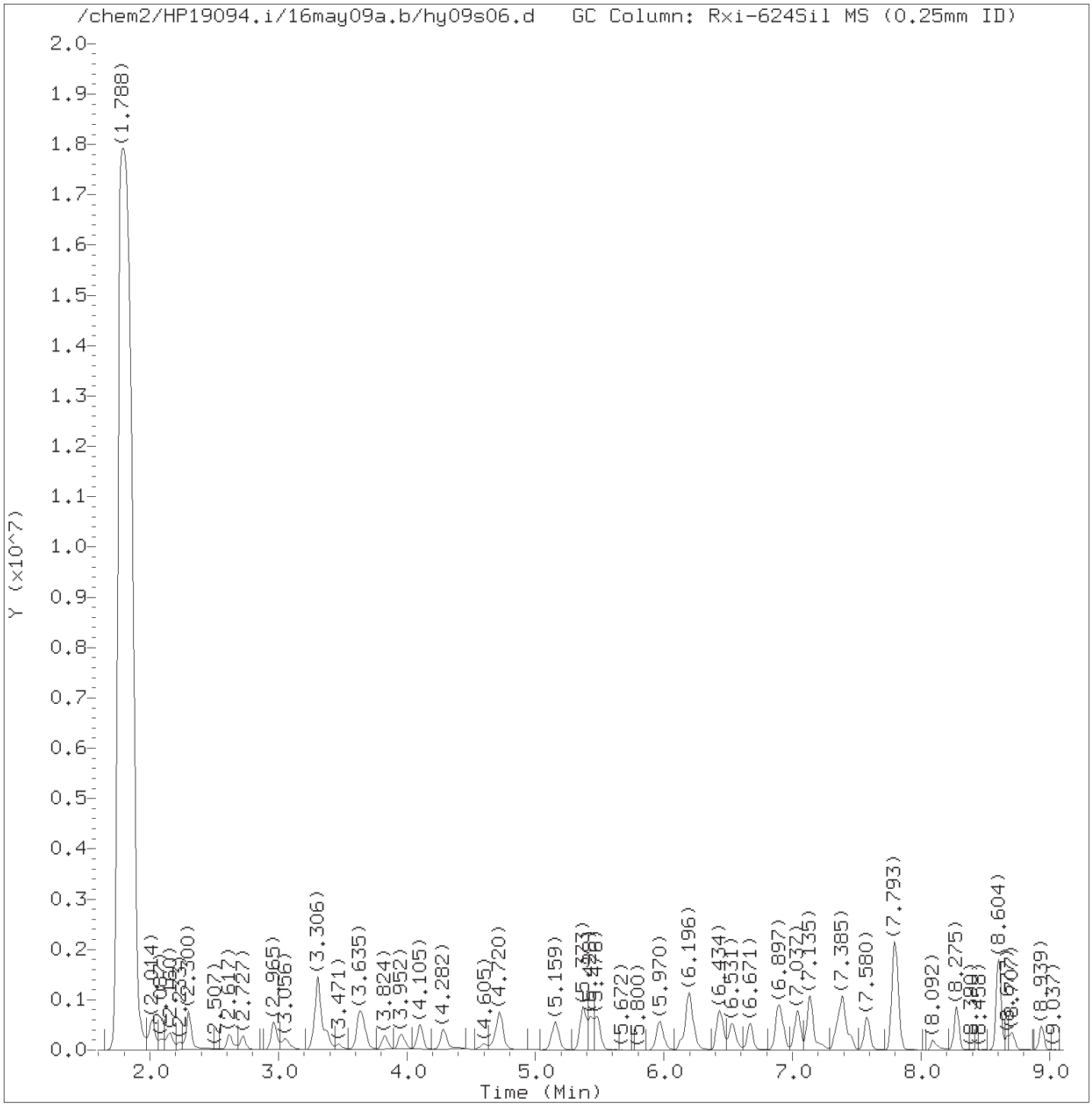
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
71) Methyl Methacrylate	(1)	8.671(0.011)	69	139536MA	6.215	6.21		J	4	10
73) Dibromomethane	(2)	8.708(0.000)	93	153806	5.465	5.46			0.1	1
72) 1,4-Dioxane	(1)	8.701(0.007)	88	29834	210.042	210.04			45	200
74) Bromodichloromethane	(2)	8.939(0.000)	83	435910	5.547	5.55			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.634(0.012)	43	952926	30.762	30.76			1	10
83) Toluene	(3)	9.878(-0.000)	92	888086	5.160	5.16			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.116(-0.000)	75	406705	5.042	5.04			0.1	1
86) Ethyl Methacrylate	(3)	10.177(-0.000)	69	304454	4.907	4.91		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.323(0.000)	97	222402	5.335	5.34			0.1	1
89) Tetrachloroethene	(3)	10.427(0.000)	166	476791	5.867	5.87			0.1	1
90) 1,3-Dichloropropane	(3)	10.488(-0.000)	76	391418	5.222	5.22			0.1	1
91) 2-Hexanone	(1)	10.518(0.014)	43	700679	31.992	31.99			1	10
93) Dibromochloromethane	(3)	10.701(0.000)	129	283560	5.307	5.31			0.1	1
95) 1,2-Dibromoethane	(3)	10.823(0.000)	107	221859	5.651	5.65			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.353(0.000)	131	349380	5.437	5.44			0.1	1
100) Ethylbenzene	(3)	11.359(0.000)	91	1785893	5.302	5.30			0.1	1
101) m+p-Xylene	(3)	11.475(0.000)	106	1381870	10.755	10.76			0.1	3
104) o-Xylene	(3)	11.804(-0.000)	106	666689	5.347	5.35			0.1	3
105) Xylene (Total)	(3)		106	2048559	16.103	16.10			0.2	3
106) Styrene	(3)	11.817(0.000)	104	1078468	5.407	5.41			0.1	1
107) Bromoform	(3)	11.975(0.000)	173	158588	5.351	5.35			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.329(0.000)	83	269844M	5.246	5.25			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.359(0.015)	53	302459A	31.708	31.71			1	10
116) 1,2,3-Trichloropropane	(4)	12.384(-0.000)	110	76357M	5.913	5.91			0.3	1
126) Pentachloroethane	(4)	12.835(0.000)	167	271538	5.842	5.84		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	13.072(-0.000)	146	807287	5.387	5.39			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.146(0.000)	146	813418	5.343	5.34			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.402(0.000)	146	718854	5.401	5.40			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.938(0.018)	155	33568A	6.821	6.82			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.493(0.000)	180	489882	5.145	5.15			0.1	1
146) Hexachlorobutadiene	(4)	14.572(0.000)	225	277131	5.570	5.57			0.1	1
147) Naphthalene	(4)	14.670(0.000)	128	740812	4.854	4.85			0.1	1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 63

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

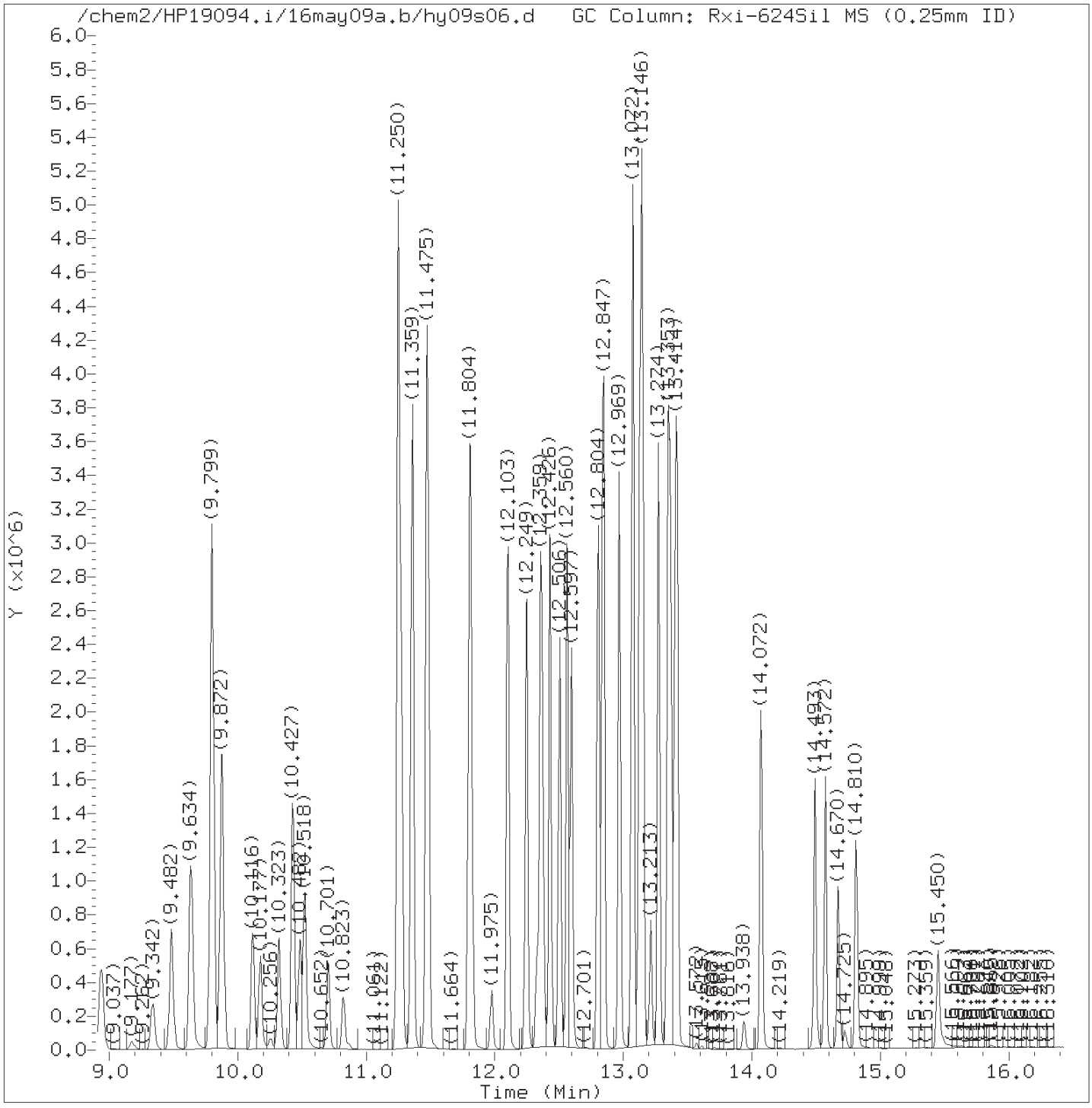
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	374048M	4.443
2) Chloromethane	(2)	2.160	50	431906	5.230
5) Vinyl Chloride	(2)	2.300	62	450348	5.864
7) Bromomethane	(2)	2.617	94	279755	5.488
8) Chloroethane	(2)	2.727	64	347247	7.335
10) Trichlorofluoromethane	(2)	3.056	101	583662	5.833
11) Ethyl ether	(2)	3.306	59	1446552	35.045
13) Acrolein	(1)	3.471	56	198243	36.981
15) 1,1-Dichloroethene	(2)	3.629	96	323779	5.640
14) Acetone	(1)	3.635	43	294800	39.909
16) Freon 113	(2)	3.666	101	341244	5.716
17) Methyl Iodide	(2)	3.824	142	551073	5.185
18) Carbon Disulfide	(2)	3.958	76	869047	4.902
22) Allyl Chloride	(2)	4.099	41	548924	5.057
23) Methylene Chloride	(2)	4.282	84	333722	5.439
26)*t-Butyl Alcohol-d10	(1)	4.288	65	94019	50.000
29) Acrylonitrile	(1)	4.599	53	252802	28.523
31) trans-1,2-Dichloroethene	(2)	4.727	96	336477	5.443
33) 1,1-Dichloroethane	(2)	5.373	63	1367591	10.854
35) 2-Chloro-1,3-Butadiene	(2)	5.483	53	570422	5.515
38) 2-Butanone	(1)	6.135	43	563939	44.804
42) Propionitrile	(1)	6.208	54	143851	45.833
45) Methacrylonitrile	(1)	6.440	67	536080	49.885
48) Tetrahydrofuran	(1)	6.543	71	107509	33.763
49) Chloroform	(2)	6.671	83	620389	5.387
50)$Dibromofluoromethane	(2)	6.891	113	615306	10.694
51) 1,1,1-Trichloroethane	(2)	6.915	97	533989	5.436
54) Carbon Tetrachloride	(2)	7.147	117	502429	5.625
56) Isobutyl Alcohol	(1)	7.208	41	145801	171.206
57)$1,2-Dichloroethane-d4	(2)	7.342	102	95980	10.071
58) Benzene	(2)	7.391	78	1429894	5.449
59) 1,2-Dichloroethane	(2)	7.452	62	374324M	5.505
63)*Fluorobenzene	(2)	7.793	96	2441801	10.000
67) Trichloroethene	(2)	8.275	95	400687	5.858
70) 1,2-Dichloropropane	(2)	8.598	63	360659	5.278
71) Methyl Methacrylate	(1)	8.671	69	139536MA	6.215
72) 1,4-Dioxane	(1)	8.701	88	29834	210.042
73) Dibromomethane	(2)	8.707	93	153806	5.465

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

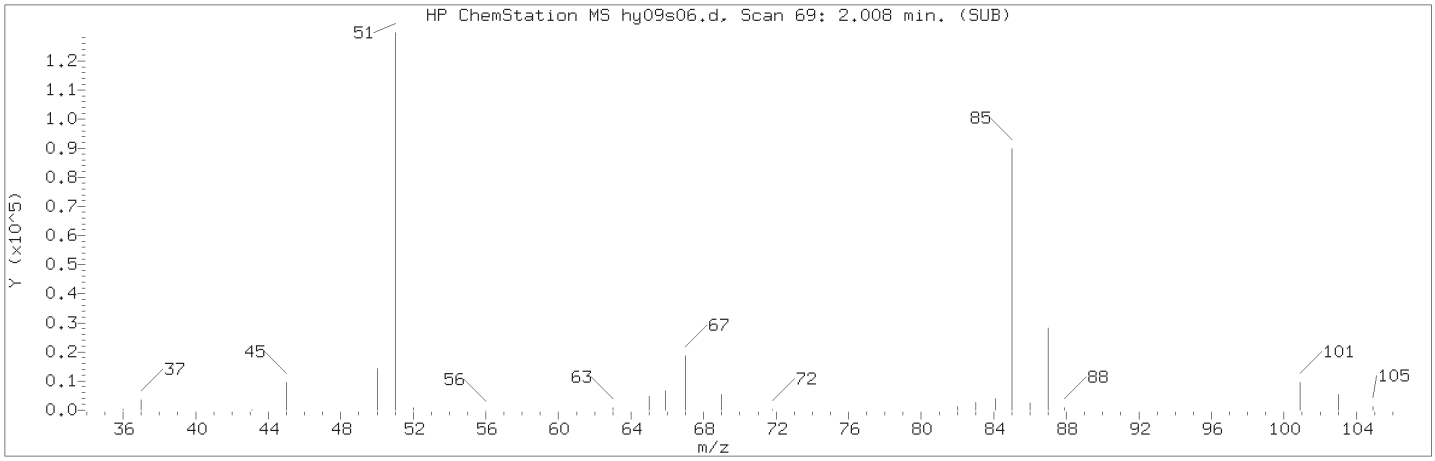
Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.939	83	435910	5.547
81) 4-Methyl-2-Pentanone	(1)	9.634	43	952926	30.762
82)$Toluene-d8	(3)	9.799	98	2462358	9.638
83) Toluene	(3)	9.878	92	888086	5.160
84) trans-1,3-Dichloropropene	(3)	10.116	75	406705	5.042
86) Ethyl Methacrylate	(3)	10.177	69	304454	4.907
88) 1,1,2-Trichloroethane	(3)	10.323	97	222402	5.335
89) Tetrachloroethene	(3)	10.427	166	476791	5.867
90) 1,3-Dichloropropane	(3)	10.488	76	391418	5.222
91) 2-Hexanone	(1)	10.518	43	700679	31.992
93) Dibromochloromethane	(3)	10.701	129	283560	5.307
95) 1,2-Dibromoethane	(3)	10.823	107	221859	5.651
97)*Chlorobenzene-d5	(3)	11.250	117	1793407	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	349380	5.437
100) Ethylbenzene	(3)	11.359	91	1785893	5.302
101) m+p-Xylene	(3)	11.475	106	1381870	10.755
105) Xylene (Total)	(3)		106	2048559	16.103
104) o-Xylene	(3)	11.804	106	666689	5.347
106) Styrene	(3)	11.817	104	1078468	5.407
107) Bromoform	(3)	11.975	173	158588	5.351
111)$4-Bromofluorobenzene	(3)	12.243	95	786106	9.546
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	269844M	5.246
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	302459A	31.708
116) 1,2,3-Trichloropropane	(4)	12.384	110	76357M	5.913
126) Pentachloroethane	(4)	12.835	167	271538	5.842
131) 1,3-Dichlorobenzene	(4)	13.072	146	807287	5.387
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	821781	10.000
134) 1,4-Dichlorobenzene	(4)	13.146	146	813418	5.343
139) 1,2-Dichlorobenzene	(4)	13.402	146	718854	5.401
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	33568A	6.821
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	489882	5.145
146) Hexachlorobutadiene	(4)	14.572	225	277131	5.570
147) Naphthalene	(4)	14.670	128	740812	4.854

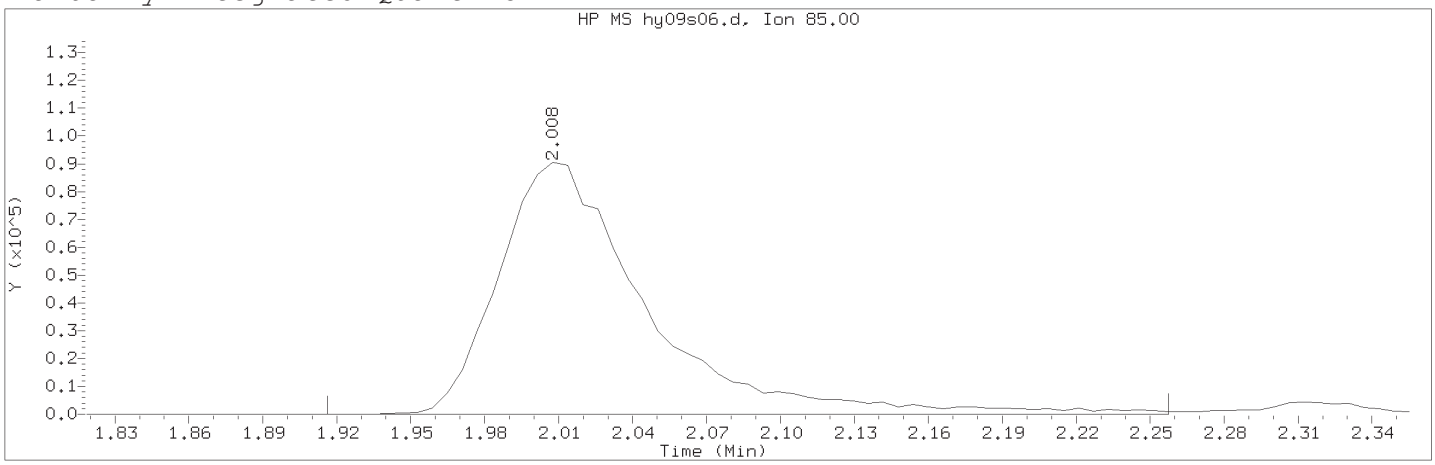
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

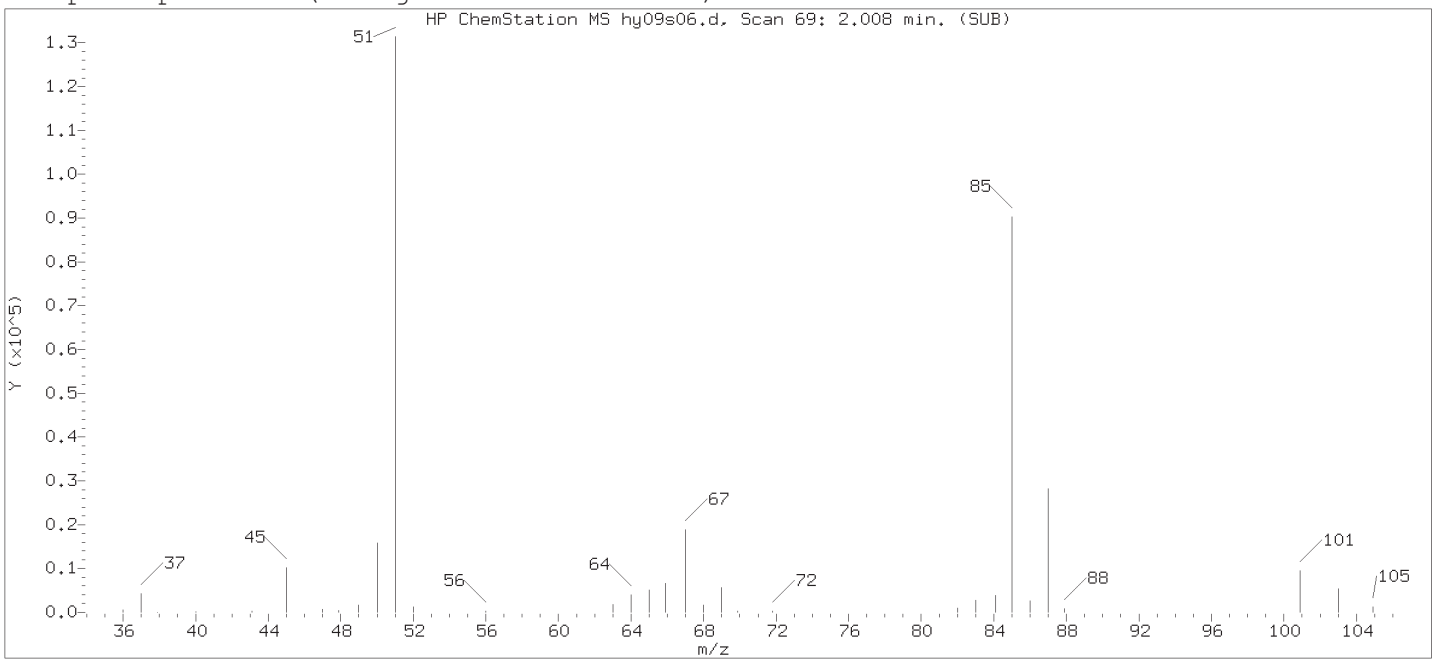
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.008
Quant Ion : 85.00
Area (flag) : 374048M
On-Column Amount (ng) : 4.4430
Integration start scan : 53 Integration stop scan: 109
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

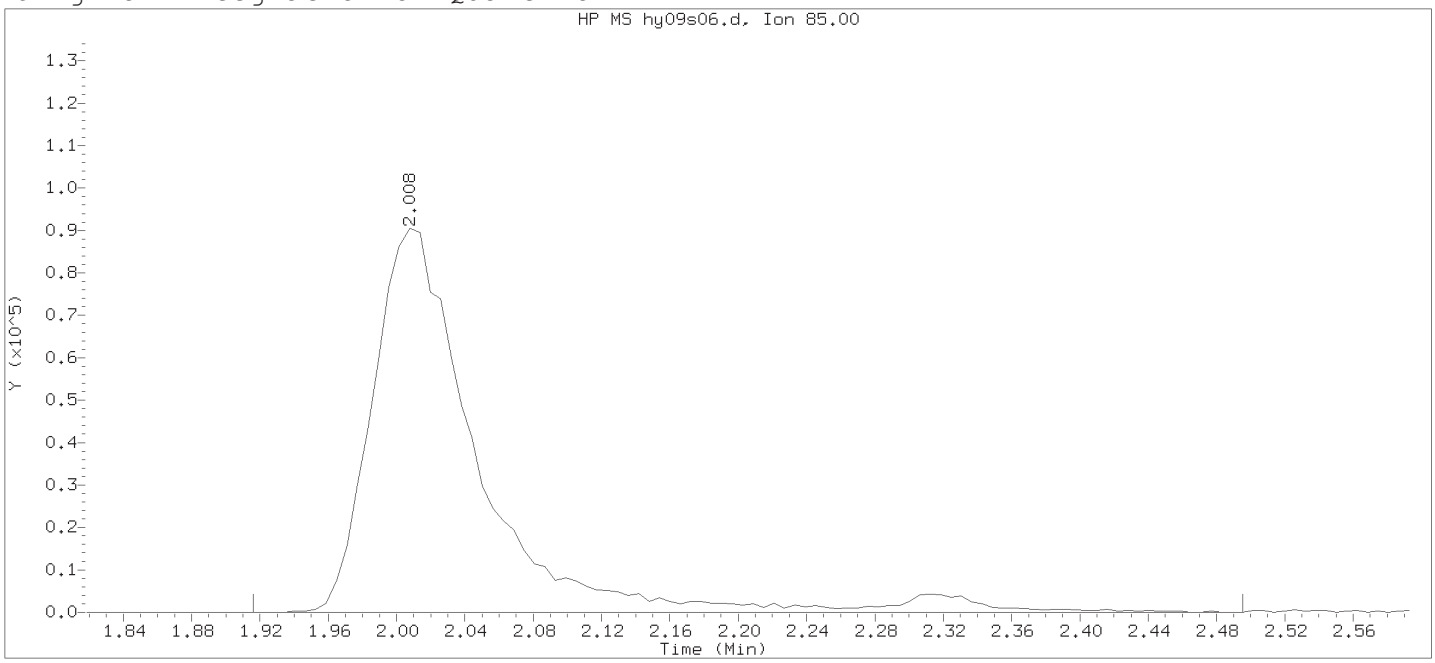
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

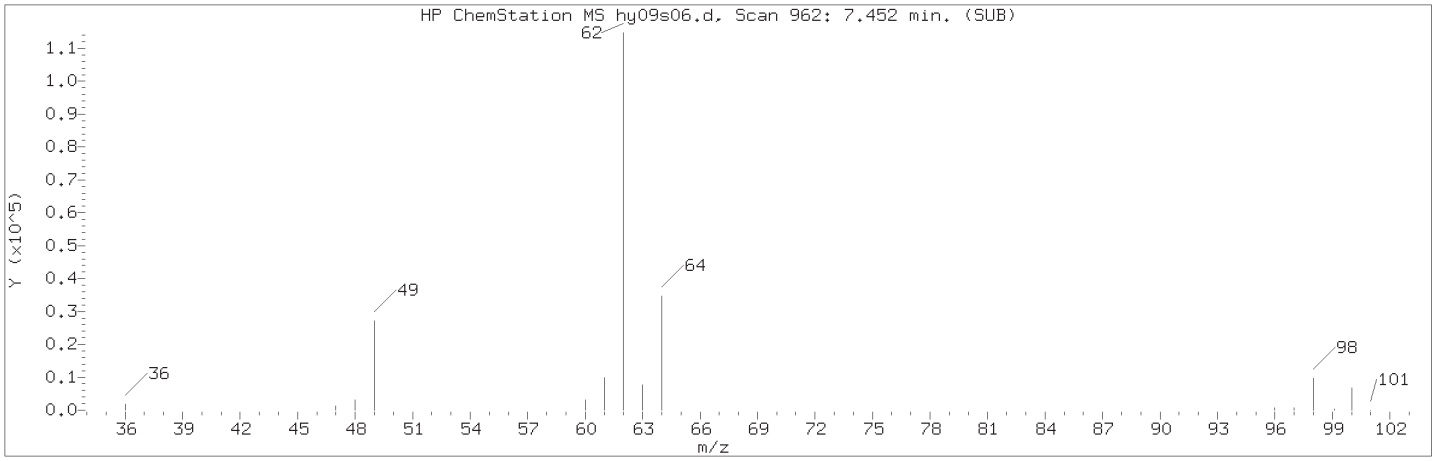
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

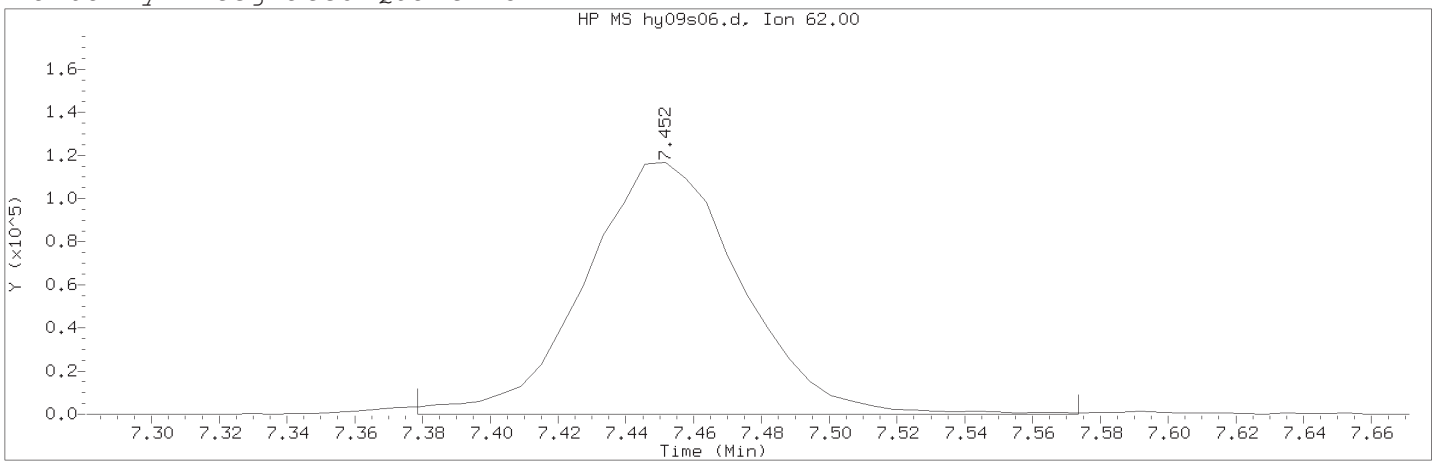
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 69
Retention Time (minutes): 2.008
Quant Ion : 85.00
Area : 390870
On-column Amount (ng) : 4.6429
Integration start scan : 53 Integration stop scan: 148
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

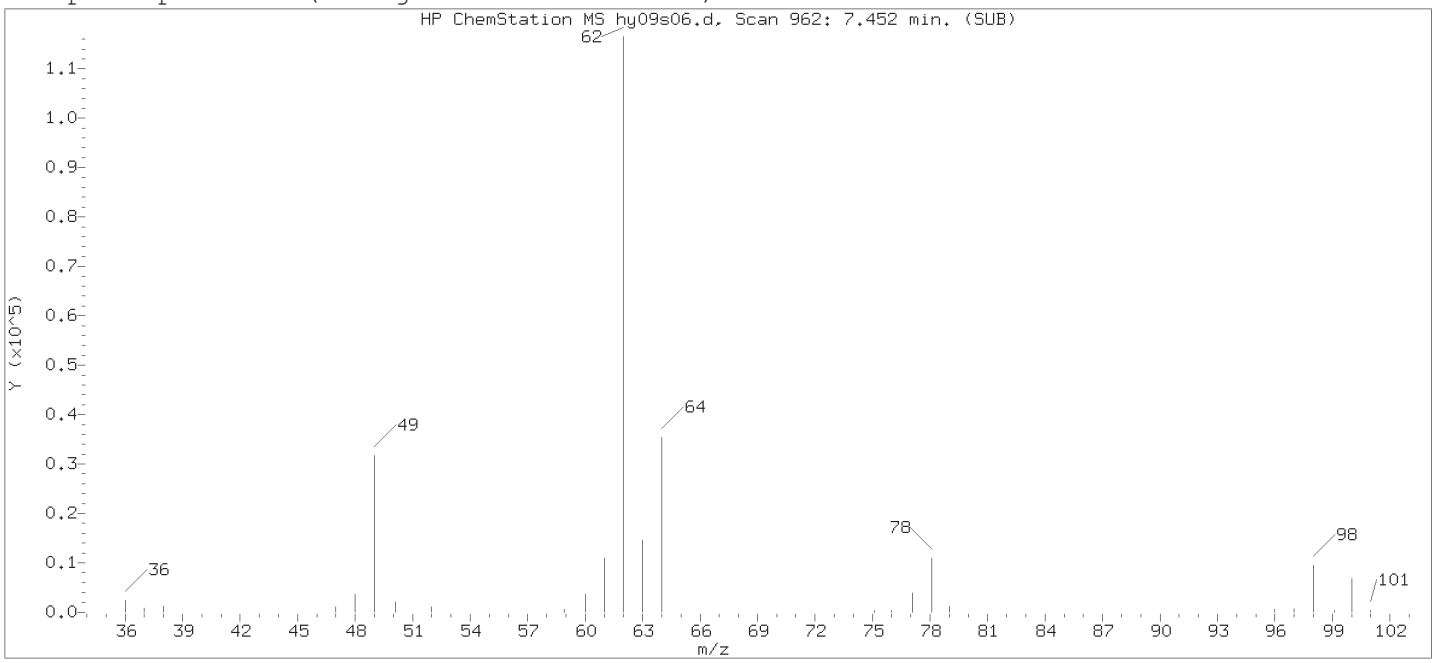
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.452
Quant Ion : 62.00
Area (flag) : 374324M
On-Column Amount (ng) : 5.5052
Integration start scan : 949 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

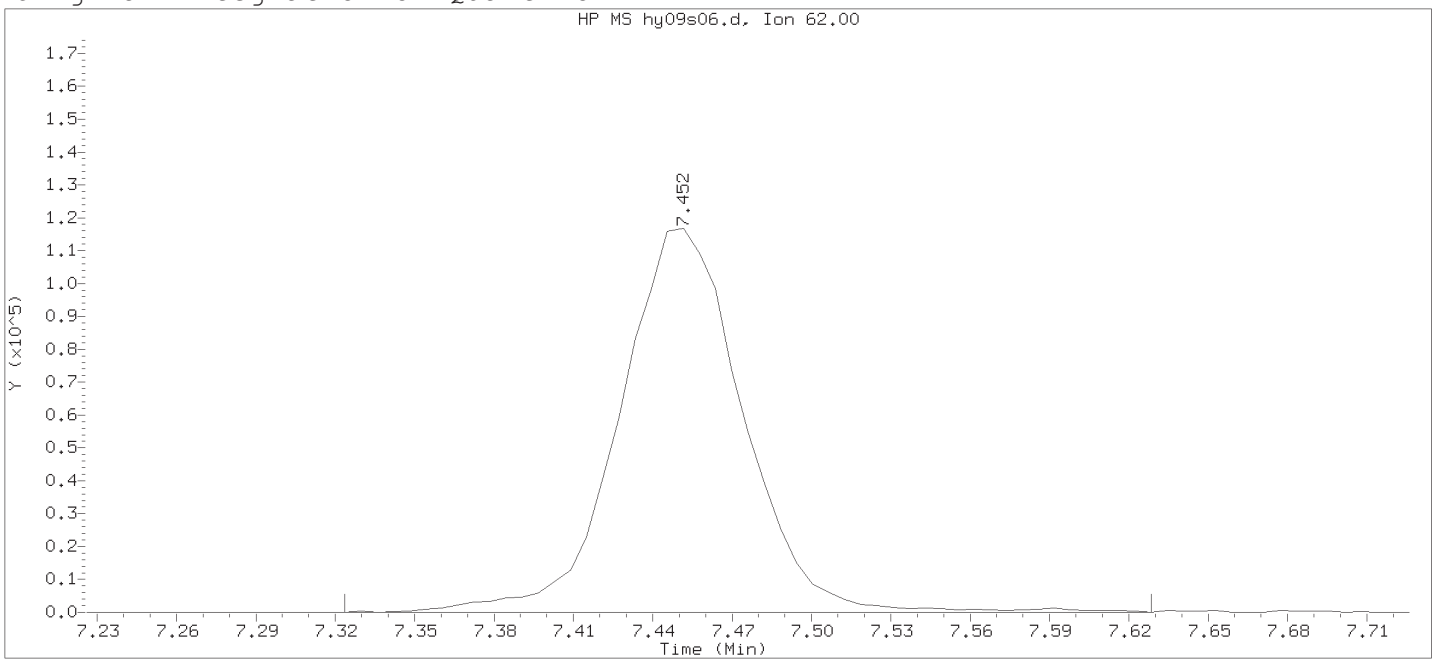
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

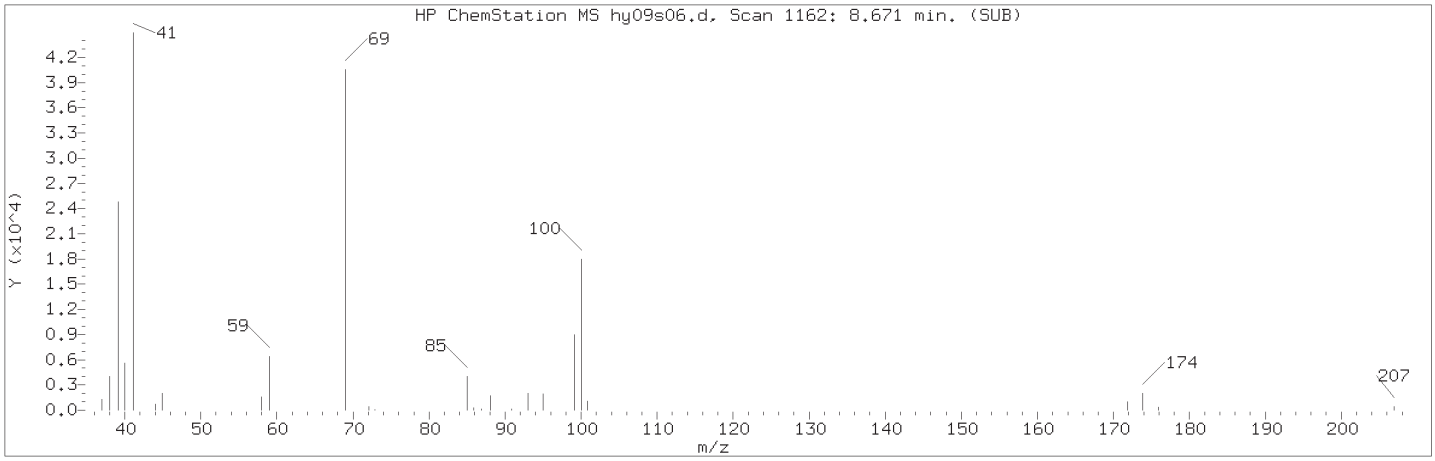
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

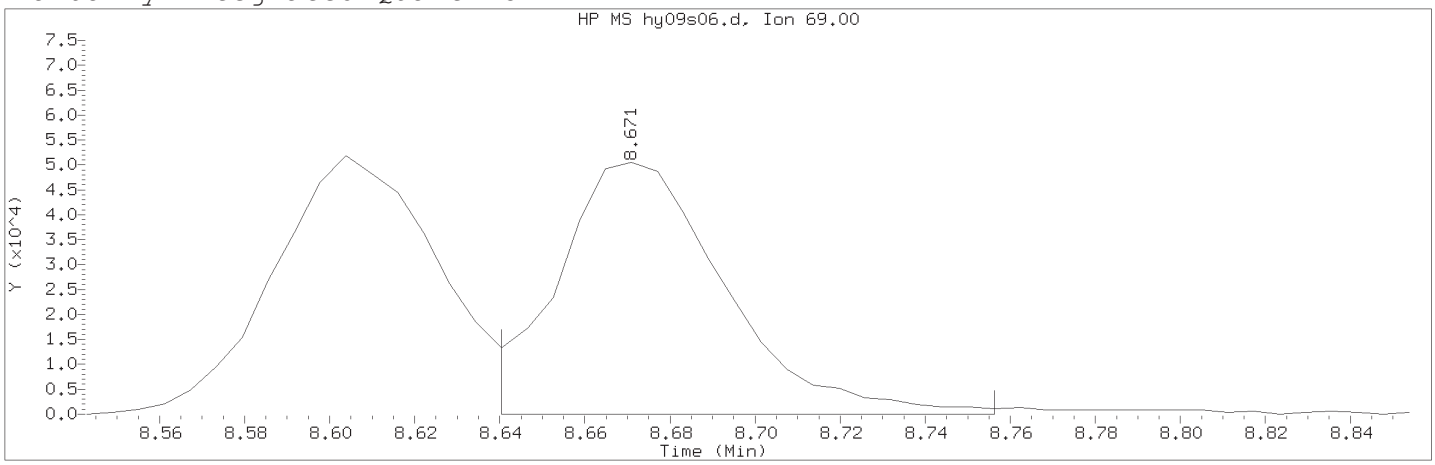
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.452
Quant Ion : 62.00
Area : 379454
On-column Amount (ng) : 5.5807
Integration start scan : 940 Integration stop scan: 990
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

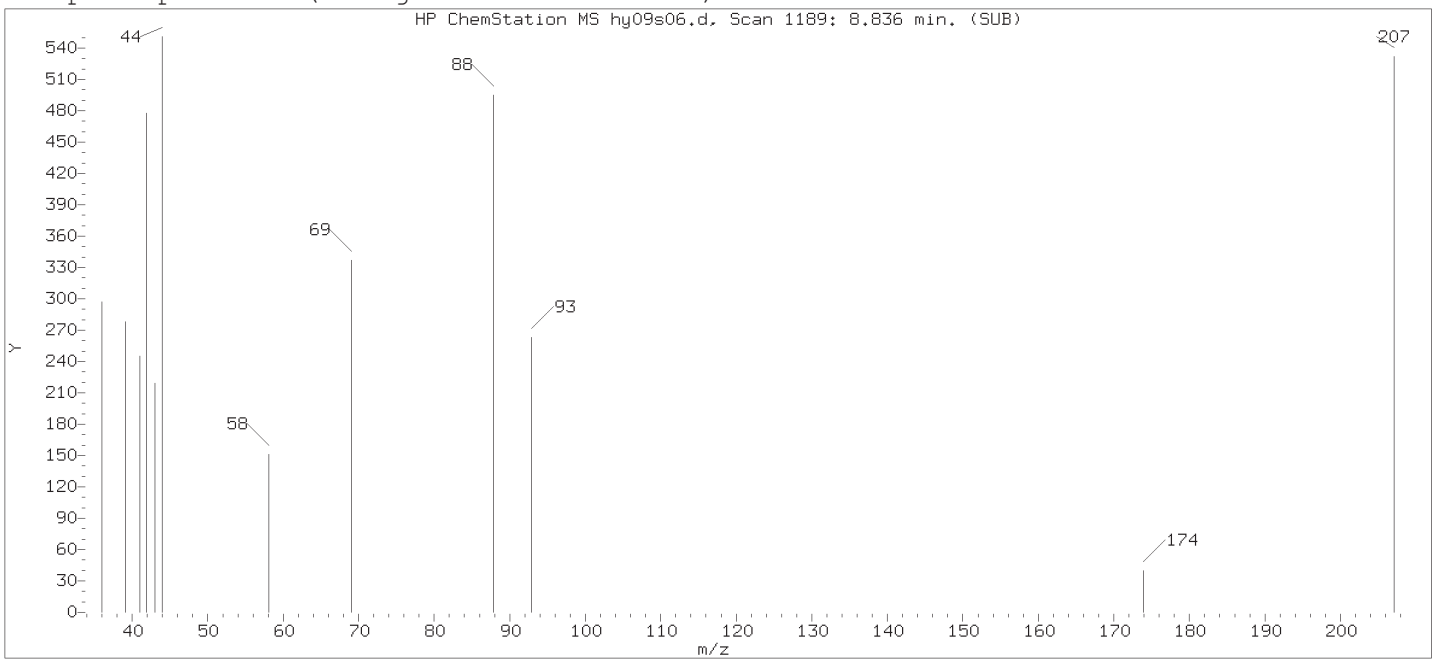
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1162
Retention Time (minutes): 8.671
Quant Ion : 69.00
Area (flag) : 139536MA
On-Column Amount (ng) : 6.2147
Integration start scan : 1156 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

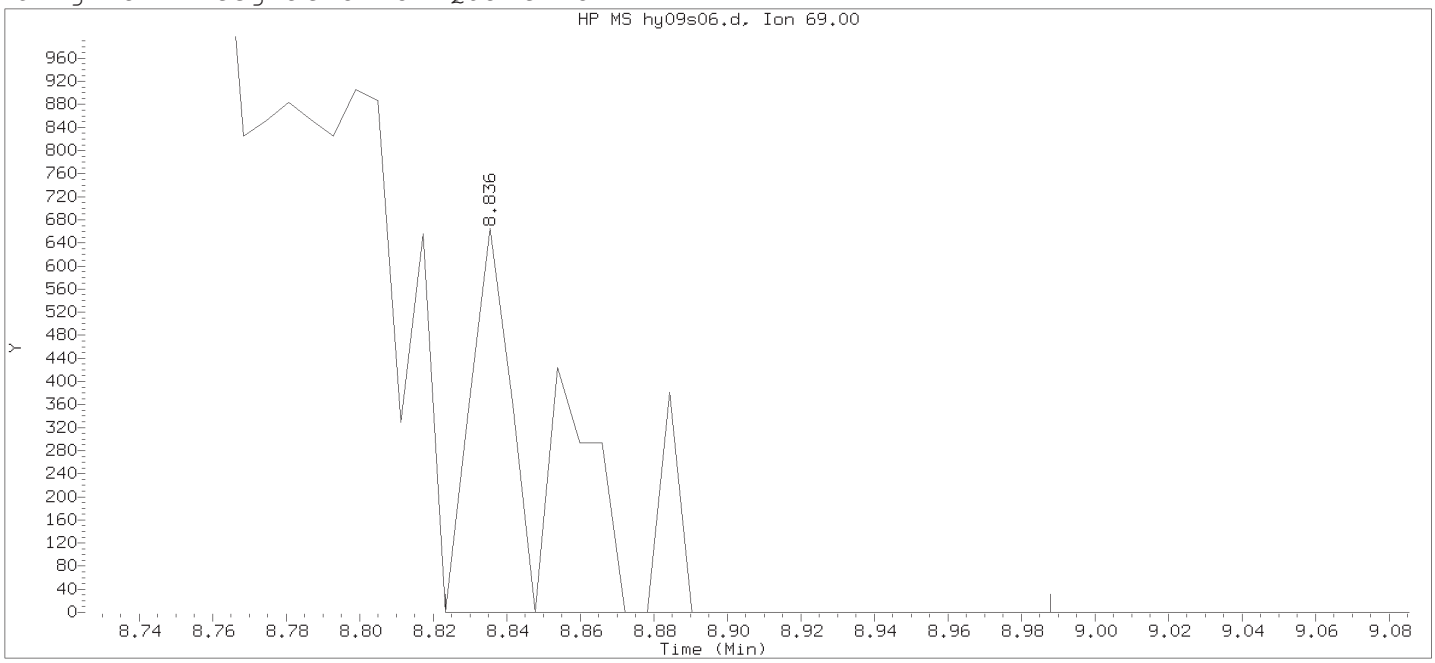
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

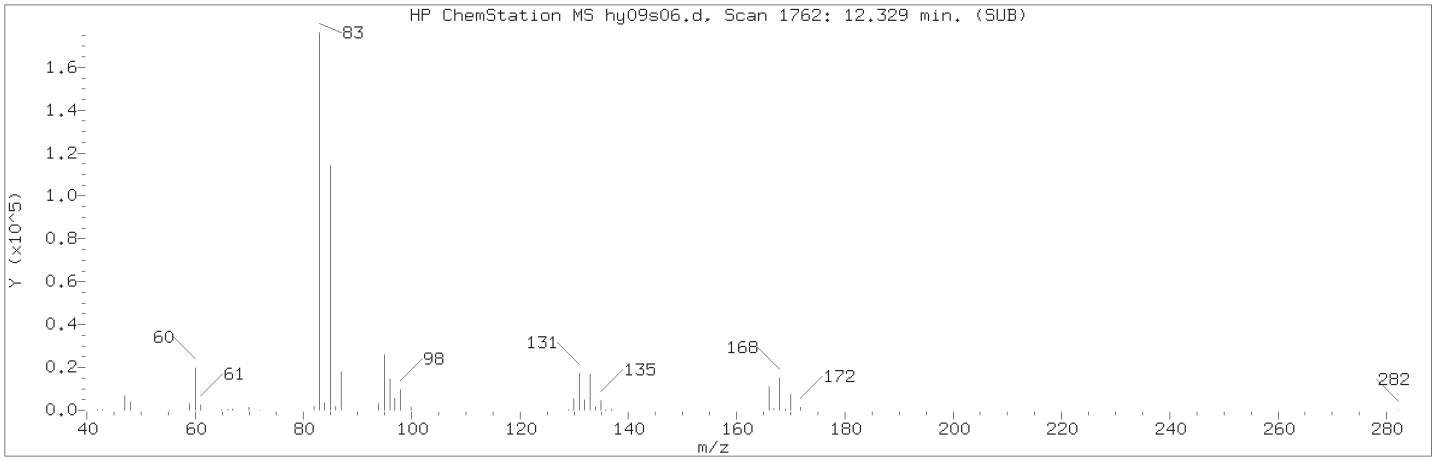
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

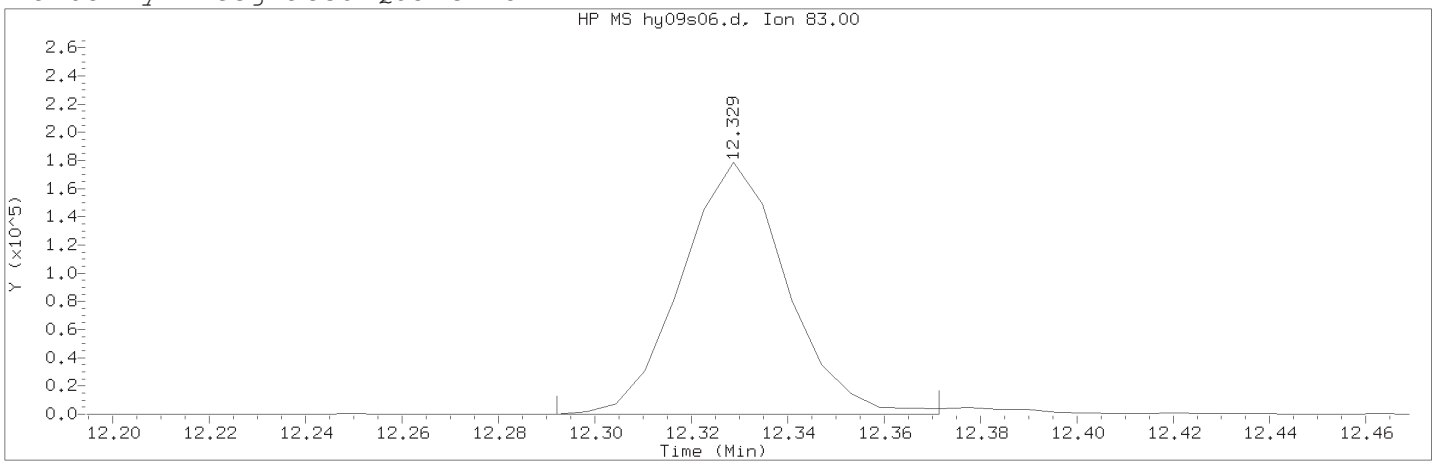
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1189
Retention Time (minutes): 8.836
Quant Ion : 69.00
Area : 1007
On-column Amount (ng) : 0.0449
Integration start scan : 1186 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

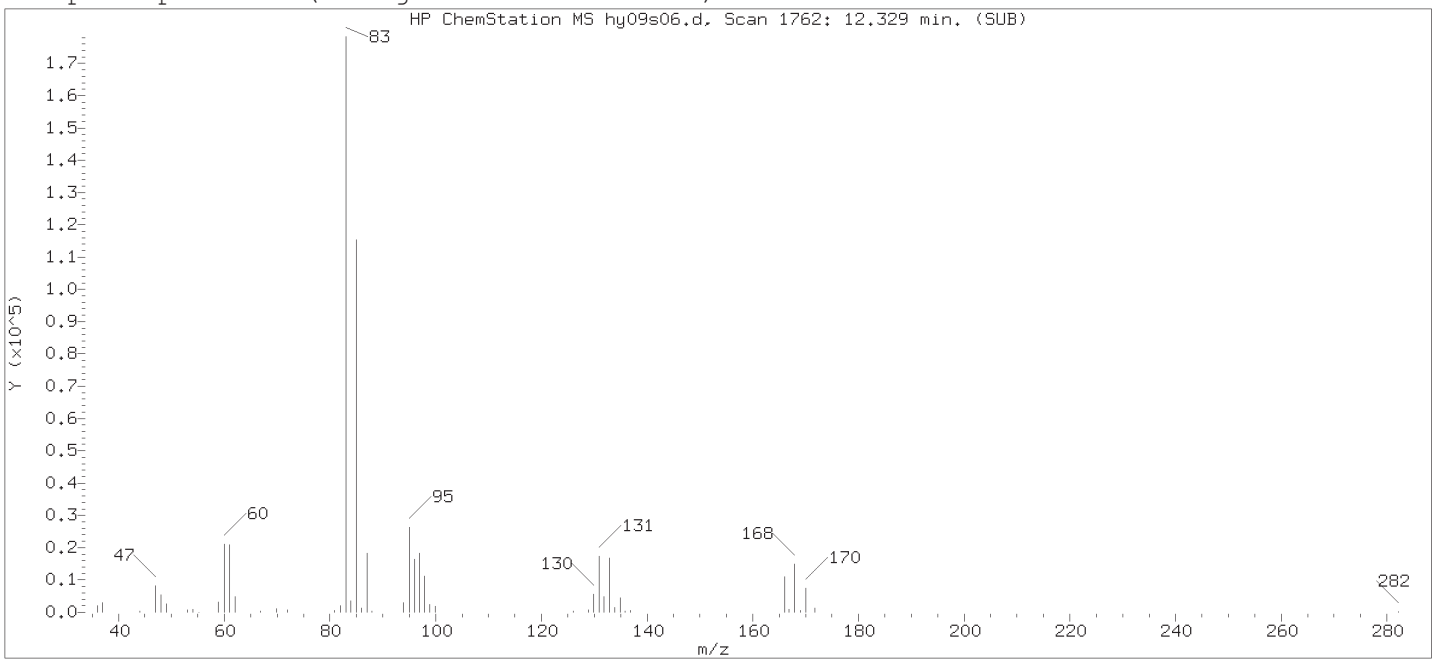
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area (flag) : 269844M
On-Column Amount (ng) : 5.2463
Integration start scan : 1755 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

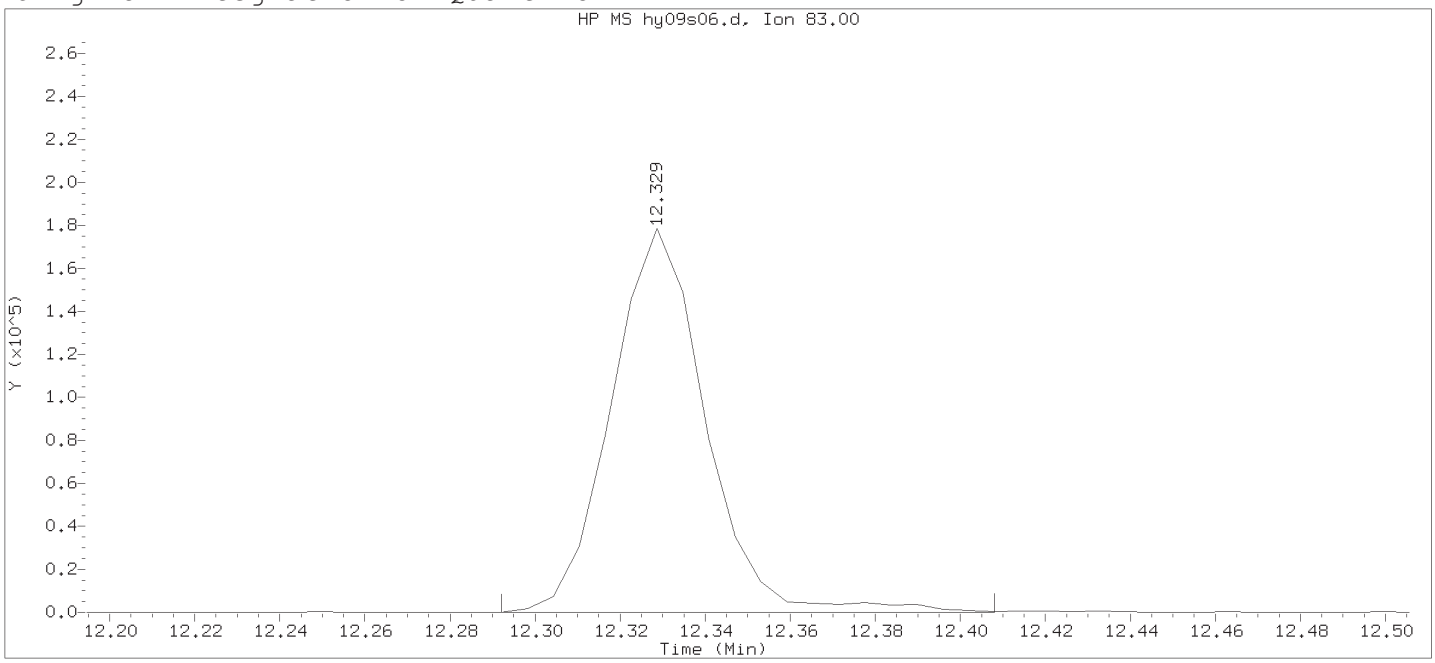
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

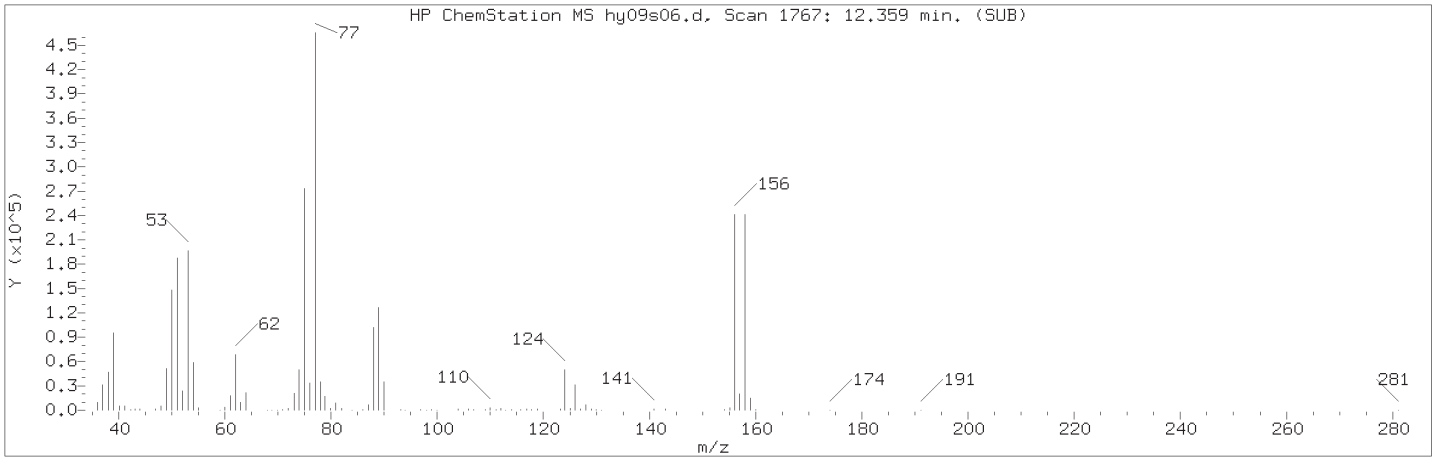
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

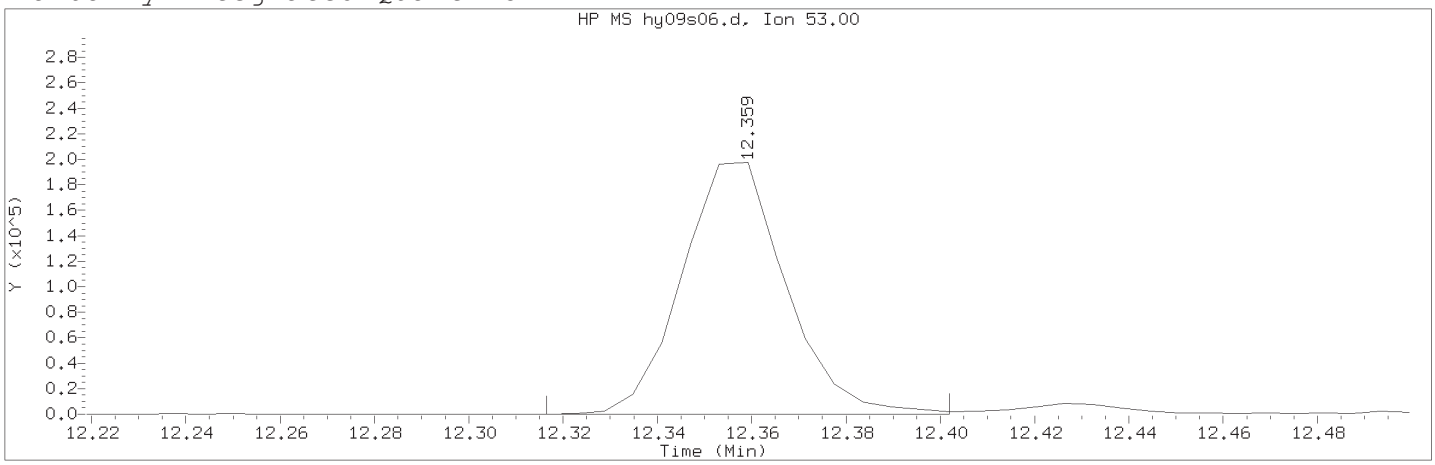
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 83.00
Area : 274899
On-column Amount (ng) : 5.3446
Integration start scan : 1755 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

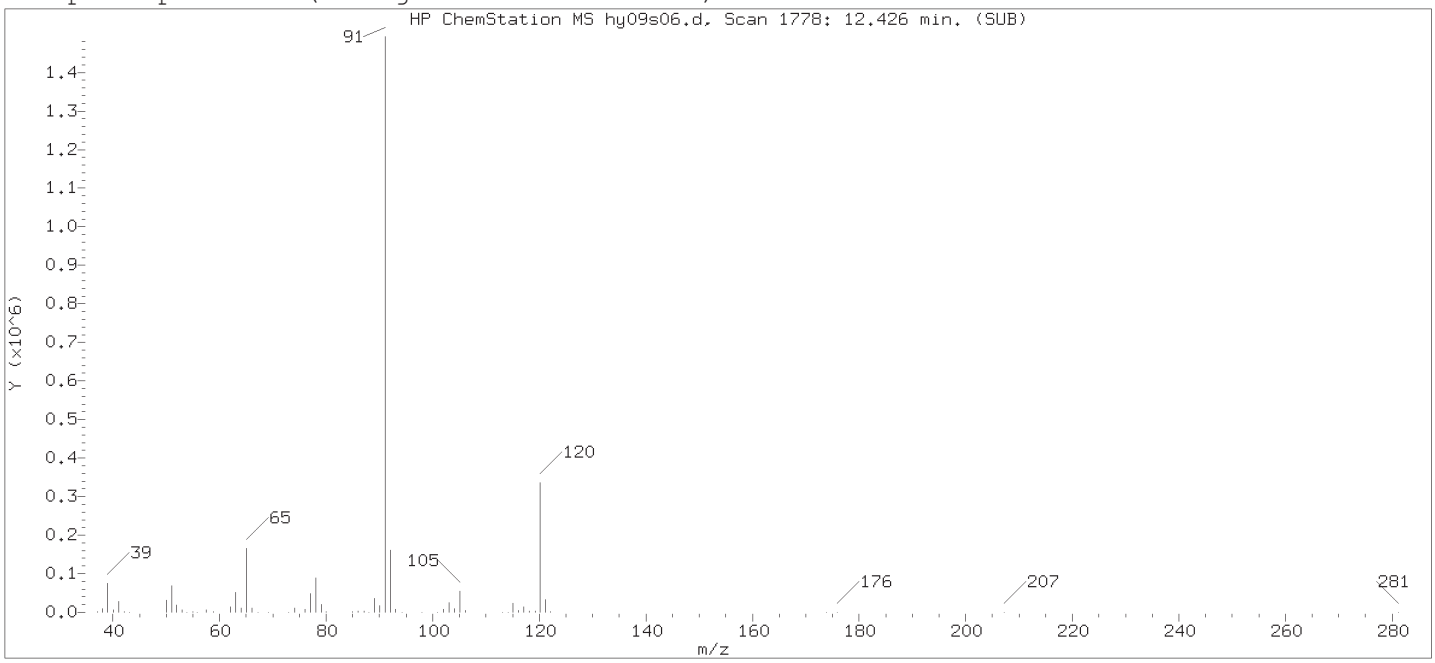
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1767
Retention Time (minutes): 12.359
Quant Ion : 53.00
Area (flag) : 302459A
On-Column Amount (ng) : 31.7078
Integration start scan : 1759 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

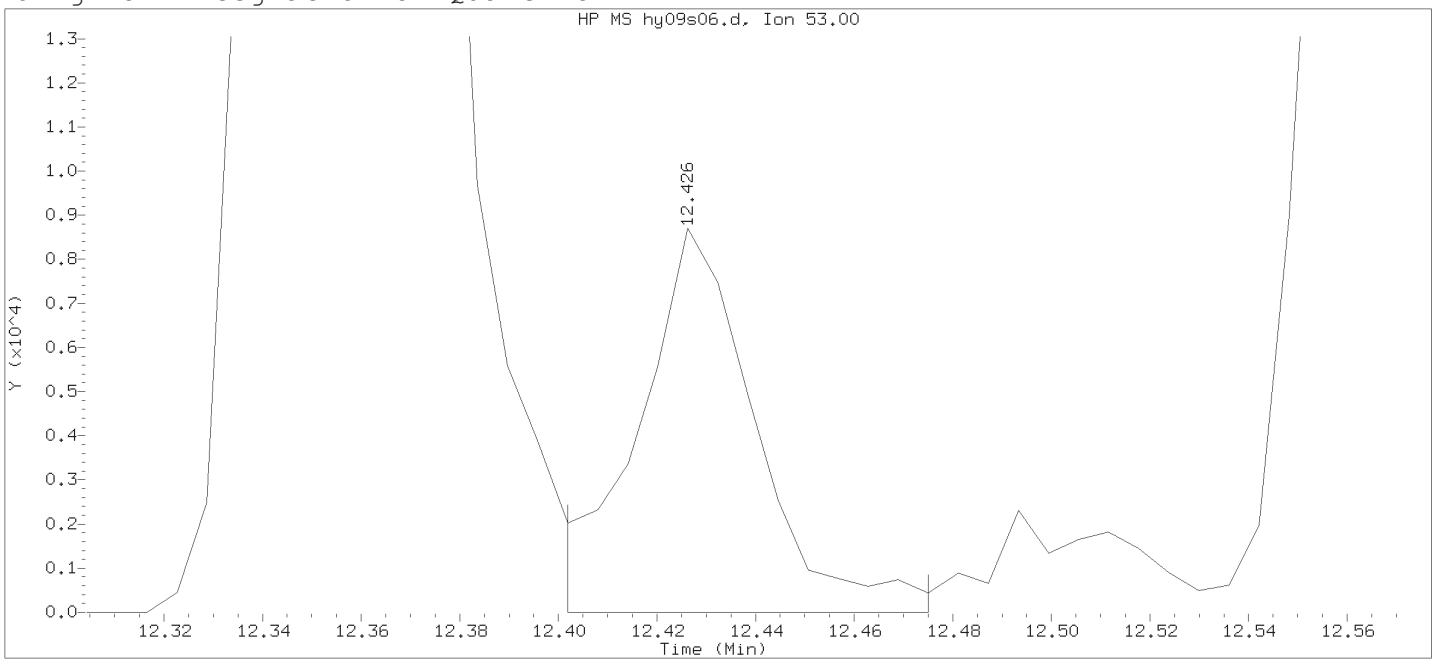
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

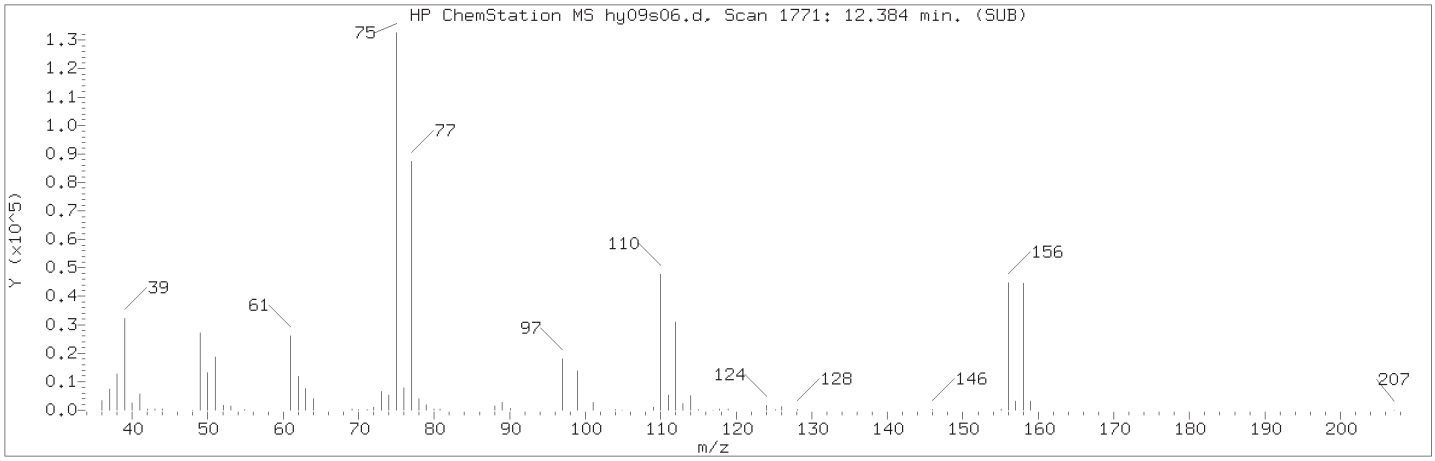
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

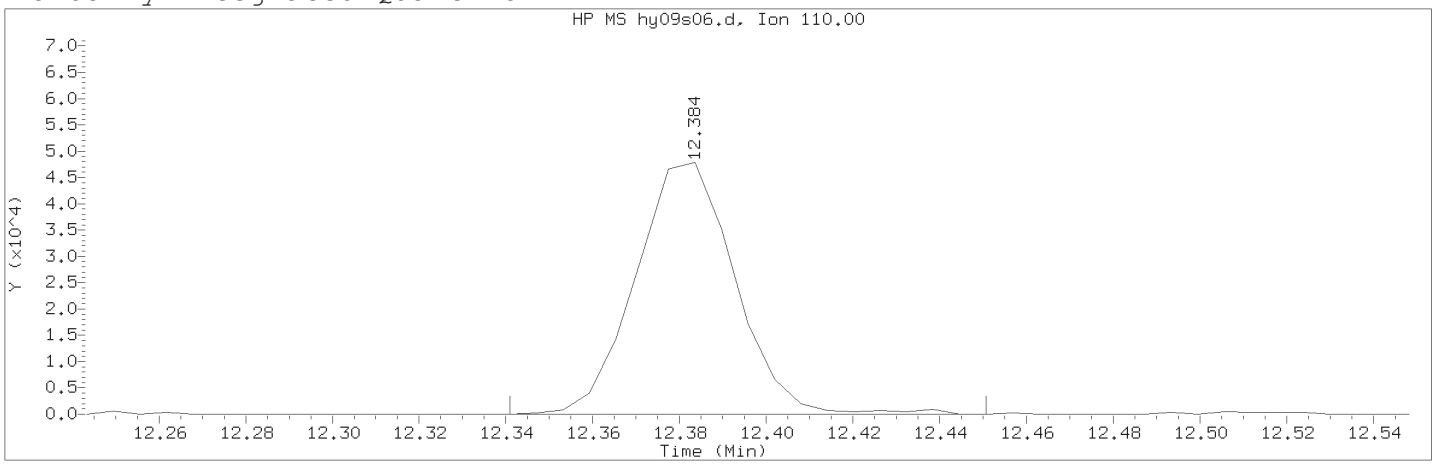
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1778
Retention Time (minutes): 12.426
Quant Ion : 53.00
Area : 14325
On-column Amount (ng) : 1.5018
Integration start scan : 1773 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

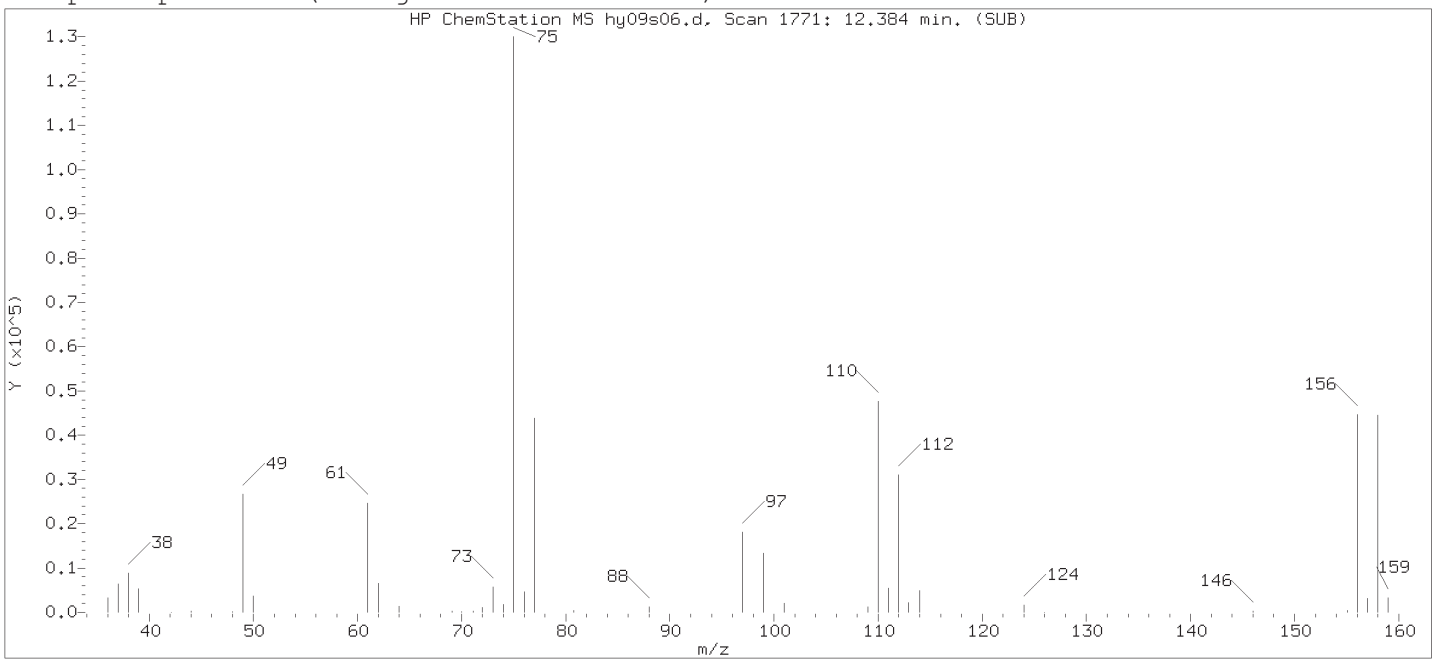
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.384
Quant Ion : 110.00
Area (flag) : 76357M
On-Column Amount (ng) : 5.9132
Integration start scan : 1763 Integration stop scan: 1781
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

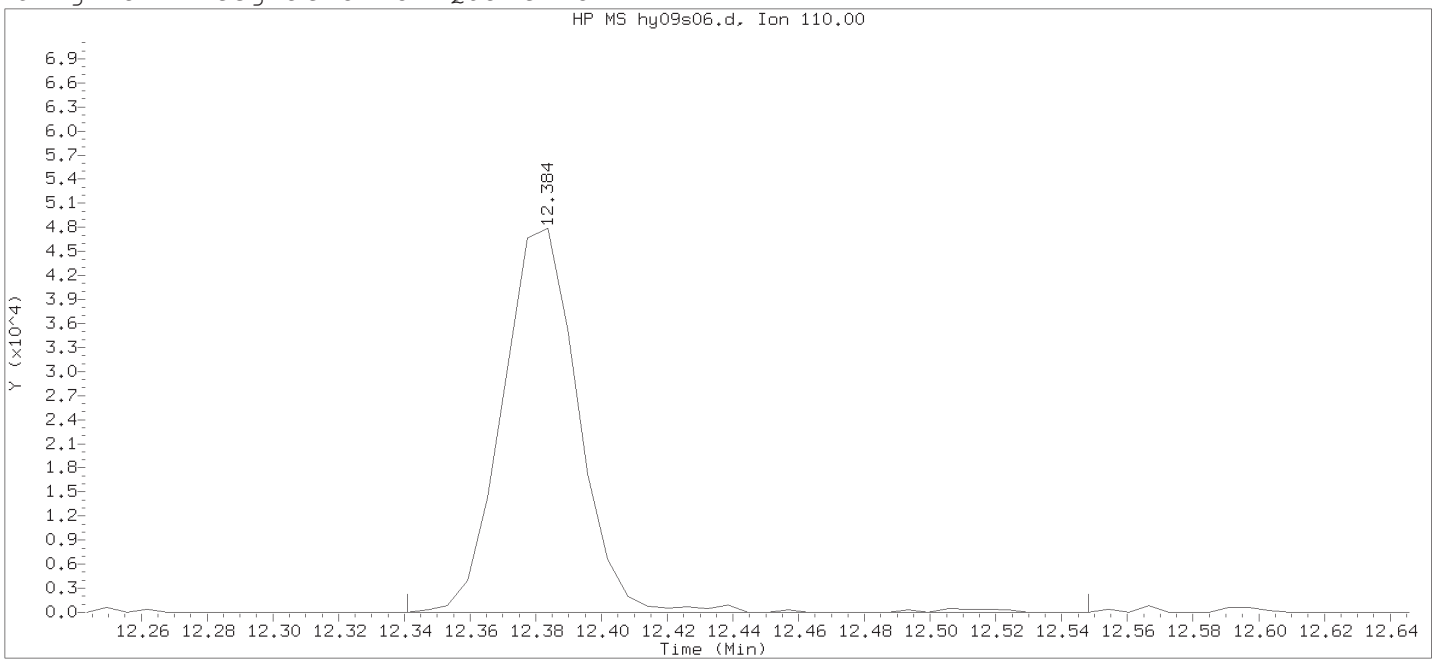
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

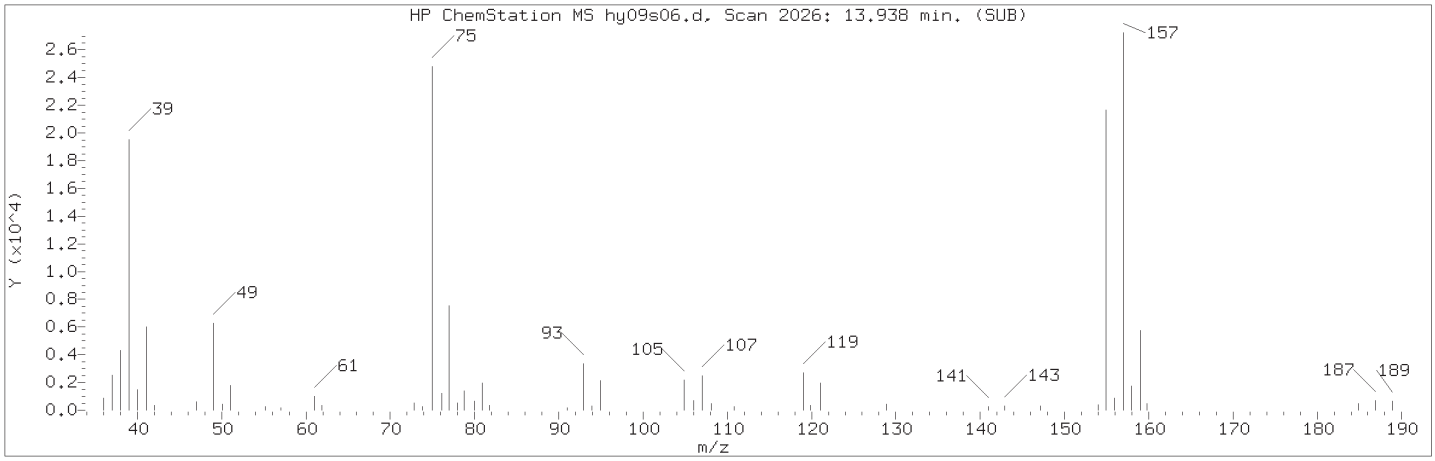
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

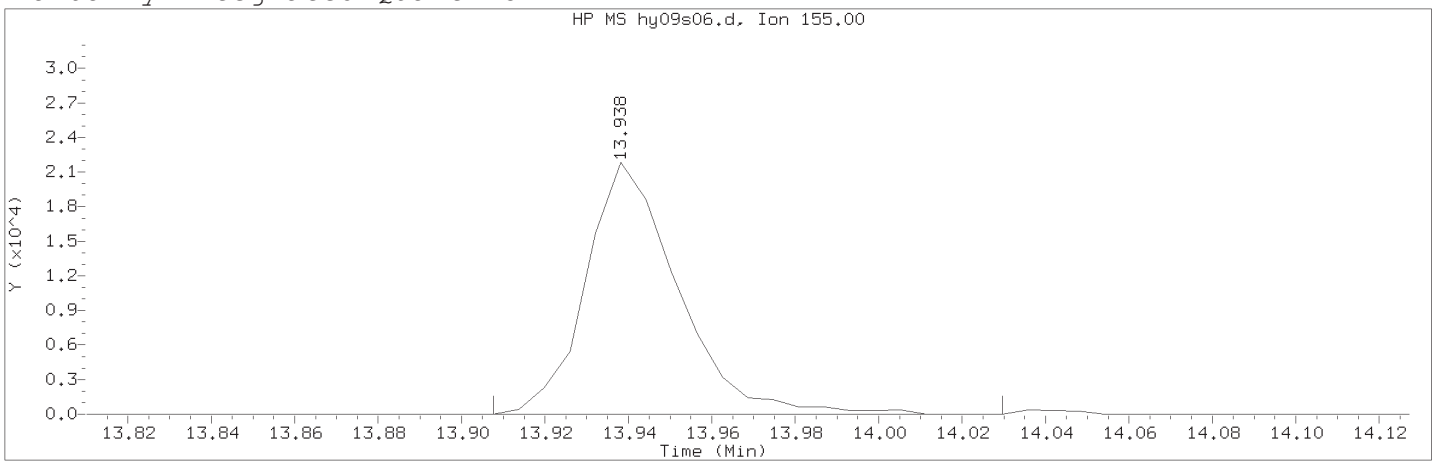
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.384
Quant Ion : 110.00
Area : 77148
On-column Amount (ng) : 5.9745
Integration start scan : 1763 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:01 kel01973

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

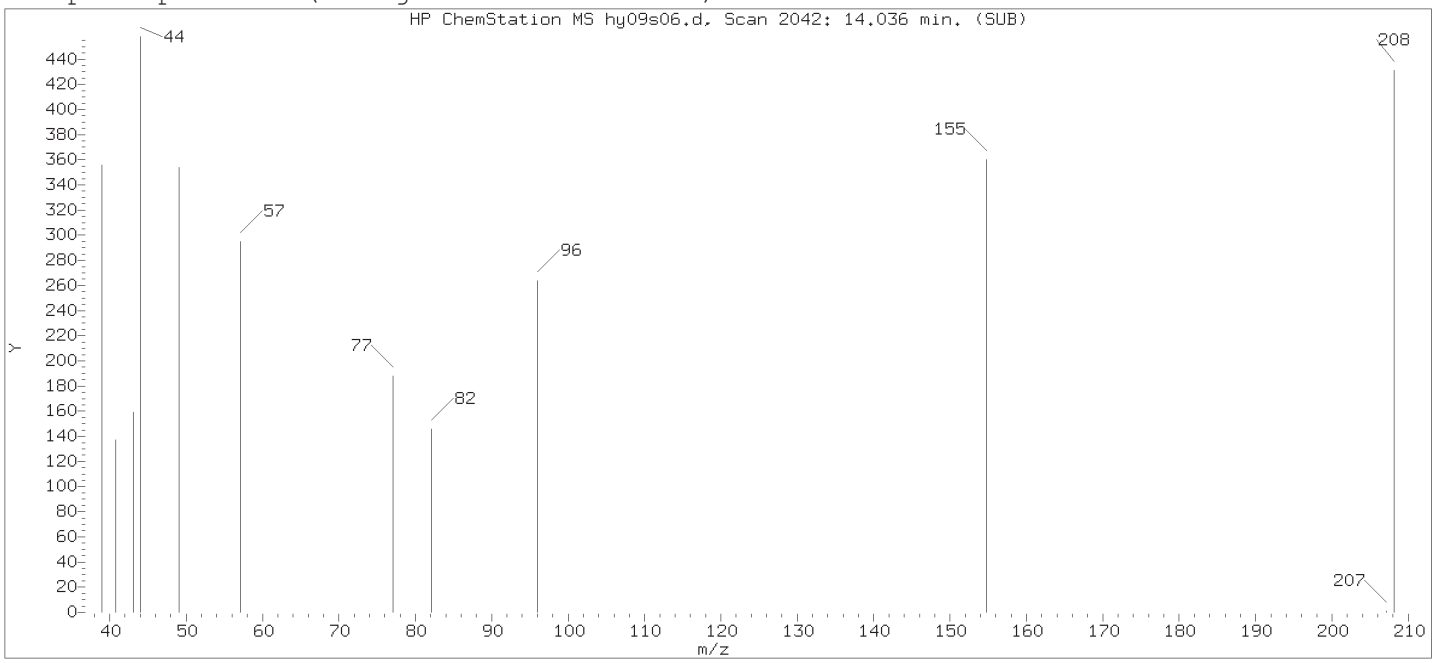
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2026
Retention Time (minutes): 13.938
Quant Ion : 155.00
Area (flag) : 33568A
On-Column Amount (ng) : 6.8215
Integration start scan : 2020 Integration stop scan: 2040
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

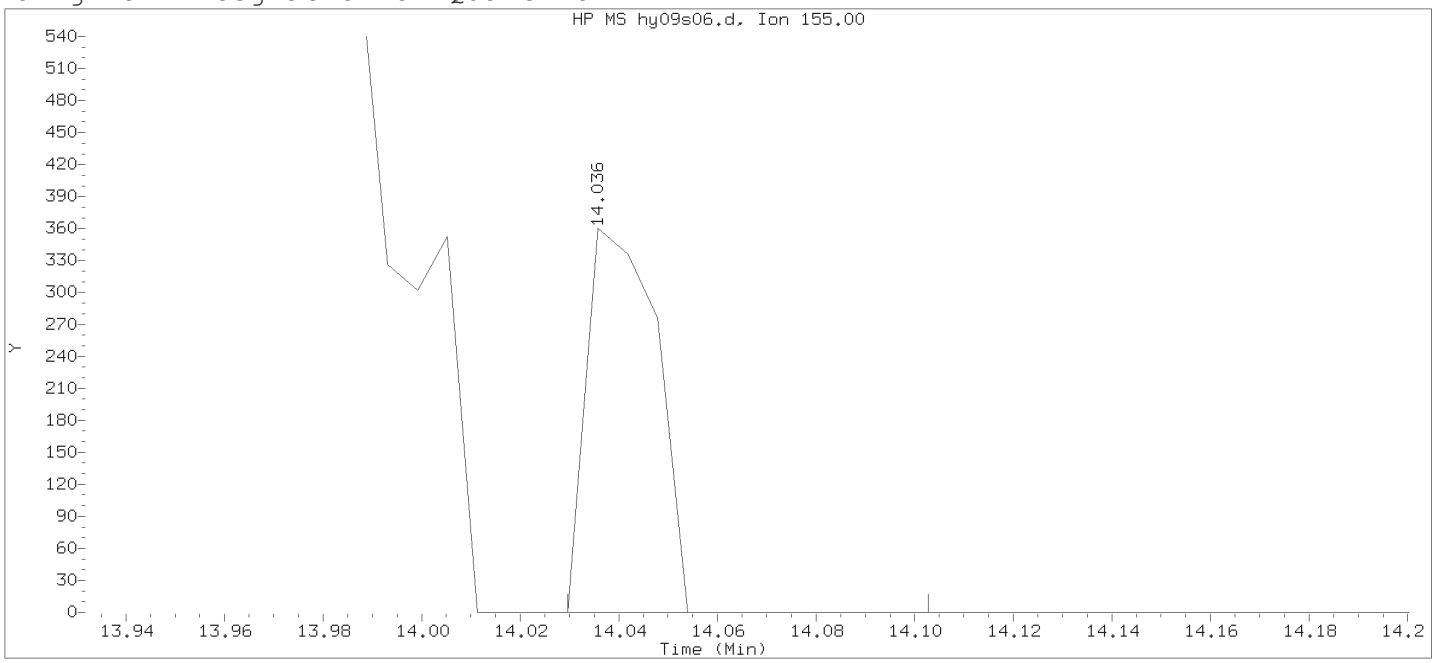
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:45.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09s06.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 12:57 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 13:16 Automation

Sample Name: E6104MSD Lab Sample ID: 8354938MSD

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2042
Retention Time (minutes): 14.036
Quant Ion : 155.00
Area : 355
On-column Amount (ng) : 0.0722
Integration start scan : 2040 Integration stop scan: 2052
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:09.
Target 3.5 esignature text: kel01973

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/16may09a.b/ly09s31.d Injection date and time: **09-MAY-2016 09:58**
Data file Sample Info. Line: LCSL83;LCSL83;1;3;LCS;;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 10:30 bwk03231

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.006	(-0.010)	754	65	252210	(0)	250.00	
66) Fluorobenzene	7.510	(0.003)	1844	96	1504156	(-1)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1152728	(-1)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	607027	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.610	(0.000)	113	347948	48.692	97%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.076	(0.000)	102	89346	49.525	99%		77 - 113
83) Toluene-d8	(3)	9.552	(0.000)	98	1498943	49.678	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.053	(0.000)	95	570923	51.132	102%		78 - 113

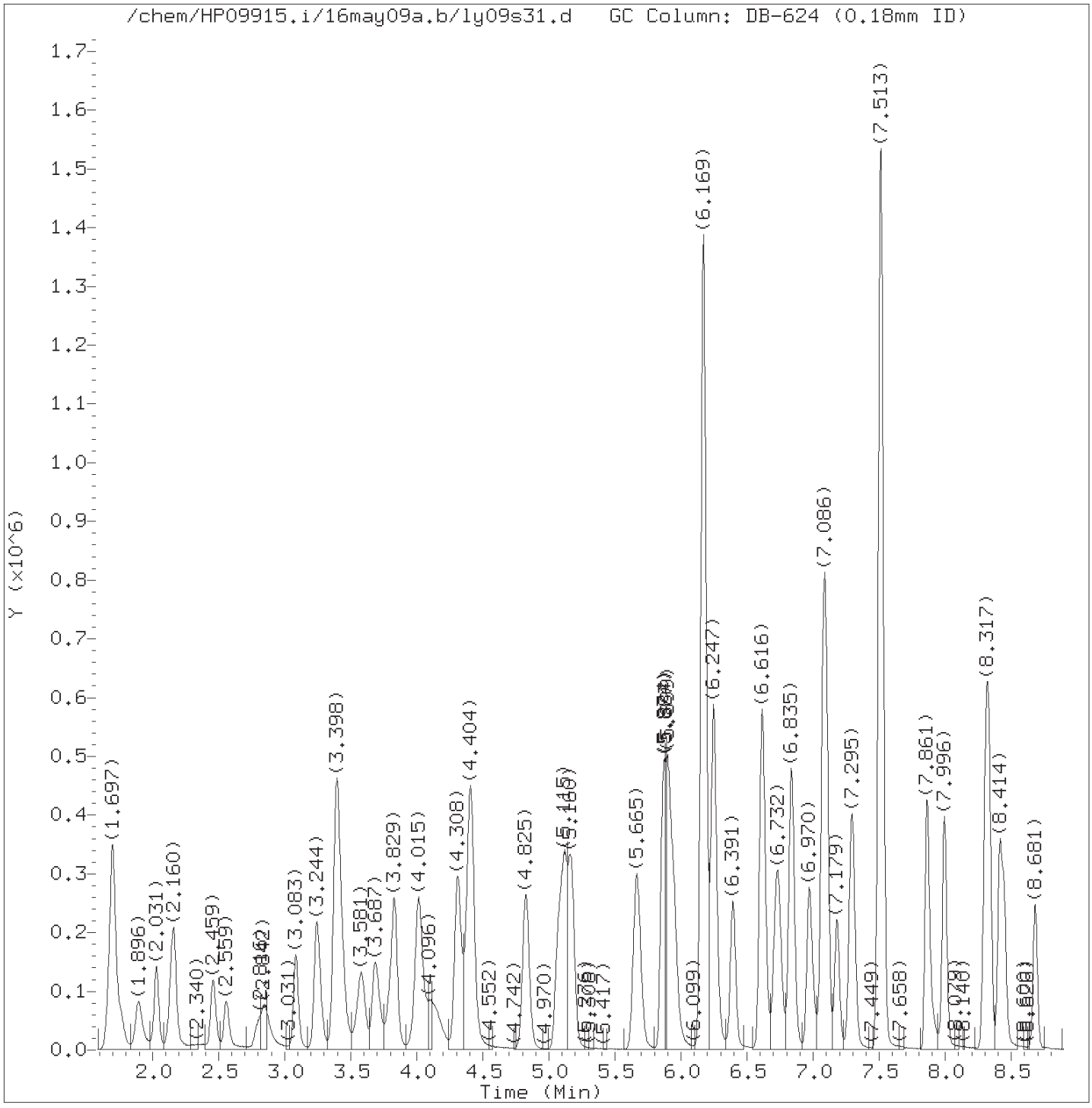
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.549	(0.001)	45	116707M	157.566	157.57			50	100

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Brett W. Kenyon on 05/09/2016 at 10:30. Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:57. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

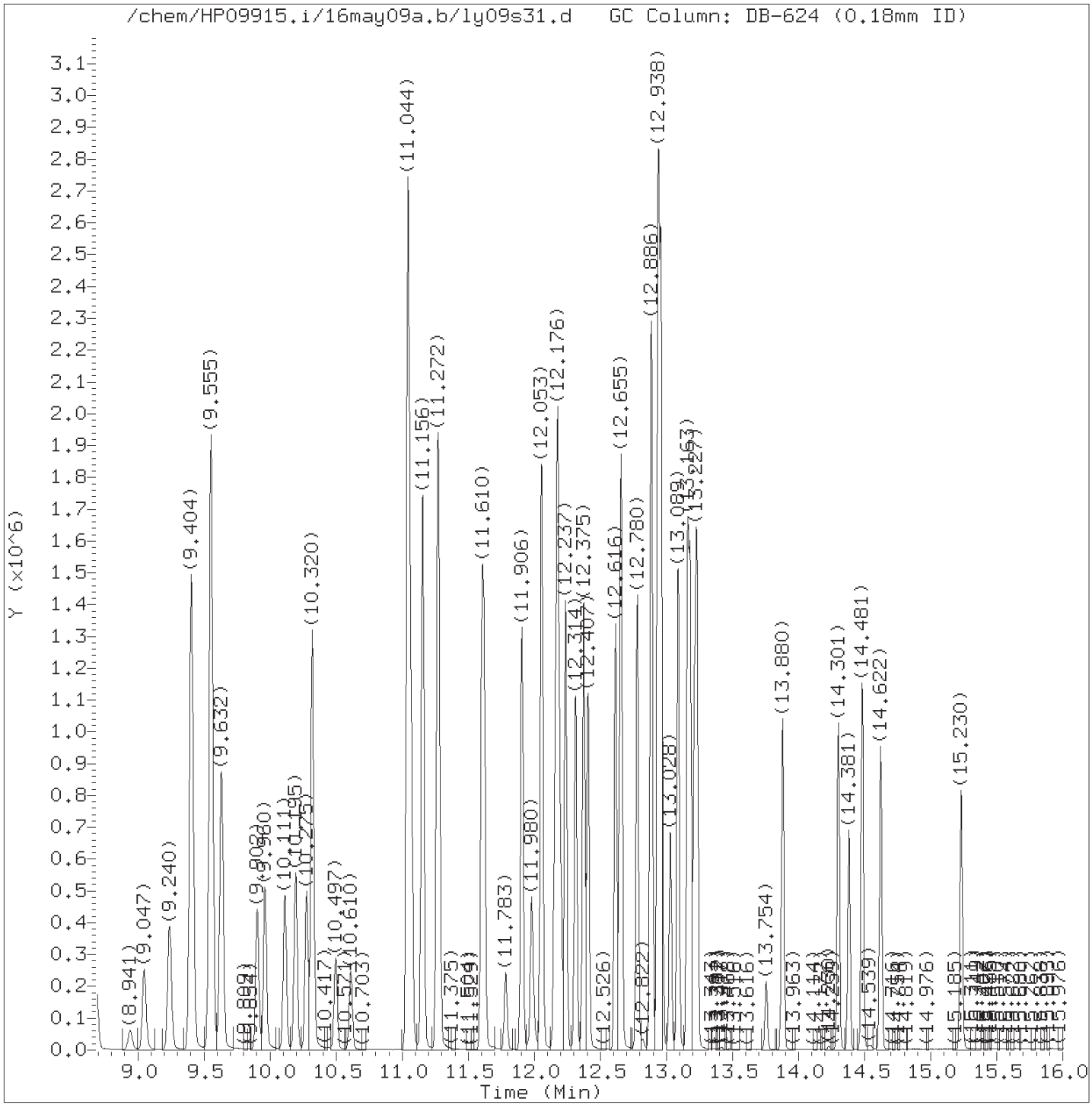
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s31.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:58 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:30 bwk03231

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:30.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s31.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:58 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:30 bwk03231

Sample Name: LCSL83 Lab Sample ID: LCSL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:30.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s31.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:58 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:30 bwk03231

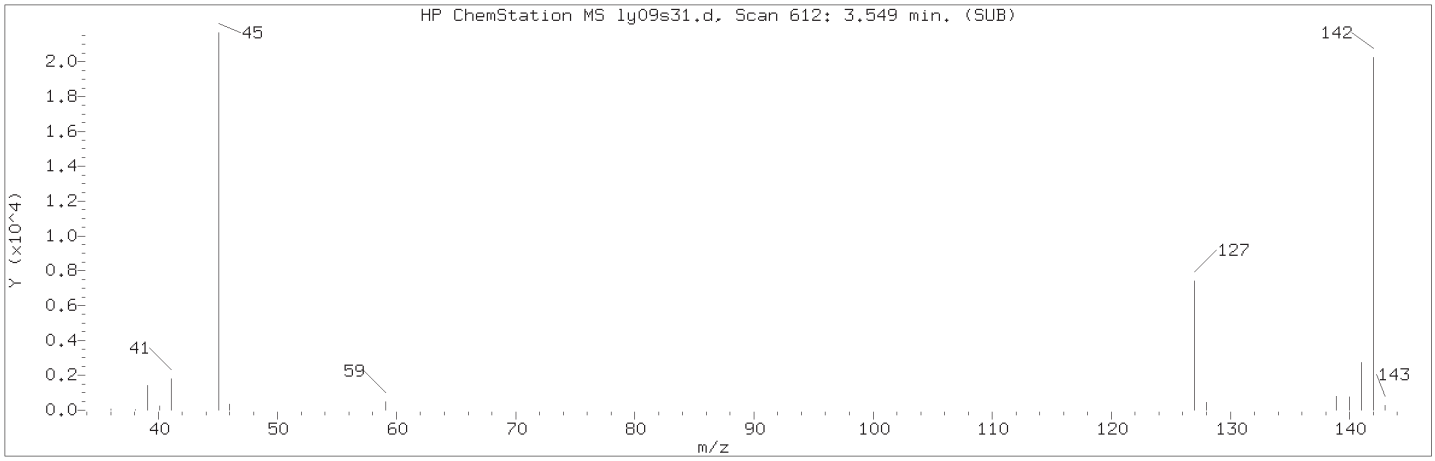
Sample Name: LCSL83 Lab Sample ID: LCSL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.549	45	116707M	157.566
29)*t-Butyl alcohol-d10	(1)	4.006	65	252210	250.000
52)$Dibromofluoromethane	(2)	6.610	113	347948	48.692
57)$1,2-Dichloroethane-d4	(2)	7.076	102	89346	49.525
66)*Fluorobenzene	(2)	7.510	96	1504156	50.000
83)$Toluene-d8	(3)	9.552	98	1498943	49.678
100)*Chlorobenzene-d5	(3)	11.041	117	1152728	50.000
114)$4-Bromofluorobenzene	(3)	12.053	95	570923	51.132
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	607027	50.000

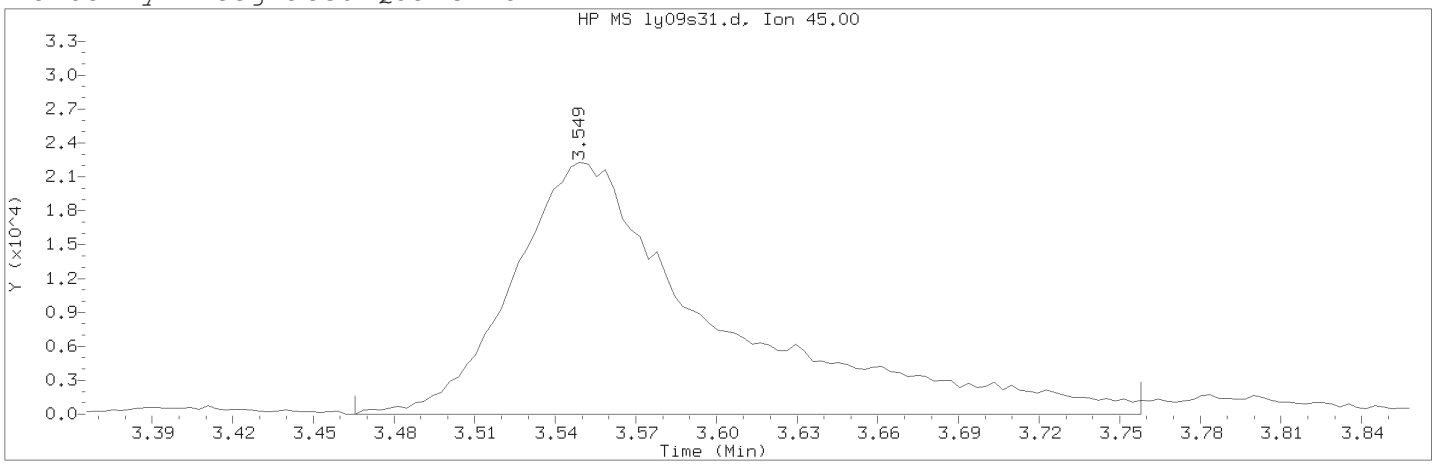
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:30.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s31.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:58 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:30 bwk03231

Sample Name: LCSL83 Lab Sample ID: LCSL83

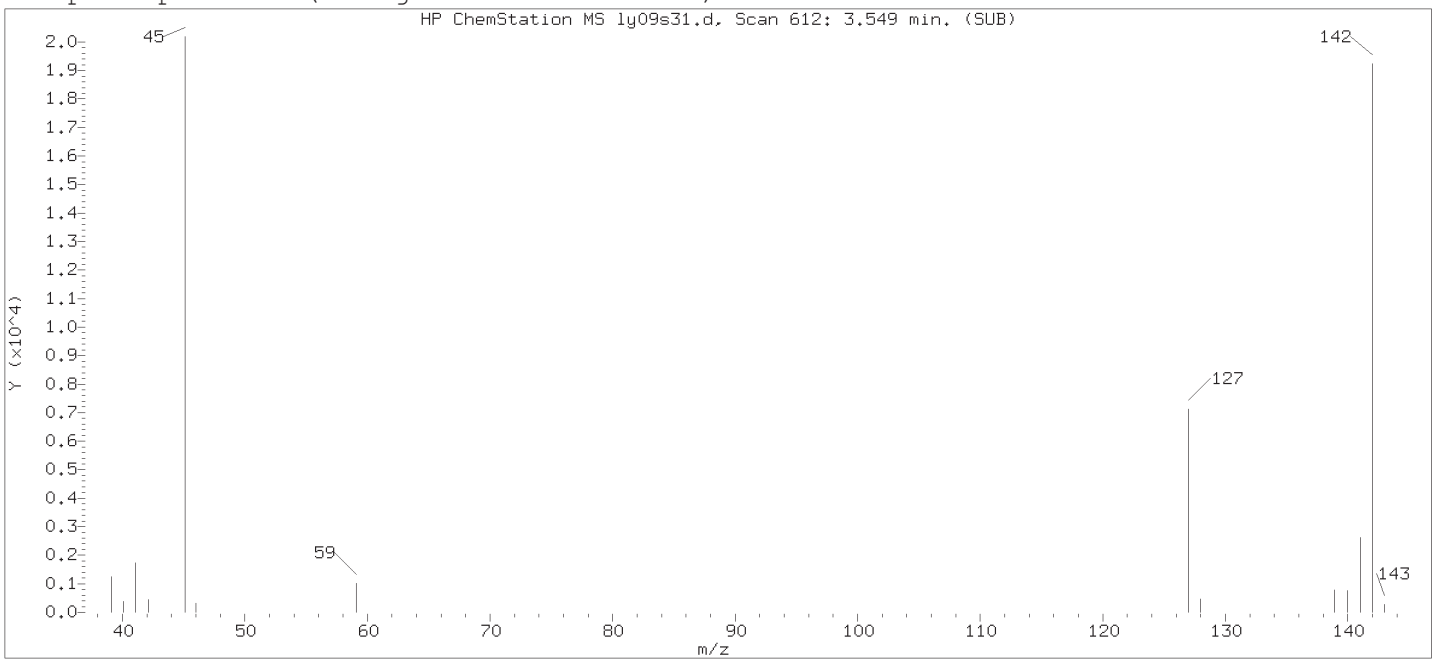
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 612
Retention Time (minutes): 3.549
Quant Ion : 45.00
Area (flag) : 116707M
On-Column Amount (ng) : 157.5660
Integration start scan : 585 Integration stop scan: 676
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

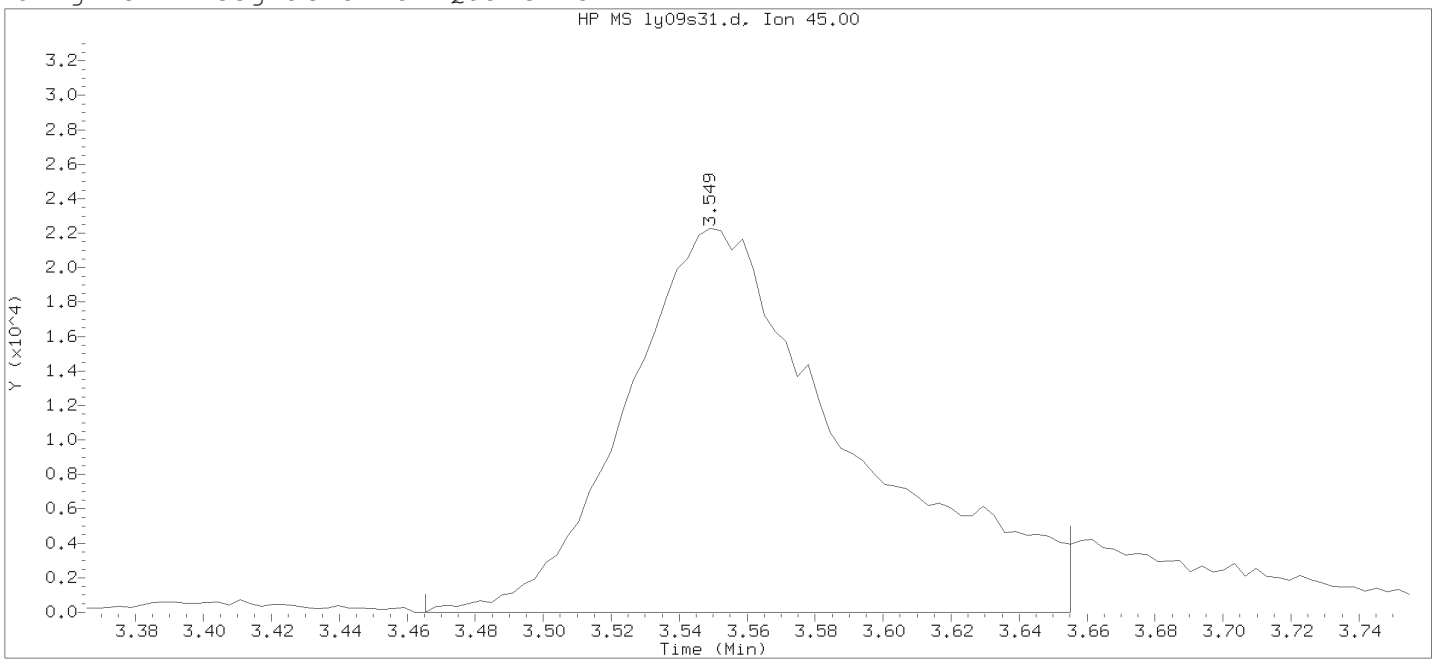
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:30.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:57.
PARALLAX ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s31.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 09:58 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:29 bwk03231

Sample Name: LCSL83 Lab Sample ID: LCSL83

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 612
Retention Time (minutes): 3.549
Quant Ion : 45.00
Area : 101732
On-column Amount (ng) : 137.3474
Integration start scan : 585 Integration stop scan: 644
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 05/09/2016 at 10:30.
Target 3.5 esignature text ID: bwk03231

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/16may09a.b/ly09s32.d Injection date and time: **09-MAY-2016 10:22**
Data file Sample Info. Line: LCDL83;LCDL83;1;3;LCSD;;DRAPEREA;;ly09b05; Instrument ID: **HP09915.i** Batch: **L161302AA**
Date, time and analyst ID of latest file update: 09-May-2016 10:49 bwk03231

Blank Data file reference: **/chem/HP09915.i/16may09a.b/ly09b05.d**

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 09-MAY-2016 09:42
Mid Level Daily Calibration Standard Reference: **/chem/HP09915.i/16may09a.b/ly09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.003	(-0.007)	753	65	256452	(2)	250.00	
66) Fluorobenzene	7.510	(0.003)	1844	96	1605088	(6)	50.00	
100) Chlorobenzene-d5	11.041	(0.000)	2942	117	1227344	(5)	50.00	
131) 1,4-Dichlorobenzene-d4	12.938	(0.000)	3532	152	641518	(2)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.613	(0.000)	113	375972	49.305	99%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	7.076	(0.000)	102	95940	49.836	100%		77 - 113
83) Toluene-d8	(3)	9.555	(0.000)	98	1616879	50.329	101%		80 - 113
114) 4-Bromofluorobenzene	(3)	12.054	(0.000)	95	602411	50.672	101%		78 - 113

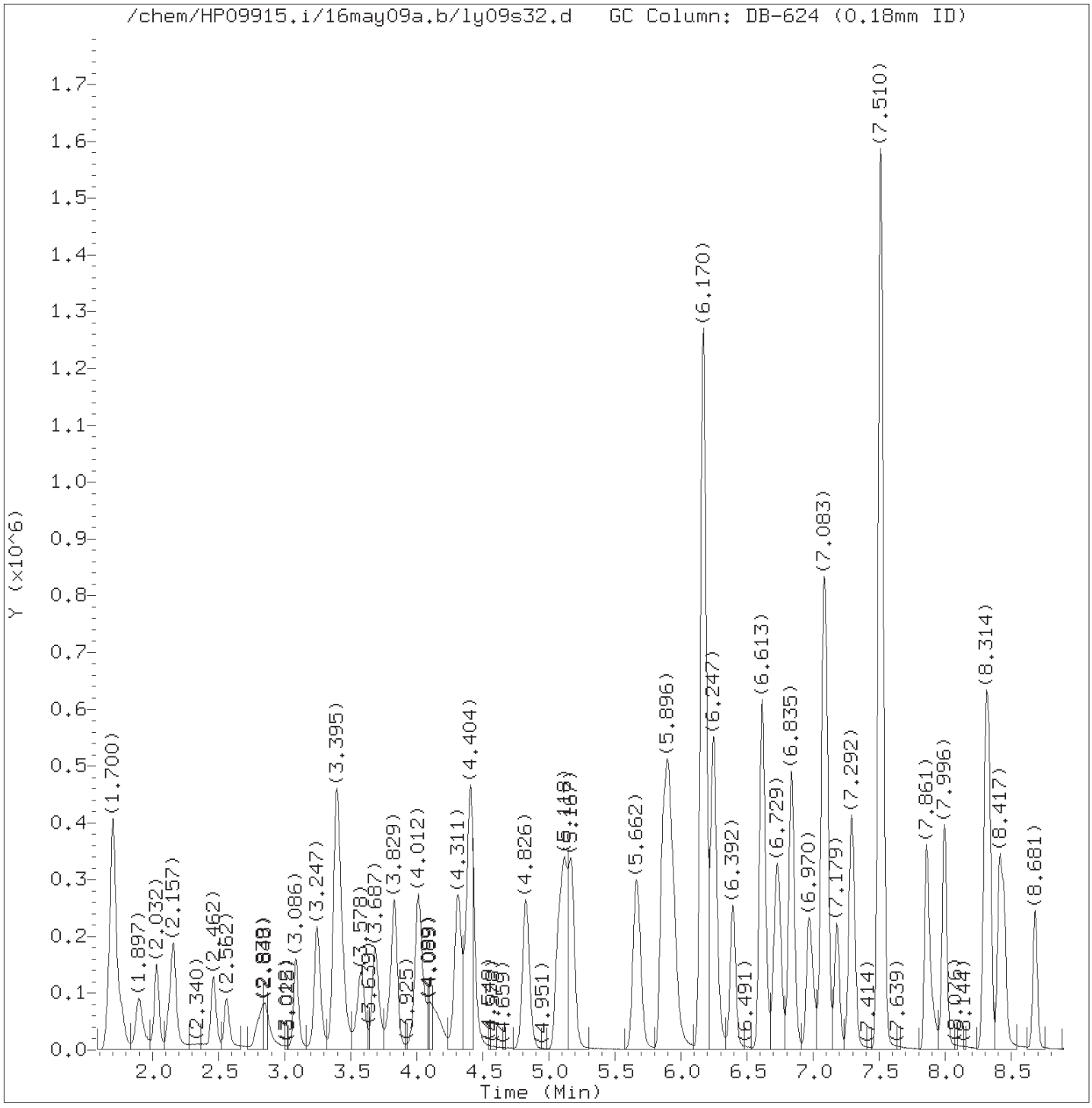
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.556	(-0.000)	45	110588M	146.834	146.83			50	100

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Brett W. Kenyon on 05/09/2016 at 10:49. Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:58. PARALLAX ID: ads01731



Total Ion Chromatogram (TIC)

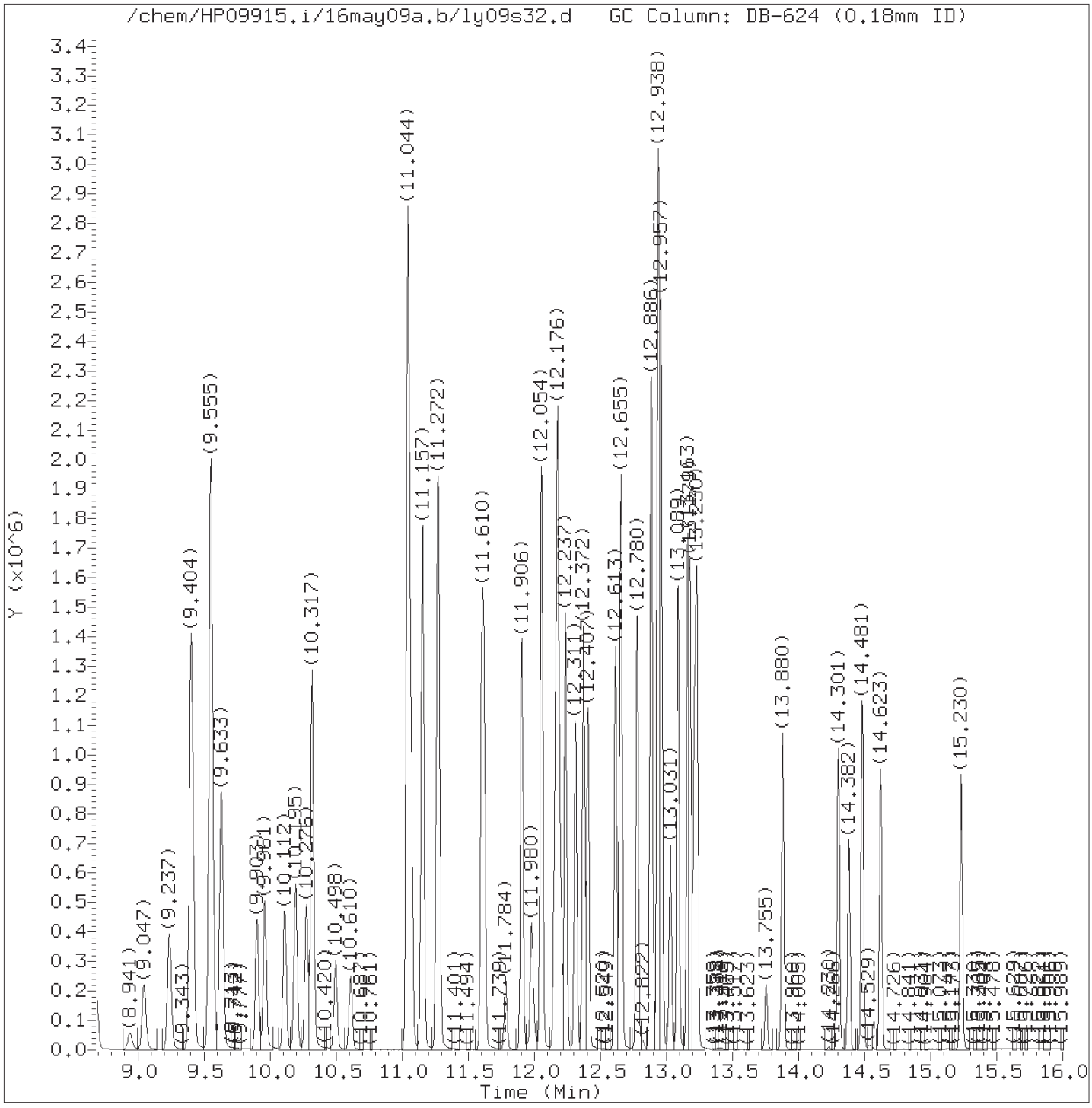
Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s32.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 10:22 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:49 bwk03231

Sample Name: LCDL83 Lab Sample ID: LCDL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:49.
Target 3.5 esignature user ID: bwk03231



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s32.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 10:22 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:49 bwk03231

Sample Name: LCDL83 Lab Sample ID: LCDL83

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:49.
Target 3.5 esignature user ID: bwk03231

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/16may09a.b/ly09s32.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 10:22 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:49 bwk03231

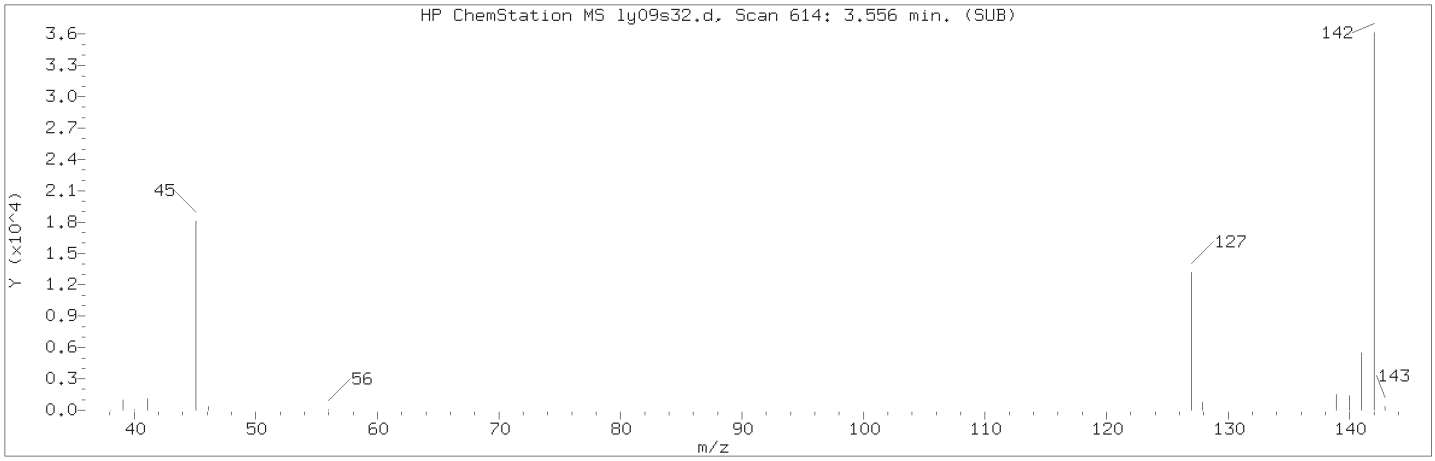
Sample Name: LCDL83 Lab Sample ID: LCDL83

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.556	45	110588M	146.834
29)*t-Butyl alcohol-d10	(1)	4.003	65	256452	250.000
52)$Dibromofluoromethane	(2)	6.613	113	375972	49.305
57)$1,2-Dichloroethane-d4	(2)	7.076	102	95940	49.836
66)*Fluorobenzene	(2)	7.510	96	1605088	50.000
83)$Toluene-d8	(3)	9.555	98	1616879	50.329
100)*Chlorobenzene-d5	(3)	11.041	117	1227344	50.000
114)$4-Bromofluorobenzene	(3)	12.054	95	602411	50.672
131)*1,4-Dichlorobenzene-d4	(4)	12.938	152	641518	50.000

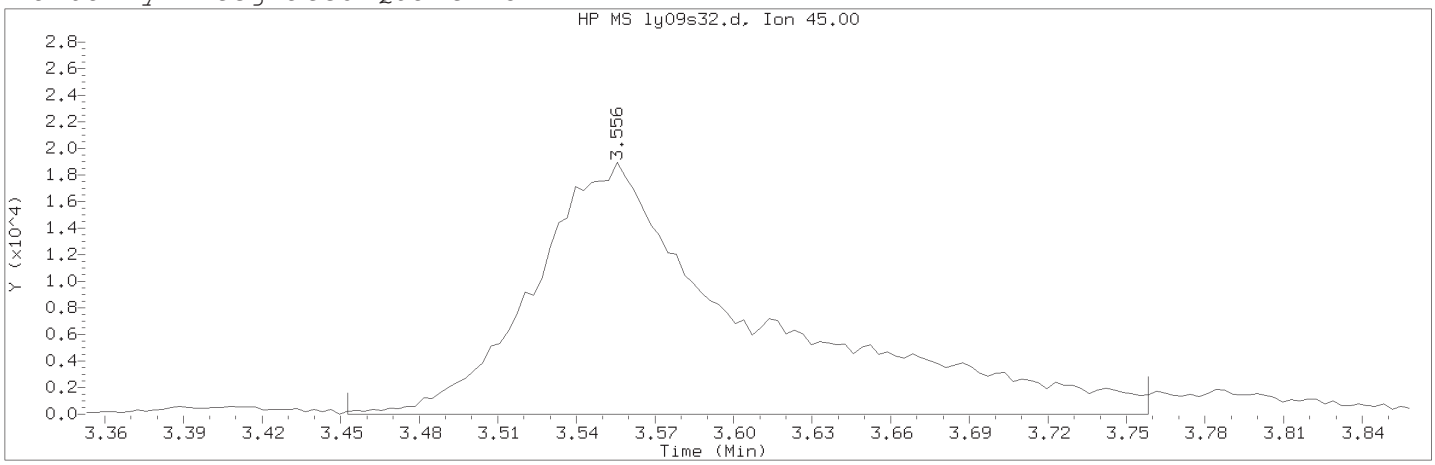
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:49.
Target 3.5 esignature user ID: bwk03231

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s32.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 10:22 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:49 bwk03231

Sample Name: LCDL83 Lab Sample ID: LCDL83

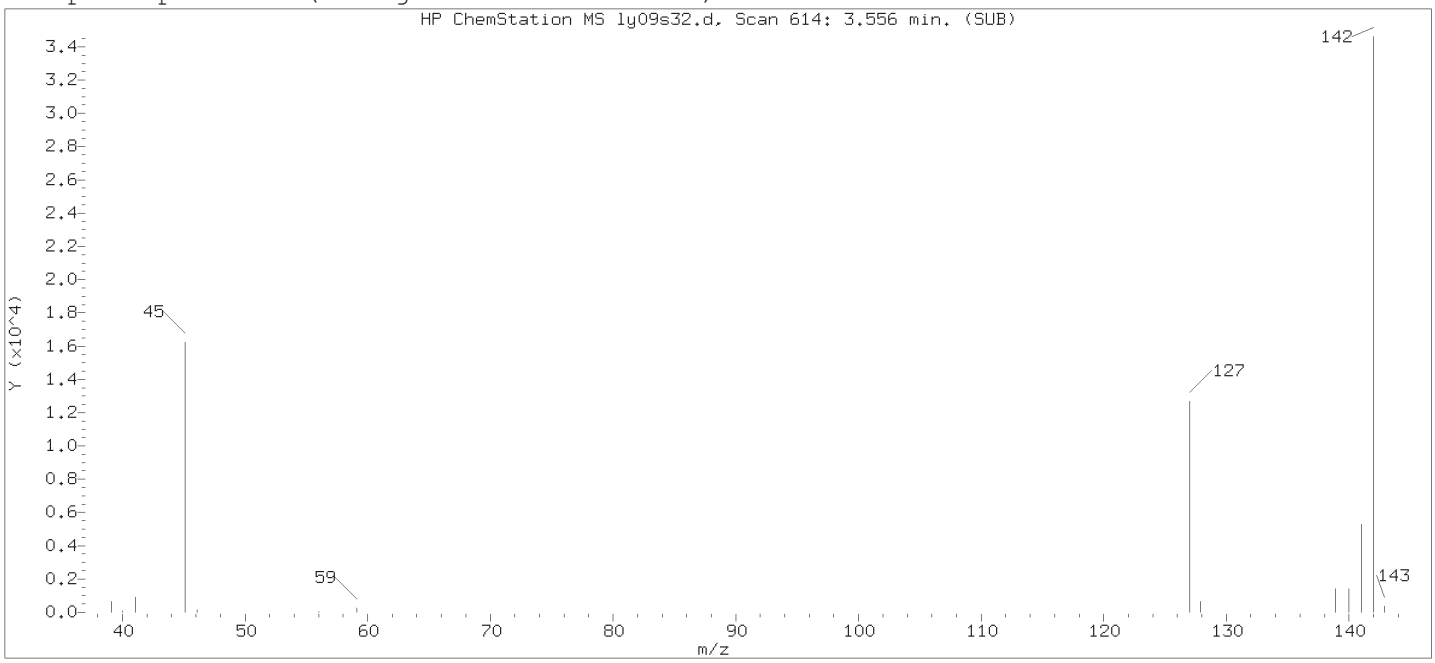
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 614
Retention Time (minutes): 3.556
Quant Ion : 45.00
Area (flag) : 110588M
On-Column Amount (ng) : 146.8344
Integration start scan : 581 Integration stop scan: 676
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

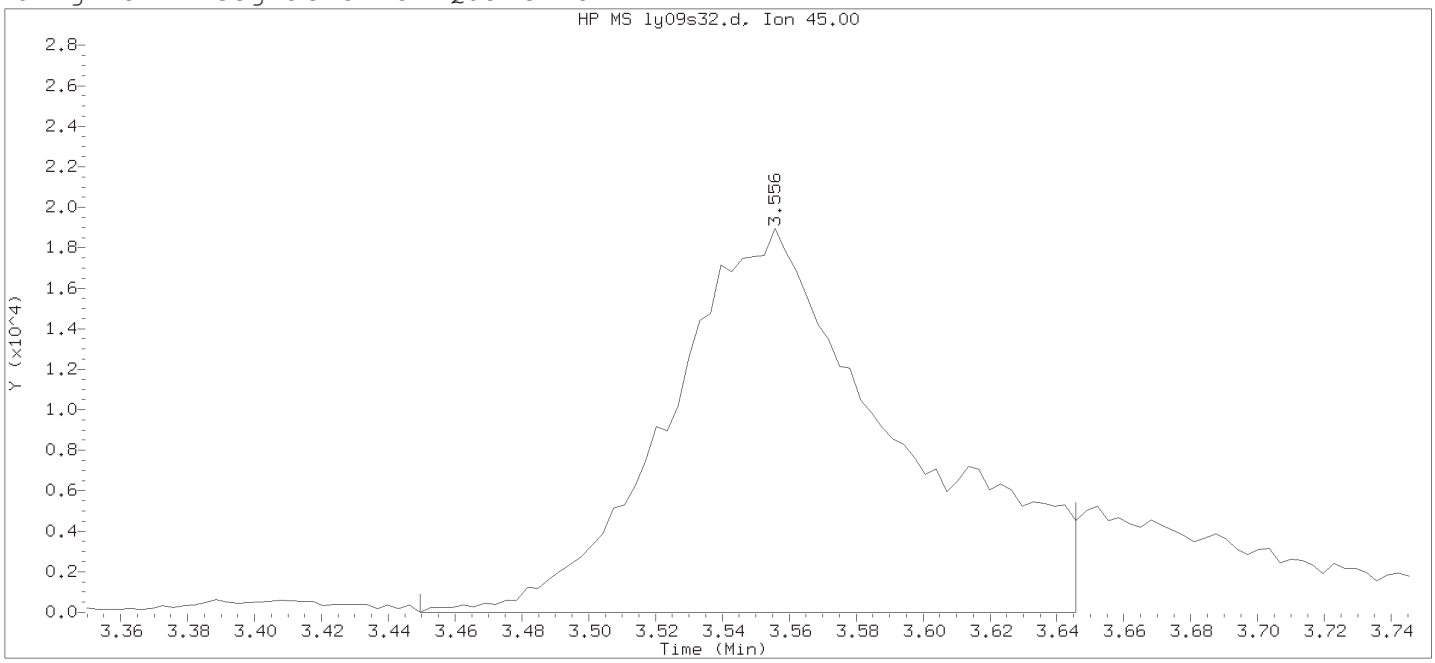
Analyst responsible for change: Digitally signed by Brett W. Kenyon
on 05/09/2016 at 10:49.
Target 3.5 esignature user ID: bwk03231

Secondary review performed and digitally signed by Angela D. Sneeringer on 05/10/2016 at 10:58.
PARALLAX ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/16may09a.b/ly09s32.d Instrument ID: HP09915.i
Injection date and time: 09-MAY-2016 10:22 Analyst ID: BWK03231

Method used: /chem/HP09915.i/16may09a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 09-MAY-2016 09:42
Date, time and analyst ID of latest file update: 09-May-2016 10:48 bwk03231

Sample Name: LCDL83 Lab Sample ID: LCDL83

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 614
Retention Time (minutes): 3.556
Quant Ion : 45.00
Area : 89823
On-column Amount (ng) : 119.2628
Integration start scan : 580 Integration stop scan: 641
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brett W. Kenyon on 05/09/2016 at 10:49.
Target 3.5 esignature [illegible] bwk03231

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/16may09a.b/hy09l02.d Injection date and time: **09-MAY-2016 10:19**
Data file Sample Info. Line: LCSH93;LCSH93;1;3;LCS;;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.281	(-0.018)	442	65	73965	(-18)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2450946	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1685117	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	733080	(-17)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	572958	9.921	99%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(-0.001)	102	93906	9.817	98%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2489101	10.369	104%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	717123	9.268	93%		78 - 110

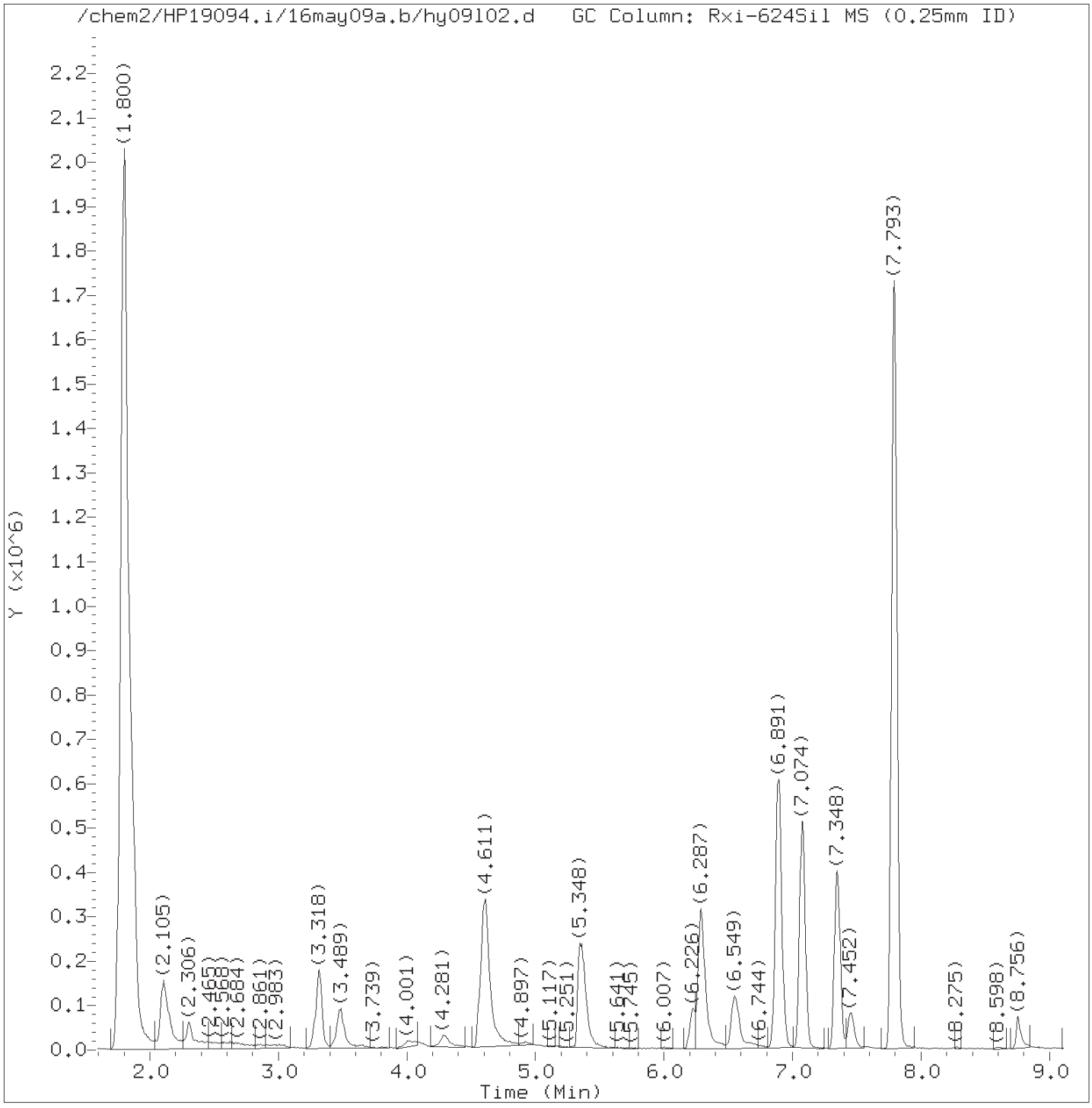
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
4) Dimethyl ether	(2)	2.105	(-0.000)	45	395668M	4.701	4.70		J	0.1	13
25) Acetonitrile	(1)	4.019	(-0.001)	41	108882M	38.928	38.93		J	32	100
36) Vinyl Acetate	(2)	5.348	(0.001)	43	835637	12.008	12.01			3	10
142) Hexachloroethane	(4)	13.615	(-0.000)	117	252876	5.162	5.16		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

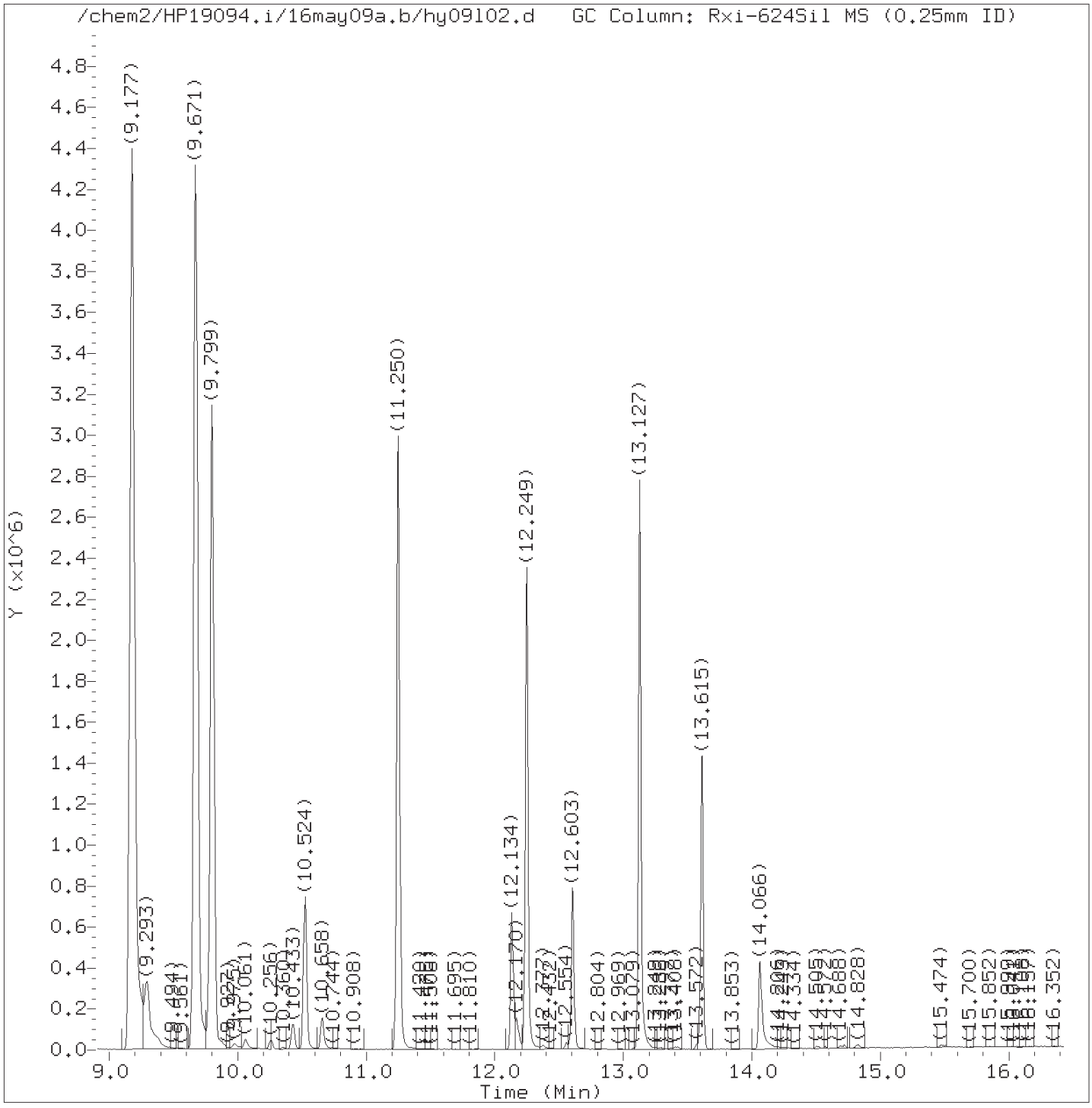
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH93 Lab Sample ID: LCSH93

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH93 Lab Sample ID: LCSH93

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

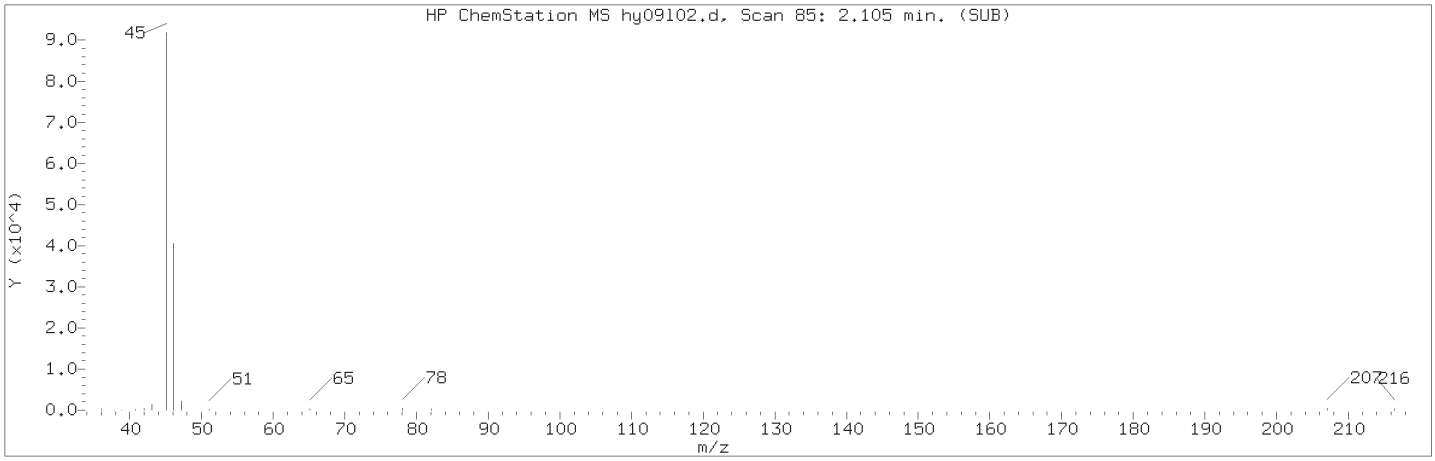
Sample Name: LCSH93 Lab Sample ID: LCSH93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.105	45	395668M	4.701
25) Acetonitrile	(1)	4.019	41	108882M	38.928
26)*t-Butyl Alcohol-d10	(1)	4.281	65	73965	50.000
36) Vinyl Acetate	(2)	5.348	43	835637	12.008
50)$Dibromofluoromethane	(2)	6.891	113	572958	9.921
57)$1,2-Dichloroethane-d4	(2)	7.354	102	93906	9.817
63)*Fluorobenzene	(2)	7.793	96	2450946	10.000
82)$Toluene-d8	(3)	9.799	98	2489101	10.369
97)*Chlorobenzene-d5	(3)	11.250	117	1685117	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	717123	9.268
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	733080	10.000
142) Hexachloroethane	(4)	13.615	117	252876	5.162

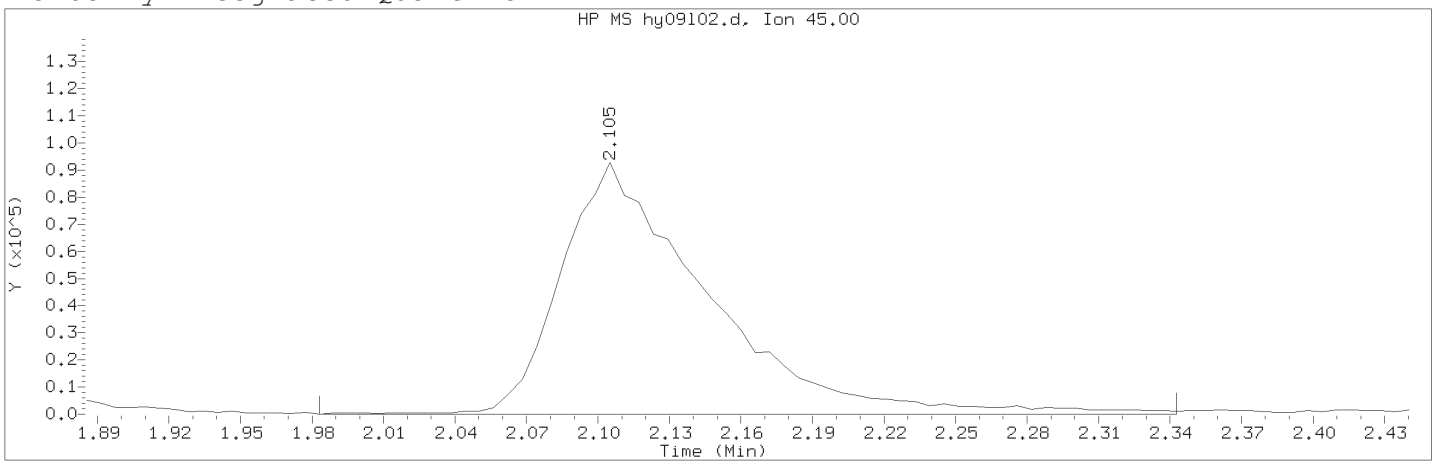
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09102.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH93 Lab Sample ID: LCSH93

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 85
Retention Time (minutes): 2.105
Quant Ion : 45.00
Area (flag) : 395668M
On-Column Amount (ng) : 4.7006
Integration start scan : 64 Integration stop scan: 123
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)

There is no spectral abundance to print at 0.000 minutes

Original Integration of Quant Ion

Data File: /chem2/HP19094.i/16may09a.b/hy09l02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

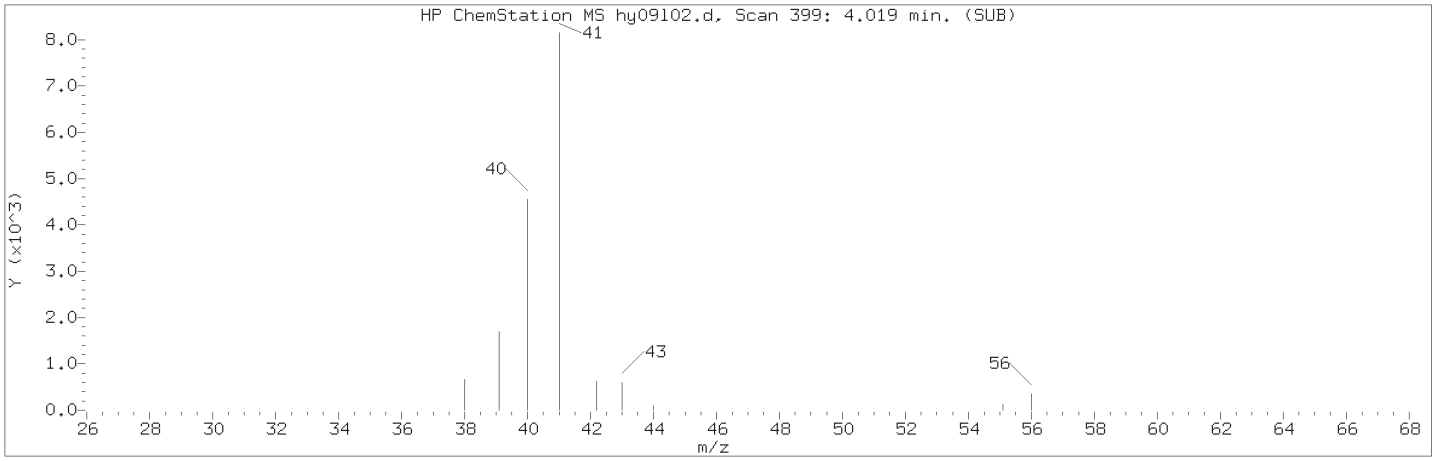
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 09-MAY-2016 10:26
Date, time and analyst ID of latest file update: 09-May-2016 10:38 Automation

Sample Name: LCSH93 Lab Sample ID: LCSH93

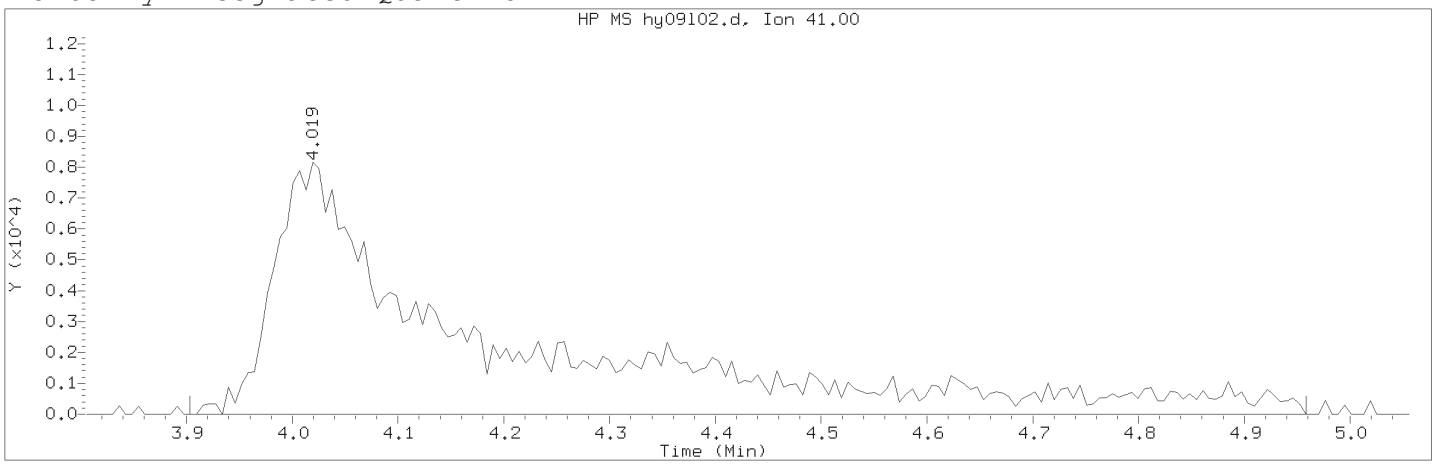
Compound Number : 0
Compound Name : Dimethyl ether
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 0.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l02.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 10:19 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH93 Lab Sample ID: LCSH93

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 399
Retention Time (minutes): 4.019
Quant Ion : 41.00
Area (flag) : 108882M
On-Column Amount (ng) : 38.9281
Integration start scan : 379 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:01.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18.
PARALLAX ID: msl01251

Data file: /chem2/HP19094.i/16may09a.b/hy09l01.d Injection date and time: **09-MAY-2016 09:39**
Data file Sample Info. Line: LCSH92;LCSH92;1;3;LCS;;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.287	(-0.024)	443	65	94878	(6)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2572242	(7)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1894267	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	890407	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	636609	10.503	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	103530	10.312	103%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2580955	9.564	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	835356	9.604	96%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.013	(-0.000)	85	404991	4.567	4.57			0.1	1
2) Chloromethane	(2)	2.154	(-0.000)	50	433916	4.988	4.99			0.2	1
5) Vinyl Chloride	(2)	2.288	(0.000)	62	439070	5.427	5.43			0.2	1
7) Bromomethane	(2)	2.617	(0.000)	94	290395	5.408	5.41			0.5	1
8) Chloroethane	(2)	2.727	(-0.000)	64	251773	5.048	5.05			0.1	1
10) Trichlorofluoromethane	(2)	3.056	(0.000)	101	572944	5.436	5.44			0.2	1
11) Ethyl ether	(2)	3.312	(-0.000)	59	199485	4.588	4.59		J	1	13
13) Acrolein	(1)	3.476	(0.001)	56	230622	42.632	42.63			5	25
15) 1,1-Dichloroethene	(2)	3.629	(0.000)	96	319207	5.278	5.28			0.2	1
16) Freon 113	(2)	3.659	(0.000)	101	337188	5.362	5.36			0.2	1
14) Acetone	(1)	3.641	(0.002)	43	286166M	38.390	38.39			3	10
17) Methyl Iodide	(2)	3.836	(-0.000)	142	569887	5.090	5.09		J	0.6	10
18) Carbon Disulfide	(2)	3.964	(-0.001)	76	893088	4.782	4.78		J	0.4	10
22) Allyl Chloride	(2)	4.110	(-0.000)	41	541595	4.736	4.74		J	0.8	10
23) Methylene Chloride	(2)	4.287	(-0.000)	84	329820	5.103	5.10			0.2	1
29) Acrylonitrile	(1)	4.598	(0.006)	53	256899	28.722	28.72			1	10
31) trans-1,2-Dichloroethene	(2)	4.726	(-0.000)	96	342239	5.255	5.26			0.2	1
33) 1,1-Dichloroethane	(2)	5.372	(-0.000)	63	640471	4.825	4.83			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.488	(-0.000)	53	565407	5.189	5.19		J	0.5	10
38) 2-Butanone	(1)	6.134	(0.009)	43	551346	43.407	43.41			1	10
42) Propionitrile	(1)	6.214	(0.006)	54	130088	41.073	41.07		J	10	100
45) Methacrylonitrile	(1)	6.439	(0.008)	67	541703	49.952	49.95		J	10	100
48) Tetrahydrofuran	(1)	6.555	(0.007)	71	98041	30.511	30.51			2	25
49) Chloroform	(2)	6.677	(-0.000)	83	628440	5.180	5.18			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.915	(0.000)	97	531281	5.134	5.13			0.1	1
54) Carbon Tetrachloride	(2)	7.146	(0.000)	117	504272	5.360	5.36			0.2	1
56) Isobutyl Alcohol	(1)	7.220	(0.006)	41	107432	125.009	125.01		J	10	200
58) Benzene	(2)	7.396	(-0.000)	78	1376328	4.979	4.98			0.1	1
59) 1,2-Dichloroethane	(2)	7.451	(0.000)	62	377278M	5.267	5.27			0.1	1
67) Trichloroethene	(2)	8.280	(-0.000)	95	377071	5.233	5.23			0.2	1
70) 1,2-Dichloropropane	(2)	8.604	(-0.000)	63	360630	5.010	5.01			0.1	1

M = Compound was manually integrated.

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Data file: /chem2/HP19094.i/16may09a.b/hy09l01.d Injection date and time: **09-MAY-2016 09:39**
Data file Sample Info. Line: LCSH92;LCSH92;1;3;LCS;;DRAPERJK;;hy09b01; Instrument ID: **HP19094.i** Batch: **H161301AA**
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Blank Data file reference: **/chem2/HP19094.i/16may09a.b/hy09b01.d**

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: **16340-SM**
Calibration date and time (Last Method Edit): 12-MAY-2016 08:00
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16may09a.b/hy09c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

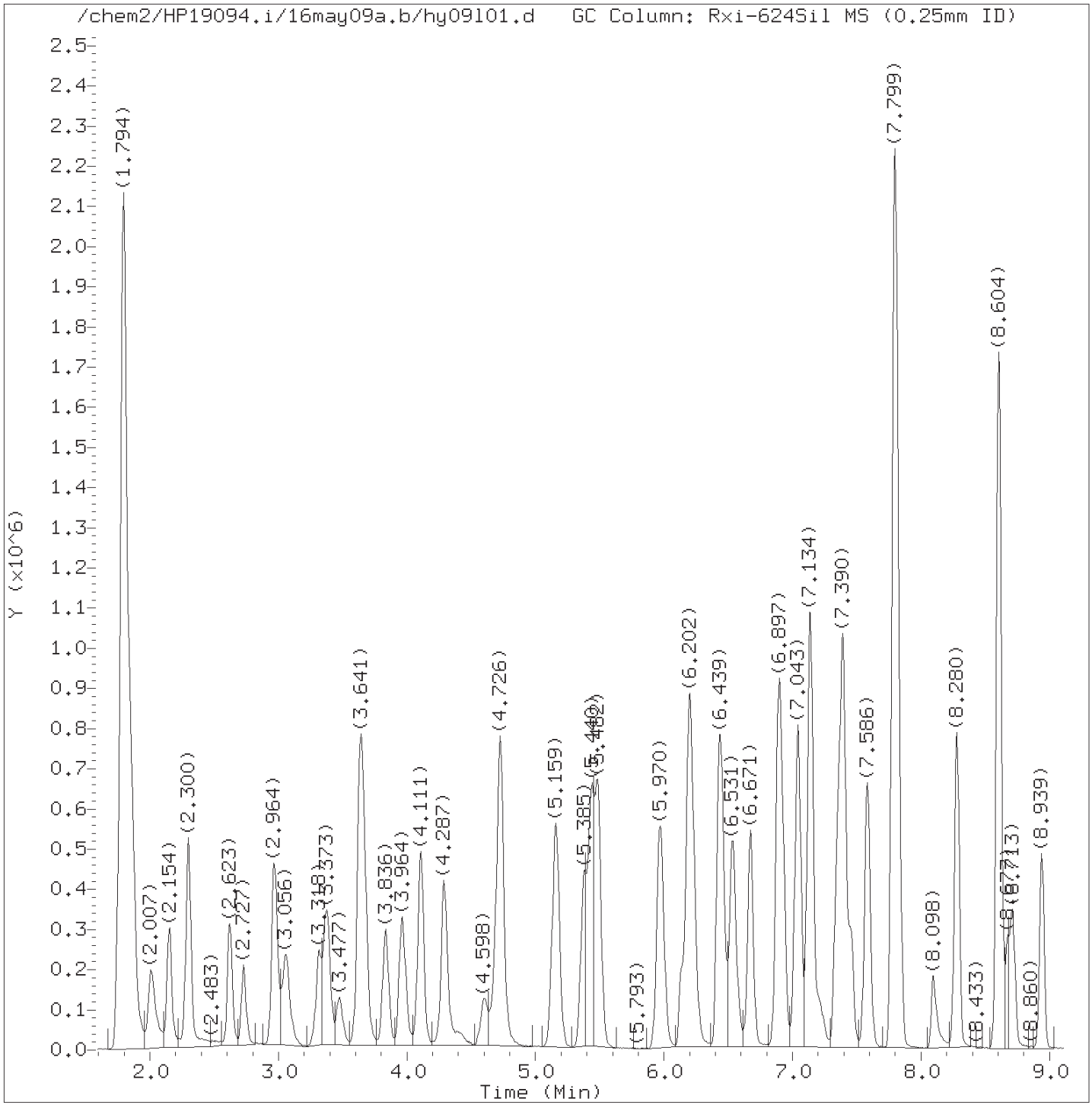
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
71) Methyl Methacrylate	(1)	8.664(0.012)	69	143778MA	6.346	6.35		J	4	10
73) Dibromomethane	(2)	8.713(-0.000)	93	159930	5.394	5.39			0.1	1
72) 1,4-Dioxane	(1)	8.695(0.008)	88	25233	176.041	176.04		J	45	200
74) Bromodichloromethane	(2)	8.939(-0.000)	83	432903	5.229	5.23			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.634(0.012)	43	974344	31.169	31.17			1	10
83) Toluene	(3)	9.878(0.000)	92	871878	4.796	4.80			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.116(0.000)	75	411517	4.830	4.83			0.1	1
86) Ethyl Methacrylate	(3)	10.176(0.000)	69	302436	4.615	4.61		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.323(0.000)	97	219591	4.988	4.99			0.1	1
89) Tetrachloroethene	(3)	10.426(0.000)	166	436692	5.087	5.09			0.1	1
90) 1,3-Dichloropropane	(3)	10.481(0.000)	76	378849	4.785	4.79			0.1	1
91) 2-Hexanone	(1)	10.518(0.014)	43	680243	30.778	30.78			1	10
93) Dibromochloromethane	(3)	10.707(0.000)	129	296646	5.256	5.26			0.1	1
95) 1,2-Dibromoethane	(3)	10.823(0.000)	107	216314	5.216	5.22			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.353(0.000)	131	336743	4.961	4.96			0.1	1
100) Ethylbenzene	(3)	11.359(0.000)	91	1689556	4.749	4.75			0.1	1
101) m+p-Xylene	(3)	11.475(-0.000)	106	1306207	9.625	9.63			0.1	3
104) o-Xylene	(3)	11.804(-0.000)	106	628862	4.775	4.78			0.1	3
105) Xylene (Total)	(3)		106	1935069	14.400	14.40			0.2	3
106) Styrene	(3)	11.816(0.000)	104	1027444	4.877	4.88			0.1	1
107) Bromoform	(3)	11.975(0.000)	173	168670	5.388	5.39			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.328(0.000)	83	257858	4.627	4.63			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.359(0.015)	53	345741	35.917	35.92			1	10
116) 1,2,3-Trichloropropane	(4)	12.383(-0.000)	110	68383	4.888	4.89			0.3	1
126) Pentachloroethane	(4)	12.840(0.000)	167	251979	5.004	5.00		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	13.072(0.000)	146	753689	4.642	4.64			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.145(0.000)	146	768827	4.661	4.66			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.401(0.000)	146	675331	4.683	4.68			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.938(0.018)	155	33874	6.821	6.82			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.493(0.000)	180	447673	4.339	4.34			0.1	1
146) Hexachlorobutadiene	(4)	14.572(0.000)	225	251145	4.659	4.66			0.1	1
147) Naphthalene	(4)	14.670(-0.000)	128	698697	4.225	4.23			0.1	1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 63

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18. PARALLAX ID: msl01251



Total Ion Chromatogram (TIC)

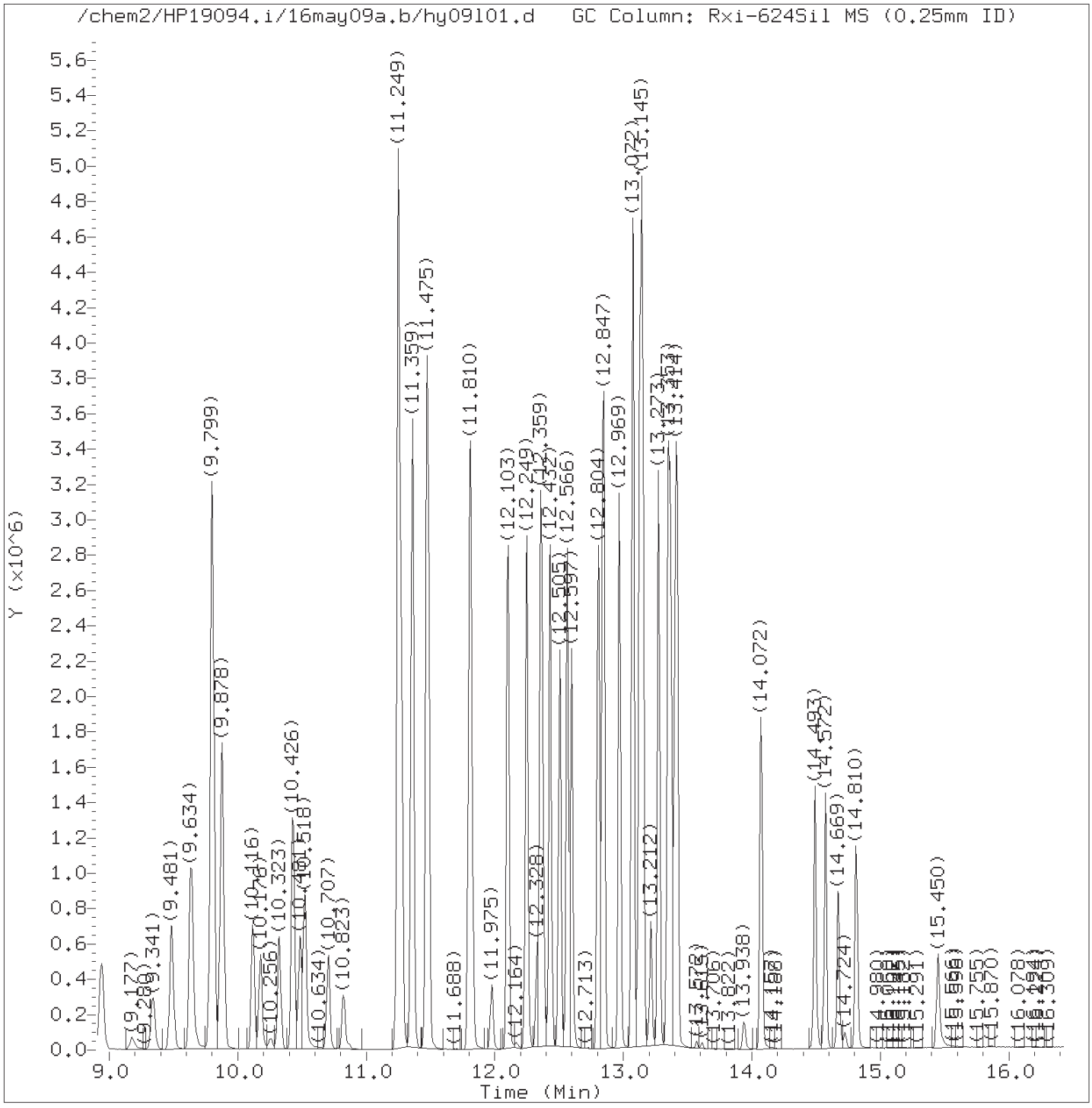
Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.013	85	404991	4.567
2) Chloromethane	(2)	2.154	50	433916	4.988
5) Vinyl Chloride	(2)	2.288	62	439070	5.427
7) Bromomethane	(2)	2.617	94	290395	5.408
8) Chloroethane	(2)	2.727	64	251773	5.048
10) Trichlorofluoromethane	(2)	3.056	101	572944	5.436
11) Ethyl ether	(2)	3.312	59	199485	4.588
13) Acrolein	(1)	3.477	56	230622	42.632
15) 1,1-Dichloroethene	(2)	3.629	96	319207	5.278
14) Acetone	(1)	3.641	43	286166M	38.390
16) Freon 113	(2)	3.659	101	337188	5.362
17) Methyl Iodide	(2)	3.836	142	569887	5.090
18) Carbon Disulfide	(2)	3.964	76	893088	4.782
22) Allyl Chloride	(2)	4.111	41	541595	4.736
23) Methylene Chloride	(2)	4.287	84	329820	5.103
26)*t-Butyl Alcohol-d10	(1)	4.287	65	94878	50.000
29) Acrylonitrile	(1)	4.598	53	256899	28.722
31) trans-1,2-Dichloroethene	(2)	4.726	96	342239	5.255
33) 1,1-Dichloroethane	(2)	5.373	63	640471	4.825
35) 2-Chloro-1,3-Butadiene	(2)	5.488	53	565407	5.189
38) 2-Butanone	(1)	6.135	43	551346	43.407
42) Propionitrile	(1)	6.214	54	130088	41.073
45) Methacrylonitrile	(1)	6.439	67	541703	49.952
48) Tetrahydrofuran	(1)	6.555	71	98041	30.511
49) Chloroform	(2)	6.677	83	628440	5.180
50)$Dibromofluoromethane	(2)	6.891	113	636609	10.503
51) 1,1,1-Trichloroethane	(2)	6.915	97	531281	5.134
54) Carbon Tetrachloride	(2)	7.147	117	504272	5.360
56) Isobutyl Alcohol	(1)	7.220	41	107432	125.009
57)$1,2-Dichloroethane-d4	(2)	7.348	102	103530	10.312
58) Benzene	(2)	7.397	78	1376328	4.979
59) 1,2-Dichloroethane	(2)	7.451	62	377278M	5.267
63)*Fluorobenzene	(2)	7.793	96	2572242	10.000
67) Trichloroethene	(2)	8.280	95	377071	5.233
70) 1,2-Dichloropropane	(2)	8.604	63	360630	5.010
71) Methyl Methacrylate	(1)	8.665	69	143778MA	6.346
72) 1,4-Dioxane	(1)	8.695	88	25233	176.041
73) Dibromomethane	(2)	8.713	93	159930	5.394

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.939	83	432903	5.229
81) 4-Methyl-2-Pentanone	(1)	9.634	43	974344	31.169
82)$Toluene-d8	(3)	9.799	98	2580955	9.564
83) Toluene	(3)	9.878	92	871878	4.796
84) trans-1,3-Dichloropropene	(3)	10.116	75	411517	4.830
86) Ethyl Methacrylate	(3)	10.176	69	302436	4.615
88) 1,1,2-Trichloroethane	(3)	10.323	97	219591	4.988
89) Tetrachloroethene	(3)	10.426	166	436692	5.087
90) 1,3-Dichloropropane	(3)	10.481	76	378849	4.785
91) 2-Hexanone	(1)	10.518	43	680243	30.778
93) Dibromochloromethane	(3)	10.707	129	296646	5.256
95) 1,2-Dibromoethane	(3)	10.823	107	216314	5.216
97)*Chlorobenzene-d5	(3)	11.249	117	1894267	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	336743	4.961
100) Ethylbenzene	(3)	11.359	91	1689556	4.749
101) m+p-Xylene	(3)	11.475	106	1306207	9.625
105) Xylene (Total)	(3)		106	1935069	14.400
104) o-Xylene	(3)	11.804	106	628862	4.775
106) Styrene	(3)	11.816	104	1027444	4.877
107) Bromoform	(3)	11.975	173	168670	5.388
111)$4-Bromofluorobenzene	(3)	12.249	95	835356	9.604
113) 1,1,2,2-Tetrachloroethane	(4)	12.328	83	257858	4.627
115) trans-1,4-Dichloro-2-butene	(1)	12.359	53	345741	35.917
116) 1,2,3-Trichloropropane	(4)	12.383	110	68383	4.888
126) Pentachloroethane	(4)	12.841	167	251979	5.004
131) 1,3-Dichlorobenzene	(4)	13.072	146	753689	4.642
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	890407	10.000
134) 1,4-Dichlorobenzene	(4)	13.145	146	768827	4.661
139) 1,2-Dichlorobenzene	(4)	13.401	146	675331	4.683
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	33874	6.821
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	447673	4.339
146) Hexachlorobutadiene	(4)	14.572	225	251145	4.659
147) Naphthalene	(4)	14.669	128	698697	4.225

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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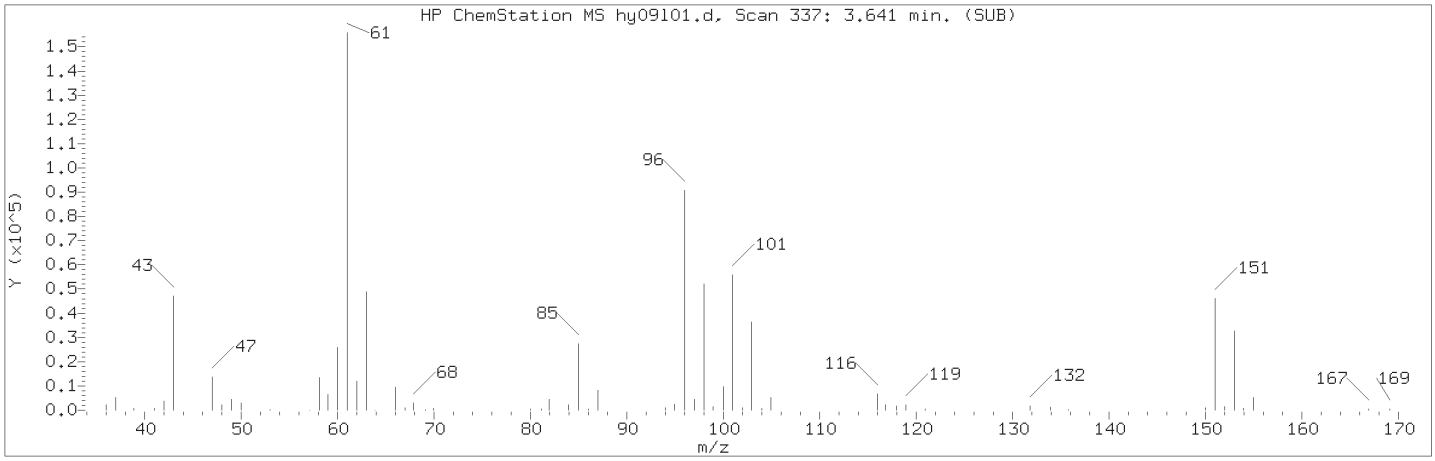
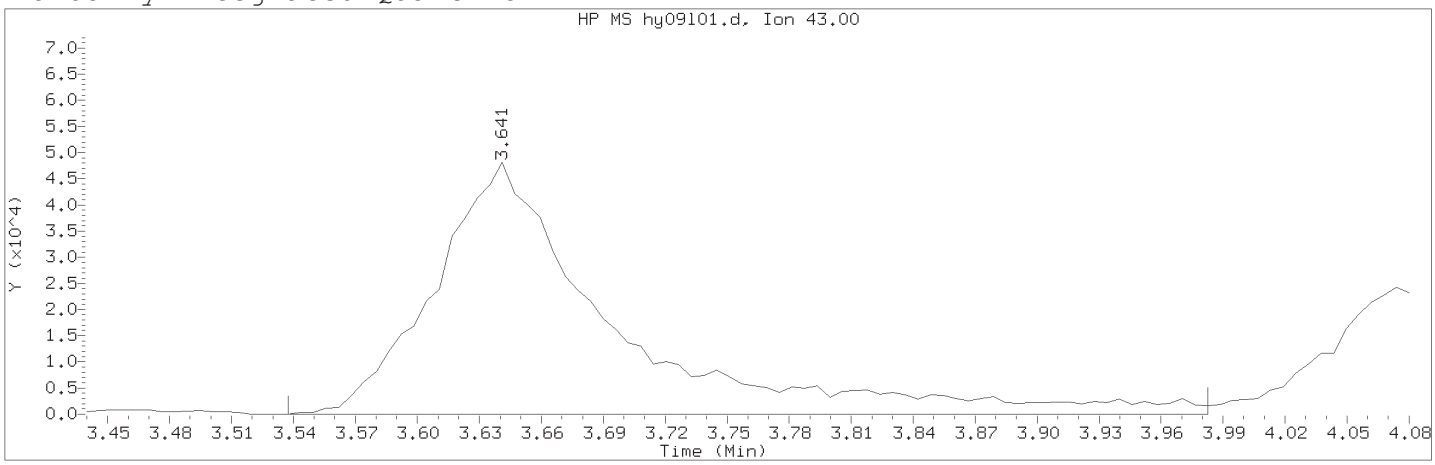
on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

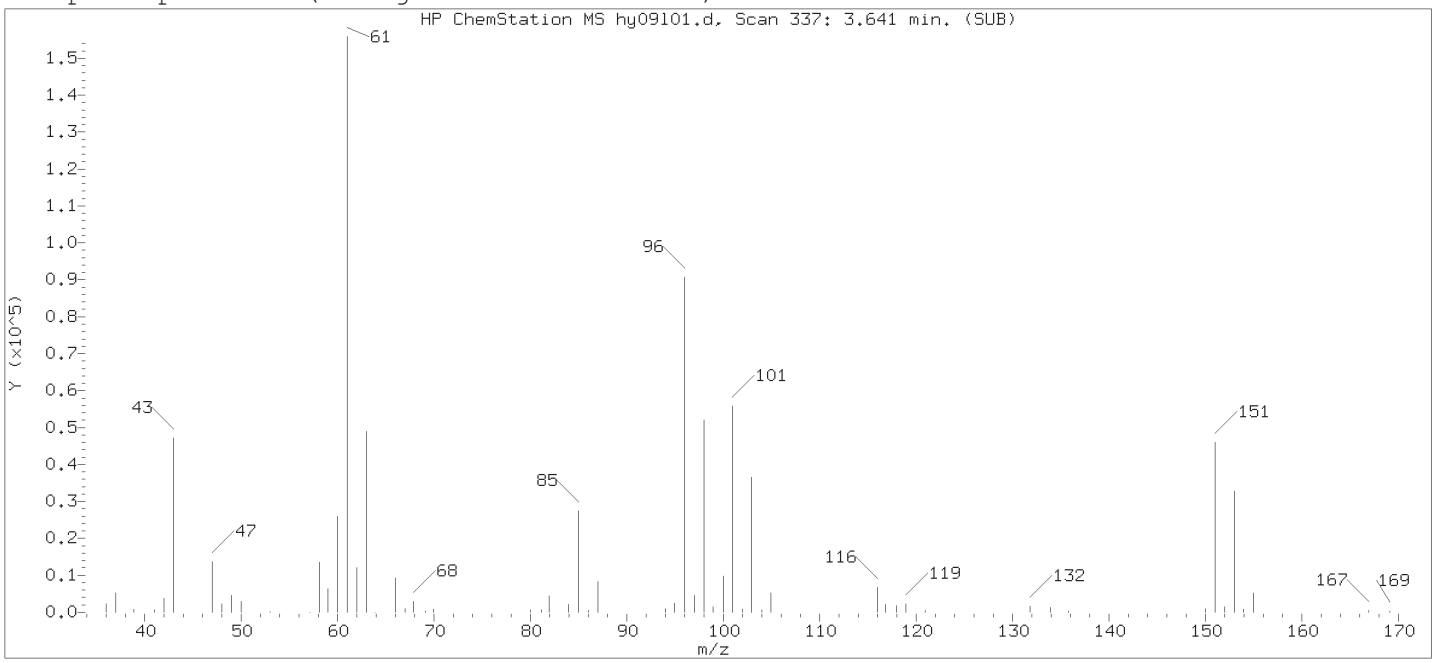
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 286166M
On-Column Amount (ng) : 38.3898
Integration start scan : 319 Integration stop scan: 392
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

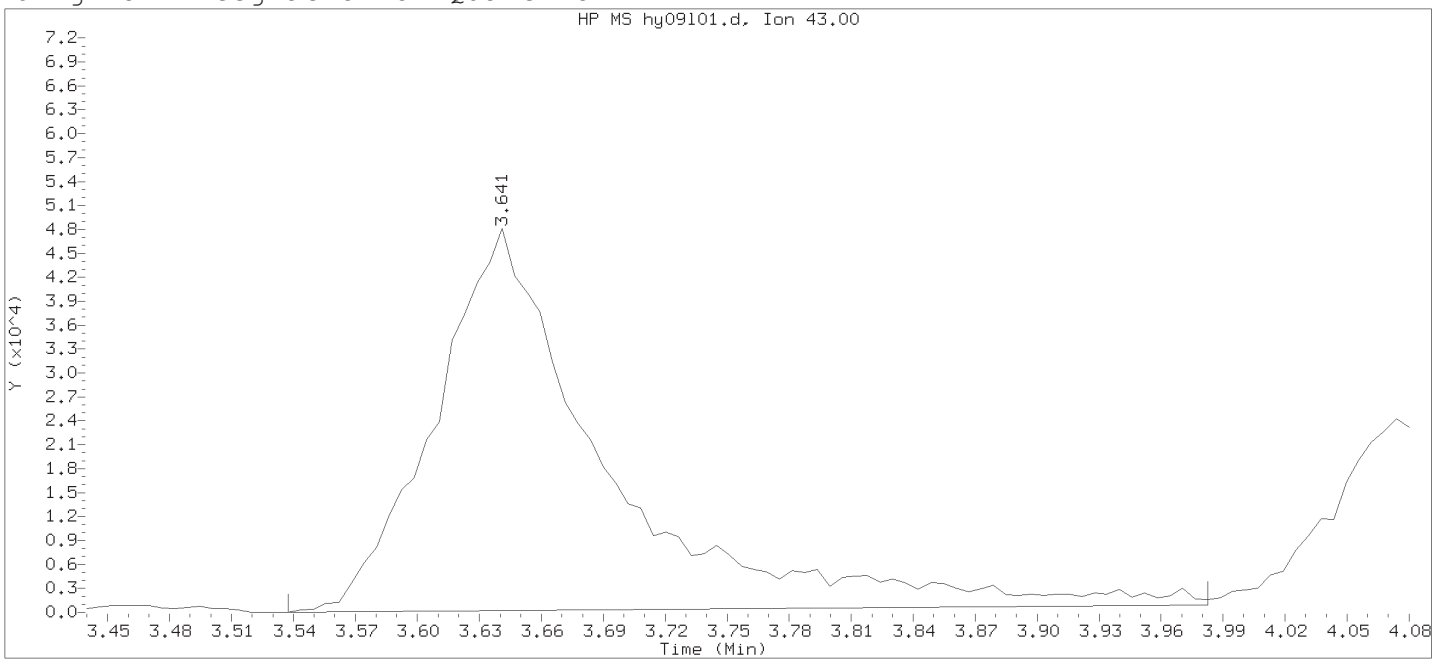
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

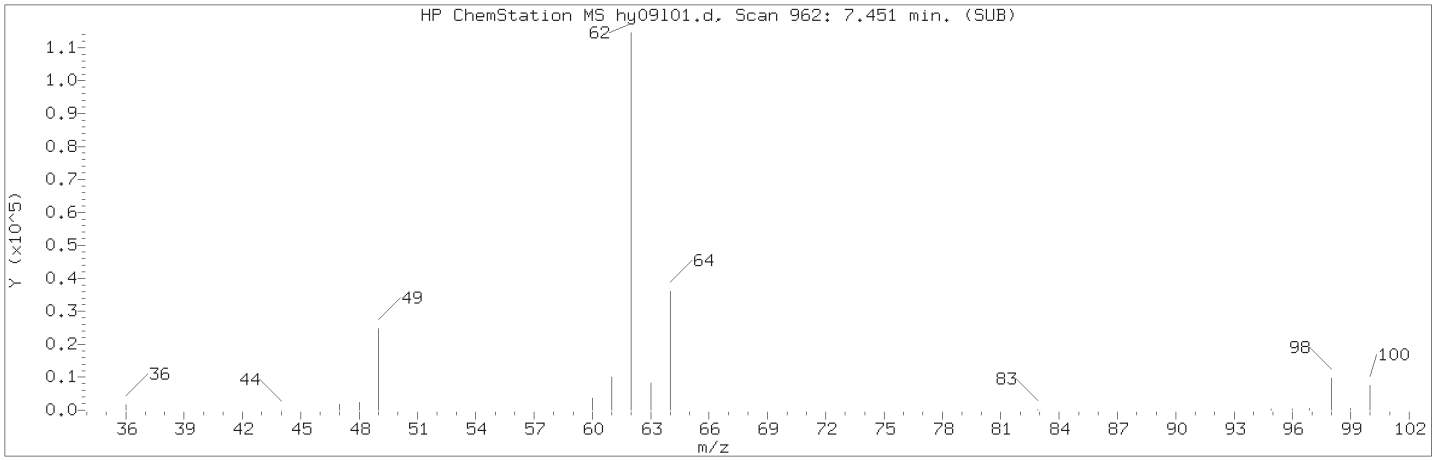
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: all
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:58 Automation

Sample Name: LCSH92 Lab Sample ID: LCSH92

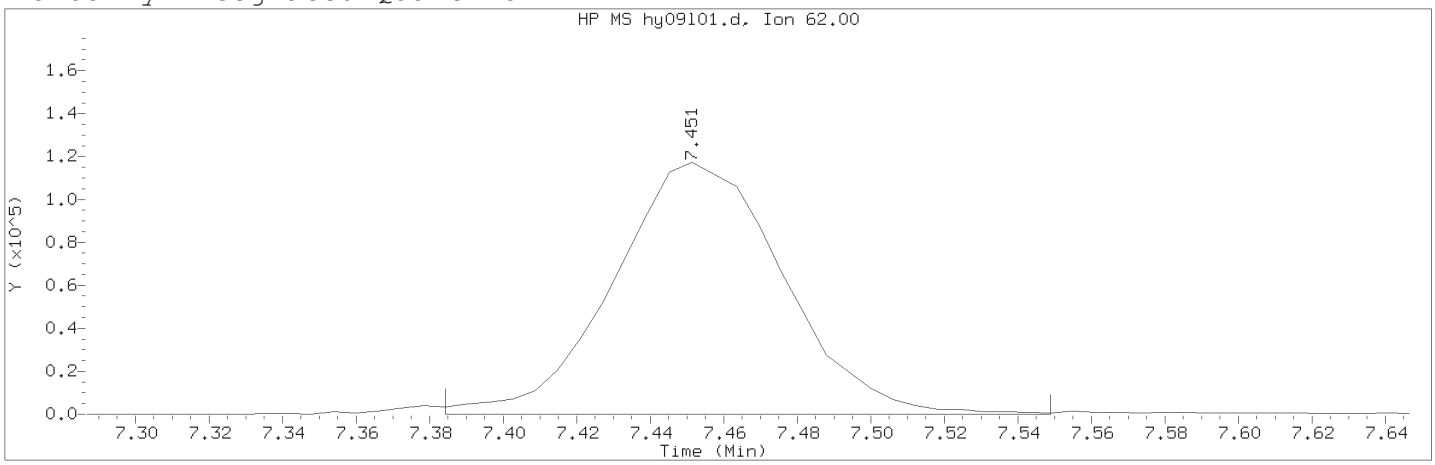
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 337		
Retention Time (minutes)	: 3.641		
Quant Ion	: 43.00		
Area	: 273286		
On-column Amount (ng)	: 36.6616		
Integration start scan	: 319	Integration stop scan:	392
Y at integration start	: 0	Y at integration end:	943

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

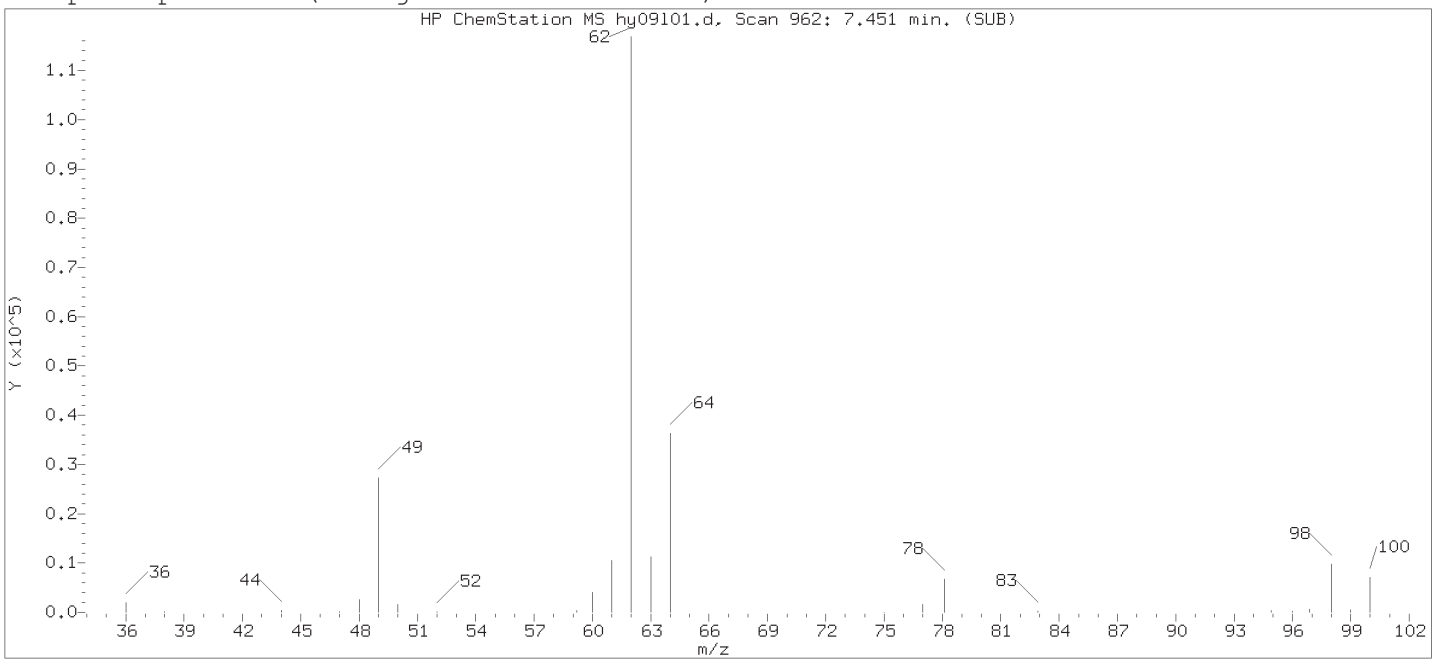
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.451
Quant Ion : 62.00
Area (flag) : 377278M
On-Column Amount (ng) : 5.2673
Integration start scan : 950 Integration stop scan: 977
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

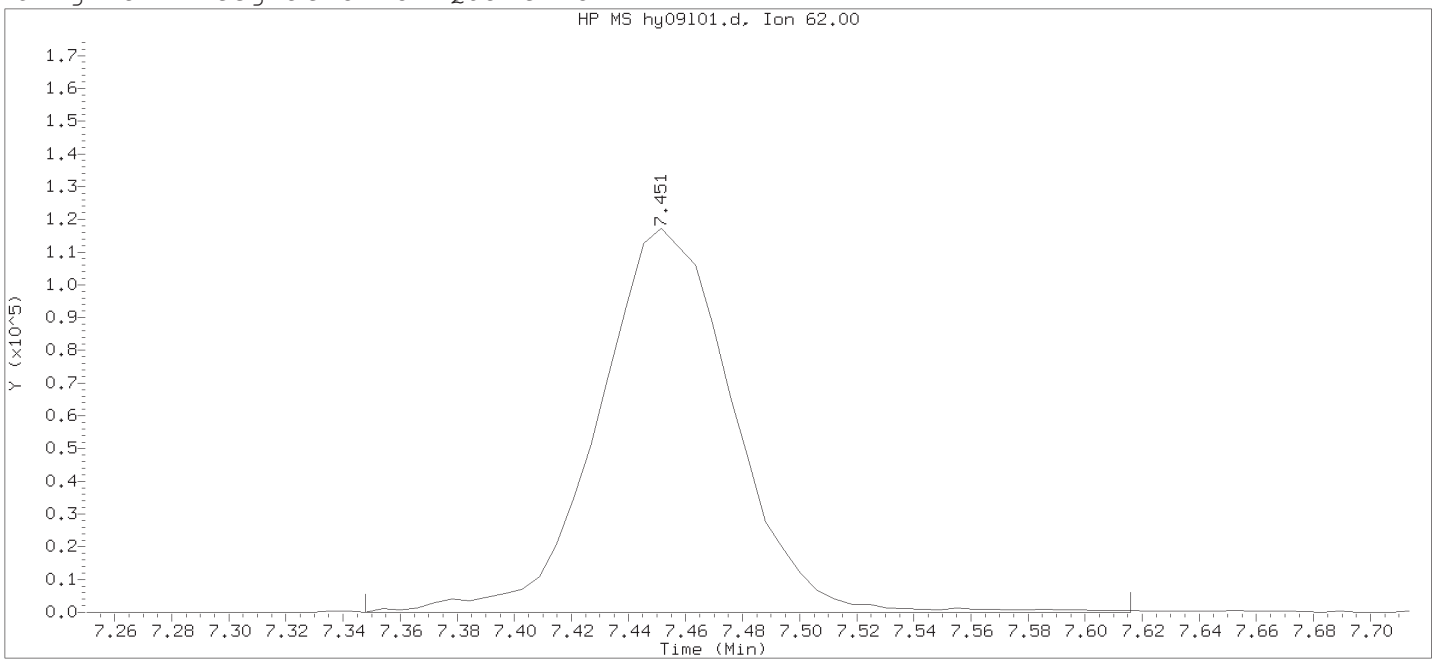
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

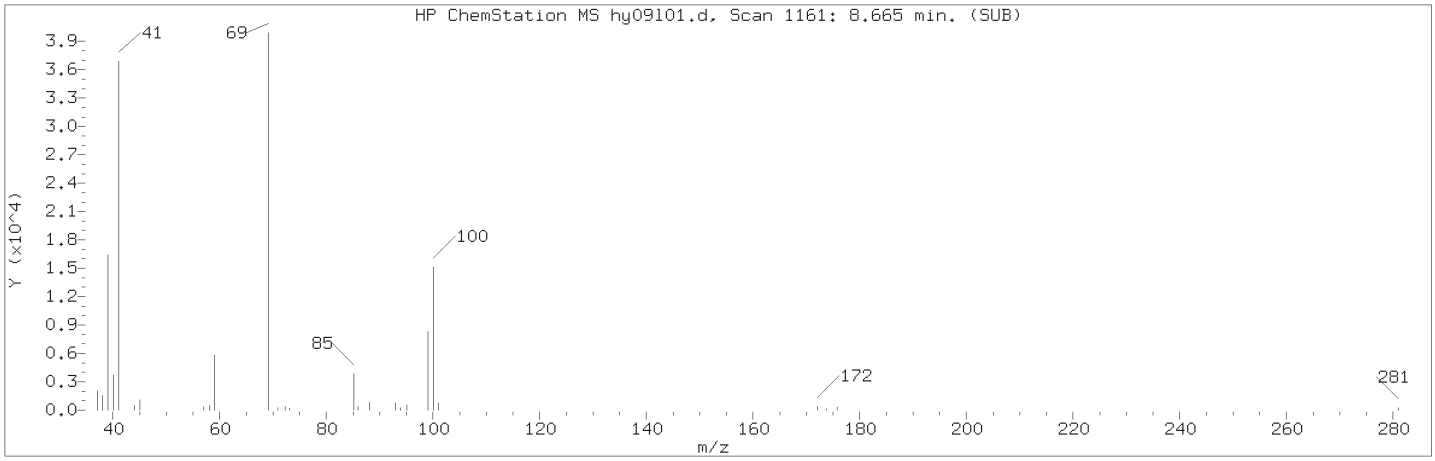
Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: all
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:58 Automation

Sample Name: LCSH92 Lab Sample ID: LCSH92

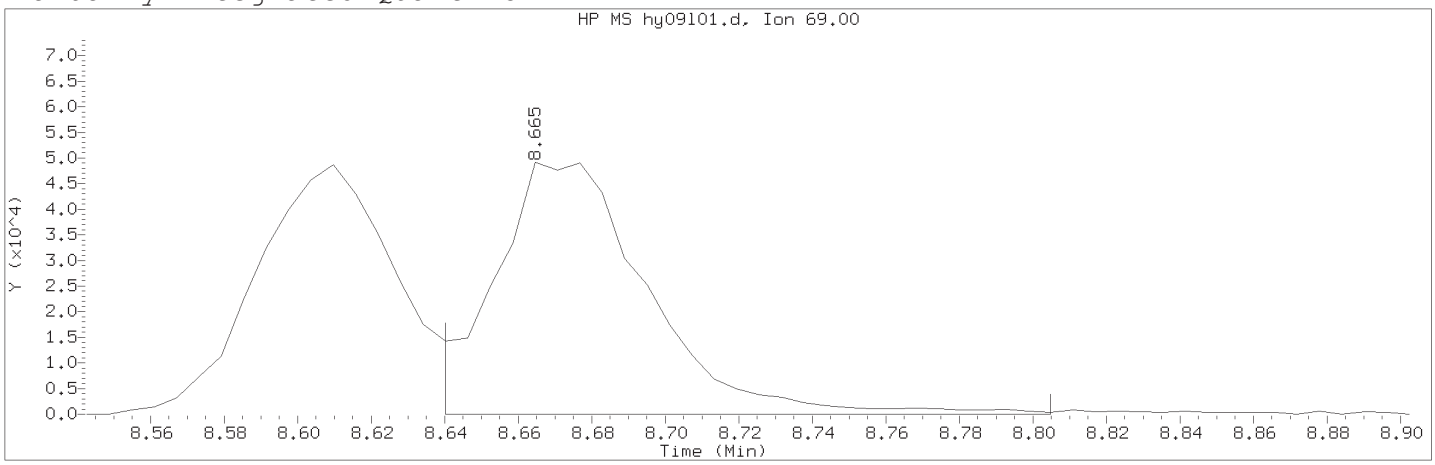
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 962
Retention Time (minutes): 7.451
Quant Ion : 62.00
Area : 384002
On-column Amount (ng) : 5.3611
Integration start scan : 944 Integration stop scan: 988
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature text: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: 16340-SM
Calibration date and time: 12-MAY-2016 08:00
Date, time and analyst ID of latest file update: 12-May-2016 08:00 kel01973

Sample Name: LCSH92 Lab Sample ID: LCSH92

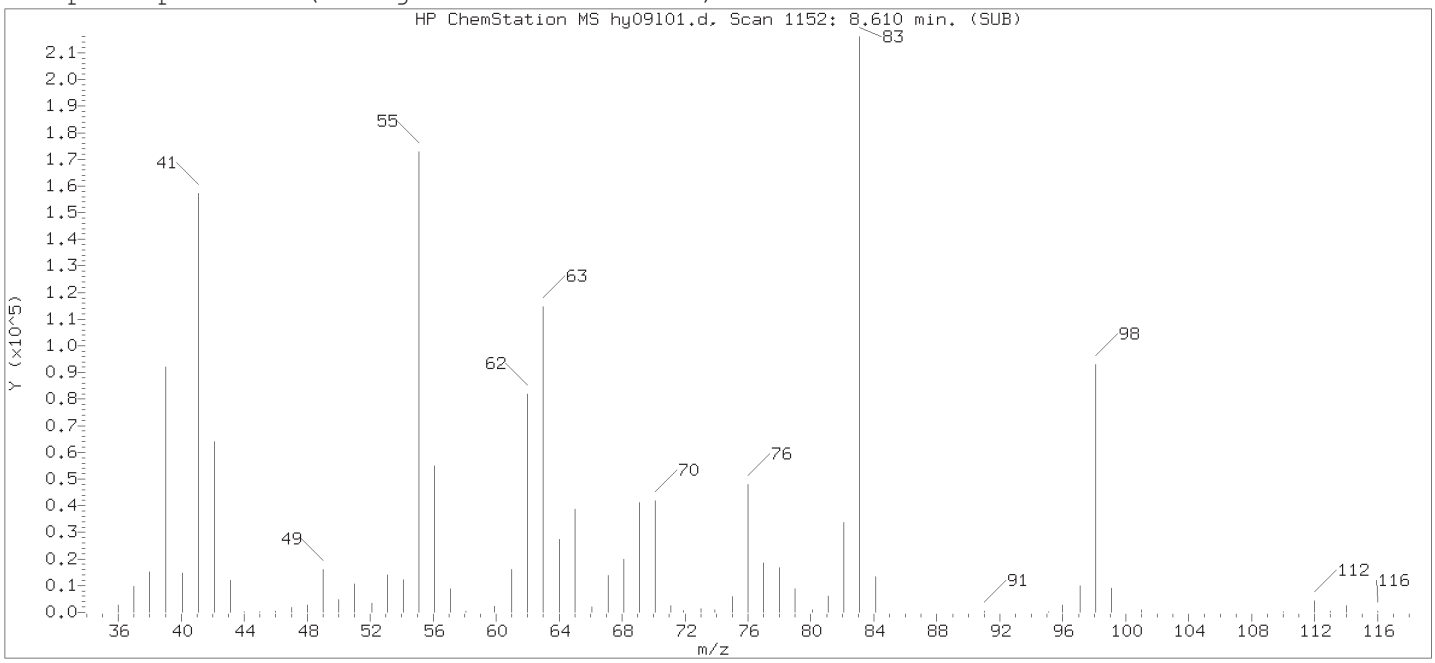
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1161
Retention Time (minutes): 8.665
Quant Ion : 69.00
Area (flag) : 143778MA
On-Column Amount (ng) : 6.3456
Integration start scan : 1156 Integration stop scan: 1183
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

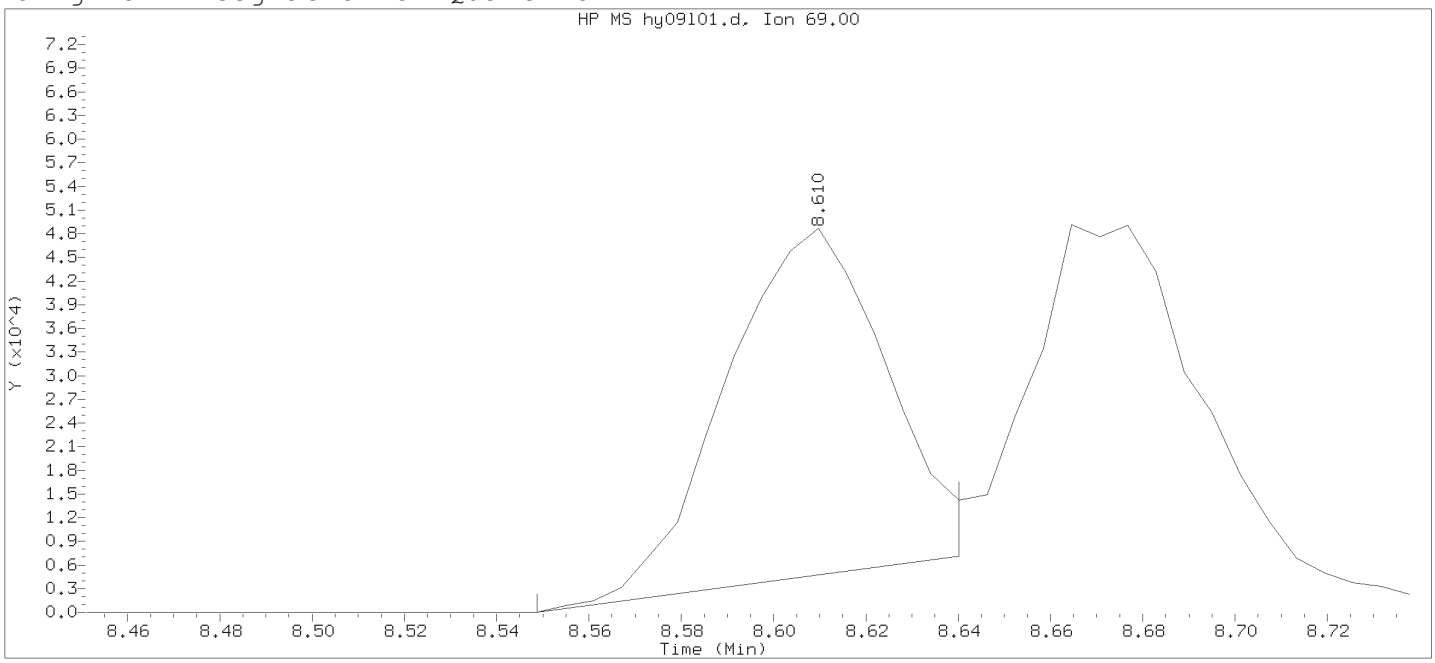
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Marla S. Brewer on 05/12/2016 at 19:18.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16may09a.b/hy09l01.d Instrument ID: HP19094.i
Injection date and time: 09-MAY-2016 09:39 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16may09a.b/m8260c25.m Sublist used: all
Calibration date and time: 09-MAY-2016 09:38
Date, time and analyst ID of latest file update: 09-May-2016 09:58 Automation

Sample Name: LCSH92 Lab Sample ID: LCSH92

Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 69.00
Area : 105657
On-column Amount (ng) : 4.6632
Integration start scan : 1141 Integration stop scan: 1156
Y at integration start : 0 Y at integration end: 7108

Digitally signed by Kerri E. Koch Legerlotz on 05/12/2016 at 08:11.
Target 3.5 esignature text: kel01973

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8354933	16C1	X		1	
8354934	16MW8	X		1	
8354935	16MW9	X		1	
8354936	16WC1A	X		1	Unspiked
8354937	16WC1A MS	X		1	Matrix Spike
8354938	16WC1A MSD	X		1	Matrix Spike Duplicate
8354939	16WDUP	X		1	Field Duplicate Sample
8354940	16WC1B	X		1	
8354941	16-2	X		1	
8354942	16-3	X		1	
8354943	16-5	X		1	
8354944	16WC2B	X		1	
8354945	16SPRING	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 16124WAA026 (Sample number(s): 8354933-8354940, UNSPK: 8354937-8354936)
The recovery(ies) for the following analyte(s) in the LCS exceeds the acceptance window indicating a positive bias: a,a-Dimethylphenethylamine, Aramite, Disulfoton, Methapyrilene

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

The recovery(ies) for the following analyte(s) in the LCS is below the acceptance window: 1,4-Naphthoquinone

Batch#: 16131WAJ026
The recovery(ies) for the following analyte(s) in the LCS is below the acceptance window: Dimethoate

The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeds the acceptance window indicating a positive bias: a,a-Dimethylphenethylamine

Since the recovery is high and no analytes are detected above the quantitation limit, the data is reported.

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD is below the acceptance window: 1,3,5-Trinitrobenzene, 1,4-Naphthoquinone, Chlorobenzilate

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 1,3,5-Trinitrobenzene, Aramite, Chlorobenzilate, Dimethoate, Dimethylphthalate, Hexachlorocyclopentadiene

Refer to the QC Summary forms for more information.

(Sample number(s): 8354933-8354936, 8354939-8354940RE: Analysis: 10461)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

(Sample number(s): 8354933-8354936, 8354939-8354940: Analysis: 10461)
The QC limits for 1,4-naphthoquinone are advisory due to the erratic performance of the compound.

The stated QC limits for Methapyrilene are advisory only until sufficient data points can be obtained to calculate statistical limits.

The % RPD for target analyte(s) in the Laboratory Control Spike/Spike Duplicate is outside the QC acceptance limits as noted on the QC Summary. Since the individual % recovery is within the acceptance limits, the data is reported.

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Batch#: 16124WAA026 (Sample number(s): 8354933-8354940, UNSPK: 8354937-8354936)
The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: 1,4-Naphthoquinone, a,a-Dimethylphenethylamine, Aramite, Disulfoton, Methapyrilene

The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 1-Naphthylamine, 3,3'-Dimethylbenzidine, o-Toluidine

Refer to the QC Summary forms for more information.

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 16124WAA026 (Sample number(s): 8354933-8354940, UNSPK: 8354937-8354936)
The recovery(ies) for the following surrogate(s) is below the acceptance window: 2,4,6-Tribromophenol (8354940), 2-Fluorophenol (8354940), Phenol-d6 (8354940)

Batch#: 16124WAZ026 (Sample number(s): 8354941-8354945)
The recovery(ies) for the following surrogate(s) exceeds the acceptance window: 2-Fluorobiphenyl (8354944), Nitrobenzene-d5 (8354944), Terphenyl-d14 (8354944)

Batch#: 16131WAJ026
The recovery(ies) for the following surrogate(s) is below the acceptance window: 2,4,6-Tribromophenol (8354940RE), 2-Fluorophenol (8354940RE), Phenol-d6 (8354940RE)

(Sample number(s): 8354944: Analysis: 10461)
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE61

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOAs by 8270D in Water	16124WAA026	SBLKWA124	05/06/2016 20:30:00
		124WALCS	05/06/2016 20:58:00
		8354933	05/07/2016 00:45:00
		8354934	05/07/2016 01:13:00
		8354935	05/07/2016 01:41:00
		8354936 UNSPK	05/06/2016 23:20:00
		8354937 MS	05/06/2016 23:48:00
		8354938 MSD	05/07/2016 00:17:00
		8354939	05/07/2016 02:10:00
		8354940	05/07/2016 02:38:00
SVOAs by 8270D in Water	16124WAZ026	SBLKWZ124	05/06/2016 20:30:00
		124WZLCS	05/06/2016 20:58:00
		8354941	05/07/2016 03:06:00
		8354942	05/07/2016 03:34:00
		8354943	05/07/2016 04:03:00
		8354944	05/07/2016 04:31:00
		8354945	05/07/2016 04:59:00
SVOAs by 8270D in Water	16131WAJ026	SBLKWJ131	05/11/2016 21:11:00
		131WJLCS	05/11/2016 21:39:00
		131WJLCSD	05/11/2016 22:07:00
		8354940RE	05/12/2016 00:56:00

Fraction: Semivolatiles by GC/MS

16124WAA026 / SBLKWA124 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Picoline	05/06/16	N.D.	ug/l	2	5
N-Nitrosomethylethylamine	05/06/16	N.D.	ug/l	2	5
Methyl methanesulfonate	05/06/16	N.D.	ug/l	1	5
N-Nitrosodimethylamine	05/06/16	N.D.	ug/l	2	5
N-Nitrosodiethylamine	05/06/16	N.D.	ug/l	0.5	1
Ethyl methanesulfonate	05/06/16	N.D.	ug/l	0.5	1
Phenol	05/06/16	N.D.	ug/l	0.5	1
Aniline	05/06/16	N.D.	ug/l	0.5	1
Pyridine	05/06/16	N.D.	ug/l	2	5
bis(2-Chloroethyl)ether	05/06/16	N.D.	ug/l	0.5	1
2-Chlorophenol	05/06/16	N.D.	ug/l	0.5	1
Benzyl alcohol	05/06/16	N.D.	ug/l	10	15
2-Methylphenol	05/06/16	N.D.	ug/l	0.5	1
bis(2-Chloroisopropyl)ether	05/06/16	N.D.	ug/l	0.5	1
N-Nitrosopyrrolidine	05/06/16	N.D.	ug/l	0.5	1
4-Methylphenol	05/06/16	N.D.	ug/l	0.5	1
N-Nitroso-di-n-propylamine	05/06/16	N.D.	ug/l	0.5	1
Acetophenone	05/06/16	N.D.	ug/l	0.5	1
N-Nitrosomorpholine	05/06/16	N.D.	ug/l	2	5
o-Toluidine	05/06/16	N.D.	ug/l	0.5	1
Hexachloroethane	05/06/16	N.D.	ug/l	1	5
Nitrobenzene	05/06/16	N.D.	ug/l	0.5	1
N-Nitrosopiperidine	05/06/16	N.D.	ug/l	0.5	1
Isophorone	05/06/16	N.D.	ug/l	0.5	1
2-Nitrophenol	05/06/16	N.D.	ug/l	0.5	1
2,4-Dimethylphenol	05/06/16	N.D.	ug/l	0.5	1
O,O,O-Triethylphosphorothioate	05/06/16	N.D.	ug/l	2	5
bis(2-Chloroethoxy)methane	05/06/16	N.D.	ug/l	0.5	1
a,a-Dimethylphenethylamine	05/06/16	N.D.	ug/l	5	50
2,4-Dichlorophenol	05/06/16	N.D.	ug/l	0.5	1
4-Chloroaniline	05/06/16	N.D.	ug/l	2	4
2,6-Dichlorophenol	05/06/16	N.D.	ug/l	0.5	1
Hexachloropropene	05/06/16	N.D.	ug/l	2	5
N-Nitrosodi-n-butylamine	05/06/16	N.D.	ug/l	2	5
1,4-Phenylenediamine	05/06/16	N.D.	ug/l	75	300
4-Chloro-3-methylphenol	05/06/16	N.D.	ug/l	0.5	1
Safrole	05/06/16	N.D.	ug/l	2	5
2-Methylnaphthalene	05/06/16	N.D.	ug/l	0.1	0.5
Hexachlorocyclopentadiene	05/06/16	N.D.	ug/l	5	15
1,2,4,5-Tetrachlorobenzene	05/06/16	N.D.	ug/l	0.5	1
2,4,6-Trichlorophenol	05/06/16	N.D.	ug/l	0.5	1
2,4,5-Trichlorophenol	05/06/16	N.D.	ug/l	0.5	1
Isosafrole	05/06/16	N.D.	ug/l	2	5
2-Chloronaphthalene	05/06/16	N.D.	ug/l	0.4	1
2-Nitroaniline	05/06/16	N.D.	ug/l	0.5	1

Fraction: Semivolatiles by GC/MS

16124WAA026 / SBLKWA124 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,4-Naphthoquinone	05/06/16	N.D.	ug/l	25	60
Dimethylphthalate	05/06/16	N.D.	ug/l	2	5
1,3-Dinitrobenzene	05/06/16	N.D.	ug/l	2	5
2,6-Dinitrotoluene	05/06/16	N.D.	ug/l	0.5	1
Acenaphthylene	05/06/16	N.D.	ug/l	0.1	0.5
3-Nitroaniline	05/06/16	N.D.	ug/l	0.5	1
Acenaphthene	05/06/16	N.D.	ug/l	0.1	0.5
2,4-Dinitrophenol	05/06/16	N.D.	ug/l	10	30
4-Nitrophenol	05/06/16	N.D.	ug/l	10	30
Pentachlorobenzene	05/06/16	N.D.	ug/l	0.5	1
2,4-Dinitrotoluene	05/06/16	N.D.	ug/l	1	5
Dibenzofuran	05/06/16	N.D.	ug/l	0.5	1
1-Naphthylamine	05/06/16	N.D.	ug/l	5	15
2,3,4,6-Tetrachlorophenol	05/06/16	N.D.	ug/l	0.5	1
2-Naphthylamine	05/06/16	N.D.	ug/l	5	15
Diethylphthalate	05/06/16	N.D.	ug/l	2	5
Thionazin	05/06/16	N.D.	ug/l	2	5
Fluorene	05/06/16	N.D.	ug/l	0.1	0.5
4-Chlorophenyl-phenylether	05/06/16	N.D.	ug/l	0.5	1
5-Nitro-o-toluidine	05/06/16	N.D.	ug/l	0.5	1
4-Nitroaniline	05/06/16	N.D.	ug/l	0.5	1
4,6-Dinitro-2-methylphenol	05/06/16	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	05/06/16	N.D.	ug/l	0.5	1
1,3,5-Trinitrobenzene	05/06/16	N.D.	ug/l	5	15
Phorate	05/06/16	N.D.	ug/l	0.5	1
Phenacetin	05/06/16	N.D.	ug/l	0.5	1
4-Bromophenyl-phenylether	05/06/16	N.D.	ug/l	0.5	1
Diallate trans/cis	05/06/16	N.D.	ug/l	1	5
Hexachlorobenzene	05/06/16	N.D.	ug/l	0.1	0.5
Dimethoate	05/06/16	N.D.	ug/l	3	10
Pentachlorophenol	05/06/16	N.D.	ug/l	1	5
4-Aminobiphenyl	05/06/16	N.D.	ug/l	0.5	1
Pentachloronitrobenzene	05/06/16	N.D.	ug/l	2	5
Pronamide	05/06/16	N.D.	ug/l	0.5	1
Disulfoton	05/06/16	N.D.	ug/l	25	50
Phenanthrene	05/06/16	N.D.	ug/l	0.1	0.5
Anthracene	05/06/16	N.D.	ug/l	0.1	0.5
Methyl parathion	05/06/16	N.D.	ug/l	1	5
Di-n-butylphthalate	05/06/16	N.D.	ug/l	2	5
Parathion	05/06/16	N.D.	ug/l	2	5
4-Nitroquinoline-1-oxide	05/06/16	N.D.	ug/l	20	60
Methapyrilene	05/06/16	N.D.	ug/l	15	50
Isodrin	05/06/16	N.D.	ug/l	0.5	1
Fluoranthene	05/06/16	N.D.	ug/l	0.1	0.5
Pyrene	05/06/16	N.D.	ug/l	0.1	0.5

Fraction: Semivolatiles by GC/MS

16124WAA026 / SBLKWA124 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Aramite	05/06/16	N.D.	ug/l	5	15
p-Dimethylaminoazobenzene	05/06/16	N.D.	ug/l	0.5	1
Chlorobenzilate	05/06/16	N.D.	ug/l	3	10
Butylbenzylphthalate	05/06/16	N.D.	ug/l	2	5
Famphur	05/06/16	N.D.	ug/l	25	50
3,3'-Dimethylbenzidine	05/06/16	N.D.	ug/l	25	75
Kepone	05/06/16	N.D.	ug/l	25	50
2-Acetylaminofluorene	05/06/16	N.D.	ug/l	2	5
bis(2-Ethylhexyl)phthalate	05/06/16	N.D.	ug/l	2	5
3,3'-Dichlorobenzidine	05/06/16	N.D.	ug/l	2	5
Benzo(a)anthracene	05/06/16	N.D.	ug/l	0.1	0.5
Chrysene	05/06/16	N.D.	ug/l	0.1	0.5
Di-n-octylphthalate	05/06/16	N.D.	ug/l	2	5
7,12-Dimethylbenz[a]anthracene	05/06/16	N.D.	ug/l	0.5	1
Benzo(b)fluoranthene	05/06/16	N.D.	ug/l	0.1	0.5
Benzo(k)fluoranthene	05/06/16	N.D.	ug/l	0.1	0.5
Benzo(a)pyrene	05/06/16	N.D.	ug/l	0.1	0.5
3-Methylcholanthrene	05/06/16	N.D.	ug/l	0.5	1
Indeno(1,2,3-cd)pyrene	05/06/16	N.D.	ug/l	0.1	0.5
Dibenz(a,h)anthracene	05/06/16	N.D.	ug/l	0.1	0.5
Benzo(g,h,i)perylene	05/06/16	N.D.	ug/l	0.1	0.5

16124WAZ026 / SBLKWZ124 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	05/06/16	N.D.	ug/l	0.5	1
2,4-Dinitrotoluene	05/06/16	N.D.	ug/l	1	5
Diethylphthalate	05/06/16	N.D.	ug/l	2	5

16131WAJ026 / SBLKWJ131 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Picoline	05/11/16	N.D.	ug/l	2	5
N-Nitrosomethylethylamine	05/11/16	N.D.	ug/l	2	5
Methyl methanesulfonate	05/11/16	N.D.	ug/l	1	5
N-Nitrosodimethylamine	05/11/16	N.D.	ug/l	2	5
N-Nitrosodiethylamine	05/11/16	N.D.	ug/l	0.5	1
Ethyl methanesulfonate	05/11/16	N.D.	ug/l	0.5	1
Phenol	05/11/16	N.D.	ug/l	0.5	1
Aniline	05/11/16	N.D.	ug/l	0.5	1
Pyridine	05/11/16	N.D.	ug/l	2	5
bis(2-Chloroethyl)ether	05/11/16	N.D.	ug/l	0.5	1
2-Chlorophenol	05/11/16	N.D.	ug/l	0.5	1
Benzyl alcohol	05/11/16	N.D.	ug/l	10	15
2-Methylphenol	05/11/16	N.D.	ug/l	0.5	1
bis(2-Chloroisopropyl)ether	05/11/16	N.D.	ug/l	0.5	1
N-Nitrosopyrrolidine	05/11/16	N.D.	ug/l	0.5	1

Fraction: Semivolatiles by GC/MS

16131WAJ026 / SBLKWJ131 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
4-Methylphenol	05/11/16	N.D.	ug/l	0.5	1
N-Nitroso-di-n-propylamine	05/11/16	N.D.	ug/l	0.5	1
Acetophenone	05/11/16	N.D.	ug/l	0.5	1
N-Nitrosomorpholine	05/11/16	N.D.	ug/l	2	5
o-Toluidine	05/11/16	N.D.	ug/l	0.5	1
Hexachloroethane	05/11/16	N.D.	ug/l	1	5
Nitrobenzene	05/11/16	N.D.	ug/l	0.5	1
N-Nitrosopiperidine	05/11/16	N.D.	ug/l	0.5	1
Isophorone	05/11/16	N.D.	ug/l	0.5	1
2-Nitrophenol	05/11/16	N.D.	ug/l	0.5	1
2,4-Dimethylphenol	05/11/16	N.D.	ug/l	0.5	1
O,O,O-Triethylphosphorothioate	05/11/16	N.D.	ug/l	2	5
bis(2-Chloroethoxy)methane	05/11/16	N.D.	ug/l	0.5	1
a,a-Dimethylphenethylamine	05/11/16	N.D.	ug/l	5	50
2,4-Dichlorophenol	05/11/16	N.D.	ug/l	0.5	1
4-Chloroaniline	05/11/16	N.D.	ug/l	2	4
2,6-Dichlorophenol	05/11/16	N.D.	ug/l	0.5	1
Hexachloropropene	05/11/16	N.D.	ug/l	2	5
N-Nitrosodi-n-butylamine	05/11/16	N.D.	ug/l	2	5
1,4-Phenylenediamine	05/11/16	N.D.	ug/l	75	300
4-Chloro-3-methylphenol	05/11/16	N.D.	ug/l	0.5	1
Safrole	05/11/16	N.D.	ug/l	2	5
2-Methylnaphthalene	05/11/16	N.D.	ug/l	0.1	0.5
Hexachlorocyclopentadiene	05/11/16	N.D.	ug/l	5	15
1,2,4,5-Tetrachlorobenzene	05/11/16	N.D.	ug/l	0.5	1
2,4,6-Trichlorophenol	05/11/16	N.D.	ug/l	0.5	1
2,4,5-Trichlorophenol	05/11/16	N.D.	ug/l	0.5	1
Isosafrole	05/11/16	N.D.	ug/l	2	5
2-Chloronaphthalene	05/11/16	N.D.	ug/l	0.4	1
2-Nitroaniline	05/11/16	N.D.	ug/l	0.5	1
1,4-Naphthoquinone	05/11/16	N.D.	ug/l	25	60
Dimethylphthalate	05/11/16	N.D.	ug/l	2	5
1,3-Dinitrobenzene	05/11/16	N.D.	ug/l	2	5
2,6-Dinitrotoluene	05/11/16	N.D.	ug/l	0.5	1
Acenaphthylene	05/11/16	N.D.	ug/l	0.1	0.5
3-Nitroaniline	05/11/16	N.D.	ug/l	0.5	1
Acenaphthene	05/11/16	N.D.	ug/l	0.1	0.5
2,4-Dinitrophenol	05/11/16	N.D.	ug/l	10	30
4-Nitrophenol	05/11/16	N.D.	ug/l	10	30
Pentachlorobenzene	05/11/16	N.D.	ug/l	0.5	1
2,4-Dinitrotoluene	05/11/16	N.D.	ug/l	1	5
Dibenzofuran	05/11/16	N.D.	ug/l	0.5	1
1-Naphthylamine	05/11/16	N.D.	ug/l	5	15
2,3,4,6-Tetrachlorophenol	05/11/16	N.D.	ug/l	0.5	1
2-Naphthylamine	05/11/16	N.D.	ug/l	5	15

Fraction: Semivolatiles by GC/MS

16131WAJ026 / SBLKWJ131 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Diethylphthalate	05/11/16	N.D.	ug/l	2	5
Thionazin	05/11/16	N.D.	ug/l	2	5
Fluorene	05/11/16	N.D.	ug/l	0.1	0.5
4-Chlorophenyl-phenylether	05/11/16	N.D.	ug/l	0.5	1
5-Nitro-o-toluidine	05/11/16	N.D.	ug/l	0.5	1
4-Nitroaniline	05/11/16	N.D.	ug/l	0.5	1
4,6-Dinitro-2-methylphenol	05/11/16	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	05/11/16	N.D.	ug/l	0.5	1
1,3,5-Trinitrobenzene	05/11/16	N.D.	ug/l	5	15
Phorate	05/11/16	N.D.	ug/l	0.5	1
Phenacetin	05/11/16	N.D.	ug/l	0.5	1
4-Bromophenyl-phenylether	05/11/16	N.D.	ug/l	0.5	1
Diallate trans/cis	05/11/16	N.D.	ug/l	1	5
Hexachlorobenzene	05/11/16	N.D.	ug/l	0.1	0.5
Dimethoate	05/11/16	N.D.	ug/l	3	10
Pentachlorophenol	05/11/16	N.D.	ug/l	1	5
4-Aminobiphenyl	05/11/16	N.D.	ug/l	0.5	1
Pentachloronitrobenzene	05/11/16	N.D.	ug/l	2	5
Pronamide	05/11/16	N.D.	ug/l	0.5	1
Disulfoton	05/11/16	N.D.	ug/l	25	50
Phenanthrene	05/11/16	N.D.	ug/l	0.1	0.5
Anthracene	05/11/16	N.D.	ug/l	0.1	0.5
Methyl parathion	05/11/16	N.D.	ug/l	1	5
Di-n-butylphthalate	05/11/16	N.D.	ug/l	2	5
Parathion	05/11/16	N.D.	ug/l	2	5
4-Nitroquinoline-1-oxide	05/11/16	N.D.	ug/l	20	60
Methapyrilene	05/11/16	N.D.	ug/l	15	50
Isodrin	05/11/16	N.D.	ug/l	0.5	1
Fluoranthene	05/11/16	N.D.	ug/l	0.1	0.5
Pyrene	05/11/16	N.D.	ug/l	0.1	0.5
Aramite	05/11/16	N.D.	ug/l	5	15
p-Dimethylaminoazobenzene	05/11/16	N.D.	ug/l	0.5	1
Chlorobenzilate	05/11/16	N.D.	ug/l	3	10
Butylbenzylphthalate	05/11/16	N.D.	ug/l	2	5
Famphur	05/11/16	N.D.	ug/l	25	50
3,3'-Dimethylbenzidine	05/11/16	N.D.	ug/l	25	75
Kepone	05/11/16	N.D.	ug/l	25	50
2-Acetylaminofluorene	05/11/16	N.D.	ug/l	2	5
bis(2-Ethylhexyl)phthalate	05/11/16	N.D.	ug/l	2	5
3,3'-Dichlorobenzidine	05/11/16	N.D.	ug/l	2	5
Benzo(a)anthracene	05/11/16	N.D.	ug/l	0.1	0.5
Chrysene	05/11/16	N.D.	ug/l	0.1	0.5
Di-n-octylphthalate	05/11/16	N.D.	ug/l	2	5
7,12-Dimethylbenz[a]anthracene	05/11/16	N.D.	ug/l	0.5	1
Benzo(b)fluoranthene	05/11/16	N.D.	ug/l	0.1	0.5

Fraction: Semivolatiles by GC/MS

16131WAJ026 / SBLKWJ131 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzo(k)fluoranthene	05/11/16	N.D.	ug/l	0.1	0.5
Benzo(a)pyrene	05/11/16	N.D.	ug/l	0.1	0.5
3-Methylcholanthrene	05/11/16	N.D.	ug/l	0.5	1
Indeno(1,2,3-cd)pyrene	05/11/16	N.D.	ug/l	0.1	0.5
Dibenz(a,h)anthracene	05/11/16	N.D.	ug/l	0.1	0.5
Benzo(g,h,i)perylene	05/11/16	N.D.	ug/l	0.1	0.5

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAE61
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

16124WAA026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWA124	99	22 - 150	91	61 - 112	65	10 - 103	82	46 - 128	47	10 - 85	88	41 - 125
124WALCS	103	22 - 150	89	61 - 112	71	10 - 103	87	46 - 128	54	10 - 85	82	41 - 125
8354933	95	22 - 150	94	61 - 112	63	10 - 103	92	46 - 128	47	10 - 85	90	41 - 125
8354934	86	22 - 150	90	61 - 112	54	10 - 103	87	46 - 128	39	10 - 85	76	41 - 125
8354935	90	22 - 150	94	61 - 112	58	10 - 103	86	46 - 128	55	10 - 85	88	41 - 125
8354936 UNSPK	74	22 - 150	91	61 - 112	53	10 - 103	92	46 - 128	51	10 - 85	76	41 - 125
8354937 MS	87	22 - 150	95	61 - 112	64	10 - 103	93	46 - 128	66	10 - 85	82	41 - 125
8354938 MSD	74	22 - 150	94	61 - 112	60	10 - 103	95	46 - 128	60	10 - 85	86	41 - 125
8354939	69	22 - 150	93	61 - 112	47	10 - 103	89	46 - 128	44	10 - 85	66	41 - 125
8354940	7 *	22 - 150	85	61 - 112	2 *	10 - 103	82	46 - 128	5 *	10 - 85	56	41 - 125

16124WAZ026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWZ124	91	61 - 112	82	46 - 128	88	41 - 125
124WZLCS	89	61 - 112	87	46 - 128	82	41 - 125
8354941	93	61 - 112	88	46 - 128	91	41 - 125
8354942	93	61 - 112	87	46 - 128	93	41 - 125
8354943	89	61 - 112	83	46 - 128	88	41 - 125
8354944	142 *	61 - 112	136 *	46 - 128	138 *	41 - 125
8354945	94	61 - 112	89	46 - 128	86	41 - 125

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Fraction: Semivolatiles by GC/MS

16131WAJ026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWJ131	93	22 - 150	91	61 - 112	75	10 - 103	91	46 - 128	59	10 - 85	109	41 - 125
131WJLCS	103	22 - 150	90	61 - 112	76	10 - 103	93	46 - 128	61	10 - 85	99	41 - 125
131WJLCSD	102	22 - 150	96	61 - 112	79	10 - 103	99	46 - 128	62	10 - 85	108	41 - 125
8354940RE	1 *	22 - 150	95	61 - 112	1 *	10 - 103	94	46 - 128	1 *	10 - 85	89	41 - 125

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Picoline	50	N.D.	44.38	43.74	89	87	65-96	1	30
N-Nitrosomethylethylamine	50	N.D.	49.4	49.28	99	99	68-109	0	30
Methyl methanesulfonate	50	N.D.	44.37	43.59	89	87	47-100	2	30
N-Nitrosodimethylamine	50	N.D.	38.71	38.13	77	76	28-99	2	30
N-Nitrosodiethylamine	50	N.D.	51.	50.22	102	100	71-113	2	30
Ethyl methanesulfonate	50	N.D.	50.51	48.85	101	98	76-106	3	30
Phenol	50	N.D.	35.5	32.14	71	64	19-82	10	30
Aniline	50	N.D.	38.33	29.07	77	58	38-106	27	30
Pyridine	50	N.D.	35.99	35.8	72	72	18-100	1	30
bis(2-Chloroethyl)ether	50	N.D.	48.94	47.9	98	96	65-120	2	30
2-Chlorophenol	50	N.D.	46.8	43.75	94	88	59-120	7	30
Benzyl alcohol	50	N.D.	48.64	47.62	97	95	55-118	2	30
2-Methylphenol	50	N.D.	49.12	46.45	98	93	54-122	6	30
bis(2-Chloroisopropyl)ether	50	N.D.	47.4	46.88	95	94	63-129	1	30
N-Nitrosopyrrolidine	50	N.D.	51.04	50.27	102	101	67-113	2	30
4-Methylphenol	50	N.D.	47.58	42.75	95	86	44-114	11	30
N-Nitroso-di-n-propylamine	50	N.D.	49.46	48.46	99	97	63-121	2	30
Acetophenone	50	N.D.	47.99	47.8	96	96	61-124	0	30
N-Nitrosomorpholine	50	N.D.	47.6	45.67	95	91	57-116	4	30
o-Toluidine	50	N.D.	38.18	23.5	76	47	21-121	48 *	30
Hexachloroethane	50	N.D.	41.97	42.46	84	85	23-121	1	30
Nitrobenzene	50	N.D.	49.61	50.46	99	101	70-121	2	30
N-Nitrosopiperidine	50	N.D.	50.42	51.01	101	102	74-111	1	30
Isophorone	50	N.D.	52.08	53.19	104	106	68-125	2	30
2-Nitrophenol	50	N.D.	53.42	54.35	107	109	67-131	2	30
2,4-Dimethylphenol	50	N.D.	44.36	43.78	89	88	63-117	1	30
O,O,O-Triethylphosphorothioate	50	N.D.	51.18	51.87	102	104	79-113	1	30
bis(2-Chloroethoxy)methane	50	N.D.	51.93	51.19	104	102	67-124	1	30
a,a-Dimethylphenethylamine	50	N.D.	59.44	61.84	119 *	124 *	10-113	4	30
2,4-Dichlorophenol	50	N.D.	45.96	45.52	92	91	66-126	1	30
4-Chloroaniline	50	N.D.	43.06	34.71	86	69	45-115	21	30
2,6-Dichlorophenol	50	N.D.	48.44	47.58	97	95	78-111	2	30
Hexachloropropene	50	N.D.	40.75	43.48	82	87	32-107	6	30
N-Nitrosodi-n-butylamine	50	N.D.	48.34	48.63	97	97	65-109	1	30
4-Chloro-3-methylphenol	50	N.D.	51.27	50.59	103	101	65-125	1	30
Safrole	50	N.D.	51.82	52.76	104	106	76-109	2	30
2-Methylnaphthalene	50	N.D.	49.3	50.82	99	102	61-117	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Hexachlorocyclopentadiene	100	N.D.	66.71	66.92	67	67	10-101	0	30
1,2,4,5-Tetrachlorobenzene	50	N.D.	49.67	49.86	99	100	46-129	0	30
2,4,6-Trichlorophenol	50	N.D.	45.65	43.35	91	87	71-130	5	30
2,4,5-Trichlorophenol	50	N.D.	48.98	47.33	98	95	68-126	3	30
Isosafrole	50	N.D.	56.49	56.61	113	113	70-137	0	30
2-Chloronaphthalene	50	N.D.	48.45	48.63	97	97	57-126	0	30
2-Nitroaniline	50	N.D.	54.35	54.54	109	109	68-130	0	30
1,4-Naphthoquinone	100	N.D.	404.69	340.38	405 *	340 *	10-69	17	30
Dimethylphthalate	50	N.D.	51.88	50.49	104	101	26-133	3	30
1,3-Dinitrobenzene	50	N.D.	54.57	54.78	109	110	76-118	0	30
2,6-Dinitrotoluene	50	N.D.	55.78	56.3	112	113	71-133	1	30
Acenaphthylene	50	N.D.	55.21	54.93	110	110	67-125	1	30
3-Nitroaniline	50	N.D.	50.62	44.03	101	88	58-122	14	30
Acenaphthene	50	N.D.	51.7	51.81	103	104	69-123	0	30
2,4-Dinitrophenol	100	N.D.	76.12	82.59	76	83	42-129	8	30
4-Nitrophenol	50	N.D.	36.82	39.43	74	79	11-88	7	30
Pentachlorobenzene	50	N.D.	52.86	53.38	106	107	75-113	1	30
2,4-Dinitrotoluene	50	N.D.	53.8	53.71	108	107	71-131	0	30
Dibenzofuran	50	N.D.	51.68	50.96	103	102	67-120	1	30
1-Naphthylamine	100	N.D.	68.7	42.79	69	43	10-112	46 *	30
2,3,4,6-Tetrachlorophenol	50	N.D.	51.09	44.78	102	90	76-124	13	30
2-Naphthylamine	100	N.D.	65.85	48.6	66	49	19-103	30	30
Diethylphthalate	50	N.D.	52.15	51.24	104	102	55-124	2	30
Thionazin	50	N.D.	54.58	53.42	109	107	68-121	2	30
Fluorene	50	N.D.	52.37	51.92	105	104	71-127	1	30
4-Chlorophenyl-phenylether	50	N.D.	52.67	52.33	105	105	67-125	1	30
5-Nitro-o-toluidine	50	N.D.	53.46	44.52	107	89	43-117	18	30
4-Nitroaniline	50	N.D.	50.49	47.35	101	95	61-111	6	30
4,6-Dinitro-2-methylphenol	50	N.D.	48.3	50.92	97	102	64-124	5	30
N-Nitrosodiphenylamine	50	N.D.	50.47	52.35	101	105	65-125	4	30
1,3,5-Trinitrobenzene	50	N.D.	46.3	46.13	93	92	31-120	0	30
Phorate	50	N.D.	53.41	53.63	107	107	66-130	0	30
Phenacetin	50	N.D.	53.29	53.	107	106	70-115	1	30
4-Bromophenyl-phenylether	50	N.D.	53.84	53.57	108	107	64-129	1	30
Diallate trans/cis	50	N.D.	48.3	48.54	97	97	67-112	0	30
Hexachlorobenzene	50	N.D.	52.58	53.88	105	108	64-128	2	30
Dimethoate	50	N.D.	39.36	37.96	79	76	14-122	4	30
Pentachlorophenol	50	N.D.	46.91	41.95	94	84	53-133	11	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 8354936 MS: 8354937 MSD: 8354938 **Analyte**	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
4-Aminobiphenyl	50	N.D.	50.41	38.77	101	78	33-113	26	30
Pentachloronitrobenzene	50	N.D.	52.29	54.08	105	108	69-117	3	30
Pronamide	50	N.D.	54.51	55.91	109	112	77-116	3	30
Disulfoton	50	N.D.	136.2	136.92	272 *	274 *	78-173	1	30
Phenanthrene	50	N.D.	49.68	50.14	99	100	65-120	1	30
Anthracene	50	N.D.	51.73	52.44	103	105	68-126	1	30
Methyl parathion	50	N.D.	39.86	38.37	80	77	19-125	4	30
Di-n-butylphthalate	50	N.D.	52.15	53.52	104	107	61-125	3	30
Parathion	50	N.D.	56.93	57.72	114	115	73-129	1	30
4-Nitroquinoline-1-oxide	500	N.D.	539.64	535.31	108	107	59-124	1	30
Methapyrilene	200	N.D.	466.16	465.06	233 *	233 *	70-130	0	30
Isodrin	50	N.D.	55.93	55.92	112	112	71-118	0	30
Fluoranthene	50	N.D.	54.57	55.53	109	111	68-129	2	30
Pyrene	50	N.D.	49.4	49.35	99	99	68-118	0	30
Aramite	50	N.D.	106.93	107.12	214 *	214 *	10-125	0	30
p-Dimethylaminoazobenzene	50	N.D.	59.35	58.91	119	118	63-139	1	30
Chlorobenzilate	50	N.D.	54.99	55.16	110	110	49-134	0	30
Butylbenzylphthalate	50	N.D.	53.61	54.21	107	108	56-124	1	30
3,3'-Dimethylbenzidine	100	N.D.	56.13 J	35.8 J	56	36	10-82	44 *	30
2-Acetylaminofluorene	50	N.D.	64.62	66.11	129	132	63-146	2	30
bis(2-Ethylhexyl)phthalate	50	N.D.	53.61	54.43	107	109	66-130	2	30
3,3'-Dichlorobenzidine	50	N.D.	51.56	47.12	103	94	39-118	9	30
Benzo(a)anthracene	50	N.D.	57.74	59.34	115	119	69-133	3	30
Chrysene	50	N.D.	58.15	58.6	116	117	71-136	1	30
Di-n-octylphthalate	50	N.D.	56.17	58.31	112	117	73-131	4	30
7,12-Dimethylbenz[a]anthracene	50	N.D.	54.47	55.67	109	111	60-118	2	30
Benzo(b)fluoranthene	50	N.D.	55.33	57.68	111	115	71-131	4	30
Benzo(k)fluoranthene	50	N.D.	53.99	54.96	108	110	72-128	2	30
Benzo(a)pyrene	50	N.D.	53.11	55.14	106	110	68-126	4	30
3-Methylcholanthrene	50	N.D.	66.97	67.19	134	134	77-134	0	30
Indeno(1,2,3-cd)pyrene	50	N.D.	45.89	44.46	92	89	62-128	3	30
Dibenz(a,h)anthracene	50	N.D.	47.12	46.02	94	92	64-133	2	30
Benzo(g,h,i)perylene	50	N.D.	44.65	42.23	89	84	62-132	6	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 124WALCS	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Picoline	50	43.91	NA	88	NA	65-96	NA	NA
N-Nitrosomethylethylamine	50	48.07	NA	96	NA	68-109	NA	NA
Methyl methanesulfonate	50	44.17	NA	88	NA	47-100	NA	NA
N-Nitrosodimethylamine	50	37.03	NA	74	NA	28-99	NA	NA
N-Nitrosodiethylamine	50	49.41	NA	99	NA	71-113	NA	NA
Ethyl methanesulfonate	50	48.67	NA	97	NA	76-106	NA	NA
Phenol	50	30.23	NA	60	NA	19-82	NA	NA
Aniline	50	37.14	NA	74	NA	38-106	NA	NA
Pyridine	50	35.1	NA	70	NA	18-100	NA	NA
bis(2-Chloroethyl)ether	50	47.71	NA	95	NA	65-120	NA	NA
2-Chlorophenol	50	47.4	NA	95	NA	59-120	NA	NA
Benzyl alcohol	50	46.56	NA	93	NA	55-118	NA	NA
2-Methylphenol	50	46.5	NA	93	NA	54-122	NA	NA
bis(2-Chloroisopropyl)ether	50	46.52	NA	93	NA	63-129	NA	NA
N-Nitrosopyrrolidine	50	49.11	NA	98	NA	67-113	NA	NA
4-Methylphenol	50	44.69	NA	89	NA	44-114	NA	NA
N-Nitroso-di-n-propylamine	50	47.71	NA	95	NA	63-121	NA	NA
Acetophenone	50	46.86	NA	94	NA	61-124	NA	NA
N-Nitrosomorpholine	50	45.62	NA	91	NA	57-116	NA	NA
o-Toluidine	50	31.44	NA	63	NA	21-121	NA	NA
Hexachloroethane	50	43.3	NA	87	NA	23-121	NA	NA
Nitrobenzene	50	46.67	NA	93	NA	70-121	NA	NA
N-Nitrosopiperidine	50	46.97	NA	94	NA	74-111	NA	NA
Isophorone	50	48.87	NA	98	NA	68-125	NA	NA
2-Nitrophenol	50	46.03	NA	92	NA	67-131	NA	NA
2,4-Dimethylphenol	50	41.99	NA	84	NA	63-117	NA	NA
O,O,O-Triethylphosphorothioate	50	48.17	NA	96	NA	79-113	NA	NA
bis(2-Chloroethoxy)methane	50	48.19	NA	96	NA	67-124	NA	NA
a,a-Dimethylphenethylamine	50	71.01	NA	142 *	NA	10-113	NA	NA
2,4-Dichlorophenol	50	47.81	NA	96	NA	66-126	NA	NA
4-Chloroaniline	50	38.68	NA	77	NA	45-115	NA	NA
2,6-Dichlorophenol	50	50.24	NA	100	NA	78-111	NA	NA
Hexachloropropene	50	41.58	NA	83	NA	32-107	NA	NA
N-Nitrosodi-n-butylamine	50	44.76	NA	90	NA	65-109	NA	NA
4-Chloro-3-methylphenol	50	48.12	NA	96	NA	65-125	NA	NA
Safrole	50	49.24	NA	98	NA	76-109	NA	NA
2-Methylnaphthalene	50	46.6	NA	93	NA	61-117	NA	NA
Hexachlorocyclopentadiene	100	63.93	NA	64	NA	10-101	NA	NA
1,2,4,5-Tetrachlorobenzene	50	46.72	NA	93	NA	46-129	NA	NA
2,4,6-Trichlorophenol	50	49.72	NA	99	NA	71-130	NA	NA
2,4,5-Trichlorophenol	50	48.42	NA	97	NA	68-126	NA	NA
Isosafrole	50	52.96	NA	106	NA	70-137	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 124WALCS	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Chloronaphthalene	50	48.14	NA	96	NA	57-126	NA	NA
2-Nitroaniline	50	48.34	NA	97	NA	68-130	NA	NA
1,4-Naphthoquinone	100	1.05 J	NA	1 *	NA	10-69	NA	NA
Dimethylphthalate	50	41.49	NA	83	NA	26-133	NA	NA
1,3-Dinitrobenzene	50	47.28	NA	95	NA	76-118	NA	NA
2,6-Dinitrotoluene	50	51.09	NA	102	NA	71-133	NA	NA
Acenaphthylene	50	50.84	NA	102	NA	67-125	NA	NA
3-Nitroaniline	50	43.82	NA	88	NA	58-122	NA	NA
Acenaphthene	50	48.24	NA	96	NA	69-123	NA	NA
2,4-Dinitrophenol	100	79.06	NA	79	NA	42-129	NA	NA
4-Nitrophenol	50	34.25	NA	68	NA	11-88	NA	NA
Pentachlorobenzene	50	49.37	NA	99	NA	75-113	NA	NA
2,4-Dinitrotoluene	50	48.47	NA	97	NA	71-131	NA	NA
Dibenzofuran	50	48.14	NA	96	NA	67-120	NA	NA
1-Naphthylamine	100	54.93	NA	55	NA	10-112	NA	NA
2,3,4,6-Tetrachlorophenol	50	54.61	NA	109	NA	76-124	NA	NA
2-Naphthylamine	100	54.22	NA	54	NA	19-103	NA	NA
Diethylphthalate	50	45.29	NA	91	NA	55-124	NA	NA
Thionazin	50	48.42	NA	97	NA	68-121	NA	NA
Fluorene	50	48.14	NA	96	NA	71-127	NA	NA
4-Chlorophenyl-phenylether	50	48.65	NA	97	NA	67-125	NA	NA
5-Nitro-o-toluidine	50	43.95	NA	88	NA	43-117	NA	NA
4-Nitroaniline	50	44.32	NA	89	NA	61-111	NA	NA
4,6-Dinitro-2-methylphenol	50	44.29	NA	89	NA	64-124	NA	NA
N-Nitrosodiphenylamine	50	47.98	NA	96	NA	65-125	NA	NA
1,3,5-Trinitrobenzene	50	28.86	NA	58	NA	31-120	NA	NA
Phorate	50	49.44	NA	99	NA	66-130	NA	NA
Phenacetin	50	48.83	NA	98	NA	70-115	NA	NA
4-Bromophenyl-phenylether	50	50.32	NA	101	NA	64-129	NA	NA
Diallate trans/cis	50	45.49	NA	91	NA	67-112	NA	NA
Hexachlorobenzene	50	50.06	NA	100	NA	64-128	NA	NA
Dimethoate	50	24.86	NA	50	NA	14-122	NA	NA
Pentachlorophenol	50	54.74	NA	109	NA	53-133	NA	NA
4-Aminobiphenyl	50	43.34	NA	87	NA	33-113	NA	NA
Pentachloronitrobenzene	50	50.89	NA	102	NA	69-117	NA	NA
Pronamide	50	51.33	NA	103	NA	77-116	NA	NA
Disulfoton	50	128.16	NA	256 *	NA	78-173	NA	NA
Phenanthrene	50	47.19	NA	94	NA	65-120	NA	NA
Anthracene	50	49.07	NA	98	NA	68-126	NA	NA
Methyl parathion	50	37.12	NA	74	NA	19-125	NA	NA
Di-n-butylphthalate	50	48.15	NA	96	NA	61-125	NA	NA
Parathion	50	50.44	NA	101	NA	73-129	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 124WALCS	Batch: **16124WAA026** (Sample number(s): 8354933-8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
4-Nitroquinoline-1-oxide	500	511.48	NA	102	NA	59-124	NA	NA
Methapyrilene	200	433.03	NA	217 *	NA	70-130	NA	NA
Isodrin	50	51.97	NA	104	NA	71-118	NA	NA
Fluoranthene	50	51.86	NA	104	NA	68-129	NA	NA
Pyrene	50	46.78	NA	94	NA	68-118	NA	NA
Aramite	50	64.75	NA	130 *	NA	10-125	NA	NA
p-Dimethylaminoazobenzene	50	52.55	NA	105	NA	63-139	NA	NA
Chlorobenzilate	50	41.8	NA	84	NA	49-134	NA	NA
Butylbenzylphthalate	50	47.68	NA	95	NA	56-124	NA	NA
3,3'-Dimethylbenzidine	100	40.13 J	NA	40	NA	10-82	NA	NA
2-Acetylaminofluorene	50	56.18	NA	112	NA	63-146	NA	NA
bis(2-Ethylhexyl)phthalate	50	48.85	NA	98	NA	66-130	NA	NA
3,3'-Dichlorobenzidine	50	46.05	NA	92	NA	39-118	NA	NA
Benzo(a)anthracene	50	53.28	NA	107	NA	69-133	NA	NA
Chrysene	50	53.34	NA	107	NA	71-136	NA	NA
Di-n-octylphthalate	50	49.3	NA	99	NA	73-131	NA	NA
7,12-Dimethylbenz[a]anthracene	50	47.96	NA	96	NA	60-118	NA	NA
Benzo(b)fluoranthene	50	51.06	NA	102	NA	71-131	NA	NA
Benzo(k)fluoranthene	50	50.57	NA	101	NA	72-128	NA	NA
Benzo(a)pyrene	50	51.06	NA	102	NA	68-126	NA	NA
3-Methylcholanthrene	50	63.26	NA	127	NA	77-134	NA	NA
Indeno(1,2,3-cd)pyrene	50	50.25	NA	101	NA	62-128	NA	NA
Dibenz(a,h)anthracene	50	52.27	NA	105	NA	64-133	NA	NA
Benzo(g,h,i)perylene	50	50.15	NA	100	NA	62-132	NA	NA

LCS: 124WZLCS	Batch: **16124WAZ026** (Sample number(s): 8354941-8354945)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	51.09	NA	102	NA	71-133	NA	NA
2,4-Dinitrotoluene	50	48.47	NA	97	NA	71-131	NA	NA
Diethylphthalate	50	45.29	NA	91	NA	55-124	NA	NA

LCS: 131WJLCS LCSD: 131WJLCSD	Batch: **16131WAJ026** (Sample number(s): 8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Picoline	50	41.86	44.92	84	90	65-96	7	30
N-Nitrosomethylethylamine	50	45.98	49.9	92	100	68-109	8	30
Methyl methanesulfonate	50	45.8	49.58	92	99	47-100	8	30
N-Nitrosodimethylamine	50	39.84	41.55	80	83	28-99	4	30
N-Nitrosodiethylamine	50	46.83	51.51	94	103	71-113	10	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 131WJLCS LCSD: 131WJLCSD	Batch: **16131WAJ026** (Sample number(s): 8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Ethyl methanesulfonate	50	46.43	50.74	93	101	76-106	9	30
Phenol	50	32.3	32.55	65	65	19-82	1	30
Aniline	50	38.98	36.93	78	74	38-106	5	30
Pyridine	50	36.79	38.07	74	76	18-100	3	30
bis(2-Chloroethyl)ether	50	45.68	48.49	91	97	65-120	6	30
2-Chlorophenol	50	46.69	48.1	93	96	59-120	3	30
Benzyl alcohol	50	50.66	52.08	101	104	55-118	3	30
2-Methylphenol	50	45.12	47.3	90	95	54-122	5	30
bis(2-Chloroisopropyl)ether	50	44.37	46.69	89	93	63-129	5	30
N-Nitrosopyrrolidine	50	47.45	52.27	95	105	67-113	10	30
4-Methylphenol	50	44.81	46.17	90	92	44-114	3	30
N-Nitroso-di-n-propylamine	50	46.51	49.33	93	99	63-121	6	30
Acetophenone	50	44.31	46.55	89	93	61-124	5	30
N-Nitrosomorpholine	50	45.48	49.01	91	98	57-116	7	30
o-Toluidine	50	40.12	37.8	80	76	21-121	6	30
Hexachloroethane	50	36.76	44.59	74	89	23-121	19	30
Nitrobenzene	50	47.38	50.34	95	101	70-121	6	30
N-Nitrosopiperidine	50	47.62	51.98	95	104	74-111	9	30
Isophorone	50	48.67	51.67	97	103	68-125	6	30
2-Nitrophenol	50	48.51	51.65	97	103	67-131	6	30
2,4-Dimethylphenol	50	38.9	41.3	78	83	63-117	6	30
O,O,O-Triethylphosphorothioate	50	47.17	50.93	94	102	79-113	8	30
bis(2-Chloroethoxy)methane	50	47.23	49.6	94	99	67-124	5	30
a,a-Dimethylphenethylamine	50	69.23	70.9	138 *	142 *	10-113	2	30
2,4-Dichlorophenol	50	46.89	47.87	94	96	66-126	2	30
4-Chloroaniline	50	43.01	41.67	86	83	45-115	3	30
2,6-Dichlorophenol	50	49.91	52.11	100	104	78-111	4	30
Hexachloropropene	50	36.19	36.95	72	74	32-107	2	30
N-Nitrosodi-n-butylamine	50	45.73	48.53	91	97	65-109	6	30
4-Chloro-3-methylphenol	50	47.91	48.64	96	97	65-125	2	30
Safrole	50	48.51	52.73	97	105	76-109	8	30
2-Methylnaphthalene	50	45.94	49.35	92	99	61-117	7	30
Hexachlorocyclopentadiene	100	37.27	51.52	37	52	10-101	32 *	30
1,2,4,5-Tetrachlorobenzene	50	44.58	49.66	89	99	46-129	11	30
2,4,6-Trichlorophenol	50	50.83	53.11	102	106	71-130	4	30
2,4,5-Trichlorophenol	50	47.71	48.96	95	98	68-126	3	30
Isosafrole	50	52.85	57.7	106	115	70-137	9	30
2-Chloronaphthalene	50	45.57	49.51	91	99	57-126	8	30
2-Nitroaniline	50	50.31	53.77	101	108	68-130	7	30
1,4-Naphthoquinone	100	N.D	N.D	0 *	0 *	10-69	0	30
Dimethylphthalate	50	13.18	23.36	26	47	26-133	56 *	30
1,3-Dinitrobenzene	50	51.31	53.16	103	106	76-118	4	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 131WJLCS LCSD: 131WJLCSD	Batch: **16131WAJ026** (Sample number(s): 8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	50.7	53.61	101	107	71-133	6	30
Acenaphthylene	50	49.92	53.82	100	108	67-125	8	30
3-Nitroaniline	50	46.6	46.31	93	93	58-122	1	30
Acenaphthene	50	48.44	51.1	97	102	69-123	5	30
2,4-Dinitrophenol	100	87.25	89.27	87	89	42-129	2	30
4-Nitrophenol	50	40.86	42.15	82	84	11-88	3	30
Pentachlorobenzene	50	48.18	51.04	96	102	75-113	6	30
2,4-Dinitrotoluene	50	48.21	50.46	96	101	71-131	5	30
Dibenzofuran	50	47.27	50.24	95	100	67-120	6	30
1-Naphthylamine	100	70.25	59.07	70	59	10-112	17	30
2,3,4,6-Tetrachlorophenol	50	52.8	51.38	106	103	76-124	3	30
2-Naphthylamine	100	64.33	59.82	64	60	19-103	7	30
Diethylphthalate	50	31.39	38.54	63	77	55-124	20	30
Thionazin	50	45.3	49.65	91	99	68-121	9	30
Fluorene	50	49.27	52.18	99	104	71-127	6	30
4-Chlorophenyl-phenylether	50	48.6	51.35	97	103	67-125	6	30
5-Nitro-o-toluidine	50	48.75	48.88	98	98	43-117	0	30
4-Nitroaniline	50	45.11	46.5	90	93	61-111	3	30
4,6-Dinitro-2-methylphenol	50	46.44	46.46	93	93	64-124	0	30
N-Nitrosodiphenylamine	50	47.29	50.34	95	101	65-125	6	30
1,3,5-Trinitrobenzene	50	N.D	13.73 J	0 *	27 *	31-120	200 *	30
Phorate	50	45.78	52.21	92	104	66-130	13	30
Phenacetin	50	49	53.94	98	108	70-115	10	30
4-Bromophenyl-phenylether	50	49.54	53.51	99	107	64-129	8	30
Diallate trans/cis	50	44.56	48.9	89	98	67-112	9	30
Hexachlorobenzene	50	49.69	52.43	99	105	64-128	5	30
Dimethoate	50	3.98 J	10.09	8 *	20	14-122	87 *	30
Pentachlorophenol	50	49.32	48.55	99	97	53-133	2	30
4-Aminobiphenyl	50	54.1	48.91	108	98	33-113	10	30
Pentachloronitrobenzene	50	49.31	53.81	99	108	69-117	9	30
Pronamide	50	49.66	53.6	99	107	77-116	8	30
Disulfoton	100	119.06	130.47	119	130	78-173	9	30
Phenanthrene	50	47.41	49.9	95	100	65-120	5	30
Anthracene	50	47.76	51.41	96	103	68-126	7	30
Methyl parathion	50	43.61	43.33	87	87	19-125	1	30
Di-n-butylphthalate	50	41.53	46.1	83	92	61-125	10	30
Parathion	50	54.11	60.94	108	122	73-129	12	30
4-Nitroquinoline-1-oxide	500	465.24	533.36	93	107	59-124	14	30
Methapyrilene	400	439.35	437.13	110	109	70-130	1	30
Isodrin	50	50.73	54.9	101	110	71-118	8	30
Fluoranthene	50	50.67	53.56	101	107	68-129	6	30
Pyrene	50	45.32	48.61	91	97	68-118	7	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 131WJLCS LCSD: 131WJLCSD	Batch: **16131WAJ026** (Sample number(s): 8354940)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Aramite	50	21.59	38.74	43	77	10-125	57 *	30
p-Dimethylaminoazobenzene	50	51.22	56.19	102	112	63-139	9	30
Chlorobenzilate	50	10.65	23.39	21 *	47 *	49-134	75 *	30
Butylbenzylphthalate	50	34.52	38.57	69	77	56-124	11	30
3,3'-Dimethylbenzidine	100	59.75 J	44.31 J	60	44	10-82	30	30
2-Acetylaminofluorene	50	59.27	68.12	119	136	63-146	14	30
bis(2-Ethylhexyl)phthalate	50	54.44	57.45	109	115	66-130	5	30
3,3'-Dichlorobenzidine	50	50.01	50.79	100	102	39-118	2	30
Benzo(a)anthracene	50	55.19	58.49	110	117	69-133	6	30
Chrysene	50	54.06	58.52	108	117	71-136	8	30
Di-n-octylphthalate	50	52.54	55.1	105	110	73-131	5	30
7,12-Dimethylbenz[a]anthracene	50	44.27	45.36	89	91	60-118	2	30
Benzo(b)fluoranthene	50	50.01	52.8	100	106	71-131	5	30
Benzo(k)fluoranthene	50	50.96	53.04	102	106	72-128	4	30
Benzo(a)pyrene	50	50.08	52.8	100	106	68-126	5	30
3-Methylcholanthrene	50	59.81	64.67	120	129	77-134	8	30
Indeno(1,2,3-cd)pyrene	50	46.15	47.19	92	94	62-128	2	30
Dibenz(a,h)anthracene	50	47.9	49.22	96	98	64-133	3	30
Benzo(g,h,i)perylene	50	44.98	45.54	90	91	62-132	1	30

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0200c.d DFTPP Injection Date: 05/05/16

Instrument ID: HP20296 DFTPP Injection Time: 18:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.5
68	Less than 2.0% of mass 69	0.79 (1.67)1
69	Mass 69 relative abundance	47.5
70	Less than 2.0% of mass 69	0.33 (0.7)1
127	40.0 - 60.0% of mass 198	44.8
197	Less than 1.0% of mass 198	1.06
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.48
441	Present, and less than mass 443	9.54
442	Greater than 40.0 % of mass 198	61.5
443	17.0 - 23.0% of mass 442	11.7 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD1266 - SSTD7.5	le0211.d	05/05/16	18:43
02	RVSTD0816 - SSTD.125	le0212.d	05/05/16	19:28
03	RVSTD0816 - SSTD30	le0213.d	05/05/16	19:56
04	RVSTD0816 - SSTD20	le0214.d	05/05/16	20:25
05	RVSTD0816 - SSTD12.5	le0215.d	05/05/16	20:53
06	RVSTD0816 - SSTD3.75	le0216.d	05/05/16	21:21
07	RVSTD0816 - SSTD1.25	le0217.d	05/05/16	21:49
08	RVSTD0816 - SSTD.25	le0218.d	05/05/16	22:17
09	MDLSTD0816 - SSTD0.125	le0219.d	05/05/16	22:46
10	PAHMDL0816 - SSTD0.025	le0220.d	05/05/16	23:14
11	RVICV0136 - SSTD12.5	le0221.d	05/05/16	23:42
12	RVBASICV0716 - SSTD12.5	le0222.d	05/06/16	00:11

FORM V SV

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0230.d DFTPP Injection Date: 05/06/16

Instrument ID: HP20296 DFTPP Injection Time: 07:21

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.0
68	Less than 2.0% of mass 69	0.92 (1.93)1
69	Mass 69 relative abundance	47.9
70	Less than 2.0% of mass 69	0.35 (0.74)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.95
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.34
275	10.0 - 30.0% of mass 198	21.8
365	Greater than 1.00% of mass 198	2.32
441	Present, and less than mass 443	9.16
442	Greater than 40.0 % of mass 198	57.5
443	17.0 - 23.0% of mass 442	10.6 (18.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVPDA1116 - SSTD30	le0232.d	05/06/16	08:20
02	RVPDA1116 - SSTD20	le0233.d	05/06/16	08:49
03	RVPDA1116 - SSTD12.5	le0234.d	05/06/16	09:17
04	RVPDA1116 - SSTD7.5	le0235.d	05/06/16	09:45
05	RVPDA1116 - SSTD3.75	le0236.d	05/06/16	10:13
06	RVKEP3645 - SSTD100	le0237.d	05/06/16	10:42
07	RVKEP3645 - SSTD80	le0238.d	05/06/16	11:10
08	RVKEP3645 - SSTD60	le0239.d	05/06/16	11:38
09	RVKEP3645 - SSTD40	le0240.d	05/06/16	12:07
10	RVKEP3645 - SSTD25	le0241.d	05/06/16	12:35
11	RVKEP3645 - SSTD12.5	le0242.d	05/06/16	13:03
12	RVKEPMDL3645 - SSTD006	le0243.d	05/06/16	13:31
13	RVFAD1116 - SSTD30	le0244.d	05/06/16	14:00
14	RVFAD1116 - SSTD20	le0245.d	05/06/16	14:28
15	RVFAD1116 - SSTD12.5	le0246.d	05/06/16	14:56
16	RVFAD1116 - SSTD7.5	le0247.d	05/06/16	15:25
17	RVFAD1116 - SSTD3.75	le0248.d	05/06/16	15:53
18	RVFAD1116 - SSTD1.25	le0249.d	05/06/16	16:21

FORM V SV

c

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0260a.d DFTPP Injection Date: 05/06/16

Instrument ID: HP20296 DFTPP Injection Time: 17:48

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.4
68	Less than 2.0% of mass 69	0.89 (1.88)1
69	Mass 69 relative abundance	47.4
70	Less than 2.0% of mass 69	0.25 (0.53)1
127	40.0 - 60.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.46
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.99
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.55
441	Present, and less than mass 443	10.2
442	Greater than 40.0 % of mass 198	63.0
443	17.0 - 23.0% of mass 442	12.6 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD1266 - SSTD7.5	le0261.d	05/06/16	18:02
02	RVPDA1116 - SSTD125	le0262.d	05/06/16	18:37
03	RVKEP3645 - SSTD60	le0263.d	05/06/16	19:05
04	RVFAD1116 - SSTD125	le0264.d	05/06/16	19:34
05	RVAAP0146 - SSTD12.5	le0265.d	05/06/16	20:02
06	SBLKWA124	le0266.d	05/06/16	20:30
07	SBLKWZ124	le0266a.d	05/06/16	20:30
08	124WALCS	le0267.d	05/06/16	20:58
09	124WZLCS	le0267a.d	05/06/16	20:58
10	SBLKWC114	le0268.d	05/06/16	21:27
11	114WCLCS	le0269.d	05/06/16	21:55
12	114WCLCSD	le0270.d	05/06/16	22:23
13	8345367	le0271.d	05/06/16	22:52
14	8354936	le0272.d	05/06/16	23:20
15	124WZUS	le0272a.d	05/06/16	23:20
16	8354937MS	le0273.d	05/06/16	23:48
17	124WZMSMS	le0273a.d	05/06/16	23:48
18	8354938MSD	le0274.d	05/07/16	00:17

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0260a.d DFTPP Injection Date: 05/06/16

Instrument ID: HP20296 DFTPP Injection Time: 17:48

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.4
68	Less than 2.0% of mass 69	0.89 (1.88)1
69	Mass 69 relative abundance	47.4
70	Less than 2.0% of mass 69	0.25 (0.53)1
127	40.0 - 60.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.46
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.99
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.55
441	Present, and less than mass 443	10.2
442	Greater than 40.0 % of mass 198	63.0
443	17.0 - 23.0% of mass 442	12.6 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	124WZMSDMSD	le0274a.d	05/07/16	00:17
20	8354933	le0275.d	05/07/16	00:45
21	8354934	le0276.d	05/07/16	01:13
22	8354935	le0277.d	05/07/16	01:41
23	8354939	le0278.d	05/07/16	02:10
24	8354940	le0279.d	05/07/16	02:38
25	8354941	le0280.d	05/07/16	03:06
26	8354942	le0281.d	05/07/16	03:34
27	8354943	le0282.d	05/07/16	04:03
28	8354944	le0283.d	05/07/16	04:31
29	8354945	le0284.d	05/07/16	04:59
30	8347055	le0285.d	05/07/16	05:28

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0380.d DFTPP Injection Date: 05/11/16

Instrument ID: HP20296 DFTPP Injection Time: 15:10

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.5
68	Less than 2.0% of mass 69	0.89 (1.83)1
69	Mass 69 relative abundance	48.5
70	Less than 2.0% of mass 69	0.33 (0.68)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	1.06
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.18
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.62
441	Present, and less than mass 443	9.92
442	Greater than 40.0 % of mass 198	62.0
443	17.0 - 23.0% of mass 442	12.8 (20.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD1166 - SSTD7.5	le0381.d	05/11/16	15:45
02	RVPDA1166 - SSTD125	le0382.d	05/11/16	16:24
03	RVFAD1116 - SSTD125	le0384.d	05/11/16	17:20
04	SSTD12.5	le0385.d	05/11/16	17:49
05	RVKEP3645 - SSTD60	le0383a.d	05/11/16	19:02
06	SBLKWI131	le0386.d	05/11/16	19:47
07	131WILCS	le0387.d	05/11/16	20:15
08	131WILCSD	le0388.d	05/11/16	20:43
09	SBLKWJ131	le0389.d	05/11/16	21:11
10	SBLKWZ131	le0389a.d	05/11/16	21:11
11	131WJLCS	le0390.d	05/11/16	21:39
12	131WZLCS	le0390a.d	05/11/16	21:39
13	131WJLCSD	le0391.d	05/11/16	22:07
14	131WZLCSD	le0391a.d	05/11/16	22:07
15	8349468RE	le0395.d	05/12/16	00:00
16	8350677RE	le0396.d	05/12/16	00:28
17	8354940RE	le0397.d	05/12/16	00:56
18	8345676RE	le0398.d	05/12/16	01:25

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: le0380.d DFTPP Injection Date: 05/11/16

Instrument ID: HP20296 DFTPP Injection Time: 15:10

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.5
68	Less than 2.0% of mass 69	0.89 (1.83)1
69	Mass 69 relative abundance	48.5
70	Less than 2.0% of mass 69	0.33 (0.68)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	1.06
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.18
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.62
441	Present, and less than mass 443	9.92
442	Greater than 40.0 % of mass 198	62.0
443	17.0 - 23.0% of mass 442	12.8 (20.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	8364089RE	le0399.d	05/12/16	01:53
20	8364091RE	le0400.d	05/12/16	02:21

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/05/16 05/05/16

Calibration Times: 18:43 22:17

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.125 = le0212.d RRF0.25 = le0218.d RRF1.25 = le0217.d RRF3.75 = le0216.d
RRF7.5 = le0211.d RRF12.5 = le0215.d RRF20 = le0214.d RRF30 = le0213.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.730	0.723	0.753	0.727	0.733	0.741	0.735	1	AVG
N-Nitrosodimethylamine			1.108	1.095	1.159	1.153	1.170	1.162	1.141	3	AVG
Pyridine			2.049	1.730	1.975	1.968	1.982	2.002	1.951	6	AVG
2-Picoline			2.054	1.898	2.024	1.995	2.014	2.034	2.003	3	AVG
N-Nitrosomethylethylamine			0.801	0.759	0.804	0.801	0.803	0.807	0.796	2	AVG
Methyl methanesulfonate			0.920	0.896	0.959	0.935	0.937	0.939	0.931	2	AVG
N-Nitrosodiethylamine		0.667	0.722	0.724	0.772	0.771	0.776	0.776	0.744	6	AVG
Ethyl methanesulfonate		0.791	0.760	0.757	0.787	0.779	0.772	0.782	0.775	2	AVG
Benzaldehyde			1.566	1.544	1.630	1.658	1.624	1.575	1.599	3	AVG
Phenol		2.218	2.375	2.336	2.482	2.418	2.428	2.427	2.383	4	AVG
Aniline		2.623	2.802	2.736	2.924	2.848	2.858	2.882	2.811	4	AVG
a-methylstyrene			1.501	1.498	1.602	1.571	1.563	1.607	1.557	3	AVG
bis(2-Chloroethyl)ether		1.718	1.776	1.666	1.778	1.746	1.752	1.773	1.744	2	AVG
2-Chlorophenol		1.203	1.344	1.348	1.436	1.435	1.416	1.437	1.374	6	AVG
1,3-Dichlorobenzene		1.618	1.603	1.531	1.614	1.548	1.560	1.569	1.578	2	AVG
1,4-Dichlorobenzene		1.612	1.586	1.522	1.646	1.584	1.581	1.606	1.591	2	AVG
Benzyl alcohol			1.016	0.993	1.078	1.076	1.060	1.092	1.052	4	AVG
1,2-Dichlorobenzene		1.504	1.526	1.463	1.524	1.497	1.495	1.505	1.502	1	AVG
Indene			2.707	2.600	2.789	2.708	2.714	2.765	2.714	2	AVG
2-Methylphenol		1.289	1.434	1.439	1.535	1.522	1.520	1.535	1.468	6	AVG
2,2'-oxybis(1-Chloropropane)		2.208	2.242	2.114	2.290	2.208	2.213	2.249	2.218	2	AVG
bis(2-Chloroisopropyl)ether		2.208	2.242	2.114	2.290	2.208	2.213	2.249	2.218	2	AVG
N-Nitrosopyrrolidine		0.653	0.752	0.762	0.813	0.834	0.830	0.840	0.783	9	AVG
Acetophenone		2.360	2.350	2.284	2.464	2.490	2.478	2.465	2.413	3	AVG
4-Methylphenol		1.489	1.548	1.531	1.644	1.625	1.733	1.742	1.616	6	AVG
Total Cresols		1.389	1.491	1.485	1.590	1.573	1.627	1.638	1.542	6	AVG
N-Nitroso-di-n-propylamine		1.361	1.342	1.325	1.385	1.385	1.360	1.365	1.360	2	AVG
N-Nitrosomorpholine			1.004	0.979	1.063	1.026	1.011	1.009	1.015	3	AVG
o-Toluidine		2.583	2.706	2.653	2.788	2.740	2.712	2.755	2.705	3	AVG
Hexachloroethane			0.667	0.668	0.714	0.691	0.691	0.701	0.689	3	AVG
Nitrobenzene		0.475	0.519	0.497	0.529	0.531	0.532	0.536	0.517	4	AVG
N-Nitrosopiperidine		0.177	0.190	0.185	0.195	0.197	0.196	0.200	0.191	4	AVG
Isophorone		0.802	0.865	0.850	0.901	0.915	0.907	0.917	0.880	5	AVG
2-Nitrophenol		0.131	0.149	0.154	0.168	0.179	0.183	0.184	0.164	12	AVG
2,4-Dimethylphenol		0.382	0.424	0.423	0.441	0.446	0.439	0.446	0.429	5	AVG
O,O,O-Triethylphosphorothioate			0.196	0.191	0.201	0.204	0.204	0.206	0.200	3	AVG
bis(2-Chloroethoxy)methane		0.533	0.560	0.521	0.558	0.548	0.552	0.548	0.545	3	AVG
Benzoic acid			0.124	0.201	0.244	0.293	0.323	0.331	0.253	32	1STDEG
1,2,3,4-Tetrahydronaphthalene			0.651	0.613	0.656	0.650	0.649	0.662	0.647	3	AVG
2,4-Dichlorophenol		0.269	0.307	0.306	0.316	0.315	0.315	0.318	0.306	6	AVG
1,2,4-Trichlorobenzene		0.347	0.365	0.340	0.359	0.358	0.354	0.360	0.355	2	AVG
Naphthalene	1.133	1.076	1.111	1.032	1.096	1.077	1.060	1.071	1.082	3	AVG
4-Chloroaniline		0.428	0.456	0.437	0.457	0.456	0.454	0.459	0.450	3	AVG
2,6-Dichlorophenol		0.251	0.296	0.286	0.301	0.305	0.299	0.308	0.292	7	AVG
Hexachloropropene			0.215	0.211	0.223	0.232	0.232	0.236	0.225	4	AVG
Hexachlorobutadiene		0.220	0.226	0.213	0.224	0.226	0.223	0.225	0.222	2	AVG
Quinoline			0.665	0.642	0.667	0.674	0.666	0.668	0.664	2	AVG
Caprolactam			0.090	0.091	0.099	0.102	0.101	0.102	0.097	6	AVG
N-Nitrosodi-n-butylamine			0.309	0.297	0.328	0.336	0.406	0.407	0.347	14	AVG
4-Chloro-3-methylphenol		0.314	0.348	0.349	0.370	0.381	0.378	0.380	0.360	7	AVG
Safrole			0.263	0.257	0.274	0.282	0.277	0.285	0.273	4	AVG
2-Methylnaphthalene	0.685	0.670	0.725	0.685	0.722	0.712	0.704	0.715	0.702	3	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/05/16 05/05/16

Calibration Times: 18:43 22:17

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = 1e0212.d RRF0.25 = 1e0218.d RRF1.25 = 1e0217.d RRF3.75 = 1e0216.d
RRF7.5 = 1e0211.d RRF12.5 = 1e0215.d RRF20 = 1e0214.d RRF30 = 1e0213.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1-Methylnaphthalene	0.639	0.627	0.655	0.635	0.664	0.649	0.648	0.659	0.647	2	AVG
Hexachlorocyclopentadiene			0.340	0.324	0.359	0.365	0.373	0.376	0.356	6	AVG
1,2,4,5-Tetrachlorobenzene		0.710	0.664	0.623	0.649	0.652	0.650	0.656	0.658	4	AVG
cis-Isosafrole			0.468	0.487	0.516	0.520	0.517	0.526	0.506	5	AVG
2,4,6-Trichlorophenol		0.343	0.377	0.370	0.387	0.410	0.409	0.413	0.387	7	AVG
2,4,5-Trichlorophenol		0.336	0.403	0.408	0.431	0.438	0.430	0.426	0.410	9	AVG
trans-Isosafrole			0.538	0.499	0.536	0.547	0.546	0.546	0.535	3	AVG
Isosafrole			0.526	0.497	0.533	0.543	0.541	0.543	0.530	3	AVG
1,1'-Biphenyl		1.542	1.517	1.414	1.522	1.526	1.494	1.488	1.500	3	AVG
2-Chloronaphthalene		1.184	1.236	1.180	1.265	1.183	1.202	1.253	1.215	3	AVG
1-Chloronaphthalene		1.165	1.213	1.068	1.119	1.172	1.137	1.087	1.137	4	AVG
Diphenyl ether		0.826	0.859	0.803	0.841	0.836	0.822	0.830	0.831	2	AVG
2-Nitroaniline		0.239	0.290	0.314	0.348	0.368	0.355	0.364	0.325	15	AVG
1,4-Naphthoquinone			0.425	0.440	0.479	0.492	0.486	0.480	0.467	6	AVG
1,4-Dinitrobenzene			0.134	0.147	0.162	0.176	0.179	0.181	0.163	12	AVG
Dimethylphthalate			1.382	1.288	1.337	1.310	1.299	1.275	1.315	3	AVG
1,3-Dinitrobenzene			0.163	0.171	0.185	0.202	0.200	0.202	0.187	9	AVG
2,6-Dinitrotoluene		0.172	0.265	0.268	0.283	0.291	0.290	0.287	0.265	16	AVG
Acenaphthylene	1.549	1.566	1.782	1.717	1.829	1.817	1.807	1.808	1.734	7	AVG
3-Nitroaniline		0.216	0.287	0.289	0.307	0.315	0.315	0.316	0.292	12	AVG
Acenaphthene	1.177	1.237	1.273	1.179	1.254	1.232	1.207	1.210	1.221	3	AVG
2,4-Dinitrophenol				0.110	0.125	0.144	0.156	0.159	0.139	15	AVG
4-Nitrophenol				0.202	0.221	0.263	0.267	0.260	0.243	12	AVG
Pentachlorobenzene		0.565	0.556	0.518	0.525	0.530	0.530	0.531	0.536	3	AVG
2,4-Dinitrotoluene			0.328	0.356	0.367	0.391	0.396	0.391	0.371	7	AVG
2,4_2,6-Dinitrotoluenes		0.192	0.297	0.312	0.325	0.341	0.343	0.339	0.307	17	AVG
Dibenzofuran		1.652	1.800	1.639	1.694	1.693	1.655	1.638	1.682	3	AVG
1-Naphthylamine				1.152	1.208	1.206	1.207	1.219	1.198	2	AVG
2,3,4,6-Tetrachlorophenol		0.240	0.293	0.306	0.326	0.333	0.341	0.350	0.313	12	AVG
2-Naphthylamine				1.142	1.167	1.205	1.209	1.201	1.185	2	AVG
Diethylphthalate			1.295	1.241	1.283	1.320	1.301	1.274	1.286	2	AVG
Thionazin			0.260	0.256	0.267	0.274	0.268	0.262	0.265	2	AVG
Fluorene	1.194	1.238	1.388	1.276	1.347	1.326	1.290	1.310	1.296	5	AVG
4-Chlorophenyl-phenylether		0.687	0.701	0.656	0.671	0.679	0.675	0.682	0.679	2	AVG
5-Nitro-o-toluidine		0.236	0.322	0.326	0.344	0.357	0.358	0.364	0.329	13	AVG
4-Nitroaniline		0.249	0.301	0.298	0.312	0.325	0.317	0.322	0.303	9	AVG
4,6-Dinitro-2-methylphenol				0.082	0.093	0.110	0.117	0.117	0.104	15	AVG
N-Nitrosodiphenylamine (1)		0.530	0.606	0.567	0.588	0.591	0.590	0.588	0.580	4	AVG
NDPA as diphenylamine		0.530	0.606	0.567	0.588	0.591	0.590	0.588	0.580	4	AVG
1,2-Diphenylhydrazine		0.860	0.948	0.916	0.970	0.947	0.942	0.923	0.929	4	AVG
Tetraethyldithiopyrophosphate			0.139	0.138	0.149	0.150	0.149	0.143	0.145	4	AVG
1,3,5-Trinitrobenzene				0.053	0.061	0.070	0.075	0.074	0.067	14	AVG
Diallate (peak 1)			0.376	0.359	0.383	0.376	0.375	0.362	0.372	3	AVG
Phorate		0.409	0.505	0.518	0.554	0.563	0.557	0.534	0.520	10	AVG
Phenacetin		0.294	0.369	0.383	0.422	0.432	0.431	0.420	0.393	13	AVG
4-Bromophenyl-phenylether		0.177	0.194	0.189	0.192	0.195	0.198	0.197	0.192	4	AVG
Diallate (peak 2)			0.371	0.350	0.371	0.366	0.381	0.381	0.370	3	AVG
Diallate trans/cis			0.375	0.357	0.381	0.375	0.376	0.365	0.371	2	AVG
Hexachlorobenzene	0.204	0.188	0.208	0.196	0.194	0.203	0.203	0.204	0.200	3	AVG
Dimethoate			0.292	0.321	0.345	0.356	0.344	0.331	0.331	7	AVG
Atrazine			0.197	0.189	0.199	0.200	0.190	0.173	0.191	5	AVG
Pentachlorophenol			0.085	0.110	0.118	0.129	0.134	0.136	0.118	16	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/05/16 05/05/16

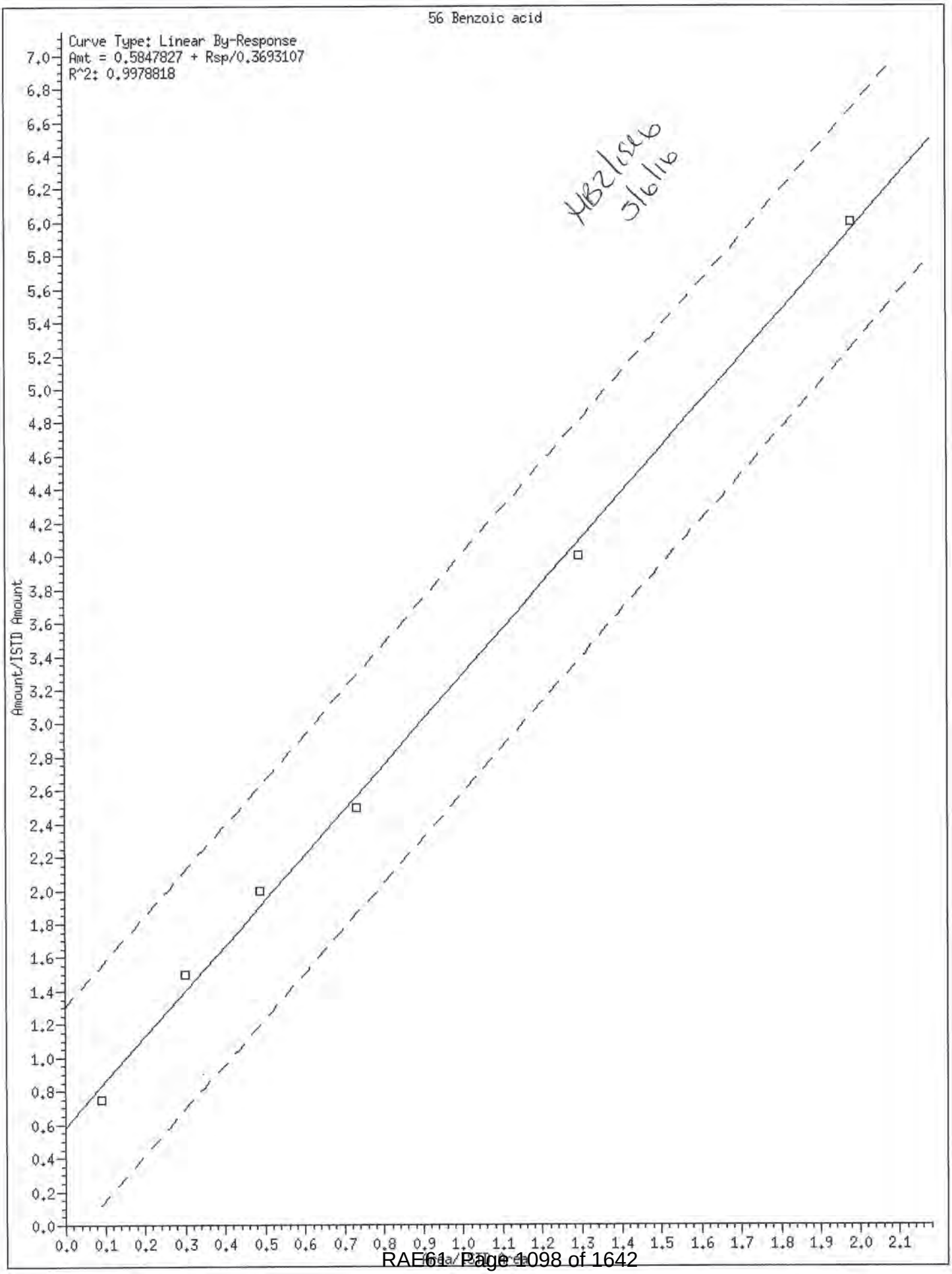
Calibration Times: 18:43 22:17

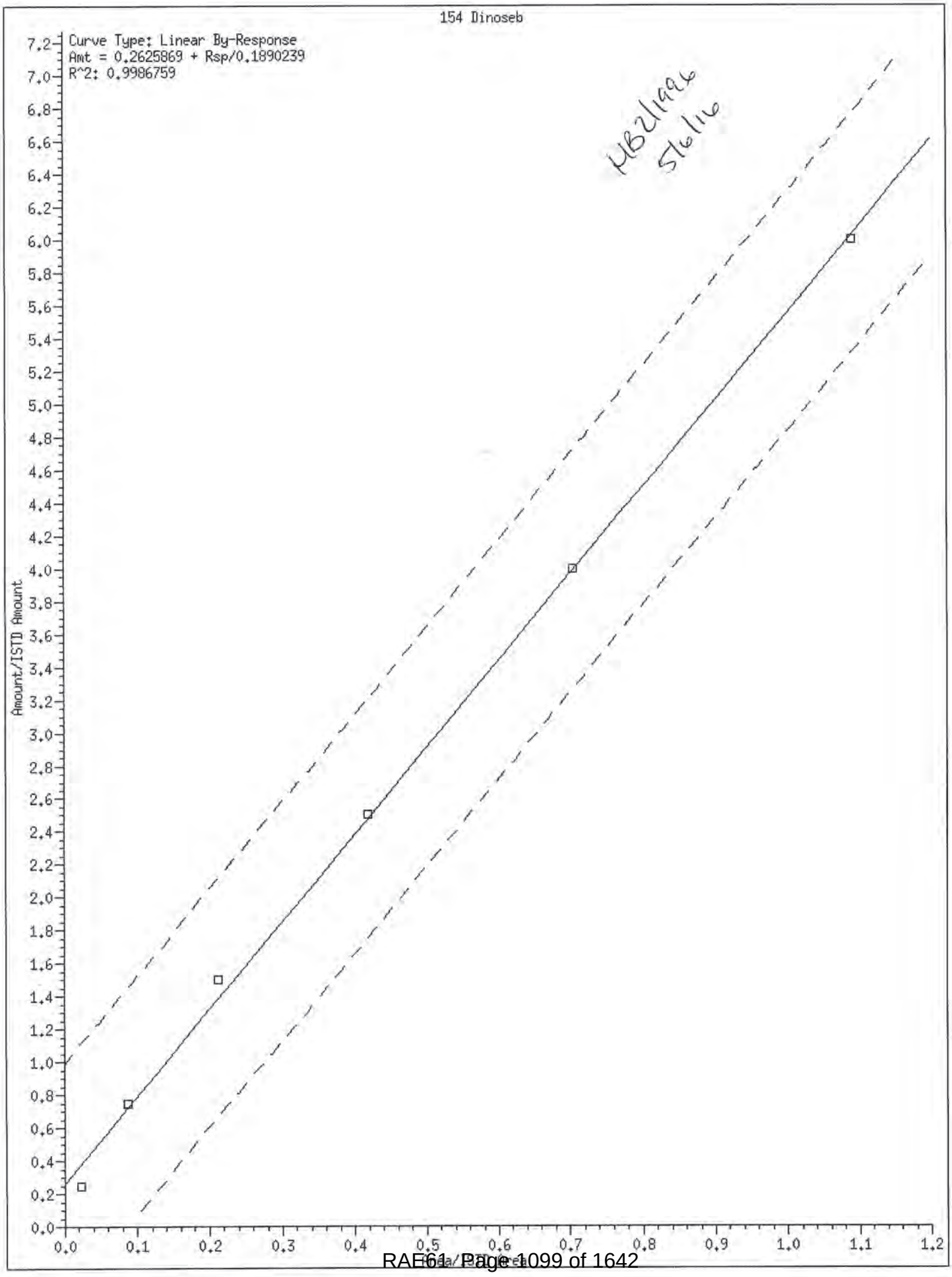
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

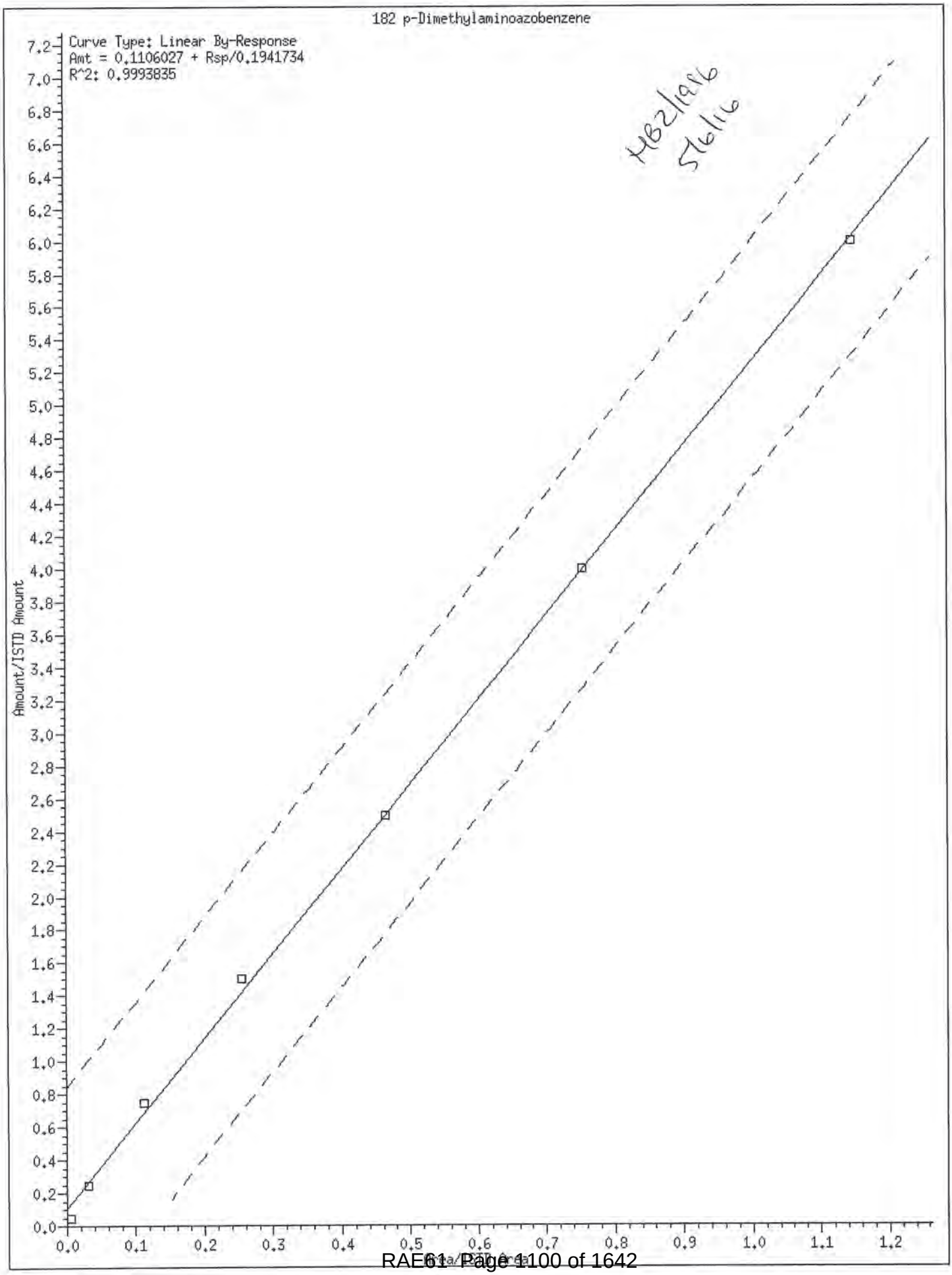
LAB FILE ID: RRF0.125 = 1e0212.d RRF0.25 = 1e0218.d RRF1.25 = 1e0217.d RRF3.75 = 1e0216.d
RRF7.5 = 1e0211.d RRF12.5 = 1e0215.d RRF20 = 1e0214.d RRF30 = 1e0213.d

COMPOUND	RRF0.125	RF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
4-Aminobiphenyl		0.515	0.547	0.543	0.589	0.590	0.580	0.557	0.560	5	AVG
Pentachloronitrobenzene			0.084	0.090	0.097	0.100	0.103	0.102	0.096	8	AVG
Pronamide		0.246	0.288	0.304	0.334	0.343	0.343	0.335	0.313	12	AVG
Dinoseb			0.090	0.116	0.142	0.168	0.176	0.182	0.146	25	1STDEG
Phenanthrene	1.062	1.009	1.097	1.021	1.065	1.065	1.059	1.050	1.053	3	AVG
Anthracene	0.998	0.962	1.030	1.005	1.063	1.072	1.085	1.072	1.036	4	AVG
Carbazole		0.814	0.936	0.931	0.986	1.000	0.986	0.971	0.946	7	AVG
Methyl parathion			0.179	0.215	0.244	0.264	0.261	0.252	0.236	14	AVG
Di-n-butylphthalate			1.032	1.074	1.184	1.215	1.222	1.192	1.153	7	AVG
Parathion			0.109	0.131	0.154	0.166	0.166	0.167	0.149	16	AVG
4-Nitroquinoline-1-oxide				0.065	0.080	0.098	0.106	0.106	0.091	20	AVG
Octachlorostyrene			0.072	0.071	0.074	0.074	0.075	0.076	0.073	2	AVG
Isodrin		0.115	0.122	0.122	0.128	0.126	0.128	0.125	0.124	4	AVG
Fluoranthene	1.058	0.984	1.135	1.129	1.209	1.225	1.234	1.205	1.147	8	AVG
Benzidine				0.637	0.670	0.701	0.691	0.685	0.677	4	AVG
Pyrene	1.159	1.068	1.090	1.038	1.073	1.082	1.082	1.084	1.085	3	AVG
p-Dimethylaminoazobenzene		0.104	0.127	0.151	0.170	0.186	0.189	0.191	0.160	21	1STDEG
Chlorobenzilate			0.266	0.274	0.306	0.313	0.312	0.309	0.297	7	AVG
3,3'-Dimethylbenzidine			0.527	0.558	0.630	0.675	0.683	0.680	0.626	11	AVG
Butylbenzylphthalate			0.368	0.400	0.450	0.458	0.462	0.460	0.433	9	AVG
2-Acetylaminofluorene			0.254	0.306	0.353	0.384	0.401	0.412	0.352	17	AVG
3,3'-Dichlorobenzidine			0.308	0.315	0.349	0.364	0.373	0.387	0.349	9	AVG
4,4'-Methylenebis(2-chloroanil				0.180	0.196	0.209	0.210	0.215	0.202	7	AVG
Benzo(a)anthracene	0.784	0.791	0.919	0.936	0.993	1.020	1.025	1.050	0.940	11	AVG
Chrysene	0.792	0.777	0.942	0.882	0.926	0.946	0.952	0.951	0.896	8	AVG
bis(2-Ethylhexyl)phthalate			0.508	0.561	0.640	0.666	0.680	0.676	0.622	11	AVG
6-Methylchrysene			0.585	0.578	0.628	0.647	0.659	0.677	0.629	6	AVG
Di-n-octylphthalate			1.045	1.277	1.509	1.544	1.543	1.535	1.409	15	AVG
Benzo(b)fluoranthene	1.053	1.045	1.218	1.201	1.291	1.310	1.309	1.351	1.222	10	AVG
7,12-Dimethylbenz[a]anthracene		0.383	0.484	0.506	0.561	0.584	0.589	0.610	0.531	15	AVG
Benzo(k)fluoranthene	1.079	1.063	1.245	1.221	1.269	1.277	1.288	1.294	1.217	8	AVG
Benzo(a)pyrene	0.935	0.895	1.125	1.107	1.186	1.200	1.225	1.251	1.115	12	AVG
3-Methylcholanthrene		0.353	0.413	0.441	0.486	0.508	0.524	0.539	0.466	14	AVG
Dibenz(a,h)acridine			0.854	0.869	0.955	0.986	1.016	1.022	0.951	8	AVG
Dibenz(a,j)acridine			0.944	0.937	0.981	1.011	1.036	1.033	0.990	4	AVG
Indeno(1,2,3-cd)pyrene	1.102	1.094	1.310	1.274	1.381	1.417	1.435	1.423	1.305	11	AVG
Dibenz(a,h)anthracene	0.891	0.943	1.089	1.076	1.160	1.177	1.203	1.213	1.094	11	AVG
Benzo(g,h,i)perylene	0.992	1.011	1.112	1.108	1.156	1.179	1.187	1.160	1.113	7	AVG
Total PAHs	1.081	1.048	1.148	1.095	1.155	1.144	1.123	1.112	1.113	3	AVG
2-Fluorophenol		1.391	1.517	1.481	1.561	1.518	1.534	1.538	1.506	4	AVG
Phenol-d6		1.883	2.013	1.975	2.064	2.061	2.045	2.056	2.014	3	AVG
Nitrobenzene-d5		0.475	0.500	0.482	0.514	0.516	0.513	0.515	0.502	3	AVG
2-Fluorobiphenyl		1.444	1.468	1.365	1.428	1.404	1.387	1.400	1.414	3	AVG
2,4,6-Tribromophenol			0.145	0.151	0.158	0.173	0.176	0.184	0.164	9	AVG
Terphenyl-d14		0.626	0.693	0.653	0.684	0.698	0.717	0.728	0.686	5	AVG
								Average %RSD	7		

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


56 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.5847827 + Rsp/0.3693107
R^2: 0.9978818
HB21515
3/6/16
Amount/ISTD Amount
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1


154 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2625869 + Rsp/0.1890239
R^2: 0.9986759
MB211496
5/6/16
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2


182 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.1106027 + Rsp/0.1941734
R^2: 0.9993835
4621916
5/6/16
Amount/ISTD Amount
Area/ISTD Area

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may05.b/le0211.d SSTD7.5
/chem/HP20296.i/16may05.b/le0212.d SSTD0.125
/chem/HP20296.i/16may05.b/le0213.d SSTD30
/chem/HP20296.i/16may05.b/le0214.d SSTD20
/chem/HP20296.i/16may05.b/le0215.d SSTD12.5
/chem/HP20296.i/16may05.b/le0216.d SSTD3.75
/chem/HP20296.i/16may05.b/le0217.d SSTD1.25
/chem/HP20296.i/16may05.b/le0218.d SSTD0.25

Area Summary

	File ID:										
Internal Standard Name	le0211.d	le0212.d	le0213.d	le0214.d	le0215.d	le0216.d	le0217.d	le0218.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	164865	162296	166377	170462	169417	164639	168064	166675	166599	2	Yes
Naphthalene-d8	642121	633837	642647	659453	655894	640781	643614	635974	644290	1	Yes
Acenaphthene-d10	368275	360175	374513	378867	378613	367222	361164	360364	368649	2	Yes
Phenanthrene-d10	688392	663552	713963	705162	714489	685471	677632	676247	690614	3	Yes
Pyrene-d10	830815	770124	850826	851591	865427	818279	796984	795597	822455	4	Yes
Perylene-d12	600148	532869	665081	653240	636534	592700	572526	551597	600587	8	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:								
Internal Standard Name	le0211.d	le0212.d	le0213.d	le0214.d	le0215.d	le0216.d	le0217.d	le0218.d	Avg. RT
1,4-Dichlorobenzene-d4	6.952	6.952	6.952	6.952	6.952	6.947	6.947	6.947	6.950
Naphthalene-d8	8.936	8.936	8.936	8.936	8.931	8.931	8.931	8.931	8.934
Acenaphthene-d10	11.766	11.766	11.771	11.766	11.766	11.766	11.761	11.760	11.765
Phenanthrene-d10	13.691	13.691	13.697	13.697	13.692	13.691	13.686	13.686	13.691
Pyrene-d10	15.740	15.740	15.740	15.740	15.735	15.734	15.735	15.729	15.737
Perylene-d12	20.318	20.318	20.323	20.318	20.313	20.313	20.313	20.313	20.316

Comments:_____

_____

Report generated on 05/19/2016 at 17:19

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: le0221.d

ICV SAMPLE ID: RVICV0136 BATCH: 16MAY05026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.49	0	30	YES
N-Nitrosodimethylamine	12.50	12.56	0	30	YES
Pyridine	12.50	12.74	2	30	YES
2-Picoline	12.50	12.64	1	30	YES
N-Nitrosomethylethylamine	12.50	12.88	3	30	YES
Methyl methanesulfonate	12.50	13.67	9	30	YES
N-Nitrosodiethylamine	12.50	12.80	2	30	YES
Ethyl methanesulfonate	12.50	12.79	2	30	YES
Phenol	12.50	12.77	2	30	YES
Aniline	12.50	12.65	1	30	YES
bis(2-Chloroethyl)ether	12.50	12.71	2	30	YES
2-Chlorophenol	12.50	13.11	5	30	YES
1,3-Dichlorobenzene	12.50	12.73	2	30	YES
1,4-Dichlorobenzene	12.50	12.88	3	30	YES
Benzyl alcohol	12.50	13.36	7	30	YES
1,2-Dichlorobenzene	12.50	13.16	5	30	YES
Indene	12.50	12.91	3	30	YES
2-Methylphenol	12.50	13.53	8	30	YES
2,2'-oxybis(1-Chloropropane	12.50	13.51	8	30	YES
bis(2-Chloroisopropyl)ether	12.50	13.51	8	30	YES
N-Nitrosopyrrolidine	12.50	13.40	7	30	YES
Acetophenone	12.50	12.80	2	30	YES
4-Methylphenol	12.50	12.74	2	30	YES
N-Nitroso-di-n-propylamine	12.50	12.92	3	30	YES
N-Nitrosomorpholine	12.50	12.97	4	30	YES
o-Toluidine	12.50	12.71	2	30	YES
Total Cresols	25.00	26.27	5	30	YES
Hexachloroethane	12.50	12.96	4	30	YES
Nitrobenzene	12.50	12.57	1	30	YES
N-Nitrosopiperidine	12.50	12.76	2	30	YES
Isophorone	12.50	13.64	9	30	YES
2-Nitrophenol	12.50	12.94	4	30	YES
2,4-Dimethylphenol	12.50	12.52	0	30	YES
bis(2-Chloroethoxy)methane	12.50	13.16	5	30	YES
Benzoic acid	25.00	21.29	-15	30	YES
O,O,O-Triethylphosphorothio	12.50	12.92	3	30	YES
2,4-Dichlorophenol	12.50	13.01	4	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: 1e0221.d

ICV SAMPLE ID: RVICV0136 BATCH: 16MAY05026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.07	5	30	YES
Naphthalene	12.50	12.98	4	30	YES
4-Chloroaniline	12.50	12.87	3	30	YES
2,6-Dichlorophenol	12.50	13.39	7	30	YES
Hexachloropropene	12.50	14.12	13	30	YES
Hexachlorobutadiene	12.50	13.09	5	30	YES
Quinoline	12.50	12.78	2	30	YES
N-Nitrosodi-n-butylamine	12.50	11.77	-6	30	YES
4-Chloro-3-methylphenol	12.50	13.06	4	30	YES
Safrole	12.50	13.04	4	30	YES
2-Methylnaphthalene	12.50	12.45	0	30	YES
1-Methylnaphthalene	12.50	12.85	3	30	YES
Hexachlorocyclopentadiene	25.00	25.10	0	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.77	2	30	YES
cis-Isosafrole	1.50	1.65	10	30	YES
2,4,6-Trichlorophenol	12.50	13.50	8	30	YES
2,4,5-Trichlorophenol	12.50	13.11	5	30	YES
trans-Isosafrole	11.00	12.51	14	30	YES
1,1'-Biphenyl	12.50	12.66	1	30	YES
2-Chloronaphthalene	12.50	12.92	3	30	YES
Isosafrole	12.50	14.16	13	30	YES
1-Chloronaphthalene	12.50	12.58	1	30	YES
Diphenyl ether	12.50	12.40	-1	30	YES
2-Nitroaniline	12.50	13.66	9	30	YES
1,4-Naphthoquinone	15.63	16.45	5	30	YES
1,4-Dinitrobenzene	12.50	13.15	5	30	YES
Dimethylphthalate	12.50	12.95	4	30	YES
1,3-Dinitrobenzene	12.50	13.36	7	30	YES
2,6-Dinitrotoluene	12.50	13.84	11	30	YES
Acenaphthylene	12.50	13.57	9	30	YES
3-Nitroaniline	12.50	13.93	11	30	YES
Acenaphthene	12.50	13.34	7	30	YES
2,4-Dinitrophenol	25.00	26.16	5	30	YES
4-Nitrophenol	12.50	13.46	8	30	YES
Pentachlorobenzene	12.50	12.72	2	30	YES
2,4-Dinitrotoluene	12.50	13.42	7	30	YES
Dibenzofuran	12.50	12.90	3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: le0221.d

ICV SAMPLE ID: RVICV0136 BATCH: 16MAY05026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	27.26	9	30	YES
1-Naphthylamine	25.00	24.69	-1	30	YES
2,3,4,6-Tetrachlorophenol	12.50	14.58	17	30	YES
2-Naphthylamine	25.00	25.02	0	30	YES
Diethylphthalate	12.50	13.00	4	30	YES
Thionazin	12.50	12.42	-1	30	YES
Fluorene	12.50	13.42	7	30	YES
4-Chlorophenyl-phenylether	12.50	13.08	5	30	YES
5-Nitro-o-toluidine	12.50	14.44	15	30	YES
4-Nitroaniline	12.50	13.44	8	30	YES
4,6-Dinitro-2-methylphenol	12.50	13.13	5	30	YES
N-Nitrosodiphenylamine	12.50	12.85	3	30	YES
NDPA as diphenylamine	12.50	12.85	3	30	YES
1,2-Diphenylhydrazine	12.50	13.17	5	30	YES
Tetraethyldithiopyrophospha	12.50	12.55	0	30	YES
1,3,5-Trinitrobenzene	12.50	12.71	2	30	YES
Diallate (peak 1)	9.38	9.43	1	30	YES
Phorate	12.50	13.48	8	30	YES
Phenacetin	12.50	13.50	8	30	YES
4-Bromophenyl-phenylether	12.50	13.18	5	30	YES
Diallate (peak 2)	3.13	3.12	0	30	YES
Hexachlorobenzene	12.50	12.83	3	30	YES
Diallate trans/cis	12.50	12.56	0	30	YES
Dimethoate	12.50	12.95	4	30	YES
Pentachlorophenol	12.50	14.44	16	30	YES
4-Aminobiphenyl	12.50	17.17	37	30	NO#
Pentachloronitrobenzene	12.50	13.29	6	30	YES
Pronamide	12.50	13.70	10	30	YES
Dinoseb	12.50	12.23	-2	30	YES
Phenanthrene	12.50	12.74	2	30	YES
Anthracene	12.50	13.42	7	30	YES
Carbazole	12.50	13.15	5	30	YES
Methyl parathion	12.50	13.53	8	30	YES
Di-n-butylphthalate	12.50	13.41	7	30	YES
Parathion	12.50	14.01	12	30	YES
4-Nitroquinoline-1-oxide	150.00	219.65	46	30	NO#
Isodrin	12.50	13.23	6	30	YES

NC = Could not calculate

Comments: _____

_____#<50%D, okay_____

_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: le0221.d

ICV SAMPLE ID: RVICV0136 BATCH: 16MAY05026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	13.63	9	30	YES
Benzidine	62.50	53.61	-14	30	YES
Pyrene	12.50	12.49	0	30	YES
p-Dimethylaminoazobenzene	12.50	13.98	12	30	YES
Chlorobenzilate	12.50	13.29	6	30	YES
3,3'-Dimethylbenzidine	25.00	24.16	-3	30	YES
Butylbenzylphthalate	12.50	13.42	7	30	YES
2-Acetylaminofluorene	12.50	13.54	8	30	YES
3,3'-Dichlorobenzidine	12.50	12.24	-2	30	YES
Benzo(a)anthracene	12.50	13.69	10	30	YES
Chrysene	12.50	13.72	10	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.36	-1	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.64	9	30	YES
6-Methylchrysene	12.50	12.68	1	30	YES
Di-n-octylphthalate	12.50	13.77	10	30	YES
Benzo(b)fluoranthene	12.50	13.63	9	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.20	6	30	YES
Benzo(k)fluoranthene	12.50	13.30	6	30	YES
Benzo(a)pyrene	12.50	13.11	5	30	YES
3-Methylcholanthrene	12.50	16.08	29	30	YES
Dibenz(a,h)acridine	12.50	12.66	1	30	YES
Dibenz(a,j)acridine	12.50	12.81	2	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.54	8	30	YES
Dibenz(a,h)anthracene	12.50	13.82	11	30	YES
Benzo(g,h,i)perylene	12.50	13.56	8	30	YES
Total PAHs	225.00	239.26	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: le0222.d

ICV SAMPLE ID: RVBASICV0716 BATCH: 16MAY05026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	12.90	3	30	YES
Caprolactam	12.50	12.01	-4	30	YES
Atrazine	12.50	12.97	4	30	YES

NC = Could not calculate

Comments:

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/06/16 05/06/16

Calibration Times: 08:20 10:13

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF3.75 = le0236.d
RRF7.5 = le0235.d RRF12.5 = le0234.d RRF20 = le0233.d RRF30 = le0232.d

COMPOUND	RRF	RRF	RRF	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Phenylenediamine				0.428	0.457	0.483	0.502	0.488	0.472	6	AVG
Methapyrilene				0.270	0.334	0.379	0.414	0.435	0.367	18	AVG
								Average %RSD		8	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may06.b/le0232.d SSTD030
/chem/HP20296.i/16may06.b/le0233.d SSTD020
/chem/HP20296.i/16may06.b/le0234.d SSTD12.5
/chem/HP20296.i/16may06.b/le0235.d SSTD7.5
/chem/HP20296.i/16may06.b/le0236.d SSTD3.75

Area Summary

	File ID:							
Internal Standard Name	le0232.d	le0233.d	le0234.d	le0235.d	le0236.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	170146	166005	166133	170586	169847	168543	1	Yes
Naphthalene-d8	653733	646168	647899	654744	635323	647573	1	Yes
Acenaphthene-d10	371347	373920	364710	366192	359810	367196	2	Yes
Phenanthrene-d10	695558	699035	692692	682436	680416	690027	1	Yes
Pyrene-d10	853879	822050	819799	806179	775312	815444	3	Yes
Perylene-d12	569308	544926	542674	529709	533720	544067	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:					
Internal Standard Name	le0232.d	le0233.d	le0234.d	le0235.d	le0236.d	Avg. RT
1,4-Dichlorobenzene-d4	6.952	6.947	6.947	6.947	6.947	6.948
Naphthalene-d8	8.931	8.931	8.931	8.931	8.931	8.931
Acenaphthene-d10	11.766	11.760	11.760	11.761	11.761	11.762
Phenanthrene-d10	13.691	13.686	13.686	13.686	13.686	13.687
Pyrene-d10	15.735	15.734	15.734	15.735	15.735	15.735
Perylene-d12	20.313	20.307	20.313	20.313	20.313	20.312

Comments: _____

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Report generated on 05/06/2016 at 16:07

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/06/16 05/06/16

Calibration Times: 10:42 13:03

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF12.5 = le0242.d RRF25 = le0241.d
RRF40 = le0240.d RRF60 = le0239.d RRF80 = le0238.d RRF100 = le0237.d

COMPOUND	RRF	RRF	RRF12.5	RRF25	RRF40	RRF60	RRF80	RRF100	$\overline{RRF}$	% RSD	CAL. METHOD
Kepone			0.073	0.074	0.087	0.090	0.093	0.092	0.085	11	AVG

Average %RSD 6

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may06.b/le0237.d SSTD100
/chem/HP20296.i/16may06.b/le0238.d SSTD080
/chem/HP20296.i/16may06.b/le0239.d SSTD060
/chem/HP20296.i/16may06.b/le0240.d SSTD040
/chem/HP20296.i/16may06.b/le0241.d SSTD025
/chem/HP20296.i/16may06.b/le0242.d SSTD12.5

Area Summary

	File ID:								
Internal Standard Name	le0237.d	le0238.d	le0239.d	le0240.d	le0241.d	le0242.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	190514	185803	205879	195399	183122	188892	191602	4	Yes
Naphthalene-d8	747139	707985	796590	753944	706211	710271	737023	5	Yes
Acenaphthene-d10	421125	401261	455532	424894	398575	405992	417896	5	Yes
Phenanthrene-d10	813147	750936	854680	804027	755735	762677	790200	5	Yes
Pyrene-d10	918503	850061	981093	915504	864030	860072	898210	6	Yes
Perylene-d12	627777	580251	679580	625962	598461	582380	615735	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:						
Internal Standard Name	le0237.d	le0238.d	le0239.d	le0240.d	le0241.d	le0242.d	Avg. RT
1,4-Dichlorobenzene-d4	6.952	6.947	6.947	6.947	6.947	6.947	6.948
Naphthalene-d8	8.931	8.931	8.931	8.931	8.931	8.931	8.931
Acenaphthene-d10	11.760	11.761	11.760	11.760	11.760	11.761	11.760
Phenanthrene-d10	13.686	13.686	13.686	13.686	13.691	13.692	13.688
Pyrene-d10	15.734	15.735	15.734	15.735	15.734	15.735	15.735
Perylene-d12	20.313	20.313	20.313	20.313	20.313	20.313	20.313

Comments: _____

_____

Report generated on 05/06/2016 at 16:08

6B
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/06/16 05/06/16

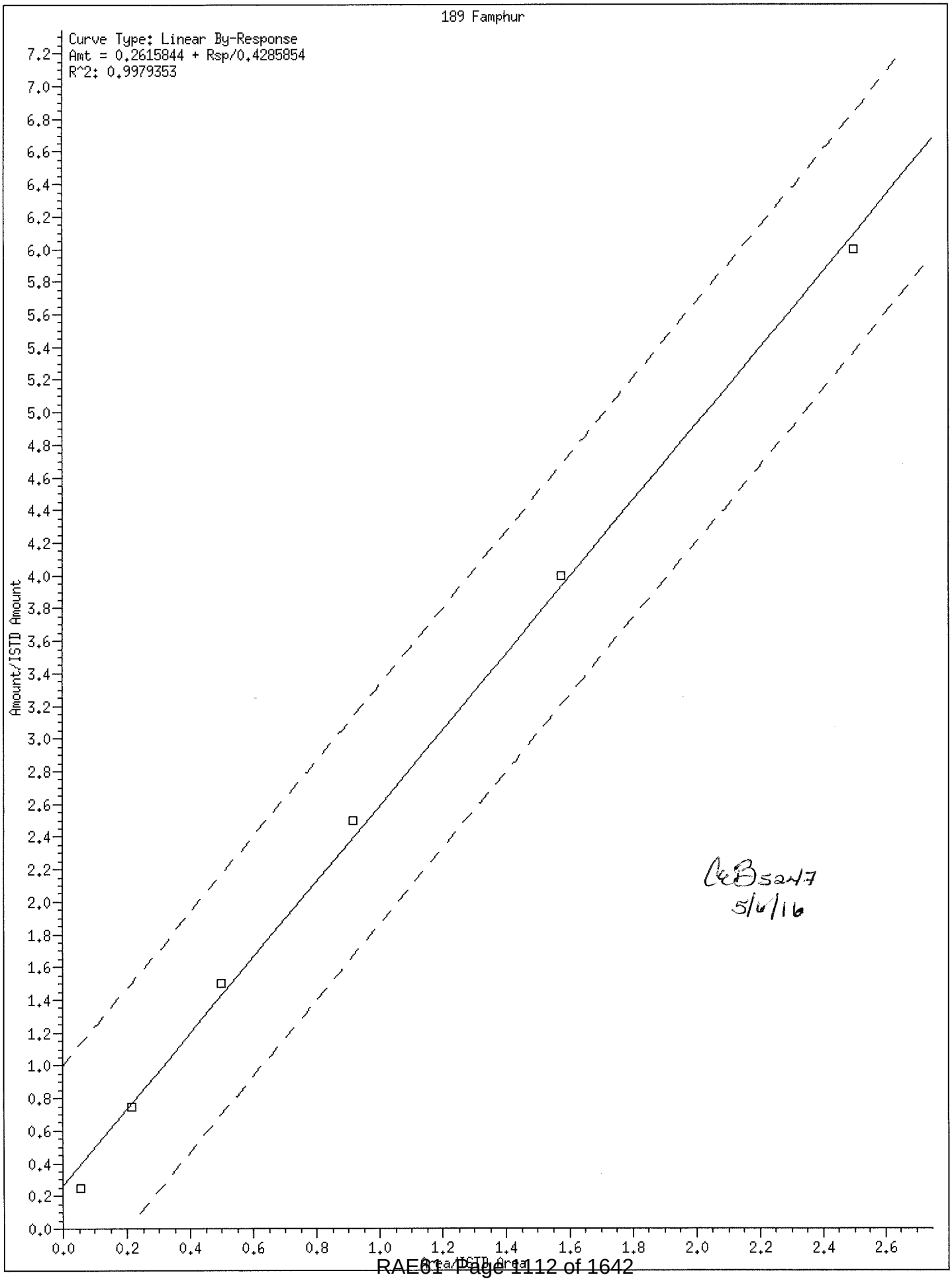
Calibration Times: 14:00 16:21

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF1.25 = le0249.d RRF3.75 = le0248.d
RRF7.5 = le0247.d RRF12.5 = le0246.d RRF20 = le0245.d RRF30 = le0244.d

COMPOUND	RRF	RRF	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Disulfoton			0.247	0.315	0.367	0.390	0.422	0.444	0.364	20	AVG
Famphur			0.221	0.285	0.334	0.366	0.393	0.416	0.336	22	1STDEG
								Average %RSD		14	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



CeB 5247
5/6/16

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may06.b/le0244.d SSTD030
/chem/HP20296.i/16may06.b/le0245.d SSTD020
/chem/HP20296.i/16may06.b/le0246.d SSTD12.5
/chem/HP20296.i/16may06.b/le0247.d SSTD7.5
/chem/HP20296.i/16may06.b/le0248.d SSTD3.75
/chem/HP20296.i/16may06.b/le0249.d SSTD1.25

Area Summary

	File ID:								
Internal Standard Name	le0244.d	le0245.d	le0246.d	le0247.d	le0248.d	le0249.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	160301	157549	164045	165963	171731	160549	163356	3	Yes
Naphthalene-d8	621332	608972	634678	644022	651673	623385	630677	3	Yes
Acenaphthene-d10	344910	341077	354474	357928	364931	354009	352888	2	Yes
Phenanthrene-d10	662585	661969	682403	674239	694791	678536	675754	2	Yes
Pyrene-d10	785672	770735	788902	775600	791790	772674	780896	1	Yes
Perylene-d12	521376	520334	529342	522952	535687	518091	524630	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:						
Internal Standard Name	le0244.d	le0245.d	le0246.d	le0247.d	le0248.d	le0249.d	Avg. RT
1,4-Dichlorobenzene-d4	6.947	6.947	6.947	6.947	6.947	6.947	6.947
Naphthalene-d8	8.931	8.931	8.931	8.931	8.931	8.931	8.931
Acenaphthene-d10	11.761	11.761	11.760	11.760	11.761	11.760	11.760
Phenanthrene-d10	13.686	13.686	13.686	13.691	13.686	13.691	13.688
Pyrene-d10	15.735	15.735	15.734	15.735	15.735	15.734	15.734
Perylene-d12	20.313	20.313	20.313	20.313	20.313	20.313	20.313

Comments: _____

_____

Report generated on 05/06/2016 at 17:02

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/06/16 05/06/16

Calibration Times: 20:02 20:02

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:

RRF12.5 = le0265.d

COMPOUND	RRF	RRF	RRF	RRF	RRF	RRF12.5	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
a,a-Dimethylphenethylamine						0.502		0.502	0	AVG
Aramite (1)						0.003		0.003	0	AVG+
Aramite (2)						0.004		0.004	0	AVG+
Aramite (3)						0.330		0.330	0	AVG
Aramite (4)						0.442		0.442	0	AVG
Aramite						0.080		0.080	0	AVG+
							Average %RSD		0	

+ %RSD is less than or equal to 0%; however, value rounds to 0.

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 05/11/16 05/11/16

Calibration Times: 17:49 17:49

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:

RRF12.5 = 1e0385.d

COMPOUND	RRF	RRF	RRF	RRF	RRF	RRF12.5	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
a,a-Dimethylphenethylamine						0.612		0.612	0	AVG
Aramite (1)						0.004		0.004	0	AVG+
Aramite (2)						0.004		0.004	0	AVG+
Aramite (3)						0.381		0.381	0	AVG
Aramite (4)						0.511		0.511	0	AVG
Aramite						0.092		0.092	0	AVG
							Average %RSD		0	

+ %RSD is less than or equal to 0%; however, value rounds to 0.

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:02

Lab File ID: le0261.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	$\overline{RRF}$	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.735	0.717	7.320	7.5	-2
N-Nitrosodimethylamine	1.141	1.119	7.360	7.5	-2
Pyridine	1.951	1.854	7.130	7.5	-5
2-Picoline	2.003	1.976	7.400	7.5	-1
N-Nitrosomethylethylamine	0.796	0.778	7.340	7.5	-2
Methyl methanesulfonate	0.931	0.904	7.280	7.5	-3
N-Nitrosodiethylamine	0.744	0.750	7.560	7.5	1
Ethyl methanesulfonate	0.775	0.782	7.570	7.5	1
Benzaldehyde	1.599	1.593	7.470	7.5	0
Phenol	2.383	2.403	7.560	7.5	1
Aniline	2.811	2.851	7.610	7.5	1
a-methylstyrene	1.557	1.588	7.650	7.5	2
bis(2-Chloroethyl)ether	1.744	1.776	7.640	7.5	2
2-Chlorophenol	1.374	1.401	7.650	7.5	2
1,3-Dichlorobenzene	1.578	1.584	7.530	7.5	0
1,4-Dichlorobenzene	1.591	1.609	7.590	7.5	1
Benzyl alcohol	1.053	1.045	7.450	7.5	-1
1,2-Dichlorobenzene	1.502	1.528	7.630	7.5	2
Indene	2.714	2.745	7.580	7.5	1
2-Methylphenol	1.468	1.495	7.640	7.5	2
2,2'-oxybis(1-Chloropropane)	2.218	2.219	7.510	7.5	0
bis(2-Chloroisopropyl)ether	2.218	2.219	7.510	7.5	0
N-Nitrosopyrrolidine	0.783	0.782	7.490	7.5	0
Acetophenone	2.413	2.440	7.580	7.5	1
4-Methylphenol	1.616	1.715	7.960	7.5	6
Total Cresols	1.542	1.605	15.600	15.0	4
N-Nitroso-di-n-propylamine	1.360	1.361	7.500	7.5	0
N-Nitrosomorpholine	1.015	1.004	7.420	7.5	-1
o-Toluidine	2.705	2.730	7.570	7.5	1
Hexachloroethane	0.689	0.680	7.410	7.5	-1
Nitrobenzene	0.517	0.517	7.500	7.5	0
N-Nitrosopiperidine	0.191	0.193	7.550	7.5	1
Isophorone	0.880	0.880	7.500	7.5	0
2-Nitrophenol	0.164	0.153	7.000	7.5	-7
2,4-Dimethylphenol	0.429	0.434	7.580	7.5	1
O,O,O-Triethylphosphorothioate	0.200	0.204	7.650	7.5	2

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:02

Lab File ID: le0261.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.545	0.557	7.660	7.5	2
Benzoic acid	0.253	0.226	9.040	10.0	-10
1,2,3,4-Tetrahydronaphthalene	0.647	0.656	7.610	7.5	1
2,4-Dichlorophenol	0.306	0.315	7.710	7.5	3
1,2,4-Trichlorobenzene	0.355	0.361	7.640	7.5	2
Naphthalene	1.082	1.070	7.420	7.5	-1
4-Chloroaniline	0.450	0.450	7.500	7.5	0
2,6-Dichlorophenol	0.292	0.299	7.660	7.5	2
Hexachloropropene	0.225	0.222	7.410	7.5	-1
Hexachlorobutadiene	0.222	0.227	7.650	7.5	2
Quinoline	0.664	0.654	7.400	7.5	-1
Caprolactam	0.097	0.092	7.090	7.5	-5
N-Nitrosodi-n-butylamine	0.347	0.318	6.880	7.5	-8
4-Chloro-3-methylphenol	0.360	0.363	7.570	7.5	1
Safrole	0.273	0.278	7.640	7.5	2
2-Methylnaphthalene	0.702	0.717	7.650	7.5	2
1-Methylnaphthalene	0.647	0.665	7.710	7.5	3
Hexachlorocyclopentadiene	0.356	0.341	7.180	7.5	-4
1,2,4,5-Tetrachlorobenzene	0.658	0.667	7.600	7.5	1
cis-Isosafrole	0.506	0.498	1.260	1.3	-2
2,4,6-Trichlorophenol	0.387	0.390	7.550	7.5	1
2,4,5-Trichlorophenol	0.410	0.428	7.820	7.5	4
trans-Isosafrole	0.535	0.527	6.120	6.2	-2
Isosafrole	0.530	0.522	7.380	7.5	-2
1,1'-Biphenyl	1.500	1.497	7.480	7.5	0
2-Chloronaphthalene	1.215	1.213	7.490	7.5	0
1-Chloronaphthalene	1.137	1.143	7.540	7.5	1
Diphenyl ether	0.831	0.838	7.560	7.5	1
2-Nitroaniline	0.325	0.320	7.380	7.5	-2
1,4-Naphthoquinone	0.467	0.454	7.290	7.5	-3
1,4-Dinitrobenzene	0.163	0.148	6.790	7.5	-10
Dimethylphthalate	1.315	1.323	7.540	7.5	1
1,3-Dinitrobenzene	0.187	0.174	6.990	7.5	-7
2,6-Dinitrotoluene	0.265	0.277	7.820	7.5	4
Acenaphthylene	1.734	1.796	7.770	7.5	4
3-Nitroaniline	0.292	0.285	7.310	7.5	-3

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:02

Lab File ID: le0261.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.221	1.214	7.460	7.5	-1
2,4-Dinitrophenol	0.139	0.101	7.260	10.0	-27
4-Nitrophenol	0.243	0.226	6.990	7.5	-7
Pentachlorobenzene	0.536	0.540	7.550	7.5	1
2,4-Dinitrotoluene	0.371	0.355	7.170	7.5	-4
2,4_2,6-Dinitrotoluenes	0.307	0.316	14.990	15.0	0
Dibenzofuran	1.681	1.687	7.520	7.5	0
1-Naphthylamine	1.199	1.177	7.360	7.5	-2
2,3,4,6-Tetrachlorophenol	0.313	0.318	7.640	7.5	2
2-Naphthylamine	1.185	1.126	7.130	7.5	-5
Diethylphthalate	1.286	1.250	7.290	7.5	-3
Thionazin	0.265	0.255	7.220	7.5	-4
Fluorene	1.296	1.319	7.630	7.5	2
4-Chlorophenyl-phenylether	0.679	0.699	7.720	7.5	3
5-Nitro-o-toluidine	0.329	0.328	7.460	7.5	-1
4-Nitroaniline	0.303	0.305	7.530	7.5	0
4,6-Dinitro-2-methylphenol	0.104	0.085	6.170	7.5	-18
N-Nitrosodiphenylamine (1)	0.580	0.584	7.550	7.5	1
NDPA as diphenylamine	0.580	0.584	7.550	7.5	1
1,2-Diphenylhydrazine	0.929	0.922	7.440	7.5	-1
Tetraethyldithiopyrophosphate	0.145	0.141	7.280	7.5	-3
1,3,5-Trinitrobenzene	0.067	0.055	6.140	7.5	-18
Diallate (peak 1)	0.372	0.366	6.130	6.2	-2
Phorate	0.520	0.532	7.670	7.5	2
Phenacetin	0.393	0.379	7.240	7.5	-3
4-Bromophenyl-phenylether	0.192	0.201	7.880	7.5	5
Diallate (peak 2)	0.370	0.362	1.250	1.3	-2
Diallate trans/cis	0.371	0.365	7.370	7.5	-2
Hexachlorobenzene	0.200	0.216	8.090	7.5	8
Dimethoate	0.331	0.323	7.320	7.5	-2
Atrazine	0.191	0.199	7.790	7.5	4
Pentachlorophenol	0.118	0.118	7.480	7.5	0
4-Aminobiphenyl	0.560	0.567	7.600	7.5	1
Pentachloronitrobenzene	0.096	0.098	7.700	7.5	3
Pronamide	0.313	0.326	7.800	7.5	4
Dinoseb	0.146	0.130	6.460	7.5	-14

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:02

Lab File ID: le0261.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.054	1.066	7.590	7.5	1
Anthracene	1.036	1.059	7.660	7.5	2
Carbazole	0.946	0.967	7.660	7.5	2
Methyl parathion	0.236	0.222	7.050	7.5	-6
Di-n-butylphthalate	1.153	1.136	7.380	7.5	-2
Parathion	0.149	0.136	6.850	7.5	-9
4-Nitroquinoline-1-oxide	0.091	0.063	5.160	7.5	-31
Octachlorostyrene	0.073	0.077	7.870	7.5	5
Isodrin	0.124	0.128	7.750	7.5	3
Fluoranthene	1.147	1.217	7.960	7.5	6
Benzidine	0.677	0.651	21.640	22.5	-4
Pyrene	1.084	1.075	7.440	7.5	-1
p-Dimethylaminoazobenzene	0.160	0.169	7.090	7.5	-6
Chlorobenzilate	0.297	0.277	6.990	7.5	-7
3,3'-Dimethylbenzidine	0.626	0.601	7.200	7.5	-4
Butylbenzylphthalate	0.433	0.408	7.060	7.5	-6
2-Acetylaminofluorene	0.352	0.310	6.600	7.5	-12
3,3'-Dichlorobenzidine	0.349	0.345	7.420	7.5	-1
4,4'-Methylenebis(2-chloroanil	0.202	0.202	7.500	7.5	0
Benzo(a)anthracene	0.940	1.002	8.000	7.5	7
Chrysene	0.896	0.947	7.920	7.5	6
bis(2-Ethylhexyl)phthalate	0.622	0.579	6.980	7.5	-7
6-Methylchrysene	0.629	0.637	7.590	7.5	1
Di-n-octylphthalate	1.409	1.234	6.570	7.5	-12
Benzo(b)fluoranthene	1.222	1.260	7.730	7.5	3
7,12-Dimethylbenz[a]anthracene	0.531	0.569	8.030	7.5	7
Benzo(k)fluoranthene	1.217	1.292	7.960	7.5	6
Benzo(a)pyrene	1.115	1.161	7.810	7.5	4
3-Methylcholanthrene	0.466	0.468	7.520	7.5	0
Dibenz(a,h)acridine	0.951	0.907	7.160	7.5	-5
Dibenz(a,j)acridine	0.990	1.002	7.590	7.5	1
Indeno(1,2,3-cd)pyrene	1.305	1.376	7.910	7.5	6
Dibenz(a,h)anthracene	1.094	1.162	7.970	7.5	6
Benzo(g,h,i)perylene	1.113	1.142	7.690	7.5	3
Total PAHs	1.113	1.109	139.280	135.0	3
2-Fluorophenol	1.506	1.501	14.960	15.0	0

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:02

Lab File ID: le0261.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.014	2.015	15.010	15.0	0
Nitrobenzene-d5	0.502	0.489	14.600	15.0	-3
2-Fluorobiphenyl	1.414	1.405	14.910	15.0	-1
2,4,6-Tribromophenol	0.164	0.170	15.510	15.0	3
Terphenyl-d14	0.686	0.711	15.570	15.0	4
			Average %Drift:		3

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may05.b/le0211.d **
/chem/HP20296.i/16may05.b/le0212.d
/chem/HP20296.i/16may05.b/le0213.d
/chem/HP20296.i/16may05.b/le0214.d
/chem/HP20296.i/16may05.b/le0215.d
/chem/HP20296.i/16may05.b/le0216.d
/chem/HP20296.i/16may05.b/le0217.d
/chem/HP20296.i/16may05.b/le0218.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/16may06a.b/le0261.d

Area Summary

File ID:

Internal Standard Name	le0261.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	169197	164865	82432	329730	Yes
Naphthalene-d8	656070	642121	321060	1284242	Yes
Acenaphthene-d10	383667	368275	184138	736550	Yes
Phenanthrene-d10	713680	688392	344196	1376784	Yes
Pyrene-d10	873895	830815	415408	1661630	Yes
Perylene-d12	659889	600148	300074	1200296	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	le0261.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.952	6.952	Yes
Naphthalene-d8	8.931	8.936	Yes
Acenaphthene-d10	11.766	11.766	Yes
Phenanthrene-d10	13.691	13.691	Yes
Pyrene-d10	15.735	15.740	Yes
Perylene-d12	20.313	20.318	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 18:37

Lab File ID: le0262.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 08:20 10:13

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.472	0.431	11.430	12.5	-9
Methapyrilene	0.367	0.340	11.610	12.5	-7
			Average %Drift:		8

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7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 19:05

Lab File ID: le0263.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 10:42 13:03

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF60	ACTUAL CONC.	TRUE CONC.	% DRIFT
Kepone	0.085	0.092	64.870	60.0	8
			Average %Drift:		8

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/06/16 Time: 19:34

Lab File ID: le0264.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 14:00 16:21

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.364	0.396	13.590	12.5	9
Famphur	0.336	0.376	12.270	12.5	-2
			Average %Drift:		6

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 15:45

Lab File ID: le0381.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.735	0.720	7.350	7.5	-2
N-Nitrosodimethylamine	1.141	1.157	7.610	7.5	1
Pyridine	1.951	1.952	7.500	7.5	0
2-Picoline	2.003	1.832	6.860	7.5	-9
N-Nitrosomethylethylamine	0.796	0.787	7.410	7.5	-1
Methyl methanesulfonate	0.931	0.966	7.780	7.5	4
N-Nitrosodiethylamine	0.744	0.749	7.550	7.5	1
Ethyl methanesulfonate	0.775	0.775	7.500	7.5	0
Benzaldehyde	1.599	1.552	7.280	7.5	-3
Phenol	2.383	2.431	7.650	7.5	2
Aniline	2.811	2.819	7.520	7.5	0
a-methylstyrene	1.557	1.536	7.400	7.5	-1
bis(2-Chloroethyl)ether	1.744	1.759	7.570	7.5	1
2-Chlorophenol	1.374	1.409	7.690	7.5	3
1,3-Dichlorobenzene	1.578	1.579	7.500	7.5	0
1,4-Dichlorobenzene	1.591	1.587	7.480	7.5	0
Benzyl alcohol	1.053	1.018	7.250	7.5	-3
1,2-Dichlorobenzene	1.502	1.523	7.610	7.5	1
Indene	2.714	2.656	7.340	7.5	-2
2-Methylphenol	1.468	1.460	7.460	7.5	-1
2,2'-oxybis(1-Chloropropane)	2.218	2.253	7.620	7.5	2
bis(2-Chloroisopropyl)ether	2.218	2.253	7.620	7.5	2
N-Nitrosopyrrolidine	0.783	0.778	7.450	7.5	-1
Acetophenone	2.413	2.464	7.660	7.5	2
4-Methylphenol	1.616	1.707	7.920	7.5	6
Total Cresols	1.542	1.584	15.380	15.0	3
N-Nitroso-di-n-propylamine	1.360	1.385	7.640	7.5	2
N-Nitrosomorpholine	1.015	1.045	7.720	7.5	3
o-Toluidine	2.705	2.674	7.410	7.5	-1
Hexachloroethane	0.689	0.702	7.640	7.5	2
Nitrobenzene	0.517	0.543	7.870	7.5	5
N-Nitrosopiperidine	0.191	0.193	7.550	7.5	1
Isophorone	0.880	0.891	7.600	7.5	1
2-Nitrophenol	0.164	0.161	7.360	7.5	-2
2,4-Dimethylphenol	0.429	0.442	7.730	7.5	3
O,O,O-Triethylphosphorothioate	0.200	0.201	7.540	7.5	0

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 15:45

Lab File ID: le0381.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.545	0.572	7.870	7.5	5
Benzoic acid	0.253	0.230	9.150	10.0	-8
1,2,3,4-Tetrahydronaphthalene	0.647	0.662	7.680	7.5	2
2,4-Dichlorophenol	0.306	0.303	7.410	7.5	-1
1,2,4-Trichlorobenzene	0.355	0.364	7.690	7.5	3
Naphthalene	1.082	1.071	7.420	7.5	-1
4-Chloroaniline	0.450	0.462	7.700	7.5	3
2,6-Dichlorophenol	0.292	0.300	7.710	7.5	3
Hexachloropropene	0.225	0.222	7.420	7.5	-1
Hexachlorobutadiene	0.222	0.225	7.600	7.5	1
Quinoline	0.664	0.650	7.350	7.5	-2
Caprolactam	0.097	0.094	7.240	7.5	-3
N-Nitrosodi-n-butylamine	0.347	0.328	7.090	7.5	-5
4-Chloro-3-methylphenol	0.360	0.375	7.810	7.5	4
Safrole	0.273	0.273	7.510	7.5	0
2-Methylnaphthalene	0.702	0.718	7.670	7.5	2
1-Methylnaphthalene	0.647	0.670	7.760	7.5	4
Hexachlorocyclopentadiene	0.356	0.343	7.210	7.5	-4
1,2,4,5-Tetrachlorobenzene	0.658	0.677	7.720	7.5	3
cis-Isosafrole	0.506	0.477	1.200	1.3	-6
2,4,6-Trichlorophenol	0.387	0.390	7.560	7.5	1
2,4,5-Trichlorophenol	0.410	0.430	7.870	7.5	5
trans-Isosafrole	0.535	0.529	6.150	6.2	-1
Isosafrole	0.530	0.520	7.350	7.5	-2
1,1'-Biphenyl	1.500	1.554	7.770	7.5	4
2-Chloronaphthalene	1.215	1.288	7.950	7.5	6
1-Chloronaphthalene	1.137	1.108	7.310	7.5	-3
Diphenyl ether	0.831	0.845	7.620	7.5	2
2-Nitroaniline	0.325	0.331	7.630	7.5	2
1,4-Naphthoquinone	0.467	0.453	7.270	7.5	-3
1,4-Dinitrobenzene	0.163	0.166	7.620	7.5	2
Dimethylphthalate	1.315	1.328	7.580	7.5	1
1,3-Dinitrobenzene	0.187	0.195	7.820	7.5	4
2,6-Dinitrotoluene	0.265	0.286	8.100	7.5	8
Acenaphthylene	1.734	1.792	7.750	7.5	3
3-Nitroaniline	0.292	0.299	7.670	7.5	2

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 15:45

Lab File ID: le0381.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Acenaphthene	1.221	1.243	7.640	7.5	2
2,4-Dinitrophenol	0.139	0.110	7.910	10.0	-21
4-Nitrophenol	0.243	0.246	7.600	7.5	1
Pentachlorobenzene	0.536	0.549	7.680	7.5	2
2,4-Dinitrotoluene	0.371	0.380	7.670	7.5	2
2,4_2,6-Dinitrotoluenes	0.307	0.333	15.760	15.0	5
Dibenzofuran	1.681	1.701	7.590	7.5	1
1-Naphthylamine	1.199	1.199	7.500	7.5	0
2,3,4,6-Tetrachlorophenol	0.313	0.323	7.750	7.5	3
2-Naphthylamine	1.185	1.171	7.410	7.5	-1
Diethylphthalate	1.286	1.300	7.580	7.5	1
Thionazin	0.265	0.274	7.760	7.5	3
Fluorene	1.296	1.382	8.000	7.5	7
4-Chlorophenyl-phenylether	0.679	0.713	7.880	7.5	5
5-Nitro-o-toluidine	0.329	0.347	7.900	7.5	5
4-Nitroaniline	0.303	0.310	7.650	7.5	2
4,6-Dinitro-2-methylphenol	0.104	0.093	6.720	7.5	-10
N-Nitrosodiphenylamine (1)	0.580	0.596	7.710	7.5	3
NDPA as diphenylamine	0.580	0.596	7.710	7.5	3
1,2-Diphenylhydrazine	0.929	0.971	7.840	7.5	4
Tetraethyldithiopyrophosphate	0.145	0.149	7.730	7.5	3
1,3,5-Trinitrobenzene	0.067	0.063	7.080	7.5	-6
Diallate (peak 1)	0.372	0.381	6.380	6.2	2
Phorate	0.520	0.566	8.160	7.5	9
Phenacetin	0.393	0.401	7.660	7.5	2
4-Bromophenyl-phenylether	0.192	0.203	7.930	7.5	6
Diallate (peak 2)	0.370	0.365	1.260	1.3	-1
Diallate trans/cis	0.371	0.378	7.630	7.5	2
Hexachlorobenzene	0.200	0.213	7.980	7.5	6
Dimethoate	0.331	0.340	7.690	7.5	3
Atrazine	0.191	0.198	7.760	7.5	4
Pentachlorophenol	0.118	0.095	6.040	7.5	-20
4-Aminobiphenyl	0.560	0.576	7.720	7.5	3
Pentachloronitrobenzene	0.096	0.094	7.390	7.5	-2
Pronamide	0.313	0.321	7.690	7.5	3
Dinoseb	0.146	0.133	6.610	7.5	-12

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 15:45

Lab File ID: le0381.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenanthrene	1.054	1.070	7.620	7.5	2
Anthracene	1.036	1.072	7.760	7.5	4
Carbazole	0.946	0.983	7.790	7.5	4
Methyl parathion	0.236	0.248	7.880	7.5	5
Di-n-butylphthalate	1.153	1.164	7.570	7.5	1
Parathion	0.149	0.158	7.940	7.5	6
4-Nitroquinoline-1-oxide	0.091	0.066	5.460	7.5	-27
Octachlorostyrene	0.073	0.080	8.210	7.5	9
Isodrin	0.124	0.125	7.550	7.5	1
Fluoranthene	1.147	1.240	8.110	7.5	8
Benzidine	0.677	0.683	22.680	22.5	1
Pyrene	1.084	1.084	7.500	7.5	0
p-Dimethylaminoazobenzene	0.160	0.171	7.170	7.5	-4
Chlorobenzilate	0.297	0.308	7.770	7.5	4
3,3'-Dimethylbenzidine	0.626	0.628	7.530	7.5	0
Butylbenzylphthalate	0.433	0.462	8.000	7.5	7
2-Acetylaminofluorene	0.352	0.345	7.370	7.5	-2
3,3'-Dichlorobenzidine	0.349	0.379	8.130	7.5	8
4,4'-Methylenebis(2-chloroanil	0.202	0.213	7.900	7.5	5
Benzo(a)anthracene	0.940	1.087	8.680	7.5	16
Chrysene	0.896	1.027	8.590	7.5	15
bis(2-Ethylhexyl)phthalate	0.622	0.688	8.300	7.5	11
6-Methylchrysene	0.629	0.719	8.580	7.5	14
Di-n-octylphthalate	1.409	1.302	6.930	7.5	-8
Benzo(b)fluoranthene	1.222	1.315	8.070	7.5	8
7,12-Dimethylbenz[a]anthracene	0.531	0.575	8.120	7.5	8
Benzo(k)fluoranthene	1.217	1.288	7.940	7.5	6
Benzo(a)pyrene	1.115	1.204	8.090	7.5	8
3-Methylcholanthrene	0.466	0.472	7.600	7.5	1
Dibenz(a,h)acridine	0.951	0.874	6.900	7.5	-8
Dibenz(a,j)acridine	0.990	0.921	6.980	7.5	-7
Indeno(1,2,3-cd)pyrene	1.305	1.293	7.430	7.5	-1
Dibenz(a,h)anthracene	1.094	1.086	7.450	7.5	-1
Benzo(g,h,i)perylene	1.113	1.055	7.110	7.5	-5
Total PAHs	1.113	1.038	140.580	135.0	4
2-Fluorophenol	1.506	1.513	15.070	15.0	0

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 15:45

Lab File ID: 1e0381.d Init. Calib. Date(s): 05/05/16 05/05/16

Init. Calib. Times(s): 18:43 22:17

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.014	2.054	15.300	15.0	2
Nitrobenzene-d5	0.502	0.522	15.590	15.0	4
2-Fluorobiphenyl	1.414	1.436	15.230	15.0	2
2,4,6-Tribromophenol	0.164	0.164	14.950	15.0	0
Terphenyl-d14	0.686	0.730	15.970	15.0	6
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/16may05.b/le0211.d **
/chem/HP20296.i/16may05.b/le0212.d
/chem/HP20296.i/16may05.b/le0213.d
/chem/HP20296.i/16may05.b/le0214.d
/chem/HP20296.i/16may05.b/le0215.d
/chem/HP20296.i/16may05.b/le0216.d
/chem/HP20296.i/16may05.b/le0217.d
/chem/HP20296.i/16may05.b/le0218.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/16may11a.b/le0381.d

Area Summary

File ID:

Internal Standard Name	le0381.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	144909	164865	82432	329730	Yes
Naphthalene-d8	548901	642121	321060	1284242	Yes
Acenaphthene-d10	316537	368275	184138	736550	Yes
Phenanthrene-d10	604056	688392	344196	1376784	Yes
Pyrene-d10	747682	830815	415408	1661630	Yes
Perylene-d12	627174	600148	300074	1200296	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	le0381.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.738	6.952	Yes
Naphthalene-d8	8.723	8.936	Yes
Acenaphthene-d10	11.573	11.766	Yes
Phenanthrene-d10	13.504	13.691	Yes
Pyrene-d10	15.515	15.740	Yes
Perylene-d12	20.062	20.318	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

_____

Report generated on 05/12/2016 at 07:43

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 16:24

Lab File ID: le0382.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 08:20 10:13

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.472	0.445	11.790	12.5	-6
Methapyrilene	0.367	0.380	12.950	12.5	4
			Average %Drift:		5

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 19:02

Lab File ID: le0383a.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 10:42 13:03

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF60	ACTUAL CONC.	TRUE CONC.	% DRIFT
Kepone	0.085	0.008	5.410	60.0	-91
			Average %Drift:		91

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 05/11/16 Time: 17:20

Lab File ID: le0384.d Init. Calib. Date(s): 05/06/16 05/06/16

Init. Calib. Times(s): 14:00 16:21

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.364	0.405	13.910	12.5	11
Famphur	0.336	0.418	13.500	12.5	8
			Average %Drift:		10

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0261.d Date Analyzed: 05/06/16

Instrument ID: HP20296 Time Analyzed: 18:02

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	169197	6.952	656070	8.931	383667	11.766
UPPER LIMIT	338394	7.452	1312140	9.431	767334	12.266
LOWER LIMIT	84599	6.452	328035	8.431	191834	11.266
LLI SAMPLE NO.						
01 SBLKWA124	126038	6.947	485678	8.931	272692	11.760
02 SBLKWZ124	126038	6.947	485678	8.931	272692	11.760
03 124WALCS	146634	6.952	580443	8.931	341425	11.760
04 124WZLCS	146634	6.952	580443	8.931	341425	11.760
05 SBLKWC114	156027	6.947	593911	8.926	342103	11.761
06 114WCLCS	152284	6.952	591126	8.926	345468	11.760
07 114WCLCSD	158318	6.952	621952	8.931	358146	11.760
08 8345367	161787	6.947	629838	8.931	374725	11.760
09 124WZUS	142066	6.947	540896	8.926	315081	11.760
10 8354936	142066	6.947	540896	8.926	315081	11.760
11 124WZMS	144319	6.952	559533	8.931	327063	11.760
12 8354937MS	144319	6.952	559533	8.931	327063	11.760
13 124WZMSD	151639	6.947	567662	8.931	335692	11.760
14 8354938MSD	151639	6.947	567662	8.931	335692	11.760
15 8354933	137064	6.941	520400	8.926	293827	11.761
16 8354934	150021	6.947	566761	8.926	323575	11.760
17 8354935	140456	6.947	541533	8.926	300308	11.760

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0261.d Date Analyzed: 05/06/16

Instrument ID: HP20296 Time Analyzed: 18:02

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	713680	13.691	873895	15.735	659889	20.313
UPPER LIMIT	1427360	14.191	1747790	16.235	1319778	20.813
LOWER LIMIT	356840	13.191	436948	15.235	329945	19.813
LLI SAMPLE NO.						
01 SBLKWA124	513167	13.686	590832	15.729	407760	20.308
02 SBLKWZ124	513167	13.686	590832	15.729	407760	20.308
03 124WALCS	653397	13.691	790225	15.734	599447	20.313
04 124WZLCS	653397	13.691	790225	15.734	599447	20.313
05 SBLKWC114	656380	13.686	762979	15.729	549211	20.308
06 114WCLCS	659508	13.691	795714	15.735	612446	20.313
07 114WCLCSD	697087	13.686	843629	15.734	649477	20.308
08 8345367	687604	13.707	985127	15.734	730524	20.313
09 124WZUS	607591	13.686	740808	15.729	569216	20.308
10 8354936	607591	13.686	740821	15.729	569216	20.308
11 124WZMS	647210	13.686	793660	15.734	595861	20.313
12 8354937MS	647210	13.686	793647	15.734	595861	20.313
13 124WZMSD	650840	13.686	803867	15.735	598444	20.313
14 8354938MSD	650840	13.686	803880	15.735	598444	20.313
15 8354933	573948	13.686	683096	15.729	507588	20.308
16 8354934	626867	13.686	740503	15.729	550786	20.307
17 8354935	581872	13.686	697352	15.729	515175	20.308

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0261.d Date Analyzed: 05/06/16

Instrument ID: HP20296 Time Analyzed: 18:02

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	169197	6.952	656070	8.931	383667	11.766
UPPER LIMIT	338394	7.452	1312140	9.431	767334	12.266
LOWER LIMIT	84599	6.452	328035	8.431	191834	11.266
LLI SAMPLE NO.						
18 8354939	137268	6.941	520972	8.926	294126	11.760
19 8354940	139355	6.941	534029	8.926	300349	11.760
20 8354941	138875	6.947	530643	8.926	298392	11.761
21 8354942	144371	6.941	556391	8.926	309710	11.760
22 8354943	139701	6.947	526078	8.926	299760	11.760
23 8354944	146429	6.947	550843	8.926	311239	11.760
24 8354945	142486	6.947	540923	8.926	305327	11.760
25 8347055	159090	6.941	606036	8.926	340001	11.760

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0261.d Date Analyzed: 05/06/16

Instrument ID: HP20296 Time Analyzed: 18:02

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	713680	13.691	873895	15.735	659889	20.313
	UPPER LIMIT	1427360	14.191	1747790	16.235	1319778	20.813
	LOWER LIMIT	356840	13.191	436948	15.235	329945	19.813
	LLI SAMPLE NO.						
18	8354939	573814	13.686	677337	15.729	498231	20.308
19	8354940	580371	13.686	681733	15.729	510351	20.308
20	8354941	562203	13.686	670076	15.729	488108	20.308
21	8354942	584895	13.686	678861	15.729	521982	20.307
22	8354943	577921	13.686	666732	15.729	505007	20.308
23	8354944	594461	13.686	687221	15.729	524093	20.307
24	8354945	584451	13.686	705449	15.729	525880	20.307
25	8347055	663817	13.686	773842	15.729	571631	20.307

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0381.d Date Analyzed: 05/11/16

Instrument ID: HP20296 Time Analyzed: 15:45

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	144909	6.738	548901	8.723	316537	11.573
UPPER LIMIT	289818	7.238	1097802	9.223	633074	12.073
LOWER LIMIT	72455	6.238	274451	8.223	158269	11.073
LLI SAMPLE NO.						
01 SBLKWI131	130664	6.738	494253	8.722	282897	11.568
02 131WILCS	130171	6.743	495702	8.722	280949	11.568
03 131WILCSD	133474	6.738	511103	8.722	294685	11.568
04 SBLKWJ131	128234	6.738	489816	8.717	276746	11.563
05 SBLKWZ131	128234	6.738	489816	8.717	276746	11.563
06 131WJLCS	134288	6.743	506978	8.722	292469	11.568
07 131WZLCS	134288	6.743	506978	8.722	292469	11.568
08 131WJLCSD	133736	6.743	505198	8.722	288756	11.568
09 131WZLCSD	133736	6.743	505198	8.722	288756	11.568
10 8349468RE	135844	6.733	508345	8.717	285014	11.563
11 8350677RE	136932	6.733	508458	8.717	287129	11.562
12 8354940RE	138517	6.733	516175	8.717	289026	11.568
13 8345676RE	125048	6.738	469885	8.717	272543	11.563
14 8364089RE	131232	6.738	492717	8.717	278922	11.568
15 8364091RE	134968	6.738	505150	8.717	282746	11.568

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): le0381.d Date Analyzed: 05/11/16

Instrument ID: HP20296 Time Analyzed: 15:45

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	604056	13.504	747682	15.515	627174	20.062
UPPER LIMIT	1208112	14.004	1495364	16.015	1254348	20.562
LOWER LIMIT	302028	13.004	373841	15.015	313587	19.562
LLI SAMPLE NO.						
01 SBLKWI131	528633	13.499	598755	15.510	461128	20.062
02 131WILCS	533585	13.499	656405	15.510	551125	20.062
03 131WILCSD	547638	13.499	681628	15.510	568948	20.061
04 SBLKWJ131	518961	13.499	599627	15.504	475880	20.056
05 SBLKWZ131	518961	13.499	599627	15.504	475880	20.056
06 131WJLCS	564024	13.499	688368	15.510	559807	20.061
07 131WZLCS	564024	13.499	688368	15.510	559807	20.061
08 131WJLCSD	547877	13.499	663601	15.510	549938	20.056
09 131WZLCSD	547877	13.499	663601	15.510	549938	20.056
10 8349468RE	540239	13.499	623813	15.504	497094	20.056
11 8350677RE	543678	13.499	631270	15.504	491135	20.056
12 8354940RE	551501	13.499	643971	15.510	504926	20.056
13 8345676RE	515475	13.493	617685	15.505	462710	20.056
14 8364089RE	539252	13.499	640467	15.510	510011	20.056
15 8364091RE	540588	13.499	643829	15.510	498698	20.056

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10461: SVOAs by 8270D in Water Analyte Name	Default MDL	Default LOQ	Units
2-Picoline	2	5	ug/l
N-Nitrosomethylethylamine	2	5	ug/l
Methyl methanesulfonate	1	5	ug/l
N-Nitrosodimethylamine	2	5	ug/l
N-Nitrosodiethylamine	0.5	1	ug/l
Ethyl methanesulfonate	0.5	1	ug/l
Phenol	0.5	1	ug/l
Aniline	0.5	1	ug/l
Pyridine	2	5	ug/l
bis(2-Chloroethyl)ether	0.5	1	ug/l
2-Chlorophenol	0.5	1	ug/l
Benzyl alcohol	10	15	ug/l
2-Methylphenol	0.5	1	ug/l
bis(2-Chloroisopropyl)ether	0.5	1	ug/l
N-Nitrosopyrrolidine	0.5	1	ug/l
4-Methylphenol	0.5	1	ug/l
N-Nitroso-di-n-propylamine	0.5	1	ug/l
Acetophenone	0.5	1	ug/l
N-Nitrosomorpholine	2	5	ug/l
o-Toluidine	0.5	1	ug/l
Hexachloroethane	1	5	ug/l
Nitrobenzene	0.5	1	ug/l
N-Nitrosopiperidine	0.5	1	ug/l
Isophorone	0.5	1	ug/l
2-Nitrophenol	0.5	1	ug/l
2,4-Dimethylphenol	0.5	1	ug/l
O,O,O-Triethylphosphorothioate	2	5	ug/l
bis(2-Chloroethoxy)methane	0.5	1	ug/l
a,a-Dimethylphenethylamine	5	50	ug/l
2,4-Dichlorophenol	0.5	1	ug/l
4-Chloroaniline	2	4	ug/l
2,6-Dichlorophenol	0.5	1	ug/l
Hexachloropropene	2	5	ug/l
N-Nitrosodi-n-butylamine	2	5	ug/l
1,4-Phenylenediamine	75	300	ug/l
4-Chloro-3-methylphenol	0.5	1	ug/l
Safrole	2	5	ug/l
2-Methylnaphthalene	0.1	0.5	ug/l
Hexachlorocyclopentadiene	5	15	ug/l
1,2,4,5-Tetrachlorobenzene	0.5	1	ug/l
2,4,6-Trichlorophenol	0.5	1	ug/l
2,4,5-Trichlorophenol	0.5	1	ug/l
Isosafrole	2	5	ug/l
2-Chloronaphthalene	0.4	1	ug/l
2-Nitroaniline	0.5	1	ug/l
1,4-Naphthoquinone	25	60	ug/l
Dimethylphthalate	2	5	ug/l

Fraction: Semivolatiles by GC/MS

10461: SVOAs by 8270D in Water Analyte Name	Default MDL	Default LOQ	Units
1,3-Dinitrobenzene	2	5	ug/l
2,6-Dinitrotoluene	0.5	1	ug/l
Acenaphthylene	0.1	0.5	ug/l
3-Nitroaniline	0.5	1	ug/l
Acenaphthene	0.1	0.5	ug/l
2,4-Dinitrophenol	10	30	ug/l
4-Nitrophenol	10	30	ug/l
Pentachlorobenzene	0.5	1	ug/l
2,4-Dinitrotoluene	1	5	ug/l
Dibenzofuran	0.5	1	ug/l
1-Naphthylamine	5	15	ug/l
2,3,4,6-Tetrachlorophenol	0.5	1	ug/l
2-Naphthylamine	5	15	ug/l
Diethylphthalate	2	5	ug/l
Thionazin	2	5	ug/l
Fluorene	0.1	0.5	ug/l
4-Chlorophenyl-phenylether	0.5	1	ug/l
5-Nitro-o-toluidine	0.5	1	ug/l
4-Nitroaniline	0.5	1	ug/l
4,6-Dinitro-2-methylphenol	5	15	ug/l
N-Nitrosodiphenylamine	0.5	1	ug/l
1,3,5-Trinitrobenzene	5	15	ug/l
Phorate	0.5	1	ug/l
Phenacetin	0.5	1	ug/l
4-Bromophenyl-phenylether	0.5	1	ug/l
Diallate trans/cis	1	5	ug/l
Hexachlorobenzene	0.1	0.5	ug/l
Dimethoate	3	10	ug/l
Pentachlorophenol	1	5	ug/l
4-Aminobiphenyl	0.5	1	ug/l
Pentachloronitrobenzene	2	5	ug/l
Pronamide	0.5	1	ug/l
Disulfoton	25	50	ug/l
Phenanthrene	0.1	0.5	ug/l
Anthracene	0.1	0.5	ug/l
Methyl parathion	1	5	ug/l
Di-n-butylphthalate	2	5	ug/l
Parathion	2	5	ug/l
4-Nitroquinoline-1-oxide	20	60	ug/l
Methapyrilene	15	50	ug/l
Isodrin	0.5	1	ug/l
Fluoranthene	0.1	0.5	ug/l
Pyrene	0.1	0.5	ug/l
Aramite	5	15	ug/l
p-Dimethylaminoazobenzene	0.5	1	ug/l
Chlorobenzilate	3	10	ug/l
Butylbenzylphthalate	2	5	ug/l

Fraction: Semivolatiles by GC/MS

10461: SVOAs by 8270D in Water Analyte Name	Default MDL	Default LOQ	Units
Famphur	25	50	ug/l
3,3'-Dimethylbenzidine	25	75	ug/l
Kepone	25	50	ug/l
2-Acetylaminofluorene	2	5	ug/l
bis(2-Ethylhexyl)phthalate	2	5	ug/l
3,3'-Dichlorobenzidine	2	5	ug/l
Benzo(a)anthracene	0.1	0.5	ug/l
Chrysene	0.1	0.5	ug/l
Di-n-octylphthalate	2	5	ug/l
7,12-Dimethylbenz[a]anthracene	0.5	1	ug/l
Benzo(b)fluoranthene	0.1	0.5	ug/l
Benzo(k)fluoranthene	0.1	0.5	ug/l
Benzo(a)pyrene	0.1	0.5	ug/l
3-Methylcholanthrene	0.5	1	ug/l
Indeno(1,2,3-cd)pyrene	0.1	0.5	ug/l
Dibenz(a,h)anthracene	0.1	0.5	ug/l
Benzo(g,h,i)perylene	0.1	0.5	ug/l

E6101 Lancaster Laboratories, Inc. 8354933
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0275.d Injection date and time: **07-MAY-2016 00:45**
Data file Sample Info. Line: E6101;8354933;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.941	(0.011)	945	152	137064	(-19)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	520400	(-21)	5.00	
113) Acenaphthene-d10	11.761	(0.005)	1846	164	293827	(-23)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	573948	(-20)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	683096	(-22)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	507588	(-23)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	1297256	31.431	63%		10 - 103
17) Phenol-d6	(1)	6.407	(-0.001)	99	1297598	23.504	47%		10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1205497	23.064	92%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1950787	23.481	94%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	458545	47.424	95%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2103818	22.465	90%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0275.d Injection date and time: **07-MAY-2016 00:45**
Data file Sample Info. Line: E6101;8354933;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.5
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.3
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.3
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1

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Data file: /chem/HP20296.i/16may06a.b/le0275.d Injection date and time: **07-MAY-2016 00:45**
Data file Sample Info. Line: E6101;8354933;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

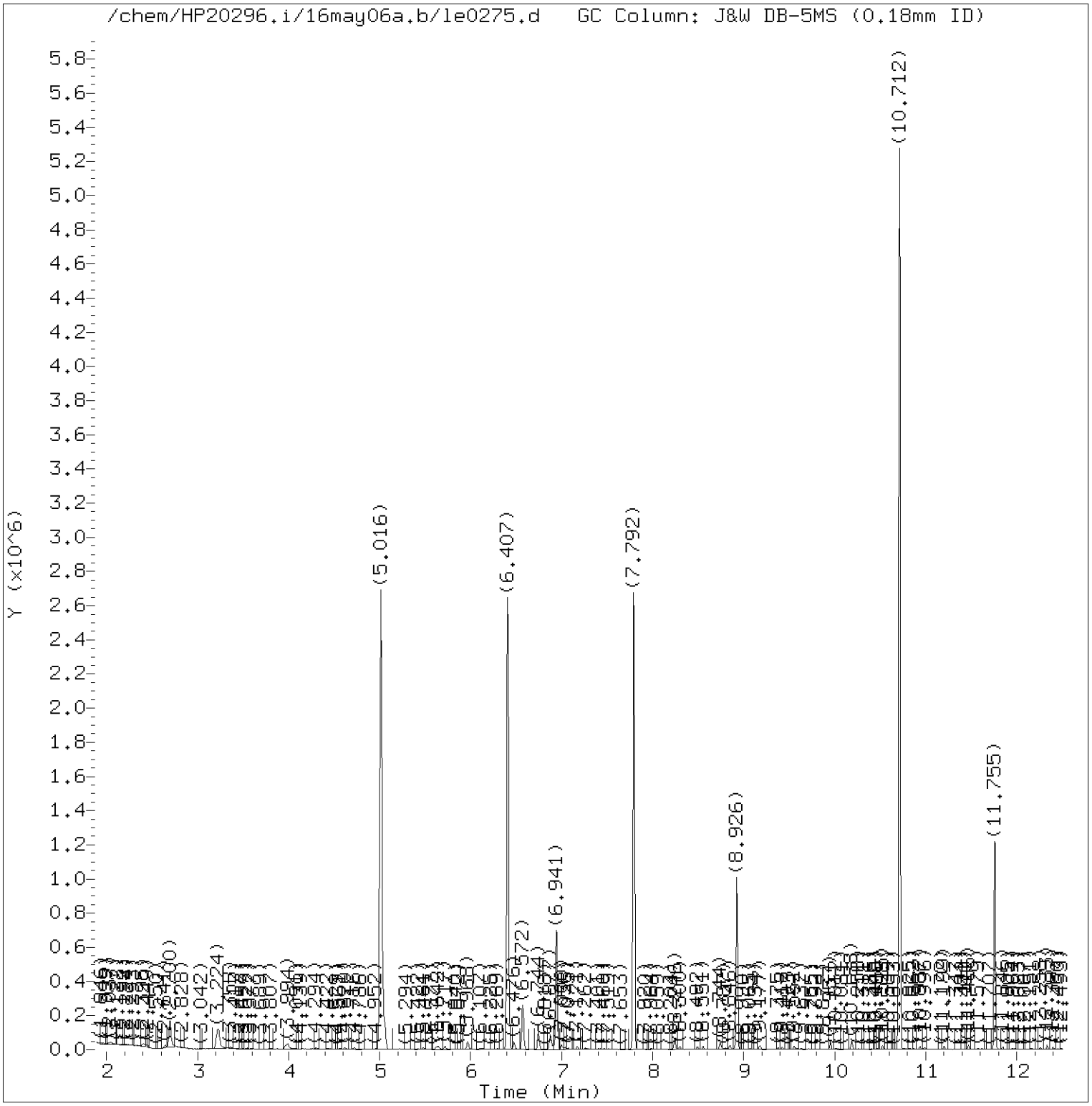
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.3
177) Pyrene	(5)				Not Detected					0.3
180) Aramite (1)	(5)				Not Detected					1
181) Aramite (2)	(5)				Not Detected					1
183) Aramite (3)	(5)				Not Detected					1
184) Aramite (4)	(5)				Not Detected					1
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

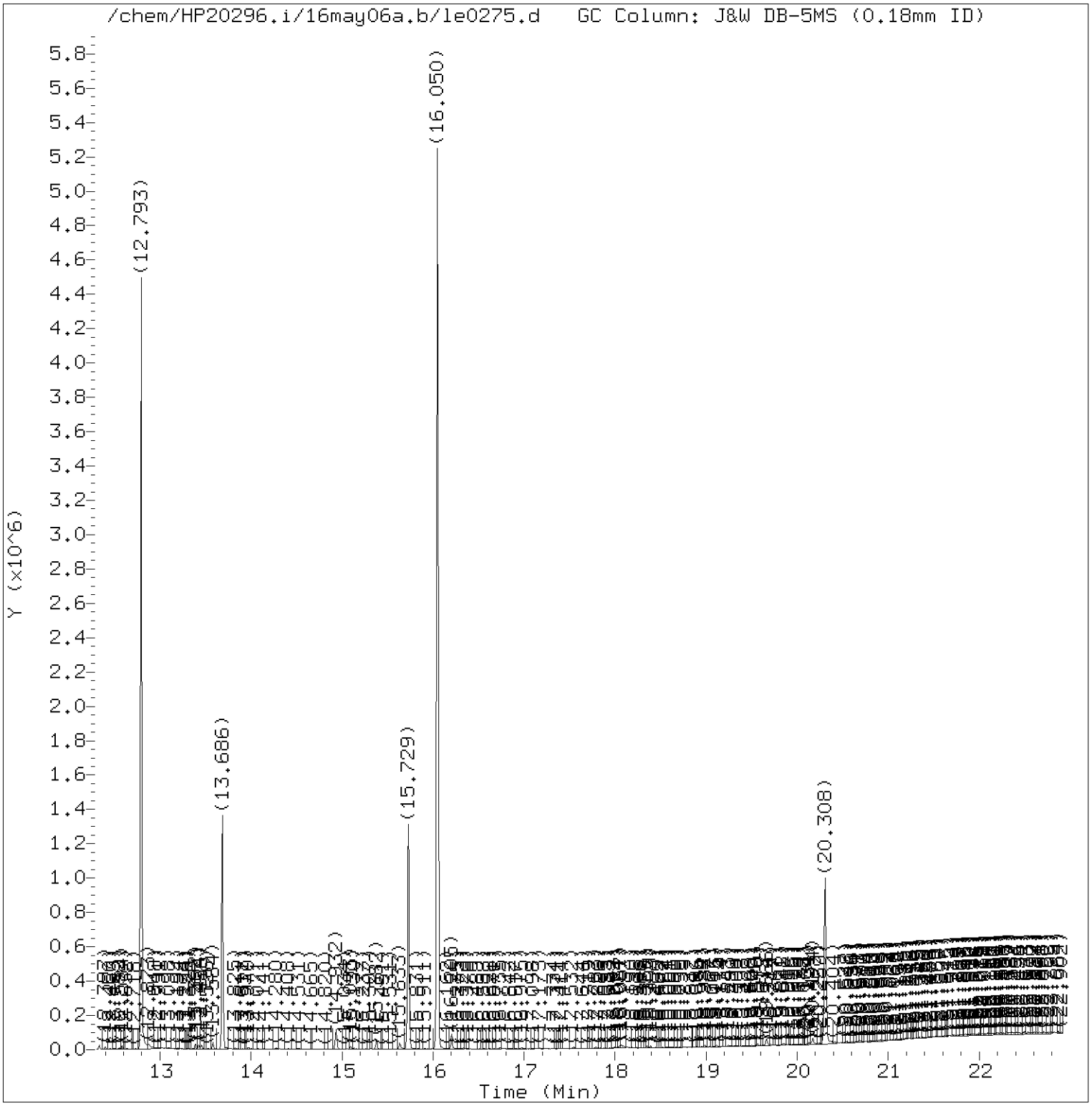
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0275.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:45 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0275.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:45 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6101 Lab Sample ID: 8354933

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0275.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:45 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6101 Lab Sample ID: 8354933

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	1297256	31.431
17)$Phenol-d6	(1)	6.407	99	1297598	23.504
25)*1,4-Dichlorobenzene-d4	(1)	6.941	152	137064	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1205497	23.064
65)*Naphthalene-d8	(2)	8.926	136	520400	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1950787	23.481
113)*Acenaphthene-d10	(3)	11.761	164	293827	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	458545	47.424
153)*Phenanthrene-d10	(4)	13.686	188	573948	5.000
175)*Pyrene-d10	(5)	15.729	212	683096	5.000
179)$Terphenyl-d14	(5)	16.050	244	2103818	22.465
213)*Perylene-d12	(6)	20.308	264	507588	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

E6102 Lancaster Laboratories, Inc. 8354934
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0276.d Injection date and time: **07-MAY-2016 01:13**
Data file Sample Info. Line: E6102;8354934;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	150021	(-11)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	566761	(-14)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	323575	(-16)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	626867	(-12)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	740503	(-15)	5.00	
213) Perylene-d12	20.307	(0.005)	3444	264	550786	(-17)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	1218945	26.983	54%		10 - 103
17) Phenol-d6	(1)	6.406	(0.000)	99	1179925	19.527	39%		10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1238074	21.750	87%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2058540	22.500	90%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	455400	42.769	86%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1916326	18.877	76%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/16may06a.b/le0276.d Injection date and time: **07-MAY-2016 01:13**
Data file Sample Info. Line: E6102;8354934;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.5
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.3
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.3
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0276.d Injection date and time: **07-MAY-2016 01:13**
Data file Sample Info. Line: E6102;8354934;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

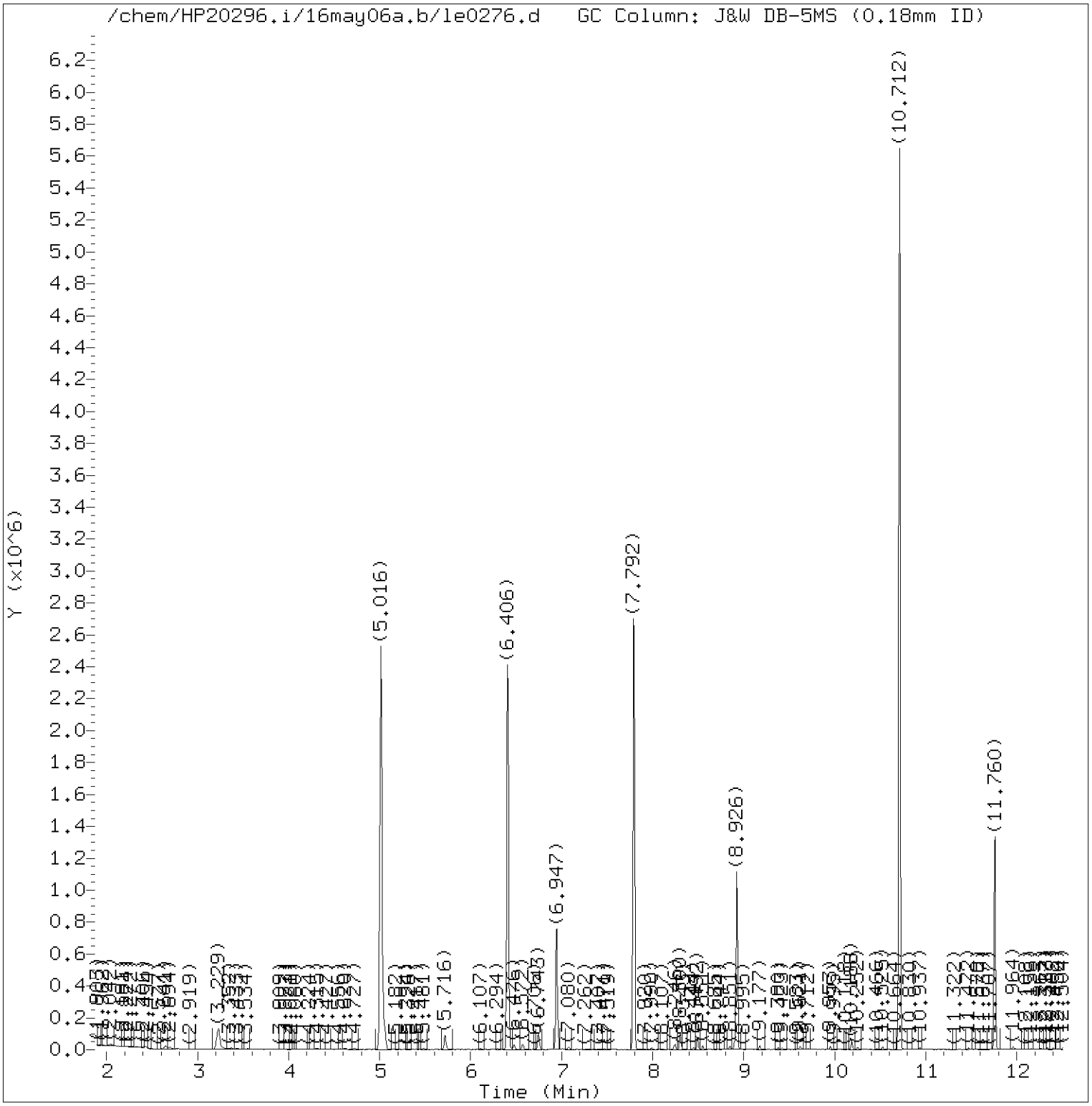
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)			Not Detected					0.5
152) Pronamide	(4)			Not Detected					0.1
155) Phenanthrene	(4)			Not Detected					0.03
157) Anthracene	(4)			Not Detected					0.03
162) Disulfoton	(4)			Not Detected					6
164) Methyl parathion	(4)			Not Detected					0.3
165) Di-n-butylphthalate	(4)			Not Detected					0.5
167) Parathion	(4)			Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
170) Methapyrilene	(4)			Not Detected					4
171) Isodrin	(4)			Not Detected					0.1
173) Fluoranthene	(4)			Not Detected					0.3
177) Pyrene	(5)			Not Detected					0.3
180) Aramite (1)	(5)			Not Detected					1
181) Aramite (2)	(5)			Not Detected					1
183) Aramite (3)	(5)			Not Detected					1
184) Aramite (4)	(5)			Not Detected					1
186) Aramite	(5)			Not Detected					1
182) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
185) Chlorobenzilate	(5)			Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
188) Butylbenzylphthalate	(5)			Not Detected					0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)			Not Detected					6
191) 2-Acetylaminofluorene	(5)			Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
195) Benzo(a)anthracene	(5)			Not Detected					0.03
196) Chrysene	(5)			Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
205) Di-n-octylphthalate	(6)			Not Detected					0.5
206) Benzo(b)fluoranthene	(6)			Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					0.1
208) Benzo(k)fluoranthene	(6)			Not Detected					0.03
211) Benzo(a)pyrene	(6)			Not Detected					0.03
215) 3-Methylcholanthrene	(6)			Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)			Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)			Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

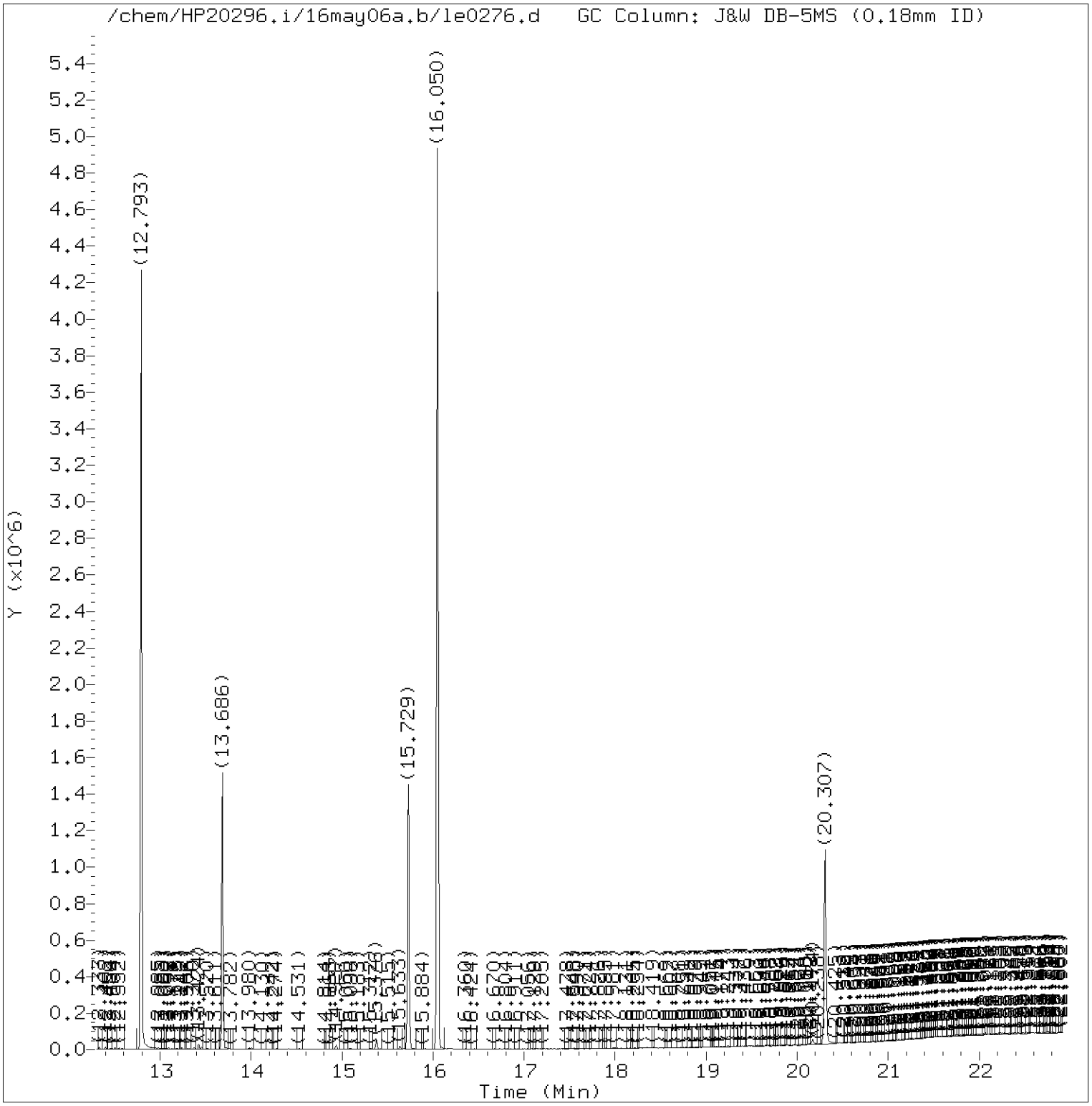
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0276.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:13 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0276.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:13 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6102 Lab Sample ID: 8354934

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0276.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:13 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6102 Lab Sample ID: 8354934

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	1218945	26.983
17)$Phenol-d6	(1)	6.406	99	1179925	19.527
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	150021	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1238074	21.750
65)*Naphthalene-d8	(2)	8.926	136	566761	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	2058540	22.500
113)*Acenaphthene-d10	(3)	11.760	164	323575	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	455400	42.769
153)*Phenanthrene-d10	(4)	13.686	188	626867	5.000
175)*Pyrene-d10	(5)	15.729	212	740503	5.000
179)$Terphenyl-d14	(5)	16.050	244	1916326	18.877
213)*Perylene-d12	(6)	20.307	264	550786	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

E6103 Lancaster Laboratories, Inc. 8354935
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0277.d Injection date and time: **07-MAY-2016 01:41**
Data file Sample Info. Line: E6103;8354935;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	140456	(-17)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	541533	(-17)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	300308	(-22)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	581872	(-18)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	697352	(-20)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	515175	(-22)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	1217782	28.793	58%		10 - 103
17) Phenol-d6	(1)	6.406	(0.000)	99	1552659	27.445	55%		10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1173379	21.574	86%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1987208	23.403	94%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	444938	45.024	90%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2093154	21.894	88%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/16may06a.b/le0277.d Injection date and time: **07-MAY-2016 01:41**
Data file Sample Info. Line: E6103;8354935;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.5
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.3
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.3
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:34. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0277.d Injection date and time: **07-MAY-2016 01:41**
Data file Sample Info. Line: E6103;8354935;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

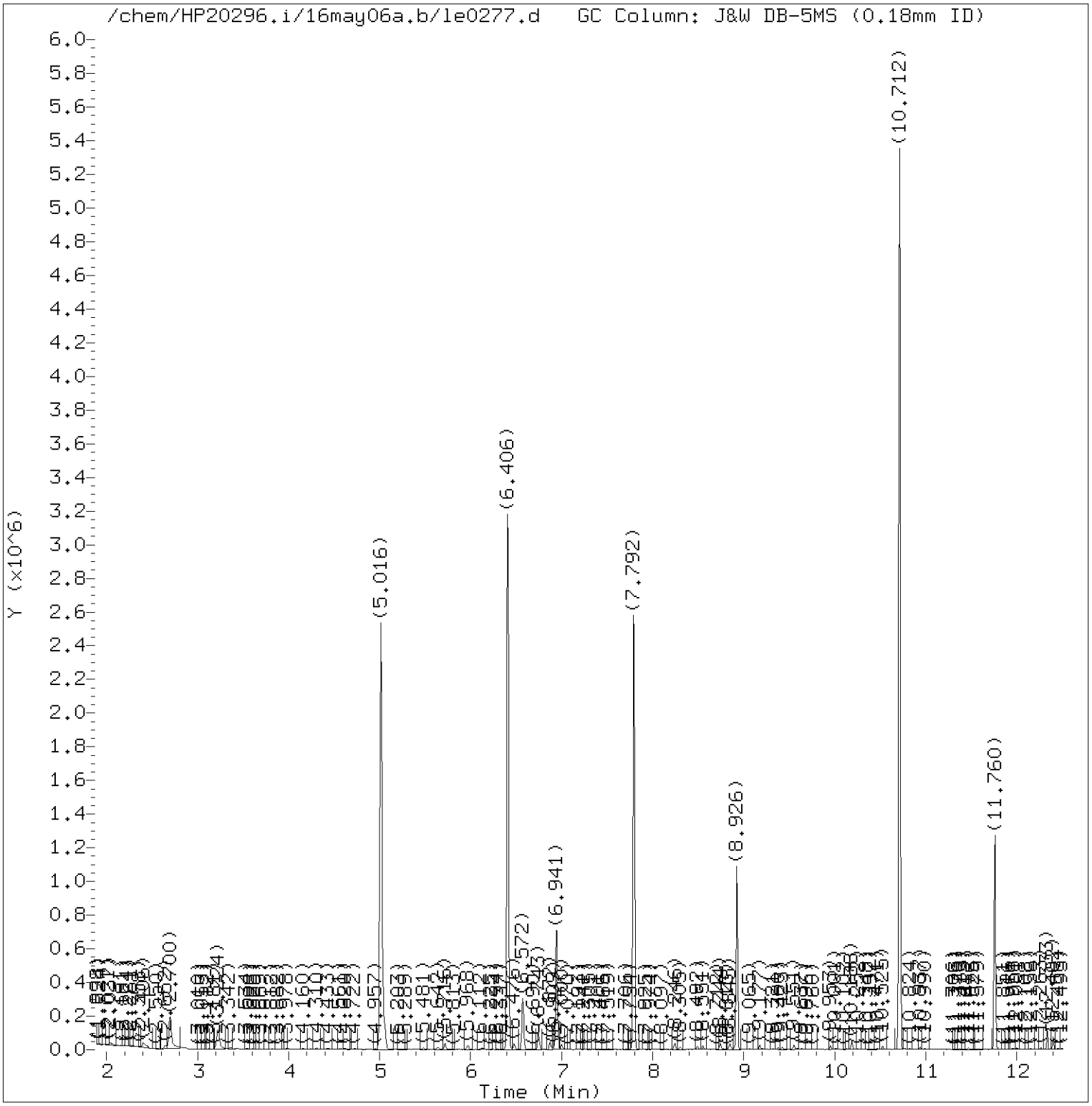
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.3
177) Pyrene	(5)				Not Detected					0.3
180) Aramite (1)	(5)				Not Detected					1
181) Aramite (2)	(5)				Not Detected					1
183) Aramite (3)	(5)				Not Detected					1
184) Aramite (4)	(5)				Not Detected					1
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:34. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

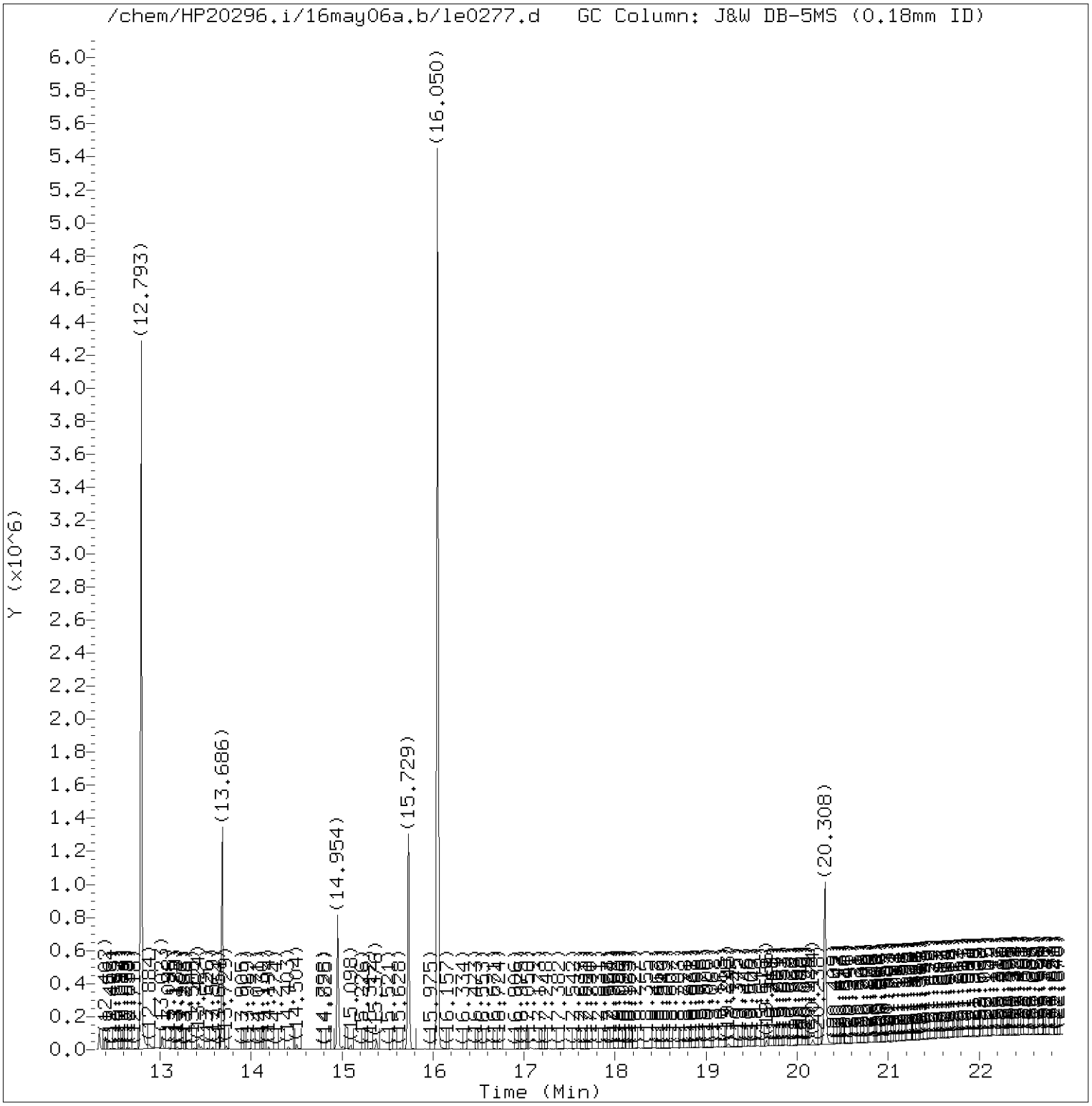
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0277.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:41 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0277.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:41 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6103 Lab Sample ID: 8354935

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0277.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 01:41 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6103 Lab Sample ID: 8354935

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	1217782	28.793
17)$Phenol-d6	(1)	6.406	99	1552659	27.445
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	140456	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1173379	21.574
65)*Naphthalene-d8	(2)	8.926	136	541533	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1987208	23.403
113)*Acenaphthene-d10	(3)	11.760	164	300308	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	444938	45.024
153)*Phenanthrene-d10	(4)	13.686	188	581872	5.000
175)*Pyrene-d10	(5)	15.729	212	697352	5.000
179)$Terphenyl-d14	(5)	16.050	244	2093154	21.894
213)*Perylene-d12	(6)	20.308	264	515175	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

E6104 Lancaster Laboratories, Inc. Analysis Summary for GC/MS Semivolatiles 8354936

Data file: /chem/HP20296.i/16may06a.b/le0272.d Injection date and time: **06-MAY-2016 23:20**
Data file Sample Info. Line: E6104;8354936;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	142066	(-16)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	540896	(-18)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	315081	(-18)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	607591	(-15)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	740821	(-15)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	569216	(-14)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	1131118	26.441	53%		10 - 103
17) Phenol-d6	(1)	6.406	(0.000)	99	1467896	25.653	51%		10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1249326	22.997	92%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2029219	22.777	91%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	386143	37.242	74%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1927334	18.977	76%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0272.d Injection date and time: **06-MAY-2016 23:20**
Data file Sample Info. Line: E6104;8354936;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.5
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.3
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.3
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0272.d Injection date and time: **06-MAY-2016 23:20**
Data file Sample Info. Line: E6104;8354936;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

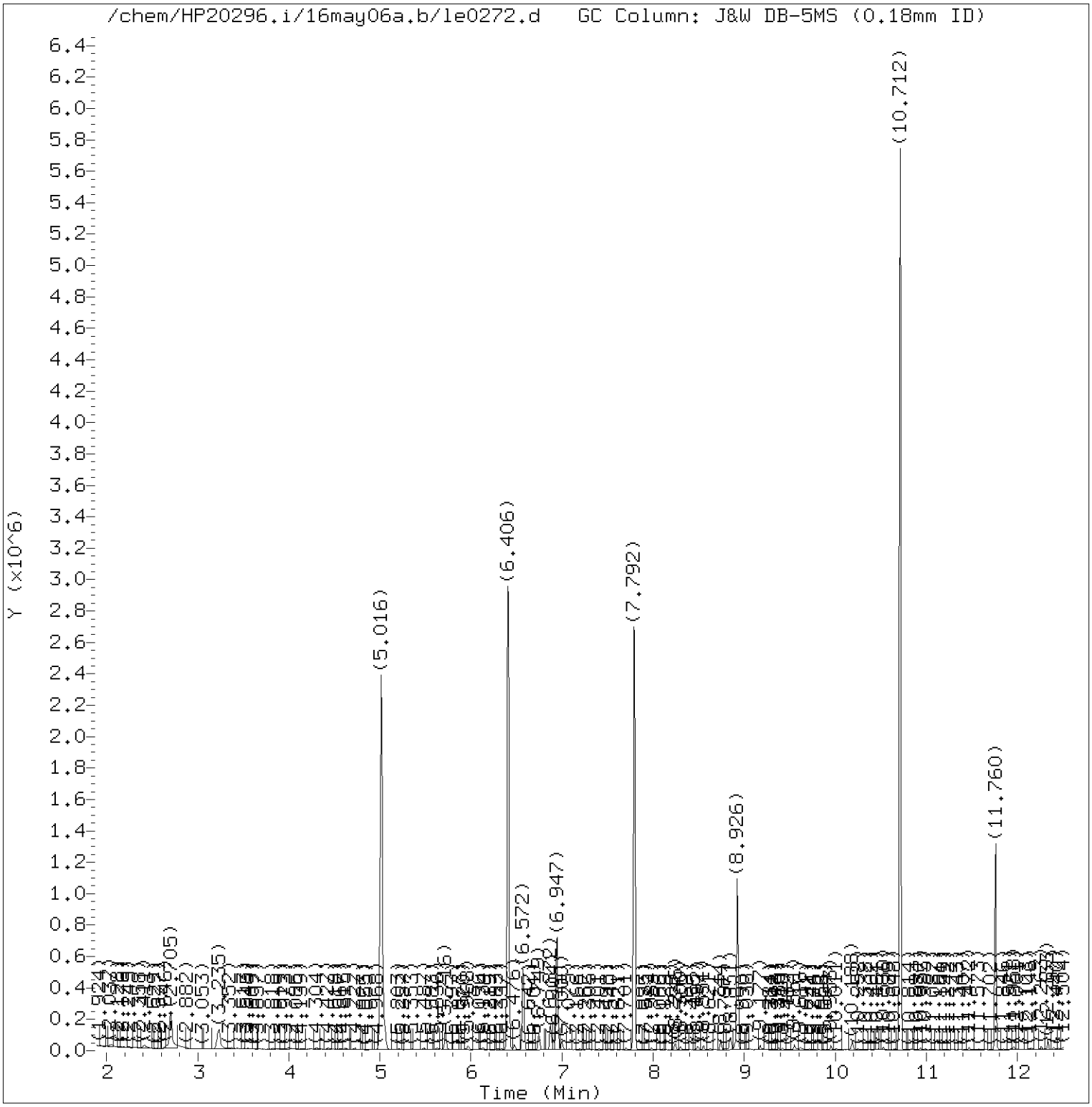
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.3
177) Pyrene	(5)				Not Detected					0.3
180) Aramite (1)	(5)				Not Detected					1
181) Aramite (2)	(5)				Not Detected					1
183) Aramite (3)	(5)				Not Detected					1
184) Aramite (4)	(5)				Not Detected					1
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

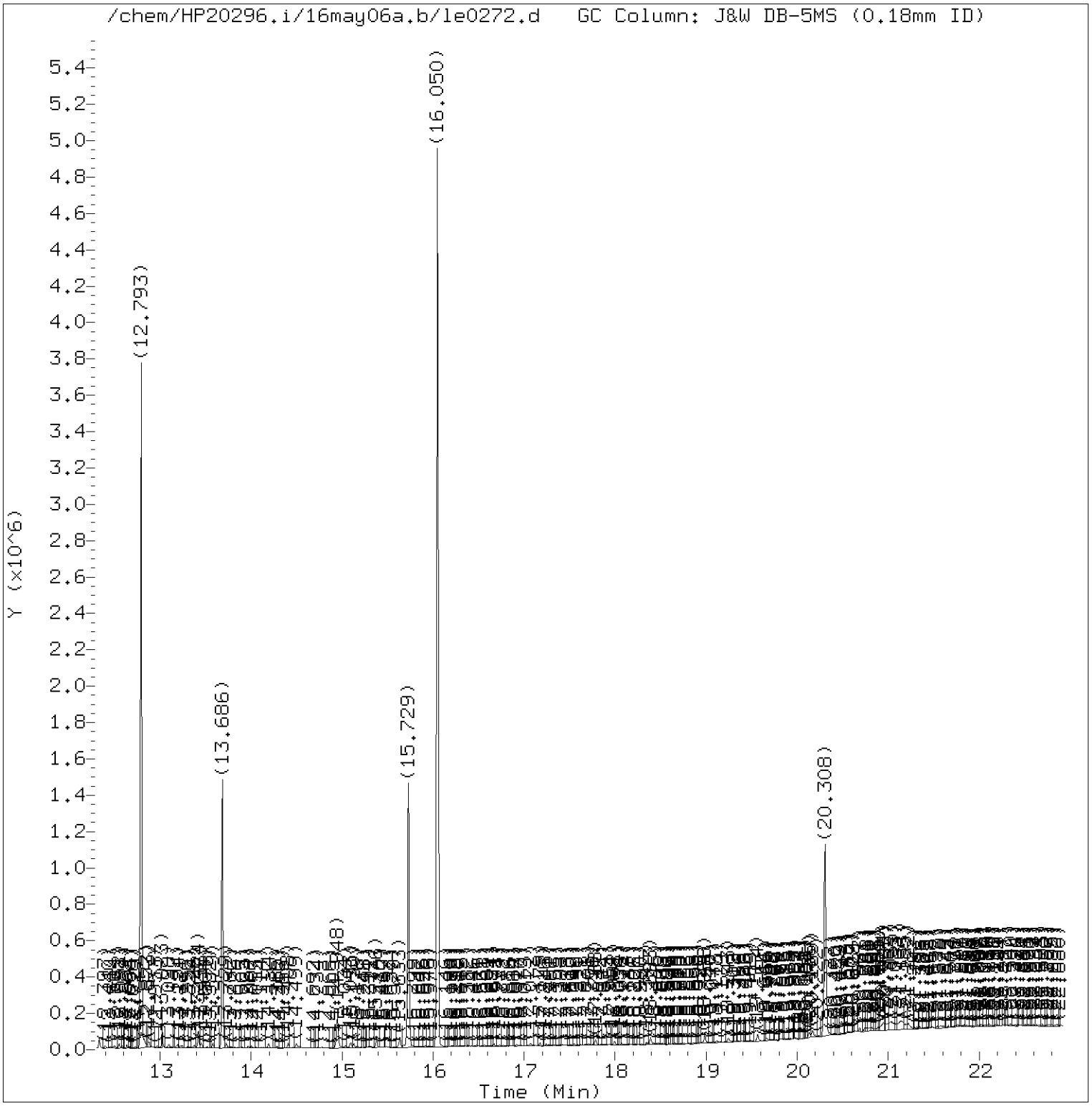
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0272.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:20 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0272.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:20 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104 Lab Sample ID: 8354936

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0272.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:20 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104 Lab Sample ID: 8354936

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	1131118	26.441
17)$Phenol-d6	(1)	6.406	99	1467896	25.653
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	142066	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1249326	22.997
65)*Naphthalene-d8	(2)	8.926	136	540896	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	2029219	22.777
113)*Acenaphthene-d10	(3)	11.760	164	315081	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	386143	37.242
153)*Phenanthrene-d10	(4)	13.686	188	607591	5.000
175)*Pyrene-d10	(5)	15.729	212	740821	5.000
179)$Terphenyl-d14	(5)	16.050	244	1927334	18.977
213)*Perylene-d12	(6)	20.308	264	569216	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

E6105 Lancaster Laboratories, Inc. 8354939
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0278.d Injection date and time: **07-MAY-2016 02:10**
Data file Sample Info. Line: E6105;8354939;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.941	(0.011)	945	152	137268	(-19)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	520972	(-21)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	294126	(-23)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	573814	(-20)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	677337	(-22)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	498231	(-24)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	974141	23.568	47%		10 - 103
17) Phenol-d6	(1)	6.406	(-0.001)	99	1227511	22.202	44%		10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1165875	22.282	89%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1940408	23.332	93%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	335472	34.660	69%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1537492	16.557	66%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/16may06a.b/le0278.d Injection date and time: **07-MAY-2016 02:10**
Data file Sample Info. Line: E6105;8354939;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)			Not Detected					1
67) 4-Chloroaniline	(2)			Not Detected					0.5
68) 2,6-Dichlorophenol	(2)			Not Detected					0.1
69) Hexachloropropene	(2)			Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
82) Safrole	(2)			Not Detected					0.5
83) 2-Methylnaphthalene	(2)			Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.1
88) cis-Isosafrole	(3)			Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
94) trans-Isosafrole	(3)			Not Detected					0.5
97) Isosafrole	(3)			Not Detected					0.5
96) 2-Chloronaphthalene	(3)			Not Detected					0.1
100) 2-Nitroaniline	(3)			Not Detected					0.1
104) 1,4-Naphthoquinone	(3)			Not Detected					6
106) Dimethylphthalate	(3)			Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
109) Acenaphthylene	(3)			Not Detected					0.03
112) 3-Nitroaniline	(3)			Not Detected					0.1
114) Acenaphthene	(3)			Not Detected					0.03
115) 2,4-Dinitrophenol	(3)			Not Detected					3
116) 4-Nitrophenol	(3)			Not Detected					3
117) Pentachlorobenzene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
119) Dibenzofuran	(3)			Not Detected					0.1
121) 1-Naphthylamine	(3)			Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					0.1
123) 2-Naphthylamine	(3)			Not Detected					1
124) Diethylphthalate	(3)			Not Detected					0.5
125) Thionazin	(3)			Not Detected					0.5
126) Fluorene	(3)			Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
131) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
140) Diallate (peak 1)	(4)			Not Detected					0.3
141) Phorate	(4)			Not Detected					0.1
142) Phenacetin	(4)			Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
144) Diallate (peak 2)	(4)			Not Detected					0.3
146) Diallate trans/cis	(4)			Not Detected					0.3
145) Hexachlorobenzene	(4)			Not Detected					0.03
147) Dimethoate	(4)			Not Detected					0.8
149) Pentachlorophenol	(4)			Not Detected					0.3
150) 4-Aminobiphenyl	(4)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0278.d Injection date and time: **07-MAY-2016 02:10**
Data file Sample Info. Line: E6105;8354939;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

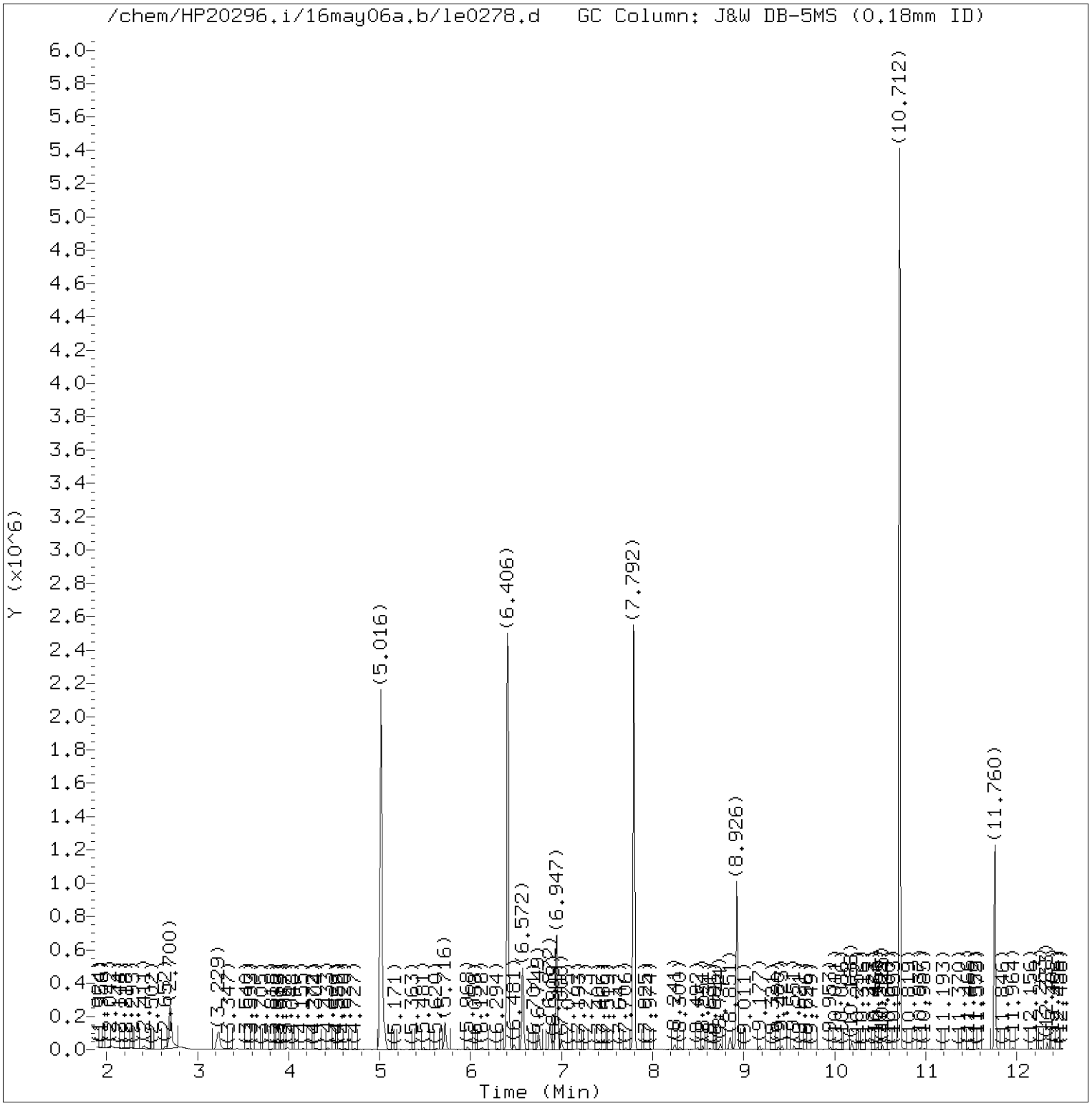
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.3
177) Pyrene	(5)				Not Detected					0.3
180) Aramite (1)	(5)				Not Detected					1
181) Aramite (2)	(5)				Not Detected					1
183) Aramite (3)	(5)				Not Detected					1
184) Aramite (4)	(5)				Not Detected					1
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:34. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

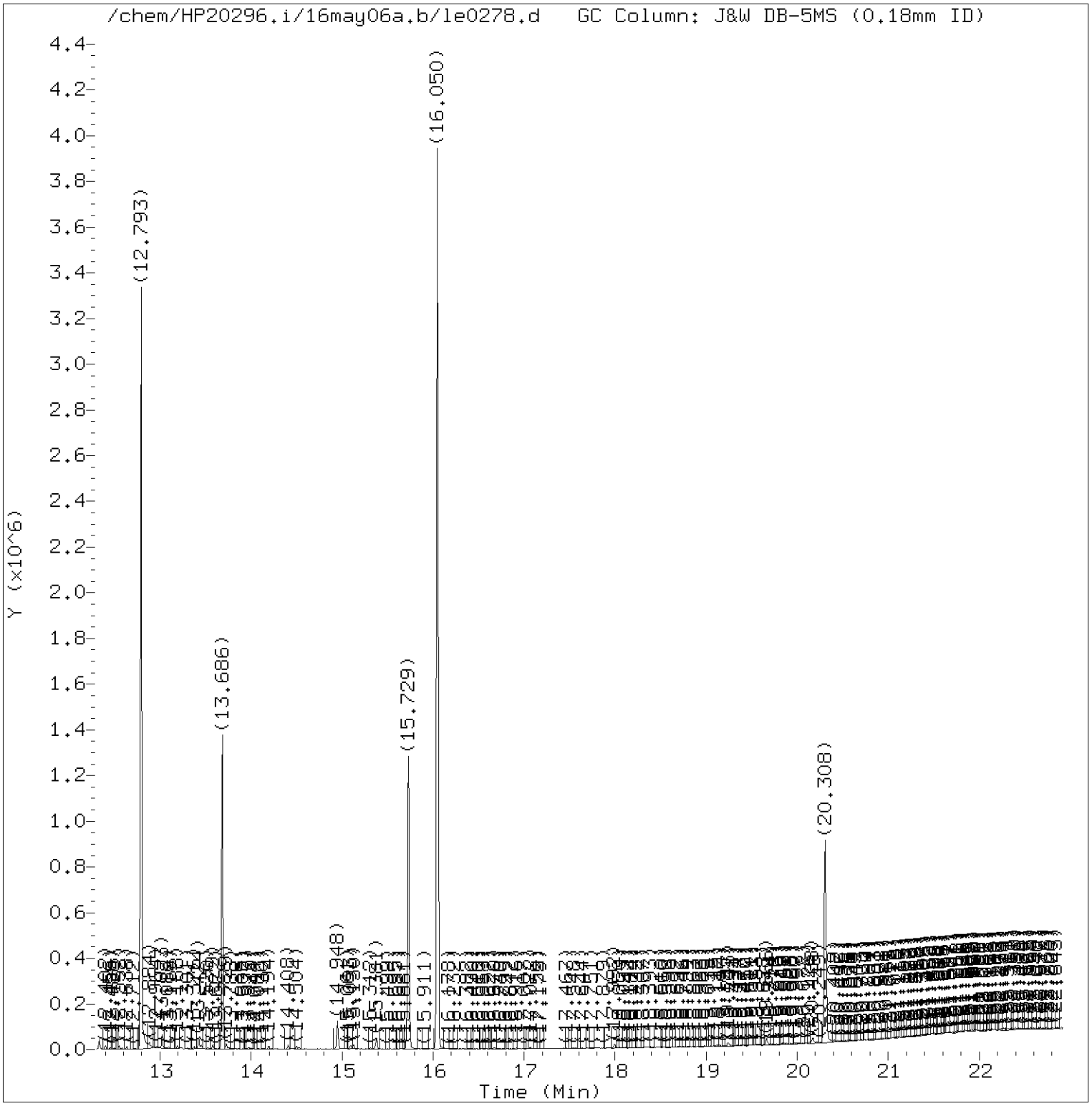
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0278.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:10 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0278.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:10 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6105 Lab Sample ID: 8354939

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0278.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:10 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6105 Lab Sample ID: 8354939

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	974141	23.568
17)$Phenol-d6	(1)	6.406	99	1227511	22.202
25)*1,4-Dichlorobenzene-d4	(1)	6.941	152	137268	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1165875	22.282
65)*Naphthalene-d8	(2)	8.926	136	520972	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1940408	23.332
113)*Acenaphthene-d10	(3)	11.760	164	294126	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	335472	34.660
153)*Phenanthrene-d10	(4)	13.686	188	573814	5.000
175)*Pyrene-d10	(5)	15.729	212	677337	5.000
179)$Terphenyl-d14	(5)	16.050	244	1537492	16.557
213)*Perylene-d12	(6)	20.308	264	498231	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

E6106 Lancaster Laboratories, Inc. Analysis Summary for GC/MS Semivolatiles 8354940

Data file: /chem/HP20296.i/16may06a.b/le0279.d Injection date and time: **07-MAY-2016 02:38**
Data file Sample Info. Line: E6106;8354940;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.941	(0.011)	945	152	139355	(-18)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	534029	(-19)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	300349	(-22)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	580371	(-19)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	681733	(-22)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	510351	(-23)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	41885	0.998	2%	*	10 - 103
17) Phenol-d6	(1)	6.406	(-0.001)	99	131237	2.338	5%	*	10 - 85
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1093841	20.394	82%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1809177	21.304	85%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.793	(0.000)	330	36769	3.720	7%	*	22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1304093	13.953	56%		41 - 125

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:34. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0279.d Injection date and time: **07-MAY-2016 02:38**
Data file Sample Info. Line: E6106;8354940;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.5
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.3
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.3
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:34. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0279.d Injection date and time: **07-MAY-2016 02:38**
Data file Sample Info. Line: E6106;8354940;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
150) 4-Aminobiphenyl	(4)				Not Detected					0.1
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.3
177) Pyrene	(5)				Not Detected					0.3
180) Aramite (1)	(5)				Not Detected					1
181) Aramite (2)	(5)				Not Detected					1
183) Aramite (3)	(5)				Not Detected					1
184) Aramite (4)	(5)				Not Detected					1
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.3

Total number of targets = 119

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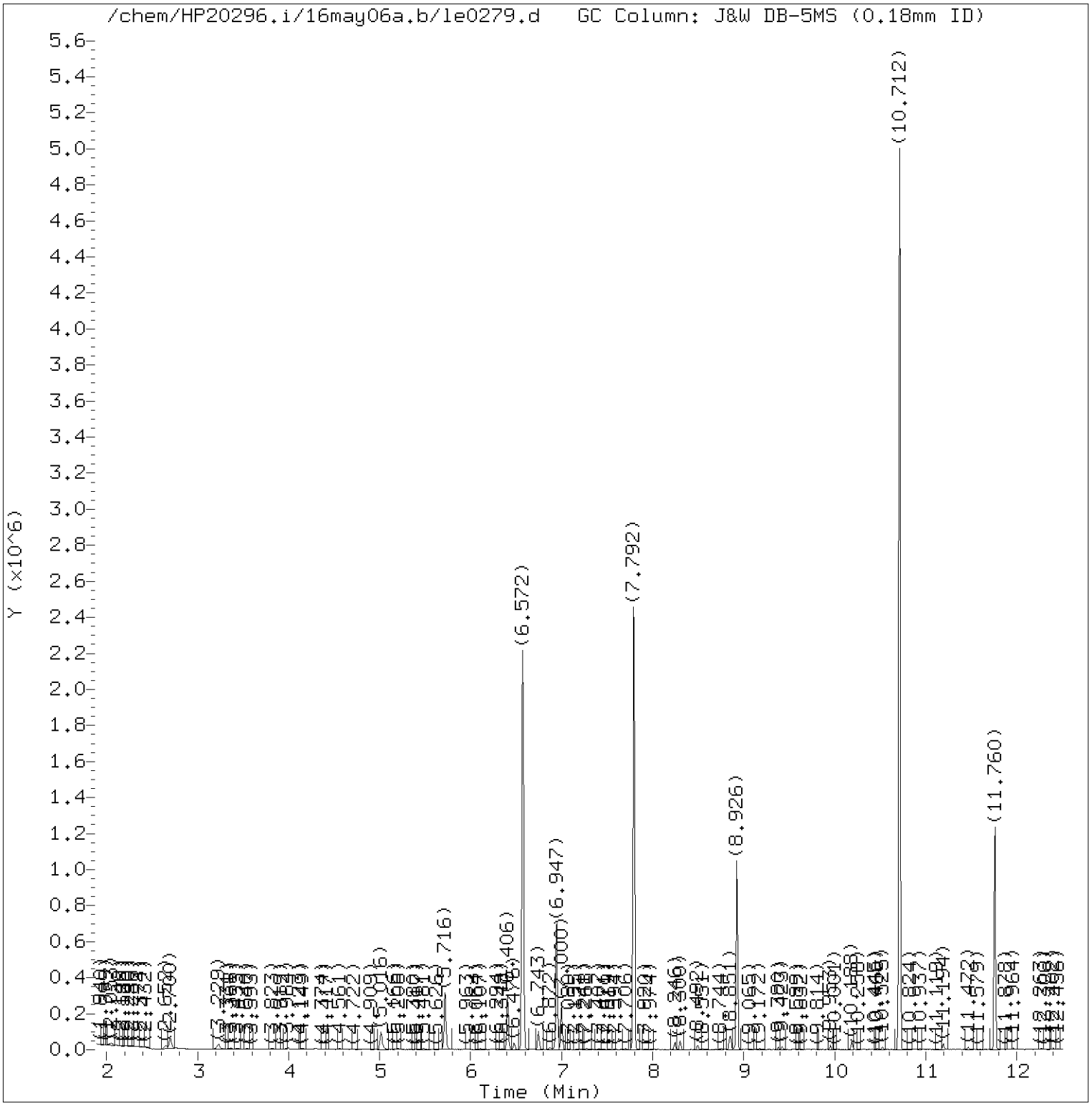
Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

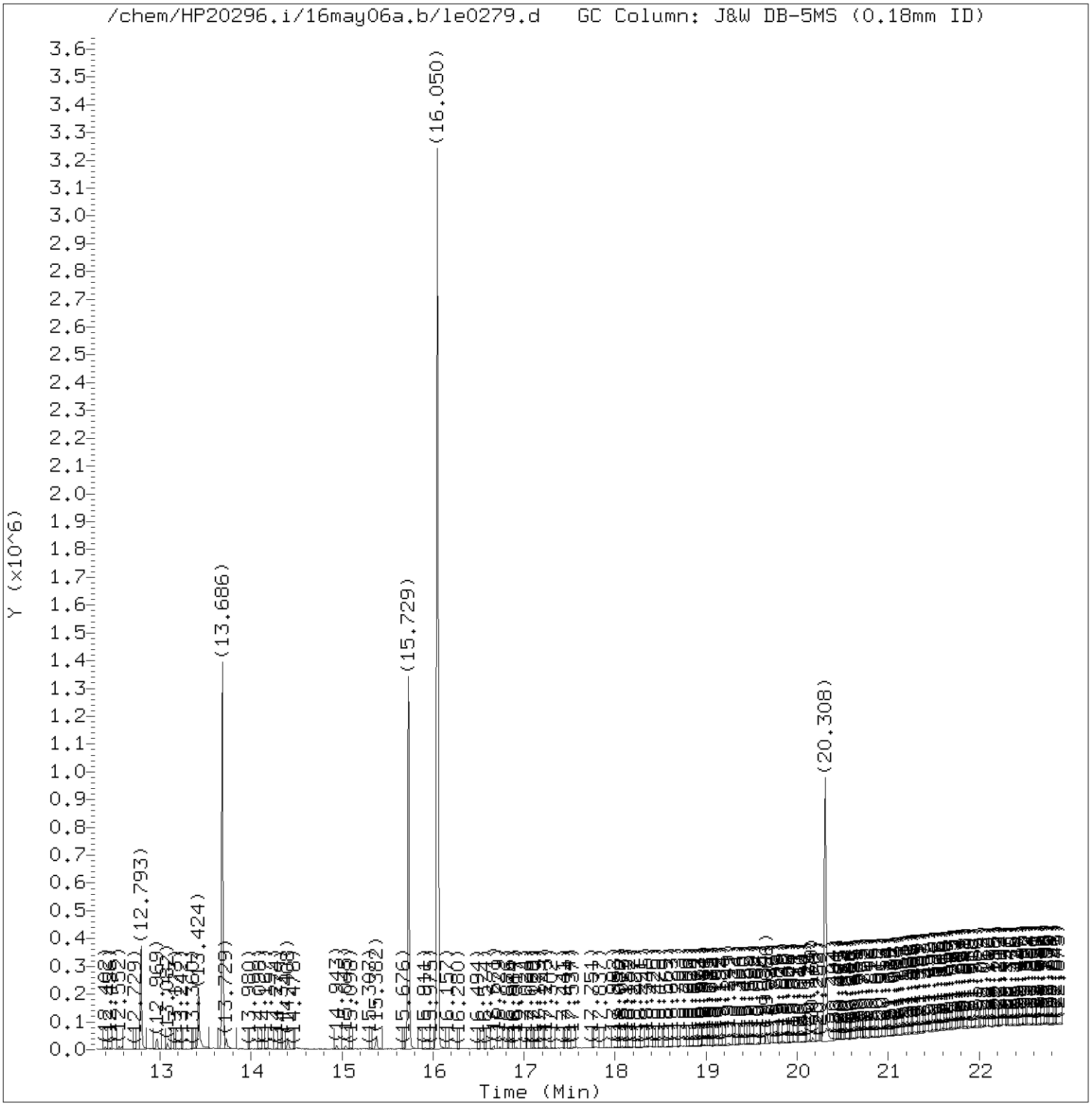
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0279.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:38 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0279.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:38 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6106 Lab Sample ID: 8354940

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0279.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 02:38 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:28 ceb05247

Sample Name: E6106 Lab Sample ID: 8354940

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	41885	0.998
17)$Phenol-d6	(1)	6.406	99	131237	2.338
25)*1,4-Dichlorobenzene-d4	(1)	6.941	152	139355	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1093841	20.394
65)*Naphthalene-d8	(2)	8.926	136	534029	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1809177	21.304
113)*Acenaphthene-d10	(3)	11.760	164	300349	5.000
135)$2,4,6-Tribromophenol	(3)	12.793	330	36769	3.720
153)*Phenanthrene-d10	(4)	13.686	188	580371	5.000
175)*Pyrene-d10	(5)	15.729	212	681733	5.000
179)$Terphenyl-d14	(5)	16.050	244	1304093	13.953
213)*Perylene-d12	(6)	20.308	264	510351	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:34.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may11a.b/le0397.d Injection date and time: **12-MAY-2016 00:56**
Data file Sample Info. Line: E6106RE;8354940RE;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **19393M**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.733(0.005)	906	152	138517 (-4)	5.00	
65) Naphthalene-d8	8.717(0.005)	1277	136	516175 (-6)	5.00	
113) Acenaphthene-d10	11.568(0.005)	1810	164	289026 (-9)	5.00	
153) Phenanthrene-d10	13.499(0.005)	2171	188	551501 (-9)	5.00	
175) Pyrene-d10	15.510(0.005)	2547	212	643971 (-14)	5.00	
213) Perylene-d12	20.056(0.005)	3397	264	504926 (-19)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.802(0.000)	112	17148	0.411	1%	*	10 - 103
17) Phenol-d6	(1)	6.209(0.000)	99	16549	0.297	1%	*	10 - 85
44) Nitrobenzene-d5	(2)	7.589(0.000)	82	1215045	23.437	94%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.509(0.000)	172	1941665	23.759	95%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.606(0.001)	330	3525	0.371	1%	*	22 - 150
179) Terphenyl-d14	(5)	15.831(0.000)	244	1967261	22.283	89%		41 - 125

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)			Not Detected					0.3
4) N-Nitrosodimethylamine	(1)			Not Detected					0.5
5) Pyridine	(1)			Not Detected					0.5
7) 2-Picoline	(1)			Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
9) Methyl methanesulfonate	(1)			Not Detected					0.3
13) N-Nitrosodiethylamine	(1)			Not Detected					0.1
15) Ethyl methanesulfonate	(1)			Not Detected					0.1
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
23) 2-Chlorophenol	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
31) 2-Methylphenol	(1)			Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
36) Acetophenone	(1)			Not Detected					0.1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
39) N-Nitrosomorpholine	(1)			Not Detected					0.5
40) o-Toluidine	(1)			Not Detected					0.1
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
48) N-Nitrosopiperidine	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.1

Digitally signed by Holly B. Ziegler on 05/17/2016 at 11:17. Target 3.5 esignature user ID: hbz01996

Data file: /chem/HP20296.i/16may11a.b/le0397.d Injection date and time: **12-MAY-2016 00:56**
Data file Sample Info. Line: E6106RE;8354940RE;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **19393M**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.1
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.1
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.06
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.06
146) Diallate trans/cis	(4)				Not Detected					0.3
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8

Digitally signed by Holly B. Ziegler on 05/17/2016 at 11:17. Target 3.5 esignature user ID: hbz01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may11a.b/le0397.d Injection date and time: **12-MAY-2016 00:56**
Data file Sample Info. Line: E6106RE;8354940RE;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **19393M**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.03
177) Pyrene	(5)				Not Detected					0.03
180) Aramite (1)	(5)				Not Detected					0.3
181) Aramite (2)	(5)				Not Detected					0.3
183) Aramite (3)	(5)				Not Detected					0.3
184) Aramite (4)	(5)				Not Detected					0.3
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.03
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.03

Digitally signed by Holly B. Ziegler on 05/17/2016 at 11:17. Target 3.5 esignature user ID: hbz01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may11a.b/le0397.d Injection date and time: **12-MAY-2016 00:56**
Data file Sample Info. Line: E6106RE;8354940RE;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **19393M**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

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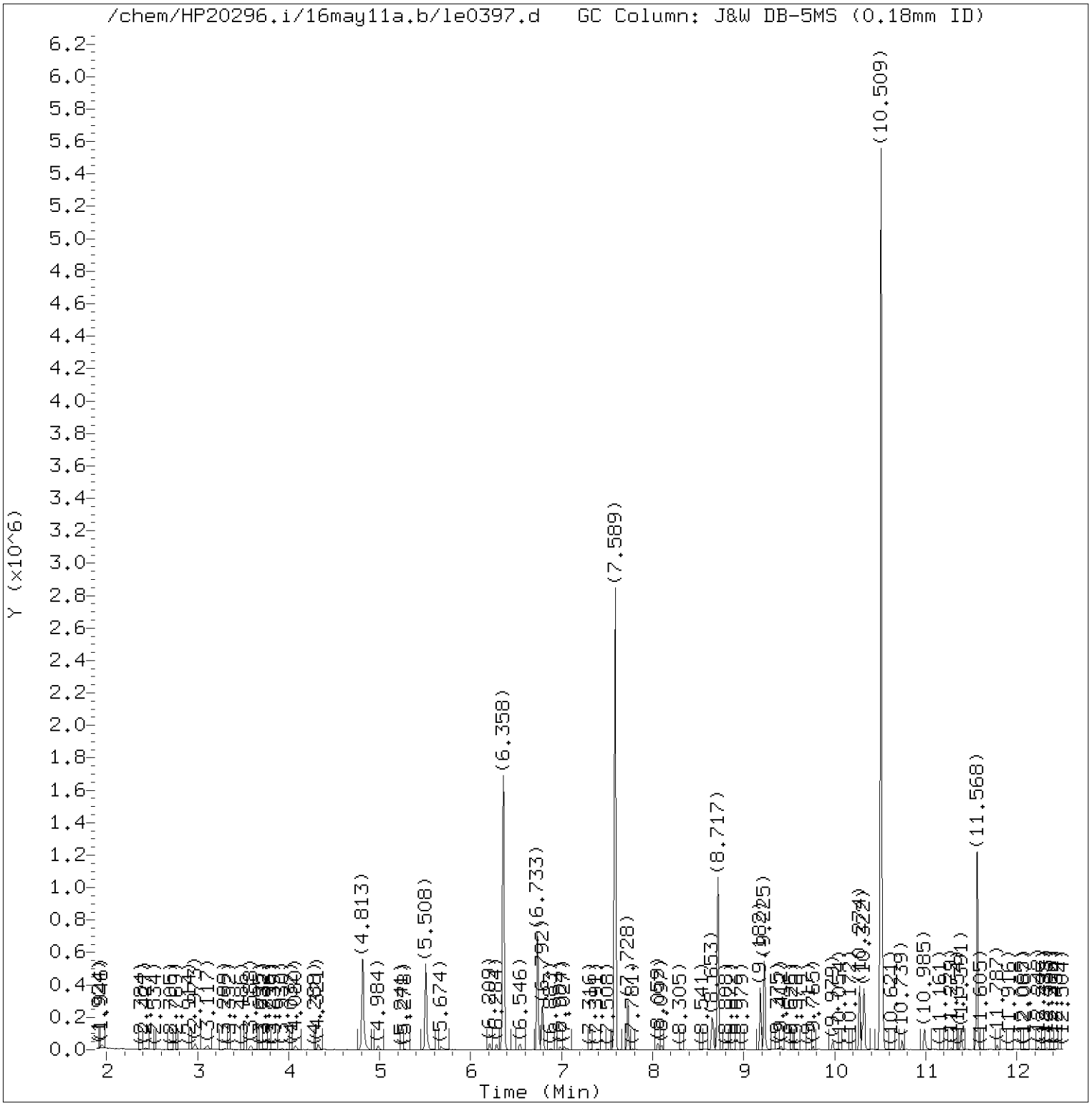
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by Holly B. Ziegler on 05/17/2016 at 11:17. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 12:24. PARALLAX ID: mar00486



Total Ion Chromatogram (TIC)

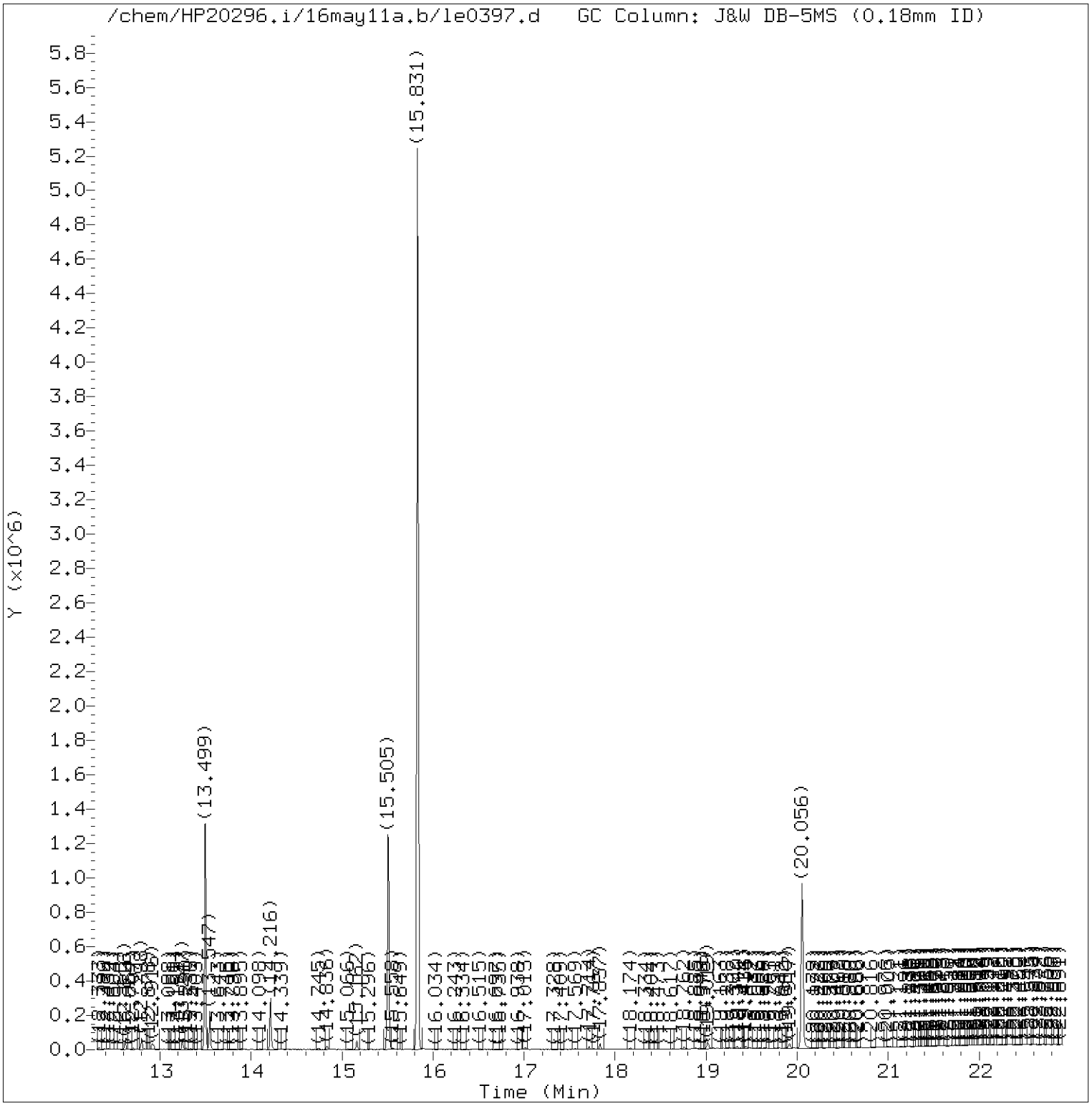
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0397.d Instrument ID: HP20296.i
Injection date and time: 12-MAY-2016 00:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 19393M
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Sample Name: E6106RE Lab Sample ID: 8354940RE

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 11:17.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0397.d Instrument ID: HP20296.i
Injection date and time: 12-MAY-2016 00:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 19393M
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Sample Name: E6106RE Lab Sample ID: 8354940RE

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 11:17.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0397.d Instrument ID: HP20296.i
Injection date and time: 12-MAY-2016 00:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 19393M
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:16 hbz01996

Sample Name: E6106RE Lab Sample ID: 8354940RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.802	112	17148	0.411
17)$Phenol-d6	(1)	6.209	99	16549	0.297
25)*1,4-Dichlorobenzene-d4	(1)	6.733	152	138517	5.000
44)$Nitrobenzene-d5	(2)	7.589	82	1215045	23.437
65)*Naphthalene-d8	(2)	8.717	136	516175	5.000
93)$2-Fluorobiphenyl	(3)	10.509	172	1941665	23.759
113)*Acenaphthene-d10	(3)	11.568	164	289026	5.000
135)$2,4,6-Tribromophenol	(3)	12.606	330	3525	0.371
153)*Phenanthrene-d10	(4)	13.499	188	551501	5.000
175)*Pyrene-d10	(5)	15.510	212	643971	5.000
179)$Terphenyl-d14	(5)	15.831	244	1967261	22.283
213)*Perylene-d12	(6)	20.056	264	504926	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 11:17.
Target 3.5 esignature user ID: hbz01996

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0280.d
Injection date and time: **07-MAY-2016 03:06**
Data file Sample Info. Line: E6107;8354941;1;0;SAMPLE;;8270MINI;
Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	138875	(-18)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	530643	(-19)	5.00	
113) Acenaphthene-d10	11.761	(0.005)	1846	164	298392	(-22)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	562203	(-21)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	670076	(-23)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	488108	(-26)	5.00	

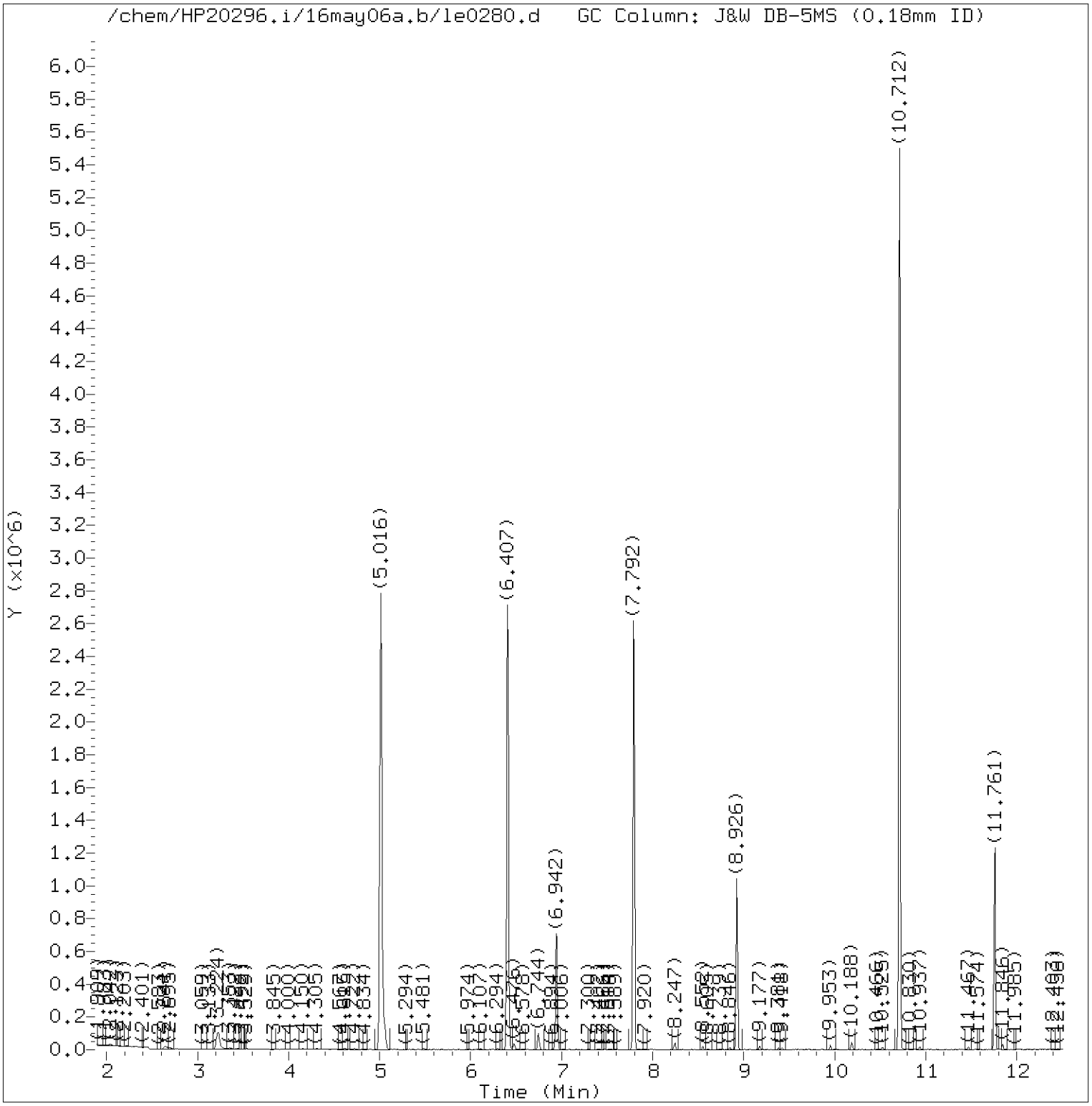
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1167522	21.907	88%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1954943	23.171	93%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2099002	22.849	91%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:49. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

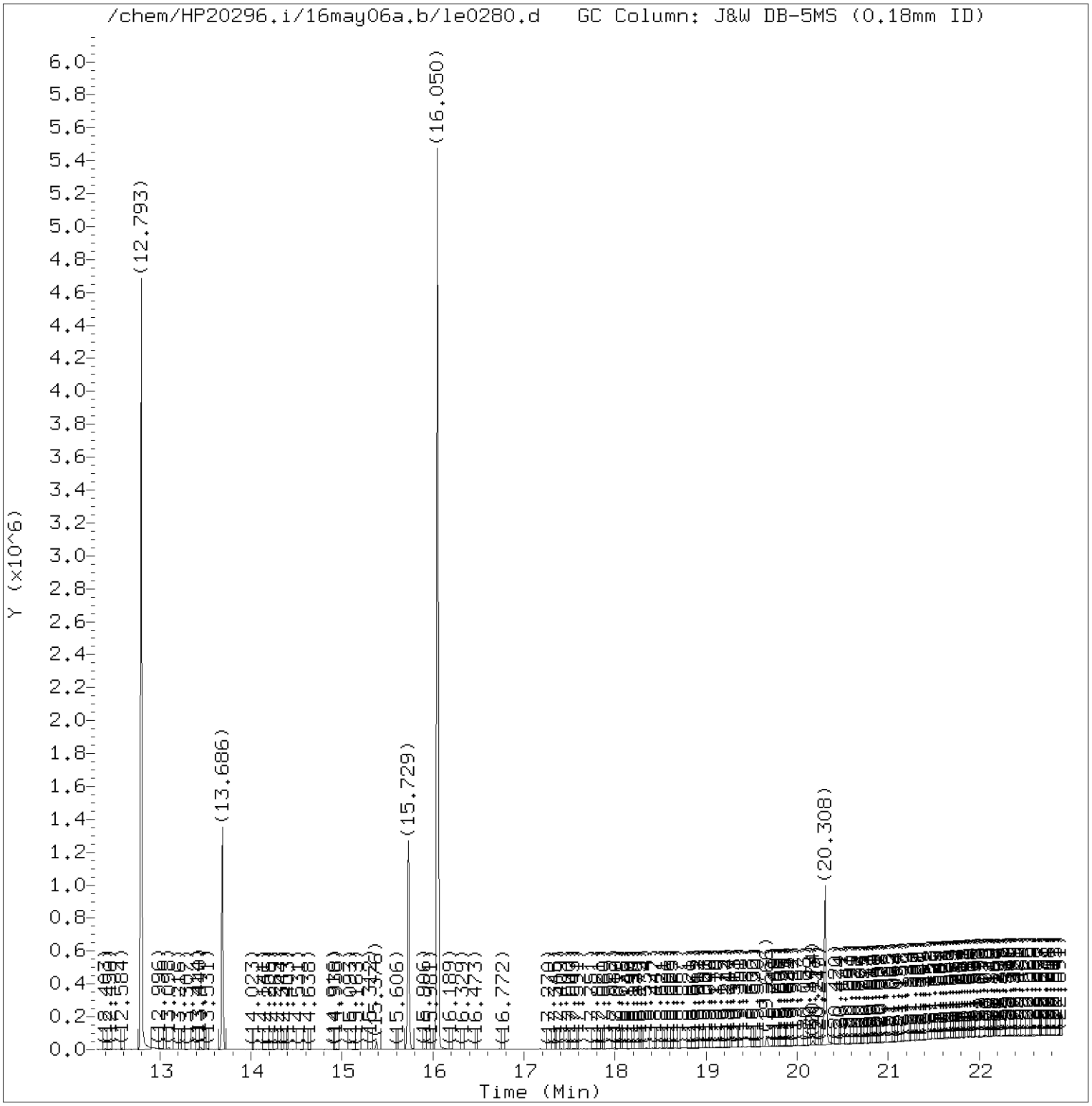
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0280.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:06 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6107 Lab Sample ID: 8354941

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0280.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:06 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6107 Lab Sample ID: 8354941

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0280.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:06 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6107 Lab Sample ID: 8354941

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	138875	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1167522	21.907
65)*Naphthalene-d8	(2)	8.926	136	530643	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1954943	23.171
113)*Acenaphthene-d10	(3)	11.761	164	298392	5.000
153)*Phenanthrene-d10	(4)	13.686	188	562203	5.000
175)*Pyrene-d10	(5)	15.729	212	670076	5.000
179)$Terphenyl-d14	(5)	16.050	244	2099002	22.849
213)*Perylene-d12	(6)	20.308	264	488108	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0281.d
Injection date and time: **07-MAY-2016 03:34**
Data file Sample Info. Line: E6108;8354942;1;0;SAMPLE;;8270MINI;
Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.941	(0.011)	945	152	144371	(-15)	5.00	
65) Naphthalene-d8	8.926	(0.006)	1316	136	556391	(-15)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	309710	(-19)	5.00	
153) Phenanthrene-d10	13.686	(0.006)	2206	188	584895	(-18)	5.00	
175) Pyrene-d10	15.729	(0.006)	2588	212	678861	(-22)	5.00	
213) Perylene-d12	20.307	(0.006)	3444	264	521982	(-21)	5.00	

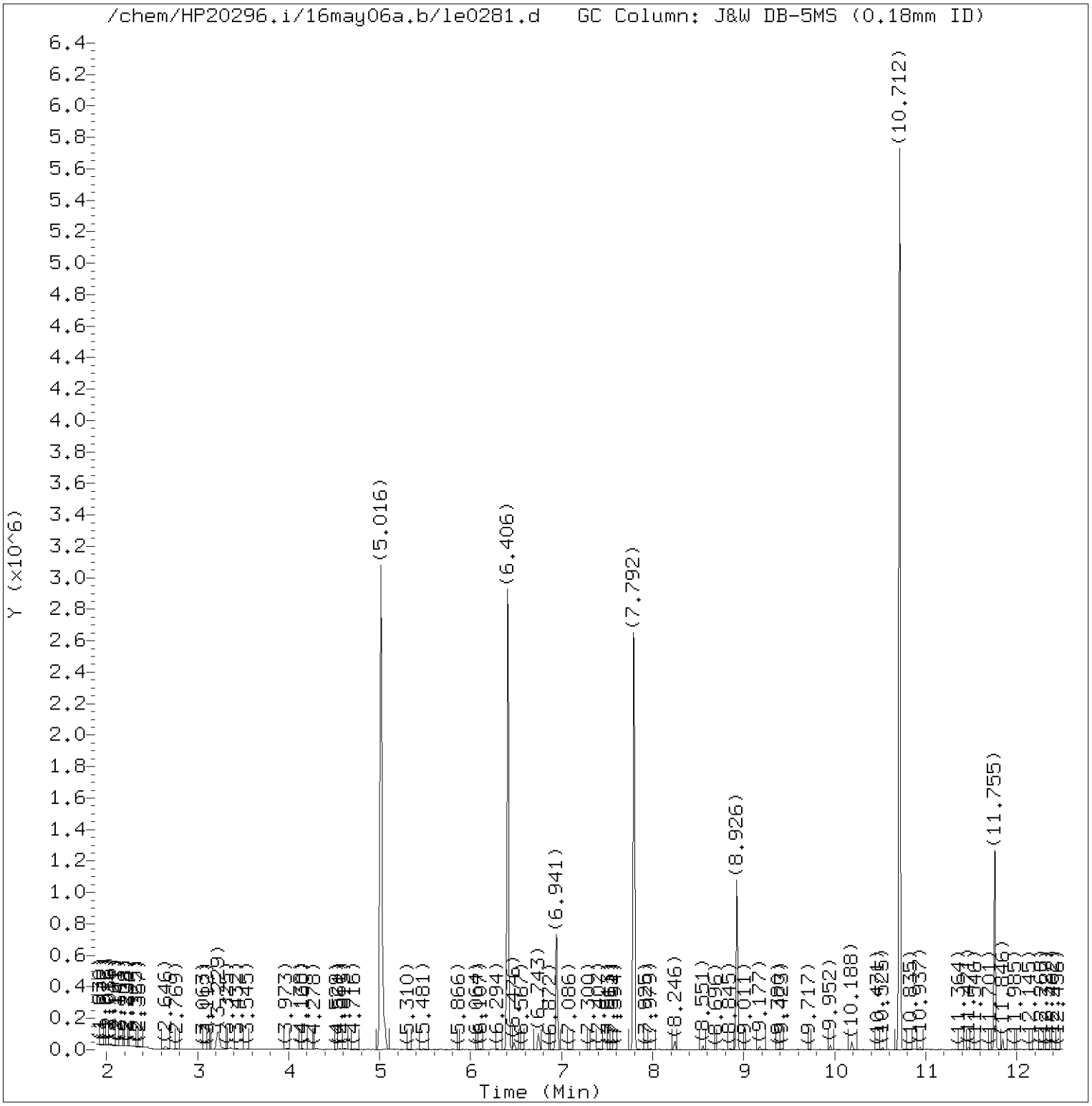
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1210863	21.669	87%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2026963	23.147	93%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2153468	23.139	93%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:49. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

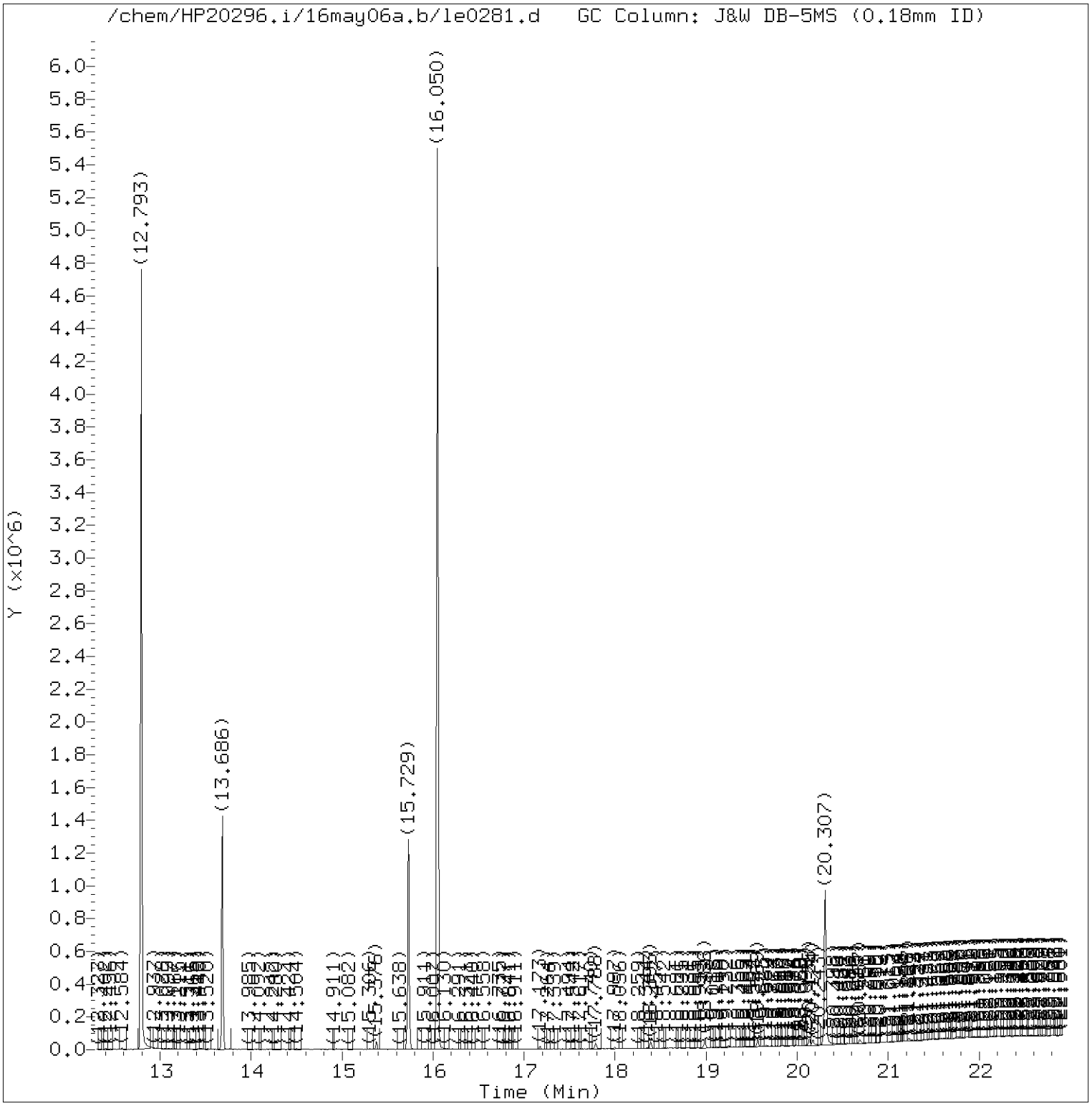
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0281.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:34 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6108 Lab Sample ID: 8354942

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0281.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:34 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6108 Lab Sample ID: 8354942

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0281.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 03:34 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6108 Lab Sample ID: 8354942

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.941	152	144371	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1210863	21.669
65)*Naphthalene-d8	(2)	8.926	136	556391	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	2026963	23.147
113)*Acenaphthene-d10	(3)	11.760	164	309710	5.000
153)*Phenanthrene-d10	(4)	13.686	188	584895	5.000
175)*Pyrene-d10	(5)	15.729	212	678861	5.000
179)$Terphenyl-d14	(5)	16.050	244	2153468	23.139
213)*Perylene-d12	(6)	20.307	264	521982	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

E6109 Lancaster Laboratories, Inc. 8354943
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0282.d Injection date and time: **07-MAY-2016 04:03**
Data file Sample Info. Line: E6109;8354943;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	139701	(-17)	5.00	
65) Naphthalene-d8	8.926	(0.005)	1316	136	526078	(-20)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	299760	(-22)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	577921	(-19)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	666732	(-24)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	505007	(-23)	5.00	

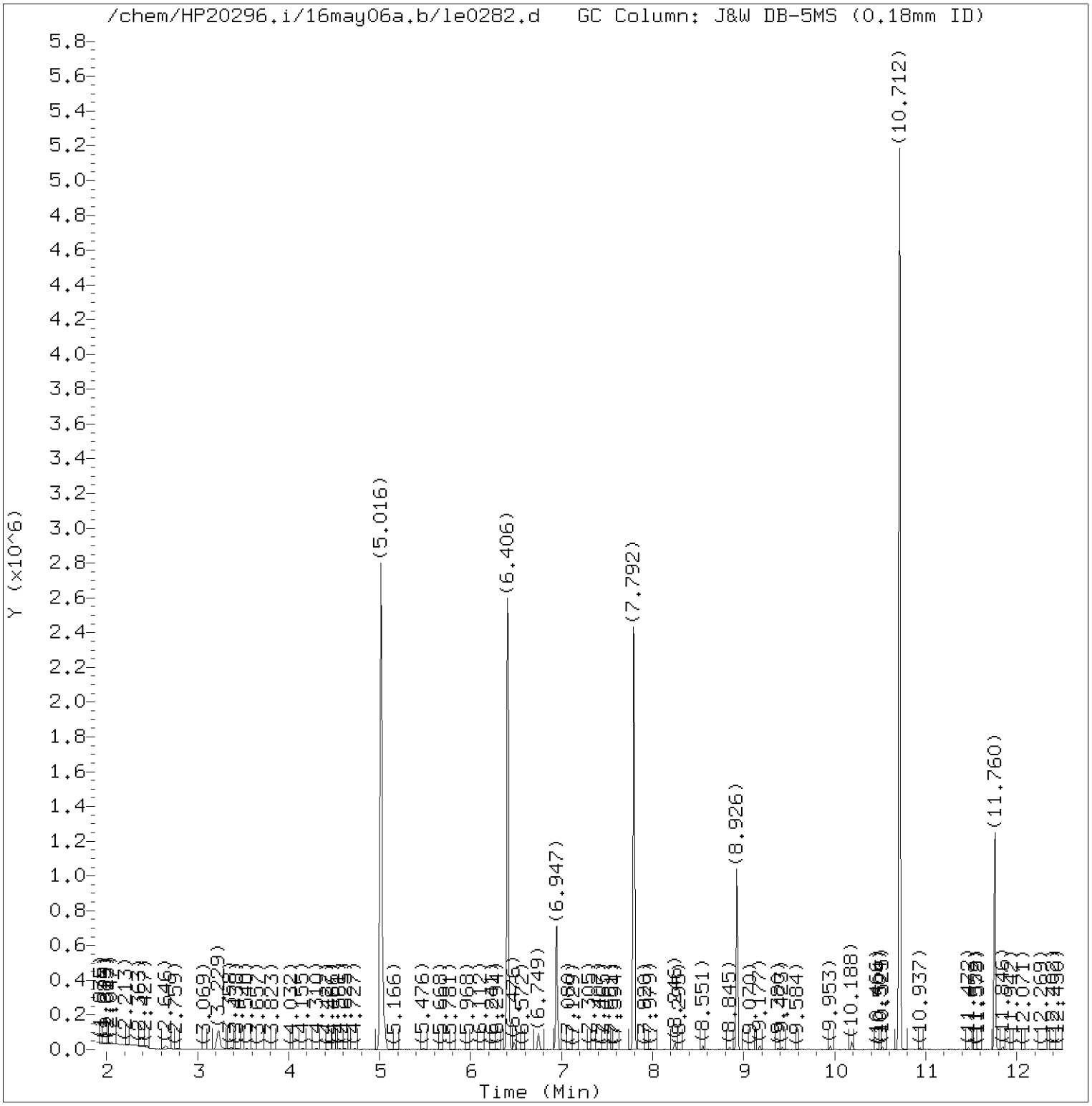
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.792	(0.001)	82	1101211	20.842	83%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1893770	22.344	89%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2011216	22.003	88%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:49. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

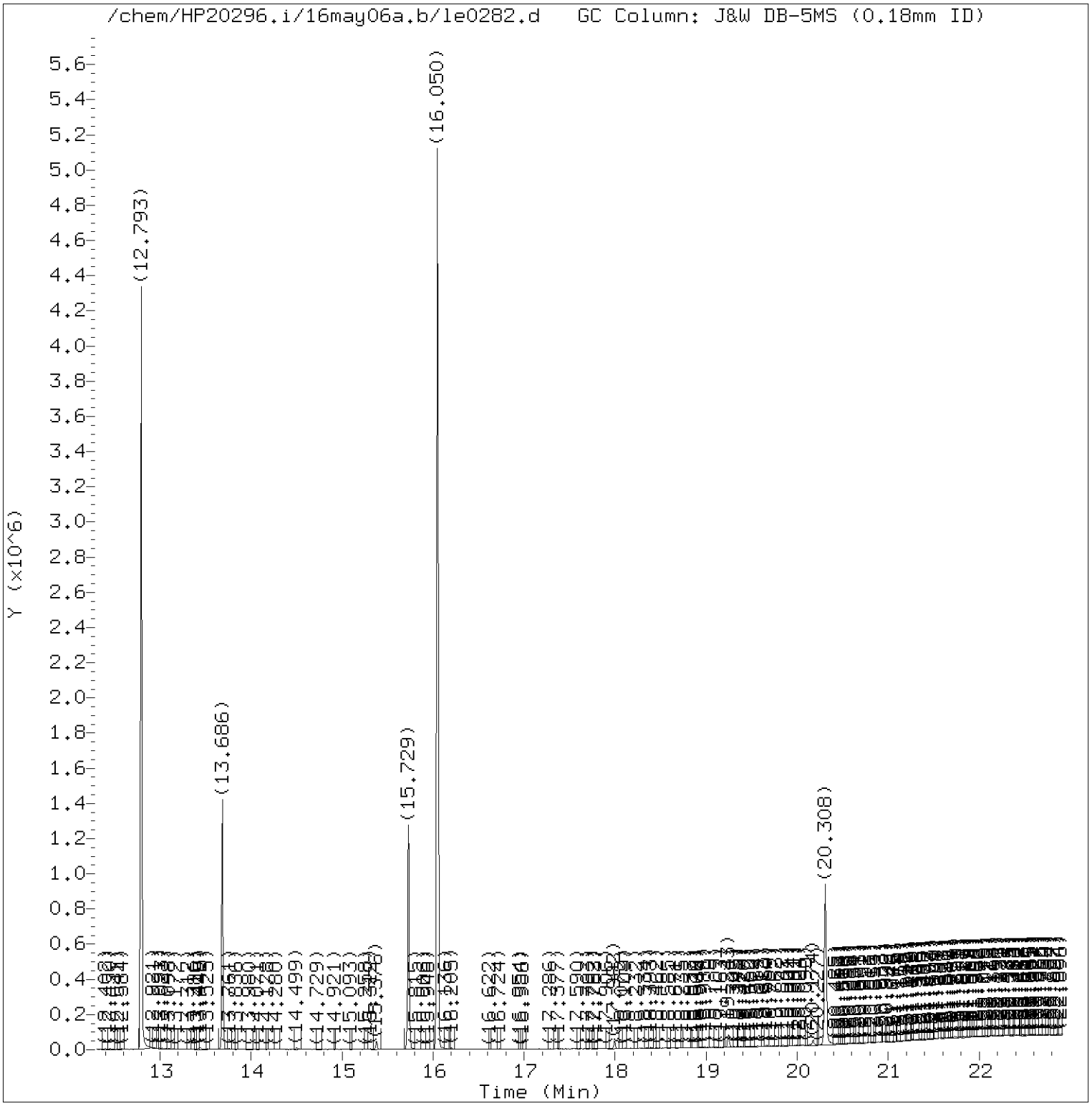
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0282.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:03 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6109 Lab Sample ID: 8354943

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0282.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:03 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6109 Lab Sample ID: 8354943

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0282.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:03 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6109 Lab Sample ID: 8354943

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	139701	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	1101211	20.842
65)*Naphthalene-d8	(2)	8.926	136	526078	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1893770	22.344
113)*Acenaphthene-d10	(3)	11.760	164	299760	5.000
153)*Phenanthrene-d10	(4)	13.686	188	577921	5.000
175)*Pyrene-d10	(5)	15.729	212	666732	5.000
179)$Terphenyl-d14	(5)	16.050	244	2011216	22.003
213)*Perylene-d12	(6)	20.308	264	505007	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

E6110 Lancaster Laboratories, Inc. 8354944
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0283.d Injection date and time: **07-MAY-2016 04:31**
Data file Sample Info. Line: E6110;8354944;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.006)	946	152	146429	(-13)	5.00	
65) Naphthalene-d8	8.926	(0.006)	1316	136	550843	(-16)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	311239	(-19)	5.00	
153) Phenanthrene-d10	13.686	(0.006)	2206	188	594461	(-17)	5.00	
175) Pyrene-d10	15.729	(0.006)	2588	212	687221	(-21)	5.00	
213) Perylene-d12	20.307	(0.006)	3444	264	524093	(-21)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.797	(0.000)	82	1875937	33.908	136%	*	46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	3127513	35.539	142%	*	61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	3255721	34.557	138%	*	41 - 125

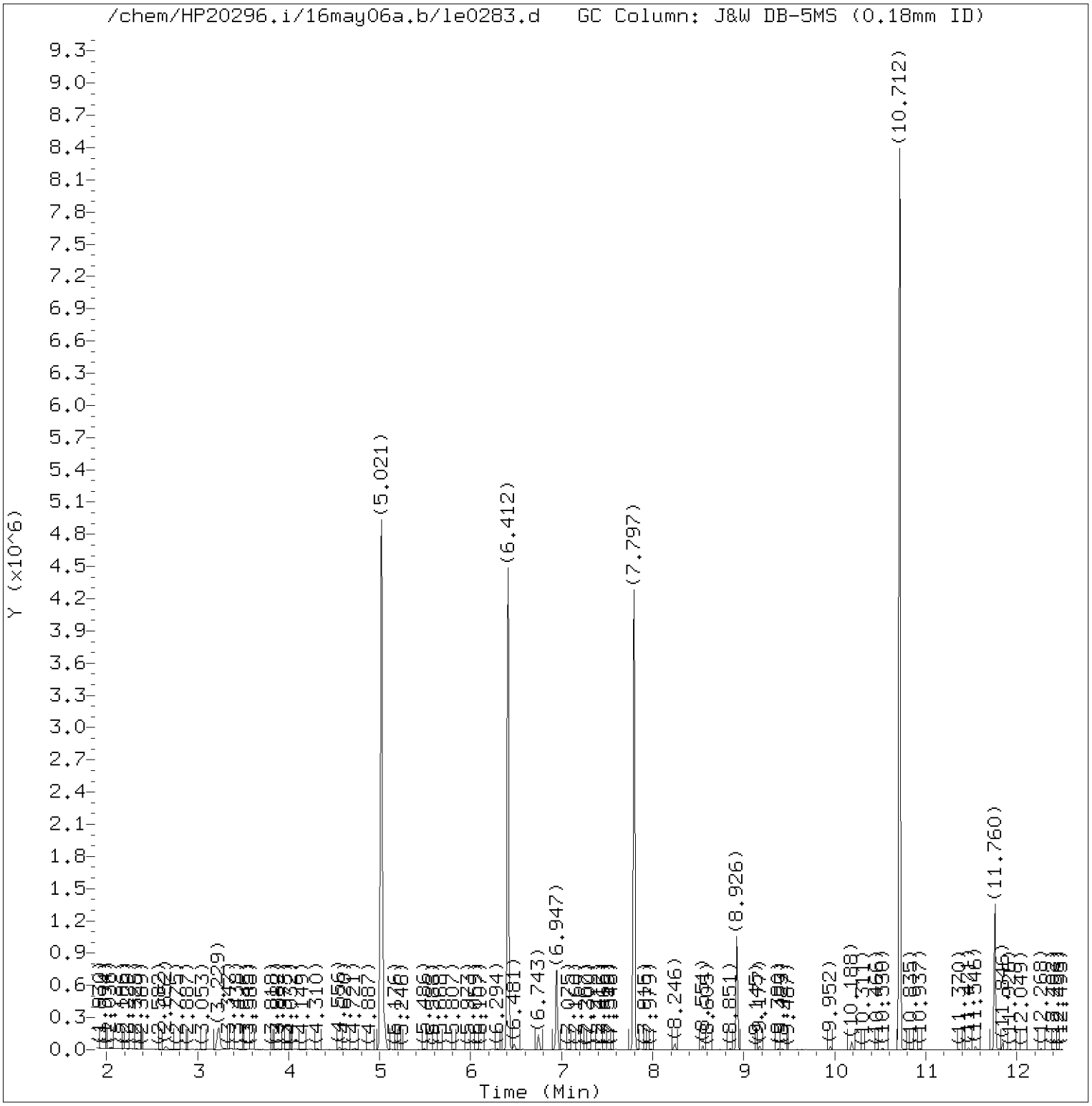
*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:49. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

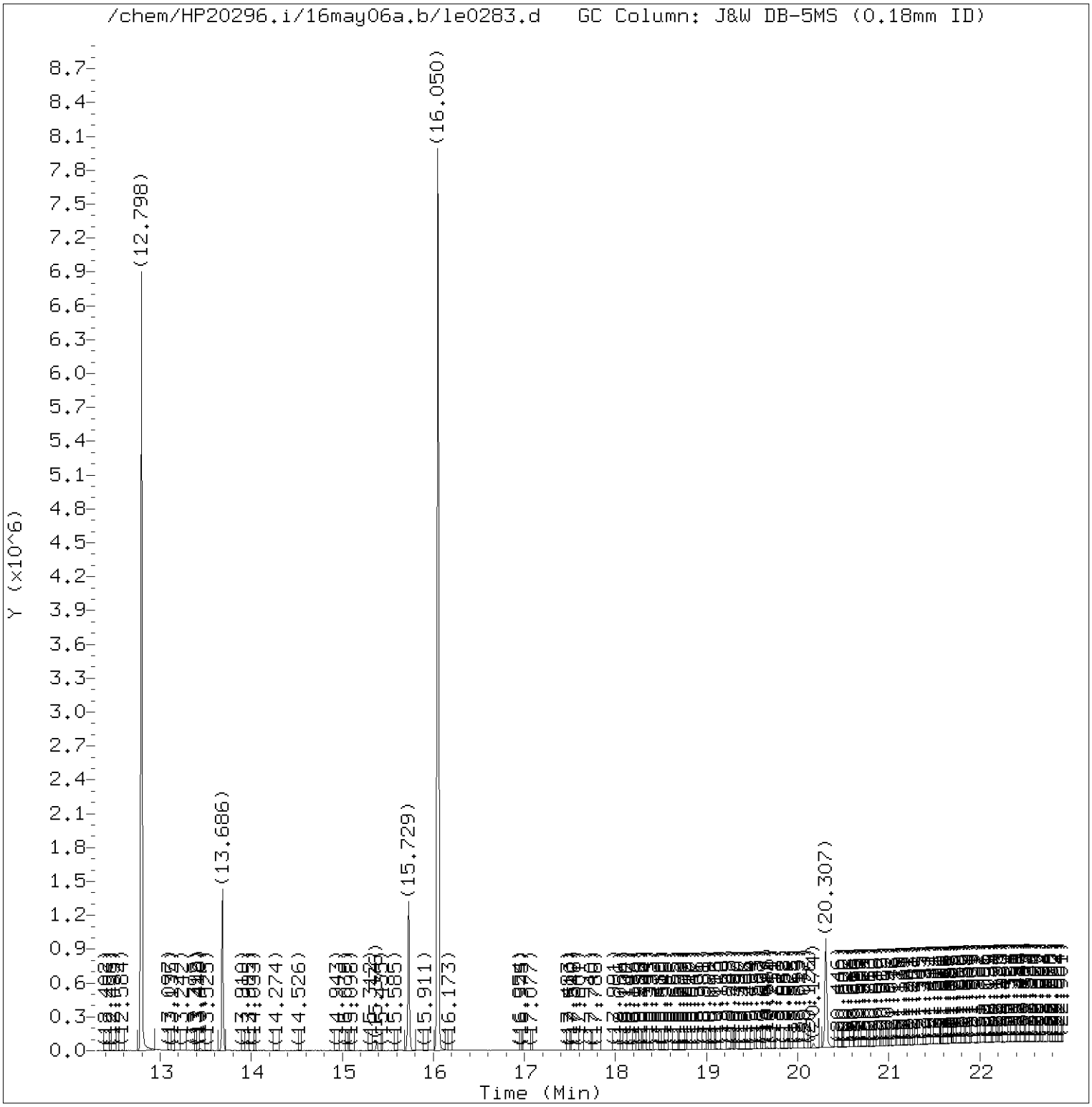
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0283.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:31 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6110 Lab Sample ID: 8354944

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0283.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:31 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6110 Lab Sample ID: 8354944

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0283.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:31 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:47 hbz01996

Sample Name: E6110 Lab Sample ID: 8354944

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	146429	5.000
44)$Nitrobenzene-d5	(2)	7.797	82	1875937	33.908
65)*Naphthalene-d8	(2)	8.926	136	550843	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	3127513	35.539
113)*Acenaphthene-d10	(3)	11.760	164	311239	5.000
153)*Phenanthrene-d10	(4)	13.686	188	594461	5.000
175)*Pyrene-d10	(5)	15.729	212	687221	5.000
179)$Terphenyl-d14	(5)	16.050	244	3255721	34.557
213)*Perylene-d12	(6)	20.307	264	524093	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

E6111 Lancaster Laboratories, Inc. 8354945
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0284.d Injection date and time: **07-MAY-2016 04:59**
Data file Sample Info. Line: E6111;8354945;1;0;SAMPLE;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:48 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.006)	946	152	142486	(-16)	5.00	
65) Naphthalene-d8	8.926	(0.006)	1316	136	540923	(-18)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	305327	(-20)	5.00	
153) Phenanthrene-d10	13.686	(0.006)	2206	188	584451	(-18)	5.00	
175) Pyrene-d10	15.729	(0.006)	2588	212	705449	(-19)	5.00	
213) Perylene-d12	20.307	(0.006)	3444	264	525880	(-20)	5.00	

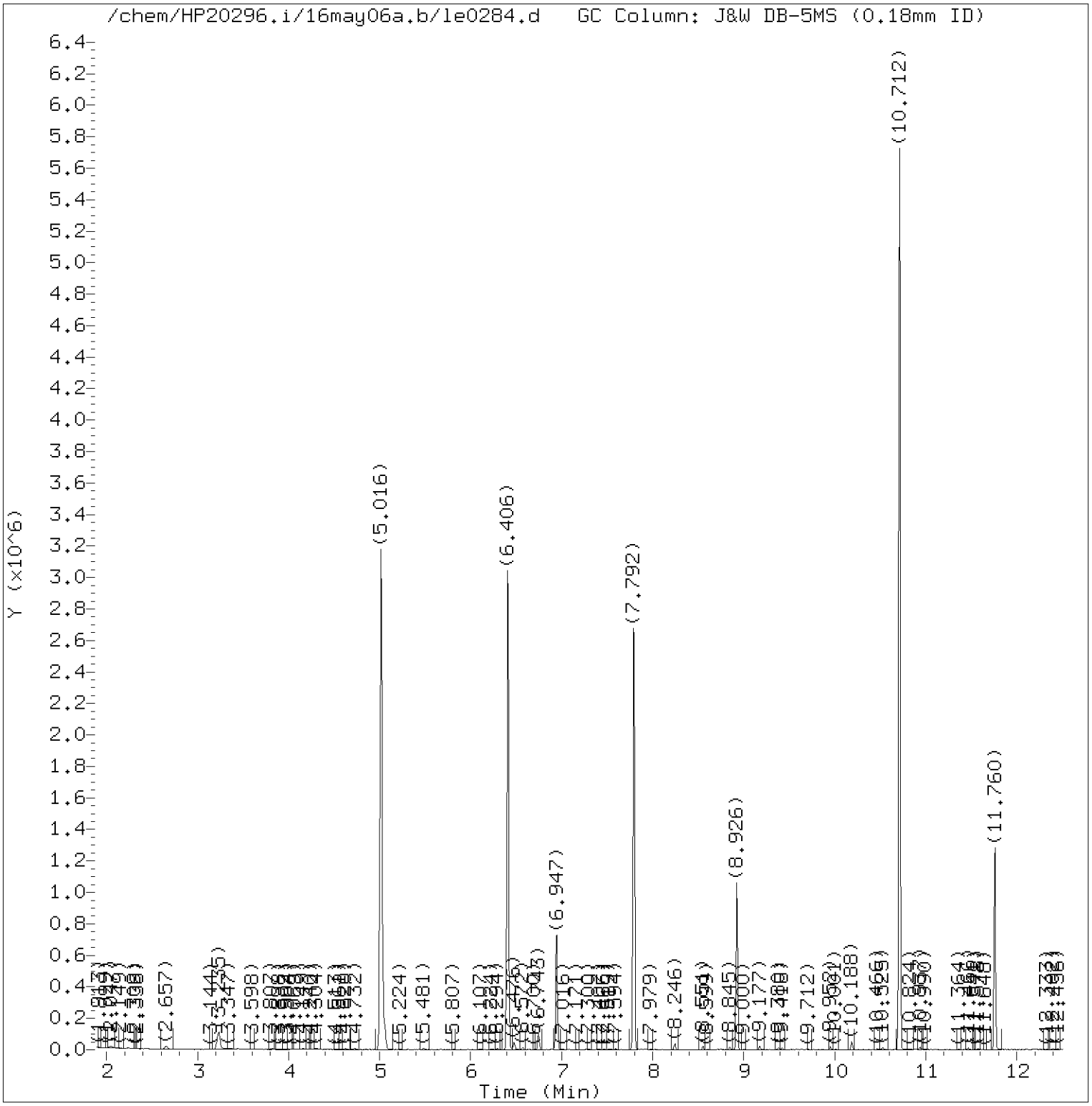
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.797	(0.000)	82	1214142	22.349	89%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2032254	23.540	94%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2090759	21.618	86%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:49. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

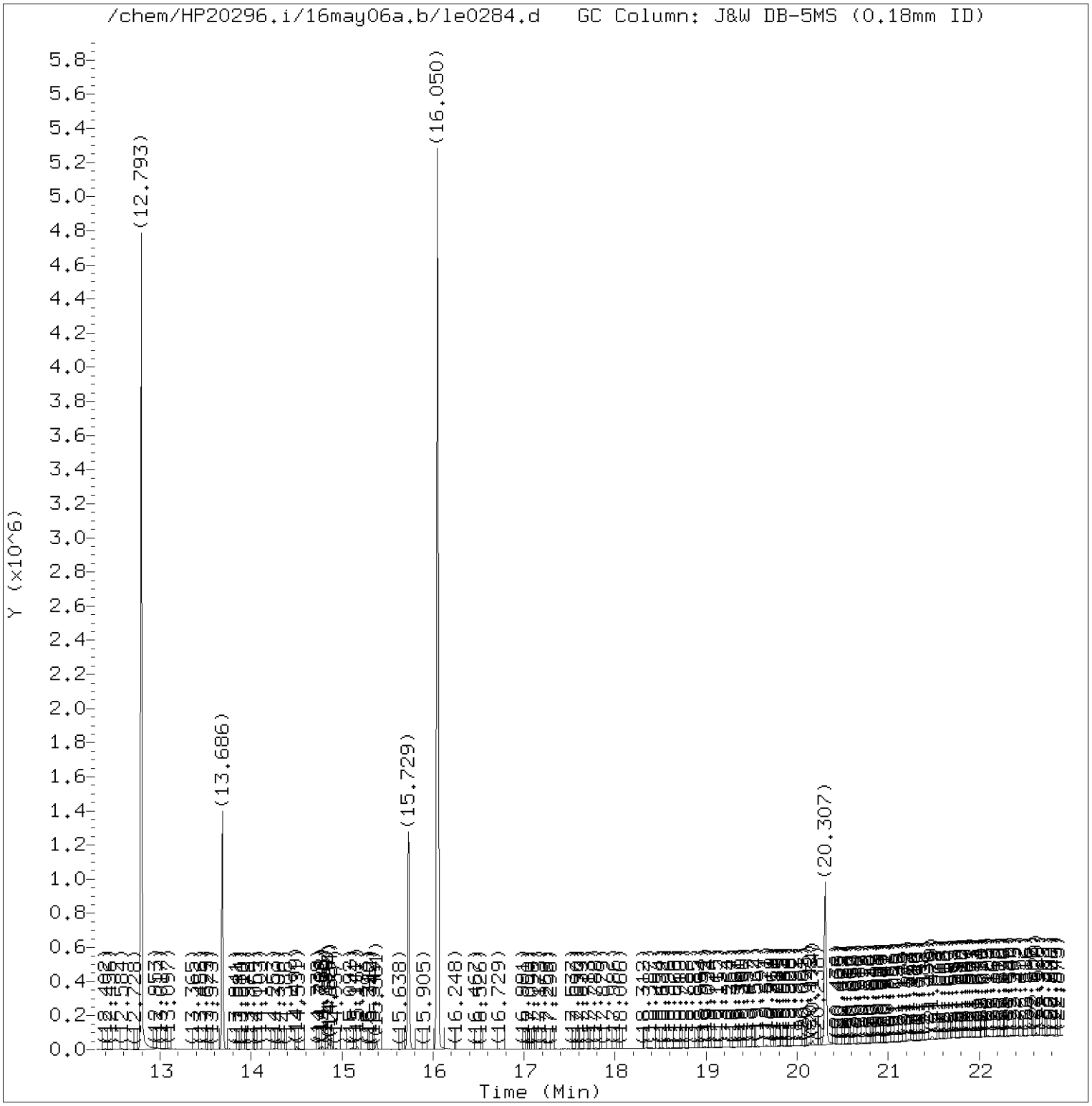
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0284.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:59 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:48 hbz01996

Sample Name: E6111 Lab Sample ID: 8354945

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0284.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:59 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:48 hbz01996

Sample Name: E6111 Lab Sample ID: 8354945

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0284.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 04:59 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:48 hbz01996

Sample Name: E6111 Lab Sample ID: 8354945

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	142486	5.000
44)$Nitrobenzene-d5	(2)	7.797	82	1214142	22.349
65)*Naphthalene-d8	(2)	8.926	136	540923	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	2032254	23.540
113)*Acenaphthene-d10	(3)	11.760	164	305327	5.000
153)*Phenanthrene-d10	(4)	13.686	188	584451	5.000
175)*Pyrene-d10	(5)	15.729	212	705449	5.000
179)$Terphenyl-d14	(5)	16.050	244	2090759	21.618
213)*Perylene-d12	(6)	20.307	264	525880	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:49.
Target 3.5 esignature user ID: hbz01996

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16may05\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	LE0200.D	RVDFTPP0826	05/05/2016	17:31		
kmb02125	LE0200a.D	RVDFTPP0826	05/05/2016	17:51		
kmb02125	LE0200b.D	RVDFTPP0826	05/05/2016	18:02		
kmb02125	LE0200c.D	RVDFTPP0826	05/05/2016	18:29		
kmb02125	LE0211.D	RVSTD1266	05/05/2016	18:43		
kmb02125	LE0212.D	RVSTD0816	05/05/2016	19:28		
kmb02125	LE0213.D	RVSTD0816	05/05/2016	19:56		
kmb02125	LE0214.D	RVSTD0816	05/05/2016	20:25		
kmb02125	LE0215.D	RVSTD0816	05/05/2016	20:53		
kmb02125	LE0216.D	RVSTD0816	05/05/2016	21:21		
kmb02125	LE0217.D	RVSTD0816	05/05/2016	21:49		
kmb02125	LE0218.D	RVSTD0816	05/05/2016	22:17		
kmb02125	LE0219.D	RVSTD0816	05/05/2016	22:46		
kmb02125	LE0220.D	RVSTD0816	05/05/2016	23:14		
kmb02125	LE0221.D	RVICV0136	05/05/2016	23:42		
kmb02125	LE0222.D	RVBASICV0716	05/06/2016	00:11		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16may06\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
hbz01996	LE0230.D	RVDFTPP0826	05/06/2016	07:21		
hbz01996	LE0231.D	RVSTD1266	05/06/2016	07:35		
hbz01996	LE0232.D	RVPDA1116	05/06/2016	08:20		
hbz01996	LE0233.D	RVPDA1116	05/06/2016	08:49		
hbz01996	LE0234.D	RVPDA1116	05/06/2016	09:17		
hbz01996	LE0235.D	RVPDA1116	05/06/2016	09:45		
hbz01996	LE0236.D	RVPDA1116	05/06/2016	10:13		
hbz01996	LE0237.D	RVKEP3645	05/06/2016	10:42		
hbz01996	LE0238.D	RVKEP3645	05/06/2016	11:10		
hbz01996	LE0239.D	RVKEP3645	05/06/2016	11:38		
hbz01996	LE0240.D	RVKEP3645	05/06/2016	12:07		
hbz01996	LE0241.D	RVKEP3645	05/06/2016	12:35		
hbz01996	LE0242.D	RVKEP3645	05/06/2016	13:03		
hbz01996	LE0243.D	RVKEPMDL3645	05/06/2016	13:31		
hbz01996	LE0244.D	RVFAD1116	05/06/2016	14:00		
hbz01996	LE0245.D	RVFAD1116	05/06/2016	14:28		
hbz01996	LE0246.D	RVFAD1116	05/06/2016	14:56		
hbz01996	LE0247.D	RVFAD1116	05/06/2016	15:25		
hbz01996	LE0248.D	RVFAD1116	05/06/2016	15:53		
hbz01996	LE0249.D	RVFAD1116	05/06/2016	16:21		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16may06a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	LE0260.D	RVDFTPP0826	05/06/2016	17:37		
ceb05247	LE0260a.D	RVDFTPP0826	05/06/2016	17:48		
ceb05247	LE0261.D	RVSTD1266	05/06/2016	18:02		
ceb05247	LE0262.D	RVPDA1116	05/06/2016	18:37		
ceb05247	LE0263.D	RVKEP3645	05/06/2016	19:05		
ceb05247	LE0264.D	RVFAD1116	05/06/2016	19:34		
ceb05247	LE0265.D	RVAAP0146	05/06/2016	20:02		
ceb05247	LE0266.D	SBLKWA124	05/06/2016	20:30	16124WAA	
ceb05247	LE0267.D	124WALCS	05/06/2016	20:58	16124WAA	
ceb05247	LE0268.D	SBLKWC114	05/06/2016	21:27	16114WAC	
ceb05247	LE0269.D	114WCLCS	05/06/2016	21:55	16114WAC	
ceb05247	LE0270.D	114WCLCSD	05/06/2016	22:23	16114WAC	
ceb05247	LE0271.D	8345367	05/06/2016	22:52	16114WAC	
ceb05247	LE0272.D	8354936	05/06/2016	23:20	16124WAA	
ceb05247	LE0273.D	8354937	05/06/2016	23:48	16124WAA	
ceb05247	LE0274.D	8354938	05/07/2016	00:17	16124WAA	
ceb05247	LE0275.D	8354933	05/07/2016	00:45	16124WAA	
ceb05247	LE0276.D	8354934	05/07/2016	01:13	16124WAA	
ceb05247	LE0277.D	8354935	05/07/2016	01:41	16124WAA	
ceb05247	LE0278.D	8354939	05/07/2016	02:10	16124WAA	
ceb05247	LE0279.D	8354940	05/07/2016	02:38	16124WAA	
ceb05247	LE0280.D	8354941	05/07/2016	03:06	16124WAA	
ceb05247	LE0281.D	8354942	05/07/2016	03:34	16124WAA	
ceb05247	LE0282.D	8354943	05/07/2016	04:03	16124WAA	
ceb05247	LE0283.D	8354944	05/07/2016	04:31	16124WAA	
ceb05247	LE0284.D	8354945	05/07/2016	04:59	16124WAA	
ceb05247	LE0285.D	8347055	05/07/2016	05:28	16114WAC	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16may11a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kmb02125	LE0380.D	RVDFTPP0826	05/11/2016	15:10		
kmb02125	LE0381.D	RVSTD1166	05/11/2016	15:45		
kmb02125	LE0382.D	RVPDA1166	05/11/2016	16:24		
kmb02125	LE0383.D	RVKEP3645	05/11/2016	16:52		
kmb02125	LE0384.D	RVFAD1116	05/11/2016	17:20		
kmb02125	LE0385.D	RVAAP0146	05/11/2016	17:49		
kmb02125	LE0383a.D	RVKEP3645	05/11/2016	19:02		
kmb02125	LE0386.D	SBLKWI131	05/11/2016	19:47	16131WAI	
kmb02125	LE0387.D	131WILCS	05/11/2016	20:15	16131WAI	
kmb02125	LE0388.D	131WILCSD	05/11/2016	20:43	16131WAI	
kmb02125	LE0389.D	SBLKWJ131	05/11/2016	21:11	16131WAJ	
kmb02125	LE0390.D	131WJLCS	05/11/2016	21:39	16131WAJ	
kmb02125	LE0391.D	131WJLCSD	05/11/2016	22:07	16131WAJ	
kmb02125	LE0392.D	8345367RE	05/11/2016	22:36	16131WAJ	10
kmb02125	LE0393.D	8345367DL4	05/11/2016	23:04	16131WAJ	1000
kmb02125	LE0394.D	8345367DL3	05/11/2016	23:32	16131WAJ	100
kmb02125	LE0395.D	8349468RE	05/12/2016	00:00	16131WAJ	
kmb02125	LE0396.D	8350677RE	05/12/2016	00:28	16131WAJ	
kmb02125	LE0397.D	8354940RE	05/12/2016	00:56	16131WAJ	
kmb02125	LE0398.D	8345676RE	05/12/2016	01:25	16131WAI	
kmb02125	LE0399.D	8364089RE	05/12/2016	01:53	16131WAI	
kmb02125	LE0400.D	8364091RE	05/12/2016	02:21	16131WAI	

Data File: /chem/HP20296.i/16may05.b/le0200c.d

Date : 05-MAY-2016 18:29

Client ID: DFTPP12.5

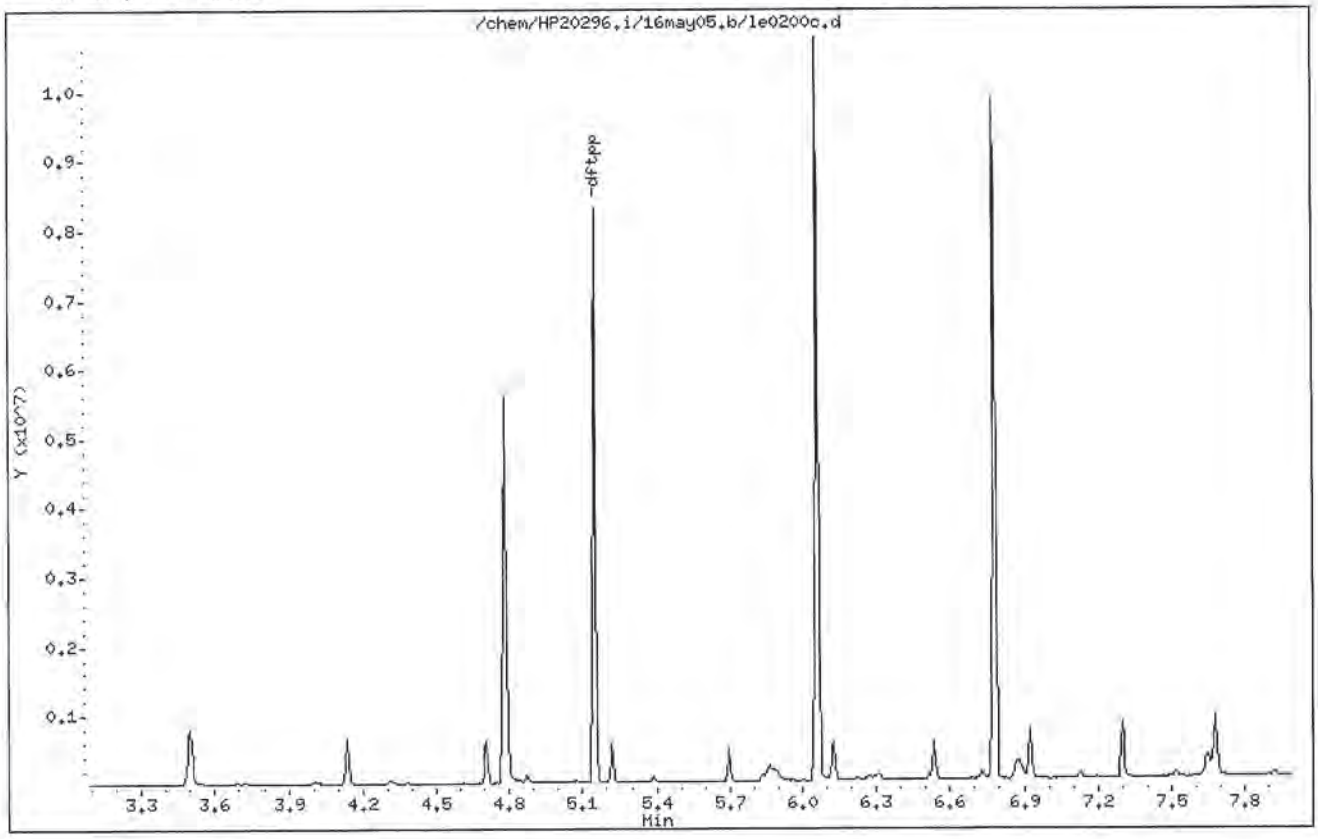
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP20296.i/16may05.b/le0200c.d

Date : 05-MAY-2016 18:29

Client ID: DFTPP12.5

Instrument: HP20296.i

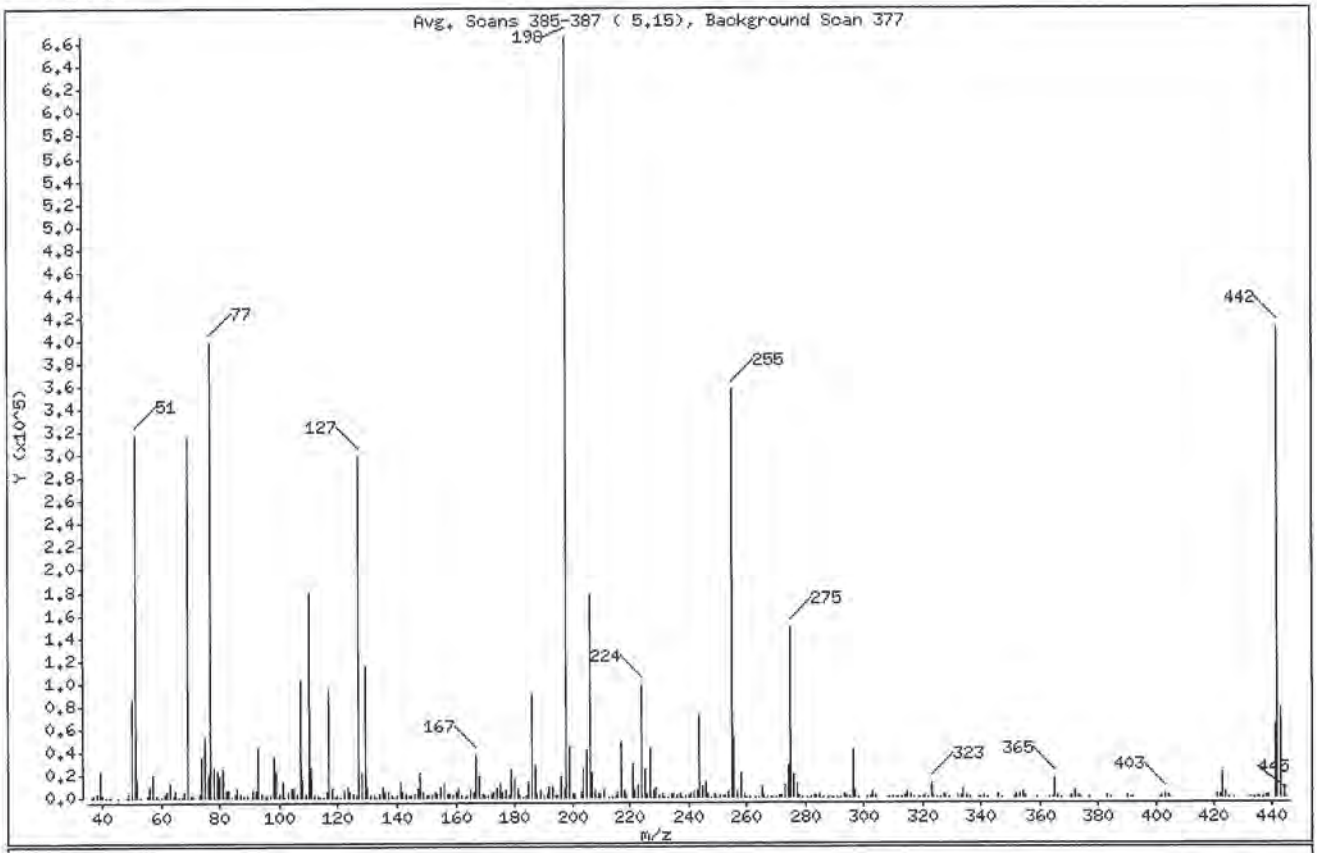
Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	47.48
68	Less than 2.00% of mass 69	0.79 (1.67)
69	Mass 69 relative abundance	47.46
70	Less than 2.00% of mass 69	0.33 (0.70)
127	10.00 - 80.00% of mass 198	44.79
197	Less than 2.00% of mass 198	1.06
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.48
441	0.01 - 24.00% of mass 442	9.54 (15.51)
442	50.00 - 99.99% of mass 198	61.54
443	15.00 - 24.00% of mass 442	11.67 (18.96)

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP20296.i/16may05.b/le0200c.d

Date : 05-MAY-2016 18:29

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0200c.d
Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377
Location of Maximum: 198.00
Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	334	126.00	2073	211.00	6457	302.00	882
37.00	1578	127.00	298496	213.00	296	303.00	4493
38.00	3795	128.00	22192	214.00	164	304.00	1297
39.00	22856	129.00	114376	215.00	2048	308.00	684
40.00	907	130.00	9926	216.00	4109	309.00	387
41.00	702	131.00	1968	217.00	48280	310.00	376
42.00	89	132.00	1081	218.00	6069	311.00	103
43.00	77	133.00	556	219.00	1010	312.00	172
45.00	351	134.00	3095	221.00	29080	313.00	465
48.00	216	135.00	9643	222.00	5680	314.00	1883
49.00	2359	136.00	3895	223.00	11243	315.00	4701
50.00	85888	137.00	4751	224.00	97720	316.00	2364
51.00	316416	138.00	1144	225.00	24128	317.00	440
52.00	15165	139.00	694	226.00	2609	319.00	103
53.00	548	140.00	1486	227.00	42808	320.00	121
55.00	1366	141.00	14449	228.00	5710	321.00	1241
56.00	8824	142.00	5204	229.00	8282	322.00	724
57.00	19424	143.00	3344	230.00	1117	323.00	12585
58.00	850	144.00	985	231.00	3509	324.00	2152
59.00	312	145.00	819	232.00	472	325.00	211
60.00	159	146.00	3250	233.00	748	326.00	299
61.00	3799	147.00	7730	234.00	2687	327.00	2544
62.00	4332	148.00	21000	235.00	2943	328.00	967
63.00	12427	149.00	4009	236.00	1870	329.00	208
64.00	1642	150.00	1156	237.00	3033	332.00	804
65.00	6153	151.00	1655	238.00	719	333.00	1493
66.00	439	152.00	1020	239.00	1600	334.00	8128
67.00	610	153.00	4244	240.00	1311	335.00	1696
68.00	5279	154.00	3571	241.00	2498	336.00	149
69.00	316288	155.00	8437	242.00	4594	339.00	110
70.00	2218	156.00	12248	243.00	5745	340.00	113
71.00	374	157.00	2942	244.00	71560	341.00	1199
73.00	2803	158.00	3099	245.00	9627	342.00	269
74.00	35856	159.00	2187	246.00	14126	346.00	2610
75.00	52368	160.00	4757	247.00	3081	347.00	595

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Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP20296.i/16may05.b/le0200c.d

Date : 05-MAY-2016 18:29

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0200c.d
Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377
Location of Maximum: 198.00
Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	20216	161.00	7146	248.00	677	351.00	338
77.00	397824	162.00	2033	249.00	2318	352.00	3802
78.00	26424	163.00	613	250.00	571	353.00	2718
79.00	23504	164.00	934	251.00	1139	354.00	4460
80.00	17952	165.00	6228	252.00	853	355.00	930
81.00	25064	166.00	4796	253.00	2007	359.00	170
82.00	6280	167.00	36952	254.00	4568	363.00	186
83.00	5426	168.00	17632	255.00	357120	364.00	192
84.00	754	169.00	3068	256.00	52848	365.00	16496
85.00	3793	170.00	1083	257.00	3980	366.00	2297
86.00	7752	171.00	1423	258.00	21128	367.00	95
87.00	3619	172.00	3293	259.00	3462	370.00	339
88.00	1385	173.00	3889	260.00	735	371.00	894
89.00	830	174.00	7143	261.00	748	372.00	6457
91.00	6044	175.00	12182	263.00	133	373.00	1411
92.00	6333	176.00	3946	264.00	755	374.00	146
93.00	43352	177.00	6051	265.00	8594	377.00	88
94.00	2996	178.00	2096	266.00	931	383.00	1779
95.00	631	179.00	24680	267.00	227	384.00	314
96.00	1204	180.00	16171	268.00	137	390.00	908
97.00	1009	181.00	7707	269.00	108	391.00	628
98.00	34696	182.00	1351	270.00	523	392.00	542
99.00	22888	183.00	704	271.00	827	401.00	185
100.00	2350	184.00	1876	272.00	1201	402.00	2118
101.00	13664	185.00	13079	273.00	11259	403.00	3359
102.00	730	186.00	90752	274.00	27960	404.00	1281
103.00	4183	187.00	27024	275.00	149120	405.00	259
104.00	7891	188.00	2766	276.00	20152	421.00	3050
105.00	7501	189.00	6068	277.00	12592	422.00	3118
106.00	2488	190.00	1044	278.00	2122	423.00	21448
107.00	102872	191.00	2375	279.00	237	424.00	5045
108.00	16028	192.00	8783	281.00	134	425.00	556
109.00	2929	193.00	9204	282.00	544	427.00	101
110.00	179584	194.00	1981	283.00	1506	432.00	103
111.00	26752	195.00	1821	284.00	1067	433.00	240

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP20296.i/16may05.b/le0200c.d

Date : 05-MAY-2016 18:29

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0200c.d

Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377

Location of Maximum: 198.00

Number of points: 333

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	3445	196.00	18792	285.00	2364	434.00	289
113.00	885	197.00	7071	286.00	370	435.00	497
114.00	200	198.00	666496	288.00	85	436.00	596
115.00	423	199.00	44456	289.00	522	437.00	508
116.00	5033	200.00	3704	290.00	512	438.00	1015
117.00	95328	201.00	3005	291.00	431	439.00	1386
118.00	6956	203.00	4965	292.00	632	441.00	63608
119.00	742	204.00	25128	293.00	2884	442.00	410112
120.00	1083	205.00	41400	294.00	1004	443.00	77776
121.00	521	206.00	178304	295.00	704	444.00	7646
122.00	6346	207.00	21576	296.00	41056	445.00	425
123.00	9234	208.00	5564	297.00	5642		
124.00	4200	209.00	2642	298.00	478		
125.00	3368	210.00	2469	301.00	625		

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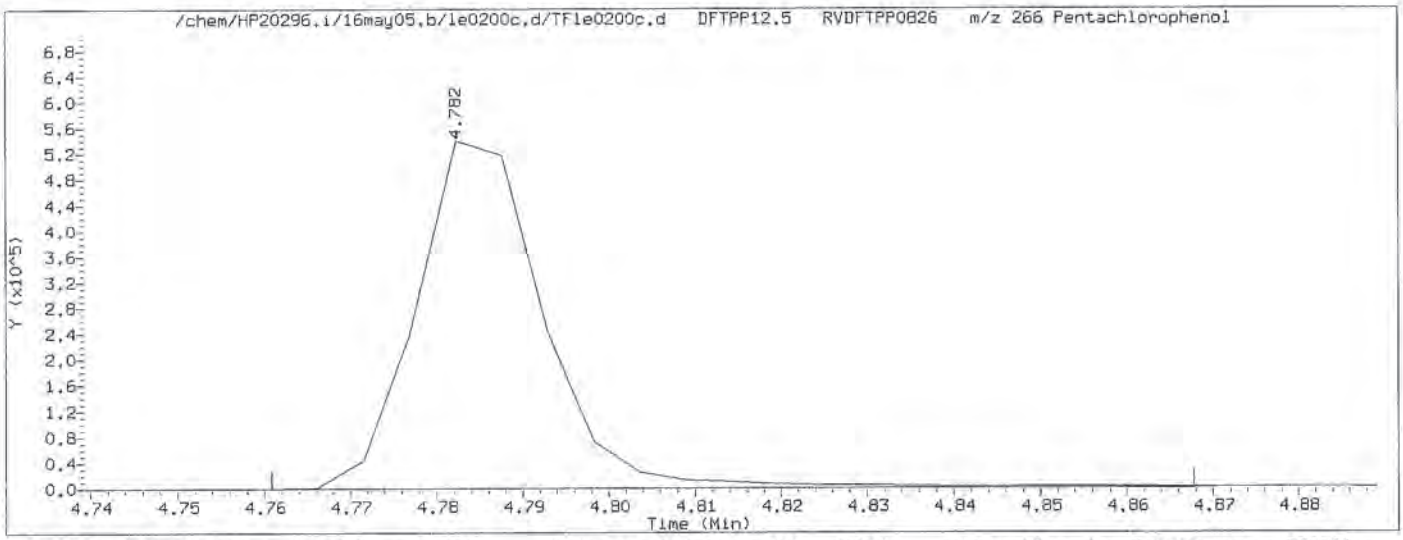
Target 3.5 esignature user ID: hbz01996

Assessment of GC Column Performance and Injection Port Inertness for

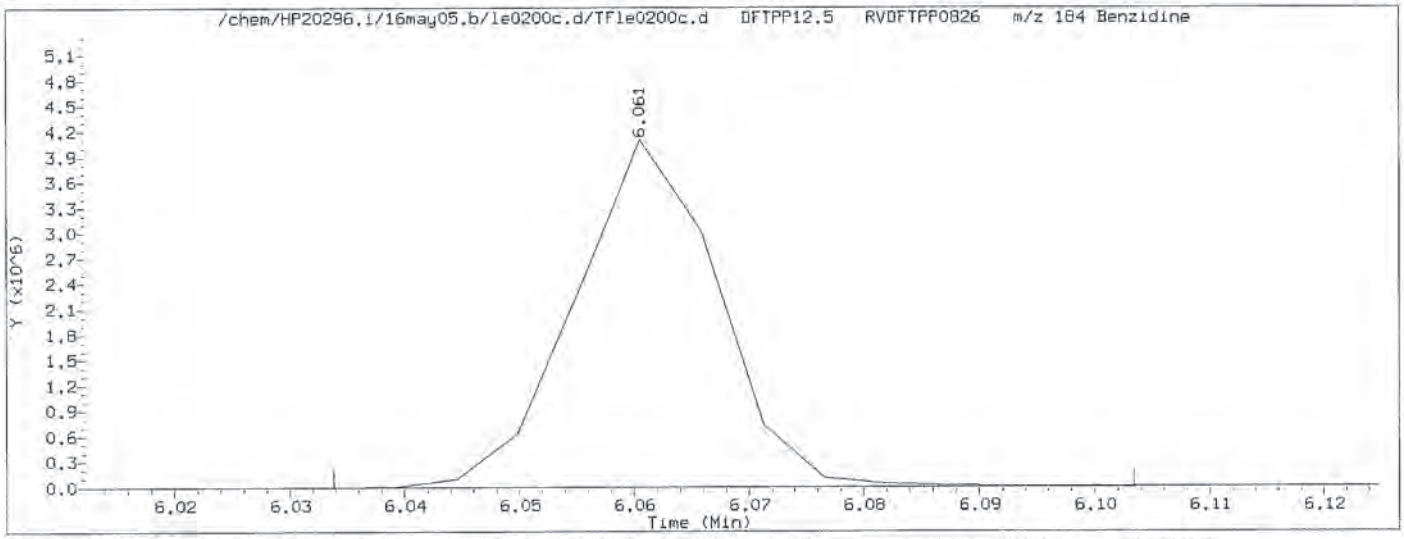
Instrument ID: HP20296.i Injection Date: 05-MAY-2016 18:29 Operator: kmb02125



Pentachlorophenol EICP peak height = 540288 EICP peak height at 10% = 54029 Pentachlorophenol EICP area = 558791

Pentachlorophenol EICP peak apex (min.) = 4.782
RT at 10% of front half of EICP (min.) = 4.772 'Front' peak width (min.) = 0.0104166667
RT at 10% of back half of EICP (min.) = 4.800 'Tailing' peak width (min.) = 0.0181166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0181166667}{0.0104166667} = 1.739$



Benzidine EICP peak height = 4104704 EICP peak height at 10% = 410470 Benzidine EICP area = 3564634

Benzidine EICP peak apex (min.) = 6.061
RT at 10% of front half of EICP (min.) = 6.048 'Front' peak width (min.) = 0.0128666667
RT at 10% of back half of EICP (min.) = 6.074 'Tailing' peak width (min.) = 0.0134333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0134333333}{0.0128666667} = 1.044$

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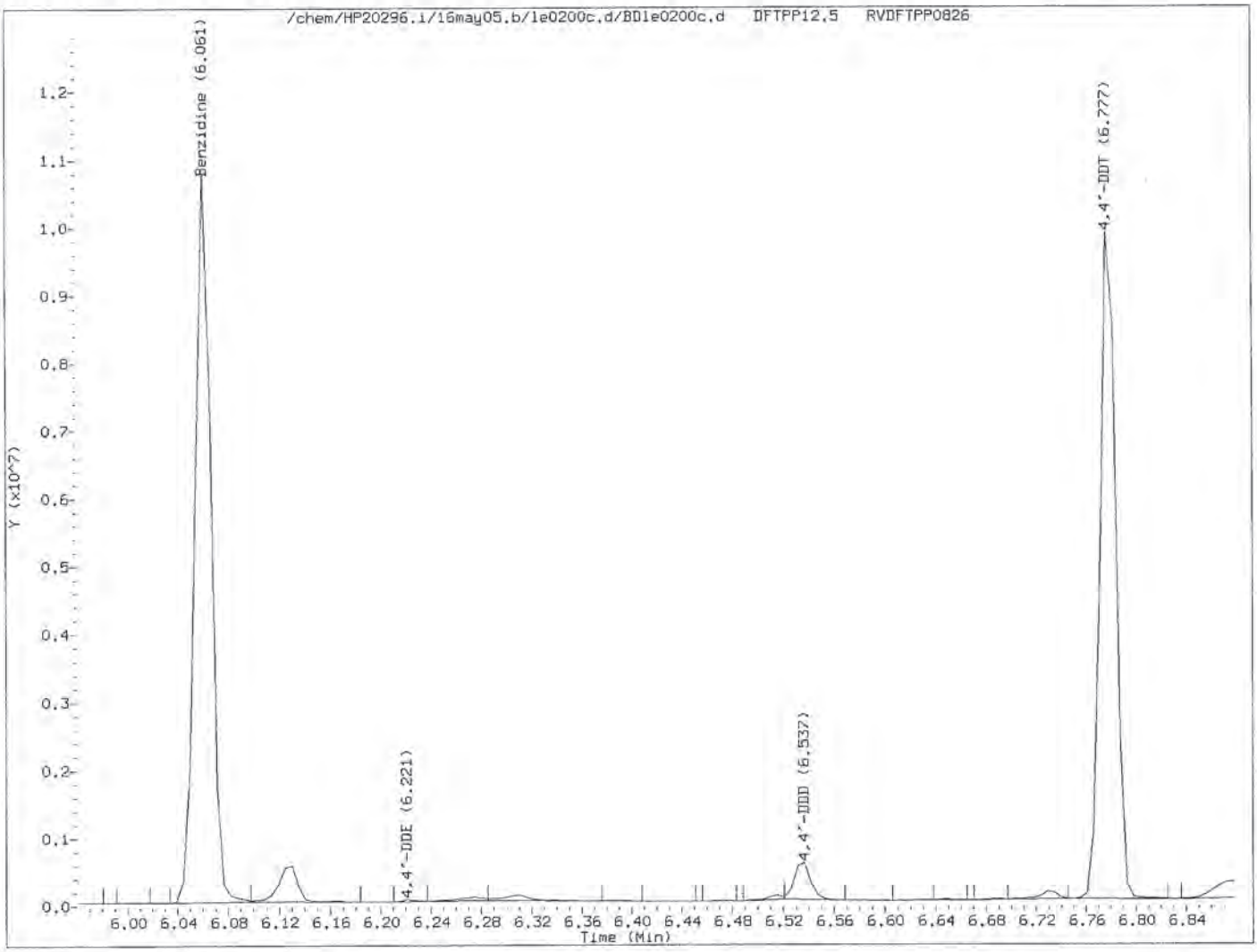
Target 3.5 esignature user ID: hbz01996

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP20296.i Injection Date: 05-MAY-2016 18:29 Operator: kmb02125



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{19719 + 506593}{19719 + 506593 + 8612230} \times 100 = 5.8$$

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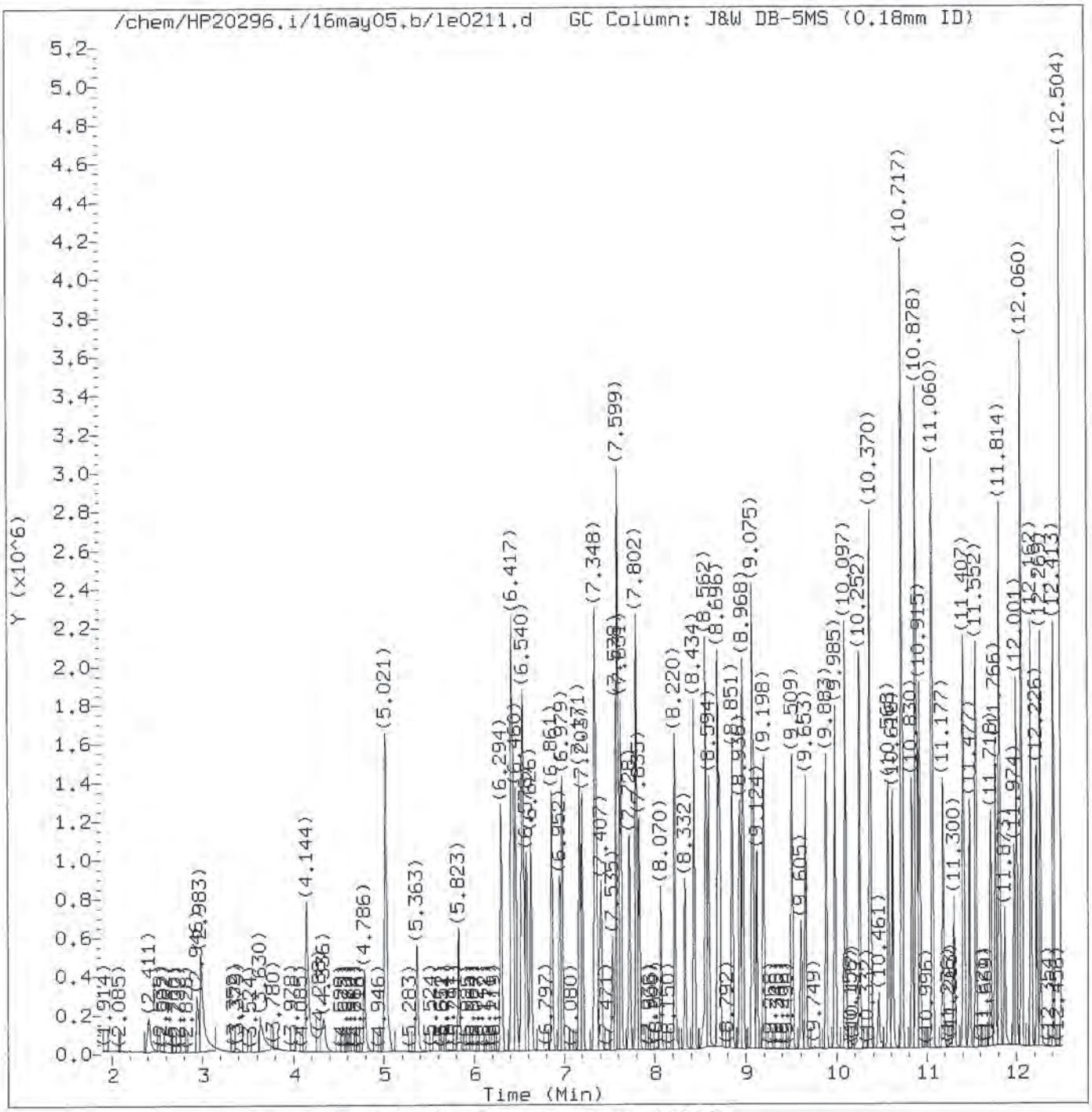
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0211.d
Injection date and time: 05-MAY-2016 18:43
Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15
Sublist used: all1
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5
Lab Sample ID: RVSTD1266

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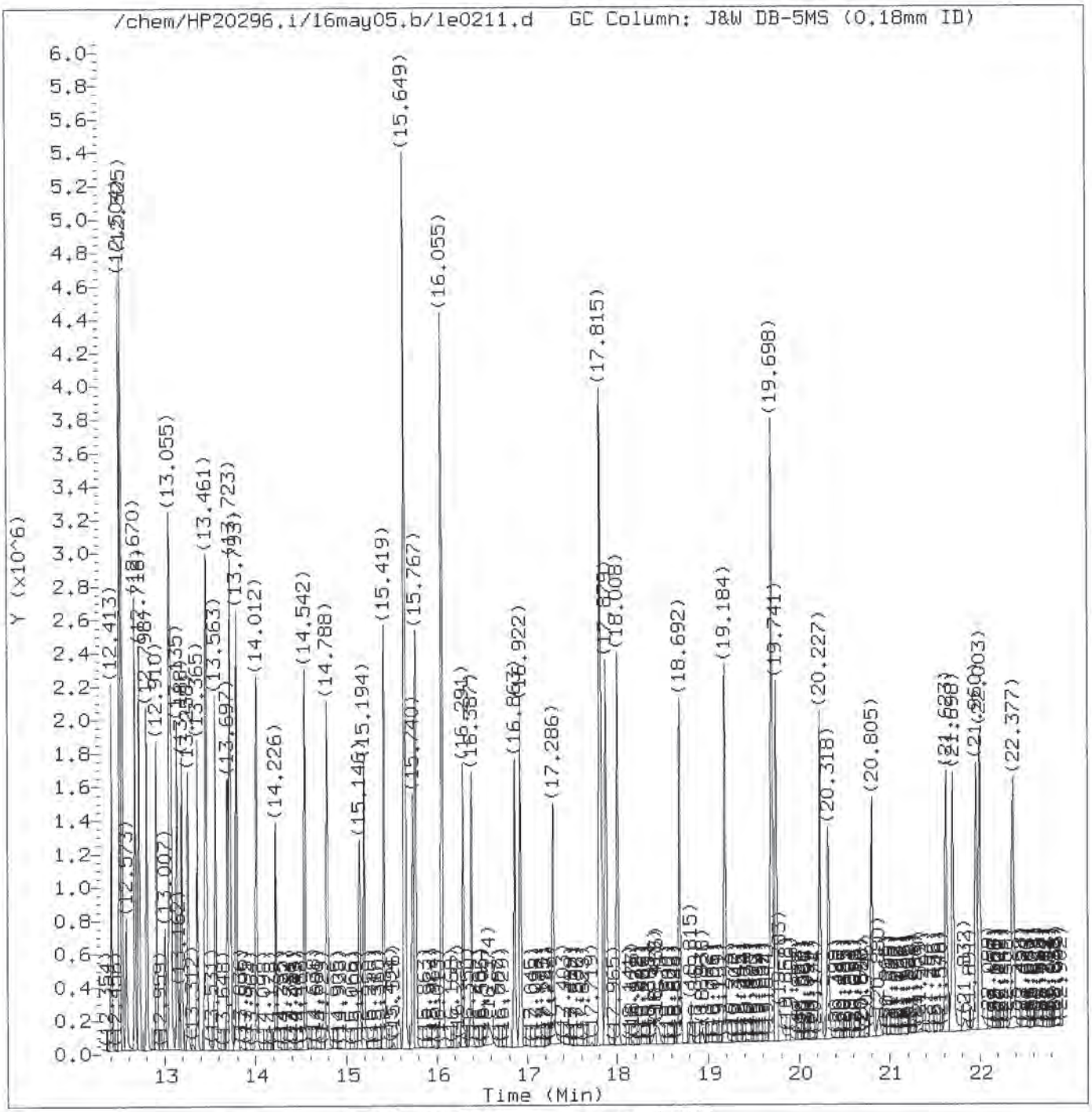
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.411	88	186240	7.500
4) N-Nitrosodimethylamine	(1)	2.946	74	286601	7.500
5) Pyridine	(1)	2.983	79	488442	7.500
7) 2-Picoline	(1)	4.144	93	500458M	7.500
8) N-Nitrosomethylethylamine	(1)	4.336	88	198837	7.500
9) Methyl methanesulfonate	(1)	4.786	80	237100	7.500
11)$2-Fluorophenol	(1)	5.021	112	771829	15.000
13) N-Nitrosodiethylamine	(1)	5.363	102	191008	7.500
42) Total Cresols	(1)			786234	15.000
15) Ethyl methanesulfonate	(1)	5.823	109	194512	7.500
16) Benzaldehyde	(1)	6.294	77	403116	7.500
17)$Phenol-d6	(1)	6.417	99	1021038	15.000
18) Phenol	(1)	6.433	94	613721	7.500
19) Aniline	(1)	6.460	93	722994	7.500
20) a-methylstyrene	(1)	6.545	118	396214	7.500
22) bis(2-Chloroethyl)ether	(1)	6.578	93	439739	7.500
23) 2-Chlorophenol	(1)	6.626	128	355036	7.500
24) 1,3-Dichlorobenzene	(1)	6.861	146	399229	7.500
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	164865	5.000
26) 1,4-Dichlorobenzene	(1)	6.979	146	407030	7.500
27) Benzyl alcohol	(1)	7.171	108	266604	7.500
28) 1,2-Dichlorobenzene	(1)	7.203	146	376857	7.500
30) Indene	(1)	7.342	115	689831	7.500
31) 2-Methylphenol	(1)	7.353	108	379665	7.500
97) Isosafrole	(3)			294213	7.500
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	566253	7.500
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	566253	7.500
35) N-Nitrosopyrrolidine	(1)	7.540	100	200997	7.500
36) Acetophenone	(1)	7.578	105	609439	7.500
37) 4-Methylphenol	(1)	7.599	108	406569	7.500
38) N-Nitroso-di-n-propylamine	(1)	7.599	70	342436	7.500
39) N-Nitrosomorpholine	(1)	7.610	56	262820	7.500
40) o-Toluidine	(1)	7.631	106	689547	7.500
43) Hexachloroethane	(1)	7.728	117	176454	7.500
44)$Nitrobenzene-d5	(2)	7.802	82	989545	15.000
45) Nitrobenzene	(2)	7.835	77	509157	7.500
120) 2,4_2,6-Dinitrotoluenes	(3)			358785	15.000
48) N-Nitrosopiperidine	(2)	8.070	114	188274	7.500
50) Isophorone	(2)	8.220	82	867829	7.500
51) 2-Nitrophenol	(2)	8.332	139	162127	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.434	107	424305	7.500
57) O,O,O-Triethylphosphorothioate	(2)	8.562	198	193742	7.500
56) Benzoic acid	(2)	8.573	105	313702M	10.000
55) bis(2-Chloroethoxy)methane	(2)	8.594	93	537363	7.500
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.696	104	632176	7.500
60) 2,4-Dichlorophenol	(2)	8.717	162	304130	7.500
146) Diallate trans/cis	(4)			393754	7.500
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	345491	7.500
65)*Naphthalene-d8	(2)	8.936	136	642121	5.000
66) Naphthalene	(2)	8.968	128	1055749	7.500
67) 4-Chloroaniline	(2)	9.070	127	439907	7.500
68) 2,6-Dichlorophenol	(2)	9.081	162	289891	7.500
69) Hexachloropropene	(2)	9.124	213	215122	7.500
71) Hexachlorobutadiene	(2)	9.198	225	216005	7.500
75) Quinoline	(2)	9.509	129	642316	7.500
76) Caprolactam	(2)	9.605	113	94921	7.500
77) N-Nitrosodi-n-butylamine	(2)	9.653	84	315983	7.500
80) 4-Chloro-3-methylphenol	(2)	9.883	107	356640	7.500
82) Safrole	(2)	9.985	162	264036	7.500
83) 2-Methylnaphthalene	(2)	10.097	142	695331	7.500
84) 1-Methylnaphthalene	(2)	10.257	142	639366	7.500
85) Hexachlorocyclopentadiene	(3)	10.370	237	198333	7.500
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	358576	7.500
88) cis-Isosafrole	(3)	10.461	162	48454	1.275
90) 2,4,6-Trichlorophenol	(3)	10.568	196	213639	7.500
92) 2,4,5-Trichlorophenol	(3)	10.616	196	238304	7.500
93)$2-Fluorobiphenyl	(3)	10.723	172	1577948	15.000
94) trans-Isosafrole	(3)	10.830	162	245759	6.225
95) 1,1'-Biphenyl	(3)	10.873	154	840532	7.500
96) 2-Chloronaphthalene	(3)	10.883	162	698706	7.500
98) 1-Chloronaphthalene	(3)	10.921	162	617974	7.500
99) Diphenyl ether	(3)	11.060	170	464761	7.500
100) 2-Nitroaniline	(3)	11.065	138	191979	7.500
104) 1,4-Naphthoquinone	(3)	11.183	158	264341	7.500
105) 1,4-Dinitrobenzene	(3)	11.300	168	89722	7.500
106) Dimethylphthalate	(3)	11.407	163	738679	7.500
107) 1,3-Dinitrobenzene	(3)	11.418	168	102042	7.500
108) 2,6-Dinitrotoluene	(3)	11.482	165	156240	7.500
109) Acenaphthylene	(3)	11.552	152	1010135	7.500
112) 3-Nitroaniline	(3)	11.718	138	169470	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113) *Acenaphthene-d10	(3)	11.766	164	368275	5.000
114) Acenaphthene	(3)	11.814	153	692759	7.500
115) 2,4-Dinitrophenol	(3)	11.873	184	91829	10.000
116) 4-Nitrophenol	(3)	11.974	109	122176	7.500
117) Pentachlorobenzene	(3)	12.001	250	290231	7.500
118) 2,4-Dinitrotoluene	(3)	12.060	165	202545	7.500
119) Dibenzofuran	(3)	12.060	168	935548	7.500
121) 1-Naphthylamine	(3)	12.162	143	667441	7.500
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	179973	7.500
123) 2-Naphthylamine	(3)	12.269	143	644707	7.500
124) Diethylphthalate	(3)	12.413	149	708627	7.500
126) Fluorene	(3)	12.504	166	744352	7.500
125) Thionazin	(3)	12.504	107	147686	7.500
128) 5-Nitro-o-toluidine	(3)	12.520	152	190104	7.500
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	370404	7.500
129) 4-Nitroaniline	(3)	12.531	138	172391	7.500
130) 4,6-Dinitro-2-methylphenol	(4)	12.573	198	95724	7.500
132) NDPA as diphenylamine	(4)	12.670	169	607038	7.500
131) N-Nitrosodiphenylamine	(4)	12.670	169	607038	7.500
134) 1,2-Diphenylhydrazine	(4)	12.718	77	1001675	7.500
135) $2,4,6-Tribromophenol	(3)	12.798	330	174952	15.000
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	154122	7.500
139) 1,3,5-Trinitrobenzene	(4)	13.007	213	63442	7.500
140) Diallate (peak 1)	(4)	13.049	86	328575	6.225
141) Phorate	(4)	13.060	75	572484	7.500
142) Phenacetin	(4)	13.076	108	435419	7.500
143) 4-Bromophenyl-phenylether	(4)	13.135	248	197839	7.500
144) Diallate (peak 2)	(4)	13.162	86	65179	1.275
145) Hexachlorobenzene	(4)	13.188	284	200509	7.500
147) Dimethoate	(4)	13.258	87	356402	7.500
148) Atrazine	(4)	13.365	200	205650	7.500
149) Pentachlorophenol	(4)	13.451	266	121570	7.500
150) 4-Aminobiphenyl	(4)	13.467	169	607698	7.500
151) Pentachloronitrobenzene	(4)	13.467	237	100165	7.500
152) Pronamide	(4)	13.563	173	344743	7.500
153) *Phenanthrene-d10	(4)	13.691	188	688392	5.000
154) Dinoseb	(4)	13.713	211	147043	7.500
155) Phenanthrene	(4)	13.723	178	1099945	7.500
157) Anthracene	(4)	13.793	178	1097606	7.500
163) Carbazole	(4)	14.012	167	1018530	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.226	109	252195	7.500
165) Di-n-butylphthalate	(4)	14.542	149	1223027	7.500
167) Parathion	(4)	14.782	109	159459	7.500
168) 4-Nitroquinoline-1-oxide	(4)	14.793	190	82635	7.500
222) Total PAHs	(6)			18712046	135.000
169) Octachlorostyrene	(4)	15.146	308	75917	7.500
171) Isodrin	(4)	15.194	193	131850	7.500
173) Fluoranthene	(4)	15.419	202	1248891	7.500
174) Benzidine	(5)	15.649	184	2505105	22.500
175)*Pyrene-d10	(5)	15.740	212	830815	5.000
177) Pyrene	(5)	15.767	202	1337042	7.500
179)$Terphenyl-d14	(5)	16.055	244	1704934	15.000
182) p-Dimethylaminoazobenzene	(5)	16.291	225	212121	7.500
185) Chlorobenzilate	(5)	16.387	139	381883	7.500
187) 3,3'-Dimethylbenzidine	(5)	16.863	212	784758	7.500
188) Butylbenzylphthalate	(5)	16.922	149	560265	7.500
191) 2-Acetylaminofluorene	(5)	17.286	181	439573	7.500
193) 3,3'-Dichlorobenzidine	(5)	17.804	252	434858	7.500
195) Benzo(a)anthracene	(5)	17.815	228	1236886	7.500
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.826	231	243836	7.500
196) Chrysene	(5)	17.879	228	1153715	7.500
199) bis(2-Ethylhexyl)phthalate	(5)	18.008	149	797874	7.500
203) 6-Methylchrysene	(5)	18.692	242	782219	7.500
205) Di-n-octylphthalate	(6)	19.184	149	1358434	7.500
206) Benzo(b)fluoranthene	(6)	19.698	252	1162117	7.500
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.698	256	505299	7.500
208) Benzo(k)fluoranthene	(6)	19.741	252	1142261	7.500
211) Benzo(a)pyrene	(6)	20.227	252	1067387	7.500
213)*Perylene-d12	(6)	20.318	264	600148	5.000
215) 3-Methylcholanthrene	(6)	20.805	268	437331	7.500
217) Dibenz(a,h)acridine	(6)	21.623	279	859969	7.500
218) Dibenz(a,j)acridine	(6)	21.698	279	883101	7.500
219) Indeno(1,2,3-cd)pyrene	(6)	21.960	276	1243123	7.500
220) Dibenz(a,h)anthracene	(6)	22.003	278	1044428	7.500
221) Benzo(g,h,i)perylene	(6)	22.377	276	1040953	7.500

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$ = Compound is a surrogate standard.

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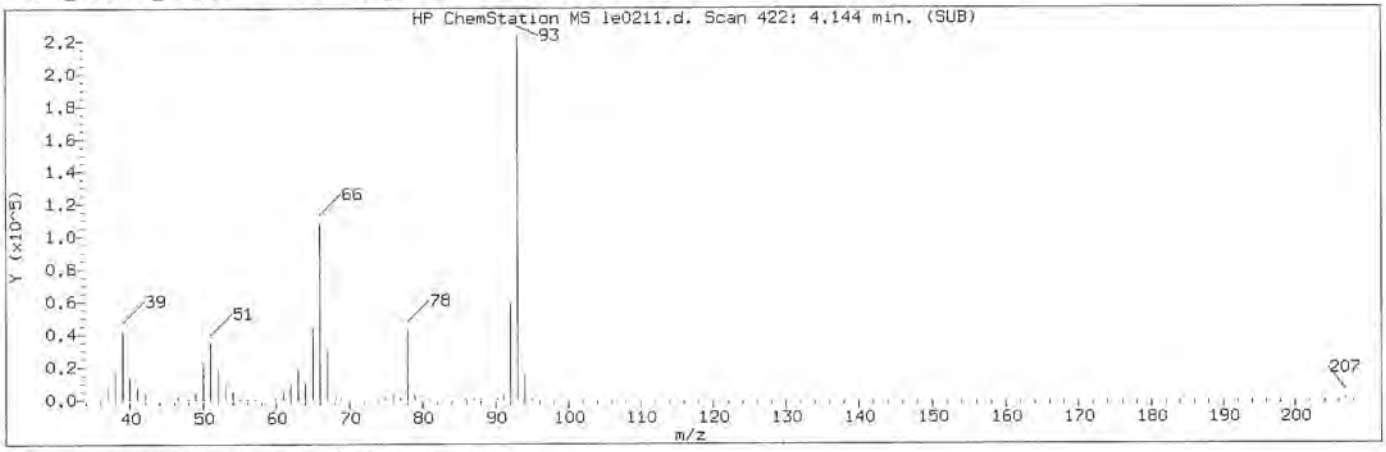
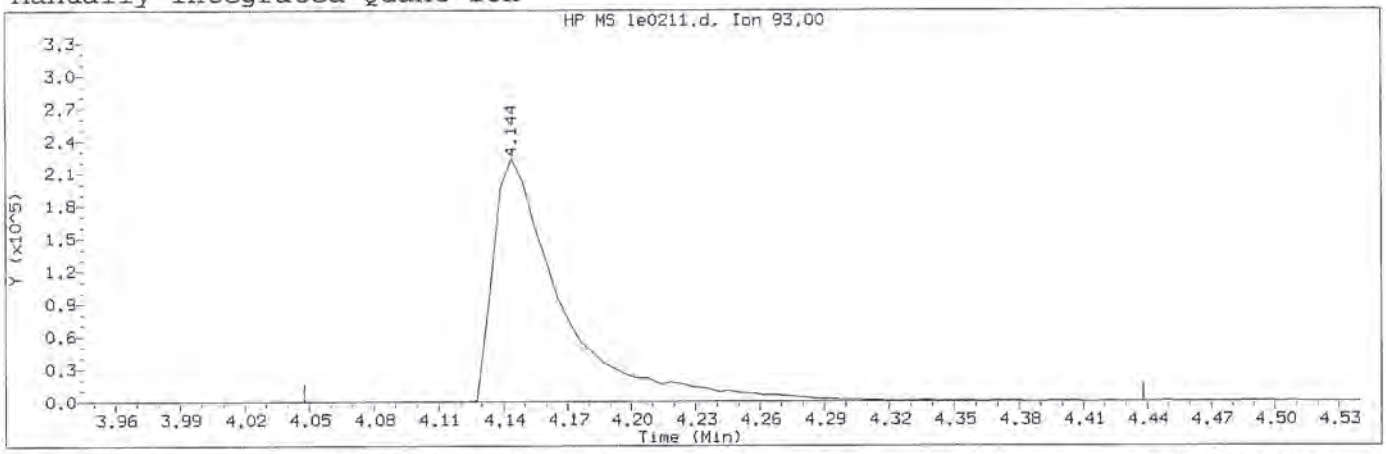
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 422		
Retention Time (minutes)	: 4.144		
Quant Ion	: 93.00		
Area (flag)	: 500458M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 403	Integration stop scan:	476
Y at integration start	: 0	Y at integration end:	0

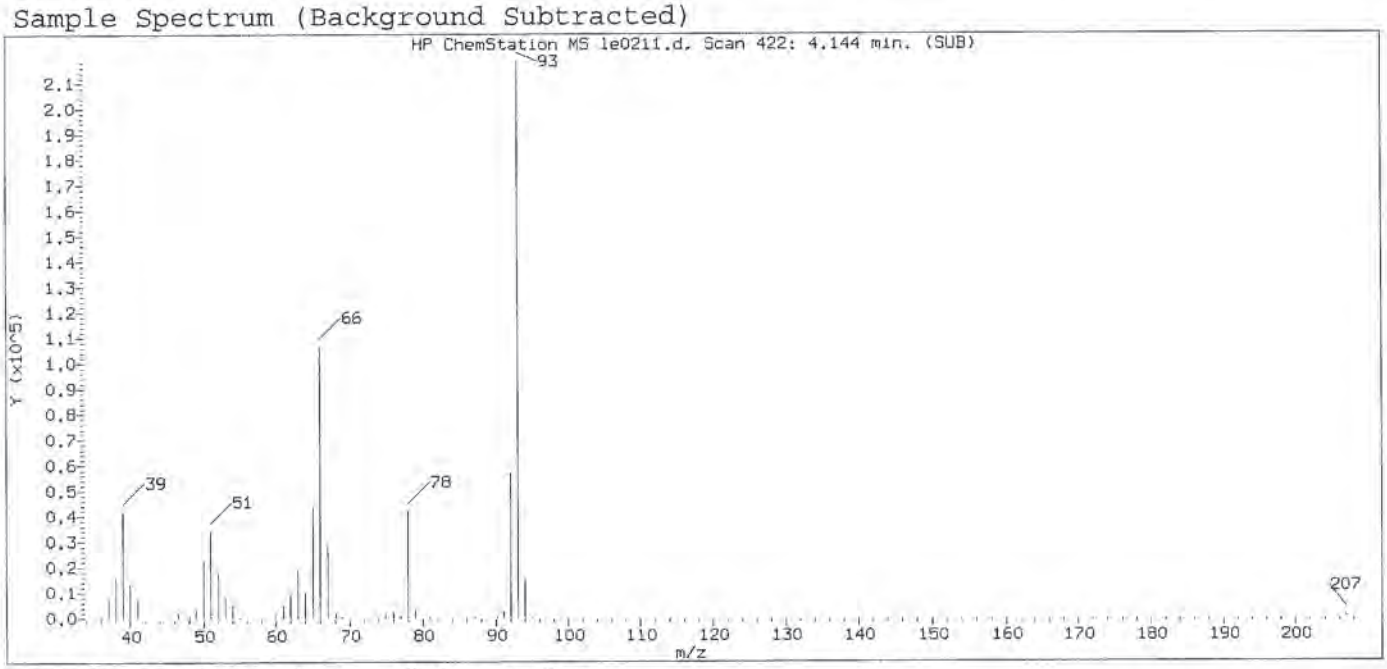
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 signature user ID: hbz01996

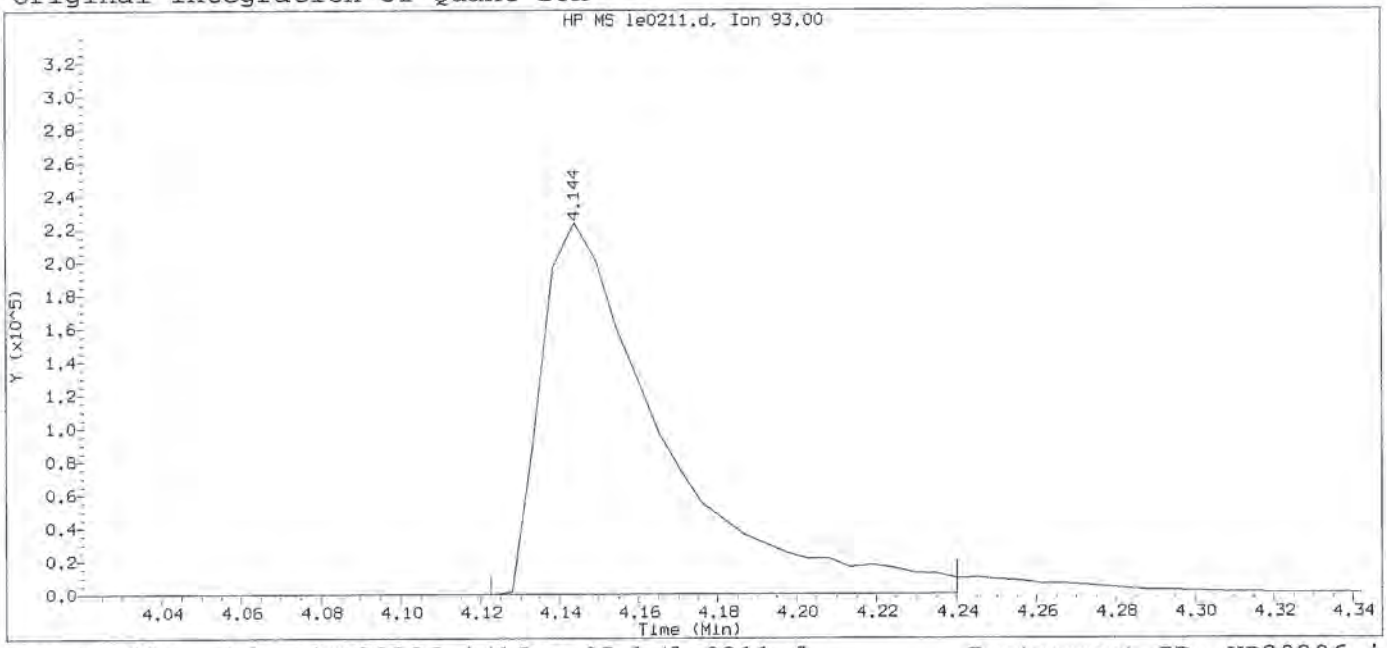
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:23
Date, time and analyst ID of latest file update: 05-May-2016 19:23 kmb02125

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 422		
Retention Time (minutes)	: 4.144		
Quant Ion	: 93.00		
Area	: 477367		
On-column Amount (ng/ul)	: 7.2146		
Integration start scan	: 417	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

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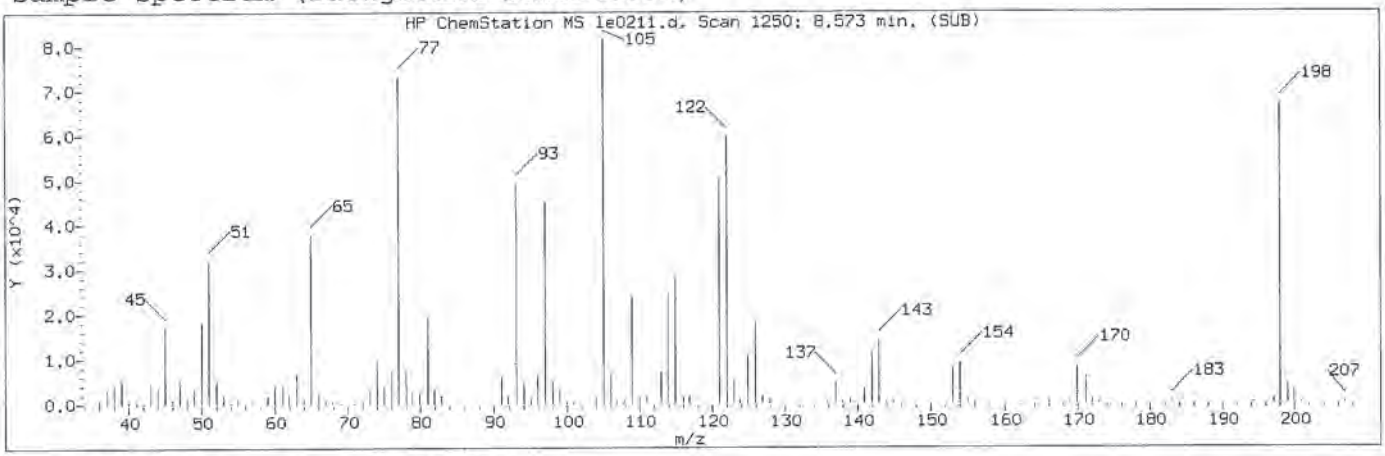
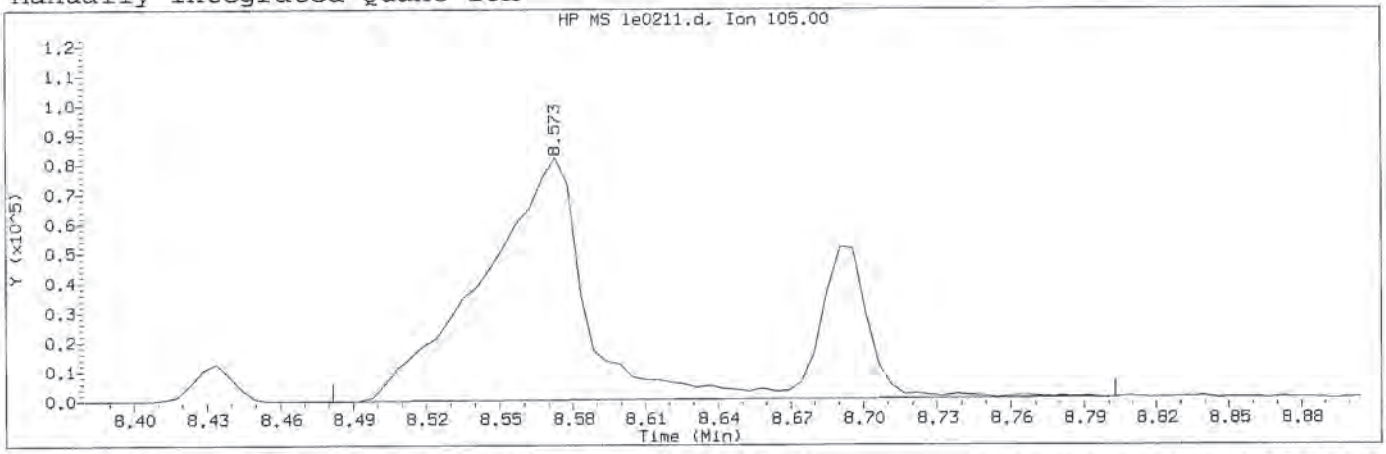
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1250		
Retention Time (minutes)	: 8.573		
Quant Ion	: 105.00		
Area (flag)	: 313702M		
On-Column Amount (ng/ul)	: 10.0000		
Integration start scan	: 1232	Integration stop scan:	1292
Y at integration start	: 0	Y at integration end:	894

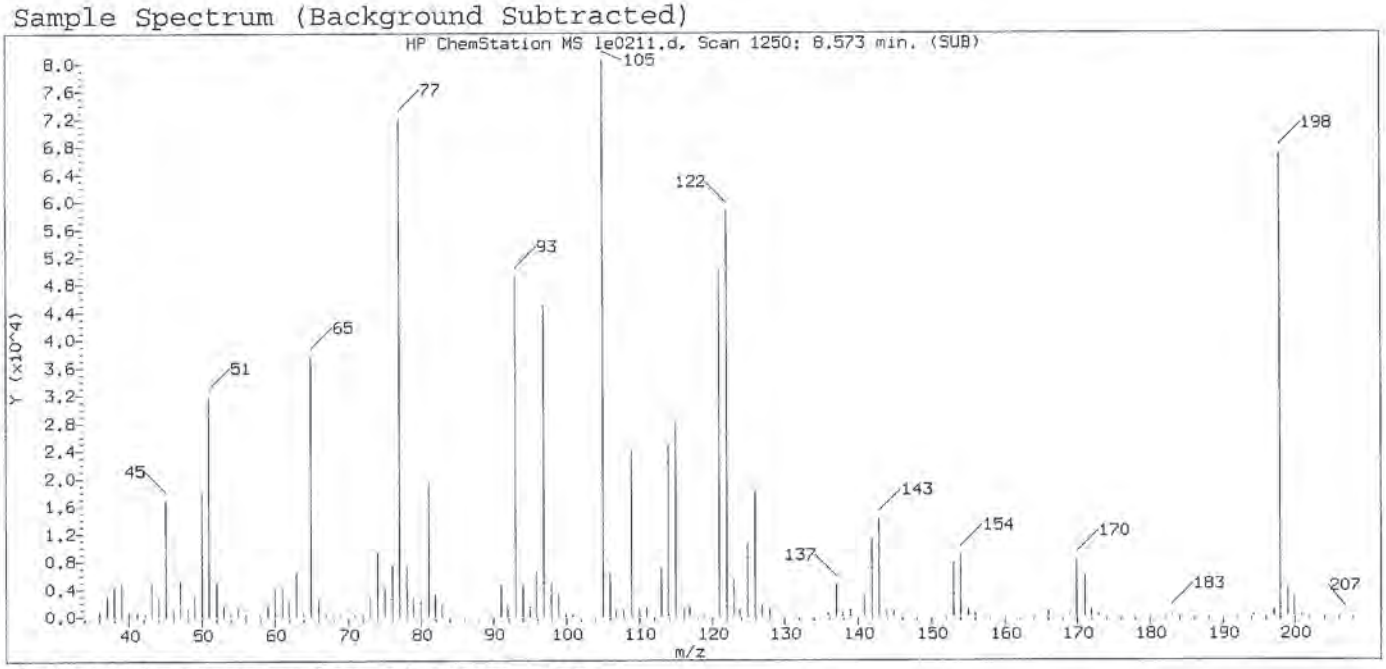
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:22:
Target 3.0 esignature user ID: hbz01996

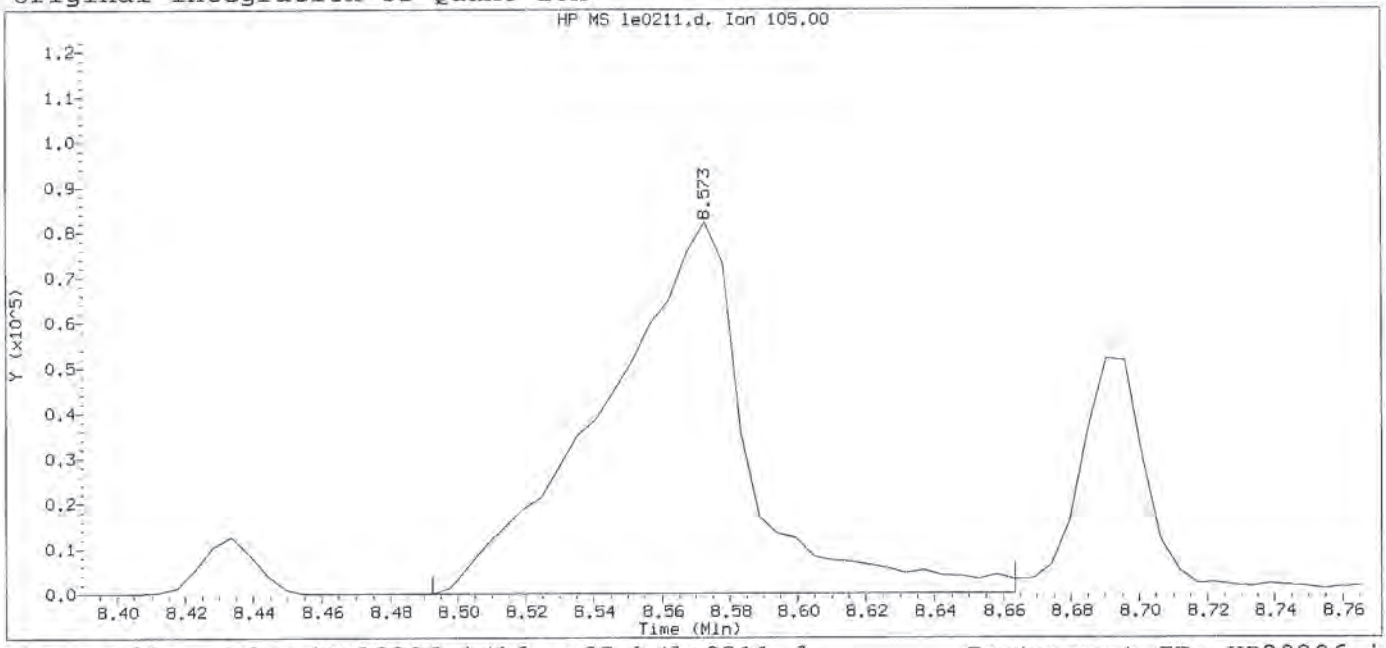
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



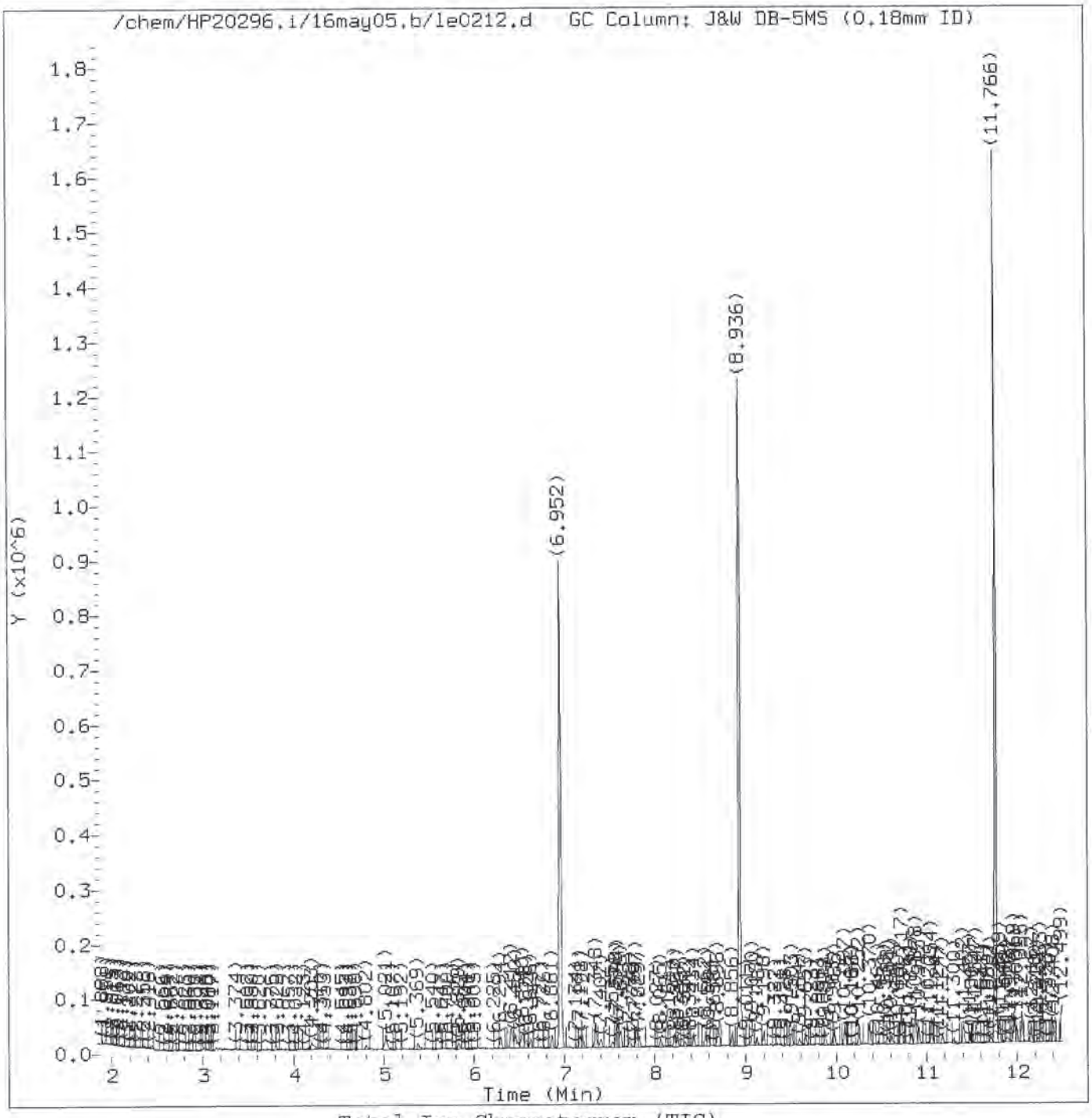
Data File: /chem/HP20296.i/16may05.b/le0211.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 18:43 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:23
Date, time and analyst ID of latest file update: 05-May-2016 19:23 kmb02125

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1250		
Retention Time (minutes)	: 8.573		
Quant Ion	: 105.00		
Area	: 245662		
On-column Amount (ng/ul)	: 10.4802		
Integration start scan	: 1234	Integration stop scan:	1266
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0212.d
Injection date and time: 05-MAY-2016 19:28
Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15
Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125
Lab Sample ID: RVSTD0816

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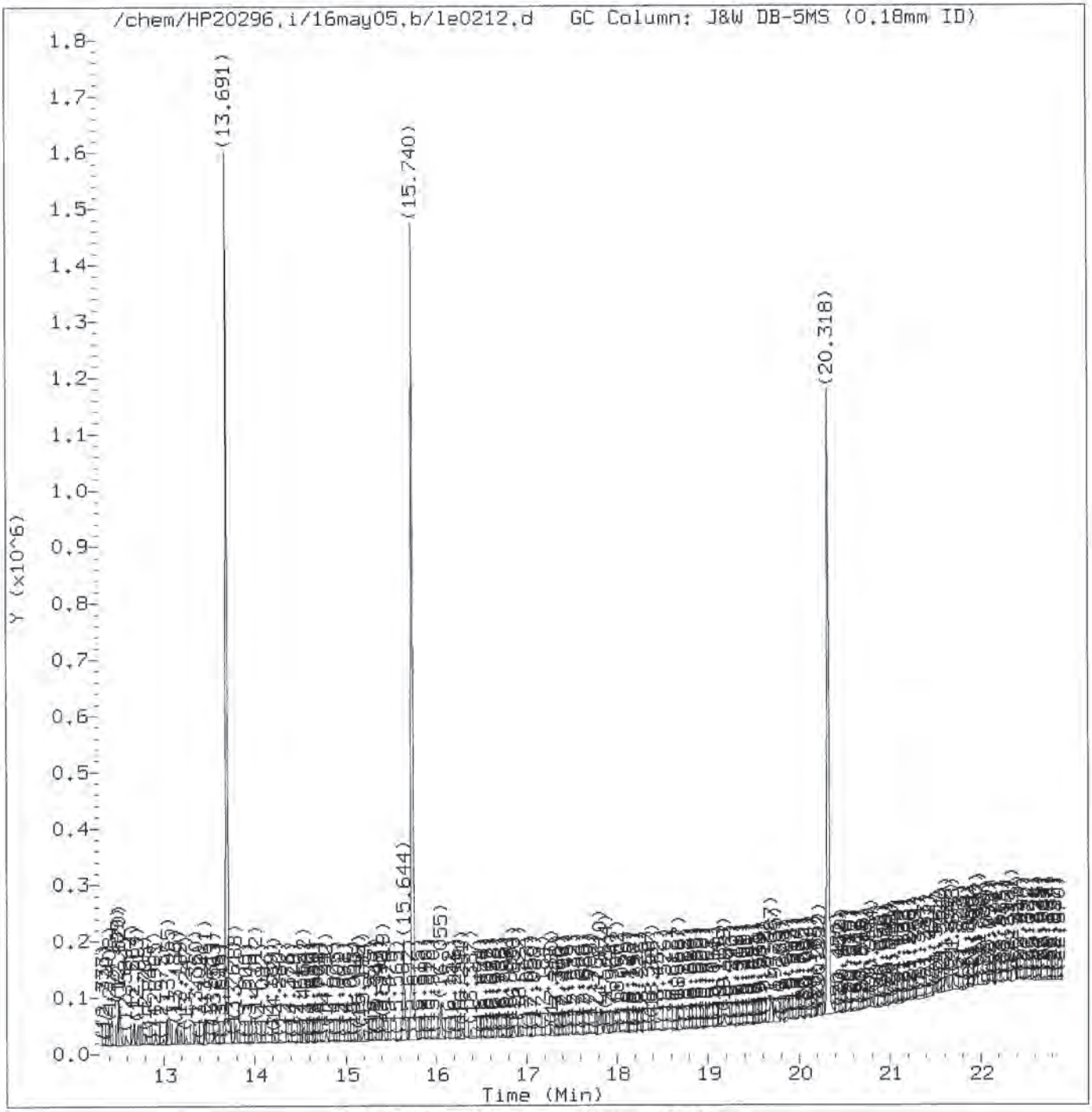
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.432	88	3518M	0.144
4) N-Nitrosodimethylamine	(1)	3.010	74	3502	0.093
5) Pyridine	(1)	3.144	79	10397M	0.162
7) 2-Picoline	(1)	4.203	93	8338M	0.127
8) N-Nitrosomethylethylamine	(1)	4.374	88	2592M	0.099
9) Methyl methanesulfonate	(1)	4.802	80	3634	0.117
11)$2-Fluorophenol	(1)	5.021	112	11138M	0.220
13) N-Nitrosodiethylamine	(1)	5.369	102	3417	0.136
42) Total Cresols	(1)			11756	0.227
15) Ethyl methanesulfonate	(1)	5.834	109	3395	0.133
16) Benzaldehyde	(1)	6.294	77	6956	0.131
17)$Phenol-d6	(1)	6.412	99	16045	0.239
18) Phenol	(1)	6.428	94	9053	0.112
19) Aniline	(1)	6.460	93	11201	0.118
20) a-methylstyrene	(1)	6.546	118	5972	0.115
22) bis(2-Chloroethyl)ether	(1)	6.578	93	6512	0.113
23) 2-Chlorophenol	(1)	6.620	128	5849	0.126
24) 1,3-Dichlorobenzene	(1)	6.861	146	6398	0.122
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	162296	5.000
26) 1,4-Dichlorobenzene	(1)	6.973	146	6523	0.122
27) Benzyl alcohol	(1)	7.177	108	3471	0.099
28) 1,2-Dichlorobenzene	(1)	7.198	146	5813	0.118
30) Indene	(1)	7.343	115	10468	0.116
31) 2-Methylphenol	(1)	7.348	108	5395	0.108
97) Isosafrole	(3)			4094	0.107
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	9724	0.131
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	9724	0.131
35) N-Nitrosopyrrolidine	(1)	7.535	100	2967	0.112
36) Acetophenone	(1)	7.578	105	10118	0.126
37) 4-Methylphenol	(1)	7.594	108	6361	0.119
38) N-Nitroso-di-n-propylamine	(1)	7.594	70	5500	0.122
39) N-Nitrosomorpholine	(1)	7.605	56	4204	0.122
40) o-Toluidine	(1)	7.626	106	10451	0.115
43) Hexachloroethane	(1)	7.728	117	2734	0.118
44)$Nitrobenzene-d5	(2)	7.797	82	15485	0.238
45) Nitrobenzene	(2)	7.829	77	8183	0.122
120) 2,4_2,6-Dinitrotoluenes	(3)			3496	0.149
48) N-Nitrosopiperidine	(2)	8.075	114	2657	0.107
50) Isophorone	(2)	8.220	82	12615	0.110
51) 2-Nitrophenol	(2)	8.337	139	2134	0.100

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.434	107	6764	0.121
57) O,O,O-Triethylphosphorothioate	(2)	8.562	198	2916	0.114
55) bis(2-Chloroethoxy)methane	(2)	8.594	93	7829	0.111
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.690	104	9473	0.114
56) Benzoic acid	(2)	8.696	105	869	0.028
60) 2,4-Dichlorophenol	(2)	8.717	162	3929	0.098
146) Diallate trans/cis	(4)			5082	0.100
62) 1,2,4-Trichlorobenzene	(2)	8.856	180	5605	0.123
65)*Naphthalene-d8	(2)	8.936	136	633837	5.000
66) Naphthalene	(2)	8.968	128	17960	0.127
67) 4-Chloroaniline	(2)	9.070	127	7303	0.126
68) 2,6-Dichlorophenol	(2)	9.075	162	3758	0.098
69) Hexachloropropene	(2)	9.118	213	2773	0.098
71) Hexachlorobutadiene	(2)	9.198	225	3431	0.121
75) Quinoline	(2)	9.503	129	10247	0.121
76) Caprolactam	(2)	9.584	113	1204M	0.096
77) N-Nitrosodi-n-butylamine	(2)	9.653	84	4762	0.115
80) 4-Chloro-3-methylphenol	(2)	9.878	107	4975	0.106
82) Safrole	(2)	9.985	162	4443	0.128
83) 2-Methylnaphthalene	(2)	10.097	142	10851	0.122
84) 1-Methylnaphthalene	(2)	10.252	142	10126	0.123
85) Hexachlorocyclopentadiene	(3)	10.370	237	2954	0.114
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	5595	0.120
88) cis-Isosafrole	(3)	10.461	162	679	0.018
90) 2,4,6-Trichlorophenol	(3)	10.568	196	2620	0.094
92) 2,4,5-Trichlorophenol	(3)	10.616	196	3386	0.109
93)$2-Fluorobiphenyl	(3)	10.717	172	25714	0.250
94) trans-Isosafrole	(3)	10.824	162	3415	0.088
95) 1,1'-Biphenyl	(3)	10.873	154	13510	0.123
96) 2-Chloronaphthalene	(3)	10.883	162	10244	0.112
98) 1-Chloronaphthalene	(3)	10.915	162	10193	0.126
100) 2-Nitroaniline	(3)	11.054	138	2288	0.091
99) Diphenyl ether	(3)	11.054	170	7410	0.122
104) 1,4-Naphthoquinone	(3)	11.177	158	2584	0.075
105) 1,4-Dinitrobenzene	(3)	11.306	168	907M	0.078
106) Dimethylphthalate	(3)	11.402	163	11486	0.119
107) 1,3-Dinitrobenzene	(3)	11.413	168	1523	0.114
108) 2,6-Dinitrotoluene	(3)	11.477	165	1445	0.071
109) Acenaphthylene	(3)	11.547	152	13949	0.115
112) 3-Nitroaniline	(3)	11.712	138	1802	0.082

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.766	164	360175	5.000
114) Acenaphthene	(3)	11.814	153	10598	0.121
115) 2,4-Dinitrophenol	(3)	11.889	184	2165M	0.241
116) 4-Nitrophenol	(3)	11.969	109	7184	0.451
117) Pentachlorobenzene	(3)	12.001	250	5301	0.140
118) 2,4-Dinitrotoluene	(3)	12.055	165	2051	0.078
119) Dibenzofuran	(3)	12.055	168	15640	0.128
121) 1-Naphthylamine	(3)	12.162	143	10023	0.115
122) 2,3,4,6-Tetrachlorophenol	(3)	12.242	232	2052	0.087
123) 2-Naphthylamine	(3)	12.263	143	10801	0.128
124) Diethylphthalate	(3)	12.408	149	11418	0.124
126) Fluorene	(3)	12.499	166	10751	0.117
125) Thionazin	(3)	12.504	107	1984	0.103
129) 4-Nitroaniline	(3)	12.520	138	1975	0.088
128) 5-Nitro-o-toluidine	(3)	12.520	152	1673	0.067
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	6365	0.132
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	2582	0.210
132) NDPA as diphenylamine	(4)	12.664	169	9380	0.120
131) N-Nitrosodiphenylamine	(4)	12.664	169	9380	0.120
134) 1,2-Diphenylhydrazine	(4)	12.713	77	14416	0.112
135)$2,4,6-Tribromophenol	(3)	12.798	330	1002	0.088
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	2272	0.115
139) 1,3,5-Trinitrobenzene	(4)	12.991	213	664M	0.081
140) Diallate (peak 1)	(4)	13.050	86	4230	0.083
141) Phorate	(4)	13.055	75	6926	0.094
142) Phenacetin	(4)	13.060	108	5094	0.091
143) 4-Bromophenyl-phenylether	(4)	13.135	248	3051	0.120
144) Diallate (peak 2)	(4)	13.162	86	852M	0.017
145) Hexachlorobenzene	(4)	13.189	284	3387	0.128
147) Dimethoate	(4)	13.253	87	4337	0.095
148) Atrazine	(4)	13.360	200	3202	0.121
150) 4-Aminobiphenyl	(4)	13.461	169	8470	0.108
151) Pentachloronitrobenzene	(4)	13.467	237	774M	0.060
149) Pentachlorophenol	(4)	13.472	266	193M	0.012
152) Pronamide	(4)	13.558	173	3818	0.086
153)*Phenanthrene-d10	(4)	13.691	188	663552	5.000
155) Phenanthrene	(4)	13.723	178	17614	0.125
157) Anthracene	(4)	13.788	178	16553	0.121
154) Dinoseb	(4)	13.788	211	223M	0.012
163) Carbazole	(4)	14.012	167	13890	0.106

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on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.221	109	2262	0.070
165) Di-n-butylphthalate	(4)	14.542	149	14773	0.094
167) Parathion	(4)	14.777	109	1274	0.062
168) 4-Nitroquinoline-1-oxide	(4)	14.793	190	656M	0.062
222) Total PAHs	(6)			259218	2.115
169) Octachlorostyrene	(4)	15.141	308	522M	0.053
171) Isodrin	(4)	15.194	193	1817	0.107
173) Fluoranthene	(4)	15.414	202	17546	0.117
174) Benzidine	(5)	15.644	184	85506	0.829
175)*Pyrene-d10	(5)	15.740	212	770124	5.000
177) Pyrene	(5)	15.767	202	22317	0.130
179)$Terphenyl-d14	(5)	16.055	244	24114	0.229
182) p-Dimethylaminoazobenzene	(5)	16.296	225	1696	0.065
185) Chlorobenzilate	(5)	16.387	139	4131	0.088
187) 3,3'-Dimethylbenzidine	(5)	16.858	212	10157	0.105
188) Butylbenzylphthalate	(5)	16.922	149	5820	0.084
191) 2-Acetylaminofluorene	(5)	17.275	181	3580	0.066
193) 3,3'-Dichlorobenzidine	(5)	17.794	252	4354	0.081
195) Benzo(a)anthracene	(5)	17.815	228	15088	0.110
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.820	231	2518	0.084
196) Chrysene	(5)	17.874	228	15253	0.115
199) bis(2-Ethylhexyl)phthalate	(5)	18.008	149	7008	0.071
203) 6-Methylchrysene	(5)	18.692	242	9720	0.101
205) Di-n-octylphthalate	(6)	19.179	149	10467	0.065
206) Benzo(b)fluoranthene	(6)	19.687	252	14029	0.112
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692	256	5015	0.084
208) Benzo(k)fluoranthene	(6)	19.735	252	14371	0.115
211) Benzo(a)pyrene	(6)	20.227	252	12451	0.110
213)*Perylene-d12	(6)	20.318	264	532869	5.000
215) 3-Methylcholanthrene	(6)	20.800	268	5009	0.097
217) Dibenz(a,h)acridine	(6)	21.613	279	10039	0.099
218) Dibenz(a,j)acridine	(6)	21.693	279	9888	0.095
219) Indeno(1,2,3-cd)pyrene	(6)	21.950	276	14687	0.111
220) Dibenz(a,h)anthracene	(6)	21.998	278	11865	0.109
221) Benzo(g,h,i)perylene	(6)	22.361	276	13209	0.115

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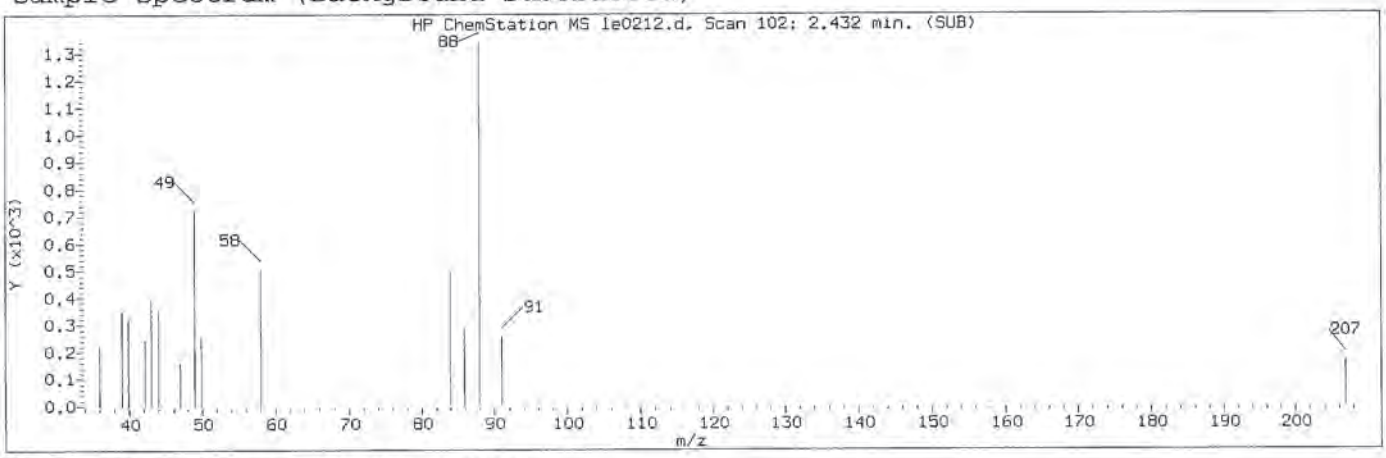
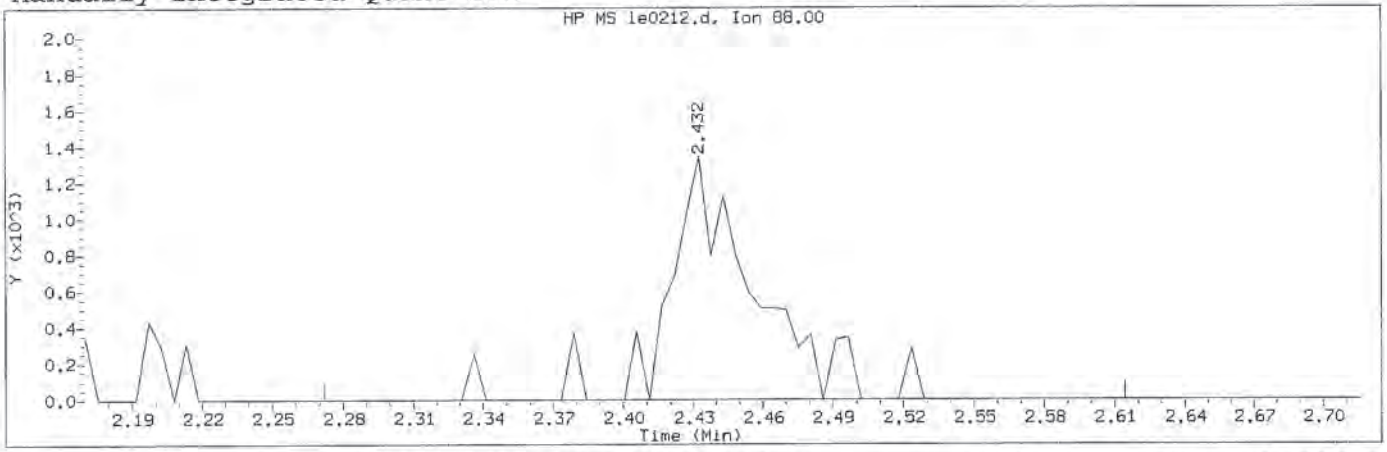
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 102		
Retention Time (minutes)	: 2.432		
Quant Ion	: 88.00		
Area (flag)	: 3518M		
On-Column Amount (ng/ul)	: 0.1439		
Integration start scan	: 71	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	0

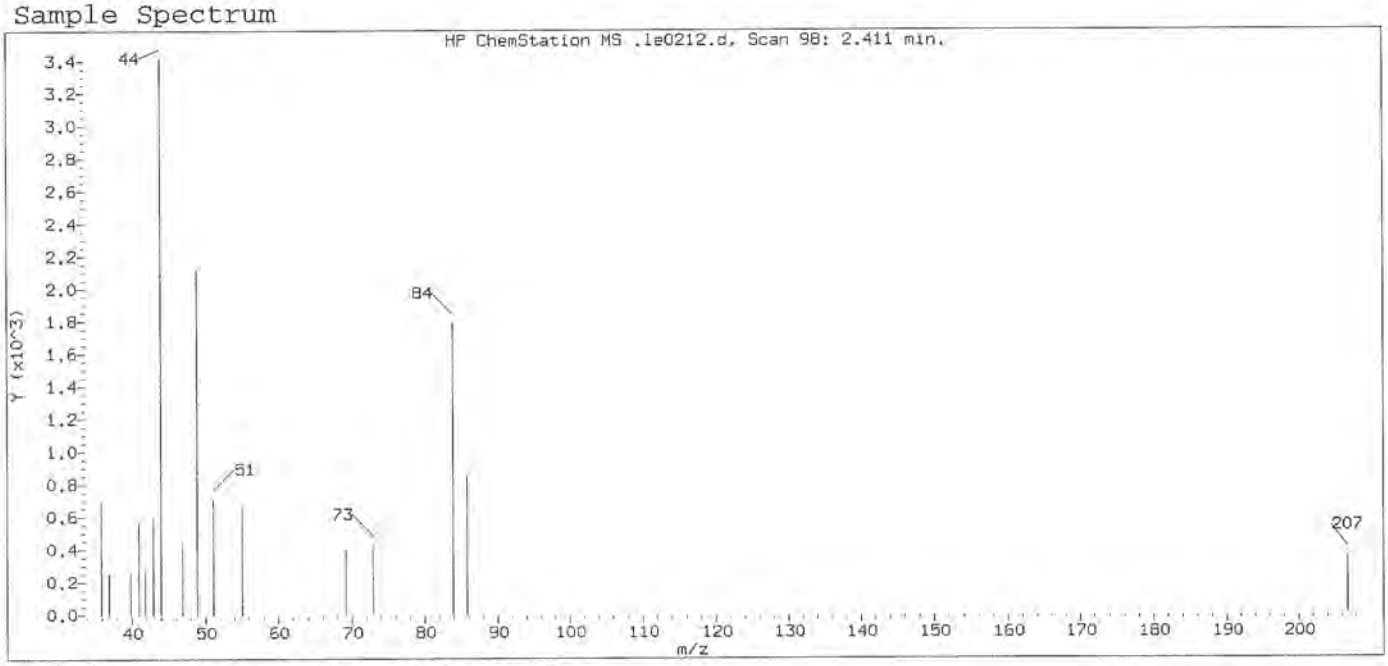
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32. Target 3.5 esignature user ID: hbz01996

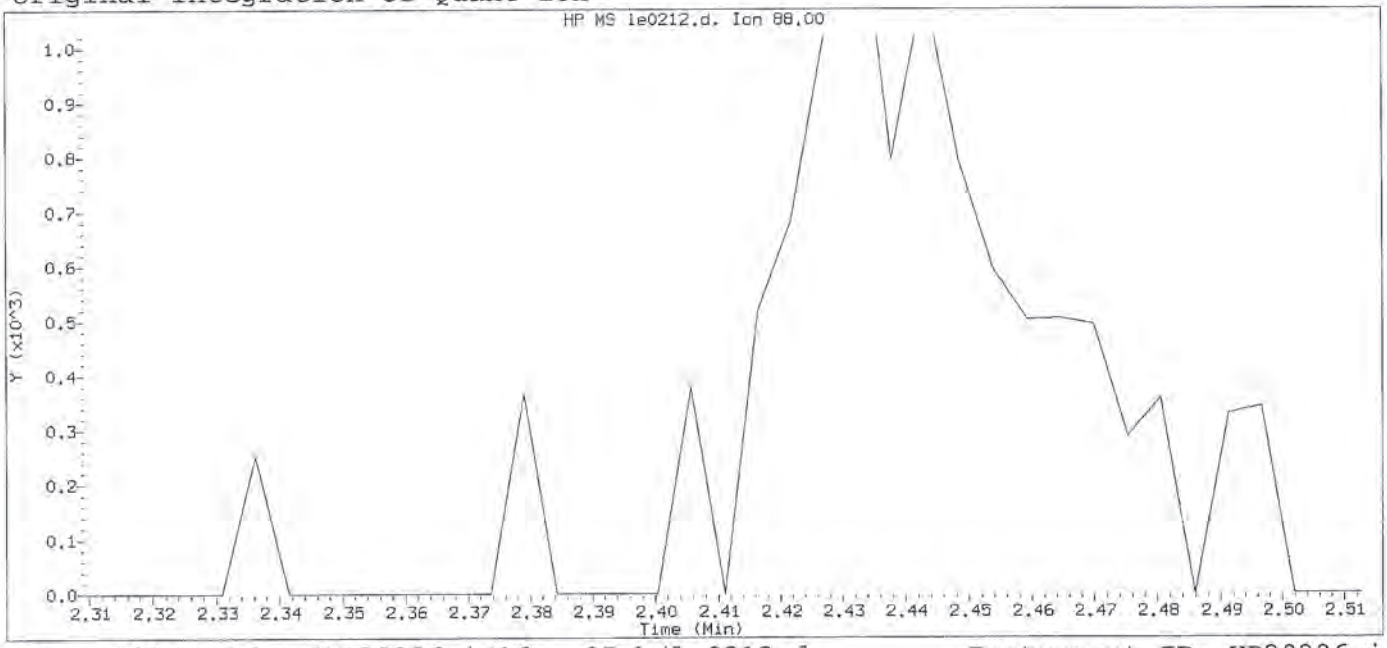
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.411
Quant Ion : 88.00

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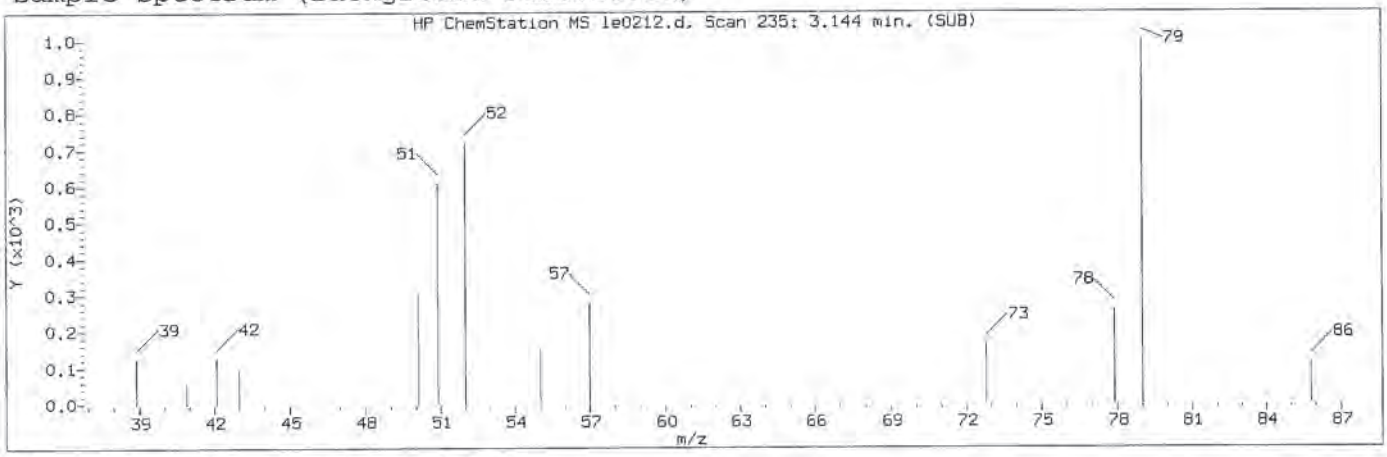
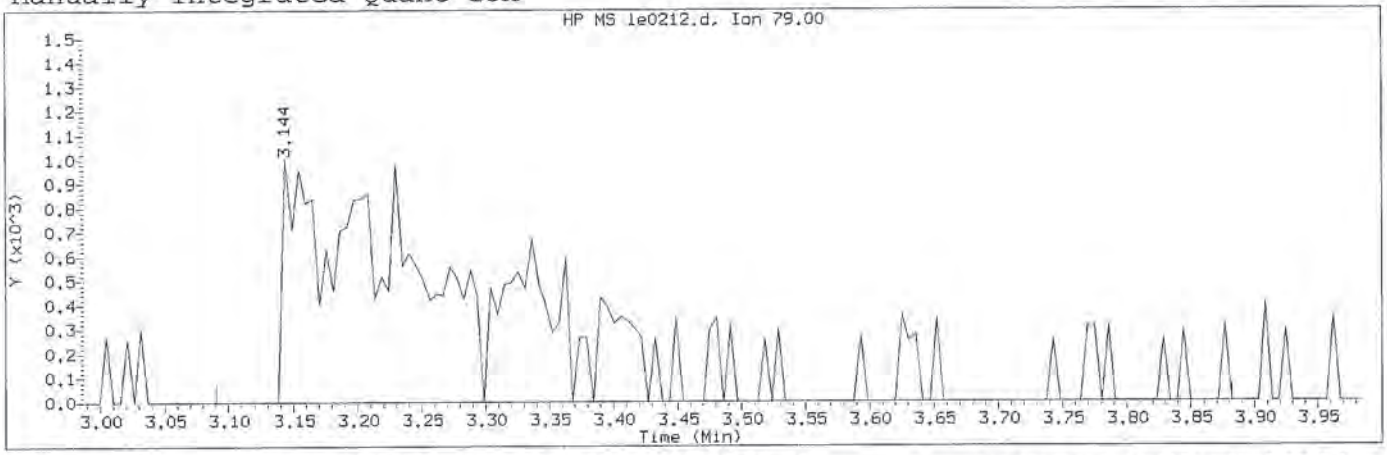
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 235		
Retention Time (minutes)	: 3.144		
Quant Ion	: 79.00		
Area (flag)	: 10397M		
On-Column Amount (ng/ul)	: 0.1622		
Integration start scan	: 224	Integration stop scan:	372
Y at integration start	: 0	Y at integration end:	0

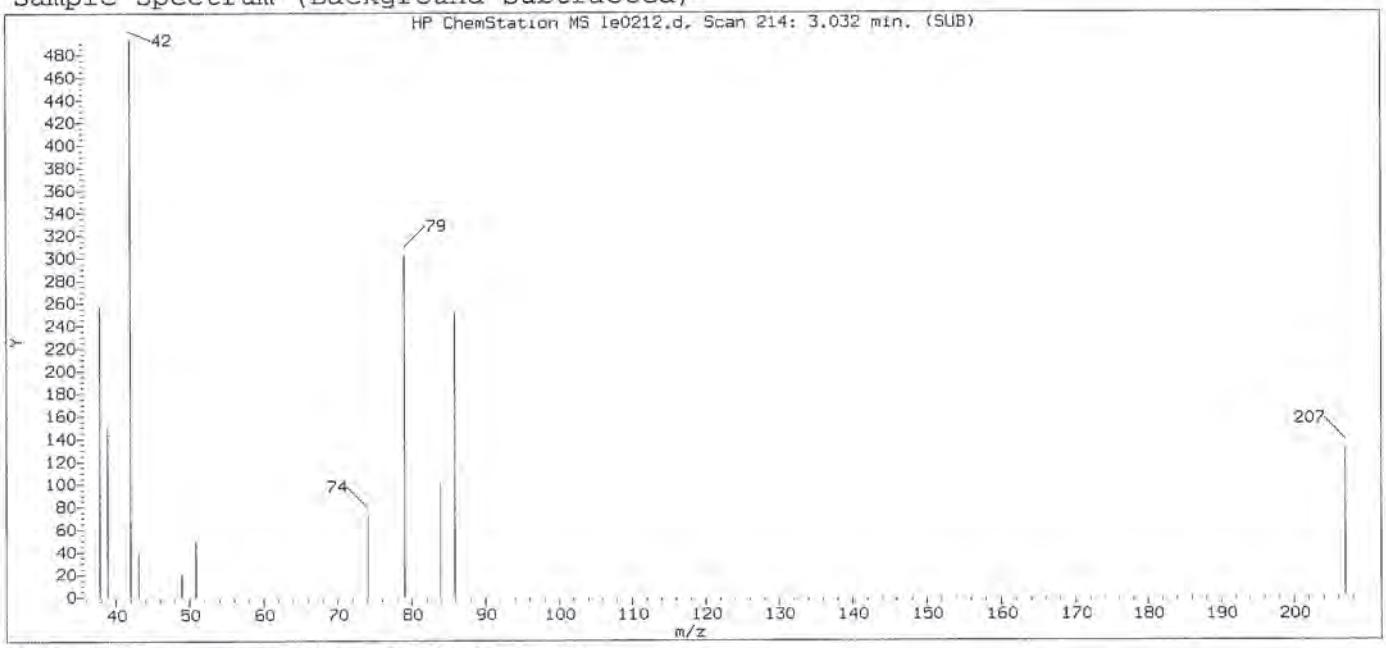
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 signature user ID: hbz01996

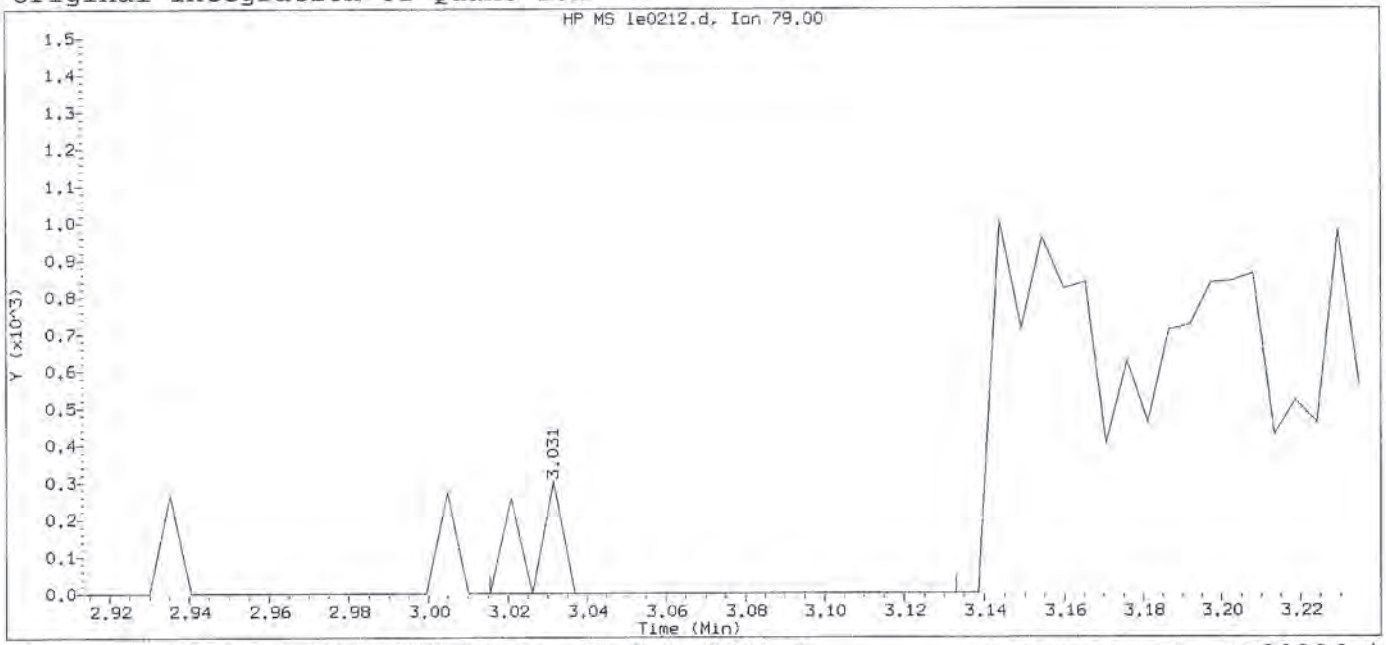
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

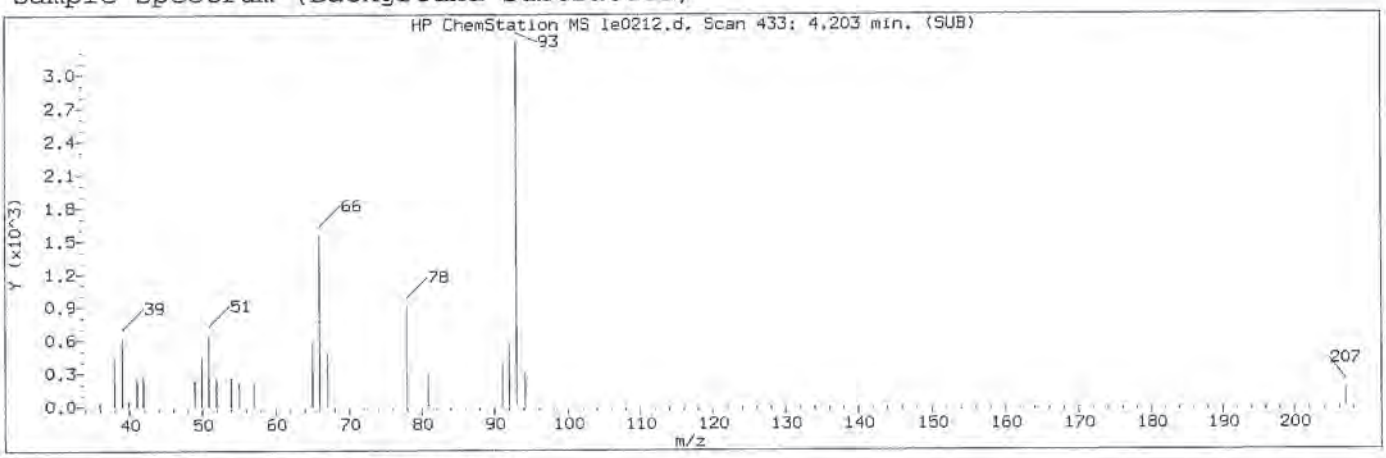
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

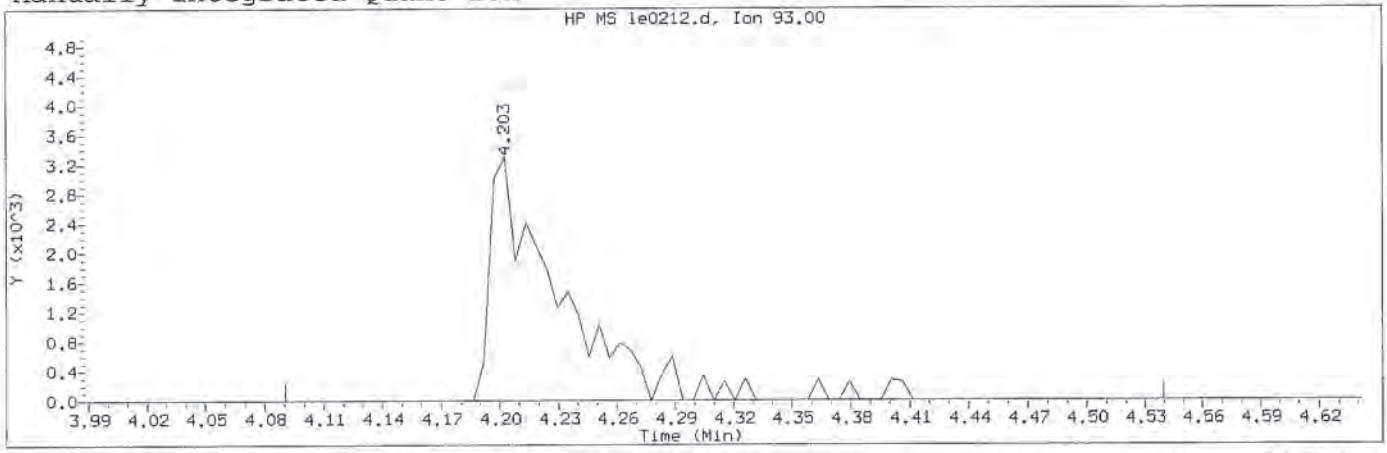
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 214		
Retention Time (minutes)	: 3.031		
Quant Ion	: 79.00		
Area	: 180		
On-column Amount (ng/ul)	: 0.0030		
Integration start scan	: 210	Integration stop scan:	232
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 433		
Retention Time (minutes)	: 4.203		
Quant Ion	: 93.00		
Area (flag)	: 8338M		
On-Column Amount (ng/ul)	: 0.1269		
Integration start scan	: 411	Integration stop scan:	495
Y at integration start	: 0	Y at integration end:	0

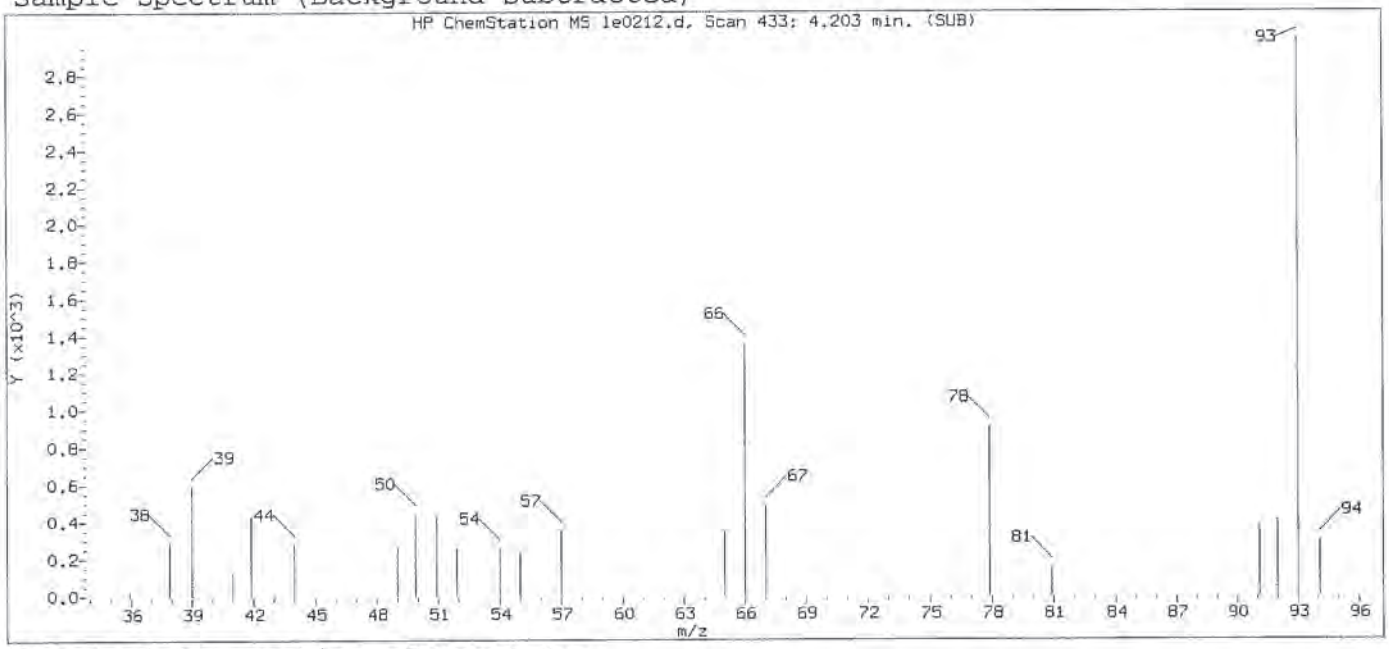
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 signature user ID: hbz01996

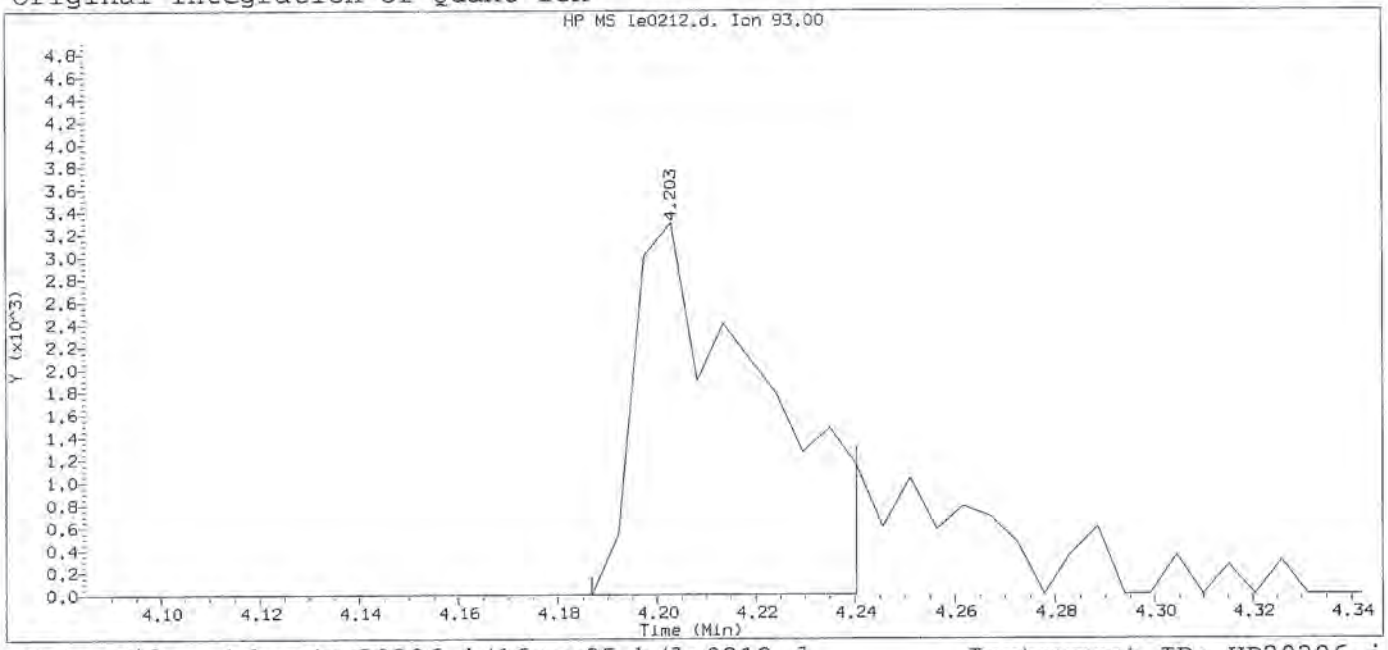
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

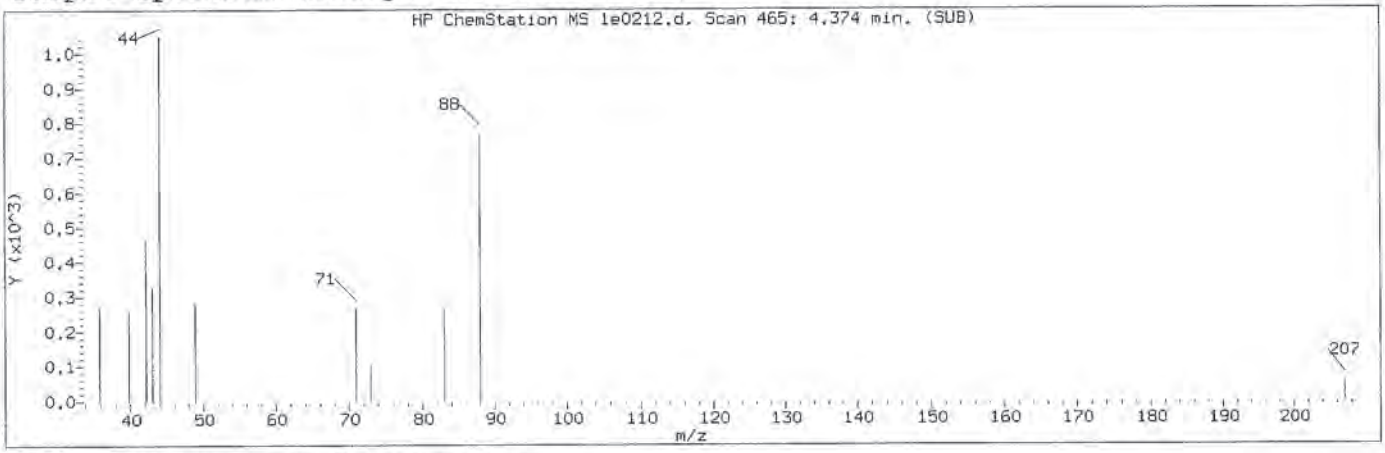
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

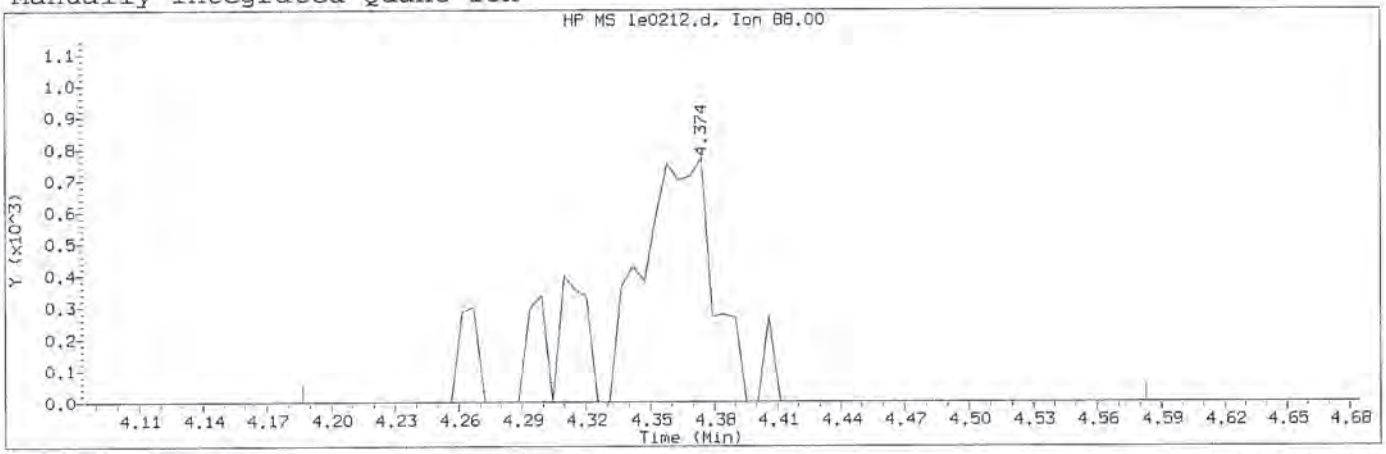
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 433		
Retention Time (minutes)	: 4.203		
Quant Ion	: 93.00		
Area	: 5880		
On-column Amount (ng/ul)	: 0.0903		
Integration start scan	: 429	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 465		
Retention Time (minutes)	: 4.374		
Quant Ion	: 88.00		
Area (flag)	: 2592M		
On-Column Amount (ng/ul)	: 0.0993		
Integration start scan	: 429	Integration stop scan:	503
Y at integration start	: 0	Y at integration end:	0

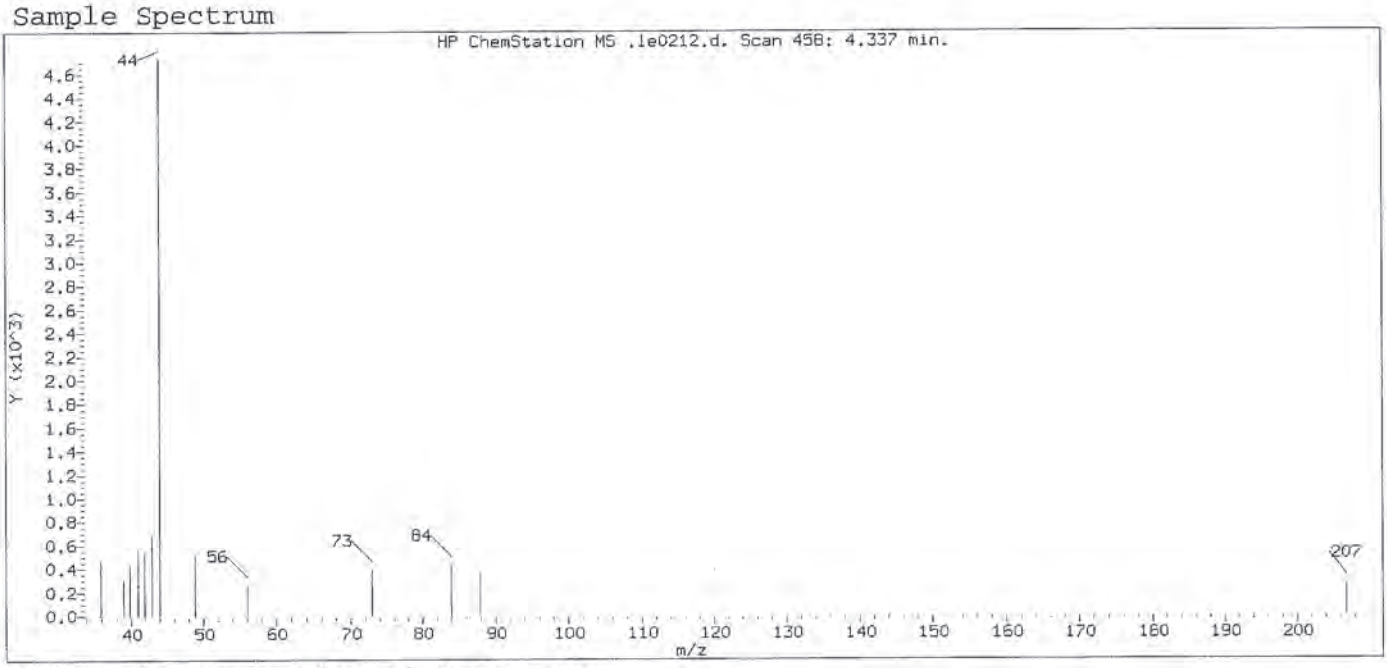
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.3 signature user ID: hbz01996

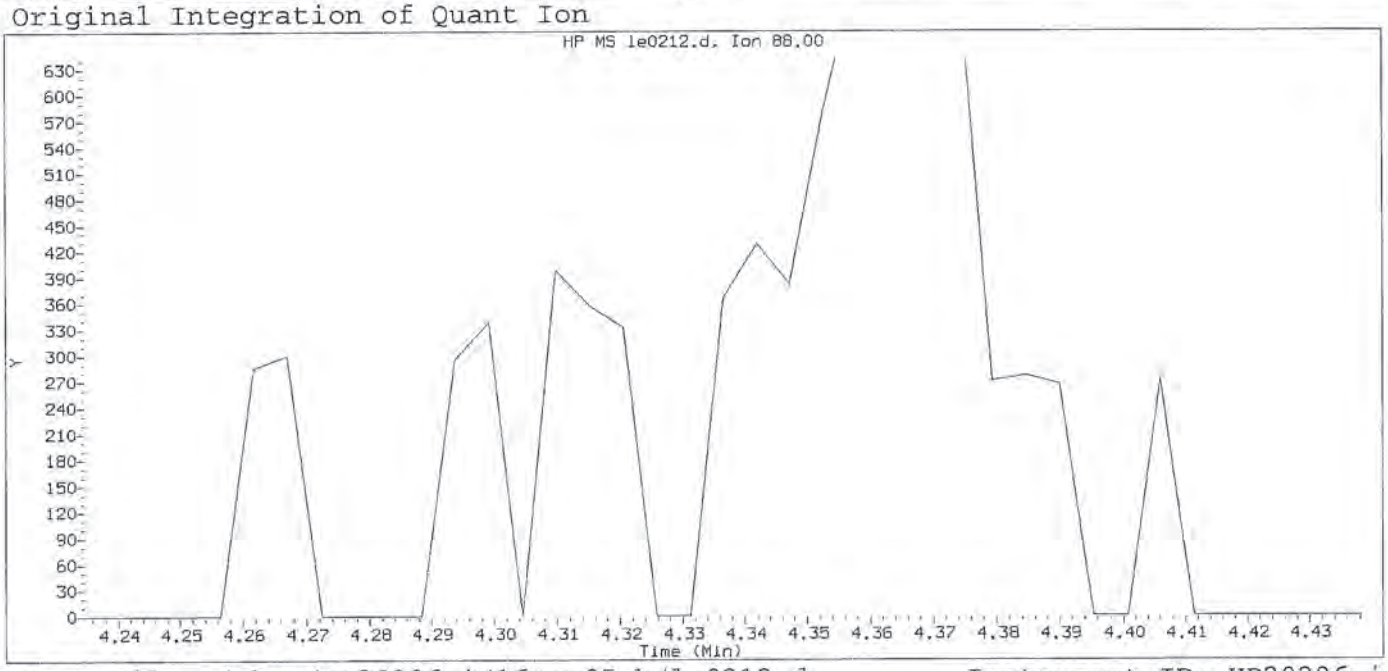
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

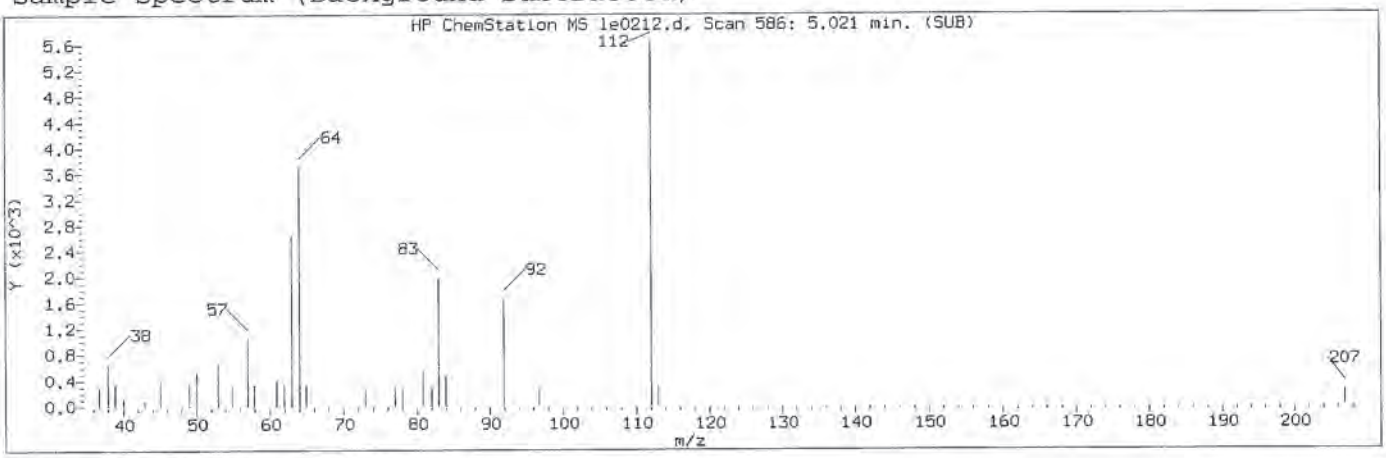
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

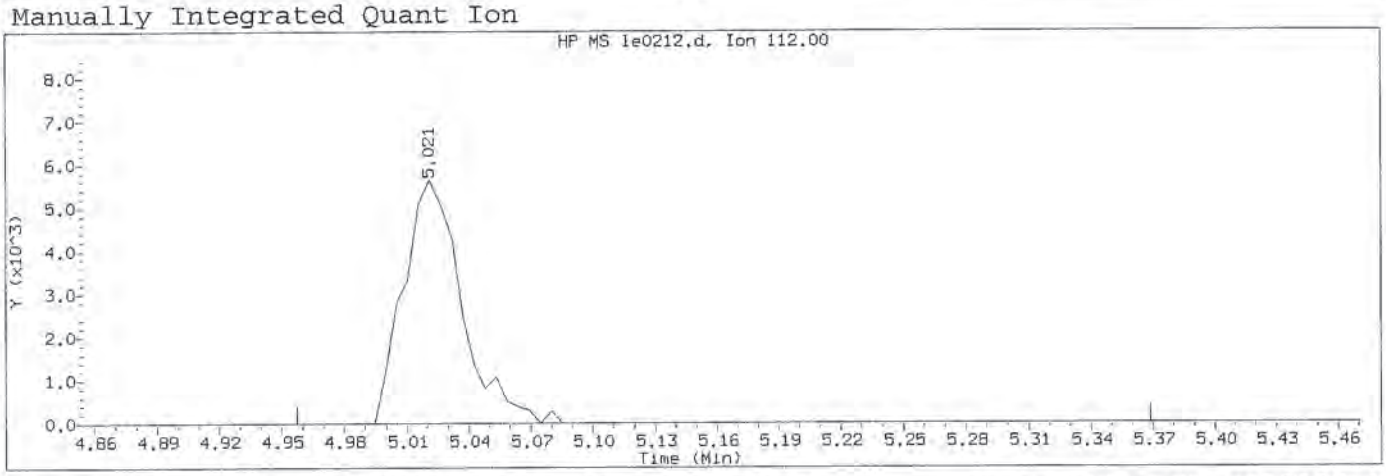
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.336
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 11		
Compound Name	: 2-Fluorophenol		
Scan Number	: 586		
Retention Time (minutes)	: 5.021		
Quant Ion	: 112.00		
Area (flag)	: 11138M		
On-Column Amount (ng/ul)	: 0.2199		
Integration start scan	: 573	Integration stop scan:	650
Y at integration start	: 0	Y at integration end:	0

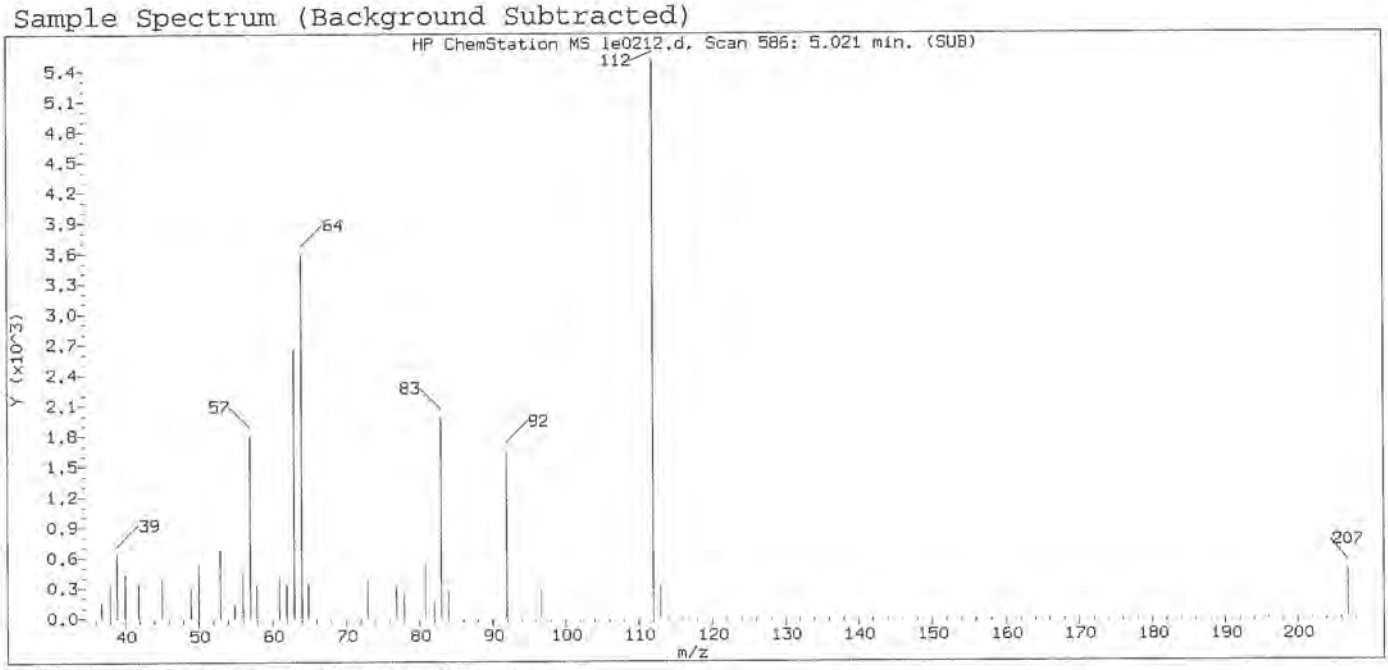
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 signature user ID: hbz01996

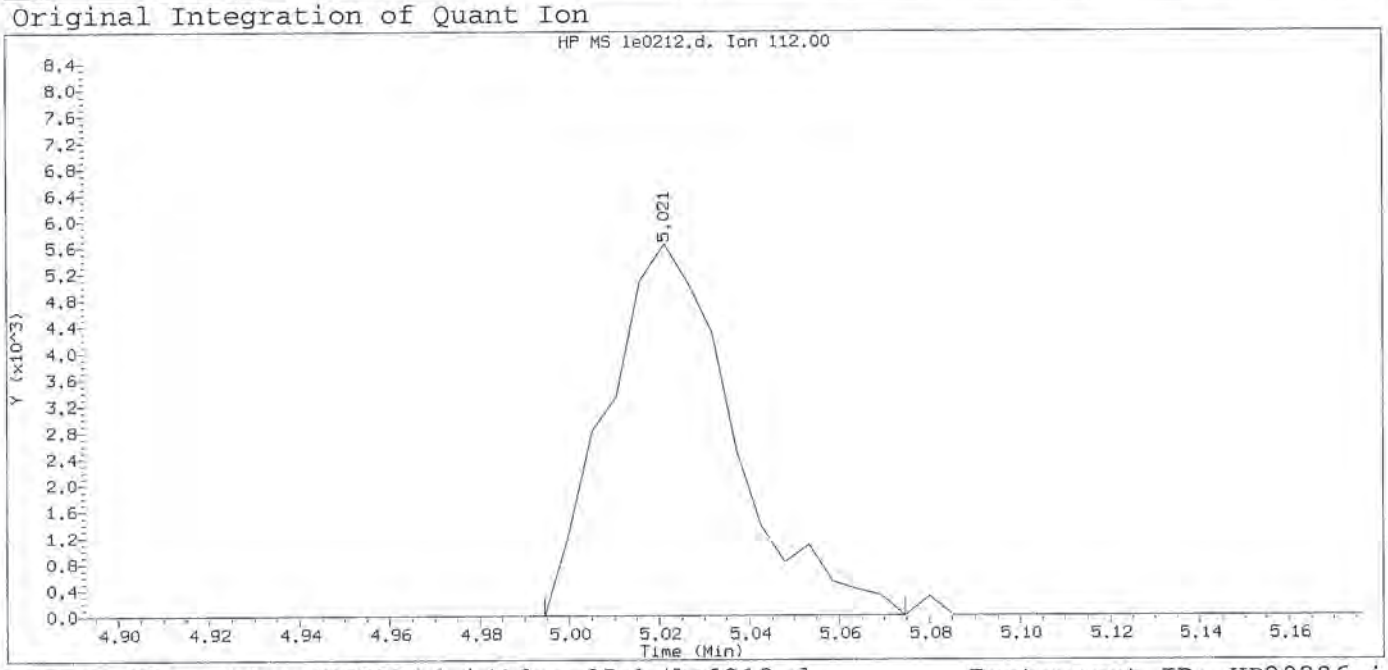
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

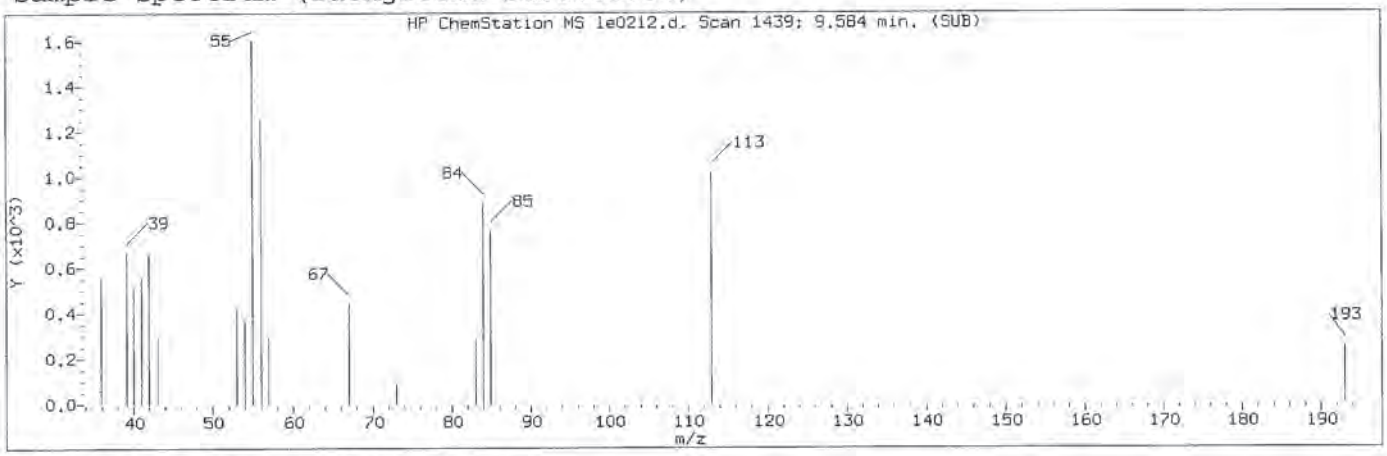
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

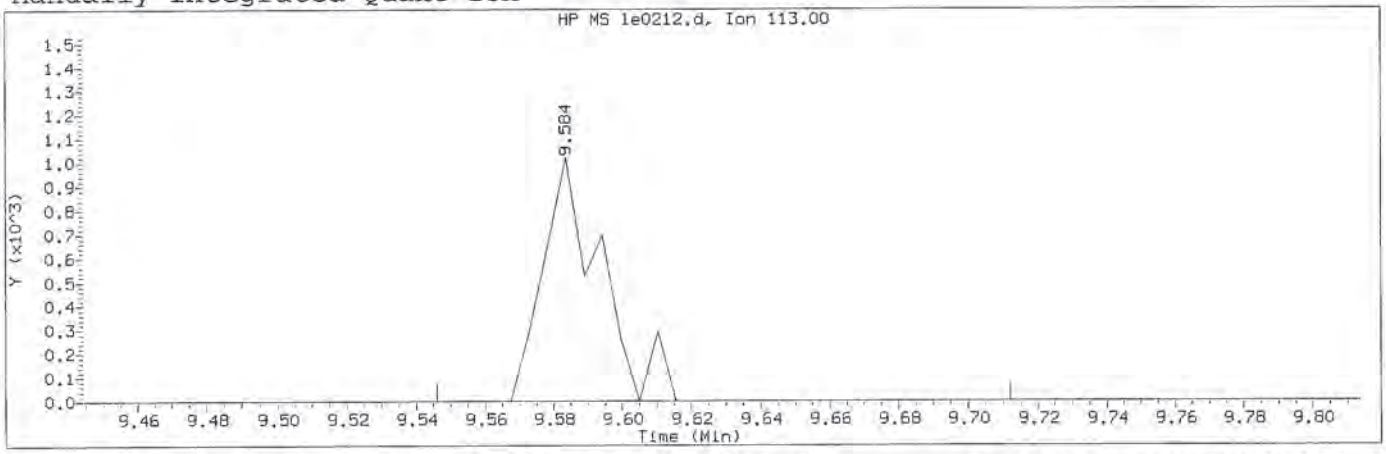
Compound Number	: 11		
Compound Name	: 2-Fluorophenol		
Scan Number	: 586		
Retention Time (minutes)	: 5.021		
Quant Ion	: 112.00		
Area	: 11045		
On-column Amount (ng/ul)	: 0.2217		
Integration start scan	: 580	Integration stop scan:	595
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1439		
Retention Time (minutes)	: 9.584		
Quant Ion	: 113.00		
Area (flag)	: 1204M		
On-Column Amount (ng/ul)	: 0.0964		
Integration start scan	: 1431	Integration stop scan:	1462
Y at integration start	: 0	Y at integration end:	0

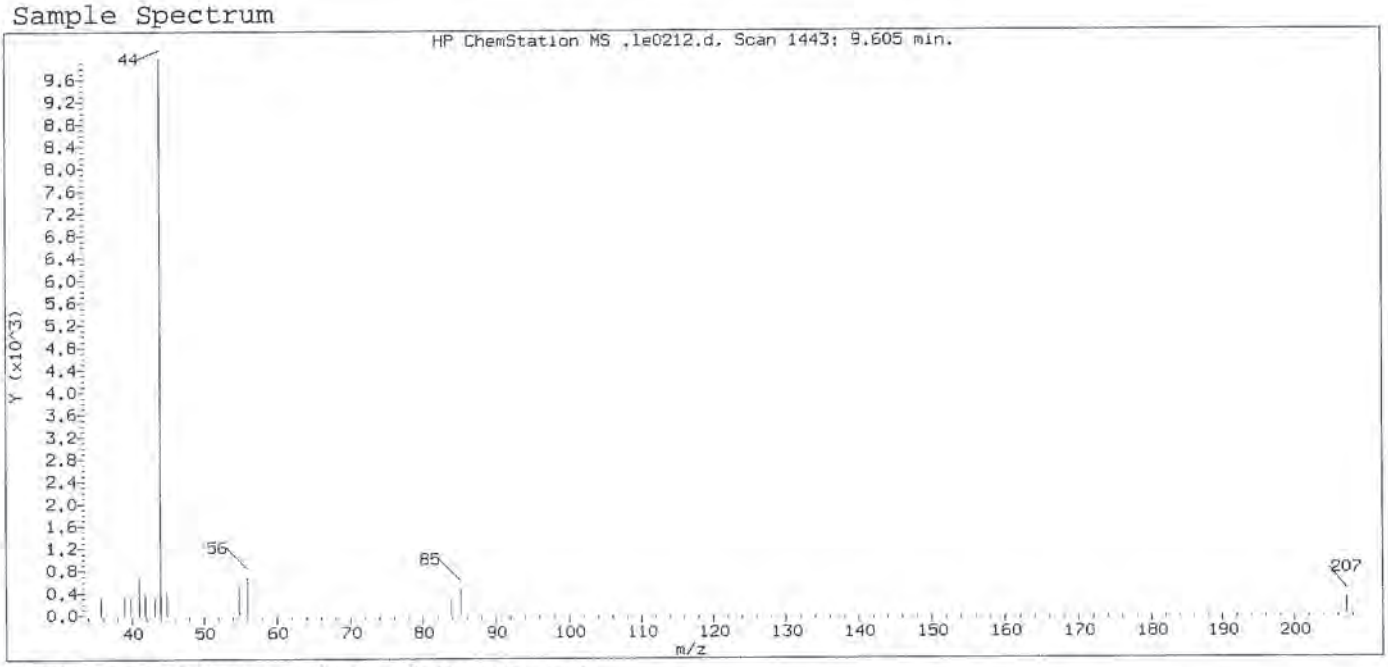
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 signature user ID: hbz01996

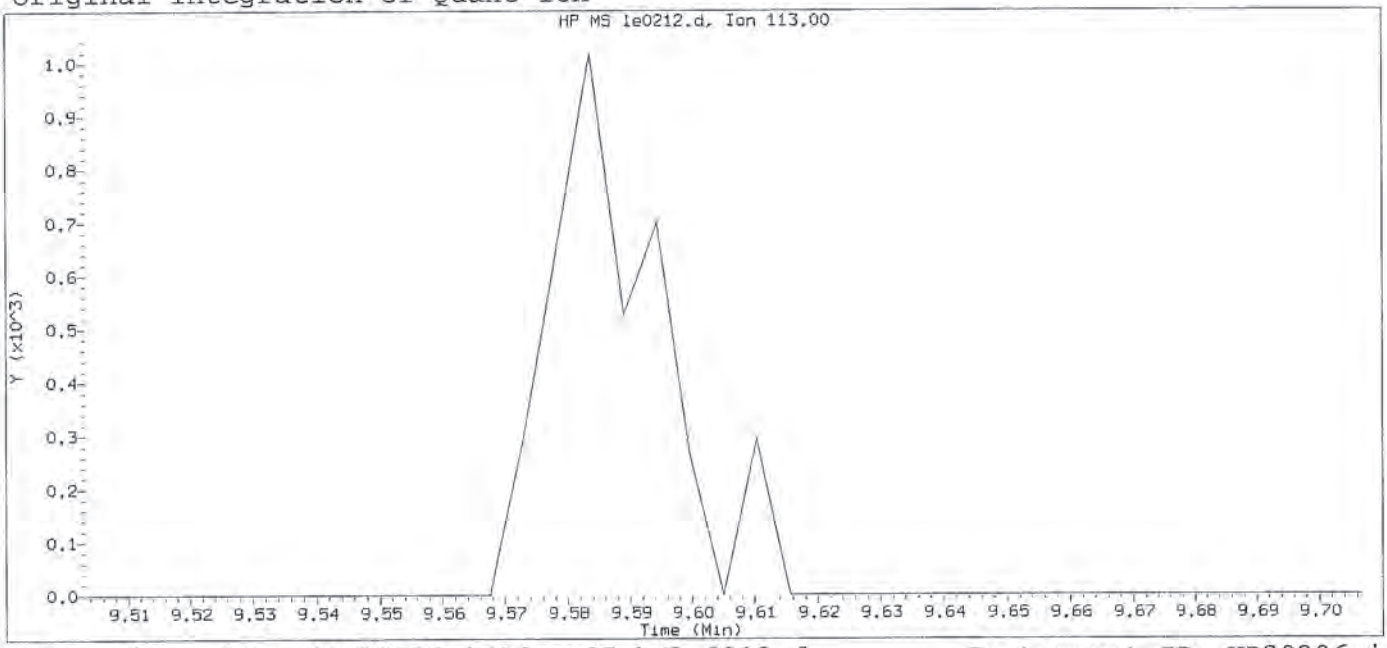
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

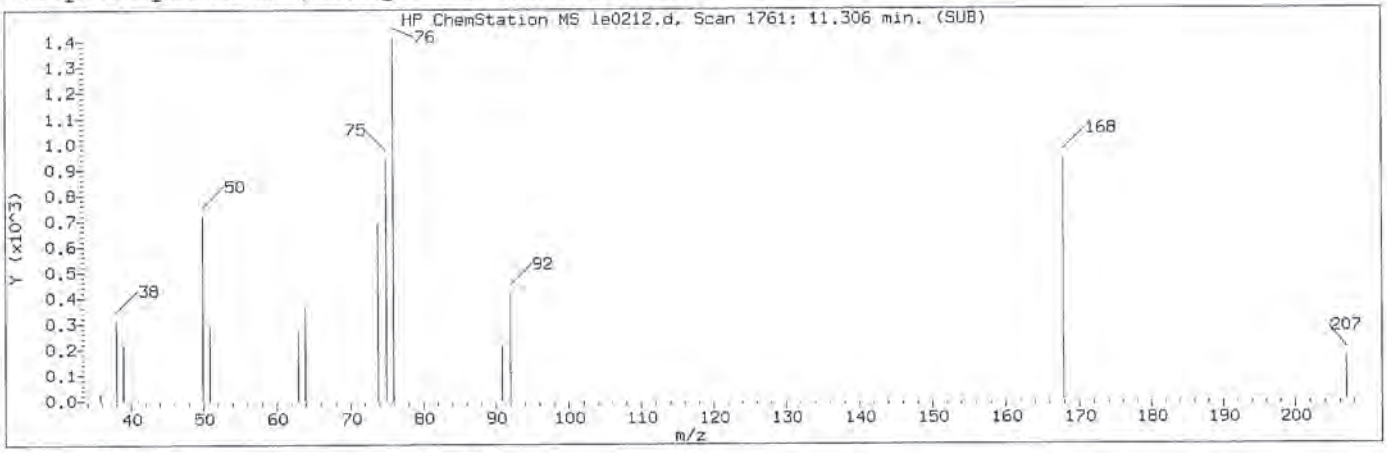
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

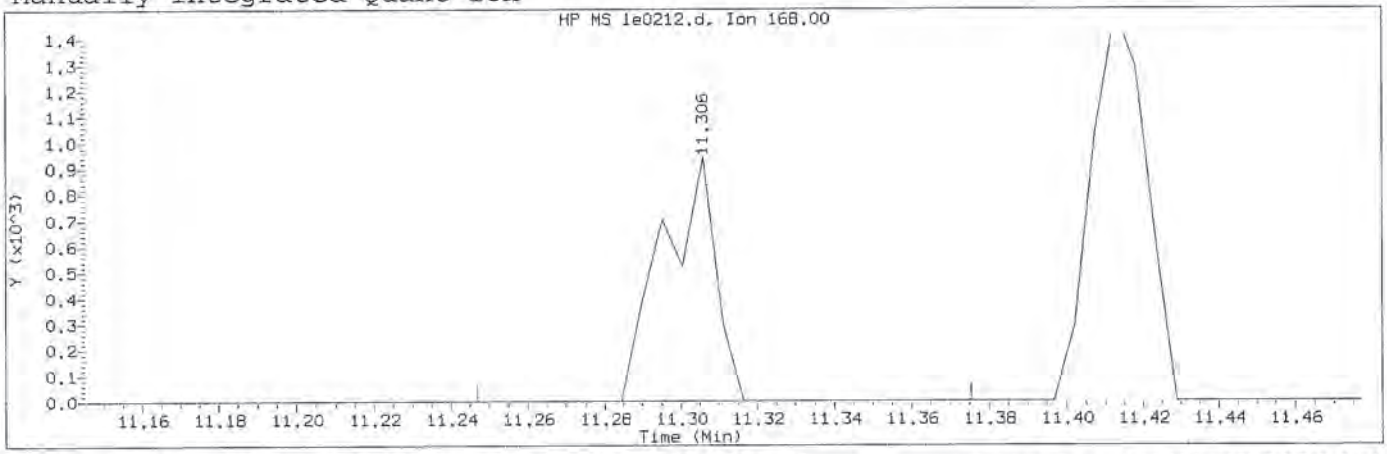
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.605
Quant Ion : 113.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 105		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1761		
Retention Time (minutes)	: 11.306		
Quant Ion	: 168.00		
Area (flag)	: 907M		
On-Column Amount (ng/ul)	: 0.0775		
Integration start scan	: 1749	Integration stop scan:	1773
Y at integration start	: 0	Y at integration end:	0

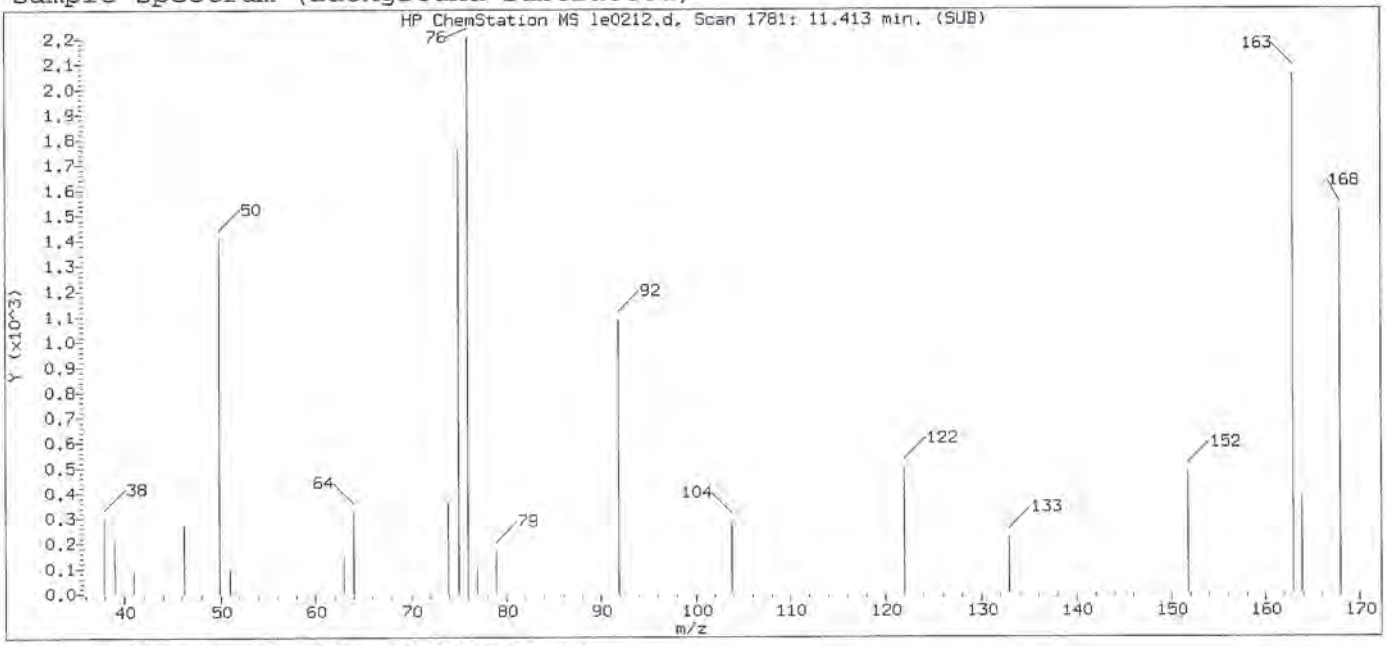
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5, signature user ID: hbz01996

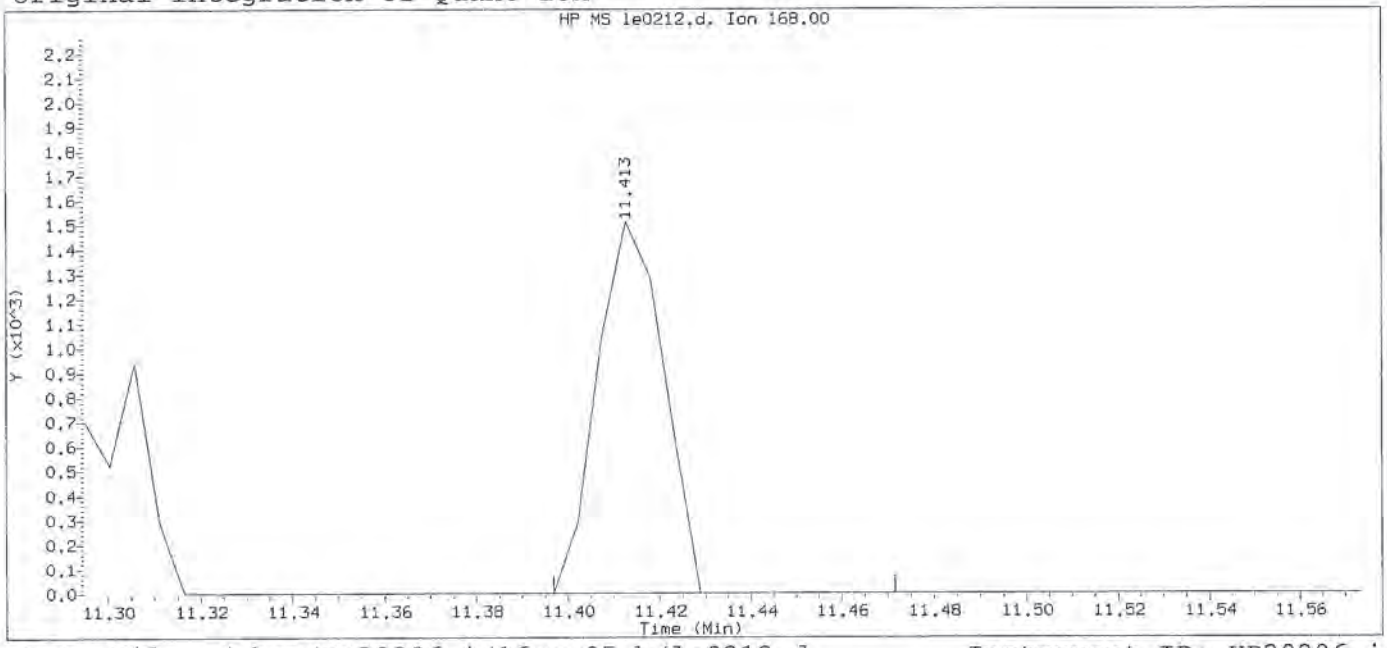
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

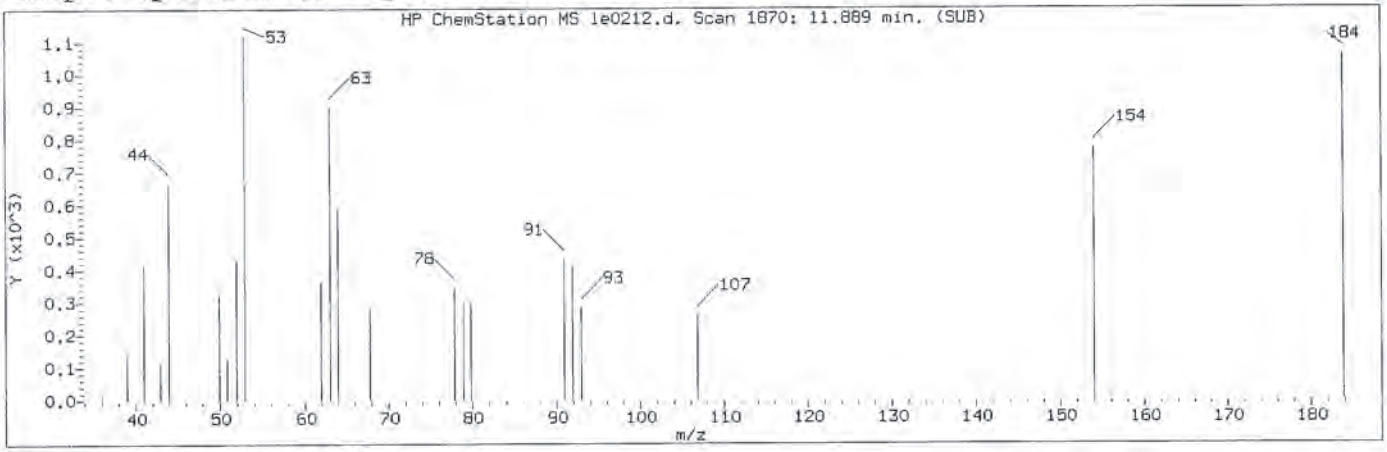
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

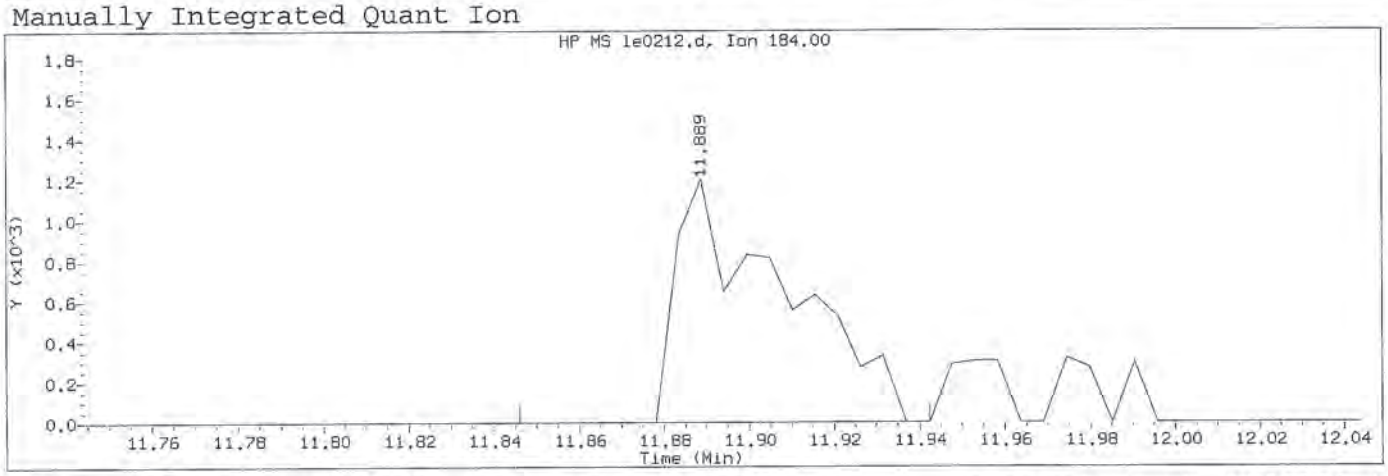
Compound Number	: 105		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1781		
Retention Time (minutes)	: 11.413		
Quant Ion	: 168.00		
Area	: 1523		
On-column Amount (ng/ul)	: 0.1274		
Integration start scan	: 1777	Integration stop scan:	1791
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1870		
Retention Time (minutes)	: 11.889		
Quant Ion	: 184.00		
Area (flag)	: 2165M		
On-Column Amount (ng/ul)	: 0.2411		
Integration start scan	: 1861	Integration stop scan:	1879
Y at integration start	: 0	Y at integration end:	0

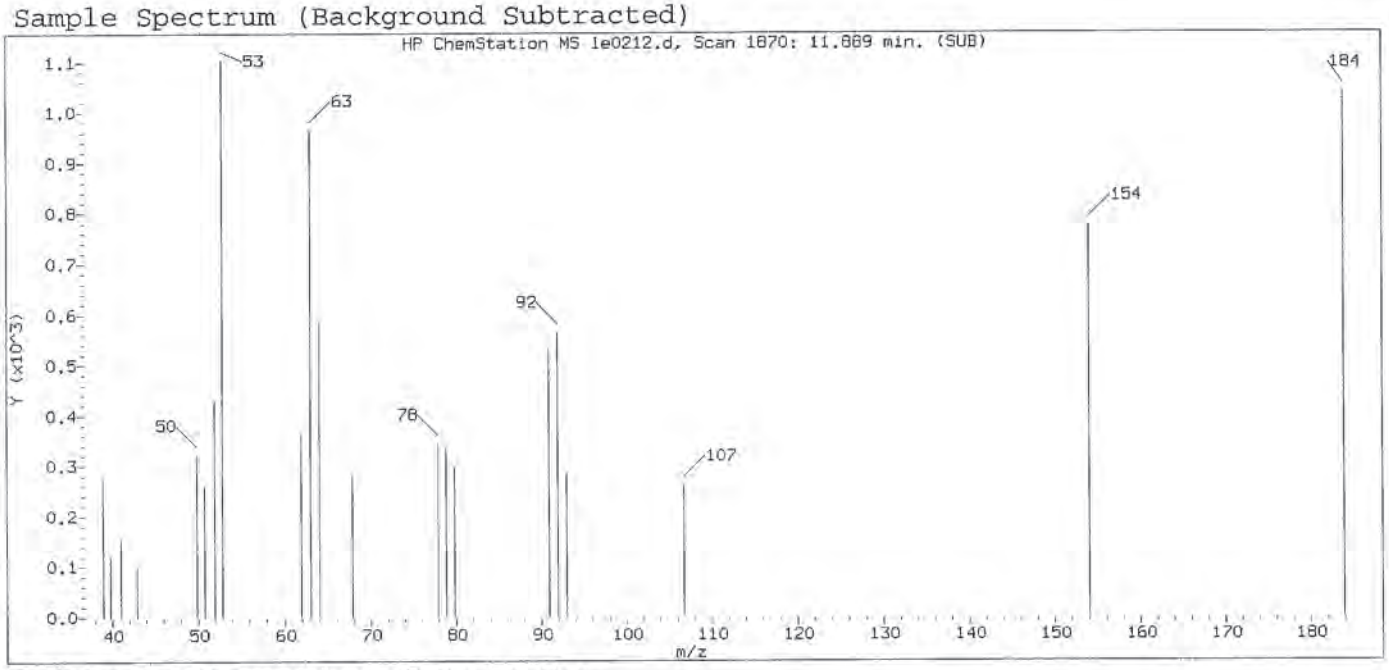
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 signature ~~user ID:~~ hbz01996

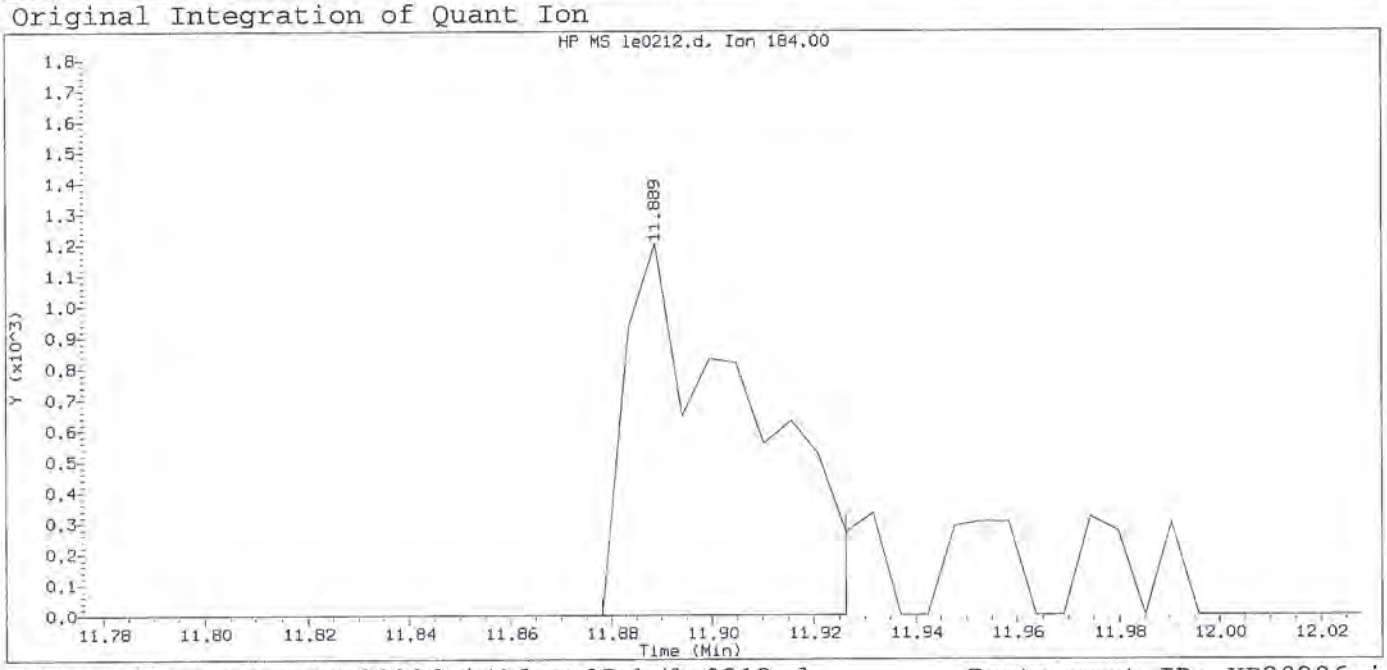
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

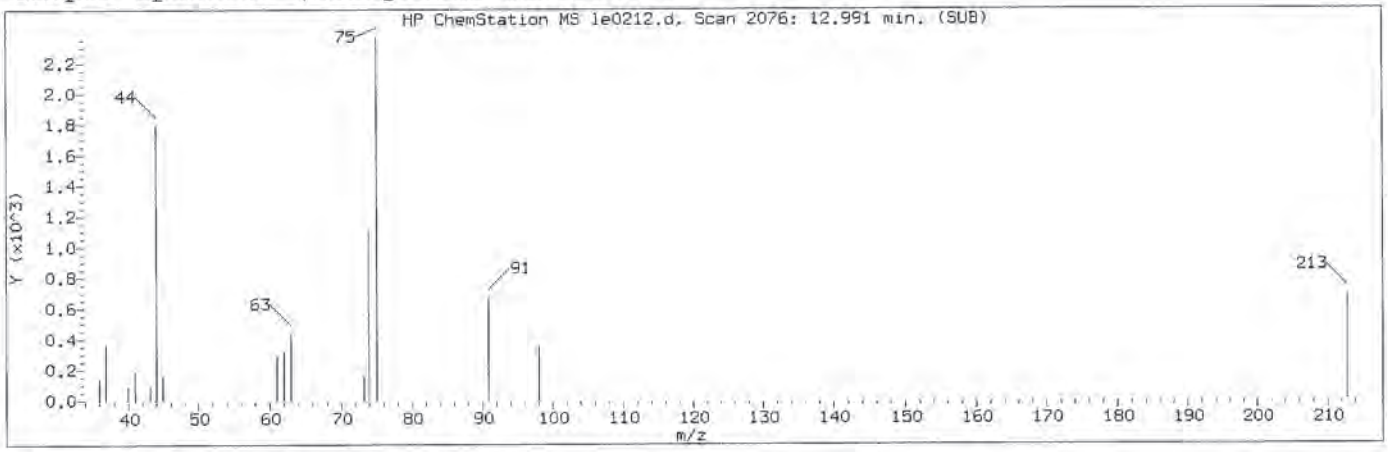
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

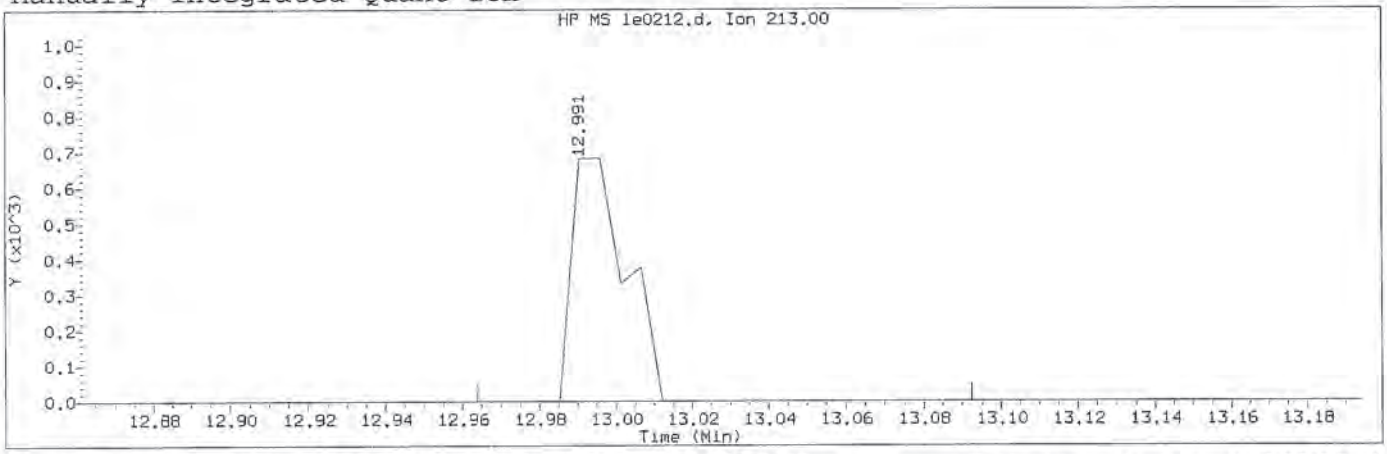
Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1870		
Retention Time (minutes)	: 11.889		
Quant Ion	: 184.00		
Area	: 2015		
On-column Amount (ng/ul)	: 0.2375		
Integration start scan	: 1867	Integration stop scan:	1876
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 139		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 2076		
Retention Time (minutes)	: 12.991		
Quant Ion	: 213.00		
Area (flag)	: 664M		
On-Column Amount (ng/ul)	: 0.0814		
Integration start scan	: 2070	Integration stop scan:	2094
Y at integration start	: 0	Y at integration end:	0

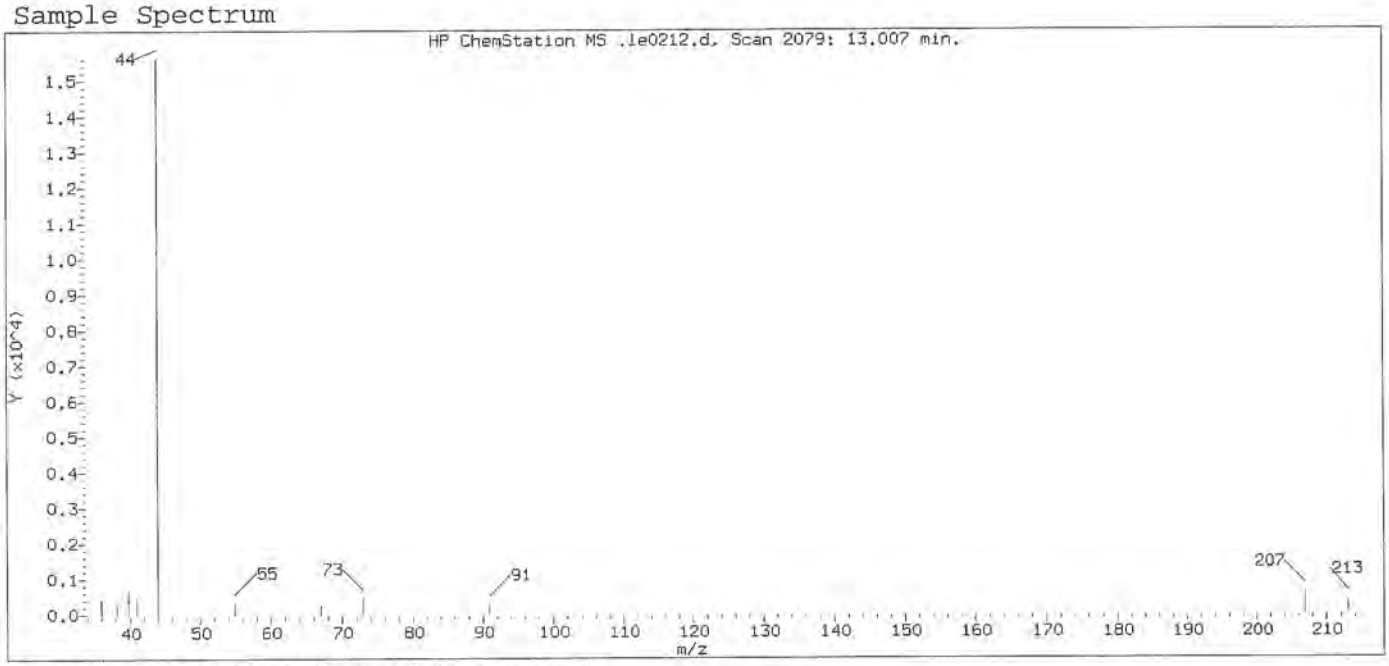
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 signature user ID: hbz01996

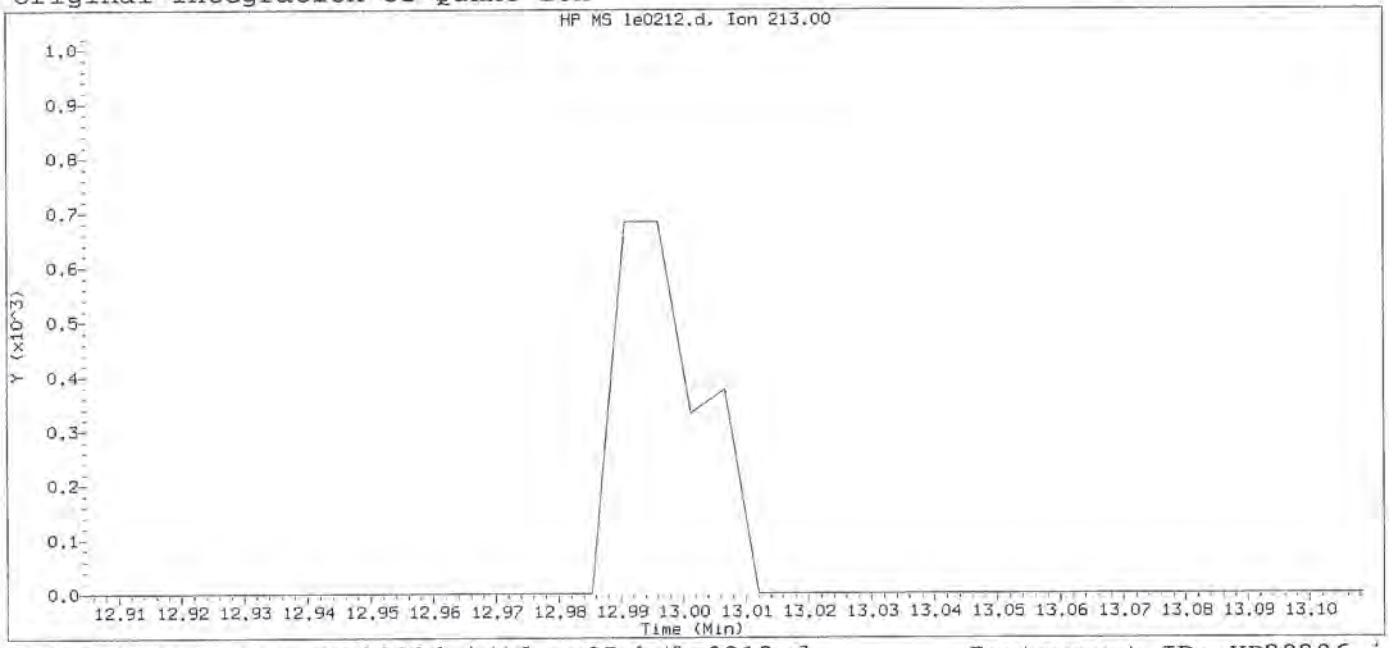
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

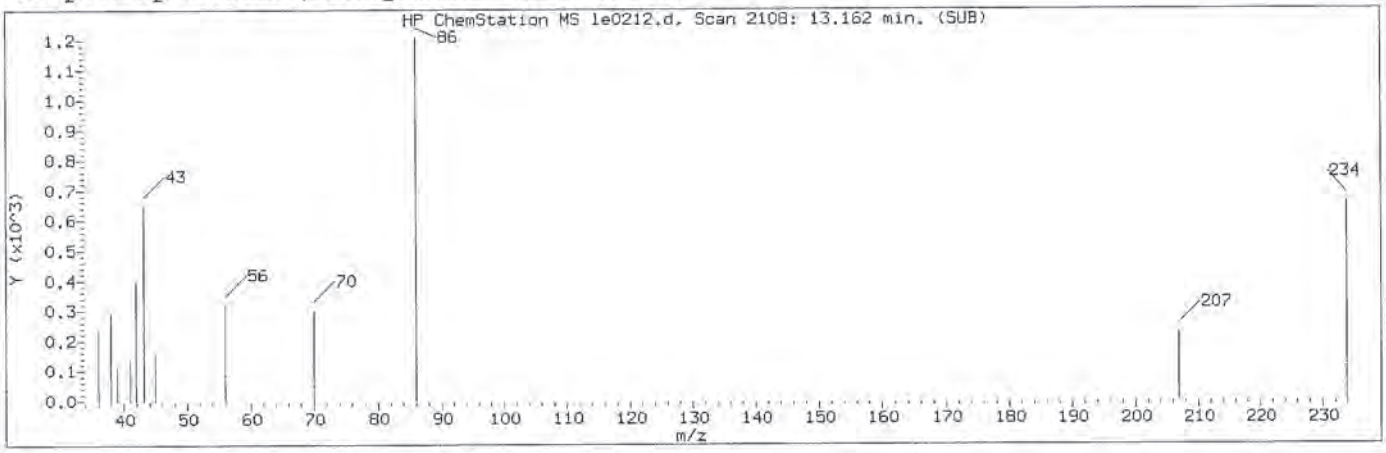
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

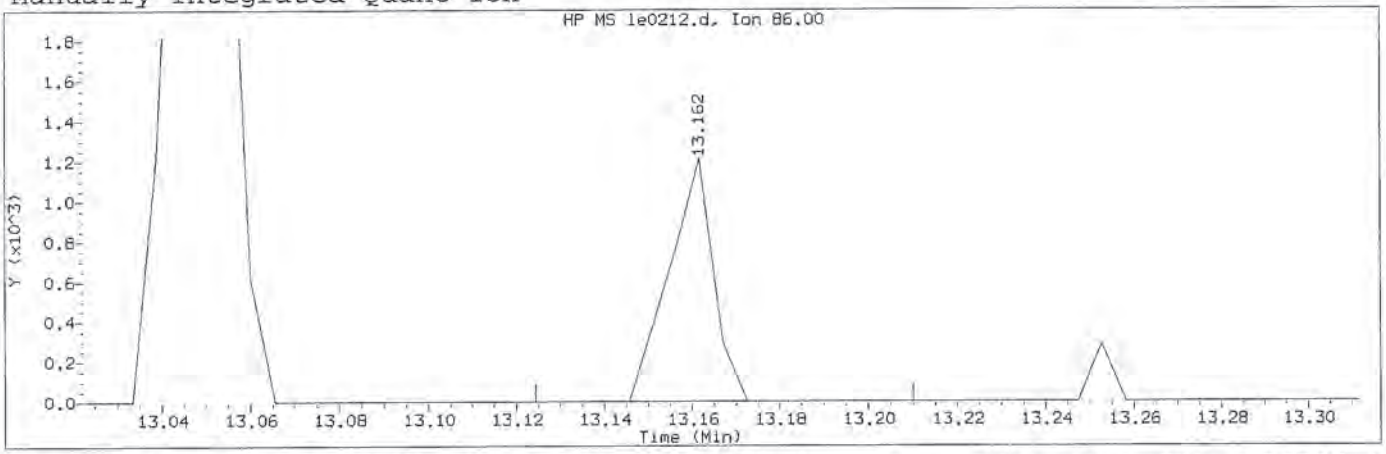
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 13.007
Quant Ion : 213.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2108		
Retention Time (minutes)	: 13.162		
Quant Ion	: 86.00		
Area (flag)	: 852M		
On-Column Amount (ng/ul)	: 0.0173		
Integration start scan	: 2100	Integration stop scan:	2116
Y at integration start	: 0	Y at integration end:	0

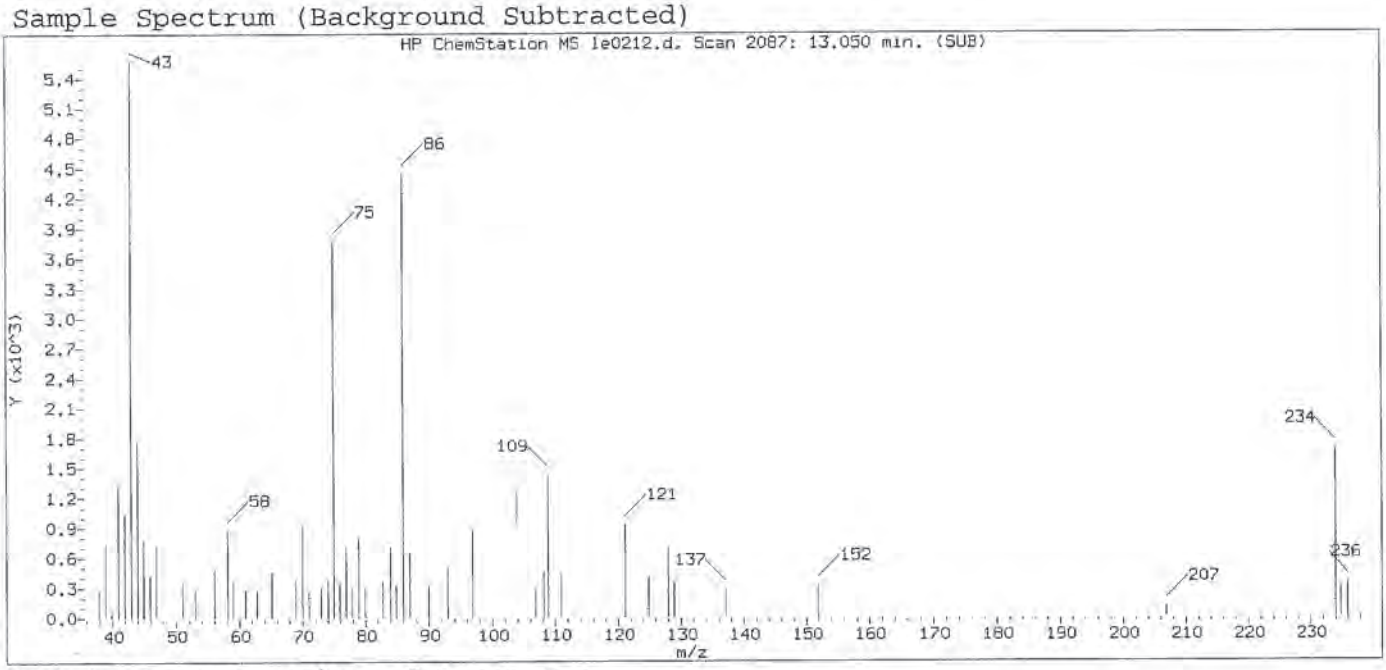
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:22
Target 3.5 esignature user ID: hbz01996

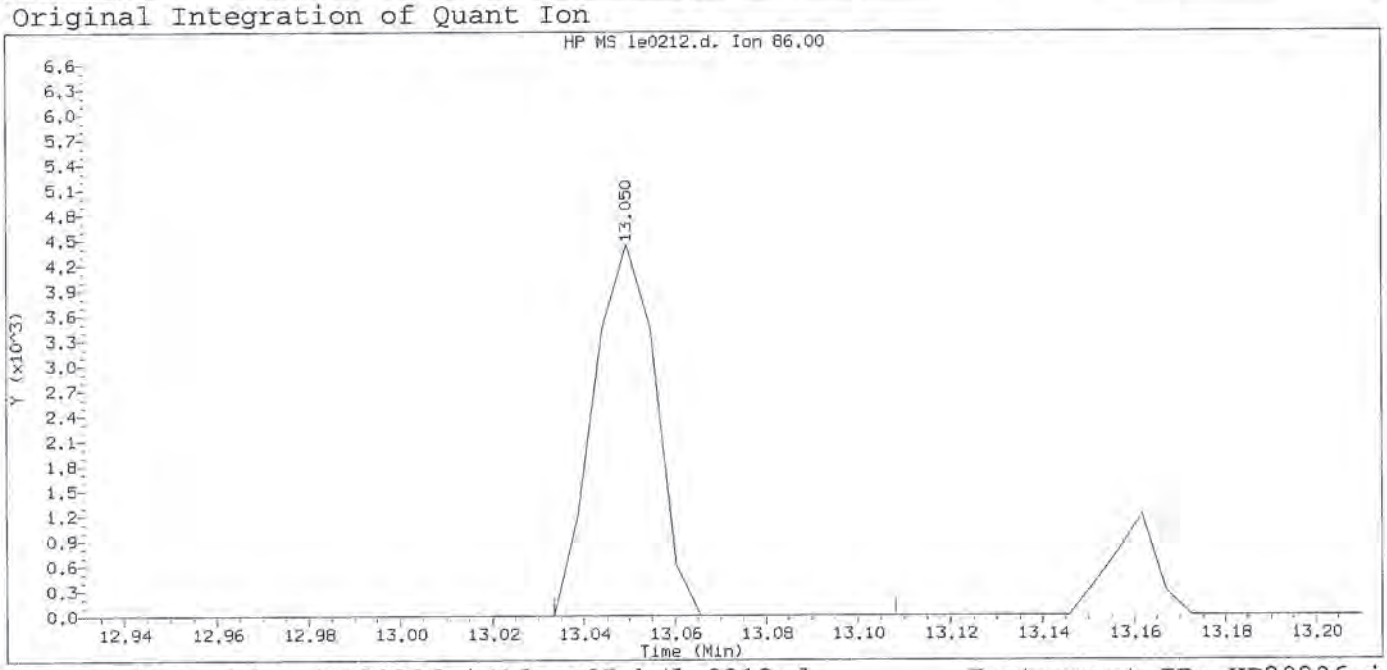
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

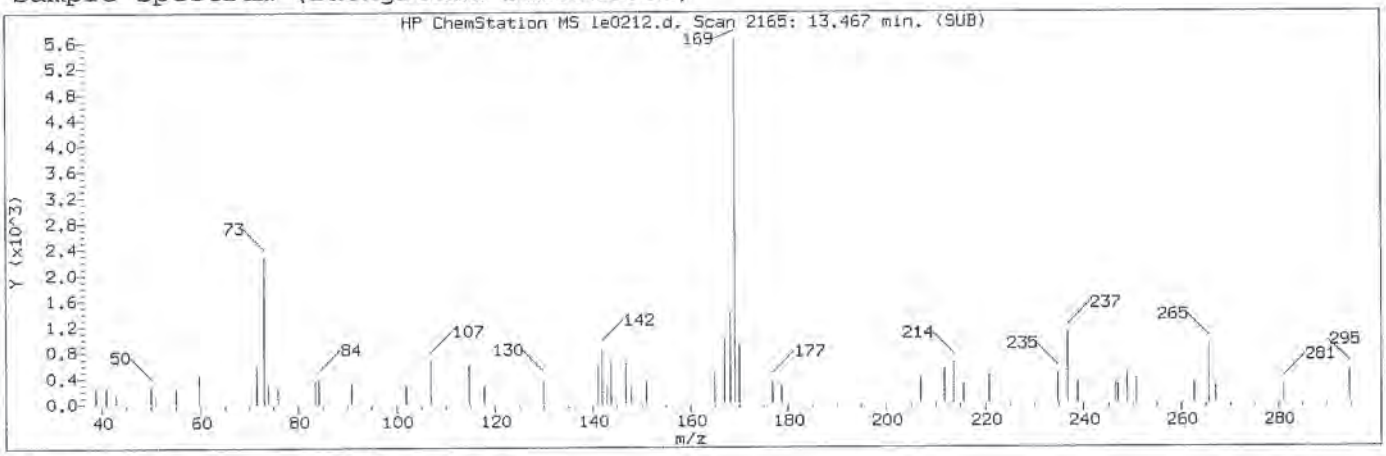
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

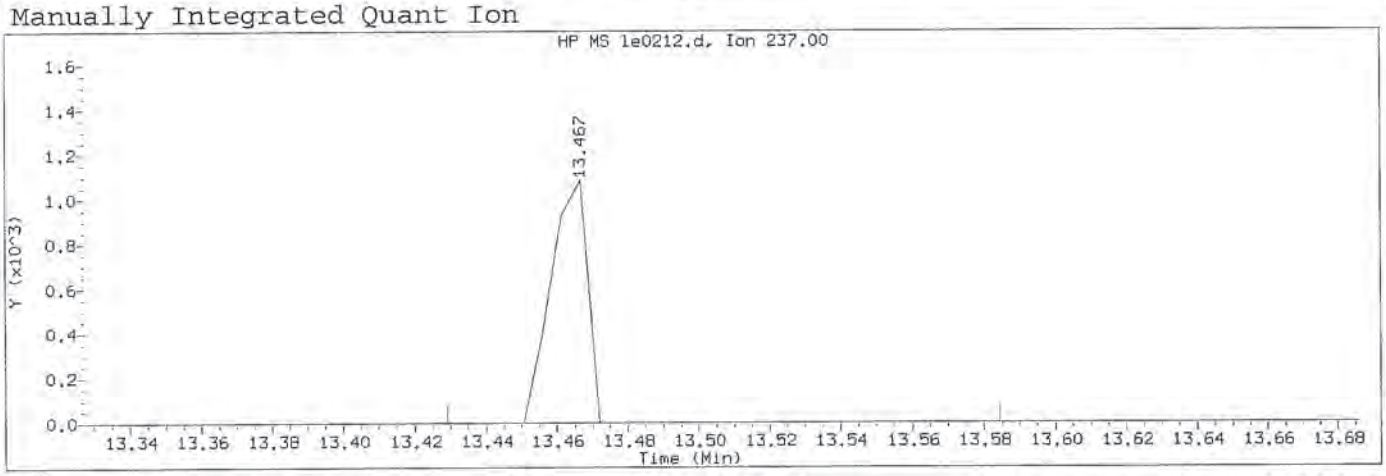
Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2087		
Retention Time (minutes)	: 13.050		
Quant Ion	: 86.00		
Area	: 4230		
On-column Amount (ng/ul)	: 0.0891		
Integration start scan	: 2083	Integration stop scan:	2097
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 151		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 2165		
Retention Time (minutes)	: 13.467		
Quant Ion	: 237.00		
Area (flag)	: 774M		
On-Column Amount (ng/ul)	: 0.0601		
Integration start scan	: 2157	Integration stop scan:	2186
Y at integration start	: 0	Y at integration end:	0

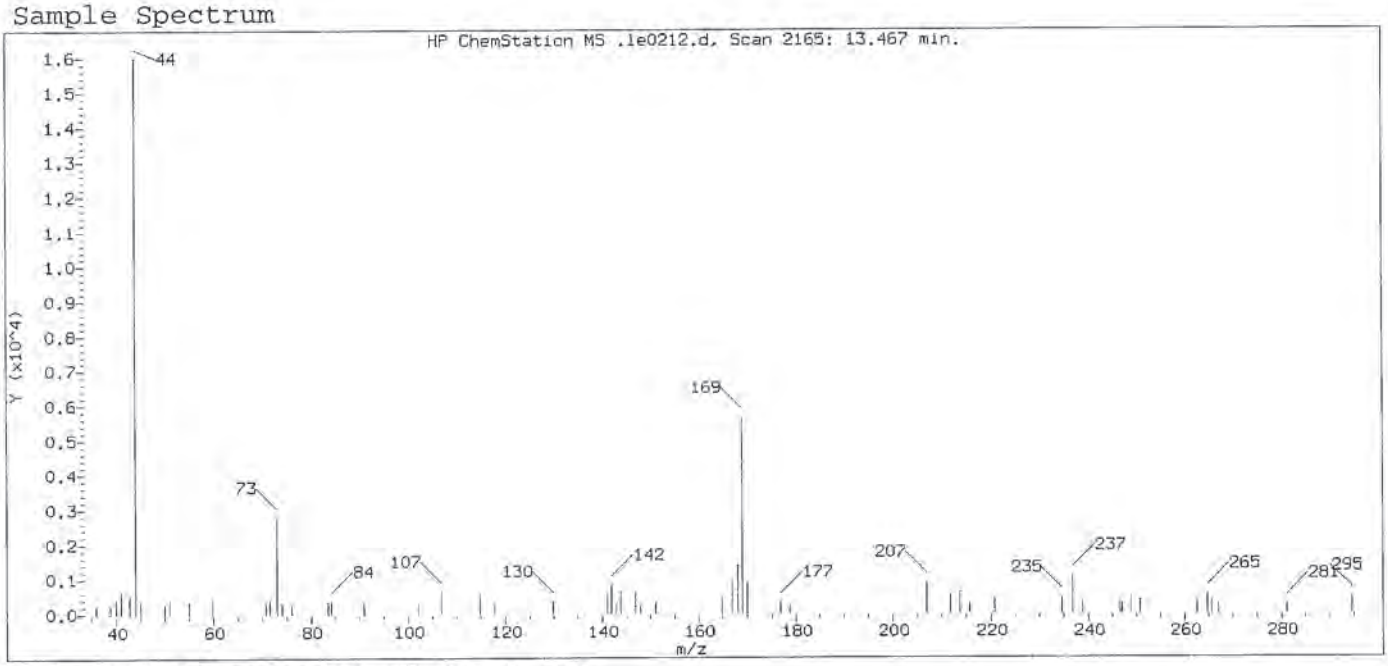
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32. Target 3.5 Designature user ID: hbz01996

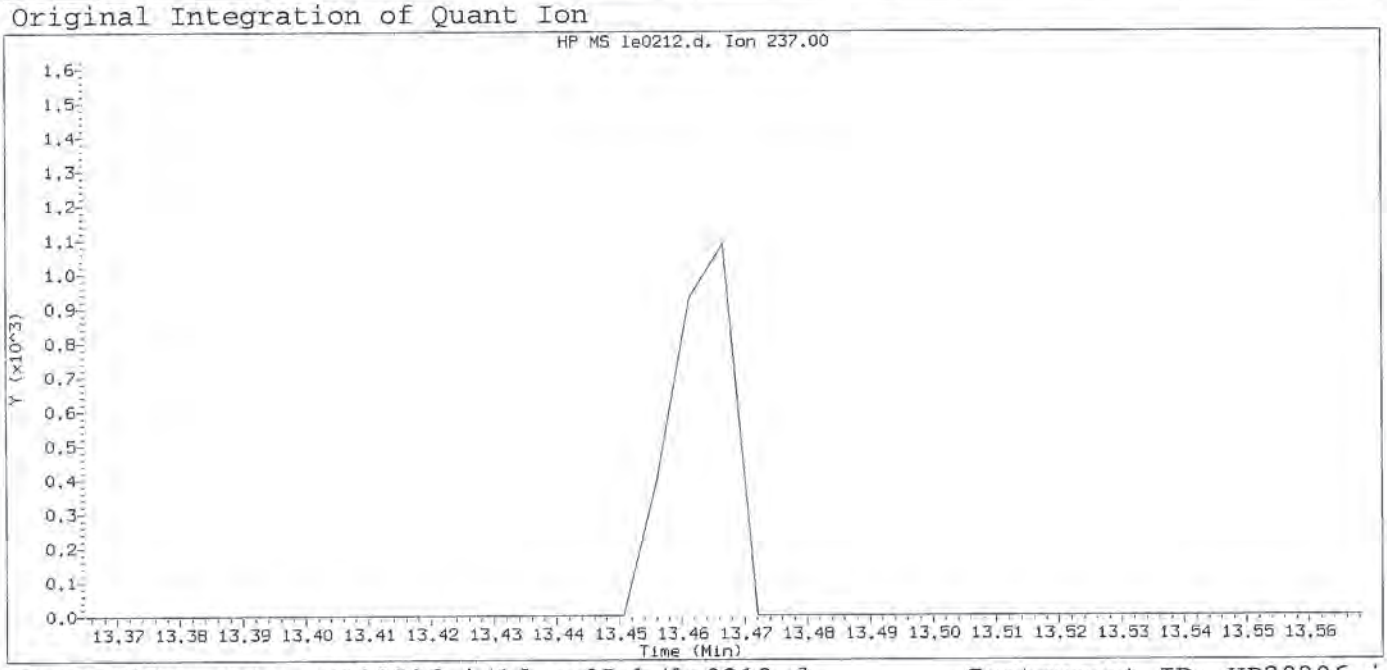
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

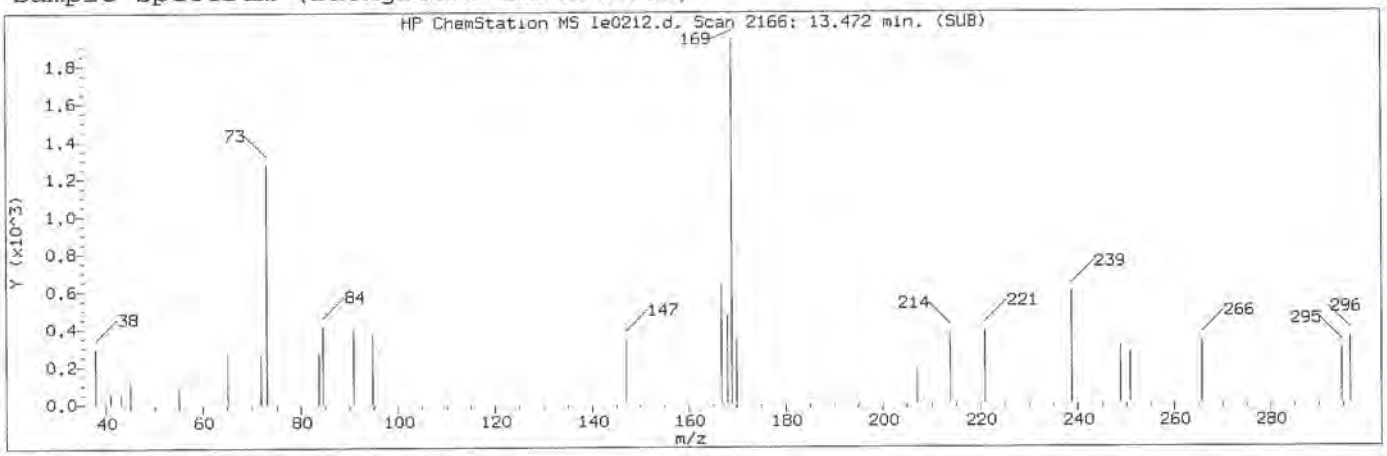
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

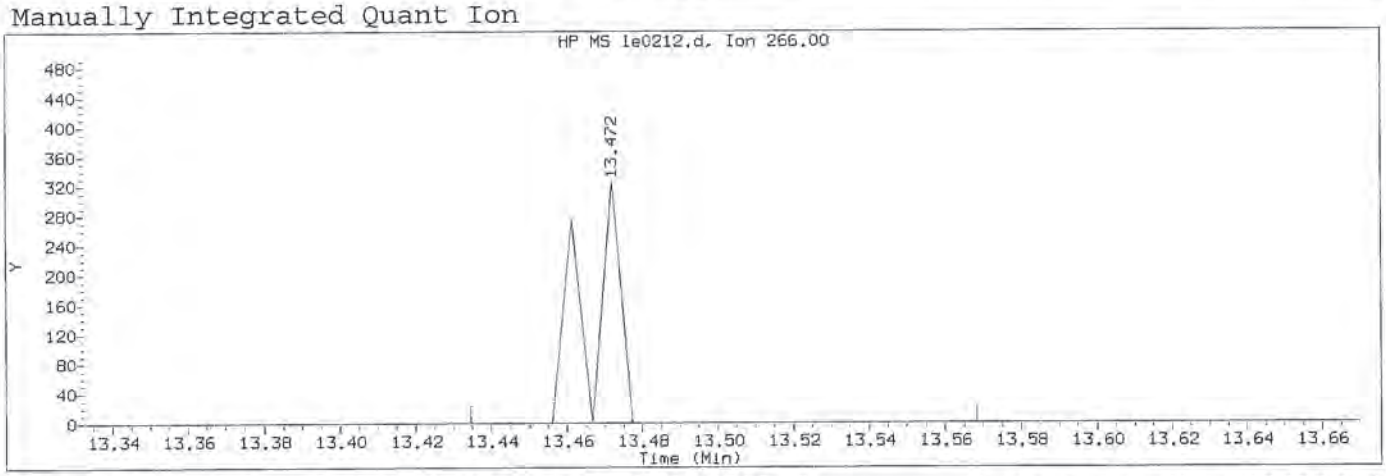
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.467
Quant Ion : 237.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 149		
Compound Name	: Pentachlorophenol		
Scan Number	: 2166		
Retention Time (minutes)	: 13.472		
Quant Ion	: 266.00		
Area (flag)	: 193M		
On-Column Amount (ng/ul)	: 0.0124		
Integration start scan	: 2158	Integration stop scan:	2183
Y at integration start	: 0	Y at integration end:	0

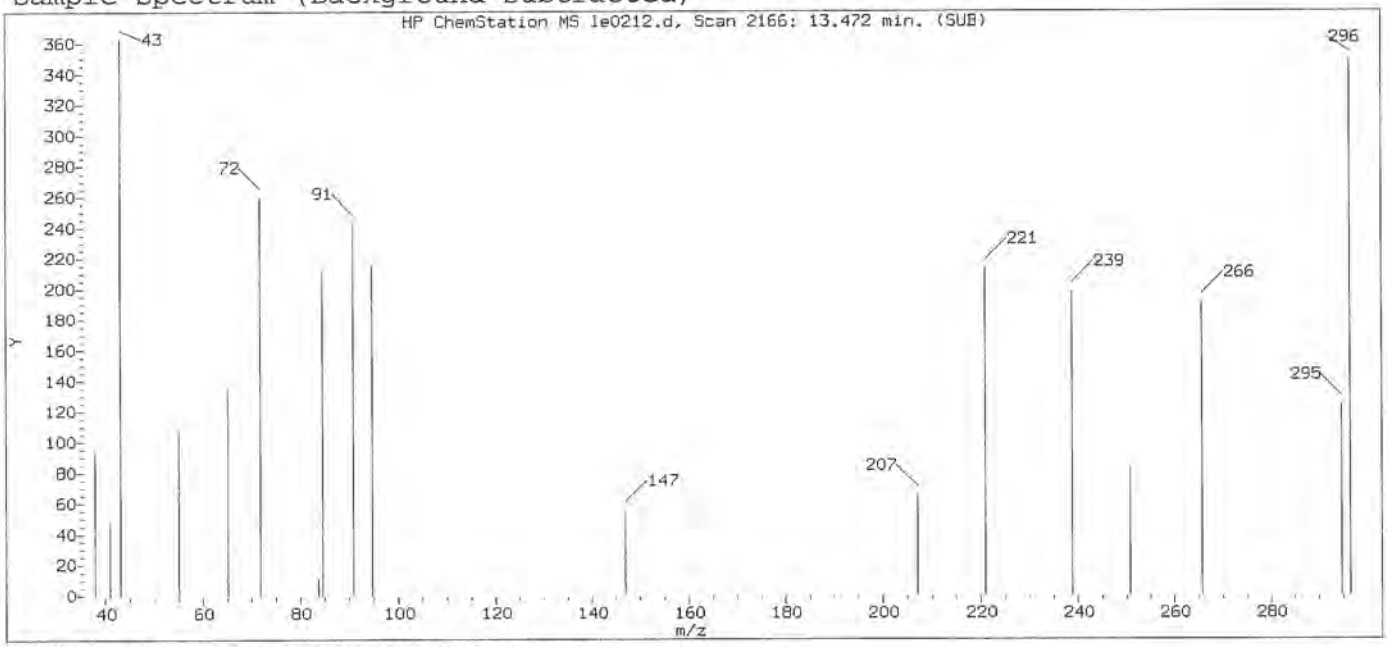
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32
Target 3.5 Designature user ID: hbz01996

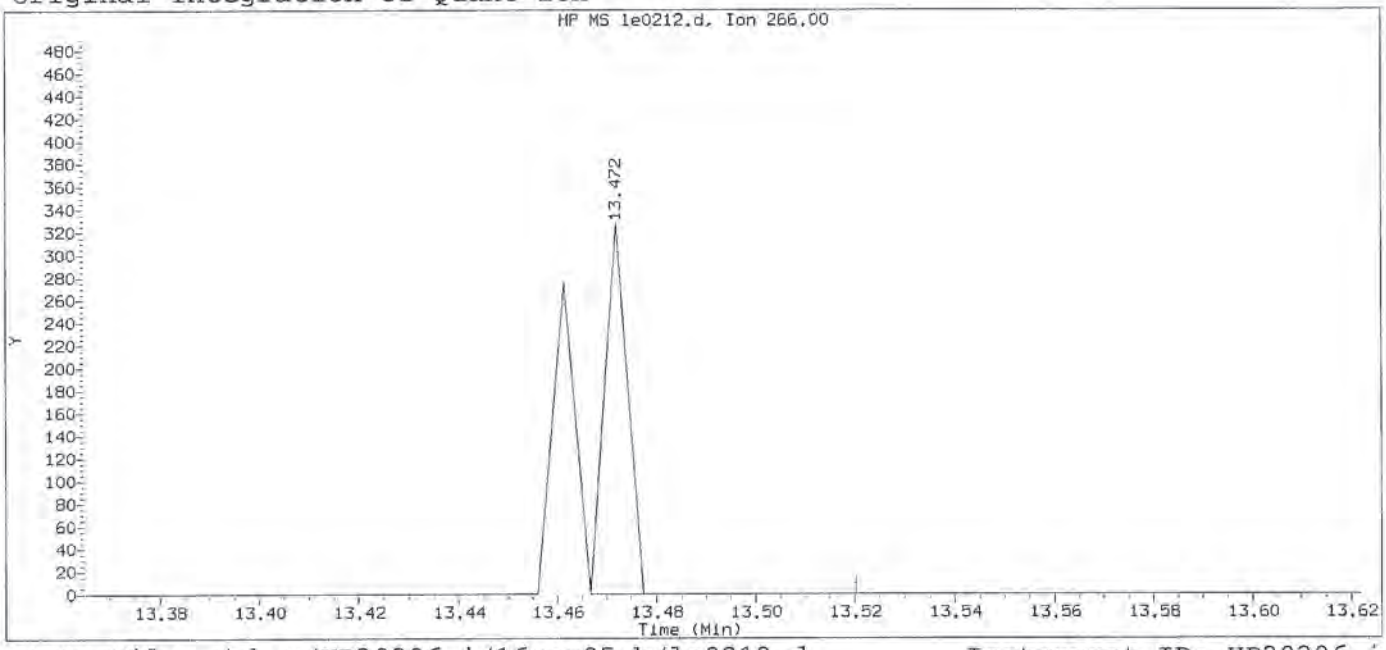
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 149		
Compound Name	: Pentachlorophenol		
Scan Number	: 2166		
Retention Time (minutes)	: 13.472		
Quant Ion	: 266.00		
Area	: 105		
On-column Amount (ng/ul)	: 1.7916		
Integration start scan	: 2164	Integration stop scan:	2174
Y at integration start	: 0	Y at integration end:	0

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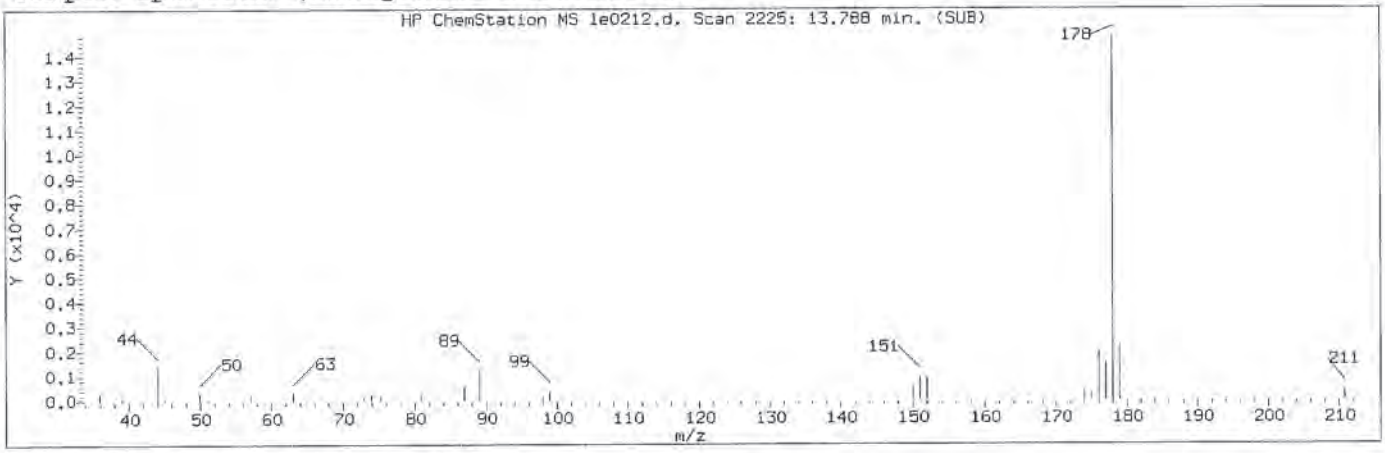
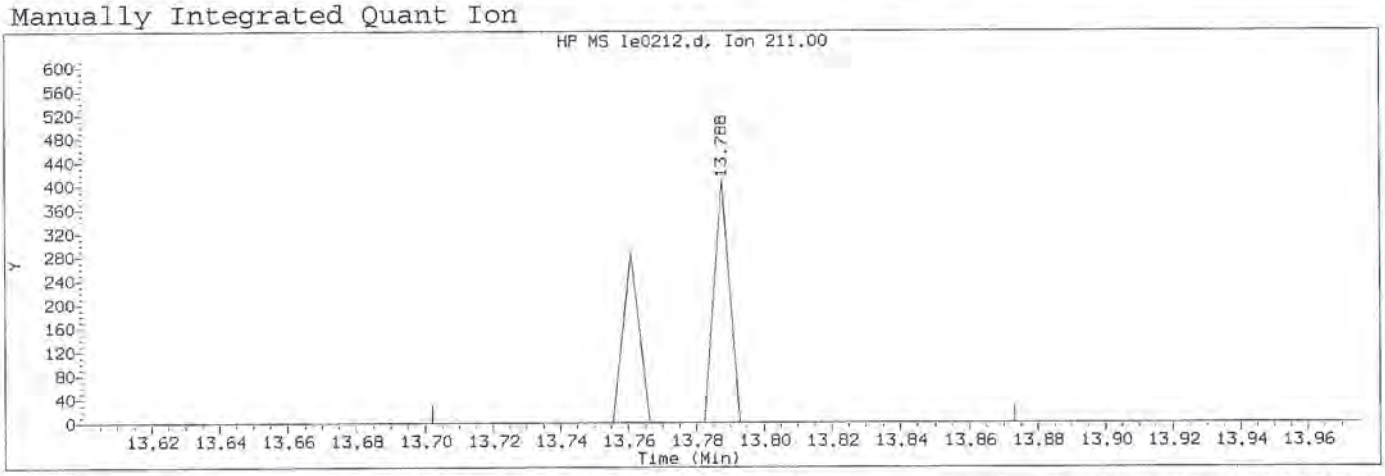
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 2225		
Retention Time (minutes)	: 13.788		
Quant Ion	: 211.00		
Area (flag)	: 223M		
On-Column Amount (ng/ul)	: 0.0118		
Integration start scan	: 2208	Integration stop scan:	2240
Y at integration start	: 0	Y at integration end:	0

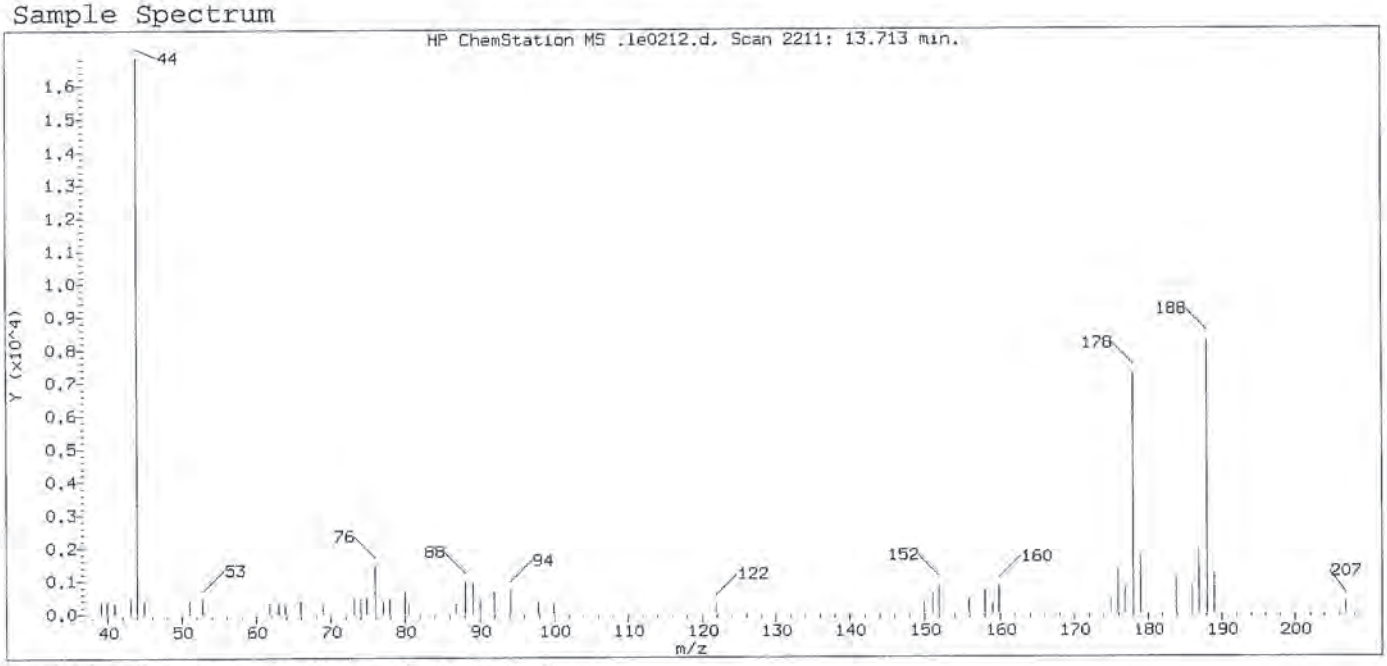
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 signature user ID: hbz01996

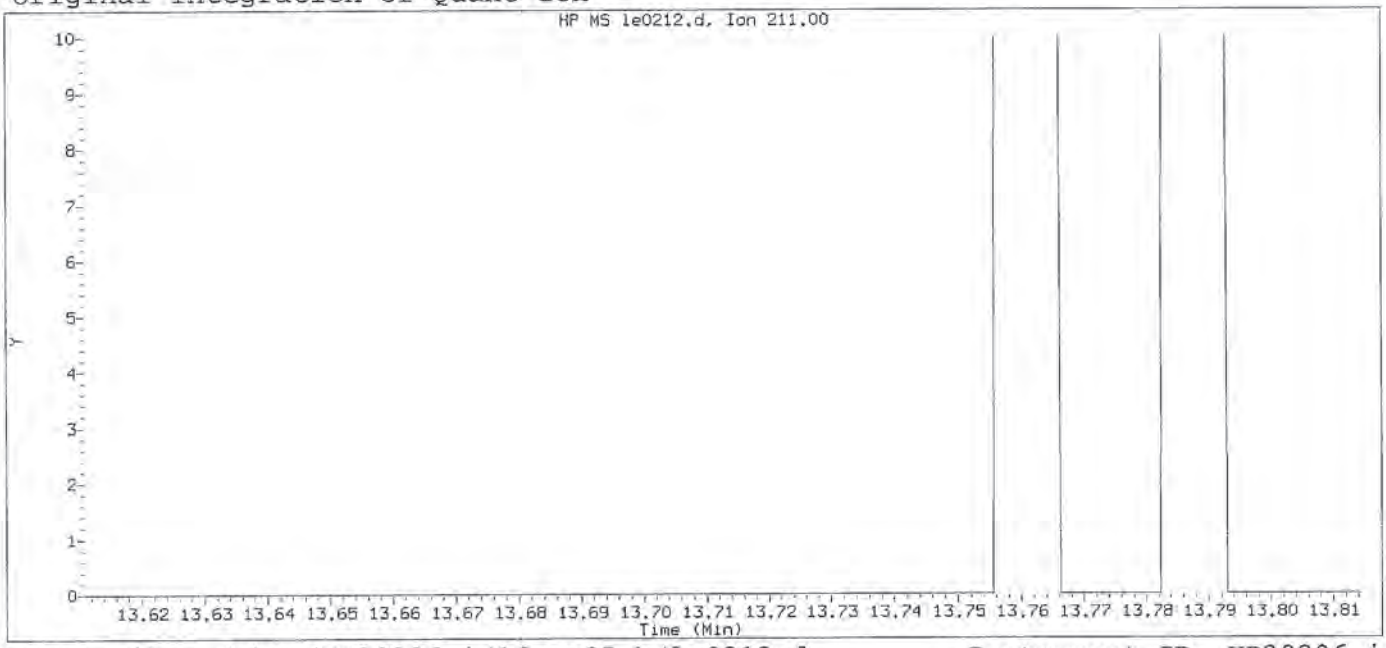
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

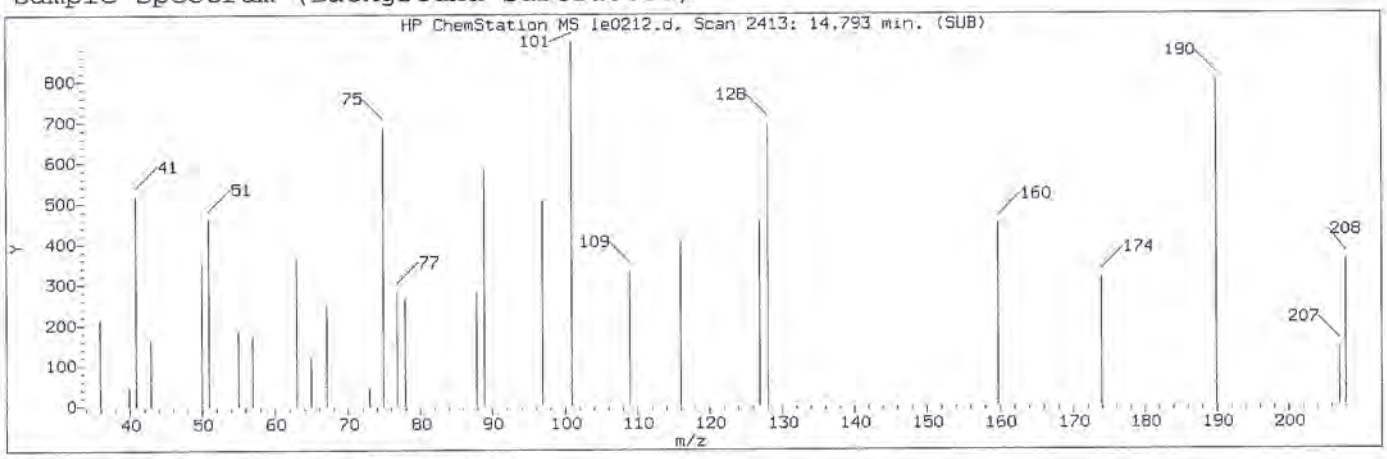
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

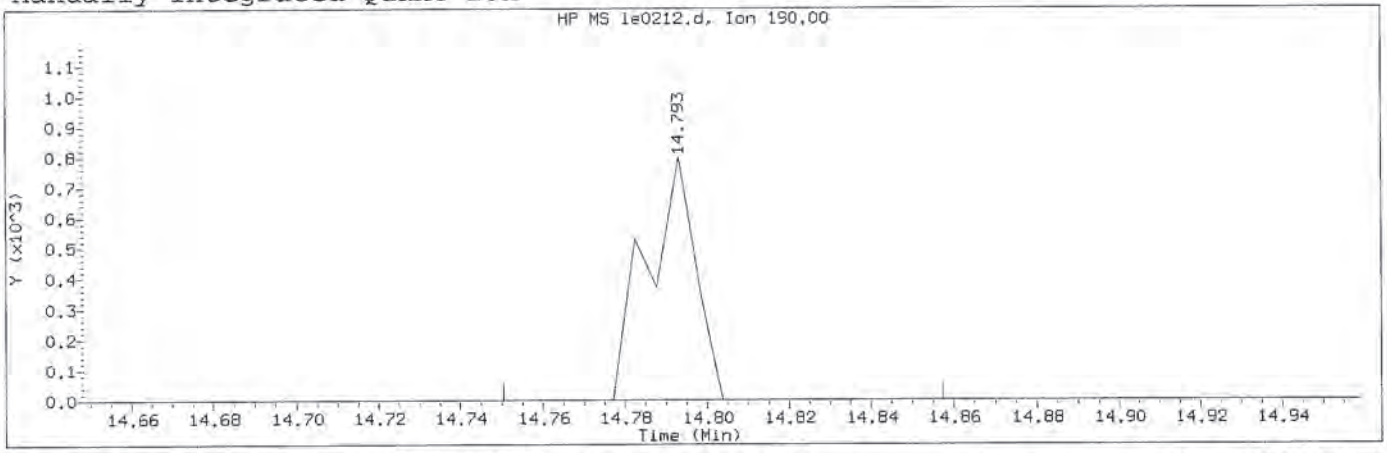
Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.713
Quant Ion : 211.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 168		
Compound Name	: 4-Nitroquinoline-1-oxide		
Scan Number	: 2413		
Retention Time (minutes)	: 14.793		
Quant Ion	: 190.00		
Area (flag)	: 656M		
On-Column Amount (ng/ul)	: 0.0618		
Integration start scan	: 2404	Integration stop scan:	2424
Y at integration start	: 0	Y at integration end:	0

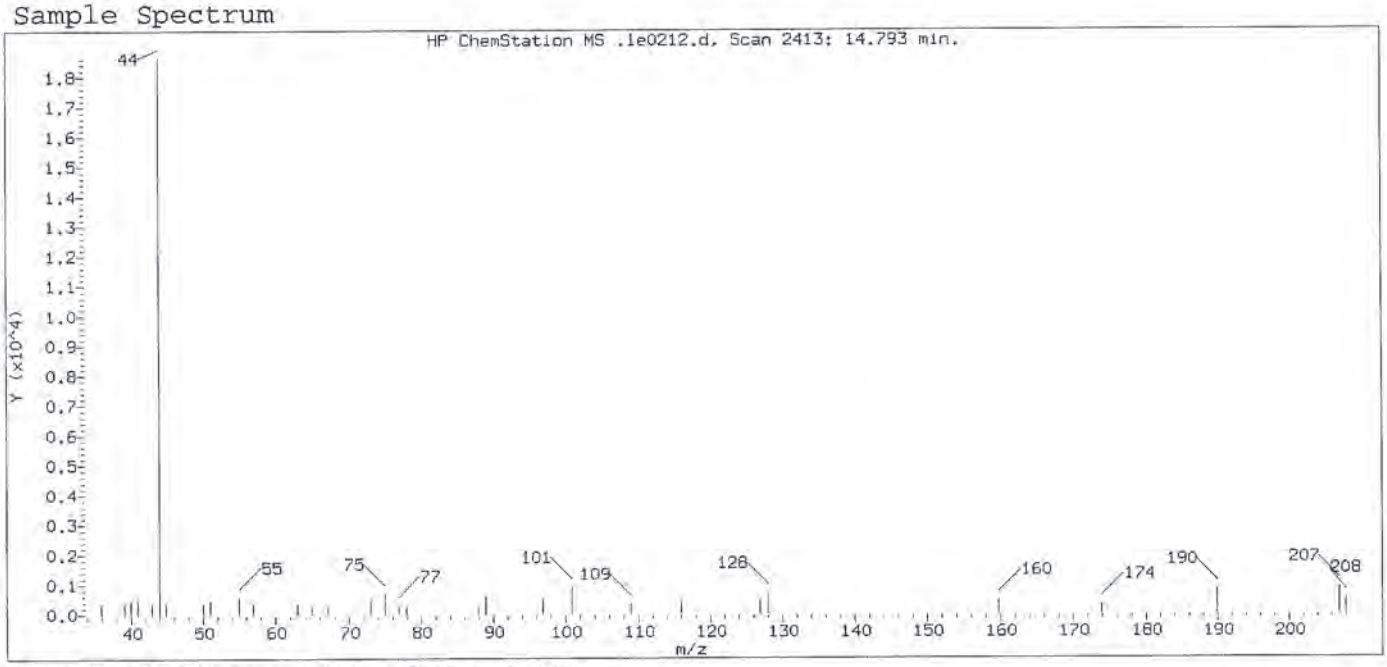
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 signature User ID: hbz01996

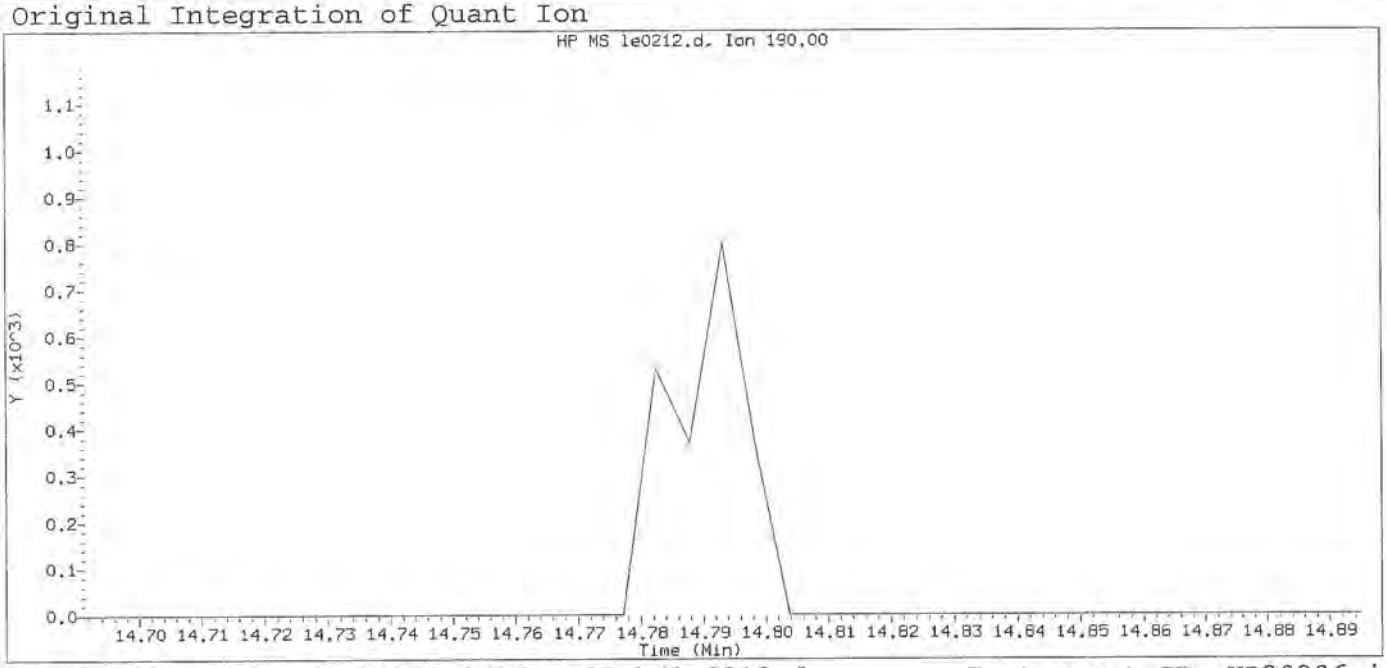
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

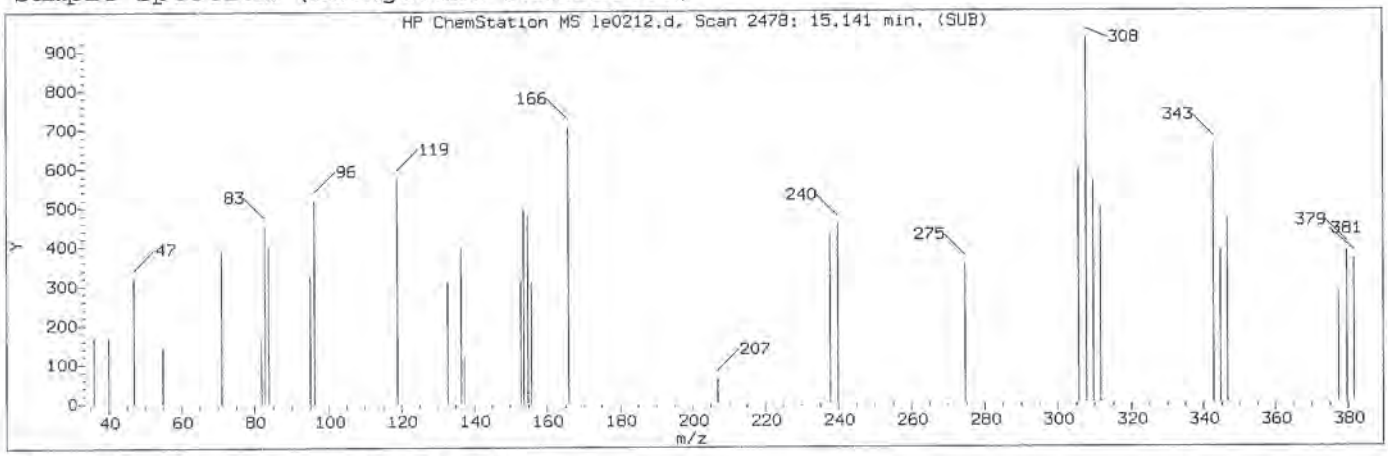
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

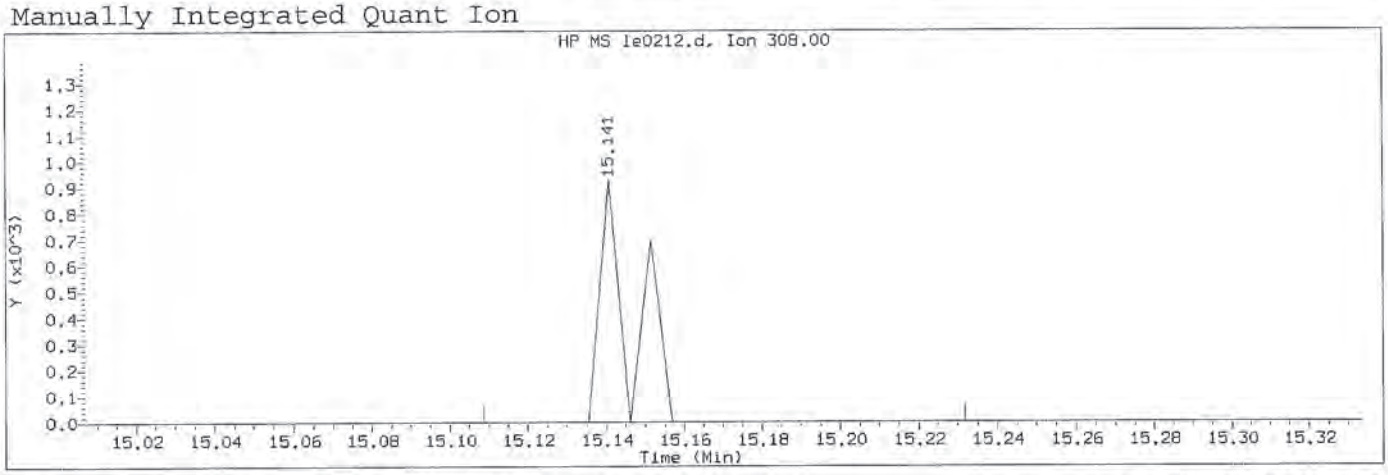
Compound Number : 168
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 14.793
Quant Ion : 190.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number	: 169		
Compound Name	: Octachlorostyrene		
Scan Number	: 2478		
Retention Time (minutes)	: 15.141		
Quant Ion	: 308.00		
Area (flag)	: 522M		
On-Column Amount (ng/ul)	: 0.0535		
Integration start scan	: 2471	Integration stop scan:	2494
Y at integration start	: 0	Y at integration end:	0

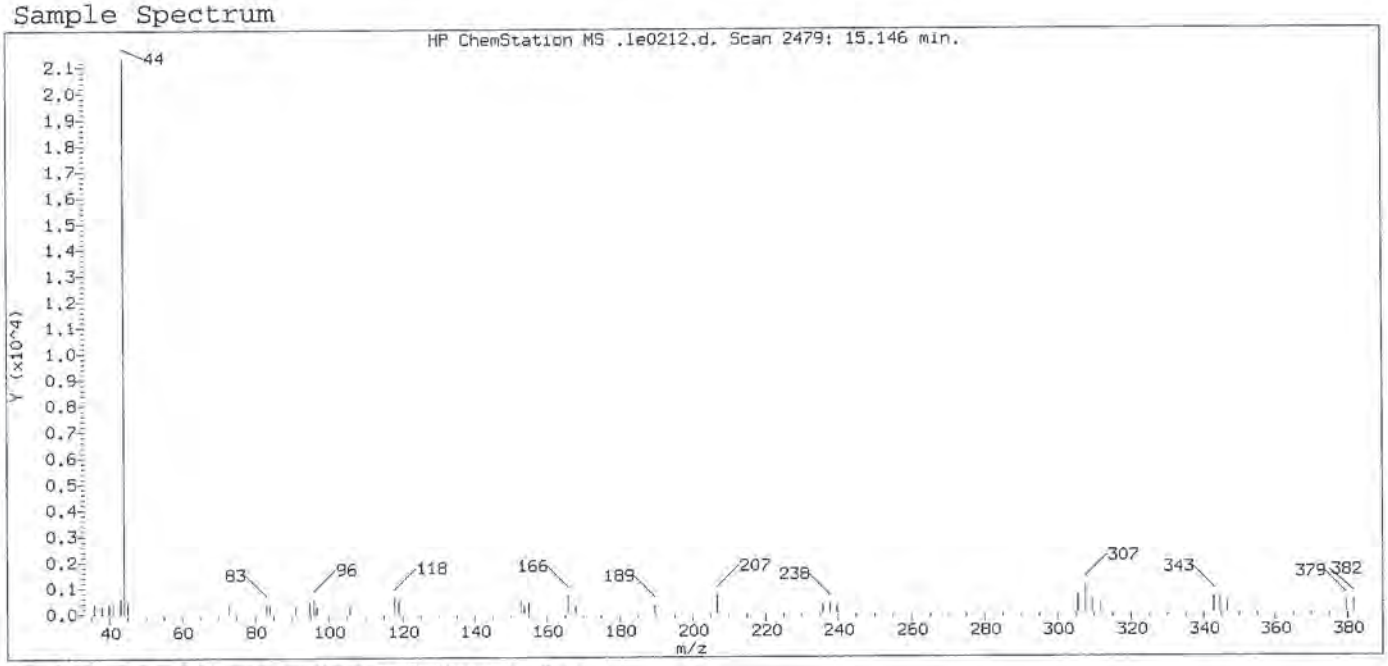
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target ~~S/B signature user ID:~~ hbz01996

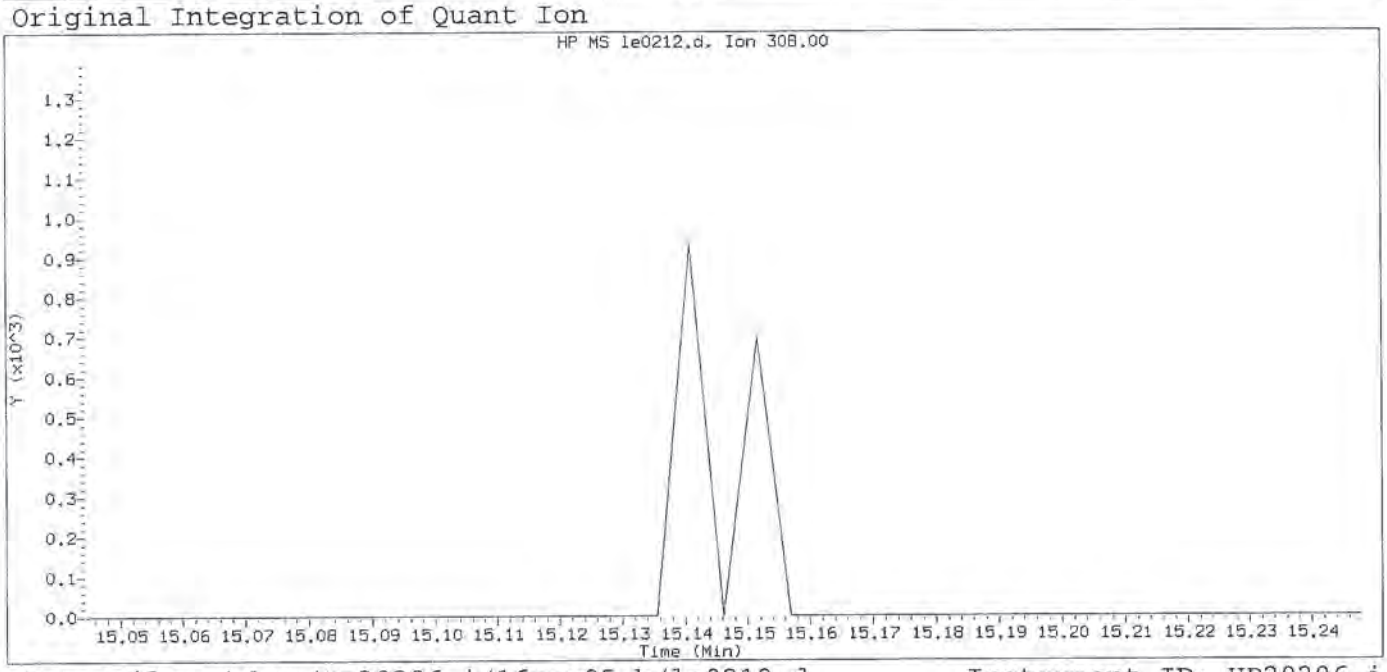
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



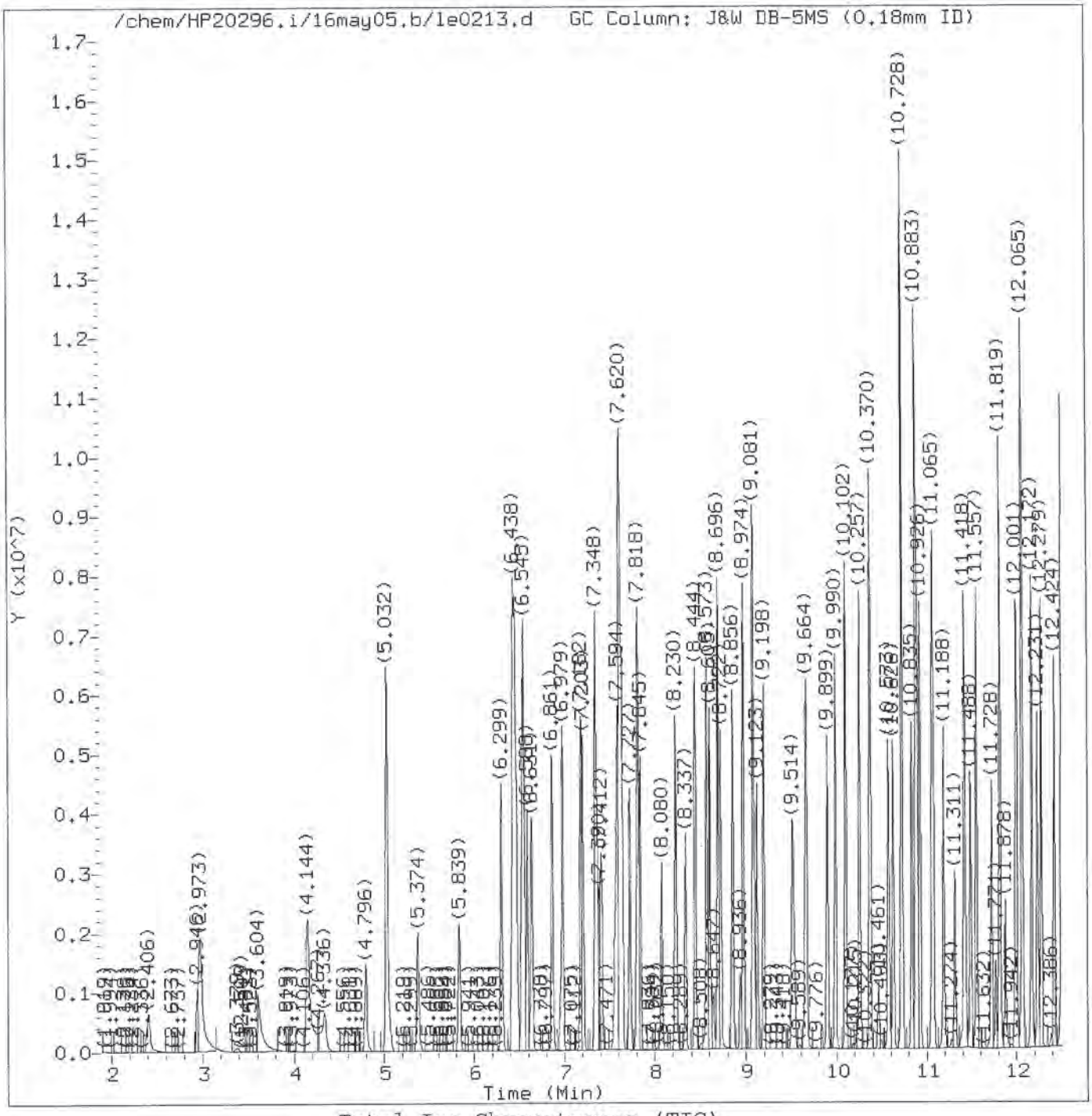
Data File: /chem/HP20296.i/16may05.b/1e0212.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:28 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 19:55
Date, time and analyst ID of latest file update: 05-May-2016 19:55 Unknown

Sample Name: SSTD0.125 Lab Sample ID: RVSTD0816

Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 15.146
Quant Ion : 308.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

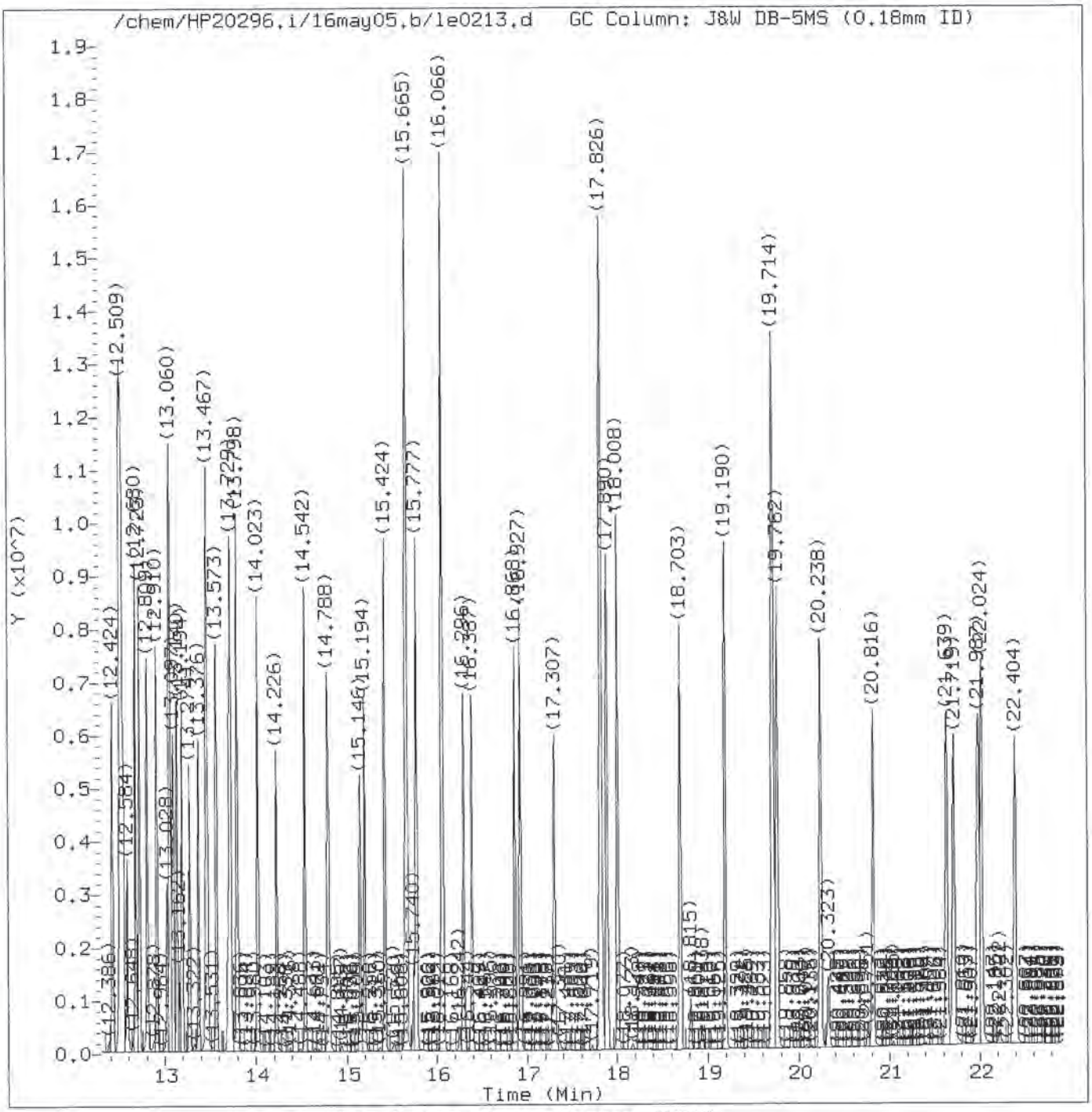
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0213.d
Injection date and time: 05-MAY-2016 19:56
Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30
Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0213.d
Injection date and time: 05-MAY-2016 19:56

Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15

Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30

Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	740111	29.765
4) N-Nitrosodimethylamine	(1)	2.946	74	1160409	30.045
5) Pyridine	(1)	2.978	79	1998563	30.203
7) 2-Picoline	(1)	4.144	93	2030646	30.077
8) N-Nitrosomethylethylamine	(1)	4.336	88	805225	30.048
9) Methyl methanesulfonate	(1)	4.796	80	937538	29.690
11)$2-Fluorophenol	(1)	5.032	112	3071043	59.568
13) N-Nitrosodiethylamine	(1)	5.374	102	774976	30.076
42) Total Cresols	(1)			3271190	60.864
15) Ethyl methanesulfonate	(1)	5.839	109	780639	29.913
16) Benzaldehyde	(1)	6.299	77	1571971	29.482
17)$Phenol-d6	(1)	6.433	99	4104205	59.873
18) Phenol	(1)	6.449	94	2422918	29.666
19) Aniline	(1)	6.465	93	2876932	29.785
20) a-methylstyrene	(1)	6.545	118	1604282	30.046
22) bis(2-Chloroethyl)ether	(1)	6.588	93	1769633	29.954
23) 2-Chlorophenol	(1)	6.631	128	1434167	30.010
24) 1,3-Dichlorobenzene	(1)	6.866	146	1566453	29.574
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	166377	5.000
26) 1,4-Dichlorobenzene	(1)	6.979	146	1603133	29.631
27) Benzyl alcohol	(1)	7.182	108	1090375	30.196
28) 1,2-Dichlorobenzene	(1)	7.203	146	1502261	29.812
30) Indene	(1)	7.342	115	2760050	29.867
31) 2-Methylphenol	(1)	7.364	108	1531894	29.993
97) Isosafrole	(3)			1220251	30.291
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.412	45	2245483	29.733
34) bis(2-Chloroisopropyl)ether	(1)	7.412	45	2245483	29.733
35) N-Nitrosopyrrolidine	(1)	7.562	100	838226	30.489
36) Acetophenone	(1)	7.588	105	2461145	30.006
37) 4-Methylphenol	(1)	7.615	108	1739296	30.871
38) N-Nitroso-di-n-propylamine	(1)	7.620	70	1362344	29.782
39) N-Nitrosomorpholine	(1)	7.631	56	1007532	29.226
40) o-Toluidine	(1)	7.642	106	2749971	29.818
43) Hexachloroethane	(1)	7.727	117	699869	29.736
44)$Nitrobenzene-d5	(2)	7.818	82	3969954	60.065
45) Nitrobenzene	(2)	7.845	77	2067969	30.217
120) 2,4_2,6-Dinitrotoluenes	(3)			1524389	61.200
48) N-Nitrosopiperidine	(2)	8.080	114	771992	30.359
50) Isophorone	(2)	8.230	82	3537654	30.272
51) 2-Nitrophenol	(2)	8.343	139	708875	31.322

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.444	107	1721413	30.200
57) O,O,O-Triethylphosphorothioate	(2)	8.573	198	794972	30.370
55) bis(2-Chloroethoxy)methane	(2)	8.605	93	2114135	29.739
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.696	104	2551796	30.124
56) Benzoic acid	(2)	8.696	105	1274511M	34.502
60) 2,4-Dichlorophenol	(2)	8.722	162	1226557	30.111
146) Diallate trans/cis	(4)			1563899	29.345
62) 1,2,4-Trichlorobenzene	(2)	8.856	180	1388432	30.058
65)*Naphthalene-d8	(2)	8.936	136	642647	5.000
66) Naphthalene	(2)	8.974	128	4131557	29.214
67) 4-Chloroaniline	(2)	9.081	127	1769980	30.076
68) 2,6-Dichlorophenol	(2)	9.086	162	1185987	30.326
69) Hexachloropropene	(2)	9.123	213	909217	30.814
71) Hexachlorobutadiene	(2)	9.198	225	868650	30.068
75) Quinoline	(2)	9.519	129	2576865	30.032
77) N-Nitrosodi-n-butylamine	(2)	9.664	84	1571149	33.239
76) Caprolactam	(2)	9.674	113	394711A	30.570
80) 4-Chloro-3-methylphenol	(2)	9.899	107	1467148	30.409
82) Safrole	(2)	9.990	162	1099975	30.598
83) 2-Methylnaphthalene	(2)	10.102	142	2755056	30.316
84) 1-Methylnaphthalene	(2)	10.257	142	2539532	30.220
85) Hexachlorocyclopentadiene	(3)	10.370	237	845351	30.701
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.375	216	1475151	30.169
88) cis-Isosafrole	(3)	10.461	162	201069	5.151
90) 2,4,6-Trichlorophenol	(3)	10.573	196	928596	30.994
92) 2,4,5-Trichlorophenol	(3)	10.626	196	956398	29.798
93)$2-Fluorobiphenyl	(3)	10.728	172	6291198	59.398
94) trans-Isosafrole	(3)	10.835	162	1019182	25.140
95) 1,1'-Biphenyl	(3)	10.883	154	3343321	29.664
96) 2-Chloronaphthalene	(3)	10.894	162	2815799	29.860
98) 1-Chloronaphthalene	(3)	10.926	162	2442403	29.568
99) Diphenyl ether	(3)	11.060	170	1865504	29.800
100) 2-Nitroaniline	(3)	11.076	138	817388	30.684
104) 1,4-Naphthoquinone	(3)	11.188	158	1078994	30.052
105) 1,4-Dinitrobenzene	(3)	11.311	168	406159	31.603
106) Dimethylphthalate	(3)	11.418	163	2864255	29.282
107) 1,3-Dinitrobenzene	(3)	11.429	168	454686	31.366
108) 2,6-Dinitrotoluene	(3)	11.488	165	645195	30.226
109) Acenaphthylene	(3)	11.557	152	4063334	31.382
112) 3-Nitroaniline	(3)	11.728	138	709253	30.427

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0213.d
Injection date and time: 05-MAY-2016 19:56
Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15
Sublist used: all1
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30
Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113) *Acenaphthene-d10	(3)	11.771	164	374513	5.000
114) Acenaphthene	(3)	11.819	153	2718673	29.907
115) 2,4-Dinitrophenol	(3)	11.883	184	357672	33.646
116) 4-Nitrophenol	(3)	11.990	109	584971	32.440
117) Pentachlorobenzene	(3)	12.006	250	1192213	30.147
119) Dibenzofuran	(3)	12.065	168	3681230	29.502
118) 2,4-Dinitrotoluene	(3)	12.071	165	879194	30.974
121) 1-Naphthylamine	(3)	12.172	143	2739247	30.133
122) 2,3,4,6-Tetrachlorophenol	(3)	12.231	232	785881	31.063
123) 2-Naphthylamine	(3)	12.279	143	2698801	30.430
124) Diethylphthalate	(3)	12.424	149	2862087	29.893
126) Fluorene	(3)	12.504	166	2943376	30.610
125) Thionazin	(3)	12.514	107	589361	29.713
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	1531982	30.249
128) 5-Nitro-o-toluidine	(3)	12.536	152	817058	30.826
129) 4-Nitroaniline	(3)	12.547	138	724316	30.486
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	499564	33.427
132) NDPA as diphenylamine	(4)	12.680	169	2519758	30.008
131) N-Nitrosodiphenylamine	(4)	12.680	169	2519758	30.008
134) 1,2-Diphenylhydrazine	(4)	12.723	77	3954841	29.258
135) $2,4,6-Tribromophenol	(3)	12.809	330	826886	64.493
137) Tetraethyldithiopyrophosphate	(4)	12.910	97	612193	29.348
139) 1,3,5-Trinitrobenzene	(4)	13.028	213	317225	32.793
140) Diallate (peak 1)	(4)	13.055	86	1286409	24.179
141) Phorate	(4)	13.065	75	2288109	29.441
142) Phenacetin	(4)	13.097	108	1800773	29.953
143) 4-Bromophenyl-phenylether	(4)	13.140	248	845934	30.453
144) Diallate (peak 2)	(4)	13.162	86	277490	5.166
145) Hexachlorobenzene	(4)	13.194	284	872235	30.442
147) Dimethoate	(4)	13.274	87	1416474	29.357
148) Atrazine	(4)	13.376	200	741835	27.906
149) Pentachlorophenol	(4)	13.456	266	581670	32.136
150) 4-Aminobiphenyl	(4)	13.472	169	2384920	29.167
151) Pentachloronitrobenzene	(4)	13.472	237	435247	30.695
152) Pronamide	(4)	13.573	173	1436742	30.069
153) *Phenanthrene-d10	(4)	13.697	188	713963	5.000
154) Dinoseb	(4)	13.713	211	778872	33.647
155) Phenanthrene	(4)	13.734	178	4499427	29.751
157) Anthracene	(4)	13.798	178	4590869	30.791
163) Carbazole	(4)	14.023	167	4160658	29.768

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.226	109	1080574	30.484
165) Di-n-butylphthalate	(4)	14.547	149	5104763	30.091
167) Parathion	(4)	14.788	109	716914	31.205
168) 4-Nitroquinoline-1-oxide	(4)	14.804	190	454798	34.212
222) Total PAHs	(6)			79850033	564.438
169) Octachlorostyrene	(4)	15.146	308	323570	30.405
171) Isodrin	(4)	15.194	193	534781	29.661
173) Fluoranthene	(4)	15.424	202	5161389	31.232
174) Benzidine	(5)	15.670	184	10489174	90.986
175)*Pyrene-d10	(5)	15.740	212	850826	5.000
177) Pyrene	(5)	15.777	202	5532367	29.416
179)$Terphenyl-d14	(5)	16.066	244	7431484	61.863
182) p-Dimethylaminoazobenzene	(5)	16.296	225	976850	31.754
185) Chlorobenzilate	(5)	16.387	139	1579603	30.146
187) 3,3'-Dimethylbenzidine	(5)	16.868	212	3470080	31.146
188) Butylbenzylphthalate	(5)	16.927	149	2350440	30.358
191) 2-Acetylaminofluorene	(5)	17.307	181	2103700	32.329
193) 3,3'-Dichlorobenzidine	(5)	17.815	252	1976155	31.556
195) Benzo(a)anthracene	(5)	17.826	228	5361767	33.444
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.831	231	1095472	31.384
196) Chrysene	(5)	17.890	228	4855221	32.070
199) bis(2-Ethylhexyl)phthalate	(5)	18.008	149	3451743	30.819
203) 6-Methylchrysene	(5)	18.703	242	3457992	31.143
205) Di-n-octylphthalate	(6)	19.190	149	6125223	30.256
206) Benzo(b)fluoranthene	(6)	19.708	252	5391857	32.909
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.714	256	2435154	31.253
208) Benzo(k)fluoranthene	(6)	19.762	252	5164056	31.982
211) Benzo(a)pyrene	(6)	20.243	252	4991418	33.393
213)*Perylene-d12	(6)	20.323	264	665081	5.000
215) 3-Methylcholanthrene	(6)	20.816	268	2149750	31.549
217) Dibenz(a,h)acridine	(6)	21.639	279	4080167	31.019
218) Dibenz(a,j)acridine	(6)	21.719	279	4123278	30.779
219) Indeno(1,2,3-cd)pyrene	(6)	21.987	276	5680216	32.791
220) Dibenz(a,h)anthracene	(6)	22.024	278	4841560	33.453
221) Benzo(g,h,i)perylene	(6)	22.404	276	4628358	31.558

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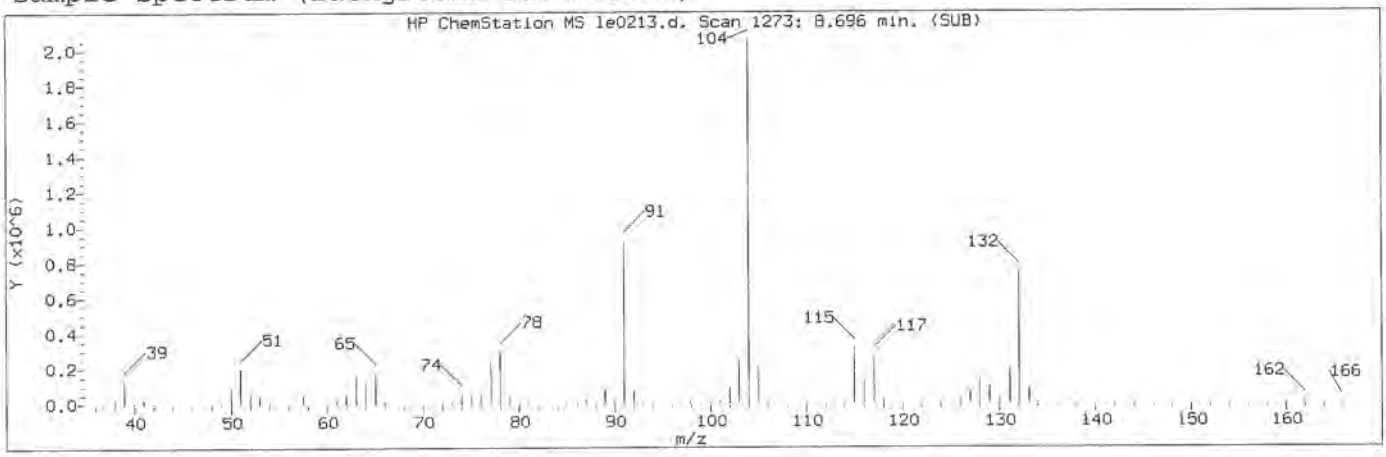
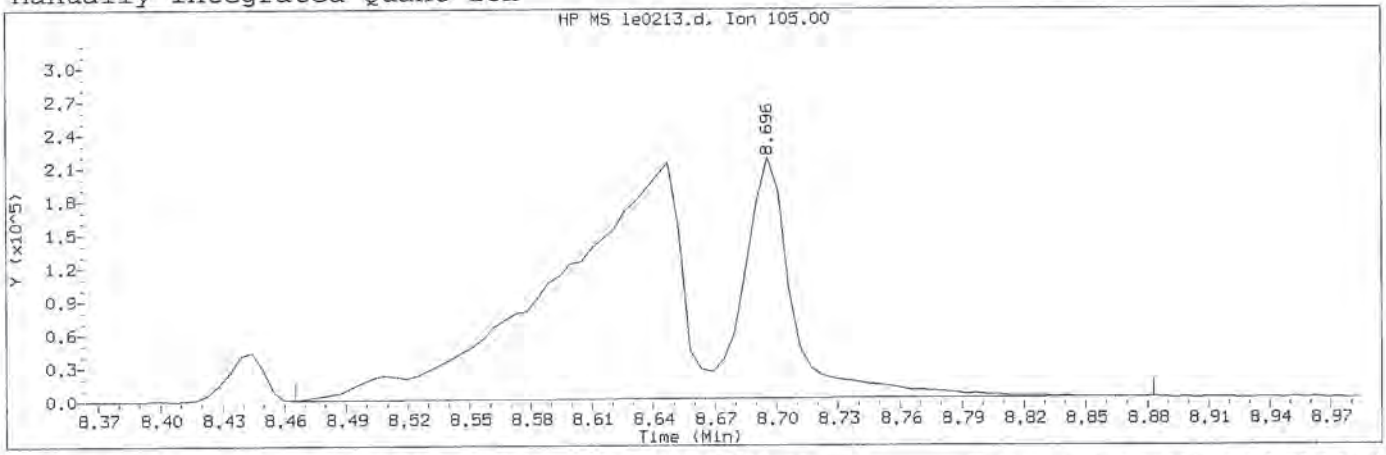
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1273		
Retention Time (minutes)	: 8.696		
Quant Ion	: 105.00		
Area (flag)	: 1274511M		
On-Column Amount (ng/ul)	: 34.5024		
Integration start scan	: 1229	Integration stop scan:	1307
Y at integration start	: 1200	Y at integration end:	3065

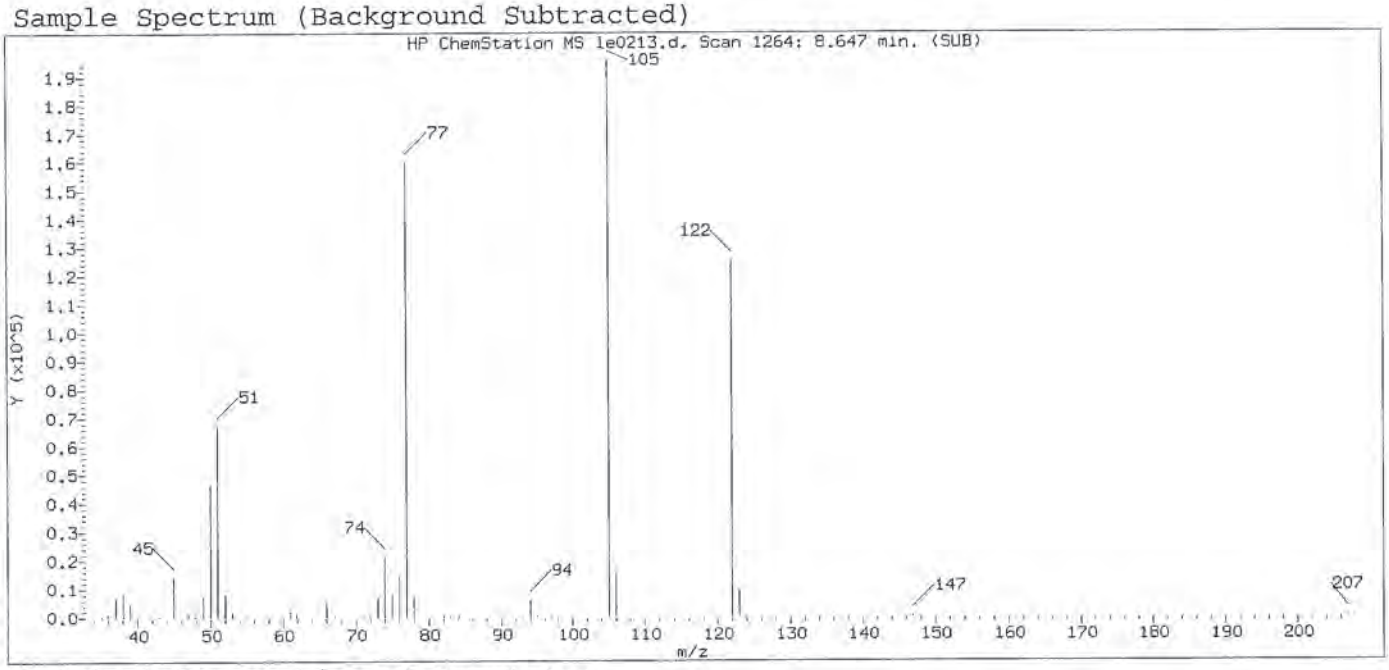
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:32.
Target 3.5 esignature user ID: hbz01996

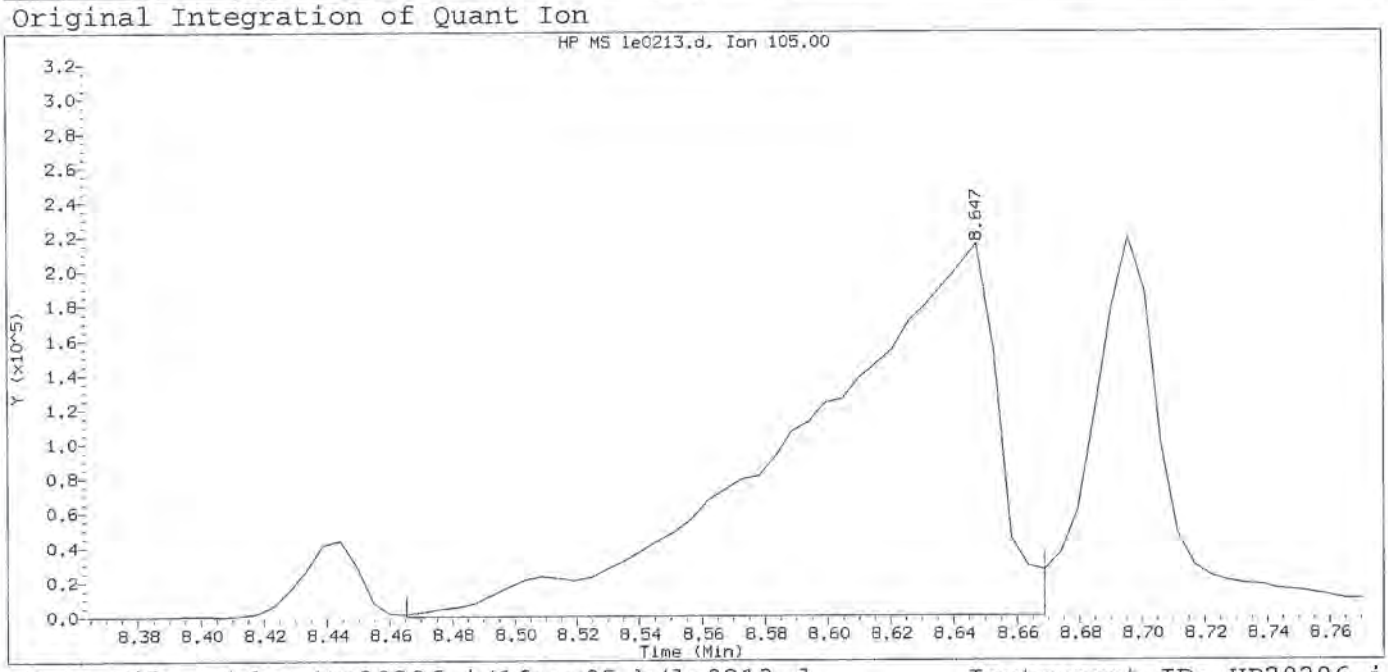
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 20:23
Date, time and analyst ID of latest file update: 05-May-2016 20:23 Unknown

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1264		
Retention Time (minutes)	: 8.647		
Quant Ion	: 105.00		
Area	: 931418		
On-column Amount (ng/ul)	: 30.8255		
Integration start scan	: 1229	Integration stop scan:	1267
Y at integration start	: 0	Y at integration end:	0

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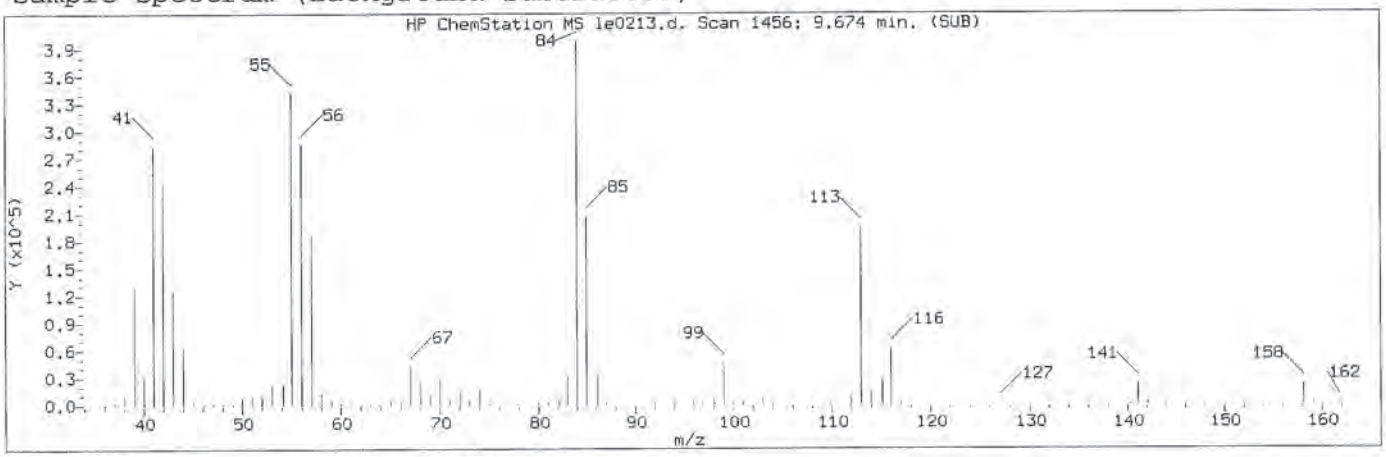
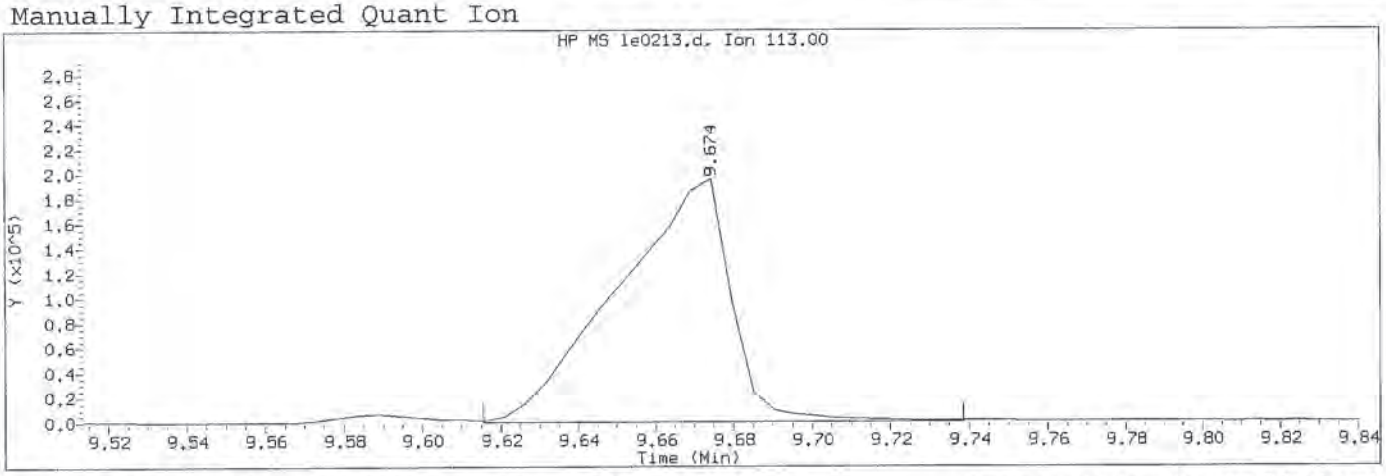
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1456		
Retention Time (minutes)	: 9.674		
Quant Ion	: 113.00		
Area (flag)	: 394711A		
On-Column Amount (ng/ul)	: 30.5699		
Integration start scan	: 1444	Integration stop scan:	1467
Y at integration start	: 0	Y at integration end:	0

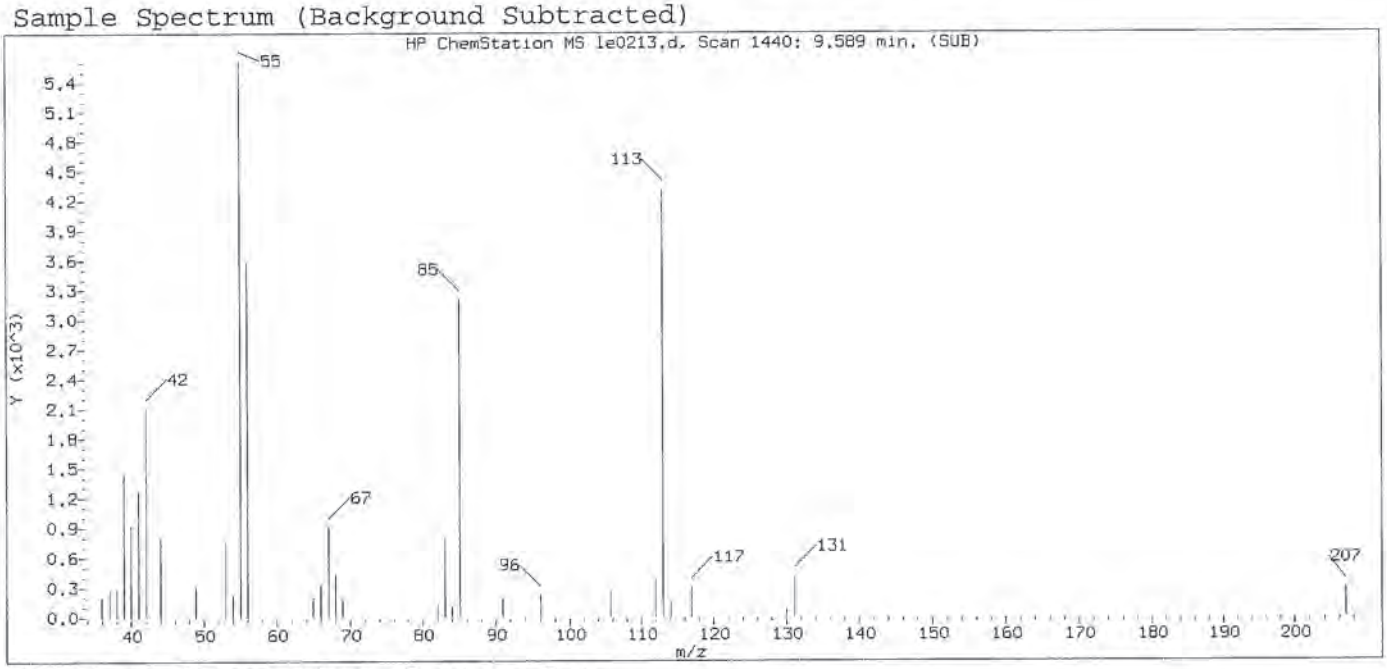
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:32. Target 3.5 signature user ID: hbz01996

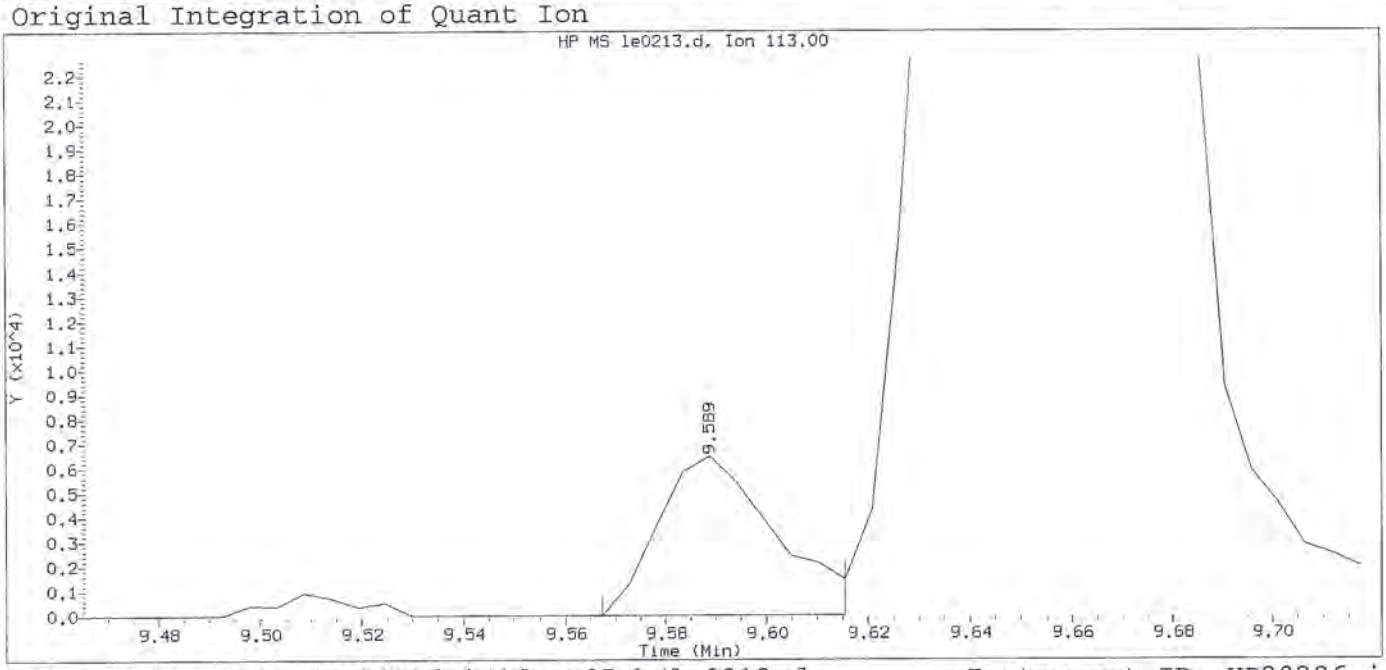
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0213.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 19:56 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 20:23
Date, time and analyst ID of latest file update: 05-May-2016 20:23 Unknown

Sample Name: SSTD30 Lab Sample ID: RVSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1440		
Retention Time (minutes)	: 9.589		
Quant Ion	: 113.00		
Area	: 10184		
On-column Amount (ng/ul)	: 0.8241		
Integration start scan	: 1435	Integration stop scan:	1444
Y at integration start	: 0	Y at integration end:	0

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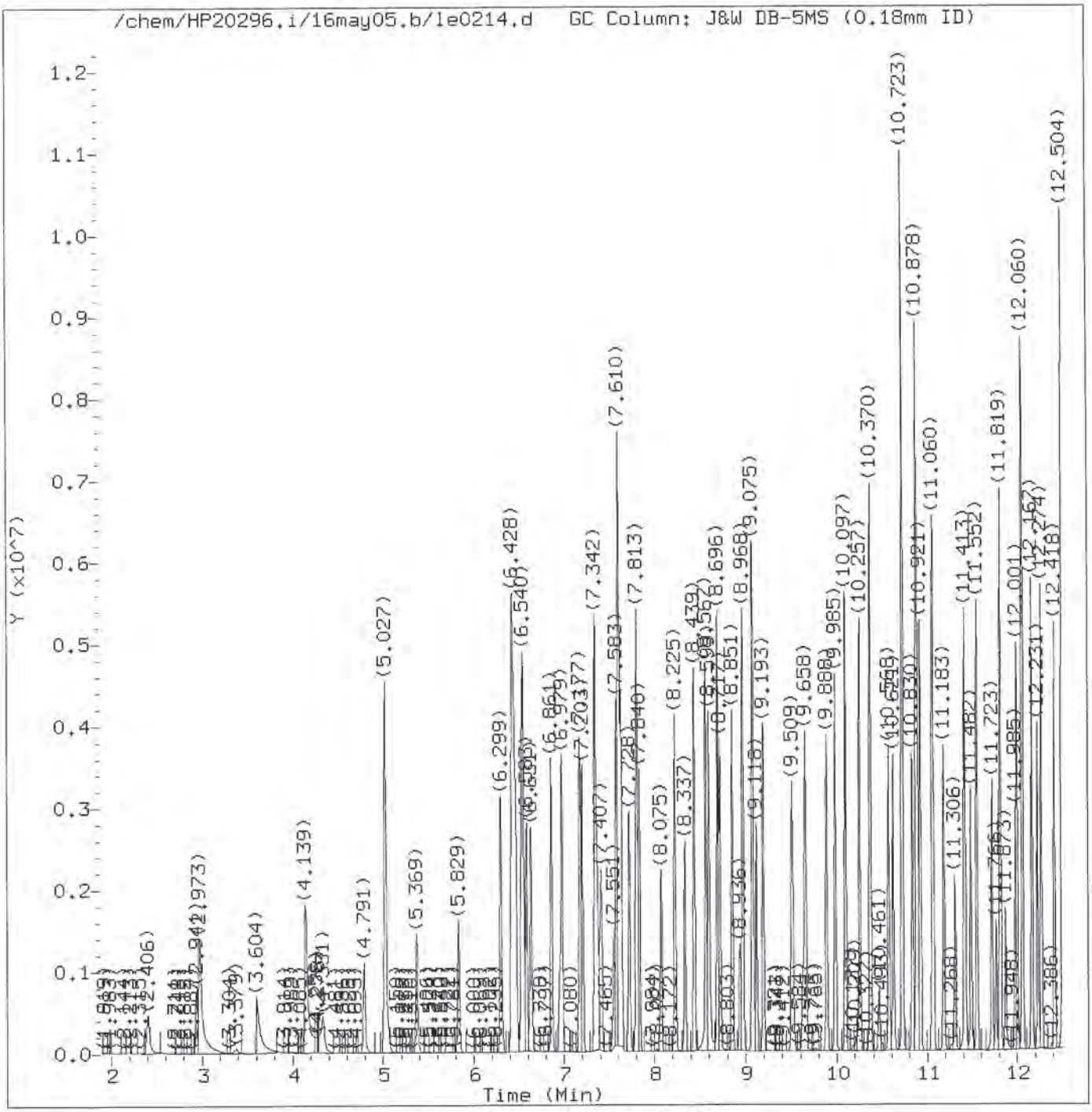
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d
Injection date and time: 05-MAY-2016 20:25

Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15

Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20

Lab Sample ID: RVSTD0816

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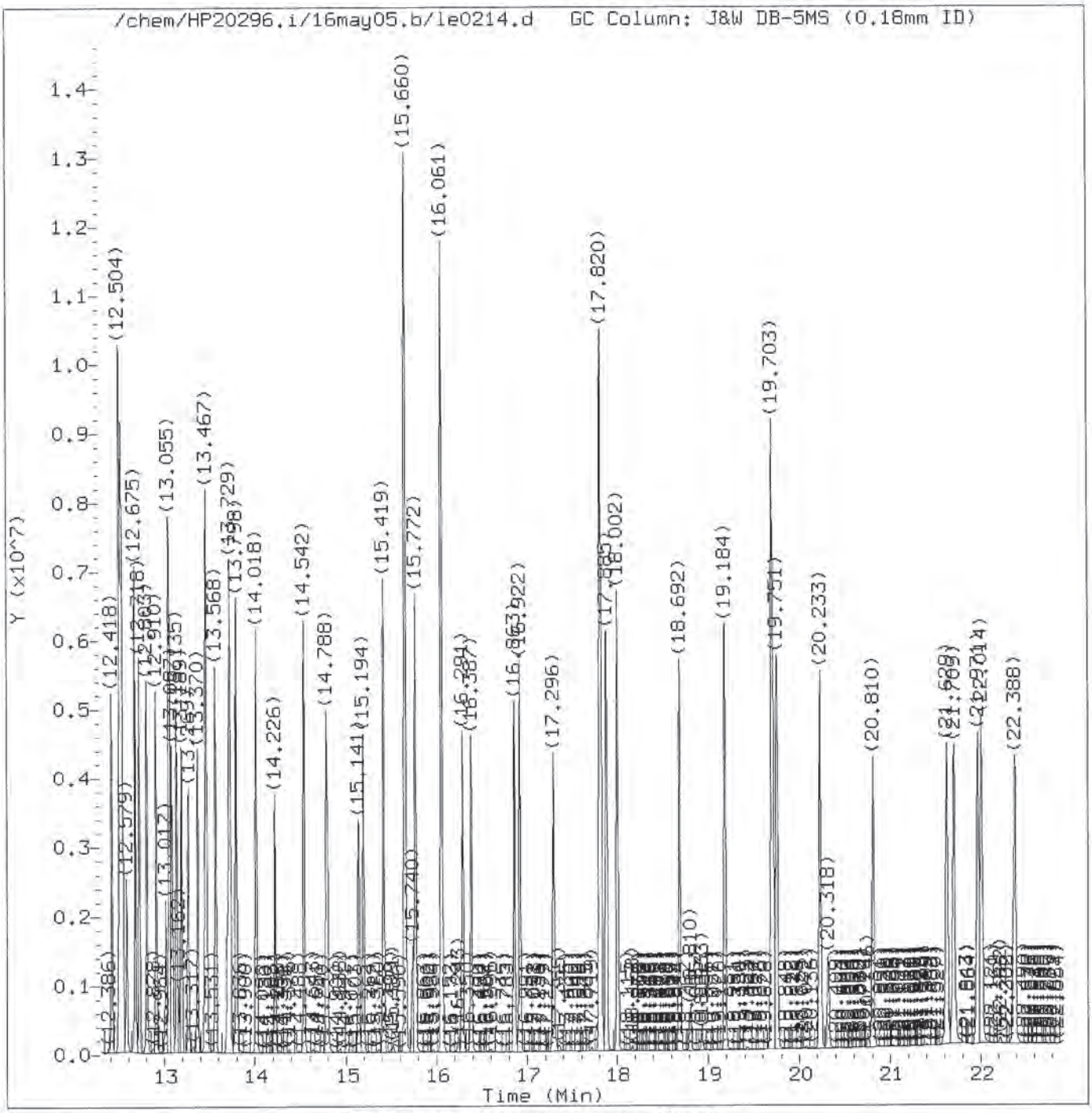
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d
Injection date and time: 05-MAY-2016 20:25

Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15

Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20

Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	499798	19.744
4) N-Nitrosodimethylamine	(1)	2.941	74	798012	20.111
5) Pyridine	(1)	2.973	79	1351433	19.956
7) 2-Picoline	(1)	4.139	93	1373524	19.904
8) N-Nitrosomethylethylamine	(1)	4.331	88	547807	19.968
9) Methyl methanesulfonate	(1)	4.791	80	639059	19.835
11)$2-Fluorophenol	(1)	5.027	112	2091991	39.736
13) N-Nitrosodiethylamine	(1)	5.369	102	529283	20.033
42) Total Cresols	(1)			2218278	40.184
15) Ethyl methanesulfonate	(1)	5.829	109	526547	19.794
16) Benzaldehyde	(1)	6.294	77	1107598	20.182
17)$Phenol-d6	(1)	6.423	99	2788470	39.802
18) Phenol	(1)	6.444	94	1655737	19.858
19) Aniline	(1)	6.460	93	1948892	19.794
20) a-methylstyrene	(1)	6.546	118	1065892	19.653
22) bis(2-Chloroethyl)ether	(1)	6.583	93	1194889	19.826
23) 2-Chlorophenol	(1)	6.631	128	965783	19.816
24) 1,3-Dichlorobenzene	(1)	6.861	146	1063902	19.735
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	170462	5.000
26) 1,4-Dichlorobenzene	(1)	6.979	146	1077744	19.625
27) Benzyl alcohol	(1)	7.177	108	722802	19.689
28) 1,2-Dichlorobenzene	(1)	7.203	146	1019388	19.829
30) Indene	(1)	7.342	115	1850552	19.695
31) 2-Methylphenol	(1)	7.359	108	1036455	19.871
97) Isosafrole	(3)			819752	20.076
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	1508787	19.664
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	1508787	19.664
35) N-Nitrosopyrrolidine	(1)	7.551	100	565793	20.057
36) Acetophenone	(1)	7.583	105	1689319	20.068
37) 4-Methylphenol	(1)	7.605	108	1181823	20.313
38) N-Nitroso-di-n-propylamine	(1)	7.610	70	927652	19.862
39) N-Nitrosomorpholine	(1)	7.621	56	689506	19.678
40) o-Toluidine	(1)	7.637	106	1848913	19.710
43) Hexachloroethane	(1)	7.728	117	471001	19.686
44)$Nitrobenzene-d5	(2)	7.813	82	2708615	39.958
45) Nitrobenzene	(2)	7.840	77	1403601	19.991
120) 2,4_2,6-Dinitrotoluenes	(3)			1040923	40.859
48) N-Nitrosopiperidine	(2)	8.075	114	516800	19.870
50) Isophorone	(2)	8.225	82	2393555	19.973
51) 2-Nitrophenol	(2)	8.337	139	482018	20.497

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.439	107	1159225	19.879
57) O,O,O-Triethylphosphorothioate	(2)	8.567	198	537311	20.002
55) bis(2-Chloroethoxy)methane	(2)	8.599	93	1454965	19.963
56) Benzoic acid	(2)	8.615	105	852177M	21.589
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.696	104	1710687	19.786
60) 2,4-Dichlorophenol	(2)	8.717	162	832203	19.939
146) Diallate trans/cis	(4)			1059819	20.090
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	934994	19.816
65)*Naphthalene-d8	(2)	8.936	136	659453	5.000
66) Naphthalene	(2)	8.968	128	2794887	19.439
67) 4-Chloroaniline	(2)	9.075	127	1198627	19.899
68) 2,6-Dichlorophenol	(2)	9.086	162	789923	19.788
69) Hexachloropropene	(2)	9.124	213	610807	20.115
71) Hexachlorobutadiene	(2)	9.198	225	587347	19.875
75) Quinoline	(2)	9.509	129	1757762	19.976
76) Caprolactam	(2)	9.642	113	265736M	20.038
77) N-Nitrosodi-n-butylamine	(2)	9.658	84	1069799	21.325
80) 4-Chloro-3-methylphenol	(2)	9.888	107	996284	20.082
82) Safrole	(2)	9.985	162	729452	19.849
83) 2-Methylnaphthalene	(2)	10.097	142	1857487	19.939
84) 1-Methylnaphthalene	(2)	10.257	142	1709048	19.864
85) Hexachlorocyclopentadiene	(3)	10.370	237	564820	20.184
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	985216	19.945
88) cis-Isosafrole	(3)	10.461	162	133174	3.382
90) 2,4,6-Trichlorophenol	(3)	10.568	196	620518	20.313
92) 2,4,5-Trichlorophenol	(3)	10.621	196	651370	20.041
93)$2-Fluorobiphenyl	(3)	10.723	172	4203369	39.483
94) trans-Isosafrole	(3)	10.830	162	686578	16.694
95) 1,1'-Biphenyl	(3)	10.878	154	2264013	19.904
96) 2-Chloronaphthalene	(3)	10.889	162	1821795	19.389
98) 1-Chloronaphthalene	(3)	10.921	162	1722967	20.408
99) Diphenyl ether	(3)	11.060	170	1245756	19.780
100) 2-Nitroaniline	(3)	11.070	138	538494	19.988
104) 1,4-Naphthoquinone	(3)	11.183	158	737211	20.197
105) 1,4-Dinitrobenzene	(3)	11.311	168	270985	20.554
106) Dimethylphthalate	(3)	11.413	163	1967861	19.924
107) 1,3-Dinitrobenzene	(3)	11.423	168	302429	20.411
108) 2,6-Dinitrotoluene	(3)	11.488	165	440101	20.252
109) Acenaphthylene	(3)	11.552	152	2738107	20.670
112) 3-Nitroaniline	(3)	11.723	138	476901	20.149

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.766	164	378867	5.000
114) Acenaphthene	(3)	11.814	153	1828642	19.914
115) 2,4-Dinitrophenol	(3)	11.878	184	236915	21.309
116) 4-Nitrophenol	(3)	11.985	109	404451	21.397
117) Pentachlorobenzene	(3)	12.001	250	803146	20.050
119) Dibenzofuran	(3)	12.060	168	2507658	19.910
118) 2,4-Dinitrotoluene	(3)	12.065	165	600822	20.606
121) 1-Naphthylamine	(3)	12.167	143	1828938	19.925
122) 2,3,4,6-Tetrachlorophenol	(3)	12.231	232	516416	20.118
123) 2-Naphthylamine	(3)	12.274	143	1832256	20.279
124) Diethylphthalate	(3)	12.418	149	1971391	20.234
126) Fluorene	(3)	12.504	166	1955355	20.076
125) Thionazin	(3)	12.509	107	405978	20.154
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	1022578	19.973
128) 5-Nitro-o-toluidine	(3)	12.531	152	542745	20.160
129) 4-Nitroaniline	(3)	12.541	138	479904	19.978
130) 4,6-Dinitro-2-methylphenol	(4)	12.579	198	329394	21.487
132) NDPA as diphenylamine	(4)	12.675	169	1665452	20.054
131) N-Nitrosodiphenylamine	(4)	12.675	169	1665452	20.054
134) 1,2-Diphenylhydrazine	(4)	12.718	77	2657058	19.935
135)$2,4,6-Tribromophenol	(3)	12.803	330	534755	40.811
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	420695	20.278
139) 1,3,5-Trinitrobenzene	(4)	13.017	213	211921	21.403
140) Diallate (peak 1)	(4)	13.055	86	877300	16.663
141) Phorate	(4)	13.060	75	1570512	20.304
142) Phenacetin	(4)	13.087	108	1214291	20.298
143) 4-Bromophenyl-phenylether	(4)	13.135	248	559267	20.255
144) Diallate (peak 2)	(4)	13.162	86	182519	3.427
145) Hexachlorobenzene	(4)	13.194	284	572158	20.163
147) Dimethoate	(4)	13.269	87	971151	20.251
148) Atrazine	(4)	13.370	200	535590	20.264
149) Pentachlorophenol	(4)	13.451	266	377458	20.729
150) 4-Aminobiphenyl	(4)	13.467	169	1637021	20.180
151) Pentachloronitrobenzene	(4)	13.467	237	290148	20.473
152) Pronamide	(4)	13.568	173	968518	20.345
153)*Phenanthrene-d10	(4)	13.697	188	705162	5.000
154) Dinoseb	(4)	13.713	211	497127	21.130
155) Phenanthrene	(4)	13.729	178	2988240	20.004
157) Anthracene	(4)	13.798	178	3059895	20.578
163) Carbazole	(4)	14.018	167	2781396	20.099

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.226	109	735721	20.665
165) Di-n-butylphthalate	(4)	14.542	149	3446182	20.375
167) Parathion	(4)	14.782	109	469267	20.449
168) 4-Nitroquinoline-1-oxide	(4)	14.798	190	297890	21.715
222) Total PAHs	(6)			52812341	370.771
169) Octachlorostyrene	(4)	15.146	308	211288	20.068
171) Isodrin	(4)	15.194	193	362145	20.223
173) Fluoranthene	(4)	15.419	202	3481166	20.979
174) Benzidine	(5)	15.660	184	7064794	60.813
175)*Pyrene-d10	(5)	15.740	212	851591	5.000
177) Pyrene	(5)	15.772	202	3686317	19.685
179)$Terphenyl-d14	(5)	16.061	244	4887246	40.429
182) p-Dimethylaminoazobenzene	(5)	16.291	225	642307	20.566
185) Chlorobenzilate	(5)	16.387	139	1064287	20.194
187) 3,3'-Dimethylbenzidine	(5)	16.863	212	2326674	20.568
188) Butylbenzylphthalate	(5)	16.922	149	1575099	20.216
191) 2-Acetylaminofluorene	(5)	17.296	181	1366377	20.642
193) 3,3'-Dichlorobenzidine	(5)	17.804	252	1272050	20.195
195) Benzo(a)anthracene	(5)	17.820	228	3490040	21.284
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.826	231	713739	20.284
196) Chrysene	(5)	17.885	228	3241675	21.027
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	2315017	20.429
203) 6-Methylchrysene	(5)	18.692	242	2243561	20.125
205) Di-n-octylphthalate	(6)	19.184	149	4032991	20.187
206) Benzo(b)fluoranthene	(6)	19.703	252	3420851	20.929
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.709	256	1539029	20.073
208) Benzo(k)fluoranthene	(6)	19.751	252	3365744	20.903
211) Benzo(a)pyrene	(6)	20.233	252	3201144	21.323
213)*Perylene-d12	(6)	20.318	264	653240	5.000
215) 3-Methylcholanthrene	(6)	20.810	268	1370369	20.315
217) Dibenz(a,h)acridine	(6)	21.629	279	2654093	20.359
218) Dibenz(a,j)acridine	(6)	21.709	279	2706956	20.378
219) Indeno(1,2,3-cd)pyrene	(6)	21.971	276	3750227	21.493
220) Dibenz(a,h)anthracene	(6)	22.014	278	3142126	21.538
221) Benzo(g,h,i)perylene	(6)	22.388	276	3101390	21.126

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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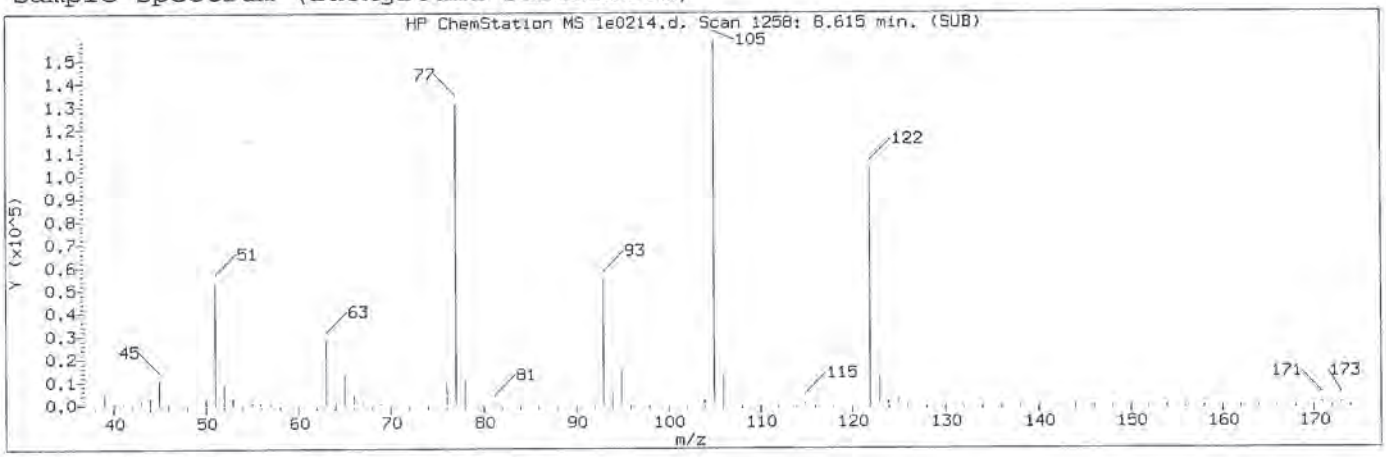
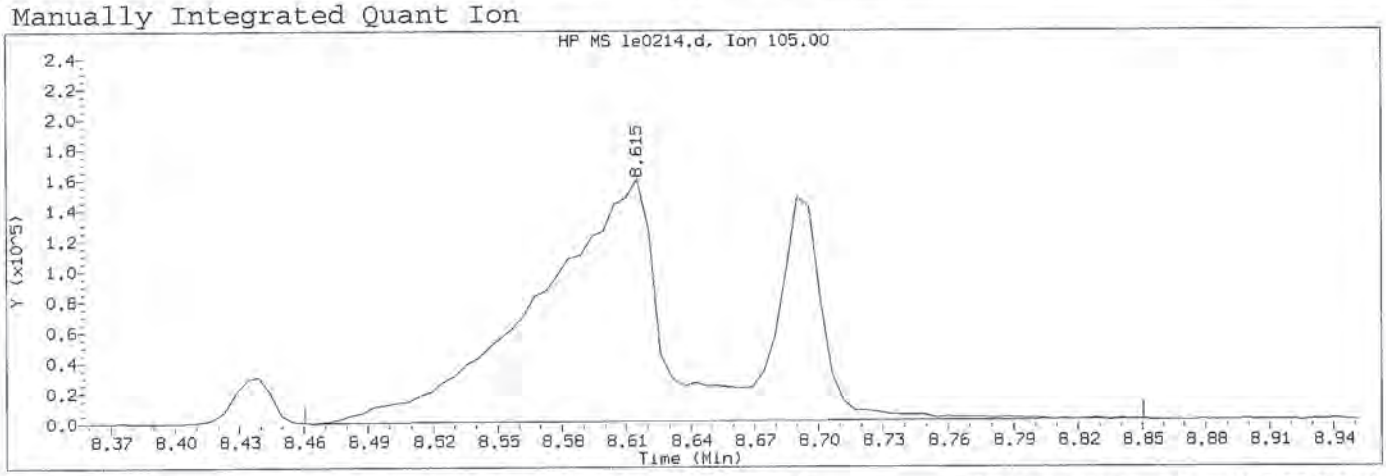
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1258		
Retention Time (minutes)	: 8.615		
Quant Ion	: 105.00		
Area (flag)	: 852177M		
On-Column Amount (ng/ul)	: 21.5886		
Integration start scan	: 1228	Integration stop scan:	1301
Y at integration start	: 477	Y at integration end:	1804

Reason for manual integration: improper integration

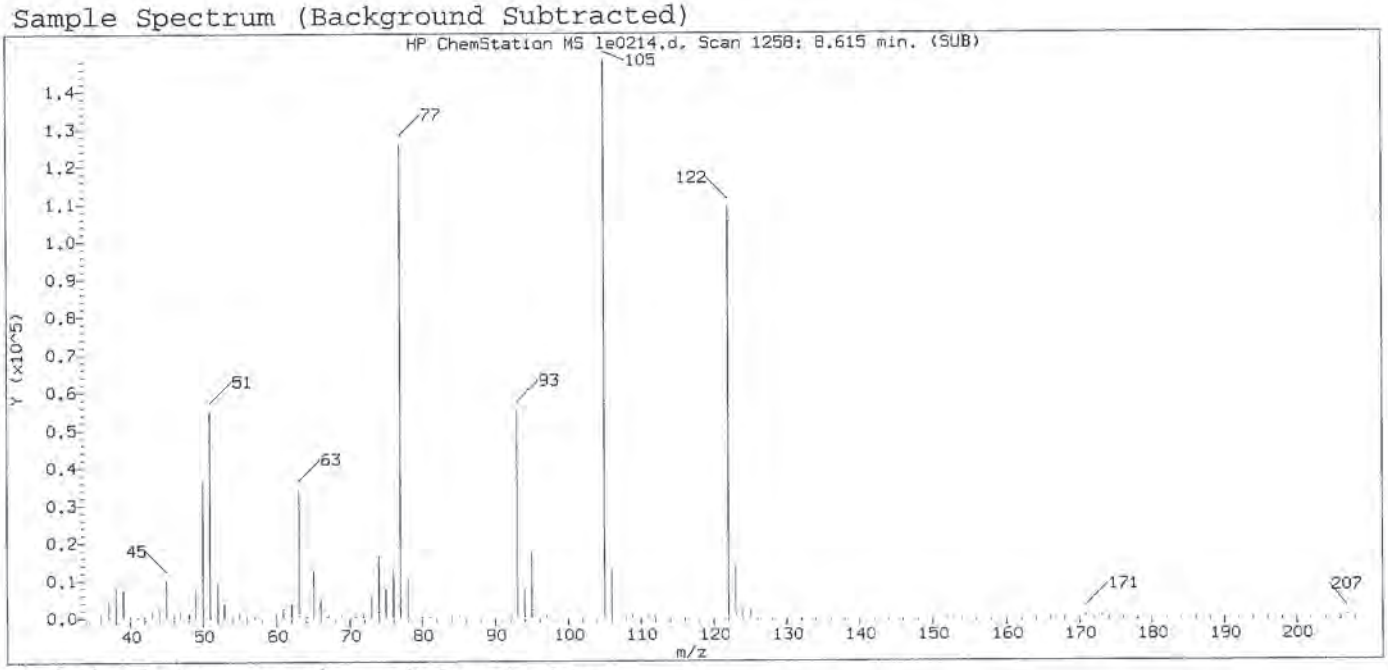
Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 signature user ID: hbz01996

MAY 06 2016

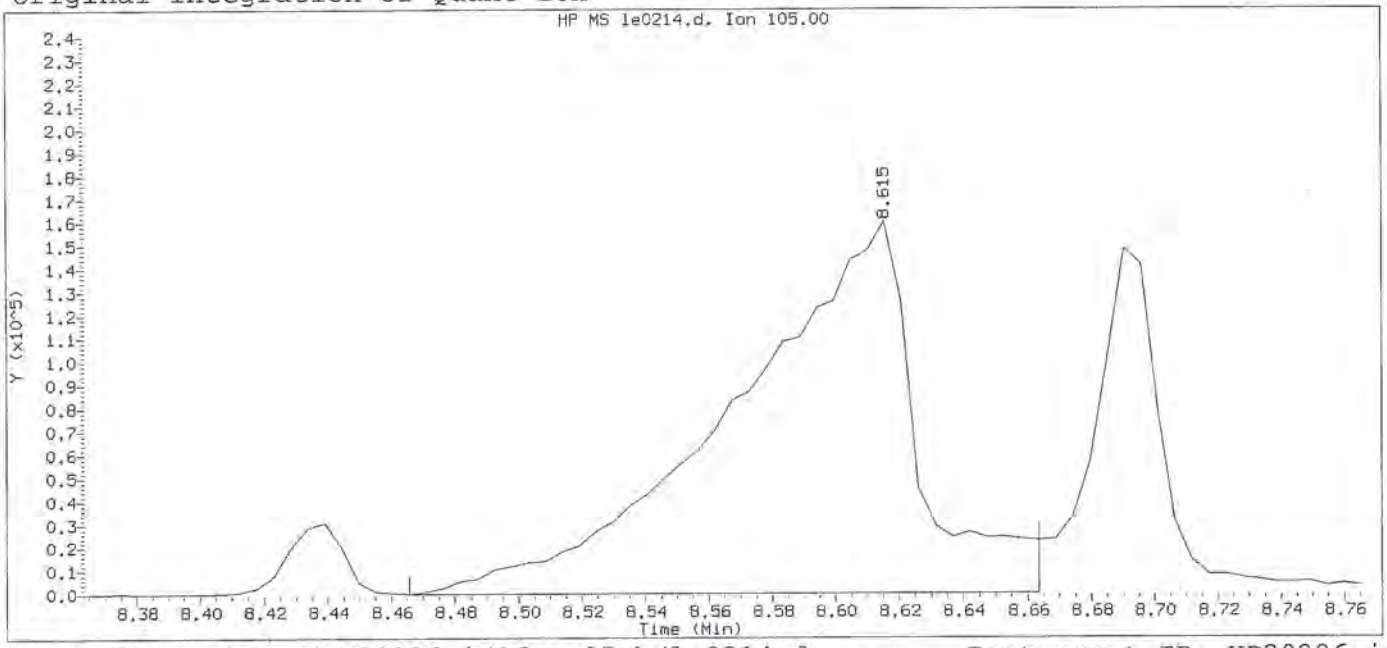
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

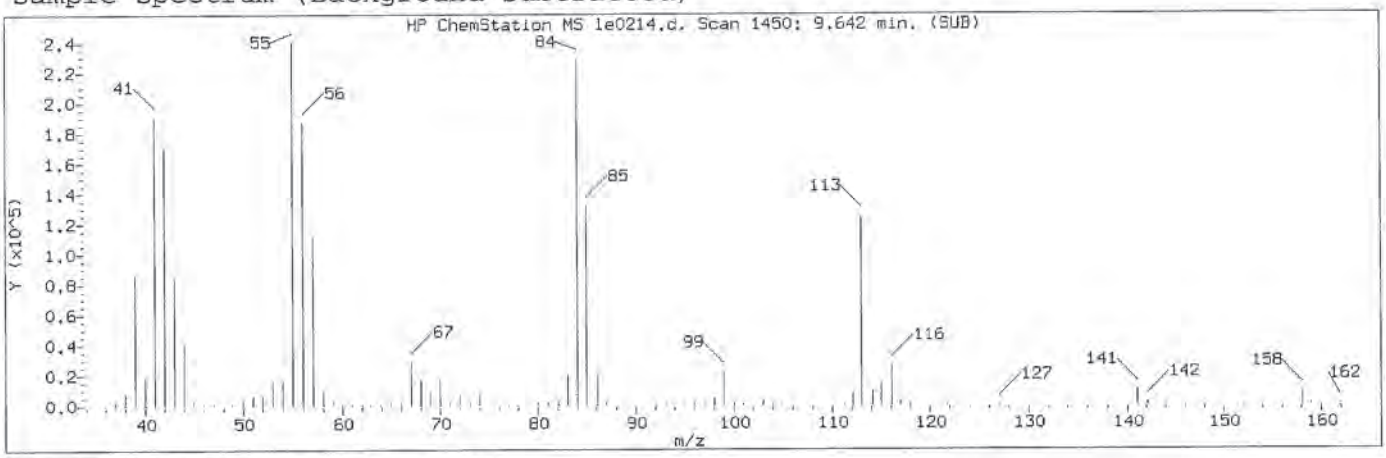
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 20:51
Date, time and analyst ID of latest file update: 05-May-2016 20:51 Unknown

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

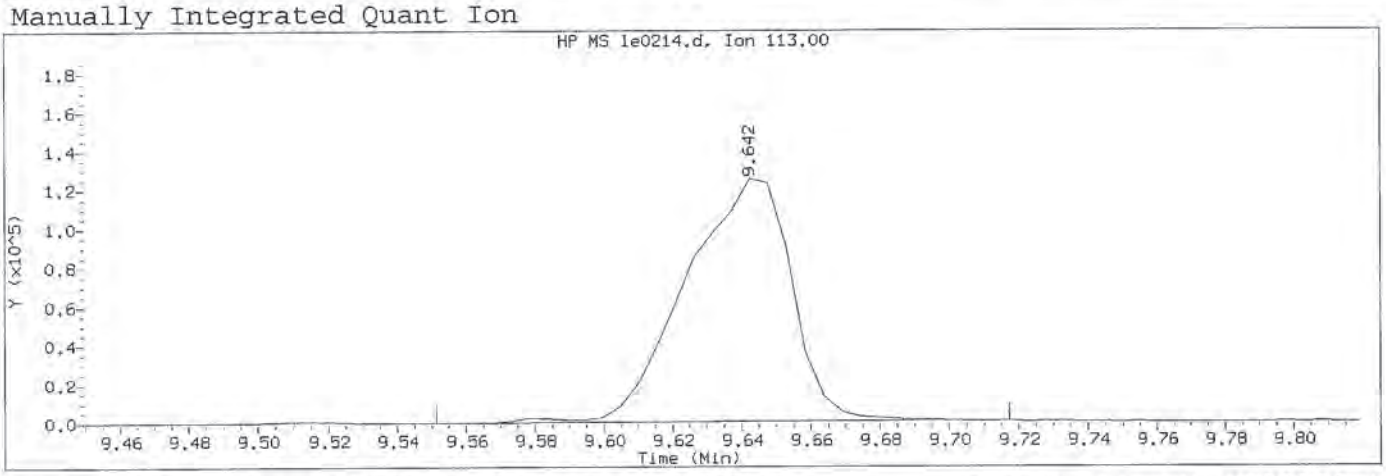
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1258		
Retention Time (minutes)	: 8.615		
Quant Ion	: 105.00		
Area	: 642870		
On-column Amount (ng/ul)	: 21.7760		
Integration start scan	: 1229	Integration stop scan:	1266
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1450		
Retention Time (minutes)	: 9.642		
Quant Ion	: 113.00		
Area (flag)	: 265736M		
On-Column Amount (ng/ul)	: 20.0376		
Integration start scan	: 1432	Integration stop scan:	1463
Y at integration start	: 0	Y at integration end:	868

Reason for manual integration: improper integration

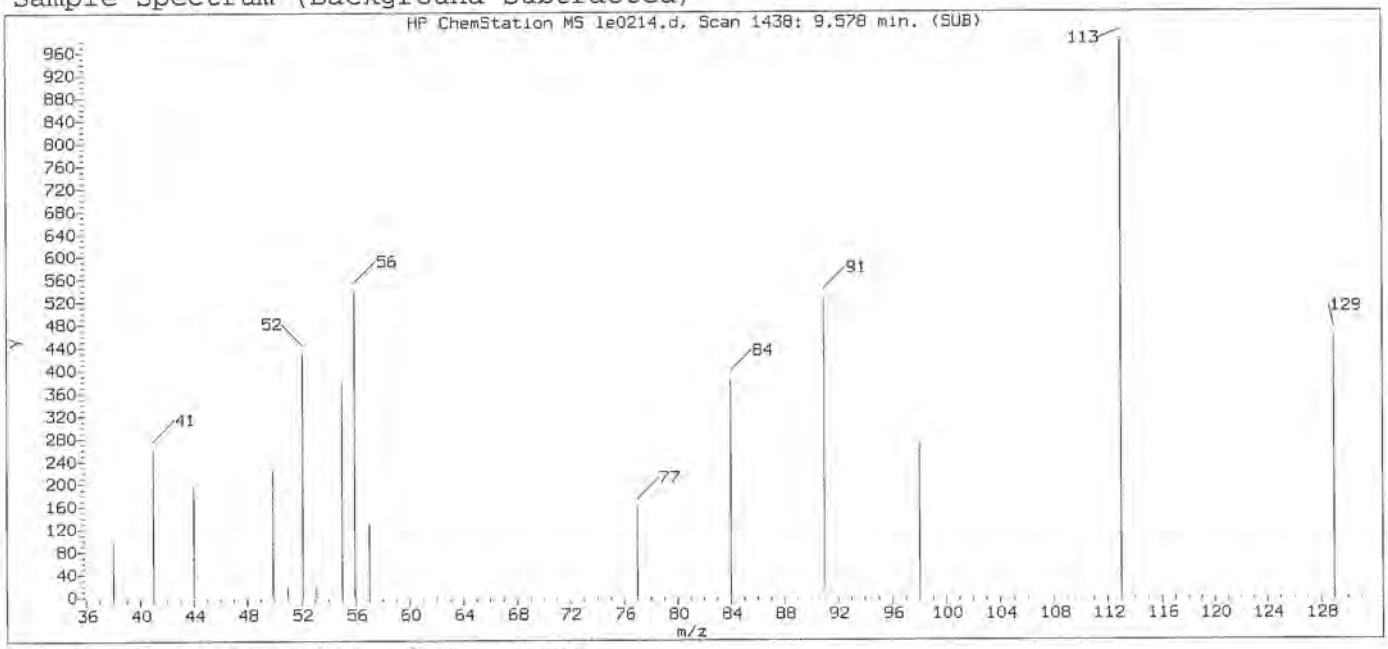
Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 esignature user ID: hbz01996

MAY 06 2016

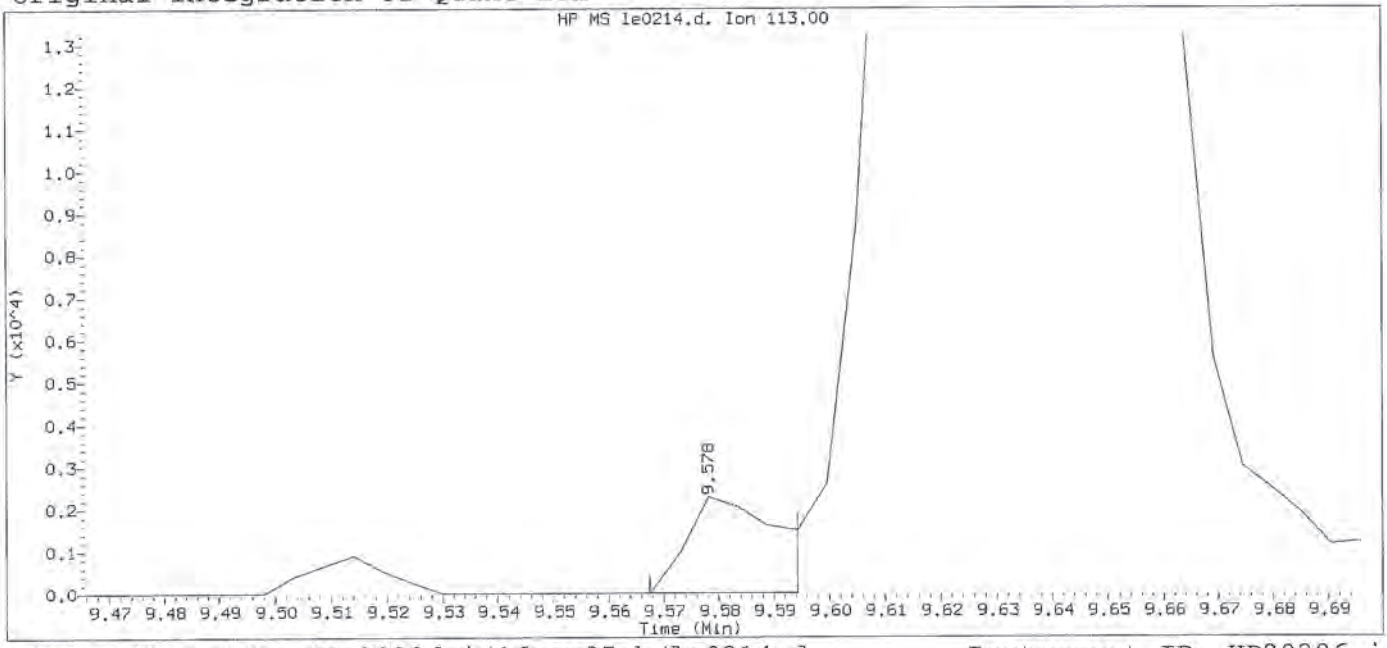
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0214.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:25 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 20:51
Date, time and analyst ID of latest file update: 05-May-2016 20:51 Unknown

Sample Name: SSTD20 Lab Sample ID: RVSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1438		
Retention Time (minutes)	: 9.578		
Quant Ion	: 113.00		
Area	: 2451		
On-column Amount (ng/ul)	: 0.1933		
Integration start scan	: 1435	Integration stop scan:	1440
Y at integration start	: 0	Y at integration end:	0

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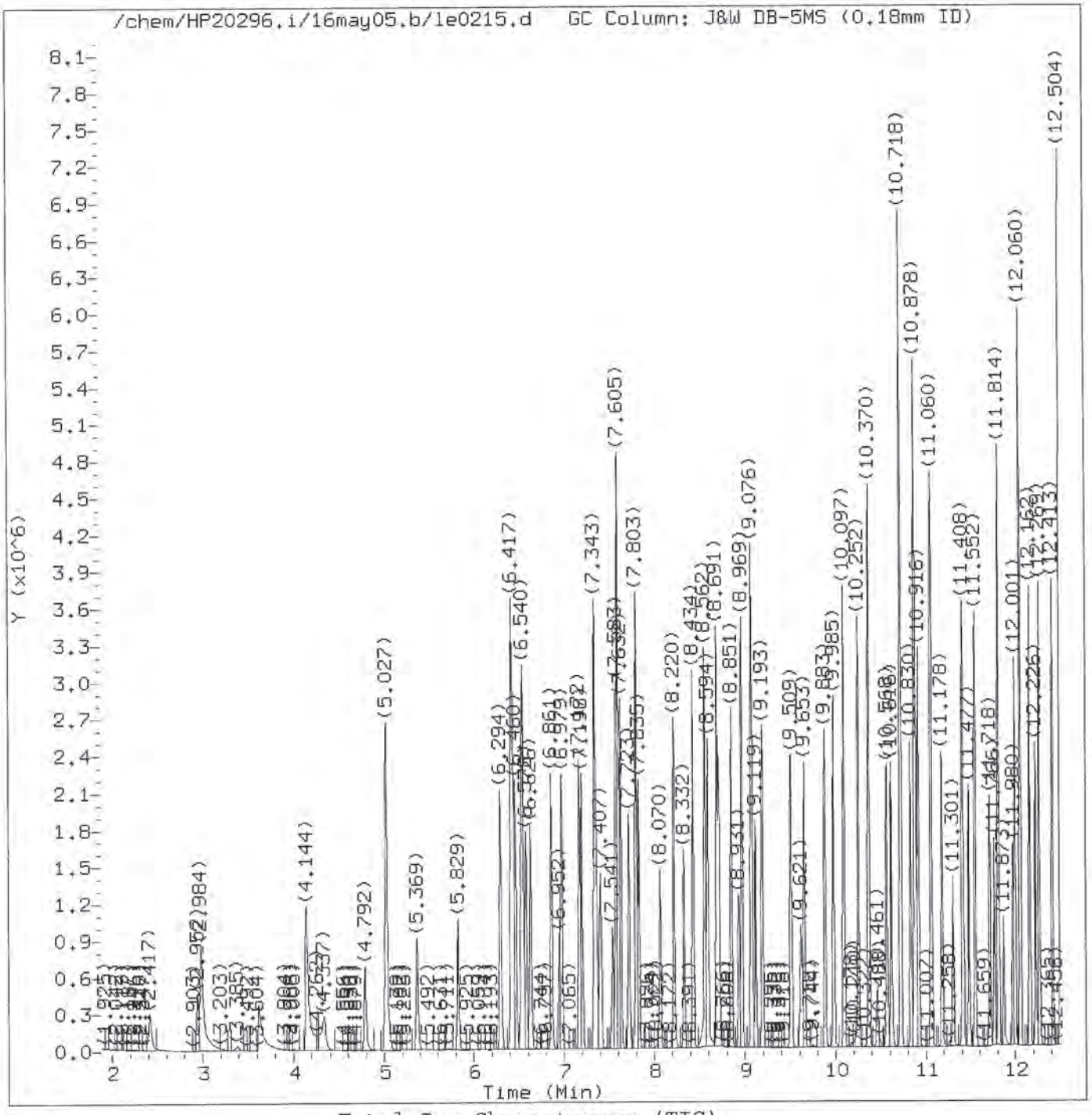
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

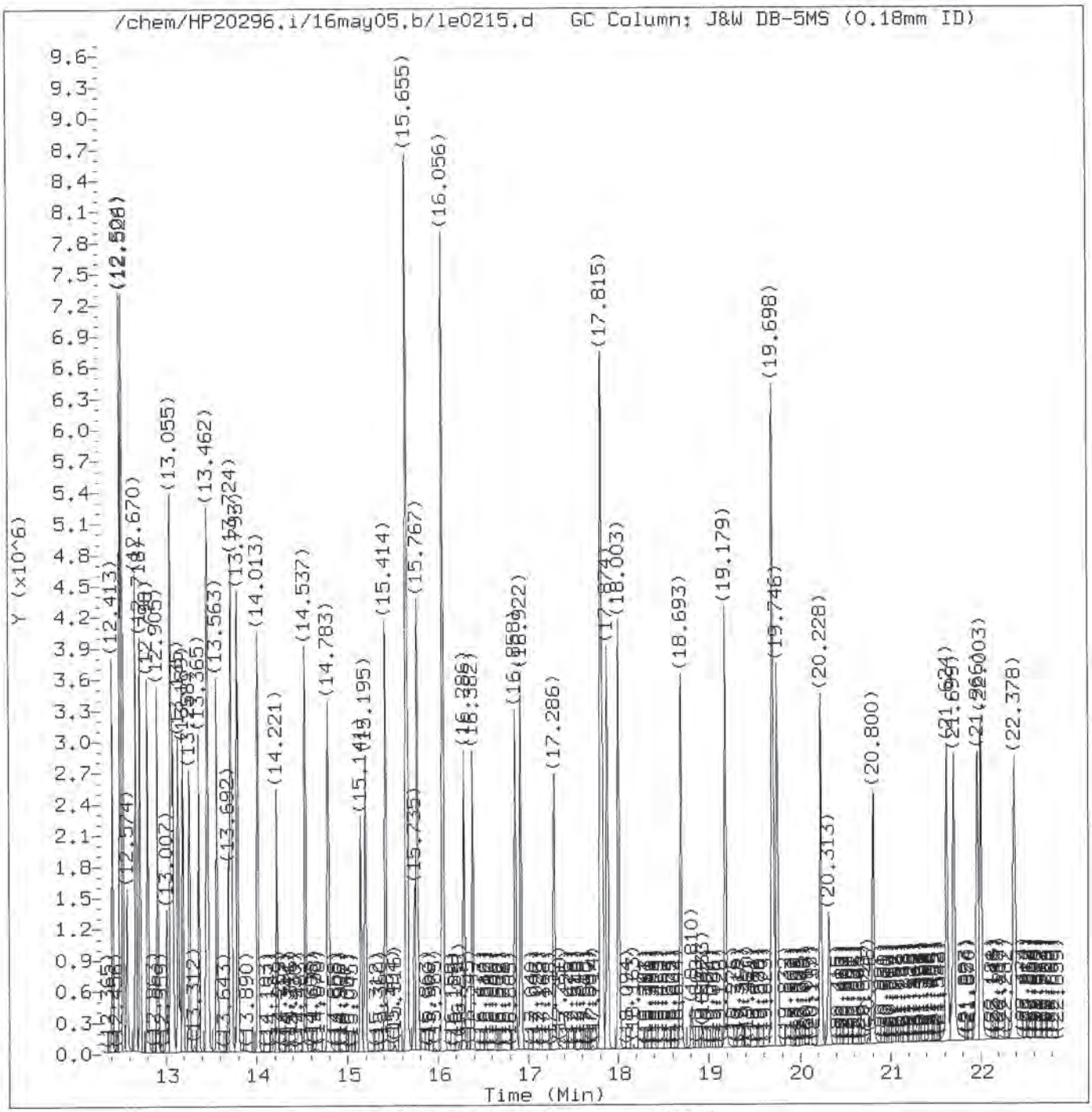
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.417	88	308048	12.307
4) N-Nitrosodimethylamine	(1)	2.952	74	488171	12.409
5) Pyridine	(1)	2.984	79	833491	12.413
7) 2-Picoline	(1)	4.144	93	844798	12.363
8) N-Nitrosomethylethylamine	(1)	4.337	88	339405	12.461
9) Methyl methanesulfonate	(1)	4.792	80	395951	12.398
11)$2-Fluorophenol	(1)	5.027	112	1286130	24.683
13) N-Nitrosodiethylamine	(1)	5.369	102	326678	12.455
42) Total Cresols	(1)			1332871	24.498
15) Ethyl methanesulfonate	(1)	5.829	109	329940	12.485
16) Benzaldehyde	(1)	6.294	77	702163	12.778
17)$Phenol-d6	(1)	6.417	99	1745435	25.051
18) Phenol	(1)	6.439	94	1024197	12.394
19) Aniline	(1)	6.460	93	1206327	12.371
20) a-methylstyrene	(1)	6.540	118	665238	12.381
22) bis(2-Chloroethyl)ether	(1)	6.578	93	739311	12.382
23) 2-Chlorophenol	(1)	6.626	128	607639	12.533
24) 1,3-Dichlorobenzene	(1)	6.861	146	655819	12.304
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	169417	5.000
26) 1,4-Dichlorobenzene	(1)	6.979	146	670944	12.344
27) Benzyl alcohol	(1)	7.172	108	455570	12.490
28) 1,2-Dichlorobenzene	(1)	7.198	146	634226	12.435
30) Indene	(1)	7.337	115	1146901	12.335
31) 2-Methylphenol	(1)	7.354	108	644756	12.453
97) Isosafrole	(3)			513714	12.567
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	935023	12.320
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	935023	12.320
35) N-Nitrosopyrrolidine	(1)	7.541	100	353289	12.576
36) Acetophenone	(1)	7.578	105	1054800	12.581
37) 4-Methylphenol	(1)	7.600	108	688115	12.045
38) N-Nitroso-di-n-propylamine	(1)	7.605	70	586583	12.602
39) N-Nitrosomorpholine	(1)	7.610	56	434688	12.487
40) o-Toluidine	(1)	7.632	106	1160328	12.459
43) Hexachloroethane	(1)	7.723	117	292637	12.354
44)$Nitrobenzene-d5	(2)	7.803	82	1693060	25.084
45) Nitrobenzene	(2)	7.835	77	870727	12.477
120) 2,4_2,6-Dinitrotoluenes	(3)			645142	25.277
48) N-Nitrosopiperidine	(2)	8.070	114	322726	12.482
50) Isophorone	(2)	8.220	82	1500959	12.569
51) 2-Nitrophenol	(2)	8.332	139	293097	12.523

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.434	107	732021	12.591
57) O,O,O-Triethylphosphorothioate	(2)	8.562	198	335285	12.537
56) Benzoic acid	(2)	8.584	105	479753M	12.289
55) bis(2-Chloroethoxy)methane	(2)	8.594	93	898161	12.418
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.691	104	1066386	12.425
60) 2,4-Dichlorophenol	(2)	8.717	162	515825	12.445
146) Diallate trans/cis	(4)			668948	12.512
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	587442	12.513
65)*Naphthalene-d8	(2)	8.931	136	655894	5.000
66) Naphthalene	(2)	8.969	128	1766080	12.380
67) 4-Chloroaniline	(2)	9.070	127	748365	12.493
68) 2,6-Dichlorophenol	(2)	9.081	162	500081	12.571
69) Hexachloropropene	(2)	9.119	213	380159	12.565
71) Hexachlorobutadiene	(2)	9.193	225	370606	12.581
75) Quinoline	(2)	9.509	129	1104826	12.593
76) Caprolactam	(2)	9.621	113	166994	12.620
77) N-Nitrosodi-n-butylamine	(2)	9.653	84	550729	11.370
80) 4-Chloro-3-methylphenol	(2)	9.883	107	625255	12.628
82) Safrole	(2)	9.985	162	462441	12.613
83) 2-Methylnaphthalene	(2)	10.097	142	1166916	12.575
84) 1-Methylnaphthalene	(2)	10.252	142	1064402	12.451
85) Hexachlorocyclopentadiene	(3)	10.365	237	345651	12.395
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	617018	12.500
88) cis-Isosafrole	(3)	10.461	162	83672	2.126
90) 2,4,6-Trichlorophenol	(3)	10.568	196	387951	12.656
92) 2,4,5-Trichlorophenol	(3)	10.616	196	414517	12.696
93)$2-Fluorobiphenyl	(3)	10.723	172	2657252	24.983
94) trans-Isosafrole	(3)	10.830	162	430042	10.441
95) 1,1'-Biphenyl	(3)	10.873	154	1444060	12.652
96) 2-Chloronaphthalene	(3)	10.884	162	1119660	12.063
98) 1-Chloronaphthalene	(3)	10.921	162	1109402	12.981
99) Diphenyl ether	(3)	11.060	170	791512	12.557
100) 2-Nitroaniline	(3)	11.065	138	348540	12.832
104) 1,4-Naphthoquinone	(3)	11.183	158	465359	12.692
105) 1,4-Dinitrobenzene	(3)	11.306	168	166826	12.621
106) Dimethylphthalate	(3)	11.408	163	1239618	12.544
107) 1,3-Dinitrobenzene	(3)	11.418	168	191568	12.825
108) 2,6-Dinitrotoluene	(3)	11.483	165	275296	12.632
109) Acenaphthylene	(3)	11.552	152	1719470	12.888
112) 3-Nitroaniline	(3)	11.718	138	297813	12.568

M = Compound was manually integrated.
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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.766	164	378613	5.000
114) Acenaphthene	(3)	11.814	153	1165850	12.663
115) 2,4-Dinitrophenol	(3)	11.873	184	136422	12.333
116) 4-Nitrophenol	(3)	11.980	109	249406	13.020
117) Pentachlorobenzene	(3)	12.001	250	501252	12.516
118) 2,4-Dinitrotoluene	(3)	12.060	165	369846	12.644
119) Dibenzofuran	(3)	12.060	168	1602663	12.674
121) 1-Naphthylamine	(3)	12.162	143	1141369	12.457
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	314886	12.331
123) 2-Naphthylamine	(3)	12.269	143	1140374	12.597
124) Diethylphthalate	(3)	12.413	149	1249343	12.747
126) Fluorene	(3)	12.499	166	1255336	12.816
125) Thionazin	(3)	12.504	107	259709	12.799
128) 5-Nitro-o-toluidine	(3)	12.526	152	337840	12.543
127) 4-Chlorophenyl-phenylether	(3)	12.526	204	643155	12.553
129) 4-Nitroaniline	(3)	12.531	138	307865	12.742
130) 4,6-Dinitro-2-methylphenol	(4)	12.574	198	196806	12.627
132) NDPA as diphenylamine	(4)	12.670	169	1055901	12.536
131) N-Nitrosodiphenylamine	(4)	12.670	169	1055901	12.536
134) 1,2-Diphenylhydrazine	(4)	12.718	77	1691712	12.520
135)$2,4,6-Tribromophenol	(3)	12.798	330	327219	24.992
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	267042	12.652
139) 1,3,5-Trinitrobenzene	(4)	13.007	213	124875	12.460
140) Diallate (peak 1)	(4)	13.050	86	557865	10.437
141) Phorate	(4)	13.055	75	1005229	12.743
142) Phenacetin	(4)	13.077	108	771069	12.665
143) 4-Bromophenyl-phenylether	(4)	13.135	248	348079	12.456
144) Diallate (peak 2)	(4)	13.157	86	111083	2.075
145) Hexachlorobenzene	(4)	13.189	284	363320	12.609
147) Dimethoate	(4)	13.258	87	636216	12.940
148) Atrazine	(4)	13.365	200	357392	13.124
149) Pentachlorophenol	(4)	13.451	266	229541	12.456
150) 4-Aminobiphenyl	(4)	13.462	169	1052991	12.732
151) Pentachloronitrobenzene	(4)	13.467	237	178432	12.444
152) Pronamide	(4)	13.563	173	612886	12.654
153)*Phenanthrene-d10	(4)	13.692	188	714489	5.000
154) Dinoseb	(4)	13.708	211	299277	12.541
155) Phenanthrene	(4)	13.724	178	1901809	12.552
157) Anthracene	(4)	13.793	178	1915223	12.669
163) Carbazole	(4)	14.013	167	1786731	12.681

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.221	109	471041	12.914
165) Di-n-butylphthalate	(4)	14.537	149	2170819	12.625
167) Parathion	(4)	14.783	109	296004	12.672
168) 4-Nitroquinoline-1-oxide	(4)	14.793	190	175838	12.613
222) Total PAHs	(6)			32764256	230.146
169) Octachlorostyrene	(4)	15.141	308	131683	12.383
171) Isodrin	(4)	15.195	193	224359	12.399
173) Fluoranthene	(4)	15.414	202	2187363	12.905
174) Benzidine	(5)	15.655	184	4553062	38.293
175)*Pyrene-d10	(5)	15.735	212	865427	5.000
177) Pyrene	(5)	15.767	202	2341045	12.341
179)$Terphenyl-d14	(5)	16.056	244	3019405	24.682
182) p-Dimethylaminoazobenzene	(5)	16.291	225	401958	12.623
185) Chlorobenzilate	(5)	16.382	139	676358	12.596
187) 3,3'-Dimethylbenzidine	(5)	16.858	212	1460770	12.655
188) Butylbenzylphthalate	(5)	16.922	149	991315	12.515
191) 2-Acetylaminofluorene	(5)	17.291	181	831095	12.391
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	787278	12.349
195) Benzo(a)anthracene	(5)	17.815	228	2206280	13.085
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.821	231	451921	12.603
196) Chrysene	(5)	17.874	228	2046601	12.946
199) bis(2-Ethylhexyl)phthalate	(5)	18.003	149	1441741	12.515
203) 6-Methylchrysene	(5)	18.693	242	1399342	12.388
205) Di-n-octylphthalate	(6)	19.179	149	2457360	12.592
206) Benzo(b)fluoranthene	(6)	19.693	252	2084774	12.967
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.698	256	929764	12.459
208) Benzo(k)fluoranthene	(6)	19.746	252	2031393	12.855
211) Benzo(a)pyrene	(6)	20.228	252	1908873	12.935
213)*Perylene-d12	(6)	20.313	264	636534	5.000
215) 3-Methylcholanthrene	(6)	20.800	268	808132	12.345
217) Dibenz(a,h)acridine	(6)	21.624	279	1569627	12.392
218) Dibenz(a,j)acridine	(6)	21.699	279	1608630	12.446
219) Indeno(1,2,3-cd)pyrene	(6)	21.966	276	2254791	13.102
220) Dibenz(a,h)anthracene	(6)	22.003	278	1872625	13.033
221) Benzo(g,h,i)perylene	(6)	22.378	276	1875425	12.984

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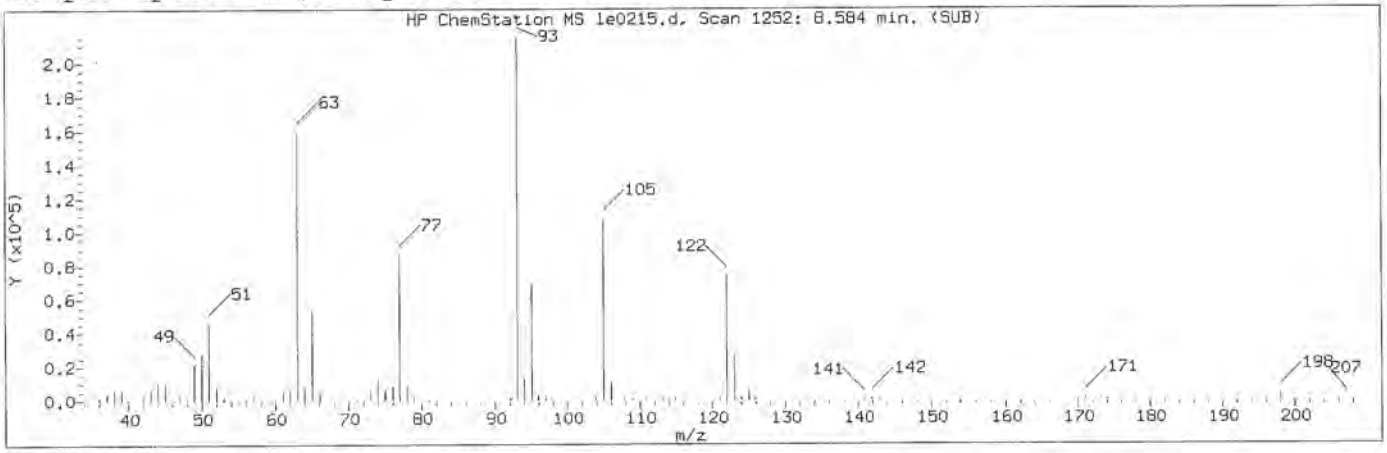
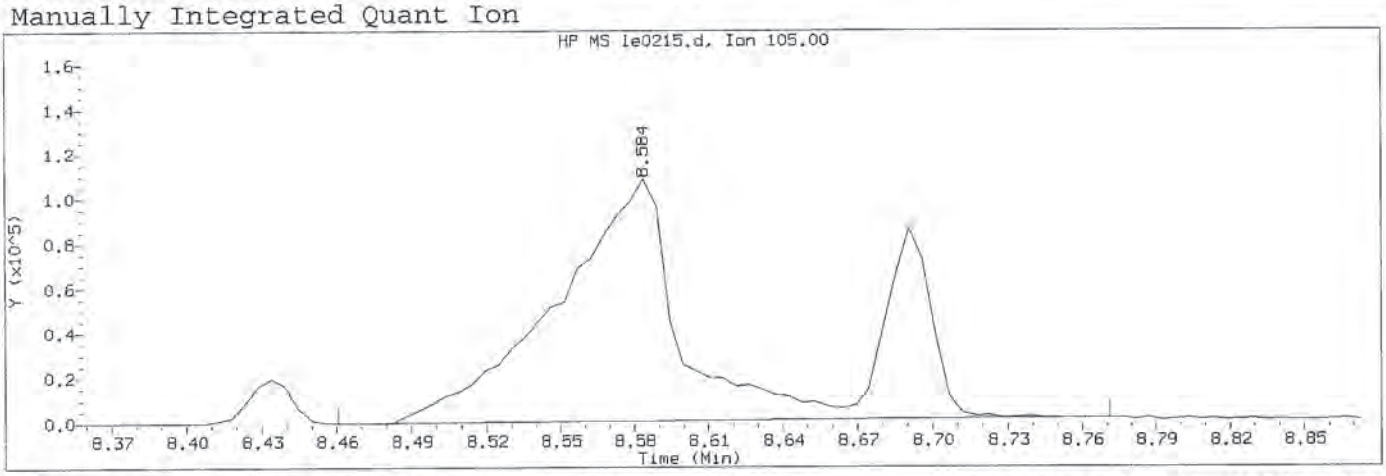
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1252		
Retention Time (minutes)	: 8.584		
Quant Ion	: 105.00		
Area (flag)	: 479753M		
On-Column Amount (ng/ul)	: 12.2886		
Integration start scan	: 1228	Integration stop scan:	1286
Y at integration start	: 0	Y at integration end:	2046

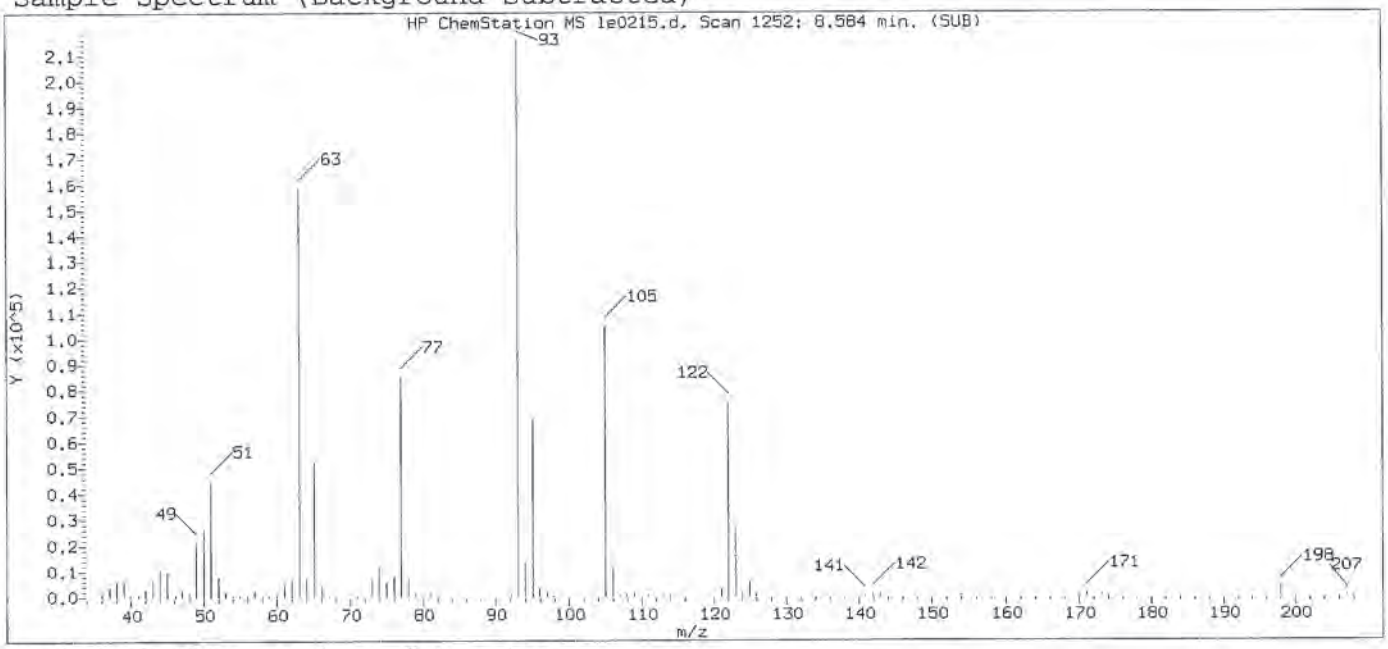
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 signature user ID: hbz01996

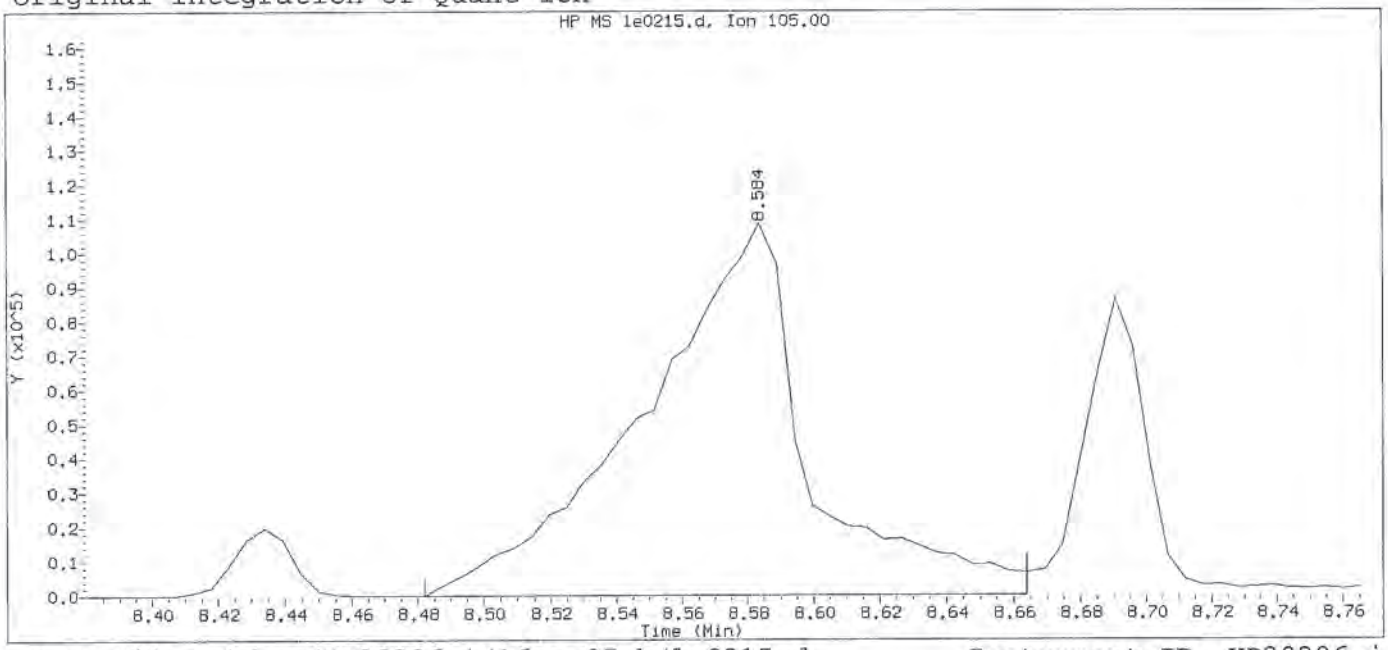
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0215.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 20:53 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 21:19
Date, time and analyst ID of latest file update: 05-May-2016 21:19 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1252		
Retention Time (minutes)	: 8.584		
Quant Ion	: 105.00		
Area	: 380754		
On-column Amount (ng/ul)	: 0.0000		
Integration start scan	: 1232	Integration stop scan:	1266
Y at integration start	: 0	Y at integration end:	0

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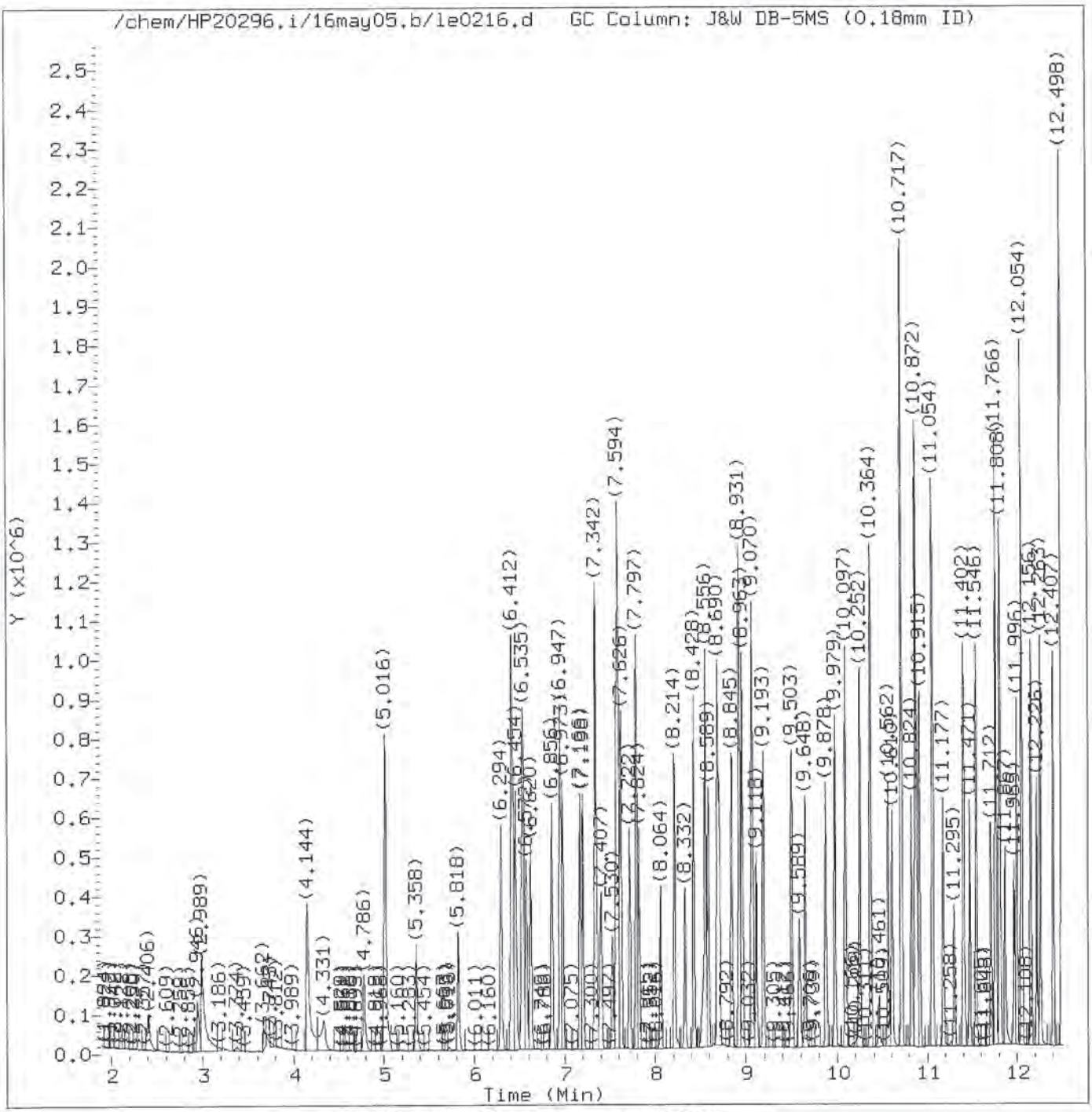
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0216.d
Injection date and time: 05-MAY-2016 21:21

Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15

Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75

Lab Sample ID: RVSTD0816

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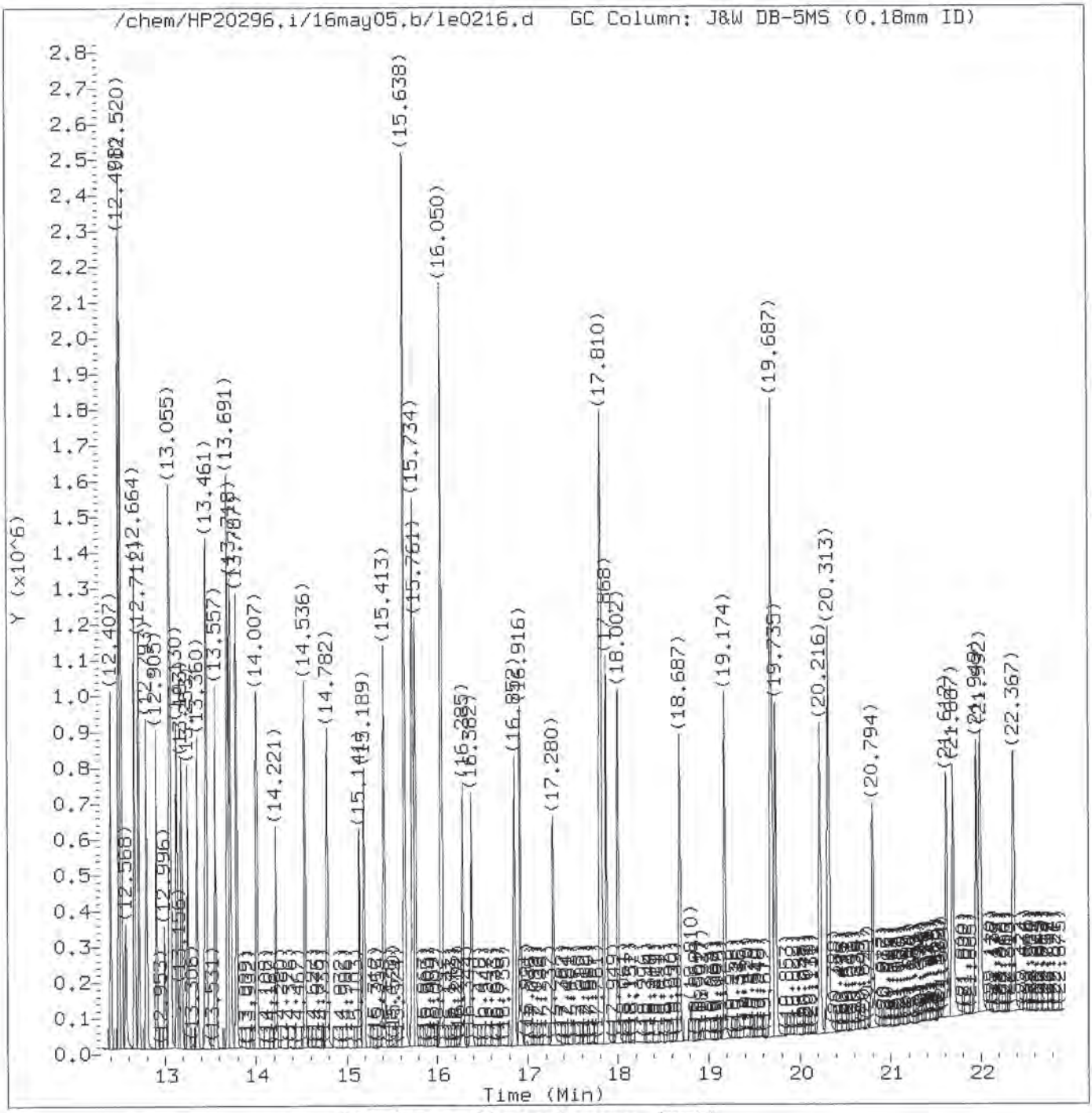
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	89322M	3.687
4) N-Nitrosodimethylamine	(1)	2.940	74	135177	3.577
5) Pyridine	(1)	2.989	79	213653	3.359
7) 2-Picoline	(1)	4.144	93	234421	3.572
8) N-Nitrosomethylethylamine	(1)	4.331	88	93701	3.580
9) Methyl methanesulfonate	(1)	4.786	80	110680	3.602
11)$2-Fluorophenol	(1)	5.016	112	365672	7.276
13) N-Nitrosodiethylamine	(1)	5.358	102	89452	3.555
42) Total Cresols	(1)			366660	7.041
15) Ethyl methanesulfonate	(1)	5.818	109	93445	3.660
16) Benzaldehyde	(1)	6.294	77	190625	3.604
17)$Phenol-d6	(1)	6.406	99	487784	7.261
18) Phenol	(1)	6.428	94	288386	3.622
19) Aniline	(1)	6.454	93	337873	3.601
20) a-methylstyrene	(1)	6.540	118	185029	3.583
22) bis(2-Chloroethyl)ether	(1)	6.572	93	205679	3.584
23) 2-Chlorophenol	(1)	6.620	128	166396	3.573
24) 1,3-Dichlorobenzene	(1)	6.856	146	189035	3.669
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	164639	5.000
26) 1,4-Dichlorobenzene	(1)	6.973	146	187995	3.596
27) Benzyl alcohol	(1)	7.166	108	122573	3.513
28) 1,2-Dichlorobenzene	(1)	7.198	146	180600	3.664
30) Indene	(1)	7.337	115	321078	3.591
31) 2-Methylphenol	(1)	7.348	108	177630	3.572
97) Isosafrole	(3)			136966	3.510
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	261038	3.579
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	261038	3.579
35) N-Nitrosopyrrolidine	(1)	7.530	100	94049	3.502
36) Acetophenone	(1)	7.572	105	282088	3.516
37) 4-Methylphenol	(1)	7.594	108	189030	3.469
38) N-Nitroso-di-n-propylamine	(1)	7.594	70	163593	3.643
39) N-Nitrosomorpholine	(1)	7.599	56	120859	3.607
40) o-Toluidine	(1)	7.626	106	327589	3.645
43) Hexachloroethane	(1)	7.722	117	82478	3.615
44)$Nitrobenzene-d5	(2)	7.797	82	463600	7.120
45) Nitrobenzene	(2)	7.829	77	238630	3.547
120) 2,4_2,6-Dinitrotoluenes	(3)			171781	7.050
48) N-Nitrosopiperidine	(2)	8.064	114	88726	3.558
50) Isophorone	(2)	8.214	82	408543	3.549
51) 2-Nitrophenol	(2)	8.332	139	74203	3.335

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Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.428	107	203517	3.615
56) Benzoic acid	(2)	8.551	105	193497M	5.424
57) O,O,O-Triethylphosphorothioate	(2)	8.556	198	91668	3.554
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	250195	3.581
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.690	104	294517	3.558
60) 2,4-Dichlorophenol	(2)	8.712	162	147052	3.654
146) Diallate trans/cis	(4)			183651	3.613
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	163472	3.600
65)*Naphthalene-d8	(2)	8.931	136	640781	5.000
66) Naphthalene	(2)	8.963	128	496103	3.590
67) 4-Chloroaniline	(2)	9.065	127	210063	3.621
68) 2,6-Dichlorophenol	(2)	9.075	162	137409	3.577
69) Hexachloropropene	(2)	9.118	213	101304	3.487
71) Hexachlorobutadiene	(2)	9.193	225	102374	3.594
75) Quinoline	(2)	9.503	129	308467	3.628
76) Caprolactam	(2)	9.589	113	43968	3.466
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	142934	3.143
80) 4-Chloro-3-methylphenol	(2)	9.878	107	167695	3.520
82) Safrole	(2)	9.979	162	123655	3.508
83) 2-Methylnaphthalene	(2)	10.097	142	329126	3.650
84) 1-Methylnaphthalene	(2)	10.252	142	304961	3.667
85) Hexachlorocyclopentadiene	(3)	10.364	237	89149	3.378
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	171637	3.617
88) cis-Isosafrole	(3)	10.461	162	22813	0.605
90) 2,4,6-Trichlorophenol	(3)	10.562	196	101961	3.489
92) 2,4,5-Trichlorophenol	(3)	10.610	196	112242	3.584
93)$2-Fluorobiphenyl	(3)	10.717	172	751743	7.329
94) trans-Isosafrole	(3)	10.824	162	114153	2.905
95) 1,1'-Biphenyl	(3)	10.872	154	389467	3.562
96) 2-Chloronaphthalene	(3)	10.883	162	325119	3.638
98) 1-Chloronaphthalene	(3)	10.915	162	294082	3.586
99) Diphenyl ether	(3)	11.054	170	221162	3.643
100) 2-Nitroaniline	(3)	11.060	138	86381	3.363
104) 1,4-Naphthoquinone	(3)	11.177	158	121284	3.473
105) 1,4-Dinitrobenzene	(3)	11.300	168	40618	3.270
106) Dimethylphthalate	(3)	11.402	163	354682	3.710
107) 1,3-Dinitrobenzene	(3)	11.413	168	47043	3.337
108) 2,6-Dinitrotoluene	(3)	11.477	165	73861	3.543
109) Acenaphthylene	(3)	11.546	152	472806	3.670
112) 3-Nitroaniline	(3)	11.712	138	79699	3.521

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.766	164	367222	5.000
114) Acenaphthene	(3)	11.808	153	324581	3.654
115) 2,4-Dinitrophenol	(3)	11.867	184	60744	5.954
116) 4-Nitrophenol	(3)	11.969	109	55552	3.116
117) Pentachlorobenzene	(3)	11.996	250	142546	3.686
119) Dibenzofuran	(3)	12.054	168	451487	3.695
118) 2,4-Dinitrotoluene	(3)	12.054	165	97920	3.507
121) 1-Naphthylamine	(3)	12.156	143	317396	3.606
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	84323	3.468
123) 2-Naphthylamine	(3)	12.263	143	314420	3.614
124) Diethylphthalate	(3)	12.407	149	341703	3.625
126) Fluorene	(3)	12.498	166	351362	3.707
125) Thionazin	(3)	12.498	107	70509	3.615
128) 5-Nitro-o-toluidine	(3)	12.514	152	89836	3.497
129) 4-Nitroaniline	(3)	12.520	138	82147	3.552
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	180800	3.660
130) 4,6-Dinitro-2-methylphenol	(4)	12.568	198	41978	2.956
132) NDPA as diphenylamine	(4)	12.664	169	291269	3.633
131) N-Nitrosodiphenylamine	(4)	12.664	169	291269	3.633
134) 1,2-Diphenylhydrazine	(4)	12.712	77	471057	3.656
135)$2,4,6-Tribromophenol	(3)	12.798	330	82966	6.706
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	71203	3.561
139) 1,3,5-Trinitrobenzene	(4)	12.996	213	27497	3.002
140) Diallate (peak 1)	(4)	13.049	86	153022	3.009
141) Phorate	(4)	13.055	75	266484	3.565
142) Phenacetin	(4)	13.065	108	196743	3.438
143) 4-Bromophenyl-phenylether	(4)	13.135	248	97039	3.645
144) Diallate (peak 2)	(4)	13.156	86	30629	0.604
145) Hexachlorobenzene	(4)	13.188	284	100720	3.661
147) Dimethoate	(4)	13.253	87	164933	3.544
148) Atrazine	(4)	13.360	200	97175	3.725
149) Pentachlorophenol	(4)	13.445	266	56643	3.300
150) 4-Aminobiphenyl	(4)	13.461	169	279309	3.564
151) Pentachloronitrobenzene	(4)	13.461	237	46147	3.427
152) Pronamide	(4)	13.557	173	156392	3.436
153)*Phenanthrene-d10	(4)	13.691	188	685471	5.000
154) Dinoseb	(4)	13.707	211	59446	2.767
155) Phenanthrene	(4)	13.718	178	524649	3.632
157) Anthracene	(4)	13.787	178	516680	3.592
163) Carbazole	(4)	14.012	167	478819	3.582

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.221	109	110352	3.257
165) Di-n-butylphthalate	(4)	14.536	149	552174	3.421
167) Parathion	(4)	14.777	109	67255	3.126
168) 4-Nitroquinoline-1-oxide	(4)	14.788	190	33400	2.676
222) Total PAHs	(6)			8760469	65.369
169) Octachlorostyrene	(4)	15.141	308	36298	3.595
171) Isodrin	(4)	15.189	193	62625	3.635
173) Fluoranthene	(4)	15.413	202	580274	3.597
174) Benzidine	(5)	15.643	184	1173706	10.593
175)*Pyrene-d10	(5)	15.734	212	818279	5.000
177) Pyrene	(5)	15.761	202	637301	3.584
179)$Terphenyl-d14	(5)	16.050	244	801333	7.035
182) p-Dimethylaminoazobenzene	(5)	16.285	225	92368	3.184
185) Chlorobenzilate	(5)	16.382	139	168250	3.393
187) 3,3'-Dimethylbenzidine	(5)	16.852	212	342645	3.245
188) Butylbenzylphthalate	(5)	16.916	149	245673	3.364
191) 2-Acetylaminofluorene	(5)	17.280	181	187491	3.087
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	193026	3.298
195) Benzo(a)anthracene	(5)	17.810	228	574671	3.628
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.815	231	110697	3.352
196) Chrysene	(5)	17.868	228	541447	3.643
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	344443	3.264
203) 6-Methylchrysene	(5)	18.687	242	354437	3.397
205) Di-n-octylphthalate	(6)	19.174	149	567788	3.232
206) Benzo(b)fluoranthene	(6)	19.687	252	533966	3.596
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692	256	224943	3.328
208) Benzo(k)fluoranthene	(6)	19.735	252	542906	3.700
211) Benzo(a)pyrene	(6)	20.216	252	492191	3.609
213)*Perylene-d12	(6)	20.313	264	592700	5.000
215) 3-Methylcholanthrene	(6)	20.794	268	196117	3.312
217) Dibenz(a,h)acridine	(6)	21.612	279	386282	3.360
218) Dibenz(a,j)acridine	(6)	21.693	279	416334	3.514
219) Indeno(1,2,3-cd)pyrene	(6)	21.949	276	566507	3.569
220) Dibenz(a,h)anthracene	(6)	21.992	278	478292	3.603
221) Benzo(g,h,i)perylene	(6)	22.367	276	492646	3.677

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$ = Compound is a surrogate standard.

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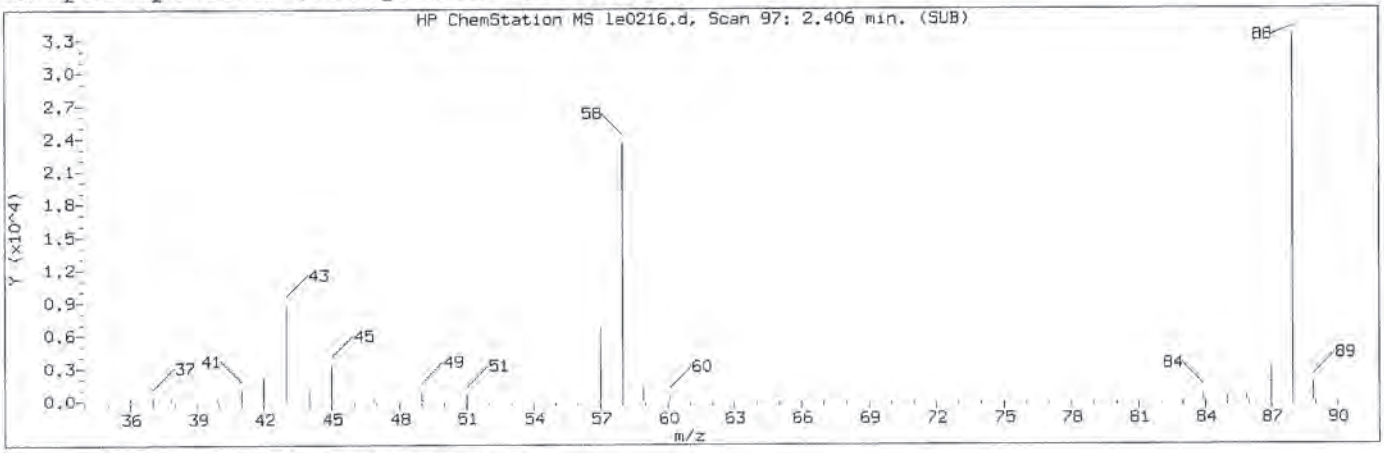
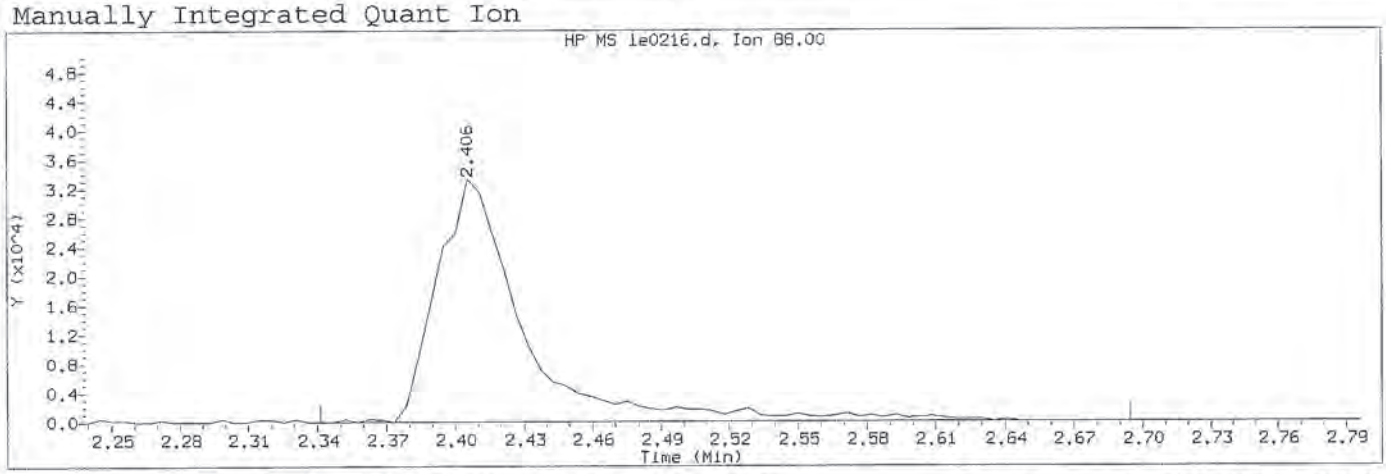
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 97		
Retention Time (minutes)	: 2.406		
Quant Ion	: 88.00		
Area (flag)	: 89322M		
On-Column Amount (ng/ul)	: 3.6875		
Integration start scan	: 84	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

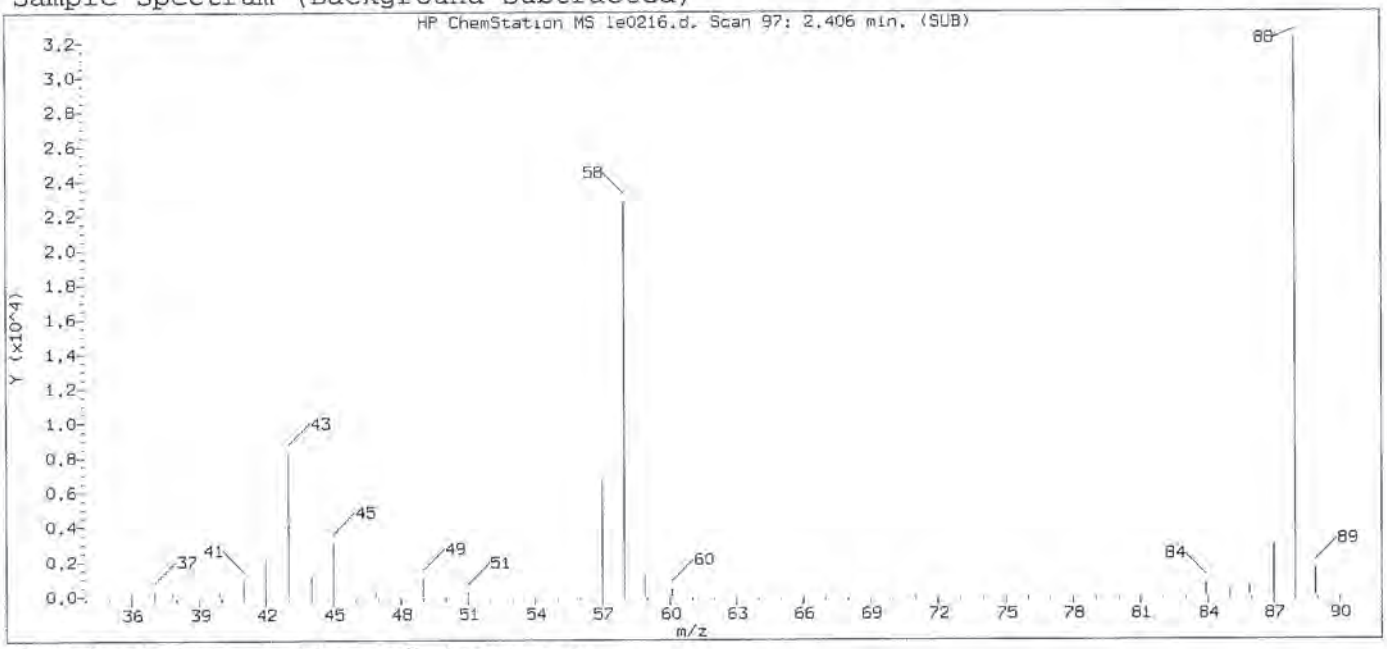
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature user ID: hbz01996

MAY 06 2016

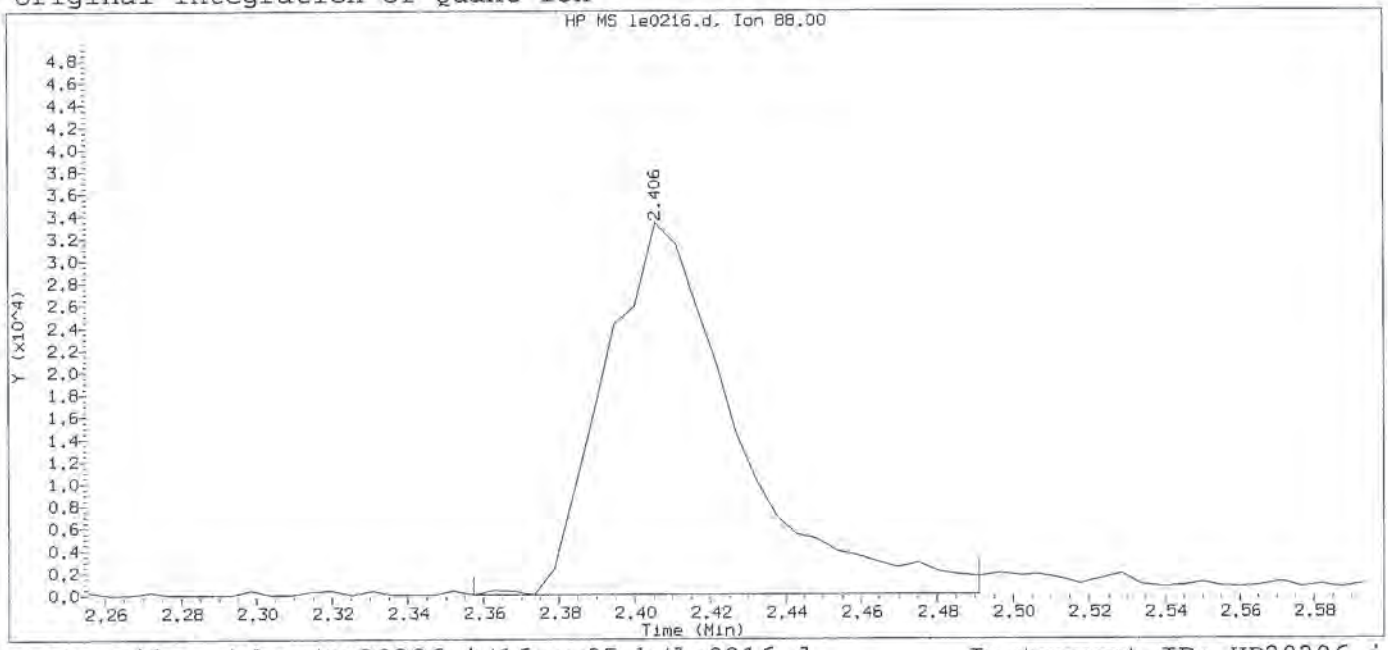
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 21:47
Date, time and analyst ID of latest file update: 05-May-2016 21:48 Unknown

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 97		
Retention Time (minutes)	: 2.406		
Quant Ion	: 88.00		
Area	: 81261		
On-column Amount (ng/ul)	: 3.3408		
Integration start scan	: 87	Integration stop scan:	112
Y at integration start	: 0	Y at integration end:	0

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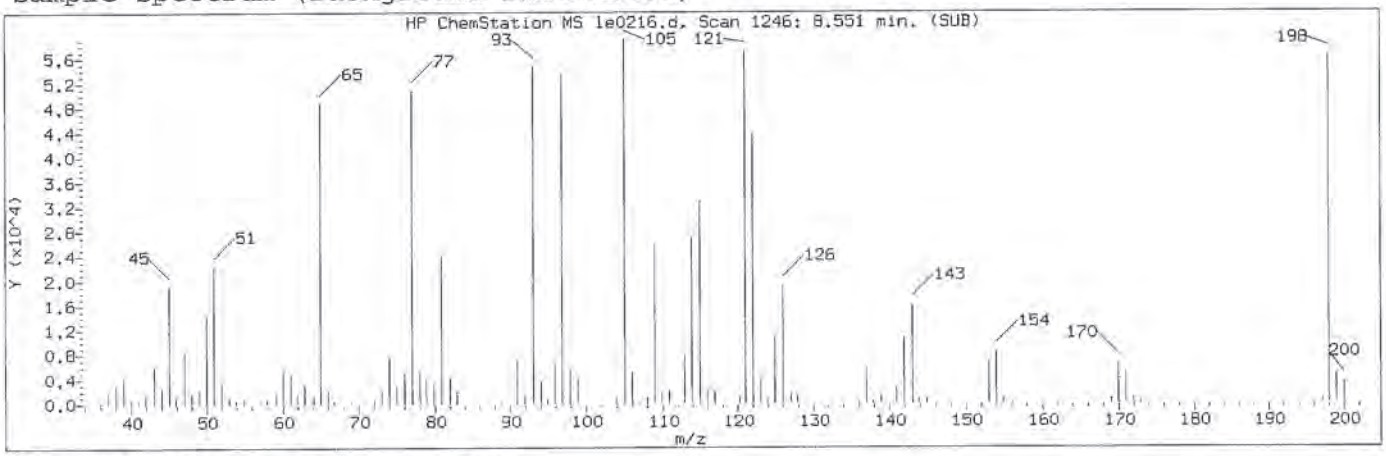
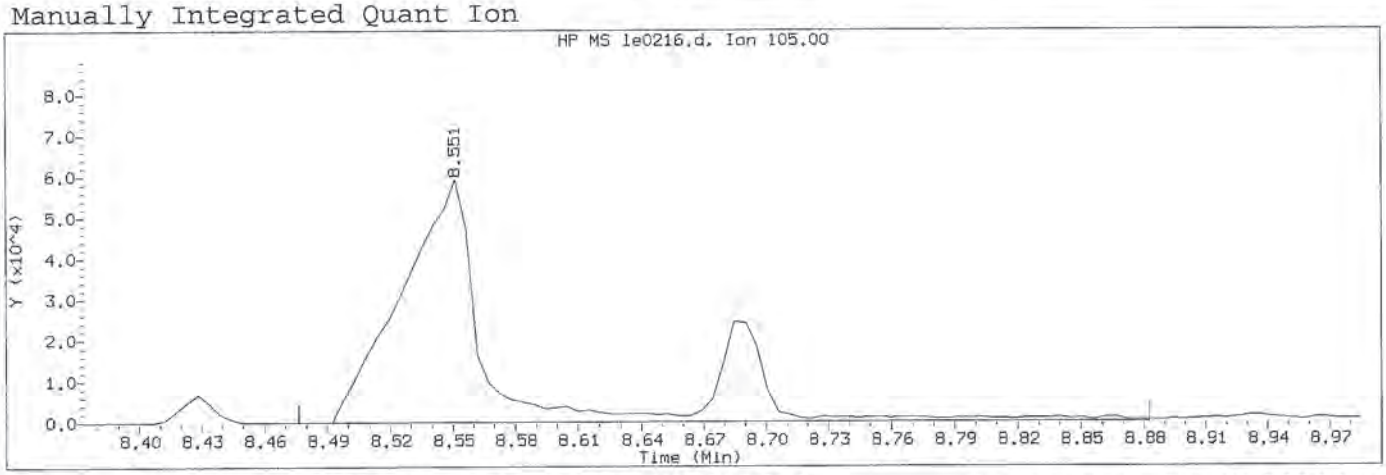
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1246		
Retention Time (minutes)	: 8.551		
Quant Ion	: 105.00		
Area (flag)	: 193497M		
On-Column Amount (ng/ul)	: 5.4242		
Integration start scan	: 1231	Integration stop scan:	1307
Y at integration start	: -3	Y at integration end:	-3

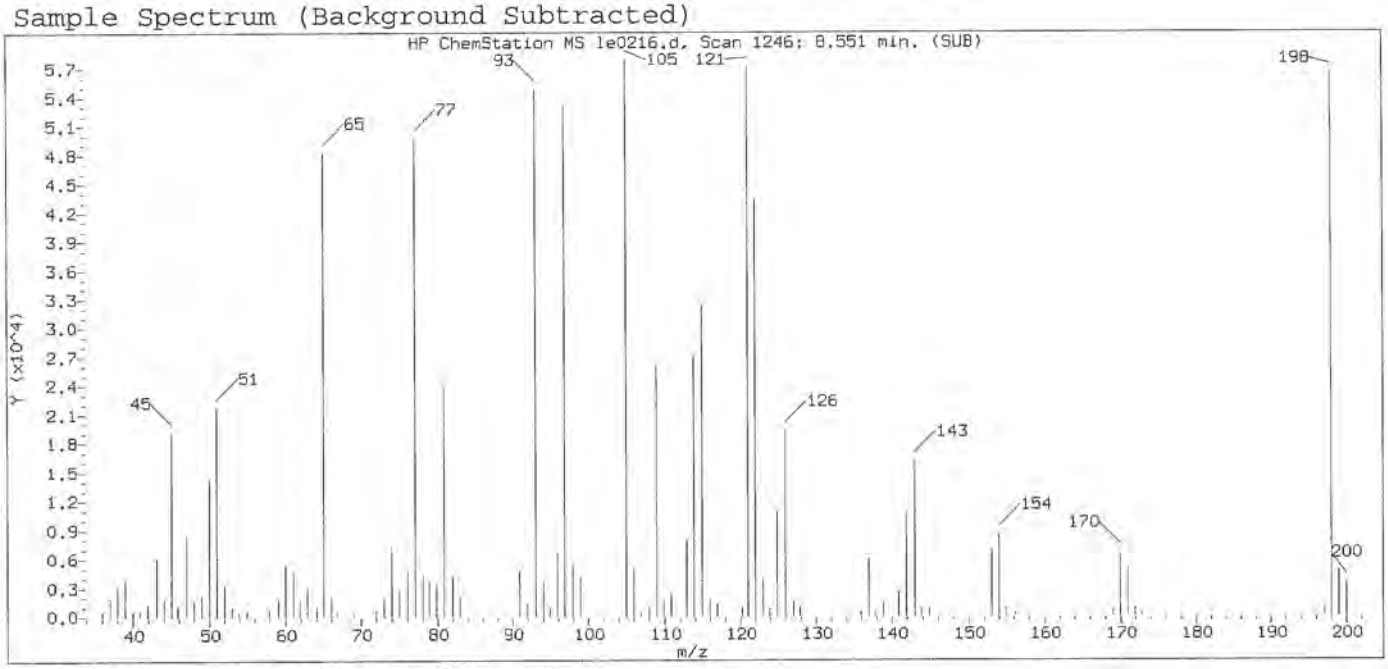
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 signature user ID: hbz01996

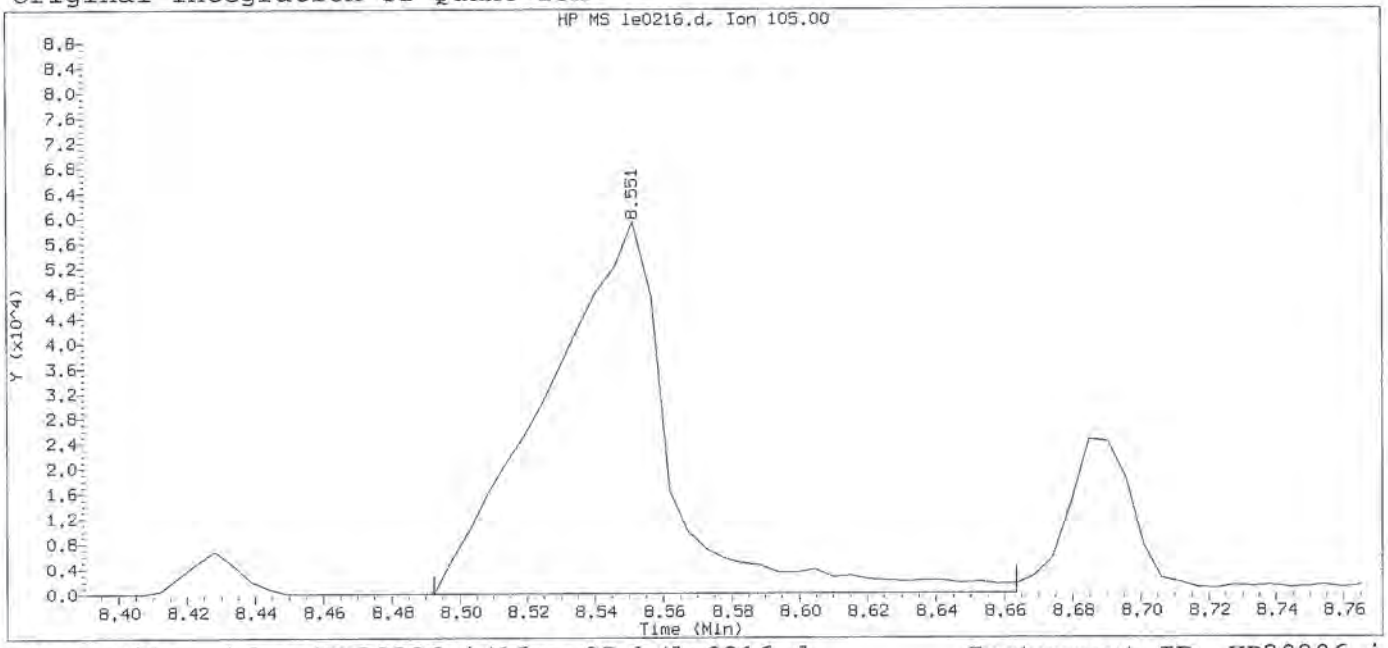
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0216.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:21 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 21:47
Date, time and analyst ID of latest file update: 05-May-2016 21:48 Unknown

Sample Name: SSTD3.75 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1246		
Retention Time (minutes)	: 8.551		
Quant Ion	: 105.00		
Area	: 152113		
On-column Amount (ng/ul)	: 3.9882		
Integration start scan	: 1234	Integration stop scan:	1266
Y at integration start	: 0	Y at integration end:	0

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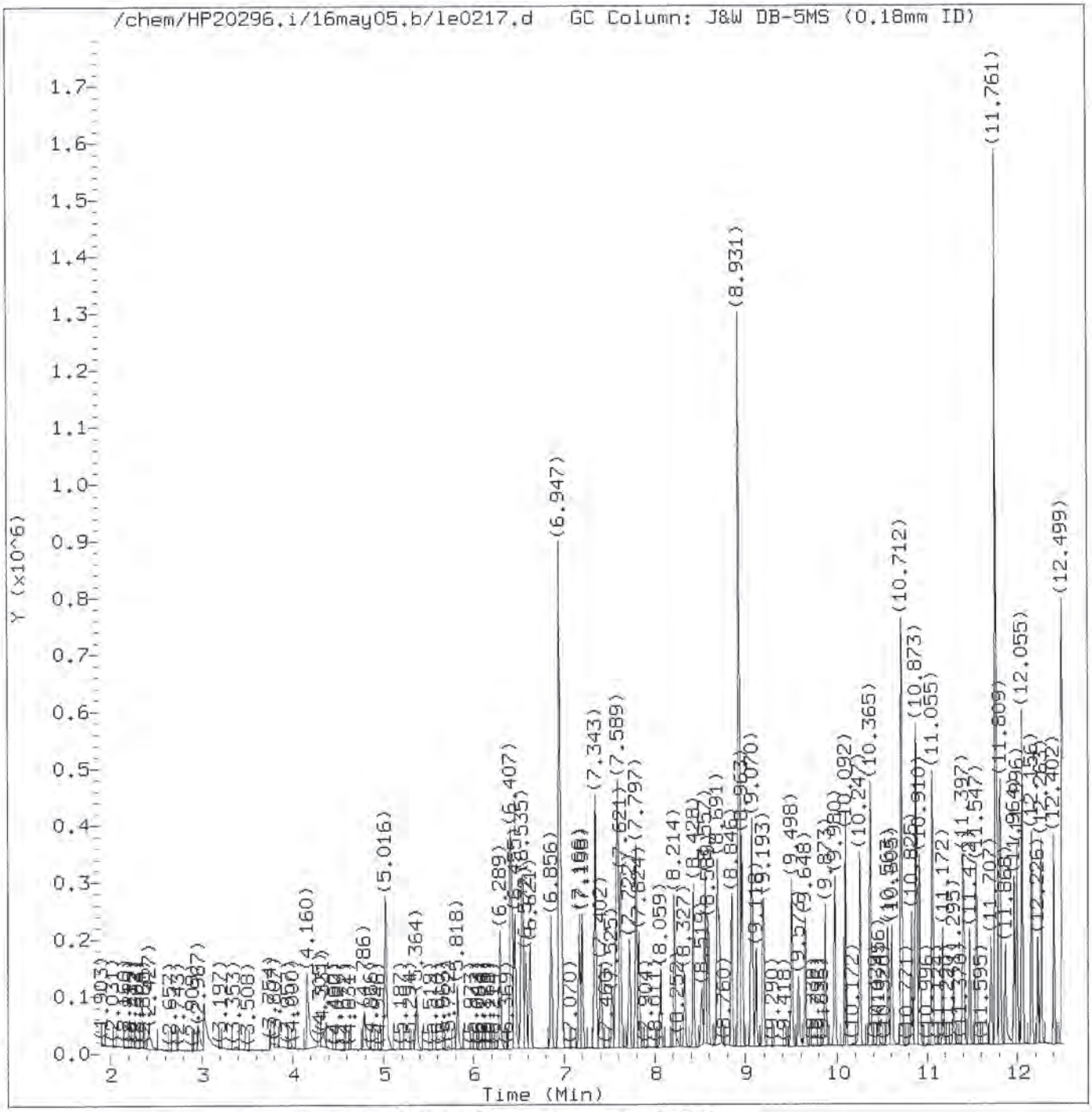
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

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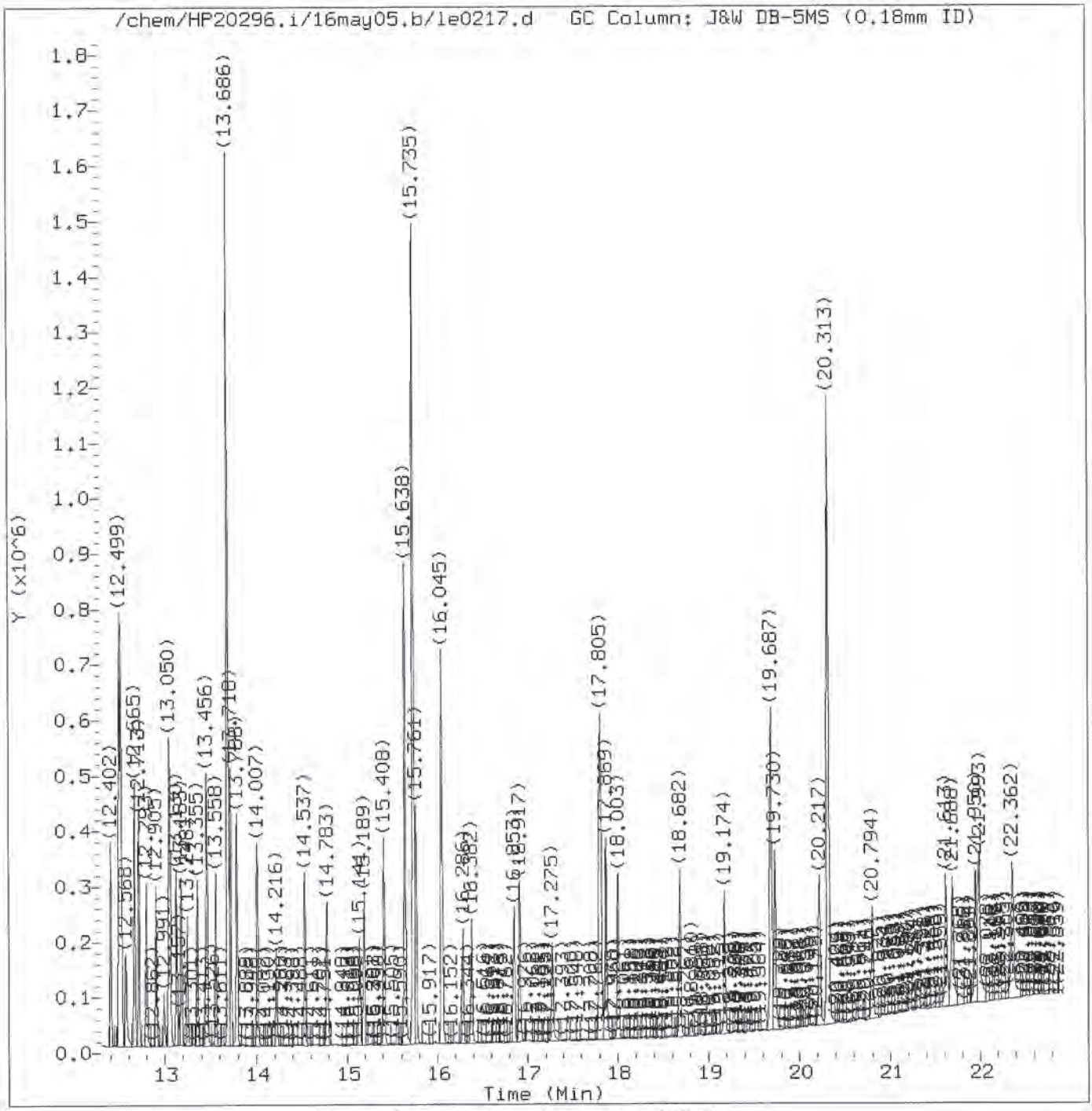
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0217.d
Injection date and time: 05-MAY-2016 21:49

Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:15

Sublist used: all1

Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25

Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.427	88	30652M	1.241
4) N-Nitrosodimethylamine	(1)	2.967	74	46547	1.214
5) Pyridine	(1)	3.026	79	86094M	1.313
7) 2-Picoline	(1)	4.160	93	86302M	1.282
8) N-Nitrosomethylethylamine	(1)	4.342	88	33666	1.258
9) Methyl methanesulfonate	(1)	4.786	80	38657	1.235
11)$2-Fluorophenol	(1)	5.016	112	127437	2.487
13) N-Nitrosodiethylamine	(1)	5.364	102	30344	1.192
42) Total Cresols	(1)			125287	2.379
15) Ethyl methanesulfonate	(1)	5.818	109	31920	1.229
16) Benzaldehyde	(1)	6.289	77	65791	1.224
17)$Phenol-d6	(1)	6.407	99	169197	2.473
18) Phenol	(1)	6.428	94	99806	1.232
19) Aniline	(1)	6.455	93	117744	1.233
20) a-methylstyrene	(1)	6.540	118	63048	1.205
22) bis(2-Chloroethyl)ether	(1)	6.572	93	74608	1.270
23) 2-Chlorophenol	(1)	6.621	128	56477	1.198
24) 1,3-Dichlorobenzene	(1)	6.856	146	67346	1.275
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	168064	5.000
26) 1,4-Dichlorobenzene	(1)	6.974	146	66631	1.249
27) Benzyl alcohol	(1)	7.166	108	42691	1.207
28) 1,2-Dichlorobenzene	(1)	7.198	146	64107	1.270
30) Indene	(1)	7.337	115	113741	1.247
31) 2-Methylphenol	(1)	7.348	108	60266	1.197
97) Isosafrole	(3)			47518	1.239
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.402	45	94197	1.263
34) bis(2-Chloroisopropyl)ether	(1)	7.402	45	94197	1.263
35) N-Nitrosopyrrolidine	(1)	7.525	100	31582	1.167
36) Acetophenone	(1)	7.573	105	98758	1.213
38) N-Nitroso-di-n-propylamine	(1)	7.589	70	56368	1.233
37) 4-Methylphenol	(1)	7.594	108	65021M	1.182
39) N-Nitrosomorpholine	(1)	7.599	56	42172	1.236
40) o-Toluidine	(1)	7.621	106	113711	1.241
43) Hexachloroethane	(1)	7.722	117	28045	1.212
44)$Nitrobenzene-d5	(2)	7.792	82	160839	2.466
45) Nitrobenzene	(2)	7.824	77	83434	1.237
120) 2,4_2,6-Dinitrotoluenes	(3)			53544	2.284
48) N-Nitrosopiperidine	(2)	8.059	114	30503	1.223
50) Isophorone	(2)	8.214	82	139235	1.212
51) 2-Nitrophenol	(2)	8.332	139	23904	1.096

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.428	107	68270	1.214
56) Benzoic acid	(2)	8.519	105	59680M	1.836
57) O,O,O-Triethylphosphorothioate	(2)	8.557	198	31558	1.223
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	90026	1.277
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	104805	1.259
60) 2,4-Dichlorophenol	(2)	8.707	162	49352	1.226
146) Diallate trans/cis	(4)			63504	1.261
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	58670	1.280
65)*Naphthalene-d8	(2)	8.931	136	643614	5.000
66) Naphthalene	(2)	8.963	128	178768	1.282
67) 4-Chloroaniline	(2)	9.065	127	73363	1.257
68) 2,6-Dichlorophenol	(2)	9.076	162	47675	1.238
69) Hexachloropropene	(2)	9.118	213	34628	1.197
71) Hexachlorobutadiene	(2)	9.193	225	36410	1.269
75) Quinoline	(2)	9.498	129	106946	1.252
76) Caprolactam	(2)	9.573	113	14463	1.153
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	49683	1.112
80) 4-Chloro-3-methylphenol	(2)	9.873	107	56007	1.183
82) Safrole	(2)	9.980	162	42241	1.202
83) 2-Methylnaphthalene	(2)	10.092	142	116676	1.283
84) 1-Methylnaphthalene	(2)	10.247	142	105355	1.260
85) Hexachlorocyclopentadiene	(3)	10.365	237	30681	1.193
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.365	216	59911	1.278
88) cis-Isosafrole	(3)	10.456	162	7186	0.197
90) 2,4,6-Trichlorophenol	(3)	10.557	196	34056	1.195
92) 2,4,5-Trichlorophenol	(3)	10.605	196	36391	1.192
93)$2-Fluorobiphenyl	(3)	10.712	172	265181	2.606
94) trans-Isosafrole	(3)	10.825	162	40332	1.043
95) 1,1'-Biphenyl	(3)	10.867	154	136979	1.270
96) 2-Chloronaphthalene	(3)	10.878	162	111564	1.266
98) 1-Chloronaphthalene	(3)	10.910	162	109514	1.339
100) 2-Nitroaniline	(3)	11.055	138	26225	1.068
99) Diphenyl ether	(3)	11.055	170	77546	1.290
104) 1,4-Naphthoquinone	(3)	11.172	158	38346	1.137
105) 1,4-Dinitrobenzene	(3)	11.295	168	12067	1.023
106) Dimethylphthalate	(3)	11.397	163	124787	1.314
107) 1,3-Dinitrobenzene	(3)	11.413	168	14682	1.087
108) 2,6-Dinitrotoluene	(3)	11.472	165	23962	1.181
109) Acenaphthylene	(3)	11.547	152	160875	1.267
112) 3-Nitroaniline	(3)	11.707	138	25936	1.178

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.761	164	361164	5.000
114) Acenaphthene	(3)	11.809	153	114944	1.306
115) 2,4-Dinitrophenol	(3)	11.868	184	23698M	2.362
116) 4-Nitrophenol	(3)	11.969	109	35322	2.015
117) Pentachlorobenzene	(3)	11.996	250	50199	1.308
118) 2,4-Dinitrotoluene	(3)	12.049	165	29582	1.103
119) Dibenzofuran	(3)	12.055	168	162509	1.334
121) 1-Naphthylamine	(3)	12.156	143	109695	1.267
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	26436	1.127
123) 2-Naphthylamine	(3)	12.263	143	111844	1.307
124) Diethylphthalate	(3)	12.402	149	116961	1.260
126) Fluorene	(3)	12.499	166	125366	1.330
125) Thionazin	(3)	12.499	107	23474	1.228
128) 5-Nitro-o-toluidine	(3)	12.515	152	29038	1.165
129) 4-Nitroaniline	(3)	12.515	138	27196	1.204
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	63331	1.294
130) 4,6-Dinitro-2-methylphenol	(4)	12.568	198	22366	1.593
132) NDPA as diphenylamine	(4)	12.665	169	102721	1.288
131) N-Nitrosodiphenylamine	(4)	12.665	169	102721	1.288
134) 1,2-Diphenylhydrazine	(4)	12.713	77	160661	1.260
135)$2,4,6-Tribromophenol	(3)	12.793	330	26178	2.203
137) Tetraethyldithiopyrophosphate	(4)	12.900	97	23580	1.202
139) 1,3,5-Trinitrobenzene	(4)	12.991	213	7542	0.833
140) Diallate (peak 1)	(4)	13.044	86	52833	1.049
141) Phorate	(4)	13.055	75	85635	1.173
142) Phenacetin	(4)	13.060	108	62578	1.128
143) 4-Bromophenyl-phenylether	(4)	13.130	248	32820	1.248
144) Diallate (peak 2)	(4)	13.157	86	10671	0.213
145) Hexachlorobenzene	(4)	13.183	284	35244	1.289
147) Dimethoate	(4)	13.248	87	49484	1.101
148) Atrazine	(4)	13.355	200	33455	1.289
149) Pentachlorophenol	(4)	13.445	266	14331	0.893
150) 4-Aminobiphenyl	(4)	13.456	169	92749	1.206
151) Pentachloronitrobenzene	(4)	13.462	237	14246	1.096
152) Pronamide	(4)	13.558	173	48854	1.110
153)*Phenanthrene-d10	(4)	13.686	188	677632	5.000
154) Dinoseb	(4)	13.708	211	15217	0.771
155) Phenanthrene	(4)	13.718	178	185796	1.294
157) Anthracene	(4)	13.788	178	174533	1.231
163) Carbazole	(4)	14.007	167	158508	1.208

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on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.221	109	30324	0.949
165) Di-n-butylphthalate	(4)	14.537	149	174874	1.119
167) Parathion	(4)	14.777	109	18465	0.915
168) 4-Nitroquinoline-1-oxide	(4)	14.783	190	8093	0.656
222) Total PAHs	(6)			2958643	22.585
169) Octachlorostyrene	(4)	15.141	308	12204	1.227
171) Isodrin	(4)	15.189	193	20740	1.223
173) Fluoranthene	(4)	15.408	202	192319	1.212
174) Benzidine	(5)	15.638	184	387990	3.595
175)*Pyrene-d10	(5)	15.735	212	796984	5.000
177) Pyrene	(5)	15.761	202	217082	1.253
179)$Terphenyl-d14	(5)	16.045	244	276092	2.491
182) p-Dimethylaminoazobenzene	(5)	16.286	225	25290	0.939
185) Chlorobenzilate	(5)	16.382	139	52920	1.119
187) 3,3'-Dimethylbenzidine	(5)	16.853	212	105074	1.054
188) Butylbenzylphthalate	(5)	16.917	149	73366	1.063
191) 2-Acetylaminofluorene	(5)	17.275	181	50534	0.902
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	61447	1.103
195) Benzo(a)anthracene	(5)	17.805	228	183160	1.196
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.815	231	33401	1.038
196) Chrysene	(5)	17.869	228	187679	1.290
199) bis(2-Ethylhexyl)phthalate	(5)	18.003	149	101218	1.021
203) 6-Methylchrysene	(5)	18.682	242	116554	1.163
205) Di-n-octylphthalate	(6)	19.174	149	149529	0.927
206) Benzo(b)fluoranthene	(6)	19.682	252	174285	1.220
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.687	256	69218	1.088
208) Benzo(k)fluoranthene	(6)	19.730	252	178269	1.257
211) Benzo(a)pyrene	(6)	20.217	252	161081	1.227
213)*Perylene-d12	(6)	20.313	264	572526	5.000
215) 3-Methylcholanthrene	(6)	20.794	268	59082	1.064
217) Dibenz(a,h)acridine	(6)	21.613	279	122294	1.124
218) Dibenz(a,j)acridine	(6)	21.688	279	135143	1.192
219) Indeno(1,2,3-cd)pyrene	(6)	21.950	276	187443	1.226
220) Dibenz(a,h)anthracene	(6)	21.993	278	155812	1.220
221) Benzo(g,h,i)perylene	(6)	22.362	276	159200	1.233

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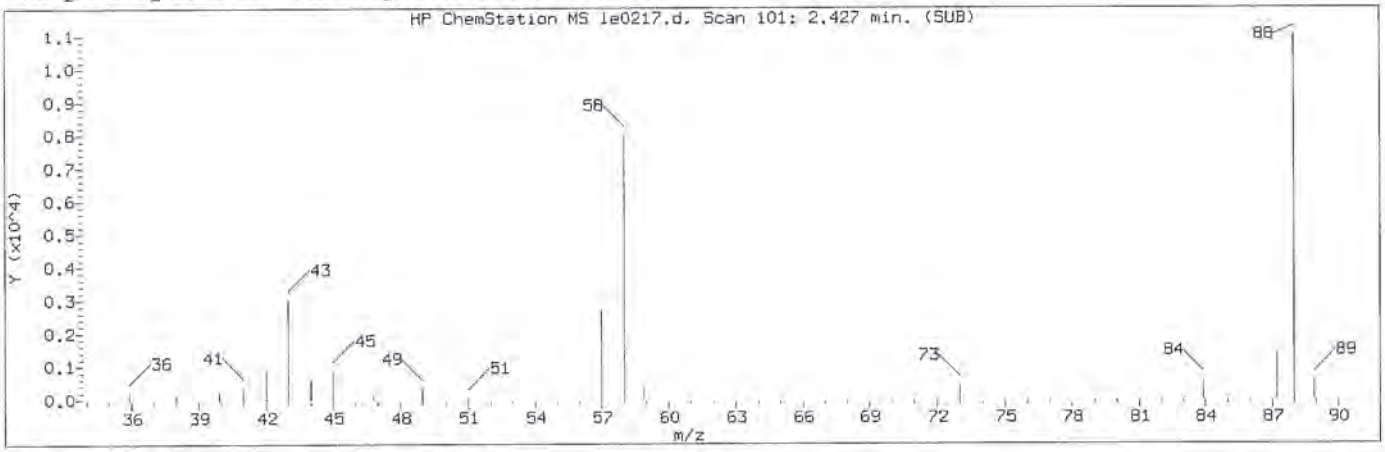
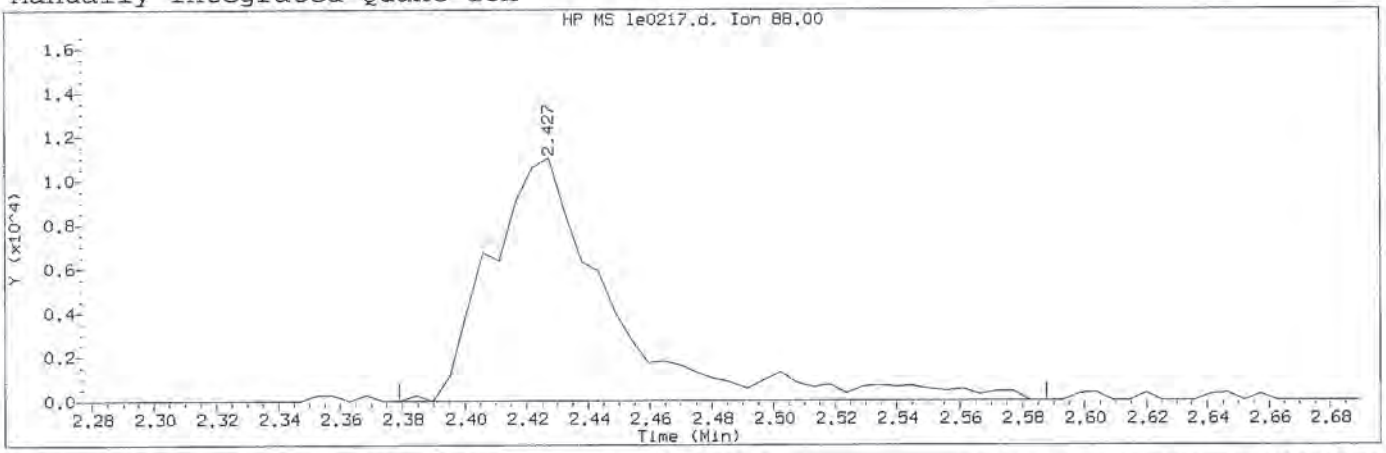
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 101		
Retention Time (minutes)	: 2.427		
Quant Ion	: 88.00		
Area (flag)	: 30652M		
On-Column Amount (ng/ul)	: 1.2413		
Integration start scan	: 91	Integration stop scan:	130
Y at integration start	: 0	Y at integration end:	0

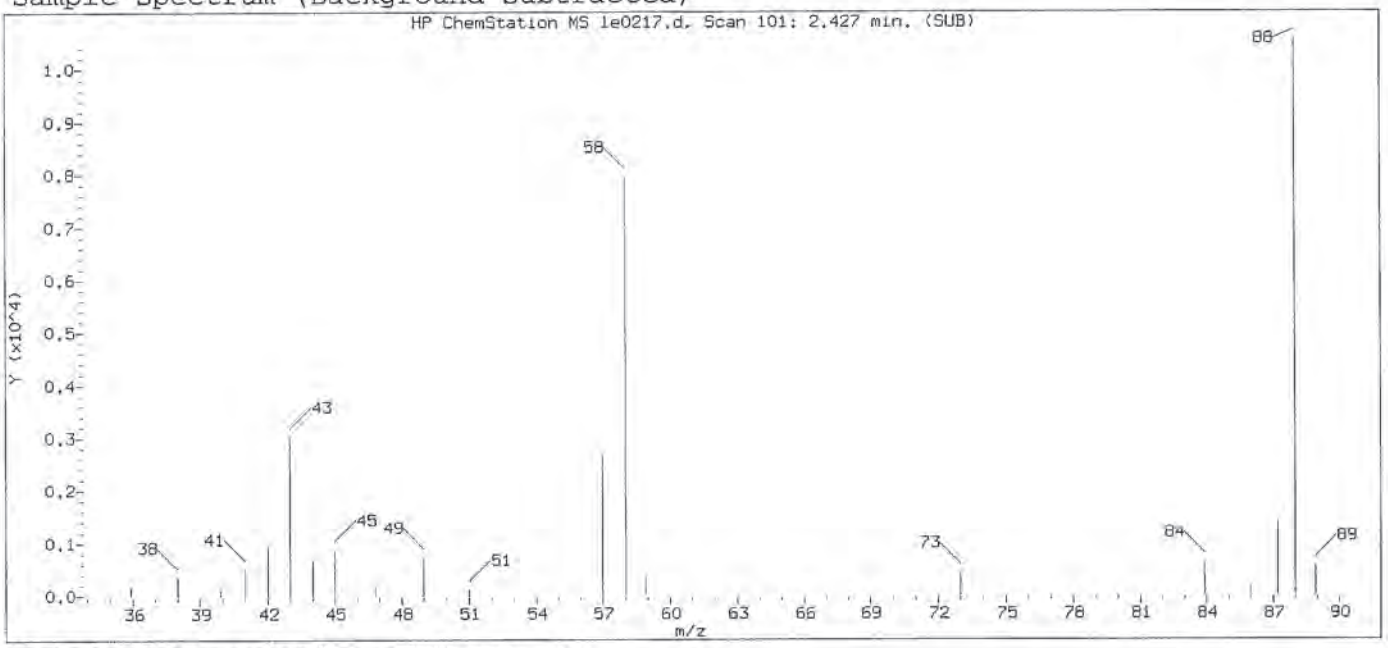
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

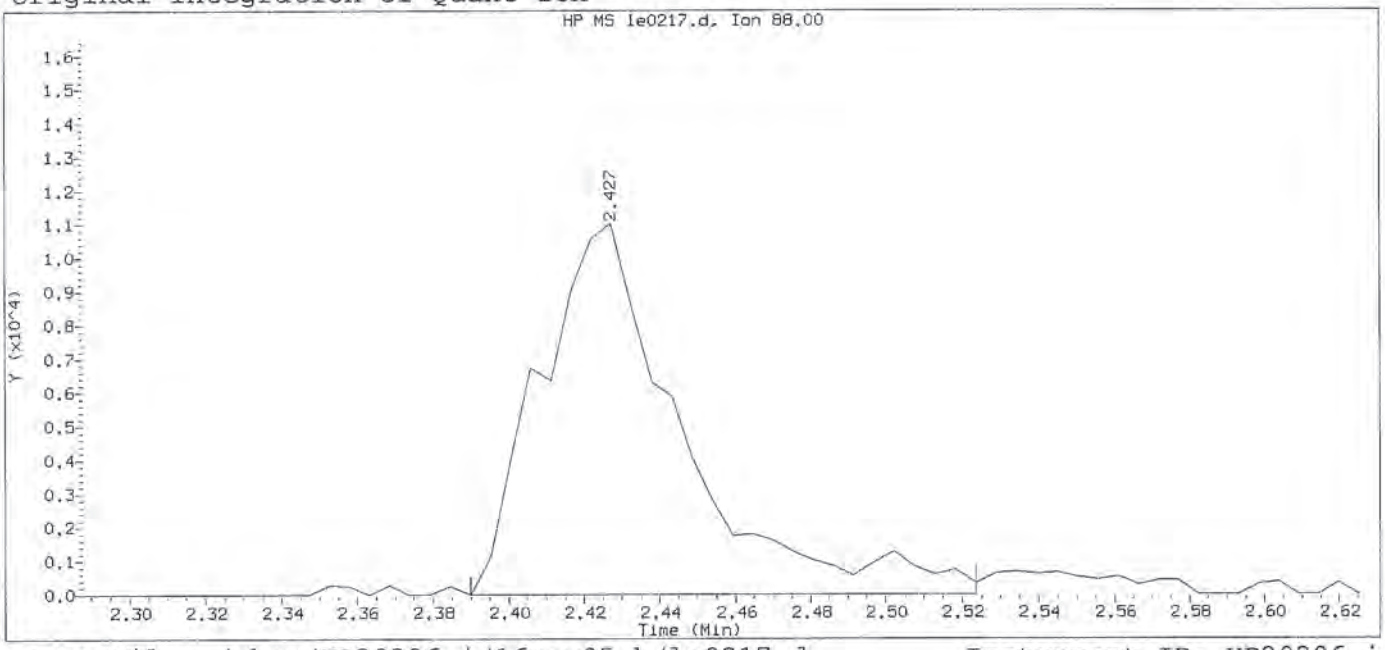
GC/MS audit/management approval: MAY 06 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 101		
Retention Time (minutes)	: 2.427		
Quant Ion	: 88.00		
Area	: 28837		
On-column Amount (ng/ul)	: 1.1614		
Integration start scan	: 93	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	0

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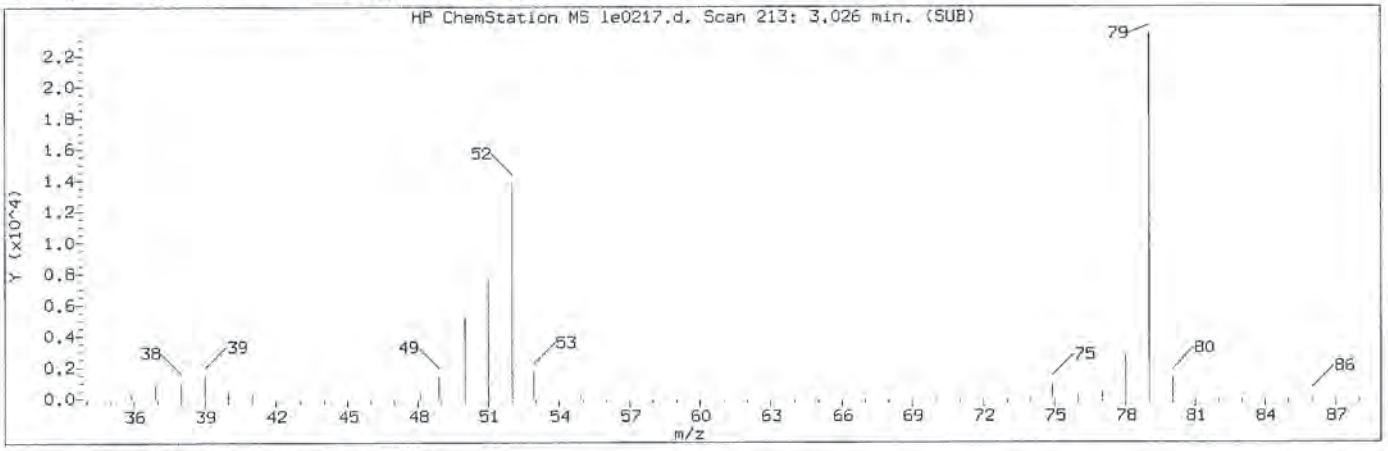
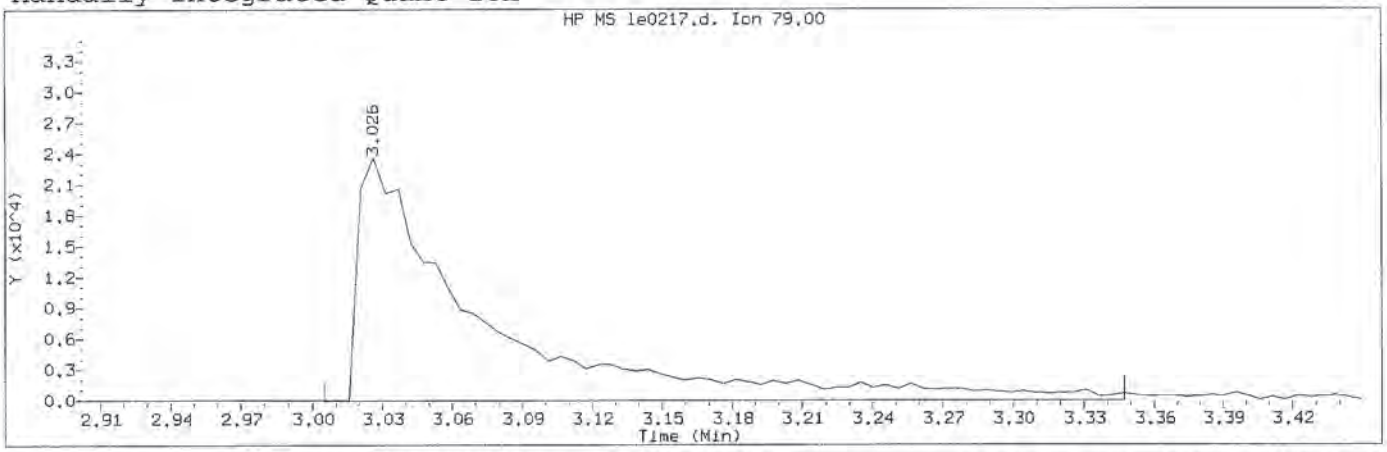
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 213		
Retention Time (minutes)	: 3.026		
Quant Ion	: 79.00		
Area (flag)	: 86094M		
On-Column Amount (ng/ul)	: 1.3128		
Integration start scan	: 208	Integration stop scan:	272
Y at integration start	: -52	Y at integration end:	-52

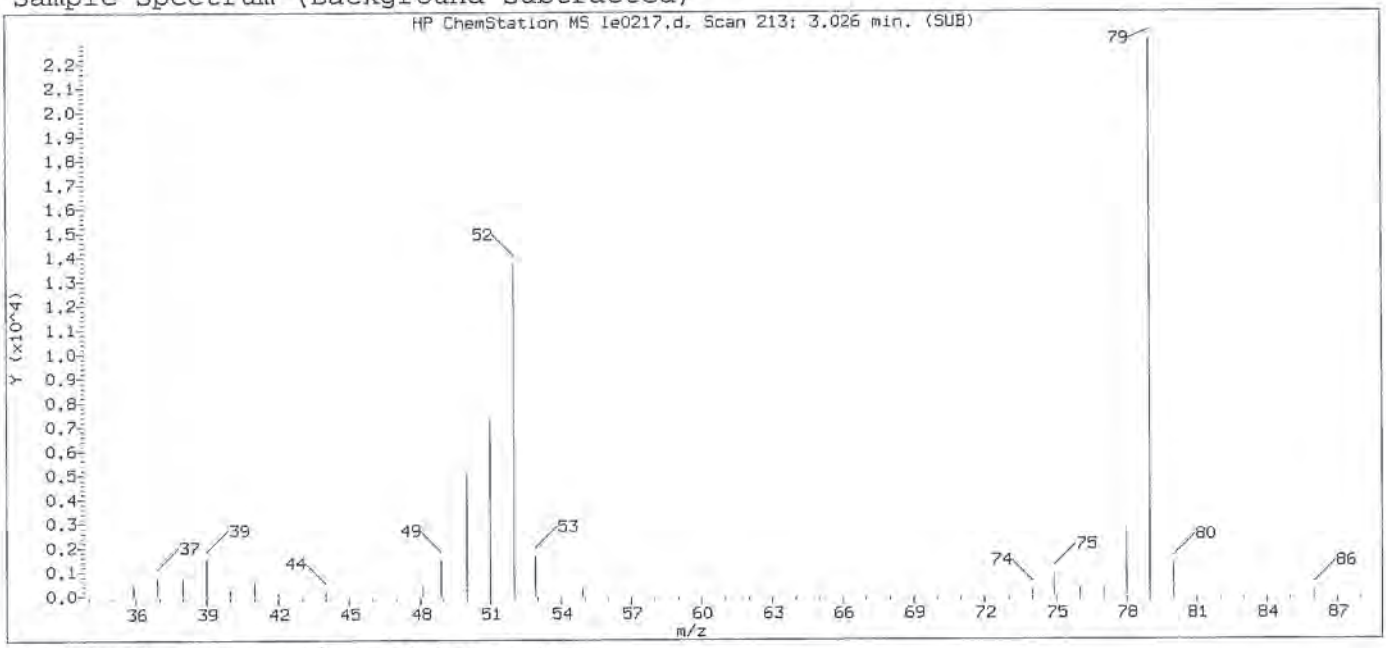
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

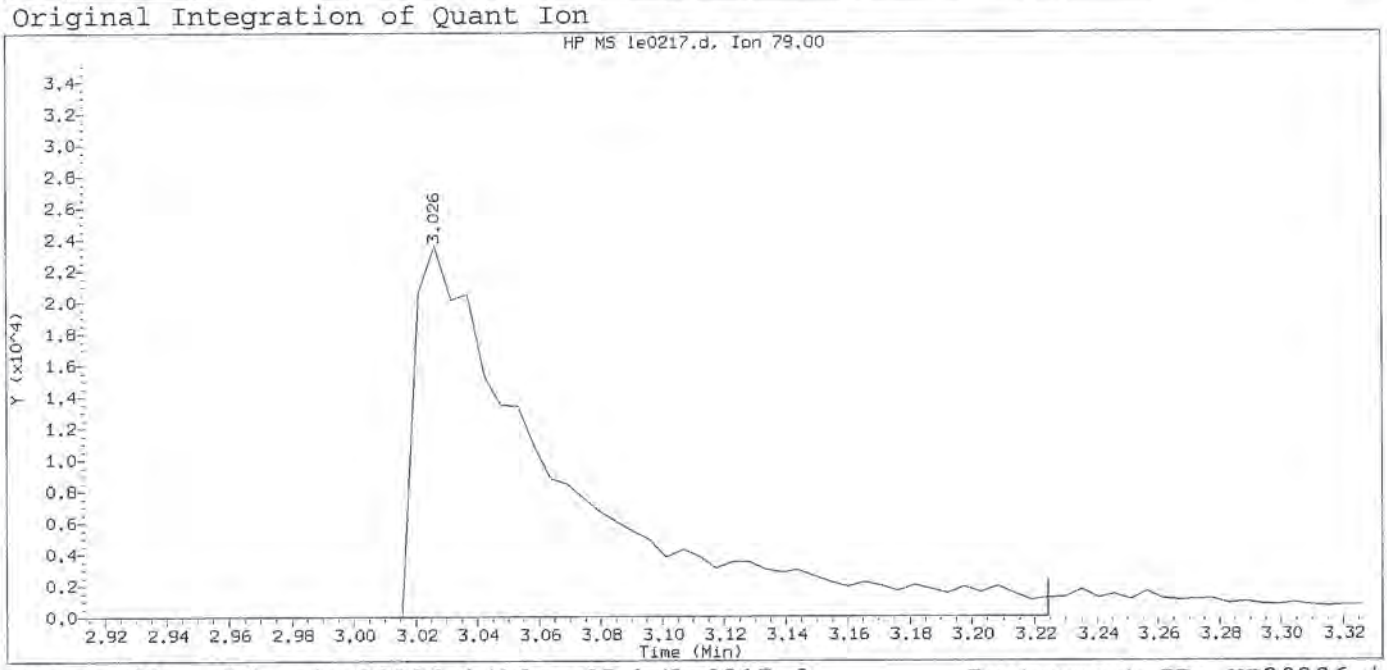
GC/MS audit/management approval: MAY 06 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

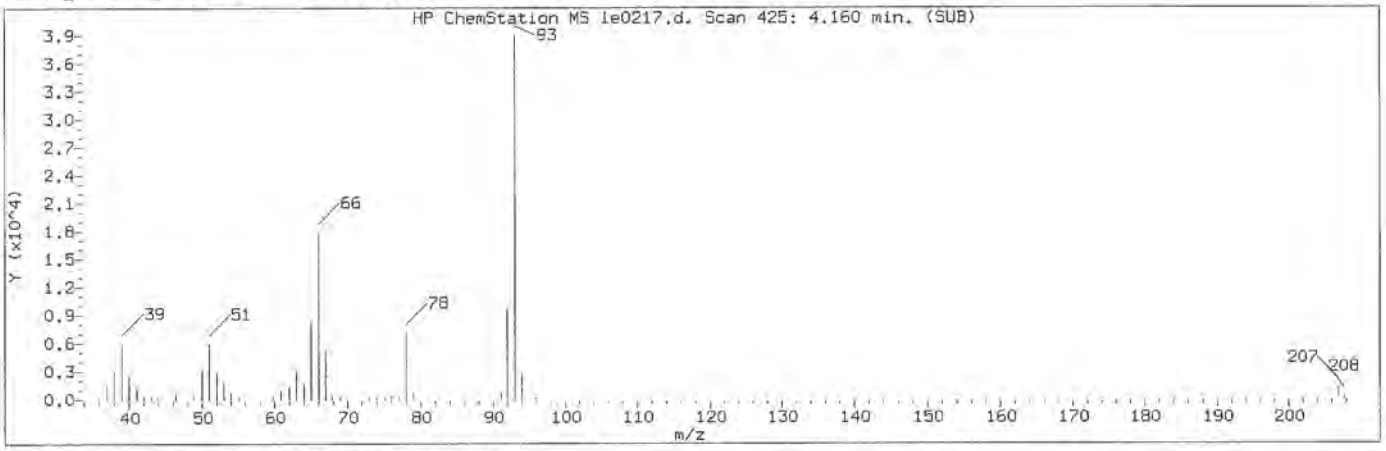
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

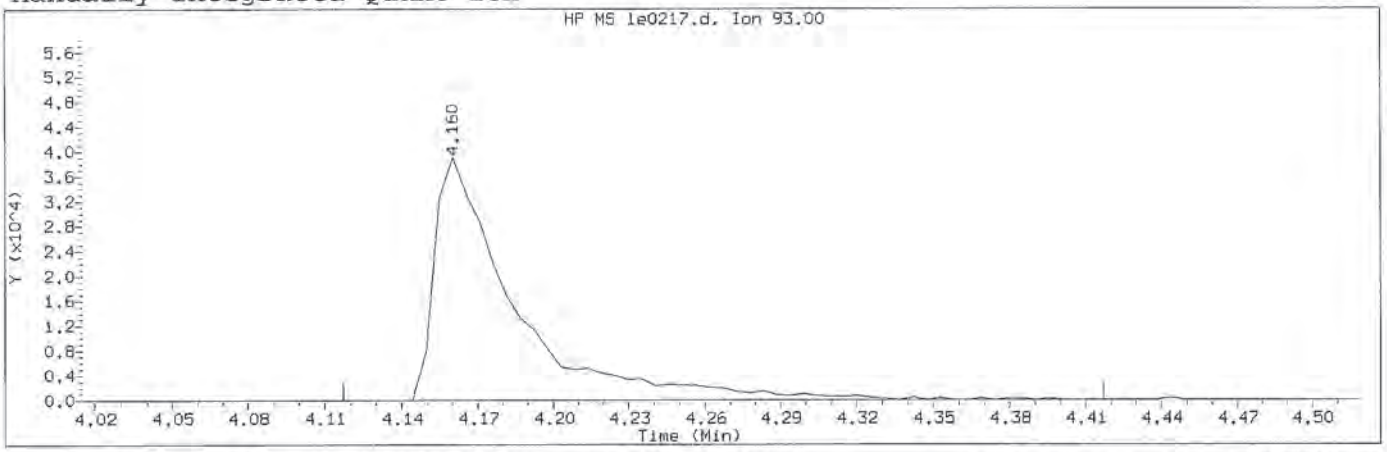
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 213		
Retention Time (minutes)	: 3.026		
Quant Ion	: 79.00		
Area	: 77851		
On-column Amount (ng/ul)	: 1.1687		
Integration start scan	: 210	Integration stop scan:	249
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 425		
Retention Time (minutes)	: 4.160		
Quant Ion	: 93.00		
Area (flag)	: 86302M		
On-Column Amount (ng/ul)	: 1.2817		
Integration start scan	: 416	Integration stop scan:	472
Y at integration start	: 0	Y at integration end:	0

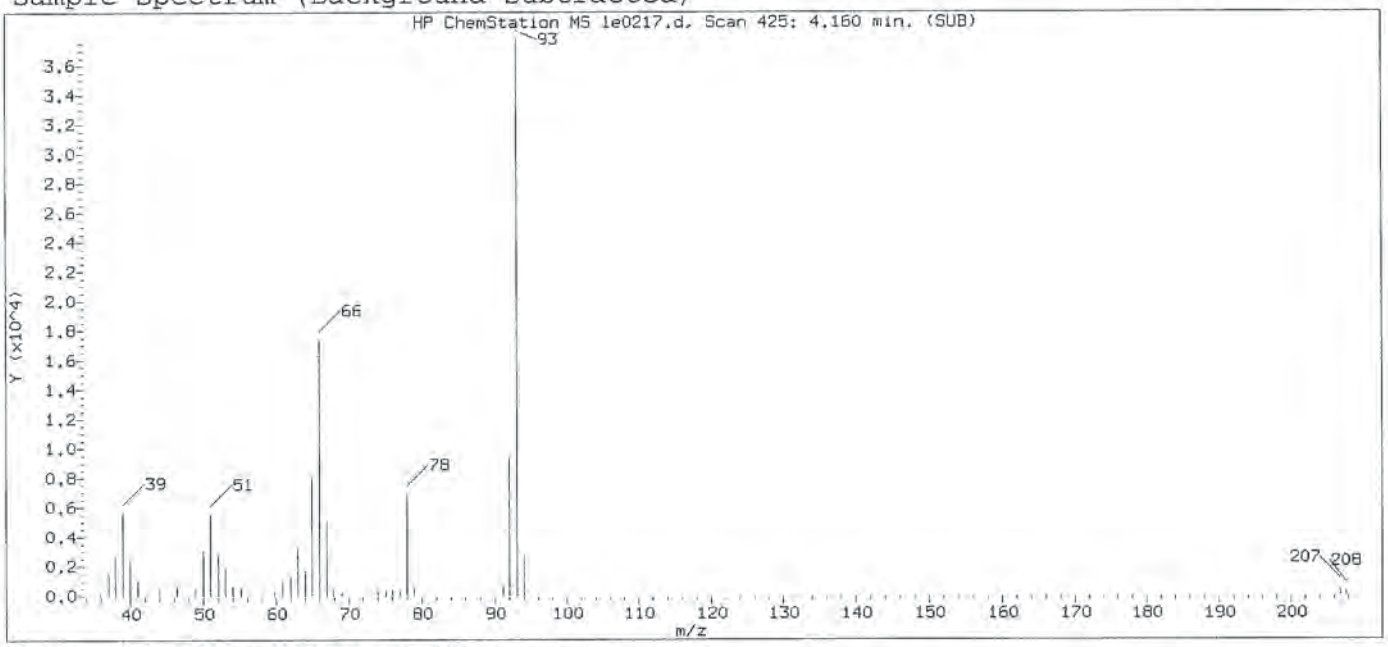
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature user ID: hbz01996

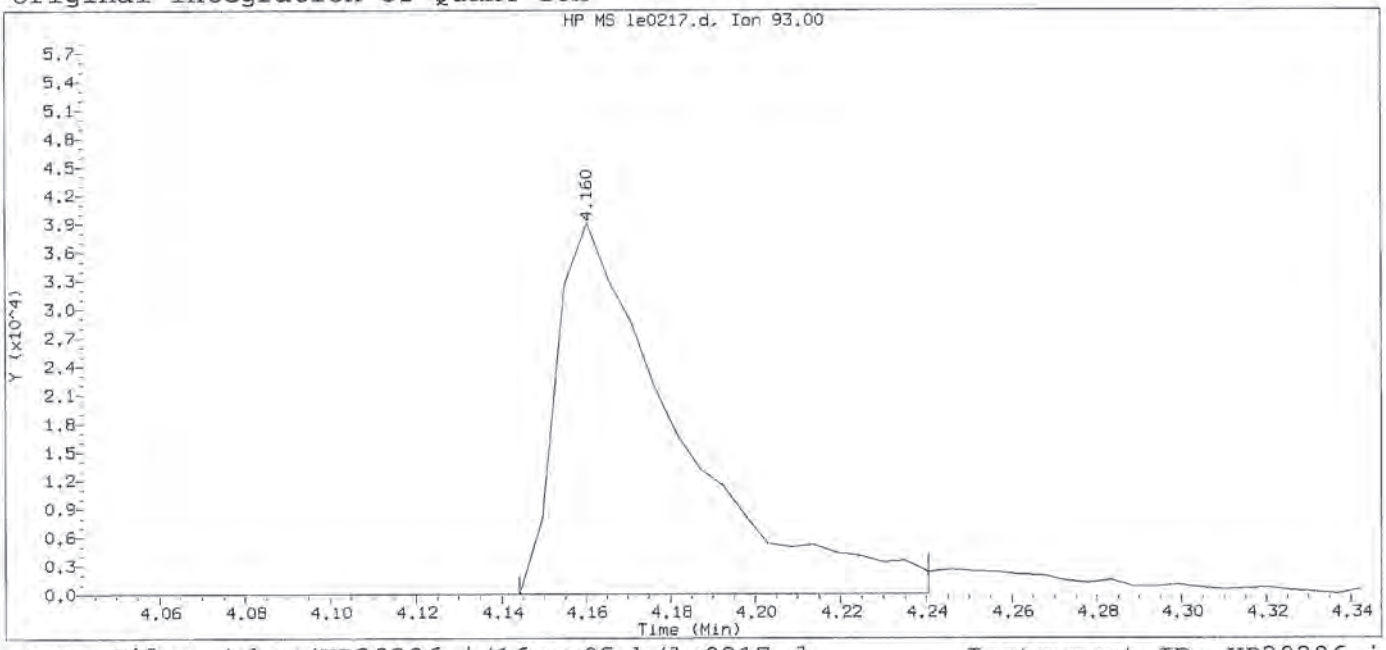
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 7
Compound Name	: 2-Picoline
Scan Number	: 425
Retention Time (minutes)	: 4.160
Quant Ion	: 93.00
Area	: 78466
On-column Amount (ng/ul)	: 1.1575
Integration start scan	: 421 Integration stop scan: 439
Y at integration start	: 0 Y at integration end: 0

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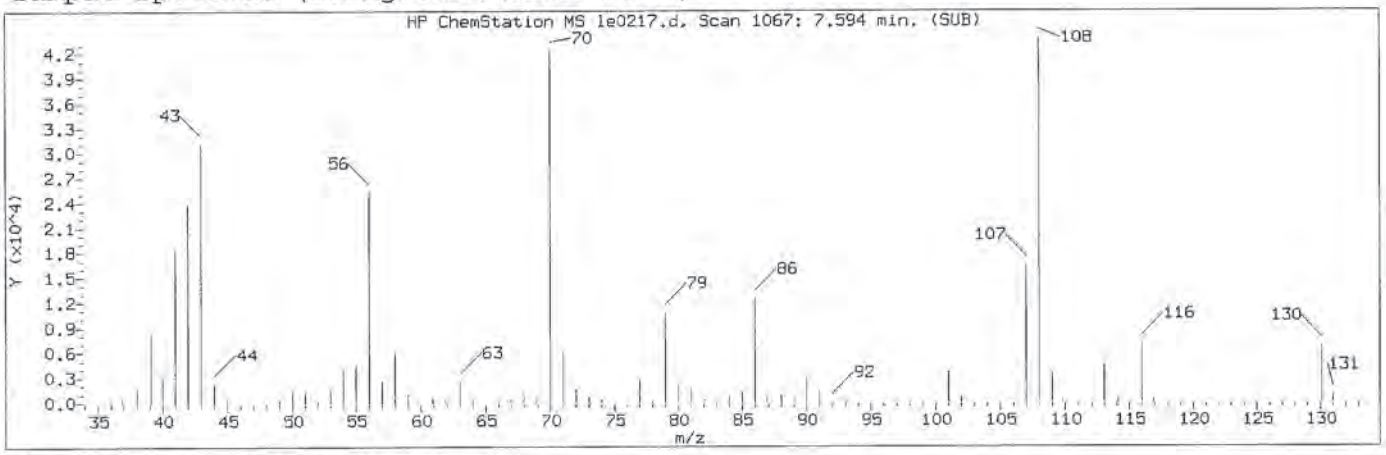
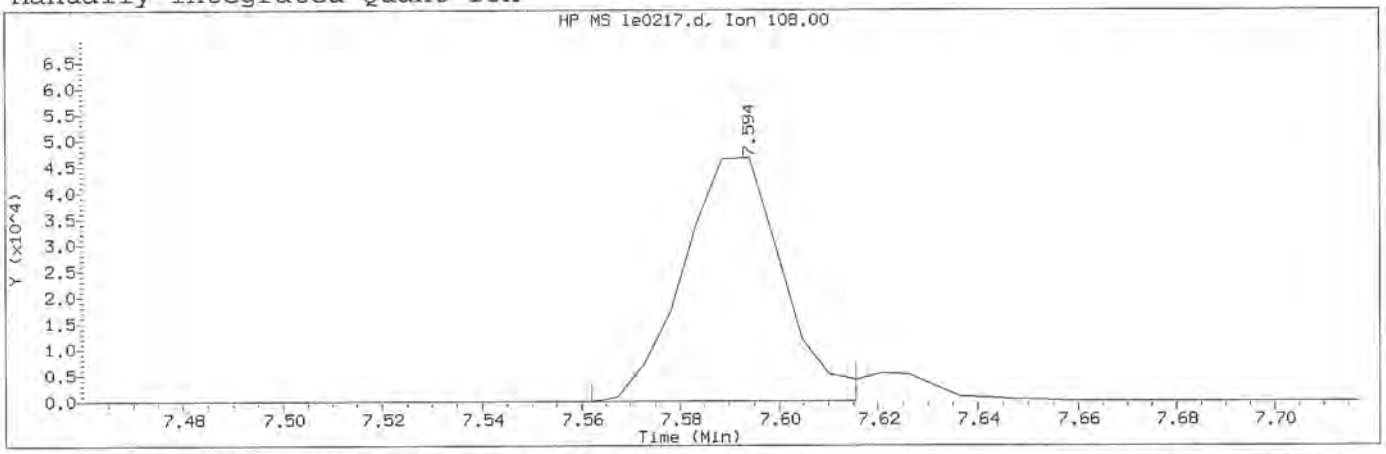
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 37		
Compound Name	: 4-Methylphenol		
Scan Number	: 1067		
Retention Time (minutes)	: 7.594		
Quant Ion	: 108.00		
Area (flag)	: 65021M		
On-Column Amount (ng/ul)	: 1.1816		
Integration start scan	: 1060	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

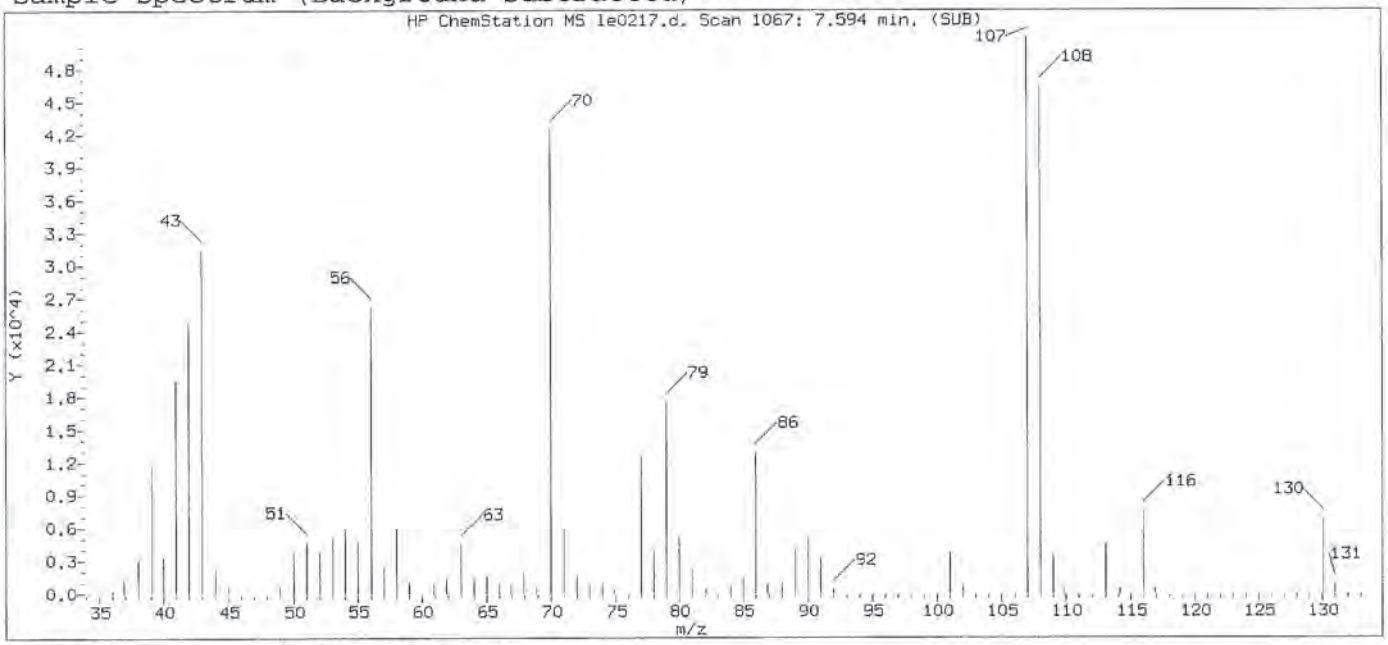
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature used ID: hbz01996

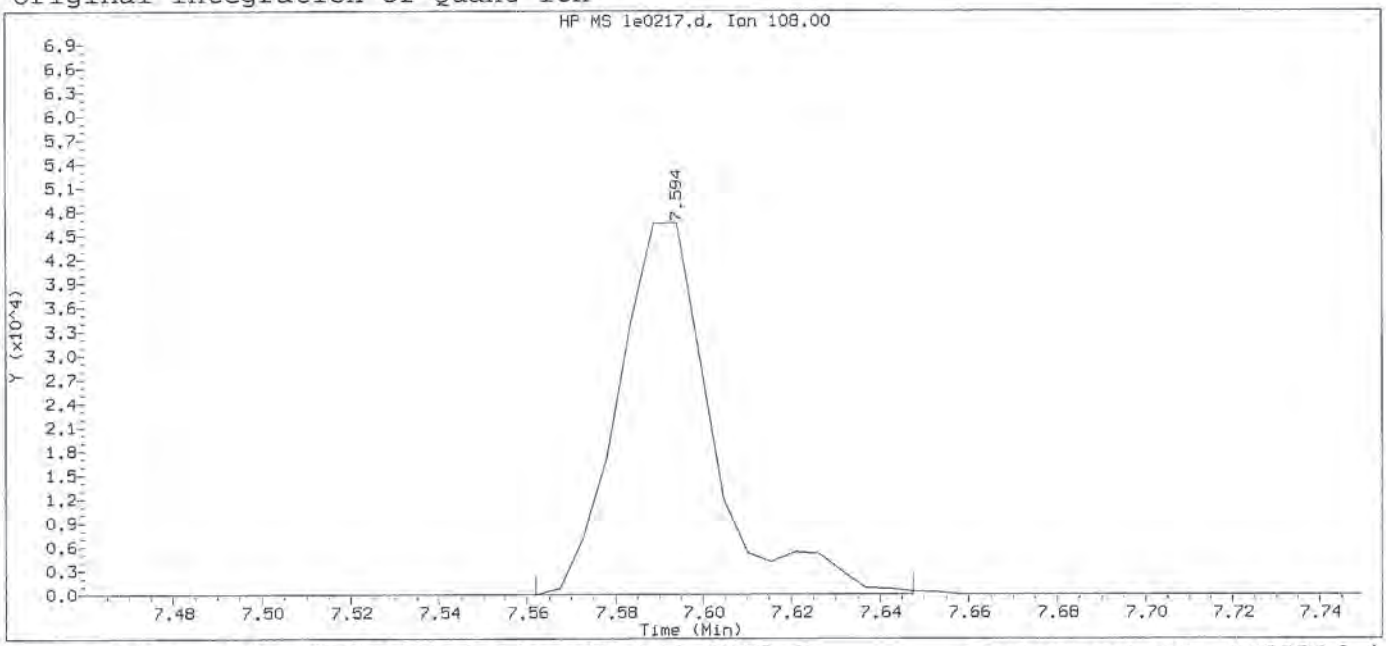
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 37		
Compound Name	: 4-Methylphenol		
Scan Number	: 1067		
Retention Time (minutes)	: 7.594		
Quant Ion	: 108.00		
Area	: 69863		
On-column Amount (ng/ul)	: 1.2327		
Integration start scan	: 1060	Integration stop scan:	1076
Y at integration start	: 0	Y at integration end:	0

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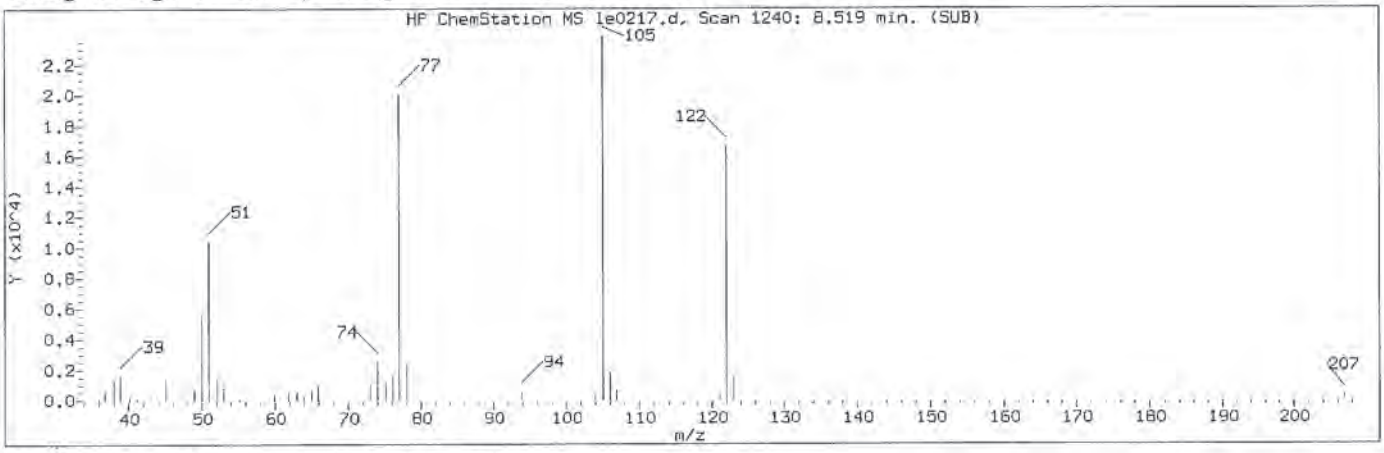
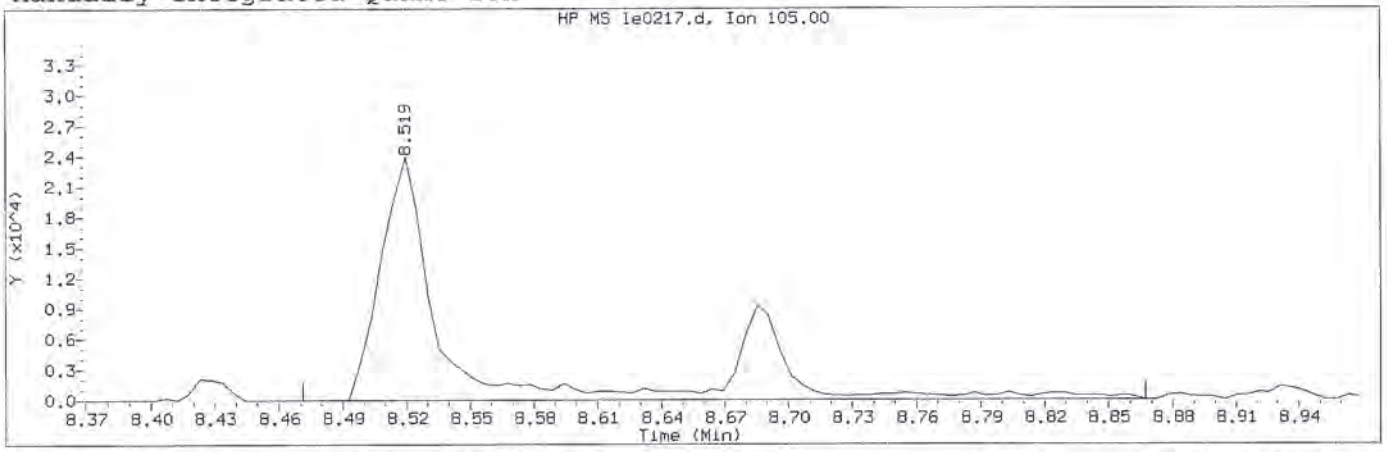
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1240		
Retention Time (minutes)	: 8.519		
Quant Ion	: 105.00		
Area (flag)	: 59680M		
On-Column Amount (ng/ul)	: 1.8357		
Integration start scan	: 1230	Integration stop scan:	1304
Y at integration start	: 0	Y at integration end:	0

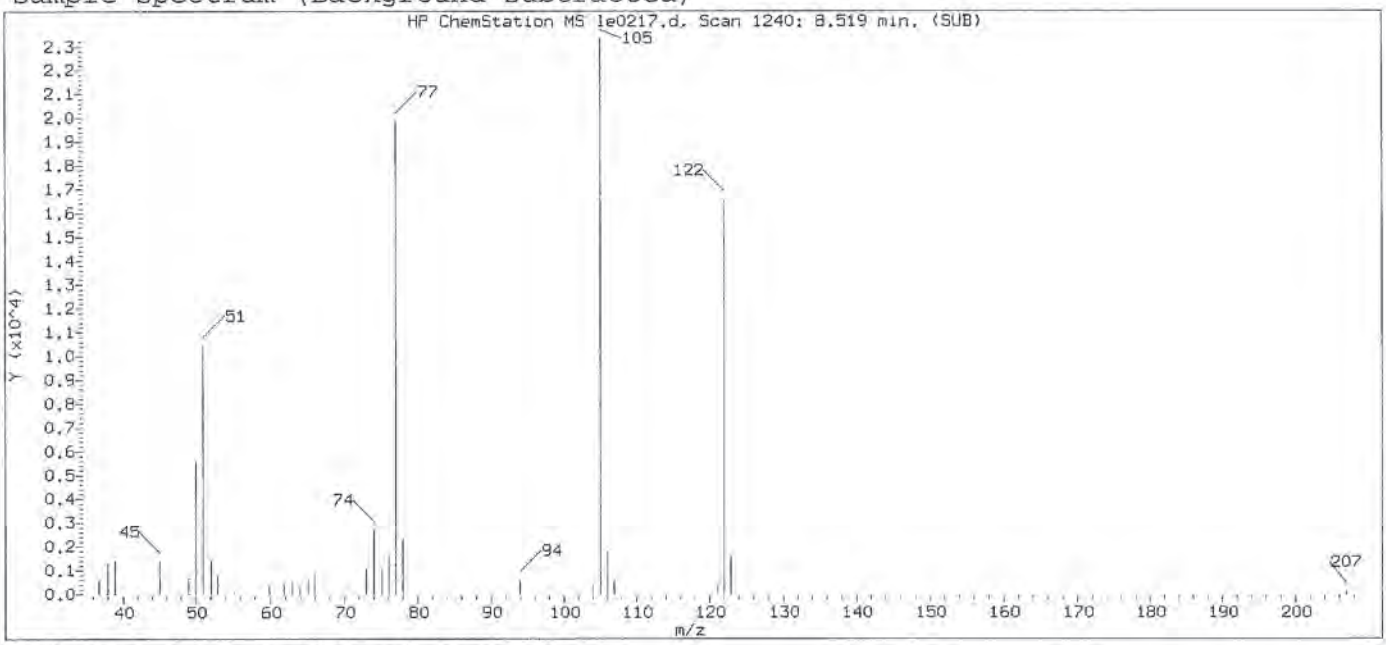
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature user ID: hbz01996

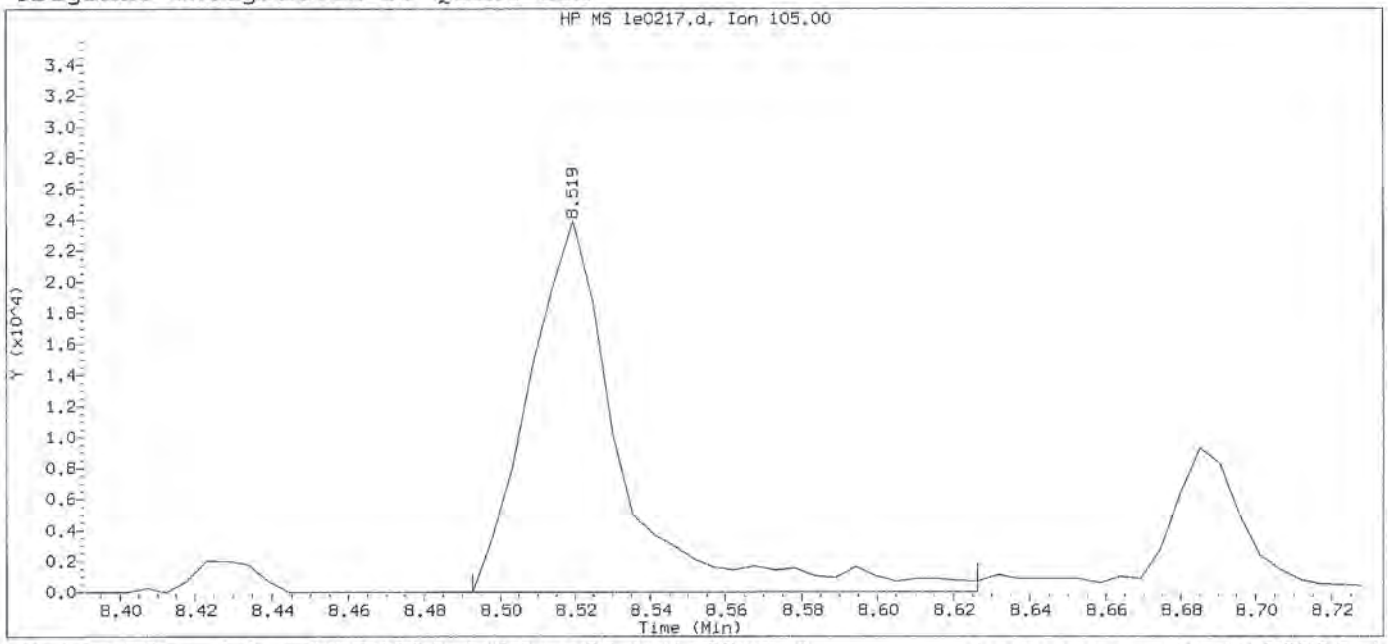
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

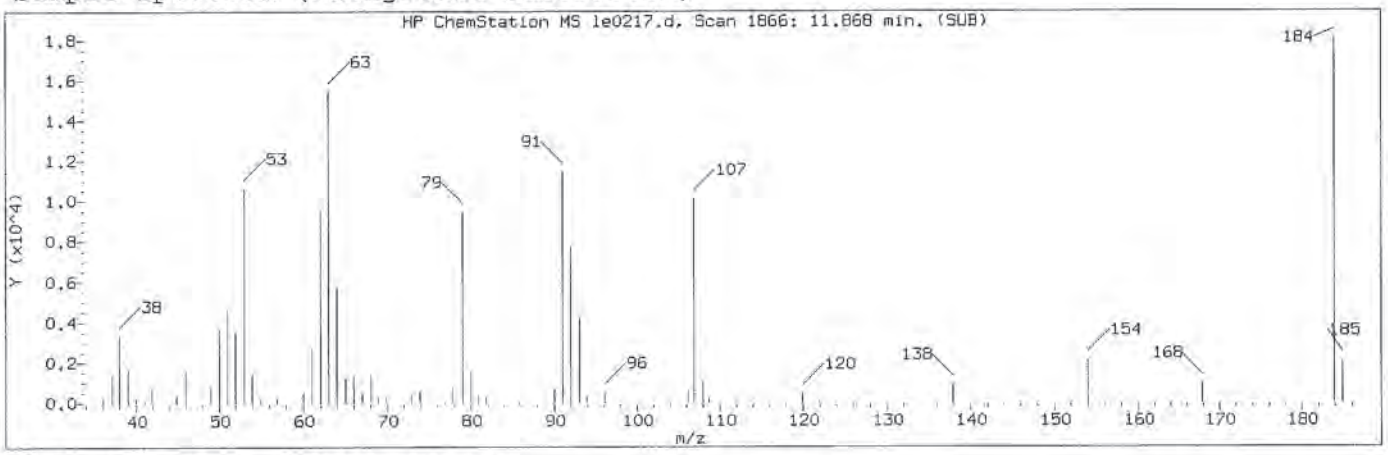
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

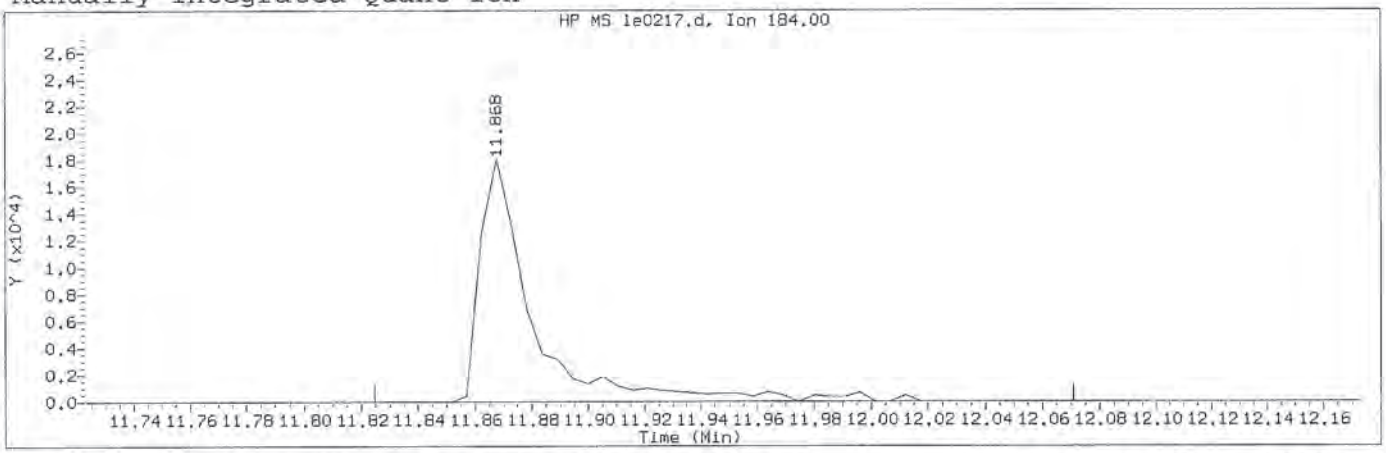
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1240		
Retention Time (minutes)	: 8.519		
Quant Ion	: 105.00		
Area	: 41303		
On-column Amount (ng/ul)	: 1.0781		
Integration start scan	: 1234	Integration stop scan:	1259
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:15
Date, time and analyst ID of latest file update: 06-May-2016 07:15 hbz01996

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1866		
Retention Time (minutes)	: 11.868		
Quant Ion	: 184.00		
Area (flag)	: 23698M		
On-Column Amount (ng/ul)	: 2.3617		
Integration start scan	: 1857	Integration stop scan:	1903
Y at integration start	: 0	Y at integration end:	0

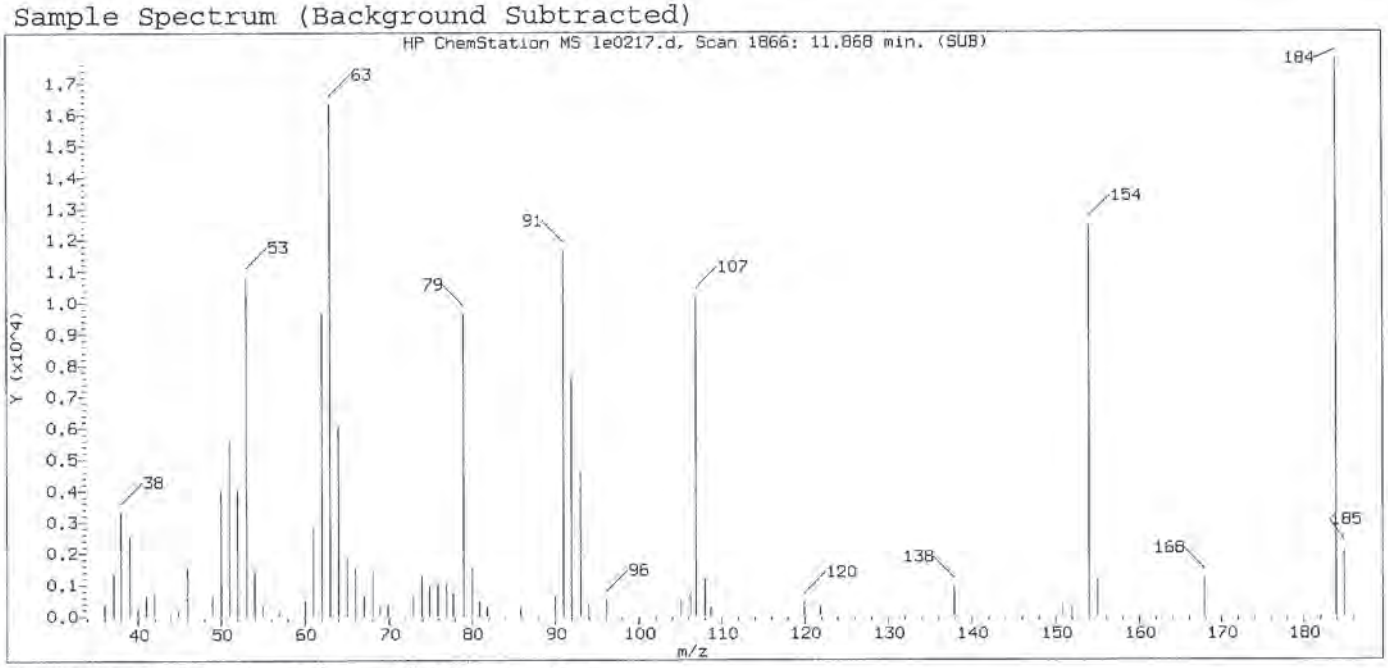
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 esignature user ID: hbz01996

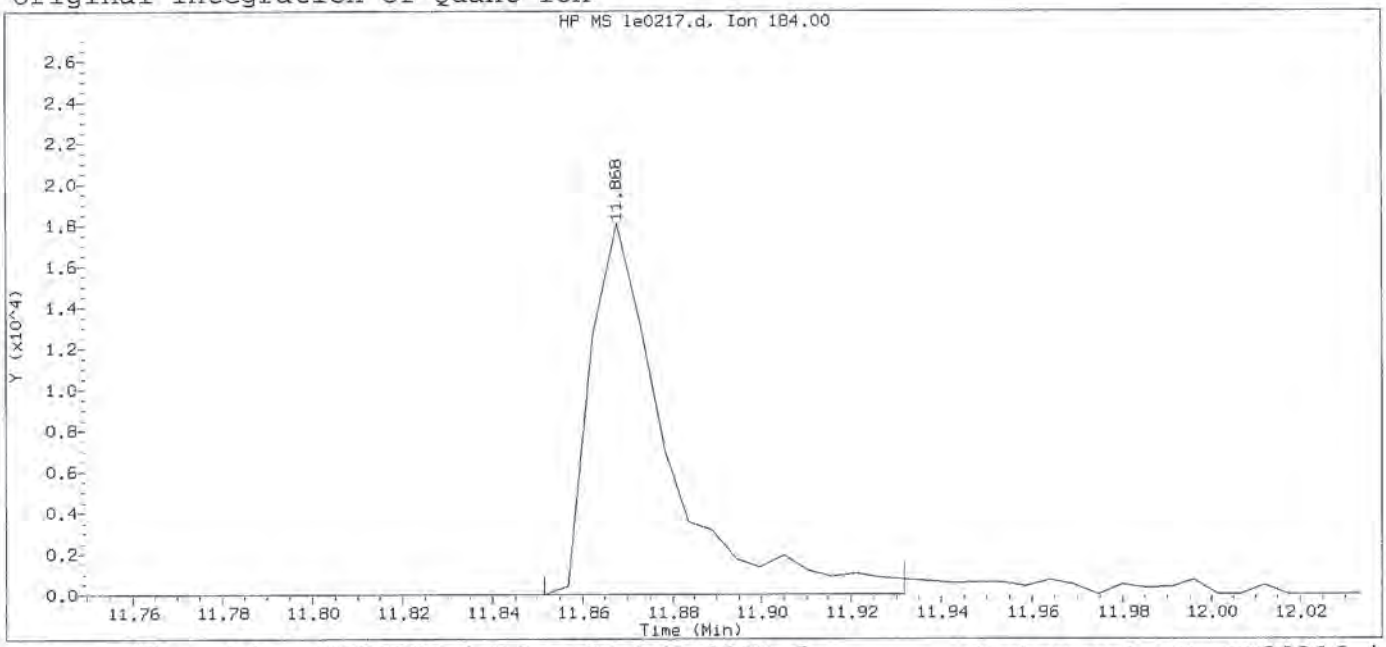
GC/MS audit/management approval: MAY 06 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



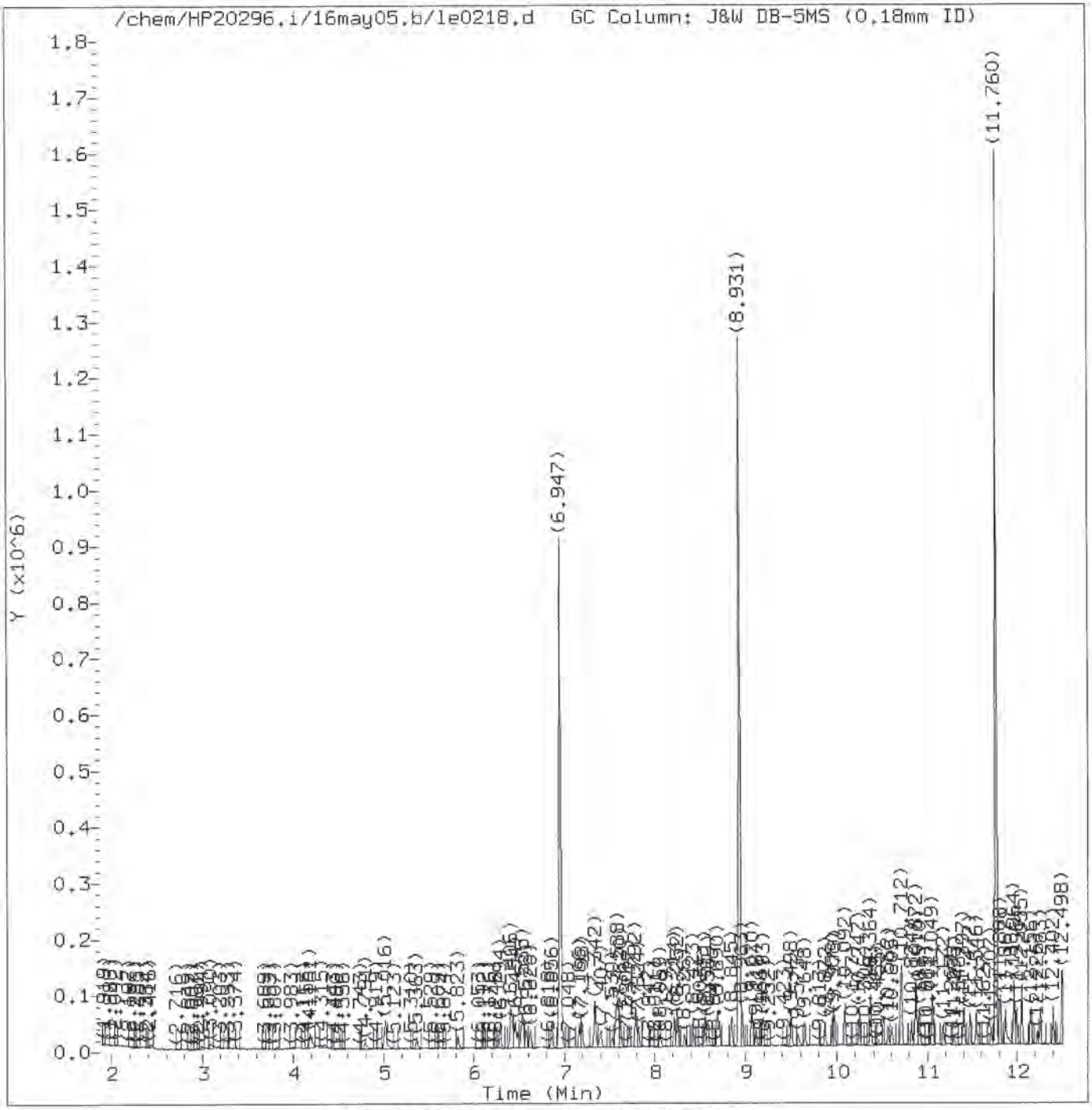
Data File: /chem/HP20296.i/16may05.b/1e0217.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 21:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:16
Date, time and analyst ID of latest file update: 05-May-2016 22:16 Unknown

Sample Name: SSTD1.25 Lab Sample ID: RVSTD0816

Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1866		
Retention Time (minutes)	: 11.868		
Quant Ion	: 184.00		
Area	: 21537		
On-column Amount (ng/ul)	: 2.0412		
Integration start scan	: 1862	Integration stop scan:	1877
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

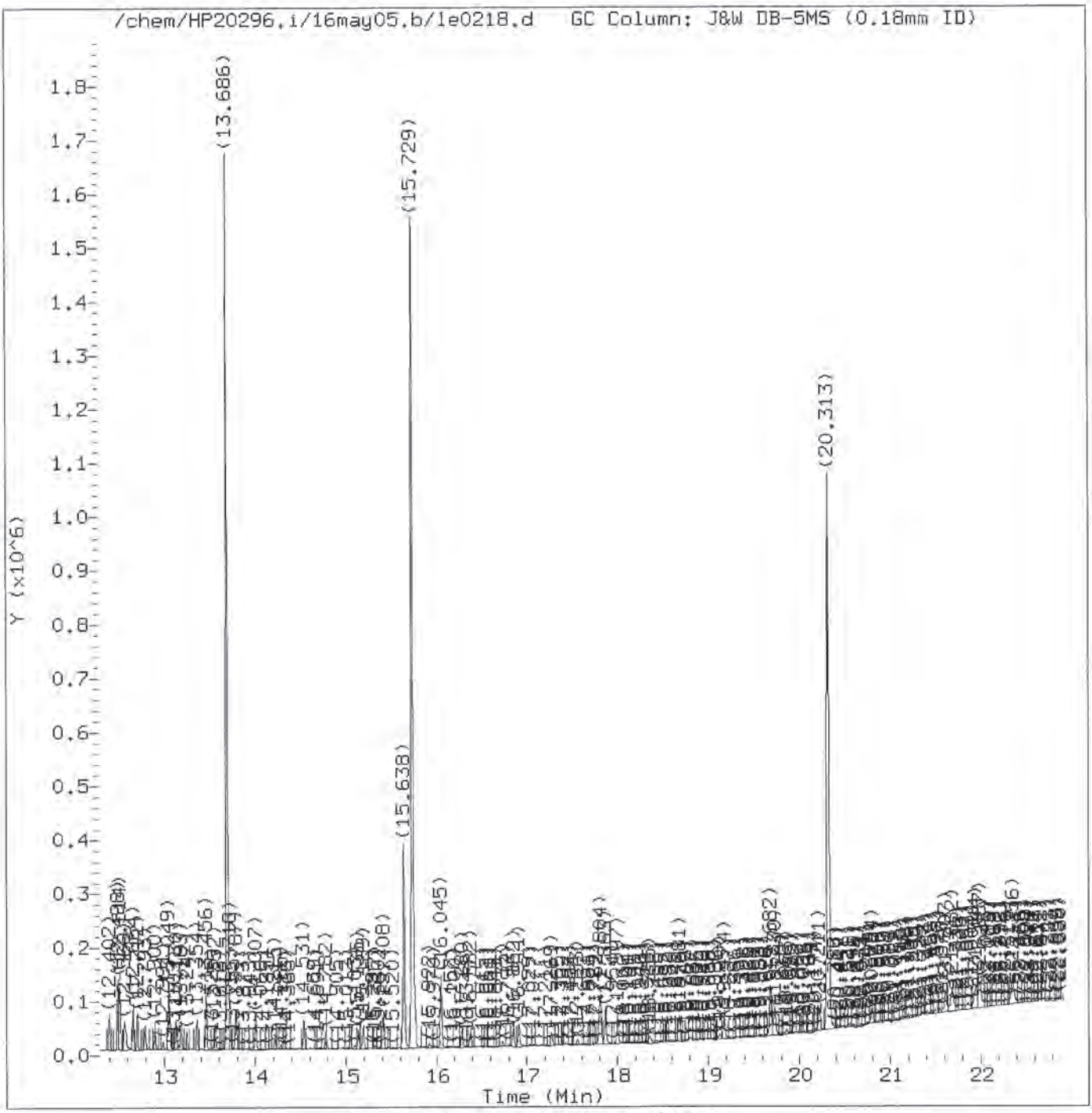
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0218.d
Injection date and time: 05-MAY-2016 22:17
Instrument ID: HP20296.i
Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m
Calibration date and time: 06-MAY-2016 07:16
Sublist used: all1
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25
Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.422	88	5745M	0.235
4) N-Nitrosodimethylamine	(1)	2.994	74	7437	0.196
5) Pyridine	(1)	3.096	79	16467M	0.253
7) 2-Picoline	(1)	4.181	93	17676M	0.265
8) N-Nitrosomethylethylamine	(1)	4.342	88	5836M	0.220
9) Methyl methanesulfonate	(1)	4.791	80	7231	0.233
11)$2-Fluorophenol	(1)	5.016	112	23182	0.462
13) N-Nitrosodiethylamine	(1)	5.363	102	5555	0.224
42) Total Cresols	(1)			23150	0.450
15) Ethyl methanesulfonate	(1)	5.823	109	6594	0.255
16) Benzaldehyde	(1)	6.294	77	14628	0.274
17)$Phenol-d6	(1)	6.406	99	31390	0.468
18) Phenol	(1)	6.422	94	18483	0.233
19) Aniline	(1)	6.454	93	21862	0.233
20) a-methylstyrene	(1)	6.535	118	11542	0.222
22) bis(2-Chloroethyl)ether	(1)	6.572	93	14316	0.246
23) 2-Chlorophenol	(1)	6.620	128	10022	0.219
24) 1,3-Dichlorobenzene	(1)	6.856	146	13487	0.256
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	166675	5.000
26) 1,4-Dichlorobenzene	(1)	6.973	146	13431	0.253
27) Benzyl alcohol	(1)	7.171	108	7517	0.214
28) 1,2-Dichlorobenzene	(1)	7.198	146	12538	0.250
30) Indene	(1)	7.337	115	21160	0.234
31) 2-Methylphenol	(1)	7.348	108	10741	0.220
97) Isosafrole	(3)			8583	0.225
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	18402	0.249
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	18402	0.249
35) N-Nitrosopyrrolidine	(1)	7.530	100	5446	0.209
36) Acetophenone	(1)	7.567	105	19671	0.245
37) 4-Methylphenol	(1)	7.588	108	12409M	0.230
38) N-Nitroso-di-n-propylamine	(1)	7.588	70	11341	0.250
39) N-Nitrosomorpholine	(1)	7.599	56	8325	0.246
40) o-Toluidine	(1)	7.620	106	21525	0.239
43) Hexachloroethane	(1)	7.717	117	5719	0.249
44)$Nitrobenzene-d5	(2)	7.792	82	30205	0.473
45) Nitrobenzene	(2)	7.824	77	15111	0.230
120) 2,4_2,6-Dinitrotoluenes	(3)			6931	0.305
48) N-Nitrosopiperidine	(2)	8.059	114	5633	0.231
50) Isophorone	(2)	8.214	82	25487	0.228
51) 2-Nitrophenol	(2)	8.332	139	4169	0.200

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.423	107	12145	0.223
56) Benzoic acid	(2)	8.508	105	2127	0.066
57) O,O,O-Triethylphosphorothioate	(2)	8.551	198	6115	0.240
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	16955	0.244
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.685	104	18814	0.229
60) 2,4-Dichlorophenol	(2)	8.712	162	8547	0.219
146) Diallate trans/cis	(4)			10762	0.214
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	11034	0.245
65)*Naphthalene-d8	(2)	8.931	136	635974	5.000
66) Naphthalene	(2)	8.963	128	34205	0.249
67) 4-Chloroaniline	(2)	9.065	127	13597	0.238
68) 2,6-Dichlorophenol	(2)	9.075	162	7984	0.215
69) Hexachloropropene	(2)	9.118	213	6744	0.236
71) Hexachlorobutadiene	(2)	9.193	225	6983	0.247
75) Quinoline	(2)	9.498	129	19801	0.235
76) Caprolactam	(2)	9.573	113	2426	0.196
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	8667	0.196
80) 4-Chloro-3-methylphenol	(2)	9.872	107	9994	0.218
82) Safrole	(2)	9.979	162	7624	0.220
83) 2-Methylnaphthalene	(2)	10.092	142	21320	0.239
84) 1-Methylnaphthalene	(2)	10.247	142	19945	0.242
85) Hexachlorocyclopentadiene	(3)	10.364	237	5981	0.233
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	12793	0.270
88) cis-Isosafrole	(3)	10.455	162	1427	0.039
90) 2,4,6-Trichlorophenol	(3)	10.562	196	6180	0.222
92) 2,4,5-Trichlorophenol	(3)	10.605	196	6054	0.205
93)$2-Fluorobiphenyl	(3)	10.712	172	52051	0.511
94) trans-Isosafrole	(3)	10.824	162	7156	0.185
95) 1,1'-Biphenyl	(3)	10.867	154	27785	0.257
96) 2-Chloronaphthalene	(3)	10.878	162	21325	0.244
98) 1-Chloronaphthalene	(3)	10.910	162	20991	0.256
99) Diphenyl ether	(3)	11.049	170	14886	0.249
100) 2-Nitroaniline	(3)	11.054	138	4305	0.184
104) 1,4-Naphthoquinone	(3)	11.172	158	6113	0.182
105) 1,4-Dinitrobenzene	(3)	11.295	168	1865	0.159
106) Dimethylphthalate	(3)	11.397	163	23329	0.246
107) 1,3-Dinitrobenzene	(3)	11.407	168	2646	0.196
108) 2,6-Dinitrotoluene	(3)	11.477	165	3099	0.162
109) Acenaphthylene	(3)	11.546	152	28220	0.226
112) 3-Nitroaniline	(3)	11.707	138	3897	0.185

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.760	164	360364	5.000
114) Acenaphthene	(3)	11.808	153	22296	0.253
115) 2,4-Dinitrophenol	(3)	11.867	184	9559M	0.955
116) 4-Nitrophenol	(3)	11.964	109	14092	0.806
117) Pentachlorobenzene	(3)	11.996	250	10182	0.263
118) 2,4-Dinitrotoluene	(3)	12.049	165	3832	0.143
119) Dibenzofuran	(3)	12.055	168	29764	0.246
121) 1-Naphthylamine	(3)	12.156	143	19154	0.222
122) 2,3,4,6-Tetrachlorophenol	(3)	12.231	232	4319	0.192
123) 2-Naphthylamine	(3)	12.263	143	19787	0.232
124) Diethylphthalate	(3)	12.402	149	21733	0.235
126) Fluorene	(3)	12.493	166	22309	0.239
125) Thionazin	(3)	12.498	107	4398	0.231
128) 5-Nitro-o-toluidine	(3)	12.514	152	4252	0.179
129) 4-Nitroaniline	(3)	12.514	138	4485	0.205
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	12381	0.253
130) 4,6-Dinitro-2-methylphenol	(4)	12.568	198	7726	0.551
132) NDPA as diphenylamine	(4)	12.664	169	17936	0.229
131) N-Nitrosodiphenylamine	(4)	12.664	169	17936	0.229
134) 1,2-Diphenylhydrazine	(4)	12.712	77	29064	0.231
135)$2,4,6-Tribromophenol	(3)	12.793	330	4418	0.373
137) Tetraethyldithiopyrophosphate	(4)	12.900	97	4503	0.230
139) 1,3,5-Trinitrobenzene	(4)	12.991	213	1330	0.147
140) Diallate (peak 1)	(4)	13.044	86	8691	0.173
141) Phorate	(4)	13.055	75	13837	0.197
142) Phenacetin	(4)	13.060	108	9952	0.187
143) 4-Bromophenyl-phenylether	(4)	13.130	248	5983	0.231
144) Diallate (peak 2)	(4)	13.156	86	2071	0.041
145) Hexachlorobenzene	(4)	13.183	284	6359	0.235
147) Dimethoate	(4)	13.247	87	7379	0.165
148) Atrazine	(4)	13.354	200	5904	0.228
149) Pentachlorophenol	(4)	13.440	266	1272	0.079
150) 4-Aminobiphenyl	(4)	13.456	169	17404	0.230
151) Pentachloronitrobenzene	(4)	13.456	237	2392	0.184
152) Pronamide	(4)	13.552	173	8306	0.196
153)*Phenanthrene-d10	(4)	13.686	188	676247	5.000
154) Dinoseb	(4)	13.713	211	1554M	0.079
155) Phenanthrene	(4)	13.718	178	34123	0.239
157) Anthracene	(4)	13.787	178	32543	0.232
163) Carbazole	(4)	14.007	167	27519	0.215

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.215	109	4639	0.145
165) Di-n-butylphthalate	(4)	14.531	149	29315	0.188
167) Parathion	(4)	14.777	109	2983	0.148
168) 4-Nitroquinoline-1-oxide	(4)	14.782	190	943	0.077
222) Total PAHs	(6)			520038	4.092
169) Octachlorostyrene	(4)	15.135	308	1824	0.184
171) Isodrin	(4)	15.194	193	3878	0.232
173) Fluoranthene	(4)	15.408	202	33275	0.214
174) Benzidine	(5)	15.638	184	176710	1.640
175)*Pyrene-d10	(5)	15.729	212	795597	5.000
177) Pyrene	(5)	15.761	202	42503	0.246
179)$Terphenyl-d14	(5)	16.045	244	49766	0.456
182) p-Dimethylaminoazobenzene	(5)	16.285	225	4155	0.164
185) Chlorobenzilate	(5)	16.382	139	8363	0.177
187) 3,3'-Dimethylbenzidine	(5)	16.852	212	16862	0.169
188) Butylbenzylphthalate	(5)	16.911	149	11265	0.163
191) 2-Acetylaminofluorene	(5)	17.269	181	7108	0.127
193) 3,3'-Dichlorobenzidine	(5)	17.794	252	9591	0.173
195) Benzo(a)anthracene	(5)	17.804	228	31478	0.211
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.810	231	5038	0.157
196) Chrysene	(5)	17.863	228	30918	0.217
199) bis(2-Ethylhexyl)phthalate	(5)	17.997	149	13461	0.136
203) 6-Methylchrysene	(5)	18.681	242	18762	0.188
205) Di-n-octylphthalate	(6)	19.174	149	19524	0.126
206) Benzo(b)fluoranthene	(6)	19.682	252	28828	0.214
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.687	256	10560	0.180
208) Benzo(k)fluoranthene	(6)	19.730	252	29315	0.218
211) Benzo(a)pyrene	(6)	20.217	252	24693	0.201
213)*Perylene-d12	(6)	20.313	264	551597	5.000
215) 3-Methylcholanthrene	(6)	20.794	268	9724	0.189
217) Dibenz(a,h)acridine	(6)	21.613	279	18519	0.177
218) Dibenz(a,j)acridine	(6)	21.687	279	22654	0.207
219) Indeno(1,2,3-cd)pyrene	(6)	21.949	276	30178	0.210
220) Dibenz(a,h)anthracene	(6)	21.987	278	25996	0.215
221) Benzo(g,h,i)perylene	(6)	22.356	276	27893	0.227

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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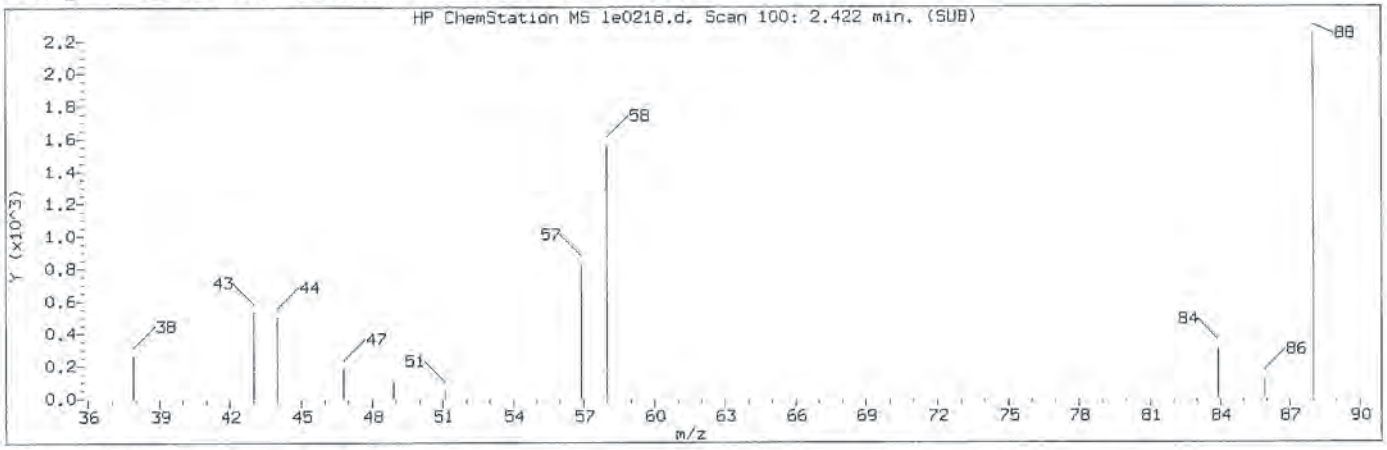
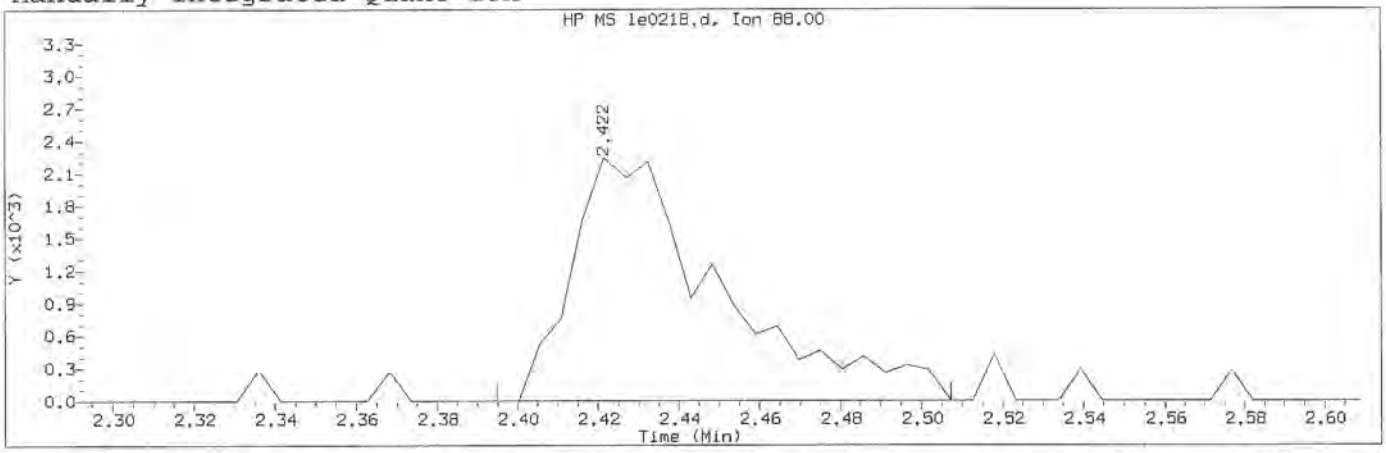
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 100		
Retention Time (minutes)	: 2.422		
Quant Ion	: 88.00		
Area (flag)	: 5745M		
On-Column Amount (ng/ul)	: 0.2346		
Integration start scan	: 94	Integration stop scan:	115
Y at integration start	: 0	Y at integration end:	0

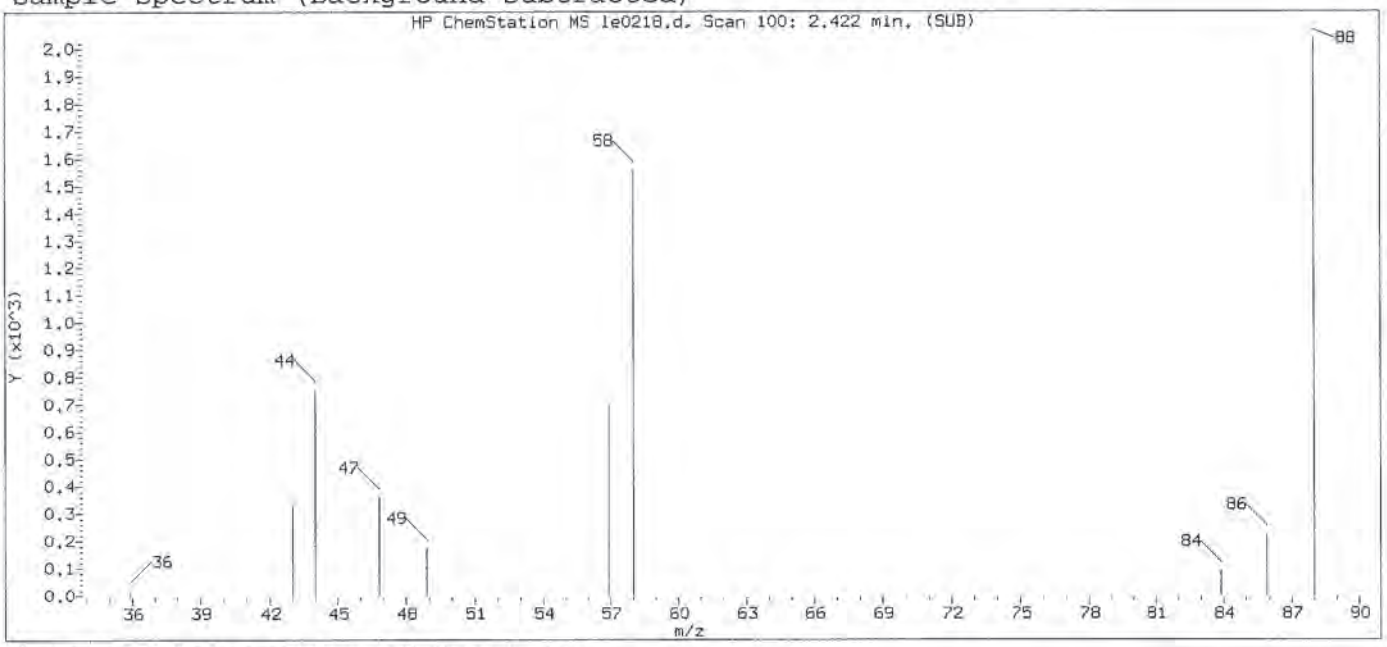
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33. Target 3.5 signature user ID: hbz01996

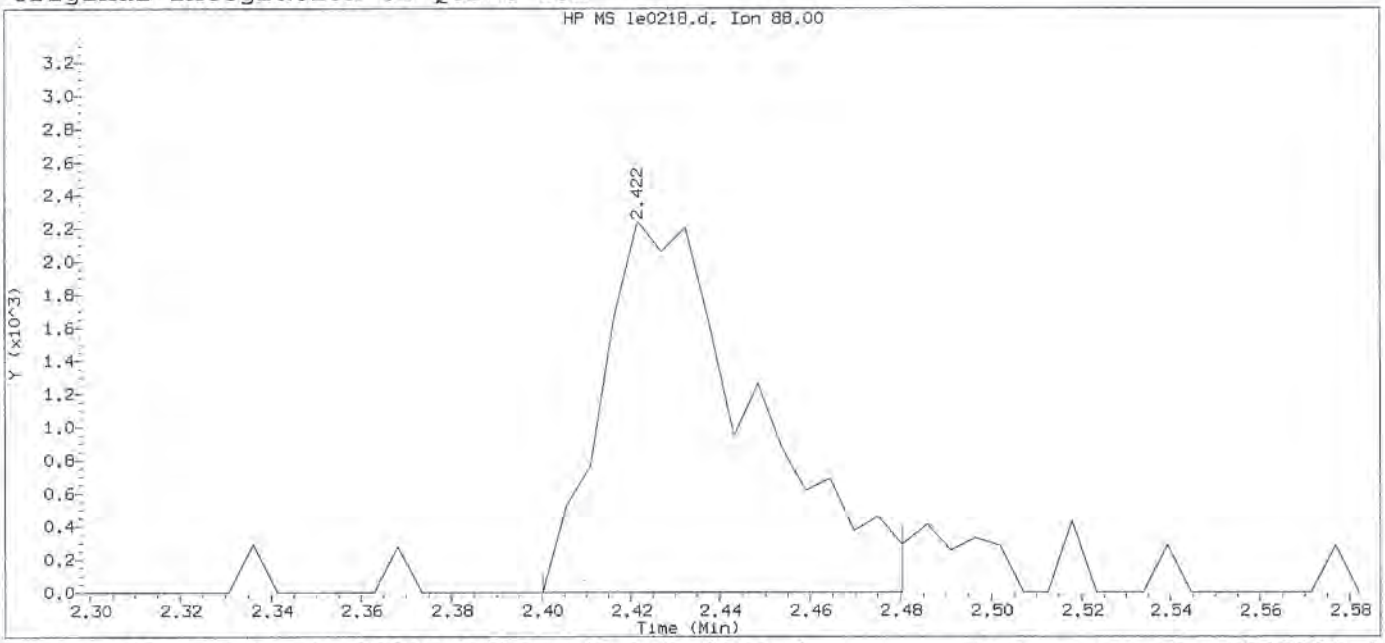
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

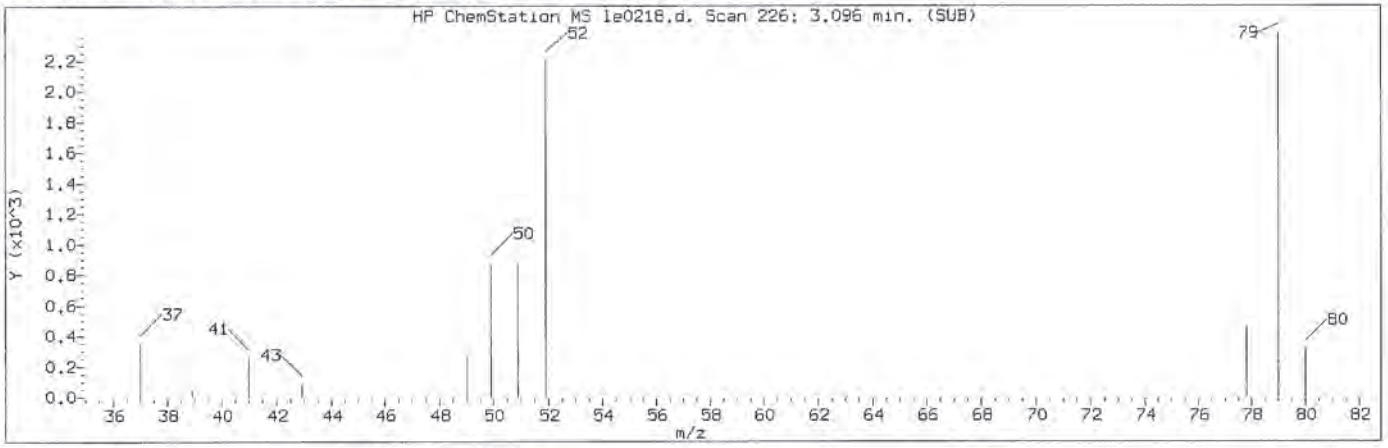
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

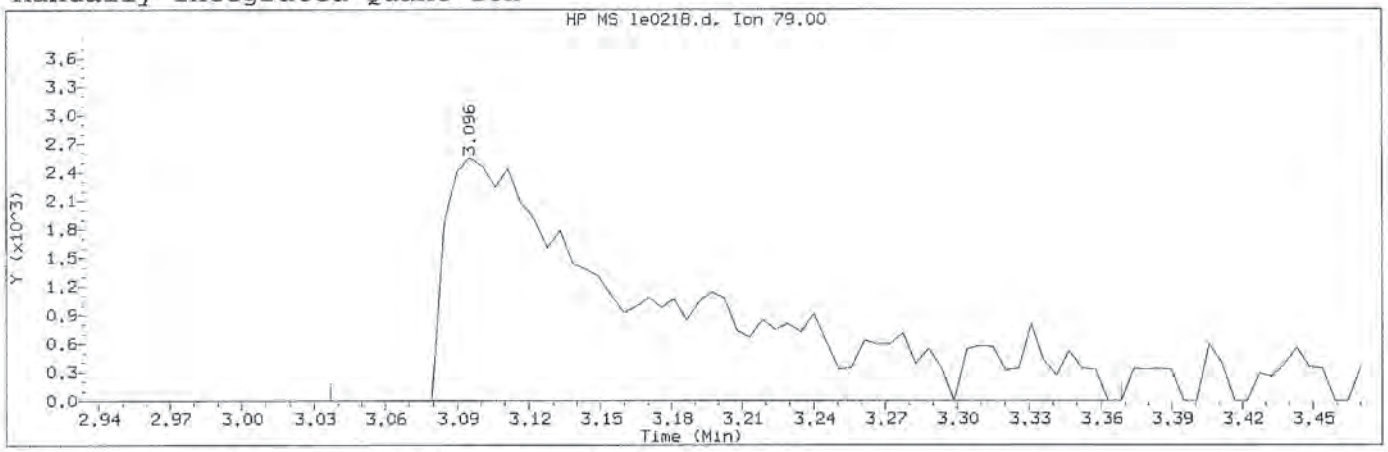
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 100		
Retention Time (minutes)	: 2.422		
Quant Ion	: 88.00		
Area	: 5286		
On-column Amount (ng/ul)	: 0.2147		
Integration start scan	: 95	Integration stop scan:	110
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 226		
Retention Time (minutes)	: 3.096		
Quant Ion	: 79.00		
Area (flag)	: 16467M		
On-Column Amount (ng/ul)	: 0.2532		
Integration start scan	: 214	Integration stop scan:	276
Y at integration start	: 0	Y at integration end:	0

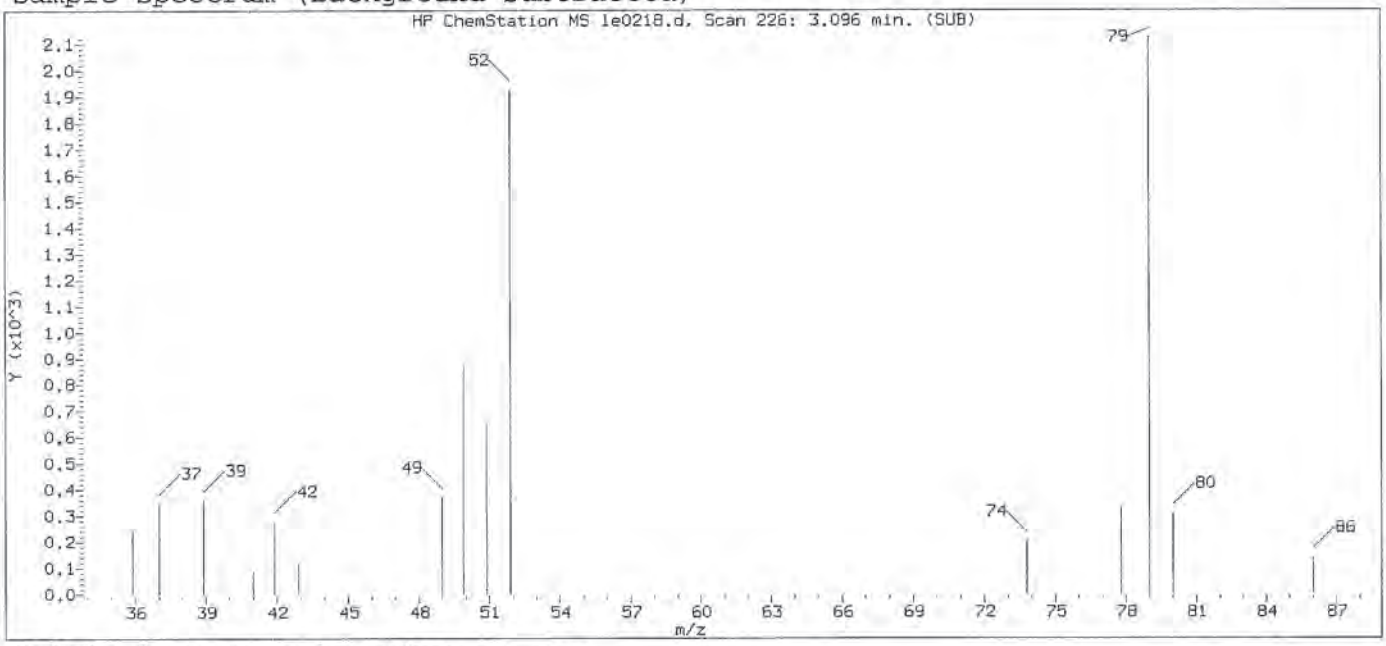
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

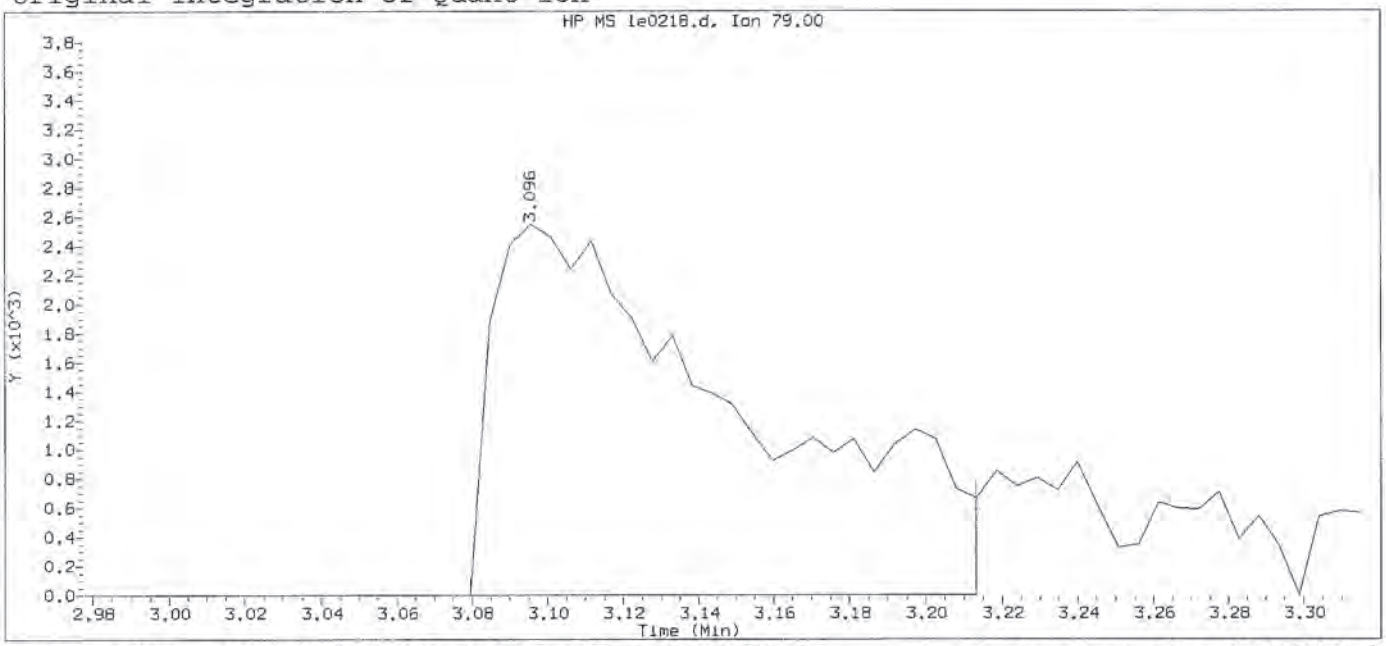
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

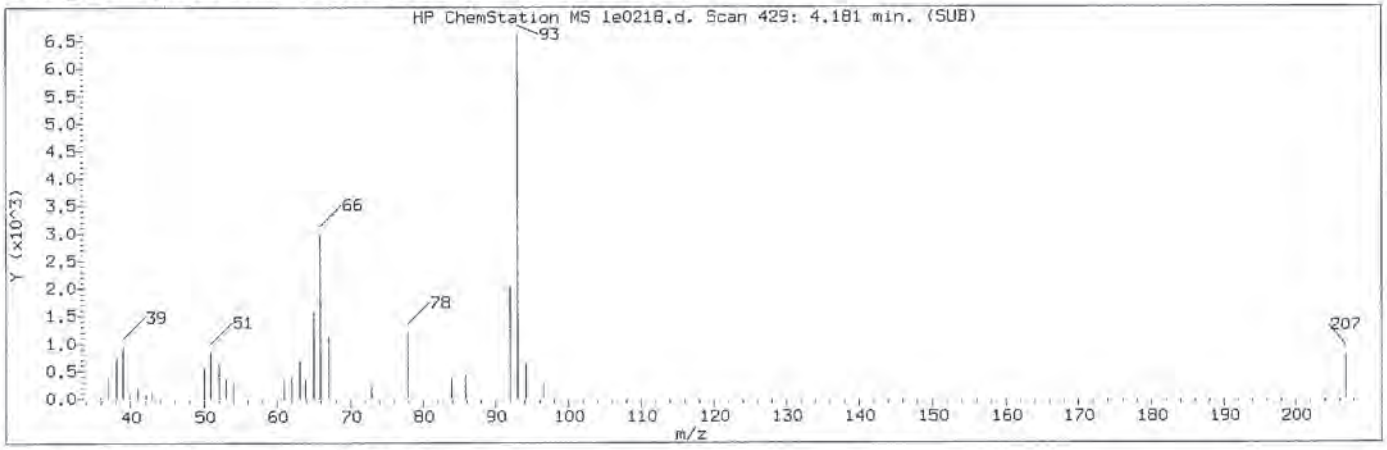
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

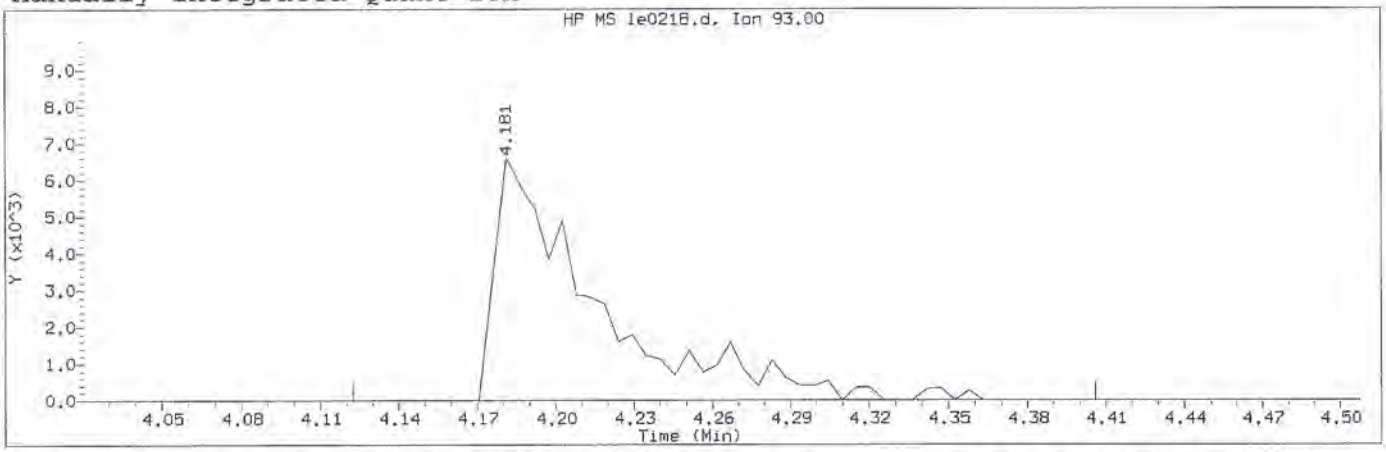
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 226		
Retention Time (minutes)	: 3.096		
Quant Ion	: 79.00		
Area	: 11813		
On-column Amount (ng/ul)	: 0.1788		
Integration start scan	: 222	Integration stop scan:	247
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 429		
Retention Time (minutes)	: 4.181		
Quant Ion	: 93.00		
Area (flag)	: 17676M		
On-Column Amount (ng/ul)	: 0.2647		
Integration start scan	: 417	Integration stop scan:	470
Y at integration start	: 0	Y at integration end:	0

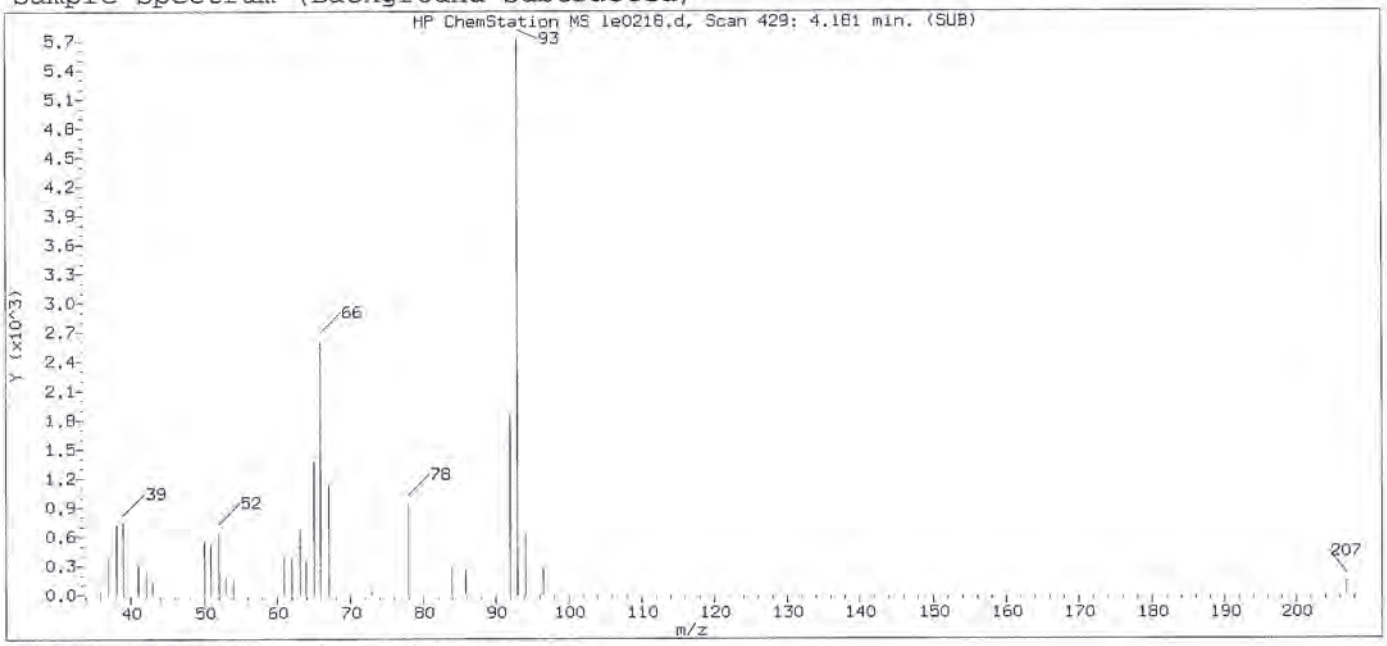
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature user ID: hbz01996

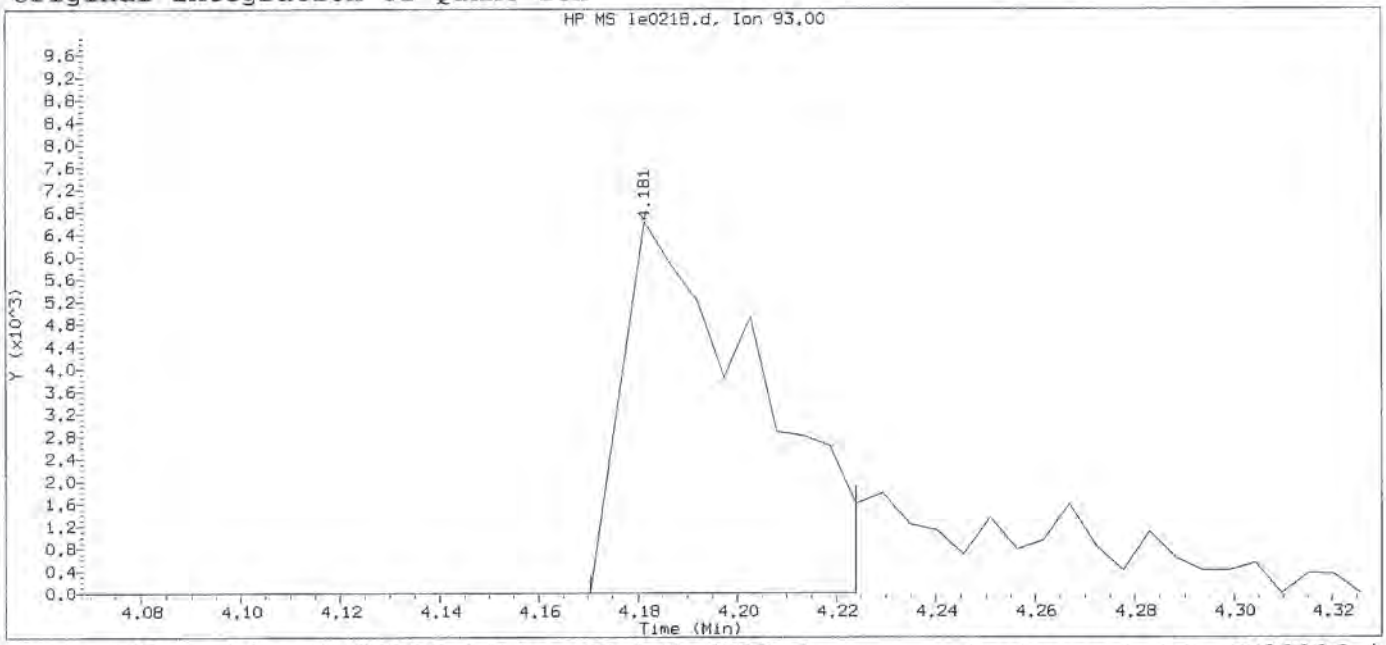
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

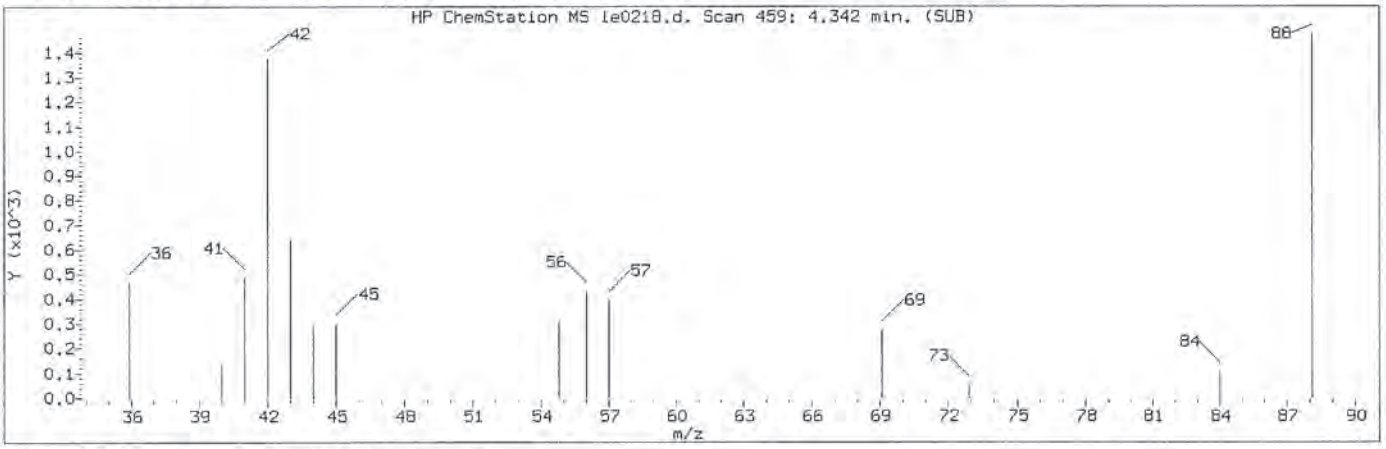
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

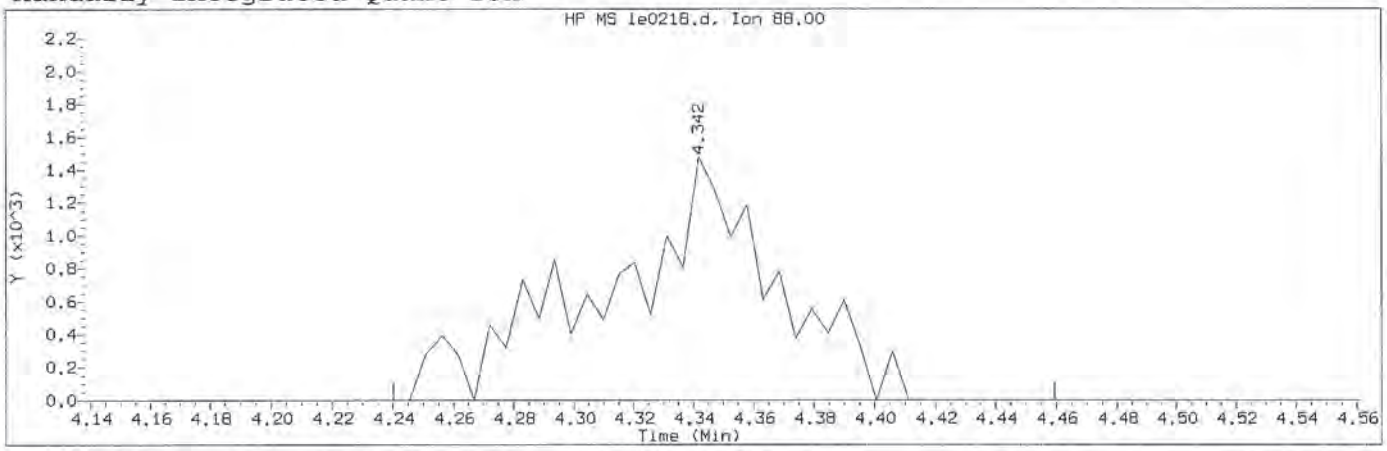
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 429		
Retention Time (minutes)	: 4.181		
Quant Ion	: 93.00		
Area	: 12477		
On-column Amount (ng/ul)	: 0.1856		
Integration start scan	: 426	Integration stop scan:	436
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 459		
Retention Time (minutes)	: 4.342		
Quant Ion	: 88.00		
Area (flag)	: 5836M		
On-Column Amount (ng/ul)	: 0.2200		
Integration start scan	: 439	Integration stop scan:	480
Y at integration start	: 0	Y at integration end:	0

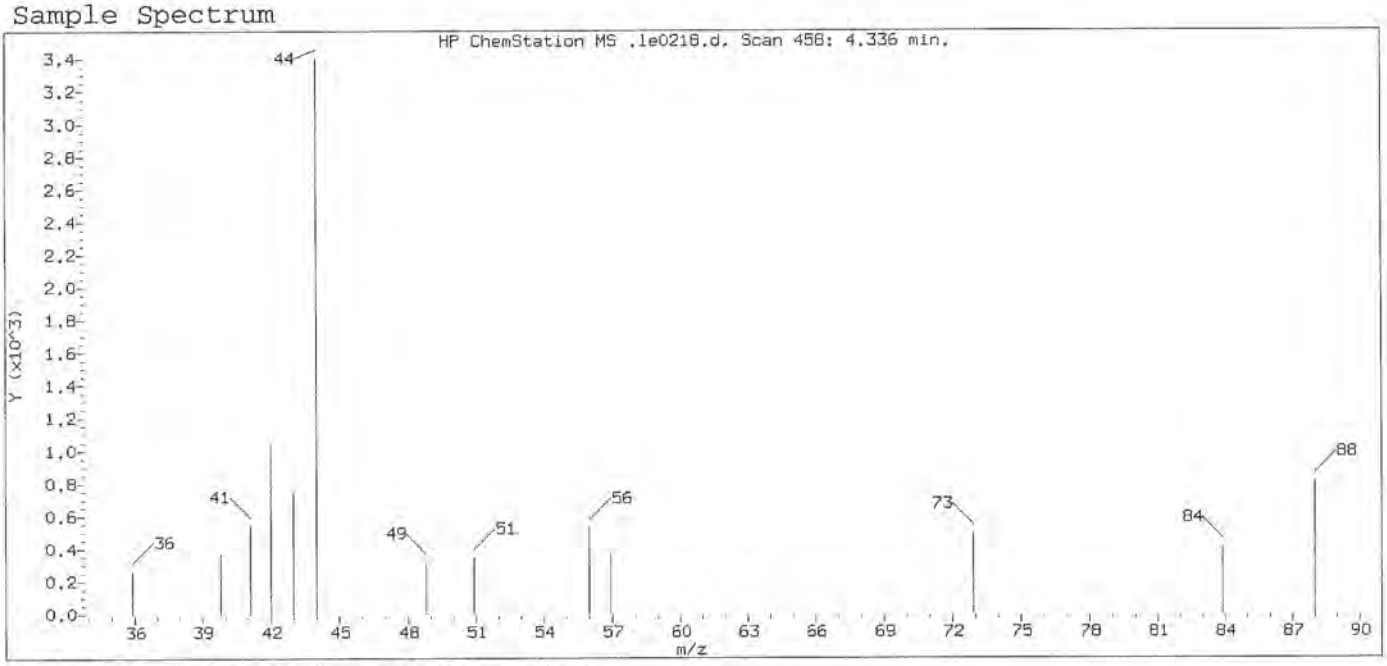
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 signature user ID: hbz01996

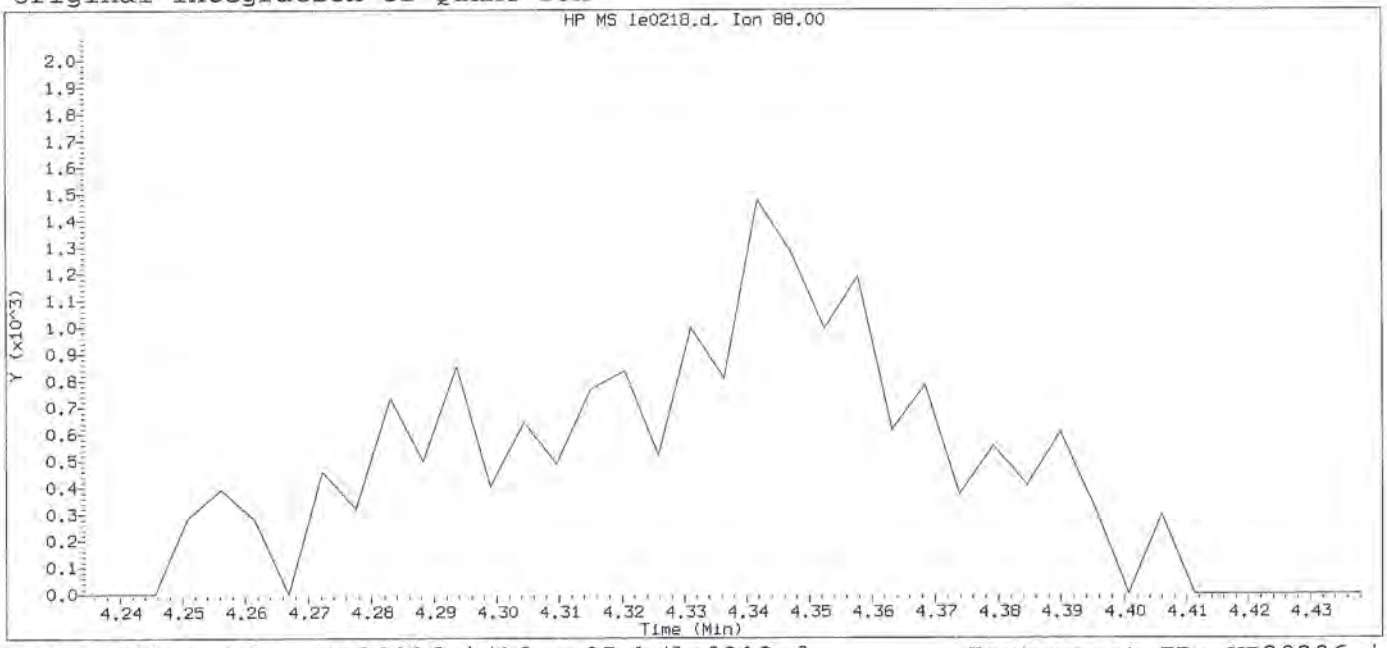
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

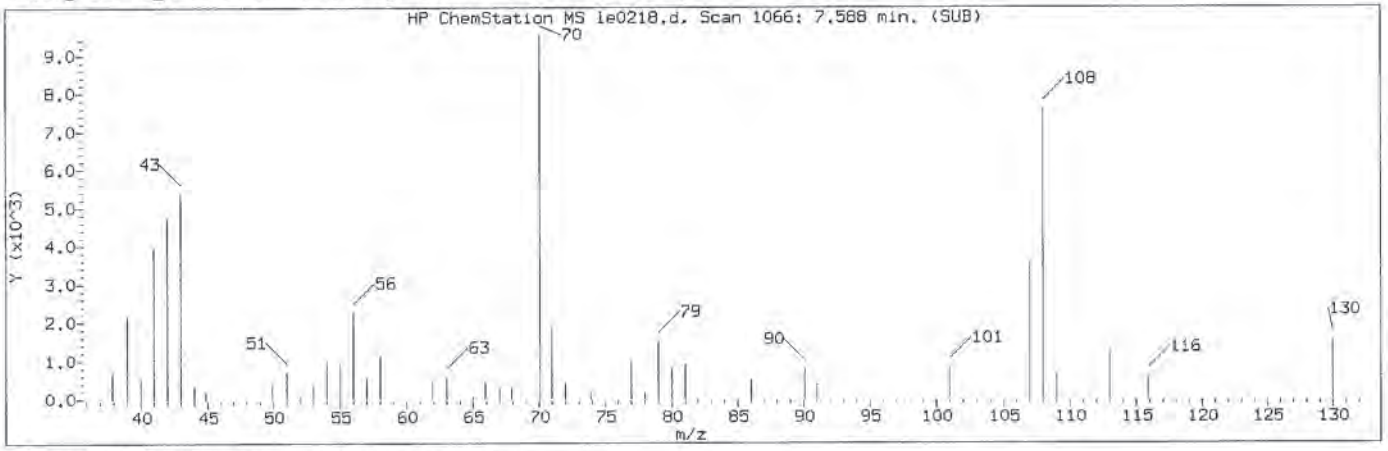
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

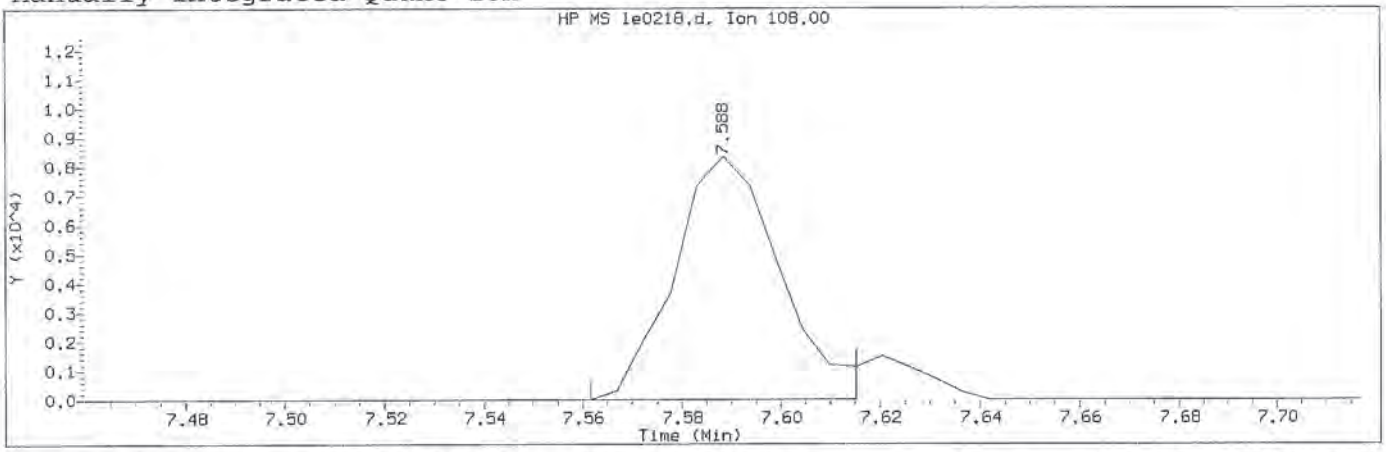
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.336
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 37		
Compound Name	: 4-Methylphenol		
Scan Number	: 1066		
Retention Time (minutes)	: 7.588		
Quant Ion	: 108.00		
Area (flag)	: 12409M		
On-Column Amount (ng/ul)	: 0.2304		
Integration start scan	: 1060	Integration stop scan:	1070
Y at integration start	: 0	Y at integration end:	0

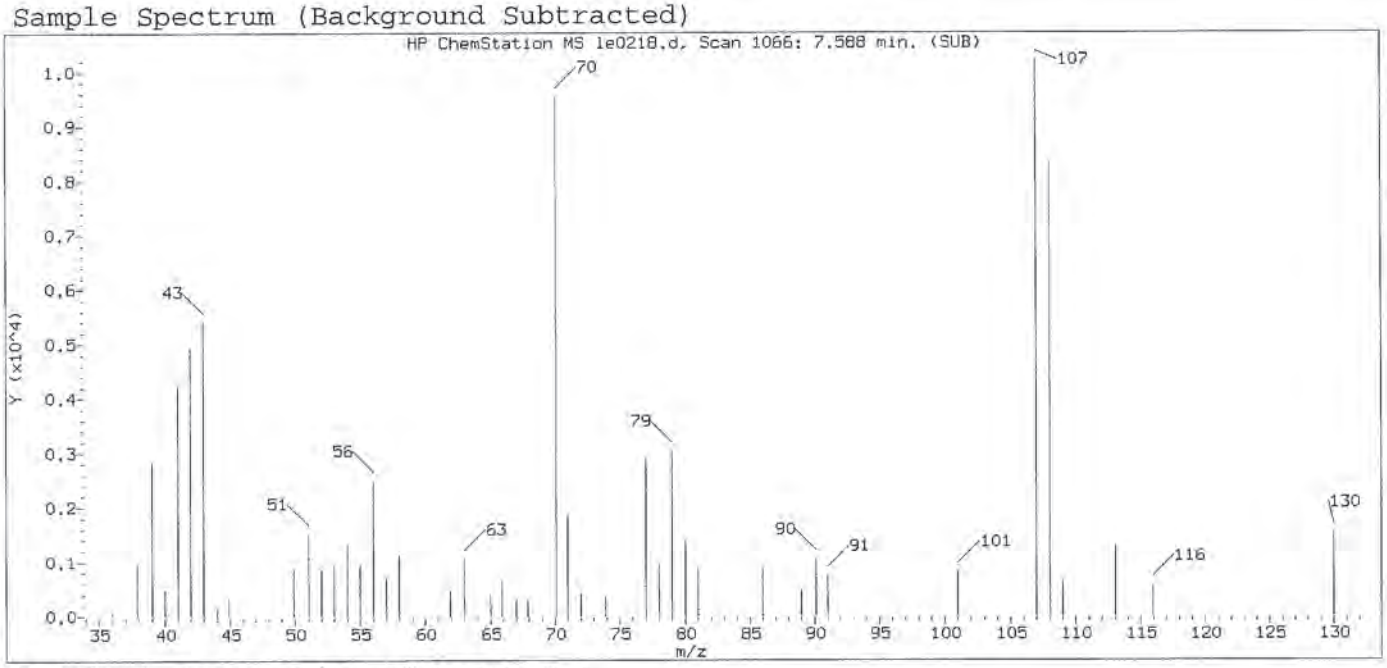
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 designature User ID: hbz01996

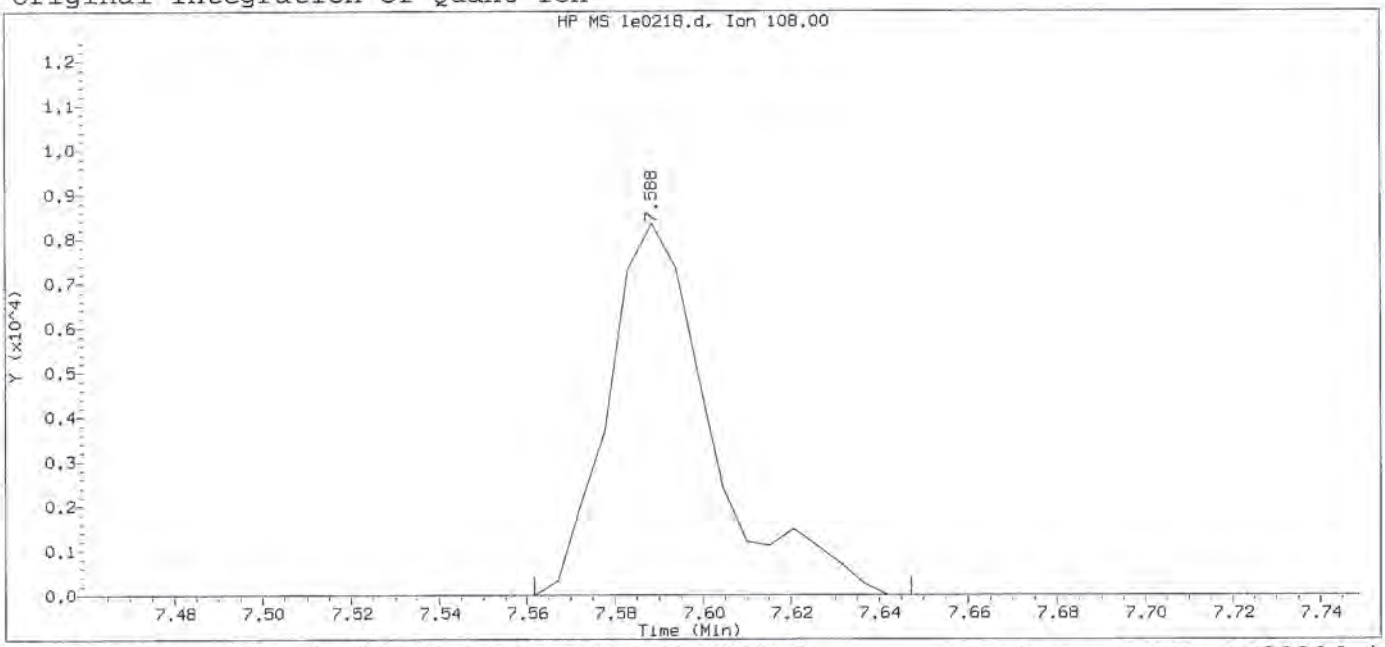
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

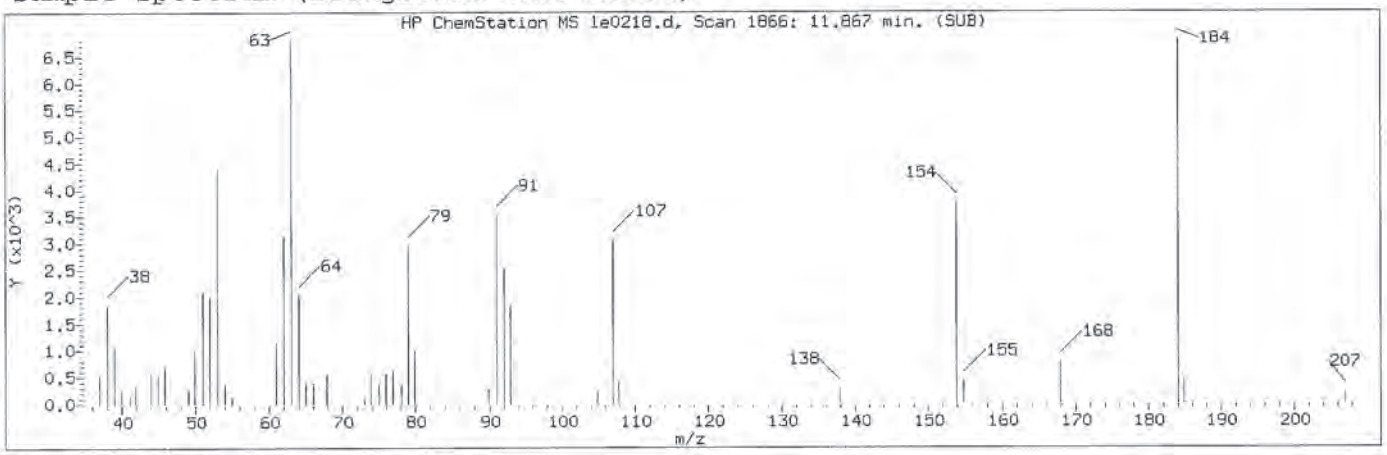
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

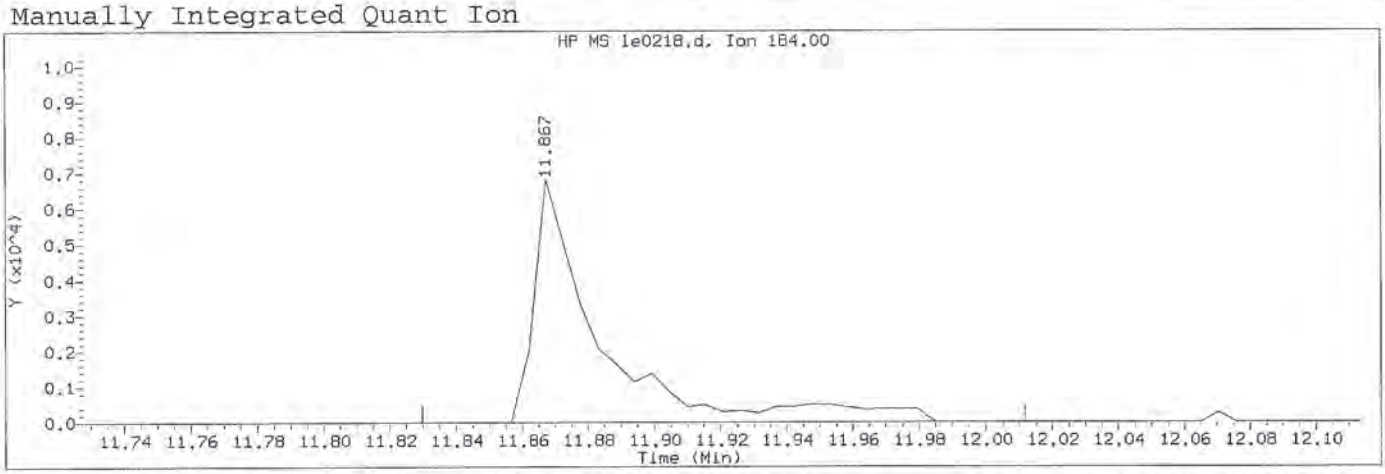
Compound Number	: 37		
Compound Name	: 4-Methylphenol		
Scan Number	: 1066		
Retention Time (minutes)	: 7.588		
Quant Ion	: 108.00		
Area	: 13565		
On-column Amount (ng/ul)	: 0.2413		
Integration start scan	: 1060	Integration stop scan:	1076
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1866		
Retention Time (minutes)	: 11.867		
Quant Ion	: 184.00		
Area (flag)	: 9559M		
On-Column Amount (ng/ul)	: 0.9547		
Integration start scan	: 1858	Integration stop scan:	1892
Y at integration start	: 0	Y at integration end:	0

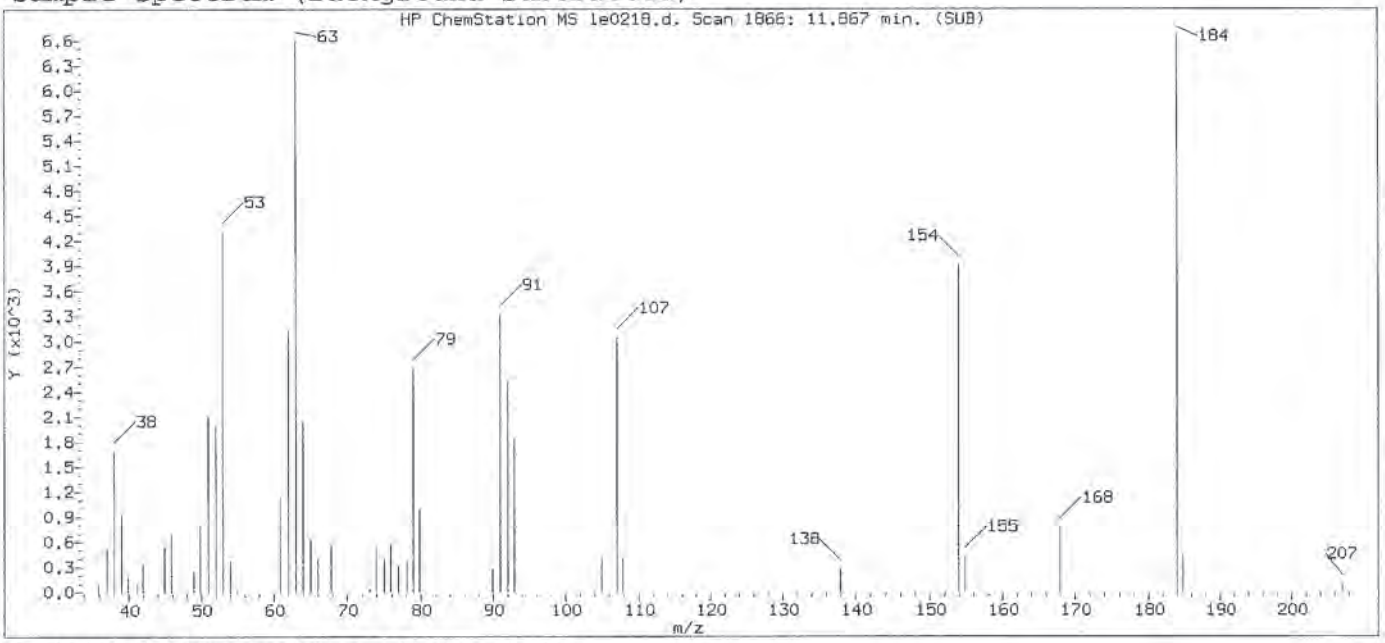
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33
Target 3.5 signature user ID: hbz01996

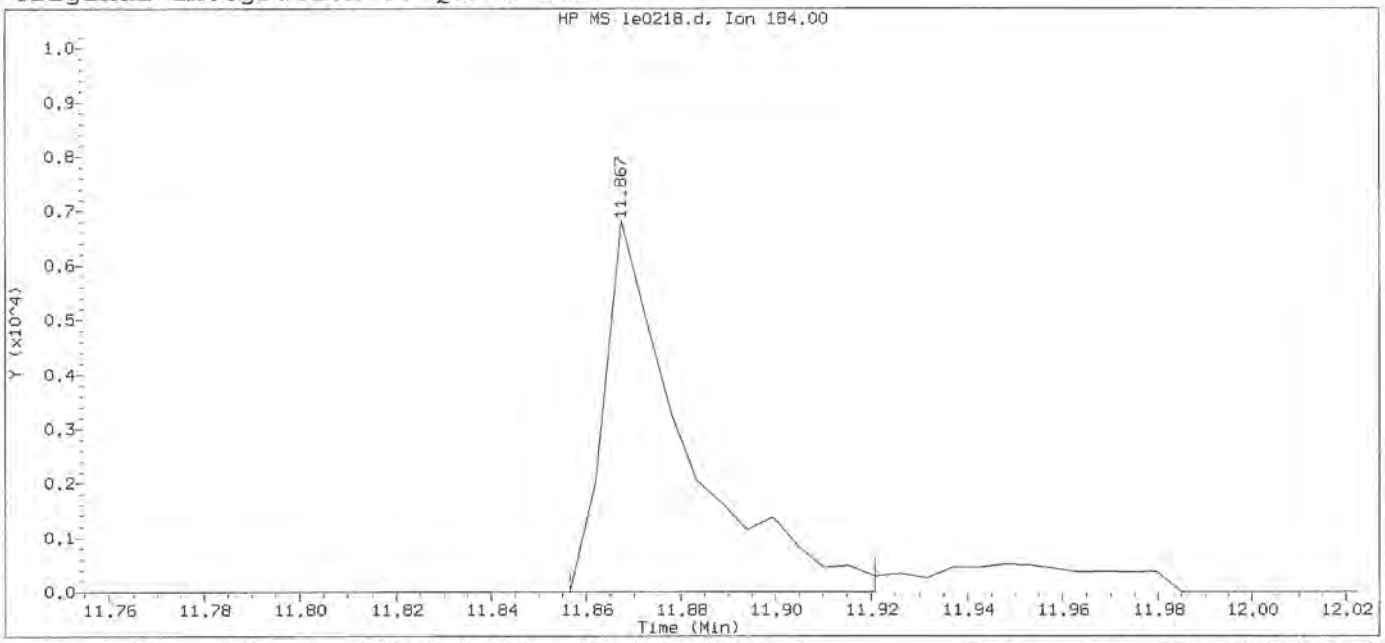
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

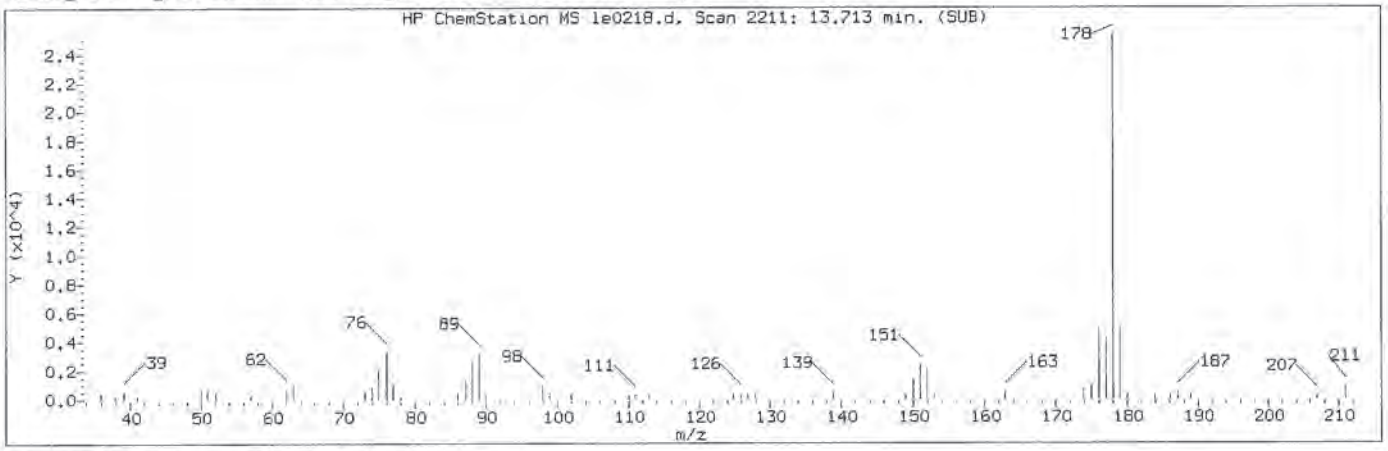
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

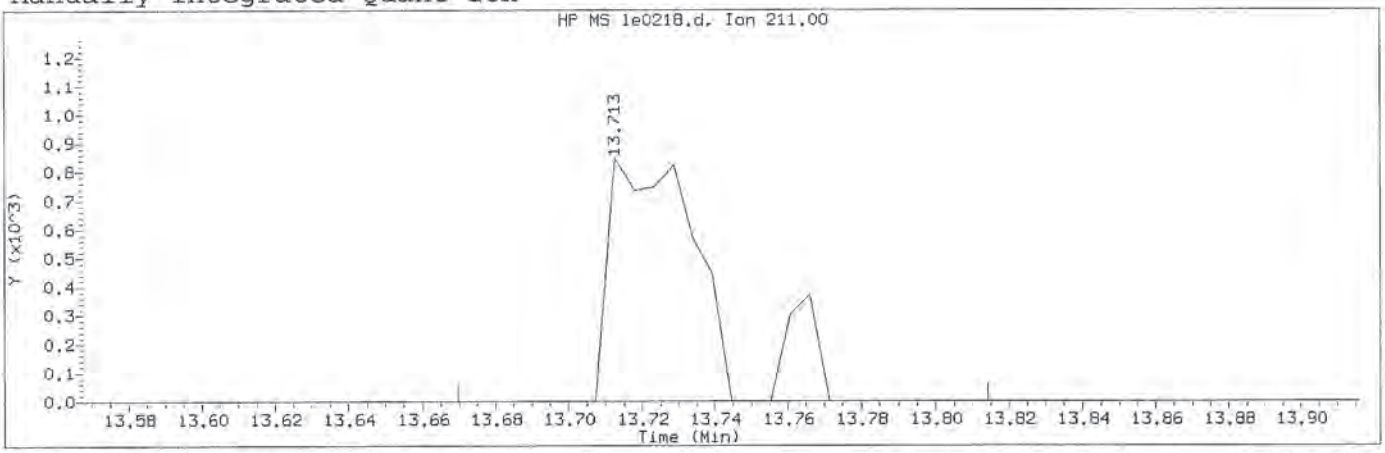
Compound Number	: 115		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1866		
Retention Time (minutes)	: 11.867		
Quant Ion	: 184.00		
Area	: 8107		
On-column Amount (ng/ul)	: 0.7701		
Integration start scan	: 1863	Integration stop scan:	1875
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 07:16
Date, time and analyst ID of latest file update: 06-May-2016 07:16 hbz01996

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number	: 154		
Compound Name	: Dinoseb		
Scan Number	: 2211		
Retention Time (minutes)	: 13.713		
Quant Ion	: 211.00		
Area (flag)	: 1554M		
On-Column Amount (ng/ul)	: 0.0789		
Integration start scan	: 2202	Integration stop scan:	2229
Y at integration start	: 0	Y at integration end:	0

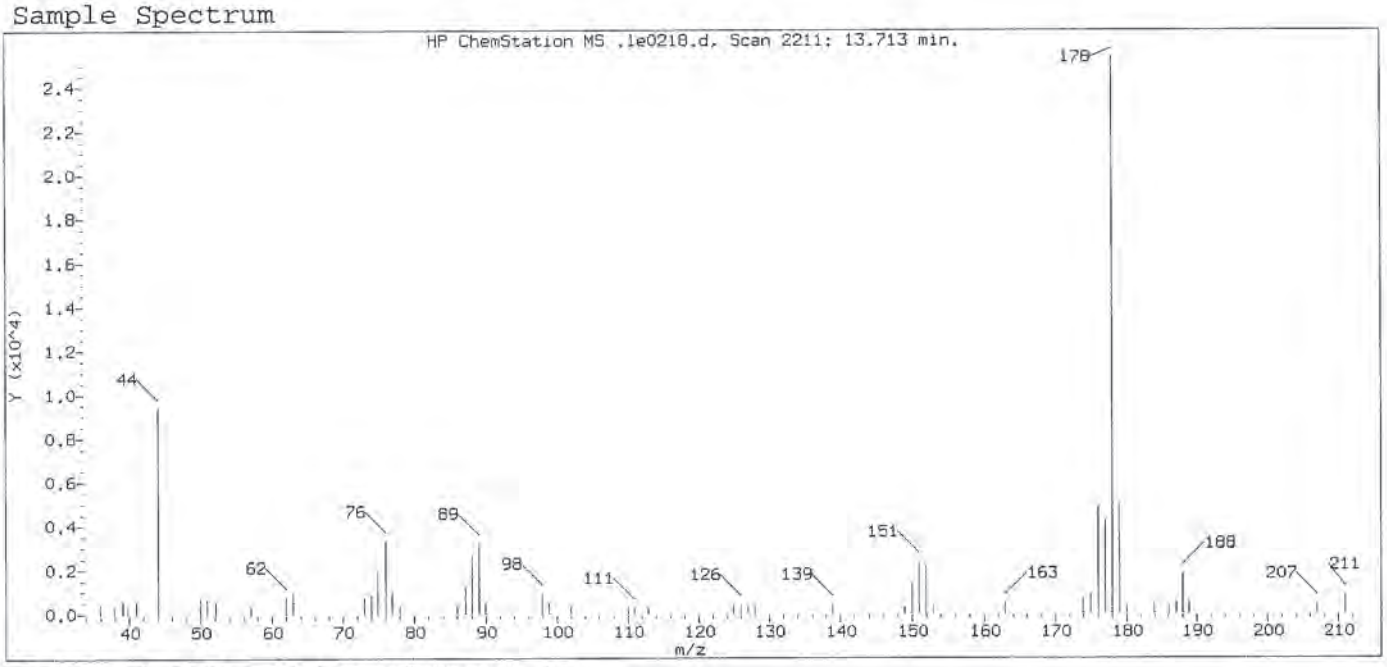
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996

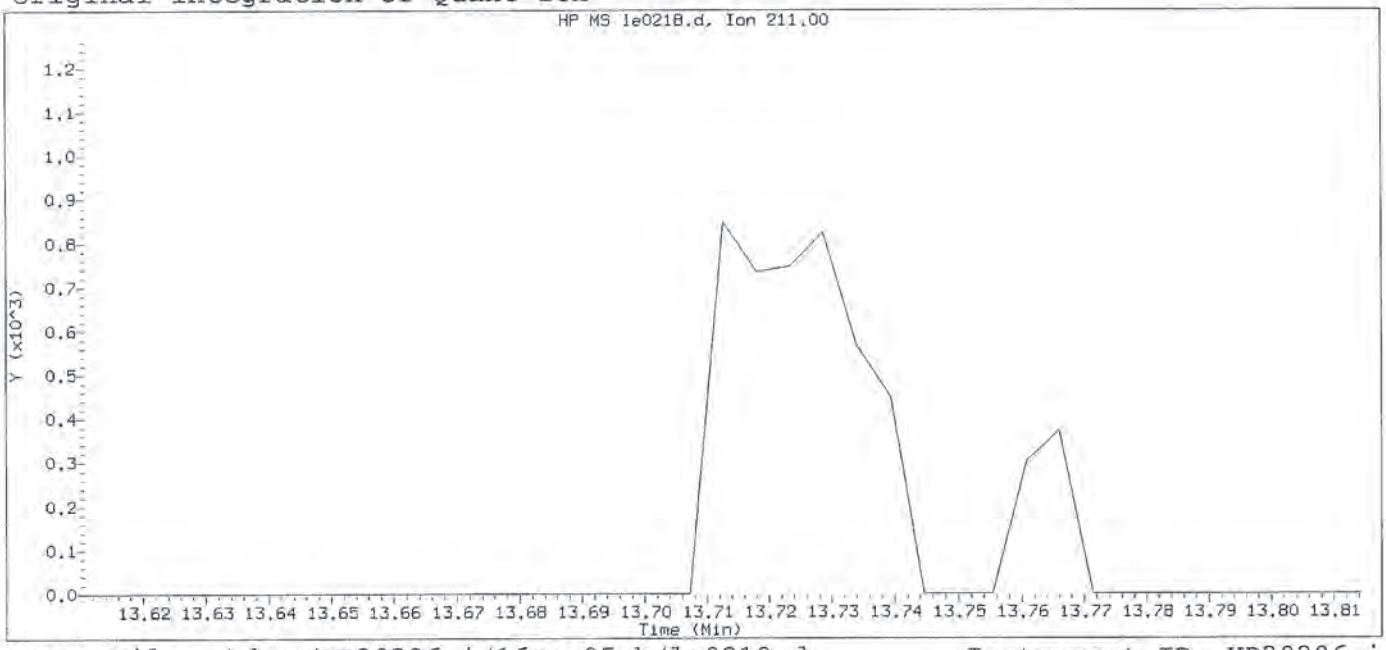
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



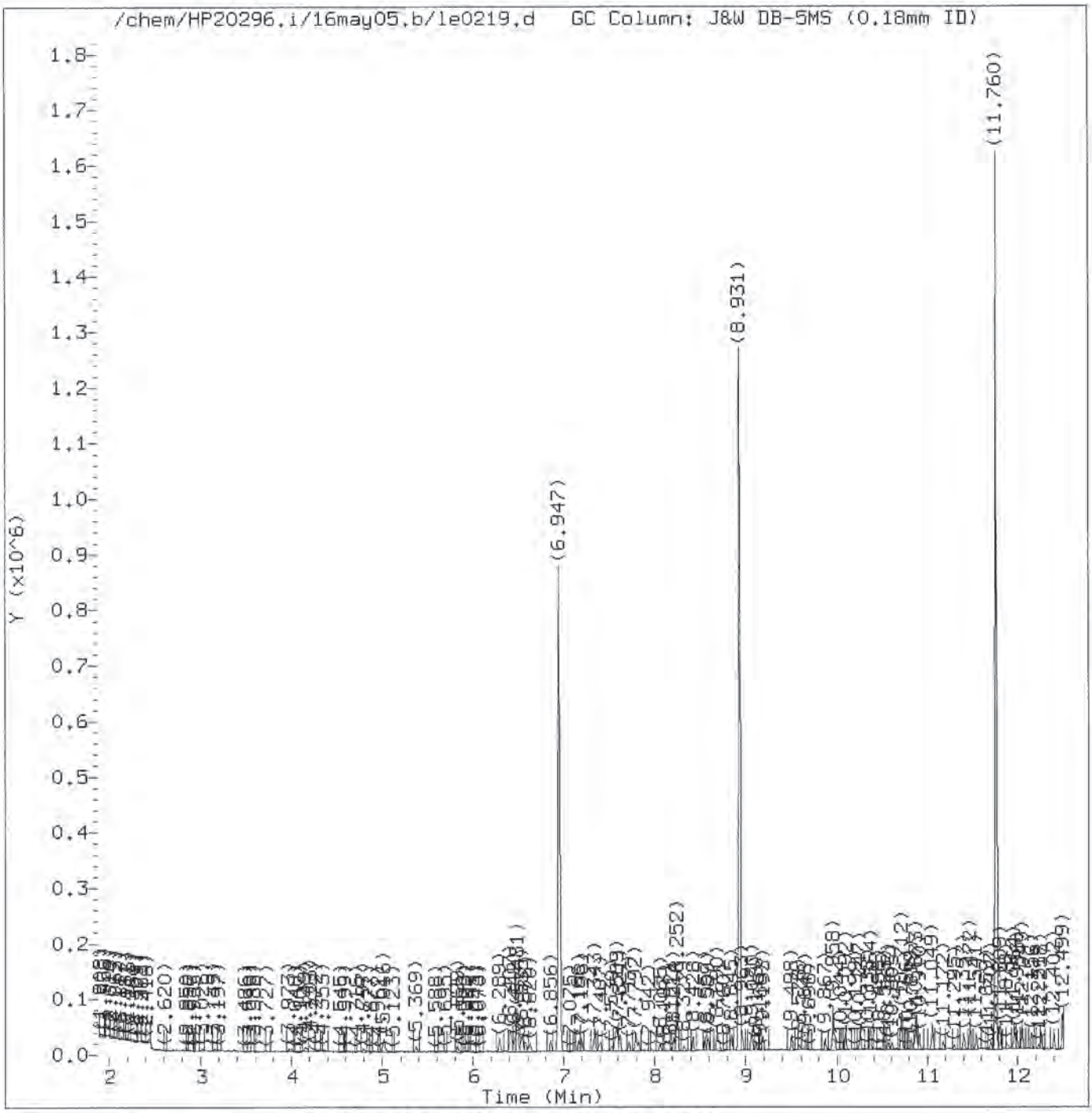
Data File: /chem/HP20296.i/16may05.b/1e0218.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:17 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: all1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 22:44 Unknown

Sample Name: SSTD0.25 Lab Sample ID: RVSTD0816

Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.713
Quant Ion : 211.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:33.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

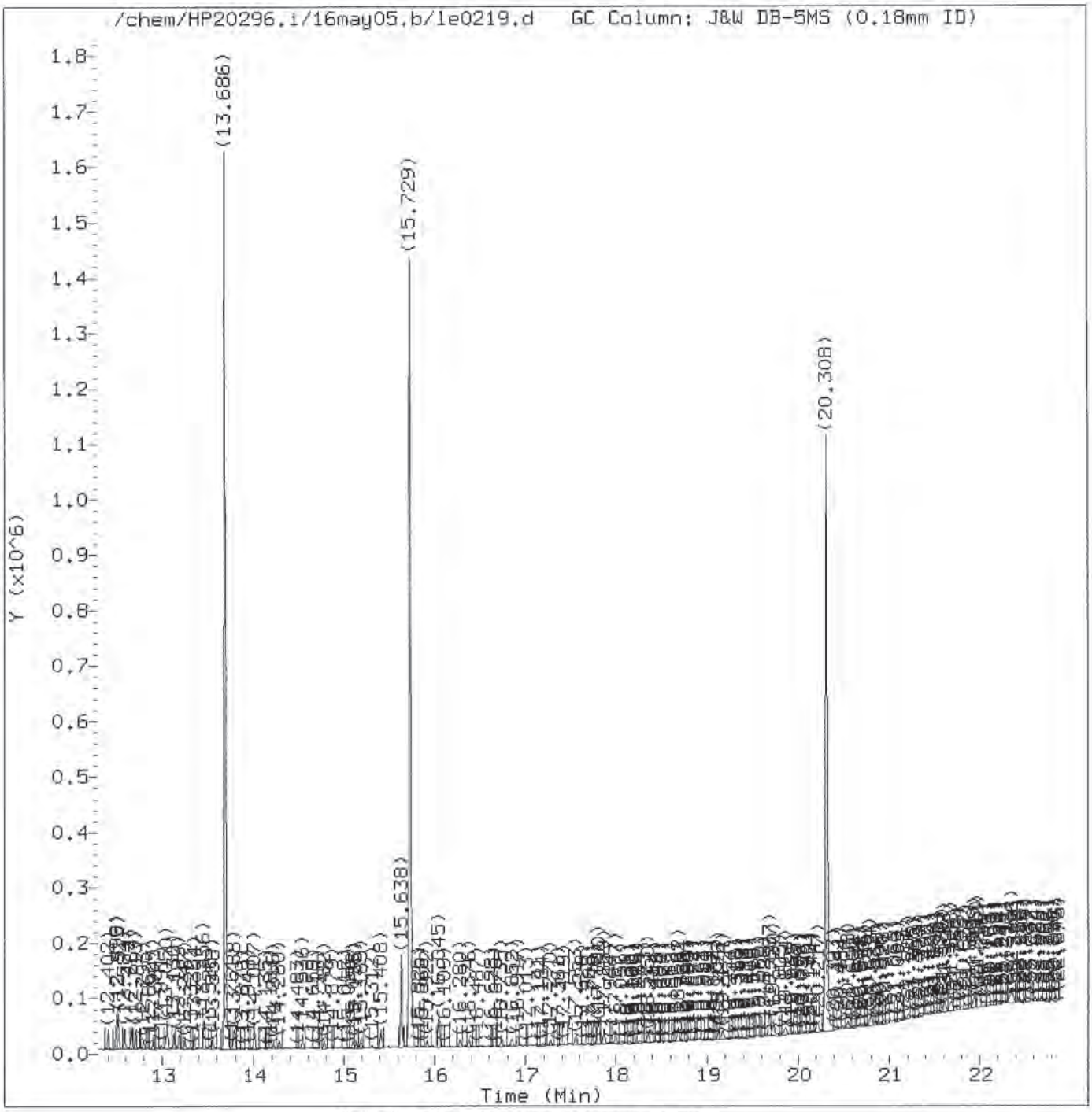
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlal11
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla11
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.427	88	4946M	0.203
4) N-Nitrosodimethylamine	(1)	3.010	74	3536	0.093
5) Pyridine	(1)	3.160	79	7410M	0.115
7) 2-Picoline	(1)	4.198	93	8720M	0.131
8) N-Nitrosomethylethylamine	(1)	4.358	88	2640M	0.100
9) Methyl methanesulfonate	(1)	4.797	80	3724	0.121
11)$2-Fluorophenol	(1)	5.016	112	11253	0.225
13) N-Nitrosodiethylamine	(1)	5.369	102	2978	0.121
42) Total Cresols	(1)			11219	0.220
15) Ethyl methanesulfonate	(1)	5.824	109	3231	0.126
16) Benzaldehyde	(1)	6.289	77	7098	0.134
17)$Phenol-d6	(1)	6.407	99	15117	0.226
18) Phenol	(1)	6.423	94	8639	0.109
19) Aniline	(1)	6.455	93	10976	0.118
20) a-methylstyrene	(1)	6.535	118	6095	0.118
22) bis(2-Chloroethyl)ether	(1)	6.572	93	7384	0.128
23) 2-Chlorophenol	(1)	6.620	128	5091	0.112
24) 1,3-Dichlorobenzene	(1)	6.861	146	6732	0.129
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	165787	5.000
26) 1,4-Dichlorobenzene	(1)	6.973	146	6948	0.132
27) Benzyl alcohol	(1)	7.166	108	3962	0.114
28) 1,2-Dichlorobenzene	(1)	7.198	146	6397	0.128
30) Indene	(1)	7.337	115	10380	0.115
31) 2-Methylphenol	(1)	7.343	108	5476	0.113
97) Isosafrole	(3)			4550	0.120
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	10342	0.141
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	10342	0.141
35) N-Nitrosopyrrolidine	(1)	7.530	100	3116	0.120
36) Acetophenone	(1)	7.572	105	10054	0.126
38) N-Nitroso-di-n-propylamine	(1)	7.589	70	5422	0.120
37) 4-Methylphenol	(1)	7.589	108	5743	0.107
39) N-Nitrosomorpholine	(1)	7.605	56	4146	0.123
40) o-Toluidine	(1)	7.621	106	10129	0.113
43) Hexachloroethane	(1)	7.722	117	2699	0.118
44)$Nitrobenzene-d5	(2)	7.792	82	13576	0.212
45) Nitrobenzene	(2)	7.819	77	7597	0.115
120) 2,4_2,6-Dinitrotoluenes	(3)			3426	0.152
48) N-Nitrosopiperidine	(2)	8.059	114	2806	0.115
50) Isophorone	(2)	8.214	82	12442	0.111
51) 2-Nitrophenol	(2)	8.321	139	1680	0.080

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlal11
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.423	107	6174	0.113
57) O,O,O-Triethylphosphorothioate	(2)	8.557	198	2787	0.109
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	9074	0.130
56) Benzoic acid	(2)	8.685	105	1135	2.948
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.690	104	10612	0.128
60) 2,4-Dichlorophenol	(2)	8.706	162	4036	0.103
146) Diallate trans/cis	(4)			5101	0.102
62) 1,2,4-Trichlorobenzene	(2)	8.845	180	5410	0.119
65)*Naphthalene-d8	(2)	8.931	136	638495	5.000
67) 4-Chloroaniline	(2)	9.065	127	6703	0.117
68) 2,6-Dichlorophenol	(2)	9.075	162	4156	0.111
69) Hexachloropropene	(2)	9.113	213	2839	0.099
71) Hexachlorobutadiene	(2)	9.193	225	3666	0.129
75) Quinoline	(2)	9.498	129	9010	0.106
76) Caprolactam	(2)	9.578	113	1073M	0.086
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	4415	0.100
80) 4-Chloro-3-methylphenol	(2)	9.872	107	4537	0.099
82) Safrole	(2)	9.974	162	3781	0.108
85) Hexachlorocyclopentadiene	(3)	10.364	237	2258	0.088
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	5975	0.127
88) cis-Isosafrole	(3)	10.461	162	900	0.025
90) 2,4,6-Trichlorophenol	(3)	10.562	196	2441	0.088
92) 2,4,5-Trichlorophenol	(3)	10.611	196	2720	0.092
93)$2-Fluorobiphenyl	(3)	10.712	172	24647	0.243
94) trans-Isosafrole	(3)	10.824	162	3650	0.095
95) 1,1'-Biphenyl	(3)	10.867	154	13446	0.125
96) 2-Chloronaphthalene	(3)	10.878	162	10388	0.119
98) 1-Chloronaphthalene	(3)	10.910	162	9841	0.121
99) Diphenyl ether	(3)	11.049	170	6988	0.117
100) 2-Nitroaniline	(3)	11.054	138	2097	0.090
104) 1,4-Naphthoquinone	(3)	11.172	158	2783	0.083
105) 1,4-Dinitrobenzene	(3)	11.295	168	941	0.080
106) Dimethylphthalate	(3)	11.397	163	11243	0.119
107) 1,3-Dinitrobenzene	(3)	11.407	168	930M	0.069
108) 2,6-Dinitrotoluene	(3)	11.472	165	1545	0.081
112) 3-Nitroaniline	(3)	11.707	138	1516	0.072
113)*Acenaphthene-d10	(3)	11.760	164	358901	5.000
115) 2,4-Dinitrophenol	(3)	11.878	184	2011	0.202
116) 4-Nitrophenol	(3)	11.964	109	6224	0.357
117) Pentachlorobenzene	(3)	11.996	250	5020	0.130

M = Compound was manually integrated.
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Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118) 2,4-Dinitrotoluene	(3)	12.049	165	1881	0.071
119) Dibenzofuran	(3)	12.055	168	14899	0.123
121) 1-Naphthylamine	(3)	12.151	143	9304	0.108
122) 2,3,4,6-Tetrachlorophenol	(3)	12.231	232	1429	0.064
123) 2-Naphthylamine	(3)	12.263	143	10080	0.119
124) Diethylphthalate	(3)	12.402	149	10746	0.116
125) Thionazin	(3)	12.499	107	2001	0.105
129) 4-Nitroaniline	(3)	12.515	138	1849	0.085
128) 5-Nitro-o-toluidine	(3)	12.515	152	1531	0.065
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	6330	0.130
130) 4,6-Dinitro-2-methylphenol	(4)	12.573	198	2176	0.156
131) N-Nitrosodiphenylamine	(4)	12.664	169	8845	0.113
132) NDPA as diphenylamine	(4)	12.664	169	8845	0.113
134) 1,2-Diphenylhydrazine	(4)	12.713	77	13149	0.105
135)$2,4,6-Tribromophenol	(3)	12.798	330	1386	0.117
137) Tetraethyldithiopyrophosphate	(4)	12.900	97	2144	0.110
139) 1,3,5-Trinitrobenzene	(4)	12.996	213	472M	0.052
140) Diallate (peak 1)	(4)	13.050	86	4292	0.086
141) Phorate	(4)	13.055	75	6246	0.089
142) Phenacetin	(4)	13.060	108	4497	0.085
143) 4-Bromophenyl-phenylether	(4)	13.130	248	3324	0.129
144) Diallate (peak 2)	(4)	13.156	86	809	0.016
147) Dimethoate	(4)	13.247	87	3664	0.082
148) Atrazine	(4)	13.354	200	2745	0.106
150) 4-Aminobiphenyl	(4)	13.456	169	7706	0.102
151) Pentachloronitrobenzene	(4)	13.461	237	809M	0.063
149) Pentachlorophenol	(4)	13.461	266	130	0.008
152) Pronamide	(4)	13.558	173	3941	0.093
153)*Phenanthrene-d10	(4)	13.686	188	673793	5.000
163) Carbazole	(4)	14.007	167	13861	0.109
164) Methyl parathion	(4)	14.221	109	2146	0.068
165) Di-n-butylphthalate	(4)	14.536	149	14055	0.090
167) Parathion	(4)	14.772	109	999M	0.050
168) 4-Nitroquinoline-1-oxide	(4)	14.788	190	380	0.031
169) Octachlorostyrene	(4)	15.135	308	920M	0.093
171) Isodrin	(4)	15.189	193	1661M	0.100
174) Benzidine	(5)	15.638	184	80432	0.768
175)*Pyrene-d10	(5)	15.735	212	773045	5.000
179)$Terphenyl-d14	(5)	16.045	244	24417	0.230
182) p-Dimethylaminoazobenzene	(5)	16.280	225	1694M	0.609

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Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

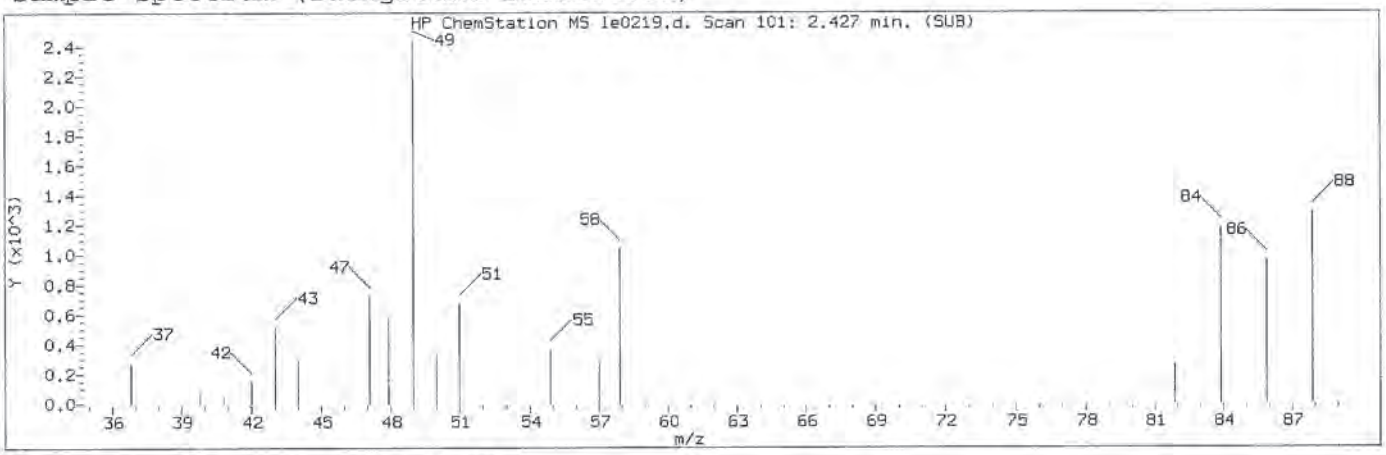
Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
185) Chlorobenzilate	(5)	16.376	139	3622	0.079
187) 3,3'-Dimethylbenzidine	(5)	16.852	212	8088	0.084
188) Butylbenzylphthalate	(5)	16.911	149	5009	0.075
191) 2-Acetylaminofluorene	(5)	17.275	181	3440	0.063
193) 3,3'-Dichlorobenzidine	(5)	17.794	252	4373	0.081
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.815	231	2320	0.074
199) bis(2-Ethylhexyl)phthalate	(5)	17.997	149	6094	0.063
203) 6-Methylchrysene	(5)	18.682	242	9130	0.094
205) Di-n-octylphthalate	(6)	19.174	149	9219	0.060
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.687	256	4737	0.082
213)*Perylene-d12	(6)	20.308	264	543702	5.000
215) 3-Methylcholanthrene	(6)	20.794	268	4862	0.096
217) Dibenz(a,h)acridine	(6)	21.607	279	8931	0.086
218) Dibenz(a,j)acridine	(6)	21.682	279	9752	0.091

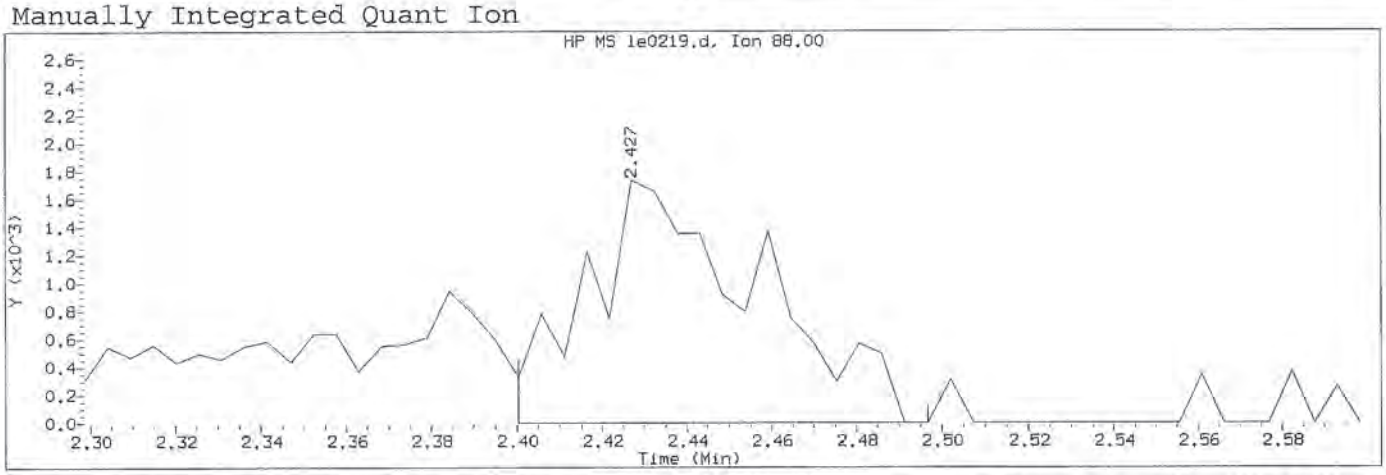
* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 101		
Retention Time (minutes)	: 2.427		
Quant Ion	: 88.00		
Area (flag)	: 4946M		
On-Column Amount (ng/ul)	: 0.2031		
Integration start scan	: 95	Integration stop scan:	113
Y at integration start	: -2	Y at integration end:	-2

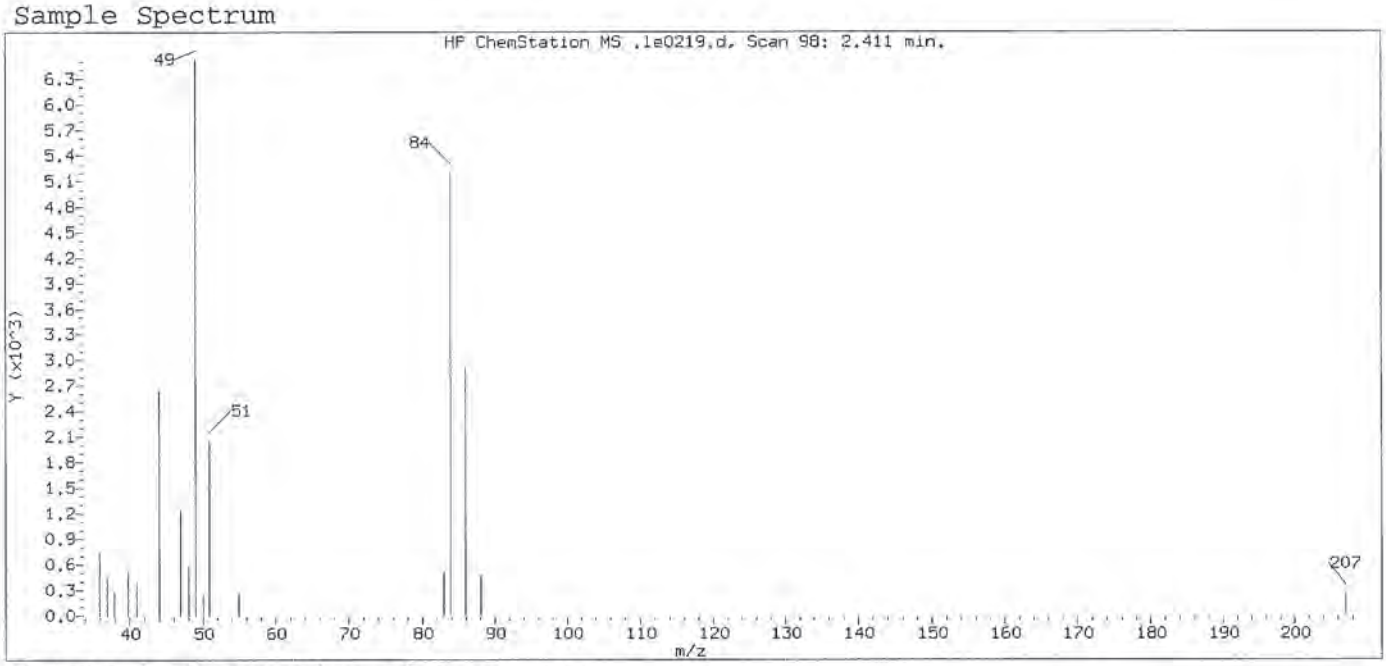
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08. Target 3.5 signature user ID: hbz01996

MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion

Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

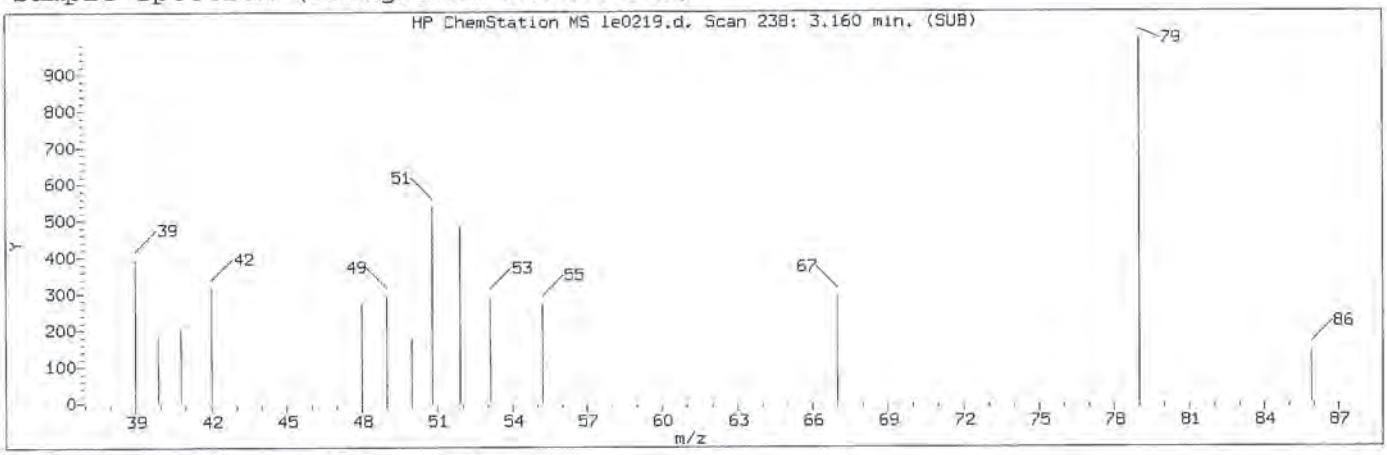
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

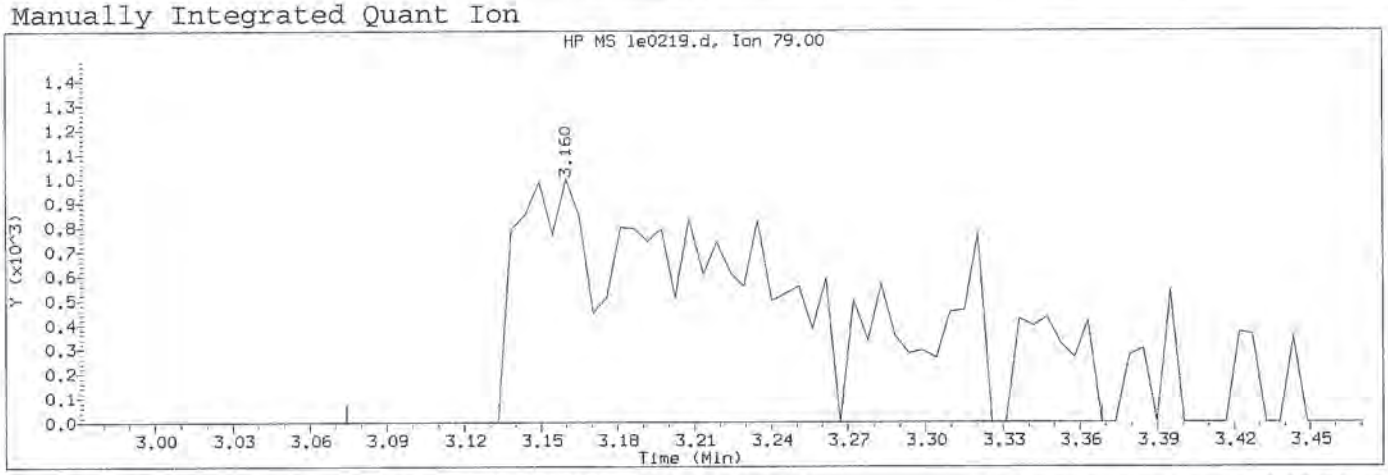
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.411
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 238		
Retention Time (minutes)	: 3.160		
Quant Ion	: 79.00		
Area (flag)	: 7410M		
On-Column Amount (ng/ul)	: 0.1145		
Integration start scan	: 221	Integration stop scan:	276
Y at integration start	: 0	Y at integration end:	0

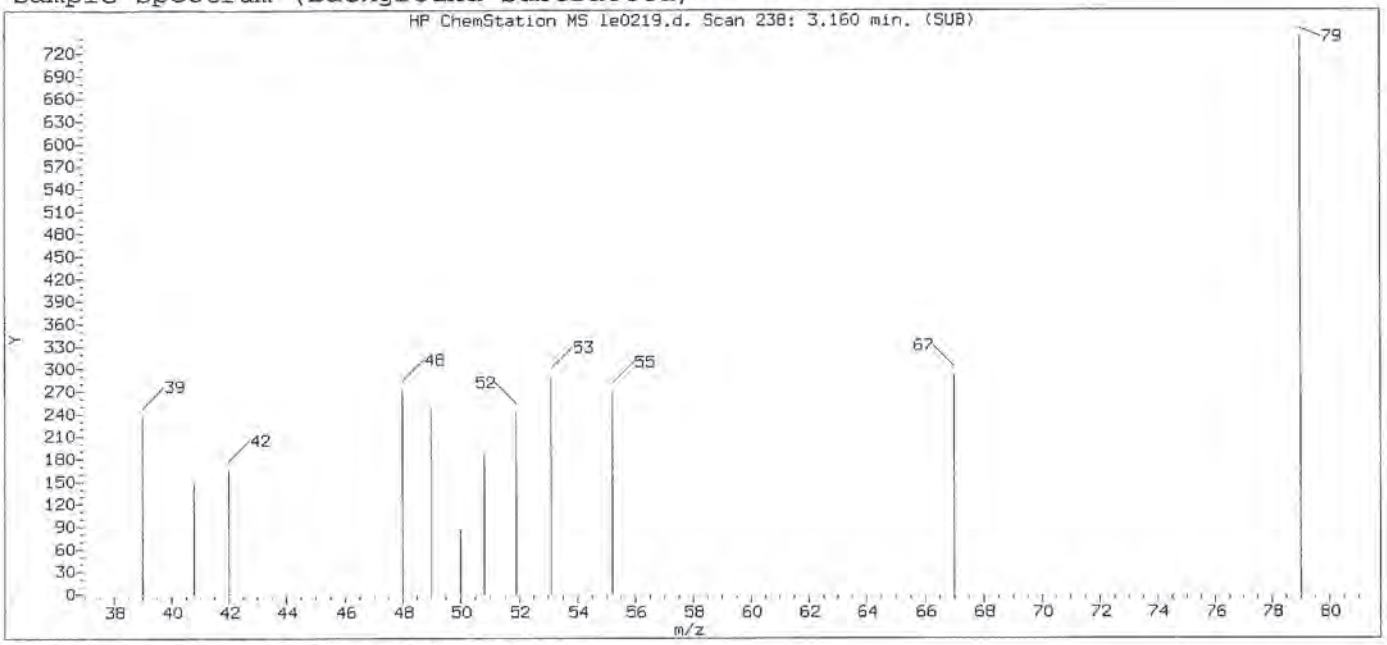
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08
Target 3.5 esignature user ID: hbz01996

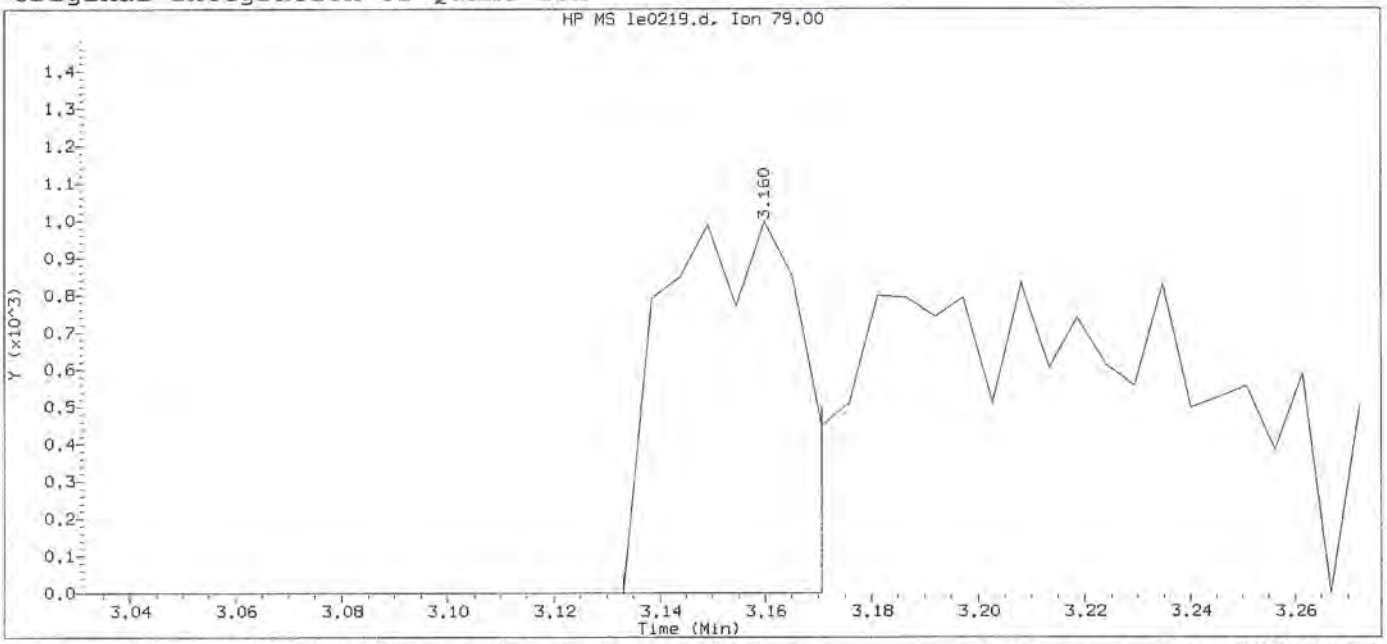
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

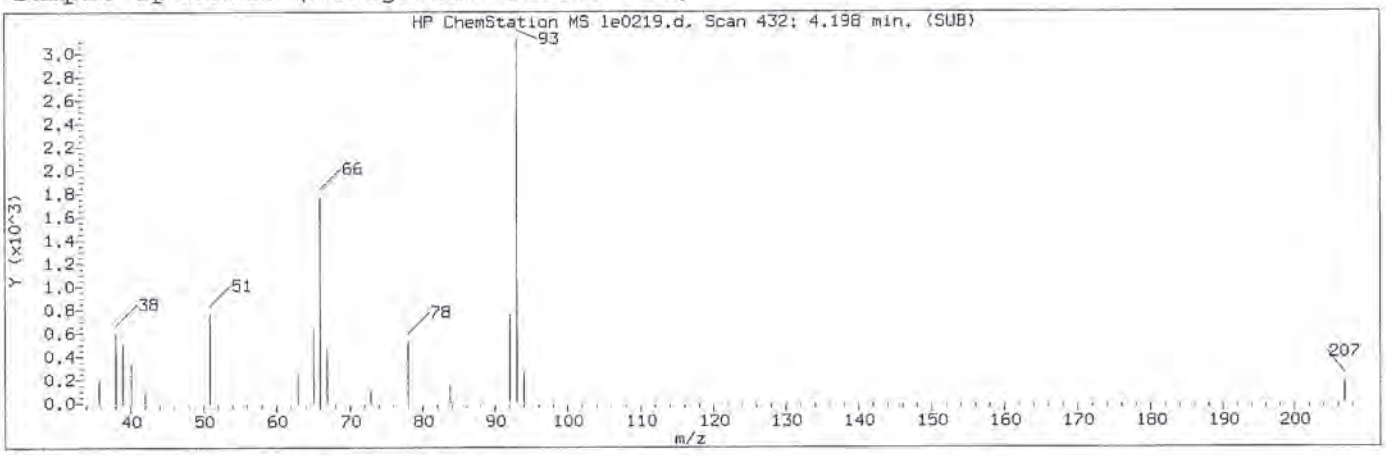
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

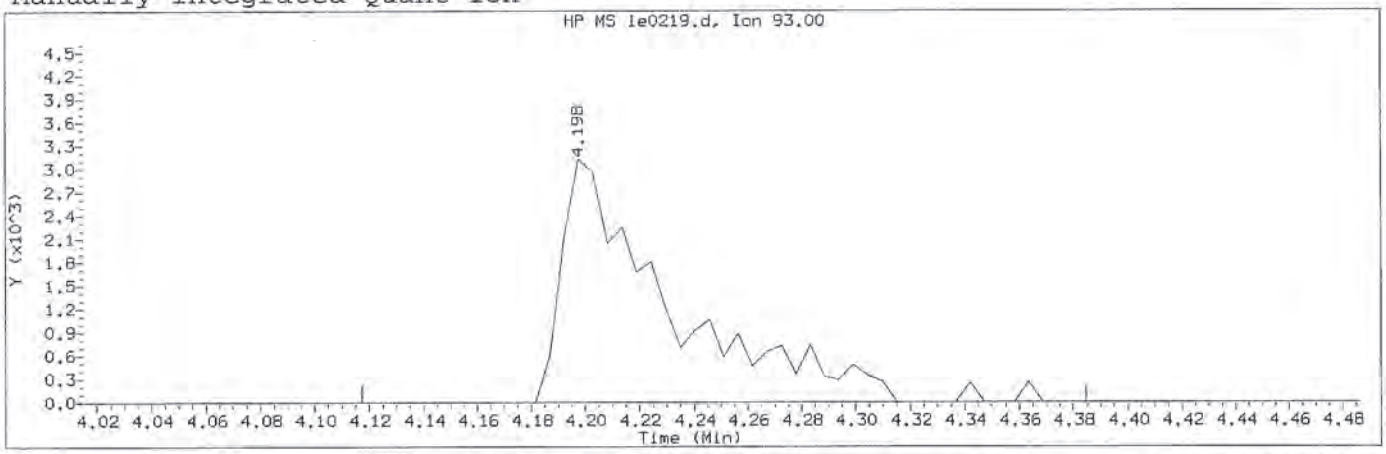
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 238		
Retention Time (minutes)	: 3.160		
Quant Ion	: 79.00		
Area	: 1756		
On-column Amount (ng/ul)	: 0.0267		
Integration start scan	: 232	Integration stop scan:	239
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 432		
Retention Time (minutes)	: 4.198		
Quant Ion	: 93.00		
Area (flag)	: 8720M		
On-Column Amount (ng/ul)	: 0.1313		
Integration start scan	: 416	Integration stop scan:	466
Y at integration start	: 0	Y at integration end:	0

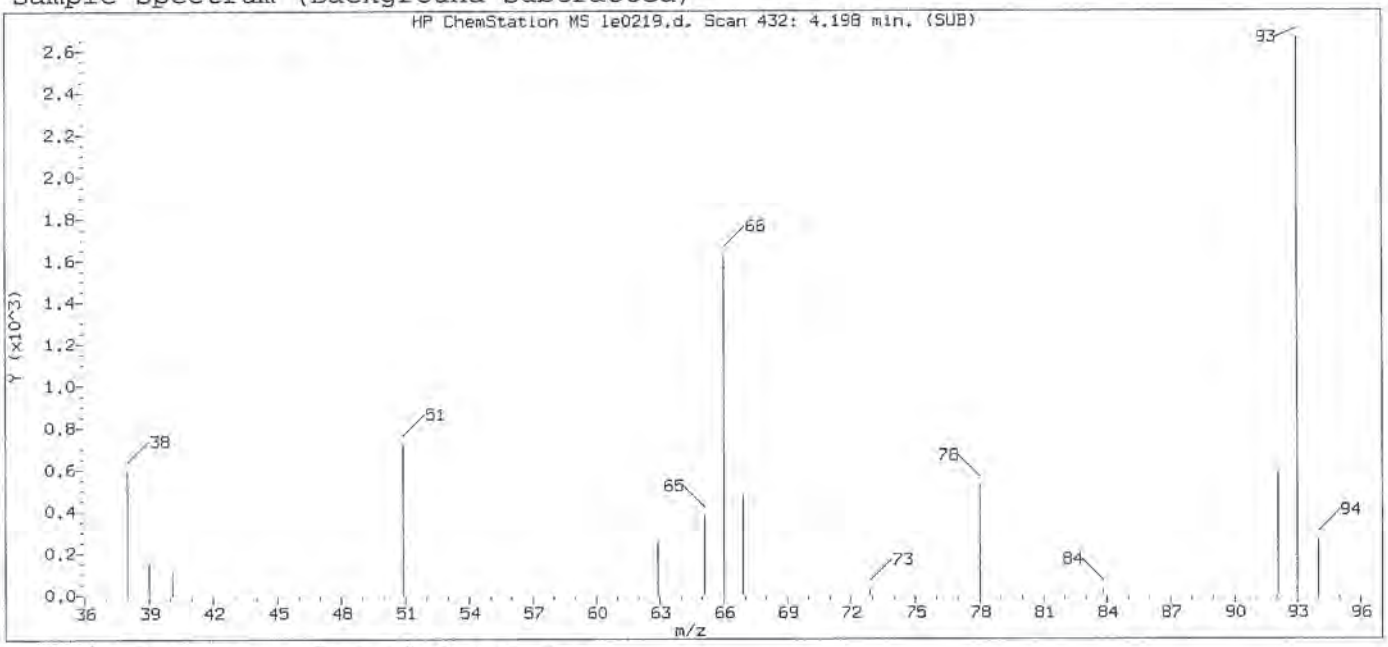
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08
Target 3.5 signature user ID: hbz01996

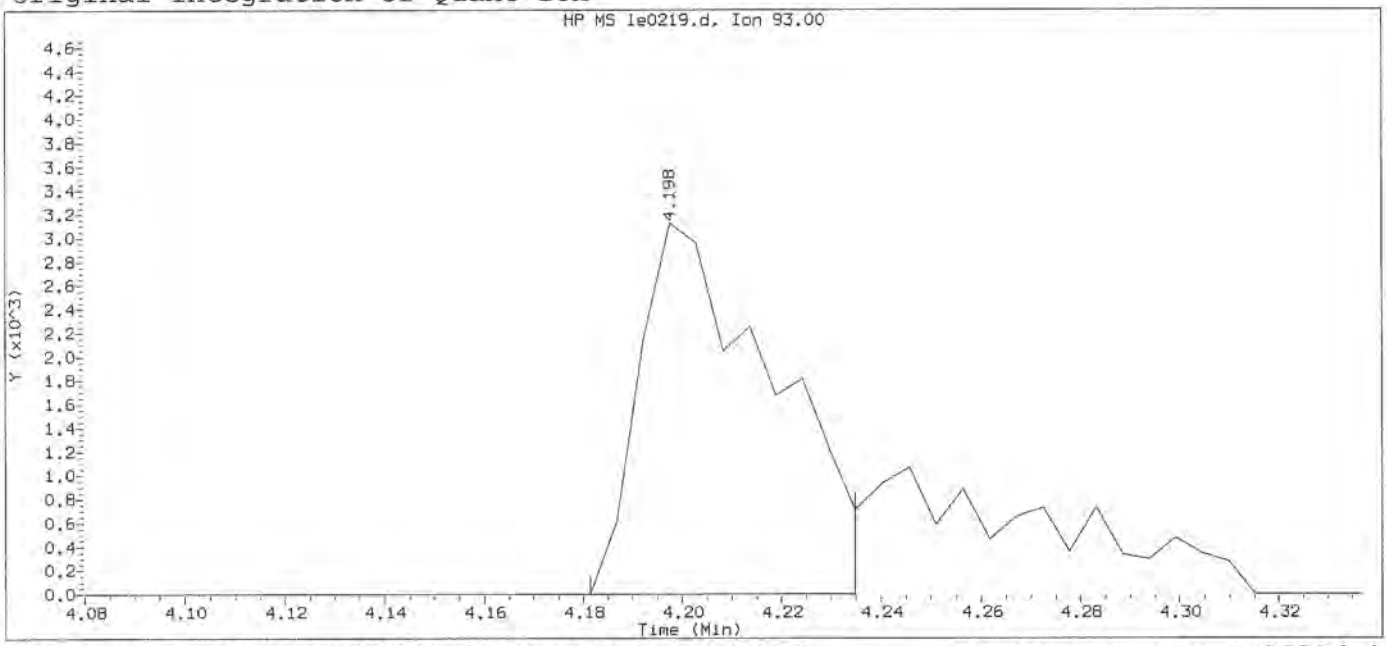
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

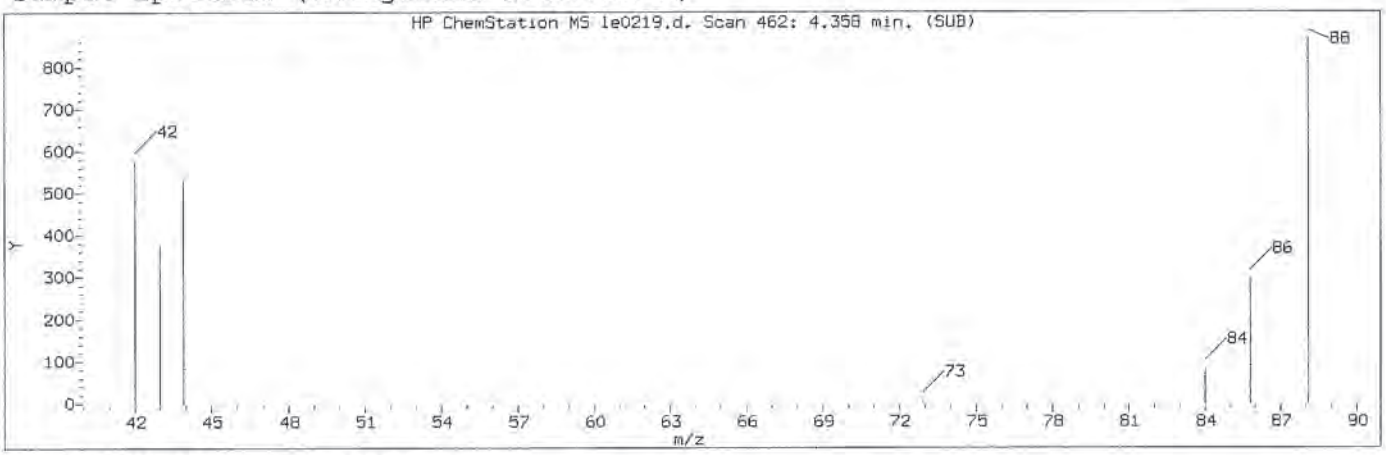
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

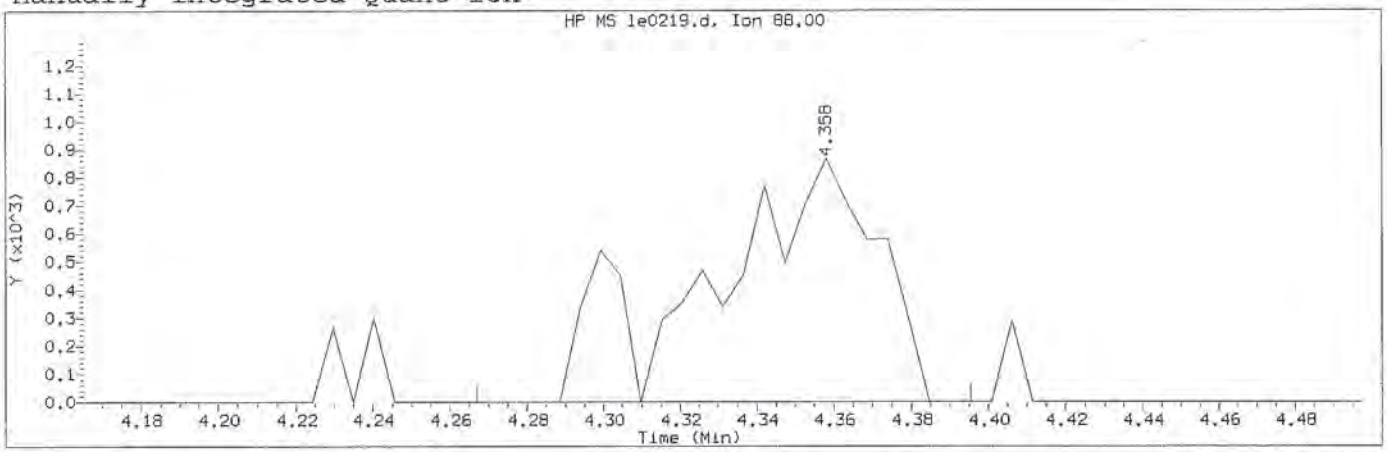
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 432		
Retention Time (minutes)	: 4.198		
Quant Ion	: 93.00		
Area	: 5836		
On-column Amount (ng/ul)	: 0.0873		
Integration start scan	: 428	Integration stop scan:	438
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 462		
Retention Time (minutes)	: 4.358		
Quant Ion	: 88.00		
Area (flag)	: 2640M		
On-Column Amount (ng/ul)	: 0.1000		
Integration start scan	: 444	Integration stop scan:	468
Y at integration start	: 0	Y at integration end:	0

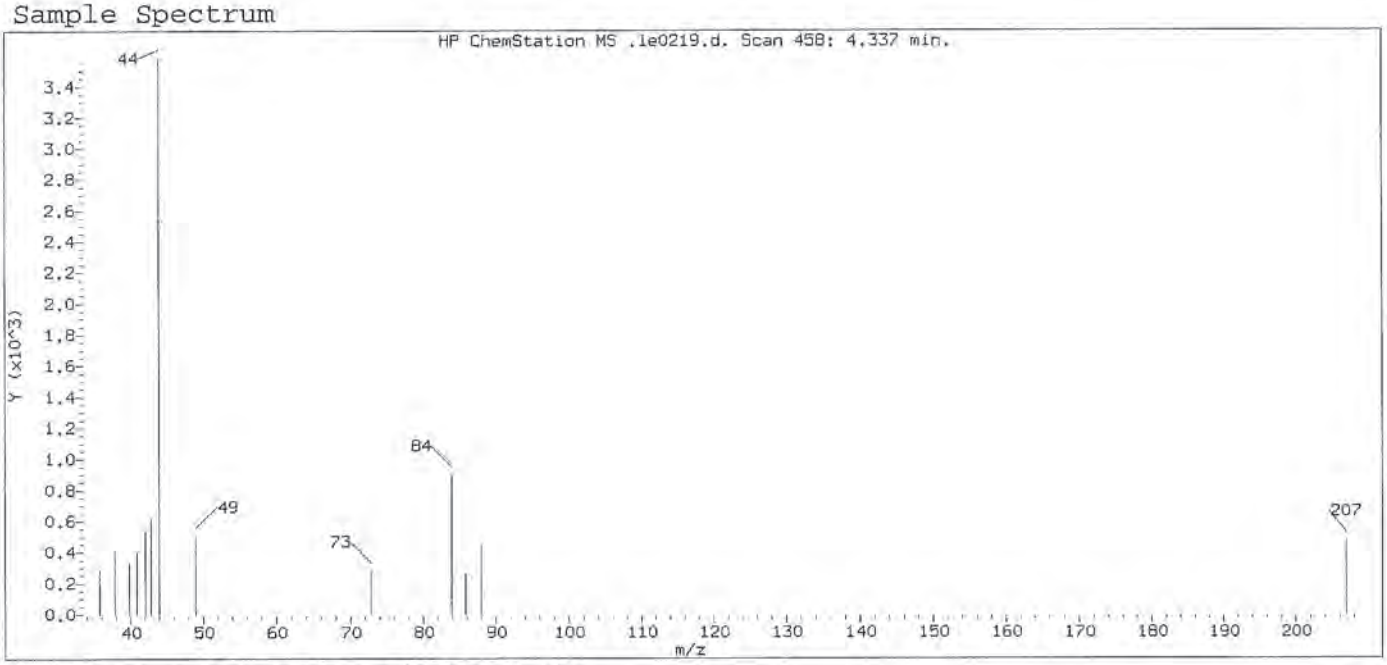
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 signature user ID: hbz01996

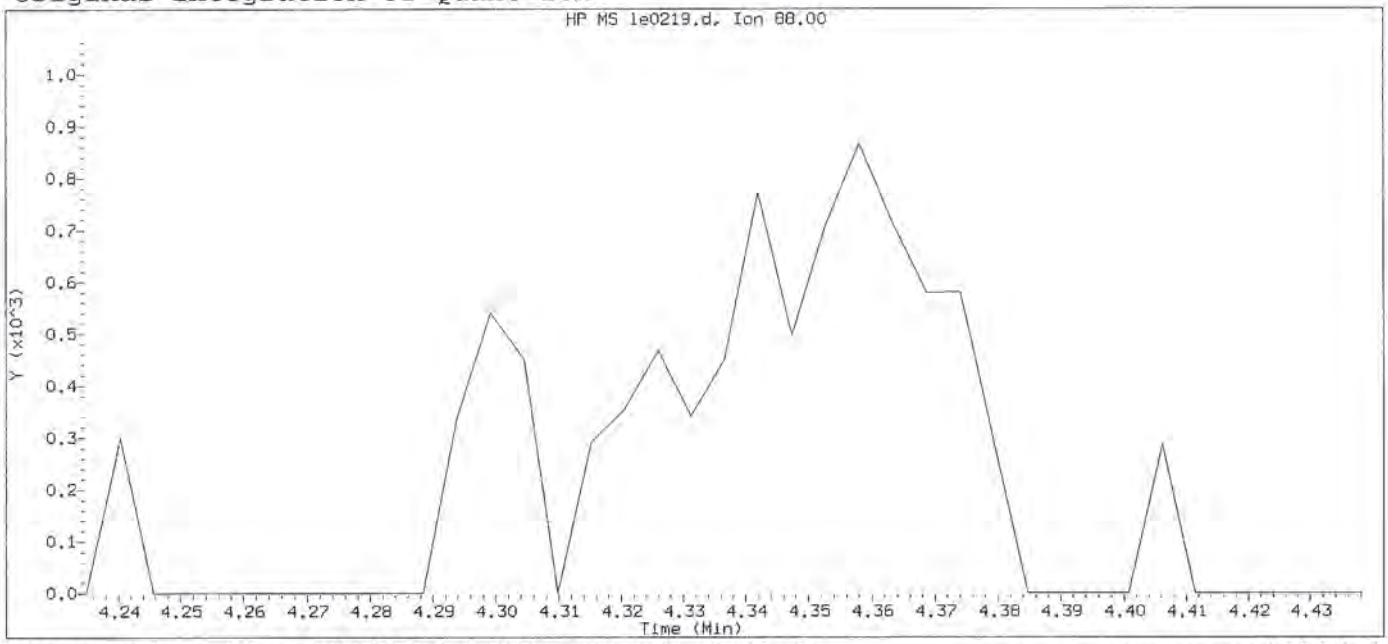
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

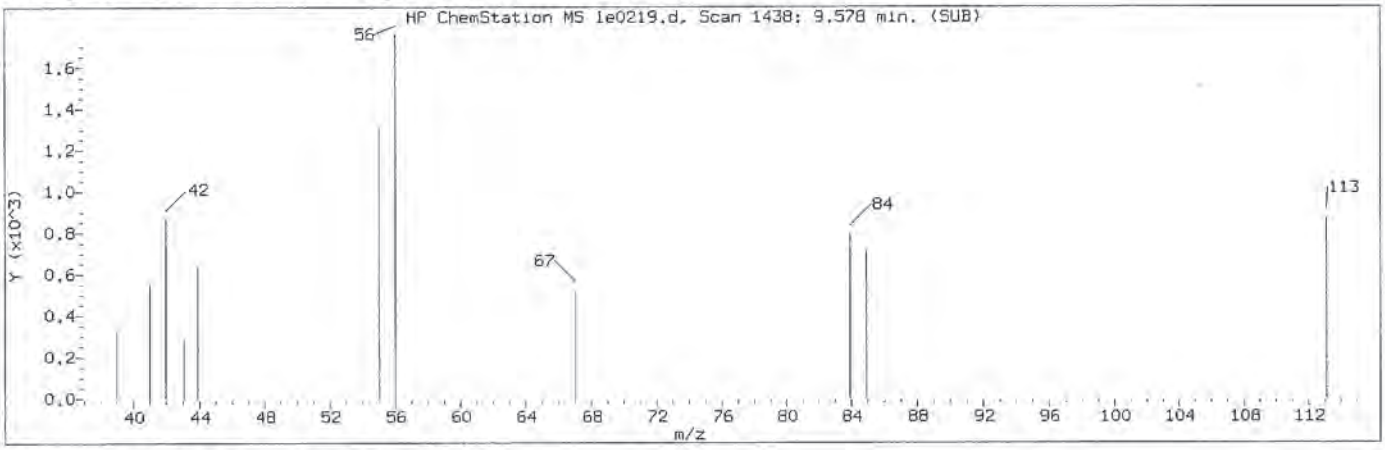
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

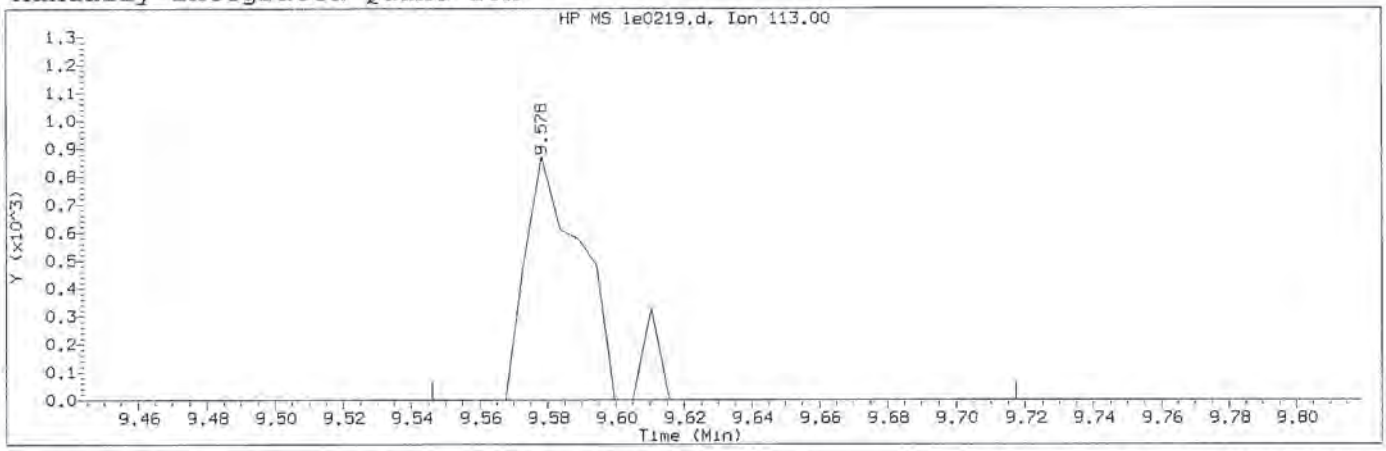
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.336
Quant Ion : 88.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1438		
Retention Time (minutes)	: 9.578		
Quant Ion	: 113.00		
Area (flag)	: 1073M		
On-Column Amount (ng/ul)	: 0.0862		
Integration start scan	: 1431	Integration stop scan:	1463
Y at integration start	: 0	Y at integration end:	0

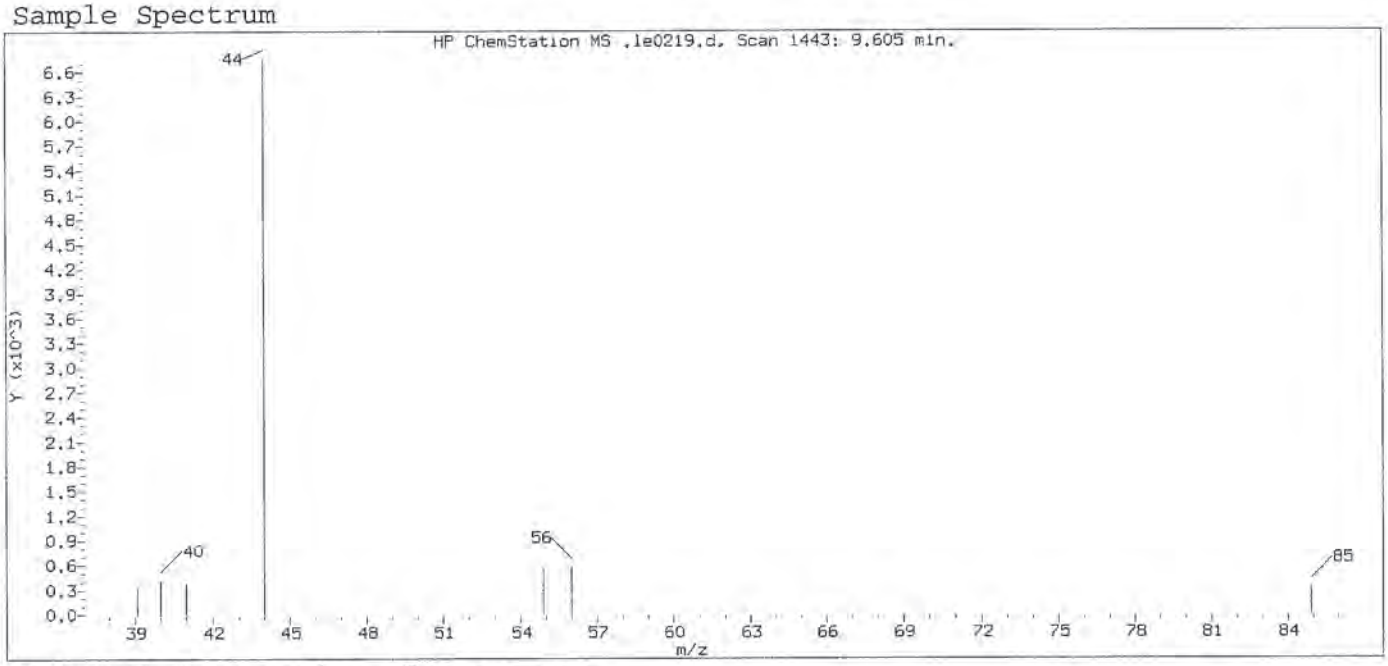
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08
Target 3.5 signature user ID: hbz01996

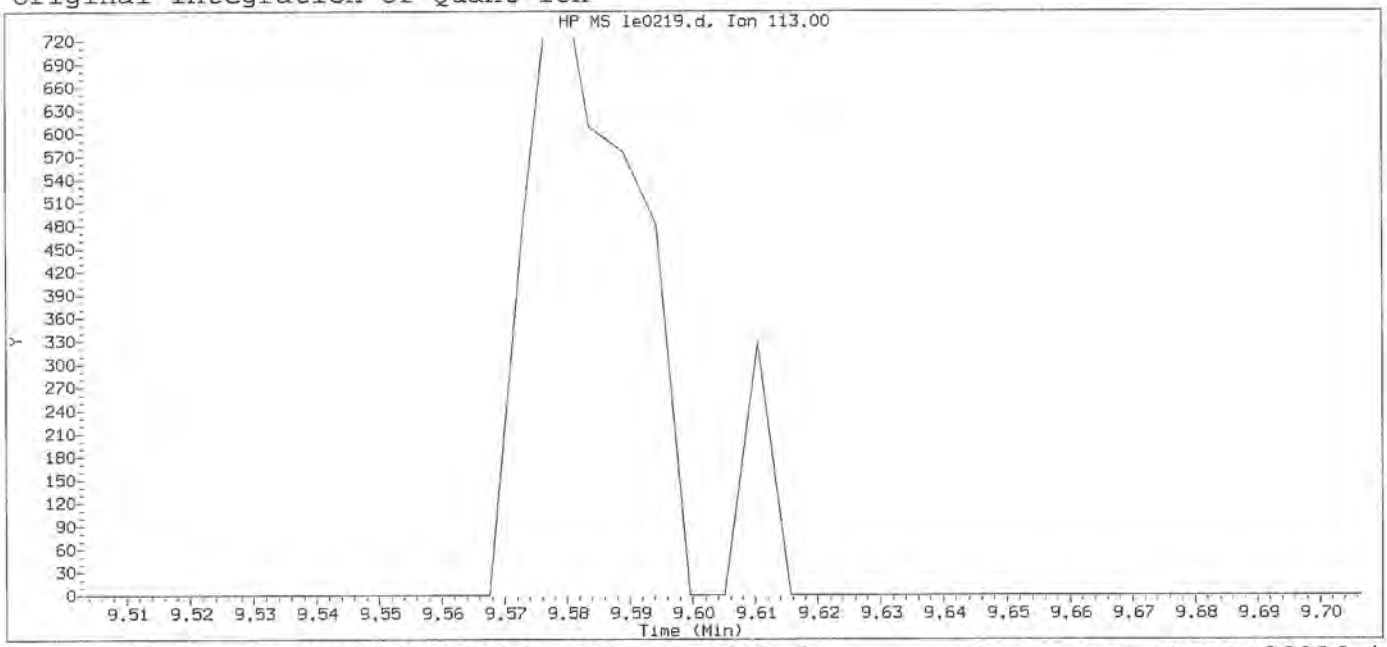
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

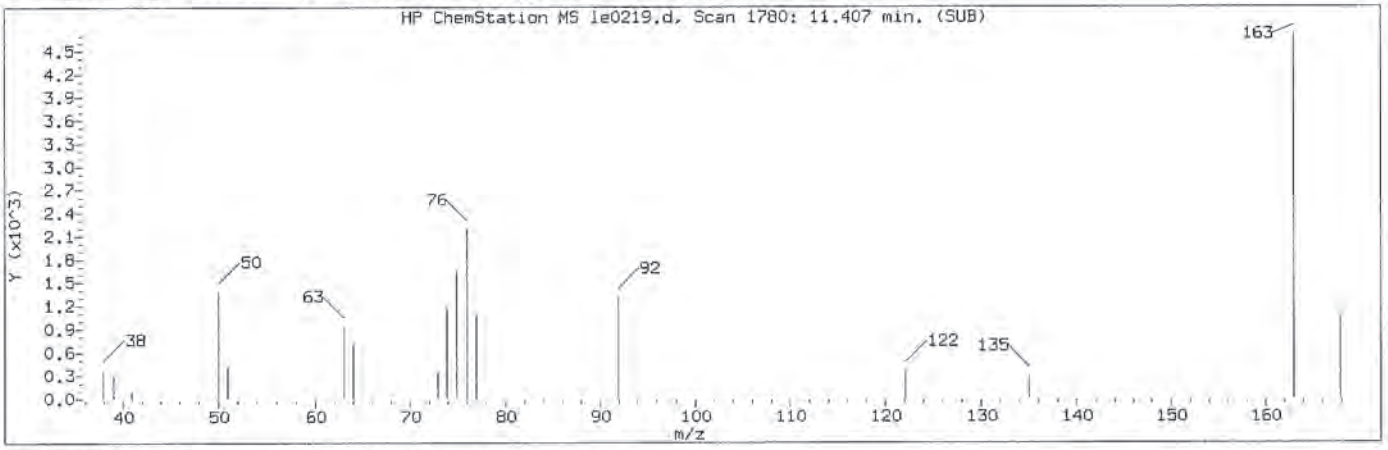
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla11
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

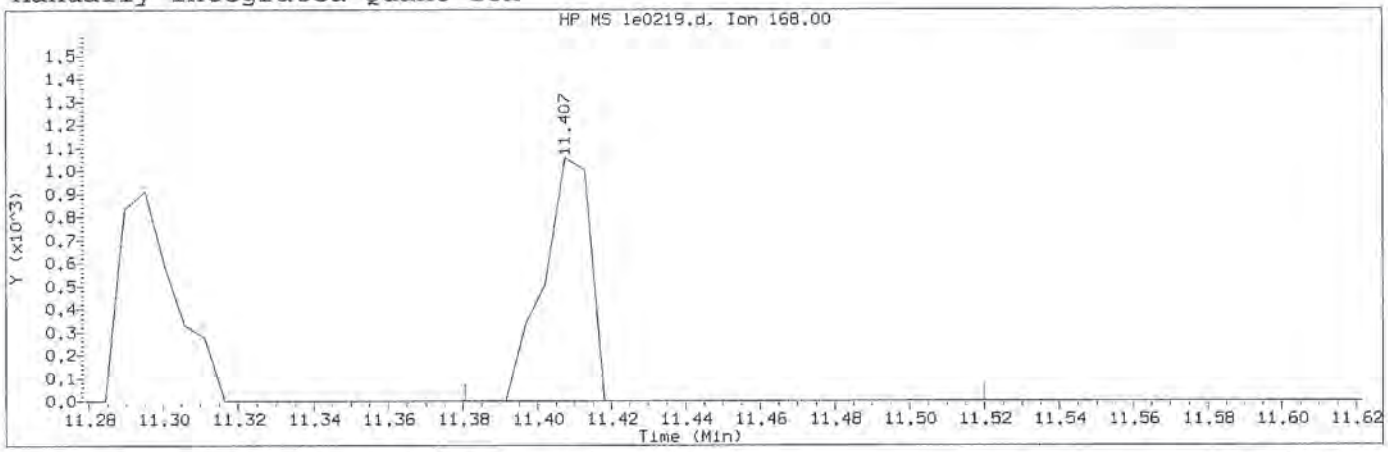
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.605
Quant Ion : 113.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 107		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1780		
Retention Time (minutes)	: 11.407		
Quant Ion	: 168.00		
Area (flag)	: 930M		
On-Column Amount (ng/ul)	: 0.0693		
Integration start scan	: 1774	Integration stop scan:	1800
Y at integration start	: 0	Y at integration end:	0

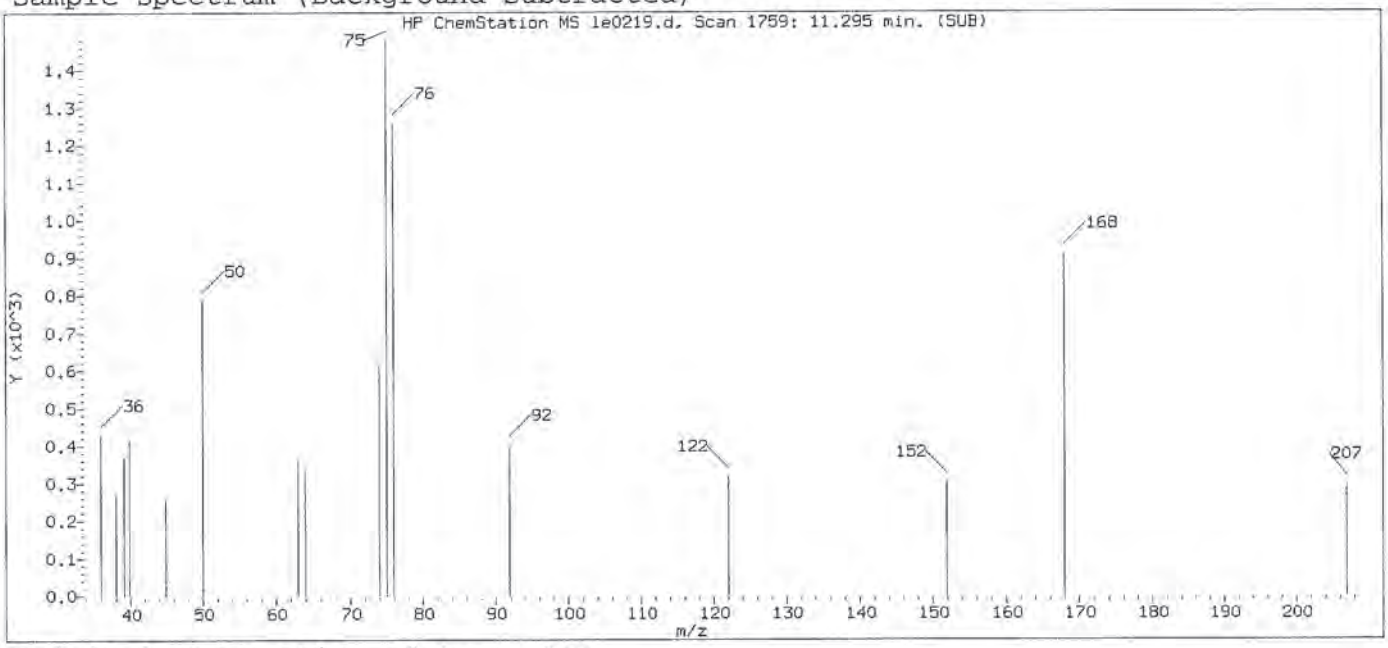
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08
Target 3.5 designated user ID: hbz01996

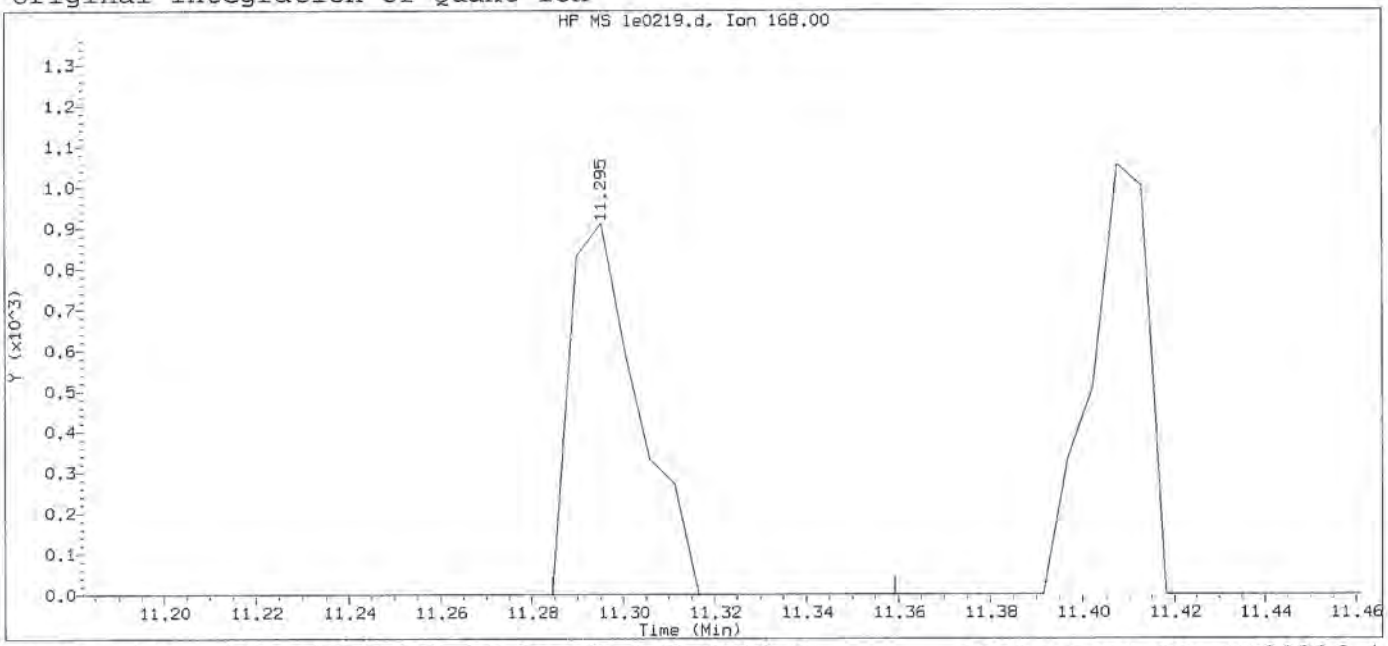
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

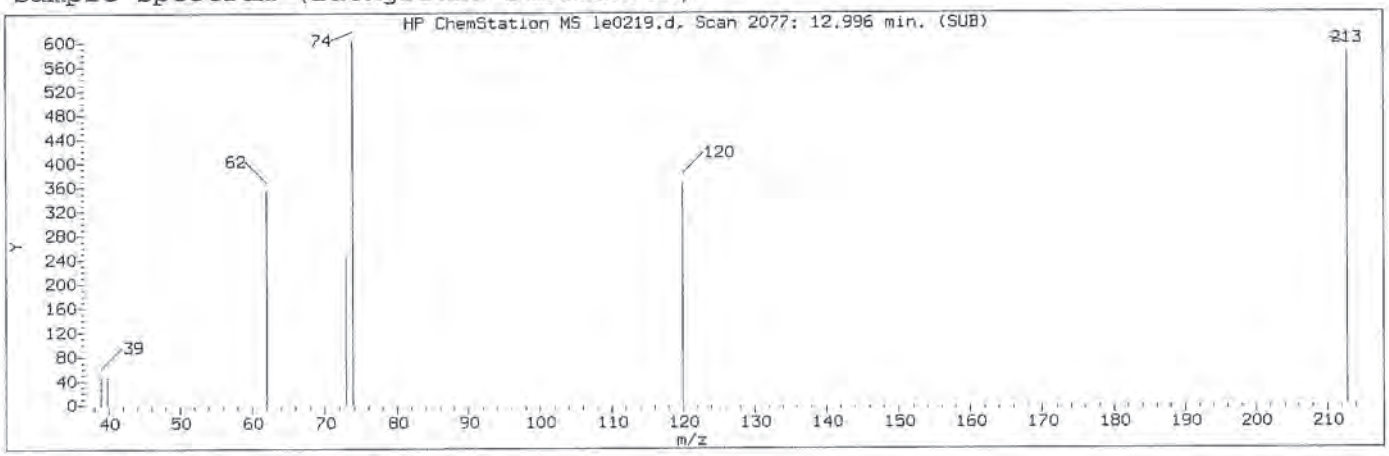
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

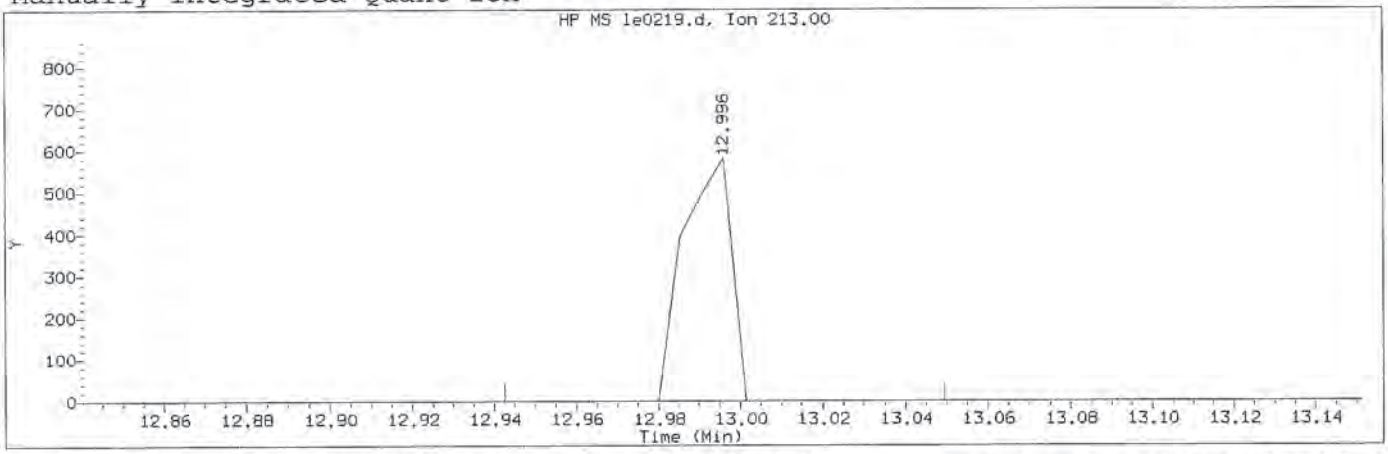
Compound Number	: 107		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1759		
Retention Time (minutes)	: 11.295		
Quant Ion	: 168.00		
Area	: 941		
On-column Amount (ng/ul)	: 0.0665		
Integration start scan	: 1756	Integration stop scan:	1770
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 139		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 2077		
Retention Time (minutes)	: 12.996		
Quant Ion	: 213.00		
Area (flag)	: 472M		
On-Column Amount (ng/ul)	: 0.0524		
Integration start scan	: 2066	Integration stop scan:	2086
Y at integration start	: 0	Y at integration end:	0

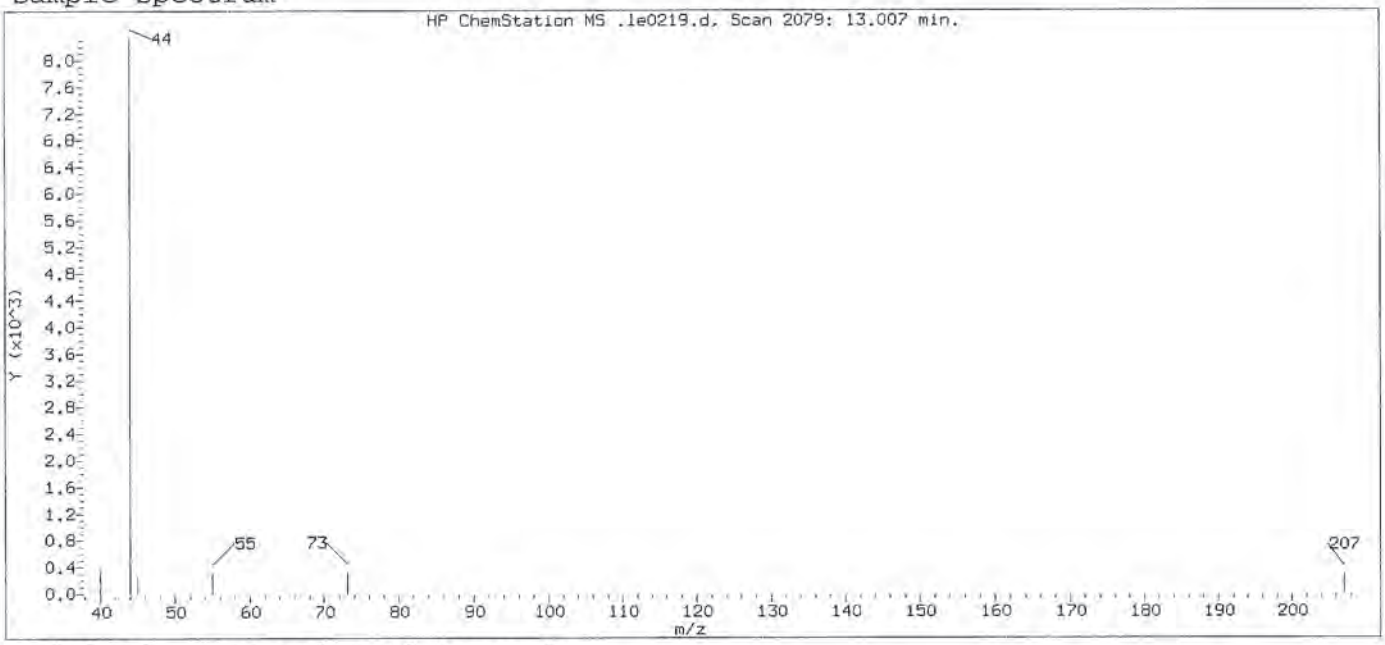
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 signature user ID: hbz01996

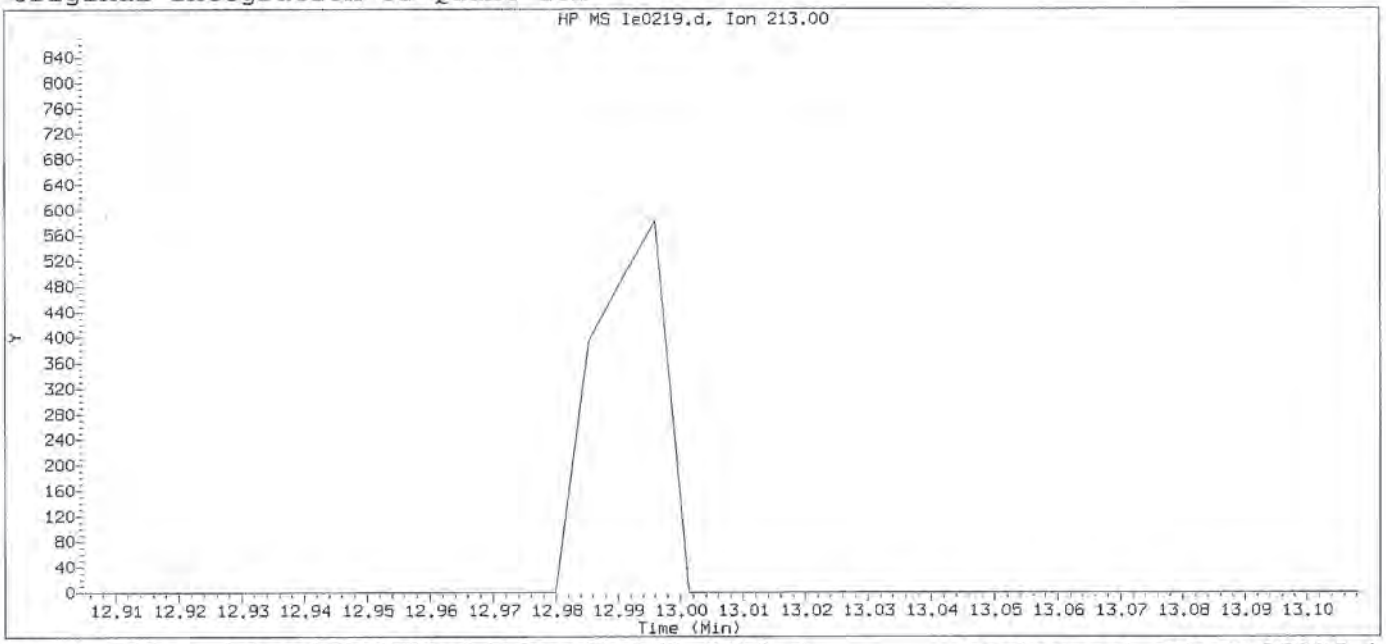
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

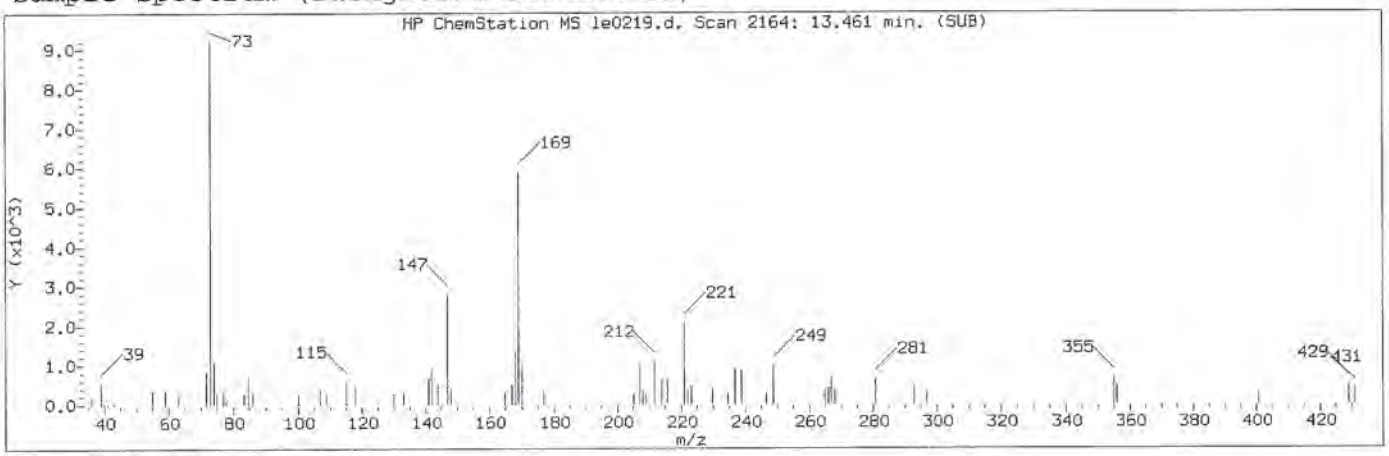
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

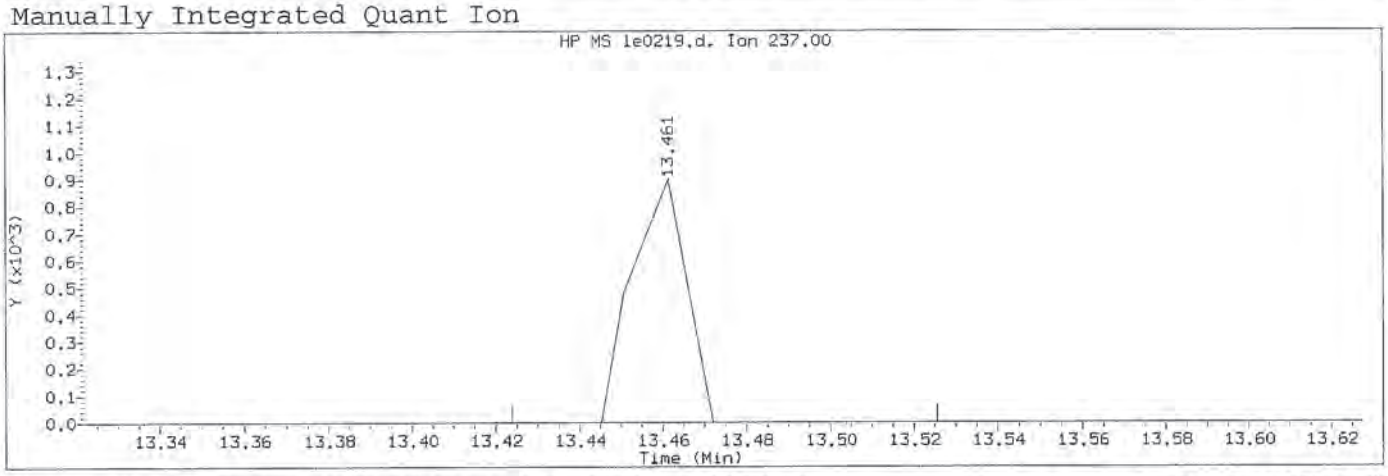
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 13.007
Quant Ion : 213.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 151		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 2164		
Retention Time (minutes)	: 13.461		
Quant Ion	: 237.00		
Area (flag)	: 809M		
On-Column Amount (ng/ul)	: 0.0626		
Integration start scan	: 2156	Integration stop scan:	2175
Y at integration start	: 0	Y at integration end:	0

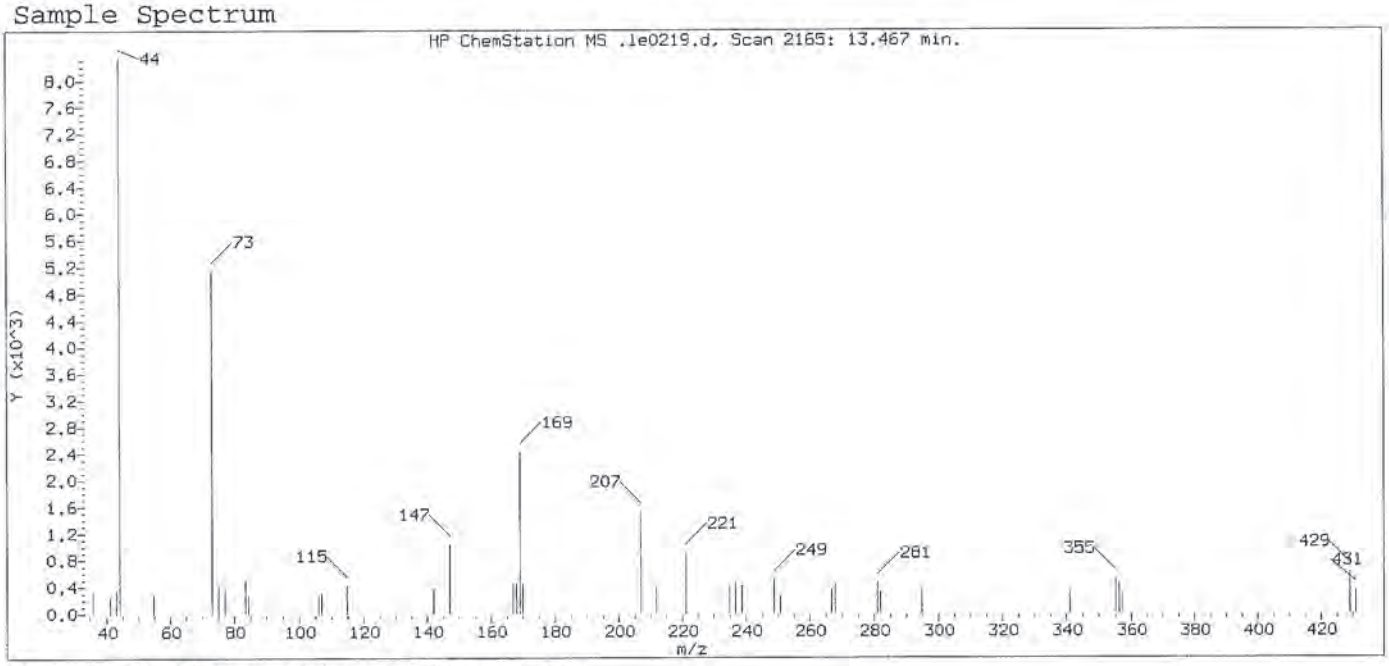
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08
Target 3.5 signature user ID: hbz01996

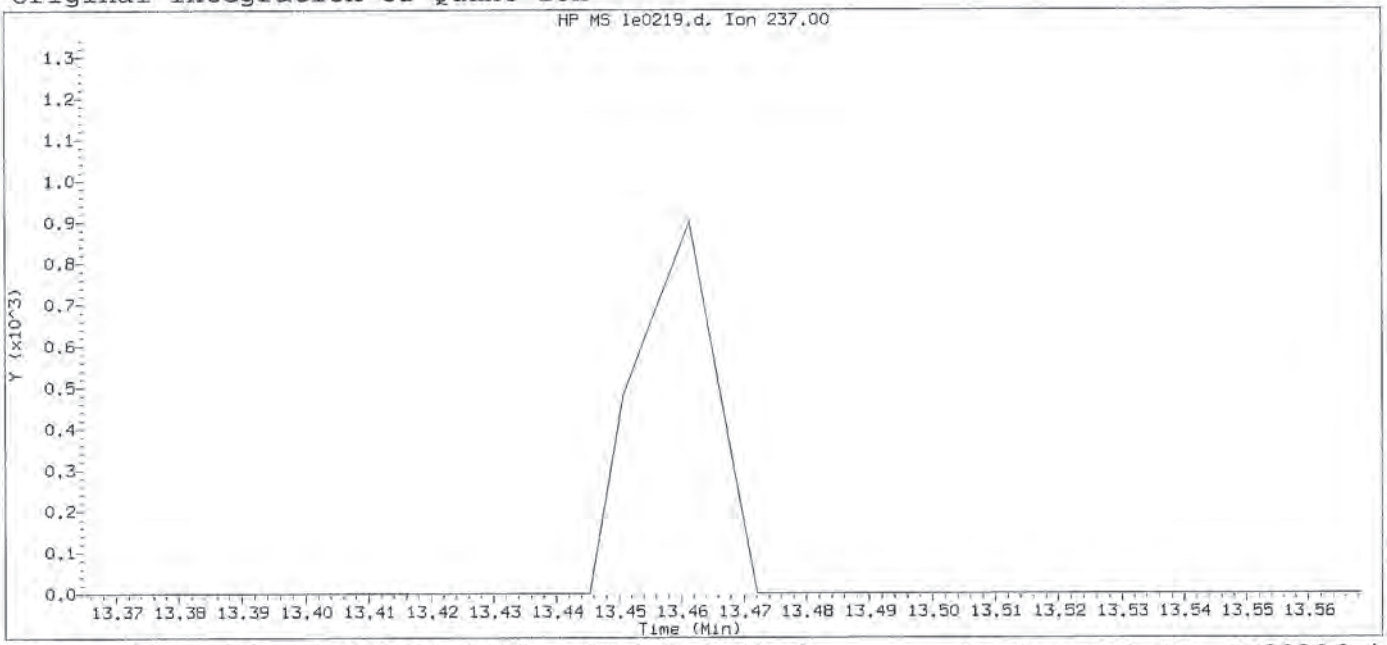
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

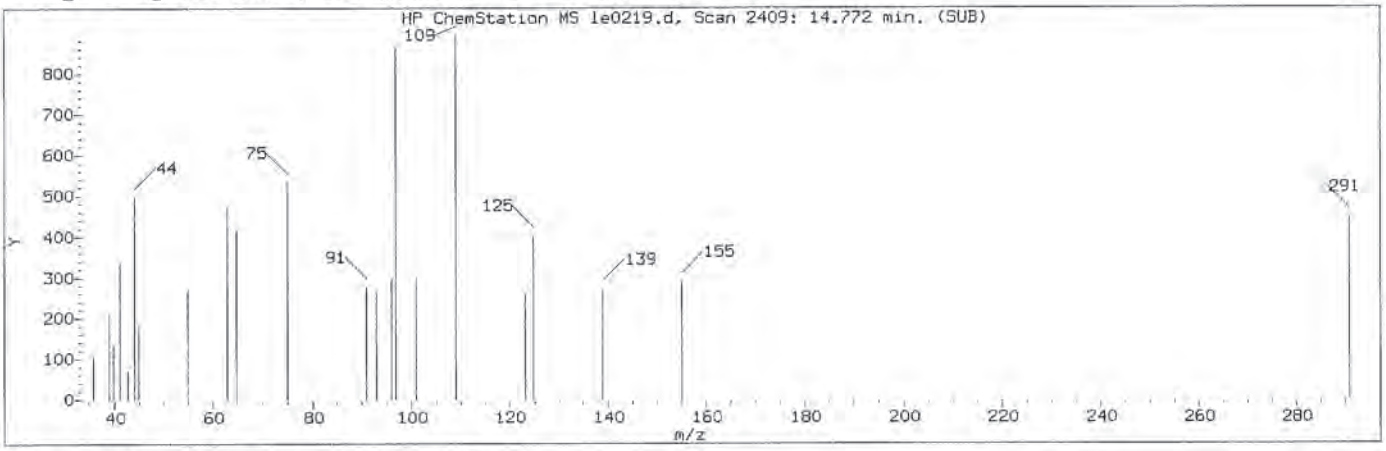
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

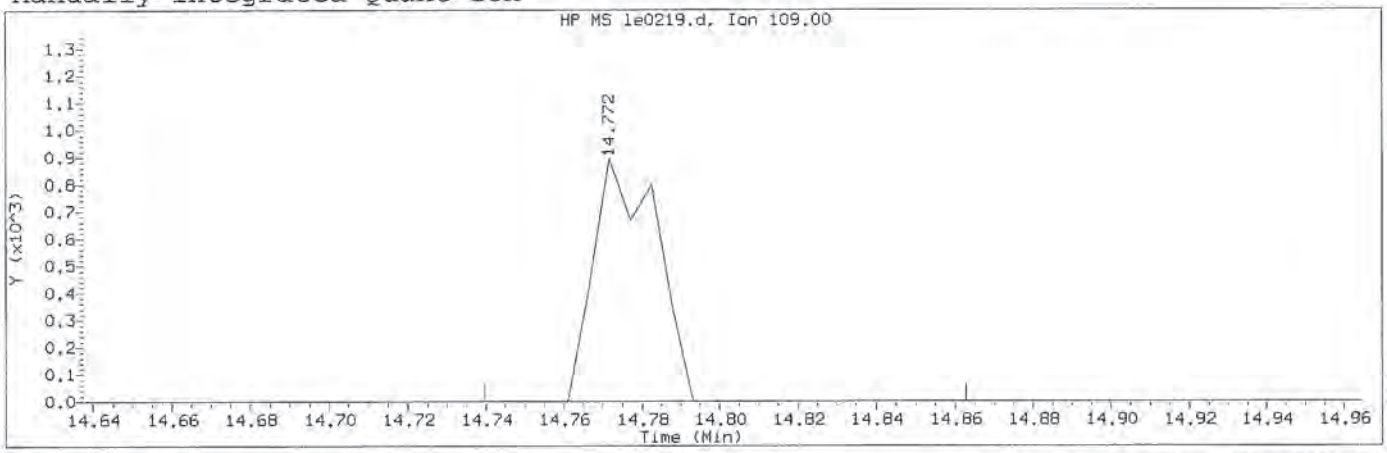
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.467
Quant Ion : 237.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 167		
Compound Name	: Parathion		
Scan Number	: 2409		
Retention Time (minutes)	: 14.772		
Quant Ion	: 109.00		
Area (flag)	: 999M		
On-Column Amount (ng/ul)	: 0.0498		
Integration start scan	: 2402	Integration stop scan:	2425
Y at integration start	: 0	Y at integration end:	0

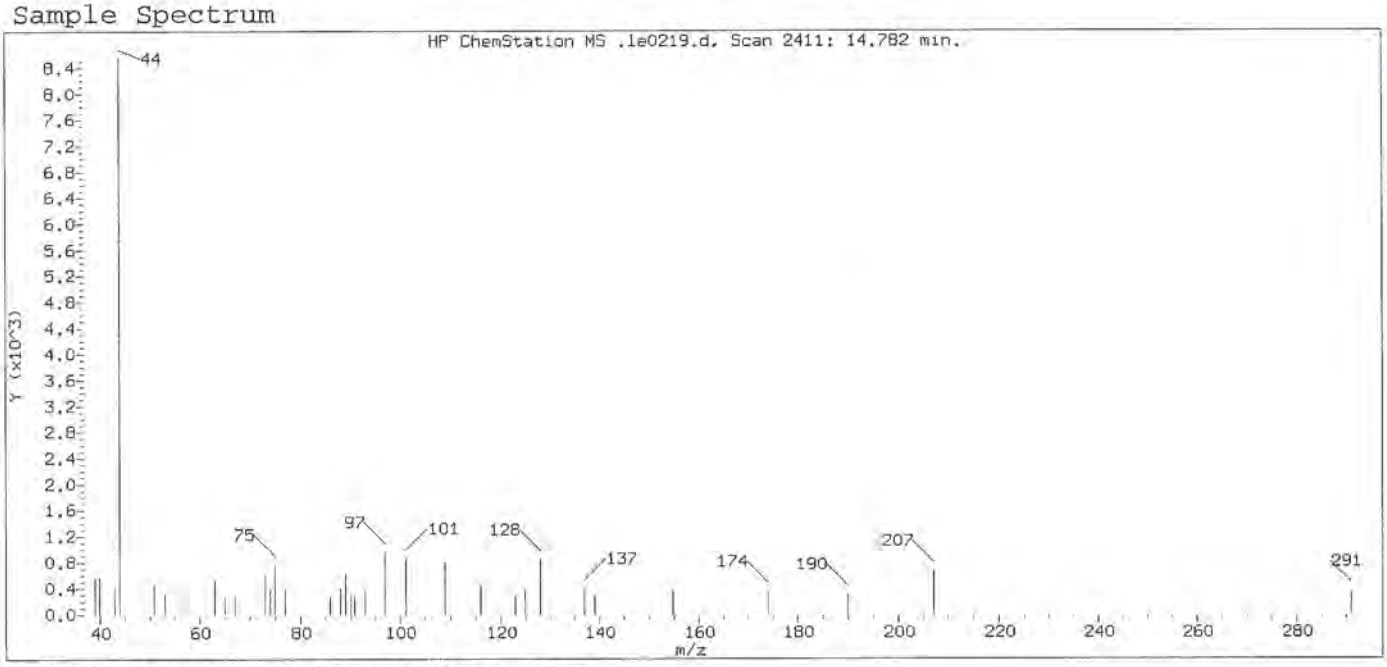
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 signature User ID: hbz01996

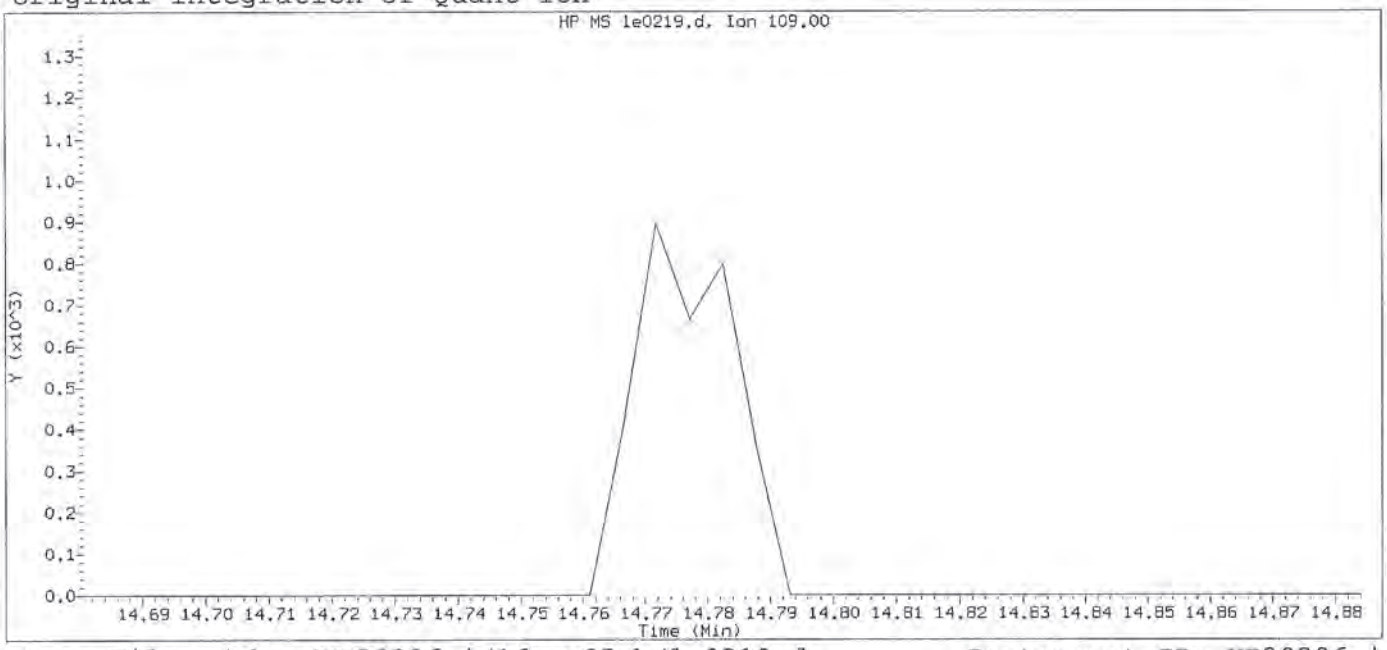
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

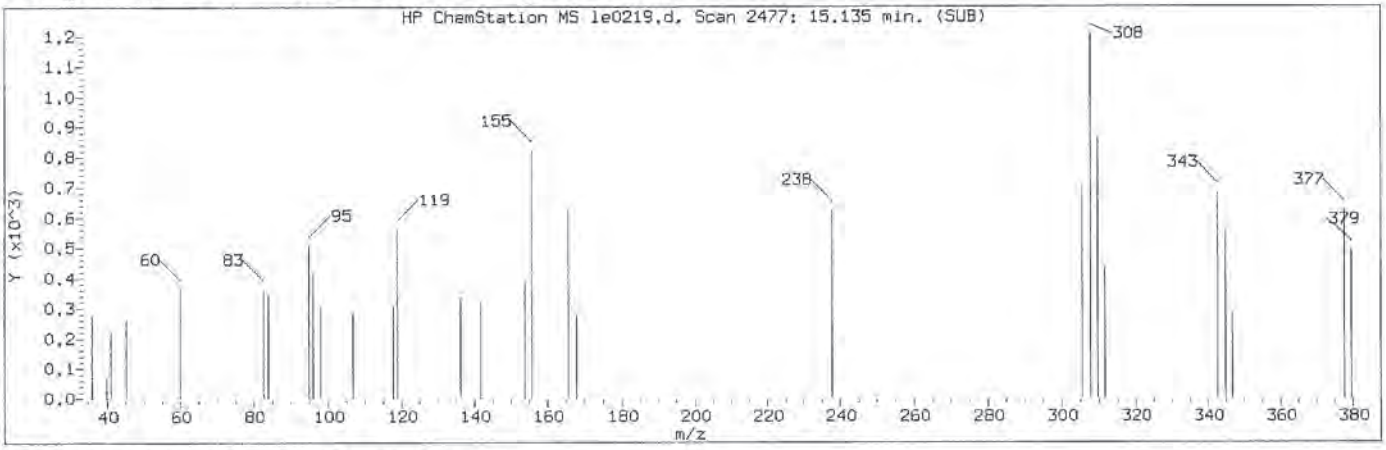
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

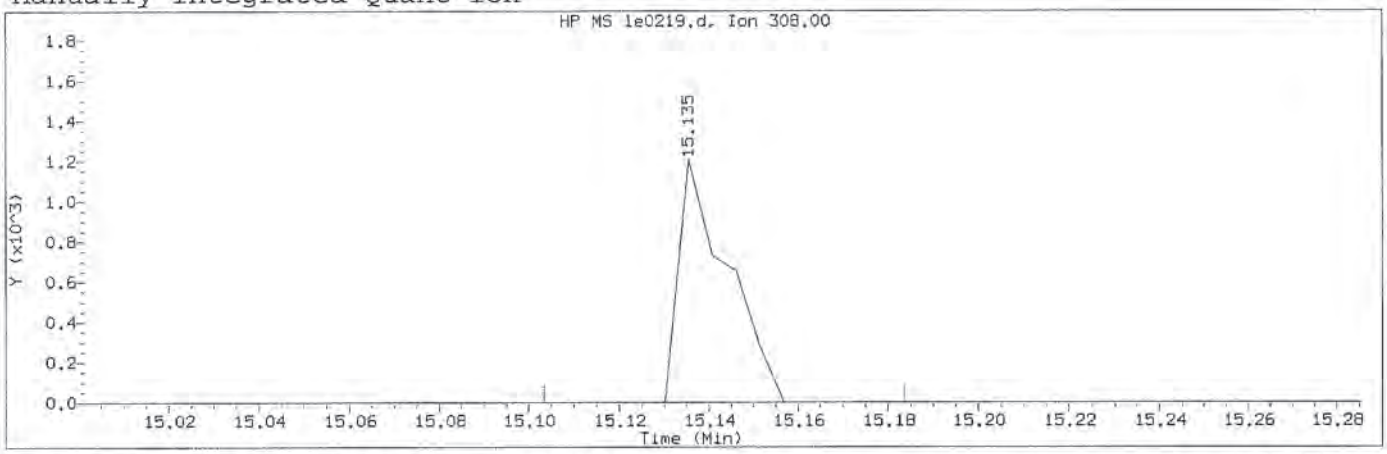
Compound Number : 167
Compound Name : Parathion
Expected RT (minutes) : 14.782
Quant Ion : 109.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 169		
Compound Name	: Octachlorostyrene		
Scan Number	: 2477		
Retention Time (minutes)	: 15.135		
Quant Ion	: 308.00		
Area (flag)	: 920M		
On-Column Amount (ng/ul)	: 0.0930		
Integration start scan	: 2470	Integration stop scan:	2485
Y at integration start	: 0	Y at integration end:	0

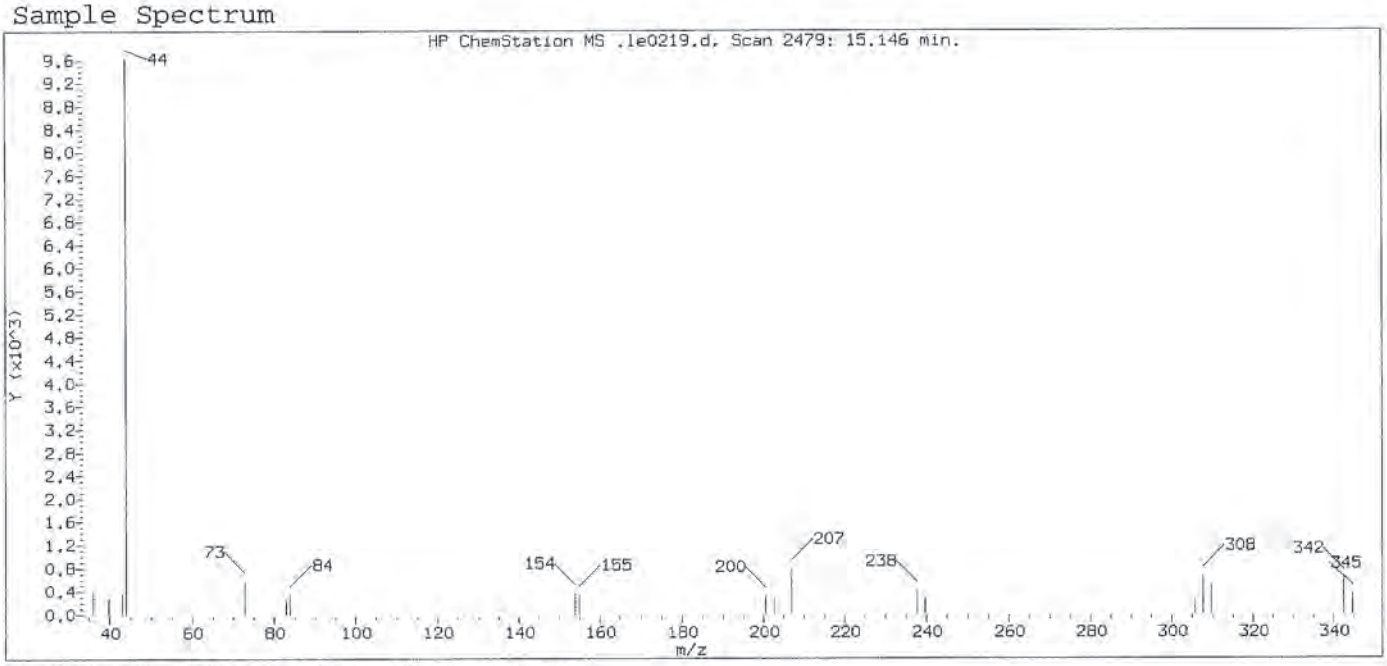
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 signature user ID: hbz01996

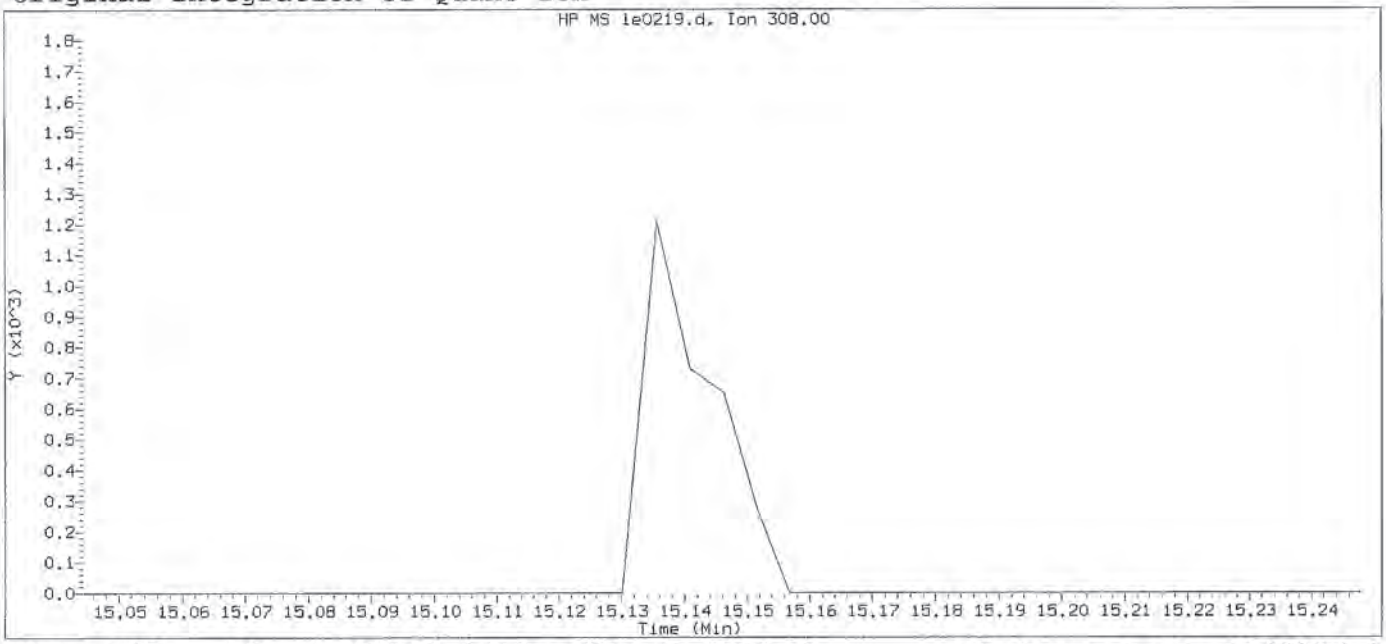
MAY 06 2016

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

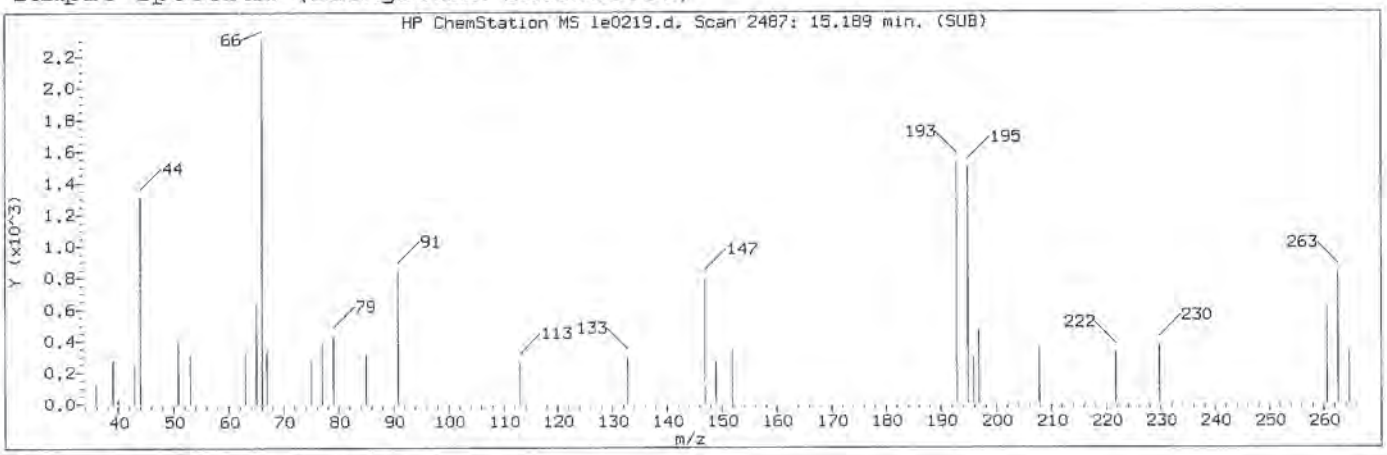
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

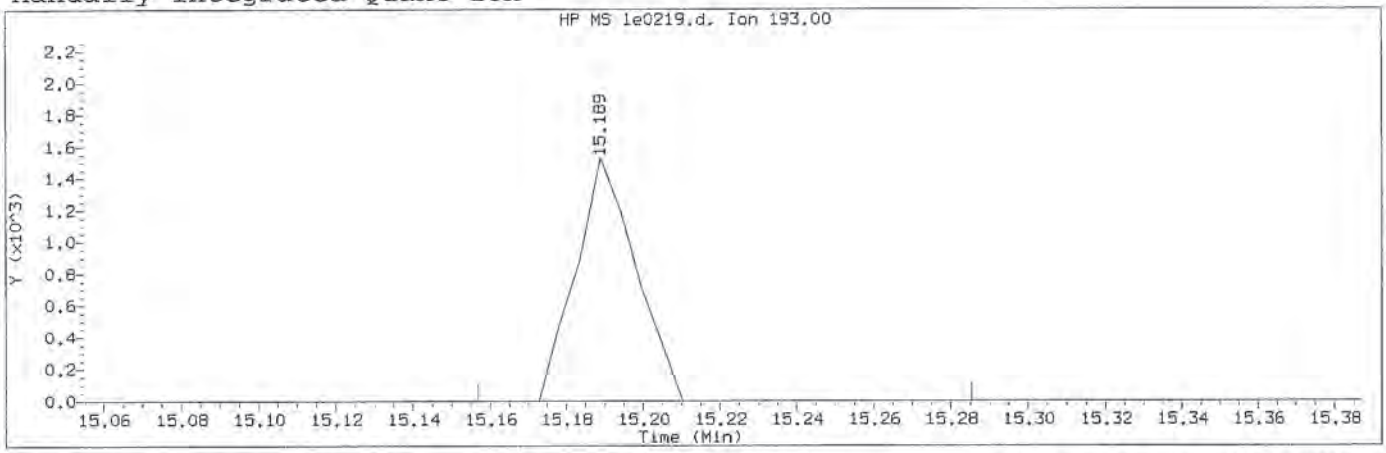
Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 15.146
Quant Ion : 308.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 171		
Compound Name	: Isodrin		
Scan Number	: 2487		
Retention Time (minutes)	: 15.189		
Quant Ion	: 193.00		
Area (flag)	: 1661M		
On-Column Amount (ng/ul)	: 0.0997		
Integration start scan	: 2480	Integration stop scan:	2504
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

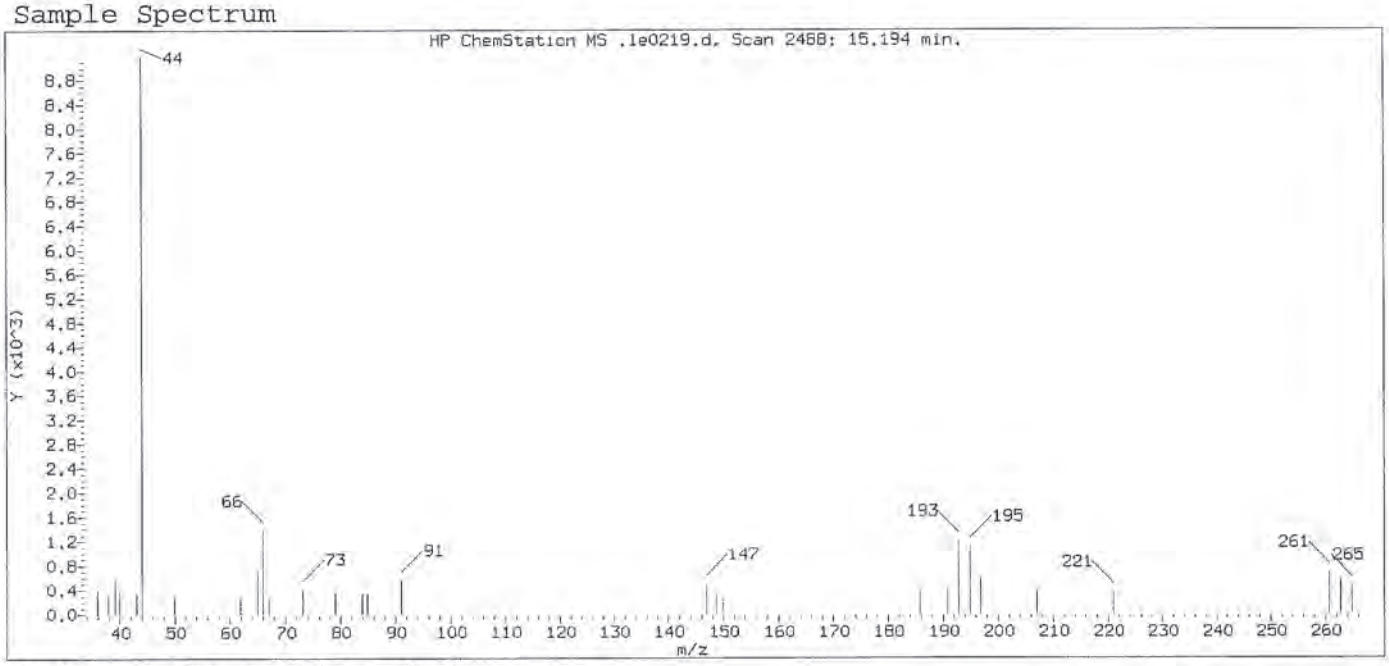
Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08. Target 3.5 signature user ID: hbz01996

MAY 06 2016

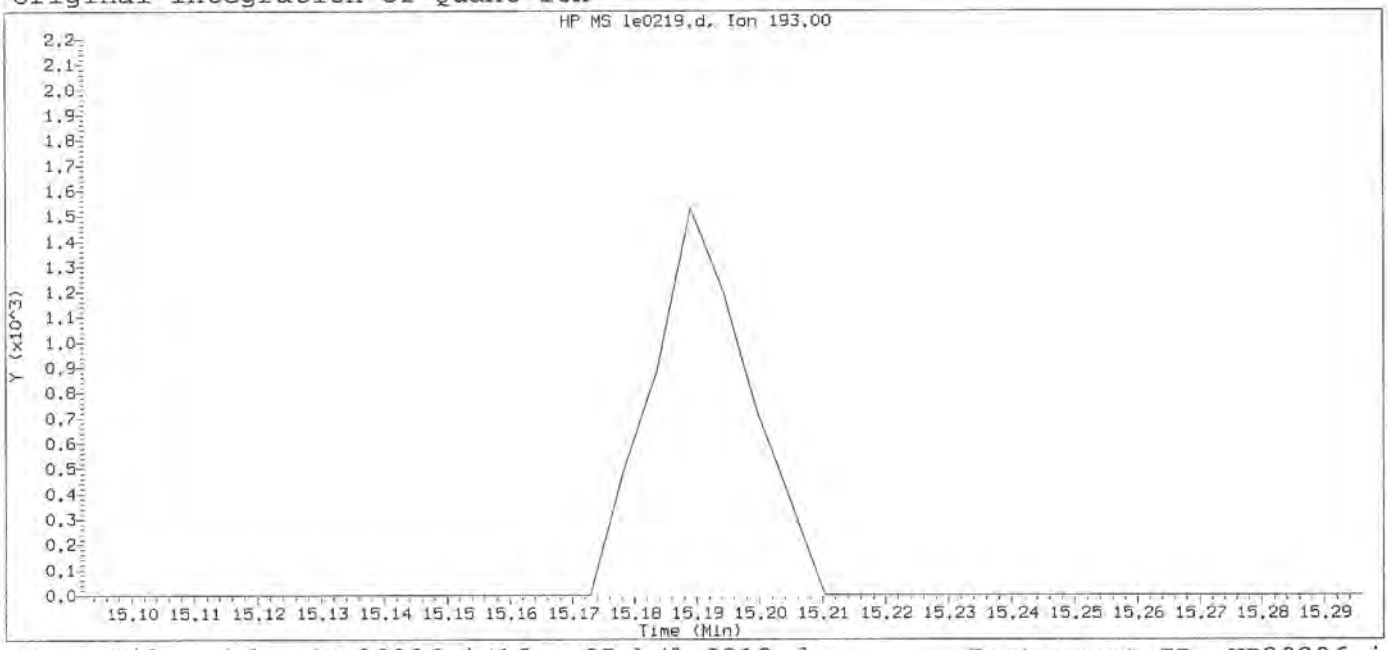
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

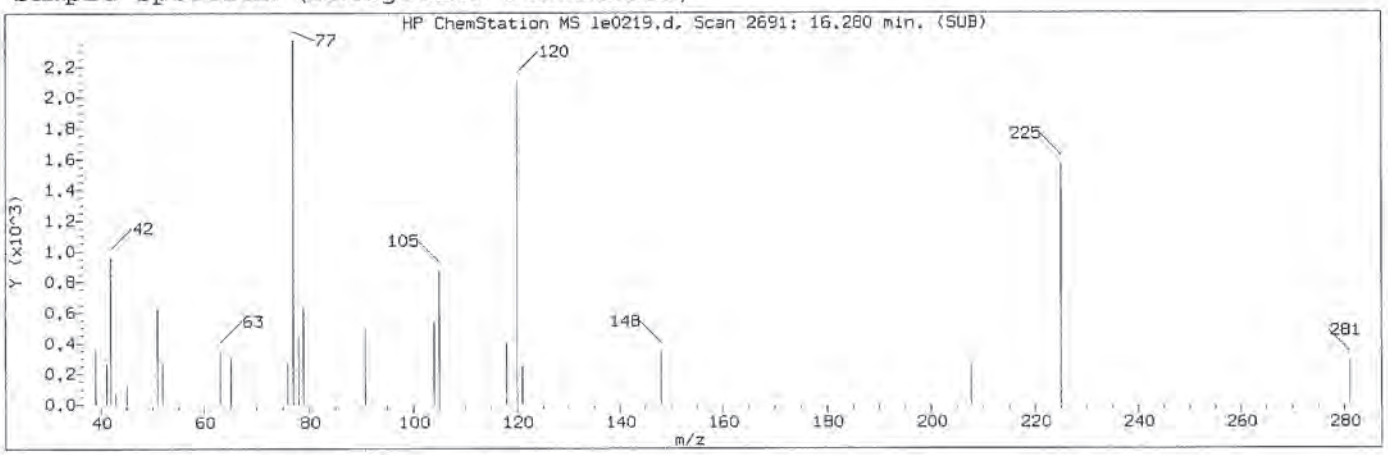
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdla111
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

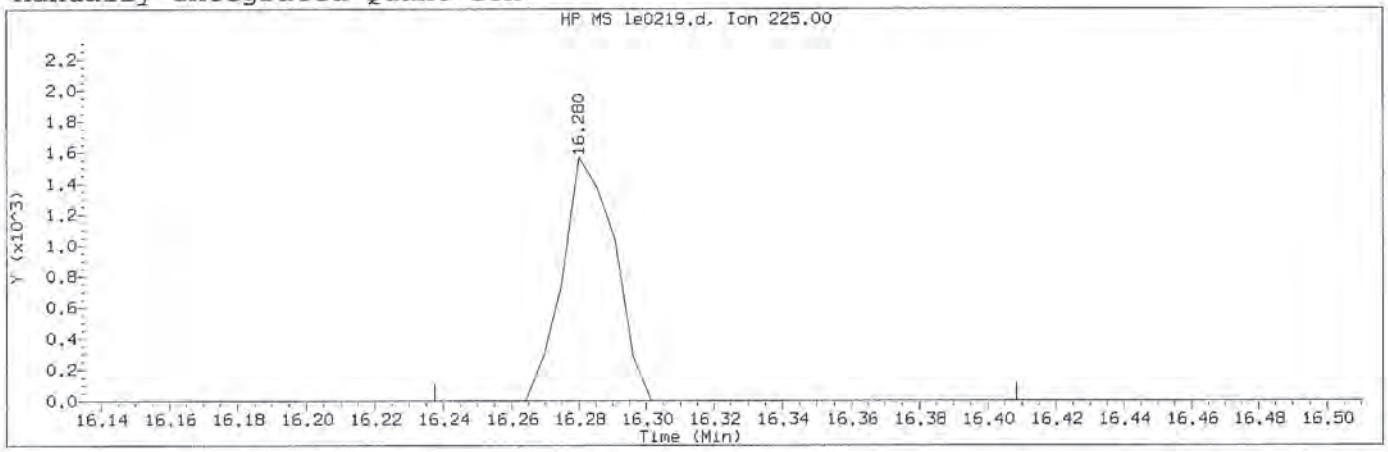
Compound Number : 171
Compound Name : Isodrin
Expected RT (minutes) : 15.194
Quant Ion : 193.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/le0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number	: 182		
Compound Name	: p-Dimethylaminoazobenzene		
Scan Number	: 2691		
Retention Time (minutes)	: 16.280		
Quant Ion	: 225.00		
Area (flag)	: 1694M		
On-Column Amount (ng/ul)	: 0.6094		
Integration start scan	: 2682	Integration stop scan:	2714
Y at integration start	: 0	Y at integration end:	0

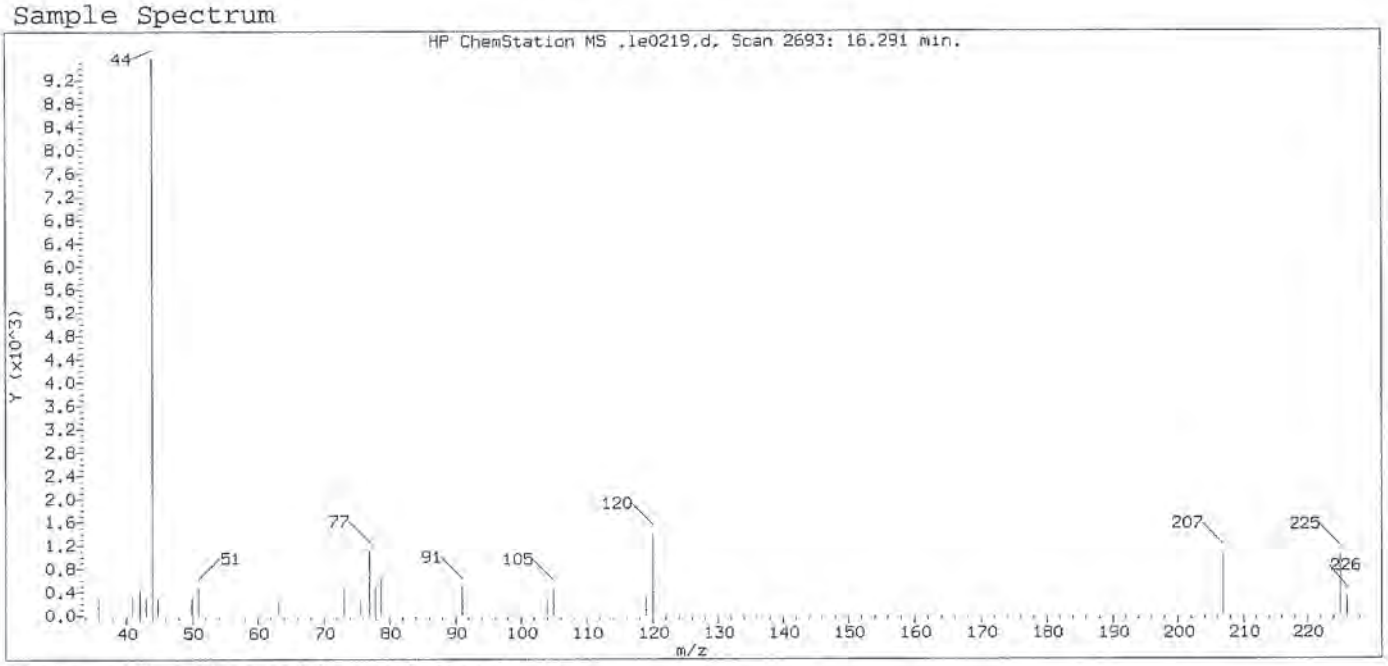
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996

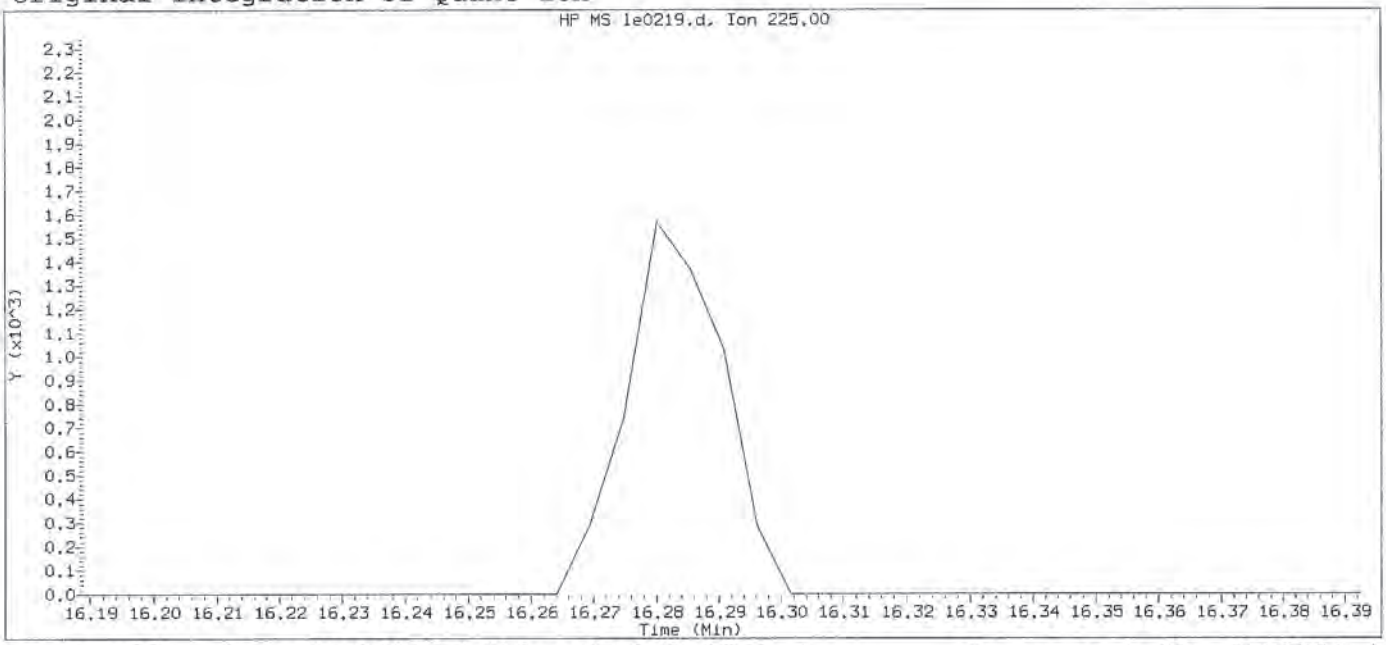
GC/MS audit/management approval: MAY 06 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



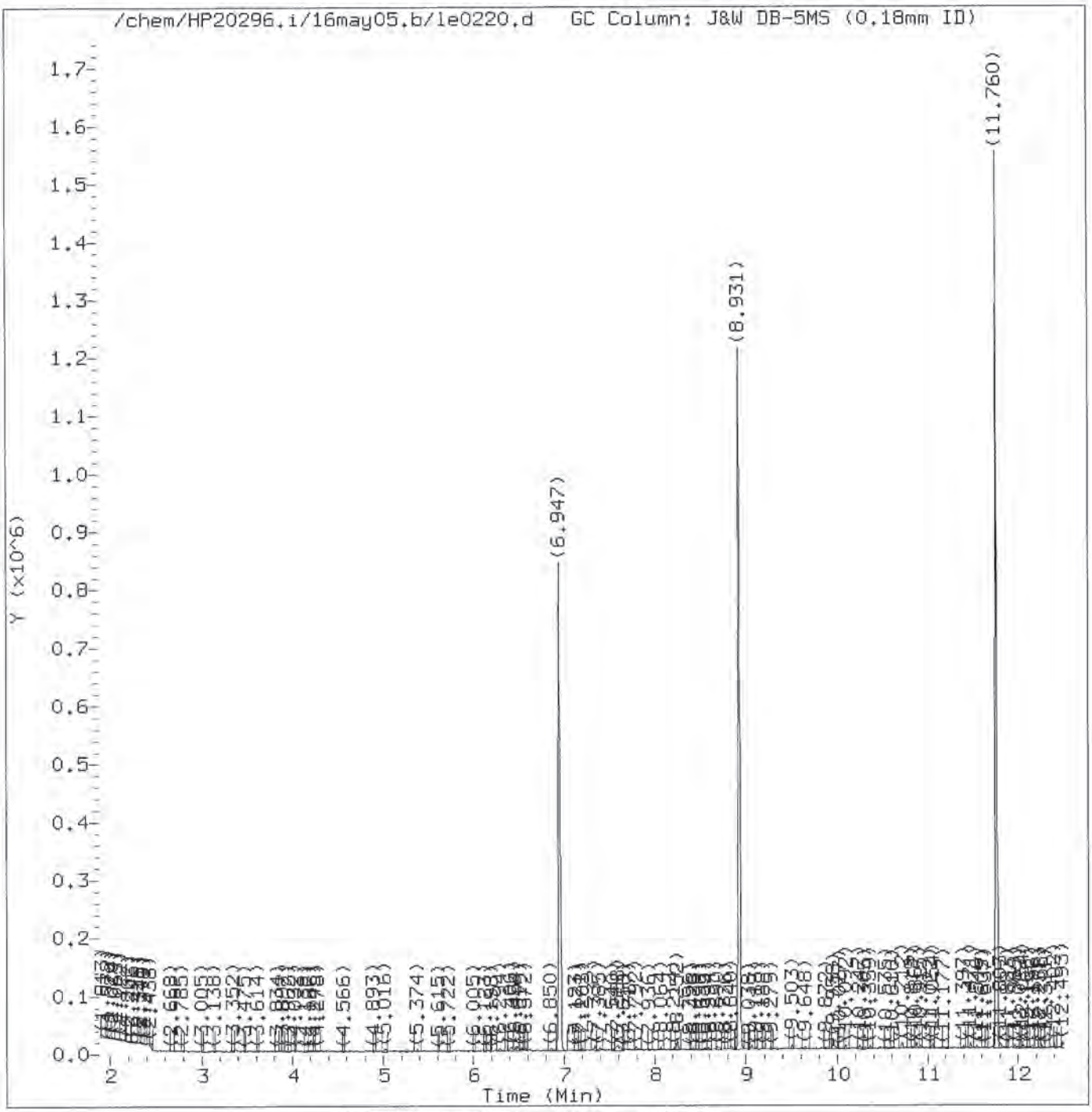
Data File: /chem/HP20296.i/16may05.b/1e0219.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 22:46 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: MDLSTD0816

Compound Number : 182
Compound Name : p-Dimethylaminoazobenzene
Expected RT (minutes) : 16.291
Quant Ion : 225.00

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:08.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

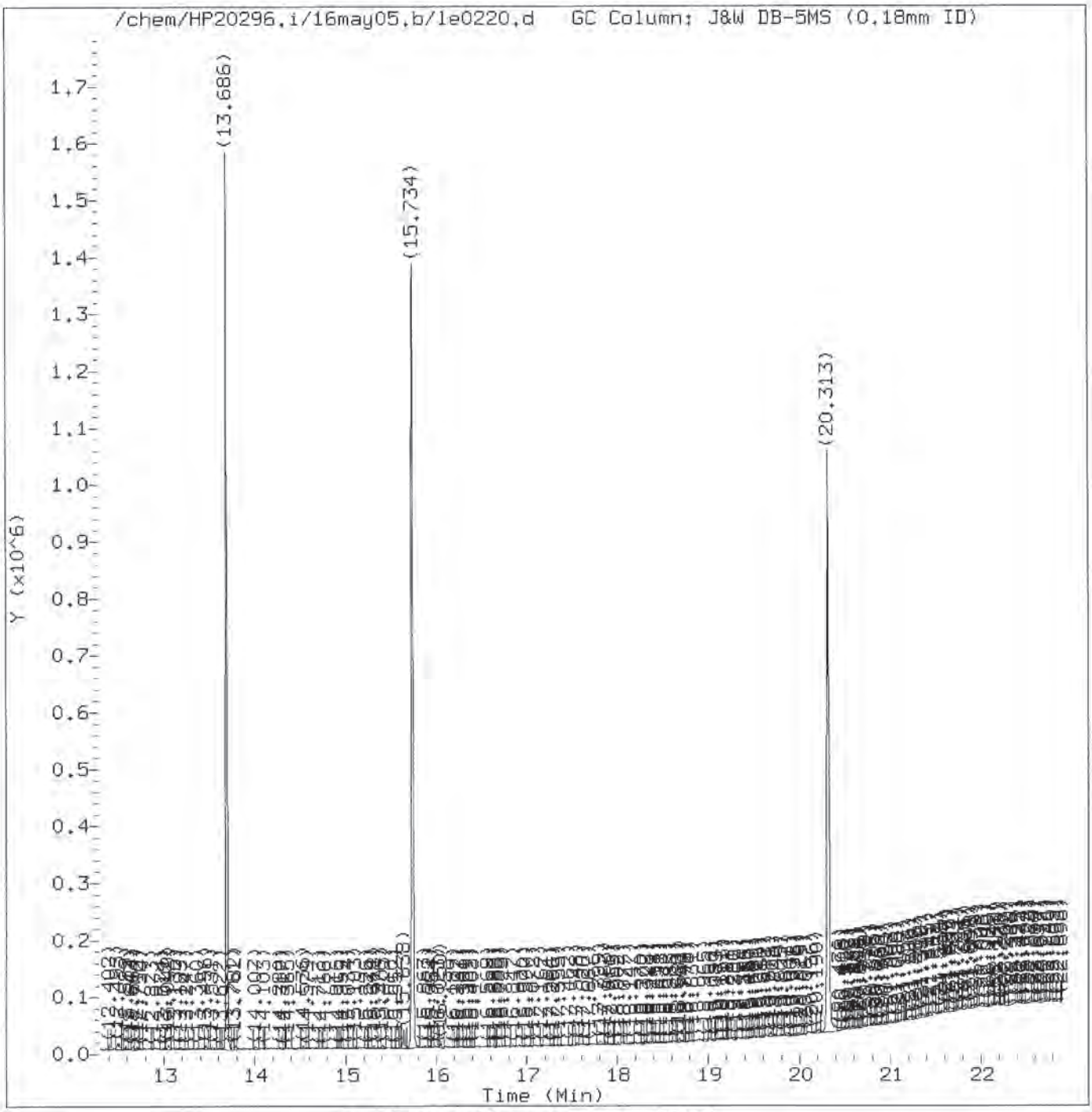
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/1e0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

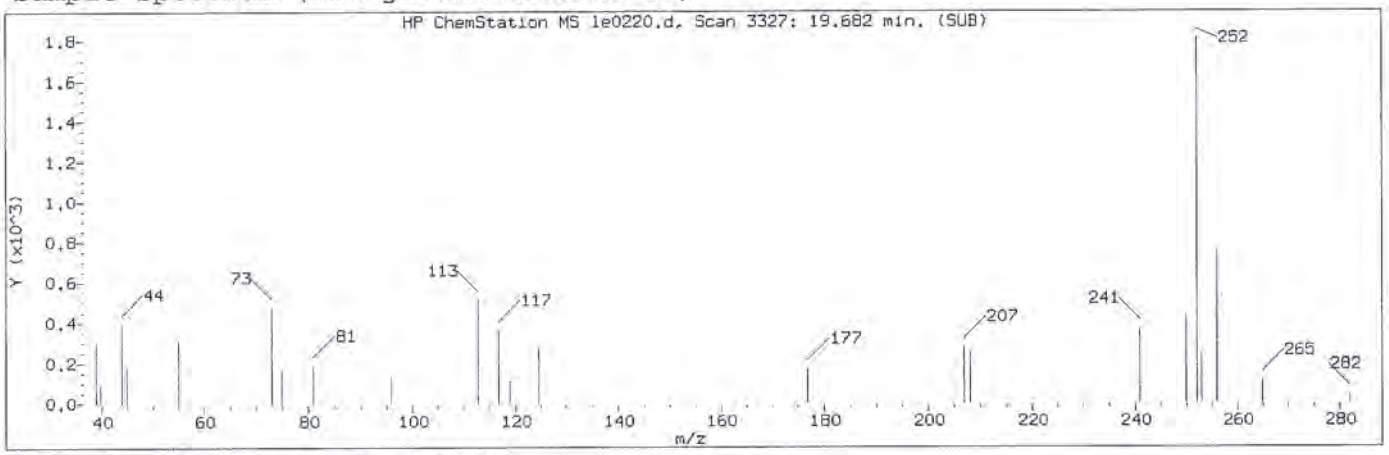
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	161062	5.000
44)$Nitrobenzene-d5	(2)	7.792	82	2965	0.048
65)*Naphthalene-d8	(2)	8.931	136	610412	5.000
66) Naphthalene	(2)	8.963	128	3355	0.025
83) 2-Methylnaphthalene	(2)	10.092	142	2052	0.024
84) 1-Methylnaphthalene	(2)	10.241	142	2104	0.027
93)$2-Fluorobiphenyl	(3)	10.712	172	4703	0.048
109) Acenaphthylene	(3)	11.541	152	2640	0.022
113)*Acenaphthene-d10	(3)	11.760	164	345897	5.000
114) Acenaphthene	(3)	11.808	153	2065	0.024
126) Fluorene	(3)	12.498	166	2246	0.025
145) Hexachlorobenzene	(4)	13.178	284	440	0.017
153)*Phenanthrene-d10	(4)	13.686	188	637115	5.000
155) Phenanthrene	(4)	13.718	178	3582	0.027
157) Anthracene	(4)	13.787	178	2804	0.021
222) Total PAHs	(6)			46239	0.389
173) Fluoranthene	(4)	15.408	202	3324	0.023
175)*Pyrene-d10	(5)	15.734	212	728653	5.000
177) Pyrene	(5)	15.761	202	4194	0.027
179)$Terphenyl-d14	(5)	16.050	244	4476	0.045
195) Benzo(a)anthracene	(5)	17.810	228	2535	0.019
196) Chrysene	(5)	17.863	228	2533	0.019
206) Benzo(b)fluoranthene	(6)	19.682	252	2403M	0.019
208) Benzo(k)fluoranthene	(6)	19.730	252	2112	0.017
211) Benzo(a)pyrene	(6)	20.222	252	2105M	0.018
213)*Perylene-d12	(6)	20.313	264	512911	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.944	276	2239	0.017
220) Dibenz(a,h)anthracene	(6)	21.982	278	1516	0.014
221) Benzo(g,h,i)perylene	(6)	22.356	276	2430	0.021

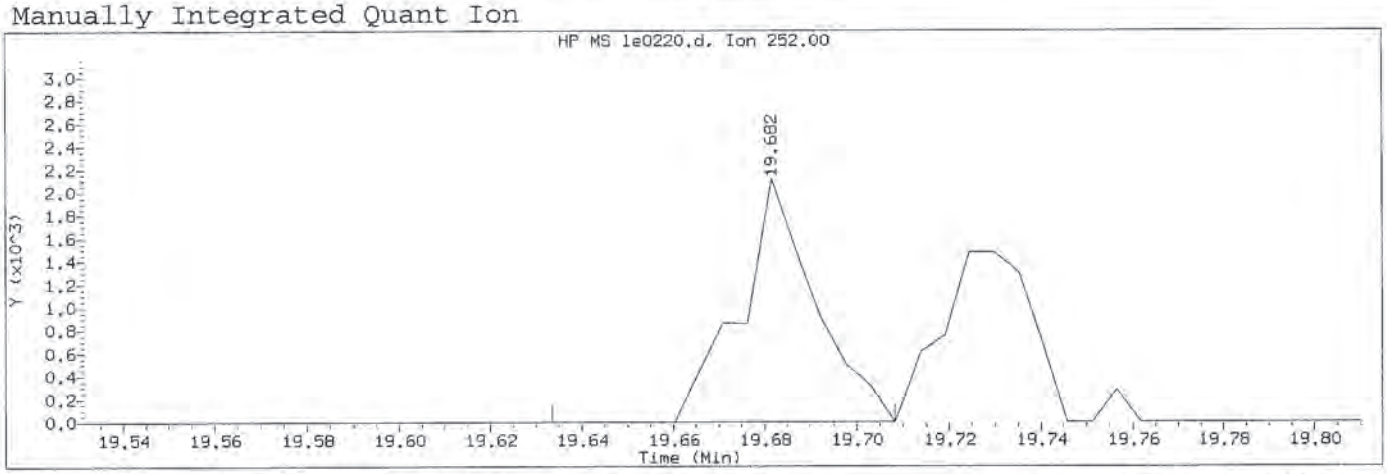
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdlal11
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	: 206		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 3327		
Retention Time (minutes)	: 19.682		
Quant Ion	: 252.00		
Area (flag)	: 2403M		
On-Column Amount (ng/ul)	: 0.0192		
Integration start scan	: 3317	Integration stop scan:	3331
Y at integration start	: 0	Y at integration end:	0

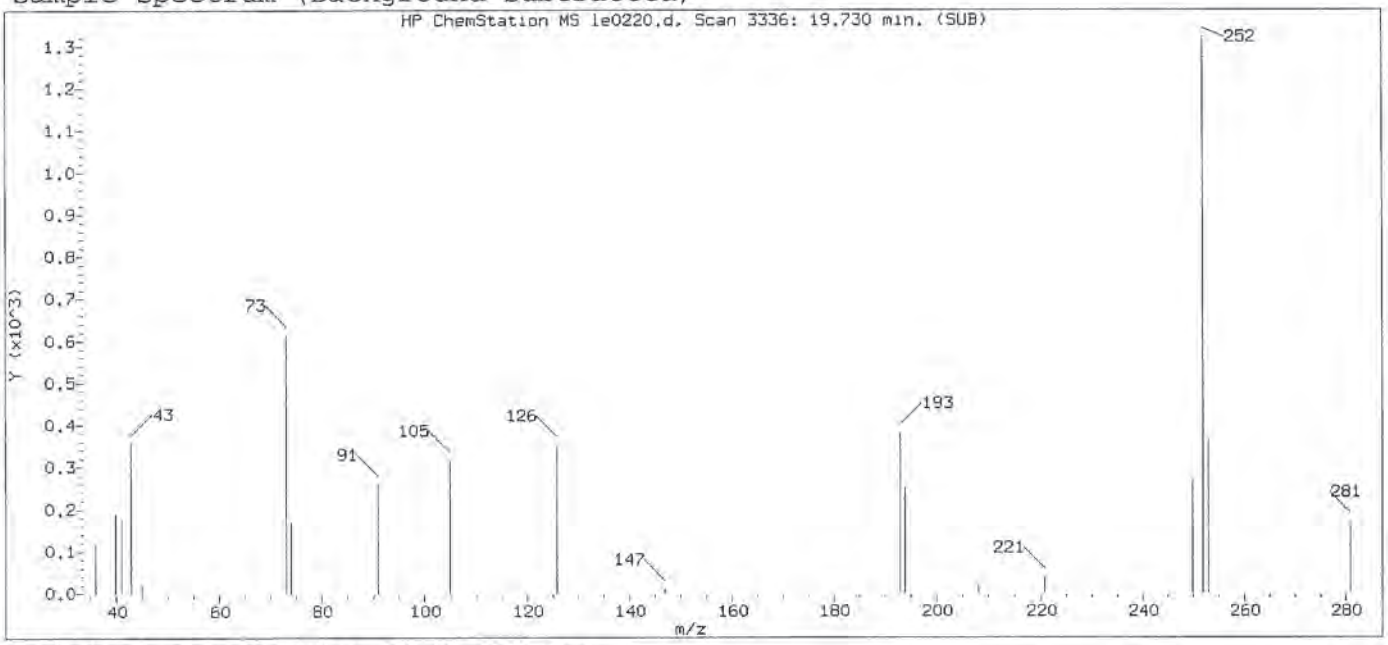
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996

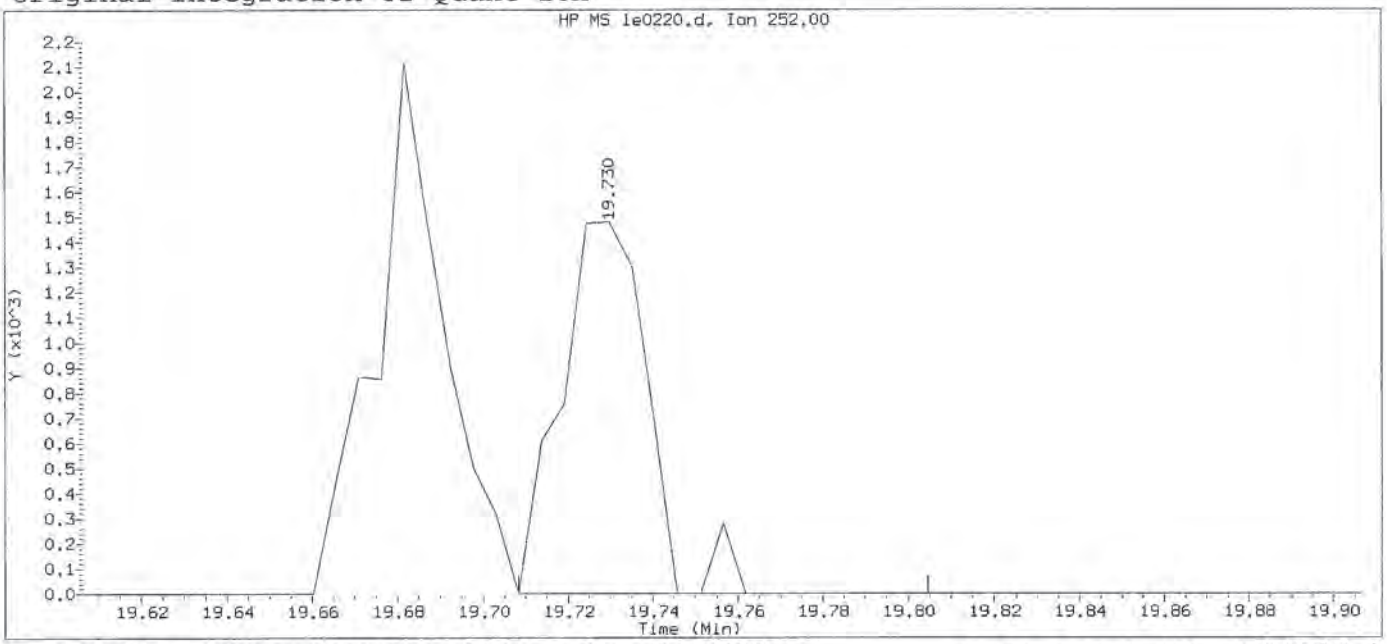
GC/MS audit/management approval: MAY 06 2016

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

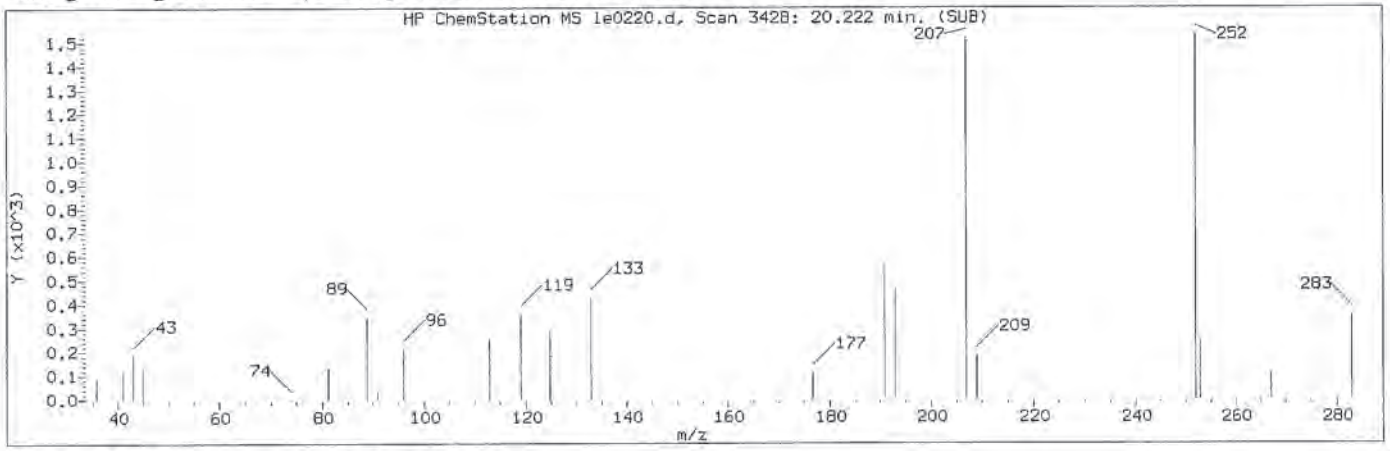
Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdla111
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

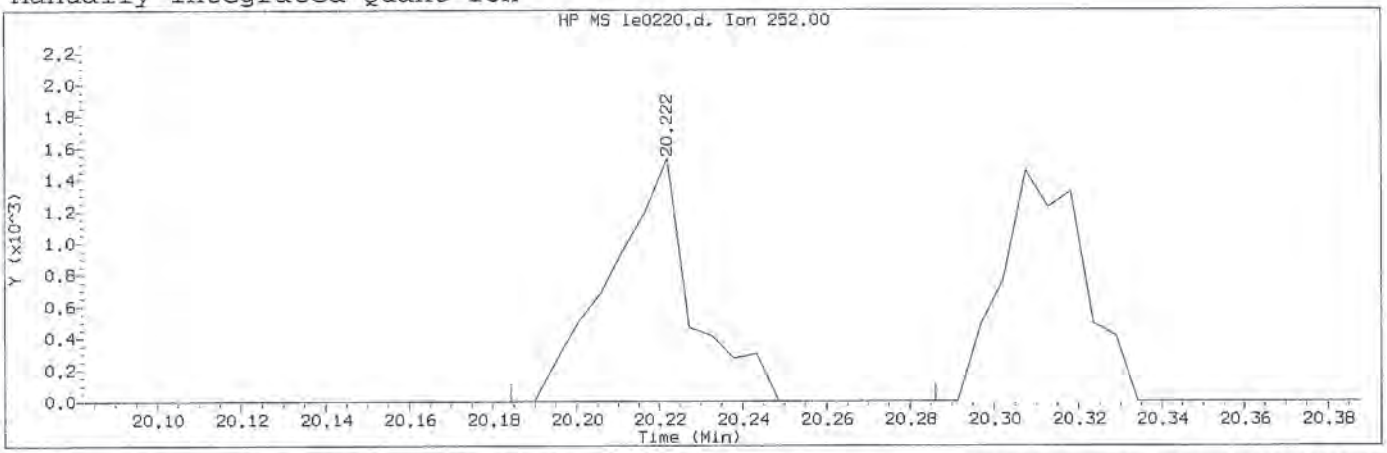
Compound Number	: 206		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 3336		
Retention Time (minutes)	: 19.730		
Quant Ion	: 252.00		
Area	: 2112		
On-column Amount (ng/ul)	: 0.0140		
Integration start scan	: 3331	Integration stop scan:	3349
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdla111
Calibration date and time: 06-MAY-2016 07:44
Date, time and analyst ID of latest file update: 06-May-2016 11:08 hbz01996

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 3428
Retention Time (minutes) : 20.222
Quant Ion : 252.00
Area (flag) : 2105M
On-Column Amount (ng/ul) : 0.0184
Integration start scan : 3420 Integration stop scan: 3439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

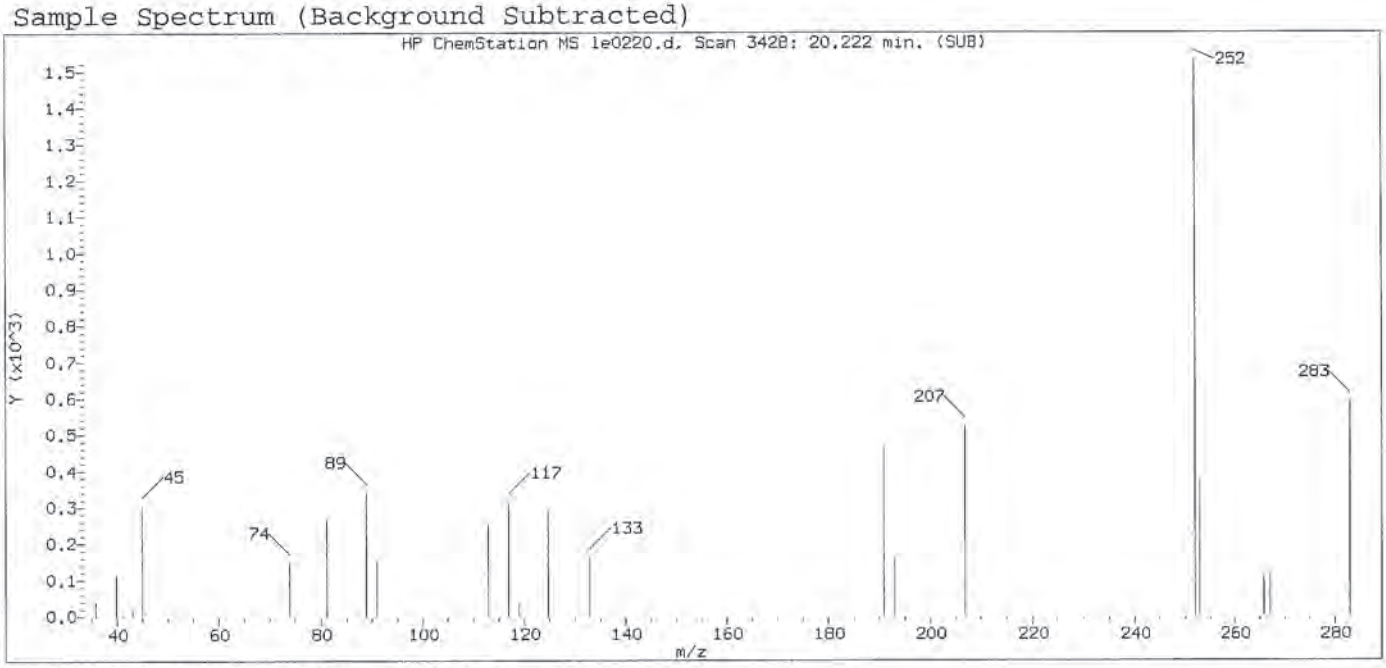
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996

MAY 06 2016

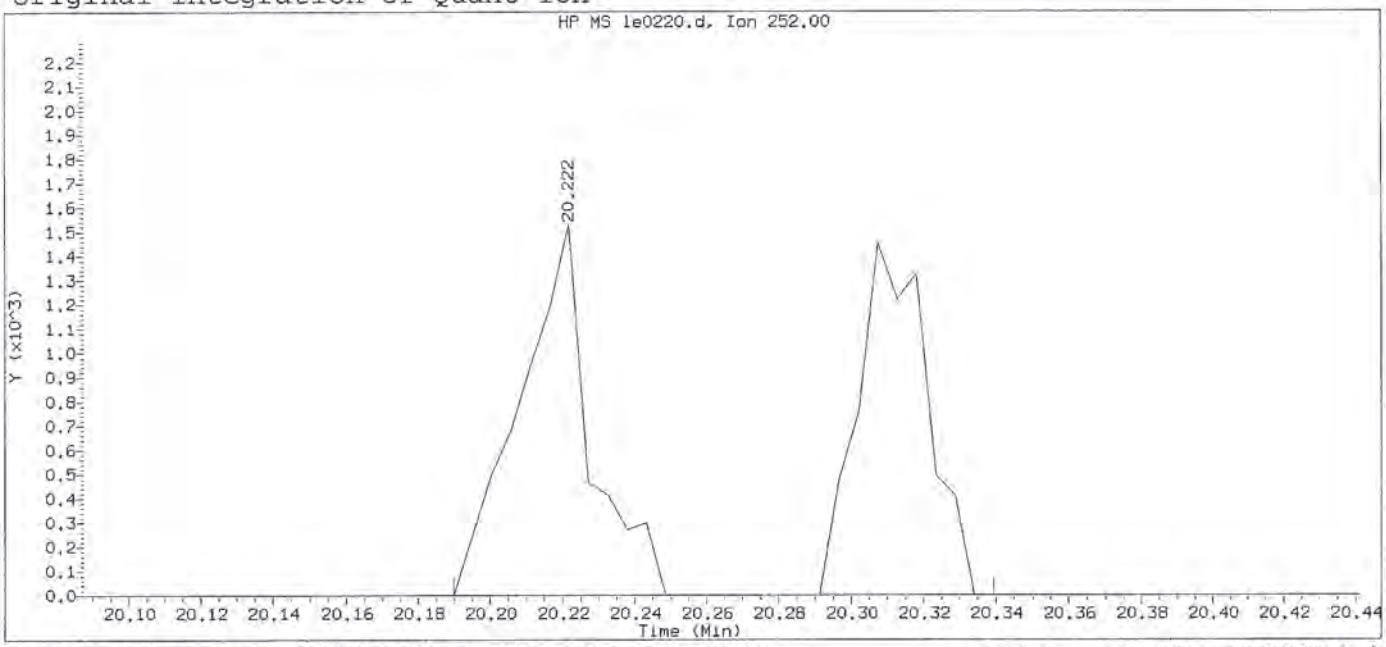
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



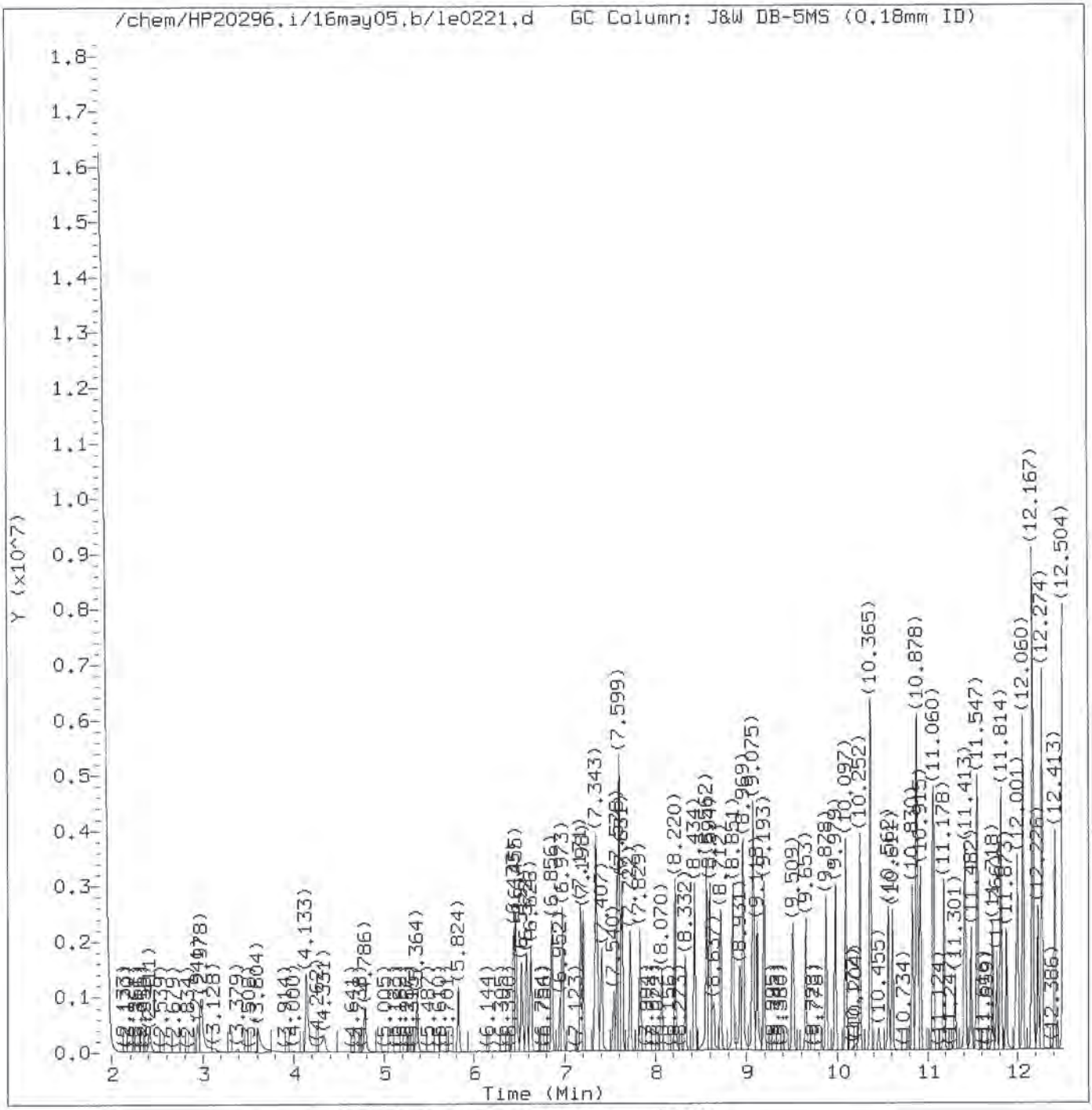
Data File: /chem/HP20296.i/16may05.b/le0220.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:14 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: pahmdla11
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 05-May-2016 23:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL0816

Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3428		
Retention Time (minutes)	: 20.222		
Quant Ion	: 252.00		
Area	: 4076		
On-column Amount (ng/ul)	: 0.0299		
Integration start scan	: 3421	Integration stop scan:	3449
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/06/2016 at 11:09.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

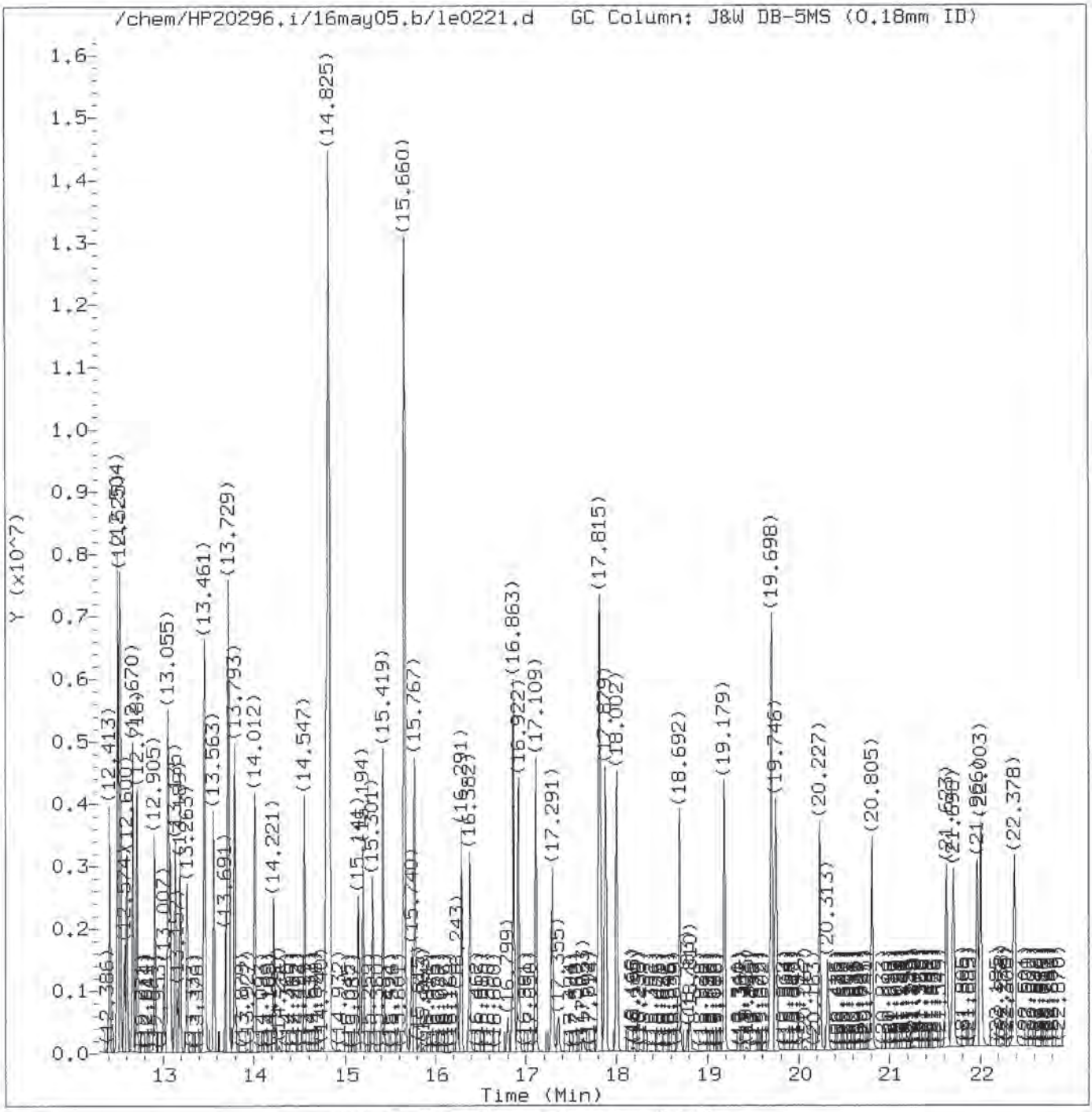
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.416	88	330599	12.486
4) N-Nitrosodimethylamine	(1)	2.946	74	516628	12.560
5) Pyridine	(1)	2.978	79	895720	12.737
7) 2-Picoline	(1)	4.139	93	912724	12.641
8) N-Nitrosomethylethylamine	(1)	4.331	88	369368	12.875
9) Methyl methanesulfonate	(1)	4.786	80	458800	13.671
13) N-Nitrosodiethylamine	(1)	5.364	102	343481	12.805
42) Total Cresols	(1)	5.660	100	1457675	26.268
15) Ethyl methanesulfonate	(1)	5.824	109	357572	12.795
18) Phenol	(1)	6.433	94	1096643	12.765
19) Aniline	(1)	6.455	93	1281932	12.654
22) bis(2-Chloroethyl)ether	(1)	6.578	93	798777	12.707
23) 2-Chlorophenol	(1)	6.626	128	649365	13.112
24) 1,3-Dichlorobenzene	(1)	6.861	146	724081	12.732
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	180219	5.000
26) 1,4-Dichlorobenzene	(1)	6.973	146	738360	12.876
27) Benzyl alcohol	(1)	7.171	108	506863	13.361
28) 1,2-Dichlorobenzene	(1)	7.198	146	712506	13.161
30) Indene	(1)	7.337	115	1262559	12.907
31) 2-Methylphenol	(1)	7.353	108	715629	13.528
97) Isosafrole	(3)	7.383	162	604175	14.164
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	1079655	13.507
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	1079655	13.507
35) N-Nitrosopyrrolidine	(1)	7.540	100	378194	13.395
36) Acetophenone	(1)	7.578	105	1113781	12.804
38) N-Nitroso-di-n-propylamine	(1)	7.599	70	633704	12.925
37) 4-Methylphenol	(1)	7.599	108	742046	12.740
39) N-Nitrosomorpholine	(1)	7.610	56	474483	12.965
40) o-Toluidine	(1)	7.631	106	1239597	12.713
43) Hexachloroethane	(1)	7.722	117	321697	12.961
45) Nitrobenzene	(2)	7.829	77	905245	12.565
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	693956	27.263
48) N-Nitrosopiperidine	(2)	8.070	114	340475	12.764
50) Isophorone	(2)	8.220	82	1672274	13.639
51) 2-Nitrophenol	(2)	8.332	139	295811	12.945
53) 2,4-Dimethylphenol	(2)	8.434	107	748761	12.525
57) O,O,O-Triethylphosphorothioate	(2)	8.562	198	360807	12.918
55) bis(2-Chloroethoxy)methane	(2)	8.594	93	1000566	13.159
56) Benzoic acid	(2)	8.637	105	945518	21.293
60) 2,4-Dichlorophenol	(2)	8.712	162	555776	13.011

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Diallate trans/cis	(4)	8.775	86	718385	12.555
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	646106	13.068
65)*Naphthalene-d8	(2)	8.931	136	696876	5.000
66) Naphthalene	(2)	8.969	128	1958060	12.983
67) 4-Chloroaniline	(2)	9.070	127	806534	12.871
68) 2,6-Dichlorophenol	(2)	9.081	162	545652	13.393
69) Hexachloropropene	(2)	9.118	213	442339	14.121
71) Hexachlorobutadiene	(2)	9.193	225	405932	13.093
75) Quinoline	(2)	9.509	129	1182323	12.783
77) N-Nitrosodi-n-butylamine	(2)	9.653	84	569745	11.774
80) 4-Chloro-3-methylphenol	(2)	9.878	107	655475	13.058
82) Safrole	(2)	9.985	162	496021	13.038
83) 2-Methylnaphthalene	(2)	10.097	142	1218308	12.449
84) 1-Methylnaphthalene	(2)	10.252	142	1158303	12.847
85) Hexachlorocyclopentadiene	(3)	10.365	237	716607	25.102
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	673485	12.772
88) cis-Isosafrole	(3)	10.461	162	66878	1.649
90) 2,4,6-Trichlorophenol	(3)	10.562	196	418973	13.501
92) 2,4,5-Trichlorophenol	(3)	10.611	196	431225	13.113
94) trans-Isosafrole	(3)	10.830	162	537297	12.515
95) 1,1'-Biphenyl	(3)	10.873	154	1523077	12.663
96) 2-Chloronaphthalene	(3)	10.883	162	1257763	12.917
98) 1-Chloronaphthalene	(3)	10.915	162	1146811	12.579
99) Diphenyl ether	(3)	11.055	170	826461	12.404
100) 2-Nitroaniline	(3)	11.065	138	356350	13.660
104) 1,4-Naphthoquinone	(3)	11.183	158	615993	16.454
105) 1,4-Dinitrobenzene	(3)	11.306	168	172095	13.152
106) Dimethylphthalate	(3)	11.408	163	1365394	12.952
107) 1,3-Dinitrobenzene	(3)	11.418	168	200360	13.360
108) 2,6-Dinitrotoluene	(3)	11.482	165	294304	13.840
109) Acenaphthylene	(3)	11.547	152	1886713	13.570
112) 3-Nitroaniline	(3)	11.718	138	326192	13.930
113)*Acenaphthene-d10	(3)	11.766	164	400841	5.000
114) Acenaphthene	(3)	11.814	153	1305515	13.337
115) 2,4-Dinitrophenol	(3)	11.878	184	291320	26.159
116) 4-Nitrophenol	(3)	11.980	109	261853	13.457
117) Pentachlorobenzene	(3)	12.001	250	547010	12.723
119) Dibenzofuran	(3)	12.060	168	1738960	12.900
118) 2,4-Dinitrotoluene	(3)	12.065	165	399652	13.423
121) 1-Naphthylamine	(3)	12.167	143	2372213	24.690

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
122) 2,3,4,6-Tetrachlorophenol	(3)	12.231	232	365297	14.580
123) 2-Naphthylamine	(3)	12.274	143	2376021	25.017
124) Diethylphthalate	(3)	12.413	149	1339397	12.996
126) Fluorene	(3)	12.499	166	1394132	13.415
125) Thionazin	(3)	12.504	107	263439M	12.417
128) 5-Nitro-o-toluidine	(3)	12.525	152	381332	14.435
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	712004	13.084
129) 4-Nitroaniline	(3)	12.536	138	327006	13.438
130) 4,6-Dinitro-2-methylphenol	(4)	12.574	198	209605	13.131
131) N-Nitrosodiphenylamine	(4)	12.670	169	1148772	12.850
132) NDPA as diphenylamine	(4)	12.670	169	1148772	12.850
134) 1,2-Diphenylhydrazine	(4)	12.718	77	1886663	13.172
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	279883	12.548
139) 1,3,5-Trinitrobenzene	(4)	13.012	213	130806	12.707
140) Diallate (peak 1)	(4)	13.050	86	540465	9.434
141) Phorate	(4)	13.055	75	1080686	13.482
142) Phenacetin	(4)	13.076	108	817725	13.504
143) 4-Bromophenyl-phenylether	(4)	13.135	248	389320	13.182
144) Diallate (peak 2)	(4)	13.157	86	177920	3.121
145) Hexachlorobenzene	(4)	13.189	284	395499	12.831
147) Dimethoate	(4)	13.263	87	661666	12.951
149) Pentachlorophenol	(4)	13.451	266	263567	14.441
150) 4-Aminobiphenyl	(4)	13.461	169	1481746	17.168
151) Pentachloronitrobenzene	(4)	13.467	237	196368	13.292
152) Pronamide	(4)	13.563	173	661445	13.695
153)*Phenanthrene-d10	(4)	13.691	188	770489	5.000
154) Dinoseb	(4)	13.707	211	317856	12.225
155) Phenanthrene	(4)	13.723	178	2068185	12.740
157) Anthracene	(4)	13.793	178	2142687	13.423
163) Carbazole	(4)	14.012	167	1918158	13.152
164) Methyl parathion	(4)	14.221	109	491478	13.527
165) Di-n-butylphthalate	(4)	14.553	149	2382372	13.406
167) Parathion	(4)	14.788	109	321562	14.010
168) 4-Nitroquinoline-1-oxide	(4)	14.825	190	3081627	219.654
222) Total PAHs	(6)	15.000	100	36238142	239.258
171) Isodrin	(4)	15.194	193	252106	13.232
173) Fluoranthene	(4)	15.419	202	2409670	13.629
174) Benzidine	(5)	15.660	184	6793405	53.605
175)*Pyrene-d10	(5)	15.740	212	935897	5.000
177) Pyrene	(5)	15.767	202	2535995	12.492

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

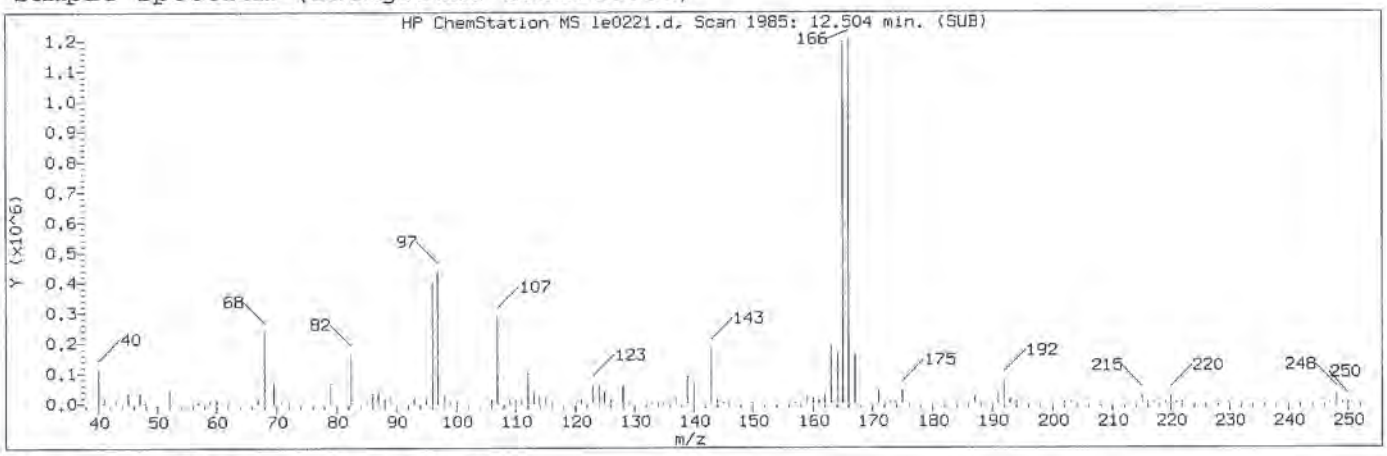
Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
182) p-Dimethylaminoazobenzene	(5)	16.291	225	488071	13.982
185) Chlorobenzilate	(5)	16.382	139	738210	13.289
187) 3,3'-Dimethylbenzidine	(5)	16.863	212	2828775	24.159
188) Butylbenzylphthalate	(5)	16.922	149	1088428	13.424
191) 2-Acetylaminofluorene	(5)	17.291	181	890860	13.539
193) 3,3'-Dichlorobenzidine	(5)	17.804	252	800506	12.241
195) Benzo(a)anthracene	(5)	17.815	228	2407551	13.687
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.826	231	466806	12.358
196) Chrysene	(5)	17.879	228	2300755	13.718
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	1587932	13.640
203) 6-Methylchrysene	(5)	18.692	242	1492786	12.683
205) Di-n-octylphthalate	(6)	19.179	149	2736627	13.768
206) Benzo(b)fluoranthene	(6)	19.698	252	2350858	13.633
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.703	256	989015	13.201
208) Benzo(k)fluoranthene	(6)	19.746	252	2284360	13.305
211) Benzo(a)pyrene	(6)	20.227	252	2063230	13.111
213)*Perylene-d12	(6)	20.313	264	705385	5.000
215) 3-Methylcholanthrene	(6)	20.805	268	1057397	16.077
217) Dibenz(a,h)acridine	(6)	21.623	279	1697971	12.662
218) Dibenz(a,j)acridine	(6)	21.704	279	1789947	12.812
219) Indeno(1,2,3-cd)pyrene	(6)	21.966	276	2491828	13.538
220) Dibenz(a,h)anthracene	(6)	22.003	278	2132443	13.819
221) Benzo(g,h,i)perylene	(6)	22.383	276	2129549	13.561

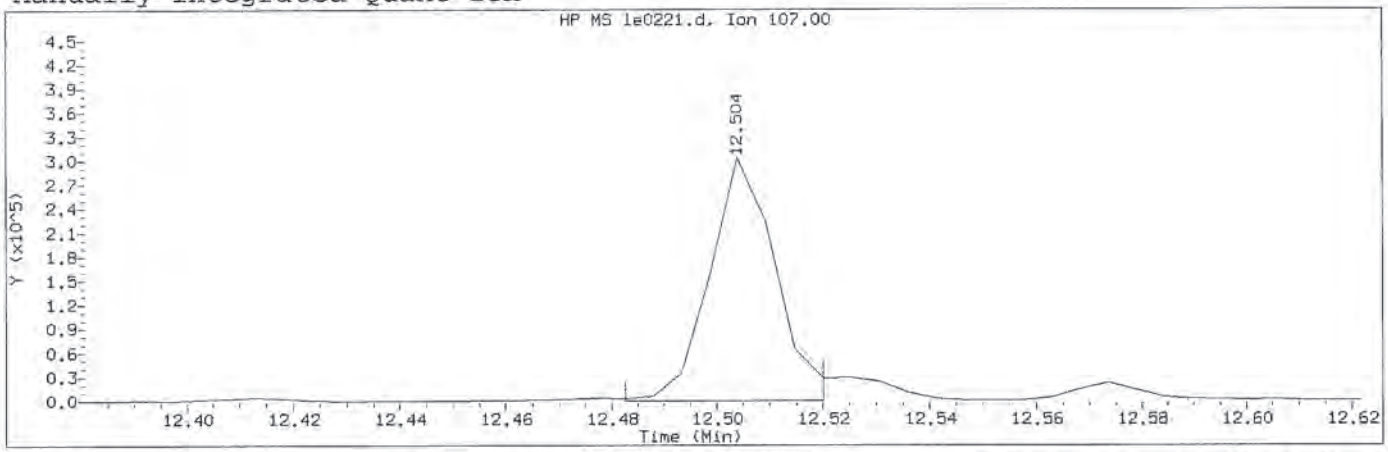
* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:31 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1985		
Retention Time (minutes)	: 12.504		
Quant Ion	: 107.00		
Area (flag)	: 263439M		
On-Column Amount (ng/ul)	: 12.4169		
Integration start scan	: 1980	Integration stop scan:	1987
Y at integration start	: 0	Y at integration end:	0

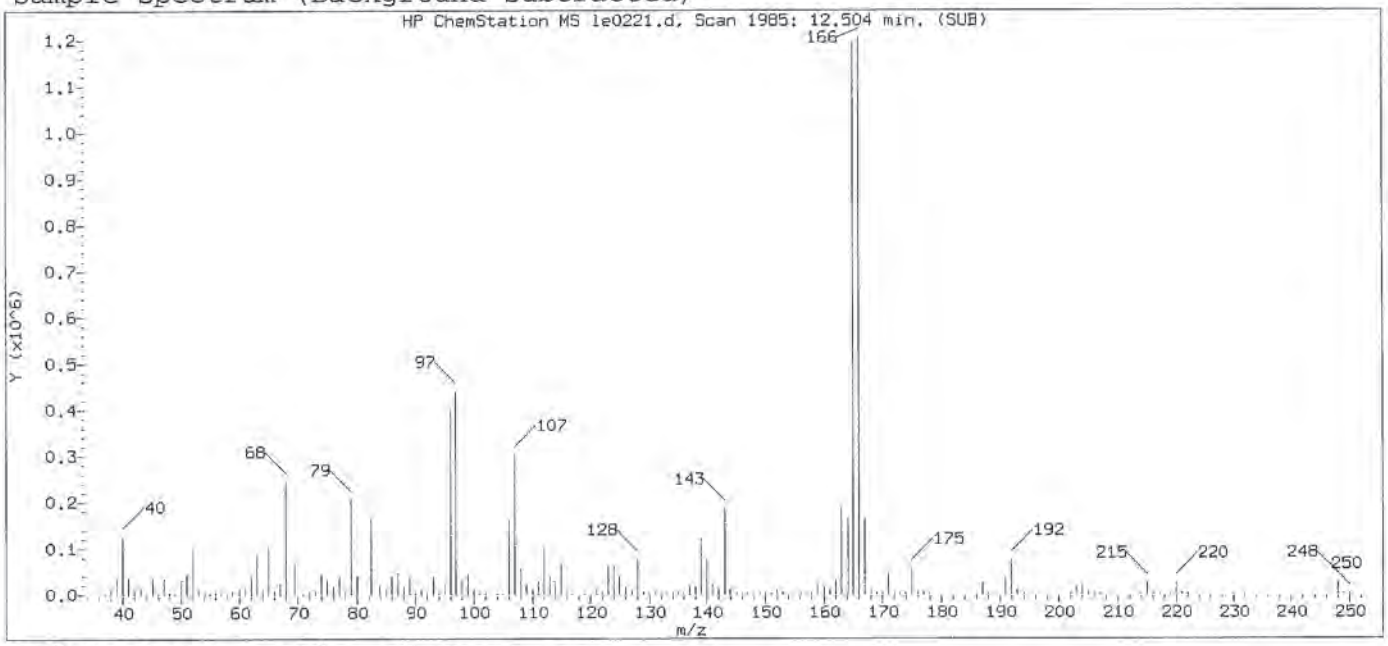
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly B. Ziegler on 05/06/2016 at 07:34. Target 3.5 signature user ID: hbz01996

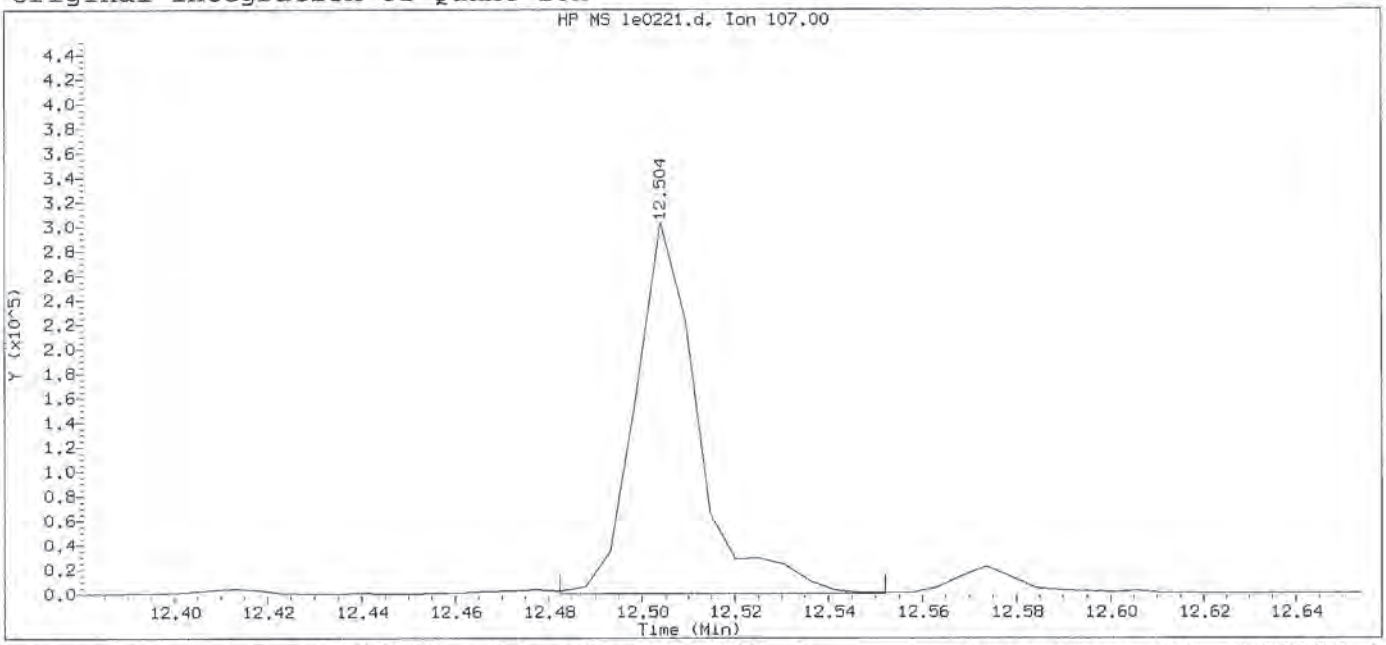
MAY 06 2016

GC/MS audit/management approval: Matthew E. Barton Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may05.b/1e0221.d Instrument ID: HP20296.i
Injection date and time: 05-MAY-2016 23:42 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: icval11
Calibration date and time: 05-MAY-2016 22:44
Date, time and analyst ID of latest file update: 06-May-2016 00:09 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVICV0136

Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1985		
Retention Time (minutes)	: 12.504		
Quant Ion	: 107.00		
Area	: 284611		
On-column Amount (ng/ul)	: 13.2482		
Integration start scan	: 1980	Integration stop scan:	1993
Y at integration start	: 0	Y at integration end:	0

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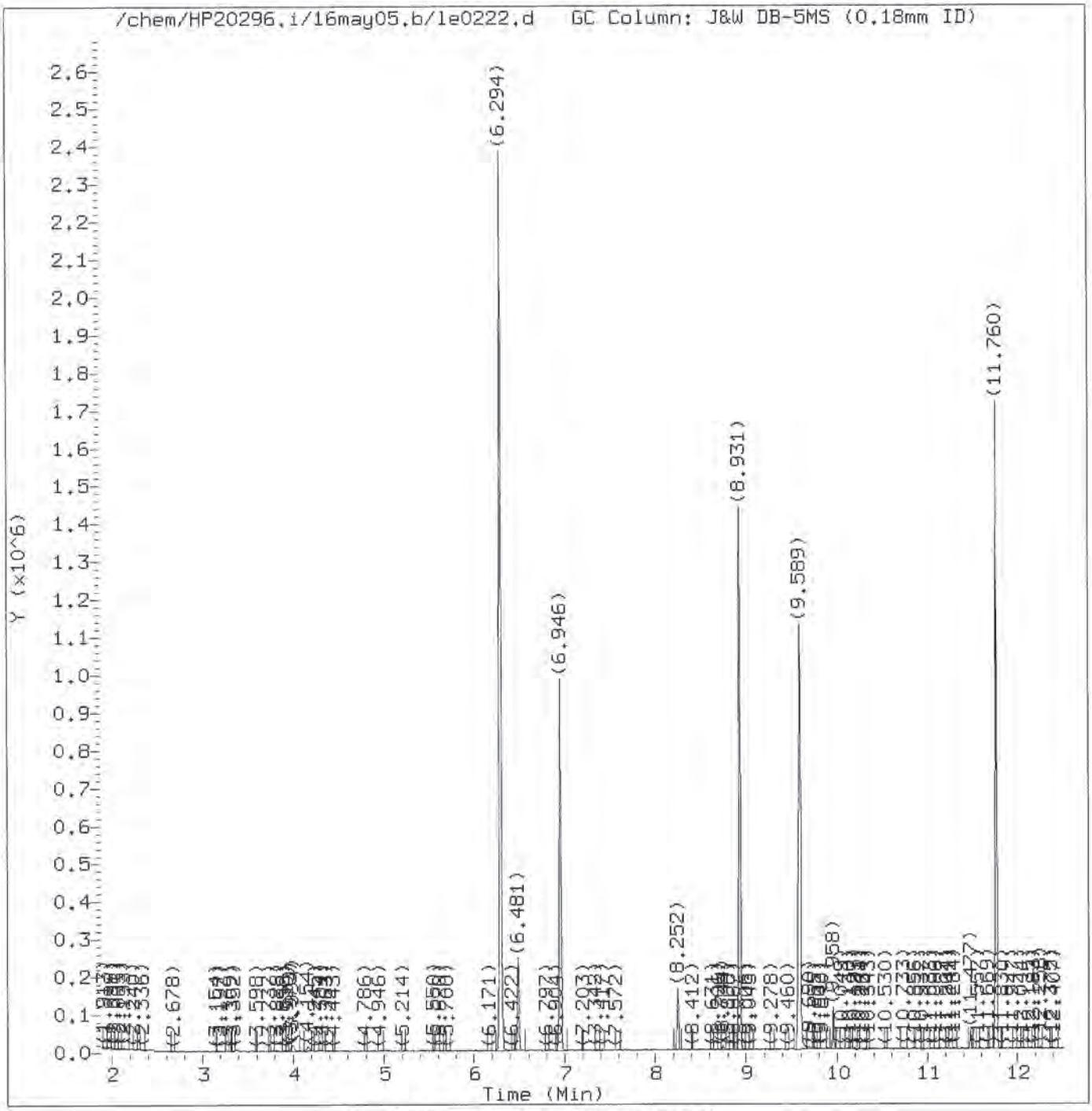
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

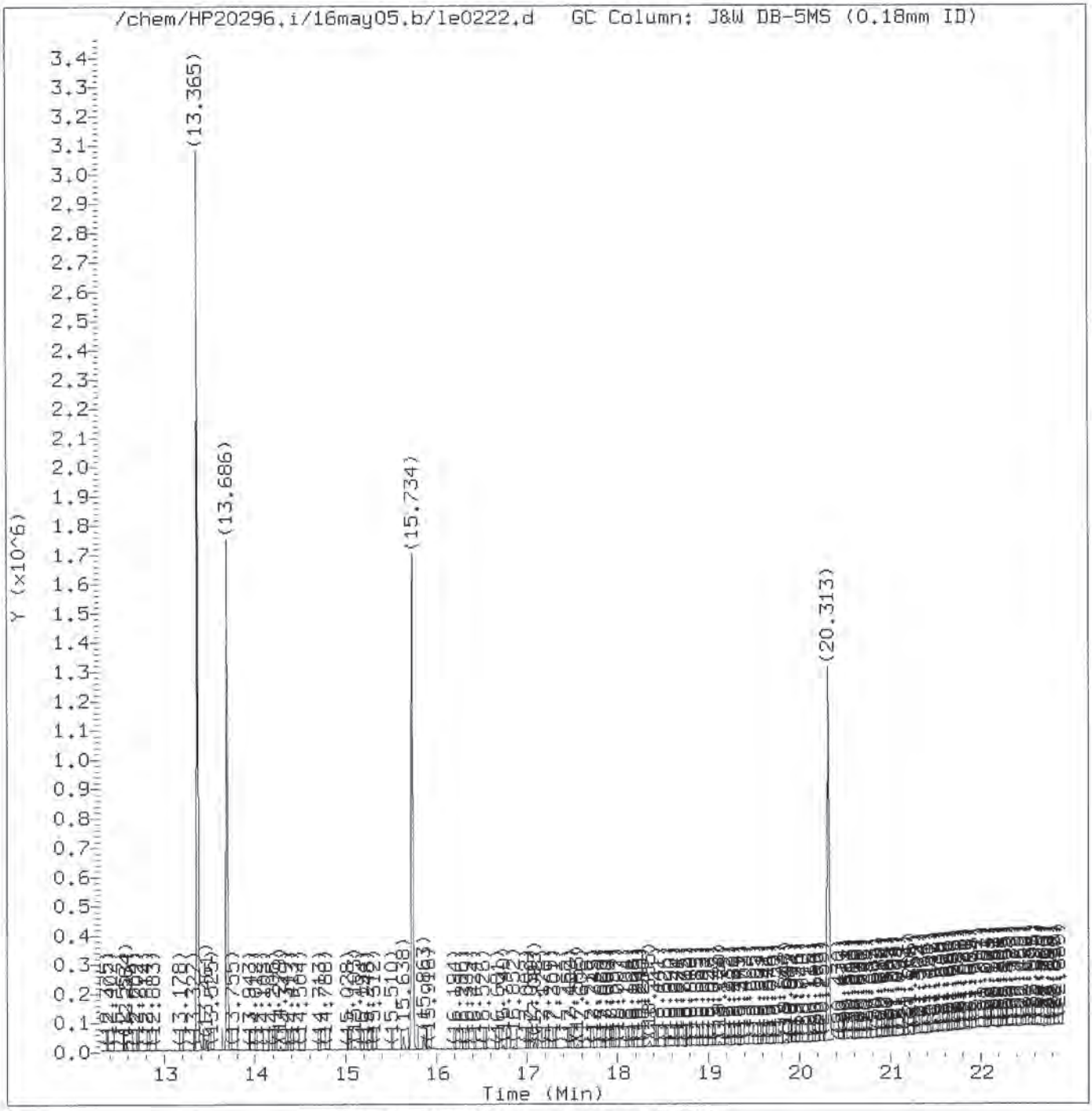
Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0222.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 00:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: basicval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:26 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV0716

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0222.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 00:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: basicval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:26 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV0716

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may05.b/le0222.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 00:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may05.b/rv8270d.m Sublist used: basicval11
Calibration date and time: 06-MAY-2016 07:25
Date, time and analyst ID of latest file update: 06-May-2016 07:26 hbz01996

Sample Name: SSTD12.5 Lab Sample ID: RVBASICV0716

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.294	77	757189	12.895
25)*1,4-Dichlorobenzene-d4	(1)	6.946	152	183556	5.000
65)*Naphthalene-d8	(2)	8.931	136	719222	5.000
76) Caprolactam	(2)	9.589	113	168457	12.014
113)*Acenaphthene-d10	(3)	11.760	164	402073	5.000
148) Atrazine	(4)	13.365	200	376908	12.969
153)*Phenanthrene-d10	(4)	13.691	188	758950	5.000
175)*Pyrene-d10	(5)	15.734	212	859872	5.000
213)*Perylene-d12	(6)	20.313	264	609261	5.000

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/06/2016 at 07:34.
Target 3.5 esignature user ID: hbz01996

Data File: /chem/HP20296.i/16may06.b/le0230.d

Date : 06-MAY-2016 07:21

Client ID: DFTPP12.5

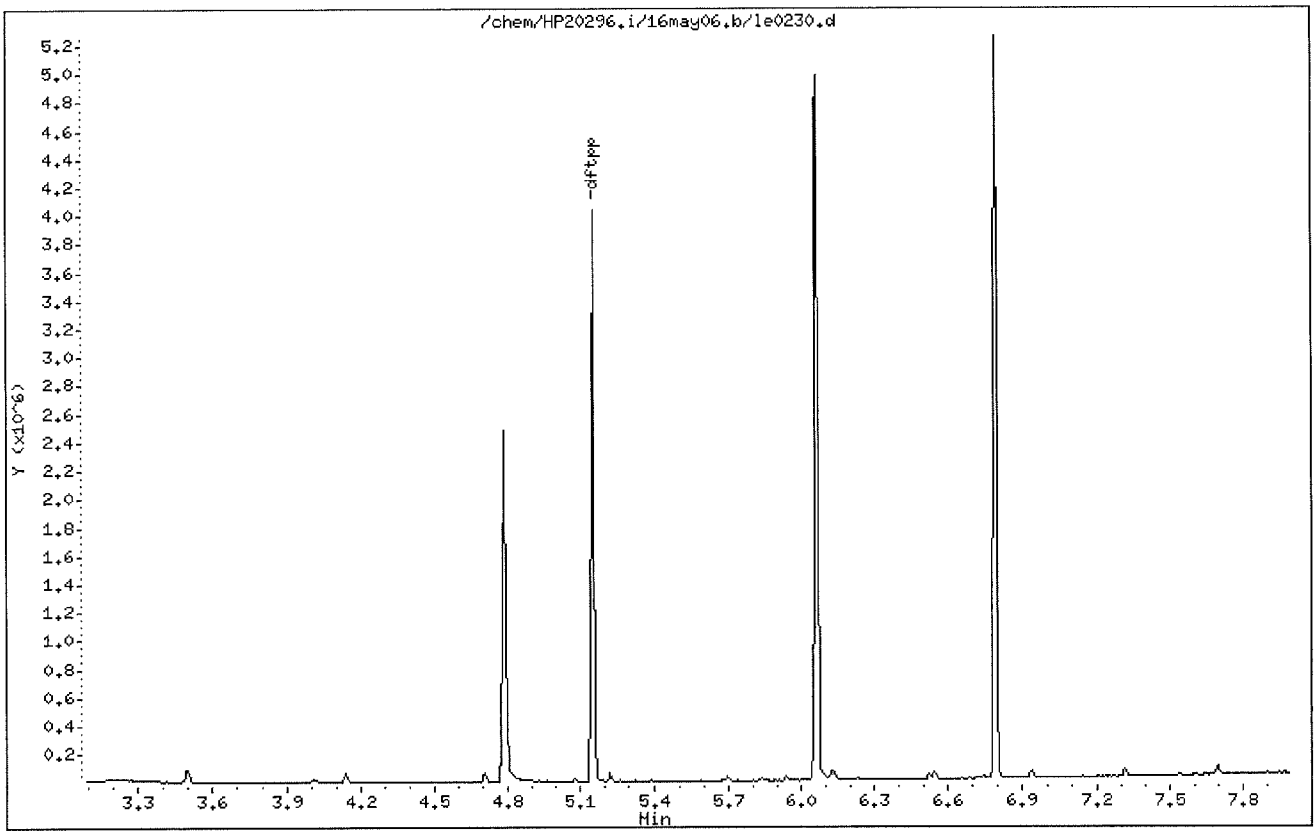
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06.b/le0230.d

Date : 06-MAY-2016 07:21

Client ID: DFTPP12.5

Instrument: HP20296.i

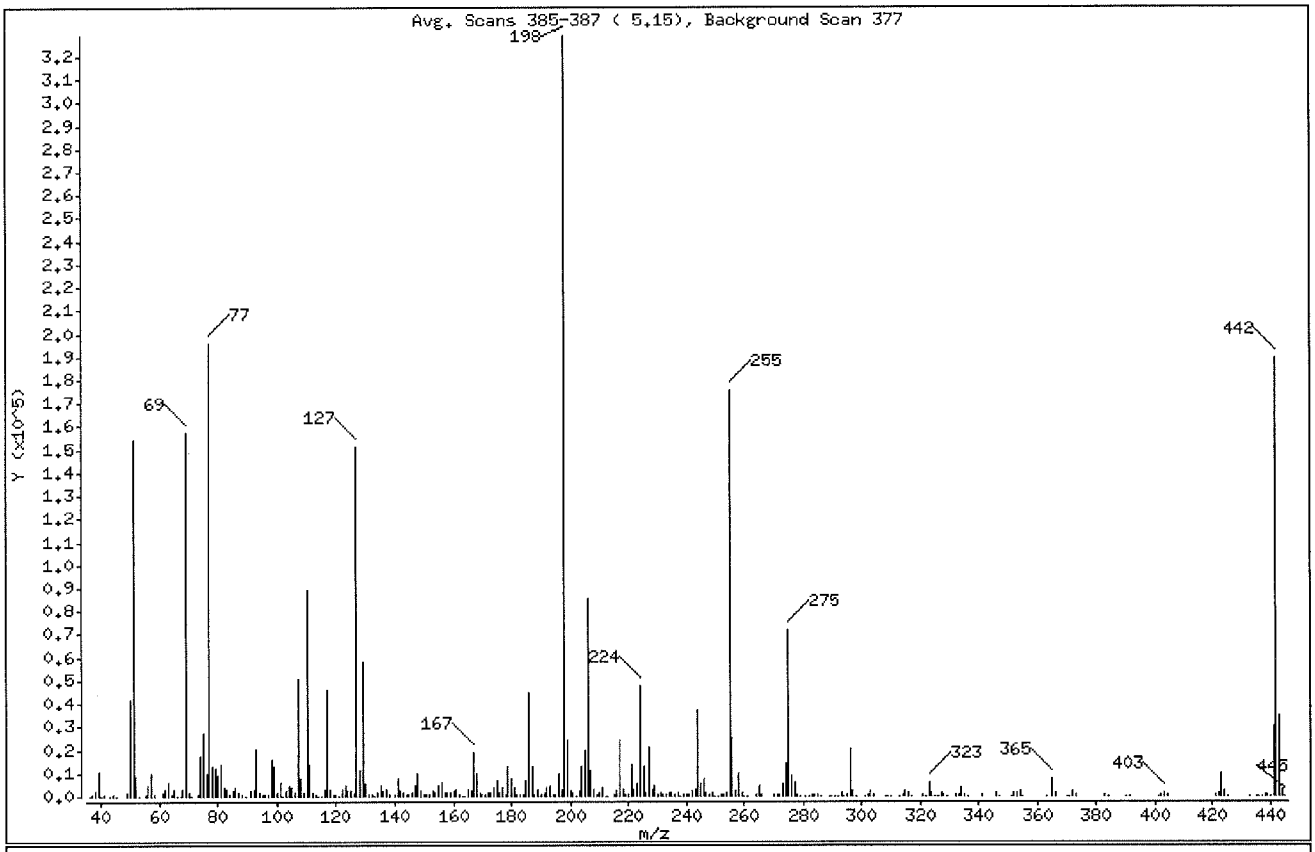
Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.95
68	Less than 2.00% of mass 69	0.92 (1.93)
69	Mass 69 relative abundance	47.92
70	Less than 2.00% of mass 69	0.35 (0.74)
127	10.00 - 80.00% of mass 198	46.04
197	Less than 2.00% of mass 198	0.95
199	5.00 - 9.00% of mass 198	7.34
275	10.00 - 60.00% of mass 198	21.76
365	Greater than 1.00% of mass 198	2.32
441	0.01 - 24.00% of mass 442	9.16 (15.93)
442	50.00 - 99.99% of mass 198	57.53
443	15.00 - 24.00% of mass 442	10.62 (18.47)

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06.b/le0230.d

Date : 06-MAY-2016 07:21

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0230.d
Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	166	123.00	4571	202.00	137	289.00	100
37.00	587	124.00	2038	203.00	2305	290.00	210
38.00	2076	125.00	2008	204.00	13190	291.00	110
39.00	10927	126.00	1450	205.00	19568	292.00	109
40.00	225	127.00	151424	206.00	85344	293.00	1333
41.00	464	128.00	11541	207.00	11546	294.00	316
43.00	105	129.00	58088	208.00	2771	295.00	504
44.00	524	130.00	5249	209.00	1029	296.00	20120
45.00	307	131.00	1017	210.00	1627	297.00	2575
49.00	1264	132.00	434	211.00	3440	298.00	263
50.00	41424	133.00	376	212.00	197	301.00	225
51.00	154432	134.00	1852	213.00	129	302.00	483
52.00	8083	135.00	4568	215.00	1053	303.00	2263
53.00	374	136.00	1988	216.00	2145	304.00	728
55.00	1030	137.00	2650	217.00	24248	308.00	280
56.00	4490	138.00	622	218.00	3381	309.00	87
57.00	9514	140.00	556	219.00	578	310.00	99
58.00	524	141.00	7632	220.00	508	313.00	95
61.00	1581	142.00	2400	221.00	13361	314.00	779
62.00	2708	143.00	1537	222.00	3265	315.00	2346
63.00	6156	144.00	482	223.00	5397	316.00	1270
64.00	738	145.00	456	224.00	47928	317.00	238
65.00	2744	146.00	1438	225.00	13126	321.00	524
66.00	187	147.00	4483	226.00	1747	322.00	286
67.00	295	148.00	9955	227.00	21512	323.00	5966
68.00	3042	149.00	2235	228.00	2853	324.00	1279
69.00	157632	150.00	535	229.00	4716	325.00	94
70.00	1164	151.00	1128	230.00	857	326.00	170
71.00	147	152.00	447	231.00	1886	327.00	1176
73.00	1129	153.00	2547	232.00	425	328.00	559
74.00	17552	154.00	1828	233.00	460	329.00	92
75.00	26944	155.00	4455	234.00	1418	332.00	511
76.00	9791	156.00	6319	235.00	1452	333.00	553
77.00	196160	157.00	1150	236.00	1030	334.00	4147
78.00	13048	158.00	1301	237.00	1841	335.00	817

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06.b/le0230.d

Date : 06-MAY-2016 07:21

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0230.d
Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	12068	159.00	1136	238.00	173	336.00	89
80.00	8758	160.00	2473	239.00	878	341.00	795
81.00	13379	161.00	3127	240.00	631	346.00	1397
82.00	3422	162.00	1109	241.00	1029	347.00	256
83.00	2906	163.00	312	242.00	2237	351.00	108
84.00	742	164.00	314	243.00	2715	352.00	1856
85.00	2103	165.00	2772	244.00	37264	353.00	1157
86.00	3971	166.00	2311	245.00	5179	354.00	1904
87.00	1740	167.00	18640	246.00	7543	355.00	285
88.00	585	168.00	10060	247.00	1610	363.00	89
89.00	266	169.00	1429	248.00	507	365.00	7630
91.00	2317	170.00	520	249.00	1193	366.00	1210
92.00	3075	171.00	641	250.00	229	370.00	121
93.00	20120	172.00	1363	251.00	358	371.00	342
94.00	1721	173.00	1816	252.00	771	372.00	2647
95.00	533	174.00	3516	253.00	1046	373.00	498
96.00	929	175.00	6749	254.00	1214	383.00	695
97.00	520	176.00	1866	255.00	175616	384.00	105
98.00	16214	177.00	3455	256.00	25240	390.00	308
99.00	12617	178.00	935	257.00	2155	391.00	144
100.00	1371	179.00	13130	258.00	9871	401.00	162
101.00	6368	180.00	7881	259.00	1698	402.00	1015
102.00	312	181.00	3524	260.00	300	403.00	1601
103.00	2069	182.00	618	261.00	356	404.00	630
104.00	4413	183.00	655	264.00	610	421.00	1058
105.00	4071	184.00	914	265.00	4449	422.00	1300
106.00	1165	185.00	6492	266.00	769	423.00	9657
107.00	50952	186.00	44856	270.00	450	424.00	2396
108.00	7187	187.00	12595	271.00	402	425.00	216
109.00	1536	188.00	1095	272.00	639	433.00	84
110.00	89072	189.00	2718	273.00	5578	435.00	107
111.00	13650	190.00	418	274.00	14537	436.00	248
112.00	1804	191.00	1766	275.00	71608	437.00	252
113.00	543	192.00	4121	276.00	9010	438.00	430
114.00	230	193.00	4639	277.00	6285	439.00	468

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06.b/le0230.d

Date : 06-MAY-2016 07:21

Client ID: DFTPP12.5

Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

Data File: le0230.d

Spectrum: Avg. Scans 385-387 (5.15), Background Scan 377

Location of Maximum: 198.00

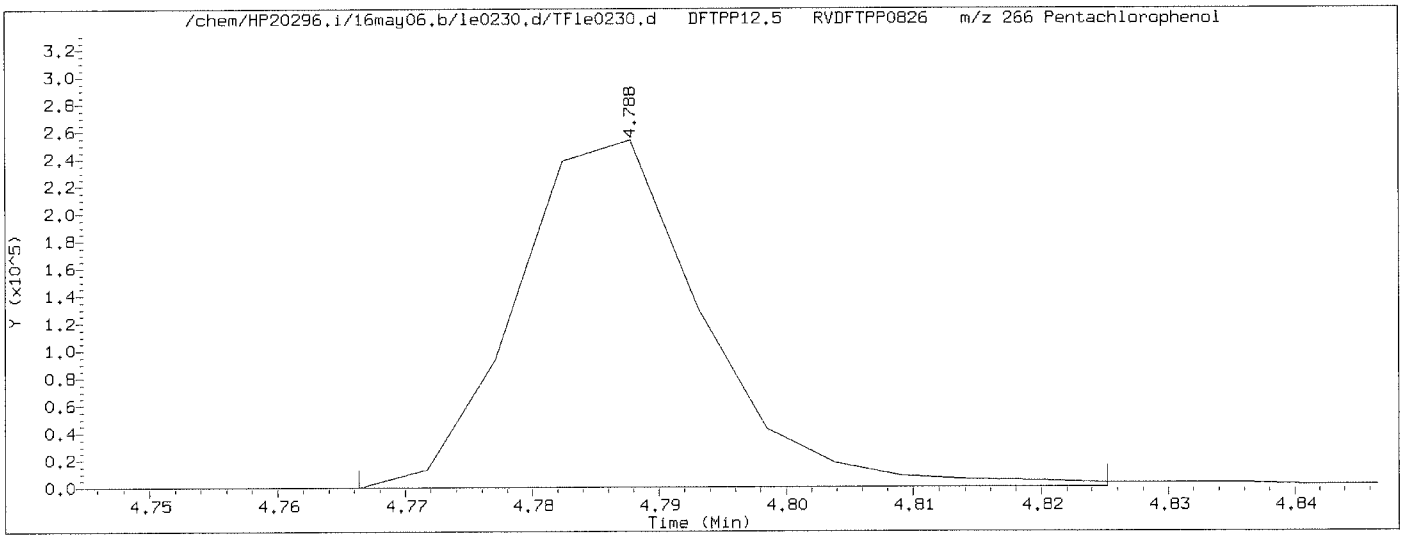
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	114	194.00	1074	278.00	974	440.00	339
116.00	2744	195.00	1007	279.00	226	441.00	30144
117.00	46048	196.00	9692	281.00	96	442.00	189248
118.00	2889	197.00	3140	282.00	150	443.00	34960
119.00	447	198.00	329024	283.00	652	444.00	2882
120.00	395	199.00	24136	284.00	397	445.00	186
121.00	335	200.00	2014	285.00	1043		
122.00	2676	201.00	1508	286.00	107		

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

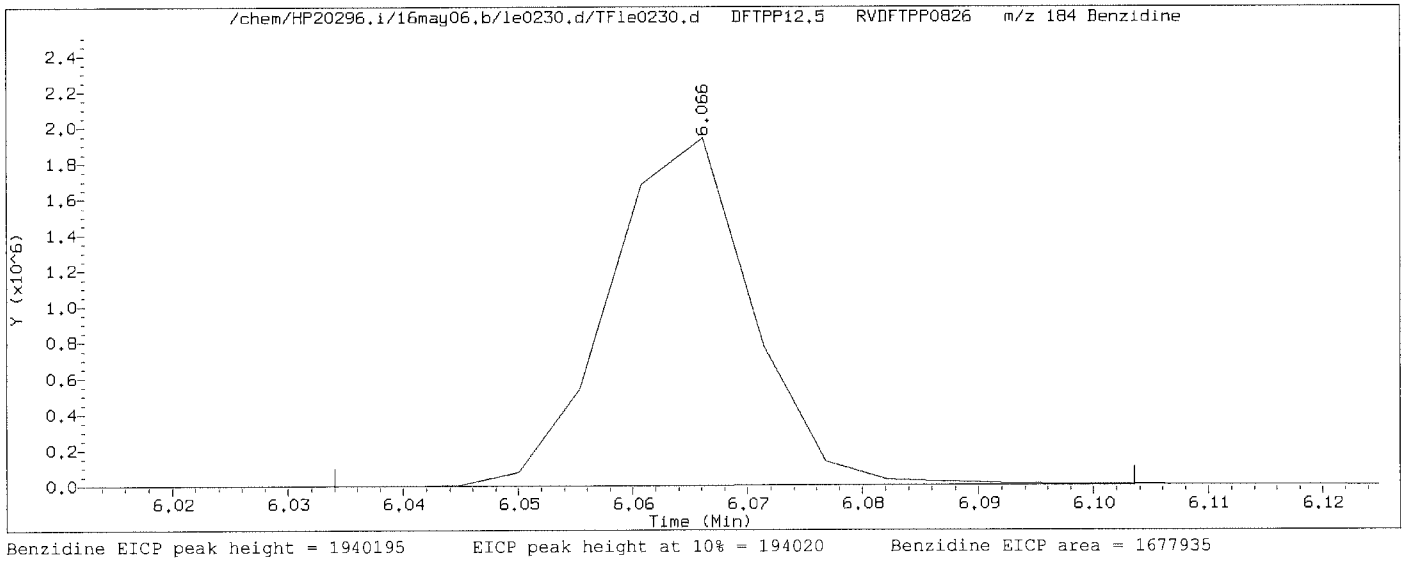
Instrument ID: HP20296.i Injection Date: 06-MAY-2016 07:21 Operator: hbz01996



Pentachlorophenol EICP peak height = 253824 EICP peak height at 10% = 25382 Pentachlorophenol EICP area = 259822

Pentachlorophenol EICP peak apex (min.) = 4.788
RT at 10% of front half of EICP (min.) = 4.773 'Front' peak width (min.) = 0.0151500000
RT at 10% of back half of EICP (min.) = 4.802 'Tailing' peak width (min.) = 0.0141833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0141833333}{0.0151500000} = 0.936$$



Benzidine EICP peak height = 1940195 EICP peak height at 10% = 194020 Benzidine EICP area = 1677935

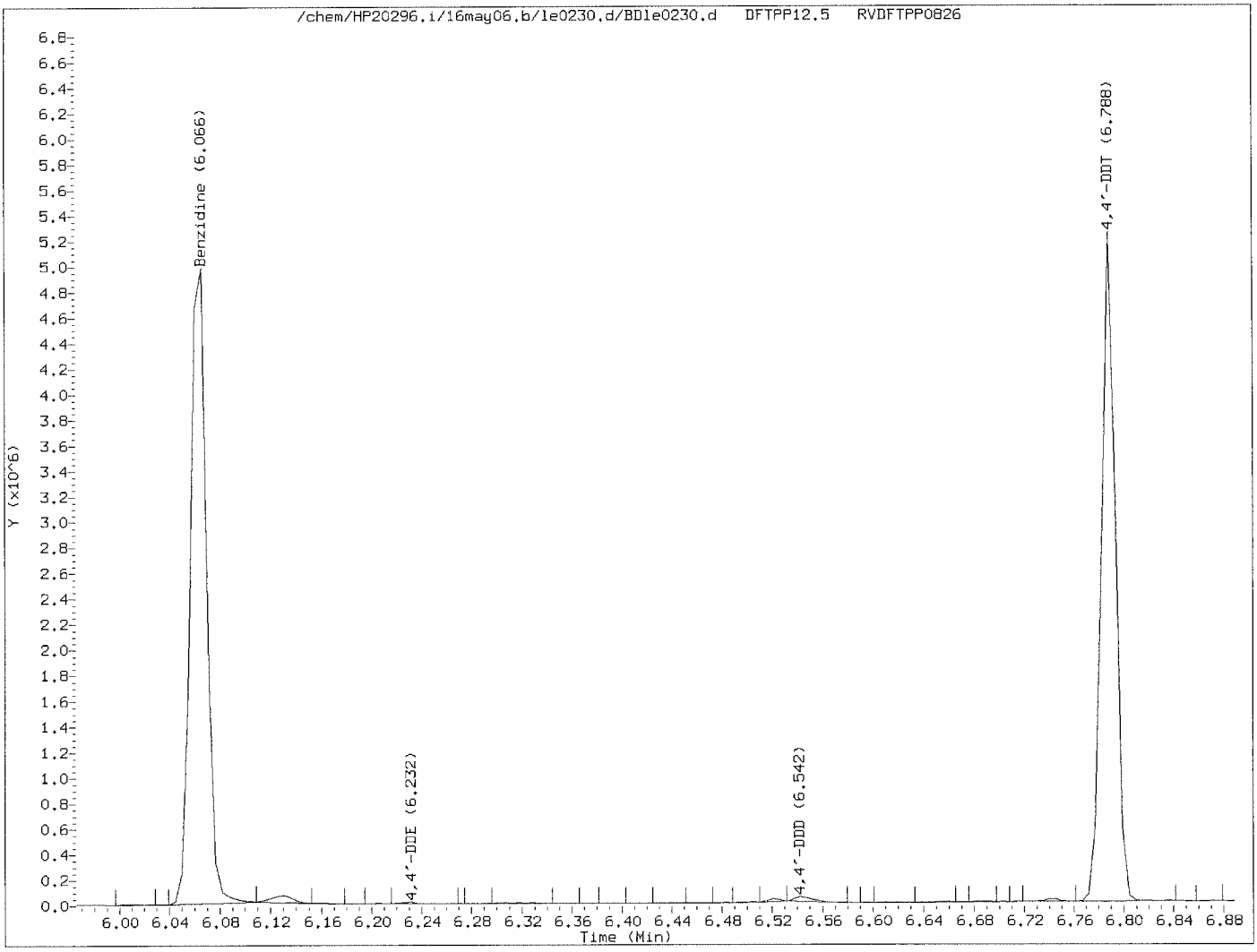
Benzidine EICP peak apex (min.) = 6.066
RT at 10% of front half of EICP (min.) = 6.051 'Front' peak width (min.) = 0.0146333333
RT at 10% of back half of EICP (min.) = 6.076 'Tailing' peak width (min.) = 0.0101666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0101666667}{0.0146333333} = 0.695$$

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

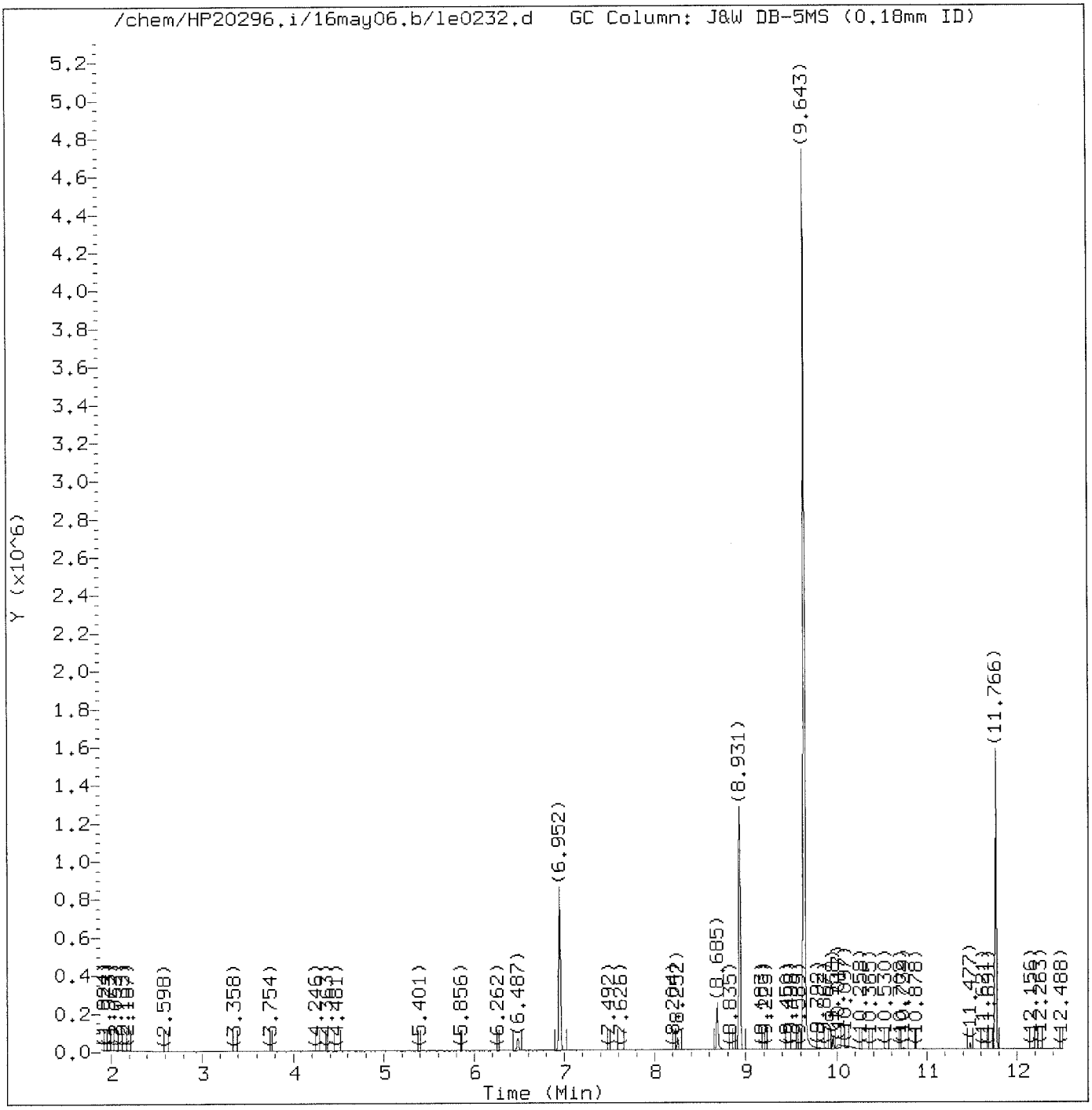
Instrument ID: HP20296.i Injection Date: 06-MAY-2016 07:21 Operator: hbz01996



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{11351 + 39636}{11351 + 39636 + 3998832} \times 100 = 1.3$$

Digitally signed by Catherine E. Bachman on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

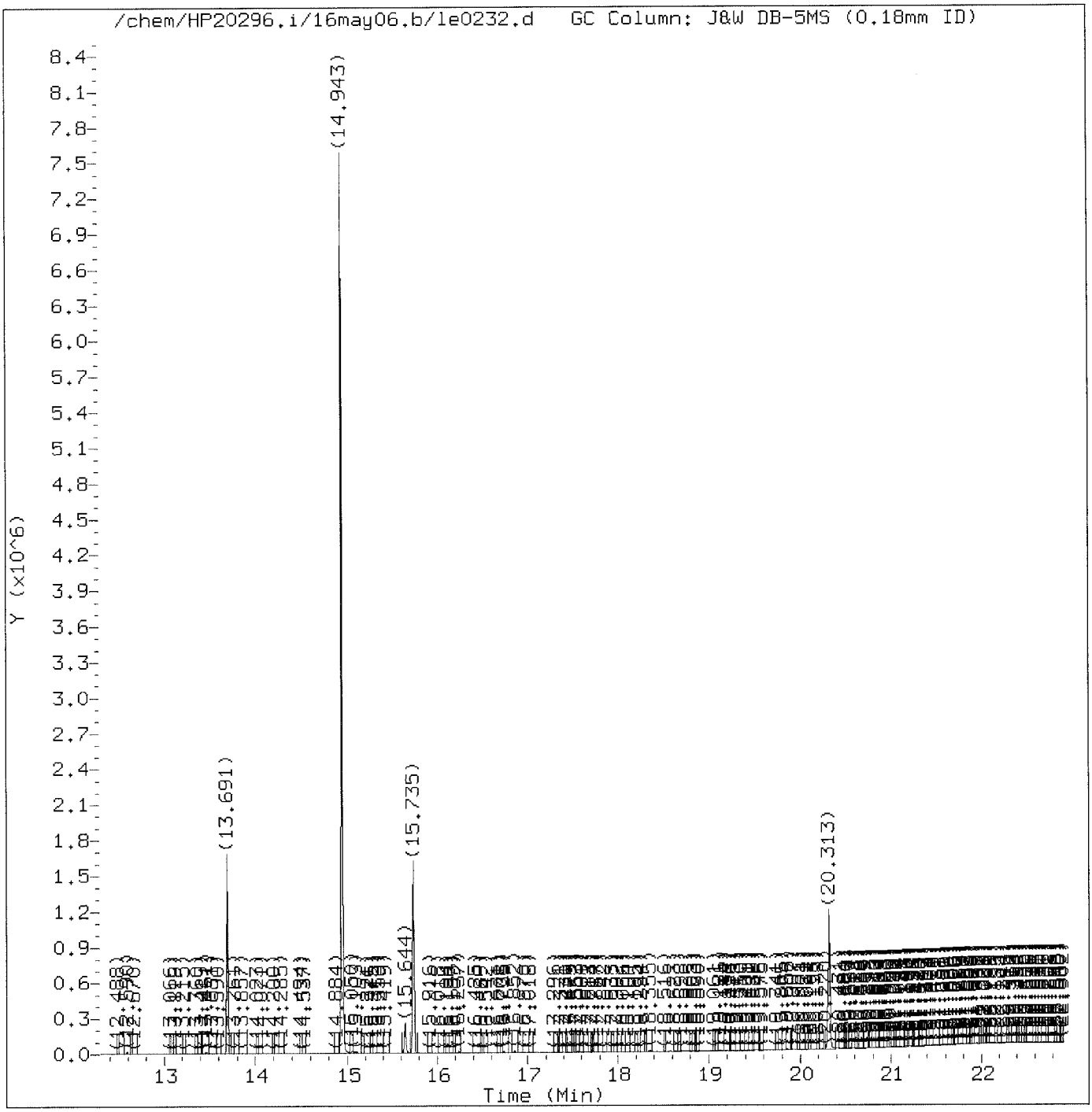
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0232.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVPDA1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0232.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVPDA1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0232.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	170146	5.000
65)*Naphthalene-d8	(2)	8.931	136	653733	5.000
81) 1,4-Phenylenediamine	(2)	9.643	108	1914722	30.000
113)*Acenaphthene-d10	(3)	11.766	164	371347	5.000
153)*Phenanthrene-d10	(4)	13.691	188	695558	5.000
170) Methapyrilene	(4)	14.943	97	1816759	30.000
175)*Pyrene-d10	(5)	15.735	212	853879	5.000
213)*Perylene-d12	(6)	20.313	264	569308	5.000

* = Compound is an internal standard.

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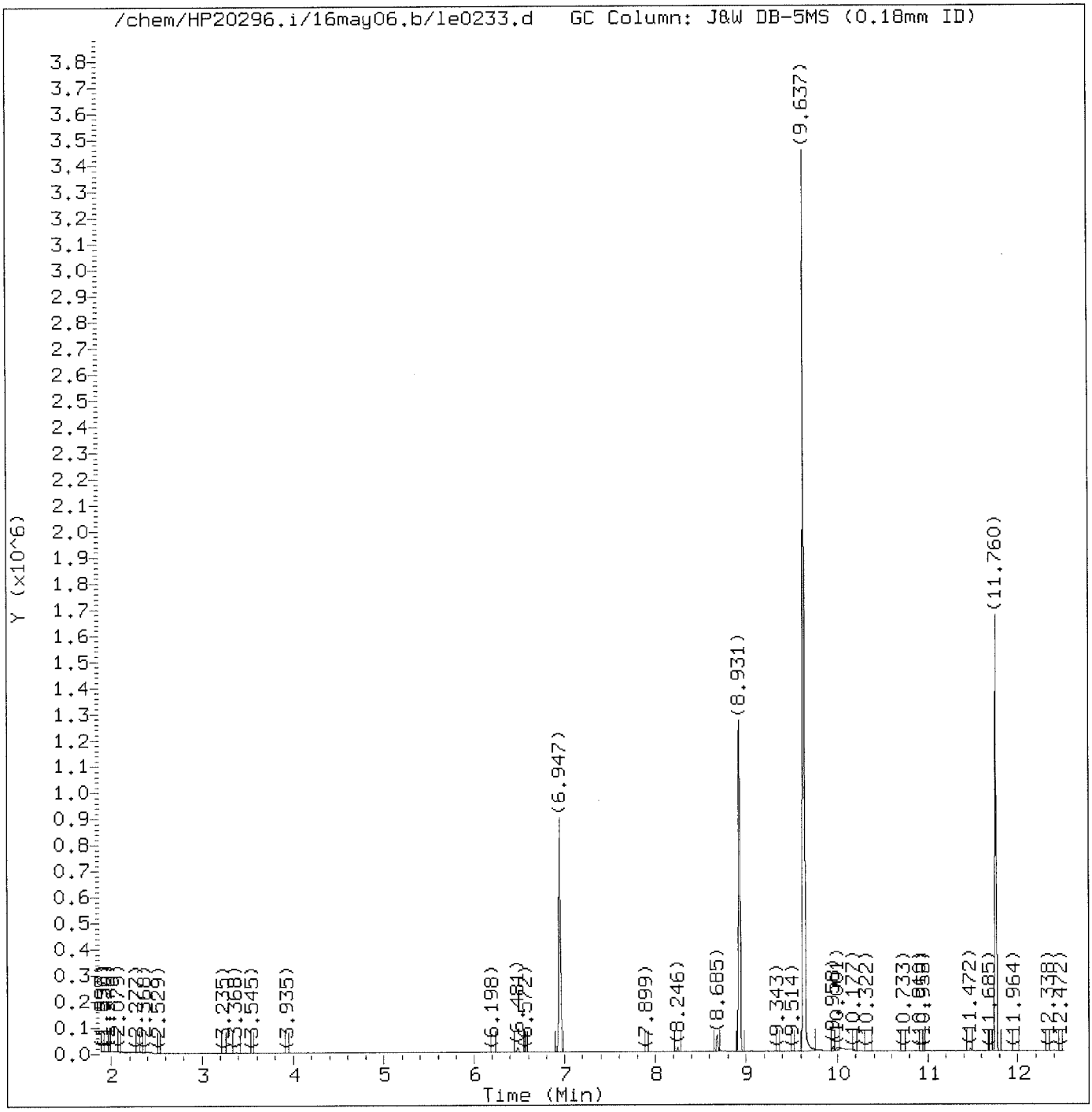
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0233.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVPDA1116

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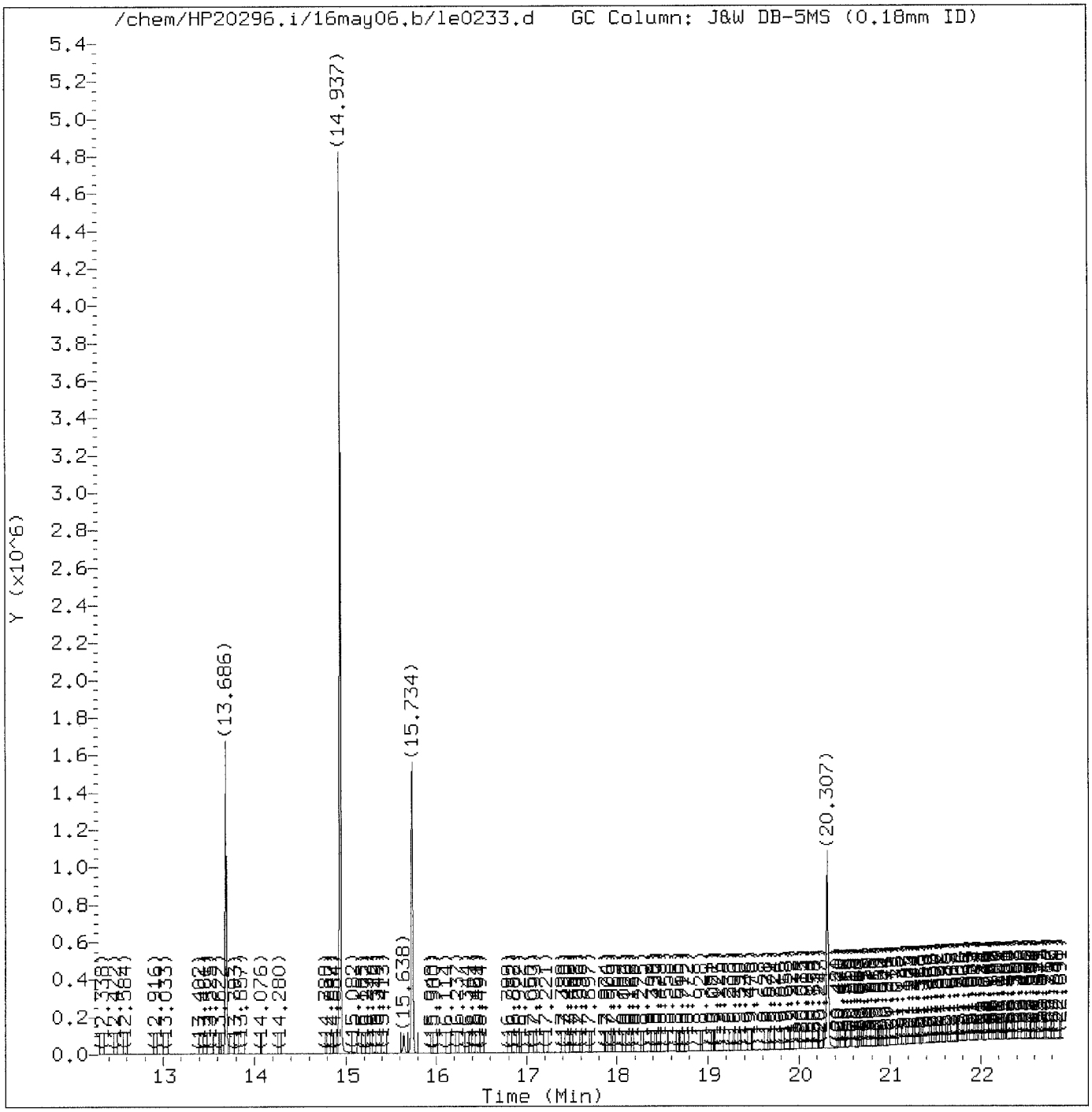
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0233.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVPDA1116

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Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0233.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 08:49 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	166005	5.000
65)*Naphthalene-d8	(2)	8.931	136	646168	5.000
81) 1,4-Phenylenediamine	(2)	9.637	108	1298559	20.288
113)*Acenaphthene-d10	(3)	11.760	164	373920	5.000
153)*Phenanthrene-d10	(4)	13.686	188	699035	5.000
170) Methapyrilene	(4)	14.937	97	1156270	19.486
175)*Pyrene-d10	(5)	15.734	212	822050	5.000
213)*Perylene-d12	(6)	20.307	264	544926	5.000

* = Compound is an internal standard.

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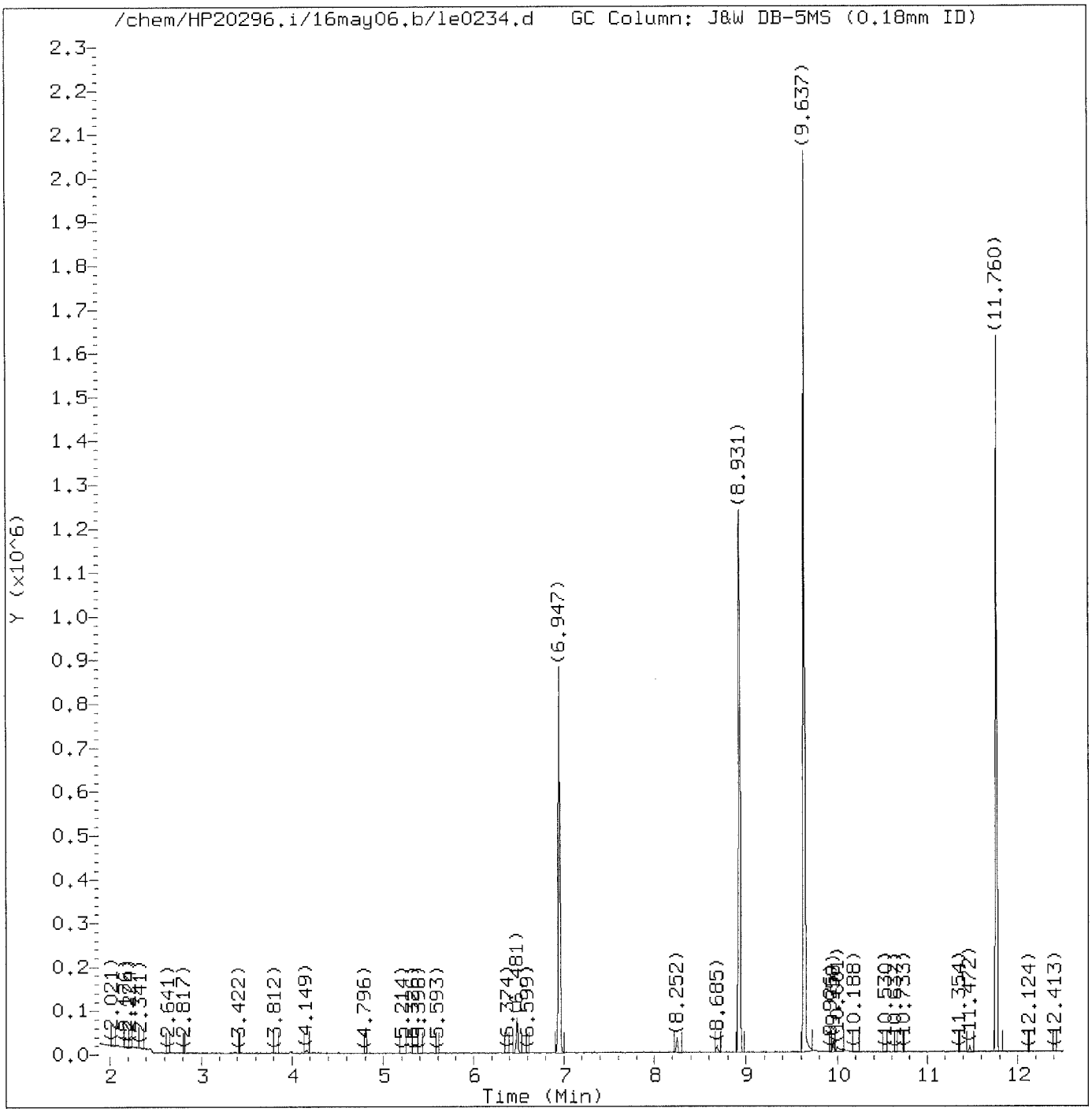
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0234.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

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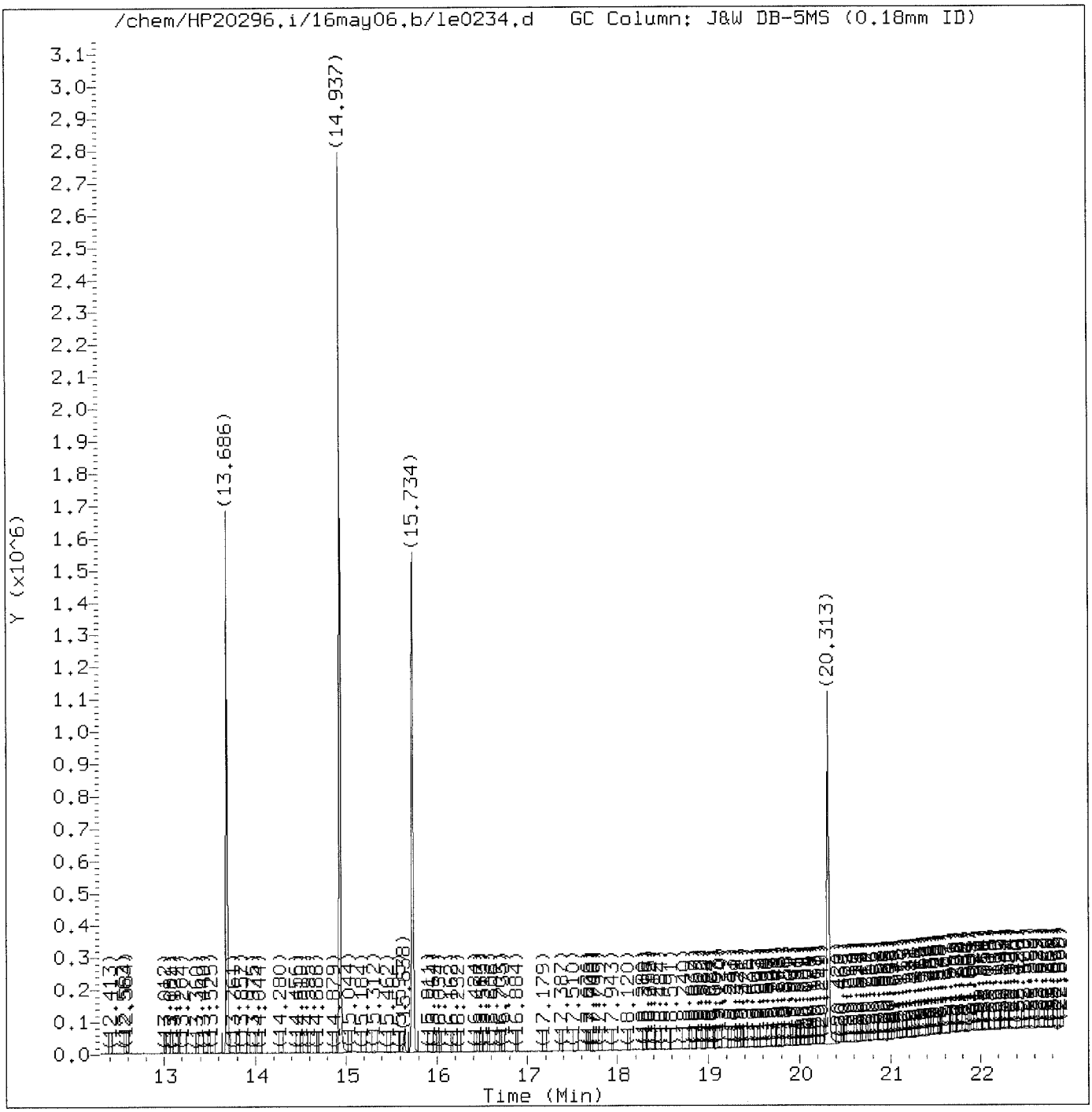
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0234.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

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on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0234.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:17 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	166133	5.000
65)*Naphthalene-d8	(2)	8.931	136	647899	5.000
81) 1,4-Phenylenediamine	(2)	9.637	108	781936	12.287
113)*Acenaphthene-d10	(3)	11.760	164	364710	5.000
153)*Phenanthrene-d10	(4)	13.686	188	692692	5.000
170) Methapyrilene	(4)	14.937	97	656964	11.583
175)*Pyrene-d10	(5)	15.734	212	819799	5.000
213)*Perylene-d12	(6)	20.313	264	542674	5.000

* = Compound is an internal standard.

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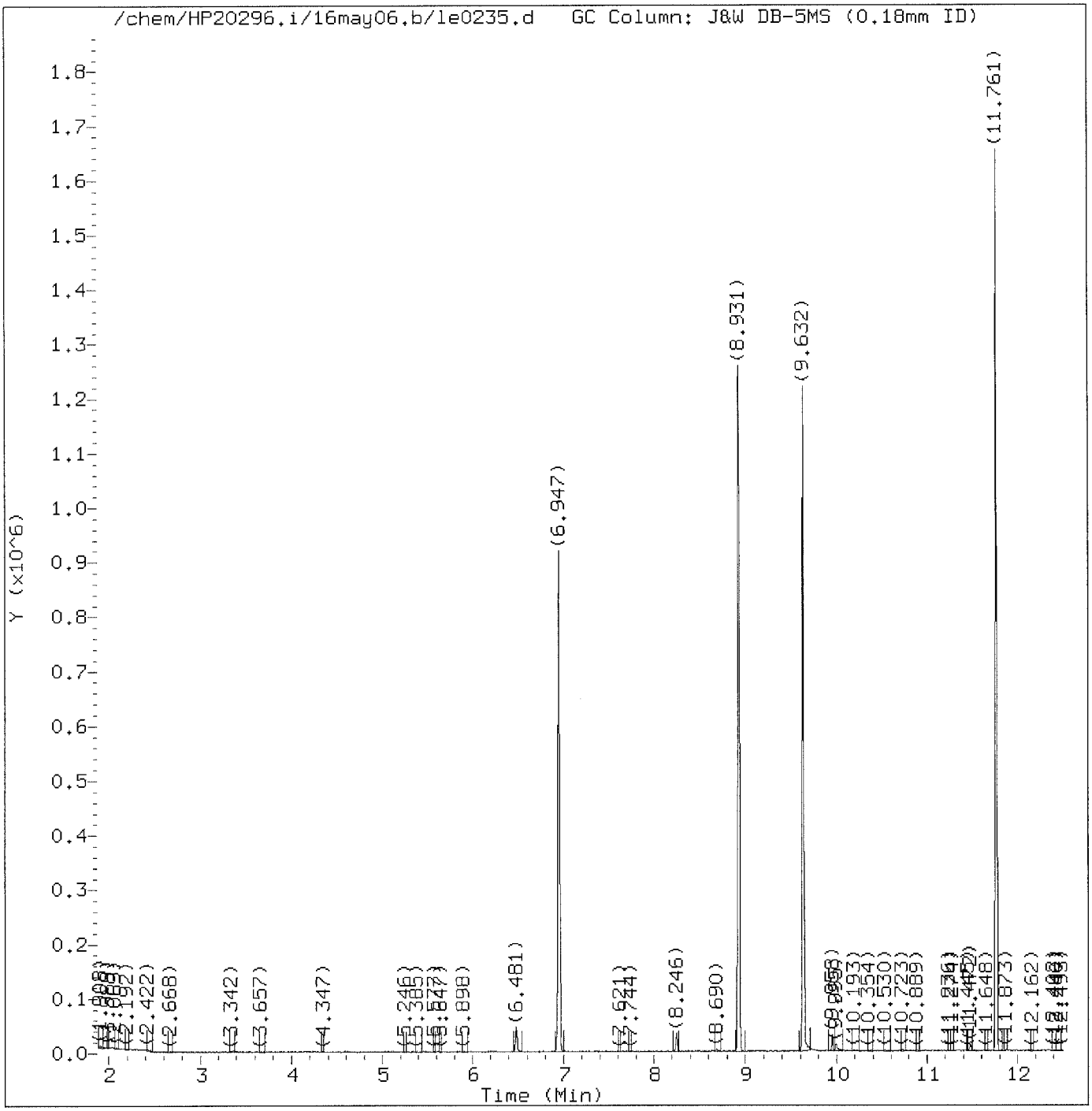
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0235.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVPDA1116

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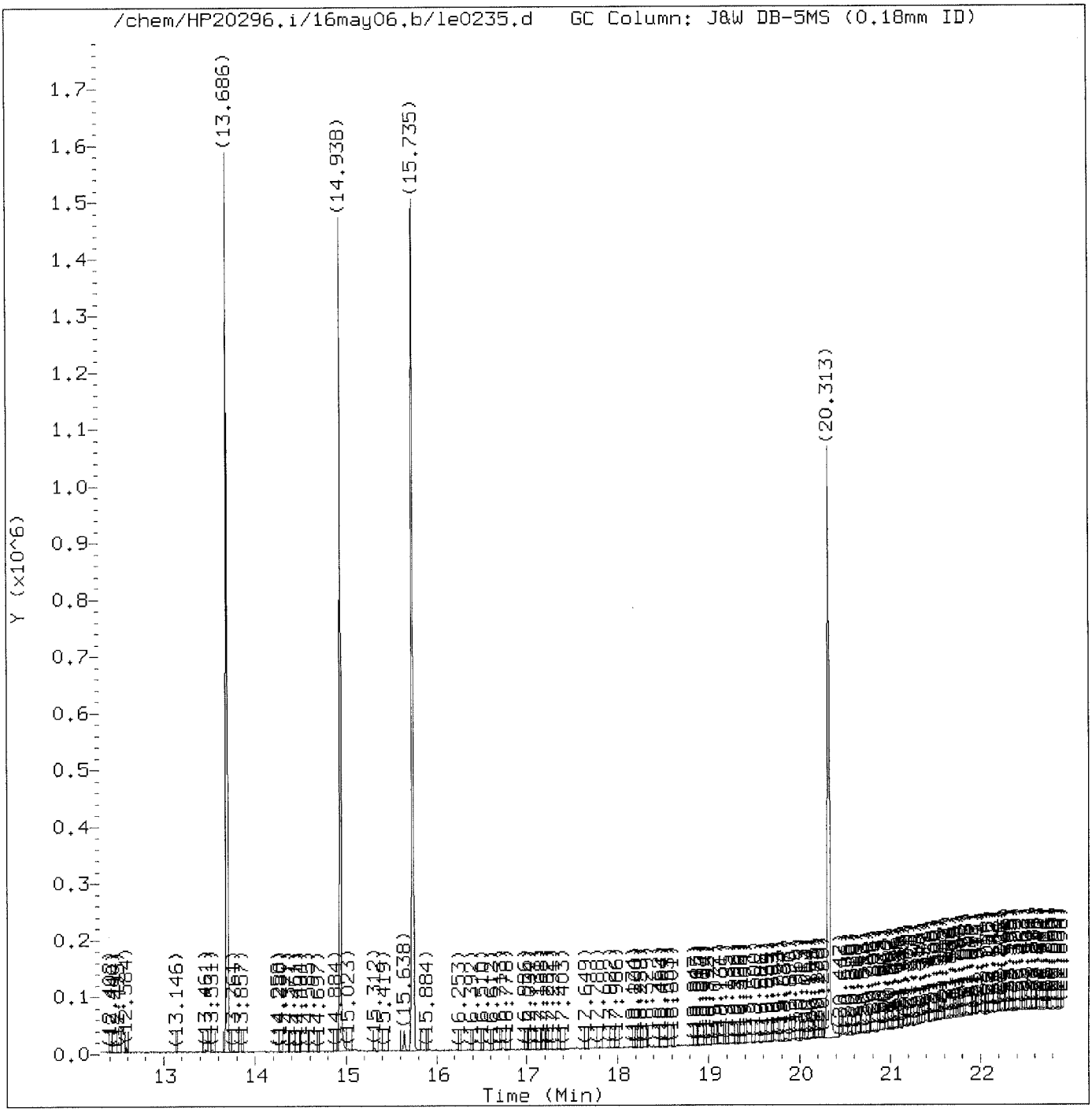
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0235.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVPDA1116

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on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0235.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 09:45 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	170586	5.000
65)*Naphthalene-d8	(2)	8.931	136	654744	5.000
81) 1,4-Phenylenediamine	(2)	9.632	108	449147	7.106
113)*Acenaphthene-d10	(3)	11.761	164	366192	5.000
153)*Phenanthrene-d10	(4)	13.686	188	682436	5.000
170) Methapyrilene	(4)	14.938	97	342146	6.418
175)*Pyrene-d10	(5)	15.735	212	806179	5.000
213)*Perylene-d12	(6)	20.313	264	529709	5.000

* = Compound is an internal standard.

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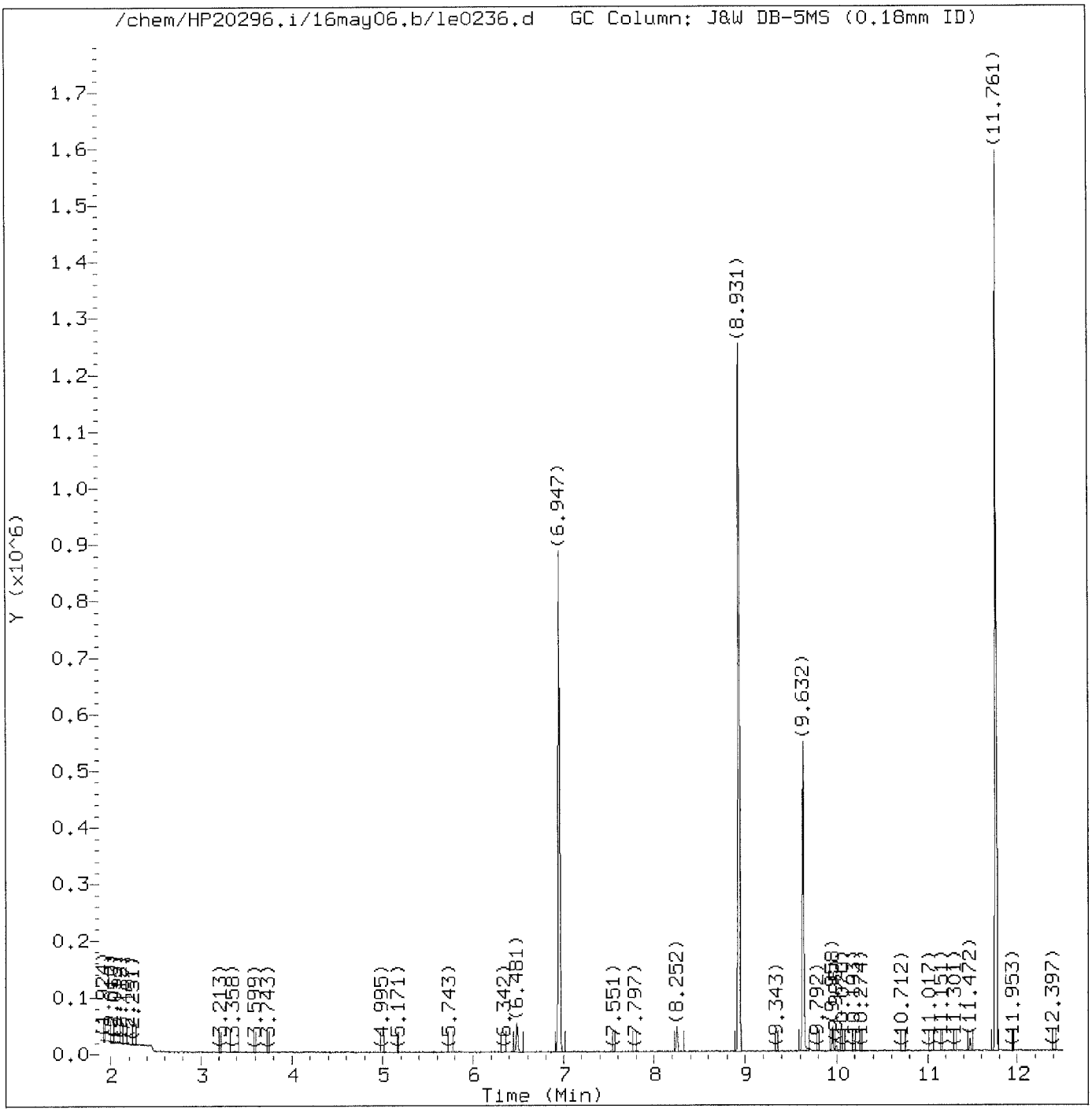
on 05/06/2016 at 16:08.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0236.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVPDA1116

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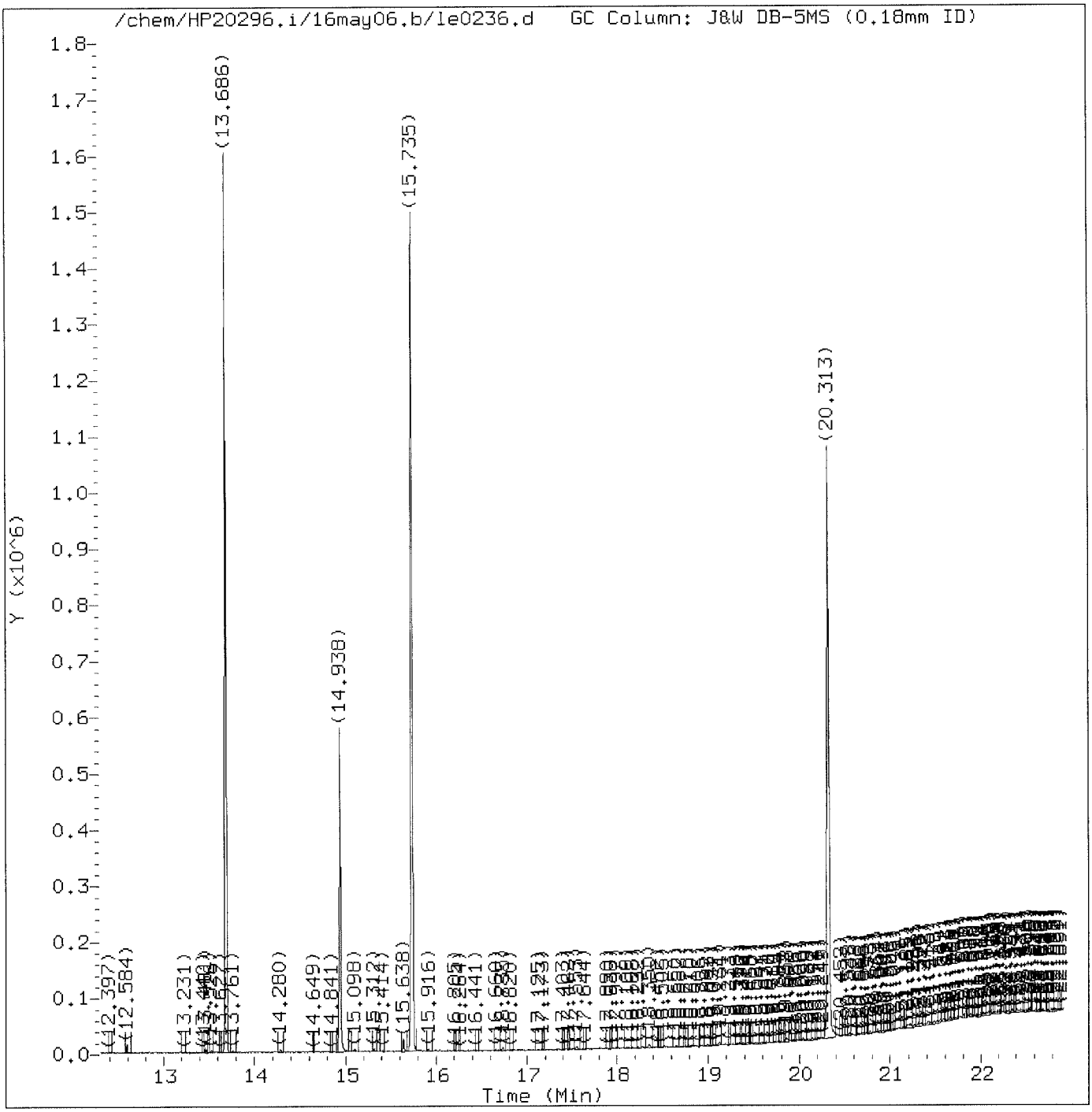
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0236.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVPDA1116

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on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0236.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:13 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	169847	5.000
65)*Naphthalene-d8	(2)	8.931	136	635323	5.000
81) 1,4-Phenylenediamine	(2)	9.632	108	203989	3.403
113)*Acenaphthene-d10	(3)	11.761	164	359810	5.000
153)*Phenanthrene-d10	(4)	13.686	188	680416	5.000
170) Methapyrilene	(4)	14.938	97	137951	2.766
175)*Pyrene-d10	(5)	15.735	212	775312	5.000
213)*Perylene-d12	(6)	20.313	264	533720	5.000

* = Compound is an internal standard.

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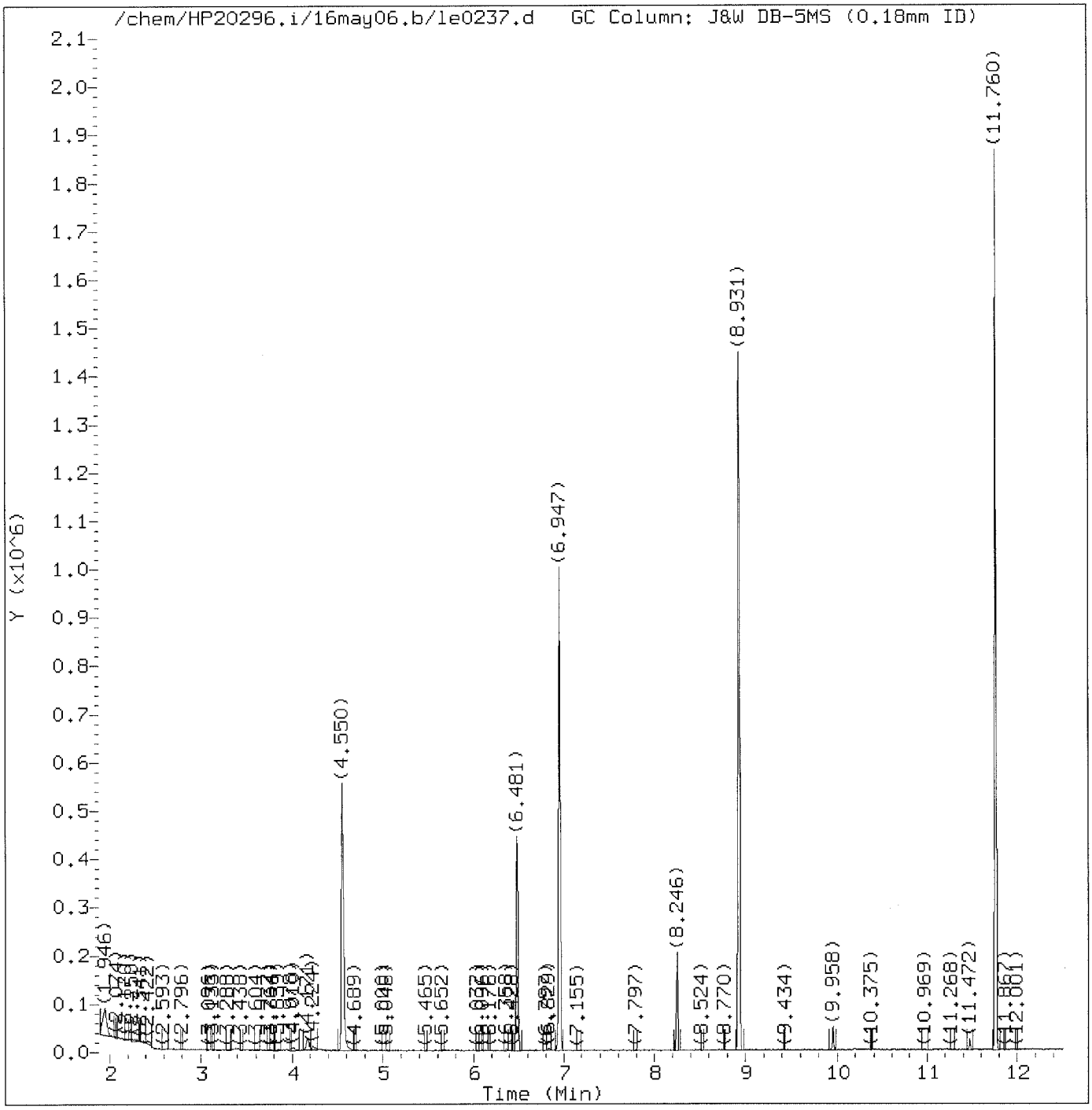
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0237.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:42 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD100 Lab Sample ID: RVKEP3645

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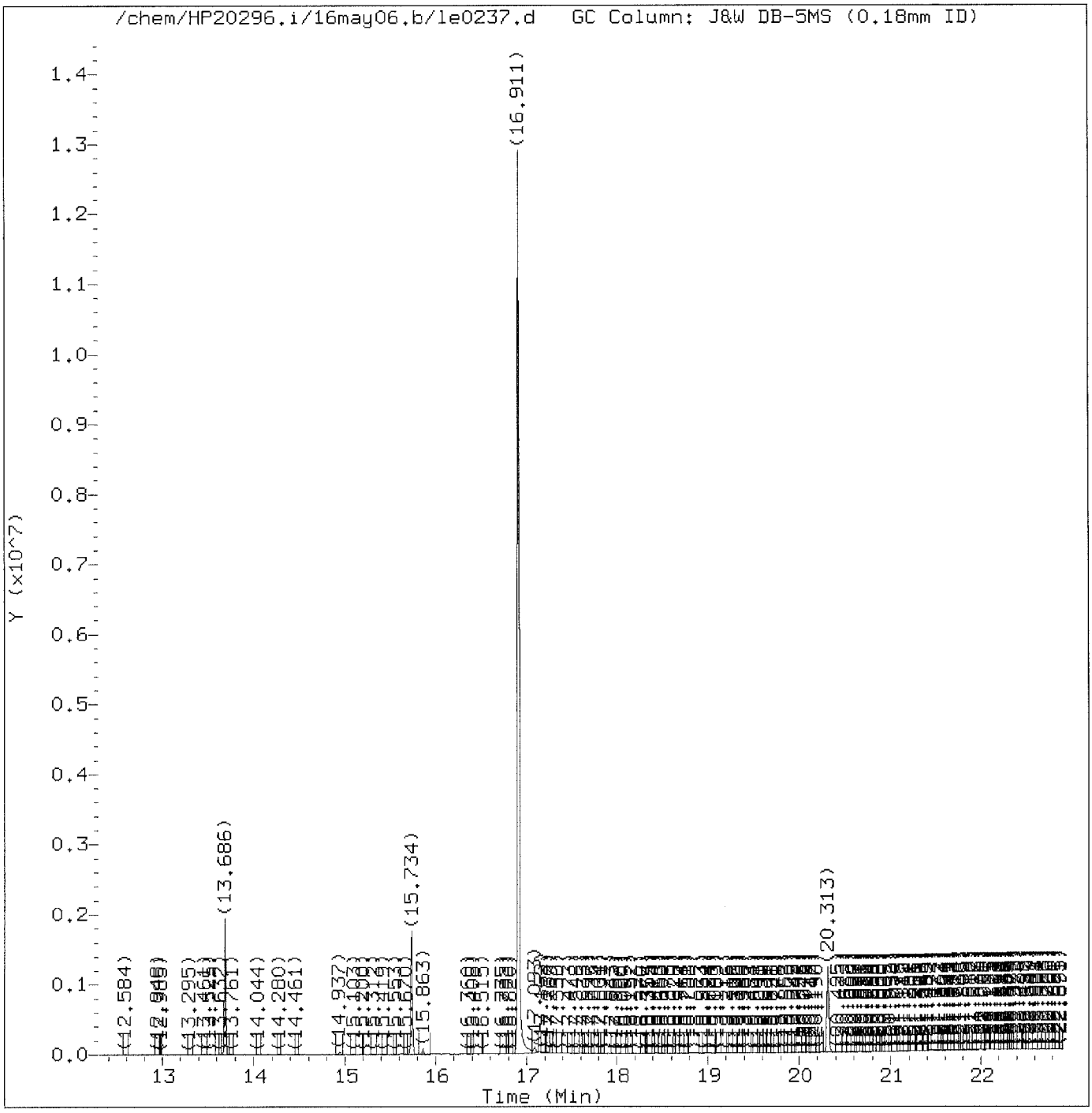
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0237.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:42 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD100 Lab Sample ID: RVKEP3645

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on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0237.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 10:42 Analyst ID: hbz01996

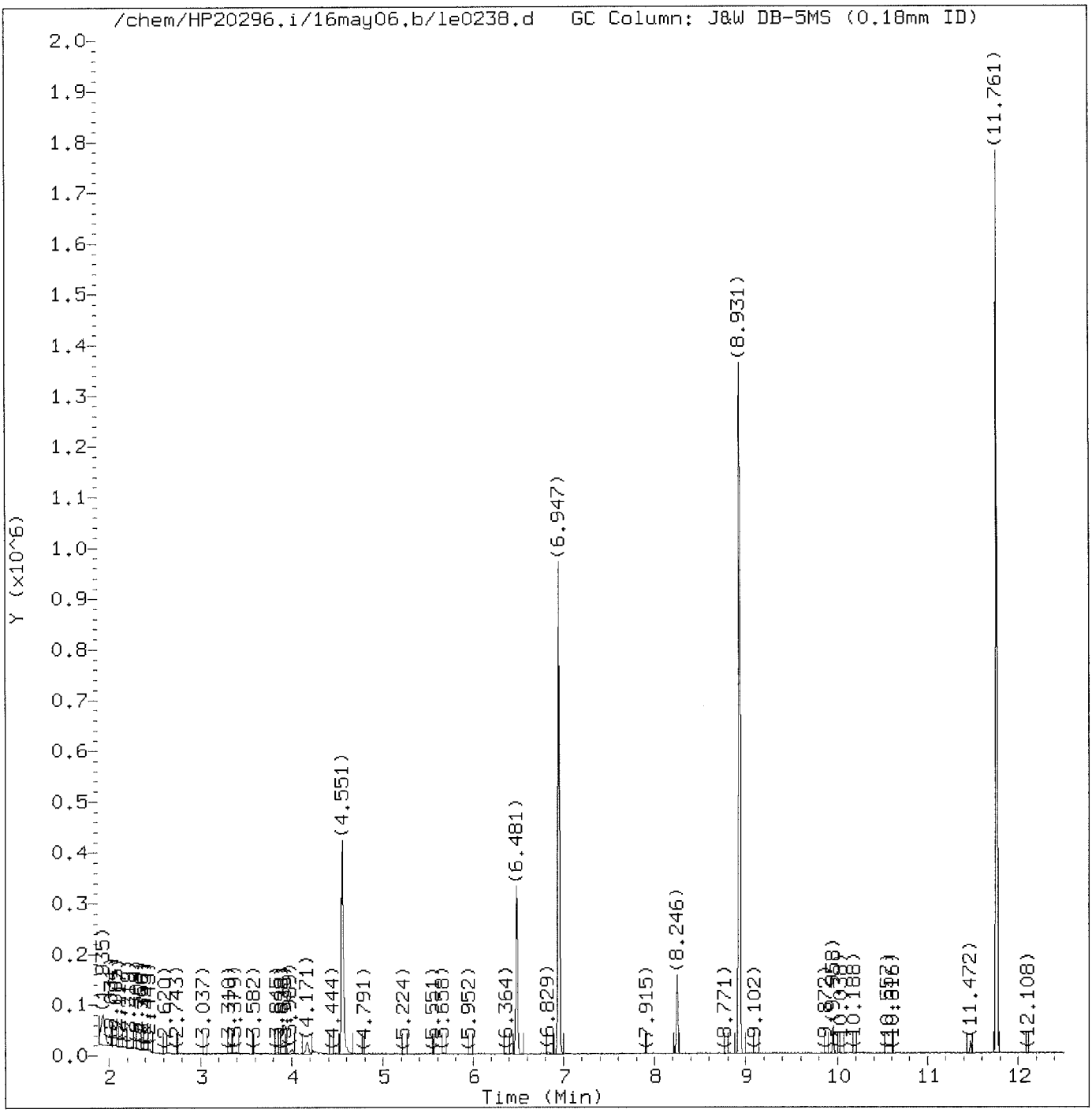
Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD100 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	190514	5.000
65)*Naphthalene-d8	(2)	8.931	136	747139	5.000
113)*Acenaphthene-d10	(3)	11.760	164	421125	5.000
153)*Phenanthrene-d10	(4)	13.686	188	813147	5.000
175)*Pyrene-d10	(5)	15.734	212	918503	5.000
190) Kepone	(5)	16.911	272	1686703	100.000
213)*Perylene-d12	(6)	20.313	264	627777	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

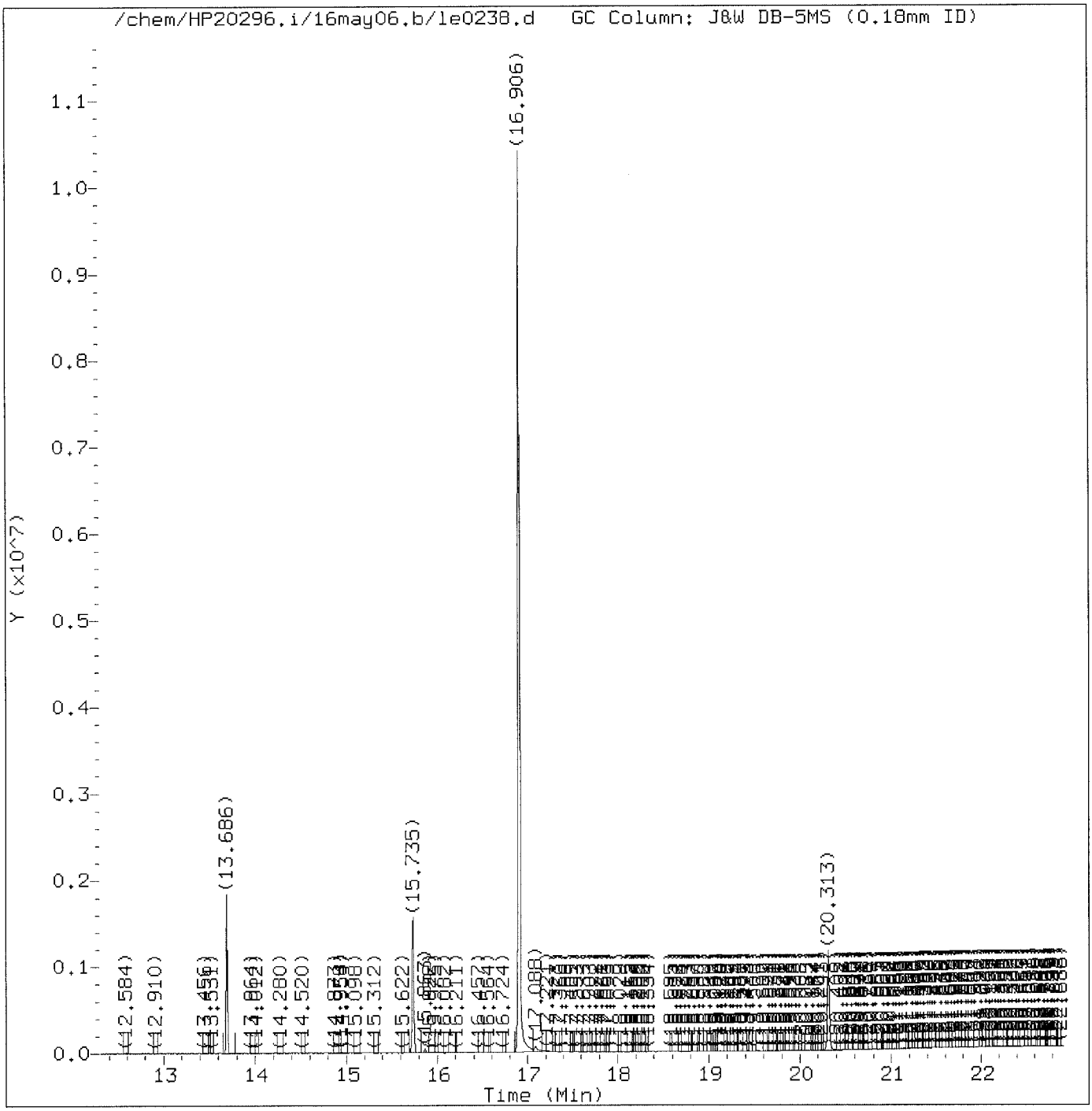
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0238.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:10 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD080 Lab Sample ID: RVKEP3645

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0238.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:10 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD080 Lab Sample ID: RVKEP3645

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0238.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:10 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD080 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	185803	5.000
65)*Naphthalene-d8	(2)	8.931	136	707985	5.000
113)*Acenaphthene-d10	(3)	11.761	164	401261	5.000
153)*Phenanthrene-d10	(4)	13.686	188	750936	5.000
175)*Pyrene-d10	(5)	15.735	212	850061	5.000
190) Kepone	(5)	16.906	272	1267412	80.591
213)*Perylene-d12	(6)	20.313	264	580251	5.000

* = Compound is an internal standard.

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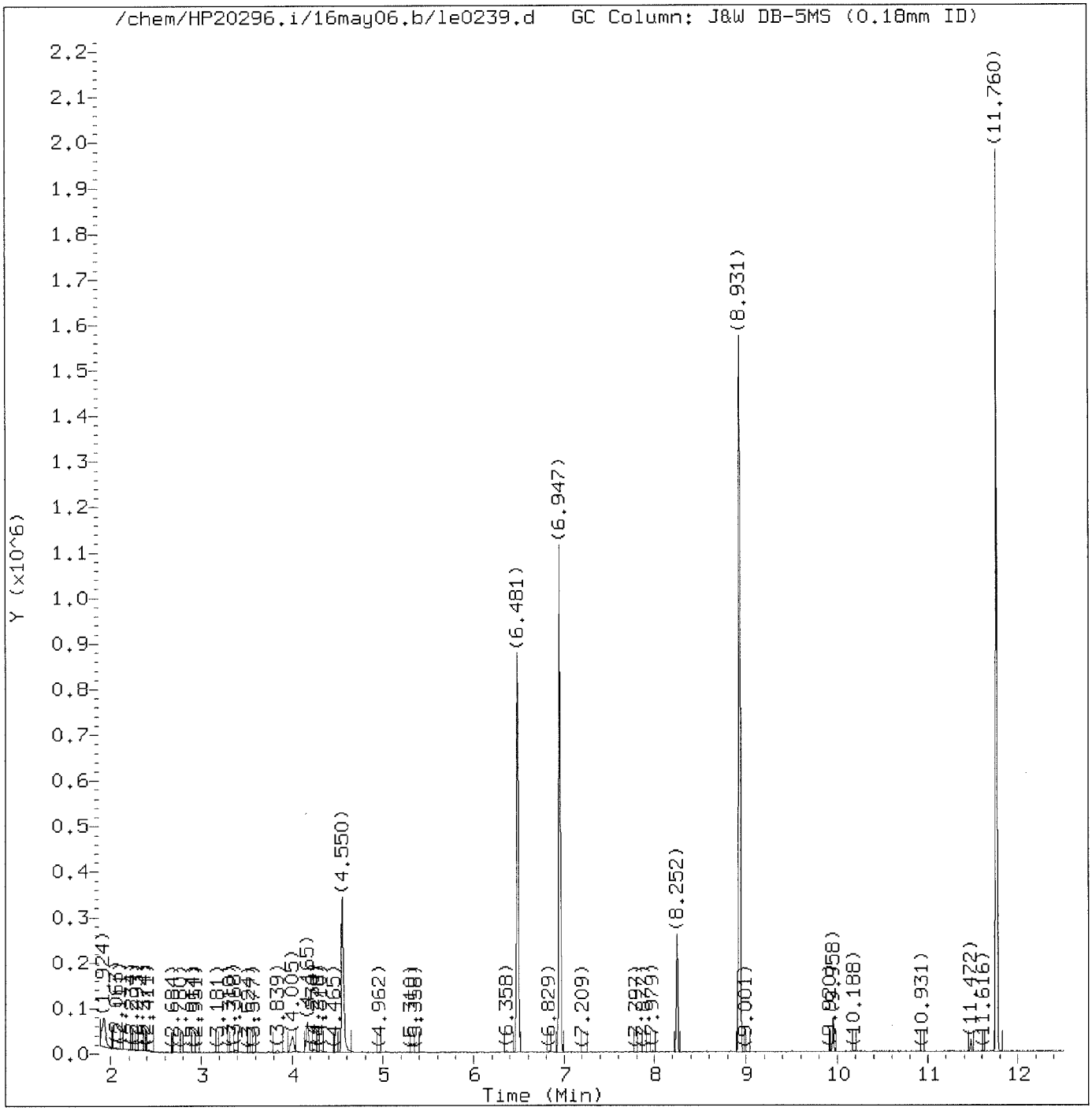
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

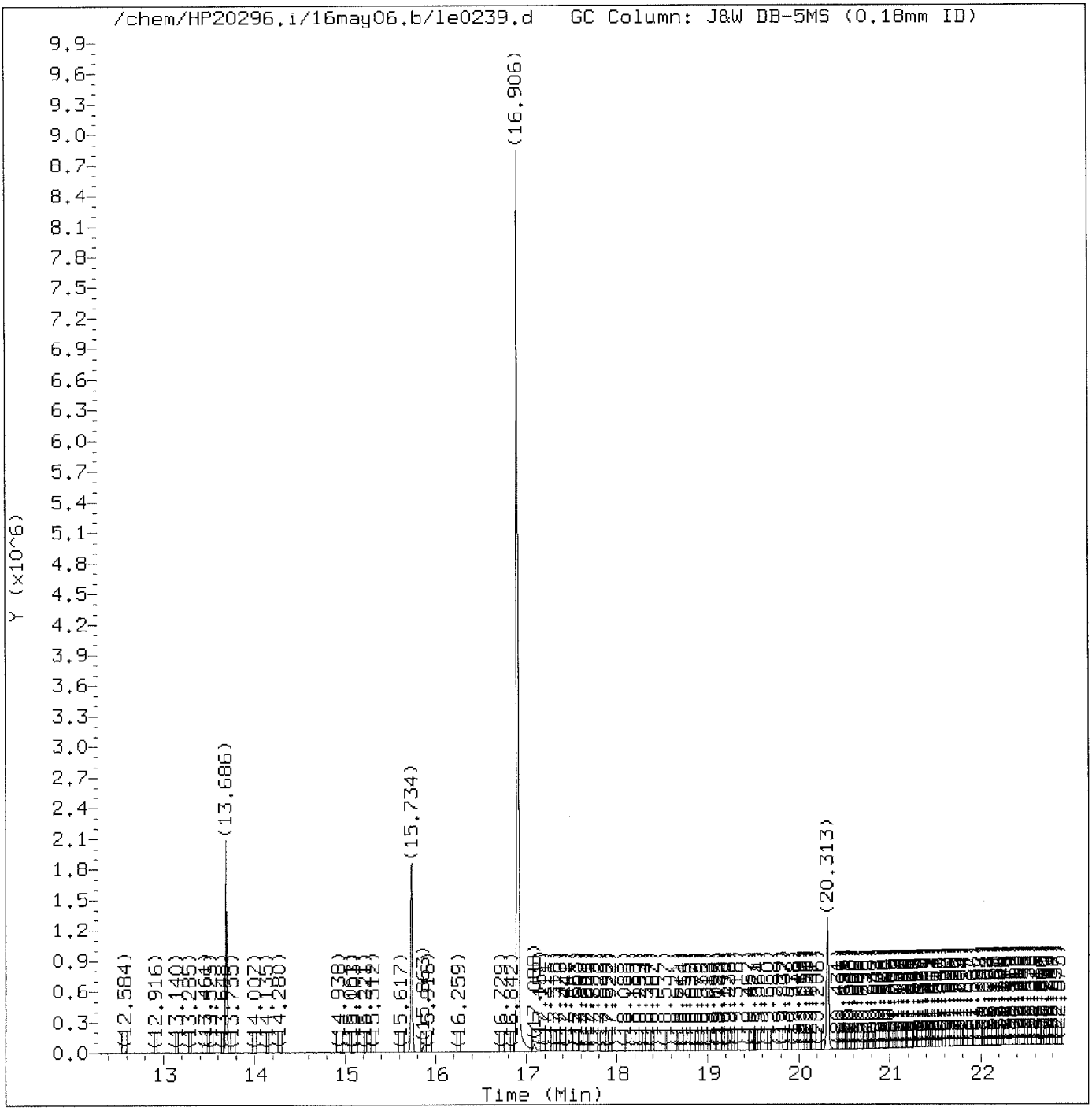
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0239.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:38 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0239.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:38 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

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on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0239.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 11:38 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	205879	5.000
65)*Naphthalene-d8	(2)	8.931	136	796590	5.000
113)*Acenaphthene-d10	(3)	11.760	164	455532	5.000
153)*Phenanthrene-d10	(4)	13.686	188	854680	5.000
175)*Pyrene-d10	(5)	15.734	212	981093	5.000
190) Kepone	(5)	16.906	272	1054772	58.728
213)*Perylene-d12	(6)	20.313	264	679580	5.000

* = Compound is an internal standard.

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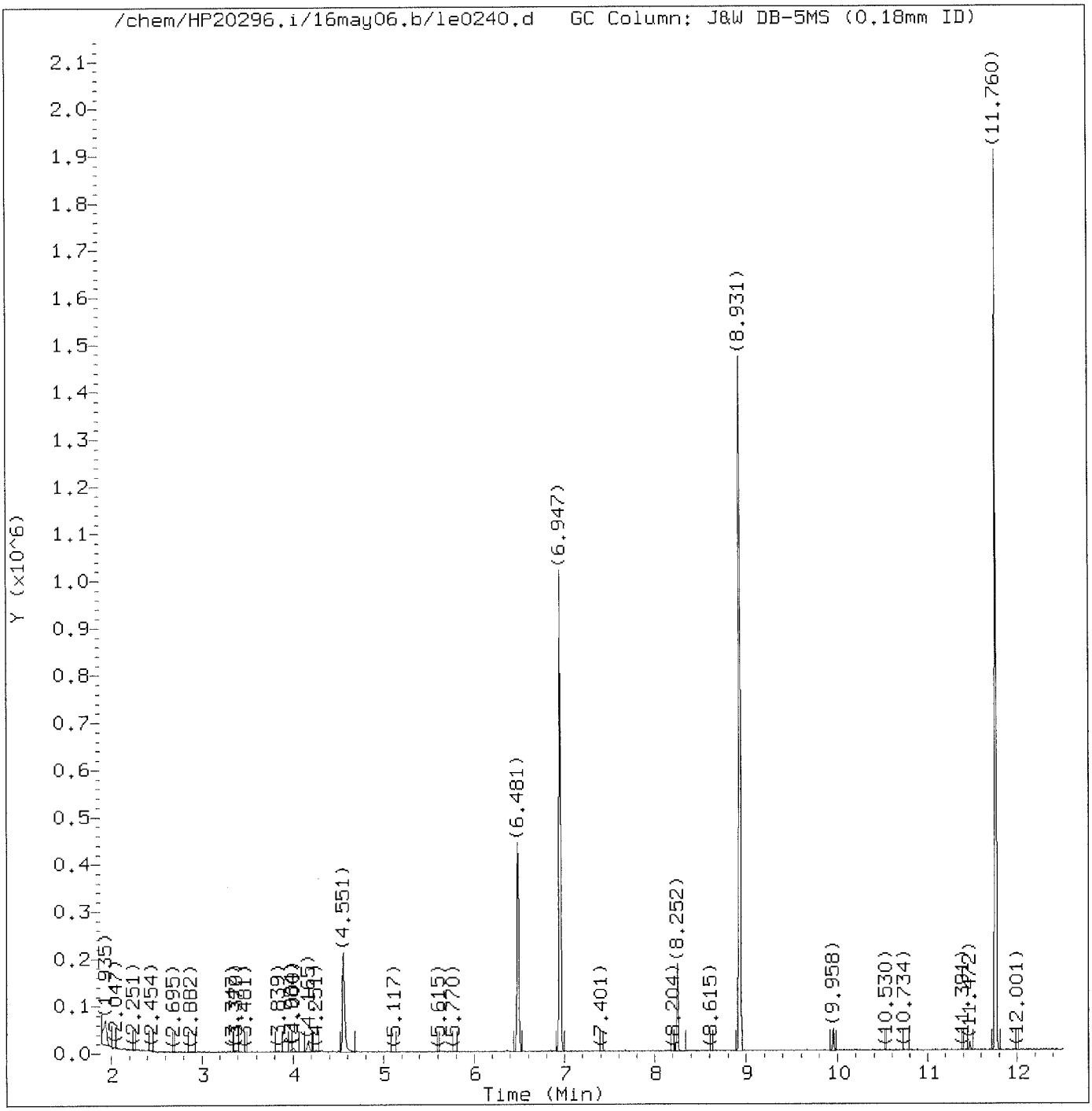
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0240.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:07 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD040 Lab Sample ID: RVKEP3645

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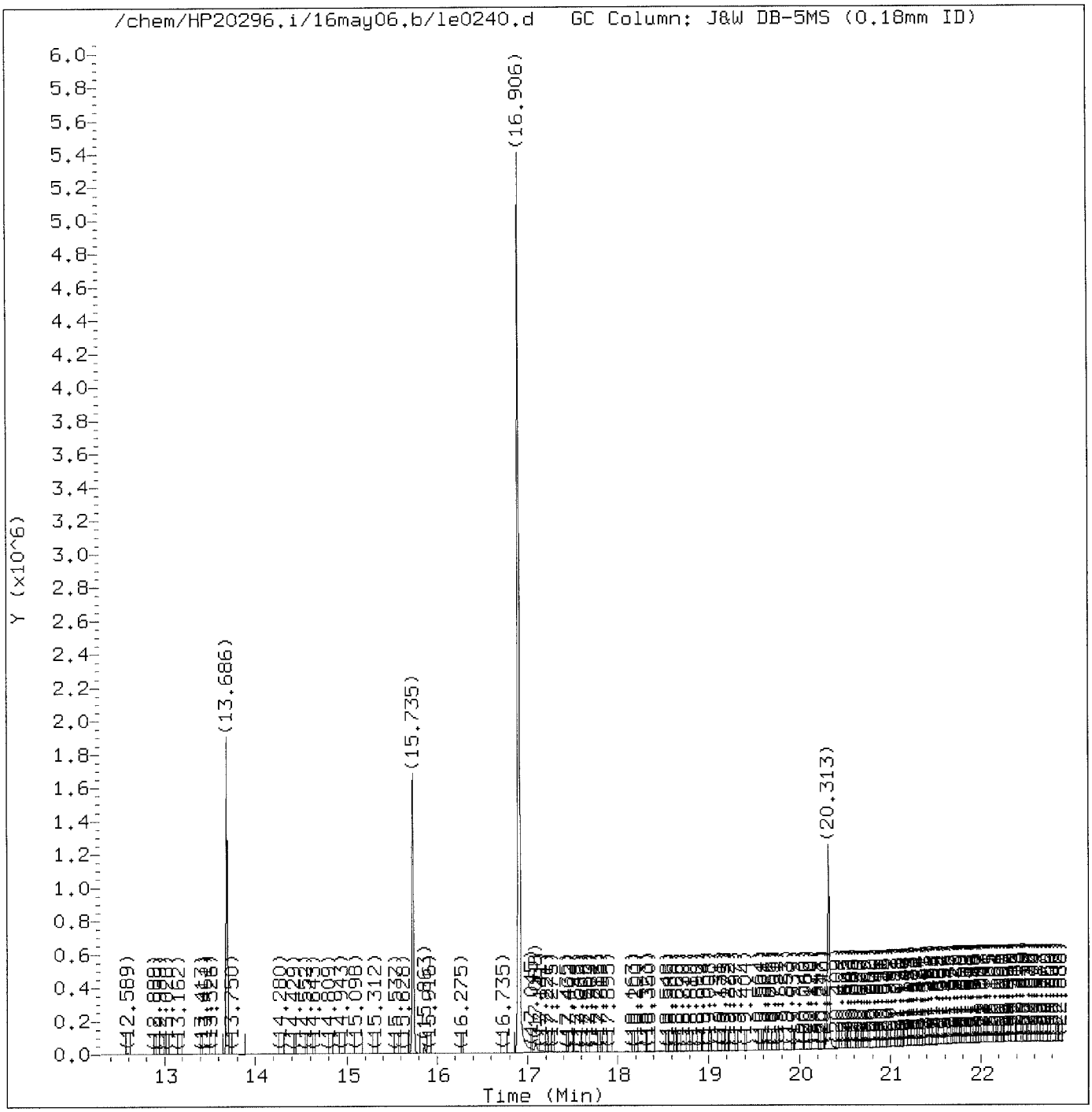
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0240.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:07 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD040 Lab Sample ID: RVKEP3645

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Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0240.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:07 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD040 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	195399	5.000
65)*Naphthalene-d8	(2)	8.931	136	753944	5.000
113)*Acenaphthene-d10	(3)	11.760	164	424894	5.000
153)*Phenanthrene-d10	(4)	13.686	188	804027	5.000
175)*Pyrene-d10	(5)	15.735	212	915504	5.000
190) Kepone	(5)	16.906	272	637998	38.533
213)*Perylene-d12	(6)	20.313	264	625962	5.000

* = Compound is an internal standard.

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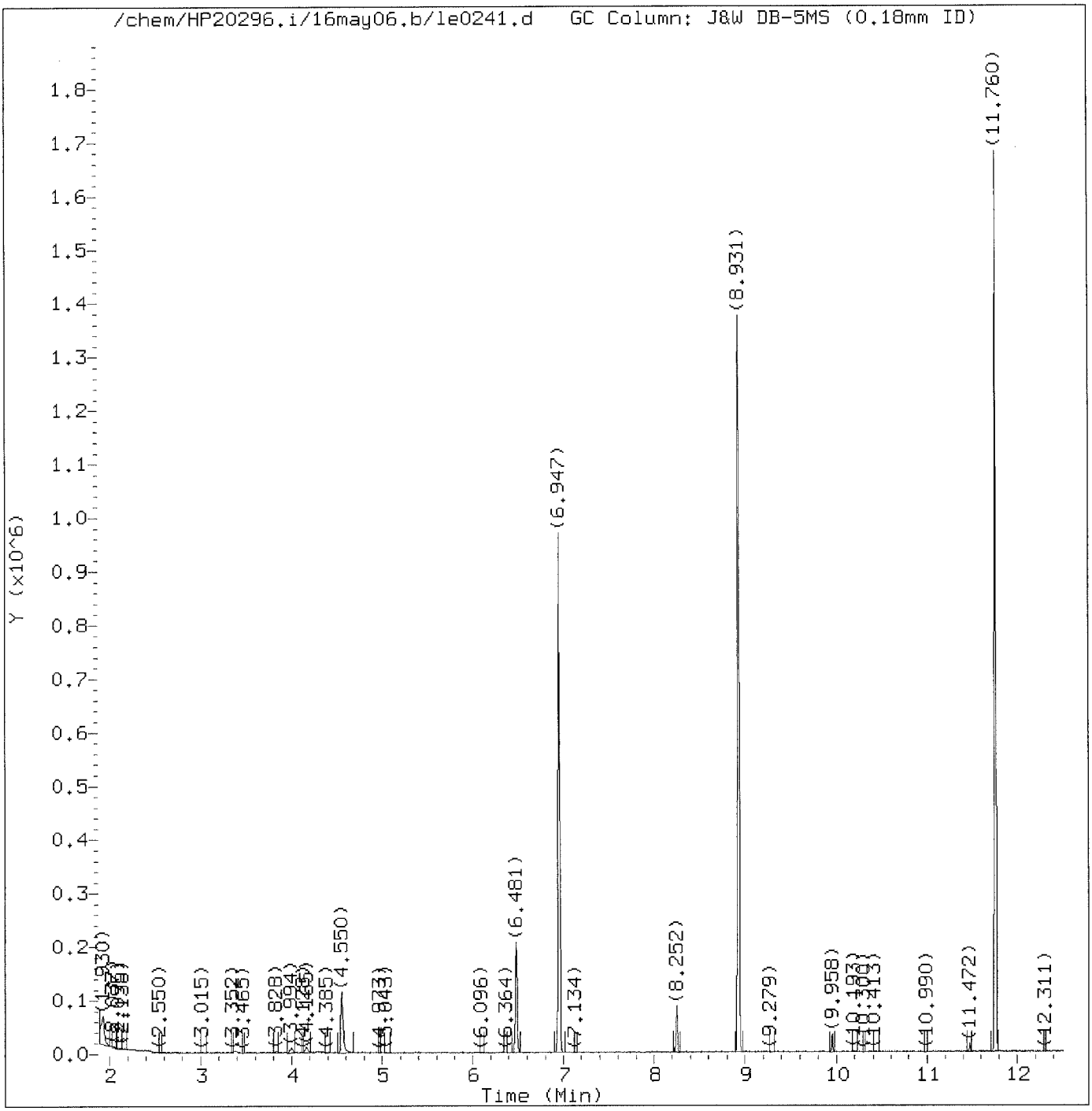
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0241.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD025 Lab Sample ID: RVKEP3645

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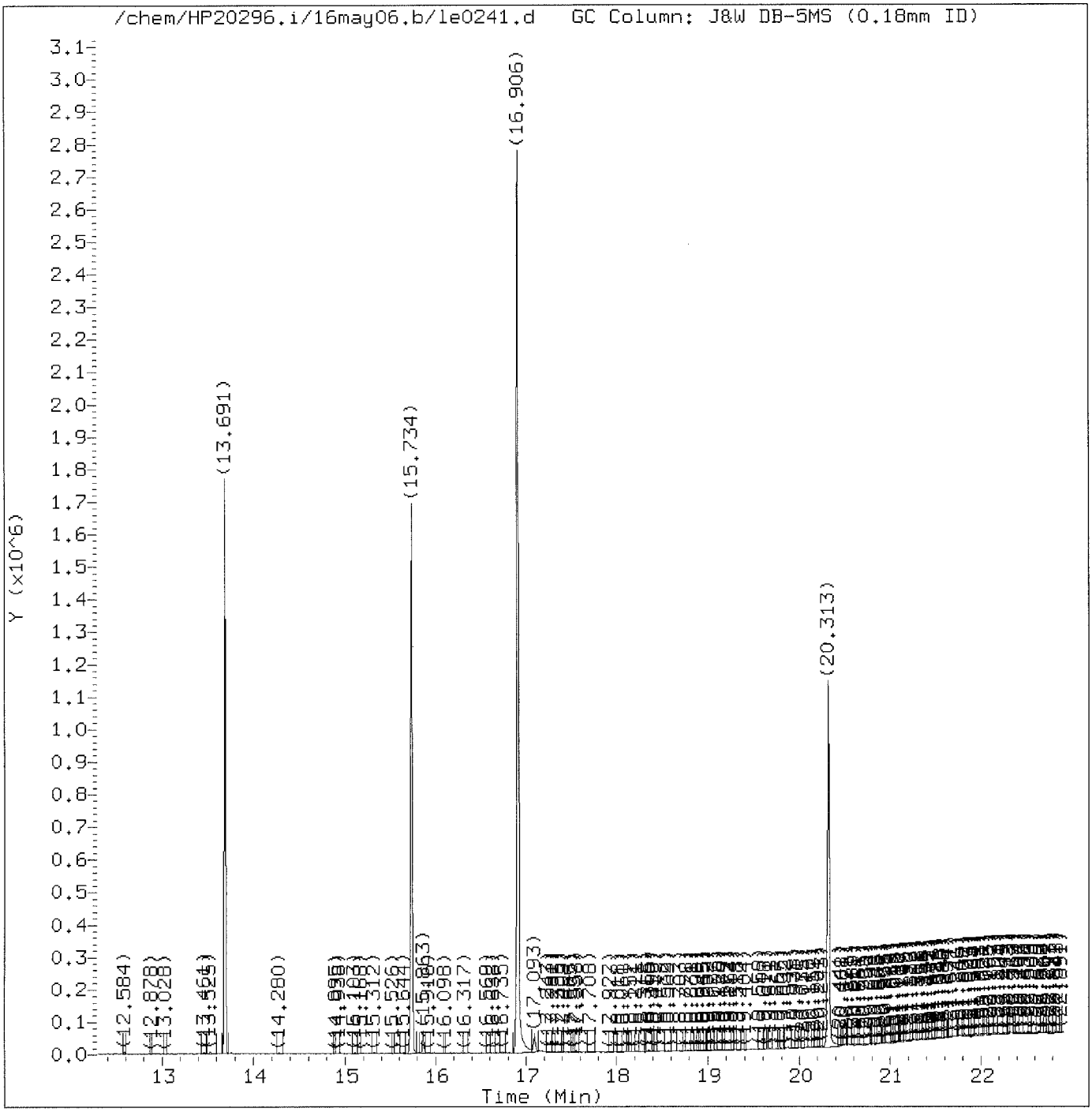
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0241.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD025 Lab Sample ID: RVKEP3645

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Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0241.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 12:35 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:05 ceb05247

Sample Name: SSTD025 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	183122	5.000
65)*Naphthalene-d8	(2)	8.931	136	706211	5.000
113)*Acenaphthene-d10	(3)	11.760	164	398575	5.000
153)*Phenanthrene-d10	(4)	13.691	188	755735	5.000
175)*Pyrene-d10	(5)	15.734	212	864030	5.000
190) Kepone	(5)	16.906	272	318635	21.172
213)*Perylene-d12	(6)	20.313	264	598461	5.000

* = Compound is an internal standard.

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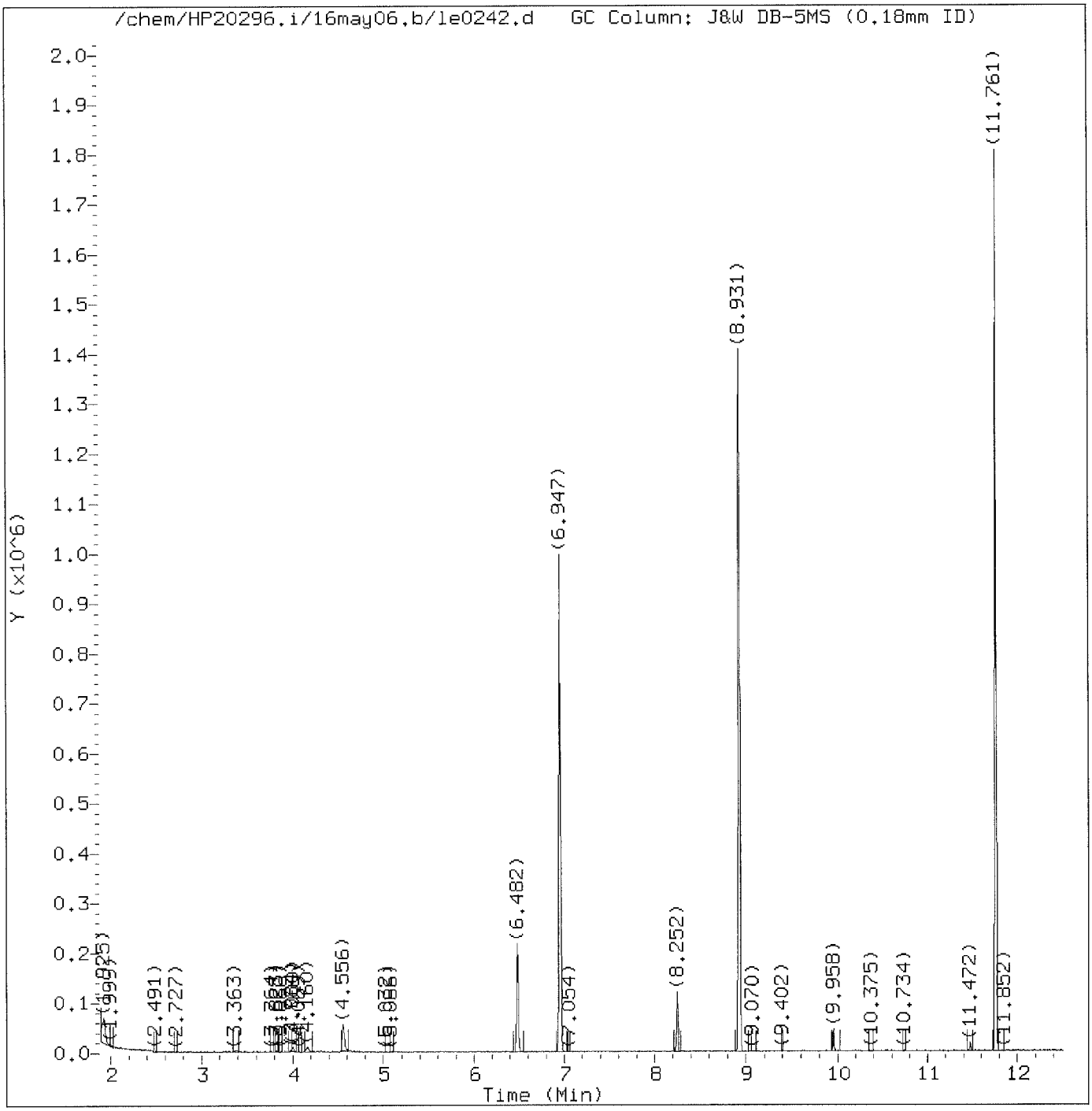
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0242.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:03 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVKEP3645

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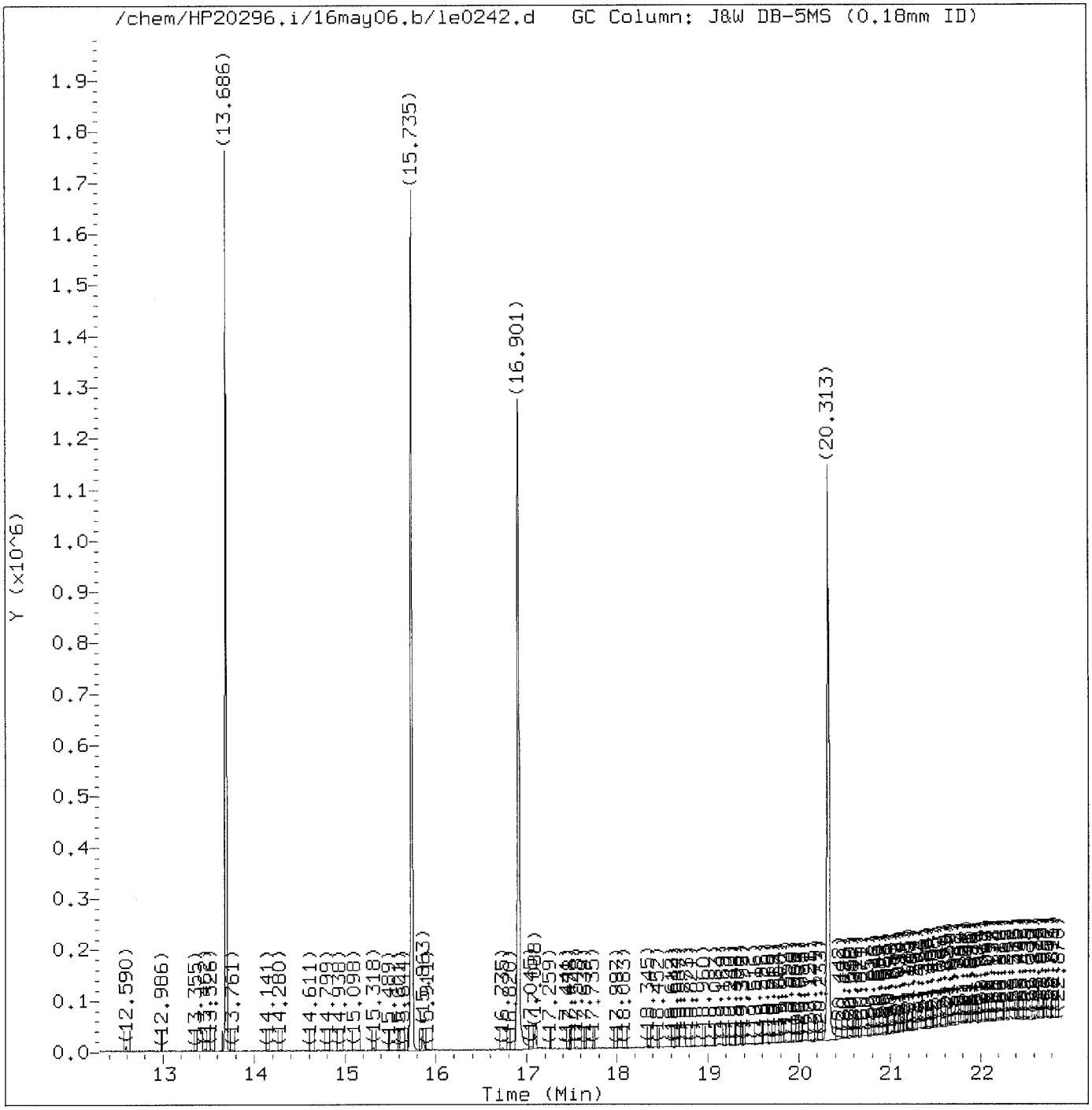
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0242.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:03 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVKEP3645

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Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0242.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:03 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	188892	5.000
65)*Naphthalene-d8	(2)	8.931	136	710271	5.000
113)*Acenaphthene-d10	(3)	11.761	164	405992	5.000
153)*Phenanthrene-d10	(4)	13.692	188	762677	5.000
175)*Pyrene-d10	(5)	15.735	212	860072	5.000
190) Kepone	(5)	16.906	272	156225	10.724
213)*Perylene-d12	(6)	20.313	264	582380	5.000

* = Compound is an internal standard.

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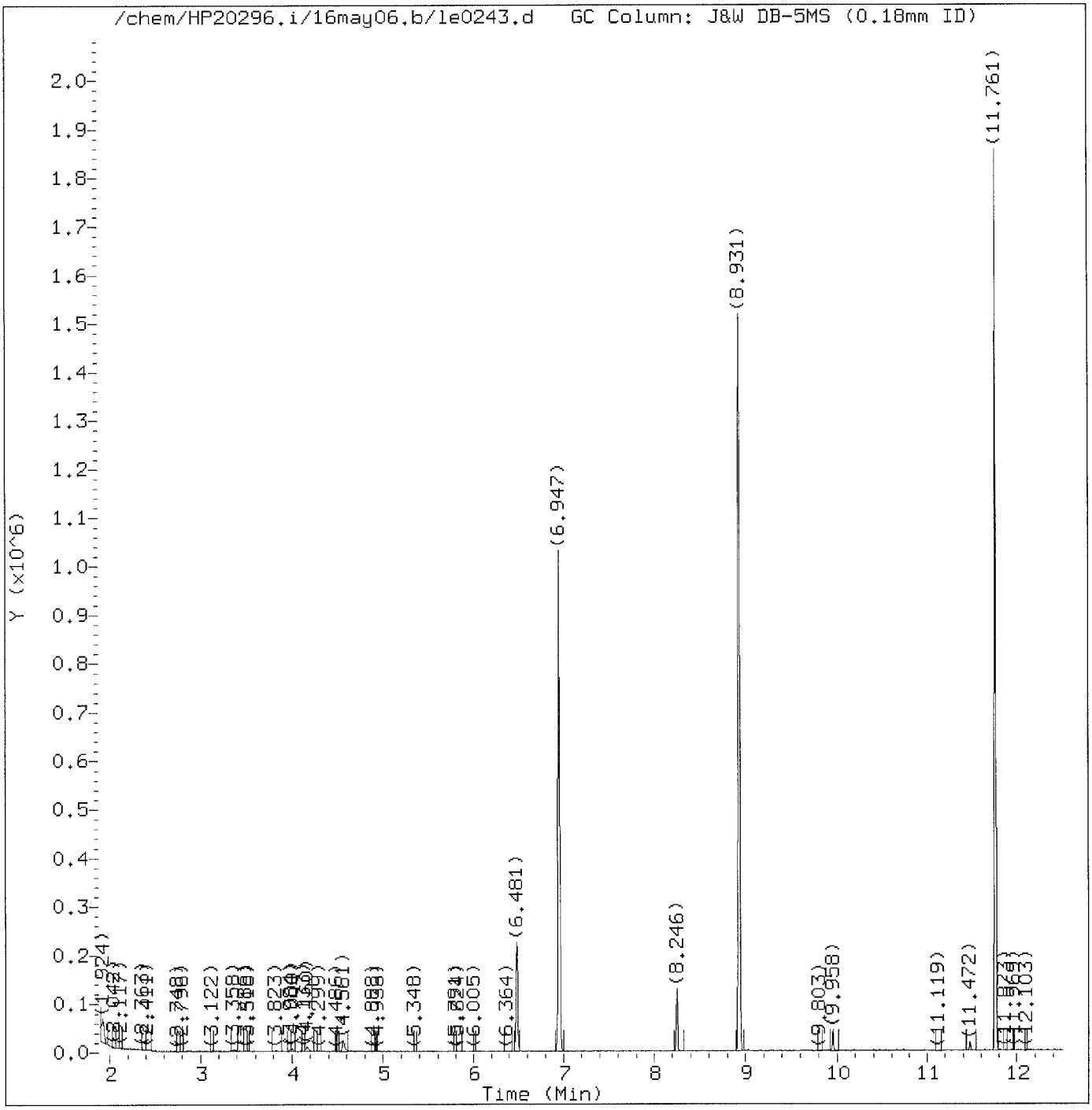
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0243.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:31 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD006 Lab Sample ID: RVKEPMDL3645

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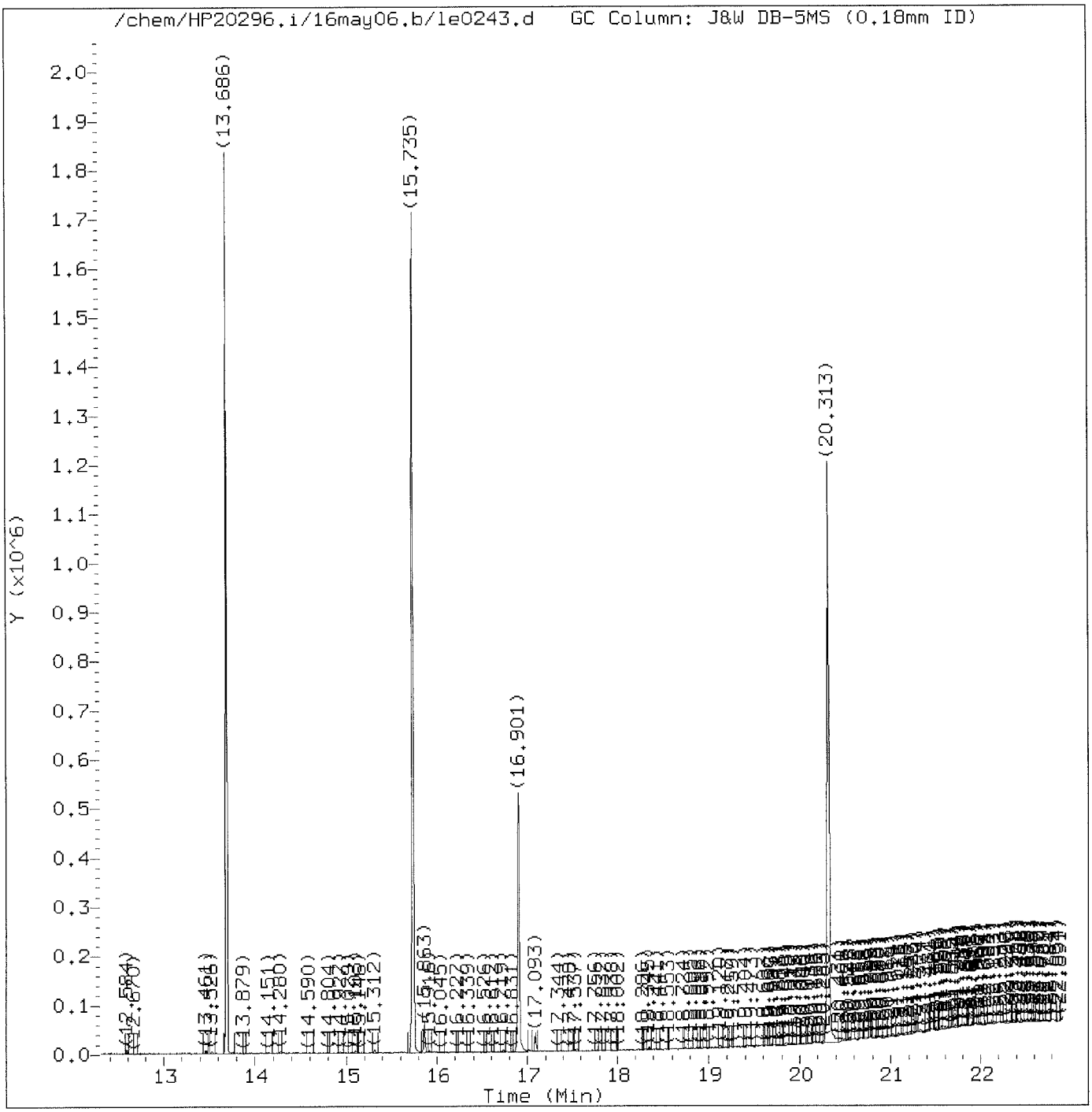
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0243.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:31 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD006 Lab Sample ID: RVKEPMDL3645

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on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0243.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 13:31 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 16:05
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD006 Lab Sample ID: RVKEPMDL3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	191962	5.000
65)*Naphthalene-d8	(2)	8.931	136	752053	5.000
113)*Acenaphthene-d10	(3)	11.761	164	417129	5.000
153)*Phenanthrene-d10	(4)	13.686	188	773960	5.000
175)*Pyrene-d10	(5)	15.735	212	889372	5.000
190) Kepone	(5)	16.901	272	63333	4.204
213)*Perylene-d12	(6)	20.313	264	609541	5.000

* = Compound is an internal standard.

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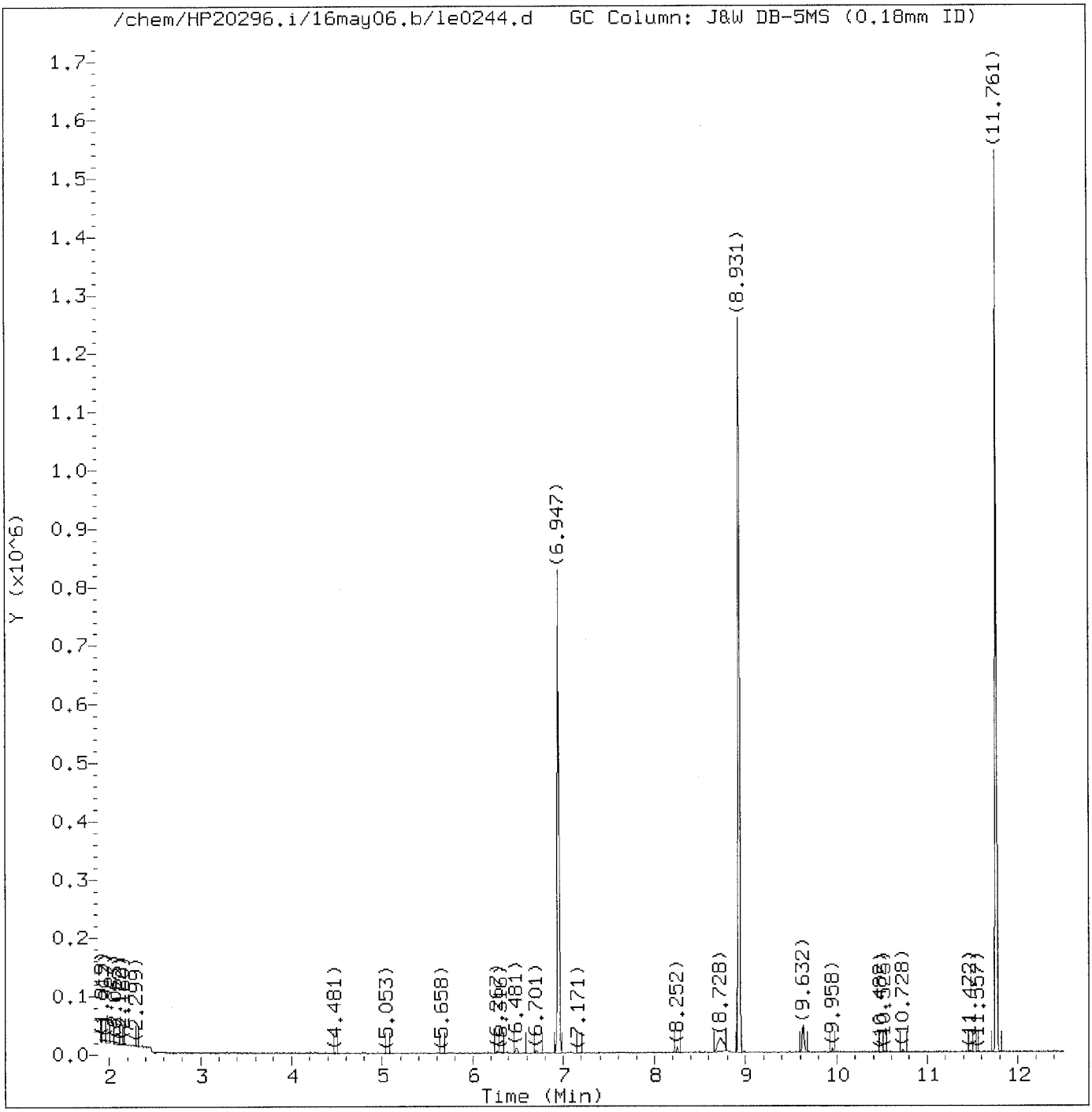
on 05/06/2016 at 16:09.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0244.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVFAD1116

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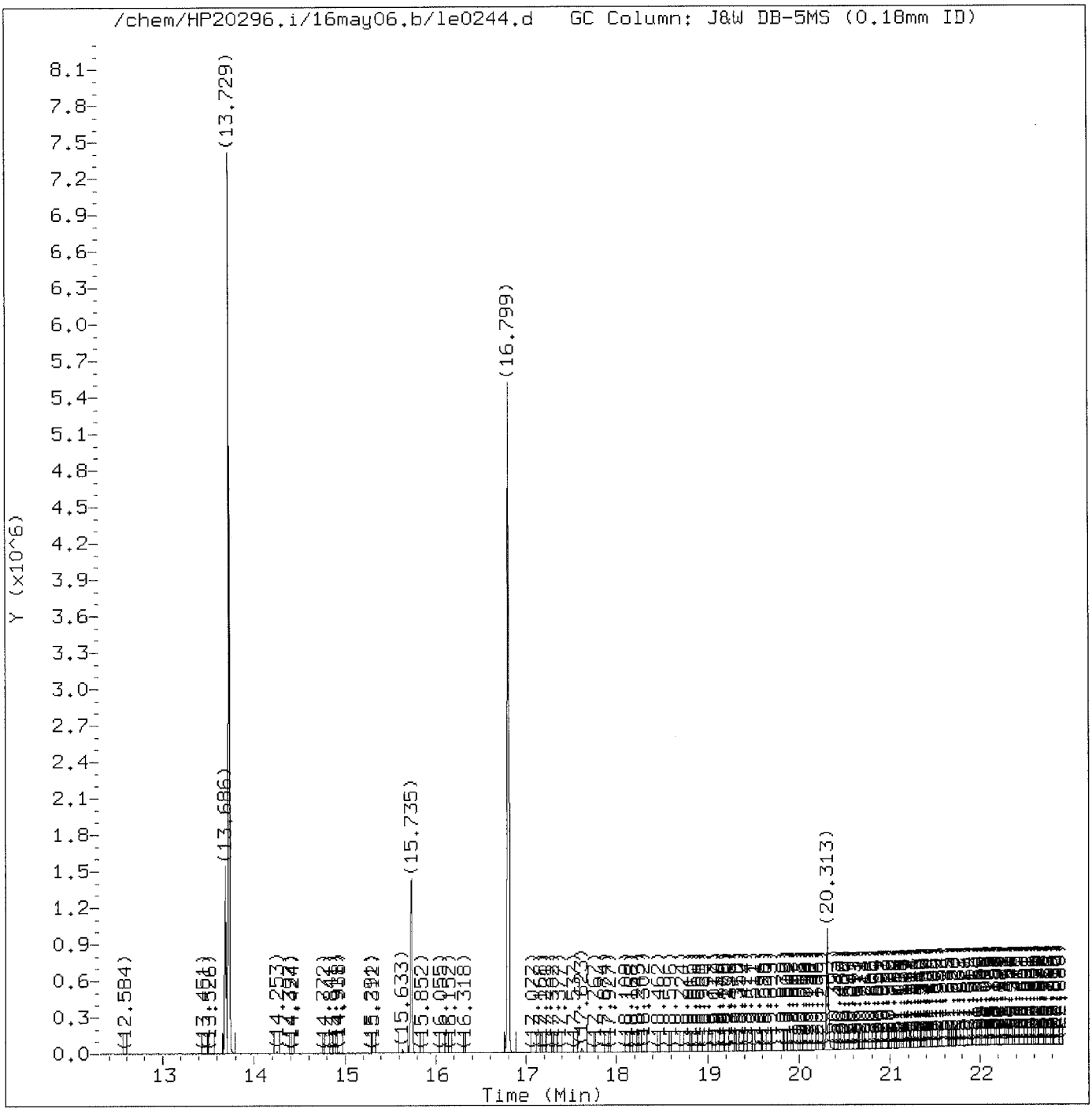
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0244.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVFAD1116

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on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0244.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:00 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD030 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	160301	5.000
65)*Naphthalene-d8	(2)	8.931	136	621332	5.000
113)*Acenaphthene-d10	(3)	11.761	164	344910	5.000
153)*Phenanthrene-d10	(4)	13.686	188	662585	5.000
162) Disulfoton	(4)	13.729	88	1763693	30.000
175)*Pyrene-d10	(5)	15.735	212	785672	5.000
189) Famphur	(5)	16.804	218	1963135	30.000
213)*Perylene-d12	(6)	20.313	264	521376	5.000

* = Compound is an internal standard.

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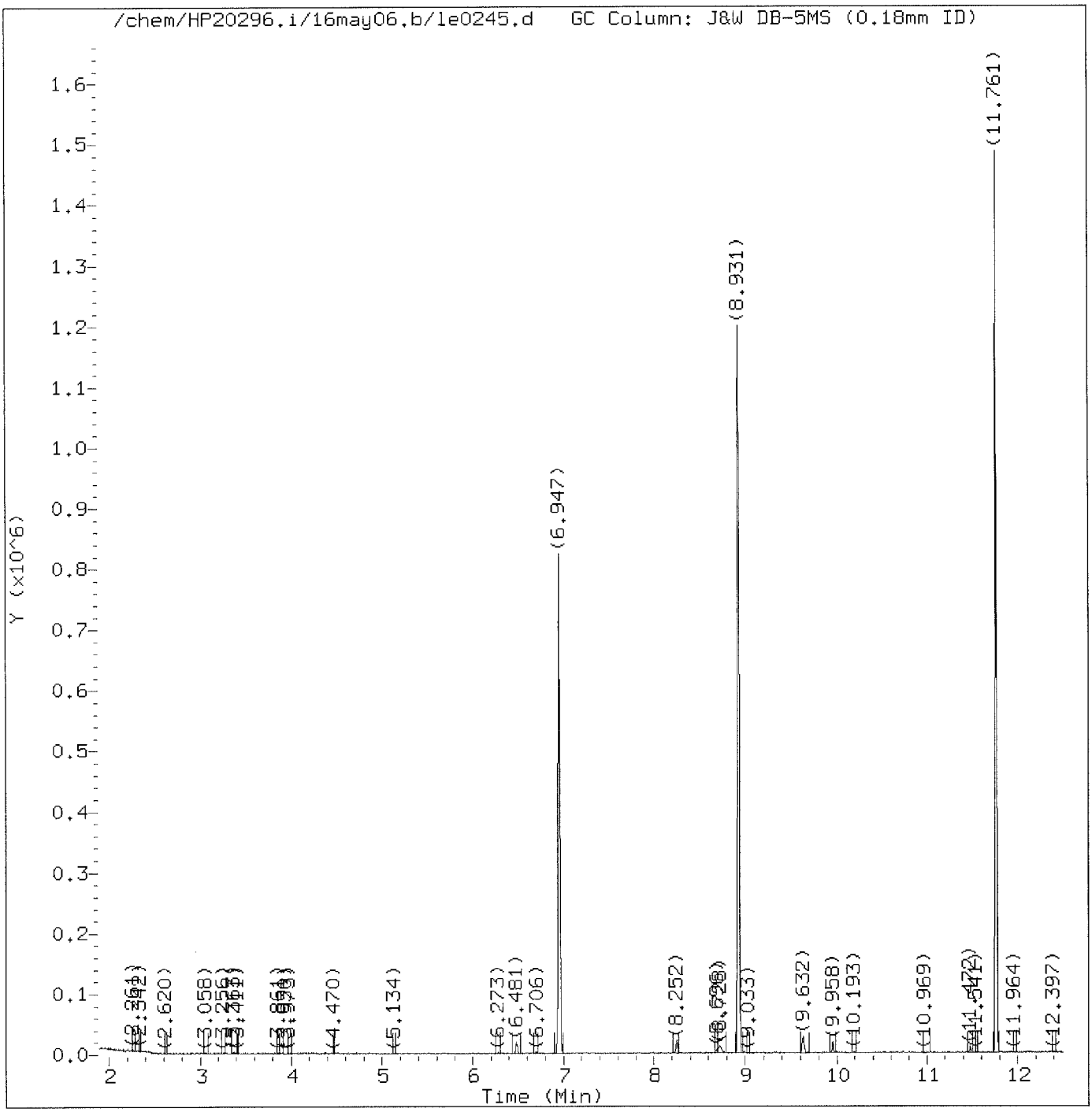
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

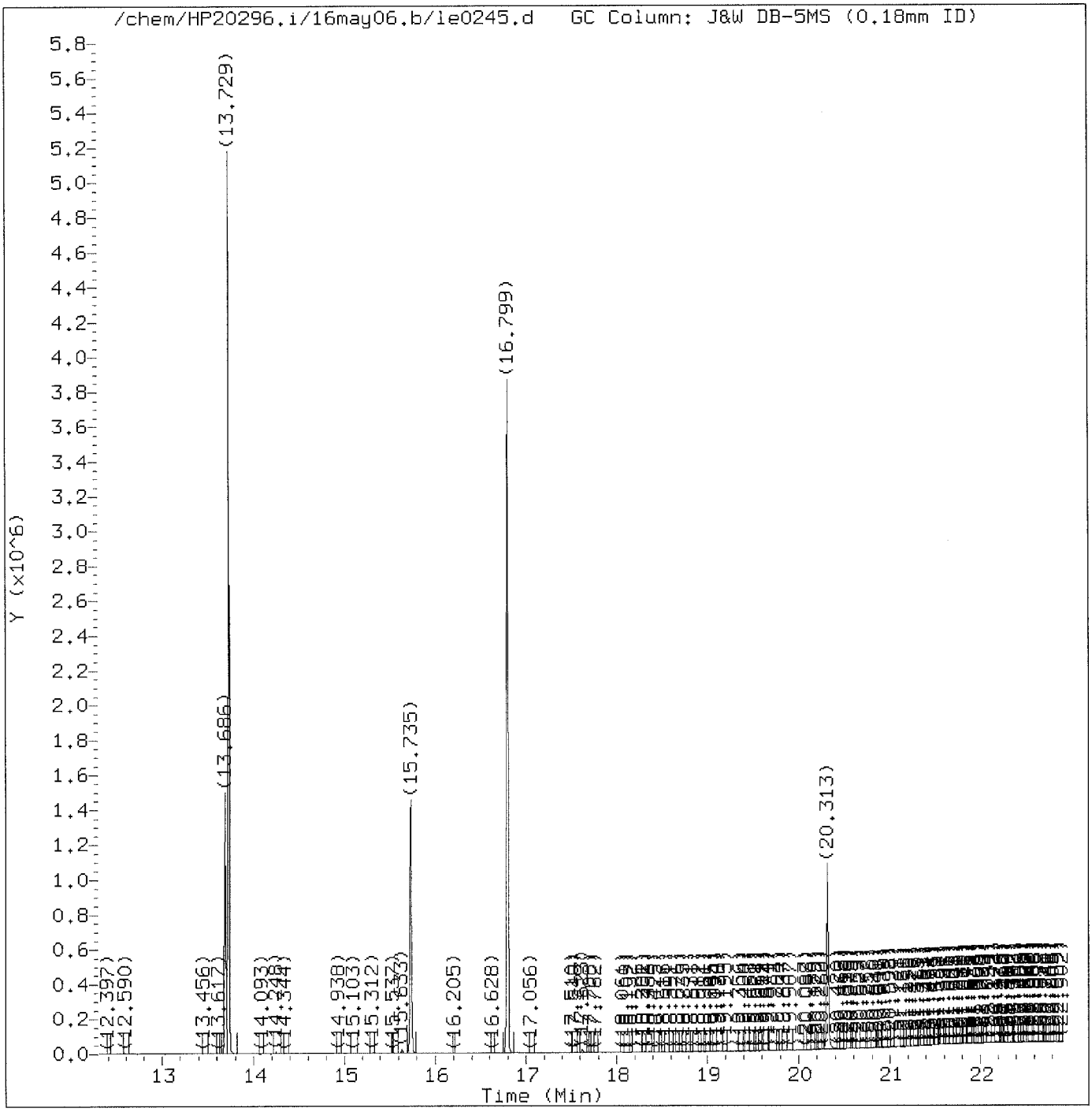
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0245.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0245.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVFAD1116

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on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0245.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD020 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	157549	5.000
65)*Naphthalene-d8	(2)	8.931	136	608972	5.000
113)*Acenaphthene-d10	(3)	11.761	164	341077	5.000
153)*Phenanthrene-d10	(4)	13.686	188	661969	5.000
162) Disulfoton	(4)	13.729	88	1117180	19.498
175)*Pyrene-d10	(5)	15.735	212	770735	5.000
189) Famphur	(5)	16.799	218	1211998	19.424
213)*Perylene-d12	(6)	20.313	264	520334	5.000

* = Compound is an internal standard.

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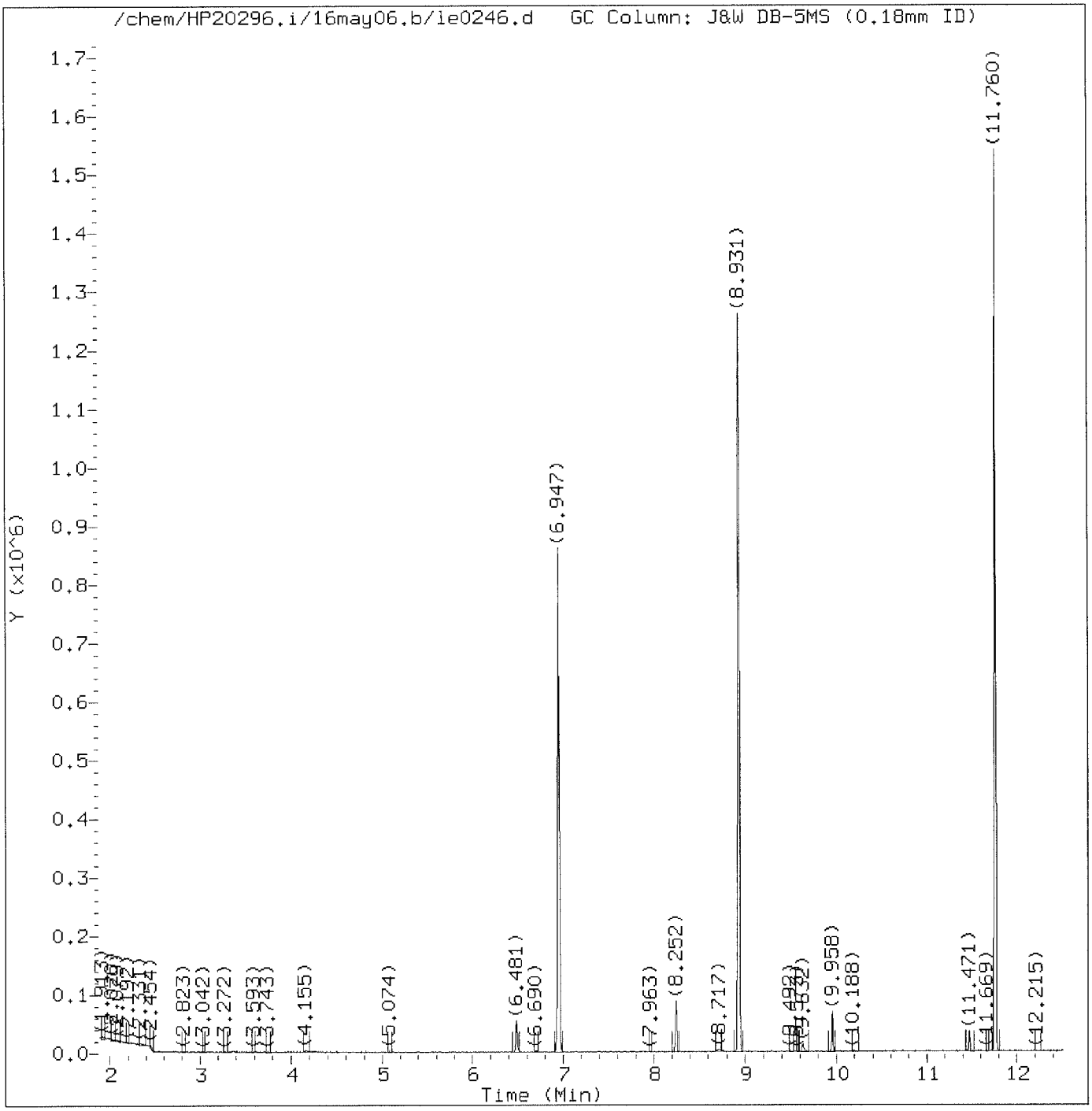
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

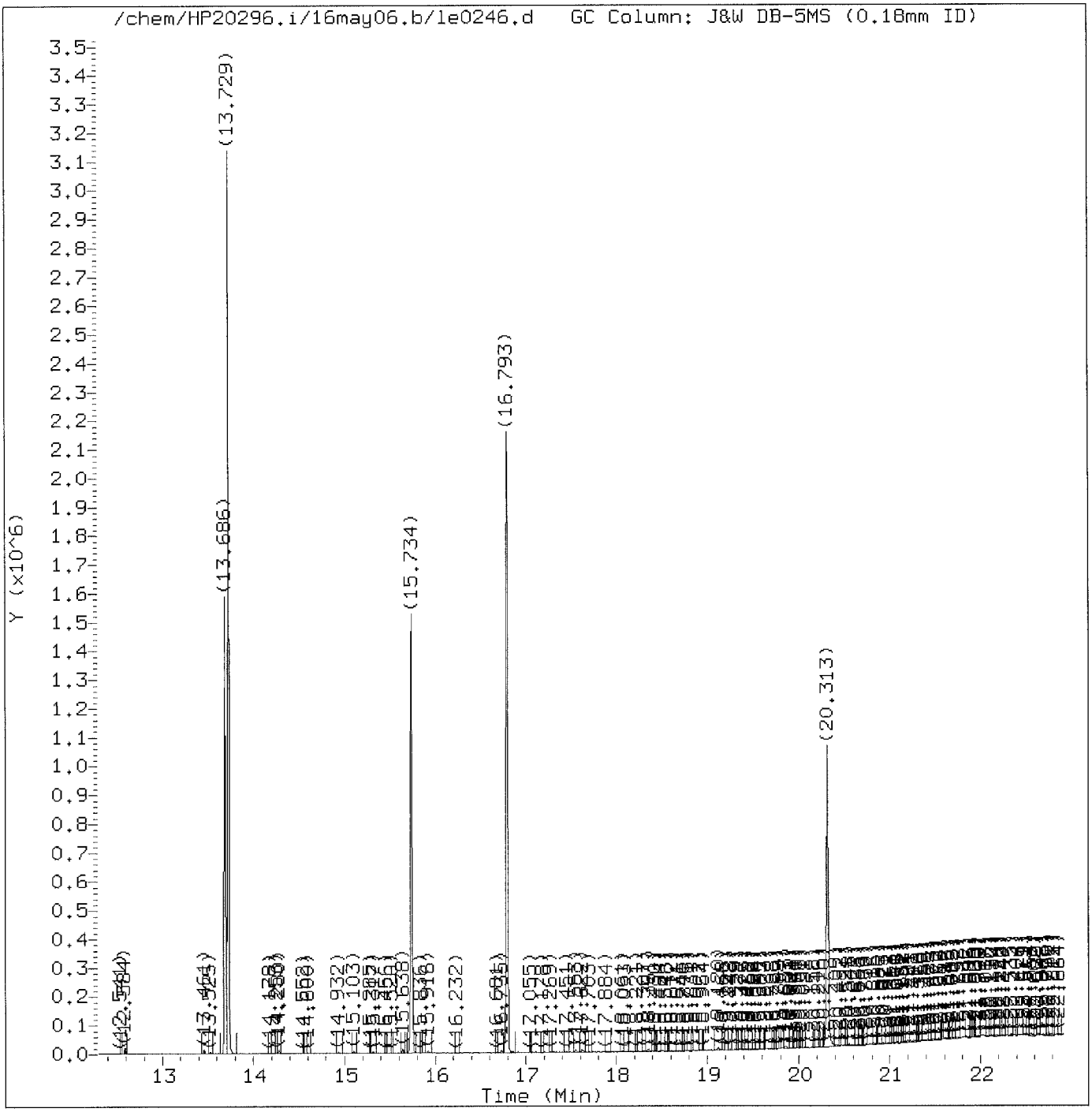
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0246.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0246.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

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on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0246.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 14:56 Analyst ID: hbz01996

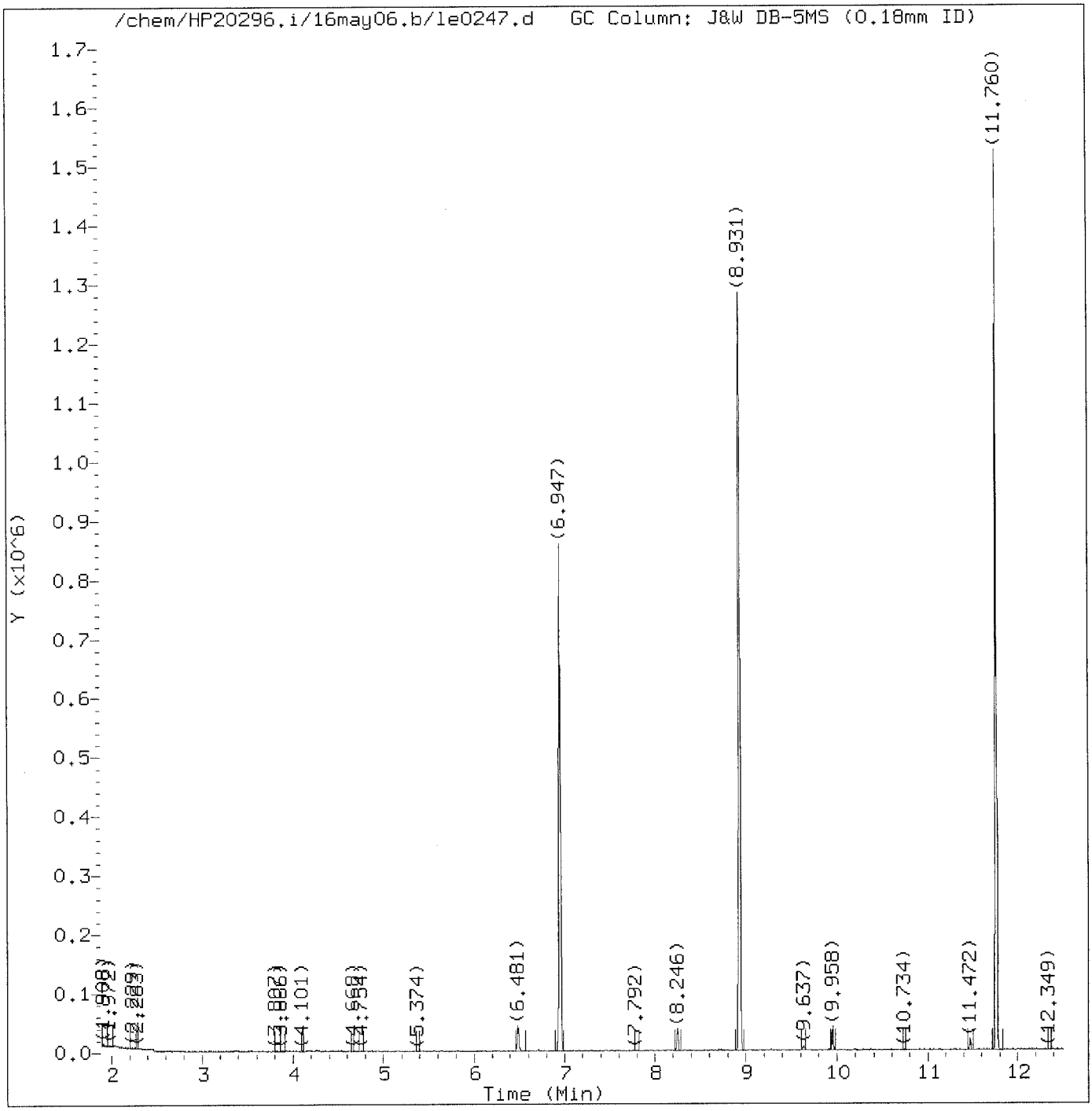
Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	164045	5.000
65)*Naphthalene-d8	(2)	8.931	136	634678	5.000
113)*Acenaphthene-d10	(3)	11.760	164	354474	5.000
153)*Phenanthrene-d10	(4)	13.686	188	682403	5.000
162) Disulfoton	(4)	13.729	88	664618	11.639
175)*Pyrene-d10	(5)	15.734	212	788902	5.000
189) Famphur	(5)	16.793	218	721758	11.674
213)*Perylene-d12	(6)	20.313	264	529342	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

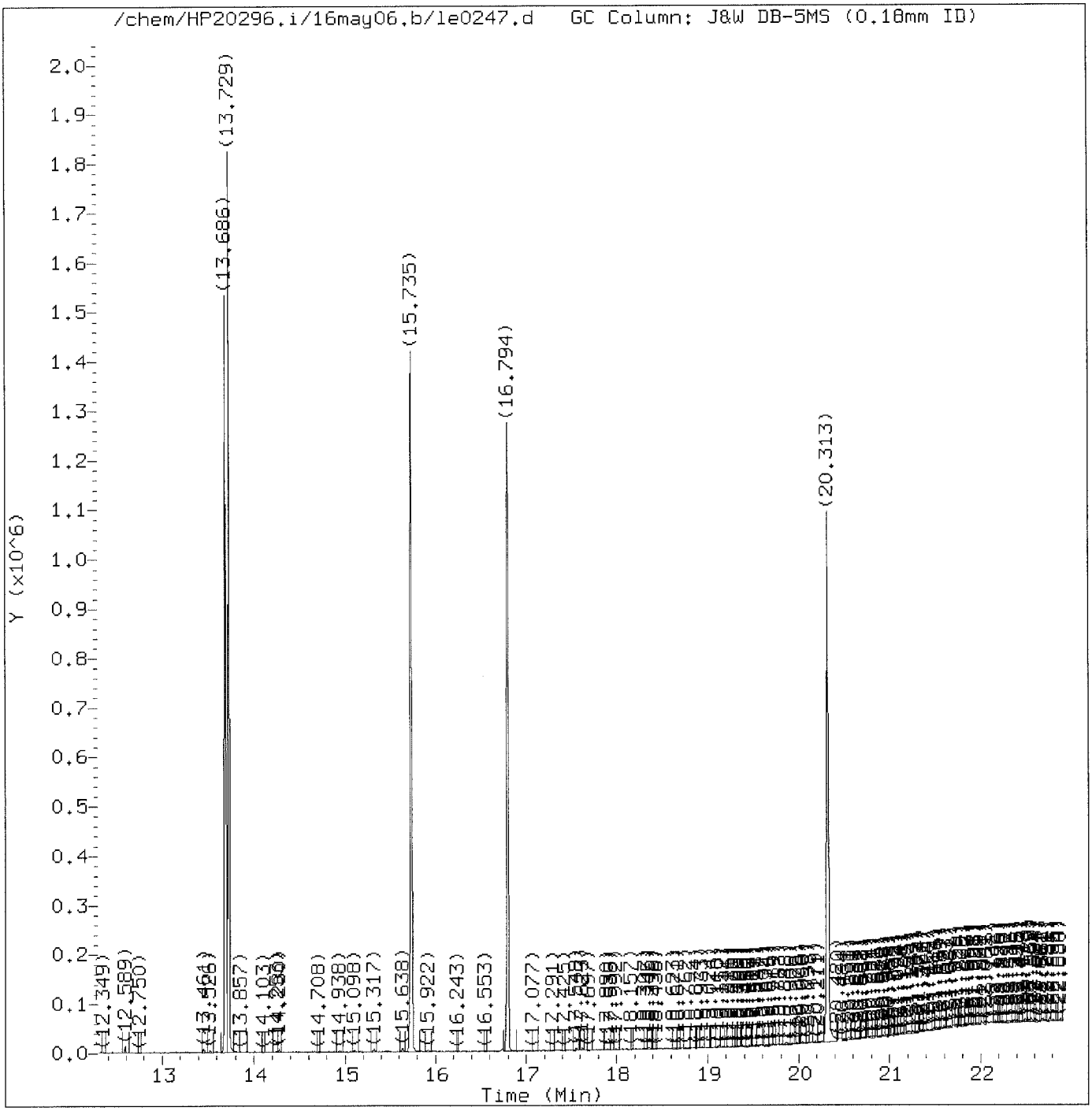
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0247.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0247.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0247.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:25 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 16:06
Date, time and analyst ID of latest file update: 06-May-2016 16:06 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	165963	5.000
65)*Naphthalene-d8	(2)	8.931	136	644022	5.000
113)*Acenaphthene-d10	(3)	11.760	164	357928	5.000
153)*Phenanthrene-d10	(4)	13.691	188	674239	5.000
162) Disulfoton	(4)	13.729	88	371041	6.786
175)*Pyrene-d10	(5)	15.735	212	775600	5.000
189) Famphur	(5)	16.794	218	388301	6.634
213)*Perylene-d12	(6)	20.313	264	522952	5.000

* = Compound is an internal standard.

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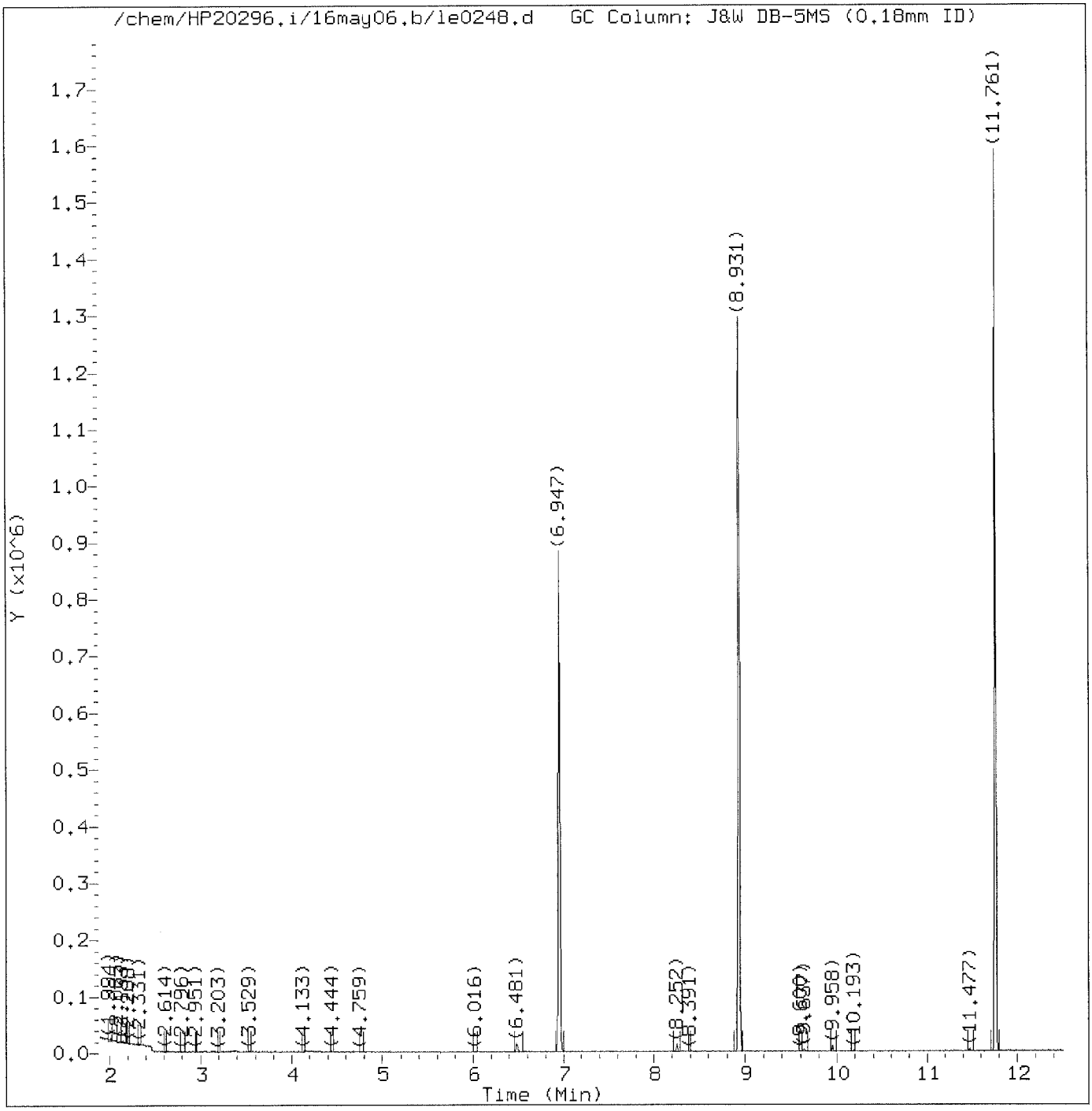
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

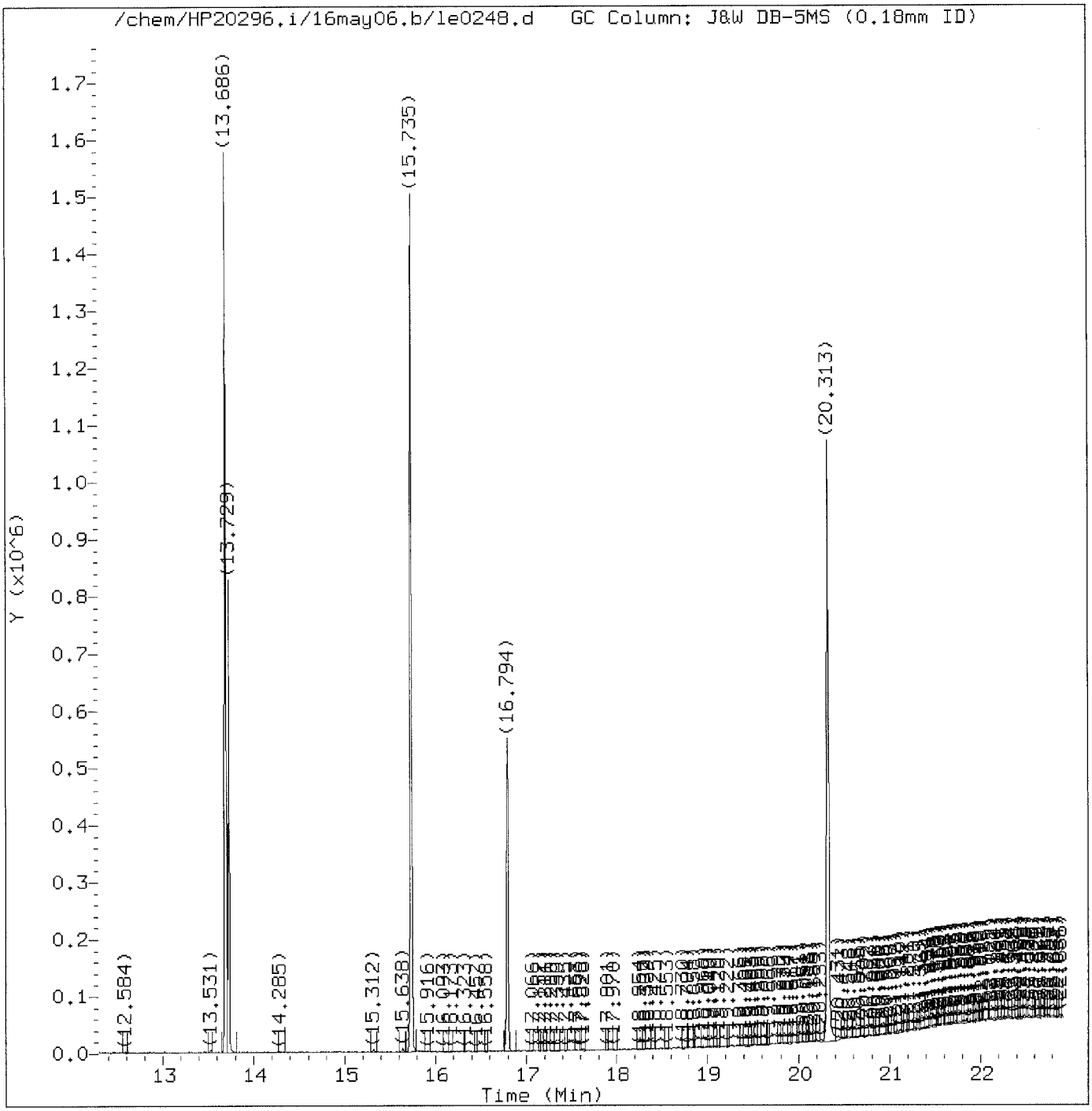
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0248.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:01
Date, time and analyst ID of latest file update: 06-May-2016 17:01 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0248.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:53 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:01
Date, time and analyst ID of latest file update: 06-May-2016 17:01 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/1e0248.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 15:53 Analyst ID: hbz01996

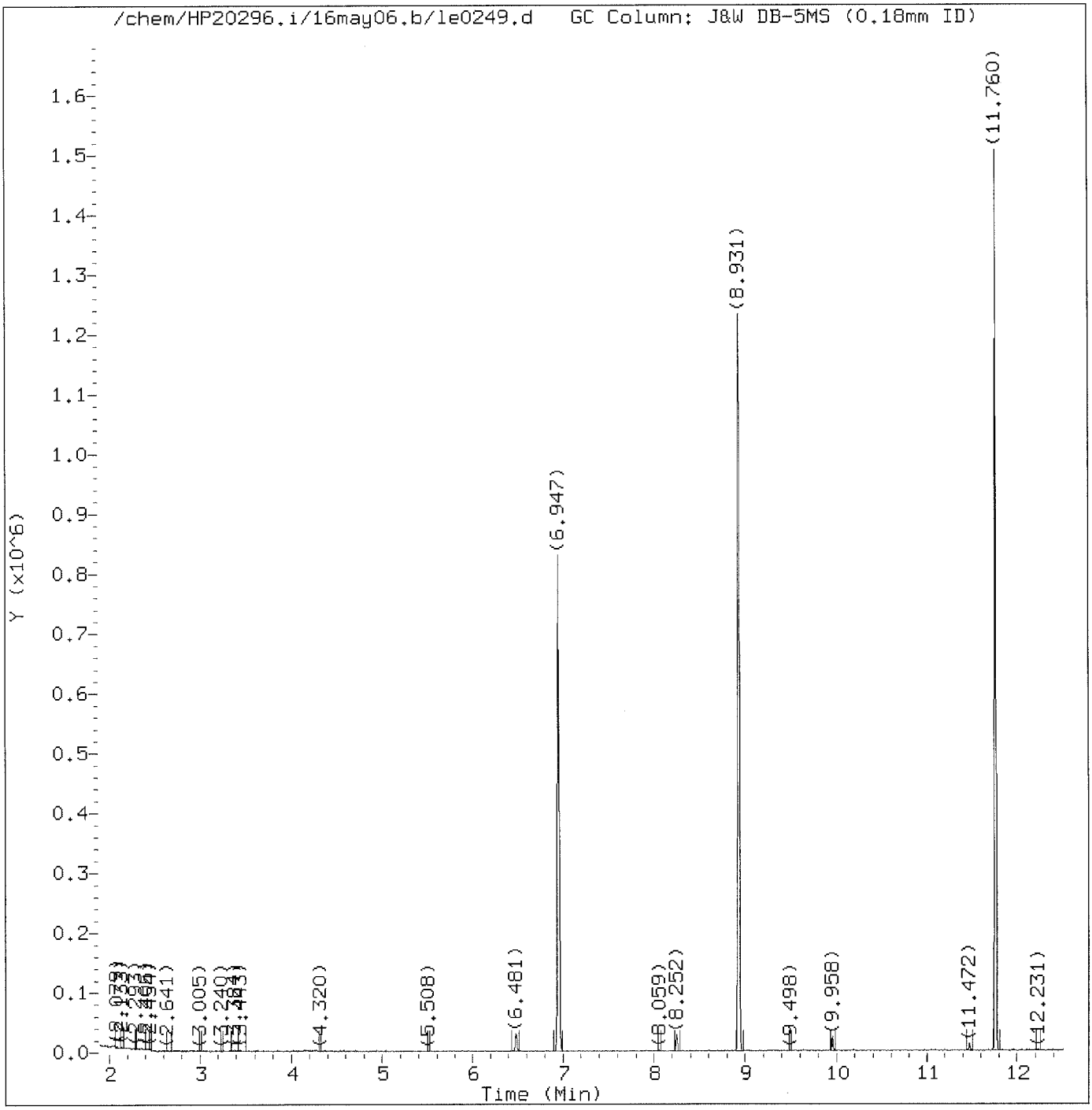
Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:01
Date, time and analyst ID of latest file update: 06-May-2016 17:01 ceb05247

Sample Name: SSTD3.75 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	171731	5.000
65)*Naphthalene-d8	(2)	8.931	136	651673	5.000
113)*Acenaphthene-d10	(3)	11.761	164	364931	5.000
153)*Phenanthrene-d10	(4)	13.686	188	694791	5.000
162) Disulfoton	(4)	13.729	88	164112	3.244
175)*Pyrene-d10	(5)	15.735	212	791790	5.000
189) Famphur	(5)	16.794	218	169534	3.186
213)*Perylene-d12	(6)	20.313	264	535687	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

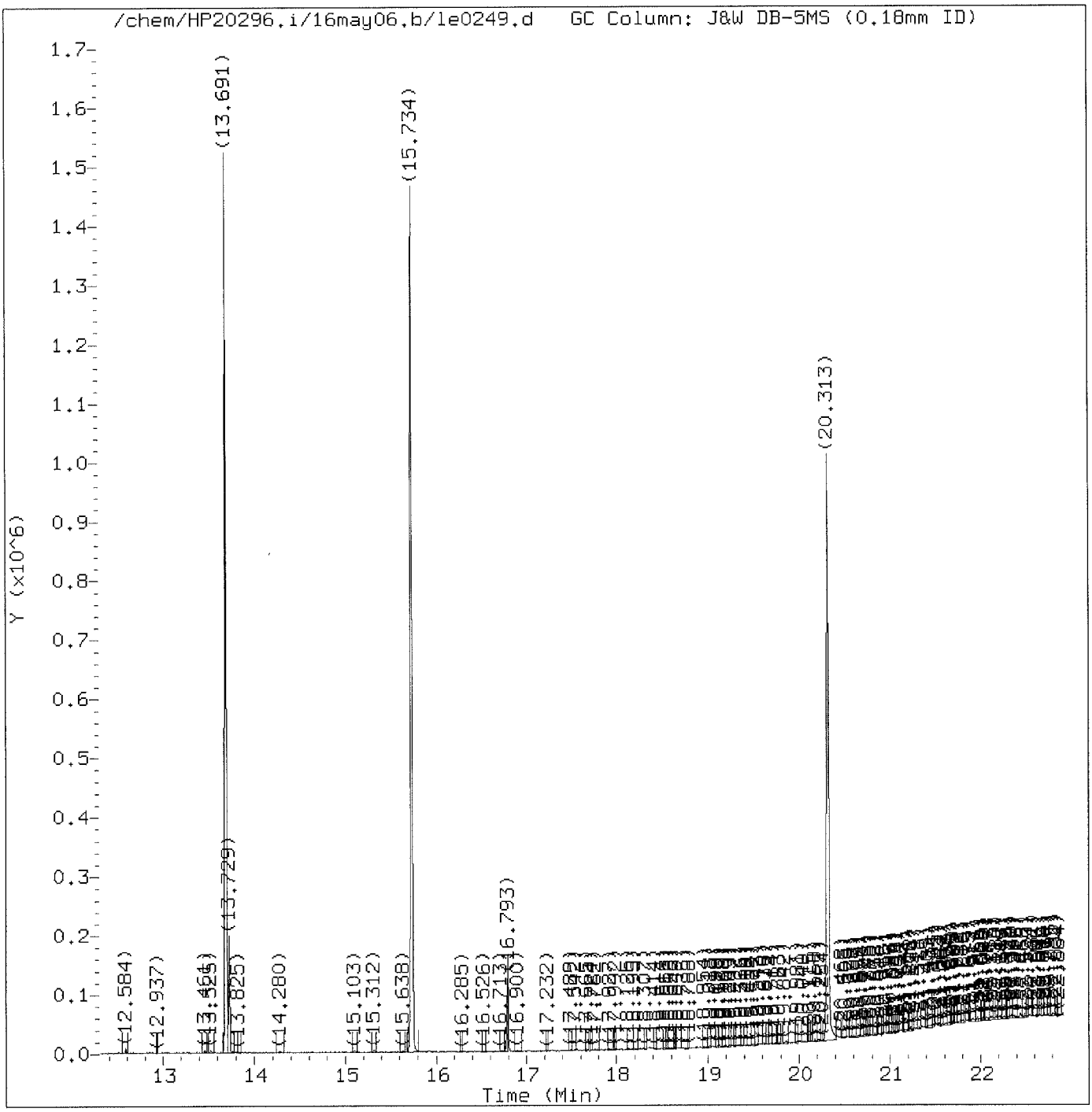
Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0249.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 16:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:00
Date, time and analyst ID of latest file update: 06-May-2016 17:00 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0249.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 16:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:00
Date, time and analyst ID of latest file update: 06-May-2016 17:00 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06.b/le0249.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 16:21 Analyst ID: hbz01996

Method used: /chem/HP20296.i/16may06.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 17:00
Date, time and analyst ID of latest file update: 06-May-2016 17:00 ceb05247

Sample Name: SSTD1.25 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	160549	5.000
65)*Naphthalene-d8	(2)	8.931	136	623385	5.000
113)*Acenaphthene-d10	(3)	11.760	164	354009	5.000
153)*Phenanthrene-d10	(4)	13.691	188	678536	5.000
162) Disulfoton	(4)	13.729	88	41932	0.827
175)*Pyrene-d10	(5)	15.734	212	772674	5.000
189) Famphur	(5)	16.793	218	42706	0.799
213)*Perylene-d12	(6)	20.313	264	518091	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 17:02.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06a.b/le0260a.d

Page 1

Date : 06-MAY-2016 17:48

Client ID: DFTPP12.5

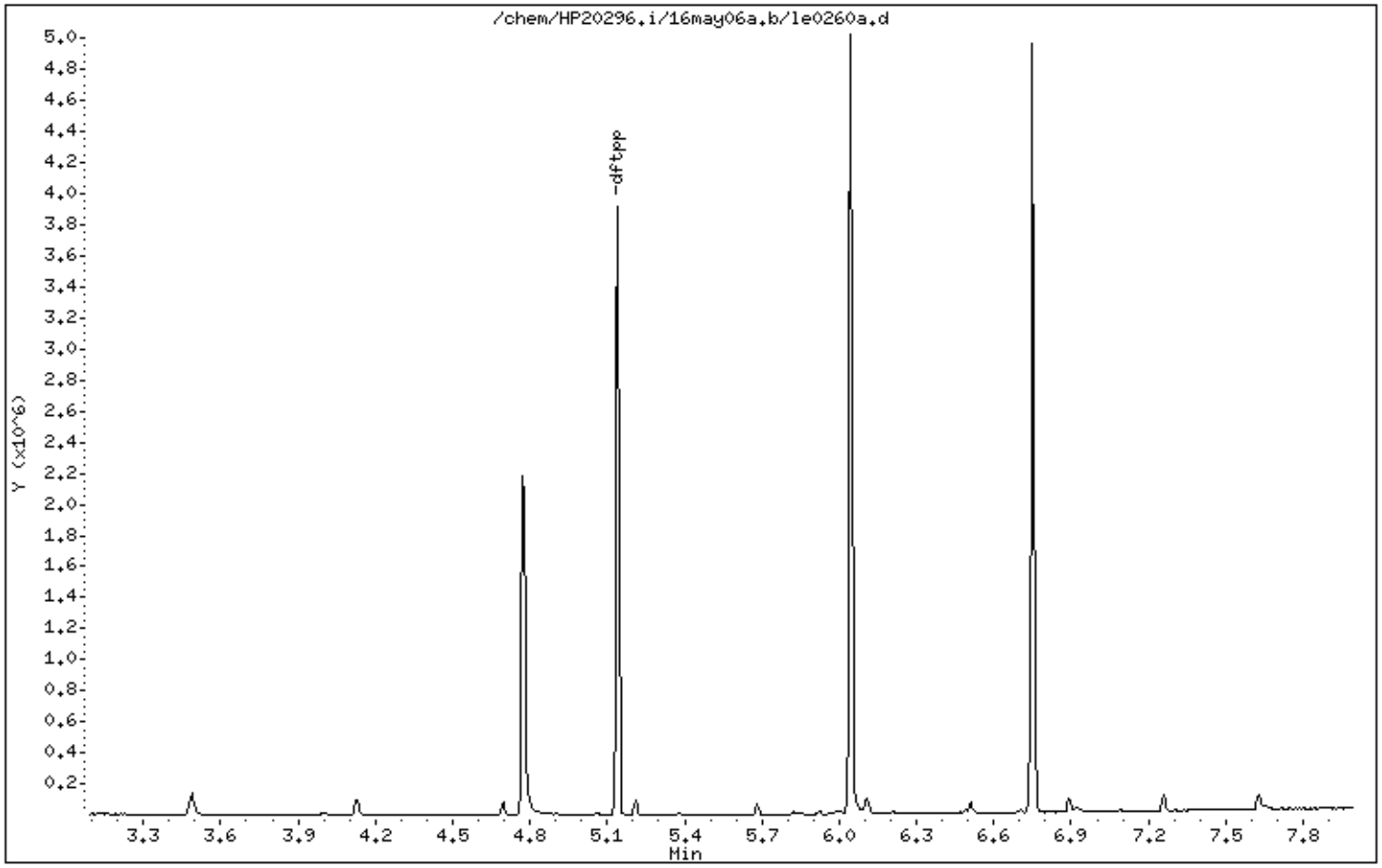
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may06a.b/le0260a.d

Date : 06-MAY-2016 17:48

Client ID: DFTPP12.5

Instrument: HP20296.i

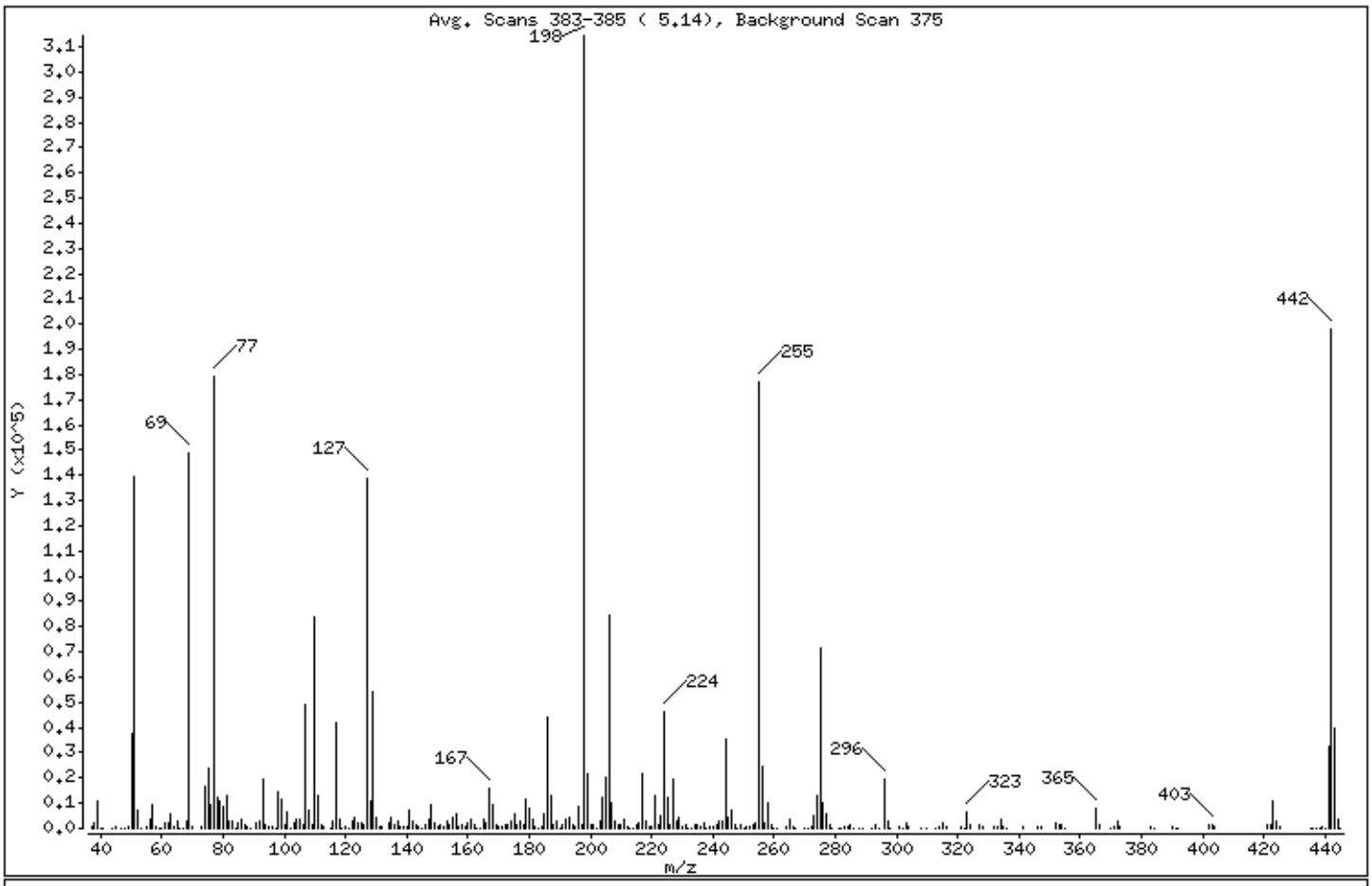
Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.41
68	Less than 2.00% of mass 69	0.89 (1.88)
69	Mass 69 relative abundance	47.43
70	Less than 2.00% of mass 69	0.25 (0.53)
127	10.00 - 80.00% of mass 198	44.10
197	Less than 2.00% of mass 198	0.46
199	5.00 - 9.00% of mass 198	6.99
275	10.00 - 60.00% of mass 198	22.71
365	Greater than 1.00% of mass 198	2.55
441	0.01 - 24.00% of mass 442	10.24 (16.25)
442	50.00 - 99.99% of mass 198	63.03
443	15.00 - 24.00% of mass 442	12.62 (20.02)

Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Date : 06-MAY-2016 17:48

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: le0260a.d
Spectrum: Avg. Scans 383-385 (5,14), Background Scan 375
Location of Maximum: 198.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	586	121.00	133	198.00	314432	278.00	1106
38.00	2226	122.00	3051	199.00	21976	279.00	246
39.00	10513	123.00	4154	200.00	1773	281.00	93
40.00	152	124.00	1917	201.00	1439	282.00	160
41.00	325	125.00	2063	202.00	199	283.00	460
44.00	112	126.00	1244	203.00	2733	284.00	565
45.00	380	127.00	138624	204.00	12230	285.00	1091
47.00	97	128.00	11046	205.00	20016	286.00	193
48.00	115	129.00	54008	206.00	84392	288.00	92
49.00	960	130.00	4130	207.00	10041	289.00	188
50.00	37248	131.00	881	208.00	2994	292.00	246
51.00	139584	132.00	472	209.00	1180	293.00	1271
52.00	6927	134.00	1839	210.00	1741	294.00	222
53.00	267	135.00	4587	211.00	3351	296.00	19592
55.00	947	136.00	1797	212.00	565	297.00	2549
56.00	3704	137.00	2566	213.00	149	298.00	87
57.00	9384	138.00	428	214.00	169	301.00	402
58.00	498	139.00	460	215.00	1139	302.00	305
59.00	190	140.00	770	216.00	2490	303.00	2332
60.00	106	141.00	7208	217.00	21736	304.00	773
61.00	2005	142.00	2542	218.00	2976	308.00	338
62.00	1867	143.00	1329	219.00	418	310.00	86
63.00	6102	144.00	364	220.00	578	313.00	225
64.00	906	145.00	358	221.00	12949	314.00	1037
65.00	2740	146.00	1562	222.00	1195	315.00	2361
66.00	188	147.00	3613	223.00	5061	316.00	1050
67.00	280	148.00	9444	224.00	46480	321.00	526
68.00	2803	149.00	2185	225.00	12015	322.00	171
69.00	149120	150.00	415	226.00	1302	323.00	6188
70.00	789	151.00	1086	227.00	19768	324.00	1126
73.00	931	152.00	489	228.00	2637	327.00	1103
74.00	16464	153.00	2619	229.00	4195	328.00	657
75.00	24184	154.00	1770	230.00	564	332.00	373
76.00	9444	155.00	4148	231.00	1743	333.00	602
77.00	179136	156.00	5818	232.00	279	334.00	3612

Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Date : 06-MAY-2016 17:48

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: le0260a.d
Spectrum: Avg. Scans 383-385 (5,14), Background Scan 375
Location of Maximum: 198.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	12302	157.00	886	233.00	272	335.00	837
79.00	11149	158.00	1302	234.00	1198	336.00	96
80.00	8419	159.00	1037	235.00	1485	341.00	800
81.00	12696	160.00	2303	236.00	1083	346.00	1069
82.00	3195	161.00	3661	237.00	1954	347.00	382
83.00	2977	162.00	1120	238.00	109	352.00	1897
84.00	278	163.00	198	239.00	653	353.00	1342
85.00	2125	164.00	359	240.00	510	354.00	1637
86.00	3644	165.00	3352	241.00	1178	355.00	310
87.00	1620	166.00	2221	242.00	2677	365.00	8023
88.00	470	167.00	16005	243.00	2846	366.00	1187
89.00	245	168.00	9335	244.00	35200	370.00	93
91.00	2319	169.00	1533	245.00	4412	371.00	502
92.00	3030	170.00	651	246.00	7175	372.00	2850
93.00	19192	171.00	709	247.00	1212	373.00	610
94.00	1365	172.00	1618	248.00	247	383.00	627
95.00	381	173.00	1784	249.00	1333	384.00	97
96.00	1059	174.00	3203	250.00	139	390.00	399
97.00	250	175.00	5811	251.00	462	391.00	231
98.00	14539	176.00	1593	252.00	558	392.00	260
99.00	11756	177.00	2812	253.00	1406	402.00	1265
100.00	1253	178.00	1273	254.00	2169	403.00	1430
101.00	6233	179.00	11519	255.00	177280	404.00	564
102.00	349	180.00	7599	256.00	24240	421.00	1393
103.00	2146	181.00	3643	257.00	2252	422.00	1282
104.00	3950	182.00	574	258.00	10219	423.00	10719
105.00	3774	183.00	172	259.00	1620	424.00	2709
106.00	1582	184.00	1059	260.00	262	425.00	514
107.00	49072	185.00	5924	261.00	184	435.00	123
108.00	7062	186.00	44072	264.00	399	436.00	232
109.00	1298	187.00	12671	265.00	3934	437.00	202
110.00	83784	188.00	1454	266.00	582	438.00	341
111.00	12819	189.00	3046	267.00	87	439.00	490
112.00	1366	190.00	349	270.00	99	440.00	340
113.00	635	191.00	1113	271.00	145	441.00	32200

Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Date : 06-MAY-2016 17:48

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

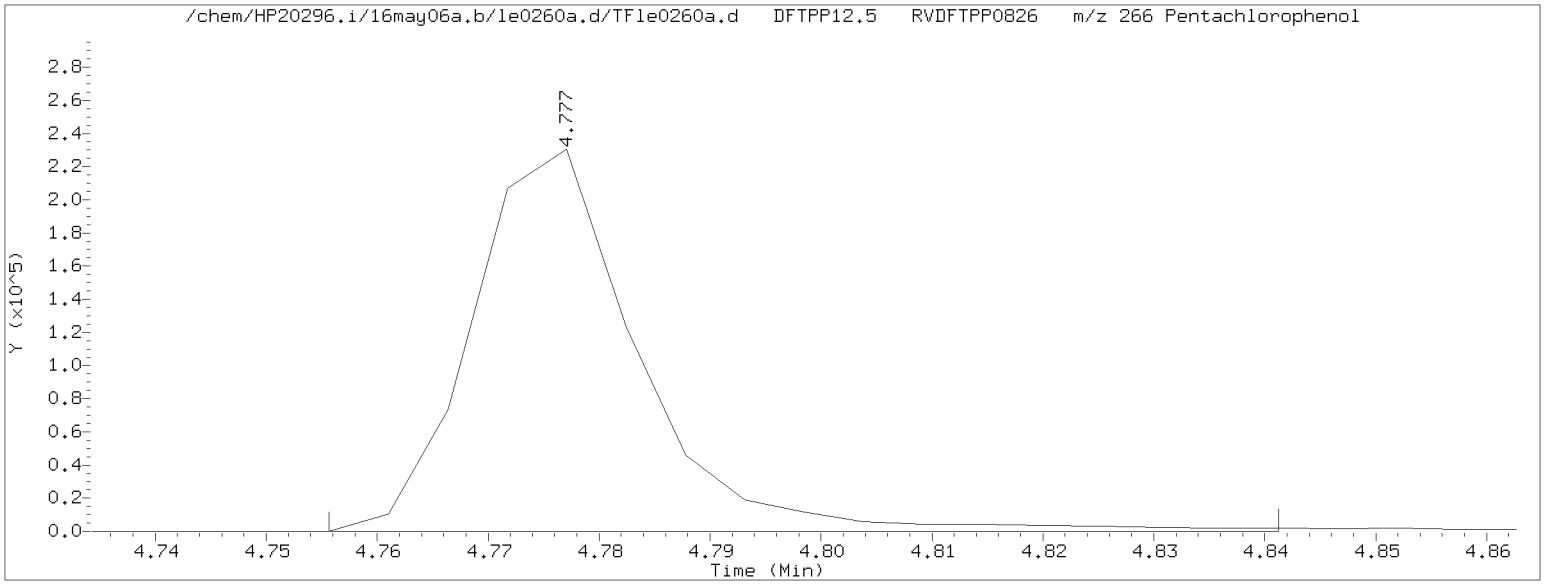
Data File: le0260a.d
Spectrum: Avg. Scans 383-385 (5.14), Background Scan 375
Location of Maximum: 198.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	173	192.00	3557	272.00	704	442.00	198144
116.00	2748	193.00	4237	273.00	5273	443.00	39672
117.00	41912	194.00	1135	274.00	13001	444.00	3498
118.00	3734	195.00	649	275.00	71408	445.00	194
119.00	281	196.00	9004	276.00	10202		
120.00	412	197.00	1462	277.00	5868		

Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

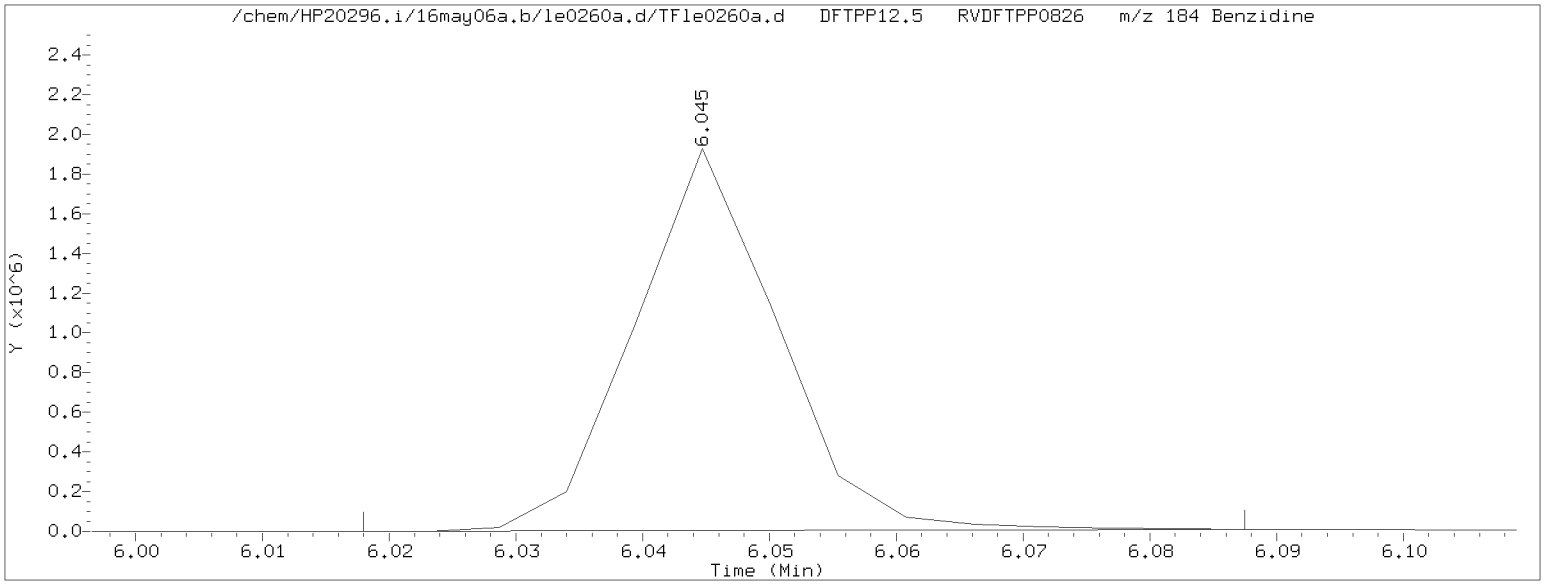
Instrument ID: HP20296.i Injection Date: 06-MAY-2016 17:48 Operator: ceb05247



Pentachlorophenol EICP peak height = 230592 EICP peak height at 10% = 23059 Pentachlorophenol EICP area = 239874

Pentachlorophenol EICP peak apex (min.) = 4.777
RT at 10% of front half of EICP (min.) = 4.762 'Front' peak width (min.) = 0.0149333333
RT at 10% of back half of EICP (min.) = 4.792 'Tailing' peak width (min.) = 0.0151500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0151500000}{0.0149333333} = 1.015$$



Benzidine EICP peak height = 1926076 EICP peak height at 10% = 192608 Benzidine EICP area = 1511136

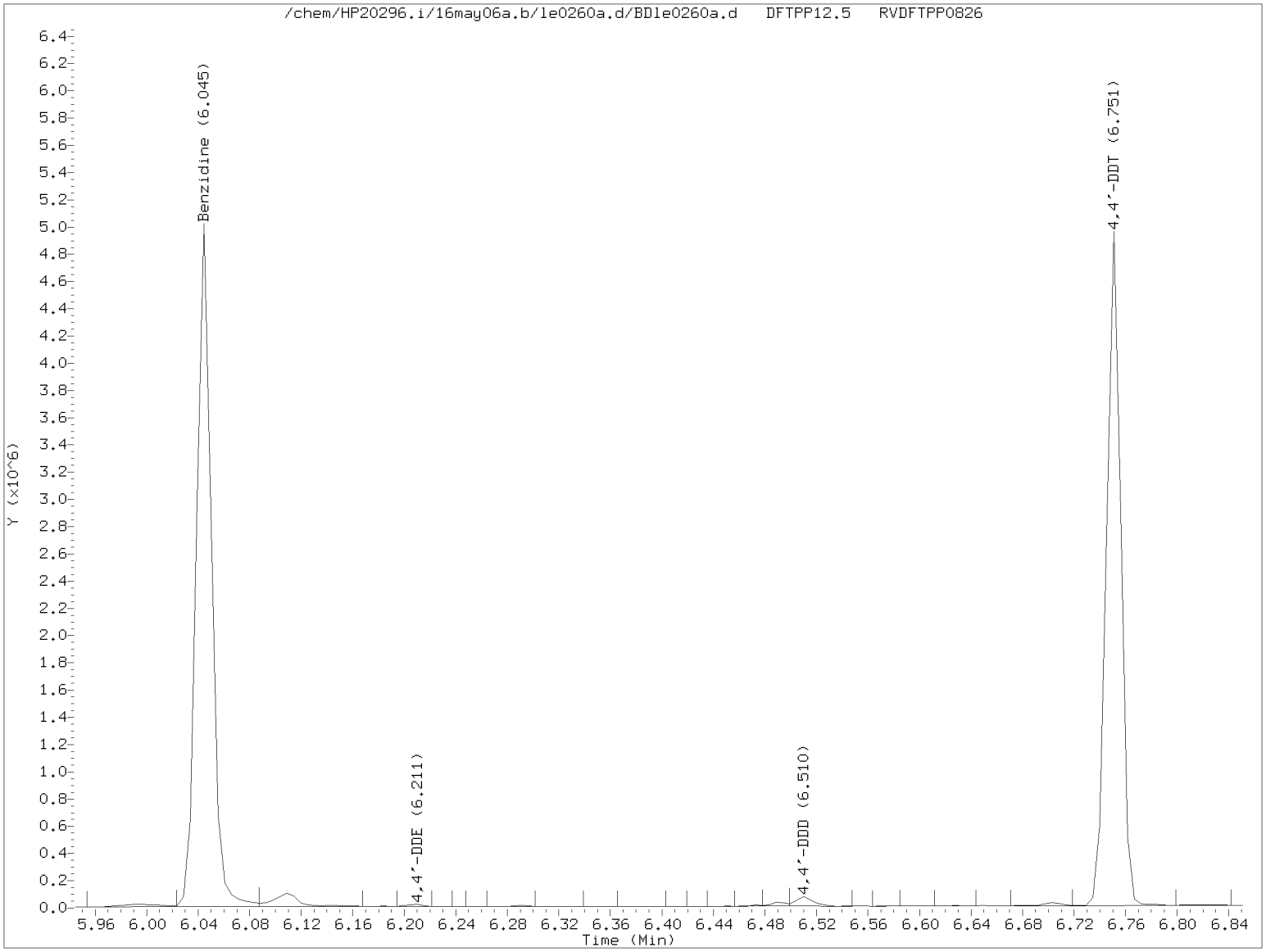
Benzidine EICP peak apex (min.) = 6.045
RT at 10% of front half of EICP (min.) = 6.034 'Front' peak width (min.) = 0.0108500000
RT at 10% of back half of EICP (min.) = 6.058 'Tailing' peak width (min.) = 0.0128000000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0128000000}{0.0108500000} = 1.180$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

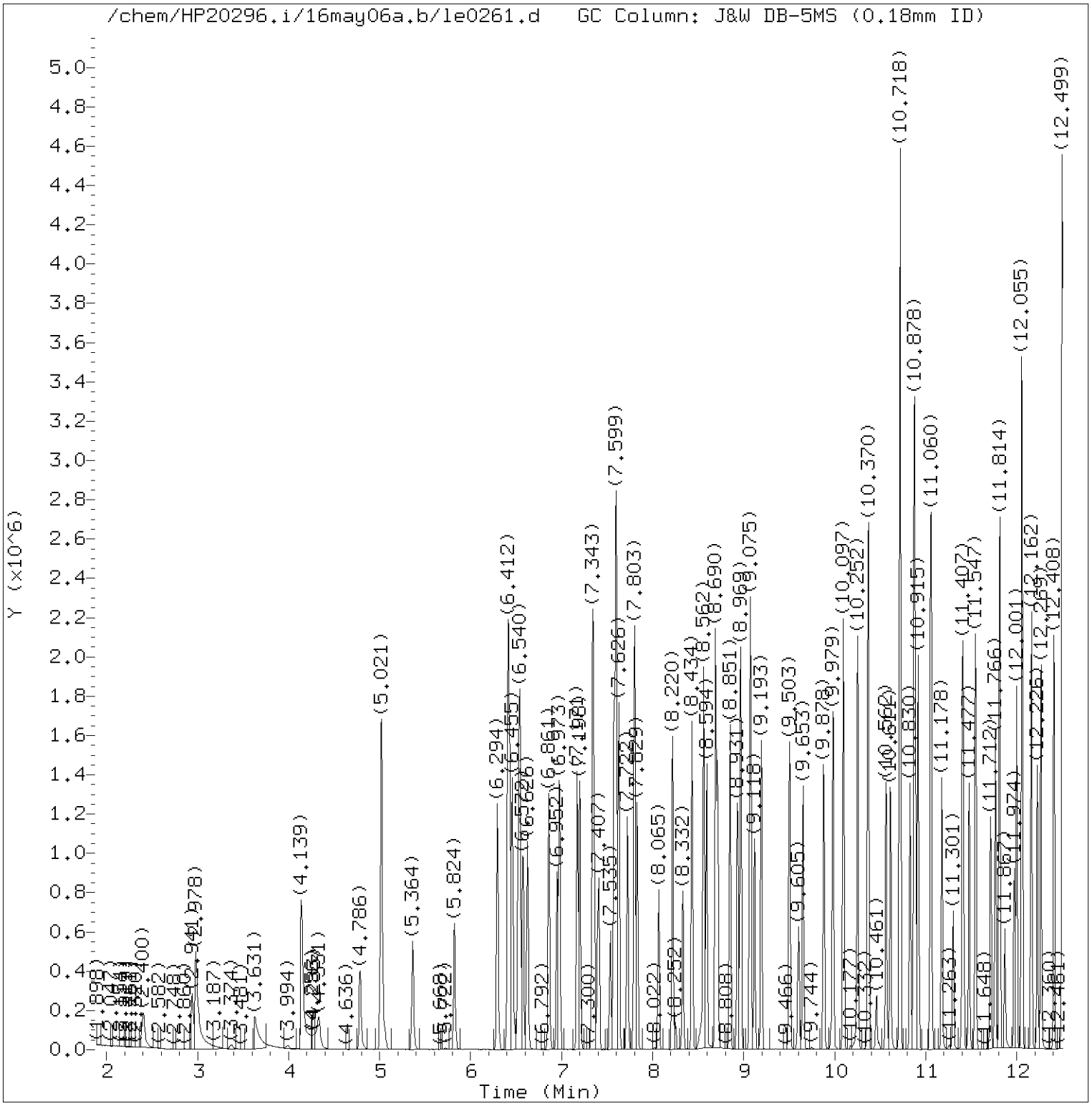
Instrument ID: HP20296.i Injection Date: 06-MAY-2016 17:48 Operator: ceb05247



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{12930 + 68518}{12930 + 68518 + 3791843} \times 100 = 2.1$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

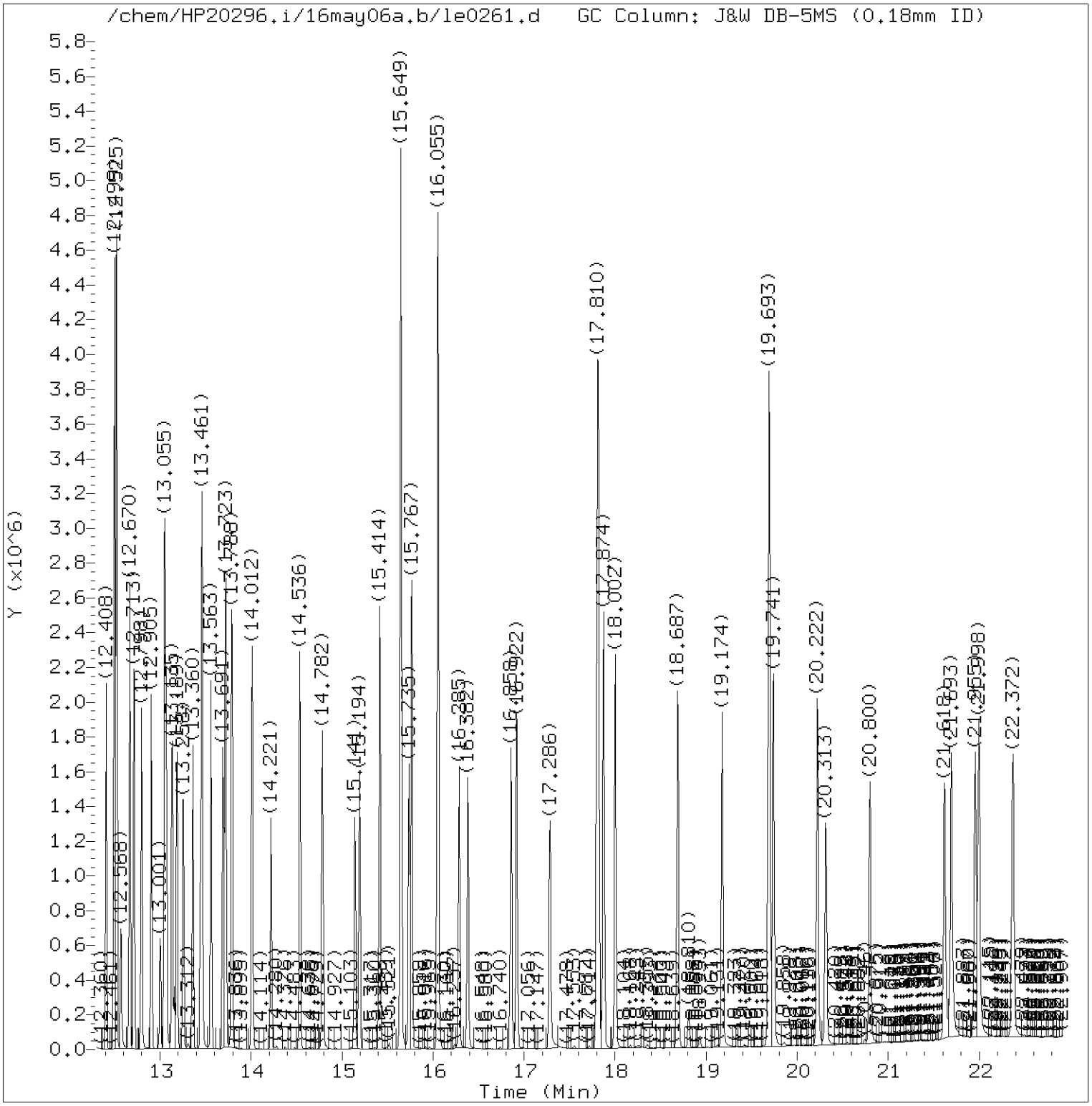
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.400	88	181921	7.318
4) N-Nitrosodimethylamine	(1)	2.941	74	284116	7.358
5) Pyridine	(1)	2.978	79	470450	7.126
7) 2-Picoline	(1)	4.139	93	501446	7.397
8) N-Nitrosomethylethylamine	(1)	4.331	88	197562	7.335
9) Methyl methanesulfonate	(1)	4.786	80	229525	7.285
11)$2-Fluorophenol	(1)	5.021	112	762082	14.958
13) N-Nitrosodiethylamine	(1)	5.364	102	190400	7.560
42) Total Cresols	(1)			814627	15.598
15) Ethyl methanesulfonate	(1)	5.824	109	198503	7.566
16) Benzaldehyde	(1)	6.294	77	404391	7.472
17)$Phenol-d6	(1)	6.412	99	1022641	15.006
18) Phenol	(1)	6.433	94	609887	7.562
19) Aniline	(1)	6.455	93	723562	7.608
20) a-methylstyrene	(1)	6.540	118	402908	7.647
22) bis(2-Chloroethyl)ether	(1)	6.578	93	450751	7.638
23) 2-Chlorophenol	(1)	6.626	128	355593	7.648
24) 1,3-Dichlorobenzene	(1)	6.861	146	401994	7.529
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	169197	5.000
26) 1,4-Dichlorobenzene	(1)	6.979	146	408404	7.586
27) Benzyl alcohol	(1)	7.171	108	265211	7.447
28) 1,2-Dichlorobenzene	(1)	7.198	146	387798	7.630
30) Indene	(1)	7.337	115	696559	7.585
31) 2-Methylphenol	(1)	7.353	108	379429	7.640
97) Isosafrole	(3)			300300	7.377
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.407	45	563229	7.505
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	563229	7.505
35) N-Nitrosopyrrolidine	(1)	7.535	100	198580	7.492
36) Acetophenone	(1)	7.578	105	619221	7.582
37) 4-Methylphenol	(1)	7.599	108	435198	7.959
38) N-Nitroso-di-n-propylamine	(1)	7.599	70	345361	7.503
39) N-Nitrosomorpholine	(1)	7.605	56	254854	7.417
40) o-Toluidine	(1)	7.626	106	692884	7.569
43) Hexachloroethane	(1)	7.722	117	172705	7.411
44)$Nitrobenzene-d5	(2)	7.803	82	962276	14.604
45) Nitrobenzene	(2)	7.829	77	508753	7.501
120) 2,4_2,6-Dinitrotoluenes	(3)			363457	14.989
48) N-Nitrosopiperidine	(2)	8.070	114	189658	7.552
50) Isophorone	(2)	8.220	82	865866	7.501
51) 2-Nitrophenol	(2)	8.332	139	150597	7.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.434	107	426738	7.582
57) O,O,O-Triethylphosphorothioate	(2)	8.562	198	201074	7.647
56) Benzoic acid	(2)	8.573	105	296292M	9.038
55) bis(2-Chloroethoxy)methane	(2)	8.594	93	548563	7.663
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.690	104	645907	7.610
60) 2,4-Dichlorophenol	(2)	8.712	162	309921	7.707
146) Diallate trans/cis	(4)			390906	7.373
62) 1,2,4-Trichlorobenzene	(2)	8.851	180	355496	7.637
65)*Naphthalene-d8	(2)	8.931	136	656070	5.000
66) Naphthalene	(2)	8.969	128	1052956	7.416
67) 4-Chloroaniline	(2)	9.070	127	442688	7.504
68) 2,6-Dichlorophenol	(2)	9.081	162	293958	7.664
69) Hexachloropropene	(2)	9.118	213	218447	7.407
71) Hexachlorobutadiene	(2)	9.193	225	223324	7.651
75) Quinoline	(2)	9.503	129	644039	7.396
76) Caprolactam	(2)	9.605	113	90676	7.089
77) N-Nitrosodi-n-butylamine	(2)	9.653	84	313204	6.875
80) 4-Chloro-3-methylphenol	(2)	9.878	107	357610	7.567
82) Safrole	(2)	9.985	162	273536	7.637
83) 2-Methylnaphthalene	(2)	10.097	142	705261	7.655
84) 1-Methylnaphthalene	(2)	10.252	142	654421	7.710
85) Hexachlorocyclopentadiene	(3)	10.364	237	196243	7.182
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.370	216	383702	7.602
88) cis-Isosafrole	(3)	10.461	162	48736	1.256
90) 2,4,6-Trichlorophenol	(3)	10.562	196	224231	7.549
92) 2,4,5-Trichlorophenol	(3)	10.616	196	246110	7.819
93)$2-Fluorobiphenyl	(3)	10.718	172	1617074	14.906
94) trans-Isosafrole	(3)	10.830	162	251564	6.122
95) 1,1'-Biphenyl	(3)	10.873	154	861245	7.481
96) 2-Chloronaphthalene	(3)	10.883	162	698369	7.493
98) 1-Chloronaphthalene	(3)	10.915	162	658027	7.541
99) Diphenyl ether	(3)	11.054	170	482048	7.559
100) 2-Nitroaniline	(3)	11.060	138	184248	7.379
104) 1,4-Naphthoquinone	(3)	11.178	158	261357	7.294
105) 1,4-Dinitrobenzene	(3)	11.301	168	84982	6.785
106) Dimethylphthalate	(3)	11.402	163	761145	7.543
107) 1,3-Dinitrobenzene	(3)	11.413	168	100305	6.988
108) 2,6-Dinitrotoluene	(3)	11.477	165	159215	7.822
109) Acenaphthylene	(3)	11.547	152	1033664	7.768
112) 3-Nitroaniline	(3)	11.712	138	163791	7.308

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.766	164	383667	5.000
114) Acenaphthene	(3)	11.814	153	698770	7.458
115) 2,4-Dinitrophenol	(3)	11.873	184	77422	7.263
116) 4-Nitrophenol	(3)	11.974	109	130104	6.986
117) Pentachlorobenzene	(3)	12.001	250	310853	7.554
119) Dibenzofuran	(3)	12.055	168	970638	7.523
118) 2,4-Dinitrotoluene	(3)	12.060	165	204242	7.167
121) 1-Naphthylamine	(3)	12.162	143	677088	7.363
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	183184	7.639
123) 2-Naphthylamine	(3)	12.269	143	647783	7.126
124) Diethylphthalate	(3)	12.408	149	719388	7.293
126) Fluorene	(3)	12.499	166	759321	7.634
125) Thionazin	(3)	12.504	107	146661	7.222
128) 5-Nitro-o-toluidine	(3)	12.520	152	188543	7.457
129) 4-Nitroaniline	(3)	12.525	138	175443	7.533
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	402208	7.722
130) 4,6-Dinitro-2-methylphenol	(4)	12.573	198	91284	6.174
132) NDPA as diphenylamine	(4)	12.670	169	624946	7.547
131) N-Nitrosodiphenylamine	(4)	12.670	169	624946	7.547
134) 1,2-Diphenylhydrazine	(4)	12.713	77	987154	7.440
135)$2,4,6-Tribromophenol	(3)	12.798	330	195814	15.510
137) Tetraethyldithiopyrophosphate	(4)	12.905	97	150511	7.285
139) 1,3,5-Trinitrobenzene	(4)	13.007	213	58558	6.141
140) Diallate (peak 1)	(4)	13.050	86	325107	6.127
141) Phorate	(4)	13.055	75	569159	7.666
142) Phenacetin	(4)	13.071	108	406098	7.240
143) 4-Bromophenyl-phenylether	(4)	13.135	248	215682	7.884
144) Diallate (peak 2)	(4)	13.156	86	65799	1.246
145) Hexachlorobenzene	(4)	13.189	284	231074	8.093
147) Dimethoate	(4)	13.253	87	346175	7.315
148) Atrazine	(4)	13.365	200	212981	7.793
149) Pentachlorophenol	(4)	13.445	266	126493	7.483
150) 4-Aminobiphenyl	(4)	13.461	169	607505	7.599
151) Pentachloronitrobenzene	(4)	13.461	237	105324	7.697
152) Pronamide	(4)	13.563	173	349022	7.802
153)*Phenanthrene-d10	(4)	13.691	188	713680	5.000
154) Dinoseb	(4)	13.707	211	138761	6.456
155) Phenanthrene	(4)	13.723	178	1140717	7.586
157) Anthracene	(4)	13.788	178	1133177	7.664
163) Carbazole	(4)	14.012	167	1035008	7.662

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Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

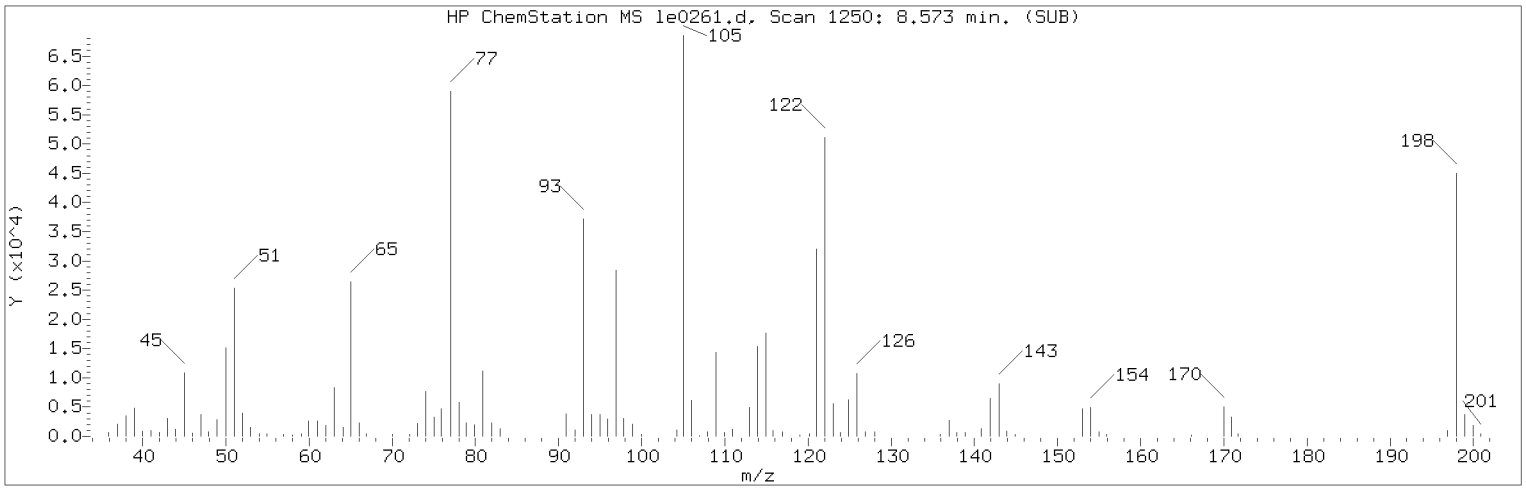
Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.221	109	237256	7.050
165) Di-n-butylphthalate	(4)	14.536	149	1215638	7.385
167) Parathion	(4)	14.782	109	145572	6.847
168) 4-Nitroquinoline-1-oxide	(4)	14.793	190	67069	5.161
222) Total PAHs	(6)			19763784	139.279
169) Octachlorostyrene	(4)	15.141	308	82413	7.868
171) Isodrin	(4)	15.194	193	136767	7.750
173) Fluoranthene	(4)	15.414	202	1303046	7.957
174) Benzidine	(5)	15.649	184	2560418	21.637
175)*Pyrene-d10	(5)	15.735	212	873895	5.000
177) Pyrene	(5)	15.767	202	1409743	7.437
179)$Terphenyl-d14	(5)	16.055	244	1864988	15.567
182) p-Dimethylaminoazobenzene	(5)	16.291	225	221749	7.087
185) Chlorobenzilate	(5)	16.382	139	362691	6.992
187) 3,3'-Dimethylbenzidine	(5)	16.858	212	787629	7.204
188) Butylbenzylphthalate	(5)	16.922	149	534379	7.058
191) 2-Acetylaminofluorene	(5)	17.286	181	405764	6.604
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	452821	7.415
195) Benzo(a)anthracene	(5)	17.810	228	1313608	7.998
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.820	231	264580	7.501
196) Chrysene	(5)	17.874	228	1240767	7.923
199) bis(2-Ethylhexyl)phthalate	(5)	18.002	149	759225	6.984
203) 6-Methylchrysene	(5)	18.687	242	834505	7.593
205) Di-n-octylphthalate	(6)	19.179	149	1221847	6.571
206) Benzo(b)fluoranthene	(6)	19.693	252	1247498	7.733
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.698	256	563056	8.034
208) Benzo(k)fluoranthene	(6)	19.741	252	1278579	7.960
211) Benzo(a)pyrene	(6)	20.222	252	1149394	7.807
213)*Perylene-d12	(6)	20.313	264	659889	5.000
215) 3-Methylcholanthrene	(6)	20.800	268	462864	7.523
217) Dibenz(a,h)acridine	(6)	21.618	279	897952	7.158
218) Dibenz(a,j)acridine	(6)	21.693	279	992116	7.591
219) Indeno(1,2,3-cd)pyrene	(6)	21.955	276	1362486	7.913
220) Dibenz(a,h)anthracene	(6)	21.998	278	1149928	7.966
221) Benzo(g,h,i)perylene	(6)	22.372	276	1130448	7.695

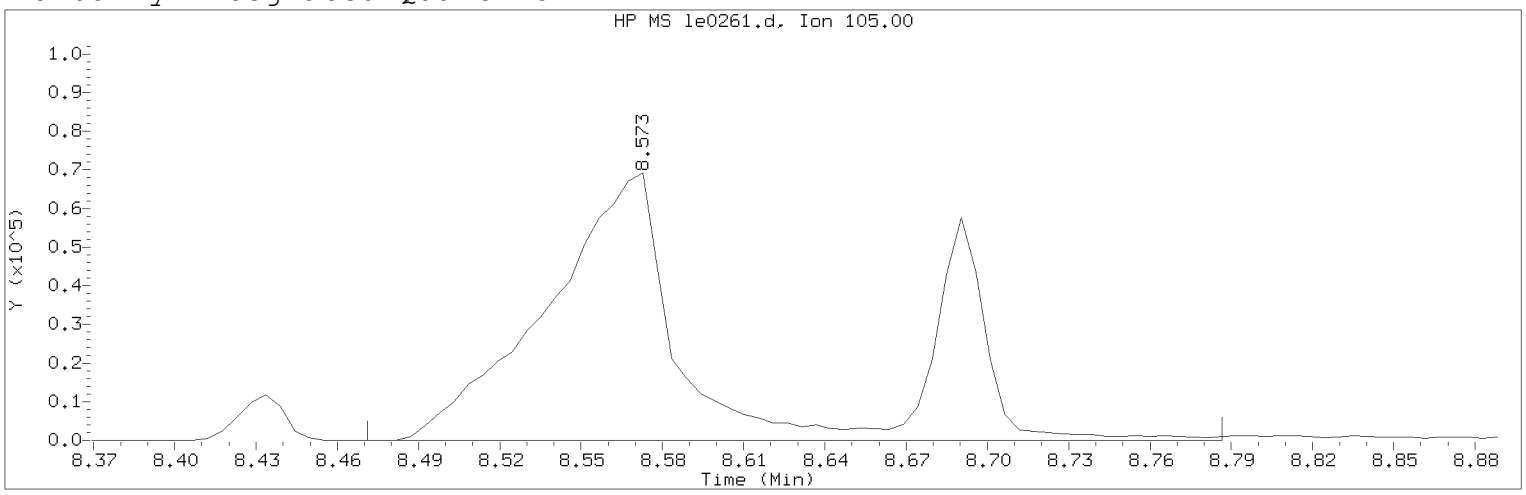
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:35
Date, time and analyst ID of latest file update: 06-May-2016 18:35 ceb05247

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

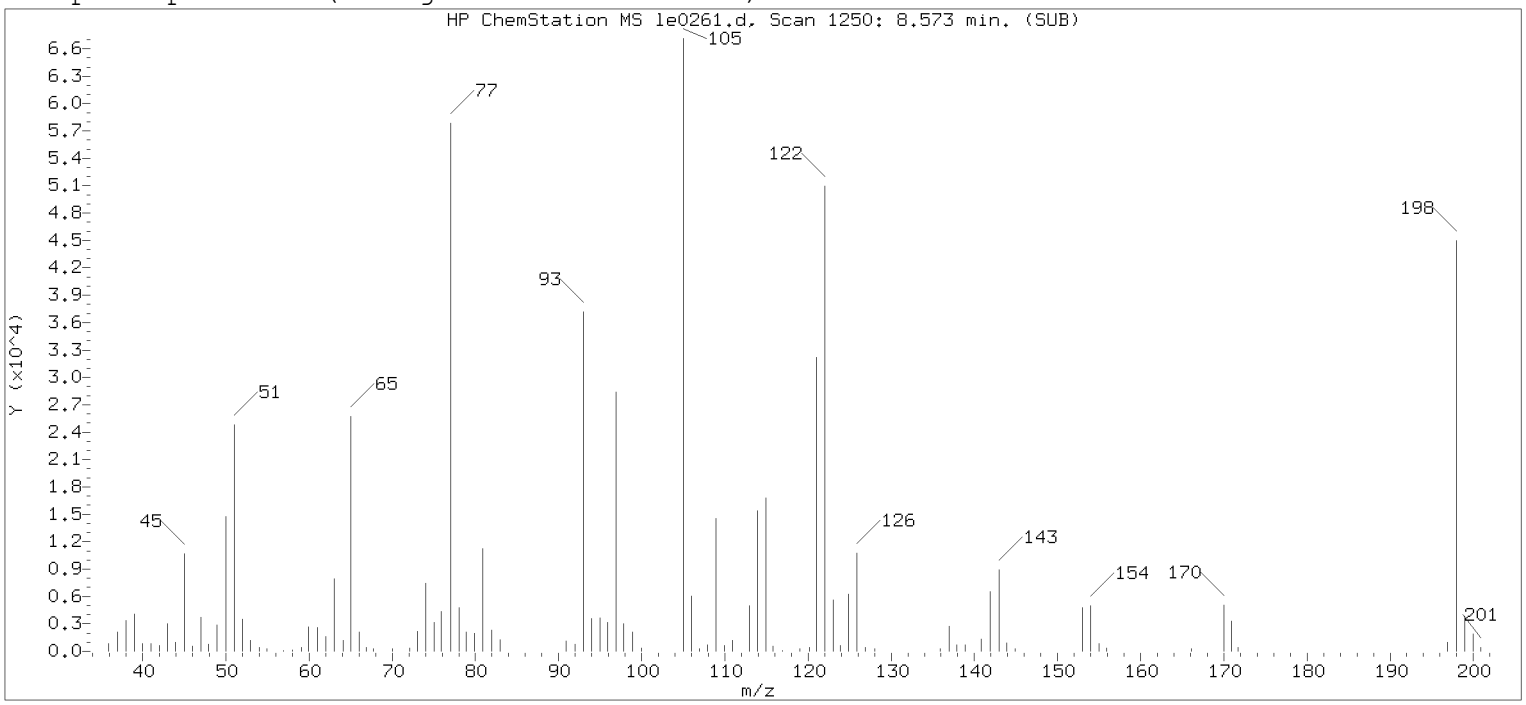
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1250
Retention Time (minutes) : 8.573
Quant Ion : 105.00
Area (flag) : 296292M
On-Column Amount (ng/ul) : 9.0382
Integration start scan : 1230 Integration stop scan: 1289
Y at integration start : 12 Y at integration end: 12

Reason for manual integration: improper integration

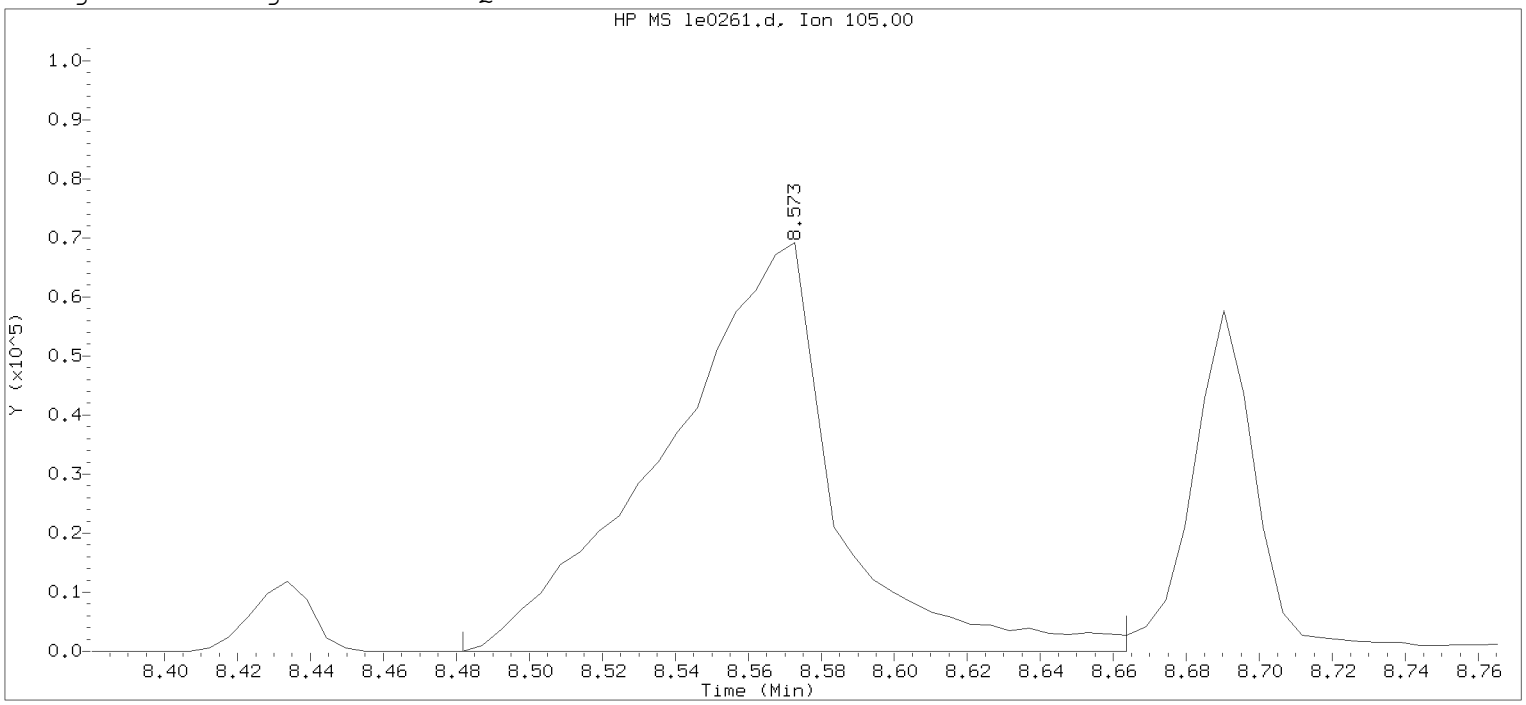
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



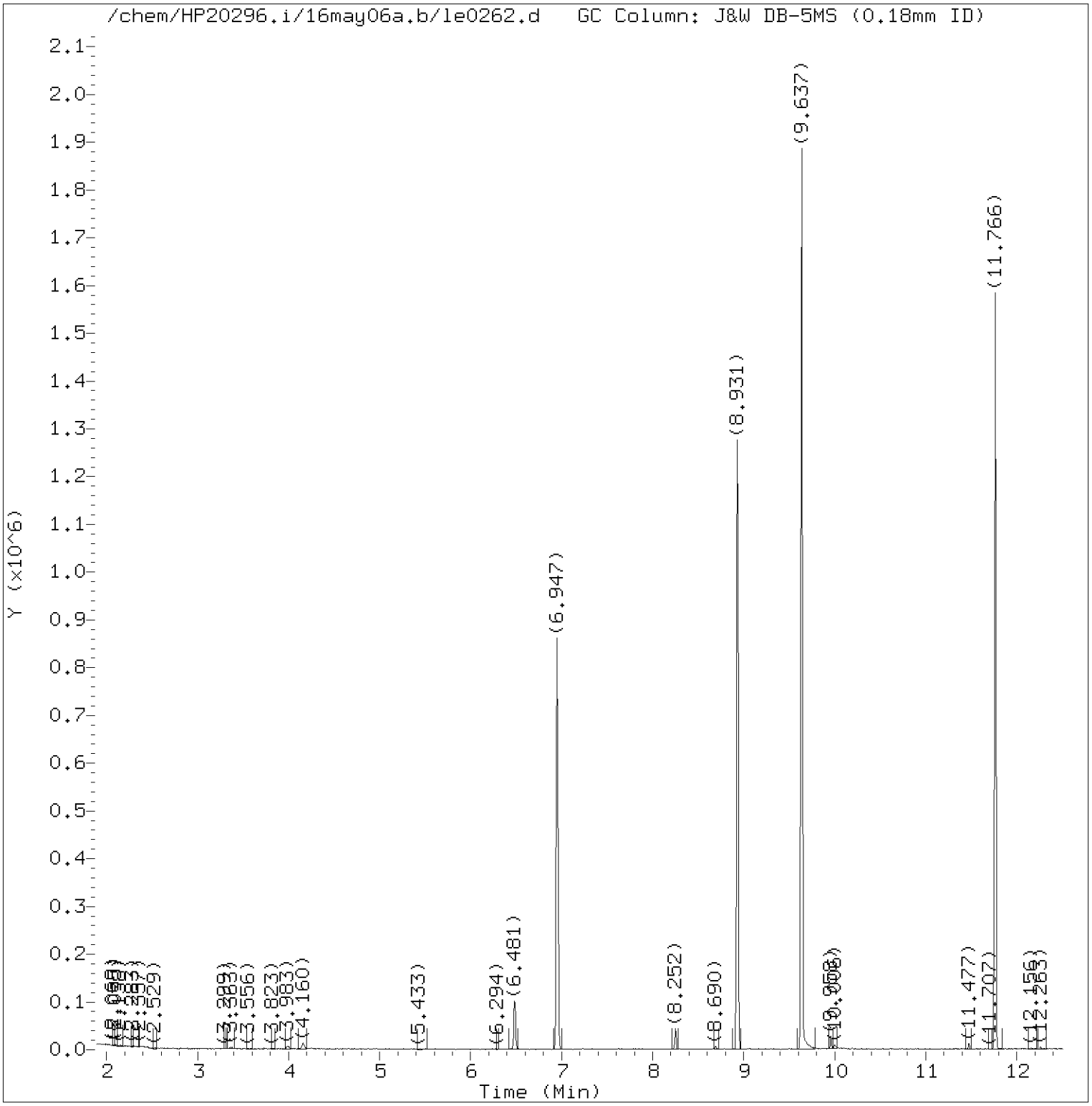
Data File: /chem/HP20296.i/16may06a.b/le0261.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: all1
Calibration date and time: 06-MAY-2016 18:30
Date, time and analyst ID of latest file update: 06-May-2016 18:30 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1266

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1250		
Retention Time (minutes)	: 8.573		
Quant Ion	: 105.00		
Area	: 223529		
On-column Amount (ng/ul)	: 7.5367		
Integration start scan	: 1232	Integration stop scan:	1266
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 05/06/2016 at 20:39.
Target 3.5 esignature used.



Total Ion Chromatogram (TIC)

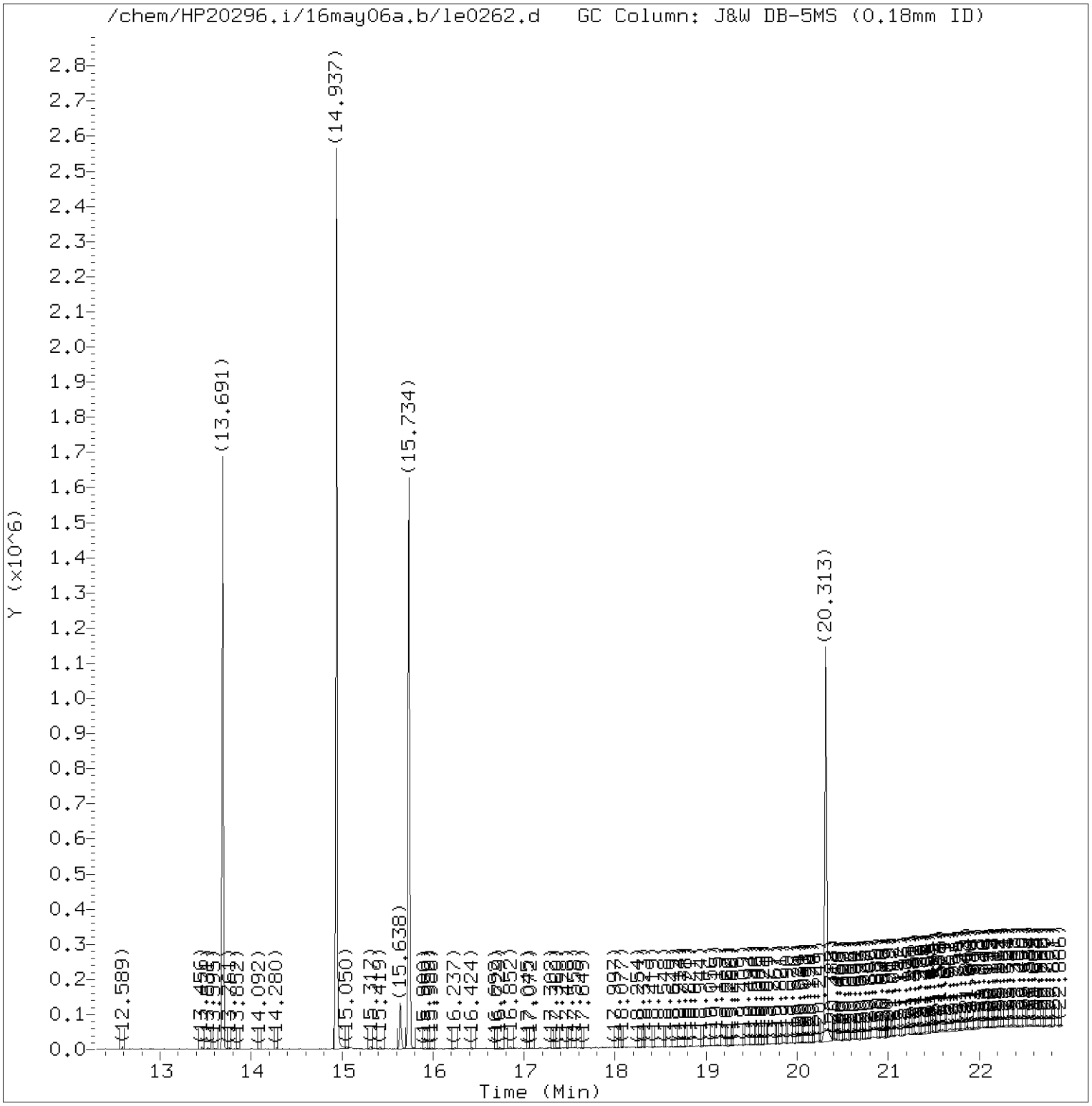
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0262.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:37 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 19:41
Date, time and analyst ID of latest file update: 06-May-2016 19:41 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0262.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:37 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 19:41
Date, time and analyst ID of latest file update: 06-May-2016 19:41 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0262.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 18:37 Analyst ID: ceb05247

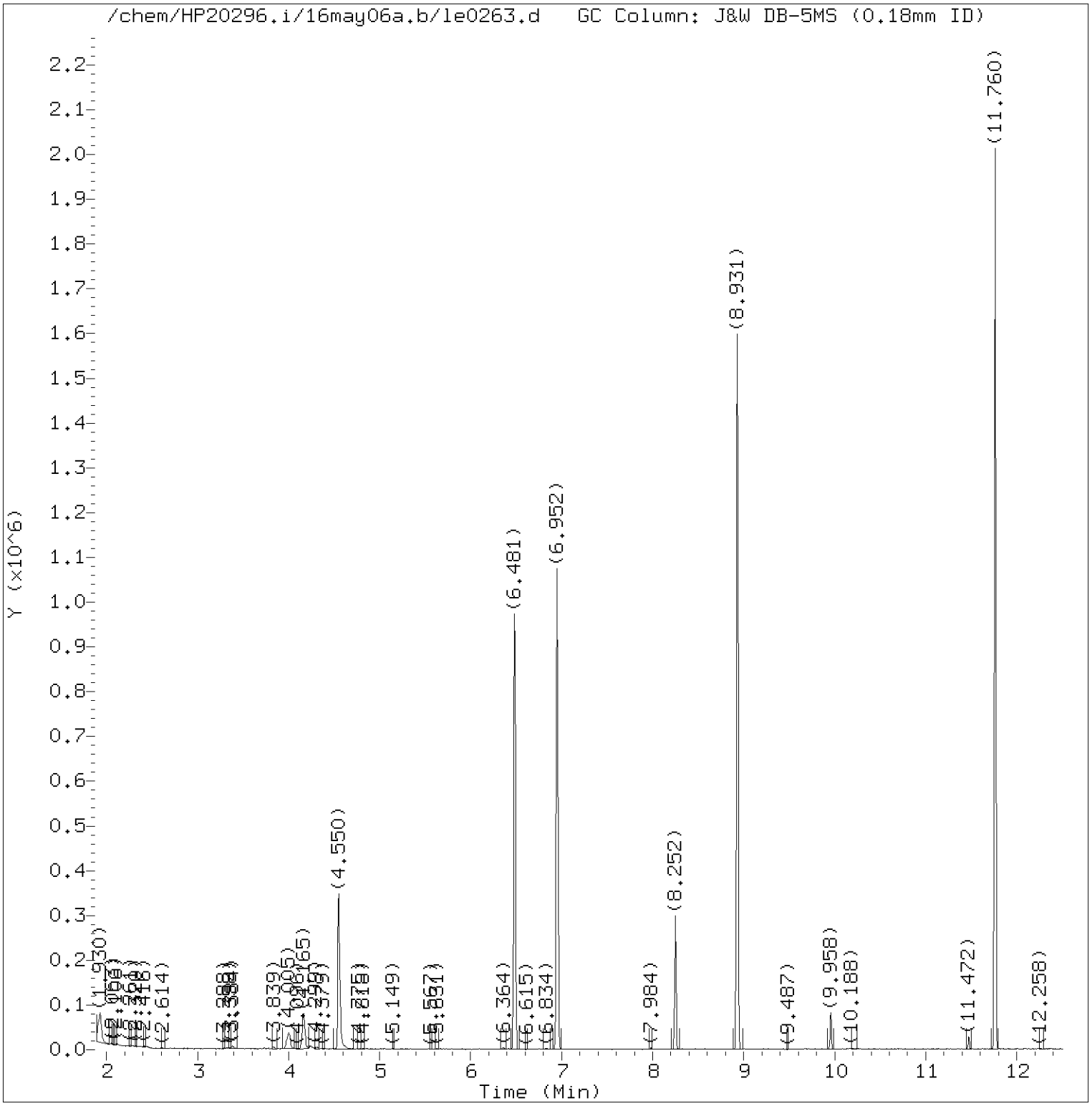
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: pda
Calibration date and time: 06-MAY-2016 19:41
Date, time and analyst ID of latest file update: 06-May-2016 19:41 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	172671	5.000
65)*Naphthalene-d8	(2)	8.931	136	654446	5.000
81) 1,4-Phenylenediamine	(2)	9.637	108	705936	11.433
113)*Acenaphthene-d10	(3)	11.766	164	371437	5.000
153)*Phenanthrene-d10	(4)	13.691	188	704342	5.000
170) Methapyrilene	(4)	14.937	97	599460	11.609
175)*Pyrene-d10	(5)	15.734	212	863583	5.000
213)*Perylene-d12	(6)	20.313	264	573405	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

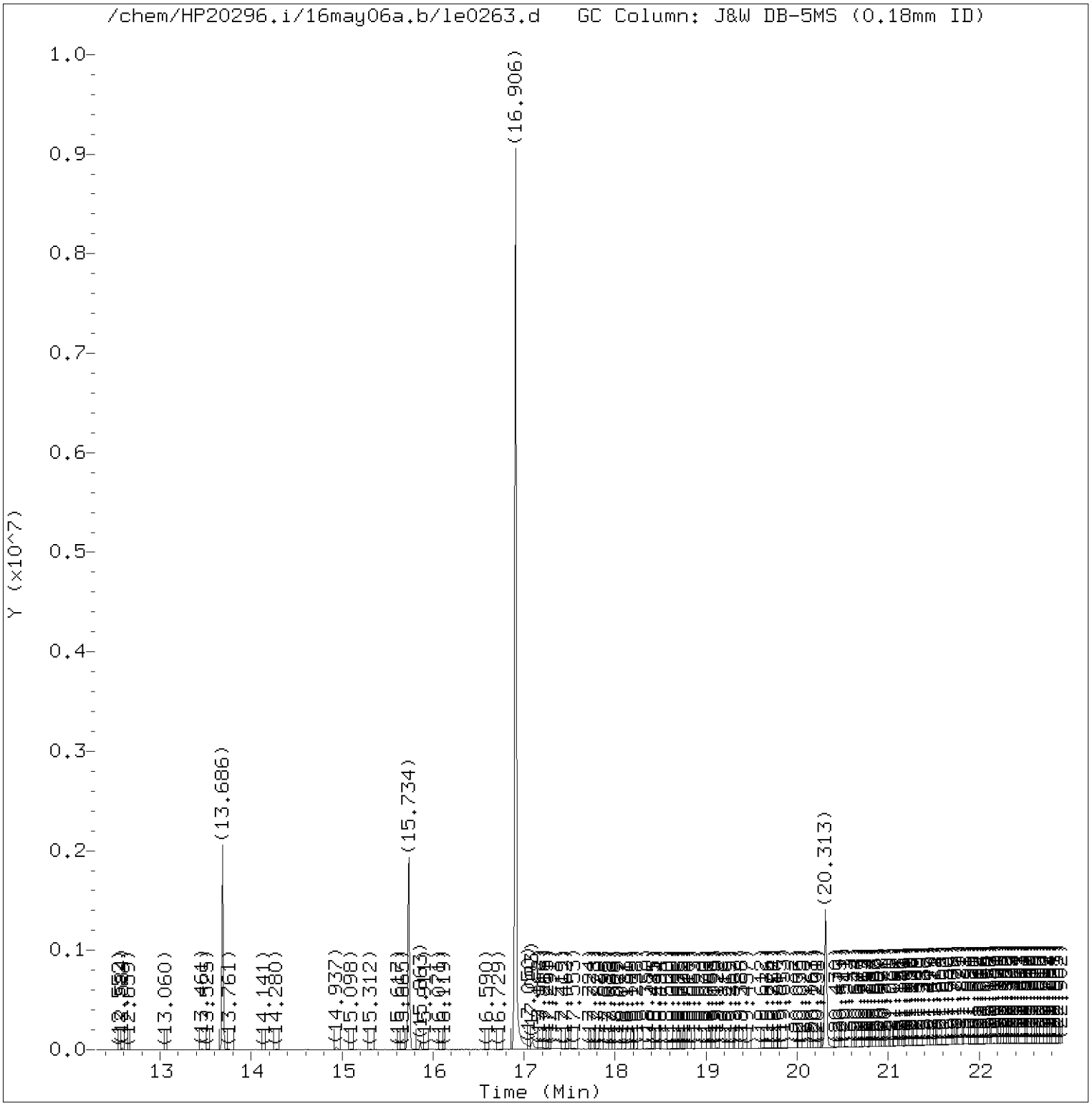
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0263.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:05 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 19:42
Date, time and analyst ID of latest file update: 06-May-2016 19:42 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0263.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:05 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 19:42
Date, time and analyst ID of latest file update: 06-May-2016 19:42 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0263.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:05 Analyst ID: ceb05247

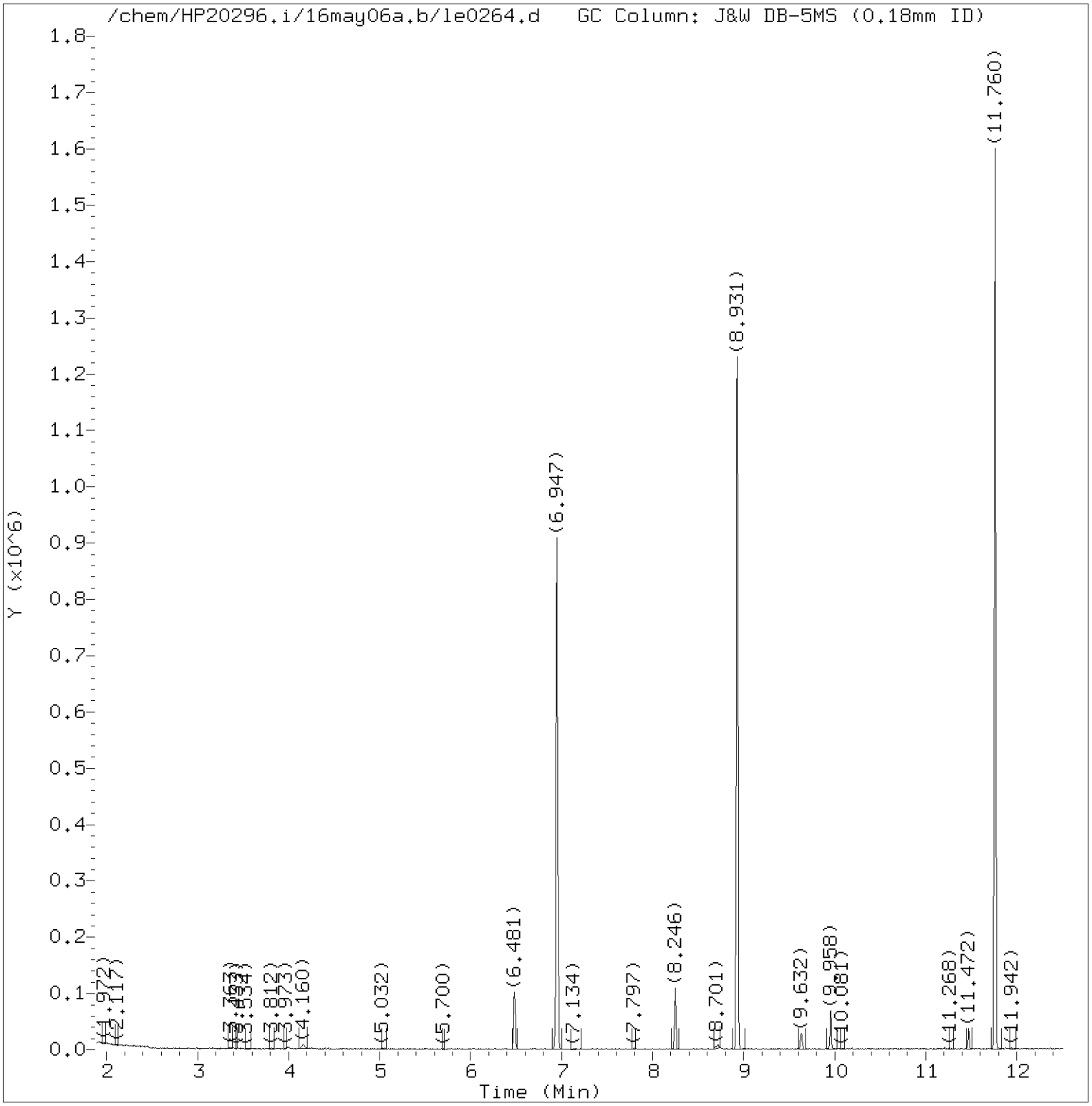
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: kep
Calibration date and time: 06-MAY-2016 19:42
Date, time and analyst ID of latest file update: 06-May-2016 19:42 ceb05247

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	213248	5.000
65)*Naphthalene-d8	(2)	8.931	136	809200	5.000
113)*Acenaphthene-d10	(3)	11.760	164	464432	5.000
153)*Phenanthrene-d10	(4)	13.686	188	889035	5.000
175)*Pyrene-d10	(5)	15.734	212	1037934	5.000
190) Kepone	(5)	16.906	272	1140317	64.865
213)*Perylene-d12	(6)	20.313	264	737491	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

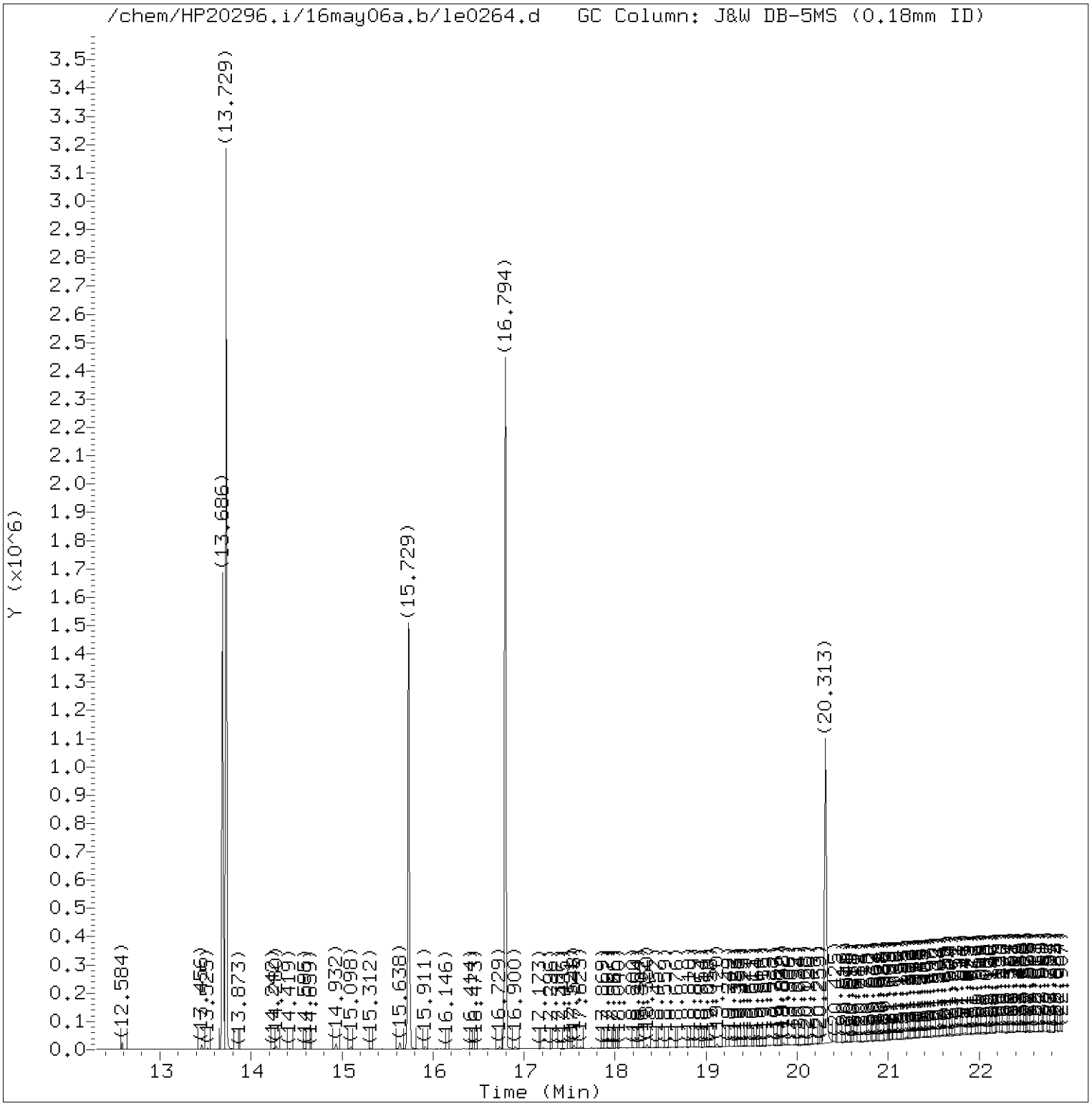
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0264.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:34 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 20:37
Date, time and analyst ID of latest file update: 06-May-2016 20:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0264.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:34 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 20:37
Date, time and analyst ID of latest file update: 06-May-2016 20:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0264.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 19:34 Analyst ID: ceb05247

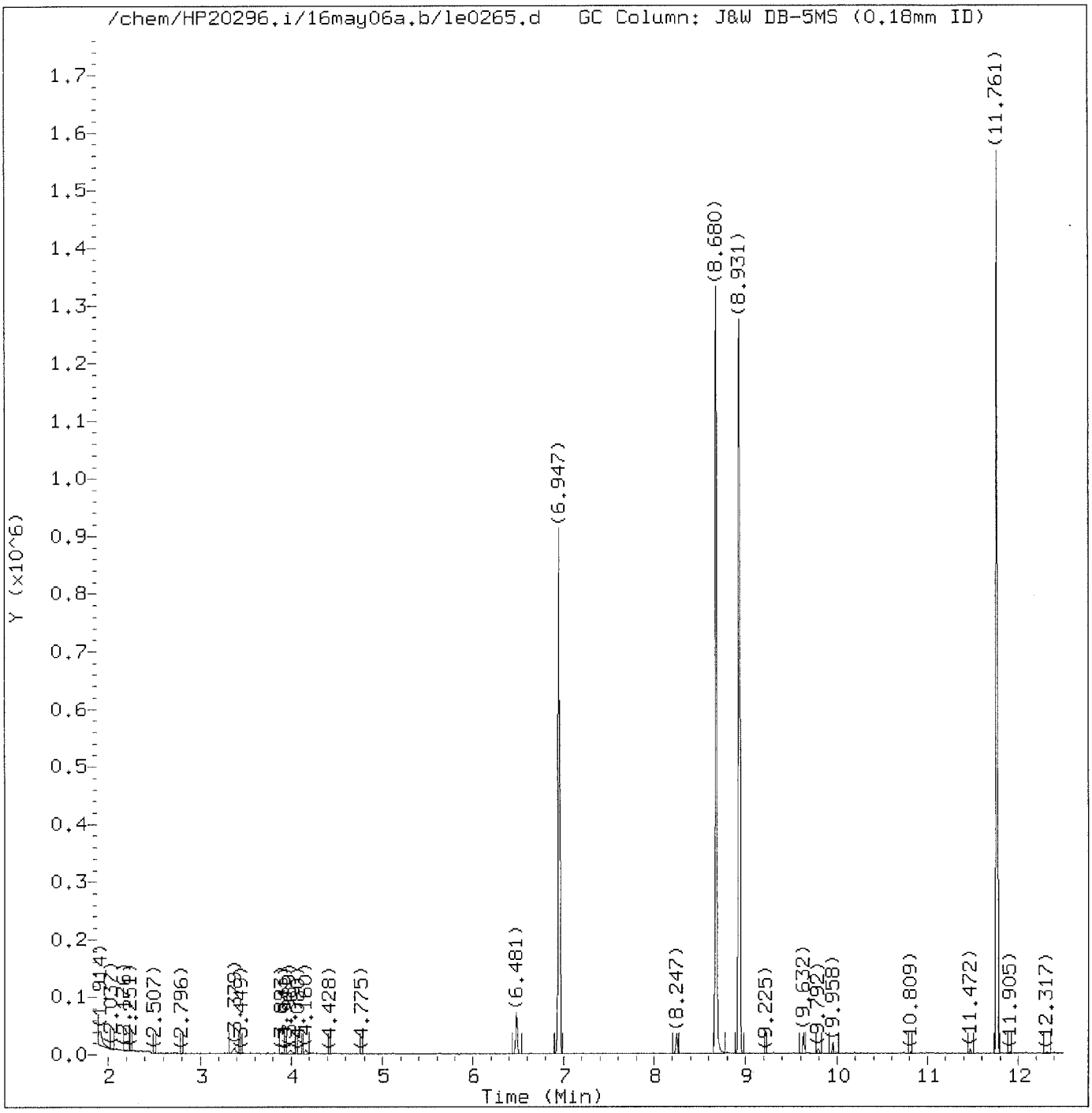
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: fad
Calibration date and time: 06-MAY-2016 20:37
Date, time and analyst ID of latest file update: 06-May-2016 20:37 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	169687	5.000
65)*Naphthalene-d8	(2)	8.931	136	646838	5.000
113)*Acenaphthene-d10	(3)	11.760	164	365492	5.000
153)*Phenanthrene-d10	(4)	13.686	188	704489	5.000
162) Disulfoton	(4)	13.729	88	696975	13.589
175)*Pyrene-d10	(5)	15.729	212	827031	5.000
189) Famphur	(5)	16.794	218	777321	12.273
213)*Perylene-d12	(6)	20.313	264	565490	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

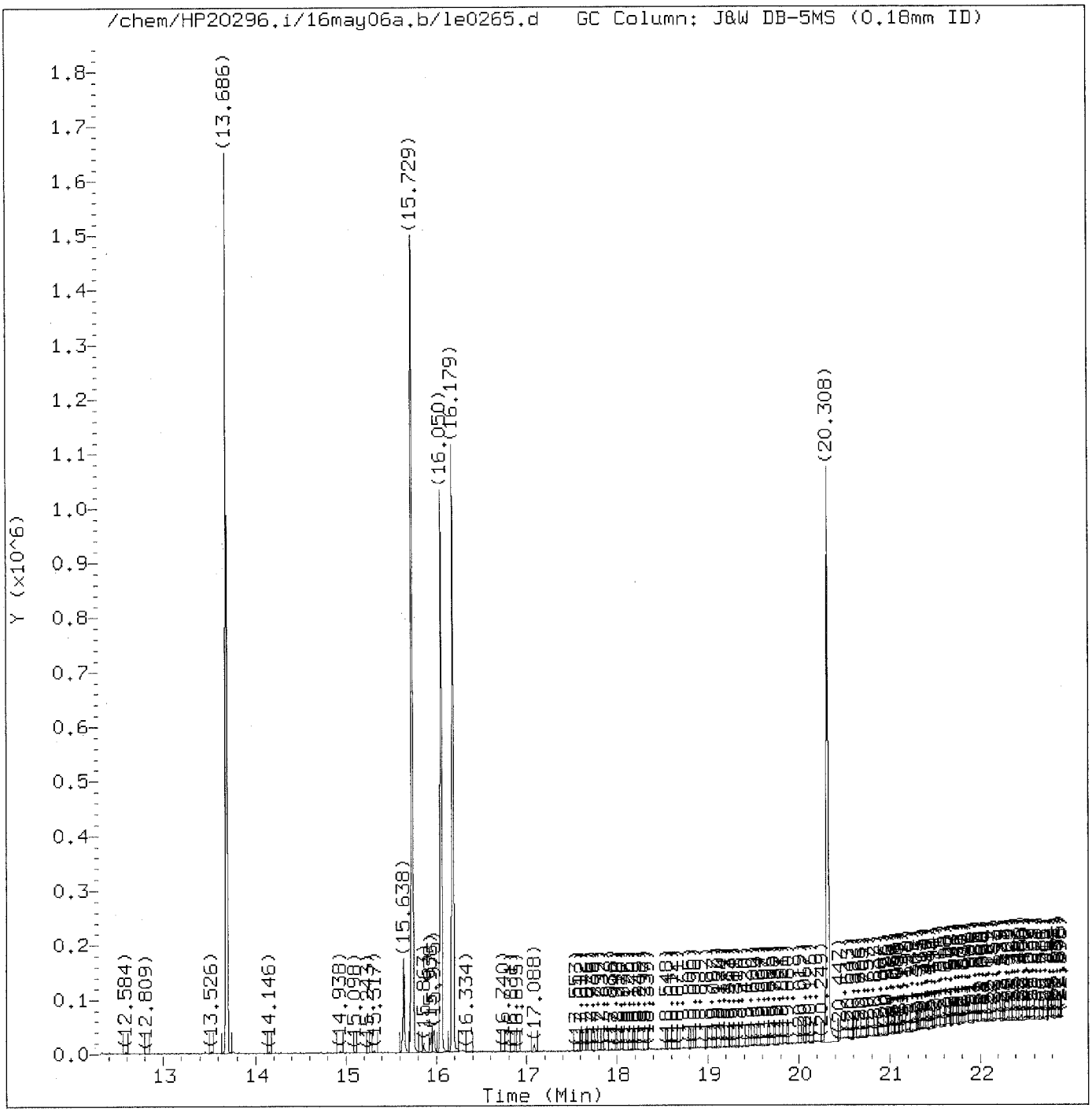
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0265.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: aap
Calibration date and time: 06-MAY-2016 20:38
Date, time and analyst ID of latest file update: 06-May-2016 20:38 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0265.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: aap
Calibration date and time: 06-MAY-2016 20:38
Date, time and analyst ID of latest file update: 06-May-2016 20:38 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0265.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:02 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: aap
Calibration date and time: 06-MAY-2016 20:38
Date, time and analyst ID of latest file update: 06-May-2016 20:38 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	172691	5.000
64) a,a-Dimethylphenethylamine	(2)	8.680	58	841326	12.500
65)*Naphthalene-d8	(2)	8.931	136	670917	5.000
186) Aramite	(5)			165683	12.500
113)*Acenaphthene-d10	(3)	11.761	164	363059	5.000
153)*Phenanthrene-d10	(4)	13.686	188	696266	5.000
175)*Pyrene-d10	(5)	15.729	212	826039	5.000
180) Aramite (1)	(5)	15.943	185	2864	5.000
181) Aramite (2)	(5)	15.970	185	3237	5.000
183) Aramite (3)	(5)	16.050	185	68229	1.250
184) Aramite (4)	(5)	16.179	185	91353	1.250
213)*Perylene-d12	(6)	20.308	264	541987	5.000

* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/06/2016 at 20:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP20296.i/16may11a.b/le0380.d

Date : 11-MAY-2016 15:10

Client ID: DFTPP12.5

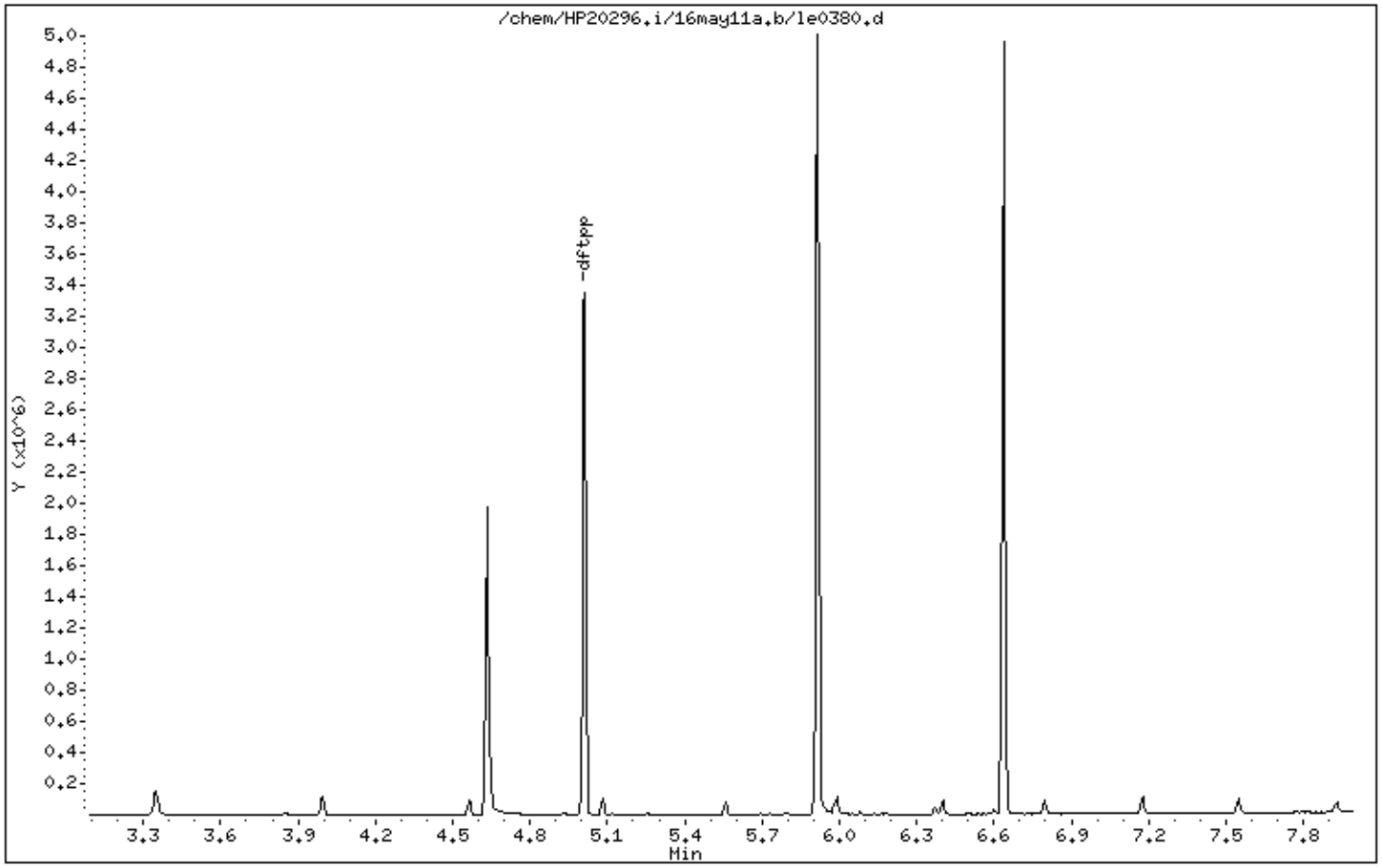
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Kelli M. Barto on 05/11/2016 at 16:24.
Target 3.5 esignature user ID: kmb02125

Data File: /chem/HP20296.i/16may11a.b/le0380.d

Date : 11-MAY-2016 15:10

Client ID: DFTPP12.5

Instrument: HP20296.i

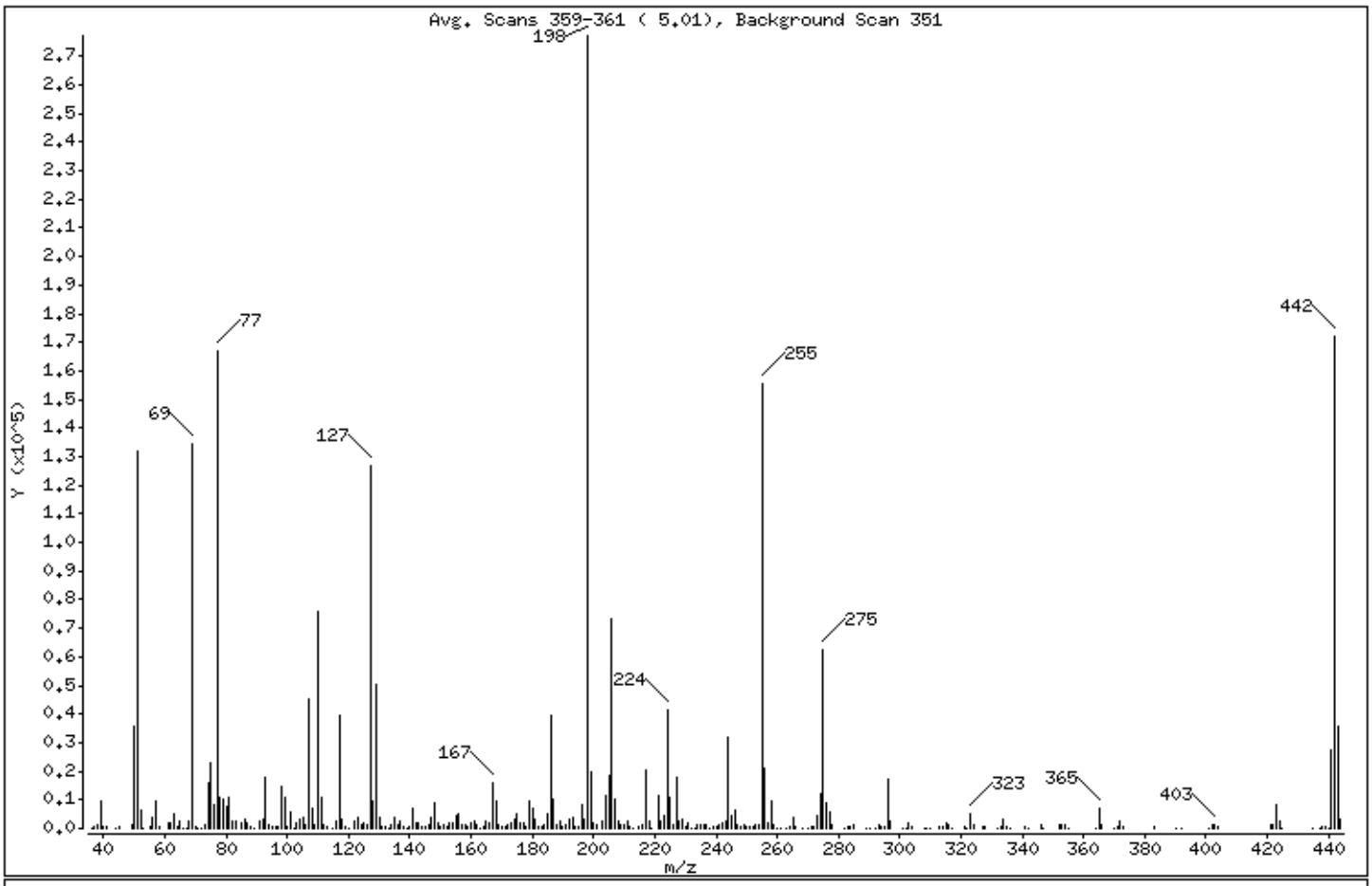
Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	47.48
68	Less than 2.00% of mass 69	0.89 (1.83)
69	Mass 69 relative abundance	48.54
70	Less than 2.00% of mass 69	0.33 (0.68)
127	10.00 - 80.00% of mass 198	45.74
197	Less than 2.00% of mass 198	1.06
199	5.00 - 9.00% of mass 198	7.18
275	10.00 - 60.00% of mass 198	22.42
365	Greater than 1.00% of mass 198	2.62
441	0.01 - 24.00% of mass 442	9.92 (16.00)
442	50.00 - 99.99% of mass 198	62.03
443	15.00 - 24.00% of mass 442	12.77 (20.58)

Digitally signed by Kelli M. Barto on 05/11/2016 at 16:24.
Target 3.5 esignature user ID: kmb02125

Date : 11-MAY-2016 15:10

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS Column diameter: 0.18

Data File: le0380.d
Spectrum: Avg. Scans 359-361 (5.01), Background Scan 351
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	156	123.00	3613	198.00	277184	282.00	287
37.00	520	124.00	1525	199.00	19912	283.00	671
38.00	1493	125.00	1793	200.00	1727	284.00	405
39.00	9403	126.00	1510	201.00	1149	285.00	1300
40.00	676	127.00	126808	203.00	2306	289.00	87
41.00	468	128.00	9786	204.00	11342	290.00	244
44.00	248	129.00	50640	205.00	18472	292.00	308
45.00	368	130.00	4017	206.00	73440	293.00	1414
49.00	1088	131.00	770	207.00	10077	294.00	351
50.00	35728	132.00	463	208.00	2265	295.00	448
51.00	131584	133.00	202	209.00	970	296.00	17328
52.00	6191	134.00	1305	210.00	1496	297.00	2483
53.00	190	135.00	3603	211.00	2861	301.00	111
55.00	496	136.00	1485	212.00	473	302.00	186
56.00	3790	137.00	2289	213.00	106	303.00	1877
57.00	9267	138.00	427	215.00	832	304.00	597
58.00	327	139.00	268	216.00	1582	308.00	117
61.00	1709	140.00	695	217.00	20464	309.00	89
62.00	2173	141.00	7024	218.00	2638	310.00	150
63.00	5191	142.00	2124	219.00	240	313.00	325
64.00	709	143.00	1705	221.00	11764	314.00	831
65.00	2623	144.00	390	222.00	2672	315.00	1947
66.00	211	145.00	348	223.00	4771	316.00	1075
67.00	270	146.00	1256	224.00	41240	317.00	113
68.00	2466	147.00	3534	225.00	10624	321.00	467
69.00	134528	148.00	8709	226.00	1265	322.00	107
70.00	912	149.00	1921	227.00	17872	323.00	5149
71.00	95	150.00	540	228.00	2715	324.00	1149
72.00	105	151.00	977	229.00	3393	327.00	816
73.00	1373	152.00	651	230.00	414	328.00	489
74.00	16086	153.00	2022	231.00	1632	332.00	236
75.00	23200	154.00	1637	232.00	317	333.00	500
76.00	8235	155.00	4234	233.00	101	334.00	3046
77.00	166976	156.00	5190	234.00	1232	335.00	916
78.00	10960	157.00	973	235.00	1240	336.00	151

Digitally signed by Kelli M. Barto on 05/11/2016 at 16:24.
Target 3.5 esignature user ID: kmb02125

Date : 11-MAY-2016 15:10

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP;

Operator: kmb02125

Column phase: DB-5MS Column diameter: 0.18

Data File: le0380.d
Spectrum: Avg. Scans 359-361 (5.01), Background Scan 351
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	9911	158.00	1347	236.00	1004	341.00	615
80.00	7858	159.00	906	237.00	1453	342.00	120
81.00	10743	160.00	1961	238.00	249	346.00	1038
82.00	2706	161.00	2831	239.00	761	347.00	133
83.00	2555	162.00	1027	240.00	675	352.00	1562
85.00	1828	163.00	138	241.00	972	353.00	1184
86.00	3140	164.00	403	242.00	2040	354.00	1419
87.00	1619	165.00	2762	243.00	2596	355.00	268
88.00	508	166.00	1879	244.00	31552	364.00	89
89.00	309	167.00	15989	245.00	4321	365.00	7250
91.00	2561	168.00	9466	246.00	6234	366.00	978
92.00	2970	169.00	1396	247.00	1335	370.00	133
93.00	17720	170.00	368	248.00	367	371.00	468
94.00	1259	171.00	659	249.00	1236	372.00	2246
95.00	471	172.00	1303	250.00	323	373.00	492
96.00	850	173.00	1792	251.00	419	383.00	599
97.00	418	174.00	2870	252.00	585	390.00	111
98.00	14604	175.00	5140	253.00	979	392.00	98
99.00	10765	176.00	1667	254.00	1317	401.00	145
100.00	920	177.00	2137	255.00	155648	402.00	1174
101.00	5607	178.00	944	256.00	21032	403.00	1521
102.00	286	179.00	9769	257.00	1798	404.00	644
103.00	1625	180.00	7258	258.00	9438	421.00	1381
104.00	3276	181.00	3150	259.00	1577	422.00	1316
105.00	3528	182.00	582	260.00	271	423.00	8465
106.00	1128	183.00	377	261.00	200	424.00	2645
107.00	44992	184.00	1054	263.00	111	425.00	249
108.00	7055	185.00	5243	264.00	414	435.00	108
109.00	1408	186.00	39392	265.00	3605	437.00	102
110.00	75960	187.00	10343	266.00	741	438.00	527
111.00	11092	188.00	1358	268.00	313	439.00	339
112.00	1455	189.00	2540	270.00	292	440.00	300
113.00	434	190.00	412	271.00	491	441.00	27504
115.00	101	191.00	1419	272.00	418	442.00	171904
116.00	2609	192.00	3343	273.00	4479	443.00	35392

Digitally signed by Kelli M. Barto on 05/11/2016 at 16:24.
Target 3.5 esignature user ID: kmb02125

Date : 11-MAY-2016 15:10

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0826;1;3;DFTPP; Operator: kmb02125

Column phase: DB-5MS Column diameter: 0.18

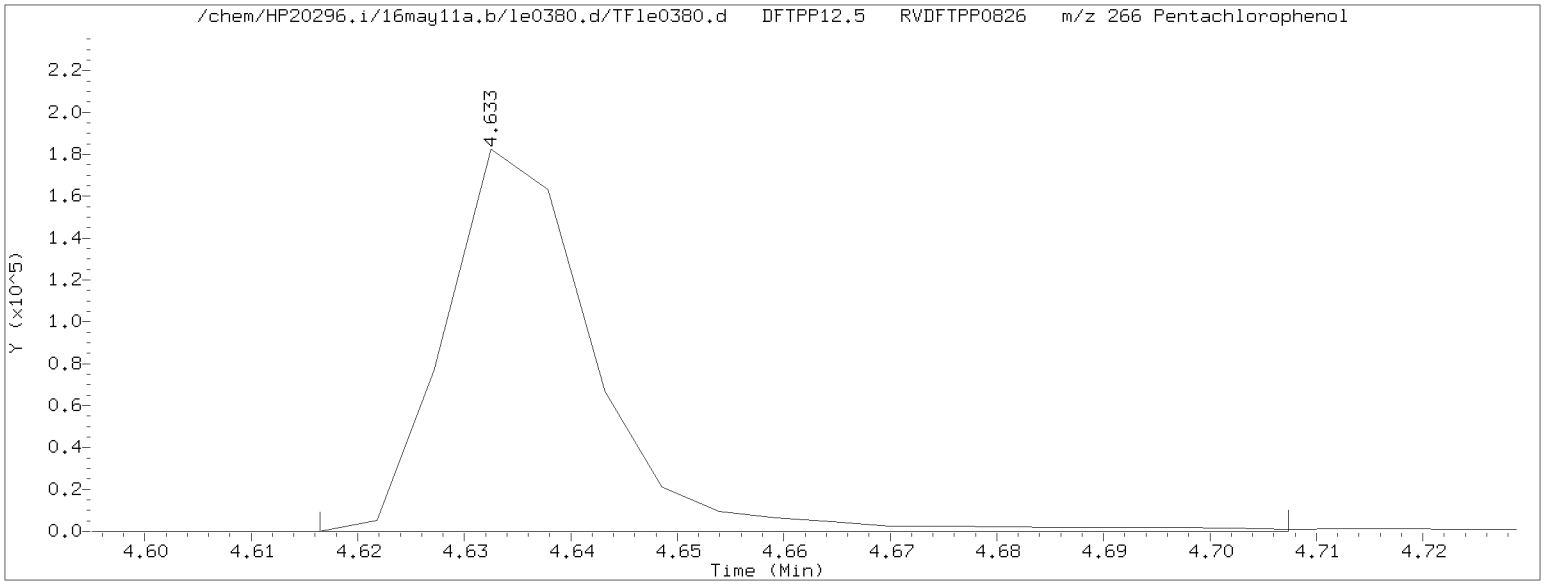
Data File: le0380.d
Spectrum: Avg. Scans 359-361 (5.01), Background Scan 351
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	39240	193.00	4106	274.00	12359	444.00	3008
118.00	3028	194.00	938	275.00	62152		
119.00	319	195.00	425	276.00	8653		
120.00	263	196.00	8441	277.00	6008		
122.00	2460	197.00	2946	278.00	1174		

Digitally signed by Kelli M. Barto on 05/11/2016 at 16:24.
Target 3.5 esignature user ID: kmb02125

Assessment of GC Column Performance and Injection Port Inertness for

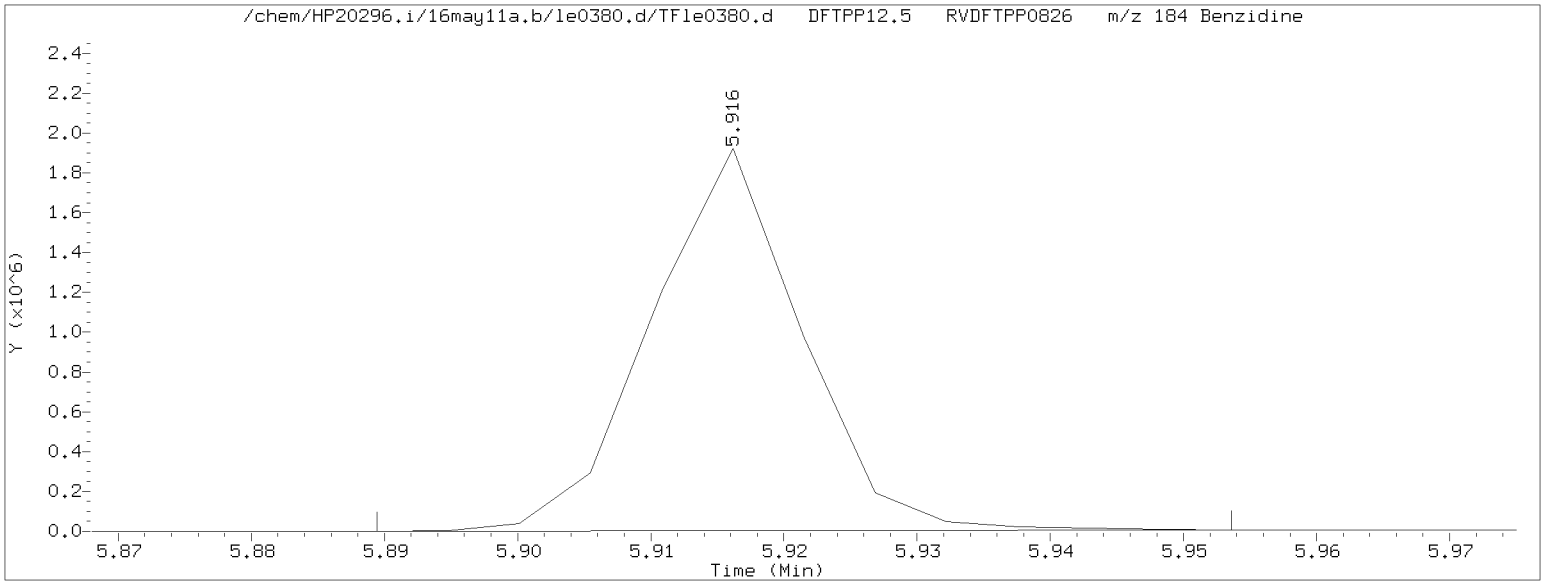
Instrument ID: HP20296.i Injection Date: 11-MAY-2016 15:10 Operator: kmb02125



Pentachlorophenol EICP peak height = 182464 EICP peak height at 10% = 18246 Pentachlorophenol EICP area = 176600

Pentachlorophenol EICP peak apex (min.) = 4.633
RT at 10% of front half of EICP (min.) = 4.623 'Front' peak width (min.) = 0.0097000000
RT at 10% of back half of EICP (min.) = 4.650 'Tailing' peak width (min.) = 0.0173166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0173166667}{0.0097000000} = 1.785$$



Benzidine EICP peak height = 1919395 EICP peak height at 10% = 191940 Benzidine EICP area = 1502173

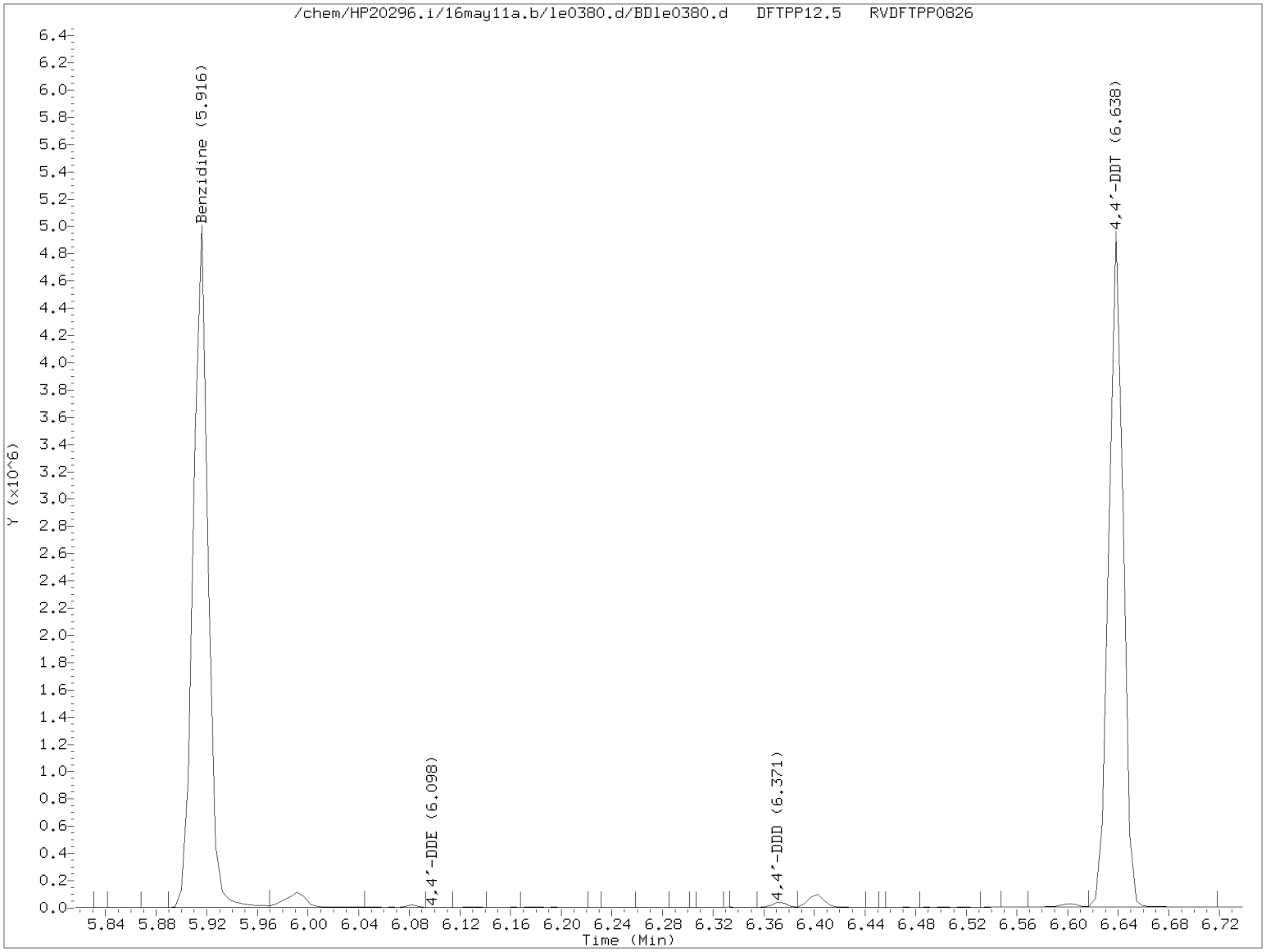
Benzidine EICP peak apex (min.) = 5.916
RT at 10% of front half of EICP (min.) = 5.903 'Front' peak width (min.) = 0.0127500000
RT at 10% of back half of EICP (min.) = 5.927 'Tailing' peak width (min.) = 0.0106833333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106833333}{0.0127500000} = 0.838$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/20/2016 at 12:34. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

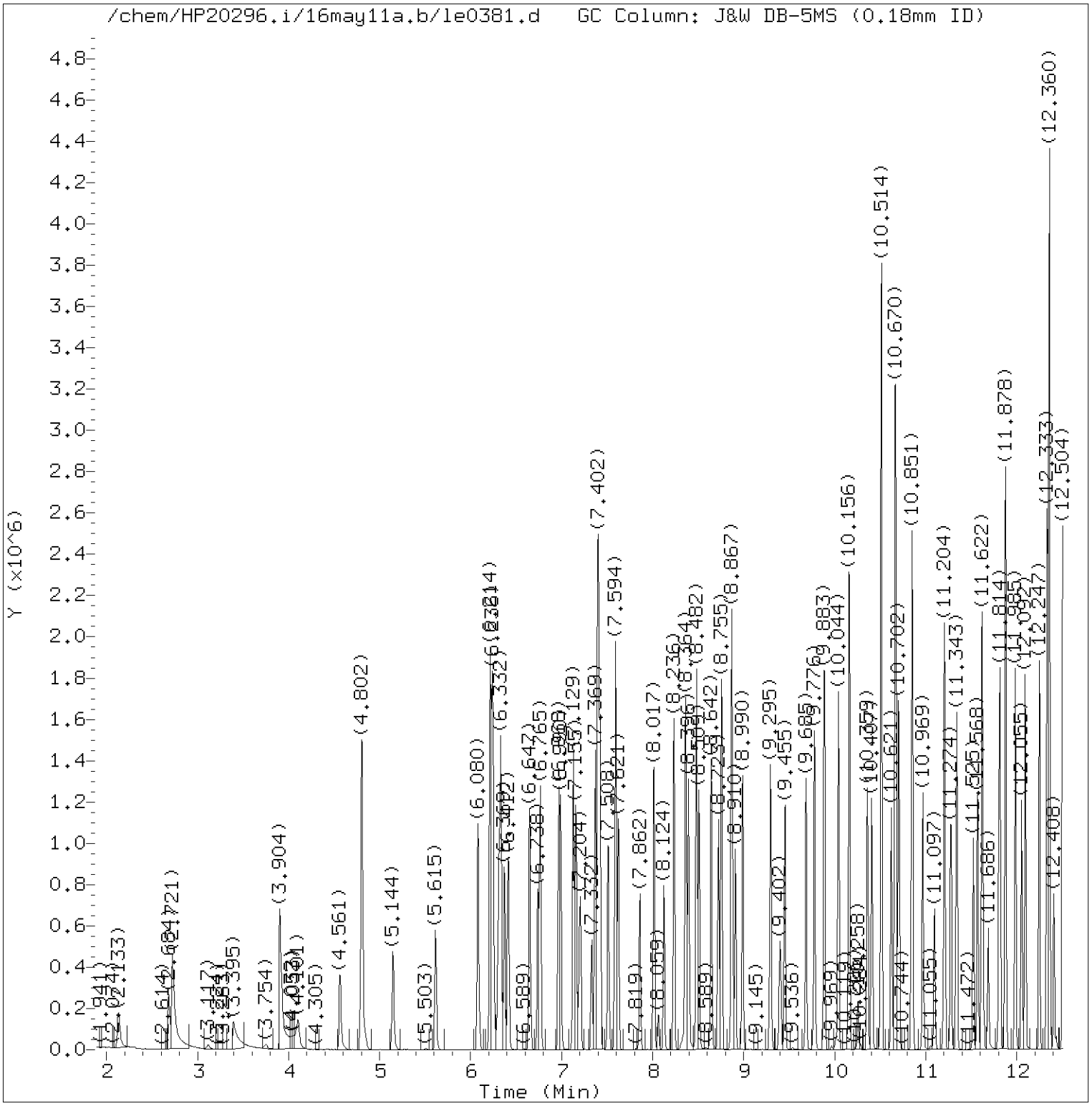
Instrument ID: HP20296.i Injection Date: 11-MAY-2016 15:10 Operator: kmb02125



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{2413 + 30257}{2413 + 30257 + 3878422} \times 100 = 0.8$$

Secondary review performed and digitally signed by Matthew E. Barton on 05/20/2016 at 12:34. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

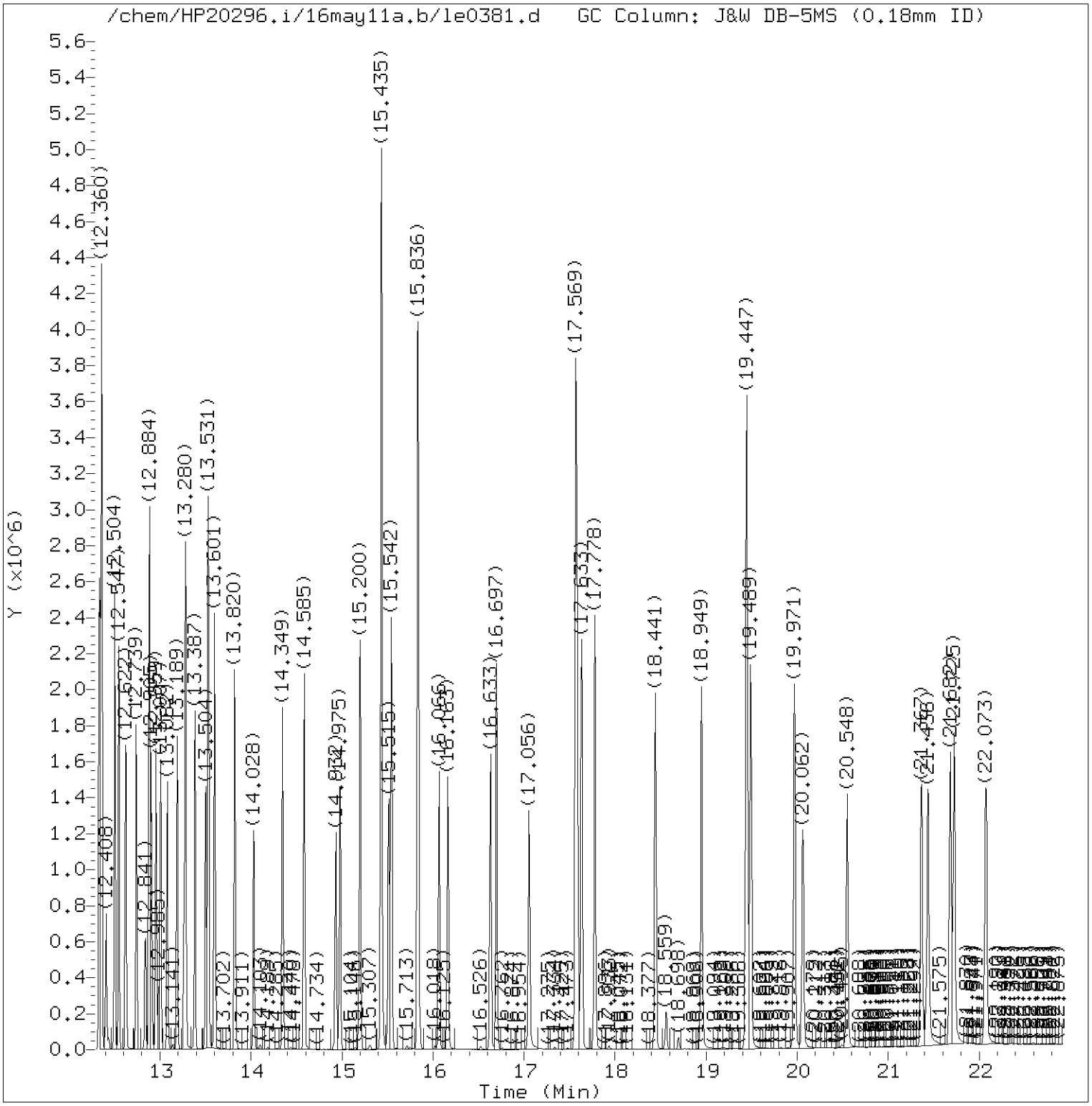
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.133	88	156580	7.354
4) N-Nitrosodimethylamine	(1)	2.684	74	251531	7.605
5) Pyridine	(1)	2.721	79	424324	7.504
7) 2-Picoline	(1)	3.904	93	398251	6.860
8) N-Nitrosomethylethylamine	(1)	4.101	88	171020	7.414
9) Methyl methanesulfonate	(1)	4.567	80	210071	7.785
11)$2-Fluorophenol	(1)	4.807	112	657777	15.075
13) N-Nitrosodiethylamine	(1)	5.144	102	162739	7.545
15) Ethyl methanesulfonate	(1)	5.615	109	168532	7.500
42) Total Cresols	(1)			688421	15.384
16) Benzaldehyde	(1)	6.080	77	337428	7.279
17)$Phenol-d6	(1)	6.214	99	892959	15.299
18) Phenol	(1)	6.236	94	528516	7.651
19) Aniline	(1)	6.246	93	612751	7.523
20) a-methylstyrene	(1)	6.332	118	333970	7.401
22) bis(2-Chloroethyl)ether	(1)	6.369	93	382383	7.565
23) 2-Chlorophenol	(1)	6.412	128	306274	7.691
24) 1,3-Dichlorobenzene	(1)	6.647	146	343118	7.504
25)*1,4-Dichlorobenzene-d4	(1)	6.738	152	144909	5.000
26) 1,4-Dichlorobenzene	(1)	6.765	146	344976	7.482
27) Benzyl alcohol	(1)	6.968	108	221289	7.255
28) 1,2-Dichlorobenzene	(1)	6.990	146	331153	7.607
30) Indene	(1)	7.129	115	577323	7.340
31) 2-Methylphenol	(1)	7.155	108	317307	7.460
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.204	45	489614	7.618
34) bis(2-Chloroisopropyl)ether	(1)	7.204	45	489614	7.618
35) N-Nitrosopyrrolidine	(1)	7.332	100	169019	7.445
36) Acetophenone	(1)	7.369	105	535510	7.656
97) Isosafrole	(3)			246962	7.351
38) N-Nitroso-di-n-propylamine	(1)	7.396	70	301029	7.636
39) N-Nitrosomorpholine	(1)	7.402	56	227171	7.720
37) 4-Methylphenol	(1)	7.402	108	371114	7.924
40) o-Toluidine	(1)	7.423	106	581139	7.412
43) Hexachloroethane	(1)	7.514	117	152493	7.641
44)$Nitrobenzene-d5	(2)	7.594	82	859263	15.586
45) Nitrobenzene	(2)	7.621	77	446796	7.874
48) N-Nitrosopiperidine	(2)	7.862	114	158534	7.545
50) Isophorone	(2)	8.017	82	733925	7.599
120) 2,4_2,6-Dinitrotoluenes	(3)			316218	15.763
51) 2-Nitrophenol	(2)	8.124	139	132472	7.360

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.236	107	363962	7.729
57) O,O,O-Triethylphosphorothioate	(2)	8.364	198	165766	7.535
56) Benzoic acid	(2)	8.386	105	252543M	9.153
55) bis(2-Chloroethoxy)methane	(2)	8.396	93	471311	7.870
59) 1,2,3,4-Tetrahydronaphthalene	(2)	8.482	104	545163	7.677
60) 2,4-Dichlorophenol	(2)	8.509	162	249313	7.410
62) 1,2,4-Trichlorobenzene	(2)	8.642	180	299671	7.695
65)*Naphthalene-d8	(2)	8.723	136	548901	5.000
66) Naphthalene	(2)	8.755	128	881918	7.424
146) Diallate trans/cis	(4)			342519	7.632
67) 4-Chloroaniline	(2)	8.867	127	380039	7.700
68) 2,6-Dichlorophenol	(2)	8.872	162	247409	7.709
69) Hexachloropropene	(2)	8.910	213	182979	7.416
71) Hexachlorobutadiene	(2)	8.990	225	185531	7.597
75) Quinoline	(2)	9.295	129	535171	7.346
76) Caprolactam	(2)	9.402	113	77504	7.243
77) N-Nitrosodi-n-butylamine	(2)	9.455	84	270247	7.090
80) 4-Chloro-3-methylphenol	(2)	9.685	107	308601	7.805
82) Safrole	(2)	9.776	162	224980	7.508
83) 2-Methylnaphthalene	(2)	9.889	142	590899	7.665
84) 1-Methylnaphthalene	(2)	10.044	142	551376	7.764
85) Hexachlorocyclopentadiene	(3)	10.156	237	162629	7.214
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.161	216	321457	7.720
88) cis-Isosafrole	(3)	10.258	162	38483	1.202
90) 2,4,6-Trichlorophenol	(3)	10.359	196	185295	7.561
92) 2,4,5-Trichlorophenol	(3)	10.407	196	204320	7.868
93)$2-Fluorobiphenyl	(3)	10.514	172	1363537	15.235
94) trans-Isosafrole	(3)	10.621	162	208479	6.149
95) 1,1'-Biphenyl	(3)	10.664	154	737849	7.768
96) 2-Chloronaphthalene	(3)	10.675	162	611643	7.954
98) 1-Chloronaphthalene	(3)	10.702	162	526149	7.308
99) Diphenyl ether	(3)	10.851	170	401064	7.623
100) 2-Nitroaniline	(3)	10.857	138	157262	7.634
104) 1,4-Naphthoquinone	(3)	10.969	158	214905	7.269
105) 1,4-Dinitrobenzene	(3)	11.097	168	78714	7.617
106) Dimethylphthalate	(3)	11.204	163	630723	7.576
107) 1,3-Dinitrobenzene	(3)	11.215	168	92561	7.816
108) 2,6-Dinitrotoluene	(3)	11.279	165	135963	8.097
109) Acenaphthylene	(3)	11.343	152	850775	7.749
112) 3-Nitroaniline	(3)	11.525	138	141881	7.673

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
113)*Acenaphthene-d10	(3)	11.573	164	316537	5.000
114) Acenaphthene	(3)	11.622	153	590370	7.637
115) 2,4-Dinitrophenol	(3)	11.686	184	69555	7.909
116) 4-Nitrophenol	(3)	11.803	109	116849	7.605
117) Pentachlorobenzene	(3)	11.814	250	260656	7.677
119) Dibenzofuran	(3)	11.873	168	807580	7.586
118) 2,4-Dinitrotoluene	(3)	11.884	165	180255	7.667
121) 1-Naphthylamine	(3)	11.985	143	569088	7.501
122) 2,3,4,6-Tetrachlorophenol	(3)	12.055	232	153240	7.745
123) 2-Naphthylamine	(3)	12.092	143	555805	7.411
124) Diethylphthalate	(3)	12.247	149	617113	7.583
126) Fluorene	(3)	12.333	166	656216	7.996
125) Thionazin	(3)	12.344	107	129969	7.757
128) 5-Nitro-o-toluidine	(3)	12.360	152	164714	7.896
127) 4-Chlorophenyl-phenylether	(3)	12.360	204	338738	7.883
129) 4-Nitroaniline	(3)	12.365	138	147047	7.652
130) 4,6-Dinitro-2-methylphenol	(4)	12.408	198	84074	6.718
132) NDPA as diphenylamine	(4)	12.504	169	540297	7.709
131) N-Nitrosodiphenylamine	(4)	12.504	169	540297	7.709
134) 1,2-Diphenylhydrazine	(4)	12.547	77	879929	7.836
135)$2,4,6-Tribromophenol	(3)	12.627	330	155767	14.954
137) Tetraethyldithiopyrophosphate	(4)	12.739	97	135218	7.732
139) 1,3,5-Trinitrobenzene	(4)	12.841	213	57159	7.082
140) Diallate (peak 1)	(4)	12.879	86	286357	6.376
141) Phorate	(4)	12.884	75	512923	8.162
142) Phenacetin	(4)	12.905	108	363596	7.659
143) 4-Bromophenyl-phenylether	(4)	12.959	248	183735	7.935
144) Diallate (peak 2)	(4)	12.985	86	56162	1.257
145) Hexachlorobenzene	(4)	13.007	284	192887	7.982
147) Dimethoate	(4)	13.082	87	308044	7.691
148) Atrazine	(4)	13.189	200	179593	7.764
149) Pentachlorophenol	(4)	13.264	266	86370	6.036
150) 4-Aminobiphenyl	(4)	13.280	169	522327	7.719
151) Pentachloronitrobenzene	(4)	13.280	237	85540	7.385
152) Pronamide	(4)	13.387	173	291203	7.691
153)*Phenanthrene-d10	(4)	13.504	188	604056	5.000
154) Dinoseb	(4)	13.526	211	120851	6.605
155) Phenanthrene	(4)	13.531	178	969262	7.616
157) Anthracene	(4)	13.601	178	971610	7.764
163) Carbazole	(4)	13.820	167	890855	7.791

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

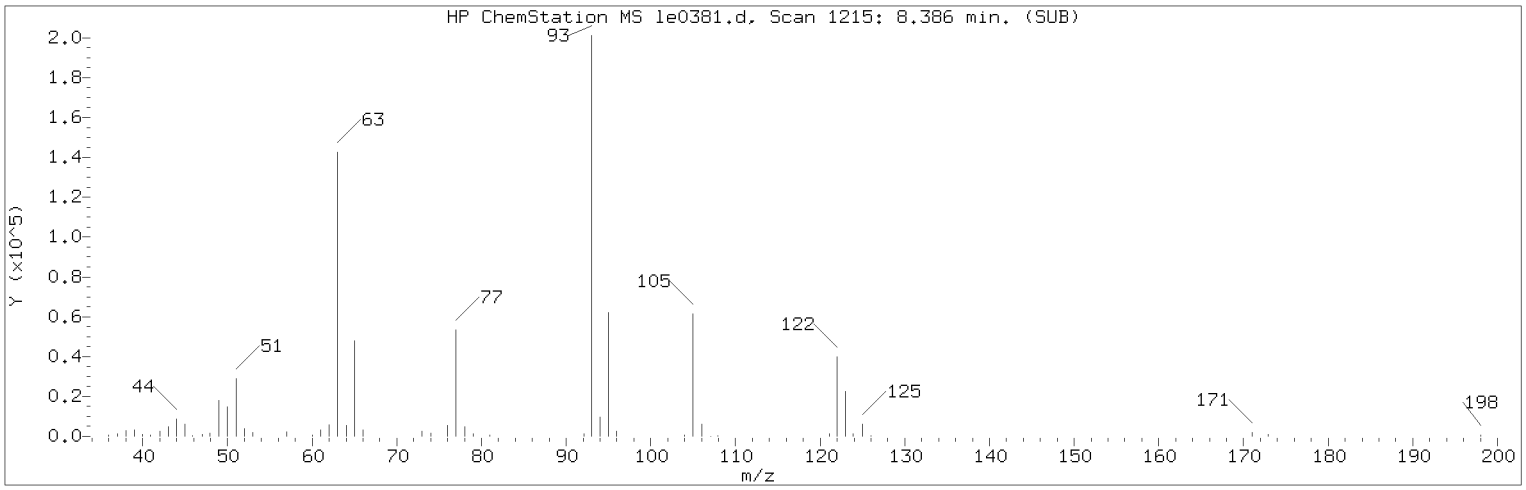
Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Methyl parathion	(4)	14.028	109	224565	7.884
165) Di-n-butylphthalate	(4)	14.349	149	1054429	7.568
167) Parathion	(4)	14.585	109	142946	7.944
168) 4-Nitroquinoline-1-oxide	(4)	14.590	190	60078	5.462
169) Octachlorostyrene	(4)	14.932	308	72782	8.209
171) Isodrin	(4)	14.981	193	112822	7.553
222) Total PAHs	(6)			17584918	140.580
173) Fluoranthene	(4)	15.200	202	1123983	8.109
174) Benzidine	(5)	15.435	184	2296441	22.682
175)*Pyrene-d10	(5)	15.515	212	747682	5.000
177) Pyrene	(5)	15.542	202	1216088	7.498
179)$Terphenyl-d14	(5)	15.836	244	1637463	15.975
182) p-Dimethylaminoazobenzene	(5)	16.066	225	192038	7.167
185) Chlorobenzilate	(5)	16.163	139	344924	7.772
187) 3,3'-Dimethylbenzidine	(5)	16.633	212	704784	7.534
188) Butylbenzylphthalate	(5)	16.697	149	517921	7.995
191) 2-Acetylaminofluorene	(5)	17.056	181	387365	7.369
193) 3,3'-Dichlorobenzidine	(5)	17.569	252	424971	8.134
195) Benzo(a)anthracene	(5)	17.569	228	1219293	8.677
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.585	231	238373	7.899
196) Chrysene	(5)	17.633	228	1151533	8.594
199) bis(2-Ethylhexyl)phthalate	(5)	17.778	149	771726	8.298
203) 6-Methylchrysene	(5)	18.441	242	806728	8.579
205) Di-n-octylphthalate	(6)	18.949	149	1224693	6.930
206) Benzo(b)fluoranthene	(6)	19.441	252	1236843	8.067
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.452	256	541025	8.122
208) Benzo(k)fluoranthene	(6)	19.489	252	1212121	7.940
211) Benzo(a)pyrene	(6)	19.971	252	1132435	8.094
213)*Perylene-d12	(6)	20.062	264	627174	5.000
215) 3-Methylcholanthrene	(6)	20.548	268	444267	7.597
217) Dibenz(a,h)acridine	(6)	21.367	279	822419	6.898
218) Dibenz(a,j)acridine	(6)	21.436	279	866559	6.976
219) Indeno(1,2,3-cd)pyrene	(6)	21.682	276	1216556	7.434
220) Dibenz(a,h)anthracene	(6)	21.725	278	1021543	7.446
221) Benzo(g,h,i)perylene	(6)	22.078	276	992097	7.105

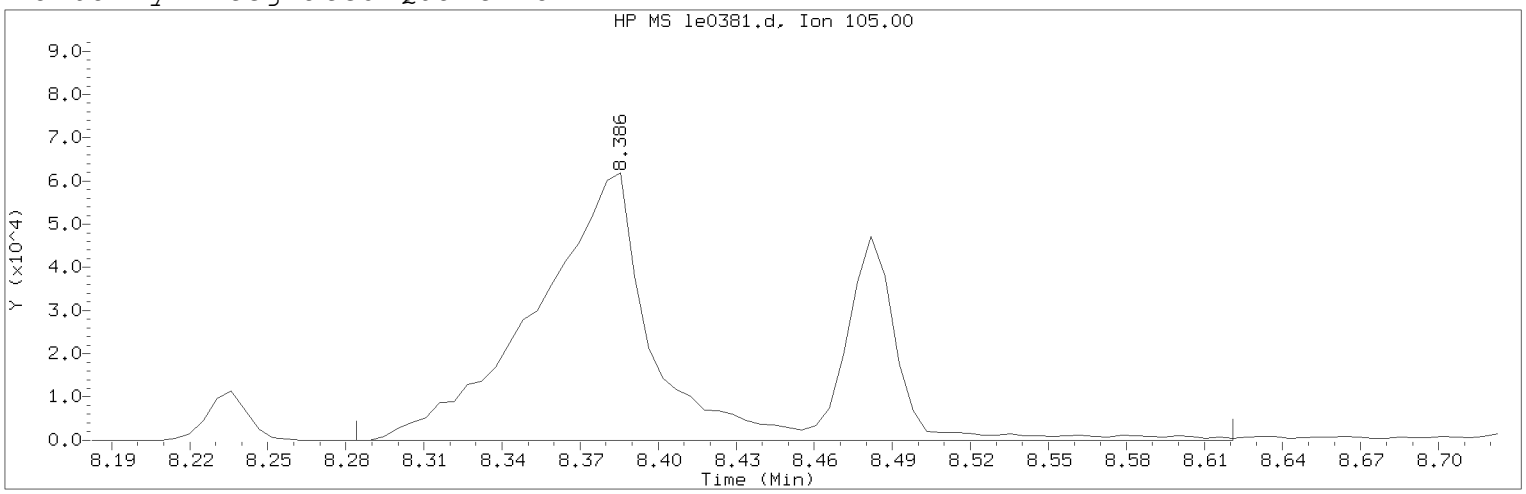
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:40
Date, time and analyst ID of latest file update: 12-May-2016 07:40 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

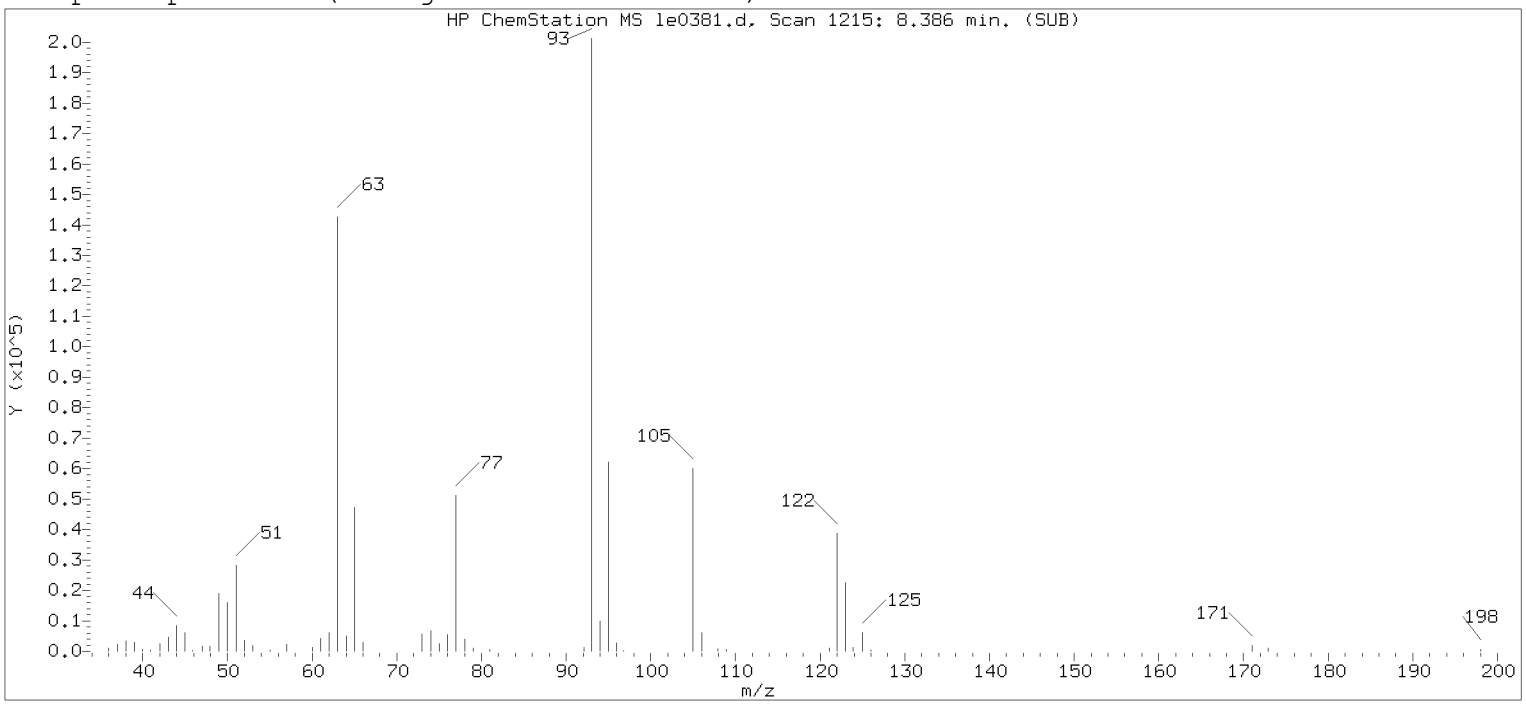
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1215
Retention Time (minutes) : 8.386
Quant Ion : 105.00
Area (flag) : 252543M
On-Column Amount (ng/ul) : 9.1529
Integration start scan : 1195 Integration stop scan: 1258
Y at integration start : -24 Y at integration end: -24

Reason for manual integration: improper integration

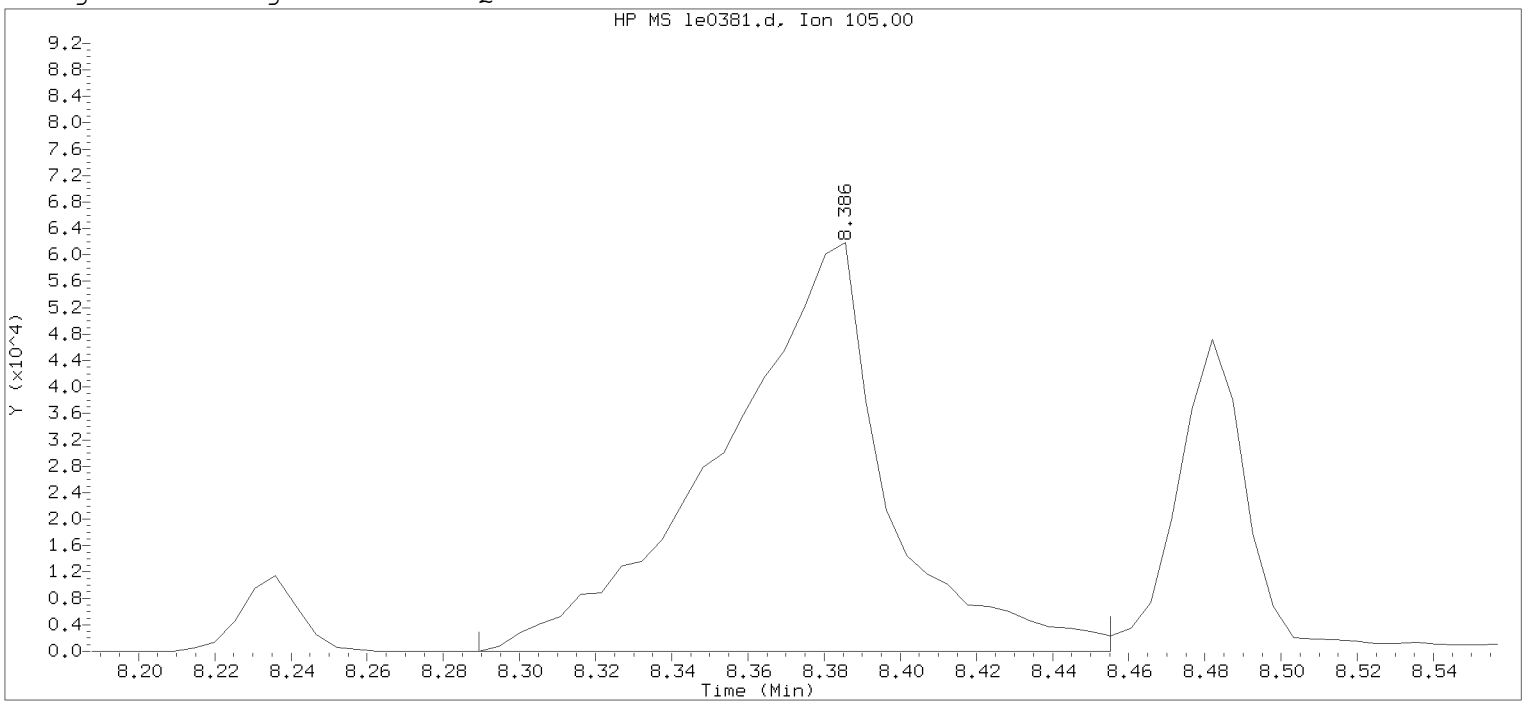
Analyst responsible for change: Digitally signed by Holly B. Ziegler
on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/20/2016 at 12:34.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



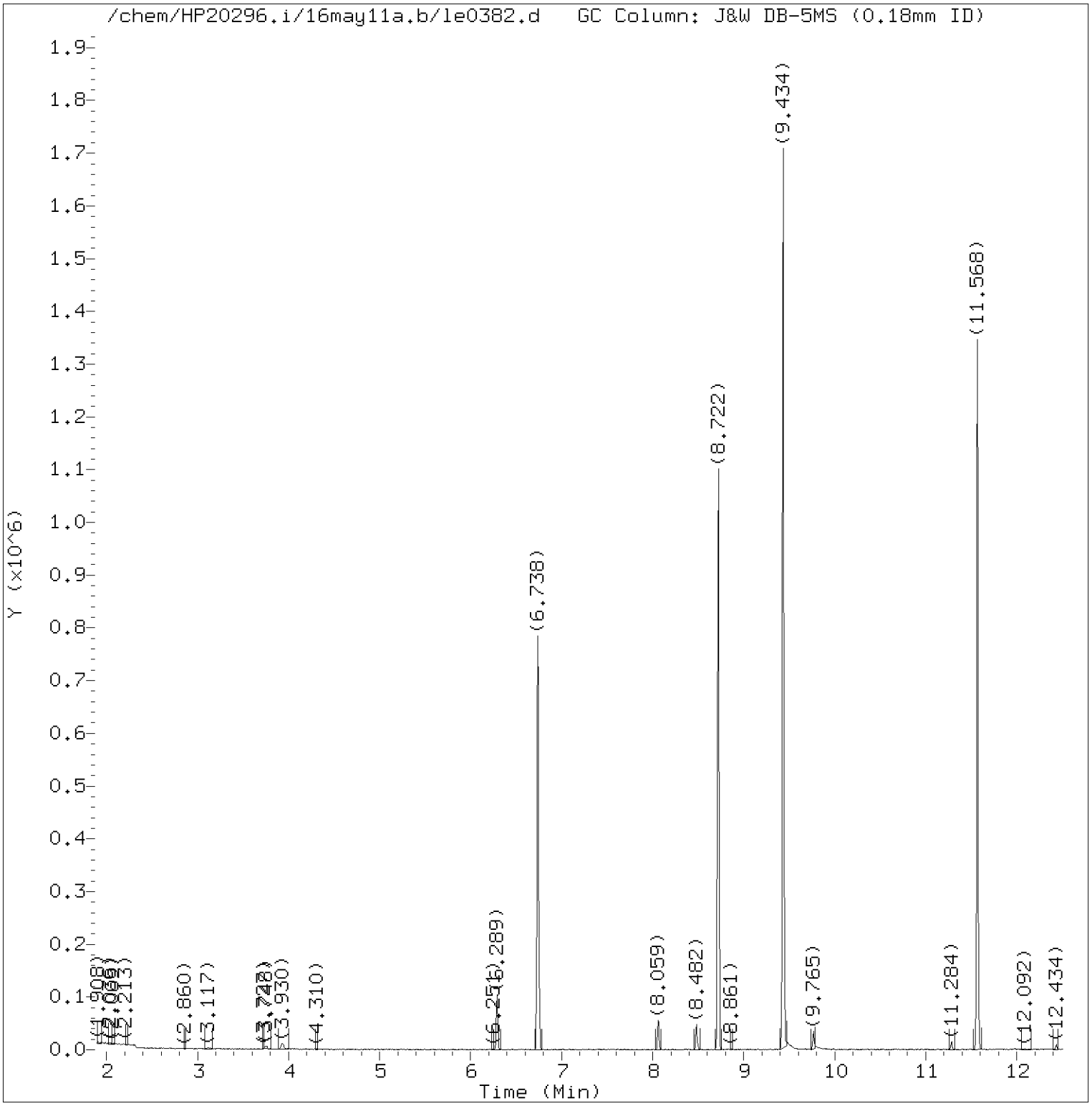
Data File: /chem/HP20296.i/16may11a.b/le0381.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 15:45 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: all1
Calibration date and time: 12-MAY-2016 07:38
Date, time and analyst ID of latest file update: 12-May-2016 07:38 hbz01996

Sample Name: SSTD7.5 Lab Sample ID: RVSTD1166

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1215		
Retention Time (minutes)	: 8.386		
Quant Ion	: 105.00		
Area	: 186979		
On-column Amount (ng/ul)	: 7.5358		
Integration start scan	: 1196	Integration stop scan:	1227
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly B. Ziegler on 05/12/2016 at 07:42.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

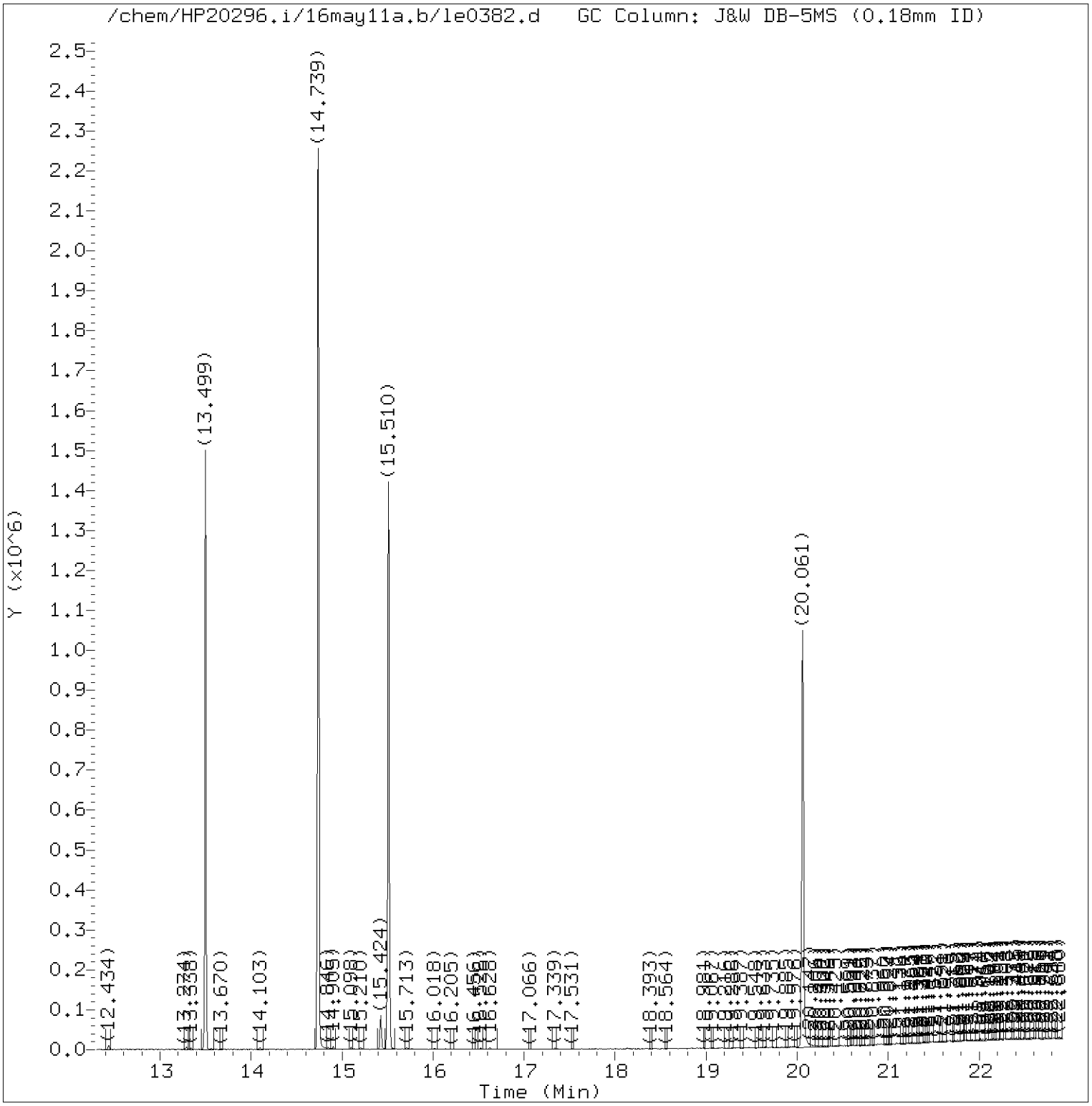
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0382.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 16:24 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: pda
Calibration date and time: 11-MAY-2016 17:02
Date, time and analyst ID of latest file update: 11-May-2016 17:02 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1166

Digitally signed by Kelli M. Barto
on 05/11/2016 at 17:04.
Target 3.5 esignature user ID: kmb02125



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0382.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 16:24 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: pda
Calibration date and time: 11-MAY-2016 17:02
Date, time and analyst ID of latest file update: 11-May-2016 17:02 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1166

Digitally signed by Kelli M. Barto
on 05/11/2016 at 17:04.
Target 3.5 esignature user ID: kmb02125

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0382.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 16:24 Analyst ID: kmb02125

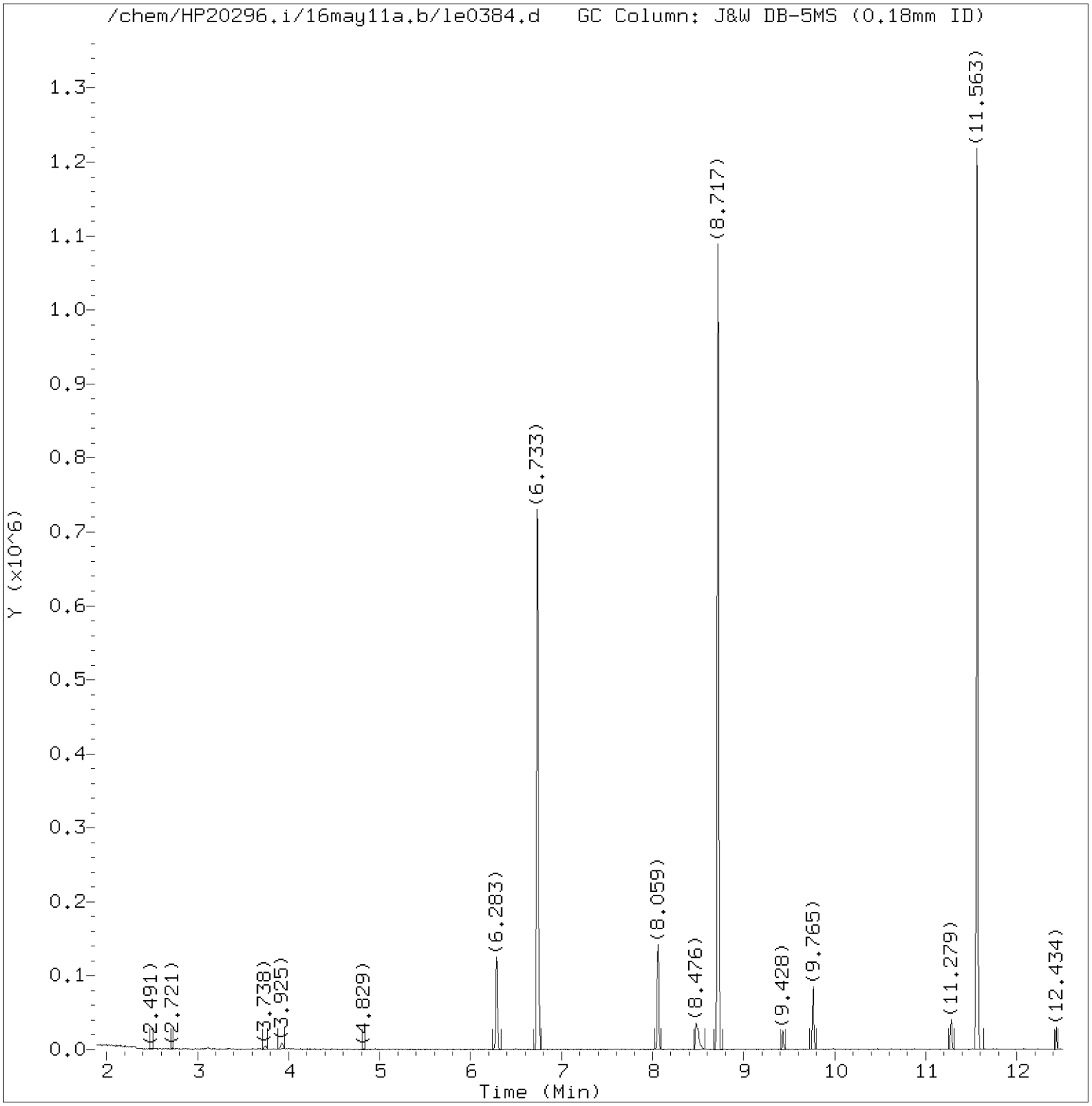
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: pda
Calibration date and time: 11-MAY-2016 17:02
Date, time and analyst ID of latest file update: 11-May-2016 17:02 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVPDA1166

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.738	152	141435	5.000
65)*Naphthalene-d8	(2)	8.722	136	529397	5.000
81) 1,4-Phenylenediamine	(2)	9.434	108	588785	11.788
113)*Acenaphthene-d10	(3)	11.568	164	297407	5.000
153)*Phenanthrene-d10	(4)	13.499	188	571236	5.000
170) Methapyrilene	(4)	14.739	97	542179	12.947
175)*Pyrene-d10	(5)	15.510	212	717584	5.000
213)*Perylene-d12	(6)	20.061	264	508152	5.000

* = Compound is an internal standard.

Digitally signed by Kelli M. Barto
on 05/11/2016 at 17:04.
Target 3.5 esignature user ID: kmb02125



Total Ion Chromatogram (TIC)

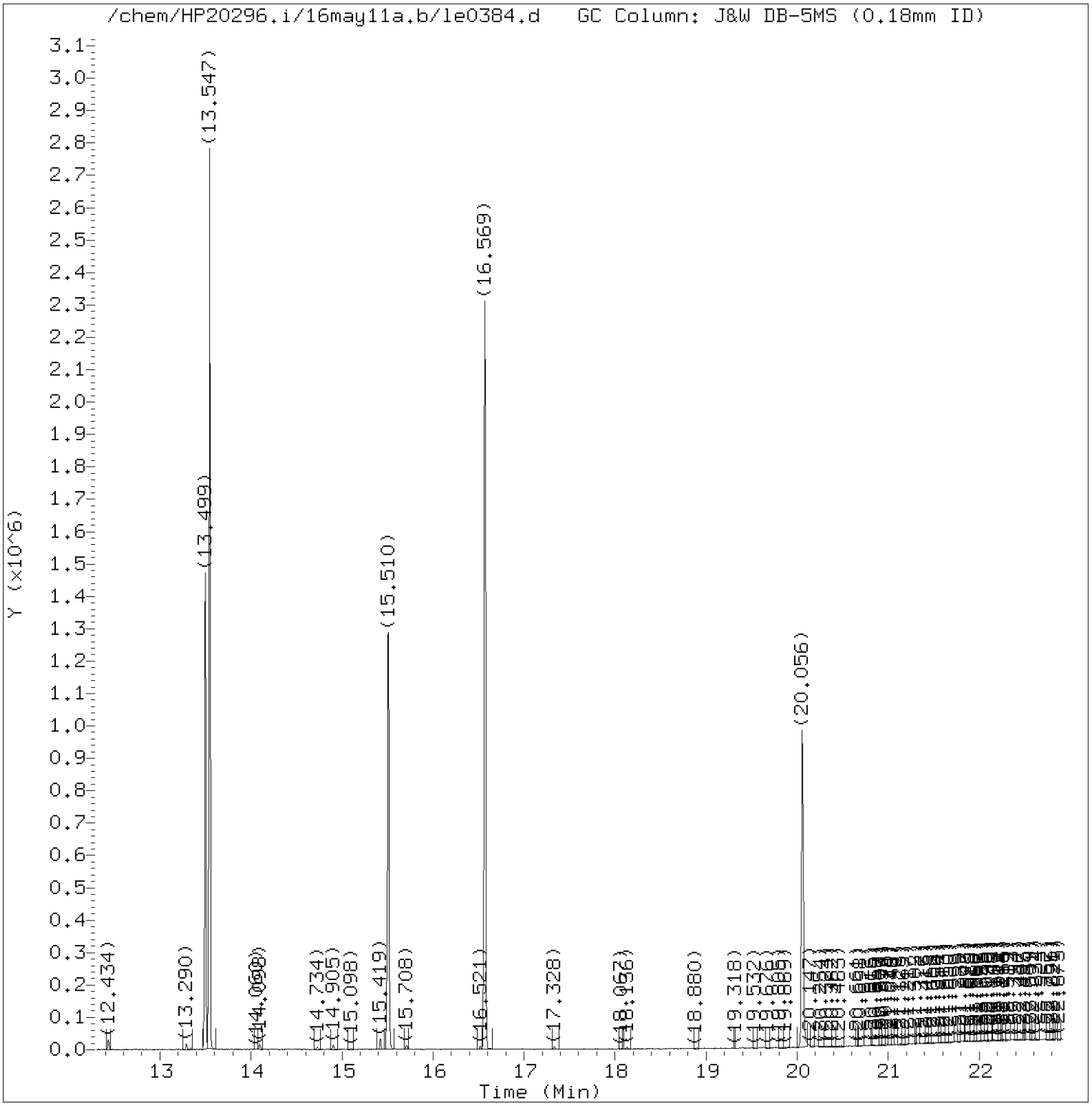
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 18:45
Date, time and analyst ID of latest file update: 11-May-2016 18:45 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 18:45
Date, time and analyst ID of latest file update: 11-May-2016 18:45 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 18:45
Date, time and analyst ID of latest file update: 11-May-2016 18:45 kmb02125

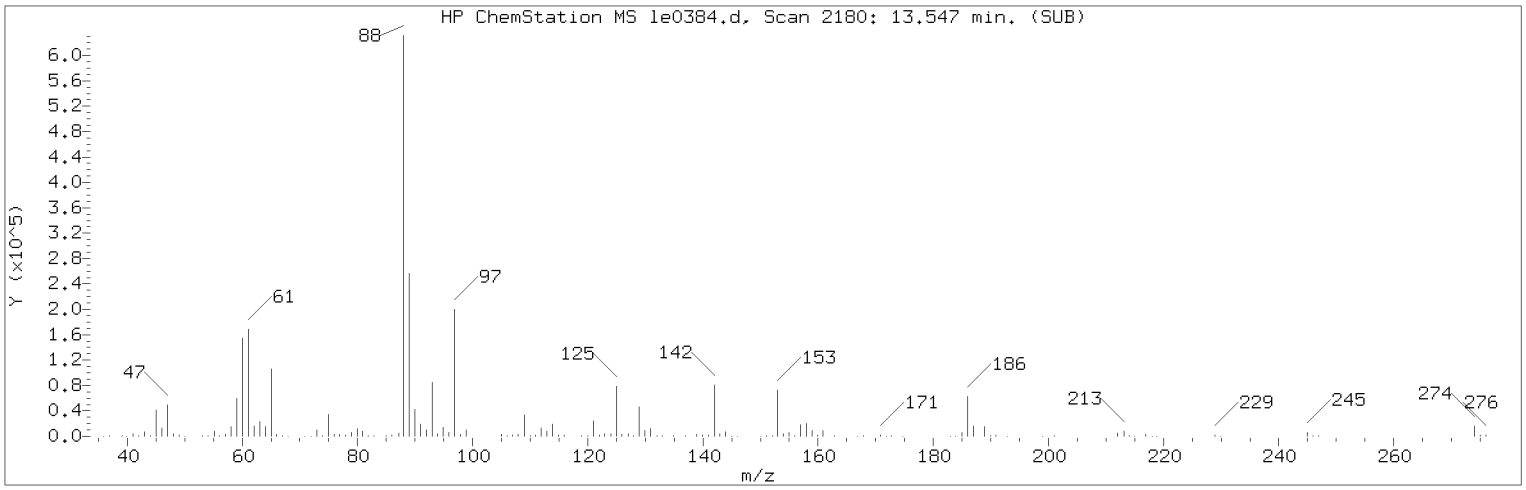
Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.733	152	140886	5.000
65)*Naphthalene-d8	(2)	8.717	136	535925	5.000
113)*Acenaphthene-d10	(3)	11.563	164	292828	5.000
153)*Phenanthrene-d10	(4)	13.499	188	577314	5.000
162) Disulfoton	(4)	13.547	88	584799M	13.914
175)*Pyrene-d10	(5)	15.510	212	679476	5.000
189) Famphur	(5)	16.569	218	709889M	13.496
213)*Perylene-d12	(6)	20.056	264	497619	5.000

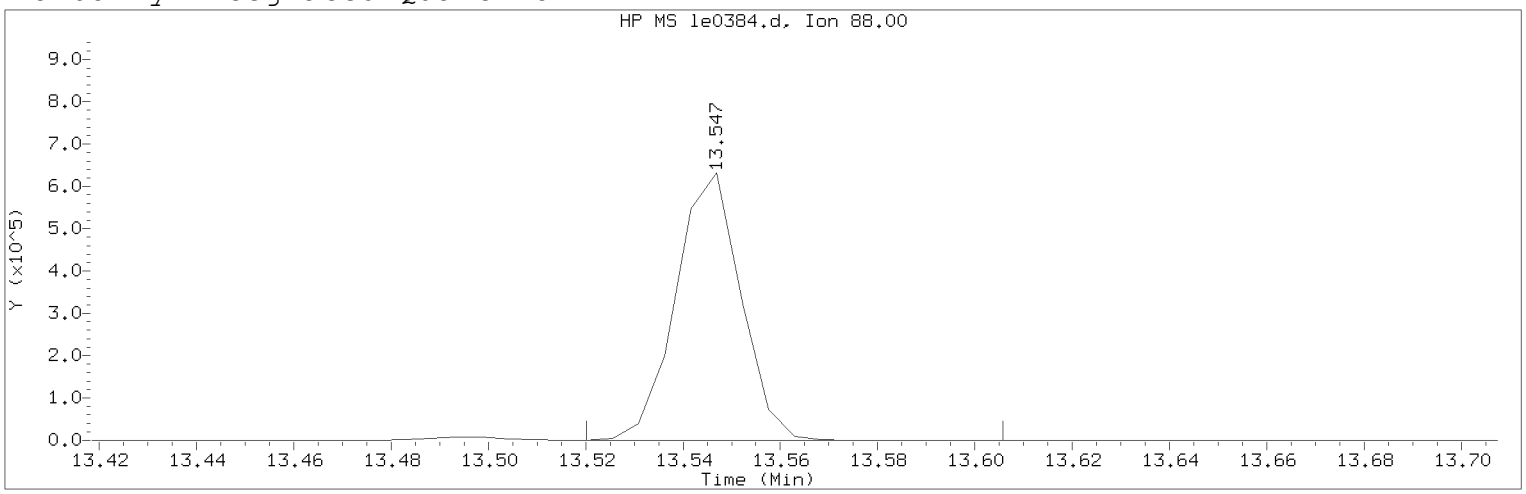
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 18:45
Date, time and analyst ID of latest file update: 11-May-2016 18:45 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

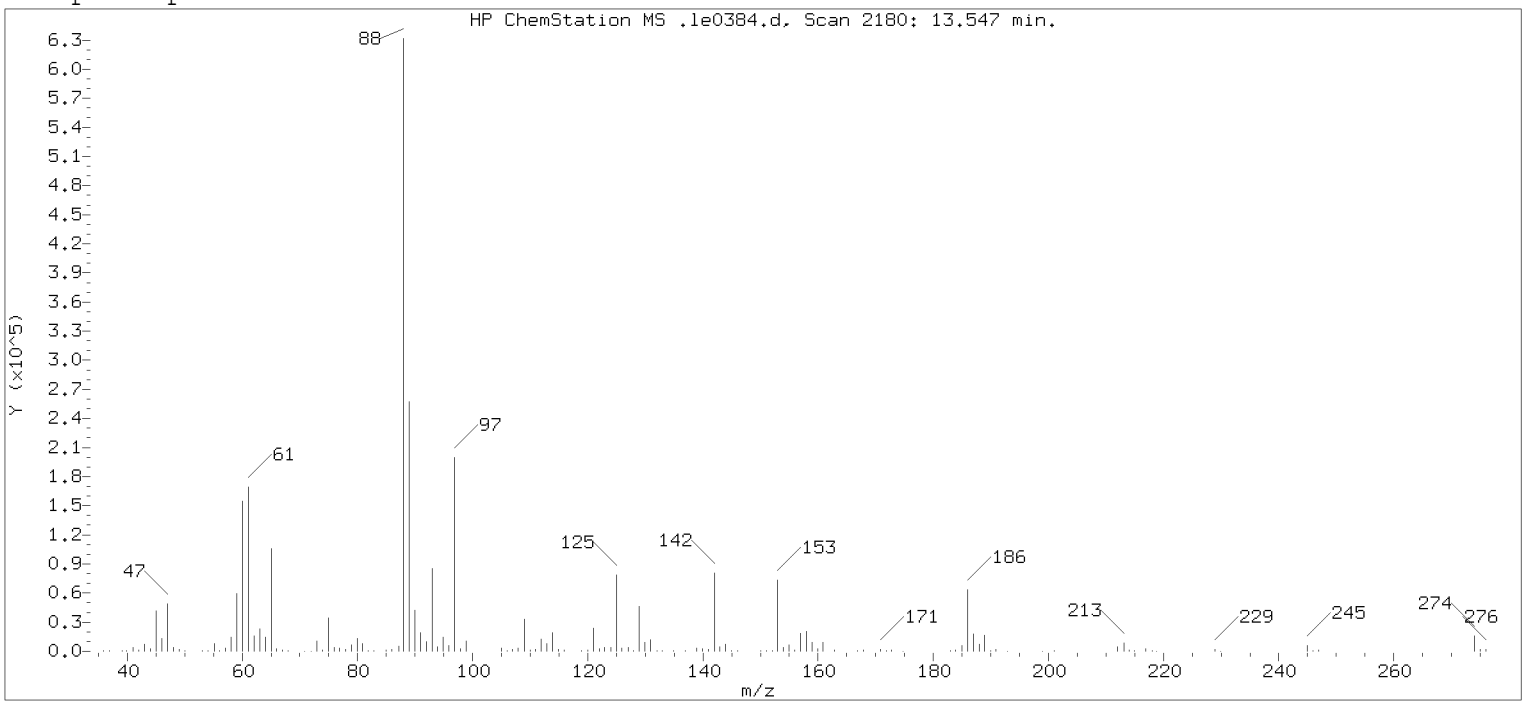
Compound Number : 162
Compound Name : Disulfoton
Scan Number : 2180
Retention Time (minutes) : 13.547
Quant Ion : 88.00
Area (flag) : 584799M
On-Column Amount (ng/ul) : 13.9135
Integration start scan : 2174 Integration stop scan: 2190
Y at integration start : 515 Y at integration end: 409

Reason for manual integration: missed peak

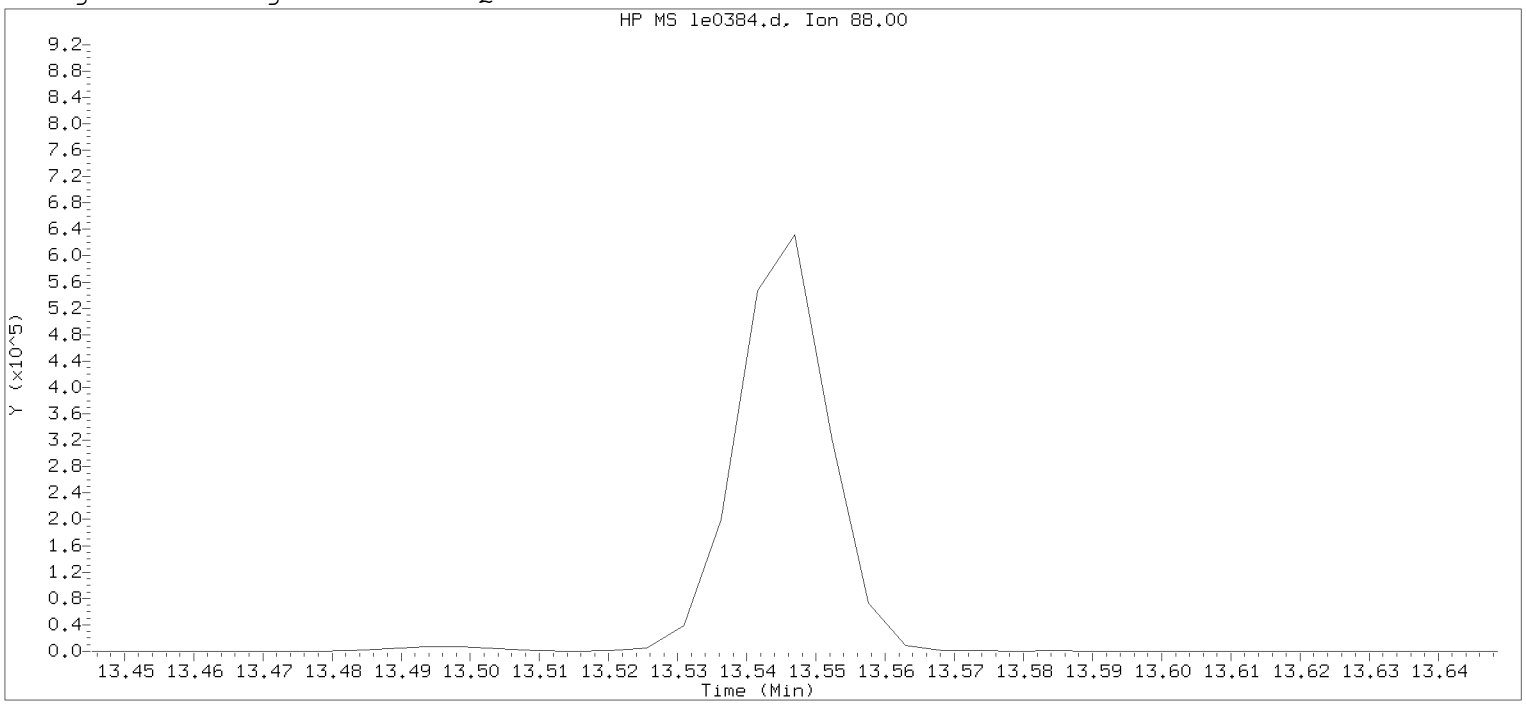
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 11:36.
PARALLAX ID: mar00486

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

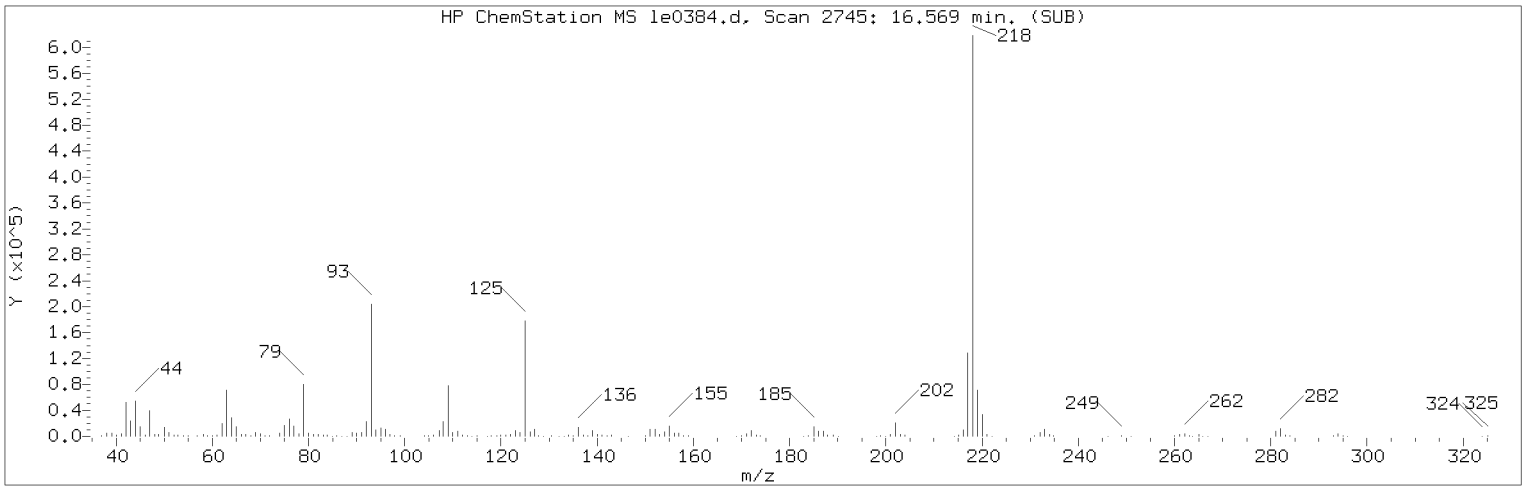
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 17:47
Date, time and analyst ID of latest file update: 11-May-2016 17:47 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

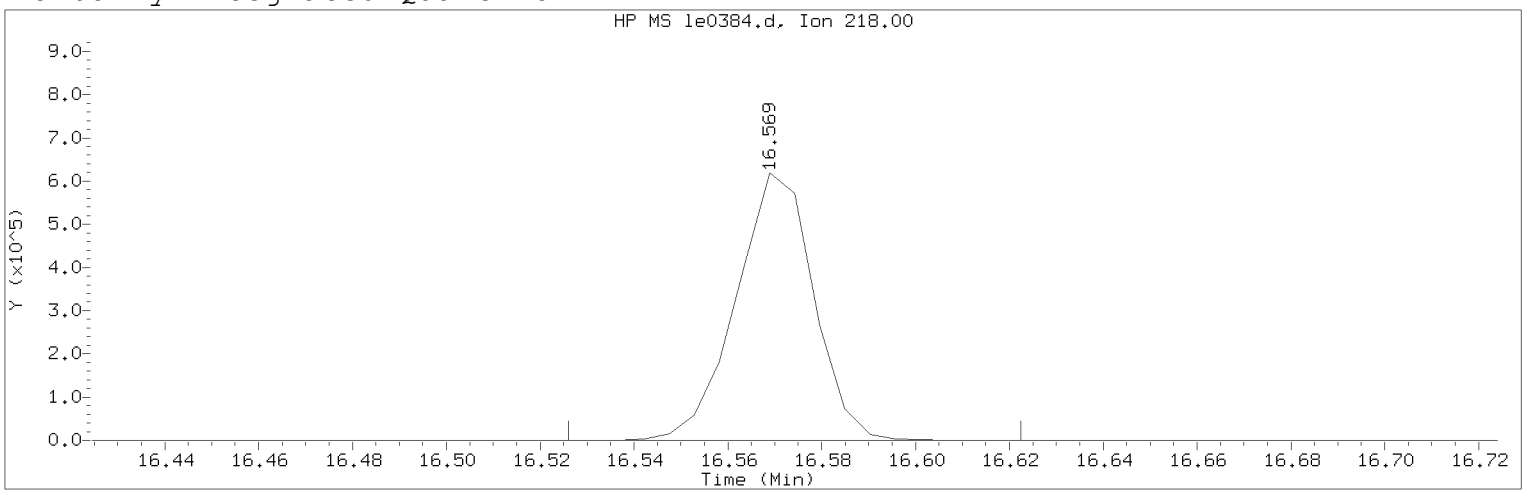
Compound Number : 162
Compound Name : Disulfoton
Expected RT (minutes) : 13.547
Quant Ion : 88.00

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 18:45
Date, time and analyst ID of latest file update: 11-May-2016 18:45 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

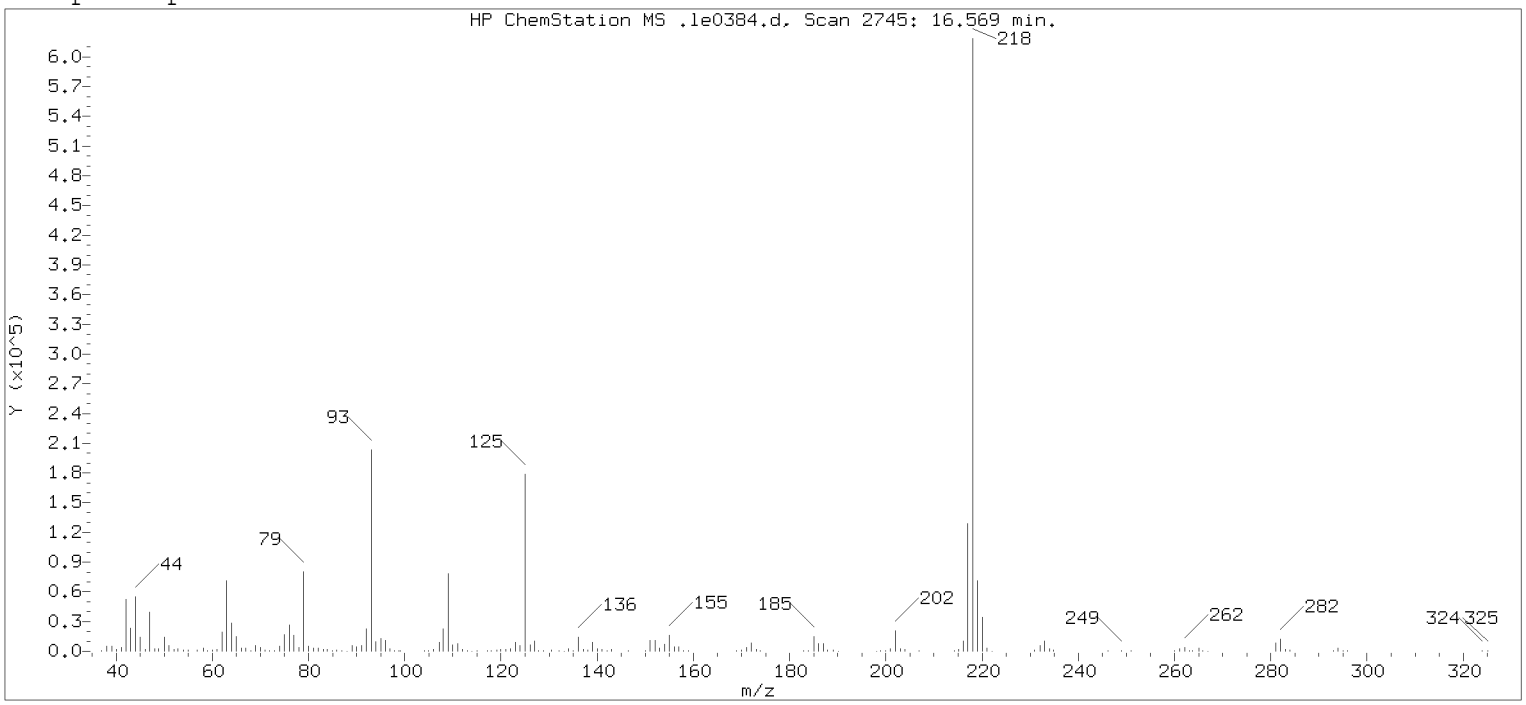
Compound Number : 189
Compound Name : Famphur
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 218.00
Area (flag) : 709889M
On-Column Amount (ng/ul) : 13.4964
Integration start scan : 2736 Integration stop scan: 2754
Y at integration start : 0 Y at integration end: 316

Reason for manual integration: missed peak

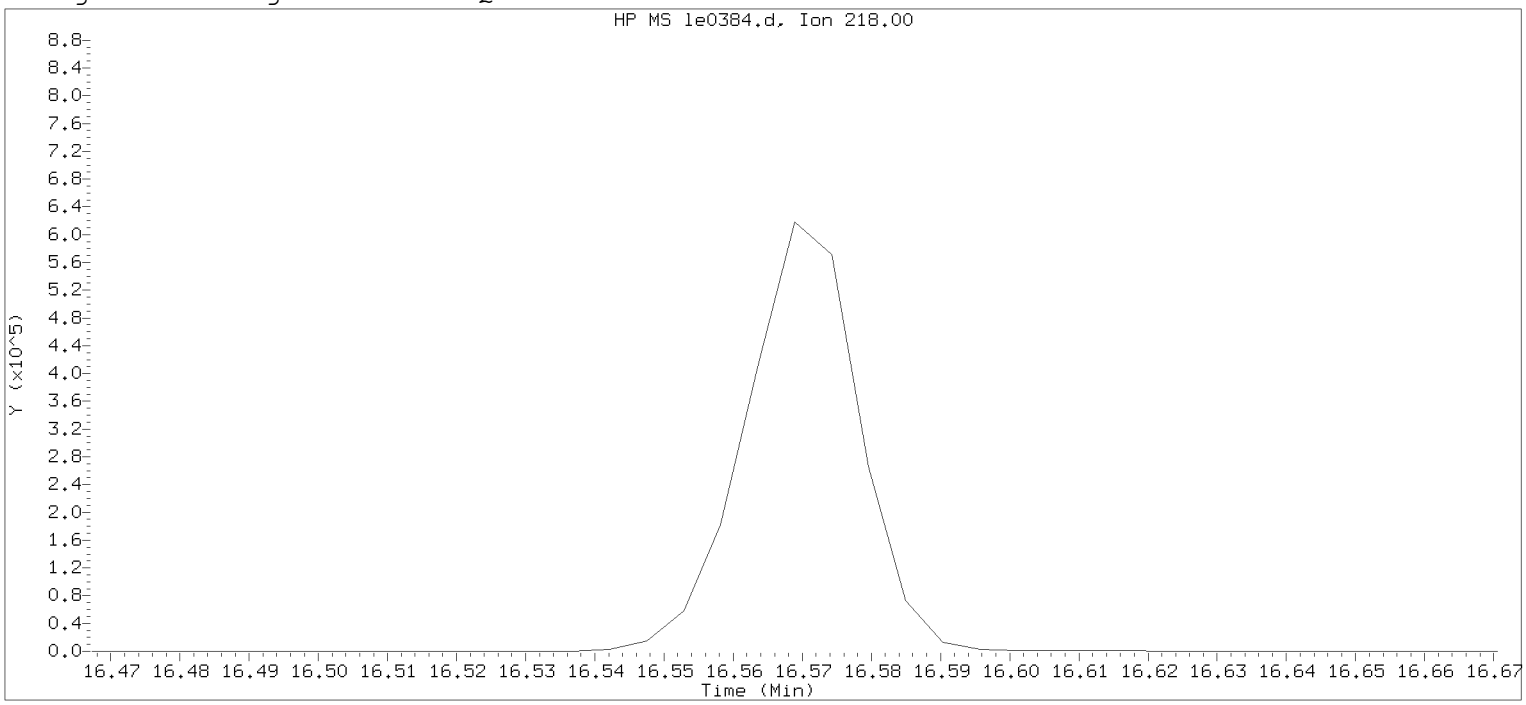
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 11:36.
PARALLAX ID: mar00486

Sample Spectrum



Original Integration of Quant Ion



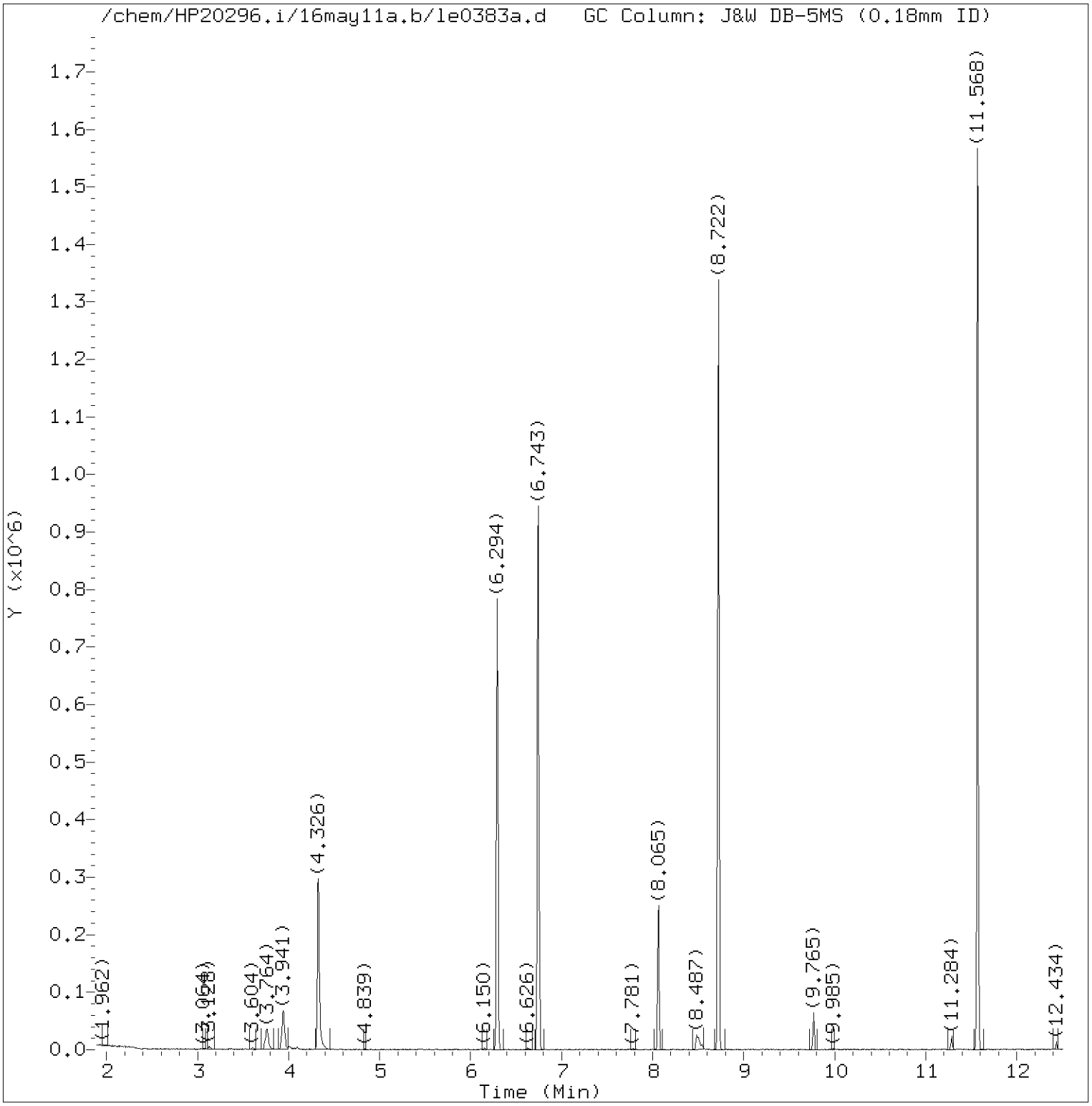
Data File: /chem/HP20296.i/16may11a.b/le0384.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:20 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: fad
Calibration date and time: 11-MAY-2016 17:47
Date, time and analyst ID of latest file update: 11-May-2016 17:47 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVFAD1116

Compound Number : 189
Compound Name : Famphur
Expected RT (minutes) : 16.569
Quant Ion : 218.00

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: KBARTO



Total Ion Chromatogram (TIC)

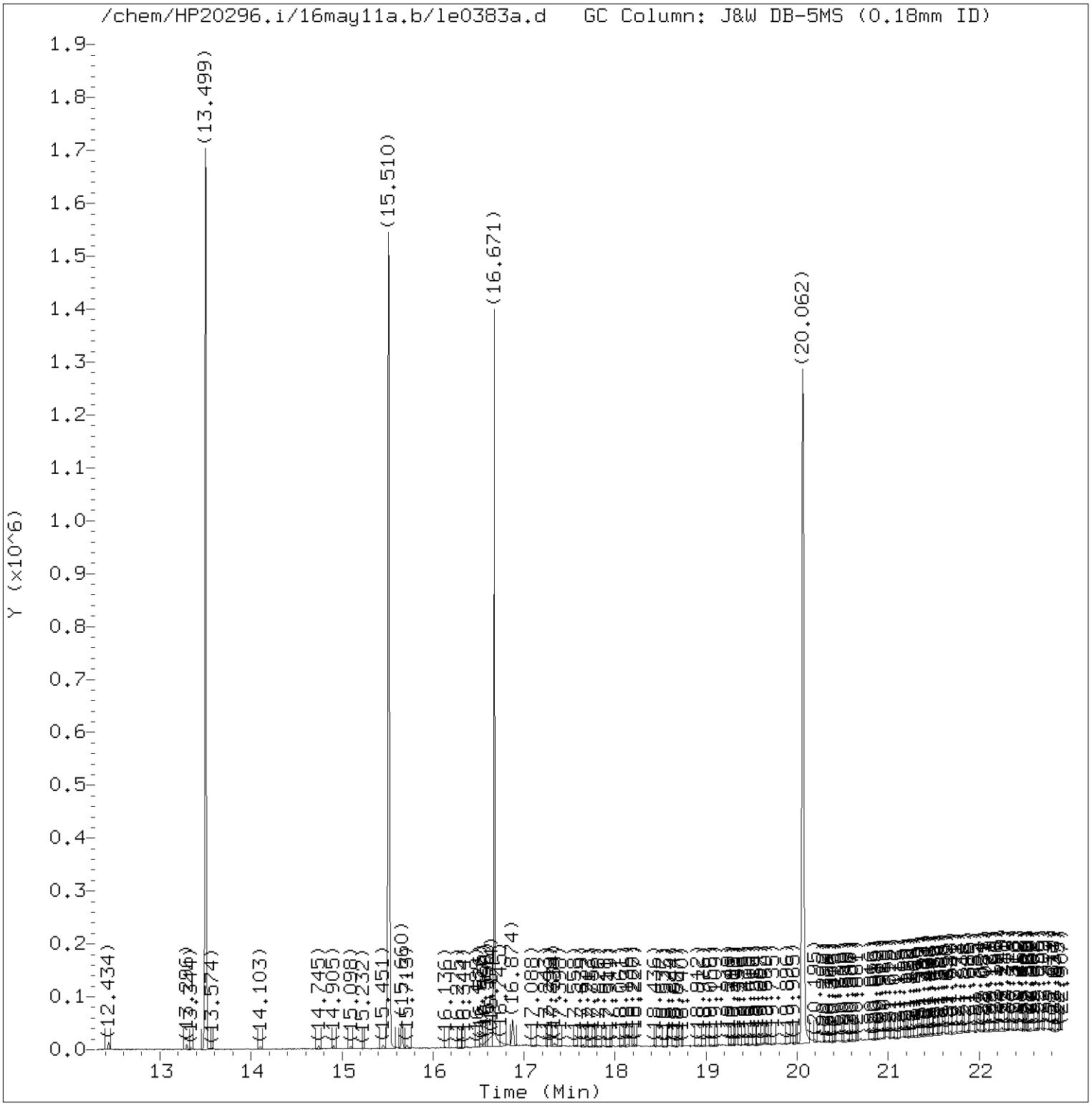
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0383a.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 19:02 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: kep
Calibration date and time: 11-MAY-2016 19:41
Date, time and analyst ID of latest file update: 11-May-2016 19:41 kmb02125

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 10:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0383a.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 19:02 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: kep
Calibration date and time: 11-MAY-2016 19:41
Date, time and analyst ID of latest file update: 11-May-2016 19:41 kmb02125

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 10:19.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0383a.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 19:02 Analyst ID: kmb02125

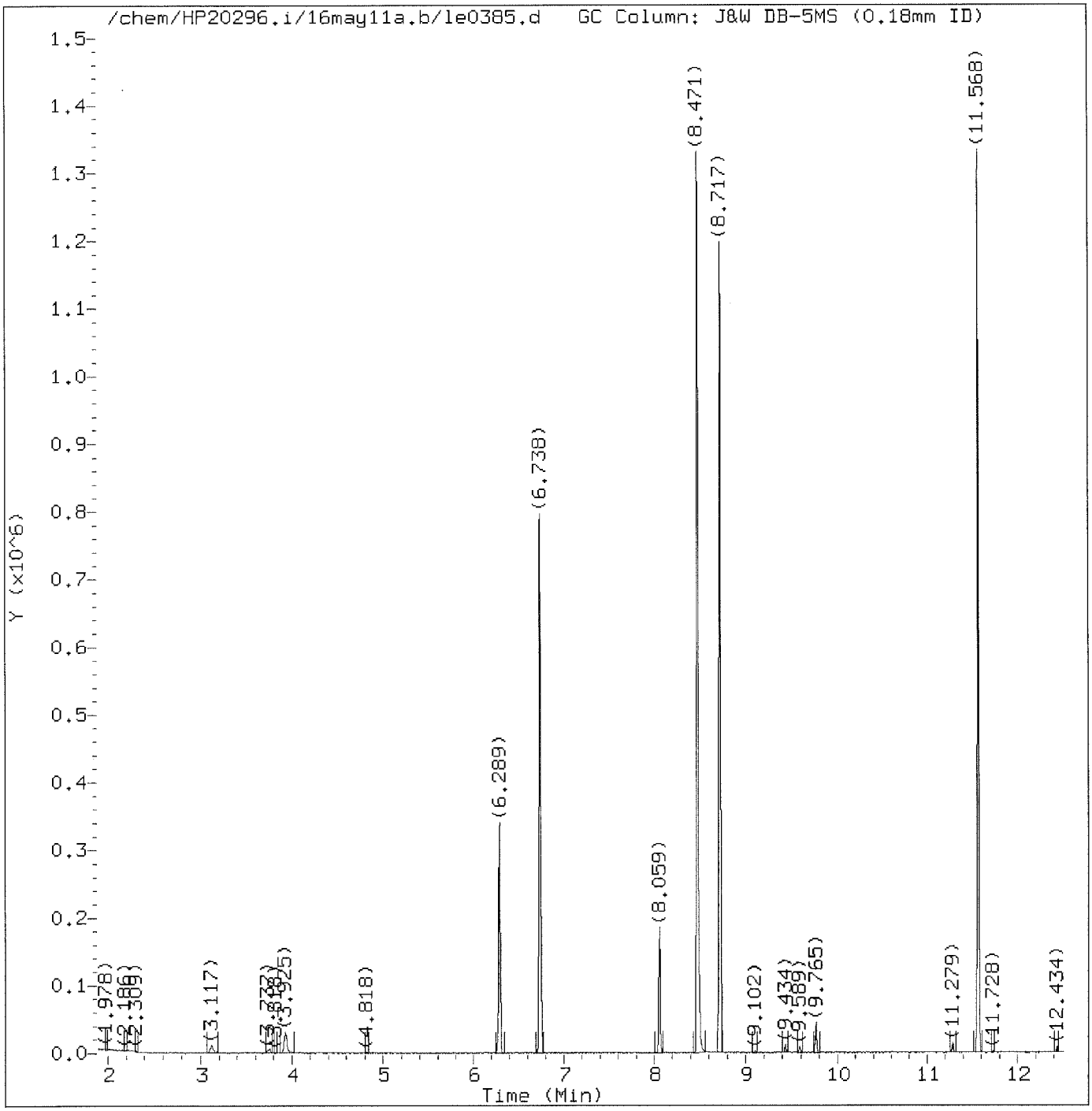
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: kep
Calibration date and time: 11-MAY-2016 19:41
Date, time and analyst ID of latest file update: 11-May-2016 19:41 kmb02125

Sample Name: SSTD060 Lab Sample ID: RVKEP3645

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.743	152	173797	5.000
65)*Naphthalene-d8	(2)	8.722	136	654969	5.000
113)*Acenaphthene-d10	(3)	11.568	164	364427	5.000
153)*Phenanthrene-d10	(4)	13.499	188	704657	5.000
175)*Pyrene-d10	(5)	15.510	212	817079	5.000
190) Kepone	(5)	16.676	272	74842	5.408
213)*Perylene-d12	(6)	20.062	264	639880	5.000

* = Compound is an internal standard.

Digitally signed by Holly B. Ziegler
on 05/17/2016 at 10:19.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

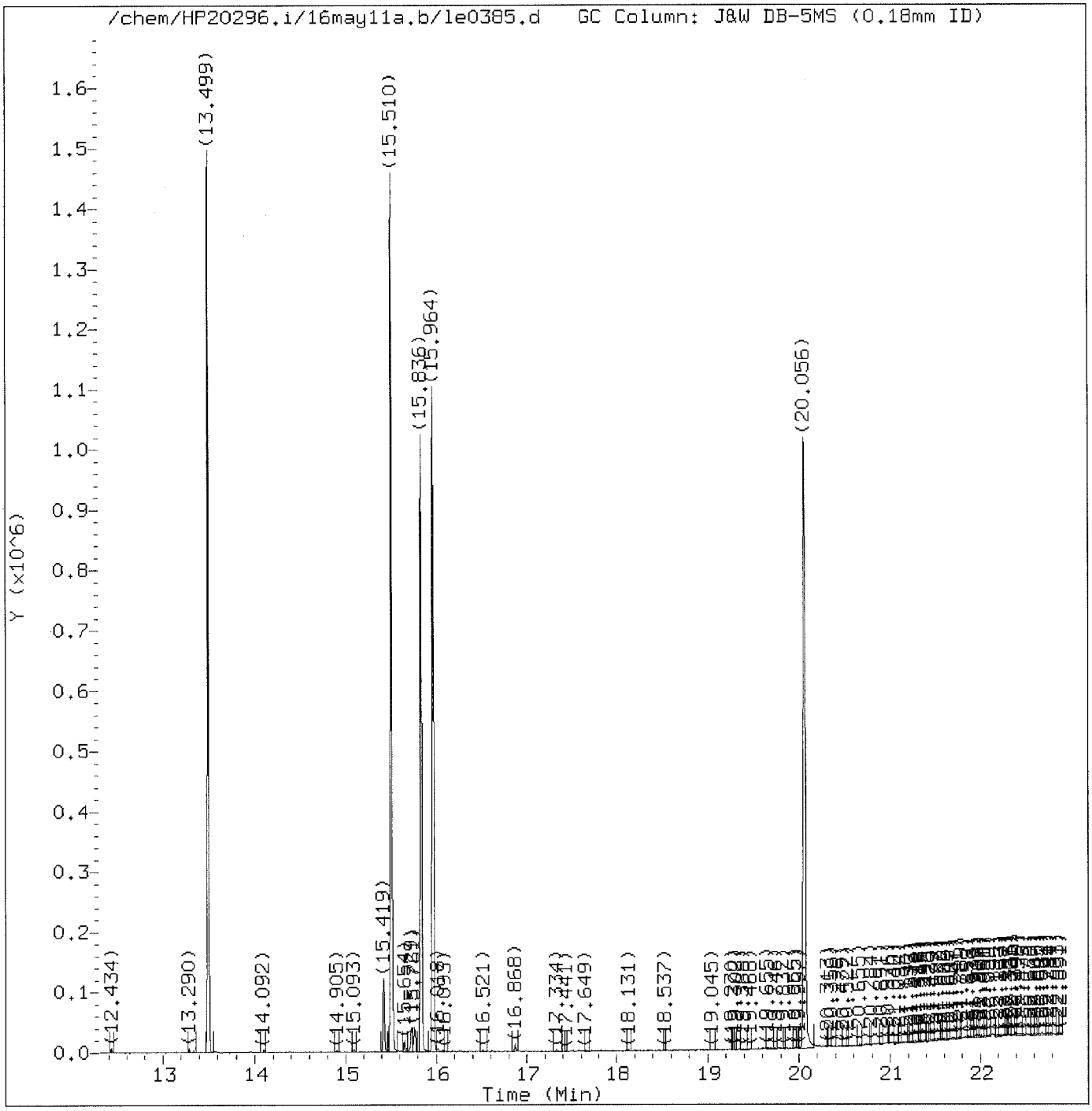
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

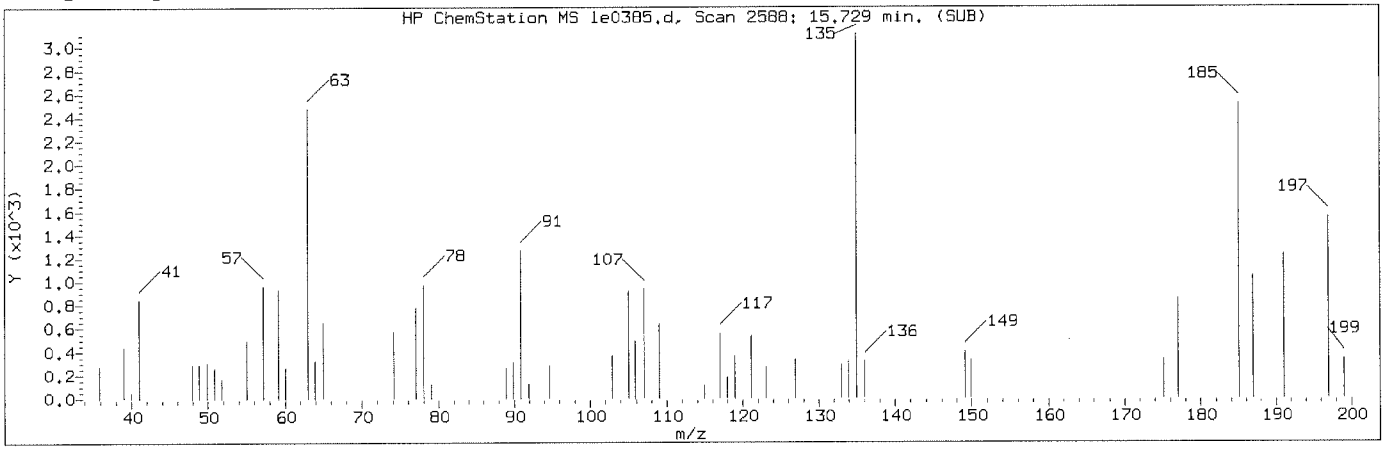
Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.733	152	155905	5.000
64) a,a-Dimethylphenethylamine	(2)	8.471	58	891002	12.500
65)*Naphthalene-d8	(2)	8.717	136	582356	5.000
186) Aramite	(5)			168126	12.500
113)*Acenaphthene-d10	(3)	11.568	164	315387	5.000
153)*Phenanthrene-d10	(4)	13.499	188	611296	5.000
175)*Pyrene-d10	(5)	15.510	212	727132	5.000
180) Aramite (1)	(5)	15.729	185	3051M	5.000
181) Aramite (2)	(5)	15.761	185	3002M	5.000
183) Aramite (3)	(5)	15.836	185	69199M	1.250
184) Aramite (4)	(5)	15.964	185	92874M	1.250
213)*Perylene-d12	(6)	20.056	264	527420	5.000

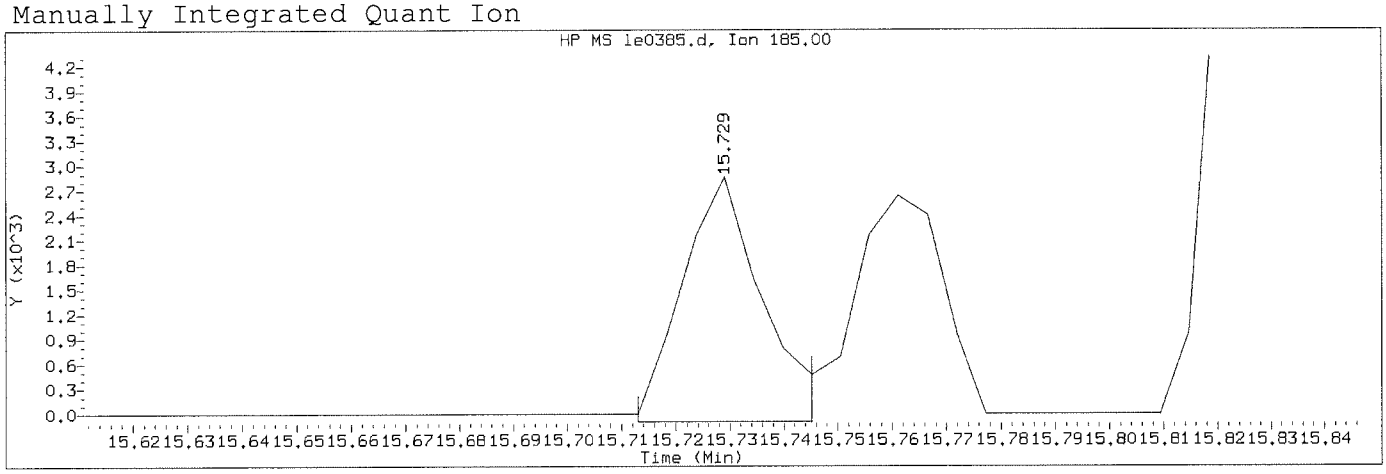
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

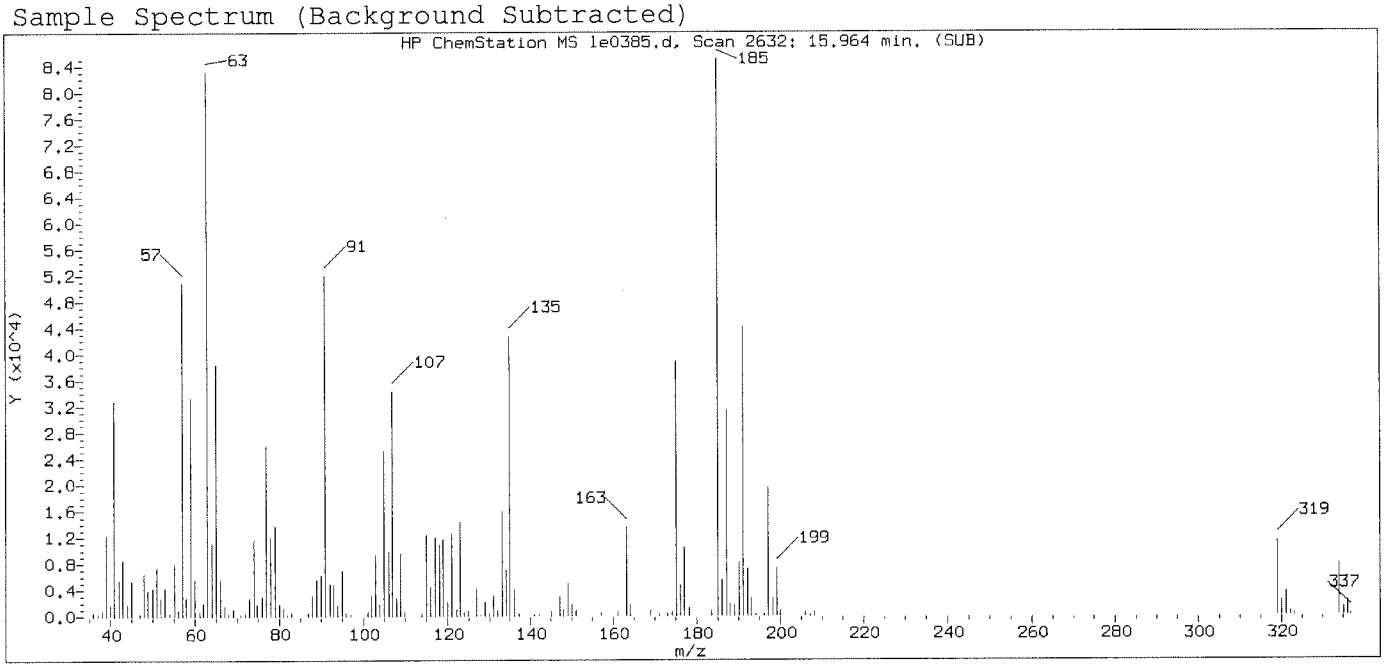
Compound Number	: 180		
Compound Name	: Aramite (1)		
Scan Number	: 2588		
Retention Time (minutes)	: 15.729		
Quant Ion	: 185.00		
Area (flag)	: 3051M		
On-Column Amount (ng/ul)	: 5.0000		
Integration start scan	: 2584	Integration stop scan:	2590
Y at integration start	: -92	Y at integration end:	-92

Reason for manual integration: improper integration

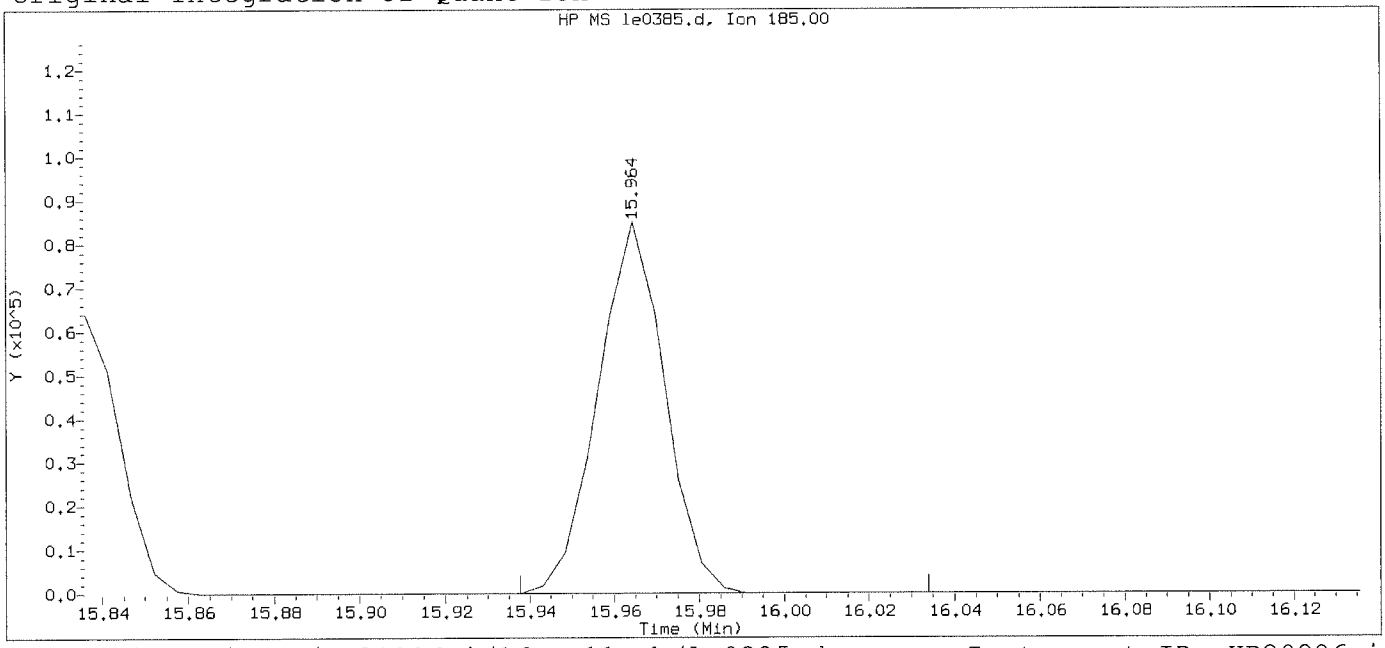
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

GC/MS audit/management approval: Mark A. Ratcliff Senior Specialist MAY 26 2016

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

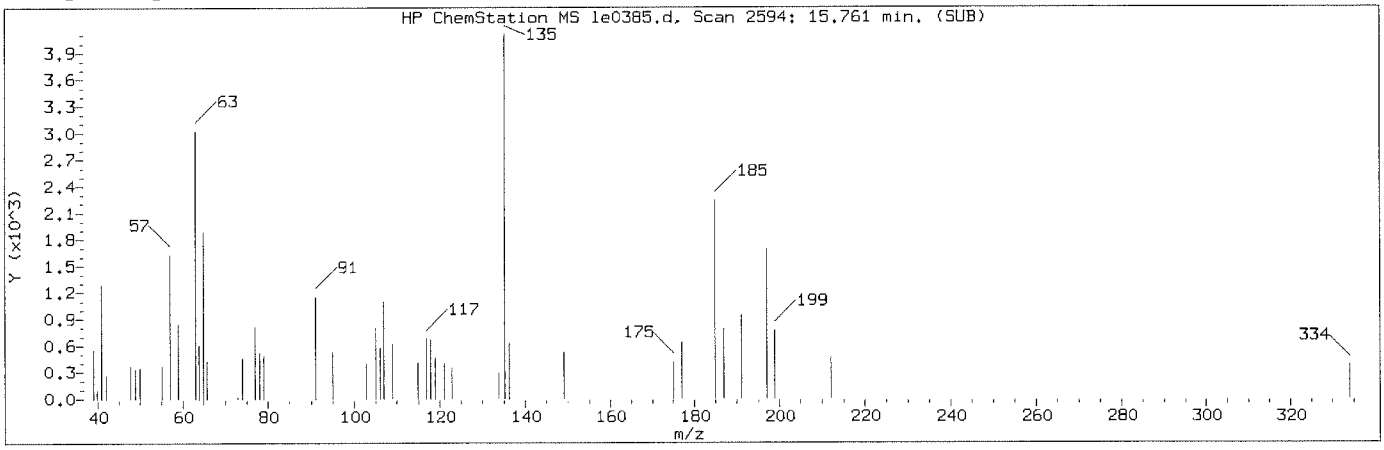
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:15
Date, time and analyst ID of latest file update: 11-May-2016 18:15 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

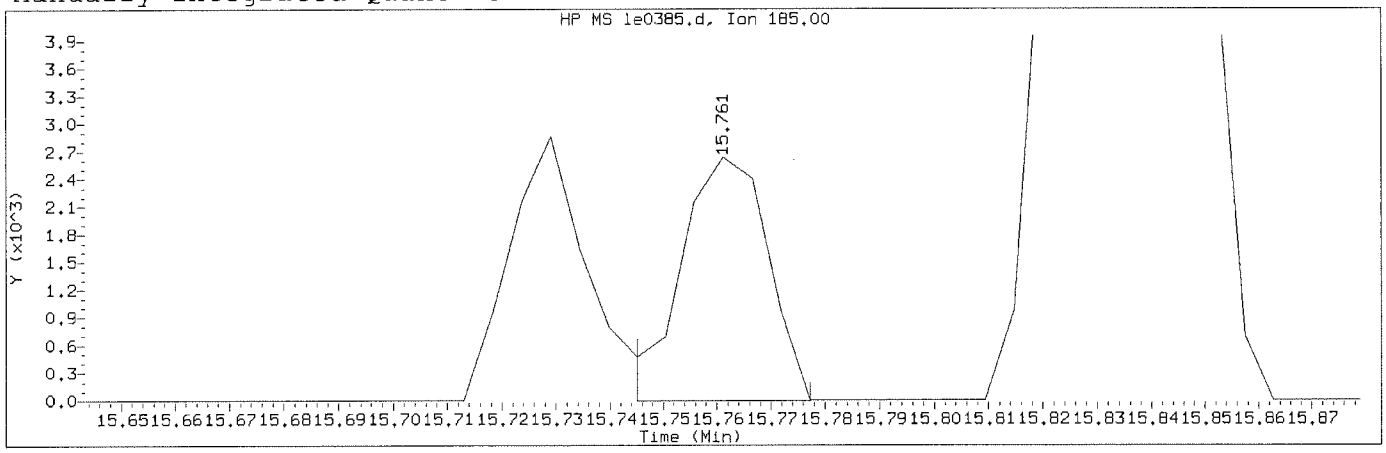
Compound Number	: 180		
Compound Name	: Aramite (1)		
Scan Number	: 2632		
Retention Time (minutes)	: 15.964		
Quant Ion	: 185.00		
Area	: 92875		
On-column Amount (ng/ul)	: 184.1990		
Integration start scan	: 2626	Integration stop scan:	2644
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/1e0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

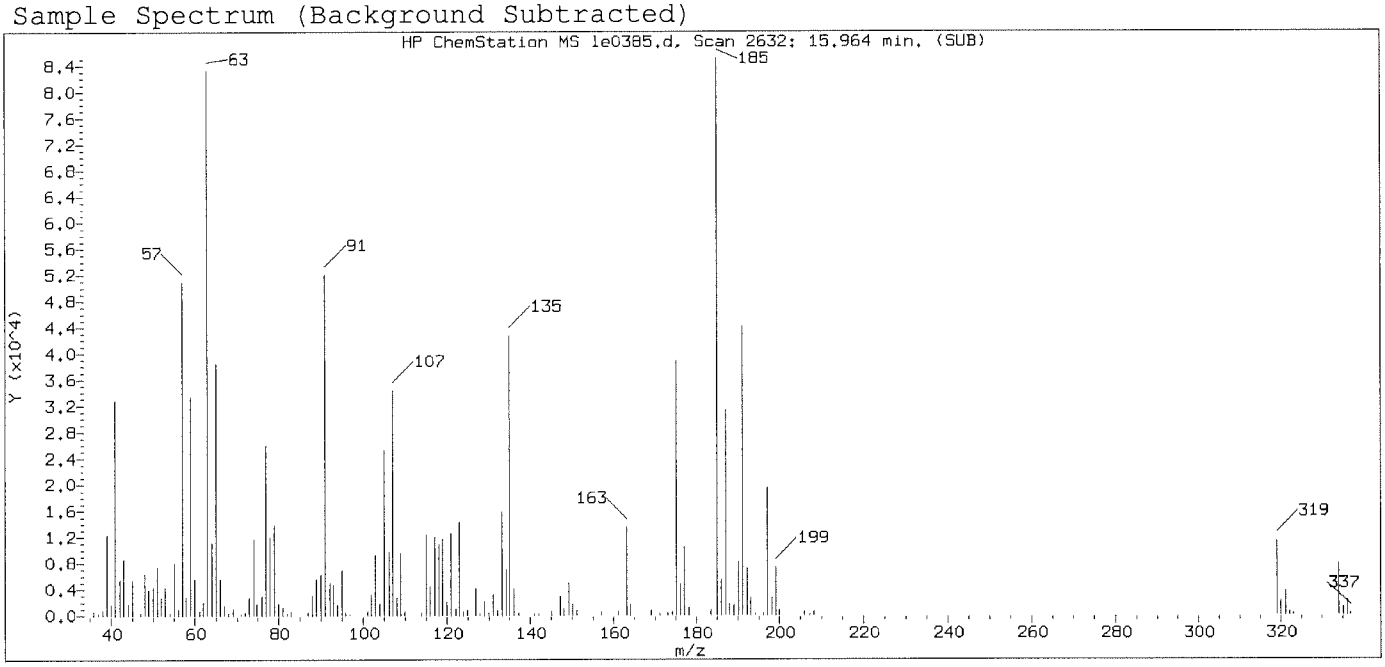
Compound Number	: 181		
Compound Name	: Aramite (2)		
Scan Number	: 2594		
Retention Time (minutes)	: 15.761		
Quant Ion	: 185.00		
Area (flag)	: 3002M		
On-Column Amount (ng/ul)	: 5.0000		
Integration start scan	: 2590	Integration stop scan:	2596
Y at integration start	: -4	Y at integration end:	-4

Reason for manual integration: improper integration

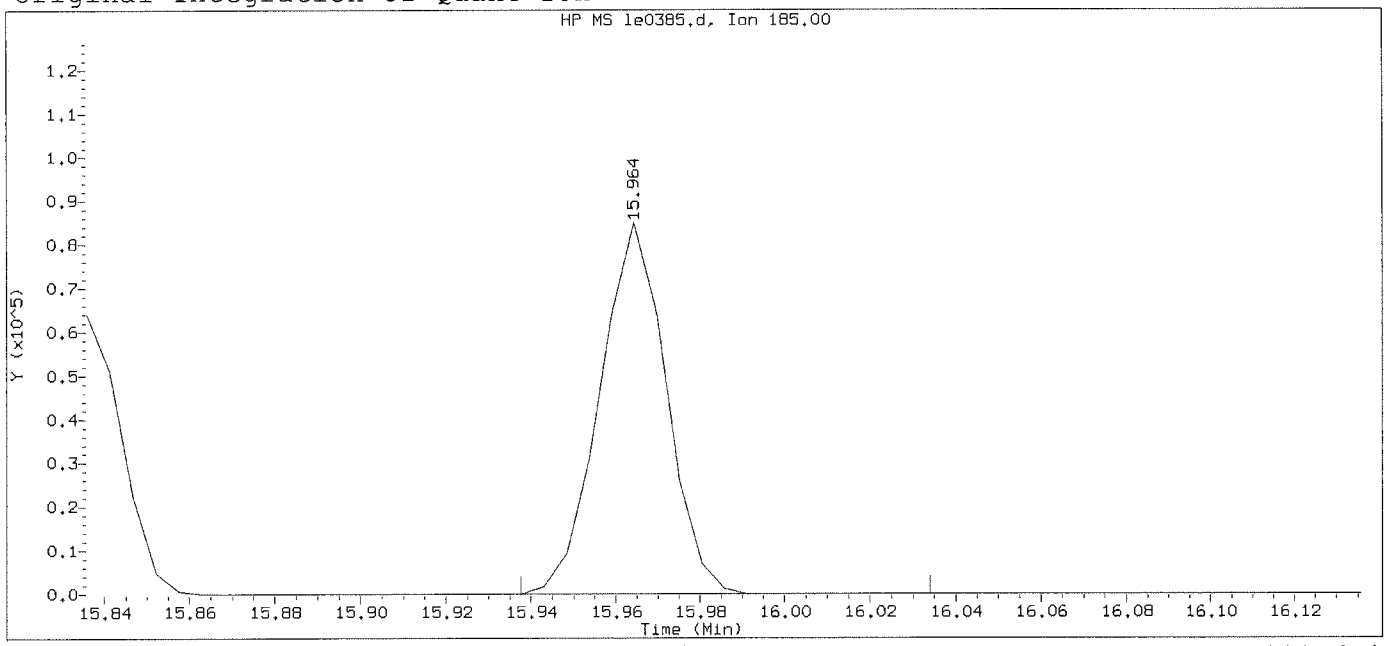
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

GC/MS audit/management approval: Mark A. Ratcliff Senior Specialist MAY 26 2016

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

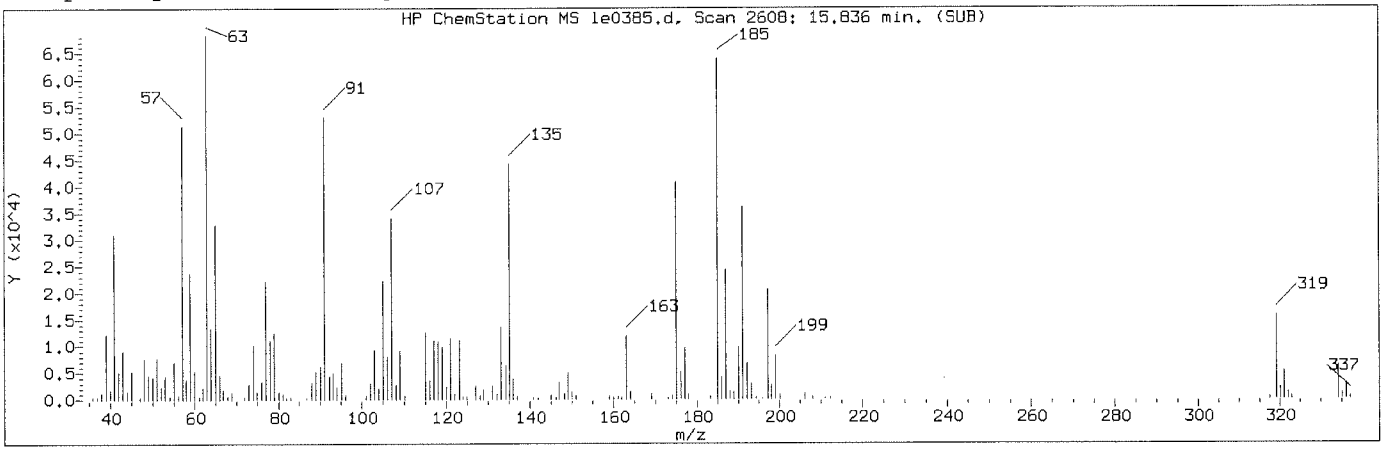
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:15
Date, time and analyst ID of latest file update: 11-May-2016 18:15 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

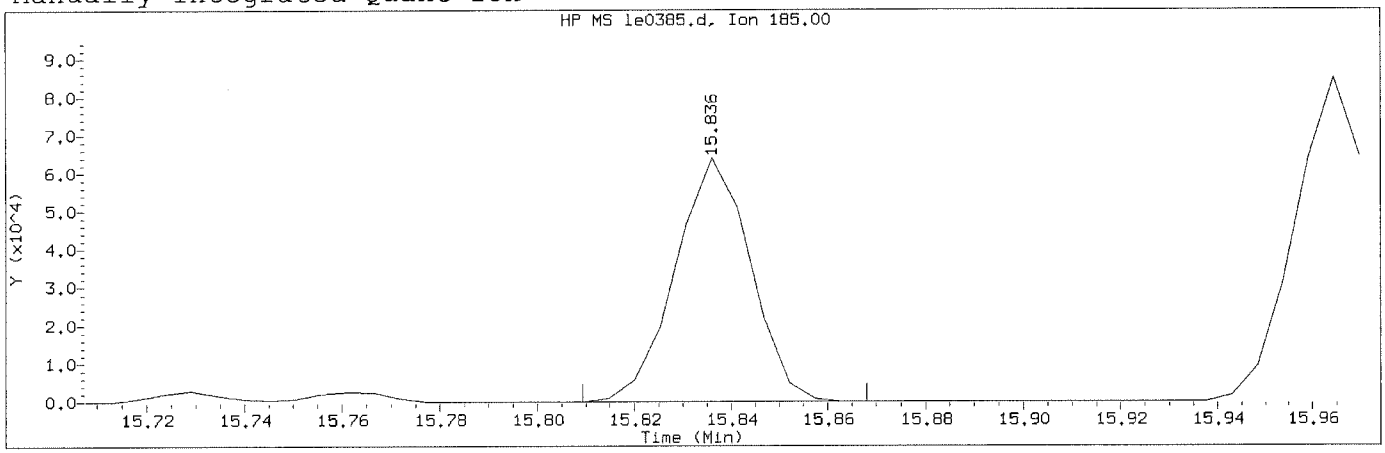
Compound Number	: 181		
Compound Name	: Aramite (2)		
Scan Number	: 2632		
Retention Time (minutes)	: 15.964		
Quant Ion	: 185.00		
Area	: 92875		
On-column Amount (ng/ul)	: 162.9737		
Integration start scan	: 2626	Integration stop scan:	2644
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

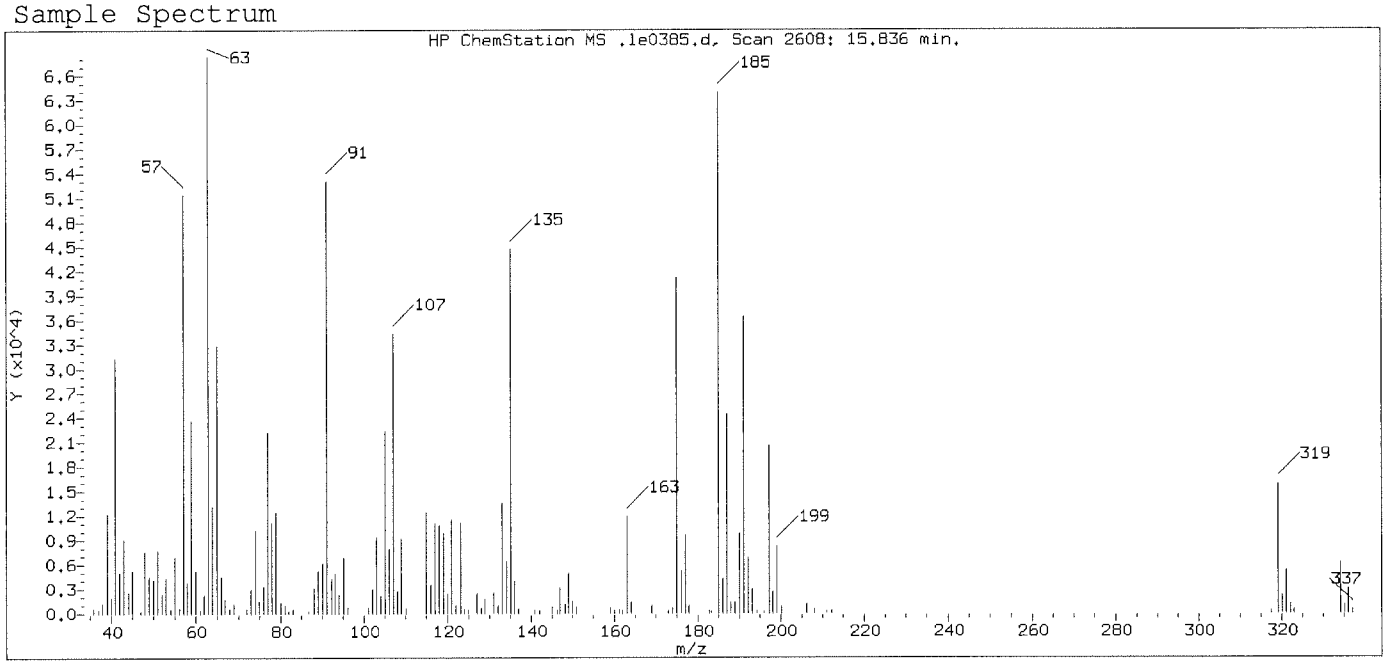
Compound Number : 183
Compound Name : Aramite (3)
Scan Number : 2608
Retention Time (minutes) : 15.836
Quant Ion : 185.00
Area (flag) : 69199M
On-Column Amount (ng/ul) : 1.2500
Integration start scan : 2602 Integration stop scan: 2613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

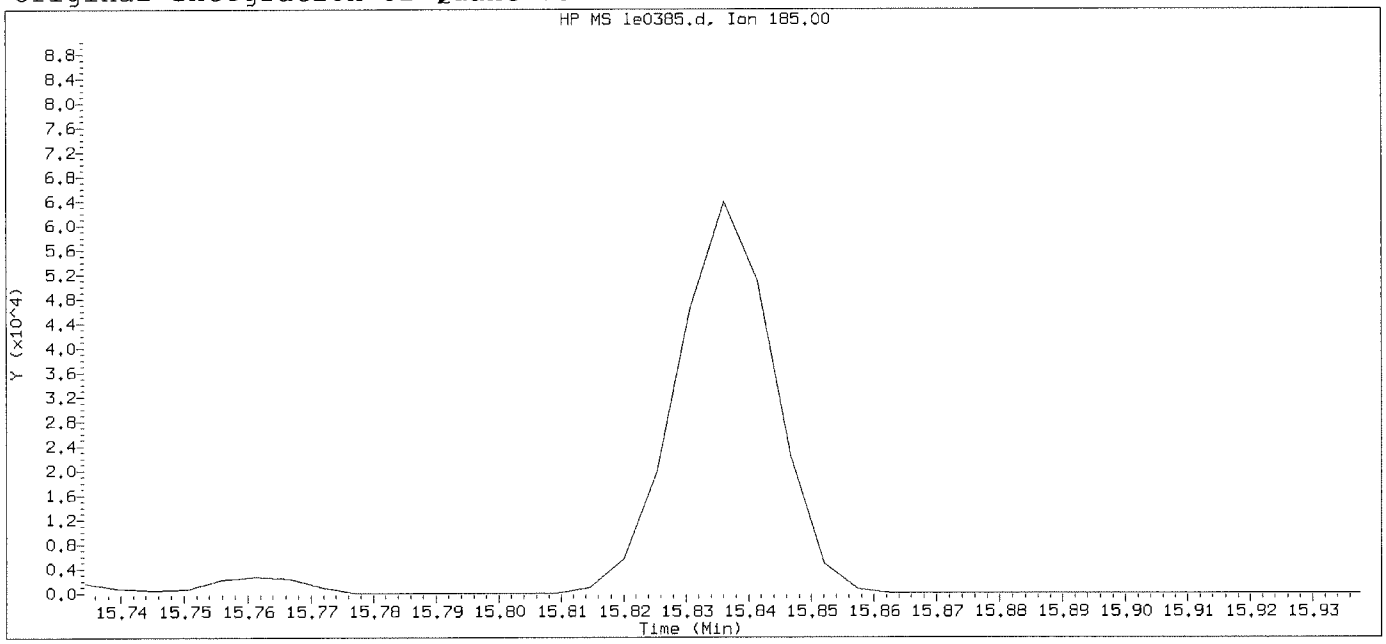
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
MAY 26 2016

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

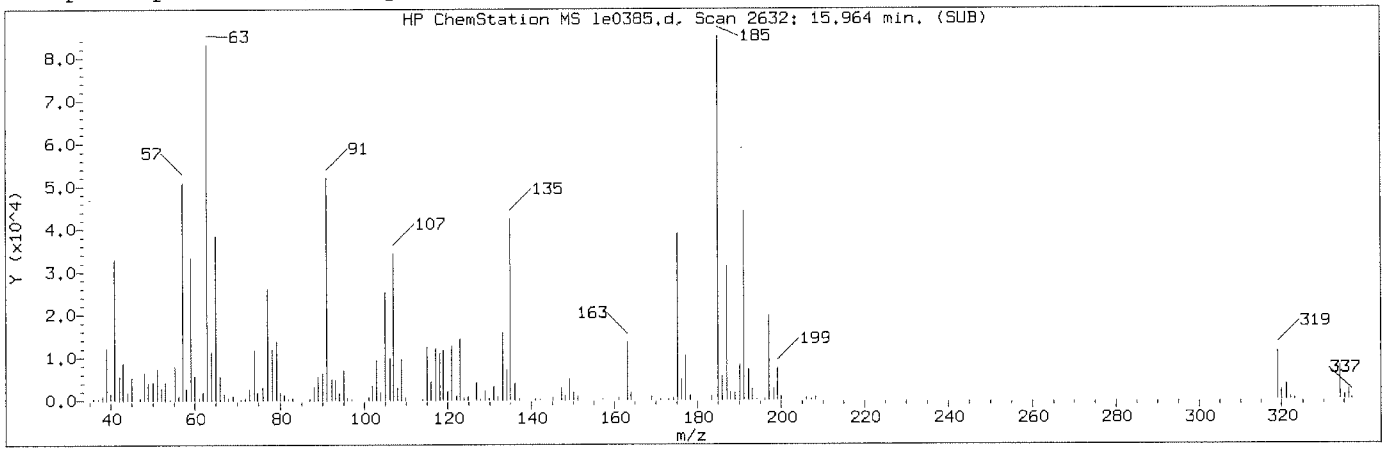
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:15
Date, time and analyst ID of latest file update: 11-May-2016 18:15 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

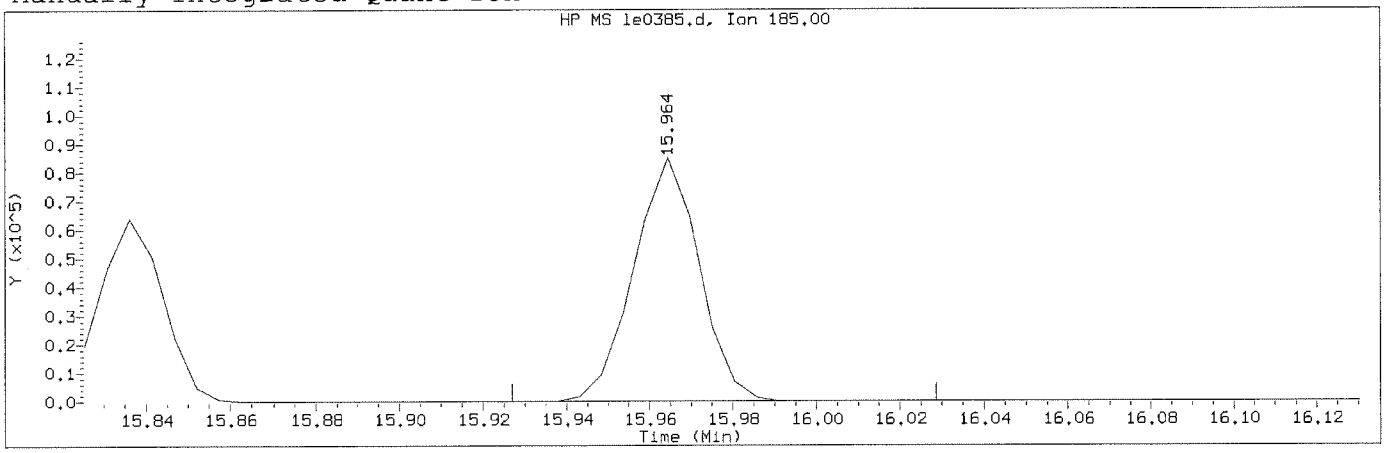
Compound Number : 183
Compound Name : Aramite (3)
Expected RT (minutes) : 15.836
Quant Ion : 185.00

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:51
Date, time and analyst ID of latest file update: 11-May-2016 18:51 kmb02125

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

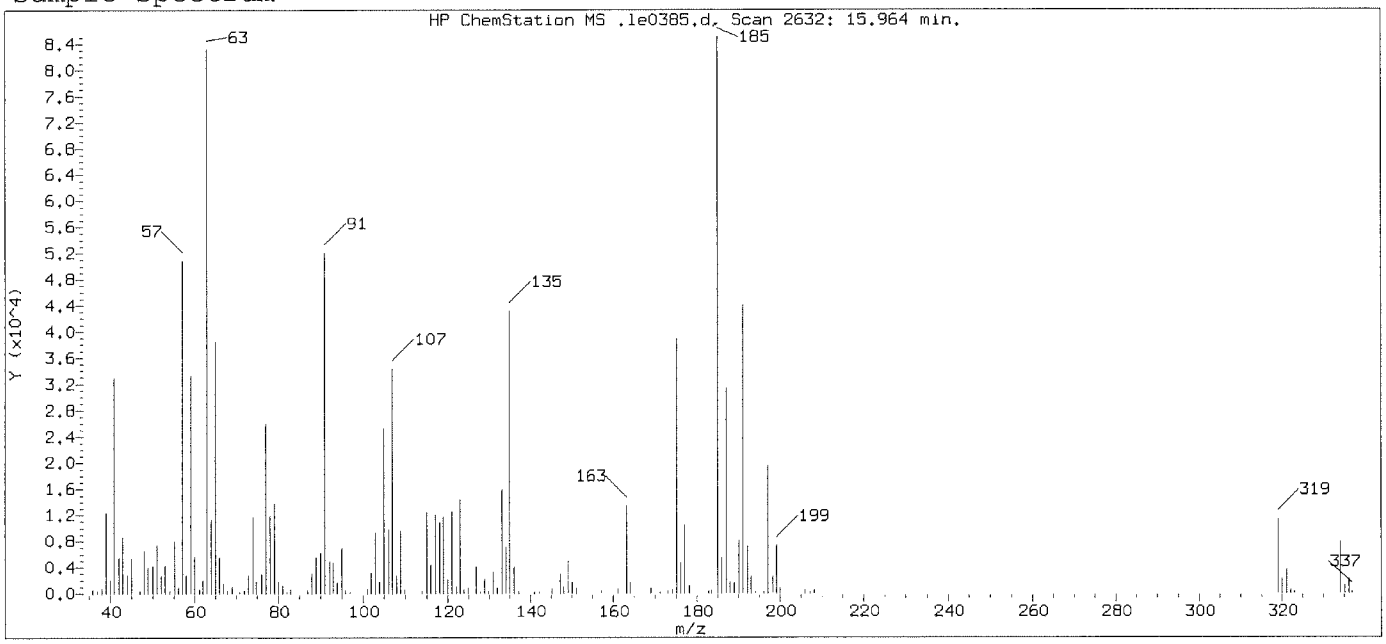
Compound Number	: 184		
Compound Name	: Aramite (4)		
Scan Number	: 2632		
Retention Time (minutes)	: 15.964		
Quant Ion	: 185.00		
Area (flag)	: 92874M		
On-Column Amount (ng/ul)	: 1.2500		
Integration start scan	: 2624	Integration stop scan:	2643
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

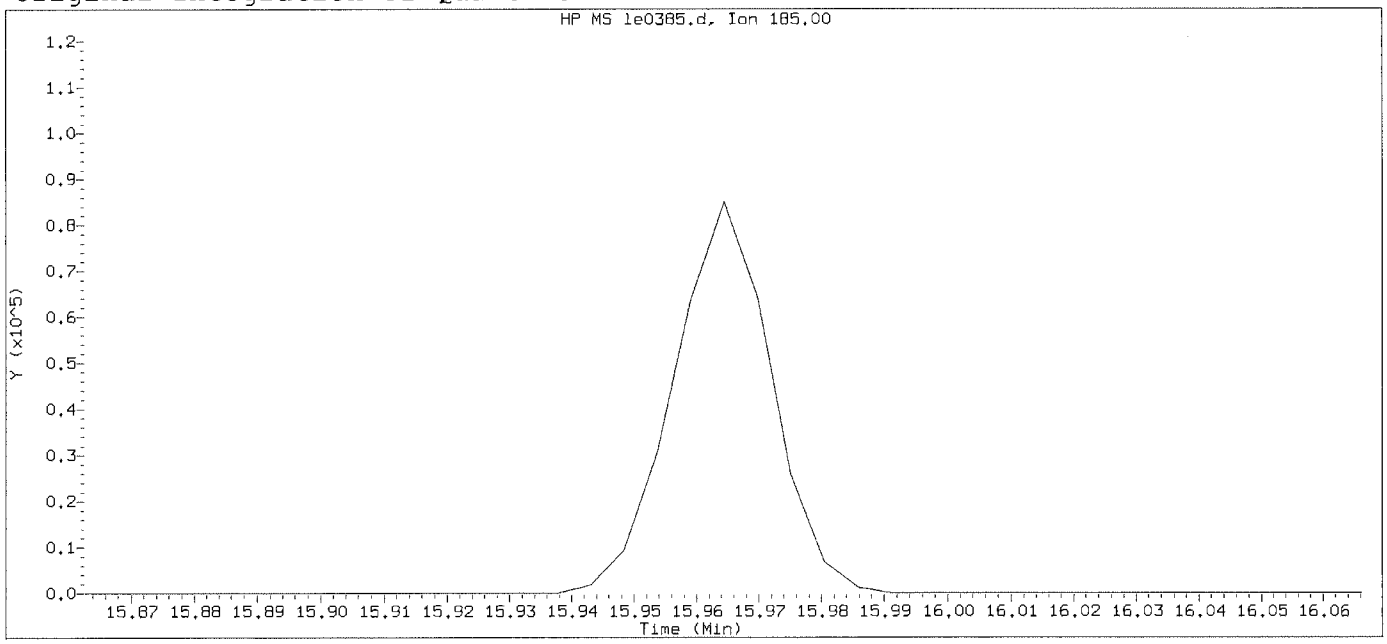
Analyst responsible for change: Digitally signed by Kelli M. Barto
on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

GC/MS audit/management approval: Mark A. Ratcliff Senior Specialist MAY 26 2016

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0385.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 17:49 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: aap
Calibration date and time: 11-MAY-2016 18:15
Date, time and analyst ID of latest file update: 11-May-2016 18:15 Unknown

Sample Name: SSTD12.5 Lab Sample ID: RVAAP0146

Compound Number : 184
Compound Name : Aramite (4)
Expected RT (minutes) : 15.964
Quant Ion : 185.00

Digitally signed by Kelli M. Barto on 05/11/2016 at 18:52.
Target 3.5 esignature user ID: kmb02125

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP20296.i/16may06a.b/le0266.d Injection date and time: **06-MAY-2016 20:30**
Data file Sample Info. Line: SBLKWA124;SBLKWA124;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	126038	(-26)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	485678	(-26)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	272692	(-29)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	513167	(-28)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	590832	(-32)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	407760	(-38)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.016	(0.000)	112	1238928	32.644	65%		10 - 103
17) Phenol-d6	(1)	6.406	(0.000)	99	1187009	23.382	47%		10 - 85
44) Nitrobenzene-d5	(2)	7.797	(0.001)	82	1002770	20.557	82%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1759711	22.823	91%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.798	(0.000)	330	444934	49.583	99%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1774607	21.909	88%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.5
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)				Not Detected					0.1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.1
53) 2,4-Dimethylphenol	(2)				Not Detected					0.1
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0266.d Injection date and time: **06-MAY-2016 20:30**
Data file Sample Info. Line: SBLKWA124;SBLKWA124;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)			Not Detected					1
67) 4-Chloroaniline	(2)			Not Detected					0.5
68) 2,6-Dichlorophenol	(2)			Not Detected					0.1
69) Hexachloropropene	(2)			Not Detected					0.5
77) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
82) Safrole	(2)			Not Detected					0.5
83) 2-Methylnaphthalene	(2)			Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.1
88) cis-Isosafrole	(3)			Not Detected					0.5
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
94) trans-Isosafrole	(3)			Not Detected					0.5
97) Isosafrole	(3)			Not Detected					0.5
96) 2-Chloronaphthalene	(3)			Not Detected					0.1
100) 2-Nitroaniline	(3)			Not Detected					0.1
104) 1,4-Naphthoquinone	(3)			Not Detected					6
106) Dimethylphthalate	(3)			Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
109) Acenaphthylene	(3)			Not Detected					0.03
112) 3-Nitroaniline	(3)			Not Detected					0.1
114) Acenaphthene	(3)			Not Detected					0.03
115) 2,4-Dinitrophenol	(3)			Not Detected					3
116) 4-Nitrophenol	(3)			Not Detected					3
117) Pentachlorobenzene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
119) Dibenzofuran	(3)			Not Detected					0.1
121) 1-Naphthylamine	(3)			Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					0.1
123) 2-Naphthylamine	(3)			Not Detected					1
124) Diethylphthalate	(3)			Not Detected					0.5
125) Thionazin	(3)			Not Detected					0.5
126) Fluorene	(3)			Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
129) 4-Nitroaniline	(3)			Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
131) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
140) Diallate (peak 1)	(4)			Not Detected					0.3
141) Phorate	(4)			Not Detected					0.1
142) Phenacetin	(4)			Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
144) Diallate (peak 2)	(4)			Not Detected					0.3
146) Diallate trans/cis	(4)			Not Detected					0.3
145) Hexachlorobenzene	(4)			Not Detected					0.03
147) Dimethoate	(4)			Not Detected					0.8
149) Pentachlorophenol	(4)			Not Detected					0.3
150) 4-Aminobiphenyl	(4)			Not Detected					0.1

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0266.d Injection date and time: **06-MAY-2016 20:30**
Data file Sample Info. Line: SBLKWA124;SBLKWA124;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

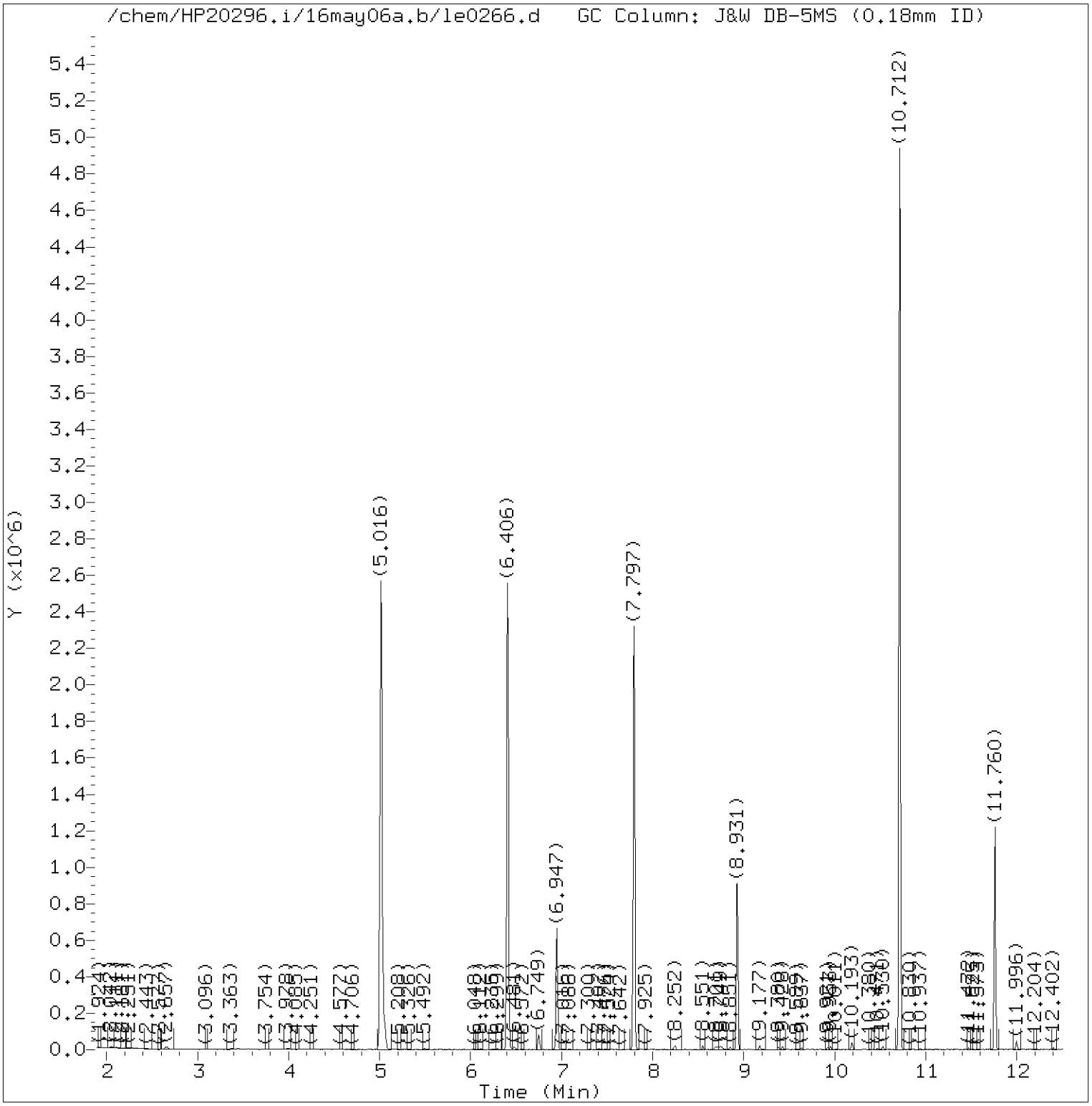
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)			Not Detected					0.5
152) Pronamide	(4)			Not Detected					0.1
155) Phenanthrene	(4)			Not Detected					0.03
157) Anthracene	(4)			Not Detected					0.03
162) Disulfoton	(4)			Not Detected					6
164) Methyl parathion	(4)			Not Detected					0.3
165) Di-n-butylphthalate	(4)			Not Detected					0.5
167) Parathion	(4)			Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
170) Methapyrilene	(4)			Not Detected					4
171) Isodrin	(4)			Not Detected					0.1
173) Fluoranthene	(4)			Not Detected					0.3
177) Pyrene	(5)			Not Detected					0.3
180) Aramite (1)	(5)			Not Detected					1
181) Aramite (2)	(5)			Not Detected					1
183) Aramite (3)	(5)			Not Detected					1
184) Aramite (4)	(5)			Not Detected					1
186) Aramite	(5)			Not Detected					1
182) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
185) Chlorobenzilate	(5)			Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
188) Butylbenzylphthalate	(5)			Not Detected					0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)			Not Detected					6
191) 2-Acetylaminofluorene	(5)			Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
195) Benzo(a)anthracene	(5)			Not Detected					0.03
196) Chrysene	(5)			Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
205) Di-n-octylphthalate	(6)			Not Detected					0.5
206) Benzo(b)fluoranthene	(6)			Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					0.1
208) Benzo(k)fluoranthene	(6)			Not Detected					0.03
211) Benzo(a)pyrene	(6)			Not Detected					0.03
215) 3-Methylcholanthrene	(6)			Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)			Not Detected					0.3
221) Benzo(g,h,i)perylene	(6)			Not Detected					0.3

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

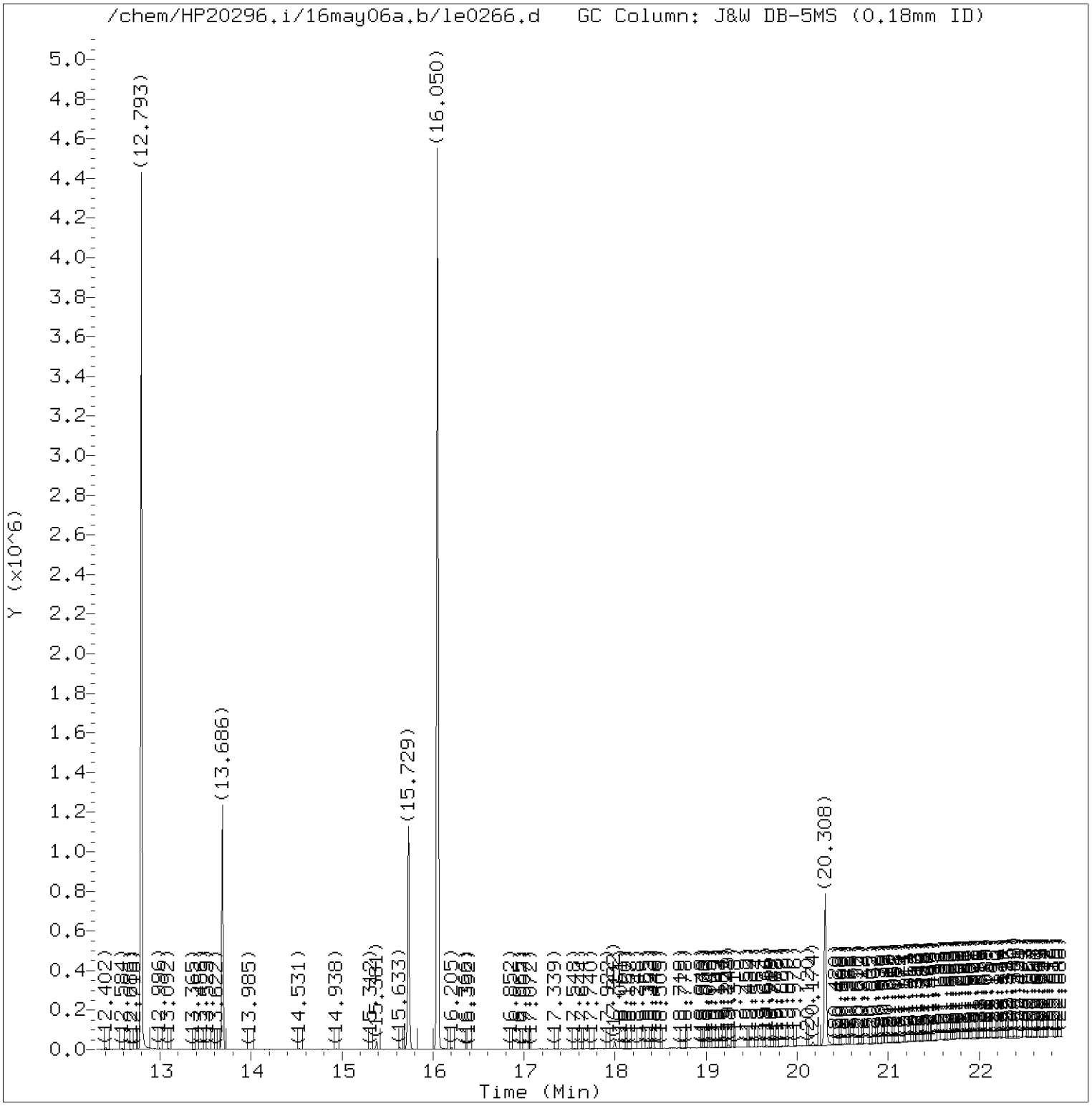
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: SBLKWA124 Lab Sample ID: SBLKWA124

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: SBLKWA124 Lab Sample ID: SBLKWA124

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: SBLKWA124 Lab Sample ID: SBLKWA124

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	5.016	112	1238928	32.644
17)$Phenol-d6	(1)	6.406	99	1187009	23.382
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	126038	5.000
44)$Nitrobenzene-d5	(2)	7.797	82	1002770	20.557
65)*Naphthalene-d8	(2)	8.931	136	485678	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1759711	22.823
113)*Acenaphthene-d10	(3)	11.760	164	272692	5.000
135)$2,4,6-Tribromophenol	(3)	12.798	330	444934	49.583
153)*Phenanthrene-d10	(4)	13.686	188	513167	5.000
175)*Pyrene-d10	(5)	15.729	212	590832	5.000
179)$Terphenyl-d14	(5)	16.050	244	1774607	21.909
213)*Perylene-d12	(6)	20.308	264	407760	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0266a.d Injection date and time: **06-MAY-2016 20:30**
Data file Sample Info. Line: SBLKWZ124;SBLKWZ124;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	126038	(-26)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	485678	(-26)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	272692	(-29)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	513167	(-28)	5.00	
175) Pyrene-d10	15.729	(0.005)	2588	212	590832	(-32)	5.00	
213) Perylene-d12	20.308	(0.005)	3444	264	407760	(-38)	5.00	

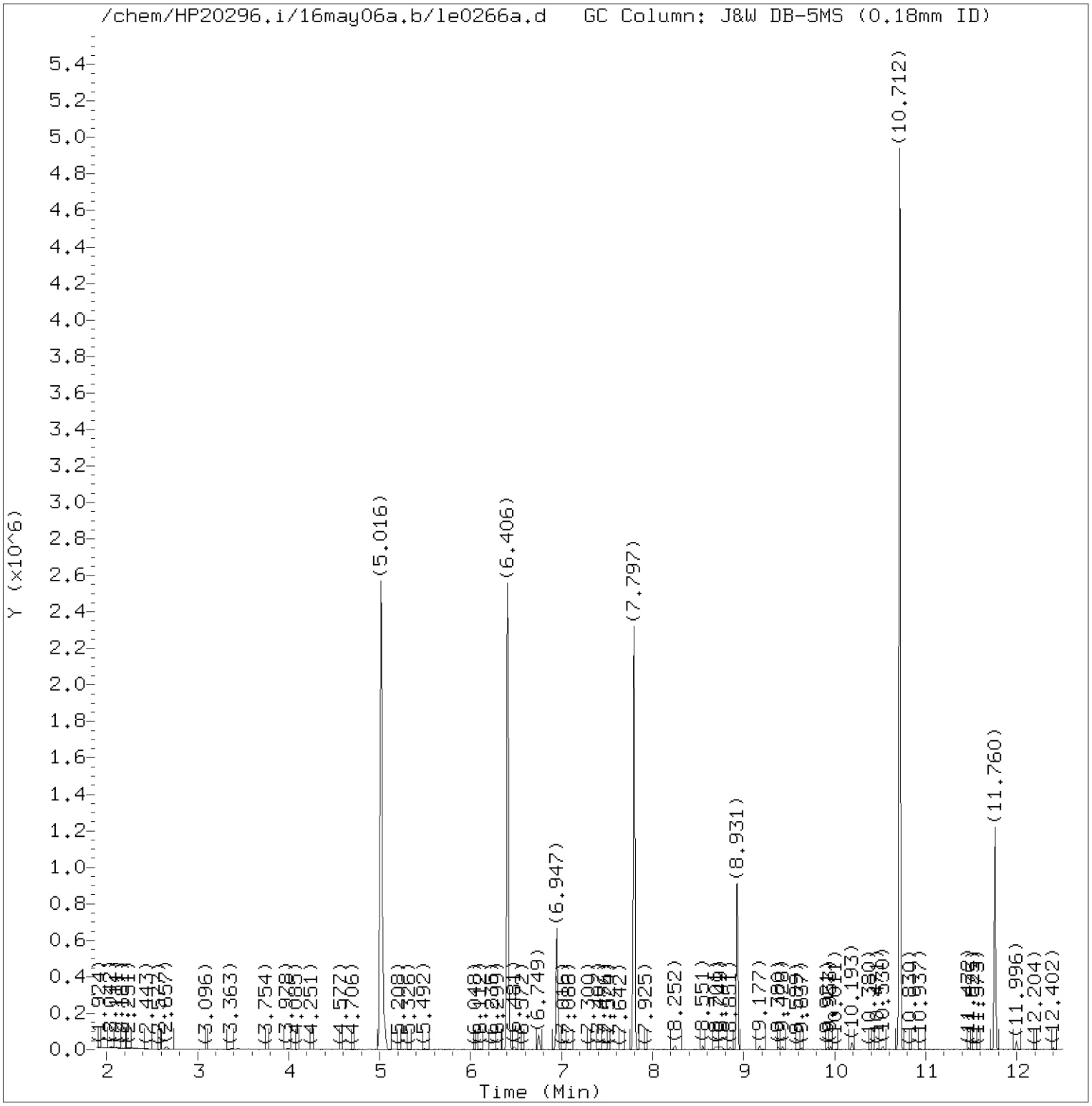
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.797	(0.001)	82	1002770	20.557	82%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	1759711	22.823	91%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	1774607	21.909	88%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:48. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

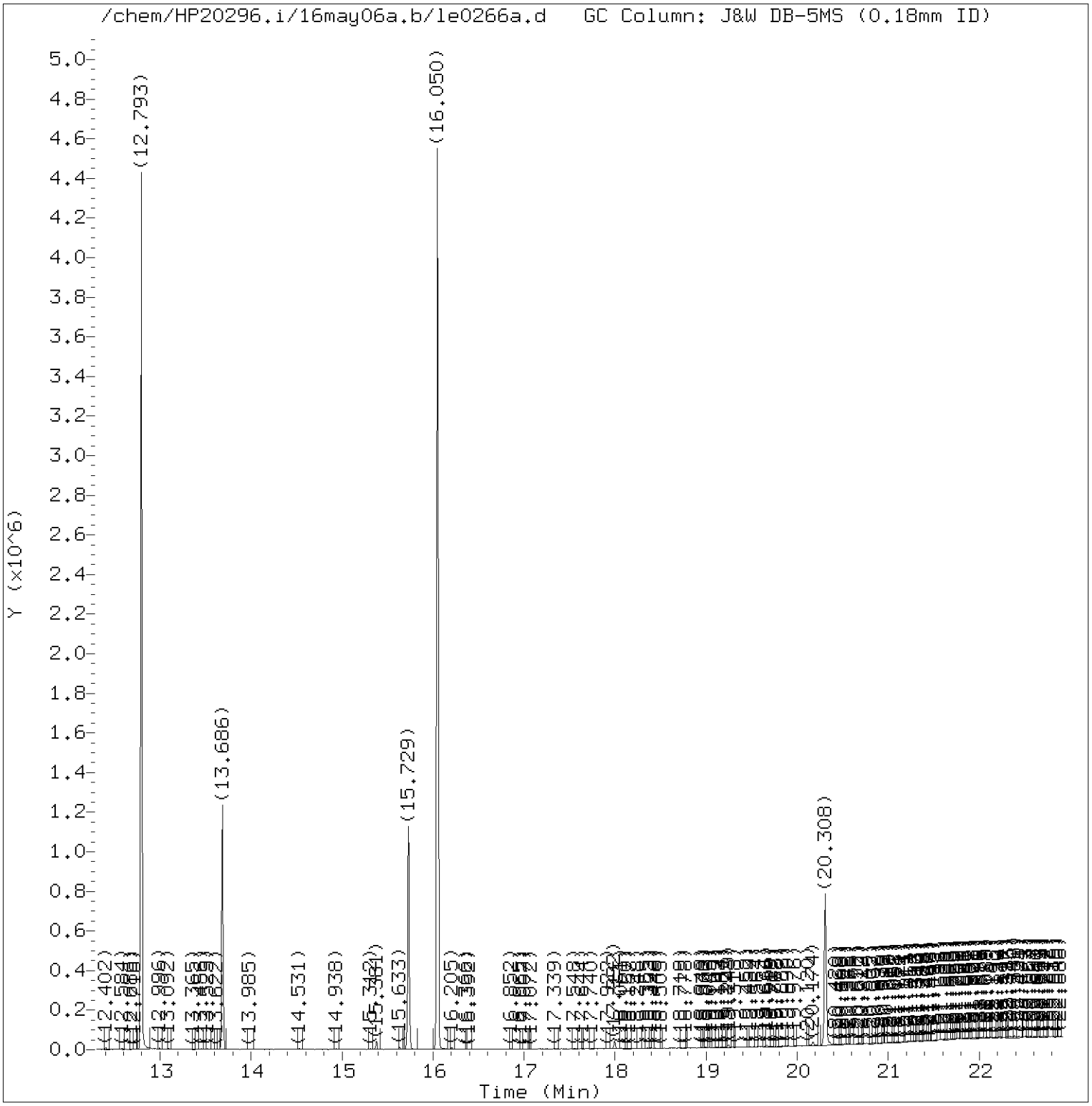
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: SBLKWZ124 Lab Sample ID: SBLKWZ124

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: SBLKWZ124 Lab Sample ID: SBLKWZ124

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0266a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:30 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: SBLKWZ124 Lab Sample ID: SBLKWZ124

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	126038	5.000
44)$Nitrobenzene-d5	(2)	7.797	82	1002770	20.557
65)*Naphthalene-d8	(2)	8.931	136	485678	5.000
93)$2-Fluorobiphenyl	(3)	10.712	172	1759711	22.823
113)*Acenaphthene-d10	(3)	11.760	164	272692	5.000
153)*Phenanthrene-d10	(4)	13.686	188	513167	5.000
175)*Pyrene-d10	(5)	15.729	212	590832	5.000
179)$Terphenyl-d14	(5)	16.050	244	1774607	21.909
213)*Perylene-d12	(6)	20.308	264	407760	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996

Data file: /chem/HP20296.i/16may11a.b/le0389.d Injection date and time: **11-MAY-2016 21:11**
Data file Sample Info. Line: SBLKWJ131;SBLKWJ131;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.738(0.000)	907	152	128234 (-12)	5.00	
65) Naphthalene-d8	8.717(0.006)	1277	136	489816 (-11)	5.00	
113) Acenaphthene-d10	11.562(0.011)	1809	164	276746 (-13)	5.00	
153) Phenanthrene-d10	13.499(0.006)	2171	188	518961 (-14)	5.00	
175) Pyrene-d10	15.504(0.011)	2546	212	599627 (-20)	5.00	
213) Perylene-d12	20.056(0.006)	3397	264	475880 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.802(0.001)	112	1451142	37.581	75%		10 - 103
17) Phenol-d6	(1)	6.214(0.000)	99	1516292	29.357	59%		10 - 85
44) Nitrobenzene-d5	(2)	7.588(0.000)	82	1115315	22.671	91%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.509(0.000)	172	1784709	22.808	91%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.622(-0.001)	330	424655	46.630	93%		22 - 150
179) Terphenyl-d14	(5)	15.831(0.000)	244	2242967	27.285	109%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)			Not Detected					0.3
4) N-Nitrosodimethylamine	(1)			Not Detected					0.5
5) Pyridine	(1)			Not Detected					0.5
7) 2-Picoline	(1)			Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
9) Methyl methanesulfonate	(1)			Not Detected					0.3
13) N-Nitrosodiethylamine	(1)			Not Detected					0.1
15) Ethyl methanesulfonate	(1)			Not Detected					0.1
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.1
22) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
23) 2-Chlorophenol	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
31) 2-Methylphenol	(1)			Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
36) Acetophenone	(1)			Not Detected					0.1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
39) N-Nitrosomorpholine	(1)			Not Detected					0.5
40) o-Toluidine	(1)			Not Detected					0.1
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
48) N-Nitrosopiperidine	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.1
53) 2,4-Dimethylphenol	(2)			Not Detected					0.1

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP20296.i/16may11a.b/le0389.d Injection date and time: **11-MAY-2016 21:11**
Data file Sample Info. Line: SBLKWJ131;SBLKWJ131;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
64) a,a-Dimethylphenethylamine	(2)				Not Detected					1
67) 4-Chloroaniline	(2)				Not Detected					0.5
68) 2,6-Dichlorophenol	(2)				Not Detected					0.1
69) Hexachloropropene	(2)				Not Detected					0.5
71) Hexachlorobutadiene	(2)				Not Detected					0.1
77) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
81) 1,4-Phenylenediamine	(2)				Not Detected					19
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
82) Safrole	(2)				Not Detected					0.5
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
88) cis-Isosafrole	(3)				Not Detected					0.1
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
94) trans-Isosafrole	(3)				Not Detected					0.1
97) Isosafrole	(3)				Not Detected					0.5
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.1
104) 1,4-Naphthoquinone	(3)				Not Detected					6
105) 1,4-Dinitrobenzene	(3)				Not Detected					0.3
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.1
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					3
116) 4-Nitrophenol	(3)				Not Detected					3
117) Pentachlorobenzene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					1
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.1
123) 2-Naphthylamine	(3)				Not Detected					1
124) Diethylphthalate	(3)				Not Detected					0.5
125) Thionazin	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.1
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
134) 1,2-Diphenylhydrazine	(4)				Not Detected					0.1
139) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
140) Diallate (peak 1)	(4)				Not Detected					0.06
141) Phorate	(4)				Not Detected					0.1
142) Phenacetin	(4)				Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
144) Diallate (peak 2)	(4)				Not Detected					0.06
146) Diallate trans/cis	(4)				Not Detected					0.3

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP20296.i/16may11a.b/le0389.d Injection date and time: **11-MAY-2016 21:11**
Data file Sample Info. Line: SBLKWJ131;SBLKWJ131;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
145) Hexachlorobenzene	(4)				Not Detected					0.03
147) Dimethoate	(4)				Not Detected					0.8
149) Pentachlorophenol	(4)				Not Detected					0.3
150) 4-Aminobiphenyl	(4)				Not Detected					0.1
151) Pentachloronitrobenzene	(4)				Not Detected					0.5
152) Pronamide	(4)				Not Detected					0.1
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
162) Disulfoton	(4)				Not Detected					6
164) Methyl parathion	(4)				Not Detected					0.3
165) Di-n-butylphthalate	(4)				Not Detected					0.5
167) Parathion	(4)				Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
170) Methapyrilene	(4)				Not Detected					4
171) Isodrin	(4)				Not Detected					0.1
173) Fluoranthene	(4)				Not Detected					0.03
177) Pyrene	(5)				Not Detected					0.03
180) Aramite (1)	(5)				Not Detected					0.3
181) Aramite (2)	(5)				Not Detected					0.3
183) Aramite (3)	(5)				Not Detected					0.3
184) Aramite (4)	(5)				Not Detected					0.3
186) Aramite	(5)				Not Detected					1
182) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
185) Chlorobenzilate	(5)				Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
188) Butylbenzylphthalate	(5)				Not Detected					0.5
189) Famphur	(5)				Not Detected					6
190) Kepone	(5)				Not Detected					6
191) 2-Acetylaminofluorene	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
198) 4,4'-Methylenebis(2-chloroanil	(5)				Not Detected					1
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
205) Di-n-octylphthalate	(6)				Not Detected					0.5
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
215) 3-Methylcholanthrene	(6)				Not Detected					0.1
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.03
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.03

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Data file: /chem/HP20296.i/16may11a.b/le0389.d Injection date and time: **11-MAY-2016 21:11**
Data file Sample Info. Line: SBLKWJ131;SBLKWJ131;1;3;BLANK;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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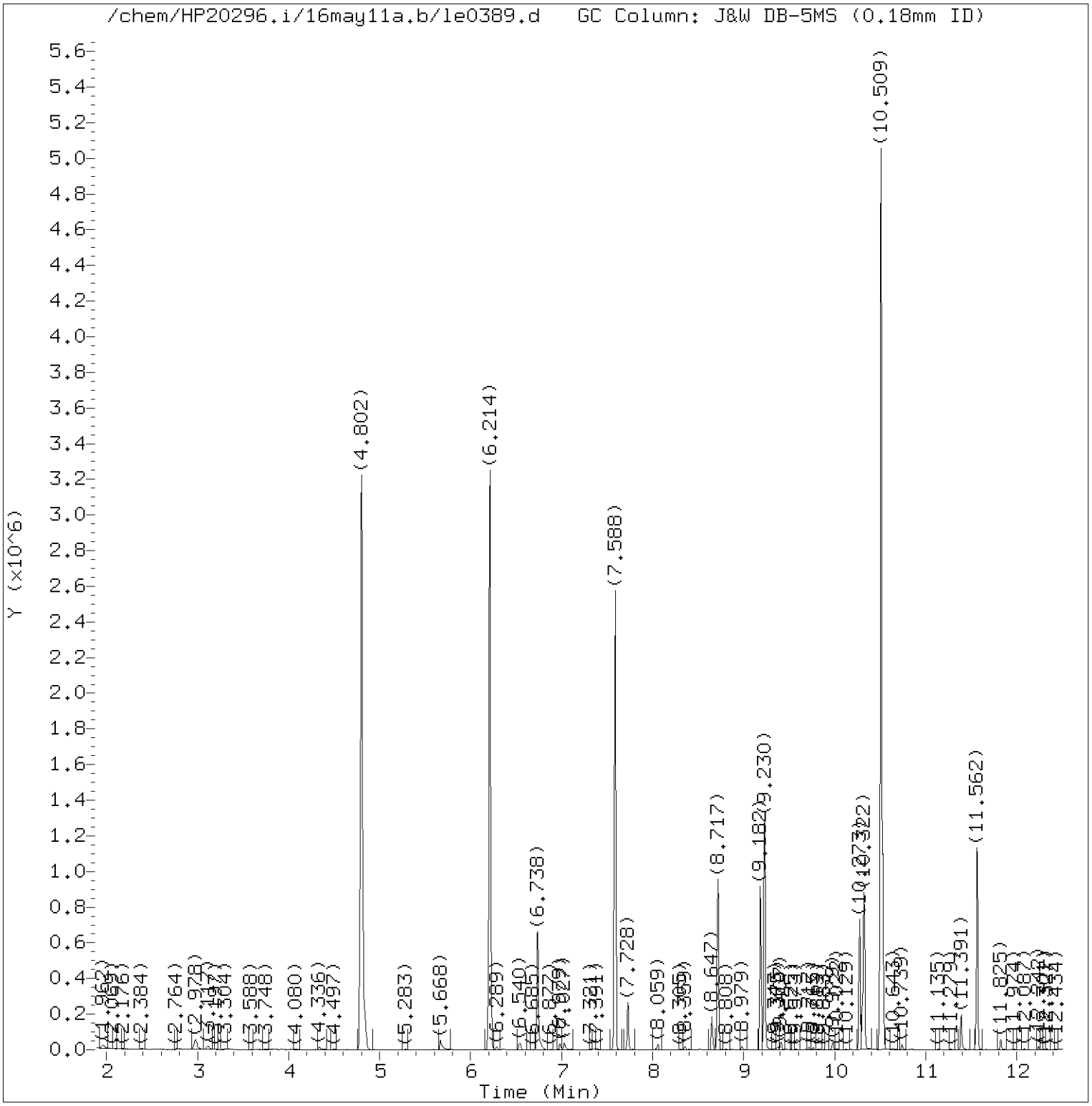
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 124

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05. PARALLAX ID: mar00486



Total Ion Chromatogram (TIC)

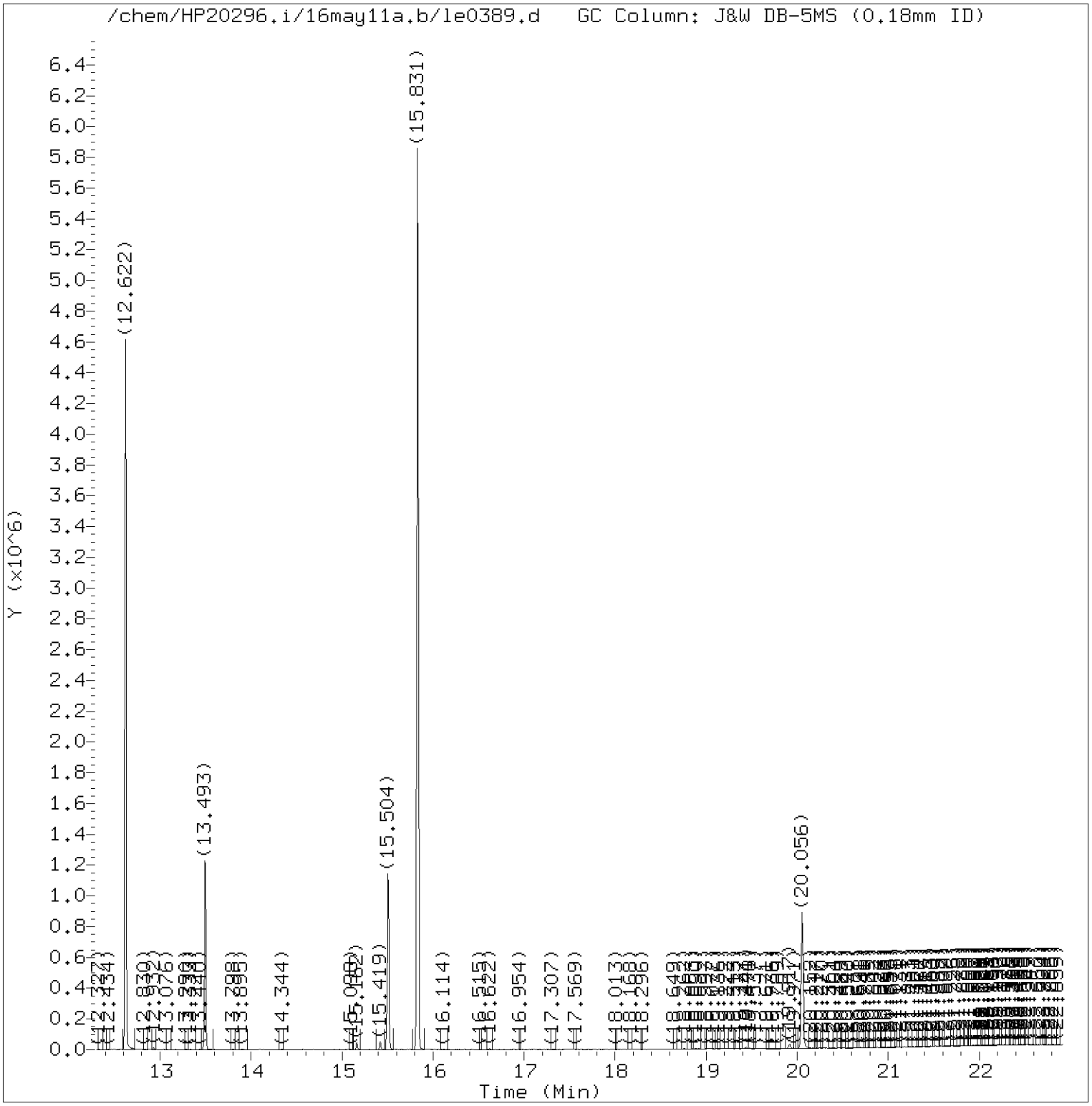
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0389.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Sample Name: SBLKWJ131 Lab Sample ID: SBLKWJ131

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0389.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Sample Name: SBLKWJ131 Lab Sample ID: SBLKWJ131

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0389.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:11 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:45 lmh00956

Sample Name: SBLKWJ131 Lab Sample ID: SBLKWJ131

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.802	112	1451142	37.581
17)$Phenol-d6	(1)	6.214	99	1516292	29.357
25)*1,4-Dichlorobenzene-d4	(1)	6.738	152	128234	5.000
44)$Nitrobenzene-d5	(2)	7.588	82	1115315	22.671
65)*Naphthalene-d8	(2)	8.717	136	489816	5.000
93)$2-Fluorobiphenyl	(3)	10.509	172	1784709	22.808
113)*Acenaphthene-d10	(3)	11.562	164	276746	5.000
135)$2,4,6-Tribromophenol	(3)	12.622	330	424655	46.630
153)*Phenanthrene-d10	(4)	13.499	188	518961	5.000
175)*Pyrene-d10	(5)	15.504	212	599627	5.000
179)$Terphenyl-d14	(5)	15.831	244	2242967	27.285
213)*Perylene-d12	(6)	20.056	264	475880	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP20296.i/16may06a.b/le0273.d Injection date and time: **06-MAY-2016 23:48**
Data file Sample Info. Line: E6104MS;8354937;1;3;MS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.952	(0.000)	947	152	144319	(-15)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	559533	(-15)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	327063	(-15)	5.00	
153) Phenanthrene-d10	13.686	(0.006)	2206	188	647210	(-9)	5.00	
175) Pyrene-d10	15.734	(0.000)	2589	212	793647	(-9)	5.00	
213) Perylene-d12	20.313	(0.000)	3445	264	595861	(-10)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.048	(-0.004)	112	1395419	32.110	64%		10 - 103
17) Phenol-d6	(1)	6.422	(-0.002)	99	1916424	32.969	66%		10 - 85
44) Nitrobenzene-d5	(2)	7.797	(0.001)	82	1307988	23.275	93%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2192842	23.712	95%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.798	(0.000)	330	470118	43.680	87%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2238750	20.576	82%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)	2.972	(-0.004)	74	318797	9.679	38.71			0.5
5) Pyridine	(1)	3.021	(-0.006)	79	506658	8.997	35.99			0.5
7) 2-Picoline	(1)	4.160	(-0.003)	93	641497	11.095	44.38			0.5
8) N-Nitrosomethylethylamine	(1)	4.342	(-0.001)	88	283739	12.351	49.40			0.5
9) Methyl methanesulfonate	(1)	4.796	(-0.001)	80	298116	11.093	44.37			0.3
13) N-Nitrosodiethylamine	(1)	5.369	(-0.000)	102	273857	12.749	51.00			0.5
15) Ethyl methanesulfonate	(1)	5.823	(0.000)	109	282602	12.628	50.51			0.1
18) Phenol	(1)	6.438	(-0.000)	94	610598	8.876	35.50			0.1
19) Aniline	(1)	6.460	(-0.000)	93	777306	9.582	38.33			0.1
22) bis(2-Chloroethyl)ether	(1)	6.577	(0.000)	93	615959	12.236	48.95			0.1
23) 2-Chlorophenol	(1)	6.631	(-0.000)	128	464038	11.701	46.80			0.1
27) Benzyl alcohol	(1)	7.171	(-0.000)	108	369366	12.159	48.64			3
31) 2-Methylphenol	(1)	7.358	(-0.000)	108	520208	12.280	49.12			0.1
34) bis(2-Chloroisopropyl)ether	(1)	7.406	(-0.000)	45	758470	11.849	47.40			0.1
35) N-Nitrosopyrrolidine	(1)	7.535	(-0.000)	100	288499	12.760	51.04			0.1
36) Acetophenone	(1)	7.572	(0.000)	105	835774	11.998	47.99			0.1
37) 4-Methylphenol	(1)	7.599	(-0.000)	108	554780	11.894	47.58			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.594	(0.000)	70	485496	12.365	49.46			0.1
39) N-Nitrosomorpholine	(1)	7.604	(-0.000)	56	348779	11.901	47.60			0.5
40) o-Toluidine	(1)	7.626	(-0.000)	106	745365	9.546	38.18			0.1
43) Hexachloroethane	(1)	7.722	(-0.000)	117	208575	10.494	41.97			0.3
45) Nitrobenzene	(2)	7.829	(0.000)	77	717382	12.402	49.61			0.1
48) N-Nitrosopiperidine	(2)	8.064	(0.000)	114	269983	12.605	50.42			0.1
50) Isophorone	(2)	8.214	(0.000)	82	1281887	13.021	52.08			0.1
51) 2-Nitrophenol	(2)	8.326	(0.000)	139	245056	13.356	53.42			0.1
53) 2,4-Dimethylphenol	(2)	8.428	(0.000)	107	532319	11.090	44.36			0.1
57) O,O,O-Triethylphosphorothioate	(2)	8.556	(0.000)	198	286932	12.795	51.18			0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0273.d Injection date and time: **06-MAY-2016 23:48**
Data file Sample Info. Line: E6104MS;8354937;1;3;MS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)	8.588(0.000)	93	792557	12.982	51.93			0.1
60) 2,4-Dichlorophenol	(2)	8.717(-0.000)	162	394101	11.491	45.96			0.1
64) a,a-Dimethylphenethylamine	(2)	8.797(-0.013)	58	834152A	14.861	59.44		E	1
67) 4-Chloroaniline	(2)	9.070(-0.000)	127	541611	10.765	43.06			0.5
68) 2,6-Dichlorophenol	(2)	9.075(0.000)	162	396173	12.110	48.44			0.1
69) Hexachloropropene	(2)	9.113(0.000)	213	256265	10.189	40.75			0.5
77) N-Nitrosodi-n-butylamine	(2)	9.648(0.000)	84	469558	12.085	48.34			0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)	9.878(-0.000)	107	516566	12.817	51.27			0.1
82) Safrole	(2)	9.979(0.000)	162	395722	12.955	51.82			0.5
83) 2-Methylnaphthalene	(2)	10.092(0.000)	142	968441	12.324	49.30			0.03
85) Hexachlorocyclopentadiene	(3)	10.359(0.000)	237	388488	16.678	66.71			1
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364(0.000)	216	534269	12.417	49.67			0.1
88) cis-Isosafrole	(3)	10.455(0.000)	162	52283	1.580	6.32			0.5
90) 2,4,6-Trichlorophenol	(3)	10.562(-0.000)	196	289007	11.414	45.65			0.1
92) 2,4,5-Trichlorophenol	(3)	10.616(-0.000)	196	328532	12.244	48.98			0.1
94) trans-Isosafrole	(3)	10.824(0.000)	162	439400	12.543	50.17			0.5
97) Isosafrole	(3)			491683	14.123	56.49			0.5
96) 2-Chloronaphthalene	(3)	10.878(0.000)	162	962421	12.113	48.45			0.1
100) 2-Nitroaniline	(3)	11.065(-0.000)	138	289223	13.588	54.35			0.1
104) 1,4-Naphthoquinone	(3)	11.188(-0.001)	158	3090445	101.173	404.69		E	6
106) Dimethylphthalate	(3)	11.402(-0.000)	163	1115689	12.971	51.88			0.5
107) 1,3-Dinitrobenzene	(3)	11.413(-0.000)	168	166932	13.642	54.57			0.5
108) 2,6-Dinitrotoluene	(3)	11.477(-0.000)	165	241966	13.945	55.78			0.1
109) Acenaphthylene	(3)	11.546(-0.000)	152	1565701	13.802	55.21			0.03
112) 3-Nitroaniline	(3)	11.712(-0.000)	138	241802	12.655	50.62			0.1
114) Acenaphthene	(3)	11.808(-0.000)	153	1032332	12.925	51.70			0.03
115) 2,4-Dinitrophenol	(3)	11.942(-0.006)	184	172930A	19.031	76.12			3
116) 4-Nitrophenol	(3)	11.996(-0.002)	109	146127	9.204	36.82			3
117) Pentachlorobenzene	(3)	11.996(-0.000)	250	463593	13.215	52.86			0.1
118) 2,4-Dinitrotoluene	(3)	12.060(-0.000)	165	326746	13.450	53.80			0.3
119) Dibenzofuran	(3)	12.054(-0.000)	168	1421141	12.920	51.68			0.1
121) 1-Naphthylamine	(3)	12.161(-0.000)	143	1346513	17.176	68.70			1
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226(-0.000)	232	261122	12.773	51.09			0.1
123) 2-Naphthylamine	(3)	12.268(-0.000)	143	1275759	16.462	65.85			1
124) Diethylphthalate	(3)	12.407(-0.000)	149	1096341	13.038	52.15			0.5
125) Thionazin	(3)	12.504(-0.000)	107	236211	13.645	54.58			0.5
126) Fluorene	(3)	12.498(-0.000)	166	1110240	13.094	52.37			0.03
127) 4-Chlorophenyl-phenylether	(3)	12.520(-0.000)	204	584658	13.168	52.67			0.1
128) 5-Nitro-o-toluidine	(3)	12.520(-0.000)	152	288070	13.365	53.46			0.1
129) 4-Nitroaniline	(3)	12.530(-0.000)	138	250599	12.622	50.49			0.1
130) 4,6-Dinitro-2-methylphenol	(4)	12.579(-0.000)	198	161901	12.075	48.30			1
131) N-Nitrosodiphenylamine	(4)	12.664(0.000)	169	947463	12.617	50.47			0.1
139) 1,3,5-Trinitrobenzene	(4)	13.006(-0.000)	213	100088	11.575	46.30			1
140) Diallate (peak 1)	(4)	13.044(0.000)	86	437314	9.088	36.35			0.3
141) Phorate	(4)	13.055(-0.000)	75	899080	13.353	53.41			0.1
142) Phenacetin	(4)	13.071(-0.000)	108	677612	13.322	53.29			0.1
143) 4-Bromophenyl-phenylether	(4)	13.130(0.000)	248	333938	13.460	53.84			0.1
144) Diallate (peak 2)	(4)	13.156(-0.000)	86	143089	2.988	11.95			0.3
146) Diallate trans/cis	(4)			580403	12.076	48.30			0.3
145) Hexachlorobenzene	(4)	13.183(0.000)	284	340372	13.146	52.58			0.03
147) Dimethoate	(4)	13.252(-0.000)	87	422265	9.840	39.36			0.8
149) Pentachlorophenol	(4)	13.456(-0.001)	266	179808	11.729	46.91			0.3
150) 4-Aminobiphenyl	(4)	13.461(-0.000)	169	913656	12.602	50.41			0.1

E = Compound concentration above calibration range. A = User selected an alternate peak.

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Data file: /chem/HP20296.i/16may06a.b/le0273.d Injection date and time: **06-MAY-2016 23:48**
Data file Sample Info. Line: E6104MS;8354937;1;3;MS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

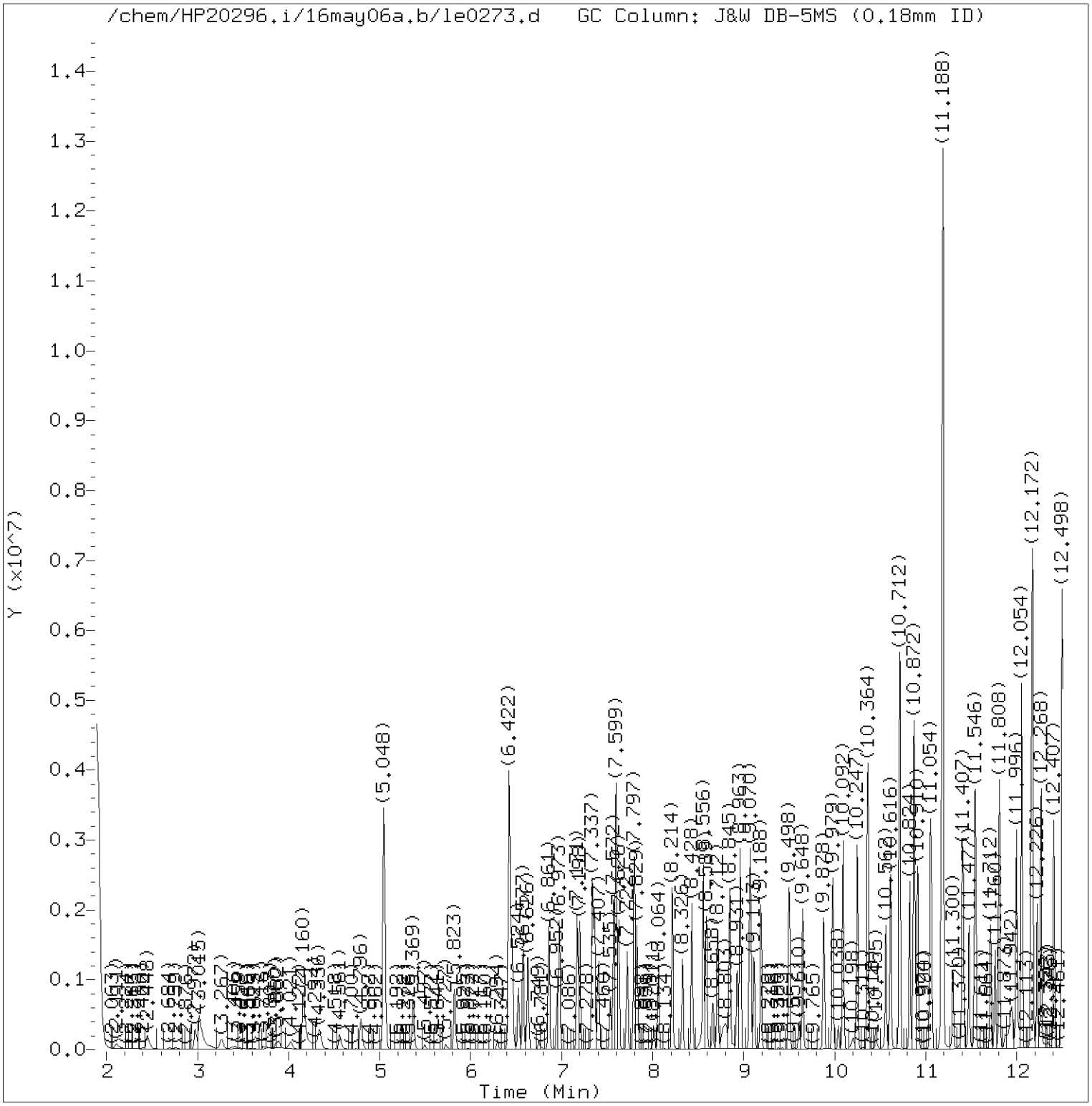
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)	13.461(-0.000)	237	162229	13.073	52.29			0.5
152) Pronamide	(4)	13.557(0.000)	173	552875	13.628	54.51			0.1
155) Phenanthrene	(4)	13.718(-0.000)	178	1693662	12.420	49.68			0.03
157) Anthracene	(4)	13.787(-0.000)	178	1734187	12.933	51.73			0.03
162) Disulfoton	(4)	13.729(-0.000)	88	1604421	34.050	136.20		E	6
164) Methyl parathion	(4)	14.215(-0.000)	109	304108	9.964	39.86			0.3
165) Di-n-butylphthalate	(4)	14.542(-0.000)	149	1946146	13.037	52.15			0.5
167) Parathion	(4)	14.782(-0.000)	109	274404	14.233	56.93			0.5
168) 4-Nitroquinoline-1-oxide	(4)	14.809(-0.001)	190	1589885	134.910	539.64		E	5
170) Methapyrilene	(4)	14.948(-0.001)	97	5529516	116.539	466.16		E	4
171) Isodrin	(4)	15.189(-0.000)	193	223781	13.983	55.93			0.1
173) Fluoranthene	(4)	15.413(-0.000)	202	2026264	13.643	54.57			0.3
177) Pyrene	(5)	15.761(0.000)	202	2126078	12.350	49.40			0.3
180) Aramite (1)	(5)	15.938(0.000)	185	6484	11.782	47.13		E	1
181) Aramite (2)	(5)	15.975(-0.000)	185	6877	11.056	44.22		E	1
183) Aramite (3)	(5)	16.050(0.000)	185	112180	2.139	8.56		E	1
184) Aramite (4)	(5)	16.178(0.000)	185	123341	1.757	7.03		E	1
186) Aramite	(5)			248882	26.734	106.93		E	1
182) p-Dimethylaminoazobenzene	(5)	16.285(0.000)	225	440239	14.837	59.35			0.1
185) Chlorobenzilate	(5)	16.376(0.000)	139	647599	13.747	54.99			0.8
187) 3,3'-Dimethylbenzidine	(5)	16.858(-0.000)	212	1393419	14.033	56.13			6
188) Butylbenzylphthalate	(5)	16.916(0.000)	149	921478	13.402	53.61			0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)	17.050(-0.009)	272	120637M	8.975	35.90			6
191) 2-Acetylaminofluorene	(5)	17.285(-0.000)	181	901379	16.154	64.62			0.5
193) 3,3'-Dichlorobenzidine	(5)	17.799(-0.000)	252	714845	12.890	51.56			0.5
195) Benzo(a)anthracene	(5)	17.810(-0.000)	228	2153124	14.435	57.74			0.03
196) Chrysene	(5)	17.874(-0.000)	228	2067713	14.538	58.15			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	17.997(0.000)	149	1323128	13.403	53.61			0.5
205) Di-n-octylphthalate	(6)	19.174(0.000)	149	2357889	14.043	56.17			0.5
206) Benzo(b)fluoranthene	(6)	19.687(0.000)	252	2014885	13.832	55.33			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692(0.000)	256	861850	13.618	54.47			0.1
208) Benzo(k)fluoranthene	(6)	19.735(0.000)	252	1957614	13.498	53.99			0.03
211) Benzo(a)pyrene	(6)	20.222(0.000)	252	1764921	13.277	53.11			0.03
215) 3-Methylcholanthrene	(6)	20.799(0.000)	268	930201	16.743	66.97			0.1
219) Indeno(1,2,3-cd)pyrene	(6)	21.955(-0.000)	276	1783657	11.472	45.89			0.03
220) Dibenz(a,h)anthracene	(6)	21.998(-0.000)	278	1535431	11.779	47.12			0.3
221) Benzo(g,h,i)perylene	(6)	22.367(0.000)	276	1480834	11.163	44.65			0.3

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

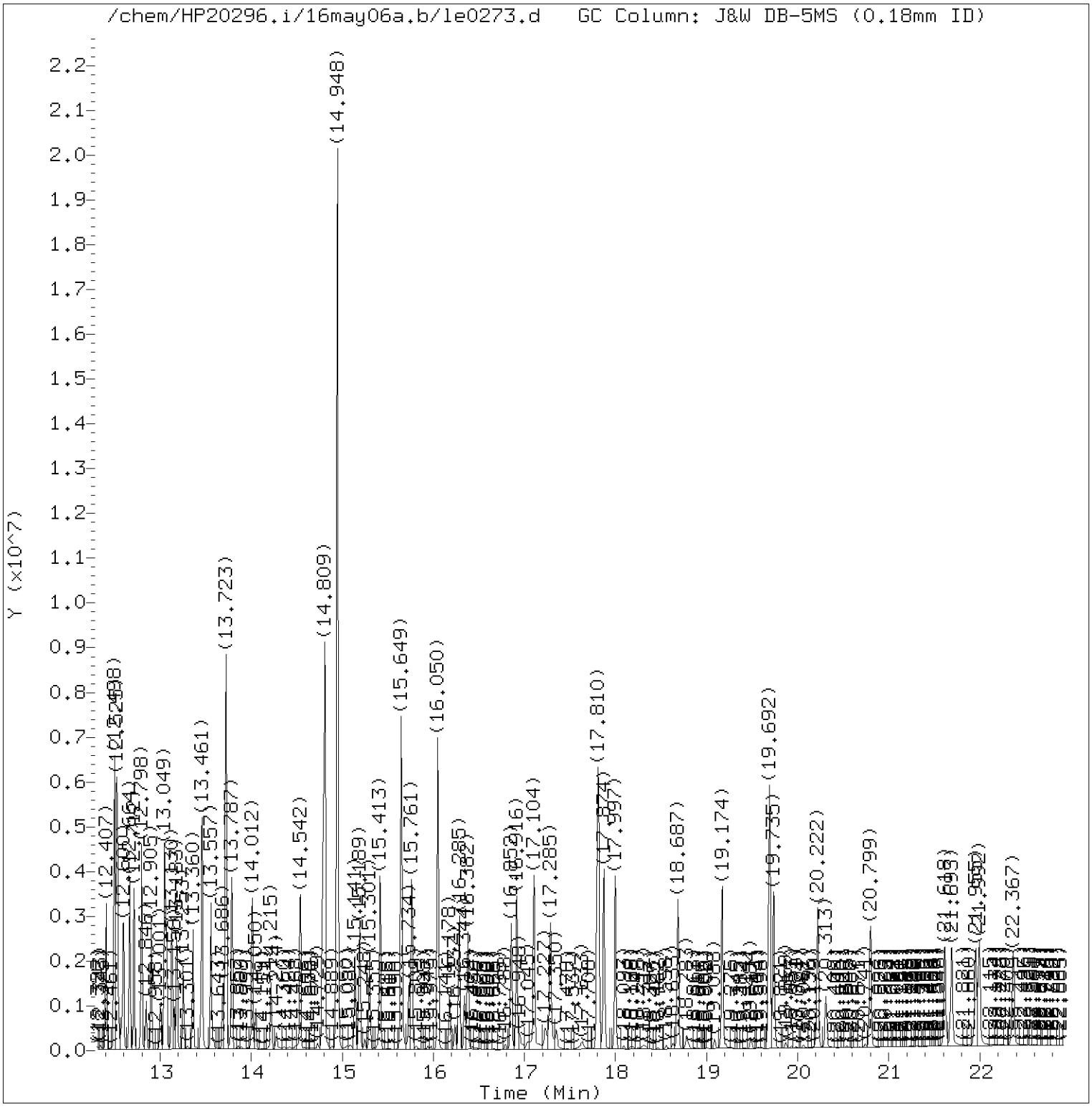
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	2.972	74	318797	9.679
5) Pyridine	(1)	3.021	79	506658	8.997
7) 2-Picoline	(1)	4.160	93	641497	11.095
8) N-Nitrosomethylethylamine	(1)	4.342	88	283739	12.351
9) Methyl methanesulfonate	(1)	4.796	80	298116	11.093
11)$2-Fluorophenol	(1)	5.048	112	1395419	32.110
13) N-Nitrosodiethylamine	(1)	5.369	102	273857	12.749
15) Ethyl methanesulfonate	(1)	5.823	109	282602	12.628
17)$Phenol-d6	(1)	6.422	99	1916424	32.969
18) Phenol	(1)	6.438	94	610598	8.876
19) Aniline	(1)	6.460	93	777306	9.582
22) bis(2-Chloroethyl)ether	(1)	6.577	93	615959	12.236
23) 2-Chlorophenol	(1)	6.631	128	464038	11.701
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	144319	5.000
27) Benzyl alcohol	(1)	7.171	108	369366	12.159
31) 2-Methylphenol	(1)	7.358	108	520208	12.280
97) Isosafrole	(3)			491683	14.123
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	758470	11.849
35) N-Nitrosopyrrolidine	(1)	7.535	100	288499	12.760
36) Acetophenone	(1)	7.572	105	835774	11.998
38) N-Nitroso-di-n-propylamine	(1)	7.594	70	485496	12.365
37) 4-Methylphenol	(1)	7.599	108	554780	11.894
39) N-Nitrosomorpholine	(1)	7.604	56	348779	11.901
40) o-Toluidine	(1)	7.626	106	745365	9.546
43) Hexachloroethane	(1)	7.722	117	208575	10.494
44)$Nitrobenzene-d5	(2)	7.797	82	1307988	23.275
45) Nitrobenzene	(2)	7.829	77	717382	12.402
48) N-Nitrosopiperidine	(2)	8.064	114	269983	12.605
50) Isophorone	(2)	8.214	82	1281887	13.021
51) 2-Nitrophenol	(2)	8.326	139	245056	13.356
53) 2,4-Dimethylphenol	(2)	8.428	107	532319	11.090
57) O,O,O-Triethylphosphorothioate	(2)	8.556	198	286932	12.795
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	792557	12.982
60) 2,4-Dichlorophenol	(2)	8.717	162	394101	11.491
146) Diallate trans/cis	(4)			580403	12.076
64) a,a-Dimethylphenethylamine	(2)	8.797	58	834152A	14.861
65)*Naphthalene-d8	(2)	8.931	136	559533	5.000
67) 4-Chloroaniline	(2)	9.070	127	541611	10.765
68) 2,6-Dichlorophenol	(2)	9.075	162	396173	12.110
69) Hexachloropropene	(2)	9.113	213	256265	10.189

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	469558	12.085
80) 4-Chloro-3-methylphenol	(2)	9.878	107	516566	12.817
82) Safrole	(2)	9.979	162	395722	12.955
83) 2-Methylnaphthalene	(2)	10.092	142	968441	12.324
85) Hexachlorocyclopentadiene	(3)	10.359	237	388488	16.678
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	534269	12.417
88) cis-Isosafrole	(3)	10.455	162	52283	1.580
186) Aramite	(5)			248882	26.734
90) 2,4,6-Trichlorophenol	(3)	10.562	196	289007	11.414
92) 2,4,5-Trichlorophenol	(3)	10.616	196	328532	12.244
93)$2-Fluorobiphenyl	(3)	10.712	172	2192842	23.712
94) trans-Isosafrole	(3)	10.824	162	439400	12.543
96) 2-Chloronaphthalene	(3)	10.878	162	962421	12.113
100) 2-Nitroaniline	(3)	11.065	138	289223	13.588
104) 1,4-Naphthoquinone	(3)	11.188	158	3090445	101.173
106) Dimethylphthalate	(3)	11.402	163	1115689	12.971
107) 1,3-Dinitrobenzene	(3)	11.413	168	166932	13.642
108) 2,6-Dinitrotoluene	(3)	11.477	165	241966	13.945
109) Acenaphthylene	(3)	11.546	152	1565701	13.802
112) 3-Nitroaniline	(3)	11.712	138	241802	12.655
113)*Acenaphthene-d10	(3)	11.760	164	327063	5.000
114) Acenaphthene	(3)	11.808	153	1032332	12.925
115) 2,4-Dinitrophenol	(3)	11.942	184	172930A	19.031
116) 4-Nitrophenol	(3)	11.996	109	146127	9.204
117) Pentachlorobenzene	(3)	11.996	250	463593	13.215
119) Dibenzofuran	(3)	12.054	168	1421141	12.920
118) 2,4-Dinitrotoluene	(3)	12.060	165	326746	13.450
121) 1-Naphthylamine	(3)	12.161	143	1346513	17.176
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	261122	12.773
123) 2-Naphthylamine	(3)	12.268	143	1275759	16.462
124) Diethylphthalate	(3)	12.407	149	1096341	13.038
126) Fluorene	(3)	12.498	166	1110240	13.094
125) Thionazin	(3)	12.504	107	236211	13.645
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	584658	13.168
128) 5-Nitro-o-toluidine	(3)	12.520	152	288070	13.365
129) 4-Nitroaniline	(3)	12.530	138	250599	12.622
130) 4,6-Dinitro-2-methylphenol	(4)	12.579	198	161901	12.075
131) N-Nitrosodiphenylamine	(4)	12.664	169	947463	12.617
135)$2,4,6-Tribromophenol	(3)	12.798	330	470118	43.680
139) 1,3,5-Trinitrobenzene	(4)	13.007	213	100088	11.575

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Diallate (peak 1)	(4)	13.044	86	437314	9.088
141) Phorate	(4)	13.055	75	899080	13.353
142) Phenacetin	(4)	13.071	108	677612	13.322
143) 4-Bromophenyl-phenylether	(4)	13.130	248	333938	13.460
144) Diallate (peak 2)	(4)	13.156	86	143089	2.988
145) Hexachlorobenzene	(4)	13.183	284	340372	13.146
147) Dimethoate	(4)	13.253	87	422265	9.840
149) Pentachlorophenol	(4)	13.456	266	179808	11.729
151) Pentachloronitrobenzene	(4)	13.461	237	162229	13.073
150) 4-Aminobiphenyl	(4)	13.461	169	913656	12.602
152) Pronamide	(4)	13.557	173	552875	13.628
153)*Phenanthrene-d10	(4)	13.686	188	647210	5.000
155) Phenanthrene	(4)	13.718	178	1693662	12.420
162) Disulfoton	(4)	13.729	88	1604421	34.050
157) Anthracene	(4)	13.787	178	1734187	12.933
164) Methyl parathion	(4)	14.215	109	304108	9.964
165) Di-n-butylphthalate	(4)	14.542	149	1946146	13.037
167) Parathion	(4)	14.782	109	274404	14.233
168) 4-Nitroquinoline-1-oxide	(4)	14.809	190	1589885	134.910
170) Methapyrilene	(4)	14.948	97	5529516	116.539
171) Isodrin	(4)	15.189	193	223781	13.983
173) Fluoranthene	(4)	15.413	202	2026264	13.643
175)*Pyrene-d10	(5)	15.734	212	793647	5.000
177) Pyrene	(5)	15.761	202	2126078	12.350
180) Aramite (1)	(5)	15.938	185	6484	11.782
181) Aramite (2)	(5)	15.975	185	6877	11.056
183) Aramite (3)	(5)	16.050	185	112180	2.139
179)$Terphenyl-d14	(5)	16.050	244	2238750	20.576
184) Aramite (4)	(5)	16.178	185	123341	1.757
182) p-Dimethylaminoazobenzene	(5)	16.285	225	440239	14.837
185) Chlorobenzilate	(5)	16.376	139	647599	13.747
187) 3,3'-Dimethylbenzidine	(5)	16.858	212	1393419	14.033
188) Butylbenzylphthalate	(5)	16.916	149	921478	13.402
190) Kepone	(5)	17.050	272	120637M	8.975
191) 2-Acetylaminofluorene	(5)	17.285	181	901379	16.154
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	714845	12.890
195) Benzo(a)anthracene	(5)	17.810	228	2153124	14.435
196) Chrysene	(5)	17.874	228	2067713	14.538
199) bis(2-Ethylhexyl)phthalate	(5)	17.997	149	1323128	13.403
205) Di-n-octylphthalate	(6)	19.174	149	2357889	14.043

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

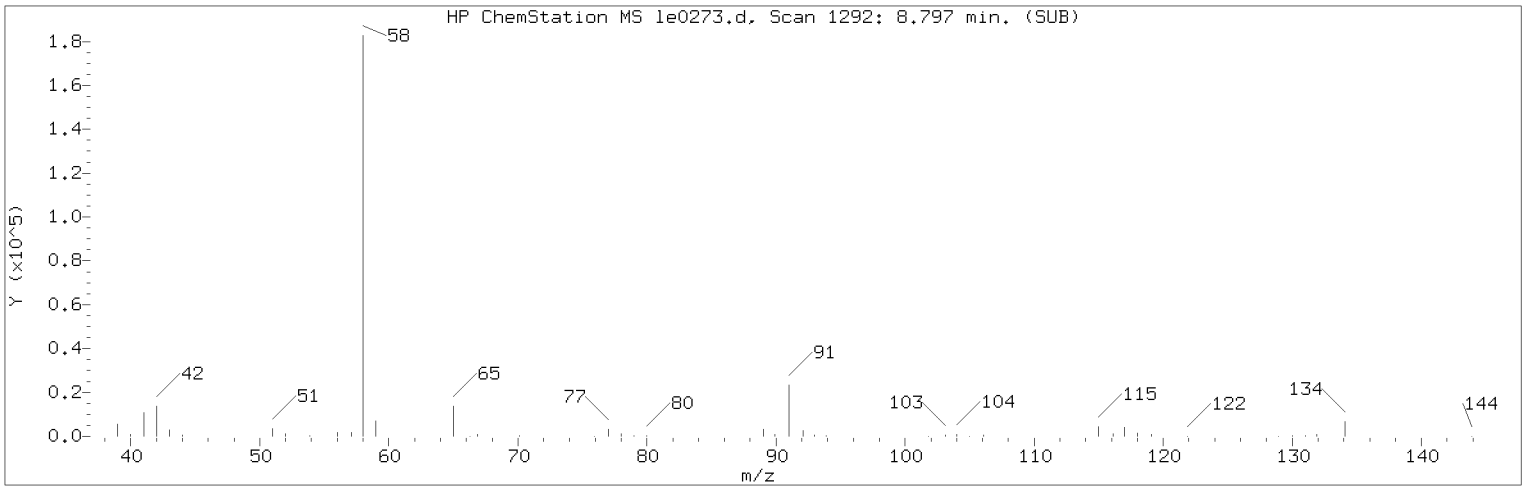
Sample Name: E6104MS Lab Sample ID: 8354937

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
206) Benzo(b)fluoranthene	(6)	19.687	252	2014885	13.832
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692	256	861850	13.618
208) Benzo(k)fluoranthene	(6)	19.735	252	1957614	13.498
211) Benzo(a)pyrene	(6)	20.222	252	1764921	13.277
213)*Perylene-d12	(6)	20.313	264	595861	5.000
215) 3-Methylcholanthrene	(6)	20.799	268	930201	16.743
219) Indeno(1,2,3-cd)pyrene	(6)	21.955	276	1783657	11.472
220) Dibenz(a,h)anthracene	(6)	21.998	278	1535431	11.779
221) Benzo(g,h,i)perylene	(6)	22.367	276	1480834	11.163

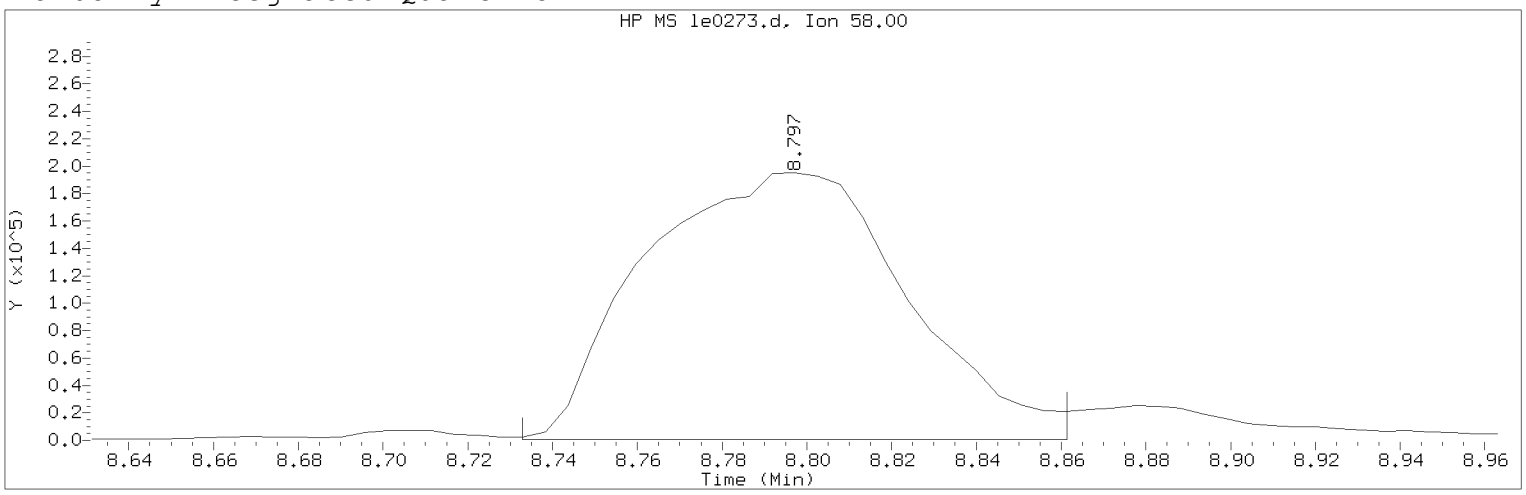
* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

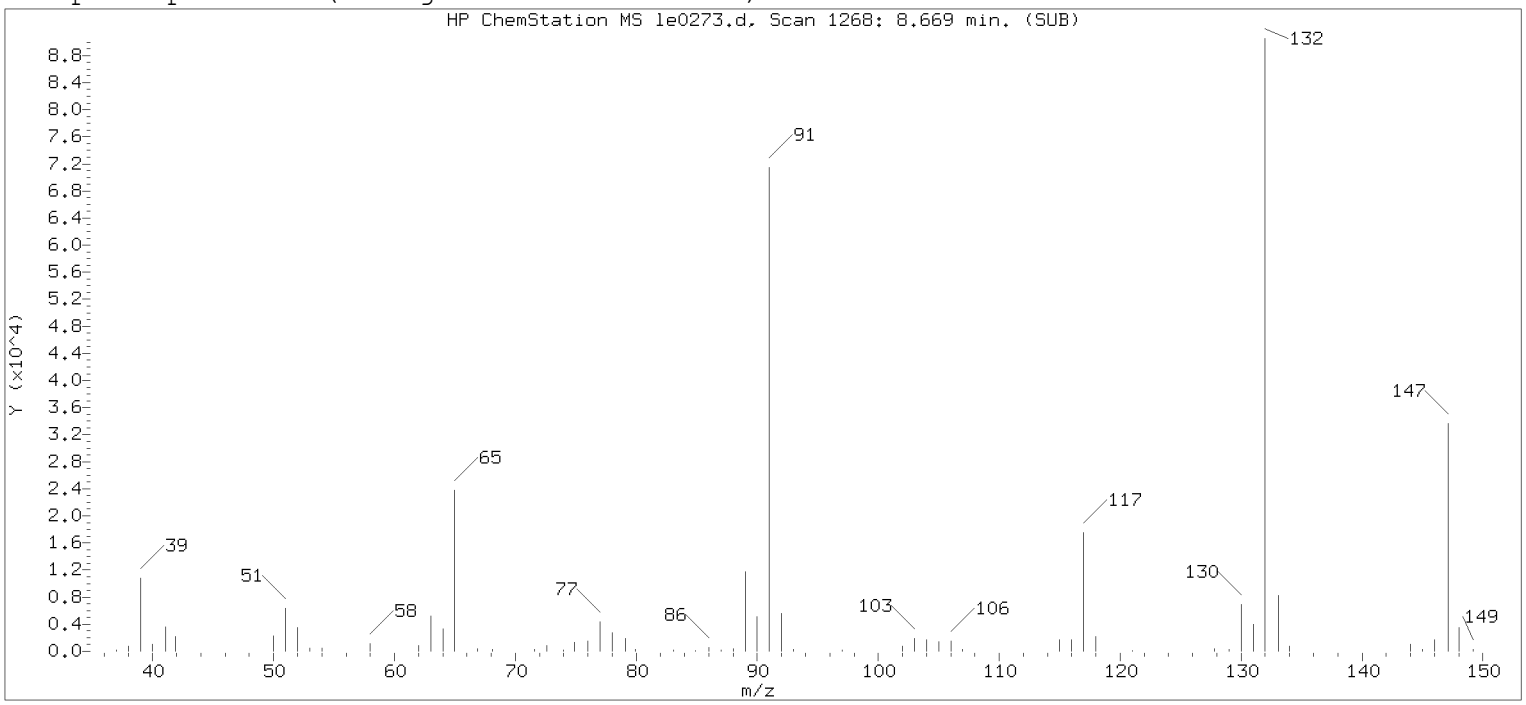
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1292
Retention Time (minutes) : 8.797
Quant Ion : 58.00
Area (flag) : 834152A
On-Column Amount (ng/ul) : 14.8605
Integration start scan : 1279 Integration stop scan: 1303
Y at integration start : 446 Y at integration end: 446

Reason for manual integration: improper integration

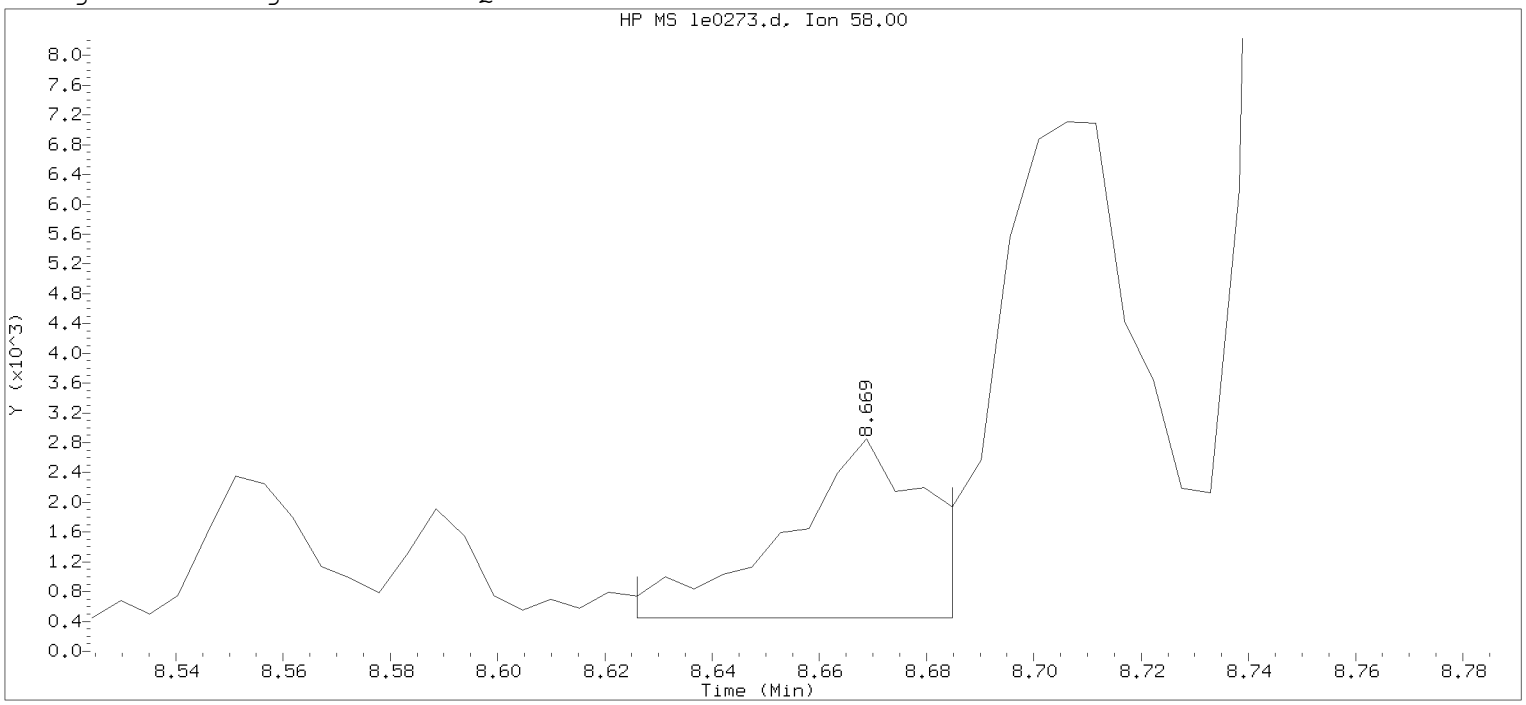
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

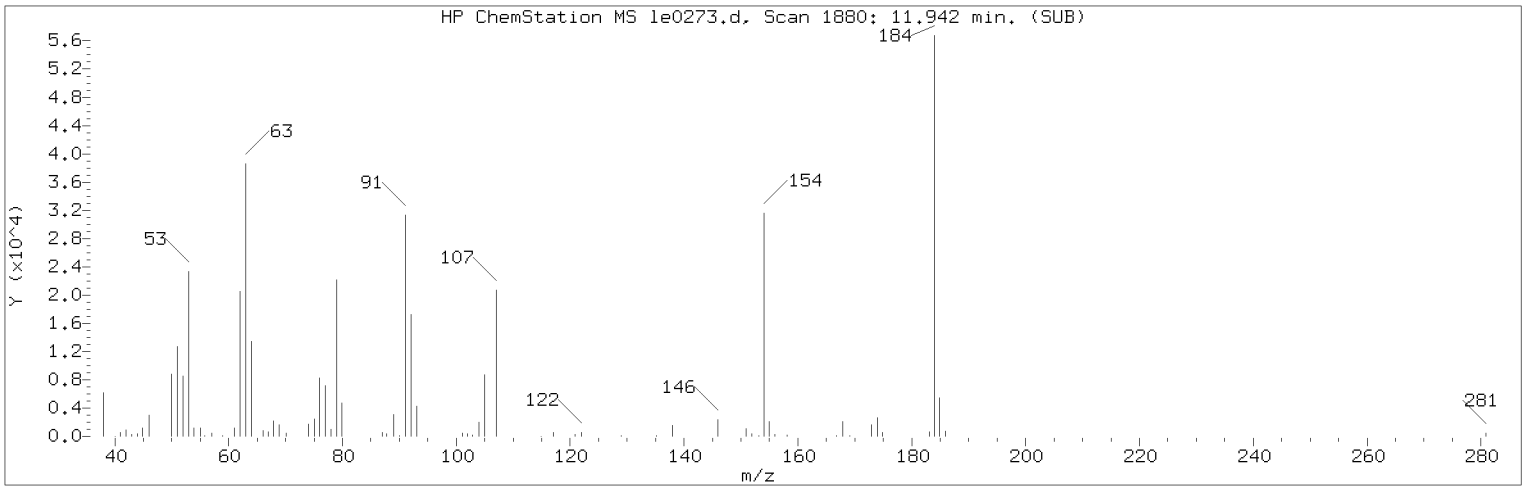
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: E6104MS Lab Sample ID: 8354937

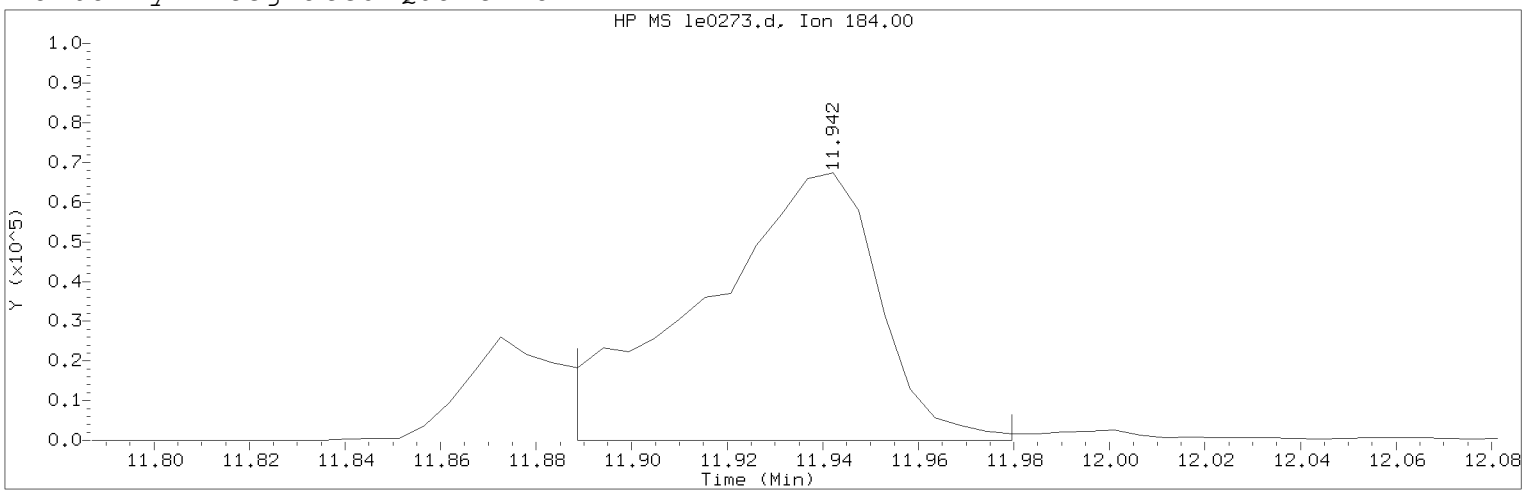
Compound Number	: 64		
Compound Name	: a,a-Dimethylphenethylamine		
Scan Number	: 1268		
Retention Time (minutes)	: 8.669		
Quant Ion	: 58.00		
Area	: 4258		
On-column Amount (ng/ul)	: 0.0759		
Integration start scan	: 1259	Integration stop scan:	1270
Y at integration start	: 446	Y at integration end:	446

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

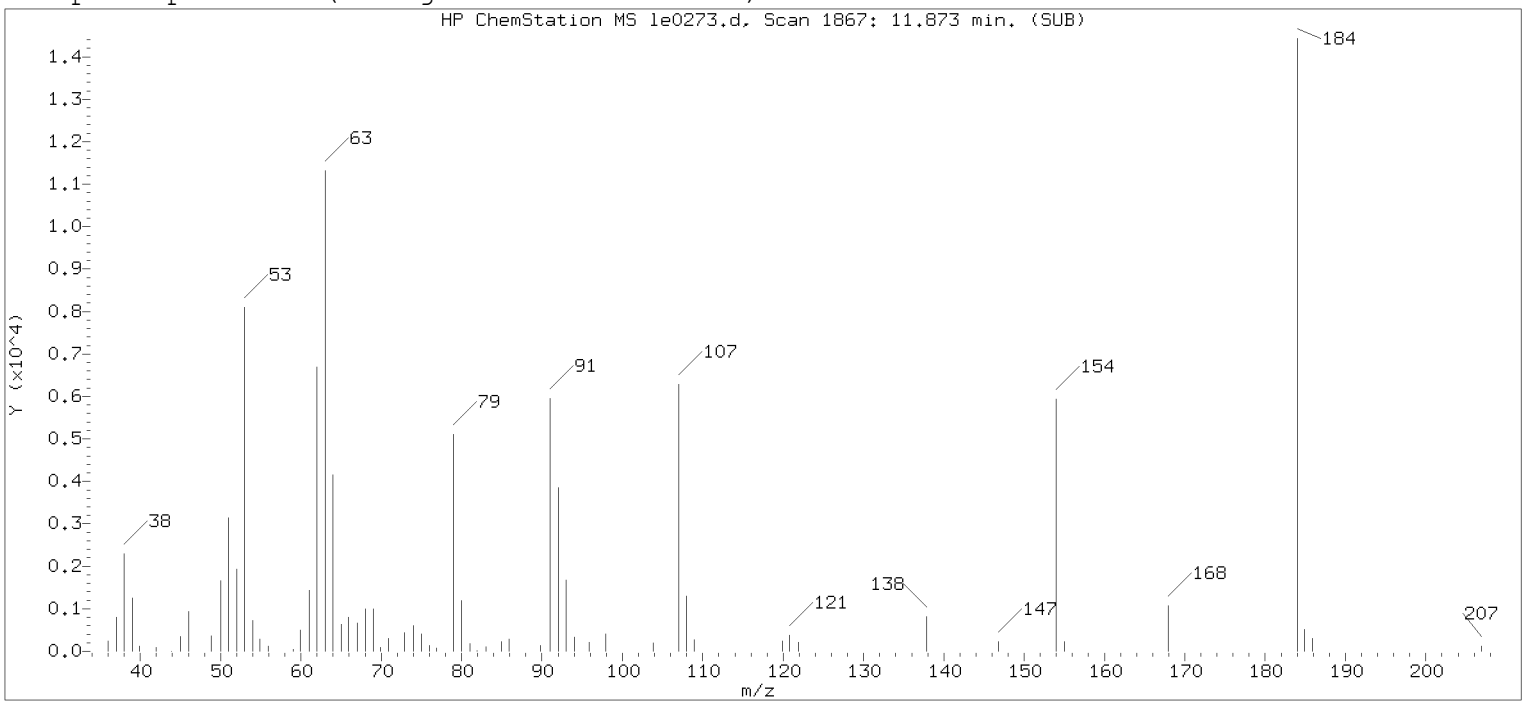
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1880
Retention Time (minutes) : 11.942
Quant Ion : 184.00
Area (flag) : 172930A
On-Column Amount (ng/ul) : 19.0307
Integration start scan : 1869 Integration stop scan: 1886
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

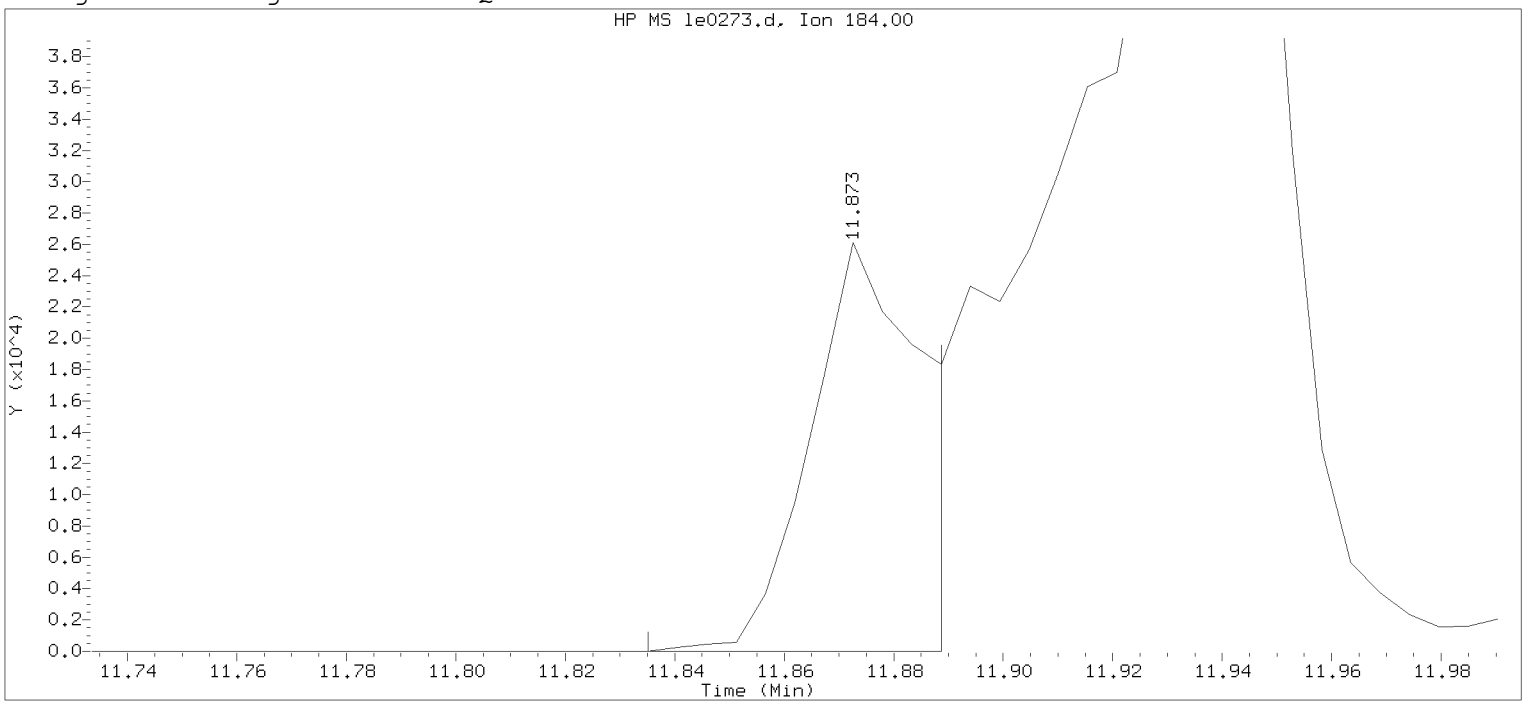
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

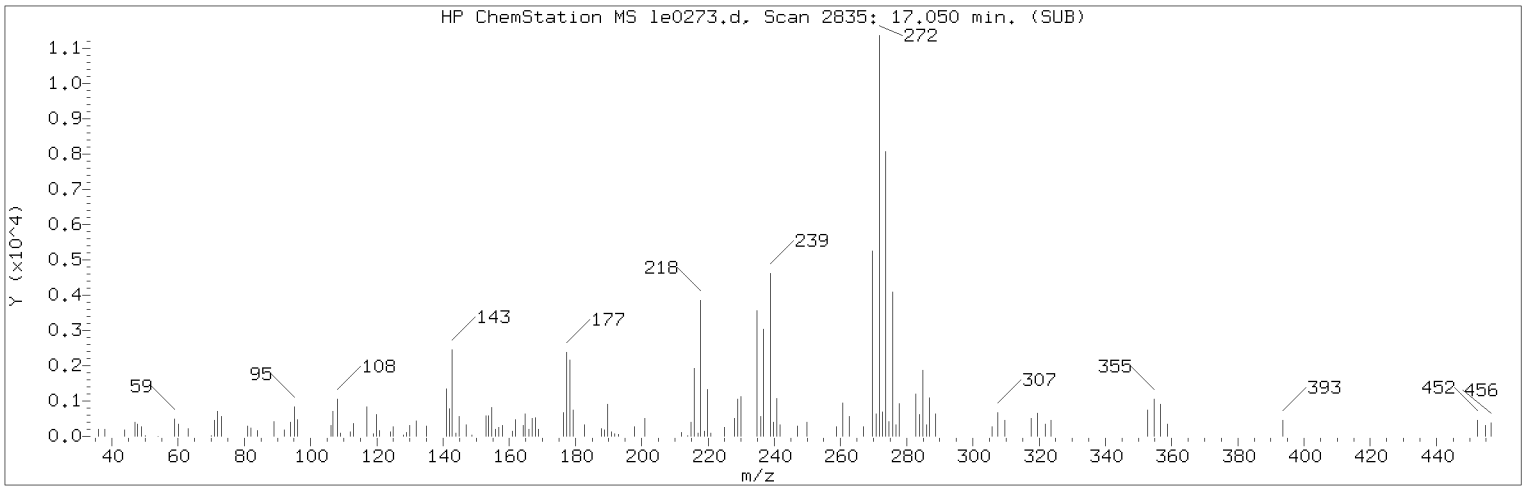
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: E6104MS Lab Sample ID: 8354937

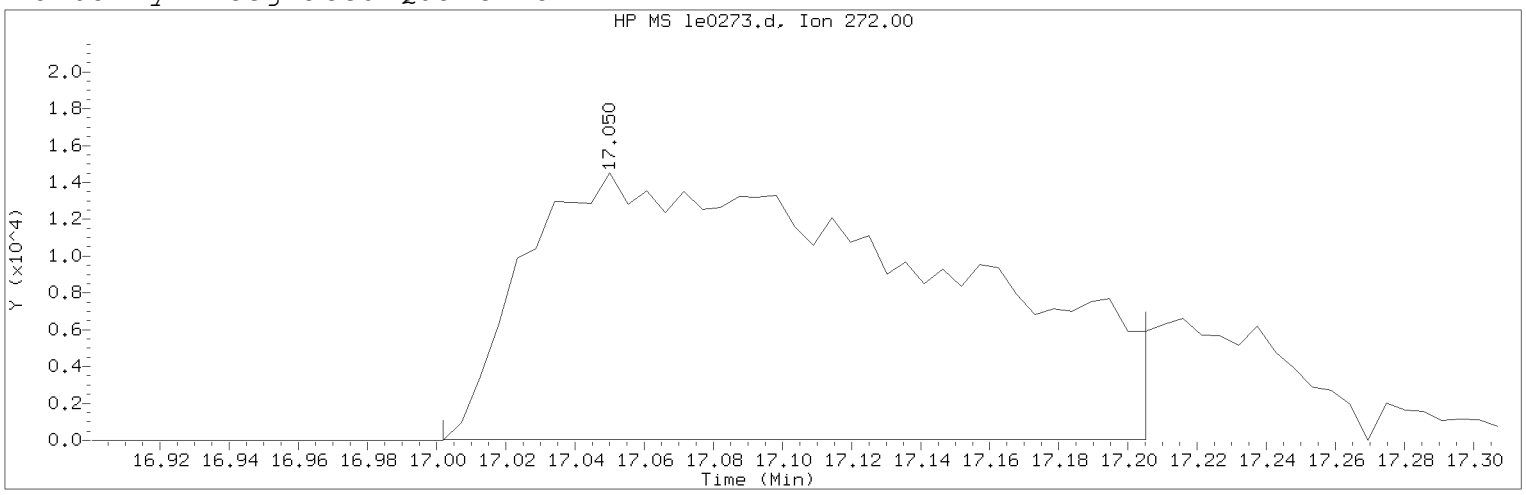
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1867
Retention Time (minutes) : 11.873
Quant Ion : 184.00
Area : 34848
On-column Amount (ng/ul) : 3.8350
Integration start scan : 1859 Integration stop scan: 1869
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MS Lab Sample ID: 8354937

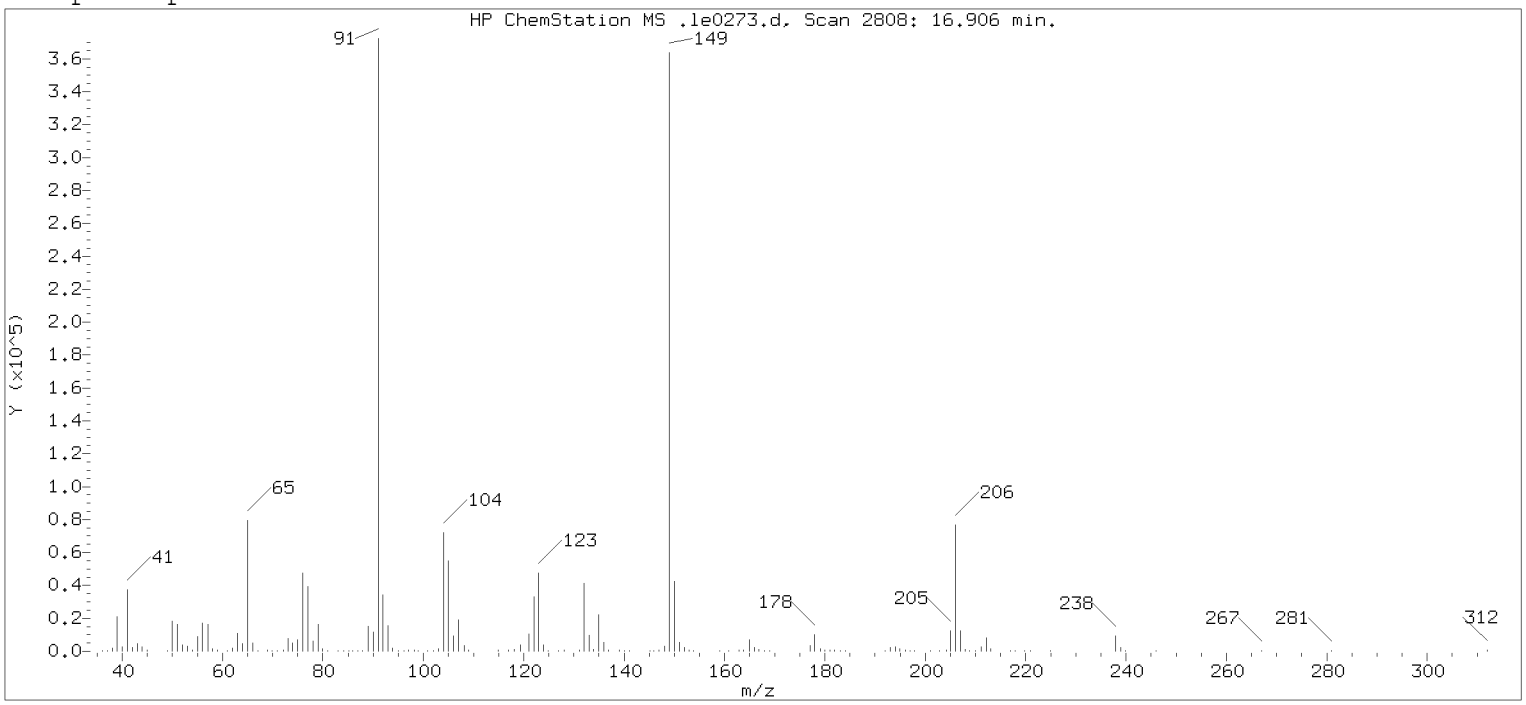
Compound Number : 190
Compound Name : Kepone
Scan Number : 2835
Retention Time (minutes) : 17.050
Quant Ion : 272.00
Area (flag) : 120637M
On-Column Amount (ng/ul) : 8.9745
Integration start scan : 2825 Integration stop scan: 2863
Y at integration start : 35 Y at integration end: 35

Reason for manual integration: missed peak

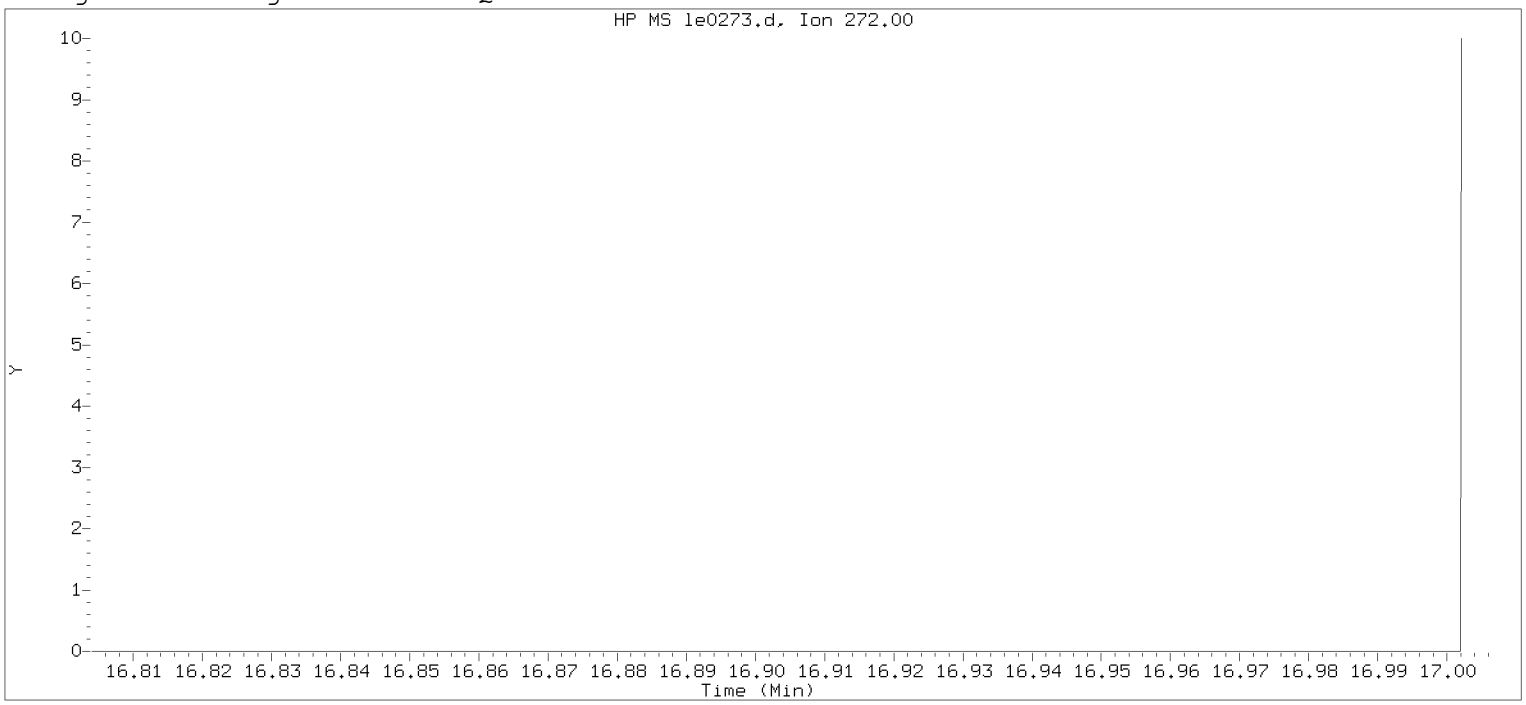
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0273.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 23:48 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: E6104MS Lab Sample ID: 8354937

Compound Number : 190
Compound Name : Kepone
Expected RT (minutes) : 16.906
Quant Ion : 272.00

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:32.
Target 3.5 esignature used.

Data file: /chem/HP20296.i/16may06a.b/le0274.d Injection date and time: **07-MAY-2016 00:17**
Data file Sample Info. Line: E6104MSD;8354938;1;3;MSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.947	(0.005)	946	152	151639	(-10)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	567662	(-13)	5.00	
113) Acenaphthene-d10	11.760	(0.005)	1846	164	335692	(-13)	5.00	
153) Phenanthrene-d10	13.686	(0.005)	2206	188	650840	(-9)	5.00	
175) Pyrene-d10	15.735	(0.000)	2589	212	803880	(-8)	5.00	
213) Perylene-d12	20.313	(0.000)	3445	264	598444	(-9)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.048	(-0.004)	112	1380200	30.227	60%		10 - 103
17) Phenol-d6	(1)	6.423	(-0.002)	99	1835727	30.056	60%		10 - 85
44) Nitrobenzene-d5	(2)	7.797	(0.001)	82	1350092	23.680	95%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.712	(0.000)	172	2240640	23.606	94%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.798	(0.000)	330	407076	36.851	74%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2380349	21.599	86%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)	2.973	(-0.004)	74	329916	9.533	38.13			0.5
5) Pyridine	(1)	3.015	(-0.005)	79	529566	8.950	35.80			0.5
7) 2-Picoline	(1)	4.155	(-0.002)	93	664322	10.935	43.74			0.5
8) N-Nitrosomethylethylamine	(1)	4.342	(-0.002)	88	297390	12.320	49.28			0.5
9) Methyl methanesulfonate	(1)	4.791	(-0.001)	80	307728	10.898	43.59			0.3
13) N-Nitrosodiethylamine	(1)	5.369	(-0.001)	102	283375	12.555	50.22			0.5
15) Ethyl methanesulfonate	(1)	5.823	(-0.000)	109	287193	12.213	48.85			0.1
18) Phenol	(1)	6.438	(-0.001)	94	580883	8.036	32.14			0.1
19) Aniline	(1)	6.455	(-0.000)	93	619470	7.268	29.07			0.1
22) bis(2-Chloroethyl)ether	(1)	6.578	(-0.000)	93	633449	11.976	47.90			0.1
23) 2-Chlorophenol	(1)	6.626	(-0.000)	128	455760	10.938	43.75			0.1
27) Benzyl alcohol	(1)	7.171	(-0.000)	108	379953	11.904	47.62			3
31) 2-Methylphenol	(1)	7.358	(-0.001)	108	516936	11.613	46.45			0.1
34) bis(2-Chloroisopropyl)ether	(1)	7.407	(-0.000)	45	788240	11.720	46.88			0.1
35) N-Nitrosopyrrolidine	(1)	7.535	(-0.000)	100	298584	12.569	50.27			0.1
36) Acetophenone	(1)	7.572	(-0.000)	105	874669	11.951	47.80			0.1
37) 4-Methylphenol	(1)	7.599	(-0.000)	108	523803	10.688	42.75			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.594	(-0.000)	70	499849	12.116	48.46			0.1
39) N-Nitrosomorpholine	(1)	7.604	(-0.000)	56	351554	11.417	45.67			0.5
40) o-Toluidine	(1)	7.626	(-0.000)	106	482056	5.876	23.50			0.1
43) Hexachloroethane	(1)	7.722	(-0.000)	117	221674	10.614	42.46			0.3
45) Nitrobenzene	(2)	7.829	(0.000)	77	740294	12.615	50.46			0.1
48) N-Nitrosopiperidine	(2)	8.064	(0.000)	114	277104	12.752	51.01			0.1
50) Isophorone	(2)	8.214	(0.000)	82	1328045	13.297	53.19			0.1
51) 2-Nitrophenol	(2)	8.327	(0.000)	139	252939	13.588	54.35			0.1
53) 2,4-Dimethylphenol	(2)	8.434	(0.000)	107	533026	10.945	43.78			0.1
57) O,O,O-Triethylphosphorothioate	(2)	8.557	(0.000)	198	295053	12.969	51.87			0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0274.d Injection date and time: **07-MAY-2016 00:17**
Data file Sample Info. Line: E6104MSD;8354938;1;3;MSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)	8.589(0.000)	93	792602	12.797	51.19			0.1
60) 2,4-Dichlorophenol	(2)	8.717(-0.000)	162	395973	11.380	45.52			0.1
64) a,a-Dimethylphenethylamine	(2)	8.770(-0.010)	58	880476MA	15.461	61.84		E	1
67) 4-Chloroaniline	(2)	9.065(0.000)	127	442893	8.677	34.71			0.5
68) 2,6-Dichlorophenol	(2)	9.075(0.000)	162	394813	11.896	47.58			0.1
69) Hexachloropropene	(2)	9.113(0.000)	213	277359	10.869	43.48			0.5
77) N-Nitrosodi-n-butylamine	(2)	9.648(0.000)	84	479208	12.157	48.63			0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)	9.878(-0.000)	107	517110	12.647	50.59			0.1
82) Safrole	(2)	9.979(0.000)	162	408724	13.189	52.76			0.5
83) 2-Methylnaphthalene	(2)	10.092(0.000)	142	1012760	12.704	50.82			0.03
85) Hexachlorocyclopentadiene	(3)	10.359(0.000)	237	399986	16.730	66.92			1
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364(0.000)	216	550453	12.465	49.86			0.1
88) cis-Isosafrole	(3)	10.455(0.000)	162	57047	1.680	6.72			0.5
90) 2,4,6-Trichlorophenol	(3)	10.562(-0.000)	196	281654	10.837	43.35			0.1
92) 2,4,5-Trichlorophenol	(3)	10.616(-0.000)	196	325883	11.833	47.33			0.1
94) trans-Isosafrole	(3)	10.824(0.000)	162	448482	12.473	49.89			0.5
97) Isosafrole	(3)			505529	14.153	56.61			0.5
96) 2-Chloronaphthalene	(3)	10.878(0.000)	162	991481	12.158	48.63			0.1
100) 2-Nitroaniline	(3)	11.065(-0.000)	138	297868	13.634	54.54			0.1
104) 1,4-Naphthoquinone	(3)	11.188(-0.001)	158	2667890	85.095	340.38		E	6
106) Dimethylphthalate	(3)	11.402(-0.000)	163	1114448	12.623	50.49			0.5
107) 1,3-Dinitrobenzene	(3)	11.413(-0.000)	168	171994	13.694	54.78			0.5
108) 2,6-Dinitrotoluene	(3)	11.477(-0.000)	165	250666	14.076	56.30			0.1
109) Acenaphthylene	(3)	11.546(-0.000)	152	1598954	13.733	54.93			0.03
112) 3-Nitroaniline	(3)	11.712(-0.000)	138	215864	11.008	44.03			0.1
114) Acenaphthene	(3)	11.809(-0.000)	153	1061909	12.954	51.81			0.03
115) 2,4-Dinitrophenol	(3)	11.942(-0.006)	184	192580A	20.648	82.59			3
116) 4-Nitrophenol	(3)	11.996(-0.002)	109	160634	9.858	39.43			3
117) Pentachlorobenzene	(3)	11.996(-0.000)	250	480502	13.345	53.38			0.1
118) 2,4-Dinitrotoluene	(3)	12.055(-0.000)	165	334829	13.429	53.71			0.3
119) Dibenzofuran	(3)	12.055(-0.000)	168	1438206	12.739	50.96			0.1
121) 1-Naphthylamine	(3)	12.162(-0.000)	143	860811	10.698	42.79			1
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226(-0.000)	232	234878	11.194	44.78			0.1
123) 2-Naphthylamine	(3)	12.263(-0.000)	143	966362	12.149	48.60			1
124) Diethylphthalate	(3)	12.408(-0.000)	149	1105585	12.810	51.24			0.5
125) Thionazin	(3)	12.498(-0.000)	107	237275	13.354	53.42			0.5
126) Fluorene	(3)	12.498(-0.000)	166	1129682	12.980	51.92			0.03
127) 4-Chlorophenyl-phenylether	(3)	12.520(-0.000)	204	596241	13.083	52.33			0.1
128) 5-Nitro-o-toluidine	(3)	12.520(-0.000)	152	246229	11.130	44.52			0.1
129) 4-Nitroaniline	(3)	12.531(-0.000)	138	241215	11.837	47.35			0.1
130) 4,6-Dinitro-2-methylphenol	(4)	12.584(-0.001)	198	171641	12.730	50.92			1
131) N-Nitrosodiphenylamine	(4)	12.664(0.000)	169	988373	13.088	52.35			0.1
139) 1,3,5-Trinitrobenzene	(4)	13.001(0.000)	213	100273	11.531	46.13			1
140) Diallate (peak 1)	(4)	13.044(0.000)	86	441684	9.127	36.51			0.3
141) Phorate	(4)	13.055(-0.000)	75	907730	13.406	53.63			0.1
142) Phenacetin	(4)	13.071(-0.000)	108	677771	13.251	53.00			0.1
143) 4-Bromophenyl-phenylether	(4)	13.130(0.000)	248	334119	13.392	53.57			0.1
144) Diallate (peak 2)	(4)	13.156(-0.000)	86	144806	3.007	12.03			0.3
146) Diallate trans/cis	(4)			586490	12.134	48.54			0.3
145) Hexachlorobenzene	(4)	13.183(0.000)	284	350749	13.471	53.88			0.03
147) Dimethoate	(4)	13.253(-0.000)	87	409571	9.491	37.96			0.8

E = Compound concentration above calibration range. M = Compound was manually integrated. A = User selected an alternate peak.

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0274.d Injection date and time: **07-MAY-2016 00:17**
Data file Sample Info. Line: E6104MSD;8354938;1;3;MSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
149) Pentachlorophenol	(4)	13.456(-0.001)	266	161672	10.487	41.95			0.3
150) 4-Aminobiphenyl	(4)	13.456(0.000)	169	706660	9.693	38.77			0.1
151) Pentachloronitrobenzene	(4)	13.461(-0.000)	237	168724	13.520	54.08			0.5
152) Pronamide	(4)	13.558(0.000)	173	570253	13.978	55.91			0.1
155) Phenanthrene	(4)	13.718(-0.000)	178	1718856	12.534	50.14			0.03
157) Anthracene	(4)	13.788(-0.000)	178	1767855	13.111	52.44			0.03
162) Disulfoton	(4)	13.729(-0.000)	88	1621940	34.230	136.92		E	6
164) Methyl parathion	(4)	14.215(-0.000)	109	294435	9.594	38.37			0.3
165) Di-n-butylphthalate	(4)	14.536(-0.000)	149	2008627	13.381	53.52			0.5
167) Parathion	(4)	14.777(-0.000)	109	279753	14.429	57.72			0.5
168) 4-Nitroquinoline-1-oxide	(4)	14.809(-0.001)	190	1585978	133.828	535.31		E	5
170) Methapyrilene	(4)	14.948(-0.001)	97	5547439	116.265	465.06		E	4
171) Isodrin	(4)	15.189(-0.000)	193	224985	13.980	55.92			0.1
173) Fluoranthene	(4)	15.414(-0.000)	202	2073524	13.884	55.53			0.3
177) Pyrene	(5)	15.767(-0.000)	202	2151367	12.338	49.35			0.3
180) Aramite (1)	(5)	15.943(0.000)	185	7622	13.673	54.69		E	1
181) Aramite (2)	(5)	15.975(-0.000)	185	5811	9.223	36.89		E	1
183) Aramite (3)	(5)	16.050(0.000)	185	111716	2.103	8.41		E	1
184) Aramite (4)	(5)	16.178(0.000)	185	126561	1.779	7.12		E	1
186) Aramite	(5)			251710	26.779	107.12		E	1
182) p-Dimethylaminoazobenzene	(5)	16.285(0.000)	225	442539	14.729	58.91			0.1
185) Chlorobenzilate	(5)	16.376(0.000)	139	657977	13.790	55.16			0.8
187) 3,3'-Dimethylbenzidine	(5)	16.852(0.000)	212	900175	8.950	35.80			6
188) Butylbenzylphthalate	(5)	16.916(0.000)	149	943845	13.552	54.21			0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)			Not Detected					6
191) 2-Acetylaminofluorene	(5)	17.286(-0.000)	181	934044	16.526	66.11			0.5
193) 3,3'-Dichlorobenzidine	(5)	17.799(-0.000)	252	661747	11.781	47.12			0.5
195) Benzo(a)anthracene	(5)	17.810(-0.000)	228	2241254	14.834	59.34			0.03
196) Chrysene	(5)	17.874(-0.000)	228	2110492	14.650	58.60			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	17.997(0.000)	149	1360728	13.608	54.43			0.5
205) Di-n-octylphthalate	(6)	19.174(0.000)	149	2458273	14.578	58.31			0.5
206) Benzo(b)fluoranthene	(6)	19.687(0.000)	252	2109648	14.420	57.68			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692(0.000)	256	884544	13.917	55.67			0.1
208) Benzo(k)fluoranthene	(6)	19.735(0.000)	252	2001498	13.741	54.96			0.03
211) Benzo(a)pyrene	(6)	20.222(0.000)	252	1840272	13.784	55.14			0.03
215) 3-Methylcholanthrene	(6)	20.800(-0.000)	268	937236	16.797	67.19			0.1
219) Indeno(1,2,3-cd)pyrene	(6)	21.955(-0.000)	276	1735607	11.115	44.46			0.03
220) Dibenz(a,h)anthracene	(6)	21.992(0.000)	278	1506277	11.506	46.02			0.3
221) Benzo(g,h,i)perylene	(6)	22.367(0.000)	276	1406462	10.557	42.23			0.3

E = Compound concentration above calibration range.

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0274.d Injection date and time: **07-MAY-2016 00:17**
Data file Sample Info. Line: E6104MSD;8354938;1;3;MSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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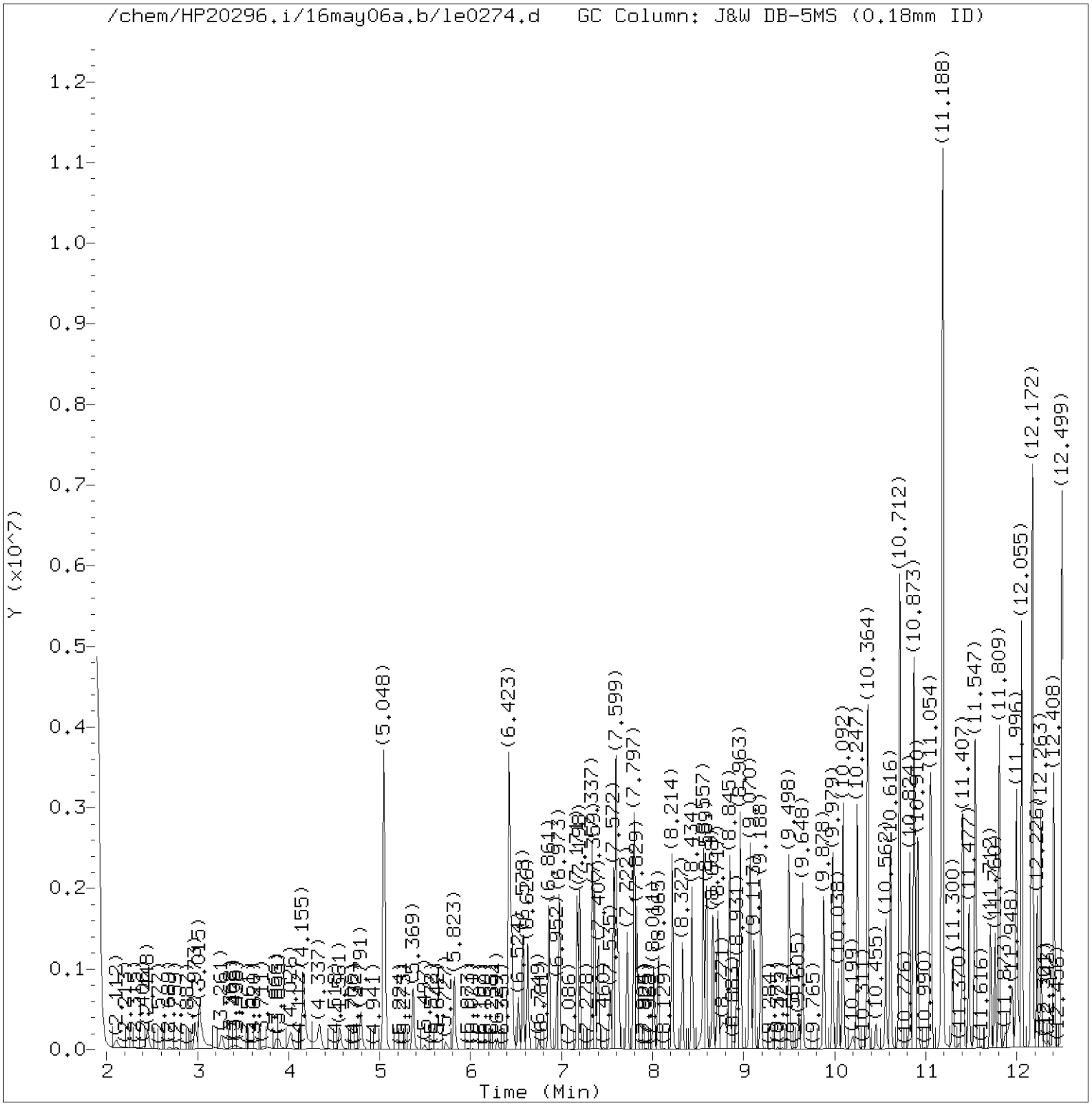
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

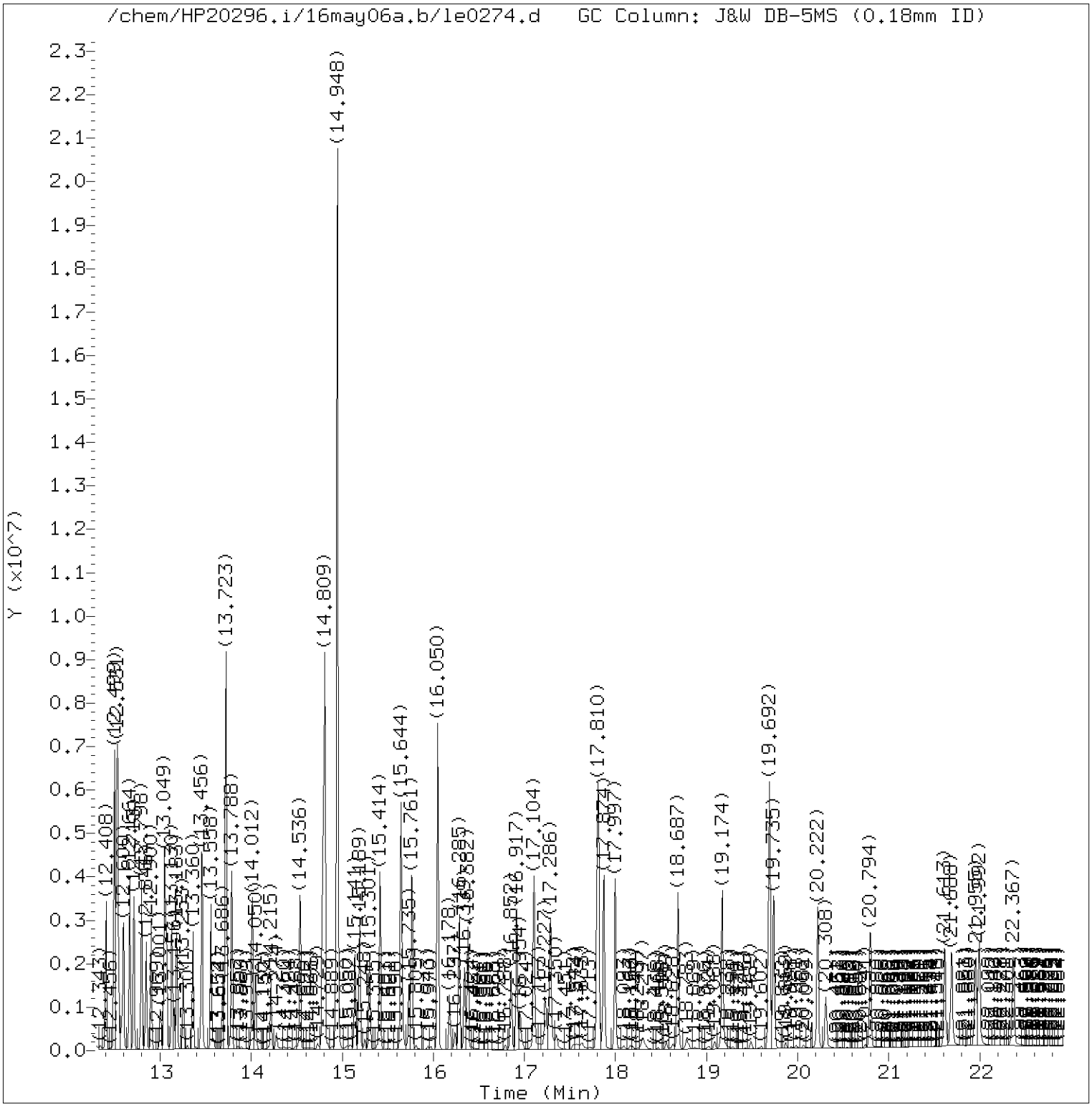
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	2.973	74	329916	9.533
5) Pyridine	(1)	3.015	79	529566	8.950
7) 2-Picoline	(1)	4.155	93	664322	10.935
8) N-Nitrosomethylethylamine	(1)	4.342	88	297390	12.320
9) Methyl methanesulfonate	(1)	4.791	80	307728	10.898
11)$2-Fluorophenol	(1)	5.048	112	1380200	30.227
13) N-Nitrosodiethylamine	(1)	5.369	102	283375	12.555
15) Ethyl methanesulfonate	(1)	5.823	109	287193	12.213
17)$Phenol-d6	(1)	6.423	99	1835727	30.056
18) Phenol	(1)	6.439	94	580883	8.036
19) Aniline	(1)	6.455	93	619470	7.268
22) bis(2-Chloroethyl)ether	(1)	6.578	93	633449	11.976
23) 2-Chlorophenol	(1)	6.626	128	455760	10.938
25)*1,4-Dichlorobenzene-d4	(1)	6.947	152	151639	5.000
27) Benzyl alcohol	(1)	7.171	108	379953	11.904
31) 2-Methylphenol	(1)	7.359	108	516936	11.613
97) Isosafrole	(3)			505529	14.153
34) bis(2-Chloroisopropyl)ether	(1)	7.407	45	788240	11.720
35) N-Nitrosopyrrolidine	(1)	7.535	100	298584	12.569
36) Acetophenone	(1)	7.572	105	874669	11.951
38) N-Nitroso-di-n-propylamine	(1)	7.594	70	499849	12.116
37) 4-Methylphenol	(1)	7.599	108	523803	10.688
39) N-Nitrosomorpholine	(1)	7.605	56	351554	11.417
40) o-Toluidine	(1)	7.626	106	482056	5.876
43) Hexachloroethane	(1)	7.722	117	221674	10.614
44)$Nitrobenzene-d5	(2)	7.797	82	1350092	23.680
45) Nitrobenzene	(2)	7.829	77	740294	12.615
48) N-Nitrosopiperidine	(2)	8.065	114	277104	12.752
50) Isophorone	(2)	8.214	82	1328045	13.297
51) 2-Nitrophenol	(2)	8.327	139	252939	13.588
53) 2,4-Dimethylphenol	(2)	8.434	107	533026	10.945
57) O,O,O-Triethylphosphorothioate	(2)	8.557	198	295053	12.969
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	792602	12.797
60) 2,4-Dichlorophenol	(2)	8.717	162	395973	11.380
64) a,a-Dimethylphenethylamine	(2)	8.771	58	880476MA	15.461
146) Diallate trans/cis	(4)			586490	12.134
65)*Naphthalene-d8	(2)	8.931	136	567662	5.000
67) 4-Chloroaniline	(2)	9.065	127	442893	8.677
68) 2,6-Dichlorophenol	(2)	9.075	162	394813	11.896
69) Hexachloropropene	(2)	9.113	213	277359	10.869

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	479208	12.157
80) 4-Chloro-3-methylphenol	(2)	9.878	107	517110	12.647
82) Safrole	(2)	9.979	162	408724	13.189
83) 2-Methylnaphthalene	(2)	10.092	142	1012760	12.704
85) Hexachlorocyclopentadiene	(3)	10.359	237	399986	16.730
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	550453	12.465
88) cis-Isosafrole	(3)	10.455	162	57047	1.680
186) Aramite	(5)			251710	26.779
90) 2,4,6-Trichlorophenol	(3)	10.562	196	281654	10.837
92) 2,4,5-Trichlorophenol	(3)	10.616	196	325883	11.833
93)$2-Fluorobiphenyl	(3)	10.712	172	2240640	23.606
94) trans-Isosafrole	(3)	10.824	162	448482	12.473
96) 2-Chloronaphthalene	(3)	10.878	162	991481	12.158
100) 2-Nitroaniline	(3)	11.065	138	297868	13.634
104) 1,4-Naphthoquinone	(3)	11.188	158	2667890	85.095
106) Dimethylphthalate	(3)	11.402	163	1114448	12.623
107) 1,3-Dinitrobenzene	(3)	11.413	168	171994	13.694
108) 2,6-Dinitrotoluene	(3)	11.477	165	250666	14.076
109) Acenaphthylene	(3)	11.547	152	1598954	13.733
112) 3-Nitroaniline	(3)	11.712	138	215864	11.008
113)*Acenaphthene-d10	(3)	11.760	164	335692	5.000
114) Acenaphthene	(3)	11.809	153	1061909	12.954
115) 2,4-Dinitrophenol	(3)	11.942	184	192580A	20.648
116) 4-Nitrophenol	(3)	11.996	109	160634	9.858
117) Pentachlorobenzene	(3)	11.996	250	480502	13.345
119) Dibenzofuran	(3)	12.055	168	1438206	12.739
118) 2,4-Dinitrotoluene	(3)	12.055	165	334829	13.429
121) 1-Naphthylamine	(3)	12.162	143	860811	10.698
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	234878	11.194
123) 2-Naphthylamine	(3)	12.263	143	966362	12.149
124) Diethylphthalate	(3)	12.408	149	1105585	12.810
126) Fluorene	(3)	12.499	166	1129682	12.980
125) Thionazin	(3)	12.499	107	237275	13.354
128) 5-Nitro-o-toluidine	(3)	12.520	152	246229	11.130
127) 4-Chlorophenyl-phenylether	(3)	12.520	204	596241	13.083
129) 4-Nitroaniline	(3)	12.531	138	241215	11.837
130) 4,6-Dinitro-2-methylphenol	(4)	12.584	198	171641	12.730
131) N-Nitrosodiphenylamine	(4)	12.664	169	988373	13.088
135)$2,4,6-Tribromophenol	(3)	12.798	330	407076	36.851
139) 1,3,5-Trinitrobenzene	(4)	13.001	213	100273	11.531

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Diallate (peak 1)	(4)	13.044	86	441684	9.127
141) Phorate	(4)	13.055	75	907730	13.406
142) Phenacetin	(4)	13.071	108	677771	13.251
143) 4-Bromophenyl-phenylether	(4)	13.130	248	334119	13.392
144) Diallate (peak 2)	(4)	13.156	86	144806	3.007
145) Hexachlorobenzene	(4)	13.183	284	350749	13.471
147) Dimethoate	(4)	13.253	87	409571	9.491
149) Pentachlorophenol	(4)	13.456	266	161672	10.487
150) 4-Aminobiphenyl	(4)	13.456	169	706660	9.693
151) Pentachloronitrobenzene	(4)	13.461	237	168724	13.520
152) Pronamide	(4)	13.558	173	570253	13.978
153)*Phenanthrene-d10	(4)	13.686	188	650840	5.000
155) Phenanthrene	(4)	13.718	178	1718856	12.534
162) Disulfoton	(4)	13.729	88	1621940	34.230
157) Anthracene	(4)	13.788	178	1767855	13.111
164) Methyl parathion	(4)	14.215	109	294435	9.594
165) Di-n-butylphthalate	(4)	14.536	149	2008627	13.381
167) Parathion	(4)	14.777	109	279753	14.429
168) 4-Nitroquinoline-1-oxide	(4)	14.809	190	1585978	133.828
170) Methapyrilene	(4)	14.948	97	5547439	116.265
171) Isodrin	(4)	15.189	193	224985	13.980
173) Fluoranthene	(4)	15.414	202	2073524	13.884
175)*Pyrene-d10	(5)	15.735	212	803880	5.000
177) Pyrene	(5)	15.767	202	2151367	12.338
180) Aramite (1)	(5)	15.943	185	7622	13.673
181) Aramite (2)	(5)	15.975	185	5811	9.223
183) Aramite (3)	(5)	16.050	185	111716	2.103
179)$Terphenyl-d14	(5)	16.050	244	2380349	21.599
184) Aramite (4)	(5)	16.178	185	126561	1.779
182) p-Dimethylaminoazobenzene	(5)	16.285	225	442539	14.729
185) Chlorobenzilate	(5)	16.376	139	657977	13.790
187) 3,3'-Dimethylbenzidine	(5)	16.852	212	900175	8.950
188) Butylbenzylphthalate	(5)	16.917	149	943845	13.552
191) 2-Acetylaminofluorene	(5)	17.286	181	934044	16.526
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	661747	11.781
195) Benzo(a)anthracene	(5)	17.810	228	2241254	14.834
196) Chrysene	(5)	17.874	228	2110492	14.650
199) bis(2-Ethylhexyl)phthalate	(5)	17.997	149	1360728	13.608
205) Di-n-octylphthalate	(6)	19.174	149	2458273	14.578
206) Benzo(b)fluoranthene	(6)	19.687	252	2109648	14.420

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

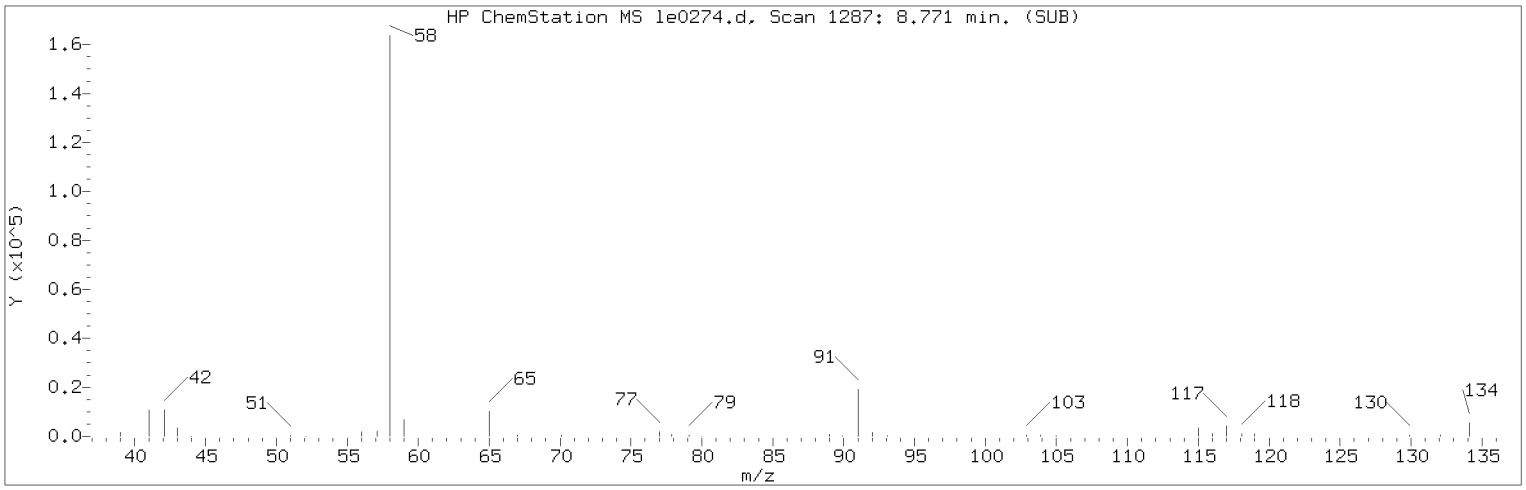
Sample Name: E6104MSD Lab Sample ID: 8354938

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692	256	884544	13.917
208) Benzo(k)fluoranthene	(6)	19.735	252	2001498	13.741
211) Benzo(a)pyrene	(6)	20.222	252	1840272	13.784
213)*Perylene-d12	(6)	20.313	264	598444	5.000
215) 3-Methylcholanthrene	(6)	20.800	268	937236	16.797
219) Indeno(1,2,3-cd)pyrene	(6)	21.955	276	1735607	11.115
220) Dibenz(a,h)anthracene	(6)	21.992	278	1506277	11.506
221) Benzo(g,h,i)perylene	(6)	22.367	276	1406462	10.557

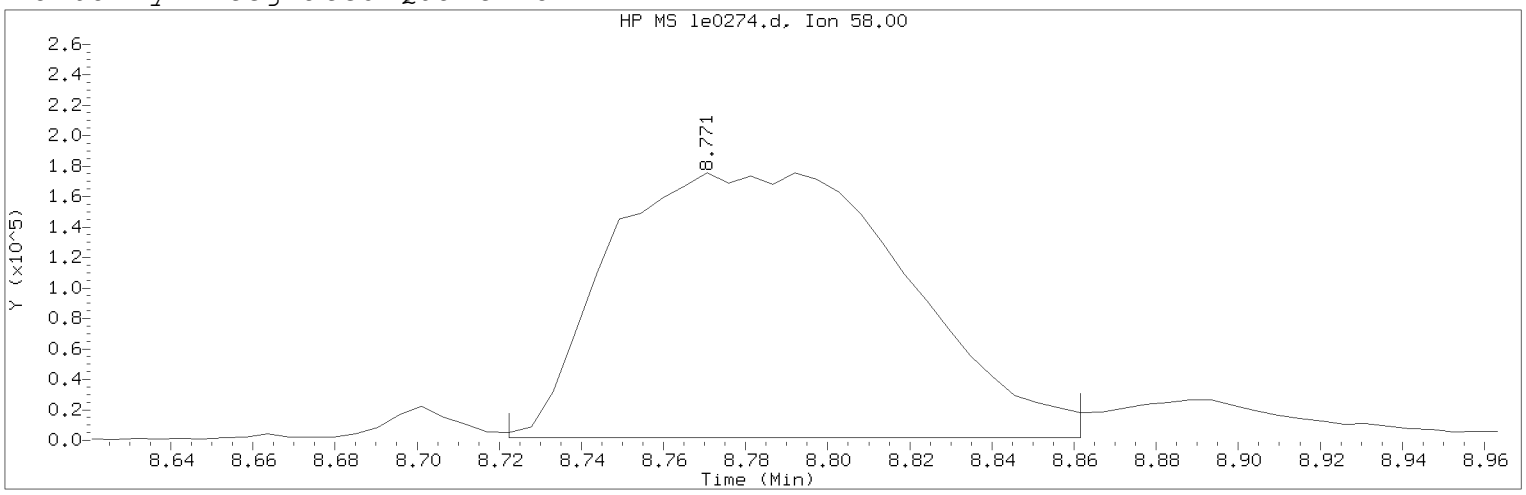
* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

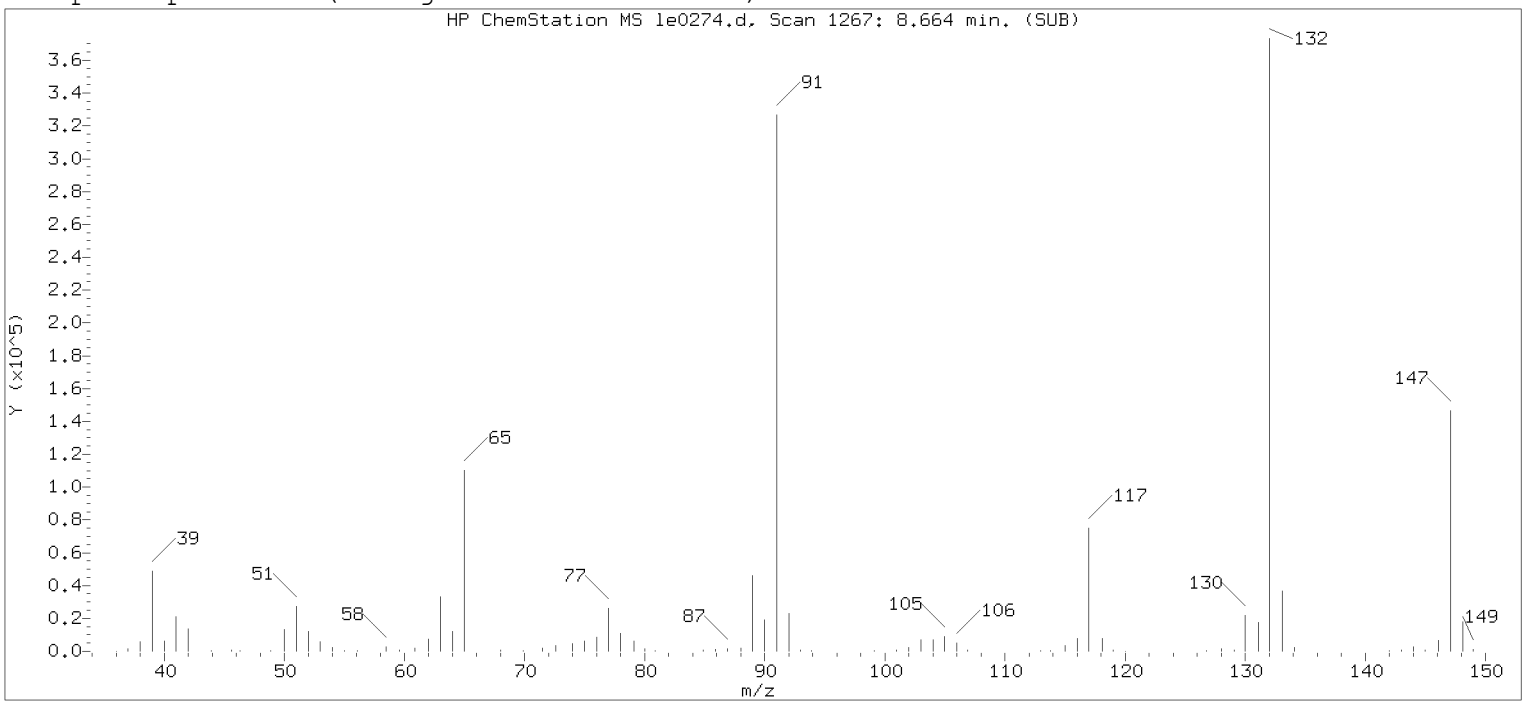
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1287
Retention Time (minutes) : 8.771
Quant Ion : 58.00
Area (flag) : 880476MA
On-Column Amount (ng/ul) : 15.4612
Integration start scan : 1277 Integration stop scan: 1303
Y at integration start : 1605 Y at integration end: 1605

Reason for manual integration: improper integration

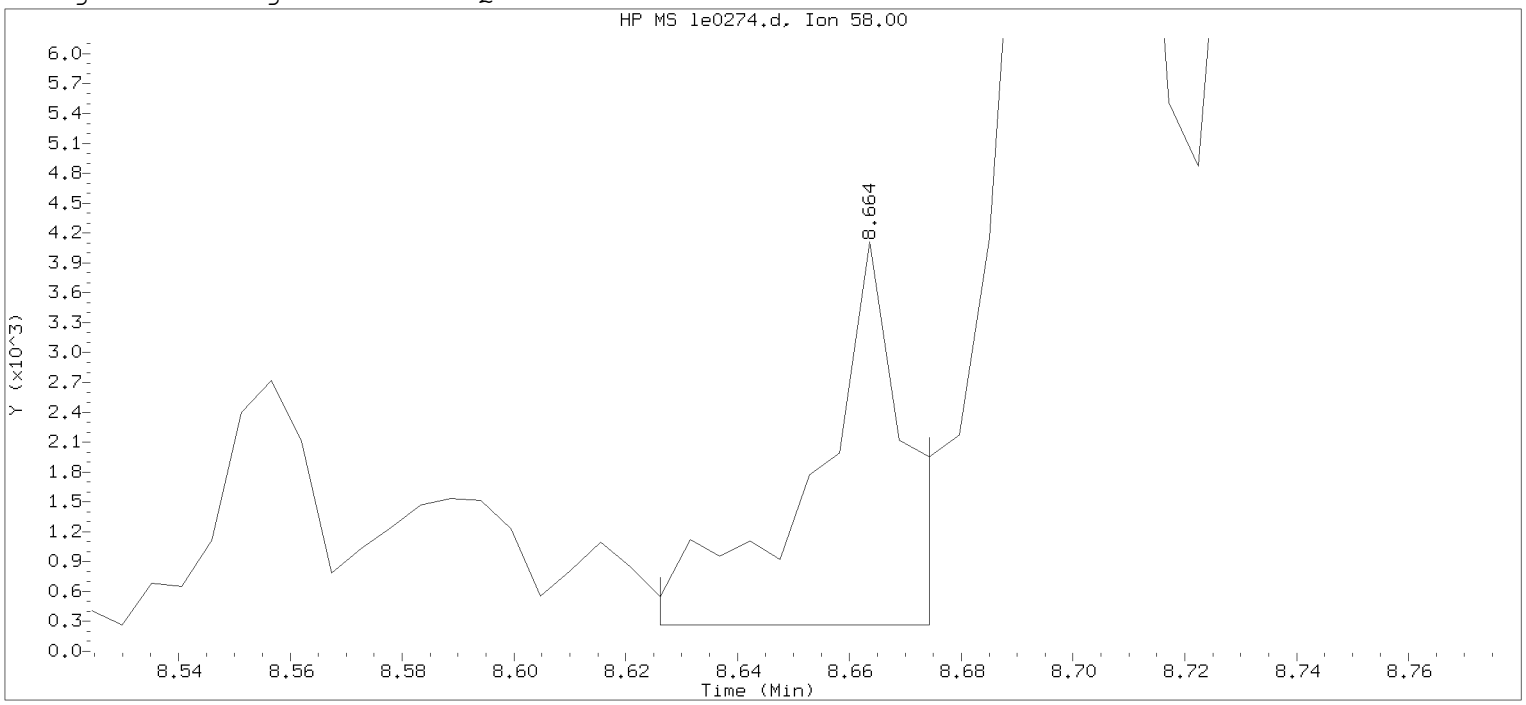
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

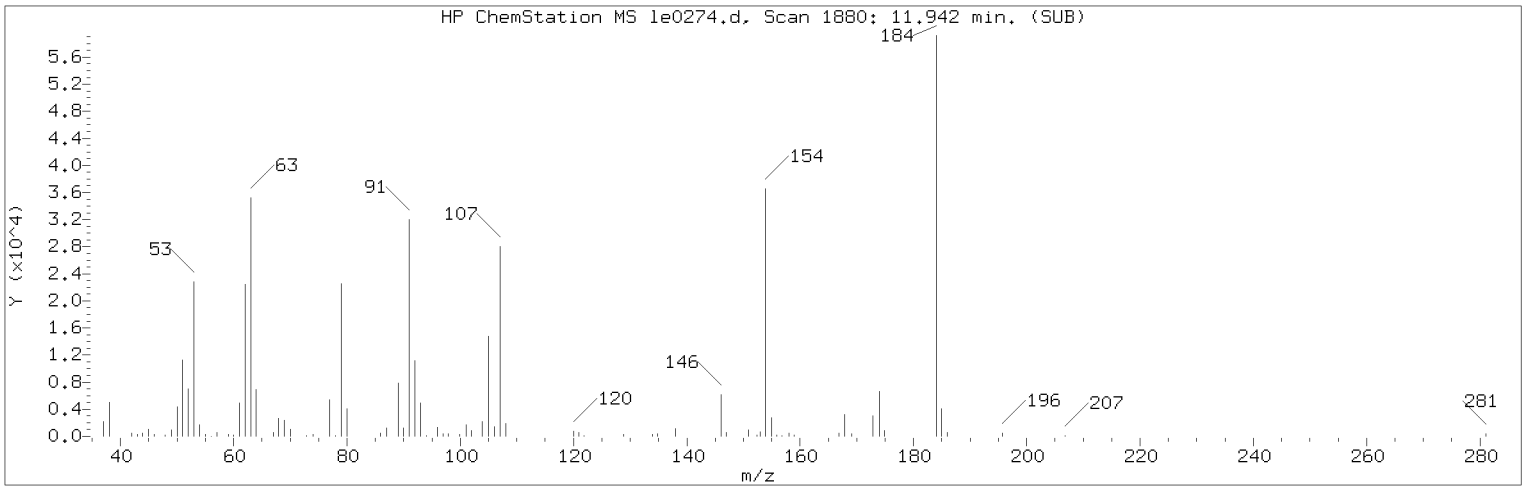
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:54 lmh00956

Sample Name: E6104MSD Lab Sample ID: 8354938

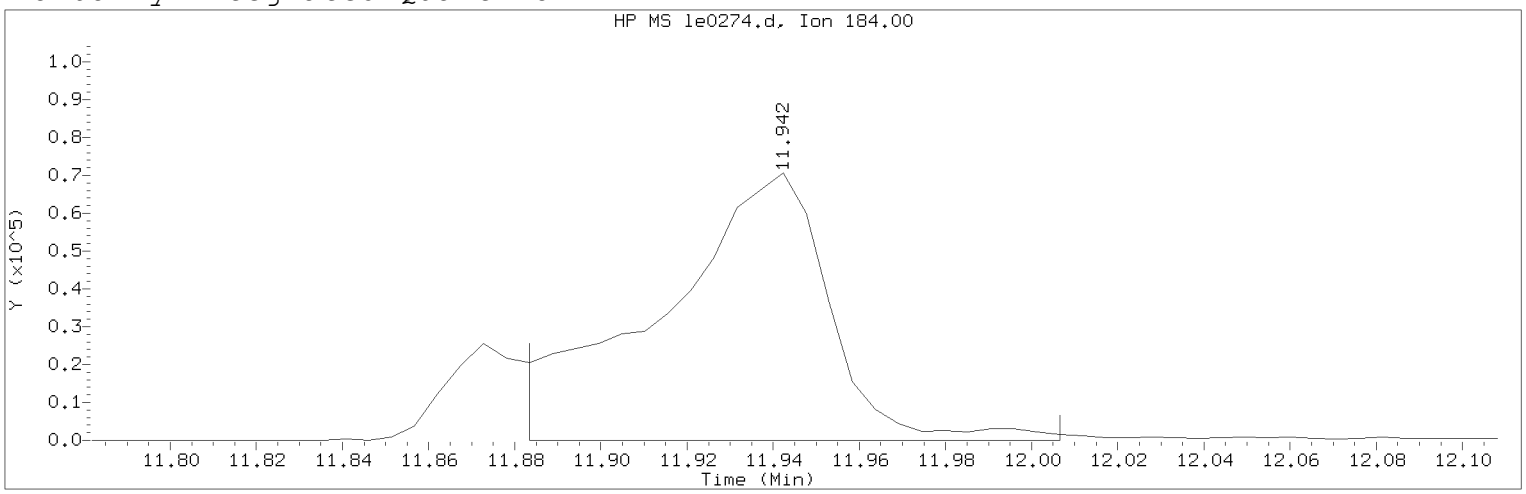
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1267
Retention Time (minutes) : 8.664
Quant Ion : 58.00
Area : 4157
On-column Amount (ng/ul) : 0.0730
Integration start scan : 1259 Integration stop scan: 1268
Y at integration start : 265 Y at integration end: 265

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

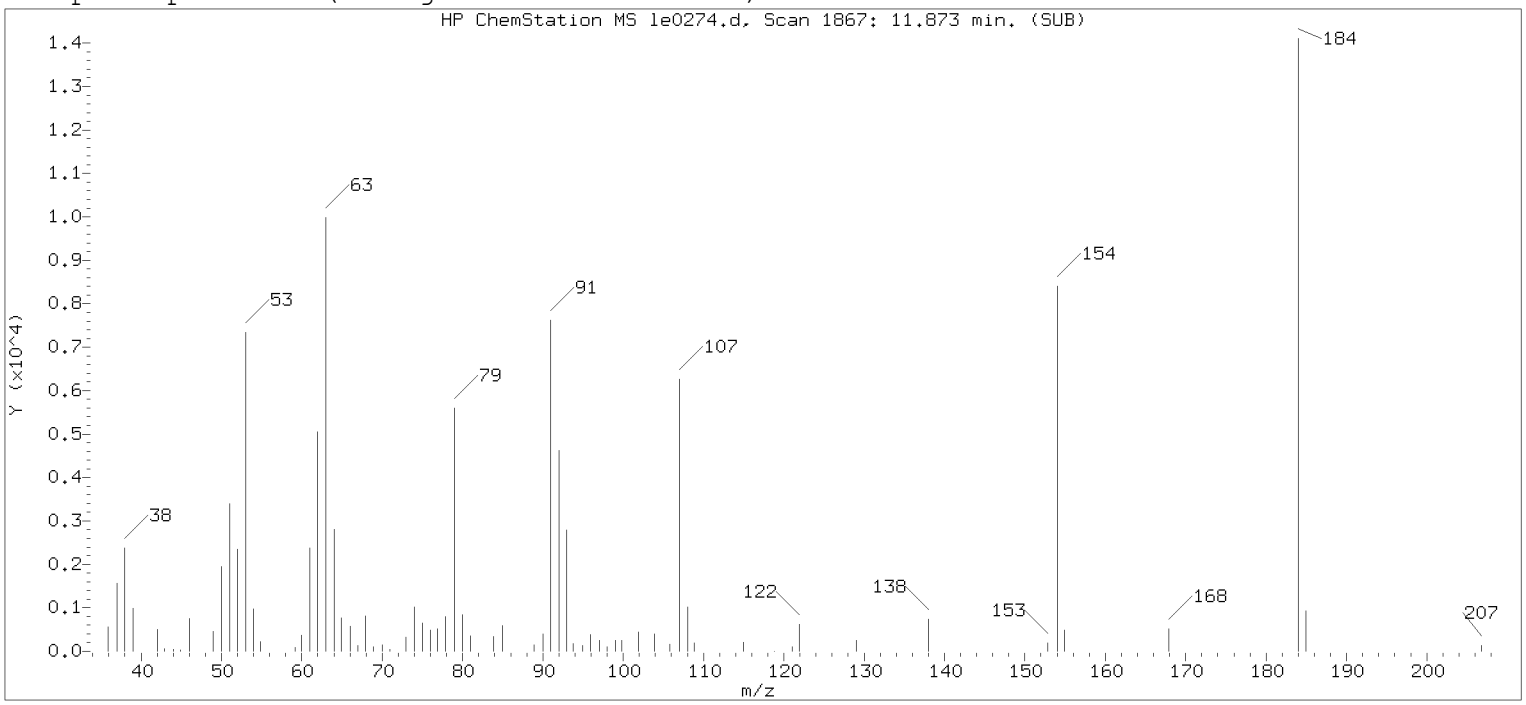
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1880
Retention Time (minutes) : 11.942
Quant Ion : 184.00
Area (flag) : 192580A
On-Column Amount (ng/ul) : 20.6484
Integration start scan : 1868 Integration stop scan: 1891
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

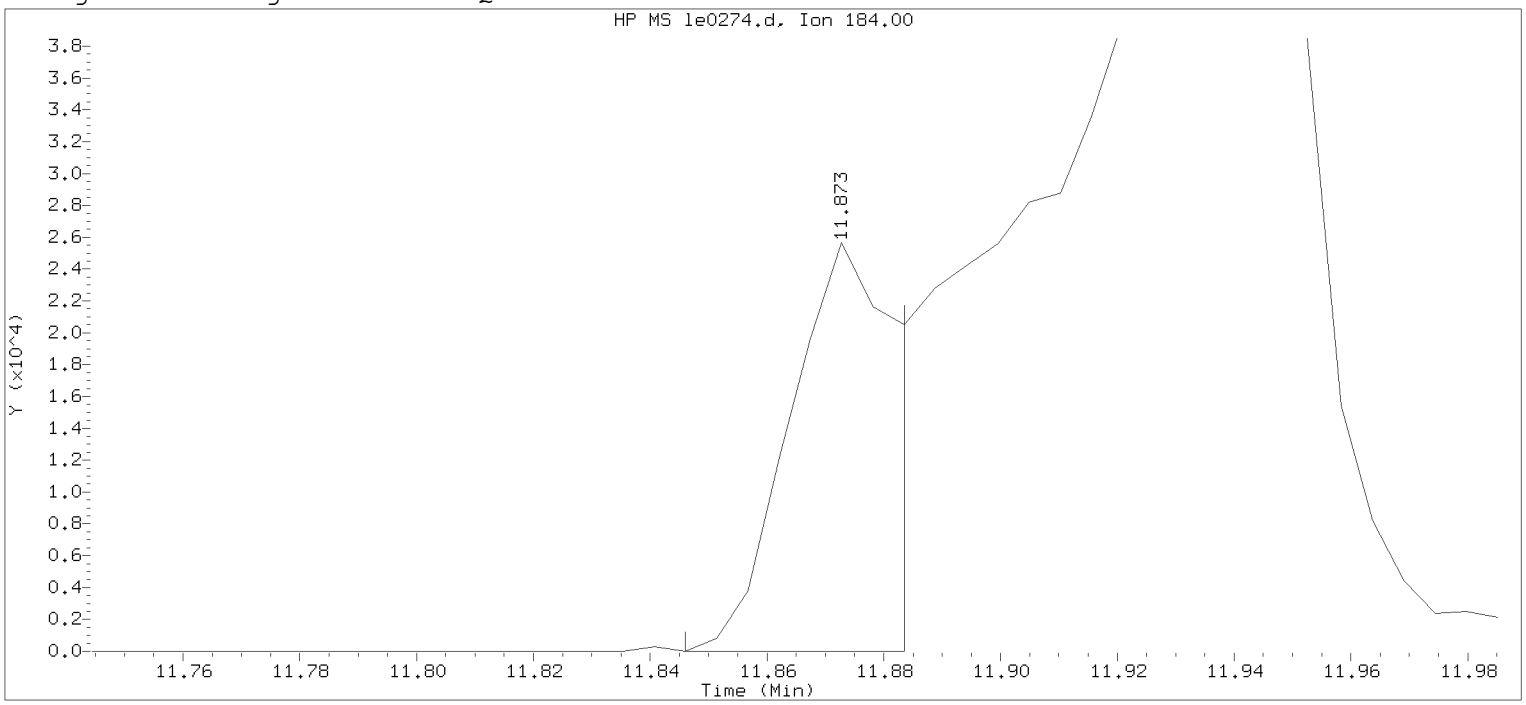
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

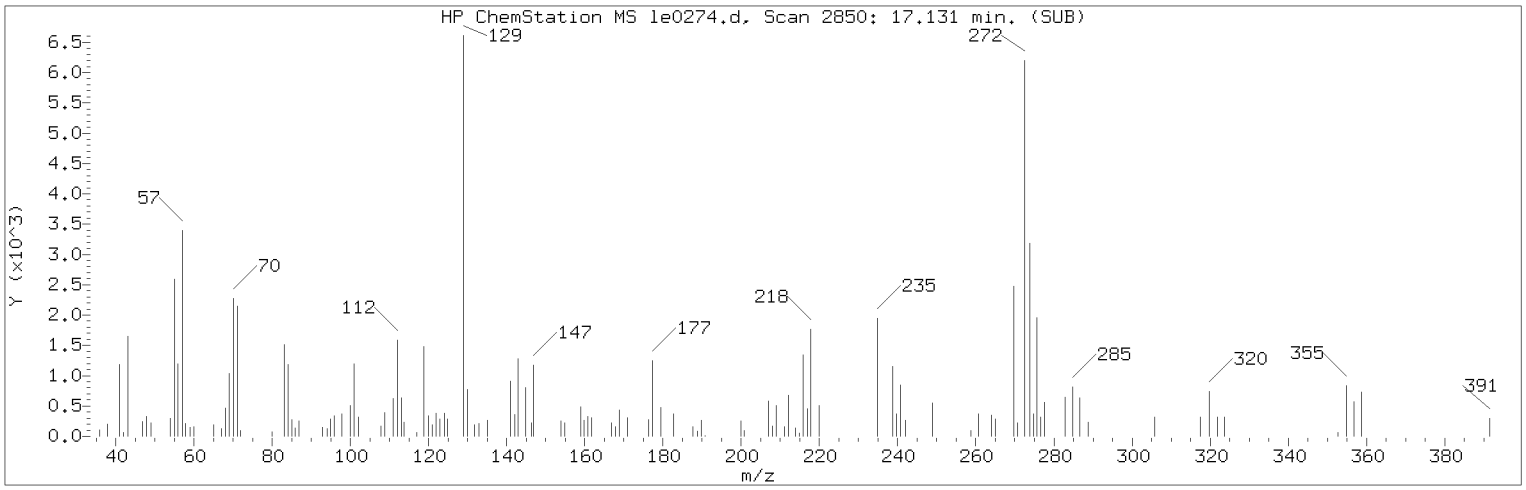
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:54 lmh00956

Sample Name: E6104MSD Lab Sample ID: 8354938

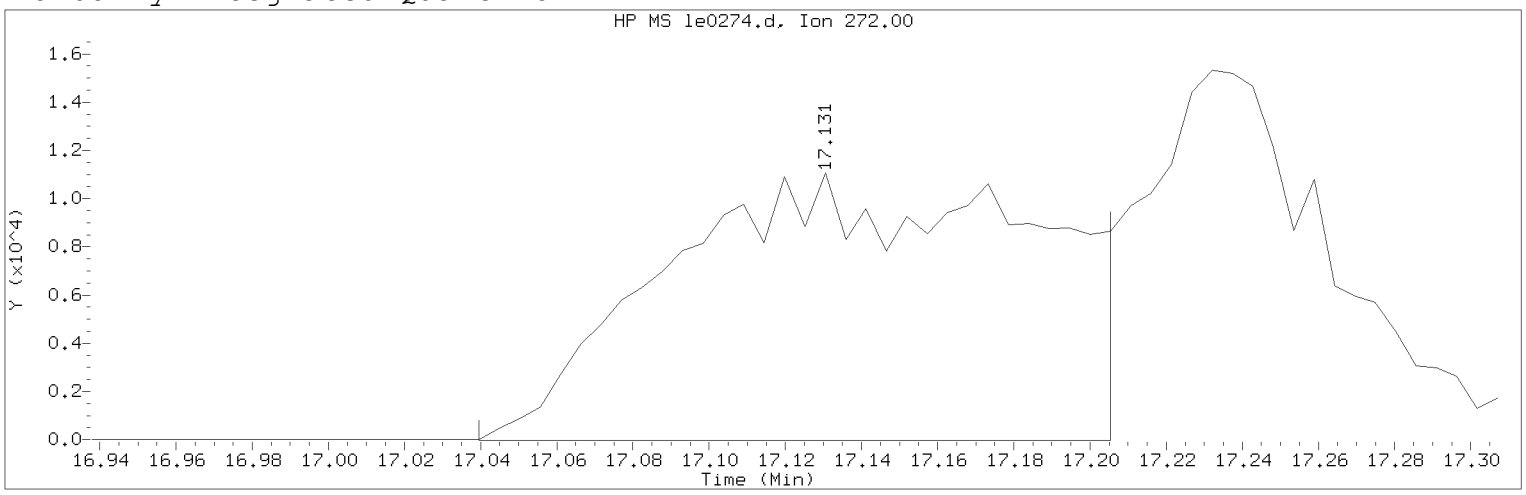
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1867
Retention Time (minutes) : 11.873
Quant Ion : 184.00
Area : 30133
On-column Amount (ng/ul) : 3.2309
Integration start scan : 1861 Integration stop scan: 1868
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: 1567

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: E6104MSD Lab Sample ID: 8354938

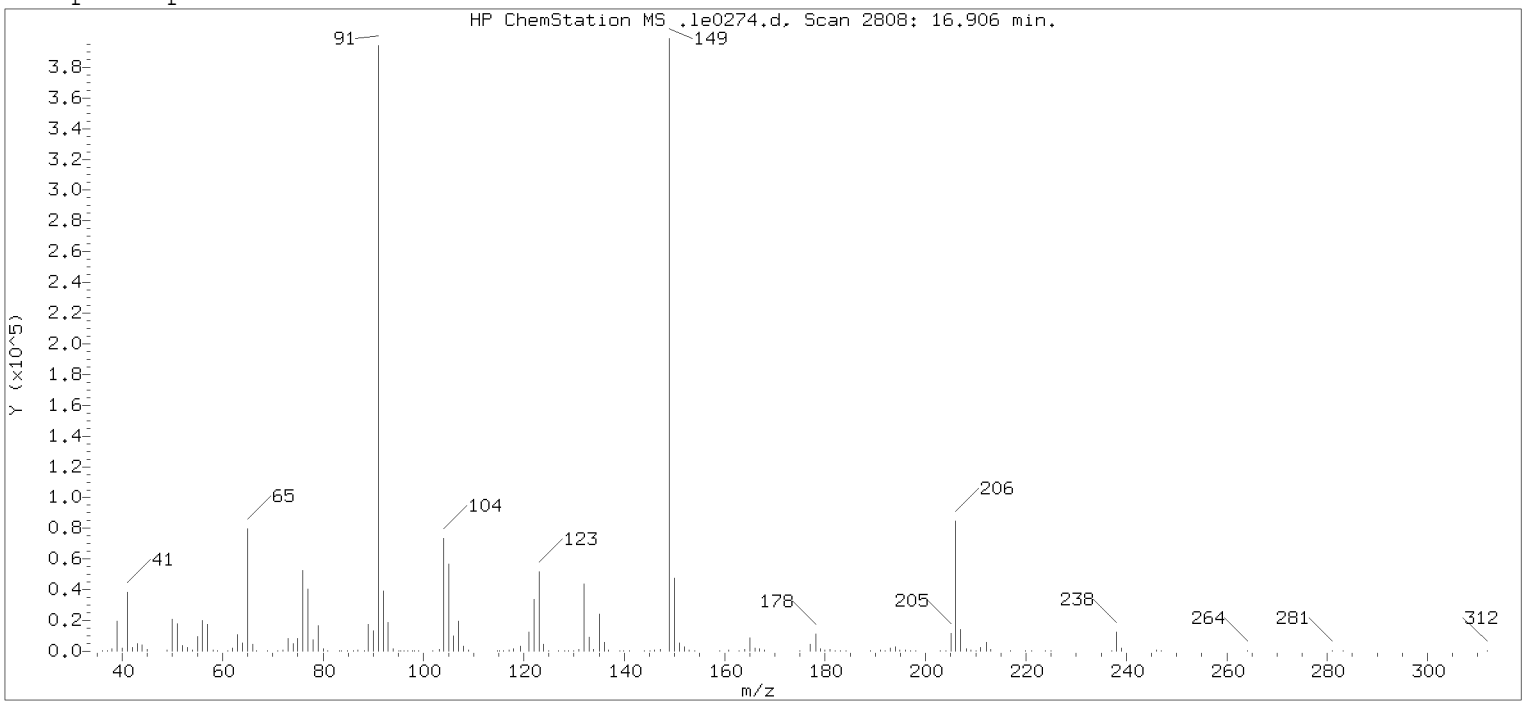
Compound Number	: 190		
Compound Name	: Kepone		
Scan Number	: 2850		
Retention Time (minutes)	: 17.131		
Quant Ion	: 272.00		
Area (flag)	: 75034M		
On-Column Amount (ng/ul)	: 5.5109		
Integration start scan	: 2832	Integration stop scan:	2863
Y at integration start	: -22	Y at integration end:	-22

Reason for manual integration: missed peak

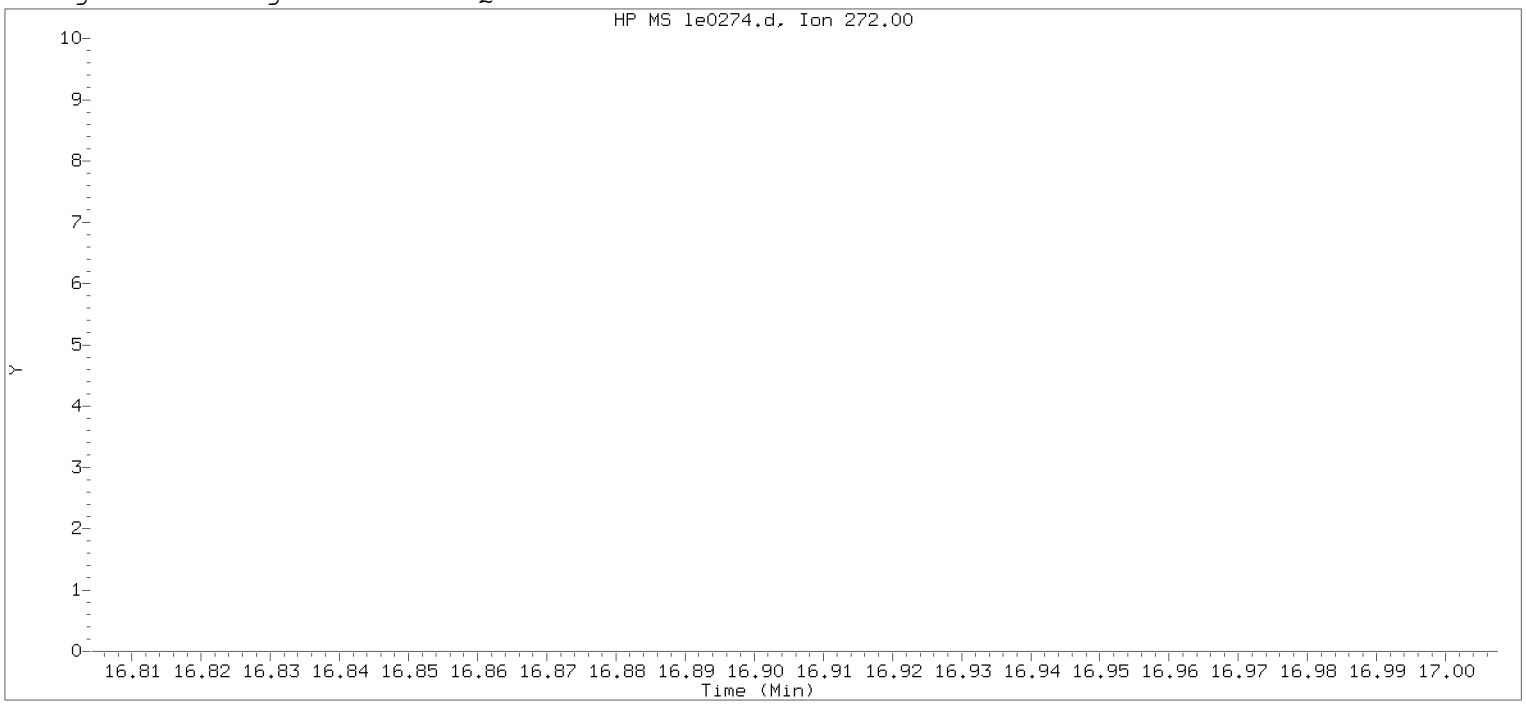
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0274.d Instrument ID: HP20296.i
Injection date and time: 07-MAY-2016 00:17 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:54 lmh00956

Sample Name: E6104MSD Lab Sample ID: 8354938

Compound Number : 190
Compound Name : Kepone
Expected RT (minutes) : 16.906
Quant Ion : 272.00

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:33.
Target 3.5 esignature user ID: 1564

Data file: /chem/HP20296.i/16may06a.b/le0267.d Injection date and time: **06-MAY-2016 20:58**
Data file Sample Info. Line: 124WALCS;124WALCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.952	(0.000)	947	152	146634	(-13)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	580443	(-12)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	341425	(-11)	5.00	
153) Phenanthrene-d10	13.691	(0.000)	2207	188	653397	(-8)	5.00	
175) Pyrene-d10	15.734	(0.000)	2589	212	790225	(-10)	5.00	
213) Perylene-d12	20.313	(0.000)	3445	264	599447	(-9)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	5.053	(-0.005)	112	1574654	35.663	71%		10 - 103
17) Phenol-d6	(1)	6.422	(-0.002)	99	1596294	27.028	54%		10 - 85
44) Nitrobenzene-d5	(2)	7.802	(0.000)	82	1274794	21.867	87%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.717	(0.000)	172	2143100	22.200	89%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.798	(0.000)	330	577487	51.399	103%		22 - 150
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2230648	20.590	82%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) N-Nitrosodimethylamine	(1)	2.983	(-0.006)	74	309793	9.257	37.03			0.5
5) Pyridine	(1)	3.031	(-0.007)	79	502104	8.775	35.10			0.5
7) 2-Picoline	(1)	4.165	(-0.003)	93	644952	10.978	43.91			0.5
8) N-Nitrosomethylethylamine	(1)	4.347	(-0.002)	88	280497	12.017	48.07			0.5
9) Methyl methanesulfonate	(1)	4.796	(-0.001)	80	301496	11.042	44.17			0.3
13) N-Nitrosodiethylamine	(1)	5.369	(-0.000)	102	269619	12.354	49.41			0.5
15) Ethyl methanesulfonate	(1)	5.823	(0.000)	109	276680	12.168	48.67			0.1
18) Phenol	(1)	6.438	(-0.000)	94	528324	7.558	30.23			0.1
19) Aniline	(1)	6.460	(-0.000)	93	765415	9.286	37.14			0.1
22) bis(2-Chloroethyl)ether	(1)	6.577	(0.000)	93	610029	11.927	47.71			0.1
23) 2-Chlorophenol	(1)	6.631	(-0.000)	128	477507	11.851	47.40			0.1
27) Benzyl alcohol	(1)	7.171	(0.000)	108	359301	11.641	46.56			3
31) 2-Methylphenol	(1)	7.358	(-0.000)	108	500411	11.626	46.50			0.1
34) bis(2-Chloroisopropyl)ether	(1)	7.406	(-0.000)	45	756451	11.631	46.52			0.1
35) N-Nitrosopyrrolidine	(1)	7.535	(-0.000)	100	282048	12.278	49.11			0.1
36) Acetophenone	(1)	7.572	(0.000)	105	829092	11.715	46.86			0.1
37) 4-Methylphenol	(1)	7.599	(-0.000)	108	529530	11.174	44.69			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.599	(-0.000)	70	475837	11.928	47.71			0.1
39) N-Nitrosomorpholine	(1)	7.604	(-0.000)	56	339579	11.404	45.62			0.5
40) o-Toluidine	(1)	7.626	(-0.000)	106	623556	7.860	31.44			0.1
43) Hexachloroethane	(1)	7.722	(-0.000)	117	218597	10.824	43.30			0.3
45) Nitrobenzene	(2)	7.829	(0.000)	77	700093	11.667	46.67			0.1
48) N-Nitrosopiperidine	(2)	8.064	(0.000)	114	260882	11.742	46.97			0.1
50) Isophorone	(2)	8.219	(0.000)	82	1247770	12.218	48.87			0.1
51) 2-Nitrophenol	(2)	8.332	(0.000)	139	219033	11.508	46.03			0.1
53) 2,4-Dimethylphenol	(2)	8.428	(0.000)	107	522757	10.498	41.99			0.1
57) O,O,O-Triethylphosphorothioate	(2)	8.556	(0.000)	198	280147	12.042	48.17			0.5

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP20296.i/16may06a.b/le0267.d Injection date and time: **06-MAY-2016 20:58**
Data file Sample Info. Line: 124WALCS;124WALCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) bis(2-Chloroethoxy)methane	(2)	8.588(0.000)	93	762971	12.047	48.19			0.1
60) 2,4-Dichlorophenol	(2)	8.717(-0.000)	162	425229	11.951	47.81			0.1
64) a,a-Dimethylphenethylamine	(2)	8.808(-0.014)	58	1033692M	17.752	71.01		E	1
67) 4-Chloroaniline	(2)	9.070(0.000)	127	504676	9.669	38.68			0.5
68) 2,6-Dichlorophenol	(2)	9.075(0.000)	162	426265	12.561	50.24			0.1
69) Hexachloropropene	(2)	9.118(-0.000)	213	271236	10.395	41.58			0.5
77) N-Nitrosodi-n-butylamine	(2)	9.648(0.000)	84	451020	11.190	44.76			0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)	9.878(-0.000)	107	502977	12.030	48.12			0.1
82) Safrole	(2)	9.979(0.000)	162	390056	12.309	49.24			0.5
83) 2-Methylnaphthalene	(2)	10.092(0.000)	142	949754	11.651	46.60			0.03
85) Hexachlorocyclopentadiene	(3)	10.364(-0.000)	237	388627	15.982	63.93			1
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364(0.000)	216	524581	11.679	46.72			0.1
88) cis-Isosafrole	(3)	10.455(0.000)	162	53971	1.563	6.25			0.5
90) 2,4,6-Trichlorophenol	(3)	10.562(-0.000)	196	328568	12.430	49.72			0.1
92) 2,4,5-Trichlorophenol	(3)	10.616(-0.000)	196	339089	12.106	48.42			0.1
94) trans-Isosafrole	(3)	10.824(0.000)	162	427069	11.678	46.71			0.5
97) Isosafrole	(3)			481040	13.241	52.96			0.5
96) 2-Chloronaphthalene	(3)	10.878(0.000)	162	998232	12.035	48.14			0.1
100) 2-Nitroaniline	(3)	11.060(-0.000)	138	268545	12.085	48.34			0.1
104) 1,4-Naphthoquinone	(3)			Not Detected					6
106) Dimethylphthalate	(3)	11.402(-0.000)	163	931423	10.373	41.49			0.5
107) 1,3-Dinitrobenzene	(3)	11.413(-0.000)	168	150997	11.820	47.28			0.5
108) 2,6-Dinitrotoluene	(3)	11.477(-0.000)	165	231344	12.772	51.09			0.1
109) Acenaphthylene	(3)	11.546(-0.000)	152	1505104	12.710	50.84			0.03
112) 3-Nitroaniline	(3)	11.712(-0.000)	138	218500	10.955	43.82			0.1
114) Acenaphthene	(3)	11.808(-0.000)	153	1005471	12.059	48.24			0.03
115) 2,4-Dinitrophenol	(3)	11.937(-0.005)	184	187491M	19.765	79.06			3
116) 4-Nitrophenol	(3)	11.996(-0.002)	109	141907	8.562	34.25			3
117) Pentachlorobenzene	(3)	11.996(-0.000)	250	452029	12.343	49.37			0.1
118) 2,4-Dinitrotoluene	(3)	12.060(-0.000)	165	307284	12.117	48.47			0.3
119) Dibenzofuran	(3)	12.054(-0.000)	168	1381802	12.034	48.14			0.1
121) 1-Naphthylamine	(3)	12.161(-0.000)	143	1123797	13.732	54.93			1
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226(-0.000)	232	291370	13.654	54.61			0.1
123) 2-Naphthylamine	(3)	12.268(-0.000)	143	1096663	13.556	54.22			1
124) Diethylphthalate	(3)	12.407(-0.000)	149	993945	11.323	45.29			0.5
125) Thionazin	(3)	12.504(-0.000)	107	218752	12.105	48.42			0.5
126) Fluorene	(3)	12.498(-0.000)	166	1065389	12.036	48.14			0.03
127) 4-Chlorophenyl-phenylether	(3)	12.525(-0.000)	204	563781	12.163	48.65			0.1
128) 5-Nitro-o-toluidine	(3)	12.520(-0.000)	152	247253	10.989	43.95			0.1
129) 4-Nitroaniline	(3)	12.530(-0.000)	138	229660	11.080	44.32			0.1
130) 4,6-Dinitro-2-methylphenol	(4)	12.573(0.000)	198	149881	11.072	44.29			1
131) N-Nitrosodiphenylamine	(4)	12.670(0.000)	169	909402	11.995	47.98			0.1
139) 1,3,5-Trinitrobenzene	(4)	13.006(0.000)	213	62990	7.215	28.86			1
140) Diallate (peak 1)	(4)	13.044(0.000)	86	415329	8.549	34.20			0.3
141) Phorate	(4)	13.055(0.000)	75	840179	12.360	49.44			0.1
142) Phenacetin	(4)	13.071(0.000)	108	626880	12.208	48.83			0.1
143) 4-Bromophenyl-phenylether	(4)	13.130(0.000)	248	315065	12.579	50.32			0.1
144) Diallate (peak 2)	(4)	13.156(0.000)	86	136522	2.824	11.30			0.3
146) Diallate trans/cis	(4)			551851	11.373	45.49			0.3
145) Hexachlorobenzene	(4)	13.183(0.000)	284	327111	12.514	50.06			0.03
147) Dimethoate	(4)	13.252(0.000)	87	269272	6.215	24.86			0.8
149) Pentachlorophenol	(4)	13.456(-0.000)	266	211796	13.684	54.74			0.3
150) 4-Aminobiphenyl	(4)	13.461(0.000)	169	793057	10.835	43.34			0.1

E = Compound concentration above calibration range. M = Compound was manually integrated.

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Data file: /chem/HP20296.i/16may06a.b/le0267.d Injection date and time: **06-MAY-2016 20:58**
Data file Sample Info. Line: 124WALCS;124WALCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAA**
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19393**
Calibration date and time (Last Method Edit): 10-MAY-2016 17:24
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

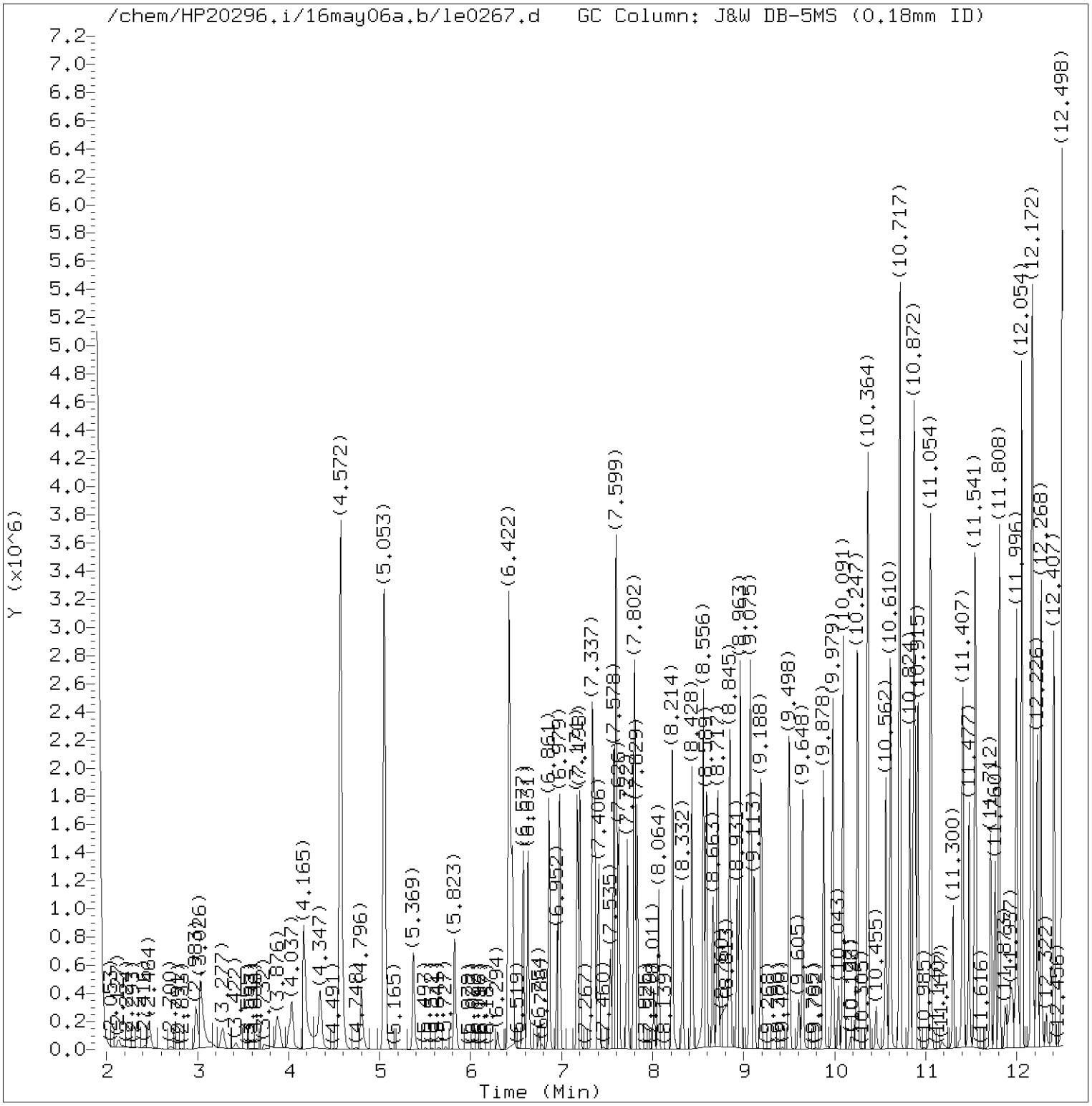
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
151) Pentachloronitrobenzene	(4)	13.461(0.000)	237	159393	12.723	50.89			0.5
152) Pronamide	(4)	13.557(0.000)	173	525613	12.833	51.33			0.1
155) Phenanthrene	(4)	13.718(0.000)	178	1624290	11.798	47.19			0.03
157) Anthracene	(4)	13.787(0.000)	178	1660619	12.267	49.07			0.03
162) Disulfoton	(4)	13.728(-0.000)	88	1524097	32.039	128.16		E	6
164) Methyl parathion	(4)	14.221(-0.000)	109	285913	9.279	37.12			0.3
165) Di-n-butylphthalate	(4)	14.542(-0.000)	149	1814000	12.037	48.15			0.5
167) Parathion	(4)	14.782(-0.000)	109	245443	12.610	50.44			0.5
168) 4-Nitroquinoline-1-oxide	(4)	14.814(-0.001)	190	1521309	127.869	511.48		E	5
170) Methapyrilene	(4)	14.948(-0.000)	97	5185709	108.258	433.03		E	4
171) Isodrin	(4)	15.189(0.000)	193	209936	12.994	51.97			0.1
173) Fluoranthene	(4)	15.413(-0.000)	202	1943992	12.965	51.86			0.3
177) Pyrene	(5)	15.766(0.000)	202	2004773	11.696	46.78			0.3
180) Aramite (1)	(5)	15.938(0.000)	185	4098	7.479	29.91		E	1
181) Aramite (2)	(5)	15.980(-0.000)	185	3578	5.777	23.11		E	1
183) Aramite (3)	(5)	16.050(0.000)	185	84432	1.617	6.47		E	1
184) Aramite (4)	(5)	16.178(0.000)	185	91994	1.316	5.26		E	1
186) Aramite	(5)			184102	16.189	64.75		E	1
182) p-Dimethylaminoazobenzene	(5)	16.285(0.000)	225	386220	13.138	52.55			0.1
185) Chlorobenzilate	(5)	16.382(-0.000)	139	490099	10.449	41.80			0.8
187) 3,3'-Dimethylbenzidine	(5)	16.858(0.000)	212	991953	10.033	40.13			6
188) Butylbenzylphthalate	(5)	16.916(0.000)	149	816127	11.921	47.68			0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)	17.066(-0.010)	272	134437M	10.044	40.18			6
191) 2-Acetylaminofluorene	(5)	17.285(-0.000)	181	780277	14.044	56.18			0.5
193) 3,3'-Dichlorobenzidine	(5)	17.799(-0.000)	252	635739	11.513	46.05			0.5
195) Benzo(a)anthracene	(5)	17.810(-0.000)	228	1978233	13.320	53.28			0.03
196) Chrysene	(5)	17.874(-0.000)	228	1888435	13.335	53.34			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	17.997(0.000)	149	1200352	12.212	48.85			0.5
205) Di-n-octylphthalate	(6)	19.173(0.000)	149	2082013	12.326	49.30			0.5
206) Benzo(b)fluoranthene	(6)	19.692(0.000)	252	1870589	12.765	51.06			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692(0.000)	256	763321	11.989	47.96			0.1
208) Benzo(k)fluoranthene	(6)	19.740(0.000)	252	1844803	12.644	50.57			0.03
211) Benzo(a)pyrene	(6)	20.222(0.000)	252	1706990	12.764	51.06			0.03
215) 3-Methylcholanthrene	(6)	20.799(0.000)	268	883947	15.815	63.26			0.1
219) Indeno(1,2,3-cd)pyrene	(6)	21.955(-0.000)	276	1965019	12.563	50.25			0.03
220) Dibenz(a,h)anthracene	(6)	21.998(-0.000)	278	1713488	13.066	52.27			0.3
221) Benzo(g,h,i)perylene	(6)	22.372(-0.000)	276	1673304	12.539	50.15			0.3

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 119

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

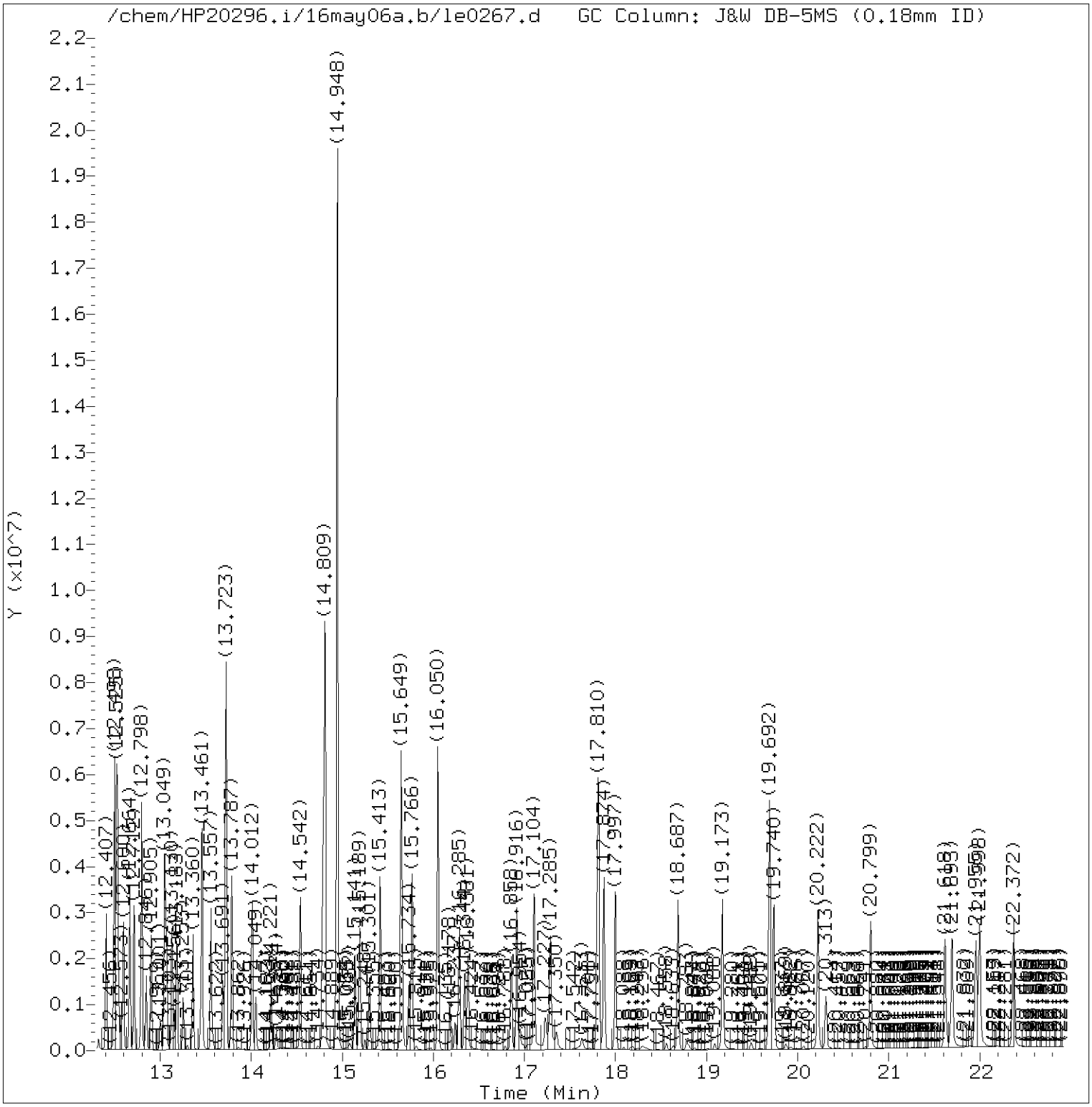
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) N-Nitrosodimethylamine	(1)	2.983	74	309793	9.257
5) Pyridine	(1)	3.031	79	502104	8.775
7) 2-Picoline	(1)	4.165	93	644952	10.978
8) N-Nitrosomethylethylamine	(1)	4.347	88	280497	12.017
9) Methyl methanesulfonate	(1)	4.796	80	301496	11.042
11)$2-Fluorophenol	(1)	5.053	112	1574654	35.663
13) N-Nitrosodiethylamine	(1)	5.369	102	269619	12.354
15) Ethyl methanesulfonate	(1)	5.823	109	276680	12.168
17)$Phenol-d6	(1)	6.422	99	1596294	27.028
18) Phenol	(1)	6.438	94	528324	7.558
19) Aniline	(1)	6.460	93	765415	9.286
22) bis(2-Chloroethyl)ether	(1)	6.577	93	610029	11.927
23) 2-Chlorophenol	(1)	6.631	128	477507	11.851
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	146634	5.000
27) Benzyl alcohol	(1)	7.171	108	359301	11.641
31) 2-Methylphenol	(1)	7.358	108	500411	11.626
97) Isosafrole	(3)			481040	13.241
34) bis(2-Chloroisopropyl)ether	(1)	7.406	45	756451	11.631
35) N-Nitrosopyrrolidine	(1)	7.535	100	282048	12.278
36) Acetophenone	(1)	7.572	105	829092	11.715
38) N-Nitroso-di-n-propylamine	(1)	7.599	70	475837	11.928
37) 4-Methylphenol	(1)	7.599	108	529530	11.174
39) N-Nitrosomorpholine	(1)	7.604	56	339579	11.404
40) o-Toluidine	(1)	7.626	106	623556	7.860
43) Hexachloroethane	(1)	7.722	117	218597	10.824
44)$Nitrobenzene-d5	(2)	7.802	82	1274794	21.867
45) Nitrobenzene	(2)	7.829	77	700093	11.667
48) N-Nitrosopiperidine	(2)	8.064	114	260882	11.742
50) Isophorone	(2)	8.219	82	1247770	12.218
51) 2-Nitrophenol	(2)	8.332	139	219033	11.508
53) 2,4-Dimethylphenol	(2)	8.428	107	522757	10.498
57) O,O,O-Triethylphosphorothioate	(2)	8.556	198	280147	12.042
55) bis(2-Chloroethoxy)methane	(2)	8.589	93	762971	12.047
60) 2,4-Dichlorophenol	(2)	8.717	162	425229	11.951
146) Diallate trans/cis	(4)			551851	11.373
64) a,a-Dimethylphenethylamine	(2)	8.808	58	1033692M	17.752
65)*Naphthalene-d8	(2)	8.931	136	580443	5.000
67) 4-Chloroaniline	(2)	9.070	127	504676	9.669
68) 2,6-Dichlorophenol	(2)	9.075	162	426265	12.561
69) Hexachloropropene	(2)	9.118	213	271236	10.395

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
77) N-Nitrosodi-n-butylamine	(2)	9.648	84	451020	11.190
80) 4-Chloro-3-methylphenol	(2)	9.878	107	502977	12.030
82) Safrole	(2)	9.979	162	390056	12.309
83) 2-Methylnaphthalene	(2)	10.091	142	949754	11.651
85) Hexachlorocyclopentadiene	(3)	10.364	237	388627	15.982
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.364	216	524581	11.679
88) cis-Isosafrole	(3)	10.455	162	53971	1.563
186) Aramite	(5)			184102	16.189
90) 2,4,6-Trichlorophenol	(3)	10.562	196	328568	12.430
92) 2,4,5-Trichlorophenol	(3)	10.616	196	339089	12.106
93)$2-Fluorobiphenyl	(3)	10.717	172	2143100	22.200
94) trans-Isosafrole	(3)	10.824	162	427069	11.678
96) 2-Chloronaphthalene	(3)	10.878	162	998232	12.035
100) 2-Nitroaniline	(3)	11.060	138	268545	12.085
106) Dimethylphthalate	(3)	11.402	163	931423	10.373
107) 1,3-Dinitrobenzene	(3)	11.413	168	150997	11.820
108) 2,6-Dinitrotoluene	(3)	11.477	165	231344	12.772
109) Acenaphthylene	(3)	11.546	152	1505104	12.710
112) 3-Nitroaniline	(3)	11.712	138	218500	10.955
113)*Acenaphthene-d10	(3)	11.760	164	341425	5.000
114) Acenaphthene	(3)	11.808	153	1005471	12.059
115) 2,4-Dinitrophenol	(3)	11.937	184	187491M	19.765
116) 4-Nitrophenol	(3)	11.996	109	141907	8.562
117) Pentachlorobenzene	(3)	11.996	250	452029	12.343
119) Dibenzofuran	(3)	12.054	168	1381802	12.034
118) 2,4-Dinitrotoluene	(3)	12.060	165	307284	12.117
121) 1-Naphthylamine	(3)	12.161	143	1123797	13.732
122) 2,3,4,6-Tetrachlorophenol	(3)	12.226	232	291370	13.654
123) 2-Naphthylamine	(3)	12.268	143	1096663	13.556
124) Diethylphthalate	(3)	12.407	149	993945	11.323
126) Fluorene	(3)	12.498	166	1065389	12.036
125) Thionazin	(3)	12.504	107	218752	12.105
128) 5-Nitro-o-toluidine	(3)	12.520	152	247253	10.989
127) 4-Chlorophenyl-phenylether	(3)	12.525	204	563781	12.163
129) 4-Nitroaniline	(3)	12.530	138	229660	11.080
130) 4,6-Dinitro-2-methylphenol	(4)	12.573	198	149881	11.072
131) N-Nitrosodiphenylamine	(4)	12.670	169	909402	11.995
135)$2,4,6-Tribromophenol	(3)	12.798	330	577487	51.399
139) 1,3,5-Trinitrobenzene	(4)	13.007	213	62990	7.215
140) Diallate (peak 1)	(4)	13.044	86	415329	8.549

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
141) Phorate	(4)	13.055	75	840179	12.360
142) Phenacetin	(4)	13.071	108	626880	12.208
143) 4-Bromophenyl-phenylether	(4)	13.130	248	315065	12.579
144) Diallate (peak 2)	(4)	13.156	86	136522	2.824
145) Hexachlorobenzene	(4)	13.183	284	327111	12.514
147) Dimethoate	(4)	13.253	87	269272	6.215
149) Pentachlorophenol	(4)	13.456	266	211796	13.684
151) Pentachloronitrobenzene	(4)	13.461	237	159393	12.723
150) 4-Aminobiphenyl	(4)	13.461	169	793057	10.835
152) Pronamide	(4)	13.557	173	525613	12.833
153)*Phenanthrene-d10	(4)	13.691	188	653397	5.000
155) Phenanthrene	(4)	13.718	178	1624290	11.798
162) Disulfoton	(4)	13.729	88	1524097	32.039
157) Anthracene	(4)	13.787	178	1660619	12.267
164) Methyl parathion	(4)	14.221	109	285913	9.279
165) Di-n-butylphthalate	(4)	14.542	149	1814000	12.037
167) Parathion	(4)	14.782	109	245443	12.610
168) 4-Nitroquinoline-1-oxide	(4)	14.814	190	1521309	127.869
170) Methapyrilene	(4)	14.948	97	5185709	108.258
171) Isodrin	(4)	15.189	193	209936	12.994
173) Fluoranthene	(4)	15.413	202	1943992	12.965
175)*Pyrene-d10	(5)	15.734	212	790225	5.000
177) Pyrene	(5)	15.766	202	2004773	11.696
180) Aramite (1)	(5)	15.938	185	4098	7.479
181) Aramite (2)	(5)	15.980	185	3578	5.777
183) Aramite (3)	(5)	16.050	185	84432	1.617
179)$Terphenyl-d14	(5)	16.050	244	2230648	20.590
184) Aramite (4)	(5)	16.178	185	91994	1.316
182) p-Dimethylaminoazobenzene	(5)	16.285	225	386220	13.138
185) Chlorobenzilate	(5)	16.381	139	490099	10.449
187) 3,3'-Dimethylbenzidine	(5)	16.858	212	991953	10.033
188) Butylbenzylphthalate	(5)	16.916	149	816127	11.921
190) Kepone	(5)	17.066	272	134437M	10.044
191) 2-Acetylaminofluorene	(5)	17.285	181	780277	14.044
193) 3,3'-Dichlorobenzidine	(5)	17.799	252	635739	11.513
195) Benzo(a)anthracene	(5)	17.810	228	1978233	13.320
196) Chrysene	(5)	17.874	228	1888435	13.335
199) bis(2-Ethylhexyl)phthalate	(5)	17.997	149	1200352	12.212
205) Di-n-octylphthalate	(6)	19.173	149	2082013	12.326
206) Benzo(b)fluoranthene	(6)	19.692	252	1870589	12.765

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

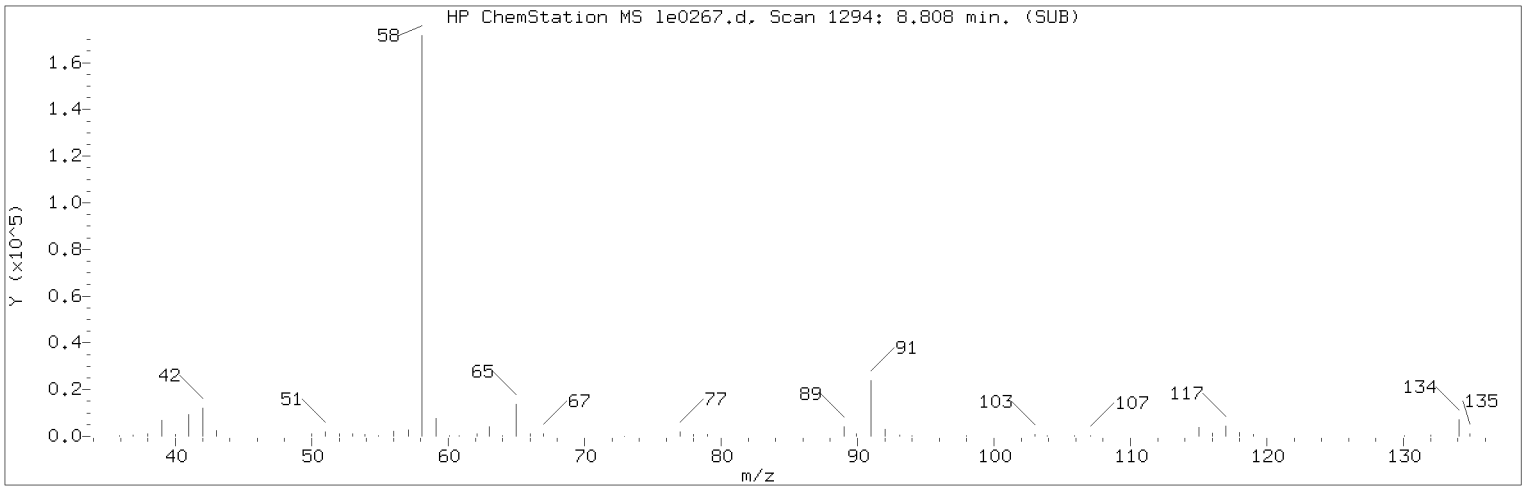
Sample Name: 124WALCS Lab Sample ID: 124WALCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.692	256	763321	11.989
208) Benzo(k)fluoranthene	(6)	19.740	252	1844803	12.644
211) Benzo(a)pyrene	(6)	20.222	252	1706990	12.764
213)*Perylene-d12	(6)	20.313	264	599447	5.000
215) 3-Methylcholanthrene	(6)	20.799	268	883947	15.815
219) Indeno(1,2,3-cd)pyrene	(6)	21.955	276	1965019	12.563
220) Dibenz(a,h)anthracene	(6)	21.998	278	1713488	13.066
221) Benzo(g,h,i)perylene	(6)	22.372	276	1673304	12.539

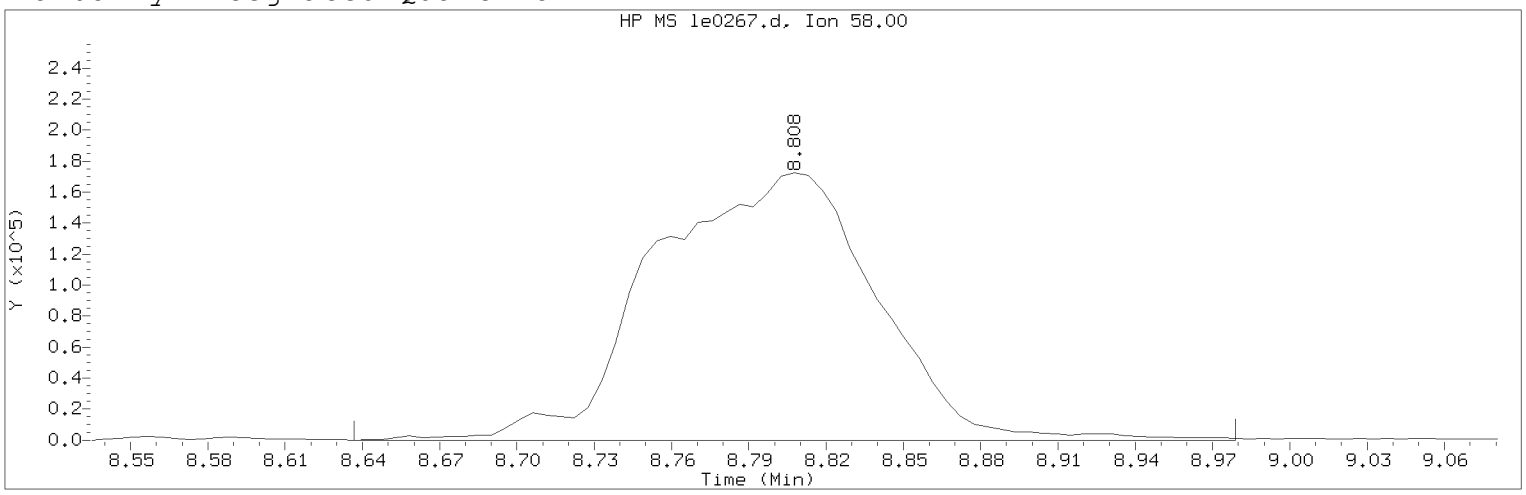
* = Compound is an internal standard.

Digitally signed by Catherine E. Bachman
on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

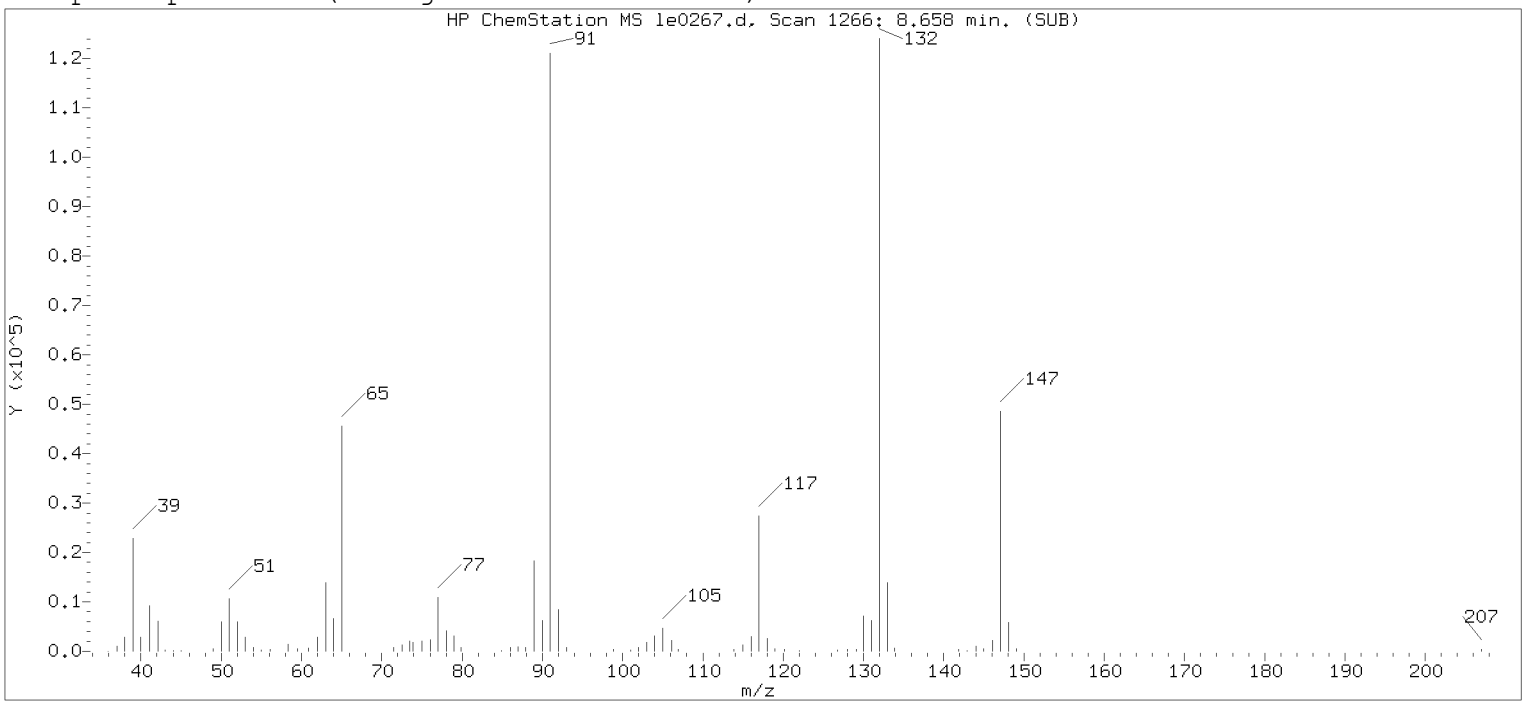
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1294
Retention Time (minutes) : 8.808
Quant Ion : 58.00
Area (flag) : 1033692M
On-Column Amount (ng/ul) : 17.7520
Integration start scan : 1261 Integration stop scan: 1325
Y at integration start : -165 Y at integration end: -165

Reason for manual integration: improper integration

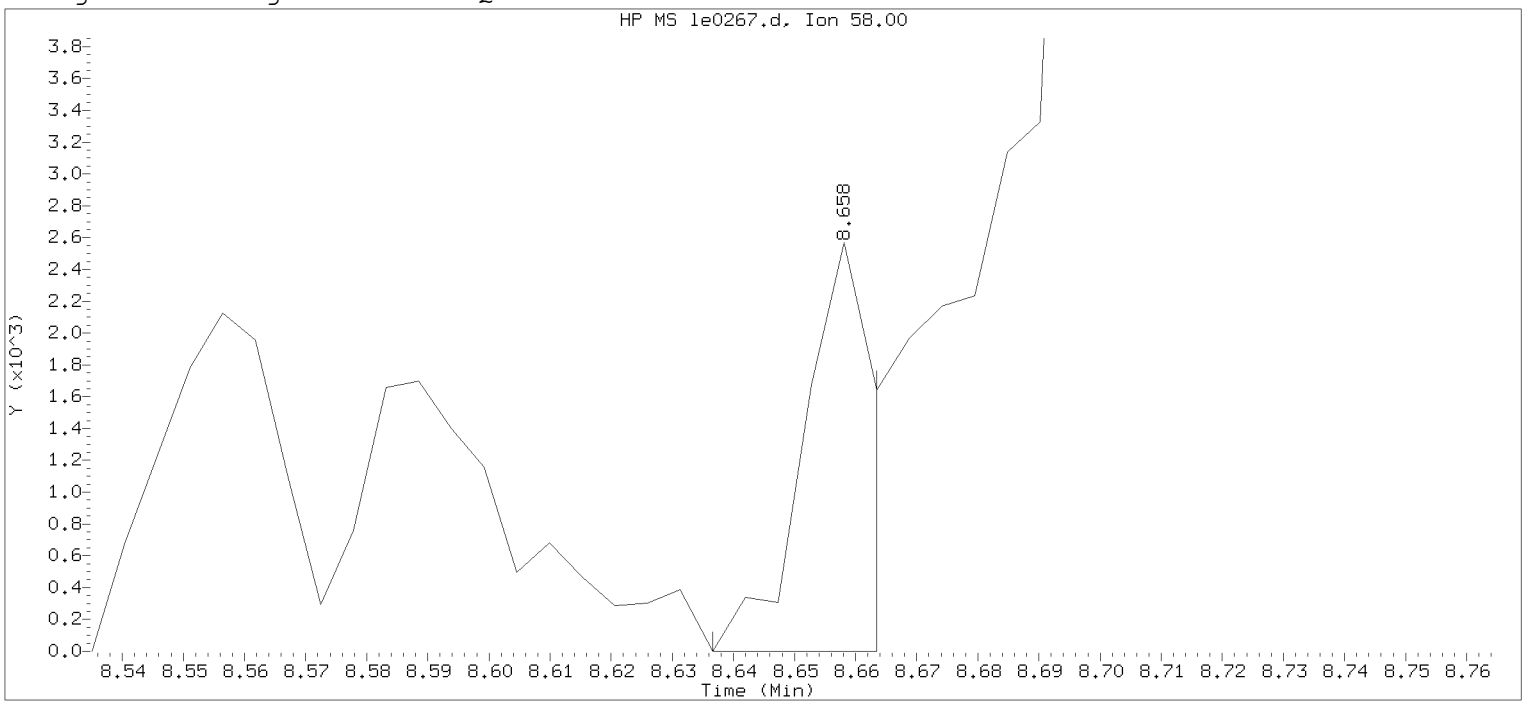
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

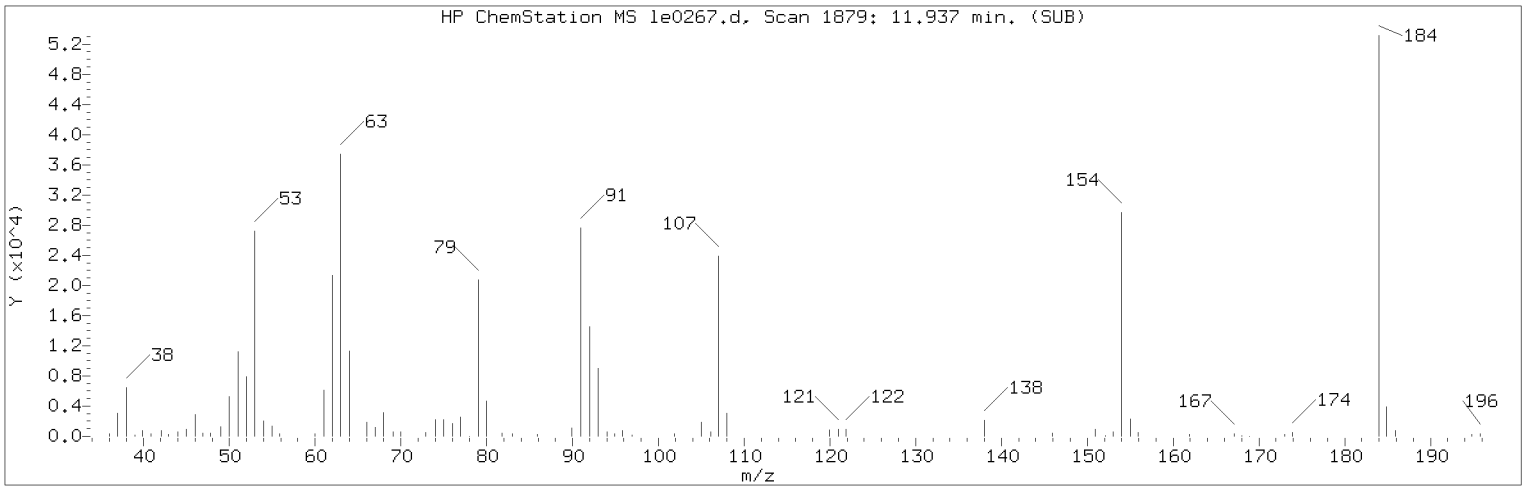
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: 124WALCS Lab Sample ID: 124WALCS

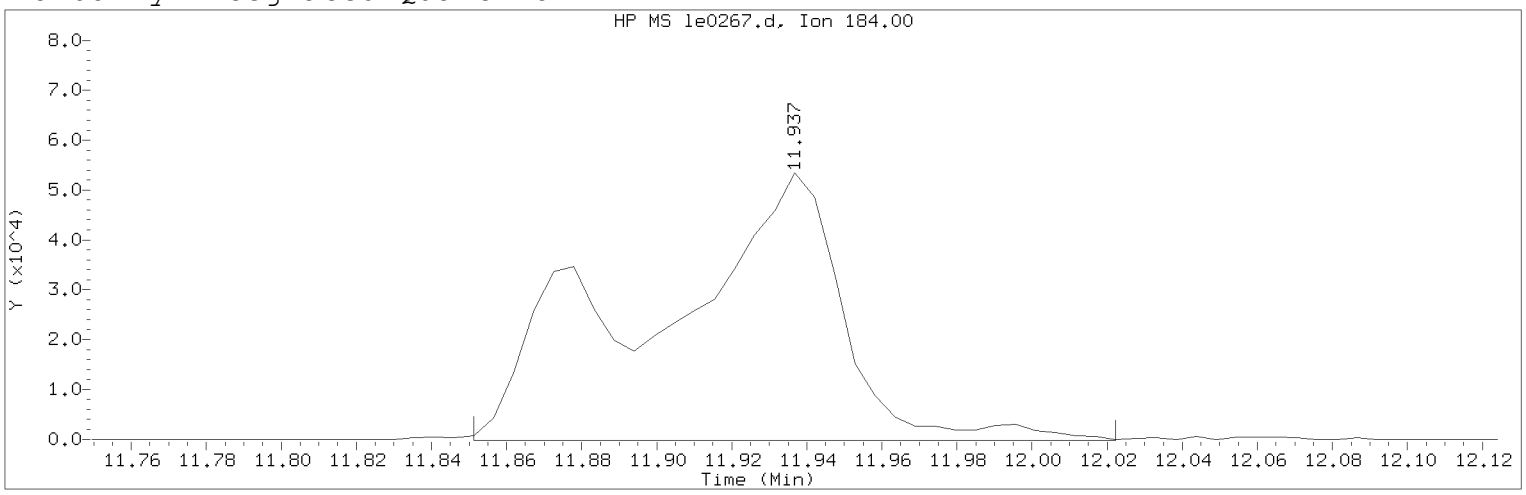
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1266
Retention Time (minutes) : 8.658
Quant Ion : 58.00
Area : 1829
On-column Amount (ng/ul) : 0.0314
Integration start scan : 1261 Integration stop scan: 1266
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: CEB

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

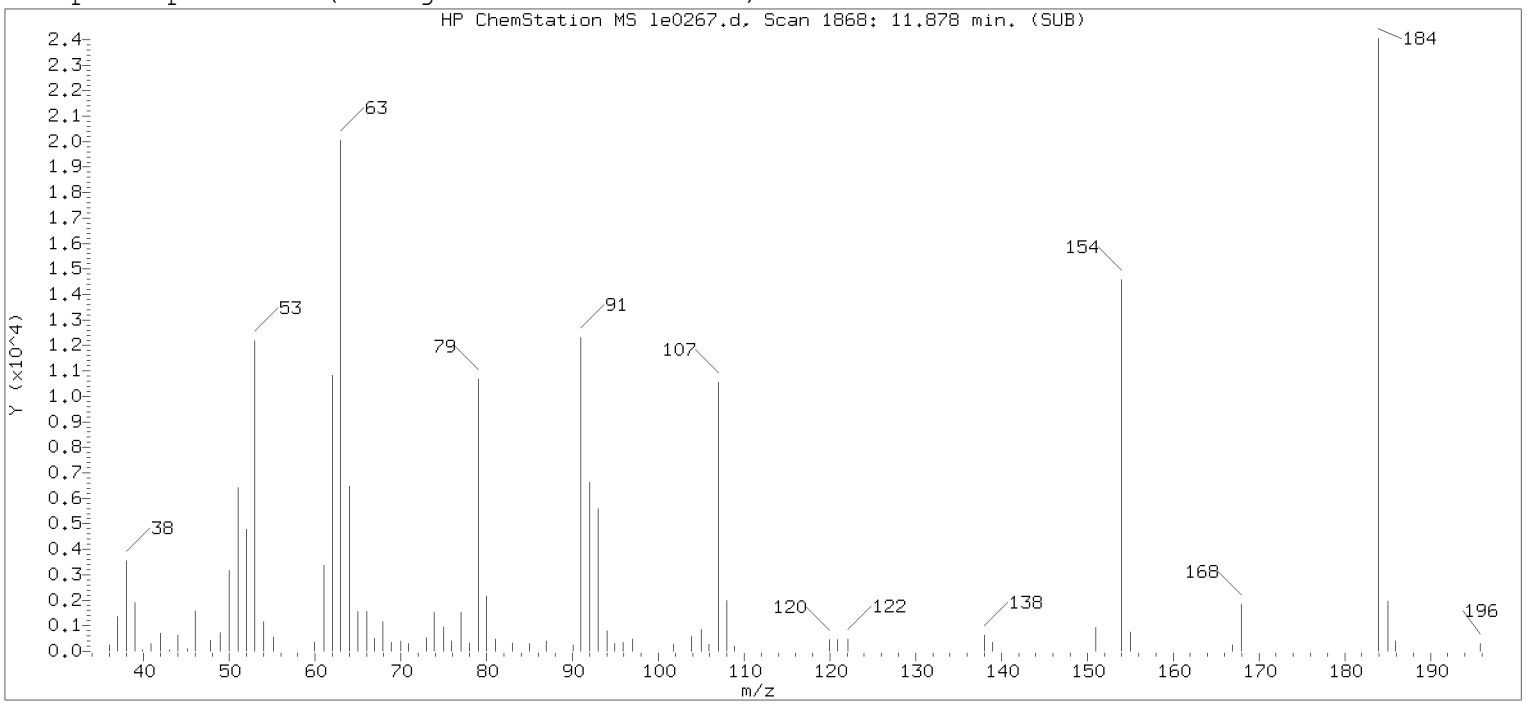
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1879
Retention Time (minutes) : 11.937
Quant Ion : 184.00
Area (flag) : 187491M
On-Column Amount (ng/ul) : 19.7652
Integration start scan : 1862 Integration stop scan: 1894
Y at integration start : -190 Y at integration end: -190

Reason for manual integration: improper integration

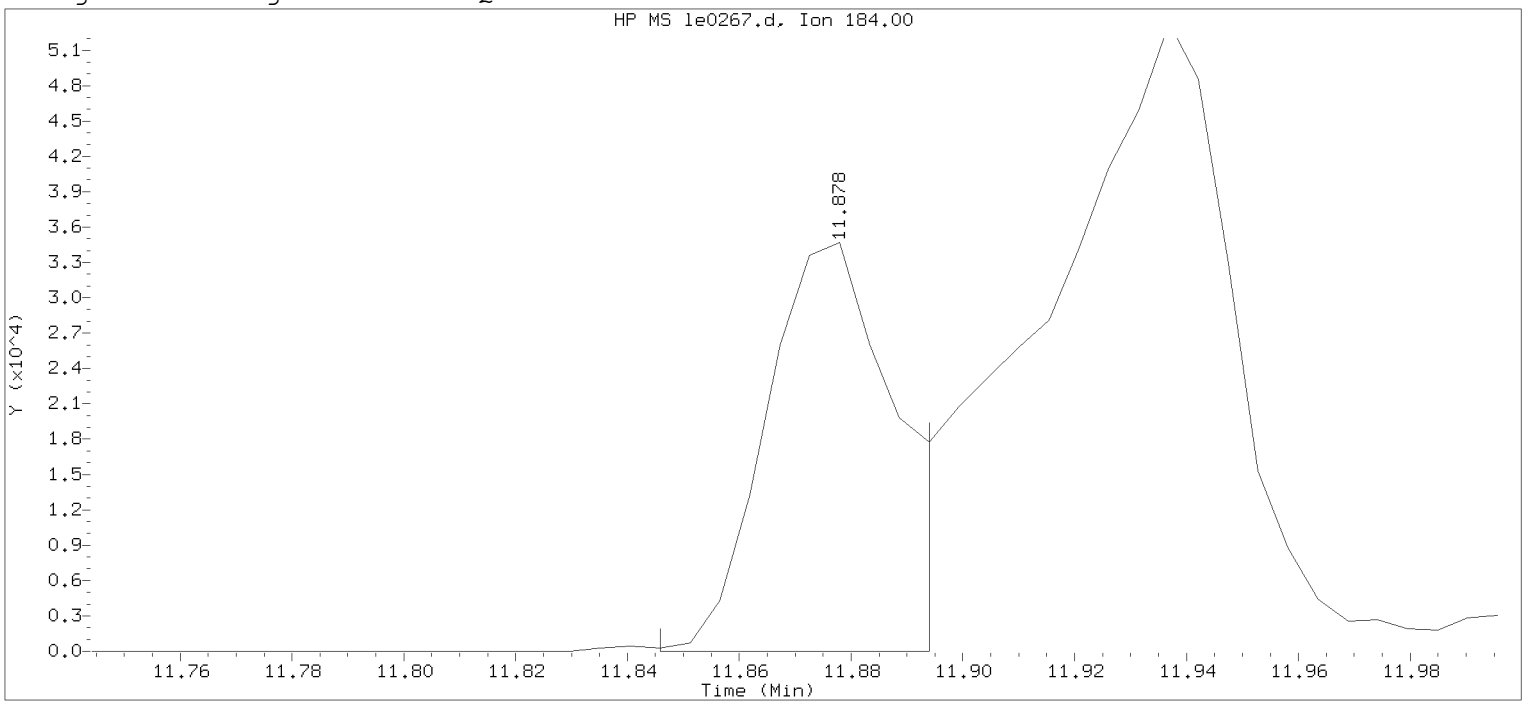
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

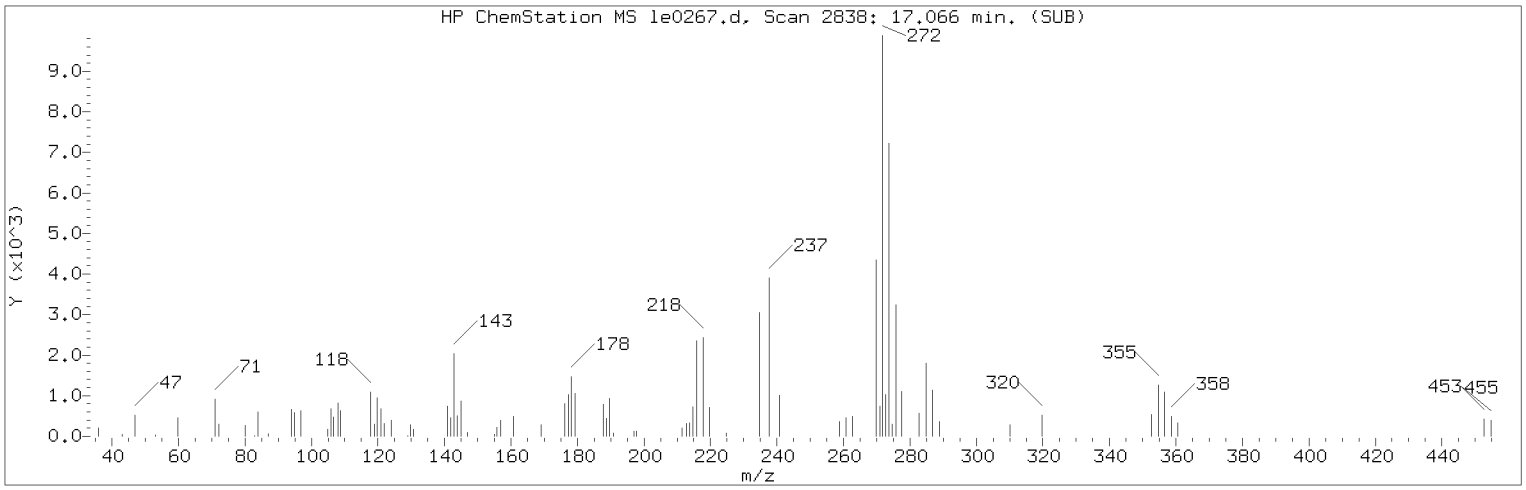
Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: 124WALCS Lab Sample ID: 124WALCS

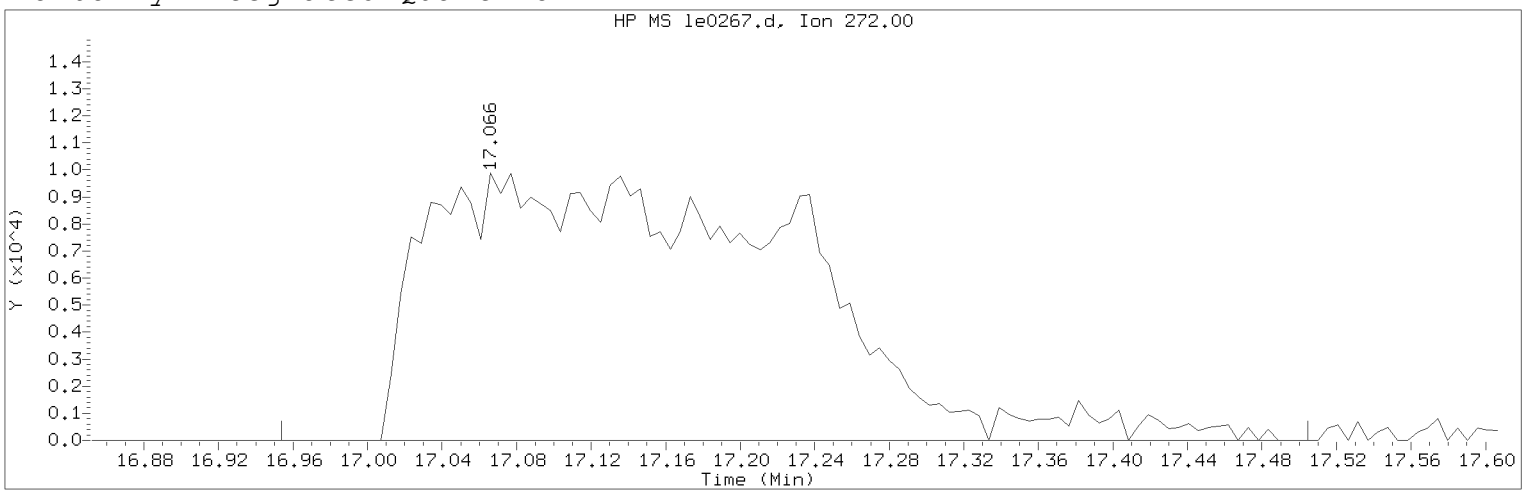
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1868
Retention Time (minutes) : 11.878
Quant Ion : 184.00
Area : 53742
On-column Amount (ng/ul) : 5.6655
Integration start scan : 1861 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 10-MAY-2016 17:24
Date, time and analyst ID of latest file update: 10-May-2016 17:27 ceb05247

Sample Name: 124WALCS Lab Sample ID: 124WALCS

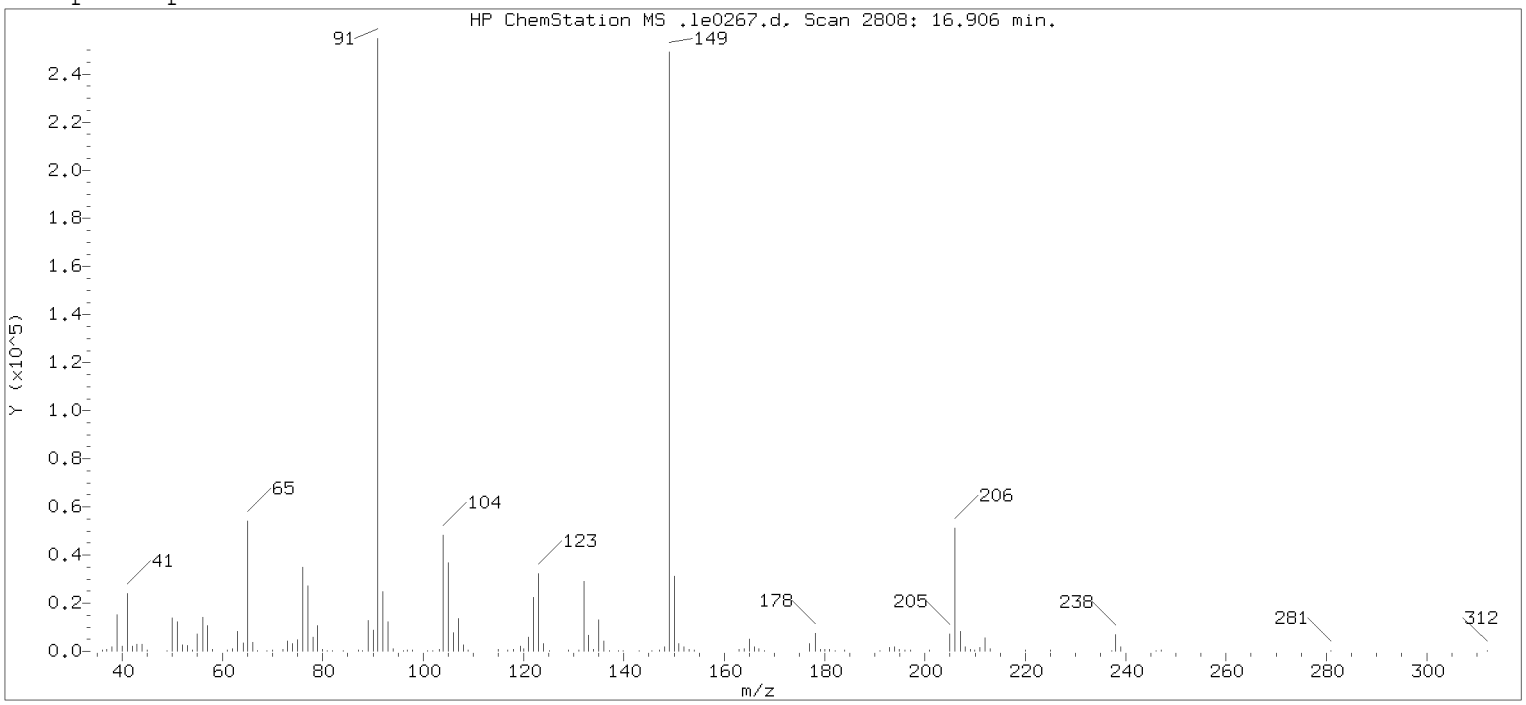
Compound Number : 190
Compound Name : Kepone
Scan Number : 2838
Retention Time (minutes) : 17.066
Quant Ion : 272.00
Area (flag) : 134437M
On-Column Amount (ng/ul) : 10.0444
Integration start scan : 2816 Integration stop scan: 2919
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

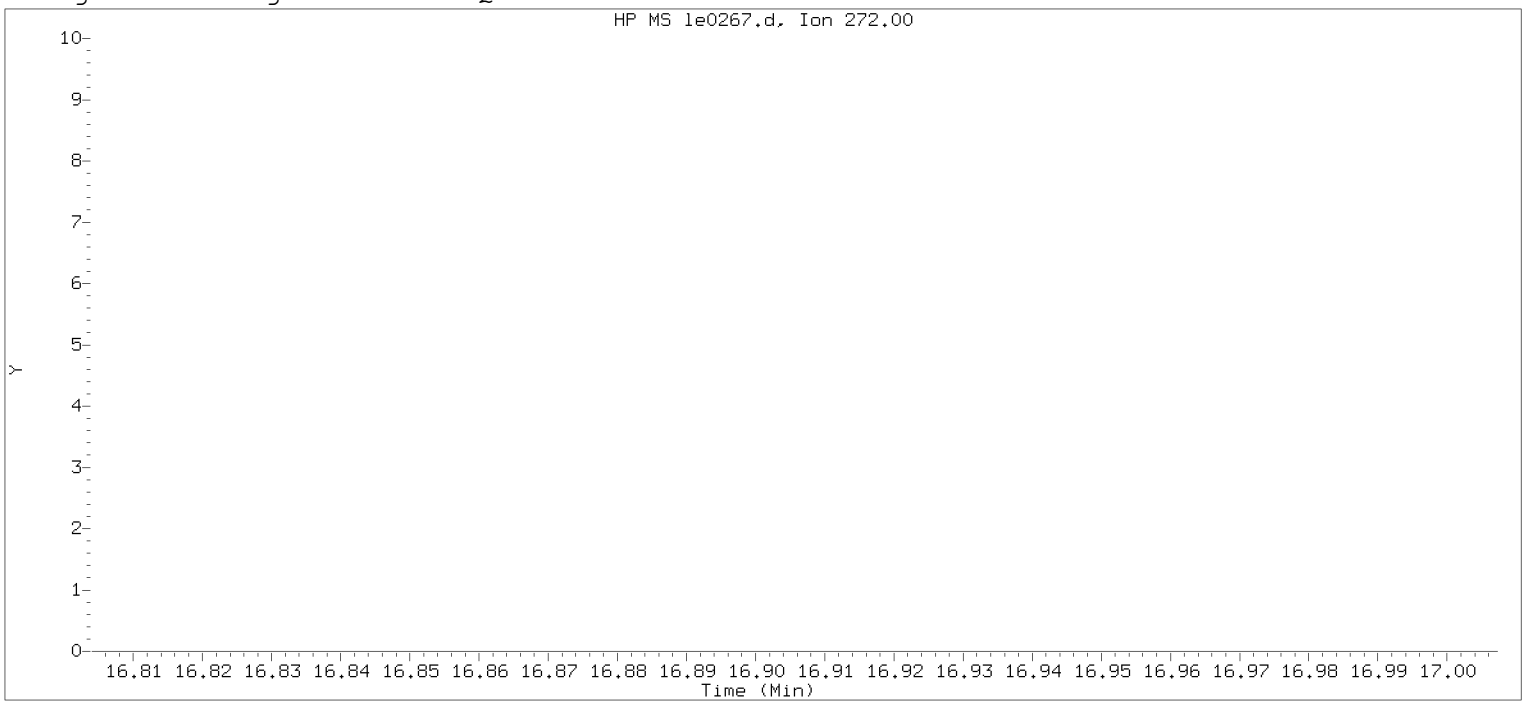
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Matthew E. Barton on 05/11/2016 at 13:15.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may06a.b/le0267.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19393
Calibration date and time: 08-MAY-2016 11:40
Date, time and analyst ID of latest file update: 08-May-2016 11:53 lmh00956

Sample Name: 124WALCS Lab Sample ID: 124WALCS

Compound Number : 190
Compound Name : Kepone
Expected RT (minutes) : 16.906
Quant Ion : 272.00

Digitally signed by Catherine E. Bachman on 05/10/2016 at 17:31.
Target 3.5 esignature used.

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may06a.b/le0267a.d Injection date and time: **06-MAY-2016 20:58**
Data file Sample Info. Line: 124WZLCS;124WZLCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16124WAZ**
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Blank Data file reference: **/chem/HP20296.i/16may06a.b/le0266a.d**

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: **19395**
Calibration date and time (Last Method Edit): 10-MAY-2016 11:42
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may06a.b/le0261.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.952	(0.000)	947	152	146634	(-13)	5.00	
65) Naphthalene-d8	8.931	(0.000)	1317	136	580443	(-12)	5.00	
113) Acenaphthene-d10	11.760	(0.006)	1846	164	341425	(-11)	5.00	
153) Phenanthrene-d10	13.691	(0.000)	2207	188	653397	(-8)	5.00	
175) Pyrene-d10	15.734	(0.000)	2589	212	790225	(-10)	5.00	
213) Perylene-d12	20.313	(0.000)	3445	264	599447	(-9)	5.00	

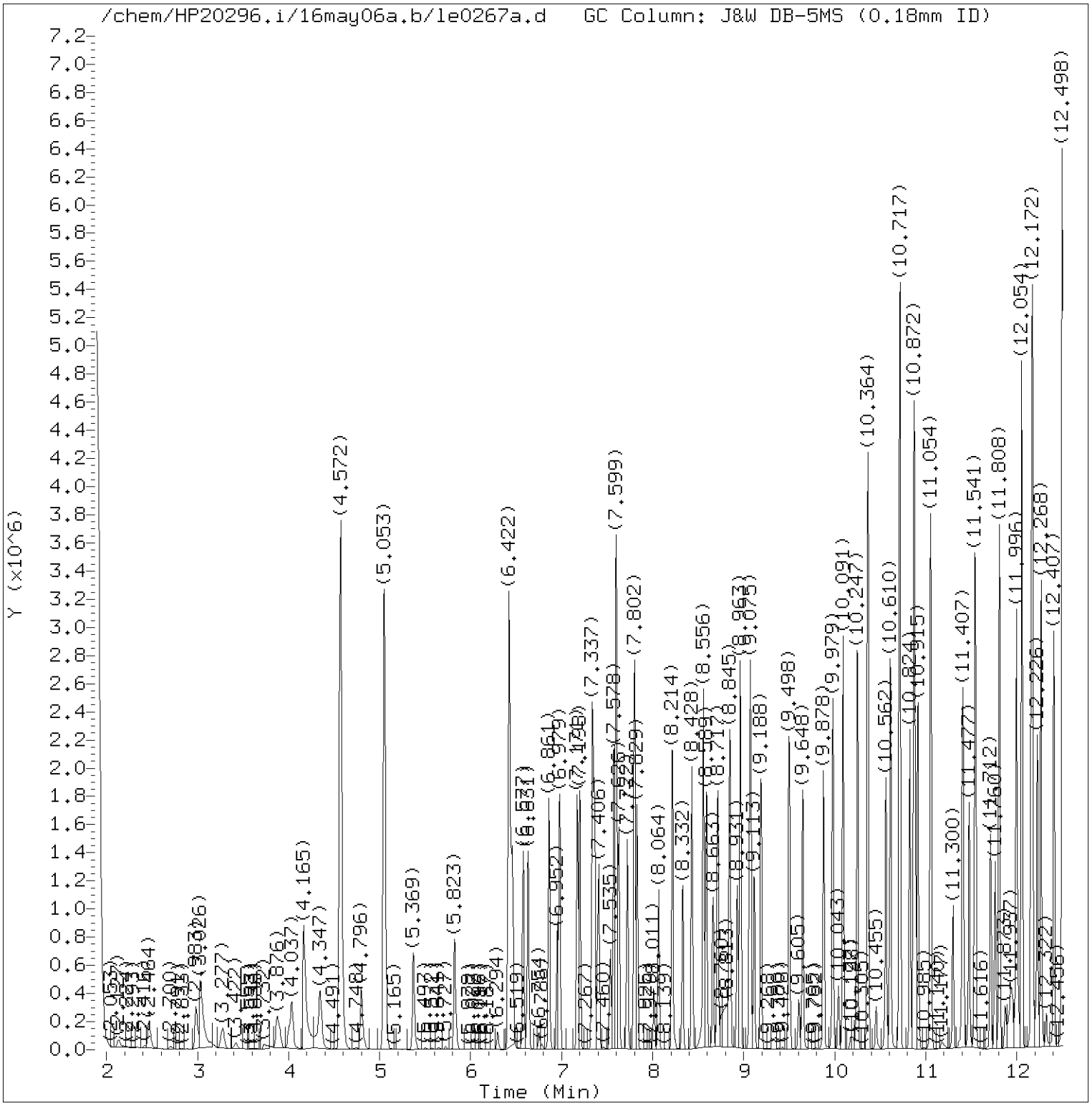
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.802	(0.000)	82	1274794	21.867	87%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.717	(0.000)	172	2143100	22.200	89%		61 - 112
179) Terphenyl-d14	(5)	16.050	(0.000)	244	2230648	20.590	82%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)	11.477	(-0.000)	165	231344	12.772	51.09			0.3
118) 2,4-Dinitrotoluene	(3)	12.060	(-0.000)	165	307284	12.117	48.47			0.3
124) Diethylphthalate	(3)	12.407	(-0.000)	149	993945	11.323	45.29			0.1

Total number of targets = 3

Digitally signed by Holly B. Ziegler on 05/10/2016 at 11:48. Target 3.5 esignature user ID: hbz01996

Secondary review performed and digitally signed by Matthew E. Barton on 05/10/2016 at 13:14. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

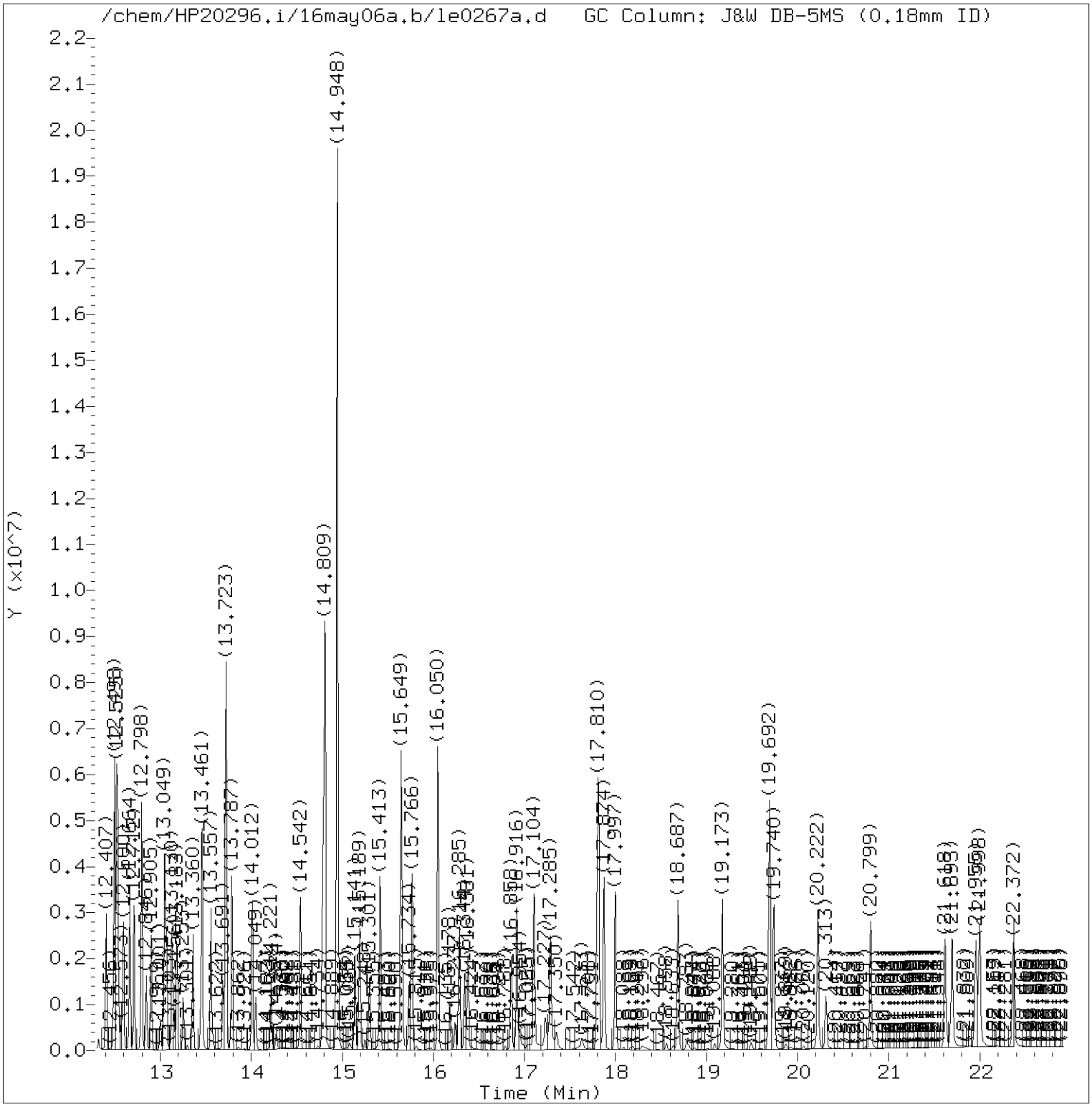
Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: 124WZLCS Lab Sample ID: 124WZLCS

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: 124WZLCS Lab Sample ID: 124WZLCS

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may06a.b/le0267a.d Instrument ID: HP20296.i
Injection date and time: 06-MAY-2016 20:58 Analyst ID: ceb05247

Method used: /chem/HP20296.i/16may06a.b/rv8270d.m Sublist used: 19395
Calibration date and time: 10-MAY-2016 11:42
Date, time and analyst ID of latest file update: 10-May-2016 11:45 hbz01996

Sample Name: 124WZLCS Lab Sample ID: 124WZLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.952	152	146634	5.000
44)$Nitrobenzene-d5	(2)	7.802	82	1274794	21.867
65)*Naphthalene-d8	(2)	8.931	136	580443	5.000
93)$2-Fluorobiphenyl	(3)	10.717	172	2143100	22.200
108) 2,6-Dinitrotoluene	(3)	11.477	165	231344	12.772
113)*Acenaphthene-d10	(3)	11.760	164	341425	5.000
118) 2,4-Dinitrotoluene	(3)	12.060	165	307284	12.117
124) Diethylphthalate	(3)	12.407	149	993945	11.323
153)*Phenanthrene-d10	(4)	13.691	188	653397	5.000
175)*Pyrene-d10	(5)	15.734	212	790225	5.000
179)$Terphenyl-d14	(5)	16.050	244	2230648	20.590
213)*Perylene-d12	(6)	20.313	264	599447	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly B. Ziegler
on 05/10/2016 at 11:48.
Target 3.5 esignature user ID: hbz01996

Data file: /chem/HP20296.i/16may11a.b/le0390.d Injection date and time: **11-MAY-2016 21:39**
Data file Sample Info. Line: 131WJLCS;131WJLCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.743(-0.005)	908	152	134288 (-7)	5.00	
65) Naphthalene-d8	8.722(0.000)	1278	136	506978 (-8)	5.00	
113) Acenaphthene-d10	11.568(0.006)	1810	164	292469 (-8)	5.00	
153) Phenanthrene-d10	13.499(0.006)	2171	188	564024 (-7)	5.00	
175) Pyrene-d10	15.510(0.006)	2547	212	688368 (-8)	5.00	
213) Perylene-d12	20.061(0.000)	3398	264	559807 (-11)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.839(-0.004)	112	1536580	38.000	76%		10 - 103
17) Phenol-d6	(1)	6.224(-0.001)	99	1647937	30.467	61%		10 - 85
44) Nitrobenzene-d5	(2)	7.594(0.000)	82	1179335	23.161	93%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.509(0.000)	172	1867388	22.582	90%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.627(-0.001)	330	497749	51.718	103%		22 - 150
179) Terphenyl-d14	(5)	15.831(0.000)	244	2347223	24.872	99%		41 - 125

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	2.192(-0.008)	88	173246	8.781	35.12			0.3
4) N-Nitrosodimethylamine	(1)	2.726(-0.006)	74	305262	9.960	39.84			0.5
5) Pyridine	(1)	2.769(-0.006)	79	481934	9.197	36.79			0.5
7) 2-Picoline	(1)	3.930(-0.003)	93	563004	10.464	41.86			0.5
8) N-Nitrosomethylethylamine	(1)	4.122(-0.002)	88	245739	11.496	45.98			0.5
9) Methyl methanesulfonate	(1)	4.582(-0.001)	80	286324	11.450	45.80			0.3
13) N-Nitrosodiethylamine	(1)	5.155(-0.000)	102	234025	11.708	46.83			0.1
15) Ethyl methanesulfonate	(1)	5.620(-0.000)	109	241703	11.607	46.43			0.1
18) Phenol	(1)	6.246(-0.000)	94	516972	8.076	32.30			0.1
19) Aniline	(1)	6.251(-0.000)	93	735508	9.744	38.98			0.1
22) bis(2-Chloroethyl)ether	(1)	6.374(-0.000)	93	534920	11.420	45.68			0.1
23) 2-Chlorophenol	(1)	6.422(-0.000)	128	430709	11.672	46.69			0.1
27) Benzyl alcohol	(1)	6.973(0.000)	108	357986	12.665	50.66			3
31) 2-Methylphenol	(1)	7.166(-0.000)	108	444689	11.281	45.12			0.1
34) bis(2-Chloroisopropyl)ether	(1)	7.203(0.000)	45	660663	11.092	44.37			0.1
35) N-Nitrosopyrrolidine	(1)	7.332(0.000)	100	249586	11.864	47.45			0.1
36) Acetophenone	(1)	7.369(0.000)	105	718014	11.078	44.31			0.1
37) 4-Methylphenol	(1)	7.401(0.000)	108	486232	11.203	44.81			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.396(0.000)	70	424795	11.627	46.51			0.1
39) N-Nitrosomorpholine	(1)	7.406(0.000)	56	310037	11.369	45.48			0.5
40) o-Toluidine	(1)	7.422(0.000)	106	728742	10.030	40.12			0.1
43) Hexachloroethane	(1)	7.508(0.001)	117	169985	9.191	36.76			0.3
45) Nitrobenzene	(2)	7.620(0.000)	77	620780	11.844	47.38			0.1
48) N-Nitrosopiperidine	(2)	7.861(0.000)	114	231020	11.904	47.62			0.1
50) Isophorone	(2)	8.011(0.000)	82	1085302	12.167	48.67			0.1
51) 2-Nitrophenol	(2)	8.123(0.000)	139	201627	12.128	48.51			0.1
53) 2,4-Dimethylphenol	(2)	8.236(0.000)	107	422941	9.725	38.90			0.1

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP20296.i/16may11a.b/le0390.d Injection date and time: **11-MAY-2016 21:39**
Data file Sample Info. Line: 131WJLCS;131WJLCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) O,O,O-Triethylphosphorothioate	(2)	8.359(0.000)	198	239599	11.792	47.17			0.5
55) bis(2-Chloroethoxy)methane	(2)	8.391(0.000)	93	653093	11.807	47.23			0.1
60) 2,4-Dichlorophenol	(2)	8.508(0.000)	162	364305	11.723	46.89			0.1
64) a,a-Dimethylphenethylamine	(2)	8.572(-0.011)	58	1074061M	17.309	69.23		E	1
67) 4-Chloroaniline	(2)	8.867(-0.000)	127	490226	10.754	43.01			0.5
68) 2,6-Dichlorophenol	(2)	8.872(-0.000)	162	369807	12.476	49.91			0.1
69) Hexachloropropene	(2)	8.910(-0.000)	213	206190	9.048	36.19			0.5
71) Hexachlorobutadiene	(2)	8.984(0.000)	225	210112	9.315	37.26			0.1
77) N-Nitrosodi-n-butylamine	(2)	9.450(0.000)	84	402460	11.432	45.73			0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)	9.680(0.000)	107	437374	11.977	47.91			0.1
82) Safrole	(2)	9.776(-0.000)	162	335635	12.127	48.51			0.5
83) 2-Methylnaphthalene	(2)	9.883(0.000)	142	817787	11.486	45.94			0.03
85) Hexachlorocyclopentadiene	(3)	10.156(-0.000)	237	194084	9.318	37.27			1
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.156(0.000)	216	428757	11.144	44.58			0.1
88) cis-Isosafrole	(3)	10.252(0.000)	162	45089	1.524	6.10			0.1
90) 2,4,6-Trichlorophenol	(3)	10.359(-0.000)	196	287710	12.706	50.83			0.1
92) 2,4,5-Trichlorophenol	(3)	10.407(-0.000)	196	286158	11.926	47.71			0.1
94) trans-Isosafrole	(3)	10.621(-0.000)	162	366115	11.687	46.75			0.1
97) Isosafrole	(3)			411204	13.211	52.85			0.5
96) 2-Chloronaphthalene	(3)	10.669(0.000)	162	809483	11.393	45.57			0.1
100) 2-Nitroaniline	(3)	10.856(-0.000)	138	239414	12.578	50.31			0.1
104) 1,4-Naphthoquinone	(3)			Not Detected					6
105) 1,4-Dinitrobenzene	(3)	11.097(-0.000)	168	113396	11.877	47.51			0.3
106) Dimethylphthalate	(3)	11.204(-0.000)	163	253499	3.296	13.18			0.5
107) 1,3-Dinitrobenzene	(3)	11.209(0.000)	168	140376	12.828	51.31			0.5
108) 2,6-Dinitrotoluene	(3)	11.279(-0.000)	165	196662	12.675	50.70			0.1
109) Acenaphthylene	(3)	11.338(0.000)	152	1266016	12.480	49.92			0.03
112) 3-Nitroaniline	(3)	11.525(-0.000)	138	199053	11.650	46.60			0.1
114) Acenaphthene	(3)	11.616(-0.000)	153	864880	12.109	48.44			0.03
115) 2,4-Dinitrophenol	(3)	11.691(-0.000)	184	177238M	21.812	87.25			3
116) 4-Nitrophenol	(3)	11.814(-0.001)	109	145039	10.216	40.86			3
117) Pentachlorobenzene	(3)	11.814(-0.000)	250	377874	12.046	48.18			0.1
118) 2,4-Dinitrotoluene	(3)	11.883(-0.000)	165	261837	12.053	48.21			0.3
119) Dibenzofuran	(3)	11.873(-0.000)	168	1162390	11.818	47.27			0.1
121) 1-Naphthylamine	(3)	11.985(-0.000)	143	1231185	17.562	70.25			1
122) 2,3,4,6-Tetrachlorophenol	(3)	12.054(-0.000)	232	241322	13.201	52.80			0.1
123) 2-Naphthylamine	(3)	12.092(-0.000)	143	1114423	16.082	64.33			1
124) Diethylphthalate	(3)	12.247(-0.000)	149	590028	7.846	31.39			0.5
125) Thionazin	(3)	12.343(-0.000)	107	175316	11.325	45.30			0.5
126) Fluorene	(3)	12.327(-0.000)	166	934008	12.318	49.27			0.03
127) 4-Chlorophenyl-phenylether	(3)	12.359(-0.000)	204	482370	12.149	48.60			0.1
128) 5-Nitro-o-toluidine	(3)	12.359(-0.000)	152	234922	12.188	48.75			0.1
129) 4-Nitroaniline	(3)	12.365(-0.000)	138	200217	11.277	45.11			0.1
130) 4,6-Dinitro-2-methylphenol	(4)	12.413(-0.000)	198	135671	11.611	46.44			1
131) N-Nitrosodiphenylamine	(4)	12.504(-0.000)	169	773745	11.823	47.29			0.1
134) 1,2-Diphenylhydrazine	(4)	12.546(-0.000)	77	1282251	12.229	48.92			0.1
139) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
140) Diallate (peak 1)	(4)	12.878(-0.000)	86	350529	8.359	33.43			0.06
141) Phorate	(4)	12.884(-0.000)	75	671564	11.445	45.78			0.1
142) Phenacetin	(4)	12.905(-0.000)	108	542982	12.250	49.00			0.1
143) 4-Bromophenyl-phenylether	(4)	12.958(-0.000)	248	267770	12.385	49.54			0.1
144) Diallate (peak 2)	(4)	12.980(0.000)	86	116077	2.781	11.13			0.06
146) Diallate trans/cis	(4)			466606	11.140	44.56			0.3

E = Compound concentration above calibration range. M = Compound was manually integrated.

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Data file: /chem/HP20296.i/16may11a.b/le0390.d Injection date and time: **11-MAY-2016 21:39**
Data file Sample Info. Line: 131WJLCS;131WJLCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
145) Hexachlorobenzene	(4)	13.006(-0.000)	284	280307	12.423	49.69			0.03
147) Dimethoate	(4)	13.076(0.000)	87	37174	0.994	3.98		J	0.8
149) Pentachlorophenol	(4)	13.274(-0.001)	266	164731	12.330	49.32			0.3
150) 4-Aminobiphenyl	(4)	13.279(-0.000)	169	854451	13.524	54.10			0.1
151) Pentachloronitrobenzene	(4)	13.279(-0.000)	237	133329	12.329	49.31			0.5
152) Pronamide	(4)	13.386(-0.000)	173	438978	12.416	49.66			0.1
155) Phenanthrene	(4)	13.531(-0.000)	178	1408660	11.854	47.41			0.03
157) Anthracene	(4)	13.595(-0.000)	178	1395352	11.941	47.76			0.03
162) Disulfoton	(4)	13.547(-0.000)	88	1222225M	29.764	119.06			6
164) Methyl parathion	(4)	14.028(-0.000)	109	290004	10.904	43.61			0.3
165) Di-n-butylphthalate	(4)	14.349(-0.000)	149	1350796	10.383	41.53			0.5
167) Parathion	(4)	14.584(-0.000)	109	227284	13.527	54.11			0.5
168) 4-Nitroquinoline-1-oxide	(4)	14.606(-0.001)	190	1194521	116.311	465.24		E	5
170) Methapyrilene	(4)	14.750(-0.001)	97	4541698	109.837	439.35		E	4
171) Isodrin	(4)	14.980(-0.000)	193	176866	12.681	50.73			0.1
173) Fluoranthene	(4)	15.200(-0.000)	202	1639412	12.667	50.67			0.03
177) Pyrene	(5)	15.542(-0.000)	202	1691702	11.330	45.32			0.03
180) Aramite (1)	(5)	15.734(-0.000)	185	1315M	2.276	9.11			0.3
181) Aramite (2)	(5)	15.761(-0.000)	185	1301M	2.289	9.16			0.3
183) Aramite (3)	(5)	15.836(-0.000)	185	26282M	0.501	2.01		J	0.3
184) Aramite (4)	(5)	15.964(-0.000)	185	23293M	0.331	1.32		J	0.3
186) Aramite	(5)			52191	5.398	21.59			1
182) p-Dimethylaminoazobenzene	(5)	16.066(-0.000)	225	327538	12.805	51.22			0.1
185) Chlorobenzilate	(5)	16.157(-0.000)	139	108767	2.662	10.65			0.8
187) 3,3'-Dimethylbenzidine	(5)	16.633(-0.000)	212	1286555	14.939	59.75		J	6
188) Butylbenzylphthalate	(5)	16.692(-0.000)	149	514627	8.629	34.52			0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)			Not Detected					6
191) 2-Acetylaminofluorene	(5)	17.055(-0.000)	181	717064	14.816	59.27			0.5
193) 3,3'-Dichlorobenzidine	(5)	17.564(-0.000)	252	601377	12.503	50.01			0.5
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.585(-0.000)	231	344899	12.414	49.66			1
195) Benzo(a)anthracene	(5)	17.569(-0.000)	228	1785033	13.797	55.19			0.03
196) Chrysene	(5)	17.633(-0.000)	228	1667061	13.514	54.06			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	17.772(-0.000)	149	1165367	13.610	54.44			0.5
205) Di-n-octylphthalate	(6)	18.949(0.000)	149	2072026	13.135	52.54			0.5
206) Benzo(b)fluoranthene	(6)	19.441(0.000)	252	1710956	12.502	50.01			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.446(0.000)	256	658105	11.069	44.27			0.1
208) Benzo(k)fluoranthene	(6)	19.489(0.000)	252	1735878	12.740	50.96			0.03
211) Benzo(a)pyrene	(6)	19.970(0.000)	252	1563720	12.521	50.08			0.03
215) 3-Methylcholanthrene	(6)	20.548(0.000)	268	780422	14.952	59.81			0.1
219) Indeno(1,2,3-cd)pyrene	(6)	21.682(-0.000)	276	1685448	11.539	46.15			0.03
220) Dibenz(a,h)anthracene	(6)	21.725(-0.000)	278	1466621	11.976	47.90			0.03
221) Benzo(g,h,i)perylene	(6)	22.078(-0.000)	276	1401294	11.244	44.98			0.03

M = Compound was manually integrated. E = Compound concentration above calibration range.

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Data file: /chem/HP20296.i/16may11a.b/le0390.d Injection date and time: **11-MAY-2016 21:39**
Data file Sample Info. Line: 131WJLCS;131WJLCS;1;3;LCS;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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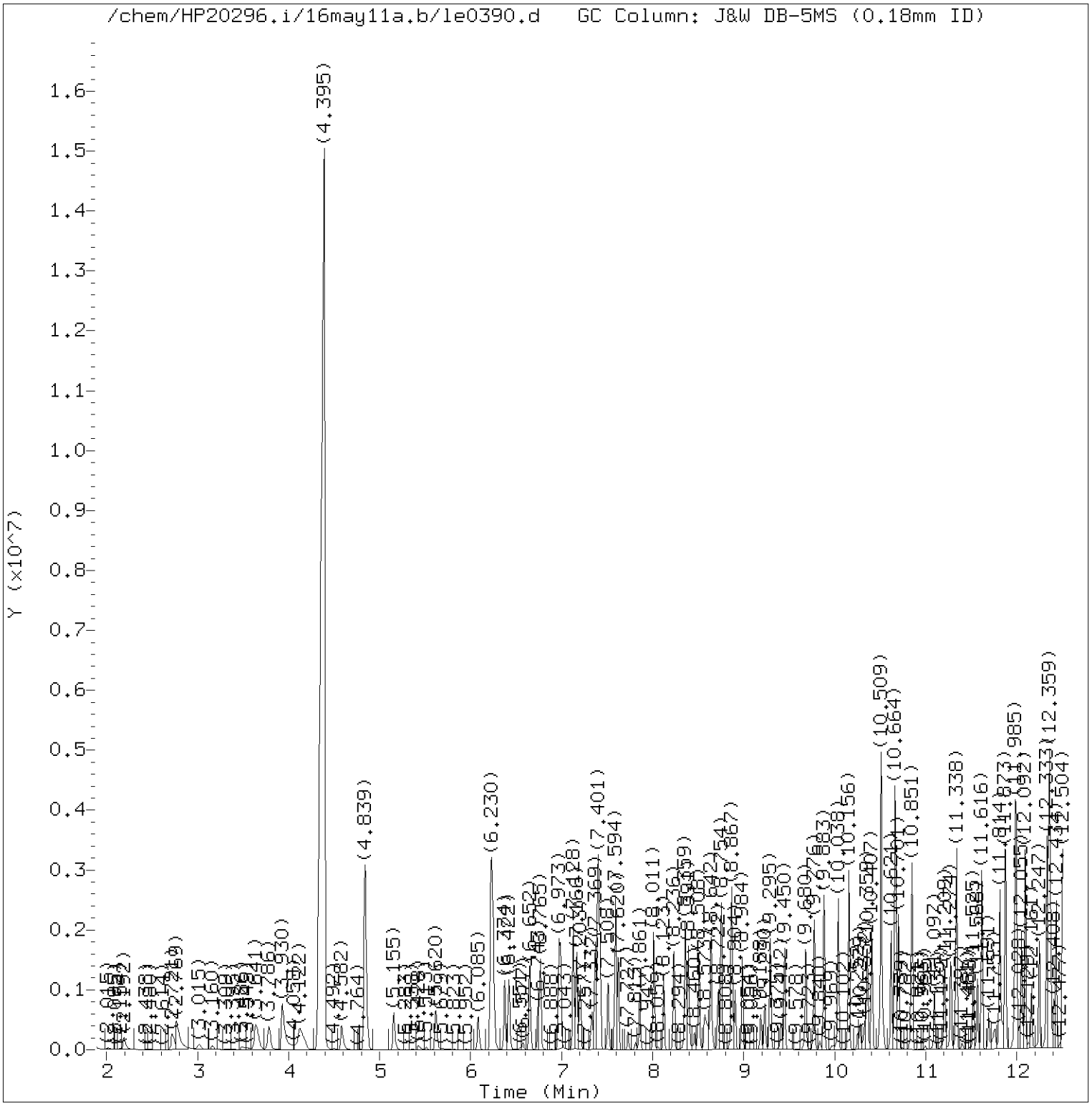
Total number of targets = 124

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05. PARALLAX ID: mar00486



Total Ion Chromatogram (TIC)

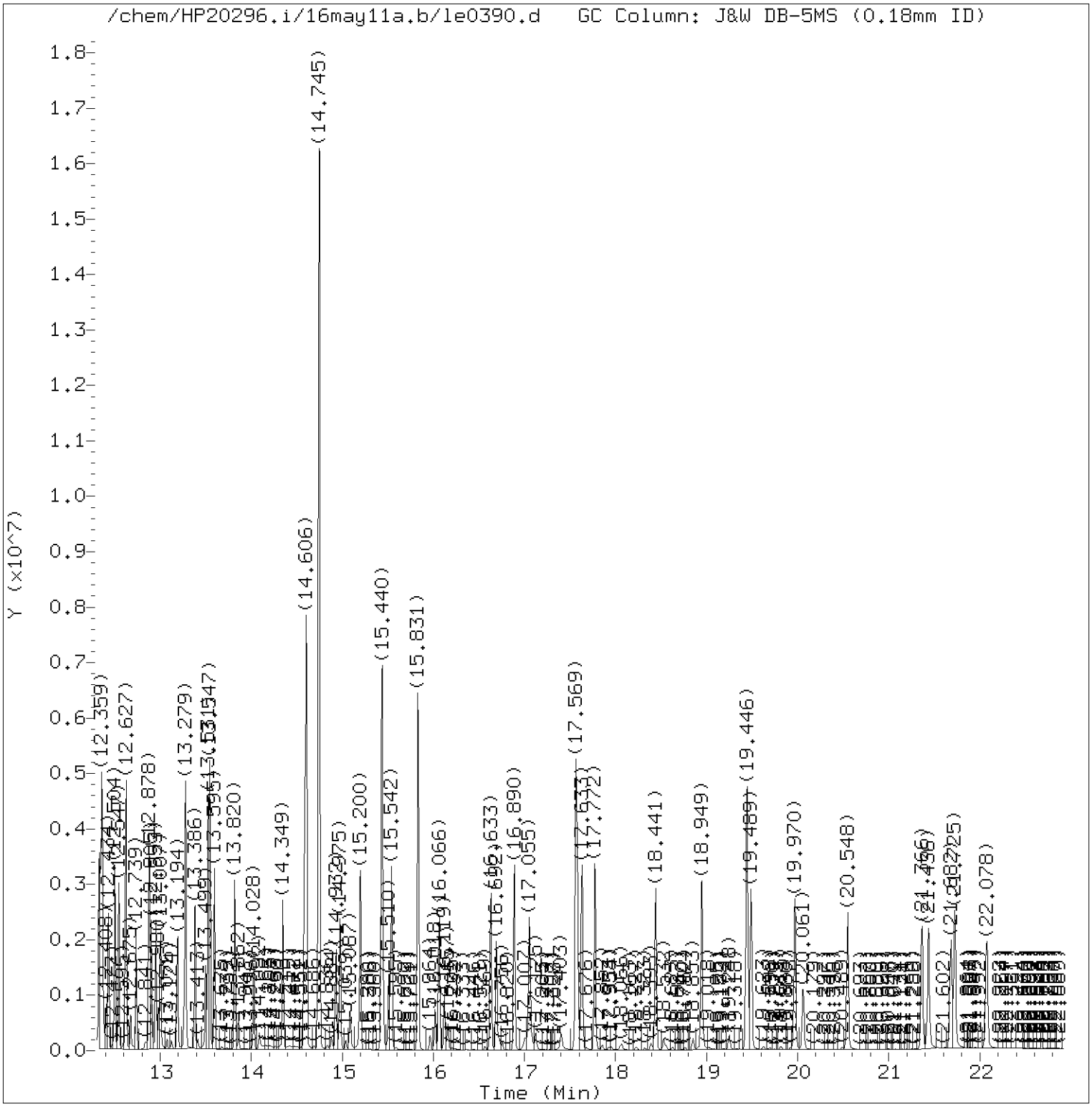
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.192	88	173246	8.781
4) N-Nitrosodimethylamine	(1)	2.726	74	305262	9.960
5) Pyridine	(1)	2.769	79	481934	9.197
7) 2-Picoline	(1)	3.930	93	563004	10.464
8) N-Nitrosomethylethylamine	(1)	4.122	88	245739	11.496
9) Methyl methanesulfonate	(1)	4.582	80	286324	11.450
11)$2-Fluorophenol	(1)	4.839	112	1536580	38.000
13) N-Nitrosodiethylamine	(1)	5.155	102	234025	11.708
15) Ethyl methanesulfonate	(1)	5.620	109	241703	11.607
17)$Phenol-d6	(1)	6.224	99	1647937	30.467
18) Phenol	(1)	6.246	94	516972	8.076
19) Aniline	(1)	6.251	93	735508	9.744
22) bis(2-Chloroethyl)ether	(1)	6.374	93	534920	11.420
23) 2-Chlorophenol	(1)	6.422	128	430709	11.672
25)*1,4-Dichlorobenzene-d4	(1)	6.743	152	134288	5.000
27) Benzyl alcohol	(1)	6.973	108	357986	12.665
31) 2-Methylphenol	(1)	7.166	108	444689	11.281
34) bis(2-Chloroisopropyl)ether	(1)	7.203	45	660663	11.092
35) N-Nitrosopyrrolidine	(1)	7.332	100	249586	11.864
36) Acetophenone	(1)	7.369	105	718014	11.078
97) Isosafrole	(3)			411204	13.211
38) N-Nitroso-di-n-propylamine	(1)	7.396	70	424795	11.627
37) 4-Methylphenol	(1)	7.401	108	486232	11.203
39) N-Nitrosomorpholine	(1)	7.407	56	310037	11.369
40) o-Toluidine	(1)	7.423	106	728742	10.030
43) Hexachloroethane	(1)	7.508	117	169985	9.191
44)$Nitrobenzene-d5	(2)	7.594	82	1179335	23.161
45) Nitrobenzene	(2)	7.620	77	620780	11.844
48) N-Nitrosopiperidine	(2)	7.861	114	231020	11.904
50) Isophorone	(2)	8.011	82	1085302	12.167
51) 2-Nitrophenol	(2)	8.123	139	201627	12.128
53) 2,4-Dimethylphenol	(2)	8.236	107	422941	9.725
57) O,O,O-Triethylphosphorothioate	(2)	8.359	198	239599	11.792
55) bis(2-Chloroethoxy)methane	(2)	8.391	93	653093	11.807
60) 2,4-Dichlorophenol	(2)	8.508	162	364305	11.723
64) a,a-Dimethylphenethylamine	(2)	8.573	58	1074061M	17.309
65)*Naphthalene-d8	(2)	8.722	136	506978	5.000
146) Diallate trans/cis	(4)			466606	11.140
67) 4-Chloroaniline	(2)	8.867	127	490226	10.754
68) 2,6-Dichlorophenol	(2)	8.872	162	369807	12.476

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
69) Hexachloropropene	(2)	8.909	213	206190	9.048
71) Hexachlorobutadiene	(2)	8.984	225	210112	9.315
77) N-Nitrosodi-n-butylamine	(2)	9.450	84	402460	11.432
80) 4-Chloro-3-methylphenol	(2)	9.680	107	437374	11.977
82) Safrole	(2)	9.776	162	335635	12.127
83) 2-Methylnaphthalene	(2)	9.883	142	817787	11.486
85) Hexachlorocyclopentadiene	(3)	10.156	237	194084	9.318
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.156	216	428757	11.144
88) cis-Isosafrole	(3)	10.252	162	45089	1.524
90) 2,4,6-Trichlorophenol	(3)	10.359	196	287710	12.706
92) 2,4,5-Trichlorophenol	(3)	10.407	196	286158	11.926
93)$2-Fluorobiphenyl	(3)	10.509	172	1867388	22.582
186) Aramite	(5)			52191	5.398
94) trans-Isosafrole	(3)	10.621	162	366115	11.687
96) 2-Chloronaphthalene	(3)	10.669	162	809483	11.393
100) 2-Nitroaniline	(3)	10.856	138	239414	12.578
105) 1,4-Dinitrobenzene	(3)	11.097	168	113396	11.877
106) Dimethylphthalate	(3)	11.204	163	253499	3.296
107) 1,3-Dinitrobenzene	(3)	11.209	168	140376	12.828
108) 2,6-Dinitrotoluene	(3)	11.279	165	196662	12.675
109) Acenaphthylene	(3)	11.338	152	1266016	12.480
112) 3-Nitroaniline	(3)	11.525	138	199053	11.650
113)*Acenaphthene-d10	(3)	11.568	164	292469	5.000
114) Acenaphthene	(3)	11.616	153	864880	12.109
115) 2,4-Dinitrophenol	(3)	11.691	184	177238M	21.812
116) 4-Nitrophenol	(3)	11.814	109	145039	10.216
117) Pentachlorobenzene	(3)	11.814	250	377874	12.046
119) Dibenzofuran	(3)	11.873	168	1162390	11.818
118) 2,4-Dinitrotoluene	(3)	11.883	165	261837	12.053
121) 1-Naphthylamine	(3)	11.985	143	1231185	17.562
122) 2,3,4,6-Tetrachlorophenol	(3)	12.055	232	241322	13.201
123) 2-Naphthylamine	(3)	12.092	143	1114423	16.082
124) Diethylphthalate	(3)	12.247	149	590028	7.846
126) Fluorene	(3)	12.327	166	934008	12.318
125) Thionazin	(3)	12.343	107	175316	11.325
128) 5-Nitro-o-toluidine	(3)	12.359	152	234922	12.188
127) 4-Chlorophenyl-phenylether	(3)	12.359	204	482370	12.149
129) 4-Nitroaniline	(3)	12.365	138	200217	11.277
130) 4,6-Dinitro-2-methylphenol	(4)	12.413	198	135671	11.611
131) N-Nitrosodiphenylamine	(4)	12.504	169	773745	11.823

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
134) 1,2-Diphenylhydrazine	(4)	12.547	77	1282251	12.229
135)$2,4,6-Tribromophenol	(3)	12.627	330	497749	51.718
140) Diallate (peak 1)	(4)	12.878	86	350529	8.359
141) Phorate	(4)	12.884	75	671564	11.445
142) Phenacetin	(4)	12.905	108	542982	12.250
143) 4-Bromophenyl-phenylether	(4)	12.958	248	267770	12.385
144) Diallate (peak 2)	(4)	12.980	86	116077	2.781
145) Hexachlorobenzene	(4)	13.007	284	280307	12.423
147) Dimethoate	(4)	13.076	87	37174	0.994
149) Pentachlorophenol	(4)	13.274	266	164731	12.330
150) 4-Aminobiphenyl	(4)	13.279	169	854451	13.524
151) Pentachloronitrobenzene	(4)	13.279	237	133329	12.329
152) Pronamide	(4)	13.386	173	438978	12.416
153)*Phenanthrene-d10	(4)	13.499	188	564024	5.000
155) Phenanthrene	(4)	13.531	178	1408660	11.854
162) Disulfoton	(4)	13.547	88	1222225M	29.764
157) Anthracene	(4)	13.595	178	1395352	11.941
164) Methyl parathion	(4)	14.028	109	290004	10.904
165) Di-n-butylphthalate	(4)	14.349	149	1350796	10.383
167) Parathion	(4)	14.584	109	227284	13.527
168) 4-Nitroquinoline-1-oxide	(4)	14.606	190	1194521	116.311
170) Methapyrilene	(4)	14.750	97	4541698	109.837
171) Isodrin	(4)	14.980	193	176866	12.681
173) Fluoranthene	(4)	15.200	202	1639412	12.667
175)*Pyrene-d10	(5)	15.510	212	688368	5.000
177) Pyrene	(5)	15.542	202	1691702	11.330
180) Aramite (1)	(5)	15.734	185	1315M	2.276
181) Aramite (2)	(5)	15.761	185	1301M	2.289
179)$Terphenyl-d14	(5)	15.831	244	2347223	24.872
183) Aramite (3)	(5)	15.836	185	26282M	0.501
184) Aramite (4)	(5)	15.964	185	23293M	0.331
182) p-Dimethylaminoazobenzene	(5)	16.066	225	327538	12.805
185) Chlorobenzilate	(5)	16.157	139	108767	2.662
187) 3,3'-Dimethylbenzidine	(5)	16.633	212	1286555	14.939
188) Butylbenzylphthalate	(5)	16.692	149	514627	8.629
191) 2-Acetylaminofluorene	(5)	17.055	181	717064	14.816
193) 3,3'-Dichlorobenzidine	(5)	17.564	252	601377	12.503
195) Benzo(a)anthracene	(5)	17.569	228	1785033	13.797
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.585	231	344899	12.414
196) Chrysene	(5)	17.633	228	1667061	13.514

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$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

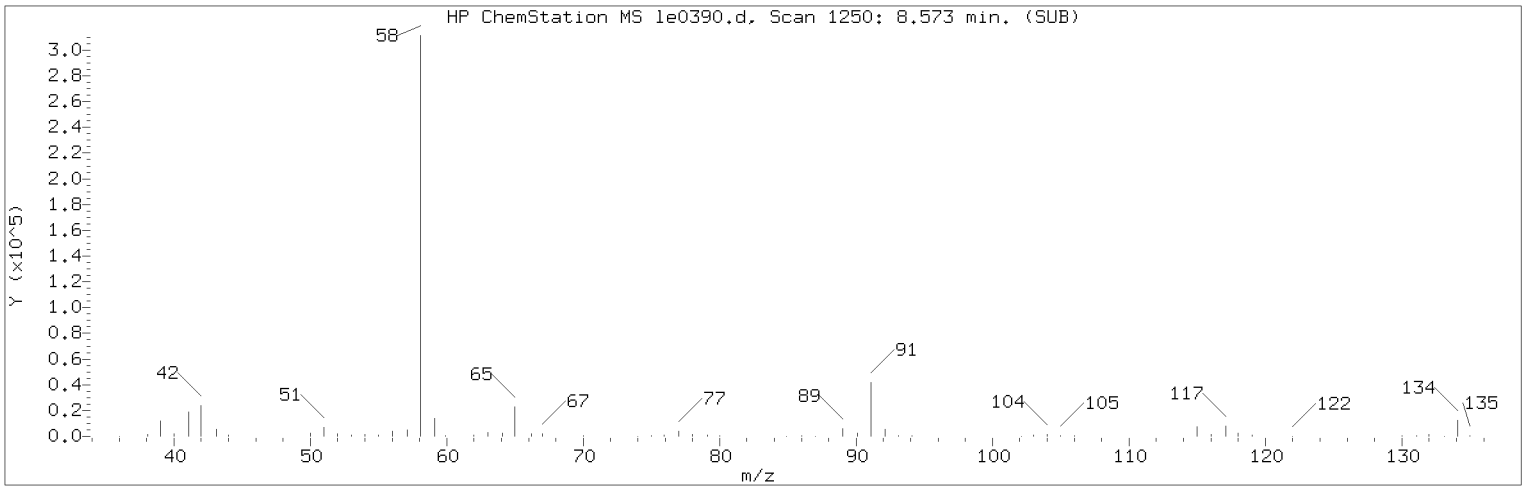
Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
199) bis(2-Ethylhexyl)phthalate	(5)	17.772	149	1165367	13.610
205) Di-n-octylphthalate	(6)	18.949	149	2072026	13.135
206) Benzo(b)fluoranthene	(6)	19.441	252	1710956	12.502
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.446	256	658105	11.069
208) Benzo(k)fluoranthene	(6)	19.489	252	1735878	12.740
211) Benzo(a)pyrene	(6)	19.970	252	1563720	12.521
213)*Perylene-d12	(6)	20.061	264	559807	5.000
215) 3-Methylcholanthrene	(6)	20.548	268	780422	14.952
219) Indeno(1,2,3-cd)pyrene	(6)	21.682	276	1685448	11.539
220) Dibenz(a,h)anthracene	(6)	21.725	278	1466621	11.976
221) Benzo(g,h,i)perylene	(6)	22.078	276	1401294	11.244

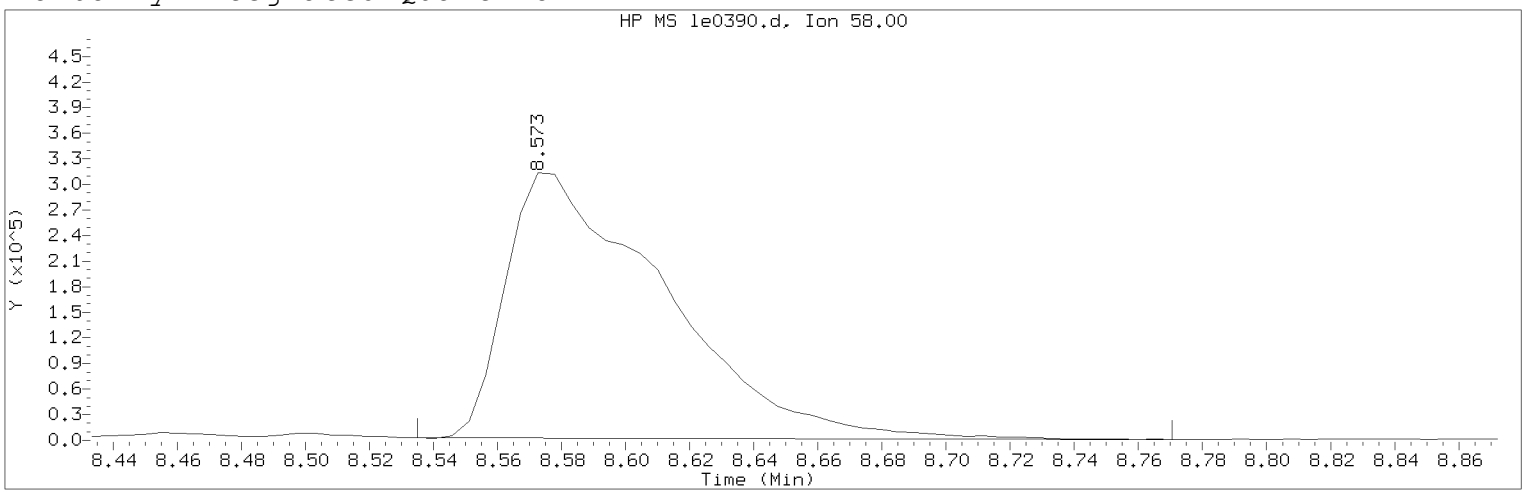
* = Compound is an internal standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

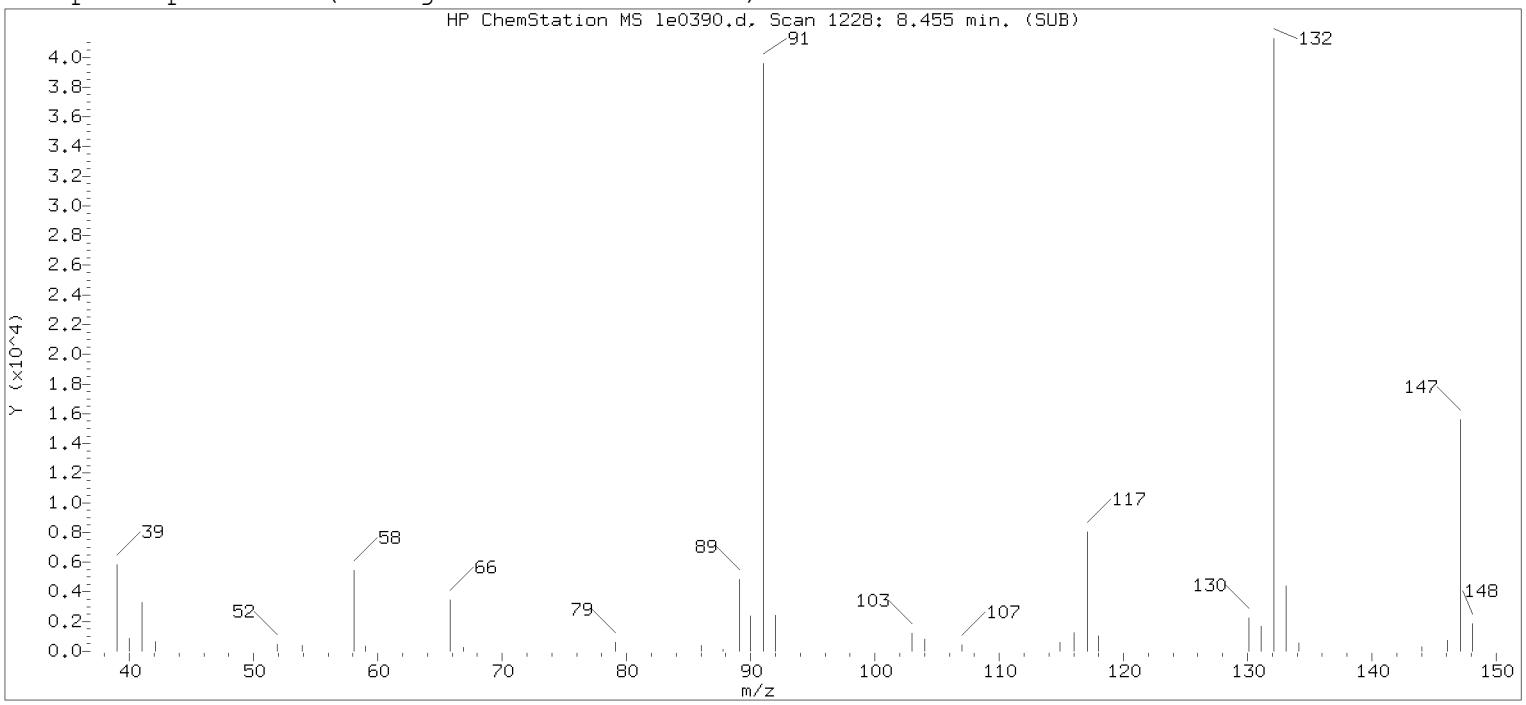
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1250
Retention Time (minutes) : 8.573
Quant Ion : 58.00
Area (flag) : 1074061M
On-Column Amount (ng/ul) : 17.3085
Integration start scan : 1242 Integration stop scan: 1286
Y at integration start : 3040 Y at integration end: 1049

Reason for manual integration: improper integration

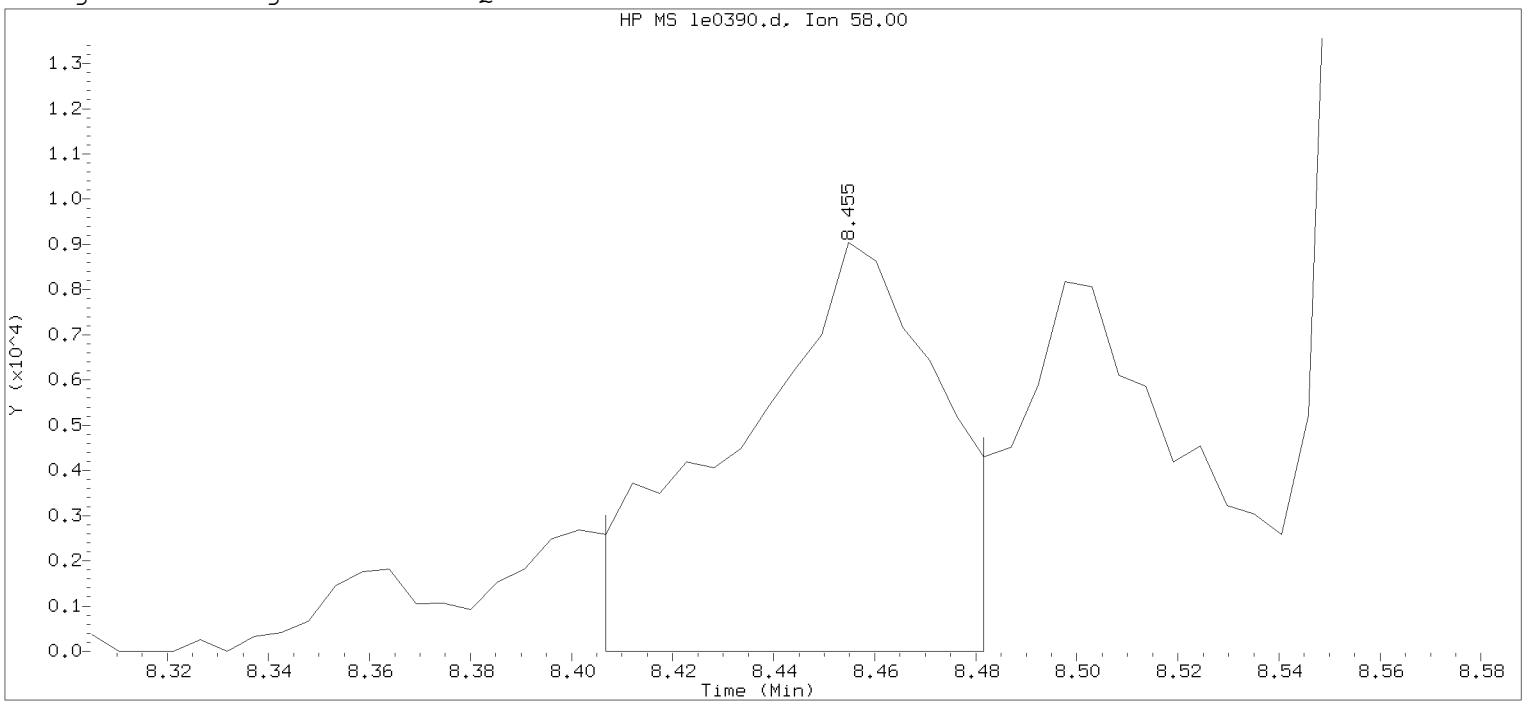
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

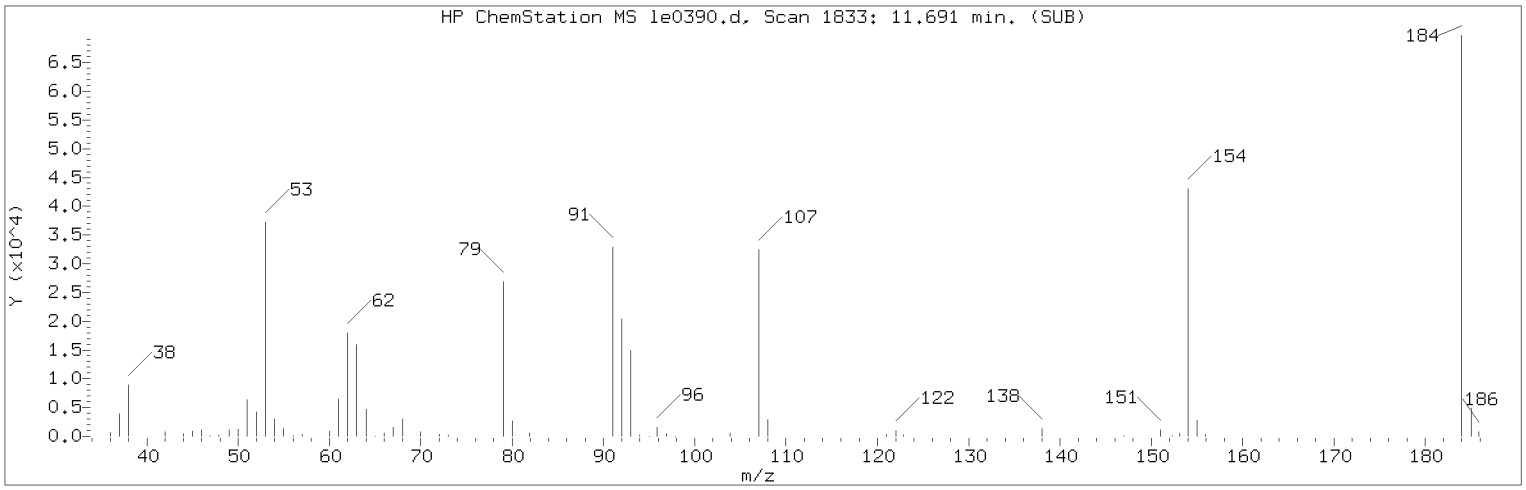
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

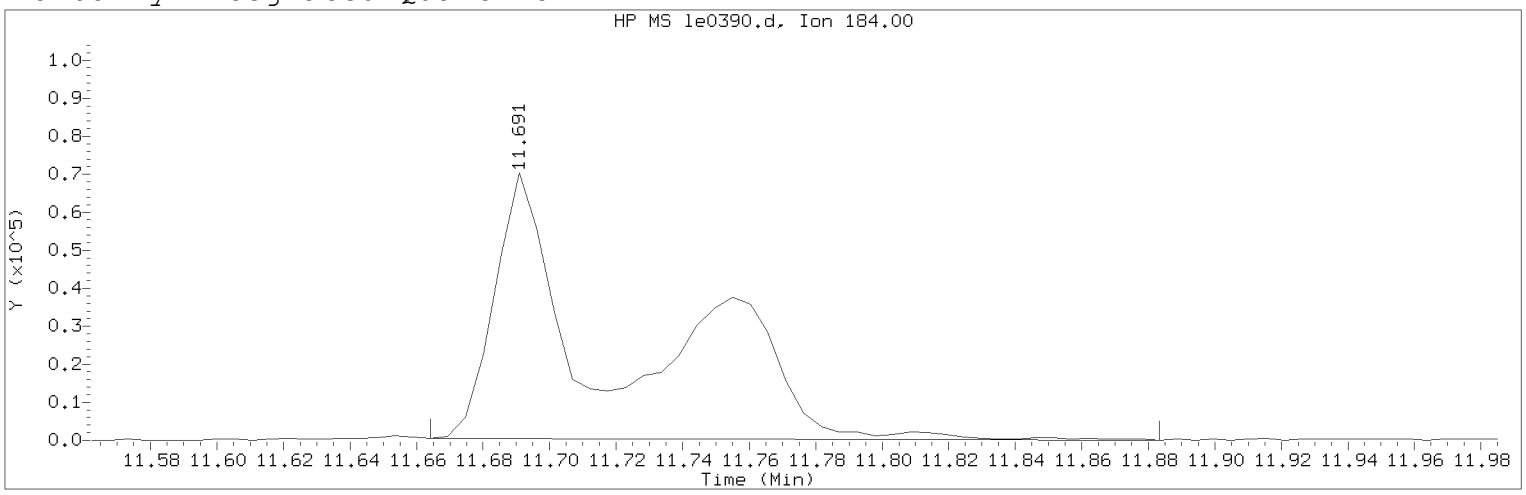
Compound Number	: 64		
Compound Name	: a,a-Dimethylphenethylamine		
Scan Number	: 1228		
Retention Time (minutes)	: 8.455		
Quant Ion	: 58.00		
Area	: 25176		
On-column Amount (ng/ul)	: 0.4057		
Integration start scan	: 1218	Integration stop scan:	1232
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: LMH01595

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

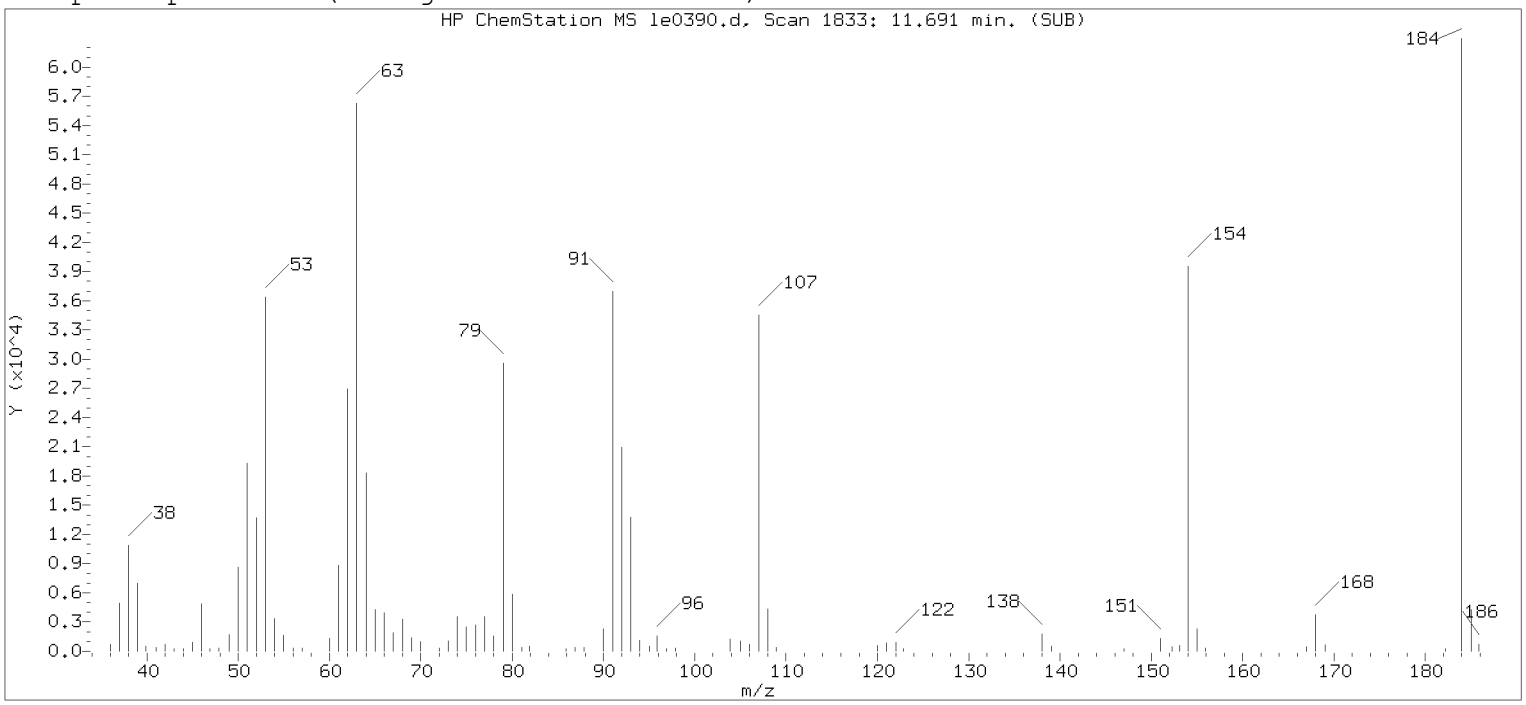
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1833
Retention Time (minutes) : 11.691
Quant Ion : 184.00
Area (flag) : 177238M
On-Column Amount (ng/ul) : 21.8119
Integration start scan : 1827 Integration stop scan: 1868
Y at integration start : 546 Y at integration end: 0

Reason for manual integration: improper integration

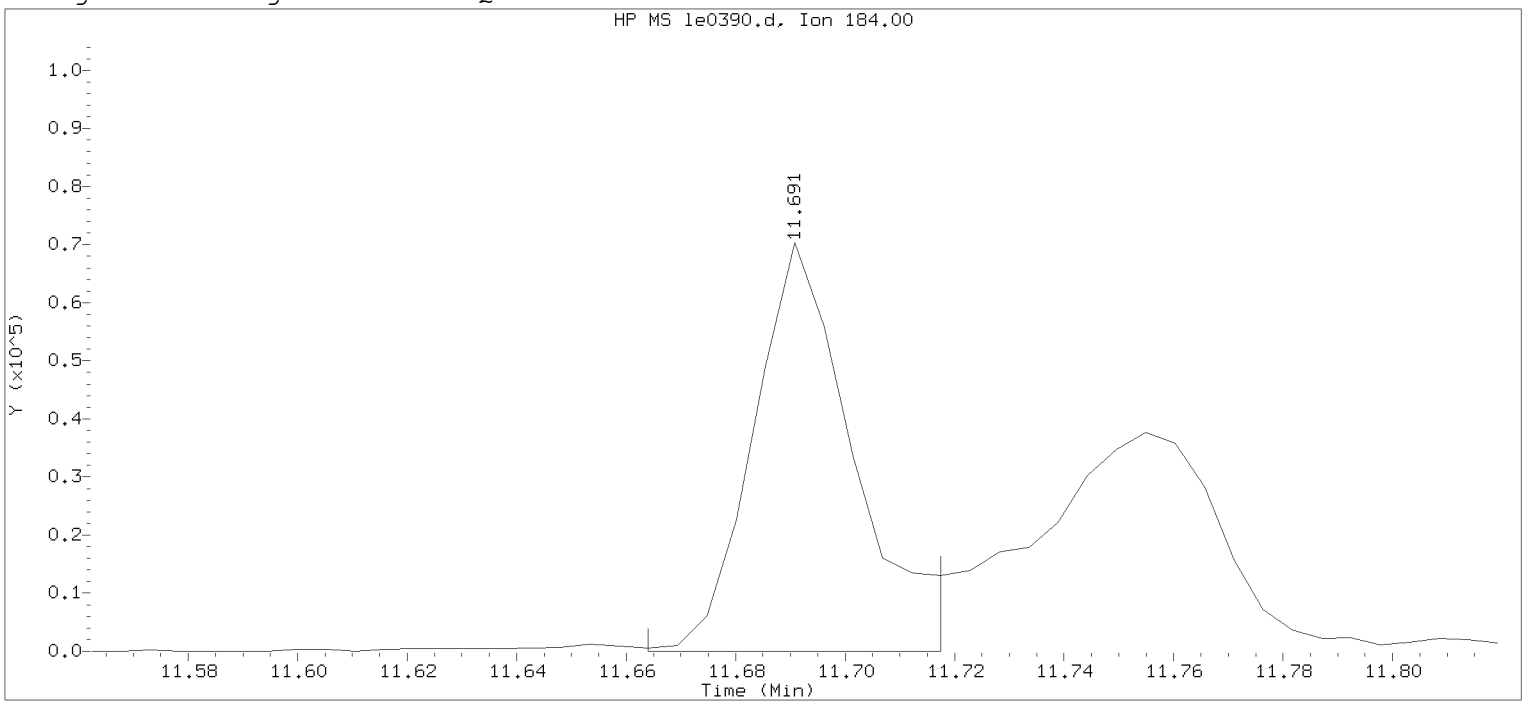
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1833
Retention Time (minutes) : 11.691
Quant Ion : 184.00
Area : 88163
On-column Amount (ng/ul) : 10.8499
Integration start scan : 1827 Integration stop scan: 1837
Y at integration start : 0 Y at integration end: 0

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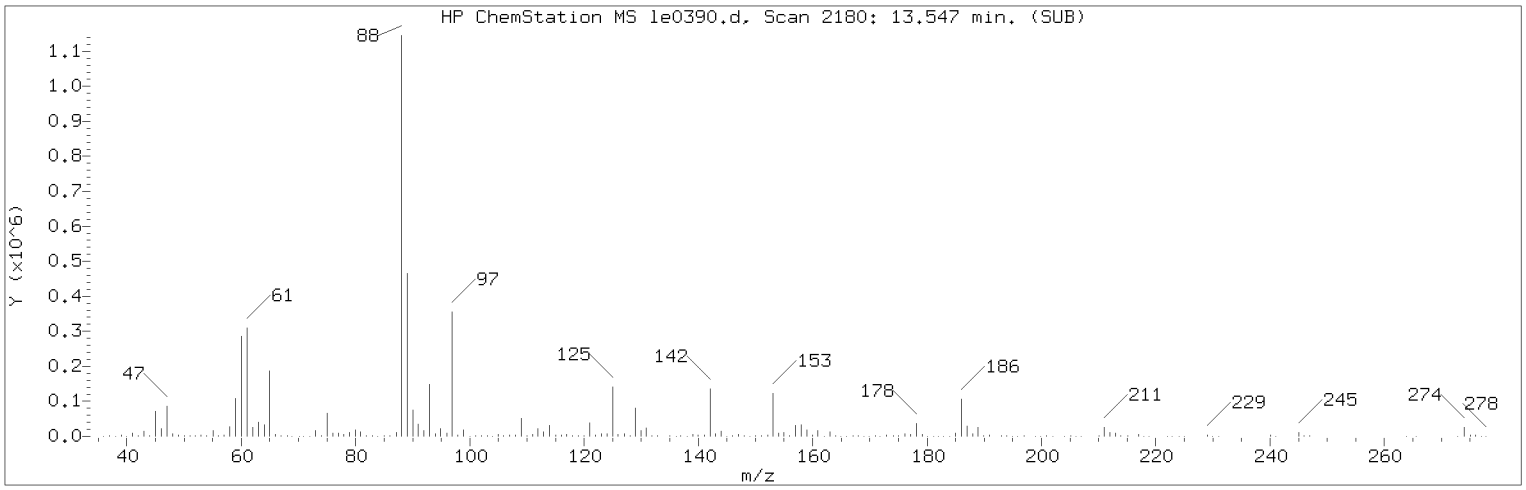
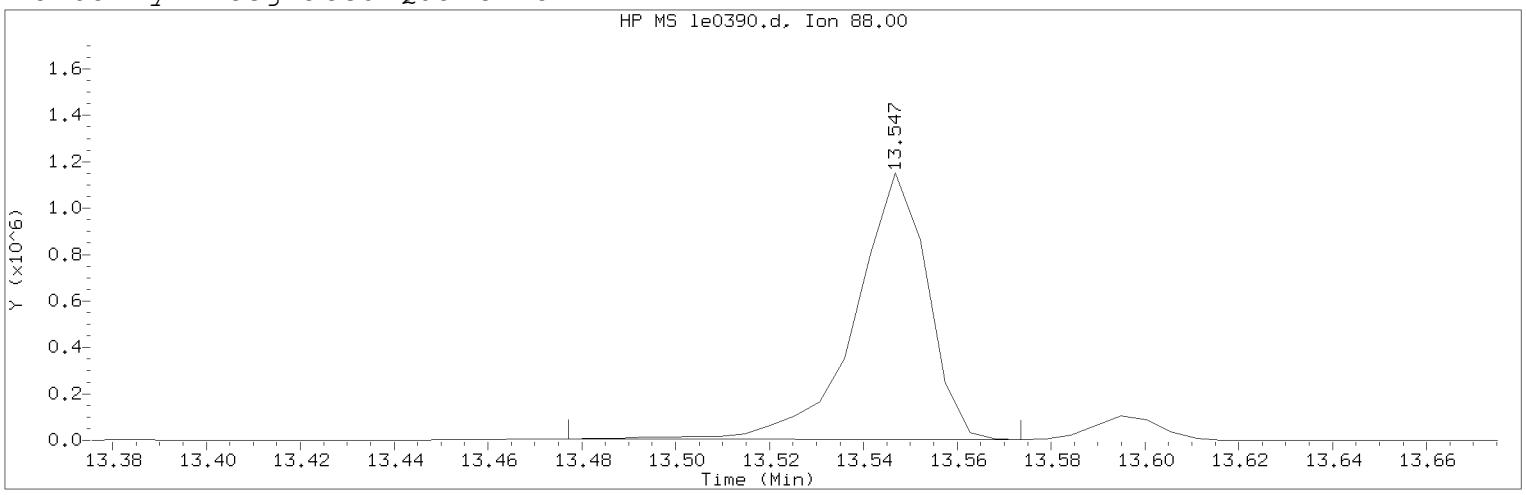
Target 3.5 esignature used. Page 1597

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

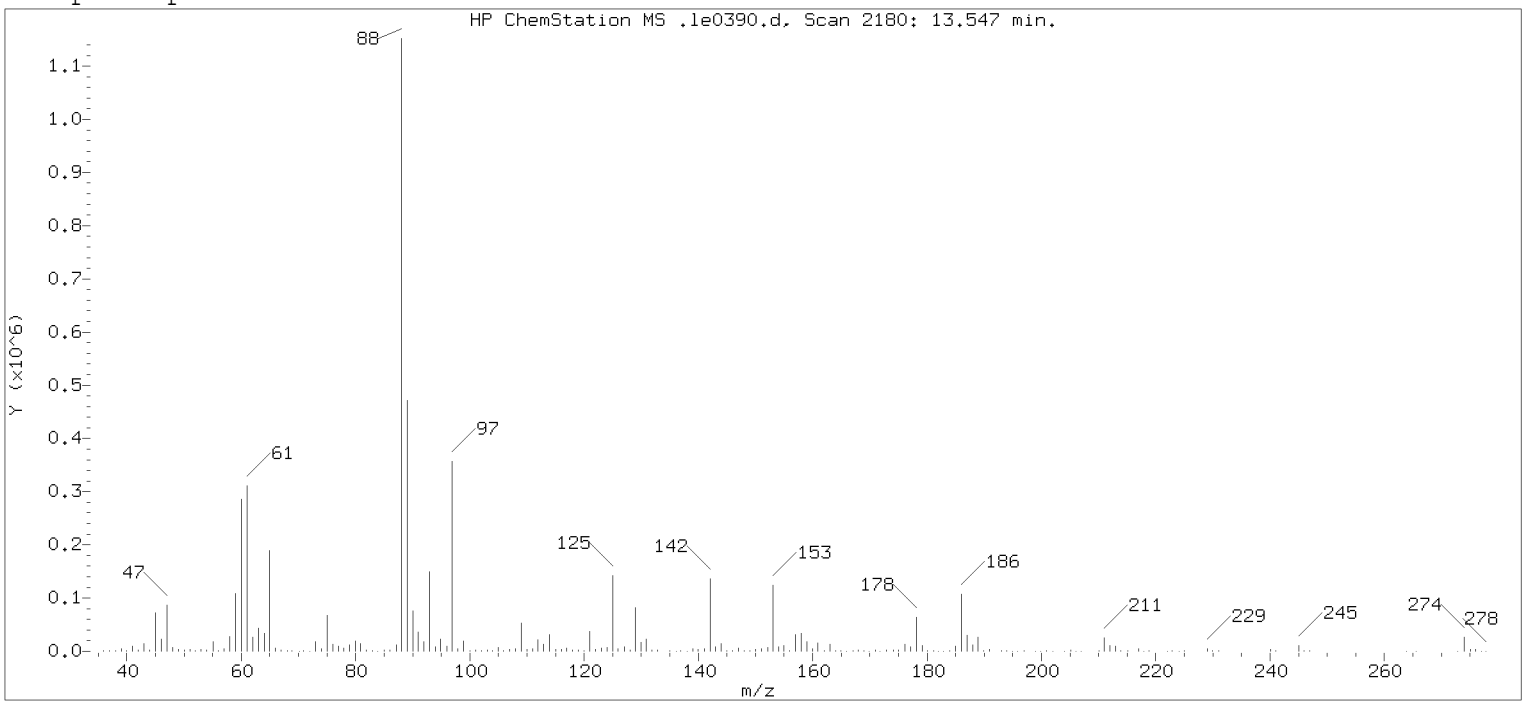
Compound Number : 162
Compound Name : Disulfoton
Scan Number : 2180
Retention Time (minutes) : 13.547
Quant Ion : 88.00
Area (flag) : 1222225M
On-Column Amount (ng/ul) : 29.7643
Integration start scan : 2166 Integration stop scan: 2184
Y at integration start : 6742 Y at integration end: 3248

Reason for manual integration: missed peak

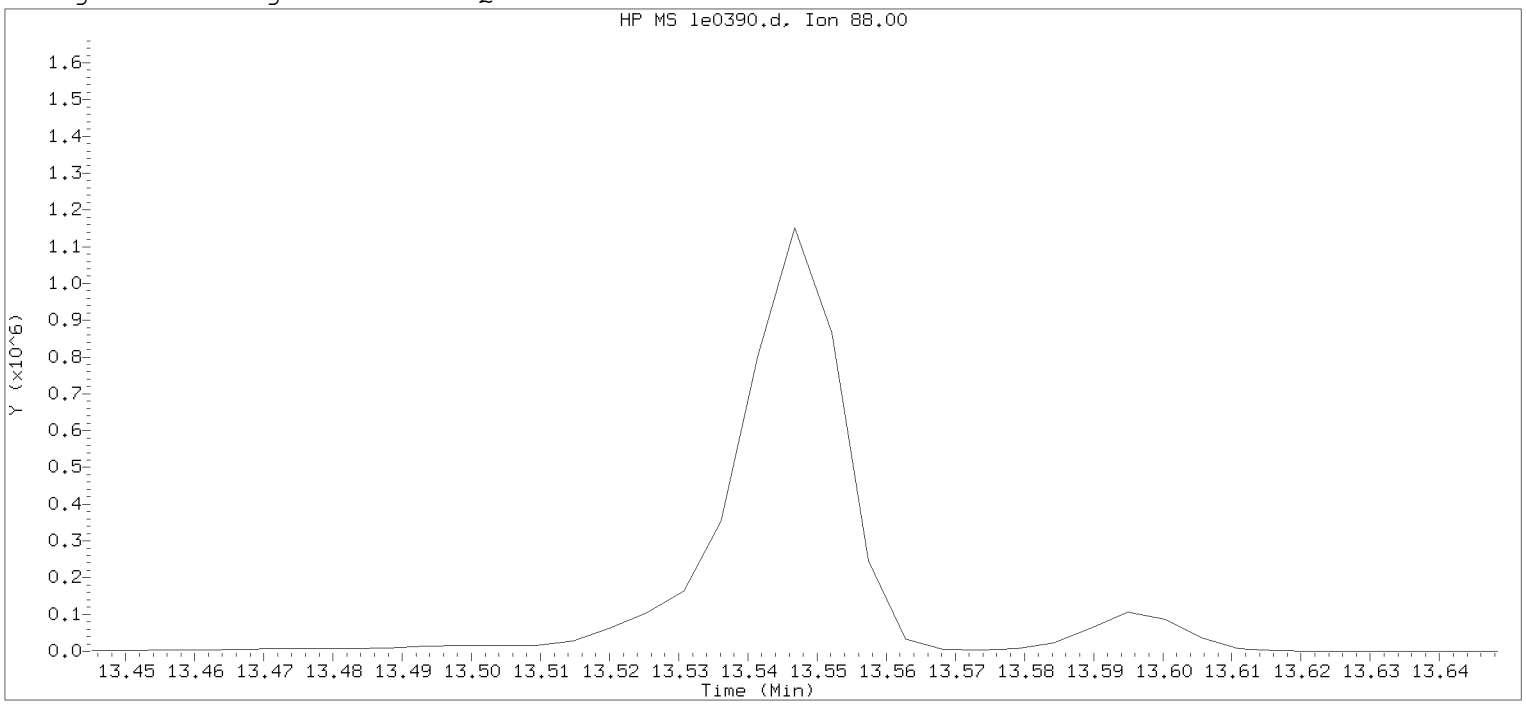
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

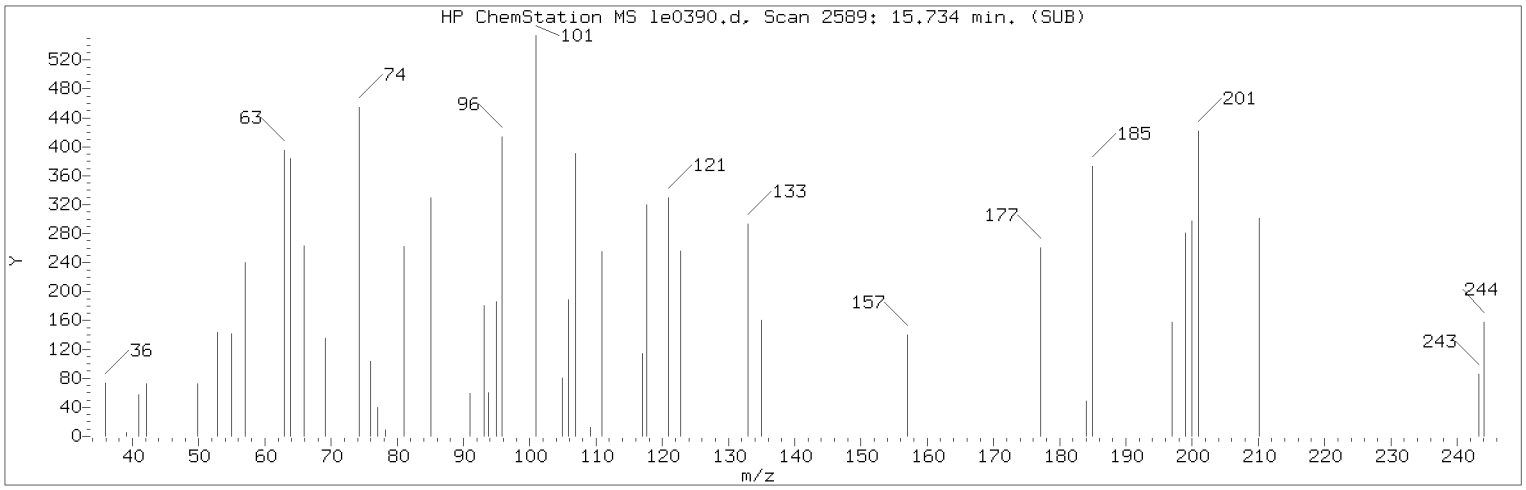
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

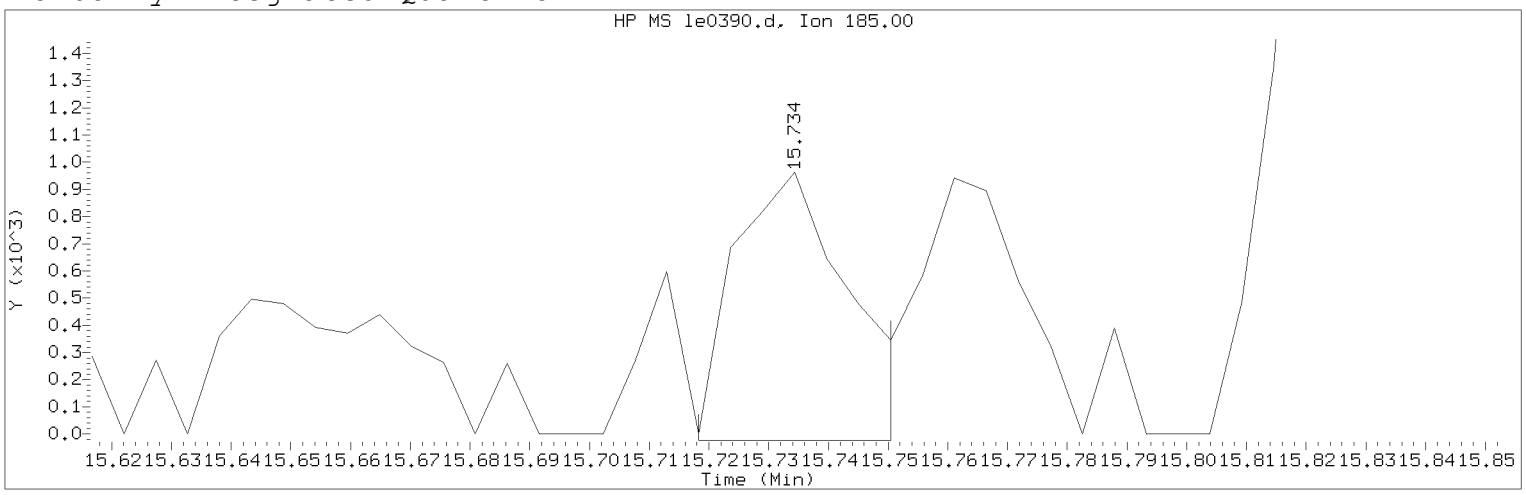
Compound Number : 162
Compound Name : Disulfoton
Expected RT (minutes) : 13.547
Quant Ion : 88.00

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used. Page 1599

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

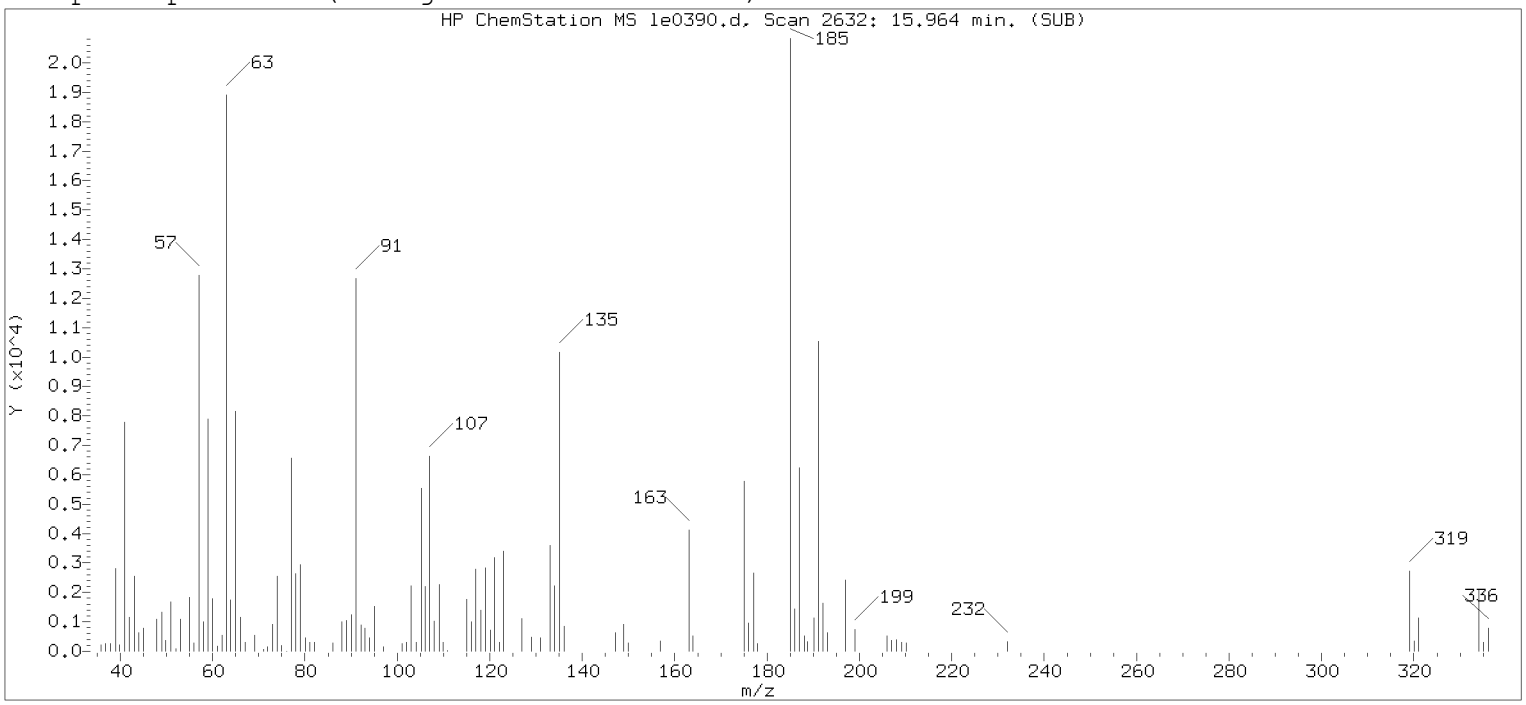
Compound Number : 180
Compound Name : Aramite (1)
Scan Number : 2589
Retention Time (minutes) : 15.734
Quant Ion : 185.00
Area (flag) : 1315M
On-Column Amount (ng/ul) : 2.2764
Integration start scan : 2585 Integration stop scan: 2591
Y at integration start : -23 Y at integration end: -23

Reason for manual integration: improper integration

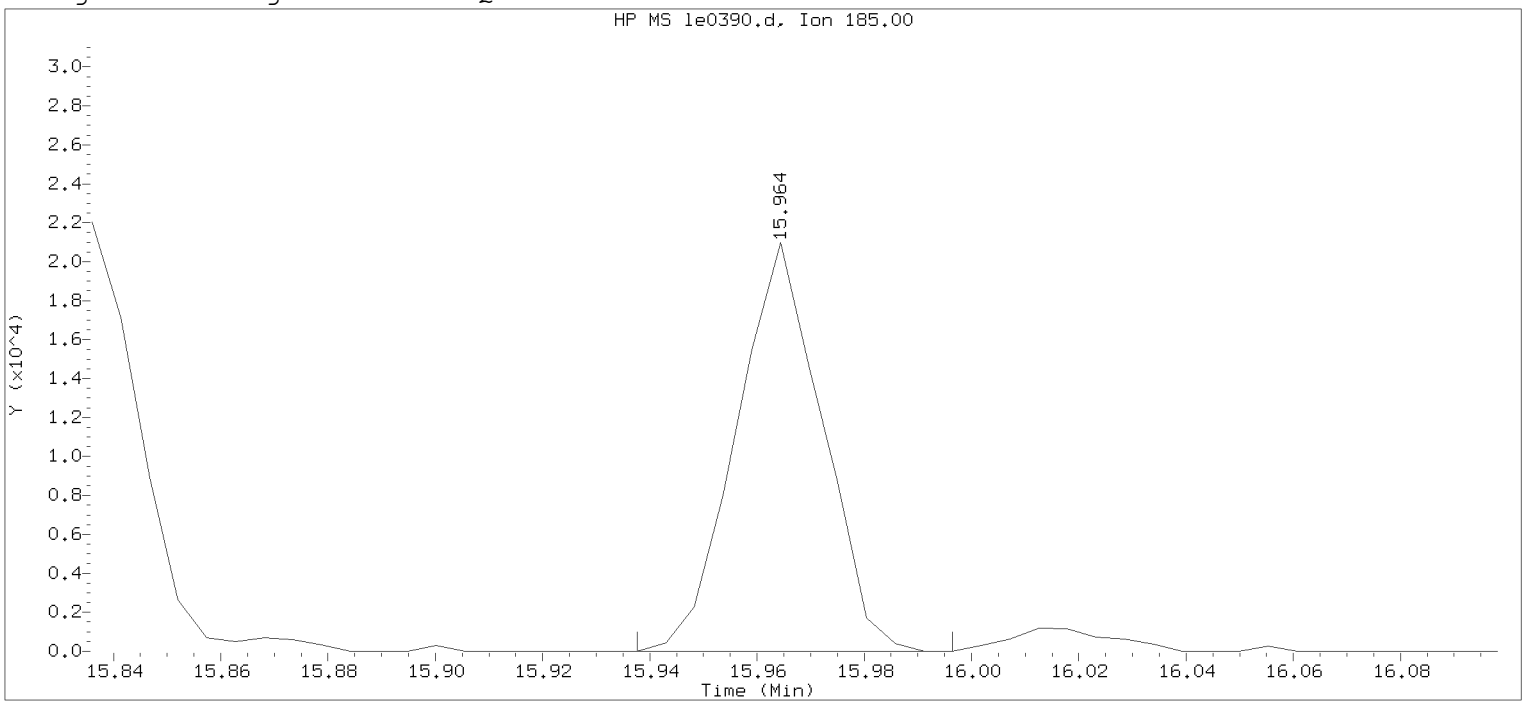
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

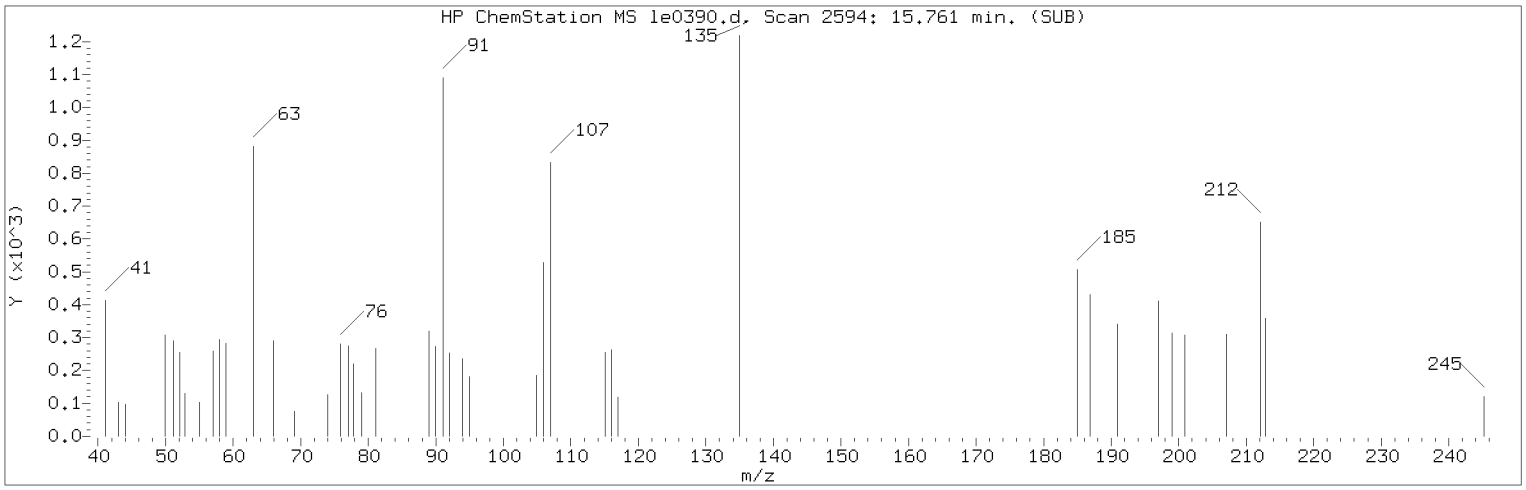
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

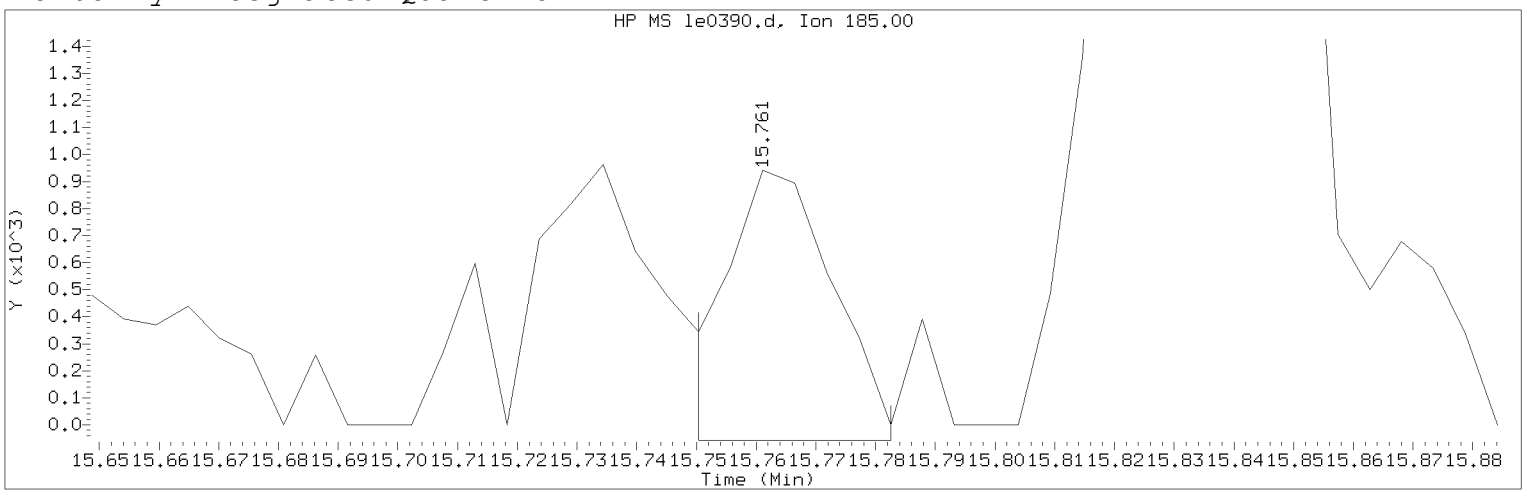
Compound Number : 180
Compound Name : Aramite (1)
Scan Number : 2632
Retention Time (minutes) : 15.964
Quant Ion : 185.00
Area : 23294
On-column Amount (ng/ul) : 40.3246
Integration start scan : 2626 Integration stop scan: 2637
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

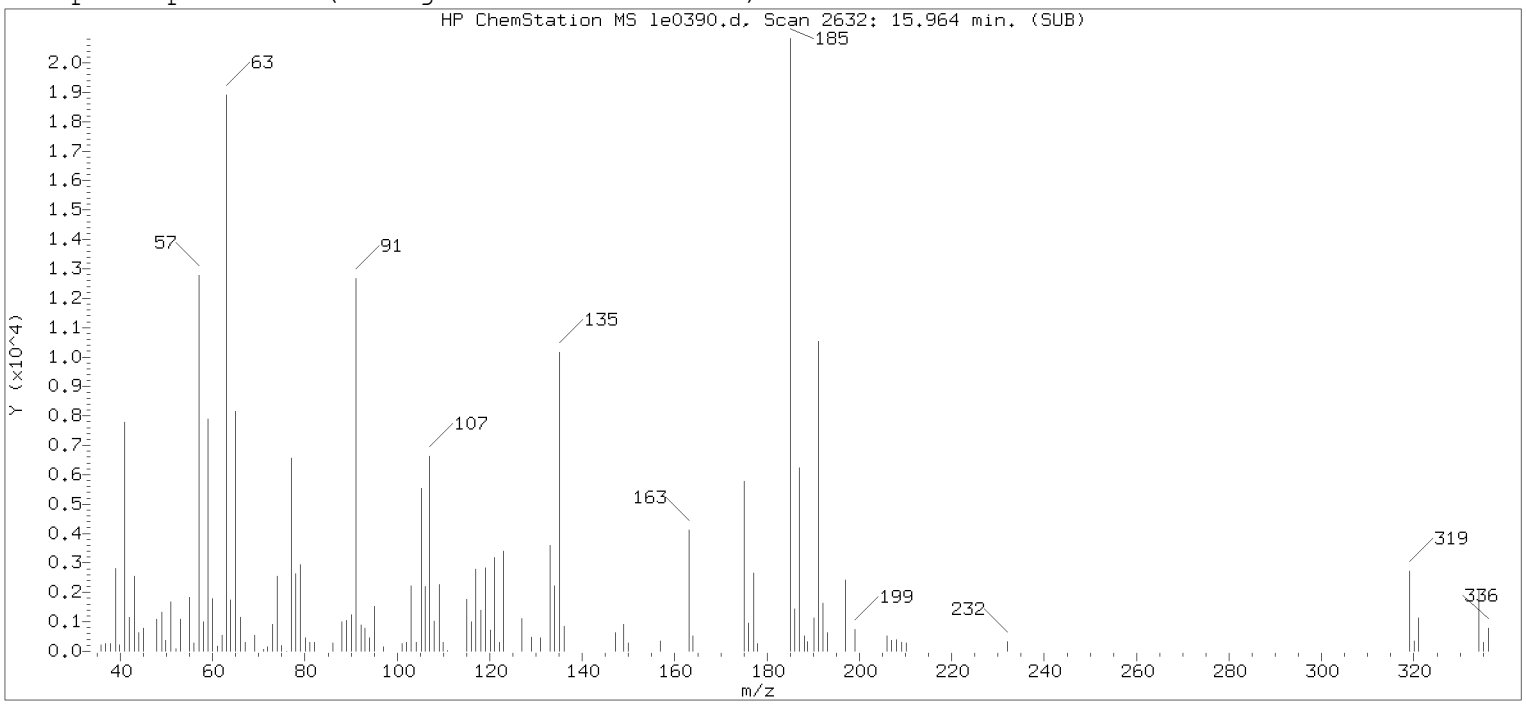
Compound Number : 181
Compound Name : Aramite (2)
Scan Number : 2594
Retention Time (minutes) : 15.761
Quant Ion : 185.00
Area (flag) : 1301M
On-Column Amount (ng/ul) : 2.2889
Integration start scan : 2591 Integration stop scan: 2597
Y at integration start : -57 Y at integration end: -57

Reason for manual integration: improper integration

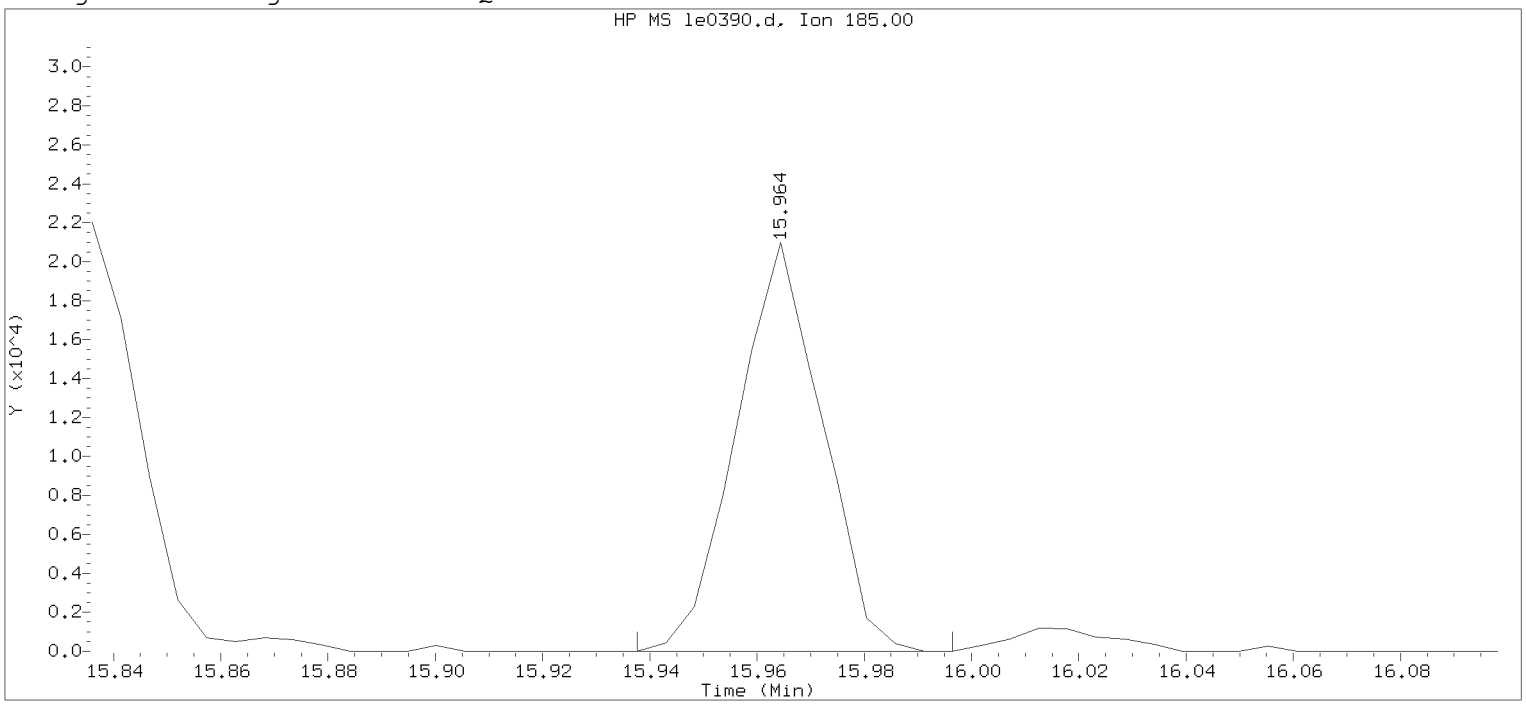
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

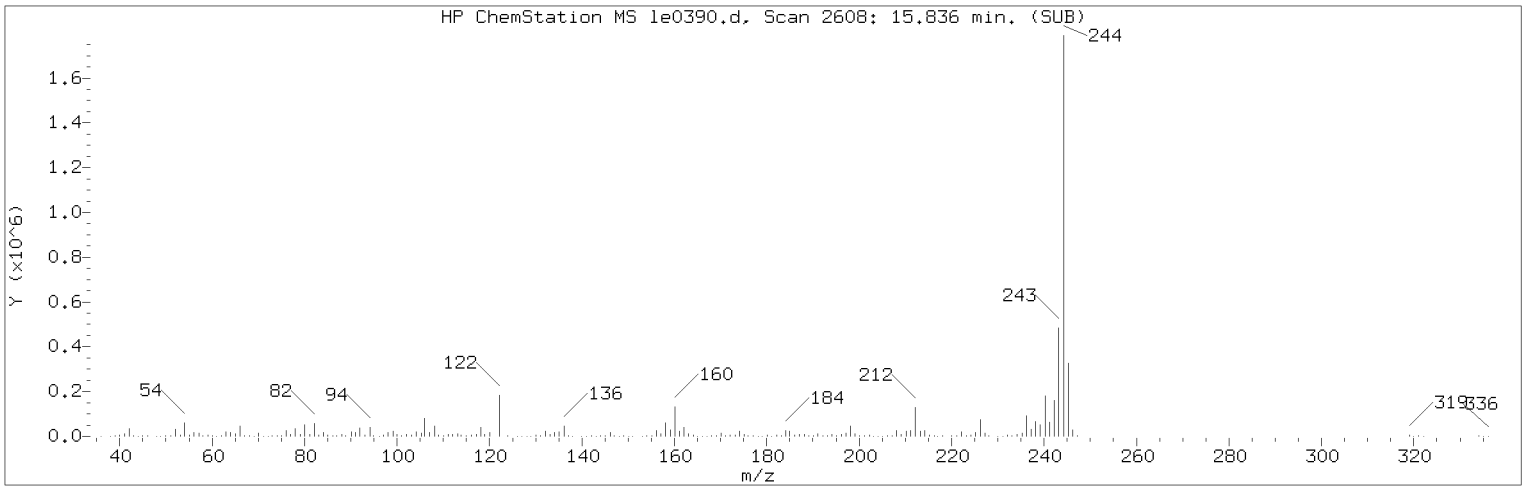
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

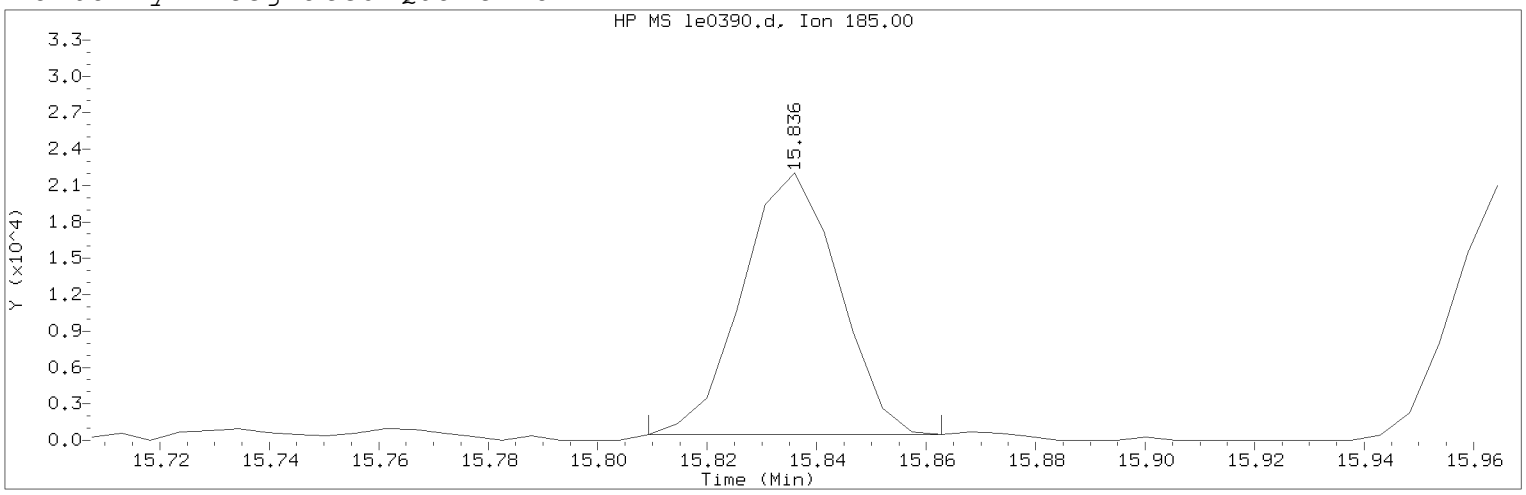
Compound Number : 181
Compound Name : Aramite (2)
Scan Number : 2632
Retention Time (minutes) : 15.964
Quant Ion : 185.00
Area : 23294
On-column Amount (ng/ul) : 40.9828
Integration start scan : 2626 Integration stop scan: 2637
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

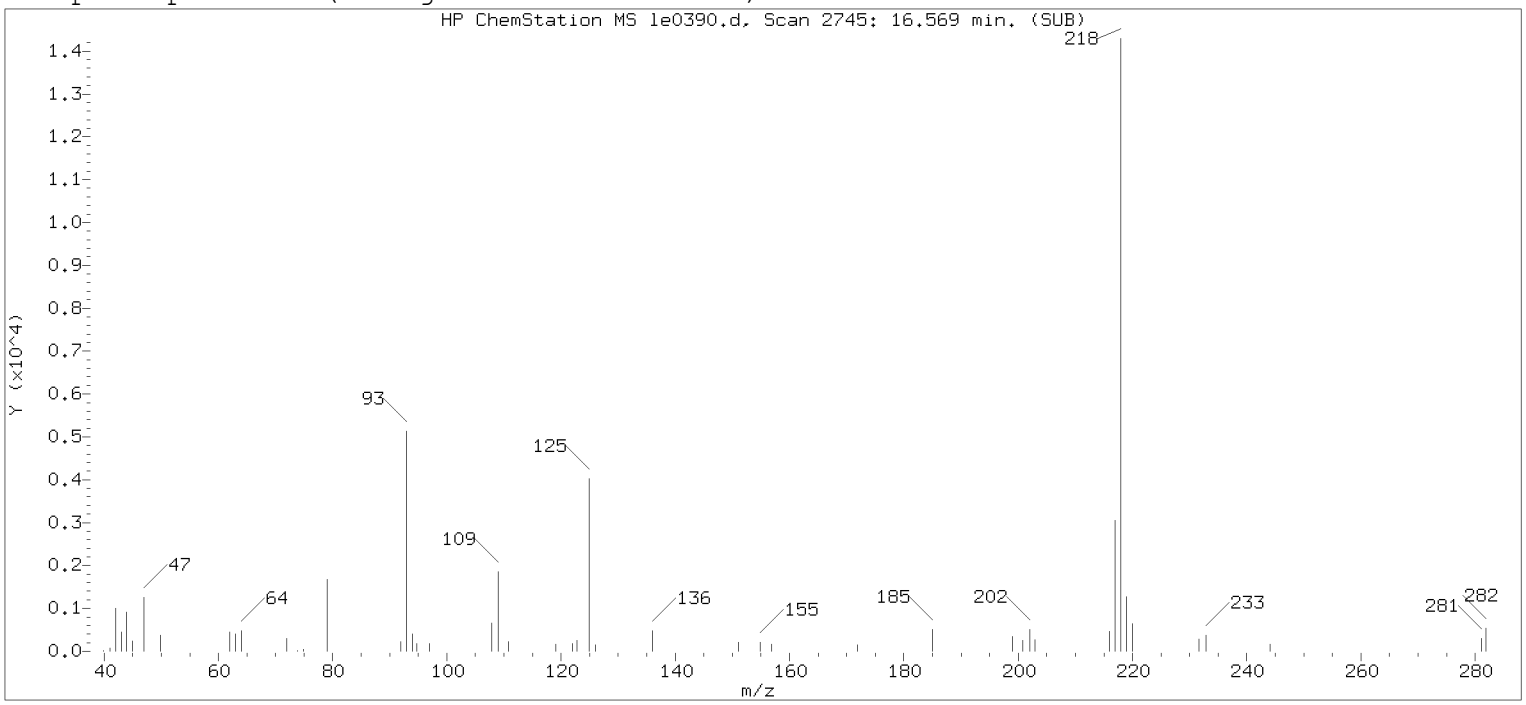
Compound Number : 183
Compound Name : Aramite (3)
Scan Number : 2608
Retention Time (minutes) : 15.836
Quant Ion : 185.00
Area (flag) : 26282M
On-Column Amount (ng/ul) : 0.5015
Integration start scan : 2602 Integration stop scan: 2612
Y at integration start : 486 Y at integration end: 500

Reason for manual integration: improper integration

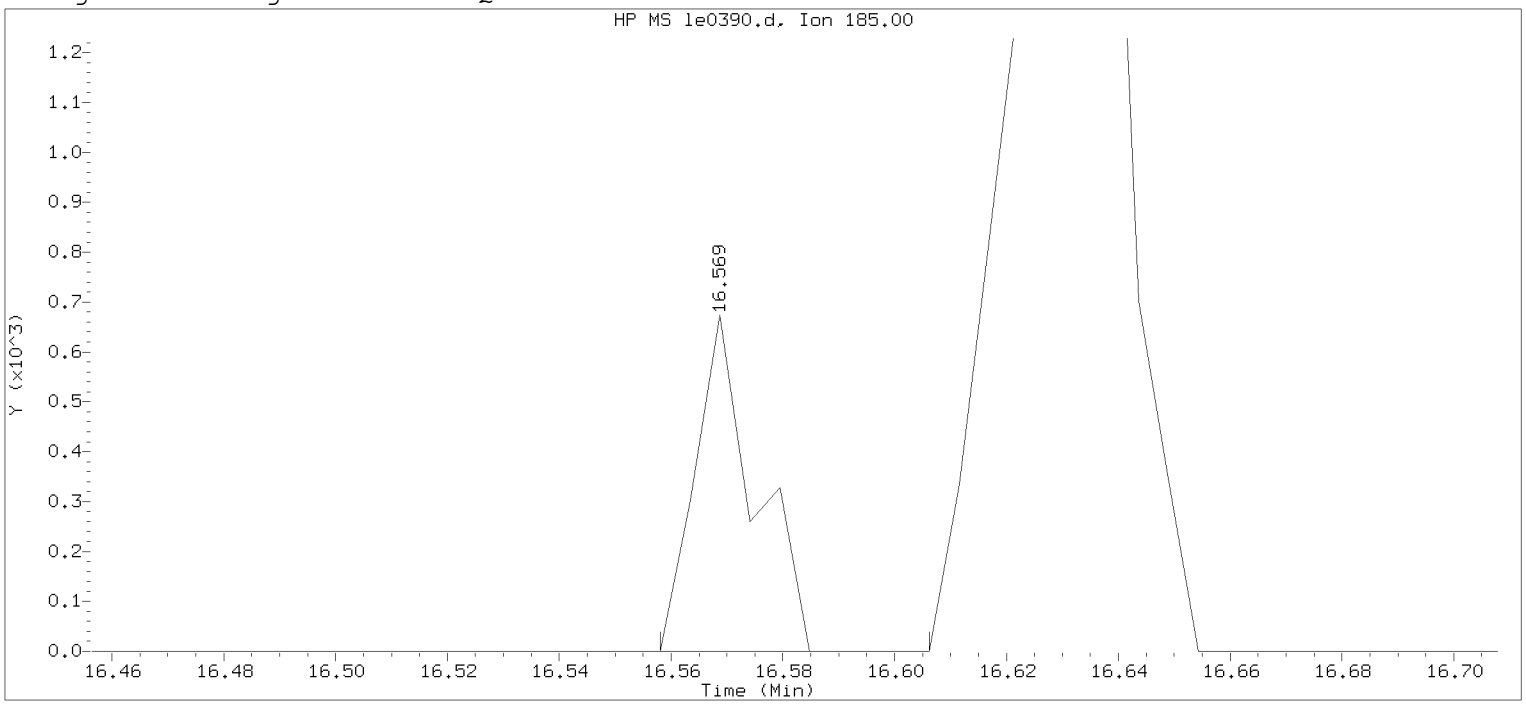
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

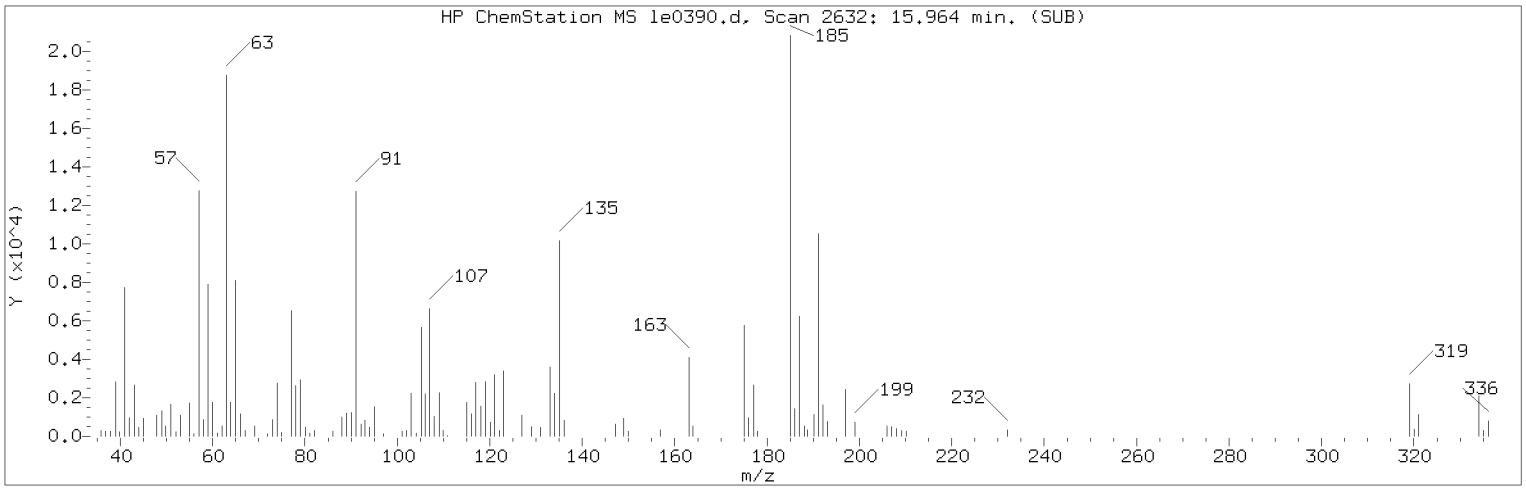
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

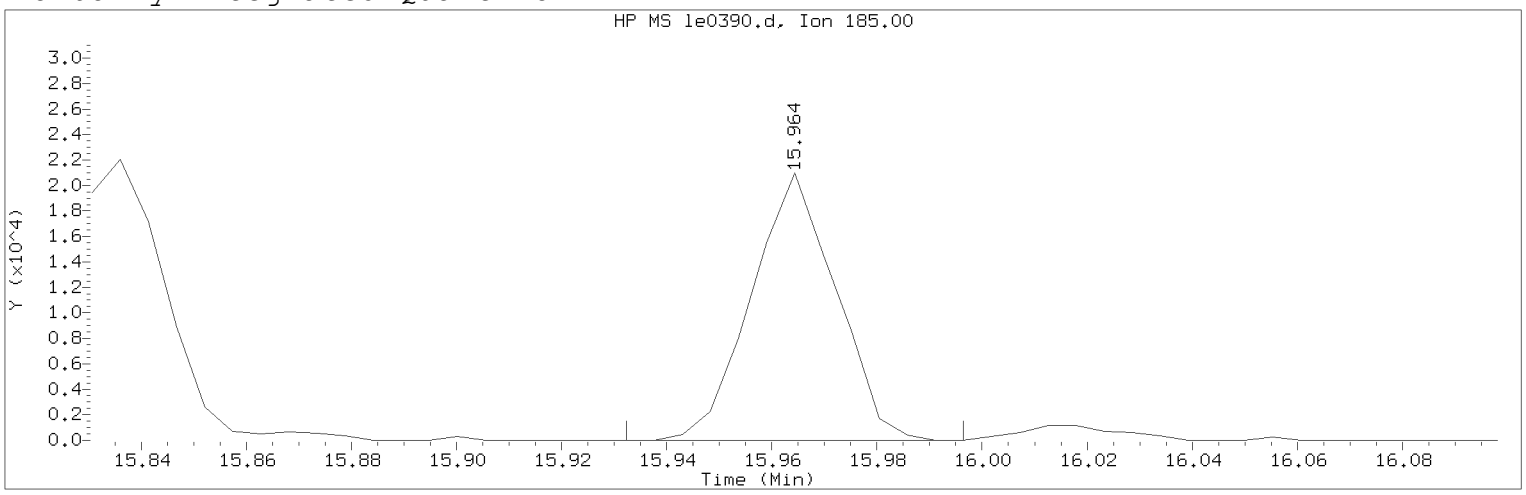
Compound Number : 183
Compound Name : Aramite (3)
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 185.00
Area : 501
On-column Amount (ng/ul) : 0.0096
Integration start scan : 2742 Integration stop scan: 2751
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used. Page 1605

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

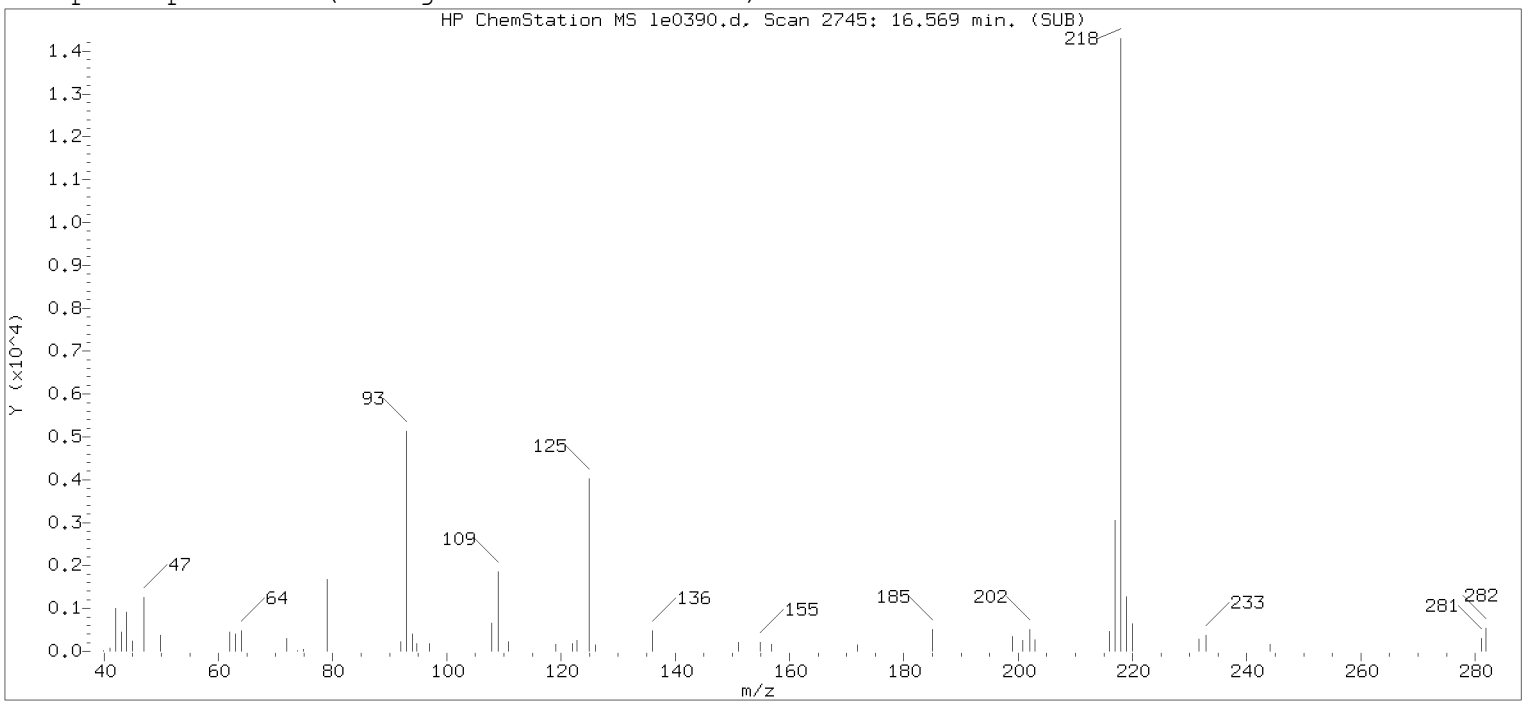
Compound Number : 184
Compound Name : Aramite (4)
Scan Number : 2632
Retention Time (minutes) : 15.964
Quant Ion : 185.00
Area (flag) : 23293M
On-Column Amount (ng/ul) : 0.3312
Integration start scan : 2625 Integration stop scan: 2637
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

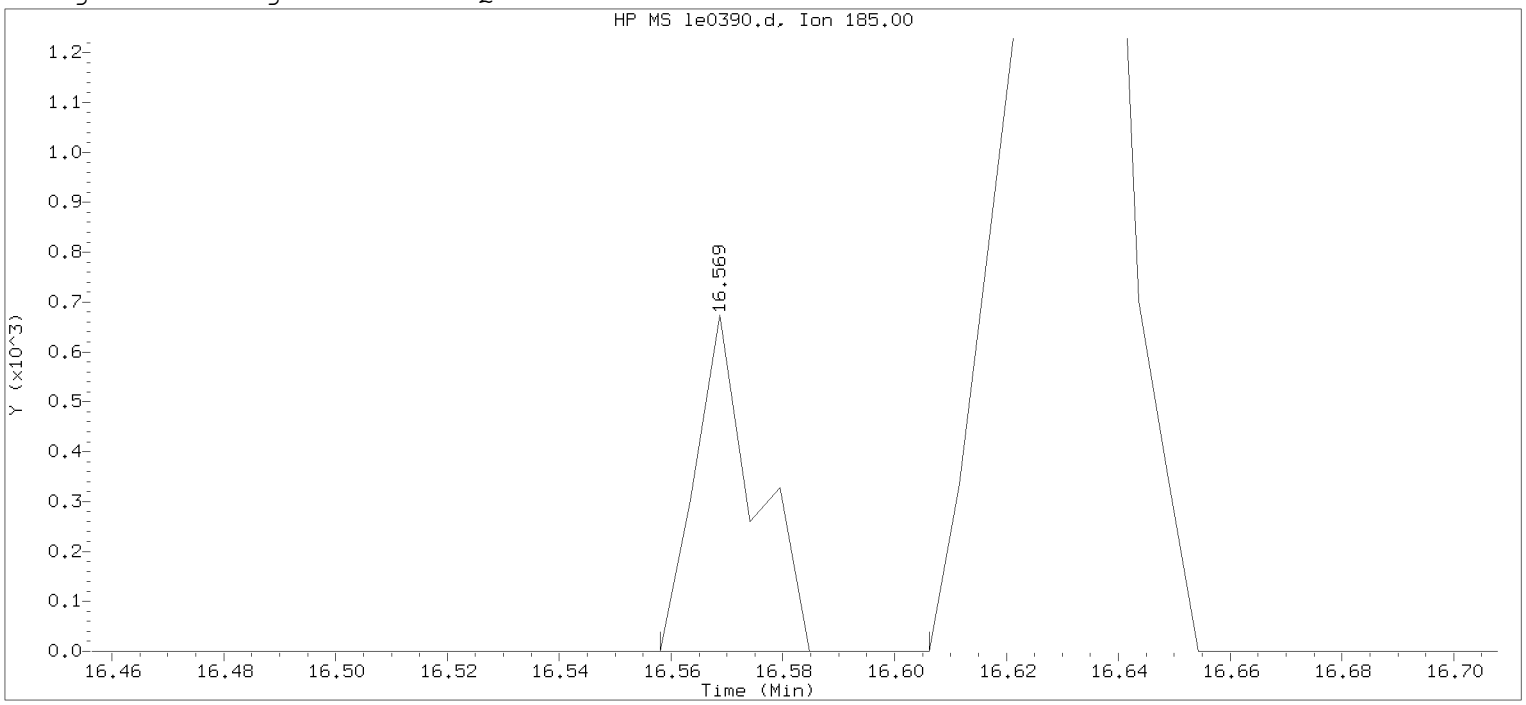
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

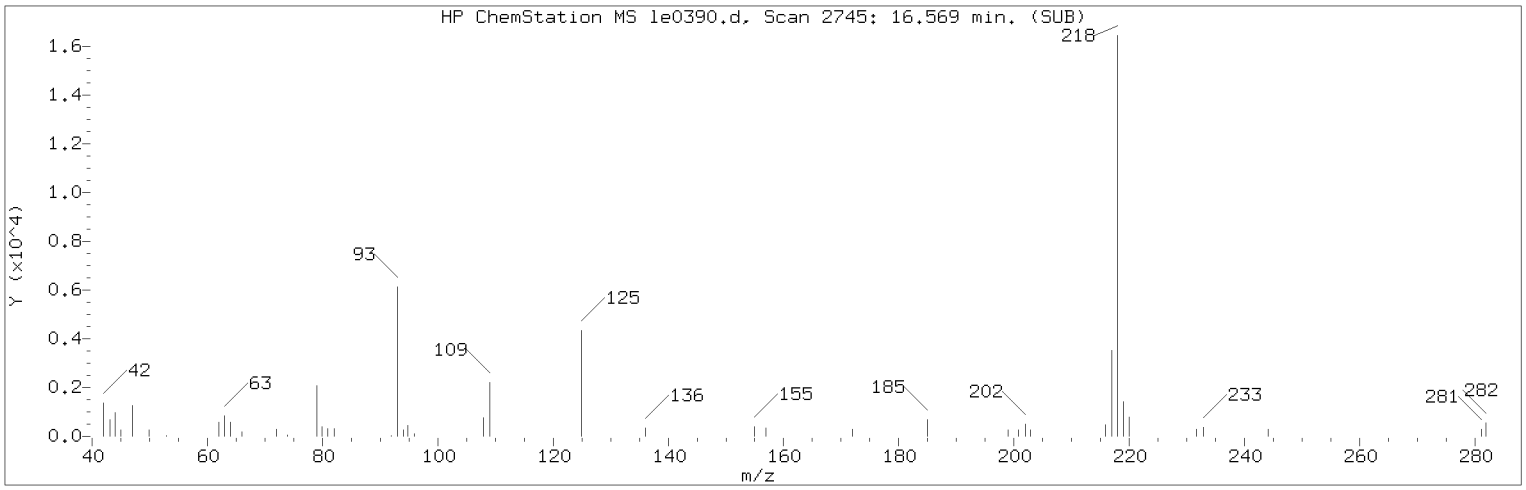
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

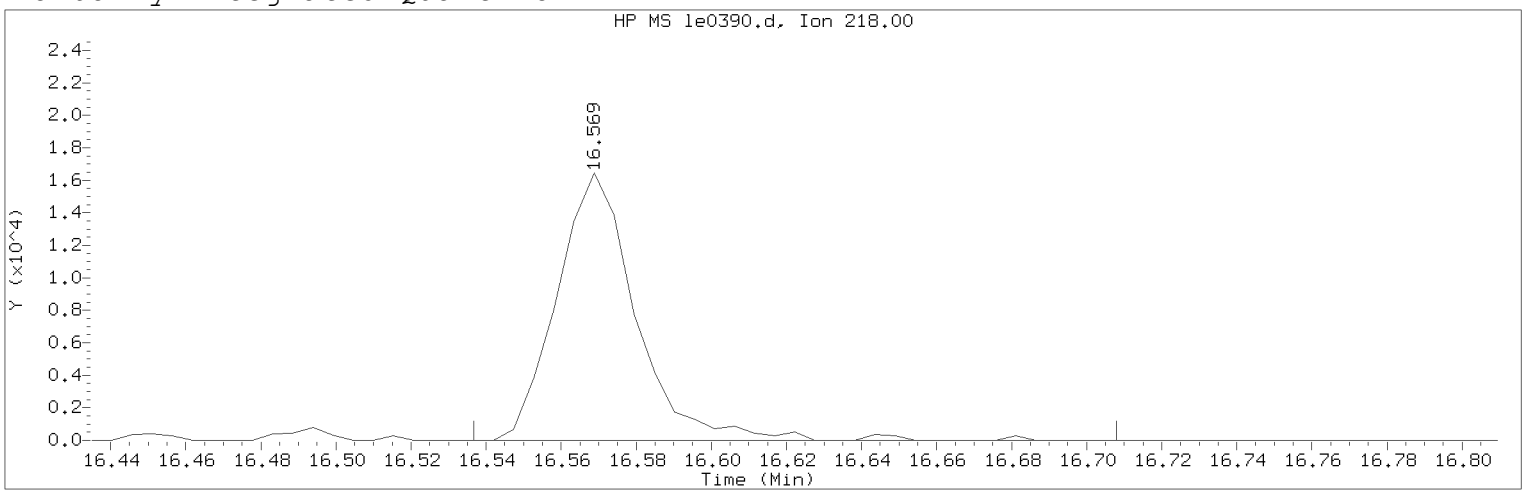
Compound Number : 184
Compound Name : Aramite (4)
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 185.00
Area : 501
On-column Amount (ng/ul) : 0.0071
Integration start scan : 2742 Integration stop scan: 2751
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used. Page 1607

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

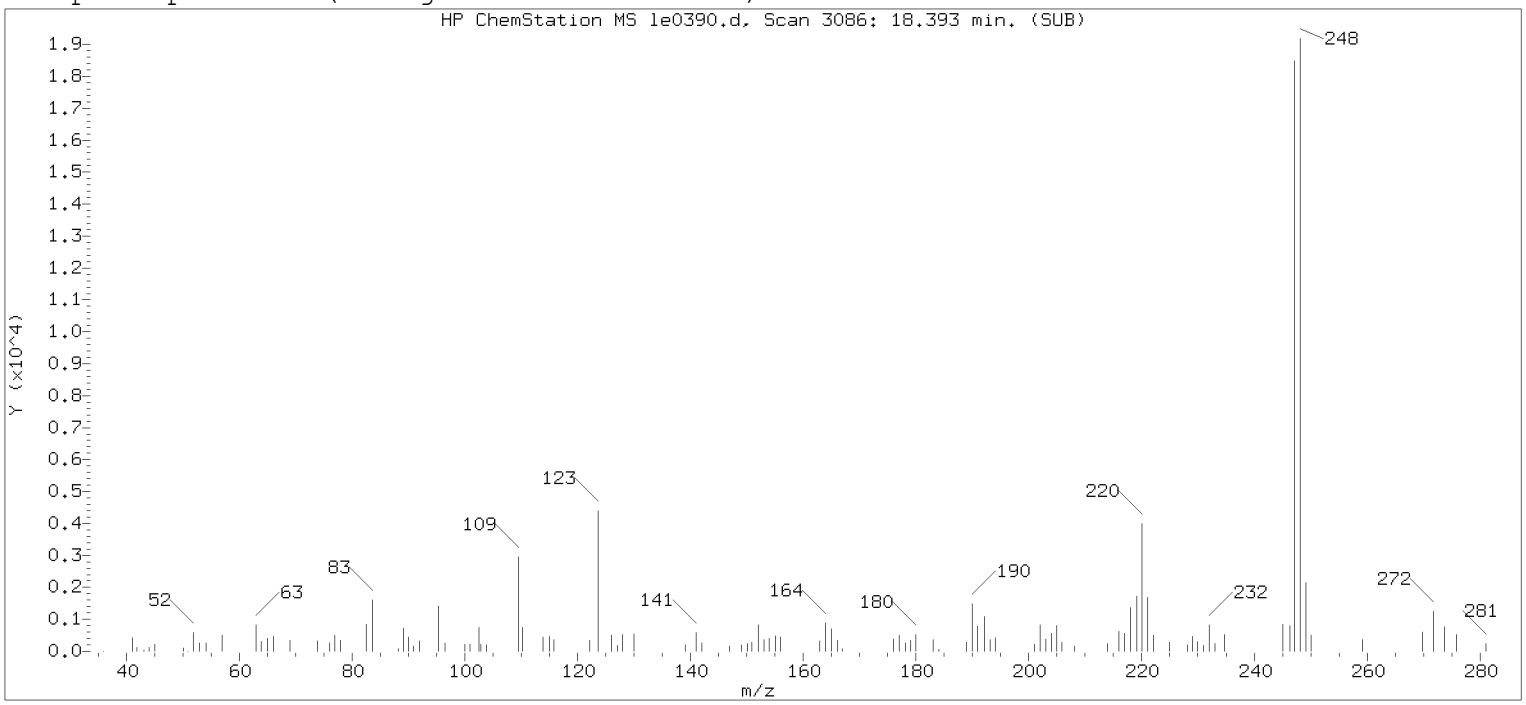
Compound Number : 189
Compound Name : Famphur
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 218.00
Area (flag) : 24076M
On-Column Amount (ng/ul) : 1.7160
Integration start scan : 2738 Integration stop scan: 2770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

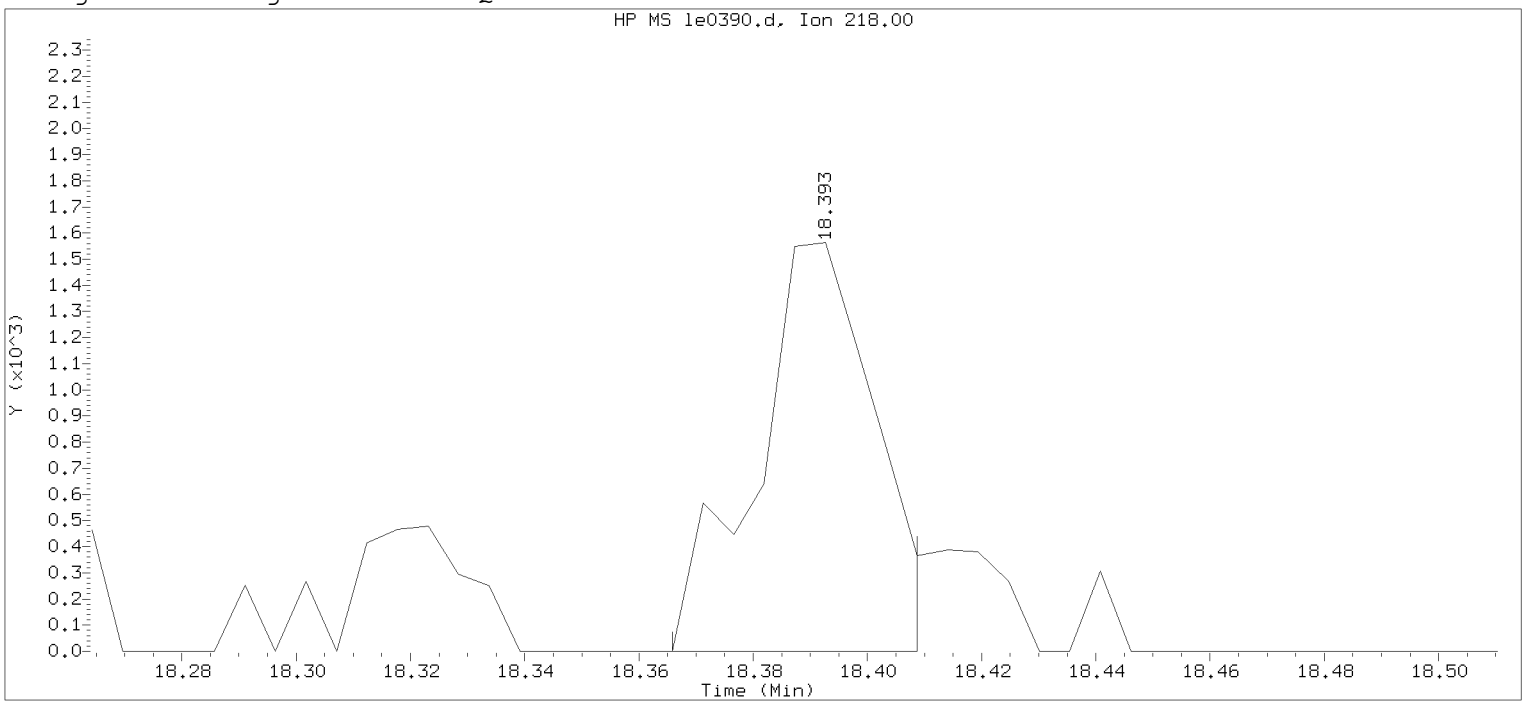
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0390.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 21:39 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCS Lab Sample ID: 131WJLCS

Compound Number : 189
Compound Name : Famphur
Scan Number : 3086
Retention Time (minutes) : 18.393
Quant Ion : 218.00
Area : 2216
On-column Amount (ng/ul) : 1.3455
Integration start scan : 3080 Integration stop scan: 3088
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:46.
Target 3.5 esignature used for this report

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/16may11a.b/le0391.d Injection date and time: **11-MAY-2016 22:07**
Data file Sample Info. Line: 131WJLCSD;131WJLCSD;1;3;LCSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.743	(-0.005)	908	152	133736	(-8)	5.00	
65) Naphthalene-d8	8.722	(0.000)	1278	136	505198	(-8)	5.00	
113) Acenaphthene-d10	11.568	(0.006)	1810	164	288756	(-9)	5.00	
153) Phenanthrene-d10	13.499	(0.006)	2171	188	547877	(-9)	5.00	
175) Pyrene-d10	15.510	(0.006)	2547	212	663601	(-11)	5.00	
213) Perylene-d12	20.056	(0.006)	3397	264	549938	(-12)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.839	(-0.004)	112	1584195	39.339	79%		10 - 103
17) Phenol-d6	(1)	6.225	(-0.001)	99	1673405	31.066	62%		10 - 85
44) Nitrobenzene-d5	(2)	7.594	(0.000)	82	1254534	24.725	99%		46 - 128
93) 2-Fluorobiphenyl	(3)	10.509	(0.000)	172	1958953	23.993	96%		61 - 112
135) 2,4,6-Tribromophenol	(3)	12.627	(-0.001)	330	482615	50.790	102%		22 - 150
179) Terphenyl-d14	(5)	15.831	(0.000)	244	2449615	26.926	108%		41 - 125

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	2.192	(-0.008)	88	175262	8.920	35.68			0.3
4) N-Nitrosodimethylamine	(1)	2.721	(-0.005)	74	317079	10.388	41.55			0.5
5) Pyridine	(1)	2.769	(-0.006)	79	496621	9.516	38.07			0.5
7) 2-Picoline	(1)	3.930	(-0.003)	93	601765	11.231	44.92			0.5
8) N-Nitrosomethylethylamine	(1)	4.117	(-0.001)	88	265596	12.476	49.90			0.5
9) Methyl methanesulfonate	(1)	4.577	(-0.001)	80	308701	12.396	49.58			0.3
13) N-Nitrosodiethylamine	(1)	5.155	(-0.000)	102	256323	12.877	51.51			0.1
15) Ethyl methanesulfonate	(1)	5.620	(-0.000)	109	263078	12.685	50.74			0.1
18) Phenol	(1)	6.246	(-0.000)	94	518814	8.138	32.55			0.1
19) Aniline	(1)	6.251	(-0.000)	93	694039	9.232	36.93			0.1
22) bis(2-Chloroethyl)ether	(1)	6.374	(-0.000)	93	565542	12.124	48.49			0.1
23) 2-Chlorophenol	(1)	6.422	(-0.000)	128	441923	12.025	48.10			0.1
27) Benzyl alcohol	(1)	6.968	(0.000)	108	366520	13.020	52.08			3
31) 2-Methylphenol	(1)	7.166	(-0.000)	108	464226	11.825	47.30			0.1
34) bis(2-Chloroisopropyl)ether	(1)	7.203	(0.000)	45	692359	11.672	46.69			0.1
35) N-Nitrosopyrrolidine	(1)	7.332	(0.000)	100	273794	13.068	52.27			0.1
36) Acetophenone	(1)	7.369	(0.000)	105	751120	11.636	46.55			0.1
37) 4-Methylphenol	(1)	7.401	(0.000)	108	498903	11.543	46.17			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.396	(0.000)	70	448731	12.333	49.33			0.1
39) N-Nitrosomorpholine	(1)	7.407	(0.000)	56	332748	12.252	49.01			0.5
40) o-Toluidine	(1)	7.423	(0.000)	106	683802	9.450	37.80			0.1
43) Hexachloroethane	(1)	7.508	(0.001)	117	205315	11.147	44.59			0.3
45) Nitrobenzene	(2)	7.620	(0.000)	77	657321	12.586	50.34			0.1
48) N-Nitrosopiperidine	(2)	7.861	(0.000)	114	251296	12.995	51.98			0.1
50) Isophorone	(2)	8.011	(0.000)	82	1148319	12.919	51.67			0.1
51) 2-Nitrophenol	(2)	8.123	(0.000)	139	213904	12.912	51.65			0.1
53) 2,4-Dimethylphenol	(2)	8.236	(0.000)	107	447457	10.324	41.30			0.1

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47. Target 3.5 esignature user ID: lmh00956

Data file: /chem/HP20296.i/16may11a.b/le0391.d Injection date and time: **11-MAY-2016 22:07**
Data file Sample Info. Line: 131WJLCSD;131WJLCSD;1;3;LCSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) O,O,O-Triethylphosphorothioate	(2)	8.359(0.000)	198	257800	12.732	50.93			0.5
55) bis(2-Chloroethoxy)methane	(2)	8.391(0.000)	93	683494	12.400	49.60			0.1
60) 2,4-Dichlorophenol	(2)	8.514(-0.000)	162	370568	11.966	47.87			0.1
64) a,a-Dimethylphenethylamine	(2)	8.567(-0.011)	58	1096047M	17.725	70.90		E	1
67) 4-Chloroaniline	(2)	8.861(0.000)	127	473279	10.418	41.67			0.5
68) 2,6-Dichlorophenol	(2)	8.872(0.000)	162	384784	13.027	52.11			0.1
69) Hexachloropropene	(2)	8.904(0.000)	213	209782	9.238	36.95			0.5
71) Hexachlorobutadiene	(2)	8.984(0.000)	225	251111	11.172	44.69			0.1
77) N-Nitrosodi-n-butylamine	(2)	9.450(0.000)	84	425606	12.132	48.53			0.5
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)	9.680(0.000)	107	442461	12.159	48.64			0.1
82) Safrole	(2)	9.776(-0.000)	162	363569	13.182	52.73			0.5
83) 2-Methylnaphthalene	(2)	9.883(0.000)	142	875332	12.338	49.35			0.03
85) Hexachlorocyclopentadiene	(3)	10.156(-0.000)	237	264905	12.881	51.52			1
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.156(0.000)	216	471640	12.416	49.66			0.1
88) cis-Isosafrole	(3)	10.252(0.000)	162	46859	1.604	6.42			0.1
90) 2,4,6-Trichlorophenol	(3)	10.359(-0.000)	196	296820	13.277	53.11			0.1
92) 2,4,5-Trichlorophenol	(3)	10.407(-0.000)	196	289952	12.240	48.96			0.1
94) trans-Isosafrole	(3)	10.621(-0.000)	162	396542	12.821	51.29			0.1
97) Isosafrole	(3)			443401	14.426	57.70			0.5
96) 2-Chloronaphthalene	(3)	10.669(0.000)	162	868310	12.378	49.51			0.1
100) 2-Nitroaniline	(3)	10.856(-0.000)	138	252624	13.443	53.77			0.1
104) 1,4-Naphthoquinone	(3)			Not Detected					6
105) 1,4-Dinitrobenzene	(3)	11.097(-0.000)	168	123578	13.110	52.44			0.3
106) Dimethylphthalate	(3)	11.204(-0.000)	163	443498	5.840	23.36			0.5
107) 1,3-Dinitrobenzene	(3)	11.209(0.000)	168	143571	13.289	53.16			0.5
108) 2,6-Dinitrotoluene	(3)	11.274(0.000)	165	205326	13.404	53.61			0.1
109) Acenaphthylene	(3)	11.338(0.000)	152	1347669	13.456	53.82			0.03
112) 3-Nitroaniline	(3)	11.520(0.000)	138	195292	11.577	46.31			0.1
114) Acenaphthene	(3)	11.616(-0.000)	153	900834	12.775	51.10			0.03
115) 2,4-Dinitrophenol	(3)	11.766(-0.007)	184	179046M	22.318	89.27			3
116) 4-Nitrophenol	(3)	11.819(-0.001)	109	147690	10.536	42.15			3
117) Pentachlorobenzene	(3)	11.814(-0.000)	250	395222	12.761	51.04			0.1
118) 2,4-Dinitrotoluene	(3)	11.883(-0.000)	165	270559	12.615	50.46			0.3
119) Dibenzofuran	(3)	11.873(-0.000)	168	1219734	12.560	50.24			0.1
121) 1-Naphthylamine	(3)	11.985(-0.000)	143	1022137	14.768	59.07			1
122) 2,3,4,6-Tetrachlorophenol	(3)	12.054(-0.000)	232	231822	12.845	51.38			0.1
123) 2-Naphthylamine	(3)	12.092(-0.000)	143	1023188	14.955	59.82			1
124) Diethylphthalate	(3)	12.247(-0.000)	149	715411	9.636	38.54			0.5
125) Thionazin	(3)	12.343(-0.000)	107	189704	12.412	49.65			0.5
126) Fluorene	(3)	12.327(-0.000)	166	976552	13.045	52.18			0.03
127) 4-Chlorophenyl-phenylether	(3)	12.359(-0.000)	204	503222	12.837	51.35			0.1
128) 5-Nitro-o-toluidine	(3)	12.359(-0.000)	152	232554	12.221	48.88			0.1
129) 4-Nitroaniline	(3)	12.365(-0.000)	138	203786	11.625	46.50			0.1
130) 4,6-Dinitro-2-methylphenol	(4)	12.413(-0.000)	198	131838M	11.615	46.46			1
131) N-Nitrosodiphenylamine	(4)	12.504(-0.000)	169	800079	12.586	50.34			0.1
134) 1,2-Diphenylhydrazine	(4)	12.547(-0.000)	77	1332229	13.080	52.32			0.1
139) 1,3,5-Trinitrobenzene	(4)	12.841(-0.000)	213	25122	3.432	13.73		J	1
140) Diallate (peak 1)	(4)	12.878(-0.000)	86	374966	9.205	36.82			0.06
141) Phorate	(4)	12.884(-0.000)	75	743967	13.053	52.21			0.1
142) Phenacetin	(4)	12.905(-0.000)	108	580674	13.486	53.94			0.1
143) 4-Bromophenyl-phenylether	(4)	12.953(0.000)	248	280950	13.378	53.51			0.1
144) Diallate (peak 2)	(4)	12.980(0.000)	86	122451	3.021	12.08			0.06
146) Diallate trans/cis	(4)			497417	12.225	48.90			0.3

E = Compound concentration above calibration range. M = Compound was manually integrated.

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Data file: /chem/HP20296.i/16may11a.b/le0391.d Injection date and time: **11-MAY-2016 22:07**
Data file Sample Info. Line: 131WJLCSD;131WJLCSD;1;3;LCSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
145) Hexachlorobenzene	(4)	13.007(-0.000)	284	287304	13.108	52.43			0.03
147) Dimethoate	(4)	13.076(0.000)	87	91658	2.523	10.09			0.8
149) Pentachlorophenol	(4)	13.274(-0.001)	266	157503	12.136	48.55			0.3
150) 4-Aminobiphenyl	(4)	13.279(-0.000)	169	750431	12.228	48.91			0.1
151) Pentachloronitrobenzene	(4)	13.279(-0.000)	237	141315	13.452	53.81			0.5
152) Pronamide	(4)	13.386(-0.000)	173	460175	13.399	53.60			0.1
155) Phenanthrene	(4)	13.531(-0.000)	178	1440024	12.475	49.90			0.03
157) Anthracene	(4)	13.595(-0.000)	178	1458847	12.852	51.41			0.03
162) Disulfoton	(4)	13.547(-0.000)	88	1301018M	32.617	130.47		E	6
164) Methyl parathion	(4)	14.028(-0.000)	109	279855	10.832	43.33			0.3
165) Di-n-butylphthalate	(4)	14.349(-0.000)	149	1456510	11.526	46.10			0.5
167) Parathion	(4)	14.584(-0.000)	109	248655	15.235	60.94			0.5
168) 4-Nitroquinoline-1-oxide	(4)	14.611(-0.002)	190	1330208	133.340	533.36		E	5
170) Methapyrilene	(4)	14.745(-0.000)	97	4389445	109.284	437.13		E	4
171) Isodrin	(4)	14.975(-0.000)	193	185934	13.725	54.90			0.1
173) Fluoranthene	(4)	15.200(-0.000)	202	1683274	13.389	53.56			0.03
177) Pyrene	(5)	15.542(-0.000)	202	1749111	12.152	48.61			0.03
180) Aramite (1)	(5)	15.734(-0.000)	185	2076M	3.728	14.91			0.3
181) Aramite (2)	(5)	15.761(-0.000)	185	2335M	4.261	17.05			0.3
183) Aramite (3)	(5)	15.836(-0.000)	185	50021M	0.990	3.96			0.3
184) Aramite (4)	(5)	15.964(-0.000)	185	47805M	0.705	2.82		J	0.3
186) Aramite	(5)			102237	9.684	38.74			1
182) p-Dimethylaminoazobenzene	(5)	16.066(-0.000)	225	347774	14.048	56.19			0.1
185) Chlorobenzilate	(5)	16.157(-0.000)	139	230321	5.847	23.39			0.8
187) 3,3'-Dimethylbenzidine	(5)	16.628(-0.000)	212	919604	11.076	44.31		J	6
188) Butylbenzylphthalate	(5)	16.692(-0.000)	149	554398	9.643	38.57			0.5
189) Famphur	(5)			Not Detected					6
190) Kepone	(5)			Not Detected					6
191) 2-Acetylaminofluorene	(5)	17.056(-0.000)	181	794510	17.029	68.12			0.5
193) 3,3'-Dichlorobenzidine	(5)	17.564(-0.000)	252	588731	12.696	50.79			0.5
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.585(-0.000)	231	336754	12.573	50.29			1
195) Benzo(a)anthracene	(5)	17.569(-0.000)	228	1823575	14.621	58.49			0.03
196) Chrysene	(5)	17.633(-0.000)	228	1739841	14.630	58.52			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	17.772(-0.000)	149	1185603	14.363	57.45			0.5
205) Di-n-octylphthalate	(6)	18.944(0.000)	149	2134576	13.775	55.10			0.5
206) Benzo(b)fluoranthene	(6)	19.441(-0.000)	252	1774700	13.201	52.80			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.446(0.000)	256	662381	11.340	45.36			0.1
208) Benzo(k)fluoranthene	(6)	19.489(-0.000)	252	1775012	13.261	53.04			0.03
211) Benzo(a)pyrene	(6)	19.970(-0.000)	252	1619632	13.201	52.80			0.03
215) 3-Methylcholanthrene	(6)	20.548(-0.000)	268	828970	16.167	64.67			0.1
219) Indeno(1,2,3-cd)pyrene	(6)	21.682(-0.000)	276	1692763	11.797	47.19			0.03
220) Dibenz(a,h)anthracene	(6)	21.725(-0.000)	278	1480497	12.306	49.22			0.03
221) Benzo(g,h,i)perylene	(6)	22.078(-0.000)	276	1393976	11.386	45.54			0.03

E = Compound concentration above calibration range. M = Compound was manually integrated.

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Data file: /chem/HP20296.i/16may11a.b/le0391.d Injection date and time: **11-MAY-2016 22:07**
Data file Sample Info. Line: 131WJLCSD;131WJLCSD;1;3;LCSD;;8270MINI; Instrument ID: **HP20296.i** Batch: **16131WAJ**
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Blank Data file reference: **/chem/HP20296.i/16may11a.b/le0389.d**

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: **131WAJ**
Calibration date and time (Last Method Edit): 17-MAY-2016 11:08
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/16may11a.b/le0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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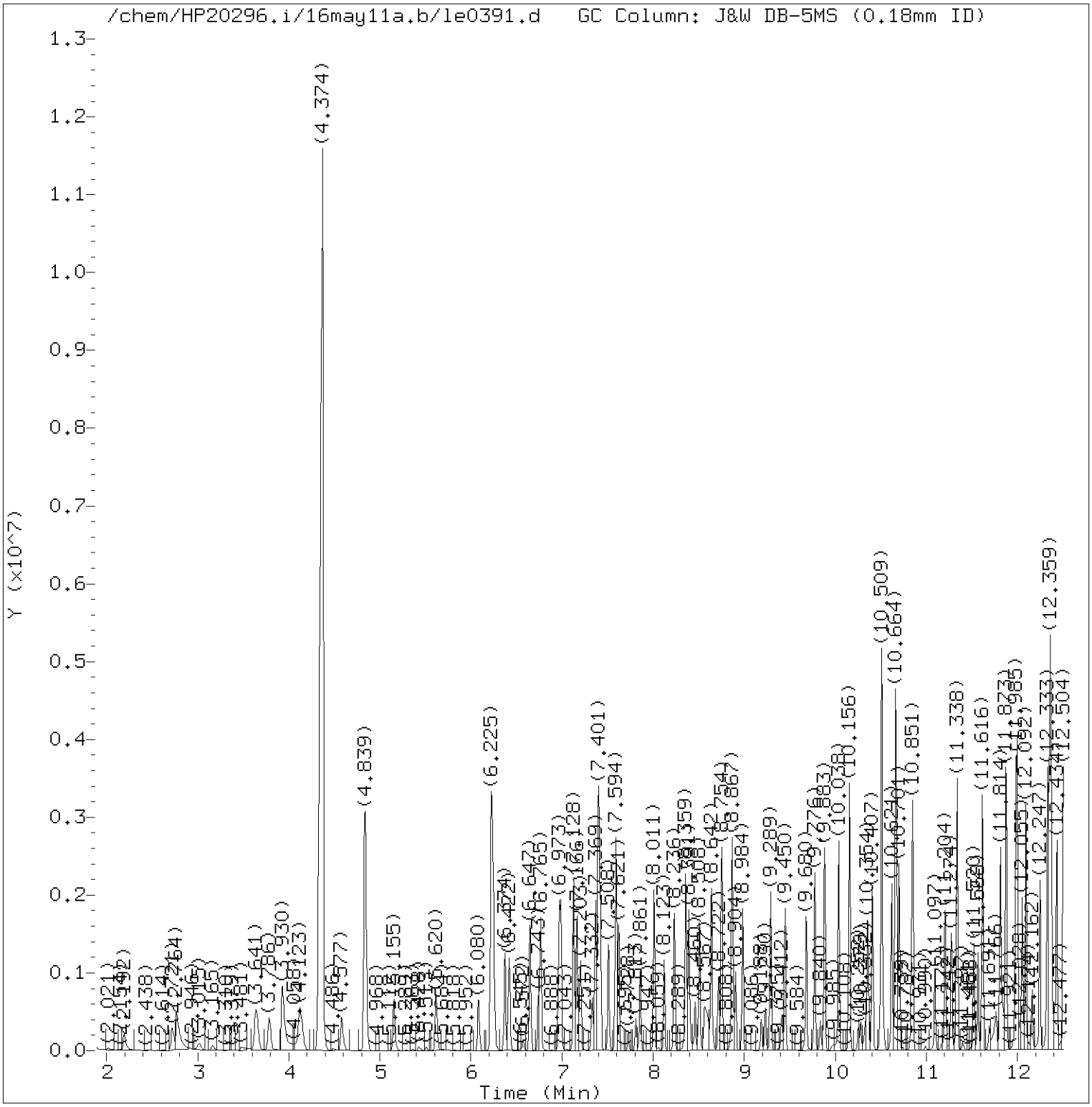
Total number of targets = 124

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05. PARALLAX ID: mar00486



Total Ion Chromatogram (TIC)

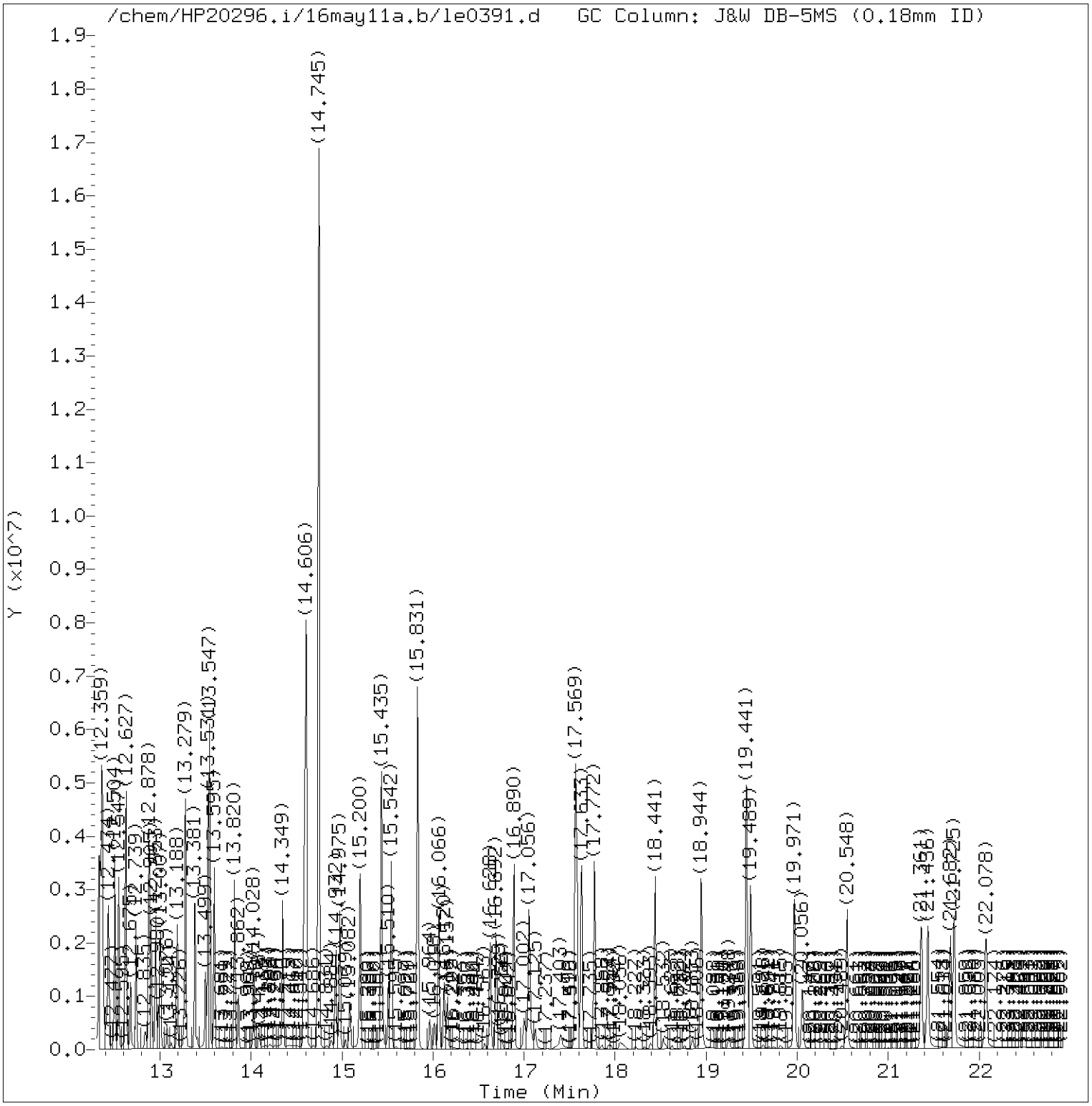
Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.192	88	175262	8.920
4) N-Nitrosodimethylamine	(1)	2.721	74	317079	10.388
5) Pyridine	(1)	2.769	79	496621	9.516
7) 2-Picoline	(1)	3.930	93	601765	11.231
8) N-Nitrosomethylethylamine	(1)	4.117	88	265596	12.476
9) Methyl methanesulfonate	(1)	4.577	80	308701	12.396
11)$2-Fluorophenol	(1)	4.839	112	1584195	39.339
13) N-Nitrosodiethylamine	(1)	5.155	102	256323	12.877
15) Ethyl methanesulfonate	(1)	5.620	109	263078	12.685
17)$Phenol-d6	(1)	6.225	99	1673405	31.066
18) Phenol	(1)	6.246	94	518814	8.138
19) Aniline	(1)	6.251	93	694039	9.232
22) bis(2-Chloroethyl)ether	(1)	6.374	93	565542	12.124
23) 2-Chlorophenol	(1)	6.422	128	441923	12.025
25)*1,4-Dichlorobenzene-d4	(1)	6.743	152	133736	5.000
27) Benzyl alcohol	(1)	6.968	108	366520	13.020
31) 2-Methylphenol	(1)	7.166	108	464226	11.825
34) bis(2-Chloroisopropyl)ether	(1)	7.203	45	692359	11.672
35) N-Nitrosopyrrolidine	(1)	7.332	100	273794	13.068
36) Acetophenone	(1)	7.369	105	751120	11.636
97) Isosafrole	(3)			443401	14.426
38) N-Nitroso-di-n-propylamine	(1)	7.396	70	448731	12.333
37) 4-Methylphenol	(1)	7.401	108	498903	11.543
39) N-Nitrosomorpholine	(1)	7.407	56	332748	12.252
40) o-Toluidine	(1)	7.423	106	683802	9.450
43) Hexachloroethane	(1)	7.508	117	205315	11.147
44)$Nitrobenzene-d5	(2)	7.594	82	1254534	24.725
45) Nitrobenzene	(2)	7.621	77	657321	12.586
48) N-Nitrosopiperidine	(2)	7.861	114	251296	12.995
50) Isophorone	(2)	8.011	82	1148319	12.919
51) 2-Nitrophenol	(2)	8.123	139	213904	12.912
53) 2,4-Dimethylphenol	(2)	8.236	107	447457	10.324
57) O,O,O-Triethylphosphorothioate	(2)	8.359	198	257800	12.732
55) bis(2-Chloroethoxy)methane	(2)	8.391	93	683494	12.400
60) 2,4-Dichlorophenol	(2)	8.514	162	370568	11.966
64) a,a-Dimethylphenethylamine	(2)	8.567	58	1096047M	17.725
65)*Naphthalene-d8	(2)	8.722	136	505198	5.000
146) Diallate trans/cis	(4)			497417	12.225
67) 4-Chloroaniline	(2)	8.861	127	473279	10.418
68) 2,6-Dichlorophenol	(2)	8.872	162	384784	13.027

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
69) Hexachloropropene	(2)	8.904	213	209782	9.238
71) Hexachlorobutadiene	(2)	8.984	225	251111	11.172
77) N-Nitrosodi-n-butylamine	(2)	9.450	84	425606	12.132
80) 4-Chloro-3-methylphenol	(2)	9.680	107	442461	12.159
82) Safrole	(2)	9.776	162	363569	13.182
83) 2-Methylnaphthalene	(2)	9.883	142	875332	12.338
85) Hexachlorocyclopentadiene	(3)	10.156	237	264905	12.881
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.156	216	471640	12.416
88) cis-Isosafrole	(3)	10.252	162	46859	1.604
90) 2,4,6-Trichlorophenol	(3)	10.359	196	296820	13.277
92) 2,4,5-Trichlorophenol	(3)	10.407	196	289952	12.240
93)$2-Fluorobiphenyl	(3)	10.509	172	1958953	23.993
186) Aramite	(5)			102237	9.684
94) trans-Isosafrole	(3)	10.621	162	396542	12.821
96) 2-Chloronaphthalene	(3)	10.669	162	868310	12.378
100) 2-Nitroaniline	(3)	10.856	138	252624	13.443
105) 1,4-Dinitrobenzene	(3)	11.097	168	123578	13.110
106) Dimethylphthalate	(3)	11.204	163	443498	5.840
107) 1,3-Dinitrobenzene	(3)	11.209	168	143571	13.289
108) 2,6-Dinitrotoluene	(3)	11.274	165	205326	13.404
109) Acenaphthylene	(3)	11.338	152	1347669	13.456
112) 3-Nitroaniline	(3)	11.520	138	195292	11.577
113)*Acenaphthene-d10	(3)	11.568	164	288756	5.000
114) Acenaphthene	(3)	11.616	153	900834	12.775
115) 2,4-Dinitrophenol	(3)	11.766	184	179046M	22.318
117) Pentachlorobenzene	(3)	11.814	250	395222	12.761
116) 4-Nitrophenol	(3)	11.819	109	147690	10.536
119) Dibenzofuran	(3)	11.873	168	1219734	12.560
118) 2,4-Dinitrotoluene	(3)	11.883	165	270559	12.615
121) 1-Naphthylamine	(3)	11.985	143	1022137	14.768
122) 2,3,4,6-Tetrachlorophenol	(3)	12.055	232	231822	12.845
123) 2-Naphthylamine	(3)	12.092	143	1023188	14.955
124) Diethylphthalate	(3)	12.247	149	715411	9.636
126) Fluorene	(3)	12.327	166	976552	13.045
125) Thionazin	(3)	12.343	107	189704	12.412
128) 5-Nitro-o-toluidine	(3)	12.359	152	232554	12.221
127) 4-Chlorophenyl-phenylether	(3)	12.359	204	503222	12.837
129) 4-Nitroaniline	(3)	12.365	138	203786	11.625
130) 4,6-Dinitro-2-methylphenol	(4)	12.413	198	131838M	11.615
131) N-Nitrosodiphenylamine	(4)	12.504	169	800079	12.586

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
134) 1,2-Diphenylhydrazine	(4)	12.547	77	1332229	13.080
135)$2,4,6-Tribromophenol	(3)	12.627	330	482615	50.790
139) 1,3,5-Trinitrobenzene	(4)	12.841	213	25122	3.432
140) Diallate (peak 1)	(4)	12.878	86	374966	9.205
141) Phorate	(4)	12.884	75	743967	13.053
142) Phenacetin	(4)	12.905	108	580674	13.486
143) 4-Bromophenyl-phenylether	(4)	12.953	248	280950	13.378
144) Diallate (peak 2)	(4)	12.980	86	122451	3.021
145) Hexachlorobenzene	(4)	13.007	284	287304	13.108
147) Dimethoate	(4)	13.076	87	91658	2.523
149) Pentachlorophenol	(4)	13.274	266	157503	12.136
150) 4-Aminobiphenyl	(4)	13.279	169	750431	12.228
151) Pentachloronitrobenzene	(4)	13.279	237	141315	13.452
152) Pronamide	(4)	13.386	173	460175	13.399
153)*Phenanthrene-d10	(4)	13.499	188	547877	5.000
155) Phenanthrene	(4)	13.531	178	1440024	12.475
162) Disulfoton	(4)	13.547	88	1301018M	32.617
157) Anthracene	(4)	13.595	178	1458847	12.852
164) Methyl parathion	(4)	14.028	109	279855	10.832
165) Di-n-butylphthalate	(4)	14.349	149	1456510	11.526
167) Parathion	(4)	14.584	109	248655	15.235
168) 4-Nitroquinoline-1-oxide	(4)	14.611	190	1330208	133.340
170) Methapyrilene	(4)	14.745	97	4389445	109.284
171) Isodrin	(4)	14.975	193	185934	13.725
173) Fluoranthene	(4)	15.200	202	1683274	13.389
175)*Pyrene-d10	(5)	15.510	212	663601	5.000
177) Pyrene	(5)	15.542	202	1749111	12.152
180) Aramite (1)	(5)	15.734	185	2076M	3.728
181) Aramite (2)	(5)	15.761	185	2335M	4.261
179)$Terphenyl-d14	(5)	15.831	244	2449615	26.926
183) Aramite (3)	(5)	15.836	185	50021M	0.990
184) Aramite (4)	(5)	15.964	185	47805M	0.705
182) p-Dimethylaminoazobenzene	(5)	16.066	225	347774	14.048
185) Chlorobenzilate	(5)	16.157	139	230321	5.847
187) 3,3'-Dimethylbenzidine	(5)	16.628	212	919604	11.076
188) Butylbenzylphthalate	(5)	16.692	149	554398	9.643
191) 2-Acetylaminofluorene	(5)	17.056	181	794510	17.029
193) 3,3'-Dichlorobenzidine	(5)	17.564	252	588731	12.696
195) Benzo(a)anthracene	(5)	17.569	228	1823575	14.621
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.585	231	336754	12.573

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

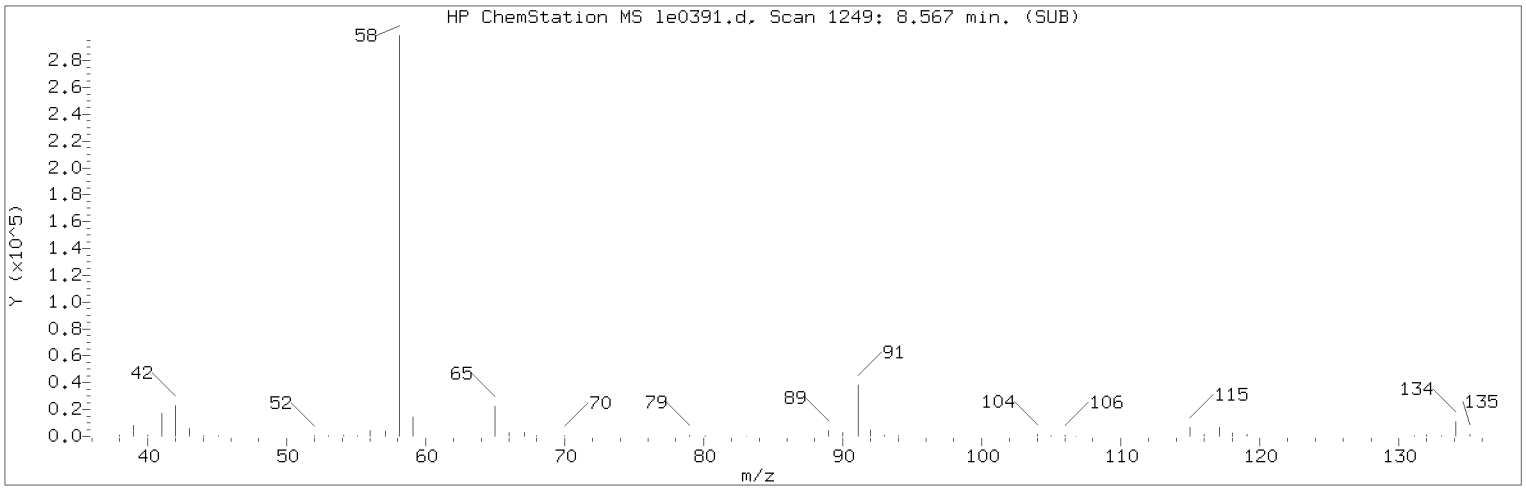
Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
196) Chrysene	(5)	17.633	228	1739841	14.630
199) bis(2-Ethylhexyl)phthalate	(5)	17.772	149	1185603	14.363
205) Di-n-octylphthalate	(6)	18.944	149	2134576	13.775
206) Benzo(b)fluoranthene	(6)	19.441	252	1774700	13.201
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.446	256	662381	11.340
208) Benzo(k)fluoranthene	(6)	19.489	252	1775012	13.261
211) Benzo(a)pyrene	(6)	19.971	252	1619632	13.201
213)*Perylene-d12	(6)	20.056	264	549938	5.000
215) 3-Methylcholanthrene	(6)	20.548	268	828970	16.167
219) Indeno(1,2,3-cd)pyrene	(6)	21.682	276	1692763	11.797
220) Dibenz(a,h)anthracene	(6)	21.725	278	1480497	12.306
221) Benzo(g,h,i)perylene	(6)	22.078	276	1393976	11.386

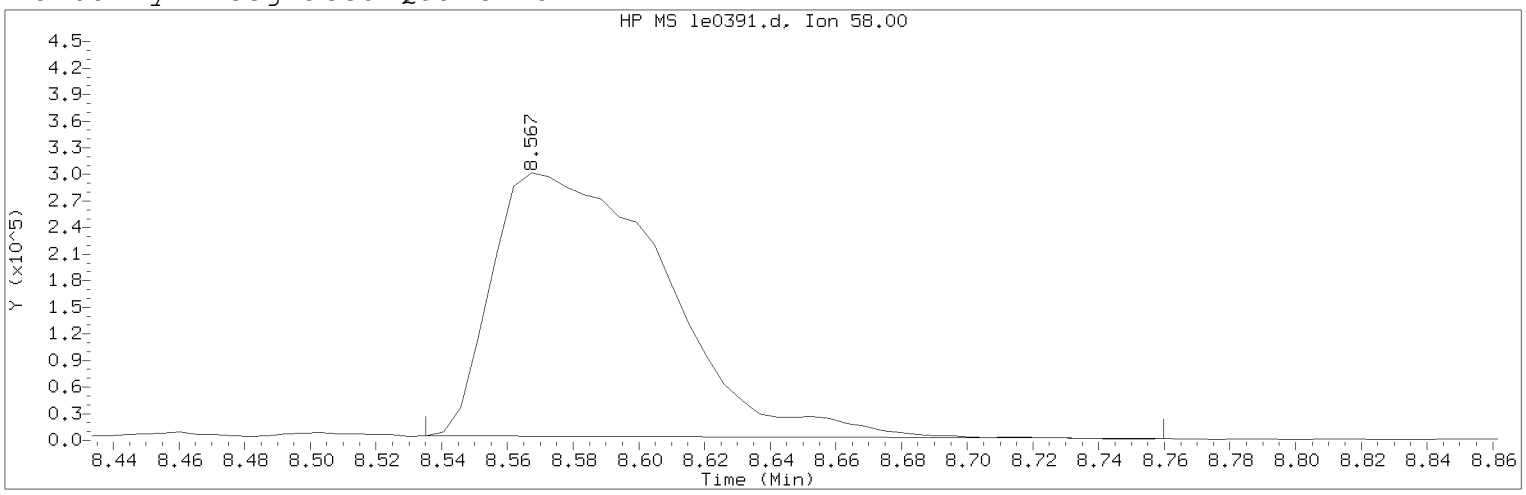
* = Compound is an internal standard.

Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

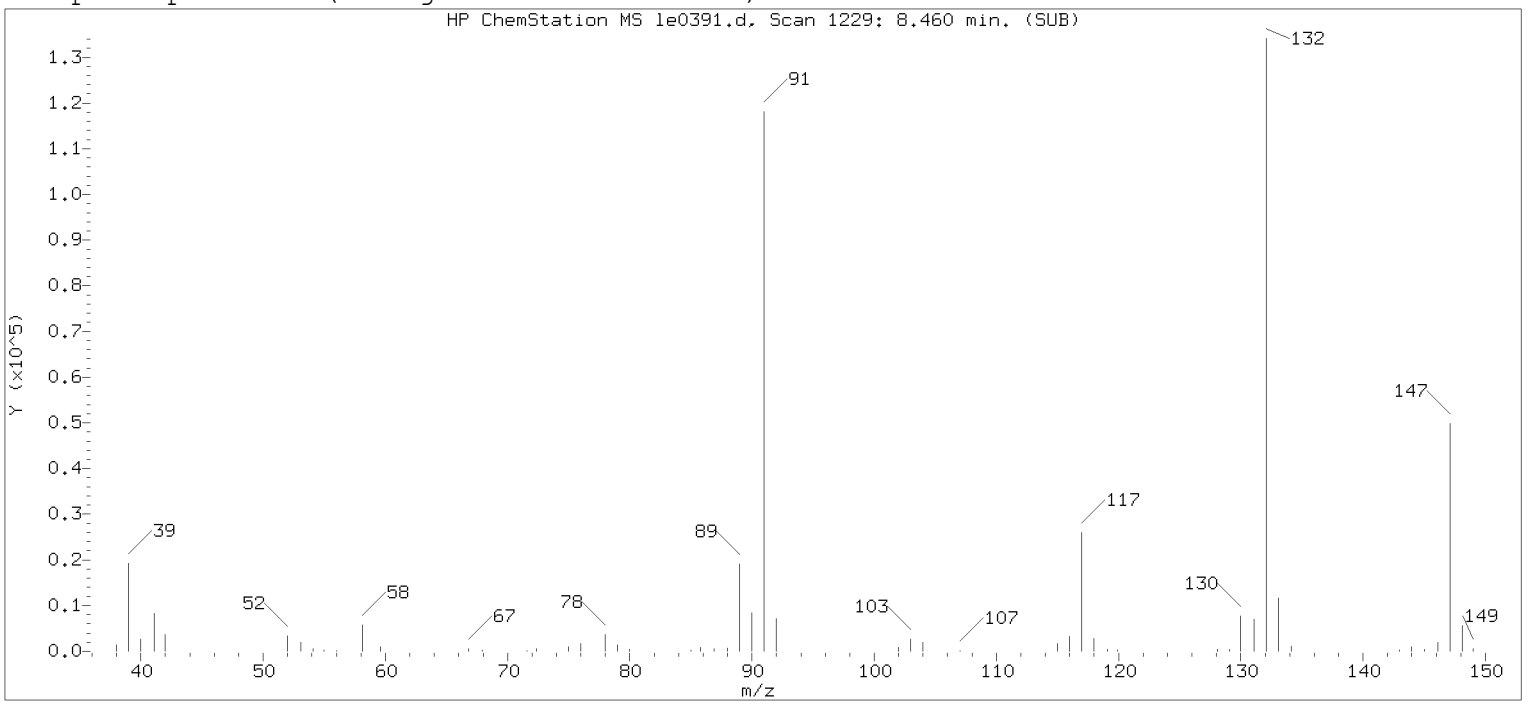
Compound Number : 64
Compound Name : a,a-Dimethylphenethylamine
Scan Number : 1249
Retention Time (minutes) : 8.567
Quant Ion : 58.00
Area (flag) : 1096047M
On-Column Amount (ng/ul) : 17.7250
Integration start scan : 1242 Integration stop scan: 1284
Y at integration start : 4794 Y at integration end: 1953

Reason for manual integration: improper integration

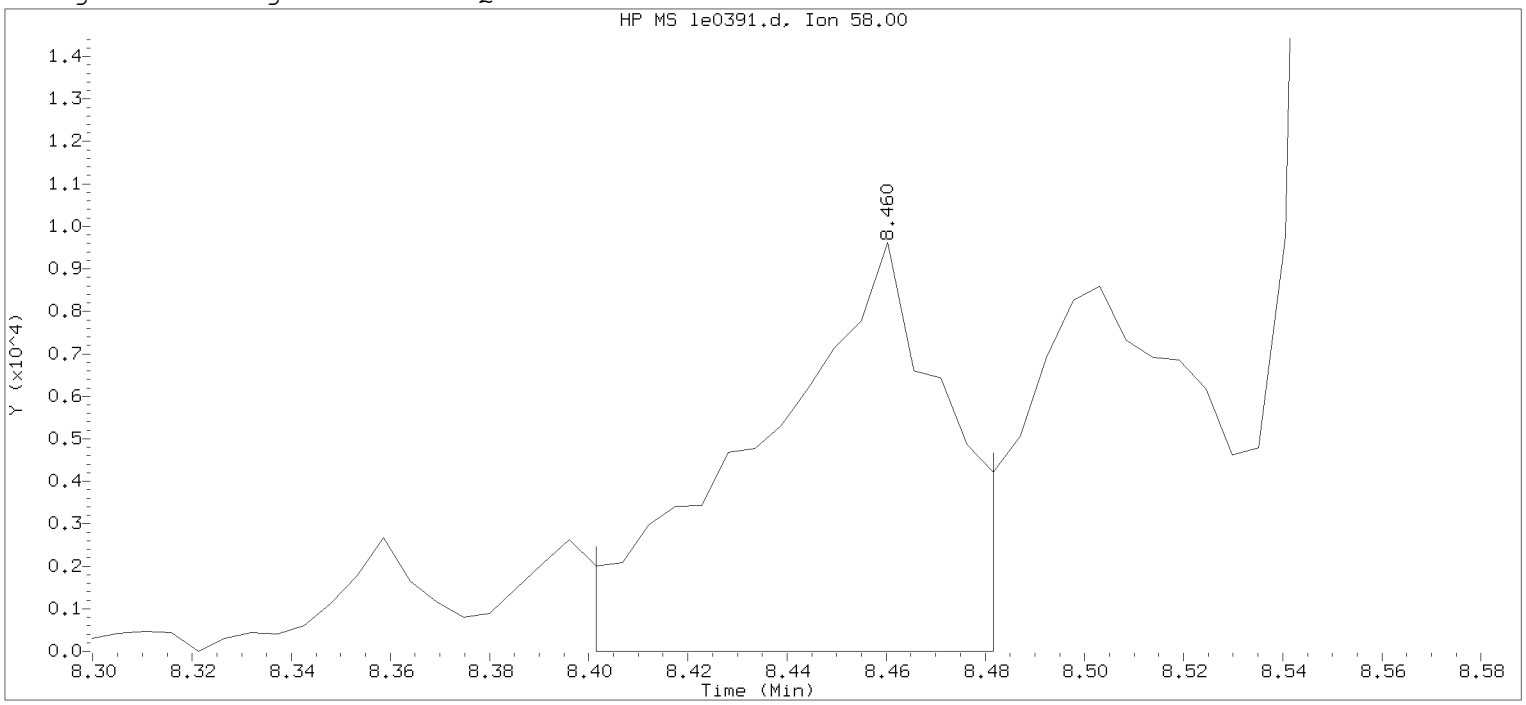
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compound Number	: 64		
Compound Name	: a,a-Dimethylphenethylamine		
Scan Number	: 1229		
Retention Time (minutes)	: 8.460		
Quant Ion	: 58.00		
Area	: 25159		
On-column Amount (ng/ul)	: 0.4069		
Integration start scan	: 1217	Integration stop scan:	1232
Y at integration start	: 0	Y at integration end:	0

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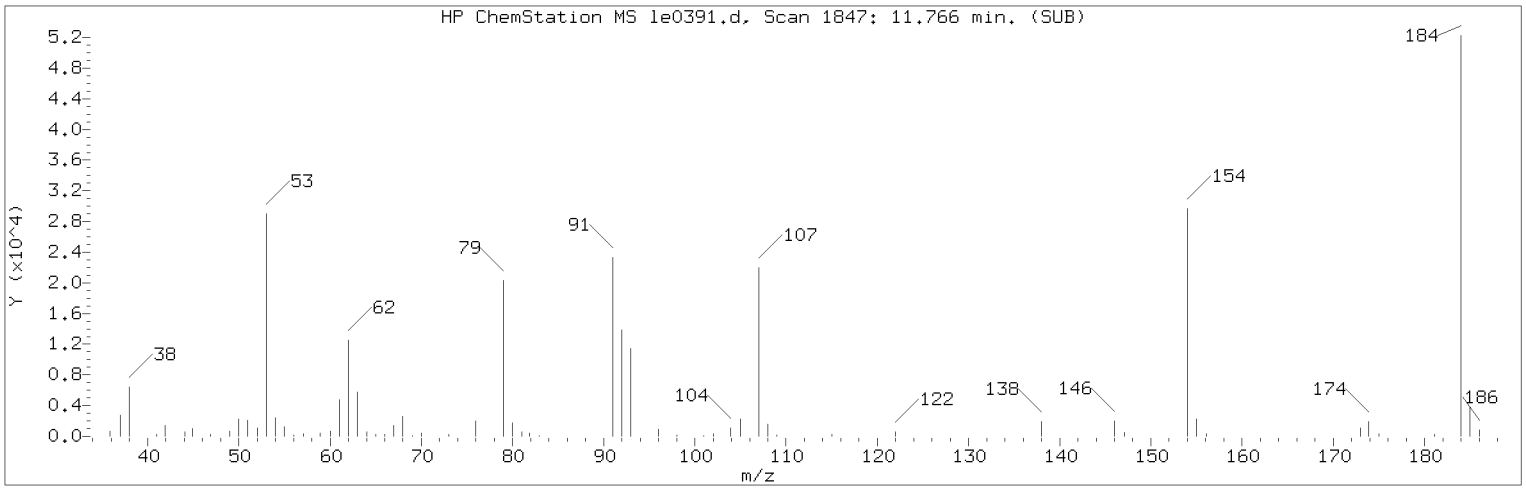
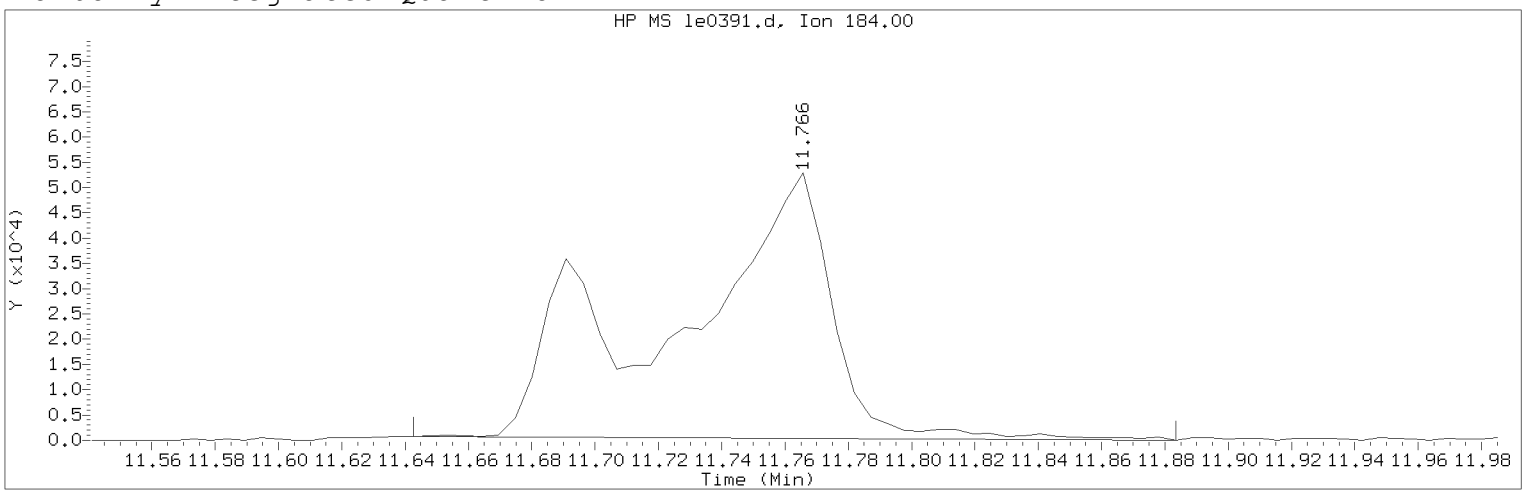
Target 3.5 esignature used. Page 1621

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

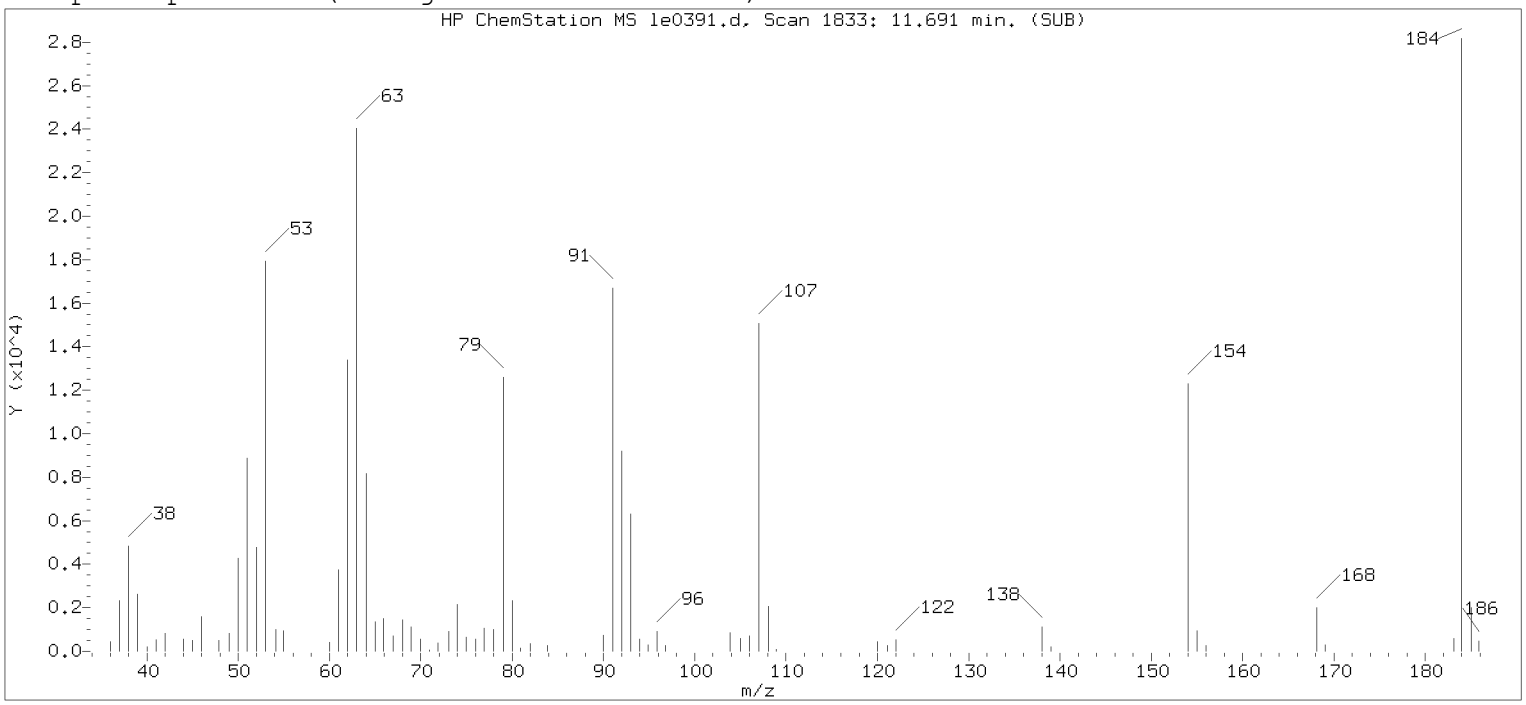
Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1847
Retention Time (minutes) : 11.766
Quant Ion : 184.00
Area (flag) : 179046M
On-Column Amount (ng/ul) : 22.3177
Integration start scan : 1823 Integration stop scan: 1868
Y at integration start : 732 Y at integration end: 0

Reason for manual integration: improper integration

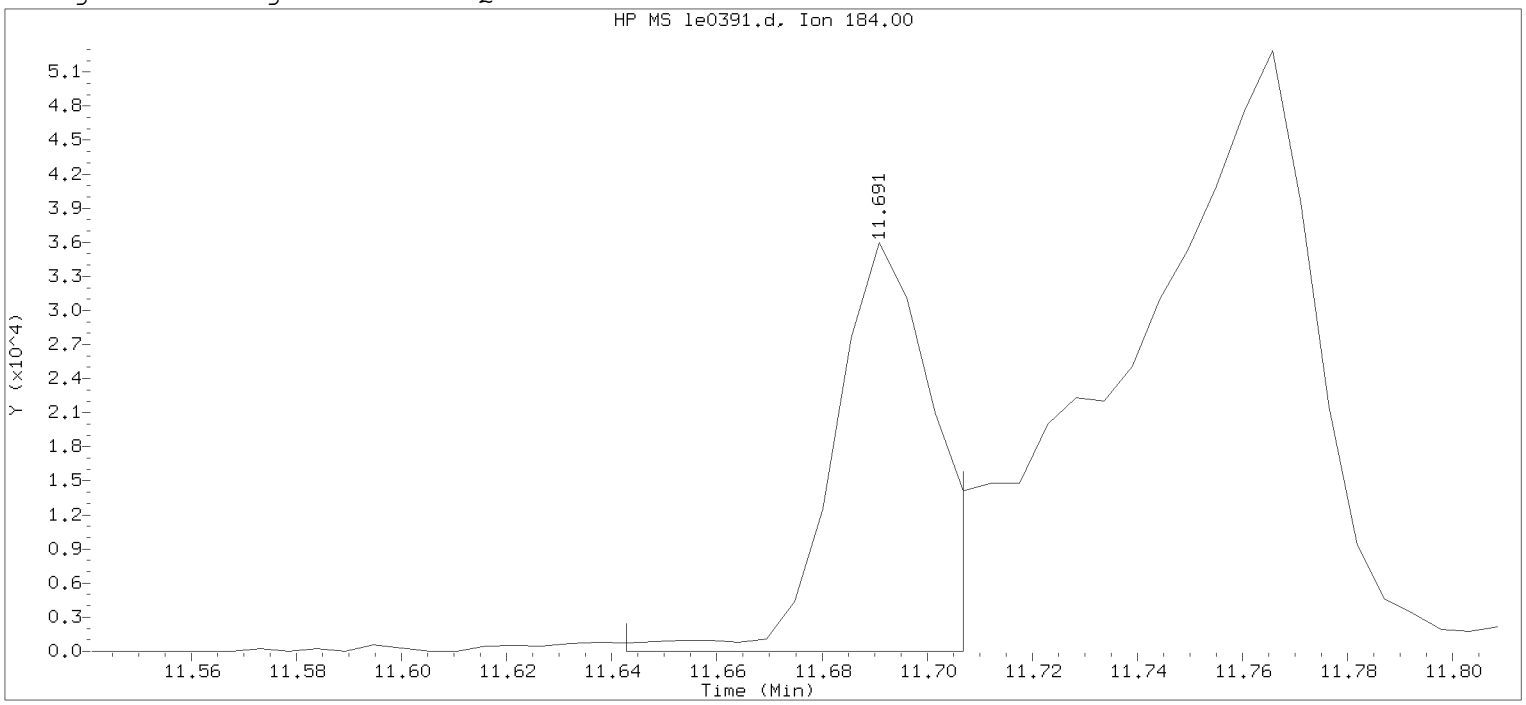
Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compound Number : 115
Compound Name : 2,4-Dinitrophenol
Scan Number : 1833
Retention Time (minutes) : 11.691
Quant Ion : 184.00
Area : 46451
On-column Amount (ng/ul) : 5.7901
Integration start scan : 1823 Integration stop scan: 1835
Y at integration start : 0 Y at integration end: 0

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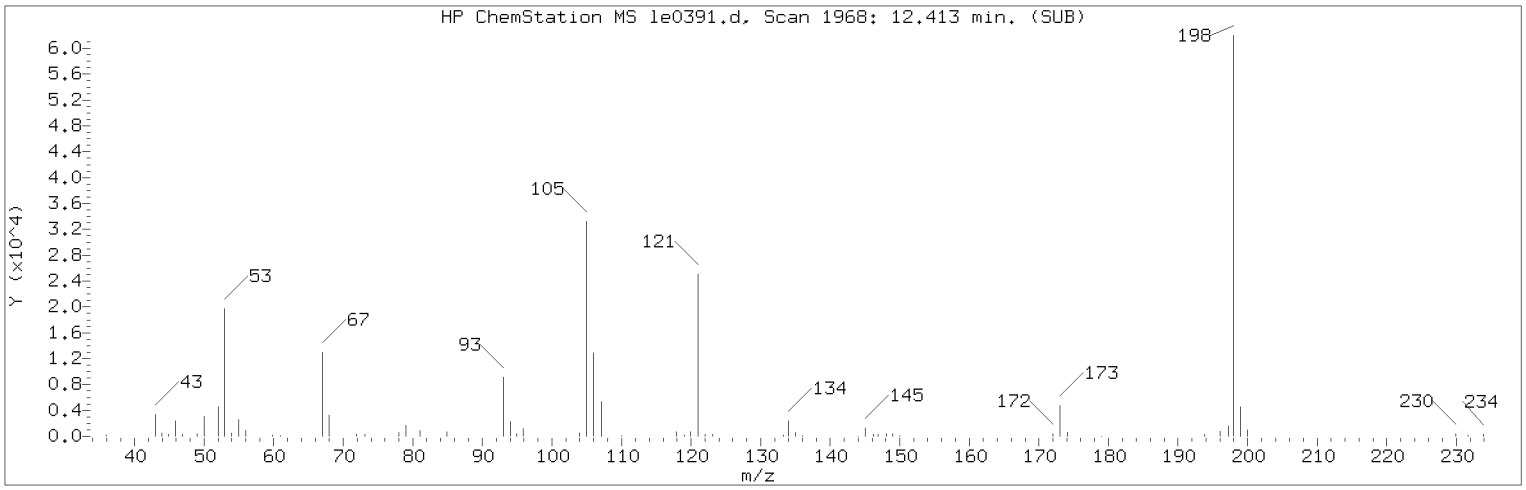
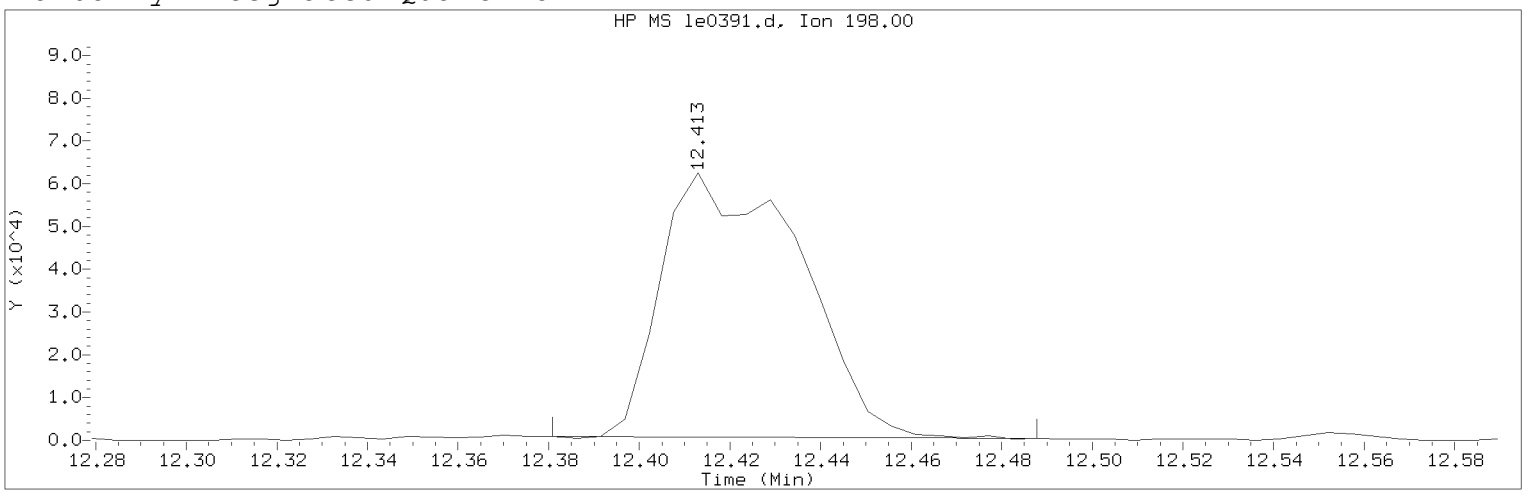
Target 3.5 esignature used. Page 1623

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

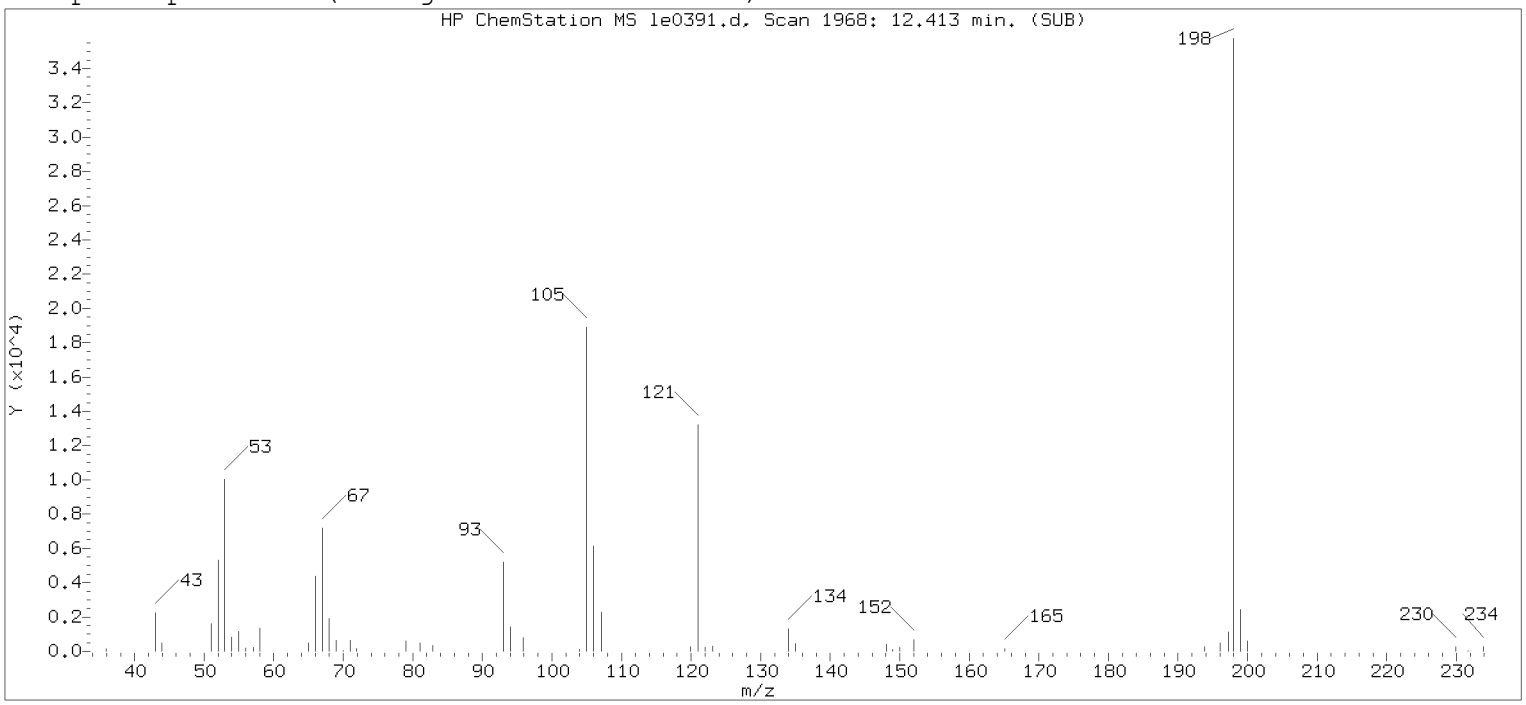
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1968
Retention Time (minutes) : 12.413
Quant Ion : 198.00
Area (flag) : 131838M
On-Column Amount (ng/ul) : 11.6151
Integration start scan : 1961 Integration stop scan: 1981
Y at integration start : 891 Y at integration end: 419

Reason for manual integration: improper integration

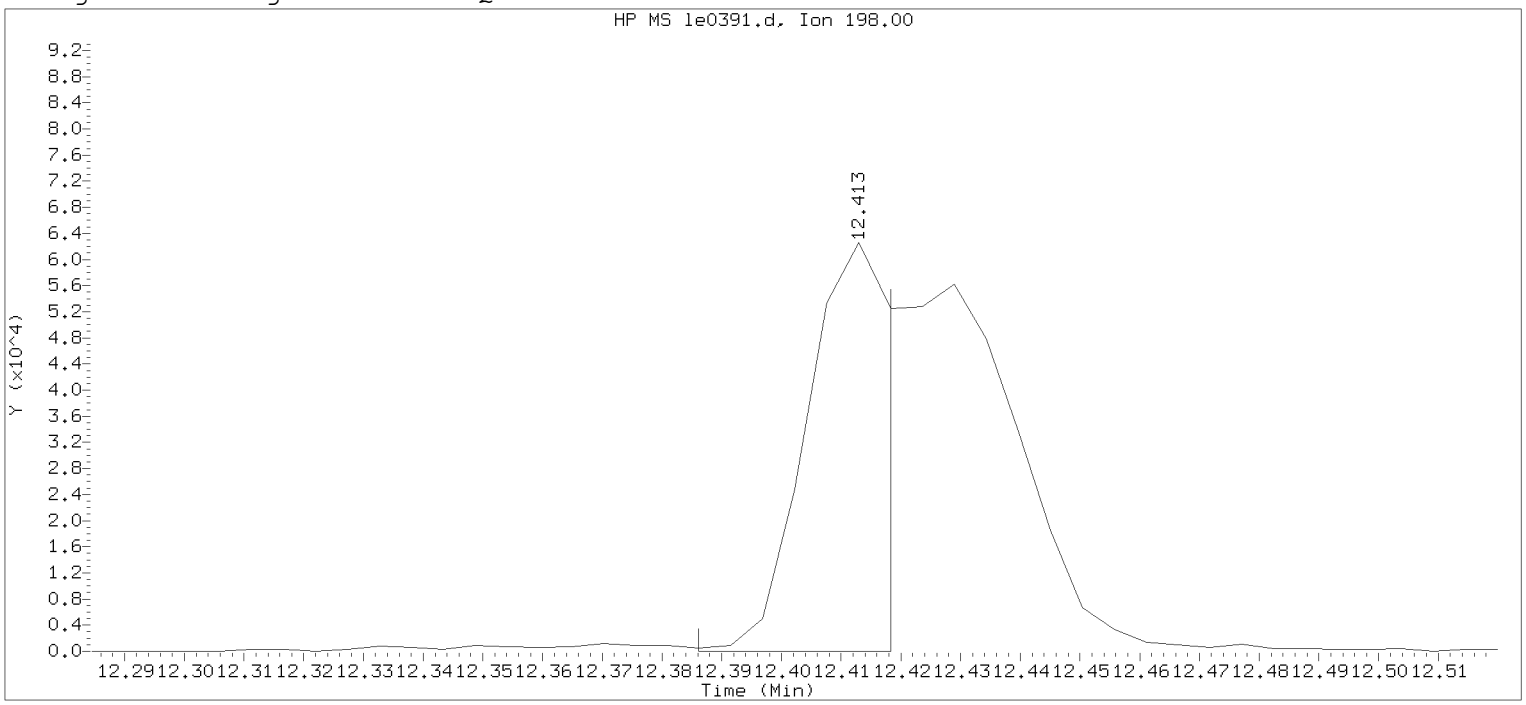
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

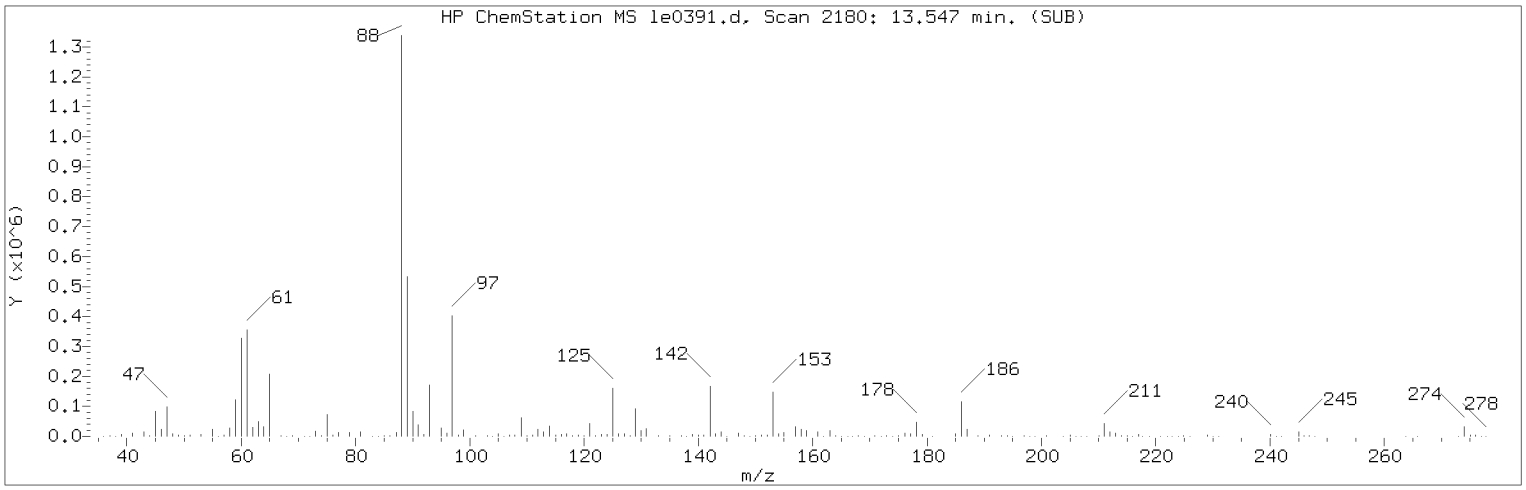
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

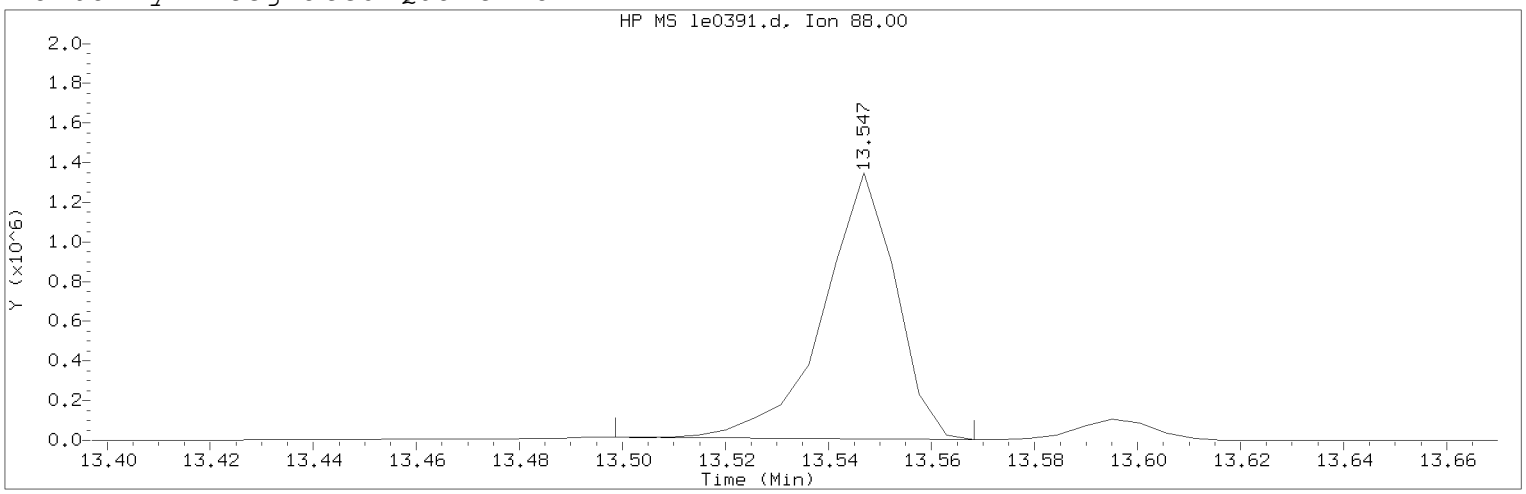
Compound Number : 130
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1968
Retention Time (minutes) : 12.413
Quant Ion : 198.00
Area : 55585
On-column Amount (ng/ul) : 4.8972
Integration start scan : 1962 Integration stop scan: 1968
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

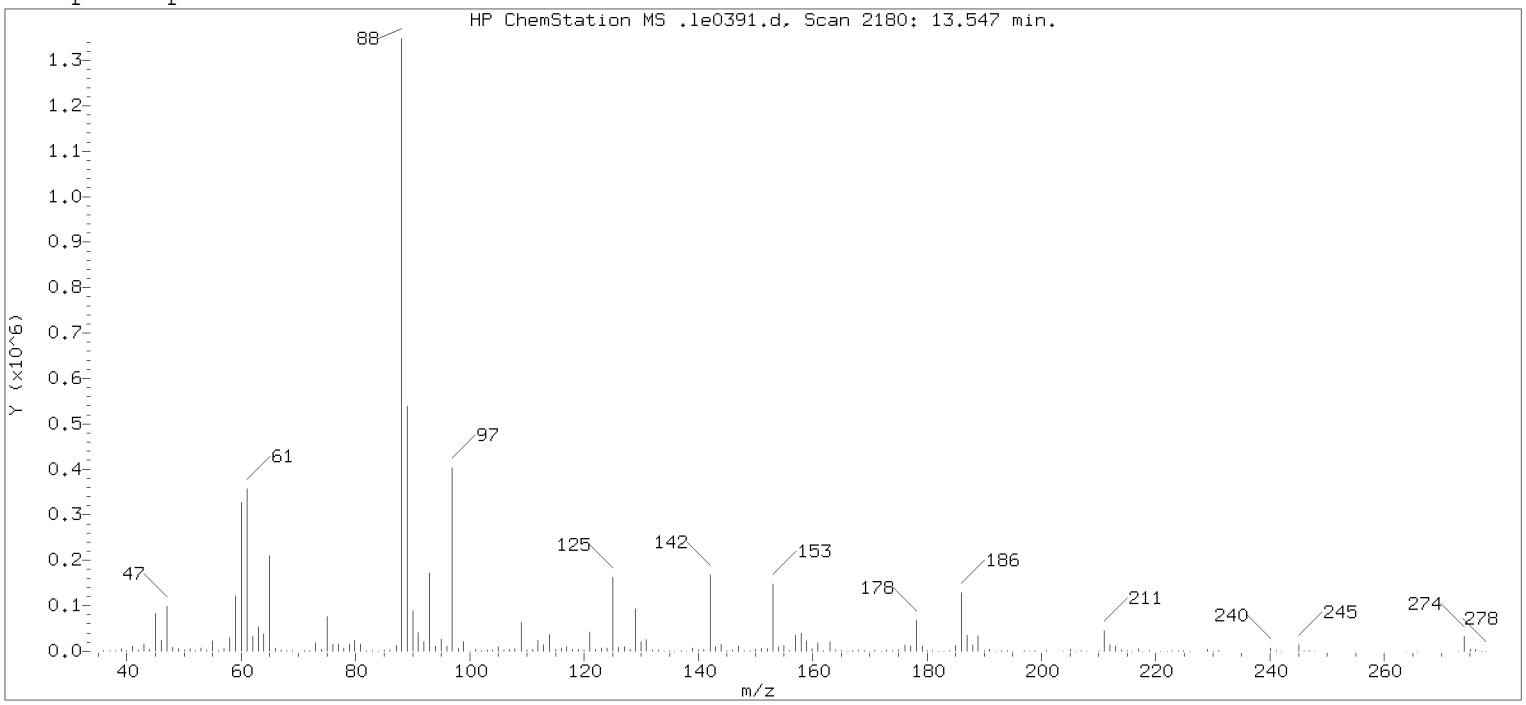
Compound Number : 162
Compound Name : Disulfoton
Scan Number : 2180
Retention Time (minutes) : 13.547
Quant Ion : 88.00
Area (flag) : 1301018M
On-Column Amount (ng/ul) : 32.6169
Integration start scan : 2170 Integration stop scan: 2183
Y at integration start : 16688 Y at integration end: 4704

Reason for manual integration: missed peak

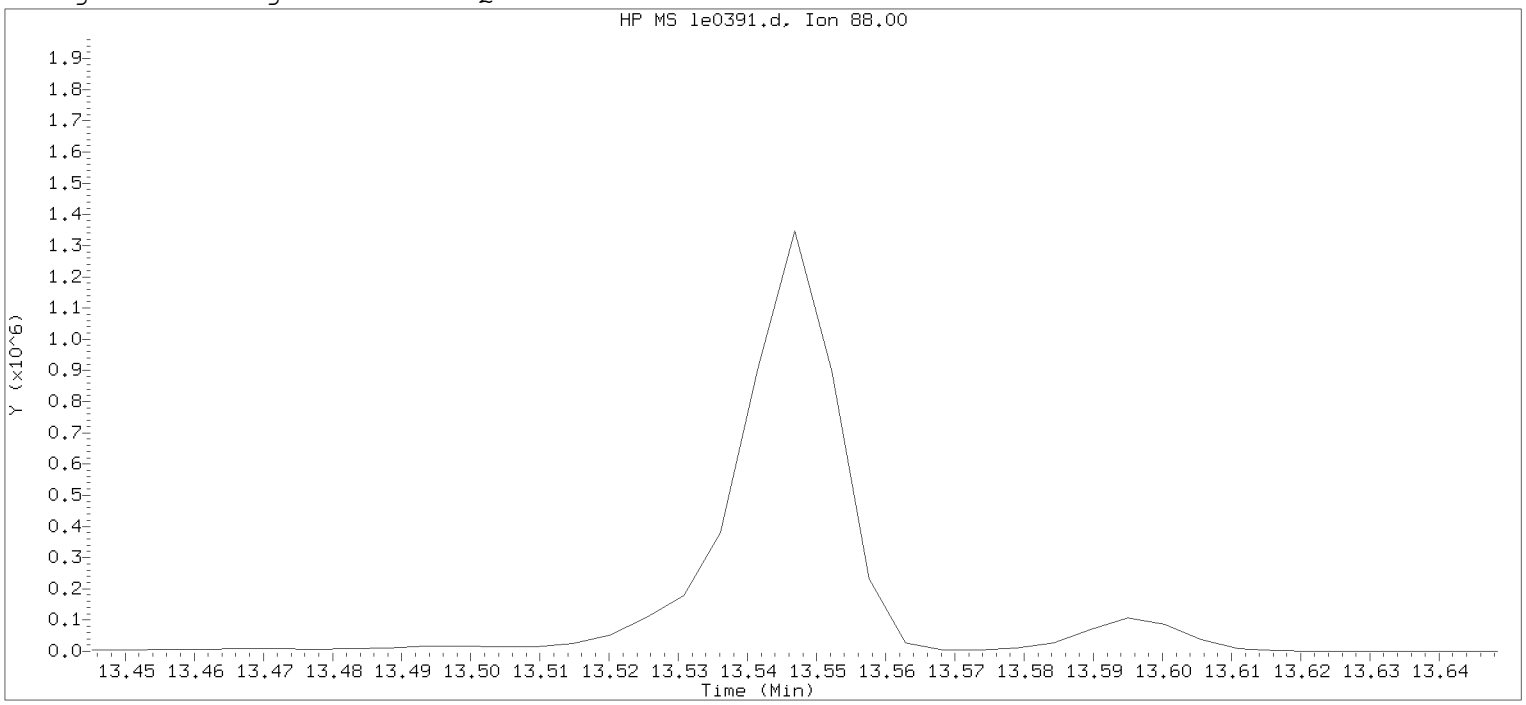
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

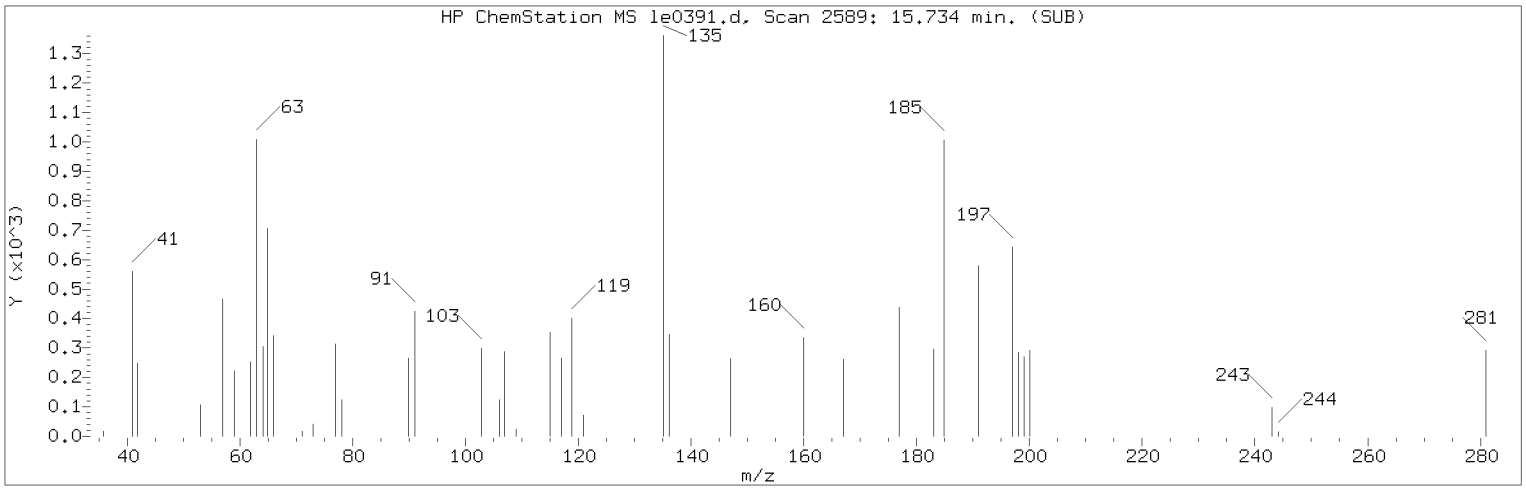
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

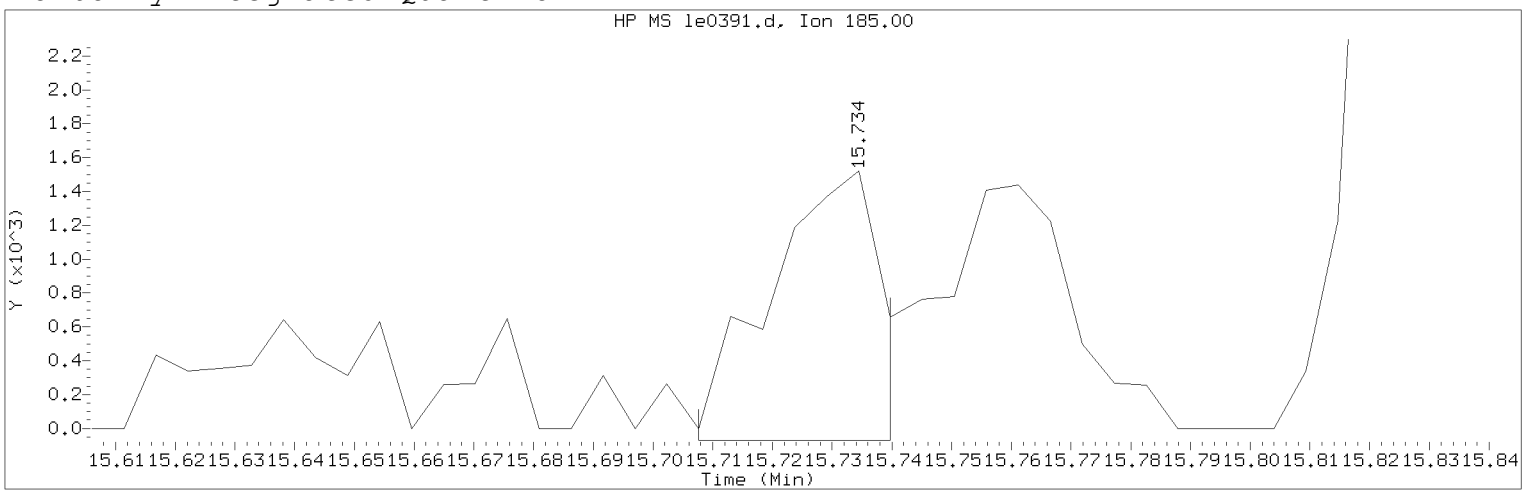
Compound Number : 162
Compound Name : Disulfoton
Expected RT (minutes) : 13.547
Quant Ion : 88.00

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

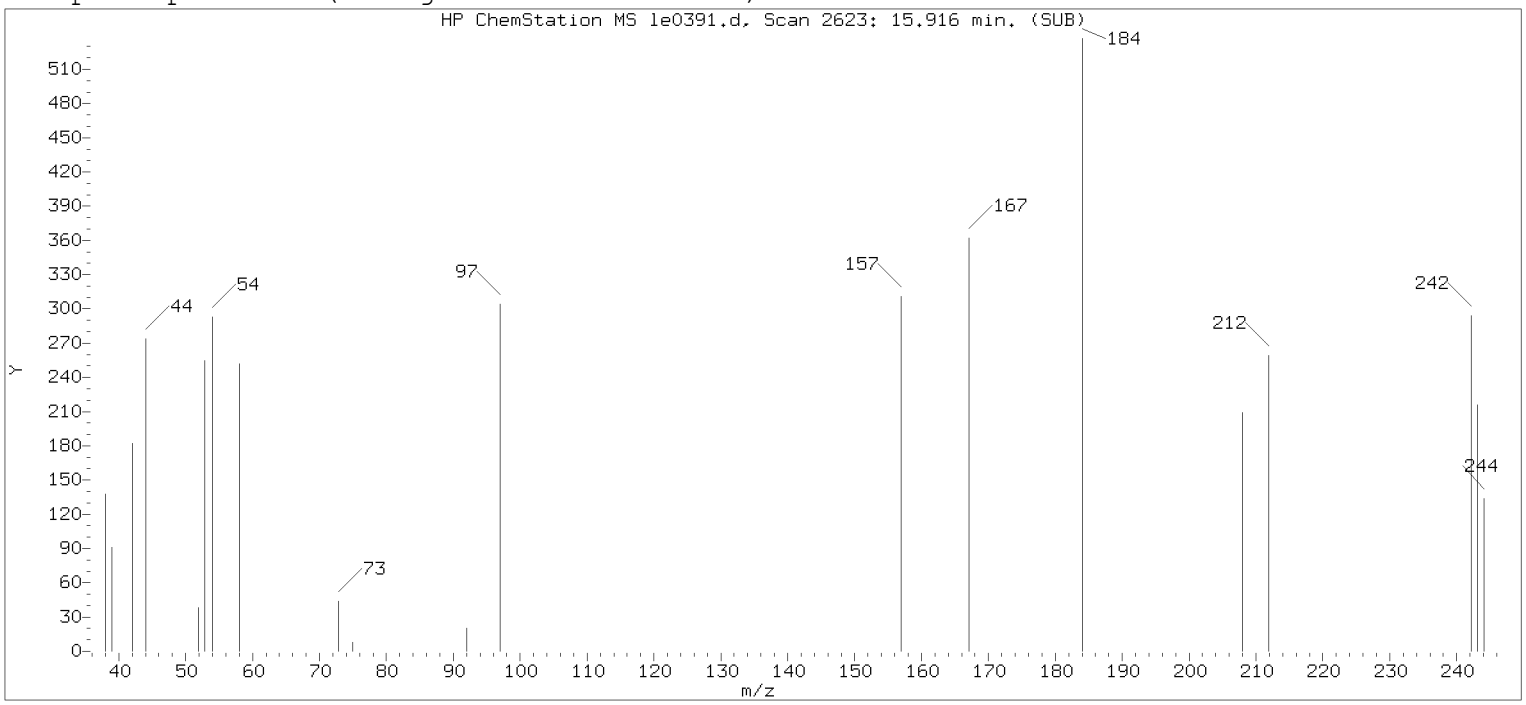
Compound Number : 180
Compound Name : Aramite (1)
Scan Number : 2589
Retention Time (minutes) : 15.734
Quant Ion : 185.00
Area (flag) : 2076M
On-Column Amount (ng/ul) : 3.7279
Integration start scan : 2583 Integration stop scan: 2589
Y at integration start : -70 Y at integration end: -70

Reason for manual integration: improper integration

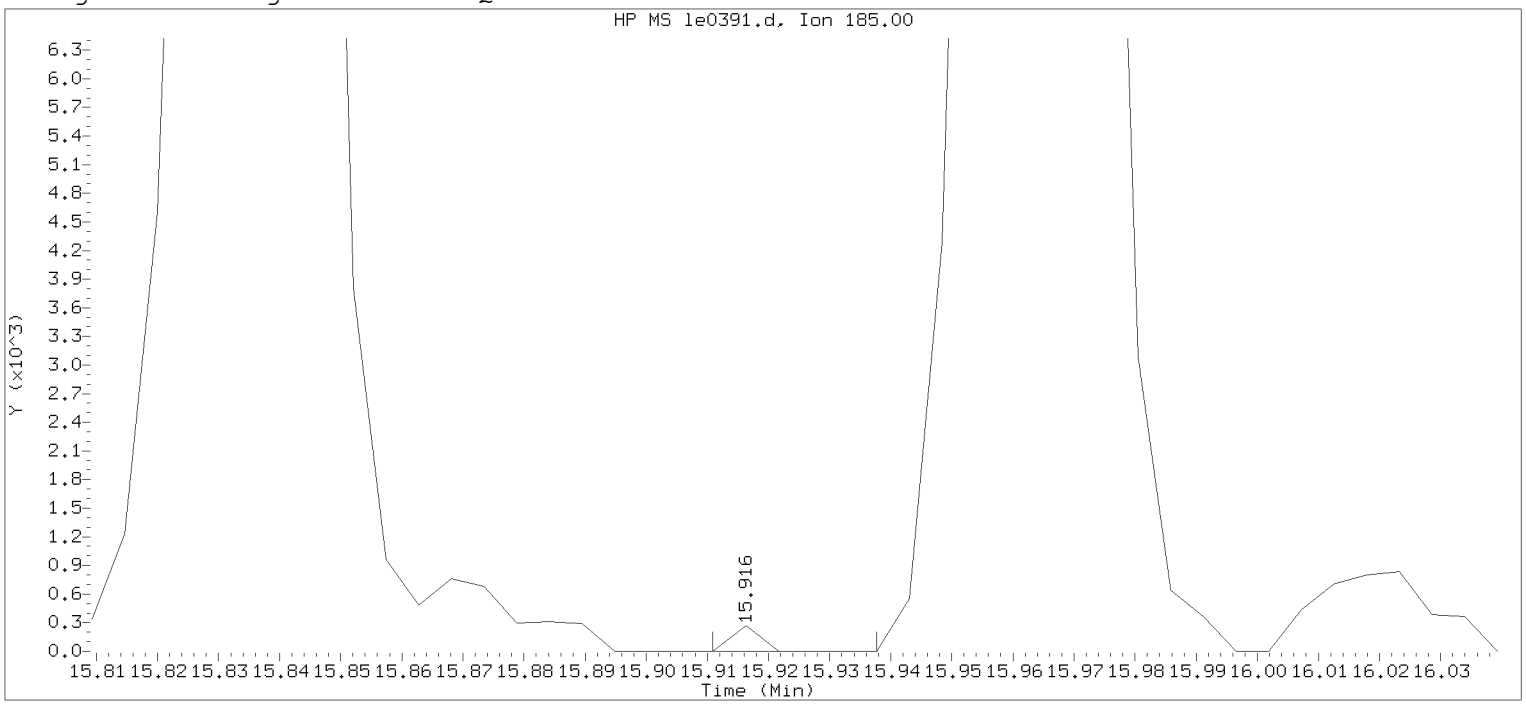
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

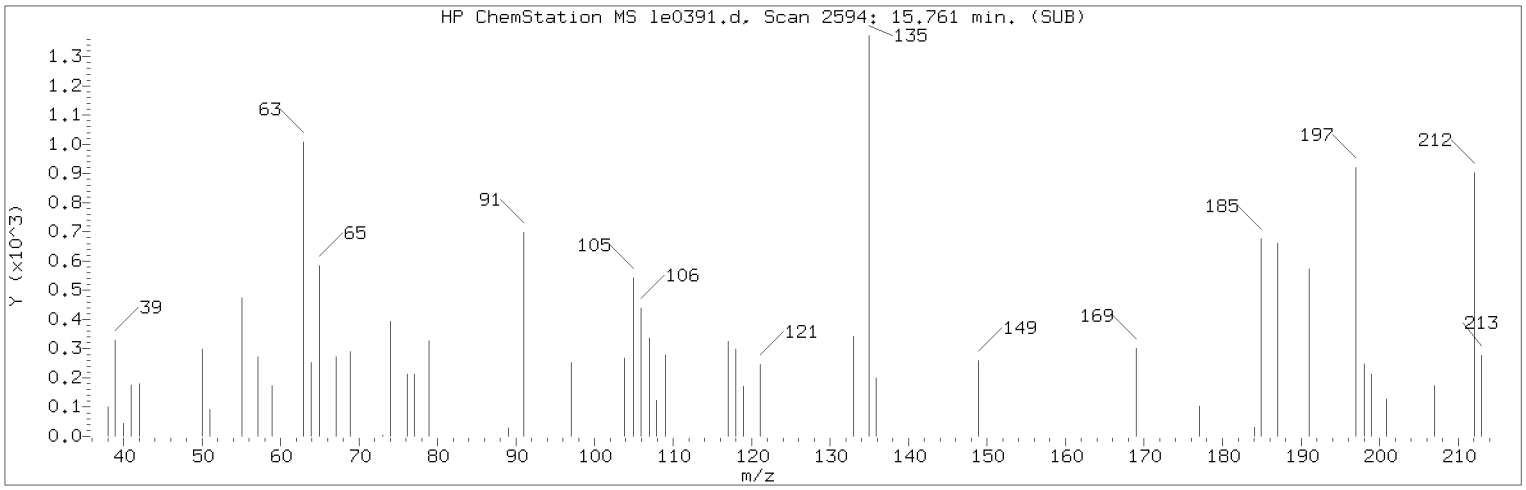
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

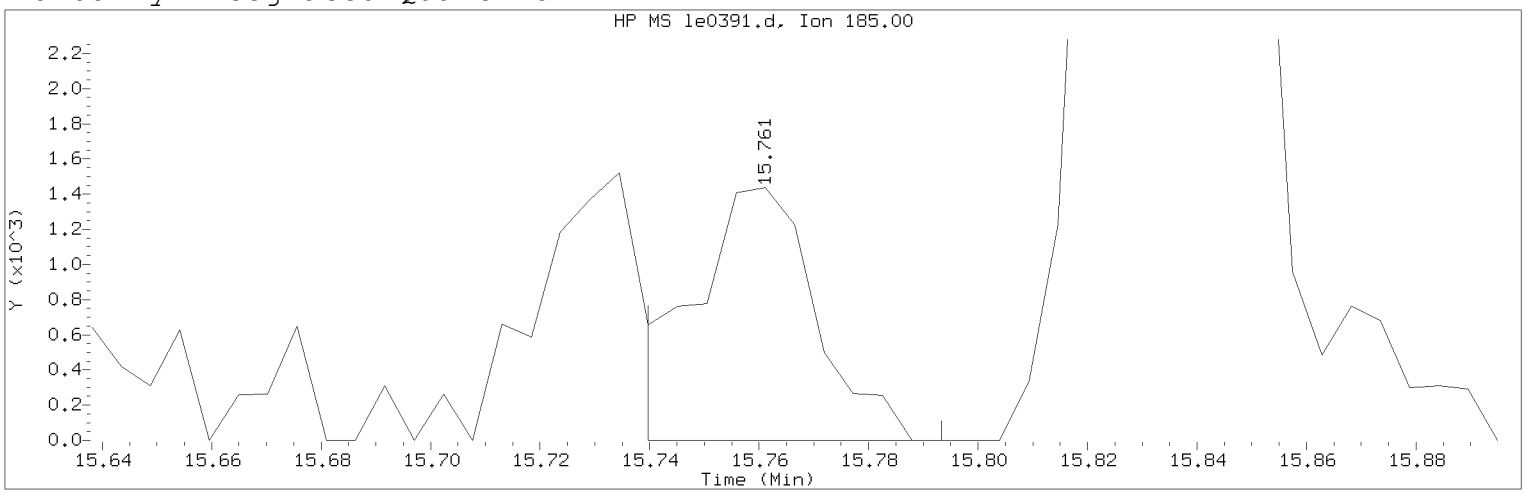
Compound Number : 180
Compound Name : Aramite (1)
Scan Number : 2623
Retention Time (minutes) : 15.916
Quant Ion : 185.00
Area : 87
On-column Amount (ng/ul) : 0.1567
Integration start scan : 2621 Integration stop scan: 2626
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

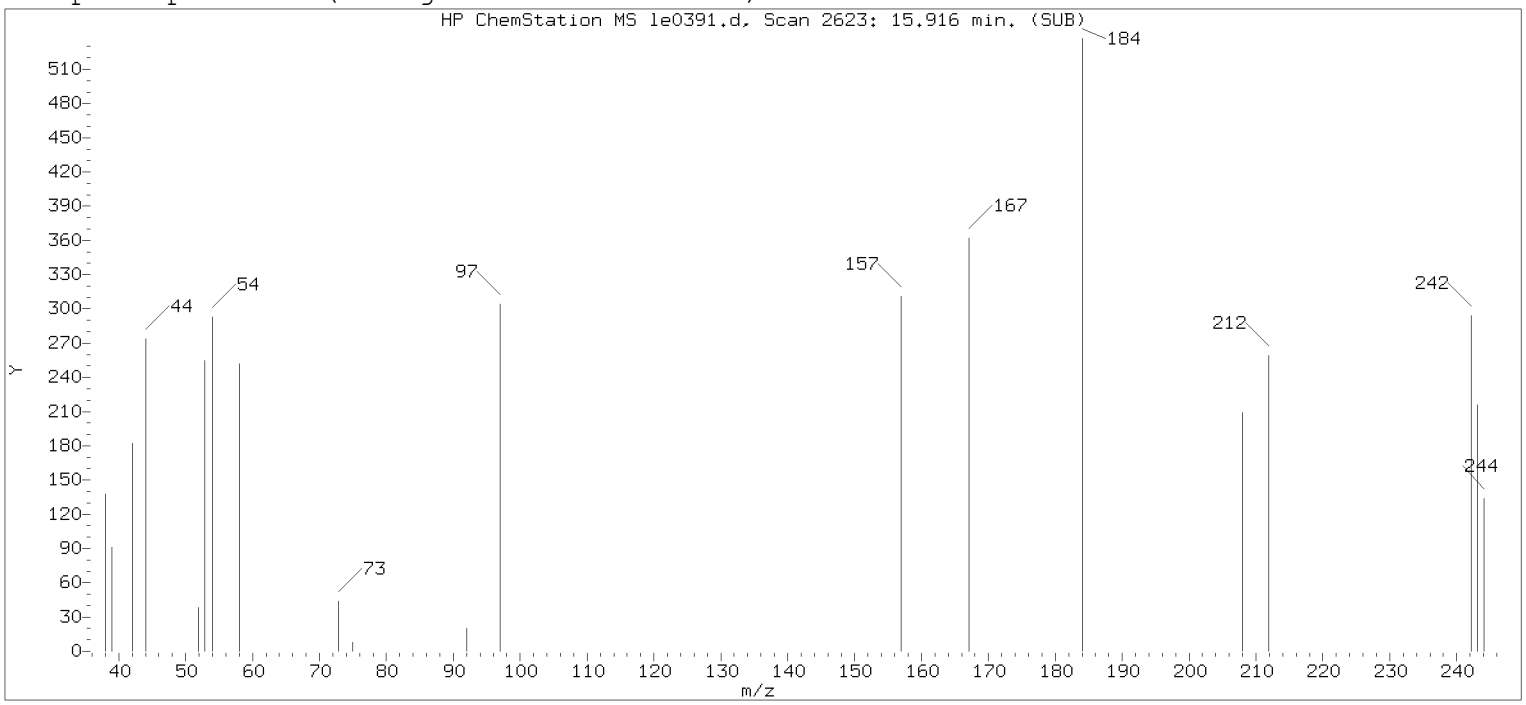
Compound Number : 181
Compound Name : Aramite (2)
Scan Number : 2594
Retention Time (minutes) : 15.761
Quant Ion : 185.00
Area (flag) : 2335M
On-Column Amount (ng/ul) : 4.2614
Integration start scan : 2589 Integration stop scan: 2599
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: improper integration

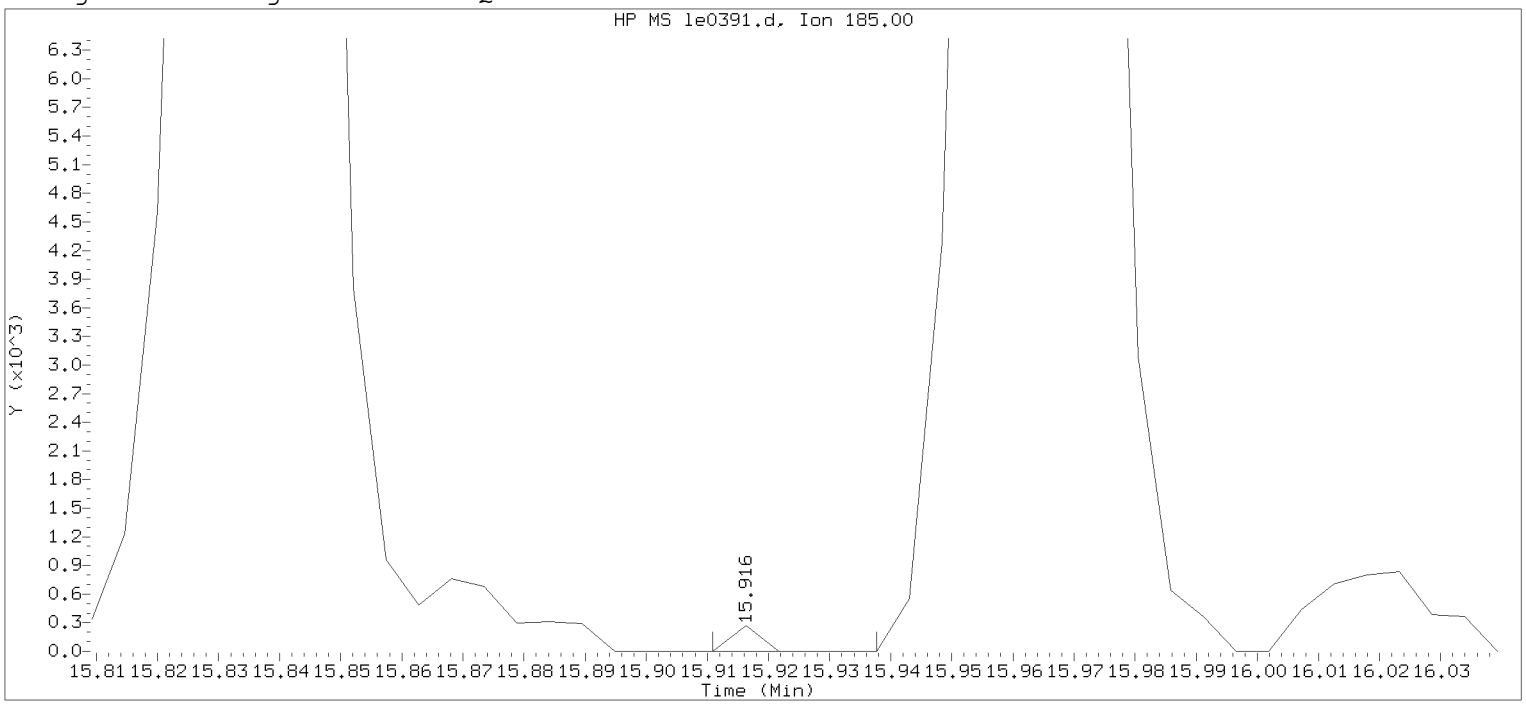
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

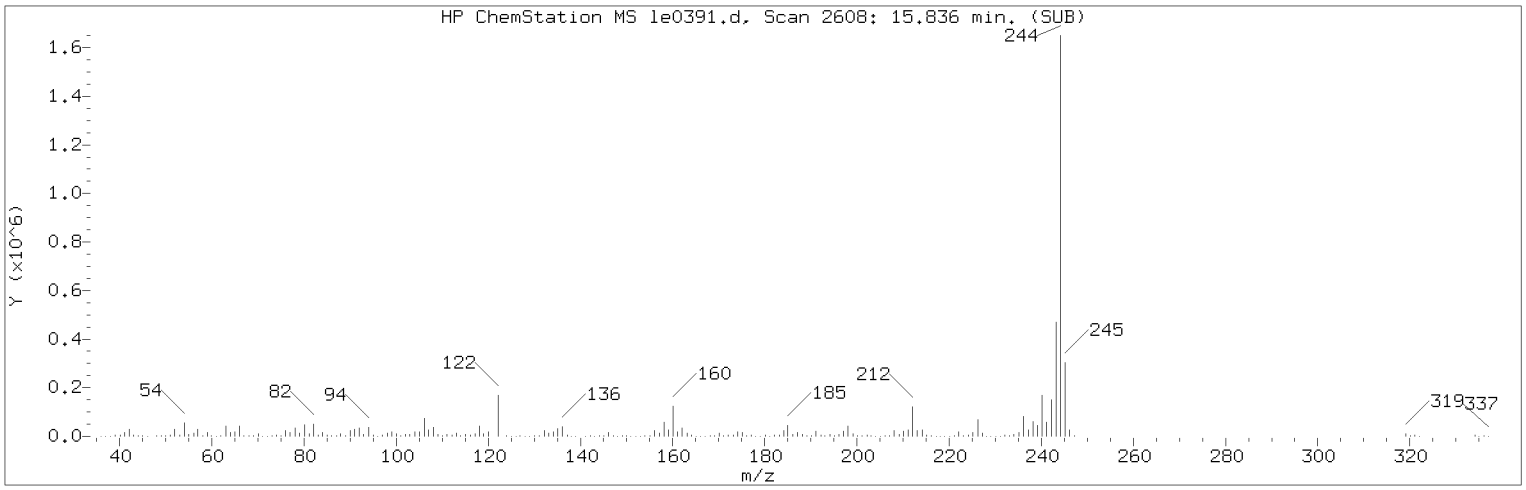
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

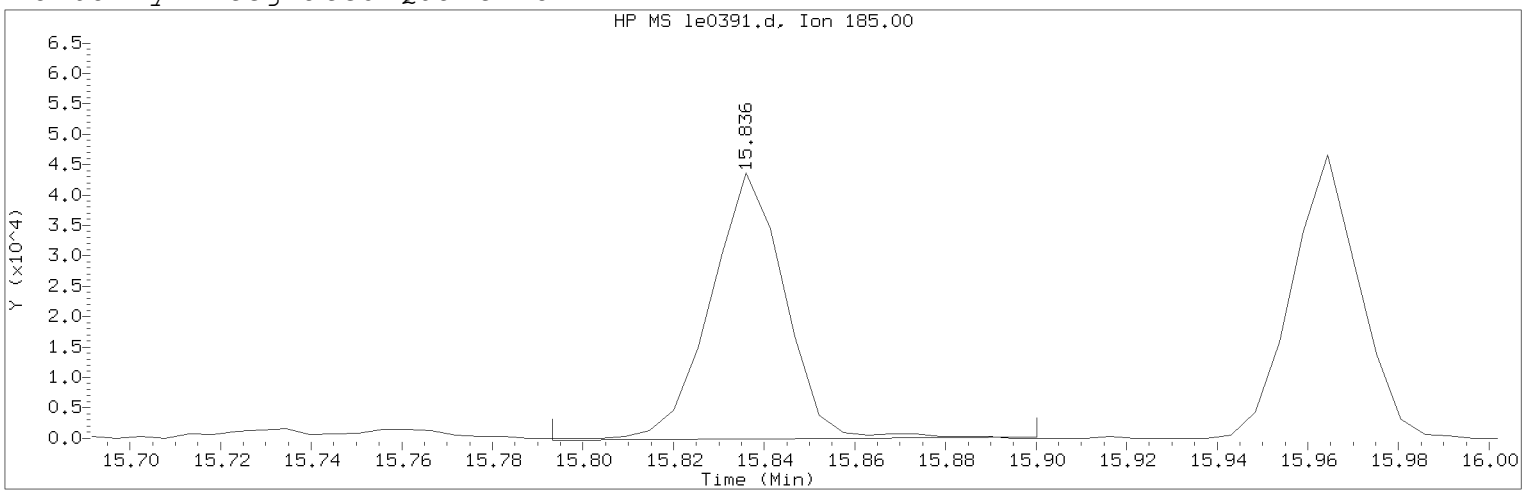
Compound Number	: 181		
Compound Name	: Aramite (2)		
Scan Number	: 2623		
Retention Time (minutes)	: 15.916		
Quant Ion	: 185.00		
Area	: 87		
On-column Amount (ng/ul)	: 0.1593		
Integration start scan	: 2621	Integration stop scan:	2626
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

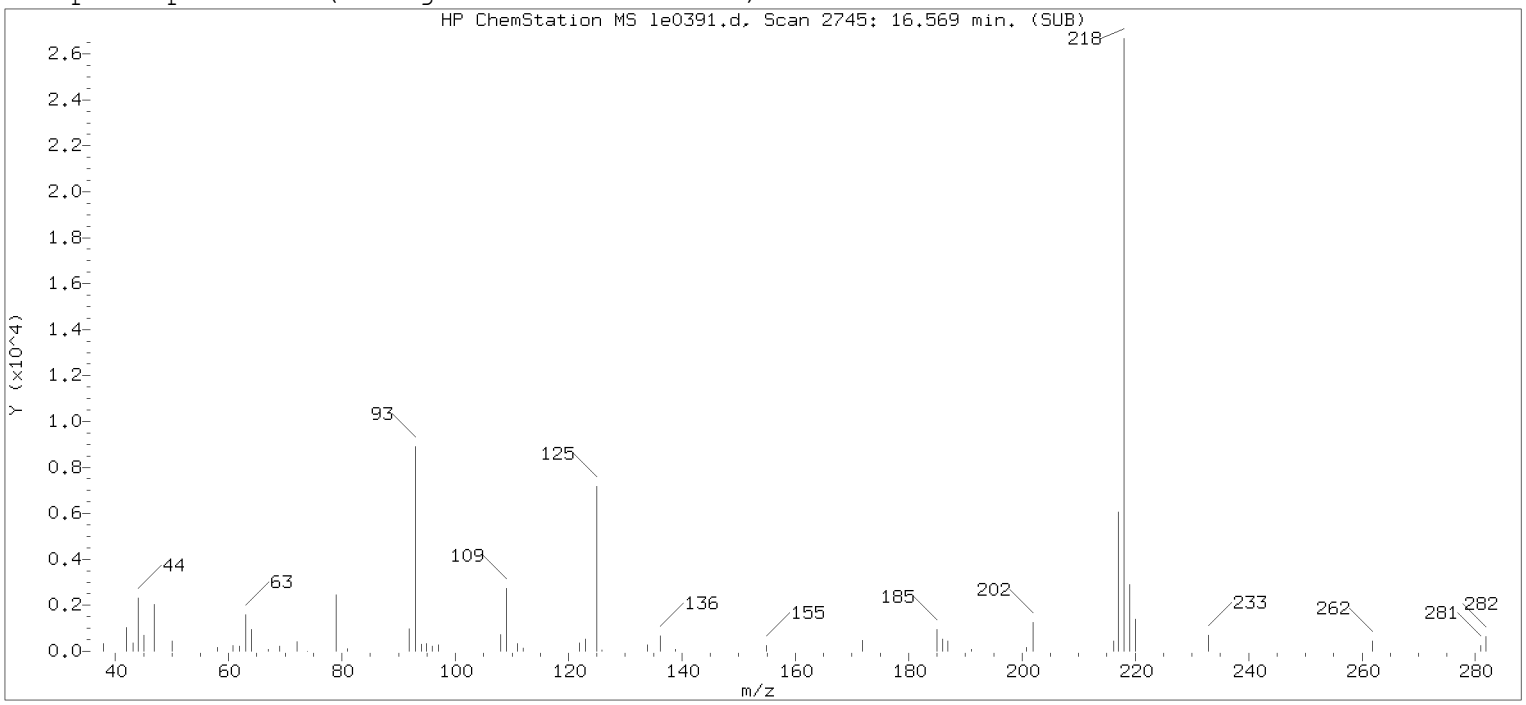
Compound Number : 183
Compound Name : Aramite (3)
Scan Number : 2608
Retention Time (minutes) : 15.836
Quant Ion : 185.00
Area (flag) : 50021M
On-Column Amount (ng/ul) : 0.9901
Integration start scan : 2599 Integration stop scan: 2619
Y at integration start : -342 Y at integration end: 163

Reason for manual integration: improper integration

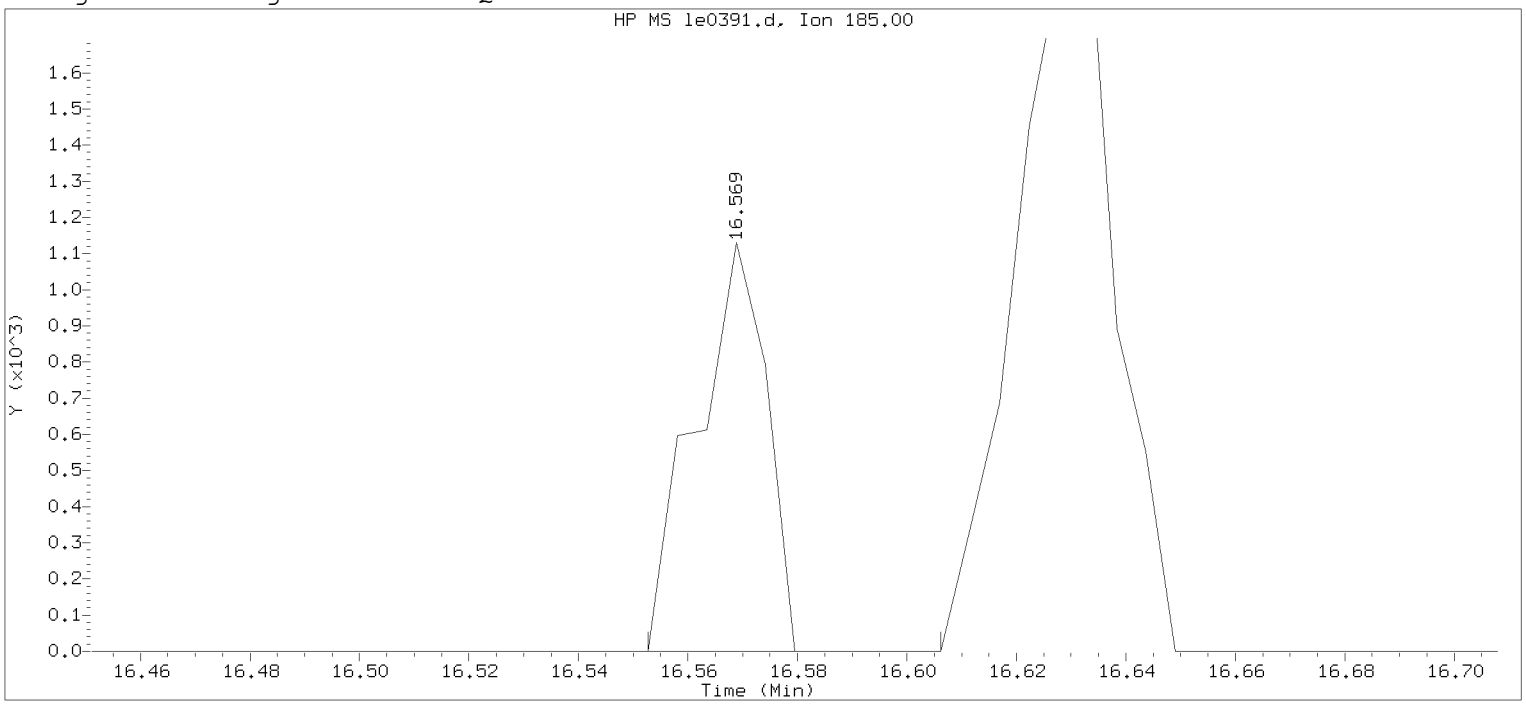
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

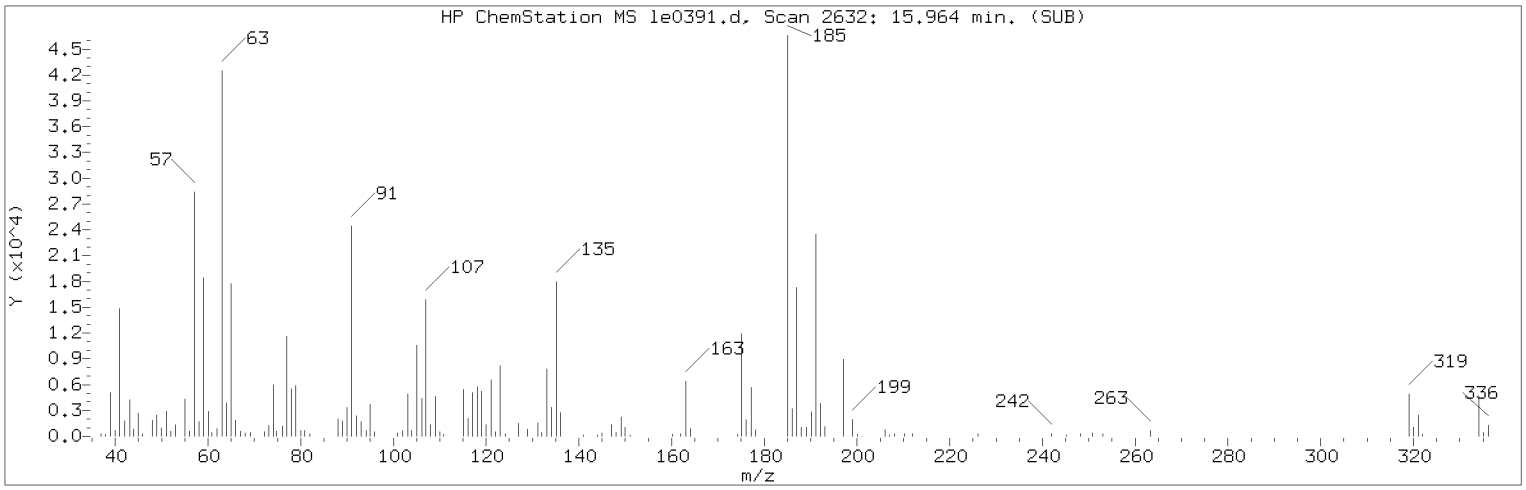
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

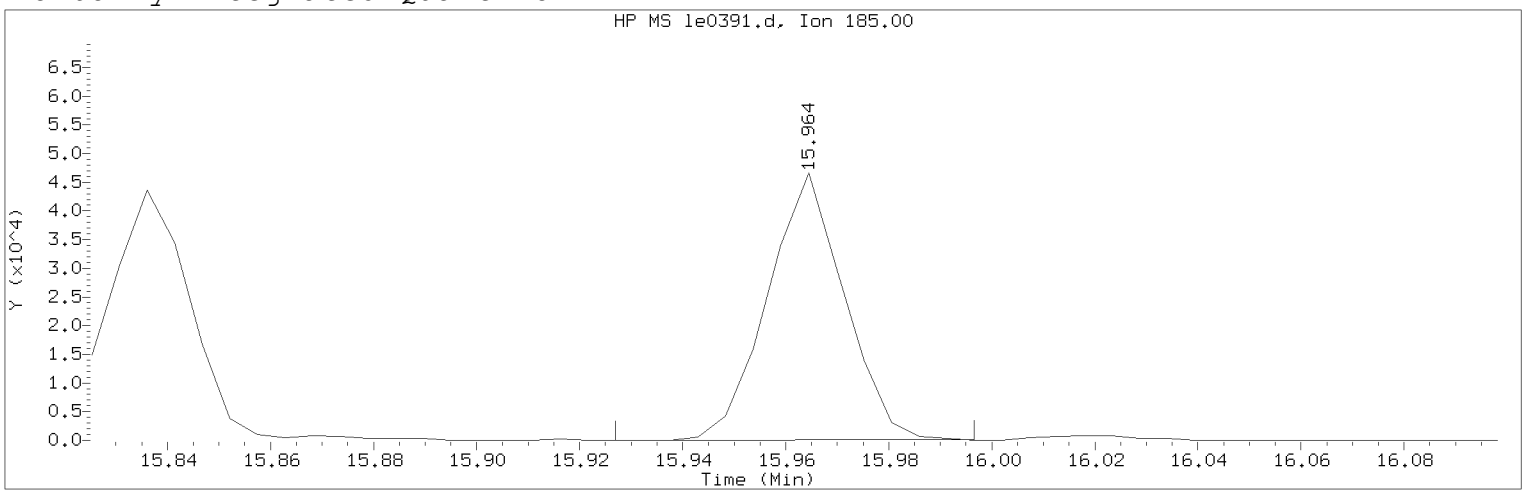
Compound Number : 183
Compound Name : Aramite (3)
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 185.00
Area : 1005
On-column Amount (ng/ul) : 0.0199
Integration start scan : 2741 Integration stop scan: 2751
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

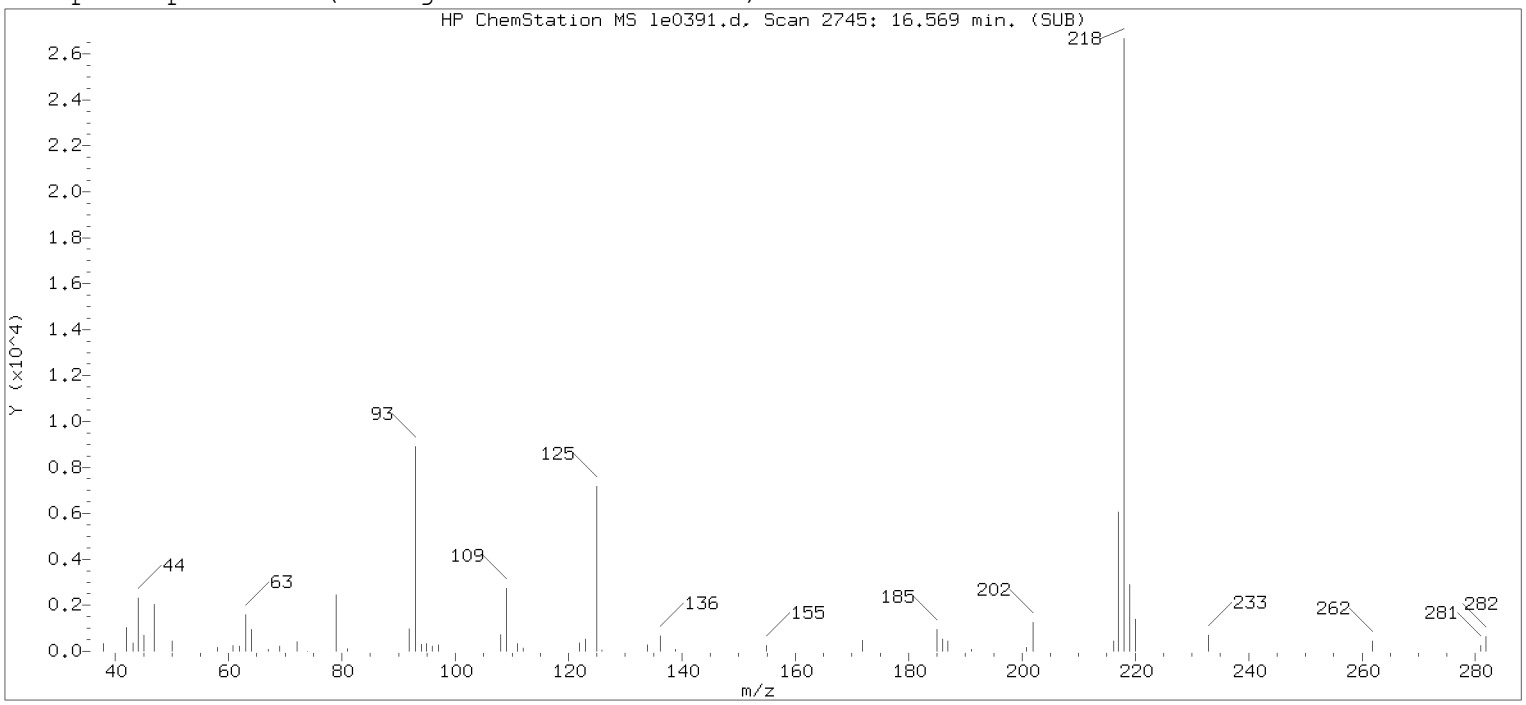
Compound Number : 184
Compound Name : Aramite (4)
Scan Number : 2632
Retention Time (minutes) : 15.964
Quant Ion : 185.00
Area (flag) : 47805M
On-Column Amount (ng/ul) : 0.7050
Integration start scan : 2624 Integration stop scan: 2637
Y at integration start : 22 Y at integration end: 63

Reason for manual integration: improper integration

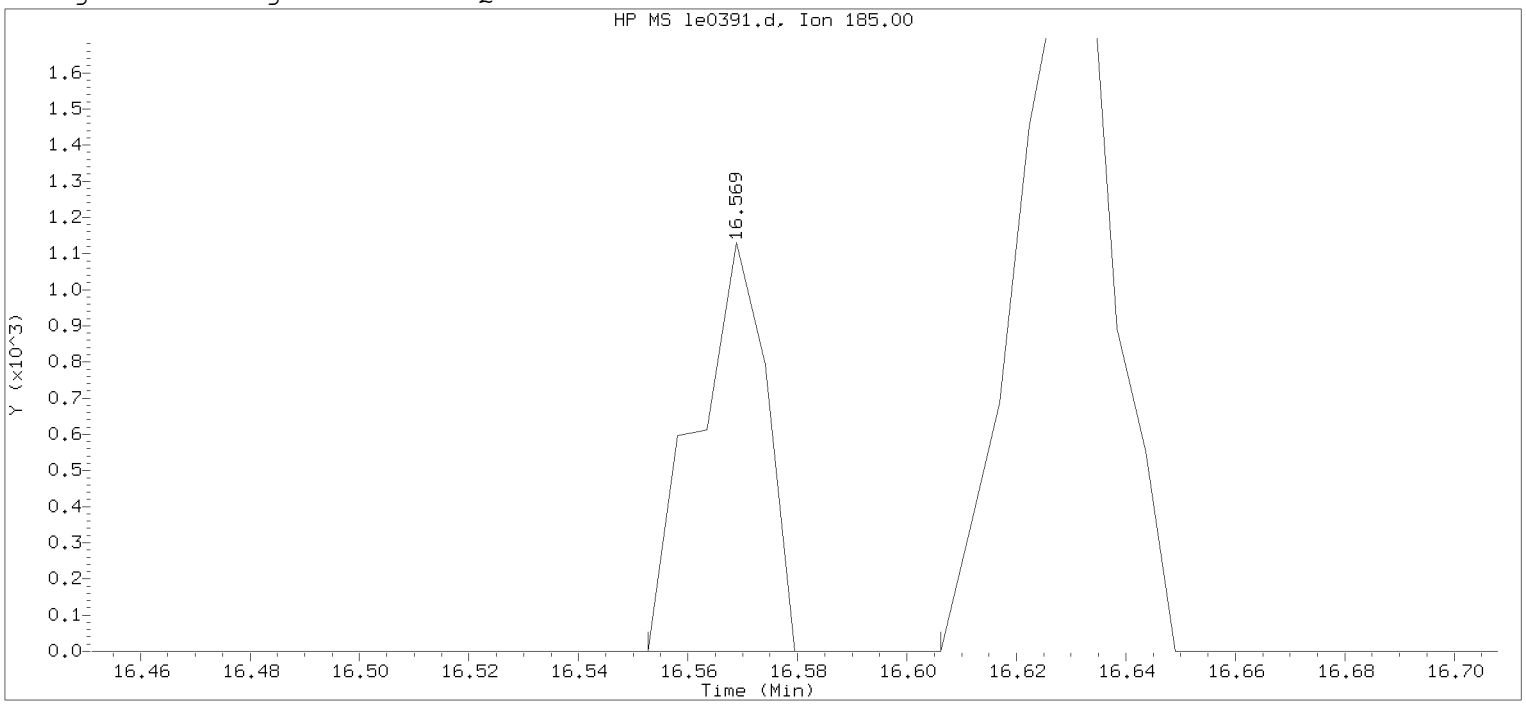
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

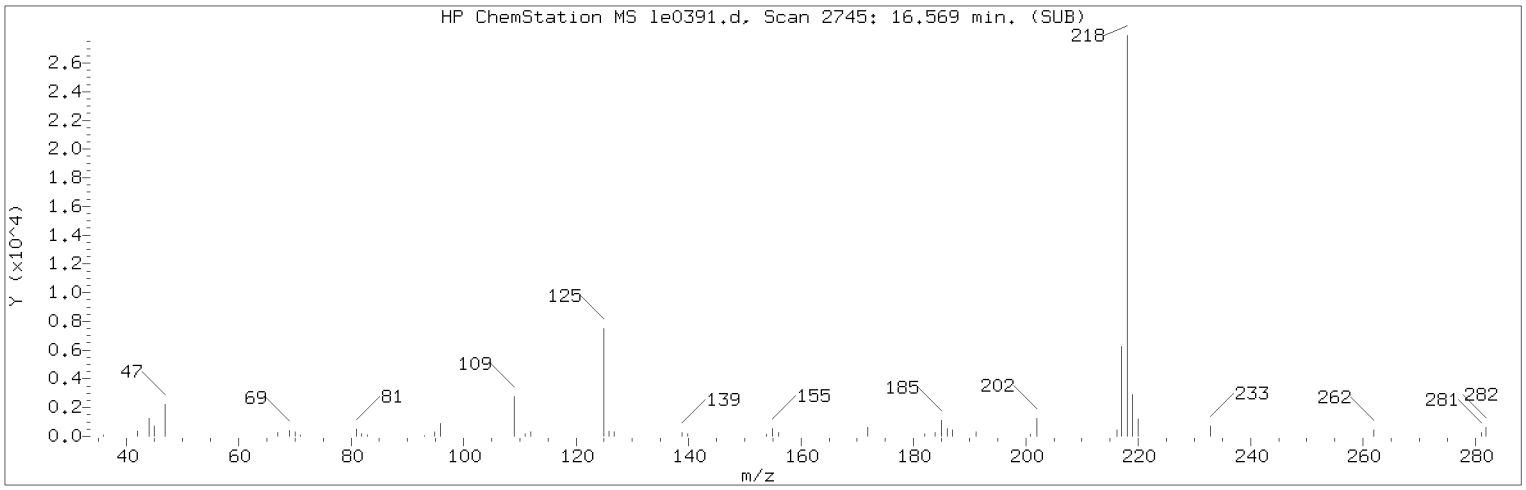
Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

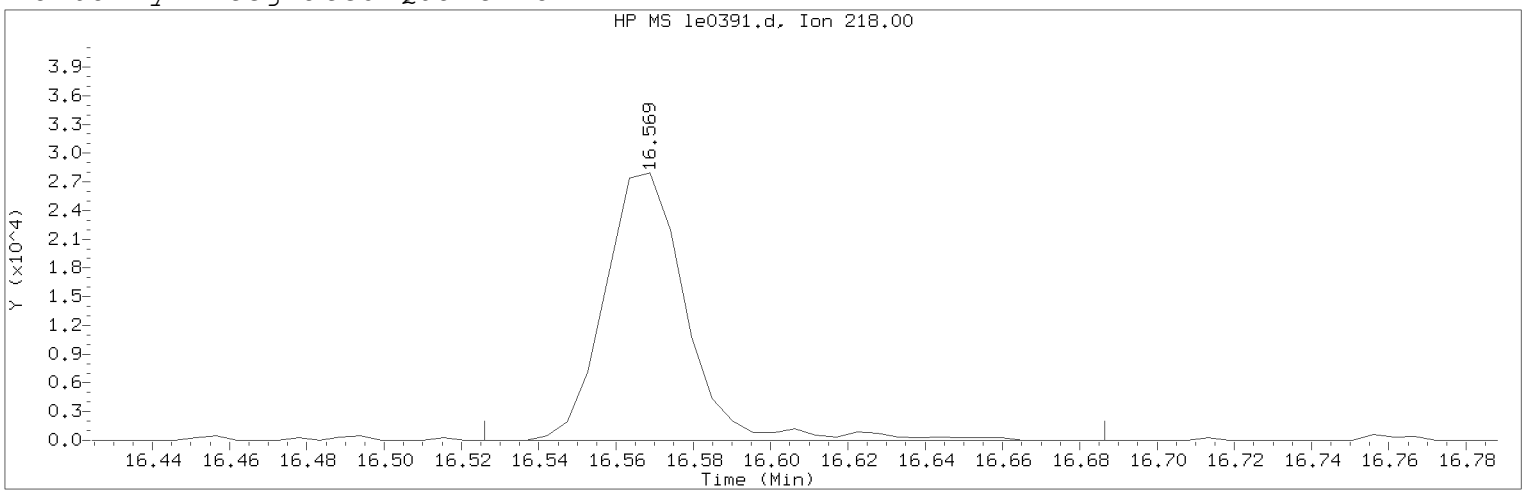
Compound Number : 184
Compound Name : Aramite (4)
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 185.00
Area : 1005
On-column Amount (ng/ul) : 0.0148
Integration start scan : 2741 Integration stop scan: 2751
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: LMH01635

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 26-May-2016 12:46 lmh00956

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

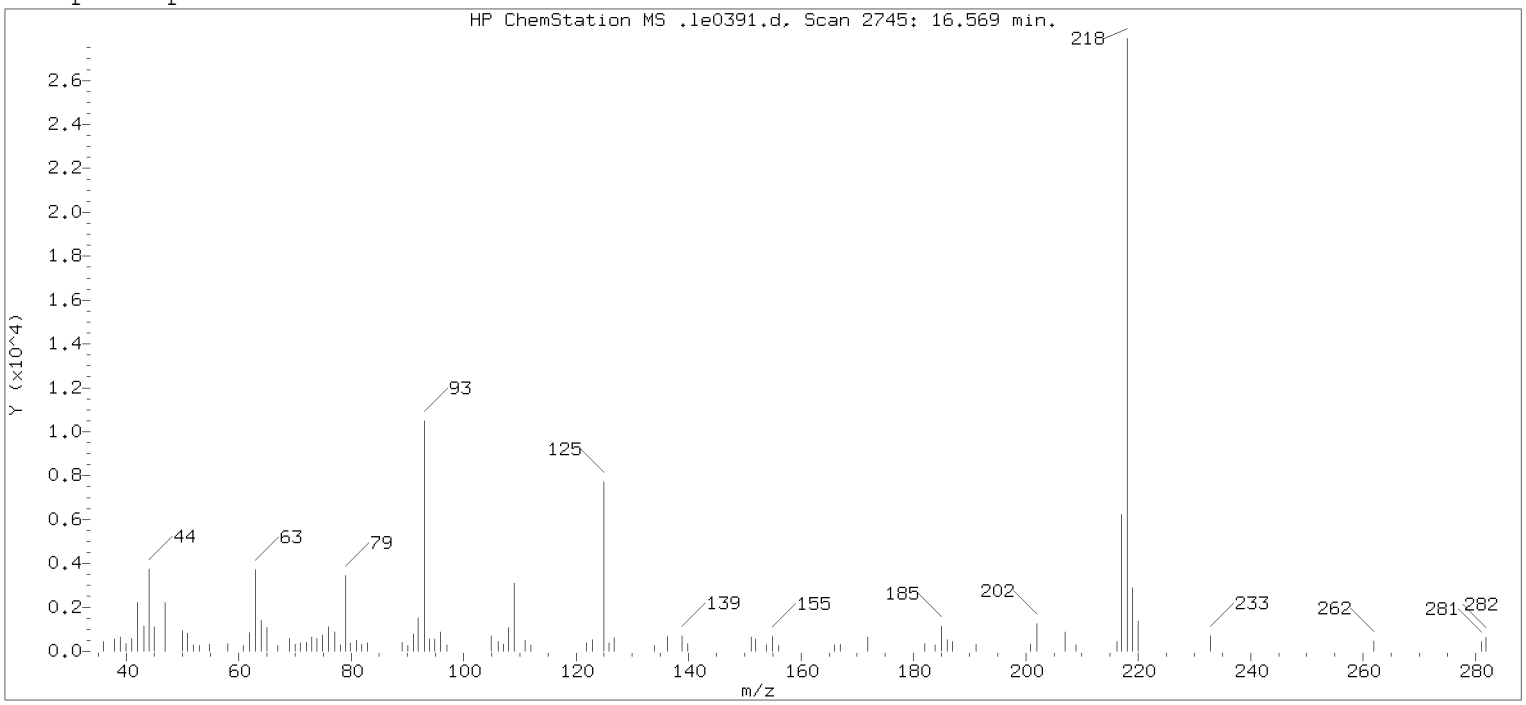
Compound Number : 189
Compound Name : Famphur
Scan Number : 2745
Retention Time (minutes) : 16.569
Quant Ion : 218.00
Area (flag) : 41321M
On-Column Amount (ng/ul) : 2.0344
Integration start scan : 2736 Integration stop scan: 2766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

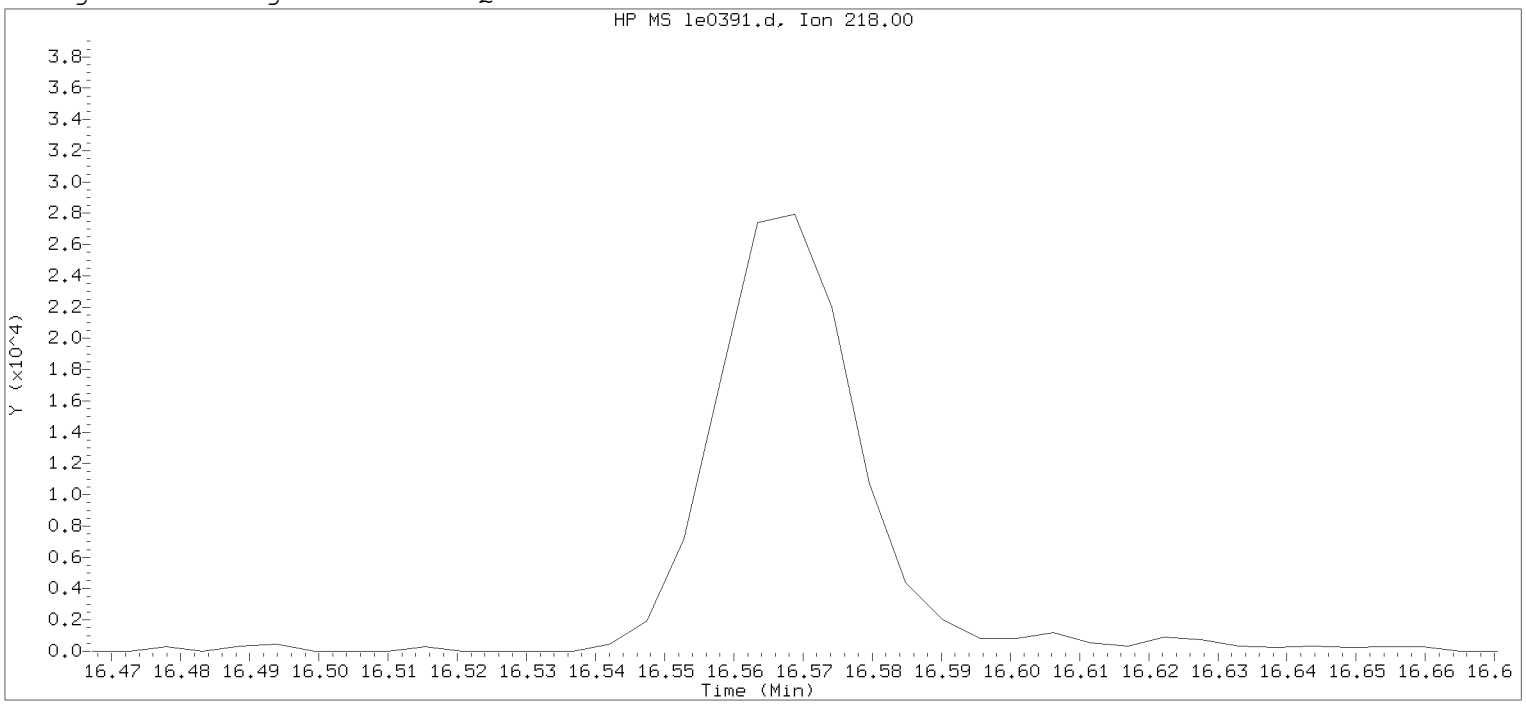
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Mark A. Ratcliff on 05/26/2016 at 13:05.
PARALLAX ID: mar00486

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/16may11a.b/le0391.d Instrument ID: HP20296.i
Injection date and time: 11-MAY-2016 22:07 Analyst ID: kmb02125

Method used: /chem/HP20296.i/16may11a.b/rv8270d.m Sublist used: 131WAJ
Calibration date and time: 17-MAY-2016 11:08
Date, time and analyst ID of latest file update: 17-May-2016 11:10 hbz01996

Sample Name: 131WJLCSD Lab Sample ID: 131WJLCSD

Compound Number : 189
Compound Name : Famphur
Expected RT (minutes) : 16.569
Quant Ion : 218.00

Digitally signed by Linda M. Hartenstine on 05/26/2016 at 12:47.
Target 3.5 esignature user ID: LMH01637

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 5153 Kailah Ortiz Reviewed by: CB5247 5/12/16 Start Date: 5/3/2016 Start time: 1700

16124WAA026 Tech 1: ICU0515T3 Tech 2:

Dept: 26	Prep Analysis: 11010 8270D BNA Extraction										SVOAs by 8270D in Water
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
8354937MS	E6104	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	153A	Clear
8354938MSD	E6104	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	153A	L
BLANKA	SBLKWA124	250	SS1611326B	1.0	←	←	1	✓	✓	2	Tupho
LCSA	124WALCS	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	2	L

Solvent Used	Lot No.
10N NaOH	2507A14
Methylene Chloride	160724
Sodium Sulfate	16124A
Sulfuric Acid	158502

Spike Solutions: Witness:
MS1610926A APPIX #1 MINI SPIKE
MS1611926C MINI SEP. LCS SPIKE
SS1611326B MINI SEP. BNA SURROGATE

+ moved to 16124WA2026 HB2/11/16 5/10/16

	Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1	8354933	E6101	250	SS1611326B	1.0	1	✓	✓	153A	Clear Colorless	10461	19393	05/10/2016	N
2	8354934	E6102	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
3	8354935	E6103	249	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
4	8354936BKG	E6104	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
5	8354939	E6105	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
6	8354940	E6106	249	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
7	8354941	E6107	249	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
8	8354942	E6108	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
9	8354943	E6109	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
10	8354944	E6110	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
11	8354945	E6111	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N

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Rack ID:	—	Work Station	Hoffenerk	Micro Temp 100?
Internal Standard	YVISTD2066	Balance #	151061	

S-bath ID 1 50 C | S-bath ID — C | N-Evap — C | M-vap — C | 16124WAA026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 5153 Kailah Ortiz Reviewed by:_____ Start Date:_____ Start time: _____

16124WAZ026 (8) Tech 1: _____ Tech 2: _____

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs by 8270D in Water

QC	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
124WZMSD	124WZMSD		SS1611326B		MS1610926A MS1611926C						
124WZMS	124WZMS		SS1611326B		MS1610926A MS1611926C						
BLANKA	SBLKWZ124		SS1611326B								
LCSA	124WZLCS		SS1611326B		MS1610926A MS1611926C						

Solvent Used	Lot No.
10N NaOH	
Methylene Chloride	
Sodium Sulfate	
Sulfuric Acid	

Spike Solutions: Witness:_____

MS1610926A APPIX #1 MINI SPIKE

MS1611926C MINI SEP. LCS SPIKE

SS1611326B MINI SEP. BNA SURROGATE

(8) See attached batchlog for extraction information MB2/4/16 SL1/4/16

Sample #		Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1	124WZ	124WZUS		SS1611326B							10461			
2	8354941	E6107		SS1611326B							10461	19395	05/10/2016	N
3	8354942	E6108		SS1611326B							10461	19395	05/10/2016	N
4	8354943	E6109		SS1611326B							10461	19395	05/10/2016	N
5	8354944	E6110		SS1611326B							10461	19395	05/10/2016	N
6	8354945	E6111		SS1611326B							10461	19395	05/10/2016	N

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Rack ID:		Work Station		Micro Temp 100?
Internal Standard		Balance #		

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	16124WAZ026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

5/12/16

Organic Extraction Batchlog Assigned to: 5153 Kailah Ortiz Reviewed by: CB5247 Start Date: 5/3/2016 Start time: 1700

16124WAA026 Tech 1: KO5153 Tech 2: _____

Dept: 26	Prep Analysis: 11010 8270D BNA Extraction										SVOAs by 8270D in Water
QC	Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
8354937MS	E6104	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	153A	clear
8354938MSD	E6104	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	153A	"
BLANKA	SBLKWA124	250	SS1611326B	1.0	←	←	1	✓	✓	2	turbid
LCSA	124WALCS	250	SS1611326B	1.0	MS1610926A MS1611926C	1.0 1.0	1	✓	✓	2	" "

Solvent Used	Lot No.
10N NaOH	2507A14
Methylene Chloride	160324
Sodium Sulfate	16124A
Sulfuric Acid	158502

Spike Solutions: Witness: _____
MS1610926A APPIX #1 MINI SPIKE
MS1611926C MINI SEP. LCS SPIKE
SS1611326B MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt mL	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 8354933	E6101	750	SS1611326B	1.0	1	✓	✓	153A	clear (colorless)	10461	19393	05/10/2016	N
2 8354934	E6102	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
3 8354935	E6103	245	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
4 8354936BKG	E6104	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
5 8354939	E6105	250	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
6 8354940	E6106	245	SS1611326B	1.0	1	✓	✓	153A		10461	19393	05/10/2016	N
7 8354941	E6107	245	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
8 8354942	E6108	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
9 8354943	E6109	250	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
10 8354944	E6110	750	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N
11 8354945	E6111	750	SS1611326B	1.0	1	✓	✓	153A		10461	19395	05/10/2016	N

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Rack ID:		Work Station	Thermometer	Micro Temp 100?
Internal Standard	IVISTD2006	Balance #	15661	

S-bath ID 11	50 C	S-bath ID	C	N-Evap	C	M-vap	C	16124WAA026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 9665 Tyler Harmes Reviewed by: KMB2725 5/11/16 Start Date: 5/11/16 Start time: 8:30

16131WAJ026 Tech 1: Ky 9874 Tech 2: CH 96665

Dept: 26	Prep Analysis: 11010 8270D BNA Extraction								SVOAs by 8270D in Water			
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWJ131	250	~~SS1611326B~~ (8)	1.0			1.0	✓	✓		Tap H_2O
LCSA	131WJLCS	250	~~SS1611326B~~ (8a)	↓	MS1611626A MS1612526A	1.0 1.0	1.0	✓	✓		↓
LCSDA	131WJLCSD	250	~~SS1611326B~~ (8a)	↓	MS1611626A MS1612526A	1.0 1.0	1.0	✓	✓		↓

+ moved to 16131WA2026 HBZ 1926 5/12/16

Solvent Used	Lot No.
10N NaOH	2507A14
Methylene Chloride	163035
Sodium Sulfate	16130A
Sulfuric Acid	158902

Spike Solutions: Witness: N/A

MS1611626A APPIX #1 MINI SPIKE

MS1612526A MINI SEP. LCS SPIKE

~~SS1611326B~~ (8a) MINI SEP. BNA SURROGATE

(8a) SS1612626A 9H 96665 5/11/16

	Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
(8b)	1 8345367	R	GMLLT	25	~~SS1611326B~~ (8a)	1.0	1.0	✓	✓	153E	black cloudy	10461	13677	05/04/2016	N
+	2 8349468	R	N3130	245	~~SS1611326B~~ (8a)	↓	1.0	✓	✓	155A	clear	10461	14048	05/10/2016	N
+	3 8350677	R	33225	244	~~SS1611326B~~ (8a)	↓	1.0	✓	✓	153A	↓	10461	14048	05/11/2016	N
	4 8354940	R	E6106	247	~~SS1611326B~~ (8a)	↓	1.0	✓	✓	153B		10461	19393	05/10/2016	N

(8b) Reduced initial volume due to poor sample matrix. Ky 9874 5/11/16

N/A

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Rack ID:	—	Work Station	H_2O 5	Micro Temp 100?	✓
Internal Standard	EVISTD266	Balance #	15661		

S-bath ID 11	88 C	S-bath ID	/ C	N-Evap	/ C	M-vap	/ C	16131WAJ026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

ANALYTICAL REPORT

Job Number: 240-64160-1

Job Description: RFAAP, Radford VA, HWMU16

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
5/19/2016 4:38 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
05/19/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RFAAP, Radford VA, HWMU16

Report Number: 240-64160-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 4/28/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3º C and 2.7º C.

Due to separate reporting requirements, samples 16-2, 16-3, 16-5, 16WC2B, and 16SPRING as listed on the chain of custody were reported in REPORT NUMBER: 240-64160-2

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples 16C1 (240-64160-1), 16MW8 (240-64160-2), 16MW9 (240-64160-3), 16WC1A (240-64160-4), 16WDUP (240-64160-5) and 16WC1B (240-64160-6) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/02/2016 and analyzed on 05/06/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria high for 16WC1AMSD (240-64160-4MSD).

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples 16C1 (240-64160-1), 16MW8 (240-64160-2), 16MW9 (240-64160-3), 16WC1A (240-64160-4), 16WDUP (240-64160-5) and 16WC1B (240-64160-6) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/05/2016 and analyzed on 05/07/2016 and 05/09/2016.

Barium was detected in method blank MB 240-228967/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: 16C1 (240-64160-1), 16MW8 (240-64160-2), 16MW9 (240-64160-3), 16WC1A (240-64160-4), 16WDUP (240-64160-5) and 16WC1B (240-64160-6). The continuing calibration blanks and method blanks may not support the lower PQL.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples 16C1 (240-64160-1), 16MW8 (240-64160-2), 16MW9 (240-64160-3), 16WC1A (240-64160-4), 16WDUP (240-64160-5) and 16WC1B (240-64160-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/05/2016 and analyzed on 05/06/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL CYANIDE

Samples 16C1 (240-64160-1), 16MW8 (240-64160-2), 16MW9 (240-64160-3), 16WC1A (240-64160-4), 16WDUP (240-64160-5) and 16WC1B (240-64160-6) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared and analyzed on 05/05/2016 and 05/06/2016.

Cyanide failed the recovery criteria low for the MSD of sample 16WC1AMSD (240-64160-4) in batch 240-229094.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-1

Client Sample ID: 16C1 — Lab Sample ID: 240-64160-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	140	B	10	1.1	ug/L	1		6020A	Total Recoverable
Beryllium	0.52	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cadmium	0.42	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Nickel	3.9	J	10	2.0	ug/L	1		6020A	Total Recoverable

Client Sample ID: 16MW8 — Lab Sample ID: 240-64160-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120	B	10	1.1	ug/L	1		6020A	Total Recoverable
Beryllium	0.54	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cadmium	0.40	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cobalt	4.0	J	5.0	1.0	ug/L	1		6020A	Total Recoverable
Copper	6.5		5.0	1.0	ug/L	1		6020A	Total Recoverable
Nickel	6.1	J	10	2.0	ug/L	1		6020A	Total Recoverable
Lead	0.36	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Zinc	27		10	7.3	ug/L	1		6020A	Total Recoverable
Cyanide, Total	13	J	20	5.0	ug/L	1		9012B	Total/NA

Client Sample ID: 16MW9 — Lab Sample ID: 240-64160-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	590	B	10	1.1	ug/L	1		6020A	Total Recoverable
Beryllium	0.23	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cobalt	5.5		5.0	1.0	ug/L	1		6020A	Total Recoverable
Nickel	15		10	2.0	ug/L	1		6020A	Total Recoverable
Cyanide, Total	8.5	J	20	5.0	ug/L	1		9012B	Total/NA

Client Sample ID: 16WC1A — Lab Sample ID: 240-64160-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	330	B	10	1.1	ug/L	1		6020A	Total Recoverable
Beryllium	0.30	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cadmium	0.26	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cobalt	4.9	J	5.0	1.0	ug/L	1		6020A	Total Recoverable
Nickel	7.6	J	10	2.0	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16WC1A (Continued) — Lab Sample ID: 240-64160-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	19	J F1	20	5.0	ug/L	1		9012B	Total/NA

Client Sample ID: 16WDUP — Lab Sample ID: 240-64160-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	300	B	10	1.1	ug/L	1		6020A	Total Recoverable
Beryllium	0.23	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cobalt	4.3	J	5.0	1.0	ug/L	1		6020A	Total Recoverable
Nickel	6.3	J	10	2.0	ug/L	1		6020A	Total Recoverable
Cyanide, Total	15	J	20	5.0	ug/L	1		9012B	Total/NA

Client Sample ID: 16WC1B — Lab Sample ID: 240-64160-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120	B	10	1.1	ug/L	1		6020A	Total Recoverable
Cadmium	0.23	J	1.0	0.20	ug/L	1		6020A	Total Recoverable
Cobalt	35		5.0	1.0	ug/L	1		6020A	Total Recoverable
Nickel	7.2	J	10	2.0	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16C1

Date Collected: 04/27/16 13:25
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 09:20	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 09:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*76*		*31 - 115*	*05/02/16 05:03*	*05/06/16 09:20*	*1*
Phenol-d5 (Surr)	*63*		*10 - 110*	*05/02/16 05:03*	*05/06/16 09:20*	*1*
Nitrobenzene-d5 (Surr)	*80*		*31 - 110*	*05/02/16 05:03*	*05/06/16 09:20*	*1*
2-Fluorophenol (Surr)	*52*		*15 - 110*	*05/02/16 05:03*	*05/06/16 09:20*	*1*
2-Fluorobiphenyl (Surr)	*73*		*29 - 110*	*05/02/16 05:03*	*05/06/16 09:20*	*1*
2,4,6-Tribromophenol (Surr)	*65*		*21 - 128*	*05/02/16 05:03*	*05/06/16 09:20*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:29	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:29	1
Barium	**140**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:29	1
Beryllium	**0.52**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:29	1
Cadmium	**0.42**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:29	1
Cobalt	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:29	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:29	1
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:30	1
Nickel	**3.9**	**J**	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:29	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:29	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:29	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:29	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:29	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 16:29	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	20	U	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:54	1

Client Sample ID: 16MW8

Date Collected: 04/26/16 13:55
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 09:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 09:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*73*		*31 - 115*	*05/02/16 05:03*	*05/06/16 09:45*	*1*
Phenol-d5 (Surr)	*53*		*10 - 110*	*05/02/16 05:03*	*05/06/16 09:45*	*1*
Nitrobenzene-d5 (Surr)	*75*		*31 - 110*	*05/02/16 05:03*	*05/06/16 09:45*	*1*
2-Fluorophenol (Surr)	*48*		*15 - 110*	*05/02/16 05:03*	*05/06/16 09:45*	*1*
2-Fluorobiphenyl (Surr)	*70*		*29 - 110*	*05/02/16 05:03*	*05/06/16 09:45*	*1*
2,4,6-Tribromophenol (Surr)	*59*		*21 - 128*	*05/02/16 05:03*	*05/06/16 09:45*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:33	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:33	1
Barium	**120**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:33	1
Beryllium	**0.54**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:33	1
Cadmium	**0.40**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:33	1
Cobalt	**4.0**	**J**	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:33	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:33	1
Copper	**6.5**		5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:34	1
Nickel	**6.1**	**J**	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:33	1
Lead	**0.36**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:33	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:33	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:33	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:33	1
Zinc	**27**		10	7.3	ug/L		05/05/16 09:40	05/07/16 16:33	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**13**	**J**	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:54	1

Client Sample ID: 16MW9

Date Collected: 04/27/16 12:15
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 10:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 10:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*84*		*31 - 115*	*05/02/16 05:03*	*05/06/16 10:10*	*1*
Phenol-d5 (Surr)	*55*		*10 - 110*	*05/02/16 05:03*	*05/06/16 10:10*	*1*
Nitrobenzene-d5 (Surr)	*84*		*31 - 110*	*05/02/16 05:03*	*05/06/16 10:10*	*1*
2-Fluorophenol (Surr)	*53*		*15 - 110*	*05/02/16 05:03*	*05/06/16 10:10*	*1*
2-Fluorobiphenyl (Surr)	*80*		*29 - 110*	*05/02/16 05:03*	*05/06/16 10:10*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*21 - 128*	*05/02/16 05:03*	*05/06/16 10:10*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:38	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:38	1
Barium	**590**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:38	1
Beryllium	**0.23**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:38	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:38	1
Cobalt	**5.5**		5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:38	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:38	1
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:47	1
Nickel	**15**		10	2.0	ug/L		05/05/16 09:40	05/07/16 16:38	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:38	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:38	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:38	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:38	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 16:38	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**8.5**	**J**	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:54	1

Client Sample ID: 16WC1A

Date Collected: 04/27/16 10:50
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 10:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 10:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*74*		*31 - 115*	*05/02/16 05:03*	*05/06/16 10:35*	*1*
Phenol-d5 (Surr)	*49*		*10 - 110*	*05/02/16 05:03*	*05/06/16 10:35*	*1*
Nitrobenzene-d5 (Surr)	*79*		*31 - 110*	*05/02/16 05:03*	*05/06/16 10:35*	*1*
2-Fluorophenol (Surr)	*51*		*15 - 110*	*05/02/16 05:03*	*05/06/16 10:35*	*1*
2-Fluorobiphenyl (Surr)	*72*		*29 - 110*	*05/02/16 05:03*	*05/06/16 10:35*	*1*
2,4,6-Tribromophenol (Surr)	*68*		*21 - 128*	*05/02/16 05:03*	*05/06/16 10:35*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:00	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:00	1
Barium	**330**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:00	1
Beryllium	**0.30**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:00	1
Cadmium	**0.26**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:00	1
Cobalt	**4.9**	**J**	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:00	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:00	1
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:09	1
Nickel	**7.6**	**J**	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:00	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:00	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:00	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:00	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:00	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 16:00	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 12:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**19**	**J F1**	20	5.0	ug/L		05/05/16 20:57	05/05/16 22:32	1

Client Sample ID: 16WDUP

Date Collected: 04/27/16 11:10
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 11:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 11:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*84*		*31 - 115*	*05/02/16 05:03*	*05/06/16 11:50*	*1*
Phenol-d5 (Surr)	*57*		*10 - 110*	*05/02/16 05:03*	*05/06/16 11:50*	*1*
Nitrobenzene-d5 (Surr)	*89*		*31 - 110*	*05/02/16 05:03*	*05/06/16 11:50*	*1*
2-Fluorophenol (Surr)	*62*		*15 - 110*	*05/02/16 05:03*	*05/06/16 11:50*	*1*
2-Fluorobiphenyl (Surr)	*82*		*29 - 110*	*05/02/16 05:03*	*05/06/16 11:50*	*1*
2,4,6-Tribromophenol (Surr)	*74*		*21 - 128*	*05/02/16 05:03*	*05/06/16 11:50*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:42	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:42	1
Barium	**300**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:42	1
Beryllium	**0.23**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:42	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:42	1
Cobalt	**4.3**	**J**	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:42	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:42	1
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:51	1
Nickel	**6.3**	**J**	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:42	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:42	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:42	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:42	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:42	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 16:42	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**15**	**J**	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:43	1

Client Sample ID: 16WC1B

Date Collected: 04/27/16 09:50
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-6

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		05/02/16 05:03	05/06/16 12:15	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*8.9*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 12:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*85*		*31 - 115*	*05/02/16 05:03*	*05/06/16 12:15*	*1*
Phenol-d5 (Surr)	*54*		*10 - 110*	*05/02/16 05:03*	*05/06/16 12:15*	*1*
Nitrobenzene-d5 (Surr)	*91*		*31 - 110*	*05/02/16 05:03*	*05/06/16 12:15*	*1*
2-Fluorophenol (Surr)	*61*		*15 - 110*	*05/02/16 05:03*	*05/06/16 12:15*	*1*
2-Fluorobiphenyl (Surr)	*85*		*29 - 110*	*05/02/16 05:03*	*05/06/16 12:15*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*21 - 128*	*05/02/16 05:03*	*05/06/16 12:15*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:46	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:46	1
Barium	**120**	**B**	10	1.1	ug/L		05/05/16 09:40	05/07/16 16:46	1
Beryllium	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:46	1
Cadmium	**0.23**	**J**	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:46	1
Cobalt	**35**		5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:46	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 16:46	1
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:55	1
Nickel	**7.2**	**J**	10	2.0	ug/L		05/05/16 09:40	05/07/16 16:46	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 16:46	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 16:46	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 16:46	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 16:46	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 16:46	1
Thallium	1.0	U	1.0	0.28	ug/L		05/05/16 09:40	05/07/16 16:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 13:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	20	U	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:43	1

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units	Method
Sulfotepp	10	1.0	ug/L	8270D

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	RL	MDL	Units	Method
Antimony	2.0	0.40	ug/L	6020A
Arsenic	10	2.0	ug/L	6020A
Barium	10	1.1	ug/L	6020A
Beryllium	1.0	0.20	ug/L	6020A
Cadmium	1.0	0.20	ug/L	6020A
Chromium	5.0	1.0	ug/L	6020A
Cobalt	5.0	1.0	ug/L	6020A
Copper	5.0	1.0	ug/L	6020A
Lead	1.0	0.20	ug/L	6020A
Nickel	10	2.0	ug/L	6020A
Selenium	5.0	3.0	ug/L	6020A
Silver	1.0	0.20	ug/L	6020A
Thallium	1.0	1.0	ug/L	6020A
Vanadium	10	0.23	ug/L	6020A
Zinc	10	7.3	ug/L	6020A

Method: 7470A - Mercury (CVAA)

Analyte	RL	MDL	Units	Method
Mercury	2.0	0.20	ug/L	7470A

General Chemistry

Analyte	RL	MDL	Units	Method
Cyanide, Total	20	5.0	ug/L	9012B

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TPH	PHL	NBZ	2FP	FBP	TBP
Lab Sample ID	Client Sample ID	(31-115)	(10-110)	(31-110)	(15-110)	(29-110)	(21-128)
240-64160-1	16C1	76	63	80	52	73	65
240-64160-2	16MW8	73	53	75	48	70	59
240-64160-3	16MW9	84	55	84	53	80	76
240-64160-4	16WC1A	74	49	79	51	72	68
240-64160-4 MS	16WC1A	84	84	90	63	79	83
240-64160-4 MSD	16WC1A	103	106	115 X	80	100	108
240-64160-5	16WDUP	84	57	89	62	82	74
240-64160-6	16WC1B	85	54	91	61	85	76
LCS 240-228312/10-A	Lab Control Sample	91	99	106	81	90	89
MB 240-228312/9-A	Method Blank	82	74	87	59	84	64

Surrogate Legend

TPH = Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)
NBZ = Nitrobenzene-d5 (Surr)
2FP = 2-Fluorophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-228312/9-A
Matrix: Water
Analysis Batch: 229123

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228312

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	10	U	10	1.0	ug/L		05/02/16 05:03	05/06/16 08:05	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*10*	*U*	*ug/L*			*70-30-4*	*05/02/16 05:03*	*05/06/16 08:05*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*82*		*31 - 115*	*05/02/16 05:03*	*05/06/16 08:05*	*1*
Phenol-d5 (Surr)	*74*		*10 - 110*	*05/02/16 05:03*	*05/06/16 08:05*	*1*
Nitrobenzene-d5 (Surr)	*87*		*31 - 110*	*05/02/16 05:03*	*05/06/16 08:05*	*1*
2-Fluorophenol (Surr)	*59*		*15 - 110*	*05/02/16 05:03*	*05/06/16 08:05*	*1*
2-Fluorobiphenyl (Surr)	*84*		*29 - 110*	*05/02/16 05:03*	*05/06/16 08:05*	*1*
2,4,6-Tribromophenol (Surr)	*64*		*21 - 128*	*05/02/16 05:03*	*05/06/16 08:05*	*1*

Lab Sample ID: LCS 240-228312/10-A
Matrix: Water
Analysis Batch: 229123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228312

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*91*		*31 - 115*
Phenol-d5 (Surr)	*99*		*10 - 110*
Nitrobenzene-d5 (Surr)	*106*		*31 - 110*
2-Fluorophenol (Surr)	*81*		*15 - 110*
2-Fluorobiphenyl (Surr)	*90*		*29 - 110*
2,4,6-Tribromophenol (Surr)	*89*		*21 - 128*

Lab Sample ID: 240-64160-4 MS
Matrix: Water
Analysis Batch: 229123

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 228312

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*84*		*31 - 115*
Phenol-d5 (Surr)	*84*		*10 - 110*
Nitrobenzene-d5 (Surr)	*90*		*31 - 110*
2-Fluorophenol (Surr)	*63*		*15 - 110*
2-Fluorobiphenyl (Surr)	*79*		*29 - 110*
2,4,6-Tribromophenol (Surr)	*83*		*21 - 128*

Lab Sample ID: 240-64160-4 MSD
Matrix: Water
Analysis Batch: 229123

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 228312

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*103*		*31 - 115*
Phenol-d5 (Surr)	*106*		*10 - 110*
Nitrobenzene-d5 (Surr)	*115*	*X*	*31 - 110*
2-Fluorophenol (Surr)	*80*		*15 - 110*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-64160-4 MSD
Matrix: Water
Analysis Batch: 229123

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 228312

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*100*		*29 - 110*
2,4,6-Tribromophenol (Surr)	*108*		*21 - 128*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-228967/1-A
Matrix: Water
Analysis Batch: 229385

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 15:52	1
Arsenic	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 15:52	1
Barium	1.29	J	10	1.1	ug/L		05/05/16 09:40	05/07/16 15:52	1
Beryllium	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 15:52	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 15:52	1
Cobalt	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 15:52	1
Chromium	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/07/16 15:52	1
Nickel	10	U	10	2.0	ug/L		05/05/16 09:40	05/07/16 15:52	1
Lead	1.0	U	1.0	0.20	ug/L		05/05/16 09:40	05/07/16 15:52	1
Antimony	2.0	U	2.0	0.40	ug/L		05/05/16 09:40	05/07/16 15:52	1
Selenium	5.0	U	5.0	3.0	ug/L		05/05/16 09:40	05/07/16 15:52	1
Vanadium	10	U	10	0.23	ug/L		05/05/16 09:40	05/07/16 15:52	1
Zinc	10	U	10	7.3	ug/L		05/05/16 09:40	05/07/16 15:52	1
Thallium	1.0	U	1.0	1.0	ug/L		05/05/16 09:40	05/07/16 15:52	1

Lab Sample ID: MB 240-228967/1-A
Matrix: Water
Analysis Batch: 229600

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	5.0	U	5.0	1.0	ug/L		05/05/16 09:40	05/09/16 13:01	1

Lab Sample ID: LCS 240-228967/2-A
Matrix: Water
Analysis Batch: 229385

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	100	101		ug/L		101	80 - 120
Arsenic	1000	999		ug/L		100	80 - 120
Barium	1000	994		ug/L		99	80 - 120
Beryllium	1000	1080		ug/L		108	80 - 120
Cadmium	1000	1010		ug/L		101	80 - 120
Cobalt	1000	1070		ug/L		107	80 - 120
Chromium	1000	1050		ug/L		105	80 - 120
Nickel	1000	1010		ug/L		101	80 - 120
Lead	1000	1060		ug/L		106	80 - 120
Antimony	100	102		ug/L		102	80 - 120
Selenium	1000	984		ug/L		98	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-228967/2-A
Matrix: Water
Analysis Batch: 229385

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	1000	1060		ug/L		106	80 - 120
Zinc	1000	1100		ug/L		110	80 - 120
Thallium	250	271		ug/L		108	80 - 120

Lab Sample ID: LCS 240-228967/2-A
Matrix: Water
Analysis Batch: 229600

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	1000	1060		ug/L		106	80 - 120

Lab Sample ID: 240-64160-4 MS
Matrix: Water
Analysis Batch: 229385

Client Sample ID: 16WC1A
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	1.0	U	100	97.2		ug/L		97	75 - 125
Arsenic	10	U	1000	990		ug/L		99	75 - 125
Barium	330	B	1000	1290		ug/L		96	75 - 125
Beryllium	0.30	J	1000	1030		ug/L		103	75 - 125
Cadmium	0.26	J	1000	966		ug/L		97	75 - 125
Cobalt	4.9	J	1000	1010		ug/L		100	75 - 125
Chromium	5.0	U	1000	1010		ug/L		101	75 - 125
Nickel	7.6	J	1000	951		ug/L		94	75 - 125
Lead	1.0	U	1000	1030		ug/L		103	75 - 125
Antimony	2.0	U	100	99.3		ug/L		99	75 - 125
Selenium	5.0	U	1000	966		ug/L		97	75 - 125
Vanadium	10	U	1000	1040		ug/L		104	75 - 125
Zinc	10	U	1000	1030		ug/L		103	75 - 125
Thallium	1.0	U	250	262		ug/L		105	75 - 125

Lab Sample ID: 240-64160-4 MS
Matrix: Water
Analysis Batch: 229600

Client Sample ID: 16WC1A
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	5.0	U	1000	993		ug/L		99	75 - 125

Lab Sample ID: 240-64160-4 MSD
Matrix: Water
Analysis Batch: 229385

Client Sample ID: 16WC1A
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	1.0	U	100	101		ug/L		101	75 - 125	4	20
Arsenic	10	U	1000	1060		ug/L		106	75 - 125	6	20
Barium	330	B	1000	1370		ug/L		105	75 - 125	6	20
Beryllium	0.30	J	1000	1110		ug/L		111	75 - 125	7	20
Cadmium	0.26	J	1000	1030		ug/L		103	75 - 125	6	20
Cobalt	4.9	J	1000	1080		ug/L		107	75 - 125	7	20

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-64160-4 MSD — **Client Sample ID: 16WC1A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229385 — **Prep Batch: 228967**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	5.0	U	1000	1080		ug/L		108	75 - 125	7	20
Nickel	7.6	J	1000	1000		ug/L		100	75 - 125	5	20
Lead	1.0	U	1000	1090		ug/L		109	75 - 125	6	20
Antimony	2.0	U	100	104		ug/L		104	75 - 125	5	20
Selenium	5.0	U	1000	1020		ug/L		102	75 - 125	5	20
Vanadium	10	U	1000	1120		ug/L		112	75 - 125	7	20
Zinc	10	U	1000	1090		ug/L		109	75 - 125	5	20
Thallium	1.0	U	250	279		ug/L		112	75 - 125	6	20

Lab Sample ID: 240-64160-4 MSD — **Client Sample ID: 16WC1A**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229600 — **Prep Batch: 228967**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	5.0	U	1000	1020		ug/L		102	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-228970/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229365 — **Prep Batch: 228970**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0	0.20	ug/L		05/05/16 12:00	05/06/16 12:37	1

Lab Sample ID: LCS 240-228970/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229365 — **Prep Batch: 228970**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			5.00	4.83		ug/L		97	80 - 120		

Lab Sample ID: 240-64160-4 MS — **Client Sample ID: 16WC1A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229365 — **Prep Batch: 228970**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	2.0	U	1.00	0.950	J	ug/L		95	80 - 120		

Lab Sample ID: 240-64160-4 MSD — **Client Sample ID: 16WC1A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229365 — **Prep Batch: 228970**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	2.0	U	1.00	0.932	J	ug/L		93	80 - 120	2	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 240-229090/1-A
Matrix: Water
Analysis Batch: 229094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	20	U	20	5.0	ug/L		05/05/16 20:57	05/05/16 22:32	1

Lab Sample ID: LCS 240-229090/2-A
Matrix: Water
Analysis Batch: 229094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	42.0	31.9		ug/L		76	69 - 118

Lab Sample ID: 240-64160-4 MS
Matrix: Water
Analysis Batch: 229094

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 229090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	18	J	40.0	40.9		ug/L		57	42 - 140

Lab Sample ID: 240-64160-4 MSD
Matrix: Water
Analysis Batch: 229094

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 229090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	19	J F1	40.0	35.4	F1	ug/L		40	42 - 140	15	20

Lab Sample ID: MB 240-229229/1-A
Matrix: Water
Analysis Batch: 229244

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	20	U	20	5.0	ug/L		05/06/16 16:08	05/06/16 18:49	1

Lab Sample ID: LCS 240-229229/2-A
Matrix: Water
Analysis Batch: 229244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	42.0	35.6		ug/L		85	69 - 118

Lab Sample ID: MRL 240-229244/6
Matrix: Water
Analysis Batch: 229244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.0105		mg/L		105	70 - 130

GC/MS Semi VOA

Prep Batch: 228312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	3520C	
240-64160-2	16MW8	Total/NA	Water	3520C	
240-64160-3	16MW9	Total/NA	Water	3520C	
240-64160-4	16WC1A	Total/NA	Water	3520C	
240-64160-4 MS	16WC1A	Total/NA	Water	3520C	
240-64160-4 MSD	16WC1A	Total/NA	Water	3520C	
240-64160-5	16WDUP	Total/NA	Water	3520C	
240-64160-6	16WC1B	Total/NA	Water	3520C	
LCS 240-228312/10-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-228312/9-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 229123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	8270D	228312
240-64160-2	16MW8	Total/NA	Water	8270D	228312
240-64160-3	16MW9	Total/NA	Water	8270D	228312
240-64160-4	16WC1A	Total/NA	Water	8270D	228312
240-64160-4 MS	16WC1A	Total/NA	Water	8270D	228312
240-64160-4 MSD	16WC1A	Total/NA	Water	8270D	228312
240-64160-5	16WDUP	Total/NA	Water	8270D	228312
240-64160-6	16WC1B	Total/NA	Water	8270D	228312
LCS 240-228312/10-A	Lab Control Sample	Total/NA	Water	8270D	228312
MB 240-228312/9-A	Method Blank	Total/NA	Water	8270D	228312

Metals

Prep Batch: 228967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total Recoverable	Water	3005A	
240-64160-2	16MW8	Total Recoverable	Water	3005A	
240-64160-3	16MW9	Total Recoverable	Water	3005A	
240-64160-4	16WC1A	Total Recoverable	Water	3005A	
240-64160-4 MS	16WC1A	Total Recoverable	Water	3005A	
240-64160-4 MSD	16WC1A	Total Recoverable	Water	3005A	
240-64160-4 SD	16WC1A	Total Recoverable	Water	3005A	
240-64160-5	16WDUP	Total Recoverable	Water	3005A	
240-64160-6	16WC1B	Total Recoverable	Water	3005A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 228970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	7470A	
240-64160-2	16MW8	Total/NA	Water	7470A	
240-64160-3	16MW9	Total/NA	Water	7470A	
240-64160-4	16WC1A	Total/NA	Water	7470A	
240-64160-4 MS	16WC1A	Total/NA	Water	7470A	
240-64160-4 MSD	16WC1A	Total/NA	Water	7470A	
240-64160-5	16WDUP	Total/NA	Water	7470A	
240-64160-6	16WC1B	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 228970 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-228970/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-228970/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 229220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CRA 240-229220/9-A	DL		Water	7470A	

Analysis Batch: 229365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	7470A	228970
240-64160-2	16MW8	Total/NA	Water	7470A	228970
240-64160-3	16MW9	Total/NA	Water	7470A	228970
240-64160-4	16WC1A	Total/NA	Water	7470A	228970
240-64160-4 MS	16WC1A	Total/NA	Water	7470A	228970
240-64160-4 MSD	16WC1A	Total/NA	Water	7470A	228970
240-64160-5	16WDUP	Total/NA	Water	7470A	228970
240-64160-6	16WC1B	Total/NA	Water	7470A	228970
CRA 240-229220/9-A	DL		Water	7470A	229220
LCS 240-228970/2-A	Lab Control Sample	Total/NA	Water	7470A	228970
MB 240-228970/1-A	Method Blank	Total/NA	Water	7470A	228970

Analysis Batch: 229385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total Recoverable	Water	6020A	228967
240-64160-2	16MW8	Total Recoverable	Water	6020A	228967
240-64160-3	16MW9	Total Recoverable	Water	6020A	228967
240-64160-4	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 MS	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 MSD	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 SD	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-5	16WDUP	Total Recoverable	Water	6020A	228967
240-64160-6	16WC1B	Total Recoverable	Water	6020A	228967
CRI 240-229385/65	DL		Water	6020A	
CRI 240-229385/9	DL		Water	6020A	
ICSA 240-229385/10	ICS		Water	6020A	
ICSAB 240-229385/11	ICS		Water	6020A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	6020A	228967
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	6020A	228967

Analysis Batch: 229600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total Recoverable	Water	6020A	228967
240-64160-2	16MW8	Total Recoverable	Water	6020A	228967
240-64160-3	16MW9	Total Recoverable	Water	6020A	228967
240-64160-4	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 MS	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 MSD	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-4 SD	16WC1A	Total Recoverable	Water	6020A	228967
240-64160-5	16WDUP	Total Recoverable	Water	6020A	228967
240-64160-6	16WC1B	Total Recoverable	Water	6020A	228967
CRI 240-229600/40	DL		Water	6020A	

Metals (Continued)

Analysis Batch: 229600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CRI 240-229600/9	DL		Water	6020A	
ICSA 240-229600/10	ICS		Water	6020A	
ICSAB 240-229600/11	ICS		Water	6020A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	6020A	228967
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	6020A	228967

General Chemistry

Prep Batch: 229090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-4	16WC1A	Total/NA	Water	9012B	
240-64160-4 MS	16WC1A	Total/NA	Water	9012B	
240-64160-4 MSD	16WC1A	Total/NA	Water	9012B	
LCS 240-229090/2-A	Lab Control Sample	Total/NA	Water	9012B	
MB 240-229090/1-A	Method Blank	Total/NA	Water	9012B	

Analysis Batch: 229094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-4	16WC1A	Total/NA	Water	9012B	229090
240-64160-4 MS	16WC1A	Total/NA	Water	9012B	229090
240-64160-4 MSD	16WC1A	Total/NA	Water	9012B	229090
LCS 240-229090/2-A	Lab Control Sample	Total/NA	Water	9012B	229090
MB 240-229090/1-A	Method Blank	Total/NA	Water	9012B	229090

Prep Batch: 229229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	9012B	
240-64160-2	16MW8	Total/NA	Water	9012B	
240-64160-3	16MW9	Total/NA	Water	9012B	
240-64160-5	16WDUP	Total/NA	Water	9012B	
240-64160-6	16WC1B	Total/NA	Water	9012B	
LCS 240-229229/2-A	Lab Control Sample	Total/NA	Water	9012B	
MB 240-229229/1-A	Method Blank	Total/NA	Water	9012B	

Analysis Batch: 229244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-1	16C1	Total/NA	Water	9012B	229229
240-64160-2	16MW8	Total/NA	Water	9012B	229229
240-64160-3	16MW9	Total/NA	Water	9012B	229229
240-64160-5	16WDUP	Total/NA	Water	9012B	229229
240-64160-6	16WC1B	Total/NA	Water	9012B	229229
LCS 240-229229/2-A	Lab Control Sample	Total/NA	Water	9012B	229229
MB 240-229229/1-A	Method Blank	Total/NA	Water	9012B	229229
MRL 240-229244/6	Lab Control Sample	Total/NA	Water	9012B	

Client Sample ID: 16C1

Lab Sample ID: 240-64160-1

Date Collected: 04/27/16 13:25

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 09:20	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:29	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:30	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 12:52	WKD	TAL CAN
Total/NA	Prep	9012B			229229	05/06/16 16:08	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229244	05/06/16 18:54	JWW	TAL CAN

Client Sample ID: 16MW8

Lab Sample ID: 240-64160-2

Date Collected: 04/26/16 13:55

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 09:45	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:33	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:34	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 12:54	WKD	TAL CAN
Total/NA	Prep	9012B			229229	05/06/16 16:08	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229244	05/06/16 18:54	JWW	TAL CAN

Client Sample ID: 16MW9

Lab Sample ID: 240-64160-3

Date Collected: 04/27/16 12:15

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 10:10	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:38	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:47	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 12:57	WKD	TAL CAN
Total/NA	Prep	9012B			229229	05/06/16 16:08	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229244	05/06/16 18:54	JWW	TAL CAN

Client Sample ID: 16WC1A

Lab Sample ID: 240-64160-4

Date Collected: 04/27/16 10:50

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 10:35	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:00	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:09	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 12:42	WKD	TAL CAN
Total/NA	Prep	9012B			229090	05/05/16 20:57	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229094	05/05/16 22:32	JWW	TAL CAN

Client Sample ID: 16WDUP

Lab Sample ID: 240-64160-5

Date Collected: 04/27/16 11:10

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 11:50	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:42	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:51	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:40	WKD	TAL CAN
Total/NA	Prep	9012B			229229	05/06/16 16:08	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229244	05/06/16 18:43	JWW	TAL CAN

Client Sample ID: 16WC1B

Lab Sample ID: 240-64160-6

Date Collected: 04/27/16 09:50

Matrix: Water

Date Received: 04/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			228312	05/02/16 05:03	CSC	TAL CAN
Total/NA	Analysis	8270D		1	229123	05/06/16 12:15	TMH	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:46	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:55	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:42	WKD	TAL CAN
Total/NA	Prep	9012B			229229	05/06/16 16:08	JWW	TAL CAN
Total/NA	Analysis	9012B		1	229244	05/06/16 18:43	JWW	TAL CAN

Lab Chronicle

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64160-1
Project/Site: RFAAP, Radford VA, HWMU16

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64160-1
Project/Site: RFAAP, Radford VA, HWMU16

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460175	09-14-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
9012B	9012B	Water	Cyanide, Total

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9012B	Cyanide, Total andor Amenable	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-64160-1	16C1	Water	04/27/16 13:25	04/28/16 10:00
240-64160-2	16MW8	Water	04/26/16 13:55	04/28/16 10:00
240-64160-3	16MW9	Water	04/27/16 12:15	04/28/16 10:00
240-64160-4	16WC1A	Water	04/27/16 10:50	04/28/16 10:00
240-64160-5	16WDUP	Water	04/27/16 11:10	04/28/16 10:00
240-64160-6	16WC1B	Water	04/27/16 09:50	04/28/16 10:00

Detection Limit Exceptions Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64160-1
Project/Site: RFAAP, Radford VA, HWMU16

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but great than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedure do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
6020A	Water	Zinc	ug/L	10	20

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 227507

Lab Sample ID: STD4 240-227507/7 IC Client Sample ID:

Date Analyzed: 04/26/16 09:48 Lab File ID: 60426007.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.64	Poor chromatography	hulat	04/26/16 11:05

Lab Sample ID: STD3 240-227507/8 IC Client Sample ID:

Date Analyzed: 04/26/16 10:13 Lab File ID: 60426008.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.64	Poor chromatography	hulat	04/26/16 11:09

Lab Sample ID: STD1 240-227507/10 IC Client Sample ID:

Date Analyzed: 04/26/16 11:03 Lab File ID: 60426010.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dibenz(a,h)anthracene	18.41	Poor chromatography	hulat	04/26/16 12:15
Indeno[1,2,3-cd]pyrene	18.41	Poor chromatography	hulat	04/26/16 12:15
Benzo[g,h,i]perylene	19.05	Poor chromatography	hulat	04/26/16 12:15

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 229123

Lab Sample ID: STD6 240-229123/2 CCVIS Client Sample ID:

Date Analyzed: 05/06/16 07:16 Lab File ID: 60506002.D GC Column: RXI-5SILMS ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Chloroaniline	8.00	Poor chromatography	hulat	05/06/16 07:52

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
exBENZALDEHYD_00038	01/31/17	04/22/16	MEOH, Lot 0000118655	200 mL	exLIST1_S11_00002	4 mL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
.exLIST1_S11_00002	01/31/17		Restek, Lot A0112321		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
exBNASPIKE_00062	08/31/16	04/15/16	MEOH, Lot 0000118655	200 mL	exLIST1_S1_00005	4 mL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Methylphenol	10 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Methylphenol	10 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.1 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	20 ug/mL
					EXLIST1_S10_00001	4 mL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					exLIST1_S9_00003	4 mL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
.exLIST1_S1_00005	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	500 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	500 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	855 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
.EXLIST1_S10_00001	08/31/16		Restek, Lot A0108988		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.exLIST1_S9_00003	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
exBNASURR W_00034	07/13/17	04/22/16	MEOH, Lot 0000118655	2000 mL	SMLIST1 SURR_00003	8 mL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMLIST1 SURR_00003	02/22/18		Restek, Lot A093638		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
K2S2O8_00041	04/13/18	04/13/16	DIWATER, Lot DIWATER	2.5 L	MTK2S208_00028	125 g	Potassium persulfate	0.05 g/g
.MTK2S208_00028	07/27/18		Macron, Lot 0000070212		(Purchased Reagent)		Potassium persulfate	1 g/g
MTH2S04_00030	04/22/18		Macron, Lot 0000122132		(Purchased Reagent)		Sulfuric acid	100 %
MTHGCALW_01198	05/05/16	05/05/16	DIWATER, Lot DIWATER	100 mL	MTHGCAL_00022	1 mL	Mercury	100 ug/L
					MTTMHNO3_00085	0.125 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00022	04/29/18		INORGANIC VENTURES, Lot J2-HG02136		(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00085	04/14/18		Macron/Avantor, Lot 0000129810		(Purchased Reagent)		Nitric acid	100 %
MTHGCALW_01199	05/06/16	05/06/16	DIWATER, Lot DIWATER	100 mL	MTHGCAL_00022	1 mL	Mercury	100 ug/L
					MTTMHNO3_00085	0.125 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00022	04/29/18		INORGANIC VENTURES, Lot J2-HG02136		(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00085	04/14/18		Macron/Avantor, Lot 0000129810		(Purchased Reagent)		Nitric acid	100 %
MTHgStd_00020	05/18/16		HPS, Lot 1531727		(Purchased Reagent)		Mercury	1 ug/mL
MTICPMS2_00024	02/01/17		Inorganic Ventures, Lot K@-MEB615154		(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Na	1000 ug/mL
MTICPMSA_00026	02/01/17		Inorganic Ventures, Lot J2-MEB584095		(Purchased Reagent)		Arsenic	100 ug/mL
							Barium	100 ug/mL
							Beryllium	100 ug/mL
							Cadmium	100 ug/mL
							Chromium	100 ug/mL
							Cobalt	100 ug/mL
							Copper	100 ug/mL
							Lead	100 ug/mL
							Mn	100 ug/mL
							Nickel	100 ug/mL
							Selenium	100 ug/mL
							Sr	100 ug/mL
							Thallium	25 ug/mL
							Vanadium	100 ug/mL
							Zinc	100 ug/mL
MTICPMSB_00027	02/01/17		Inorganic Ventures, Lot K@-MEB615153		(Purchased Reagent)		Antimony	10 ug/mL
							B	10 ug/mL
							Li	10 ug/mL
							Mo	10 ug/mL
							Silver	10 ug/mL
							Sn	100 ug/mL
							Ti	10 ug/mL
							W	10 ug/mL
MTKMN04W_00106	04/26/18	04/26/16	DIWATER, Lot DIWATER	2.5 L	MTKMN04_00027	125 g	Potassium Permanganate	50000 mg/L
.MTKMN04_00027	12/30/20		Fisher, Lot 143416		(Purchased Reagent)		Potassium Permanganate	1 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MTMSCAL2CCVW_00164	10/22/16	04/22/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Silver	50 ug/L
							Thallium	50 ug/L
							Vanadium	50 ug/L
							Zinc	50 ug/L
					MTMSCAL4_00012	5 mL	Antimony	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Selenium	5 ug/mL
							Silver	5 ug/mL
							Thallium	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
.MTMSCAL4_00012	11/01/16	INORGANIC VENTURES, Lot J2-MEB596140			(Purchased Reagent)		Antimony	5 ug/mL
MTMSCAL2CCVW_00165	11/01/16	05/04/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Silver	50 ug/L
							Thallium	50 ug/L
							Vanadium	50 ug/L
							Zinc	50 ug/L
					MTMSCAL4_00012	5 mL	Antimony	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Selenium	5 ug/mL
							Silver	5 ug/mL
							Thallium	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
.MTMSCAL4_00012	11/01/16	INORGANIC VENTURES, Lot J2-MEB596140			(Purchased Reagent)		Antimony	5 ug/mL
MTMSCAL3W_00058	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	10 mL	Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Silver	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
							Zinc	100 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Selenium	5 ug/mL
							Silver	5 ug/mL
							Thallium	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
MTMSCAL4W_00053	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL4_00012	10 mL	Antimony	100 ug/L
.MTMSCAL4_00012	11/01/16	INORGANIC VENTURES, Lot J2-MEB596140			(Purchased Reagent)		Antimony	5 ug/mL
MTMSCRI6020AW_00038	08/01/16	04/12/16	DIWATER, Lot DIWATER	500 mL	MS6020ACRIA_00003	0.5 mL	Arsenic	5 ug/L
							Barium	5 ug/L
							Beryllium	1 ug/L
							Cadmium	1 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chromium	2 ug/L
							Cobalt	1 ug/L
							Copper	2 ug/L
							Lead	1 ug/L
							Nickel	2 ug/L
							Selenium	5 ug/L
							Thallium	1 ug/L
							Vanadium	5 ug/L
							Zinc	20 ug/L
					MS6020ACRIB_00004	0.5 mL	Antimony	2 ug/L
					MTAGSPIKEW_00057	0.2 mL	Silver	1 ug/L
.MS6020ACRIA_00003	08/01/16	Inorganic Ventures, Lot J2-MEB592019			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	1 ug/mL
							Cadmium	1 ug/mL
							Chromium	2 ug/mL
							Cobalt	1 ug/mL
							Copper	2 ug/mL
							Lead	1 ug/mL
							Nickel	2 ug/mL
							Selenium	5 ug/mL
							Thallium	1 ug/mL
							Vanadium	5 ug/mL
							Zinc	20 ug/mL
.MS6020ACRIB_00004	08/01/16	Inorganic Ventures, Lot J2-MEB592020			(Purchased Reagent)		Antimony	2 ug/mL
.MTAGSPIKEW_00057	06/09/17	03/28/16	DIWATER, Lot DIWATER	1000 mL	MTAG_00006	2.5 mL	Silver	2500 ug/L
..MTAG_00006	06/09/17	HIGH PURITY STANDARDS, Lot 1507504			(Purchased Reagent)		Silver	1000 ug/mL
MTMSICSABW_00066	06/08/16	05/06/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1100 ug/L
							Na	50000 ug/L
							Ti	1100 ug/L
					MTMSICSABSOLA_00007	1 mL	Arsenic	100 ug/L
							B	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Li	100 ug/L
							Mn	100 ug/L
							Nickel	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	100 ug/L
							Sr	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
							Zinc	100 ug/L
					MTMSICSABSOLB_00007	1 mL	Antimony	100 ug/L
							Mo	1100 ug/L
							Silver	100 ug/L
							Sn	100 ug/L
							Ti	1100 ug/L
							W	100 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
.MTMSICSABSOLA_00007	06/08/16	HIGH PURITY STANDARDS, Lot 1515332			(Purchased Reagent)		Arsenic	20 ug/mL
							B	20 ug/mL
							Barium	20 ug/mL
							Beryllium	20 ug/mL
							Cadmium	20 ug/mL
							Chromium	20 ug/mL
							Cobalt	20 ug/mL
							Copper	20 ug/mL
							Lead	20 ug/mL
							Li	20 ug/mL
							Mn	20 ug/mL
							Nickel	20 ug/mL
							Selenium	20 ug/mL
							Sr	20 ug/mL
							Thallium	20 ug/mL
							Vanadium	20 ug/mL
							Zinc	20 ug/mL
.MTMSICSABSOLB_00007	06/08/16	HIGH PURITY STANDARDS, Lot 1515333			(Purchased Reagent)		Antimony	20 ug/mL
							Mo	20 ug/mL
							Silver	20 ug/mL
							Sn	20 ug/mL
							Ti	20 ug/mL
							W	20 ug/mL
MTMSICSAW_00068	10/04/16	04/04/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mo	1000 ug/L
							Na	50000 ug/L
							Ti	1000 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
MTMSICVW_00067	09/29/16	03/29/16	DIWATER, Lot DIWATER	250 mL	MTMSICVA_00010	2.5 mL	Antimony	40 ug/L
							Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Silver	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
							Zinc	40 ug/L
.MTMSICVA_00010	09/01/17	CPI, Lot 1087406			(Purchased Reagent)		Antimony	4 mg/L
							Arsenic	4 mg/L
							Barium	4 mg/L
							Beryllium	4 mg/L
							Cadmium	4 mg/L
							Chromium	4 mg/L
							Cobalt	4 mg/L
							Copper	4 mg/L
							Lead	4 mg/L
							Nickel	4 mg/L
							Selenium	4 mg/L
							Silver	4 mg/L
							Thallium	4 mg/L
							Vanadium	4 mg/L
							Zinc	4 mg/L
MTMSSCAL1_00036	10/22/16	04/22/16	DIWATER, Lot DIWATER	250 mL	MTMSCAL3_00010	0.5 mL	Arsenic	10 ug/L
							Barium	10 ug/L
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Cobalt	10 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	10 ug/L
							Lead	10 ug/L
							Nickel	10 ug/L
							Selenium	10 ug/L
							Silver	10 ug/L
							Thallium	10 ug/L
							Vanadium	10 ug/L
							Zinc	10 ug/L
					MTMSCAL4_00012	0.5 mL	Antimony	10 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Selenium	5 ug/mL
							Silver	5 ug/mL
							Thallium	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
.MTMSCAL4_00012	11/01/16	INORGANIC VENTURES, Lot J2-MEB596140			(Purchased Reagent)		Antimony	5 ug/mL
MTTMHCL_00109	04/29/18	Fisher, Lot 4115120			(Purchased Reagent)		Hydrogen Chloride	100 %
MTTMHNO3_00085	04/14/18	Macron/Avantor, Lot 0000129810			(Purchased Reagent)		Nitric acid	100 %
MTTMHNO3_00086	05/03/18	Macron/Avantor, Lot 0000129810			(Purchased Reagent)		Nitric acid	100 %
SMIS80PPMW_00013	07/10/16	07/10/15	MECL2, Lot 0000103549	25 mL	SMIS R_00005	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
.SMIS R_00005	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 L1 W_00007	03/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1PAH ST_00005	2 uL	1,1'-Biphenyl	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	0.1 ug/mL
							2-Chloronaphthalene	0.1 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Dibenzofuran	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Hexachlorobenzene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							2-Fluorobiphenyl (Surr)	0.1 ug/mL
							Nitrobenzene-d5 (Surr)	0.1 ug/mL
							Terphenyl-d14 (Surr)	0.1 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1PAH ST_00005	03/31/17	03/04/16	MECL2, Lot 0000127195	3 mL	SMLIST1 PAH_00005	300 uL	1,1'-Biphenyl	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Naphthalene	100 ug/mL
							Phenanthrene	100 ug/mL
							Pyrene	100 ug/mL
					SMLIST1 SURR_00004	60 uL	2-Fluorobiphenyl (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 PAH_00005	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L2 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	10 uL	1,1'-Biphenyl	0.5 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.5 ug/mL
							1,2,4-Trichlorobenzene	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	0.5 ug/mL
							1,2-Diphenylhydrazine	0.5 ug/mL
							1,3-Dichlorobenzene	0.5 ug/mL
							1,3-Dinitrobenzene	0.5 ug/mL
							1,4-Dichlorobenzene	0.5 ug/mL
							1,4-Dioxane	0.5 ug/mL
							1-Methylnaphthalene	0.5 ug/mL
							2,2'-oxybis[1-chloropropane]	0.5 ug/mL
							2,3,4,6-Tetrachlorophenol	0.5 ug/mL
							2,4,5-Trichlorophenol	0.5 ug/mL
							2,4,6-Trichlorophenol	0.5 ug/mL
							2,4-Dichlorophenol	0.5 ug/mL
							2,4-Dimethylphenol	0.5 ug/mL
							2,4-Dinitrophenol	1 ug/mL
							2,4-Dinitrotoluene	0.5 ug/mL
							2,6-Dichlorophenol	0.5 ug/mL
							2,6-Dinitrotoluene	0.5 ug/mL
							2-Chloronaphthalene	0.5 ug/mL
							2-Chlorophenol	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							2-Methylphenol	0.5 ug/mL
							2-Nitroaniline	0.5 ug/mL
							2-Nitrophenol	0.5 ug/mL
							3 & 4 Methylphenol	0.5 ug/mL
							3-Nitroaniline	0.5 ug/mL
							4,6-Dinitro-2-methylphenol	1 ug/mL
							4-Bromophenyl phenyl ether	0.5 ug/mL
							4-Chloro-3-methylphenol	0.5 ug/mL
							4-Chloroaniline	0.5 ug/mL
							4-Chlorophenyl phenyl ether	0.5 ug/mL
							4-Nitroaniline	0.5 ug/mL
							4-Nitrophenol	1 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Acetophenone	0.5 ug/mL
							Aniline	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Azobenzene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Benzyl alcohol	0.5 ug/mL
							Bis(2-chloroethoxy)methane	0.5 ug/mL
							Bis(2-chloroethyl)ether	0.5 ug/mL
							Bis(2-ethylhexyl) phthalate	0.5 ug/mL
							Butyl benzyl phthalate	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbazole	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Di-n-butyl phthalate	0.5 ug/mL
							Di-n-octyl phthalate	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Dibenzofuran	0.5 ug/mL
							Diethyl phthalate	0.5 ug/mL
							Dimethyl phthalate	0.5 ug/mL
							Diphenylamine	0.42535 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Hexachlorobenzene	0.5 ug/mL
							Hexachlorobutadiene	0.5 ug/mL
							Hexachlorocyclopentadiene	0.5 ug/mL
							Hexachloroethane	0.5 ug/mL
							Hexadecane	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Isophorone	0.5 ug/mL
							n-Decane	0.5 ug/mL
							N-Nitrosodi-n-propylamine	0.5 ug/mL
							N-Nitrosodimethylamine	0.5 ug/mL
							N-Nitrosodiphenylamine	0.5 ug/mL
							n-Octadecane	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Nitrobenzene	0.5 ug/mL
							Pentachlorophenol	1 ug/mL
							Phenanthrene	0.5 ug/mL
							Phenol	0.5 ug/mL
							Pyrene	0.5 ug/mL
							Pyridine	0.5 ug/mL
							Benzoic acid	1 ug/mL
							Indene	1 ug/mL
							Atrazine	1 ug/mL
							Benzaldehyde	1 ug/mL
							Caprolactam	1 ug/mL
							3,3'-Dichlorobenzidine	1 ug/mL
							Benzidine	1 ug/mL
							2,4,6-Tribromophenol (Surr)	0.5 ug/mL
							2-Fluorobiphenyl (Surr)	0.5 ug/mL
							2-Fluorophenol (Surr)	0.5 ug/mL
							Nitrobenzene-d5 (Surr)	0.5 ug/mL
							Phenol-d5 (Surr)	0.5 ug/mL
							Terphenyl-d14 (Surr)	0.5 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L3 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	20 uL	1,1'-Biphenyl	1 ug/mL
							1,2,4,5-Tetrachlorobenzene	1 ug/mL
							1,2,4-Trichlorobenzene	1 ug/mL
							1,2-Dichlorobenzene	1 ug/mL
							1,2-Diphenylhydrazine	1 ug/mL
							1,3-Dichlorobenzene	1 ug/mL
							1,3-Dinitrobenzene	1 ug/mL
							1,4-Dichlorobenzene	1 ug/mL
							1,4-Dioxane	1 ug/mL
							1-Methylnaphthalene	1 ug/mL
							2,2'-oxybis[1-chloropropane]	1 ug/mL
							2,3,4,6-Tetrachlorophenol	1 ug/mL
							2,4,5-Trichlorophenol	1 ug/mL
							2,4,6-Trichlorophenol	1 ug/mL
							2,4-Dichlorophenol	1 ug/mL
							2,4-Dimethylphenol	1 ug/mL
							2,4-Dinitrophenol	2 ug/mL
							2,4-Dinitrotoluene	1 ug/mL
							2,6-Dichlorophenol	1 ug/mL
							2,6-Dinitrotoluene	1 ug/mL
							2-Chloronaphthalene	1 ug/mL
							2-Chlorophenol	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							2-Methylphenol	1 ug/mL
							2-Nitroaniline	1 ug/mL
							2-Nitrophenol	1 ug/mL
							3 & 4 Methylphenol	1 ug/mL
							3-Nitroaniline	1 ug/mL
							4,6-Dinitro-2-methylphenol	2 ug/mL
							4-Bromophenyl phenyl ether	1 ug/mL
							4-Chloro-3-methylphenol	1 ug/mL
							4-Chloroaniline	1 ug/mL
							4-Chlorophenyl phenyl ether	1 ug/mL
							4-Nitroaniline	1 ug/mL
							4-Nitrophenol	2 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Acetophenone	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	1 ug/mL
							Anthracene	1 ug/mL
							Azobenzene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Benzyl alcohol	1 ug/mL
							Bis(2-chloroethoxy)methane	1 ug/mL
							Bis(2-chloroethyl)ether	1 ug/mL
							Bis(2-ethylhexyl) phthalate	1 ug/mL
							Butyl benzyl phthalate	1 ug/mL
							Carbazole	1 ug/mL
							Chrysene	1 ug/mL
							Di-n-butyl phthalate	1 ug/mL
							Di-n-octyl phthalate	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Dibenzofuran	1 ug/mL
							Diethyl phthalate	1 ug/mL
							Dimethyl phthalate	1 ug/mL
							Diphenylamine	0.8507 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Hexachlorobenzene	1 ug/mL
							Hexachlorobutadiene	1 ug/mL
							Hexachlorocyclopentadiene	1 ug/mL
							Hexachloroethane	1 ug/mL
							Hexadecane	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Isophorone	1 ug/mL
							n-Decane	1 ug/mL
							N-Nitrosodi-n-propylamine	1 ug/mL
							N-Nitrosodimethylamine	1 ug/mL
							N-Nitrosodiphenylamine	1 ug/mL
							n-Octadecane	1 ug/mL
							Naphthalene	1 ug/mL
							Nitrobenzene	1 ug/mL
							Pentachlorophenol	2 ug/mL
							Phenanthrene	1 ug/mL
							Phenol	1 ug/mL
							Pyrene	1 ug/mL
							Pyridine	1 ug/mL
							Benzoic acid	2 ug/mL
							Indene	2 ug/mL
							Atrazine	2 ug/mL
							Benzaldehyde	2 ug/mL
							Caprolactam	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3,3'-Dichlorobenzidine	2 ug/mL
							Benzidine	2 ug/mL
							2,4,6-Tribromophenol (Surr)	1 ug/mL
							2-Fluorobiphenyl (Surr)	1 ug/mL
							2-Fluorophenol (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	1 ug/mL
							Phenol-d5 (Surr)	1 ug/mL
							Terphenyl-d14 (Surr)	1 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L4 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	40 uL	1,1'-Biphenyl	2 ug/mL
							1,2,4,5-Tetrachlorobenzene	2 ug/mL
							1,2,4-Trichlorobenzene	2 ug/mL
							1,2-Dichlorobenzene	2 ug/mL
							1,2-Diphenylhydrazine	2 ug/mL
							1,3-Dichlorobenzene	2 ug/mL
							1,3-Dinitrobenzene	2 ug/mL
							1,4-Dichlorobenzene	2 ug/mL
							1,4-Dioxane	2 ug/mL
							1-Methylnaphthalene	2 ug/mL
							2,2'-oxybis[1-chloropropane]	2 ug/mL
							2,3,4,6-Tetrachlorophenol	2 ug/mL
							2,4,5-Trichlorophenol	2 ug/mL
							2,4,6-Trichlorophenol	2 ug/mL
							2,4-Dichlorophenol	2 ug/mL
							2,4-Dimethylphenol	2 ug/mL
							2,4-Dinitrophenol	4 ug/mL
							2,4-Dinitrotoluene	2 ug/mL
							2,6-Dichlorophenol	2 ug/mL
							2,6-Dinitrotoluene	2 ug/mL
							2-Chloronaphthalene	2 ug/mL
							2-Chlorophenol	2 ug/mL
							2-Methylnaphthalene	2 ug/mL
							2-Methylphenol	2 ug/mL
							2-Nitroaniline	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	2 ug/mL
							3 & 4 Methylphenol	2 ug/mL
							3-Nitroaniline	2 ug/mL
							4,6-Dinitro-2-methylphenol	4 ug/mL
							4-Bromophenyl phenyl ether	2 ug/mL
							4-Chloro-3-methylphenol	2 ug/mL
							4-Chloroaniline	2 ug/mL
							4-Chlorophenyl phenyl ether	2 ug/mL
							4-Nitroaniline	2 ug/mL
							4-Nitrophenol	4 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Acetophenone	2 ug/mL
							Aniline	2 ug/mL
							Anthracene	2 ug/mL
							Azobenzene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Benzyl alcohol	2 ug/mL
							Bis(2-chloroethoxy)methane	2 ug/mL
							Bis(2-chloroethyl)ether	2 ug/mL
							Bis(2-ethylhexyl) phthalate	2 ug/mL
							Butyl benzyl phthalate	2 ug/mL
							Carbazole	2 ug/mL
							Chrysene	2 ug/mL
							Di-n-butyl phthalate	2 ug/mL
							Di-n-octyl phthalate	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Dibenzofuran	2 ug/mL
							Diethyl phthalate	2 ug/mL
							Dimethyl phthalate	2 ug/mL
							Diphenylamine	1.7014 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Hexachlorobenzene	2 ug/mL
							Hexachlorobutadiene	2 ug/mL
							Hexachlorocyclopentadiene	2 ug/mL
							Hexachloroethane	2 ug/mL
							Hexadecane	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Isophorone	2 ug/mL
							n-Decane	2 ug/mL
							N-Nitrosodi-n-propylamine	2 ug/mL
							N-Nitrosodimethylamine	2 ug/mL
							N-Nitrosodiphenylamine	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Octadecane	2 ug/mL
							Naphthalene	2 ug/mL
							Nitrobenzene	2 ug/mL
							Pentachlorophenol	4 ug/mL
							Phenanthrene	2 ug/mL
							Phenol	2 ug/mL
							Pyrene	2 ug/mL
							Pyridine	2 ug/mL
							Benzoic acid	4 ug/mL
							Indene	4 ug/mL
							Atrazine	4 ug/mL
							Benzaldehyde	4 ug/mL
							Caprolactam	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzidine	4 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl (Surr)	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Terphenyl-d14 (Surr)	2 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L5 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	100 uL	1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Diphenylhydrazine	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dinitrobenzene	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dichlorophenol	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL
							3 & 4 Methylphenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chloroaniline	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitroaniline	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Aniline	5 ug/mL
							Anthracene	5 ug/mL
							Azobenzene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Benzyl alcohol	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Chrysene	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Diphenylamine	4.2535 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Hexadecane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Isophorone	5 ug/mL
							n-Decane	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodimethylamine	5 ug/mL
							N-Nitrosodiphenylamine	5 ug/mL
							n-Octadecane	5 ug/mL
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Pyridine	5 ug/mL
							Benzoic acid	10 ug/mL
							Indene	10 ug/mL
							Atrazine	10 ug/mL
							Benzaldehyde	10 ug/mL
							Caprolactam	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzidine	10 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl (Surr)	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L6 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	200 uL	1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.507 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Hexadecane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							n-Decane	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							n-Octadecane	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	10 ug/mL
							Benzoic acid	20 ug/mL
							Indene	20 ug/mL
							Atrazine	20 ug/mL
							Benzaldehyde	20 ug/mL
							Caprolactam	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzidine	20 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19	Restek, Lot A0103960			(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L7 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	300 uL	1,1'-Biphenyl	15 ug/mL
							1,2,4,5-Tetrachlorobenzene	15 ug/mL
							1,2,4-Trichlorobenzene	15 ug/mL
							1,2-Dichlorobenzene	15 ug/mL
							1,2-Diphenylhydrazine	15 ug/mL
							1,3-Dichlorobenzene	15 ug/mL
							1,3-Dinitrobenzene	15 ug/mL
							1,4-Dichlorobenzene	15 ug/mL
							1,4-Dioxane	15 ug/mL
							1-Methylnaphthalene	15 ug/mL
							2,2'-oxybis[1-chloropropane]	15 ug/mL
							2,3,4,6-Tetrachlorophenol	15 ug/mL
							2,4,5-Trichlorophenol	15 ug/mL
							2,4,6-Trichlorophenol	15 ug/mL
							2,4-Dichlorophenol	15 ug/mL
							2,4-Dimethylphenol	15 ug/mL
							2,4-Dinitrophenol	30 ug/mL
							2,4-Dinitrotoluene	15 ug/mL
							2,6-Dichlorophenol	15 ug/mL
							2,6-Dinitrotoluene	15 ug/mL
							2-Chloronaphthalene	15 ug/mL
							2-Chlorophenol	15 ug/mL
							2-Methylnaphthalene	15 ug/mL
							2-Methylphenol	15 ug/mL
							2-Nitroaniline	15 ug/mL
							2-Nitrophenol	15 ug/mL
							3 & 4 Methylphenol	15 ug/mL
							3-Nitroaniline	15 ug/mL
							4,6-Dinitro-2-methylphenol	30 ug/mL
							4-Bromophenyl phenyl ether	15 ug/mL
							4-Chloro-3-methylphenol	15 ug/mL
							4-Chloroaniline	15 ug/mL
							4-Chlorophenyl phenyl ether	15 ug/mL
							4-Nitroaniline	15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	30 ug/mL
							Acenaphthene	15 ug/mL
							Acenaphthylene	15 ug/mL
							Acetophenone	15 ug/mL
							Aniline	15 ug/mL
							Anthracene	15 ug/mL
							Azobenzene	15 ug/mL
							Benzo[a]anthracene	15 ug/mL
							Benzo[a]pyrene	15 ug/mL
							Benzo[b]fluoranthene	15 ug/mL
							Benzo[g,h,i]perylene	15 ug/mL
							Benzo[k]fluoranthene	15 ug/mL
							Benzyl alcohol	15 ug/mL
							Bis(2-chloroethoxy)methane	15 ug/mL
							Bis(2-chloroethyl)ether	15 ug/mL
							Bis(2-ethylhexyl) phthalate	15 ug/mL
							Butyl benzyl phthalate	15 ug/mL
							Carbazole	15 ug/mL
							Chrysene	15 ug/mL
							Di-n-butyl phthalate	15 ug/mL
							Di-n-octyl phthalate	15 ug/mL
							Dibenz(a,h)anthracene	15 ug/mL
							Dibenzofuran	15 ug/mL
							Diethyl phthalate	15 ug/mL
							Dimethyl phthalate	15 ug/mL
							Diphenylamine	12.7605 ug/mL
							Fluoranthene	15 ug/mL
							Fluorene	15 ug/mL
							Hexachlorobenzene	15 ug/mL
							Hexachlorobutadiene	15 ug/mL
							Hexachlorocyclopentadiene	15 ug/mL
							Hexachloroethane	15 ug/mL
							Hexadecane	15 ug/mL
							Indeno[1,2,3-cd]pyrene	15 ug/mL
							Isophorone	15 ug/mL
							n-Decane	15 ug/mL
							N-Nitrosodi-n-propylamine	15 ug/mL
							N-Nitrosodimethylamine	15 ug/mL
							N-Nitrosodiphenylamine	15 ug/mL
							n-Octadecane	15 ug/mL
							Naphthalene	15 ug/mL
							Nitrobenzene	15 ug/mL
							Pentachlorophenol	30 ug/mL
							Phenanthrene	15 ug/mL
							Phenol	15 ug/mL
							Pyrene	15 ug/mL
							Pyridine	15 ug/mL
							Benzoic acid	30 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	30 ug/mL
							Atrazine	30 ug/mL
							Benzaldehyde	30 ug/mL
							Caprolactam	30 ug/mL
							3,3'-Dichlorobenzidine	30 ug/mL
							Benzidine	30 ug/mL
							2,4,6-Tribromophenol (Surr)	15 ug/mL
							2-Fluorobiphenyl (Surr)	15 ug/mL
							2-Fluorophenol (Surr)	15 ug/mL
							Nitrobenzene-d5 (Surr)	15 ug/mL
							Phenol-d5 (Surr)	15 ug/mL
							Terphenyl-d14 (Surr)	15 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L8 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	400 uL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.014 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	20 ug/mL
							Benzoic acid	40 ug/mL
							Indene	40 ug/mL
							Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
							3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L9 W_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00007	500 uL	1,1'-Biphenyl	25 ug/mL
							1,2,4,5-Tetrachlorobenzene	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Diphenylhydrazine	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dinitrobenzene	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	25 ug/mL
							1-Methylnaphthalene	25 ug/mL
							2,2'-oxybis[1-chloropropane]	25 ug/mL
							2,3,4,6-Tetrachlorophenol	25 ug/mL
							2,4,5-Trichlorophenol	25 ug/mL
							2,4,6-Trichlorophenol	25 ug/mL
							2,4-Dichlorophenol	25 ug/mL
							2,4-Dimethylphenol	25 ug/mL
							2,4-Dinitrophenol	50 ug/mL
							2,4-Dinitrotoluene	25 ug/mL
							2,6-Dichlorophenol	25 ug/mL
							2,6-Dinitrotoluene	25 ug/mL
							2-Chloronaphthalene	25 ug/mL
							2-Chlorophenol	25 ug/mL
							2-Methylnaphthalene	25 ug/mL
							2-Methylphenol	25 ug/mL
							2-Nitroaniline	25 ug/mL
							2-Nitrophenol	25 ug/mL
							3 & 4 Methylphenol	25 ug/mL
							3-Nitroaniline	25 ug/mL
							4,6-Dinitro-2-methylphenol	50 ug/mL
							4-Bromophenyl phenyl ether	25 ug/mL
							4-Chloro-3-methylphenol	25 ug/mL
							4-Chloroaniline	25 ug/mL
							4-Chlorophenyl phenyl ether	25 ug/mL
							4-Nitroaniline	25 ug/mL
							4-Nitrophenol	50 ug/mL
							Acenaphthene	25 ug/mL
							Acenaphthylene	25 ug/mL
							Acetophenone	25 ug/mL
							Aniline	25 ug/mL
							Anthracene	25 ug/mL
							Azobenzene	25 ug/mL
							Benzo[a]anthracene	25 ug/mL
							Benzo[a]pyrene	25 ug/mL
							Benzo[b]fluoranthene	25 ug/mL
							Benzo[g,h,i]perylene	25 ug/mL
							Benzo[k]fluoranthene	25 ug/mL
							Benzyl alcohol	25 ug/mL
							Bis(2-chloroethoxy)methane	25 ug/mL
							Bis(2-chloroethyl)ether	25 ug/mL
							Bis(2-ethylhexyl) phthalate	25 ug/mL
							Butyl benzyl phthalate	25 ug/mL
							Carbazole	25 ug/mL
							Chrysene	25 ug/mL
							Di-n-butyl phthalate	25 ug/mL
							Di-n-octyl phthalate	25 ug/mL
							Dibenz(a,h)anthracene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	25 ug/mL
							Diethyl phthalate	25 ug/mL
							Dimethyl phthalate	25 ug/mL
							Diphenylamine	21.2675 ug/mL
							Fluoranthene	25 ug/mL
							Fluorene	25 ug/mL
							Hexachlorobenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexachlorocyclopentadiene	25 ug/mL
							Hexachloroethane	25 ug/mL
							Hexadecane	25 ug/mL
							Indeno[1,2,3-cd]pyrene	25 ug/mL
							Isophorone	25 ug/mL
							n-Decane	25 ug/mL
							N-Nitrosodi-n-propylamine	25 ug/mL
							N-Nitrosodimethylamine	25 ug/mL
							N-Nitrosodiphenylamine	25 ug/mL
							n-Octadecane	25 ug/mL
							Naphthalene	25 ug/mL
							Nitrobenzene	25 ug/mL
							Pentachlorophenol	50 ug/mL
							Phenanthrene	25 ug/mL
							Phenol	25 ug/mL
							Pyrene	25 ug/mL
							Pyridine	25 ug/mL
							Benzoic acid	50 ug/mL
							Indene	50 ug/mL
							Atrazine	50 ug/mL
							Benzaldehyde	50 ug/mL
							Caprolactam	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzidine	50 ug/mL
							2,4,6-Tribromophenol (Surr)	25 ug/mL
							2-Fluorobiphenyl (Surr)	25 ug/mL
							2-Fluorophenol (Surr)	25 ug/mL
							Nitrobenzene-d5 (Surr)	25 ug/mL
							Phenol-d5 (Surr)	25 ug/mL
							Terphenyl-d14 (Surr)	25 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00007	01/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 S1_00006	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85.07 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	100 ug/mL
					SMLIST1 S10_00002	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00002	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00002	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SMLIST1 S1_00006	04/30/17		Restek, Lot A0114832		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850.7 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	1000 ug/mL
..SMLIST1 S10_00002	05/31/17		Restek, Lot A0115596		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00002	05/31/17		Restek, Lot A0115387		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00002	01/31/17		Restek, Lot A0112567		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 SS W_00006	03/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 SS W_00006	03/31/17	03/04/16	MECL2, Lot 0000127195	2 mL	SMLIST1 SS ST_00006	200 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMLIST1 SS ST_00006	03/31/17	03/04/16	MECL2, Lot 0000127195	10 mL	SMLIST1 SURR_00004	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 SURR_00004	06/30/19		Restek, Lot A0103960		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST2 L2 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	10 uL	1,3,5-Trinitrobenzene	0.5 ug/mL
							1,4-Dinitrobenzene	0.5 ug/mL
							1-Naphthylamine	0.5 ug/mL
							2-Acetylaminofluorene	0.5 ug/mL
							2-Naphthylamine	0.5 ug/mL
							2-Picoline	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Toluidine	0.5 ug/mL
							3,3'-Dimethylbenzidine	0.5 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	0.5 ug/mL
							4-Aminobiphenyl	0.5 ug/mL
							4-Nitroquinoline-1-oxide	0.5 ug/mL
							Acrylamide	0.5 ug/mL
							alpha,alpha-Dimethyl phenethylamine	0.5 ug/mL
							Dibenz[a,h]acridine	0.5 ug/mL
							N-Nitro-o-toluidine	0.5 ug/mL
							N-Nitrosodi-n-butylamine	0.5 ug/mL
							N-Nitrosodiethylamine	0.5 ug/mL
							N-Nitrosomethylethylamine	0.5 ug/mL
							N-Nitrosomorpholine	0.5 ug/mL
							N-Nitrosopiperidine	0.5 ug/mL
							N-Nitrosopyrrolidine	0.5 ug/mL
							p-Dimethylamino azobenzene	0.5 ug/mL
							p-Phenylene diamine	0.5 ug/mL
							Pentachloronitrobenzene	0.5 ug/mL
							Phenacetin	0.5 ug/mL
							Pronamide	0.5 ug/mL
							Quinoline	0.5 ug/mL
							1,4-Naphthoquinone	0.5 ug/mL
							1-Chloronaphthalene	0.5 ug/mL
							2,3,5,6-Tetrachlorophenol	0.5 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.5 ug/mL
							Chlorobenzilate	0.5 ug/mL
							Dinoseb	0.5 ug/mL
							Ethyl methanesulfonate	0.5 ug/mL
							Hexachloropropene	0.5 ug/mL
							Isodrin	0.5 ug/mL
							Isosafrole Peak 1	0.415 ug/mL
							Isosafrole Peak 2	0.085 ug/mL
							Methyl methanesulfonate	0.5 ug/mL
							Pentachlorobenzene	0.5 ug/mL
							Pentachloroethane	0.5 ug/mL
							3-Methylcholanthrene	1 ug/mL
							6-Methylchrysene	1 ug/mL
							Aramite Peak 1	0.255 ug/mL
							Aramite Peak 2	0.245 ug/mL
							Diallate Peak 1	0.415 ug/mL
							Diallate Peak 2	0.085 ug/mL
							Dimethoate	0.5 ug/mL
							Disulfoton	0.5 ug/mL
							Ethyl Parathion	0.5 ug/mL
							Famphur	0.5 ug/mL
							Methyl parathion	0.5 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o,o',o''-Triethylphosphorothioate	0.5 ug/mL
							Phorate	0.5 ug/mL
							Safrole, Total	0.5 ug/mL
							Sulfotepp	0.5 ug/mL
							Thionazin	0.5 ug/mL
							Methapyrilene	1 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L3 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	20 uL	1,3,5-Trinitrobenzene	1 ug/mL
							1,4-Dinitrobenzene	1 ug/mL
							1-Naphthylamine	1 ug/mL
							2-Acetylaminofluorene	1 ug/mL
							2-Naphthylamine	1 ug/mL
							2-Picoline	1 ug/mL
							2-Toluidine	1 ug/mL
							3,3'-Dimethylbenzidine	1 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1 ug/mL
							4-Aminobiphenyl	1 ug/mL
							4-Nitroquinoline-1-oxide	1 ug/mL
							Acrylamide	1 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1 ug/mL
							Dibenz[a,h]acridine	1 ug/mL
							N-Nitro-o-toluidine	1 ug/mL
							N-Nitrosodi-n-butylamine	1 ug/mL
							N-Nitrosodiethylamine	1 ug/mL
							N-Nitrosomethylethylamine	1 ug/mL
							N-Nitrosomorpholine	1 ug/mL
							N-Nitrosopiperidine	1 ug/mL
							N-Nitrosopyrrolidine	1 ug/mL
							p-Dimethylamino azobenzene	1 ug/mL
							p-Phenylene diamine	1 ug/mL
							Pentachloronitrobenzene	1 ug/mL
							Phenacetin	1 ug/mL
							Pronamide	1 ug/mL
							Quinoline	1 ug/mL
							1,4-Naphthoquinone	1 ug/mL
							1-Chloronaphthalene	1 ug/mL
							2,3,5,6-Tetrachlorophenol	1 ug/mL
							7,12-Dimethylbenz(a)anthracene	1 ug/mL
							Chlorobenzilate	1 ug/mL
							Dinoseb	1 ug/mL
							Ethyl methanesulfonate	1 ug/mL
							Hexachloropropene	1 ug/mL
							Isodrin	1 ug/mL
							Isosafrole Peak 1	0.83 ug/mL
							Isosafrole Peak 2	0.17 ug/mL
							Methyl methanesulfonate	1 ug/mL
							Pentachlorobenzene	1 ug/mL
							Pentachloroethane	1 ug/mL
							3-Methylcholanthrene	2 ug/mL
							6-Methylchrysene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aramite Peak 1	0.51 ug/mL
							Aramite Peak 2	0.49 ug/mL
							Diallate Peak 1	0.83 ug/mL
							Diallate Peak 2	0.17 ug/mL
							Dimethoate	1 ug/mL
							Disulfoton	1 ug/mL
							Ethyl Parathion	1 ug/mL
							Famphur	1 ug/mL
							Methyl parathion	1 ug/mL
							o,o',o''-Triethylphosphorothioate	1 ug/mL
							Phorate	1 ug/mL
							Safrole, Total	1 ug/mL
							Sulfotepp	1 ug/mL
							Thionazin	1 ug/mL
							Methapyrilene	2 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L4 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	40 uL	1,3,5-Trinitrobenzene	2 ug/mL
							1,4-Dinitrobenzene	2 ug/mL
							1-Naphthylamine	2 ug/mL
							2-Acetylaminofluorene	2 ug/mL
							2-Naphthylamine	2 ug/mL
							2-Picoline	2 ug/mL
							2-Toluidine	2 ug/mL
							3,3'-Dimethylbenzidine	2 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	2 ug/mL
							4-Aminobiphenyl	2 ug/mL
							4-Nitroquinoline-1-oxide	2 ug/mL
							Acrylamide	2 ug/mL
							alpha,alpha-Dimethyl phenethylamine	2 ug/mL
							Dibenz[a,h]acridine	2 ug/mL
							N-Nitro-o-toluidine	2 ug/mL
							N-Nitrosodi-n-butylamine	2 ug/mL
							N-Nitrosodiethylamine	2 ug/mL
							N-Nitrosomethylethylamine	2 ug/mL
							N-Nitrosomorpholine	2 ug/mL
							N-Nitrosopiperidine	2 ug/mL
							N-Nitrosopyrrolidine	2 ug/mL
							p-Dimethylamino azobenzene	2 ug/mL
							p-Phenylene diamine	2 ug/mL
							Pentachloronitrobenzene	2 ug/mL
							Phenacetin	2 ug/mL
							Pronamide	2 ug/mL
							Quinoline	2 ug/mL
							1,4-Naphthoquinone	2 ug/mL
							1-Chloronaphthalene	2 ug/mL
							2,3,5,6-Tetrachlorophenol	2 ug/mL
							7,12-Dimethylbenz(a)anthracene	2 ug/mL
							Chlorobenzilate	2 ug/mL
							Dinoseb	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl methanesulfonate	2 ug/mL
							Hexachloropropene	2 ug/mL
							Isodrin	2 ug/mL
							Isosafrole Peak 1	1.66 ug/mL
							Isosafrole Peak 2	0.34 ug/mL
							Methyl methanesulfonate	2 ug/mL
							Pentachlorobenzene	2 ug/mL
							Pentachloroethane	2 ug/mL
							3-Methylcholanthrene	4 ug/mL
							6-Methylchrysene	4 ug/mL
							Aramite Peak 1	1.02 ug/mL
							Aramite Peak 2	0.98 ug/mL
							Diallate Peak 1	1.66 ug/mL
							Diallate Peak 2	0.34 ug/mL
							Dimethoate	2 ug/mL
							Disulfoton	2 ug/mL
							Ethyl Parathion	2 ug/mL
							Famphur	2 ug/mL
							Methyl parathion	2 ug/mL
							o,o',o''-Triethylphosphorothioate	2 ug/mL
							Phorate	2 ug/mL
							Safrole, Total	2 ug/mL
							Sulfotepp	2 ug/mL
							Thionazin	2 ug/mL
							Methapyrilene	4 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L5 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	100 uL	1,3,5-Trinitrobenzene	5 ug/mL
							1,4-Dinitrobenzene	5 ug/mL
							1-Naphthylamine	5 ug/mL
							2-Acetylaminofluorene	5 ug/mL
							2-Naphthylamine	5 ug/mL
							2-Picoline	5 ug/mL
							2-Toluidine	5 ug/mL
							3,3'-Dimethylbenzidine	5 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	5 ug/mL
							4-Aminobiphenyl	5 ug/mL
							4-Nitroquinoline-1-oxide	5 ug/mL
							Acrylamide	5 ug/mL
							alpha,alpha-Dimethyl phenethylamine	5 ug/mL
							Dibenz[a,h]acridine	5 ug/mL
							N-Nitro-o-toluidine	5 ug/mL
							N-Nitrosodi-n-butylamine	5 ug/mL
							N-Nitrosodiethylamine	5 ug/mL
							N-Nitrosomethylethylamine	5 ug/mL
							N-Nitrosomorpholine	5 ug/mL
							N-Nitrosopiperidine	5 ug/mL
							N-Nitrosopyrrolidine	5 ug/mL
							p-Dimethylamino azobenzene	5 ug/mL
							p-Phenylene diamine	5 ug/mL
							Pentachloronitrobenzene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenacetin	5 ug/mL
							Pronamide	5 ug/mL
							Quinoline	5 ug/mL
							1,4-Naphthoquinone	5 ug/mL
							1-Chloronaphthalene	5 ug/mL
							2,3,5,6-Tetrachlorophenol	5 ug/mL
							7,12-Dimethylbenz(a)anthracene	5 ug/mL
							Chlorobenzilate	5 ug/mL
							Dinoseb	5 ug/mL
							Ethyl methanesulfonate	5 ug/mL
							Hexachloropropene	5 ug/mL
							Isodrin	5 ug/mL
							Isosafrole Peak 1	4.15 ug/mL
							Isosafrole Peak 2	0.85 ug/mL
							Methyl methanesulfonate	5 ug/mL
							Pentachlorobenzene	5 ug/mL
							Pentachloroethane	5 ug/mL
							3-Methylcholanthrene	10 ug/mL
							6-Methylchrysene	10 ug/mL
							Aramite Peak 1	2.55 ug/mL
							Aramite Peak 2	2.45 ug/mL
							Diallate Peak 1	4.15 ug/mL
							Diallate Peak 2	0.85 ug/mL
							Dimethoate	5 ug/mL
							Disulfoton	5 ug/mL
							Ethyl Parathion	5 ug/mL
							Famphur	5 ug/mL
							Methyl parathion	5 ug/mL
							o,o',o''-Triethylphosphorothioate	5 ug/mL
							Phorate	5 ug/mL
							Safrole, Total	5 ug/mL
							Sulfotepp	5 ug/mL
							Thionazin	5 ug/mL
							Methapyrilene	10 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5 00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L6 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	200 uL	1,3,5-Trinitrobenzene	10 ug/mL
							1,4-Dinitrobenzene	10 ug/mL
							1-Naphthylamine	10 ug/mL
							2-Acetylaminofluorene	10 ug/mL
							2-Naphthylamine	10 ug/mL
							2-Picoline	10 ug/mL
							2-Toluidine	10 ug/mL
							3,3'-Dimethylbenzidine	10 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	10 ug/mL
							4-Aminobiphenyl	10 ug/mL
							4-Nitroquinoline-1-oxide	10 ug/mL
							Acrylamide	10 ug/mL
							alpha,alpha-Dimethyl phenethylamine	10 ug/mL
							Dibenz[a,h]acridine	10 ug/mL
							N-Nitro-o-toluidine	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-butylamine	10 ug/mL
							N-Nitrosodiethylamine	10 ug/mL
							N-Nitrosomethylethylamine	10 ug/mL
							N-Nitrosomorpholine	10 ug/mL
							N-Nitrosopiperidine	10 ug/mL
							N-Nitrosopyrrolidine	10 ug/mL
							p-Dimethylamino azobenzene	10 ug/mL
							p-Phenylene diamine	10 ug/mL
							Pentachloronitrobenzene	10 ug/mL
							Phenacetin	10 ug/mL
							Pronamide	10 ug/mL
							Quinoline	10 ug/mL
							1,4-Naphthoquinone	10 ug/mL
							1-Chloronaphthalene	10 ug/mL
							2,3,5,6-Tetrachlorophenol	10 ug/mL
							7,12-Dimethylbenz(a)anthracene	10 ug/mL
							Chlorobenzilate	10 ug/mL
							Dinoseb	10 ug/mL
							Ethyl methanesulfonate	10 ug/mL
							Hexachloropropene	10 ug/mL
							Isodrin	10 ug/mL
							Isosafrole Peak 1	8.3 ug/mL
							Isosafrole Peak 2	1.7 ug/mL
							Methyl methanesulfonate	10 ug/mL
							Pentachlorobenzene	10 ug/mL
							Pentachloroethane	10 ug/mL
							3-Methylcholanthrene	20 ug/mL
							6-Methylchrysene	20 ug/mL
							Aramite Peak 1	5.1 ug/mL
							Aramite Peak 2	4.9 ug/mL
							Diallate Peak 1	8.3 ug/mL
							Diallate Peak 2	1.7 ug/mL
							Dimethoate	10 ug/mL
							Disulfoton	10 ug/mL
							Ethyl Parathion	10 ug/mL
							Famphur	10 ug/mL
							Methyl parathion	10 ug/mL
							o,o',o''-Triethylphosphorothioate	10 ug/mL
							Phorate	10 ug/mL
							Safrole, Total	10 ug/mL
							Sulfotepp	10 ug/mL
							Thionazin	10 ug/mL
							Methapyrilene	20 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L7 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	300 uL	1,3,5-Trinitrobenzene	15 ug/mL
							1,4-Dinitrobenzene	15 ug/mL
							1-Naphthylamine	15 ug/mL
							2-Acetylaminofluorene	15 ug/mL
							2-Naphthylamine	15 ug/mL
							2-Picoline	15 ug/mL
							2-Toluidine	15 ug/mL
							3,3'-Dimethylbenzidine	15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-Methylene bis(2-chloroaniline)	15 ug/mL
							4-Aminobiphenyl	15 ug/mL
							4-Nitroquinoline-1-oxide	15 ug/mL
							Acrylamide	15 ug/mL
							alpha,alpha-Dimethyl phenethylamine	15 ug/mL
							Dibenz[a,h]acridine	15 ug/mL
							N-Nitro-o-toluidine	15 ug/mL
							N-Nitrosodi-n-butylamine	15 ug/mL
							N-Nitrosodiethylamine	15 ug/mL
							N-Nitrosomethylethylamine	15 ug/mL
							N-Nitrosomorpholine	15 ug/mL
							N-Nitrosopiperidine	15 ug/mL
							N-Nitrosopyrrolidine	15 ug/mL
							p-Dimethylamino azobenzene	15 ug/mL
							p-Phenylene diamine	15 ug/mL
							Pentachloronitrobenzene	15 ug/mL
							Phenacetin	15 ug/mL
							Pronamide	15 ug/mL
							Quinoline	15 ug/mL
							1,4-Naphthoquinone	15 ug/mL
							1-Chloronaphthalene	15 ug/mL
							2,3,5,6-Tetrachlorophenol	15 ug/mL
							7,12-Dimethylbenz(a)anthracene	15 ug/mL
							Chlorobenzilate	15 ug/mL
							Dinoseb	15 ug/mL
							Ethyl methanesulfonate	15 ug/mL
							Hexachloropropene	15 ug/mL
							Isodrin	15 ug/mL
							Isosafrole Peak 1	12.45 ug/mL
							Isosafrole Peak 2	2.55 ug/mL
							Methyl methanesulfonate	15 ug/mL
							Pentachlorobenzene	15 ug/mL
							Pentachloroethane	15 ug/mL
							3-Methylcholanthrene	30 ug/mL
							6-Methylchrysene	30 ug/mL
							Aramite Peak 1	7.65 ug/mL
							Aramite Peak 2	7.35 ug/mL
							Diallate Peak 1	12.45 ug/mL
							Diallate Peak 2	2.55 ug/mL
							Dimethoate	15 ug/mL
							Disulfoton	15 ug/mL
							Ethyl Parathion	15 ug/mL
							Famphur	15 ug/mL
							Methyl parathion	15 ug/mL
							o,o',o''-Triethylphosphorothioate	15 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phorate	15 ug/mL
							Safrole, Total	15 ug/mL
							Sulfotepp	15 ug/mL
							Thionazin	15 ug/mL
							Methapyrilene	30 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L8 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	400 uL	1,3,5-Trinitrobenzene	20 ug/mL
							1,4-Dinitrobenzene	20 ug/mL
							1-Naphthylamine	20 ug/mL
							2-Acetylaminofluorene	20 ug/mL
							2-Naphthylamine	20 ug/mL
							2-Picoline	20 ug/mL
							2-Toluidine	20 ug/mL
							3,3'-Dimethylbenzidine	20 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	20 ug/mL
							4-Aminobiphenyl	20 ug/mL
							4-Nitroquinoline-1-oxide	20 ug/mL
							Acrylamide	20 ug/mL
							alpha,alpha-Dimethyl phenethylamine	20 ug/mL
							Dibenz[a,h]acridine	20 ug/mL
							N-Nitro-o-toluidine	20 ug/mL
							N-Nitrosodi-n-butylamine	20 ug/mL
							N-Nitrosodiethylamine	20 ug/mL
							N-Nitrosomethylethylamine	20 ug/mL
							N-Nitrosomorpholine	20 ug/mL
							N-Nitrosopiperidine	20 ug/mL
							N-Nitrosopyrrolidine	20 ug/mL
							p-Dimethylamino azobenzene	20 ug/mL
							p-Phenylene diamine	20 ug/mL
							Pentachloronitrobenzene	20 ug/mL
							Phenacetin	20 ug/mL
							Pronamide	20 ug/mL
							Quinoline	20 ug/mL
							1,4-Naphthoquinone	20 ug/mL
							1-Chloronaphthalene	20 ug/mL
							2,3,5,6-Tetrachlorophenol	20 ug/mL
							7,12-Dimethylbenz(a)anthracene	20 ug/mL
							Chlorobenzilate	20 ug/mL
							Dinoseb	20 ug/mL
							Ethyl methanesulfonate	20 ug/mL
							Hexachloropropene	20 ug/mL
							Isodrin	20 ug/mL
							Isosafrole Peak 1	16.6 ug/mL
							Isosafrole Peak 2	3.4 ug/mL
							Methyl methanesulfonate	20 ug/mL
							Pentachlorobenzene	20 ug/mL
							Pentachloroethane	20 ug/mL
							3-Methylcholanthrene	40 ug/mL
							6-Methylchrysene	40 ug/mL
							Aramite Peak 1	10.2 ug/mL
							Aramite Peak 2	9.8 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diallate Peak 1	16.6 ug/mL
							Diallate Peak 2	3.4 ug/mL
							Dimethoate	20 ug/mL
							Disulfoton	20 ug/mL
							Ethyl Parathion	20 ug/mL
							Famphur	20 ug/mL
							Methyl parathion	20 ug/mL
							o,o',o''-Triethylphosphorothioate	20 ug/mL
							Phorate	20 ug/mL
							Safrole, Total	20 ug/mL
							Sulfotepp	20 ug/mL
							Thionazin	20 ug/mL
							Methapyrilene	40 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17		Restek, Lot A0112843		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L9 W_00010	10/31/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00012	500 uL	1,3,5-Trinitrobenzene	25 ug/mL
							1,4-Dinitrobenzene	25 ug/mL
							1-Naphthylamine	25 ug/mL
							2-Acetylaminofluorene	25 ug/mL
							2-Naphthylamine	25 ug/mL
							2-Picoline	25 ug/mL
							2-Toluidine	25 ug/mL
							3,3'-Dimethylbenzidine	25 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	25 ug/mL
							4-Aminobiphenyl	25 ug/mL
							4-Nitroquinoline-1-oxide	25 ug/mL
							Acrylamide	25 ug/mL
							alpha,alpha-Dimethyl phenethylamine	25 ug/mL
							Dibenz[a,h]acridine	25 ug/mL
							N-Nitro-o-toluidine	25 ug/mL
							N-Nitrosodi-n-butylamine	25 ug/mL
							N-Nitrosodiethylamine	25 ug/mL
							N-Nitrosomethylethylamine	25 ug/mL
							N-Nitrosomorpholine	25 ug/mL
							N-Nitrosopiperidine	25 ug/mL
							N-Nitrosopyrrolidine	25 ug/mL
							p-Dimethylamino azobenzene	25 ug/mL
							p-Phenylene diamine	25 ug/mL
							Pentachloronitrobenzene	25 ug/mL
							Phenacetin	25 ug/mL
							Pronamide	25 ug/mL
							Quinoline	25 ug/mL
							1,4-Naphthoquinone	25 ug/mL
							1-Chloronaphthalene	25 ug/mL
							2,3,5,6-Tetrachlorophenol	25 ug/mL
							7,12-Dimethylbenz(a)anthracene	25 ug/mL
							Chlorobenzilate	25 ug/mL
							Dinoseb	25 ug/mL
							Ethyl methanesulfonate	25 ug/mL
							Hexachloropropene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isodrin	25 ug/mL
							Isosafrole Peak 1	20.75 ug/mL
							Isosafrole Peak 2	4.25 ug/mL
							Methyl methanesulfonate	25 ug/mL
							Pentachlorobenzene	25 ug/mL
							Pentachloroethane	25 ug/mL
							3-Methylcholanthrene	50 ug/mL
							6-Methylchrysene	50 ug/mL
							Aramite Peak 1	12.75 ug/mL
							Aramite Peak 2	12.25 ug/mL
							Diallate Peak 1	20.75 ug/mL
							Diallate Peak 2	4.25 ug/mL
							Dimethoate	25 ug/mL
							Disulfoton	25 ug/mL
							Ethyl Parathion	25 ug/mL
							Famphur	25 ug/mL
							Methyl parathion	25 ug/mL
							o,o',o''-Triethylphosphorothioate	25 ug/mL
							Phorate	25 ug/mL
							Safrole, Total	25 ug/mL
							Sulfotepp	25 ug/mL
							Thionazin	25 ug/mL
							Methapyrilene	50 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19		Restek, Lot A0101020		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00012	10/31/16	03/15/16	MECL2, Lot 0000127195	10 mL	SMLIST2 S1_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00010	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	83 ug/mL
							Isosafrole Peak 2	17 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00010	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00010	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	83 ug/mL
							Diallate Peak 2	17 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST2 S5_00009	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00009	11/30/17		Restek, Lot A0115538		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00010	10/31/16		Restek, Lot A0114440		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00010	01/31/17		Restek, Lot A0116618		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00010	08/31/17		Restek, Lot A0113584		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diallate Peak 1	830 ug/mL
							Diallate Peak 2	170 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00009	07/31/17	Restek, Lot A0112843			(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 SS W_00007	11/30/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMIS80PPMW_00014	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00014	03/31/17	03/04/16	MECL2, Lot 0000127195	25 mL	SMIS R_00006	1 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00006	01/31/19	Restek, Lot A0101020			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST2 SS W_00007	11/30/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMLIST2 SS ST_00008	200 uL	Sulfotepp	10 ug/mL
.SMLIST2 SS ST_00008	11/30/16	03/15/16	MECL2, Lot 0000127195	2 mL	SMLIST2 SS S4_00006	200 uL	Sulfotepp	100 ug/mL
..SMLIST2 SS S4_00006	07/31/17	Restek, Lot A012356			(Purchased Reagent)		Sulfotepp	1000 ug/mL
WCCN.01MRL1_00240	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN10PPM1_00258	0.1 mL	Cyanide, Total	0.01 mg/L
.WCCN10PPM1_00258	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00033	1 mL	Cyanide, Total	10 mg/L
..WCCN1000PPM_00033	01/11/18	INORGANIC VENTURES, Lot J2-CN01048MCA			(Purchased Reagent)		Cyanide, Total	1000 mg/L
WCCN.1CCV1_00250	05/05/16	04/28/16	NAOH, Lot 2469241	100 mL	WCCN10PPM1_00257	1 mL	Cyanide, Total	0.1 mg/L
.WCCN10PPM1_00257	05/05/16	04/28/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00033	1 mL	Cyanide, Total	10 mg/L
..WCCN1000PPM_00033	01/11/18	INORGANIC VENTURES, Lot J2-CN01048MCA			(Purchased Reagent)		Cyanide, Total	1000 mg/L
WCCN.1CCV1_00251	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN10PPM1_00258	1 mL	Cyanide, Total	0.1 mg/L
.WCCN10PPM1_00258	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00033	1 mL	Cyanide, Total	10 mg/L
..WCCN1000PPM_00033	01/11/18	INORGANIC VENTURES, Lot J2-CN01048MCA			(Purchased Reagent)		Cyanide, Total	1000 mg/L
WCCN.1ICV2_00258	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN10PPM2_00257	1 mL	Cyanide, Total	0.1 mg/L
.WCCN10PPM2_00257	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00032	1 mL	Cyanide, Total	10 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..WCCN1000PPM_00032	06/08/16	Lab ChemRES, Lot E327-10			(Purchased Reagent)		Cyanide, Total	1000 mg/L
WCCN10PPM1_00258	05/13/16	05/06/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00033	1 mL	Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.WCCN1000PPM_00033	01/11/18	INORGANIC VENTURES, Lot J2-CN01048MCA			(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
WCCN1PPMMSD2_00271	05/05/16	04/28/16	NAOH, Lot 2469241	200 mL	WCCN10PPM2_00256	20 mL	Cyanide, Free	1 mg/L
							Cyanide, Non-amenable	1 mg/L
							Cyanide, Total	1 mg/L
							Cyanide, Weak Acid Dissociable	1 mg/L
.WCCN10PPM2_00256	05/05/16	04/20/16	NAOH, Lot 2469241	100 mL	WCCN1000PPM_00032	1 mL	Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
..WCCN1000PPM_00032	06/08/16	Lab ChemRES, Lot E327-10			(Purchased Reagent)		Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
WCERAPHEN0L_00035	11/30/16	ERA, Lot P228-502			(Purchased Reagent)		Cyanide, Non-amenable	0.42 mg/L
							Cyanide, Total	0.42 mg/L
							Phenols, Total	0.408 mg/L

Reagent

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exLIST1_S1_00005

Reference Standards

8270 List 1 / Std #1 MegaMix (2016)

Catalog # 570666

Lot # A0114832

110 Benner Circle Bellefonte, PA 16823-8812
1-814-353-1300 1-800-356-1688
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ilac-MRA

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ISO/IEC 17025 Accredited
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,000.9 µg/mL		+/- 5.8193 µg/mL		Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648 µg/mL		Unstressed
	Purity 99%				+/- 19.0418 µg/mL		Stressed
2	Pyridine		1,004.7 µg/mL		+/- 5.8416 µg/mL		Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106 µg/mL		Unstressed
	Purity 99%				+/- 19.1148 µg/mL		Stressed
3	N-Nitrosodimethylamine		1,002.6 µg/mL		+/- 5.8294 µg/mL		Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855 µg/mL		Unstressed
	Purity 99%				+/- 19.0748 µg/mL		Stressed
4	Aniline		1,001.8 µg/mL		+/- 5.8246 µg/mL		Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756 µg/mL		Unstressed
	Purity 99%				+/- 19.0590 µg/mL		Stressed
5	Bis(2-chloroethyl)ether		1,000.2 µg/mL		+/- 5.8152 µg/mL		Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565 µg/mL		Unstressed
	Purity 99%				+/- 19.0285 µg/mL		Stressed
6	2-Chlorophenol		1,001.6 µg/mL		+/- 5.8236 µg/mL		Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736 µg/mL		Unstressed
	Purity 99%				+/- 19.0558 µg/mL		Stressed
7	Phenol		1,000.6 µg/mL		+/- 5.8176 µg/mL		Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612 µg/mL		Unstressed
	Purity 99%				+/- 19.0361 µg/mL		Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/-	5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9740	µg/mL	Unstressed
	Purity 99%				+/-	19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/-	5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.9716	µg/mL	Unstressed
	Purity 99%				+/-	19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/-	2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.9822	µg/mL	Unstressed
	Purity 99%				+/-	9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/-	2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9970	µg/mL	Unstressed
	Purity 99%				+/-	9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/-	5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/-	11.9796	µg/mL	Unstressed
	Purity 99%				+/-	19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 3299900)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBH1617V)	1,002.2	µg/mL	+/- 5.8271 +/- 11.9808 +/- 19.0672	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 98%	(Lot SHBC5541V)	1,000.1	µg/mL	+/- 5.8144 +/- 11.9547 +/- 19.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	1,000.4	µg/mL	+/- 5.8164 +/- 11.9588 +/- 19.0323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBN2776V)	1,001.1	µg/mL	+/- 5.8205 +/- 11.9672 +/- 19.0456	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot 12528PH)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9624 +/- 19.0380	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot J31X013)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9626 +/- 19.0382	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 99%	(Lot 19399MJV)	1,001.3	µg/mL	+/- 5.8216 +/- 11.9696 +/- 19.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC0769V)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-10)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot 06024AIV)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 97%	(Lot 150909)	999.7	µg/mL	+/- 5.8126 +/- 11.9510 +/- 19.0199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,001.4	µg/mL	+/- 5.8220 +/- 11.9704 +/- 19.0507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot 150806JLM)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI-TE)	1,000.9	µg/mL	+/- 5.8193 +/- 11.9648 +/- 19.0418	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.6	µg/mL	+/- 5.8178 +/- 11.9616 +/- 19.0368	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%				+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

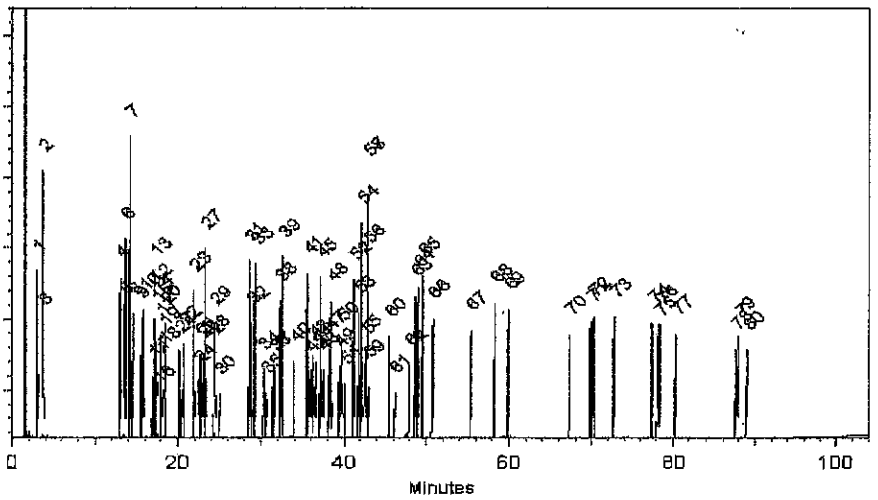
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 3°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56/	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2015) (Cat.#570666)

COMPONENT	Runs of Lot # A0114832 Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Runs of Lot # A0109802 Run #1	Run #2	Run #3	(Cat.#569729.sec) AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150957	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259884	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688695	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261958	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394269	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	388966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	186	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	194929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	193539	192864	3515	1.82	188027	184782	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371876	373978	375314	373723	1732	0.46	370261	370296	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	126181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	218344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502361	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217428	218239	217513	687	0.32	216034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104823	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187496	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516780	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.84	PASS
2-Nitroaniline	495370	498313	499647	497777	2168	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219787	221183	221648	220873	969	0.44	220378	220710	219379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263813	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240480	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266686	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240980	242171	242559	241907	817	0.34	242096	242287	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364646	367383	364830	2467	0.68	356401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764556	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160976	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851668	37192248	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1356337	3.22	-9.56	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530487	531526	529991	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.56	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363869	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539380	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531536	530298	2382	0.45	537532	535982	533785	535766	1863	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)anthracene	532496	537967	537904	536130	3145	0.59	530873	529760	528617	529750	1126	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542689	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

Reagent

EXLIST1_S10_00001

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

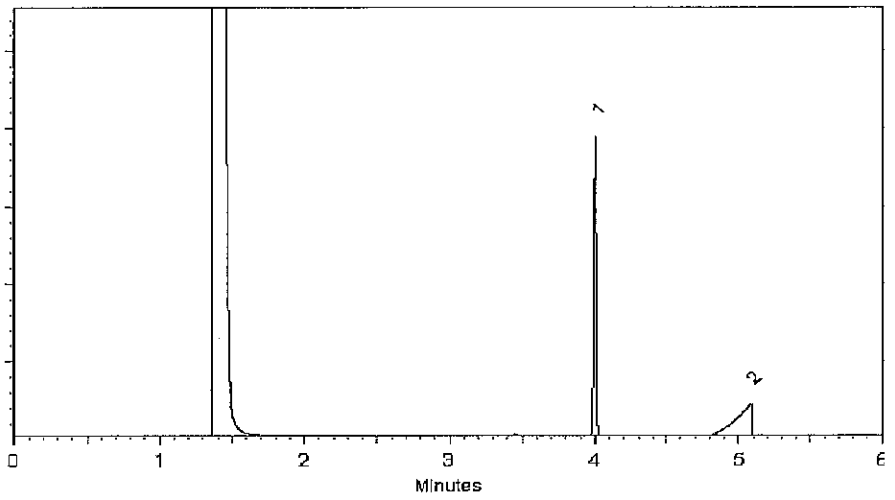
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham

Cheryl Graham - Mix Technician

Date Mixed: 10-Feb-2015 **Balance:** 1128360905

Jennifer L Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 12-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

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Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0108988

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2016 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene **CAS #** 95-13-6 **Purity** 99% (Lot MKBP3098V)	2,001.4 µg/mL	+/- 11.6363 µg/mL +/- 22.5687 µg/mL +/- 25.9700 µg/mL	Gravimetric Unstressed Stressed
2	Benzoic acid **CAS #** 65-85-0 **Purity** 99% (Lot MKBL6689V)	2,000.1 µg/mL	+/- 11.6288 µg/mL +/- 22.5540 µg/mL +/- 25.9531 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

exLIST1_S11_00002

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0112321

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde		2,001.2 µg/mL	+/- 11.6351	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBD3510V)		+/- 64.1498	µg/mL	Unstressed
	Purity 99%			+/- 74.5716	µg/mL	Stressed
2	epsilon-Caprolactam		2,009.2 µg/mL	+/- 11.6817	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.4062	µg/mL	Unstressed
	Purity 99%			+/- 74.8697	µg/mL	Stressed
3	Atrazine		1,999.2 µg/mL	+/- 11.6235	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)		+/- 64.0857	µg/mL	Unstressed
	Purity 98%			+/- 74.4971	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

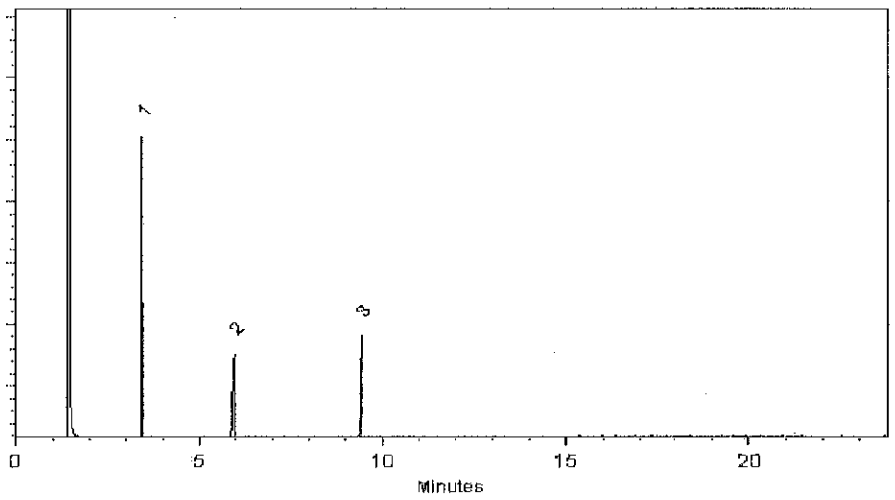
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 06-Jul-2015 **Balance:** 1128360905

Amanda Miller - QC Analyst

Date Passed: 08-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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exLIST1_S9_00003

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0112567

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine **CAS #** 92-87-5 **Purity** 99% (Lot 150701JLMB)	2,001.0 µg/mL	+/- 11.6337 µg/mL +/- 21.9078 µg/mL +/- 37.1592 µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1 **Purity** 99% (Lot 150701JLMA)	2,001.5 µg/mL	+/- 11.6369 µg/mL +/- 21.9138 µg/mL +/- 37.1694 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

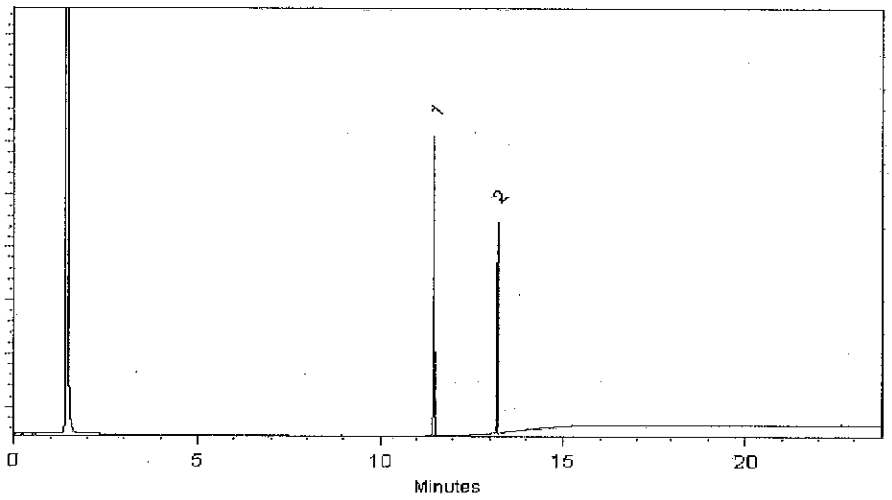
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 15-Jul-2015 **Balance:** 1122030677

Jennifer L. Pollino - QC Analyst

Date Passed: 17-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS6020ACRIA_00003

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 • USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-6020A-CRI-A-REV1
Lot Number:	J2-MEB592019
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea:
	Ca, K, Mg,
	Na,
	100 µg/mL ea:
	Fe,
	50 µg/mL ea:
	Al,
	20 µg/mL ea:
	B, Zn,
	10 µg/mL ea:
	Sr,
	5 µg/mL ea:
	As, Ba, Mn,
	Se, V,
	2 µg/mL ea:
	Cr3, Cu, Ni,
	1 µg/mL ea:
	Be, Cd, Co,
	Pb, Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	50.03 ± 0.28 µg/mL	Arsenic, As	5.000 ± 0.033 µg/mL
Barium, Ba	4.997 ± 0.029 µg/mL	Beryllium, Be	1.000 ± 0.006 µg/mL
Boron, B	20.00 ± 0.14 µg/mL	Cadmium, Cd	1.001 ± 0.007 µg/mL
Calcium, Ca	1 000 ± 5 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	1.000 ± 0.006 µg/mL	Copper, Cu	1.999 ± 0.010 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	1.000 ± 0.006 µg/mL
Magnesium, Mg	1 001 ± 5 µg/mL	Manganese, Mn	5.006 ± 0.029 µg/mL
Nickel, Ni	2.001 ± 0.014 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	5.003 ± 0.029 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	1.000 ± 0.008 µg/mL
Vanadium, V	5.005 ± 0.033 µg/mL	Zinc, Zn	20.00 ± 0.13 µg/mL

Certified Density: 1.039 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing,- Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

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9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

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10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 14, 2015

11.2 Expiration Date

EXPIRES
1 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MS6020ACRIB_00004

INORGANIC VENTURES™
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inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-6020A-CRI-B-REV1
Lot Number:	J2-MEB592020
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	10 µg/mL ea: Sn, Ti, W, 8 µg/mL ea: Li, 5 µg/mL ea: Mo, 2 µg/mL ea: Sb

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	2.001 ± 0.015 µg/mL	Lithium, Li	8.00 ± 0.04 µg/mL
Molybdenum, Mo	4.999 ± 0.036 µg/mL	Tin, Sn	10.00 ± 0.06 µg/mL
Titanium, Ti	10.00 ± 0.06 µg/mL	Tungsten, W	10.00 ± 0.06 µg/mL

Certified Density: 1.023 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Li	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	130418
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
W	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

al Requirements for the Competence of Testing and Calibration Laboratories"

ed / A2LA Certificate Number 883.01

:equirements for the Competence of Reference Material Producers"

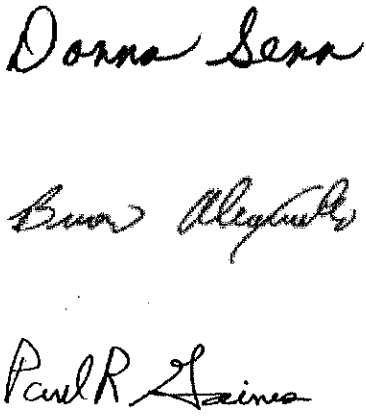
:r - Accredited / A2LA Certificate Number 883.02

N AND PERIOD OF VALIDITY

in the measurement uncertainty specified provided the CRM/RM is handled and
tructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This
:RM/RM is damaged, contaminated, or otherwise modified.

F CERTIFYING OFFICERS

1



Reagent

MTAG_00006

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 12-14-15 KU

Certificate of Analysis

Product Description:

Name:	Silver	Source Material:	Silver Metal
Part Number:	**100051-1**	Material Purity:	99.999%
Lot Number:	**1507504**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3151 (lot number 992212) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.009 g/mL ± 0.002 g/mL @ 22.4°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag		M	Cu	<	1	Li	<	0.02	Rb	<	0.02	Th	<	0.02
Al	<	0.1	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.02
As	<	0.05	Er	<	0.02	Mg	<	0.5	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.1	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	2	U	<	0.1
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.1	W	<	0.02
Bi	<	2	Ge	<	0.02	Nd	<	0.02	Si	<	5	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	0.02	Sm	<	0.02	Yb	<	0.02
Cd	<	0.1	Ho	<	0.02	Os	<	0.02	Sn	<	5	Zn	<	0.5
Ce	<	0.02	In	<	0.1	Pb	<	0.05	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.02	Pd	<	2	Ta	<	0.02			
Cr	<	0.1	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs	<	0.02	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of silver, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-clcaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**March 16, 2015**
Shipped Date:	**12/9/2015**
Expire Date:	**6/9/2017**
Certificate Issue Date:	**April 15, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTHGCAL_00022

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS
[illegible]

Rec'd 3-1-16 KW

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHGN-10PPM
Lot Number:	J2-HG02136
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea: Hg
Starting Material:	Hg metal
Starting Material Lot#:	1780
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.009 ± 0.047 µg/mL

Certified Density: 1.050 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.006542	M	Eu	<	0.000218	O	Na		0.000005	O	Se	<	0.030000	O	Zn	<	0.000400
O	Al	<	0.001000	O	Fe	<	0.000800	M	Nb	<	0.002180	O	Si		0.000006	O	Zr	<	0.001000
M	As	<	0.006542	M	Ga	<	0.000436	M	Nd	<	0.000218	M	Sm	<	0.000218				
M	Au	<	0.004361	M	Gd	<	0.000218	O	Ni	<	0.002000	O	Sn	<	0.002000				
M	B	<	0.004361	M	Ge	<	0.001090	n	Os	<		O	Sr	<	0.000200				
O	Ba	<	0.000260	M	Hf	<	0.006542	O	P	<	0.030000	M	Ta	<	0.001090				
O	Be	<	0.000180	s	Hg	<		M	Pb	<	0.002180	M	Tb	<	0.000218				
M	Bi	<	0.002180	M	Ho	<	0.000218	M	Pd	<	0.008723	M	Te	<	0.010904				
O	Ca		0.000017	M	In	<	0.000218	M	Pr	<	0.000218	M	Th	<	0.000436				
O	Cd	<	0.000500	M	Ir	<	0.000218	M	Pt	<	0.000218	O	Ti	<	0.000600				
M	Ce	<	0.000218	O	K		0.000003	M	Rb	<	0.000218	O	Tl	<	0.010000				
M	Co	<	0.000436	M	La	<	0.000218	M	Re	<	0.000218	M	Tm	<	0.000218				
O	Cr	<	0.002000	O	Li	<	0.000040	M	Rh	<	0.000218	M	U	<	0.000218				
M	Cs	<	0.001090	M	Lu	<	0.000218	M	Ru	<	0.000218	O	V	<	0.000550				
M	Cu	<	0.002180	O	Mg		0.000003	O	S	<	0.030000	M	W	<	0.004361				
M	Dy	<	0.000218	O	Mn	<	0.000160	M	Sb	<	0.001090	M	Y	<	0.000218				
M	Er	<	0.000218	O	Mo	<	0.001500	O	Sc	<	0.000600	M	Yb	<	0.000218				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference

n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 29, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 29, 2018

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTHgStd_00020

HIGH-PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
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Rec'd 11-20-15 KLC

Certificate of Analysis

Product Description:

Name:	Mercury	Source Material:	Mercury Metal
Part Number:	**1 33-1**	Material Purity:	99.9998%
Lot Number:	**1531727**	Matrix:	5% (v/v) HNO_3

Certified Value: 1.00 µg/mL ± 0.02 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3133 (lot number 061204) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of mercury, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for six months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**November 13, 2015**
Shipped Date:	**November 18, 2015**
Expiration Date:	**May 18, 2016**
Certificate Issue Date:	**November 16, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

MTICPMS2_00024

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Rec'd 1-27-16 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-84
Lot Number:	K2-MEB615154
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Aluminum, Calcium, Iron, Potassium, Magnesium, Sodium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Magnesium, Mg	1 000 ± 4 µg/mL
Potassium, K	1 000 ± 4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	051220
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA, Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES: 1 FEB 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
QC Supervisor

Michael 2 Booth

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

MTICPMSA_00026

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CERTIFICATE OF ANALYSIS

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Rec'd 1-27-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1A
Lot Number:	J2-MEB584095
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

As, Ba, Be,
Cd, Co, Cr3,
Cu, Mn, Ni,
Pb, Se, Sr,
V, Zn,

25 µg/mL ea:
Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	100.0 ± 0.8 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.5 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium+3, Cr3	100.0 ± 0.5 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Lead, Pb	100.0 ± 0.5 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.5 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	25.00 ± 0.15 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Certified Density: 1.030 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 04, 2015

11.2 Expiration Date

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

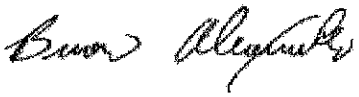
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMSB_00027

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CERTIFICATE OF ANALYSIS

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Rec'd 1-27-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1BREV2
Lot Number:	K2-MEB615153
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 µg/mL ea: Tin, 10 µg/mL ea: Silver, Boron, Lithium, Molybdenum, Antimony, Titanium, Tungsten

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	10.01 ± 0.08 µg/mL
Lithium, Li	10.01 ± 0.04 µg/mL	Molybdenum, Mo	10.00 ± 0.04 µg/mL
Silver, Ag	10.00 ± 0.06 µg/mL	Tin, Sn	100.0 ± 0.4 µg/mL
Titanium, Ti	9.99 ± 0.06 µg/mL	Tungsten, W	10.00 ± 0.06 µg/mL

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
B	ICP Assay	3107	110830
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES 1 FEB 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSCAL3_00010

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CERTIFICATE OF ANALYSIS

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Rec'd 10-19-15 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLPA-CAL-SPECA-REV
Lot Number:	J2-MEB596139
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:
	Ca, K, Mg,
	Na,
	1 250 µg/mL ea:
	Fe,
	25 µg/mL ea:
	Al, Mn,
	5 µg/mL ea:
	Ag, As, Ba,
	Be, Cd, Co,
	Cr3, Cu, Ni,
	Pb, Se, Sr,
	Tl, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.14 µg/mL	Arsenic, As	5.001 ± 0.032 µg/mL
Barium, Ba	5.000 ± 0.032 µg/mL	Beryllium, Be	5.000 ± 0.029 µg/mL
Cadmium, Cd	4.999 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 12 µg/mL
Chromium+3, Cr3	5.000 ± 0.029 µg/mL	Cobalt, Co	5.001 ± 0.025 µg/mL
Copper, Cu	5.000 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	5.000 ± 0.026 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	25.00 ± 0.12 µg/mL	Nickel, Ni	5.001 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	5.001 ± 0.029 µg/mL
Silver, Ag	5.001 ± 0.036 µg/mL	Sodium, Na	2 501 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.001 ± 0.040 µg/mL
Vanadium, V	5.000 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.032 µg/mL

Certified Density: 1.049 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 13, 2015

11.2 Expiration Date

EXPIRES
1 NOV 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

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CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CAL-SPECC-REV1
Lot Number:	J2-MEB596140
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	5 µg/mL ea: B, Li, Mo, Sb, Sn, Ti, W

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	5.003 ± 0.047 µg/mL	Boron, B	5.000 ± 0.036 µg/mL
Lithium, Li	5.002 ± 0.025 µg/mL	Molybdenum, Mo	5.003 ± 0.039 µg/mL
Tin, Sn	5.003 ± 0.036 µg/mL	Titanium, Ti	5.003 ± 0.043 µg/mL
Tungsten, W	5.001 ± 0.036 µg/mL		

Certified Density: 1.027 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Li	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808
W	ICP Assay	3163	080331

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 13, 2015

11.2 Expiration Date

EXPIRES
1 N 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSA_00011

INORGANIC VENTURES™

CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	J2-MEB533111
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cl-, 2 000 µg/mL ea: C, 1 000 µg/mL ea: Al, Ca, Fe, K, Mg, Na, P, S, 20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 5 µg/mL	Calcium, Ca	1 001 ± 6 µg/mL
Carbon, C	2 002 ± 10 µg/mL	Chloride, Chloride	10 010.0 ± 50.0 µg/mL
Iron, Fe	1 001 ± 5 µg/mL	Magnesium, Mg	1 001 ± 6 µg/mL
Molybdenum, Mo	20.02 ± 0.09 µg/mL	Phosphorus, P	1 001 ± 8 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 7 µg/mL	Titanium, Ti	20.03 ± 0.13 µg/mL

Certified Density: 1.033 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.

[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	M	Eu	<	0.000102	s	Na	<		M	Se	<	0.001333	M	Zn		0.005643
s	Al	<		s	Fe	<		M	Nb	<	0.000102	n	Si	<		M	Zr	<	0.000410
M	As	<	0.015390	M	Ga	<	0.000102	M	Nd	<	0.000205	M	Sm	<	0.000102				
M	Au	<	0.001026	M	Gd	<	0.000102	M	Ni	<	0.002770	M	Sn	<	0.000615				
O	B	<	0.010330	O	Ge	<	0.020660	M	Os	<	0.000102	O	Sr		0.003543				
M	Ba	<	0.001846	M	Hf	<	0.000102	s	P	<		M	Ta	<	0.000102				
O	Be	<	0.000103	M	Hg	<	0.000307	M	Pb		0.003796	M	Tb	<	0.000102				
M	Bi	<	0.000205	M	Ho	<	0.000102	M	Pd	<	0.000102	M	Te	<	0.000205				
s	Ca	<		M	In	<	0.000102	M	Pr	<	0.000102	M	Th	<	0.000102				
O	Cd		0.001549	M	Ir	<	0.000102	M	Pt	<	0.000102	s	Ti	<					
M	Ce	<	0.000410	s	K	<		M	Rb		0.012927	M	Tl	<	0.000102				
M	Co	<	0.004309	M	La	<	0.000205	M	Re	<	0.000102	M	Tm	<	0.000102				
M	Cr		0.012619	O	Li		0.000999	M	Rh	<	0.000102	M	U	<	0.000102				
M	Cs	<	0.000205	M	Lu	<	0.000102	M	Ru	<	0.000102	M	V	<	0.001436				
O	Cu	<	0.015495	s	Mg	<		s	S	<		M	W		0.001128				
M	Dy	<	0.000102	O	Mn		0.001189	M	Sb	<	0.000615	M	Y	<	0.000102				
M	Er	<	0.000102	s	Mo	<		M	Sc	<	0.000102	M	Yb	<	0.000102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

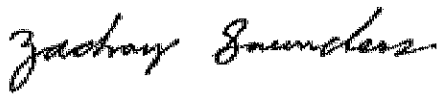
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSABSOLA_00007

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-606-139**
	Solution A
Lot Number:	**1515332**
Matrix:	2% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)			SRM ID	SRM Lot#
Cd	20.00	±	0.12	3108	130116
As	20.00	±	0.12	3103a	100818
Ba	20.00	±	0.12	*	
Be	20.0	±	0.2	3105a	090514
B	20.0	±	0.2	*	
Cr	20.00	±	0.12	3112a	030730
Ni	20.00	±	0.12	3136	120619
Co	20.00	±	0.12	3113	000630
Cu	20.00	±	0.12	3114	121207
Mn	20.0	±	0.3	3132	050429
Se	20.0	±	0.2	3149	100901
Sr	20.00	±	0.12	3153a	990906
Tl	20.00	±	0.12	3158	993012
Zn	20.00	±	0.12	3168a	120629
V	20.0	±	0.2	3165	992706
Pb	20.0	±	0.2	3128	101026
Li	20.0	±	0.2	3129a	100714

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally manufactured from CRM single element solutions that were prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

The CRM is intended for use as a calibration standard and QC control for instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**June 2, 2015**
Shipped Date:	**June 8, 2015**
Expiration Date:	**June 8, 2016**
Certificate Issue Date:	**June 5, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTMSICSABSOLB_00007

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-606-139**
	Solution B
Lot Number:	**1515333**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	20.0 ± 0.2	*		Sn	20.0 ± 0.2	*	
Mo	20.0 ± 0.2	3134	891307	Ti	20.0 ± 0.2	3162a	130925
Ag	20.00 ± 0.12	3151	992212	W	20.0 ± 0.3	3163	080331

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally manufactured from CRM single element solutions that were prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

The CRM is intended for use as a calibration standard and QC control for instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**June 2, 2015**
Shipped Date:	**June 8, 2015**
Expiration Date:	**June 8, 2016**
Certificate Issue Date:	**June 5, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTMSICVA_00010

CPI INTERNATIONAL

USA

5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Rec'd 3-7-16 KL

Additional Information:

Date Received: _____

Container: 16 oz (500 mL) Narrow Mouth, LDPE clean

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.
The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Aluminum	Al	7429-90-5	3101	060502	7001.46.8P	99.9995	20	0.06
Manganese	Mn	7439-96-5	3132	050429	7017.46.5P	99.95	20	0.06
Silver	Ag	7440-22-4	3151	992212	7000.29.1P	99.999	4	0.01
Arsenic	As	7440-38-2	3103	010713	7002.46.5P	99.9999	4	0.01
Boron	B	7440-42-8	3107	070514	7003.46.4P	99.999	4	0.01
Barium	Ba	7440-39-3	3104	070222	7004.29.3P	99.997	4	0.01
Beryllium	Be	7440-41-7	3105	892707	7005.46.5P	99.999	4	0.01
Cadmium	Cd	7440-43-9	3108	060531	7007.46.3P	99.9999	4	0.01
Cobalt	Co	7440-48-4	3113	000630	7008.409.1P	99.999	4	0.01
Chromium	Cr	7440-47-3	3112	030730	7009.46.2P	99.998	4	0.01
Copper	Cu	7440-50-8	3114	011017	7011.46.5P	99.9995	4	0.01
Lithium	Li	7439-93-2	3129	000505	7015.46.5P	99.999	4	0.01
Molybdenum	Mo	7439-98-7	3134	891307	7018.29.3P	99.999	4	0.01
Nickel	Ni	7440-02-0	3136	000612	7021.46.9P	99.995	4	0.01
Lead	Pb	7439-92-1	3128	030721	7023.29.3P	99.999	4	0.01
Antimony	Sb	7440-36-0	3102	061229	7026.46.3P	99.999	4	0.01
Selenium	Se	7782-49-2	3149	992106	7027.46.4P	99.999	4	0.01
Tin	Sn	7440-31-5	3161	070330	7029.46.4P	99.999	4	0.01
Strontium	Sr	7440-24-6	3153	990906	7030.409.1P	99.999	4	0.01
Titanium	Ti	7440-32-6	3162	060808	7033.38.2P	99.995	4	0.01
Thallium	Tl	7440-28-0	3158	993012	7034.29.4P	99.99	4	0.01
Vanadium	V	7440-62-2	3165	992706	7036.46.6P	99.995	4	0.01
Tungsten	W	7440-33-7	3163	080331	7072.46.2P	99.99	4	0.01
Zinc	Zn	7440-66-6	3168	080123	7037.46.5P	99.9995	4	0.01
Calcium	Ca	7440-70-2	3109	050825	7006.29.3P	99.999	2000	5.66
Potassium	K	7440-09-7	3141	051220	7013.409.1P	99.999	2000	5.66
Magnesium	Mg	7439-95-4	3131	050302	7016.46.5P	99.99	2000	5.66
Sodium	Na	7440-23-5	3152	010728	7020.46.7P	99.999	2000	5.66
Iron	Fe	7439-89-6	3126	051031	7012.409.1P	99.99	1000	2.83

CPI INTERNATIONAL

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F: 707.545.7901

Europe

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Intended Uses:

This Certified Reference material, CRM, is intended for use as a calibration standard or a quality control standard for Inorganic Spectrometry Equipment such as ICP-OES, ICP-MS, AA, and XRF, It may aslo be used for various USEPA and ASTM methods.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with NIST traceable weights (NIST Test Number 822/264157-00). Only calibrated Class A volumetric glassware was used to prepare this standard. Sub-boiled distilled acid and 18 megaohm deionized water were used to stabilize the product. All raw materials were checked for stoichiometry and purity prior to use. This standard has been spectrometrically certified by an independent source, which is directly traceable to NIST.

Packaging and Storage:

The Solution should be kept trightly capped and stored under normal laboratory conditions. Pre-cleaned polyethlene bottles are used to package this material. Special storage information: Ambient

Glassware Calibration:

Only Class A glassware is used in the manufacture and quality control of Standards. All Glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used perform daily checks on balances calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to the National Institute of Standards and Technology (NIST). Balances are checked daily in accordance to in house procedure O2-LB-004. Balances are calibrated annually by an ISO 17025 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-10 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC Guide 17025:2005 and ISO Guide 34:2009. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous information:

Refer to MSDS

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Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:
$U=ku_c$ U=Expanded Uncertainty, k= the coverage factor at the 95% confidence level, k=2, u_c = the combined uncertainty
$u_c=\sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Mark Filla

Manufacture Date: 2/29/2016

Certified By:

Zachary Spinelli

Certified Date:2/29/2016

Released By:

HuiChen Stavros, Ph.D.

Original Issue Date: 2/29/2016

Reagent

SMIS R_00005

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0101020

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2019 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4	2,005.4 µg/mL	+/- 11.6596	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 89.1010	µg/mL	Unstressed
	Purity 99%		+/- 97.8939	µg/mL	Stressed
2	Naphthalene-d8	2,005.8 µg/mL	+/- 11.6619	µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot PR-20449)		+/- 89.1187	µg/mL	Unstressed
	Purity 99%		+/- 97.9134	µg/mL	Stressed
3	Acenaphthene-d10	1,998.2 µg/mL	+/- 11.6177	µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-21070)		+/- 88.7811	µg/mL	Unstressed
	Purity 97%		+/- 97.5424	µg/mL	Stressed
4	Phenanthrene-d10	2,001.2 µg/mL	+/- 11.6351	µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-23065)		+/- 88.9144	µg/mL	Unstressed
	Purity 99%		+/- 97.6889	µg/mL	Stressed
5	Chrysene-d12	1,999.6 µg/mL	+/- 11.6258	µg/mL	Gravimetric
	CAS # 1719-03-5 (Lot PR-24875)		+/- 88.8429	µg/mL	Unstressed
	Purity 98%		+/- 97.6104	µg/mL	Stressed
6	Perylene-d12	2,002.6 µg/mL	+/- 11.6433	µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-24113)		+/- 88.9766	µg/mL	Unstressed
	Purity 99%		+/- 97.7572	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

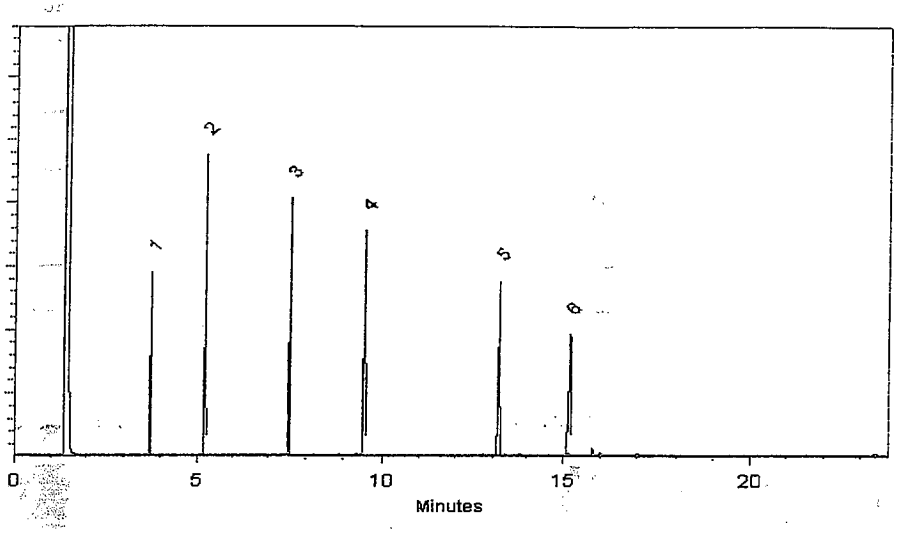
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen to guarantee product quality. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 30-Jan-2014 **Balance:** 1128342313

Jennifer L. Pollino - QC Analyst

Date Passed: 03-Feb-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\,stability} + U^2_{shipping\,stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,000.9	µg/mL	+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7	µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6	µg/mL	+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8	µg/mL	+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2	µg/mL	+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6	µg/mL	+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6	µg/mL	+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/-	5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9740	µg/mL	Unstressed
	Purity 99%				+/-	19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/-	5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.9716	µg/mL	Unstressed
	Purity 99%				+/-	19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/-	2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.9822	µg/mL	Unstressed
	Purity 99%				+/-	9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/-	2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9970	µg/mL	Unstressed
	Purity 99%				+/-	9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/-	5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/-	11.9796	µg/mL	Unstressed
	Purity 99%				+/-	19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 3299900)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBH1617V)	1,002.2	µg/mL	+/- 5.8271 +/- 11.9808 +/- 19.0672	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26 ✓	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 98%	(Lot SHBC5541V)	1,000.1	µg/mL	+/- 5.8144 +/- 11.9547 +/- 19.0258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	1,000.4	µg/mL	+/- 5.8164 +/- 11.9588 +/- 19.0323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBN2776V)	1,001.1	µg/mL	+/- 5.8205 +/- 11.9672 +/- 19.0456	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot 12528PH)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9624 +/- 19.0380	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot J31X013)	1,000.7	µg/mL	+/- 5.8182 +/- 11.9626 +/- 19.0382	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 99%	(Lot 19399MJV)	1,001.3	µg/mL	+/- 5.8216 +/- 11.9696 +/- 19.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC0769V)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-10)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34 ✓	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot 06024AIV)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 97%	(Lot 150909)	999.7	µg/mL	+/- 5.8126 +/- 11.9510 +/- 19.0199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBH7393V)	1,001.4	µg/mL	+/- 5.8220 +/- 11.9704 +/- 19.0507	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot 150806JLM)	1,000.1	µg/mL	+/- 5.8145 +/- 11.9549 +/- 19.0260	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI-TE)	1,000.9	µg/mL	+/- 5.8193 +/- 11.9648 +/- 19.0418	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39 ✓	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot 1277976)	1,000.6	µg/mL	+/- 5.8178 +/- 11.9616 +/- 19.0368	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene (1,2-Diphenylhydrazine)		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99%	122-66-7			+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

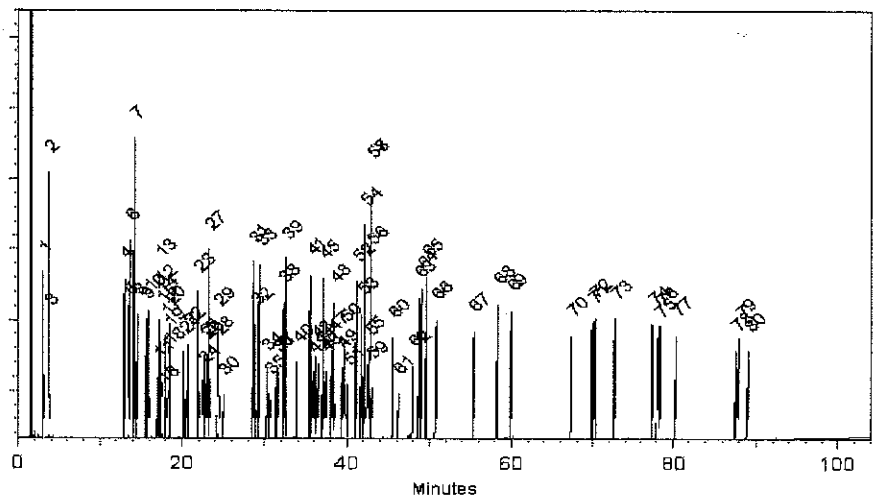
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 8°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56A	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2016) (Cat.#570666)

	Runs of Lot # A0114832						Runs of Lot # A0109802 (Cat.#569729.sec)							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150967	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259684	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688895	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261968	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394289	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	386966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	188	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	194929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	193539	192864	3515	1.82	188027	184762	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371878	373978	375314	373723	1732	0.46	370261	370298	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	128181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	216344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502381	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217426	218239	217513	687	0.32	218034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104923	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187498	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516760	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.64	PASS
2-Nitroaniline	495370	498313	499647	497777	2188	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219767	221183	221648	220873	969	0.44	220378	220710	219379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263913	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240490	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266666	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240990	242171	242559	241907	817	0.34	242096	242267	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364648	367383	364830	2467	0.68	358401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764558	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160978	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851868	37192246	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1358337	3.22	-9.66	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530497	531526	529961	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.58	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363669	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539380	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531636	530298	2382	0.45	537532	535982	533785	535766	1883	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)enthracene	532498	537987	537904	536130	3145	0.59	530873	529760	528617	529750	1128	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542669	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

Reagent

SMLIST1 S1_00006

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570666 **Lot No.:** A0114832

Description : 8270 List 1 / Std #1 MegaMix (2016)

8270 List 1 / Std #1 MegaMix (2016) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2017 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,000.9	µg/mL	+/- 5.8193	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)			+/- 11.9648	µg/mL	Unstressed
	Purity 99%				+/- 19.0418	µg/mL	Stressed
2	Pyridine		1,004.7	µg/mL	+/- 5.8416	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 12.0106	µg/mL	Unstressed
	Purity 99%				+/- 19.1148	µg/mL	Stressed
3	N-Nitrosodimethylamine		1,002.6	µg/mL	+/- 5.8294	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 4370100)			+/- 11.9855	µg/mL	Unstressed
	Purity 99%				+/- 19.0748	µg/mL	Stressed
4	Aniline		1,001.8	µg/mL	+/- 5.8246	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 11.9756	µg/mL	Unstressed
	Purity 99%				+/- 19.0590	µg/mL	Stressed
5	Bis(2-chloroethyl)ether		1,000.2	µg/mL	+/- 5.8152	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 11.9565	µg/mL	Unstressed
	Purity 99%				+/- 19.0285	µg/mL	Stressed
6	2-Chlorophenol		1,001.6	µg/mL	+/- 5.8236	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/- 11.9736	µg/mL	Unstressed
	Purity 99%				+/- 19.0558	µg/mL	Stressed
7	Phenol		1,000.6	µg/mL	+/- 5.8176	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)			+/- 11.9612	µg/mL	Unstressed
	Purity 99%				+/- 19.0361	µg/mL	Stressed

8	n-Decane (C10)		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBG1119V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
9	1,4-Dichlorobenzene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS1350V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
10	1,3-Dichlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
11	1,2-Dichlorobenzene		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBD7331V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
12	Benzyl alcohol		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
13	2,2'-oxybis(1-chloropropane)		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 2-KMW-57-8)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
14	2-Methylphenol (o-cresol)		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBC1479V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
15	Hexachloroethane		1,001.7	µg/mL	+/-	5.8238	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9740	µg/mL	Unstressed
	Purity 99%				+/-	19.0564	µg/mL	Stressed
16	Acetophenone		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot MKBR7156V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
17	N-Nitroso-di-n-propylamine		1,001.5	µg/mL	+/-	5.8226	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	11.9716	µg/mL	Unstressed
	Purity 99%				+/-	19.0526	µg/mL	Stressed
18	4-Methylphenol (p-cresol)		500.4	µg/mL	+/-	2.9096	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	5.9822	µg/mL	Unstressed
	Purity 99%				+/-	9.5206	µg/mL	Stressed
19	3-Methylphenol (m-cresol)		501.7	µg/mL	+/-	2.9167	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9970	µg/mL	Unstressed
	Purity 99%				+/-	9.5441	µg/mL	Stressed
20	Nitrobenzene		1,002.1	µg/mL	+/-	5.8265	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBF2348V)			+/-	11.9796	µg/mL	Unstressed
	Purity 99%				+/-	19.0653	µg/mL	Stressed
21	Isophorone		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
22	2-Nitrophenol		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 3299900)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
25	2,4-Dichlorophenol		1,002.2	µg/mL	+/-	5.8271	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9808	µg/mL	Unstressed
	Purity 99%				+/-	19.0672	µg/mL	Stressed
26 ✓	1,2,4-Trichlorobenzene		1,000.1	µg/mL	+/-	5.8144	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/-	11.9547	µg/mL	Unstressed
	Purity 98%				+/-	19.0258	µg/mL	Stressed
27	Naphthalene		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBN2776V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
29	4-Chloroaniline		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot 12528PH)			+/-	11.9624	µg/mL	Unstressed
	Purity 99%				+/-	19.0380	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
31	2-Methylnaphthalene		1,001.3	µg/mL	+/-	5.8216	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/-	11.9696	µg/mL	Unstressed
	Purity 99%				+/-	19.0494	µg/mL	Stressed
32	4-Chloro-3-methylphenol		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC0769V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
33	1-Methylnaphthalene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
34 ✓	1,2,4,5-Tetrachlorobenzene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot 06024AIV)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
35	Hexachlorocyclopentadiene		999.7	µg/mL	+/-	5.8126	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/-	11.9510	µg/mL	Unstressed
	Purity 97%				+/-	19.0199	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBH7393V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot 150806JLM)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI-TE)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed
39 ✓	Biphenyl		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot 1277976)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed

40	4-Nitroaniline		1,000.5	µg/mL	+/-	5.8172	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9604	µg/mL	Unstressed
	Purity 99%				+/-	19.0349	µg/mL	Stressed
41	Acenaphthylene		999.8	µg/mL	+/-	5.8127	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot W01O)			+/-	11.9512	µg/mL	Unstressed
	Purity 98%				+/-	19.0202	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBB1436V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
43	Dimethylphthalate		1,001.5	µg/mL	+/-	5.8228	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9720	µg/mL	Unstressed
	Purity 99%				+/-	19.0532	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
45	Acenaphthene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBP0384V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
46	2,4-Dinitrophenol		1,999.8	µg/mL	+/-	11.6272	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF1268V)			+/-	23.9061	µg/mL	Unstressed
	Purity 99%				+/-	38.0462	µg/mL	Stressed
47	Dibenzofuran		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
48	3-Nitroaniline		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBQ6338V)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed
49	2,4-Dinitrotoluene		1,001.5	µg/mL	+/-	5.8230	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9724	µg/mL	Unstressed
	Purity 99%				+/-	19.0539	µg/mL	Stressed
50	4-Nitrophenol		2,000.3	µg/mL	+/-	11.6297	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBP6945V)			+/-	23.9113	µg/mL	Unstressed
	Purity 99%				+/-	38.0545	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B15W0912)			+/-	11.9541	µg/mL	Unstressed
	Purity 99%				+/-	19.0247	µg/mL	Stressed
52	Fluorene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
53	4-Chlorophenyl phenyl ether		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBS2248V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
54	n-Hexadecane (C16)		1,000.7	µg/mL	+/-	5.8180	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBF6942V)			+/-	11.9620	µg/mL	Unstressed
	Purity 99%				+/-	19.0374	µg/mL	Stressed
55	Diethylphthalate		1,000.9	µg/mL	+/-	5.8193	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	11.9648	µg/mL	Unstressed
	Purity 99%				+/-	19.0418	µg/mL	Stressed

56	Azobenzene 1,2-Diphenylhydrazine		1,001.2	µg/mL	+/-	5.8213	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot MKBS2559V)			+/-	11.9688	µg/mL	Unstressed
	Purity 99% 122-66-7				+/-	19.0482	µg/mL	Stressed
57	Diphenylamine		850.7	µg/mL	+/-	4.9460	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1693	µg/mL	Unstressed
	Purity 99%				+/-	16.1843	µg/mL	Stressed
58	2-Nitroaniline		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
59	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.9	µg/mL	+/-	11.6336	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC12394V)			+/-	23.9193	µg/mL	Unstressed
	Purity 99%				+/-	38.0672	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		999.8	µg/mL	+/-	5.8131	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9520	µg/mL	Unstressed
	Purity 98%				+/-	19.0215	µg/mL	Stressed
61	Hexachlorobenzene		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC10604V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
62	Pentachlorophenol		2,000.5	µg/mL	+/-	11.6311	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 150902JLM)			+/-	23.9142	µg/mL	Unstressed
	Purity 98%				+/-	38.0591	µg/mL	Stressed
63	Phenanthrene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBT8628V)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
64	n-Octadecane (C18)		1,000.8	µg/mL	+/-	5.8187	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9636	µg/mL	Unstressed
	Purity 99%				+/-	19.0399	µg/mL	Stressed
65	Anthracene		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBK5208V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8161	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 4017900)			+/-	11.9583	µg/mL	Unstressed
	Purity 98%				+/-	19.0314	µg/mL	Stressed
67	Di-n-butylphthalate		1,003.6	µg/mL	+/-	5.8348	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBL8501V)			+/-	11.9967	µg/mL	Unstressed
	Purity 99%				+/-	19.0926	µg/mL	Stressed
68	Fluoranthene		1,000.7	µg/mL	+/-	5.8184	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9629	µg/mL	Unstressed
	Purity 98%				+/-	19.0389	µg/mL	Stressed
69	Pyrene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot 03027HV)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed
71	Benz(a)anthracene		1,000.1	µg/mL	+/-	5.8147	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9553	µg/mL	Unstressed
	Purity 99%				+/-	19.0266	µg/mL	Stressed

72	Chrysene		1,000.0	µg/mL	+/-	5.8143	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot PR121912-01)			+/-	11.9545	µg/mL	Unstressed
	Purity 99%				+/-	19.0253	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8164	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBK2695V)			+/-	11.9588	µg/mL	Unstressed
	Purity 99%				+/-	19.0323	µg/mL	Stressed
74	Di-n-octyl phthalate		1,004.1	µg/mL	+/-	5.8379	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 3998900)			+/-	12.0031	µg/mL	Unstressed
	Purity 99%				+/-	19.1027	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.1	µg/mL	+/-	5.8149	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9557	µg/mL	Unstressed
	Purity 99%				+/-	19.0272	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.3	µg/mL	+/-	5.8160	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9580	µg/mL	Unstressed
	Purity 99%				+/-	19.0311	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.8	µg/mL	+/-	5.8189	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9640	µg/mL	Unstressed
	Purity 99%				+/-	19.0406	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8251	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9768	µg/mL	Unstressed
	Purity 99%				+/-	19.0609	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.8	µg/mL	+/-	5.8185	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9632	µg/mL	Unstressed
	Purity 99%				+/-	19.0393	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

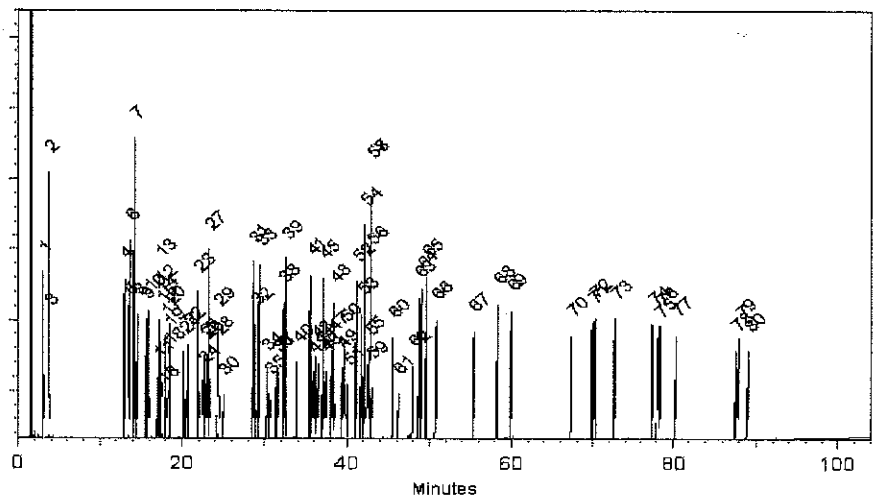
Carrier Gas:
hydrogen-constant pressure 10 psi

Temp. Program:
35°C (hold 3 min.) to 330°C
@ 8°C/min. (hold 3 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 20-Oct-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 04-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Chemical Standard Batch Sheet
Lot #: A0114832

Catalog #: 570666	**Target:** 500-2000 ug/mL	
Description: 8270 List 1 / Std #1 MegaMix (2016)		
Solvent: Methylene Chloride	**Solvent Lot:** 154085	**Final Volume:** 3,000 ml

Made by: Kendra Swope	**Date:** 10/27/2015 8:28:12AM		
Tested by: Tyler Brown	**Date:** 10/29/2015 3:09:08PM		
Pass	**By:** Jodi Breon	**Date:** 11/4/2015 2:13:39PM	
Packaged by: Mary Ellen Wood / Kendra Swope	**Date:** 10/30/2015 7:37:56A	**No. Units:** 487	**Pkg Size:** 5 mL
Balance Used: BEDEARMBALPC1 XPE205	**Serial #:** B442140311		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
N-Nitrosodimethylamine	62-75-9	CAL012	4370100	0.99	1,000.00	3,000.00 mg	3,007.90 mg	1,002.6
Pyridine	110-86-1	F0049	SHBC7174V	0.99	1,000.00	3,000.00 mg	3,014.20 mg	1,004.7
Bis(2-chloroethoxy)methane	111-91-1	R0253	3299900	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
4-Bromophenyl phenyl ether	101-55-3	R0254	STBB9729V	0.98	1,000.00	3,061.22 mg	3,060.70 mg	999.8
4-Chlorophenyl phenyl ether	7005-72-3	R0255	MKBS2248V	0.99	1,000.00	3,000.00 mg	3,003.10 mg	1,001.0
2,4-Dimethylphenol	105-67-9	R0256	10165155	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
2-Nitrophenol	88-75-5	R0263	BCBH7602V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benz(a)anthracene	56-55-3	R0469	ER031412-01	0.99	1,000.00	3,000.00 mg	3,000.30 mg	1,000.1
Benzo(b)fluoranthene	205-99-2	R0470	ER03101401	0.99	1,000.00	3,000.00 mg	3,006.00 mg	1,002.0
Benzo(k)fluoranthene	207-08-9	R0471	012012K	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Benzo(g,h,i)perylene	191-24-2	R0473	ER05121401	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
Benzo(a)pyrene	50-32-8	R0474	ER071309-02	0.99	1,000.00	3,000.00 mg	3,001.00 mg	1,000.3
Benzyl butyl phthalate	85-68-7	R0475	03027HV	0.99	1,000.00	3,000.00 mg	3,000.90 mg	1,000.3
Bis(2-ethylhexyl)phthalate	117-81-7	R0479	MKBK2695V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Carbazole	86-74-8	R0480	4017900	0.98	1,000.00	3,061.22 mg	3,062.30 mg	1,000.4
1,2-Dichlorobenzene	95-50-1	R0484	SHBD7331V	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
1,3-Dichlorobenzene	541-73-1	R0485	BCBM5751V	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
1,4-Dichlorobenzene	106-46-7	R0486	MKBS1350V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
2,4-Dinitrotoluene	121-14-2	R0488	MKAA0690V	0.99	1,000.00	3,000.00 mg	3,004.60 mg	1,001.5
2,6-Dinitrotoluene	606-20-2	R0489	1437483V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2-Methylnaphthalene	91-57-6	R0490	19399MJV	0.99	1,000.00	3,000.00 mg	3,003.90 mg	1,001.3
2-Nitroaniline	88-74-4	R0491	MKBK7597V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
3-Nitroaniline	99-09-2	R0492	MKBQ6338V	0.99	1,000.00	3,000.00 mg	3,002.30 mg	1,000.8
4-Nitroaniline	100-01-6	R0493	BCBG4702V	0.99	1,000.00	3,000.00 mg	3,001.60 mg	1,000.5
4-Nitrophenol	100-02-7	R0494	MKBP6945V	0.99	2,000.00	6,000.00 mg	6,000.80 mg	2,000.3
1,2,4-Trichlorobenzene	120-82-1	R0496	SHBC5541V	0.98	1,000.00	3,061.22 mg	3,061.40 mg	1,000.1
Acenaphthylene	208-96-8	R0497	W01O	0.98	1,000.00	3,061.22 mg	3,060.50 mg	999.8
Anthracene	120-12-7	R0499	MKBK5208V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Pentachlorophenol	87-86-5	R0501	150902JLM	0.98	2,000.00	6,122.45 mg	6,124.00 mg	2,000.5
Phenanthrene	85-01-8	R0502	MKBT8628V	0.99	1,000.00	3,000.00 mg	3,005.60 mg	1,001.9
Pyrene	129-00-0	R0503	BCBL6786V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
Chrysene	218-01-9	R0505	PR121912-01	0.99	1,000.00	3,000.00 mg	3,000.10 mg	1,000.0
Dibenz(a,h)anthracene	53-70-3	R0507	ER032211-01	0.99	1,000.00	3,000.00 mg	3,005.70 mg	1,001.9
Di-n-butylphthalate	84-74-2	R0508	MKBL8501V	0.99	1,000.00	3,000.00 mg	3,010.70 mg	1,003.6
Fluoranthene	206-44-0	R0514	MKBQ6360V	0.98	1,000.00	3,061.22 mg	3,063.50 mg	1,000.7
Fluorene	86-73-7	R0515	10174662	0.98	1,000.00	3,061.22 mg	3,062.40 mg	1,000.4
Hexachlorocyclopentadiene	77-47-4	R0517	150909	0.97	1,000.00	3,092.78 mg	3,092.00 mg	999.7
Hexachlorobenzene	118-74-1	R0518	LC10604V	0.99	1,000.00	3,000.00 mg	3,004.80 mg	1,001.6
Hexachlorobutadiene	87-68-3	R0519	J31X013	0.98	1,000.00	3,061.22 mg	3,063.40 mg	1,000.7
Hexachloroethane	67-72-1	R0520	4H3SF	0.99	1,000.00	3,000.00 mg	3,005.00 mg	1,001.7
Indeno(1,2,3-cd)pyrene	193-39-5	R0521	ER082107-02	0.99	1,000.00	3,000.00 mg	3,002.50 mg	1,000.8
Naphthalene	91-20-3	R0524	MKBH4351V	0.99	1,000.00	3,000.00 mg	3,001.20 mg	1,000.4
Nitrobenzene	98-95-3	R0525	SHBF2348V	0.99	1,000.00	3,000.00 mg	3,006.40 mg	1,002.1
N-Nitroso-di-n-propylamine	621-64-7	R0527	OPAGF	0.99	1,000.00	3,000.00 mg	3,004.40 mg	1,001.5
2,3,4,6-Tetrachlorophenol	58-90-2	R0528	B15W0912	0.99	1,000.00	3,000.00 mg	3,000.00 mg	1,000.0

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
n-Decane (C10)	124-18-5	R0531	SHBG1119V	0.99	1,000.00	3,000.00 mg	3,004.30 mg	1,001.4
Acenaphthene	83-32-9	R0537	MKBP0384V	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
2,6-Dichlorophenol	87-65-0	R0548	MKBN2776V	0.99	1,000.00	3,000.00 mg	3,003.30 mg	1,001.1
n-Octadecane (C18)	593-45-3	R0549	27SOF	0.99	1,000.00	3,000.00 mg	3,002.40 mg	1,000.8
1,2,4,5-Tetrachlorobenzene	95-94-3	R0555	06024AIV	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
Acetophenone	98-86-2	R0561	MKBR7156V	0.99	1,000.00	3,000.00 mg	3,000.40 mg	1,000.1
Biphenyl	92-52-4	R0562	1277976	0.99	1,000.00	3,000.00 mg	3,001.90 mg	1,000.6
n-Hexadecane (C16)	544-76-3	R0563	SHBF6942V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
1-Methylnaphthalene	90-12-0	R0571	525000-10	0.99	1,000.00	3,000.00 mg	3,003.20 mg	1,001.1
1,4-Dioxane	123-91-1	R0581	SHBG1461V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Benzyl alcohol	100-51-6	R0606	SHBC1850V	0.99	1,000.00	3,000.00 mg	3,001.50 mg	1,000.5
Bis(2-chloroethyl)ether	111-44-4	R0607	SHBD4430V	0.99	1,000.00	3,000.00 mg	3,000.60 mg	1,000.2
2,2'-oxybis(1-chloropropane)	108-60-1	R0608	2-KMW-57-8	0.99	1,000.00	3,000.00 mg	3,003.80 mg	1,001.3
4-Chloroaniline	106-47-8	R0609	12528PH	0.99	1,000.00	3,000.00 mg	3,002.10 mg	1,000.7
4-Chloro-3-methylphenol	59-50-7	R0610	STBC0769V	0.99	1,000.00	3,000.00 mg	3,000.50 mg	1,000.2
2-Chloronaphthalene	91-58-7	R0611	AJ2UI-TE	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
2-Chlorophenol	95-57-8	R0612	STBF2690V	0.99	1,000.00	3,000.00 mg	3,004.90 mg	1,001.6
2,4-Dichlorophenol	120-83-2	R0614	BCBH1617V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
4,6-Dinitro-2-methylphenol (Dinitro-o-cr	534-52-1	R0615	LC12394V	0.99	2,000.00	6,000.00 mg	6,002.80 mg	2,000.9
2,4-Dinitrophenol	51-28-5	R0616	STBF1268V	0.99	2,000.00	6,000.00 mg	5,999.50 mg	1,999.8
2-Methylphenol (o-cresol)	95-48-7	R0617	SHBC1479V	0.99	1,000.00	3,000.00 mg	3,003.60 mg	1,001.2
4-Methylphenol (p-cresol)	106-44-5	R0618	49396APV	0.99	500.00	1,500.00 mg	1,501.30 mg	500.4
2,4,5-Trichlorophenol	95-95-4	R0620	150806JLM	0.99	1,000.00	3,000.00 mg	3,000.20 mg	1,000.1
2,4,6-Trichlorophenol	88-06-2	R0621	MKBH7393V	0.99	1,000.00	3,000.00 mg	3,004.10 mg	1,001.4
Phenol	108-95-2	R0627	SHBF1351V	0.99	1,000.00	3,000.00 mg	3,001.80 mg	1,000.6
Dibenzofuran	132-64-9	R0630	MKBH8392V	0.99	1,000.00	3,000.00 mg	3,002.00 mg	1,000.7
Diethylphthalate	84-66-2	R0631	MKBJ3578V	0.99	1,000.00	3,000.00 mg	3,002.70 mg	1,000.9
Dimethylphthalate	131-11-3	R0632	10117699	0.99	1,000.00	3,000.00 mg	3,004.50 mg	1,001.5
Di-n-octyl phthalate	117-84-0	R0633	3998900	0.99	1,000.00	3,000.00 mg	3,012.30 mg	1,004.1
Isophorone	78-59-1	R0636	MKBG2442V	0.99	1,000.00	3,000.00 mg	3,006.70 mg	1,002.2
Azobenzene	103-33-3	R0645	MKBS2559V	0.99	1,000.00	3,000.00 mg	3,003.70 mg	1,001.2
Aniline	62-53-3	R0647	K22Z462	0.99	1,000.00	3,000.00 mg	3,005.40 mg	1,001.8
3-Methylphenol (m-cresol)	108-39-4	R0648	SHBD0627V	0.99	500.00	1,500.00 mg	1,505.00 mg	501.7
1,3-Dinitrobenzene	99-65-0	R0690	BCBB1436V	0.99	1,000.00	3,000.00 mg	3,001.40 mg	1,000.5
Diphenylamine	122-39-4	R0691	MKBN8295V	0.99	850.00	2,550.00 mg	2,552.10 mg	850.7

QA Report: 8270 List 1 / Std #1 MegaMix (2016) (Cat.#570666)

	Runs of Lot # A0114832						Runs of Lot # A0109802 (Cat.#569729.sec)							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	Run #1	Run #2	Run #3	AVG	STD DEV	% RSD	%D MEAN	P/F
1,4-Dioxane	149144	150967	151796	150636	1357	0.90	150348	150431	150725	150501	198	0.13	0.09	PASS
Pyridine & N-Nitrosodimethylamine	507691	512293	514434	511473	3446	0.67	487468	488020	487576	487688	293	0.06	4.65	PASS
Aniline	391250	394022	395396	393556	2112	0.54	388747	388346	388636	388576	207	0.05	1.27	PASS
Bis(2-chloroethyl)ether	259684	261690	262884	261553	1528	0.58	260125	259686	260237	260016	291	0.11	0.59	PASS
2-Chlorophenol	505603	509620	511242	508822	2903	0.57	509581	510151	508516	509416	830	0.16	-0.12	PASS
Bis(2-chloroethyl)ether	690285	697216	699913	695805	4967	0.71	689165	688895	688763	688941	205	0.03	0.99	PASS
Phenol	259669	261915	262899	261494	1656	0.63	261679	261480	261374	261511	155	0.06	-0.01	PASS
n-Decane	260937	263322	263894	262718	1568	0.60	261968	261930	261666	261855	164	0.06	0.33	PASS
1,4-Dichlorobenzene	394289	397150	398182	396540	2017	0.51	398743	398833	398124	398567	386	0.10	-0.51	PASS
1,3-Dichlorobenzene	176856	178325	178727	177969	985	0.55	178961	178728	178643	178777	165	0.09	-0.45	PASS
1,2-Dichlorobenzene	386966	389635	390746	389116	1943	0.50	398521	398415	397966	398301	295	0.07	-2.36	PASS
Benzyl alcohol & 2,2'-oxybis(1-chloropropane)	355273	357345	357956	356858	1406	0.39	353313	353534	352006	352951	826	0.23	1.09	PASS
2-Methylphenol & Hexachloroethane	88406	89658	90324	89463	974	1.09	92445	92404	93208	92686	453	0.49	-3.60	PASS
Acetophenone	285409	287305	288276	286997	1458	0.51	283847	283804	283502	283718	188	0.07	1.14	PASS
N-Nitroso-di-n-propylamine	189574	184929	189364	187956	2623	1.40	191853	195133	190522	192503	2373	1.23	-2.42	PASS
4-Methylphenol	189060	195992	193539	192864	3515	1.82	188027	184762	188761	187190	2117	1.13	2.94	PASS
3-Methylphenol	299428	301748	302514	301230	1607	0.53	299158	298973	298246	298792	482	0.16	0.81	PASS
Nitrobenzene	371878	373978	375314	373723	1732	0.46	370261	370298	369576	370045	407	0.11	0.98	PASS
Isophrone	234627	236282	236957	235955	1199	0.51	236581	236762	236346	236563	209	0.09	-0.26	PASS
2-Nitrophenol	391246	393732	395319	393432	2053	0.52	387046	386874	386128	386683	488	0.13	1.72	PASS
2,4-Dimethylphenol	126995	127706	128181	127627	597	0.47	125315	125625	124874	125271	377	0.30	1.85	PASS
Bis(2-chloroethoxy)methane	217116	218888	219265	218423	1147	0.53	217146	217109	216636	216964	284	0.13	0.67	PASS
2,4-Dichlorophenol	220586	222468	222967	222007	1256	0.57	216344	218230	217818	218131	277	0.13	1.75	PASS
1,2,4-Trichlorobenzene	499159	502807	504443	502136	2705	0.54	502527	502381	501505	502138	553	0.11	0.00	PASS
Naphthalene	216872	217426	218239	217513	687	0.32	218034	216606	216691	217110	801	0.37	0.19	PASS
2,6-Dichlorophenol	293420	296949	297249	295873	2129	0.72	291736	293110	291805	292217	774	0.26	1.24	PASS
4-Chloroaniline	103832	104564	104923	104440	556	0.53	104003	103813	103597	103804	203	0.20	0.61	PASS
Hexachlorobutadiene	496368	499866	501083	499106	2448	0.49	498127	497636	496466	497410	853	0.17	0.34	PASS
2-Methylnaphthalene	294836	296640	297412	296296	1322	0.45	295097	295021	294297	294805	442	0.15	0.50	PASS
4-Chloro-3-methylphenol	496081	499502	501125	498903	2575	0.52	492096	491866	490633	491532	787	0.16	1.48	PASS
1-Methylnaphthalene	186309	187498	187958	187255	851	0.45	188346	188283	187854	188161	268	0.14	-0.48	PASS
1,2,4,5-Tetrachlorobenzene	110947	112251	112762	111987	936	0.84	107450	106873	106652	106992	412	0.39	4.46	PASS
Hexachlorocyclopentadiene	180384	181531	182015	181310	838	0.46	184127	184151	183683	183987	264	0.14	-1.48	PASS
2,4,6-Trichlorophenol	173645	174574	175155	174458	762	0.44	182964	183319	182778	183020	275	0.15	-4.91	PASS
2,4,5-Trichlorophenol	404489	406884	407939	406437	1768	0.43	404319	403905	402603	403609	895	0.22	0.70	PASS
2-Chloronaphthalene	511993	514877	516107	514326	2112	0.41	516995	516760	515329	516368	906	0.18	-0.40	PASS
Biphenyl	267734	269131	271803	269556	2068	0.77	268000	268033	267429	267821	340	0.13	0.64	PASS
2-Nitroaniline	495370	498313	499647	497777	2188	0.44	501713	501699	500288	501233	819	0.16	-0.69	PASS
Acenaphthylene	219767	221183	221648	220873	969	0.44	220378	220710	219379	220156	693	0.31	0.32	PASS

1,3-Dinitrobenzene	263913	265307	266079	265100	1098	0.41	263427	263620	262489	263179	605	0.23	0.72	PASS
Dimethylphthalate	239202	240490	241271	240321	1045	0.43	239658	239966	239089	239571	445	0.19	0.31	PASS
2,6-Dinitrotoluene	515109	518112	519323	517515	2170	0.42	526793	526761	525265	526273	873	0.17	-1.69	PASS
Acenaphthene	264927	265923	266776	265875	925	0.35	266190	266666	265751	266202	458	0.17	-0.12	PASS
2,4-Dinitrophenol	344188	345827	346695	345570	1273	0.37	338051	339610	339067	338909	791	0.23	1.93	PASS
Dibenzofuran	446606	449113	450079	448599	1793	0.40	443275	443091	441650	442672	890	0.20	1.32	PASS
3-Nitroaniline	240990	242171	242559	241907	817	0.34	242096	242267	241602	241995	353	0.15	-0.04	PASS
2,4-Dinitrotoluene	488311	490654	490893	489953	1427	0.29	488495	489732	488376	488868	751	0.15	0.22	PASS
4-Nitrophenol	160119	160903	161195	160739	556	0.35	164251	164469	164445	164388	120	0.07	-2.27	PASS
2,3,4,6-Tetrachlorophenol	521735	524233	525512	523827	1921	0.37	516341	516321	514677	515780	955	0.19	1.54	PASS
Fluorene	362460	364648	367383	364830	2467	0.68	358401	358426	357214	358014	693	0.19	1.87	PASS
4-Chlorophenyl phenyl ether	759468	764558	767179	763735	3921	0.51	759124	758933	756502	758186	1462	0.19	0.73	PASS
n-Hexadecane	321912	324239	323446	323199	1183	0.37	325162	325670	321879	324237	2058	0.63	-0.32	PASS
Diethylphthalate	343541	343965	347408	344971	2121	0.61	345304	346252	346696	346084	711	0.21	-0.32	PASS
***Azobenzene	7359458	7440818	7557362	7452546	99472	1.33	6838997	6579578	6792363	6736979	138293	2.05	9.60	PASS
***Diphenylamine	11112533	11382543	11530796	11341957	212065	1.87	10086203	10196962	10403386	10228850	160978	1.57	9.81	PASS
***4-Nitroaniline	39432200	38851868	37192246	38492038	1162475	3.02	40767275	43465076	42393009	42208453	1358337	3.22	-9.66	PASS
***4,6-Dinitro-2-methylphenol	9741531	9968562	10123293	9944462	192019	1.93	9413416	9524931	9559122	9499156	76196	0.80	4.48	PASS
4-Bromophenyl phenyl ether	304820	306427	307137	306128	1187	0.39	304749	305024	303454	304409	838	0.28	0.56	PASS
Hexachlorobenzene	147569	148147	148640	148119	536	0.36	152590	152561	151879	152343	402	0.26	-2.85	PASS
Pentachlorophenol	273531	274572	275493	274532	982	0.36	281686	283269	282662	282539	799	0.28	-2.92	PASS
Phenanthrene	527861	530497	531526	529961	1890	0.36	528510	529538	526556	528201	1515	0.29	0.33	PASS
n-Octadecane	534552	537533	538231	536772	1954	0.36	532726	533627	530759	532371	1467	0.28	0.82	PASS
Anthracene	471696	475681	476139	474505	2444	0.52	471752	471370	469589	470904	1154	0.25	0.76	PASS
Carbazole	475578	477503	478103	477061	1319	0.28	474604	475262	472750	474205	1303	0.27	0.60	PASS
Di-n-butylphthalate	334025	336070	336615	335570	1365	0.41	334654	334846	333083	334194	967	0.29	0.41	PASS
Fluoranthene	537720	540872	541286	539959	1950	0.36	532790	533558	530336	532228	1683	0.32	1.43	PASS
Pyrene	529437	532777	532916	531710	1970	0.37	530737	529204	525943	528628	2448	0.46	0.58	PASS
Benzyl butyl phthalate	361022	363496	363358	362625	1390	0.38	366433	366476	363669	365593	1493	0.41	-0.82	PASS
Benz(a)anthracene	531727	535894	535955	534525	2424	0.45	539894	539380	536078	538451	2071	0.38	-0.73	PASS
Chrysene	530113	534277	534191	532860	2380	0.45	537017	536393	533417	535609	1924	0.36	-0.52	PASS
Bis(2-ethylhexyl)phthalate	379616	382657	382011	381428	1602	0.42	380076	379593	376973	378881	1670	0.44	0.67	PASS
Di-n-octyl phthalate	372539	375787	375405	374577	1775	0.47	379822	378334	375881	378012	1990	0.53	-0.92	PASS
Benzo(b)fluoranthene	541576	547264	546342	545061	3053	0.56	540681	539453	537299	539144	1712	0.32	1.09	PASS
Benzo(k)fluoranthene	527547	531710	531636	530298	2382	0.45	537532	535982	533785	535766	1883	0.35	-1.03	PASS
Benzo(a)pyrene	535581	541655	539945	539060	3132	0.58	529850	528647	527486	528661	1182	0.22	1.93	PASS
Indeno(1,2,3-cd)pyrene	530791	536213	536523	534509	3224	0.60	525749	524717	523868	524778	942	0.18	1.82	PASS
Dibenz(a,h)enthracene	532498	537987	537904	536130	3145	0.59	530873	529760	528617	529750	1128	0.21	1.19	PASS
Benzo(g,h,i)perylene	536854	542669	542791	540771	3393	0.63	532129	531647	531951	531909	244	0.05	1.64	PASS

*****These compounds were analyzed by ion extraction on GC/MS.**

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0115596

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene		2,009.8 µg/mL	+/- 11.6852	µg/mL	Gravimetric
	CAS # 95-13-6	(Lot MKBP3098V)		+/- 112.6875	µg/mL	Unstressed
	Purity 99%			+/- 115.3242	µg/mL	Stressed
2	Benzoic acid		2,011.6 µg/mL	+/- 11.6953	µg/mL	Gravimetric
	CAS # 65-85-0	(Lot MKBL6689V)		+/- 112.7856	µg/mL	Unstressed
	Purity 99%			+/- 115.4247	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

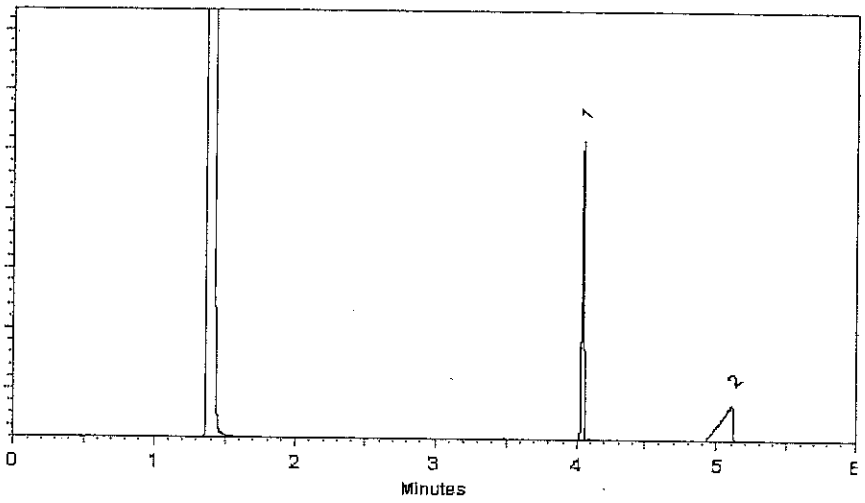
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 23-Nov-2015 **Balance:** 1128360905

Jodi E. Breon - QA Analyst

Date Passed: 25-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0115387

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde		2,017.4 µg/mL	+/- 11.7290	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBD3510V)		+/- 64.6675	µg/mL	Unstressed
	Purity 99%			+/- 75.1734	µg/mL	Stressed
2	epsilon-Caprolactam		2,012.4 µg/mL	+/- 11.7003	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.5088	µg/mL	Unstressed
	Purity 99%			+/- 74.9890	µg/mL	Stressed
3	Atrazine		2,003.5 µg/mL	+/- 11.6483	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot TZ8ED)		+/- 64.2223	µg/mL	Unstressed
	Purity 98%			+/- 74.6560	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

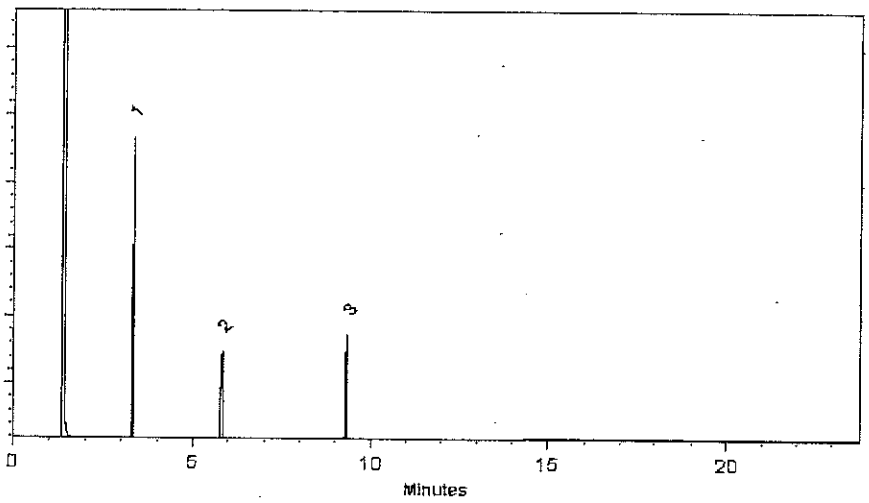
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 12-Nov-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 13-Nov-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0112567

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine		2,001.0 µg/mL	+/- 11.6337	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 150701JLMB)		+/- 21.9078	µg/mL	Unstressed
	Purity 99%			+/- 37.1592	µg/mL	Stressed
2	3,3'-Dichlorobenzidine		2,001.5 µg/mL	+/- 11.6369	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 150701JLMA)		+/- 21.9138	µg/mL	Unstressed
	Purity 99%			+/- 37.1694	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

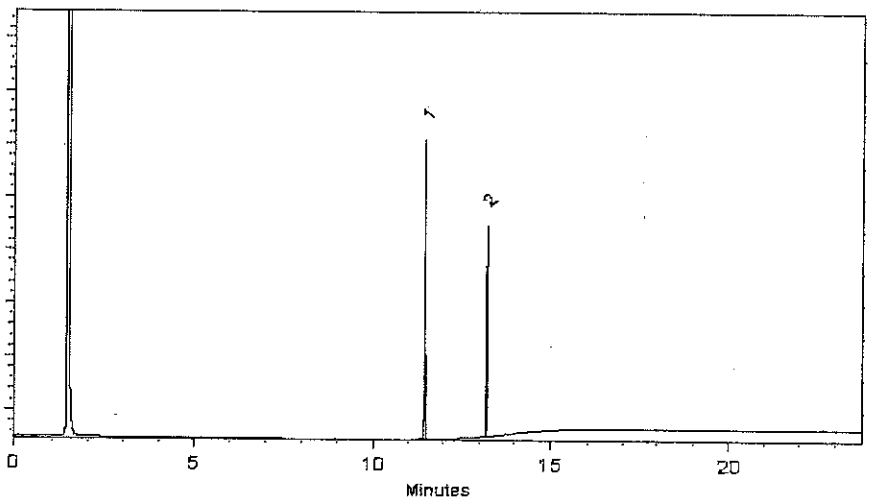
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 15-Jul-2015 **Balance:** 1122030677

Jennifer L. Pollino - QC Analyst

Date Passed: 17-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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5MLIST1 SURR-00002

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A093638

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 2018 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	5,000.0 µg/mL	+/- 29.0689 +/- 132.9492 +/- 163.4029	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x .25mm x .25um
Rtx-5 (cat.#10223)

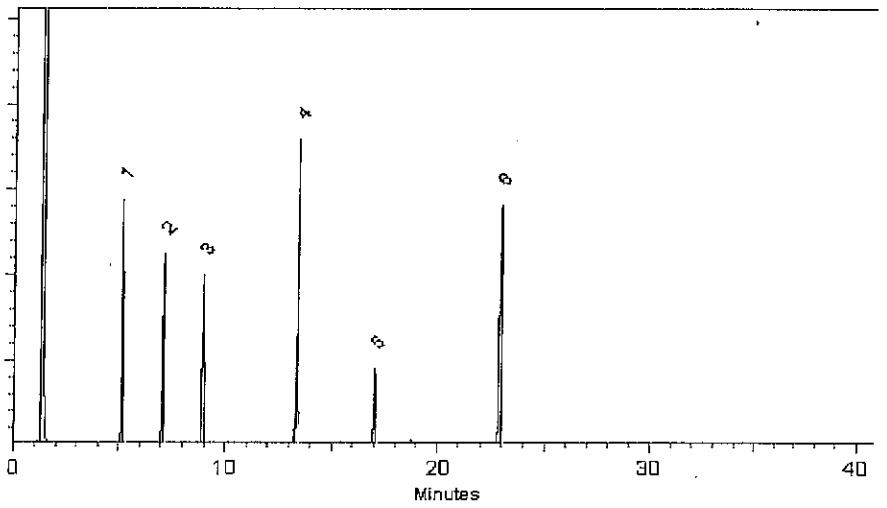
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



Diane Shaffer - QA Analyst

Date Passed: 22-Feb-2013 **Balance:** 1128342313

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0103960

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBC5591V)	5,006.1 µg/mL	+/- 29.1044 +/- 124.7363 +/- 156.8636	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X479P6)	5,002.5 µg/mL	+/- 29.0834 +/- 124.6466 +/- 156.7508	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-20474)	5,003.7 µg/mL	+/- 29.0901 +/- 124.6753 +/- 156.7868	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot B19Z016)	5,002.4 µg/mL	+/- 29.0826 +/- 124.6429 +/- 156.7461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,024.2 µg/mL	+/- 29.2093 +/- 125.1861 +/- 157.4292	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-20577)	5,010.4 µg/mL	+/- 29.1291 +/- 124.8422 +/- 156.9968	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

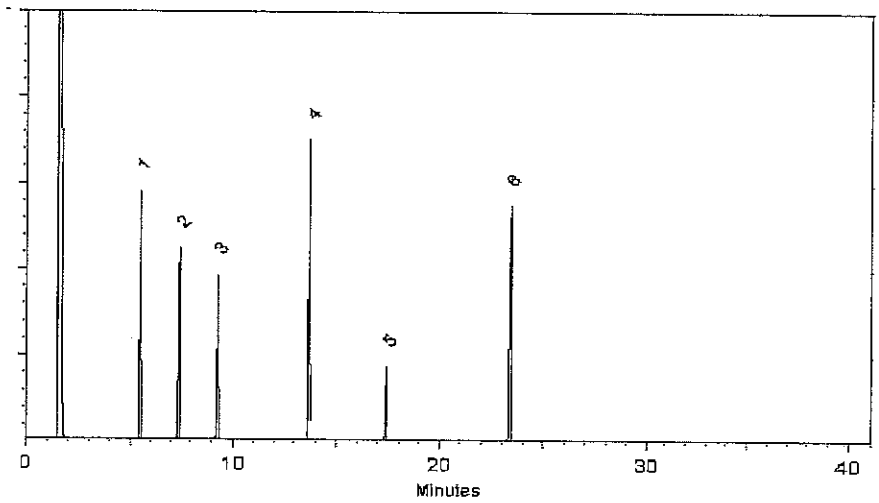
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sauer

Date Mixed: 11-Jun-2014 **Balance:** 1128360905

Jennifer L. Pollino - QC Analyst

Date Passed: 23-Jun-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST2 S1_00009

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570667 **Lot No.:** A0115538

Description : 8270 Supplemental Standard #1

8270 Supplemental Standard #1 1,000 ug/ml, Methylene Chloride, 1 ml/ampul
Also described as 8270 List 2 / Std #1

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2017 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Picoline		1,003.2 µg/mL	+/- 5.8873	µg/mL	Gravimetric
	CAS # 109-06-8	(Lot STBD4888V)		+/- 12.0190	µg/mL	Unstressed
	Purity 99%			+/- 19.1024	µg/mL	Stressed
2	N-Nitrosomethylethylamine		1,000.8 µg/mL	+/- 5.8733	µg/mL	Gravimetric
	CAS # 10595-95-6	(Lot 4458400)		+/- 11.9902	µg/mL	Unstressed
	Purity 99%			+/- 19.0567	µg/mL	Stressed
3	Acrylamide		1,002.8 µg/mL	+/- 5.8850	µg/mL	Gravimetric
	CAS # 79-06-1	(Lot 01402JA)		+/- 12.0142	µg/mL	Unstressed
	Purity 99%			+/- 19.0947	µg/mL	Stressed
4	N-Nitrosodiethylamine		1,004.0 µg/mL	+/- 5.8920	µg/mL	Gravimetric
	CAS # 55-18-5	(Lot PEI3F-ES)		+/- 12.0286	µg/mL	Unstressed
	Purity 99%			+/- 19.1176	µg/mL	Stressed
5	N-Nitrosopyrrolidine		1,002.0 µg/mL	+/- 5.8803	µg/mL	Gravimetric
	CAS # 930-55-2	(Lot MKBC5211V)		+/- 12.0046	µg/mL	Unstressed
	Purity 99%			+/- 19.0795	µg/mL	Stressed
6	o-Toluidine		1,000.8 µg/mL	+/- 5.8733	µg/mL	Gravimetric
	CAS # 95-53-4	(Lot 03417PZ)		+/- 11.9902	µg/mL	Unstressed
	Purity 99%			+/- 19.0567	µg/mL	Stressed
7	N-Nitrosomorpholine		1,000.0 µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 59-89-2	(Lot MV7MC)		+/- 11.9807	µg/mL	Unstressed
	Purity 99%			+/- 19.0414	µg/mL	Stressed

8	N-Nitrosopiperidine		1,001.6	µg/mL	+/-	5.8779	µg/mL	Gravimetric
	CAS # 100-75-4	(Lot 4369200)			+/-	11.9998	µg/mL	Unstressed
	Purity 99%				+/-	19.0719	µg/mL	Stressed
9	Phentermine (a,a-Dimethylphenethylamine)		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 122-09-8	(Lot 151118JLM)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
10	Quinoline		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 91-22-5	(Lot Y448A)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
11	N-Nitrosodi-n-butylamine		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 924-16-3	(Lot S47KJ)			+/-	12.0046	µg/mL	Unstressed
	Purity 99%				+/-	19.0795	µg/mL	Stressed
12	1,4-Phenylenediamine		1,000.8	µg/mL	+/-	5.8733	µg/mL	Gravimetric
	CAS # 106-50-3	(Lot 2247500)			+/-	11.9902	µg/mL	Unstressed
	Purity 99%				+/-	19.0567	µg/mL	Stressed
13	1,4-Dinitrobenzene		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 100-25-4	(Lot S58502V)			+/-	12.0046	µg/mL	Unstressed
	Purity 99%				+/-	19.0795	µg/mL	Stressed
14	1-Naphthylamine (1-aminonaphthalene)		1,007.8	µg/mL	+/-	5.9145	µg/mL	Gravimetric
	CAS # 134-32-7	(Lot R7NAN-IP)			+/-	12.0745	µg/mL	Unstressed
	Purity 98%				+/-	19.1906	µg/mL	Stressed
15	2-Naphthylamine (2-aminonaphthalene)		998.8	µg/mL	+/-	5.8615	µg/mL	Gravimetric
	CAS # 91-59-8	(Lot SLBD0851V)			+/-	11.9663	µg/mL	Unstressed
	Purity 99%				+/-	19.0186	µg/mL	Stressed
16	5-Nitro-o-toluidine		1,002.8	µg/mL	+/-	5.8850	µg/mL	Gravimetric
	CAS # 99-55-8	(Lot N002814)			+/-	12.0142	µg/mL	Unstressed
	Purity 99%				+/-	19.0947	µg/mL	Stressed
17	1,3,5-Trinitrobenzene		1,002.8	µg/mL	+/-	5.8850	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot UNVVB)			+/-	12.0142	µg/mL	Unstressed
	Purity 99%				+/-	19.0947	µg/mL	Stressed
18	Phenacetin		1,001.6	µg/mL	+/-	5.8779	µg/mL	Gravimetric
	CAS # 62-44-2	(Lot 88F0225)			+/-	11.9998	µg/mL	Unstressed
	Purity 99%				+/-	19.0719	µg/mL	Stressed
19	4-Aminobiphenyl		1,002.4	µg/mL	+/-	5.8826	µg/mL	Gravimetric
	CAS # 92-67-1	(Lot SLBF0806V)			+/-	12.0094	µg/mL	Unstressed
	Purity 99%				+/-	19.0871	µg/mL	Stressed
20	Propyzamide		1,000.8	µg/mL	+/-	5.8733	µg/mL	Gravimetric
	CAS # 23950-58-5	(Lot 3795100)			+/-	11.9902	µg/mL	Unstressed
	Purity 99%				+/-	19.0567	µg/mL	Stressed
21	Pentachloronitrobenzene (quintozene)		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 82-68-8	(Lot 947600)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
22	4-Nitroquinoline-N-oxide		1,003.0	µg/mL	+/-	5.8860	µg/mL	Gravimetric
	CAS # 56-57-5	(Lot LC15235V)			+/-	12.0164	µg/mL	Unstressed
	Purity 97%				+/-	19.0982	µg/mL	Stressed
23	p-Dimethylaminoazobenzene		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 60-11-7	(Lot BCBH3983V)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed

24	3,3'-Dimethylbenzidine (o-tolidine)		1,003.6	µg/mL	+/-	5.8896	µg/mL	Gravimetric
	CAS # 119-93-7	(Lot HO6DO)			+/-	12.0235	µg/mL	Unstressed
	Purity 95%				+/-	19.1096	µg/mL	Stressed
25	2-Acetylaminofluorene		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 53-96-3	(Lot FCW01)			+/-	12.0046	µg/mL	Unstressed
	Purity 99%				+/-	19.0795	µg/mL	Stressed
26	4,4-Methylene-bis(2-chloroaniline)		998.6	µg/mL	+/-	5.8606	µg/mL	Gravimetric
	CAS # 101-14-4	(Lot 3509000)			+/-	11.9644	µg/mL	Unstressed
	Purity 95%				+/-	19.0155	µg/mL	Stressed
27	Dibenz (a,h) acridine		1,001.6	µg/mL	+/-	5.8777	µg/mL	Gravimetric
	CAS # 226-36-8	(Lot 1-CQW-8-1)			+/-	11.9993	µg/mL	Unstressed
	Purity 98%				+/-	19.0711	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

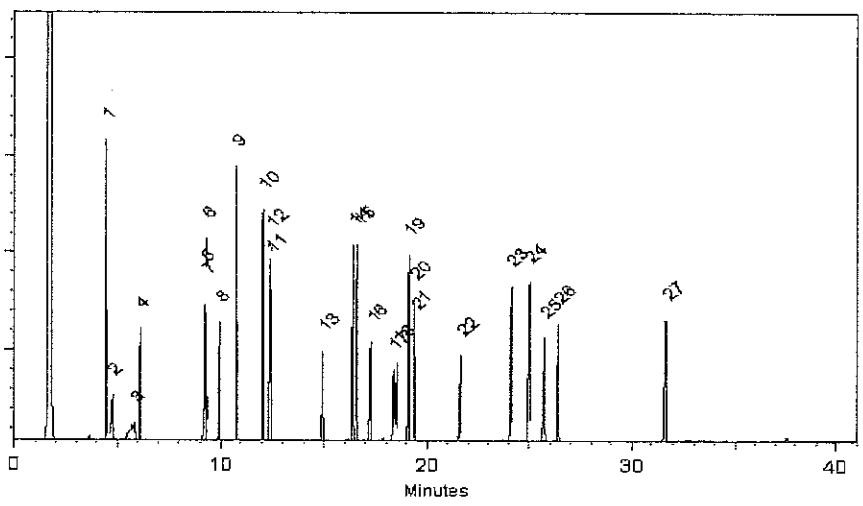
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 19-Nov-2015 **Balance:** B442140311

Jodi E. Breon - QA Analyst

Date Passed: 02-Dec-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569733 **Lot No.:** A0114440

Description : 8270 List 2 / Std #2 (2015)

8270 List 2 / Std #2 (2015) 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2016 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Methyl methanesulfonate		1,004.7 µg/mL	+/- 5.9674 µg/mL		Gravimetric
	CAS # 66-27-3	(Lot MKBL6789V)		+/- 46.1655 µg/mL		Unstressed
	Purity 99%			+/- 47.3464 µg/mL		Stressed
2	Ethyl methanesulfonate		1,002.7 µg/mL	+/- 5.9555 µg/mL		Gravimetric
	CAS # 62-50-0	(Lot FIN01-LVQL)		+/- 46.0736 µg/mL		Unstressed
	Purity 99%			+/- 47.2522 µg/mL		Stressed
3	Pentachloroethane		1,002.7 µg/mL	+/- 5.9555 µg/mL		Gravimetric
	CAS # 76-01-7	(Lot L7GVM)		+/- 46.0736 µg/mL		Unstressed
	Purity 99%			+/- 47.2522 µg/mL		Stressed
4	Hexachloropropene		1,002.0 µg/mL	+/- 5.9516 µg/mL		Gravimetric
	CAS # 1888-71-7	(Lot 44391/3)		+/- 46.0429 µg/mL		Unstressed
	Purity 99%			+/- 47.2208 µg/mL		Stressed
5	Isosafrole (cis & trans)		999.6 µg/mL	+/- 5.9373 µg/mL		Gravimetric
	CAS # 120-58-1	(Lot MKBK3786V)		+/- 45.9326 µg/mL		Unstressed
	Purity 98%	83% trans; 17% cis		+/- 47.1077 µg/mL		Stressed
6	1-Chloronaphthalene		1,000.0 µg/mL	+/- 5.9397 µg/mL		Gravimetric
	CAS # 90-13-1	(Lot MYWUK)		+/- 45.9510 µg/mL		Unstressed
	Purity 99%			+/- 47.1265 µg/mL		Stressed
7	1,4-Naphthoquinone		1,006.0 µg/mL	+/- 5.9753 µg/mL		Gravimetric
	CAS # 130-15-4	(Lot 3232134094)		+/- 46.2267 µg/mL		Unstressed
	Purity 99%			+/- 47.4093 µg/mL		Stressed

8	Pentachlorobenzene		1,004.7	µg/mL	+/-	5.9674	µg/mL	Gravimetric
	CAS # 608-93-5	(Lot 02331CPV)			+/-	46.1655	µg/mL	Unstressed
	Purity 99%				+/-	47.3464	µg/mL	Stressed
9	2,3,5,6-Tetrachlorophenol		1,001.3	µg/mL	+/-	5.9476	µg/mL	Gravimetric
	CAS # 935-95-5	(Lot ER090607-01)			+/-	46.0123	µg/mL	Unstressed
	Purity 99%				+/-	47.1893	µg/mL	Stressed
10	Dinoseb		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 88-85-7	(Lot 50001)			+/-	46.0429	µg/mL	Unstressed
	Purity 99%				+/-	47.2208	µg/mL	Stressed
11	Isodrin		999.6	µg/mL	+/-	5.9373	µg/mL	Gravimetric
	CAS # 465-73-6	(Lot 4175900)			+/-	45.9326	µg/mL	Unstressed
	Purity 98%				+/-	47.1077	µg/mL	Stressed
12	Chlorobenzilate		1,001.6	µg/mL	+/-	5.9490	µg/mL	Gravimetric
	CAS # 510-15-6	(Lot 4157900)			+/-	46.0227	µg/mL	Unstressed
	Purity 98%				+/-	47.2000	µg/mL	Stressed
13	7,12-Dimethylbenz(a)anthracene		1,000.0	µg/mL	+/-	5.9397	µg/mL	Gravimetric
	CAS # 57-97-6	(Lot GGR4E)			+/-	45.9510	µg/mL	Unstressed
	Purity 99%				+/-	47.1265	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

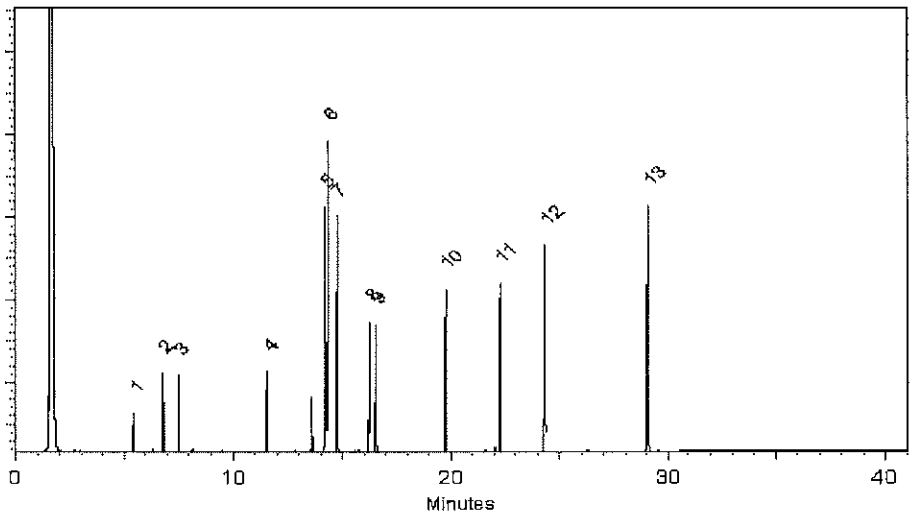
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sauers

Jennifer L. Pollino - QC Analyst

Date Mixed: 01-Oct-2015 **Balance:** 1128360905

Date Passed: 05-Oct-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567680 **Lot No.:** A0116618

Description : 8270 List 2 / Std #3

8270 List 2 / Std #3 2,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	6-Methylchrysene	2,006.0 µg/mL	+/- 11.7723	µg/mL	Gravimetric
	CAS # 1705-85-7 (Lot ER030711-01)		+/- 90.3656	µg/mL	Unstressed
	Purity 99%		+/- 100.2689	µg/mL	Stressed
2	3-Methylcholanthrene	2,001.3 µg/mL	+/- 11.7449	µg/mL	Gravimetric
	CAS # 56-49-5 (Lot MKBQ8665V)		+/- 90.1554	µg/mL	Unstressed
	Purity 99%		+/- 100.0356	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

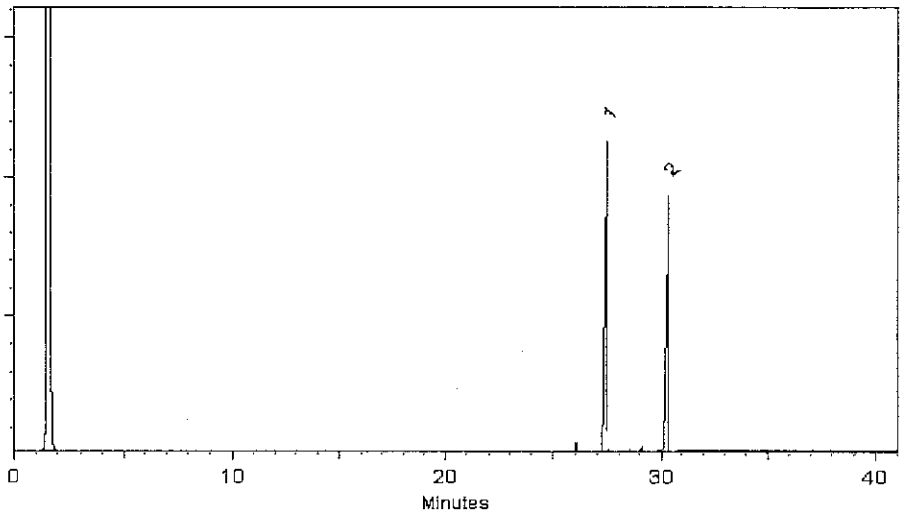
Carrier Gas:
Hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 17-Jan-2016 **Balance:** B442140311

Amanda Miller - QC Analyst

Date Passed: 19-Jan-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681 **Lot No.:** A0113584

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	o,o,o-Triethyl phosphorothioate		1,010.0 µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 126-68-1	(Lot 4157500)		+/- 36.3868	µg/mL	Unstressed
	Purity 99%			+/- 36.3881	µg/mL	Stressed
2	Safrole		1,009.0 µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 94-59-7	(Lot 322225/11292)		+/- 36.3508	µg/mL	Unstressed
	Purity 99%			+/- 36.3521	µg/mL	Stressed
3	Zinophos (thionazine)		1,007.0 µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 297-97-2	(Lot 4051700)		+/- 36.2787	µg/mL	Unstressed
	Purity 99%			+/- 36.2800	µg/mL	Stressed
4	Sulfotepp		1,000.3 µg/mL	+/- 5.9416	µg/mL	Gravimetric
	CAS # 3689-24-5	(Lot 4011500)		+/- 36.0381	µg/mL	Unstressed
	Purity 96%			+/- 36.0393	µg/mL	Stressed
5	Diallate (cis and trans)		1,003.0 µg/mL	+/- 5.9575	µg/mL	Gravimetric
	CAS # 2303-16-4	(Lot 3857700)		+/- 36.1346	µg/mL	Unstressed
	Purity 99%	83% cis-Isomer; 17% trans-Isomer		+/- 36.1359	µg/mL	Stressed
6	Phorate		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 298-02-2	(Lot 4082500)		+/- 36.2427	µg/mL	Unstressed
	Purity 99%			+/- 36.2440	µg/mL	Stressed
7	Dimethoate		1,002.2 µg/mL	+/- 5.9530	µg/mL	Gravimetric
	CAS # 60-51-5	(Lot 4065100)		+/- 36.1073	µg/mL	Unstressed
	Purity 96%			+/- 36.1085	µg/mL	Stressed

8	Disulfoton		1,001.0	µg/mL	+/-	5.9456	µg/mL	Gravimetric
	CAS # 298-04-4	(Lot 2959700)			+/-	36.0626	µg/mL	Unstressed
	Purity 99%				+/-	36.0638	µg/mL	Stressed
9	Methyl parathion		1,009.0	µg/mL	+/-	5.9932	µg/mL	Gravimetric
	CAS # 298-00-0	(Lot 3595300)			+/-	36.3508	µg/mL	Unstressed
	Purity 99%				+/-	36.3521	µg/mL	Stressed
10	Parathion (ethyl parathion)		1,010.0	µg/mL	+/-	5.9991	µg/mL	Gravimetric
	CAS # 56-38-2	(Lot 4180300)			+/-	36.3868	µg/mL	Unstressed
	Purity 99%				+/-	36.3881	µg/mL	Stressed
11	Aramite		1,001.0	µg/mL	+/-	5.9459	µg/mL	Gravimetric
	CAS # 140-57-8	(Lot 032010)			+/-	36.0640	µg/mL	Unstressed
	Purity 97%	51% I; 49% II			+/-	36.0653	µg/mL	Stressed
12	Famphur		1,004.5	µg/mL	+/-	5.9664	µg/mL	Gravimetric
	CAS # 52-85-7	(Lot 4168000)			+/-	36.1887	µg/mL	Unstressed
	Purity 98%				+/-	36.1899	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

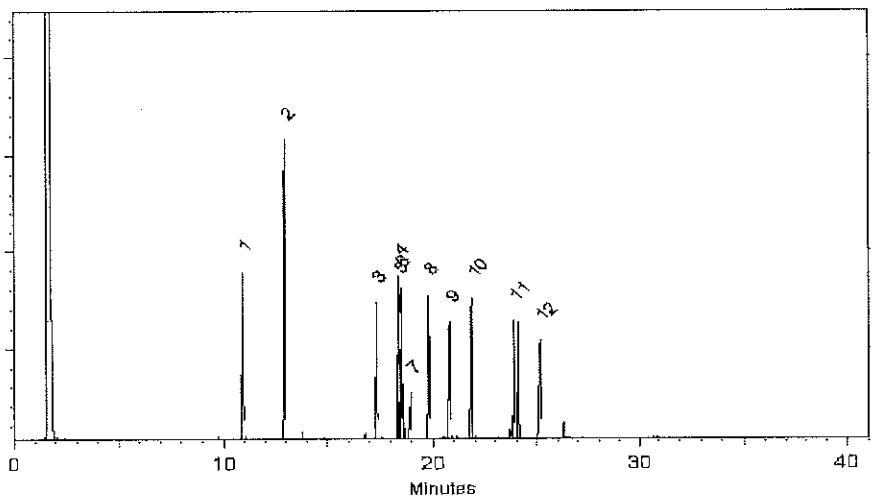
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 26-Aug-2015 **Balance:** 1128360905

Amanda Miller - QC Analyst

Date Passed: 03-Sep-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567682 **Lot No.:** A0112843

Description : 8270 List 2 / Std #5 Methapyrilene

8270 List 2 / Std #5 Methapyrilene 2,000µg/mL, Methylene Chloride, 1mL/ampul
*The reported compound masses are for Methapyrilene HCl. Purity is adjusted to correct for the HCl salt. The reported concentration is of Methapyrilene.

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Methapyrilene hydrochloride	2,007.6 µg/mL	+/- 11.7816	µg/mL	Gravimetric
	CAS # 135-23-9 (Lot 037F09291)		+/- 22.0386	µg/mL	Unstressed
	Purity 88% CAS # 91-80-5		+/- 37.3166	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

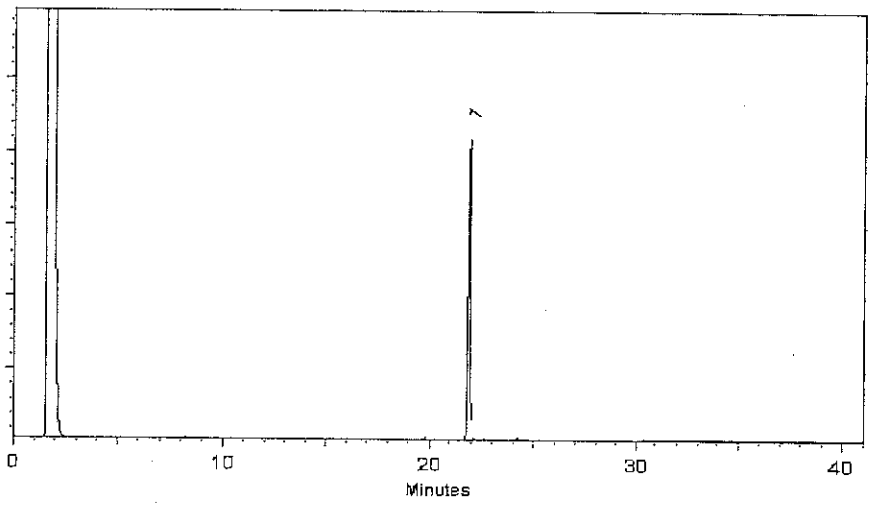
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery – Mix Technician

Date Mixed: 27-Jul-2015 **Balance:** B442140311

Jennifer L Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 29-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681.SEC **Lot No.:** A0112356

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2017 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	o,o,o-Triethyl phosphorothioate		1,005.5 µg/mL	+/- 5.9722	µg/mL	Gravimetric
	CAS # 126-68-1 *	(Lot 2658700)		+/- 36.2240	µg/mL	Unstressed
	Purity 98%			+/- 36.2252	µg/mL	Stressed
2	Safrole		1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 94-59-7.SEC	(Lot 793000)		+/- 36.0266	µg/mL	Unstressed
	Purity 99%			+/- 36.0278	µg/mL	Stressed
3	Zinophos (thionazine)		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 297-97-2.SEC	(Lot 31018)		+/- 36.2427	µg/mL	Unstressed
	Purity 99%			+/- 36.2440	µg/mL	Stressed
4	Sulfotepp		1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 3689-24-5.SEC	(Lot 11025)		+/- 36.3148	µg/mL	Unstressed
	Purity 99%			+/- 36.3160	µg/mL	Stressed
5	Diallate (cis and trans)		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 2303-16-4.SEC	(Lot 40325)		+/- 36.2427	µg/mL	Unstressed
	Purity 99%	75% cis-Isomer; 25% trans-Isomer		+/- 36.2440	µg/mL	Stressed
6	Phorate		998.4 µg/mL	+/- 5.9302	µg/mL	Gravimetric
	CAS # 298-02-2.SEC	(Lot SZBB137XV)		+/- 35.9689	µg/mL	Unstressed
	Purity 96%			+/- 35.9702	µg/mL	Stressed
7	Dimethoate		1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 60-51-5.SEC	(Lot 40620)		+/- 36.0986	µg/mL	Unstressed
	Purity 99%			+/- 36.0999	µg/mL	Stressed

8	Disulfoton **CAS #** 298-04-4.SEC **Purity** 99%	(Lot 31120)	1,010.0	µg/mL	+/- 5.9991 +/- 36.3868 +/- 36.3881	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Methyl parathion **CAS #** 298-00-0.SEC **Purity** 99%	(Lot 21005)	1,002.0	µg/mL	+/- 5.9516 +/- 36.0986 +/- 36.0999	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Parathion (ethyl parathion) **CAS #** 56-38-2.SEC **Purity** 99%	(Lot 50326)	998.0	µg/mL	+/- 7.0767 +/- 36.1617 +/- 36.1629	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Aramite **CAS #** 140-57-8 * **Purity** 98%	(Lot 012012) 51% I; 49% II	1,005.5	µg/mL	+/- 5.9722 +/- 36.2240 +/- 36.2252	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Famphur **CAS #** 52-85-7.SEC **Purity** 94%	(Lot 40512)	996.4	µg/mL	+/- 5.9183 +/- 35.8969 +/- 35.8981	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene Chloride **CAS #** 75-09-2 **Purity** 99%						

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

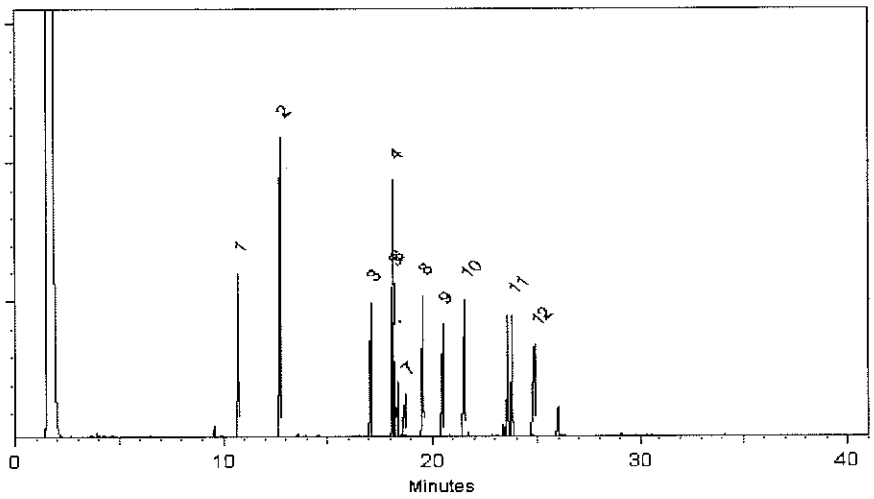
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 07-Jul-2015 **Balance:** B345965662

Jennifer L. Pollino - QC Analyst

Date Passed: 10-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- . Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

WCCN1000PPM_00032

LabChem
performance through chemistry
Jackson's Pointe Commerce Park - Building 1000
1010 Jackson's Pointe Court, Zelienople, PA 16063
Ph: 412-826-5230 | Fax: 724-473-0647 | www.labchem.com

CERTIFICATE OF ANALYSIS

Description: CYANIDE STANDARD, 1000ppm (1ml = 1mg CN)

Catalog Number: LC13545
Lot Number: E327-10

Mfg Date: 12/08/2015
Expiration Date: 06/08/2016

ANALYTICAL SECTION

Test	Specification	Test Result
Appearance	clear, colorless solution	Pass Test
Concentration ppm CN	1000ppm +/- 10ppm	998ppm
Concentration mg CN/mL	1.000mg/mL +/- 0.010 mg CN/mL	0.998mg CN/mL
Traceable to NIST	Potassium Chloride	999b

Submitted By: Greg Albright, Chemist Supervisor

Greg Albright

An ISO9001:2008 certified company. Registration # 0306-01

12/09/2015 12:41:49 PM

Form #17.12 06/19/2012

Page 1 of 1

Reagent

WCCN1000PPM_00033

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories." Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105)).

ACCREDITED
Testing Laboratory
Certificate 883.01

2.0 PRODUCT DESCRIPTION

Product Code:	**Water QC Reference Material**
Catalog Number:	CN-1000-25
Lot Number:	J2-CN01048
Matrix:	H_2O
Starting Material:	NaCN
Starting Material Lot #:	00426KR

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1006 ± 20 µg/mL
Certified Density:	1.000 g/mL (measured at 20 ± 1°C)
Assay Information:	
Assay Method #1	1006 ± 5 µg/mL Titrimetric Method, NIST SRM 3151, Lot Number 992212

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$
X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$
w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$$
$$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{sts} = short term stability standard uncertainty (transportation)

No correction has been applied for transpiration that will occur after the CRM/RM bottle has been removed from the sealed aluminized bag. See Section 7.0 (Instructions for the Correct Use of this Reference Material) for more information.

4.0 TRACEABILITY TO NIST

-This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term "in-house std." is specified.

4.1 Thermometer Calibration

-All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

-All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

-An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL) - N/A

6.0 INTENDED USE

-For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

-For optimum conditions, this product should be frozen before opening. If this is not possible, then it should be stored at 4°C. Bring to room temperature and shake well before using to ensure the homogeneity of the solution. EPA method 335.4 recommends that the prepared sample (See Sec. 7.2) be analyzed within 14 days and stored at 4°C.

-While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur. It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

-After opening the sealed TCT bag keep cap tightly sealed when not in use. Do not pipette from the container. Do not return removed aliquots to container.

-For more information, visit **www.inorganicventures.com/TCT**.

7.2 Preparation Instructions

Carefully open the container and transfer solution to a clean, dry glass or plastic container for pipetting. If following EPA method 335.4, preserve any diluted solutions to pH of ≥12 with NaOH.

8.0 HAZARDOUS INFORMATION

-Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

-This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B – Nuclear Regulatory Commission

-Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 – Nuclear Regulatory Commission

-Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

-SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

-Chemical Testing – Accredited / A2LA Certificate Number 883.01

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 11, 2016

-The certification is valid within the measurement uncertainty specified, provided the CRM/RM is stored and handled in accordance with instructions given in Section 7.1. This certification is nullified if instructions in Section 7.1 are not followed or if the CRM/RM is damaged, contaminated or otherwise modified.

11.2 Period of Validity

-Sealed TCT Bag Open Date: _____

-This CRM/RM should not be used longer than one year from the date of opening the sealed TCT bag or after the date given in Section 11.3, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instruction given in Section 7.1.

11.3 Lot Expiration Date

January 11, 2018

-The date after which this CRM/RM should not be used (See Section 11.2)

-The lot expiration date reflects the period of time the stability of a CRM/RM can be supported by long-term stability studies conducted on properly stored and handled CRM/RMs.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
TSG Technician

Certificate Approved By:

Michael Booth
Quality Control Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
16C1	240-64160-1	52	63	80	73	65	76
16MW8	240-64160-2	48	53	75	70	59	73
16MW9	240-64160-3	53	55	84	80	76	84
16WC1A	240-64160-4	51	49	79	72	68	74
16WDUP	240-64160-5	62	57	89	82	74	84
16WC1B	240-64160-6	61	54	91	85	76	85
	MB 240-228312/9-A	59	74	87	84	64	82
	LCS 240-228312/10-A	81	99	106	90	89	91
16WC1A MS	240-64160-4 MS	63	84	90	79	83	84
16WC1A MSD	240-64160-4 MSD	80	106	115 X	100	108	103

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	15-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	31-110
FBP = 2-Fluorobiphenyl (Surr)	29-110
TBP = 2,4,6-Tribromophenol (Surr)	21-128
TPH = Terphenyl-d14 (Surr)	31-115

Column to be used to flag recovery values

FORM II 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab File ID: 60506004.D Lab Sample ID: MB 240-228312/9-A

Matrix: Water Date Extracted: 05/02/2016 05:03

Instrument ID: A4AG2 Date Analyzed: 05/06/2016 08:05

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-228312/10-A	60506005.D	05/06/2016 08:30
16C1	240-64160-1	60506007.D	05/06/2016 09:20
16MW8	240-64160-2	60506008.D	05/06/2016 09:45
16MW9	240-64160-3	60506009.D	05/06/2016 10:10
16WC1A	240-64160-4	60506010.D	05/06/2016 10:35
16WC1A MS	240-64160-4 MS	60506011.D	05/06/2016 11:00
16WC1A MSD	240-64160-4 MSD	60506012.D	05/06/2016 11:25
16WDUP	240-64160-5	60506013.D	05/06/2016 11:50
16WC1B	240-64160-6	60506014.D	05/06/2016 12:15

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab File ID: 60426001.D DFTPP Injection Date: 04/26/2016

Instrument ID: A4AG2 DFTPP Injection Time: 07:23

Analysis Batch No.: 227507

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	52.3	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	42.6	
70	Less than 2.0% of mass 69	0.2	(0.5) 1
127	25.0 - 75.0% of mass 198	54.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	27.8	
365	Greater than 0.75% of mass 198	3.6	
441	Present, but less than mass 443	8.5	
442	40.0 - 110.0% of mass 198	59.3	
443	15.0 - 24.0% of mass 442	11.2	(18.9) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-227507/2	60426002.D	04/26/2016	07:44
	STD8 240-227507/3	60426003.D	04/26/2016	08:09
	STD7 240-227507/4	60426004.D	04/26/2016	08:34
	STD6 240-227507/5	60426005.D	04/26/2016	08:59
	STD5 240-227507/6	60426006.D	04/26/2016	09:23
	STD4 240-227507/7	60426007.D	04/26/2016	09:48
	STD3 240-227507/8	60426008.D	04/26/2016	10:13
	STD2 240-227507/9	60426009.D	04/26/2016	10:38
	STD1 240-227507/10	60426010.D	04/26/2016	11:03
	ICV 240-227507/11	60426011.D	04/26/2016	11:28
	STD9 240-227507/12	60426012.D	04/26/2016	11:53
	STD8 240-227507/13	60426013.D	04/26/2016	12:18
	STD7 240-227507/14	60426014.D	04/26/2016	12:43
	STD6 240-227507/15	60426015.D	04/26/2016	13:08
	STD5 240-227507/16	60426016.D	04/26/2016	13:33
	STD4 240-227507/17	60426017.D	04/26/2016	13:58
	STD3 240-227507/18	60426018.D	04/26/2016	14:22
	STD2 240-227507/19	60426019.D	04/26/2016	14:47
	ICV 240-227507/20	60426020.D	04/26/2016	15:12

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab File ID: 60506001.D DFTPP Injection Date: 05/06/2016

Instrument ID: A4AG2 DFTPP Injection Time: 06:58

Analysis Batch No.: 229123

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	53.6	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	45.0	
70	Less than 2.0% of mass 69	0.2	(0.6) 1
127	25.0 - 75.0% of mass 198	53.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.0	
275	10.0- 30.0% of mass 198	26.0	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	7.8	
442	40.0 - 110.0% of mass 198	53.7	
443	15.0 - 24.0% of mass 442	10.4	(19.4) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-229123/2	60506002.D	05/06/2016	07:16
	STD6 240-229123/3	60506003.D	05/06/2016	07:40
	MB 240-228312/9-A	60506004.D	05/06/2016	08:05
	LCS 240-228312/10-A	60506005.D	05/06/2016	08:30
16C1	240-64160-1	60506007.D	05/06/2016	09:20
16MW8	240-64160-2	60506008.D	05/06/2016	09:45
16MW9	240-64160-3	60506009.D	05/06/2016	10:10
16WC1A	240-64160-4	60506010.D	05/06/2016	10:35
16WC1A MS	240-64160-4 MS	60506011.D	05/06/2016	11:00
16WC1A MSD	240-64160-4 MSD	60506012.D	05/06/2016	11:25
16WDUP	240-64160-5	60506013.D	05/06/2016	11:50
16WC1B	240-64160-6	60506014.D	05/06/2016	12:15

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Sample No.: STD6 240-227507/5 Date Analyzed: 04/26/2016 08:59

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60426005.D Heated Purge: (Y/N) N

Calibration ID: 34174

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		293740	6.92	1248544	7.99	672048	9.49
UPPER LIMIT		587480	7.42	2497088	8.49	1344096	9.99
LOWER LIMIT		146870	6.42	624272	7.49	336024	8.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-227507/11		293721	6.92	1290194	7.99	700958	9.49
ICV 240-227507/20		246976	6.92	1106356	7.99	596281	9.49
STD6 240-229123/2 CCVIS		219446	6.90	868590	7.97	506583	9.47

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Sample No.: STD6 240-227507/5 Date Analyzed: 04/26/2016 08:59

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60426005.D Heated Purge: (Y/N) N

Calibration ID: 34174

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		998374	10.79	962653	13.79	715790	16.19
UPPER LIMIT		1996748	11.29	1925306	14.29	1431580	16.69
LOWER LIMIT		499187	10.29	481327	13.29	357895	15.69
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-227507/11		1053657	10.79	1021293	13.79	741554	16.19
ICV 240-227507/20		915491	10.79	796364	13.78	531776	16.19
STD6 240-229123/2 CCVIS		844371	10.76	854403	13.74	654389	16.14

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Sample No.: STD6 240-229123/2 Date Analyzed: 05/06/2016 07:16

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60506002.D Heated Purge: (Y/N) N

Calibration ID: 34178

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		219446	6.90	868590	7.97	506583	9.47
UPPER LIMIT		438892	7.40	1737180	8.47	1013166	9.97
LOWER LIMIT		109723	6.40	434295	7.47	253292	8.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/3 CCV		209759	6.90	895843	7.97	512060	9.47
MB 240-228312/9-A		220707	6.90	995625	7.97	576674	9.47
LCS 240-228312/10-A		209394	6.90	867840	7.97	506017	9.47
240-64160-1	16C1	209088	6.90	1010845	7.97	595290	9.47
240-64160-2	16MW8	209497	6.90	950715	7.97	592663	9.47
240-64160-3	16MW9	212781	6.90	967351	7.97	580031	9.47
240-64160-4	16WC1A	215646	6.90	954490	7.97	572954	9.47
240-64160-4 MS	16WC1A MS	213084	6.90	872233	7.97	504902	9.47
240-64160-4 MSD	16WC1A MSD	214058	6.90	872057	7.97	500672	9.47
240-64160-5	16WDUP	203030	6.90	955038	7.97	561475	9.47
240-64160-6	16WC1B	203839	6.90	906308	7.97	549992	9.47

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Sample No.: STD6 240-229123/2 Date Analyzed: 05/06/2016 07:16

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 60506002.D Heated Purge: (Y/N) N

Calibration ID: 34178

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		844371	10.76	854403	13.74	654389	16.14
UPPER LIMIT		1688742	11.26	1708806	14.24	1308778	16.64
LOWER LIMIT		422186	10.26	427202	13.24	327195	15.64
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-229123/3 CCV		876620	10.76	825519	13.73	634681	16.14
MB 240-228312/9-A		1064356	10.76	1022311	13.74	714234	16.13
LCS 240-228312/10-A		881694	10.76	872891	13.74	594398	16.13
240-64160-1	16C1	1069275	10.76	1008823	13.73	675664	16.13
240-64160-2	16MW8	1051015	10.76	978370	13.73	675887	16.13
240-64160-3	16MW9	1046114	10.76	1003732	13.73	687950	16.13
240-64160-4	16WC1A	1018925	10.76	981416	13.74	652289	16.13
240-64160-4 MS	16WC1A MS	876996	10.76	876236	13.74	587959	16.13
240-64160-4 MSD	16WC1A MSD	890192	10.76	879883	13.74	591367	16.14
240-64160-5	16WDUP	1019412	10.76	958791	13.74	612010	16.13
240-64160-6	16WC1B	994192	10.76	930316	13.73	611667	16.13

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16C1 | Lab Sample ID: 240-64160-1

Matrix: Water | Lab File ID: 60506007.D

Analysis Method: 8270D | Date Collected: 04/27/2016 13:25

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 09:20

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	76		31-115
4165-62-2	Phenol-d5 (Surr)	63		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	80		31-110
367-12-4	2-Fluorophenol (Surr)	52		15-110
321-60-8	2-Fluorobiphenyl (Surr)	73		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16C1 | Lab Sample ID: 240-64160-1

Matrix: Water | Lab File ID: 60506007.D

Analysis Method: 8270D | Date Collected: 04/27/2016 13:25

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 09:20

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506007.D
Lims ID: 240-64160-D-1-A
Client ID: 16C1
Sample Type: Client
Inject. Date: 06-May-2016 09:20:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-007
Misc. Info.: 240-64160-D-1-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-May-2016 13:36:32 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: gurneyk Date: 16-May-2016 11:09:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	209088	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	1010845	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	595290	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	97	1069275	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	1008823	400.0	
* 6 Perylene-d12	264	16.125	16.137	-0.012	96	675664	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	476496	835.9	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	722695	1007.8	
$ 9 Nitrobenzene-d5	82	7.344	7.343	0.001	93	1137700	1276.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2070936	1175.9	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	92	184466	1043.2	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2284444	1208.1	
132 Sulfotepp	202		10.084				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

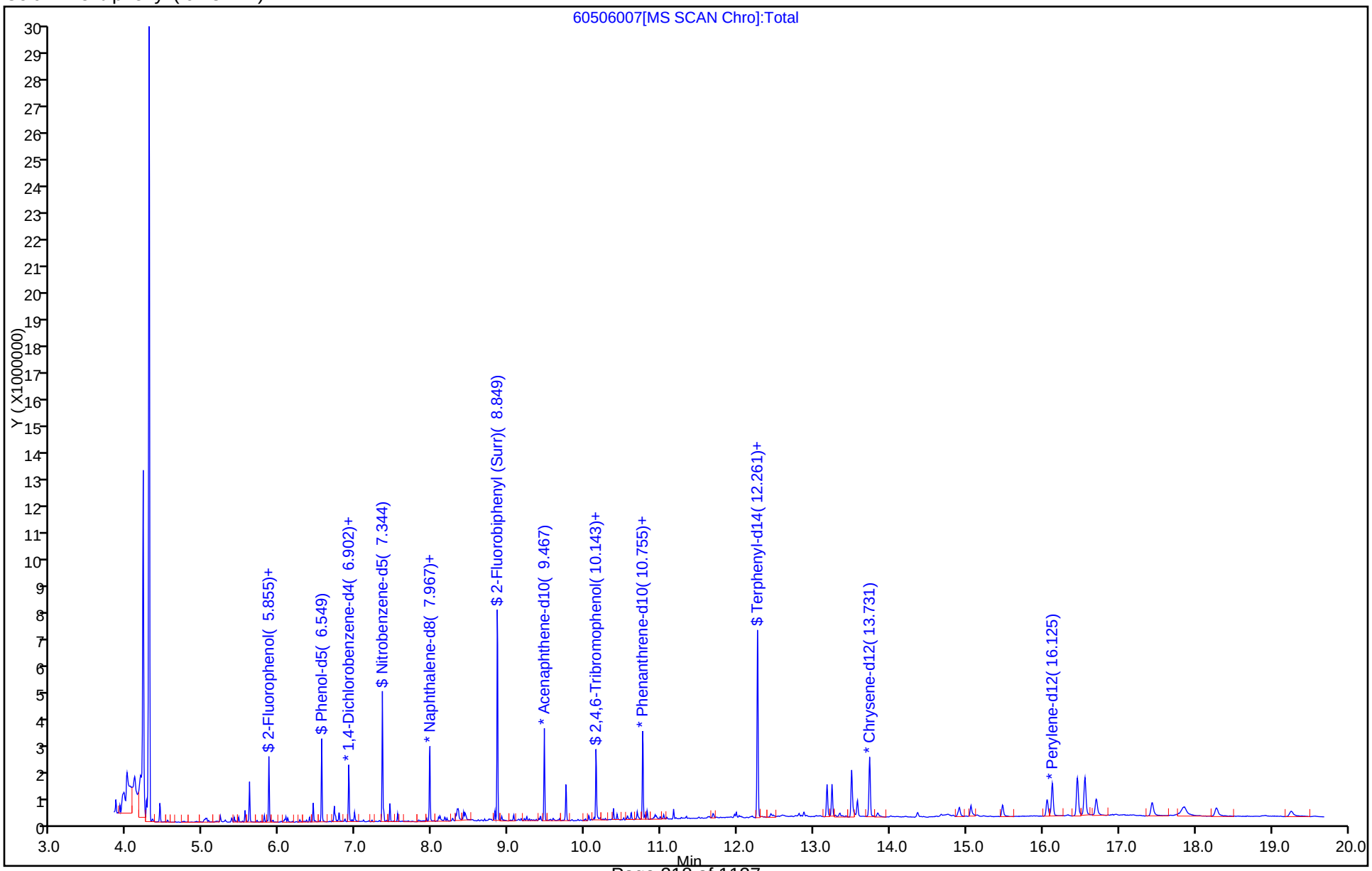
Report Date: 16-May-2016 11:09:17 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506007.D

Injection Date:	06-May-2016 09:20:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-D-1-A	Lab Sample ID:	240-64160-1	Worklist Smp#:	7
Client ID:	16C1				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16MW8 | Lab Sample ID: 240-64160-2

Matrix: Water | Lab File ID: 60506008.D

Analysis Method: 8270D | Date Collected: 04/26/2016 13:55

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 09:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	73		31-115
4165-62-2	Phenol-d5 (Surr)	53		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	75		31-110
367-12-4	2-Fluorophenol (Surr)	48		15-110
321-60-8	2-Fluorobiphenyl (Surr)	70		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16MW8 | Lab Sample ID: 240-64160-2

Matrix: Water | Lab File ID: 60506008.D

Analysis Method: 8270D | Date Collected: 04/26/2016 13:55

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 09:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506008.D
Lims ID: 240-64160-C-2-A
Client ID: 16MW8
Sample Type: Client
Inject. Date: 06-May-2016 09:45:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-008
Misc. Info.: 240-64160-C-2-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 10:39:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	209497	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	950715	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	592663	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	98	1051015	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	978370	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	675887	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	440322	770.9	
$ 8 Phenol-d5	99	6.549	6.549	0.000	96	614952	855.8	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	1004285	1198.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	1958107	1116.8	
$ 11 2,4,6-Tribromophenol	330	10.143	10.149	-0.006	83	165738	941.4	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2142932	1168.5	
132 Sulfotepp	202		10.084				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

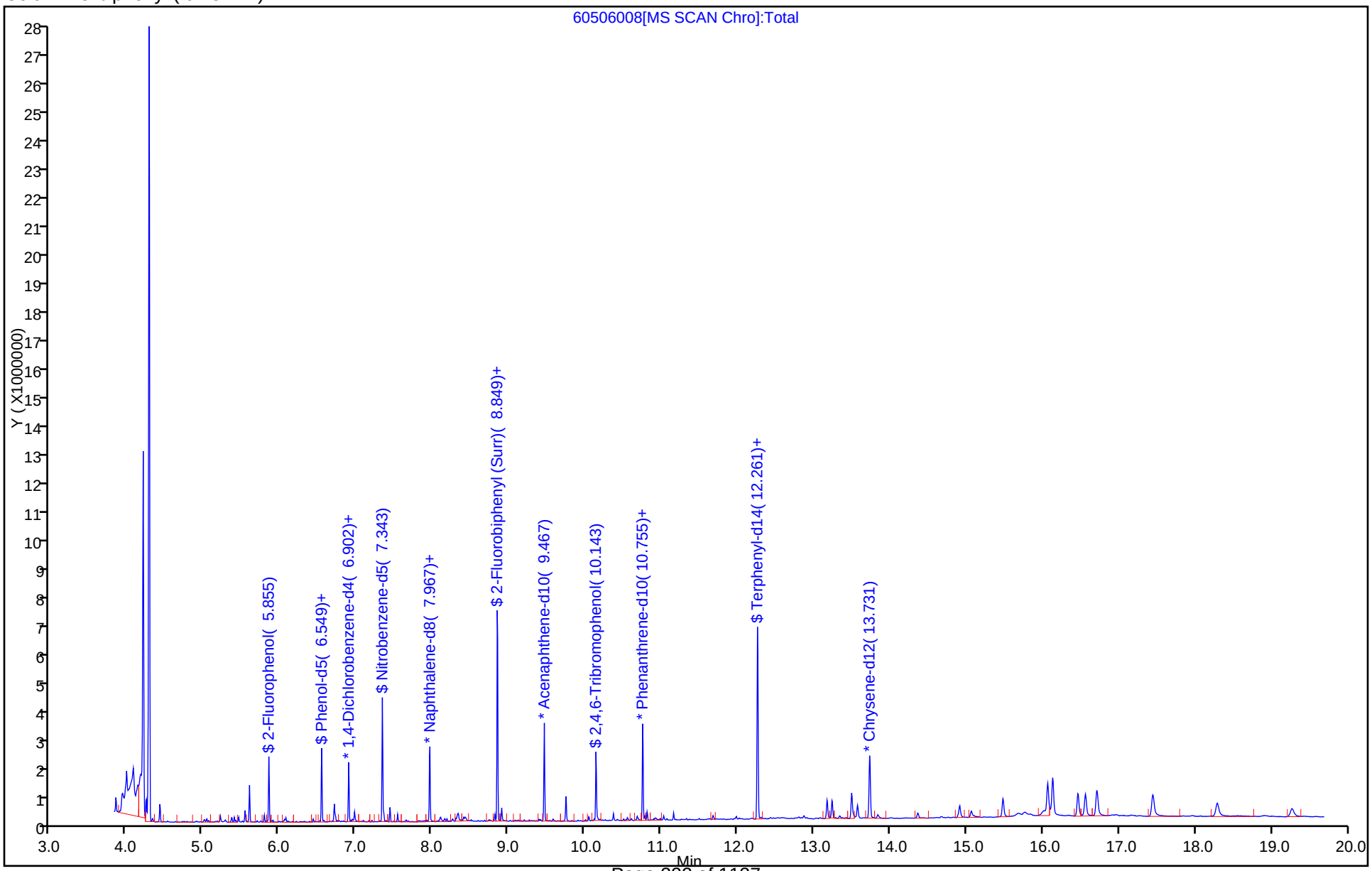
Report Date: 16-May-2016 11:11:02 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506008.D

Injection Date:	06-May-2016 09:45:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-C-2-A	Lab Sample ID:	240-64160-2	Worklist Smp#:	8
Client ID:	16MW8				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16MW9 | Lab Sample ID: 240-64160-3

Matrix: Water | Lab File ID: 60506009.D

Analysis Method: 8270D | Date Collected: 04/27/2016 12:15

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 10:10

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	84		31-115
4165-62-2	Phenol-d5 (Surr)	55		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	84		31-110
367-12-4	2-Fluorophenol (Surr)	53		15-110
321-60-8	2-Fluorobiphenyl (Surr)	80		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	76		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16MW9 | Lab Sample ID: 240-64160-3

Matrix: Water | Lab File ID: 60506009.D

Analysis Method: 8270D | Date Collected: 04/27/2016 12:15

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 10:10

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506009.D
Lims ID: 240-64160-C-3-A
Client ID: 16MW9
Sample Type: Client
Inject. Date: 06-May-2016 10:10:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-009
Misc. Info.: 240-64160-C-3-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 10:55:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	212781	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	967351	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	580031	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	98	1046114	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	1003732	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	687950	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	494535	852.4	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	637251	873.2	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	1152114	1351.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2183314	1272.4	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	91	209120	1213.7	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2536482	1348.2	
132 Sulfotepp	202		10.084				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

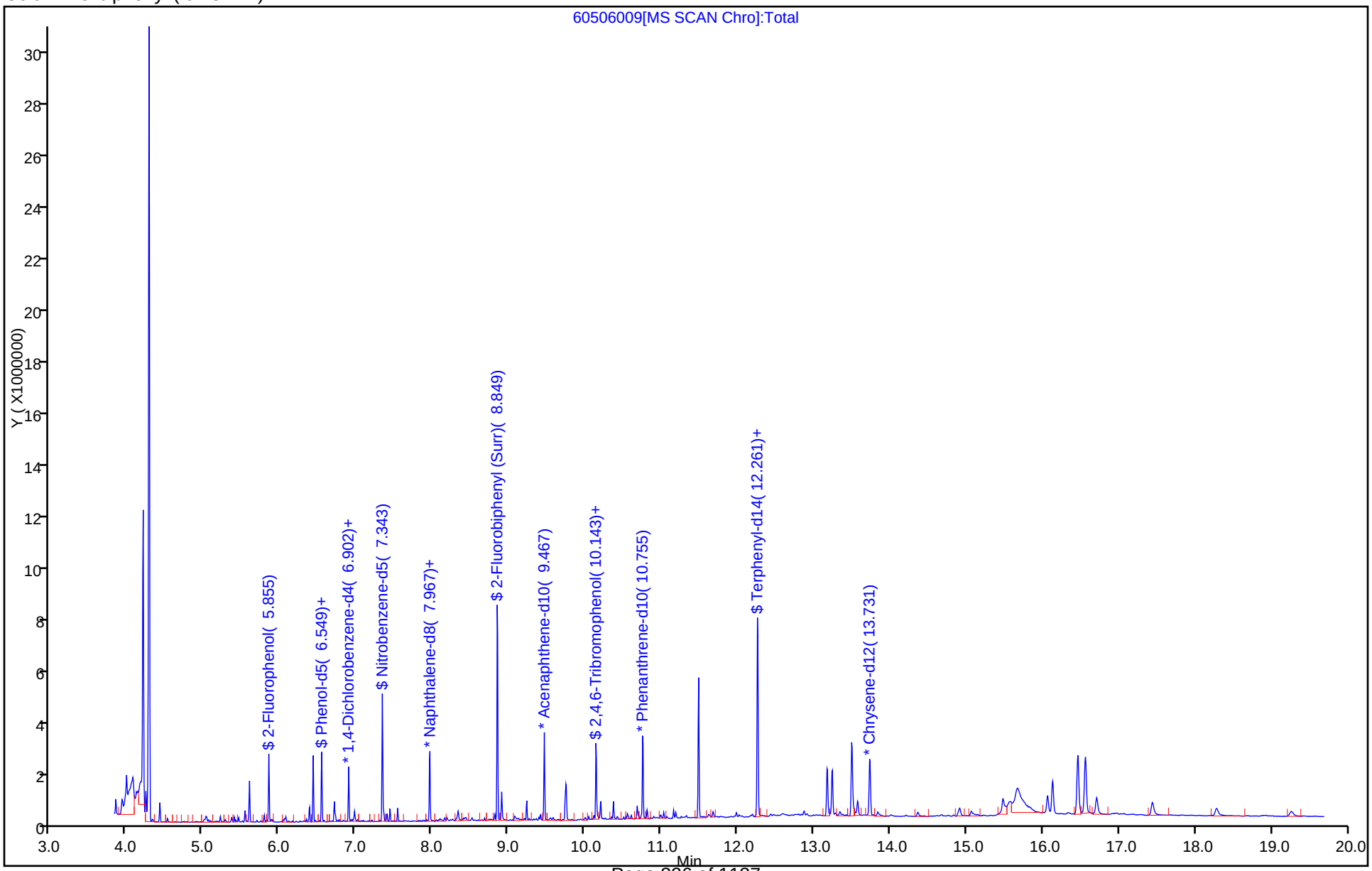
Report Date: 16-May-2016 11:11:08 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506009.D

Injection Date:	06-May-2016 10:10:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-C-3-A	Lab Sample ID:	240-64160-3	Worklist Smp#:	9
Client ID:	16MW9				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1A | Lab Sample ID: 240-64160-4

Matrix: Water | Lab File ID: 60506010.D

Analysis Method: 8270D | Date Collected: 04/27/2016 10:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 10:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	74		31-115
4165-62-2	Phenol-d5 (Surr)	49		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	79		31-110
367-12-4	2-Fluorophenol (Surr)	51		15-110
321-60-8	2-Fluorobiphenyl (Surr)	72		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	68		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1A | Lab Sample ID: 240-64160-4

Matrix: Water | Lab File ID: 60506010.D

Analysis Method: 8270D | Date Collected: 04/27/2016 10:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 10:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506010.D
Lims ID: 240-64160-L-4-A
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 06-May-2016 10:35:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-010
Misc. Info.: 240-64160-L-4-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 11:26:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	215646	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	954490	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	572954	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	97	1018925	400.0	
* 5 Chrysene-d12	240	13.737	13.731	0.006	97	981416	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	652289	400.0	
$ 7 2-Fluorophenol	112	5.849	5.855	-0.006	94	484236	823.6	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	578136	781.7	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	1062872	1263.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	1962005	1157.5	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	91	184777	1085.7	
$ 12 Terphenyl-d14	244	12.267	12.267	0.000	98	2169640	1179.4	
132 Sulfotepp	202		10.084				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

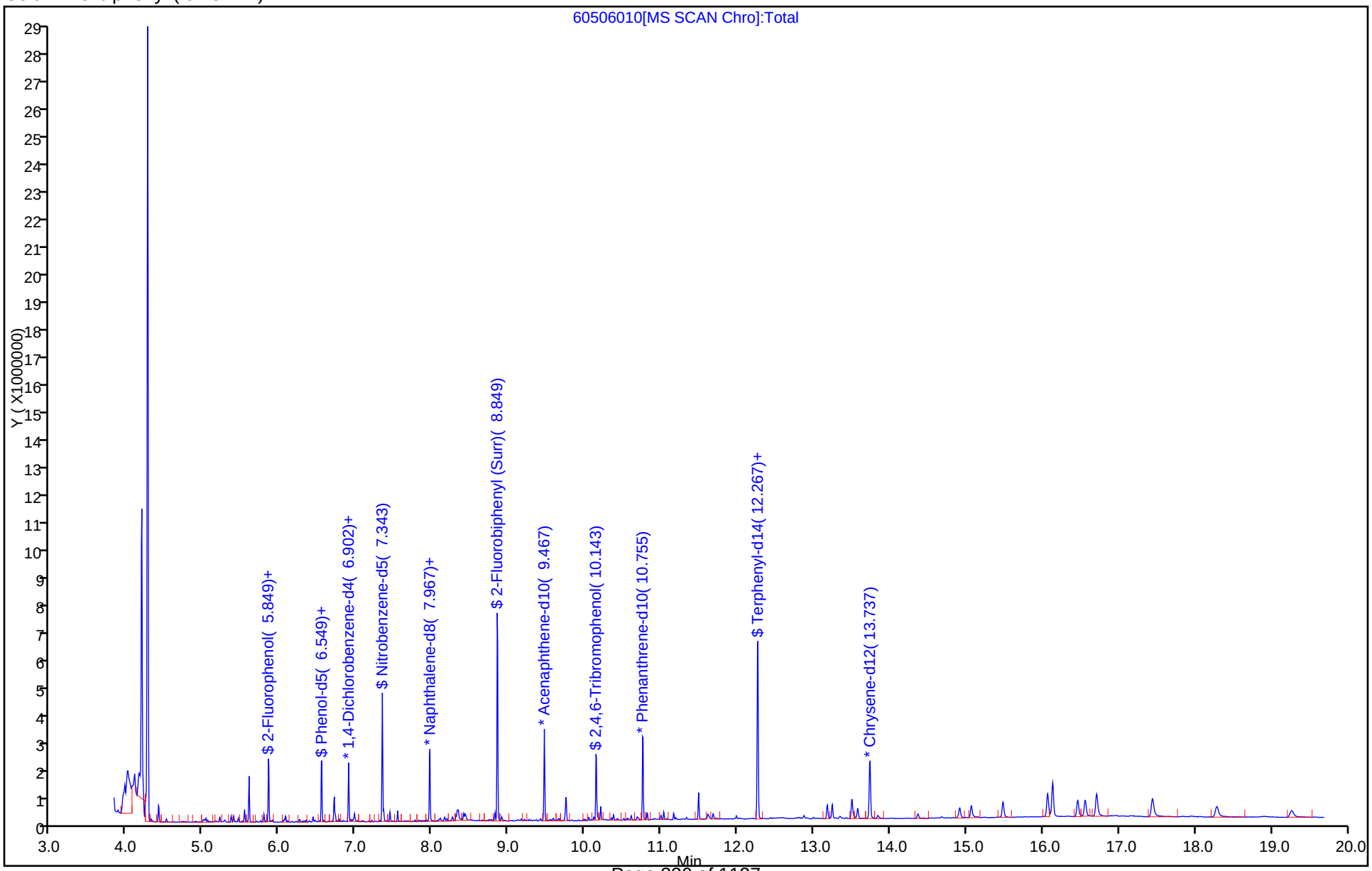
Report Date: 16-May-2016 11:11:17 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506010.D

Injection Date:	06-May-2016 10:35:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-L-4-A	Lab Sample ID:	240-64160-4	Worklist Smp#:	10
Client ID:	16WC1A				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WDUP | Lab Sample ID: 240-64160-5

Matrix: Water | Lab File ID: 60506013.D

Analysis Method: 8270D | Date Collected: 04/27/2016 11:10

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 11:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	84		31-115
4165-62-2	Phenol-d5 (Surr)	57		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	89		31-110
367-12-4	2-Fluorophenol (Surr)	62		15-110
321-60-8	2-Fluorobiphenyl (Surr)	82		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	74		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WDUP | Lab Sample ID: 240-64160-5

Matrix: Water | Lab File ID: 60506013.D

Analysis Method: 8270D | Date Collected: 04/27/2016 11:10

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 11:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

Report Date: 16-May-2016 11:11:42 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506013.D
Lims ID: 240-64160-C-5-A
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 06-May-2016 11:50:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-013
Misc. Info.: 240-64160-C-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 12:44:38

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	203030	400.0	
*	2 Naphthalene-d8	136	7.967	7.967	0.000	100	955038	400.0	
*	3 Acenaphthene-d10	164	9.467	9.467	0.000	93	561475	400.0	
*	4 Phenanthrene-d10	188	10.761	10.761	0.000	97	1019412	400.0	
*	5 Chrysene-d12	240	13.737	13.731	0.006	97	958791	400.0	
*	6 Perylene-d12	264	16.131	16.137	-0.006	96	612010	400.0	
$	7 2-Fluorophenol	112	5.855	5.855	0.000	94	546753	987.7	
$	8 Phenol-d5	99	6.550	6.549	0.001	97	639183	917.9	
$	9 Nitrobenzene-d5	82	7.344	7.343	0.001	93	1202093	1427.9	
$	10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2178847	1311.7	
$	11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	91	196853	1180.3	
$	12 Terphenyl-d14	244	12.267	12.267	0.000	99	2416574	1344.6	
	132 Sulfotepp	202		10.084				ND	
T	202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

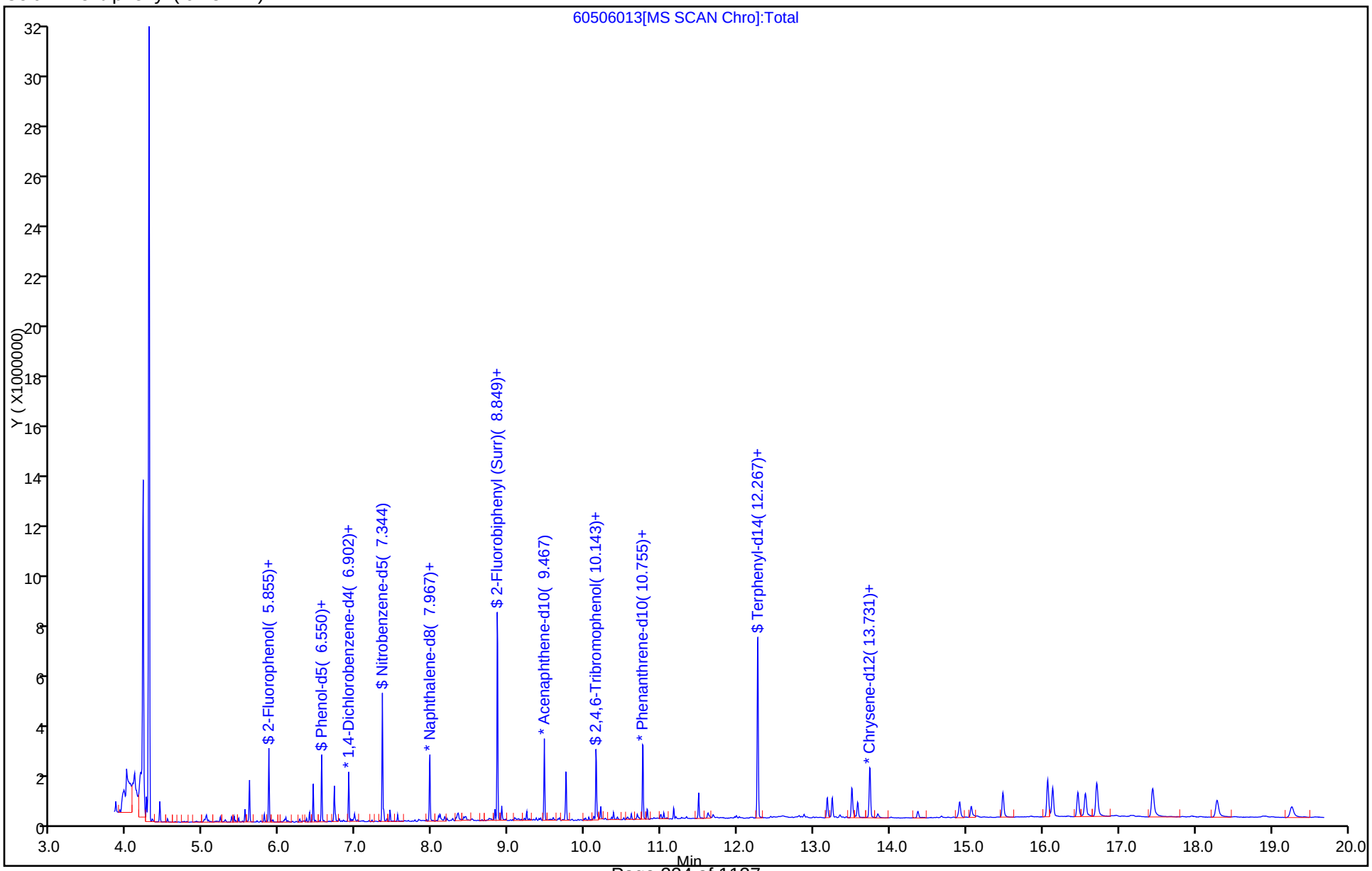
Report Date: 16-May-2016 11:11:42 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506013.D

Injection Date:	06-May-2016 11:50:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-C-5-A	Lab Sample ID:	240-64160-5	Worklist Smp#:	13
Client ID:	16WDUP				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1B | Lab Sample ID: 240-64160-6

Matrix: Water | Lab File ID: 60506014.D

Analysis Method: 8270D | Date Collected: 04/27/2016 09:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 12:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	85		31-115
4165-62-2	Phenol-d5 (Surr)	54		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	91		31-110
367-12-4	2-Fluorophenol (Surr)	61		15-110
321-60-8	2-Fluorobiphenyl (Surr)	85		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	76		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1B | Lab Sample ID: 240-64160-6

Matrix: Water | Lab File ID: 60506014.D

Analysis Method: 8270D | Date Collected: 04/27/2016 09:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 12:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		8.9	U

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506014.D				
Lims ID:	240-64160-C-6-A				
Client ID:	16WC1B				
Sample Type:	Client				
Inject. Date:	06-May-2016 12:15:30	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	240-0054198-014				
Misc. Info.:	240-64160-C-6-A				
Operator ID:		Instrument ID:	A4AG2		
Method:	\\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m				
Limit Group:	MSS 8270D ICAL				
Last Update:	16-May-2016 11:10:52	Calib Date:	26-Apr-2016 14:47:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D				
Column 1 :	5% phenyl (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK038				
First Level Reviewer: hulat		Date:	06-May-2016 13:09:36		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	203839	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	906308	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	549992	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	97	994192	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	930316	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	611667	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	545776	982.0	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	602662	862.0	
$ 9 Nitrobenzene-d5	82	7.344	7.343	0.001	93	1165373	1458.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2211221	1359.0	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	90	198166	1212.9	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2372115	1360.3	
132 Sulfotepp	202		10.084				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

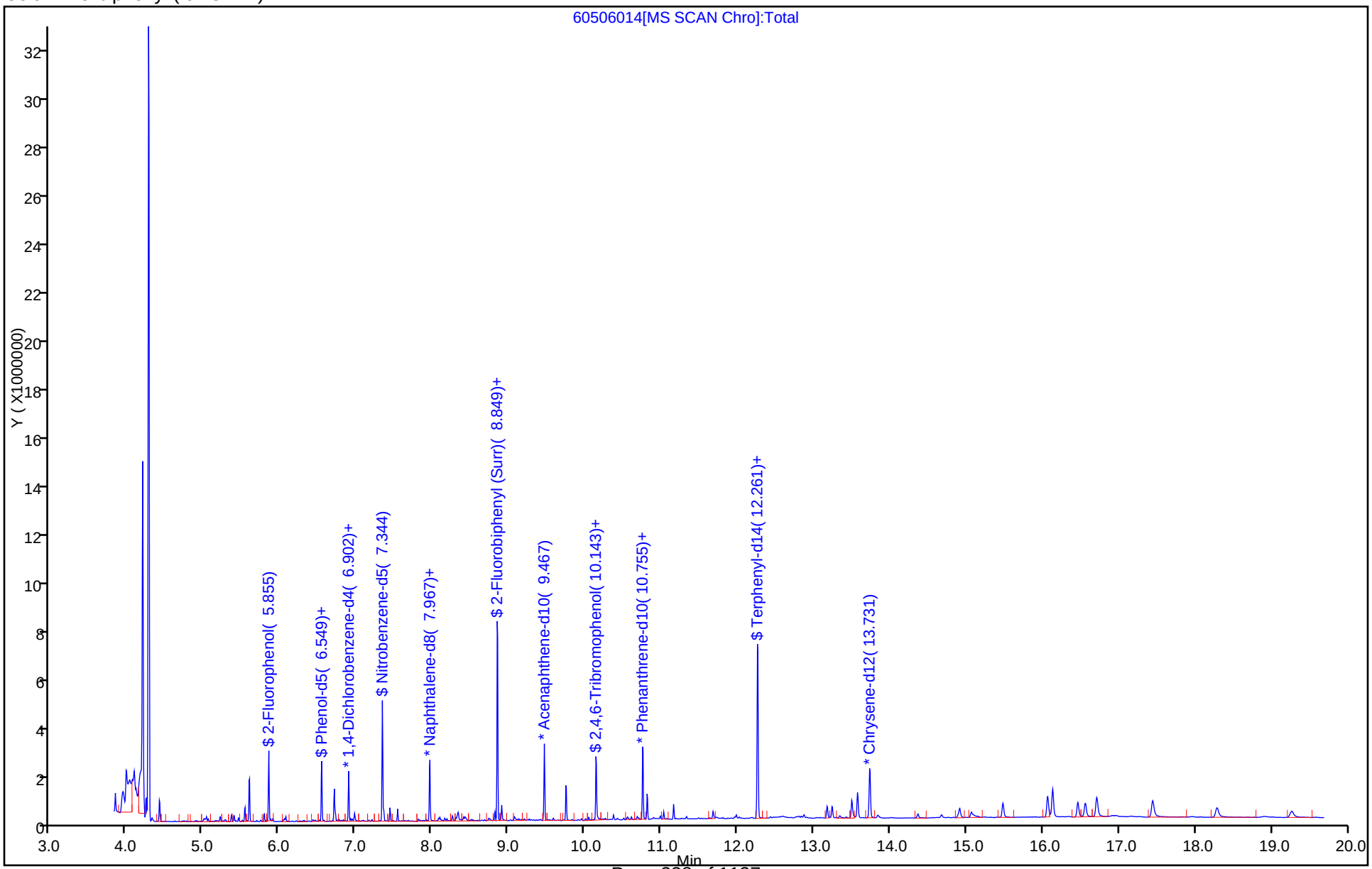
Report Date: 16-May-2016 11:11:52 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506014.D

Injection Date:	06-May-2016 12:15:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-C-6-A	Lab Sample ID:	240-64160-6	Worklist Smp#:	14
Client ID:	16WC1B				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-227507/10	60426010.D
Level 2	STD2 240-227507/9	60426009.D
Level 3	STD3 240-227507/8	60426008.D
Level 4	STD4 240-227507/7	60426007.D
Level 5	STD5 240-227507/6	60426006.D
Level 6	STD6 240-227507/5	60426005.D
Level 7	STD7 240-227507/4	60426004.D
Level 8	STD8 240-227507/3	60426003.D
Level 9	STD9 240-227507/2	60426002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4597	0.4032 0.4914	0.3994 0.4302	0.4180 0.4607	0.4274	Ave		0.4362				7.3		20.0			
N-Nitrosodimethylamine	0.8677	0.8517 0.9056	0.9008 0.9031	0.8512 0.8392	0.8639	Ave		0.8729				3.0		20.0			
Pyridine	1.2566	1.0658 1.3818	1.0964 1.3800	1.1105 1.3455	1.1729	Ave		1.2262				10.8		20.0			
Benzaldehyde	0.6384	1.0685 0.5677	1.0530 +++++	0.9779 +++++	0.7969	Qua	57.236	0.7966	-0.000084		0.0100				0.9980		0.9900
Phenol	1.4324	1.4209 1.5207	1.6132 1.6314	1.5055 1.5454	1.2997	Ave		1.4961			0.8000	7.3		20.0			
Aniline	2.1662	1.5639 2.2116	1.9505 2.1751	2.2459 2.2946	2.2181	Ave		2.1032				11.4		20.0			
Bis(2-chloroethyl)ether	1.3573	1.5758 1.4721	1.7957 1.5395	1.4885 1.2930	1.3852	Ave		1.4884			0.7000	10.5		20.0			
n-Decane	1.5781	1.8179 1.5441	1.9041 1.4067	1.8399 1.2685	1.7295	Ave		1.6361				13.8		20.0			
2-Chlorophenol	1.2208	1.1402 1.2408	1.3025 1.2501	1.2491 1.1457	1.1957	Ave		1.2181			0.8000	4.5		20.0			
1,3-Dichlorobenzene	1.4377	1.4330 1.4846	1.5081 1.4596	1.4794 1.4079	1.4572	Ave		1.4585				2.2		20.0			
1,4-Dichlorobenzene	1.4371	1.4690 1.5070	1.5161 1.4975	1.5168 1.4254	1.4595	Ave		1.4786				2.4		20.0			
Benzyl alcohol	0.8916	0.6603 0.9390	0.7755 0.9283	0.7886 0.8837	0.8621	Ave		0.8411				11.2		20.0			
2-Methylphenol	1.1838	1.0329 1.2279	1.2071 1.1715	1.1553 1.0829	1.1267	Ave		1.1485			0.7000	5.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3219	1.3719 1.3614	1.5080 1.3302	1.4396 1.2250	1.3633	Ave		1.3652				6.1		20.0			
bis (2-chloroisopropyl) ether	2.1285	2.3211 2.1582	2.5287 2.1149	2.4361 1.9520	2.2338	Ave		2.2342				8.4		20.0			
Indene	2.4022	2.5907 2.3784	2.7843 2.2762	2.7067 2.0352	2.5258	Ave		2.4624				9.8		20.0			
3 & 4 Methylphenol	1.3198	1.0213 1.3874	1.0920 1.3741	1.0582 1.3073	1.2249	Ave		1.2231				12.0		20.0			
N-Nitrosodi-n-propylamine	1.0181	0.9256 1.0671	1.1118 1.0520	1.1159 0.9876	1.0233	Ave		1.0377			0.5000	6.1		20.0			
Acetophenone	1.8318	1.8150 1.9163	1.9984 1.9183	1.9615 1.8022	1.8529	Ave		1.8871			0.0100	3.8		20.0			
Hexachloroethane	0.5419	0.5275 0.5590	0.5664 0.5551	0.5612 0.5216	0.5503	Ave		0.5479			0.3000	3.0		20.0			
Nitrobenzene	0.3434	0.3053 0.3547	0.3445 0.3486	0.3402 0.3348	0.3439	Ave		0.3394			0.2000	4.4		20.0			
Isophorone	0.6161	0.5861 0.6319	0.6413 0.6239	0.6402 0.5866	0.6247	Ave		0.6188			0.4000	3.5		20.0			
2,4-Dimethylphenol	0.3100	0.2688 0.3234	0.2562 0.3129	0.2887 0.2989	0.3133	Ave		0.2966			0.2000	8.0		20.0			
2-Nitrophenol	0.1663	0.1069 0.1715	0.1482 0.1708	0.1549 0.1642	0.1555	Ave		0.1548			0.1000	13.6		20.0			
Benzoic acid	0.1543	+++++ 0.1840	0.0871 0.1819	0.1098 0.1772	0.1316	Lin1	-25.73	0.1825							0.9950		0.9900
Bis(2-chloroethoxy)methane	0.3695	0.3758 0.3767	0.3921 0.3601	0.3970 0.3270	0.3767	Ave		0.3719			0.3000	5.8		20.0			
2,4-Dichlorophenol	0.2469	0.1662 0.2576	0.1856 0.2571	0.1845 0.2480	0.2401	Ave		0.2233			0.2000	16.9		20.0			
1,2,4-Trichlorobenzene	0.2596	0.2579 0.2696	0.2637 0.2654	0.2617 0.2580	0.2574	Ave		0.2617				1.7		20.0			
Naphthalene	1.0563 0.9269	0.9777 0.9370	0.9979 0.9130	0.9791 0.8544	0.9402	Ave		0.9536			0.7000	6.0		20.0			
4-Chloroaniline	0.3385	0.2709 0.2857	0.3396 0.3038	0.3839 0.2635	0.3437	Ave		0.3162			0.0100	13.3		20.0			
2,6-Dichlorophenol	0.2447	0.1991 0.2543	0.2056 0.2523	0.2355 0.2428	0.2415	Ave		0.2345				8.9		20.0			
Hexachlorobutadiene	0.1324	0.1316 0.1371	0.1370 0.1381	0.1276 0.1354	0.1292	Ave		0.1335			0.0100	2.9		20.0			
Caprolactam	0.0891	0.0773 0.0864	0.0957 0.0847	0.1018 0.0809	0.0983	Ave		0.0893			0.0100	9.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.2541	0.1966 0.2660	0.2384 0.2580	0.2464 0.2498	0.2509	Ave		0.2450			0.2000	8.6		20.0			
2-Methylnaphthalene	0.6565 0.6028	0.6047 0.6205	0.6511 0.6030	0.6312 0.5659	0.6101	Ave		0.6162			0.4000	4.5		20.0			
1-Methylnaphthalene	0.6326 0.5608	0.5862 0.5789	0.6054 0.5645	0.5917 0.5395	0.5658	Ave		0.5806				4.7		20.0			
Hexachlorocyclopentadiene	0.2574	0.1626 0.2782	0.1892 0.2910	0.2111 0.2799	0.2327	Ave		0.2378			0.0500	19.7		20.0			
1,2,4,5-Tetrachlorobenzene	0.4250	0.3690 0.4395	0.4093 0.4450	0.4190 0.4229	0.4168	Ave		0.4183			0.0100	5.5		20.0			
2,4,6-Trichlorophenol	0.2969	0.2147 0.3089	0.2543 0.3218	0.2644 0.3079	0.2815	Ave		0.2813			0.2000	12.6		20.0			
2,4,5-Trichlorophenol	0.2956	0.2293 0.3116	0.2715 0.3184	0.2740 0.3135	0.2755	Ave		0.2862			0.2000	10.4		20.0			
1,1'-Biphenyl	1.4030 1.3077	1.2897 1.3344	1.3806 1.3311	1.3602 1.2455	1.3010	Ave		1.3282			0.0100	3.7		20.0			
2-Chloronaphthalene	1.0482 1.0198	0.9839 1.0433	1.0595 1.0500	1.0408 1.0019	1.0096	Ave		1.0286			0.8000	2.5		20.0			
2-Nitroaniline	0.3450	0.2609 0.3648	0.2969 0.3585	0.3188 0.3444	0.3398	Ave		0.3286			0.0100	10.6		20.0			
Dimethyl phthalate	1.1231	1.0627 1.1566	1.1367 1.1639	1.1159 1.1033	1.1055	Ave		1.1210			0.0100	2.9		20.0			
1,3-Dinitrobenzene	0.1789	0.1077 0.1934	0.1376 0.1947	0.1476 0.1903	0.1686	Ave		0.1648				19.0		20.0			
2,6-Dinitrotoluene	0.2559	0.1930 0.2703	0.2229 0.2724	0.2391 0.2640	0.2597	Ave		0.2472				11.1		20.0			
Acenaphthylene	1.5365 1.5845	1.4053 1.6048	1.5604 1.6075	1.5801 1.5189	1.5907	Ave		1.5543			0.9000	4.1		20.0			
3-Nitroaniline	0.1217	0.1461 0.1167	0.1594 0.1341	0.2041 0.1260	0.1523	Ave		0.1450			0.0100	19.5		20.0			
2,4-Dinitrophenol	0.1127	+++++ 0.1344	0.0472 0.1431	0.0656 0.1392	0.0872	Lin1	-26.64	0.1414			0.0100				0.9910		0.9900
4-Nitrophenol	0.1562	+++++ 0.1649	0.1097 0.1634	0.1258 0.1576	0.1426	Ave		0.1458				14.4		20.0			
Acenaphthene	1.1533 0.9952	1.0283 0.9847	1.0815 0.9474	1.0317 0.8828	1.0112	Ave		1.0129			0.9000	7.6		20.0			
2,4-Dinitrotoluene	0.3300	0.2303 0.3499	0.2782 0.3598	0.3019 0.3459	0.3220	Ave		0.3148			0.2000	13.8		20.0			
Dibenzofuran	1.5296 1.4294	1.4056 1.4427	1.4916 1.4487	1.4359 1.3623	1.4077	Ave		1.4393			0.8000	3.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3,4,6-Tetrachlorophenol	0.2211	0.1544 0.2406	0.1869 0.2456	0.2052 0.2425	0.2141	Ave		0.2138			0.0100	14.7		20.0			
Hexadecane	0.8016	0.8720 0.7620	0.9567 0.7325	0.9472 0.6570	0.8772	Ave		0.8258				12.8		20.0			
Diethyl phthalate	1.0866	1.3001 1.1028	1.2418 1.1040	1.2066 1.0254	1.1165	Ave		1.1480			0.0100	8.0		20.0			
4-Chlorophenyl phenyl ether	0.5107	0.4806 0.5294	0.5226 0.5376	0.5059 0.5157	0.5106	Ave		0.5141			0.4000	3.3		20.0			
4-Nitroaniline	0.2187	0.1623 0.2037	0.2089 0.1993	0.2366 0.1731	0.2375	Ave		0.2050			0.0100	13.2		20.0			
Fluorene	1.2472 1.1537	1.1124 1.1537	1.1811 1.1517	1.1966 1.0715	1.1561	Ave		1.1582			0.9000	4.3		20.0			
4,6-Dinitro-2-methylphenol	0.1079	+++++ 0.1163	0.0543 0.1238	0.0687 0.1168	0.0895	Lin1	-17.73	0.1215			0.0100				0.9960		0.9900
Diphenylamine	0.6424	0.5684 0.6418	0.6312 0.6451	0.6440 0.6225	0.6290	Ave		0.6281				4.1		20.0			
N-Nitrosodiphenylamine	0.5465	0.4835 0.5460	0.5370 0.5488	0.5479 0.5296	0.5351	Ave		0.5343			0.0100	4.1		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.8955	0.7844 0.8785	0.8757 0.8622	0.8960 0.8045	0.8949	Ave		0.8616				5.0		20.0			
Azobenzene	0.8955	0.7853 0.8785	0.8757 0.8622	0.8955 0.8045	0.8954	Ave		0.8616				5.0		20.0			
4-Bromophenyl phenyl ether	0.1907	0.1626 0.1979	0.1797 0.2036	0.1802 0.1915	0.1807	Ave		0.1859			0.1000	6.9		20.0			
Atrazine	0.1884	0.1598 0.1910	0.1807 0.1911	0.1901 0.1754	0.1899	Ave		0.1833			0.0100	6.0		20.0			
Hexachlorobenzene	0.1931 0.1930	0.1772 0.2016	0.1882 0.2060	0.1864 0.1970	0.1818	Ave		0.1916			0.1000	4.8		20.0			
n-Octadecane	0.5971	0.5237 0.5634	0.6055 0.5432	0.6098 0.4914	0.6091	Ave		0.5679				7.9		20.0			
Pentachlorophenol	0.1235	0.0509 0.1293	0.0834 0.1339	0.0909 0.1278	0.1054	Lin1	-10.20	0.1309			0.0500				0.9980		0.9900
Phenanthrene	1.1104 1.0329	0.9948 1.0389	1.0458 1.0530	1.0327 0.9868	0.9978	Ave		1.0326			0.7000	3.7		20.0			
Anthracene	1.0053 1.0781	0.9570 1.0805	1.0538 1.0837	1.0601 1.0213	1.0278	Ave		1.0408			0.7000	4.0		20.0			
Carbazole	0.7843	0.8228 0.7463	0.9260 0.7380	0.8945 0.7464	0.8120	Ave		0.8088			0.0100	8.7		20.0			
Di-n-butyl phthalate	1.2651	1.5219 1.2609	1.3073 1.2564	1.3171 1.1445	1.2525	Ave		1.2907			0.0100	8.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Fluoranthene	0.9339 1.0317	0.8799 1.0572	0.9576 1.0733	0.9837 1.0347	1.0042	Ave		0.9951			0.6000	6.3		20.0			
Benzidine	0.3555	0.1066 0.4010	0.1107 0.4228	0.1887 0.4230	0.2362	Lin	-105.8	0.4402							0.9950		0.9900
Pyrene	1.0275 1.0955	1.0010 1.1418	1.0619 1.1372	1.0826 1.1036	1.0484	Ave		1.0777			0.6000	4.4		20.0			
Butyl benzyl phthalate	0.5436	0.4845 0.5683	0.4907 0.5681	0.5112 0.5576	0.5087	Ave		0.5291			0.0100	6.5		20.0			
Bis(2-ethylhexyl) phthalate	0.7370	0.5341 0.7932	0.6309 0.7940	0.6488 0.7800	0.6870	Ave		0.7006			0.0100	13.3		20.0			
3,3'-Dichlorobenzidine	0.3220	0.2293 0.3356	0.2625 0.3438	0.3053 0.3502	0.3054	Ave		0.3068			0.0100	13.7		20.0			
Benzo[a]anthracene	0.9627 0.9618	0.8590 1.0164	0.9232 1.0344	0.9227 1.0107	0.9240	Ave		0.9572			0.8000	5.9		20.0			
Chrysene	0.9353 0.9181	0.8740 0.9800	0.9603 0.9795	0.9359 0.9680	0.8942	Ave		0.9384			0.7000	4.0		20.0			
Di-n-octyl phthalate	1.6344	0.9033 1.7185	1.2436 1.7787	1.2559 1.7231	1.4880	Lin1	-55.70	1.7437			0.0100				0.9980		0.9900
Benzo[b]fluoranthene	0.9973 1.1560	0.9272 1.1877	1.0994 1.2482	1.0074 1.2482	1.1070	Ave		1.1087			0.7000	10.2		20.0			
Benzo[k]fluoranthene	1.3439 1.1986	1.2080 1.2735	1.1640 1.2799	1.1930 1.2420	1.1603	Ave		1.2292			0.7000	4.9		20.0			
Benzo[a]pyrene	0.8959 1.0673	0.8233 1.1368	0.9630 1.1686	0.9376 1.1542	1.0009	Ave		1.0164			0.7000	12.1		20.0			
Indeno[1,2,3-cd]pyrene	0.7977 1.1061	0.8942 1.1581	0.9837 1.1893	1.0166 1.1544	1.0331	Ave		1.0370			0.5000	12.6		20.0			
Dibenz(a,h)anthracene	0.7270 0.9485	0.7822 1.0106	0.8387 1.0451	0.8692 1.0244	0.8897	Ave		0.9039			0.4000	12.3		20.0			
Benzo[g,h,i]perylene	0.7303 0.8572	0.7306 0.8840	0.8216 0.8910	0.8142 0.8765	0.8113	Ave		0.8241			0.5000	7.4		20.0			
2-Fluorophenol (Surr)	1.0316	1.0606 1.1394	1.1301 1.0655	1.1360 1.0928	1.0687	Ave		1.0906				3.7		20.0			
Phenol-d5 (Surr)	1.3257	1.2485 1.4256	1.5042 1.4942	1.3870 1.4035	1.1868	Ave		1.3719				8.2		20.0			
Nitrobenzene-d5 (Surr)	0.3477 0.3548	0.3339 0.3617	0.3591 0.3556	0.3671 0.3363	0.3571	Ave		0.3526				3.2		20.0			
2-Fluorobiphenyl (Surr)	1.2897 1.1697	1.1217 1.1960	1.1877 1.2047	1.1821 1.1285	1.1699	Ave		1.1833				4.1		20.0			
2,4,6-Tribromophenol (Surr)	0.1238	0.0873 0.1361	0.1019 0.1420	0.1085 0.1384	0.1125	Ave		0.1188				16.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Terphenyl-d14 (Surr)	0.7640 0.7501	0.6734 0.7981	0.7369 0.7977	0.7363 0.7775	0.7140	Ave		0.7498				5.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-227507/10	60426010.D
Level 2	STD2 240-227507/9	60426009.D
Level 3	STD3 240-227507/8	60426008.D
Level 4	STD4 240-227507/7	60426007.D
Level 5	STD5 240-227507/6	60426006.D
Level 6	STD6 240-227507/5	60426005.D
Level 7	STD7 240-227507/4	60426004.D
Level 8	STD8 240-227507/3	60426003.D
Level 9	STD9 240-227507/2	60426002.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	337577	13706 543365	27089 609009	59264 820575	155649	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodimethylamine	DCB	Ave	637190	28954 1001385	61100 1278421	120673 1494715	314627	1000	50.0 1500	100 2000	200 2500	500
Pyridine	DCB	Ave	922807	36232 1527918	74363 1953548	157436 2396589	427143	1000	50.0 1500	100 2000	200 2500	500
Benzaldehyde	DCB	Qua	937598	72645 1255402	142836 +++++	277280 +++++	580416	2000	100 3000	200 +++++	400 +++++	1000
Phenol	DCB	Ave	1051882	48304 1681485	109416 2309466	213435 2752603	473316	1000	50.0 1500	100 2000	200 2500	500
Aniline	DCB	Ave	1590734	53167 2445461	132294 3079101	318398 4087029	807805	1000	50.0 1500	100 2000	200 2500	500
Bis(2-chloroethyl)ether	DCB	Ave	996750	53571 1627829	121791 2179327	211022 2303050	504462	1000	50.0 1500	100 2000	200 2500	500
n-Decane	DCB	Ave	1158866	61799 1707375	129148 1991306	260836 2259509	629858	1000	50.0 1500	100 2000	200 2500	500
2-Chlorophenol	DCB	Ave	896516	38763 1372089	88346 1769714	177087 2040646	435465	1000	50.0 1500	100 2000	200 2500	500
1,3-Dichlorobenzene	DCB	Ave	1055741	48715 1641654	102291 2066329	209728 2507749	530701	1000	50.0 1500	100 2000	200 2500	500
1,4-Dichlorobenzene	DCB	Ave	1055356	49939 1666372	102833 2119947	215028 2538948	531521	1000	50.0 1500	100 2000	200 2500	500
Benzyl alcohol	DCB	Ave	654717	22447 1038263	52596 1314170	111800 1574008	313943	1000	50.0 1500	100 2000	200 2500	500
2-Methylphenol	DCB	Ave	869333	35114 1357745	81869 1658399	163786 1928812	410333	1000	50.0 1500	100 2000	200 2500	500
1,2-Dichlorobenzene	DCB	Ave	970727	46638 1505398	102282 1883136	204083 2181961	496492	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCB	Ave	1563034	78906 2386488	171513 2993961	345355 3476843	813502	1000	50.0 1500	100 2000	200 2500	500
Indene	DCB	Ave	3528150	176142 5259989	377691 6444486	767438 7250007	1839694	2000	100 3000	200 4000	400 5000	1000
3 & 4 Methylphenol	DCB	Ave	969188	34719 1534099	74066 1945193	150020 2328598	446099	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodi-n-propylamine	DCB	Ave	747609	31466 1179988	75405 1489193	158200 1759007	372677	1000	50.0 1500	100 2000	200 2500	500
Acetophenone	DCB	Ave	1345213	61702 2119007	135545 2715581	278080 3210028	674774	1000	50.0 1500	100 2000	200 2500	500
Hexachloroethane	DCB	Ave	397939	17934 618158	38416 785821	79554 929037	200408	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene	NPT	Ave	1072001	44137 1703798	103228 2179483	214201 2590210	533568	1000	50.0 1500	100 2000	200 2500	500
Isophorone	NPT	Ave	1922922	84731 3035213	192173 3900878	403101 4538036	969058	1000	50.0 1500	100 2000	200 2500	500
2,4-Dimethylphenol	NPT	Ave	967738	38868 1553578	76781 1956505	181808 2312268	486096	1000	50.0 1500	100 2000	200 2500	500
2-Nitrophenol	NPT	Ave	518965	15455 823662	44395 1067653	97551 1270503	241299	1000	50.0 1500	100 2000	200 2500	500
Benzoic acid	NPT	Lin1	962951	+++++ 1767481	52170 2274853	138266 2741238	408235	2000	+++++ 3000	200 4000	400 5000	1000
Bis(2-chloroethoxy)methane	NPT	Ave	1153478	54336 1809554	117507 2251454	249948 2530218	584439	1000	50.0 1500	100 2000	200 2500	500
2,4-Dichlorophenol	NPT	Ave	770595	24031 1237277	55620 1607554	116195 1918986	372483	1000	50.0 1500	100 2000	200 2500	500
1,2,4-Trichlorobenzene	NPT	Ave	810230	37290 1294859	79023 1659588	164785 1995860	399292	1000	50.0 1500	100 2000	200 2500	500
Naphthalene	NPT	Ave	26932 2893169	141356 4500883	299015 5707890	616483 6610238	1458617	10.0 1000	50.0 1500	100 2000	200 2500	500
4-Chloroaniline	NPT	Ave	1056699	39165 1372190	101758 1899452	241749 2038574	533216	1000	50.0 1500	100 2000	200 2500	500
2,6-Dichlorophenol	NPT	Ave	763809	28784 1221466	61606 1577407	148307 1878690	374659	1000	50.0 1500	100 2000	200 2500	500
Hexachlorobutadiene	NPT	Ave	413322	19022 658397	41060 863418	80351 1047259	200479	1000	50.0 1500	100 2000	200 2500	500
Caprolactam	NPT	Ave	556319	22359 830416	57382 1059219	128189 1252177	305065	2000	100 3000	200 4000	400 5000	1000
4-Chloro-3-methylphenol	NPT	Ave	793203	28429 1277735	71449 1613096	155156 1932506	389179	1000	50.0 1500	100 2000	200 2500	500
2-Methylnaphthalene	NPT	Ave	16738 1881498	87424 2980336	195109 3769687	397448 4378075	946462	10.0 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1-Methylnaphthalene	NPT	Ave	16129 1750507	84743 2780691	181424 3528966	372596 4173562	877790	10.0 1000	50.0 1500	100 2000	200 2500	500
Hexachlorocyclopentadiene	ANT	Ave	 432468	13607 730181	31630 967198	73338 1164529	196777	 1000	50.0 1500	100 2000	200 2500	500
1,2,4,5-Tetrachlorobenzene	ANT	Ave	 714000	30876 1153457	68425 1478989	145562 1759303	352462	 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Trichlorophenol	ANT	Ave	 498789	17966 810874	42510 1069490	91859 1281015	237996	 1000	50.0 1500	100 2000	200 2500	500
2,4,5-Trichlorophenol	ANT	Ave	 496697	19187 817857	45387 1058206	95201 1304155	232949	 1000	50.0 1500	100 2000	200 2500	500
1,1'-Biphenyl	ANT	Ave	21252 2197161	107915 3502522	230809 4423760	472521 5181119	1100099	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Chloronaphthalene	ANT	Ave	15877 1713426	82329 2738315	177129 3489581	361553 4167770	853681	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Nitroaniline	ANT	Ave	 579581	21833 957536	49630 1191528	110737 1432719	287319	 1000	50.0 1500	100 2000	200 2500	500
Dimethyl phthalate	ANT	Ave	 1886923	88921 3035648	190038 3867899	387667 4589804	934760	 1000	50.0 1500	100 2000	200 2500	500
1,3-Dinitrobenzene	ANT	Ave	 300589	9012 507504	22999 646943	51270 791626	142589	 1000	50.0 1500	100 2000	200 2500	500
2,6-Dinitrotoluene	ANT	Ave	 429987	16145 709378	37273 905227	83062 1098326	219608	 1000	50.0 1500	100 2000	200 2500	500
Acenaphthylene	ANT	Ave	23274 2662189	117584 4212038	260872 5342305	548921 6318517	1345049	10.0 1000	50.0 1500	100 2000	200 2500	500
3-Nitroaniline	ANT	Ave	 204493	12225 306270	26644 445767	70893 524127	128776	 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrophenol	ANT	Lin1	 378547	+++++ 705771	15781 950841	45564 1158191	147517	 2000	+++++ 3000	200 4000	400 5000	1000
4-Nitrophenol	ANT	Ave	 524981	+++++ 865875	36672 1086166	87392 1311478	241106	 2000	+++++ 3000	200 4000	400 5000	1000
Acenaphthene	ANT	Ave	17470 1672134	86041 2584432	180800 3148375	358390 3672291	854995	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrotoluene	ANT	Ave	 554451	19273 918418	46503 1195783	104862 1438920	272299	 1000	50.0 1500	100 2000	200 2500	500
Dibenzofuran	ANT	Ave	23170 2401480	117607 3786598	249371 4814312	498812 5666896	1190297	10.0 1000	50.0 1500	100 2000	200 2500	500
2,3,4,6-Tetrachlorophenol	ANT	Ave	 371464	12918 631592	31245 816336	71296 1008636	181049	 1000	50.0 1500	100 2000	200 2500	500
Hexadecane	ANT	Ave	 1346821	72963 2000096	159942 2434452	329060 2732880	741718	 1000	50.0 1500	100 2000	200 2500	500
Diethyl phthalate	ANT	Ave	 1825619	108784 2894538	207607 3668816	419175 4265802	944071	 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chlorophenyl phenyl ether	ANT	Ave	858027	40212 1389520	87372 1786502	175743 2145121	431750	1000	50.0 1500	100 2000	200 2500	500
4-Nitroaniline	ANT	Ave	367364	13576 534739	34923 662347	82204 720141	200842	1000	50.0 1500	100 2000	200 2500	500
Fluorene	ANT	Ave	18892 1938355	93081 3028183	197456 3827347	415678 4457350	977515	10.0 1000	50.0 1500	100 2000	200 2500	500
4,6-Dinitro-2-methylphenol	PHN	Lin1	538554	+++++ 933281	28195 1255369	73053 1489981	229646	2000	+++++ 3000	200 4000	400 5000	1000
Diphenylamine	PHN	Ave	1364072	63576 2191130	139535 2783662	291450 3378645	686867	851	42.5 1276	85.1 1701	170 2127	425
N-Nitrosodiphenylamine	PHN	Ave	1364072	63576 2191130	139535 2783662	291450 3378645	686867	1000	50.0 1500	100 2000	200 2500	500
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	2235089	103141 3525461	227564 4373199	476641 5132406	1148759	1000	50.0 1500	100 2000	200 2500	500
Azobenzene	PHN	Ave	2235089	103260 3525461	227565 4373199	476376 5132406	1149321	1000	50.0 1500	100 2000	200 2500	500
4-Bromophenyl phenyl ether	PHN	Ave	475981	21385 794236	46696 1032944	95843 1221706	231976	1000	50.0 1500	100 2000	200 2500	500
Atrazine	PHN	Ave	940653	42014 1532823	93906 1938293	202271 2238512	487456	2000	100 3000	200 4000	400 5000	1000
Hexachlorobenzene	PHN	Ave	4568 481744	23298 809080	48900 1045057	99164 1256725	233347	10.0 1000	50.0 1500	100 2000	200 2500	500
n-Octadecane	PHN	Ave	1490361	68855 2260953	157350 2755086	324411 3135149	781812	1000	50.0 1500	100 2000	200 2500	500
Pentachlorophenol	PHN	Lin1	616620	13385 1037711	43367 1357913	96690 1630778	270656	2000	100 3000	200 4000	400 5000	1000
Phenanthrene	PHN	Ave	26266 2577944	130809 4169234	271774 5340963	549392 6295733	1280870	10.0 1000	50.0 1500	100 2000	200 2500	500
Anthracene	PHN	Ave	23780 2690779	125831 4336033	273846 5496985	563932 6515422	1319281	10.0 1000	50.0 1500	100 2000	200 2500	500
Carbazole	PHN	Ave	1957495	108193 2994760	240626 3743482	475830 4762080	1042291	1000	50.0 1500	100 2000	200 2500	500
Di-n-butyl phthalate	PHN	Ave	3157556	200113 5060134	339724 6372767	700658 7301414	1607753	1000	50.0 1500	100 2000	200 2500	500
Fluoranthene	PHN	Ave	22092 2575180	115701 4242654	248841 5443901	523306 6601016	1288992	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzidine	CRY	Lin	1711129	25204 3049016	52920 4177001	186576 5171140	588179	2000	100 3000	200 4000	400 5000	1000
Pyrene	CRY	Ave	22549 2636367	118370 4340531	253880 5617234	535301 6745883	1305143	10.0 1000	50.0 1500	100 2000	200 2500	500
Butyl benzyl phthalate	CRY	Ave	1308269	57293 2160300	117316 2806057	252783 3408484	633270	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 07:44 Calibration End Date: 04/26/2016 11:03 Calibration ID: 34174

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bis(2-ethylhexyl) phthalate	CRY	Ave	1773685	63153 3015513	150844 3921910	320826 4768259	855274	1000	50.0 1500	100 2000	200 2500	500
3,3'-Dichlorobenzidine	CRY	Ave	1549886	54229 2551454	125518 3396710	301885 4281705	760454	2000	100 3000	200 4000	400 5000	1000
Benzo[a]anthracene	CRY	Ave	21128 2314652	101574 3863753	220723 5109475	456236 6178311	1150329	10.0 1000	50.0 1500	100 2000	200 2500	500
Chrysene	CRY	Ave	20526 2209529	103352 3725543	229586 4838377	462777 5917224	1113229	10.0 1000	50.0 1500	100 2000	200 2500	500
Di-n-octyl phthalate	PRY	Lin1	2924804	81426 4972592	222698 6591452	485859 8043475	1352358	1000	50.0 1500	100 2000	200 2500	500
Benzo[b]fluoranthene	PRY	Ave	16543 2068551	83574 3436754	196883 4625299	389739 5826654	1006071	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[k]fluoranthene	PRY	Ave	22291 2144816	108893 3685038	208454 4742785	461544 5797492	1054530	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[a]pyrene	PRY	Ave	14861 1909976	74213 3289357	172460 4330428	362712 5387867	909683	10.0 1000	50.0 1500	100 2000	200 2500	500
Indeno[1,2,3-cd]pyrene	PRY	Ave	13232 1979301	80605 3351091	176161 4407046	393283 5388557	938866	10.0 1000	50.0 1500	100 2000	200 2500	500
Dibenz(a,h)anthracene	PRY	Ave	12059 1697335	70503 2924308	150188 3872819	336257 4781943	808562	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[g,h,i]perylene	PRY	Ave	12114 1533923	65858 2557919	147133 3301597	314976 4091454	737333	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorophenol (Surr)	DCB	Ave	757551	36055 1259917	76650 1508319	161042 1946519	389188	1000	50.0 1500	100 2000	200 2500	500
Phenol-d5 (Surr)	DCB	Ave	973558	42442 1576386	102026 2115181	196628 2499847	432206	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene-d5 (Surr)	NPT	Ave	8865 1107441	48271 1737381	107612 2223041	231167 2602037	554051	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorobiphenyl (Surr)	ANT	Ave	19536 1965261	93852 3139161	198569 4003608	410646 4694363	989245	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Tribromophenol (Surr)	ANT	Ave	207986	7303 357275	17041 471933	37700 575849	95114	1000	50.0 1500	100 2000	200 2500	500
Terphenyl-d14 (Surr)	CRY	Ave	16768 1805150	79632 3033813	176170 3940277	364061 4752626	888875	10.0 1000	50.0 1500	100 2000	200 2500	500

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426002.D
Lims ID: std9 l1lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 26-Apr-2016 07:44:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-002
Misc. Info.: STD9 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:41 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 06:24:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	96	284988	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1237863	400.0	400.0	
* 3 Acenaphthene-d10	164	9.499	9.499	0.000	90	665591	400.0	400.0	
* 4 Phenanthrene-d10	188	10.793	10.793	0.000	97	1020746	400.0	400.0	
* 5 Chrysene-d12	240	13.799	13.799	0.000	97	978048	400.0	400.0	
* 6 Perylene-d12	264	16.211	16.211	0.000	96	746869	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	93	1946519	2500.0	2505.2	
$ 8 Phenol-d5	99	6.564	6.564	0.000	97	2499847	2500.0	2557.5	
$ 9 Nitrobenzene-d5	82	7.370	7.370	0.000	91	2602037	2500.0	2384.6	
$ 10 2-Fluorobiphenyl (Surr)	172	8.882	8.882	0.000	100	4694363	2500.0	2384.1	
$ 11 2,4,6-Tribromophenol	330	10.182	10.182	0.000	95	575849	2500.0	2912.5	
$ 12 Terphenyl-d14	244	12.317	12.317	0.000	99	4752626	2500.0	2592.4	
26 1,4-Dioxane	88	4.541	4.541	0.000	98	820575	2500.0	2640.1	
27 N-Nitrosodimethylamine	74	4.782	4.782	0.000	87	1494715	2500.0	2403.4	
28 Pyridine	79	4.841	4.841	0.000	90	2396589	2500.0	2743.3	
42 Benzaldehyde	77		6.564				ND	ND	
43 Phenol	94	6.576	6.576	0.000	98	2752603	2500.0	2582.3	
44 Aniline	93	6.646	6.646	0.000	97	4087029	2500.0	2727.4	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	95	2303050	2500.0	2171.8	
244 n-Decane	57	6.752	6.752	0.000	95	2259509	2500.0	1938.4	
47 2-Chlorophenol	128	6.758	6.758	0.000	96	2040646	2500.0	2351.3	
48 1,3-Dichlorobenzene	146	6.888	6.888	0.000	97	2507749	2500.0	2413.4	
49 1,4-Dichlorobenzene	146	6.941	6.941	0.000	93	2538948	2500.0	2410.2	
50 Benzyl alcohol	108	6.999	6.999	0.000	91	1574008	2500.0	2626.5	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1928812	2500.0	2357.2	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	92	2181961	2500.0	2243.3	
54 2,2'-oxybis[1-chloropropan	45	7.105	7.105	0.000	92	3476843	2500.0	2184.3	
53 Indene	115	7.146	7.146	0.000	91	7250007	5000.0	4132.5	
55 3 & 4 Methylphenol	108	7.193	7.193	0.000	92	2328598	2500.0	2672.1	
57 N-Nitrosodi-n-propylamine	70	7.211	7.211	0.000	90	1759007	2500.0	2379.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	95	3210028	2500.0	2387.6	
61 Hexachloroethane	117	7.358	7.358	0.000	94	929037	2500.0	2380.0	
62 Nitrobenzene	77	7.382	7.382	0.000	90	2590210	2500.0	2465.9	
64 Isophorone	82	7.570	7.570	0.000	98	4538036	2500.0	2369.6	
66 2,4-Dimethylphenol	107	7.641	7.641	0.000	95	2312268	2500.0	2519.5	
65 2-Nitrophenol	139	7.652	7.652	0.000	97	1270503	2500.0	2652.4	
70 Benzoic acid	122	7.711	7.711	0.000	91	2741238	5000.0	4994.7	
69 Bis(2-chloroethoxy)methane	93	7.717	7.717	0.000	100	2530218	2500.0	2198.6	
72 2,4-Dichlorophenol	162	7.846	7.846	0.000	96	1918986	2500.0	2777.4	
73 1,2,4-Trichlorobenzene	180	7.935	7.935	0.000	94	1995860	2500.0	2464.8	
74 Naphthalene	128	8.011	8.011	0.000	98	6610238	2500.0	2239.9	
75 4-Chloroaniline	127	8.011	8.011	0.000	95	2038574	2500.0	2083.3	
76 2,6-Dichlorophenol	162	8.040	8.040	0.000	96	1878690	2500.0	2589.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	97	1047259	2500.0	2534.0	
83 Caprolactam	113	8.317	8.317	0.000	78	1252177	5000.0	4531.2	
85 4-Chloro-3-methylphenol	107	8.399	8.399	0.000	96	1932506	2500.0	2548.5	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	93	4378075	2500.0	2295.9	
87 1-Methylnaphthalene	142	8.682	8.682	0.000	94	4173562	2500.0	2322.8	
89 Hexachlorocyclopentadiene	237	8.729	8.729	0.000	97	1164529	2500.0	2943.3	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	1759303	2500.0	2527.5	
93 2,4,6-Trichlorophenol	196	8.817	8.817	0.000	94	1281015	2500.0	2736.7	
94 2,4,5-Trichlorophenol	196	8.852	8.852	0.000	93	1304155	2500.0	2738.6	
99 1,1'-Biphenyl	154	8.976	8.976	0.000	95	5181119	2500.0	2344.4	
100 2-Chloronaphthalene	162	9.017	9.017	0.000	97	4167770	2500.0	2435.2	
101 2-Nitroaniline	65	9.076	9.076	0.000	84	1432719	2500.0	2620.0	
104 Dimethyl phthalate	163	9.193	9.193	0.000	98	4589804	2500.0	2460.7	
103 1,3-Dinitrobenzene	168	9.240	9.240	0.000	84	791626	2500.0	2886.1	
106 2,6-Dinitrotoluene	165	9.264	9.264	0.000	94	1098326	2500.0	2670.5	
108 Acenaphthylene	152	9.382	9.382	0.000	98	6318517	2500.0	2443.0	
109 3-Nitroaniline	138	9.429	9.429	0.000	93	524127	2500.0	2171.6	
110 2,4-Dinitrophenol	184	9.511	9.511	0.000	83	1158191	5000.0	5109.8	
111 Acenaphthene	153	9.529	9.529	0.000	94	3672291	2500.0	2178.9	
112 4-Nitrophenol	109	9.529	9.529	0.000	96	1311478	5000.0	5407.5	
113 2,4-Dinitrotoluene	165	9.617	9.617	0.000	92	1438920	2500.0	2747.4	
115 Dibenzofuran	168	9.670	9.670	0.000	95	5666896	2500.0	2366.2	
118 2,3,4,6-Tetrachlorophenol	232	9.770	9.770	0.000	74	1008636	2500.0	2835.1	
248 Hexadecane	57	9.787	9.787	0.000	95	2732880	2500.0	1988.9	
120 Diethyl phthalate	149	9.793	9.793	0.000	98	4265802	2500.0	2233.1	
122 4-Chlorophenyl phenyl ethe	204	9.934	9.934	0.000	94	2145121	2500.0	2507.4	
125 4-Nitroaniline	138	9.958	9.958	0.000	83	720141	2500.0	2111.0	
124 Fluorene	166	9.970	9.970	0.000	95	4457350	2500.0	2312.8	
127 4,6-Dinitro-2-methylphenol	198	9.982	9.982	0.000	82	1489981	5000.0	4951.6	
128 N-Nitrosodiphenylamine	169	10.029	10.029	0.000	62	3378645	2500.0	2478.0	
129 Diphenylamine	169	10.029	10.029	0.000	95	3378645	2126.8	2108.1	
131 Azobenzene	77	10.076	10.076	0.000	99	5132406	2500.0	2334.4	
130 1,2-Diphenylhydrazine	77	10.076	10.076	0.000	97	5132406	2500.0	2334.4	
138 4-Bromophenyl phenyl ether	248	10.364	10.364	0.000	70	1221706	2500.0	2575.7	
141 Atrazine	200	10.458	10.458	0.000	94	2238512	5000.0	4785.8	
140 Hexachlorobenzene	284	10.470	10.470	0.000	95	1256725	2500.0	2570.4	
245 n-Octadecane	57	10.576	10.576	0.000	93	3135149	2500.0	2163.4	
143 Pentachlorophenol	266	10.617	10.617	0.000	92	1630778	5000.0	4961.3	
148 Phenanthrene	178	10.817	10.817	0.000	98	6295733	2500.0	2389.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.864	10.864	0.000	97	6515422	2500.0	2453.0	
150 Carbazole	167	10.976	10.976	0.000	96	4762080	2500.0	2307.3	
154 Di-n-butyl phthalate	149	11.205	11.205	0.000	100	7301414	2500.0	2216.8	e
159 Fluoranthene	202	11.958	11.958	0.000	98	6601016	2500.0	2599.4	
160 Benzidine	184	12.040	12.040	0.000	99	5171140	5000.0	5044.6	
161 Pyrene	202	12.217	12.217	0.000	97	6745883	2500.0	2560.0	
169 Butyl benzyl phthalate	149	12.864	12.864	0.000	98	3408484	2500.0	2634.7	
174 Bis(2-ethylhexyl) phthalat	149	13.646	13.646	0.000	98	4768259	2500.0	2783.3	
177 3,3'-Dichlorobenzidine	252	13.687	13.687	0.000	74	4281705	5000.0	5708.3	
178 Benzo[a]anthracene	228	13.781	13.781	0.000	99	6178311	2500.0	2639.7	
179 Chrysene	228	13.846	13.846	0.000	98	5917224	2500.0	2578.9	
181 Di-n-octyl phthalate	149	14.681	14.681	0.000	99	8043475	2500.0	2502.5	
183 Benzo[b]fluoranthene	252	15.546	15.546	0.000	98	5826654	2500.0	2814.6	
184 Benzo[k]fluoranthene	252	15.593	15.593	0.000	99	5797492	2500.0	2525.9	
185 Benzo[a]pyrene	252	16.122	16.122	0.000	85	5387867	2500.0	2839.0	
190 Indeno[1,2,3-cd]pyrene	276	18.440	18.440	0.000	98	5388557	2500.0	2782.9	
189 Dibenz(a,h)anthracene	278	18.452	18.452	0.000	90	4781943	2500.0	2833.3	
191 Benzo[g,h,i]perylene	276	19.104	19.104	0.000	96	4091454	2500.0	2659.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

e - Potential Peak Saturated

Reagents:

SMLIST1 L9 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:42 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426002.D

Injection Date: 26-Apr-2016 07:44:30 Instrument ID: A4AG2 Operator ID:

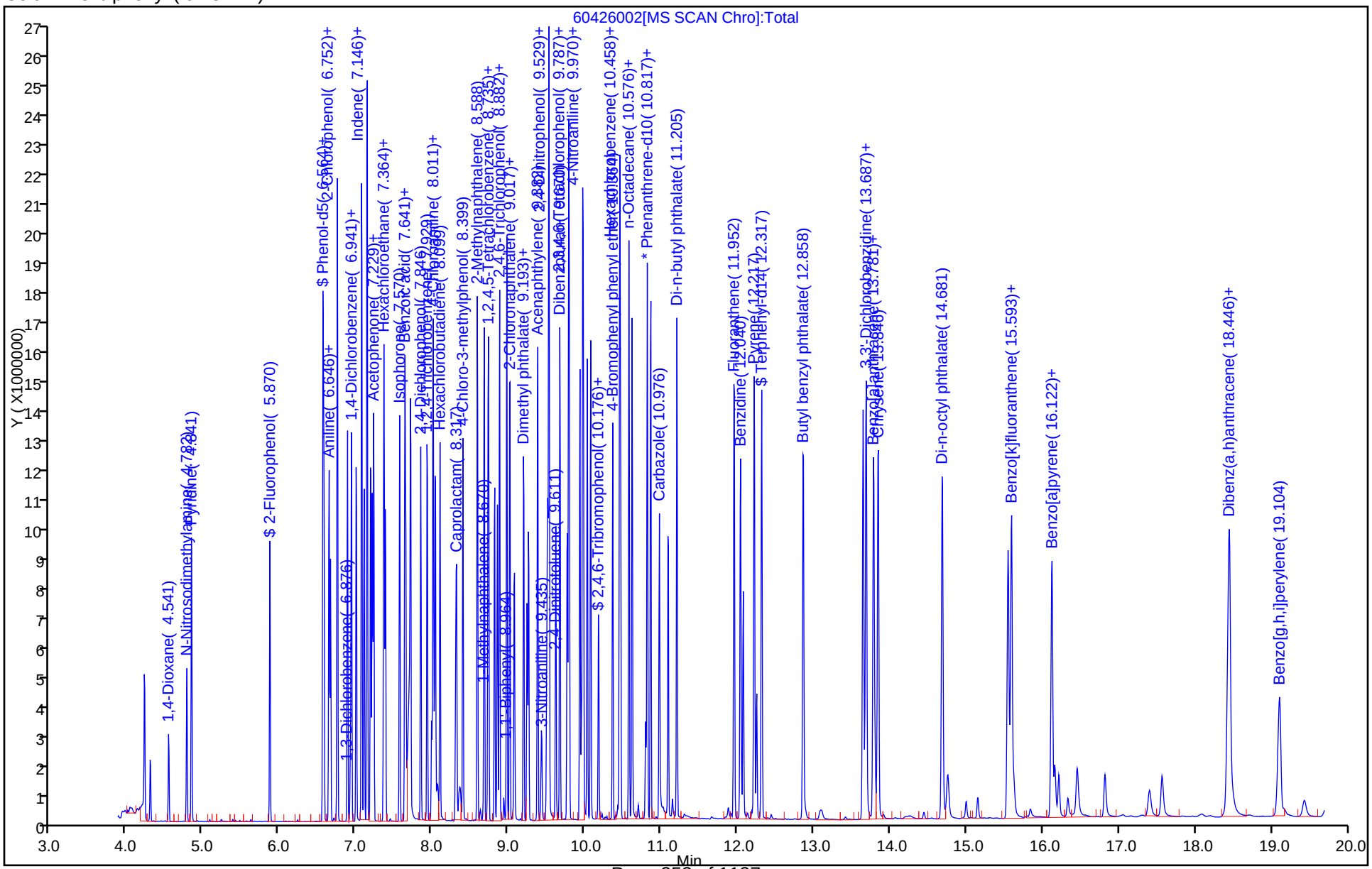
Lims ID: std9 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426003.D
Lims ID: std8 l1lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 26-Apr-2016 08:09:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-003
Misc. Info.: STD8 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:44 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 08:38:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	283127	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1250400	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.499	-0.006	92	664658	400.0	400.0	
* 4 Phenanthrene-d10	188	10.788	10.793	-0.005	98	1014439	400.0	400.0	
* 5 Chrysene-d12	240	13.793	13.799	-0.006	97	987886	400.0	400.0	
* 6 Perylene-d12	264	16.205	16.211	-0.006	96	741137	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	94	1508319	2000.0	1954.0	
$ 8 Phenol-d5	99	6.564	6.564	0.000	96	2115181	2000.0	2178.2	
$ 9 Nitrobenzene-d5	82	7.364	7.370	-0.006	91	2223041	2000.0	2016.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.882	-0.006	100	4003608	2000.0	2036.1	
$ 11 2,4,6-Tribromophenol	330	10.176	10.182	-0.006	93	471933	2000.0	2390.3	
$ 12 Terphenyl-d14	244	12.311	12.317	-0.006	100	3940277	2000.0	2127.9	
26 1,4-Dioxane	88	4.541	4.541	0.000	98	609009	2000.0	1972.3	
27 N-Nitrosodimethylamine	74	4.782	4.782	0.000	87	1278421	2000.0	2069.1	
28 Pyridine	79	4.841	4.841	0.000	89	1953548	2000.0	2250.9	
42 Benzaldehyde	77		6.564				ND	ND	
43 Phenol	94	6.576	6.576	0.000	99	2309466	2000.0	2180.8	
44 Aniline	93	6.641	6.646	-0.005	96	3079101	2000.0	2068.3	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	93	2179327	2000.0	2068.6	
244 n-Decane	57	6.752	6.752	0.000	94	1991306	2000.0	1719.5	
47 2-Chlorophenol	128	6.752	6.758	-0.006	97	1769714	2000.0	2052.5	
48 1,3-Dichlorobenzene	146	6.888	6.888	0.000	98	2066329	2000.0	2001.6	
49 1,4-Dichlorobenzene	146	6.935	6.941	-0.006	93	2119947	2000.0	2025.7	
50 Benzyl alcohol	108	7.000	6.999	0.001	91	1314170	2000.0	2207.4	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1658399	2000.0	2040.0	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	1883136	2000.0	1948.8	
54 2,2'-oxybis[1-chloropropan	45	7.105	7.105	0.000	92	2993961	2000.0	1893.3	
53 Indene	115	7.141	7.146	-0.005	90	6444486	4000.0	3697.5	
55 3 & 4 Methylphenol	108	7.188	7.193	-0.005	93	1945193	2000.0	2246.8	
57 N-Nitrosodi-n-propylamine	70	7.211	7.211	0.000	88	1489193	2000.0	2027.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	2715581	2000.0	2033.1	
61 Hexachloroethane	117	7.358	7.358	0.000	94	785821	2000.0	2026.4	
62 Nitrobenzene	77	7.382	7.382	0.000	90	2179483	2000.0	2054.1	
64 Isophorone	82	7.570	7.570	0.000	98	3900878	2000.0	2016.5	
66 2,4-Dimethylphenol	107	7.635	7.641	-0.006	95	1956505	2000.0	2110.5	
65 2-Nitrophenol	139	7.647	7.652	-0.005	97	1067653	2000.0	2206.6	
70 Benzoic acid	122	7.705	7.711	-0.006	91	2274853	4000.0	4128.5	
69 Bis(2-chloroethoxy)methane	93	7.711	7.717	-0.006	99	2251454	2000.0	1936.7	
72 2,4-Dichlorophenol	162	7.847	7.846	0.001	96	1607554	2000.0	2303.4	
73 1,2,4-Trichlorobenzene	180	7.929	7.935	-0.006	94	1659588	2000.0	2028.9	
74 Naphthalene	128	8.005	8.011	-0.006	98	5707890	2000.0	1914.8	
75 4-Chloroaniline	127	8.017	8.011	0.006	95	1899452	2000.0	1921.6	
76 2,6-Dichlorophenol	162	8.035	8.040	-0.005	96	1577407	2000.0	2152.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	863418	2000.0	2068.2	
83 Caprolactam	113	8.311	8.317	-0.006	76	1059219	4000.0	3794.5	
85 4-Chloro-3-methylphenol	107	8.394	8.399	-0.005	95	1613096	2000.0	2105.9	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	92	3769687	2000.0	1957.1	
87 1-Methylnaphthalene	142	8.676	8.682	-0.006	93	3528966	2000.0	1944.4	
89 Hexachlorocyclopentadiene	237	8.729	8.729	0.000	97	967198	2000.0	2448.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	1478989	2000.0	2127.8	
93 2,4,6-Trichlorophenol	196	8.811	8.817	-0.006	94	1069490	2000.0	2288.0	
94 2,4,5-Trichlorophenol	196	8.846	8.852	-0.006	93	1058206	2000.0	2225.3	
99 1,1'-Biphenyl	154	8.970	8.976	-0.006	95	4423760	2000.0	2004.5	
100 2-Chloronaphthalene	162	9.011	9.017	-0.006	97	3489581	2000.0	2041.8	
101 2-Nitroaniline	65	9.070	9.076	-0.006	83	1191528	2000.0	2182.0	
104 Dimethyl phthalate	163	9.194	9.193	0.001	98	3867899	2000.0	2076.6	
103 1,3-Dinitrobenzene	168	9.241	9.240	0.001	85	646943	2000.0	2361.9	
106 2,6-Dinitrotoluene	165	9.258	9.264	-0.006	94	905227	2000.0	2204.1	
108 Acenaphthylene	152	9.376	9.382	-0.006	98	5342305	2000.0	2068.5	
109 3-Nitroaniline	138	9.423	9.429	-0.006	92	445767	2000.0	1849.5	
110 2,4-Dinitrophenol	184	9.505	9.511	-0.006	81	950841	4000.0	4234.4	
111 Acenaphthene	153	9.523	9.529	-0.006	95	3148375	2000.0	1870.6	
112 4-Nitrophenol	109	9.523	9.529	-0.006	60	1086166	4000.0	4484.8	
113 2,4-Dinitrotoluene	165	9.617	9.617	0.000	92	1195783	2000.0	2286.4	
115 Dibenzofuran	168	9.670	9.670	0.000	96	4814312	2000.0	2013.1	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.770	-0.006	76	816336	2000.0	2297.8	
248 Hexadecane	57	9.782	9.787	-0.005	95	2434452	2000.0	1774.2	
120 Diethyl phthalate	149	9.788	9.793	-0.005	98	3668816	2000.0	1923.3	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.934	-0.005	98	1786502	2000.0	2091.2	
125 4-Nitroaniline	138	9.952	9.958	-0.006	83	662347	2000.0	1944.3	
124 Fluorene	166	9.964	9.970	-0.006	96	3827347	2000.0	1988.7	
127 4,6-Dinitro-2-methylphenol	198	9.976	9.982	-0.006	82	1255369	4000.0	4220.1	
128 N-Nitrosodiphenylamine	169	10.029	10.029	0.000	63	2783662	2000.0	2054.3	
129 Diphenylamine	169	10.029	10.029	0.000	95	2783662	1701.4	1747.6	
131 Azobenzene	77	10.070	10.076	-0.006	99	4373199	2000.0	2001.4	
130 1,2-Diphenylhydrazine	77	10.070	10.076	-0.006	97	4373199	2000.0	2001.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.364	-0.006	70	1032944	2000.0	2191.3	
141 Atrazine	200	10.452	10.458	-0.006	94	1938293	4000.0	4169.7	
140 Hexachlorobenzene	284	10.464	10.470	-0.006	94	1045057	2000.0	2150.8	
245 n-Octadecane	57	10.570	10.576	-0.006	93	2755086	2000.0	1912.9	
143 Pentachlorophenol	266	10.617	10.617	0.000	93	1357913	4000.0	4169.5	
148 Phenanthrene	178	10.811	10.817	-0.006	97	5340963	2000.0	2039.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.858	10.864	-0.006	97	5496985	2000.0	2082.5	
150 Carbazole	167	10.970	10.976	-0.006	96	3743482	2000.0	1825.1	
154 Di-n-butyl phthalate	149	11.199	11.205	-0.006	100	6372767	2000.0	1946.8	
159 Fluoranthene	202	11.946	11.958	-0.012	98	5443901	2000.0	2157.1	
160 Benzidine	184	12.029	12.040	-0.011	99	4177001	4000.0	4082.4	
161 Pyrene	202	12.211	12.217	-0.006	97	5617234	2000.0	2110.4	
169 Butyl benzyl phthalate	149	12.852	12.864	-0.012	98	2806057	2000.0	2147.4	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.646	-0.012	98	3921910	2000.0	2266.5	
177 3,3'-Dichlorobenzidine	252	13.676	13.687	-0.011	74	3396710	4000.0	4483.3	
178 Benzo[a]anthracene	228	13.776	13.781	-0.005	99	5109475	2000.0	2161.3	
179 Chrysene	228	13.834	13.846	-0.012	98	4838377	2000.0	2087.7	
181 Di-n-octyl phthalate	149	14.675	14.681	-0.006	99	6591452	2000.0	2072.2	
183 Benzo[b]fluoranthene	252	15.534	15.546	-0.012	98	4625299	2000.0	2251.6	
184 Benzo[k]fluoranthene	252	15.581	15.593	-0.012	99	4742785	2000.0	2082.4	
185 Benzo[a]pyrene	252	16.111	16.122	-0.011	79	4330428	2000.0	2299.4	
190 Indeno[1,2,3-cd]pyrene	276	18.422	18.440	-0.018	98	4407046	2000.0	2293.6	
189 Dibenz(a,h)anthracene	278	18.428	18.452	-0.024	91	3872819	2000.0	2312.4	
191 Benzo[g,h,i]perylene	276	19.087	19.104	-0.017	96	3301597	2000.0	2162.3	
S 246 Total Cresols	100				0			4286.8	
S 193 Methyl Phenols,Total	100				0			4286.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST1 L8 W_00007 Amount Added: 0.10 Units: mL

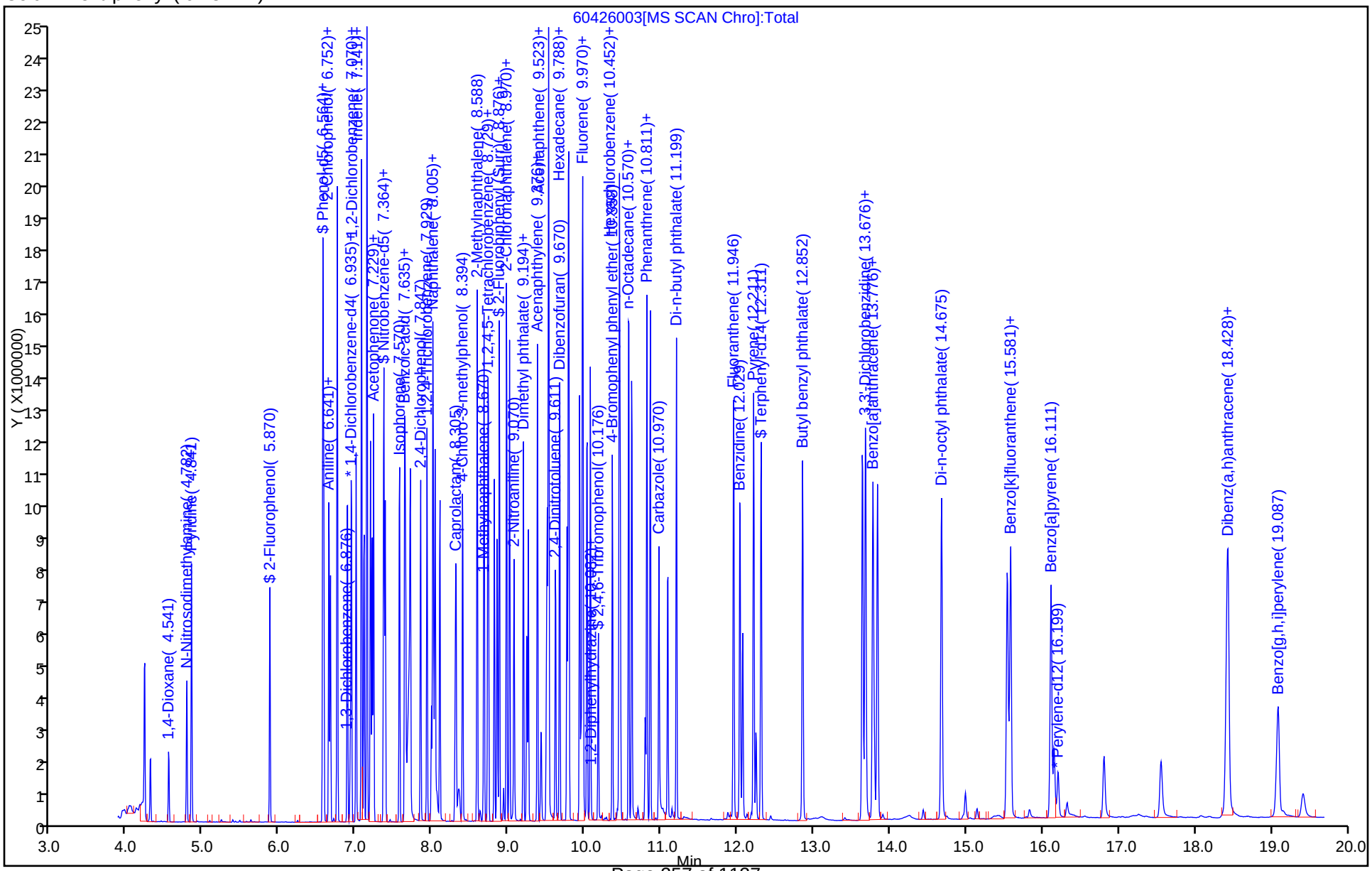
Report Date: 27-Apr-2016 07:29:45 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426003.D

Injection Date:	26-Apr-2016 08:09:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std8 l1lvi			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426004.D
Lims ID: std7 l1lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 26-Apr-2016 08:34:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-004
Misc. Info.: STD7 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:47 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:57:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	294871	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1280933	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.499	-0.006	91	699923	400.0	400.0	
* 4 Phenanthrene-d10	188	10.788	10.793	-0.005	97	1070140	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.799	-0.012	97	1013737	400.0	400.0	
* 6 Perylene-d12	264	16.199	16.211	-0.012	96	771624	400.0	400.0	
$ 7 2-Fluorophenol	112	5.870	5.870	0.000	94	1259917	1500.0	1567.2	
$ 8 Phenol-d5	99	6.564	6.564	0.000	97	1576386	1500.0	1558.7	
$ 9 Nitrobenzene-d5	82	7.364	7.370	-0.006	91	1737381	1500.0	1538.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.882	-0.006	100	3139161	1500.0	1516.1	
$ 11 2,4,6-Tribromophenol	330	10.176	10.182	-0.006	95	357275	1500.0	1718.4	
$ 12 Terphenyl-d14	244	12.305	12.317	-0.012	99	3033813	1500.0	1596.6	
26 1,4-Dioxane	88	4.541	4.541	0.000	99	543365	1500.0	1689.6	
27 N-Nitrosodimethylamine	74	4.776	4.782	-0.006	88	1001385	1500.0	1556.2	
28 Pyridine	79	4.841	4.841	0.000	89	1527918	1500.0	1690.3	
42 Benzaldehyde	77	6.564	6.564	0.000	89	1255402	3000.0	3045.2	
43 Phenol	94	6.576	6.576	0.000	99	1681485	1500.0	1524.6	
44 Aniline	93	6.641	6.646	-0.005	96	2445461	1500.0	1577.3	
45 Bis(2-chloroethyl)ether	93	6.664	6.664	0.000	97	1627829	1500.0	1483.6	
244 n-Decane	57	6.752	6.752	0.000	94	1707375	1500.0	1415.6	
47 2-Chlorophenol	128	6.752	6.758	-0.006	97	1372089	1500.0	1528.0	
48 1,3-Dichlorobenzene	146	6.882	6.888	-0.006	97	1641654	1500.0	1526.9	
49 1,4-Dichlorobenzene	146	6.935	6.941	-0.006	92	1666372	1500.0	1528.8	
50 Benzyl alcohol	108	7.000	6.999	0.001	91	1038263	1500.0	1674.5	
52 2-Methylphenol	108	7.070	7.070	0.000	89	1357745	1500.0	1603.7	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	1505398	1500.0	1495.9	
54 2,2'-oxybis[1-chloropropan	45	7.100	7.105	-0.005	92	2386488	1500.0	1449.0	
53 Indene	115	7.141	7.146	-0.005	90	5259989	3000.0	2897.7	
55 3 & 4 Methylphenol	108	7.188	7.193	-0.005	92	1534099	1500.0	1701.4	
57 N-Nitrosodi-n-propylamine	70	7.205	7.211	-0.006	89	1179988	1500.0	1542.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	2119007	1500.0	1523.3	
61 Hexachloroethane	117	7.358	7.358	0.000	96	618158	1500.0	1530.5	
62 Nitrobenzene	77	7.382	7.382	0.000	90	1703798	1500.0	1567.5	
64 Isophorone	82	7.564	7.570	-0.006	98	3035213	1500.0	1531.6	
66 2,4-Dimethylphenol	107	7.635	7.641	-0.006	95	1553578	1500.0	1635.9	
65 2-Nitrophenol	139	7.647	7.652	-0.005	96	823662	1500.0	1661.8	
70 Benzoic acid	122	7.694	7.711	-0.017	90	1767481	3000.0	3165.3	
69 Bis(2-chloroethoxy)methane	93	7.711	7.717	-0.006	99	1809554	1500.0	1519.5	
72 2,4-Dichlorophenol	162	7.847	7.846	0.001	96	1237277	1500.0	1730.6	
73 1,2,4-Trichlorobenzene	180	7.929	7.935	-0.006	94	1294859	1500.0	1545.3	
74 Naphthalene	128	8.005	8.011	-0.006	98	4500883	1500.0	1473.9	
75 4-Chloroaniline	127	8.011	8.011	0.000	97	1372190	1500.0	1355.1	
76 2,6-Dichlorophenol	162	8.035	8.040	-0.005	95	1221466	1500.0	1626.7	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	658397	1500.0	1539.5	
83 Caprolactam	113	8.305	8.317	-0.012	76	830416	3000.0	2904.0	
85 4-Chloro-3-methylphenol	107	8.394	8.399	-0.005	95	1277735	1500.0	1628.3	
86 2-Methylnaphthalene	142	8.588	8.588	0.000	92	2980336	1500.0	1510.4	
87 1-Methylnaphthalene	142	8.676	8.682	-0.006	93	2780691	1500.0	1495.6	
89 Hexachlorocyclopentadiene	237	8.723	8.729	-0.006	97	730181	1500.0	1755.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	1153457	1500.0	1575.8	
93 2,4,6-Trichlorophenol	196	8.811	8.817	-0.006	94	810874	1500.0	1647.3	
94 2,4,5-Trichlorophenol	196	8.846	8.852	-0.006	93	817857	1500.0	1633.2	
99 1,1'-Biphenyl	154	8.970	8.976	-0.006	95	3502522	1500.0	1507.1	
100 2-Chloronaphthalene	162	9.011	9.017	-0.006	97	2738315	1500.0	1521.5	
101 2-Nitroaniline	65	9.070	9.076	-0.006	83	957536	1500.0	1665.1	
104 Dimethyl phthalate	163	9.194	9.193	0.001	99	3035648	1500.0	1547.6	
103 1,3-Dinitrobenzene	168	9.235	9.240	-0.005	84	507504	1500.0	1759.5	
106 2,6-Dinitrotoluene	165	9.258	9.264	-0.006	93	709378	1500.0	1640.2	
108 Acenaphthylene	152	9.376	9.382	-0.006	98	4212038	1500.0	1548.7	
109 3-Nitroaniline	138	9.423	9.429	-0.006	92	306270	1500.0	1206.7	
110 2,4-Dinitrophenol	184	9.505	9.511	-0.006	82	705771	3000.0	3040.3	
111 Acenaphthene	153	9.523	9.529	-0.006	95	2584432	1500.0	1458.2	
112 4-Nitrophenol	109	9.523	9.529	-0.006	59	865875	3000.0	3395.1	
113 2,4-Dinitrotoluene	165	9.611	9.617	-0.006	91	918418	1500.0	1667.6	
115 Dibenzofuran	168	9.664	9.670	-0.006	96	3786598	1500.0	1503.6	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.770	-0.006	75	631592	1500.0	1688.2	
248 Hexadecane	57	9.782	9.787	-0.005	93	2000096	1500.0	1384.2	
120 Diethyl phthalate	149	9.788	9.793	-0.005	98	2894538	1500.0	1441.0	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.934	-0.005	96	1389520	1500.0	1544.5	
125 4-Nitroaniline	138	9.946	9.958	-0.012	83	534739	1500.0	1490.6	
124 Fluorene	166	9.964	9.970	-0.006	95	3028183	1500.0	1494.2	
127 4,6-Dinitro-2-methylphenol	198	9.976	9.982	-0.006	86	933281	3000.0	3017.1	
128 N-Nitrosodiphenylamine	169	10.023	10.029	-0.006	63	2191130	1500.0	1532.9	
129 Diphenylamine	169	10.023	10.029	-0.006	95	2191130	1276.1	1304.0	
131 Azobenzene	77	10.070	10.076	-0.006	99	3525461	1500.0	1529.5	
130 1,2-Diphenylhydrazine	77	10.070	10.076	-0.006	97	3525461	1500.0	1529.5	
138 4-Bromophenyl phenyl ether	248	10.358	10.364	-0.006	71	794236	1500.0	1597.2	
141 Atrazine	200	10.446	10.458	-0.012	93	1532823	3000.0	3125.8	
140 Hexachlorobenzene	284	10.458	10.470	-0.012	93	809080	1500.0	1578.5	
245 n-Octadecane	57	10.570	10.576	-0.006	92	2260953	1500.0	1488.1	
143 Pentachlorophenol	266	10.611	10.617	-0.006	91	1037711	3000.0	3041.9	
148 Phenanthrene	178	10.811	10.817	-0.006	97	4169234	1500.0	1509.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.864	-0.012	98	4336033	1500.0	1557.2	
150 Carbazole	167	10.970	10.976	-0.006	96	2994760	1500.0	1384.0	
154 Di-n-butyl phthalate	149	11.199	11.205	-0.006	100	5060134	1500.0	1465.4	
159 Fluoranthene	202	11.946	11.958	-0.012	98	4242654	1500.0	1593.6	
160 Benzidine	184	12.029	12.040	-0.011	99	3049016	3000.0	2973.3	
161 Pyrene	202	12.205	12.217	-0.012	97	4340531	1500.0	1589.2	
169 Butyl benzyl phthalate	149	12.852	12.864	-0.012	98	2160300	1500.0	1611.1	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.646	-0.012	98	3015513	1500.0	1698.2	
177 3,3'-Dichlorobenzidine	252	13.676	13.687	-0.011	75	2551454	3000.0	3281.8	
178 Benzo[a]anthracene	228	13.770	13.781	-0.011	99	3863753	1500.0	1592.7	
179 Chrysene	228	13.829	13.846	-0.018	98	3725543	1500.0	1566.6	
181 Di-n-octyl phthalate	149	14.670	14.681	-0.011	99	4972592	1500.0	1510.3	
183 Benzo[b]fluoranthene	252	15.534	15.546	-0.012	98	3436754	1500.0	1606.9	
184 Benzo[k]fluoranthene	252	15.575	15.593	-0.018	99	3685038	1500.0	1554.0	
185 Benzo[a]pyrene	252	16.105	16.122	-0.017	79	3289357	1500.0	1677.6	
190 Indeno[1,2,3-cd]pyrene	276	18.416	18.440	-0.024	98	3351091	1500.0	1675.2	
189 Dibenz(a,h)anthracene	278	18.422	18.452	-0.030	91	2924308	1500.0	1677.0	
191 Benzo[g,h,i]perylene	276	19.075	19.104	-0.029	95	2557919	1500.0	1609.1	
S 246 Total Cresols	100				0			3305.1	
S 193 Methyl Phenols,Total	100				0			3305.1	

Reagents:

SMLIST1 L7 W_00007 Amount Added: 0.10 Units: mL

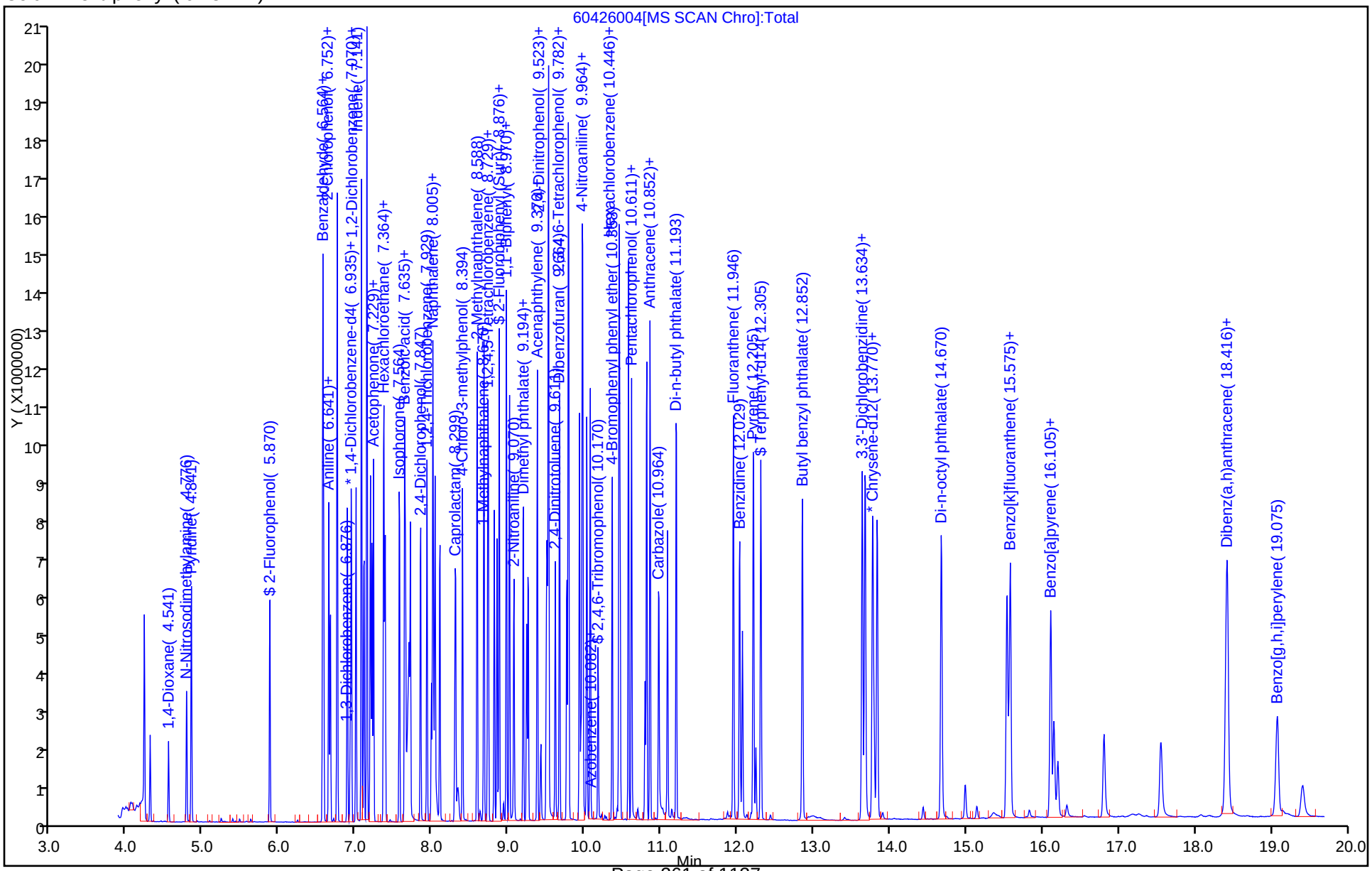
Report Date: 27-Apr-2016 07:29:48 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426004.D

Injection Date:	26-Apr-2016 08:34:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std7 l1lvi			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426005.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 26-Apr-2016 08:59:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-005
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:49 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:27:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	293740	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1248544	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	93	672048	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	998374	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.787	0.000	96	962653	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	715790	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	757551	1000.0	945.9	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	973558	1000.0	966.3	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	1107441	1000.0	1006.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	1965261	1000.0	988.5	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	86	207986	1000.0	1041.8	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	1805150	1000.0	1000.4	
26 1,4-Dioxane	88	4.535	4.535	0.000	99	337577	1000.0	1053.7	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	87	637190	1000.0	994.0	
28 Pyridine	79	4.835	4.835	0.000	88	922807	1000.0	1024.8	
42 Benzaldehyde	77	6.564	6.564	0.000	92	937598	2000.0	1920.4	
43 Phenol	94	6.570	6.570	0.000	98	1051882	1000.0	957.4	
44 Aniline	93	6.641	6.641	0.000	96	1590734	1000.0	1029.9	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	93	996750	1000.0	911.9	
244 n-Decane	57	6.752	6.752	0.000	93	1158866	1000.0	964.5	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	896516	1000.0	1002.2	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	1055741	1000.0	985.7	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	1055356	1000.0	972.0	
50 Benzyl alcohol	108	6.999	6.999	0.000	91	654717	1000.0	1060.0	
52 2-Methylphenol	108	7.070	7.070	0.000	88	869333	1000.0	1030.7	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	970727	1000.0	968.3	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	1563034	1000.0	952.7	
53 Indene	115	7.141	7.141	0.000	91	3528150	2000.0	1951.1	
55 3 & 4 Methylphenol	108	7.188	7.188	0.000	92	969188	1000.0	1079.0	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	91	747609	1000.0	981.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	94	1345213	1000.0	970.7	
61 Hexachloroethane	117	7.358	7.358	0.000	95	397939	1000.0	989.1	
62 Nitrobenzene	77	7.382	7.382	0.000	91	1072001	1000.0	1011.8	
64 Isophorone	82	7.564	7.564	0.000	98	1922922	1000.0	995.5	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	967738	1000.0	1045.5	
65 2-Nitrophenol	139	7.646	7.646	0.000	96	518965	1000.0	1074.2	
70 Benzoic acid	122	7.682	7.682	0.000	93	962951	2000.0	1831.4	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	99	1153478	1000.0	993.7	
72 2,4-Dichlorophenol	162	7.846	7.846	0.000	96	770595	1000.0	1105.8	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	810230	1000.0	992.0	
74 Naphthalene	128	8.005	8.005	0.000	96	2893169	1000.0	972.0	
75 4-Chloroaniline	127	8.017	8.017	0.000	96	1056699	1000.0	1070.6	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	96	763809	1000.0	1043.6	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	413322	1000.0	991.5	
83 Caprolactam	113	8.293	8.293	0.000	76	556319	2000.0	1995.9	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	793203	1000.0	1037.1	
86 2-Methylnaphthalene	142	8.587	8.587	0.000	93	1881498	1000.0	978.2	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	1750507	1000.0	965.9	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	97	432468	1000.0	1082.5	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	99	714000	1000.0	1015.9	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	498789	1000.0	1055.3	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	92	496697	1000.0	1033.0	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	2197161	1000.0	984.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	1713426	1000.0	991.5	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	579581	1000.0	1049.7	
104 Dimethyl phthalate	163	9.187	9.187	0.000	98	1886923	1000.0	1001.9	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.000	84	300589	1000.0	1085.3	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	92	429987	1000.0	1035.4	
108 Acenaphthylene	152	9.376	9.376	0.000	98	2662189	1000.0	1019.4	
109 3-Nitroaniline	138	9.417	9.417	0.000	92	204493	1000.0	839.1	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	81	378547	2000.0	1781.4	
111 Acenaphthene	153	9.523	9.523	0.000	95	1672134	1000.0	982.6	
112 4-Nitrophenol	109	9.517	9.517	0.000	88	524981	2000.0	2143.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	91	554451	1000.0	1048.5	
115 Dibenzofuran	168	9.664	9.664	0.000	96	2401480	1000.0	993.1	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	76	371464	1000.0	1034.1	
248 Hexadecane	57	9.782	9.782	0.000	93	1346821	1000.0	970.7	
120 Diethyl phthalate	149	9.787	9.787	0.000	98	1825619	1000.0	946.5	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	858027	1000.0	993.3	
125 4-Nitroaniline	138	9.946	9.946	0.000	84	367364	1000.0	1066.5	
124 Fluorene	166	9.964	9.964	0.000	95	1938355	1000.0	996.1	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	87	538554	2000.0	1921.9	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	63	1364072	1000.0	1022.9	
129 Diphenylamine	169	10.023	10.023	0.000	95	1364072	850.7	870.2	
131 Azobenzene	77	10.070	10.070	0.000	99	2235089	1000.0	1039.4	
130 1,2-Diphenylhydrazine	77	10.070	10.070	0.000	98	2235089	1000.0	1039.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	73	475981	1000.0	1026.0	
141 Atrazine	200	10.446	10.446	0.000	91	940653	2000.0	2056.1	
140 Hexachlorobenzene	284	10.458	10.458	0.000	93	481744	1000.0	1007.4	
245 n-Octadecane	57	10.570	10.570	0.000	92	1490361	1000.0	1051.5	
143 Pentachlorophenol	266	10.611	10.611	0.000	91	616620	2000.0	1965.8	
148 Phenanthrene	178	10.811	10.811	0.000	98	2577944	1000.0	1000.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	97	2690779	1000.0	1035.8	
150 Carbazole	167	10.964	10.964	0.000	96	1957495	1000.0	969.7	
154 Di-n-butyl phthalate	149	11.199	11.199	0.000	100	3157556	1000.0	980.1	
159 Fluoranthene	202	11.946	11.946	0.000	98	2575180	1000.0	1036.8	
160 Benzidine	184	12.023	12.023	0.000	99	1711129	2000.0	1855.5	
161 Pyrene	202	12.205	12.205	0.000	97	2636367	1000.0	1016.5	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	1308269	1000.0	1027.4	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	97	1773685	1000.0	1051.9	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	75	1549886	2000.0	2099.3	
178 Benzo[a]anthracene	228	13.770	13.770	0.000	99	2314652	1000.0	1004.8	
179 Chrysene	228	13.828	13.828	0.000	98	2209529	1000.0	978.4	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	2924804	1000.0	969.3	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	99	2068551	1000.0	1042.6	
184 Benzo[k]fluoranthene	252	15.569	15.569	0.000	99	2144816	1000.0	975.0	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	80	1909976	1000.0	1050.1	
190 Indeno[1,2,3-cd]pyrene	276	18.399	18.399	0.000	97	1979301	1000.0	1066.6	
189 Dibenz(a,h)anthracene	278	18.410	18.410	0.000	92	1697335	1000.0	1049.3	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	94	1533923	1000.0	1040.2	

Reagents:

SMLIST1 L6 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:51 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426005.D

Injection Date: 26-Apr-2016 08:59:30 Instrument ID: A4AG2 Operator ID:

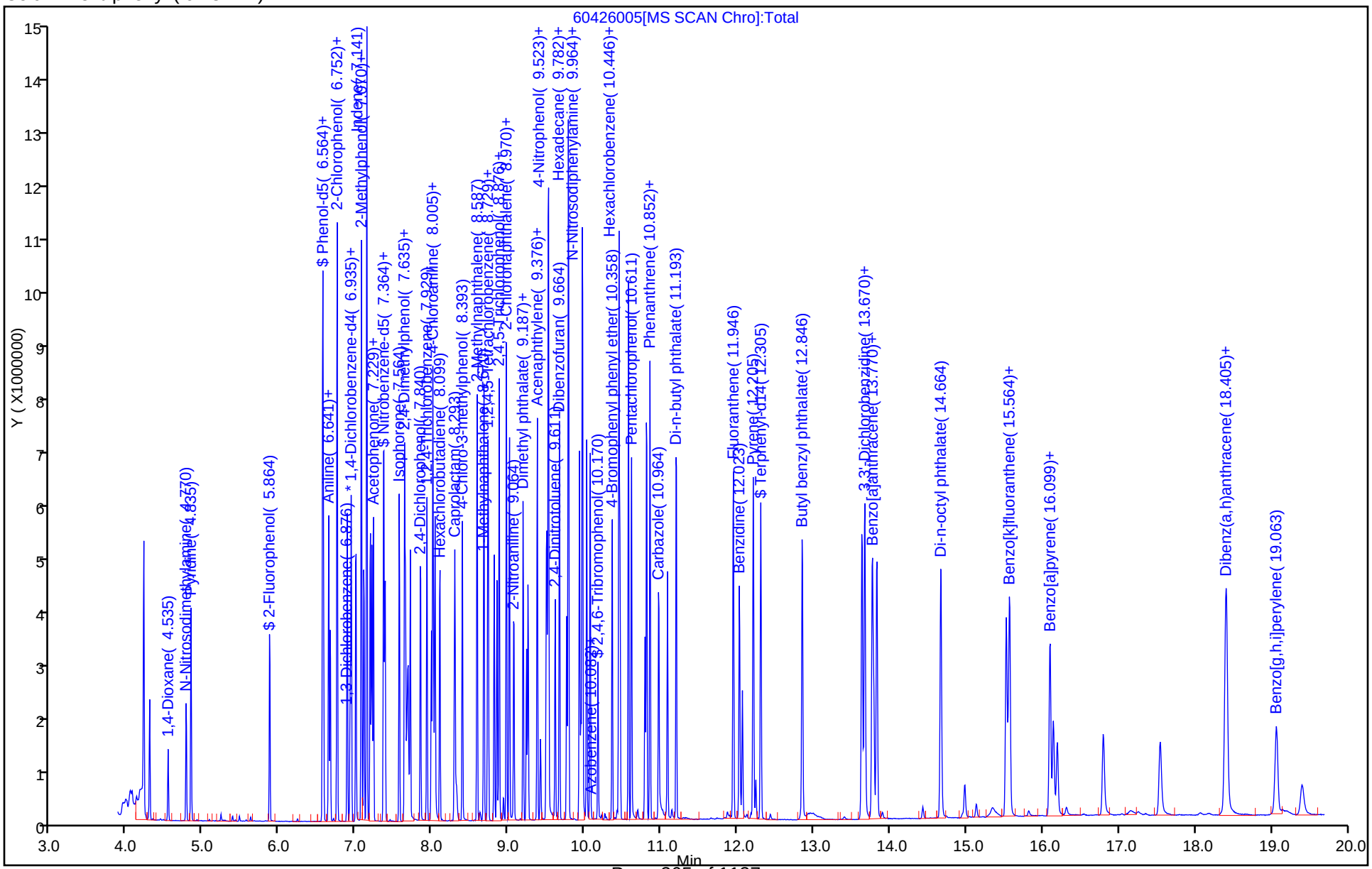
Lims ID: std6 l1lvi Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 27-Apr-2016 07:29:55 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426006.D
Lims ID: std5 l1lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Apr-2016 09:23:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-006
Misc. Info.: STD5 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:53 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:03:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	291345	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1241077	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	676439	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1026922	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.787	0.000	97	995937	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	727059	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	389188	500.0	490.0	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	432206	500.0	432.5	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	554051	500.0	506.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	989245	500.0	494.3	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	85	95114	500.0	473.3	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	888875	500.0	476.1	
26 1,4-Dioxane	88	4.535	4.535	0.000	96	155649	500.0	489.9	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	87	314627	500.0	494.9	
28 Pyridine	79	4.835	4.835	0.000	88	427143	500.0	478.3	
42 Benzaldehyde	77	6.564	6.564	0.000	93	580416	1000.0	1043.5	
43 Phenol	94	6.570	6.570	0.000	98	473316	500.0	434.3	
44 Aniline	93	6.641	6.641	0.000	96	807805	500.0	527.3	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	94	504462	500.0	465.3	
244 n-Decane	57	6.746	6.752	-0.006	93	629858	500.0	528.6	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	435465	500.0	490.8	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	530701	500.0	499.6	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	531521	500.0	493.6	
50 Benzyl alcohol	108	6.994	6.999	-0.005	91	313943	500.0	512.4	
52 2-Methylphenol	108	7.070	7.070	0.000	97	410333	500.0	490.5	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	95	496492	500.0	499.3	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	813502	500.0	499.9	
53 Indene	115	7.141	7.141	0.000	91	1839694	1000.0	1025.7	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	94	446099	500.0	500.7	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	92	372677	500.0	493.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	94	674774	500.0	490.9	
61 Hexachloroethane	117	7.358	7.358	0.000	93	200408	500.0	502.2	
62 Nitrobenzene	77	7.376	7.382	-0.006	91	533568	500.0	506.6	
64 Isophorone	82	7.564	7.564	0.000	98	969058	500.0	504.7	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	94	486096	500.0	528.3	
65 2-Nitrophenol	139	7.646	7.646	0.000	95	241299	500.0	502.5	
70 Benzoic acid	122	7.664	7.682	-0.018	92	408235	1000.0	862.0	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	98	584439	500.0	506.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	97	372483	500.0	537.7	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	399292	500.0	491.8	
74 Naphthalene	128	8.005	8.005	0.000	98	1458617	500.0	493.0	
75 4-Chloroaniline	127	8.017	8.017	0.000	95	533216	500.0	543.5	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	95	374659	500.0	515.0	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	98	200479	500.0	483.8	
83 Caprolactam	113	8.288	8.293	-0.005	75	305065	1000.0	1101.1	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	389179	500.0	511.9	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	93	946462	500.0	495.1	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	877790	500.0	487.3	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	96	196777	500.0	489.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	352462	500.0	498.2	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	237996	500.0	500.3	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	91	232949	500.0	481.3	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	96	1100099	500.0	489.8	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	853681	500.0	490.8	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	287319	500.0	517.0	
104 Dimethyl phthalate	163	9.187	9.187	0.000	98	934760	500.0	493.1	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	83	142589	500.0	511.5	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	93	219608	500.0	525.4	
108 Acenaphthylene	152	9.376	9.376	0.000	98	1345049	500.0	511.7	
109 3-Nitroaniline	138	9.417	9.417	0.000	93	128776	500.0	525.0	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	77	147517	1000.0	805.1	
111 Acenaphthene	153	9.523	9.523	0.000	95	854995	500.0	499.2	
112 4-Nitrophenol	109	9.517	9.517	0.000	94	241106	1000.0	978.2	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	91	272299	500.0	511.6	
115 Dibenzofuran	168	9.664	9.664	0.000	96	1190297	500.0	489.0	
118 2,3,4,6-Tetrachlorophenol	232	9.758	9.764	-0.006	81	181049	500.0	500.7	
248 Hexadecane	57	9.782	9.782	0.000	93	741718	500.0	531.1	
120 Diethyl phthalate	149	9.787	9.787	0.000	97	944071	500.0	486.3	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	431750	500.0	496.6	
125 4-Nitroaniline	138	9.946	9.946	0.000	83	200842	500.0	579.3	
124 Fluorene	166	9.964	9.964	0.000	95	977515	500.0	499.1	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	76	229646	1000.0	882.1	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	64	686867	500.0	500.7	
129 Diphenylamine	169	10.023	10.023	0.000	94	686867	425.4	426.0	
131 Azobenzene	77	10.064	10.070	-0.006	99	1149321	500.0	519.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	1148759	500.0	519.4	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	75	231976	500.0	486.1	
141 Atrazine	200	10.446	10.446	0.000	90	487456	1000.0	1035.9	
140 Hexachlorobenzene	284	10.458	10.458	0.000	92	233347	500.0	474.4	
245 n-Octadecane	57	10.570	10.570	0.000	91	781812	500.0	536.2	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	270656	1000.0	883.5	
148 Phenanthrene	178	10.805	10.811	-0.006	98	1280870	500.0	483.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	1319281	500.0	493.7	
150 Carbazole	167	10.964	10.964	0.000	96	1042291	500.0	502.0	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	100	1607753	500.0	485.2	
159 Fluoranthene	202	11.940	11.946	-0.006	99	1288992	500.0	504.5	
160 Benzidine	184	12.023	12.023	0.000	99	588179	1000.0	777.0	
161 Pyrene	202	12.205	12.205	0.000	97	1305143	500.0	486.4	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	633270	500.0	480.7	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.628	0.006	97	855274	500.0	490.3	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	76	760454	1000.0	995.6	
178 Benzo[a]anthracene	228	13.770	13.770	0.000	99	1150329	500.0	482.7	
179 Chrysene	228	13.828	13.828	0.000	98	1113229	500.0	476.5	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	1352358	500.0	458.6	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	98	1006071	500.0	499.2	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	98	1054530	500.0	472.0	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	80	909683	500.0	492.4	
190 Indeno[1,2,3-cd]pyrene	276	18.405	18.399	0.006	97	938866	500.0	498.1	
189 Dibenz(a,h)anthracene	278	18.410	18.410	0.000	91	808562	500.0	492.1	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	95	737333	500.0	492.3	
S 246 Total Cresols	100				0			991.3	
S 193 Methyl Phenols,Total	100				0			991.3	

Reagents:

SMLIST1 L5 W_00007 Amount Added: 0.10 Units: mL

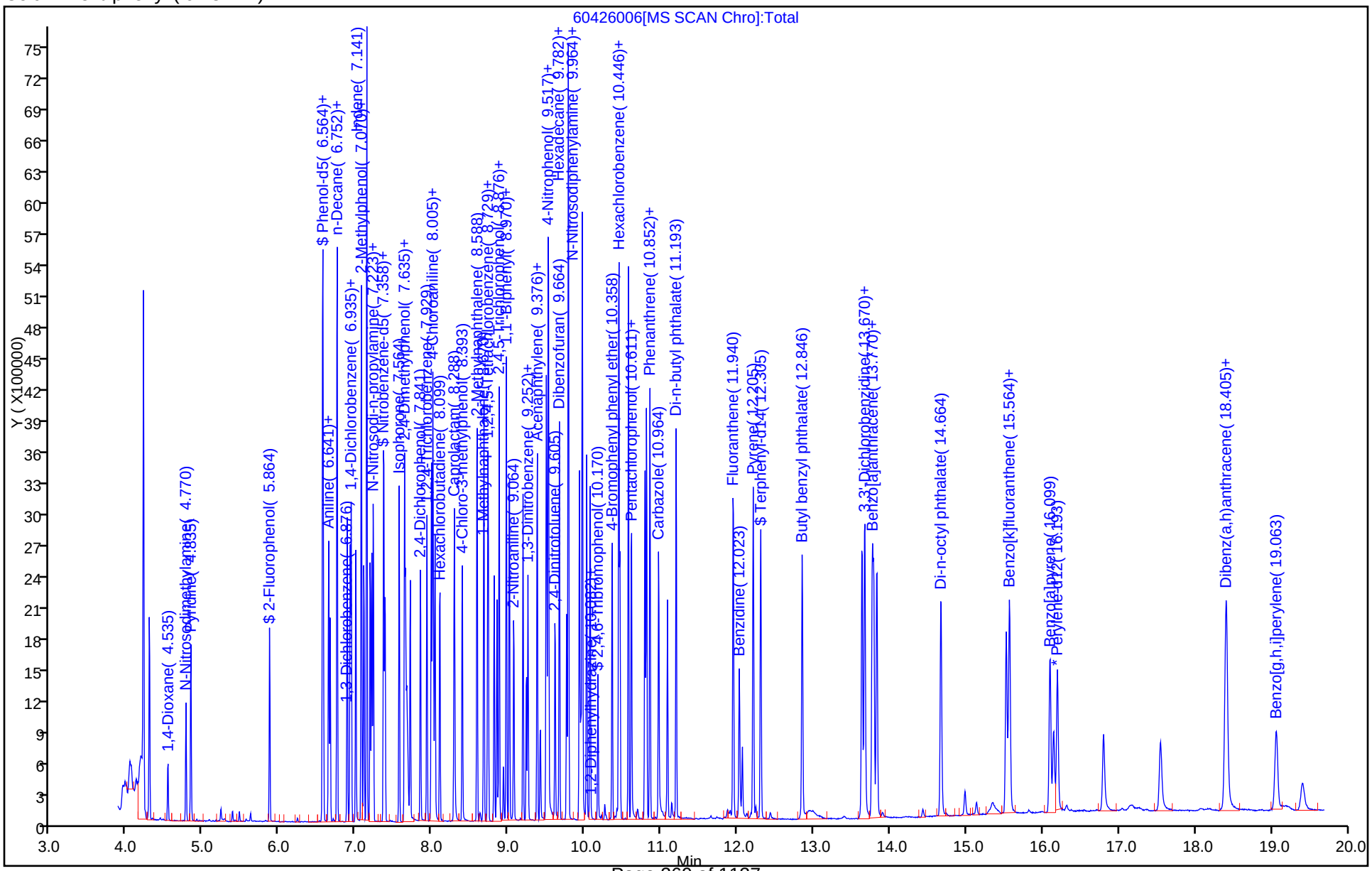
Report Date: 27-Apr-2016 07:29:55 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426006.D

Injection Date:	26-Apr-2016 09:23:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std5 l1lvi			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D
Lims ID: std4 l1lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Apr-2016 09:48:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-007
Misc. Info.: STD4 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:56 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 10:23:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	283535	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1259321	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	694783	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1063959	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	988928	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	773740	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	161042	200.0	208.3	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	196628	200.0	202.2	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	231167	200.0	208.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	410646	200.0	199.8	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	84	37700	200.0	182.7	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	364061	200.0	196.4	
26 1,4-Dioxane	88	4.535	4.535	0.000	98	59264	200.0	191.7	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	86	120673	200.0	195.0	
28 Pyridine	79	4.835	4.835	0.000	87	157436	200.0	181.1	
42 Benzaldehyde	77	6.564	6.564	0.000	92	277280	400.0	439.6	
43 Phenol	94	6.570	6.570	0.000	98	213435	200.0	201.3	
44 Aniline	93	6.641	6.641	0.000	97	318398	200.0	213.6	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	95	211022	200.0	200.0	
244 n-Decane	57	6.747	6.752	-0.005	92	260836	200.0	224.9	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	177087	200.0	205.1	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	209728	200.0	202.9	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	93	215028	200.0	205.2	
50 Benzyl alcohol	108	6.994	6.999	-0.005	92	111800	200.0	187.5	
52 2-Methylphenol	108	7.064	7.070	-0.006	98	163786	200.0	201.2	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	94	204083	200.0	210.9	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	345355	200.0	218.1	
53 Indene	115	7.141	7.141	0.000	91	767438	400.0	439.7	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	93	150020	200.0	173.0	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	92	158200	200.0	215.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	93	278080	200.0	207.9	
61 Hexachloroethane	117	7.358	7.358	0.000	94	79554	200.0	204.8	
62 Nitrobenzene	77	7.376	7.382	-0.006	92	214201	200.0	200.4	
64 Isophorone	82	7.564	7.564	0.000	98	403101	200.0	206.9	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	181808	200.0	194.7	
65 2-Nitrophenol	139	7.646	7.646	0.000	96	97551	200.0	200.2	
70 Benzoic acid	122	7.641	7.682	-0.041	93	138266	400.0	381.7	M
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	98	249948	200.0	213.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	96	116195	200.0	165.3	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	93	164785	200.0	200.0	
74 Naphthalene	128	8.005	8.005	0.000	98	616483	200.0	205.3	
75 4-Chloroaniline	127	8.011	8.017	-0.006	95	241749	200.0	242.8	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	95	148307	200.0	200.9	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	80351	200.0	191.1	
83 Caprolactam	113	8.282	8.293	-0.011	76	128189	400.0	456.0	
85 4-Chloro-3-methylphenol	107	8.388	8.393	-0.005	95	155156	200.0	201.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	93	397448	200.0	204.9	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	372596	200.0	203.8	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	95	73338	200.0	177.6	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	145562	200.0	200.3	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	91859	200.0	188.0	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	91	95201	200.0	191.5	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	472521	200.0	204.8	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	361553	200.0	202.4	
101 2-Nitroaniline	65	9.064	9.064	0.000	81	110737	200.0	194.0	
104 Dimethyl phthalate	163	9.188	9.187	0.001	97	387667	200.0	199.1	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	83	51270	200.0	179.1	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	91	83062	200.0	193.5	
108 Acenaphthylene	152	9.376	9.376	0.000	98	548921	200.0	203.3	
109 3-Nitroaniline	138	9.411	9.417	-0.006	91	70893	200.0	281.4	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	77	45564	400.0	373.8	
112 4-Nitrophenol	109	9.517	9.517	0.000	94	87392	400.0	345.2	
111 Acenaphthene	153	9.523	9.523	0.000	95	358390	200.0	203.7	
113 2,4-Dinitrotoluene	165	9.605	9.611	-0.006	90	104862	200.0	191.8	
115 Dibenzofuran	168	9.664	9.664	0.000	96	498812	200.0	199.5	
118 2,3,4,6-Tetrachlorophenol	232	9.758	9.764	-0.006	79	71296	200.0	192.0	
248 Hexadecane	57	9.782	9.782	0.000	88	329060	200.0	229.4	
120 Diethyl phthalate	149	9.788	9.787	0.001	97	419175	200.0	210.2	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	97	175743	200.0	196.8	
125 4-Nitroaniline	138	9.946	9.946	0.000	84	82204	200.0	230.8	
124 Fluorene	166	9.964	9.964	0.000	95	415678	200.0	206.6	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	75	73053	400.0	371.9	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	63	291450	200.0	205.1	
129 Diphenylamine	169	10.023	10.023	0.000	94	291450	170.1	174.5	
131 Azobenzene	77	10.064	10.070	-0.006	99	476376	200.0	207.9	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	476641	200.0	208.0	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	75	95843	200.0	193.9	
141 Atrazine	200	10.440	10.446	-0.006	88	202271	400.0	414.9	
140 Hexachlorobenzene	284	10.458	10.458	0.000	92	99164	200.0	194.6	
245 n-Octadecane	57	10.570	10.570	0.000	91	324411	200.0	214.8	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	96690	400.0	355.7	
148 Phenanthrene	178	10.805	10.811	-0.006	98	549392	200.0	200.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	563932	200.0	203.7	
150 Carbazole	167	10.964	10.964	0.000	96	475830	200.0	221.2	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	700658	200.0	204.1	
159 Fluoranthene	202	11.940	11.946	-0.006	99	523306	200.0	197.7	
160 Benzidine	184	12.023	12.023	0.000	99	186576	400.0	411.8	
161 Pyrene	202	12.205	12.205	0.000	96	535301	200.0	200.9	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	252783	200.0	193.2	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	320826	200.0	185.2	
177 3,3'-Dichlorobenzidine	252	13.664	13.670	-0.006	76	301885	400.0	398.0	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	100	456236	200.0	192.8	
179 Chrysene	228	13.823	13.828	-0.005	98	462777	200.0	199.5	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	485859	200.0	176.0	
183 Benzo[b]fluoranthene	252	15.517	15.522	-0.005	99	389739	200.0	181.7	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	97	461544	200.0	194.1	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	80	362712	200.0	184.5	
190 Indeno[1,2,3-cd]pyrene	276	18.393	18.399	-0.006	91	393283	200.0	196.1	
189 Dibenz(a,h)anthracene	278	18.399	18.410	-0.011	67	336257	200.0	192.3	
191 Benzo[g,h,i]perylene	276	19.052	19.063	-0.011	95	314976	200.0	197.6	
S 246 Total Cresols	100				0			374.2	
S 193 Methyl Phenols,Total	100				0			374.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L4 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:29:58 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D

Injection Date: 26-Apr-2016 09:48:30 Instrument ID: A4AG2 Operator ID:

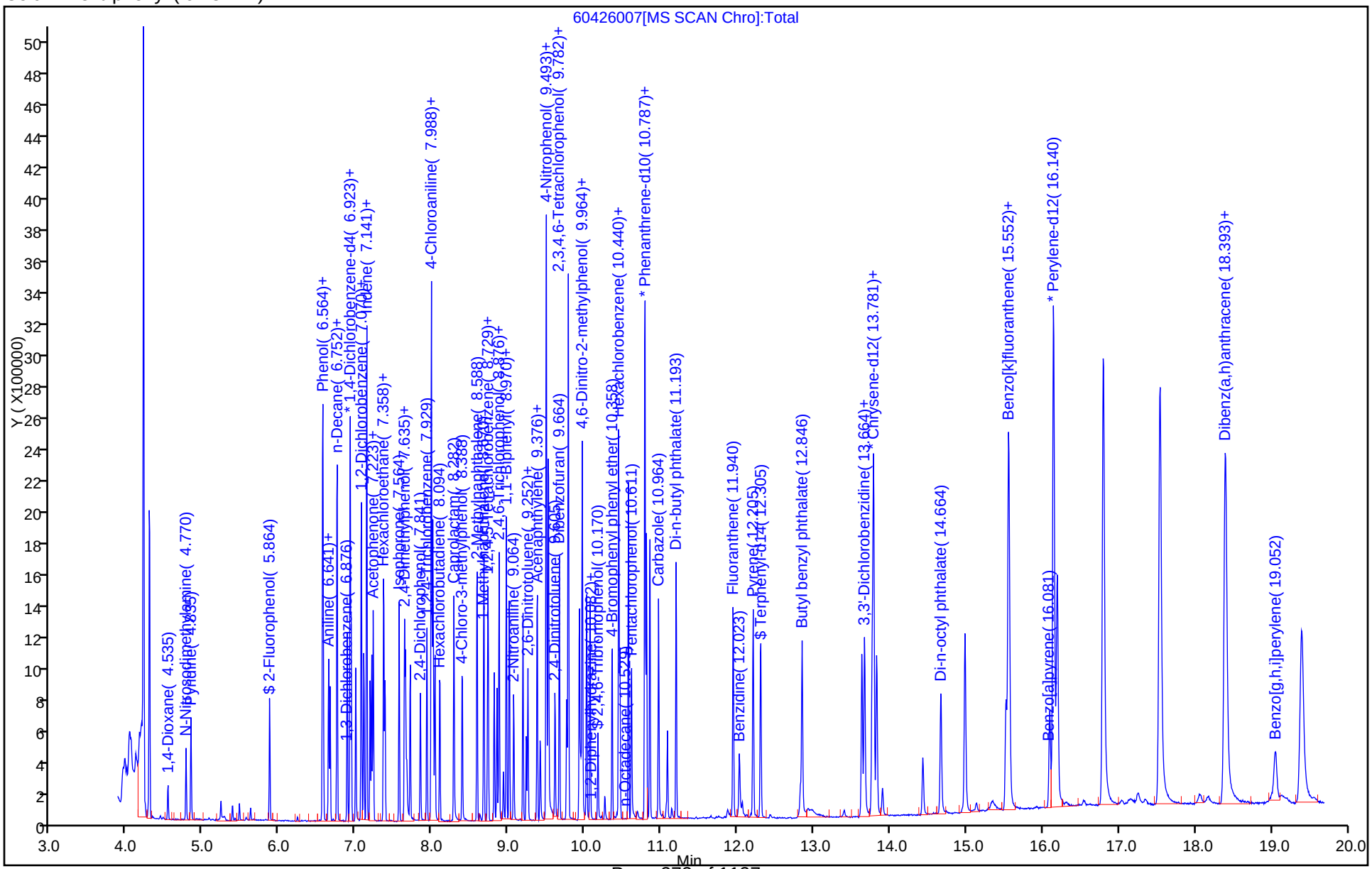
Lims ID: std4 l1lvi Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 7

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

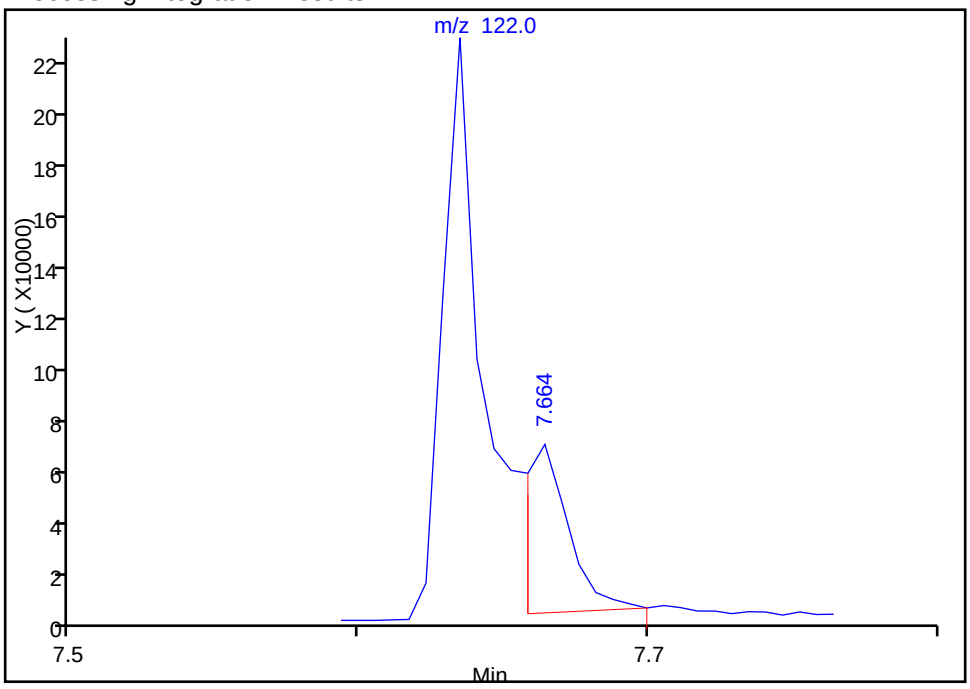
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426007.D
Injection Date: 26-Apr-2016 09:48:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 Benzoic acid, CAS: 65-85-0

Signal: 1

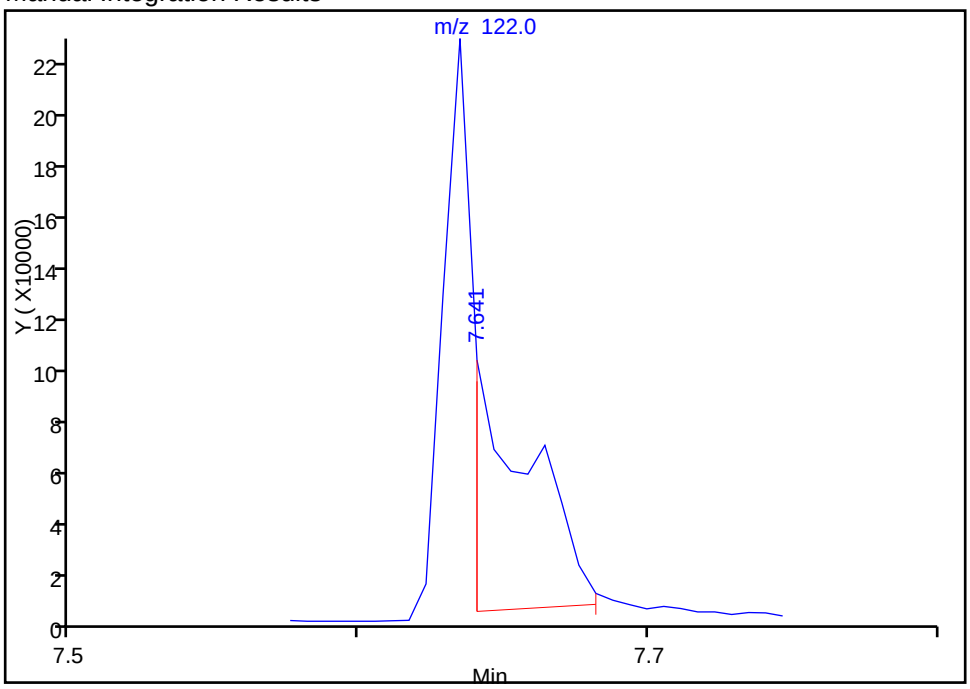
Processing Integration Results

RT: 7.66
Area: 68937
Amount: 410.3019
Amount Units: ng/ml



Manual Integration Results

RT: 7.64
Area: 138266
Amount: 381.6501
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 11:05:31
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Report Date: 27-Apr-2016 07:30:01 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D
Lims ID: std3 l1lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Apr-2016 10:13:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-008
Misc. Info.: STD3 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:59 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:09:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	271302	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1198615	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	668728	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	1039438	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	956303	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	716328	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	93	76650	100.0	103.6	
$ 8 Phenol-d5	99	6.558	6.558	0.000	99	102026	100.0	109.6	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	91	107612	100.0	101.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	198569	100.0	100.4	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	83	17041	100.0	85.8	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	176170	100.0	98.3	
26 1,4-Dioxane	88	4.529	4.535	-0.006	98	27089	100.0	91.6	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	88	61100	100.0	103.2	
28 Pyridine	79	4.835	4.835	0.000	88	74363	100.0	89.4	
42 Benzaldehyde	77	6.564	6.564	0.000	92	142836	200.0	196.6	
43 Phenol	94	6.570	6.570	0.000	98	109416	100.0	107.8	
44 Aniline	93	6.641	6.641	0.000	96	132294	100.0	92.7	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	91	121791	100.0	120.6	
244 n-Decane	57	6.747	6.752	-0.005	93	129148	100.0	116.4	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	88346	100.0	106.9	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	96	102291	100.0	103.4	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	95	102833	100.0	102.5	
50 Benzyl alcohol	108	6.994	6.999	-0.005	89	52596	100.0	92.2	
52 2-Methylphenol	108	7.064	7.070	-0.006	95	81869	100.0	105.1	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	94	102282	100.0	110.5	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	171513	100.0	113.2	
53 Indene	115	7.141	7.141	0.000	90	377691	200.0	226.1	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	92	74066	100.0	89.3	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	90	75405	100.0	107.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	94	135545	100.0	105.9	
61 Hexachloroethane	117	7.358	7.358	0.000	92	38416	100.0	103.4	
62 Nitrobenzene	77	7.376	7.382	-0.006	91	103228	100.0	101.5	
64 Isophorone	82	7.564	7.564	0.000	98	192173	100.0	103.6	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	76781	100.0	86.4	
65 2-Nitrophenol	139	7.646	7.646	0.000	95	44395	100.0	95.7	
70 Benzoic acid	122	7.641	7.682	-0.041	0	52170	200.0	236.4	M
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	97	117507	100.0	105.4	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	97	55620	100.0	83.1	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	94	79023	100.0	100.8	
74 Naphthalene	128	8.005	8.005	0.000	98	299015	100.0	104.6	
75 4-Chloroaniline	127	8.011	8.017	-0.006	94	101758	100.0	107.4	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	94	61606	100.0	87.7	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	41060	100.0	102.6	
83 Caprolactam	113	8.282	8.293	-0.011	75	57382	200.0	214.4	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	71449	100.0	97.3	
86 2-Methylnaphthalene	142	8.582	8.587	-0.005	93	195109	100.0	105.7	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	181424	100.0	104.3	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	95	31630	100.0	79.6	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	97	68425	100.0	97.8	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	42510	100.0	90.4	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	93	45387	100.0	94.9	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	230809	100.0	103.9	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	98	177129	100.0	103.0	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	49630	100.0	90.3	
104 Dimethyl phthalate	163	9.188	9.187	0.001	98	190038	100.0	101.4	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	80	22999	100.0	83.5	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	88	37273	100.0	90.2	
108 Acenaphthylene	152	9.376	9.376	0.000	98	260872	100.0	100.4	
109 3-Nitroaniline	138	9.411	9.417	-0.006	91	26644	100.0	109.9	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	42	15781	200.0	255.1	
112 4-Nitrophenol	109	9.523	9.517	0.006	93	36672	200.0	150.5	
111 Acenaphthene	153	9.523	9.523	0.000	95	180800	100.0	106.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	93	46503	100.0	88.4	
115 Dibenzofuran	168	9.664	9.664	0.000	96	249371	100.0	103.6	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	81	31245	100.0	87.4	
248 Hexadecane	57	9.782	9.782	0.000	91	159942	100.0	115.9	
120 Diethyl phthalate	149	9.782	9.787	-0.005	97	207607	100.0	108.2	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	97	87372	100.0	101.7	
125 4-Nitroaniline	138	9.946	9.946	0.000	85	34923	100.0	101.9	
124 Fluorene	166	9.964	9.964	0.000	95	197456	100.0	102.0	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	75	28195	200.0	235.2	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	65	139535	100.0	100.5	
129 Diphenylamine	169	10.023	10.023	0.000	93	139535	85.1	85.5	
131 Azobenzene	77	10.064	10.070	-0.006	98	227565	100.0	101.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	98	227564	100.0	101.6	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	76	46696	100.0	96.7	
141 Atrazine	200	10.440	10.446	-0.006	88	93906	200.0	197.2	
140 Hexachlorobenzene	284	10.458	10.458	0.000	93	48900	100.0	98.2	
245 n-Octadecane	57	10.570	10.570	0.000	91	157350	100.0	106.6	
143 Pentachlorophenol	266	10.611	10.611	0.000	90	43367	200.0	205.5	
148 Phenanthrene	178	10.805	10.811	-0.006	98	271774	100.0	101.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	273846	100.0	101.2	
150 Carbazole	167	10.964	10.964	0.000	96	240626	100.0	114.5	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	339724	100.0	101.3	
159 Fluoranthene	202	11.940	11.946	-0.006	99	248841	100.0	96.2	
160 Benzidine	184	12.023	12.023	0.000	99	52920	200.0	290.7	
161 Pyrene	202	12.205	12.205	0.000	96	253880	100.0	98.5	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	117316	100.0	92.7	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	150844	100.0	90.1	
177 3,3'-Dichlorobenzidine	252	13.664	13.670	-0.006	76	125518	200.0	171.1	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	99	220723	100.0	96.5	
179 Chrysene	228	13.823	13.828	-0.005	98	229586	100.0	102.3	
181 Di-n-octyl phthalate	149	14.664	14.664	0.000	99	222698	100.0	103.3	
183 Benzo[b]fluoranthene	252	15.517	15.522	-0.005	99	196883	100.0	99.2	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	98	208454	100.0	94.7	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	79	172460	100.0	94.7	
190 Indeno[1,2,3-cd]pyrene	276	18.387	18.399	-0.012	81	176161	100.0	94.9	
189 Dibenz(a,h)anthracene	278	18.399	18.410	-0.011	68	150188	100.0	92.8	
191 Benzo[g,h,i]perylene	276	19.046	19.063	-0.017	95	147133	100.0	99.7	
S 246 Total Cresols	100				0			194.4	
S 193 Methyl Phenols,Total	100				0			194.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L3 W_00007 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:30:01 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D

Injection Date: 26-Apr-2016 10:13:30 Instrument ID: A4AG2 Operator ID:

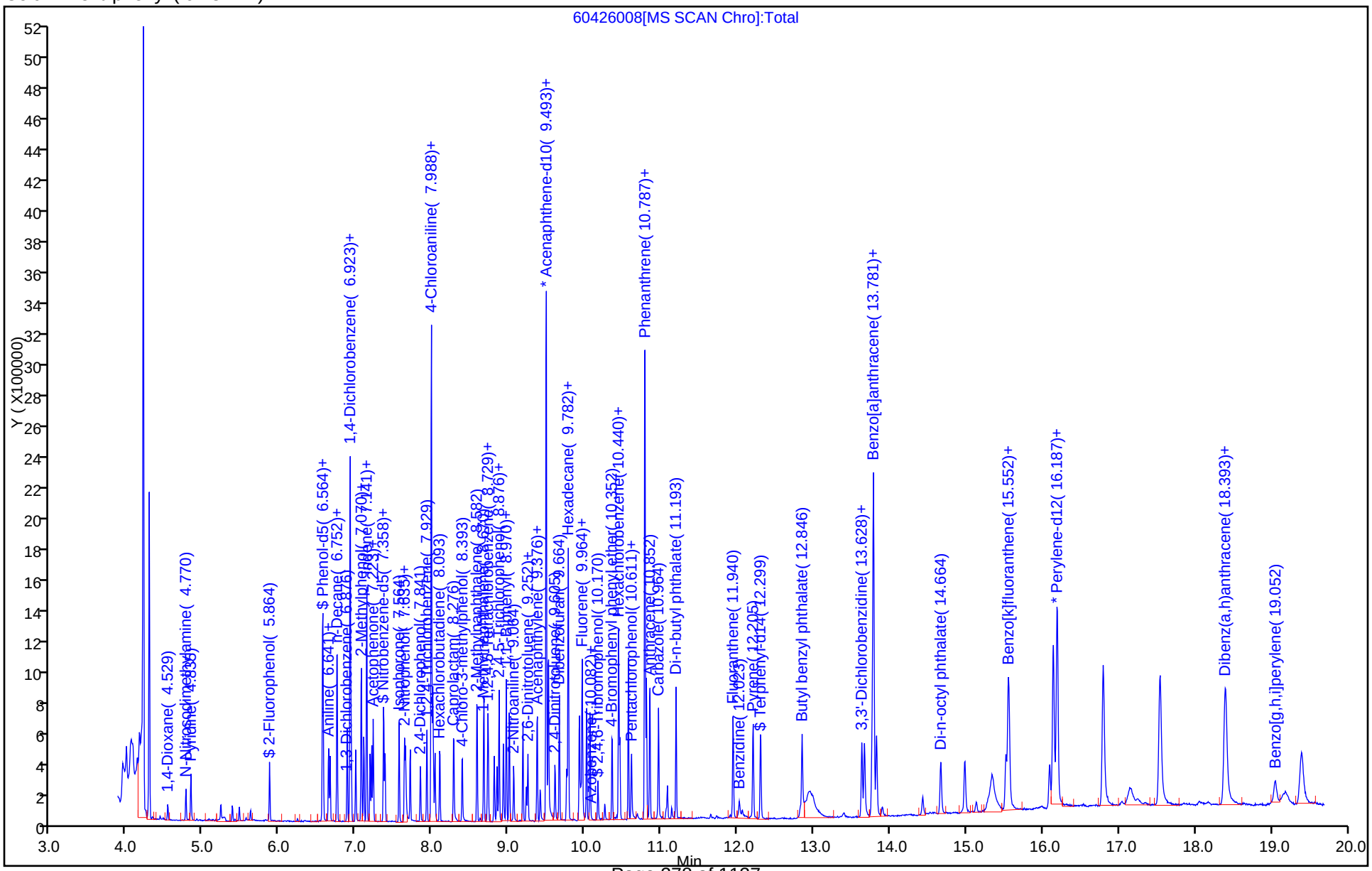
Lims ID: std3 l1lvi Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 8

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

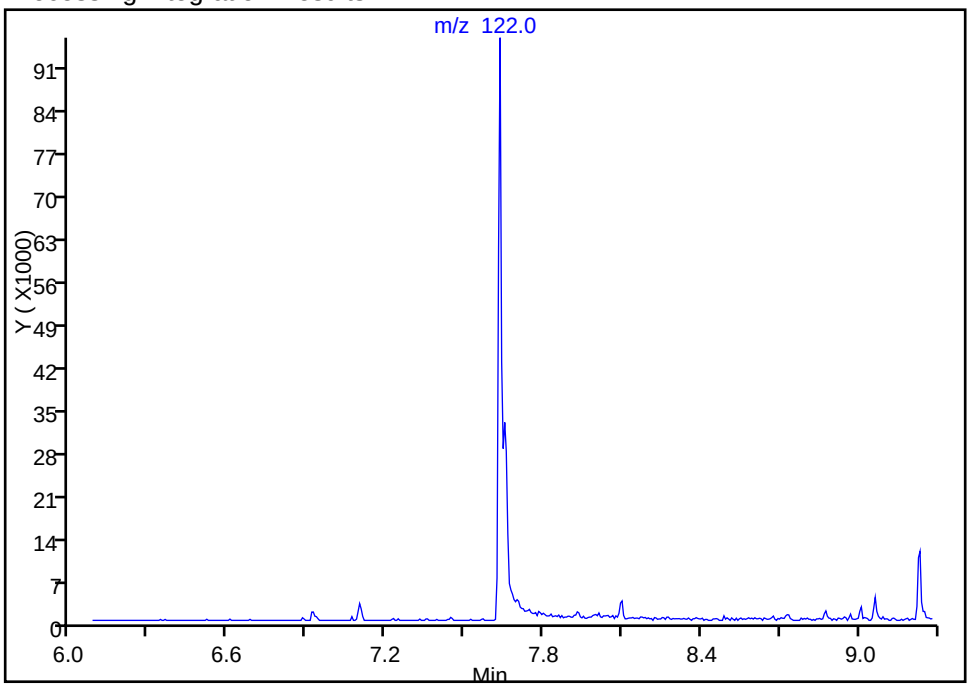
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426008.D
Injection Date: 26-Apr-2016 10:13:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 Benzoic acid, CAS: 65-85-0

Signal: 1

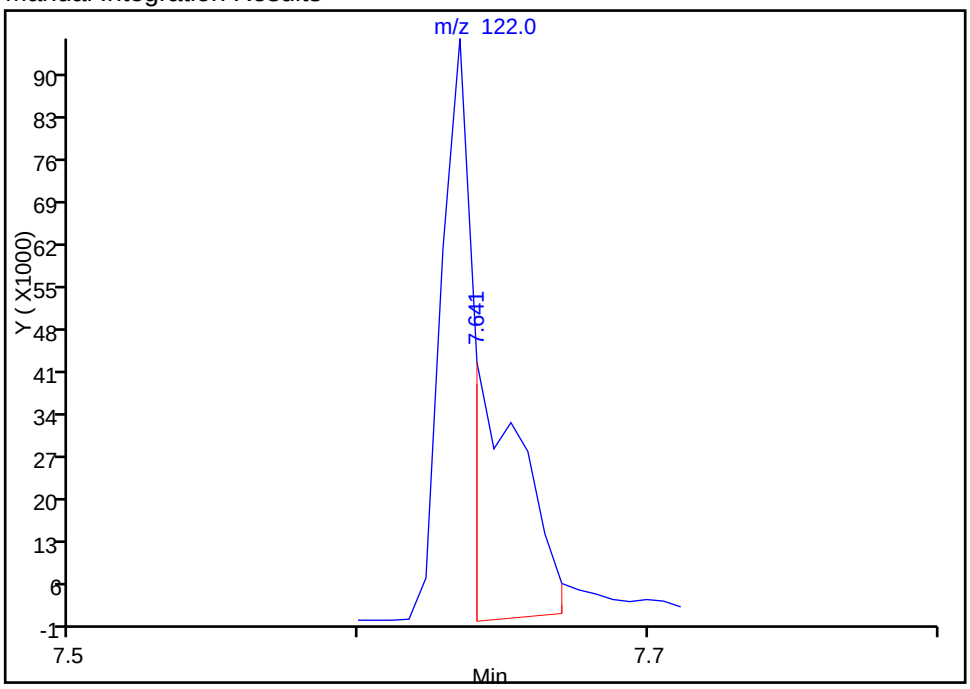
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.64
Area: 52170
Amount: 236.4029
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 11:09:36
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426009.D
Lims ID: std2 l1lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Apr-2016 10:38:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-009
Misc. Info.: STD2 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:09 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 11:11:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	271963	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1156603	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	669380	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	1051898	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	97	946007	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	95	721119	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	93	36055	50.0	48.6	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	42442	50.0	45.5	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	93	48271	50.0	47.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	93852	50.0	47.4	
$ 11 2,4,6-Tribromophenol	330	10.176	10.170	0.006	83	7303	50.0	36.7	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	79632	50.0	44.9	
26 1,4-Dioxane	88	4.529	4.535	-0.006	96	13706	50.0	46.2	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	89	28954	50.0	48.8	
28 Pyridine	79	4.835	4.835	0.000	87	36232	50.0	43.5	
42 Benzaldehyde	77	6.564	6.564	0.000	91	72645	100.0	62.7	
43 Phenol	94	6.570	6.570	0.000	97	48304	50.0	47.5	
44 Aniline	93	6.641	6.641	0.000	97	53167	50.0	37.2	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	91	53571	50.0	52.9	
244 n-Decane	57	6.747	6.752	-0.005	94	61799	50.0	55.6	
47 2-Chlorophenol	128	6.752	6.752	0.000	97	38763	50.0	46.8	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	95	48715	50.0	49.1	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	92	49939	50.0	49.7	
50 Benzyl alcohol	108	6.994	6.999	-0.005	90	22447	50.0	39.3	
52 2-Methylphenol	108	7.064	7.070	-0.006	95	35114	50.0	45.0	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	46638	50.0	50.2	
54 2,2'-oxybis[1-chloropropan	45	7.100	7.099	0.001	92	78906	50.0	51.9	
53 Indene	115	7.141	7.141	0.000	91	176142	100.0	105.2	
55 3 & 4 Methylphenol	108	7.182	7.188	-0.006	93	34719	50.0	41.7	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	90	31466	50.0	44.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.223	7.229	-0.006	95	61702	50.0	48.1	
61 Hexachloroethane	117	7.358	7.358	0.000	92	17934	50.0	48.1	
62 Nitrobenzene	77	7.376	7.382	-0.006	93	44137	50.0	45.0	
64 Isophorone	82	7.564	7.564	0.000	98	84731	50.0	47.4	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	96	38868	50.0	45.3	
65 2-Nitrophenol	139	7.647	7.646	0.001	92	15455	50.0	34.5	
70 Benzoic acid	122		7.682				ND	ND	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	99	54336	50.0	50.5	
72 2,4-Dichlorophenol	162	7.841	7.846	-0.005	96	24031	50.0	37.2	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	93	37290	50.0	49.3	
74 Naphthalene	128	8.005	8.005	0.000	98	141356	50.0	51.3	
75 4-Chloroaniline	127	8.005	8.017	-0.012	94	39165	50.0	42.8	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	93	28784	50.0	42.5	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	95	19022	50.0	49.3	
83 Caprolactam	113	8.282	8.293	-0.011	74	22359	100.0	86.6	
85 4-Chloro-3-methylphenol	107	8.394	8.393	0.001	96	28429	50.0	40.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	92	87424	50.0	49.1	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	93	84743	50.0	50.5	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	93	13607	50.0	34.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	0.000	98	30876	50.0	44.1	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	96	17966	50.0	38.2	
94 2,4,5-Trichlorophenol	196	8.852	8.846	0.006	90	19187	50.0	40.1	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	107915	50.0	48.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	82329	50.0	47.8	
101 2-Nitroaniline	65	9.064	9.064	0.000	77	21833	50.0	39.7	
104 Dimethyl phthalate	163	9.188	9.187	0.001	98	88921	50.0	47.4	
103 1,3-Dinitrobenzene	168	9.235	9.235	0.001	82	9012	50.0	32.7	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	89	16145	50.0	39.0	
108 Acenaphthylene	152	9.376	9.376	0.000	98	117584	50.0	45.2	
109 3-Nitroaniline	138	9.417	9.417	0.000	90	12225	50.0	50.4	
110 2,4-Dinitrophenol	184		9.499				ND	ND	
112 4-Nitrophenol	109		9.517				ND	ND	
111 Acenaphthene	153	9.523	9.523	0.000	94	86041	50.0	50.8	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	87	19273	50.0	36.6	
115 Dibenzofuran	168	9.664	9.664	0.000	96	117607	50.0	48.8	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	79	12918	50.0	36.1	
248 Hexadecane	57	9.782	9.782	0.000	86	72963	50.0	52.8	
120 Diethyl phthalate	149	9.788	9.787	0.001	97	108784	50.0	56.6	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	40212	50.0	46.7	
125 4-Nitroaniline	138	9.946	9.946	0.000	80	13576	50.0	39.6	
124 Fluorene	166	9.964	9.964	0.000	95	93081	50.0	48.0	
127 4,6-Dinitro-2-methylphenol	198		9.970				ND	ND	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	64	63576	50.0	45.2	
129 Diphenylamine	169	10.023	10.023	0.000	93	63576	42.5	38.5	
131 Azobenzene	77	10.064	10.070	-0.006	99	103260	50.0	45.6	
130 1,2-Diphenylhydrazine	77	10.064	10.070	-0.006	97	103141	50.0	45.5	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	77	21385	50.0	43.8	
141 Atrazine	200	10.440	10.446	-0.006	87	42014	100.0	87.2	
140 Hexachlorobenzene	284	10.458	10.458	0.000	91	23298	50.0	46.2	
245 n-Octadecane	57	10.570	10.570	0.000	92	68855	50.0	46.1	
143 Pentachlorophenol	266	10.611	10.611	0.000	86	13385	100.0	116.8	
148 Phenanthrene	178	10.805	10.811	-0.006	97	130809	50.0	48.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	98	125831	50.0	46.0	
150 Carbazole	167	10.964	10.964	0.000	96	108193	50.0	50.9	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	99	200113	50.0	59.0	
159 Fluoranthene	202	11.940	11.946	-0.006	99	115701	50.0	44.2	
160 Benzidine	184	12.023	12.023	0.000	98	25204	100.0	264.6	
161 Pyrene	202	12.205	12.205	0.000	96	118370	50.0	46.4	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	96	57293	50.0	45.8	
174 Bis(2-ethylhexyl) phthalat	149	13.628	13.628	0.000	96	63153	50.0	38.1	
177 3,3'-Dichlorobenzidine	252	13.670	13.670	0.000	75	54229	100.0	74.7	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	99	101574	50.0	44.9	
179 Chrysene	228	13.823	13.828	-0.005	98	103352	50.0	46.6	
181 Di-n-octyl phthalate	149	14.670	14.664	0.006	98	81426	50.0	57.8	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	96	83574	50.0	41.8	
184 Benzo[k]fluoranthene	252	15.570	15.569	0.001	96	108893	50.0	49.1	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	81	74213	50.0	40.5	
190 Indeno[1,2,3-cd]pyrene	276	18.399	18.399	0.000	94	80605	50.0	43.1	
189 Dibenz(a,h)anthracene	278	18.411	18.410	0.001	73	70503	50.0	43.3	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	93	65858	50.0	44.3	
S 246 Total Cresols	100				0			86.7	
S 193 Methyl Phenols,Total	100				0			86.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST1 L2 W_00007 Amount Added: 0.10 Units: mL

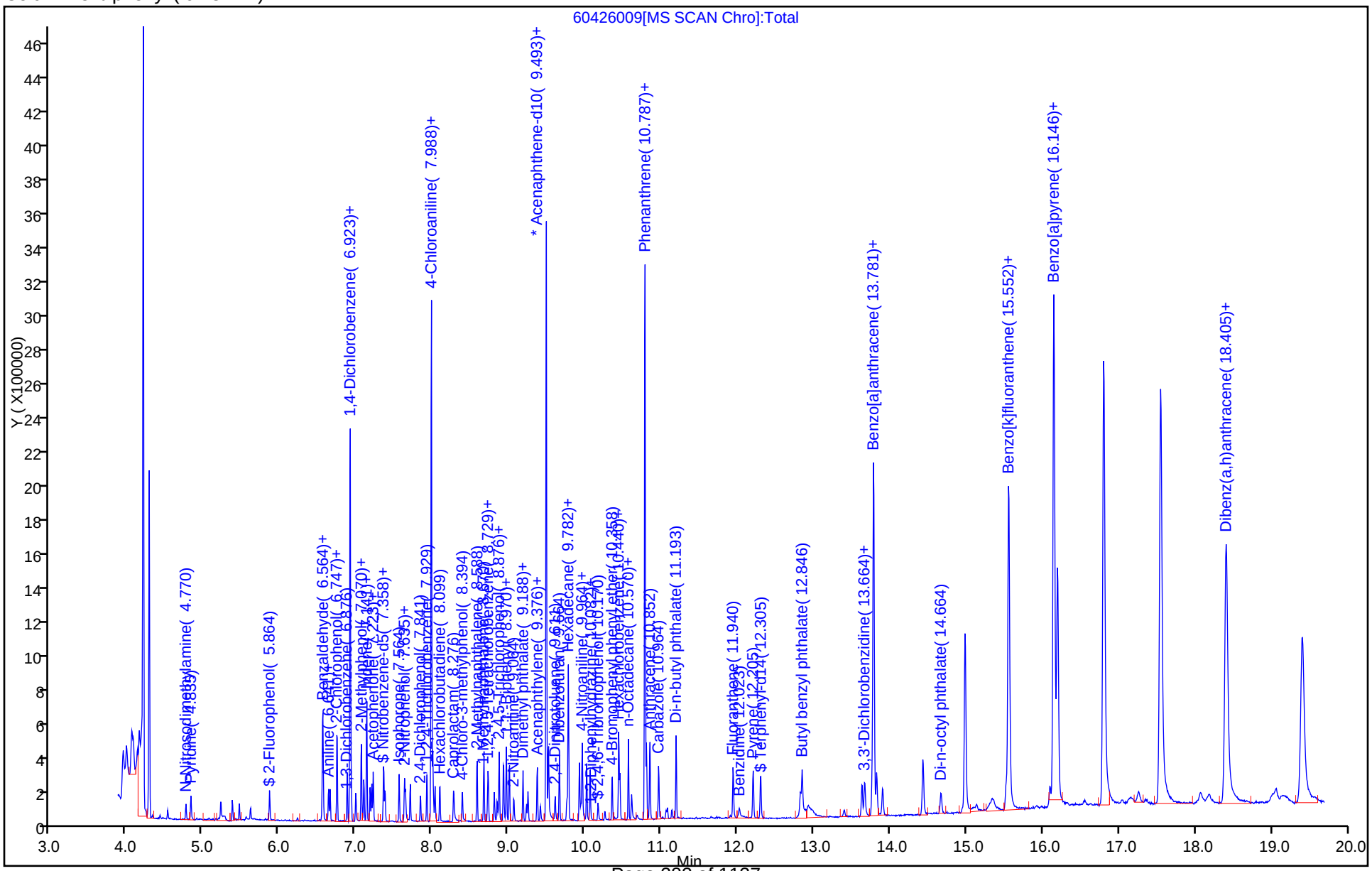
Report Date: 27-Apr-2016 07:30:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426009.D

Injection Date:	26-Apr-2016 10:38:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std2 l1lvi			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D
Lims ID: std1 l1lvi
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Apr-2016 11:03:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-010
Misc. Info.: STD1 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:21 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 12:15:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	234310	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1019831	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	605895	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	946215	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.787	-0.006	96	877855	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	663492	400.0	400.0	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	92	8865	10.0	9.86	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	99	19536	10.0	10.9	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	98	16768	10.0	10.2	
74 Naphthalene	128	8.005	8.005	0.000	94	26932	10.0	11.1	
86 2-Methylnaphthalene	142	8.588	8.587	0.001	89	16738	10.0	10.7	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	89	16129	10.0	10.9	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	21252	10.0	10.6	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	96	15877	10.0	10.2	
108 Acenaphthylene	152	9.376	9.376	0.000	98	23274	10.0	9.89	
111 Acenaphthene	153	9.523	9.523	0.000	95	17470	10.0	11.4	
115 Dibenzofuran	168	9.664	9.664	0.000	94	23170	10.0	10.6	
124 Fluorene	166	9.964	9.964	0.000	96	18892	10.0	10.8	
140 Hexachlorobenzene	284	10.458	10.458	0.000	87	4568	10.0	10.1	
148 Phenanthrene	178	10.805	10.811	-0.006	97	26266	10.0	10.8	
149 Anthracene	178	10.852	10.852	0.000	99	23780	10.0	9.66	
159 Fluoranthene	202	11.940	11.946	-0.006	98	22092	10.0	9.38	
161 Pyrene	202	12.205	12.205	0.000	93	22549	10.0	9.53	
178 Benzo[a]anthracene	228	13.764	13.770	-0.006	97	21128	10.0	10.1	
179 Chrysene	228	13.822	13.828	-0.006	96	20526	10.0	9.97	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	95	16543	10.0	9.00	
184 Benzo[k]fluoranthene	252	15.564	15.569	-0.005	45	22291	10.0	10.9	
185 Benzo[a]pyrene	252	16.093	16.099	-0.006	81	14861	10.0	8.81	
190 Indeno[1,2,3-cd]pyrene	276	18.405	18.399	0.006	38	13232	10.0	7.69	M
189 Dibenz(a,h)anthracene	278	18.405	18.410	-0.005	0	12059	10.0	8.04	M

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
191 Benzo[g,h,i]perylene	276	19.046	19.063	-0.017	77	12114	10.0	8.86	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L1 W_00007 Amount Added: 0.10 Units: mL

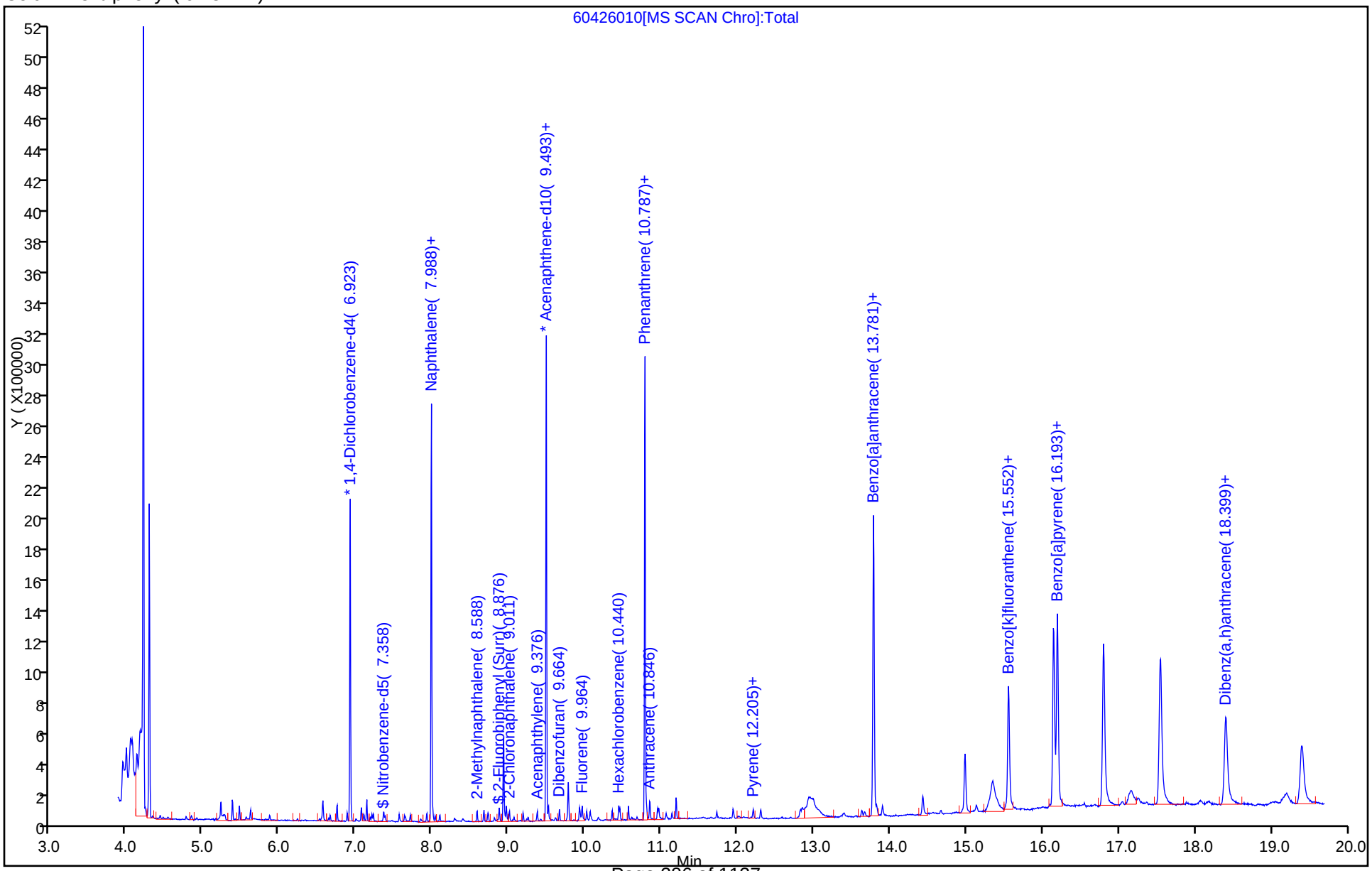
Report Date: 27-Apr-2016 07:30:26 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D

Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std1 l1lvi			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

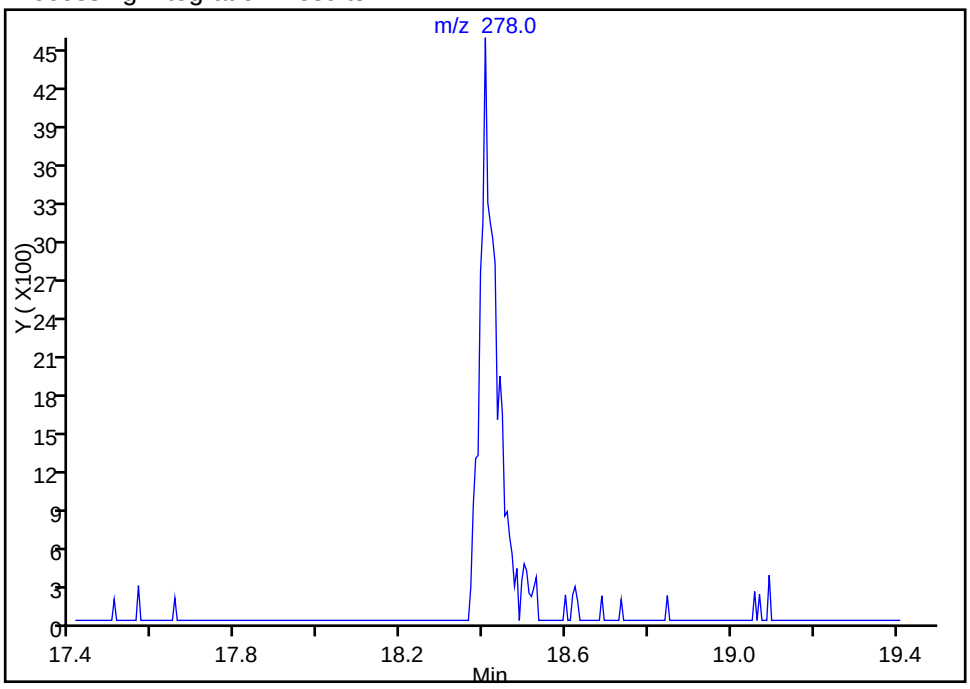
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D
Injection Date: 26-Apr-2016 11:03:30 Instrument ID: A4AG2
Lims ID: std1 l1lvi
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

189 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

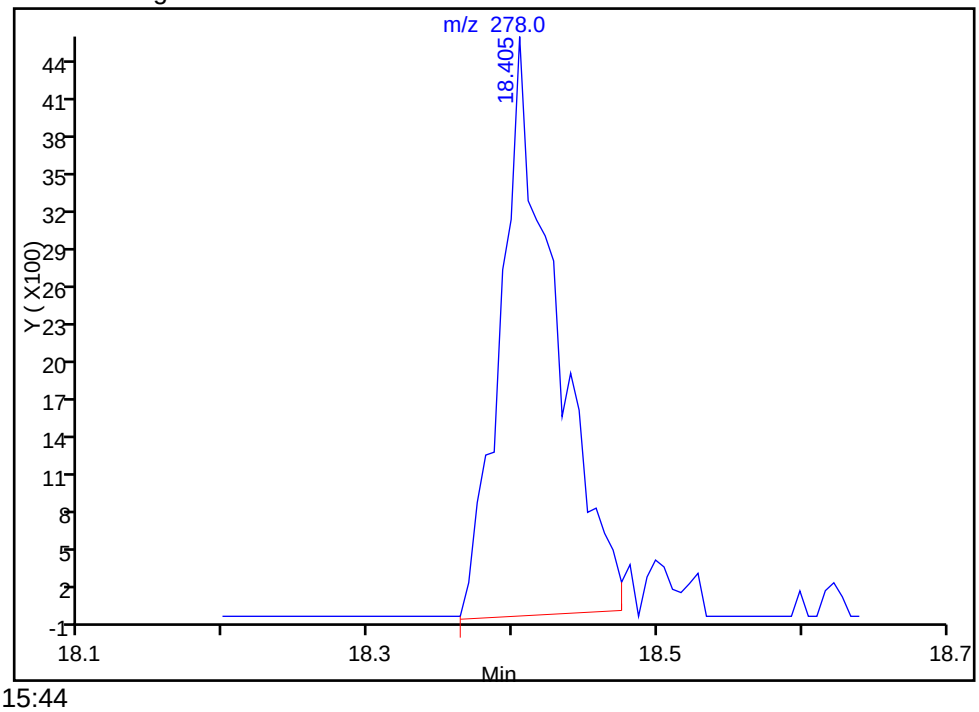
Not Detected
Expected RT: 18.41

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 12059
Amount: 8.042736
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

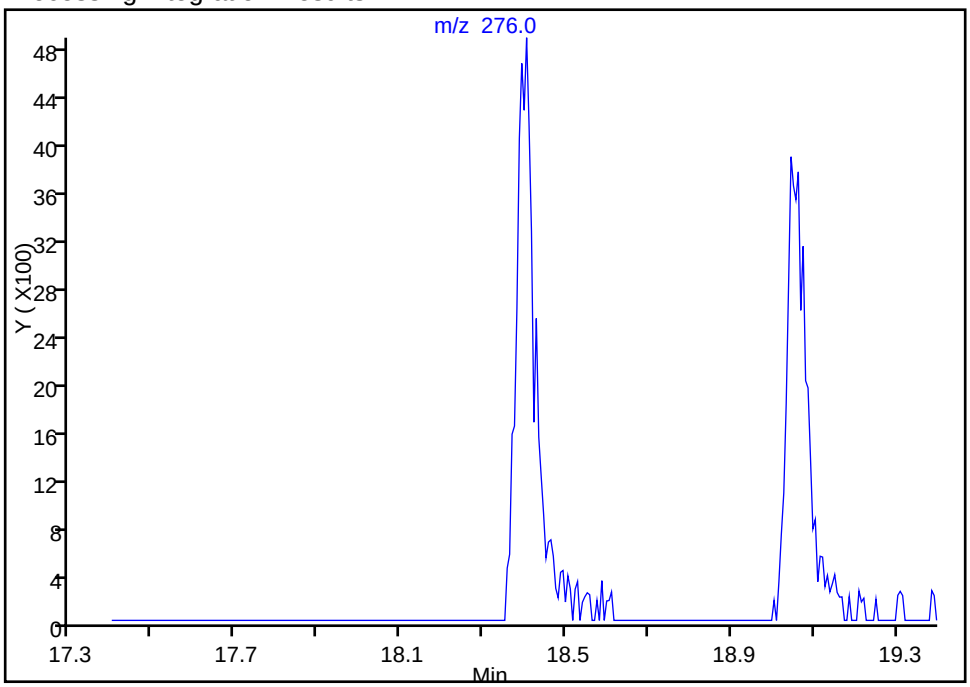
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D				
Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

190 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

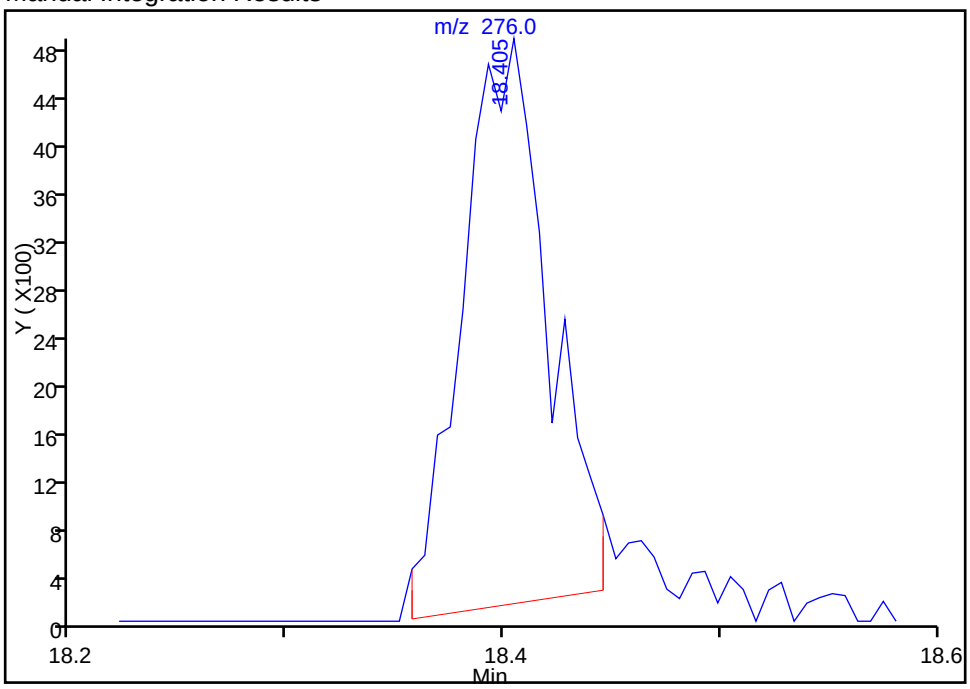
Not Detected
Expected RT: 18.40

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 13232
Amount: 7.692485
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

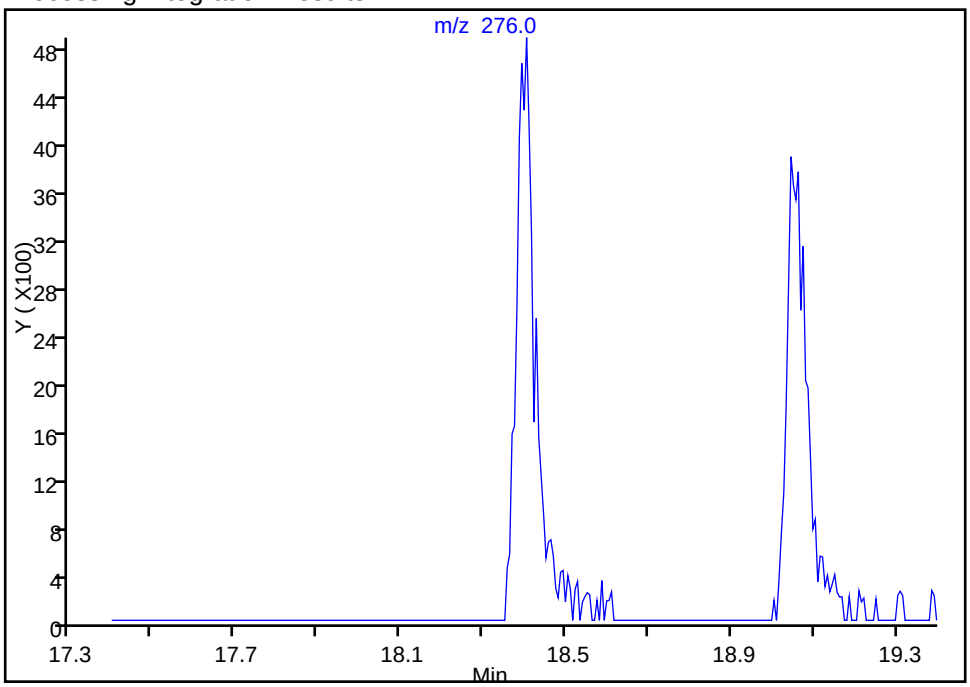
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D
Injection Date: 26-Apr-2016 11:03:30 Instrument ID: A4AG2
Lims ID: std1 l1lvi
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

190 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

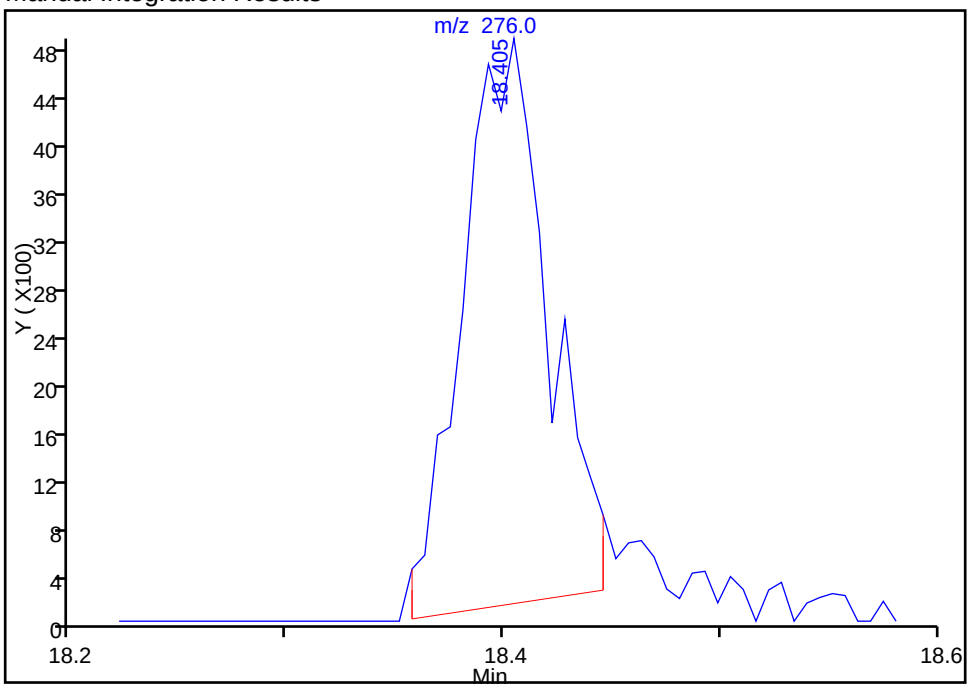
Not Detected
Expected RT: 18.40

Processing Integration Results



Manual Integration Results

RT: 18.40
Area: 13232
Amount: 7.692485
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

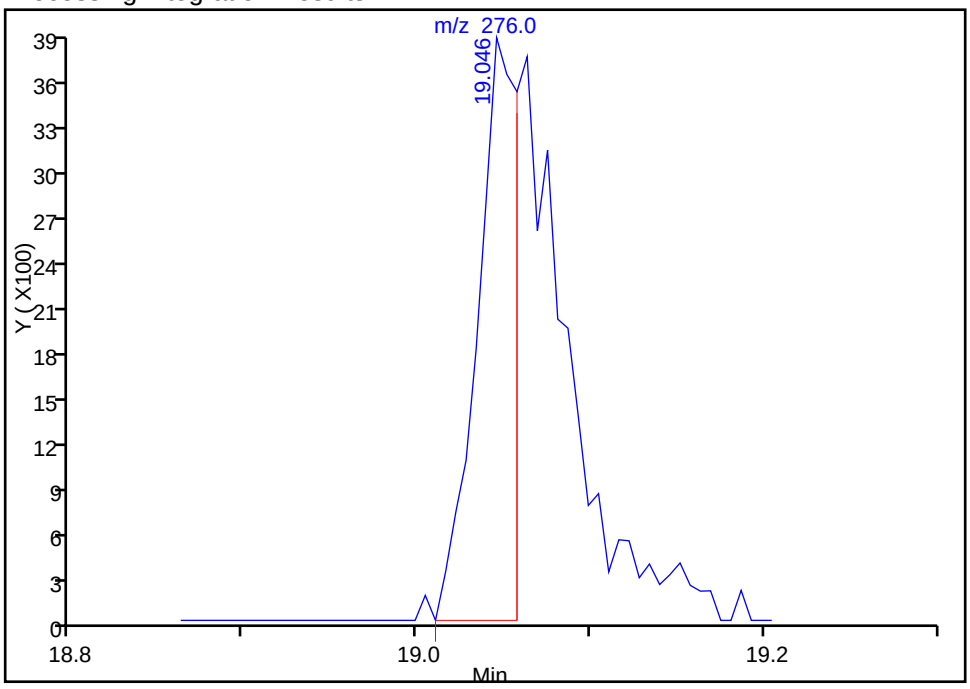
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426010.D				
Injection Date:	26-Apr-2016 11:03:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

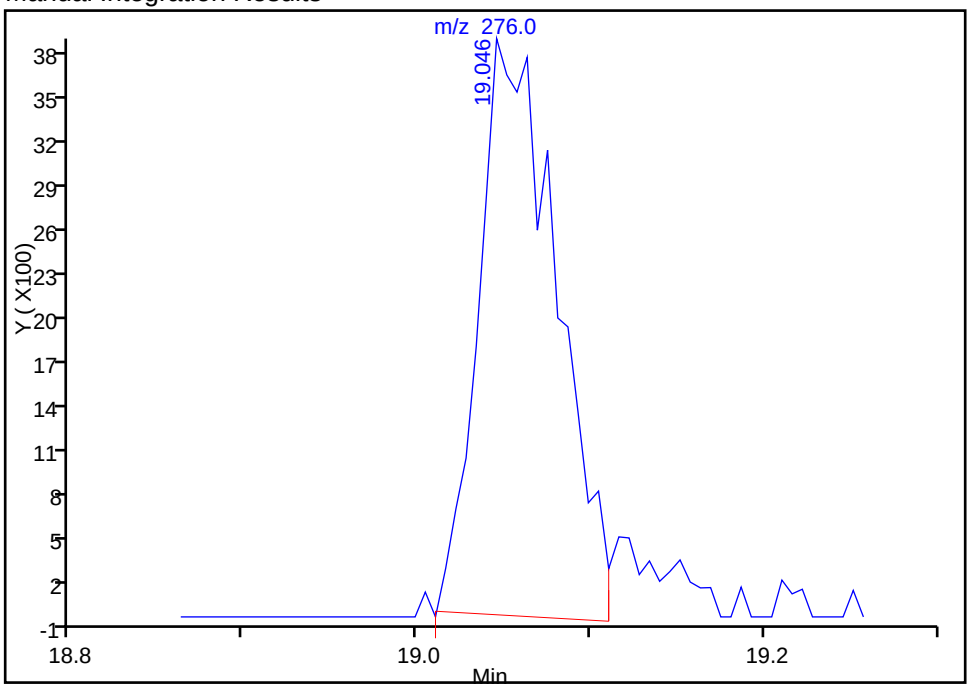
Processing Integration Results

RT: 19.05
Area: 6258
Amount: 11.141185
Amount Units: ng/ml



Manual Integration Results

RT: 19.05
Area: 12114
Amount: 8.862307
Amount Units: ng/ml



Reviewer: hulat, 26-Apr-2016 12:15:44

Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-227507/19	60426019.D
Level 2	STD3 240-227507/18	60426018.D
Level 3	STD4 240-227507/17	60426017.D
Level 4	STD5 240-227507/16	60426016.D
Level 5	STD6 240-227507/15	60426015.D
Level 6	STD7 240-227507/14	60426014.D
Level 7	STD8 240-227507/13	60426013.D
Level 8	STD9 240-227507/12	60426012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
2-Picoline	1.5099 1.4822	1.5274 1.4246	1.4886 1.5246	1.5493	1.4925	Ave		1.4999				2.5		20.0			
N-Nitrosomethylethylamine	0.5254 0.6728	0.6473 0.6680	0.6558 0.6781	0.6408	0.6631	Ave		0.6439				7.7		20.0			
Acrylamide	+++++ 0.2497	0.3234 0.3626	0.2250 0.4671	0.1582	0.1754	Qua	55.260	-0.103	0.0002187						0.9990		0.9900
Methyl methanesulfonate	0.8329 0.8314	0.8719 0.8041	0.8542 0.8125	0.8182	0.8274	Ave		0.8316				2.7		20.0			
N-Nitrosodiethylamine	0.5916 0.6821	0.6718 0.6606	0.6893 0.6681	0.6447	0.6768	Ave		0.6606				4.7		20.0			
Ethyl methanesulfonate	1.0041 1.0612	1.0525 1.0325	1.0890 1.0354	1.0252	1.0457	Ave		1.0432				2.4		20.0			
Pentachloroethane	0.4291 0.4634	0.4506 0.4598	0.4687 0.4588	0.4583	0.4563	Ave		0.4556				2.6		20.0			
N-Nitrosopyrrolidine	0.5069 0.7026	0.5686 0.6876	0.6299 0.6923	0.6391	0.6849	Ave		0.6390				10.9		20.0			
N-Nitrosomorpholine	0.7577 0.9936	0.9483 0.9601	0.9839 0.9657	0.9498	0.9899	Ave		0.9436				8.2		20.0			
2-Toluidine	1.6399 2.1663	1.9043 2.0956	2.0867 2.0567	2.0714	2.1471	Ave		2.0210				8.6		20.0			
N-Nitrosopiperidine	0.1335 0.1628	0.1580 0.1614	0.1593 0.1620	0.1579	0.1616	Ave		0.1571				6.2		20.0			
o,o',o''-Triethylphosphorothioate	0.1363 0.1378	0.1368 0.1356	0.1380 0.1363	0.1356	0.1358	Ave		0.1365				0.7		20.0			
alpha,alpha-Dimethyl phenethylamine	+++++ 0.4442	+++++ 0.4482	0.3417 0.4458	0.5433	0.5369	Ave		0.4600				16.1		20.0			
Hexachloropropene	0.0993 0.1422	0.1069 0.1466	0.1176 0.1503	0.1259	0.1335	Ave		0.1278			0.0100	14.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-butylamine	0.1774 0.1999	0.1910 0.1869	0.2066 0.1823	0.1997	0.2022	Ave		0.1932				5.4		20.0			
Quinoline	0.5281 0.5897	0.6152 0.5625	0.6339 0.5356	0.6044	0.5998	Ave		0.5836				6.5		20.0			
p-Phenylene diamine	+++++ 0.2236	0.0131 0.2273	0.0999 0.2333	0.1739	0.1994	Lin1	-25.44	0.2383							0.9980		0.9900
Safrole, Total	0.1904 0.2301	0.2192 0.2273	0.2283 0.2253	0.2202	0.2220	Ave		0.2204				5.8		20.0			
Isosafrole Peak 1	0.0809 0.0970	0.0894 0.0944	0.0867 0.0998	0.0901	0.0948	Ave		0.0916				6.6		20.0			
Isosafrole Peak 2	2.1196 2.6956	2.4478 2.6578	2.5085 2.6762	2.6107	2.6488	Ave		2.5456				7.6		20.0			
1-Chloronaphthalene	0.9531 1.0128	1.0107 0.9677	0.9889 0.9807	0.9942	1.0021	Ave		0.9888				2.1		20.0			
1,4-Naphthoquinone	0.1731 0.3069	0.2391 0.2984	0.2646 0.2899	0.3271	0.3052	Ave		0.2755				18.0		20.0			
1,4-Dinitrobenzene	0.0722 0.1660	0.0910 0.1651	0.1108 0.1732	0.1387	0.1562	Lin1	-7.118	0.1694							0.9970		0.9900
Pentachlorobenzene	0.3756 0.3958	0.3938 0.3838	0.3812 0.3945	0.3768	0.3792	Ave		0.3851				2.2		20.0			
1-Naphthylamine	0.7446 1.0161	0.8988 0.9404	1.0435 0.9156	1.0625	1.0567	Ave		0.9598				11.3		20.0			
2,3,5,6-Tetrachlorophenol	0.1053 0.2017	0.1362 0.2061	0.1539 0.2151	0.1710	0.1895	Lin1	-7.276	0.2083							0.9970		0.9900
2-Naphthylamine	0.6150 0.9372	0.6226 0.8958	1.0017 0.9119	0.9971	0.9691	Ave		0.8688				18.3		20.0			
Thionazin	0.2078 0.2409	0.2301 0.2294	0.2304 0.2335	0.2400	0.2370	Ave		0.2311				4.5		20.0			
N-Nitro-o-toluidine	0.1701 0.3242	0.2102 0.3237	0.2468 0.3360	0.2907	0.3137	Lin1	-10.96	0.3311							0.9990		0.9900
Sulfotepp	0.0596 0.0818	0.0700 0.0808	0.0718 0.0827	0.0744	0.0782	Ave		0.0749				10.4		20.0			
1,3,5-Trinitrobenzene	0.0142 0.0520	0.0173 0.0538	0.0229 0.0566	0.0362	0.0461	Lin	-6.720	0.0576							0.9960		0.9900
Phenacetin	0.1880 0.3636	0.2511 0.3385	0.2900 0.3384	0.3328	0.3613	Ave		0.3080				19.9		20.0			
Diallate Peak 1	0.3422 0.3174	0.3492 0.2924	0.3559 0.2777	0.3432	0.3364	Ave		0.3268				8.7		20.0			
Phorate	0.1276 0.1497	0.1401 0.1405	0.1389 0.1364	0.1536	0.1516	Ave		0.1423				6.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Diallate Peak 2	0.3384 0.3490	0.3131 0.3326	0.3177 0.3430	0.3283	0.3393	Ave		0.3327				3.7		20.0			
Dimethoate	0.1758 0.2775	0.2187 0.2621	0.2394 0.2582	0.2697	0.2788	Ave		0.2475				14.3		20.0			
4-Aminobiphenyl	0.3871 0.7832	0.4305 0.7594	0.5383 0.7764	0.7051	0.7623	Lin1	-28.34	0.7829							0.9990		0.9900
Pronamide	0.2121 0.3061	0.2435 0.2951	0.2585 0.3025	0.2831	0.2942	Ave		0.2744				12.1		20.0			
Pentachloronitrobenzene	0.0437 0.0731	0.0593 0.0751	0.0612 0.0771	0.0663	0.0688	Ave		0.0656				16.6		20.0			
Disulfoton	0.3121 0.3846	0.3518 0.3608	0.3551 0.3595	0.3796	0.3798	Ave		0.3604				6.4		20.0			
Dinoseb	0.0347 0.1122	0.0400 0.1226	0.0489 0.1303	0.0779	0.0967	Lin	-17.74	0.1315							0.9910		0.9900
Methyl parathion	0.1087 0.2242	0.1441 0.2169	0.1702 0.2155	0.2139	0.2251	Lin1	-6.641	0.2227							0.9990		0.9900
Ethyl Parathion	0.0620 0.1442	0.0845 0.1400	0.1048 0.1415	0.1270	0.1346	Lin1	-5.175	0.1429							0.9990		0.9900
4-Nitroquinoline-1-oxide	0.0096 0.0373	0.0141 0.0454	0.0136 0.0535	0.0225	0.0290	Qua	-0.155	0.0133	0.0000161						1.0000		0.9900
Methapyrilene	0.3264 0.5552	0.4060 0.5229	0.4542 0.5103	0.5255	0.5394	Ave		0.4800				16.5		20.0			
Isodrin	0.1368 0.1284	0.1376 0.1206	0.1313 0.1202	0.1297	0.1283	Ave		0.1291				5.0		20.0			
Aramite Peak 1	0.0797 0.1117	0.0863 0.1145	0.0879 0.1203	0.1004	0.1088	Ave		0.1012				14.8		20.0			
Aramite Peak 2	0.0927 0.1472	0.1120 0.1471	0.1151 0.1498	0.1335	0.1382	Ave		0.1295				16.0		20.0			
p-Dimethylamino azobenzene	0.1512 0.2466	0.1767 0.2480	0.1897 0.2578	0.2218	0.2320	Ave		0.2155				17.9		20.0			
Ethyl 4,4'-Dichlorobenzilate	0.3267 0.4320	0.3576 0.4248	0.3847 0.4327	0.4093	0.4173	Ave		0.3981				9.7		20.0			
Famphur	0.1632 0.0811	0.2009 +++++	0.1881 +++++	0.1877	0.1277	Qua	-3.187	0.2370	-0.000103						0.9970		0.9900
3,3'-Dimethylbenzidine	0.0761 0.5221	0.0621 0.5514	0.2623 0.5886	0.3739	0.4466	Lin	-77.73	0.5956							0.9930		0.9900
2-Acetylaminofluorene	0.1340 0.4140	0.2015 0.4166	0.2284 0.4390	0.3321	0.3794	Lin1	-21.81	0.4260							0.9950		0.9900
4,4'-Methylene bis(2-chloroaniline)	0.0722 0.1751	0.0803 0.1783	0.1193 0.1886	0.1448	0.1606	Lin1	-8.471	0.1818							0.9960		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
6-Methylchrysene	0.6840 0.7900	0.7008 0.7793	0.6943 0.7873	0.7375	0.7618	Ave		0.7419				5.9		20.0			
7,12-Dimethylbenz(a)anthracene	0.5186 0.6432	0.5476 0.6356	0.5317 0.6582	0.5697	0.6004	Ave		0.5881				9.2		20.0			
3-Methylcholanthrene	0.4557 0.6599	0.5062 0.6450	0.5221 0.6878	0.5721	0.6152	Ave		0.5830				14.2		20.0			
Dibenz[a,h]acridine	0.5178 0.8288	0.6455 0.8381	0.6756 0.8720	0.7502	0.7816	Ave		0.7387				16.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-227507/19	60426019.D
Level 2	STD3 240-227507/18	60426018.D
Level 3	STD4 240-227507/17	60426017.D
Level 4	STD5 240-227507/16	60426016.D
Level 5	STD6 240-227507/15	60426015.D
Level 6	STD7 240-227507/14	60426014.D
Level 7	STD8 240-227507/13	60426013.D
Level 8	STD9 240-227507/12	60426012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Picoline	DCB	Ave	46473 1422992	93415 1898365	181133 2548037	520530	961042	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomethylethylamine	DCB	Ave	16171 645930	39590 890210	79793 1133277	215317	427018	50.0 1500	100 2000	200 2500	500	1000
Acrylamide	DCB	Qua	+++++ 239683	19780 483251	27384 780628	53150	112972	+++++ 1500	100 2000	200 2500	500	1000
Methyl methanesulfonate	DCB	Ave	25637 798172	53324 1071553	103940 1357903	274894	532812	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodiethylamine	DCB	Ave	18208 654842	41085 880243	83873 1116678	216627	435788	50.0 1500	100 2000	200 2500	500	1000
Ethyl methanesulfonate	DCB	Ave	30905 1018814	64368 1375960	132511 1730537	344468	673375	50.0 1500	100 2000	200 2500	500	1000
Pentachloroethane	DCB	Ave	13209 444908	27560 612785	57029 766773	153967	293823	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopyrrolidine	DCB	Ave	15603 674556	34775 916288	76649 1157022	214716	441039	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomorpholine	DCB	Ave	23323 953952	57997 1279413	119720 1614029	319113	637413	50.0 1500	100 2000	200 2500	500	1000
2-Toluidine	DCB	Ave	50476 2079762	116463 2792591	253915 3437485	695968	1382610	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopiperidine	NPT	Ave	16743 679320	40879 928270	85083 1176367	221030	454864	50.0 1500	100 2000	200 2500	500	1000
o,o',o''-Triethylphosphorothioate	NPT	Ave	17097 574812	35373 779838	73694 989236	189856	382116	50.0 1500	100 2000	200 2500	500	1000
alpha,alpha-Dimethyl phenethylamine	NPT	Ave	+++++ 1853409	+++++ 2578150	182444 3236126	760494	1510905	+++++ 1500	+++++ 2000	200 2500	500	1000
Hexachloropropene	NPT	Ave	12451 593319	27642 843443	62821 1090858	176214	375665	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodi-n-butylamine	NPT	Ave	22248 834049	49406 1075291	110305 1323473	279470	569118	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Quinoline	NPT	Ave	66228 2460632	159125 3235656	338498 3888153	846030	1687924	50.0 1500	100 2000	200 2500	500	1000
p-Phenylene diamine	NPT	Lin1	+++++ 932917	3399 1307833	53333 1693551	243432	561178	+++++ 1500	100 2000	200 2500	500	1000
Safrole, Total	NPT	Ave	23878 960337	56687 1307720	121886 1635932	308272	624698	50.0 1500	100 2000	200 2500	500	1000
Isosafrole Peak 1	ANT	Ave	4717 181466	10960 246562	21857 322763	56565	118563	41.5 1245	83.0 1660	166 2075	415	830
Isosafrole Peak 2	ANT	Ave	25327 1033051	61436 1421619	129450 1773372	335566	678802	8.50 255	17.0 340	34.0 425	85.0	170
1-Chloronaphthalene	ANT	Ave	66994 2283217	149226 3044690	300195 3822559	751713	1510566	50.0 1500	100 2000	200 2500	500	1000
1,4-Naphthoquinone	ANT	Ave	12165 691819	35299 938969	80324 1129808	247345	460146	50.0 1500	100 2000	200 2500	500	1000
1,4-Dinitrobenzene	ANT	Lin1	5076 374214	13435 519423	33646 674954	104876	235530	50.0 1500	100 2000	200 2500	500	1000
Pentachlorobenzene	ANT	Ave	26401 892153	58139 1207578	115716 1537868	284888	571590	50.0 1500	100 2000	200 2500	500	1000
1-Naphthylamine	ANT	Ave	52333 2290520	132698 2958906	316756 3568857	803361	1592949	50.0 1500	100 2000	200 2500	500	1000
2,3,5,6-Tetrachlorophenol	ANT	Lin1	7404 454611	20109 648582	46714 838614	129270	285720	50.0 1500	100 2000	200 2500	500	1000
2-Naphthylamine	ANT	Ave	43229 2112630	91921 2818439	304089 3554426	753924	1460851	50.0 1500	100 2000	200 2500	500	1000
Thionazin	ANT	Ave	14608 543080	33974 721755	69945 909968	181466	357287	50.0 1500	100 2000	200 2500	500	1000
N-Nitro-o-toluidine	ANT	Lin1	11957 730865	31034 1018538	74921 1309870	219832	472868	50.0 1500	100 2000	200 2500	500	1000
Sulfotepp	PHN	Ave	6546 279606	16562 387238	34210 494649	86398	180526	50.0 1500	100 2000	200 2500	500	1000
1,3,5-Trinitrobenzene	PHN	Lin	1561 177593	4088 257938	10921 338400	42082	106458	50.0 1500	100 2000	200 2500	500	1000
Phenacetin	PHN	Ave	20637 1242881	59430 1621480	138125 2024671	386527	833641	50.0 1500	100 2000	200 2500	500	1000
Diallate Peak 1	PHN	Ave	31180 900378	68619 1162532	140693 1379126	330795	644120	41.5 1245	83.0 1660	166 2075	415	830
Phorate	PHN	Ave	14003 511850	33171 673234	66144 815985	178347	349695	50.0 1500	100 2000	200 2500	500	1000
Diallate Peak 2	PHN	Ave	6315 202800	12600 270903	25727 348830	64804	133088	8.50 255	17.0 340	34.0 425	85.0	170
Dimethoate	PHN	Ave	19302 948595	51764 1255655	114054 1544989	313146	643109	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
4-Aminobiphenyl	PHN	Lin1	42501 2677039	101907 3637915	256423 4644606	818854	1758708	50.0 1500	100 2000	200 2500	500	1000
Pronamide	PHN	Ave	23290 1046273	57634 1413527	123133 1809651	328821	678648	50.0 1500	100 2000	200 2500	500	1000
Pentachloronitrobenzene	PHN	Ave	4792 250009	14044 359724	29148 461525	77049	158747	50.0 1500	100 2000	200 2500	500	1000
Disulfoton	PHN	Ave	34264 1314517	83278 1728380	169168 2150459	440779	876160	50.0 1500	100 2000	200 2500	500	1000
Dinoseb	PHN	Lin	3814 383408	9463 587125	23313 779798	90474	223203	50.0 1500	100 2000	200 2500	500	1000
Methyl parathion	PHN	Lin1	11933 766494	34104 1038901	81070 1289501	248428	519230	50.0 1500	100 2000	200 2500	500	1000
Ethyl Parathion	PHN	Lin1	6811 492977	20011 670517	49934 846442	147487	310560	50.0 1500	100 2000	200 2500	500	1000
4-Nitroquinoline-1-oxide	PHN	Qua	1052 127412	3333 217484	6497 319941	26167	66832	50.0 1500	100 2000	200 2500	500	1000
Methapyrilene	PHN	Ave	71657 3795619	192199 5010595	432697 6105891	1220601	2488955	100 3000	200 4000	400 5000	1000	2000
Isodrin	PHN	Ave	15020 438879	32574 577803	62565 719209	150672	296029	50.0 1500	100 2000	200 2500	500	1000
Aramite Peak 1	CRY	Ave	3736 176344	8824 248545	18149 329521	52480	114725	25.5 765	51.0 1020	102 1275	255	510
Aramite Peak 2	CRY	Ave	4174 223206	11008 306932	22825 394257	67064	139940	24.5 735	49.0 980	98.0 1225	245	490
p-Dimethylamino azobenzene	CRY	Ave	13890 763171	35426 1055821	76772 1384535	227398	479481	50.0 1500	100 2000	200 2500	500	1000
Ethyl 4,4'-Dichlorobenzilate	CRY	Ave	30017 1336961	71698 1808321	155706 2324125	419623	862449	50.0 1500	100 2000	200 2500	500	1000
Famphur	CRY	Qua	14994 251038	40273 +++++	76141 +++++	192418	264016	50.0 1500	100 +++++	200 +++++	500	1000
3,3'-Dimethylbenzidine	CRY	Lin	6990 1615801	12453 2347180	106169 3161333	383410	923024	50.0 1500	100 2000	200 2500	500	1000
2-Acetylaminofluorene	CRY	Lin1	12314 1281441	40401 1773531	92447 2358101	340534	784146	50.0 1500	100 2000	200 2500	500	1000
4,4'-Methylene bis(2-chloroaniline)	CRY	Lin1	6633 542021	16092 759161	48302 1013148	148488	332012	50.0 1500	100 2000	200 2500	500	1000
6-Methylchrysene	CRY	Ave	125677 4890263	281034 6634923	562105 8457897	1512276	3148922	100 3000	200 4000	400 5000	1000	2000
7,12-Dimethylbenz(a)anthracene	PRY	Ave	32725 1410763	75855 1957596	151182 2565800	416994	896109	50.0 1500	100 2000	200 2500	500	1000
3-Methylcholanthrene	PRY	Ave	57507 2894635	140250 3973077	296906 5362795	837413	1836628	100 3000	200 4000	400 5000	1000	2000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-64160-1 Analy Batch No.: 227507

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2016 11:53 Calibration End Date: 04/26/2016 14:47 Calibration ID: 34178

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dibenz[a,h]acridine	PRY	Ave	32672 1817865	89425 2581394	192097 3399435	549069	1166695	50.0 1500	100 2000	200 2500	500	1000

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426012.D
Lims ID: std9 l2lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 26-Apr-2016 11:53:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-012
Misc. Info.: STD9 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:38 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 12:44:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	267412	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1161593	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	623655	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	957214	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	859408	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	623750	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	2548037	2500.0	2541.2	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	93	1133277	2500.0	2632.6	
14 Acrylamide	71	5.670	5.670	0.000	69	780628	2500.0	2503.8	
34 Methyl methanesulfonate	80	5.711	5.711	0.000	89	1357903	2500.0	2442.6	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	93	1116678	2500.0	2528.5	
37 Ethyl methanesulfonate	79	6.246	6.246	0.000	98	1730537	2500.0	2481.3	
46 Pentachloroethane	167	6.705	6.705	0.000	91	766773	2500.0	2517.3	
56 N-Nitrosopyrrolidine	100	7.199	7.199	0.000	83	1157022	2500.0	2708.5	
59 N-Nitrosomorpholine	56	7.223	7.223	0.000	93	1614029	2500.0	2558.5	
60 2-Toluidine	106	7.258	7.258	0.000	97	3437485	2500.0	2544.2	
63 N-Nitrosopiperidine	114	7.499	7.499	0.000	81	1176367	2500.0	2578.9	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	86	989236	2500.0	2495.4	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	3236126	2500.0	2422.6	
77 Hexachloropropene	213	8.082	8.082	0.000	91	1090858	2500.0	2939.8	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	92	1323473	2500.0	2358.4	
81 Quinoline	129	8.276	8.276	0.000	96	3888153	2500.0	2294.1	
84 p-Phenylene diamine	108	8.305	8.305	0.000	96	1693551	2500.0	2553.7	
92 Safrole, Total	162	8.476	8.476	0.000	90	1635932	2500.0	2556.5	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	90	322763	2075.0	2259.0	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	92	1773372	425.0	446.8	
247 1-Chloronaphthalene	162	9.035	9.035	0.000	99	3822559	2500.0	2479.5	
102 1,4-Naphthoquinone	158	9.140	9.140	0.000	86	1129808	2500.0	2629.9	
105 1,4-Dinitrobenzene	168	9.164	9.164	0.000	92	674954	2500.0	2598.1	
114 Pentachlorobenzene	250	9.640	9.640	0.000	96	1537868	2500.0	2561.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.729	9.729	0.000	63	838614	2500.0	2616.5	
117 1-Naphthylamine	143	9.729	9.729	0.000	98	3568857	2500.0	2384.9	
119 2-Naphthylamine	143	9.787	9.787	0.000	97	3554426	2500.0	2624.0	
121 Thionazin	97	9.864	9.864	0.000	81	909968	2500.0	2525.0	
123 N-Nitro-o-toluidine	152	9.946	9.946	0.000	96	1309870	2500.0	2570.1	
132 Sulfotepp	202	10.111	10.111	0.000	78	494649	2500.0	2759.0	
133 1,3,5-Trinitrobenzene	213	10.211	10.211	0.000	84	338400	2500.0	2572.2	
135 Phenacetin	108	10.258	10.258	0.000	81	2024671	2500.0	2747.3	
134 Diallate Peak 1	86	10.258	10.258	0.000	86	1379126	2075.0	1763.5	
136 Phorate	121	10.270	10.270	0.000	96	815985	2500.0	2396.3	
137 Diallate Peak 2	86	10.340	10.340	0.000	93	348830	425.0	438.2	
139 Dimethoate	87	10.423	10.423	0.000	93	1544989	2500.0	2608.3	
142 4-Aminobiphenyl	169	10.581	10.581	0.000	89	4644606	2500.0	2515.2	
144 Pronamide	173	10.593	10.593	0.000	92	1809651	2500.0	2756.1	
145 Pentachloronitrobenzene	237	10.629	10.629	0.000	86	461525	2500.0	2940.6	
146 Disulfoton	88	10.717	10.717	0.000	98	2150459	2500.0	2493.5	
147 Dinoseb	211	10.734	10.734	0.000	94	779798	2500.0	2612.8	
152 Methyl parathion	109	11.052	11.052	0.000	94	1289501	2500.0	2449.8	
155 Ethyl Parathion	97	11.399	11.399	0.000	84	846442	2500.0	2510.9	
156 4-Nitroquinoline-1-oxide	190	11.487	11.487	0.000	95	319941	2500.0	2500.6	
157 Methapyrilene	58	11.517	11.517	0.000	98	6105891	5000.0	5315.8	
158 Isodrin	66	11.793	11.793	0.000	92	719209	2500.0	2327.4	
162 Aramite Peak 1	185	12.217	12.217	0.000	88	329521	1275.0	1515.4	
163 Aramite Peak 2	185	12.299	12.299	0.000	89	394257	1225.0	1417.5	
164 p-Dimethylamino azobenzene	225	12.464	12.464	0.000	94	1384535	2500.0	2990.8	
165 Chlorobenzilate	139	12.499	12.499	0.000	87	2324125	2500.0	2717.0	
168 Famphur	218		12.799				ND	ND	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	99	3161333	2500.0	2601.1	
172 2-Acetylaminofluorene	181	13.246	13.246	0.000	95	2358101	2500.0	2627.4	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	96	1013148	2500.0	2640.2	
180 6-Methylchrysene	242	14.546	14.546	0.000	98	8457897	5000.0	5306.2	
182 7,12-Dimethylbenz(a)anthra	256	15.499	15.499	0.000	94	2565800	2500.0	2797.8	
186 3-Methylcholanthrene	268	16.734	16.734	0.000	92	5362795	5000.0	5899.0	
188 Dibenz[a,h]acridine	279	17.846	17.846	0.000	92	3399435	2500.0	2951.1	
S 194 Isosafrole	162				0		2500.0	2705.8	
S 195 Diallate	86				0		2500.0	2201.7	
S 196 Aramite, Total	185				0		2500.0	2932.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST2 L9 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:30:41 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426012.D

Injection Date: 26-Apr-2016 11:53:30 Instrument ID: A4AG2 Operator ID:

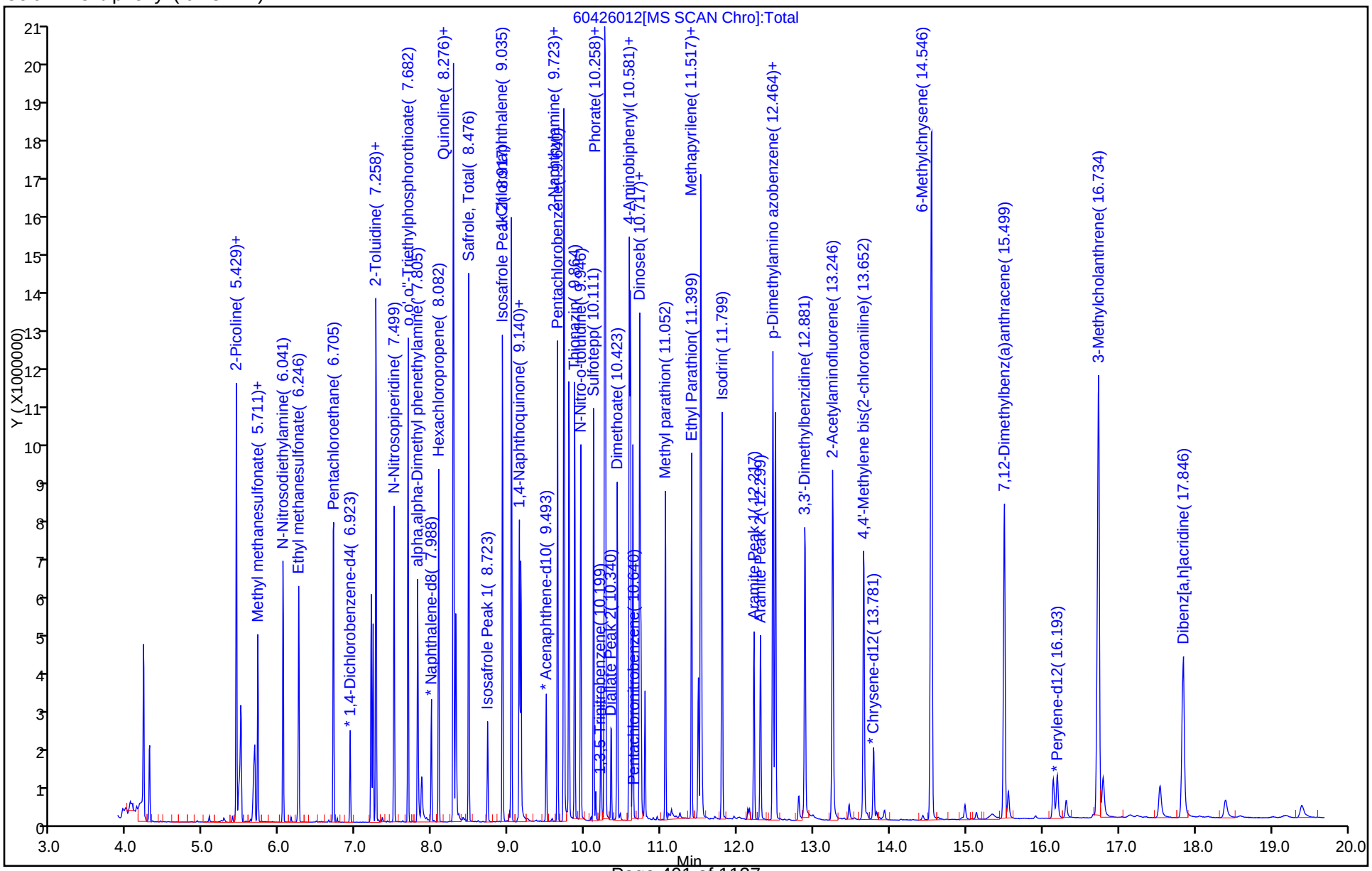
Lims ID: std9 l2lvi Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 12

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426013.D
Lims ID: std8 l2lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 26-Apr-2016 12:18:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-013
Misc. Info.: STD8 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:45 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 12:45:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	266518	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1150543	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	629271	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	958154	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	97	851378	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	616027	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	1898365	2000.0	1899.6	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	94	890210	2000.0	2074.9	
14 Acrylamide	71	5.658	5.670	-0.012	70	483251	2000.0	2002.3	
34 Methyl methanesulfonate	80	5.711	5.711	0.000	88	1071553	2000.0	1934.0	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	92	880243	2000.0	1999.8	
37 Ethyl methanesulfonate	79	6.246	6.246	0.000	98	1375960	2000.0	1979.6	
46 Pentachloroethane	167	6.705	6.705	0.000	91	612785	2000.0	2018.5	
56 N-Nitrosopyrrolidine	100	7.199	7.199	0.000	83	916288	2000.0	2152.1	
59 N-Nitrosomorpholine	56	7.223	7.223	0.000	94	1279413	2000.0	2034.9	
60 2-Toluidine	106	7.258	7.258	0.000	97	2792591	2000.0	2073.8	
63 N-Nitrosopiperidine	114	7.499	7.499	0.000	81	928270	2000.0	2054.6	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	87	779838	2000.0	1986.1	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	2578150	2000.0	1948.6	
77 Hexachloropropene	213	8.082	8.082	0.000	92	843443	2000.0	2294.8	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	92	1075291	2000.0	1934.5	
81 Quinoline	129	8.276	8.276	0.000	97	3235656	2000.0	1927.4	
84 p-Phenylene diamine	108	8.305	8.305	0.000	96	1307833	2000.0	2014.6	
92 Safrole, Total	162	8.476	8.476	0.000	90	1307720	2000.0	2063.2	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	88	246562	1660.0	1710.3	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	92	1421619	340.0	355.0	
247 1-Chloronaphthalene	162	9.035	9.035	0.000	99	3044690	2000.0	1957.3	
102 1,4-Naphthoquinone	158	9.140	9.140	0.000	87	938969	2000.0	2166.1	
105 1,4-Dinitrobenzene	168	9.158	9.164	-0.006	92	519423	2000.0	1991.5	
114 Pentachlorobenzene	250	9.640	9.640	0.000	96	1207578	2000.0	1993.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.729	9.729	0.000	82	648582	2000.0	2013.7	
117 1-Naphthylamine	143	9.723	9.729	-0.006	99	2958906	2000.0	1959.7	
119 2-Naphthylamine	143	9.787	9.787	0.000	97	2818439	2000.0	2062.1	
121 Thionazin	97	9.864	9.864	0.000	81	721755	2000.0	1984.9	
123 N-Nitro-o-toluidine	152	9.946	9.946	0.000	97	1018538	2000.0	1988.2	
132 Sulfotepp	202	10.111	10.111	0.000	79	387238	2000.0	2157.8	
133 1,3,5-Trinitrobenzene	213	10.211	10.211	0.000	84	257938	2000.0	1986.5	
135 Phenacetin	108	10.258	10.258	0.000	90	1621480	2000.0	2198.1	
134 Diallate Peak 1	86	10.258	10.258	0.000	95	1162532	1660.0	1485.1	
136 Phorate	121	10.270	10.270	0.000	96	673234	2000.0	1975.2	
137 Diallate Peak 2	86	10.340	10.340	0.000	92	270903	340.0	340.0	
139 Dimethoate	87	10.423	10.423	0.000	93	1255655	2000.0	2117.8	
142 4-Aminobiphenyl	169	10.582	10.581	0.001	89	3637915	2000.0	1976.0	
144 Pronamide	173	10.593	10.593	0.000	92	1413527	2000.0	2150.7	
145 Pentachloronitrobenzene	237	10.629	10.629	0.000	85	359724	2000.0	2289.7	
146 Disulfoton	88	10.717	10.717	0.000	98	1728380	2000.0	2002.1	
147 Dinoseb	211	10.729	10.734	-0.005	93	587125	2000.0	1998.7	
152 Methyl parathion	109	11.052	11.052	0.000	94	1038901	2000.0	1977.6	
155 Ethyl Parathion	97	11.393	11.399	-0.006	84	670517	2000.0	1994.7	
156 4-Nitroquinoline-1-oxide	190	11.487	11.487	0.000	95	217484	2000.0	1999.9	
157 Methapyrilene	58	11.517	11.517	0.000	98	5010595	4000.0	4358.0	
158 Isodrin	66	11.793	11.793	0.000	91	577803	2000.0	1868.0	
162 Aramite Peak 1	185	12.217	12.217	0.000	88	248545	1020.0	1153.8	
163 Aramite Peak 2	185	12.299	12.299	0.000	88	306932	980.0	1113.9	
164 p-Dimethylamino azobenzene	225	12.464	12.464	0.000	94	1055821	2000.0	2302.3	
165 Chlorobenzilate	139	12.493	12.499	-0.006	86	1808321	2000.0	2134.0	
168 Famphur	218		12.799				ND	ND	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	99	2347180	2000.0	1982.1	
172 2-Acetylaminofluorene	181	13.246	13.246	0.000	95	1773531	2000.0	2007.0	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	96	759161	2000.0	2008.3	
180 6-Methylchrysene	242	14.540	14.546	-0.006	98	6634923	4000.0	4201.8	
182 7,12-Dimethylbenz(a)anthra	256	15.499	15.499	0.000	94	1957596	2000.0	2161.4	
186 3-Methylcholanthrene	268	16.728	16.734	-0.006	94	3973077	4000.0	4425.2	
188 Dibenz[a,h]acridine	279	17.840	17.846	-0.006	92	2581394	2000.0	2269.1	
S 194 Isosafrole	162				0		2000.0	2065.3	
S 195 Diallate	86				0		2000.0	1825.1	
S 196 Aramite, Total	185				0		2000.0	2267.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST2 L8 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:30:48 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426013.D

Injection Date: 26-Apr-2016 12:18:30 Instrument ID: A4AG2 Operator ID:

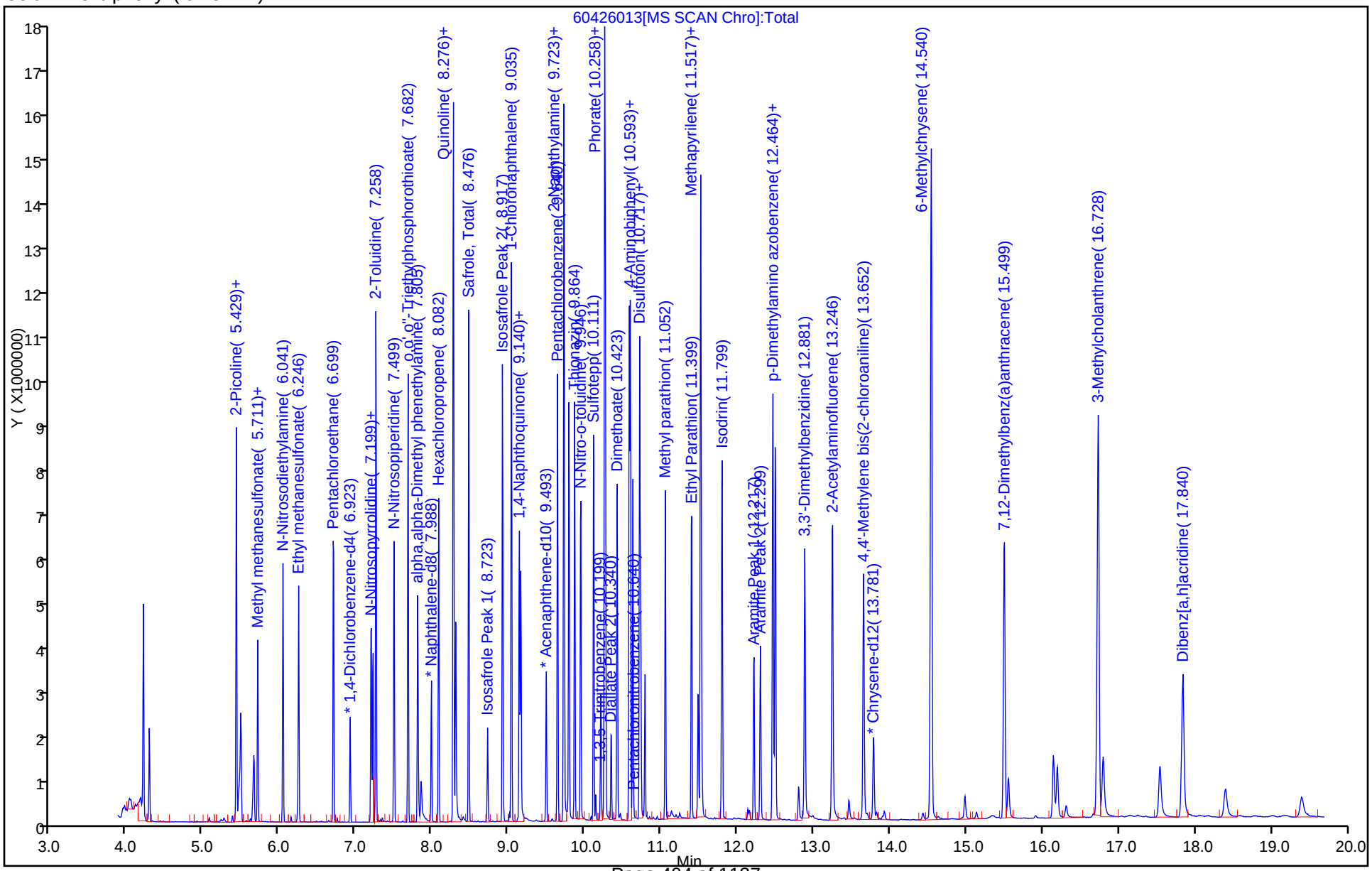
Lims ID: std8 l2lvi Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 13

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 27-Apr-2016 07:30:54 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426014.D
Lims ID: std7 l2lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 26-Apr-2016 12:43:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-014
Misc. Info.: STD7 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:51 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 13:11:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	256014	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1112727	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	601145	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	911540	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	825314	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	584893	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	1422992	1500.0	1482.3	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	94	645930	1500.0	1567.3	
14 Acrylamide	71	5.653	5.670	-0.018	69	239683	1500.0	1467.1	
34 Methyl methanesulfonate	80	5.711	5.711	0.000	88	798172	1500.0	1499.7	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	91	654842	1500.0	1548.8	
37 Ethyl methanesulfonate	79	6.247	6.246	0.001	98	1018814	1500.0	1525.9	
46 Pentachloroethane	167	6.705	6.705	0.000	91	444908	1500.0	1525.6	
56 N-Nitrosopyrrolidine	100	7.194	7.199	-0.005	84	674556	1500.0	1649.4	
59 N-Nitrosomorpholine	56	7.217	7.223	-0.006	94	953952	1500.0	1579.5	
60 2-Toluidine	106	7.258	7.258	0.000	97	2079762	1500.0	1607.8	
63 N-Nitrosopiperidine	114	7.499	7.499	0.000	81	679320	1500.0	1554.6	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	87	574812	1500.0	1513.7	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	1853409	1500.0	1448.4	
77 Hexachloropropene	213	8.082	8.082	0.000	92	593319	1500.0	1669.2	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	92	834049	1500.0	1551.5	
81 Quinoline	129	8.276	8.276	0.000	96	2460632	1500.0	1515.6	
84 p-Phenylene diamine	108	8.305	8.305	0.000	95	932917	1500.0	1513.9	
92 Safrole, Total	162	8.476	8.476	0.000	89	960337	1500.0	1566.7	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	88	181466	1245.0	1317.6	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	91	1033051	255.0	270.0	
247 1-Chloronaphthalene	162	9.035	9.035	0.000	98	2283217	1500.0	1536.5	
102 1,4-Naphthoquinone	158	9.141	9.140	0.001	86	691819	1500.0	1670.7	
105 1,4-Dinitrobenzene	168	9.158	9.164	-0.006	92	374214	1500.0	1512.2	
114 Pentachlorobenzene	250	9.640	9.640	0.000	96	892153	1500.0	1541.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.723	9.729	-0.006	78	454611	1500.0	1486.8	
117 1-Naphthylamine	143	9.723	9.729	-0.006	99	2290520	1500.0	1588.0	
119 2-Naphthylamine	143	9.788	9.787	0.001	97	2112630	1500.0	1618.0	
121 Thionazin	97	9.864	9.864	0.000	81	543080	1500.0	1563.4	
123 N-Nitro-o-toluidine	152	9.940	9.946	-0.006	95	730865	1500.0	1501.7	
132 Sulfotepp	202	10.111	10.111	0.000	78	279606	1500.0	1637.7	
133 1,3,5-Trinitrobenzene	213	10.205	10.211	-0.006	83	177593	1500.0	1469.9	
135 Phenacetin	108	10.252	10.258	-0.006	94	1242881	1500.0	1771.0	
134 Diallate Peak 1	86	10.258	10.258	0.000	95	900378	1245.0	1209.0	
136 Phorate	121	10.270	10.270	0.000	96	511850	1500.0	1578.5	
137 Diallate Peak 2	86	10.340	10.340	0.000	93	202800	255.0	267.5	
139 Dimethoate	87	10.423	10.423	0.000	94	948595	1500.0	1681.7	
142 4-Aminobiphenyl	169	10.582	10.581	0.001	89	2677039	1500.0	1536.6	
144 Pronamide	173	10.593	10.593	0.000	92	1046273	1500.0	1673.3	
145 Pentachloronitrobenzene	237	10.629	10.629	0.000	84	250009	1500.0	1672.7	
146 Disulfoton	88	10.717	10.717	0.000	98	1314517	1500.0	1600.6	
147 Dinoseb	211	10.729	10.734	-0.005	93	383408	1500.0	1414.2	
152 Methyl parathion	109	11.052	11.052	0.000	93	766494	1500.0	1540.4	
155 Ethyl Parathion	97	11.399	11.399	0.000	84	492977	1500.0	1549.7	
156 4-Nitroquinoline-1-oxide	190	11.482	11.487	-0.005	84	127412	1500.0	1498.5	
157 Methapyrilene	58	11.517	11.517	0.000	98	3795619	3000.0	3470.1	
158 Isodrin	66	11.793	11.793	0.000	89	438879	1500.0	1491.4	
162 Aramite Peak 1	185	12.217	12.217	0.000	88	176344	765.0	844.5	
163 Aramite Peak 2	185	12.299	12.299	0.000	88	223206	735.0	835.7	
164 p-Dimethylamino azobenzene	225	12.464	12.464	0.000	94	763171	1500.0	1716.7	
165 Chlorobenzilate	139	12.493	12.499	-0.006	86	1336961	1500.0	1627.6	
168 Famphur	218	12.805	12.799	0.006	89	251038	1500.0	816.3	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	99	1615801	1500.0	1445.4	
172 2-Acetylaminofluorene	181	13.240	13.246	-0.006	96	1281441	1500.0	1509.0	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	96	542021	1500.0	1491.5	
180 6-Methylchrysene	242	14.540	14.546	-0.006	99	4890263	3000.0	3194.7	
182 7,12-Dimethylbenz(a)anthra	256	15.499	15.499	0.000	94	1410763	1500.0	1640.5	
186 3-Methylcholanthrene	268	16.728	16.734	-0.006	93	2894635	3000.0	3395.6	
188 Dibenz[a,h]acridine	279	17.840	17.846	-0.006	92	1817865	1500.0	1683.0	
S 194 Isosafrole	162				0		1500.0	1587.7	
S 195 Diallate	86				0		1500.0	1476.6	
S 196 Aramite, Total	185				0		1500.0	1680.1	

Reagents:

SMLIST2 L7 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:30:54 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426014.D

Injection Date: 26-Apr-2016 12:43:30 Instrument ID: A4AG2 Operator ID:

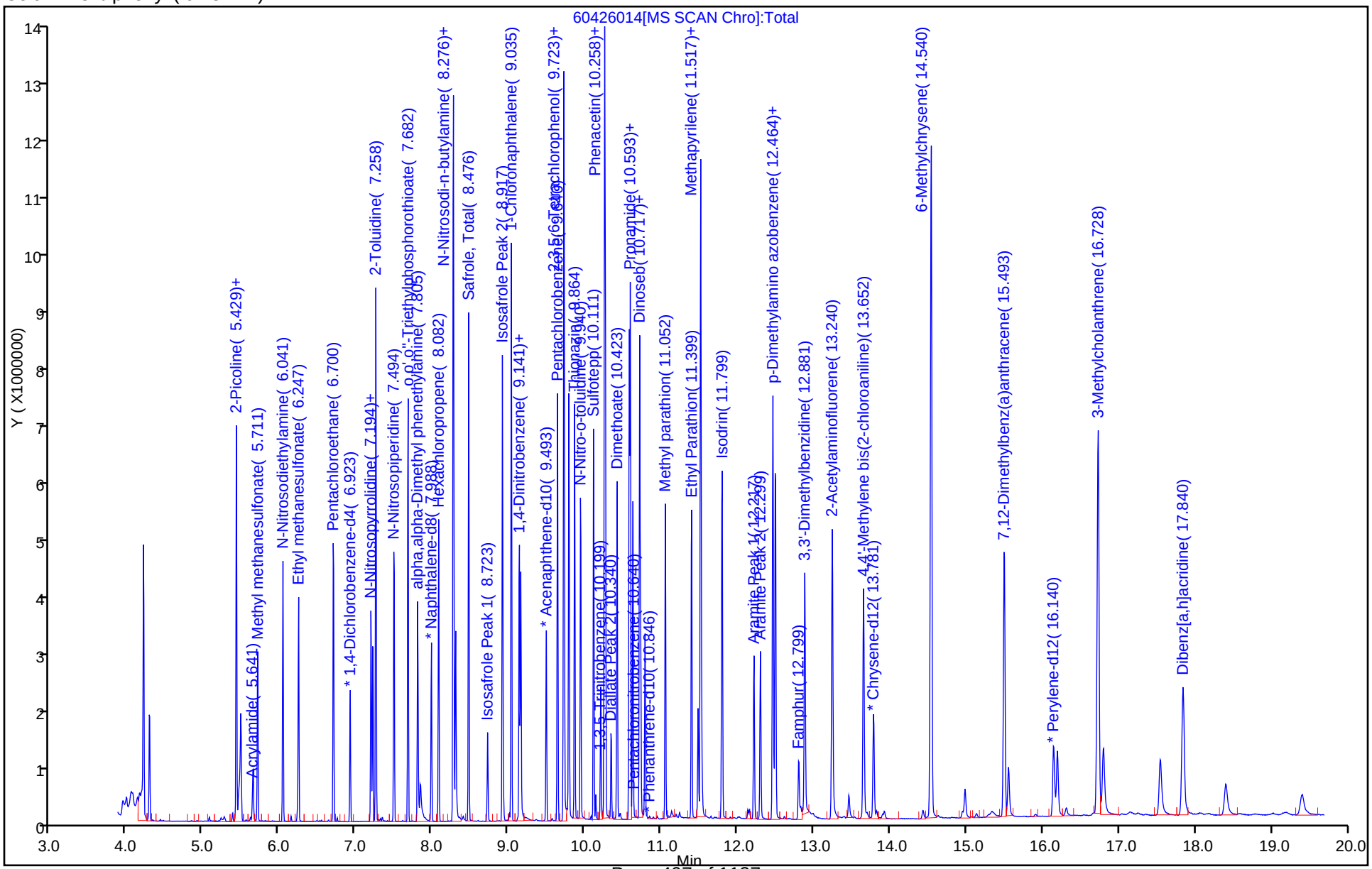
Lims ID: std7 l2lvi Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 14

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426015.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Apr-2016 13:08:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-015
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:57 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 13:36:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	257574	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1125731	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	602978	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	922837	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	826701	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	597046	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	961042	1000.0	995.1	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	93	427018	1000.0	1029.8	
14 Acrylamide	71	5.641	5.641	0.000	69	112972	1000.0	1014.1	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	89	532812	1000.0	995.0	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	91	435788	1000.0	1024.4	
37 Ethyl methanesulfonate	79	6.247	6.247	0.000	98	673375	1000.0	1002.4	
46 Pentachloroethane	167	6.705	6.705	0.000	92	293823	1000.0	1001.5	
56 N-Nitrosopyrrolidine	100	7.194	7.194	0.000	82	441039	1000.0	1071.9	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	92	637413	1000.0	1049.0	
60 2-Toluidine	106	7.258	7.258	0.000	97	1382610	1000.0	1062.4	
63 N-Nitrosopiperidine	114	7.494	7.494	0.000	80	454864	1000.0	1028.9	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	87	382116	1000.0	994.6	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	1510905	1000.0	1167.1	
77 Hexachloropropene	213	8.082	8.082	0.000	92	375665	1000.0	1044.6	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	91	569118	1000.0	1046.4	
81 Quinoline	129	8.276	8.276	0.000	96	1687924	1000.0	1027.6	
84 p-Phenylene diamine	108	8.305	8.305	0.000	96	561178	1000.0	943.4	
92 Safrole, Total	162	8.476	8.476	0.000	89	624698	1000.0	1007.3	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	89	118563	830.0	858.3	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	91	678802	170.0	176.9	
247 1-Chloronaphthalene	162	9.035	9.035	0.000	98	1510566	1000.0	1013.4	
102 1,4-Naphthoquinone	158	9.140	9.140	0.000	85	460146	1000.0	1107.8	
105 1,4-Dinitrobenzene	168	9.158	9.158	0.000	91	235530	1000.0	964.6	
114 Pentachlorobenzene	250	9.640	9.640	0.000	96	571590	1000.0	984.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.723	9.723	0.000	60	285720	1000.0	944.6	
117 1-Naphthylamine	143	9.723	9.723	0.000	99	1592949	1000.0	1101.0	
119 2-Naphthylamine	143	9.787	9.787	0.000	97	1460851	1000.0	1115.4	
121 Thionazin	97	9.864	9.864	0.000	81	357287	1000.0	1025.4	
123 N-Nitro-o-toluidine	152	9.940	9.940	0.000	95	472868	1000.0	980.4	
132 Sulfotepp	202	10.111	10.111	0.000	79	180526	1000.0	1044.4	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	83	106458	1000.0	918.0	
135 Phenacetin	108	10.252	10.252	0.000	88	833641	1000.0	1173.3	
134 Diallate Peak 1	86	10.258	10.258	0.000	94	644120	830.0	854.3	
136 Phorate	121	10.270	10.270	0.000	96	349695	1000.0	1065.2	
137 Diallate Peak 2	86	10.340	10.340	0.000	94	133088	170.0	173.4	
139 Dimethoate	87	10.417	10.417	0.000	94	643109	1000.0	1126.2	
142 4-Aminobiphenyl	169	10.576	10.576	0.000	89	1758708	1000.0	1009.9	
144 Pronamide	173	10.593	10.593	0.000	91	678648	1000.0	1072.1	
145 Pentachloronitrobenzene	237	10.629	10.629	0.000	84	158747	1000.0	1049.1	
146 Disulfoton	88	10.717	10.717	0.000	98	876160	1000.0	1053.8	
147 Dinoseb	211	10.729	10.729	0.000	92	223203	1000.0	870.5	
152 Methyl parathion	109	11.052	11.052	0.000	93	519230	1000.0	1040.6	
155 Ethyl Parathion	97	11.393	11.393	0.000	84	310560	1000.0	978.0	
156 4-Nitroquinoline-1-oxide	190	11.481	11.481	0.000	77	66832	1000.0	994.0	
157 Methapyrilene	58	11.517	11.517	0.000	98	2488955	2000.0	2247.6	
158 Isodrin	66	11.793	11.793	0.000	88	296029	1000.0	993.7	
162 Aramite Peak 1	185	12.211	12.211	0.000	87	114725	510.0	548.5	
163 Aramite Peak 2	185	12.299	12.299	0.000	89	139940	490.0	523.0	
164 p-Dimethylamino azobenzene	225	12.464	12.464	0.000	94	479481	1000.0	1076.7	
165 Chlorobenzilate	139	12.493	12.493	0.000	85	862449	1000.0	1048.1	
168 Famphur	218	12.799	12.799	0.000	89	264016	1000.0	920.6	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	99	923024	1000.0	880.4	
172 2-Acetylaminofluorene	181	13.234	13.234	0.000	96	784146	1000.0	941.8	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	95	332012	1000.0	930.1	
180 6-Methylchrysene	242	14.534	14.534	0.000	98	3148922	2000.0	2053.7	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	94	896109	1000.0	1020.8	
186 3-Methylcholanthrene	268	16.722	16.722	0.000	94	1836628	2000.0	2110.6	
188 Dibenz[a,h]acridine	279	17.840	17.840	0.000	92	1166695	1000.0	1058.1	
S 194 Isosafrole	162				0		1000.0	1035.2	
S 195 Diallate	86				0		1000.0	1027.8	
S 196 Aramite, Total	185				0		1000.0	1071.5	

Reagents:

SMLIST2 L6 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:31:00 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426015.D

Injection Date: 26-Apr-2016 13:08:30 Instrument ID: A4AG2 Operator ID:

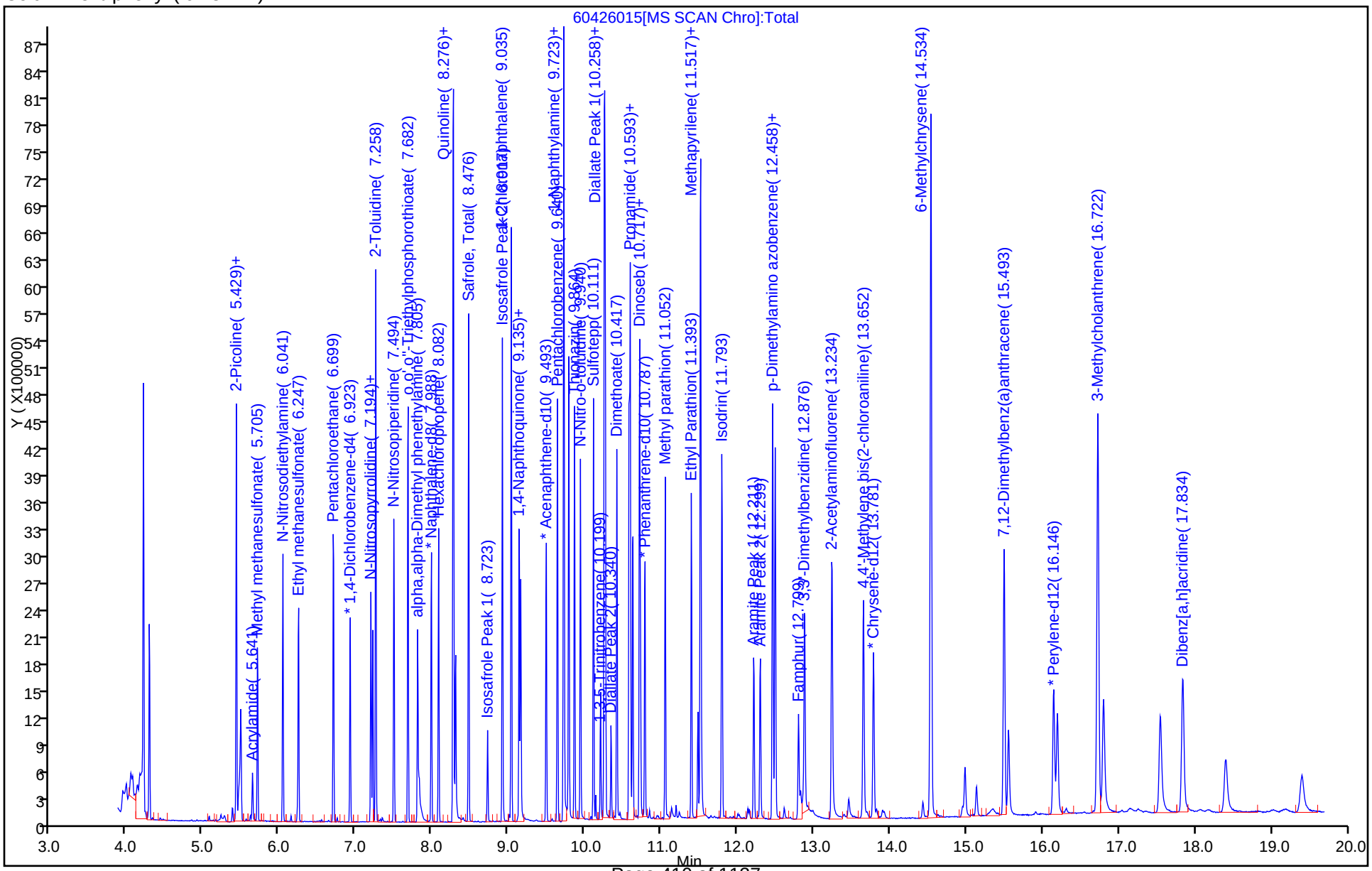
Lims ID: std6 l2lvi Worklist Smp#: 15

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 15

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426016.D
Lims ID: std5 l2lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Apr-2016 13:33:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-016
Misc. Info.: STD5 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:31:06 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 14:02:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	268790	400.0	400.0	
* 2 Naphthalene-d8	136	7.987	7.988	-0.001	100	1119785	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	604870	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	929043	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	820267	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	585519	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	97	520530	500.0	516.5	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	95	215317	500.0	497.6	
14 Acrylamide	71	5.635	5.641	-0.006	71	53150	500.0	642.0	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	89	274894	500.0	491.9	
36 N-Nitrosodiethylamine	102	6.041	6.041	-0.001	90	216627	500.0	488.0	
37 Ethyl methanesulfonate	79	6.240	6.247	-0.007	98	344468	500.0	491.4	
46 Pentachloroethane	167	6.699	6.705	-0.006	91	153967	500.0	502.9	
56 N-Nitrosopyrrolidine	100	7.193	7.194	-0.001	82	214716	500.0	500.1	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	94	319113	500.0	503.3	
60 2-Toluidine	106	7.258	7.258	0.000	97	695968	500.0	512.5	
63 N-Nitrosopiperidine	114	7.493	7.494	-0.001	80	221030	500.0	502.6	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	88	189856	500.0	496.8	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	760494	500.0	590.6	
77 Hexachloropropene	213	8.082	8.082	0.000	92	176214	500.0	492.6	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	90	279470	500.0	516.6	
81 Quinoline	129	8.276	8.276	0.000	96	846030	500.0	517.8	
84 p-Phenylene diamine	108	8.305	8.305	0.000	95	243432	500.0	471.6	
92 Safrole, Total	162	8.476	8.476	0.000	88	308272	500.0	499.7	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	88	56565	415.0	408.2	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	91	335566	85.0	87.2	
247 1-Chloronaphthalene	162	9.034	9.035	-0.001	99	751713	500.0	502.7	
102 1,4-Naphthoquinone	158	9.134	9.140	-0.006	84	247345	500.0	593.6	
105 1,4-Dinitrobenzene	168	9.158	9.158	0.000	93	104876	500.0	451.5	
114 Pentachlorobenzene	250	9.640	9.640	0.000	97	284888	500.0	489.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.723	9.723	0.000	79	129270	500.0	445.2	
117 1-Naphthylamine	143	9.723	9.723	0.000	99	803361	500.0	553.5	
119 2-Naphthylamine	143	9.787	9.787	0.000	97	753924	500.0	573.9	
121 Thionazin	97	9.864	9.864	0.000	81	181466	500.0	519.2	
123 N-Nitro-o-toluidine	152	9.940	9.940	0.000	95	219832	500.0	472.1	
132 Sulfotepp	202	10.111	10.111	0.000	79	86398	500.0	496.5	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	84	42082	500.0	431.3	
135 Phenacetin	108	10.252	10.252	0.000	88	386527	500.0	540.4	
134 Diallate Peak 1	86	10.258	10.258	0.000	92	330795	415.0	435.8	
136 Phorate	121	10.264	10.270	-0.006	95	178347	500.0	539.6	
137 Diallate Peak 2	86	10.340	10.340	0.000	94	64804	85.0	83.9	
139 Dimethoate	87	10.417	10.417	0.000	94	313146	500.0	544.7	
142 4-Aminobiphenyl	169	10.576	10.576	0.000	89	818854	500.0	486.5	
144 Pronamide	173	10.593	10.593	0.000	92	328821	500.0	516.0	
145 Pentachloronitrobenzene	237	10.628	10.629	-0.001	83	77049	500.0	505.8	
146 Disulfoton	88	10.711	10.717	-0.006	98	440779	500.0	526.6	
147 Dinoseb	211	10.723	10.729	-0.006	93	90474	500.0	431.1	
152 Methyl parathion	109	11.052	11.052	0.000	93	248428	500.0	510.2	
155 Ethyl Parathion	97	11.393	11.393	0.000	84	147487	500.0	480.5	
156 4-Nitroquinoline-1-oxide	190	11.481	11.481	0.000	76	26167	500.0	524.9	
157 Methapyrilene	58	11.511	11.517	-0.006	99	1220601	1000.0	1094.9	
158 Isodrin	66	11.793	11.793	0.000	87	150672	500.0	502.4	
162 Aramite Peak 1	185	12.211	12.211	0.000	86	52480	255.0	252.9	
163 Aramite Peak 2	185	12.299	12.299	0.000	89	67064	245.0	252.6	
164 p-Dimethylamino azobenzene	225	12.458	12.464	-0.006	93	227398	500.0	514.7	
165 Chlorobenzilate	139	12.493	12.493	0.000	84	419623	500.0	514.0	
168 Famphur	218	12.799	12.799	0.000	89	192418	500.0	532.7	
170 3,3'-Dimethylbenzidine	212	12.875	12.881	-0.006	99	383410	500.0	444.5	
172 2-Acetylaminofluorene	181	13.234	13.234	0.000	95	340534	500.0	441.0	
175 4,4'-Methylene bis(2-chlor	231	13.646	13.652	-0.006	95	148488	500.0	444.9	
180 6-Methylchrysene	242	14.528	14.534	-0.006	99	1512276	1000.0	994.0	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	93	416994	500.0	484.4	
186 3-Methylcholanthrene	268	16.716	16.722	-0.006	95	837413	1000.0	981.3	
188 Dibenz[a,h]acridine	279	17.834	17.840	-0.006	92	549069	500.0	507.8	
S 194 Isosafrole	162				0		500.0	495.4	
S 195 Diallate	86				0		500.0	519.7	
S 196 Aramite, Total	185				0		500.0	505.5	

Reagents:

SMLIST2 L5 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:31:08 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426016.D

Injection Date: 26-Apr-2016 13:33:30 Instrument ID: A4AG2 Operator ID:

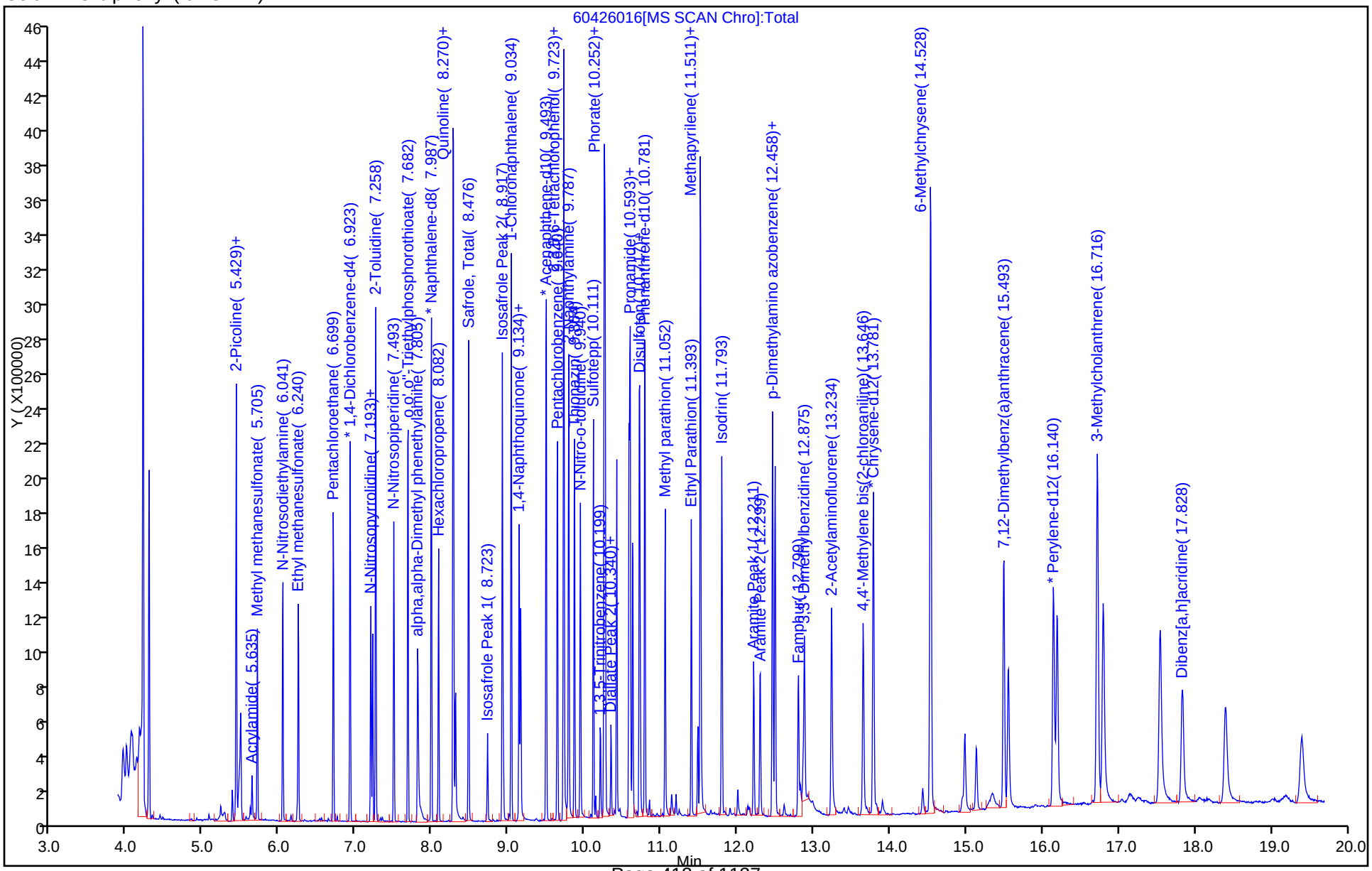
Lims ID: std5 l2lvi Worklist Smp#: 16

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 16

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426017.D
Lims ID: std4 l2lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Apr-2016 13:58:30 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-017
Misc. Info.: STD4 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:31:14 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 05:42:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	243363	400.0	400.0	
* 2 Naphthalene-d8	136	7.987	7.988	-0.001	100	1067962	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	607120	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	952678	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	809558	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	568697	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	181133	200.0	198.5	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	94	79793	200.0	203.7	
14 Acrylamide	71	5.635	5.641	-0.006	76	27384	200.0	330.3	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	89	103940	200.0	205.4	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	90	83873	200.0	208.7	
37 Ethyl methanesulfonate	79	6.241	6.247	-0.006	98	132511	200.0	208.8	
46 Pentachloroethane	167	6.699	6.705	-0.006	91	57029	200.0	205.7	
56 N-Nitrosopyrrolidine	100	7.193	7.194	-0.001	81	76649	200.0	197.2	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	94	119720	200.0	208.5	
60 2-Toluidine	106	7.258	7.258	0.000	97	253915	200.0	206.5	
63 N-Nitrosopiperidine	114	7.493	7.494	-0.001	80	85083	200.0	202.9	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	87	73694	200.0	202.2	
71 alpha,alpha-Dimethyl phene	58	7.811	7.805	0.006	98	182444	200.0	148.6	
77 Hexachloropropene	213	8.082	8.082	0.000	92	62821	200.0	184.1	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	89	110305	200.0	213.8	
81 Quinoline	129	8.276	8.276	0.000	96	338498	200.0	217.2	
84 p-Phenylene diamine	108	8.305	8.305	0.000	95	53333	200.0	190.6	
92 Safrole, Total	162	8.476	8.476	0.000	88	121886	200.0	207.2	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	89	21857	166.0	157.1	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	90	129450	34.0	33.5	
247 1-Chloronaphthalene	162	9.034	9.035	-0.001	98	300195	200.0	200.0	
102 1,4-Naphthoquinone	158	9.140	9.140	0.000	86	80324	200.0	192.1	
105 1,4-Dinitrobenzene	168	9.158	9.158	0.000	92	33646	200.0	172.9	
114 Pentachlorobenzene	250	9.640	9.640	0.000	96	115716	200.0	198.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.723	9.723	0.000	90	46714	200.0	182.6	
117 1-Naphthylamine	143	9.723	9.723	0.000	99	316756	200.0	217.4	
119 2-Naphthylamine	143	9.787	9.787	0.000	96	304089	200.0	230.6	
121 Thionazin	97	9.864	9.864	0.000	80	69945	200.0	199.4	
123 N-Nitro-o-toluidine	152	9.940	9.940	0.000	94	74921	200.0	182.2	
132 Sulfotepp	202	10.111	10.111	0.000	78	34210	200.0	191.7	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	83	10921	200.0	196.3	
135 Phenacetin	108	10.252	10.252	0.000	93	138125	200.0	188.3	
134 Diallate Peak 1	86	10.258	10.258	0.000	93	140693	166.0	180.8	
136 Phorate	121	10.264	10.270	-0.006	96	66144	200.0	195.2	
137 Diallate Peak 2	86	10.340	10.340	0.000	94	25727	34.0	32.5	
139 Dimethoate	87	10.417	10.417	0.000	94	114054	200.0	193.5	
142 4-Aminobiphenyl	169	10.576	10.576	0.000	89	256423	200.0	173.7	
144 Pronamide	173	10.593	10.593	0.000	92	123133	200.0	188.4	
145 Pentachloronitrobenzene	237	10.623	10.629	-0.006	83	29148	200.0	186.6	
146 Disulfoton	88	10.717	10.717	0.000	98	169168	200.0	197.1	
147 Dinoseb	211	10.723	10.729	-0.006	91	23313	200.0	209.3	
152 Methyl parathion	109	11.052	11.052	0.000	92	81070	200.0	182.7	
155 Ethyl Parathion	97	11.393	11.393	0.000	84	49934	200.0	182.9	
156 4-Nitroquinoline-1-oxide	190	11.481	11.481	0.000	68	6497	200.0	178.2	
157 Methapyrilene	58	11.511	11.517	-0.006	99	432697	400.0	378.5	
158 Isodrin	66	11.793	11.793	0.000	85	62565	200.0	203.4	
162 Aramite Peak 1	185	12.211	12.211	0.000	84	18149	102.0	88.6	
163 Aramite Peak 2	185	12.299	12.299	0.000	87	22825	98.0	87.1	
164 p-Dimethylamino azobenzene	225	12.458	12.464	-0.006	93	76772	200.0	176.1	
165 Chlorobenzilate	139	12.493	12.493	0.000	83	155706	200.0	193.2	
168 Famphur	218	12.799	12.799	0.000	91	76141	200.0	187.5	
170 3,3'-Dimethylbenzidine	212	12.875	12.881	-0.006	99	106169	200.0	218.6	
172 2-Acetylaminofluorene	181	13.234	13.234	0.000	95	92447	200.0	158.4	
175 4,4'-Methylene bis(2-chlor	231	13.646	13.652	-0.006	94	48302	200.0	177.9	
180 6-Methylchrysene	242	14.528	14.534	-0.006	98	562105	400.0	374.4	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	94	151182	200.0	180.8	
186 3-Methylcholanthrene	268	16.716	16.722	-0.006	96	296906	400.0	358.2	
188 Dibenz[a,h]acridine	279	17.834	17.840	-0.006	92	192097	200.0	182.9	
S 194 Isosafrole	162				0		200.0	190.6	
S 195 Diallate	86				0		200.0	213.2	
S 196 Aramite, Total	185				0		200.0	175.7	

Reagents:

SMLIST2 L4 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:31:17 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426017.D

Injection Date: 26-Apr-2016 13:58:30 Instrument ID: A4AG2 Operator ID:

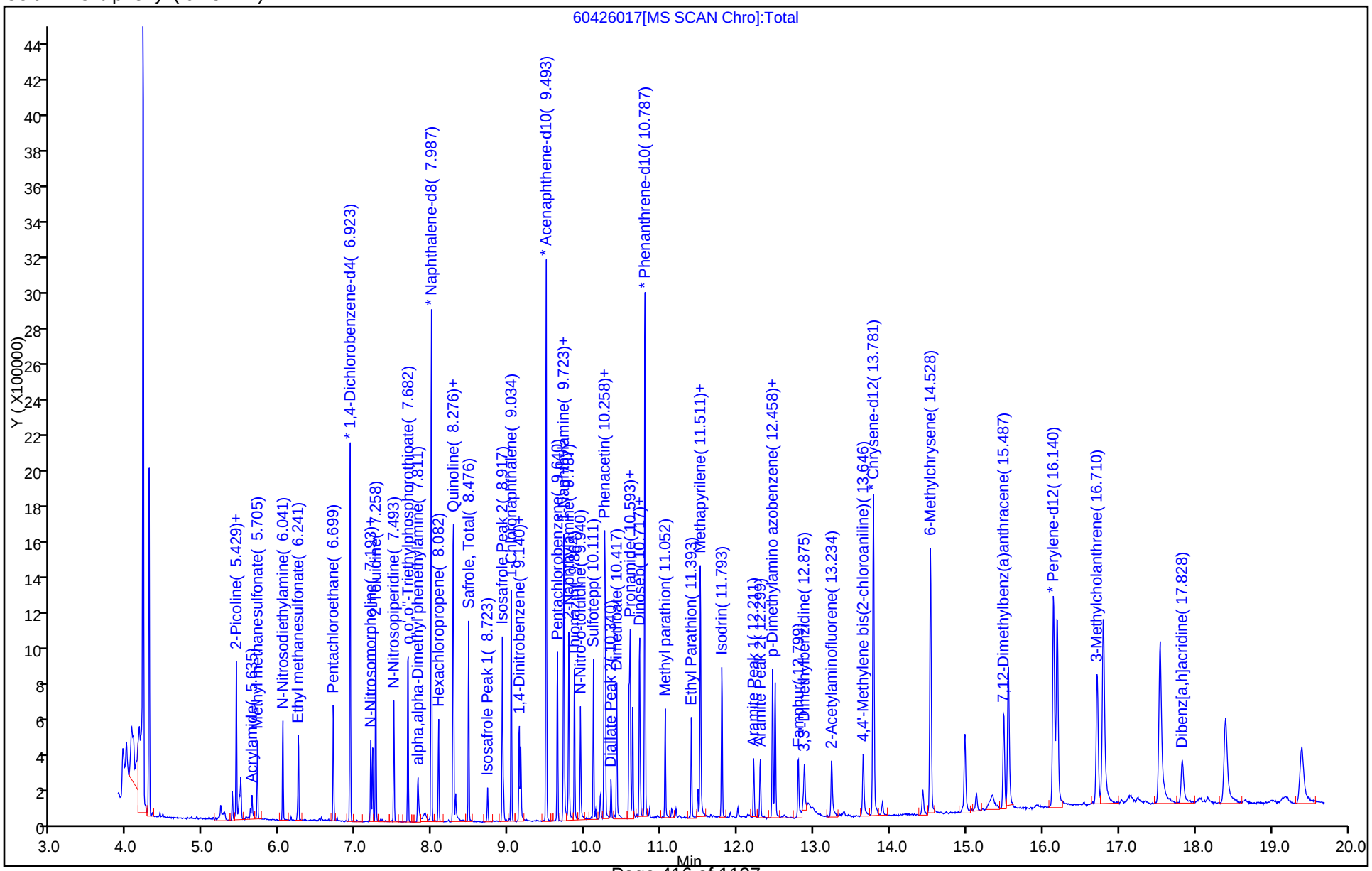
Lims ID: std4 l2lvi Worklist Smp#: 17

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 17

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426018.D
Lims ID: std3 l2lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Apr-2016 14:22:30 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-018
Misc. Info.: STD3 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:31:21 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 05:43:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	244634	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1034618	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	93	590559	400.0	400.0	
* 4 Phenanthrene-d10	188	10.788	10.787	0.001	97	946879	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	801989	400.0	400.0	
* 6 Perylene-d12	264	16.187	16.193	-0.006	96	554124	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	93415	100.0	101.8	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	95	39590	100.0	100.5	
14 Acrylamide	71	5.635	5.641	-0.006	67	19780	100.0	NQ	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	89	53324	100.0	104.8	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	92	41085	100.0	101.7	
37 Ethyl methanesulfonate	79	6.241	6.247	-0.006	98	64368	100.0	100.9	
46 Pentachloroethane	167	6.700	6.705	-0.005	92	27560	100.0	98.9	
56 N-Nitrosopyrrolidine	100	7.194	7.194	0.000	80	34775	100.0	89.0	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	94	57997	100.0	100.5	
60 2-Toluidine	106	7.258	7.258	0.000	97	116463	100.0	94.2	
63 N-Nitrosopiperidine	114	7.494	7.494	0.000	81	40879	100.0	100.6	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	89	35373	100.0	100.2	
71 alpha,alpha-Dimethyl phene	58		7.805				ND	ND	
77 Hexachloropropene	213	8.082	8.082	0.000	93	27642	100.0	83.6	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	88	49406	100.0	98.8	
81 Quinoline	129	8.276	8.276	0.000	96	159125	100.0	105.4	
84 p-Phenylene diamine	108	8.311	8.305	0.006	90	3399	100.0	112.3	
92 Safrole, Total	162	8.476	8.476	0.000	89	56687	100.0	99.5	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	86	10960	83.0	81.0	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	90	61436	17.0	16.3	
247 1-Chloronaphthalene	162	9.035	9.035	0.000	98	149226	100.0	102.2	
102 1,4-Naphthoquinone	158	9.141	9.140	0.001	82	35299	100.0	86.8	
105 1,4-Dinitrobenzene	168	9.164	9.158	0.006	91	13435	100.0	95.8	
114 Pentachlorobenzene	250	9.641	9.640	0.001	95	58139	100.0	102.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.729	9.723	0.006	79	20109	100.0	100.3	
117 1-Naphthylamine	143	9.723	9.723	0.000	98	132698	100.0	93.6	
119 2-Naphthylamine	143	9.788	9.787	0.001	97	91921	100.0	71.7	
121 Thionazin	97	9.864	9.864	0.000	80	33974	100.0	99.6	
123 N-Nitro-o-toluidine	152	9.941	9.940	0.000	91	31034	100.0	96.6	
132 Sulfotepp	202	10.111	10.111	0.000	79	16562	100.0	93.4	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	84	4088	100.0	146.7	
135 Phenacetin	108	10.252	10.252	0.000	92	59430	100.0	81.5	
134 Diallate Peak 1	86	10.258	10.258	0.000	92	68619	83.0	88.7	
136 Phorate	121	10.264	10.270	-0.006	95	33171	100.0	98.5	
137 Diallate Peak 2	86	10.340	10.340	0.000	94	12600	17.0	16.0	
139 Dimethoate	87	10.417	10.417	0.000	94	51764	100.0	88.3	
142 4-Aminobiphenyl	169	10.582	10.576	0.006	88	101907	100.0	91.2	
144 Pronamide	173	10.593	10.593	0.000	92	57634	100.0	88.7	
145 Pentachloronitrobenzene	237	10.629	10.629	0.000	84	14044	100.0	90.5	
146 Disulfoton	88	10.717	10.717	0.000	99	83278	100.0	97.6	
147 Dinoseb	211	10.723	10.729	-0.006	89	9463	100.0	165.3	
152 Methyl parathion	109	11.052	11.052	0.000	91	34104	100.0	94.5	
155 Ethyl Parathion	97	11.393	11.393	0.000	81	20011	100.0	95.4	
156 4-Nitroquinoline-1-oxide	190	11.482	11.481	0.001	70	3333	100.0	104.3	
157 Methapyrilene	58	11.511	11.517	-0.006	98	192199	200.0	169.2	
158 Isodrin	66	11.793	11.793	0.000	85	32574	100.0	106.6	
162 Aramite Peak 1	185	12.211	12.211	0.000	84	8824	51.0	43.5	
163 Aramite Peak 2	185	12.299	12.299	0.000	83	11008	49.0	42.4	
164 p-Dimethylamino azobenzene	225	12.458	12.464	-0.006	92	35426	100.0	82.0	
165 Chlorobenzilate	139	12.493	12.493	0.000	83	71698	100.0	89.8	
168 Famphur	218	12.799	12.799	0.000	93	40273	100.0	102.8	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	97	12453	100.0	140.9	
172 2-Acetylaminofluorene	181	13.234	13.234	0.000	95	40401	100.0	98.5	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	95	16092	100.0	90.7	
180 6-Methylchrysene	242	14.528	14.534	-0.006	98	281034	200.0	188.9	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	93	75855	100.0	93.1	
186 3-Methylcholanthrene	268	16.717	16.722	-0.005	94	140250	200.0	173.7	
188 Dibenz[a,h]acridine	279	17.828	17.840	-0.012	92	89425	100.0	87.4	
S 194 Isosafrole	162				0		100.0	97.4	
S 195 Diallate	86				0		100.0	104.7	
S 196 Aramite, Total	185				0		100.0	85.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

NQ - Not Quantifiable

Reagents:

SMLIST2 L3 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:31:24 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426018.D

Injection Date: 26-Apr-2016 14:22:30 Instrument ID: A4AG2 Operator ID:

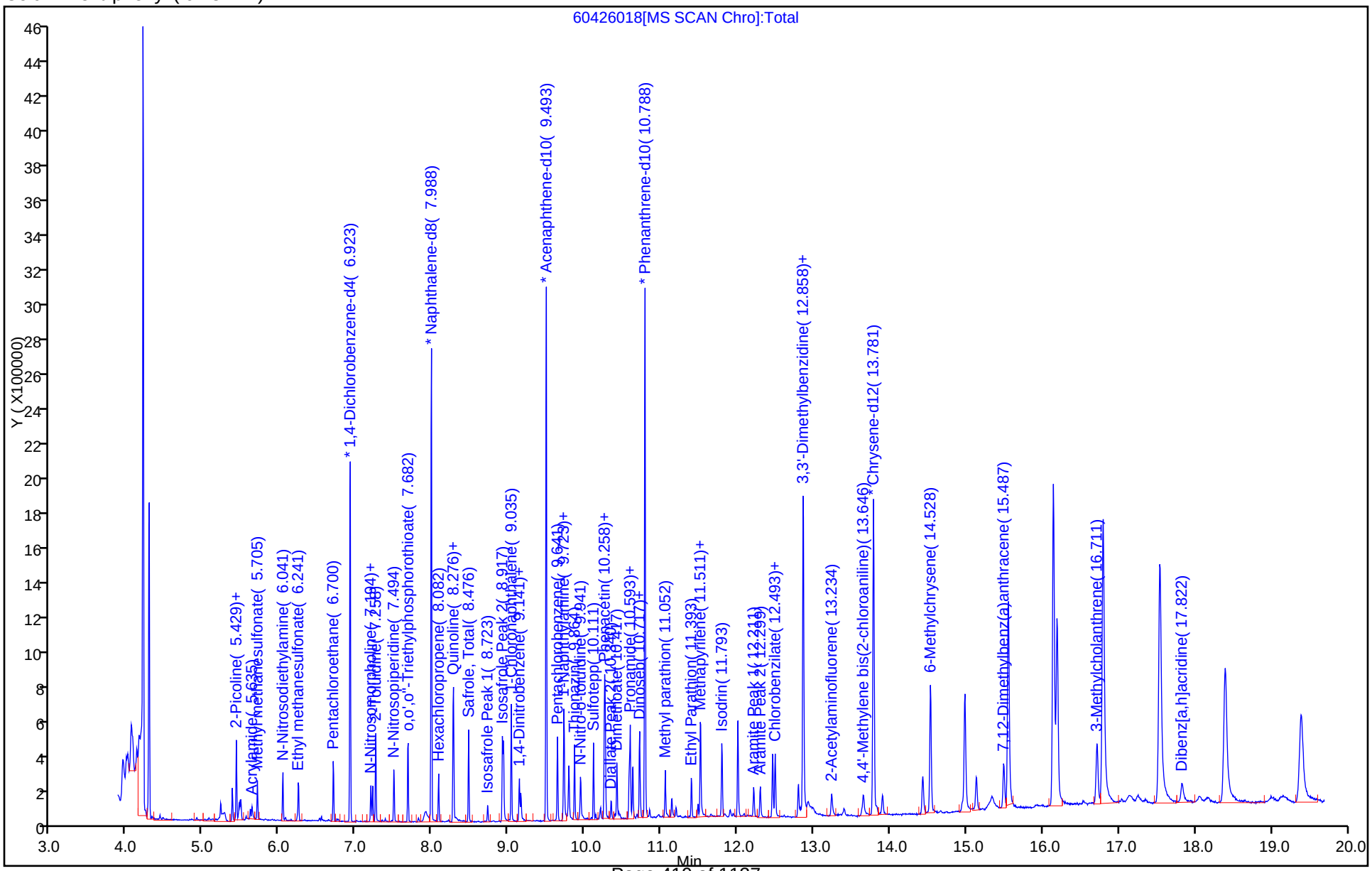
Lims ID: std3 l2lvi Worklist Smp#: 18

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 18

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D
Lims ID: std2 l2lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Apr-2016 14:47:30 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-019
Misc. Info.: STD2 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:31:33 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 05:44:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	246236	400.0	400.0	
* 2 Naphthalene-d8	136	7.987	7.988	-0.001	100	1003258	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	562297	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	878258	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	734949	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	95	504829	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	97	46473	50.0	50.3	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	95	16171	50.0	40.8	
14 Acrylamide	71		5.641				ND	ND	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	90	25637	50.0	50.1	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	89	18208	50.0	44.8	
37 Ethyl methanesulfonate	79	6.246	6.247	-0.001	98	30905	50.0	48.1	
46 Pentachloroethane	167	6.699	6.705	-0.006	91	13209	50.0	47.1	
56 N-Nitrosopyrrolidine	100	7.193	7.194	-0.001	84	15603	50.0	39.7	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	94	23323	50.0	40.2	
60 2-Toluidine	106	7.258	7.258	0.000	98	50476	50.0	40.6	
63 N-Nitrosopiperidine	114	7.499	7.494	0.005	81	16743	50.0	42.5	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	89	17097	50.0	49.9	
71 alpha,alpha-Dimethyl phene	58		7.805				ND	ND	
77 Hexachloropropene	213	8.082	8.082	0.000	94	12451	50.0	38.8	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	91	22248	50.0	45.9	
81 Quinoline	129	8.276	8.276	0.000	97	66228	50.0	45.2	
84 p-Phenylene diamine	108		8.305				ND	ND	
92 Safrole, Total	162	8.476	8.476	0.000	88	23878	50.0	43.2	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	88	4717	41.5	36.6	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	88	25327	8.50	7.08	
247 1-Chloronaphthalene	162	9.034	9.035	-0.001	98	66994	50.0	48.2	
102 1,4-Naphthoquinone	158	9.140	9.140	0.000	81	12165	50.0	31.4	
105 1,4-Dinitrobenzene	168	9.164	9.158	0.006	91	5076	50.0	63.4	
114 Pentachlorobenzene	250	9.640	9.640	0.000	95	26401	50.0	48.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.729	9.723	0.005	84	7404	50.0	60.2	
117 1-Naphthylamine	143	9.723	9.723	0.000	98	52333	50.0	38.8	
119 2-Naphthylamine	143	9.787	9.787	0.000	96	43229	50.0	35.4	
121 Thionazin	97	9.864	9.864	0.000	81	14608	50.0	45.0	
123 N-Nitro-o-toluidine	152	9.946	9.940	0.006	91	11957	50.0	58.8	
132 Sulfotepp	202	10.111	10.111	0.000	77	6546	50.0	39.8	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	83	1561	50.0	129.0	
135 Phenacetin	108	10.252	10.252	0.000	91	20637	50.0	30.5	
134 Diallate Peak 1	86	10.258	10.258	0.000	91	31180	41.5	43.5	
136 Phorate	121	10.264	10.270	-0.006	95	14003	50.0	44.8	
137 Diallate Peak 2	86	10.340	10.340	0.000	90	6315	8.50	8.65	
139 Dimethoate	87	10.417	10.417	0.000	91	19302	50.0	35.5	
142 4-Aminobiphenyl	169	10.581	10.576	0.005	88	42501	50.0	60.9	
144 Pronamide	173	10.593	10.593	0.000	91	23290	50.0	38.7	
145 Pentachloronitrobenzene	237	10.623	10.629	-0.006	77	4792	50.0	33.3	
146 Disulfoton	88	10.711	10.717	-0.006	99	34264	50.0	43.3	
147 Dinoseb	211	10.723	10.729	-0.006	86	3814	50.0	148.1	
152 Methyl parathion	109	11.052	11.052	0.000	91	11933	50.0	54.2	
155 Ethyl Parathion	97	11.393	11.393	0.000	82	6811	50.0	57.9	
156 4-Nitroquinoline-1-oxide	190	11.475	11.481	-0.006	65	1052	50.0	45.2	
157 Methapyrilene	58	11.511	11.517	-0.006	97	71657	100.0	68.0	
158 Isodrin	66	11.793	11.793	0.000	85	15020	50.0	53.0	
162 Aramite Peak 1	185	12.211	12.211	0.000	82	3736	25.5	20.1	
163 Aramite Peak 2	185	12.293	12.299	-0.006	77	4174	24.5	17.5	
164 p-Dimethylamino azobenzene	225	12.458	12.464	-0.006	93	13890	50.0	35.1	
165 Chlorobenzilate	139	12.493	12.493	0.000	84	30017	50.0	41.0	
168 Famphur	218	12.793	12.799	-0.006	92	14994	50.0	48.9	
170 3,3'-Dimethylbenzidine	212	12.875	12.881	-0.006	98	6990	50.0	136.9	
172 2-Acetylaminofluorene	181	13.228	13.234	-0.006	94	12314	50.0	66.9	
175 4,4'-Methylene bis(2-chlor	231	13.646	13.652	-0.006	90	6633	50.0	66.4	
180 6-Methylchrysene	242	14.528	14.534	-0.006	97	125677	100.0	92.2	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	93	32725	50.0	44.1	
186 3-Methylcholanthrene	268	16.716	16.722	-0.006	95	57507	100.0	78.2	
188 Dibenz[a,h]acridine	279	17.834	17.840	-0.006	91	32672	50.0	35.0	
S 194 Isosafrole	162				0		50.0	43.7	
S 195 Diallate	86				0		50.0	52.1	
S 196 Aramite, Total	185				0		50.0	37.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

SMLIST2 L2 W_00010 Amount Added: 0.10 Units: mL

Report Date: 27-Apr-2016 07:31:36 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Injection Date: 26-Apr-2016 14:47:30 Instrument ID: A4AG2 Operator ID:

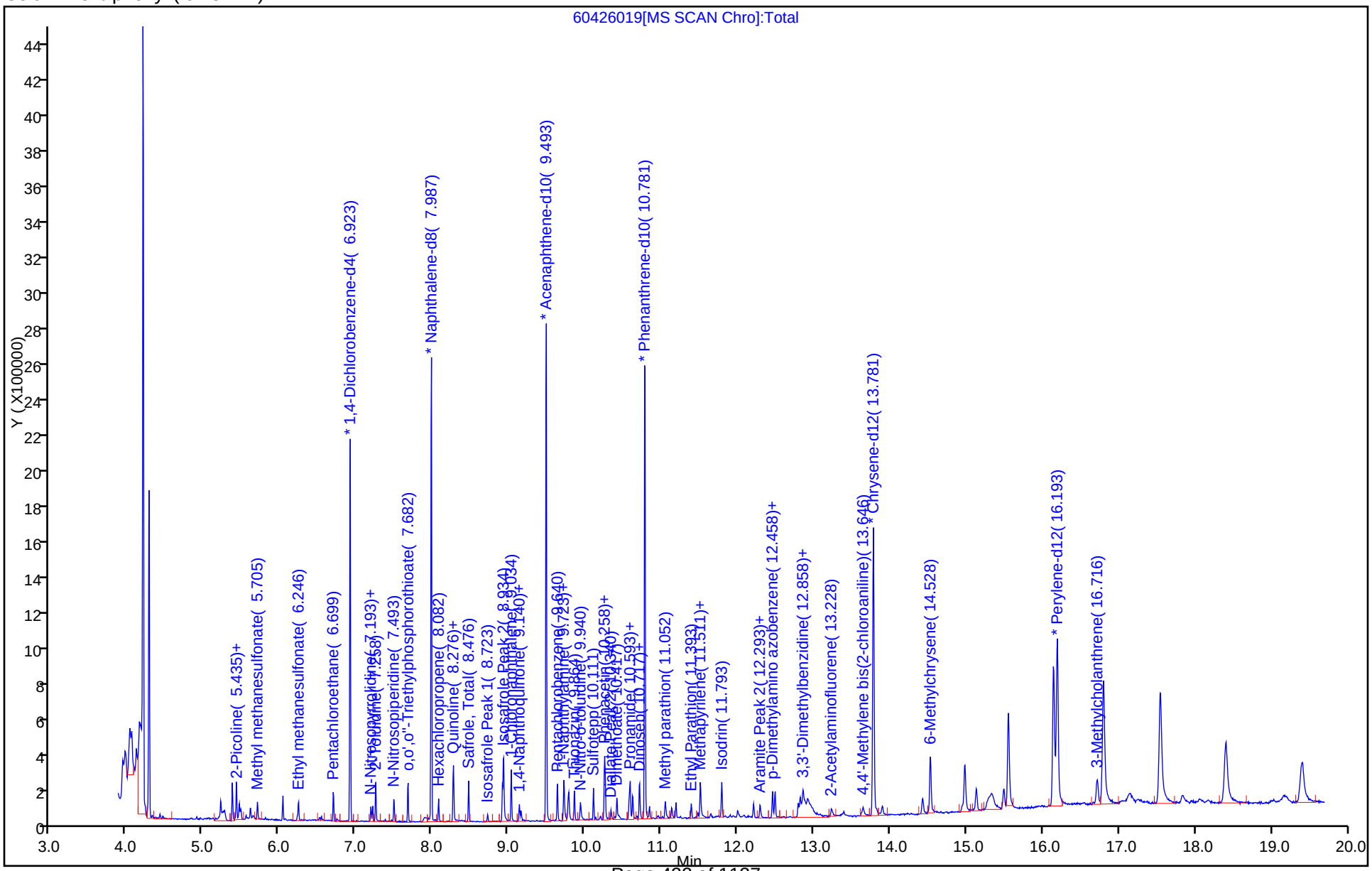
Lims ID: std2 l2lvi Worklist Smp#: 19

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 19

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICV 240-227507/11 Calibration Date: 04/26/2016 11:28

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60426011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4362	0.3868		0.887	1.00	-11.3	30.0
N-Nitrosodimethylamine	Ave	0.8729	0.7196		0.824	1.00	-17.6	30.0
Pyridine	Ave	1.226	1.164		0.949	1.00	-5.1	30.0
Benzaldehyde	Qua		0.5882	0.0100	1.72	2.00	-14.2	30.0
Phenol	Ave	1.496	1.395	0.8000	0.932	1.00	-6.8	30.0
Aniline	Ave	2.103	2.201		1.05	1.00	4.7	30.0
Bis(2-chloroethyl)ether	Ave	1.488	1.375	0.7000	0.924	1.00	-7.6	30.0
2-Chlorophenol	Ave	1.218	1.170	0.8000	0.961	1.00	-3.9	30.0
n-Decane	Ave	1.636	1.520		0.929	1.00	-7.1	30.0
1,3-Dichlorobenzene	Ave	1.458	1.407		0.965	1.00	-3.5	30.0
1,4-Dichlorobenzene	Ave	1.479	1.448		0.979	1.00	-2.1	30.0
Benzyl alcohol	Ave	0.8411	0.9004		1.07	1.00	7.0	30.0
1,2-Dichlorobenzene	Ave	1.365	1.329		0.973	1.00	-2.6	30.0
2-Methylphenol	Ave	1.149	1.210	0.7000	1.05	1.00	5.4	30.0
bis (2-chloroisopropyl) ether	Ave	2.234	2.125		0.951	1.00	-4.9	30.0
Indene	Ave	2.462	2.204		1.79	2.00	-10.5	30.0
3 & 4 Methylphenol	Ave	1.223	1.310		1.07	1.00	7.1	30.0
N-Nitrosodi-n-propylamine	Ave	1.038	1.020	0.5000	0.983	1.00	-1.7	30.0
Acetophenone	Ave	1.887	1.808	0.0100	0.958	1.00	-4.2	30.0
Hexachloroethane	Ave	0.5479	0.5451	0.3000	0.995	1.00	-0.5	30.0
Nitrobenzene	Ave	0.3394	0.3344	0.2000	0.985	1.00	-1.5	30.0
Isophorone	Ave	0.6188	0.6094	0.4000	0.985	1.00	-1.5	30.0
2,4-Dimethylphenol	Ave	0.2966	0.3029	0.2000	1.02	1.00	2.1	30.0
2-Nitrophenol	Ave	0.1548	0.1595	0.1000	1.03	1.00	3.0	30.0
Benzoic acid	Lin1		0.1453		1.73	2.00	-13.3	30.0
Bis(2-chloroethoxy)methane	Ave	0.3719	0.3653	0.3000	0.982	1.00	-1.8	30.0
2,4-Dichlorophenol	Ave	0.2233	0.2423	0.2000	1.09	1.00	8.5	30.0
1,2,4-Trichlorobenzene	Ave	0.2617	0.2483		0.949	1.00	-5.1	30.0
Naphthalene	Ave	0.9536	0.9082	0.7000	0.952	1.00	-4.8	30.0
4-Chloroaniline	Ave	0.3162	0.3381	0.0100	1.07	1.00	6.9	30.0
2,6-Dichlorophenol	Ave	0.2345	0.2370		1.01	1.00	1.1	30.0
Hexachlorobutadiene	Ave	0.1335	0.1291	0.0100	0.967	1.00	-3.3	30.0
Caprolactam	Ave	0.0893	0.0848	0.0100	1.90	2.00	-5.0	30.0
4-Chloro-3-methylphenol	Ave	0.2450	0.2497	0.2000	1.02	1.00	1.9	30.0
2-Methylnaphthalene	Ave	0.6162	0.5880	0.4000	0.954	1.00	-4.6	30.0
1-Methylnaphthalene	Ave	0.5806	0.5568		0.959	1.00	-4.1	30.0
Hexachlorocyclopentadiene	Ave	0.2378	0.2435	0.0500	1.02	1.00	2.4	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4183	0.4078	0.0100	0.975	1.00	-2.5	30.0
2,4,6-Trichlorophenol	Ave	0.2813	0.2875	0.2000	1.02	1.00	2.2	30.0
2,4,5-Trichlorophenol	Ave	0.2862	0.3017	0.2000	1.05	1.00	5.4	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICV 240-227507/11 Calibration Date: 04/26/2016 11:28

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60426011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.328	1.286	0.0100	0.968	1.00	-3.2	30.0
2-Chloronaphthalene	Ave	1.029	0.9948	0.8000	0.967	1.00	-3.3	30.0
2-Nitroaniline	Ave	0.3286	0.3345	0.0100	1.02	1.00	1.8	30.0
Dimethyl phthalate	Ave	1.121	1.088	0.0100	0.971	1.00	-2.9	30.0
1,3-Dinitrobenzene	Ave	0.1648	0.1691		1.03	1.00	2.6	30.0
2,6-Dinitrotoluene	Ave	0.2472	0.2514		1.02	1.00	1.7	30.0
Acenaphthylene	Ave	1.554	1.611	0.9000	1.04	1.00	3.6	30.0
3-Nitroaniline	Ave	0.1450	0.1206	0.0100	0.831	1.00	-16.9	30.0
2,4-Dinitrophenol	Lin1		0.0959	0.0100	1.54	2.00	-22.8	30.0
4-Nitrophenol	Ave	0.1458	0.1500		2.06	2.00	2.9	30.0
Acenaphthene	Ave	1.013	0.997	0.9000	0.984	1.00	-1.6	30.0
2,4-Dinitrotoluene	Ave	0.3148	0.3215	0.2000	1.02	1.00	2.2	30.0
Dibenzofuran	Ave	1.439	1.386	0.8000	0.963	1.00	-3.7	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2138	0.2193	0.0100	1.03	1.00	2.6	30.0
Hexadecane	Ave	0.8258	0.7870		0.953	1.00	-4.7	30.0
Diethyl phthalate	Ave	1.148	1.065	0.0100	0.928	1.00	-7.2	30.0
4-Chlorophenyl phenyl ether	Ave	0.5141	0.4956	0.4000	0.964	1.00	-3.6	30.0
4-Nitroaniline	Ave	0.2050	0.2172	0.0100	1.06	1.00	5.9	30.0
Fluorene	Ave	1.158	1.127	0.9000	0.973	1.00	-2.7	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.0916	0.0100	1.65	2.00	-17.4	30.0
Diphenylamine	Ave	0.6281	0.6293		0.852	0.850	0.2	30.0
N-Nitrosodiphenylamine	Ave	0.5343	0.5349	0.0100	1.00	1.00	0.1	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.8615	0.8676		1.01	1.00	0.7	30.0
Azobenzene	Ave	0.8616	0.8677		1.01	1.00	0.7	30.0
4-Bromophenyl phenyl ether	Ave	0.1859	0.1828	0.1000	0.983	1.00	-1.7	30.0
Atrazine	Ave	0.1833	0.1769	0.0100	1.93	2.00	-3.5	30.0
Hexachlorobenzene	Ave	0.1916	0.1871	0.1000	0.976	1.00	-2.4	30.0
n-Octadecane	Ave	0.5679	0.5813		1.02	1.00	2.4	30.0
Pentachlorophenol	Lin1		0.1186	0.0500	1.89	2.00	-5.5	30.0
Phenanthrene	Ave	1.033	1.008	0.7000	0.976	1.00	-2.4	30.0
Anthracene	Ave	1.041	1.034	0.7000	0.993	1.00	-0.7	30.0
Carbazole	Ave	0.8088	0.7060	0.0100	0.873	1.00	-12.7	30.0
Di-n-butyl phthalate	Ave	1.291	1.246	0.0100	0.966	1.00	-3.4	30.0
Fluoranthene	Ave	0.995	1.004	0.6000	1.01	1.00	0.8	30.0
Benzidine	Lin		0.3055		1.63	2.00	-18.6	30.0
Pyrene	Ave	1.078	1.076	0.6000	0.999	1.00	-0.1	30.0
Butyl benzyl phthalate	Ave	0.5291	0.5368	0.0100	1.01	1.00	1.5	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.7006	0.7144	0.0100	1.02	1.00	2.0	30.0
3,3'-Dichlorobenzidine	Ave	0.3068	0.2954	0.0100	1.93	2.00	-3.7	30.0
Benzo[a]anthracene	Ave	0.9572	0.9636	0.8000	1.01	1.00	0.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICV 240-227507/11 Calibration Date: 04/26/2016 11:28

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60426011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	0.9384	0.9023	0.7000	0.962	1.00	-3.8	30.0
Di-n-octyl phthalate	Lin1		1.592	0.0100	0.945	1.00	-5.5	30.0
Benzo[b]fluoranthene	Ave	1.109	1.116	0.7000	1.01	1.00	0.7	30.0
Benzo[k]fluoranthene	Ave	1.229	1.218	0.7000	0.991	1.00	-0.9	30.0
Benzo[a]pyrene	Ave	1.016	0.998	0.7000	0.982	1.00	-1.8	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.037	1.005	0.5000	0.969	1.00	-3.1	30.0
Dibenz(a,h)anthracene	Ave	0.9039	0.8756	0.4000	0.969	1.00	-3.1	30.0
Benzo[g,h,i]perylene	Ave	0.8241	0.8077	0.5000	0.980	1.00	-2.0	30.0
2-Fluorophenol (Surr)	Ave	1.091	1.131		1.04	1.00	3.7	30.0
Phenol-d5 (Surr)	Ave	1.372	1.391		1.01	1.00	1.4	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3526	0.3696		1.05	1.00	4.8	30.0
2-Fluorobiphenyl (Surr)	Ave	1.183	1.231		1.04	1.00	4.1	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1188	0.1280		1.08	1.00	7.7	30.0
Terphenyl-d14 (Surr)	Ave	0.7498	0.8040		1.07	1.00	7.2	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426011.D
Lims ID: icv l1lvi
Client ID:
Sample Type: ICV
Inject. Date: 26-Apr-2016 11:28:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-011
Misc. Info.: ICV L1LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:30:21 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 12:39:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	97	293721	400.0	400.0	
* 2 Naphthalene-d8	136	7.988	7.988	0.000	100	1290194	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	700958	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	97	1053657	400.0	400.0	
* 5 Chrysene-d12	240	13.787	13.787	0.000	97	1021293	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	741554	400.0	400.0	
$ 7 2-Fluorophenol	112	5.864	5.864	0.000	94	830193	1000.0	1036.7	
$ 8 Phenol-d5	99	6.558	6.558	0.000	98	1021090	1000.0	1013.6	
$ 9 Nitrobenzene-d5	82	7.364	7.364	0.000	91	1192180	1000.0	1048.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.876	8.876	0.000	100	2157836	1000.0	1040.6	
$ 11 2,4,6-Tribromophenol	330	10.170	10.170	0.000	86	224262	1000.0	1077.0	
$ 12 Terphenyl-d14	244	12.305	12.305	0.000	99	2052720	1000.0	1072.3	
26 1,4-Dioxane	88	4.535	4.535	0.000	98	284008	1000.0	886.6	
27 N-Nitrosodimethylamine	74	4.770	4.770	0.000	88	528430	1000.0	824.4	
28 Pyridine	79	4.835	4.835	0.000	90	854666	1000.0	949.2	
42 Benzaldehyde	77	6.564	6.564	0.000	93	863783	2000.0	1715.7	
43 Phenol	94	6.570	6.570	0.000	98	1024370	1000.0	932.4	
44 Aniline	93	6.641	6.641	0.000	96	1616539	1000.0	1046.7	
45 Bis(2-chloroethyl)ether	93	6.658	6.658	0.000	93	1009743	1000.0	923.9	
244 n-Decane	57	6.752	6.752	0.000	93	1116492	1000.0	929.3	
47 2-Chlorophenol	128	6.752	6.752	0.000	96	859359	1000.0	960.7	
48 1,3-Dichlorobenzene	146	6.882	6.882	0.000	97	1033209	1000.0	964.8	
49 1,4-Dichlorobenzene	146	6.935	6.935	0.000	93	1063275	1000.0	979.3	
50 Benzyl alcohol	108	6.999	6.999	0.000	91	661165	1000.0	1070.5	
52 2-Methylphenol	108	7.070	7.070	0.000	88	888512	1000.0	1053.5	
51 1,2-Dichlorobenzene	146	7.070	7.070	0.000	93	975878	1000.0	973.5	
54 2,2'-oxybis[1-chloropropan	45	7.099	7.099	0.000	92	1560744	1000.0	951.4	
53 Indene	115	7.140	7.141	-0.001	91	3237322	2000.0	1790.4	
55 3 & 4 Methylphenol	108	7.188	7.188	0.000	93	962257	1000.0	1071.4	
57 N-Nitrosodi-n-propylamine	70	7.205	7.205	0.000	92	749201	1000.0	983.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.229	7.229	0.000	93	1327776	1000.0	958.2	
61 Hexachloroethane	117	7.358	7.358	0.000	95	400243	1000.0	994.9	
62 Nitrobenzene	77	7.382	7.382	0.000	91	1078658	1000.0	985.2	
64 Isophorone	82	7.564	7.564	0.000	98	1965687	1000.0	984.8	
66 2,4-Dimethylphenol	107	7.635	7.635	0.000	95	976899	1000.0	1021.3	
65 2-Nitrophenol	139	7.646	7.646	0.000	96	514439	1000.0	1030.4	
70 Benzoic acid	122	7.682	7.682	0.000	90	937448	2000.0	1733.5	
69 Bis(2-chloroethoxy)methane	93	7.711	7.711	0.000	98	1178276	1000.0	982.3	
72 2,4-Dichlorophenol	162	7.846	7.846	0.000	96	781495	1000.0	1085.2	
73 1,2,4-Trichlorobenzene	180	7.929	7.929	0.000	93	801027	1000.0	949.1	
74 Naphthalene	128	8.005	8.005	0.000	97	2929452	1000.0	952.4	
75 4-Chloroaniline	127	8.017	8.017	0.000	95	1090557	1000.0	1069.3	
76 2,6-Dichlorophenol	162	8.035	8.035	0.000	95	764324	1000.0	1010.6	
78 Hexachlorobutadiene	225	8.099	8.099	0.000	97	416355	1000.0	966.6	
83 Caprolactam	113	8.293	8.293	0.000	76	546946	2000.0	1898.9	
85 4-Chloro-3-methylphenol	107	8.393	8.393	0.000	96	805523	1000.0	1019.2	
86 2-Methylnaphthalene	142	8.587	8.587	0.000	92	1896429	1000.0	954.2	
87 1-Methylnaphthalene	142	8.676	8.676	0.000	94	1795901	1000.0	959.0	
89 Hexachlorocyclopentadiene	237	8.723	8.723	0.000	96	426786	1000.0	1024.3	
90 1,2,4,5-Tetrachlorobenzene	216	8.735	8.735	-0.001	99	714619	1000.0	974.8	
93 2,4,6-Trichlorophenol	196	8.811	8.811	0.000	95	503845	1000.0	1022.1	
94 2,4,5-Trichlorophenol	196	8.846	8.846	0.000	92	528667	1000.0	1054.1	
99 1,1'-Biphenyl	154	8.970	8.970	0.000	95	2253767	1000.0	968.3	
100 2-Chloronaphthalene	162	9.011	9.011	0.000	97	1743308	1000.0	967.2	
101 2-Nitroaniline	65	9.064	9.064	0.000	82	586154	1000.0	1017.8	
104 Dimethyl phthalate	163	9.187	9.187	0.000	98	1906482	1000.0	970.5	
103 1,3-Dinitrobenzene	168	9.234	9.235	0.000	83	296235	1000.0	1025.5	
106 2,6-Dinitrotoluene	165	9.252	9.252	0.000	92	440502	1000.0	1017.0	
108 Acenaphthylene	152	9.376	9.376	0.000	98	2822388	1000.0	1036.2	
109 3-Nitroaniline	138	9.417	9.417	0.000	91	211287	1000.0	831.3	
110 2,4-Dinitrophenol	184	9.499	9.499	0.000	82	335943	2000.0	1543.8	
112 4-Nitrophenol	109	9.517	9.517	0.000	92	525746	2000.0	2058.4	
111 Acenaphthene	153	9.523	9.523	0.000	95	1746838	1000.0	984.1	
113 2,4-Dinitrotoluene	165	9.611	9.611	0.000	91	563465	1000.0	1021.6	
115 Dibenzofuran	168	9.664	9.664	0.000	96	2428899	1000.0	963.0	
118 2,3,4,6-Tetrachlorophenol	232	9.764	9.764	0.000	76	384260	1000.0	1025.6	
248 Hexadecane	57	9.782	9.782	0.000	92	1379127	1000.0	953.0	
120 Diethyl phthalate	149	9.787	9.787	0.000	98	1866775	1000.0	927.9	
122 4-Chlorophenyl phenyl ethe	204	9.929	9.929	0.000	96	868397	1000.0	963.9	
125 4-Nitroaniline	138	9.946	9.946	0.000	84	380563	1000.0	1059.3	
124 Fluorene	166	9.964	9.964	0.000	95	1975390	1000.0	973.3	
127 4,6-Dinitro-2-methylphenol	198	9.970	9.970	0.000	80	482328	2000.0	1653.0	
128 N-Nitrosodiphenylamine	169	10.023	10.023	0.000	64	1409001	1000.0	1001.1	
129 Diphenylamine	169	10.023	10.023	0.000	94	1409001	850.0	851.7	
131 Azobenzene	77	10.070	10.070	0.000	99	2285548	1000.0	1007.1	
130 1,2-Diphenylhydrazine	77	10.070	10.070	0.000	98	2285451	1000.0	1007.0	
138 4-Bromophenyl phenyl ether	248	10.358	10.358	0.000	72	481517	1000.0	983.5	
141 Atrazine	200	10.446	10.446	0.000	91	931895	2000.0	1930.1	
140 Hexachlorobenzene	284	10.458	10.458	0.000	92	492770	1000.0	976.4	
245 n-Octadecane	57	10.570	10.570	0.000	92	1531316	1000.0	1023.7	
143 Pentachlorophenol	266	10.611	10.611	0.000	91	624599	2000.0	1889.9	
148 Phenanthrene	178	10.805	10.811	-0.006	98	2654422	1000.0	975.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.852	10.852	0.000	97	2723432	1000.0	993.3	
150 Carbazole	167	10.964	10.964	0.000	96	1859581	1000.0	872.9	
154 Di-n-butyl phthalate	149	11.193	11.199	-0.006	100	3283243	1000.0	965.7	
159 Fluoranthene	202	11.946	11.946	0.000	98	2643595	1000.0	1008.5	
160 Benzidine	184	12.023	12.023	0.000	99	1559897	2000.0	1628.2	
161 Pyrene	202	12.205	12.205	0.000	97	2748283	1000.0	998.8	
169 Butyl benzyl phthalate	149	12.846	12.846	0.000	98	1370652	1000.0	1014.6	
174 Bis(2-ethylhexyl) phthalat	149	13.634	13.628	0.006	97	1824063	1000.0	1019.7	
177 3,3'-Dichlorobenzidine	252	13.669	13.670	-0.001	75	1508354	2000.0	1925.8	
178 Benzo[a]anthracene	228	13.769	13.770	-0.001	99	2460301	1000.0	1006.7	
179 Chrysene	228	13.828	13.828	0.000	98	2303847	1000.0	961.6	
181 Di-n-octyl phthalate	149	14.669	14.664	0.005	99	2952243	1000.0	945.2	
183 Benzo[b]fluoranthene	252	15.522	15.522	0.000	99	2069511	1000.0	1006.9	
184 Benzo[k]fluoranthene	252	15.569	15.569	0.000	99	2257284	1000.0	990.5	
185 Benzo[a]pyrene	252	16.099	16.099	0.000	80	1850704	1000.0	982.2	
190 Indeno[1,2,3-cd]pyrene	276	18.399	18.399	0.000	98	1863155	1000.0	969.1	
189 Dibenz(a,h)anthracene	278	18.410	18.410	0.000	92	1623218	1000.0	968.6	
191 Benzo[g,h,i]perylene	276	19.063	19.063	0.000	95	1497385	1000.0	980.1	

Reagents:

SMLIST1 SS W_00006 Amount Added: 0.10 Units: mL

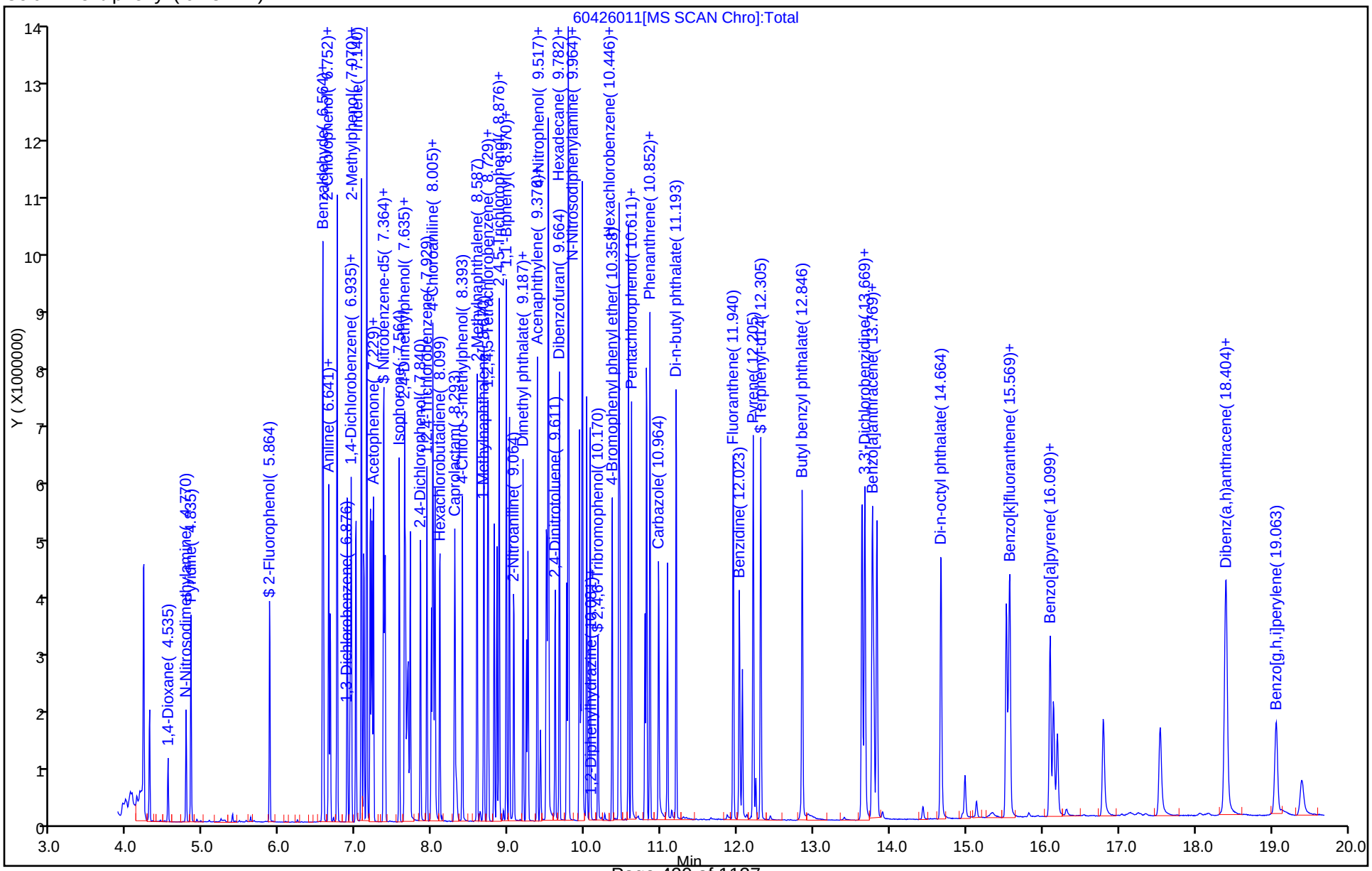
Report Date: 27-Apr-2016 07:30:35 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426011.D

Injection Date:	26-Apr-2016 11:28:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	icv l1lvi			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICV 240-227507/20 | Calibration Date: 04/26/2016 15:12

Instrument ID: A4AG2 | Calib Start Date: 04/26/2016 11:53

GC Column: RXI-5SILMS ID: 0.45(mm) | Calib End Date: 04/26/2016 14:47

Lab File ID: 60426020.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.500	1.440		0.960	1.00	-4.0	30.0
N-Nitrosomethylethylamine	Ave	0.6439	0.6696		1.04	1.00	4.0	30.0
Acrylamide	Qua		0.1829		1.04	1.00	3.6	30.0
Methyl methanesulfonate	Ave	0.8316	0.8243		0.991	1.00	-0.9	30.0
N-Nitrosodiethylamine	Ave	0.6606	0.6808		1.03	1.00	3.1	30.0
Ethyl methanesulfonate	Ave	1.043	1.073		1.03	1.00	2.8	30.0
Pentachloroethane	Ave	0.4556	0.4450		0.977	1.00	-2.3	30.0
N-Nitrosopyrrolidine	Ave	0.6390	0.7048		1.10	1.00	10.3	30.0
N-Nitrosomorpholine	Ave	0.9436	1.022		1.08	1.00	8.3	30.0
2-Toluidine	Ave	2.021	2.194		1.09	1.00	8.6	30.0
N-Nitrosopiperidine	Ave	0.1571	0.1564		0.996	1.00	-0.4	30.0
o,o',o''-Triethylphosphorothioate	Ave	0.1365	0.1471		1.08	1.00	7.7	30.0
alpha,alpha-Dimethyl phenethylamine	Ave	0.4600	0.5295		1.15	1.00	15.1	30.0
Hexachloropropene	Ave	0.1278	0.1312	0.0100	1.03	1.00	2.7	30.0
N-Nitrosodi-n-butylamine	Ave	0.1932	0.1930		0.999	1.00	-0.1	30.0
Quinoline	Ave	0.5836	0.6060		1.04	1.00	3.8	30.0
p-Phenylene diamine	Lin1		0.2180		1.02	1.00	2.1	30.0
Safrole, Total	Ave	0.2204	0.2410		1.09	1.00	9.4	30.0
Isosafrole Peak 1	Ave	0.0916	0.4857		0.636	0.120	430.0*	30.0
Isosafrole Peak 2	Ave	2.546	0.5362		0.185	0.880	-78.9*	30.0
1-Chloronaphthalene	Ave	0.9888	1.007		1.02	1.00	1.8	30.0
1,4-Naphthoquinone	Ave	0.2755	0.3117		1.13	1.00	13.1	30.0
1,4-Dinitrobenzene	Lin1		0.1494		0.924	1.00	-7.6	30.0
Pentachlorobenzene	Ave	0.3851	0.3850		1.00	1.00	-0.0	30.0
1-Naphthylamine	Ave	0.9598	1.051		1.10	1.00	9.5	30.0
2,3,5,6-Tetrachlorophenol	Lin1		0.1661		0.832	1.00	-16.8	30.0
2-Naphthylamine	Ave	0.8688	0.9407		1.08	1.00	8.3	30.0
Thionazin	Ave	0.2311	0.2596		1.12	1.00	12.3	30.0
N-Nitro-o-toluidine	Lin1		0.3128		0.978	1.00	-2.2	30.0
Sulfotepp	Ave	0.0749	0.0815		1.09	1.00	8.7	30.0
1,3,5-Trinitrobenzene	Lin		0.0407		0.824	1.00	-17.6	30.0
Phenacetin	Ave	0.3080	0.3493		1.13	1.00	13.4	30.0
Diallate Peak 1	Ave	0.3268	0.3525		0.809	0.750	7.9	30.0
Phorate	Ave	0.1423	0.1594		1.12	1.00	12.1	30.0
Diallate Peak 2	Ave	0.3327	0.3509		0.264	0.250	5.5	30.0
Dimethoate	Ave	0.2475	0.2773		1.12	1.00	12.0	30.0
4-Aminobiphenyl	Lin1		0.7022		0.933	1.00	-6.7	30.0
Pronamide	Ave	0.2744	0.3087		1.13	1.00	12.5	30.0
Pentachloronitrobenzene	Ave	0.0656	0.0696		1.06	1.00	6.2	30.0
Disulfoton	Ave	0.3604	0.4014		1.11	1.00	11.4	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICV 240-227507/20 Calibration Date: 04/26/2016 15:12

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 11:53

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 14:47

Lab File ID: 60426020.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Lin		0.0871		0.797	1.00	-20.3	30.0
Methyl parathion	Lin1		0.2315		1.07	1.00	7.0	30.0
Ethyl Parathion	Lin1		0.1433		1.04	1.00	3.9	30.0
4-Nitroquinoline-1-oxide	Qua		0.0232		0.861	1.00	-13.9	30.0
Methapyrilene	Ave	0.4800	0.5374		2.24	2.00	12.0	30.0
Isodrin	Ave	0.1291	0.1273		0.986	1.00	-1.4	30.0
Aramite Peak 1	Ave	0.1012	0.1148		0.578	0.510	13.4	30.0
Aramite Peak 2	Ave	0.1295	0.1513		0.573	0.490	16.9	30.0
p-Dimethylamino azobenzene	Ave	0.2155	0.2406		1.12	1.00	11.7	30.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.3981	0.4193		1.05	1.00	5.3	30.0
Famphur	Qua		0.1216		0.815	1.00	-18.5	30.0
3,3'-Dimethylbenzidine	Lin		0.3908		0.787	1.00	-21.3	30.0
2-Acetylaminofluorene	Lin1		0.3552		0.885	1.00	-11.5	30.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.1549		0.899	1.00	-10.1	30.0
6-Methylchrysene	Ave	0.7419	0.7323		1.97	2.00	-1.3	30.0
7,12-Dimethylbenz(a)anthracene	Ave	0.5881	0.6262		1.06	1.00	6.5	30.0
3-Methylcholanthrene	Ave	0.5830	0.5952		2.04	2.00	2.1	30.0
Dibenz[a,h]acridine	Ave	0.7387	0.7216		0.977	1.00	-2.3	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426020.D
Lims ID: icv l2lvi
Client ID:
Sample Type: ICV
Inject. Date: 26-Apr-2016 15:12:30 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-020
Misc. Info.: ICV L2LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 08:03:25 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 27-Apr-2016 05:47:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.923	6.923	0.000	98	246976	400.0	400.0	
* 2 Naphthalene-d8	136	7.987	7.988	-0.001	100	1106356	400.0	400.0	
* 3 Acenaphthene-d10	164	9.493	9.493	0.000	92	596281	400.0	400.0	
* 4 Phenanthrene-d10	188	10.787	10.787	0.000	98	915491	400.0	400.0	
* 5 Chrysene-d12	240	13.781	13.781	0.000	96	796364	400.0	400.0	
* 6 Perylene-d12	264	16.193	16.193	0.000	96	531776	400.0	400.0	
31 2-Picoline	93	5.429	5.429	0.000	96	889035	1000.0	960.0	
32 N-Nitrosomethylethylamine	88	5.488	5.488	0.000	93	413460	1000.0	1039.9	
14 Acrylamide	71	5.641	5.641	0.000	70	112902	1000.0	1035.6	
34 Methyl methanesulfonate	80	5.705	5.705	0.000	89	508948	1000.0	991.2	
36 N-Nitrosodiethylamine	102	6.041	6.041	0.000	92	420345	1000.0	1030.5	
37 Ethyl methanesulfonate	79	6.241	6.247	-0.006	98	662257	1000.0	1028.2	
46 Pentachloroethane	167	6.699	6.705	-0.006	92	274771	1000.0	976.7	
56 N-Nitrosopyrrolidine	100	7.193	7.194	-0.001	83	435189	1000.0	1103.0	
59 N-Nitrosomorpholine	56	7.217	7.217	0.000	93	630804	1000.0	1082.7	
60 2-Toluidine	106	7.258	7.258	0.000	97	1354730	1000.0	1085.6	
63 N-Nitrosopiperidine	114	7.493	7.494	-0.001	80	432562	1000.0	995.6	
68 o,o',o''-Triethylphosphoro	198	7.682	7.682	0.000	87	406717	1000.0	1077.2	
71 alpha,alpha-Dimethyl phene	58	7.805	7.805	0.000	97	1464390	1000.0	1151.0	
77 Hexachloropropene	213	8.082	8.082	0.000	92	362985	1000.0	1027.1	
82 N-Nitrosodi-n-butylamine	84	8.270	8.270	0.000	91	533763	1000.0	998.6	
81 Quinoline	129	8.276	8.276	0.000	96	1676057	1000.0	1038.3	
84 p-Phenylene diamine	108	8.305	8.305	0.000	95	602976	1000.0	1021.5	
92 Safrole, Total	162	8.476	8.476	0.000	89	666600	1000.0	1093.7	
95 Isosafrole Peak 1	162	8.723	8.723	0.000	88	86877	120.0	636.0	
91 Isosafrole Peak 2	162	8.917	8.917	0.000	91	703414	880.0	185.4	
247 1-Chloronaphthalene	162	9.034	9.035	-0.001	99	1500694	1000.0	1018.1	
102 1,4-Naphthoquinone	158	9.134	9.140	-0.006	85	464603	1000.0	1131.1	
105 1,4-Dinitrobenzene	168	9.158	9.158	0.000	93	222670	1000.0	924.0	
114 Pentachlorobenzene	250	9.640	9.640	0.000	97	573912	1000.0	999.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.723	9.723	0.000	73	247592	1000.0	832.1	
117 1-Naphthylamine	143	9.723	9.723	0.000	99	1566835	1000.0	1095.1	
119 2-Naphthylamine	143	9.787	9.787	0.000	97	1402299	1000.0	1082.7	
121 Thionazin	97	9.864	9.864	0.000	81	386970	1000.0	1123.1	
123 N-Nitro-o-toluidine	152	9.940	9.940	0.000	95	466232	1000.0	977.6	
132 Sulfotepp	202	10.111	10.111	0.000	79	186446	1000.0	1087.3	
133 1,3,5-Trinitrobenzene	213	10.205	10.205	0.000	83	93209	1000.0	823.9	
135 Phenacetin	108	10.252	10.252	0.000	88	799398	1000.0	1134.2	
134 Diallate Peak 1	86	10.258	10.258	0.000	94	605095	750.0	809.0	
136 Phorate	121	10.264	10.270	-0.006	96	364916	1000.0	1120.5	
137 Diallate Peak 2	86	10.340	10.340	0.000	93	200761	250.0	263.7	
139 Dimethoate	87	10.417	10.417	0.000	94	634543	1000.0	1120.1	
142 4-Aminobiphenyl	169	10.576	10.576	0.000	89	1607201	1000.0	933.1	
144 Pronamide	173	10.593	10.593	0.000	92	706499	1000.0	1125.0	
145 Pentachloronitrobenzene	237	10.628	10.629	-0.001	84	159385	1000.0	1061.8	
146 Disulfoton	88	10.711	10.717	-0.006	98	918597	1000.0	1113.7	
147 Dinoseb	211	10.728	10.729	-0.001	94	199391	1000.0	797.3	
152 Methyl parathion	109	11.052	11.052	0.000	93	529850	1000.0	1069.5	
155 Ethyl Parathion	97	11.393	11.393	0.000	84	327902	1000.0	1038.6	
156 4-Nitroquinoline-1-oxide	190	11.481	11.481	0.000	78	53170	1000.0	861.0	
157 Methapyrilene	58	11.511	11.517	-0.006	98	2460043	2000.0	2239.3	
158 Isodrin	66	11.793	11.793	0.000	89	291318	1000.0	985.7	
162 Aramite Peak 1	185	12.211	12.211	0.000	87	116526	510.0	578.3	
163 Aramite Peak 2	185	12.299	12.299	0.000	87	147612	490.0	572.7	
164 p-Dimethylamino azobenzene	225	12.458	12.464	-0.006	93	479061	1000.0	1116.8	
165 Chlorobenzilate	139	12.493	12.493	0.000	86	834777	1000.0	1053.2	
168 Famphur	218	12.799	12.799	0.000	90	242031	1000.0	814.8	
170 3,3'-Dimethylbenzidine	212	12.881	12.881	0.000	99	778069	1000.0	786.7	
172 2-Acetylaminofluorene	181	13.234	13.234	0.000	96	707085	1000.0	884.8	
175 4,4'-Methylene bis(2-chlor	231	13.652	13.652	0.000	94	308420	1000.0	898.6	
180 6-Methylchrysene	242	14.534	14.534	0.000	99	2915809	2000.0	1974.1	
182 7,12-Dimethylbenz(a)anthra	256	15.493	15.493	0.000	94	832545	1000.0	1064.8	
186 3-Methylcholanthrene	268	16.722	16.722	0.000	94	1582583	2000.0	2041.9	
188 Dibenz[a,h]acridine	279	17.840	17.840	0.000	92	959314	1000.0	976.8	
S 194 Isosafrole	162				0		1000.0	821.3	
S 195 Diallate	86				0		1000.0	1072.7	
S 196 Aramite, Total	185				0		1000.0	1151.0	

Reagents:

SMLIST2 SS W_00007 Amount Added: 0.10 Units: mL

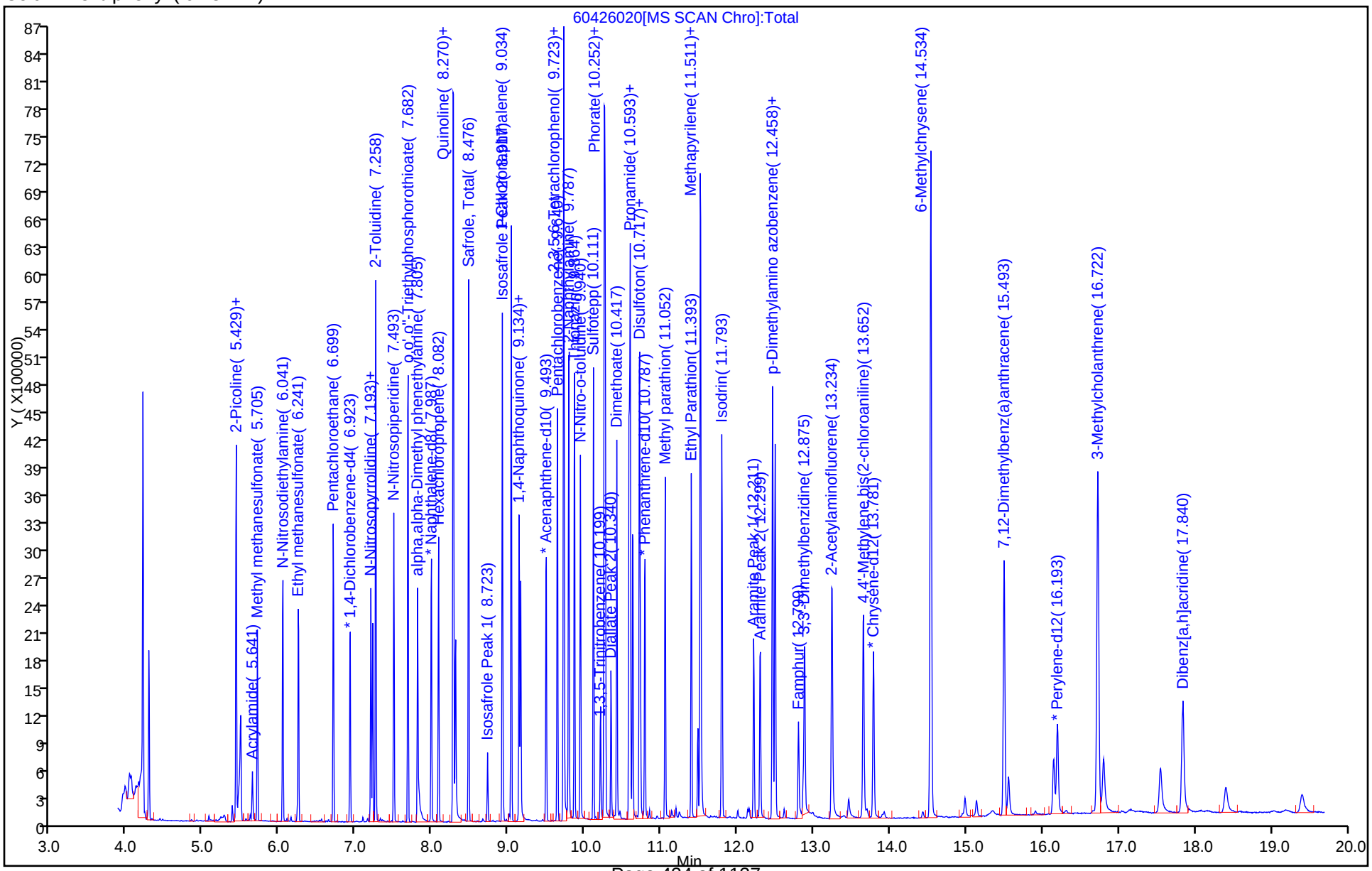
Report Date: 27-Apr-2016 08:03:44 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426020.D

Injection Date:	26-Apr-2016 15:12:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	icv l2lvi			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4362	0.3386		0.776	1.00	-22.4*	20.0
N-Nitrosodimethylamine	Ave	0.8729	0.8192		0.938	1.00	-6.2	20.0
Pyridine	Ave	1.226	0.9859		0.804	1.00	-19.6	20.0
Benzaldehyde	Qua		0.6637	0.0100	2.03	2.00	1.5	20.0
Phenol	Ave	1.496	1.490	0.8000	0.996	1.00	-0.4	20.0
Aniline	Ave	2.103	2.021		0.961	1.00	-3.9	20.0
Bis(2-chloroethyl)ether	Ave	1.488	1.562	0.7000	1.05	1.00	5.0	20.0
n-Decane	Ave	1.636	1.554		0.950	1.00	-5.0	20.0
2-Chlorophenol	Ave	1.218	1.121	0.8000	0.920	1.00	-8.0	20.0
1,3-Dichlorobenzene	Ave	1.458	1.344		0.922	1.00	-7.8	20.0
1,4-Dichlorobenzene	Ave	1.479	1.367		0.924	1.00	-7.6	20.0
Benzyl alcohol	Ave	0.8411	0.8155		0.970	1.00	-3.0	20.0
1,2-Dichlorobenzene	Ave	1.365	1.241		0.909	1.00	-9.1	20.0
2-Methylphenol	Ave	1.149	1.183	0.7000	1.03	1.00	3.0	20.0
bis (2-chloroisopropyl) ether	Ave	2.234	2.068		0.926	1.00	-7.4	20.0
Indene	Ave	2.462	2.358		1.92	2.00	-4.2	20.0
3 & 4 Methylphenol	Ave	1.223	1.267		1.04	1.00	3.6	20.0
N-Nitrosodi-n-propylamine	Ave	1.038	1.029	0.5000	0.991	1.00	-0.9	20.0
Acetophenone	Ave	1.887	1.839	0.0100	0.975	1.00	-2.5	20.0
Hexachloroethane	Ave	0.5479	0.5332	0.3000	0.973	1.00	-2.7	20.0
Nitrobenzene	Ave	0.3394	0.3814	0.2000	1.12	1.00	12.4	20.0
Isophorone	Ave	0.6188	0.6931	0.4000	1.12	1.00	12.0	20.0
2,4-Dimethylphenol	Ave	0.2966	0.3411	0.2000	1.15	1.00	15.0	20.0
2-Nitrophenol	Ave	0.1548	0.1642	0.1000	1.06	1.00	6.1	20.0
Benzoic acid	Lin1		0.1894		2.22	2.00	10.9	20.0
Bis(2-chloroethoxy)methane	Ave	0.3719	0.3913	0.3000	1.05	1.00	5.2	20.0
2,4-Dichlorophenol	Ave	0.2233	0.2484	0.2000	1.11	1.00	11.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2617	0.2764		1.06	1.00	5.6	20.0
Naphthalene	Ave	0.9536	0.9817	0.7000	1.03	1.00	2.9	20.0
4-Chloroaniline	Ave	0.3162	0.3060	0.0100	0.968	1.00	-3.2	20.0
2,6-Dichlorophenol	Ave	0.2345	0.2519		1.07	1.00	7.4	20.0
Hexachlorobutadiene	Ave	0.1335	0.1532	0.0100	1.15	1.00	14.7	20.0
Caprolactam	Ave	0.0893	0.1091	0.0100	2.44	2.00	22.2*	20.0
4-Chloro-3-methylphenol	Ave	0.2450	0.2923	0.2000	1.19	1.00	19.3	20.0
2-Methylnaphthalene	Ave	0.6162	0.6284	0.4000	1.02	1.00	2.0	20.0
1-Methylnaphthalene	Ave	0.5806	0.5907		1.02	1.00	1.7	20.0
Hexachlorocyclopentadiene	Ave	0.2378	0.2158	0.0500	0.907	1.00	-9.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4183	0.4663	0.0100	1.11	1.00	11.5	20.0
2,4,6-Trichlorophenol	Ave	0.2813	0.2990	0.2000	1.06	1.00	6.3	20.0
2,4,5-Trichlorophenol	Ave	0.2862	0.2921	0.2000	1.02	1.00	2.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.328	1.366	0.0100	1.03	1.00	2.8	20.0
2-Chloronaphthalene	Ave	1.029	0.9786	0.8000	0.951	1.00	-4.9	20.0
2-Nitroaniline	Ave	0.3286	0.3661	0.0100	1.11	1.00	11.4	20.0
Dimethyl phthalate	Ave	1.121	1.141	0.0100	1.02	1.00	1.7	20.0
1,3-Dinitrobenzene	Ave	0.1648	0.1866		1.13	1.00	13.2	20.0
2,6-Dinitrotoluene	Ave	0.2472	0.2567		1.04	1.00	3.8	20.0
Acenaphthylene	Ave	1.554	1.622	0.9000	1.04	1.00	4.3	20.0
3-Nitroaniline	Ave	0.1450	0.1150	0.0100	0.793	1.00	-20.7*	20.0
2,4-Dinitrophenol	Lin1		0.1333	0.0100	2.07	2.00	3.7	20.0
Acenaphthene	Ave	1.013	1.052	0.9000	1.04	1.00	3.9	20.0
4-Nitrophenol	Ave	0.1458	0.1750		2.40	2.00	20.0	20.0
2,4-Dinitrotoluene	Ave	0.3148	0.3280	0.2000	1.04	1.00	4.2	20.0
Dibenzofuran	Ave	1.439	1.489	0.8000	1.03	1.00	3.5	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2138	0.2150	0.0100	1.01	1.00	0.5	20.0
Hexadecane	Ave	0.8258	0.8486		1.03	1.00	2.8	20.0
Diethyl phthalate	Ave	1.148	1.172	0.0100	1.02	1.00	2.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.5141	0.5527	0.4000	1.07	1.00	7.5	20.0
4-Nitroaniline	Ave	0.2050	0.2365	0.0100	1.15	1.00	15.4	20.0
Fluorene	Ave	1.158	1.232	0.9000	1.06	1.00	6.4	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.0955	0.0100	1.72	2.00	-14.1	20.0
Diphenylamine	Ave	0.6281	0.6023		0.816	0.851	-4.1	20.0
N-Nitrosodiphenylamine	Ave	0.5343	0.5124	0.0100	0.959	1.00	-4.1	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.8615	0.8613		1.00	1.00	-0.0	20.0
Azobenzene	Ave	0.8616	0.8613		1.00	1.00	-0.0	20.0
4-Bromophenyl phenyl ether	Ave	0.1859	0.1832	0.1000	0.986	1.00	-1.4	20.0
Atrazine	Ave	0.1833	0.1904	0.0100	2.08	2.00	3.9	20.0
Hexachlorobenzene	Ave	0.1916	0.1710	0.1000	0.892	1.00	-10.8	20.0
n-Octadecane	Ave	0.5679	0.5525		0.973	1.00	-2.7	20.0
Pentachlorophenol	Lin1		0.1091	0.0500	1.75	2.00	-12.7	20.0
Phenanthrene	Ave	1.033	0.9811	0.7000	0.950	1.00	-5.0	20.0
Anthracene	Ave	1.041	1.012	0.7000	0.972	1.00	-2.8	20.0
Carbazole	Ave	0.8088	0.8424	0.0100	1.04	1.00	4.1	20.0
Di-n-butyl phthalate	Ave	1.291	1.243	0.0100	0.963	1.00	-3.7	20.0
Fluoranthene	Ave	0.995	1.077	0.6000	1.08	1.00	8.2	20.0
Benzidine	Lin		0.3500		1.83	2.00	-8.5	20.0
Pyrene	Ave	1.078	1.081	0.6000	1.00	1.00	0.3	20.0
Butyl benzyl phthalate	Ave	0.5291	0.5355	0.0100	1.01	1.00	1.2	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.7006	0.7458	0.0100	1.06	1.00	6.4	20.0
3,3'-Dichlorobenzidine	Ave	0.3068	0.3299	0.0100	2.15	2.00	7.5	20.0
Benzo[a]anthracene	Ave	0.9572	0.9507	0.8000	0.993	1.00	-0.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Lab Sample ID: STD6 240-229123/2 | Calibration Date: 05/06/2016 07:16

Instrument ID: A4AG2 | Calib Start Date: 04/26/2016 07:44

GC Column: RXI-5SILMS ID: 0.45(mm) | Calib End Date: 04/26/2016 11:03

Lab File ID: 60506002.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	0.9384	0.9273	0.7000	0.988	1.00	-1.2	20.0
Di-n-octyl phthalate	Lin1		1.676	0.0100	0.993	1.00	-0.7	20.0
Benzo[b]fluoranthene	Ave	1.109	1.152	0.7000	1.04	1.00	3.9	20.0
Benzo[k]fluoranthene	Ave	1.229	1.219	0.7000	0.991	1.00	-0.9	20.0
Benzo[a]pyrene	Ave	1.016	1.108	0.7000	1.09	1.00	9.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.037	1.080	0.5000	1.04	1.00	4.2	20.0
Dibenz(a,h)anthracene	Ave	0.9039	0.9309	0.4000	1.03	1.00	3.0	20.0
Benzo[g,h,i]perylene	Ave	0.8241	0.8666	0.5000	1.05	1.00	5.2	20.0
2-Fluorophenol (Surr)	Ave	1.091	0.7931		0.727	1.00	-27.3*	20.0
Phenol-d5 (Surr)	Ave	1.372	1.353		0.987	1.00	-1.3	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3526	0.4104		1.16	1.00	16.4	20.0
2-Fluorobiphenyl (Surr)	Ave	1.183	1.229		1.04	1.00	3.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1188	0.1125		0.947	1.00	-5.3	20.0
Terphenyl-d14 (Surr)	Ave	0.7498	0.6996		0.933	1.00	-6.7	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: CCVIS
Inject. Date: 06-May-2016 07:16:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-002
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:22:43 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 07:52:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	96	219446	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	868590	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	506583	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	97	844371	400.0	400.0	
* 5 Chrysene-d12	240	13.743	13.743	0.000	97	854403	400.0	400.0	
* 6 Perylene-d12	264	16.143	16.143	0.000	96	654389	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	435092	1000.0	727.2	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	742505	1000.0	986.5	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	891228	1000.0	1164.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.855	8.855	0.000	100	1556150	1000.0	1038.4	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	87	142439	1000.0	946.6	
$ 12 Terphenyl-d14	244	12.267	12.267	0.000	99	1494336	1000.0	933.1	
26 1,4-Dioxane	88	4.526	4.526	0.000	98	185770	1000.0	776.2	
27 N-Nitrosodimethylamine	74	4.761	4.761	0.000	83	449401	1000.0	938.4	
28 Pyridine	79	4.826	4.826	0.000	88	540895	1000.0	804.1	
42 Benzaldehyde	77	6.544	6.544	0.000	93	728253	2000.0	2029.5	
43 Phenol	94	6.561	6.561	0.000	98	817704	1000.0	996.2	
44 Aniline	93	6.626	6.626	0.000	96	1108763	1000.0	960.9	
45 Bis(2-chloroethyl)ether	93	6.644	6.644	0.000	89	857004	1000.0	1049.5	
244 n-Decane	57	6.726	6.726	0.000	92	852731	1000.0	950.0	
47 2-Chlorophenol	128	6.738	6.738	0.000	97	615033	1000.0	920.3	
48 1,3-Dichlorobenzene	146	6.867	6.867	0.000	95	737605	1000.0	921.9	
49 1,4-Dichlorobenzene	146	6.920	6.920	0.000	92	749898	1000.0	924.5	
50 Benzyl alcohol	108	6.979	6.979	0.000	90	447414	1000.0	969.6	
51 1,2-Dichlorobenzene	146	7.049	7.049	0.000	93	680915	1000.0	909.2	
52 2-Methylphenol	108	7.055	7.055	0.000	97	649054	1000.0	1030.1	
54 2,2'-oxybis[1-chloropropan	45	7.085	7.085	0.000	91	1134663	1000.0	925.7	
53 Indene	115	7.120	7.120	0.000	90	2587324	2000.0	1915.2	
55 3 & 4 Methylphenol	108	7.173	7.173	0.000	92	694903	1000.0	1035.6	
57 N-Nitrosodi-n-propylamine	70	7.185	7.185	0.000	91	564395	1000.0	991.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.208	7.208	0.000	93	1008959	1000.0	974.6	
61 Hexachloroethane	117	7.338	7.338	0.000	93	292506	1000.0	973.2	
62 Nitrobenzene	77	7.361	7.361	0.000	91	828132	1000.0	1123.6	
64 Isophorone	82	7.543	7.543	0.000	98	1505130	1000.0	1120.1	
66 2,4-Dimethylphenol	107	7.620	7.620	0.000	96	740666	1000.0	1150.2	
65 2-Nitrophenol	139	7.626	7.626	0.000	92	356644	1000.0	1061.1	
70 Benzoic acid	122	7.673	7.673	0.000	91	822706	2000.0	2217.0	
69 Bis(2-chloroethoxy)methane	93	7.691	7.691	0.000	98	849584	1000.0	1052.1	
72 2,4-Dichlorophenol	162	7.826	7.826	0.000	97	539475	1000.0	1112.8	
73 1,2,4-Trichlorobenzene	180	7.908	7.908	0.000	93	600234	1000.0	1056.4	
74 Naphthalene	128	7.985	7.985	0.000	96	2131698	1000.0	1029.4	
75 4-Chloroaniline	127	7.996	7.996	0.000	96	664490	1000.0	967.8	M
76 2,6-Dichlorophenol	162	8.014	8.014	0.000	94	546955	1000.0	1074.2	
78 Hexachlorobutadiene	225	8.073	8.073	0.000	96	332588	1000.0	1146.9	
83 Caprolactam	113	8.279	8.279	0.000	75	473921	2000.0	2444.1	
85 4-Chloro-3-methylphenol	107	8.379	8.379	0.000	96	634729	1000.0	1192.9	
86 2-Methylnaphthalene	142	8.567	8.567	0.000	92	1364526	1000.0	1019.8	
87 1-Methylnaphthalene	142	8.655	8.655	0.000	93	1282688	1000.0	1017.4	
89 Hexachlorocyclopentadiene	237	8.702	8.702	0.000	96	273252	1000.0	907.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.714	8.714	0.000	99	590576	1000.0	1114.8	
93 2,4,6-Trichlorophenol	196	8.790	8.790	0.000	96	378707	1000.0	1063.0	
94 2,4,5-Trichlorophenol	196	8.832	8.832	0.000	94	369887	1000.0	1020.5	
99 1,1'-Biphenyl	154	8.949	8.949	0.000	95	1729350	1000.0	1028.1	
100 2-Chloronaphthalene	162	8.990	8.990	0.000	99	1239341	1000.0	951.4	
101 2-Nitroaniline	65	9.049	9.049	0.000	78	463584	1000.0	1113.8	
104 Dimethyl phthalate	163	9.167	9.167	0.000	97	1444445	1000.0	1017.5	
103 1,3-Dinitrobenzene	168	9.214	9.214	0.000	82	236290	1000.0	1131.9	
106 2,6-Dinitrotoluene	165	9.232	9.232	0.000	88	325076	1000.0	1038.5	
108 Acenaphthylene	152	9.355	9.355	0.000	98	2053667	1000.0	1043.3	
109 3-Nitroaniline	138	9.402	9.402	0.000	91	145579	1000.0	792.5	
110 2,4-Dinitrophenol	184	9.485	9.485	0.000	85	337738	2000.0	2074.0	
111 Acenaphthene	153	9.496	9.496	0.000	95	1332517	1000.0	1038.8	
112 4-Nitrophenol	109	9.502	9.502	0.000	96	443194	2000.0	2401.0	
113 2,4-Dinitrotoluene	165	9.590	9.590	0.000	87	415361	1000.0	1042.0	
115 Dibenzofuran	168	9.643	9.643	0.000	96	1886042	1000.0	1034.7	
118 2,3,4,6-Tetrachlorophenol	232	9.737	9.737	0.000	80	272236	1000.0	1005.4	
248 Hexadecane	57	9.755	9.755	0.000	72	1074729	1000.0	1027.6	
120 Diethyl phthalate	149	9.761	9.761	0.000	97	1484393	1000.0	1021.0	
122 4-Chlorophenyl phenyl ethe	204	9.902	9.902	0.000	97	699902	1000.0	1074.9	
125 4-Nitroaniline	138	9.926	9.926	0.000	82	299538	1000.0	1153.7	
124 Fluorene	166	9.943	9.943	0.000	96	1560492	1000.0	1063.8	
127 4,6-Dinitro-2-methylphenol	198	9.949	9.949	0.000	76	403344	2000.0	1718.6	
128 N-Nitrosodiphenylamine	169	10.002	10.002	0.000	64	1081530	1000.0	958.9	
129 Diphenylamine	169	10.002	10.002	0.000	94	1081530	850.7	815.8	
131 Azobenzene	77	10.043	10.043	0.000	99	1818151	1000.0	999.7	
130 1,2-Diphenylhydrazine	77	10.043	10.043	0.000	98	1818151	1000.0	999.7	
138 4-Bromophenyl phenyl ether	248	10.332	10.332	0.000	75	386779	1000.0	985.8	
141 Atrazine	200	10.420	10.420	0.000	94	803938	2000.0	2077.8	
140 Hexachlorobenzene	284	10.437	10.437	0.000	92	360870	1000.0	892.3	
245 n-Octadecane	57	10.543	10.543	0.000	92	1166234	1000.0	972.8	
143 Pentachlorophenol	266	10.590	10.590	0.000	89	460601	2000.0	1745.3	
148 Phenanthrene	178	10.784	10.784	0.000	98	2070996	1000.0	950.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.826	10.826	0.000	98	2135346	1000.0	971.9	
150 Carbazole	167	10.943	10.943	0.000	96	1778132	1000.0	1041.5	
154 Di-n-butyl phthalate	149	11.167	11.167	0.000	100	2623988	1000.0	963.1	
159 Fluoranthene	202	11.914	11.914	0.000	98	2272890	1000.0	1082.0	
160 Benzidine	184	11.996	11.996	0.000	99	1495123	2000.0	1830.4	
161 Pyrene	202	12.173	12.173	0.000	97	2308048	1000.0	1002.6	
169 Butyl benzyl phthalate	149	12.808	12.808	0.000	97	1143800	1000.0	1012.1	
174 Bis(2-ethylhexyl) phthalat	149	13.584	13.584	0.000	97	1593029	1000.0	1064.4	
177 3,3'-Dichlorobenzidine	252	13.625	13.625	0.000	75	1409380	2000.0	2150.9	
178 Benzo[a]anthracene	228	13.725	13.725	0.000	99	2030631	1000.0	993.2	
179 Chrysene	228	13.784	13.784	0.000	98	1980731	1000.0	988.2	
181 Di-n-octyl phthalate	149	14.614	14.614	0.000	99	2742636	1000.0	993.4	
183 Benzo[b]fluoranthene	252	15.478	15.478	0.000	98	1883976	1000.0	1038.7	
184 Benzo[k]fluoranthene	252	15.519	15.519	0.000	99	1993731	1000.0	991.4	
185 Benzo[a]pyrene	252	16.049	16.049	0.000	81	1812611	1000.0	1090.1	
190 Indeno[1,2,3-cd]pyrene	276	18.331	18.331	0.000	98	1767212	1000.0	1041.7	
189 Dibenz(a,h)anthracene	278	18.337	18.337	0.000	90	1522895	1000.0	1029.8	
191 Benzo[g,h,i]perylene	276	18.990	18.990	0.000	95	1417658	1000.0	1051.6	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SMLIST1 L6 W_00007 Amount Added: 0.10 Units: mL

Report Date: 16-May-2016 11:23:02 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D

Injection Date: 06-May-2016 07:16:30 Instrument ID: A4AG2 Operator ID:

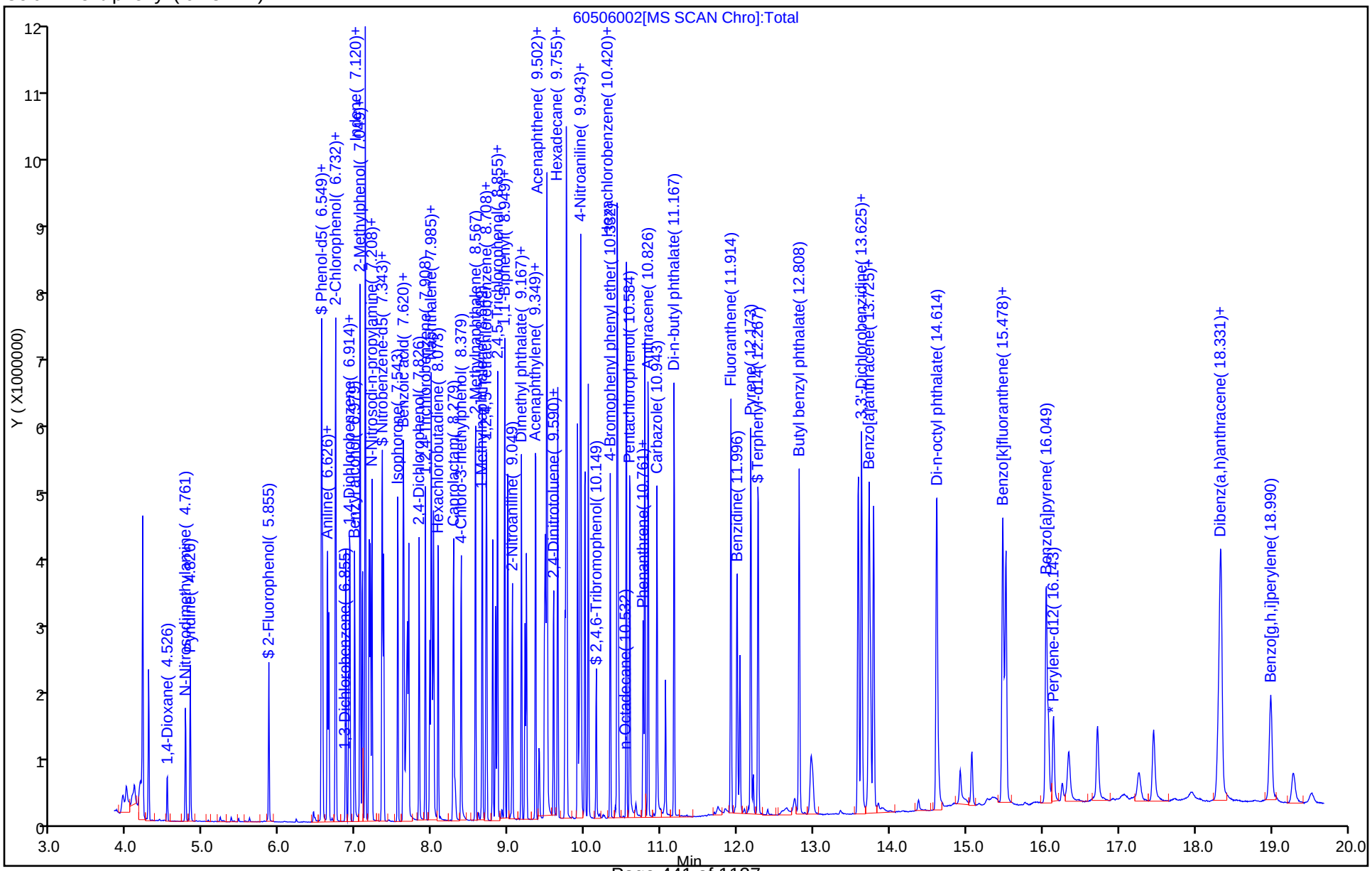
Lims ID: std6 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

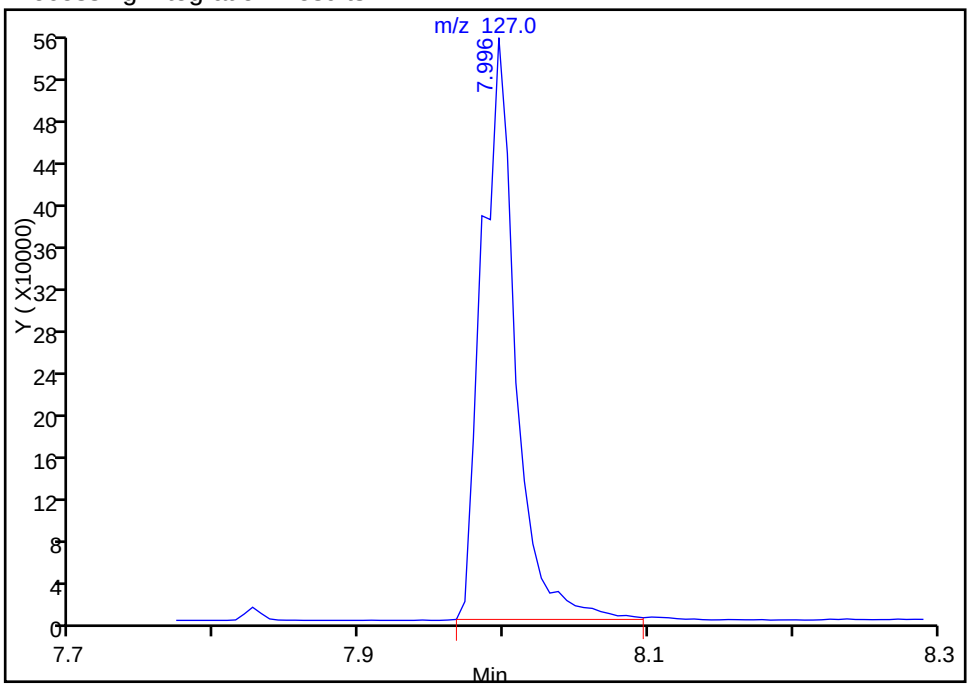
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506002.D
Injection Date: 06-May-2016 07:16:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

75 4-Chloroaniline, CAS: 106-47-8

Signal: 1

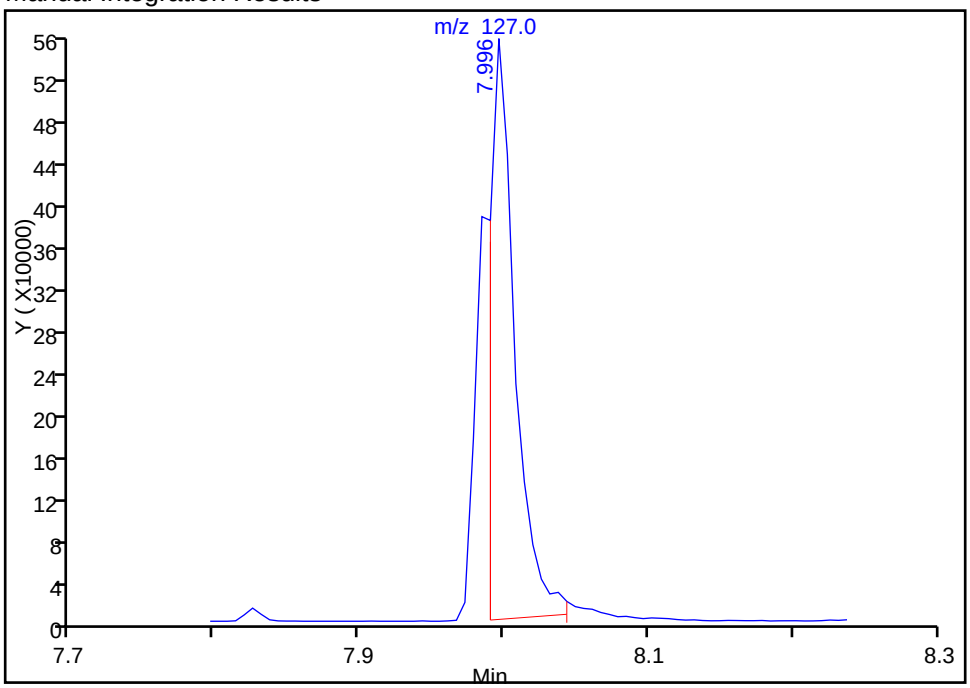
Processing Integration Results

RT: 8.00
Area: 898029
Amount: 1307.8751
Amount Units: ng/ml



Manual Integration Results

RT: 8.00
Area: 664490
Amount: 967.7526
Amount Units: ng/ml



Reviewer: hulat, 06-May-2016 07:52:57
Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Lab Sample ID: STD6 240-229123/3 | Calibration Date: 05/06/2016 07:40

Instrument ID: A4AG2 | Calib Start Date: 04/26/2016 11:53

GC Column: RXI-5SILMS ID: 0.45(mm) | Calib End Date: 04/26/2016 14:47

Lab File ID: 60506003.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.500	1.246		0.831	1.00	-16.9	20.0
N-Nitrosomethylethylamine	Ave	0.6439	0.7008		1.09	1.00	8.8	20.0
Acrylamide	Qua		0.2943		1.31	1.00	30.8*	20.0
Methyl methanesulfonate	Ave	0.8316	0.9341		1.12	1.00	12.3	20.0
N-Nitrosodiethylamine	Ave	0.6606	0.7060		1.07	1.00	6.9	20.0
Ethyl methanesulfonate	Ave	1.043	1.149		1.10	1.00	10.1	20.0
Pentachloroethane	Ave	0.4556	0.4474		0.982	1.00	-1.8	20.0
N-Nitrosopyrrolidine	Ave	0.6390	0.7257		1.14	1.00	13.6	20.0
N-Nitrosomorpholine	Ave	0.9436	1.071		1.14	1.00	13.5	20.0
2-Toluidine	Ave	2.021	2.308		1.14	1.00	14.2	20.0
N-Nitrosopiperidine	Ave	0.1571	0.1710		1.09	1.00	8.9	20.0
o,o',o''-Triethylphosphorothioate	Ave	0.1365	0.1495		1.09	1.00	9.5	20.0
alpha,alpha-Dimethylphenethylamine	Ave	0.4600	0.6304		1.37	1.00	37.0*	20.0
Hexachloropropene	Ave	0.1278	0.1703	0.0100	1.33	1.00	33.3*	20.0
N-Nitrosodi-n-butylamine	Ave	0.1932	0.2400		1.24	1.00	24.2*	20.0
Quinoline	Ave	0.5836	0.6301		1.08	1.00	8.0	20.0
p-Phenylene diamine	Lin1		0.2252		1.05	1.00	5.2	20.0
Safrole, Total	Ave	0.2204	0.2362		1.07	1.00	7.2	20.0
Isosafrole Peak 1	Ave	0.0916	0.0954		0.864	0.830	4.1	20.0
Isosafrole Peak 2	Ave	2.546	2.685		0.179	0.170	5.5	20.0
1-Chloronaphthalene	Ave	0.9888	0.9906		1.00	1.00	0.2	20.0
1,4-Naphthoquinone	Ave	0.2755	0.2988		1.08	1.00	8.4	20.0
1,4-Dinitrobenzene	Lin1		0.1723		1.06	1.00	6.0	20.0
Pentachlorobenzene	Ave	0.3851	0.4135		1.07	1.00	7.4	20.0
1-Naphthylamine	Ave	0.9598	1.063		1.11	1.00	10.8	20.0
2,3,5,6-Tetrachlorophenol	Lin1		0.1836		0.916	1.00	-8.4	20.0
2-Naphthylamine	Ave	0.8688	0.9728		1.12	1.00	12.0	20.0
Thionazin	Ave	0.2311	0.2668		1.15	1.00	15.4	20.0
N-Nitro-o-toluidine	Lin1		0.3392		1.06	1.00	5.7	20.0
Sulfotepp	Ave	0.0749	0.0827		1.10	1.00	10.4	20.0
1,3,5-Trinitrobenzene	Lin		0.0474		0.940	1.00	-6.0	20.0
Phenacetin	Ave	0.3080	0.3634		1.18	1.00	18.0	20.0
Diallate Peak 1	Ave	0.3268	0.3304		0.839	0.830	1.1	20.0
Phorate	Ave	0.1423	0.1412		0.992	1.00	-0.8	20.0
Diallate Peak 2	Ave	0.3327	0.3487		0.178	0.170	4.8	20.0
Dimethoate	Ave	0.2475	0.2612		1.06	1.00	5.5	20.0
4-Aminobiphenyl	Lin1		0.7323		0.972	1.00	-2.8	20.0
Pronamide	Ave	0.2744	0.2952		1.08	1.00	7.6	20.0
Pentachloronitrobenzene	Ave	0.0656	0.0736		1.12	1.00	12.1	20.0
Disulfoton	Ave	0.3604	0.3812		1.06	1.00	5.8	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: STD6 240-229123/3 Calibration Date: 05/06/2016 07:40

Instrument ID: A4AG2 Calib Start Date: 04/26/2016 11:53

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/26/2016 14:47

Lab File ID: 60506003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Lin		0.0994		0.891	1.00	-10.9	20.0
Methyl parathion	Lin1		0.2145		0.993	1.00	-0.7	20.0
Ethyl Parathion	Lin1		0.1429		1.04	1.00	3.6	20.0
4-Nitroquinoline-1-oxide	Qua		0.0210		0.806	1.00	-19.4	20.0
Methapyrilene	Ave	0.4800	0.5883		2.45	2.00	22.6*	20.0
Isodrin	Ave	0.1291	0.1210		0.937	1.00	-6.3	20.0
Aramite Peak 1	Ave	0.1012	0.1158		0.584	0.510	14.4	20.0
Aramite Peak 2	Ave	0.1295	0.1484		0.562	0.490	14.6	20.0
p-Dimethylamino azobenzene	Ave	0.2155	0.2194		1.02	1.00	1.8	20.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.3981	0.3957		0.994	1.00	-0.6	20.0
Famphur	Qua		0.1398			1.00		20.0
3,3'-Dimethylbenzidine	Lin		0.4259		0.846	1.00	-15.4	20.0
2-Acetylaminofluorene	Lin1		0.4045		1.00	1.00	0.0	20.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.1719		0.992	1.00	-0.8	20.0
6-Methylchrysene	Ave	0.7419	0.7555		2.04	2.00	1.8	20.0
7,12-Dimethylbenz(a)anthracene	Ave	0.5881	0.6143		1.04	1.00	4.5	20.0
3-Methylcholanthrene	Ave	0.5830	0.6227		2.14	2.00	6.8	20.0
Dibenz[a,h]acridine	Ave	0.7387	0.8615		1.17	1.00	16.6	20.0

Report Date: 16-May-2016 11:23:23 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506003.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: CCV
Inject. Date: 06-May-2016 07:40:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-003
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:23:19 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 08:17:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	98	209759	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	895843	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	512060	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	98	876620	400.0	400.0	
* 5 Chrysene-d12	240	13.731	13.731	0.000	97	825519	400.0	400.0	
* 6 Perylene-d12	264	16.137	16.137	0.000	96	634681	400.0	400.0	
31 2-Picoline	93	5.420	5.420	0.000	96	653440	1000.0	830.8	
32 N-Nitrosomethylethylamine	88	5.479	5.479	0.000	93	367511	1000.0	1088.4	
14 Acrylamide	71	5.644	5.644	0.000	69	154322	1000.0	1307.9	
34 Methyl methanesulfonate	80	5.697	5.697	0.000	89	489839	1000.0	1123.3	
36 N-Nitrosodiethylamine	102	6.026	6.026	0.000	92	370215	1000.0	1068.7	
37 Ethyl methanesulfonate	79	6.232	6.232	0.000	98	602382	1000.0	1101.1	
46 Pentachloroethane	167	6.685	6.685	0.000	91	234610	1000.0	981.9	
56 N-Nitrosopyrrolidine	100	7.179	7.179	0.000	80	380567	1000.0	1135.7	
59 N-Nitrosomorpholine	56	7.202	7.202	0.000	93	561691	1000.0	1135.1	
60 2-Toluidine	106	7.238	7.238	0.000	97	1210504	1000.0	1142.2	
63 N-Nitrosopiperidine	114	7.479	7.479	0.000	79	382929	1000.0	1088.5	
68 o,o',o''-Triethylphosphoro	198	7.661	7.661	0.000	88	334755	1000.0	1094.9	
71 alpha,alpha-Dimethyl phene	58	7.785	7.785	0.000	98	1411807	1000.0	1370.4	
77 Hexachloropropene	213	8.061	8.061	0.000	91	381382	1000.0	1332.7	
82 N-Nitrosodi-n-butylamine	84	8.249	8.249	0.000	91	537529	1000.0	1242.0	
81 Quinoline	129	8.255	8.255	0.000	96	1411060	1000.0	1079.5	
84 p-Phenylene diamine	108	8.285	8.285	0.000	95	504455	1000.0	1051.8	
92 Safrole, Total	162	8.455	8.455	0.000	86	528918	1000.0	1071.8	
95 Isosafrole Peak 1	162	8.702	8.702	0.000	87	101313	830.0	863.6	
91 Isosafrole Peak 2	162	8.896	8.896	0.000	90	584411	170.0	179.3	
247 1-Chloronaphthalene	162	9.014	9.014	0.000	99	1268154	1000.0	1001.9	
102 1,4-Naphthoquinone	158	9.114	9.114	0.000	81	382508	1000.0	1084.4	
105 1,4-Dinitrobenzene	168	9.137	9.137	0.000	93	220622	1000.0	1059.6	
114 Pentachlorobenzene	250	9.614	9.614	0.000	96	529346	1000.0	1073.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.702	9.702	0.000	98	1360880	1000.0	1107.6	
116 2,3,5,6-Tetrachlorophenol	232	9.702	9.702	0.000	91	235042	1000.0	916.2	
119 2-Naphthylamine	143	9.767	9.767	0.000	96	1245384	1000.0	1119.7	
121 Thionazin	97	9.837	9.837	0.000	79	341583	1000.0	1154.4	
123 N-Nitro-o-toluidine	152	9.920	9.920	0.000	93	434231	1000.0	1057.4	
132 Sulfotepp	202	10.084	10.084	0.000	78	181190	1000.0	1103.5	
133 1,3,5-Trinitrobenzene	213	10.184	10.184	0.000	82	103849	1000.0	939.5	
135 Phenacetin	108	10.226	10.226	0.000	92	796432	1000.0	1180.1	
134 Diallate Peak 1	86	10.232	10.232	0.000	94	600927	830.0	839.1	
136 Phorate	121	10.237	10.237	0.000	96	309496	1000.0	992.5	
137 Diallate Peak 2	86	10.314	10.314	0.000	94	129920	170.0	178.2	
139 Dimethoate	87	10.390	10.390	0.000	93	572344	1000.0	1055.1	
142 4-Aminobiphenyl	169	10.555	10.555	0.000	89	1604818	1000.0	971.5	
144 Pronamide	173	10.567	10.567	0.000	92	646863	1000.0	1075.7	
145 Pentachloronitrobenzene	237	10.602	10.602	0.000	82	161192	1000.0	1121.4	
146 Disulfoton	88	10.684	10.684	0.000	98	835495	1000.0	1057.8	
147 Dinoseb	211	10.702	10.702	0.000	95	217935	1000.0	891.1	
152 Methyl parathion	109	11.020	11.020	0.000	92	470182	1000.0	993.3	
155 Ethyl Parathion	97	11.361	11.361	0.000	83	313144	1000.0	1035.9	
156 4-Nitroquinoline-1-oxide	190	11.449	11.449	0.000	77	46047	1000.0	805.7	
157 Methapyrilene	58	11.478	11.478	0.000	99	2578379	2000.0	2451.1	
158 Isodrin	66	11.761	11.761	0.000	90	265147	1000.0	936.9	
162 Aramite Peak 1	185	12.173	12.173	0.000	88	121904	510.0	583.6	
163 Aramite Peak 2	185	12.255	12.255	0.000	89	150087	490.0	561.8	
164 p-Dimethylamino azobenzene	225	12.420	12.420	0.000	94	452702	1000.0	1018.1	
165 Chlorobenzilate	139	12.449	12.449	0.000	85	816617	1000.0	993.9	
168 Famphur	218	12.755	12.755	0.000	88	288450	1000.0	NQ	E
170 3,3'-Dimethylbenzidine	212	12.837	12.837	0.000	99	878888	1000.0	845.6	
172 2-Acetylaminofluorene	181	13.196	13.196	0.000	95	834757	1000.0	1000.6	
175 4,4'-Methylene bis(2-chlor	231	13.602	13.602	0.000	96	354718	1000.0	991.9	
180 6-Methylchrysene	242	14.484	14.484	0.000	99	3118185	2000.0	2036.5	
182 7,12-Dimethylbenz(a)anthra	256	15.437	15.437	0.000	94	974762	1000.0	1044.6	
186 3-Methylcholanthrene	268	16.661	16.661	0.000	93	1976010	2000.0	2136.2	
188 Dibenz[a,h]acridine	279	17.766	17.766	0.000	92	1366945	1000.0	1166.2	
S 194 Isosafrole	162				0		1000.0	1043.0	
S 195 Diallate	86				0		1000.0	1017.3	
S 196 Aramite, Total	185				0		1000.0	1145.4	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

E - Exceeded Maximum Amount

Reagents:

SMLIST2 L6 W_00010 Amount Added: 0.10 Units: mL

Report Date: 16-May-2016 11:23:23 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506003.D

Injection Date: 06-May-2016 07:40:30 Instrument ID: A4AG2 Operator ID:

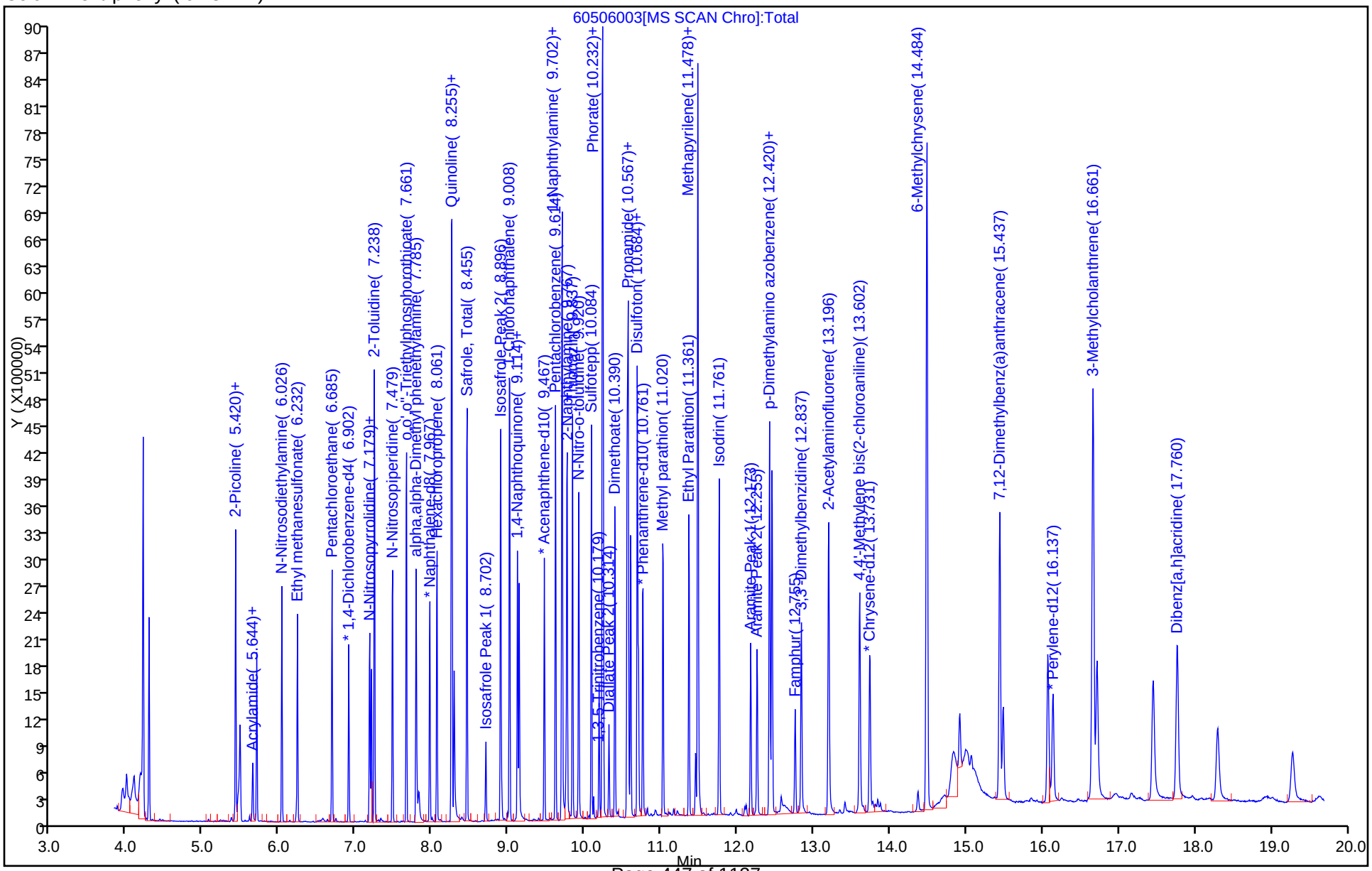
Lims ID: std6 l2lvi Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 3

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 26-Apr-2016 07:23:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0053832-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 27-Apr-2016 07:29:38 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 26-Apr-2016 08:09:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.611	10.611	0.000	90	1144594	NR	NR	
160 Benzidine	184	12.028	12.028	0.000	99	4903058	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.234	12.234	0.000	65	4119		NR	
166 4,4'-DDD	235	12.640	12.640	0.000	95	76154		NR	
171 4,4'-DDT	235	13.040	13.040	0.000	97	3036905	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

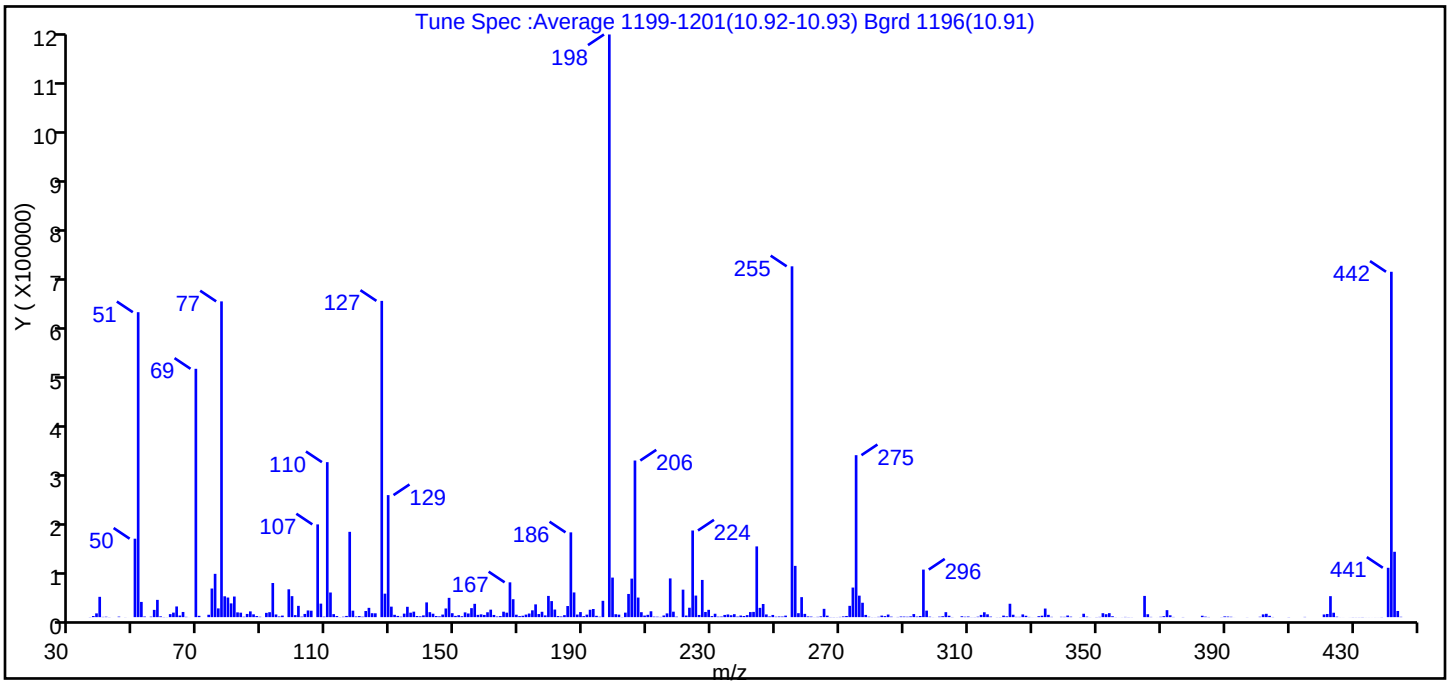
SMDFTPPW_00011 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D
Injection Date: 26-Apr-2016 07:23:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	52.3
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	42.6
70	Less than 2.0 percent of mass 69	0.2 (0.5)
127	25.0 - 75.0 percent of mass 198	54.3
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.8
275	10.0 - 30.0 percent of mass 198	27.8
365	Greater than 0.75 percent of mass 198	3.6
441	Present but less than mass 443	8.5 (75.5)
442	40.0 - 110.0 percent of mass 198	59.3
443	15.0 - 24.0 percent of mass 442	11.2 (18.9)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 26-Apr-2016 07:23:30
Spectrum: Tune Spec :Average 1199-1201(10.92-10.93) Bgrd 1196(10.91)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 353

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	274	136.00	8596	227.00	71744	320.00	251
37.00	2155	137.00	10570	228.00	9998	321.00	2945
38.00	7292	138.00	2155	229.00	14131	322.00	1480
39.00	39168	139.00	1513	230.00	2038	323.00	25832
40.00	514	140.00	3394	231.00	6544	324.00	4644
41.00	863	141.00	28432	232.00	978	325.00	552
42.00	228	142.00	9570	233.00	1176	326.00	531
45.00	1024	143.00	6599	234.00	4246	327.00	5287
47.00	152	144.00	2108	235.00	5181	328.00	2636
48.00	18	145.00	1520	236.00	3682	329.00	437
50.00	151232	146.00	4950	237.00	5744	330.00	126
51.00	587904	147.00	16704	238.00	1053	331.00	79
52.00	29352	148.00	37192	239.00	3076	332.00	1817
53.00	1181	149.00	7609	240.00	2172	333.00	2770
55.00	957	150.00	2413	241.00	3890	334.00	16568
56.00	14015	151.00	3751	242.00	9774	335.00	4431
57.00	33288	152.00	1768	243.00	10099	336.00	576
58.00	1534	153.00	9149	244.00	136384	339.00	649
59.00	291	154.00	7048	245.00	17896	340.00	566
60.00	152	155.00	17360	246.00	25344	341.00	3129
61.00	5839	156.00	25664	247.00	5198	342.00	911
62.00	8717	157.00	4404	248.00	1351	345.00	235
63.00	20616	158.00	5411	249.00	4239	346.00	6560
64.00	3119	159.00	4270	250.00	798	347.00	971
65.00	9988	160.00	9391	251.00	1243	348.00	124
66.00	582	161.00	14442	252.00	1129	350.00	287
67.00	64	162.00	4238	253.00	2928	351.00	517
69.00	478784	163.00	1228	255.00	676352	352.00	7583
70.00	2539	164.00	2012	256.00	98832	353.00	5640
73.00	4595	165.00	10499	257.00	7616	354.00	7691
74.00	55176	166.00	8621	258.00	38576	355.00	1735
75.00	83480	167.00	67112	259.00	6299	356.00	162
76.00	16872	168.00	34592	260.00	1410	357.00	54

Report Date: 27-Apr-2016 07:29:39 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 26-Apr-2016 07:23:30
Spectrum: Tune Spec :Average 1199-1201(10.92-10.93) Bgrd 1196(10.91)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 353

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	608768	169.00	4664	261.00	1015	358.00	127
78.00	40192	170.00	2015	262.00	170	359.00	445
79.00	37792	171.00	2706	263.00	578	360.00	249
80.00	26544	172.00	4933	264.00	1495	361.00	168
81.00	39744	173.00	6930	265.00	16028	365.00	40928
82.00	9198	174.00	13138	266.00	2850	366.00	5632
83.00	8596	175.00	24640	267.00	294	367.00	477
84.00	829	176.00	5996	268.00	258	369.00	50
85.00	6181	177.00	10362	269.00	202	370.00	718
86.00	11115	178.00	3351	270.00	476	371.00	1864
87.00	5425	179.00	40912	271.00	1388	372.00	13471
88.00	2093	180.00	30944	272.00	2243	373.00	3619
89.00	746	181.00	14649	273.00	21768	374.00	390
90.00	62	182.00	2132	274.00	57032	377.00	297
91.00	8263	183.00	1273	275.00	312256	383.00	2680
92.00	9540	184.00	3822	276.00	41432	384.00	973
93.00	65800	185.00	21416	277.00	27760	385.00	336
94.00	5164	186.00	163456	278.00	4322	389.00	191
95.00	1354	187.00	47624	279.00	816	390.00	1424
96.00	2980	188.00	4992	280.00	210	391.00	1137
98.00	53672	189.00	9775	281.00	189	392.00	699
99.00	40480	190.00	1918	282.00	636	393.00	51
100.00	3880	191.00	4862	283.00	2985	397.00	155
101.00	21760	192.00	14247	284.00	2013	401.00	757
102.00	949	193.00	15695	285.00	5005	402.00	5331
103.00	6176	194.00	2575	286.00	930	403.00	6452
104.00	12890	195.00	789	287.00	55	404.00	2560
105.00	12421	196.00	31480	288.00	377	405.00	336
107.00	178816	198.00	1123328	289.00	1215	410.00	277
108.00	26056	199.00	76264	290.00	1075	415.00	460
109.00	960	200.00	5635	291.00	790	421.00	5173
110.00	298816	201.00	4820	292.00	1439	422.00	6112
111.00	47504	202.00	283	293.00	5946	423.00	40456
112.00	5796	203.00	8673	294.00	1062	424.00	8497

Report Date: 27-Apr-2016 07:29:39 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 26-Apr-2016 07:23:30
Spectrum: Tune Spec :Average 1199-1201(10.92-10.93) Bgrd 1196(10.91)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 353

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	2119	204.00	44720	295.00	2129	425.00	896
114.00	246	205.00	74272	296.00	91688	426.00	82
115.00	838	206.00	301952	297.00	12571	427.00	59
116.00	2330	207.00	37768	298.00	891	429.00	70
117.00	164480	208.00	9536	299.00	163	430.00	217
118.00	12470	209.00	3043	300.00	55	431.00	167
119.00	1270	210.00	4492	301.00	949	432.00	177
120.00	2069	211.00	11323	302.00	1748	433.00	288
121.00	872	212.00	987	303.00	9599	434.00	76
122.00	11794	213.00	866	304.00	2693	435.00	82
123.00	17928	214.00	454	305.00	304	436.00	51
124.00	7611	215.00	3199	308.00	1738	437.00	87
125.00	7392	216.00	7241	309.00	806	438.00	66
127.00	609728	217.00	74664	310.00	1222	439.00	240
128.00	45264	218.00	10534	311.00	188	441.00	95160
129.00	235264	219.00	932	312.00	231	442.00	665856
130.00	20240	221.00	53000	313.00	843	443.00	126008
131.00	4502	222.00	3047	314.00	4308	444.00	11888
132.00	2354	223.00	18128	315.00	9385	445.00	670
133.00	864	224.00	167040	316.00	5435		
134.00	6761	225.00	41584	317.00	1017		
135.00	19944	226.00	4192	319.00	194		

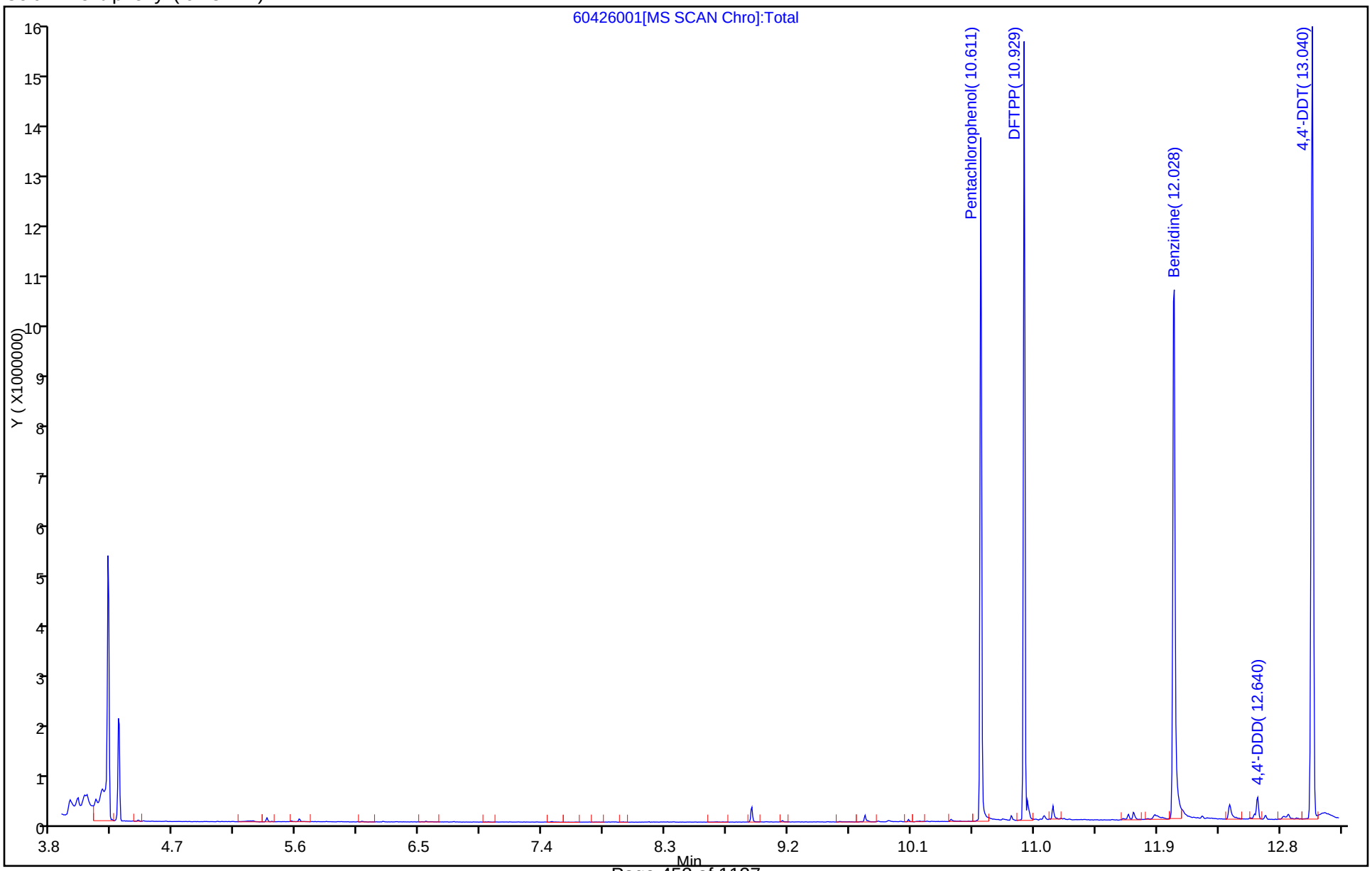
Report Date: 27-Apr-2016 07:29:39 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D

Injection Date:	26-Apr-2016 07:23:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

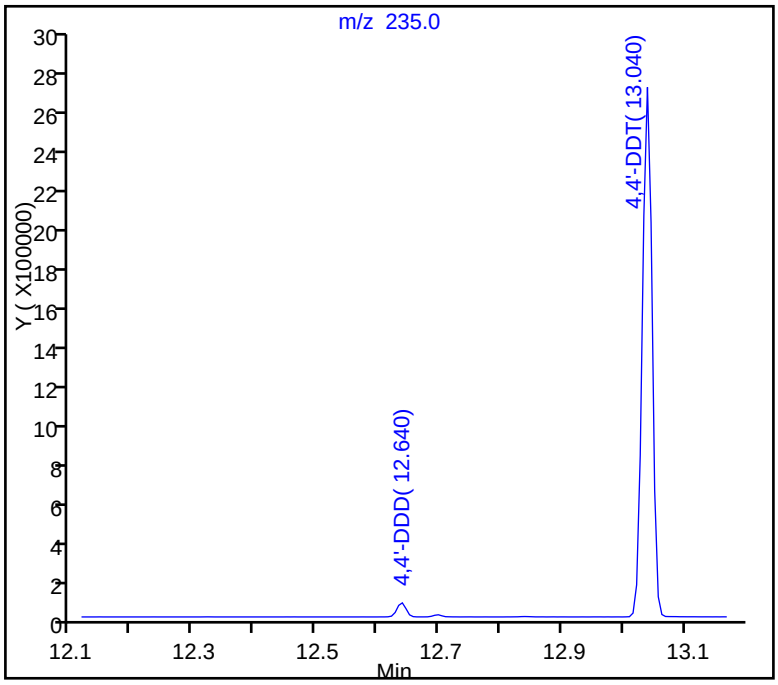


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D
Injection Date: 26-Apr-2016 07:23:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 3036905
166 4,4'-DDD, Area = 76154
167 4,4'-DDE, Area = 4119

%Breakdown: 2.58%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

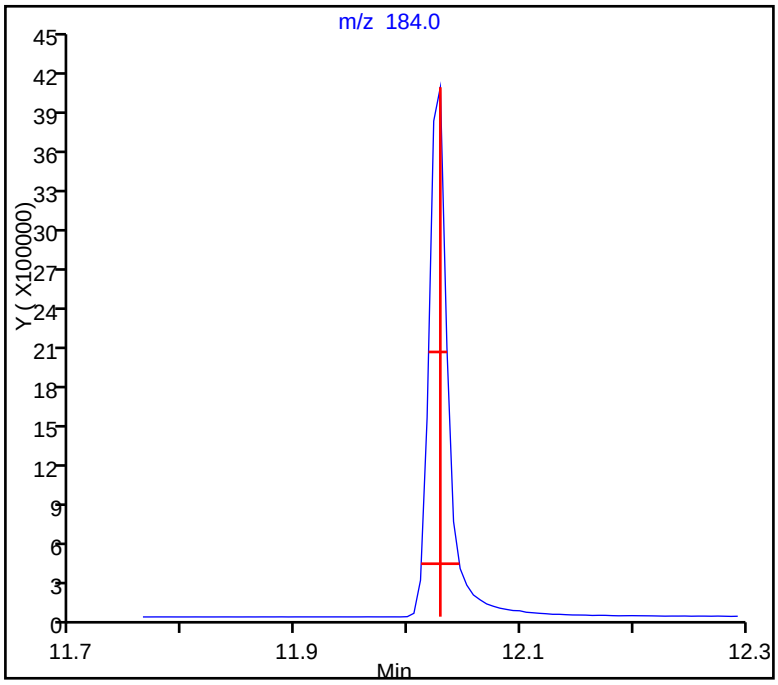
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D
Injection Date: 26-Apr-2016 07:23:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.017 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

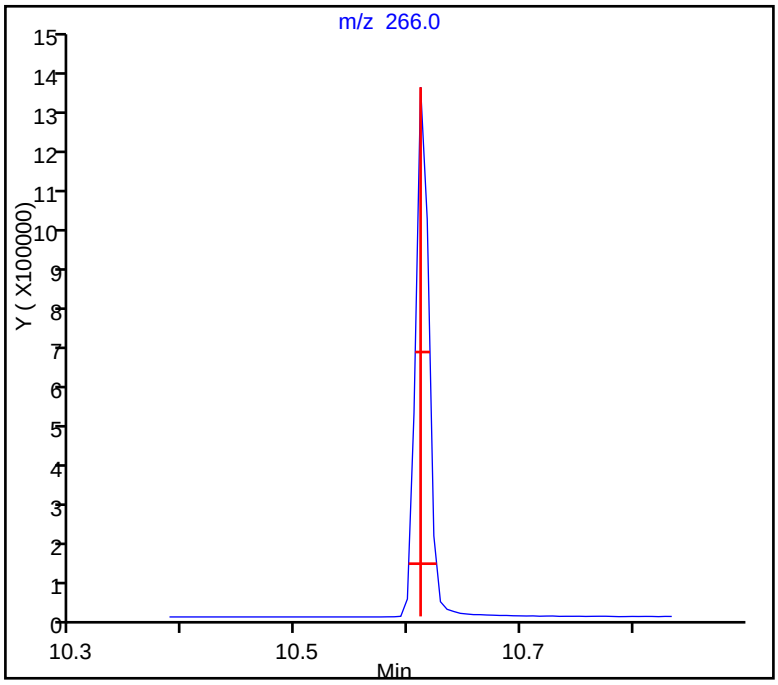
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426001.D
Injection Date: 26-Apr-2016 07:23:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.014 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.3, Max. Tailing < 2.00
Passed



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 06-May-2016 06:58:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:22:19 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 07:17:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.585	10.585	0.000	89	836989	NR	NR	
160 Benzidine	184	11.990	11.990	0.000	99	5352712	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.196	12.196	0.000	66	4909		NR	
166 4,4'-DDD	235	12.596	12.596	0.000	94	62875		NR	
171 4,4'-DDT	235	12.996	12.996	0.000	98	3167023	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

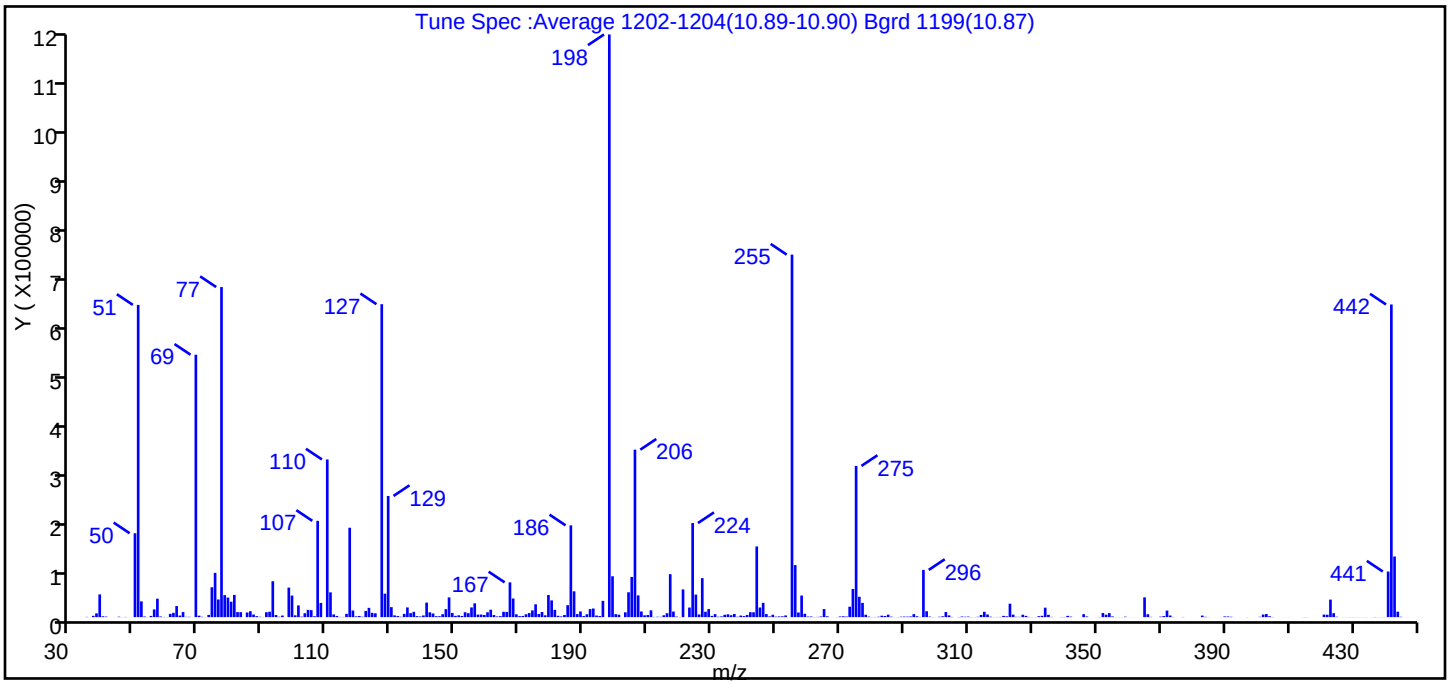
SMDFTPPW_00011 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	53.6
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	45.0
70	Less than 2.0 percent of mass 69	0.2 (0.6)
127	25.0 - 75.0 percent of mass 198	53.7
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	7.0
275	10.0 - 30.0 percent of mass 198	26.0
365	Greater than 0.75 percent of mass 198	3.4
441	Present but less than mass 443	7.8 (75.2)
442	40.0 - 110.0 percent of mass 198	53.7
443	15.0 - 24.0 percent of mass 442	10.4 (19.4)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	484	136.00	7539	230.00	2392	323.00	25368
37.00	2500	137.00	10003	231.00	5673	324.00	4748
38.00	7147	138.00	1914	232.00	768	325.00	573
39.00	42920	139.00	1279	233.00	1406	326.00	528
40.00	1618	140.00	3158	234.00	4427	327.00	4571
41.00	1030	141.00	27480	235.00	5379	328.00	2410
45.00	866	142.00	9158	236.00	3592	329.00	447
46.00	163	143.00	6902	237.00	6029	330.00	207
47.00	402	144.00	1803	238.00	773	331.00	148
48.00	67	145.00	1773	239.00	2919	332.00	1778
50.00	158592	146.00	5497	240.00	1989	333.00	2546
51.00	590208	147.00	15083	241.00	4133	334.00	17864
52.00	29800	148.00	37336	242.00	9384	335.00	4415
53.00	1170	149.00	7890	243.00	9214	336.00	469
54.00	189	150.00	2468	244.00	133632	339.00	326
55.00	2293	151.00	3432	245.00	18208	340.00	372
56.00	14610	152.00	2229	246.00	27032	341.00	2403
57.00	34904	153.00	9301	247.00	5807	342.00	952
58.00	1263	154.00	7505	248.00	1386	346.00	5607
59.00	364	155.00	18360	249.00	4472	347.00	1185
60.00	217	156.00	26104	250.00	950	348.00	52
61.00	6231	157.00	4801	251.00	1331	350.00	134
62.00	8102	158.00	4927	252.00	1525	351.00	385
63.00	20936	159.00	4067	253.00	3203	352.00	7889
64.00	2979	160.00	9264	255.00	685248	353.00	4650
65.00	9610	161.00	14046	256.00	98304	354.00	7601
66.00	570	162.00	3955	257.00	8813	355.00	1345
67.00	645	163.00	1318	258.00	40816	356.00	163
69.00	496000	164.00	1842	259.00	6401	357.00	174
70.00	2746	165.00	10159	260.00	1127	358.00	109
71.00	607	166.00	9881	261.00	1137	359.00	866
72.00	153	167.00	65760	262.00	298	360.00	75
73.00	4243	168.00	35224	263.00	478	361.00	120

Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	56544	169.00	5330	264.00	1199	362.00	76
75.00	83704	170.00	1949	265.00	15313	363.00	65
76.00	33344	171.00	2286	266.00	1586	365.00	37392
77.00	623936	172.00	5407	267.00	49	366.00	5509
78.00	41680	173.00	7721	268.00	30	367.00	528
79.00	37024	174.00	12769	269.00	203	370.00	963
80.00	29160	175.00	24256	270.00	1245	371.00	2004
81.00	42016	176.00	5889	271.00	1591	372.00	12421
82.00	9544	177.00	9703	272.00	1160	373.00	3073
83.00	9443	178.00	3455	273.00	19776	374.00	398
85.00	8813	179.00	41816	274.00	53232	377.00	345
86.00	11201	180.00	31664	275.00	285824	383.00	2965
87.00	4998	181.00	13769	276.00	38496	384.00	606
88.00	1881	182.00	2585	277.00	26888	385.00	171
89.00	705	183.00	1310	278.00	4567	389.00	57
90.00	212	184.00	4047	279.00	1031	390.00	1308
91.00	9368	185.00	22592	280.00	215	391.00	1208
92.00	10251	186.00	173568	281.00	363	392.00	755
93.00	67880	187.00	48824	282.00	741	393.00	133
94.00	3956	188.00	5745	283.00	2751	395.00	94
95.00	749	189.00	10745	284.00	2185	397.00	199
96.00	2990	190.00	2008	285.00	4716	401.00	644
98.00	55816	191.00	5382	286.00	916	402.00	4942
99.00	40752	192.00	15240	287.00	149	403.00	5833
100.00	3417	193.00	16306	288.00	278	404.00	1772
101.00	22192	194.00	3061	289.00	816	405.00	357
102.00	914	195.00	2087	290.00	1056	408.00	60
103.00	7407	196.00	30784	291.00	956	410.00	105
104.00	13748	198.00	1101312	292.00	1274	414.00	75
105.00	13308	199.00	77264	293.00	5684	415.00	261
106.00	1744	200.00	5648	294.00	1691	416.00	65
107.00	182016	201.00	4627	295.00	357	421.00	4887
108.00	26840	203.00	9120	296.00	89240	422.00	4567
110.00	298048	204.00	47016	297.00	11180	423.00	33168

Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 06-May-2016 06:58:30
Spectrum: Tune Spec :Average 1202-1204(10.89-10.90) Bgrd 1199(10.87)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 362

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	46872	205.00	75984	298.00	986	424.00	7476
112.00	5100	206.00	316544	299.00	220	425.00	758
113.00	2270	207.00	41104	300.00	97	426.00	52
114.00	411	208.00	10691	301.00	799	427.00	122
115.00	395	209.00	3432	302.00	1563	428.00	102
116.00	6204	210.00	3976	303.00	9655	429.00	196
117.00	169024	211.00	12865	304.00	3287	430.00	189
118.00	12530	212.00	365	305.00	410	431.00	186
119.00	1475	213.00	733	307.00	328	432.00	161
120.00	2092	214.00	555	308.00	1153	433.00	121
121.00	751	215.00	3525	309.00	808	434.00	214
122.00	11742	216.00	7349	310.00	1035	435.00	57
123.00	17560	217.00	81224	311.00	242	436.00	148
124.00	8138	218.00	10579	312.00	198	437.00	315
125.00	7230	219.00	1063	313.00	665	438.00	138
127.00	591552	220.00	295	314.00	4230	439.00	184
128.00	44376	221.00	52440	315.00	10127	440.00	178
129.00	229056	223.00	18152	316.00	5017	441.00	86200
130.00	18896	224.00	177856	317.00	852	442.00	590976
131.00	3348	225.00	42672	318.00	208	443.00	114576
132.00	2061	226.00	5039	319.00	336	444.00	10313
133.00	720	227.00	73776	320.00	411	445.00	671
134.00	6146	228.00	10182	321.00	2388		
135.00	18312	229.00	15273	322.00	1547		

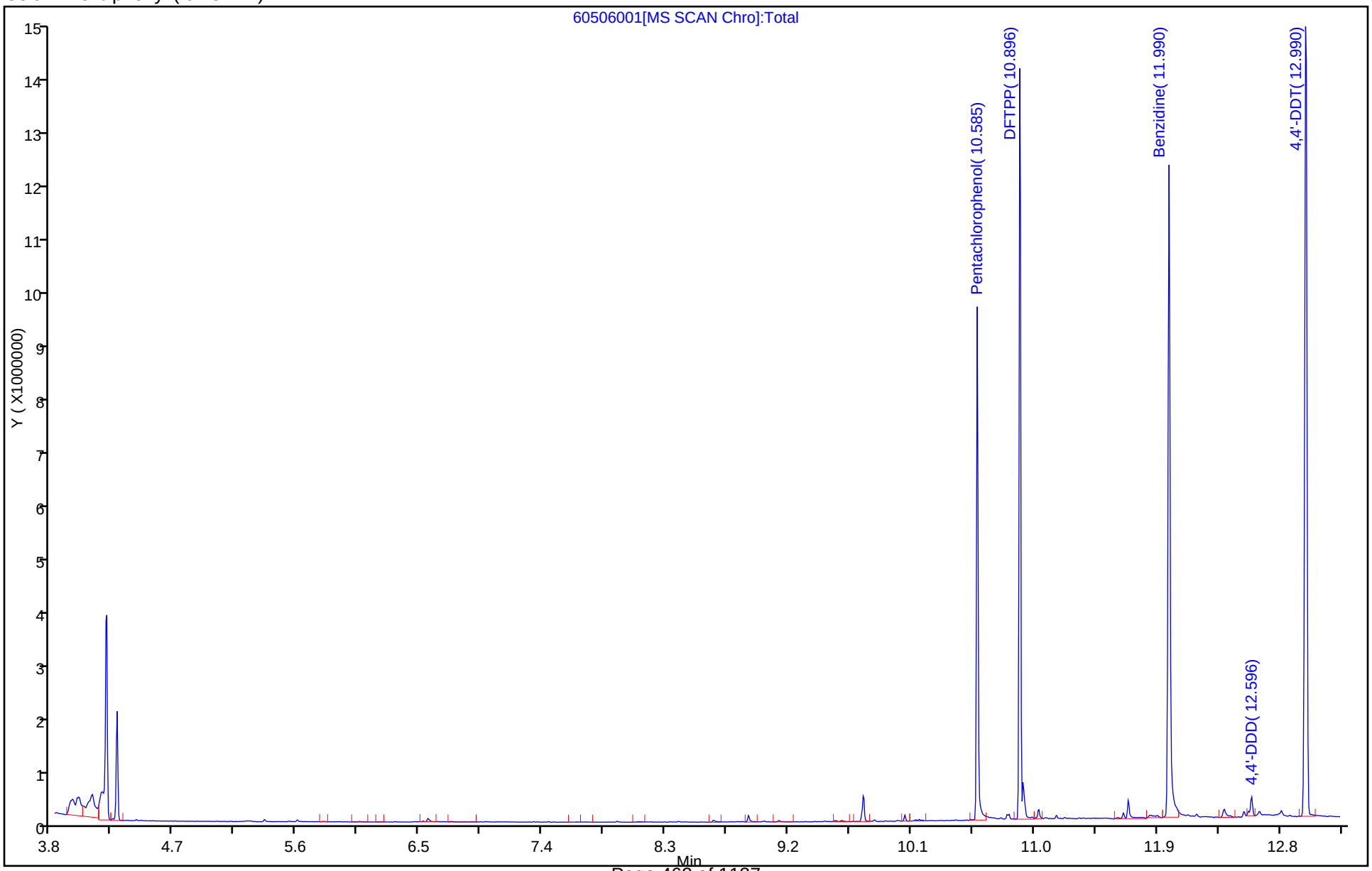
Report Date: 16-May-2016 11:22:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D

Injection Date:	06-May-2016 06:58:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

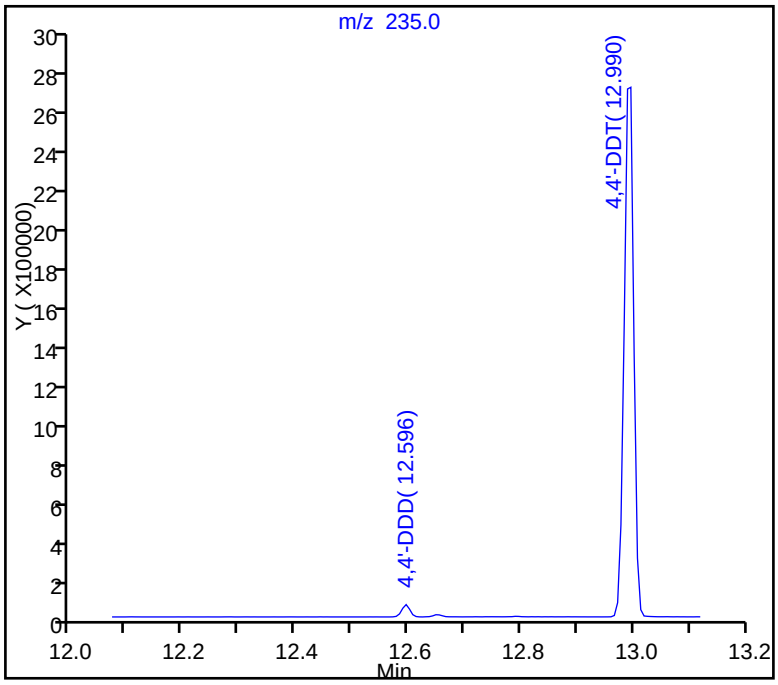


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 3167023
166 4,4'-DDD, Area = 62875
167 4,4'-DDE, Area = 4909

%Breakdown: 2.10%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

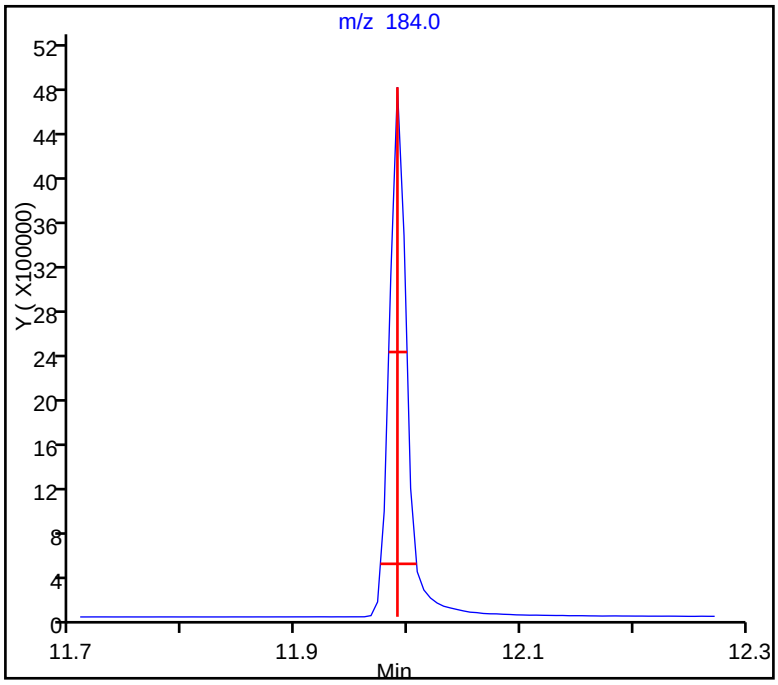
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

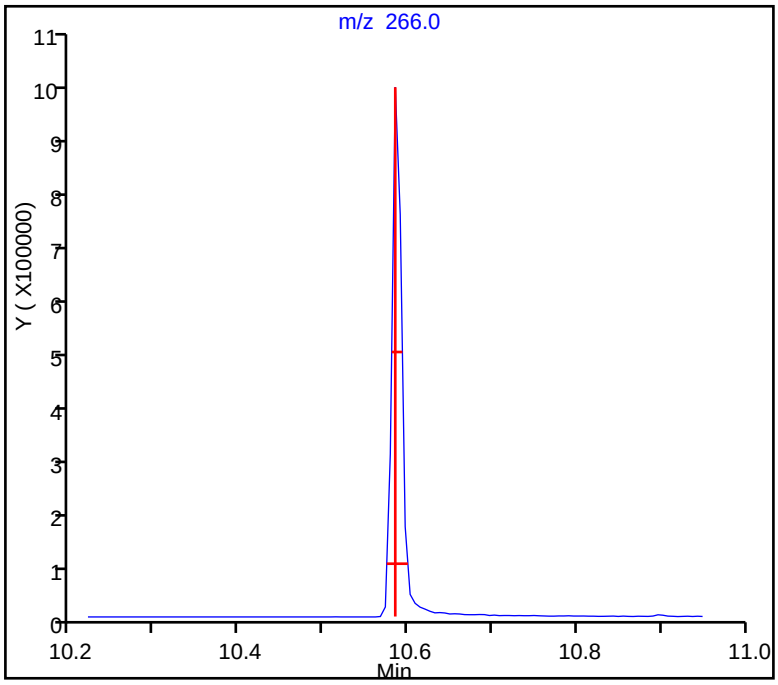
Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506001.D
Injection Date: 06-May-2016 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.015 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.5, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-228312/9-A

Matrix: Water | Lab File ID: 60506004.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 250(mL) | Date Analyzed: 05/06/2016 08:05

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	82		31-115
4165-62-2	Phenol-d5 (Surr)	74		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	87		31-110
367-12-4	2-Fluorophenol (Surr)	59		15-110
321-60-8	2-Fluorobiphenyl (Surr)	84		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	64		21-128

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-228312/9-A

Matrix: Water | Lab File ID: 60506004.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 250(mL) | Date Analyzed: 05/06/2016 08:05

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q
70-30-4	Hexachlorophene TIC		10	U

Report Date: 16-May-2016 11:09:40 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506004.D
Lims ID: MB 240-228312/9-A
Client ID:
Sample Type: MB
Inject. Date: 06-May-2016 08:05:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-004
Misc. Info.: MB 240-228312/9-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-May-2016 13:36:32 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: gurneyk Date: 12-May-2016 13:34:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	98	220707	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	995625	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	576674	400.0	400.0	
* 4 Phenanthrene-d10	188	10.755	10.761	-0.006	97	1064356	400.0	400.0	
* 5 Chrysene-d12	240	13.737	13.731	0.006	97	1022311	400.0	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	714234	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	567684	1600.0	943.4	
$ 8 Phenol-d5	99	6.549	6.549	0.000	97	900831	1600.0	1190.0	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	94	1223119	1600.0	1393.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	2296633	1600.0	1346.2	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	93	174448	1600.0	1018.4	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	98	2523025	1600.0	1316.6	
264 2-Ethoxyethanol	59		3.362					ND	
22 Dimethylformamide	73	4.273	4.255	0.018	56	9595421		NC	e
29 Ethyl methacrylate	69	4.420	4.340	0.080	88	160207		NC	
26 1,4-Dioxane	88		4.526					ND	
30 3-Chloropropionitrile	54		4.597					ND	
27 N-Nitrosodimethylamine	74		4.761					ND	
28 Pyridine	79		4.826					ND	
33 Malononitrile	66		5.046					ND	
35 3-Picoline	93		5.046					ND	
233 n,n'-Dimethylacetamide	44	5.067	5.052	0.015	44	466		NC	
31 2-Picoline	93		5.420					ND	
32 N-Nitrosomethylethylamine	88		5.479					ND	
14 Acrylamide	71		5.644					ND	
34 Methyl methanesulfonate	80		5.697					ND	
38 2-Methylcyclohexanone	68	5.785	5.779	0.006	20	561		NC	
39 3-Methylcyclohexanone	69	5.820	5.806	0.014	24	77		NC	
40 4-Methylcyclohexanone	55	5.796	5.849	-0.053	52	8014		NC	
36 N-Nitrosodiethylamine	102		6.026					ND	
41 Phenylmercaptan	110		6.194					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
37 Ethyl methanesulfonate	79		6.232					ND	
232 1-Methyl-2-pyrrilidinone	99	6.308	6.330	-0.022	0	583			NC
286 4-Methyl-1-cyclohexanemeth	55	6.461	6.490	-0.029	0	3092			NC
42 Benzaldehyde	77		6.544					ND	
43 Phenol	94		6.561					ND	
287 4-Methyl-1-cyclohexanemeth	55		6.624					ND	
44 Aniline	93		6.626					ND	
45 Bis(2-chloroethyl)ether	93		6.644					ND	
46 Pentachloroethane	167		6.685					ND	
244 n-Decane	57		6.726					ND	
47 2-Chlorophenol	128		6.738					ND	
48 1,3-Dichlorobenzene	146		6.867					ND	
49 1,4-Dichlorobenzene	146		6.920					ND	
50 Benzyl alcohol	108		6.979					ND	
67 1,3,5-Trichlorobenzene	180		6.988					ND	
51 1,2-Dichlorobenzene	146		7.049					ND	
52 2-Methylphenol	108		7.055					ND	
54 2,2'-oxybis[1-chloropropan	45		7.085					ND	
53 Indene	115		7.120					ND	
55 3 & 4 Methylphenol	108		7.173					ND	
56 N-Nitrosopyrrolidine	100		7.179					ND	
57 N-Nitrosodi-n-propylamine	70		7.185					ND	
24 Catechol	110	7.149	7.191	-0.042	47	205			NC
59 N-Nitrosomorpholine	56		7.202					ND	
58 Acetophenone	105		7.208					ND	
60 2-Toluidine	106		7.238					ND	
61 Hexachloroethane	117		7.338					ND	
62 Nitrobenzene	77		7.361					ND	
79 1,2,3-Trichlorobenzene	180		7.443					ND	
63 N-Nitrosopiperidine	114		7.479					ND	
80 Benzothiazole	135		7.533					ND	
64 Isophorone	82		7.543					ND	
15 3-Methylcatechol	124	7.543	7.555	-0.012	32	137			NC
66 2,4-Dimethylphenol	107		7.620					ND	
65 2-Nitrophenol	139		7.626					ND	
68 o,o',o''-Triethylphosphoro	198		7.661					ND	
70 Benzoic acid	122		7.673					ND	
69 Bis(2-chloroethoxy)methane	93		7.691					ND	
18 4-Methylcatechol	124		7.694					ND	
71 alpha,alpha-Dimethyl phene	58		7.785					ND	
72 2,4-Dichlorophenol	162		7.826					ND	
73 1,2,4-Trichlorobenzene	180		7.908					ND	
74 Naphthalene	128	7.985	7.985	0.000	93	25678			10.8
75 4-Chloroaniline	127		7.996					ND	
76 2,6-Dichlorophenol	162		8.014					ND	
88 1,2,3,5-Tetrachlorobenzene	216		8.026					ND	
77 Hexachloropropene	213		8.061					ND	
78 Hexachlorobutadiene	225		8.073					ND	
82 N-Nitrosodi-n-butylamine	84		8.249					ND	
81 Quinoline	129		8.255					ND	
97 2,4-Toluene diamine	121		8.261					ND	
83 Caprolactam	113		8.279					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
98 1,2,3,4 -Tetrachlorobenzen	216		8.282					ND	
84 p-Phenylene diamine	108		8.285					ND	
96 3,4-Dichloronitrobenzene	109		8.309					ND	
192 Phenyl ether	170		8.373					ND	
85 4-Chloro-3-methylphenol	107		8.379					ND	
92 Safrole, Total	162		8.455					ND	
86 2-Methylnaphthalene	142		8.567					ND	
107 1,2-Dinitrobenzene	168		8.625					ND	
87 1-Methylnaphthalene	142		8.655					ND	
95 Isosafrole Peak 1	162		8.702					ND	
89 Hexachlorocyclopentadiene	237		8.702					ND	
90 1,2,4,5-Tetrachlorobenzene	216		8.714					ND	
93 2,4,6-Trichlorophenol	196		8.790					ND	
94 2,4,5-Trichlorophenol	196		8.832					ND	
91 Isosafrole Peak 2	162		8.896					ND	
99 1,1'-Biphenyl	154		8.949					ND	
100 2-Chloronaphthalene	162		8.990					ND	
247 1-Chloronaphthalene	162		9.014					ND	
101 2-Nitroaniline	65		9.049					ND	
102 1,4-Naphthoquinone	158		9.114					ND	
105 1,4-Dinitrobenzene	168		9.137					ND	
104 Dimethyl phthalate	163		9.167					ND	
103 1,3-Dinitrobenzene	168		9.214					ND	
106 2,6-Dinitrotoluene	165		9.232					ND	
126 Tributyl phosphate	99		9.277					ND	
108 Acenaphthylene	152		9.355					ND	
109 3-Nitroaniline	138		9.402					ND	
110 2,4-Dinitrophenol	184		9.485					ND	
111 Acenaphthene	153		9.496					ND	
112 4-Nitrophenol	109		9.502					ND	
113 2,4-Dinitrotoluene	165		9.590					ND	
114 Pentachlorobenzene	250		9.614					ND	
115 Dibenzofuran	168		9.643					ND	
117 1-Naphthylamine	143		9.702					ND	
116 2,3,5,6-Tetrachlorophenol	232		9.702					ND	
118 2,3,4,6-Tetrachlorophenol	232		9.737					ND	
248 Hexadecane	57		9.755					ND	
120 Diethyl phthalate	149	9.761	9.761	0.000	97	32333		19.5	
119 2-Naphthylamine	143		9.767					ND	
121 Thionazin	97		9.837					ND	
122 4-Chlorophenyl phenyl ethe	204		9.902					ND	
123 N-Nitro-o-toluidine	152		9.920					ND	
125 4-Nitroaniline	138		9.926					ND	
124 Fluorene	166		9.943					ND	
127 4,6-Dinitro-2-methylphenol	198		9.949					ND	
128 N-Nitrosodiphenylamine	169		10.002					ND	
129 Diphenylamine	169		10.002					ND	
131 Azobenzene	77		10.043					ND	
130 1,2-Diphenylhydrazine	77		10.043					ND	
132 Sulfotepp	202		10.084					ND	
133 1,3,5-Trinitrobenzene	213		10.184					ND	
135 Phenacetin	108		10.226					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
134 Diallate Peak 1	86		10.232					ND	
136 Phorate	121		10.237					ND	
137 Diallate Peak 2	86		10.314					ND	
138 4-Bromophenyl phenyl ether	248		10.332					ND	
139 Dimethoate	87		10.390					ND	
141 Atrazine	200		10.420					ND	
140 Hexachlorobenzene	284		10.437					ND	
153 Diphenylsulfone	125		10.513					ND	
245 n-Octadecane	57		10.543					ND	
142 4-Aminobiphenyl	169		10.555					ND	
144 Pronamide	173		10.567					ND	
143 Pentachlorophenol	266		10.590					ND	
145 Pentachloronitrobenzene	237		10.602					ND	
146 Disulfoton	88		10.684					ND	
147 Dinoseb	211		10.702					ND	
148 Phenanthrene	178		10.784					ND	
149 Anthracene	178		10.826					ND	
150 Carbazole	167		10.943					ND	
152 Methyl parathion	109		11.020					ND	
154 Di-n-butyl phthalate	149	11.161	11.167	-0.006	99	136489		39.7	
155 Ethyl Parathion	97		11.361					ND	
156 4-Nitroquinoline-1-oxide	190		11.449					ND	
157 Methapyrilene	58		11.478					ND	
158 Isodrin	66		11.761					ND	
159 Fluoranthene	202		11.914					ND	
160 Benzidine	184		11.996					ND	
162 Aramite Peak 1	185		12.173					ND	
161 Pyrene	202		12.173					ND	
163 Aramite Peak 2	185		12.255					ND	
164 p-Dimethylamino azobenzene	225		12.420					ND	
165 Chlorobenzilate	139		12.449					ND	
173 3,3'-Dimethoxybenzidine	244		12.524					ND	
176 Hexabromobenzene	232		12.668					ND	
168 Famphur	218		12.755					ND	
169 Butyl benzyl phthalate	149		12.808					ND	
170 3,3'-Dimethylbenzidine	212		12.837					ND	
172 2-Acetylaminofluorene	181		13.196					ND	
174 Bis(2-ethylhexyl) phthalat	149	13.572	13.584	-0.012	96	131673		73.5	
175 4,4'-Methylene bis(2-chlor	231		13.602					ND	
177 3,3'-Dichlorobenzidine	252		13.625					ND	
178 Benzo[a]anthracene	228		13.725					ND	
179 Chrysene	228		13.784					ND	
180 6-Methylchrysene	242		14.484					ND	
181 Di-n-octyl phthalate	149		14.614					ND	
182 7,12-Dimethylbenz(a)anthra	256		15.437					ND	
183 Benzo[b]fluoranthene	252		15.478					ND	
184 Benzo[k]fluoranthene	252		15.519					ND	
185 Benzo[a]pyrene	252		16.049					ND	
187 Dibenz[a,j]acridine	279		16.129					ND	
186 3-Methylcholanthrene	268		16.661					ND	
188 Dibenz[a,h]acridine	279		17.766					ND	
190 Indeno[1,2,3-cd]pyrene	276		18.331					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
189 Dibenz(a,h)anthracene	278		18.337					ND	
191 Benzo[g,h,i]perylene	276		18.990					ND	
278 Dieldrin	1		0.000					ND	
253 Chlorobenzene	112		0.000					ND	
281 delta-BHC	1		0.000					ND	
277 Dibenz(a,i)pyrene	1		0.000					ND	
258 Endosulfan I	1		0.000					ND	
25 2,3-Dichlorophenol	1		0.000					ND	
262 Endosulfan II	1		0.000					ND	
13 Bis(2-hydroxyphenyl)methan	1		0.000					ND	
275 2,3-Dinitrotoluene	1		0.000					ND	
251 Endosulfan sulfate	1		0.000					ND	
284 2,3,7,8-TCDD TIC	1		0.000					ND	
271 Endrin	1		0.000					ND	
276 3 & 4 Chlorophenol	1		0.000					ND	
270 Hexachlorophene	196		0.000					ND	
261 Methoxychlor	1		0.000					ND	
259 Aldrin	1		0.000					ND	
272 Dibenzo[a,e]pyrene	1		0.000					ND	
280 Chlorpyrifos	1		0.000					ND	
254 Endrin aldehyde	1		0.000					ND	
274 3 & 4 Phenoxyphenol	1		0.000					ND	
257 Chloroacetophenone	1		0.000					ND	
267 Dibenzo[a,h]pyrene	1		0.000					ND	
268 Heptachlor	1		0.000					ND	
256 beta-BHC	1		0.000					ND	
260 o-Phenylphenol	1		0.000					ND	
252 4-tert-Butylphenol	1		0.000					ND	
16 Octachlorocyclopentene	1		0.000					ND	
255 2-Chloroaniline	1		0.000					ND	
279 Chlordane (technical)	1		0.000					ND	
282 Kepone	272		0.000					ND	
19 2,5-Dichlorophenol	1		0.000					ND	
273 Toxaphene	1		0.000					ND	
283 3,4-Dichloroaniline	1		0.000					ND	
263 Isoquinoline	1		0.000					ND	
290 1-Phenoxy-2-propanol	1		0.000					ND	
265 Heptachlor epoxide	1		0.000					ND	
269 2,6-Diaminotoluene	1		0.000					ND	
266 alpha-BHC	1		0.000					ND	
17 Bis(4-hydroxyphenyl)methan	1		0.000					ND	
250 gamma-BHC (Lindane)	1		0.000					ND	
285 Chlorobenzene TIC	1		0.000					ND	
S 194 Isosafrole	162		5.181					ND	
S 195 Diallate	86		6.385					ND	
S 196 Aramite, Total	185		7.898					ND	
S 246 Total Cresols	100		0.000					ND	
S 193 Methyl Phenols,Total	100		0.000					ND	
S 288 4-Methyl-1-cyclohexanemeth	1		0.000					ND	
T 201 Kepone TIC	272		8.281					ND	
T 21 2,3,7,8-TCDD	322		8.500					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
T 199 Decane TIC	57	6.726	0.000	6.726	94	45317		0	7
T 200 Hexamethylphosphoramide TI	44		0.000				ND		
T 236 4-isopropylphenol TIC	1		0.000				ND		
T 197 Hydroquinone TIC	110		0.000				ND		
T 289 1-Phenoxy-2-propanol TIC	1		0.000				ND		
T 249 4-Chlorophenol TIC	1		0.000				ND		
T 198 Octadecane (TIC)	57		0.000				ND		
T 239 2,3,7,8 TCDF TIC	1		0.000				ND		
T 240 3-isopropylphenol TIC	1		0.000				ND		
T 241 Tricresyl phosphate TIC	1		0.000				ND		
T 237 Tris(2,3-dibromopropyl)pho	1		0.000				ND		
T 238 Trimethyl phosphate TIC	1		0.000				ND		
T 242 Triphenyl Phosphate TIC	1		0.000				ND		
T 243 3-(1,1-Dimethylethyl Pheno	1		0.000				ND		
T 234 2-Isopropylphenol TIC	1		0.000				ND		

QC Flag Legend

Processing Flags

NC - Not Calibrated

7 - Failed Limit of Detection

e - Potential Peak Saturated

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

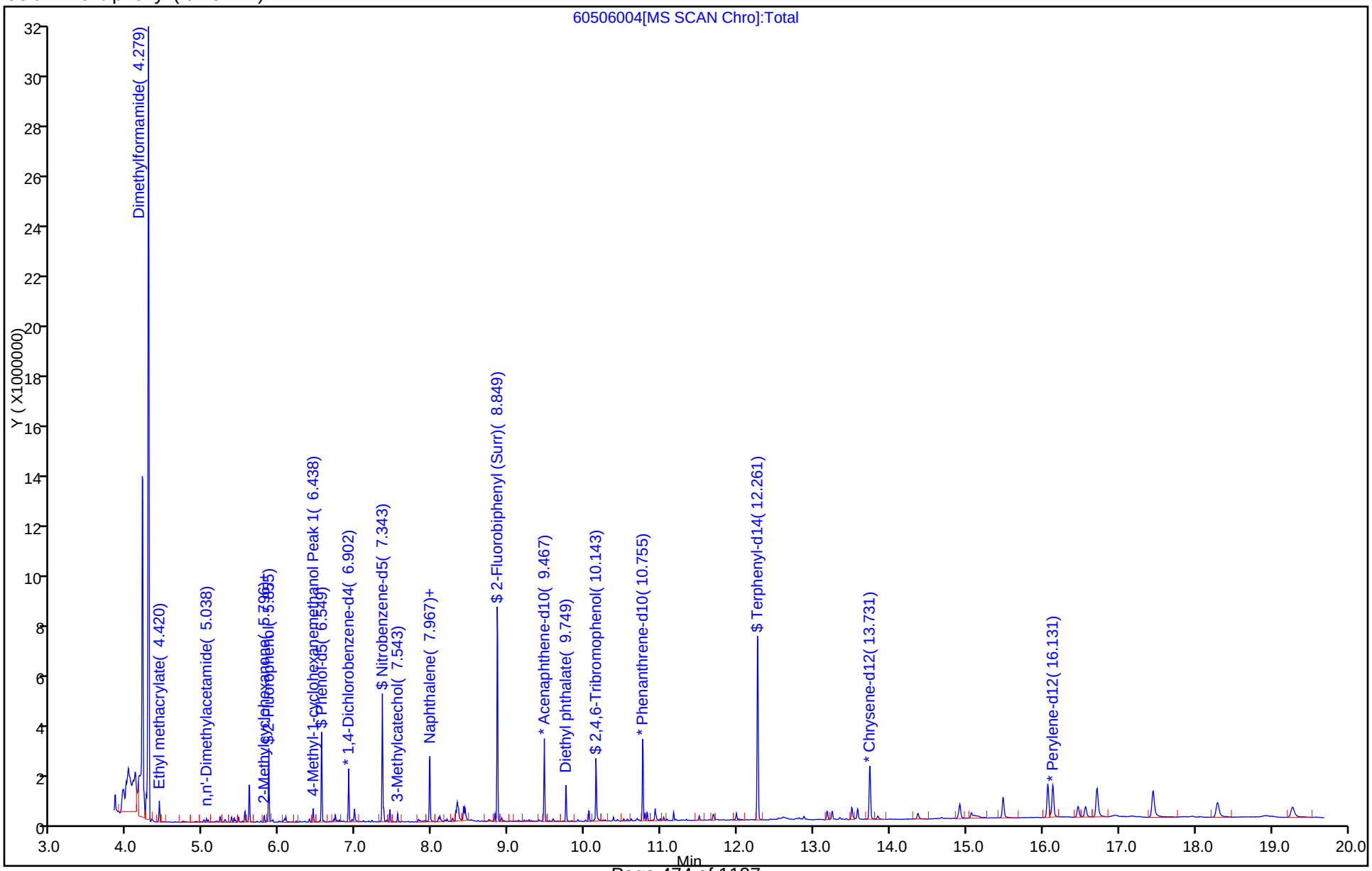
Report Date: 16-May-2016 11:09:40 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506004.D

Injection Date:	06-May-2016 08:05:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	MB 240-228312/9-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-228312/10-A

Matrix: Water | Lab File ID: 60506005.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 250(mL) | Date Analyzed: 05/06/2016 08:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	91		31-115
4165-62-2	Phenol-d5 (Surr)	99		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	106		31-110
367-12-4	2-Fluorophenol (Surr)	81		15-110
321-60-8	2-Fluorobiphenyl (Surr)	90		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	89		21-128

Report Date: 16-May-2016 11:10:03 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506005.D
Lims ID: LCS 240-228312/10-A
Client ID:
Sample Type: LCS
Inject. Date: 06-May-2016 08:30:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-005
Misc. Info.: LCS 240-228312/10-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-May-2016 13:36:32 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 10:28:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	97	209394	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	867840	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	92	506017	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	97	881694	400.0	400.0	
* 5 Chrysene-d12	240	13.737	13.731	0.006	97	872891	400.0	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	594398	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	741555	1600.0	1298.9	
$ 8 Phenol-d5	99	6.549	6.549	0.000	96	1136192	1600.0	1582.0	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	92	1294174	1600.0	1691.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.855	8.855	0.000	100	2156093	1600.0	1440.3	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	92	214826	1600.0	1429.2	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2381232	1600.0	1455.4	
26 1,4-Dioxane	88	4.520	4.526	-0.006	98	209529	1600.0	917.5	
27 N-Nitrosodimethylamine	74	4.761	4.761	0.000	86	632573	1600.0	1384.3	
28 Pyridine	79	4.826	4.826	0.000	89	319653	1600.0	498.0	
42 Benzaldehyde	77	6.543	6.544	-0.001	92	1207486	3200.0	NQ	E
43 Phenol	94	6.561	6.561	0.000	97	1244929	1600.0	1589.5	
44 Aniline	93	6.626	6.626	0.000	97	1583146	1600.0	1437.9	
45 Bis(2-chloroethyl)ether	93	6.643	6.644	-0.001	97	1323464	1600.0	1698.6	
244 n-Decane	57	6.726	6.726	0.000	92	913947	1600.0	1067.1	
47 2-Chlorophenol	128	6.738	6.738	0.000	97	1007420	1600.0	1579.8	
48 1,3-Dichlorobenzene	146	6.867	6.867	0.000	95	927265	1600.0	1214.5	
49 1,4-Dichlorobenzene	146	6.920	6.920	0.000	91	962106	1600.0	1243.0	
50 Benzyl alcohol	108	6.979	6.979	0.000	90	765782	1600.0	1739.2	
51 1,2-Dichlorobenzene	146	7.049	7.049	0.000	93	917238	1600.0	1283.5	
52 2-Methylphenol	108	7.055	7.055	0.000	97	888804	1600.0	1478.3	
54 2,2'-oxybis[1-chloropropan	45	7.085	7.085	0.000	91	1672523	1600.0	1430.1	
53 Indene	115	7.120	7.120	0.000	90	3263854	3200.0	2532.0	
55 3 & 4 Methylphenol	108	7.173	7.173	0.000	91	997345	1600.0	1557.6	
57 N-Nitrosodi-n-propylamine	70	7.185	7.185	0.000	91	812384	1600.0	1495.6	
58 Acetophenone	105	7.208	7.208	0.000	93	1490441	1600.0	1508.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
61 Hexachloroethane	117	7.338	7.338	0.000	94	350546	1600.0	1222.2	
62 Nitrobenzene	77	7.361	7.361	0.000	91	1240310	1600.0	1684.2	
64 Isophorone	82	7.543	7.543	0.000	98	2277515	1600.0	1696.3	
66 2,4-Dimethylphenol	107	7.620	7.620	0.000	95	672448	1600.0	1045.1	
65 2-Nitrophenol	139	7.626	7.626	0.000	93	538173	1600.0	1602.6	
70 Benzoic acid	122	7.655	7.673	-0.018	93	411203	3200.0	1179.5	
69 Bis(2-chloroethoxy)methane	93	7.690	7.691	0.000	99	1235132	1600.0	1530.8	
72 2,4-Dichlorophenol	162	7.826	7.826	0.000	96	798959	1600.0	1649.4	
73 1,2,4-Trichlorobenzene	180	7.908	7.908	0.000	93	808081	1600.0	1423.4	
74 Naphthalene	128	7.985	7.985	0.000	98	3017271	1600.0	1458.4	
75 4-Chloroaniline	127	7.996	7.996	0.000	0	800509	1600.0	1166.9	M
76 2,6-Dichlorophenol	162	8.014	8.014	0.000	96	787173	1600.0	1547.3	
78 Hexachlorobutadiene	225	8.073	8.073	0.000	96	401490	1600.0	1385.7	
83 Caprolactam	113	8.279	8.279	0.000	76	577166	3200.0	2979.1	
85 4-Chloro-3-methylphenol	107	8.379	8.379	0.000	96	899436	1600.0	1691.9	
86 2-Methylnaphthalene	142	8.561	8.567	-0.006	92	1931517	1600.0	1444.8	
87 1-Methylnaphthalene	142	8.655	8.655	0.000	93	1812975	1600.0	1439.2	
89 Hexachlorocyclopentadiene	237	8.702	8.702	0.000	95	35255	1600.0	117.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.708	8.714	-0.006	99	803431	1600.0	1518.2	
93 2,4,6-Trichlorophenol	196	8.790	8.790	0.000	95	534234	1600.0	1501.2	
94 2,4,5-Trichlorophenol	196	8.832	8.832	0.000	92	522294	1600.0	1442.6	
99 1,1'-Biphenyl	154	8.949	8.949	0.000	95	2434635	1600.0	1449.0	
100 2-Chloronaphthalene	162	8.984	8.990	-0.006	99	1767548	1600.0	1358.4	
101 2-Nitroaniline	65	9.049	9.049	0.000	79	701097	1600.0	1686.4	
104 Dimethyl phthalate	163	9.167	9.167	0.000	97	2133083	1600.0	1504.2	
103 1,3-Dinitrobenzene	168	9.214	9.214	0.000	82	351484	1600.0	1685.5	
106 2,6-Dinitrotoluene	165	9.232	9.232	0.000	89	483789	1600.0	1547.2	
108 Acenaphthylene	152	9.349	9.355	-0.006	98	2909112	1600.0	1479.5	
109 3-Nitroaniline	138	9.402	9.402	0.000	91	238273	1600.0	1298.6	
110 2,4-Dinitrophenol	184	9.479	9.485	-0.005	76	337746	3200.0	2076.1	
111 Acenaphthene	153	9.496	9.496	0.000	94	1853751	1600.0	1446.7	
112 4-Nitrophenol	109	9.502	9.502	0.000	97	639723	3200.0	3469.5	
113 2,4-Dinitrotoluene	165	9.590	9.590	0.000	88	634382	1600.0	1593.2	
115 Dibenzofuran	168	9.643	9.643	0.000	96	2711255	1600.0	1489.1	
118 2,3,4,6-Tetrachlorophenol	232	9.737	9.737	0.000	77	415038	1600.0	1534.5	
248 Hexadecane	57	9.749	9.755	-0.006	91	1459985	1600.0	1397.6	
120 Diethyl phthalate	149	9.761	9.761	0.000	97	2174986	1600.0	1497.7	
122 4-Chlorophenyl phenyl ethe	204	9.902	9.902	0.000	96	1038272	1600.0	1596.4	
125 4-Nitroaniline	138	9.926	9.926	0.000	80	374334	1600.0	1443.3	
124 Fluorene	166	9.937	9.943	-0.006	97	2254791	1600.0	1538.9	
127 4,6-Dinitro-2-methylphenol	198	9.949	9.949	0.000	85	595009	3200.0	2367.7	
128 N-Nitrosodiphenylamine	169	9.996	10.002	-0.006	63	1598507	1600.0	1357.3	
129 Diphenylamine	169	9.996	10.002	-0.006	95	1598507	1368.0	1154.7	
131 Azobenzene	77	10.043	10.043	0.000	99	2662799	1600.0	1402.1	
130 1,2-Diphenylhydrazine	77	10.043	10.043	0.000	98	2662917	1600.0	1402.2	
138 4-Bromophenyl phenyl ether	248	10.331	10.332	-0.001	73	565107	1600.0	1379.3	
141 Atrazine	200	10.420	10.420	0.000	92	1196701	3200.0	2961.9	
140 Hexachlorobenzene	284	10.431	10.437	-0.006	92	543258	1600.0	1286.4	
245 n-Octadecane	57	10.537	10.543	-0.006	91	1656076	1600.0	1323.0	
143 Pentachlorophenol	266	10.584	10.590	-0.006	89	477814	3200.0	1734.4	
148 Phenanthrene	178	10.778	10.784	-0.006	98	3096311	1600.0	1360.4	
149 Anthracene	178	10.826	10.826	0.000	97	3142365	1600.0	1369.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
150 Carbazole	167	10.937	10.943	-0.006	96	2491706	1600.0	1397.7	
154 Di-n-butyl phthalate	149	11.161	11.167	-0.006	100	3897064	1600.0	1369.8	
159 Fluoranthene	202	11.908	11.914	-0.006	97	3433990	1600.0	1565.5	
160 Benzidine	184	11.990	11.996	-0.006	99	1068316	3200.0	1352.5	
161 Pyrene	202	12.167	12.173	-0.006	98	3481760	1600.0	1480.5	
169 Butyl benzyl phthalate	149	12.802	12.808	-0.006	98	1710127	1600.0	1481.2	
174 Bis(2-ethylhexyl) phthalat	149	13.572	13.584	-0.012	97	2494049	1600.0	1631.2	
177 3,3'-Dichlorobenzidine	252	13.619	13.625	-0.006	75	2021593	3200.0	3019.8	
178 Benzo[a]anthracene	228	13.719	13.725	-0.006	99	3059382	1600.0	1464.6	
179 Chrysene	228	13.778	13.784	-0.006	98	2975278	1600.0	1452.9	
181 Di-n-octyl phthalate	149	14.602	14.614	-0.012	99	3947480	1600.0	1555.4	
183 Benzo[b]fluoranthene	252	15.466	15.478	-0.012	98	2845086	1600.0	1726.9	
184 Benzo[k]fluoranthene	252	15.513	15.519	-0.006	99	2891724	1600.0	1583.1	
185 Benzo[a]pyrene	252	16.037	16.049	-0.012	79	2444506	1600.0	1618.5	
190 Indeno[1,2,3-cd]pyrene	276	18.325	18.331	-0.006	97	2459666	1600.0	1596.2	
189 Dibenz(a,h)anthracene	278	18.331	18.337	-0.006	89	2127981	1600.0	1584.2	
191 Benzo[g,h,i]perylene	276	18.978	18.990	-0.012	95	1955143	1600.0	1596.6	

QC Flag Legend

Processing Flags
- NQ - Not Quantifiable
- E - Exceeded Maximum Amount

Review Flags
- M - Manually Integrated

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 16-May-2016 11:10:03 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506005.D

Injection Date: 06-May-2016 08:30:30 Instrument ID: A4AG2 Operator ID:

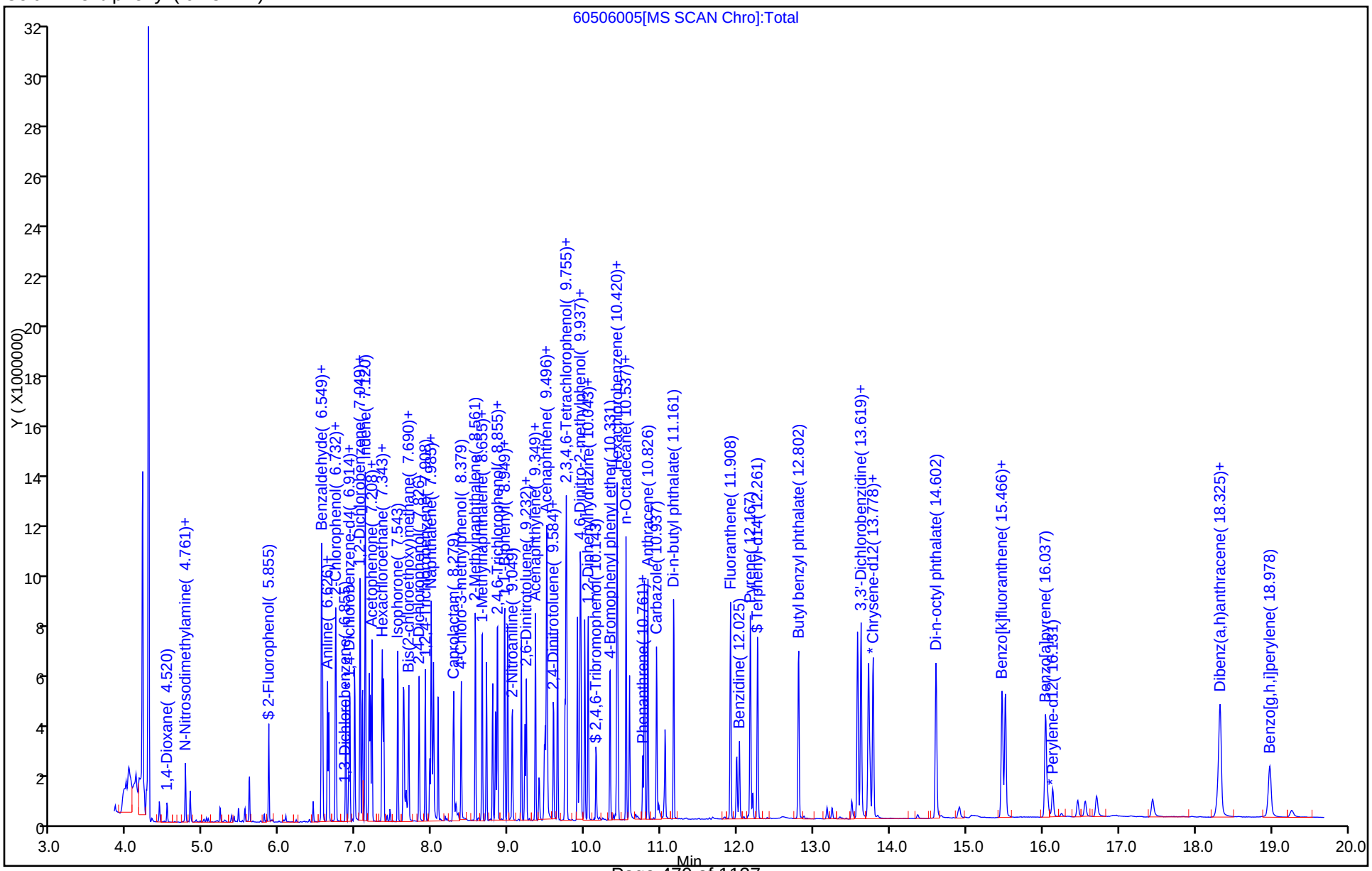
Lims ID: LCS 240-228312/10-A Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1A MS | Lab Sample ID: 240-64160-4 MS

Matrix: Water | Lab File ID: 60506011.D

Analysis Method: 8270D | Date Collected: 04/27/2016 10:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 11:00

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	84		31-115
4165-62-2	Phenol-d5 (Surr)	84		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	90		31-110
367-12-4	2-Fluorophenol (Surr)	63		15-110
321-60-8	2-Fluorobiphenyl (Surr)	79		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	83		21-128

Report Date: 16-May-2016 11:11:22 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506011.D
Lims ID: 240-64160-I-4-A MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 06-May-2016 11:00:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-011
Misc. Info.: 240-64160-I-4-A MS
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 12:18:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	95	213084	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	872233	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	504902	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	98	876996	400.0	400.0	
* 5 Chrysene-d12	240	13.737	13.731	0.006	97	876236	400.0	400.0	
* 6 Perylene-d12	264	16.131	16.137	-0.006	96	587959	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	586190	1600.0	1009.0	
$ 8 Phenol-d5	99	6.550	6.549	0.001	96	985799	1600.0	1348.9	
$ 9 Nitrobenzene-d5	82	7.344	7.343	0.001	93	1108183	1600.0	1441.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.849	8.855	-0.006	100	1885321	1600.0	1262.2	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	93	199736	1600.0	1331.7	
$ 12 Terphenyl-d14	244	12.261	12.267	-0.006	99	2197489	1600.0	1337.9	
132 Sulfotepp	202		10.084					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

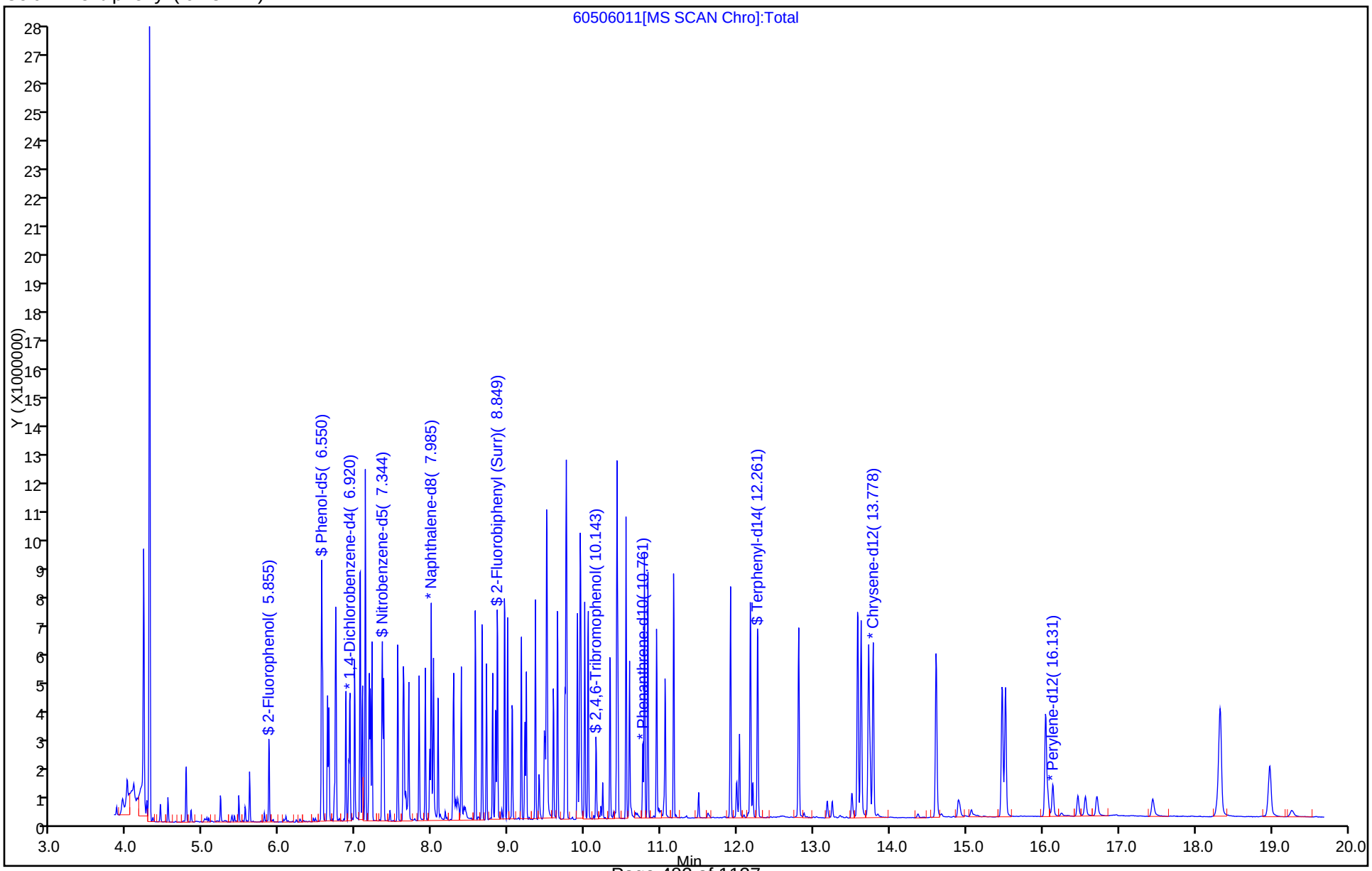
Report Date: 16-May-2016 11:11:22 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506011.D

Injection Date:	06-May-2016 11:00:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-I-4-A MS			Worklist Smp#:	11
Client ID:	16WC1A				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Client Sample ID: 16WC1A MSD | Lab Sample ID: 240-64160-4 MSD

Matrix: Water | Lab File ID: 60506012.D

Analysis Method: 8270D | Date Collected: 04/27/2016 10:50

Extract. Method: 3520C | Date Extracted: 05/02/2016 05:03

Sample wt/vol: 280(mL) | Date Analyzed: 05/06/2016 11:25

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 229123 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	103		31-115
4165-62-2	Phenol-d5 (Surr)	106		10-110
4165-60-0	Nitrobenzene-d5 (Surr)	115	X	31-110
367-12-4	2-Fluorophenol (Surr)	80		15-110
321-60-8	2-Fluorobiphenyl (Surr)	100		29-110
118-79-6	2,4,6-Tribromophenol (Surr)	108		21-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506012.D
Lims ID: 240-64160-H-4-A MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 06-May-2016 11:25:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0054198-012
Misc. Info.: 240-64160-H-4-A MSD
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 16-May-2016 11:10:52 Calib Date: 26-Apr-2016 14:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20160426-53832.b\60426019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK038

First Level Reviewer: hulat Date: 06-May-2016 12:19:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.902	6.902	0.000	95	214058	400.0	400.0	
* 2 Naphthalene-d8	136	7.967	7.967	0.000	100	872057	400.0	400.0	
* 3 Acenaphthene-d10	164	9.467	9.467	0.000	93	500672	400.0	400.0	
* 4 Phenanthrene-d10	188	10.761	10.761	0.000	97	890192	400.0	400.0	
* 5 Chrysene-d12	240	13.737	13.731	0.006	97	879883	400.0	400.0	
* 6 Perylene-d12	264	16.137	16.137	0.000	96	591367	400.0	400.0	
$ 7 2-Fluorophenol	112	5.855	5.855	0.000	94	744548	1600.0	1275.7	
$ 8 Phenol-d5	99	6.549	6.549	0.000	96	1250467	1600.0	1703.2	
$ 9 Nitrobenzene-d5	82	7.343	7.343	0.000	93	1413160	1600.0	1838.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.855	8.855	0.000	99	2376049	1600.0	1604.2	
$ 11 2,4,6-Tribromophenol	330	10.149	10.149	0.000	91	257891	1600.0	1734.0	
$ 12 Terphenyl-d14	244	12.267	12.267	0.000	99	2728887	1600.0	1654.6	
132 Sulfotepp	202		10.084					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

Reagents:

SMIS80PPMW_00013 Amount Added: 5.00 Units: uL Run Reagent

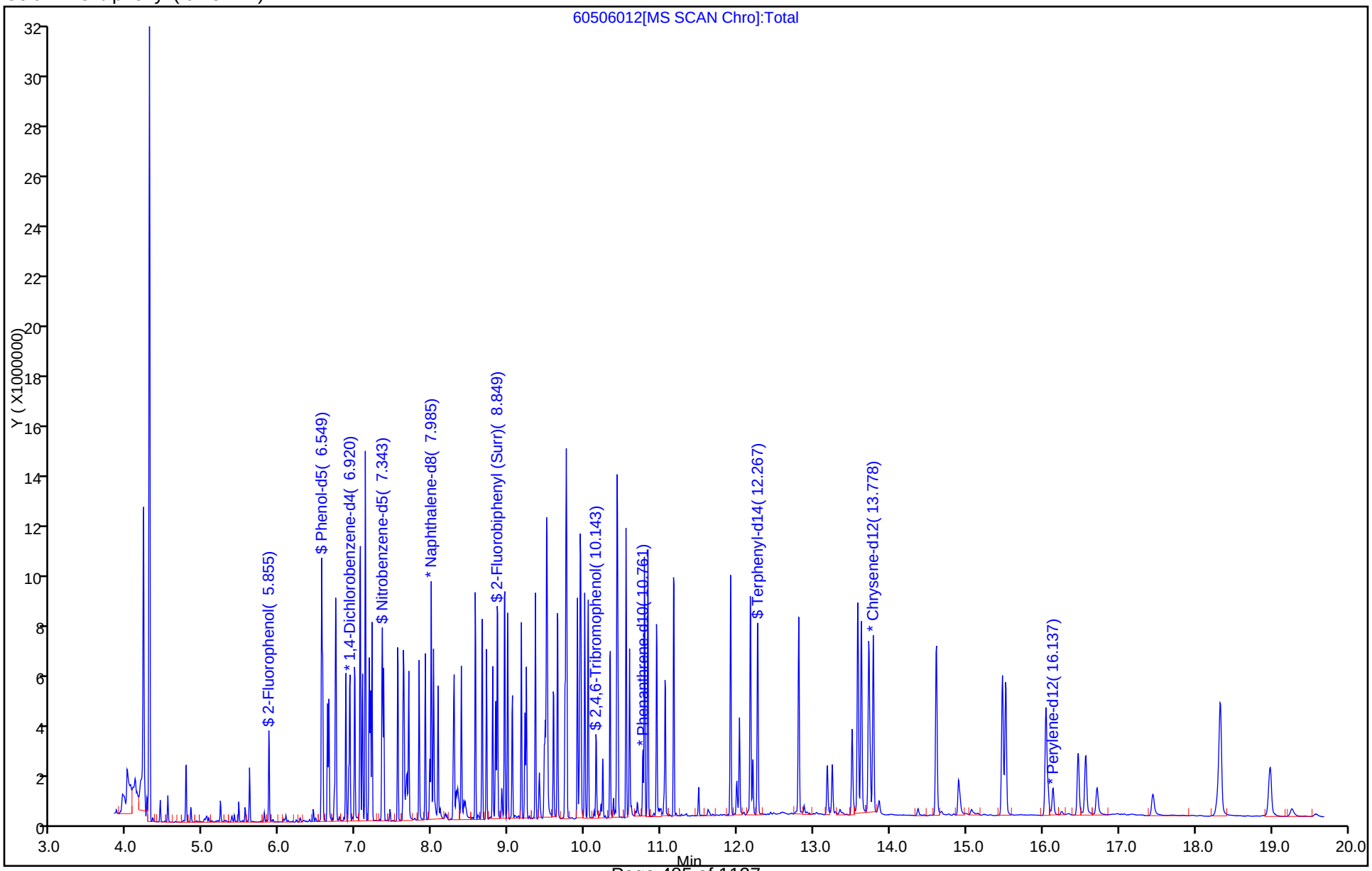
Report Date: 16-May-2016 11:11:34 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20160506-54198.b\60506012.D

Injection Date:	06-May-2016 11:25:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-64160-H-4-A MSD			Worklist Smp#:	12
Client ID:	16WC1A				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/26/2016 07:23

Analysis Batch Number: 227507 End Date: 04/26/2016 15:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-227507/1		04/26/2016 07:23	1	60426001.D	RXI-5SILMS 0.45(mm)
STD9 240-227507/2 IC		04/26/2016 07:44	1	60426002.D	RXI-5SILMS 0.45(mm)
STD8 240-227507/3 IC		04/26/2016 08:09	1	60426003.D	RXI-5SILMS 0.45(mm)
STD7 240-227507/4 IC		04/26/2016 08:34	1	60426004.D	RXI-5SILMS 0.45(mm)
STD6 240-227507/5 ICIS		04/26/2016 08:59	1	60426005.D	RXI-5SILMS 0.45(mm)
STD5 240-227507/6 IC		04/26/2016 09:23	1	60426006.D	RXI-5SILMS 0.45(mm)
STD4 240-227507/7 IC		04/26/2016 09:48	1	60426007.D	RXI-5SILMS 0.45(mm)
STD3 240-227507/8 IC		04/26/2016 10:13	1	60426008.D	RXI-5SILMS 0.45(mm)
STD2 240-227507/9 IC		04/26/2016 10:38	1	60426009.D	RXI-5SILMS 0.45(mm)
STD1 240-227507/10 IC		04/26/2016 11:03	1	60426010.D	RXI-5SILMS 0.45(mm)
ICV 240-227507/11		04/26/2016 11:28	1	60426011.D	RXI-5SILMS 0.45(mm)
STD9 240-227507/12 IC		04/26/2016 11:53	1	60426012.D	RXI-5SILMS 0.45(mm)
STD8 240-227507/13 IC		04/26/2016 12:18	1	60426013.D	RXI-5SILMS 0.45(mm)
STD7 240-227507/14 IC		04/26/2016 12:43	1	60426014.D	RXI-5SILMS 0.45(mm)
STD6 240-227507/15 IC		04/26/2016 13:08	1	60426015.D	RXI-5SILMS 0.45(mm)
STD5 240-227507/16 IC		04/26/2016 13:33	1	60426016.D	RXI-5SILMS 0.45(mm)
STD4 240-227507/17 IC		04/26/2016 13:58	1	60426017.D	RXI-5SILMS 0.45(mm)
STD3 240-227507/18 IC		04/26/2016 14:22	1	60426018.D	RXI-5SILMS 0.45(mm)
STD2 240-227507/19 IC		04/26/2016 14:47	1	60426019.D	RXI-5SILMS 0.45(mm)
ICV 240-227507/20		04/26/2016 15:12	1	60426020.D	RXI-5SILMS 0.45(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/06/2016 06:58

Analysis Batch Number: 229123 End Date: 05/06/2016 13:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-229123/1		05/06/2016 06:58	1	60506001.D	RXI-5SILMS 0.45(mm)
STD6 240-229123/2 CCVIS		05/06/2016 07:16	1	60506002.D	RXI-5SILMS 0.45(mm)
STD6 240-229123/3 CCV		05/06/2016 07:40	1	60506003.D	RXI-5SILMS 0.45(mm)
MB 240-228312/9-A		05/06/2016 08:05	1	60506004.D	RXI-5SILMS 0.45(mm)
LCS 240-228312/10-A		05/06/2016 08:30	1	60506005.D	RXI-5SILMS 0.45(mm)
240-64160-1		05/06/2016 09:20	1	60506007.D	RXI-5SILMS 0.45(mm)
240-64160-2		05/06/2016 09:45	1	60506008.D	RXI-5SILMS 0.45(mm)
240-64160-3		05/06/2016 10:10	1	60506009.D	RXI-5SILMS 0.45(mm)
240-64160-4		05/06/2016 10:35	1	60506010.D	RXI-5SILMS 0.45(mm)
240-64160-4 MS		05/06/2016 11:00	1	60506011.D	RXI-5SILMS 0.45(mm)
240-64160-4 MSD		05/06/2016 11:25	1	60506012.D	RXI-5SILMS 0.45(mm)
240-64160-5		05/06/2016 11:50	1	60506013.D	RXI-5SILMS 0.45(mm)
240-64160-6		05/06/2016 12:15	1	60506014.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 12:40	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 13:05	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/06/2016 13:30	1		RXI-5SILMS 0.45(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228312 Batch Start Date: 05/02/16 05:50 Batch Analyst: Coast, Chris

Batch Method: 3520C Batch End Date: 05/02/16 23:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	exBENZALDEHYD 00038	exBNASPIKE 00062
240-64160-D-1	16C1	3520C, 8270D	T	280 mL	5 mL	7	2		
240-64160-C-2	16MW8	3520C, 8270D	T	280 mL	5 mL	6	2		
240-64160-C-3	16MW9	3520C, 8270D	T	280 mL	5 mL	7	2		
240-64160-L-4	16WC1A	3520C, 8270D	T	280 mL	5 mL	7	2		
240-64160-I-4 MS	16WC1A	3520C, 8270D	T	280 mL	5 mL	7	2	0.4 mL	0.4 mL
240-64160-H-4 MSD	16WC1A	3520C, 8270D	T	280 mL	5 mL	7	2	0.4 mL	0.4 mL
240-64160-C-5	16WDUP	3520C, 8270D	T	280 mL	5 mL	7	2		
240-64160-C-6	16WC1B	3520C, 8270D	T	280 mL	5 mL	7	2		
MB 240-228312/9		3520C, 8270D		250 mL	5 mL	7	2		
LCS 240-228312/10		3520C, 8270D		250 mL	5 mL	7	2	0.4 mL	0.4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	exBNASURR W 00034					
240-64160-D-1	16C1	3520C, 8270D	T	0.4 mL					
240-64160-C-2	16MW8	3520C, 8270D	T	0.4 mL					
240-64160-C-3	16MW9	3520C, 8270D	T	0.4 mL					
240-64160-L-4	16WC1A	3520C, 8270D	T	0.4 mL					
240-64160-I-4 MS	16WC1A	3520C, 8270D	T	0.4 mL					
240-64160-H-4 MSD	16WC1A	3520C, 8270D	T	0.4 mL					
240-64160-C-5	16WDUP	3520C, 8270D	T	0.4 mL					
240-64160-C-6	16WC1B	3520C, 8270D	T	0.4 mL					
MB 240-228312/9		3520C, 8270D		0.4 mL					
LCS 240-228312/10		3520C, 8270D		0.4 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228312 Batch Start Date: 05/02/16 05:50 Batch Analyst: Coast, Chris

Batch Method: 3520C Batch End Date: 05/02/16 23:50

Batch Notes	
Acid Used for pH Adjustment ID	2315745
Acidified Na2SO4 ID	2305854
Na2SO4 ID	2387190
NaCl ID	2484166
pH Paper ID	2442337 2459009
Prep Solvent ID	2508633

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG No.:

Project: RFAAP, Radford VA, HWMU16

Client Sample ID	Lab Sample ID
16C1	240-64160-1
16MW8	240-64160-2
16MW9	240-64160-3
16WC1A	240-64160-4
16WDUP	240-64160-5
16WC1B	240-64160-6

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16C1 Lab Sample ID: 240-64160-1

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 13:25

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16C1 Lab Sample ID: 240-64160-1

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 13:25

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	140	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	0.52	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	0.42	1.0	0.20	ug/L	J		1	6020A
7440-48-4	Cobalt	5.0	5.0	1.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	1.0	ug/L	U		1	6020A
7440-02-0	Nickel	3.9	10	2.0	ug/L	J		1	6020A
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	7.3	ug/L	U		1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16MW8 Lab Sample ID: 240-64160-2

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 13:55

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16MW8 Lab Sample ID: 240-64160-2

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 13:55

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	120	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	0.54	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	0.40	1.0	0.20	ug/L	J		1	6020A
7440-48-4	Cobalt	4.0	5.0	1.0	ug/L	J		1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	6.5	5.0	1.0	ug/L			1	6020A
7440-02-0	Nickel	6.1	10	2.0	ug/L	J		1	6020A
7439-92-1	Lead	0.36	1.0	0.20	ug/L	J		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	27	10	7.3	ug/L			1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16MW9 Lab Sample ID: 240-64160-3

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 12:15

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16MW9 Lab Sample ID: 240-64160-3

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 12:15

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	590	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	0.23	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	1.0	1.0	0.20	ug/L	U		1	6020A
7440-48-4	Cobalt	5.5	5.0	1.0	ug/L			1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	1.0	ug/L	U		1	6020A
7440-02-0	Nickel	15	10	2.0	ug/L			1	6020A
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	7.3	ug/L	U		1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16WC1A
Lab Sample ID: 240-64160-4
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 10:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC1A
Lab Sample ID: 240-64160-4
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 10:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	330	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	0.30	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	0.26	1.0	0.20	ug/L	J		1	6020A
7440-48-4	Cobalt	4.9	5.0	1.0	ug/L	J		1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	1.0	ug/L	U		1	6020A
7440-02-0	Nickel	7.6	10	2.0	ug/L	J		1	6020A
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	7.3	ug/L	U		1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16WDUP
Lab Sample ID: 240-64160-5
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 11:10
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WDUP
Lab Sample ID: 240-64160-5
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 11:10
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	300	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	0.23	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	1.0	1.0	0.20	ug/L	U		1	6020A
7440-48-4	Cobalt	4.3	5.0	1.0	ug/L	J		1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	1.0	ug/L	U		1	6020A
7440-02-0	Nickel	6.3	10	2.0	ug/L	J		1	6020A
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	7.3	ug/L	U		1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16WC1B
Lab Sample ID: 240-64160-6
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 09:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	0.20	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC1B
Lab Sample ID: 240-64160-6
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 09:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.20	ug/L	U		1	6020A
7440-38-2	Arsenic	10	10	2.0	ug/L	U		1	6020A
7440-39-3	Barium	120	10	1.1	ug/L		B	1	6020A
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020A
7440-43-9	Cadmium	0.23	1.0	0.20	ug/L	J		1	6020A
7440-48-4	Cobalt	35	5.0	1.0	ug/L			1	6020A
7440-47-3	Chromium	5.0	5.0	1.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	1.0	ug/L	U		1	6020A
7440-02-0	Nickel	7.2	10	2.0	ug/L	J		1	6020A
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020A
7440-36-0	Antimony	2.0	2.0	0.40	ug/L	U		1	6020A
7782-49-2	Selenium	5.0	5.0	3.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	0.23	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	7.3	ug/L	U		1	6020A
7440-28-0	Thallium	1.0	1.0	1.0	ug/L	U		1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	ICV 240-229385/7 05/07/2016 13:23				CCV 240-229385/35 05/07/2016 15:23				CCV 240-229385/47 05/07/2016 16:13			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.1		40.0	100	50.8		50.0	102	51.4		50.0	103
Arsenic	41.2		40.0	103	50.4		50.0	101	51.5		50.0	103
Barium	39.1		40.0	98	50.2		50.0	100	51.5		50.0	103
Beryllium	40.1		40.0	100	50.6		50.0	101	51.1		50.0	102
Cadmium	40.6		40.0	102	50.6		50.0	101	50.7		50.0	101
Chromium	41.1		40.0	103	50.1		50.0	100	50.1		50.0	100
Cobalt	40.9		40.0	102	50.0		50.0	100	50.3		50.0	101
Lead	40.7		40.0	102	50.0		50.0	100	50.2		50.0	100
Nickel	40.9		40.0	102	50.3		50.0	101	50.7		50.0	101
Selenium	41.4		40.0	103	50.8		50.0	102	51.0		50.0	102
Silver	40.6		40.0	102	49.9		50.0	100	50.6		50.0	101
Thallium	40.3		40.0	101	50.1		50.0	100	50.4		50.0	101
Vanadium	41.7		40.0	104	50.7		50.0	101	50.2		50.0	100
Zinc	38.2		40.0	95	46.6		50.0	93	47.8		50.0	96
Copper	41.9		40.0	105	49.1		50.0	98	49.7		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	CCV 240-229385/59 05/07/2016 17:03											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	50.8		50.0	102								
Arsenic	51.0		50.0	102								
Barium	49.7		50.0	99								
Beryllium	51.2		50.0	102								
Cadmium	50.2		50.0	100								
Chromium	49.9		50.0	100								
Cobalt	50.2		50.0	100								
Lead	50.4		50.0	101								
Nickel	50.6		50.0	101								
Selenium	48.8		50.0	98								
Silver	50.4		50.0	101								
Thallium	50.1		50.0	100								
Vanadium	50.2		50.0	100								
Zinc	46.6		50.0	93								
Copper	49.5		50.0	99								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	ICV 240-229600/7 05/09/2016 12:04				CCV 240-229600/16 05/09/2016 12:49				CCV 240-229600/28 05/09/2016 13:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Copper	40.3		40.0	101	51.1		50.0	102	49.8		50.0	100
Antimony	39.5		40.0	99	50.8		50.0	102	49.8		50.0	100
Arsenic	39.5		40.0	99	49.1		50.0	98	48.7		50.0	97
Barium	38.9		40.0	97	49.7		50.0	99	48.5		50.0	97
Beryllium	39.7		40.0	99	48.9		50.0	98	52.1		50.0	104
Cadmium	39.2		40.0	98	50.5		50.0	101	50.4		50.0	101
Chromium	39.4		40.0	99	50.5		50.0	101	49.8		50.0	100
Cobalt	39.5		40.0	99	50.8		50.0	102	50.0		50.0	100
Lead	39.4		40.0	98	49.1		50.0	98	48.6		50.0	97
Nickel	39.9		40.0	100	51.2		50.0	102	49.9		50.0	100
Selenium	39.8		40.0	100	51.8		50.0	104	50.4		50.0	101
Silver	39.4		40.0	98	50.1		50.0	100	49.5		50.0	99
Thallium	39.2		40.0	98	49.0		50.0	98	48.4		50.0	97
Vanadium	39.0		40.0	97	49.8		50.0	100	49.8		50.0	100
Zinc	39.8		40.0	100	49.7		50.0	99	48.4		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	CCV 240-229600/38 05/09/2016 14:20											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Copper	51.7		50.0	103								
Antimony	51.1		50.0	102								
Arsenic	49.6		50.0	99								
Barium	51.3		50.0	103								
Beryllium	51.1		50.0	102								
Cadmium	51.7		50.0	103								
Chromium	51.1		50.0	102								
Cobalt	51.7		50.0	103								
Lead	49.6		50.0	99								
Nickel	52.2		50.0	104								
Selenium	51.3		50.0	103								
Silver	50.5		50.0	101								
Thallium	49.6		50.0	99								
Vanadium	50.7		50.0	101								
Zinc	49.0		50.0	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTHgStd_00020 Concentration Units: ug/L

CCV Source: MTHGCALW_01199

Analyte	ICV 240-229220/7-A 05/06/2016 10:46				CCV 240-229220/10-A 05/06/2016 12:18				CCV 240-229220/10-A 05/06/2016 12:46			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.86		5.00	97	4.87		5.00	97	4.78		5.00	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICV Source: MTHgStd_00020 Concentration Units: ug/L

CCV Source: MTHGCALW_01199

Analyte	CCV 240-229220/10-A 05/06/2016 13:36				CCV 240-229220/10-A 05/06/2016 14:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.96		5.00	99	4.82		5.00	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-229385/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.02		102	70-130
Arsenic	5.00	5.15		103	70-130
Barium	5.00	4.72	J	94	70-130
Beryllium	1.00	0.962	J	96	70-130
Cadmium	1.00	0.984	J	98	70-130
Cobalt	1.00	0.981	J	98	70-130
Chromium	2.00	2.08		104	70-130
Copper	2.00	1.80	J	90	70-130
Nickel	2.00	1.96	J	98	70-130
Lead	1.00	1.04		104	70-130
Antimony	2.00	2.09		105	70-130
Selenium	5.00	5.45		109	70-130
Vanadium	5.00	5.14		103	70-130
Zinc	20.0	14.0	J	70	70-130
Thallium	1.00	1.01		101	70-130

Lab Sample ID: CRI 240-229385/65 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	0.986	J	99	70-130
Arsenic	5.00	5.06		101	70-130
Barium	5.00	4.93	J	99	70-130
Beryllium	1.00	1.08		108	70-130
Cadmium	1.00	1.03		103	70-130
Cobalt	1.00	0.932	J	93	70-130
Chromium	2.00	1.95	J	98	70-130
Nickel	2.00	2.03		101	70-130
Lead	1.00	0.987	J	99	70-130
Antimony	2.00	2.05		102	70-130
Selenium	5.00	5.46		109	70-130
Vanadium	5.00	5.09		102	70-130
Zinc	20.0	14.4	J	72	70-130
Thallium	1.00	1.03		103	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-229600/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.00		100	70-130
Arsenic	5.00	4.77	J	95	70-130
Barium	5.00	4.88	J	98	70-130
Beryllium	1.00	1.08		108	70-130
Cadmium	1.00	0.975	J	98	70-130
Cobalt	1.00	1.07		107	70-130
Chromium	2.00	2.05		103	70-130
Copper	2.00	2.20		110	70-130
Nickel	2.00	2.04		102	70-130
Lead	1.00	1.02		102	70-130
Antimony	2.00	1.99	J	99	70-130
Selenium	5.00	4.46	J	89	70-130
Vanadium	5.00	5.32		106	70-130
Zinc	20.0	20.4		102	70-130
Thallium	1.00	1.03		103	70-130

Lab Sample ID: CRI 240-229600/40 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.01		101	70-130
Arsenic	5.00	5.03		101	70-130
Barium	5.00	5.02		100	70-130
Beryllium	1.00	1.07		107	70-130
Cadmium	1.00	1.04		104	70-130
Cobalt	1.00	1.03		103	70-130
Chromium	2.00	2.08		104	70-130
Copper	2.00	1.76	J	88	70-130
Nickel	2.00	2.14		107	70-130
Lead	1.00	1.00		100	70-130
Antimony	2.00	2.00		100	70-130
Selenium	5.00	5.30		106	70-130
Vanadium	5.00	5.30		106	70-130
Zinc	20.0	20.4		102	70-130
Thallium	1.00	0.993	J	99	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-229220/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_01199

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.195	J	98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229385/8 05/07/2016 13:27		CCB 240-229385/36 05/07/2016 15:27		CCB 240-229385/48 05/07/2016 16:17		CCB 240-229385/60 05/07/2016 17:07	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	0.180	J	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	0.0870	J	0.299	J	0.167	J
Cadmium	1.0	1.0	U	1.0	U	0.132	J	0.111	J
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	0.568	J	5.0	U
Silver	1.0	1.0	U	0.0300	J	0.0380	J	0.0820	J
Thallium	1.0	1.0	U	0.0800	J	0.154	J	0.126	J
Vanadium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Zinc	20	20	U	20	U	20	U	20	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229600/8 05/09/2016 12:08		CCB 240-229600/17 05/09/2016 12:53		CCB 240-229600/29 05/09/2016 13:42		CCB 240-229600/39 05/09/2016 14:24	
		Found	C	Found	C	Found	C	Found	C
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	0.267	J	0.120	J
Cadmium	1.0	1.0	U	1.0	U	0.0750	J	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	0.322	J	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	0.0250	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229220/8-A 05/06/2016 10:48		CCB 240-229220/11-A 05/06/2016 12:21		CCB 240-229220/11-A 05/06/2016 12:48		CCB 240-229220/11-A 05/06/2016 13:38	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-229220/11-A 05/06/2016 14:04							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228967/1-A

Instrument Code: I10 Batch No.: 229385

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	1.0	U		6020A
7440-38-2	Arsenic	10	U		6020A
7440-39-3	Barium	1.29	J		6020A
7440-41-7	Beryllium	1.0	U		6020A
7440-43-9	Cadmium	1.0	U		6020A
7440-48-4	Cobalt	5.0	U		6020A
7440-47-3	Chromium	5.0	U		6020A
7440-02-0	Nickel	10	U		6020A
7439-92-1	Lead	1.0	U		6020A
7440-36-0	Antimony	2.0	U		6020A
7782-49-2	Selenium	5.0	U		6020A
7440-62-2	Vanadium	10	U		6020A
7440-66-6	Zinc	10	U		6020A
7440-28-0	Thallium	1.0	U		6020A

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228967/1-A

Instrument Code: I10 Batch No.: 229600

CAS No.	Analyte	Concentration	C	Q	Method
7440-50-8	Copper	5.0	U		6020A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228970/1-A

Instrument Code: H4 Batch No.: 229365

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	2.0	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICSA 240-229385/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00068

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0550**	
Arsenic		**0.0830**	
Barium		**0.0280**	
Beryllium		**0.0050**	
Cadmium		**-0.0320**	
Chromium		**0.663**	
Cobalt		**-0.0330**	
Lead		**0.101**	
Nickel		**-0.0430**	
Selenium		**0.428**	
Silver		**0.0130**	
Thallium		**0.0060**	
Vanadium		**-0.209**	
Zinc		**-7.93**	
Aluminum	*50000*	*53498*	*107*
Boron		*0.913*	
Calcium	*50000*	*50119*	*100*
Copper		*0.114*	
Iron	*50000*	*49855*	*100*
Lithium		*0.221*	
Magnesium	*50000*	*50727*	*101*
Manganese		*-0.847*	
Molybdenum	*1000*	*1107*	*111*
Potassium	*50000*	*49918*	*100*
Sodium	*50000*	*50631*	*101*
Strontium		*0.316*	
Tin		*-1.14*	
Titanium	*1000*	*995*	*99*
Tungsten		*0.147*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICSAB 240-229385/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00066

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**103**	**103**
Arsenic	**100**	**107**	**107**
Barium	**100**	**103**	**103**
Beryllium	**100**	**102**	**102**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**103**	**103**
Cobalt	**100**	**104**	**104**
Lead	**100**	**101**	**101**
Nickel	**100**	**103**	**103**
Selenium	**100**	**104**	**104**
Silver	**100**	**102**	**102**
Thallium	**100**	**99.1**	**99**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**106**	**106**
Aluminum	*50000*	*53663*	*107*
Boron	*100*	*107*	*107*
Calcium	*50000*	*50772*	*102*
Copper	*100*	*103*	*103*
Iron	*50000*	*50126*	*100*
Lithium	*100*	*102*	*102*
Magnesium	*50000*	*50897*	*102*
Manganese	*100*	*102*	*102*
Molybdenum	*1100*	*1239*	*113*
Potassium	*50000*	*51231*	*102*
Sodium	*50000*	*50778*	*102*
Strontium	*100*	*102*	*102*
Tin	*100*	*111*	*111*
Titanium	*1100*	*1117*	*102*
Tungsten	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICSA 240-229600/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00068

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Copper		**0.408**	
Aluminum	*50000*	*51924*	*104*
Antimony		*0.0090*	
Arsenic		*0.0910*	
Barium		*0.279*	
Beryllium		*0.0200*	
Boron		*1.29*	
Cadmium		*-0.0460*	
Calcium	*50000*	*49473*	*99*
Chromium		*0.633*	
Cobalt		*-0.0120*	
Iron	*50000*	*49354*	*99*
Lead		*0.101*	
Lithium		*0.319*	
Magnesium	*50000*	*50262*	*101*
Manganese		*0.238*	
Molybdenum	*1000*	*1053*	*105*
Nickel		*0.0410*	
Potassium	*50000*	*49165*	*98*
Selenium		*0.157*	
Silver		*0.0100*	
Sodium	*50000*	*50116*	*100*
Strontium		*0.282*	
Thallium		*0.0040*	
Tin		*0.0030*	
Titanium	*1000*	*998*	*100*
Tungsten		*0.144*	
Vanadium		*0.0740*	
Zinc		*0.275*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Lab Sample ID: ICSAB 240-229600/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00066

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Copper	**100**	**100**	**100**
Aluminum	*50000*	*50997*	*102*
Antimony	*100*	*103*	*103*
Arsenic	*100*	*103*	*103*
Barium	*100*	*102*	*102*
Beryllium	*100*	*104*	*104*
Boron	*100*	*102*	*102*
Cadmium	*100*	*101*	*101*
Calcium	*50000*	*49482*	*99*
Chromium	*100*	*100*	*100*
Cobalt	*100*	*101*	*101*
Iron	*50000*	*48762*	*98*
Lead	*100*	*98.3*	*98*
Lithium	*100*	*102*	*102*
Magnesium	*50000*	*49300*	*99*
Manganese	*100*	*101*	*101*
Molybdenum	*1100*	*1166*	*106*
Nickel	*100*	*101*	*101*
Potassium	*50000*	*48830*	*98*
Selenium	*100*	*102*	*102*
Silver	*100*	*100*	*100*
Sodium	*50000*	*49358*	*99*
Strontium	*100*	*100*	*100*
Thallium	*100*	*96.9*	*97*
Tin	*100*	*113*	*113*
Titanium	*1100*	*1092*	*99*
Tungsten	*100*	*103*	*103*
Vanadium	*100*	*101*	*101*
Zinc	*100*	*98.1*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: 16WC1A MS
Lab ID: 240-64160-4 MS
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.950	J	2.0	U	1.00	95	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 16WC1A MS | Lab ID: 240-64160-4 MS

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	97.2		1.0	U	100	97	75-125		6020A
Arsenic	990		10	U	1000	99	75-125		6020A
Barium	1290		330		1000	96	75-125		6020A
Beryllium	1030		0.30	J	1000	103	75-125		6020A
Cadmium	966		0.26	J	1000	97	75-125		6020A
Cobalt	1010		4.9	J	1000	100	75-125		6020A
Chromium	1010		5.0	U	1000	101	75-125		6020A
Copper	993		5.0	U	1000	99	75-125		6020A
Nickel	951		7.6	J	1000	94	75-125		6020A
Lead	1030		1.0	U	1000	103	75-125		6020A
Antimony	99.3		2.0	U	100	99	75-125		6020A
Selenium	966		5.0	U	1000	97	75-125		6020A
Vanadium	1040		10	U	1000	104	75-125		6020A
Zinc	1030		10	U	1000	103	75-125		6020A
Thallium	262		1.0	U	250	105	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: 16WC1A MSD
Lab ID: 240-64160-4 MSD
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.932	J	1.00	93	80-120	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 16WC1A MSD | Lab ID: 240-64160-4 MSD

Lab Name: TestAmerica Canton | Job No.: 240-64160-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	101		100	101	75-125	4	20		6020A
Arsenic	1060		1000	106	75-125	6	20		6020A
Barium	1370		1000	105	75-125	6	20		6020A
Beryllium	1110		1000	111	75-125	7	20		6020A
Cadmium	1030		1000	103	75-125	6	20		6020A
Cobalt	1080		1000	107	75-125	7	20		6020A
Chromium	1080		1000	108	75-125	7	20		6020A
Copper	1020		1000	102	75-125	3	20		6020A
Nickel	1000		1000	100	75-125	5	20		6020A
Lead	1090		1000	109	75-125	6	20		6020A
Antimony	104		100	104	75-125	5	20		6020A
Selenium	1020		1000	102	75-125	5	20		6020A
Vanadium	1120		1000	112	75-125	7	20		6020A
Zinc	1090		1000	109	75-125	5	20		6020A
Thallium	279		250	112	75-125	6	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-228967/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-1

Sample Matrix: Water LCS Source: MTICPMSB_00027

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	101		101	80	120		6020A
Arsenic	1000	999		100	80	120		6020A
Barium	1000	994		99	80	120		6020A
Beryllium	1000	1080		108	80	120		6020A
Cadmium	1000	1010		101	80	120		6020A
Cobalt	1000	1070		107	80	120		6020A
Chromium	1000	1050		105	80	120		6020A
Nickel	1000	1010		101	80	120		6020A
Lead	1000	1060		106	80	120		6020A
Antimony	100	102		102	80	120		6020A
Selenium	1000	984		98	80	120		6020A
Vanadium	1000	1060		106	80	120		6020A
Zinc	1000	1100		110	80	120		6020A
Thallium	250	271		108	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-228967/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-1

Sample Matrix: Water LCS Source: MTICPMSA_00026

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Copper	1000	1060		106	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-228970/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-1

Sample Matrix: Water LCS Source: MTHGCALW_01198

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.83		97	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-64160-4

SDG No:

Lab Name: TestAmerica Canton Job No: 240-64160-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	1.0	U	5.0	U	NC		6020A
Arsenic	10	U	50	U	NC		6020A
Barium	330		322		NC		6020A
Beryllium	0.30	J	5.0	U	NC		6020A
Cadmium	0.26	J	5.0	U	NC		6020A
Cobalt	4.9	J	25	U	NC		6020A
Chromium	5.0	U	25	U	NC		6020A
Copper	5.0	U	25	U	NC		6020A
Nickel	7.6	J	50	U	NC		6020A
Lead	1.0	U	5.0	U	NC		6020A
Antimony	2.0	U	10	U	NC		6020A
Selenium	5.0	U	25	U	NC		6020A
Vanadium	10	U	50	U	NC		6020A
Zinc	10	U	50	U	NC		6020A
Thallium	1.0	U	5.0	U	NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A MDL Date: 04/28/2016 16:52

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.4
Arsenic	75.00	10	2
Barium	137.00	10	1.1
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.2
Chromium	52.00	5	1
Cobalt	59.00	5	1
Copper	65.00	5	1
Lead	208.00	1	0.2
Nickel	60.00	10	2
Selenium	78.00	5	3
Silver	107.00	1	0.2
Thallium	205.00	1	1
Vanadium	51.00	10	0.23
Zinc	66.00	10	7.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 09/15/2014 17:03

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.16
Arsenic	75.00	5	0.49
Barium	137.00	5	1.1
Beryllium	9.00	1	0.053
Cadmium	111.00	1	0.061
Chromium	52.00	2	0.6
Cobalt	59.00	1	0.021
Copper	65.00	2	0.75
Lead	208.00	1	0.11
Nickel	60.00	2	0.23
Selenium	78.00	5	0.25
Silver	107.00	1	0.02
Thallium	205.00	1	0.074
Vanadium	51.00	5	0.23
Zinc	66.00	20	7.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 04/28/2016 16:32

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	2	0.2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 09/17/2014 14:07

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.09

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-64160-1

SDG No.:

Instrument ID: I10 Date: 04/12/2016 14:53

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		5000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Thallium		2000	6020A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-64160-1

SDG No.:

Instrument ID: H4 Date: 12/10/2013 15:55

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-228967/1-A	05/05/2016 09:40	228967		50	50
LCS 240-228967/2-A	05/05/2016 09:40	228967		50	50
240-64160-4	05/05/2016 09:40	228967		50	50
240-64160-4 MS	05/05/2016 09:40	228967		50	50
240-64160-4 MSD	05/05/2016 09:40	228967		50	50
240-64160-1	05/05/2016 09:40	228967		50	50
240-64160-2	05/05/2016 09:40	228967		50	50
240-64160-3	05/05/2016 09:40	228967		50	50
240-64160-5	05/05/2016 09:40	228967		50	50
240-64160-6	05/05/2016 09:40	228967		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-228970/1-A	05/05/2016 12:00	228970		50	50
LCS 240-228970/2-A	05/05/2016 12:00	228970		50	50
240-64160-4	05/05/2016 12:00	228970		50	50
240-64160-4 MS	05/05/2016 12:00	228970		50	50
240-64160-4 MSD	05/05/2016 12:00	228970		50	50
240-64160-1	05/05/2016 12:00	228970		50	50
240-64160-2	05/05/2016 12:00	228970		50	50
240-64160-3	05/05/2016 12:00	228970		50	50
240-64160-5	05/05/2016 12:00	228970		50	50
240-64160-6	05/05/2016 12:00	228970		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			12:58																									
ICIS 240-229385/2	1		13:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
STD1 240-229385/3 IC	1		13:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
STD2 240-229385/4 IC	1		13:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
STD3 240-229385/5 IC	1		13:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
STD4 240-229385/6 IC	1		13:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICV 240-229385/7	1		13:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICB 240-229385/8	1		13:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CRI 240-229385/9	1		13:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICSA 240-229385/10	1		13:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
ICSAB 240-229385/11	1		13:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCV 240-229385/12			13:44																									
CCB 240-229385/13			13:48																									
ZZZZZZ			13:56																									
ZZZZZZ			14:00																									
ZZZZZZ			14:04																									
ZZZZZZ			14:08																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:20																									
ZZZZZZ			14:24																									
ZZZZZZ			14:28																									
ZZZZZZ			14:33																									
CCV 240-229385/24			14:37																									
CCB 240-229385/25			14:41																									
ZZZZZZ			14:45																									
ZZZZZZ			14:49																									
ZZZZZZ			14:53																									
ZZZZZZ			14:58																									
ZZZZZZ			15:02																									
ZZZZZZ			15:06																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:19																									
CCV 240-229385/35	1		15:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 240-229385/36	1		15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CRI 240-229385/37			15:31																									
ZZZZZZ			15:35																									
ZZZZZZ			15:39																									
ZZZZZZ			15:44																									
ZZZZZZ			15:48																									
MB 240-228967/1-A	1	R	15:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Cd	Co	Cr	Ni	Pb	Sb	Se	Tl	V	Zn													
LCS 240-228967/2-A	1	R	15:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-4	1	R	16:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-4 SD	5	R	16:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
ZZZZZZ			16:09																											
CCV 240-229385/47	1		16:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
CCB 240-229385/48	1		16:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-4 MS	1	R	16:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-4 MSD	1	R	16:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-1	1	R	16:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-2	1	R	16:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-3	1	R	16:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-5	1	R	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
240-64160-6	1	R	16:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
ZZZZZZ			16:50																											
ZZZZZZ			16:54																											
ZZZZZZ			16:59																											
CCV 240-229385/59	1		17:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
CCB 240-229385/60	1		17:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
ZZZZZZ			17:11																											
ZZZZZZ			17:15																											
CCV 240-229385/63			17:19																											
CCB 240-229385/64			17:24																											
CRI 240-229385/65	1		17:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
ZZZZZZ			17:32																											
ZZZZZZ			17:36																											
ZZZZZZ			17:40																											
ZZZZZZ			17:45																											
ZZZZZZ			17:49																											
ZZZZZZ			17:53																											
ZZZZZZ			17:57																											
ZZZZZZ			18:01																											
ZZZZZZ			18:06																											
CCV 240-229385/75			18:10																											
CCB 240-229385/76			18:14																											
CCV 240-229385/77			18:19																											
CCB 240-229385/78			18:23																											
ZZZZZZ			18:27																											
ZZZZZZ			18:32																											
ZZZZZZ			18:37																											
ZZZZZZ			18:41																											
ZZZZZZ			18:46																											
ZZZZZZ			18:50																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			18:54																									
CCV 240-229385/86			18:59																									
CCB 240-229385/87			19:03																									
ZZZZZZ			19:07																									
ZZZZZZ			19:11																									
ZZZZZZ			19:16																									
ZZZZZZ			19:20																									
ZZZZZZ			19:24																									
ZZZZZZ			19:28																									
ZZZZZZ			19:32																									
ZZZZZZ			19:36																									
ZZZZZZ			19:40																									
ZZZZZZ			19:44																									
CCV 240-229385/98			19:48																									
CCB 240-229385/99			19:53																									
ZZZZZZ			19:57																									
ZZZZZZ			20:01																									
ZZZZZZ			20:05																									
ZZZZZZ			20:09																									
ZZZZZZ			20:13																									
ZZZZZZ			20:17																									
ZZZZZZ			20:22																									
ZZZZZZ			20:26																									
ZZZZZZ			20:30																									
ZZZZZZ			20:34																									
CCV 240-229385/110			20:38																									
CCB 240-229385/111			20:42																									
ZZZZZZ			20:47																									
ZZZZZZ			20:51																									
ZZZZZZ			20:55																									
ZZZZZZ			20:59																									
ZZZZZZ			21:03																									
ZZZZZZ			21:07																									
ZZZZZZ			21:12																									
ZZZZZZ			21:16																									
ZZZZZZ			21:20																									
ZZZZZZ			21:24																									
CCV 240-229385/122			21:28																									
CCB 240-229385/123			21:32																									
ZZZZZZ			21:37																									
ZZZZZZ			21:41																									
ZZZZZZ			21:45																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			21:49																									
ICSA 240-229385/128			21:53																									
ICSAB 240-229385/129			21:57																									
CCV 240-229385/130			22:02																									
CCB 240-229385/131			22:06																									
ZZZZZZ			22:10																									
ZZZZZZ			22:14																									
ZZZZZZ			22:18																									
ZZZZZZ			22:23																									
ZZZZZZ			22:27																									
ZZZZZZ			22:31																									
ZZZZZZ			22:35																									
ZZZZZZ			22:39																									
ZZZZZZ			22:43																									
ZZZZZZ			22:47																									
CCV 240-229385/142			22:51																									
CCB 240-229385/143			22:55																									
ZZZZZZ			23:00																									
ZZZZZZ			23:04																									
ZZZZZZ			23:08																									
ZZZZZZ			23:12																									
ZZZZZZ			23:16																									
ZZZZZZ			23:20																									
ZZZZZZ			23:24																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
CCV 240-229385/154			23:41																									
CCB 240-229385/155			23:45																									
ZZZZZZ			23:49																									
ZZZZZZ			23:53																									
ZZZZZZ			23:57																									
ZZZZZZ			00:02																									
ZZZZZZ			00:06																									
ZZZZZZ			00:10																									
ZZZZZZ			00:15																									
ZZZZZZ			00:19																									
ZZZZZZ			00:23																									
ZZZZZZ			00:27																									
ZZZZZZ			00:31																									
CCV 240-229385/167			00:35																									
CCB 240-229385/168			00:40																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			00:44																									
ZZZZZZ			00:48																									
ZZZZZZ			00:52																									
ZZZZZZ			00:56																									
ZZZZZZ			01:01																									
ZZZZZZ			01:05																									
CCV 240-229385/175			01:09																									
CCB 240-229385/176			01:13																									
ZZZZZZ			01:17																									
ZZZZZZ			01:21																									
ZZZZZZ			01:25																									
ZZZZZZ			01:30																									
ZZZZZZ			01:34																									
ZZZZZZ			01:38																									
ZZZZZZ			01:42																									
ZZZZZZ			01:46																									
ZZZZZZ			01:50																									
ZZZZZZ			01:54																									
CCV 240-229385/187			01:58																									
CCB 240-229385/188			02:03																									
ZZZZZZ			02:07																									
ZZZZZZ			02:11																									
ZZZZZZ			02:15																									
ZZZZZZ			02:19																									
CCV 240-229385/193			02:23																									
CCB 240-229385/194			02:28																									
ZZZZZZ			02:32																									
ZZZZZZ			02:36																									
CCV 240-229385/197			02:40																									
CCB 240-229385/198			02:44																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes
				Cu
ZZZZZZ			11:39	
ICIS 240-229600/2	1		11:43	X
STD1 240-229600/3 IC	1		11:47	X
STD2 240-229600/4 IC	1		11:51	X
STD3 240-229600/5 IC	1		11:55	X
STD4 240-229600/6 IC	1		12:00	X
ICV 240-229600/7	1		12:04	X
ICB 240-229600/8	1		12:08	X
CRI 240-229600/9	1		12:12	X
ICSA 240-229600/10	1		12:16	X
ICSAB 240-229600/11	1		12:21	X
CCV 240-229600/12			12:25	
CCB 240-229600/13			12:29	
ZZZZZZ			12:40	
ZZZZZZ			12:44	
CCV 240-229600/16	1		12:49	X
CCB 240-229600/17	1		12:53	X
CRI 240-229600/18			12:57	
MB 240-228967/1-A	1	R	13:01	X
LCS 240-228967/2-A	1	R	13:05	X
240-64160-4	1	R	13:09	X
240-64160-4 SD	5	R	13:14	X
ZZZZZZ			13:18	
240-64160-4 MS	1	R	13:22	X
240-64160-4 MSD	1	R	13:26	X
240-64160-1	1	R	13:30	X
240-64160-2	1	R	13:34	X
CCV 240-229600/28	1		13:38	X
CCB 240-229600/29	1		13:42	X
240-64160-3	1	R	13:47	X
240-64160-5	1	R	13:51	X
240-64160-6	1	R	13:55	X
ZZZZZZ			13:59	
ZZZZZZ			14:03	
ZZZZZZ			14:08	
ZZZZZZ			14:12	
ZZZZZZ			14:16	
CCV 240-229600/38	1		14:20	X
CCB 240-229600/39	1		14:24	X
CRI 240-229600/40	1		14:28	X
ZZZZZZ			14:33	
ZZZZZZ			14:37	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			14:41																									
ZZZZZZ			14:45																									
ZZZZZZ			14:49																									
ZZZZZZ			14:53																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									
ZZZZZZ			15:05																									
CCV 240-229600/50			15:09																									
CCB 240-229600/51			15:14																									
ZZZZZZ			15:18																									
ZZZZZZ			15:22																									
ZZZZZZ			15:26																									
ZZZZZZ			15:30																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:43																									
CCV 240-229600/59			15:47																									
CCB 240-229600/60			15:51																									
ZZZZZZ			15:55																									
ZZZZZZ			15:59																									
ZZZZZZ			16:03																									
ZZZZZZ			16:08																									
ZZZZZZ			16:12																									
ZZZZZZ			16:16																									
ZZZZZZ			16:20																									
ZZZZZZ			16:24																									
ZZZZZZ			16:29																									
ZZZZZZ			16:33																									
CCV 240-229600/71			16:37																									
CCB 240-229600/72			16:41																									
ZZZZZZ			16:45																									
ZZZZZZ			16:50																									
ZZZZZZ			16:54																									
ZZZZZZ			16:58																									
ZZZZZZ			17:02																									
ZZZZZZ			17:06																									
ZZZZZZ			17:10																									
ZZZZZZ			17:14																									
ZZZZZZ			17:18																									
ZZZZZZ			17:22																									
CCV 240-229600/83			17:27																									
CCB 240-229600/84			17:31																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
CRI 240-229600/87			17:43																									
ICSA 240-229600/88			17:48																									
ICSAB 240-229600/89			17:52																									
CCV 240-229600/90			17:56																									
CCB 240-229600/91			18:00																									
ZZZZZZ			18:04																									
ZZZZZZ			18:09																									
ZZZZZZ			18:13																									
ZZZZZZ			18:17																									
ZZZZZZ			18:21																									
ZZZZZZ			18:25																									
ZZZZZZ			18:29																									
ZZZZZZ			18:33																									
ZZZZZZ			18:37																									
ZZZZZZ			18:42																									
CCV 240-229600/102			18:46																									
CCB 240-229600/103			18:50																									
ZZZZZZ			18:54																									
ZZZZZZ			18:58																									
ZZZZZZ			19:02																									
ZZZZZZ			19:07																									
ZZZZZZ			19:11																									
ZZZZZZ			19:15																									
ZZZZZZ			19:20																									
CCV 240-229600/111			19:24																									
CCB 240-229600/112			19:28																									
ZZZZZZ			19:32																									
ZZZZZZ			19:36																									
ZZZZZZ			19:40																									
ZZZZZZ			19:44																									
ZZZZZZ			19:48																									
ZZZZZZ			19:53																									
ZZZZZZ			19:57																									
ZZZZZZ			20:01																									
ZZZZZZ			20:05																									
ZZZZZZ			20:09																									
CCV 240-229600/123			20:13																									
CCB 240-229600/124			20:17																									
ZZZZZZ			20:22																									
ZZZZZZ			20:26																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes
				Cu
ZZZZZZ			20:30	
ZZZZZZ			20:34	
ZZZZZZ			20:38	
ZZZZZZ			20:43	
ZZZZZZ			20:47	
ZZZZZZ			20:51	
ZZZZZZ			20:55	
CCV 240-229600/134			20:59	
CCB 240-229600/135			21:04	
CRI 240-229600/136			21:08	
ZZZZZZ			21:12	
ZZZZZZ			21:16	
ZZZZZZ			21:20	
ZZZZZZ			21:25	
ZZZZZZ			21:29	
ZZZZZZ			21:33	
ZZZZZZ			21:37	
ZZZZZZ			21:41	
ZZZZZZ			21:45	
CCV 240-229600/146			21:50	
CCB 240-229600/147			21:54	
ZZZZZZ			21:58	
ZZZZZZ			22:02	
ZZZZZZ			22:06	
ZZZZZZ			22:10	
ZZZZZZ			22:15	
ZZZZZZ			22:19	
ZZZZZZ			22:23	
ZZZZZZ			22:27	
ZZZZZZ			22:31	
ZZZZZZ			22:35	
CCV 240-229600/158			22:39	
CCB 240-229600/159			22:44	
ZZZZZZ			22:48	
ZZZZZZ			22:52	
ZZZZZZ			22:56	
ZZZZZZ			23:00	
ZZZZZZ			23:05	
ZZZZZZ			23:09	
ZZZZZZ			23:13	
ZZZZZZ			23:17	
ZZZZZZ			23:21	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			23:26																									
CCV 240-229600/170			23:30																									
CCB 240-229600/171			23:34																									
ZZZZZZ			23:38																									
ZZZZZZ			23:42																									
ZZZZZZ			23:47																									
ZZZZZZ			23:51																									
ZZZZZZ			23:55																									
ZZZZZZ			23:59																									
ZZZZZZ			00:03																									
CCV 240-229600/179			00:08																									
CCB 240-229600/180			00:12																									
ZZZZZZ			00:16																									
ZZZZZZ			00:20																									
ZZZZZZ			00:24																									
ZZZZZZ			00:29																									
ZZZZZZ			00:33																									
ZZZZZZ			00:37																									
ZZZZZZ			00:41																									
ZZZZZZ			00:45																									
ZZZZZZ			00:49																									
ZZZZZZ			00:53																									
CCV 240-229600/191			00:58																									
CCB 240-229600/192			01:02																									
ZZZZZZ			01:06																									
ZZZZZZ			01:10																									
ZZZZZZ			01:14																									
ZZZZZZ			01:18																									
ZZZZZZ			01:23																									
ZZZZZZ			01:27																									
CCV 240-229600/199			01:31																									
CCB 240-229600/200			01:35																									
ZZZZZZ			01:39																									
ZZZZZZ			01:43																									
ZZZZZZ			01:48																									
ZZZZZZ			01:52																									
ZZZZZZ			01:56																									
ZZZZZZ			02:00																									
ZZZZZZ			02:04																									
ZZZZZZ			02:08																									
ZZZZZZ			02:12																									
ZZZZZZ			02:17																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
CCV 240-229600/211			02:21																									
CCB 240-229600/212			02:25																									
ZZZZZZ			02:29																									
ZZZZZZ			02:33																									
ZZZZZZ			02:37																									
ZZZZZZ			02:41																									
CCV 240-229600/217			02:46																									
CCB 240-229600/218			02:50																									
CRI 240-229600/219			02:54																									
ZZZZZZ			02:58																									
ZZZZZZ			03:02																									
ZZZZZZ			03:07																									
ZZZZZZ			03:11																									
ZZZZZZ			03:15																									
ZZZZZZ			03:19																									
ZZZZZZ			03:23																									
ZZZZZZ			03:27																									
ZZZZZZ			03:31																									
CCV 240-229600/229			03:36																									
CCB 240-229600/230			03:40																									
ZZZZZZ			03:44																									
ZZZZZZ			03:48																									
ZZZZZZ			03:52																									
ZZZZZZ			03:56																									
ZZZZZZ			04:01																									
ZZZZZZ			04:05																									
ZZZZZZ			04:09																									
ZZZZZZ			04:13																									
ZZZZZZ			04:17																									
CCV 240-229600/240			04:22																									
CCB 240-229600/241			04:26																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 240-229220/1-A			10:24	X																								
IC 240-229220/2-A			10:26	X																								
IC 240-229220/3-A			10:28	X																								
IC 240-229220/4-A			10:30	X																								
IC 240-229220/5-A			10:34	X																								
IC 240-229220/6-A			10:36	X																								
ICV 240-229220/7-A	1		10:46	X																								
ICB 240-229220/8-A	1		10:48	X																								
CRA 240-229220/9-A	1		10:50	X																								
CCV 240-229220/10-A			10:58																									
CCB 240-229220/11-A			11:00																									
ZZZZZZ			11:02																									
ZZZZZZ			11:04																									
ZZZZZZ			11:06																									
ZZZZZZ			11:08																									
ZZZZZZ			11:11																									
ZZZZZZ			11:13																									
ZZZZZZ			11:15																									
ZZZZZZ			11:17																									
ZZZZZZ			11:19																									
ZZZZZZ			11:21																									
CCV 240-229220/10-A			11:23																									
CCB 240-229220/11-A			11:25																									
ZZZZZZ			11:28																									
ZZZZZZ			11:30																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
ZZZZZZ			11:37																									
ZZZZZZ			11:39																									
ZZZZZZ			11:41																									
ZZZZZZ			11:44																									
ZZZZZZ			11:46																									
ZZZZZZ			11:48																									
CCV 240-229220/10-A			11:50																									
CCB 240-229220/11-A			11:54																									
ZZZZZZ			11:56																									
ZZZZZZ			11:59																									
ZZZZZZ			12:01																									
CRA 240-229365/39			12:03																									
ZZZZZZ			12:05																									
ZZZZZZ			12:07																									
ZZZZZZ			12:10																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			12:12	
ZZZZZZ			12:14	
ZZZZZZ			12:16	
CCV 240-229220/10-A	1		12:18	X
CCB 240-229220/11-A	1		12:21	X
ZZZZZZ			12:23	
ZZZZZZ			12:25	
ZZZZZZ			12:27	
ZZZZZZ			12:29	
ZZZZZZ			12:32	
ZZZZZZ			12:35	
MB 240-228970/1-A	1	T	12:37	X
LCS 240-228970/2-A	1	T	12:39	X
240-64160-4	1	T	12:42	X
240-64160-4 MS	1	T	12:44	X
CCV 240-229220/10-A	1		12:46	X
CCB 240-229220/11-A	1		12:48	X
240-64160-4 MSD	1	T	12:50	X
240-64160-1	1	T	12:52	X
240-64160-2	1	T	12:54	X
240-64160-3	1	T	12:57	X
CCV 240-229220/10-A	1		13:36	X
CCB 240-229220/11-A	1		13:38	X
240-64160-5	1	T	13:40	X
240-64160-6	1	T	13:42	X
ZZZZZZ			13:44	
ZZZZZZ			13:46	
ZZZZZZ			13:49	
ZZZZZZ			13:51	
ZZZZZZ			13:53	
ZZZZZZ			13:55	
ZZZZZZ			13:57	
ZZZZZZ			14:00	
CCV 240-229220/10-A	1		14:02	X
CCB 240-229220/11-A	1		14:04	X
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:11	
ZZZZZZ			14:14	
ZZZZZZ			14:16	
ZZZZZZ			14:19	
CCV 240-229220/10-A			14:22	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 240-229220/11-A			14:24																									
CCV 240-229220/10-A			15:02																									
CCB 240-229220/11-A			15:04																									
ZZZZZZ			15:07																									
ZZZZZZ			15:09																									
ZZZZZZ			15:11																									
ZZZZZZ			15:13																									
ZZZZZZ			15:16																									
ZZZZZZ			15:19																									
CCV 240-229220/10-A			15:22																									
CCB 240-229220/11-A			15:24																									
CCV 240-229220/10-A			15:28																									
CCB 240-229220/11-A			15:30																									
ZZZZZZ			15:33																									
ZZZZZZ			15:35																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									
ZZZZZZ			15:41																									
ZZZZZZ			15:44																									
ZZZZZZ			15:46																									
ZZZZZZ			15:48																									
ZZZZZZ			15:50																									
ZZZZZZ			15:52																									
CCV 240-229220/10-A			15:54																									
CCB 240-229220/11-A			15:57																									
ZZZZZZ			15:59																									
ZZZZZZ			16:01																									
ZZZZZZ			16:04																									
ZZZZZZ			16:06																									
ZZZZZZ			16:20																									
ZZZZZZ			16:22																									
CCV 240-229220/10-A			16:41																									
CCB 240-229220/11-A			16:43																									
ZZZZZZ			16:45																									
ZZZZZZ			16:47																									
ZZZZZZ			16:49																									
ZZZZZZ			16:52																									
ZZZZZZ			16:54																									
ZZZZZZ			16:56																									
ZZZZZZ			16:59																									
ZZZZZZ			17:02																									
ZZZZZZ			17:04																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			17:06																									
CCV 240-229220/10-A			17:08																									
CCB 240-229220/11-A			17:10																									
ZZZZZZ			17:12																									
ZZZZZZ			17:15																									
ZZZZZZ			17:17																									
ZZZZZZ			17:19																									
ZZZZZZ			17:21																									
ZZZZZZ			17:23																									
ZZZZZZ			17:25																									
ZZZZZZ			17:28																									
ZZZZZZ			17:30																									
ZZZZZZ			17:32																									
CCV 240-229220/10-A			17:34																									
CCB 240-229220/11-A			17:36																									
ZZZZZZ			17:39																									
ZZZZZZ			17:42																									
ZZZZZZ			17:44																									
ZZZZZZ			17:46																									
ZZZZZZ			17:49																									
ZZZZZZ			17:51																									
ZZZZZZ			17:53																									
ZZZZZZ			17:55																									
ZZZZZZ			17:57																									
ZZZZZZ			17:59																									
CCV 240-229220/10-A			18:02																									
CCB 240-229220/11-A			18:04																									
ZZZZZZ			18:06																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:13																									
ZZZZZZ			18:15																									
ZZZZZZ			18:17																									
ZZZZZZ			18:19																									
ZZZZZZ			18:22																									
ZZZZZZ			18:24																									
ZZZZZZ			18:26																									
CCV 240-229220/10-A			18:29																									
CCB 240-229220/11-A			18:31																									
ZZZZZZ			18:33																									
ZZZZZZ			18:36																									
ZZZZZZ			18:38																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			18:40																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
ZZZZZZ			18:50																									
ZZZZZZ			18:52																									
ZZZZZZ			18:55																									
CCV 240-229220/10-A			18:58																									
CCB 240-229220/11-A			19:00																									
ZZZZZZ			19:02																									
ZZZZZZ			19:04																									
ZZZZZZ			19:07																									
ZZZZZZ			19:09																									
ZZZZZZ			19:12																									
ZZZZZZ			19:14																									
ZZZZZZ			19:16																									
ZZZZZZ			19:18																									
ZZZZZZ			19:20																									
ZZZZZZ			19:22																									
CCV 240-229220/10-A			19:24																									
CCB 240-229220/11-A			19:26																									
ZZZZZZ			19:28																									
ZZZZZZ			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:35																									
ZZZZZZ			19:37																									
ZZZZZZ			19:39																									
ZZZZZZ			19:41																									
ZZZZZZ			19:43																									
ZZZZZZ			19:45																									
ZZZZZZ			19:47																									
CCV 240-229220/10-A			19:50																									
CCB 240-229220/11-A			19:52																									
ZZZZZZ			19:54																									
ZZZZZZ			19:57																									
ZZZZZZ			19:59																									
ZZZZZZ			20:01																									
ZZZZZZ			20:03																									
ZZZZZZ			20:06																									
ZZZZZZ			20:09																									
ZZZZZZ			20:11																									
CCV 240-229220/10-A			20:13																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 240-229220/11-A			20:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/07/2016 End Date: 05/07/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-229385/2	13:02	100		100		100		100		100	
STD1 240-229385/3 I	13:07	99		99		99		101		100	
STD2 240-229385/4 I	13:11	95		100		99		97		99	
STD3 240-229385/5 I	13:15	99		99		102		96		97	
STD4 240-229385/6 I	13:19	100		102		103		103		104	
ICV 240-229385/7	13:23	101		103		106		100		103	
ICB 240-229385/8	13:27	102		107		106		106		106	
CRI 240-229385/9	13:32	103		106		106		106		106	
ICSA 240-229385/10	13:36	99		99		101		93		95	
ICSAB 240-229385/11	13:40	97		100		104		96		97	
CCV 240-229385/35	15:23	111		105		110		102		101	
CCB 240-229385/36	15:27	115		106		113		107		105	
MB 240-228967/1-A	15:52	112		106		111		106		105	
LCS 240-228967/2-A	15:56	108		101		106		99		98	
240-64160-4	16:00	112		102		109		96		97	
240-64160-4 SD	16:05	112		105		110		102		101	
CCV 240-229385/47	16:13	110		102		108		97		97	
CCB 240-229385/48	16:17	114		101		110		100		98	
240-64160-4 MS	16:21	109		103		111		97		97	
240-64160-4 MSD	16:25	110		102		109		97		95	
240-64160-1	16:29	116		105		111		102		101	
240-64160-2	16:33	111		103		108		100		100	
240-64160-3	16:38	110		101		110		95		97	
240-64160-5	16:42	113		107		110		103		101	
240-64160-6	16:46	111		102		108		98		99	
CCV 240-229385/59	17:03	112		104		110		100		101	
CCB 240-229385/60	17:07	117		104		110		103		103	
CRI 240-229385/65	17:28	115		103		110		103		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/07/2016 End Date: 05/07/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-229385/2	13:02	100		100		100					
STD1 240-229385/3 I	13:07	102		102		100					
STD2 240-229385/4 I	13:11	98		100		96					
STD3 240-229385/5 I	13:15	98		100		94					
STD4 240-229385/6 I	13:19	101		103		101					
ICV 240-229385/7	13:23	102		102		98					
ICB 240-229385/8	13:27	103		104		102					
CRI 240-229385/9	13:32	102		104		101					
ICSA 240-229385/10	13:36	98		100		94					
ICSAB 240-229385/11	13:40	99		101		95					
CCV 240-229385/35	15:23	102		104		98					
CCB 240-229385/36	15:27	104		104		101					
MB 240-228967/1-A	15:52	102		104		102					
LCS 240-228967/2-A	15:56	99		102		95					
240-64160-4	16:00	98		100		94					
240-64160-4 SD	16:05	100		100		98					
CCV 240-229385/47	16:13	98		100		94					
CCB 240-229385/48	16:17	97		98		95					
240-64160-4 MS	16:21	100		102		95					
240-64160-4 MSD	16:25	99		102		94					
240-64160-1	16:29	104		106		99					
240-64160-2	16:33	99		100		97					
240-64160-3	16:38	97		98		92					
240-64160-5	16:42	105		106		97					
240-64160-6	16:46	99		99		95					
CCV 240-229385/59	17:03	100		102		96					
CCB 240-229385/60	17:07	101		102		100					
CRI 240-229385/65	17:28	99		101		98					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/09/2016 End Date: 05/09/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-229600/2	11:43	100		100		100		100		100	
STD1 240-229600/3 I	11:47	97		99		99		97		99	
STD2 240-229600/4 I	11:51	95		99		98		96		98	
STD3 240-229600/5 I	11:55	94		101		100		95		98	
STD4 240-229600/6 I	12:00	100		106		103		106		106	
ICV 240-229600/7	12:04	103		112		110		107		109	
ICB 240-229600/8	12:08	107		111		109		110		109	
CRI 240-229600/9	12:12	108		111		109		108		110	
ICSA 240-229600/10	12:16	105		103		103		95		98	
ICSAB 240-229600/11	12:21	102		106		106		98		100	
CCV 240-229600/16	12:49	106		111		112		106		106	
CCB 240-229600/17	12:53	109		113		112		111		108	
MB 240-228967/1-A	13:01	108		111		109		107		107	
LCS 240-228967/2-A	13:05	101		105		108		101		100	
240-64160-4	13:09	105		112		113		102		104	
240-64160-4 SD	13:14	102		115		111		107		108	
240-64160-4 MS	13:22	104		108		110		102		100	
240-64160-4 MSD	13:26	103		112		109		103		102	
240-64160-1	13:30	112		113		115		106		105	
240-64160-2	13:34	113		112		112		108		108	
CCV 240-229600/28	13:38	107		111		107		105		105	
CCB 240-229600/29	13:42	110		110		111		108		107	
240-64160-3	13:47	111		111		115		103		104	
240-64160-5	13:51	110		113		113		105		105	
240-64160-6	13:55	110		107		109		103		103	
CCV 240-229600/38	14:20	110		109		110		103		102	
CCB 240-229600/39	14:24	110		109		109		106		104	
CRI 240-229600/40	14:28	106		107		108		105		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/09/2016 End Date: 05/09/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-229600/2	11:43	100		100		100					
STD1 240-229600/3 I	11:47	100		99		99					
STD2 240-229600/4 I	11:51	99		98		96					
STD3 240-229600/5 I	11:55	98		97		95					
STD4 240-229600/6 I	12:00	104		102		105					
ICV 240-229600/7	12:04	109		107		104					
ICB 240-229600/8	12:08	109		108		107					
CRI 240-229600/9	12:12	108		107		108					
ICSA 240-229600/10	12:16	102		102		97					
ICSAB 240-229600/11	12:21	104		103		98					
CCV 240-229600/16	12:49	108		106		102					
CCB 240-229600/17	12:53	108		108		108					
MB 240-228967/1-A	13:01	107		105		106					
LCS 240-228967/2-A	13:05	103		102		98					
240-64160-4	13:09	103		102		99					
240-64160-4 SD	13:14	105		103		103					
240-64160-4 MS	13:22	103		103		98					
240-64160-4 MSD	13:26	107		105		100					
240-64160-1	13:30	109		107		104					
240-64160-2	13:34	108		107		106					
CCV 240-229600/28	13:38	107		106		101					
CCB 240-229600/29	13:42	105		105		104					
240-64160-3	13:47	105		105		100					
240-64160-5	13:51	107		106		101					
240-64160-6	13:55	105		104		103					
CCV 240-229600/38	14:20	105		105		100					
CCB 240-229600/39	14:24	104		104		102					
CRI 240-229600/40	14:28	104		102		103					

MTMSCCBDILH20-262 EPA Tune Solution Spex CL1-16MKBY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 5/7/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

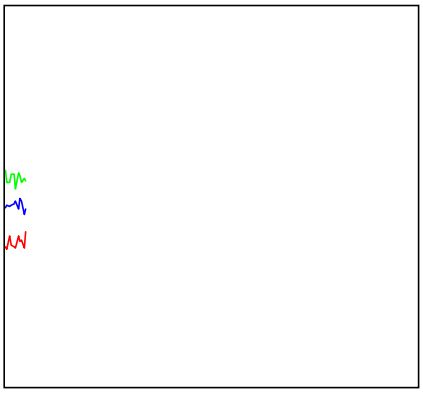
Level I Analyst: Anjali Sharma Date: 5/9/16 Time: 12:58 – 2:44
Level I Analyst: _____ Date: _____ Time: _____

Level II Reviewer: Karen L Conti Date: 5/9/16 Time: 12:58-2:44
Level II Reviewer: _____ Date: _____ Time: _____

Comments: _____

Current Signal

[NoGas]



Mass	Range	Count	Avg. Count	RSD [%]
7	5000	2023	1890.3	4.08
89	10000	5421	5472.8	2.65
205	5000	2328	2379.2	2.47
156/140	2	0.637 %	0.965 %	21.89
65	20000	10109	9901.0	1.47
11	2000	1390	1415.8	3.64
63	50000	22328	22176.1	0.89
60	500	294	292.2	4.91
45	5000	1858	1922.5	3.66
6	2000	1182	1184.4	3.82
52	10000	7552	7116.0	3.15
208	500	316	316.4	7.27
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	14.2	V
Extract 2	-155.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Meters

IF/BK Press	2.08E+2	Pa	TMP Revolution	100.0	%	Forward Power	1599	W
Analyzer Press	9.98E-5	Pa	Carrier Gas(BP)	1.93E+2	kPa			

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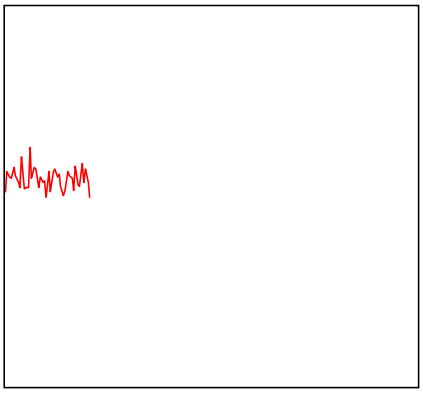
Current Signal

[He]



Mass	Range	Count	Avg. Count	RSD [%]
59	1000	497	546.0	5.23
51	200	55	72.9	17.52
52	200	101	95.3	13.97
51/59	20	11.065 %	13.361 %	17.31
63	5000	2291	2312.8	2.62
65	2000	1095	1118.8	3.24
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	4.4	V
Extract 2	-155.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-75	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	10.0	V
He Flow	4.3	mL/min	OctP Bias	-25.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Meters

IF/BK Press	2.09E+2	Pa	TMP Revolution	100.0	%	Forward Power	1601	W
Analyzer Press	1.81E-4	Pa	Carrier Gas(BP)	1.93E+2	kPa			

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US EPA Tune Check Sample Report

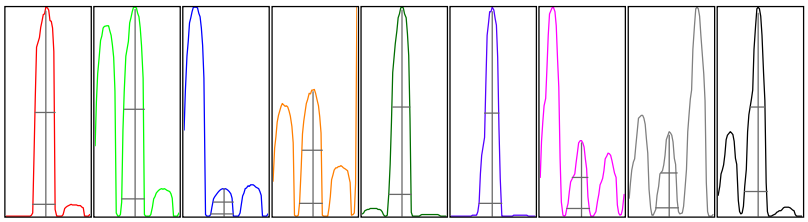
Batch Folder D:\Analytical Runs\I10050716A.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	31815	0.77	5.00	
24	148350	0.17	5.00	
25	19318	0.53	5.00	
26	22092	0.46	5.00	
59	168512	0.61	5.00	
115	211816	0.51	5.00	
206	44357	0.66	5.00	
207	38533	0.48	5.00	
208	90894	0.46	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	31758	31787	31450	32028	32050
24	148414	148558	148332	148505	147940
25	19420	19385	19157	19337	19289
26	22133	22182	22035	21942	22167
59	167479	167368	168867	169557	169287
115	209986	211826	212809	212172	212284
206	44068	44052	44379	44588	44698
207	38472	38416	38625	38346	38808
208	90508	91095	91483	90884	90498

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	4866	8.95	8.9 - 9.1		0.791	0.850	
24	22974	23.95	23.9 - 24.1		0.792	0.850	
25	3006	24.95	24.9 - 25.1		0.790	0.850	
26	3400	25.95	25.9 - 26.1		0.796	0.850	
59	27540	58.95	58.9 - 59.1		0.795	0.850	
115	39381	115.00	114.9 - 115.1		0.788	0.850	
206	8335	206.00	205.9 - 206.1		0.796	0.850	
207	6906	206.95	206.9 - 207.1		0.778	0.850	
208	17269	207.95	207.9 - 208.1		0.779	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	14.2	V
Extract 2	-155.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T12:58:41-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	87537	0.00
Be	9	45	2	NoGas	885	1.14
B	11	6	2	NoGas	10392	0.01
Na	23	45	1	He	10077	0.13
Mg	24	45	1	He	3271	2.43
Al	27	45	1	He	311	2.54
K	39	45	1	He	10889	0.02
Ca	44	45	1	He	897	2.21
Ti	47	45	1	He	4	2579.17
V	51	45	1	He	258	28.73
Cr	52	45	1	He	816	0.98
Mn	55	45	1	He	1611	0.36
Fe	56	45	1	He	15258	0.50
Co	59	45	1	He	551	3.05
Ni	60	45	1	He	258	7.97
Cu	63	45	1	He	5652	0.05
Zn	66	45	1	He	3061	0.24
As	75	115	1	He	34	49.99
Se	78	115	1	He	7	131.08
Sr	88	103	1	He	129	23.26
Mo	95	103	1	He	77	113.84
Ag	107	103	1	He	67	90.94
Cd	111	115	1	He	11	676.22
Sn	118	115	1	He	1482	1.55
Sb	123	115	1	He	77	51.98
Ba	137	115	1	He	14	92.44
W	182	159	1	He	2248	0.57
Tl	205	165	1	He	362	21.03
Pb	208	165	1	He	1309	1.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1278911	1.51
Sc	45	1	He	160665	1.37
Sc	45	2	NoGas	8828511	0.27
Rh	103	1	He	1010126	0.72
In	115	1	He	257178	0.66
Tb	159	1	He	1145559	0.26
Ho	165	1	He	1151095	0.74
Bi	209	1	He	789842	0.59

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:02:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	86188	0.00
Be	9	45	2	NoGas	96	48.42
B	11	6	2	NoGas	10414	0.05
Na	23	45	1	He	8550	0.04
Mg	24	45	1	He	782	1.64
Al	27	45	1	He	296	6.43
K	39	45	1	He	10477	0.01
Ca	44	45	1	He	749	0.96
Ti	47	45	1	He	2	7790.33
V	51	45	1	He	184	59.12
Cr	52	45	1	He	901	1.06
Mn	55	45	1	He	1473	0.37
Fe	56	45	1	He	3889	0.21
Co	59	45	1	He	488	1.77
Ni	60	45	1	He	239	1.78
Cu	63	45	1	He	5250	0.04
Zn	66	45	1	He	3258	0.21
As	75	115	1	He	29	28.50
Se	78	115	1	He	4	1424.93
Sr	88	103	1	He	107	29.73
Mo	95	103	1	He	26	241.24
Ag	107	103	1	He	13	495.90
Cd	111	115	1	He	1	8507.26
Sn	118	115	1	He	1578	0.54
Sb	123	115	1	He	26	147.36
Ba	137	115	1	He	7	1499.63
W	182	159	1	He	1671	0.06
Tl	205	165	1	He	33	90.02
Pb	208	165	1	He	1212	0.68

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1276810	0.35
Sc	45	1	He	163460	1.52
Sc	45	2	NoGas	8842934	0.43
Rh	103	1	He	1010526	1.06
In	115	1	He	257801	0.61
Tb	159	1	He	1155473	0.54
Ho	165	1	He	1147359	0.13
Bi	209	1	He	790610	0.70

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Calibration Standard Report

Sample Table

Sample Name	STD1-2495516
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:07:03-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	249336	0.00
Be	9	2	NoGas	49593	0.00
B	11	2	NoGas	42264	0.01
Na	23	1	He	2422426	0.00
Mg	24	1	He	1354457	0.00
Al	27	1	He	7704	0.04
K	39	1	He	651286	0.00
Ca	44	1	He	37722	0.01
Ti	47	1	He	533	2.82
V	51	1	He	18694	0.02
Cr	52	1	He	24403	0.00
Mn	55	1	He	59829	0.00
Fe	56	1	He	4685752	0.00
Co	59	1	He	43095	0.00
Ni	60	1	He	12143	0.03
Cu	63	1	He	40687	0.00
Zn	66	1	He	6046	0.07
As	75	1	He	2530	0.19
Se	78	1	He	118	4.97
Sr	88	1	He	11533	0.01
Mo	95	1	He	13973	0.01
Ag	107	1	He	50864	0.00
Cd	111	1	He	5723	0.01
Sn	118	1	He	11126	0.04
Sb	123	1	He	12044	0.02
Ba	137	1	He	4186	0.01
W	182	1	He	61365	0.00
Tl	205	1	He	92698	0.00
Pb	208	1	He	123698	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1260903	1.17	1276810	98.75	60	120	
Sc	45	1	He	161712	7.27	163460	98.93	60	120	
Sc	45	2	NoGas	8760325	1.18	8842934	99.07	60	120	
Rh	103	1	He	1016767	8.93	1010526	100.62	60	120	
In	115	1	He	256482	6.06	257801	99.49	60	120	
Tb	159	1	He	1178128	10.94	1155473	101.96	60	120	
Ho	165	1	He	1170678	10.90	1147359	102.03	60	120	
Bi	209	1	He	787231	5.41	790610	99.57	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2517056
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:11:14-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	881320	0.00
Be	9	2	NoGas	249560	0.00
B	11	2	NoGas	167862	0.00
Na	23	1	He	11764328	0.00
Mg	24	1	He	6572757	0.00
Al	27	1	He	27466	0.01
K	39	1	He	3228587	0.00
Ca	44	1	He	186769	0.00
Ti	47	1	He	2706	0.21
V	51	1	He	92851	0.00
Cr	52	1	He	115157	0.00
Mn	55	1	He	289610	0.00
Fe	56	1	He	22670796	0.00
Co	59	1	He	208894	0.00
Ni	60	1	He	58765	0.00
Cu	63	1	He	169197	0.00
Zn	66	1	He	21161	0.00
As	75	1	He	12393	0.00
Se	78	1	He	603	0.56
Sr	88	1	He	56278	0.00
Mo	95	1	He	70503	0.00
Ag	107	1	He	248839	0.00
Cd	111	1	He	27924	0.00
Sn	118	1	He	52508	0.00
Sb	123	1	He	60149	0.00
Ba	137	1	He	20318	0.00
W	182	1	He	299318	0.00
Tl	205	1	He	451677	0.00
Pb	208	1	He	595912	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1217288	0.55	1276810	95.34	60	120	
Sc	45	1	He	162960	0.75	163460	99.69	60	120	
Sc	45	2	NoGas	8765197	0.77	8842934	99.12	60	120	
Rh	103	1	He	982654	0.56	1010526	97.24	60	120	
In	115	1	He	254484	0.64	257801	98.71	60	120	
Tb	159	1	He	1135258	0.97	1155473	98.25	60	120	
Ho	165	1	He	1149496	0.44	1147359	100.19	60	120	
Bi	209	1	He	757430	0.37	790610	95.80	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:15:24-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	90916	0.00
Be	9	2	NoGas	498266	0.00
B	11	2	NoGas	11411	0.03
Na	23	1	He	23357043	0.00
Mg	24	1	He	13100274	0.00
Al	27	1	He	55390	0.00
K	39	1	He	6451736	0.00
Ca	44	1	He	373949	0.00
Ti	47	1	He	1	15604.06
V	51	1	He	184668	0.00
Cr	52	1	He	230930	0.00
Mn	55	1	He	580688	0.00
Fe	56	1	He	45405258	0.00
Co	59	1	He	417191	0.00
Ni	60	1	He	115642	0.00
Cu	63	1	He	330869	0.00
Zn	66	1	He	41341	0.00
As	75	1	He	24744	0.01
Se	78	1	He	1194	0.07
Sr	88	1	He	113377	0.00
Mo	95	1	He	191	13.30
Ag	107	1	He	483968	0.00
Cd	111	1	He	55021	0.00
Sn	118	1	He	385	10.63
Sb	123	1	He	198	7.10
Ba	137	1	He	41533	0.00
W	182	1	He	2700	0.17
Tl	205	1	He	891352	0.00
Pb	208	1	He	1171179	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1264815	0.92	1276810	99.06	60	120	
Sc	45	1	He	161970	1.90	163460	99.09	60	120	
Sc	45	2	NoGas	8985144	0.23	8842934	101.61	60	120	
Rh	103	1	He	968068	0.44	1010526	95.80	60	120	
In	115	1	He	249689	0.56	257801	96.85	60	120	
Tb	159	1	He	1134919	0.53	1155473	98.22	60	120	
Ho	165	1	He	1145456	0.84	1147359	99.83	60	120	
Bi	209	1	He	740693	1.26	790610	93.69	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:19:35-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	1824886	0.00
Be	9	2	NoGas	244	9.30
B	11	2	NoGas	342576	0.00
Na	23	1	He	12916	0.06
Mg	24	1	He	1582	0.68
Al	27	1	He	64	48.38
K	39	1	He	11882	0.02
Ca	44	1	He	184	9.96
Ti	47	1	He	5543	0.03
V	51	1	He	308	22.39
Cr	52	1	He	812	0.44
Mn	55	1	He	210	2.27
Fe	56	1	He	11212	0.23
Co	59	1	He	347	2.94
Ni	60	1	He	170	13.30
Cu	63	1	He	6019	0.07
Zn	66	1	He	67	19.84
As	75	1	He	32	14.12
Se	78	1	He	6	503.09
Sr	88	1	He	30	133.51
Mo	95	1	He	144829	0.00
Ag	107	1	He	59	78.28
Cd	111	1	He	20	140.01
Sn	118	1	He	114167	0.00
Sb	123	1	He	125184	0.00
Ba	137	1	He	17	120.06
W	182	1	He	596281	0.00
Tl	205	1	He	856	2.21
Pb	208	1	He	1749	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1274521	0.82	1276810	99.82	60	120	
Sc	45	1	He	167184	1.47	163460	102.28	60	120	
Sc	45	2	NoGas	9113379	0.91	8842934	103.06	60	120	
Rh	103	1	He	1041189	0.09	1010526	103.03	60	120	
In	115	1	He	267366	0.82	257801	103.71	60	120	
Tb	159	1	He	1160942	0.51	1155473	100.47	60	120	
Ho	165	1	He	1175513	1.18	1147359	102.45	60	120	
Bi	209	1	He	794357	1.16	790610	100.47	60	120	

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Calibration for 198_CCB.d

Batch Folder: D:\Analytical Runs\I10050716G.b\
Analysis File: I10050716G.batch.bin
DA Date-Time: 5/9/2016 8:22:24 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	5/7/2016 1:02:50 PM
2	003CALS.d	STD1-2495516	5/7/2016 1:07:03 PM
3	004CALS.d	STD2-2517056	5/7/2016 1:11:14 PM
4	005CALS.d	STD3-2510771	5/7/2016 1:15:24 PM
5	006CALS.d	STD4-2510772	5/7/2016 1:19:35 PM

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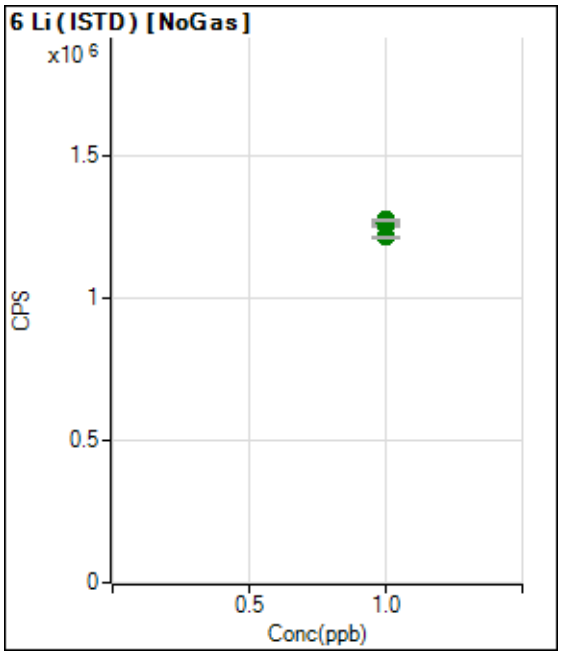

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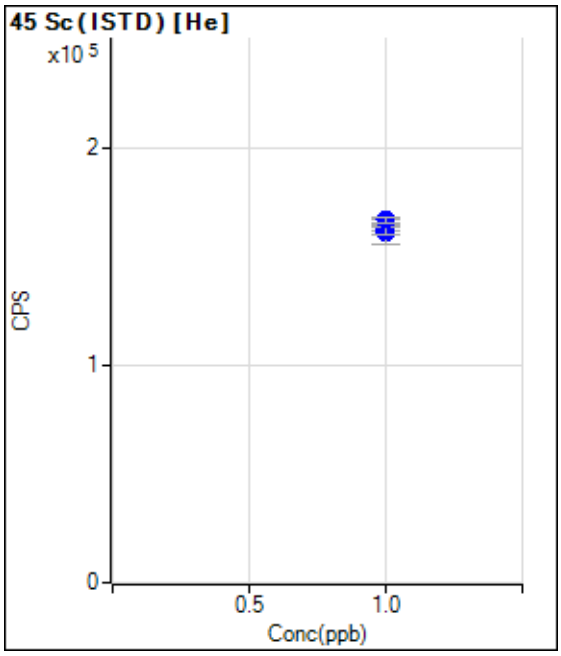
1	☐	1.000		1276809.76		A	0.4
2	☐	1.000		1260902.71		A	1.2
3	☐	1.000		1217287.58		A	0.5
4	☐	1.000		1264814.65		A	0.9
5	☐	1.000		1274520.93		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		163459.53		P	1.5
2	☐	1.000		161712.14		P	7.3
3	☐	1.000		162959.77		P	0.7
4	☐	1.000		161970.10		P	1.9
5	☐	1.000		167183.62		P	1.5

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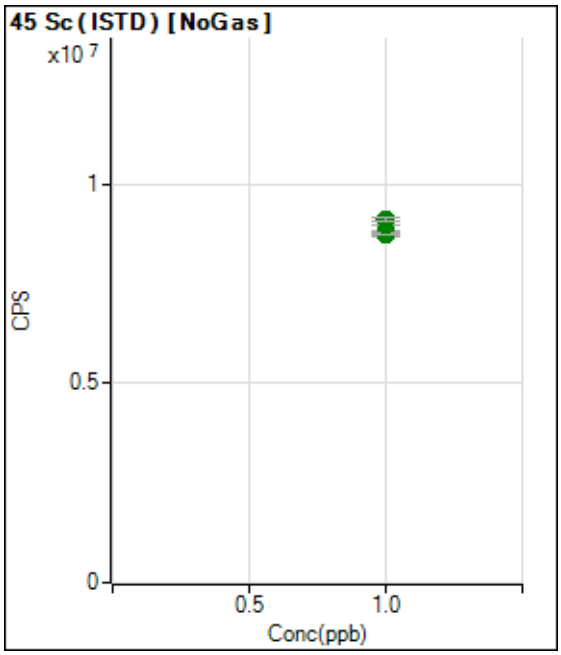
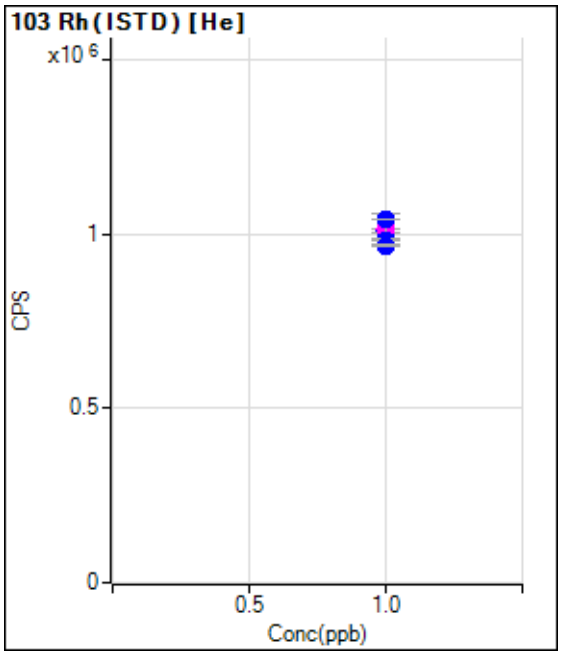


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8842934.09		A	0.4
2	☐	1.000		8760324.65		A	1.2
3	☐	1.000		8765197.43		A	0.8
4	☐	1.000		8985143.81		A	0.2
5	☐	1.000		9113378.52		A	0.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1010526.29		P	1.1
2	☐	1.000		1016766.63		M	8.9
3	☐	1.000		982654.00		P	0.6
4	☐	1.000		968068.32		P	0.4
5	☐	1.000		1041188.76		P	0.1

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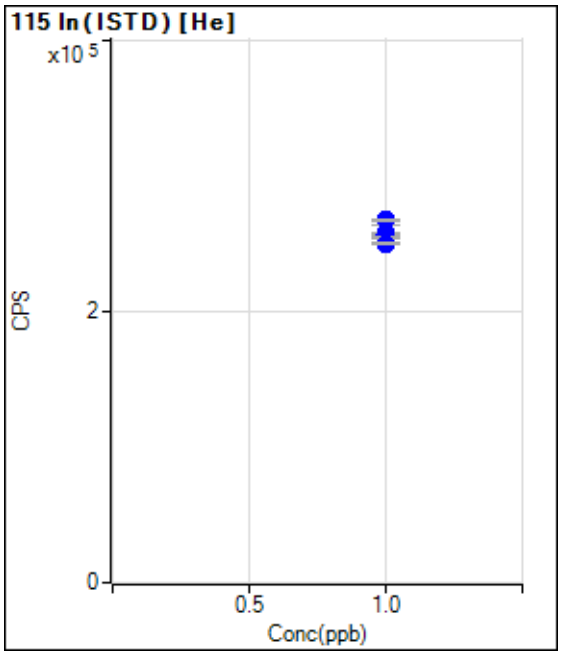
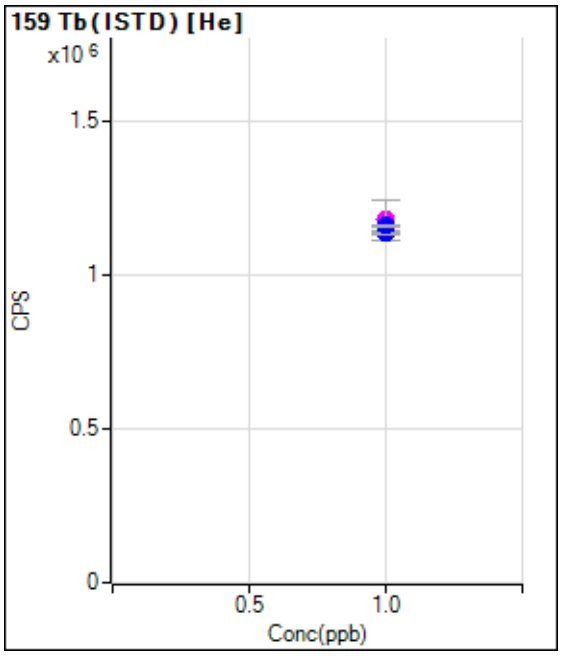


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		257800.69		P	0.6
2		1.000		256481.81		P	6.1
3		1.000		254483.61		P	0.6
4		1.000		249688.83		P	0.6
5		1.000		267365.94		P	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1155473.05		P	0.5
2		1.000		1178128.32		M	10.9
3		1.000		1135258.21		P	1.0
4		1.000		1134918.84		P	0.5
5		1.000		1160941.65		P	0.5

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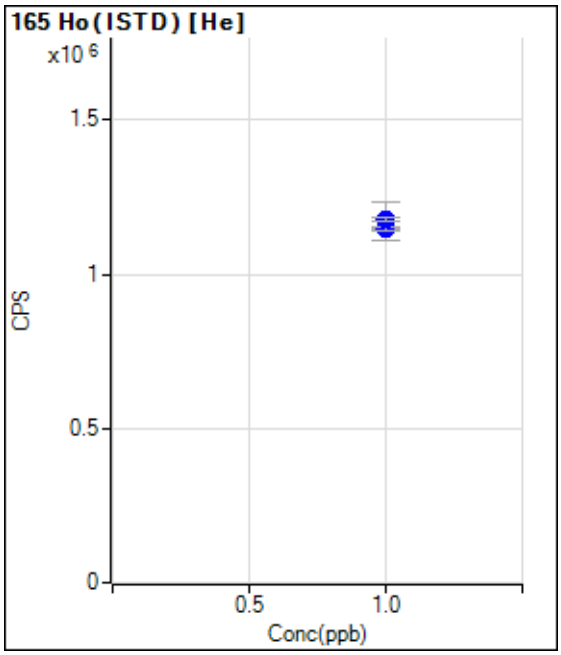
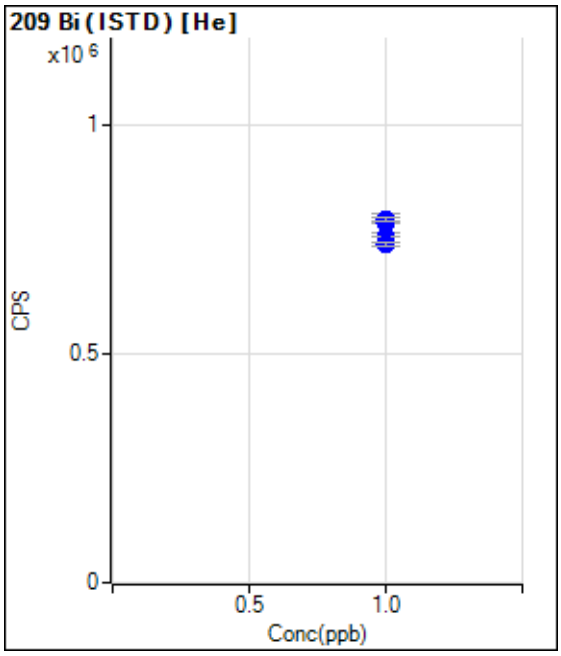


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1147358.76		P	0.1
2	☐	1.000		1170678.29		M	10.9
3	☐	1.000		1149496.08		P	0.4
4	☐	1.000		1145455.74		P	0.8
5	☐	1.000		1175512.66		P	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		790610.45		P	0.7
2	☐	1.000		787230.98		P	5.4
3	☐	1.000		757430.25		P	0.4
4	☐	1.000		740693.45		P	1.3
5	☐	1.000		794356.97		P	1.2

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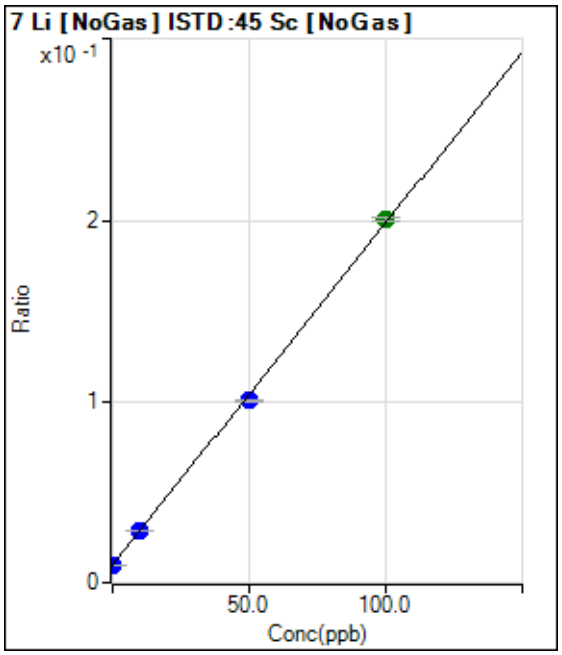
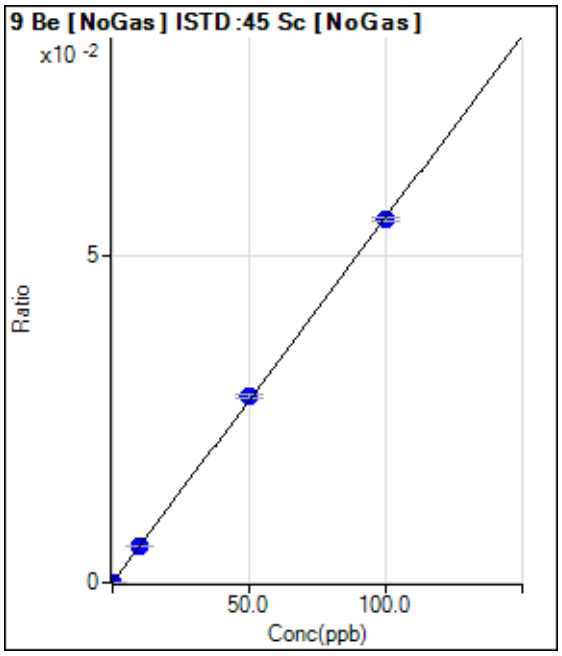


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86187.63	0.0097	P	0.2
2	☐	10.000	9.919	249335.75	0.0285	P	1.7
3	☐	50.000	48.119	881320.45	0.1006	P	1.3
4	☐			90916.28	0.0101	P	0.4
5	☐	100.000	100.949	1824886.32	0.2003	A	1.1

y = 0.0019 * x + 0.0097
R = 0.9997
DL = 0.0364
BEC = 5.165

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.30	0.0000	P	46.4
2	☐	10.000	10.136	49592.73	0.0057	P	0.8
3	☐	50.000	51.057	249560.32	0.0285	P	1.5
4	☐	100.000	99.458	498266.48	0.0555	P	1.1
5	☐			244.46	0.0000	P	23.6

y = 5.5746E-004 * x + 1.0880E-005
R = 0.9999
DL = 0.02719
BEC = 0.01952

Weight: <None>
Min Conc: <None>

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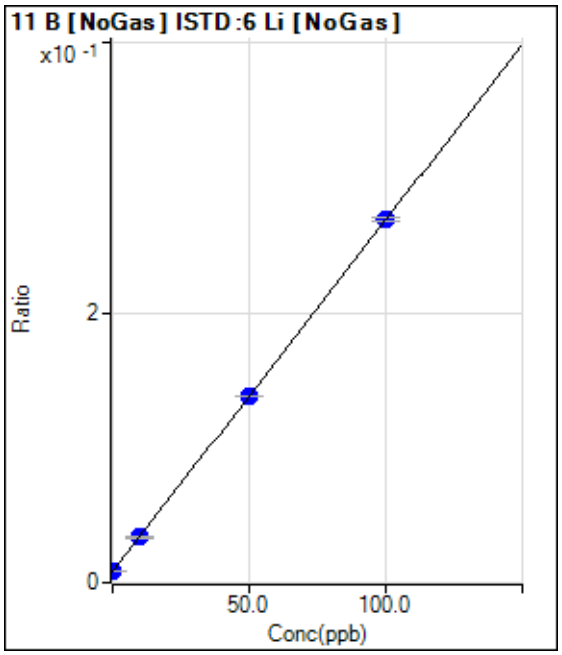
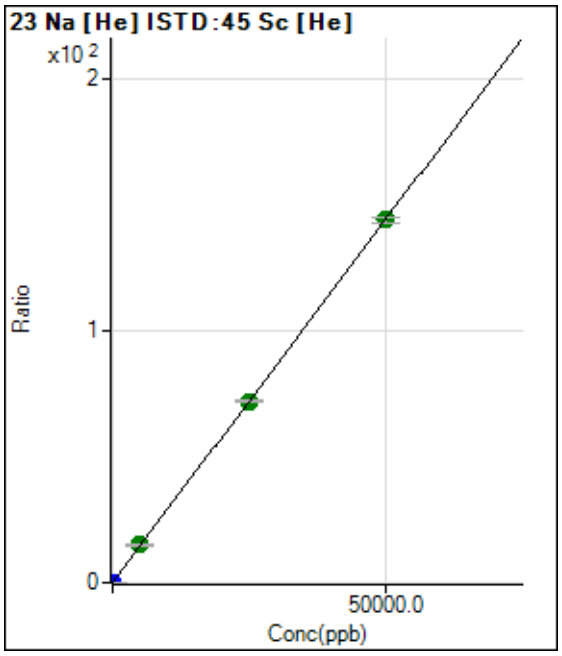


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10414.49	0.0082	P	5.1
2	☐	10.000	9.745	42264.05	0.0335	P	3.8
3	☐	50.000	49.832	167861.87	0.1379	P	0.3
4	☐			11411.44	0.0090	P	2.5
5	☐	100.000	100.110	342575.59	0.2688	P	1.1

y = 0.0026 * x + 0.0082
R = 1.0000
DL = 0.4754
BEC = 3.133

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8550.46	0.0523	P	5.2
2	☐	5000.000	5192.509	2422426.24	15.0319	A	7.2
3	☐	25000.000	25008.258	11764327.77	72.1974	A	1.6
4	☐	50000.000	49976.620	23357043.06	144.2273	A	1.3
5	☐			12916.22	0.0773	P	7.9

y = 0.0029 * x + 0.0523
R = 1.0000
DL = 2.827
BEC = 18.14

Weight: <None>
Min Conc: <None>

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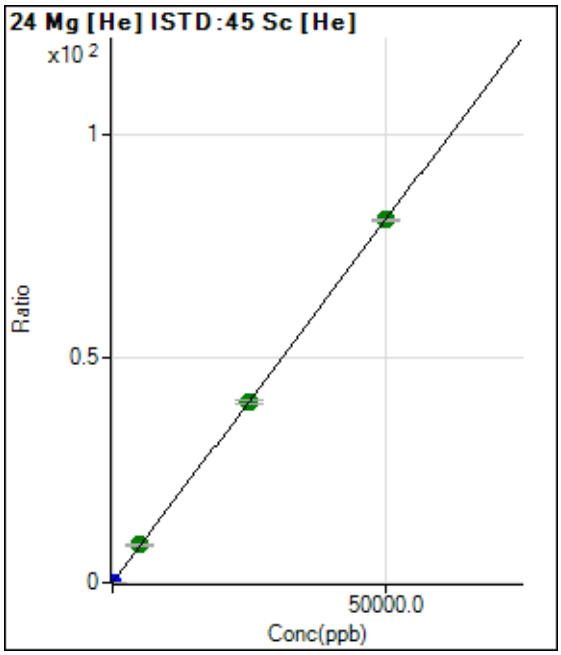
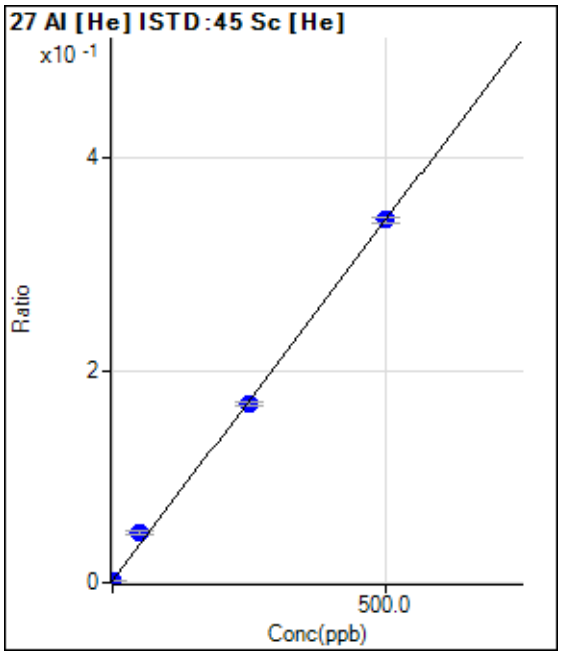


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	781.53	0.0048	P	12.0
2	☐	5000.000	5197.974	1354456.57	8.4115	A	8.8
3	☐	25000.000	24937.886	6572756.68	40.3371	A	1.7
4	☐	50000.000	50011.260	13100274.02	80.8886	A	0.8
5	☐			1581.62	0.0095	P	10.5

y = 0.0016 * x + 0.0048
R = 1.0000
DL = 1.06
BEC = 2.954

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	295.56	0.0018	P	20.6
2	☐	50.000	67.650	7703.92	0.0478	P	7.3
3	☐	250.000	245.342	27466.01	0.1686	P	3.0
4	☐	500.000	500.564	55390.09	0.3420	P	1.6
5	☐			64.44	0.0004	P	30.7

y = 6.7969E-004 * x + 0.0018
R = 0.9992
DL = 1.647
BEC = 2.666

Weight: <None>
Min Conc: <None>

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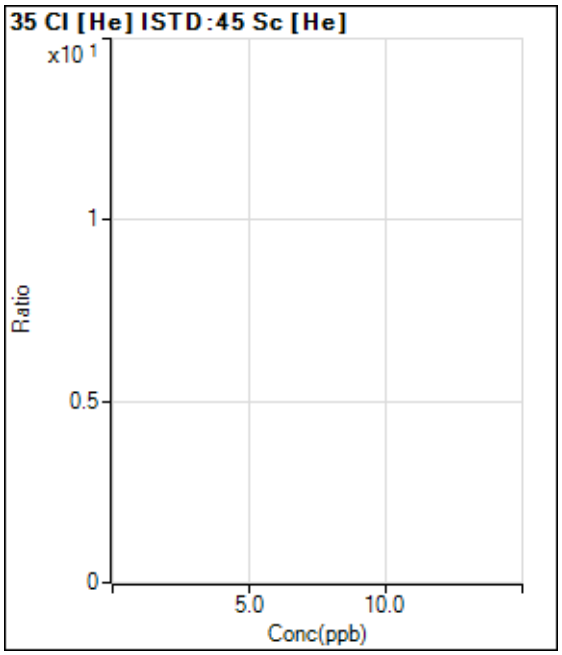
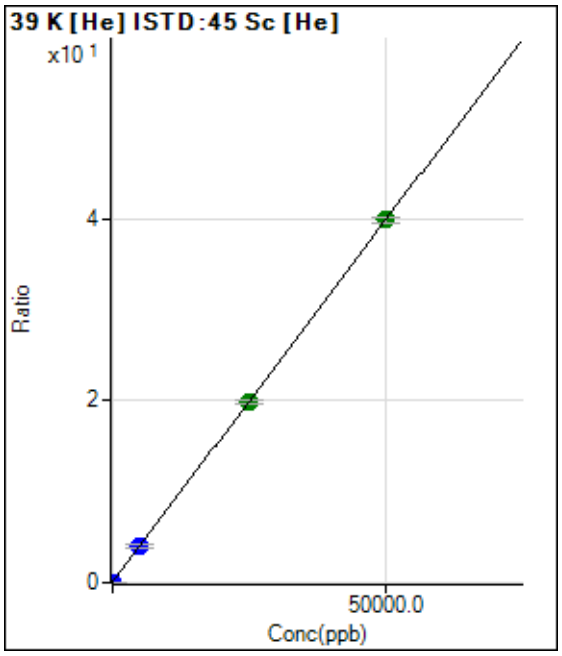


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			13370041.60	81.8128	A	2.4
2	☐			14607089.70	90.6940	A	8.3
3	☐			13982935.09	85.8148	A	2.3
4	☐			14515371.18	89.6247	A	1.3
5	☐			15091760.51	90.2908	A	2.3

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10477.46	0.0641	P	2.1
2	☐	5000.000	5007.575	651285.52	4.0424	P	7.6
3	☐	25000.000	24859.325	3228587.02	19.8137	A	1.7
4	☐	50000.000	50069.580	6451735.62	39.8422	A	1.9
5	☐			11882.25	0.0711	P	2.2

y = 7.9446E-004 * x + 0.0641

R = 1.0000

DL = 5.023

BEC = 80.7

Weight: <None>

Min Conc: <None>

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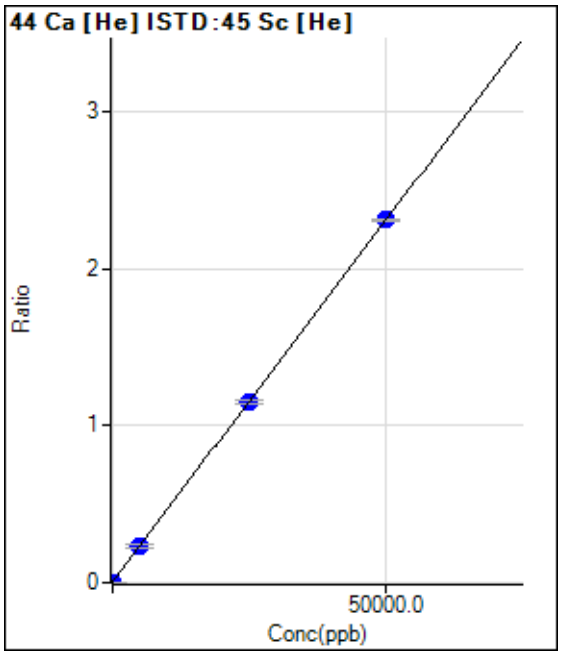
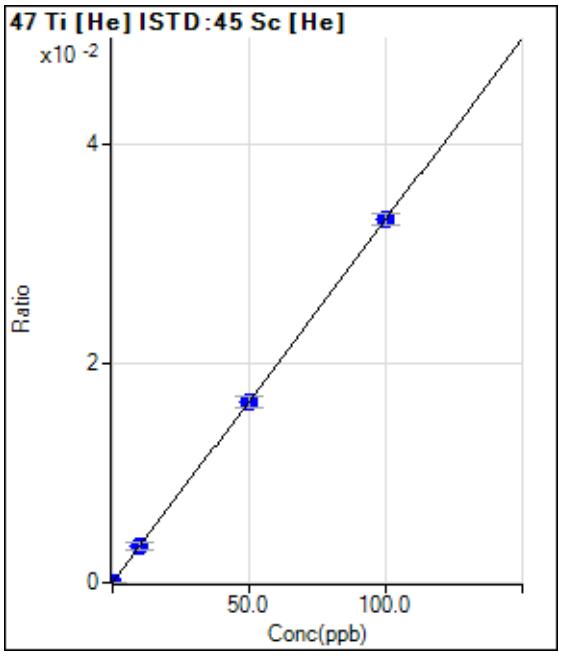


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	749.00	0.0046	P	7.6
2	☐	5000.000	4993.444	37722.12	0.2343	P	9.0
3	☐	25000.000	24817.202	186769.46	1.1462	P	1.8
4	☐	50000.000	50092.055	373949.48	2.3089	P	0.5
5	☐			183.85	0.0011	P	19.7

y = 4.6001E-005 * x + 0.0046
R = 1.0000
DL = 22.64
BEC = 99.64

Weight: <None>
Min Conc: <None>

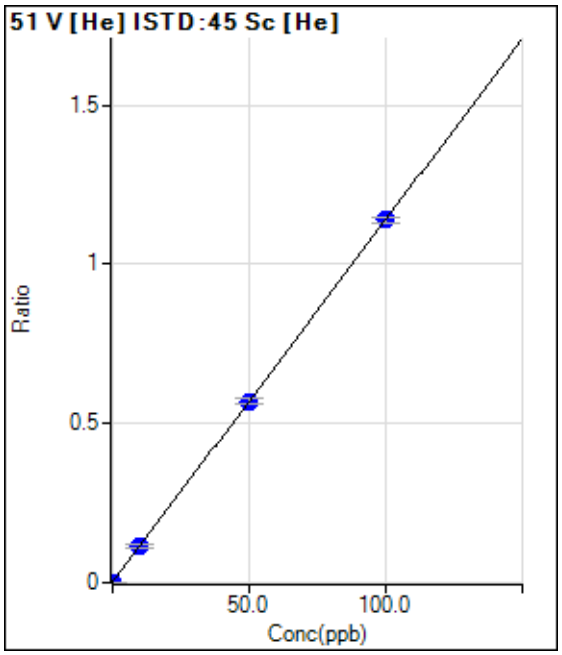


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	173.2
2	☐	10.000	10.010	533.35	0.0033	P	21.7
3	☐	50.000	50.045	2705.79	0.0166	P	6.4
4	☐			1.11	0.0000	P	173.2
5	☐	100.000	99.976	5543.15	0.0332	P	3.2

y = 3.3160E-004 * x + 1.3569E-005
R = 1.0000
DL = 0.2126
BEC = 0.04092

Weight: <None>
Min Conc: <None>

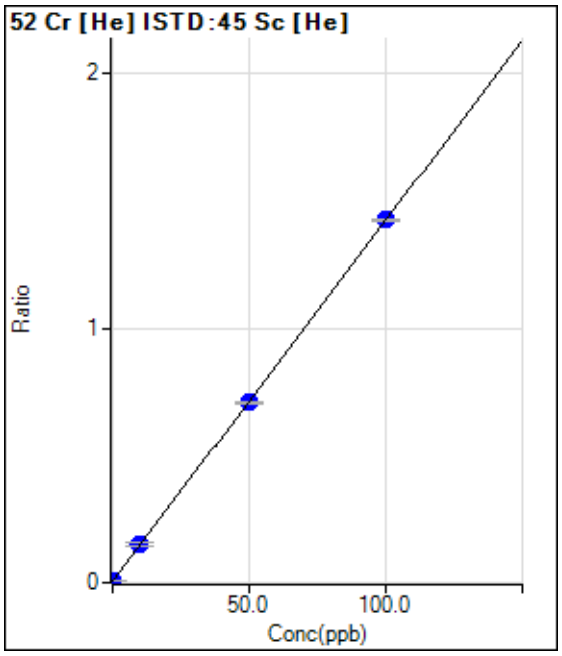
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.55	0.0011	P	108.6
2	☐	10.000	10.099	18693.60	0.1161	P	9.1
3	☐	50.000	49.947	92850.64	0.5698	P	3.3
4	☐	100.000	100.016	184667.65	1.1399	P	1.3
5	☐			307.80	0.0019	P	69.7

y = 0.0114 * x + 0.0011
R = 1.0000
DL = 0.3179
BEC = 0.09754

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	901.16	0.0055	P	10.8
2	☐	10.000	10.299	24403.22	0.1515	P	7.6
3	☐	50.000	49.483	115156.85	0.7067	P	1.8
4	☐	100.000	100.229	230929.55	1.4258	P	0.6
5	☐			812.25	0.0049	P	4.2

y = 0.0142 * x + 0.0055
R = 1.0000
DL = 0.1258
BEC = 0.3894

Weight: <None>
Min Conc: <None>

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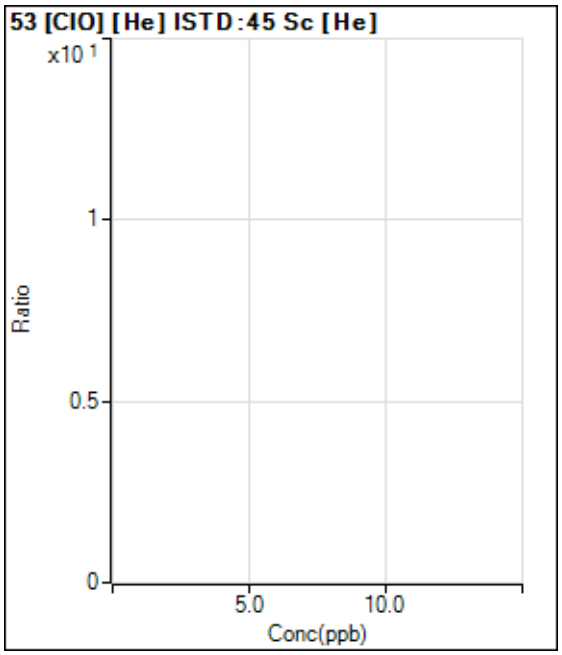
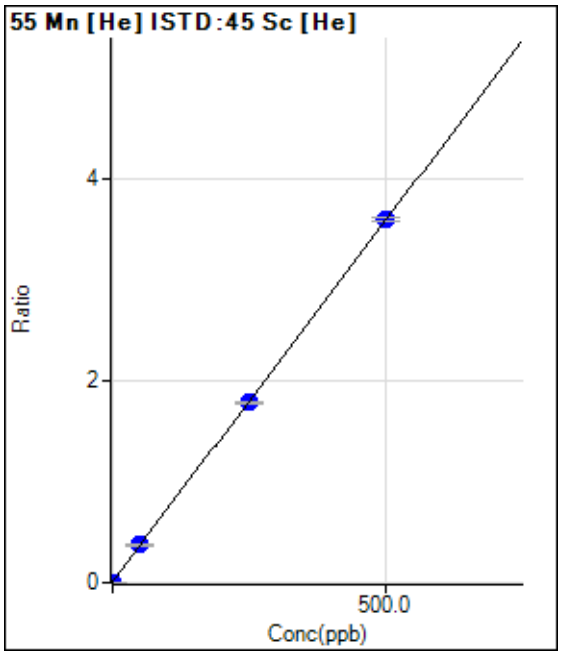


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			237.05	0.0015	P	30.2
2	☐			3144.87	0.0195	P	9.4
3	☐			14235.83	0.0874	P	4.5
4	☐			28627.22	0.1768	P	3.2
5	☐			192.60	0.0011	P	27.1

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1473.42	0.0090	P	4.7
2	☐	50.000	50.775	59829.37	0.3715	P	8.2
3	☐	250.000	247.722	289610.36	1.7773	P	1.5
4	☐	500.000	501.061	580688.19	3.5856	P	1.1
5	☐			210.00	0.0013	P	5.6

y = 0.0071 * x + 0.0090

R = 1.0000

DL = 0.1791

BEC = 1.263

Weight: <None>

Min Conc: <None>

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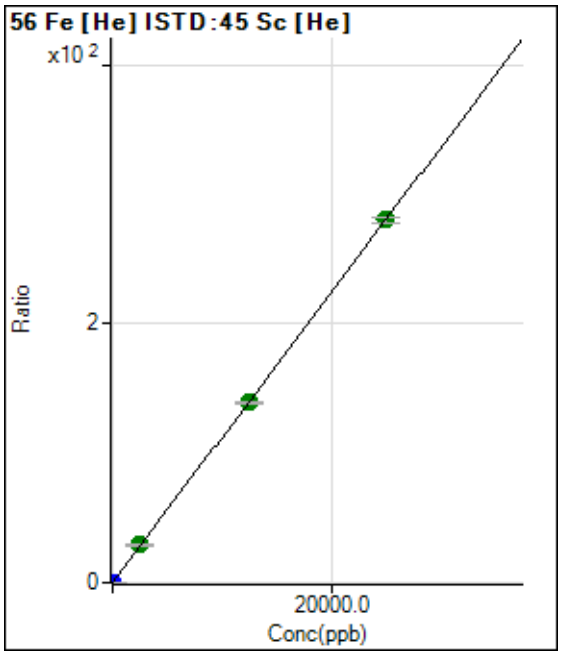
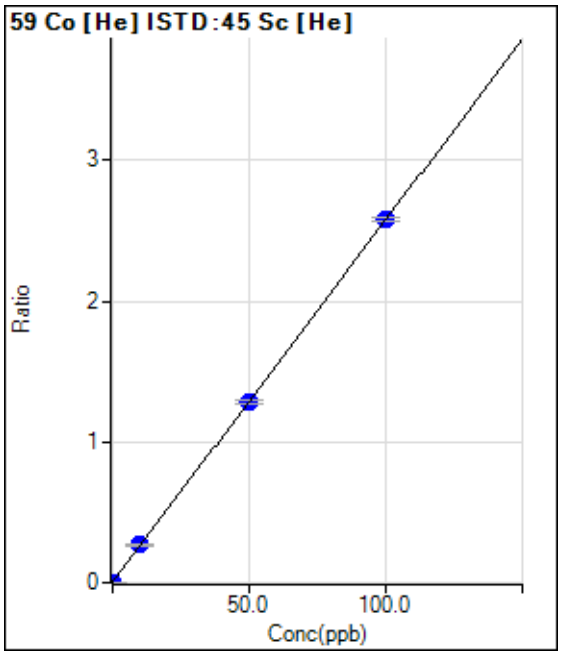


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3889.36	0.0238	P	9.3
2	☐	2500.000	2596.018	4685752.45	29.1004	A	8.8
3	☐	12500.000	12419.819	22670796.32	139.1312	A	1.8
4	☐	25000.000	25030.489	45405258.20	280.3763	A	1.3
5	☐			11211.57	0.0669	P	24.5

y = 0.0112 * x + 0.0238
R = 1.0000
DL = 0.5908
BEC = 2.126

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	487.79	0.0030	P	9.6
2	☐	10.000	10.296	43094.75	0.2676	P	8.9
3	☐	50.000	49.754	208893.82	1.2820	P	2.0
4	☐	100.000	100.093	417190.61	2.5760	P	0.9
5	☐			346.68	0.0021	P	10.6

y = 0.0257 * x + 0.0030
R = 1.0000
DL = 0.03358
BEC = 0.1162

Weight: <None>
Min Conc: <None>

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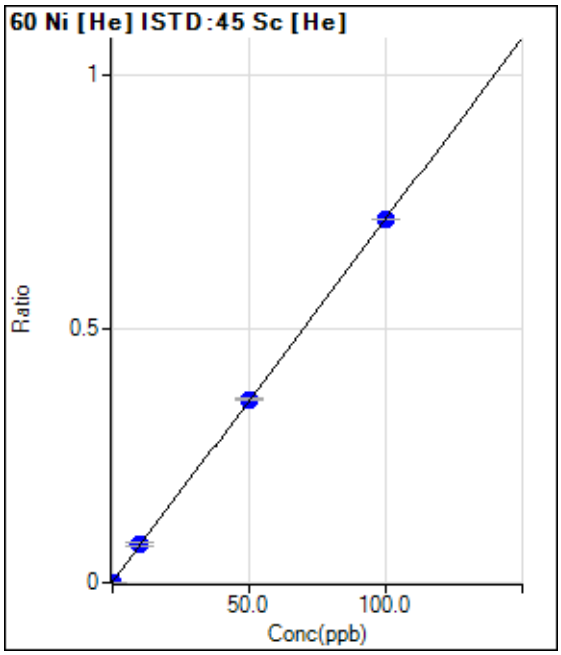
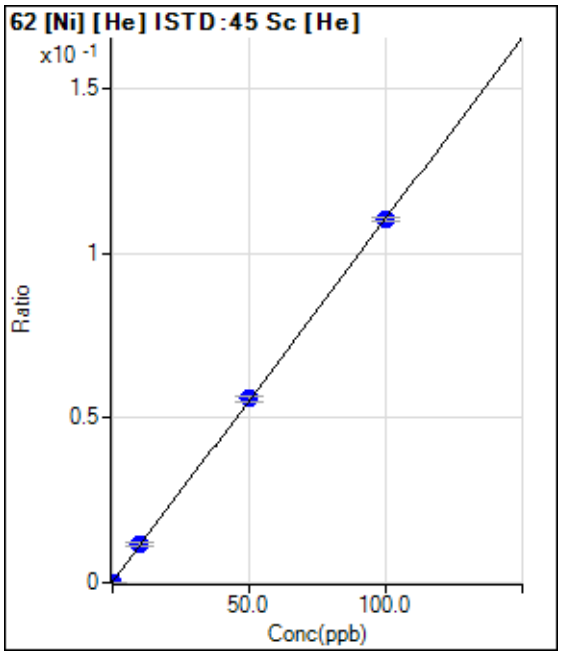


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	238.89	0.0015	P	3.8
2	☐	10.000	10.368	12143.11	0.0755	P	10.6
3	☐	50.000	50.312	58765.34	0.3606	P	1.5
4	☐	100.000	99.807	115642.15	0.7140	P	0.2
5	☐			170.00	0.0010	P	23.4

y = 0.0071 * x + 0.0015
R = 1.0000
DL = 0.02344
BEC = 0.2047

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.44	0.0002	P	15.0
2	☐	10.000	10.399	1874.57	0.0117	P	13.5
3	☐	50.000	50.418	9085.72	0.0558	P	2.6
4	☐	100.000	99.751	17837.88	0.1101	P	1.1
5	☐			38.89	0.0002	P	41.4

y = 0.0011 * x + 2.1081E-004
R = 1.0000
DL = 0.08631
BEC = 0.1913

Weight: <None>
Min Conc: <None>

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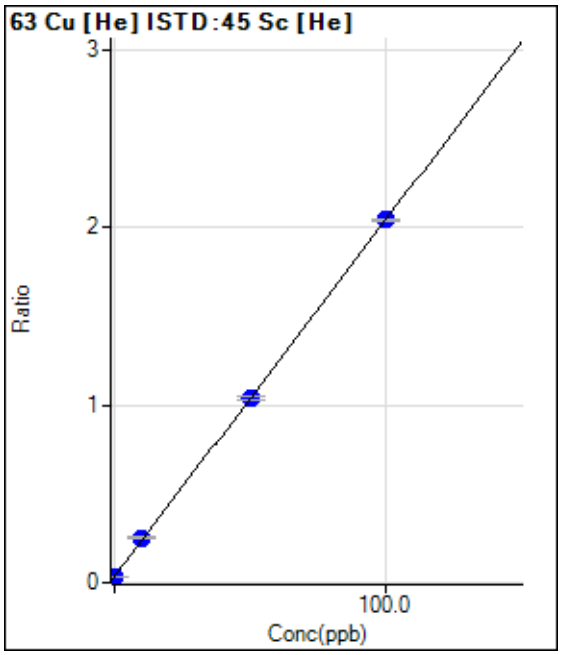
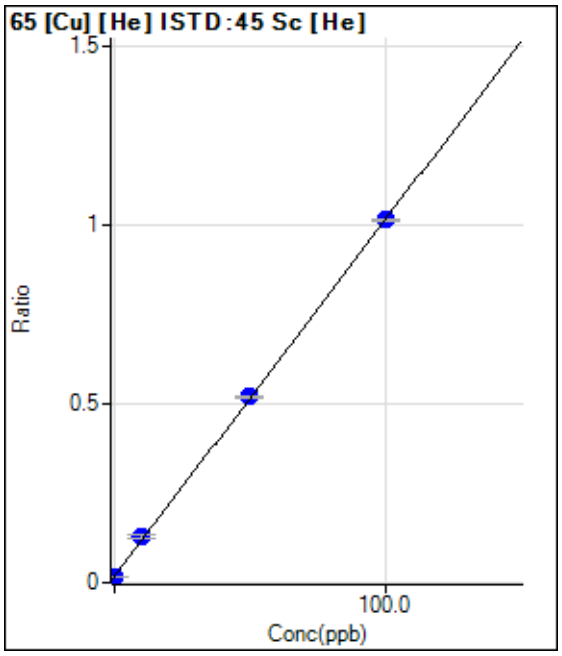


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5249.71	0.0321	P	3.0
2	☐	10.000	10.944	40687.00	0.2524	P	6.5
3	☐	50.000	49.998	169197.18	1.0384	P	2.8
4	☐	100.000	99.907	330868.78	2.0429	P	0.6
5	☐			6018.84	0.0360	P	3.0

y = 0.0201 * x + 0.0321
R = 1.0000
DL = 0.1419
BEC = 1.596

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2530.21	0.0155	P	5.2
2	☐	10.000	11.264	20638.65	0.1281	P	7.7
3	☐	50.000	50.268	84421.15	0.5181	P	1.4
4	☐	100.000	99.740	164023.11	1.0127	P	0.5
5	☐			2865.82	0.0171	P	3.6

y = 0.0100 * x + 0.0155
R = 0.9999
DL = 0.2424
BEC = 1.548

Weight: <None>
Min Conc: <None>

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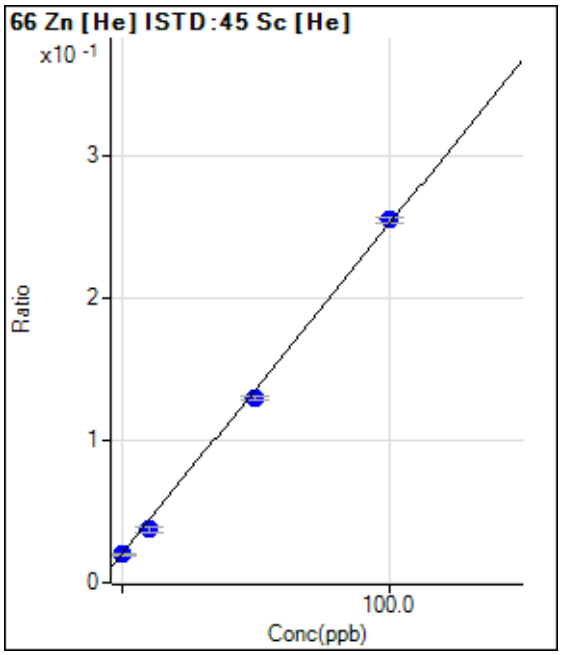
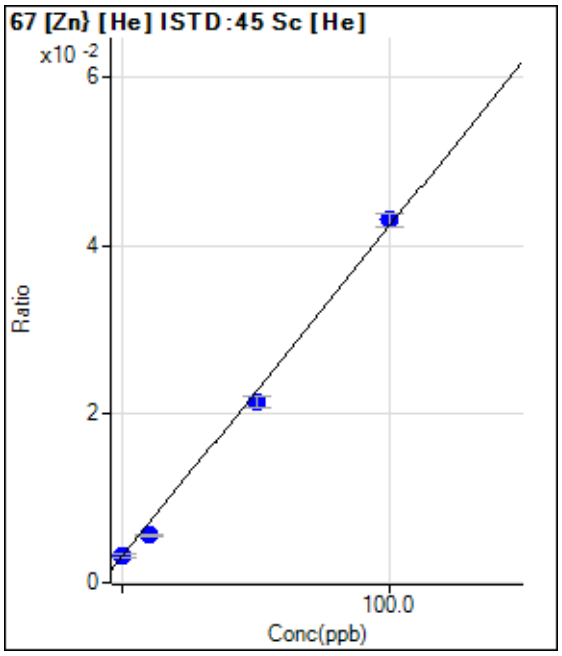


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3258.12	0.0199	P	5.7
2	☐	10.000	7.613	6045.53	0.0376	P	10.5
3	☐	50.000	47.426	21161.47	0.1299	P	1.3
4	☐	100.000	101.526	41340.83	0.2553	P	1.3
5	☐			66.67	0.0004	P	14.5

y = 0.0023 * x + 0.0199
R = 0.9993
DL = 1.48
BEC = 8.595

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	522.24	0.0032	P	9.0
2	☐	10.000	6.209	907.81	0.0056	P	1.7
3	☐	50.000	46.811	3499.28	0.0215	P	6.0
4	☐	100.000	101.974	6963.68	0.0430	P	3.9
5	☐			11.11	0.0001	P	74.4

y = 3.9049E-004 * x + 0.0032
R = 0.9988
DL = 2.216
BEC = 8.177

Weight: <None>
Min Conc: <None>

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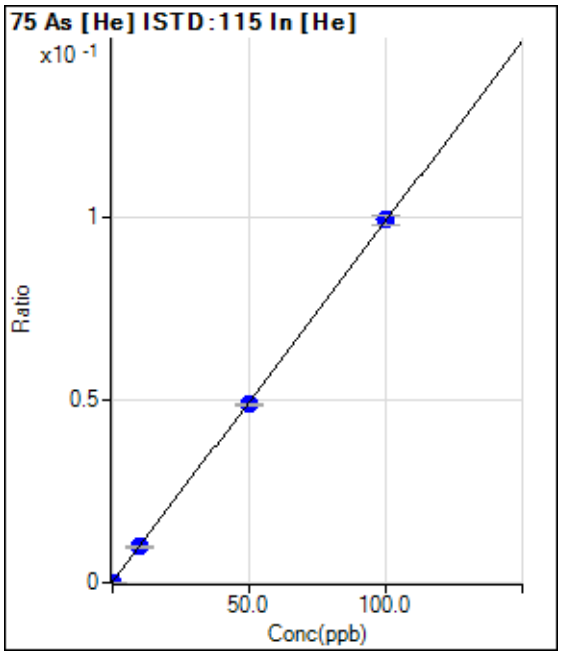


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29.08	0.0001	P	8.6
2	☐	10.000	9.907	2530.26	0.0099	P	6.4
3	☐	50.000	49.265	12392.67	0.0487	P	0.6
4	☐	100.000	100.377	24744.48	0.0991	P	2.4
5	☐			31.78	0.0001	P	4.6

y = 9.8620E-004 * x + 1.1282E-004

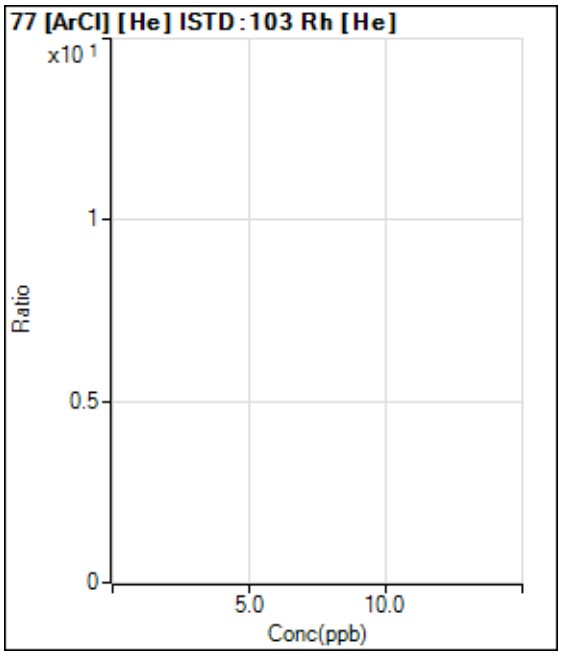
R = 1.0000

DL = 0.02942

BEC = 0.1144

Weight: <None>

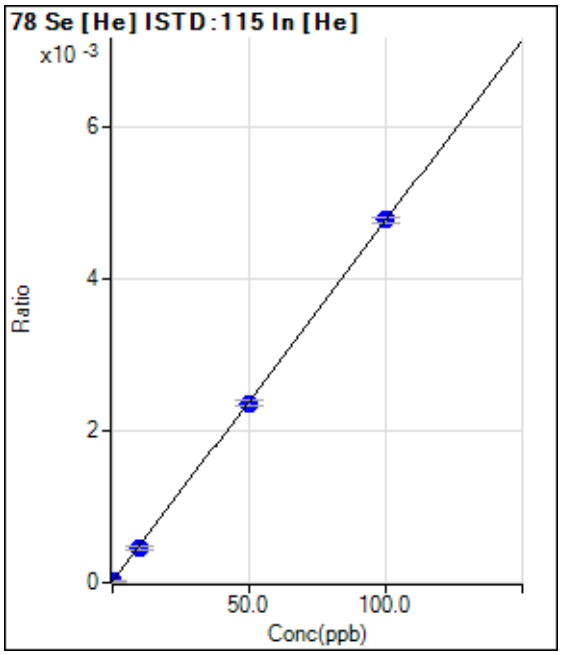
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			14.81	0.0000	P	86.6
2	☐			40.75	0.0000	P	11.9
3	☐			177.78	0.0002	P	41.3
4	☐			351.87	0.0004	P	22.1
5	☐			0.00	0.0000	P	

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.81	0.0000	P	54.0
2	☐	10.000	9.430	118.41	0.0005	P	8.9
3	☐	50.000	49.536	602.83	0.0024	P	3.6
4	☐	100.000	100.289	1193.74	0.0048	P	1.3
5	☐			5.97	0.0000	P	30.8

y = 4.7526E-005 * x + 1.4774E-005

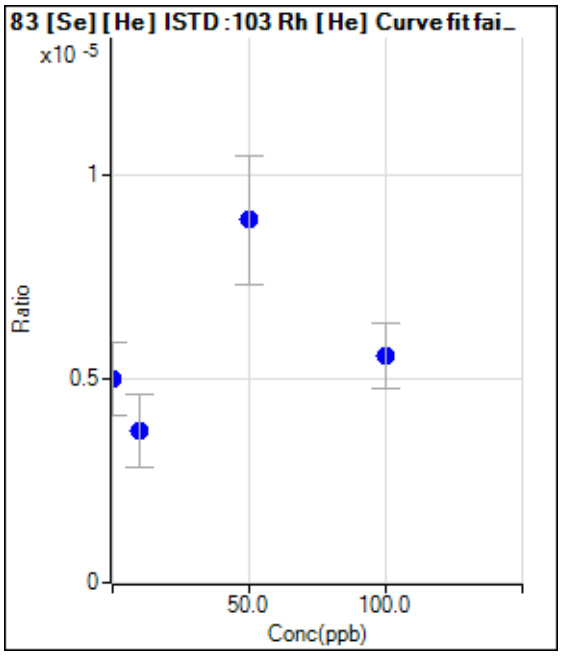
R = 1.0000

DL = 0.504

BEC = 0.3109

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		5.05	0.0000	P	35.3
2	☐	10.000		3.70	0.0000	P	48.0
3	☐	50.000		8.75	0.0000	P	35.5
4	☐	100.000		5.39	0.0000	P	28.8
5	☐			3.03	0.0000	P	33.3

Excluded

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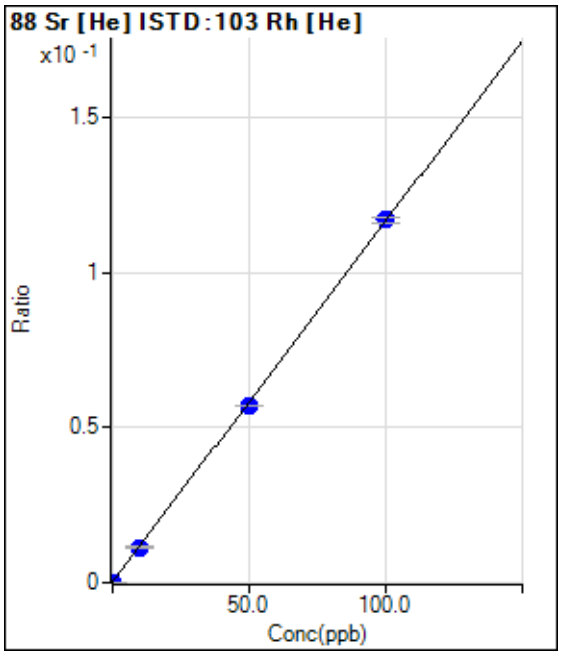


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	32.8
2	☐	10.000	9.699	11532.78	0.0114	P	8.5
3	☐	50.000	49.091	56278.33	0.0573	P	0.2
4	☐	100.000	100.484	113377.44	0.1171	P	1.2
5	☐			30.00	0.0000	P	40.1

y = 0.0012 * x + 1.0580E-004

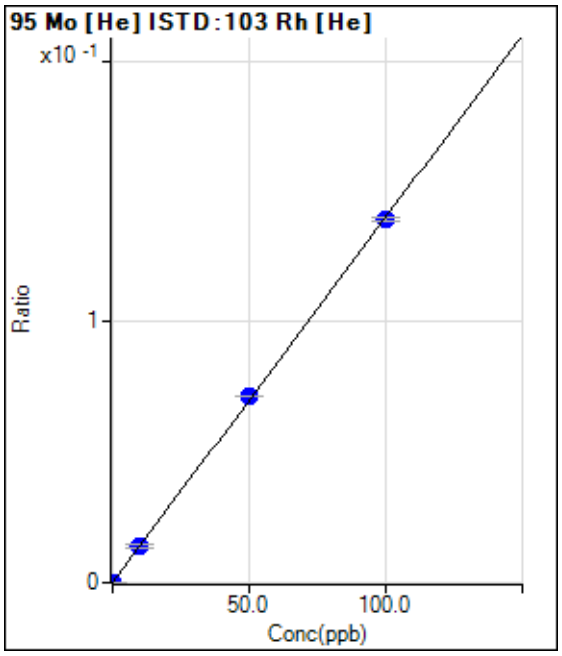
R = 0.9999

DL = 0.08928

BEC = 0.09086

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.55	0.0000	P	60.7
2	☐	10.000	9.863	13973.44	0.0138	P	10.1
3	☐	50.000	51.255	70503.11	0.0717	P	0.3
4	☐			191.11	0.0002	P	25.1
5	☐	100.000	99.386	144828.69	0.1391	P	1.1

y = 0.0014 * x + 2.5184E-005

R = 0.9999

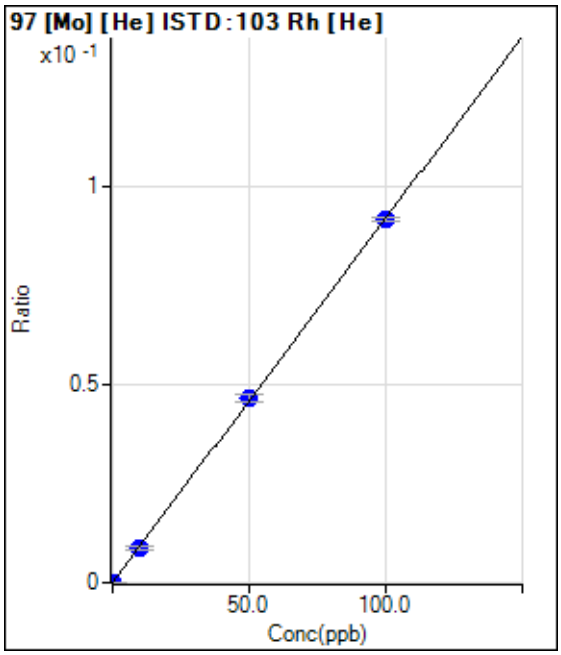
DL = 0.03275

BEC = 0.018

Weight: <None>

Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	86.6
2	☐	10.000	9.683	9002.76	0.0089	P	11.2
3	☐	50.000	50.717	45839.54	0.0466	P	3.6
4	☐			96.30	0.0001	P	23.6
5	☐	100.000	99.673	95449.80	0.0917	P	1.0

y = 9.1967E-004 * x + 7.2912E-006

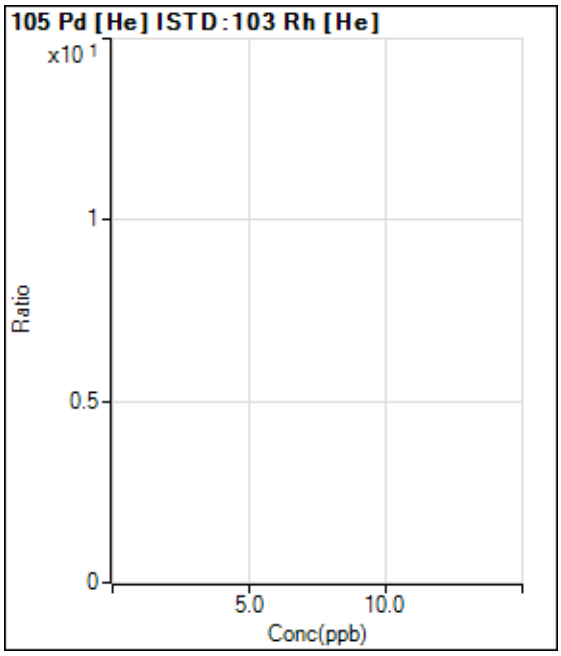
R = 0.9999

DL = 0.0206

BEC = 0.007928

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			170.38	0.0002	P	37.2
2	☐			233.35	0.0002	P	60.7
3	☐			251.86	0.0003	P	32.8
4	☐			262.98	0.0003	P	6.9
5	☐			251.86	0.0002	P	12.7

Excluded

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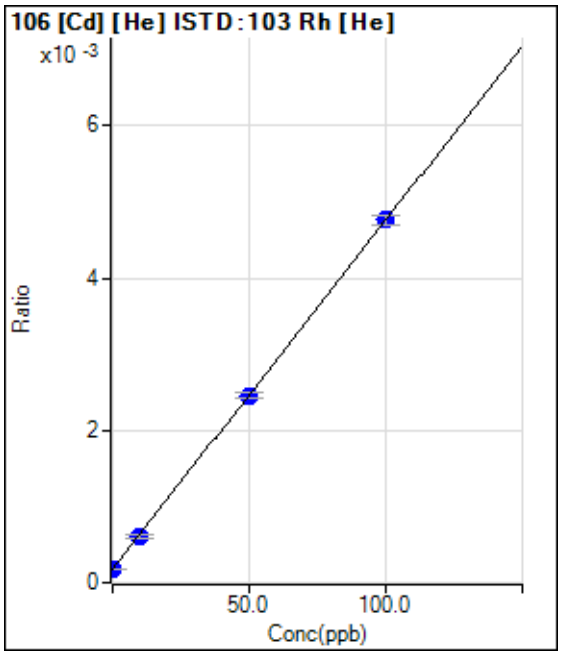


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	179.80	0.0002	P	8.5
2	☐	10.000	9.528	622.24	0.0006	P	9.7
3	☐	50.000	49.797	2416.34	0.0025	P	3.5
4	☐	100.000	100.149	4613.76	0.0048	P	2.6
5	☐			173.07	0.0002	P	2.8

y = 4.5811E-005 * x + 1.7785E-004

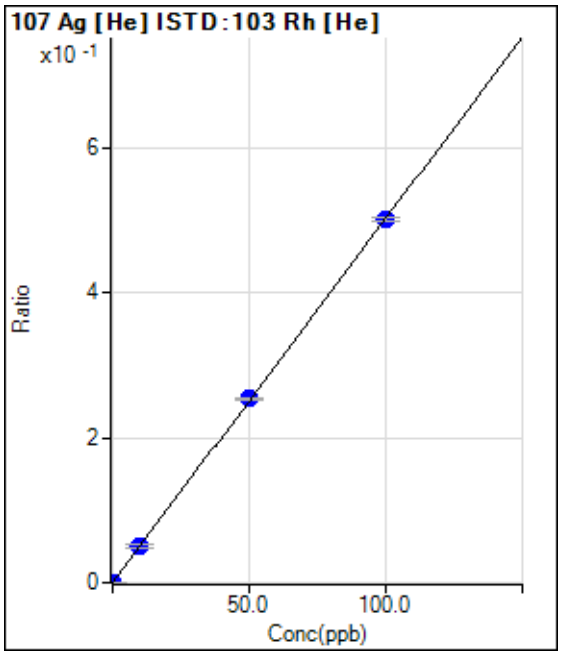
R = 1.0000

DL = 0.9896

BEC = 3.882

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	67.1
2	☐	10.000	10.037	50864.34	0.0503	P	10.1
3	☐	50.000	50.517	248838.85	0.2532	P	1.0
4	☐	100.000	99.738	483967.95	0.4999	P	0.9
5	☐			58.89	0.0001	P	46.1

y = 0.0050 * x + 1.3254E-005

R = 1.0000

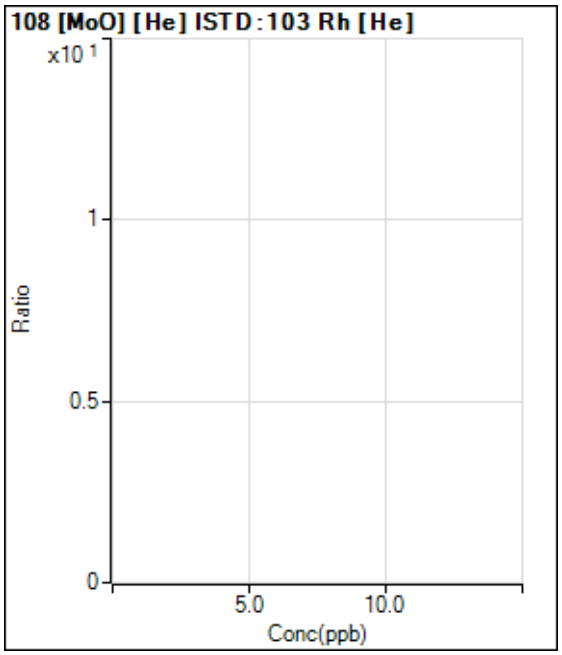
DL = 0.005321

BEC = 0.002644

Weight: <None>

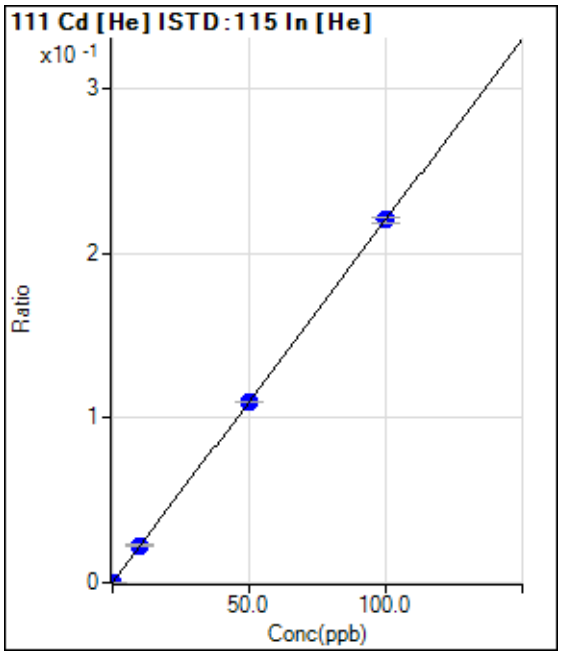
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.70	0.0000	P	173.2
2	☐			337.06	0.0003	P	30.9
3	☐			1637.19	0.0017	P	11.6
4	☐			3344.92	0.0035	P	7.9
5	☐			0.00	0.0000	P	

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.35	0.0000	P	114.1
2	☐	10.000	10.153	5722.88	0.0224	P	5.6
3	☐	50.000	49.827	27923.84	0.1097	P	0.8
4	☐	100.000	100.071	55020.51	0.2204	P	1.6
5	☐			20.16	0.0001	P	29.0

y = 0.0022 * x + 5.2026E-006

R = 1.0000

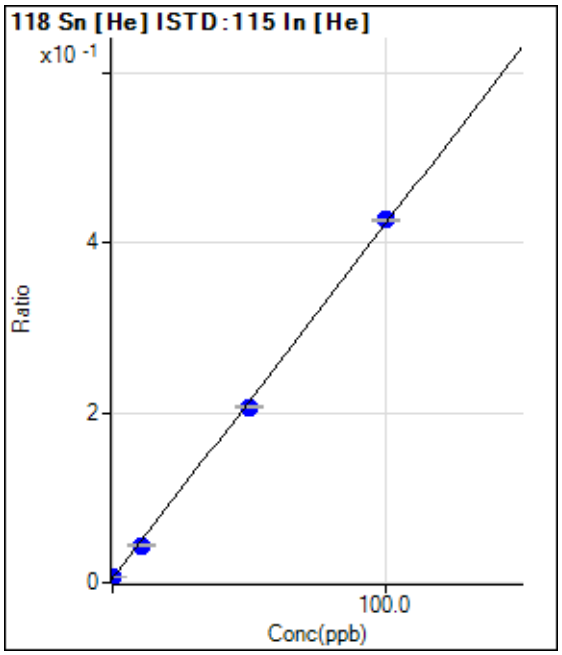
DL = 0.00809

BEC = 0.002363

Weight: <None>

Min Conc: <None>

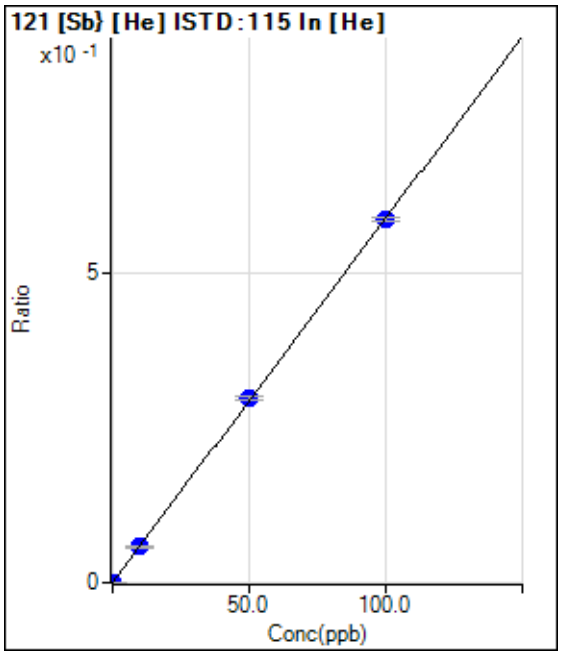
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1577.92	0.0061	P	8.4
2	☐	10.000	8.959	11126.29	0.0434	P	4.3
3	☐	50.000	48.074	52507.72	0.2063	P	1.0
4	☐			385.21	0.0015	P	40.6
5	☐	100.000	101.067	114166.51	0.4270	P	0.8

y = 0.0042 * x + 0.0061
R = 0.9997
DL = 0.3705
BEC = 1.47

Weight: <None>
Min Conc: <None>

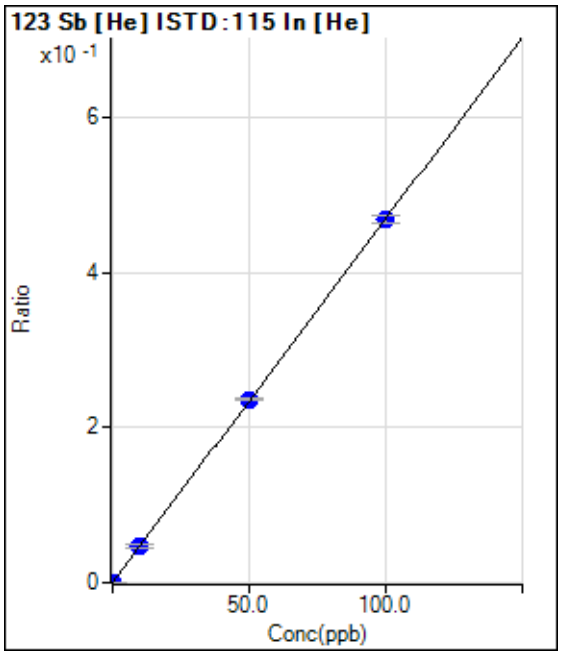


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.45	0.0001	P	20.6
2	☐	10.000	9.974	15051.20	0.0588	P	5.8
3	☐	50.000	50.671	75905.40	0.2983	P	1.6
4	☐			245.56	0.0010	P	14.5
5	☐	100.000	99.667	156810.44	0.5865	P	1.1

y = 0.0059 * x + 1.3372E-004
R = 1.0000
DL = 0.01406
BEC = 0.02273

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	25.56	0.0001	P	38.1
2		10.000	10.024	12044.36	0.0471	P	8.2
3		50.000	50.374	60149.39	0.2364	P	1.5
4				197.78	0.0008	P	13.5
5		100.000	99.811	125184.48	0.4682	P	2.1

y = 0.0047 * x + 9.9232E-005

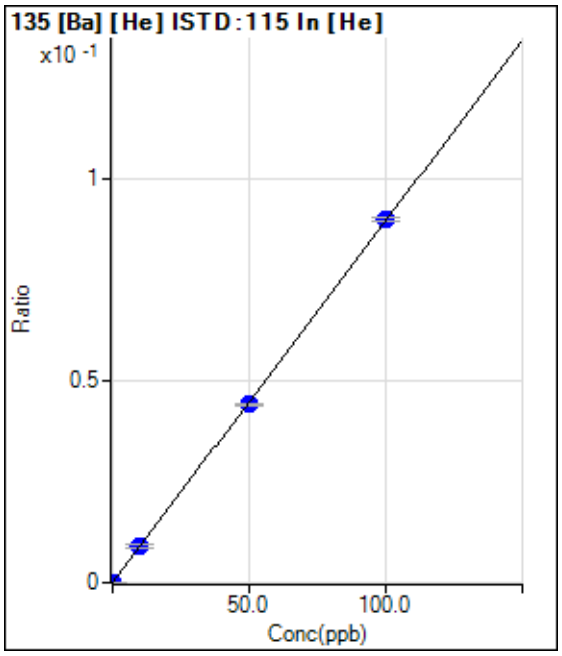
R = 1.0000

DL = 0.02418

BEC = 0.02116

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	4.44	0.0000	P	173.2
2		10.000	10.316	2362.41	0.0092	P	10.5
3		50.000	49.234	11217.16	0.0441	P	1.1
4		100.000	100.352	22428.25	0.0898	P	1.1
5				12.22	0.0000	P	78.8

y = 8.9495E-004 * x + 1.7278E-005

R = 0.9999

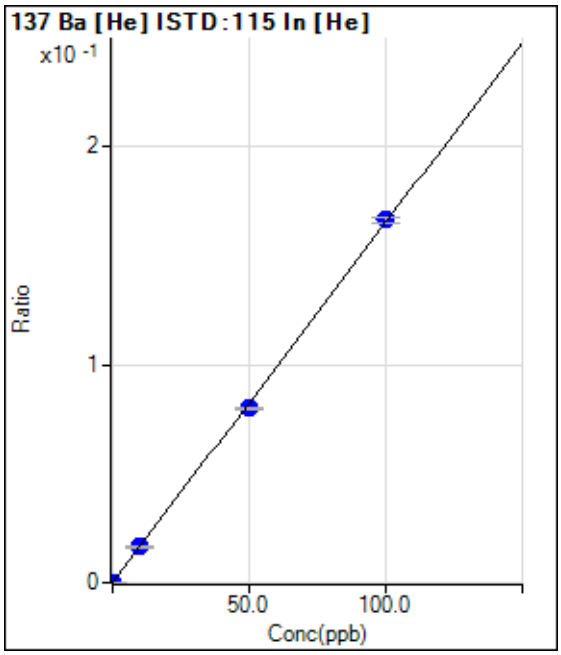
DL = 0.1003

BEC = 0.01931

Weight: <None>

Min Conc: <None>

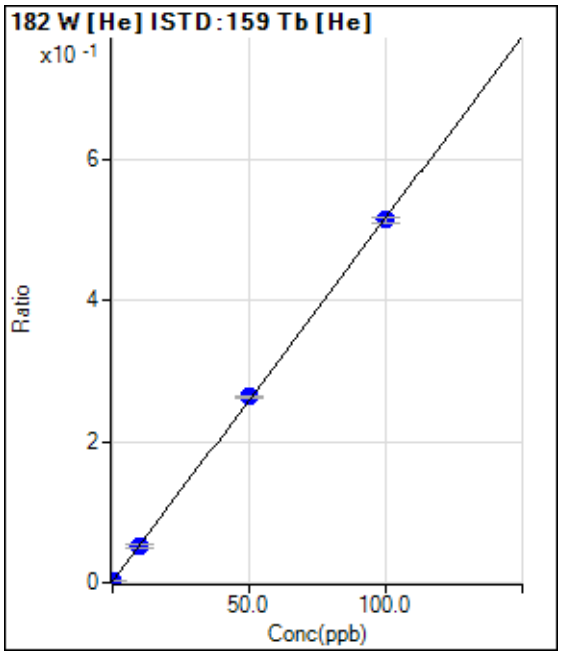
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	100.3
2	☐	10.000	9.901	4186.14	0.0164	P	5.6
3	☐	50.000	48.383	20317.92	0.0798	P	1.1
4	☐	100.000	100.818	41533.05	0.1663	P	1.3
5	☐			16.67	0.0001	P	19.2

y = 0.0016 * x + 2.5843E-005
R = 0.9998
DL = 0.04713
BEC = 0.01567

Weight: <None>
Min Conc: <None>

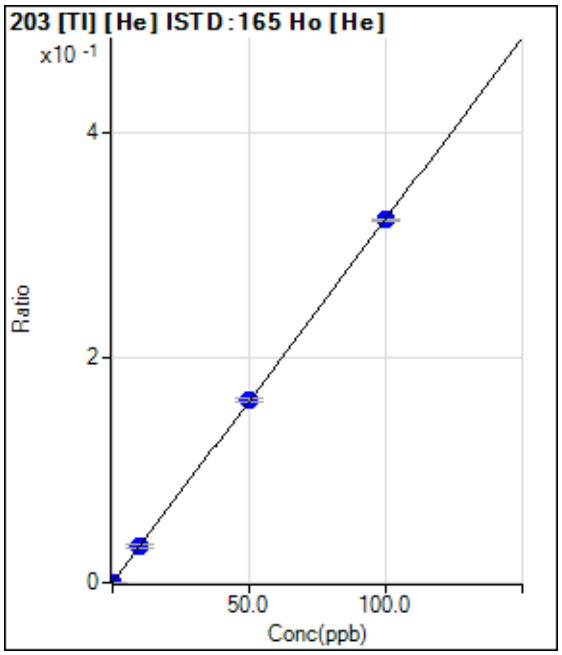


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1670.54	0.0014	P	1.3
2	☐	10.000	9.930	61365.16	0.0525	P	12.0
3	☐	50.000	50.952	299317.53	0.2636	P	1.1
4	☐			2700.37	0.0024	P	4.2
5	☐	100.000	99.531	596281.17	0.5136	P	1.9

y = 0.0051 * x + 0.0014
R = 0.9999
DL = 0.01134
BEC = 0.281

Weight: <None>
Min Conc: <None>

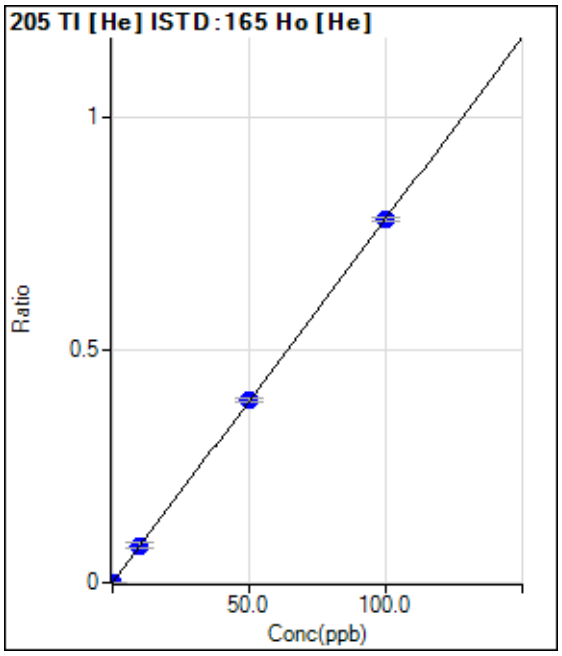
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.82	0.0000	P	114.5
2	☐	10.000	10.217	38261.57	0.0330	P	11.6
3	☐	50.000	50.267	186353.39	0.1621	P	1.2
4	☐	100.000	99.845	368816.13	0.3220	P	0.3
5	☐			425.95	0.0004	P	32.7

y = 0.0032 * x + 1.2912E-005
R = 1.0000
DL = 0.01375
BEC = 0.004004

Weight: <None>
Min Conc: <None>

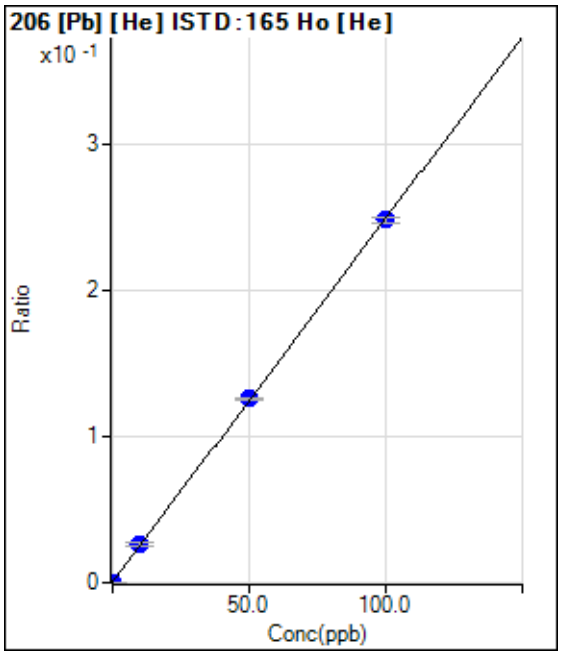


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	30.1
2	☐	10.000	10.244	92698.17	0.0799	P	12.5
3	☐	50.000	50.385	451677.01	0.3929	P	2.1
4	☐	100.000	99.783	891352.01	0.7782	P	1.2
5	☐			855.59	0.0007	P	18.6

y = 0.0078 * x + 2.9056E-005
R = 1.0000
DL = 0.003367
BEC = 0.003726

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	276.67	0.0002	P	20.0
2		10.000	10.396	30295.37	0.0261	P	10.9
3		50.000	50.521	144639.36	0.1258	P	1.6
4		100.000	99.700	284150.76	0.2481	P	1.3
5				380.01	0.0003	P	4.9

y = 0.0025 * x + 2.4111E-004

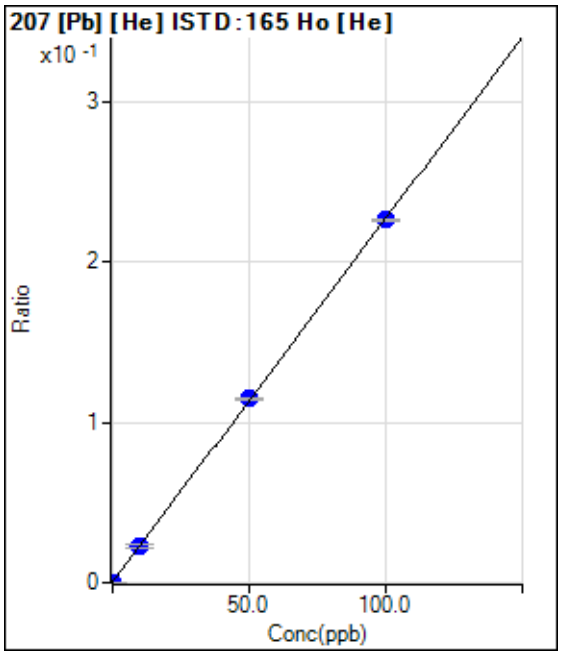
R = 1.0000

DL = 0.05808

BEC = 0.09699

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	270.01	0.0002	P	17.6
2		10.000	10.135	26978.34	0.0232	P	10.3
3		50.000	50.510	131931.61	0.1148	P	0.4
4		100.000	99.731	259311.88	0.2264	P	0.9
5				354.45	0.0003	P	3.3

y = 0.0023 * x + 2.3536E-004

R = 1.0000

DL = 0.05493

BEC = 0.1038

Weight: <None>

Min Conc: <None>

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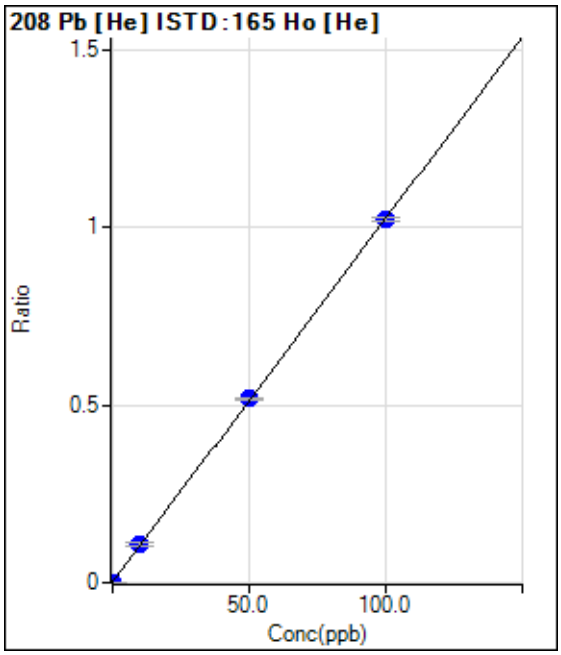

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1212.26	0.0011	P	8.2
2	☐	10.000	10.295	123698.13	0.1065	P	11.0
3	☐	50.000	50.506	595912.18	0.5184	P	0.9
4	☐	100.000	99.717	1171179.22	1.0225	P	1.0
5	☐			1748.95	0.0015	P	6.7

y = 0.0102 * x + 0.0011

R = 1.0000

DL = 0.02534

BEC = 0.1031

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2467071
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:23:47-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.312	0.670	749554	0.66	40	93.3	89.5	110.5	
Be	9	45	NoGas	40.088	0.348	209067	0.51	40	100.2	89.5	110.5	
B	11	6	NoGas	40.946	2.800	148392	2.30	40	102.4	89.5	110.5	
Na	23	45	He	20525.175	1.534	9940411	0.53	20000	102.6	89.5	110.5	
Mg	24	45	He	20226.609	1.487	5487857	0.97	20000	101.1	89.5	110.5	
Al	27	45	He	205.232	1.484	23703	1.50	200	102.6	89.5	110.5	
K	39	45	He	20884.070	1.172	2793889	1.39	20000	104.4	89.5	110.5	
Ca	44	45	He	20257.055	1.417	157090	2.05	20000	101.3	89.5	110.5	
Ti	47	45	He	41.081	8.260	2287	7.82	40	102.7	89.5	110.5	
V	51	45	He	41.710	2.846	79843	2.14	40	104.3	89.5	110.5	
Cr	52	45	He	41.057	1.747	98520	1.90	40	102.6	89.5	110.5	
Mn	55	45	He	203.932	1.853	245689	1.73	200	102.0	89.5	110.5	
Fe	56	45	He	10133.365	1.470	19042529	1.55	10000	101.3	89.5	110.5	
Co	59	45	He	40.897	1.506	176841	1.11	40	102.2	89.5	110.5	
Ni	60	45	He	40.915	1.603	49237	0.27	40	102.3	89.5	110.5	
Cu	63	45	He	41.912	2.434	146876	1.70	40	104.8	89.5	110.5	
Zn	66	45	He	38.157	1.954	18178	1.04	40	95.4	89.5	110.5	
As	75	115	He	41.247	0.956	10788	0.54	40	103.1	89.5	110.5	
Se	78	115	He	41.351	4.352	524	3.63	40	103.4	89.5	110.5	
Sr	88	103	He	39.238	0.847	46457	0.67	40	98.1	89.5	110.5	
Mo	95	103	He	41.270	1.411	58608	1.45	40	103.2	89.5	110.5	
Ag	107	103	He	40.645	1.128	206677	1.10	40	101.6	89.5	110.5	
Cd	111	115	He	40.614	0.394	23654	0.43	40	101.5	89.5	110.5	
Sn	118	115	He	39.232	1.056	44826	0.66	40	98.1	89.5	110.5	
Sb	123	115	He	40.142	1.323	49822	1.72	40	100.4	89.5	110.5	
Ba	137	115	He	39.135	1.541	17080	0.84	40	97.8	89.5	110.5	
W	182	159	He	39.966	1.358	243248	1.71	40	99.9	89.5	110.5	
Tl	205	165	He	40.327	2.341	369052	1.86	40	100.8	89.5	110.5	
Pb	208	165	He	40.684	1.111	490280	0.50	40	101.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1293105	0.82	1276810	101.28	60	120	
Sc	45	He	167758	1.69	163460	102.63	60	120	
Sc	45	NoGas	9350753	0.79	8842934	105.74	60	120	
Rh	103	He	1014403	0.65	1010526	100.38	60	120	
In	115	He	264468	0.71	257801	102.59	60	120	
Tb	159	He	1174428	0.41	1155473	101.64	60	120	
Ho	165	He	1173520	0.61	1147359	102.28	60	120	
Bi	209	He	772554	0.73	790610	97.72	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:27:58-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.036	245.5	4	114.6	20	
W	182	1	He	0.189	18.7	2871	7.6	10	
Ca	44	1	He	-64.843	-7.9	279	14.2	1000	
Na	23	1	He	3.509	15.5	10878	2.6	1000	
Mg	24	1	He	0.136	269.6	870	11.9	1000	
K	39	1	He	-0.684	-636.4	11070	5.5	1000	
V	51	1	He	0.053	71.2	298	25.4	2	
Cr	52	1	He	-0.047	-39.8	846	5.0	2	
Mn	55	1	He	-1.117	-0.5	181	4.2	2	
Fe	56	1	He	1.521	34.6	7112	14.2	50	
Co	59	1	He	-0.042	-12.2	333	6.6	1	
Ni	60	1	He	-0.090	-36.5	142	29.3	2	
Cu	63	1	He	-0.168	-34.8	5006	3.6	2	
Zn	66	1	He	-8.125	-1.0	190	16.9	20	
As	75	1	He	0.036	30.7	41	7.9	2	
Se	78	1	He	0.059	308.2	5	48.8	2	
Sr	88	1	He	-0.037	-35.9	68	24.8	10	
Mo	95	1	He	0.092	41.0	166	34.3	2	
Ag	107	1	He	0.001	71.2	21	24.1	0.2	
Cd	111	1	He	0.017	31.8	11	28.4	0.2	
Ba	137	1	He	0.004	281.3	9	57.3	5	
Sn	118	1	He	-0.989	-0.3	548	1.2	10	
Tl	205	1	He	0.046	23.2	461	21.1	0.5	
Pb	208	1	He	0.015	101.3	1444	13.1	0.5	
Al	27	1	He	-1.097	-22.0	186	15.0	50	
Sb	123	1	He	0.123	24.4	186	20.4	2	
B	11	2	NoGas	0.863	6.9	13561	1.5	20	
Be	9	2	NoGas	0.012	85.3	167	33.3	1	
Li	7	2	NoGas	-0.086	-84.7	89774	1.3	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303390	0.16	1276810	102.08	60	120	
Sc	45	1	He	174157	0.48	163460	106.54	60	120	
Sc	45	2	NoGas	9366308	0.23	8842934	105.92	60	120	
Rh	103	1	He	1072314	1.18	1010526	106.11	60	120	

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In	115	1	He	273880	0.49	257801	106.24	60	120	
Tb	159	1	He	1187611	0.26	1155473	102.78	60	120	
Ho	165	1	He	1190989	0.32	1147359	103.80	60	120	
Bi	209	1	He	805091	1.08	790610	101.83	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:32:08-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.391	7.391	1.535	222689	0.56	8	92.4	69.5	130.5	
Be	9	2	NoGas	0.962	0.962	3.859	5145	4.17	1	96.2	69.5	130.5	
B	11	2	NoGas	19.749	19.749	1.527	77993	0.25	20	98.7	69.5	130.5	
Na	23	1	He	963.429	963.429	2.140	489659	0.85	1000	96.3	69.5	130.5	
Mg	24	1	He	974.802	974.802	1.856	273458	0.94	1000	97.5	69.5	130.5	
Al	27	1	He	49.625	49.625	2.002	6147	1.84	50	99.3	69.5	130.5	
K	39	1	He	979.055	979.055	1.967	145589	0.28	1000	97.9	69.5	130.5	
Ca	44	1	He	900.656	900.656	2.591	7957	1.65	1000	90.1	69.5	130.5	
Ti	47	1	He	10.012	10.012	16.938	576	15.48	10	100.1	69.5	130.5	
V	51	1	He	5.140	5.140	5.497	10309	3.75	5	102.8	69.5	130.5	
Cr	52	1	He	2.076	2.076	1.744	6042	0.52	2	103.8	69.5	130.5	
Mn	55	1	He	3.798	3.798	0.734	6248	1.47	5	76.0	69.5	130.5	
Fe	56	1	He	104.706	104.706	3.824	206874	2.24	100	104.7	69.5	130.5	
Co	59	1	He	0.981	0.981	3.375	4879	4.24	1	98.1	69.5	130.5	
Ni	60	1	He	1.957	1.957	3.486	2668	2.58	2	97.8	69.5	130.5	
Cu	63	1	He	1.797	1.797	4.978	11808	2.07	2	89.8	69.5	130.5	
Zn	66	1	He	13.982	13.982	6.669	9050	3.75	20	69.9	69.5	130.5	
As	75	1	He	5.154	5.154	2.475	1416	1.77	5	103.1	69.5	130.5	
Se	78	1	He	5.449	5.449	0.702	75	1.33	5	109.0	69.5	130.5	
Sr	88	1	He	9.302	9.302	2.296	11682	2.91	10	93.0	69.5	130.5	
Mo	95	1	He	5.180	5.180	3.126	7768	3.86	5	103.6	69.5	130.5	
Ag	107	1	He	1.015	1.015	1.024	5446	0.84	1	101.5	69.5	130.5	
Cd	111	1	He	0.984	0.984	3.877	592	3.50	1	98.4	69.5	130.5	
Sn	118	1	He	8.953	8.953	6.171	11834	5.52	10	89.5	69.5	130.5	
Sb	123	1	He	2.094	2.094	1.656	2705	1.23	2	104.7	69.5	130.5	
Ba	137	1	He	4.717	4.717	5.176	2128	4.57	5	94.3	69.5	130.5	
W	182	1	He	9.994	9.994	2.295	62455	2.59	10	99.9	69.5	130.5	
Tl	205	1	He	1.007	1.007	2.664	9395	1.81	1	100.7	69.5	130.5	
Pb	208	1	He	1.037	1.037	0.918	13925	0.68	1	103.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1309309	1.38	1276810	102.55	60	120	
Sc	45	1	He	172959	1.67	163460	105.81	60	120	
Sc	45	2	NoGas	9398141	0.39	8842934	106.28	60	120	
Rh	103	1	He	1067876	0.76	1010526	105.68	60	120	
In	115	1	He	272622	0.67	257801	105.75	60	120	
Tb	159	1	He	1181102	1.07	1155473	102.22	60	120	
Ho	165	1	He	1192264	0.87	1147359	103.91	60	120	
Bi	209	1	He	800242	0.74	790610	101.22	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:36:20-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.221	12.8	90844	0.8	4	
Be	9	45	2	NoGas	0.005	80.6	122	15.7	2	
B	11	6	2	NoGas	0.913	1.4	13302	0.6	20	
Na	23	45	1	He	50630.602	1.2	23548527	0.4	75200	
Mg	24	45	1	He	50726.899	1.2	13223125	0.7	75200	
Al	27	45	1	He	53498.082	1.2	5860697	0.6	75200	
K	39	45	1	He	49918.194	0.2	6402175	0.7	75200	
Ca	44	45	1	He	50118.852	1.8	372301	1.0	75200	
Ti	47	45	1	He	994.869	2.6	53171	2.4	1505	
V	51	45	1	He	-0.209	-39.9	-204	-74.0	4	
Cr	52	45	1	He	0.663	11.7	2404	7.2	4	
Mn	55	45	1	He	-0.847	-3.9	478	7.1	4	
Fe	56	45	1	He	49854.898	1.2	89998696	0.5	75200	
Co	59	45	1	He	-0.033	-28.9	344	11.5	2	
Ni	60	45	1	He	-0.043	-16.8	186	3.7	4	
Cu	63	45	1	He	0.114	8.4	5549	1.2	4	
Zn	66	45	1	He	-7.932	-0.7	248	9.5	20	
As	75	115	1	He	0.083	56.1	48	23.0	4	
Se	78	115	1	He	0.428	48.2	9	27.3	4	
Sr	88	103	1	He	0.316	11.7	448	9.2	20	
Mo	95	103	1	He	1106.971	3.8	1462272	3.7	1505	
Ag	107	103	1	He	0.013	35.7	72	29.7	1	
Cd	111	115	1	He	-0.032	-5.1	-16	-5.8	1	
Sn	118	115	1	He	-1.144	-10.4	333	36.1	20	
Sb	123	115	1	He	0.055	50.3	88	35.9	4	
Ba	137	115	1	He	0.028	74.0	18	47.2	2	
W	182	159	1	He	0.147	15.5	2497	6.7	20	
Tl	205	165	1	He	0.006	12.6	83	8.0	2	
Pb	208	165	1	He	0.101	6.6	2387	3.9	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1262797	0.84	1276810	98.90	60	120	
Sc	45	1	He	161177	0.88	163460	98.60	60	120	
Sc	45	2	NoGas	8938523	0.74	8842934	101.08	60	120	
Rh	103	1	He	944019	0.44	1010526	93.42	60	120	
In	115	1	He	245923	0.80	257801	95.39	60	120	
Tb	159	1	He	1134148	1.47	1155473	98.15	60	120	
Ho	165	1	He	1142916	0.73	1147359	99.61	60	120	
Bi	209	1	He	742094	0.37	790610	93.86	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:40:27-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	101.671	1.630	1854752	1.67	100	101.7	49.5	150.5	
Be	9	45	2	NoGas	101.847	0.112	522403	0.27	100	101.8	49.5	150.5	
B	11	6	2	NoGas	107.497	0.720	356357	0.60	100	107.5	49.5	150.5	
Na	23	45	1	He	50777.628	0.625	24003037	0.38	50000	101.6	49.5	150.5	
Mg	24	45	1	He	50896.593	0.680	13484160	0.50	50000	101.8	49.5	150.5	
Al	27	45	1	He	53663.033	1.094	5974796	0.90	50000	107.3	49.5	150.5	
K	39	45	1	He	51230.863	1.590	6677193	1.34	50000	102.5	49.5	150.5	
Ca	44	45	1	He	50772.097	2.155	383314	1.98	50000	101.5	49.5	150.5	
Ti	47	45	1	He	1116.844	2.262	60666	2.30	1100	101.5	49.5	150.5	
V	51	45	1	He	103.350	2.829	192950	3.05	100	103.3	49.5	150.5	
Cr	52	45	1	He	102.817	0.741	239564	0.94	100	102.8	49.5	150.5	
Mn	55	45	1	He	102.490	0.337	121312	0.58	100	102.5	49.5	150.5	
Fe	56	45	1	He	50125.696	1.634	91965743	1.48	50000	100.3	49.5	150.5	
Co	59	45	1	He	103.543	1.134	436471	0.89	100	103.5	49.5	150.5	
Ni	60	45	1	He	103.261	1.283	120988	1.04	100	103.3	49.5	150.5	
Cu	63	45	1	He	102.789	1.776	344143	1.86	100	102.8	49.5	150.5	
Zn	66	45	1	He	105.747	1.669	43417	1.49	100	105.7	49.5	150.5	
As	75	115	1	He	106.551	0.917	26428	1.64	100	106.6	49.5	150.5	
Se	78	115	1	He	103.860	4.637	1244	5.20	100	103.9	49.5	150.5	
Sr	88	103	1	He	102.023	0.708	114819	0.46	100	102.0	49.5	150.5	
Mo	95	103	1	He	1239.142	1.242	1674451	1.83	1100	112.6	49.5	150.5	
Ag	107	103	1	He	102.166	1.614	494492	1.39	100	102.2	49.5	150.5	
Cd	111	115	1	He	101.798	0.324	56317	0.52	100	101.8	49.5	150.5	
Sn	118	115	1	He	111.425	0.294	118113	0.78	100	111.4	49.5	150.5	
Sb	123	115	1	He	103.156	1.109	121580	1.51	100	103.2	49.5	150.5	
Ba	137	115	1	He	102.948	0.315	42672	0.88	100	102.9	49.5	150.5	
W	182	159	1	He	103.133	2.756	607599	2.00	100	103.1	49.5	150.5	
Tl	205	165	1	He	99.092	1.325	891641	0.97	100	99.1	49.5	150.5	
Pb	208	165	1	He	100.971	1.077	1194617	0.37	100	101.0	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1237238	0.98	1276810	96.90	60	120	
Sc	45	1	He	163802	0.24	163460	100.21	60	120	
Sc	45	2	NoGas	9199345	0.17	8842934	104.03	60	120	
Rh	103	1	He	965613	0.61	1010526	95.56	60	120	
In	115	1	He	251224	0.76	257801	97.45	60	120	
Tb	159	1	He	1141896	0.84	1155473	98.82	60	120	
Ho	165	1	He	1153882	0.74	1147359	100.57	60	120	
Bi	209	1	He	749556	2.10	790610	94.81	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:44:35-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	46.073	0.949	938858	0.23	50	92.1	89.5	110.5	
Be	9	45	2	NoGas	48.569	0.562	263010	1.02	50	97.1	89.5	110.5	
B	11	6	2	NoGas	49.463	2.116	184810	1.33	50	98.9	89.5	110.5	
Na	23	45	1	He	25528.748	2.798	12647318	1.52	25000	102.1	89.5	110.5	
Mg	24	45	1	He	25031.740	3.296	6947647	1.69	25000	100.1	89.5	110.5	
Al	27	45	1	He	255.079	2.245	30064	0.50	250	102.0	89.5	110.5	
K	39	45	1	He	25271.418	2.588	3456340	0.83	25000	101.1	89.5	110.5	
Ca	44	45	1	He	24838.746	2.743	196863	1.08	25000	99.4	89.5	110.5	
Ti	47	45	1	He	50.415	4.316	2871	3.86	50	100.8	89.5	110.5	
V	51	45	1	He	49.852	3.062	97596	1.43	50	99.7	89.5	110.5	
Cr	52	45	1	He	50.255	3.463	123144	1.84	50	100.5	89.5	110.5	
Mn	55	45	1	He	250.606	3.668	308486	1.91	250	100.2	89.5	110.5	
Fe	56	45	1	He	12586.012	3.851	24191580	2.10	12500	100.7	89.5	110.5	
Co	59	45	1	He	50.546	3.626	223459	1.90	50	101.1	89.5	110.5	
Ni	60	45	1	He	51.178	2.467	62949	0.78	50	102.4	89.5	110.5	
Cu	63	45	1	He	51.175	2.888	182265	1.36	50	102.4	89.5	110.5	
Zn	66	45	1	He	46.846	4.367	22053	2.25	50	93.7	89.5	110.5	
As	75	115	1	He	50.753	0.332	13214	1.05	50	101.5	89.5	110.5	
Se	78	115	1	He	51.523	2.015	649	2.75	50	103.0	89.5	110.5	
Sr	88	103	1	He	50.112	0.963	59503	1.70	50	100.2	89.5	110.5	
Mo	95	103	1	He	53.687	1.661	76490	1.99	50	107.4	89.5	110.5	
Ag	107	103	1	He	50.560	0.237	257954	0.81	50	101.1	89.5	110.5	
Cd	111	115	1	He	50.417	1.016	29246	1.76	50	100.8	89.5	110.5	
Sn	118	115	1	He	48.132	2.647	54410	2.76	50	96.3	89.5	110.5	
Sb	123	115	1	He	50.194	1.895	62041	2.40	50	100.4	89.5	110.5	
Ba	137	115	1	He	49.878	2.101	21678	1.65	50	99.8	89.5	110.5	
W	182	159	1	He	50.589	0.544	304813	1.28	50	101.2	89.5	110.5	
Tl	205	165	1	He	50.409	0.902	459718	1.37	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.243	0.775	603056	1.10	50	100.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349692	0.68	1276810	105.71	60	120	
Sc	45	1	He	171658	1.76	163460	105.02	60	120	
Sc	45	2	NoGas	9710041	0.67	8842934	109.81	60	120	
Rh	103	1	He	1017800	0.80	1010526	100.72	60	120	
In	115	1	He	263396	0.76	257801	102.17	60	120	
Tb	159	1	He	1164351	0.75	1155473	100.77	60	120	
Ho	165	1	He	1169355	0.75	1147359	101.92	60	120	
Bi	209	1	He	765724	0.99	790610	96.85	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:48:46-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.120	-31.6	93344	0.8	8	
Be	9	45	2	NoGas	0.088	8.3	589	6.8	1	
B	11	6	2	NoGas	2.347	6.2	19211	3.2	20	
Na	23	45	1	He	43.792	4.3	31721	1.9	1000	
Mg	24	45	1	He	36.213	5.4	11245	3.8	1000	
Al	27	45	1	He	1.200	12.4	467	5.0	50	
K	39	45	1	He	35.266	22.7	16360	7.1	1000	
Ca	44	45	1	He	52.912	28.0	1247	10.8	1000	
Ti	47	45	1	He	0.110	30.7	9	21.6	20	
V	51	45	1	He	0.037	422.4	274	115.8	2	
Cr	52	45	1	He	0.039	92.6	1079	9.6	2	
Mn	55	45	1	He	0.269	19.5	1941	2.6	2	
Fe	56	45	1	He	22.126	0.9	48240	2.0	50	
Co	59	45	1	He	0.020	44.7	620	6.5	1	
Ni	60	45	1	He	0.063	120.8	340	29.2	2	
Cu	63	45	1	He	0.039	303.7	5844	7.4	2	
Zn	66	45	1	He	-0.525	-62.8	3321	3.6	20	
As	75	115	1	He	0.111	9.0	61	4.1	2	
Se	78	115	1	He	0.186	108.5	6	40.7	2	
Sr	88	103	1	He	0.074	10.9	208	4.9	10	
Mo	95	103	1	He	0.565	6.9	882	7.0	2	
Ag	107	103	1	He	0.066	16.6	373	16.1	0.2	
Cd	111	115	1	He	0.101	8.8	62	8.9	0.2	
Sn	118	115	1	He	-0.020	-90.0	1652	1.0	10	
Sb	123	115	1	He	0.223	4.7	313	4.6	2	
Ba	137	115	1	He	0.078	24.1	42	19.9	5	
W	182	159	1	He	0.356	14.4	3908	7.7	10	
Tl	205	165	1	He	0.124	12.2	1187	11.5	0.5	
Pb	208	165	1	He	0.090	9.8	2360	4.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1346317	0.94	1276810	105.44	60	120	
Sc	45	1	He	177581	1.20	163460	108.64	60	120	
Sc	45	2	NoGas	9805804	0.03	8842934	110.89	60	120	
Rh	103	1	He	1081539	0.46	1010526	107.03	60	120	
In	115	1	He	273721	0.42	257801	106.18	60	120	
Tb	159	1	He	1192978	0.79	1155473	103.25	60	120	
Ho	165	1	He	1192086	0.34	1147359	103.90	60	120	
Bi	209	1	He	807766	0.87	790610	102.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228593/1-a
Data File Name	014_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:56:09-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.078	-37.9	94028	1.3	8	
Be	9	45	2	NoGas	0.015	96.0	189	41.2	1	
B	11	6	2	NoGas	2.134	12.3	19270	6.7	20	
Na	23	45	1	He	39.229	5.3	29383	3.8	1000	
Mg	24	45	1	He	78.761	3.7	23460	3.3	1000	
Al	27	45	1	He	0.807	26.1	419	5.3	50	
K	39	45	1	He	8.101	7.4	12523	0.3	1000	
Ca	44	45	1	He	163.929	5.8	2152	3.5	1000	
Ti	47	45	1	He	0.128	191.5	10	145.3	20	
V	51	45	1	He	-0.218	-107.9	-242	-196.2	2	
Cr	52	45	1	He	-0.005	-113.9	967	2.1	2	
Mn	55	45	1	He	-0.783	-5.2	608	9.3	2	
Fe	56	45	1	He	5.874	4.3	15904	2.5	50	
Co	59	45	1	He	-0.048	-9.0	313	6.6	1	
Ni	60	45	1	He	0.014	206.6	278	13.9	2	
Cu	63	45	1	He	0.547	28.5	7661	7.7	2	
Zn	66	45	1	He	-2.483	-13.9	2515	5.0	20	
As	75	115	1	He	0.022	80.9	37	13.1	2	
Se	78	115	1	He	-0.020	-428.6	4	30.1	2	
Sr	88	103	1	He	0.521	6.7	778	6.4	10	
Mo	95	103	1	He	0.152	6.5	259	5.2	2	
Ag	107	103	1	He	0.000	-13845.1	14	26.7	0.2	
Cd	111	115	1	He	0.006	97.4	5	71.3	0.2	
Sn	118	115	1	He	-0.637	-17.3	959	13.4	10	
Sb	123	115	1	He	0.047	11.1	89	7.8	2	
Ba	137	115	1	He	0.791	5.9	368	5.8	5	
W	182	159	1	He	0.058	27.4	2089	3.5	10	
Tl	205	165	1	He	0.006	36.5	91	22.1	0.5	
Pb	208	165	1	He	0.014	13.9	1441	1.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1404456	1.80	1276810	110.00	60	120	
Sc	45	1	He	177531	0.78	163460	108.61	60	120	
Sc	45	2	NoGas	9794847	0.89	8842934	110.76	60	120	
Rh	103	1	He	1091582	0.71	1010526	108.02	60	120	
In	115	1	He	276532	0.19	257801	107.27	60	120	
Tb	159	1	He	1199608	1.22	1155473	103.82	60	120	
Ho	165	1	He	1200253	1.02	1147359	104.61	60	120	
Bi	209	1	He	840466	0.17	790610	106.31	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228593/2-a
Data File Name	015_LCS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:00:21-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	95.366	95.366	1.073	1777171	1.20	100	95.4	84.5	115.5	
Be	9	2	NoGas	1034.362	1034.362	1.021	5401383	0.73	1000	103.4	84.5	115.5	
B	11	2	NoGas	101.204	101.204	2.043	345677	1.31	100	101.2	84.5	115.5	
Na	23	1	He	9862.299	9862.299	2.504	4829599	0.40	10000	98.6	84.5	115.5	
Mg	24	1	He	10073.695	10073.695	2.921	2761218	0.96	10000	100.7	84.5	115.5	
Al	27	1	He	9616.857	9616.857	2.094	1107909	0.30	10000	96.2	84.5	115.5	
K	39	1	He	9740.642	9740.642	2.870	1322000	0.77	10000	97.4	84.5	115.5	
Ca	44	1	He	10334.785	10334.785	1.879	81338	0.77	10000	103.3	84.5	115.5	
Ti	47	1	He	95.547	95.547	5.003	5370	3.64	100	95.5	84.5	115.5	
V	51	1	He	1065.278	1065.278	1.731	2055710	0.99	1000	106.5	84.5	115.5	
Cr	52	1	He	1033.776	1033.776	2.081	2483227	0.07	1000	103.4	84.5	115.5	
Mn	55	1	He	963.497	963.497	1.727	1166985	0.66	1000	96.3	84.5	115.5	
Fe	56	1	He	9825.241	9825.241	2.121	18652013	1.13	10000	98.3	84.5	115.5	
Co	59	1	He	1059.374	1059.374	3.249	4614235	1.14	1000	105.9	84.5	115.5	
Ni	60	1	He	1003.143	1003.143	2.167	1213726	0.29	1000	100.3	84.5	115.5	
Cu	63	1	He	1060.167	1060.167	3.011	3620654	0.99	1000	106.0	84.5	115.5	
Zn	66	1	He	1087.994	1087.994	2.182	430740	0.52	1000	108.8	84.5	115.5	
As	75	1	He	1010.322	1010.322	0.436	254086	0.17	1000	101.0	84.5	115.5	
Se	78	1	He	999.045	999.045	0.848	12110	0.79	1000	99.9	84.5	115.5	
Sr	88	1	He	926.501	926.501	0.483	1100938	0.74	1000	92.7	84.5	115.5	
Mo	95	1	He	99.583	99.583	0.830	142208	0.97	100	99.6	84.5	115.5	
Ag	107	1	He	97.443	97.443	0.718	498359	0.08	100	97.4	84.5	115.5	
Cd	111	1	He	995.346	995.346	1.350	558861	1.02	1000	99.5	84.5	115.5	
Sn	118	1	He	981.701	981.701	1.424	1043982	1.17	1000	98.2	84.5	115.5	
Sb	123	1	He	98.727	98.727	1.001	118097	0.86	100	98.7	84.5	115.5	
Ba	137	1	He	974.907	974.907	1.286	410084	1.11	1000	97.5	84.5	115.5	
W	182	1	He	97.006	97.006	1.433	576523	1.08	100	97.0	84.5	115.5	
Tl	205	1	He	274.175	274.175	1.635	2496506	0.69	250	109.7	84.5	115.5	
Pb	208	1	He	1073.783	1073.783	0.619	12845350	0.74	1000	107.4	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1272614	0.68	1276810	99.67	60	120	
Sc	45	1	He	169497	2.09	163460	103.69	60	120	
Sc	45	2	NoGas	9367322	0.30	8842934	105.93	60	120	
Rh	103	1	He	1020339	0.76	1010526	100.97	60	120	
In	115	1	He	254982	0.33	257801	98.91	60	120	
Tb	159	1	He	1151598	0.36	1155473	99.66	60	120	
Ho	165	1	He	1167752	0.95	1147359	101.78	60	120	
Bi	209	1	He	772836	0.85	790610	97.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-a
Data File Name	016SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:04:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.897	4.897	3.43	182198	0.00	10000	
Be	9	45	2	NoGas	0.234	0.234	11.80	1356	0.02	2000	
B	11	6	2	NoGas	31.585	31.585	1.15	121650	0.03	300	
Na	23	45	1	He	6706.856	6706.856	3.05	3332909	0.20	500000	
Mg	24	45	1	He	7345.197	7345.197	1.75	2041899	0.36	500000	
Al	27	45	1	He	19.412	19.412	3.18	2578	0.75	200000	
K	39	45	1	He	2934.875	2934.875	2.85	411585	0.71	500000	
Ca	44	45	1	He	75348.409	75348.409	2.60	596269	12.64	500000	
Ti	47	45	1	He	0.565	0.565	47.57	34	1.64	2500	
V	51	45	1	He	0.108	0.108	13.56	402	0.03	10000	
Cr	52	45	1	He	0.142	0.142	34.24	1296	0.01	10000	
Mn	55	45	1	He	61.224	61.224	3.11	76628	0.08	10000	
Fe	56	45	1	He	556.518	556.518	3.28	1074904	0.05	200000	
Co	59	45	1	He	0.056	0.056	61.57	760	0.01	5000	
Ni	60	45	1	He	0.021	0.021	167.69	277	0.01	10000	
Cu	63	45	1	He	0.153	0.153	56.32	6052	0.00	10000	
Zn	66	45	1	He	-6.117	-6.117	-3.83	988	-0.62	10000	
As	75	115	1	He	0.241	0.241	14.52	92	0.26	10000	
Se	78	115	1	He	0.212	0.212	101.51	6	3.27	10000	
Sr	88	103	1	He	488.863	488.863	0.12	577790	0.08	10000	
Mo	95	103	1	He	0.268	0.268	2.22	407	0.07	2000	
Ag	107	103	1	He	0.008	0.008	21.06	53	0.01	300	
Cd	111	115	1	He	0.202	0.202	28.26	117	0.17	4000	
Sn	118	115	1	He	0.273	0.273	161.67	1893	0.01	2000	
Sb	123	115	1	He	0.205	0.205	23.86	277	0.07	200	
Ba	137	115	1	He	52.220	52.220	1.14	22521	0.23	10000	
W	182	159	1	He	0.497	0.497	26.36	4597	0.01	2500	
Tl	205	165	1	He	0.171	0.171	19.85	1580	0.01	2000	
Pb	208	165	1	He	0.120	0.120	17.45	2650	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1345885	1.18	1276810	105.41	60	120	
Sc	45	1	He	171840	1.33	163460	105.13	60	120	
Sc	45	2	NoGas	9597033	1.52	8842934	108.53	60	120	
Rh	103	1	He	1014764	1.12	1010526	100.42	60	120	
In	115	1	He	261364	1.17	257801	101.38	60	120	
Tb	159	1	He	1148910	0.71	1155473	99.43	60	120	
Ho	165	1	He	1159620	0.45	1147359	101.07	60	120	
Bi	209	1	He	783772	0.90	790610	99.14	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64177-f-8-a@5
Data File Name	017SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:08:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.832	0.832	4.21	110658	0.00	10000	
Be	9	45	2	NoGas	0.109	0.109	14.81	700	0.02	2000	
B	11	6	2	NoGas	7.230	7.230	2.61	36592	0.02	300	
Na	23	45	1	He	1382.621	1382.621	1.87	703560	0.20	500000	
Mg	24	45	1	He	1538.338	1538.338	2.40	434018	0.35	500000	
Al	27	45	1	He	2.868	2.868	19.37	654	0.44	200000	
K	39	45	1	He	647.092	647.092	3.38	100654	0.64	500000	
Ca	44	45	1	He	16220.160	16220.160	3.08	130693	12.41	500000	
Ti	47	45	1	He	0.132	0.132	129.80	10	1.32	2500	
V	51	45	1	He	-0.191	-0.191	-26.88	-184	0.10	10000	
Cr	52	45	1	He	0.022	0.022	134.54	1016	0.00	10000	
Mn	55	45	1	He	14.764	14.764	3.33	19923	0.07	10000	
Fe	56	45	1	He	121.227	121.227	3.00	240519	0.05	200000	
Co	59	45	1	He	-0.030	-0.030	-14.52	384	-0.01	5000	
Ni	60	45	1	He	-0.075	-0.075	-43.20	162	-0.05	10000	
Cu	63	45	1	He	-0.410	-0.410	-2.20	4157	-0.01	10000	
Zn	66	45	1	He	-7.571	-7.571	-0.78	413	-1.83	10000	
As	75	115	1	He	0.091	0.091	35.72	55	0.17	10000	
Se	78	115	1	He	0.312	0.312	86.98	8	3.91	10000	
Sr	88	103	1	He	102.001	102.001	1.29	125577	0.08	10000	
Mo	95	103	1	He	0.062	0.062	9.68	118	0.05	2000	
Ag	107	103	1	He	0.001	0.001	94.71	20	0.01	300	
Cd	111	115	1	He	0.068	0.068	15.04	42	0.16	4000	
Sn	118	115	1	He	0.357	0.357	59.98	2045	0.02	2000	
Sb	123	115	1	He	0.056	0.056	28.99	97	0.06	200	
Ba	137	115	1	He	11.073	11.073	1.72	4919	0.23	10000	
W	182	159	1	He	0.044	0.044	123.97	1956	0.00	2500	
Tl	205	165	1	He	0.024	0.024	9.77	254	0.01	2000	
Pb	208	165	1	He	0.016	0.016	45.88	1437	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1356229	2.23	1276810	106.22	60	120	
Sc	45	1	He	174134	1.47	163460	106.53	60	120	
Sc	45	2	NoGas	9778552	0.56	8842934	110.58	60	120	
Rh	103	1	He	1056255	0.76	1010526	104.53	60	120	
In	115	1	He	268870	0.32	257801	104.29	60	120	
Tb	159	1	He	1170202	0.74	1155473	101.27	60	120	
Ho	165	1	He	1174342	0.28	1147359	102.35	60	120	
Bi	209	1	He	790859	0.64	790610	100.03	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64177-f-8-a
Data File Name	018SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:12:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	103.323	103.323	0.97	1955263	0.01	10000	
Be	9	45	2	NoGas	1066.520	1066.520	0.40	5678198	0.02	2000	
B	11	6	2	NoGas	141.992	141.992	0.15	478446	0.03	300	
Na	23	45	1	He	16689.539	16689.539	1.67	8273721	0.20	500000	
Mg	24	45	1	He	17442.381	17442.381	3.40	4842201	0.36	500000	
Al	27	45	1	He	10009.486	10009.486	2.65	1168019	0.86	200000	
K	39	45	1	He	13413.782	13413.782	0.93	1840480	0.73	500000	
Ca	44	45	1	He	83034.913	83034.913	1.66	656473	12.65	500000	
Ti	47	45	1	He	100.466	100.466	3.86	5720	1.76	2500	
V	51	45	1	He	1094.916	1094.916	2.97	2139944	0.05	10000	
Cr	52	45	1	He	1056.535	1056.535	3.41	2570493	0.04	10000	
Mn	55	45	1	He	1069.109	1069.109	1.43	1311756	0.08	10000	
Fe	56	45	1	He	10669.810	10669.810	2.32	20516620	0.05	200000	
Co	59	45	1	He	1071.207	1071.207	1.56	4727428	0.02	5000	
Ni	60	45	1	He	1011.672	1011.672	1.88	1239976	0.08	10000	
Cu	63	45	1	He	1069.381	1069.381	3.27	3699503	0.03	10000	
Zn	66	45	1	He	1096.349	1096.349	2.89	439616	0.25	10000	
As	75	115	1	He	1066.291	1066.291	1.27	265533	0.40	10000	
Se	78	115	1	He	1033.580	1033.580	0.40	12407	8.33	10000	
Sr	88	103	1	He	1554.749	1554.749	0.40	1828441	0.09	10000	
Mo	95	103	1	He	106.417	106.417	0.25	150407	0.07	2000	
Ag	107	103	1	He	101.416	101.416	1.20	513343	0.02	300	
Cd	111	115	1	He	1033.461	1033.461	1.42	574582	0.18	4000	
Sn	118	115	1	He	1044.622	1044.622	1.81	1099899	0.09	2000	
Sb	123	115	1	He	103.928	103.928	1.18	123101	0.08	200	
Ba	137	115	1	He	1070.537	1070.537	2.08	445874	0.24	10000	
W	182	159	1	He	101.716	101.716	2.10	609417	0.02	2500	
Tl	205	165	1	He	278.222	278.222	0.88	2533219	0.01	2000	
Pb	208	165	1	He	1078.190	1078.190	0.17	12896162	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1266243	1.07	1276810	99.17	60	120	
Sc	45	1	He	171692	1.83	163460	105.04	60	120	
Sc	45	2	NoGas	9550166	1.52	8842934	108.00	60	120	
Rh	103	1	He	1009857	0.71	1010526	99.93	60	120	
In	115	1	He	252505	1.12	257801	97.95	60	120	
Tb	159	1	He	1160982	0.68	1155473	100.48	60	120	
Ho	165	1	He	1167561	0.76	1147359	101.76	60	120	
Bi	209	1	He	738088	0.62	790610	93.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-b ms
Data File Name	019SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:16:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	100.722	100.722	2.47	1921417	0.01	10000	
Be	9	45	2	NoGas	1018.910	1018.910	0.48	5461747	0.02	2000	
B	11	6	2	NoGas	137.679	137.679	0.66	465454	0.03	300	
Na	23	45	1	He	16444.915	16444.915	1.53	8239683	0.20	500000	
Mg	24	45	1	He	16918.103	16918.103	2.11	4747819	0.36	500000	
Al	27	45	1	He	9642.210	9642.210	2.21	1137293	0.85	200000	
K	39	45	1	He	12743.874	12743.874	1.21	1767660	0.72	500000	
Ca	44	45	1	He	82793.738	82793.738	1.79	661548	12.52	500000	
Ti	47	45	1	He	98.259	98.259	8.48	5654	1.74	2500	
V	51	45	1	He	1055.748	1055.748	1.10	2085842	0.05	10000	
Cr	52	45	1	He	1024.300	1024.300	2.48	2519110	0.04	10000	
Mn	55	45	1	He	1011.662	1011.662	1.92	1254378	0.08	10000	
Fe	56	45	1	He	10093.342	10093.342	2.10	19616719	0.05	200000	
Co	59	45	1	He	1028.230	1028.230	1.60	4586234	0.02	5000	
Ni	60	45	1	He	972.362	972.362	1.03	1204602	0.08	10000	
Cu	63	45	1	He	1028.949	1028.949	2.73	3598290	0.03	10000	
Zn	66	45	1	He	1063.683	1063.683	1.52	431241	0.25	10000	
As	75	115	1	He	1026.809	1026.809	0.85	258816	0.40	10000	
Se	78	115	1	He	997.541	997.541	0.66	12120	8.23	10000	
Sr	88	103	1	He	1537.251	1537.251	0.75	1817263	0.08	10000	
Mo	95	103	1	He	101.805	101.805	0.86	144641	0.07	2000	
Ag	107	103	1	He	98.260	98.260	0.62	499986	0.02	300	
Cd	111	115	1	He	993.488	993.488	1.35	559091	0.18	4000	
Sn	118	115	1	He	1008.073	1008.073	1.27	1074428	0.09	2000	
Sb	123	115	1	He	100.643	100.643	0.75	120661	0.08	200	
Ba	137	115	1	He	1028.212	1028.212	0.40	433495	0.24	10000	
W	182	159	1	He	97.333	97.333	1.56	587653	0.02	2500	
Tl	205	165	1	He	265.153	265.153	1.61	2424283	0.01	2000	
Pb	208	165	1	He	1042.824	1042.824	0.76	12525613	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1269632	0.76	1276810	99.44	60	120	
Sc	45	1	He	173504	0.74	163460	106.14	60	120	
Sc	45	2	NoGas	9615425	0.13	8842934	108.74	60	120	
Rh	103	1	He	1015126	0.27	1010526	100.46	60	120	
In	115	1	He	255561	0.49	257801	99.13	60	120	
Tb	159	1	He	1169932	0.56	1155473	101.25	60	120	
Ho	165	1	He	1172477	0.37	1147359	102.19	60	120	
Bi	209	1	He	750075	0.21	790610	94.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-c msd
Data File Name	020SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:20:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	98.623	98.623	3.74	1892509	0.01	10000	
Be	9	45	2	NoGas	998.855	998.855	1.30	5381399	0.02	2000	
B	11	6	2	NoGas	133.083	133.083	1.00	459639	0.03	300	
Na	23	45	1	He	16242.041	16242.041	1.99	8152731	0.20	500000	
Mg	24	45	1	He	16952.652	16952.652	2.30	4766040	0.36	500000	
Al	27	45	1	He	9538.032	9538.032	1.11	1127076	0.85	200000	
K	39	45	1	He	12733.927	12733.927	1.23	1769437	0.72	500000	
Ca	44	45	1	He	83421.631	83421.631	0.85	667773	12.49	500000	
Ti	47	45	1	He	95.322	95.322	3.45	5496	1.73	2500	
V	51	45	1	He	1048.338	1048.338	1.15	2074866	0.05	10000	
Cr	52	45	1	He	1019.359	1019.359	1.56	2511535	0.04	10000	
Mn	55	45	1	He	1004.240	1004.240	1.19	1247459	0.08	10000	
Fe	56	45	1	He	10107.328	10107.328	0.99	19679973	0.05	200000	
Co	59	45	1	He	1020.671	1020.671	0.55	4560774	0.02	5000	
Ni	60	45	1	He	963.570	963.570	0.81	1195843	0.08	10000	
Cu	63	45	1	He	1022.290	1022.290	2.55	3581589	0.03	10000	
Zn	66	45	1	He	1041.229	1041.229	1.19	422973	0.25	10000	
As	75	115	1	He	1021.741	1021.741	0.85	255722	0.40	10000	
Se	78	115	1	He	990.503	990.503	0.71	11949	8.29	10000	
Sr	88	103	1	He	1510.656	1510.656	1.84	1781863	0.08	10000	
Mo	95	103	1	He	100.459	100.459	3.02	142411	0.07	2000	
Ag	107	103	1	He	96.358	96.358	0.82	489230	0.02	300	
Cd	111	115	1	He	988.849	988.849	0.62	552556	0.18	4000	
Sn	118	115	1	He	989.900	989.900	1.22	1047653	0.09	2000	
Sb	123	115	1	He	98.930	98.930	1.05	117779	0.08	200	
Ba	137	115	1	He	1026.919	1026.919	0.29	429913	0.24	10000	
W	182	159	1	He	96.755	96.755	1.26	578642	0.02	2500	
Tl	205	165	1	He	264.185	264.185	0.89	2417364	0.01	2000	
Pb	208	165	1	He	1037.205	1037.205	1.09	12467746	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1296116	1.11	1276810	101.51	60	120	
Sc	45	1	He	173808	0.28	163460	106.33	60	120	
Sc	45	2	NoGas	9665713	1.78	8842934	109.30	60	120	
Rh	103	1	He	1012916	0.52	1010526	100.24	60	120	
In	115	1	He	253765	1.26	257801	98.43	60	120	
Tb	159	1	He	1158730	0.94	1155473	100.28	60	120	
Ho	165	1	He	1173359	0.13	1147359	102.27	60	120	
Bi	209	1	He	746514	0.23	790610	94.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-1-a
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:24:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.763	2.763	4.48	146486	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	1.84	2886	0.02	2000	
B	11	6	2	NoGas	13.748	13.748	0.60	61692	0.02	300	
Na	23	45	1	He	6963.257	6963.257	1.30	3528394	0.20	500000	
Mg	24	45	1	He	3065.294	3065.294	2.19	869315	0.35	500000	
Al	27	45	1	He	3.214	3.214	11.87	700	0.46	200000	
K	39	45	1	He	771.517	771.517	3.03	118613	0.65	500000	
Ca	44	45	1	He	77498.718	77498.718	1.55	625352	12.39	500000	
Ti	47	45	1	He	0.189	0.189	60.91	13	1.42	2500	
V	51	45	1	He	0.148	0.148	105.90	492	0.03	10000	
Cr	52	45	1	He	0.158	0.158	11.91	1359	0.01	10000	
Mn	55	45	1	He	34.233	34.233	1.71	44388	0.08	10000	
Fe	56	45	1	He	1372.183	1372.183	1.88	2696616	0.05	200000	
Co	59	45	1	He	0.179	0.179	18.30	1331	0.01	5000	
Ni	60	45	1	He	0.164	0.164	4.25	461	0.04	10000	
Cu	63	45	1	He	0.099	0.099	69.21	5980	0.00	10000	
Zn	66	45	1	He	-4.891	-4.891	-5.09	1505	-0.33	10000	
As	75	115	1	He	1.373	1.373	3.09	394	0.35	10000	
Se	78	115	1	He	0.831	0.831	45.79	15	5.69	10000	
Sr	88	103	1	He	422.438	422.438	0.72	515072	0.08	10000	
Mo	95	103	1	He	0.237	0.237	14.82	373	0.06	2000	
Ag	107	103	1	He	0.008	0.008	45.57	53	0.01	300	
Cd	111	115	1	He	0.383	0.383	20.09	228	0.17	4000	
Sn	118	115	1	He	1.120	1.120	26.57	2893	0.04	2000	
Sb	123	115	1	He	0.321	0.321	14.11	430	0.07	200	
Ba	137	115	1	He	11.293	11.293	6.35	5006	0.23	10000	
W	182	159	1	He	0.539	0.539	17.79	4986	0.01	2500	
Tl	205	165	1	He	0.250	0.250	16.77	2347	0.01	2000	
Pb	208	165	1	He	0.195	0.195	12.38	3626	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403564	0.62	1276810	109.93	60	120	
Sc	45	1	He	175201	0.75	163460	107.18	60	120	
Sc	45	2	NoGas	9791390	1.14	8842934	110.73	60	120	
Rh	103	1	He	1046821	0.67	1010526	103.59	60	120	
In	115	1	He	268411	0.99	257801	104.12	60	120	
Tb	159	1	He	1180868	0.79	1155473	102.20	60	120	
Ho	165	1	He	1187914	0.49	1147359	103.53	60	120	
Bi	209	1	He	778132	0.91	790610	98.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-2-a
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:28:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.226	6.226	1.02	215200	0.00	10000	
Be	9	45	2	NoGas	0.318	0.318	8.07	1885	0.02	2000	
B	11	6	2	NoGas	27.169	27.169	1.68	110701	0.02	300	
Na	23	45	1	He	6686.756	6686.756	1.23	3408079	0.20	500000	
Mg	24	45	1	He	4308.428	4308.428	4.40	1228293	0.35	500000	
Al	27	45	1	He	1.133	1.133	64.62	456	0.25	200000	
K	39	45	1	He	2101.279	2101.279	1.04	305440	0.69	500000	
Ca	44	45	1	He	71083.812	71083.812	1.82	576931	12.32	500000	
Ti	47	45	1	He	0.092	0.092	93.84	8	1.18	2500	
V	51	45	1	He	0.081	0.081	165.00	356	0.02	10000	
Cr	52	45	1	He	0.124	0.124	33.73	1282	0.01	10000	
Mn	55	45	1	He	53.506	53.506	1.07	68884	0.08	10000	
Fe	56	45	1	He	144.303	144.303	2.14	288960	0.05	200000	
Co	59	45	1	He	0.046	0.046	21.74	732	0.01	5000	
Ni	60	45	1	He	-0.047	-0.047	-11.77	199	-0.02	10000	
Cu	63	45	1	He	0.033	0.033	162.71	5779	0.00	10000	
Zn	66	45	1	He	-6.013	-6.013	-2.76	1054	-0.57	10000	
As	75	115	1	He	0.189	0.189	30.70	81	0.23	10000	
Se	78	115	1	He	0.333	0.333	92.36	8	4.02	10000	
Sr	88	103	1	He	457.880	457.880	1.14	562464	0.08	10000	
Mo	95	103	1	He	0.125	0.125	15.82	211	0.06	2000	
Ag	107	103	1	He	0.005	0.005	46.84	39	0.01	300	
Cd	111	115	1	He	0.171	0.171	10.04	103	0.17	4000	
Sn	118	115	1	He	-0.538	-0.538	-25.84	1048	-0.05	2000	
Sb	123	115	1	He	0.125	0.125	15.43	186	0.07	200	
Ba	137	115	1	He	27.823	27.823	1.35	12421	0.22	10000	
W	182	159	1	He	0.138	0.138	19.03	2574	0.01	2500	
Tl	205	165	1	He	0.060	0.060	16.13	606	0.01	2000	
Pb	208	165	1	He	0.053	0.053	6.44	1933	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403261	1.02	1276810	109.90	60	120	
Sc	45	1	He	176211	1.11	163460	107.80	60	120	
Sc	45	2	NoGas	10011679	1.30	8842934	113.22	60	120	
Rh	103	1	He	1054653	0.42	1010526	104.37	60	120	
In	115	1	He	270446	1.21	257801	104.91	60	120	
Tb	159	1	He	1194765	0.77	1155473	103.40	60	120	
Ho	165	1	He	1211567	0.09	1147359	105.60	60	120	
Bi	209	1	He	799549	0.99	790610	101.13	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-3-a
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:33:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.390	1.390	1.76	124535	0.00	10000	
Be	9	45	2	NoGas	0.204	0.204	13.19	1252	0.02	2000	
B	11	6	2	NoGas	18.878	18.878	2.36	83112	0.02	300	
Na	23	45	1	He	7271.376	7271.376	2.34	3745866	0.19	500000	
Mg	24	45	1	He	1408.483	1408.483	2.63	406607	0.35	500000	
Al	27	45	1	He	9.157	9.157	6.82	1431	0.64	200000	
K	39	45	1	He	607.686	607.686	0.40	97433	0.62	500000	
Ca	44	45	1	He	91629.953	91629.953	2.08	751649	12.19	500000	
Ti	47	45	1	He	0.260	0.260	45.35	18	1.46	2500	
V	51	45	1	He	0.095	0.095	23.16	391	0.02	10000	
Cr	52	45	1	He	0.074	0.074	38.97	1171	0.01	10000	
Mn	55	45	1	He	40.939	40.939	2.03	53662	0.08	10000	
Fe	56	45	1	He	2113.294	2113.294	0.94	4221013	0.05	200000	
Co	59	45	1	He	0.049	0.049	8.03	758	0.01	5000	
Ni	60	45	1	He	-0.034	-0.034	-101.28	217	-0.02	10000	
Cu	63	45	1	He	-0.495	-0.495	-9.12	3949	-0.01	10000	
Zn	66	45	1	He	-7.002	-7.002	-2.67	658	-1.06	10000	
As	75	115	1	He	0.650	0.650	13.81	203	0.32	10000	
Se	78	115	1	He	0.403	0.403	59.42	9	4.41	10000	
Sr	88	103	1	He	353.358	353.358	0.85	435454	0.08	10000	
Mo	95	103	1	He	0.046	0.046	41.35	94	0.05	2000	
Ag	107	103	1	He	0.001	0.001	307.53	19	0.00	300	
Cd	111	115	1	He	0.108	0.108	18.92	66	0.17	4000	
Sn	118	115	1	He	-0.125	-0.125	-188.34	1508	-0.01	2000	
Sb	123	115	1	He	0.103	0.103	14.89	157	0.07	200	
Ba	137	115	1	He	33.675	33.675	1.56	14958	0.23	10000	
W	182	159	1	He	0.049	0.049	69.18	2045	0.00	2500	
Tl	205	165	1	He	0.026	0.026	10.26	279	0.01	2000	
Pb	208	165	1	He	0.045	0.045	23.24	1840	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1450400	0.79	1276810	113.60	60	120	
Sc	45	1	He	178156	1.06	163460	108.99	60	120	
Sc	45	2	NoGas	10068416	0.87	8842934	113.86	60	120	
Rh	103	1	He	1058029	0.62	1010526	104.70	60	120	
In	115	1	He	269135	0.49	257801	104.40	60	120	
Tb	159	1	He	1203382	0.56	1155473	104.15	60	120	
Ho	165	1	He	1212072	0.16	1147359	105.64	60	120	
Bi	209	1	He	803317	0.71	790610	101.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	024_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:37:09-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	47.056	0.777	965837	0.63	50	94.1	89.5	110.5	
Be	9	45	2	NoGas	49.179	0.759	268792	0.53	50	98.4	89.5	110.5	
B	11	6	2	NoGas	50.674	1.326	193871	1.23	50	101.3	89.5	110.5	
Na	23	45	1	He	25887.045	2.104	13017540	1.16	25000	103.5	89.5	110.5	
Mg	24	45	1	He	25547.286	2.021	7197745	0.47	25000	102.2	89.5	110.5	
Al	27	45	1	He	251.539	2.881	30092	0.96	250	100.6	89.5	110.5	
K	39	45	1	He	25149.367	2.992	3490955	1.24	25000	100.6	89.5	110.5	
Ca	44	45	1	He	24875.206	2.758	200095	0.91	25000	99.5	89.5	110.5	
Ti	47	45	1	He	51.089	8.519	2951	7.12	50	102.2	89.5	110.5	
V	51	45	1	He	49.953	1.267	99277	0.83	50	99.9	89.5	110.5	
Cr	52	45	1	He	50.244	3.731	124952	1.86	50	100.5	89.5	110.5	
Mn	55	45	1	He	248.529	2.320	310564	0.55	250	99.4	89.5	110.5	
Fe	56	45	1	He	12609.349	1.952	24604219	0.06	12500	100.9	89.5	110.5	
Co	59	45	1	He	50.669	2.369	227385	0.45	50	101.3	89.5	110.5	
Ni	60	45	1	He	50.567	2.118	63133	0.22	50	101.1	89.5	110.5	
Cu	63	45	1	He	50.427	2.053	182381	0.09	50	100.9	89.5	110.5	
Zn	66	45	1	He	47.675	3.571	22718	1.29	50	95.4	89.5	110.5	
As	75	115	1	He	51.702	1.461	13407	0.91	50	103.4	89.5	110.5	
Se	78	115	1	He	50.608	2.675	635	3.31	50	101.2	89.5	110.5	
Sr	88	103	1	He	49.744	1.784	59964	1.09	50	99.5	89.5	110.5	
Mo	95	103	1	He	51.728	1.156	74822	0.50	50	103.5	89.5	110.5	
Ag	107	103	1	He	50.447	0.353	261310	0.44	50	100.9	89.5	110.5	
Cd	111	115	1	He	50.669	1.516	29274	0.81	50	101.3	89.5	110.5	
Sn	118	115	1	He	48.853	0.850	54986	1.28	50	97.7	89.5	110.5	
Sb	123	115	1	He	51.089	0.588	62899	1.36	50	102.2	89.5	110.5	
Ba	137	115	1	He	49.262	3.924	21321	2.34	50	98.5	89.5	110.5	
W	182	159	1	He	51.599	2.520	313673	2.36	50	103.2	89.5	110.5	
Tl	205	165	1	He	50.342	2.027	466280	1.68	50	100.7	89.5	110.5	
Pb	208	165	1	He	50.140	0.673	611270	0.60	50	100.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1384047	1.78	1276810	108.40	60	120	
Sc	45	1	He	174228	1.95	163460	106.59	60	120	
Sc	45	2	NoGas	9801186	1.27	8842934	110.84	60	120	
Rh	103	1	He	1033368	0.76	1010526	102.26	60	120	
In	115	1	He	262388	1.59	257801	101.78	60	120	
Tb	159	1	He	1174948	0.28	1155473	101.69	60	120	
Ho	165	1	He	1187732	0.60	1147359	103.52	60	120	
Bi	209	1	He	771598	0.84	790610	97.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	025_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:41:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.031	-149.9	95112	0.4	8	
Be	9	45	2	NoGas	0.158	19.6	974	18.3	1	
B	11	6	2	NoGas	1.408	8.2	16534	2.7	20	
Na	23	45	1	He	16.560	8.3	17524	4.8	1000	
Mg	24	45	1	He	9.622	1.3	3560	1.9	1000	
Al	27	45	1	He	-0.414	-16.8	268	2.6	50	
K	39	45	1	He	15.933	26.6	13431	3.5	1000	
Ca	44	45	1	He	-10.222	-70.8	720	7.5	1000	
Ti	47	45	1	He	0.092	128.6	8	89.2	20	
V	51	45	1	He	0.015	728.5	225	98.0	2	
Cr	52	45	1	He	-0.023	-8.5	908	0.4	2	
Mn	55	45	1	He	-0.377	-17.0	1106	6.4	2	
Fe	56	45	1	He	6.507	10.1	16929	8.4	50	
Co	59	45	1	He	-0.012	-68.8	469	7.8	1	
Ni	60	45	1	He	-0.047	-19.2	197	6.1	2	
Cu	63	45	1	He	-0.614	-10.7	3461	7.5	2	
Zn	66	45	1	He	-3.636	-5.3	2011	3.0	20	
As	75	115	1	He	0.068	42.5	49	15.0	2	
Se	78	115	1	He	0.230	102.6	7	42.8	2	
Sr	88	103	1	He	0.014	174.3	132	24.0	10	
Mo	95	103	1	He	0.108	26.5	190	22.0	2	
Ag	107	103	1	He	0.022	9.1	132	7.7	0.2	
Cd	111	115	1	He	0.096	8.8	59	8.4	0.2	
Sn	118	115	1	He	-0.418	-19.1	1189	7.1	10	
Sb	123	115	1	He	0.108	12.8	164	11.5	2	
Ba	137	115	1	He	0.017	51.9	14	26.7	5	
W	182	159	1	He	0.221	20.2	3078	8.8	10	
Tl	205	165	1	He	0.075	17.5	742	16.1	0.5	
Pb	208	165	1	He	0.046	12.7	1833	3.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1398448	0.46	1276810	109.53	60	120	
Sc	45	1	He	175005	0.92	163460	107.06	60	120	
Sc	45	2	NoGas	9818208	0.82	8842934	111.03	60	120	
Rh	103	1	He	1082491	0.89	1010526	107.12	60	120	
In	115	1	He	271665	0.92	257801	105.38	60	120	
Tb	159	1	He	1191980	1.06	1155473	103.16	60	120	
Ho	165	1	He	1203944	0.57	1147359	104.93	60	120	
Bi	209	1	He	795519	1.05	790610	100.62	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-4-a
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:45:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.938	3.938	2.05	167736	0.00	10000	
Be	9	45	2	NoGas	0.144	0.144	4.61	889	0.02	2000	
B	11	6	2	NoGas	23.868	23.868	1.46	97059	0.02	300	
Na	23	45	1	He	6366.945	6366.945	1.03	3145646	0.20	500000	
Mg	24	45	1	He	4179.241	4179.241	1.24	1155060	0.36	500000	
Al	27	45	1	He	204.802	204.802	1.98	24081	0.85	200000	
K	39	45	1	He	3094.586	3094.586	1.47	430768	0.72	500000	
Ca	44	45	1	He	64787.005	64787.005	1.07	509717	12.71	500000	
Ti	47	45	1	He	2.411	2.411	24.89	139	1.74	2500	
V	51	45	1	He	0.561	0.561	73.97	1284	0.04	10000	
Cr	52	45	1	He	0.579	0.579	7.46	2344	0.02	10000	
Mn	55	45	1	He	19.830	19.830	2.08	25711	0.08	10000	
Fe	56	45	1	He	669.056	669.056	1.79	1283703	0.05	200000	
Co	59	45	1	He	0.053	0.053	3.90	743	0.01	5000	
Ni	60	45	1	He	0.056	0.056	30.78	318	0.02	10000	
Cu	63	45	1	He	-0.563	-0.563	-1.59	3552	-0.02	10000	
Zn	66	45	1	He	-4.940	-4.940	-2.75	1447	-0.34	10000	
As	75	115	1	He	0.425	0.425	8.24	142	0.30	10000	
Se	78	115	1	He	0.301	0.301	147.40	8	3.86	10000	
Sr	88	103	1	He	393.724	393.724	0.79	474358	0.08	10000	
Mo	95	103	1	He	0.191	0.191	6.43	302	0.06	2000	
Ag	107	103	1	He	0.004	0.004	7.39	32	0.01	300	
Cd	111	115	1	He	0.047	0.047	8.73	29	0.16	4000	
Sn	118	115	1	He	-1.073	-1.073	-7.18	441	-0.24	2000	
Sb	123	115	1	He	0.053	0.053	11.14	93	0.06	200	
Ba	137	115	1	He	55.237	55.237	0.92	24349	0.23	10000	
W	182	159	1	He	0.076	0.076	74.21	2160	0.00	2500	
Tl	205	165	1	He	0.024	0.024	26.50	253	0.01	2000	
Pb	208	165	1	He	0.084	0.084	10.48	2266	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380620	1.26	1276810	108.13	60	120	
Sc	45	1	He	170770	0.53	163460	104.47	60	120	
Sc	45	2	NoGas	9764737	0.53	8842934	110.42	60	120	
Rh	103	1	He	1034484	1.95	1010526	102.37	60	120	
In	115	1	He	267149	1.39	257801	103.63	60	120	
Tb	159	1	He	1175305	0.94	1155473	101.72	60	120	
Ho	165	1	He	1179283	1.58	1147359	102.78	60	120	
Bi	209	1	He	784440	0.93	790610	99.22	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-5-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:49:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.777	4.777	1.67	181372	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	10.10	833	0.02	2000	
B	11	6	2	NoGas	649.810	649.810	2.04	2355642	0.03	300	>LDR
Na	23	45	1	He	12102.580	12102.580	1.95	6064492	0.20	500000	
Mg	24	45	1	He	7071.236	7071.236	2.30	1984245	0.36	500000	
Al	27	45	1	He	203.153	203.153	4.11	24257	0.84	200000	
K	39	45	1	He	2432.109	2432.109	0.51	346284	0.70	500000	
Ca	44	45	1	He	91997.726	91997.726	1.52	734800	12.52	500000	
Ti	47	45	1	He	2.261	2.261	13.69	132	1.71	2500	
V	51	45	1	He	0.421	0.421	25.32	1025	0.04	10000	
Cr	52	45	1	He	0.584	0.584	3.16	2394	0.02	10000	
Mn	55	45	1	He	119.587	119.587	1.99	149613	0.08	10000	
Fe	56	45	1	He	1400.696	1400.696	1.25	2725328	0.05	200000	
Co	59	45	1	He	0.077	0.077	25.61	860	0.01	5000	
Ni	60	45	1	He	0.093	0.093	26.89	369	0.03	10000	
Cu	63	45	1	He	-0.653	-0.653	-9.01	3293	-0.02	10000	
Zn	66	45	1	He	-6.658	-6.658	-0.96	779	-0.85	10000	
As	75	115	1	He	0.168	0.168	9.33	74	0.23	10000	
Se	78	115	1	He	0.239	0.239	92.14	7	3.43	10000	
Sr	88	103	1	He	575.748	575.748	1.33	692289	0.08	10000	
Mo	95	103	1	He	0.248	0.248	2.42	384	0.06	2000	
Ag	107	103	1	He	0.004	0.004	78.31	33	0.01	300	
Cd	111	115	1	He	0.039	0.039	32.73	24	0.16	4000	
Sn	118	115	1	He	-1.049	-1.049	-2.99	467	-0.22	2000	
Sb	123	115	1	He	0.032	0.032	55.36	67	0.05	200	
Ba	137	115	1	He	32.680	32.680	1.52	14376	0.23	10000	
W	182	159	1	He	0.015	0.015	179.99	1785	0.00	2500	
Tl	205	165	1	He	0.011	0.011	3.86	133	0.01	2000	
Pb	208	165	1	He	0.142	0.142	10.05	2957	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386035	2.26	1276810	108.55	60	120	
Sc	45	1	He	173464	1.47	163460	106.12	60	120	
Sc	45	2	NoGas	9666905	0.70	8842934	109.32	60	120	
Rh	103	1	He	1032455	0.60	1010526	102.17	60	120	
In	115	1	He	266575	1.57	257801	103.40	60	120	
Tb	159	1	He	1172830	1.00	1155473	101.50	60	120	
Ho	165	1	He	1179196	0.72	1147359	102.77	60	120	
Bi	209	1	He	780744	0.35	790610	98.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-6-a
Data File Name	028SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:53:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.429	0.429	9.09	103966	0.00	10000	
Be	9	45	2	NoGas	0.097	0.097	16.17	637	0.02	2000	
B	11	6	2	NoGas	15.062	15.062	1.95	66571	0.02	300	
Na	23	45	1	He	6870.465	6870.465	1.73	3502042	0.20	500000	
Mg	24	45	1	He	1375.171	1375.171	3.34	392662	0.35	500000	
Al	27	45	1	He	25.205	25.205	2.09	3339	0.75	200000	
K	39	45	1	He	686.761	686.761	2.86	107429	0.64	500000	
Ca	44	45	1	He	31857.148	31857.148	3.81	258963	12.30	500000	
Ti	47	45	1	He	0.302	0.302	50.80	20	1.51	2500	
V	51	45	1	He	0.126	0.126	132.07	455	0.03	10000	
Cr	52	45	1	He	0.113	0.113	3.63	1255	0.01	10000	
Mn	55	45	1	He	0.266	0.266	35.17	1921	0.01	10000	
Fe	56	45	1	He	90.169	90.169	3.88	182101	0.05	200000	
Co	59	45	1	He	0.034	0.034	37.21	680	0.00	5000	
Ni	60	45	1	He	0.089	0.089	61.34	369	0.02	10000	
Cu	63	45	1	He	-0.634	-0.634	-6.38	3410	-0.02	10000	
Zn	66	45	1	He	-6.871	-6.871	-0.68	704	-0.98	10000	
As	75	115	1	He	0.128	0.128	7.42	66	0.19	10000	
Se	78	115	1	He	0.400	0.400	57.87	9	4.31	10000	
Sr	88	103	1	He	176.406	176.406	1.30	217745	0.08	10000	
Mo	95	103	1	He	0.021	0.021	79.90	58	0.04	2000	
Ag	107	103	1	He	0.000	0.000	-1657.73	13	0.00	300	
Cd	111	115	1	He	0.033	0.033	25.25	22	0.15	4000	
Sn	118	115	1	He	-1.075	-1.075	-2.09	452	-0.24	2000	
Sb	123	115	1	He	0.029	0.029	30.62	64	0.04	200	
Ba	137	115	1	He	17.955	17.955	3.41	8144	0.22	10000	
W	182	159	1	He	-0.009	-0.009	-319.41	1682	0.00	2500	
Tl	205	165	1	He	0.015	0.015	32.68	176	0.01	2000	
Pb	208	165	1	He	0.040	0.040	10.46	1770	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1405270	0.87	1276810	110.06	60	120	
Sc	45	1	He	176274	2.63	163460	107.84	60	120	
Sc	45	2	NoGas	9849849	0.58	8842934	111.39	60	120	
Rh	103	1	He	1059442	0.31	1010526	104.84	60	120	
In	115	1	He	274754	0.51	257801	106.58	60	120	
Tb	159	1	He	1203508	0.48	1155473	104.16	60	120	
Ho	165	1	He	1209727	0.73	1147359	105.44	60	120	
Bi	209	1	He	790514	0.90	790610	99.99	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-7-a
Data File Name	029SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:58:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.293	1.293	6.55	118752	0.00	10000	
Be	9	45	2	NoGas	0.146	0.146	18.75	896	0.02	2000	
B	11	6	2	NoGas	100.229	100.229	1.11	374094	0.03	300	
Na	23	45	1	He	30094.521	30094.521	1.13	15117856	0.20	500000	
Mg	24	45	1	He	2586.581	2586.581	1.65	728787	0.35	500000	
Al	27	45	1	He	129.291	129.291	3.13	15607	0.83	200000	
K	39	45	1	He	644.801	644.801	3.01	100289	0.64	500000	
Ca	44	45	1	He	99554.521	99554.521	2.75	797631	12.48	500000	
Ti	47	45	1	He	1.929	1.929	34.90	113	1.70	2500	
V	51	45	1	He	1.592	1.592	6.72	3347	0.05	10000	
Cr	52	45	1	He	0.625	0.625	3.27	2500	0.02	10000	
Mn	55	45	1	He	128.071	128.071	2.56	160635	0.08	10000	
Fe	56	45	1	He	6714.093	6714.093	2.82	13088727	0.05	200000	
Co	59	45	1	He	0.092	0.092	15.77	931	0.01	5000	
Ni	60	45	1	He	0.063	0.063	31.52	332	0.02	10000	
Cu	63	45	1	He	-0.554	-0.554	-5.88	3650	-0.02	10000	
Zn	66	45	1	He	-6.405	-6.405	-5.09	883	-0.73	10000	
As	75	115	1	He	0.435	0.435	13.67	144	0.30	10000	
Se	78	115	1	He	0.500	0.500	18.33	10	4.87	10000	
Sr	88	103	1	He	519.656	519.656	0.42	623162	0.08	10000	
Mo	95	103	1	He	0.068	0.068	28.25	124	0.05	2000	
Ag	107	103	1	He	0.001	0.001	137.42	21	0.01	300	
Cd	111	115	1	He	0.038	0.038	30.31	24	0.16	4000	
Sn	118	115	1	He	-1.133	-1.133	-1.97	374	-0.30	2000	
Sb	123	115	1	He	0.055	0.055	15.79	96	0.06	200	
Ba	137	115	1	He	53.947	53.947	1.82	23727	0.23	10000	
W	182	159	1	He	0.133	0.133	7.64	2515	0.01	2500	
Tl	205	165	1	He	0.007	0.007	21.95	99	0.01	2000	
Pb	208	165	1	He	0.072	0.072	17.97	2141	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1390200	1.01	1276810	108.88	60	120	
Sc	45	1	He	174039	1.38	163460	106.47	60	120	
Sc	45	2	NoGas	9745888	1.00	8842934	110.21	60	120	
Rh	103	1	He	1029639	0.83	1010526	101.89	60	120	
In	115	1	He	266525	0.86	257801	103.38	60	120	
Tb	159	1	He	1181625	1.44	1155473	102.26	60	120	
Ho	165	1	He	1194693	1.44	1147359	104.13	60	120	
Bi	209	1	He	773421	0.57	790610	97.83	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-9-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:02:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.029	2.029	6.32	136745	0.00	10000	
Be	9	45	2	NoGas	0.064	0.064	17.15	467	0.01	2000	
B	11	6	2	NoGas	20.074	20.074	1.40	89485	0.02	300	
Na	23	45	1	He	6625.799	6625.799	2.30	3436273	0.19	500000	
Mg	24	45	1	He	1567.099	1567.099	2.22	455266	0.34	500000	
Al	27	45	1	He	-0.580	-0.580	-24.20	254	-0.23	200000	
K	39	45	1	He	610.632	610.632	3.34	98461	0.62	500000	
Ca	44	45	1	He	78312.529	78312.529	2.32	646684	12.11	500000	
Ti	47	45	1	He	0.034	0.034	189.58	4	0.77	2500	
V	51	45	1	He	-0.044	-0.044	-117.79	111	-0.04	10000	
Cr	52	45	1	He	-0.016	-0.016	-244.70	948	0.00	10000	
Mn	55	45	1	He	1.126	1.126	9.61	3056	0.04	10000	
Fe	56	45	1	He	7.970	7.970	2.98	20283	0.04	200000	
Co	59	45	1	He	-0.040	-0.040	-31.97	352	-0.01	5000	
Ni	60	45	1	He	-0.043	-0.043	-26.94	207	-0.02	10000	
Cu	63	45	1	He	-0.538	-0.538	-5.51	3817	-0.01	10000	
Zn	66	45	1	He	-7.085	-7.085	-1.85	628	-1.13	10000	
As	75	115	1	He	0.179	0.179	7.96	80	0.22	10000	
Se	78	115	1	He	0.159	0.159	74.89	6	2.59	10000	
Sr	88	103	1	He	429.682	429.682	1.92	529034	0.08	10000	
Mo	95	103	1	He	0.450	0.450	11.26	692	0.06	2000	
Ag	107	103	1	He	-0.001	-0.001	-172.92	11	0.00	300	
Cd	111	115	1	He	0.020	0.020	57.79	14	0.15	4000	
Sn	118	115	1	He	-1.140	-1.140	-5.60	378	-0.30	2000	
Sb	123	115	1	He	0.056	0.056	16.21	100	0.06	200	
Ba	137	115	1	He	13.231	13.231	1.96	6013	0.22	10000	
W	182	159	1	He	0.043	0.043	127.02	2045	0.00	2500	
Tl	205	165	1	He	0.005	0.005	58.94	80	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-21.61	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1480981	0.48	1276810	115.99	60	120	
Sc	45	1	He	179331	1.78	163460	109.71	60	120	
Sc	45	2	NoGas	10072891	0.52	8842934	113.91	60	120	
Rh	103	1	He	1057150	0.53	1010526	104.61	60	120	
In	115	1	He	275203	0.83	257801	106.75	60	120	
Tb	159	1	He	1225602	0.46	1155473	106.07	60	120	
Ho	165	1	He	1236523	0.69	1147359	107.77	60	120	
Bi	209	1	He	811882	0.48	790610	102.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-10-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:06:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.197	0.197	30.37	102078	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	15.43	637	0.01	2000	
B	11	6	2	NoGas	16.097	16.097	1.22	75011	0.02	300	
Na	23	45	1	He	13731.542	13731.542	1.95	7023318	0.20	500000	
Mg	24	45	1	He	1564.022	1564.022	1.62	448744	0.35	500000	
Al	27	45	1	He	87.634	87.634	4.46	10866	0.81	200000	
K	39	45	1	He	259.629	259.629	5.06	47864	0.54	500000	
Ca	44	45	1	He	41662.181	41662.181	1.67	340161	12.25	500000	
Ti	47	45	1	He	1.133	1.133	21.18	69	1.64	2500	
V	51	45	1	He	1.049	1.049	13.12	2315	0.05	10000	
Cr	52	45	1	He	0.412	0.412	10.33	2010	0.02	10000	
Mn	55	45	1	He	134.598	134.598	1.90	171717	0.08	10000	
Fe	56	45	1	He	2542.486	2542.486	2.74	5046004	0.05	200000	
Co	59	45	1	He	0.498	0.498	2.33	2798	0.02	5000	
Ni	60	45	1	He	0.769	0.769	5.52	1231	0.06	10000	
Cu	63	45	1	He	-0.521	-0.521	-5.37	3829	-0.01	10000	
Zn	66	45	1	He	-5.051	-5.051	-3.50	1455	-0.35	10000	
As	75	115	1	He	0.685	0.685	9.07	213	0.32	10000	
Se	78	115	1	He	0.297	0.297	92.35	8	3.80	10000	
Sr	88	103	1	He	231.981	231.981	0.72	287394	0.08	10000	
Mo	95	103	1	He	0.056	0.056	25.67	110	0.05	2000	
Ag	107	103	1	He	0.001	0.001	110.45	21	0.01	300	
Cd	111	115	1	He	0.028	0.028	39.64	18	0.16	4000	
Sn	118	115	1	He	-1.035	-1.035	-11.41	489	-0.21	2000	
Sb	123	115	1	He	0.067	0.067	21.52	112	0.06	200	
Ba	137	115	1	He	29.799	29.799	2.02	13286	0.22	10000	
W	182	159	1	He	0.022	0.022	140.31	1882	0.00	2500	
Tl	205	165	1	He	0.014	0.014	13.04	168	0.01	2000	
Pb	208	165	1	He	0.175	0.175	4.35	3481	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1498320	1.15	1276810	117.35	60	120	
Sc	45	1	He	177095	1.44	163460	108.34	60	120	
Sc	45	2	NoGas	10089155	0.23	8842934	114.09	60	120	
Rh	103	1	He	1063479	0.45	1010526	105.24	60	120	
In	115	1	He	270141	0.41	257801	104.79	60	120	
Tb	159	1	He	1205561	0.66	1155473	104.33	60	120	
Ho	165	1	He	1223363	0.14	1147359	106.62	60	120	
Bi	209	1	He	807624	0.54	790610	102.15	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-11-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:10:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.909	13.909	1.15	354932	0.00	10000	
Be	9	45	2	NoGas	0.081	0.081	24.11	552	0.01	2000	
B	11	6	2	NoGas	471.774	471.774	2.00	1816950	0.03	300	>LDR
Na	23	45	1	He	10289.854	10289.854	1.59	5152735	0.20	500000	
Mg	24	45	1	He	2736.131	2736.131	2.31	767562	0.36	500000	
Al	27	45	1	He	1.530	1.530	54.02	494	0.31	200000	
K	39	45	1	He	2234.499	2234.499	1.35	318725	0.70	500000	
Ca	44	45	1	He	96406.234	96406.234	2.23	769200	12.53	500000	
Ti	47	45	1	He	0.075	0.075	78.11	7	1.13	2500	
V	51	45	1	He	0.187	0.187	78.57	563	0.03	10000	
Cr	52	45	1	He	0.070	0.070	39.77	1128	0.01	10000	
Mn	55	45	1	He	82.786	82.786	2.51	103949	0.08	10000	
Fe	56	45	1	He	3844.512	3844.512	2.18	7465088	0.05	200000	
Co	59	45	1	He	6.994	6.994	3.06	31669	0.02	5000	
Ni	60	45	1	He	1.269	1.269	2.90	1823	0.07	10000	
Cu	63	45	1	He	-0.188	-0.188	-6.97	4911	0.00	10000	
Zn	66	45	1	He	-1.731	-1.731	-9.88	2757	-0.06	10000	
As	75	115	1	He	5.912	5.912	2.18	1580	0.37	10000	
Se	78	115	1	He	0.135	0.135	88.12	6	2.40	10000	
Sr	88	103	1	He	635.645	635.645	1.65	768701	0.08	10000	
Mo	95	103	1	He	45.745	45.745	2.53	66494	0.07	2000	
Ag	107	103	1	He	0.000	0.000	-2904.87	13	0.00	300	
Cd	111	115	1	He	0.042	0.042	40.00	26	0.16	4000	
Sn	118	115	1	He	-1.192	-1.192	-2.85	307	-0.39	2000	
Sb	123	115	1	He	0.048	0.048	34.88	87	0.06	200	
Ba	137	115	1	He	41.062	41.062	0.55	18014	0.23	10000	
W	182	159	1	He	0.013	0.013	429.63	1819	0.00	2500	
Tl	205	165	1	He	0.012	0.012	20.43	146	0.01	2000	
Pb	208	165	1	He	0.002	0.002	94.64	1311	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1469695	1.26	1276810	115.11	60	120	
Sc	45	1	He	173299	1.23	163460	106.02	60	120	
Sc	45	2	NoGas	9860860	0.72	8842934	111.51	60	120	
Rh	103	1	He	1038377	0.24	1010526	102.76	60	120	
In	115	1	He	265833	0.78	257801	103.12	60	120	
Tb	159	1	He	1202684	0.77	1155473	104.09	60	120	
Ho	165	1	He	1211812	0.89	1147359	105.62	60	120	
Bi	209	1	He	792914	0.58	790610	100.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-12-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:14:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.073	0.073	18.72	99547	0.00	10000	
Be	9	45	2	NoGas	0.052	0.052	24.41	400	0.01	2000	
B	11	6	2	NoGas	7.833	7.833	3.10	42290	0.02	300	
Na	23	45	1	He	6.398	6.398	19.88	12479	0.05	500000	
Mg	24	45	1	He	-0.822	-0.822	-44.97	607	-0.14	500000	
Al	27	45	1	He	-0.707	-0.707	-53.44	234	-0.30	200000	
K	39	45	1	He	-2.340	-2.340	-95.54	10974	-0.02	500000	
Ca	44	45	1	He	-24.420	-24.420	-22.15	610	-4.00	500000	
Ti	47	45	1	He	-0.041	-0.041	0.00	0	#DIV/0!	2500	
V	51	45	1	He	-0.018	-0.018	-776.38	158	-0.01	10000	
Cr	52	45	1	He	0.037	0.037	36.68	1064	0.00	10000	
Mn	55	45	1	He	-0.920	-0.920	-3.76	431	-0.21	10000	
Fe	56	45	1	He	4.516	4.516	4.31	13120	0.03	200000	
Co	59	45	1	He	-0.046	-0.046	-9.51	317	-0.01	5000	
Ni	60	45	1	He	-0.059	-0.059	-18.86	183	-0.03	10000	
Cu	63	45	1	He	-0.857	-0.857	-2.26	2622	-0.03	10000	
Zn	66	45	1	He	-6.716	-6.716	-3.91	768	-0.87	10000	
As	75	115	1	He	0.038	0.038	28.70	41	0.09	10000	
Se	78	115	1	He	-0.070	-0.070	-164.23	3	-2.22	10000	
Sr	88	103	1	He	0.045	0.045	73.09	172	0.03	10000	
Mo	95	103	1	He	0.068	0.068	39.63	130	0.05	2000	
Ag	107	103	1	He	-0.001	-0.001	-92.90	9	-0.01	300	
Cd	111	115	1	He	0.014	0.014	69.79	10	0.14	4000	
Sn	118	115	1	He	-0.724	-0.724	-13.16	852	-0.08	2000	
Sb	123	115	1	He	0.056	0.056	28.67	99	0.06	200	
Ba	137	115	1	He	0.024	0.024	95.27	18	0.13	10000	
W	182	159	1	He	0.018	0.018	204.08	1852	0.00	2500	
Tl	205	165	1	He	0.001	0.001	288.38	43	0.00	2000	
Pb	208	165	1	He	0.004	0.004	71.96	1327	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481409	0.96	1276810	116.02	60	120	
Sc	45	1	He	176338	1.41	163460	107.88	60	120	
Sc	45	2	NoGas	10070909	0.79	8842934	113.89	60	120	
Rh	103	1	He	1085701	0.21	1010526	107.44	60	120	
In	115	1	He	274305	0.94	257801	106.40	60	120	
Tb	159	1	He	1204453	1.24	1155473	104.24	60	120	
Ho	165	1	He	1211932	1.06	1147359	105.63	60	120	
Bi	209	1	He	829885	1.01	790610	104.97	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-13-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:19:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.546	5.546	1.82	199330	0.00	10000	
Be	9	45	2	NoGas	0.045	0.045	17.75	352	0.01	2000	
B	11	6	2	NoGas	35.158	35.158	1.36	147348	0.02	300	
Na	23	45	1	He	7021.807	7021.807	1.80	3450877	0.20	500000	
Mg	24	45	1	He	7799.864	7799.864	2.78	2144184	0.36	500000	
Al	27	45	1	He	22.848	22.848	8.09	2946	0.78	200000	
K	39	45	1	He	3024.936	3024.936	1.71	419232	0.72	500000	
Ca	44	45	1	He	77215.881	77215.881	1.06	604344	12.78	500000	
Ti	47	45	1	He	0.529	0.529	62.65	32	1.64	2500	
V	51	45	1	He	0.022	0.022	396.17	232	0.01	10000	
Cr	52	45	1	He	0.029	0.029	42.74	1008	0.00	10000	
Mn	55	45	1	He	63.634	63.634	1.65	78713	0.08	10000	
Fe	56	45	1	He	613.786	613.786	1.77	1172159	0.05	200000	
Co	59	45	1	He	-0.030	-0.030	-12.32	376	-0.01	5000	
Ni	60	45	1	He	-0.100	-0.100	-28.13	127	-0.08	10000	
Cu	63	45	1	He	-0.686	-0.686	-3.59	3111	-0.02	10000	
Zn	66	45	1	He	-6.158	-6.158	-1.78	960	-0.64	10000	
As	75	115	1	He	0.049	0.049	27.34	42	0.12	10000	
Se	78	115	1	He	0.050	0.050	217.11	4	1.13	10000	
Sr	88	103	1	He	489.186	489.186	1.07	584486	0.08	10000	
Mo	95	103	1	He	0.074	0.074	19.82	132	0.06	2000	
Ag	107	103	1	He	0.001	0.001	158.74	19	0.01	300	
Cd	111	115	1	He	0.020	0.020	35.55	13	0.16	4000	
Sn	118	115	1	He	-0.911	-0.911	-3.62	607	-0.15	2000	
Sb	123	115	1	He	0.014	0.014	52.30	43	0.03	200	
Ba	137	115	1	He	53.212	53.212	0.45	22933	0.23	10000	
W	182	159	1	He	0.014	0.014	44.36	1808	0.00	2500	
Tl	205	165	1	He	0.002	0.002	234.49	49	0.00	2000	
Pb	208	165	1	He	0.012	0.012	38.35	1403	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1478032	0.54	1276810	115.76	60	120	
Sc	45	1	He	169929	0.68	163460	103.96	60	120	
Sc	45	2	NoGas	9862582	0.90	8842934	111.53	60	120	
Rh	103	1	He	1025854	0.24	1010526	101.52	60	120	
In	115	1	He	261168	1.03	257801	101.31	60	120	
Tb	159	1	He	1191794	0.49	1155473	103.14	60	120	
Ho	165	1	He	1191324	0.55	1147359	103.83	60	120	
Bi	209	1	He	796089	0.48	790610	100.69	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	035_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:23:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.127	0.551	991775	0.35	50	98.3	89.5	110.5	
Be	9	45	2	NoGas	50.643	1.858	273370	1.36	50	101.3	89.5	110.5	
B	11	6	2	NoGas	53.032	0.712	207244	0.38	50	106.1	89.5	110.5	
Na	23	45	1	He	25565.217	1.246	12685768	0.21	25000	102.3	89.5	110.5	
Mg	24	45	1	He	25438.695	1.469	7072488	0.66	25000	101.8	89.5	110.5	
Al	27	45	1	He	247.064	1.839	29175	1.25	250	98.8	89.5	110.5	
K	39	45	1	He	25239.052	1.520	3457486	0.66	25000	101.0	89.5	110.5	
Ca	44	45	1	He	24875.844	1.931	197468	0.80	25000	99.5	89.5	110.5	
Ti	47	45	1	He	49.367	2.505	2816	1.28	50	98.7	89.5	110.5	
V	51	45	1	He	50.732	3.156	99468	2.11	50	101.5	89.5	110.5	
Cr	52	45	1	He	50.141	2.338	123068	1.17	50	100.3	89.5	110.5	
Mn	55	45	1	He	245.128	2.037	302296	1.34	250	98.1	89.5	110.5	
Fe	56	45	1	He	12388.476	1.638	23853811	0.87	12500	99.1	89.5	110.5	
Co	59	45	1	He	50.025	1.110	221558	1.20	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.333	2.782	62008	1.80	50	100.7	89.5	110.5	
Cu	63	45	1	He	49.145	1.424	175541	1.08	50	98.3	89.5	110.5	
Zn	66	45	1	He	46.605	1.844	21996	1.73	50	93.2	89.5	110.5	
As	75	115	1	He	50.391	2.000	12958	1.45	50	100.8	89.5	110.5	
Se	78	115	1	He	50.818	7.112	632	6.42	50	101.6	89.5	110.5	
Sr	88	103	1	He	49.051	1.402	58747	1.30	50	98.1	89.5	110.5	
Mo	95	103	1	He	50.679	1.427	72830	1.49	50	101.4	89.5	110.5	
Ag	107	103	1	He	49.922	0.802	256901	0.39	50	99.8	89.5	110.5	
Cd	111	115	1	He	50.622	1.856	29002	1.02	50	101.2	89.5	110.5	
Sn	118	115	1	He	49.166	2.890	54855	1.70	50	98.3	89.5	110.5	
Sb	123	115	1	He	50.794	1.260	62012	1.49	50	101.6	89.5	110.5	
Ba	137	115	1	He	50.224	4.335	21557	3.15	50	100.4	89.5	110.5	
W	182	159	1	He	50.659	0.262	310121	0.78	50	101.3	89.5	110.5	
Tl	205	165	1	He	50.068	0.946	464787	1.05	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.044	0.904	611446	1.00	50	100.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1417255	0.42	1276810	111.00	60	120	
Sc	45	1	He	171902	1.25	163460	105.16	60	120	
Sc	45	2	NoGas	9680214	0.84	8842934	109.47	60	120	
Rh	103	1	He	1026620	0.70	1010526	101.59	60	120	
In	115	1	He	260191	1.33	257801	100.93	60	120	
Tb	159	1	He	1183032	0.61	1155473	102.39	60	120	
Ho	165	1	He	1190330	0.38	1147359	103.75	60	120	
Bi	209	1	He	771770	0.32	790610	97.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	036_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:27:21-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.103	27.7	98910	2.1	8	
Be	9	45	2	NoGas	0.087	14.5	589	13.6	1	
B	11	6	2	NoGas	3.766	2.1	26464	1.9	20	
Na	23	45	1	He	24.436	5.9	21361	4.1	1000	
Mg	24	45	1	He	15.531	8.8	5201	8.3	1000	
Al	27	45	1	He	-0.672	-30.7	236	10.2	50	
K	39	45	1	He	21.343	25.8	14099	5.9	1000	
Ca	44	45	1	He	-4.723	-237.1	759	11.7	1000	
Ti	47	45	1	He	0.056	61.3	6	34.7	20	
V	51	45	1	He	-0.009	-742.2	175	76.5	2	
Cr	52	45	1	He	-0.014	-134.8	926	4.3	2	
Mn	55	45	1	He	-0.438	-11.3	1024	6.9	2	
Fe	56	45	1	He	10.189	9.9	23992	8.9	50	
Co	59	45	1	He	-0.021	-96.1	424	21.2	1	
Ni	60	45	1	He	-0.057	-44.8	183	17.3	2	
Cu	63	45	1	He	-0.896	-1.9	2451	2.2	2	
Zn	66	45	1	He	-3.909	-12.3	1888	9.5	20	
As	75	115	1	He	0.085	19.4	53	8.1	2	
Se	78	115	1	He	0.075	51.9	5	9.9	2	
Sr	88	103	1	He	0.075	43.4	209	18.9	10	
Mo	95	103	1	He	0.116	21.7	203	17.7	2	
Ag	107	103	1	He	0.030	17.5	178	16.9	0.2	
Cd	111	115	1	He	0.049	10.8	31	10.1	0.2	
Sn	118	115	1	He	-0.455	-30.8	1148	13.6	10	
Sb	123	115	1	He	0.099	30.0	153	24.5	2	
Ba	137	115	1	He	0.049	84.0	29	63.6	5	
W	182	159	1	He	0.203	24.9	2978	10.5	10	
Tl	205	165	1	He	0.080	12.5	779	11.8	0.5	
Pb	208	165	1	He	0.040	33.2	1752	9.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1473161	0.71	1276810	115.38	60	120	
Sc	45	1	He	173886	0.90	163460	106.38	60	120	
Sc	45	2	NoGas	9950119	1.72	8842934	112.52	60	120	
Rh	103	1	He	1084619	1.10	1010526	107.33	60	120	
In	115	1	He	271701	0.20	257801	105.39	60	120	
Tb	159	1	He	1196347	0.07	1155473	103.54	60	120	
Ho	165	1	He	1197073	0.19	1147359	104.33	60	120	
Bi	209	1	He	798141	1.38	790610	100.95	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	037CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:31:35-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	9.358	9.358	4.344	232293	0.63	8	117.0	69.5	130.5	
Be	9	2	NoGas	1.247	1.247	4.221	5990	6.34	1	124.7	69.5	130.5	
B	11	2	NoGas	25.623	25.623	2.068	96836	2.10	20	128.1	69.5	130.5	
Na	23	1	He	996.320	996.320	3.367	505710	1.35	1000	99.6	69.5	130.5	
Mg	24	1	He	1001.655	1001.655	2.678	280781	0.60	1000	100.2	69.5	130.5	
Al	27	1	He	47.826	47.826	2.462	5931	0.25	50	95.7	69.5	130.5	
K	39	1	He	998.521	998.521	2.528	148176	0.50	1000	99.9	69.5	130.5	
Ca	44	1	He	911.673	911.673	2.981	8041	2.13	1000	91.2	69.5	130.5	
Ti	47	1	He	9.956	9.956	11.062	572	9.11	10	99.6	69.5	130.5	
V	51	1	He	5.107	5.107	4.545	10239	2.54	5	102.1	69.5	130.5	
Cr	52	1	He	2.146	2.146	4.425	6209	2.27	2	107.3	69.5	130.5	
Mn	55	1	He	3.780	3.780	6.986	6218	3.28	5	75.6	69.5	130.5	
Fe	56	1	He	103.517	103.517	2.607	204484	0.55	100	103.5	69.5	130.5	
Co	59	1	He	0.964	0.964	2.791	4800	1.90	1	96.4	69.5	130.5	
Ni	60	1	He	1.948	1.948	5.206	2655	2.86	2	97.4	69.5	130.5	
Cu	63	1	He	1.102	1.102	7.539	9385	2.26	2	55.1	69.5	130.5	6020A CR1 Failed
Zn	66	1	He	14.611	14.611	7.582	9295	3.19	20	73.1	69.5	130.5	
As	75	1	He	5.013	5.013	4.490	1364	4.23	5	100.3	69.5	130.5	
Se	78	1	He	4.798	4.798	2.114	66	1.16	5	96.0	69.5	130.5	
Sr	88	1	He	9.122	9.122	0.750	11508	0.66	10	91.2	69.5	130.5	
Mo	95	1	He	5.212	5.212	4.654	7850	4.42	5	104.2	69.5	130.5	
Ag	107	1	He	0.974	0.974	3.028	5250	3.24	1	97.4	69.5	130.5	
Cd	111	1	He	1.014	1.014	4.824	604	5.27	1	101.4	69.5	130.5	
Sn	118	1	He	8.658	8.658	5.597	11378	4.20	10	86.6	69.5	130.5	
Sb	123	1	He	1.945	1.945	6.090	2488	5.25	2	97.3	69.5	130.5	
Ba	137	1	He	4.862	4.862	1.791	2171	2.00	5	97.2	69.5	130.5	
W	182	1	He	10.258	10.258	1.897	64629	2.79	10	102.6	69.5	130.5	
Tl	205	1	He	1.018	1.018	0.739	9508	1.67	1	101.8	69.5	130.5	
Pb	208	1	He	1.014	1.014	2.598	13658	1.57	1	101.4	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1293371	0.74	1276810	101.30	60	120	
Sc	45	1	He	172878	2.12	163460	105.76	60	120	
Sc	45	2	NoGas	8479800	2.64	8842934	95.89	60	120	
Rh	103	1	He	1072724	0.24	1010526	106.15	60	120	
In	115	1	He	269823	0.85	257801	104.66	60	120	
Tb	159	1	He	1191513	1.10	1155473	103.12	60	120	
Ho	165	1	He	1193149	0.94	1147359	103.99	60	120	
Bi	209	1	He	802873	1.32	790610	101.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64205-a-1-a
Data File Name	038SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:35:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.095	4.095	1.38	164495	0.00	10000	
Be	9	45	2	NoGas	0.061	0.061	14.04	422	0.01	2000	
B	11	6	2	NoGas	109.973	109.973	2.29	406314	0.03	300	
Na	23	45	1	He	96232.146	96232.146	1.09	46178659	0.21	500000	
Mg	24	45	1	He	19275.949	19275.949	1.28	5185301	0.37	500000	
Al	27	45	1	He	1997.799	1997.799	1.96	226112	0.88	200000	
K	39	45	1	He	45181.300	45181.300	1.45	5980087	0.76	500000	
Ca	44	45	1	He	70131.663	70131.663	1.69	537263	13.05	500000	
Ti	47	45	1	He	23.949	23.949	6.85	1322	1.81	2500	
V	51	45	1	He	2.149	2.149	16.06	4254	0.05	10000	
Cr	52	45	1	He	6.164	6.164	4.22	15440	0.04	10000	
Mn	55	45	1	He	84.063	84.063	2.26	101280	0.08	10000	
Fe	56	45	1	He	2129.285	2129.285	1.23	3970198	0.05	200000	
Co	59	45	1	He	1.199	1.199	5.66	5623	0.02	5000	
Ni	60	45	1	He	10.826	10.826	0.80	13097	0.08	10000	
Cu	63	45	1	He	100.565	100.565	2.92	341896	0.03	10000	
Zn	66	45	1	He	361.882	361.882	2.34	142806	0.25	10000	
As	75	115	1	He	1.299	1.299	3.73	353	0.37	10000	
Se	78	115	1	He	2.050	2.050	20.56	28	7.23	10000	
Sr	88	103	1	He	224.128	224.128	1.00	256506	0.09	10000	
Mo	95	103	1	He	4.318	4.318	1.75	5960	0.07	2000	
Ag	107	103	1	He	0.144	0.144	17.43	724	0.02	300	
Cd	111	115	1	He	0.863	0.863	5.12	482	0.18	4000	
Sn	118	115	1	He	5.465	5.465	7.88	7306	0.07	2000	
Sb	123	115	1	He	0.994	0.994	4.82	1206	0.08	200	
Ba	137	115	1	He	88.945	88.945	0.63	37125	0.24	10000	
W	182	159	1	He	0.807	0.807	8.64	6439	0.01	2500	
Tl	205	165	1	He	0.038	0.038	16.36	377	0.01	2000	
Pb	208	165	1	He	7.886	7.886	0.77	95333	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380093	1.61	1276810	108.09	60	120	
Sc	45	1	He	166325	1.61	163460	101.75	60	120	
Sc	45	2	NoGas	9412961	0.25	8842934	106.45	60	120	
Rh	103	1	He	982416	0.85	1010526	97.22	60	120	
In	115	1	He	252980	1.53	257801	98.13	60	120	
Tb	159	1	He	1149706	0.82	1155473	99.50	60	120	
Ho	165	1	He	1164902	0.36	1147359	101.53	60	120	
Bi	209	1	He	1104225	0.38	790610	139.67	60	120	ISTD warning

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Sample Report

Sample Table

Sample Name	240-64205-a-4-a
Data File Name	039SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:39:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.626	1.626	3.01	121024	0.00	10000	
Be	9	45	2	NoGas	0.032	0.032	36.18	270	0.01	2000	
B	11	6	2	NoGas	124.408	124.408	1.38	462373	0.03	300	
Na	23	45	1	He	108610.320	108610.320	1.39	52183166	0.21	500000	
Mg	24	45	1	He	6470.924	6470.924	2.70	1743313	0.37	500000	
Al	27	45	1	He	3831.796	3831.796	1.87	433981	0.88	200000	
K	39	45	1	He	4608.894	4608.894	1.30	620416	0.74	500000	
Ca	44	45	1	He	44810.544	44810.544	1.53	344011	13.03	500000	
Ti	47	45	1	He	3.670	3.670	29.85	204	1.80	2500	
V	51	45	1	He	1.045	1.045	2.47	2167	0.05	10000	
Cr	52	45	1	He	3.461	3.461	4.29	9083	0.04	10000	
Mn	55	45	1	He	95.127	95.127	1.58	114570	0.08	10000	
Fe	56	45	1	He	243.576	243.576	1.28	458262	0.05	200000	
Co	59	45	1	He	0.526	0.526	4.20	2751	0.02	5000	
Ni	60	45	1	He	3.152	3.152	2.65	3992	0.08	10000	
Cu	63	45	1	He	22.771	22.771	2.25	81660	0.03	10000	
Zn	66	45	1	He	94.595	94.595	2.00	39831	0.24	10000	
As	75	115	1	He	0.629	0.629	5.08	186	0.34	10000	
Se	78	115	1	He	0.501	0.501	5.45	10	5.12	10000	
Sr	88	103	1	He	240.714	240.714	0.77	273270	0.09	10000	
Mo	95	103	1	He	2.100	2.100	5.46	2888	0.07	2000	
Ag	107	103	1	He	0.075	0.075	7.50	381	0.02	300	
Cd	111	115	1	He	0.157	0.157	13.07	89	0.18	4000	
Sn	118	115	1	He	-0.512	-0.512	-29.08	1011	-0.05	2000	
Sb	123	115	1	He	3.156	3.156	4.09	3779	0.08	200	
Ba	137	115	1	He	25.436	25.436	1.08	10652	0.24	10000	
W	182	159	1	He	1.285	1.285	4.72	9266	0.01	2500	
Tl	205	165	1	He	0.012	0.012	14.94	142	0.01	2000	
Pb	208	165	1	He	5.094	5.094	0.85	61803	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1392496	1.30	1276810	109.06	60	120	
Sc	45	1	He	166538	1.25	163460	101.88	60	120	
Sc	45	2	NoGas	9443447	0.21	8842934	106.79	60	120	
Rh	103	1	He	974523	0.22	1010526	96.44	60	120	
In	115	1	He	253703	0.84	257801	98.41	60	120	
Tb	159	1	He	1149963	0.62	1155473	99.52	60	120	
Ho	165	1	He	1160930	0.23	1147359	101.18	60	120	
Bi	209	1	He	740694	0.75	790610	93.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-23-a
Data File Name	040SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:44:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.126	28.126	3.21	600598	0.00	10000	
Be	9	45	2	NoGas	0.028	0.028	26.07	256	0.01	2000	
B	11	6	2	NoGas	264.463	264.463	1.04	958470	0.03	300	
Na	23	45	1	He	295027.096	295027.096	1.49	142329042	0.21	500000	
Mg	24	45	1	He	22195.457	22195.457	0.98	6003328	0.37	500000	
Al	27	45	1	He	2.917	2.917	13.76	634	0.46	200000	
K	39	45	1	He	2902.130	2902.130	1.06	396245	0.73	500000	
Ca	44	45	1	He	57242.390	57242.390	1.27	441075	12.98	500000	
Ti	47	45	1	He	0.099	0.099	92.79	8	1.28	2500	
V	51	45	1	He	-0.180	-0.180	-101.45	-156	0.12	10000	
Cr	52	45	1	He	0.110	0.110	20.16	1183	0.01	10000	
Mn	55	45	1	He	31.630	31.630	1.09	39260	0.08	10000	
Fe	56	45	1	He	354.287	354.287	1.38	667514	0.05	200000	
Co	59	45	1	He	-0.013	-0.013	-81.51	442	0.00	5000	
Ni	60	45	1	He	0.177	0.177	11.94	456	0.04	10000	
Cu	63	45	1	He	0.040	0.040	241.01	5505	0.00	10000	
Zn	66	45	1	He	-4.734	-4.734	-1.91	1497	-0.32	10000	
As	75	115	1	He	0.952	0.952	2.78	267	0.36	10000	
Se	78	115	1	He	0.199	0.199	107.84	6	3.24	10000	
Sr	88	103	1	He	1152.116	1152.116	1.71	1295454	0.09	10000	
Mo	95	103	1	He	3.042	3.042	4.95	4134	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-102.08	9	-0.01	300	
Cd	111	115	1	He	0.012	0.012	16.69	8	0.15	4000	
Sn	118	115	1	He	-1.136	-1.136	-2.56	352	-0.32	2000	
Sb	123	115	1	He	0.084	0.084	17.01	126	0.07	200	
Ba	137	115	1	He	167.000	167.000	0.31	69841	0.24	10000	
W	182	159	1	He	0.237	0.237	7.57	3056	0.01	2500	
Tl	205	165	1	He	0.002	0.002	47.90	48	0.00	2000	
Pb	208	165	1	He	-0.024	-0.024	-13.39	931	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1375714	0.09	1276810	107.75	60	120	
Sc	45	1	He	167215	0.36	163460	102.30	60	120	
Sc	45	2	NoGas	9563424	1.99	8842934	108.15	60	120	
Rh	103	1	He	965611	1.09	1010526	95.56	60	120	
In	115	1	He	253486	0.96	257801	98.33	60	120	
Tb	159	1	He	1146621	0.23	1155473	99.23	60	120	
Ho	165	1	He	1152731	0.39	1147359	100.47	60	120	
Bi	209	1	He	722798	0.35	790610	91.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-24-a
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:48:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.605	29.605	0.96	618431	0.00	10000	
Be	9	45	2	NoGas	0.044	0.044	27.68	333	0.01	2000	
B	11	6	2	NoGas	280.046	280.046	0.99	994008	0.03	300	
Na	23	45	1	He	309992.560	309992.560	1.22	150798842	0.21	500000	
Mg	24	45	1	He	23215.131	23215.131	1.84	6331451	0.37	500000	
Al	27	45	1	He	0.492	0.492	104.66	362	0.14	200000	
K	39	45	1	He	3045.433	3045.433	1.82	418755	0.73	500000	
Ca	44	45	1	He	60608.812	60608.812	1.46	470876	12.87	500000	
Ti	47	45	1	He	-0.021	-0.021	-163.58	1	-1.90	2500	
V	51	45	1	He	-0.112	-0.112	-115.82	-29	0.39	10000	
Cr	52	45	1	He	0.083	0.083	27.46	1128	0.01	10000	
Mn	55	45	1	He	33.301	33.301	1.93	41599	0.08	10000	
Fe	56	45	1	He	340.111	340.111	1.71	646317	0.05	200000	
Co	59	45	1	He	-0.003	-0.003	-213.97	492	0.00	5000	
Ni	60	45	1	He	0.186	0.186	21.40	470	0.04	10000	
Cu	63	45	1	He	-0.011	-0.011	-634.78	5380	0.00	10000	
Zn	66	45	1	He	-4.285	-4.285	-4.80	1685	-0.25	10000	
As	75	115	1	He	0.995	0.995	4.00	278	0.36	10000	
Se	78	115	1	He	0.005	0.005	2387.37	4	0.14	10000	
Sr	88	103	1	He	1252.084	1252.084	3.69	1411802	0.09	10000	
Mo	95	103	1	He	3.367	3.367	0.98	4586	0.07	2000	
Ag	107	103	1	He	0.001	0.001	63.51	19	0.01	300	
Cd	111	115	1	He	0.004	0.004	28.70	3	0.11	4000	
Sn	118	115	1	He	-0.934	-0.934	-11.17	567	-0.16	2000	
Sb	123	115	1	He	0.057	0.057	16.78	93	0.06	200	
Ba	137	115	1	He	175.251	175.251	0.85	73513	0.24	10000	
W	182	159	1	He	0.207	0.207	10.45	2893	0.01	2500	
Tl	205	165	1	He	0.000	0.000	-491.88	32	0.00	2000	
Pb	208	165	1	He	-0.012	-0.012	-44.67	1080	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348278	0.96	1276810	105.60	60	120	
Sc	45	1	He	168624	0.73	163460	103.16	60	120	
Sc	45	2	NoGas	9425338	1.04	8842934	106.59	60	120	
Rh	103	1	He	968207	0.20	1010526	95.81	60	120	
In	115	1	He	254261	0.79	257801	98.63	60	120	
Tb	159	1	He	1152507	0.21	1155473	99.74	60	120	
Ho	165	1	He	1157175	0.11	1147359	100.86	60	120	
Bi	209	1	He	715236	0.17	790610	90.47	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	MB 240-228967/1-A
Data File Name	042_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:52:37-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.080	129.0	97464	1.3	8	
Be	9	45	2	NoGas	0.022	39.8	230	21.8	1	
B	11	6	2	NoGas	7.698	4.7	40363	2.3	20	
Na	23	45	1	He	157.653	4.5	87619	7.0	1000	
Mg	24	45	1	He	128.570	1.6	36712	1.7	1000	
Al	27	45	1	He	0.017	1559.2	314	8.5	50	
K	39	45	1	He	24.394	37.0	14388	5.6	1000	
Ca	44	45	1	He	344.197	11.2	3521	7.2	1000	
Ti	47	45	1	He	0.056	121.1	6	69.3	20	
V	51	45	1	He	-0.221	-73.8	-244	-130.7	2	
Cr	52	45	1	He	-0.005	-696.3	940	9.8	2	
Mn	55	45	1	He	0.046	155.4	1611	3.9	2	
Fe	56	45	1	He	5.445	6.7	14625	1.9	50	
Co	59	45	1	He	-0.068	-8.8	216	14.6	1	
Ni	60	45	1	He	0.013	275.0	268	14.4	2	
Cu	63	45	1	He	0.179	36.0	6171	6.6	2	
Zn	66	45	1	He	2.565	19.7	4463	2.7	20	
As	75	115	1	He	0.023	35.8	37	6.8	2	
Se	78	115	1	He	0.077	104.2	5	20.0	2	
Sr	88	103	1	He	1.096	7.7	1478	6.7	10	
Mo	95	103	1	He	0.014	34.0	48	14.5	2	
Ag	107	103	1	He	0.000	-264.2	12	41.7	0.2	
Cd	111	115	1	He	0.004	133.6	4	83.3	0.2	
Sn	118	115	1	He	-1.098	-3.5	419	10.1	10	
Sb	123	115	1	He	0.015	68.5	46	27.7	2	
Ba	137	115	1	He	1.288	14.5	581	13.6	5	
W	182	159	1	He	0.004	435.2	1726	5.6	10	
Tl	205	165	1	He	0.000	-56.2	31	6.2	0.5	
Pb	208	165	1	He	0.015	31.3	1439	4.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1431687	1.26	1276810	112.13	60	120	
Sc	45	1	He	172638	3.10	163460	105.62	60	120	
Sc	45	2	NoGas	9848876	0.70	8842934	111.38	60	120	
Rh	103	1	He	1069387	0.42	1010526	105.82	60	120	
In	115	1	He	270497	0.79	257801	104.92	60	120	
Tb	159	1	He	1177199	0.67	1155473	101.88	60	120	
Ho	165	1	He	1190750	0.16	1147359	103.78	60	120	
Bi	209	1	He	805297	0.70	790610	101.86	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 240-228967/2-A
Data File Name	043_LCS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:56:51-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	105.424	105.424	0.853	1956923	0.71	100	105.4	84.5	115.5	
Be	9	2	NoGas	1079.461	1079.461	0.428	5642717	0.34	1000	107.9	84.5	115.5	
B	11	2	NoGas	104.588	104.588	1.545	387242	0.65	100	104.6	84.5	115.5	
Na	23	1	He	10316.346	10316.346	2.066	4936661	0.74	10000	103.2	84.5	115.5	
Mg	24	1	He	10266.498	10266.498	2.829	2749984	1.42	10000	102.7	84.5	115.5	
Al	27	1	He	9843.105	9843.105	2.059	1108128	0.99	10000	98.4	84.5	115.5	
K	39	1	He	9994.195	9994.195	0.901	1325502	0.70	10000	99.9	84.5	115.5	
Ca	44	1	He	10510.858	10510.858	1.103	80829	0.54	10000	105.1	84.5	115.5	
Ti	47	1	He	98.407	98.407	3.049	5405	2.02	100	98.4	84.5	115.5	
V	51	1	He	1064.664	1064.664	2.757	2007404	1.39	1000	106.5	84.5	115.5	
Cr	52	1	He	1051.164	1051.164	2.175	2467413	1.01	1000	105.1	84.5	115.5	
Mn	55	1	He	981.864	981.864	1.492	1162080	0.27	1000	98.2	84.5	115.5	
Fe	56	1	He	9935.007	9935.007	2.615	18429109	1.50	10000	99.4	84.5	115.5	
Co	59	1	He	1070.552	1070.552	1.687	4557506	0.37	1000	107.1	84.5	115.5	
Ni	60	1	He	1009.096	1009.096	1.430	1193172	0.32	1000	100.9	84.5	115.5	
Cu	63	1	He	1064.620	1064.620	2.925	3553177	1.76	1000	106.5	84.5	115.5	
Zn	66	1	He	1099.210	1099.210	1.429	425259	0.80	1000	109.9	84.5	115.5	
As	75	1	He	999.094	999.094	0.294	247813	0.21	1000	99.9	84.5	115.5	
Se	78	1	He	983.901	983.901	1.196	11763	1.14	1000	98.4	84.5	115.5	
Sr	88	1	He	948.090	948.090	0.431	1101687	0.59	1000	94.8	84.5	115.5	
Mo	95	1	He	101.315	101.315	0.963	141482	0.79	100	101.3	84.5	115.5	
Ag	107	1	He	101.047	101.047	0.580	505378	0.52	100	101.0	84.5	115.5	
Cd	111	1	He	1010.344	1010.344	0.914	559500	0.69	1000	101.0	84.5	115.5	
Sn	118	1	He	1014.202	1014.202	1.402	1063689	1.22	1000	101.4	84.5	115.5	
Sb	123	1	He	101.756	101.756	0.559	120049	0.52	100	101.8	84.5	115.5	
Ba	137	1	He	993.522	993.522	0.514	412179	0.35	1000	99.4	84.5	115.5	
W	182	1	He	99.595	99.595	1.997	589176	1.58	100	99.6	84.5	115.5	
Tl	205	1	He	270.618	270.618	1.558	2460297	1.39	250	108.2	84.5	115.5	
Pb	208	1	He	1062.135	1062.135	1.013	12685305	0.72	1000	106.2	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380900	1.34	1276810	108.15	60	120	
Sc	45	1	He	165616	1.40	163460	101.32	60	120	
Sc	45	2	NoGas	9376977	0.62	8842934	106.04	60	120	
Rh	103	1	He	997773	0.18	1010526	98.74	60	120	
In	115	1	He	251480	0.30	257801	97.55	60	120	
Tb	159	1	He	1146445	1.16	1155473	99.22	60	120	
Ho	165	1	He	1165860	0.74	1147359	101.61	60	120	
Bi	209	1	He	749790	1.17	790610	94.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-A
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:00:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.105	18.105	0.14	423686	0.00	10000	
Be	9	45	2	NoGas	0.297	0.297	6.69	1700	0.02	2000	
B	11	6	2	NoGas	12.797	12.797	1.03	59042	0.02	300	
Na	23	45	1	He	7520.032	7520.032	2.72	3616175	0.21	500000	
Mg	24	45	1	He	39600.167	39600.167	0.87	10650804	0.37	500000	
Al	27	45	1	He	3.158	3.158	146.59	659	0.48	200000	
K	39	45	1	He	2963.787	2963.787	1.66	402189	0.74	500000	
Ca	44	45	1	He	111005.192	111005.192	1.64	849876	13.06	500000	
Ti	47	45	1	He	0.281	0.281	81.27	18	1.58	2500	
V	51	45	1	He	0.157	0.157	11.55	482	0.03	10000	
Cr	52	45	1	He	0.100	0.100	47.38	1153	0.01	10000	
Mn	55	45	1	He	1020.311	1020.311	1.73	1212587	0.08	10000	
Fe	56	45	1	He	333.392	333.392	1.41	624887	0.05	200000	
Co	59	45	1	He	4.914	4.914	3.42	21502	0.02	5000	
Ni	60	45	1	He	7.591	7.591	3.67	9254	0.08	10000	
Cu	63	45	1	He	-0.215	-0.215	-17.57	4622	0.00	10000	
Zn	66	45	1	He	4.703	4.703	9.48	5126	0.09	10000	
As	75	115	1	He	0.851	0.851	5.52	237	0.36	10000	
Se	78	115	1	He	0.768	0.768	17.40	13	6.01	10000	
Sr	88	103	1	He	89.334	89.334	0.64	101484	0.09	10000	
Mo	95	103	1	He	0.462	0.462	12.24	654	0.07	2000	
Ag	107	103	1	He	0.015	0.015	29.89	84	0.02	300	
Cd	111	115	1	He	0.258	0.258	24.97	142	0.18	4000	
Sn	118	115	1	He	0.555	0.555	84.83	2097	0.03	2000	
Sb	123	115	1	He	0.234	0.234	24.63	298	0.08	200	
Ba	137	115	1	He	326.201	326.201	1.31	134141	0.24	10000	
W	182	159	1	He	1.164	1.164	7.94	8395	0.01	2500	
Tl	205	165	1	He	0.261	0.261	13.69	2361	0.01	2000	
Pb	208	165	1	He	0.154	0.154	26.90	3018	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1423570	1.26	1276810	111.49	60	120	
Sc	45	1	He	166289	0.45	163460	101.73	60	120	
Sc	45	2	NoGas	9648262	0.79	8842934	109.11	60	120	
Rh	103	1	He	974485	1.68	1010526	96.43	60	120	
In	115	1	He	249270	1.63	257801	96.69	60	120	
Tb	159	1	He	1129979	1.35	1155473	97.79	60	120	
Ho	165	1	He	1144832	0.98	1147359	99.78	60	120	
Bi	209	1	He	743500	0.47	790610	94.04	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64160-D-4-A@5
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:05:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.704	3.704	4.13	162097	0.00	10000	
Be	9	45	2	NoGas	0.157	0.157	1.20	956	0.02	2000	
B	11	6	2	NoGas	6.690	6.690	5.01	36522	0.02	300	
Na	23	45	1	He	1523.941	1523.941	1.18	761812	0.20	500000	
Mg	24	45	1	He	8116.584	8116.584	1.69	2248661	0.36	500000	
Al	27	45	1	He	-1.053	-1.053	-16.86	188	-0.56	200000	
K	39	45	1	He	599.328	599.328	1.79	92512	0.65	500000	
Ca	44	45	1	He	22445.816	22445.816	2.26	177587	12.64	500000	
Ti	47	45	1	He	-0.002	-0.002	-4383.64	2	-0.07	2500	
V	51	45	1	He	-0.059	-0.059	-140.55	77	-0.08	10000	
Cr	52	45	1	He	-0.017	-0.017	-63.23	903	0.00	10000	
Mn	55	45	1	He	206.939	206.939	1.84	254485	0.08	10000	
Fe	56	45	1	He	67.029	67.029	2.33	132629	0.05	200000	
Co	59	45	1	He	0.945	0.945	0.87	4670	0.02	5000	
Ni	60	45	1	He	1.417	1.417	6.77	1982	0.07	10000	
Cu	63	45	1	He	-0.759	-0.759	-8.54	2885	-0.03	10000	
Zn	66	45	1	He	-2.707	-2.707	-9.85	2337	-0.12	10000	
As	75	115	1	He	0.205	0.205	4.47	82	0.25	10000	
Se	78	115	1	He	0.170	0.170	92.85	6	2.85	10000	
Sr	88	103	1	He	17.813	17.813	1.29	21389	0.08	10000	
Mo	95	103	1	He	0.056	0.056	51.15	107	0.05	2000	
Ag	107	103	1	He	0.007	0.007	72.29	50	0.01	300	
Cd	111	115	1	He	0.083	0.083	25.79	49	0.17	4000	
Sn	118	115	1	He	0.252	0.252	78.57	1871	0.01	2000	
Sb	123	115	1	He	0.079	0.079	19.59	122	0.06	200	
Ba	137	115	1	He	64.383	64.383	1.30	27704	0.23	10000	
W	182	159	1	He	0.216	0.216	20.19	2963	0.01	2500	
Tl	205	165	1	He	0.055	0.055	14.83	524	0.01	2000	
Pb	208	165	1	He	0.007	0.007	89.17	1299	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1428212	0.48	1276810	111.86	60	120	
Sc	45	1	He	171260	1.15	163460	104.77	60	120	
Sc	45	2	NoGas	9686534	1.27	8842934	109.54	60	120	
Rh	103	1	He	1025890	0.29	1010526	101.52	60	120	
In	115	1	He	260769	0.51	257801	101.15	60	120	
Tb	159	1	He	1157367	0.66	1155473	100.16	60	120	
Ho	165	1	He	1151882	0.25	1147359	100.39	60	120	
Bi	209	1	He	771912	0.81	790610	97.63	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64160-D-4-A
Data File Name	046SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:09:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	122.881	122.881	0.91	2313586	0.01	10000	
Be	9	45	2	NoGas	1089.364	1089.364	1.61	5814322	0.02	2000	
B	11	6	2	NoGas	113.914	113.914	1.49	418375	0.03	300	
Na	23	45	1	He	17781.257	17781.257	2.40	8458664	0.21	500000	
Mg	24	45	1	He	48227.039	48227.039	3.23	12847985	0.38	500000	
Al	27	45	1	He	10101.031	10101.031	2.64	1131240	0.89	200000	
K	39	45	1	He	13295.503	13295.503	2.31	1750586	0.76	500000	
Ca	44	45	1	He	118230.685	118230.685	2.06	896717	13.18	500000	
Ti	47	45	1	He	100.363	100.363	7.31	5482	1.83	2500	
V	51	45	1	He	1102.755	1102.755	2.08	2068712	0.05	10000	
Cr	52	45	1	He	1074.367	1074.367	2.60	2508812	0.04	10000	
Mn	55	45	1	He	2089.420	2089.420	1.86	2458785	0.08	10000	
Fe	56	45	1	He	10362.239	10362.239	2.70	19121982	0.05	200000	
Co	59	45	1	He	1066.904	1066.904	3.19	4518024	0.02	5000	
Ni	60	45	1	He	1000.833	1000.833	3.02	1177131	0.09	10000	
Cu	63	45	1	He	1048.178	1048.178	3.43	3480040	0.03	10000	
Zn	66	45	1	He	1090.017	1090.017	2.53	419513	0.26	10000	
As	75	115	1	He	1047.145	1047.145	1.05	251208	0.42	10000	
Se	78	115	1	He	1012.964	1012.964	0.86	11713	8.65	10000	
Sr	88	103	1	He	1069.935	1069.935	0.84	1199722	0.09	10000	
Mo	95	103	1	He	106.604	106.604	1.64	143653	0.07	2000	
Ag	107	103	1	He	100.847	100.847	0.68	486719	0.02	300	
Cd	111	115	1	He	1023.789	1023.789	1.02	548344	0.19	4000	
Sn	118	115	1	He	1042.196	1042.196	0.56	1057228	0.10	2000	
Sb	123	115	1	He	103.415	103.415	1.45	117998	0.09	200	
Ba	137	115	1	He	1351.378	1351.378	1.29	542229	0.25	10000	
W	182	159	1	He	102.748	102.748	1.72	602120	0.02	2500	
Tl	205	165	1	He	275.022	275.022	2.09	2466241	0.01	2000	
Pb	208	165	1	He	1079.624	1079.624	1.72	12718986	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1372972	0.72	1276810	107.53	60	120	
Sc	45	1	He	164782	1.97	163460	100.81	60	120	
Sc	45	2	NoGas	9574622	0.45	8842934	108.27	60	120	
Rh	103	1	He	962856	0.56	1010526	95.28	60	120	
In	115	1	He	243238	0.88	257801	94.35	60	120	
Tb	159	1	He	1135754	0.70	1155473	98.29	60	120	
Ho	165	1	He	1150072	0.94	1147359	100.24	60	120	
Bi	209	1	He	730245	0.40	790610	92.36	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	047_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:13:16-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.377	0.357	981503	0.41	50	98.8	89.5	110.5	
Be	9	45	2	NoGas	51.123	0.594	271865	0.67	50	102.2	89.5	110.5	
B	11	6	2	NoGas	53.788	1.746	208321	1.13	50	107.6	89.5	110.5	
Na	23	45	1	He	25742.946	1.225	12380866	0.59	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25356.712	1.874	6832480	0.89	25000	101.4	89.5	110.5	
Al	27	45	1	He	253.323	1.488	28986	0.65	250	101.3	89.5	110.5	
K	39	45	1	He	25140.853	2.080	3337935	1.10	25000	100.6	89.5	110.5	
Ca	44	45	1	He	24828.727	1.486	191038	0.75	25000	99.3	89.5	110.5	
Ti	47	45	1	He	47.104	6.450	2604	5.56	50	94.2	89.5	110.5	
V	51	45	1	He	50.211	2.084	95433	1.88	50	100.4	89.5	110.5	
Cr	52	45	1	He	50.148	2.595	119296	1.61	50	100.3	89.5	110.5	
Mn	55	45	1	He	248.572	1.796	297086	0.94	250	99.4	89.5	110.5	
Fe	56	45	1	He	12564.861	1.478	23448680	0.48	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.282	1.665	215825	0.71	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.659	1.814	60491	0.85	50	101.3	89.5	110.5	
Cu	63	45	1	He	49.746	1.916	172142	0.85	50	99.5	89.5	110.5	
Zn	66	45	1	He	47.848	3.159	21796	1.80	50	95.7	89.5	110.5	
As	75	115	1	He	51.517	0.841	12762	0.38	50	103.0	89.5	110.5	
Se	78	115	1	He	51.025	4.568	611	4.37	50	102.0	89.5	110.5	
Sr	88	103	1	He	49.960	0.079	57315	0.82	50	99.9	89.5	110.5	
Mo	95	103	1	He	51.316	0.693	70641	1.46	50	102.6	89.5	110.5	
Ag	107	103	1	He	50.599	0.959	249408	0.33	50	101.2	89.5	110.5	
Cd	111	115	1	He	50.699	0.945	27982	0.60	50	101.4	89.5	110.5	
Sn	118	115	1	He	50.107	2.276	53830	1.77	50	100.2	89.5	110.5	
Sb	123	115	1	He	51.383	0.942	60429	1.19	50	102.8	89.5	110.5	
Ba	137	115	1	He	51.450	2.367	21278	2.02	50	102.9	89.5	110.5	
W	182	159	1	He	51.286	1.341	299410	2.10	50	102.6	89.5	110.5	
Tl	205	165	1	He	50.379	0.819	449593	1.31	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.175	0.177	589332	0.35	50	100.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1405791	0.91	1276810	110.10	60	120	
Sc	45	1	He	166608	1.04	163460	101.93	60	120	
Sc	45	2	NoGas	9535779	0.11	8842934	107.84	60	120	
Rh	103	1	He	983379	0.90	1010526	97.31	60	120	
In	115	1	He	250632	0.47	257801	97.22	60	120	
Tb	159	1	He	1128224	0.78	1155473	97.64	60	120	
Ho	165	1	He	1144282	0.51	1147359	99.73	60	120	
Bi	209	1	He	743580	0.25	790610	94.05	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	048_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:17:28-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.323	27.7	100404	1.1	8	
Be	9	45	2	NoGas	0.299	10.7	1719	9.4	1	
B	11	6	2	NoGas	7.312	3.5	39647	0.9	20	
Na	23	45	1	He	42.474	5.9	28719	2.2	1000	
Mg	24	45	1	He	21.971	3.2	6624	3.2	1000	
Al	27	45	1	He	-0.097	-255.7	287	8.4	50	
K	39	45	1	He	30.913	21.2	14558	3.7	1000	
Ca	44	45	1	He	13.423	8.3	855	1.7	1000	
Ti	47	45	1	He	0.104	151.7	8	107.8	20	
V	51	45	1	He	-0.009	-744.7	165	69.8	2	
Cr	52	45	1	He	0.072	37.7	1073	4.8	2	
Mn	55	45	1	He	-0.229	-13.1	1212	3.9	2	
Fe	56	45	1	He	11.853	5.8	25711	2.8	50	
Co	59	45	1	He	0.018	109.3	567	15.1	1	
Ni	60	45	1	He	-0.035	-69.5	199	12.1	2	
Cu	63	45	1	He	-0.730	-8.8	2861	5.4	2	
Zn	66	45	1	He	-3.400	-1.9	1979	3.2	20	
As	75	115	1	He	0.141	7.6	64	4.4	2	
Se	78	115	1	He	0.568	57.7	11	39.9	2	
Sr	88	103	1	He	0.141	16.0	272	12.0	10	
Mo	95	103	1	He	0.172	19.1	267	15.6	2	
Ag	107	103	1	He	0.038	17.4	206	19.0	0.2	
Cd	111	115	1	He	0.132	23.2	74	21.3	0.2	
Sn	118	115	1	He	0.091	170.4	1641	10.3	10	
Sb	123	115	1	He	0.180	35.6	239	32.6	2	
Ba	137	115	1	He	0.118	28.1	56	24.3	5	
W	182	159	1	He	0.349	22.1	3604	9.3	10	
Tl	205	165	1	He	0.154	10.0	1378	6.9	0.5	
Pb	208	165	1	He	0.070	18.1	1989	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1458357	2.02	1276810	114.22	60	120	
Sc	45	1	He	164324	2.12	163460	100.53	60	120	
Sc	45	2	NoGas	9694965	0.90	8842934	109.64	60	120	
Rh	103	1	He	1005167	3.23	1010526	99.47	60	120	
In	115	1	He	252458	2.72	257801	97.93	60	120	
Tb	159	1	He	1115181	2.96	1155473	96.51	60	120	
Ho	165	1	He	1124688	3.12	1147359	98.02	60	120	
Bi	209	1	He	754261	2.59	790610	95.40	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-B MS
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:21:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	118.485	118.485	0.95	2288014	0.01	10000	
Be	9	45	2	NoGas	1034.422	1034.422	1.28	5654216	0.02	2000	
B	11	6	2	NoGas	112.572	112.572	1.81	420152	0.03	300	
Na	23	45	1	He	17392.276	17392.276	1.39	8430225	0.21	500000	
Mg	24	45	1	He	48876.303	48876.303	1.38	13268658	0.37	500000	
Al	27	45	1	He	9535.422	9535.422	2.46	1088024	0.88	200000	
K	39	45	1	He	12710.835	12710.835	1.42	1705690	0.75	500000	
Ca	44	45	1	He	119915.121	119915.121	2.09	926603	12.94	500000	
Ti	47	45	1	He	93.848	93.848	2.52	5227	1.80	2500	
V	51	45	1	He	1041.514	1041.514	4.18	1990199	0.05	10000	
Cr	52	45	1	He	1007.360	1007.360	3.99	2396350	0.04	10000	
Mn	55	45	1	He	2091.464	2091.464	3.21	2506886	0.08	10000	
Fe	56	45	1	He	9818.710	9818.710	2.78	18460346	0.05	200000	
Co	59	45	1	He	1005.833	1005.833	2.92	4339870	0.02	5000	
Ni	60	45	1	He	950.795	950.795	2.45	1139413	0.08	10000	
Cu	63	45	1	He	1004.385	1004.385	1.06	3398612	0.03	10000	
Zn	66	45	1	He	1031.567	1031.567	2.04	404688	0.25	10000	
As	75	115	1	He	989.803	989.803	1.64	243558	0.41	10000	
Se	78	115	1	He	966.433	966.433	2.51	11462	8.43	10000	
Sr	88	103	1	He	1019.074	1019.074	0.59	1165875	0.09	10000	
Mo	95	103	1	He	102.549	102.549	1.19	140994	0.07	2000	
Ag	107	103	1	He	97.182	97.182	0.69	478524	0.02	300	
Cd	111	115	1	He	966.299	966.299	1.51	530869	0.18	4000	
Sn	118	115	1	He	993.588	993.588	1.74	1033832	0.10	2000	
Sb	123	115	1	He	99.290	99.290	1.09	116217	0.09	200	
Ba	137	115	1	He	1290.861	1290.861	2.43	531253	0.24	10000	
W	182	159	1	He	98.895	98.895	1.42	589918	0.02	2500	
Tl	205	165	1	He	262.076	262.076	0.89	2385165	0.01	2000	
Pb	208	165	1	He	1031.010	1031.010	0.50	12325805	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1394986	1.74	1276810	109.26	60	120	
Sc	45	1	He	167866	1.39	163460	102.70	60	120	
Sc	45	2	NoGas	9805667	0.76	8842934	110.89	60	120	
Rh	103	1	He	982353	0.55	1010526	97.21	60	120	
In	115	1	He	249506	0.96	257801	96.78	60	120	
Tb	159	1	He	1155796	0.96	1155473	100.03	60	120	
Ho	165	1	He	1167006	0.85	1147359	101.71	60	120	
Bi	209	1	He	747028	1.06	790610	94.49	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-C MSD
Data File Name	050SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:25:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	126.537	126.537	1.82	2387398	0.01	10000	
Be	9	45	2	NoGas	1109.925	1109.925	0.67	5943502	0.02	2000	
B	11	6	2	NoGas	115.909	115.909	1.68	434411	0.03	300	
Na	23	45	1	He	18296.258	18296.258	1.71	8819408	0.21	500000	
Mg	24	45	1	He	51132.917	51132.917	2.34	13804130	0.37	500000	
Al	27	45	1	He	10100.996	10100.996	2.34	1146256	0.88	200000	
K	39	45	1	He	13402.091	13402.091	1.90	1788131	0.75	500000	
Ca	44	45	1	He	125054.058	125054.058	1.92	961008	13.01	500000	
Ti	47	45	1	He	100.380	100.380	6.53	5555	1.81	2500	
V	51	45	1	He	1120.326	1120.326	2.75	2129326	0.05	10000	
Cr	52	45	1	He	1084.259	1084.259	1.37	2565793	0.04	10000	
Mn	55	45	1	He	2184.799	2184.799	2.23	2604618	0.08	10000	
Fe	56	45	1	He	10258.726	10258.726	2.63	19182748	0.05	200000	
Co	59	45	1	He	1079.626	1079.626	2.53	4632810	0.02	5000	
Ni	60	45	1	He	1003.144	1003.144	1.71	1195668	0.08	10000	
Cu	63	45	1	He	1048.107	1048.107	2.93	3526202	0.03	10000	
Zn	66	45	1	He	1088.235	1088.235	2.40	424394	0.26	10000	
As	75	115	1	He	1056.200	1056.200	1.09	255313	0.41	10000	
Se	78	115	1	He	1021.049	1021.049	1.85	11896	8.58	10000	
Sr	88	103	1	He	1070.986	1070.986	0.42	1221226	0.09	10000	
Mo	95	103	1	He	106.754	106.754	0.85	146289	0.07	2000	
Ag	107	103	1	He	100.832	100.832	0.86	494878	0.02	300	
Cd	111	115	1	He	1028.602	1028.602	0.70	555152	0.19	4000	
Sn	118	115	1	He	1058.793	1058.793	0.75	1082337	0.10	2000	
Sb	123	115	1	He	104.384	104.384	1.02	120019	0.09	200	
Ba	137	115	1	He	1372.725	1372.725	1.17	555025	0.25	10000	
W	182	159	1	He	103.783	103.783	1.65	614436	0.02	2500	
Tl	205	165	1	He	279.001	279.001	1.22	2535099	0.01	2000	
Pb	208	165	1	He	1090.798	1090.798	1.56	13020189	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1401837	1.47	1276810	109.79	60	120	
Sc	45	1	He	166959	1.79	163460	102.14	60	120	
Sc	45	2	NoGas	9606012	1.05	8842934	108.63	60	120	
Rh	103	1	He	979138	0.60	1010526	96.89	60	120	
In	115	1	He	245108	1.41	257801	95.08	60	120	
Tb	159	1	He	1147395	0.86	1155473	99.30	60	120	
Ho	165	1	He	1165249	0.93	1147359	101.56	60	120	
Bi	209	1	He	743557	0.48	790610	94.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-B-1-A
Data File Name	051SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:29:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.081	16.081	1.00	391702	0.00	10000	
Be	9	45	2	NoGas	0.519	0.519	8.17	2934	0.02	2000	
B	11	6	2	NoGas	8.929	8.929	4.35	46336	0.02	300	
Na	23	45	1	He	3884.244	3884.244	5.85	1935228	0.20	500000	
Mg	24	45	1	He	24123.141	24123.141	5.66	6707411	0.36	500000	
Al	27	45	1	He	0.931	0.931	79.64	418	0.22	200000	
K	39	45	1	He	3363.001	3363.001	4.99	470443	0.71	500000	
Ca	44	45	1	He	65920.397	65920.397	5.80	522064	12.63	500000	
Ti	47	45	1	He	-0.004	-0.004	-1406.18	2	-0.20	2500	
V	51	45	1	He	0.188	0.188	9.98	562	0.03	10000	
Cr	52	45	1	He	0.137	0.137	27.44	1282	0.01	10000	
Mn	55	45	1	He	64.026	64.026	6.19	80099	0.08	10000	
Fe	56	45	1	He	6.712	6.712	16.26	16977	0.04	200000	
Co	59	45	1	He	0.757	0.757	15.03	3849	0.02	5000	
Ni	60	45	1	He	3.899	3.899	6.43	5035	0.08	10000	
Cu	63	45	1	He	-0.679	-0.679	-13.66	3167	-0.02	10000	
Zn	66	45	1	He	-6.076	-6.076	-6.40	1000	-0.61	10000	
As	75	115	1	He	0.432	0.432	21.19	140	0.31	10000	
Se	78	115	1	He	1.102	1.102	26.98	17	6.33	10000	
Sr	88	103	1	He	37.084	37.084	5.96	44367	0.08	10000	
Mo	95	103	1	He	0.205	0.205	11.79	319	0.06	2000	
Ag	107	103	1	He	0.012	0.012	31.33	72	0.02	300	
Cd	111	115	1	He	0.417	0.417	18.99	240	0.17	4000	
Sn	118	115	1	He	1.295	1.295	28.50	2997	0.04	2000	
Sb	123	115	1	He	0.275	0.275	12.97	362	0.08	200	
Ba	137	115	1	He	136.212	136.212	6.46	58605	0.23	10000	
W	182	159	1	He	0.478	0.478	13.03	4675	0.01	2500	
Tl	205	165	1	He	0.263	0.263	22.96	2487	0.01	2000	
Pb	208	165	1	He	0.125	0.125	28.41	2803	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1475687	1.58	1276810	115.58	60	120	
Sc	45	1	He	172283	5.91	163460	105.40	60	120	
Sc	45	2	NoGas	9769591	0.09	8842934	110.48	60	120	
Rh	103	1	He	1027265	5.83	1010526	101.66	60	120	
In	115	1	He	261445	5.93	257801	101.41	60	120	
Tb	159	1	He	1202455	9.23	1155473	104.07	60	120	
Ho	165	1	He	1212605	9.82	1147359	105.69	60	120	
Bi	209	1	He	785719	5.18	790610	99.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-2-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:33:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.562	5.562	0.48	192756	0.00	10000	
Be	9	45	2	NoGas	0.543	0.543	9.26	2986	0.02	2000	
B	11	6	2	NoGas	7.103	7.103	2.93	37762	0.02	300	
Na	23	45	1	He	4935.285	4935.285	0.67	2404847	0.21	500000	
Mg	24	45	1	He	5296.044	5296.044	1.35	1442206	0.37	500000	
Al	27	45	1	He	19.846	19.846	4.13	2575	0.77	200000	
K	39	45	1	He	3659.255	3659.255	1.99	500008	0.73	500000	
Ca	44	45	1	He	8839.583	8839.583	2.27	69195	12.77	500000	
Ti	47	45	1	He	0.158	0.158	56.88	11	1.42	2500	
V	51	45	1	He	0.030	0.030	397.15	243	0.01	10000	
Cr	52	45	1	He	0.157	0.157	2.53	1302	0.01	10000	
Mn	55	45	1	He	1357.934	1357.934	1.28	1632694	0.08	10000	
Fe	56	45	1	He	1233.775	1233.775	2.58	2329356	0.05	200000	
Co	59	45	1	He	4.037	4.037	1.76	17966	0.02	5000	
Ni	60	45	1	He	6.062	6.062	5.10	7527	0.08	10000	
Cu	63	45	1	He	5.473	5.473	1.03	23944	0.02	10000	
Zn	66	45	1	He	26.563	26.563	1.75	13716	0.19	10000	
As	75	115	1	He	0.565	0.565	5.20	172	0.33	10000	
Se	78	115	1	He	0.546	0.546	34.00	10	5.23	10000	
Sr	88	103	1	He	39.388	39.388	0.07	46368	0.08	10000	
Mo	95	103	1	He	0.076	0.076	7.61	133	0.06	2000	
Ag	107	103	1	He	0.099	0.099	9.35	514	0.02	300	
Cd	111	115	1	He	0.402	0.402	10.55	229	0.18	4000	
Sn	118	115	1	He	-0.410	-0.410	-12.53	1133	-0.04	2000	
Sb	123	115	1	He	0.147	0.147	23.88	203	0.07	200	
Ba	137	115	1	He	117.426	117.426	2.73	49765	0.24	10000	
W	182	159	1	He	0.124	0.124	22.88	2374	0.01	2500	
Tl	205	165	1	He	0.144	0.144	5.53	1328	0.01	2000	
Pb	208	165	1	He	0.357	0.357	2.65	5415	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1417083	1.02	1276810	110.99	60	120	
Sc	45	1	He	168297	1.08	163460	102.96	60	120	
Sc	45	2	NoGas	9521804	0.50	8842934	107.68	60	120	
Rh	103	1	He	1008602	0.83	1010526	99.81	60	120	
In	115	1	He	256924	1.30	257801	99.66	60	120	
Tb	159	1	He	1139080	0.55	1155473	98.58	60	120	
Ho	165	1	He	1149072	1.16	1147359	100.15	60	120	
Bi	209	1	He	770192	1.67	790610	97.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-3-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:38:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.367	26.367	0.41	579240	0.00	10000	
Be	9	45	2	NoGas	0.228	0.228	8.92	1345	0.02	2000	
B	11	6	2	NoGas	10.579	10.579	4.62	50101	0.02	300	
Na	23	45	1	He	5576.209	5576.209	0.54	2669516	0.21	500000	
Mg	24	45	1	He	49473.949	49473.949	1.18	13236963	0.37	500000	
Al	27	45	1	He	0.005	0.005	8768.75	300	0.00	200000	
K	39	45	1	He	3875.947	3875.947	0.03	519960	0.75	500000	
Ca	44	45	1	He	135932.755	135932.755	0.25	1035109	13.13	500000	
Ti	47	45	1	He	0.060	0.060	154.08	6	1.08	2500	
V	51	45	1	He	-0.004	-0.004	-1642.92	177	0.00	10000	
Cr	52	45	1	He	0.031	0.031	28.61	986	0.00	10000	
Mn	55	45	1	He	406.910	406.910	0.52	481959	0.08	10000	
Fe	56	45	1	He	1597.400	1597.400	0.99	2963624	0.05	200000	
Co	59	45	1	He	5.487	5.487	1.32	23827	0.02	5000	
Ni	60	45	1	He	15.064	15.064	1.05	18029	0.08	10000	
Cu	63	45	1	He	-0.949	-0.949	-5.67	2153	-0.04	10000	
Zn	66	45	1	He	-1.551	-1.551	-12.06	2701	-0.06	10000	
As	75	115	1	He	1.567	1.567	3.74	413	0.38	10000	
Se	78	115	1	He	0.471	0.471	69.36	9	5.07	10000	
Sr	88	103	1	He	85.658	85.658	1.36	95746	0.09	10000	
Mo	95	103	1	He	0.044	0.044	13.18	83	0.05	2000	
Ag	107	103	1	He	0.007	0.007	36.16	47	0.02	300	
Cd	111	115	1	He	0.100	0.100	4.75	56	0.18	4000	
Sn	118	115	1	He	-0.688	-0.688	-9.28	811	-0.08	2000	
Sb	123	115	1	He	0.047	0.047	14.87	80	0.06	200	
Ba	137	115	1	He	586.939	586.939	0.79	240967	0.24	10000	
W	182	159	1	He	0.090	0.090	23.43	2145	0.00	2500	
Tl	205	165	1	He	0.079	0.079	5.60	728	0.01	2000	
Pb	208	165	1	He	0.008	0.008	101.57	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403437	0.67	1276810	109.92	60	120	
Sc	45	1	He	165414	0.84	163460	101.20	60	120	
Sc	45	2	NoGas	9734443	0.82	8842934	110.08	60	120	
Rh	103	1	He	958857	1.33	1010526	94.89	60	120	
In	115	1	He	248873	1.57	257801	96.54	60	120	
Tb	159	1	He	1124061	0.92	1155473	97.28	60	120	
Ho	165	1	He	1125383	1.68	1147359	98.08	60	120	
Bi	209	1	He	724610	1.48	790610	91.65	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-5-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:42:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.858	16.858	1.06	403479	0.00	10000	
Be	9	45	2	NoGas	0.231	0.231	22.32	1359	0.02	2000	
B	11	6	2	NoGas	9.399	9.399	3.34	47131	0.02	300	
Na	23	45	1	He	6902.457	6902.457	5.15	3496160	0.20	500000	
Mg	24	45	1	He	35851.350	35851.350	5.74	10152782	0.35	500000	
Al	27	45	1	He	-0.509	-0.509	-79.64	256	-0.20	200000	
K	39	45	1	He	2713.201	2713.201	4.67	388773	0.70	500000	
Ca	44	45	1	He	100727.284	100727.284	4.70	812351	12.40	500000	
Ti	47	45	1	He	-0.023	-0.023	-136.36	1	-2.06	2500	
V	51	45	1	He	-0.112	-0.112	-110.70	-29	0.39	10000	
Cr	52	45	1	He	-0.006	-0.006	-366.79	951	0.00	10000	
Mn	55	45	1	He	906.417	906.417	4.65	1134776	0.08	10000	
Fe	56	45	1	He	294.987	294.987	5.23	582736	0.05	200000	
Co	59	45	1	He	4.274	4.274	6.08	19758	0.02	5000	
Ni	60	45	1	He	6.336	6.336	9.10	8166	0.08	10000	
Cu	63	45	1	He	-0.719	-0.719	-8.09	3088	-0.02	10000	
Zn	66	45	1	He	3.439	3.439	12.18	4889	0.07	10000	
As	75	115	1	He	0.601	0.601	8.56	183	0.33	10000	
Se	78	115	1	He	0.365	0.365	26.84	8	4.40	10000	
Sr	88	103	1	He	79.991	79.991	8.97	96425	0.08	10000	
Mo	95	103	1	He	0.175	0.175	11.90	282	0.06	2000	
Ag	107	103	1	He	0.001	0.001	273.01	18	0.00	300	
Cd	111	115	1	He	0.092	0.092	10.40	54	0.17	4000	
Sn	118	115	1	He	-0.945	-0.945	-3.94	567	-0.17	2000	
Sb	123	115	1	He	0.062	0.062	55.94	100	0.06	200	
Ba	137	115	1	He	298.149	298.149	5.57	127404	0.23	10000	
W	182	159	1	He	0.785	0.785	35.20	6738	0.01	2500	
Tl	205	165	1	He	0.077	0.077	8.38	762	0.01	2000	
Pb	208	165	1	He	-0.007	-0.007	-144.78	1186	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1444815	1.83	1276810	113.16	60	120	
Sc	45	1	He	175418	5.08	163460	107.32	60	120	
Sc	45	2	NoGas	9708753	1.08	8842934	109.79	60	120	
Rh	103	1	He	1039549	8.93	1010526	102.87	60	120	
In	115	1	He	259571	5.83	257801	100.69	60	120	
Tb	159	1	He	1210267	8.83	1155473	104.74	60	120	
Ho	165	1	He	1213337	10.12	1147359	105.75	60	120	
Bi	209	1	He	768684	4.81	790610	97.23	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-6-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:46:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.449	4.449	4.05	173209	0.00	10000	
Be	9	45	2	NoGas	0.193	0.193	17.15	1130	0.02	2000	
B	11	6	2	NoGas	8.854	8.854	1.93	44354	0.02	300	
Na	23	45	1	He	2414.634	2414.634	0.78	1165666	0.21	500000	
Mg	24	45	1	He	17593.259	17593.259	0.72	4726701	0.37	500000	
Al	27	45	1	He	26.509	26.509	4.33	3294	0.80	200000	
K	39	45	1	He	2794.605	2794.605	1.52	379404	0.74	500000	
Ca	44	45	1	He	42319.561	42319.561	0.62	324100	13.06	500000	
Ti	47	45	1	He	0.403	0.403	31.07	24	1.65	2500	
V	51	45	1	He	0.002	0.002	7844.96	189	0.00	10000	
Cr	52	45	1	He	0.197	0.197	32.42	1379	0.01	10000	
Mn	55	45	1	He	11605.828	11605.828	1.44	13761182	0.08	10000	>LDR
Fe	56	45	1	He	4134.923	4134.923	1.02	7696161	0.05	200000	
Co	59	45	1	He	34.501	34.501	1.27	147803	0.02	5000	
Ni	60	45	1	He	7.217	7.217	0.93	8800	0.08	10000	
Cu	63	45	1	He	-0.214	-0.214	-4.52	4620	0.00	10000	
Zn	66	45	1	He	1.022	1.022	21.97	3703	0.03	10000	
As	75	115	1	He	0.344	0.344	19.50	115	0.30	10000	
Se	78	115	1	He	0.458	0.458	23.08	9	4.94	10000	
Sr	88	103	1	He	125.703	125.703	0.89	145114	0.09	10000	
Mo	95	103	1	He	0.041	0.041	25.18	81	0.05	2000	
Ag	107	103	1	He	0.046	0.046	8.57	241	0.02	300	
Cd	111	115	1	He	0.229	0.229	6.85	129	0.18	4000	
Sn	118	115	1	He	-1.057	-1.057	-11.84	437	-0.24	2000	
Sb	123	115	1	He	0.034	0.034	50.88	66	0.05	200	
Ba	137	115	1	He	122.635	122.635	1.69	51409	0.24	10000	
W	182	159	1	He	0.022	0.022	104.34	1774	0.00	2500	
Tl	205	165	1	He	0.051	0.051	2.79	488	0.01	2000	
Pb	208	165	1	He	0.022	0.022	61.21	1462	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1421117	0.29	1276810	111.30	60	120	
Sc	45	1	He	166090	0.23	163460	101.61	60	120	
Sc	45	2	NoGas	9547786	0.51	8842934	107.97	60	120	
Rh	103	1	He	990635	0.52	1010526	98.03	60	120	
In	115	1	He	254110	1.68	257801	98.57	60	120	
Tb	159	1	He	1138023	0.54	1155473	98.49	60	120	
Ho	165	1	He	1138137	0.70	1147359	99.20	60	120	
Bi	209	1	He	753327	0.64	790610	95.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-7-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:50:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.572	12.572	0.42	327496	0.00	10000	
Be	9	45	2	NoGas	0.124	0.124	5.10	785	0.02	2000	
B	11	6	2	NoGas	12.061	12.061	3.71	56999	0.02	300	
Na	23	45	1	He	4056.664	4056.664	1.75	2013288	0.20	500000	
Mg	24	45	1	He	18806.859	18806.859	3.77	5208817	0.36	500000	
Al	27	45	1	He	13.897	13.897	8.91	1927	0.72	200000	
K	39	45	1	He	3124.231	3124.231	2.96	436011	0.72	500000	
Ca	44	45	1	He	66184.386	66184.386	3.47	522103	12.68	500000	
Ti	47	45	1	He	0.217	0.217	111.41	14	1.50	2500	
V	51	45	1	He	0.125	0.125	66.75	436	0.03	10000	
Cr	52	45	1	He	0.578	0.578	12.08	2346	0.02	10000	
Mn	55	45	1	He	2.015	2.015	4.69	4009	0.05	10000	
Fe	56	45	1	He	26.824	26.824	3.80	55521	0.05	200000	
Co	59	45	1	He	-0.034	-0.034	-6.25	360	-0.01	5000	
Ni	60	45	1	He	0.034	0.034	127.54	291	0.01	10000	
Cu	63	45	1	He	-0.742	-0.742	-8.71	2944	-0.03	10000	
Zn	66	45	1	He	-6.742	-6.742	-1.33	736	-0.92	10000	
As	75	115	1	He	0.116	0.116	19.14	59	0.20	10000	
Se	78	115	1	He	0.390	0.390	40.00	9	4.52	10000	
Sr	88	103	1	He	34.611	34.611	1.70	40452	0.09	10000	
Mo	95	103	1	He	0.229	0.229	12.09	346	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-226.21	9	-0.01	300	
Cd	111	115	1	He	0.073	0.073	24.62	43	0.17	4000	
Sn	118	115	1	He	-1.103	-1.103	-13.37	396	-0.28	2000	
Sb	123	115	1	He	0.061	0.061	12.59	100	0.06	200	
Ba	137	115	1	He	178.889	178.889	1.30	76479	0.23	10000	
W	182	159	1	He	-0.003	-0.003	-1026.65	1645	0.00	2500	
Tl	205	165	1	He	0.014	0.014	30.33	156	0.01	2000	
Pb	208	165	1	He	0.029	0.029	24.49	1566	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1441073	0.82	1276810	112.87	60	120	
Sc	45	1	He	171307	2.00	163460	104.80	60	120	
Sc	45	2	NoGas	9784434	0.23	8842934	110.65	60	120	
Rh	103	1	He	1000941	1.09	1010526	99.05	60	120	
In	115	1	He	259146	0.85	257801	100.52	60	120	
Tb	159	1	He	1150388	1.34	1155473	99.56	60	120	
Ho	165	1	He	1154154	0.88	1147359	100.59	60	120	
Bi	209	1	He	756964	0.52	790610	95.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-8-a
Data File Name	057SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:54:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.793	9.793	0.47	278853	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	20.62	852	0.02	2000	
B	11	6	2	NoGas	6.518	6.518	1.59	36455	0.02	300	
Na	23	45	1	He	503.917	503.917	1.99	262312	0.19	500000	
Mg	24	45	1	He	17854.770	17854.770	1.91	5030326	0.35	500000	
Al	27	45	1	He	12.598	12.598	8.60	1807	0.70	200000	
K	39	45	1	He	1005.633	1005.633	1.37	150320	0.67	500000	
Ca	44	45	1	He	19275.120	19275.120	0.85	155239	12.42	500000	
Ti	47	45	1	He	0.248	0.248	81.05	17	1.49	2500	
V	51	45	1	He	-0.022	-0.022	-527.18	150	-0.01	10000	
Cr	52	45	1	He	1.593	1.593	4.57	4893	0.03	10000	
Mn	55	45	1	He	0.316	0.316	8.32	1962	0.02	10000	
Fe	56	45	1	He	13.385	13.385	3.25	30258	0.04	200000	
Co	59	45	1	He	-0.045	-0.045	-16.30	318	-0.01	5000	
Ni	60	45	1	He	0.078	0.078	50.53	351	0.02	10000	
Cu	63	45	1	He	-0.852	-0.852	-1.71	2610	-0.03	10000	
Zn	66	45	1	He	-6.008	-6.008	-3.75	1044	-0.58	10000	
As	75	115	1	He	0.113	0.113	14.47	60	0.19	10000	
Se	78	115	1	He	0.372	0.372	59.09	9	4.31	10000	
Sr	88	103	1	He	24.779	24.779	0.92	29729	0.08	10000	
Mo	95	103	1	He	0.155	0.155	9.80	249	0.06	2000	
Ag	107	103	1	He	0.006	0.006	58.39	42	0.01	300	
Cd	111	115	1	He	0.054	0.054	7.97	33	0.16	4000	
Sn	118	115	1	He	-1.005	-1.005	-8.79	515	-0.20	2000	
Sb	123	115	1	He	0.082	0.082	20.15	129	0.06	200	
Ba	137	115	1	He	748.076	748.076	1.27	328275	0.23	10000	
W	182	159	1	He	0.105	0.105	15.54	2322	0.00	2500	
Tl	205	165	1	He	0.013	0.013	8.07	157	0.01	2000	
Pb	208	165	1	He	0.035	0.035	10.45	1663	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1450894	0.62	1276810	113.63	60	120	
Sc	45	1	He	174181	0.46	163460	106.56	60	120	
Sc	45	2	NoGas	9878827	0.09	8842934	111.71	60	120	
Rh	103	1	He	1026580	1.18	1010526	101.59	60	120	
In	115	1	He	266008	0.44	257801	103.18	60	120	
Tb	159	1	He	1169238	0.80	1155473	101.19	60	120	
Ho	165	1	He	1178042	0.17	1147359	102.67	60	120	
Bi	209	1	He	780520	0.79	790610	98.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-9-a
Data File Name	058SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:59:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.708	6.708	0.20	226824	0.00	10000	
Be	9	45	2	NoGas	0.114	0.114	12.53	756	0.02	2000	
B	11	6	2	NoGas	25.459	25.459	2.61	110490	0.02	300	
Na	23	45	1	He	2751.624	2751.624	1.43	1403837	0.20	500000	
Mg	24	45	1	He	27167.351	27167.351	1.94	7719713	0.35	500000	
Al	27	45	1	He	15.423	15.423	4.68	2160	0.71	200000	
K	39	45	1	He	1710.786	1710.786	3.21	250005	0.68	500000	
Ca	44	45	1	He	63366.802	63366.802	1.66	512894	12.35	500000	
Ti	47	45	1	He	0.074	0.074	156.04	7	1.11	2500	
V	51	45	1	He	0.127	0.127	122.83	451	0.03	10000	
Cr	52	45	1	He	0.870	0.870	6.05	3134	0.03	10000	
Mn	55	45	1	He	0.841	0.841	4.65	2638	0.03	10000	
Fe	56	45	1	He	30.660	30.660	2.76	64515	0.05	200000	
Co	59	45	1	He	-0.010	-0.010	-146.00	478	0.00	5000	
Ni	60	45	1	He	0.718	0.718	7.43	1158	0.06	10000	
Cu	63	45	1	He	-0.625	-0.625	-4.94	3431	-0.02	10000	
Zn	66	45	1	He	-1.167	-1.167	-22.92	3026	-0.04	10000	
As	75	115	1	He	0.225	0.225	23.09	88	0.26	10000	
Se	78	115	1	He	0.760	0.760	21.73	13	5.66	10000	
Sr	88	103	1	He	61.832	61.832	0.85	73831	0.08	10000	
Mo	95	103	1	He	1.633	1.633	4.45	2365	0.07	2000	
Ag	107	103	1	He	0.003	0.003	62.42	30	0.01	300	
Cd	111	115	1	He	0.050	0.050	23.48	30	0.16	4000	
Sn	118	115	1	He	-0.971	-0.971	-6.40	548	-0.18	2000	
Sb	123	115	1	He	0.058	0.058	26.57	98	0.06	200	
Ba	137	115	1	He	162.242	162.242	3.04	70607	0.23	10000	
W	182	159	1	He	0.372	0.372	11.98	3949	0.01	2500	
Tl	205	165	1	He	0.042	0.042	12.67	426	0.01	2000	
Pb	208	165	1	He	0.053	0.053	19.41	1894	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1484961	3.48	1276810	116.30	60	120	
Sc	45	1	He	175694	1.02	163460	107.48	60	120	
Sc	45	2	NoGas	10123568	0.56	8842934	114.48	60	120	
Rh	103	1	He	1023848	0.96	1010526	101.32	60	120	
In	115	1	He	263762	0.68	257801	102.31	60	120	
Tb	159	1	He	1174313	0.79	1155473	101.63	60	120	
Ho	165	1	He	1181204	0.23	1147359	102.95	60	120	
Bi	209	1	He	776681	0.23	790610	98.24	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	059_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:03:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.028	2.259	1028918	2.23	50	102.1	89.5	110.5	
Be	9	45	2	NoGas	51.199	0.775	277034	0.89	50	102.4	89.5	110.5	
B	11	6	2	NoGas	52.475	0.415	206561	0.81	50	104.9	89.5	110.5	
Na	23	45	1	He	25699.505	1.659	12645385	0.78	25000	102.8	89.5	110.5	
Mg	24	45	1	He	25596.333	2.686	7055802	1.20	25000	102.4	89.5	110.5	
Al	27	45	1	He	252.645	0.747	29581	1.62	250	101.1	89.5	110.5	
K	39	45	1	He	25159.330	1.740	3417630	0.14	25000	100.6	89.5	110.5	
Ca	44	45	1	He	25026.704	1.868	196997	0.54	25000	100.1	89.5	110.5	
Ti	47	45	1	He	48.994	5.603	2772	6.37	50	98.0	89.5	110.5	
V	51	45	1	He	50.242	1.011	97703	0.86	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.938	1.483	121554	0.21	50	99.9	89.5	110.5	
Mn	55	45	1	He	249.727	1.495	305363	0.20	250	99.9	89.5	110.5	
Fe	56	45	1	He	12599.717	1.927	24056320	0.59	12500	100.8	89.5	110.5	
Co	59	45	1	He	50.153	1.577	220249	0.09	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.551	1.853	61757	0.87	50	101.1	89.5	110.5	
Cu	63	45	1	He	49.452	1.739	175116	0.53	50	98.9	89.5	110.5	
Zn	66	45	1	He	46.579	1.599	21800	0.27	50	93.2	89.5	110.5	
As	75	115	1	He	50.967	1.175	13090	0.96	50	101.9	89.5	110.5	
Se	78	115	1	He	48.788	3.377	606	3.16	50	97.6	89.5	110.5	
Sr	88	103	1	He	49.832	0.685	58742	0.75	50	99.7	89.5	110.5	
Mo	95	103	1	He	51.218	1.130	72444	1.06	50	102.4	89.5	110.5	
Ag	107	103	1	He	50.351	0.366	255029	0.45	50	100.7	89.5	110.5	
Cd	111	115	1	He	50.178	0.895	28713	0.95	50	100.4	89.5	110.5	
Sn	118	115	1	He	49.129	2.090	54752	1.87	50	98.3	89.5	110.5	
Sb	123	115	1	He	50.820	1.752	61965	2.07	50	101.6	89.5	110.5	
Ba	137	115	1	He	49.713	2.288	21316	2.09	50	99.4	89.5	110.5	
W	182	159	1	He	50.058	2.354	300432	2.34	50	100.1	89.5	110.5	
Tl	205	165	1	He	50.120	0.991	455246	1.32	50	100.2	89.5	110.5	
Pb	208	165	1	He	50.358	0.856	602001	0.74	50	100.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1426727	0.80	1276810	111.74	60	120	
Sc	45	1	He	170469	1.61	163460	104.29	60	120	
Sc	45	2	NoGas	9702515	0.19	8842934	109.72	60	120	
Rh	103	1	He	1010437	0.08	1010526	99.99	60	120	
In	115	1	He	259843	0.41	257801	100.79	60	120	
Tb	159	1	He	1159760	0.25	1155473	100.37	60	120	
Ho	165	1	He	1164698	1.12	1147359	101.51	60	120	
Bi	209	1	He	759156	0.63	790610	96.02	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	060_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:07:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.353	13.3	101416	0.9	8	
Be	9	45	2	NoGas	0.167	9.9	1015	9.2	1	
B	11	6	2	NoGas	4.373	4.3	29139	2.0	20	
Na	23	45	1	He	59.962	4.9	38282	4.9	1000	
Mg	24	45	1	He	39.135	5.2	11563	5.4	1000	
Al	27	45	1	He	-0.112	-362.7	294	14.7	50	
K	39	45	1	He	44.963	9.5	16960	4.5	1000	
Ca	44	45	1	He	33.661	20.0	1041	3.9	1000	
Ti	47	45	1	He	0.118	127.7	9	94.4	20	
V	51	45	1	He	-0.003	-2065.9	183	61.1	2	
Cr	52	45	1	He	0.035	41.5	1022	2.3	2	
Mn	55	45	1	He	0.114	31.6	1669	3.4	2	
Fe	56	45	1	He	21.500	5.3	44961	5.9	50	
Co	59	45	1	He	0.020	52.7	594	7.8	1	
Ni	60	45	1	He	-0.019	-66.3	226	7.6	2	
Cu	63	45	1	He	-0.943	-5.9	2232	9.4	2	
Zn	66	45	1	He	-3.574	-9.2	1978	7.6	20	
As	75	115	1	He	0.111	11.3	59	5.9	2	
Se	78	115	1	He	0.228	68.0	7	29.5	2	
Sr	88	103	1	He	0.139	5.5	280	4.1	10	
Mo	95	103	1	He	0.138	19.6	228	16.1	2	
Ag	107	103	1	He	0.082	9.8	442	9.1	0.2	
Cd	111	115	1	He	0.111	23.7	66	22.1	0.2	
Sn	118	115	1	He	-0.251	-87.6	1345	18.5	10	
Sb	123	115	1	He	0.142	8.2	202	7.6	2	
Ba	137	115	1	He	0.150	32.0	72	28.2	5	
W	182	159	1	He	0.239	19.2	3115	7.6	10	
Tl	205	165	1	He	0.126	6.7	1183	5.7	0.5	
Pb	208	165	1	He	0.087	19.8	2270	7.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1491291	1.90	1276810	116.80	60	120	
Sc	45	1	He	169849	1.20	163460	103.91	60	120	
Sc	45	2	NoGas	9740284	1.26	8842934	110.15	60	120	
Rh	103	1	He	1045203	1.25	1010526	103.43	60	120	
In	115	1	He	264919	1.00	257801	102.76	60	120	
Tb	159	1	He	1164746	1.33	1155473	100.80	60	120	
Ho	165	1	He	1168738	1.31	1147359	101.86	60	120	
Bi	209	1	He	789910	0.35	790610	99.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-10-a
Data File Name	061SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:11:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.890	5.890	3.04	206482	0.00	10000	
Be	9	45	2	NoGas	0.097	0.097	18.74	644	0.02	2000	
B	11	6	2	NoGas	9.295	9.295	1.95	47933	0.02	300	
Na	23	45	1	He	553.218	553.218	1.67	281982	0.20	500000	
Mg	24	45	1	He	23938.288	23938.288	1.94	6623925	0.36	500000	
Al	27	45	1	He	2.345	2.345	29.23	582	0.40	200000	
K	39	45	1	He	1167.567	1167.567	1.70	169650	0.69	500000	
Ca	44	45	1	He	24938.109	24938.109	1.95	197031	12.66	500000	
Ti	47	45	1	He	0.037	0.037	363.32	4	0.84	2500	
V	51	45	1	He	0.022	0.022	392.15	235	0.01	10000	
Cr	52	45	1	He	0.015	0.015	87.03	981	0.00	10000	
Mn	55	45	1	He	0.097	0.097	25.05	1660	0.01	10000	
Fe	56	45	1	He	16.186	16.186	1.81	35089	0.05	200000	
Co	59	45	1	He	-0.024	-0.024	-58.35	404	-0.01	5000	
Ni	60	45	1	He	-0.029	-0.029	-98.47	214	-0.01	10000	
Cu	63	45	1	He	-1.054	-1.054	-5.53	1866	-0.06	10000	
Zn	66	45	1	He	-3.709	-3.709	-18.28	1937	-0.19	10000	
As	75	115	1	He	0.195	0.195	26.88	80	0.24	10000	
Se	78	115	1	He	0.022	0.022	918.57	4	0.52	10000	
Sr	88	103	1	He	41.932	41.932	1.46	49739	0.08	10000	
Mo	95	103	1	He	2.178	2.178	1.69	3124	0.07	2000	
Ag	107	103	1	He	0.000	0.000	-432.13	11	0.00	300	
Cd	111	115	1	He	0.026	0.026	14.53	16	0.16	4000	
Sn	118	115	1	He	-1.061	-1.061	-11.44	448	-0.24	2000	
Sb	123	115	1	He	0.049	0.049	38.37	87	0.06	200	
Ba	137	115	1	He	108.010	108.010	1.25	46899	0.23	10000	
W	182	159	1	He	0.061	0.061	94.90	2045	0.00	2500	
Tl	205	165	1	He	0.015	0.015	30.69	168	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-60.76	1114	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481483	1.12	1276810	116.03	60	120	
Sc	45	1	He	171090	1.07	163460	104.67	60	120	
Sc	45	2	NoGas	9897579	0.32	8842934	111.93	60	120	
Rh	103	1	He	1016348	0.74	1010526	100.58	60	120	
In	115	1	He	263169	0.50	257801	102.08	60	120	
Tb	159	1	He	1162913	0.70	1155473	100.64	60	120	
Ho	165	1	He	1173090	0.99	1147359	102.24	60	120	
Bi	209	1	He	777593	0.73	790610	98.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-11-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:15:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.469	10.469	0.86	289458	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	11.54	596	0.01	2000	
B	11	6	2	NoGas	32.669	32.669	0.86	137507	0.02	300	
Na	23	45	1	He	4634.079	4634.079	1.61	2305643	0.20	500000	
Mg	24	45	1	He	23869.620	23869.620	1.23	6633152	0.36	500000	
Al	27	45	1	He	345.916	345.916	2.60	40700	0.85	200000	
K	39	45	1	He	2258.719	2258.719	1.87	319284	0.71	500000	
Ca	44	45	1	He	68969.884	68969.884	1.72	545833	12.64	500000	
Ti	47	45	1	He	8.906	8.906	8.35	510	1.75	2500	
V	51	45	1	He	1.391	1.391	6.56	2912	0.05	10000	
Cr	52	45	1	He	0.995	0.995	5.60	3371	0.03	10000	
Mn	55	45	1	He	30.596	30.596	1.17	39069	0.08	10000	
Fe	56	45	1	He	1370.816	1370.816	1.43	2641850	0.05	200000	
Co	59	45	1	He	0.125	0.125	14.33	1063	0.01	5000	
Ni	60	45	1	He	0.165	0.165	24.69	453	0.04	10000	
Cu	63	45	1	He	-0.727	-0.727	-5.91	3007	-0.02	10000	
Zn	66	45	1	He	-4.759	-4.759	-3.33	1528	-0.31	10000	
As	75	115	1	He	0.478	0.478	8.95	151	0.32	10000	
Se	78	115	1	He	0.420	0.420	42.17	9	4.69	10000	
Sr	88	103	1	He	63.644	63.644	1.20	74482	0.09	10000	
Mo	95	103	1	He	0.407	0.407	6.79	597	0.07	2000	
Ag	107	103	1	He	0.001	0.001	342.70	17	0.00	300	
Cd	111	115	1	He	0.039	0.039	13.74	23	0.17	4000	
Sn	118	115	1	He	-1.184	-1.184	-7.69	307	-0.39	2000	
Sb	123	115	1	He	0.044	0.044	45.96	79	0.06	200	
Ba	137	115	1	He	181.391	181.391	1.93	77153	0.24	10000	
W	182	159	1	He	0.020	0.020	180.48	1793	0.00	2500	
Tl	205	165	1	He	0.019	0.019	36.22	203	0.01	2000	
Pb	208	165	1	He	0.362	0.362	6.26	5549	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1475283	1.47	1276810	115.54	60	120	
Sc	45	1	He	171811	0.97	163460	105.11	60	120	
Sc	45	2	NoGas	9811060	1.18	8842934	110.95	60	120	
Rh	103	1	He	1003534	0.37	1010526	99.31	60	120	
In	115	1	He	257863	1.76	257801	100.02	60	120	
Tb	159	1	He	1157695	0.58	1155473	100.19	60	120	
Ho	165	1	He	1165277	0.91	1147359	101.56	60	120	
Bi	209	1	He	763300	0.43	790610	96.55	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	063_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:19:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.632	0.832	985967	0.54	50	99.3	89.5	110.5	
Be	9	45	2	NoGas	50.769	0.511	269961	1.17	50	101.5	89.5	110.5	
B	11	6	2	NoGas	48.898	2.265	195099	1.55	50	97.8	89.5	110.5	
Na	23	45	1	He	25753.040	1.568	12437747	0.96	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25439.203	1.450	6883754	0.33	25000	101.8	89.5	110.5	
Al	27	45	1	He	248.779	2.324	28590	1.39	250	99.5	89.5	110.5	
K	39	45	1	He	25331.886	1.065	3377640	0.56	25000	101.3	89.5	110.5	
Ca	44	45	1	He	25108.312	1.785	193986	0.46	25000	100.4	89.5	110.5	
Ti	47	45	1	He	50.872	1.489	2825	1.99	50	101.7	89.5	110.5	
V	51	45	1	He	49.655	1.130	94776	0.39	50	99.3	89.5	110.5	
Cr	52	45	1	He	50.377	1.435	120350	0.27	50	100.8	89.5	110.5	
Mn	55	45	1	He	247.790	1.244	297414	0.54	250	99.1	89.5	110.5	
Fe	56	45	1	He	12443.510	1.545	23319793	0.22	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.929	1.462	215216	0.26	50	99.9	89.5	110.5	
Ni	60	45	1	He	49.999	2.198	59955	1.08	50	100.0	89.5	110.5	
Cu	63	45	1	He	48.780	2.843	169606	1.70	50	97.6	89.5	110.5	
Zn	66	45	1	He	46.686	3.583	21435	1.71	50	93.4	89.5	110.5	
As	75	115	1	He	51.047	1.635	12824	0.71	50	102.1	89.5	110.5	
Se	78	115	1	He	50.434	3.234	613	2.76	50	100.9	89.5	110.5	
Sr	88	103	1	He	49.983	1.770	58180	1.95	50	100.0	89.5	110.5	
Mo	95	103	1	He	50.902	0.844	71096	1.47	50	101.8	89.5	110.5	
Ag	107	103	1	He	49.509	0.620	247624	1.24	50	99.0	89.5	110.5	
Cd	111	115	1	He	49.832	1.169	27894	1.41	50	99.7	89.5	110.5	
Sn	118	115	1	He	48.319	2.851	52708	3.31	50	96.6	89.5	110.5	
Sb	123	115	1	He	50.744	1.105	60526	1.81	50	101.5	89.5	110.5	
Ba	137	115	1	He	49.989	2.449	20970	3.01	50	100.0	89.5	110.5	
W	182	159	1	He	49.434	1.930	291004	1.43	50	98.9	89.5	110.5	
Tl	205	165	1	He	49.785	1.206	445959	1.35	50	99.6	89.5	110.5	
Pb	208	165	1	He	49.752	0.429	586576	0.40	50	99.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1440315	0.65	1276810	112.81	60	120	
Sc	45	1	He	167314	1.34	163460	102.36	60	120	
Sc	45	2	NoGas	9534702	0.70	8842934	107.82	60	120	
Rh	103	1	He	997752	0.65	1010526	98.74	60	120	
In	115	1	He	254187	0.97	257801	98.60	60	120	
Tb	159	1	He	1137608	1.47	1155473	98.45	60	120	
Ho	165	1	He	1148602	0.51	1147359	100.11	60	120	
Bi	209	1	He	741721	0.59	790610	93.82	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	064_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:24:09-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.269	25.3	98347	0.9	8	
Be	9	45	2	NoGas	0.125	7.3	774	5.8	1	
B	11	6	2	NoGas	2.484	2.4	21068	0.3	20	
Na	23	45	1	He	55.802	4.2	36207	2.2	1000	
Mg	24	45	1	He	39.248	2.2	11586	1.0	1000	
Al	27	45	1	He	-0.256	-122.6	278	11.7	50	
K	39	45	1	He	45.023	10.4	16957	4.1	1000	
Ca	44	45	1	He	35.614	35.1	1057	9.6	1000	
Ti	47	45	1	He	0.077	76.1	7	50.0	20	
V	51	45	1	He	0.015	434.9	218	58.5	2	
Cr	52	45	1	He	0.025	90.0	996	4.9	2	
Mn	55	45	1	He	-0.088	-66.5	1423	5.5	2	
Fe	56	45	1	He	19.732	7.2	41567	6.8	50	
Co	59	45	1	He	-0.008	-157.6	473	10.8	1	
Ni	60	45	1	He	-0.022	-86.1	221	10.3	2	
Cu	63	45	1	He	-0.960	-2.4	2172	4.2	2	
Zn	66	45	1	He	-3.734	-9.2	1913	7.8	20	
As	75	115	1	He	0.112	42.9	59	20.0	2	
Se	78	115	1	He	0.218	41.6	7	17.3	2	
Sr	88	103	1	He	0.102	15.6	232	8.7	10	
Mo	95	103	1	He	0.160	23.0	258	21.3	2	
Ag	107	103	1	He	0.076	3.2	408	2.9	0.2	
Cd	111	115	1	He	0.096	14.6	57	15.4	0.2	
Sn	118	115	1	He	-0.434	-21.7	1137	9.1	10	
Sb	123	115	1	He	0.144	12.3	204	10.9	2	
Ba	137	115	1	He	0.140	40.3	68	36.9	5	
W	182	159	1	He	0.267	21.7	3238	10.5	10	
Tl	205	165	1	He	0.130	7.5	1202	7.9	0.5	
Pb	208	165	1	He	0.082	13.9	2183	6.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1440778	0.91	1276810	112.84	60	120	
Sc	45	1	He	169770	1.33	163460	103.86	60	120	
Sc	45	2	NoGas	9591522	1.43	8842934	108.47	60	120	
Rh	103	1	He	1036515	0.52	1010526	102.57	60	120	
In	115	1	He	263712	1.21	257801	102.29	60	120	
Tb	159	1	He	1148476	0.05	1155473	99.39	60	120	
Ho	165	1	He	1152437	0.67	1147359	100.44	60	120	
Bi	209	1	He	769120	0.39	790610	97.28	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	065CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:28:22-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	8.221	8.221	1.212	244997	0.82	8	102.8	69.5	130.5	
Be	9	2	NoGas	1.075	1.075	3.171	5916	2.67	1	107.5	69.5	130.5	
B	11	2	NoGas	20.340	20.340	1.561	89790	0.25	20	101.7	69.5	130.5	
Na	23	1	He	995.124	995.124	2.004	493931	0.07	1000	99.5	69.5	130.5	
Mg	24	1	He	987.828	987.828	2.740	270739	0.85	1000	98.8	69.5	130.5	
Al	27	1	He	48.306	48.306	3.372	5855	3.66	50	96.6	69.5	130.5	
K	39	1	He	1002.998	1002.998	2.104	145478	0.20	1000	100.3	69.5	130.5	
Ca	44	1	He	917.955	917.955	2.024	7912	3.10	1000	91.8	69.5	130.5	
Ti	47	1	He	9.875	9.875	8.191	556	7.92	10	98.7	69.5	130.5	
V	51	1	He	5.094	5.094	7.571	9983	6.10	5	101.9	69.5	130.5	
Cr	52	1	He	1.950	1.950	2.409	5604	3.26	2	97.5	69.5	130.5	
Mn	55	1	He	3.813	3.813	5.193	6121	2.44	5	76.3	69.5	130.5	
Fe	56	1	He	103.269	103.269	3.407	199448	2.10	100	103.3	69.5	130.5	
Co	59	1	He	0.932	0.932	0.517	4554	1.47	1	93.2	69.5	130.5	
Ni	60	1	He	2.028	2.028	7.823	2691	5.16	2	101.4	69.5	130.5	
Cu	63	1	He	0.926	0.926	16.356	8574	4.13	2	46.3	69.5	130.5	6020A CR1 Failed
Zn	66	1	He	14.355	14.355	2.179	8990	0.54	20	71.8	69.5	130.5	
As	75	1	He	5.059	5.059	4.043	1355	4.91	5	101.2	69.5	130.5	
Se	78	1	He	5.457	5.457	9.803	73	9.33	5	109.1	69.5	130.5	
Sr	88	1	He	9.133	9.133	2.061	11143	2.56	10	91.3	69.5	130.5	
Mo	95	1	He	5.213	5.213	2.259	7593	1.97	5	104.3	69.5	130.5	
Ag	107	1	He	0.986	0.986	0.930	5142	0.42	1	98.6	69.5	130.5	
Cd	111	1	He	1.028	1.028	1.622	603	1.43	1	102.8	69.5	130.5	
Sn	118	1	He	8.983	8.983	7.387	11556	5.32	10	89.8	69.5	130.5	
Sb	123	1	He	2.045	2.045	4.059	2574	3.32	2	102.3	69.5	130.5	
Ba	137	1	He	4.931	4.931	10.298	2167	9.88	5	98.6	69.5	130.5	
W	182	1	He	9.805	9.805	1.418	59621	2.08	10	98.0	69.5	130.5	
Tl	205	1	He	1.026	1.026	0.897	9277	0.83	1	102.6	69.5	130.5	
Pb	208	1	He	0.987	0.987	1.871	12903	0.88	1	98.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1469376	1.28	1276810	115.08	60	120	
Sc	45	1	He	169016	1.89	163460	103.40	60	120	
Sc	45	2	NoGas	9698948	1.03	8842934	109.68	60	120	
Rh	103	1	He	1037334	0.77	1010526	102.65	60	120	
In	115	1	He	265601	1.07	257801	103.03	60	120	
Tb	159	1	He	1148653	0.71	1155473	99.41	60	120	
Ho	165	1	He	1155628	1.20	1147359	100.72	60	120	
Bi	209	1	He	776005	0.68	790610	98.15	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-2-a
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:32:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.894	2.894	2.39	149517	0.00	10000	
Be	9	45	2	NoGas	2.913	2.913	5.39	16067	0.02	2000	
B	11	6	2	NoGas	9.512	9.512	4.01	49229	0.02	300	
Na	23	45	1	He	22040.701	22040.701	1.59	10840497	0.20	500000	
Mg	24	45	1	He	6877.779	6877.779	0.92	1895889	0.36	500000	
Al	27	45	1	He	92.797	92.797	3.41	11052	0.84	200000	
K	39	45	1	He	1679.925	1679.925	1.16	238304	0.70	500000	
Ca	44	45	1	He	2904.847	2904.847	2.18	23553	12.33	500000	
Ti	47	45	1	He	0.330	0.330	69.42	21	1.56	2500	
V	51	45	1	He	0.507	0.507	26.38	1175	0.04	10000	
Cr	52	45	1	He	0.337	0.337	8.25	1753	0.02	10000	
Mn	55	45	1	He	914.000	914.000	0.78	1113112	0.08	10000	
Fe	56	45	1	He	103449.127	103449.127	0.70	197421045	0.05	200000	
Co	59	45	1	He	66.635	66.635	1.42	292335	0.02	5000	
Ni	60	45	1	He	55.089	55.089	1.48	67247	0.08	10000	
Cu	63	45	1	He	2.205	2.205	5.03	13031	0.02	10000	
Zn	66	45	1	He	8.345	8.345	3.58	6690	0.12	10000	
As	75	115	1	He	3.143	3.143	1.87	843	0.37	10000	
Se	78	115	1	He	1.923	1.923	27.26	28	6.90	10000	
Sr	88	103	1	He	35.520	35.520	0.54	42408	0.08	10000	
Mo	95	103	1	He	0.295	0.295	12.66	448	0.07	2000	
Ag	107	103	1	He	0.031	0.031	11.74	173	0.02	300	
Cd	111	115	1	He	0.030	0.030	24.76	19	0.16	4000	
Sn	118	115	1	He	-1.056	-1.056	-6.22	452	-0.23	2000	
Sb	123	115	1	He	0.084	0.084	7.46	129	0.06	200	
Ba	137	115	1	He	94.381	94.381	1.81	40885	0.23	10000	
W	182	159	1	He	0.069	0.069	43.31	2100	0.00	2500	
Tl	205	165	1	He	0.014	0.014	23.94	162	0.01	2000	
Pb	208	165	1	He	0.257	0.257	4.84	4290	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1495440	0.38	1276810	117.12	60	120	
Sc	45	1	He	170389	2.21	163460	104.24	60	120	
Sc	45	2	NoGas	9831530	0.56	8842934	111.18	60	120	
Rh	103	1	He	1022691	0.82	1010526	101.20	60	120	
In	115	1	He	262546	0.69	257801	101.84	60	120	
Tb	159	1	He	1165815	1.08	1155473	100.90	60	120	
Ho	165	1	He	1163983	1.12	1147359	101.45	60	120	
Bi	209	1	He	767820	0.43	790610	97.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-2-a
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:36:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.617	2.617	2.14	148263	0.00	10000	
Be	9	45	2	NoGas	2.458	2.458	4.38	13939	0.02	2000	
B	11	6	2	NoGas	10.728	10.728	2.35	54543	0.02	300	
Na	23	45	1	He	22680.148	22680.148	1.56	11519499	0.20	500000	
Mg	24	45	1	He	7593.480	7593.480	1.50	2161336	0.35	500000	
Al	27	45	1	He	47.735	47.735	2.35	6028	0.79	200000	
K	39	45	1	He	1785.014	1785.014	0.72	260768	0.68	500000	
Ca	44	45	1	He	3306.406	3306.406	1.43	27565	11.99	500000	
Ti	47	45	1	He	0.054	0.054	220.10	6	0.97	2500	
V	51	45	1	He	0.335	0.335	69.15	866	0.04	10000	
Cr	52	45	1	He	0.271	0.271	12.34	1646	0.02	10000	
Mn	55	45	1	He	1008.228	1008.228	1.34	1267702	0.08	10000	
Fe	56	45	1	He	112200.788	112200.788	2.02	221078920	0.05	200000	
Co	59	45	1	He	63.923	63.923	1.85	289599	0.02	5000	
Ni	60	45	1	He	49.512	49.512	2.16	62438	0.08	10000	
Cu	63	45	1	He	-0.908	-0.908	-4.13	2437	-0.04	10000	
Zn	66	45	1	He	2.674	2.674	8.50	4596	0.06	10000	
As	75	115	1	He	3.543	3.543	2.25	953	0.37	10000	
Se	78	115	1	He	2.119	2.119	5.30	31	6.94	10000	
Sr	88	103	1	He	40.194	40.194	2.37	48698	0.08	10000	
Mo	95	103	1	He	0.048	0.048	35.80	97	0.05	2000	
Ag	107	103	1	He	-0.001	-0.001	-47.01	7	-0.02	300	
Cd	111	115	1	He	0.025	0.025	24.32	16	0.16	4000	
Sn	118	115	1	He	-0.928	-0.928	-2.67	596	-0.16	2000	
Sb	123	115	1	He	0.079	0.079	34.70	124	0.06	200	
Ba	137	115	1	He	98.373	98.373	0.99	42885	0.23	10000	
W	182	159	1	He	0.014	0.014	427.77	1782	0.00	2500	
Tl	205	165	1	He	0.010	0.010	20.29	124	0.01	2000	
Pb	208	165	1	He	0.021	0.021	62.19	1494	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1511432	0.21	1276810	118.38	60	120	
Sc	45	1	He	175938	1.00	163460	107.63	60	120	
Sc	45	2	NoGas	10096284	1.47	8842934	114.17	60	120	
Rh	103	1	He	1038251	1.05	1010526	102.74	60	120	
In	115	1	He	264220	0.36	257801	102.49	60	120	
Tb	159	1	He	1174699	0.32	1155473	101.66	60	120	
Ho	165	1	He	1175921	0.98	1147359	102.49	60	120	
Bi	209	1	He	767485	1.26	790610	97.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-3-a
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:40:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.229	13.229	13.39	382295	0.00	10000	
Be	9	45	2	NoGas	0.310	0.310	5.22	2034	0.02	2000	
B	11	6	2	NoGas	14.712	14.712	11.91	72453	0.02	300	
Na	23	45	1	He	28017.647	28017.647	1.41	14070393	0.20	500000	
Mg	24	45	1	He	426.915	426.915	1.16	120953	0.35	500000	
Al	27	45	1	He	92.990	92.990	3.09	11316	0.82	200000	
K	39	45	1	He	1416.320	1416.320	1.40	206908	0.68	500000	
Ca	44	45	1	He	6035.959	6035.959	0.45	49106	12.29	500000	
Ti	47	45	1	He	0.266	0.266	31.33	18	1.50	2500	
V	51	45	1	He	1.463	1.463	8.87	3090	0.05	10000	
Cr	52	45	1	He	0.597	0.597	2.09	2431	0.02	10000	
Mn	55	45	1	He	46.540	46.540	0.88	59367	0.08	10000	
Fe	56	45	1	He	5014.118	5014.118	0.96	9774688	0.05	200000	
Co	59	45	1	He	9.915	9.915	3.52	44852	0.02	5000	
Ni	60	45	1	He	9.811	9.811	0.38	12440	0.08	10000	
Cu	63	45	1	He	-0.102	-0.102	-26.60	5231	0.00	10000	
Zn	66	45	1	He	-6.013	-6.013	-0.73	1041	-0.58	10000	
As	75	115	1	He	2.286	2.286	0.72	635	0.36	10000	
Se	78	115	1	He	0.237	0.237	100.86	7	3.40	10000	
Sr	88	103	1	He	271.098	271.098	1.56	328025	0.08	10000	
Mo	95	103	1	He	0.848	0.848	7.61	1259	0.07	2000	
Ag	107	103	1	He	0.000	0.000	387.35	16	0.00	300	
Cd	111	115	1	He	0.023	0.023	28.08	15	0.15	4000	
Sn	118	115	1	He	-1.035	-1.035	-4.96	485	-0.21	2000	
Sb	123	115	1	He	0.268	0.268	3.97	363	0.07	200	
Ba	137	115	1	He	17.448	17.448	3.19	7722	0.23	10000	
W	182	159	1	He	0.063	0.063	64.14	2089	0.00	2500	
Tl	205	165	1	He	0.005	0.005	3.52	84	0.01	2000	
Pb	208	165	1	He	0.066	0.066	9.58	2060	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1566338	6.76	1276810	122.68	60	120	ISTD warning
Sc	45	1	He	173993	1.53	163460	106.44	60	120	
Sc	45	2	NoGas	11094430	11.39	8842934	125.46	60	120	ISTD warning
Rh	103	1	He	1038780	0.83	1010526	102.80	60	120	
In	115	1	He	268086	0.90	257801	103.99	60	120	
Tb	159	1	He	1178799	0.42	1155473	102.02	60	120	
Ho	165	1	He	1190853	1.08	1147359	103.79	60	120	
Bi	209	1	He	787969	0.94	790610	99.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-3-a
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:45:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	14.832	14.832	0.13	378807	0.00	10000	
Be	9	45	2	NoGas	0.281	0.281	14.15	1682	0.02	2000	
B	11	6	2	NoGas	16.094	16.094	1.16	75892	0.02	300	
Na	23	45	1	He	28137.000	28137.000	1.08	14077520	0.20	500000	
Mg	24	45	1	He	420.835	420.835	1.55	118794	0.35	500000	
Al	27	45	1	He	15.428	15.428	2.79	2131	0.72	200000	
K	39	45	1	He	1448.382	1448.382	2.41	210525	0.69	500000	
Ca	44	45	1	He	6067.154	6067.154	1.53	49165	12.34	500000	
Ti	47	45	1	He	0.036	0.036	184.89	4	0.81	2500	
V	51	45	1	He	0.355	0.355	26.98	892	0.04	10000	
Cr	52	45	1	He	0.259	0.259	20.01	1592	0.02	10000	
Mn	55	45	1	He	47.338	47.338	1.02	60129	0.08	10000	
Fe	56	45	1	He	4348.357	4348.357	2.34	8444424	0.05	200000	
Co	59	45	1	He	9.863	9.863	3.26	44452	0.02	5000	
Ni	60	45	1	He	11.225	11.225	3.07	14140	0.08	10000	
Cu	63	45	1	He	-0.778	-0.778	-1.16	2855	-0.03	10000	
Zn	66	45	1	He	-4.436	-4.436	-5.37	1671	-0.27	10000	
As	75	115	1	He	2.052	2.052	6.14	577	0.36	10000	
Se	78	115	1	He	0.361	0.361	55.26	9	4.19	10000	
Sr	88	103	1	He	271.771	271.771	0.41	328920	0.08	10000	
Mo	95	103	1	He	0.677	0.677	2.55	1011	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-307.21	11	0.00	300	
Cd	111	115	1	He	0.024	0.024	38.92	16	0.15	4000	
Sn	118	115	1	He	-1.058	-1.058	-3.24	463	-0.23	2000	
Sb	123	115	1	He	0.236	0.236	23.81	326	0.07	200	
Ba	137	115	1	He	17.221	17.221	3.35	7676	0.22	10000	
W	182	159	1	He	0.025	0.025	155.71	1867	0.00	2500	
Tl	205	165	1	He	0.009	0.009	8.03	122	0.01	2000	
Pb	208	165	1	He	0.003	0.003	93.97	1292	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1515968	0.72	1276810	118.73	60	120	
Sc	45	1	He	173334	1.28	163460	106.04	60	120	
Sc	45	2	NoGas	10038246	0.89	8842934	113.52	60	120	
Rh	103	1	He	1039012	1.07	1010526	102.82	60	120	
In	115	1	He	269958	0.12	257801	104.72	60	120	
Tb	159	1	He	1184628	0.63	1155473	102.52	60	120	
Ho	165	1	He	1191391	0.25	1147359	103.84	60	120	
Bi	209	1	He	793212	0.95	790610	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-4-a
Data File Name	070SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:49:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	45.488	45.488	0.24	970490	0.00	10000	
Be	9	45	2	NoGas	4.387	4.387	4.05	24943	0.02	2000	
B	11	6	2	NoGas	12.029	12.029	1.55	61179	0.02	300	
Na	23	45	1	He	8052.787	8052.787	0.79	4047173	0.20	500000	
Mg	24	45	1	He	2548.551	2548.551	0.48	717290	0.36	500000	
Al	27	45	1	He	402.604	402.604	0.24	47882	0.84	200000	
K	39	45	1	He	2350.417	2350.417	1.02	335716	0.70	500000	
Ca	44	45	1	He	2093.088	2093.088	0.88	17533	11.94	500000	
Ti	47	45	1	He	0.307	0.307	50.57	20	1.53	2500	
V	51	45	1	He	-0.037	-0.037	-245.84	120	-0.03	10000	
Cr	52	45	1	He	0.031	0.031	26.79	1036	0.00	10000	
Mn	55	45	1	He	222.258	222.258	1.76	277329	0.08	10000	
Fe	56	45	1	He	29.423	29.423	1.29	61420	0.05	200000	
Co	59	45	1	He	222.571	222.571	1.09	995021	0.02	5000	
Ni	60	45	1	He	355.463	355.463	1.03	441345	0.08	10000	
Cu	63	45	1	He	77.399	77.399	1.26	276362	0.03	10000	
Zn	66	45	1	He	373.928	373.928	1.91	154131	0.24	10000	
As	75	115	1	He	0.114	0.114	33.89	61	0.19	10000	
Se	78	115	1	He	0.549	0.549	29.72	11	4.94	10000	
Sr	88	103	1	He	17.999	17.999	1.11	22345	0.08	10000	
Mo	95	103	1	He	0.018	0.018	54.54	53	0.03	2000	
Ag	107	103	1	He	0.005	0.005	66.83	40	0.01	300	
Cd	111	115	1	He	0.164	0.164	10.11	99	0.16	4000	
Sn	118	115	1	He	-1.107	-1.107	-1.53	411	-0.27	2000	
Sb	123	115	1	He	0.057	0.057	28.81	100	0.06	200	
Ba	137	115	1	He	55.604	55.604	2.68	24943	0.22	10000	
W	182	159	1	He	0.004	0.004	1044.38	1748	0.00	2500	
Tl	205	165	1	He	0.117	0.117	9.86	1135	0.01	2000	
Pb	208	165	1	He	0.763	0.763	3.56	10676	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1549888	0.97	1276810	121.39	60	120	ISTD warning
Sc	45	1	He	173824	0.53	163460	106.34	60	120	
Sc	45	2	NoGas	10152724	0.38	8842934	114.81	60	120	
Rh	103	1	He	1060773	0.09	1010526	104.97	60	120	
In	115	1	He	271861	0.86	257801	105.45	60	120	
Tb	159	1	He	1192548	0.72	1155473	103.21	60	120	
Ho	165	1	He	1202970	1.26	1147359	104.85	60	120	
Bi	209	1	He	815837	0.45	790610	103.19	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-4-a
Data File Name	071SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:53:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	46.782	46.782	1.02	975479	0.00	10000	
Be	9	45	2	NoGas	4.634	4.634	2.49	25811	0.02	2000	
B	11	6	2	NoGas	11.281	11.281	6.07	57189	0.02	300	
Na	23	45	1	He	8191.404	8191.404	1.78	4102433	0.20	500000	
Mg	24	45	1	He	2546.884	2546.884	1.17	714376	0.36	500000	
Al	27	45	1	He	375.546	375.546	0.39	44533	0.84	200000	
K	39	45	1	He	2325.337	2325.337	0.70	331158	0.70	500000	
Ca	44	45	1	He	2104.132	2104.132	1.14	17561	11.98	500000	
Ti	47	45	1	He	0.056	0.056	158.11	6	1.01	2500	
V	51	45	1	He	-0.006	-0.006	-3184.77	183	0.00	10000	
Cr	52	45	1	He	0.020	0.020	68.19	1004	0.00	10000	
Mn	55	45	1	He	221.497	221.497	1.13	275444	0.08	10000	
Fe	56	45	1	He	1.499	1.499	6.09	7035	0.02	200000	
Co	59	45	1	He	220.299	220.299	1.14	981510	0.02	5000	
Ni	60	45	1	He	355.682	355.682	1.29	440107	0.08	10000	
Cu	63	45	1	He	77.839	77.839	0.84	276961	0.03	10000	
Zn	66	45	1	He	377.751	377.751	1.31	155139	0.24	10000	
As	75	115	1	He	0.108	0.108	32.37	59	0.18	10000	
Se	78	115	1	He	0.394	0.394	15.04	9	4.40	10000	
Sr	88	103	1	He	18.419	18.419	2.26	22503	0.08	10000	
Mo	95	103	1	He	0.012	0.012	42.68	44	0.03	2000	
Ag	107	103	1	He	0.002	0.002	121.42	23	0.01	300	
Cd	111	115	1	He	0.131	0.131	15.29	78	0.17	4000	
Sn	118	115	1	He	-1.187	-1.187	-6.75	315	-0.38	2000	
Sb	123	115	1	He	0.037	0.037	38.58	72	0.05	200	
Ba	137	115	1	He	56.718	56.718	2.11	25003	0.23	10000	
W	182	159	1	He	0.014	0.014	196.31	1793	0.00	2500	
Tl	205	165	1	He	0.116	0.116	1.66	1110	0.01	2000	
Pb	208	165	1	He	0.761	0.761	3.19	10525	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1524349	1.03	1276810	119.39	60	120	
Sc	45	1	He	173239	0.95	163460	105.98	60	120	
Sc	45	2	NoGas	9951197	0.93	8842934	112.53	60	120	
Rh	103	1	He	1044043	0.11	1010526	103.32	60	120	
In	115	1	He	267171	1.28	257801	103.63	60	120	
Tb	159	1	He	1179749	0.56	1155473	102.10	60	120	
Ho	165	1	He	1189397	0.71	1147359	103.66	60	120	
Bi	209	1	He	804980	0.89	790610	101.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64369-c-1-a
Data File Name	072SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:57:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.750	5.750	1.22	207375	0.00	10000	
Be	9	45	2	NoGas	0.105	0.105	17.81	696	0.02	2000	
B	11	6	2	NoGas	75.734	75.734	1.16	314485	0.02	300	
Na	23	45	1	He	22225.852	22225.852	1.39	11127675	0.20	500000	
Mg	24	45	1	He	31226.262	31226.262	0.69	8758629	0.36	500000	
Al	27	45	1	He	1372.440	1372.440	1.73	162071	0.85	200000	
K	39	45	1	He	3624.118	3624.118	2.30	510367	0.71	500000	
Ca	44	45	1	He	148352.569	148352.569	1.99	1184148	12.53	500000	
Ti	47	45	1	He	12.523	12.523	10.23	722	1.73	2500	
V	51	45	1	He	2.472	2.472	12.38	5070	0.05	10000	
Cr	52	45	1	He	1.616	1.616	6.48	4926	0.03	10000	
Mn	55	45	1	He	177.955	177.955	1.73	221830	0.08	10000	
Fe	56	45	1	He	1094.498	1094.498	2.01	2129831	0.05	200000	
Co	59	45	1	He	0.756	0.756	1.21	3886	0.02	5000	
Ni	60	45	1	He	2.655	2.655	4.15	3540	0.08	10000	
Cu	63	45	1	He	2.997	2.997	4.30	16029	0.02	10000	
Zn	66	45	1	He	14.311	14.311	3.89	9209	0.16	10000	
As	75	115	1	He	1.218	1.218	1.14	347	0.35	10000	
Se	78	115	1	He	1.158	1.158	22.94	18	6.29	10000	
Sr	88	103	1	He	651.339	651.339	1.51	762522	0.09	10000	
Mo	95	103	1	He	2.442	2.442	4.43	3460	0.07	2000	
Ag	107	103	1	He	0.006	0.006	58.78	43	0.01	300	
Cd	111	115	1	He	0.090	0.090	14.55	54	0.17	4000	
Sn	118	115	1	He	-1.095	-1.095	-1.98	411	-0.27	2000	
Sb	123	115	1	He	0.664	0.664	5.11	848	0.08	200	
Ba	137	115	1	He	79.390	79.390	0.87	34562	0.23	10000	
W	182	159	1	He	0.032	0.032	55.52	1885	0.00	2500	
Tl	205	165	1	He	0.029	0.029	9.99	303	0.01	2000	
Pb	208	165	1	He	0.876	0.876	4.12	11881	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1531724	1.91	1276810	119.96	60	120	
Sc	45	1	He	173417	0.72	163460	106.09	60	120	
Sc	45	2	NoGas	10067895	0.54	8842934	113.85	60	120	
Rh	103	1	He	1005197	0.03	1010526	99.47	60	120	
In	115	1	He	263849	0.47	257801	102.35	60	120	
Tb	159	1	He	1170235	0.30	1155473	101.28	60	120	
Ho	165	1	He	1184898	0.92	1147359	103.27	60	120	
Bi	209	1	He	768976	0.61	790610	97.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64334-d-1-a
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:01:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.975	3.975	2.21	174018	0.00	10000	
Be	9	45	2	NoGas	0.071	0.071	28.57	507	0.01	2000	
B	11	6	2	NoGas	148.952	148.952	2.35	609051	0.02	300	
Na	23	45	1	He	49013.941	49013.941	1.88	24557194	0.20	500000	
Mg	24	45	1	He	21888.025	21888.025	2.03	6146561	0.36	500000	
Al	27	45	1	He	83.147	83.147	2.53	10126	0.82	200000	
K	39	45	1	He	7011.994	7011.994	1.08	978335	0.72	500000	
Ca	44	45	1	He	70140.966	70140.966	1.44	560984	12.50	500000	
Ti	47	45	1	He	1.735	1.735	9.95	102	1.70	2500	
V	51	45	1	He	0.157	0.157	50.79	503	0.03	10000	
Cr	52	45	1	He	0.092	0.092	89.06	1185	0.01	10000	
Mn	55	45	1	He	69.968	69.968	2.01	88272	0.08	10000	
Fe	56	45	1	He	193.716	193.716	2.09	380811	0.05	200000	
Co	59	45	1	He	0.794	0.794	1.89	4064	0.02	5000	
Ni	60	45	1	He	9.489	9.489	0.52	12015	0.08	10000	
Cu	63	45	1	He	-0.597	-0.597	-13.03	3491	-0.02	10000	
Zn	66	45	1	He	3.846	3.846	11.12	5006	0.08	10000	
As	75	115	1	He	4.952	4.952	1.20	1310	0.38	10000	
Se	78	115	1	He	0.208	0.208	125.82	6	3.21	10000	
Sr	88	103	1	He	325.220	325.220	1.16	383268	0.08	10000	
Mo	95	103	1	He	5.010	5.010	1.98	7118	0.07	2000	
Ag	107	103	1	He	0.002	0.002	109.98	21	0.01	300	
Cd	111	115	1	He	0.066	0.066	19.45	40	0.17	4000	
Sn	118	115	1	He	-1.184	-1.184	-4.70	311	-0.38	2000	
Sb	123	115	1	He	0.905	0.905	10.18	1139	0.08	200	
Ba	137	115	1	He	14.662	14.662	2.81	6348	0.23	10000	
W	182	159	1	He	0.031	0.031	21.96	1885	0.00	2500	
Tl	205	165	1	He	0.112	0.112	2.55	1066	0.01	2000	
Pb	208	165	1	He	0.518	0.518	1.24	7527	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1538849	3.01	1276810	120.52	60	120	ISTD warning
Sc	45	1	He	173629	0.88	163460	106.22	60	120	
Sc	45	2	NoGas	10088803	1.02	8842934	114.09	60	120	
Rh	103	1	He	1011768	0.88	1010526	100.12	60	120	
In	115	1	He	262144	1.29	257801	101.68	60	120	
Tb	159	1	He	1173734	0.43	1155473	101.58	60	120	
Ho	165	1	He	1183871	0.97	1147359	103.18	60	120	
Bi	209	1	He	761370	0.70	790610	96.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64336-a-1-a
Data File Name	074SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:06:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.822	3.822	1.98	171021	0.00	10000	
Be	9	45	2	NoGas	0.115	0.115	4.25	756	0.02	2000	
B	11	6	2	NoGas	68.619	68.619	0.85	285483	0.02	300	
Na	23	45	1	He	23502.407	23502.407	0.43	11843431	0.20	500000	
Mg	24	45	1	He	33065.728	33065.728	0.50	9335074	0.35	500000	
Al	27	45	1	He	1839.643	1839.643	0.97	218567	0.84	200000	
K	39	45	1	He	4989.920	4989.920	0.21	703131	0.71	500000	
Ca	44	45	1	He	63547.182	63547.182	1.22	511040	12.43	500000	
Ti	47	45	1	He	31.138	31.138	18.18	1805	1.73	2500	
V	51	45	1	He	4.062	4.062	5.23	8268	0.05	10000	
Cr	52	45	1	He	2.129	2.129	3.63	6229	0.03	10000	
Mn	55	45	1	He	111.360	111.360	1.36	140319	0.08	10000	
Fe	56	45	1	He	1770.612	1770.612	1.66	3465692	0.05	200000	
Co	59	45	1	He	0.897	0.897	1.66	4547	0.02	5000	
Ni	60	45	1	He	10.892	10.892	4.37	13828	0.08	10000	
Cu	63	45	1	He	3.065	3.065	0.95	16373	0.02	10000	
Zn	66	45	1	He	25.447	25.447	3.90	13774	0.18	10000	
As	75	115	1	He	3.475	3.475	4.43	914	0.38	10000	
Se	78	115	1	He	0.798	0.798	36.13	14	5.87	10000	
Sr	88	103	1	He	370.191	370.191	0.38	432367	0.09	10000	
Mo	95	103	1	He	4.792	4.792	2.12	6749	0.07	2000	
Ag	107	103	1	He	0.004	0.004	99.22	33	0.01	300	
Cd	111	115	1	He	0.050	0.050	15.61	29	0.17	4000	
Sn	118	115	1	He	-1.035	-1.035	-2.96	467	-0.22	2000	
Sb	123	115	1	He	1.323	1.323	3.92	1627	0.08	200	
Ba	137	115	1	He	110.950	110.950	0.33	47232	0.23	10000	
W	182	159	1	He	0.052	0.052	30.23	1993	0.00	2500	
Tl	205	165	1	He	0.023	0.023	17.14	247	0.01	2000	
Pb	208	165	1	He	1.023	1.023	2.37	13521	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1528190	0.39	1276810	119.69	60	120	
Sc	45	1	He	174544	0.12	163460	106.78	60	120	
Sc	45	2	NoGas	10084190	0.93	8842934	114.04	60	120	
Rh	103	1	He	1002725	0.86	1010526	99.23	60	120	
In	115	1	He	258021	0.76	257801	100.09	60	120	
Tb	159	1	He	1164435	1.07	1155473	100.78	60	120	
Ho	165	1	He	1171791	0.66	1147359	102.13	60	120	
Bi	209	1	He	762743	0.40	790610	96.48	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	075_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:10:18-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.714	1.895	1047146	1.71	50	103.4	89.5	110.5	
Be	9	45	2	NoGas	51.706	0.859	281301	0.93	50	103.4	89.5	110.5	
B	11	6	2	NoGas	51.215	2.606	208828	0.30	50	102.4	89.5	110.5	
Na	23	45	1	He	25511.077	0.386	12519884	0.68	25000	102.0	89.5	110.5	
Mg	24	45	1	He	24929.444	0.882	6854891	1.14	25000	99.7	89.5	110.5	
Al	27	45	1	He	249.881	2.353	29182	2.67	250	100.0	89.5	110.5	
K	39	45	1	He	25452.564	0.887	3448361	0.94	25000	101.8	89.5	110.5	
Ca	44	45	1	He	24974.602	1.020	196082	1.19	25000	99.9	89.5	110.5	
Ti	47	45	1	He	49.858	2.606	2812	1.72	50	99.7	89.5	110.5	
V	51	45	1	He	49.983	2.149	96954	3.03	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.747	0.911	120775	0.81	50	99.5	89.5	110.5	
Mn	55	45	1	He	247.556	1.114	301916	0.34	250	99.0	89.5	110.5	
Fe	56	45	1	He	12505.819	1.689	23814039	1.11	12500	100.0	89.5	110.5	
Co	59	45	1	He	50.077	0.944	219333	0.26	50	100.2	89.5	110.5	
Ni	60	45	1	He	50.357	1.372	61359	1.17	50	100.7	89.5	110.5	
Cu	63	45	1	He	49.161	0.209	173667	0.73	50	98.3	89.5	110.5	
Zn	66	45	1	He	46.486	2.274	21704	1.33	50	93.0	89.5	110.5	
As	75	115	1	He	50.532	1.080	12833	0.46	50	101.1	89.5	110.5	
Se	78	115	1	He	49.625	2.108	610	2.43	50	99.3	89.5	110.5	
Sr	88	103	1	He	49.824	1.104	58109	0.53	50	99.6	89.5	110.5	
Mo	95	103	1	He	51.670	1.476	72310	1.47	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.798	0.494	254577	0.86	50	101.6	89.5	110.5	
Cd	111	115	1	He	50.342	1.603	28482	0.71	50	100.7	89.5	110.5	
Sn	118	115	1	He	49.189	2.742	54198	1.84	50	98.4	89.5	110.5	
Sb	123	115	1	He	50.730	1.188	61157	0.28	50	101.5	89.5	110.5	
Ba	137	115	1	He	50.027	1.800	21210	1.56	50	100.1	89.5	110.5	
W	182	159	1	He	50.090	2.216	300501	2.42	50	100.2	89.5	110.5	
Tl	205	165	1	He	50.096	1.532	454352	1.10	50	100.2	89.5	110.5	
Pb	208	165	1	He	49.975	0.734	596580	0.28	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1476464	2.69	1276810	115.64	60	120	
Sc	45	1	He	169999	0.91	163460	104.00	60	120	
Sc	45	2	NoGas	9755452	0.07	8842934	110.32	60	120	
Rh	103	1	He	999760	0.62	1010526	98.93	60	120	
In	115	1	He	256937	0.92	257801	99.66	60	120	
Tb	159	1	He	1159270	0.57	1155473	100.33	60	120	
Ho	165	1	He	1163008	0.46	1147359	101.36	60	120	
Bi	209	1	He	749375	0.57	790610	94.78	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	076_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:14:30-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.233	35.1	100951	0.6	8	
Be	9	45	2	NoGas	0.125	33.6	800	30.1	1	
B	11	6	2	NoGas	3.115	8.5	24944	3.6	20	
Na	23	45	1	He	56.769	6.3	36478	4.4	1000	
Mg	24	45	1	He	36.339	3.9	10729	4.0	1000	
Al	27	45	1	He	0.007	457.9	307	1.9	50	
K	39	45	1	He	48.990	11.7	17390	3.9	1000	
Ca	44	45	1	He	27.125	25.5	984	5.3	1000	
Ti	47	45	1	He	0.139	114.4	10	88.2	20	
V	51	45	1	He	0.064	275.9	312	109.8	2	
Cr	52	45	1	He	0.034	36.2	1013	2.9	2	
Mn	55	45	1	He	-0.186	-33.9	1297	5.4	2	
Fe	56	45	1	He	20.191	2.8	42194	1.8	50	
Co	59	45	1	He	-0.010	-39.4	461	3.6	1	
Ni	60	45	1	He	-0.028	-71.4	213	10.2	2	
Cu	63	45	1	He	-0.841	-7.5	2566	7.9	2	
Zn	66	45	1	He	-3.595	-2.0	1957	1.1	20	
As	75	115	1	He	0.090	23.7	53	10.7	2	
Se	78	115	1	He	0.288	25.1	7	13.3	2	
Sr	88	103	1	He	0.144	32.1	283	19.3	10	
Mo	95	103	1	He	0.139	11.1	228	9.4	2	
Ag	107	103	1	He	0.080	5.9	428	6.5	0.2	
Cd	111	115	1	He	0.085	37.2	50	37.5	0.2	
Sn	118	115	1	He	-0.363	-6.6	1208	1.9	10	
Sb	123	115	1	He	0.154	18.8	214	15.6	2	
Ba	137	115	1	He	0.162	38.2	77	34.5	5	
W	182	159	1	He	0.314	7.4	3534	3.9	10	
Tl	205	165	1	He	0.116	11.9	1083	11.2	0.5	
Pb	208	165	1	He	0.067	14.7	2026	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1533910	2.66	1276810	120.14	60	120	ISTD warning
Sc	45	1	He	168821	0.86	163460	103.28	60	120	
Sc	45	2	NoGas	9911532	0.95	8842934	112.08	60	120	
Rh	103	1	He	1035672	0.76	1010526	102.49	60	120	
In	115	1	He	262036	1.29	257801	101.64	60	120	
Tb	159	1	He	1153949	0.02	1155473	99.87	60	120	
Ho	165	1	He	1159654	0.50	1147359	101.07	60	120	
Bi	209	1	He	778427	0.58	790610	98.46	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	077_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:19:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.950	0.307	1018940	0.75	50	101.9	89.5	110.5	
Be	9	45	2	NoGas	52.045	1.020	279256	0.47	50	104.1	89.5	110.5	
B	11	6	2	NoGas	50.486	3.028	200724	2.79	50	101.0	89.5	110.5	
Na	23	45	1	He	25834.052	2.110	12506114	0.70	25000	103.3	89.5	110.5	
Mg	24	45	1	He	25411.476	2.117	6892525	0.83	25000	101.6	89.5	110.5	
Al	27	45	1	He	250.312	3.026	28831	1.67	250	100.1	89.5	110.5	
K	39	45	1	He	25392.904	1.431	3393830	0.04	25000	101.6	89.5	110.5	
Ca	44	45	1	He	25032.656	1.750	193874	0.43	25000	100.1	89.5	110.5	
Ti	47	45	1	He	50.733	5.373	2822	4.02	50	101.5	89.5	110.5	
V	51	45	1	He	51.124	2.039	97804	0.90	50	102.2	89.5	110.5	
Cr	52	45	1	He	50.399	2.118	120687	0.79	50	100.8	89.5	110.5	
Mn	55	45	1	He	247.676	1.516	297991	0.30	250	99.1	89.5	110.5	
Fe	56	45	1	He	12516.483	2.324	23512001	1.08	12500	100.1	89.5	110.5	
Co	59	45	1	He	49.748	2.645	214935	1.28	50	99.5	89.5	110.5	
Ni	60	45	1	He	50.078	1.262	60199	0.15	50	100.2	89.5	110.5	
Cu	63	45	1	He	49.410	2.522	172145	1.17	50	98.8	89.5	110.5	
Zn	66	45	1	He	47.145	3.051	21667	1.21	50	94.3	89.5	110.5	
As	75	115	1	He	50.850	1.221	12842	0.31	50	101.7	89.5	110.5	
Se	78	115	1	He	50.654	3.202	619	1.87	50	101.3	89.5	110.5	
Sr	88	103	1	He	49.671	1.126	57669	0.72	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.655	0.672	71965	1.30	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.033	0.701	249608	1.11	50	100.1	89.5	110.5	
Cd	111	115	1	He	50.243	0.648	28271	0.83	50	100.5	89.5	110.5	
Sn	118	115	1	He	48.685	0.593	53373	1.65	50	97.4	89.5	110.5	
Sb	123	115	1	He	50.667	0.624	60748	0.83	50	101.3	89.5	110.5	
Ba	137	115	1	He	49.584	3.486	20902	2.15	50	99.2	89.5	110.5	
W	182	159	1	He	50.064	0.285	297121	1.07	50	100.1	89.5	110.5	
Tl	205	165	1	He	50.177	2.982	450885	1.95	50	100.4	89.5	110.5	
Pb	208	165	1	He	49.985	1.553	591257	0.99	50	100.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1437876	0.79	1276810	112.61	60	120	
Sc	45	1	He	167721	1.41	163460	102.61	60	120	
Sc	45	2	NoGas	9621896	0.60	8842934	108.81	60	120	
Rh	103	1	He	995240	0.65	1010526	98.49	60	120	
In	115	1	He	255529	1.41	257801	99.12	60	120	
Tb	159	1	He	1146837	0.79	1155473	99.25	60	120	
Ho	165	1	He	1152481	1.19	1147359	100.45	60	120	
Bi	209	1	He	754247	1.26	790610	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	078_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:23:27-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.294	32.8	100122	0.9	8	
Be	9	45	2	NoGas	0.108	12.6	689	11.3	1	
B	11	6	2	NoGas	3.031	10.1	23820	4.0	20	
Na	23	45	1	He	55.572	5.1	36133	3.8	1000	
Mg	24	45	1	He	37.656	2.2	11159	1.6	1000	
Al	27	45	1	He	-0.184	-110.7	287	8.8	50	
K	39	45	1	He	47.341	5.4	17283	1.6	1000	
Ca	44	45	1	He	26.679	3.4	987	1.3	1000	
Ti	47	45	1	He	0.058	59.3	6	34.7	20	
V	51	45	1	He	-0.037	-329.5	118	201.1	2	
Cr	52	45	1	He	-0.005	-201.8	927	2.9	2	
Mn	55	45	1	He	-0.126	-59.2	1379	6.4	2	
Fe	56	45	1	He	20.011	2.6	42131	2.7	50	
Co	59	45	1	He	0.004	298.1	526	9.8	1	
Ni	60	45	1	He	-0.008	-162.6	239	6.9	2	
Cu	63	45	1	He	-0.924	-8.5	2298	11.9	2	
Zn	66	45	1	He	-3.618	-7.1	1960	4.6	20	
As	75	115	1	He	0.099	11.5	56	6.3	2	
Se	78	115	1	He	0.317	74.0	8	38.0	2	
Sr	88	103	1	He	0.110	47.8	243	26.1	10	
Mo	95	103	1	He	0.140	11.6	231	10.2	2	
Ag	107	103	1	He	0.064	15.7	348	14.7	0.2	
Cd	111	115	1	He	0.088	21.0	53	21.0	0.2	
Sn	118	115	1	He	-0.405	-22.1	1182	8.9	10	
Sb	123	115	1	He	0.144	12.2	207	9.7	2	
Ba	137	115	1	He	0.116	44.1	58	38.4	5	
W	182	159	1	He	0.282	10.8	3356	5.7	10	
Tl	205	165	1	He	0.128	6.0	1203	5.4	0.5	
Pb	208	165	1	He	0.064	14.1	2002	4.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1484561	0.97	1276810	116.27	60	120	
Sc	45	1	He	169919	0.57	163460	103.95	60	120	
Sc	45	2	NoGas	9719960	1.25	8842934	109.92	60	120	
Rh	103	1	He	1042673	0.81	1010526	103.18	60	120	
In	115	1	He	266316	1.01	257801	103.30	60	120	
Tb	159	1	He	1158103	0.46	1155473	100.23	60	120	
Ho	165	1	He	1168901	0.46	1147359	101.88	60	120	
Bi	209	1	He	782445	0.89	790610	98.97	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-5-a
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:27:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.126	119.126	0.64	2344319	0.01	10000	
Be	9	45	2	NoGas	0.049	0.049	23.93	382	0.01	2000	
B	11	6	2	NoGas	504.433	504.433	0.81	1869799	0.03	300	>LDR
Na	23	45	1	He	148866.785	148866.785	1.46	74512719	0.20	500000	
Mg	24	45	1	He	179336.247	179336.247	1.75	50318481	0.36	500000	
Al	27	45	1	He	6.725	6.725	11.16	1106	0.61	200000	
K	39	45	1	He	932575.516	932575.516	0.78	128547436	0.73	500000	>LDR
Ca	44	45	1	He	431011.391	431011.391	1.35	3441818	12.52	500000	
Ti	47	45	1	He	0.189	0.189	50.46	13	1.42	2500	
V	51	45	1	He	-0.014	-0.014	-4160.31	190	-0.01	10000	
Cr	52	45	1	He	4.463	4.463	4.56	11940	0.04	10000	
Mn	55	45	1	He	57.443	57.443	1.57	72704	0.08	10000	
Fe	56	45	1	He	878.218	878.218	1.61	1710826	0.05	200000	
Co	59	45	1	He	0.003	0.003	426.42	533	0.00	5000	
Ni	60	45	1	He	1.093	1.093	8.43	1608	0.07	10000	
Cu	63	45	1	He	6.181	6.181	14.95	27229	0.02	10000	
Zn	66	45	1	He	-5.572	-5.572	-2.46	1216	-0.46	10000	
As	75	115	1	He	0.342	0.342	14.74	113	0.30	10000	
Se	78	115	1	He	0.898	0.898	10.28	14	6.23	10000	
Sr	88	103	1	He	15625.185	15625.185	0.61	16777256	0.09	10000	>LDR
Mo	95	103	1	He	7.743	7.743	0.97	10013	0.08	2000	
Ag	107	103	1	He	0.009	0.009	14.89	54	0.02	300	
Cd	111	115	1	He	0.022	0.022	51.10	13	0.16	4000	
Sn	118	115	1	He	-1.044	-1.044	-6.04	444	-0.23	2000	
Sb	123	115	1	He	0.075	0.075	15.59	113	0.07	200	
Ba	137	115	1	He	17.760	17.760	1.43	7357	0.24	10000	
W	182	159	1	He	0.254	0.254	20.45	3049	0.01	2500	
Tl	205	165	1	He	0.019	0.019	10.35	196	0.01	2000	
Pb	208	165	1	He	0.036	0.036	36.53	1596	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1414910	0.78	1276810	110.82	60	120	
Sc	45	1	He	173515	3.24	163460	106.15	60	120	
Sc	45	2	NoGas	9994593	0.58	8842934	113.02	60	120	
Rh	103	1	He	922052	2.33	1010526	91.24	60	120	
In	115	1	He	250905	2.36	257801	97.33	60	120	
Tb	159	1	He	1108503	1.41	1155473	95.93	60	120	
Ho	165	1	He	1118508	0.80	1147359	97.49	60	120	
Bi	209	1	He	666486	1.18	790610	84.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-5-a@20
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:32:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.236	6.236	1.27	209638	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	20.39	222	0.01	2000	
B	11	6	2	NoGas	29.764	29.764	1.47	128083	0.02	300	
Na	23	45	1	He	7918.448	7918.448	1.39	3995042	0.20	500000	
Mg	24	45	1	He	9562.269	9562.269	2.24	2699047	0.35	500000	
Al	27	45	1	He	-0.592	-0.592	-64.43	246	-0.24	200000	
K	39	45	1	He	48393.541	48393.541	1.28	6719707	0.72	500000	
Ca	44	45	1	He	20611.406	20611.406	1.35	166243	12.40	500000	
Ti	47	45	1	He	-0.002	-0.002	-3634.06	2	-0.08	2500	
V	51	45	1	He	-0.112	-0.112	-83.79	-30	0.38	10000	
Cr	52	45	1	He	0.183	0.183	3.86	1415	0.01	10000	
Mn	55	45	1	He	2.009	2.009	0.28	4075	0.05	10000	
Fe	56	45	1	He	46.200	46.200	2.98	94428	0.05	200000	
Co	59	45	1	He	-0.086	-0.086	-2.76	134	-0.06	5000	
Ni	60	45	1	He	-0.103	-0.103	-11.34	127	-0.08	10000	
Cu	63	45	1	He	1.058	1.058	11.92	9326	0.01	10000	
Zn	66	45	1	He	-7.371	-7.371	-2.21	494	-1.49	10000	
As	75	115	1	He	0.059	0.059	89.27	45	0.13	10000	
Se	78	115	1	He	0.188	0.188	47.27	6	2.97	10000	
Sr	88	103	1	He	691.643	691.643	1.09	821101	0.08	10000	
Mo	95	103	1	He	0.350	0.350	1.21	524	0.07	2000	
Ag	107	103	1	He	0.003	0.003	23.26	29	0.01	300	
Cd	111	115	1	He	0.053	0.053	2.47	33	0.16	4000	
Sn	118	115	1	He	-1.082	-1.082	-5.43	430	-0.25	2000	
Sb	123	115	1	He	0.036	0.036	47.18	71	0.05	200	
Ba	137	115	1	He	0.911	0.911	10.96	407	0.22	10000	
W	182	159	1	He	0.008	0.008	361.73	1708	0.00	2500	
Tl	205	165	1	He	0.011	0.011	20.21	128	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-238.80	1152	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1495493	0.74	1276810	117.13	60	120	
Sc	45	1	He	174515	1.73	163460	106.76	60	120	
Sc	45	2	NoGas	9743837	0.72	8842934	110.19	60	120	
Rh	103	1	He	1019405	0.89	1010526	100.88	60	120	
In	115	1	He	266111	0.76	257801	103.22	60	120	
Tb	159	1	He	1146889	0.28	1155473	99.26	60	120	
Ho	165	1	He	1149263	0.21	1147359	100.17	60	120	
Bi	209	1	He	758447	0.79	790610	95.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-6-a
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:37:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	80.441	80.441	1.72	1418948	0.01	10000	
Be	9	45	2	NoGas	0.043	0.043	29.41	304	0.01	2000	
B	11	6	2	NoGas	314.144	314.144	2.28	1114860	0.03	300	>LDR
Na	23	45	1	He	108747.187	108747.187	0.85	53418133	0.20	500000	
Mg	24	45	1	He	126843.788	126843.788	0.95	34926610	0.36	500000	
Al	27	45	1	He	16.284	16.284	5.29	2192	0.74	200000	
K	39	45	1	He	296879.034	296879.034	0.95	40164361	0.74	500000	
Ca	44	45	1	He	293198.079	293198.079	1.99	2296823	12.77	500000	
Ti	47	45	1	He	0.275	0.275	54.83	18	1.54	2500	
V	51	45	1	He	0.123	0.123	137.64	429	0.03	10000	
Cr	52	45	1	He	2.682	2.682	1.17	7409	0.04	10000	
Mn	55	45	1	He	9.935	9.935	1.68	13609	0.07	10000	
Fe	56	45	1	He	74.563	74.563	1.23	146232	0.05	200000	
Co	59	45	1	He	-0.008	-0.008	-72.94	474	0.00	5000	
Ni	60	45	1	He	1.331	1.331	2.90	1867	0.07	10000	
Cu	63	45	1	He	0.809	0.809	22.44	8243	0.01	10000	
Zn	66	45	1	He	-6.824	-6.824	-3.93	699	-0.98	10000	
As	75	115	1	He	0.279	0.279	16.27	97	0.29	10000	
Se	78	115	1	He	0.389	0.389	23.19	8	4.70	10000	
Sr	88	103	1	He	13136.317	13136.317	0.32	13977450	0.09	10000	>LDR
Mo	95	103	1	He	0.345	0.345	3.60	464	0.07	2000	
Ag	107	103	1	He	0.005	0.005	46.07	34	0.01	300	
Cd	111	115	1	He	0.044	0.044	23.90	25	0.17	4000	
Sn	118	115	1	He	-1.166	-1.166	-10.97	315	-0.37	2000	
Sb	123	115	1	He	0.048	0.048	19.50	81	0.06	200	
Ba	137	115	1	He	110.960	110.960	1.02	45624	0.24	10000	
W	182	159	1	He	0.033	0.033	66.59	1767	0.00	2500	
Tl	205	165	1	He	0.010	0.010	31.30	119	0.01	2000	
Pb	208	165	1	He	0.110	0.110	9.67	2403	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349862	1.37	1276810	105.72	60	120	
Sc	45	1	He	170251	0.68	163460	104.15	60	120	
Sc	45	2	NoGas	8784389	1.26	8842934	99.34	60	120	
Rh	103	1	He	913733	0.56	1010526	90.42	60	120	
In	115	1	He	249212	0.41	257801	96.67	60	120	
Tb	159	1	He	1095065	0.54	1155473	94.77	60	120	
Ho	165	1	He	1099908	0.46	1147359	95.86	60	120	
Bi	209	1	He	672633	0.66	790610	85.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-7-a
Data File Name	082SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:41:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	38.355	38.355	0.66	779721	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	2.17	2797	0.02	2000	
B	11	6	2	NoGas	256.379	256.379	1.60	983821	0.03	300	
Na	23	45	1	He	28749.816	28749.816	0.95	14315299	0.20	500000	
Mg	24	45	1	He	106134.186	106134.186	1.79	29603728	0.36	500000	
Al	27	45	1	He	9000.848	9000.848	2.11	1055341	0.85	200000	
K	39	45	1	He	15006.154	15006.154	1.51	2067180	0.73	500000	
Ca	44	45	1	He	405445.917	405445.917	0.73	3217997	12.60	500000	
Ti	47	45	1	He	134.297	134.297	4.01	7680	1.75	2500	
V	51	45	1	He	16.923	16.923	7.96	33412	0.05	10000	
Cr	52	45	1	He	127.759	127.759	1.88	313188	0.04	10000	
Mn	55	45	1	He	325.916	325.916	1.87	402775	0.08	10000	
Fe	56	45	1	He	9335.293	9335.293	2.51	18033783	0.05	200000	
Co	59	45	1	He	6.009	6.009	2.31	27152	0.02	5000	
Ni	60	45	1	He	108.363	108.363	1.01	133690	0.08	10000	
Cu	63	45	1	He	22.166	22.166	1.69	82481	0.03	10000	
Zn	66	45	1	He	43.215	43.215	1.68	20715	0.21	10000	
As	75	115	1	He	7.432	7.432	1.62	1886	0.39	10000	
Se	78	115	1	He	2.637	2.637	22.19	35	7.43	10000	
Sr	88	103	1	He	6775.578	6775.578	0.60	7552527	0.09	10000	
Mo	95	103	1	He	79.008	79.008	2.36	105834	0.07	2000	
Ag	107	103	1	He	0.058	0.058	16.66	290	0.02	300	
Cd	111	115	1	He	0.189	0.189	6.45	107	0.18	4000	
Sn	118	115	1	He	-0.411	-0.411	-21.73	1119	-0.04	2000	
Sb	123	115	1	He	3.828	3.828	3.46	4575	0.08	200	
Ba	137	115	1	He	101.806	101.806	2.73	42568	0.24	10000	
W	182	159	1	He	1.040	1.040	0.95	7754	0.01	2500	
Tl	205	165	1	He	0.355	0.355	0.03	3227	0.01	2000	
Pb	208	165	1	He	5.439	5.439	1.22	65438	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456376	1.92	1276810	114.06	60	120	
Sc	45	1	He	172523	3.26	163460	105.54	60	120	
Sc	45	2	NoGas	9494224	1.02	8842934	107.37	60	120	
Rh	103	1	He	957251	1.94	1010526	94.73	60	120	
In	115	1	He	253433	2.64	257801	98.31	60	120	
Tb	159	1	He	1141016	2.25	1155473	98.75	60	120	
Ho	165	1	He	1152879	2.67	1147359	100.48	60	120	
Bi	209	1	He	725130	2.02	790610	91.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-8-a
Data File Name	083SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:46:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	75.493	75.493	1.01	1403924	0.01	10000	
Be	9	45	2	NoGas	0.038	0.038	6.94	296	0.01	2000	
B	11	6	2	NoGas	297.591	297.591	1.86	1073708	0.03	300	
Na	23	45	1	He	113261.182	113261.182	0.97	52960453	0.21	500000	
Mg	24	45	1	He	131296.637	131296.637	1.20	34413068	0.38	500000	
Al	27	45	1	He	12.841	12.841	5.52	1708	0.75	200000	
K	39	45	1	He	305590.436	305590.436	0.80	39355002	0.78	500000	
Ca	44	45	1	He	297314.313	297314.313	1.36	2217159	13.41	500000	
Ti	47	45	1	He	0.270	0.270	61.19	17	1.62	2500	
V	51	45	1	He	-0.165	-0.165	-181.18	-122	0.14	10000	
Cr	52	45	1	He	2.706	2.706	3.71	7107	0.04	10000	
Mn	55	45	1	He	10.195	10.195	1.84	13254	0.08	10000	
Fe	56	45	1	He	67.715	67.715	1.78	126764	0.05	200000	
Co	59	45	1	He	-0.031	-0.031	-35.40	353	-0.01	5000	
Ni	60	45	1	He	1.129	1.129	1.31	1543	0.07	10000	
Cu	63	45	1	He	1.147	1.147	12.53	8950	0.01	10000	
Zn	66	45	1	He	-7.196	-7.196	-1.00	526	-1.37	10000	
As	75	115	1	He	0.274	0.274	14.19	92	0.30	10000	
Se	78	115	1	He	0.523	0.523	73.24	9	5.53	10000	
Sr	88	103	1	He	13259.759	13259.759	1.06	13602716	0.10	10000	>LDR
Mo	95	103	1	He	0.339	0.339	3.92	440	0.08	2000	
Ag	107	103	1	He	0.008	0.008	26.06	49	0.02	300	
Cd	111	115	1	He	0.027	0.027	16.13	15	0.17	4000	
Sn	118	115	1	He	-0.959	-0.959	-5.32	507	-0.19	2000	
Sb	123	115	1	He	0.056	0.056	27.71	87	0.06	200	
Ba	137	115	1	He	93.482	93.482	1.17	36814	0.25	10000	
W	182	159	1	He	0.068	0.068	43.45	1900	0.00	2500	
Tl	205	165	1	He	0.007	0.007	67.13	93	0.01	2000	
Pb	208	165	1	He	0.078	0.078	6.16	1982	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1371275	0.59	1276810	107.40	60	120	
Sc	45	1	He	162067	0.90	163460	99.15	60	120	
Sc	45	2	NoGas	9222783	1.35	8842934	104.30	60	120	
Rh	103	1	He	880963	0.27	1010526	87.18	60	120	
In	115	1	He	238680	0.26	257801	92.58	60	120	
Tb	159	1	He	1059365	1.21	1155473	91.68	60	120	
Ho	165	1	He	1071532	1.54	1147359	93.39	60	120	
Bi	209	1	He	659009	2.28	790610	83.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-9-a
Data File Name	084SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:50:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.576	0.576	16.30	102395	0.00	10000	
Be	9	45	2	NoGas	0.014	0.014	65.29	178	0.01	2000	
B	11	6	2	NoGas	10.452	10.452	3.66	52977	0.02	300	
Na	23	45	1	He	221.532	221.532	0.84	113773	0.19	500000	
Mg	24	45	1	He	103.500	103.500	0.85	28330	0.37	500000	
Al	27	45	1	He	6.188	6.188	6.57	990	0.62	200000	
K	39	45	1	He	208.740	208.740	6.47	37837	0.55	500000	
Ca	44	45	1	He	366.609	366.609	6.20	3529	10.39	500000	
Ti	47	45	1	He	0.264	0.264	82.84	17	1.58	2500	
V	51	45	1	He	-0.122	-0.122	-93.01	-47	0.26	10000	
Cr	52	45	1	He	0.175	0.175	8.51	1317	0.01	10000	
Mn	55	45	1	He	-0.658	-0.658	-3.79	710	-0.09	10000	
Fe	56	45	1	He	9.530	9.530	0.45	21481	0.04	200000	
Co	59	45	1	He	-0.090	-0.090	-9.07	109	-0.08	5000	
Ni	60	45	1	He	0.020	0.020	130.16	263	0.01	10000	
Cu	63	45	1	He	1.608	1.608	9.65	10611	0.02	10000	
Zn	66	45	1	He	0.323	0.323	118.33	3401	0.01	10000	
As	75	115	1	He	0.052	0.052	80.41	42	0.13	10000	
Se	78	115	1	He	0.214	0.214	179.29	6	3.39	10000	
Sr	88	103	1	He	8.390	8.390	4.53	9721	0.09	10000	
Mo	95	103	1	He	0.093	0.093	6.56	153	0.06	2000	
Ag	107	103	1	He	0.001	0.001	31.69	19	0.01	300	
Cd	111	115	1	He	0.039	0.039	19.00	23	0.17	4000	
Sn	118	115	1	He	-1.065	-1.065	-6.74	426	-0.25	2000	
Sb	123	115	1	He	0.061	0.061	35.97	98	0.06	200	
Ba	137	115	1	He	0.490	0.490	22.16	211	0.23	10000	
W	182	159	1	He	0.043	0.043	60.08	1811	0.00	2500	
Tl	205	165	1	He	0.004	0.004	45.85	68	0.01	2000	
Pb	208	165	1	He	0.045	0.045	19.06	1665	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1498000	0.74	1276810	117.32	60	120	
Sc	45	1	He	164546	0.40	163460	100.66	60	120	
Sc	45	2	NoGas	9451599	0.39	8842934	106.88	60	120	
Rh	103	1	He	984230	0.40	1010526	97.40	60	120	
In	115	1	He	253042	1.19	257801	98.15	60	120	
Tb	159	1	He	1086923	0.59	1155473	94.07	60	120	
Ho	165	1	He	1099713	0.68	1147359	95.85	60	120	
Bi	209	1	He	745429	0.81	790610	94.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-2-a@500
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:54:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.622	0.622	2.14	100569	0.00	10000	
Be	9	45	2	NoGas	0.038	0.038	69.23	296	0.01	2000	
B	11	6	2	NoGas	8.190	8.190	4.26	42676	0.02	300	
Na	23	45	1	He	98.645	98.645	2.98	53686	0.18	500000	
Mg	24	45	1	He	45.738	45.738	3.17	12549	0.36	500000	
Al	27	45	1	He	339.026	339.026	1.93	37003	0.92	200000	
K	39	45	1	He	281.538	281.538	1.36	45855	0.61	500000	
Ca	44	45	1	He	452.563	452.563	6.37	4047	11.18	500000	
Ti	47	45	1	He	12.411	12.411	4.07	658	1.89	2500	
V	51	45	1	He	0.760	0.760	9.59	1555	0.05	10000	
Cr	52	45	1	He	0.886	0.886	14.87	2880	0.03	10000	
Mn	55	45	1	He	7.125	7.125	2.82	9540	0.07	10000	
Fe	56	45	1	He	727.509	727.509	3.31	1301929	0.06	200000	
Co	59	45	1	He	2.295	2.295	1.06	9876	0.02	5000	
Ni	60	45	1	He	9.843	9.843	4.56	11428	0.09	10000	
Cu	63	45	1	He	10.740	10.740	1.70	39566	0.03	10000	
Zn	66	45	1	He	5.533	5.533	11.29	5217	0.11	10000	
As	75	115	1	He	39.297	39.297	1.40	9574	0.41	10000	
Se	78	115	1	He	0.128	0.128	148.06	5	2.49	10000	
Sr	88	103	1	He	2.815	2.815	6.22	3275	0.09	10000	
Mo	95	103	1	He	0.089	0.089	26.88	144	0.06	2000	
Ag	107	103	1	He	0.539	0.539	3.80	2628	0.02	300	
Cd	111	115	1	He	0.513	0.513	4.51	280	0.18	4000	
Sn	118	115	1	He	-0.683	-0.683	-14.00	807	-0.08	2000	
Sb	123	115	1	He	7.814	7.814	5.57	9051	0.09	200	
Ba	137	115	1	He	3.075	3.075	6.16	1256	0.24	10000	
W	182	159	1	He	-0.011	-0.011	-174.72	1504	0.00	2500	
Tl	205	165	1	He	0.115	0.115	27.26	1000	0.01	2000	
Pb	208	165	1	He	1709.770	1709.770	0.83	18999985	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1447350	1.06	1276810	113.36	60	120	
Sc	45	1	He	159345	0.98	163460	97.48	60	120	
Sc	45	2	NoGas	9209584	0.15	8842934	104.15	60	120	
Rh	103	1	He	967635	0.18	1010526	95.76	60	120	
In	115	1	He	246330	0.51	257801	95.55	60	120	
Tb	159	1	He	1081018	0.36	1155473	93.56	60	120	
Ho	165	1	He	1084816	0.71	1147359	94.55	60	120	
Bi	209	1	He	777537	0.60	790610	98.35	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	086_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:59:02-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.205	1.777	972842	0.70	50	104.4	89.5	110.5	
Be	9	45	2	NoGas	51.792	1.483	259538	0.77	50	103.6	89.5	110.5	
B	11	6	2	NoGas	53.063	1.788	203042	1.18	50	106.1	89.5	110.5	
Na	23	45	1	He	25740.329	0.567	11504785	0.63	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25337.918	1.145	6345324	1.26	25000	101.4	89.5	110.5	
Al	27	45	1	He	248.828	1.168	26466	1.39	250	99.5	89.5	110.5	
K	39	45	1	He	25258.370	1.151	3116756	1.37	25000	101.0	89.5	110.5	
Ca	44	45	1	He	25010.569	0.182	178836	0.38	25000	100.0	89.5	110.5	
Ti	47	45	1	He	47.553	2.185	2444	2.39	50	95.1	89.5	110.5	
V	51	45	1	He	49.983	0.742	88286	0.75	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.789	1.303	110090	1.46	50	99.6	89.5	110.5	
Mn	55	45	1	He	246.884	0.846	274238	0.93	250	98.8	89.5	110.5	
Fe	56	45	1	He	12353.576	0.798	21425940	0.92	12500	98.8	89.5	110.5	
Co	59	45	1	He	49.677	0.819	198172	0.86	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.579	0.845	55025	0.76	50	99.2	89.5	110.5	
Cu	63	45	1	He	50.461	0.223	162216	0.47	50	100.9	89.5	110.5	
Zn	66	45	1	He	46.028	1.425	19604	1.38	50	92.1	89.5	110.5	
As	75	115	1	He	50.537	1.086	11739	0.66	50	101.1	89.5	110.5	
Se	78	115	1	He	50.608	2.840	569	2.45	50	101.2	89.5	110.5	
Sr	88	103	1	He	51.541	1.815	54728	2.01	50	103.1	89.5	110.5	
Mo	95	103	1	He	51.441	1.048	65544	1.26	50	102.9	89.5	110.5	
Ag	107	103	1	He	50.223	0.541	229150	0.48	50	100.4	89.5	110.5	
Cd	111	115	1	He	49.800	1.147	25773	1.52	50	99.6	89.5	110.5	
Sn	118	115	1	He	48.520	0.929	48924	0.85	50	97.0	89.5	110.5	
Sb	123	115	1	He	51.002	0.939	56239	0.31	50	102.0	89.5	110.5	
Ba	137	115	1	He	50.294	1.401	19505	1.62	50	100.6	89.5	110.5	
W	182	159	1	He	50.384	1.280	274265	1.07	50	100.8	89.5	110.5	
Tl	205	165	1	He	50.072	1.002	416379	0.84	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.764	1.282	555575	0.99	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1387852	0.94	1276810	108.70	60	120	
Sc	45	1	He	154823	0.25	163460	94.72	60	120	
Sc	45	2	NoGas	8986665	1.03	8842934	101.63	60	120	
Rh	103	1	He	910216	0.23	1010526	90.07	60	120	
In	115	1	He	235006	0.69	257801	91.16	60	120	
Tb	159	1	He	1051975	0.74	1155473	91.04	60	120	
Ho	165	1	He	1066280	0.29	1147359	92.93	60	120	
Bi	209	1	He	690893	0.91	790610	87.39	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	087_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:03:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.571	9.5	96419	1.2	8	
Be	9	45	2	NoGas	0.081	34.6	496	27.4	1	
B	11	6	2	NoGas	6.872	11.4	37024	5.2	20	
Na	23	45	1	He	65.502	6.9	37135	4.9	1000	
Mg	24	45	1	He	39.946	1.9	10681	2.7	1000	
Al	27	45	1	He	0.232	136.3	303	11.6	50	
K	39	45	1	He	57.034	9.7	16838	2.9	1000	
Ca	44	45	1	He	29.283	20.0	913	4.6	1000	
Ti	47	45	1	He	0.024	272.3	3	100.1	20	
V	51	45	1	He	0.006	1892.1	181	107.7	2	
Cr	52	45	1	He	0.015	111.4	882	3.8	2	
Mn	55	45	1	He	-0.078	-19.3	1301	1.6	2	
Fe	56	45	1	He	19.992	4.4	38126	3.5	50	
Co	59	45	1	He	-0.016	-37.7	398	4.1	1	
Ni	60	45	1	He	-0.027	-97.9	196	13.2	2	
Cu	63	45	1	He	0.489	28.0	6461	7.1	2	
Zn	66	45	1	He	-3.572	-3.1	1792	2.7	20	
As	75	115	1	He	0.135	6.3	59	3.4	2	
Se	78	115	1	He	0.109	23.3	5	6.0	2	
Sr	88	103	1	He	0.388	4.4	524	3.5	10	
Mo	95	103	1	He	0.174	13.6	252	11.9	2	
Ag	107	103	1	He	0.070	8.3	343	7.7	0.2	
Cd	111	115	1	He	0.092	28.7	50	28.5	0.2	
Sn	118	115	1	He	-0.413	-21.3	1063	8.8	10	
Sb	123	115	1	He	0.190	8.2	239	7.0	2	
Ba	137	115	1	He	0.118	46.2	53	41.0	5	
W	182	159	1	He	0.292	28.4	3134	14.6	10	
Tl	205	165	1	He	0.115	6.6	988	6.3	0.5	
Pb	208	165	1	He	0.336	16.3	4804	12.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1423305	3.00	1276810	111.47	60	120	
Sc	45	1	He	153939	1.67	163460	94.18	60	120	
Sc	45	2	NoGas	8907741	0.57	8842934	100.73	60	120	
Rh	103	1	He	940993	0.48	1010526	93.12	60	120	
In	115	1	He	241431	0.55	257801	93.65	60	120	
Tb	159	1	He	1062666	0.37	1155473	91.97	60	120	
Ho	165	1	He	1066821	0.17	1147359	92.98	60	120	
Bi	209	1	He	716792	0.99	790610	90.66	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228170/1-a@2
Data File Name	088_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:07:36-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.613	12.9	95969	0.6	8	
Be	9	45	2	NoGas	0.021	33.8	200	16.7	1	
B	11	6	2	NoGas	5.930	6.5	33932	2.1	20	
Na	23	45	1	He	161.455	2.7	80007	2.8	1000	
Mg	24	45	1	He	52.547	9.7	13854	8.4	1000	
Al	27	45	1	He	1.716	17.6	460	7.7	50	
K	39	45	1	He	31.608	18.3	13776	5.1	1000	
Ca	44	45	1	He	115.652	9.4	1529	4.8	1000	
Ti	47	45	1	He	0.003	2629.9	2	173.2	20	
V	51	45	1	He	-0.015	-1166.9	147	204.8	2	
Cr	52	45	1	He	0.307	8.8	1525	4.3	2	
Mn	55	45	1	He	-0.495	-22.4	846	14.1	2	
Fe	56	45	1	He	10.976	4.9	22655	3.5	50	
Co	59	45	1	He	-0.075	-8.8	163	15.9	1	
Ni	60	45	1	He	0.663	6.1	957	5.3	2	
Cu	63	45	1	He	0.844	19.5	7584	7.0	2	
Zn	66	45	1	He	-2.770	-9.1	2085	3.6	20	
As	75	115	1	He	0.076	18.4	45	5.5	2	
Se	78	115	1	He	0.153	86.6	5	27.1	2	
Sr	88	103	1	He	0.614	13.3	770	10.9	10	
Mo	95	103	1	He	0.082	24.1	131	21.2	2	
Ag	107	103	1	He	0.003	138.9	26	71.8	0.2	
Cd	111	115	1	He	0.012	92.2	8	78.7	0.2	
Sn	118	115	1	He	18.392	7.5	19990	7.5	10	Blank High
Sb	123	115	1	He	0.047	65.3	78	47.2	2	
Ba	137	115	1	He	0.800	14.9	326	16.6	5	
W	182	159	1	He	0.154	9.2	2360	3.8	10	
Tl	205	165	1	He	0.016	12.6	163	10.6	0.5	
Pb	208	165	1	He	0.761	1.8	9367	1.3	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1438881	2.17	1276810	112.69	60	120	
Sc	45	1	He	154413	0.80	163460	94.47	60	120	
Sc	45	2	NoGas	8801821	1.02	8842934	99.54	60	120	
Rh	103	1	He	939363	2.08	1010526	92.96	60	120	
In	115	1	He	241640	1.96	257801	93.73	60	120	
Tb	159	1	He	1053489	0.55	1155473	91.17	60	120	
Ho	165	1	He	1058524	0.77	1147359	92.26	60	120	
Bi	209	1	He	734831	2.49	790610	92.94	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228170/2-a@2
Data File Name	089LCSS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:11:53-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.057	51.057	1.130	929040	0.30	50	102.1	79.5	120.5	
Be	9	2	NoGas	526.376	526.376	1.297	2569518	0.91	500	105.3	78.6	110.5	
B	11	2	NoGas	49.664	49.664	1.786	193710	1.31	50	99.3	79.5	120.5	
Na	23	1	He	5046.558	5046.558	0.107	2182925	1.19	5000	100.9	79.5	120.5	
Mg	24	1	He	4719.769	4719.769	1.570	1141116	1.61	5000	94.4	79.5	120.5	
Al	27	1	He	4736.237	4736.237	0.948	481206	0.89	5000	94.7	79.5	120.5	
K	39	1	He	4773.149	4773.149	0.847	576090	0.47	5000	95.5	79.5	120.5	
Ca	44	1	He	5060.398	5060.398	1.776	35460	1.31	5000	101.2	79.5	120.5	
Ti	47	1	He	47.288	47.288	6.652	2344	5.38	50	94.6	79.5	120.5	
V	51	1	He	469.081	469.081	2.264	798036	1.38	500	93.8	71.5	110.5	
Cr	52	1	He	471.710	471.710	1.630	999422	1.25	500	94.3	69.5	110.5	
Mn	55	1	He	474.464	474.464	1.717	507288	1.01	500	94.9	79.5	120.5	
Fe	56	1	He	4751.610	4751.610	1.474	7954072	0.79	5000	95.0	79.5	120.5	
Co	59	1	He	515.953	515.953	2.095	1981675	0.81	500	103.2	73.9	110.5	
Ni	60	1	He	478.678	478.678	1.470	510712	0.22	500	95.7	74.9	110.5	
Cu	63	1	He	508.099	508.099	1.543	1532577	1.43	500	101.6	72.6	110.5	
Zn	66	1	He	501.760	501.760	0.646	176754	1.32	500	100.4	71.5	113.4	
As	75	1	He	459.148	459.148	0.714	103904	0.67	500	91.8	73.4	110.5	
Se	78	1	He	446.533	446.533	1.375	4872	1.34	500	89.3	64.6	110.5	
Sr	88	1	He	456.708	456.708	0.865	479470	1.25	500	91.3	79.5	120.5	
Mo	95	1	He	48.593	48.593	2.091	61320	2.86	50	97.2	29.5	140.5	
Ag	107	1	He	47.687	47.687	0.562	215470	1.36	50	95.4	59.5	114.5	
Cd	111	1	He	466.801	466.801	0.655	235815	0.68	500	93.4	73.5	110.5	
Sn	118	1	He	504.565	504.565	0.379	483450	0.46	500	100.9	79.5	120.5	
Sb	123	1	He	47.638	47.638	2.206	51281	2.18	50	95.3	67.5	113.4	
Ba	137	1	He	477.092	477.092	1.471	180560	1.46	500	95.4	69.5	110.5	
W	182	1	He	47.742	47.742	1.388	256313	1.93	50	95.5	74.6	125.4	
Tl	205	1	He	119.597	119.597	0.359	980261	1.08	125	95.7	70.6	110.5	
Pb	208	1	He	500.266	500.266	0.452	5386981	0.87	500	100.1	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409242	0.53	1276810	110.37	60	120	
Sc	45	1	He	149405	1.29	163460	91.40	60	120	
Sc	45	2	NoGas	8756758	0.77	8842934	99.03	60	120	
Rh	103	1	He	901397	1.32	1010526	89.20	60	120	
In	115	1	He	229406	0.10	257801	88.99	60	120	
Tb	159	1	He	1037134	0.73	1155473	89.76	60	120	
Ho	165	1	He	1051018	0.85	1147359	91.60	60	120	
Bi	209	1	He	696462	0.67	790610	88.09	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-a@2
Data File Name	090SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:16:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	37.845	37.845	1.55	709904	0.01	10000	
Be	9	45	2	NoGas	2.296	2.296	4.55	11293	0.02	2000	
B	11	6	2	NoGas	199.346	199.346	1.15	727563	0.03	300	
Na	23	45	1	He	1311.364	1311.364	1.56	571370	0.23	500000	
Mg	24	45	1	He	164096.042	164096.042	1.35	39536668	0.42	500000	
Al	27	45	1	He	120346.414	120346.414	1.82	12186007	0.99	200000	
K	39	45	1	He	1366.202	1366.202	1.02	171238	0.80	500000	
Ca	44	45	1	He	714169.944	714169.944	0.84	4894732	14.59	500000	>LDR
Ti	47	45	1	He	7572.910	7572.910	1.86	374097	2.02	2500	>LDR
V	51	45	1	He	3151.906	3151.906	1.81	5346637	0.06	10000	
Cr	52	45	1	He	4090.300	4090.300	2.16	8635640	0.05	10000	
Mn	55	45	1	He	70210.204	70210.204	0.64	74659799	0.09	10000	>LDR
Fe	56	45	1	He	671261.233	671261.233	1.87	1120041698	0.06	200000	>LDR
Co	59	45	1	He	129.926	129.926	1.47	497993	0.03	5000	
Ni	60	45	1	He	1609.603	1609.603	1.52	1712037	0.09	10000	
Cu	63	45	1	He	340.423	340.423	1.40	1025479	0.03	10000	
Zn	66	45	1	He	925.913	925.913	1.01	322714	0.29	10000	
As	75	115	1	He	41.958	41.958	1.48	8749	0.48	10000	
Se	78	115	1	He	11.423	11.423	14.32	118	9.71	10000	
Sr	88	103	1	He	450.939	450.939	1.19	417464	0.11	10000	
Mo	95	103	1	He	34.587	34.587	1.93	38491	0.09	2000	
Ag	107	103	1	He	0.885	0.885	1.78	3536	0.03	300	
Cd	111	115	1	He	6.109	6.109	0.38	2838	0.22	4000	
Sn	118	115	1	He	79.699	79.699	1.72	71271	0.11	2000	
Sb	123	115	1	He	6.401	6.401	3.88	6351	0.10	200	
Ba	137	115	1	He	802.704	802.704	1.25	279225	0.29	10000	
W	182	159	1	He	132.049	132.049	1.03	677929	0.02	2500	
Tl	205	165	1	He	0.565	0.565	3.31	4481	0.01	2000	
Pb	208	165	1	He	399.142	399.142	1.17	4132187	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380213	1.06	1276810	108.10	60	120	
Sc	45	1	He	148968	0.27	163460	91.13	60	120	
Sc	45	2	NoGas	8746888	1.00	8842934	98.91	60	120	
Rh	103	1	He	794875	1.22	1010526	78.66	60	120	
In	115	1	He	210850	0.96	257801	81.79	60	120	
Tb	159	1	He	995427	1.51	1155473	86.15	60	120	
Ho	165	1	He	1010514	1.49	1147359	88.07	60	120	
Bi	209	1	He	630105	0.74	790610	79.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-a@20
Data File Name	091SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:20:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.139	4.139	1.20	165200	0.00	10000	
Be	9	45	2	NoGas	0.343	0.343	1.34	1904	0.02	2000	
B	11	6	2	NoGas	28.363	28.363	1.16	122485	0.02	300	
Na	23	45	1	He	143.638	143.638	1.65	73357	0.20	500000	
Mg	24	45	1	He	17362.494	17362.494	0.50	4414423	0.39	500000	
Al	27	45	1	He	12038.755	12038.755	3.54	1286426	0.94	200000	
K	39	45	1	He	152.717	152.717	1.45	29147	0.52	500000	
Ca	44	45	1	He	70771.642	70771.642	0.99	512428	13.81	500000	
Ti	47	45	1	He	784.856	784.856	1.31	40909	1.92	2500	
V	51	45	1	He	304.634	304.634	0.40	545382	0.06	10000	
Cr	52	45	1	He	410.438	410.438	1.06	915046	0.04	10000	
Mn	55	45	1	He	7427.870	7427.870	0.64	8335198	0.09	10000	
Fe	56	45	1	He	71796.298	71796.298	0.78	126399315	0.06	200000	
Co	59	45	1	He	14.094	14.094	0.38	57414	0.02	5000	
Ni	60	45	1	He	166.289	166.289	1.14	186822	0.09	10000	
Cu	63	45	1	He	38.016	38.016	1.28	125313	0.03	10000	
Zn	66	45	1	He	98.779	98.779	0.16	39123	0.25	10000	
As	75	115	1	He	4.150	4.150	3.41	1013	0.41	10000	
Se	78	115	1	He	1.311	1.311	8.42	19	7.06	10000	
Sr	88	103	1	He	42.632	42.632	0.88	46322	0.09	10000	
Mo	95	103	1	He	3.389	3.389	3.98	4438	0.08	2000	
Ag	107	103	1	He	0.082	0.082	8.59	394	0.02	300	
Cd	111	115	1	He	0.690	0.690	2.30	367	0.19	4000	
Sn	118	115	1	He	6.508	6.508	3.72	8002	0.08	2000	
Sb	123	115	1	He	0.716	0.716	4.79	833	0.09	200	
Ba	137	115	1	He	79.003	79.003	1.54	31401	0.25	10000	
W	182	159	1	He	13.677	13.677	1.69	77426	0.02	2500	
Tl	205	165	1	He	0.065	0.065	12.43	582	0.01	2000	
Pb	208	165	1	He	39.820	39.820	0.88	446739	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1493830	1.93	1276810	117.00	60	120	
Sc	45	1	He	157179	0.02	163460	96.16	60	120	
Sc	45	2	NoGas	9409244	0.28	8842934	106.40	60	120	
Rh	103	1	He	931098	0.24	1010526	92.14	60	120	
In	115	1	He	240893	0.44	257801	93.44	60	120	
Tb	159	1	He	1077908	0.31	1155473	93.29	60	120	
Ho	165	1	He	1092405	0.45	1147359	95.21	60	120	
Bi	209	1	He	718627	0.57	790610	90.90	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64037-o-10-a@10
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:24:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.007	8.007	0.89	229680	0.00	10000	
Be	9	45	2	NoGas	0.494	0.494	19.06	2645	0.02	2000	
B	11	6	2	NoGas	46.602	46.602	1.74	190410	0.02	300	
Na	23	45	1	He	270.779	270.779	1.13	133507	0.20	500000	
Mg	24	45	1	He	34064.516	34064.516	2.33	8823885	0.39	500000	
Al	27	45	1	He	24766.468	24766.468	1.31	2696507	0.92	200000	
K	39	45	1	He	287.727	287.727	1.11	46884	0.61	500000	
Ca	44	45	1	He	141240.952	141240.952	1.60	1041332	13.56	500000	
Ti	47	45	1	He	1544.620	1544.620	1.86	82040	1.88	2500	
V	51	45	1	He	620.583	620.583	0.19	1132182	0.05	10000	
Cr	52	45	1	He	869.028	869.028	0.87	1973496	0.04	10000	
Mn	55	45	1	He	14698.453	14698.453	1.85	16805049	0.09	10000	>LDR
Fe	56	45	1	He	141552.140	141552.140	0.38	253975145	0.06	200000	
Co	59	45	1	He	27.542	27.542	1.67	113871	0.02	5000	
Ni	60	45	1	He	323.273	323.273	1.32	369875	0.09	10000	
Cu	63	45	1	He	74.082	74.082	1.47	243957	0.03	10000	
Zn	66	45	1	He	200.068	200.068	2.23	77465	0.26	10000	
As	75	115	1	He	8.424	8.424	0.52	1995	0.42	10000	
Se	78	115	1	He	2.559	2.559	12.26	32	7.91	10000	
Sr	88	103	1	He	87.140	87.140	1.70	92490	0.09	10000	
Mo	95	103	1	He	6.574	6.574	1.48	8400	0.08	2000	
Ag	107	103	1	He	0.178	0.178	5.29	826	0.02	300	
Cd	111	115	1	He	1.225	1.225	9.26	640	0.19	4000	
Sn	118	115	1	He	15.871	15.871	3.64	17109	0.09	2000	
Sb	123	115	1	He	1.340	1.340	3.29	1512	0.09	200	
Ba	137	115	1	He	157.912	157.912	1.30	61721	0.26	10000	
W	182	159	1	He	26.579	26.579	1.71	147084	0.02	2500	
Tl	205	165	1	He	0.109	0.109	2.87	950	0.01	2000	
Pb	208	165	1	He	80.517	80.517	0.44	888830	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1470670	1.29	1276810	115.18	60	120	
Sc	45	1	He	160195	2.04	163460	98.00	60	120	
Sc	45	2	NoGas	9239859	0.15	8842934	104.49	60	120	
Rh	103	1	He	910563	0.47	1010526	90.11	60	120	
In	115	1	He	236929	1.24	257801	91.90	60	120	
Tb	159	1	He	1063973	1.23	1155473	92.08	60	120	
Ho	165	1	He	1076284	0.32	1147359	93.81	60	120	
Bi	209	1	He	706701	0.24	790610	89.39	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64037-o-10-a@100
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:28:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.075	1.075	1.58	108906	0.00	10000	
Be	9	45	2	NoGas	0.090	0.090	28.84	567	0.02	2000	
B	11	6	2	NoGas	9.406	9.406	0.75	48716	0.02	300	
Na	23	45	1	He	34.898	34.898	1.73	23786	0.15	500000	
Mg	24	45	1	He	3378.285	3378.285	0.92	850083	0.40	500000	
Al	27	45	1	He	2352.605	2352.605	1.13	248854	0.95	200000	
K	39	45	1	He	34.884	34.884	8.04	14273	0.24	500000	
Ca	44	45	1	He	14174.956	14174.956	1.45	102075	13.89	500000	
Ti	47	45	1	He	153.413	153.413	2.29	7910	1.94	2500	
V	51	45	1	He	60.059	60.059	1.52	106475	0.06	10000	
Cr	52	45	1	He	82.389	82.389	1.17	182344	0.05	10000	
Mn	55	45	1	He	1518.300	1518.300	1.75	1686059	0.09	10000	
Fe	56	45	1	He	14594.733	14594.733	0.80	25414907	0.06	200000	
Co	59	45	1	He	2.746	2.746	1.29	11437	0.02	5000	
Ni	60	45	1	He	33.171	33.171	0.48	37040	0.09	10000	
Cu	63	45	1	He	7.296	7.296	2.19	27818	0.03	10000	
Zn	66	45	1	He	14.412	14.412	4.65	8290	0.17	10000	
As	75	115	1	He	0.864	0.864	1.41	232	0.37	10000	
Se	78	115	1	He	0.446	0.446	55.61	9	5.17	10000	
Sr	88	103	1	He	8.467	8.467	1.44	9185	0.09	10000	
Mo	95	103	1	He	0.695	0.695	9.30	919	0.08	2000	
Ag	107	103	1	He	0.018	0.018	13.22	97	0.02	300	
Cd	111	115	1	He	0.130	0.130	7.10	70	0.19	4000	
Sn	118	115	1	He	1.218	1.218	13.36	2689	0.05	2000	
Sb	123	115	1	He	0.160	0.160	24.33	204	0.08	200	
Ba	137	115	1	He	15.650	15.650	4.18	6208	0.25	10000	
W	182	159	1	He	2.832	2.832	5.29	16709	0.02	2500	
Tl	205	165	1	He	0.013	0.013	26.44	133	0.01	2000	
Pb	208	165	1	He	8.225	8.225	0.59	89789	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1492194	0.71	1276810	116.87	60	120	
Sc	45	1	He	155457	0.77	163460	95.10	60	120	
Sc	45	2	NoGas	9247952	0.59	8842934	104.58	60	120	
Rh	103	1	He	921637	0.39	1010526	91.20	60	120	
In	115	1	He	240288	1.28	257801	93.21	60	120	
Tb	159	1	He	1042904	1.05	1155473	90.26	60	120	
Ho	165	1	He	1052533	0.30	1147359	91.74	60	120	
Bi	209	1	He	710986	0.47	790610	89.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-b ms@2
Data File Name	094SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:32:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	78.860	78.860	0.87	1416314	0.01	10000	
Be	9	45	2	NoGas	444.516	444.516	1.03	2213447	0.02	2000	
B	11	6	2	NoGas	226.663	226.663	2.43	788161	0.03	300	
Na	23	45	1	He	5519.728	5519.728	0.95	2445939	0.23	500000	
Mg	24	45	1	He	138905.891	138905.891	0.64	34397519	0.40	500000	
Al	27	45	1	He	231544.956	231544.956	0.69	24097660	0.96	200000	>LDR
K	39	45	1	He	5156.040	5156.040	0.59	636984	0.81	500000	
Ca	44	45	1	He	709445.730	709445.730	1.07	4997531	14.20	500000	>LDR
Ti	47	45	1	He	6466.698	6466.698	0.55	328321	1.97	2500	>LDR
V	51	45	1	He	2721.098	2721.098	0.47	4744094	0.06	10000	
Cr	52	45	1	He	3057.124	3057.124	0.85	6633473	0.05	10000	
Mn	55	45	1	He	59342.605	59342.605	0.22	64858766	0.09	10000	>LDR
Fe	56	45	1	He	540082.763	540082.763	0.28	926186452	0.06	200000	>LDR
Co	59	45	1	He	517.917	517.917	0.67	2038866	0.03	5000	
Ni	60	45	1	He	1518.996	1518.996	1.01	1660488	0.09	10000	
Cu	63	45	1	He	721.472	721.472	0.31	2228214	0.03	10000	
Zn	66	45	1	He	921.963	921.963	1.19	330260	0.28	10000	
As	75	115	1	He	474.575	474.575	1.31	97490	0.49	10000	
Se	78	115	1	He	415.637	415.637	0.70	4117	10.10	10000	
Sr	88	103	1	He	958.917	958.917	1.00	886507	0.11	10000	
Mo	95	103	1	He	76.820	76.820	2.02	85354	0.09	2000	
Ag	107	103	1	He	44.305	44.305	0.76	176304	0.03	300	
Cd	111	115	1	He	415.196	415.196	1.20	190407	0.22	4000	
Sn	118	115	1	He	505.287	505.287	1.43	439486	0.11	2000	
Sb	123	115	1	He	24.657	24.657	2.91	24103	0.10	200	
Ba	137	115	1	He	969.157	969.157	2.11	332942	0.29	10000	
W	182	159	1	He	130.626	130.626	1.09	658699	0.02	2500	
Tl	205	165	1	He	104.429	104.429	0.57	802317	0.01	2000	
Pb	208	165	1	He	819.038	819.038	0.97	8266265	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1317835	2.32	1276810	103.21	60	120	
Sc	45	1	He	153112	1.09	163460	93.67	60	120	
Sc	45	2	NoGas	8932010	0.35	8842934	101.01	60	120	
Rh	103	1	He	793835	0.17	1010526	78.56	60	120	
In	115	1	He	208273	1.28	257801	80.79	60	120	
Tb	159	1	He	977742	0.90	1155473	84.62	60	120	
Ho	165	1	He	985176	0.68	1147359	85.86	60	120	
Bi	209	1	He	628999	0.84	790610	79.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-b ms@20
Data File Name	095SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:36:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.947	7.947	2.91	223017	0.00	10000	
Be	9	45	2	NoGas	44.305	44.305	2.05	222702	0.02	2000	
B	11	6	2	NoGas	27.576	27.576	1.50	112831	0.02	300	
Na	23	45	1	He	556.068	556.068	3.89	250582	0.22	500000	
Mg	24	45	1	He	14868.670	14868.670	2.32	3639014	0.41	500000	
Al	27	45	1	He	24796.655	24796.655	2.13	2550297	0.97	200000	
K	39	45	1	He	556.441	556.441	3.46	76583	0.73	500000	
Ca	44	45	1	He	72290.980	72290.980	2.10	503841	14.35	500000	
Ti	47	45	1	He	676.959	676.959	1.61	33970	1.99	2500	
V	51	45	1	He	265.932	265.932	1.25	458356	0.06	10000	
Cr	52	45	1	He	310.079	310.079	2.43	665629	0.05	10000	
Mn	55	45	1	He	6498.472	6498.472	2.12	7019723	0.09	10000	
Fe	56	45	1	He	58765.486	58765.486	2.96	99580276	0.06	200000	
Co	59	45	1	He	52.517	52.517	2.07	204710	0.03	5000	
Ni	60	45	1	He	158.834	158.834	2.64	171775	0.09	10000	
Cu	63	45	1	He	77.198	77.198	2.55	239933	0.03	10000	
Zn	66	45	1	He	101.573	101.573	1.99	38641	0.26	10000	
As	75	115	1	He	46.708	46.708	0.36	10669	0.44	10000	
Se	78	115	1	He	43.749	43.749	3.05	484	9.04	10000	
Sr	88	103	1	He	91.042	91.042	1.03	94931	0.10	10000	
Mo	95	103	1	He	7.239	7.239	1.77	9085	0.08	2000	
Ag	107	103	1	He	4.461	4.461	2.51	20016	0.02	300	
Cd	111	115	1	He	42.970	42.970	1.08	21862	0.20	4000	
Sn	118	115	1	He	49.977	49.977	1.24	49499	0.10	2000	
Sb	123	115	1	He	2.494	2.494	2.26	2726	0.09	200	
Ba	137	115	1	He	93.815	93.815	0.91	35763	0.26	10000	
W	182	159	1	He	13.770	13.770	2.88	74419	0.02	2500	
Tl	205	165	1	He	10.716	10.716	1.00	87038	0.01	2000	
Pb	208	165	1	He	78.414	78.414	0.14	837397	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411283	0.83	1276810	110.53	60	120	
Sc	45	1	He	151337	1.74	163460	92.58	60	120	
Sc	45	2	NoGas	9014168	1.13	8842934	101.94	60	120	
Rh	103	1	He	894523	0.33	1010526	88.52	60	120	
In	115	1	He	231038	0.64	257801	89.62	60	120	
Tb	159	1	He	1029156	0.44	1155473	89.07	60	120	
Ho	165	1	He	1041174	0.68	1147359	90.75	60	120	
Bi	209	1	He	677357	0.66	790610	85.68	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-c msd@2
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:40:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	86.755	86.755	0.05	1515034	0.01	10000	
Be	9	45	2	NoGas	453.477	453.477	0.98	2207953	0.02	2000	
B	11	6	2	NoGas	244.958	244.958	1.91	827312	0.03	300	
Na	23	45	1	He	5535.911	5535.911	0.39	2366713	0.23	500000	
Mg	24	45	1	He	152883.266	152883.266	1.72	36521441	0.42	500000	
Al	27	45	1	He	139445.178	139445.178	1.73	13999414	1.00	200000	
K	39	45	1	He	6206.914	6206.914	1.55	737808	0.84	500000	
Ca	44	45	1	He	705020.797	705020.797	2.02	4790950	14.72	500000	>LDR
Ti	47	45	1	He	7239.576	7239.576	1.80	354592	2.04	2500	>LDR
V	51	45	1	He	3494.505	3494.505	2.28	5877179	0.06	10000	
Cr	52	45	1	He	4030.835	4030.835	1.42	8437908	0.05	10000	
Mn	55	45	1	He	67582.055	67582.055	1.77	71255731	0.09	10000	>LDR
Fe	56	45	1	He	486976.959	486976.959	1.79	805646261	0.06	200000	>LDR
Co	59	45	1	He	555.818	555.818	1.52	2110778	0.03	5000	
Ni	60	45	1	He	1663.688	1663.688	1.00	1754589	0.09	10000	
Cu	63	45	1	He	864.271	864.271	0.62	2574135	0.03	10000	
Zn	66	45	1	He	1122.511	1122.511	1.26	387296	0.29	10000	
As	75	115	1	He	479.168	479.168	0.33	97261	0.49	10000	
Se	78	115	1	He	420.414	420.414	1.48	4115	10.22	10000	
Sr	88	103	1	He	933.658	933.658	1.07	847090	0.11	10000	
Mo	95	103	1	He	71.008	71.008	2.50	77436	0.09	2000	
Ag	107	103	1	He	44.037	44.037	1.60	171974	0.03	300	
Cd	111	115	1	He	415.645	415.645	1.03	188328	0.22	4000	
Sn	118	115	1	He	495.791	495.791	0.53	426115	0.12	2000	
Sb	123	115	1	He	26.122	26.122	2.11	25231	0.10	200	
Ba	137	115	1	He	1097.855	1097.855	0.53	372690	0.29	10000	
W	182	159	1	He	146.452	146.452	0.62	733066	0.02	2500	
Tl	205	165	1	He	104.531	104.531	1.29	797758	0.01	2000	
Pb	208	165	1	He	1049.265	1049.265	1.64	10519513	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1281020	1.31	1276810	100.33	60	120	
Sc	45	1	He	147711	0.77	163460	90.37	60	120	
Sc	45	2	NoGas	8733844	0.27	8842934	98.77	60	120	
Rh	103	1	He	779056	0.62	1010526	77.09	60	120	
In	115	1	He	205769	1.14	257801	79.82	60	120	
Tb	159	1	He	970782	1.20	1155473	84.02	60	120	
Ho	165	1	He	978750	1.69	1147359	85.30	60	120	
Bi	209	1	He	614524	0.42	790610	77.73	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-c msd@20
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:44:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.634	8.634	1.18	235240	0.00	10000	
Be	9	45	2	NoGas	44.192	44.192	1.03	222648	0.02	2000	
B	11	6	2	NoGas	28.945	28.945	1.58	117881	0.02	300	
Na	23	45	1	He	563.412	563.412	1.31	249379	0.23	500000	
Mg	24	45	1	He	16256.943	16256.943	0.58	3909217	0.42	500000	
Al	27	45	1	He	14802.706	14802.706	1.41	1495804	0.99	200000	
K	39	45	1	He	664.716	664.716	1.67	88027	0.76	500000	
Ca	44	45	1	He	71447.396	71447.396	0.81	489241	14.60	500000	
Ti	47	45	1	He	758.896	758.896	0.45	37413	2.03	2500	
V	51	45	1	He	340.172	340.172	1.49	576036	0.06	10000	
Cr	52	45	1	He	404.830	404.830	0.62	853667	0.05	10000	
Mn	55	45	1	He	7268.012	7268.012	1.18	7713427	0.09	10000	
Fe	56	45	1	He	52297.102	52297.102	0.43	87082921	0.06	200000	
Co	59	45	1	He	55.990	55.990	0.17	214405	0.03	5000	
Ni	60	45	1	He	172.841	172.841	1.33	183661	0.09	10000	
Cu	63	45	1	He	91.081	91.081	0.66	277303	0.03	10000	
Zn	66	45	1	He	124.590	124.590	1.76	45902	0.27	10000	
As	75	115	1	He	47.076	47.076	1.71	10699	0.44	10000	
Se	78	115	1	He	42.915	42.915	0.59	472	9.09	10000	
Sr	88	103	1	He	88.176	88.176	0.46	90947	0.10	10000	
Mo	95	103	1	He	6.695	6.695	2.75	8311	0.08	2000	
Ag	107	103	1	He	4.485	4.485	0.56	19900	0.02	300	
Cd	111	115	1	He	43.111	43.111	0.71	21827	0.20	4000	
Sn	118	115	1	He	47.718	47.718	3.04	47096	0.10	2000	
Sb	123	115	1	He	2.763	2.763	2.56	3001	0.09	200	
Ba	137	115	1	He	106.861	106.861	0.90	40535	0.26	10000	
W	182	159	1	He	15.009	15.009	0.36	80637	0.02	2500	
Tl	205	165	1	He	10.864	10.864	0.72	87595	0.01	2000	
Pb	208	165	1	He	101.928	101.928	0.28	1080249	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411446	0.34	1276810	110.54	60	120	
Sc	45	1	He	148658	1.17	163460	90.94	60	120	
Sc	45	2	NoGas	9033939	0.52	8842934	102.16	60	120	
Rh	103	1	He	884833	1.50	1010526	87.56	60	120	
In	115	1	He	229917	1.25	257801	89.18	60	120	
Tb	159	1	He	1024863	0.54	1155473	88.70	60	120	
Ho	165	1	He	1033580	1.19	1147359	90.08	60	120	
Bi	209	1	He	678443	0.74	790610	85.81	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	098_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:48:55-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.078	0.914	914989	0.40	50	104.2	89.5	110.5	
Be	9	45	2	NoGas	51.504	0.221	243284	0.45	50	103.0	89.5	110.5	
B	11	6	2	NoGas	50.037	2.014	183808	1.68	50	100.1	89.5	110.5	
Na	23	45	1	He	25504.217	0.468	10652631	1.12	25000	102.0	89.5	110.5	
Mg	24	45	1	He	25160.235	1.520	5887819	1.45	25000	100.6	89.5	110.5	
Al	27	45	1	He	252.542	2.347	25095	2.01	250	101.0	89.5	110.5	
K	39	45	1	He	26141.387	0.098	3014149	1.43	25000	104.6	89.5	110.5	
Ca	44	45	1	He	25076.186	1.466	167545	0.85	25000	100.3	89.5	110.5	
Ti	47	45	1	He	52.170	3.187	2505	2.86	50	104.3	89.5	110.5	
V	51	45	1	He	50.863	1.367	83944	0.21	50	101.7	89.5	110.5	
Cr	52	45	1	He	50.284	1.237	103884	0.52	50	100.6	89.5	110.5	
Mn	55	45	1	He	251.661	1.583	261178	0.41	250	100.7	89.5	110.5	
Fe	56	45	1	He	12504.106	1.027	20265942	1.24	12500	100.0	89.5	110.5	
Co	59	45	1	He	50.153	1.128	186947	0.41	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.516	1.947	52382	1.13	50	101.0	89.5	110.5	
Cu	63	45	1	He	50.345	1.074	151244	0.78	50	100.7	89.5	110.5	
Zn	66	45	1	He	46.859	0.868	18599	1.32	50	93.7	89.5	110.5	
As	75	115	1	He	50.215	1.510	11226	1.22	50	100.4	89.5	110.5	
Se	78	115	1	He	50.129	3.274	542	2.88	50	100.3	89.5	110.5	
Sr	88	103	1	He	49.987	2.491	50810	2.06	50	100.0	89.5	110.5	
Mo	95	103	1	He	51.355	1.333	62639	0.99	50	102.7	89.5	110.5	
Ag	107	103	1	He	50.376	1.595	220031	1.18	50	100.8	89.5	110.5	
Cd	111	115	1	He	49.517	1.966	24662	1.84	50	99.0	89.5	110.5	
Sn	118	115	1	He	47.719	0.671	46331	0.78	50	95.4	89.5	110.5	
Sb	123	115	1	He	50.431	0.630	53521	0.71	50	100.9	89.5	110.5	
Ba	137	115	1	He	49.777	2.064	18579	2.43	50	99.6	89.5	110.5	
W	182	159	1	He	49.812	1.722	258600	2.43	50	99.6	89.5	110.5	
Tl	205	165	1	He	50.410	0.744	397549	1.20	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.653	0.213	525753	0.75	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1327897	1.45	1276810	104.00	60	120	
Sc	45	1	He	144688	1.52	163460	88.52	60	120	
Sc	45	2	NoGas	8470255	0.55	8842934	95.79	60	120	
Rh	103	1	He	871399	1.10	1010526	86.23	60	120	
In	115	1	He	226172	0.42	257801	87.73	60	120	
Tb	159	1	He	1003109	0.83	1155473	86.81	60	120	
Ho	165	1	He	1011214	0.58	1147359	88.13	60	120	
Bi	209	1	He	659766	0.63	790610	83.45	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	099_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:53:05-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.529	4.4	92153	0.6	8	
Be	9	45	2	NoGas	0.206	11.7	1078	10.9	1	
B	11	6	2	NoGas	4.934	2.4	28571	2.2	20	
Na	23	45	1	He	54.154	3.3	29821	2.0	1000	
Mg	24	45	1	He	38.378	2.3	9558	1.7	1000	
Al	27	45	1	He	2.083	53.1	461	22.7	50	
K	39	45	1	He	49.134	9.9	14747	3.2	1000	
Ca	44	45	1	He	41.416	2.5	928	0.5	1000	
Ti	47	45	1	He	0.382	64.1	20	57.7	20	
V	51	45	1	He	0.063	109.3	261	43.0	2	
Cr	52	45	1	He	0.053	25.1	896	3.0	2	
Mn	55	45	1	He	1.232	16.7	2546	7.7	2	
Fe	56	45	1	He	30.051	4.5	51528	3.6	50	
Co	59	45	1	He	-0.007	-77.8	400	5.5	1	
Ni	60	45	1	He	0.003	817.6	212	12.7	2	
Cu	63	45	1	He	-0.658	-2.5	2699	2.2	2	
Zn	66	45	1	He	-3.214	-8.8	1783	4.7	20	
As	75	115	1	He	0.105	21.4	49	10.0	2	
Se	78	115	1	He	0.321	45.7	7	22.4	2	
Sr	88	103	1	He	0.121	22.5	220	13.6	10	
Mo	95	103	1	He	0.138	27.9	194	23.3	2	
Ag	107	103	1	He	0.085	13.5	392	13.6	0.2	
Cd	111	115	1	He	0.114	8.7	58	7.9	0.2	
Sn	118	115	1	He	-0.327	-39.5	1078	10.8	10	
Sb	123	115	1	He	0.151	29.5	183	25.8	2	
Ba	137	115	1	He	0.106	31.2	46	27.7	5	
W	182	159	1	He	0.330	7.1	3163	2.5	10	
Tl	205	165	1	He	0.141	18.1	1141	16.6	0.5	
Pb	208	165	1	He	0.117	5.6	2278	1.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1360301	1.15	1276810	106.54	60	120	
Sc	45	1	He	142998	0.58	163460	87.48	60	120	
Sc	45	2	NoGas	8576723	0.29	8842934	96.99	60	120	
Rh	103	1	He	890811	1.51	1010526	88.15	60	120	
In	115	1	He	226544	0.80	257801	87.88	60	120	
Tb	159	1	He	1006747	1.31	1155473	87.13	60	120	
Ho	165	1	He	1011115	1.45	1147359	88.13	60	120	
Bi	209	1	He	685797	0.62	790610	86.74	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64037-o-10-a@2
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:57:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	146.338	146.338	0.39	2414292	0.01	10000	
Be	9	45	2	NoGas	1057.728	1057.728	0.31	4979217	0.02	2000	
B	11	6	2	NoGas	293.300	293.300	1.19	958701	0.03	300	
Na	23	45	1	He	10808.151	10808.151	1.81	4509391	0.24	500000	
Mg	24	45	1	He	163290.568	163290.568	3.01	38131333	0.43	500000	
Al	27	45	1	He	121731.436	121731.436	2.33	11947117	1.02	200000	
K	39	45	1	He	10742.134	10742.134	1.51	1241526	0.87	500000	
Ca	44	45	1	He	690879.671	690879.671	1.31	4589554	15.05	500000	>LDR
Ti	47	45	1	He	7328.510	7328.510	2.25	350893	2.09	2500	>LDR
V	51	45	1	He	3990.521	3990.521	2.32	6561194	0.06	10000	
Cr	52	45	1	He	4856.347	4856.347	2.27	9937841	0.05	10000	
Mn	55	45	1	He	67677.402	67677.402	2.17	69753362	0.10	10000	>LDR
Fe	56	45	1	He	646447.607	646447.607	2.61	1045480243	0.06	200000	>LDR
Co	59	45	1	He	1109.580	1109.580	1.79	4119062	0.03	5000	
Ni	60	45	1	He	2481.549	2481.549	3.22	2558046	0.10	10000	
Cu	63	45	1	He	1289.008	1289.008	2.34	3750776	0.03	10000	
Zn	66	45	1	He	1812.245	1812.245	2.43	609461	0.30	10000	
As	75	115	1	He	1061.295	1061.295	1.98	211719	0.50	10000	
Se	78	115	1	He	959.066	959.066	2.43	9222	10.40	10000	
Sr	88	103	1	He	1469.195	1469.195	0.49	1321016	0.11	10000	
Mo	95	103	1	He	143.068	143.068	0.55	154604	0.09	2000	
Ag	107	103	1	He	98.836	98.836	0.91	382482	0.03	300	
Cd	111	115	1	He	961.303	961.303	1.31	428153	0.22	4000	
Sn	118	115	1	He	1114.052	1114.052	2.35	939615	0.12	2000	
Sb	123	115	1	He	106.975	106.975	0.77	101504	0.11	200	
Ba	137	115	1	He	1836.623	1836.623	2.30	612807	0.30	10000	
W	182	159	1	He	224.508	224.508	1.35	1110275	0.02	2500	
Tl	205	165	1	He	271.521	271.521	0.61	2058709	0.01	2000	
Pb	208	165	1	He	1439.957	1439.957	0.30	14341345	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1242216	0.59	1276810	97.29	60	120	
Sc	45	1	He	144399	0.97	163460	88.34	60	120	
Sc	45	2	NoGas	8444273	0.13	8842934	95.49	60	120	
Rh	103	1	He	772101	1.89	1010526	76.41	60	120	
In	115	1	He	202263	0.62	257801	78.46	60	120	
Tb	159	1	He	959650	1.89	1155473	83.05	60	120	
Ho	165	1	He	972222	1.61	1147359	84.74	60	120	
Bi	209	1	He	613608	0.69	790610	77.61	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64037-o-10-a@20
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:01:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.513	121.513	1.48	2000479	0.01	10000	
Be	9	45	2	NoGas	1159.042	1159.042	1.42	5406930	0.02	2000	
B	11	6	2	NoGas	121.633	121.633	1.14	430597	0.03	300	
Na	23	45	1	He	10322.239	10322.239	1.96	4413923	0.23	500000	
Mg	24	45	1	He	26068.636	26068.636	1.49	6239273	0.42	500000	
Al	27	45	1	He	22603.292	22603.292	2.76	2273318	0.99	200000	
K	39	45	1	He	10173.583	10173.583	1.09	1205489	0.84	500000	
Ca	44	45	1	He	78268.867	78268.867	1.71	533425	14.67	500000	
Ti	47	45	1	He	844.285	844.285	1.51	41428	2.04	2500	
V	51	45	1	He	1420.590	1420.590	1.69	2393603	0.06	10000	
Cr	52	45	1	He	1469.821	1469.821	2.82	3082513	0.05	10000	
Mn	55	45	1	He	8072.603	8072.603	1.99	8527649	0.09	10000	
Fe	56	45	1	He	77707.057	77707.057	2.67	128776199	0.06	200000	
Co	59	45	1	He	1060.420	1060.420	2.06	4033861	0.03	5000	
Ni	60	45	1	He	1138.301	1138.301	2.45	1202557	0.09	10000	
Cu	63	45	1	He	1091.748	1091.748	2.62	3255817	0.03	10000	
Zn	66	45	1	He	1158.152	1158.152	2.52	400173	0.29	10000	
As	75	115	1	He	1007.532	1007.532	1.28	225568	0.45	10000	
Se	78	115	1	He	970.036	970.036	2.27	10468	9.27	10000	
Sr	88	103	1	He	1038.766	1038.766	1.09	1050261	0.10	10000	
Mo	95	103	1	He	109.194	109.194	0.96	132677	0.08	2000	
Ag	107	103	1	He	100.720	100.720	0.34	438323	0.02	300	
Cd	111	115	1	He	984.911	984.911	1.57	492296	0.20	4000	
Sn	118	115	1	He	1030.075	1030.075	1.28	975113	0.11	2000	
Sb	123	115	1	He	103.318	103.318	1.16	110022	0.09	200	
Ba	137	115	1	He	1107.164	1107.164	1.27	414592	0.27	10000	
W	182	159	1	He	111.826	111.826	2.00	595193	0.02	2500	
Tl	205	165	1	He	277.658	277.658	2.24	2257565	0.01	2000	
Pb	208	165	1	He	1127.706	1127.706	0.50	12047264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1325560	0.17	1276810	103.82	60	120	
Sc	45	1	He	147989	1.35	163460	90.54	60	120	
Sc	45	2	NoGas	8369021	1.27	8842934	94.64	60	120	
Rh	103	1	He	868193	0.42	1010526	85.91	60	120	
In	115	1	He	226999	0.63	257801	88.05	60	120	
Tb	159	1	He	1031714	0.76	1155473	89.29	60	120	
Ho	165	1	He	1042856	1.48	1147359	90.89	60	120	
Bi	209	1	He	671443	0.74	790610	84.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@200
Data File Name	102SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:05:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.151	1.151	3.36	100441	0.00	10000	
Be	9	45	2	NoGas	0.754	0.754	7.15	3634	0.02	2000	
B	11	6	2	NoGas	15.475	15.475	1.82	66627	0.02	300	
Na	23	45	1	He	38.404	38.404	2.48	23100	0.17	500000	
Mg	24	45	1	He	163.220	163.220	3.02	38055	0.43	500000	
Al	27	45	1	He	627.111	627.111	2.28	60614	1.03	200000	
K	39	45	1	He	110.251	110.251	6.36	21484	0.51	500000	
Ca	44	45	1	He	1543.164	1543.164	1.82	10702	14.42	500000	
Ti	47	45	1	He	14.678	14.678	2.64	691	2.12	2500	
V	51	45	1	He	-11.159	-11.159	-23.70	-17833	0.06	10000	
Cr	52	45	1	He	301.769	301.769	1.85	606331	0.05	10000	
Mn	55	45	1	He	803.851	803.851	1.52	813830	0.10	10000	
Fe	56	45	1	He	2612.780	2612.780	1.36	4147529	0.06	200000	
Co	59	45	1	He	136.768	136.768	1.28	498300	0.03	5000	
Ni	60	45	1	He	1602.817	1602.817	1.03	1620685	0.10	10000	
Cu	63	45	1	He	455.099	455.099	1.58	1301648	0.03	10000	
Zn	66	45	1	He	163.382	163.382	2.86	56451	0.29	10000	
As	75	115	1	He	9.372	9.372	3.01	2161	0.43	10000	
Se	78	115	1	He	15.116	15.116	5.67	169	8.93	10000	
Sr	88	103	1	He	5.427	5.427	2.44	5693	0.10	10000	
Mo	95	103	1	He	1.404	1.404	2.20	1762	0.08	2000	
Ag	107	103	1	He	1.919	1.919	1.45	8533	0.02	300	
Cd	111	115	1	He	52.067	52.067	1.89	26485	0.20	4000	
Sn	118	115	1	He	36.867	36.867	1.65	36878	0.10	2000	
Sb	123	115	1	He	8.716	8.716	3.38	9465	0.09	200	
Ba	137	115	1	He	81.961	81.961	1.59	31239	0.26	10000	
W	182	159	1	He	1.098	1.098	8.06	7265	0.02	2500	
Tl	205	165	1	He	0.323	0.323	16.09	2614	0.01	2000	
Pb	208	165	1	He	833.204	833.204	0.79	8771102	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1375383	1.30	1276810	107.72	60	120	
Sc	45	1	He	141623	0.92	163460	86.64	60	120	
Sc	45	2	NoGas	8427576	1.14	8842934	95.30	60	120	
Rh	103	1	He	885929	0.78	1010526	87.67	60	120	
In	115	1	He	231015	1.12	257801	89.61	60	120	
Tb	159	1	He	1024246	0.40	1155473	88.64	60	120	
Ho	165	1	He	1027558	0.45	1147359	89.56	60	120	
Bi	209	1	He	698767	0.93	790610	88.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@500
Data File Name	103SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:09:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.797	0.797	10.31	94843	0.00	10000	
Be	9	45	2	NoGas	0.408	0.408	6.84	2008	0.02	2000	
B	11	6	2	NoGas	9.618	9.618	5.00	46125	0.02	300	
Na	23	45	1	He	16.734	16.734	5.44	14265	0.12	500000	
Mg	24	45	1	He	57.778	57.778	1.50	13928	0.41	500000	
Al	27	45	1	He	226.011	226.011	2.03	22035	1.03	200000	
K	39	45	1	He	40.434	40.434	5.96	13643	0.30	500000	
Ca	44	45	1	He	533.974	533.974	2.92	4133	12.92	500000	
Ti	47	45	1	He	5.913	5.913	4.04	280	2.11	2500	
V	51	45	1	He	-4.611	-4.611	-11.31	-7290	0.06	10000	
Cr	52	45	1	He	108.294	108.294	0.97	218358	0.05	10000	
Mn	55	45	1	He	288.128	288.128	1.23	292869	0.10	10000	
Fe	56	45	1	He	953.349	953.349	1.90	1517171	0.06	200000	
Co	59	45	1	He	49.251	49.251	1.42	179919	0.03	5000	
Ni	60	45	1	He	541.687	541.687	0.89	548488	0.10	10000	
Cu	63	45	1	He	163.675	163.675	0.72	471625	0.03	10000	
Zn	66	45	1	He	52.422	52.422	0.76	20055	0.26	10000	
As	75	115	1	He	3.366	3.366	6.73	785	0.43	10000	
Se	78	115	1	He	5.990	5.990	5.71	68	8.75	10000	
Sr	88	103	1	He	1.976	1.976	4.42	2113	0.09	10000	
Mo	95	103	1	He	0.473	0.473	1.10	603	0.08	2000	
Ag	107	103	1	He	0.692	0.692	3.74	3057	0.02	300	
Cd	111	115	1	He	19.061	19.061	0.53	9604	0.20	4000	
Sn	118	115	1	He	12.097	12.097	6.29	12924	0.09	2000	
Sb	123	115	1	He	3.247	3.247	0.98	3507	0.09	200	
Ba	137	115	1	He	30.111	30.111	1.30	11372	0.26	10000	
W	182	159	1	He	0.374	0.374	10.34	3415	0.01	2500	
Tl	205	165	1	He	0.102	0.102	0.95	840	0.01	2000	
Pb	208	165	1	He	290.162	290.162	1.14	3037341	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1389385	1.31	1276810	108.82	60	120	
Sc	45	1	He	141791	1.26	163460	86.74	60	120	
Sc	45	2	NoGas	8430471	0.46	8842934	95.34	60	120	
Rh	103	1	He	878029	0.97	1010526	86.89	60	120	
In	115	1	He	228792	1.73	257801	88.75	60	120	
Tb	159	1	He	1013471	0.17	1155473	87.71	60	120	
Ho	165	1	He	1021580	0.77	1147359	89.04	60	120	
Bi	209	1	He	696621	0.67	790610	88.11	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-7-a@200
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:13:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.967	0.967	4.30	97384	0.00	10000	
Be	9	45	2	NoGas	0.246	0.246	12.97	1245	0.02	2000	
B	11	6	2	NoGas	6.139	6.139	8.40	33865	0.02	300	
Na	23	45	1	He	13.539	13.539	7.13	13176	0.10	500000	
Mg	24	45	1	He	89.996	89.996	4.62	21665	0.42	500000	
Al	27	45	1	He	221.725	221.725	2.72	21985	1.01	200000	
K	39	45	1	He	34.064	34.064	1.83	13146	0.26	500000	
Ca	44	45	1	He	735.565	735.565	3.29	5539	13.28	500000	
Ti	47	45	1	He	8.386	8.386	15.21	402	2.08	2500	
V	51	45	1	He	0.630	0.630	29.46	1191	0.05	10000	
Cr	52	45	1	He	2.136	2.136	3.67	5157	0.04	10000	
Mn	55	45	1	He	23.210	23.210	3.66	25179	0.09	10000	
Fe	56	45	1	He	897.712	897.712	2.99	1452795	0.06	200000	
Co	59	45	1	He	44.431	44.431	1.81	165088	0.03	5000	
Ni	60	45	1	He	1220.325	1220.325	2.78	1256006	0.10	10000	
Cu	63	45	1	He	14.048	14.048	2.47	45389	0.03	10000	
Zn	66	45	1	He	5.390	5.390	24.51	4671	0.12	10000	
As	75	115	1	He	1.534	1.534	4.17	373	0.41	10000	
Se	78	115	1	He	0.465	0.465	17.36	8	5.49	10000	
Sr	88	103	1	He	1.094	1.094	8.23	1228	0.09	10000	
Mo	95	103	1	He	0.140	0.140	27.75	197	0.07	2000	
Ag	107	103	1	He	0.010	0.010	51.33	57	0.02	300	
Cd	111	115	1	He	0.988	0.988	5.55	501	0.20	4000	
Sn	118	115	1	He	-0.257	-0.257	-72.40	1159	-0.02	2000	
Sb	123	115	1	He	0.341	0.341	3.08	390	0.09	200	
Ba	137	115	1	He	3.350	3.350	5.26	1275	0.26	10000	
W	182	159	1	He	0.067	0.067	90.45	1830	0.00	2500	
Tl	205	165	1	He	0.043	0.043	12.06	374	0.01	2000	
Pb	208	165	1	He	6.967	6.967	0.43	74317	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403810	1.86	1276810	109.95	60	120	
Sc	45	1	He	144197	1.86	163460	88.22	60	120	
Sc	45	2	NoGas	8415715	0.64	8842934	95.17	60	120	
Rh	103	1	He	889790	0.60	1010526	88.05	60	120	
In	115	1	He	229512	0.19	257801	89.03	60	120	
Tb	159	1	He	1022676	0.37	1155473	88.51	60	120	
Ho	165	1	He	1026162	0.47	1147359	89.44	60	120	
Bi	209	1	He	702913	0.42	790610	88.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-8-c@2
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:17:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	137.308	137.308	0.67	2452026	0.01	10000	
Be	9	45	2	NoGas	2.956	2.956	4.40	15125	0.02	2000	
B	11	6	2	NoGas	40.502	40.502	3.72	149426	0.03	300	
Na	23	45	1	He	485.088	485.088	2.46	215674	0.22	500000	
Mg	24	45	1	He	16536.415	16536.415	1.01	3975065	0.42	500000	
Al	27	45	1	He	59586.083	59586.083	1.38	6019521	0.99	200000	
K	39	45	1	He	9260.361	9260.361	0.71	1102866	0.84	500000	
Ca	44	45	1	He	12308.147	12308.147	1.56	84848	14.51	500000	
Ti	47	45	1	He	251.383	251.383	1.85	12388	2.03	2500	
V	51	45	1	He	86.383	86.383	1.14	146357	0.06	10000	
Cr	52	45	1	He	94.126	94.126	1.10	199048	0.05	10000	
Mn	55	45	1	He	704.289	704.289	1.22	748446	0.09	10000	
Fe	56	45	1	He	165619.182	165619.182	1.14	275666807	0.06	200000	
Co	59	45	1	He	61.766	61.766	1.53	236379	0.03	5000	
Ni	60	45	1	He	157.601	157.601	2.44	167409	0.09	10000	
Cu	63	45	1	He	85.587	85.587	1.64	260791	0.03	10000	
Zn	66	45	1	He	383.530	383.530	1.74	135079	0.28	10000	
As	75	115	1	He	139.956	139.956	2.31	30526	0.46	10000	
Se	78	115	1	He	10.375	10.375	7.75	112	9.24	10000	
Sr	88	103	1	He	90.567	90.567	0.47	88884	0.10	10000	
Mo	95	103	1	He	40.292	40.292	1.84	47485	0.08	2000	
Ag	107	103	1	He	0.087	0.087	7.61	380	0.02	300	
Cd	111	115	1	He	0.417	0.417	13.38	204	0.20	4000	
Sn	118	115	1	He	23.052	23.052	2.52	22568	0.10	2000	
Sb	123	115	1	He	1.050	1.050	6.61	1110	0.09	200	
Ba	137	115	1	He	423.120	423.120	0.90	154245	0.27	10000	
W	182	159	1	He	0.325	0.325	11.45	3160	0.01	2500	
Tl	205	165	1	He	2.684	2.684	1.96	21401	0.01	2000	
Pb	208	165	1	He	140.445	140.445	0.53	1469800	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1315633	1.42	1276810	103.04	60	120	
Sc	45	1	He	148632	3.00	163460	90.93	60	120	
Sc	45	2	NoGas	9119727	0.12	8842934	103.13	60	120	
Rh	103	1	He	841998	2.43	1010526	83.32	60	120	
In	115	1	He	220959	0.95	257801	85.71	60	120	
Tb	159	1	He	1013024	0.73	1155473	87.67	60	120	
Ho	165	1	He	1020944	1.19	1147359	88.98	60	120	
Bi	209	1	He	667269	0.68	790610	84.40	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-9-c@2
Data File Name	106SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:22:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	201.676	201.676	1.02	3574939	0.01	10000	
Be	9	45	2	NoGas	3.859	3.859	3.00	19800	0.02	2000	
B	11	6	2	NoGas	64.082	64.082	1.65	223686	0.03	300	
Na	23	45	1	He	923.253	923.253	1.24	417210	0.22	500000	
Mg	24	45	1	He	27365.422	27365.422	0.77	6799843	0.40	500000	
Al	27	45	1	He	66333.312	66333.312	1.16	6926617	0.96	200000	
K	39	45	1	He	15062.339	15062.339	0.45	1848167	0.81	500000	
Ca	44	45	1	He	5740.337	5740.337	1.25	41269	13.91	500000	
Ti	47	45	1	He	230.814	230.814	1.05	11761	1.96	2500	
V	51	45	1	He	86.039	86.039	2.57	150662	0.06	10000	
Cr	52	45	1	He	97.035	97.035	1.22	212083	0.05	10000	
Mn	55	45	1	He	744.860	744.860	0.91	818170	0.09	10000	
Fe	56	45	1	He	152941.123	152941.123	0.98	263157252	0.06	200000	
Co	59	45	1	He	82.477	82.477	1.94	326151	0.03	5000	
Ni	60	45	1	He	229.601	229.601	0.92	252027	0.09	10000	
Cu	63	45	1	He	102.320	102.320	1.36	321295	0.03	10000	
Zn	66	45	1	He	443.209	443.209	1.67	160890	0.28	10000	
As	75	115	1	He	138.974	138.974	0.89	31188	0.45	10000	
Se	78	115	1	He	12.719	12.719	1.30	141	9.03	10000	
Sr	88	103	1	He	89.657	89.657	0.54	90170	0.10	10000	
Mo	95	103	1	He	9.612	9.612	1.52	11626	0.08	2000	
Ag	107	103	1	He	0.088	0.088	11.89	393	0.02	300	
Cd	111	115	1	He	0.256	0.256	12.98	129	0.20	4000	
Sn	118	115	1	He	21.121	21.121	1.43	21392	0.10	2000	
Sb	123	115	1	He	0.699	0.699	5.09	768	0.09	200	
Ba	137	115	1	He	93.665	93.665	0.46	35139	0.27	10000	
W	182	159	1	He	0.265	0.265	21.45	2900	0.01	2500	
Tl	205	165	1	He	1.692	1.692	3.20	13747	0.01	2000	
Pb	208	165	1	He	123.898	123.898	0.58	1320871	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1278368	1.88	1276810	100.12	60	120	
Sc	45	1	He	153626	0.53	163460	93.98	60	120	
Sc	45	2	NoGas	9159182	1.17	8842934	103.58	60	120	
Rh	103	1	He	862796	0.56	1010526	85.38	60	120	
In	115	1	He	227371	0.30	257801	88.20	60	120	
Tb	159	1	He	1031709	0.33	1155473	89.29	60	120	
Ho	165	1	He	1039919	0.70	1147359	90.64	60	120	
Bi	209	1	He	669713	1.55	790610	84.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-11-c@2
Data File Name	107SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:26:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	151.251	151.251	1.80	2478308	0.01	10000	
Be	9	45	2	NoGas	3.837	3.837	4.32	18046	0.02	2000	
B	11	6	2	NoGas	63.879	63.879	0.67	220705	0.03	300	
Na	23	45	1	He	519.607	519.607	1.89	218792	0.24	500000	
Mg	24	45	1	He	41683.048	41683.048	1.38	9508468	0.44	500000	
Al	27	45	1	He	63206.519	63206.519	2.50	6058777	1.04	200000	
K	39	45	1	He	11832.949	11832.949	1.70	1334859	0.89	500000	
Ca	44	45	1	He	96892.158	96892.158	1.47	629255	15.40	500000	
Ti	47	45	1	He	714.384	714.384	0.87	33413	2.14	2500	
V	51	45	1	He	467.784	467.784	1.84	751358	0.06	10000	
Cr	52	45	1	He	744.568	744.568	1.89	1488778	0.05	10000	
Mn	55	45	1	He	11215.972	11215.972	2.02	11292166	0.10	10000	>LDR
Fe	56	45	1	He	179432.564	179432.564	1.30	283444878	0.06	200000	
Co	59	45	1	He	63.075	63.075	2.05	229087	0.03	5000	
Ni	60	45	1	He	319.736	319.736	1.25	322133	0.10	10000	
Cu	63	45	1	He	110.465	110.465	1.63	318090	0.03	10000	
Zn	66	45	1	He	338.596	338.596	2.13	113504	0.30	10000	
As	75	115	1	He	100.783	100.783	0.02	20947	0.48	10000	
Se	78	115	1	He	11.392	11.392	6.90	117	9.73	10000	
Sr	88	103	1	He	132.291	132.291	0.84	123560	0.11	10000	
Mo	95	103	1	He	15.231	15.231	0.67	17103	0.09	2000	
Ag	107	103	1	He	0.262	0.262	6.17	1064	0.02	300	
Cd	111	115	1	He	0.586	0.586	3.40	273	0.21	4000	
Sn	118	115	1	He	32.754	32.754	2.28	30005	0.11	2000	
Sb	123	115	1	He	1.038	1.038	7.08	1046	0.10	200	
Ba	137	115	1	He	209.723	209.723	0.91	72839	0.29	10000	
W	182	159	1	He	15.285	15.285	2.36	78557	0.02	2500	
Tl	205	165	1	He	1.099	1.099	1.07	8535	0.01	2000	
Pb	208	165	1	He	96.939	96.939	0.09	986188	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1265027	0.61	1276810	99.08	60	120	
Sc	45	1	He	141048	1.05	163460	86.29	60	120	
Sc	45	2	NoGas	8396647	0.78	8842934	94.95	60	120	
Rh	103	1	He	801550	0.65	1010526	79.32	60	120	
In	115	1	He	210513	0.38	257801	81.66	60	120	
Tb	159	1	He	980744	0.85	1155473	84.88	60	120	
Ho	165	1	He	992096	0.13	1147359	86.47	60	120	
Bi	209	1	He	639602	0.60	790610	80.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-11-c@20
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:30:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.412	15.412	0.84	318416	0.00	10000	
Be	9	45	2	NoGas	0.537	0.537	6.40	2545	0.02	2000	
B	11	6	2	NoGas	9.892	9.892	2.43	45041	0.02	300	
Na	23	45	1	He	56.508	56.508	5.60	29491	0.19	500000	
Mg	24	45	1	He	4179.839	4179.839	2.21	926533	0.45	500000	
Al	27	45	1	He	6130.176	6130.176	2.65	570876	1.07	200000	
K	39	45	1	He	1206.084	1206.084	1.79	140028	0.86	500000	
Ca	44	45	1	He	9988.748	9988.748	2.44	63558	15.72	500000	
Ti	47	45	1	He	72.985	72.985	6.50	3315	2.20	2500	
V	51	45	1	He	45.856	45.856	1.38	71677	0.06	10000	
Cr	52	45	1	He	71.572	71.572	2.97	139650	0.05	10000	
Mn	55	45	1	He	1105.780	1105.780	2.01	1082301	0.10	10000	
Fe	56	45	1	He	18801.315	18801.315	2.96	28841844	0.07	200000	
Co	59	45	1	He	6.651	6.651	1.91	23828	0.03	5000	
Ni	60	45	1	He	33.772	33.772	3.43	33216	0.10	10000	
Cu	63	45	1	He	10.950	10.950	3.31	34581	0.03	10000	
Zn	66	45	1	He	29.827	29.827	3.68	12198	0.24	10000	
As	75	115	1	He	9.720	9.720	0.94	2143	0.45	10000	
Se	78	115	1	He	1.225	1.225	41.83	16	7.61	10000	
Sr	88	103	1	He	12.334	12.334	1.41	12292	0.10	10000	
Mo	95	103	1	He	1.463	1.463	3.24	1761	0.08	2000	
Ag	107	103	1	He	0.025	0.025	9.29	119	0.02	300	
Cd	111	115	1	He	0.115	0.115	11.58	57	0.20	4000	
Sn	118	115	1	He	2.182	2.182	20.39	3360	0.06	2000	
Sb	123	115	1	He	0.115	0.115	42.04	141	0.08	200	
Ba	137	115	1	He	20.213	20.213	1.75	7372	0.27	10000	
W	182	159	1	He	1.492	1.492	2.24	9029	0.02	2500	
Tl	205	165	1	He	0.122	0.122	5.71	983	0.01	2000	
Pb	208	165	1	He	9.774	9.774	0.59	101324	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1328177	0.51	1276810	104.02	60	120	
Sc	45	1	He	136996	1.83	163460	83.81	60	120	
Sc	45	2	NoGas	8200226	0.98	8842934	92.73	60	120	
Rh	103	1	He	849634	0.28	1010526	84.08	60	120	
In	115	1	He	220934	1.05	257801	85.70	60	120	
Tb	159	1	He	989820	0.74	1155473	85.66	60	120	
Ho	165	1	He	1001480	0.39	1147359	87.29	60	120	
Bi	209	1	He	664219	1.64	790610	84.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-12-c@2
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:34:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	56.678	56.678	0.53	970135	0.01	10000	
Be	9	45	2	NoGas	5.067	5.067	3.50	23575	0.02	2000	
B	11	6	2	NoGas	228.097	228.097	1.62	749733	0.03	300	
Na	23	45	1	He	1823.823	1823.823	0.89	731393	0.25	500000	
Mg	24	45	1	He	173340.120	173340.120	1.68	38587541	0.45	500000	
Al	27	45	1	He	138169.421	138169.421	2.72	12925859	1.07	200000	
K	39	45	1	He	1749.694	1749.694	2.21	200133	0.87	500000	
Ca	44	45	1	He	782994.961	782994.961	2.67	4958490	15.79	500000	>LDR
Ti	47	45	1	He	8088.743	8088.743	2.35	369175	2.19	2500	>LDR
V	51	45	1	He	3228.479	3228.479	1.58	5059837	0.06	10000	
Cr	52	45	1	He	3352.849	3352.849	2.28	6540268	0.05	10000	
Mn	55	45	1	He	72538.234	72538.234	1.89	71267086	0.10	10000	>LDR
Fe	56	45	1	He	627586.590	627586.590	1.82	967458628	0.06	200000	>LDR
Co	59	45	1	He	41.773	41.773	2.02	148208	0.03	5000	
Ni	60	45	1	He	430.490	430.490	1.86	423212	0.10	10000	
Cu	63	45	1	He	182.265	182.265	1.92	509342	0.04	10000	
Zn	66	45	1	He	562.835	562.835	1.03	182332	0.31	10000	
As	75	115	1	He	80.313	80.313	1.04	15652	0.51	10000	
Se	78	115	1	He	10.789	10.789	9.38	104	10.36	10000	
Sr	88	103	1	He	644.121	644.121	0.57	549980	0.12	10000	
Mo	95	103	1	He	28.446	28.446	1.28	29202	0.10	2000	
Ag	107	103	1	He	0.576	0.576	1.54	2127	0.03	300	
Cd	111	115	1	He	4.232	4.232	2.39	1840	0.23	4000	
Sn	118	115	1	He	47.866	47.866	1.61	40548	0.12	2000	
Sb	123	115	1	He	4.552	4.552	1.27	4233	0.11	200	
Ba	137	115	1	He	735.035	735.035	0.34	239287	0.31	10000	
W	182	159	1	He	79.655	79.655	0.36	381412	0.02	2500	
Tl	205	165	1	He	0.337	0.337	2.58	2466	0.01	2000	
Pb	208	165	1	He	771.114	771.114	0.39	7332438	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1245531	1.43	1276810	97.55	60	120	
Sc	45	1	He	137649	1.42	163460	84.21	60	120	
Sc	45	2	NoGas	8312618	0.44	8842934	94.00	60	120	
Rh	103	1	He	733100	1.53	1010526	72.55	60	120	
In	115	1	He	197330	1.13	257801	76.54	60	120	
Tb	159	1	He	927229	1.58	1155473	80.25	60	120	
Ho	165	1	He	928146	0.97	1147359	80.89	60	120	
Bi	209	1	He	579212	1.02	790610	73.26	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	110_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:38:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.620	1.230	881684	0.17	50	105.2	89.5	110.5	
Be	9	45	2	NoGas	50.340	1.486	226977	0.47	50	100.7	89.5	110.5	
B	11	6	2	NoGas	47.168	0.063	171182	1.28	50	94.3	89.5	110.5	
Na	23	45	1	He	24693.438	1.654	9803244	1.10	25000	98.8	89.5	110.5	
Mg	24	45	1	He	24515.158	1.388	5452892	0.61	25000	98.1	89.5	110.5	
Al	27	45	1	He	261.005	0.731	24645	0.34	250	104.4	89.5	110.5	
K	39	45	1	He	25654.900	0.714	2811706	0.57	25000	102.6	89.5	110.5	
Ca	44	45	1	He	25109.980	1.392	159469	0.37	25000	100.4	89.5	110.5	
Ti	47	45	1	He	55.570	1.744	2536	0.72	50	111.1	89.5	110.5	CCV Failed
V	51	45	1	He	50.018	1.012	78473	0.11	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.619	0.931	97453	0.75	50	99.2	89.5	110.5	
Mn	55	45	1	He	254.323	0.258	250905	1.23	250	101.7	89.5	110.5	
Fe	56	45	1	He	12432.447	0.658	19152740	0.43	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.718	1.021	176167	0.57	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.472	1.950	48770	1.87	50	98.9	89.5	110.5	
Cu	63	45	1	He	49.191	0.966	140570	0.57	50	98.4	89.5	110.5	
Zn	66	45	1	He	45.894	0.773	17372	1.62	50	91.8	89.5	110.5	
As	75	115	1	He	47.255	0.853	10398	0.21	50	94.5	89.5	110.5	
Se	78	115	1	He	44.482	5.429	474	6.07	50	89.0	89.5	110.5	CCV Failed
Sr	88	103	1	He	49.531	0.495	48897	0.87	50	99.1	89.5	110.5	
Mo	95	103	1	He	50.354	1.659	59643	1.32	50	100.7	89.5	110.5	
Ag	107	103	1	He	49.661	0.899	210643	0.38	50	99.3	89.5	110.5	
Cd	111	115	1	He	48.329	1.073	23689	0.39	50	96.7	89.5	110.5	
Sn	118	115	1	He	47.553	0.359	45443	0.43	50	95.1	89.5	110.5	
Sb	123	115	1	He	49.552	2.017	51751	1.24	50	99.1	89.5	110.5	
Ba	137	115	1	He	49.701	1.687	18256	1.35	50	99.4	89.5	110.5	
W	182	159	1	He	49.507	1.508	254902	0.96	50	99.0	89.5	110.5	
Tl	205	165	1	He	49.920	0.761	390771	0.90	50	99.8	89.5	110.5	
Pb	208	165	1	He	50.261	0.456	517831	0.14	50	100.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1307091	1.31	1276810	102.37	60	120	
Sc	45	1	He	137526	1.01	163460	84.13	60	120	
Sc	45	2	NoGas	8085884	1.01	8842934	91.44	60	120	
Rh	103	1	He	846199	0.55	1010526	83.74	60	120	
In	115	1	He	222592	0.77	257801	86.34	60	120	
Tb	159	1	He	994944	0.57	1155473	86.11	60	120	
Ho	165	1	He	1003755	0.59	1147359	87.48	60	120	
Bi	209	1	He	655122	0.09	790610	82.86	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	111_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:42:56-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.778	5.9	92778	0.2	8	
Be	9	45	2	NoGas	0.183	21.7	933	19.9	1	
B	11	6	2	NoGas	4.959	2.4	29027	1.4	20	
Na	23	45	1	He	50.156	1.9	27377	3.1	1000	
Mg	24	45	1	He	41.045	3.3	9884	2.9	1000	
Al	27	45	1	He	3.284	19.9	562	11.9	50	
K	39	45	1	He	45.640	11.8	13950	5.9	1000	
Ca	44	45	1	He	42.107	2.3	906	2.3	1000	
Ti	47	45	1	He	0.562	5.0	28	6.9	20	
V	51	45	1	He	0.141	40.7	377	24.1	2	
Cr	52	45	1	He	0.083	34.3	929	3.8	2	
Mn	55	45	1	He	2.071	5.9	3304	0.9	2	CCB High
Fe	56	45	1	He	39.790	2.2	65259	5.0	50	
Co	59	45	1	He	-0.034	-33.8	294	12.4	1	
Ni	60	45	1	He	-0.029	-31.1	174	7.2	2	
Cu	63	45	1	He	-0.922	-4.2	1886	5.8	2	
Zn	66	45	1	He	-3.940	-4.8	1499	3.9	20	
As	75	115	1	He	0.103	21.4	49	10.4	2	
Se	78	115	1	He	0.268	24.0	6	12.1	2	
Sr	88	103	1	He	0.112	46.2	206	24.6	10	
Mo	95	103	1	He	0.168	12.5	228	12.4	2	
Ag	107	103	1	He	0.074	17.5	337	16.5	0.2	
Cd	111	115	1	He	0.123	23.2	63	22.7	0.2	
Sn	118	115	1	He	-0.370	-28.5	1048	9.8	10	
Sb	123	115	1	He	0.127	19.9	159	16.0	2	
Ba	137	115	1	He	0.164	27.4	68	25.2	5	
W	182	159	1	He	0.324	1.9	3141	1.6	10	
Tl	205	165	1	He	0.122	4.5	1003	4.9	0.5	
Pb	208	165	1	He	0.106	3.8	2189	1.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1377760	0.34	1276810	107.91	60	120	
Sc	45	1	He	138952	2.99	163460	85.01	60	120	
Sc	45	2	NoGas	8273099	0.65	8842934	93.56	60	120	
Rh	103	1	He	873435	1.40	1010526	86.43	60	120	
In	115	1	He	228861	1.07	257801	88.77	60	120	
Tb	159	1	He	1008621	0.73	1155473	87.29	60	120	
Ho	165	1	He	1020458	0.95	1147359	88.94	60	120	
Bi	209	1	He	694091	0.63	790610	87.79	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-12-c@20
Data File Name	112SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:47:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.533	6.533	2.39	183581	0.00	10000	
Be	9	45	2	NoGas	0.628	0.628	4.10	3004	0.02	2000	
B	11	6	2	NoGas	26.279	26.279	2.38	103232	0.03	300	
Na	23	45	1	He	197.090	197.090	1.10	84805	0.23	500000	
Mg	24	45	1	He	18921.495	18921.495	1.08	4180394	0.45	500000	
Al	27	45	1	He	14667.407	14667.407	2.87	1361934	1.08	200000	
K	39	45	1	He	192.788	192.788	2.52	29673	0.65	500000	
Ca	44	45	1	He	80326.258	80326.258	0.72	505332	15.90	500000	
Ti	47	45	1	He	857.551	857.551	1.95	38856	2.21	2500	
V	51	45	1	He	317.401	317.401	1.52	493760	0.06	10000	
Cr	52	45	1	He	344.234	344.234	1.11	667046	0.05	10000	
Mn	55	45	1	He	8060.527	8060.527	1.23	7859844	0.10	10000	
Fe	56	45	1	He	68858.669	68858.669	0.66	105349116	0.07	200000	
Co	59	45	1	He	4.542	4.542	1.38	16355	0.03	5000	
Ni	60	45	1	He	48.209	48.209	0.95	47206	0.10	10000	
Cu	63	45	1	He	19.877	19.877	2.10	59033	0.03	10000	
Zn	66	45	1	He	59.351	59.351	0.86	21517	0.28	10000	
As	75	115	1	He	8.112	8.112	2.64	1769	0.46	10000	
Se	78	115	1	He	1.289	1.289	27.45	17	7.77	10000	
Sr	88	103	1	He	60.924	60.924	0.96	59471	0.10	10000	
Mo	95	103	1	He	2.546	2.546	0.96	3003	0.08	2000	
Ag	107	103	1	He	0.045	0.045	15.30	200	0.02	300	
Cd	111	115	1	He	0.463	0.463	9.35	223	0.21	4000	
Sn	118	115	1	He	3.598	3.598	7.65	4601	0.08	2000	
Sb	123	115	1	He	0.511	0.511	5.09	544	0.09	200	
Ba	137	115	1	He	73.951	73.951	1.14	26602	0.28	10000	
W	182	159	1	He	8.049	8.049	2.03	43099	0.02	2500	
Tl	205	165	1	He	0.043	0.043	14.41	370	0.01	2000	
Pb	208	165	1	He	74.240	74.240	1.18	767569	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348207	0.90	1276810	105.59	60	120	
Sc	45	1	He	136600	1.99	163460	83.57	60	120	
Sc	45	2	NoGas	8316271	0.72	8842934	94.04	60	120	
Rh	103	1	He	836935	1.59	1010526	82.82	60	120	
In	115	1	He	218006	0.77	257801	84.56	60	120	
Tb	159	1	He	1005603	1.70	1155473	87.03	60	120	
Ho	165	1	He	1008036	1.62	1147359	87.86	60	120	
Bi	209	1	He	666320	0.24	790610	84.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-13-c@2
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:51:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	90.713	90.713	0.34	1580510	0.01	10000	
Be	9	45	2	NoGas	2.025	2.025	4.70	9955	0.02	2000	
B	11	6	2	NoGas	41.007	41.007	2.58	151071	0.03	300	
Na	23	45	1	He	657.149	657.149	1.22	284778	0.23	500000	
Mg	24	45	1	He	14586.337	14586.337	0.88	3449640	0.42	500000	
Al	27	45	1	He	52931.175	52931.175	0.87	5259708	1.01	200000	
K	39	45	1	He	12169.637	12169.637	2.14	1422550	0.86	500000	
Ca	44	45	1	He	12629.099	12629.099	0.59	85604	14.75	500000	
Ti	47	45	1	He	214.107	214.107	3.15	10384	2.06	2500	
V	51	45	1	He	94.386	94.386	0.74	157288	0.06	10000	
Cr	52	45	1	He	98.212	98.212	0.28	204287	0.05	10000	
Mn	55	45	1	He	627.208	627.208	0.83	655859	0.10	10000	
Fe	56	45	1	He	161053.841	161053.841	0.67	263723198	0.06	200000	
Co	59	45	1	He	44.310	44.310	1.25	166948	0.03	5000	
Ni	60	45	1	He	149.716	149.716	0.97	156462	0.10	10000	
Cu	63	45	1	He	89.507	89.507	0.77	268061	0.03	10000	
Zn	66	45	1	He	269.934	269.934	0.56	94395	0.29	10000	
As	75	115	1	He	139.311	139.311	1.98	30382	0.46	10000	
Se	78	115	1	He	11.186	11.186	4.52	121	9.27	10000	
Sr	88	103	1	He	164.604	164.604	1.15	161432	0.10	10000	
Mo	95	103	1	He	43.309	43.309	1.46	51033	0.08	2000	
Ag	107	103	1	He	0.066	0.066	11.20	291	0.02	300	
Cd	111	115	1	He	0.775	0.775	9.23	378	0.20	4000	
Sn	118	115	1	He	20.681	20.681	3.24	20380	0.10	2000	
Sb	123	115	1	He	1.128	1.128	7.23	1191	0.09	200	
Ba	137	115	1	He	406.703	406.703	2.20	148247	0.27	10000	
W	182	159	1	He	0.305	0.305	35.11	3075	0.01	2500	
Tl	205	165	1	He	2.530	2.530	1.09	20228	0.01	2000	
Pb	208	165	1	He	178.084	178.084	0.47	1868273	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1314731	1.19	1276810	102.97	60	120	
Sc	45	1	He	146202	1.78	163460	89.44	60	120	
Sc	45	2	NoGas	8735260	0.77	8842934	98.78	60	120	
Rh	103	1	He	841712	0.86	1010526	83.29	60	120	
In	115	1	He	221008	1.97	257801	85.73	60	120	
Tb	159	1	He	1020456	1.30	1155473	88.32	60	120	
Ho	165	1	He	1023565	0.42	1147359	89.21	60	120	
Bi	209	1	He	677638	0.87	790610	85.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-14-c@2
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:55:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	215.493	215.493	1.14	3514048	0.01	10000	
Be	9	45	2	NoGas	4.211	4.211	5.01	19897	0.02	2000	
B	11	6	2	NoGas	65.365	65.365	2.14	221403	0.03	300	
Na	23	45	1	He	766.185	766.185	4.67	312170	0.25	500000	
Mg	24	45	1	He	65033.094	65033.094	3.30	14516602	0.45	500000	
Al	27	45	1	He	83227.895	83227.895	4.19	7805617	1.07	200000	
K	39	45	1	He	14584.158	14584.158	4.40	1607440	0.91	500000	
Ca	44	45	1	He	70794.247	70794.247	4.58	449924	15.73	500000	
Ti	47	45	1	He	442.405	442.405	4.36	20243	2.19	2500	
V	51	45	1	He	284.147	284.147	5.78	446387	0.06	10000	
Cr	52	45	1	He	416.677	416.677	4.04	815493	0.05	10000	
Mn	55	45	1	He	6591.984	6591.984	4.16	6493722	0.10	10000	
Fe	56	45	1	He	213796.694	213796.694	3.72	330448138	0.06	200000	>LDR
Co	59	45	1	He	115.032	115.032	4.09	408429	0.03	5000	
Ni	60	45	1	He	421.182	421.182	4.18	415074	0.10	10000	
Cu	63	45	1	He	166.550	166.550	4.02	466974	0.04	10000	
Zn	66	45	1	He	408.069	408.069	4.17	133273	0.31	10000	
As	75	115	1	He	163.686	163.686	4.32	33614	0.49	10000	
Se	78	115	1	He	10.718	10.718	10.40	109	9.84	10000	
Sr	88	103	1	He	120.540	120.540	3.66	110691	0.11	10000	
Mo	95	103	1	He	15.349	15.349	1.17	16955	0.09	2000	
Ag	107	103	1	He	0.484	0.484	2.50	1923	0.03	300	
Cd	111	115	1	He	4.143	4.143	3.66	1900	0.22	4000	
Sn	118	115	1	He	44.714	44.714	6.14	40000	0.11	2000	
Sb	123	115	1	He	0.995	0.995	3.24	993	0.10	200	
Ba	137	115	1	He	172.946	172.946	5.17	59357	0.29	10000	
W	182	159	1	He	13.882	13.882	3.82	71360	0.02	2500	
Tl	205	165	1	He	1.723	1.723	8.66	13339	0.01	2000	
Pb	208	165	1	He	164.438	164.438	4.23	1672019	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1241646	1.25	1276810	97.25	60	120	
Sc	45	1	He	138134	4.06	163460	84.51	60	120	
Sc	45	2	NoGas	8439601	1.32	8842934	95.44	60	120	
Rh	103	1	He	788720	3.78	1010526	78.05	60	120	
In	115	1	He	208366	4.76	257801	80.82	60	120	
Tb	159	1	He	980182	4.56	1155473	84.83	60	120	
Ho	165	1	He	993230	4.38	1147359	86.57	60	120	
Bi	209	1	He	653561	3.61	790610	82.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-15-a@2
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:59:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.081	1.081	4.82	93949	0.00	10000	
Be	9	45	2	NoGas	0.087	0.087	19.27	474	0.02	2000	
B	11	6	2	NoGas	6.167	6.167	6.89	32711	0.02	300	
Na	23	45	1	He	0.846	0.846	81.97	7365	0.01	500000	
Mg	24	45	1	He	12.829	12.829	36.46	3430	0.37	500000	
Al	27	45	1	He	18.137	18.137	36.35	1900	0.95	200000	
K	39	45	1	He	3.911	3.911	9.17	9036	0.04	500000	
Ca	44	45	1	He	-39.261	-39.261	-31.27	373	-10.52	500000	
Ti	47	45	1	He	0.358	0.358	67.31	18	2.01	2500	
V	51	45	1	He	-0.148	-0.148	-53.40	-78	0.19	10000	
Cr	52	45	1	He	0.036	0.036	146.21	811	0.00	10000	
Mn	55	45	1	He	0.807	0.807	75.92	1985	0.04	10000	
Fe	56	45	1	He	72.433	72.433	32.52	112221	0.06	200000	
Co	59	45	1	He	-0.077	-0.077	-7.91	137	-0.06	5000	
Ni	60	45	1	He	-0.069	-0.069	-70.66	130	-0.05	10000	
Cu	63	45	1	He	-1.094	-1.094	-1.53	1358	-0.08	10000	
Zn	66	45	1	He	-7.828	-7.828	-0.26	239	-3.28	10000	
As	75	115	1	He	0.101	0.101	33.09	47	0.21	10000	
Se	78	115	1	He	0.225	0.225	63.45	6	3.98	10000	
Sr	88	103	1	He	-0.027	-0.027	-65.50	63	-0.04	10000	
Mo	95	103	1	He	0.041	0.041	10.55	71	0.06	2000	
Ag	107	103	1	He	-0.001	-0.001	-80.65	9	-0.01	300	
Cd	111	115	1	He	0.027	0.027	24.14	14	0.19	4000	
Sn	118	115	1	He	0.438	0.438	55.95	1759	0.02	2000	
Sb	123	115	1	He	0.031	0.031	62.44	54	0.06	200	
Ba	137	115	1	He	0.058	0.058	115.43	27	0.22	10000	
W	182	159	1	He	0.144	0.144	24.92	2193	0.01	2500	
Tl	205	165	1	He	0.006	0.006	33.96	80	0.01	2000	
Pb	208	165	1	He	0.053	0.053	9.08	1618	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1351207	1.55	1276810	105.83	60	120	
Sc	45	1	He	134430	0.58	163460	82.24	60	120	
Sc	45	2	NoGas	7971256	0.24	8842934	90.14	60	120	
Rh	103	1	He	858032	0.90	1010526	84.91	60	120	
In	115	1	He	221510	0.75	257801	85.92	60	120	
Tb	159	1	He	1003337	0.76	1155473	86.83	60	120	
Ho	165	1	He	1010866	0.67	1147359	88.10	60	120	
Bi	209	1	He	685479	0.55	790610	86.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-16-a@2
Data File Name	116SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:03:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.518	119.518	1.30	2014017	0.01	10000	
Be	9	45	2	NoGas	3.729	3.729	0.96	17887	0.02	2000	
B	11	6	2	NoGas	49.174	49.174	1.05	179888	0.03	300	
Na	23	45	1	He	553.989	553.989	1.71	228991	0.24	500000	
Mg	24	45	1	He	17470.942	17470.942	1.31	3920898	0.45	500000	
Al	27	45	1	He	57353.807	57353.807	1.44	5408744	1.06	200000	
K	39	45	1	He	8001.217	8001.217	0.24	890835	0.90	500000	
Ca	44	45	1	He	43905.982	43905.982	1.24	280853	15.63	500000	
Ti	47	45	1	He	360.836	360.836	0.84	16603	2.17	2500	
V	51	45	1	He	127.288	127.288	0.83	201242	0.06	10000	
Cr	52	45	1	He	85.796	85.796	1.28	169445	0.05	10000	
Mn	55	45	1	He	1724.366	1724.366	0.79	1708994	0.10	10000	
Fe	56	45	1	He	116082.495	116082.495	1.52	180389642	0.06	200000	
Co	59	45	1	He	171.852	171.852	0.80	613327	0.03	5000	
Ni	60	45	1	He	6745.297	6745.297	1.28	6681182	0.10	10000	
Cu	63	45	1	He	208.972	208.972	0.92	587996	0.04	10000	
Zn	66	45	1	He	750.782	750.782	1.03	244230	0.31	10000	
As	75	115	1	He	71.024	71.024	1.01	15091	0.47	10000	
Se	78	115	1	He	20.498	20.498	6.57	213	9.63	10000	
Sr	88	103	1	He	102.497	102.497	0.69	98295	0.10	10000	
Mo	95	103	1	He	25.064	25.064	3.23	28877	0.09	2000	
Ag	107	103	1	He	0.380	0.380	7.86	1577	0.02	300	
Cd	111	115	1	He	12.871	12.871	1.62	6098	0.21	4000	
Sn	118	115	1	He	37.285	37.285	1.04	34718	0.11	2000	
Sb	123	115	1	He	1.958	1.958	8.32	1996	0.10	200	
Ba	137	115	1	He	334.404	334.404	0.71	118666	0.28	10000	
W	182	159	1	He	1.027	1.027	7.40	6876	0.01	2500	
Tl	205	165	1	He	2.233	2.233	1.40	17945	0.01	2000	
Pb	208	165	1	He	144.883	144.883	1.19	1527892	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320943	0.89	1276810	103.46	60	120	
Sc	45	1	He	138744	0.34	163460	84.88	60	120	
Sc	45	2	NoGas	8559482	0.30	8842934	96.79	60	120	
Rh	103	1	He	822834	0.48	1010526	81.43	60	120	
In	115	1	He	215104	0.75	257801	83.44	60	120	
Tb	159	1	He	1021500	0.72	1155473	88.41	60	120	
Ho	165	1	He	1028780	0.47	1147359	89.67	60	120	
Bi	209	1	He	674846	0.96	790610	85.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-17-a@2
Data File Name	117SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:07:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	78.034	78.034	2.37	1344790	0.01	10000	
Be	9	45	2	NoGas	2.424	2.424	3.35	11667	0.02	2000	
B	11	6	2	NoGas	30.216	30.216	1.09	115857	0.03	300	
Na	23	45	1	He	1551.417	1551.417	1.37	639693	0.24	500000	
Mg	24	45	1	He	9928.987	9928.987	0.66	2269512	0.44	500000	
Al	27	45	1	He	36743.309	36743.309	1.49	3528534	1.04	200000	
K	39	45	1	He	6310.008	6310.008	0.49	717278	0.88	500000	
Ca	44	45	1	He	5743.053	5743.053	1.41	37967	15.13	500000	
Ti	47	45	1	He	291.963	291.963	2.44	13678	2.13	2500	
V	51	45	1	He	92.206	92.206	1.91	148484	0.06	10000	
Cr	52	45	1	He	57.153	57.153	1.08	115206	0.05	10000	
Mn	55	45	1	He	1139.057	1139.057	0.60	1149976	0.10	10000	
Fe	56	45	1	He	117207.326	117207.326	0.30	185473362	0.06	200000	
Co	59	45	1	He	36.319	36.319	0.90	132323	0.03	5000	
Ni	60	45	1	He	544.899	544.899	0.82	549769	0.10	10000	
Cu	63	45	1	He	84.147	84.147	0.82	243793	0.03	10000	
Zn	66	45	1	He	306.691	306.691	2.18	103244	0.30	10000	
As	75	115	1	He	72.002	72.002	0.26	15548	0.46	10000	
Se	78	115	1	He	15.174	15.174	2.11	161	9.43	10000	
Sr	88	103	1	He	34.542	34.542	1.03	33902	0.10	10000	
Mo	95	103	1	He	25.893	25.893	0.70	30479	0.08	2000	
Ag	107	103	1	He	0.129	0.129	12.06	554	0.02	300	
Cd	111	115	1	He	3.044	3.044	1.26	1466	0.21	4000	
Sn	118	115	1	He	25.562	25.562	2.32	24611	0.10	2000	
Sb	123	115	1	He	1.027	1.027	4.51	1074	0.10	200	
Ba	137	115	1	He	174.819	174.819	0.92	63050	0.28	10000	
W	182	159	1	He	0.306	0.306	14.68	3126	0.01	2500	
Tl	205	165	1	He	1.735	1.735	2.41	14024	0.01	2000	
Pb	208	165	1	He	47.653	47.653	0.45	505862	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1334436	1.43	1276810	104.51	60	120	
Sc	45	1	He	141280	1.34	163460	86.43	60	120	
Sc	45	2	NoGas	8564730	0.43	8842934	96.85	60	120	
Rh	103	1	He	840627	0.25	1010526	83.19	60	120	
In	115	1	He	218610	1.17	257801	84.80	60	120	
Tb	159	1	He	1035453	0.56	1155473	89.61	60	120	
Ho	165	1	He	1034071	0.65	1147359	90.13	60	120	
Bi	209	1	He	670737	0.41	790610	84.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-18-a@2
Data File Name	118SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:12:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.996	113.996	1.37	1889410	0.01	10000	
Be	9	45	2	NoGas	5.232	5.232	2.93	24595	0.02	2000	
B	11	6	2	NoGas	76.514	76.514	0.13	265970	0.03	300	
Na	23	45	1	He	1611.554	1611.554	1.90	633061	0.25	500000	
Mg	24	45	1	He	135875.077	135875.077	1.40	29593222	0.46	500000	
Al	27	45	1	He	52076.499	52076.499	2.67	4766885	1.09	200000	
K	39	45	1	He	9080.352	9080.352	1.88	980071	0.93	500000	
Ca	44	45	1	He	367484.032	367484.032	1.98	2277007	16.14	500000	
Ti	47	45	1	He	613.983	613.983	2.19	27420	2.24	2500	
V	51	45	1	He	91.359	91.359	2.70	140237	0.07	10000	
Cr	52	45	1	He	73.013	73.013	2.10	140079	0.05	10000	
Mn	55	45	1	He	2570.426	2570.426	2.37	2472043	0.10	10000	
Fe	56	45	1	He	81954.727	81954.727	2.74	123621986	0.07	200000	
Co	59	45	1	He	32.337	32.337	1.96	112348	0.03	5000	
Ni	60	45	1	He	249.704	249.704	2.55	240252	0.10	10000	
Cu	63	45	1	He	110.082	110.082	2.40	302693	0.04	10000	
Zn	66	45	1	He	391.880	391.880	1.90	125017	0.31	10000	
As	75	115	1	He	47.668	47.668	1.40	9654	0.49	10000	
Se	78	115	1	He	14.512	14.512	5.61	144	10.06	10000	
Sr	88	103	1	He	370.506	370.506	0.67	330593	0.11	10000	
Mo	95	103	1	He	7.731	7.731	1.70	8308	0.09	2000	
Ag	107	103	1	He	0.231	0.231	7.08	896	0.03	300	
Cd	111	115	1	He	2.021	2.021	4.36	913	0.22	4000	
Sn	118	115	1	He	36.229	36.229	0.50	32165	0.11	2000	
Sb	123	115	1	He	1.495	1.495	4.21	1457	0.10	200	
Ba	137	115	1	He	417.852	417.852	1.22	141227	0.30	10000	
W	182	159	1	He	1.133	1.133	6.34	7102	0.02	2500	
Tl	205	165	1	He	0.735	0.735	2.37	5709	0.01	2000	
Pb	208	165	1	He	143.281	143.281	0.54	1454550	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1282591	0.34	1276810	100.45	60	120	
Sc	45	1	He	134665	1.13	163460	82.38	60	120	
Sc	45	2	NoGas	8402598	1.19	8842934	95.02	60	120	
Rh	103	1	He	766026	1.92	1010526	75.80	60	120	
In	115	1	He	204885	1.68	257801	79.47	60	120	
Tb	159	1	He	976167	0.63	1155473	84.48	60	120	
Ho	165	1	He	990320	0.77	1147359	86.31	60	120	
Bi	209	1	He	623768	1.01	790610	78.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-19-a@2
Data File Name	119SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:16:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	141.671	141.671	0.77	2411824	0.01	10000	
Be	9	45	2	NoGas	3.037	3.037	3.28	14832	0.02	2000	
B	11	6	2	NoGas	59.189	59.189	1.35	211520	0.03	300	
Na	23	45	1	He	655.273	655.273	2.05	276977	0.24	500000	
Mg	24	45	1	He	43253.301	43253.301	2.40	9974418	0.43	500000	
Al	27	45	1	He	53438.429	53438.429	2.15	5178883	1.03	200000	
K	39	45	1	He	10891.718	10891.718	1.60	1242874	0.88	500000	
Ca	44	45	1	He	120793.564	120793.564	1.59	792914	15.23	500000	
Ti	47	45	1	He	443.060	443.060	0.95	20952	2.11	2500	
V	51	45	1	He	89.985	89.985	2.20	146242	0.06	10000	
Cr	52	45	1	He	79.875	79.875	1.82	162172	0.05	10000	
Mn	55	45	1	He	1767.829	1767.829	2.53	1800529	0.10	10000	
Fe	56	45	1	He	109634.690	109634.690	1.87	175083037	0.06	200000	
Co	59	45	1	He	54.511	54.511	2.02	200214	0.03	5000	
Ni	60	45	1	He	140.721	140.721	1.53	143445	0.10	10000	
Cu	63	45	1	He	91.916	91.916	2.39	268350	0.03	10000	
Zn	66	45	1	He	306.095	306.095	1.24	104013	0.29	10000	
As	75	115	1	He	35.467	35.467	1.26	7491	0.47	10000	
Se	78	115	1	He	15.149	15.149	7.60	157	9.66	10000	
Sr	88	103	1	He	217.334	217.334	1.04	204243	0.11	10000	
Mo	95	103	1	He	14.498	14.498	1.39	16387	0.09	2000	
Ag	107	103	1	He	0.184	0.184	12.67	752	0.02	300	
Cd	111	115	1	He	0.647	0.647	5.42	305	0.21	4000	
Sn	118	115	1	He	19.041	19.041	3.03	18236	0.10	2000	
Sb	123	115	1	He	0.457	0.457	15.03	479	0.10	200	
Ba	137	115	1	He	445.067	445.067	1.66	156729	0.28	10000	
W	182	159	1	He	0.206	0.206	15.90	2534	0.01	2500	
Tl	205	165	1	He	1.542	1.542	1.32	12283	0.01	2000	
Pb	208	165	1	He	53.590	53.590	0.61	560291	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303678	1.00	1276810	102.10	60	120	
Sc	45	1	He	142590	0.88	163460	87.23	60	120	
Sc	45	2	NoGas	8703684	0.20	8842934	98.43	60	120	
Rh	103	1	He	806742	1.41	1010526	79.83	60	120	
In	115	1	He	213463	0.91	257801	82.80	60	120	
Tb	159	1	He	1012173	0.98	1155473	87.60	60	120	
Ho	165	1	He	1018750	1.20	1147359	88.79	60	120	
Bi	209	1	He	655127	0.55	790610	82.86	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-20-a@2
Data File Name	120SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:20:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	140.524	140.524	2.50	2384153	0.01	10000	
Be	9	45	2	NoGas	2.784	2.784	5.05	13554	0.02	2000	
B	11	6	2	NoGas	55.762	55.762	2.30	201674	0.03	300	
Na	23	45	1	He	872.929	872.929	1.64	361963	0.24	500000	
Mg	24	45	1	He	45406.632	45406.632	1.44	10341385	0.44	500000	
Al	27	45	1	He	52991.620	52991.620	1.75	5071738	1.04	200000	
K	39	45	1	He	10721.956	10721.956	1.29	1208463	0.89	500000	
Ca	44	45	1	He	136111.108	136111.108	1.44	882315	15.43	500000	
Ti	47	45	1	He	457.521	457.521	1.52	21365	2.14	2500	
V	51	45	1	He	91.109	91.109	1.31	146233	0.06	10000	
Cr	52	45	1	He	78.652	78.652	1.72	157717	0.05	10000	
Mn	55	45	1	He	1754.533	1754.533	2.10	1764959	0.10	10000	
Fe	56	45	1	He	110441.726	110441.726	1.48	174182349	0.06	200000	
Co	59	45	1	He	53.944	53.944	1.60	195675	0.03	5000	
Ni	60	45	1	He	138.718	138.718	2.39	139635	0.10	10000	
Cu	63	45	1	He	90.993	90.993	1.65	262397	0.03	10000	
Zn	66	45	1	He	276.176	276.176	2.19	92949	0.30	10000	
As	75	115	1	He	41.446	41.446	0.90	8751	0.47	10000	
Se	78	115	1	He	13.722	13.722	5.22	142	9.63	10000	
Sr	88	103	1	He	262.479	262.479	1.64	247448	0.11	10000	
Mo	95	103	1	He	13.863	13.863	0.41	15722	0.09	2000	
Ag	107	103	1	He	0.197	0.197	8.34	808	0.02	300	
Cd	111	115	1	He	0.496	0.496	3.24	234	0.21	4000	
Sn	118	115	1	He	22.294	22.294	3.18	21129	0.11	2000	
Sb	123	115	1	He	0.415	0.415	1.32	437	0.09	200	
Ba	137	115	1	He	357.653	357.653	0.99	125985	0.28	10000	
W	182	159	1	He	0.231	0.231	2.31	2660	0.01	2500	
Tl	205	165	1	He	1.479	1.479	1.49	11722	0.01	2000	
Pb	208	165	1	He	52.107	52.107	0.16	542083	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1315300	0.75	1276810	103.01	60	120	
Sc	45	1	He	140826	1.47	163460	86.15	60	120	
Sc	45	2	NoGas	8673198	1.78	8842934	98.08	60	120	
Rh	103	1	He	809360	0.78	1010526	80.09	60	120	
In	115	1	He	213525	0.91	257801	82.83	60	120	
Tb	159	1	He	1010031	0.58	1155473	87.41	60	120	
Ho	165	1	He	1013582	0.83	1147359	88.34	60	120	
Bi	209	1	He	647499	1.44	790610	81.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-1-a@200
Data File Name	121SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:24:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.241	1.241	4.22	98564	0.00	10000	
Be	9	45	2	NoGas	0.065	0.065	12.88	385	0.02	2000	
B	11	6	2	NoGas	4.963	4.963	4.39	28460	0.02	300	
Na	23	45	1	He	11.572	11.572	2.20	11545	0.10	500000	
Mg	24	45	1	He	86.246	86.246	3.47	19426	0.44	500000	
Al	27	45	1	He	366.902	366.902	3.36	33825	1.08	200000	
K	39	45	1	He	51.571	51.571	12.03	14147	0.36	500000	
Ca	44	45	1	He	1095.992	1095.992	2.14	7406	14.80	500000	
Ti	47	45	1	He	10.163	10.163	6.95	456	2.23	2500	
V	51	45	1	He	1.215	1.215	35.35	2010	0.06	10000	
Cr	52	45	1	He	21.068	21.068	1.92	40946	0.05	10000	
Mn	55	45	1	He	423.172	423.172	1.10	408013	0.10	10000	
Fe	56	45	1	He	1058.776	1058.776	3.89	1599749	0.07	200000	
Co	59	45	1	He	70.225	70.225	1.46	243501	0.03	5000	
Ni	60	45	1	He	1854.961	1854.961	1.14	1783575	0.10	10000	
Cu	63	45	1	He	78.191	78.191	1.30	216259	0.04	10000	
Zn	66	45	1	He	29.723	29.723	2.83	11962	0.25	10000	
As	75	115	1	He	6.123	6.123	1.32	1377	0.44	10000	
Se	78	115	1	He	0.921	0.921	11.77	13	7.03	10000	
Sr	88	103	1	He	2.370	2.370	5.00	2432	0.10	10000	
Mo	95	103	1	He	0.630	0.630	9.61	770	0.08	2000	
Ag	107	103	1	He	0.278	0.278	4.13	1196	0.02	300	
Cd	111	115	1	He	3.827	3.827	0.44	1887	0.20	4000	
Sn	118	115	1	He	4.382	4.382	11.90	5457	0.08	2000	
Sb	123	115	1	He	4.511	4.511	1.53	4757	0.09	200	
Ba	137	115	1	He	17.812	17.812	3.16	6580	0.27	10000	
W	182	159	1	He	0.104	0.104	49.40	1963	0.01	2500	
Tl	205	165	1	He	0.050	0.050	17.88	421	0.01	2000	
Pb	208	165	1	He	112.345	112.345	1.21	1154210	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1350175	0.34	1276810	105.75	60	120	
Sc	45	1	He	134687	1.66	163460	82.40	60	120	
Sc	45	2	NoGas	8153573	0.69	8842934	92.20	60	120	
Rh	103	1	He	849053	0.97	1010526	84.02	60	120	
In	115	1	He	223792	1.06	257801	86.81	60	120	
Tb	159	1	He	991773	1.28	1155473	85.83	60	120	
Ho	165	1	He	1002131	1.24	1147359	87.34	60	120	
Bi	209	1	He	692668	0.42	790610	87.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	122_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:28:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.374	1.326	888220	0.71	50	106.7	89.5	110.5	
Be	9	45	2	NoGas	50.762	0.867	227616	0.43	50	101.5	89.5	110.5	
B	11	6	2	NoGas	45.416	1.036	164750	1.06	50	90.8	89.5	110.5	
Na	23	45	1	He	24630.070	0.132	9541751	0.43	25000	98.5	89.5	110.5	
Mg	24	45	1	He	24443.993	1.588	5305904	2.04	25000	97.8	89.5	110.5	
Al	27	45	1	He	247.367	3.291	22804	3.12	250	98.9	89.5	110.5	
K	39	45	1	He	25443.256	0.653	2721027	0.52	25000	101.8	89.5	110.5	
Ca	44	45	1	He	24766.748	0.767	153501	1.22	25000	99.1	89.5	110.5	
Ti	47	45	1	He	52.210	4.786	2325	4.26	50	104.4	89.5	110.5	
V	51	45	1	He	49.961	1.023	76490	1.50	50	99.9	89.5	110.5	
Cr	52	45	1	He	49.848	1.075	95530	1.30	50	99.7	89.5	110.5	
Mn	55	45	1	He	246.939	1.060	237745	1.26	250	98.8	89.5	110.5	
Fe	56	45	1	He	12388.292	1.345	18622016	1.00	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.471	0.273	171052	0.56	50	98.9	89.5	110.5	
Ni	60	45	1	He	49.867	1.357	47969	1.68	50	99.7	89.5	110.5	
Cu	63	45	1	He	48.962	1.114	136550	1.40	50	97.9	89.5	110.5	
Zn	66	45	1	He	45.797	1.346	16920	1.65	50	91.6	89.5	110.5	
As	75	115	1	He	48.071	0.934	10165	0.24	50	96.1	89.5	110.5	
Se	78	115	1	He	49.448	3.293	506	2.85	50	98.9	89.5	110.5	
Sr	88	103	1	He	50.783	2.143	48439	2.35	50	101.6	89.5	110.5	
Mo	95	103	1	He	50.993	3.195	58367	3.51	50	102.0	89.5	110.5	
Ag	107	103	1	He	50.122	0.186	205425	0.22	50	100.2	89.5	110.5	
Cd	111	115	1	He	49.300	1.314	23223	0.88	50	98.6	89.5	110.5	
Sn	118	115	1	He	49.993	2.432	45840	1.81	50	100.0	89.5	110.5	
Sb	123	115	1	He	50.074	1.342	50258	0.48	50	100.1	89.5	110.5	
Ba	137	115	1	He	51.849	3.100	18299	2.11	50	103.7	89.5	110.5	
W	182	159	1	He	50.193	0.382	255481	1.06	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.390	1.663	388786	1.93	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.760	0.455	515440	0.36	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303489	1.62	1276810	102.09	60	120	
Sc	45	1	He	134190	0.55	163460	82.09	60	120	
Sc	45	2	NoGas	8040726	0.85	8842934	90.93	60	120	
Rh	103	1	He	817623	0.32	1010526	80.91	60	120	
In	115	1	He	213914	0.99	257801	82.98	60	120	
Tb	159	1	He	983582	0.83	1155473	85.12	60	120	
Ho	165	1	He	989327	0.81	1147359	86.23	60	120	
Bi	209	1	He	646487	1.20	790610	81.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:32:56-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.082	1.7	94863	0.3	8	
Be	9	45	2	NoGas	0.299	2.1	1430	2.4	1	
B	11	6	2	NoGas	4.017	3.6	24917	1.4	20	
Na	23	45	1	He	55.522	6.9	28456	5.1	1000	
Mg	24	45	1	He	44.100	16.4	10192	15.5	1000	
Al	27	45	1	He	1.277	10.8	359	3.5	50	
K	39	45	1	He	50.495	6.5	13958	2.8	1000	
Ca	44	45	1	He	33.614	44.4	821	11.2	1000	
Ti	47	45	1	He	0.109	119.0	7	86.6	20	
V	51	45	1	He	0.073	24.6	261	10.2	2	
Cr	52	45	1	He	0.041	20.5	817	1.5	2	
Mn	55	45	1	He	0.247	19.3	1443	3.4	2	
Fe	56	45	1	He	31.517	15.4	50461	14.4	50	
Co	59	45	1	He	-0.008	-275.2	371	21.1	1	
Ni	60	45	1	He	0.058	109.7	251	24.1	2	
Cu	63	45	1	He	-0.940	-7.7	1767	10.9	2	
Zn	66	45	1	He	-3.785	-10.3	1493	8.5	20	
As	75	115	1	He	0.115	20.8	50	11.0	2	
Se	78	115	1	He	0.539	8.1	9	5.5	2	
Sr	88	103	1	He	0.092	62.0	182	31.2	10	
Mo	95	103	1	He	0.191	11.7	250	10.6	2	
Ag	107	103	1	He	0.084	13.6	372	13.2	0.2	
Cd	111	115	1	He	0.100	12.1	50	12.3	0.2	
Sn	118	115	1	He	-0.394	-57.5	993	21.4	10	
Sb	123	115	1	He	0.162	22.7	190	19.9	2	
Ba	137	115	1	He	0.121	19.4	50	17.6	5	
W	182	159	1	He	0.329	10.0	3097	5.1	10	
Tl	205	165	1	He	0.170	30.0	1350	29.4	0.5	
Pb	208	165	1	He	0.118	10.5	2259	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1338503	0.56	1276810	104.83	60	120	
Sc	45	1	He	133913	0.48	163460	81.92	60	120	
Sc	45	2	NoGas	8047261	0.47	8842934	91.00	60	120	
Rh	103	1	He	853995	0.09	1010526	84.51	60	120	
In	115	1	He	221596	0.55	257801	85.96	60	120	
Tb	159	1	He	986806	0.47	1155473	85.40	60	120	
Ho	165	1	He	997375	0.36	1147359	86.93	60	120	
Bi	209	1	He	674352	0.81	790610	85.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-2-a@2
Data File Name	124SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:37:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.879	113.879	1.51	1978844	0.01	10000	
Be	9	45	2	NoGas	2.838	2.838	1.08	14032	0.02	2000	
B	11	6	2	NoGas	29.325	29.325	1.40	112466	0.03	300	
Na	23	45	1	He	238.426	238.426	2.54	103347	0.23	500000	
Mg	24	45	1	He	12211.096	12211.096	4.04	2758228	0.44	500000	
Al	27	45	1	He	49081.329	49081.329	3.02	4660003	1.05	200000	
K	39	45	1	He	7528.396	7528.396	2.12	844277	0.89	500000	
Ca	44	45	1	He	13993.247	13993.247	3.09	90538	15.46	500000	
Ti	47	45	1	He	286.508	286.508	2.78	13275	2.16	2500	
V	51	45	1	He	107.523	107.523	2.32	171156	0.06	10000	
Cr	52	45	1	He	98.698	98.698	2.60	196101	0.05	10000	
Mn	55	45	1	He	1268.285	1268.285	2.21	1265621	0.10	10000	
Fe	56	45	1	He	109334.528	109334.528	2.69	171038651	0.06	200000	
Co	59	45	1	He	531.102	531.102	2.51	1907248	0.03	5000	
Ni	60	45	1	He	7535.044	7535.044	1.82	7513032	0.10	10000	
Cu	63	45	1	He	91.622	91.622	2.14	262028	0.03	10000	
Zn	66	45	1	He	428.831	428.831	3.30	141584	0.30	10000	
As	75	115	1	He	56.822	56.822	1.19	12116	0.47	10000	
Se	78	115	1	He	15.124	15.124	2.60	158	9.55	10000	
Sr	88	103	1	He	27.532	27.532	1.98	26496	0.10	10000	
Mo	95	103	1	He	26.927	26.927	1.75	31056	0.09	2000	
Ag	107	103	1	He	0.160	0.160	15.64	670	0.02	300	
Cd	111	115	1	He	1.639	1.639	5.54	779	0.21	4000	
Sn	118	115	1	He	20.709	20.709	3.92	19916	0.10	2000	
Sb	123	115	1	He	0.755	0.755	8.27	786	0.10	200	
Ba	137	115	1	He	134.412	134.412	2.33	47834	0.28	10000	
W	182	159	1	He	0.335	0.335	20.37	3175	0.01	2500	
Tl	205	165	1	He	2.640	2.640	1.42	20771	0.01	2000	
Pb	208	165	1	He	50.246	50.246	0.64	519514	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1330888	0.82	1276810	104.24	60	120	
Sc	45	1	He	139678	2.30	163460	85.45	60	120	
Sc	45	2	NoGas	8809092	0.84	8842934	99.62	60	120	
Rh	103	1	He	823565	1.26	1010526	81.50	60	120	
In	115	1	He	215777	3.22	257801	83.70	60	120	
Tb	159	1	He	1001484	1.24	1155473	86.67	60	120	
Ho	165	1	He	1007248	1.17	1147359	87.79	60	120	
Bi	209	1	He	673564	1.19	790610	85.20	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-3-a@2
Data File Name	125SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:41:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	94.291	94.291	1.54	1568540	0.01	10000	
Be	9	45	2	NoGas	2.912	2.912	2.69	13657	0.02	2000	
B	11	6	2	NoGas	30.893	30.893	2.26	116487	0.03	300	
Na	23	45	1	He	256.336	256.336	2.06	108144	0.24	500000	
Mg	24	45	1	He	11278.518	11278.518	1.60	2491615	0.45	500000	
Al	27	45	1	He	39785.764	39785.764	0.97	3693394	1.08	200000	
K	39	45	1	He	7127.939	7127.939	0.33	782156	0.91	500000	
Ca	44	45	1	He	5677.623	5677.623	2.03	36291	15.64	500000	
Ti	47	45	1	He	295.798	295.798	0.90	13397	2.21	2500	
V	51	45	1	He	92.624	92.624	2.71	144164	0.06	10000	
Cr	52	45	1	He	82.347	82.347	1.32	160109	0.05	10000	
Mn	55	45	1	He	763.739	763.739	1.43	745758	0.10	10000	
Fe	56	45	1	He	95316.957	95316.957	1.51	145793608	0.07	200000	
Co	59	45	1	He	638.154	638.154	1.79	2240570	0.03	5000	
Ni	60	45	1	He	7157.805	7157.805	0.52	6978993	0.10	10000	
Cu	63	45	1	He	113.822	113.822	0.95	317248	0.04	10000	
Zn	66	45	1	He	413.310	413.310	1.98	133555	0.31	10000	
As	75	115	1	He	40.022	40.022	0.36	8346	0.48	10000	
Se	78	115	1	He	20.282	20.282	3.55	206	9.83	10000	
Sr	88	103	1	He	30.063	30.063	2.16	28183	0.11	10000	
Mo	95	103	1	He	25.842	25.842	0.84	29044	0.09	2000	
Ag	107	103	1	He	0.159	0.159	10.15	652	0.02	300	
Cd	111	115	1	He	4.974	4.974	2.55	2311	0.22	4000	
Sn	118	115	1	He	20.937	20.937	0.55	19675	0.11	2000	
Sb	123	115	1	He	1.032	1.032	6.66	1042	0.10	200	
Ba	137	115	1	He	251.362	251.362	0.30	87437	0.29	10000	
W	182	159	1	He	0.405	0.405	8.69	3527	0.01	2500	
Tl	205	165	1	He	2.156	2.156	0.32	16786	0.01	2000	
Pb	208	165	1	He	51.493	51.493	0.05	526780	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1314929	0.19	1276810	102.99	60	120	
Sc	45	1	He	136578	1.34	163460	83.55	60	120	
Sc	45	2	NoGas	8357768	0.91	8842934	94.51	60	120	
Rh	103	1	He	802610	0.09	1010526	79.42	60	120	
In	115	1	He	210850	1.07	257801	81.79	60	120	
Tb	159	1	He	998646	1.05	1155473	86.43	60	120	
Ho	165	1	He	996699	0.32	1147359	86.87	60	120	
Bi	209	1	He	655312	0.77	790610	82.89	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-4-a@2
Data File Name	126SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:45:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	102.303	102.303	0.91	1710357	0.01	10000	
Be	9	45	2	NoGas	9.911	9.911	1.06	46689	0.02	2000	
B	11	6	2	NoGas	76.591	76.591	1.26	267904	0.03	300	
Na	23	45	1	He	3687.440	3687.440	3.56	1407228	0.26	500000	
Mg	24	45	1	He	73180.490	73180.490	1.98	15580519	0.47	500000	
Al	27	45	1	He	61069.580	61069.580	2.83	5464301	1.12	200000	
K	39	45	1	He	6483.067	6483.067	2.63	686419	0.94	500000	
Ca	44	45	1	He	375605.832	375605.832	2.67	2275049	16.51	500000	
Ti	47	45	1	He	738.298	738.298	3.48	32227	2.29	2500	
V	51	45	1	He	51.969	51.969	4.44	78033	0.07	10000	
Cr	52	45	1	He	133.656	133.656	2.80	250040	0.05	10000	
Mn	55	45	1	He	3046.775	3046.775	2.20	2864012	0.11	10000	
Fe	56	45	1	He	77883.486	77883.486	2.81	114832029	0.07	200000	
Co	59	45	1	He	38.080	38.080	3.59	129249	0.03	5000	
Ni	60	45	1	He	359.376	359.376	3.64	337908	0.11	10000	
Cu	63	45	1	He	141.572	141.572	2.44	379310	0.04	10000	
Zn	66	45	1	He	293.450	293.450	3.10	92168	0.32	10000	
As	75	115	1	He	111.772	111.772	1.65	22193	0.50	10000	
Se	78	115	1	He	18.388	18.388	3.81	179	10.29	10000	
Sr	88	103	1	He	557.892	557.892	1.78	486504	0.11	10000	
Mo	95	103	1	He	14.037	14.037	1.29	14724	0.10	2000	
Ag	107	103	1	He	0.658	0.658	2.05	2480	0.03	300	
Cd	111	115	1	He	41.681	41.681	1.88	18463	0.23	4000	
Sn	118	115	1	He	25.650	25.650	1.26	22716	0.11	2000	
Sb	123	115	1	He	23.085	23.085	1.23	21797	0.11	200	
Ba	137	115	1	He	599.250	599.250	0.85	198833	0.30	10000	
W	182	159	1	He	0.715	0.715	5.64	4923	0.01	2500	
Tl	205	165	1	He	1.026	1.026	2.98	7840	0.01	2000	
Pb	208	165	1	He	2061.759	2061.759	1.29	20619723	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1290745	0.78	1276810	101.09	60	120	
Sc	45	1	He	131637	0.36	163460	80.53	60	120	
Sc	45	2	NoGas	8433687	0.71	8842934	95.37	60	120	
Rh	103	1	He	748694	1.69	1010526	74.09	60	120	
In	115	1	He	201112	1.46	257801	78.01	60	120	
Tb	159	1	He	960941	0.58	1155473	83.16	60	120	
Ho	165	1	He	976252	0.48	1147359	85.09	60	120	
Bi	209	1	He	615199	0.94	790610	77.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-5-a@2
Data File Name	127SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:49:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.535	49.535	1.52	861304	0.01	10000	
Be	9	45	2	NoGas	2.279	2.279	3.95	10689	0.02	2000	
B	11	6	2	NoGas	35.580	35.580	1.73	133005	0.03	300	
Na	23	45	1	He	752.325	752.325	2.05	302712	0.25	500000	
Mg	24	45	1	He	36140.772	36140.772	2.52	7960725	0.45	500000	
Al	27	45	1	He	26275.945	26275.945	2.78	2432378	1.08	200000	
K	39	45	1	He	4340.679	4340.679	2.57	478355	0.91	500000	
Ca	44	45	1	He	162901.072	162901.072	2.69	1021109	15.95	500000	
Ti	47	45	1	He	406.221	406.221	3.73	18344	2.21	2500	
V	51	45	1	He	57.443	57.443	3.58	89214	0.06	10000	
Cr	52	45	1	He	37.146	37.146	4.78	72415	0.05	10000	
Mn	55	45	1	He	2435.071	2435.071	3.32	2368129	0.10	10000	
Fe	56	45	1	He	78754.686	78754.686	3.26	120117315	0.07	200000	
Co	59	45	1	He	32.469	32.469	3.04	114066	0.03	5000	
Ni	60	45	1	He	105.809	105.809	2.80	103064	0.10	10000	
Cu	63	45	1	He	82.044	82.044	3.63	229222	0.04	10000	
Zn	66	45	1	He	252.136	252.136	2.87	82307	0.31	10000	
As	75	115	1	He	267.811	267.811	0.84	55785	0.48	10000	
Se	78	115	1	He	14.447	14.447	11.63	148	9.76	10000	
Sr	88	103	1	He	221.161	221.161	0.43	207002	0.11	10000	
Mo	95	103	1	He	19.899	19.899	2.52	22393	0.09	2000	
Ag	107	103	1	He	0.127	0.127	1.19	521	0.02	300	
Cd	111	115	1	He	6.726	6.726	2.18	3129	0.21	4000	
Sn	118	115	1	He	19.307	19.307	4.80	18266	0.11	2000	
Sb	123	115	1	He	1.661	1.661	7.18	1666	0.10	200	
Ba	137	115	1	He	283.333	283.333	1.08	98685	0.29	10000	
W	182	159	1	He	0.305	0.305	14.32	2986	0.01	2500	
Tl	205	165	1	He	1.067	1.067	1.04	8371	0.01	2000	
Pb	208	165	1	He	51.587	51.587	0.57	530749	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1319685	1.10	1276810	103.36	60	120	
Sc	45	1	He	136225	1.87	163460	83.34	60	120	
Sc	45	2	NoGas	8344921	1.44	8842934	94.37	60	120	
Rh	103	1	He	803439	0.45	1010526	79.51	60	120	
In	115	1	He	211138	1.58	257801	81.90	60	120	
Tb	159	1	He	990135	1.77	1155473	85.69	60	120	
Ho	165	1	He	1002414	0.99	1147359	87.37	60	120	
Bi	209	1	He	642481	1.17	790610	81.26	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	128ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:53:45-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.185	6.4	97848	1.1	4	
Be	9	45	2	NoGas	0.072	7.9	419	6.7	2	
B	11	6	2	NoGas	3.329	3.5	22466	2.1	20	
Na	23	45	1	He	51896.655	4.0	19020003	0.9	75200	
Mg	24	45	1	He	51885.732	3.5	10658825	0.3	75200	
Al	27	45	1	He	54725.213	4.5	4723477	0.9	75200	
K	39	45	1	He	53411.301	3.4	5397710	0.3	75200	
Ca	44	45	1	He	52671.185	4.2	308272	0.6	75200	
Ti	47	45	1	He	1052.687	2.8	44345	0.8	1505	
V	51	45	1	He	-0.017	-780.1	116	162.3	4	
Cr	52	45	1	He	0.698	20.5	1952	9.6	4	
Mn	55	45	1	He	-0.168	-62.8	993	10.2	4	
Fe	56	45	1	He	51836.919	4.1	73736890	1.0	75200	
Co	59	45	1	He	-0.071	-10.6	147	17.2	2	
Ni	60	45	1	He	0.083	55.6	262	19.0	4	
Cu	63	45	1	He	-0.684	-9.8	2331	5.1	4	
Zn	66	45	1	He	-7.481	-0.8	328	2.9	20	
As	75	115	1	He	0.122	23.3	48	9.3	4	
Se	78	115	1	He	0.027	188.1	3	17.2	4	
Sr	88	103	1	He	0.305	6.3	358	5.7	20	
Mo	95	103	1	He	1078.712	3.4	1170472	0.1	1505	
Ag	107	103	1	He	0.009	60.0	43	42.8	1	
Cd	111	115	1	He	-0.026	-16.2	-11	-19.2	1	
Sn	118	115	1	He	-1.186	-7.3	244	31.8	20	
Sb	123	115	1	He	0.040	57.0	59	34.6	4	
Ba	137	115	1	He	0.184	22.6	68	17.3	2	
W	182	159	1	He	0.085	21.4	1789	1.6	20	
Tl	205	165	1	He	0.005	57.7	63	27.9	2	
Pb	208	165	1	He	0.223	22.3	3211	10.8	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1335262	0.37	1276810	104.58	60	120	
Sc	45	1	He	127115	3.51	163460	77.77	60	120	
Sc	45	2	NoGas	8165699	0.95	8842934	92.34	60	120	
Rh	103	1	He	775975	3.27	1010526	76.79	60	120	
In	115	1	He	206489	3.75	257801	80.10	60	120	
Tb	159	1	He	951516	3.35	1155473	82.35	60	120	
Ho	165	1	He	965147	4.13	1147359	84.12	60	120	
Bi	209	1	He	630029	2.66	790610	79.69	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	129ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:57:56-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	112.873	1.319	1851822	0.30	100	112.9	49.5	150.5	
Be	9	45	2	NoGas	104.556	0.811	484658	0.61	100	104.6	49.5	150.5	
B	11	6	2	NoGas	92.855	0.552	330052	0.71	100	92.9	49.5	150.5	
Na	23	45	1	He	49746.665	2.205	19231691	0.55	50000	99.5	49.5	150.5	
Mg	24	45	1	He	49394.523	1.904	10702731	0.83	50000	98.8	49.5	150.5	
Al	27	45	1	He	52347.478	2.179	4766554	0.55	50000	104.7	49.5	150.5	
K	39	45	1	He	51303.921	2.244	5468574	0.61	50000	102.6	49.5	150.5	
Ca	44	45	1	He	50599.851	1.514	312479	1.73	50000	101.2	49.5	150.5	
Ti	47	45	1	He	1108.755	2.165	49254	0.68	1100	100.8	49.5	150.5	
V	51	45	1	He	102.243	2.145	156115	1.62	100	102.2	49.5	150.5	
Cr	52	45	1	He	101.075	2.316	192608	0.90	100	101.1	49.5	150.5	
Mn	55	45	1	He	102.473	2.560	99192	1.15	100	102.5	49.5	150.5	
Fe	56	45	1	He	49421.480	1.864	74161559	1.21	50000	98.8	49.5	150.5	
Co	59	45	1	He	101.516	1.948	349995	0.91	100	101.5	49.5	150.5	
Ni	60	45	1	He	101.129	2.650	96901	0.08	100	101.1	49.5	150.5	
Cu	63	45	1	He	100.258	2.185	274621	0.78	100	100.3	49.5	150.5	
Zn	66	45	1	He	102.170	3.141	34392	0.21	100	102.2	49.5	150.5	
As	75	115	1	He	101.164	1.931	21252	1.26	100	101.2	49.5	150.5	
Se	78	115	1	He	97.673	3.038	991	3.71	100	97.7	49.5	150.5	
Sr	88	103	1	He	103.125	0.853	96246	0.24	100	103.1	49.5	150.5	
Mo	95	103	1	He	1155.721	0.604	1295166	1.66	1100	105.1	49.5	150.5	
Ag	107	103	1	He	101.399	0.532	407030	1.31	100	101.4	49.5	150.5	
Cd	111	115	1	He	98.514	2.548	46159	1.98	100	98.5	49.5	150.5	
Sn	118	115	1	He	113.353	2.686	101742	1.95	100	113.4	49.5	150.5	
Sb	123	115	1	He	103.189	1.943	103006	1.52	100	103.2	49.5	150.5	
Ba	137	115	1	He	105.285	2.035	36961	1.32	100	105.3	49.5	150.5	
W	182	159	1	He	101.529	1.142	514350	1.60	100	101.5	49.5	150.5	
Tl	205	165	1	He	100.073	1.051	775386	1.96	100	100.1	49.5	150.5	
Pb	208	165	1	He	101.931	0.081	1038390	0.95	100	101.9	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320660	0.54	1276810	103.43	60	120	
Sc	45	1	He	134013	2.75	163460	81.99	60	120	
Sc	45	2	NoGas	8314134	1.30	8842934	94.02	60	120	
Rh	103	1	He	800805	1.08	1010526	79.25	60	120	
In	115	1	He	212794	0.71	257801	82.54	60	120	
Tb	159	1	He	981703	0.52	1155473	84.96	60	120	
Ho	165	1	He	993495	0.92	1147359	86.59	60	120	
Bi	209	1	He	641872	0.30	790610	81.19	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	130_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:02:06-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.762	0.326	909464	0.55	50	109.5	89.5	110.5	
Be	9	45	2	NoGas	51.565	1.031	231266	1.48	50	103.1	89.5	110.5	
B	11	6	2	NoGas	43.574	2.330	164132	2.15	50	87.1	89.5	110.5	CCV Failed
Na	23	45	1	He	24759.643	0.987	9476876	1.19	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24313.330	1.846	5213397	0.62	25000	97.3	89.5	110.5	
Al	27	45	1	He	260.767	3.128	23735	2.33	250	104.3	89.5	110.5	
K	39	45	1	He	25771.801	1.559	2722775	0.25	25000	103.1	89.5	110.5	
Ca	44	45	1	He	24900.673	1.255	152464	0.36	25000	99.6	89.5	110.5	
Ti	47	45	1	He	51.611	3.619	2270	2.20	50	103.2	89.5	110.5	
V	51	45	1	He	49.500	5.337	74838	3.77	50	99.0	89.5	110.5	
Cr	52	45	1	He	49.500	2.988	93710	1.74	50	99.0	89.5	110.5	
Mn	55	45	1	He	247.025	1.422	234954	0.21	250	98.8	89.5	110.5	
Fe	56	45	1	He	12385.148	1.516	18393042	0.43	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.696	1.703	169749	0.17	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.672	0.868	47207	0.72	50	99.3	89.5	110.5	
Cu	63	45	1	He	49.091	1.742	135245	0.97	50	98.2	89.5	110.5	
Zn	66	45	1	He	46.021	2.069	16785	1.36	50	92.0	89.5	110.5	
As	75	115	1	He	48.298	1.268	10151	0.92	50	96.6	89.5	110.5	
Se	78	115	1	He	47.221	3.307	480	3.08	50	94.4	89.5	110.5	
Sr	88	103	1	He	50.152	2.088	47964	2.15	50	100.3	89.5	110.5	
Mo	95	103	1	He	53.286	1.517	61147	1.31	50	106.6	89.5	110.5	
Ag	107	103	1	He	49.643	0.634	204004	0.84	50	99.3	89.5	110.5	
Cd	111	115	1	He	48.986	0.621	22937	1.22	50	98.0	89.5	110.5	
Sn	118	115	1	He	49.247	1.635	44905	1.14	50	98.5	89.5	110.5	
Sb	123	115	1	He	51.012	1.175	50895	1.74	50	102.0	89.5	110.5	
Ba	137	115	1	He	52.107	1.384	18281	0.99	50	104.2	89.5	110.5	
W	182	159	1	He	50.192	1.106	252714	1.98	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.183	0.774	385329	1.21	50	100.4	89.5	110.5	
Pb	208	165	1	He	50.389	0.735	509234	1.19	50	100.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349773	1.24	1276810	105.71	60	120	
Sc	45	1	He	132589	1.52	163460	81.11	60	120	
Sc	45	2	NoGas	8042018	0.81	8842934	90.94	60	120	
Rh	103	1	He	819795	0.46	1010526	81.13	60	120	
In	115	1	He	212617	0.64	257801	82.47	60	120	
Tb	159	1	He	972909	0.90	1155473	84.20	60	120	
Ho	165	1	He	984561	0.59	1147359	85.81	60	120	
Bi	209	1	He	639827	0.44	790610	80.93	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	131_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:06:15-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.089	5.0	95298	0.2	8	
Be	9	45	2	NoGas	0.248	21.2	1204	19.2	1	
B	11	6	2	NoGas	3.167	3.3	22195	2.8	20	
Na	23	45	1	He	93.948	3.3	43070	3.1	1000	
Mg	24	45	1	He	73.630	0.8	16497	0.9	1000	
Al	27	45	1	He	4.098	11.0	612	6.5	50	
K	39	45	1	He	88.633	0.4	17917	0.5	1000	
Ca	44	45	1	He	69.896	12.3	1039	4.9	1000	
Ti	47	45	1	He	0.286	40.3	14	35.3	20	
V	51	45	1	He	0.178	22.0	418	14.3	2	
Cr	52	45	1	He	0.100	38.3	924	8.1	2	
Mn	55	45	1	He	0.420	11.3	1600	2.9	2	
Fe	56	45	1	He	46.180	1.7	72060	1.6	50	
Co	59	45	1	He	0.057	36.4	593	12.2	1	
Ni	60	45	1	He	0.125	24.6	313	9.6	2	
Cu	63	45	1	He	-0.947	-3.3	1741	5.1	2	
Zn	66	45	1	He	-3.416	-1.7	1599	1.0	20	
As	75	115	1	He	0.158	2.6	59	3.1	2	
Se	78	115	1	He	0.278	59.5	6	28.5	2	
Sr	88	103	1	He	0.151	29.5	237	18.3	10	
Mo	95	103	1	He	0.681	9.5	823	9.3	2	
Ag	107	103	1	He	0.149	8.0	640	7.7	0.2	
Cd	111	115	1	He	0.163	20.7	80	21.2	0.2	
Sn	118	115	1	He	-0.211	-53.0	1148	7.5	10	
Sb	123	115	1	He	0.306	6.6	337	7.9	2	
Ba	137	115	1	He	0.227	16.4	88	17.1	5	
W	182	159	1	He	0.452	5.7	3689	2.9	10	
Tl	205	165	1	He	0.239	2.6	1888	2.2	0.5	
Pb	208	165	1	He	0.177	4.6	2858	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1353196	2.68	1276810	105.98	60	120	
Sc	45	1	He	133187	0.27	163460	81.48	60	120	
Sc	45	2	NoGas	8075431	0.85	8842934	91.32	60	120	
Rh	103	1	He	841604	0.10	1010526	83.28	60	120	
In	115	1	He	219170	1.76	257801	85.02	60	120	
Tb	159	1	He	978671	0.72	1155473	84.70	60	120	
Ho	165	1	He	996239	0.37	1147359	86.83	60	120	
Bi	209	1	He	673877	1.64	790610	85.23	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228602/1-a@2
Data File Name	132_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:10:27-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.941	5.4	93321	0.8	8	
Be	9	45	2	NoGas	0.058	20.1	348	15.1	1	
B	11	6	2	NoGas	2.954	7.8	21558	3.6	20	
Na	23	45	1	He	34.782	5.5	20301	3.0	1000	
Mg	24	45	1	He	55.487	3.7	12568	3.0	1000	
Al	27	45	1	He	13.040	7.7	1419	5.2	50	
K	39	45	1	He	26.120	3.0	11285	1.3	1000	
Ca	44	45	1	He	112.515	13.5	1297	6.3	1000	
Ti	47	45	1	He	0.111	119.4	7	86.6	20	
V	51	45	1	He	-0.027	-444.8	105	172.5	2	
Cr	52	45	1	He	0.333	1.2	1361	1.0	2	
Mn	55	45	1	He	0.065	41.8	1260	2.9	2	
Fe	56	45	1	He	10.827	4.6	19288	2.5	50	
Co	59	45	1	He	-0.046	-23.4	239	14.0	1	
Ni	60	45	1	He	0.058	31.1	249	6.2	2	
Cu	63	45	1	He	-0.942	-3.8	1749	4.1	2	
Zn	66	45	1	He	-6.014	-2.1	796	4.5	20	
As	75	115	1	He	0.034	38.2	32	9.2	2	
Se	78	115	1	He	0.027	343.9	3	28.6	2	
Sr	88	103	1	He	0.392	12.9	470	11.3	10	
Mo	95	103	1	He	0.339	8.3	417	7.7	2	
Ag	107	103	1	He	0.007	35.7	40	25.0	0.2	
Cd	111	115	1	He	0.014	22.7	8	20.0	0.2	
Sn	118	115	1	He	18.037	1.7	17599	2.4	10	Blank High
Sb	123	115	1	He	0.065	47.3	88	35.3	2	
Ba	137	115	1	He	0.708	18.1	259	18.4	5	
W	182	159	1	He	0.209	15.3	2460	6.2	10	
Tl	205	165	1	He	0.059	14.1	479	12.6	0.5	
Pb	208	165	1	He	0.457	10.5	5644	9.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1360497	1.64	1276810	106.55	60	120	
Sc	45	1	He	132994	1.53	163460	81.36	60	120	
Sc	45	2	NoGas	8099116	0.06	8842934	91.59	60	120	
Rh	103	1	He	834914	0.86	1010526	82.62	60	120	
In	115	1	He	216639	1.80	257801	84.03	60	120	
Tb	159	1	He	974716	0.71	1155473	84.36	60	120	
Ho	165	1	He	983658	0.80	1147359	85.73	60	120	
Bi	209	1	He	678580	0.77	790610	85.83	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228602/2-a@2
Data File Name	133LCSS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:14:42-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	52.960	52.960	1.018	870751	0.47	50	105.9	79.5	120.5	
Be	9	2	NoGas	518.748	518.748	1.561	2295693	1.29	500	103.7	78.6	110.5	
B	11	2	NoGas	43.658	43.658	1.740	164209	1.45	50	87.3	79.5	120.5	
Na	23	1	He	4839.259	4839.259	1.734	1789391	1.52	5000	96.8	79.5	120.5	
Mg	24	1	He	4613.528	4613.528	1.128	953400	0.01	5000	92.3	79.5	120.5	
Al	27	1	He	4627.390	4627.390	1.369	401849	0.37	5000	92.5	79.5	120.5	
K	39	1	He	4746.318	4746.318	1.418	489682	0.63	5000	94.9	79.5	120.5	
Ca	44	1	He	4976.642	4976.642	2.156	29817	1.40	5000	99.5	79.5	120.5	
Ti	47	1	He	48.547	48.547	3.151	2058	4.10	50	97.1	79.5	120.5	
V	51	1	He	464.950	464.950	1.763	676144	0.81	500	93.0	71.5	110.5	
Cr	52	1	He	473.059	473.059	1.948	856664	1.03	500	94.6	69.5	110.5	
Mn	55	1	He	474.095	474.095	1.705	433269	0.69	500	94.8	79.5	120.5	
Fe	56	1	He	4798.592	4798.592	1.656	6865870	0.61	5000	96.0	79.5	120.5	
Co	59	1	He	518.344	518.344	2.453	1701709	1.49	500	103.7	73.9	110.5	
Ni	60	1	He	489.060	489.060	2.159	445981	1.05	500	97.8	74.9	110.5	
Cu	63	1	He	484.638	484.638	1.766	1249604	0.77	500	96.9	72.6	110.5	
Zn	66	1	He	515.057	515.057	1.744	155004	1.13	500	103.0	71.5	113.4	
As	75	1	He	445.758	445.758	0.218	90973	0.41	500	89.2	73.4	110.5	
Se	78	1	He	428.712	428.712	1.303	4218	0.91	500	85.7	64.6	110.5	
Sr	88	1	He	454.444	454.444	0.694	424983	0.57	500	90.9	79.5	120.5	
Mo	95	1	He	48.740	48.740	0.729	54784	1.15	50	97.5	29.5	140.5	
Ag	107	1	He	48.317	48.317	0.471	194468	0.32	50	96.6	59.5	114.5	
Cd	111	1	He	462.214	462.214	0.806	210579	0.98	500	92.4	73.5	110.5	
Sn	118	1	He	505.914	505.914	1.263	437145	0.96	500	101.2	79.5	120.5	
Sb	123	1	He	47.896	47.896	0.332	46499	0.72	50	95.8	67.5	113.4	
Ba	137	1	He	489.640	489.640	1.099	167120	1.18	500	97.9	69.5	110.5	
W	182	1	He	47.324	47.324	0.858	235384	0.85	50	94.6	74.6	125.4	
Tl	205	1	He	121.472	121.472	0.853	911641	1.04	125	97.2	70.6	110.5	
Pb	208	1	He	512.397	512.397	0.260	5052177	0.32	500	102.5	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348127	2.07	1276810	105.59	60	120	
Sc	45	1	He	127705	1.13	163460	78.13	60	120	
Sc	45	2	NoGas	7938496	0.45	8842934	89.77	60	120	
Rh	103	1	He	802928	0.44	1010526	79.46	60	120	
In	115	1	He	206888	0.40	257801	80.25	60	120	
Tb	159	1	He	960875	1.12	1155473	83.16	60	120	
Ho	165	1	He	962362	0.34	1147359	83.88	60	120	
Bi	209	1	He	650365	1.13	790610	82.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-a@200
Data File Name	134SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:18:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.724	1.724	2.78	106383	0.00	10000	
Be	9	45	2	NoGas	0.571	0.571	6.45	2693	0.02	2000	
B	11	6	2	NoGas	4.475	4.475	6.01	27540	0.02	300	
Na	23	45	1	He	16.625	16.625	5.18	13294	0.13	500000	
Mg	24	45	1	He	364.501	364.501	2.33	78746	0.46	500000	
Al	27	45	1	He	502.804	502.804	1.47	45525	1.10	200000	
K	39	45	1	He	100.860	100.860	5.43	19115	0.53	500000	
Ca	44	45	1	He	1082.609	1082.609	1.72	7206	15.02	500000	
Ti	47	45	1	He	5.805	5.805	23.29	257	2.26	2500	
V	51	45	1	He	0.512	0.512	118.53	927	0.06	10000	
Cr	52	45	1	He	14.424	14.424	2.44	27812	0.05	10000	
Mn	55	45	1	He	48.413	48.413	2.90	46981	0.10	10000	
Fe	56	45	1	He	1346.209	1346.209	1.69	2001104	0.07	200000	
Co	59	45	1	He	1626.952	1626.952	1.88	5542061	0.03	5000	
Ni	60	45	1	He	32.056	32.056	2.49	30517	0.11	10000	
Cu	63	45	1	He	16.030	16.030	2.34	47006	0.03	10000	
Zn	66	45	1	He	15.276	15.276	4.69	7332	0.21	10000	
As	75	115	1	He	7.781	7.781	3.97	1697	0.46	10000	
Se	78	115	1	He	0.570	0.570	92.82	9	6.25	10000	
Sr	88	103	1	He	2.896	2.896	5.57	2928	0.10	10000	
Mo	95	103	1	He	0.314	0.314	18.97	391	0.08	2000	
Ag	107	103	1	He	0.179	0.179	10.84	767	0.02	300	
Cd	111	115	1	He	1.022	1.022	5.26	492	0.21	4000	
Sn	118	115	1	He	0.415	0.415	17.68	1711	0.02	2000	
Sb	123	115	1	He	4.480	4.480	3.70	4603	0.10	200	
Ba	137	115	1	He	13.560	13.560	0.52	4883	0.28	10000	
W	182	159	1	He	0.773	0.773	3.38	5342	0.01	2500	
Tl	205	165	1	He	0.206	0.206	8.00	1631	0.01	2000	
Pb	208	165	1	He	983.447	983.447	0.03	10056103	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1390399	0.93	1276810	108.90	60	120	
Sc	45	1	He	132522	1.21	163460	81.07	60	120	
Sc	45	2	NoGas	8183232	0.34	8842934	92.54	60	120	
Rh	103	1	He	841947	0.47	1010526	83.32	60	120	
In	115	1	He	218046	1.05	257801	84.58	60	120	
Tb	159	1	He	984821	0.48	1155473	85.23	60	120	
Ho	165	1	He	998127	0.46	1147359	86.99	60	120	
Bi	209	1	He	693804	0.32	790610	87.76	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-b-21-a@1000
Data File Name	135SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:23:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.973	0.973	7.07	93572	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	29.43	726	0.02	2000	
B	11	6	2	NoGas	4.069	4.069	2.32	25678	0.02	300	
Na	23	45	1	He	6.822	6.822	8.96	9540	0.07	500000	
Mg	24	45	1	He	71.106	71.106	1.85	15867	0.45	500000	
Al	27	45	1	He	97.160	97.160	4.44	8988	1.08	200000	
K	39	45	1	He	25.525	25.525	26.97	11174	0.23	500000	
Ca	44	45	1	He	164.741	164.741	5.76	1611	10.23	500000	
Ti	47	45	1	He	1.252	1.252	43.34	57	2.21	2500	
V	51	45	1	He	0.068	0.068	180.12	252	0.03	10000	
Cr	52	45	1	He	2.810	2.810	4.15	6004	0.05	10000	
Mn	55	45	1	He	8.702	8.702	4.44	9420	0.09	10000	
Fe	56	45	1	He	270.071	270.071	2.20	403827	0.07	200000	
Co	59	45	1	He	301.562	301.562	1.70	1027251	0.03	5000	
Ni	60	45	1	He	6.497	6.497	4.38	6336	0.10	10000	
Cu	63	45	1	He	2.233	2.233	4.53	10206	0.02	10000	
Zn	66	45	1	He	-3.226	-3.226	-19.12	1648	-0.20	10000	
As	75	115	1	He	1.553	1.553	1.64	363	0.43	10000	
Se	78	115	1	He	0.164	0.164	101.89	5	3.29	10000	
Sr	88	103	1	He	0.489	0.489	11.99	570	0.09	10000	
Mo	95	103	1	He	0.097	0.097	17.87	136	0.07	2000	
Ag	107	103	1	He	0.039	0.039	16.99	176	0.02	300	
Cd	111	115	1	He	0.209	0.209	17.18	103	0.20	4000	
Sn	118	115	1	He	0.435	0.435	24.37	1752	0.02	2000	
Sb	123	115	1	He	0.958	0.958	3.43	1014	0.09	200	
Ba	137	115	1	He	2.537	2.537	8.95	930	0.27	10000	
W	182	159	1	He	0.150	0.150	9.76	2189	0.01	2500	
Tl	205	165	1	He	0.038	0.038	10.14	323	0.01	2000	
Pb	208	165	1	He	178.817	178.817	0.76	1825136	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1369334	0.62	1276810	107.25	60	120	
Sc	45	1	He	132482	1.30	163460	81.05	60	120	
Sc	45	2	NoGas	8078870	0.74	8842934	91.36	60	120	
Rh	103	1	He	844702	0.12	1010526	83.59	60	120	
In	115	1	He	220875	0.42	257801	85.68	60	120	
Tb	159	1	He	986317	1.27	1155473	85.36	60	120	
Ho	165	1	He	995852	0.52	1147359	86.80	60	120	
Bi	209	1	He	688316	0.21	790610	87.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-b ms@200
Data File Name	136SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:27:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.297	2.297	4.43	113803	0.00	10000	
Be	9	45	2	NoGas	5.054	5.054	1.59	22855	0.02	2000	
B	11	6	2	NoGas	4.894	4.894	3.63	28352	0.02	300	
Na	23	45	1	He	59.960	59.960	6.06	29788	0.20	500000	
Mg	24	45	1	He	442.975	442.975	1.80	95327	0.46	500000	
Al	27	45	1	He	659.590	659.590	2.86	59491	1.11	200000	
K	39	45	1	He	182.518	182.518	2.43	27640	0.66	500000	
Ca	44	45	1	He	1219.854	1219.854	3.98	8022	15.21	500000	
Ti	47	45	1	He	7.164	7.164	10.79	316	2.27	2500	
V	51	45	1	He	5.995	5.995	8.66	9165	0.07	10000	
Cr	52	45	1	He	14.775	14.775	4.02	28398	0.05	10000	
Mn	55	45	1	He	64.312	64.312	2.04	61867	0.10	10000	
Fe	56	45	1	He	1295.033	1295.033	2.77	1920174	0.07	200000	
Co	59	45	1	He	90.878	90.878	2.55	309149	0.03	5000	
Ni	60	45	1	He	19.134	19.134	4.62	18243	0.10	10000	
Cu	63	45	1	He	19.855	19.855	3.10	57061	0.03	10000	
Zn	66	45	1	He	16.845	16.845	4.08	7795	0.22	10000	
As	75	115	1	He	10.066	10.066	1.42	2196	0.46	10000	
Se	78	115	1	He	4.816	4.816	19.53	53	9.02	10000	
Sr	88	103	1	He	9.303	9.303	3.87	9219	0.10	10000	
Mo	95	103	1	He	0.816	0.816	9.50	983	0.08	2000	
Ag	107	103	1	He	0.592	0.592	0.59	2512	0.02	300	
Cd	111	115	1	He	5.219	5.219	2.33	2515	0.21	4000	
Sn	118	115	1	He	3.940	3.940	11.64	4927	0.08	2000	
Sb	123	115	1	He	3.562	3.562	3.94	3676	0.10	200	
Ba	137	115	1	He	38.000	38.000	2.15	13719	0.28	10000	
W	182	159	1	He	0.592	0.592	13.58	4412	0.01	2500	
Tl	205	165	1	He	1.378	1.378	1.22	10655	0.01	2000	
Pb	208	165	1	He	2310.773	2310.773	0.50	23409553	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1356532	0.70	1276810	106.24	60	120	
Sc	45	1	He	132200	1.52	163460	80.88	60	120	
Sc	45	2	NoGas	8082446	1.32	8842934	91.40	60	120	
Rh	103	1	He	842930	0.68	1010526	83.41	60	120	
In	115	1	He	218762	1.67	257801	84.86	60	120	
Tb	159	1	He	982418	0.84	1155473	85.02	60	120	
Ho	165	1	He	988934	0.09	1147359	86.19	60	120	
Bi	209	1	He	683893	1.32	790610	86.50	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-c msd@200
Data File Name	137SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:31:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.490	2.490	1.91	116273	0.00	10000	
Be	9	45	2	NoGas	5.302	5.302	1.62	23879	0.02	2000	
B	11	6	2	NoGas	4.071	4.071	12.13	25852	0.02	300	
Na	23	45	1	He	59.687	59.687	1.72	29636	0.20	500000	
Mg	24	45	1	He	439.918	439.918	2.09	94538	0.47	500000	
Al	27	45	1	He	618.708	618.708	2.07	55743	1.11	200000	
K	39	45	1	He	170.838	170.838	2.49	26383	0.65	500000	
Ca	44	45	1	He	1180.923	1180.923	3.01	7775	15.19	500000	
Ti	47	45	1	He	6.209	6.209	12.97	273	2.27	2500	
V	51	45	1	He	5.431	5.431	9.33	8309	0.07	10000	
Cr	52	45	1	He	16.123	16.123	1.13	30886	0.05	10000	
Mn	55	45	1	He	65.333	65.333	2.75	62739	0.10	10000	
Fe	56	45	1	He	1453.875	1453.875	1.97	2152428	0.07	200000	
Co	59	45	1	He	88.563	88.563	2.50	300867	0.03	5000	
Ni	60	45	1	He	18.313	18.313	1.97	17449	0.10	10000	
Cu	63	45	1	He	15.788	15.788	2.50	46185	0.03	10000	
Zn	66	45	1	He	12.318	12.318	2.94	6400	0.19	10000	
As	75	115	1	He	9.701	9.701	1.76	2080	0.47	10000	
Se	78	115	1	He	5.259	5.259	9.81	57	9.24	10000	
Sr	88	103	1	He	8.919	8.919	1.06	8683	0.10	10000	
Mo	95	103	1	He	0.761	0.761	6.20	902	0.08	2000	
Ag	107	103	1	He	0.587	0.587	5.19	2448	0.02	300	
Cd	111	115	1	He	5.336	5.336	1.11	2526	0.21	4000	
Sn	118	115	1	He	3.959	3.959	5.91	4856	0.08	2000	
Sb	123	115	1	He	2.866	2.866	6.15	2910	0.10	200	
Ba	137	115	1	He	39.554	39.554	0.62	14025	0.28	10000	
W	182	159	1	He	0.590	0.590	14.90	4360	0.01	2500	
Tl	205	165	1	He	1.329	1.329	2.15	10241	0.01	2000	
Pb	208	165	1	He	1227.830	1227.830	0.60	12390632	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1378235	0.13	1276810	107.94	60	120	
Sc	45	1	He	132008	1.24	163460	80.76	60	120	
Sc	45	2	NoGas	8049485	1.01	8842934	91.03	60	120	
Rh	103	1	He	827637	0.60	1010526	81.90	60	120	
In	115	1	He	214854	0.75	257801	83.34	60	120	
Tb	159	1	He	972070	0.65	1155473	84.13	60	120	
Ho	165	1	He	985085	0.21	1147359	85.86	60	120	
Bi	209	1	He	685770	0.36	790610	86.74	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-b-21-a@200
Data File Name	138SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:35:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.968	119.968	1.04	1896602	0.01	10000	
Be	9	45	2	NoGas	1135.856	1135.856	0.99	5085044	0.02	2000	
B	11	6	2	NoGas	91.365	91.365	2.04	324957	0.03	300	
Na	23	45	1	He	10275.853	10275.853	3.78	3914909	0.26	500000	
Mg	24	45	1	He	10599.523	10599.523	4.99	2259878	0.47	500000	
Al	27	45	1	He	10375.524	10375.524	4.67	929728	1.12	200000	
K	39	45	1	He	10210.958	10210.958	3.99	1077828	0.95	500000	
Ca	44	45	1	He	11256.087	11256.087	5.20	68841	16.35	500000	
Ti	47	45	1	He	106.153	106.153	7.52	4640	2.29	2500	
V	51	45	1	He	1114.884	1114.884	6.60	1672496	0.07	10000	
Cr	52	45	1	He	1089.412	1089.412	6.22	2034630	0.05	10000	
Mn	55	45	1	He	1056.298	1056.298	4.39	995046	0.11	10000	
Fe	56	45	1	He	11410.622	11410.622	4.53	16848706	0.07	200000	
Co	59	45	1	He	2602.342	2602.342	4.92	8816823	0.03	5000	
Ni	60	45	1	He	1048.374	1048.374	4.40	986704	0.11	10000	
Cu	63	45	1	He	1122.968	1122.968	4.11	2983697	0.04	10000	
Zn	66	45	1	He	1129.852	1129.852	3.77	347914	0.32	10000	
As	75	115	1	He	982.606	982.606	2.10	205358	0.48	10000	
Se	78	115	1	He	950.469	950.469	2.73	9575	9.93	10000	
Sr	88	103	1	He	981.029	981.029	1.53	939790	0.10	10000	
Mo	95	103	1	He	103.552	103.552	2.13	119210	0.09	2000	
Ag	107	103	1	He	101.324	101.324	1.23	417792	0.02	300	
Cd	111	115	1	He	1004.835	1004.835	2.01	468866	0.21	4000	
Sn	118	115	1	He	1026.372	1026.372	2.77	906950	0.11	2000	
Sb	123	115	1	He	106.963	106.963	1.86	106329	0.10	200	
Ba	137	115	1	He	1062.503	1062.503	1.79	371418	0.29	10000	
W	182	159	1	He	102.766	102.766	3.45	518731	0.02	2500	
Tl	205	165	1	He	290.545	290.545	1.32	2238749	0.01	2000	
Pb	208	165	1	He	2084.923	2084.923	2.31	21101650	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320835	0.38	1276810	103.45	60	120	
Sc	45	1	He	131955	3.75	163460	80.73	60	120	
Sc	45	2	NoGas	8031043	0.88	8842934	90.82	60	120	
Rh	103	1	He	822661	1.07	1010526	81.41	60	120	
In	115	1	He	211934	1.51	257801	82.21	60	120	
Tb	159	1	He	978501	1.42	1155473	84.68	60	120	
Ho	165	1	He	988207	1.43	1147359	86.13	60	120	
Bi	209	1	He	675037	2.13	790610	85.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-a@2
Data File Name	139SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:39:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.551	121.551	1.75	2089985	0.01	10000	
Be	9	45	2	NoGas	6.248	6.248	2.84	30537	0.02	2000	
B	11	6	2	NoGas	41.457	41.457	2.24	153856	0.03	300	
Na	23	45	1	He	15076.389	15076.389	2.08	6006572	0.25	500000	
Mg	24	45	1	He	14007.584	14007.584	2.87	3125585	0.45	500000	
Al	27	45	1	He	50906.383	50906.383	3.52	4772967	1.07	200000	
K	39	45	1	He	10308.824	10308.824	2.16	1138547	0.91	500000	
Ca	44	45	1	He	57927.952	57927.952	2.30	368201	15.73	500000	
Ti	47	45	1	He	371.799	371.799	1.58	17008	2.19	2500	
V	51	45	1	He	91.689	91.689	7.31	144170	0.06	10000	
Cr	52	45	1	He	1231.418	1231.418	2.52	2407786	0.05	10000	
Mn	55	45	1	He	1605.222	1605.222	3.39	1581759	0.10	10000	
Fe	56	45	1	He	110396.269	110396.269	2.81	170560873	0.06	200000	
Co	59	45	1	He	117.148	117.148	2.80	415801	0.03	5000	
Ni	60	45	1	He	5853.355	5853.355	2.82	5764181	0.10	10000	
Cu	63	45	1	He	3433.817	3433.817	2.49	9537572	0.04	10000	
Zn	66	45	1	He	575.824	575.824	2.56	186871	0.31	10000	
As	75	115	1	He	110.686	110.686	1.03	22961	0.48	10000	
Se	78	115	1	He	15.697	15.697	8.10	160	9.83	10000	
Sr	88	103	1	He	200.805	200.805	1.85	184326	0.11	10000	
Mo	95	103	1	He	19.308	19.308	1.43	21309	0.09	2000	
Ag	107	103	1	He	2.387	2.387	0.42	9436	0.03	300	
Cd	111	115	1	He	5.457	5.457	1.70	2525	0.22	4000	
Sn	118	115	1	He	95.054	95.054	1.89	84475	0.11	2000	
Sb	123	115	1	He	12.332	12.332	1.90	12172	0.10	200	
Ba	137	115	1	He	365.692	365.692	0.37	126760	0.29	10000	
W	182	159	1	He	0.984	0.984	6.84	6357	0.02	2500	
Tl	205	165	1	He	3.139	3.139	1.69	23872	0.01	2000	
Pb	208	165	1	He	2636.189	2636.189	1.68	26306167	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1325407	0.87	1276810	103.81	60	120	
Sc	45	1	He	137938	0.09	163460	84.39	60	120	
Sc	45	2	NoGas	8740165	0.46	8842934	98.84	60	120	
Rh	103	1	He	787871	0.64	1010526	77.97	60	120	
In	115	1	He	210106	1.79	257801	81.50	60	120	
Tb	159	1	He	976531	0.97	1155473	84.51	60	120	
Ho	165	1	He	974166	0.84	1147359	84.91	60	120	
Bi	209	1	He	646971	0.94	790610	81.83	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-b ms@2
Data File Name	140SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:43:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	158.990	158.990	1.20	2675800	0.01	10000	
Be	9	45	2	NoGas	432.374	432.374	2.34	2082186	0.02	2000	
B	11	6	2	NoGas	88.201	88.201	1.71	306558	0.03	300	
Na	23	45	1	He	18794.319	18794.319	1.39	7664716	0.25	500000	
Mg	24	45	1	He	17327.992	17327.992	3.08	3958006	0.44	500000	
Al	27	45	1	He	56465.076	56465.076	2.43	5419985	1.04	200000	
K	39	45	1	He	15160.488	15160.488	2.44	1709910	0.89	500000	
Ca	44	45	1	He	98623.476	98623.476	1.85	641349	15.38	500000	
Ti	47	45	1	He	448.987	448.987	2.93	21028	2.14	2500	
V	51	45	1	He	491.967	491.967	2.65	791206	0.06	10000	
Cr	52	45	1	He	1536.509	1536.509	2.33	3075549	0.05	10000	
Mn	55	45	1	He	1933.465	1933.465	3.09	1950128	0.10	10000	
Fe	56	45	1	He	94669.915	94669.915	2.87	149735483	0.06	200000	
Co	59	45	1	He	523.692	523.692	1.99	1901573	0.03	5000	
Ni	60	45	1	He	3984.982	3984.982	2.19	4017707	0.10	10000	
Cu	63	45	1	He	2377.353	2377.353	1.61	6762044	0.04	10000	
Zn	66	45	1	He	851.307	851.307	1.62	281514	0.30	10000	
As	75	115	1	He	490.332	490.332	0.65	101583	0.48	10000	
Se	78	115	1	He	388.372	388.372	1.67	3880	10.01	10000	
Sr	88	103	1	He	614.615	614.615	0.28	570895	0.11	10000	
Mo	95	103	1	He	57.531	57.531	1.05	64228	0.09	2000	
Ag	107	103	1	He	43.549	43.549	0.75	174109	0.03	300	
Cd	111	115	1	He	404.203	404.203	0.42	186942	0.22	4000	
Sn	118	115	1	He	429.199	429.199	0.41	376710	0.11	2000	
Sb	123	115	1	He	25.856	25.856	1.88	25488	0.10	200	
Ba	137	115	1	He	761.154	761.154	0.55	263724	0.29	10000	
W	182	159	1	He	27.265	27.265	1.77	139190	0.02	2500	
Tl	205	165	1	He	102.721	102.721	0.13	798080	0.01	2000	
Pb	208	165	1	He	2182.318	2182.318	0.48	22271600	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1289214	0.44	1276810	100.97	60	120	
Sc	45	1	He	141246	1.31	163460	86.41	60	120	
Sc	45	2	NoGas	8638082	1.28	8842934	97.68	60	120	
Rh	103	1	He	797543	0.33	1010526	78.92	60	120	
In	115	1	He	210031	1.21	257801	81.47	60	120	
Tb	159	1	He	981919	0.17	1155473	84.98	60	120	
Ho	165	1	He	996279	1.20	1147359	86.83	60	120	
Bi	209	1	He	634592	0.14	790610	80.27	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-c msd@2
Data File Name	141SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:47:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	187.758	187.758	0.40	3099420	0.01	10000	
Be	9	45	2	NoGas	470.364	470.364	0.10	2232334	0.02	2000	
B	11	6	2	NoGas	106.064	106.064	0.50	360927	0.03	300	
Na	23	45	1	He	18397.375	18397.375	1.13	7429806	0.25	500000	
Mg	24	45	1	He	28714.391	28714.391	2.13	6494956	0.44	500000	
Al	27	45	1	He	62282.795	62282.795	2.24	5920165	1.05	200000	
K	39	45	1	He	14978.159	14978.159	1.33	1673106	0.90	500000	
Ca	44	45	1	He	117891.293	117891.293	1.71	759047	15.53	500000	
Ti	47	45	1	He	618.292	618.292	3.12	28672	2.16	2500	
V	51	45	1	He	528.462	528.462	2.89	841589	0.06	10000	
Cr	52	45	1	He	1829.750	1829.750	2.36	3626639	0.05	10000	
Mn	55	45	1	He	2100.936	2100.936	1.98	2098451	0.10	10000	
Fe	56	45	1	He	118092.674	118092.674	1.83	184974637	0.06	200000	
Co	59	45	1	He	582.536	582.536	1.16	2094668	0.03	5000	
Ni	60	45	1	He	6697.860	6697.860	2.47	6686718	0.10	10000	
Cu	63	45	1	He	3451.057	3451.057	1.37	9718344	0.04	10000	
Zn	66	45	1	He	1013.031	1013.031	0.72	331214	0.31	10000	
As	75	115	1	He	545.671	545.671	1.00	112376	0.49	10000	
Se	78	115	1	He	414.336	414.336	0.62	4114	10.07	10000	
Sr	88	103	1	He	788.539	788.539	0.27	724398	0.11	10000	
Mo	95	103	1	He	64.702	64.702	1.40	71441	0.09	2000	
Ag	107	103	1	He	47.561	47.561	0.74	188064	0.03	300	
Cd	111	115	1	He	434.280	434.280	1.30	199658	0.22	4000	
Sn	118	115	1	He	493.310	493.310	1.53	430182	0.11	2000	
Sb	123	115	1	He	26.404	26.404	2.26	25878	0.10	200	
Ba	137	115	1	He	839.950	839.950	1.35	289294	0.29	10000	
W	182	159	1	He	29.954	29.954	4.18	152078	0.02	2500	
Tl	205	165	1	He	110.786	110.786	1.75	850799	0.01	2000	
Pb	208	165	1	He	4089.906	4089.906	1.08	41259922	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1269534	1.04	1276810	99.43	60	120	
Sc	45	1	He	139862	1.03	163460	85.56	60	120	
Sc	45	2	NoGas	8513131	0.53	8842934	96.27	60	120	
Rh	103	1	He	788812	0.77	1010526	78.06	60	120	
In	115	1	He	208781	0.55	257801	80.99	60	120	
Tb	159	1	He	977400	0.09	1155473	84.59	60	120	
Ho	165	1	He	984940	1.72	1147359	85.84	60	120	
Bi	209	1	He	629134	0.36	790610	79.58	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	142_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:51:42-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.548	0.668	896973	0.47	50	109.1	89.5	110.5	
Be	9	45	2	NoGas	52.130	0.838	231406	0.79	50	104.3	89.5	110.5	
B	11	6	2	NoGas	43.881	1.920	163068	1.19	50	87.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24754.228	1.291	9422920	0.40	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24701.026	2.019	5267779	0.80	25000	98.8	89.5	110.5	
Al	27	45	1	He	263.234	2.556	23828	1.37	250	105.3	89.5	110.5	
K	39	45	1	He	25825.706	0.997	2713819	0.32	25000	103.3	89.5	110.5	
Ca	44	45	1	He	25083.745	0.485	152762	1.14	25000	100.3	89.5	110.5	
Ti	47	45	1	He	48.056	4.766	2102	3.65	50	96.1	89.5	110.5	
V	51	45	1	He	50.445	3.267	75874	2.48	50	100.9	89.5	110.5	
Cr	52	45	1	He	50.341	1.728	94784	0.50	50	100.7	89.5	110.5	
Mn	55	45	1	He	247.034	1.953	233682	0.78	250	98.8	89.5	110.5	
Fe	56	45	1	He	12449.213	1.904	18387581	0.80	12500	99.6	89.5	110.5	
Co	59	45	1	He	49.890	1.581	169491	0.70	50	99.8	89.5	110.5	
Ni	60	45	1	He	51.997	1.550	49139	1.29	50	104.0	89.5	110.5	
Cu	63	45	1	He	50.388	1.870	137951	0.69	50	100.8	89.5	110.5	
Zn	66	45	1	He	46.716	1.034	16907	0.97	50	93.4	89.5	110.5	
As	75	115	1	He	48.642	0.698	10090	0.24	50	97.3	89.5	110.5	
Se	78	115	1	He	46.795	3.040	470	3.42	50	93.6	89.5	110.5	
Sr	88	103	1	He	50.551	0.877	47799	1.24	50	101.1	89.5	110.5	
Mo	95	103	1	He	50.923	1.483	57778	1.78	50	101.8	89.5	110.5	
Ag	107	103	1	He	49.474	0.697	201005	0.40	50	98.9	89.5	110.5	
Cd	111	115	1	He	49.531	1.815	22887	1.01	50	99.1	89.5	110.5	
Sn	118	115	1	He	50.105	2.132	45072	2.27	50	100.2	89.5	110.5	
Sb	123	115	1	He	50.704	2.702	49919	1.76	50	101.4	89.5	110.5	
Ba	137	115	1	He	51.581	0.975	17861	0.06	50	103.2	89.5	110.5	
W	182	159	1	He	49.643	1.754	247715	1.89	50	99.3	89.5	110.5	
Tl	205	165	1	He	50.415	0.513	380316	1.32	50	100.8	89.5	110.5	
Pb	208	165	1	He	51.785	0.929	514089	0.22	50	103.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1332474	2.03	1276810	104.36	60	120	
Sc	45	1	He	131868	1.23	163460	80.67	60	120	
Sc	45	2	NoGas	7959920	0.14	8842934	90.01	60	120	
Rh	103	1	He	810529	0.61	1010526	80.21	60	120	
In	115	1	He	209848	0.93	257801	81.40	60	120	
Tb	159	1	He	964201	0.63	1155473	83.45	60	120	
Ho	165	1	He	967265	0.81	1147359	84.30	60	120	
Bi	209	1	He	637203	0.84	790610	80.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	143_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:55:53-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.117	6.5	97405	0.9	8	
Be	9	45	2	NoGas	0.605	4.8	2860	5.1	1	
B	11	6	2	NoGas	3.902	13.4	25092	6.2	20	
Na	23	45	1	He	88.776	5.6	40645	1.9	1000	
Mg	24	45	1	He	75.882	12.6	16775	8.8	1000	
Al	27	45	1	He	5.282	10.0	713	9.4	50	
K	39	45	1	He	88.427	11.0	17702	2.9	1000	
Ca	44	45	1	He	71.839	27.1	1038	8.0	1000	
Ti	47	45	1	He	0.292	56.9	14	48.0	20	
V	51	45	1	He	0.208	39.3	461	29.2	2	
Cr	52	45	1	He	0.287	11.5	1262	2.1	2	
Mn	55	45	1	He	0.706	11.3	1852	1.4	2	
Fe	56	45	1	He	52.970	10.9	81218	7.2	50	CCB High
Co	59	45	1	He	0.160	31.0	933	15.8	1	
Ni	60	45	1	He	0.585	9.4	744	9.9	2	
Cu	63	45	1	He	-0.609	-5.9	2620	3.6	2	
Zn	66	45	1	He	-3.356	-8.8	1600	3.1	20	
As	75	115	1	He	0.242	18.0	77	13.7	2	
Se	78	115	1	He	0.530	49.4	9	32.7	2	
Sr	88	103	1	He	0.188	18.9	269	11.5	10	
Mo	95	103	1	He	0.302	14.8	371	12.3	2	
Ag	107	103	1	He	0.152	5.0	644	3.6	0.2	
Cd	111	115	1	He	0.248	1.4	121	2.9	0.2	CCB High
Sn	118	115	1	He	0.125	134.3	1452	9.1	10	
Sb	123	115	1	He	0.270	6.7	299	4.6	2	
Ba	137	115	1	He	0.233	24.3	90	24.3	5	
W	182	159	1	He	0.429	32.9	3541	19.3	10	
Tl	205	165	1	He	0.286	18.2	2186	17.4	0.5	
Pb	208	165	1	He	0.528	10.7	6264	9.1	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1370816	1.31	1276810	107.36	60	120	
Sc	45	1	He	131898	3.12	163460	80.69	60	120	
Sc	45	2	NoGas	8216905	0.47	8842934	92.92	60	120	
Rh	103	1	He	830236	1.63	1010526	82.16	60	120	
In	115	1	He	218909	2.13	257801	84.91	60	120	
Tb	159	1	He	969552	0.61	1155473	83.91	60	120	
Ho	165	1	He	969483	1.22	1147359	84.50	60	120	
Bi	209	1	He	655608	1.48	790610	82.92	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-c-24-a@2
Data File Name	144SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:00:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	227.304	227.304	0.58	3659328	0.01	10000	
Be	9	45	2	NoGas	1058.438	1058.438	1.35	4921622	0.02	2000	
B	11	6	2	NoGas	134.348	134.348	0.32	442714	0.03	300	
Na	23	45	1	He	24239.561	24239.561	2.72	9614864	0.25	500000	
Mg	24	45	1	He	22982.746	22982.746	3.11	5107513	0.45	500000	
Al	27	45	1	He	59366.934	59366.934	3.25	5544185	1.07	200000	
K	39	45	1	He	20265.784	20265.784	3.15	2220819	0.91	500000	
Ca	44	45	1	He	66180.661	66180.661	3.60	418896	15.80	500000	
Ti	47	45	1	He	462.340	462.340	3.24	21067	2.19	2500	
V	51	45	1	He	1131.801	1131.801	3.44	1770707	0.06	10000	
Cr	52	45	1	He	2186.580	2186.580	3.47	4257785	0.05	10000	
Mn	55	45	1	He	2606.287	2606.287	2.78	2557363	0.10	10000	
Fe	56	45	1	He	117319.303	117319.303	3.32	180540082	0.06	200000	
Co	59	45	1	He	1148.181	1148.181	2.84	4055685	0.03	5000	
Ni	60	45	1	He	6636.695	6636.695	3.11	6509982	0.10	10000	
Cu	63	45	1	He	4325.738	4325.738	3.23	11966400	0.04	10000	
Zn	66	45	1	He	1573.358	1573.358	3.04	503853	0.31	10000	
As	75	115	1	He	1086.893	1086.893	1.75	222864	0.49	10000	
Se	78	115	1	He	933.186	933.186	2.09	9223	10.12	10000	
Sr	88	103	1	He	1200.683	1200.683	0.75	1106153	0.11	10000	
Mo	95	103	1	He	125.856	125.856	1.57	139352	0.09	2000	
Ag	107	103	1	He	103.223	103.223	0.61	409298	0.03	300	
Cd	111	115	1	He	983.202	983.202	1.49	450105	0.22	4000	
Sn	118	115	1	He	1122.972	1122.972	1.66	973509	0.12	2000	
Sb	123	115	1	He	113.587	113.587	1.18	110783	0.10	200	
Ba	137	115	1	He	1403.933	1403.933	1.71	481489	0.29	10000	
W	182	159	1	He	98.077	98.077	2.50	502608	0.02	2500	
Tl	205	165	1	He	276.042	276.042	1.18	2139945	0.01	2000	
Pb	208	165	1	He	3551.695	3551.695	1.77	36166834	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1236820	0.29	1276810	96.87	60	120	
Sc	45	1	He	137431	1.47	163460	84.08	60	120	
Sc	45	2	NoGas	8341381	0.68	8842934	94.33	60	120	
Rh	103	1	He	791055	1.10	1010526	78.28	60	120	
In	115	1	He	207908	1.23	257801	80.65	60	120	
Tb	159	1	He	993009	0.11	1155473	85.94	60	120	
Ho	165	1	He	994177	1.06	1147359	86.65	60	120	
Bi	209	1	He	640658	0.48	790610	81.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-19-a@2
Data File Name	145SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:04:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.229	23.229	1.24	489902	0.00	10000	
Be	9	45	2	NoGas	2.391	2.391	1.46	12286	0.02	2000	
B	11	6	2	NoGas	41.386	41.386	3.28	165312	0.03	300	
Na	23	45	1	He	2235.238	2235.238	1.18	868475	0.26	500000	
Mg	24	45	1	He	7662.998	7662.998	2.01	1656505	0.46	500000	
Al	27	45	1	He	27465.579	27465.579	0.54	2494199	1.10	200000	
K	39	45	1	He	8901.950	8901.950	1.74	953452	0.93	500000	
Ca	44	45	1	He	840627.165	840627.165	1.92	5166924	16.27	500000	>LDR
Ti	47	45	1	He	326.481	326.481	2.73	14465	2.26	2500	
V	51	45	1	He	35.304	35.304	3.58	53866	0.07	10000	
Cr	52	45	1	He	172.643	172.643	1.62	327606	0.05	10000	
Mn	55	45	1	He	437.213	437.213	1.74	418178	0.10	10000	
Fe	56	45	1	He	19523.136	19523.136	1.50	29218490	0.07	200000	
Co	59	45	1	He	96.004	96.004	1.63	330133	0.03	5000	
Ni	60	45	1	He	287.104	287.104	2.09	274049	0.10	10000	
Cu	63	45	1	He	67.099	67.099	2.74	184745	0.04	10000	
Zn	66	45	1	He	89.421	89.421	1.18	30356	0.29	10000	
As	75	115	1	He	68.388	68.388	0.66	13966	0.49	10000	
Se	78	115	1	He	4.412	4.412	4.72	46	9.50	10000	
Sr	88	103	1	He	163.126	163.126	0.53	146012	0.11	10000	
Mo	95	103	1	He	4.607	4.607	3.75	4969	0.09	2000	
Ag	107	103	1	He	0.693	0.693	3.65	2678	0.03	300	
Cd	111	115	1	He	5.339	5.339	2.12	2432	0.22	4000	
Sn	118	115	1	He	57.051	57.051	2.79	50375	0.11	2000	
Sb	123	115	1	He	1364.557	1364.557	0.68	1323258	0.10	200	>LDR
Ba	137	115	1	He	392.180	392.180	1.57	133763	0.29	10000	
W	182	159	1	He	1.123	1.123	7.99	6846	0.02	2500	
Tl	205	165	1	He	1.128	1.128	11.53	8539	0.01	2000	
Pb	208	165	1	He	8687.558	8687.558	0.34	86220645	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1426510	1.07	1276810	111.72	60	120	
Sc	45	1	He	133589	1.37	163460	81.73	60	120	
Sc	45	2	NoGas	9143069	0.50	8842934	103.39	60	120	
Rh	103	1	He	768197	2.53	1010526	76.02	60	120	
In	115	1	He	206752	2.27	257801	80.20	60	120	
Tb	159	1	He	947131	2.43	1155473	81.97	60	120	
Ho	165	1	He	968876	1.63	1147359	84.44	60	120	
Bi	209	1	He	626899	1.64	790610	79.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-19-a@20
Data File Name	146SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:08:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.840	2.840	0.42	142195	0.00	10000	
Be	9	45	2	NoGas	0.523	0.523	8.10	2848	0.02	2000	
B	11	6	2	NoGas	7.827	7.827	4.45	42379	0.02	300	
Na	23	45	1	He	234.258	234.258	11.09	110189	0.21	500000	
Mg	24	45	1	He	743.592	743.592	10.45	182705	0.41	500000	
Al	27	45	1	He	2593.115	2593.115	11.78	266728	0.97	200000	
K	39	45	1	He	910.730	910.730	10.31	119257	0.76	500000	
Ca	44	45	1	He	82304.837	82304.837	11.31	573248	14.36	500000	
Ti	47	45	1	He	34.583	34.583	15.69	1731	2.00	2500	
V	51	45	1	He	3.500	3.500	14.88	6206	0.06	10000	
Cr	52	45	1	He	18.003	18.003	12.46	39392	0.05	10000	
Mn	55	45	1	He	45.573	45.573	10.22	50606	0.09	10000	
Fe	56	45	1	He	2062.059	2062.059	11.40	3496074	0.06	200000	
Co	59	45	1	He	10.169	10.169	11.71	39975	0.03	5000	
Ni	60	45	1	He	31.439	31.439	12.60	34135	0.09	10000	
Cu	63	45	1	He	7.112	7.112	11.85	26533	0.03	10000	
Zn	66	45	1	He	3.584	3.584	30.93	4276	0.08	10000	
As	75	115	1	He	6.821	6.821	5.84	1706	0.40	10000	
Se	78	115	1	He	0.807	0.807	20.40	13	6.08	10000	
Sr	88	103	1	He	15.543	15.543	9.77	17045	0.09	10000	
Mo	95	103	1	He	0.485	0.485	6.88	661	0.07	2000	
Ag	107	103	1	He	0.069	0.069	6.70	340	0.02	300	
Cd	111	115	1	He	0.666	0.666	6.62	367	0.18	4000	
Sn	118	115	1	He	4.424	4.424	11.57	6113	0.07	2000	
Sb	123	115	1	He	135.258	135.258	8.70	158008	0.09	200	
Ba	137	115	1	He	38.071	38.071	8.42	15650	0.24	10000	
W	182	159	1	He	0.260	0.260	64.61	3160	0.01	2500	
Tl	205	165	1	He	0.146	0.146	7.09	1348	0.01	2000	
Pb	208	165	1	He	876.735	876.735	13.32	10273827	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1485584	1.53	1276810	116.35	60	120	
Sc	45	1	He	152367	9.95	163460	93.21	60	120	
Sc	45	2	NoGas	9413546	0.56	8842934	106.45	60	120	
Rh	103	1	He	941333	8.32	1010526	93.15	60	120	
In	115	1	He	250132	7.65	257801	97.03	60	120	
Tb	159	1	He	1143309	12.97	1155473	98.95	60	120	
Ho	165	1	He	1156563	12.41	1147359	100.80	60	120	
Bi	209	1	He	759920	7.12	790610	96.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-20-a@2
Data File Name	147SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:12:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	140.242	140.242	0.78	2763638	0.01	10000	
Be	9	45	2	NoGas	3.225	3.225	1.96	18217	0.02	2000	
B	11	6	2	NoGas	43.316	43.316	0.45	179906	0.02	300	
Na	23	45	1	He	705.219	705.219	1.26	327710	0.22	500000	
Mg	24	45	1	He	42657.075	42657.075	1.89	10835045	0.39	500000	
Al	27	45	1	He	54823.911	54823.911	2.43	5851177	0.94	200000	
K	39	45	1	He	11200.984	11200.984	2.76	1407345	0.80	500000	
Ca	44	45	1	He	128244.612	128244.612	1.55	927177	13.83	500000	
Ti	47	45	1	He	431.637	431.637	1.83	22487	1.92	2500	
V	51	45	1	He	95.101	95.101	1.38	170236	0.06	10000	
Cr	52	45	1	He	83.780	83.780	1.68	187314	0.04	10000	
Mn	55	45	1	He	1595.931	1595.931	1.12	1790407	0.09	10000	
Fe	56	45	1	He	117556.721	117556.721	1.97	206761761	0.06	200000	
Co	59	45	1	He	59.877	59.877	2.13	242175	0.02	5000	
Ni	60	45	1	He	144.646	144.646	2.02	162386	0.09	10000	
Cu	63	45	1	He	101.860	101.860	1.74	326963	0.03	10000	
Zn	66	45	1	He	322.582	322.582	2.89	120547	0.27	10000	
As	75	115	1	He	69.554	69.554	0.60	16079	0.43	10000	
Se	78	115	1	He	15.632	15.632	5.45	177	8.82	10000	
Sr	88	103	1	He	185.366	185.366	1.02	192929	0.10	10000	
Mo	95	103	1	He	16.096	16.096	3.43	20155	0.08	2000	
Ag	107	103	1	He	0.167	0.167	4.69	760	0.02	300	
Cd	111	115	1	He	0.768	0.768	7.81	397	0.19	4000	
Sn	118	115	1	He	19.337	19.337	1.31	20276	0.10	2000	
Sb	123	115	1	He	2.402	2.402	11.97	2656	0.09	200	
Ba	137	115	1	He	445.709	445.709	1.35	172059	0.26	10000	
W	182	159	1	He	0.290	0.290	10.68	3264	0.01	2500	
Tl	205	165	1	He	1.670	1.670	1.36	14516	0.01	2000	
Pb	208	165	1	He	63.916	63.916	0.63	729532	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1487615	0.20	1276810	116.51	60	120	
Sc	45	1	He	157061	2.07	163460	96.09	60	120	
Sc	45	2	NoGas	10071279	0.19	8842934	113.89	60	120	
Rh	103	1	He	893451	2.03	1010526	88.41	60	120	
In	115	1	He	234032	1.94	257801	90.78	60	120	
Tb	159	1	He	1110777	0.57	1155473	96.13	60	120	
Ho	165	1	He	1112529	1.32	1147359	96.96	60	120	
Bi	209	1	He	719011	0.54	790610	90.94	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-22-a@2
Data File Name	148SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:16:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	100.337	100.337	1.81	1897391	0.01	10000	
Be	9	45	2	NoGas	2.696	2.696	4.08	14425	0.02	2000	
B	11	6	2	NoGas	31.311	31.311	0.88	131507	0.02	300	
Na	23	45	1	He	388.743	388.743	2.56	182652	0.21	500000	
Mg	24	45	1	He	12327.744	12327.744	1.39	3103516	0.40	500000	
Al	27	45	1	He	45714.113	45714.113	2.08	4835542	0.95	200000	
K	39	45	1	He	6384.601	6384.601	0.89	799390	0.80	500000	
Ca	44	45	1	He	8575.092	8575.092	0.51	62101	13.81	500000	
Ti	47	45	1	He	318.832	318.832	0.43	16455	1.94	2500	
V	51	45	1	He	97.756	97.756	2.60	173373	0.06	10000	
Cr	52	45	1	He	65.372	65.372	2.45	145005	0.05	10000	
Mn	55	45	1	He	1124.042	1124.042	1.80	1249999	0.09	10000	
Fe	56	45	1	He	105798.734	105798.734	1.37	184416446	0.06	200000	
Co	59	45	1	He	53.017	53.017	1.16	212555	0.02	5000	
Ni	60	45	1	He	164.252	164.252	0.81	182723	0.09	10000	
Cu	63	45	1	He	75.785	75.785	1.06	242365	0.03	10000	
Zn	66	45	1	He	371.901	371.901	1.02	137259	0.27	10000	
As	75	115	1	He	50.562	50.562	1.21	11928	0.42	10000	
Se	78	115	1	He	14.632	14.632	3.52	169	8.63	10000	
Sr	88	103	1	He	44.926	44.926	0.77	47971	0.09	10000	
Mo	95	103	1	He	21.008	21.008	2.86	26928	0.08	2000	
Ag	107	103	1	He	0.075	0.075	9.91	354	0.02	300	
Cd	111	115	1	He	2.617	2.617	1.23	1377	0.19	4000	
Sn	118	115	1	He	20.269	20.269	1.59	21603	0.09	2000	
Sb	123	115	1	He	1.048	1.048	1.57	1197	0.09	200	
Ba	137	115	1	He	221.839	221.839	1.28	87358	0.25	10000	
W	182	159	1	He	0.216	0.216	6.36	2849	0.01	2500	
Tl	205	165	1	He	1.867	1.867	2.75	16326	0.01	2000	
Pb	208	165	1	He	64.683	64.683	0.35	742665	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1466424	0.25	1276810	114.85	60	120	
Sc	45	1	He	155626	1.07	163460	95.21	60	120	
Sc	45	2	NoGas	9530335	0.45	8842934	107.77	60	120	
Rh	103	1	He	915106	0.82	1010526	90.56	60	120	
In	115	1	He	238662	1.32	257801	92.58	60	120	
Tb	159	1	He	1114253	1.70	1155473	96.43	60	120	
Ho	165	1	He	1119083	1.39	1147359	97.54	60	120	
Bi	209	1	He	732953	1.50	790610	92.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-23-a@2
Data File Name	149SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:20:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	53.433	53.433	0.31	991954	0.01	10000	
Be	9	45	2	NoGas	5.932	5.932	0.69	29762	0.02	2000	
B	11	6	2	NoGas	152.700	152.700	2.50	562304	0.03	300	
Na	23	45	1	He	2170.183	2170.183	1.40	914262	0.24	500000	
Mg	24	45	1	He	159349.515	159349.515	1.72	37322547	0.43	500000	
Al	27	45	1	He	51414.110	51414.110	1.45	5061169	1.02	200000	
K	39	45	1	He	3471.449	3471.449	1.64	408689	0.85	500000	
Ca	44	45	1	He	832588.998	832588.998	1.33	5547390	15.01	500000	>LDR
Ti	47	45	1	He	1282.249	1282.249	0.70	61584	2.08	2500	
V	51	45	1	He	68.284	68.284	1.56	112792	0.06	10000	
Cr	52	45	1	He	375.227	375.227	1.85	770812	0.05	10000	
Mn	55	45	1	He	3814.835	3814.835	1.95	3944770	0.10	10000	
Fe	56	45	1	He	64614.814	64614.814	2.28	104803449	0.06	200000	
Co	59	45	1	He	340.877	340.877	1.70	1269408	0.03	5000	
Ni	60	45	1	He	1860.571	1860.571	1.23	1923843	0.10	10000	
Cu	63	45	1	He	992.296	992.296	1.26	2897032	0.03	10000	
Zn	66	45	1	He	616.757	616.757	0.89	209953	0.29	10000	
As	75	115	1	He	46.298	46.298	1.04	9586	0.48	10000	
Se	78	115	1	He	12.570	12.570	5.74	128	9.81	10000	
Sr	88	103	1	He	732.761	732.761	0.89	678709	0.11	10000	
Mo	95	103	1	He	10.742	10.742	1.40	11974	0.09	2000	
Ag	107	103	1	He	0.645	0.645	3.28	2581	0.02	300	
Cd	111	115	1	He	112.126	112.126	1.26	51711	0.22	4000	
Sn	118	115	1	He	106.887	106.887	1.51	94505	0.11	2000	
Sb	123	115	1	He	12.503	12.503	1.31	12302	0.10	200	
Ba	137	115	1	He	997.147	997.147	0.59	344513	0.29	10000	
W	182	159	1	He	0.785	0.785	9.35	5535	0.01	2500	
Tl	205	165	1	He	0.818	0.818	3.80	6556	0.01	2000	
Pb	208	165	1	He	2034.619	2034.619	0.49	21333716	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386355	1.96	1276810	108.58	60	120	
Sc	45	1	He	144841	1.50	163460	88.61	60	120	
Sc	45	2	NoGas	8970209	0.43	8842934	101.44	60	120	
Rh	103	1	He	795320	0.31	1010526	78.70	60	120	
In	115	1	He	209433	0.50	257801	81.24	60	120	
Tb	159	1	He	1008337	0.47	1155473	87.27	60	120	
Ho	165	1	He	1023577	0.48	1147359	89.21	60	120	
Bi	209	1	He	626422	0.59	790610	79.23	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-25-a@200
Data File Name	150SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:24:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.233	1.233	3.12	105195	0.00	10000	
Be	9	45	2	NoGas	0.225	0.225	18.00	1189	0.02	2000	
B	11	6	2	NoGas	3.072	3.072	6.64	23037	0.01	300	
Na	23	45	1	He	58.742	58.742	3.47	30941	0.19	500000	
Mg	24	45	1	He	444.696	444.696	0.89	101009	0.44	500000	
Al	27	45	1	He	417.832	417.832	1.63	39874	1.05	200000	
K	39	45	1	He	72.784	72.784	9.15	17009	0.43	500000	
Ca	44	45	1	He	4671.575	4671.575	1.13	30621	15.26	500000	
Ti	47	45	1	He	20.024	20.024	11.31	929	2.16	2500	
V	51	45	1	He	0.731	0.731	5.34	1317	0.06	10000	
Cr	52	45	1	He	1.290	1.290	5.92	3320	0.04	10000	
Mn	55	45	1	He	12.946	12.946	2.41	14151	0.09	10000	
Fe	56	45	1	He	801.155	801.155	1.37	1255233	0.06	200000	
Co	59	45	1	He	1.585	1.585	1.79	6101	0.03	5000	
Ni	60	45	1	He	9.830	9.830	1.39	9995	0.10	10000	
Cu	63	45	1	He	6.080	6.080	2.04	21556	0.03	10000	
Zn	66	45	1	He	-3.712	-3.712	-9.44	1579	-0.24	10000	
As	75	115	1	He	1.149	1.149	1.36	287	0.40	10000	
Se	78	115	1	He	0.263	0.263	98.73	6	4.18	10000	
Sr	88	103	1	He	4.498	4.498	1.12	4752	0.09	10000	
Mo	95	103	1	He	0.114	0.114	23.02	164	0.07	2000	
Ag	107	103	1	He	0.144	0.144	12.88	654	0.02	300	
Cd	111	115	1	He	0.195	0.195	7.68	100	0.20	4000	
Sn	118	115	1	He	-0.494	-0.494	-24.83	933	-0.05	2000	
Sb	123	115	1	He	1.585	1.585	3.59	1732	0.09	200	
Ba	137	115	1	He	9.455	9.455	0.83	3593	0.26	10000	
W	182	159	1	He	0.044	0.044	31.07	1715	0.00	2500	
Tl	205	165	1	He	0.207	0.207	18.86	1697	0.01	2000	
Pb	208	165	1	He	2706.558	2706.558	2.24	28641903	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1425631	1.27	1276810	111.66	60	120	
Sc	45	1	He	139522	0.88	163460	85.36	60	120	
Sc	45	2	NoGas	8713183	0.66	8842934	98.53	60	120	
Rh	103	1	He	889302	1.05	1010526	88.00	60	120	
In	115	1	He	229970	1.49	257801	89.20	60	120	
Tb	159	1	He	1026482	2.62	1155473	88.84	60	120	
Ho	165	1	He	1033354	2.29	1147359	90.06	60	120	
Bi	209	1	He	711613	1.84	790610	90.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-26-a@2
Data File Name	151SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:28:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	141.599	141.599	1.12	2532247	0.01	10000	
Be	9	45	2	NoGas	4.032	4.032	4.02	20657	0.02	2000	
B	11	6	2	NoGas	136.224	136.224	1.53	496366	0.03	300	
Na	23	45	1	He	16027.787	16027.787	0.55	6645469	0.24	500000	
Mg	24	45	1	He	15421.098	15421.098	0.88	3581261	0.43	500000	
Al	27	45	1	He	77705.308	77705.308	1.86	7583909	1.02	200000	
K	39	45	1	He	19072.527	19072.527	1.24	2184483	0.87	500000	
Ca	44	45	1	He	6523.982	6523.982	0.64	43743	14.91	500000	
Ti	47	45	1	He	385.156	385.156	1.61	18335	2.10	2500	
V	51	45	1	He	180.941	180.941	2.21	295971	0.06	10000	
Cr	52	45	1	He	172.275	172.275	1.18	351283	0.05	10000	
Mn	55	45	1	He	1711.165	1711.165	1.46	1755045	0.10	10000	
Fe	56	45	1	He	120544.879	120544.879	1.57	193853917	0.06	200000	
Co	59	45	1	He	80.714	80.714	1.05	298306	0.03	5000	
Ni	60	45	1	He	393.726	393.726	0.96	403750	0.10	10000	
Cu	63	45	1	He	106.379	106.379	0.62	312003	0.03	10000	
Zn	66	45	1	He	394.411	394.411	1.05	134125	0.29	10000	
As	75	115	1	He	79.477	79.477	1.06	17050	0.47	10000	
Se	78	115	1	He	19.122	19.122	3.54	201	9.53	10000	
Sr	88	103	1	He	73.937	73.937	1.09	70837	0.10	10000	
Mo	95	103	1	He	16.625	16.625	1.62	19136	0.09	2000	
Ag	107	103	1	He	0.174	0.174	11.13	727	0.02	300	
Cd	111	115	1	He	2.593	2.593	4.36	1242	0.21	4000	
Sn	118	115	1	He	21.623	21.623	4.84	20902	0.10	2000	
Sb	123	115	1	He	1.531	1.531	6.65	1580	0.10	200	
Ba	137	115	1	He	386.178	386.178	0.59	138389	0.28	10000	
W	182	159	1	He	0.383	0.383	19.23	3508	0.01	2500	
Tl	205	165	1	He	2.538	2.538	1.23	20475	0.01	2000	
Pb	208	165	1	He	705.525	705.525	0.43	7466924	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1368224	1.35	1276810	107.16	60	120	
Sc	45	1	He	143571	1.94	163460	87.83	60	120	
Sc	45	2	NoGas	9143425	1.08	8842934	103.40	60	120	
Rh	103	1	He	821671	1.94	1010526	81.31	60	120	
In	115	1	He	217229	2.03	257801	84.26	60	120	
Tb	159	1	He	1026930	1.43	1155473	88.88	60	120	
Ho	165	1	He	1033073	1.51	1147359	90.04	60	120	
Bi	209	1	He	666759	0.81	790610	84.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-27-a@2
Data File Name	152SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:33:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	82.373	82.373	0.54	1513912	0.01	10000	
Be	9	45	2	NoGas	3.569	3.569	3.40	18332	0.02	2000	
B	11	6	2	NoGas	182.483	182.483	2.51	669672	0.03	300	
Na	23	45	1	He	1220.295	1220.295	3.00	503494	0.24	500000	
Mg	24	45	1	He	9468.769	9468.769	2.22	2159405	0.44	500000	
Al	27	45	1	He	59544.806	59544.806	2.08	5705280	1.04	200000	
K	39	45	1	He	14419.741	14419.741	2.76	1623576	0.89	500000	
Ca	44	45	1	He	104244.225	104244.225	2.73	676525	15.41	500000	
Ti	47	45	1	He	1320.964	1320.964	2.47	61741	2.14	2500	
V	51	45	1	He	128.796	128.796	2.36	206989	0.06	10000	
Cr	52	45	1	He	3176.473	3176.473	2.42	6345562	0.05	10000	
Mn	55	45	1	He	797.074	797.074	2.84	803156	0.10	10000	
Fe	56	45	1	He	132173.569	132173.569	2.05	208690543	0.06	200000	
Co	59	45	1	He	367.182	367.182	2.96	1330665	0.03	5000	
Ni	60	45	1	He	297.491	297.491	2.85	299520	0.10	10000	
Cu	63	45	1	He	261.469	261.469	2.46	746282	0.04	10000	
Zn	66	45	1	He	334.614	334.614	4.05	112104	0.30	10000	
As	75	115	1	He	98.379	98.379	2.43	21216	0.46	10000	
Se	78	115	1	He	10.352	10.352	7.34	111	9.33	10000	
Sr	88	103	1	He	259.114	259.114	2.39	247150	0.10	10000	
Mo	95	103	1	He	15.230	15.230	0.85	17477	0.09	2000	
Ag	107	103	1	He	1.810	1.810	4.96	7439	0.02	300	
Cd	111	115	1	He	4.495	4.495	4.51	2164	0.21	4000	
Sn	118	115	1	He	58.532	58.532	3.91	54559	0.11	2000	
Sb	123	115	1	He	18.500	18.500	4.85	18965	0.10	200	
Ba	137	115	1	He	1869.141	1869.141	2.83	673436	0.28	10000	
W	182	159	1	He	1.558	1.558	5.25	9444	0.02	2500	
Tl	205	165	1	He	1.592	1.592	4.63	12660	0.01	2000	
Pb	208	165	1	He	2411.367	2411.367	2.74	25137058	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386187	2.18	1276810	108.57	60	120	
Sc	45	1	He	141022	3.38	163460	86.27	60	120	
Sc	45	2	NoGas	9164260	0.86	8842934	103.63	60	120	
Rh	103	1	He	819183	2.85	1010526	81.06	60	120	
In	115	1	He	218545	3.72	257801	84.77	60	120	
Tb	159	1	He	999070	3.60	1155473	86.46	60	120	
Ho	165	1	He	1018298	3.67	1147359	88.75	60	120	
Bi	209	1	He	692637	2.23	790610	87.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-29-a@2
Data File Name	153SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:37:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.435	112.435	0.42	2022720	0.01	10000	
Be	9	45	2	NoGas	3.168	3.168	3.16	16193	0.02	2000	
B	11	6	2	NoGas	64.416	64.416	1.49	240492	0.03	300	
Na	23	45	1	He	482.599	482.599	0.80	213581	0.23	500000	
Mg	24	45	1	He	14373.204	14373.204	1.04	3437823	0.42	500000	
Al	27	45	1	He	49315.860	49315.860	0.70	4956499	0.99	200000	
K	39	45	1	He	7109.987	7109.987	0.45	844649	0.84	500000	
Ca	44	45	1	He	4798.278	4798.278	1.72	33313	14.40	500000	
Ti	47	45	1	He	313.763	313.763	1.46	15387	2.04	2500	
V	51	45	1	He	116.854	116.854	0.85	196907	0.06	10000	
Cr	52	45	1	He	76.819	76.819	1.26	161776	0.05	10000	
Mn	55	45	1	He	1512.975	1512.975	1.67	1598208	0.09	10000	
Fe	56	45	1	He	128309.637	128309.637	1.46	212505116	0.06	200000	
Co	59	45	1	He	51.157	51.157	0.70	194885	0.03	5000	
Ni	60	45	1	He	129.547	129.547	0.49	136958	0.09	10000	
Cu	63	45	1	He	98.688	98.688	0.73	298428	0.03	10000	
Zn	66	45	1	He	381.368	381.368	1.26	133670	0.29	10000	
As	75	115	1	He	77.786	77.786	1.64	17404	0.45	10000	
Se	78	115	1	He	17.360	17.360	8.77	190	9.13	10000	
Sr	88	103	1	He	35.339	35.339	1.34	35535	0.10	10000	
Mo	95	103	1	He	36.895	36.895	0.75	44494	0.08	2000	
Ag	107	103	1	He	0.099	0.099	18.40	437	0.02	300	
Cd	111	115	1	He	0.972	0.972	6.18	486	0.20	4000	
Sn	118	115	1	He	20.455	20.455	1.39	20684	0.10	2000	
Sb	123	115	1	He	1.187	1.187	5.37	1283	0.09	200	
Ba	137	115	1	He	211.973	211.973	0.71	79221	0.27	10000	
W	182	159	1	He	0.235	0.235	27.72	2823	0.01	2500	
Tl	205	165	1	He	2.578	2.578	1.80	21421	0.01	2000	
Pb	208	165	1	He	59.781	59.781	0.65	652619	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367601	1.29	1276810	107.11	60	120	
Sc	45	1	He	147858	0.89	163460	90.46	60	120	
Sc	45	2	NoGas	9114429	0.76	8842934	103.07	60	120	
Rh	103	1	He	861396	1.51	1010526	85.24	60	120	
In	115	1	He	226528	0.54	257801	87.87	60	120	
Tb	159	1	He	1063765	1.38	1155473	92.06	60	120	
Ho	165	1	He	1063953	1.31	1147359	92.73	60	120	
Bi	209	1	He	687152	0.59	790610	86.91	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	154_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:41:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.198	1.011	940130	0.95	50	106.4	89.5	110.5	
Be	9	45	2	NoGas	50.931	0.725	242445	0.75	50	101.9	89.5	110.5	
B	11	6	2	NoGas	46.595	2.950	179896	1.96	50	93.2	89.5	110.5	
Na	23	45	1	He	24490.798	0.779	9903034	0.30	25000	98.0	89.5	110.5	
Mg	24	45	1	He	24133.752	1.074	5467576	0.89	25000	96.5	89.5	110.5	
Al	27	45	1	He	254.602	3.243	24488	2.45	250	101.8	89.5	110.5	
K	39	45	1	He	25431.206	1.750	2838738	1.40	25000	101.7	89.5	110.5	
Ca	44	45	1	He	24941.086	1.754	161332	1.24	25000	99.8	89.5	110.5	
Ti	47	45	1	He	51.034	1.182	2372	1.97	50	102.1	89.5	110.5	
V	51	45	1	He	51.308	0.627	81989	1.51	50	102.6	89.5	110.5	
Cr	52	45	1	He	49.845	1.369	99701	0.90	50	99.7	89.5	110.5	
Mn	55	45	1	He	247.890	1.329	249089	0.45	250	99.2	89.5	110.5	
Fe	56	45	1	He	12403.512	1.142	19461077	0.48	12500	99.2	89.5	110.5	
Co	59	45	1	He	49.678	0.766	179282	0.53	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.582	1.820	49779	0.92	50	99.2	89.5	110.5	
Cu	63	45	1	He	49.119	0.866	142965	0.47	50	98.2	89.5	110.5	
Zn	66	45	1	He	47.014	1.907	18057	2.25	50	94.0	89.5	110.5	
As	75	115	1	He	47.594	0.309	10721	0.53	50	95.2	89.5	110.5	
Se	78	115	1	He	47.765	3.675	521	4.39	50	95.5	89.5	110.5	
Sr	88	103	1	He	50.695	1.851	50633	2.29	50	101.4	89.5	110.5	
Mo	95	103	1	He	51.324	0.719	61506	0.95	50	102.6	89.5	110.5	
Ag	107	103	1	He	49.835	0.300	213860	0.37	50	99.7	89.5	110.5	
Cd	111	115	1	He	48.549	1.838	24361	1.43	50	97.1	89.5	110.5	
Sn	118	115	1	He	48.269	1.762	47200	1.79	50	96.5	89.5	110.5	
Sb	123	115	1	He	50.093	1.214	53564	1.95	50	100.2	89.5	110.5	
Ba	137	115	1	He	50.494	2.568	18985	2.09	50	101.0	89.5	110.5	
W	182	159	1	He	49.547	2.046	261180	2.80	50	99.1	89.5	110.5	
Tl	205	165	1	He	50.518	0.381	403063	0.54	50	101.0	89.5	110.5	
Pb	208	165	1	He	51.003	0.408	535574	0.39	50	102.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1389691	1.10	1276810	108.84	60	120	
Sc	45	1	He	140068	0.90	163460	85.69	60	120	
Sc	45	2	NoGas	8536227	1.23	8842934	96.53	60	120	
Rh	103	1	He	856107	0.60	1010526	84.72	60	120	
In	115	1	He	227868	0.77	257801	88.39	60	120	
Tb	159	1	He	1018480	0.81	1155473	88.14	60	120	
Ho	165	1	He	1023072	0.61	1147359	89.17	60	120	
Bi	209	1	He	679192	0.59	790610	85.91	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	155_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:45:29-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.001	6.4	100531	0.9	8	
Be	9	45	2	NoGas	0.311	17.2	1593	16.1	1	
B	11	6	2	NoGas	5.896	2.6	33553	0.9	20	
Na	23	45	1	He	85.545	0.7	41355	1.1	1000	
Mg	24	45	1	He	71.863	2.4	16727	1.5	1000	
Al	27	45	1	He	3.175	10.5	549	6.0	50	
K	39	45	1	He	88.148	3.1	18543	0.7	1000	
Ca	44	45	1	He	74.494	17.2	1107	7.5	1000	
Ti	47	45	1	He	0.468	40.6	23	37.8	20	
V	51	45	1	He	0.066	149.1	257	60.0	2	
Cr	52	45	1	He	0.132	11.1	1021	2.5	2	
Mn	55	45	1	He	0.439	16.9	1679	4.0	2	
Fe	56	45	1	He	50.142	3.8	80942	4.0	50	CCB High
Co	59	45	1	He	0.085	25.4	713	10.4	1	
Ni	60	45	1	He	0.048	138.7	249	25.5	2	
Cu	63	45	1	He	-0.825	-3.8	2145	3.3	2	
Zn	66	45	1	He	-3.325	-6.3	1689	3.8	20	
As	75	115	1	He	0.181	2.8	67	2.6	2	
Se	78	115	1	He	0.325	71.9	7	37.1	2	
Sr	88	103	1	He	0.141	39.5	239	24.0	10	
Mo	95	103	1	He	0.212	10.2	284	9.4	2	
Ag	107	103	1	He	0.138	10.7	622	10.6	0.2	
Cd	111	115	1	He	0.200	5.1	102	5.0	0.2	
Sn	118	115	1	He	-0.300	-74.0	1122	19.8	10	
Sb	123	115	1	He	0.295	7.2	341	7.5	2	
Ba	137	115	1	He	0.250	22.6	101	22.4	5	
W	182	159	1	He	0.366	7.9	3419	4.7	10	
Tl	205	165	1	He	0.222	11.7	1822	11.5	0.5	
Pb	208	165	1	He	0.410	9.4	5438	7.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1427449	1.15	1276810	111.80	60	120	
Sc	45	1	He	138254	0.89	163460	84.58	60	120	
Sc	45	2	NoGas	8639625	0.15	8842934	97.70	60	120	
Rh	103	1	He	883929	0.05	1010526	87.47	60	120	
In	115	1	He	230128	1.12	257801	89.27	60	120	
Tb	159	1	He	1027314	0.42	1155473	88.91	60	120	
Ho	165	1	He	1035831	0.75	1147359	90.28	60	120	
Bi	209	1	He	702602	0.64	790610	88.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-30-a@2
Data File Name	156SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:49:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	118.671	118.671	0.98	2167452	0.01	10000	
Be	9	45	2	NoGas	4.029	4.029	2.61	20935	0.02	2000	
B	11	6	2	NoGas	58.084	58.084	2.87	222683	0.03	300	
Na	23	45	1	He	711.782	711.782	0.32	309166	0.23	500000	
Mg	24	45	1	He	19044.898	19044.898	0.61	4522880	0.42	500000	
Al	27	45	1	He	56402.391	56402.391	0.23	5628979	1.00	200000	
K	39	45	1	He	8834.854	8834.854	0.68	1039851	0.85	500000	
Ca	44	45	1	He	64023.348	64023.348	0.35	433101	14.78	500000	
Ti	47	45	1	He	483.693	483.693	1.24	23554	2.05	2500	
V	51	45	1	He	91.340	91.340	0.75	152853	0.06	10000	
Cr	52	45	1	He	105.172	105.172	0.32	219635	0.05	10000	
Mn	55	45	1	He	1982.452	1982.452	1.20	2079306	0.10	10000	
Fe	56	45	1	He	127651.043	127651.043	0.43	209932654	0.06	200000	
Co	59	45	1	He	108.998	108.998	0.49	411818	0.03	5000	
Ni	60	45	1	He	1175.321	1175.321	0.54	1232150	0.10	10000	
Cu	63	45	1	He	726.975	726.975	0.50	2152833	0.03	10000	
Zn	66	45	1	He	1250.068	1250.068	0.43	428363	0.29	10000	
As	75	115	1	He	1226.548	1226.548	1.56	268903	0.46	10000	
Se	78	115	1	He	20.081	20.081	7.89	215	9.32	10000	
Sr	88	103	1	He	160.623	160.623	0.61	157954	0.10	10000	
Mo	95	103	1	He	15.541	15.541	0.53	18374	0.08	2000	
Ag	107	103	1	He	4.086	4.086	0.62	17297	0.02	300	
Cd	111	115	1	He	3.465	3.465	1.39	1697	0.20	4000	
Sn	118	115	1	He	32.384	32.384	3.55	31326	0.10	2000	
Sb	123	115	1	He	10.672	10.672	3.03	11152	0.10	200	
Ba	137	115	1	He	330.442	330.442	0.91	121179	0.27	10000	
W	182	159	1	He	0.575	0.575	5.34	4605	0.01	2500	
Tl	205	165	1	He	4.876	4.876	1.85	40230	0.01	2000	
Pb	208	165	1	He	9133.809	9133.809	0.53	98939493	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1397351	0.82	1276810	109.44	60	120	
Sc	45	1	He	146821	2.08	163460	89.82	60	120	
Sc	45	2	NoGas	9274875	0.57	8842934	104.88	60	120	
Rh	103	1	He	843942	1.88	1010526	83.52	60	120	
In	115	1	He	222319	2.59	257801	86.24	60	120	
Tb	159	1	He	1046097	1.52	1155473	90.53	60	120	
Ho	165	1	He	1057456	1.12	1147359	92.16	60	120	
Bi	209	1	He	707864	0.73	790610	89.53	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-30-a@20
Data File Name	157SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:53:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.757	12.757	0.45	296514	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	4.40	2582	0.02	2000	
B	11	6	2	NoGas	8.276	8.276	4.58	43396	0.02	300	
Na	23	45	1	He	79.756	79.756	3.48	39903	0.20	500000	
Mg	24	45	1	He	1971.188	1971.188	0.54	451140	0.44	500000	
Al	27	45	1	He	5636.818	5636.818	1.08	541621	1.04	200000	
K	39	45	1	He	938.178	938.178	0.94	114378	0.82	500000	
Ca	44	45	1	He	6779.248	6779.248	1.00	44714	15.16	500000	
Ti	47	45	1	He	51.189	51.189	4.40	2400	2.13	2500	
V	51	45	1	He	9.828	9.828	2.47	15971	0.06	10000	
Cr	52	45	1	He	11.443	11.443	1.27	23692	0.05	10000	
Mn	55	45	1	He	195.424	195.424	0.74	198379	0.10	10000	
Fe	56	45	1	He	13643.252	13643.252	1.58	21595031	0.06	200000	
Co	59	45	1	He	11.596	11.596	2.66	42540	0.03	5000	
Ni	60	45	1	He	128.355	128.355	0.34	129683	0.10	10000	
Cu	63	45	1	He	73.336	73.336	0.45	213104	0.03	10000	
Zn	66	45	1	He	132.015	132.015	0.64	46058	0.29	10000	
As	75	115	1	He	123.902	123.902	1.46	27867	0.44	10000	
Se	78	115	1	He	2.398	2.398	19.52	29	8.17	10000	
Sr	88	103	1	He	15.582	15.582	1.68	16016	0.10	10000	
Mo	95	103	1	He	1.514	1.514	4.36	1881	0.08	2000	
Ag	107	103	1	He	0.425	0.425	6.98	1880	0.02	300	
Cd	111	115	1	He	0.395	0.395	1.68	200	0.20	4000	
Sn	118	115	1	He	1.908	1.908	9.66	3204	0.06	2000	
Sb	123	115	1	He	1.168	1.168	4.66	1270	0.09	200	
Ba	137	115	1	He	32.748	32.748	2.29	12316	0.27	10000	
W	182	159	1	He	0.067	0.067	25.63	1841	0.00	2500	
Tl	205	165	1	He	0.511	0.511	2.36	4163	0.01	2000	
Pb	208	165	1	He	972.557	972.557	1.25	10340253	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1460876	0.63	1276810	114.42	60	120	
Sc	45	1	He	141301	0.45	163460	86.44	60	120	
Sc	45	2	NoGas	8767189	0.35	8842934	99.14	60	120	
Rh	103	1	He	877680	0.96	1010526	86.85	60	120	
In	115	1	He	227867	0.94	257801	88.39	60	120	
Tb	159	1	He	1029329	0.70	1155473	89.08	60	120	
Ho	165	1	He	1037895	0.86	1147359	90.46	60	120	
Bi	209	1	He	704330	0.67	790610	89.09	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@500
Data File Name	158SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:57:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.534	1.534	1.35	108119	0.00	10000	
Be	9	45	2	NoGas	0.104	0.104	15.95	589	0.02	2000	
B	11	6	2	NoGas	3.165	3.165	3.70	23656	0.01	300	
Na	23	45	1	He	11.131	11.131	10.42	11886	0.09	500000	
Mg	24	45	1	He	96.997	96.997	0.50	22759	0.43	500000	
Al	27	45	1	He	460.711	460.711	2.19	44336	1.04	200000	
K	39	45	1	He	126.939	126.939	2.22	23223	0.55	500000	
Ca	44	45	1	He	458.893	458.893	2.55	3617	12.69	500000	
Ti	47	45	1	He	5.723	5.723	13.52	269	2.13	2500	
V	51	45	1	He	0.743	0.743	61.97	1346	0.06	10000	
Cr	52	45	1	He	20.409	20.409	1.14	41493	0.05	10000	
Mn	55	45	1	He	5.009	5.009	4.93	6301	0.08	10000	
Fe	56	45	1	He	852.700	852.700	3.29	1347901	0.06	200000	
Co	59	45	1	He	0.544	0.544	2.37	2388	0.02	5000	
Ni	60	45	1	He	2.143	2.143	9.82	2360	0.09	10000	
Cu	63	45	1	He	0.845	0.845	10.21	6918	0.01	10000	
Zn	66	45	1	He	-2.038	-2.038	-29.39	2139	-0.10	10000	
As	75	115	1	He	0.610	0.610	6.41	163	0.37	10000	
Se	78	115	1	He	0.440	0.440	41.92	8	5.41	10000	
Sr	88	103	1	He	1.690	1.690	4.87	1817	0.09	10000	
Mo	95	103	1	He	0.091	0.091	12.10	133	0.07	2000	
Ag	107	103	1	He	0.006	0.006	39.24	37	0.02	300	
Cd	111	115	1	He	0.086	0.086	26.25	44	0.19	4000	
Sn	118	115	1	He	-0.954	-0.954	-8.68	489	-0.20	2000	
Sb	123	115	1	He	0.281	0.281	18.83	323	0.09	200	
Ba	137	115	1	He	12.473	12.473	4.69	4694	0.27	10000	
W	182	159	1	He	0.036	0.036	47.45	1656	0.00	2500	
Tl	205	165	1	He	0.016	0.016	17.52	158	0.01	2000	
Pb	208	165	1	He	13.048	13.048	1.39	138742	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1442616	0.65	1276810	112.99	60	120	
Sc	45	1	He	140797	1.45	163460	86.14	60	120	
Sc	45	2	NoGas	8552476	0.23	8842934	96.72	60	120	
Rh	103	1	He	876080	0.50	1010526	86.70	60	120	
In	115	1	He	227813	0.27	257801	88.37	60	120	
Tb	159	1	He	1015877	0.86	1155473	87.92	60	120	
Ho	165	1	He	1029879	0.14	1147359	89.76	60	120	
Bi	209	1	He	700138	0.91	790610	88.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-32-a@2
Data File Name	159SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:02:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	159.466	159.466	1.81	2874016	0.01	10000	
Be	9	45	2	NoGas	4.497	4.497	3.39	23286	0.02	2000	
B	11	6	2	NoGas	272.777	272.777	0.08	938412	0.03	300	
Na	23	45	1	He	2063.998	2063.998	0.66	895901	0.23	500000	
Mg	24	45	1	He	22312.177	22312.177	0.12	5383398	0.41	500000	
Al	27	45	1	He	123753.005	123753.005	0.44	12546608	0.99	200000	
K	39	45	1	He	29615.159	29615.159	1.31	3518784	0.84	500000	
Ca	44	45	1	He	126286.435	126286.435	0.42	867192	14.56	500000	
Ti	47	45	1	He	1390.492	1390.492	0.41	68776	2.02	2500	
V	51	45	1	He	191.386	191.386	7.80	324988	0.06	10000	
Cr	52	45	1	He	2613.019	2613.019	0.39	5523980	0.05	10000	
Mn	55	45	1	He	1111.875	1111.875	1.06	1185224	0.09	10000	
Fe	56	45	1	He	159452.162	159452.162	1.44	266416896	0.06	200000	
Co	59	45	1	He	78.117	78.117	1.01	299986	0.03	5000	
Ni	60	45	1	He	322.333	322.333	0.56	343440	0.09	10000	
Cu	63	45	1	He	335.226	335.226	0.70	1011159	0.03	10000	
Zn	66	45	1	He	767.089	767.089	0.82	268197	0.29	10000	
As	75	115	1	He	95.536	95.536	0.85	20283	0.47	10000	
Se	78	115	1	He	19.600	19.600	1.95	203	9.63	10000	
Sr	88	103	1	He	471.749	471.749	0.73	445445	0.11	10000	
Mo	95	103	1	He	25.607	25.607	0.87	29068	0.09	2000	
Ag	107	103	1	He	0.741	0.741	3.00	3019	0.02	300	
Cd	111	115	1	He	5.208	5.208	2.36	2466	0.21	4000	
Sn	118	115	1	He	71.516	71.516	1.64	65359	0.11	2000	
Sb	123	115	1	He	48.823	48.823	1.69	49264	0.10	200	
Ba	137	115	1	He	3535.029	3535.029	0.83	1253944	0.28	10000	
W	182	159	1	He	3.455	3.455	2.47	19690	0.02	2500	
Tl	205	165	1	He	2.094	2.094	1.35	16971	0.01	2000	
Pb	208	165	1	He	2966.341	2966.341	0.72	31520365	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1306324	0.80	1276810	102.31	60	120	
Sc	45	1	He	149162	1.63	163460	91.25	60	120	
Sc	45	2	NoGas	9252026	1.34	8842934	104.63	60	120	
Rh	103	1	He	810724	1.98	1010526	80.23	60	120	
In	115	1	He	215013	0.89	257801	83.40	60	120	
Tb	159	1	He	1024233	1.89	1155473	88.64	60	120	
Ho	165	1	He	1037330	1.32	1147359	90.41	60	120	
Bi	209	1	He	663831	0.72	790610	83.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-33-a@2
Data File Name	160SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:06:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	102.640	102.640	1.60	1780557	0.01	10000	
Be	9	45	2	NoGas	2.501	2.501	3.46	12297	0.02	2000	
B	11	6	2	NoGas	219.887	219.887	1.32	778848	0.03	300	
Na	23	45	1	He	903.017	903.017	1.29	379769	0.24	500000	
Mg	24	45	1	He	15479.010	15479.010	0.79	3578259	0.43	500000	
Al	27	45	1	He	47623.306	47623.306	1.87	4626125	1.03	200000	
K	39	45	1	He	13043.871	13043.871	1.85	1490016	0.88	500000	
Ca	44	45	1	He	62890.820	62890.820	0.99	414096	15.19	500000	
Ti	47	45	1	He	269.764	269.764	1.88	12786	2.11	2500	
V	51	45	1	He	94.312	94.312	2.70	153634	0.06	10000	
Cr	52	45	1	He	379.542	379.542	1.66	769397	0.05	10000	
Mn	55	45	1	He	1134.635	1134.635	0.88	1158706	0.10	10000	
Fe	56	45	1	He	150077.284	150077.284	1.08	240220648	0.06	200000	
Co	59	45	1	He	50.343	50.343	1.30	185362	0.03	5000	
Ni	60	45	1	He	191.098	191.098	1.49	195173	0.10	10000	
Cu	63	45	1	He	97.392	97.392	1.26	284718	0.03	10000	
Zn	66	45	1	He	437.495	437.495	1.47	147779	0.30	10000	
As	75	115	1	He	108.161	108.161	1.97	23577	0.46	10000	
Se	78	115	1	He	9.996	9.996	7.72	108	9.24	10000	
Sr	88	103	1	He	195.217	195.217	1.56	188496	0.10	10000	
Mo	95	103	1	He	17.753	17.753	0.83	20609	0.09	2000	
Ag	107	103	1	He	0.128	0.128	4.52	544	0.02	300	
Cd	111	115	1	He	8.826	8.826	2.00	4293	0.21	4000	
Sn	118	115	1	He	20.366	20.366	3.15	20087	0.10	2000	
Sb	123	115	1	He	1.699	1.699	7.31	1781	0.10	200	
Ba	137	115	1	He	337.481	337.481	1.29	122935	0.27	10000	
W	182	159	1	He	0.196	0.196	11.71	2493	0.01	2500	
Tl	205	165	1	He	3.385	3.385	2.07	27080	0.01	2000	
Pb	208	165	1	He	156.843	156.843	0.75	1647443	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1341467	1.24	1276810	105.06	60	120	
Sc	45	1	He	142906	0.40	163460	87.43	60	120	
Sc	45	2	NoGas	8751693	0.37	8842934	98.97	60	120	
Rh	103	1	He	828798	0.84	1010526	82.02	60	120	
In	115	1	He	220828	1.36	257801	85.66	60	120	
Tb	159	1	He	1014449	1.31	1155473	87.80	60	120	
Ho	165	1	He	1024765	0.90	1147359	89.32	60	120	
Bi	209	1	He	668033	0.84	790610	84.50	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-34-a@2
Data File Name	161SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:10:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	91.459	91.459	2.26	1600507	0.01	10000	
Be	9	45	2	NoGas	2.624	2.624	5.43	12938	0.02	2000	
B	11	6	2	NoGas	235.548	235.548	1.49	849765	0.03	300	
Na	23	45	1	He	1770.161	1770.161	1.90	741524	0.24	500000	
Mg	24	45	1	He	12193.459	12193.459	1.39	2835249	0.43	500000	
Al	27	45	1	He	39112.249	39112.249	1.39	3821768	1.02	200000	
K	39	45	1	He	5175.764	5175.764	2.03	600217	0.86	500000	
Ca	44	45	1	He	3789.933	3789.933	1.59	25719	14.74	500000	
Ti	47	45	1	He	277.185	277.185	1.26	13216	2.10	2500	
V	51	45	1	He	90.676	90.676	2.27	148552	0.06	10000	
Cr	52	45	1	He	62.974	62.974	1.84	129053	0.05	10000	
Mn	55	45	1	He	1440.434	1440.434	1.59	1479473	0.10	10000	
Fe	56	45	1	He	119268.196	119268.196	1.67	192018970	0.06	200000	
Co	59	45	1	He	47.976	47.976	1.29	177710	0.03	5000	
Ni	60	45	1	He	122.945	122.945	1.65	126364	0.10	10000	
Cu	63	45	1	He	82.158	82.158	2.00	242294	0.03	10000	
Zn	66	45	1	He	339.265	339.265	1.29	115914	0.29	10000	
As	75	115	1	He	69.089	69.089	1.70	15228	0.45	10000	
Se	78	115	1	He	16.079	16.079	6.21	174	9.25	10000	
Sr	88	103	1	He	30.747	30.747	3.47	30157	0.10	10000	
Mo	95	103	1	He	29.830	29.830	3.35	35077	0.09	2000	
Ag	107	103	1	He	0.069	0.069	15.93	303	0.02	300	
Cd	111	115	1	He	0.477	0.477	15.11	236	0.20	4000	
Sn	118	115	1	He	19.094	19.094	1.85	19108	0.10	2000	
Sb	123	115	1	He	1.032	1.032	4.27	1102	0.09	200	
Ba	137	115	1	He	208.302	208.302	0.72	76680	0.27	10000	
W	182	159	1	He	0.165	0.165	23.74	2356	0.01	2500	
Tl	205	165	1	He	1.979	1.979	2.47	16098	0.01	2000	
Pb	208	165	1	He	50.106	50.106	0.06	535567	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367613	1.77	1276810	107.11	60	120	
Sc	45	1	He	143763	2.04	163460	87.95	60	120	
Sc	45	2	NoGas	8778017	0.74	8842934	99.27	60	120	
Rh	103	1	He	839785	0.50	1010526	83.10	60	120	
In	115	1	He	223134	1.26	257801	86.55	60	120	
Tb	159	1	He	1026674	1.17	1155473	88.85	60	120	
Ho	165	1	He	1041307	0.78	1147359	90.76	60	120	
Bi	209	1	He	670728	1.10	790610	84.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-35-a@2
Data File Name	162SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:15:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	58.608	58.608	0.42	1015097	0.01	10000	
Be	9	45	2	NoGas	1.552	1.552	6.75	7391	0.02	2000	
B	11	6	2	NoGas	39.956	39.956	0.12	155781	0.03	300	
Na	23	45	1	He	447.661	447.661	2.84	178771	0.25	500000	
Mg	24	45	1	He	47085.660	47085.660	1.62	10132777	0.46	500000	
Al	27	45	1	He	24101.935	24101.935	2.77	2179494	1.11	200000	
K	39	45	1	He	5076.114	5076.114	2.51	545006	0.93	500000	
Ca	44	45	1	He	173790.735	173790.735	2.15	1064198	16.33	500000	
Ti	47	45	1	He	394.298	394.298	3.95	17393	2.27	2500	
V	51	45	1	He	60.753	60.753	2.13	92183	0.07	10000	
Cr	52	45	1	He	42.895	42.895	2.52	81600	0.05	10000	
Mn	55	45	1	He	1824.262	1824.262	3.28	1733205	0.11	10000	
Fe	56	45	1	He	83750.230	83750.230	2.69	124789524	0.07	200000	
Co	59	45	1	He	33.224	33.224	2.54	114015	0.03	5000	
Ni	60	45	1	He	85.422	85.422	3.03	81324	0.11	10000	
Cu	63	45	1	He	89.621	89.621	2.53	244250	0.04	10000	
Zn	66	45	1	He	294.552	294.552	1.87	93497	0.32	10000	
As	75	115	1	He	53.893	53.893	2.34	11285	0.48	10000	
Se	78	115	1	He	13.551	13.551	11.41	139	9.72	10000	
Sr	88	103	1	He	211.277	211.277	0.79	195513	0.11	10000	
Mo	95	103	1	He	21.219	21.219	0.09	23606	0.09	2000	
Ag	107	103	1	He	0.189	0.189	13.55	762	0.02	300	
Cd	111	115	1	He	0.984	0.984	9.70	460	0.21	4000	
Sn	118	115	1	He	20.596	20.596	5.07	19467	0.11	2000	
Sb	123	115	1	He	0.798	0.798	9.16	813	0.10	200	
Ba	137	115	1	He	166.299	166.299	1.79	58130	0.29	10000	
W	182	159	1	He	0.244	0.244	18.41	2689	0.01	2500	
Tl	205	165	1	He	1.258	1.258	0.49	9880	0.01	2000	
Pb	208	165	1	He	58.801	58.801	0.31	606108	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1388585	0.88	1276810	108.75	60	120	
Sc	45	1	He	133096	3.14	163460	81.42	60	120	
Sc	45	2	NoGas	8434650	0.25	8842934	95.38	60	120	
Rh	103	1	He	794331	0.79	1010526	78.61	60	120	
In	115	1	He	211902	1.40	257801	82.20	60	120	
Tb	159	1	He	995625	1.11	1155473	86.17	60	120	
Ho	165	1	He	1004511	0.29	1147359	87.55	60	120	
Bi	209	1	He	654756	0.29	790610	82.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-36-a@2
Data File Name	163SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:19:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	50.634	50.634	1.65	918966	0.01	10000	
Be	9	45	2	NoGas	1.256	1.256	3.24	6209	0.02	2000	
B	11	6	2	NoGas	36.300	36.300	1.43	144943	0.03	300	
Na	23	45	1	He	390.947	390.947	1.97	162184	0.24	500000	
Mg	24	45	1	He	45109.461	45109.461	1.97	10026972	0.45	500000	
Al	27	45	1	He	20526.315	20526.315	2.03	1917607	1.07	200000	
K	39	45	1	He	4082.822	4082.822	0.86	454596	0.90	500000	
Ca	44	45	1	He	165150.789	165150.789	1.45	1044702	15.81	500000	
Ti	47	45	1	He	333.523	333.523	2.93	15201	2.19	2500	
V	51	45	1	He	50.996	50.996	4.39	79938	0.06	10000	
Cr	52	45	1	He	33.531	33.531	2.61	66054	0.05	10000	
Mn	55	45	1	He	1612.103	1612.103	1.95	1582674	0.10	10000	
Fe	56	45	1	He	72378.770	72378.770	1.85	111411702	0.06	200000	
Co	59	45	1	He	28.490	28.490	2.11	101056	0.03	5000	
Ni	60	45	1	He	73.390	73.390	2.25	72200	0.10	10000	
Cu	63	45	1	He	77.622	77.622	2.37	219117	0.04	10000	
Zn	66	45	1	He	233.113	233.113	2.02	77001	0.30	10000	
As	75	115	1	He	46.521	46.521	1.87	9877	0.47	10000	
Se	78	115	1	He	12.216	12.216	2.30	128	9.55	10000	
Sr	88	103	1	He	202.189	202.189	1.37	191724	0.11	10000	
Mo	95	103	1	He	18.657	18.657	1.38	21271	0.09	2000	
Ag	107	103	1	He	0.186	0.186	7.43	768	0.02	300	
Cd	111	115	1	He	0.868	0.868	3.89	412	0.21	4000	
Sn	118	115	1	He	20.459	20.459	4.47	19612	0.10	2000	
Sb	123	115	1	He	0.688	0.688	17.40	714	0.10	200	
Ba	137	115	1	He	128.836	128.836	1.86	45649	0.28	10000	
W	182	159	1	He	0.219	0.219	26.31	2612	0.01	2500	
Tl	205	165	1	He	1.146	1.146	2.82	9173	0.01	2000	
Pb	208	165	1	He	54.714	54.714	0.39	574518	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411839	0.78	1276810	110.58	60	120	
Sc	45	1	He	137441	0.92	163460	84.08	60	120	
Sc	45	2	NoGas	8727866	0.95	8842934	98.70	60	120	
Rh	103	1	He	813948	0.14	1010526	80.55	60	120	
In	115	1	He	214758	0.19	257801	83.30	60	120	
Tb	159	1	He	1015620	0.52	1155473	87.90	60	120	
Ho	165	1	He	1023177	0.96	1147359	89.18	60	120	
Bi	209	1	He	661778	0.56	790610	83.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-37-a@2
Data File Name	164SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:23:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	74.907	74.907	0.72	1339450	0.01	10000	
Be	9	45	2	NoGas	1.950	1.950	1.41	9733	0.02	2000	
B	11	6	2	NoGas	84.736	84.736	1.03	325135	0.03	300	
Na	23	45	1	He	567.051	567.051	0.27	238449	0.24	500000	
Mg	24	45	1	He	47092.885	47092.885	0.35	10758551	0.44	500000	
Al	27	45	1	He	34504.423	34504.423	0.33	3312822	1.04	200000	
K	39	45	1	He	6914.764	6914.764	0.43	784949	0.88	500000	
Ca	44	45	1	He	176749.567	176749.567	0.20	1149069	15.38	500000	
Ti	47	45	1	He	540.596	540.596	0.75	25322	2.13	2500	
V	51	45	1	He	81.158	81.158	1.50	130677	0.06	10000	
Cr	52	45	1	He	52.843	52.843	0.45	106546	0.05	10000	
Mn	55	45	1	He	1814.411	1814.411	0.61	1830634	0.10	10000	
Fe	56	45	1	He	94224.287	94224.287	0.53	149060830	0.06	200000	
Co	59	45	1	He	39.362	39.362	0.55	143335	0.03	5000	
Ni	60	45	1	He	107.285	107.285	0.99	108378	0.10	10000	
Cu	63	45	1	He	107.438	107.438	0.90	309955	0.03	10000	
Zn	66	45	1	He	342.078	342.078	1.22	114814	0.30	10000	
As	75	115	1	He	59.875	59.875	1.10	12854	0.47	10000	
Se	78	115	1	He	14.832	14.832	5.08	156	9.48	10000	
Sr	88	103	1	He	240.144	240.144	0.85	228819	0.10	10000	
Mo	95	103	1	He	20.939	20.939	0.63	23987	0.09	2000	
Ag	107	103	1	He	0.221	0.221	9.54	919	0.02	300	
Cd	111	115	1	He	1.090	1.090	9.04	522	0.21	4000	
Sn	118	115	1	He	22.312	22.312	4.21	21511	0.10	2000	
Sb	123	115	1	He	1.984	1.984	1.43	2043	0.10	200	
Ba	137	115	1	He	208.968	208.968	0.69	74904	0.28	10000	
W	182	159	1	He	0.269	0.269	12.74	2919	0.01	2500	
Tl	205	165	1	He	1.310	1.310	1.28	10684	0.01	2000	
Pb	208	165	1	He	410.788	410.788	0.85	4390150	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1421276	0.95	1276810	111.31	60	120	
Sc	45	1	He	141243	1.11	163460	86.41	60	120	
Sc	45	2	NoGas	8863838	1.03	8842934	100.24	60	120	
Rh	103	1	He	817954	0.92	1010526	80.94	60	120	
In	115	1	He	217282	1.59	257801	84.28	60	120	
Tb	159	1	He	1032607	1.11	1155473	89.37	60	120	
Ho	165	1	He	1043019	0.52	1147359	90.91	60	120	
Bi	209	1	He	671093	0.73	790610	84.88	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ZZZZ
Data File Name	165ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:27:40-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.356	3.3	105273	1.3	4	
Be	9	45	2	NoGas	0.068	20.7	419	16.9	2	
B	11	6	2	NoGas	5.394	0.3	32021	0.9	20	
Na	23	45	1	He	49187.708	0.6	19427081	0.4	75200	
Mg	24	45	1	He	48853.105	0.2	10814138	0.8	75200	
Al	27	45	1	He	52230.296	1.2	4858801	1.3	75200	
K	39	45	1	He	50787.482	0.8	5530697	0.4	75200	
Ca	44	45	1	He	50446.050	0.7	318225	1.1	75200	
Ti	47	45	1	He	995.924	1.5	45197	0.9	1505	
V	51	45	1	He	-0.066	-169.9	48	361.2	4	
Cr	52	45	1	He	0.698	1.9	2109	0.6	4	
Mn	55	45	1	He	-0.271	-22.0	969	5.8	4	
Fe	56	45	1	He	49476.332	0.8	75842890	0.4	75200	
Co	59	45	1	He	-0.072	-6.8	157	11.3	2	
Ni	60	45	1	He	-0.033	-52.9	168	10.9	4	
Cu	63	45	1	He	-0.701	-12.3	2464	9.0	4	
Zn	66	45	1	He	-7.467	-3.6	358	23.4	20	
As	75	115	1	He	0.082	30.1	42	13.1	4	
Se	78	115	1	He	0.106	255.3	4	65.6	4	
Sr	88	103	1	He	0.353	8.8	421	7.5	20	
Mo	95	103	1	He	1060.995	1.4	1209977	1.1	1505	
Ag	107	103	1	He	0.012	43.4	61	36.3	1	
Cd	111	115	1	He	-0.003	-1525.2	0	-10092.2	1	
Sn	118	115	1	He	-1.129	-6.7	307	21.8	20	
Sb	123	115	1	He	0.036	9.7	58	6.7	4	
Ba	137	115	1	He	0.161	65.3	63	59.8	2	
W	182	159	1	He	0.061	52.2	1774	9.4	20	
Tl	205	165	1	He	0.007	29.8	82	18.7	2	
Pb	208	165	1	He	0.395	5.7	5238	4.8	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1442319	0.73	1276810	112.96	60	120	
Sc	45	1	He	136861	0.77	163460	83.73	60	120	
Sc	45	2	NoGas	8554971	0.79	8842934	96.74	60	120	
Rh	103	1	He	814991	0.79	1010526	80.65	60	120	
In	115	1	He	216782	0.66	257801	84.09	60	120	
Tb	159	1	He	1009521	0.60	1155473	87.37	60	120	
Ho	165	1	He	1025849	0.28	1147359	89.41	60	120	
Bi	209	1	He	671245	1.05	790610	84.90	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ZZZZ
Data File Name	166ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:31:49-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	116.760	1.359	1872691	0.68	100	116.8	49.5	150.5	
Be	9	45	2	NoGas	106.041	1.709	481205	1.09	100	106.0	49.5	150.5	
B	11	6	2	NoGas	93.499	1.056	332047	0.71	100	93.5	49.5	150.5	
Na	23	45	1	He	9241.349	104.070	6894825	100.09	50000	18.5	49.5	150.5	Fail
Mg	24	45	1	He	9188.741	105.524	3831938	101.80	50000	18.4	49.5	150.5	Fail
Al	27	45	1	He	9437.142	107.623	1654234	103.79	50000	18.9	49.5	150.5	Fail
K	39	45	1	He	9444.026	108.325	1953333	103.46	50000	18.9	49.5	150.5	Fail
Ca	44	45	1	He	9181.277	106.688	110170	101.72	50000	18.4	49.5	150.5	Fail
Ti	47	45	1	He	198.441	105.117	16983	101.30	1100	18.0	49.5	150.5	Fail
V	51	45	1	He	18.001	108.107	53272	103.39	100	18.0	49.5	150.5	Fail
Cr	52	45	1	He	18.511	105.346	68881	99.86	100	18.5	49.5	150.5	Fail
Mn	55	45	1	He	17.653	112.811	34834	101.50	100	17.7	49.5	150.5	Fail
Fe	56	45	1	He	9005.128	107.065	26022244	103.21	50000	18.0	49.5	150.5	Fail
Co	59	45	1	He	18.468	107.278	123231	102.79	100	18.5	49.5	150.5	Fail
Ni	60	45	1	He	18.216	106.823	33908	101.91	100	18.2	49.5	150.5	Fail
Cu	63	45	1	He	17.187	114.713	97484	101.26	100	17.2	49.5	150.5	Fail
Zn	66	45	1	He	11.501	189.654	12015	104.66	100	11.5	49.5	150.5	Fail
As	75	115	1	He	18.232	118.659	7132	107.67	100	18.2	49.5	150.5	Fail
Se	78	115	1	He	17.652	123.358	336	110.91	100	17.7	49.5	150.5	Fail
Sr	88	103	1	He	18.386	112.636	34217	102.17	100	18.4	49.5	150.5	Fail
Mo	95	103	1	He	199.044	118.070	442423	108.08	1100	18.1	49.5	150.5	Fail
Ag	107	103	1	He	18.024	113.254	143875	103.14	100	18.0	49.5	150.5	Fail
Cd	111	115	1	He	18.298	114.823	15918	104.41	100	18.3	49.5	150.5	Fail
Sn	118	115	1	He	20.971	122.716	36866	104.44	100	21.0	49.5	150.5	Fail
Sb	123	115	1	He	20.142	109.416	37269	99.38	100	20.1	49.5	150.5	Fail
Ba	137	115	1	He	20.795	113.468	13534	103.28	100	20.8	49.5	150.5	Fail
W	182	159	1	He	19.501	91.016	201748	82.03	100	19.5	49.5	150.5	Fail
Tl	205	165	1	He	16.254	123.267	257533	112.56	100	16.3	49.5	150.5	Fail
Pb	208	165	1	He	19.212	107.488	402648	96.65	100	19.2	49.5	150.5	Fail

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1319826	0.33	1276810	103.37	60	120	
Sc	45	1	He	262278	25.89	163460	160.45	60	120	ISTD warning
Sc	45	2	NoGas	8139315	0.62	8842934	92.04	60	120	
Rh	103	1	He	1711042	27.60	1010526	169.32	60	120	ISTD warning
In	115	1	He	426866	29.23	257801	165.58	60	120	ISTD warning
Tb	159	1	He	2141707	28.32	1155473	185.35	60	120	ISTD warning
Ho	165	1	He	2192447	28.14	1147359	191.09	60	120	ISTD warning
Bi	209	1	He	1496114	26.54	790610	189.24	60	120	ISTD warning

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	167_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:35:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.047	0.918	944010	0.29	50	112.1	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	51.916	1.378	236621	1.95	50	103.8	89.5	110.5	
B	11	6	2	NoGas	43.927	2.057	170083	0.42	50	87.9	89.5	110.5	CCV Failed
Na	23	45	1	He	24814.828	1.445	9386273	0.14	25000	99.3	89.5	110.5	
Mg	24	45	1	He	24360.419	1.881	5162456	0.57	25000	97.4	89.5	110.5	
Al	27	45	1	He	244.772	3.034	22033	1.98	250	97.9	89.5	110.5	
K	39	45	1	He	25771.931	2.035	2690907	0.93	25000	103.1	89.5	110.5	
Ca	44	45	1	He	25073.773	1.808	151719	0.63	25000	100.3	89.5	110.5	
Ti	47	45	1	He	49.415	6.823	2150	8.09	50	98.8	89.5	110.5	
V	51	45	1	He	50.814	2.329	75962	2.62	50	101.6	89.5	110.5	
Cr	52	45	1	He	49.763	2.496	93107	1.17	50	99.5	89.5	110.5	
Mn	55	45	1	He	247.584	1.944	232723	0.69	250	99.0	89.5	110.5	
Fe	56	45	1	He	12538.101	2.446	18402065	1.70	12500	100.3	89.5	110.5	
Co	59	45	1	He	49.979	2.173	168712	0.93	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.040	1.557	46997	0.32	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.119	1.433	133739	0.19	50	98.2	89.5	110.5	
Zn	66	45	1	He	46.425	2.480	16710	0.97	50	92.9	89.5	110.5	
As	75	115	1	He	48.117	0.821	10145	0.88	50	96.2	89.5	110.5	
Se	78	115	1	He	49.291	5.615	503	4.92	50	98.6	89.5	110.5	
Sr	88	103	1	He	51.108	0.587	48052	0.31	50	102.2	89.5	110.5	
Mo	95	103	1	He	53.839	2.403	60737	1.89	50	107.7	89.5	110.5	
Ag	107	103	1	He	50.246	0.755	202999	0.32	50	100.5	89.5	110.5	
Cd	111	115	1	He	49.110	1.360	23066	1.15	50	98.2	89.5	110.5	
Sn	118	115	1	He	49.986	3.658	45699	3.21	50	100.0	89.5	110.5	
Sb	123	115	1	He	51.697	1.905	51734	1.65	50	103.4	89.5	110.5	
Ba	137	115	1	He	51.776	1.892	18221	1.20	50	103.6	89.5	110.5	
W	182	159	1	He	50.361	1.245	254956	1.38	50	100.7	89.5	110.5	
Tl	205	165	1	He	50.920	1.742	392663	1.95	50	101.8	89.5	110.5	
Pb	208	165	1	He	51.274	0.572	520374	0.69	50	102.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1388548	2.30	1276810	108.75	60	120	
Sc	45	1	He	131038	1.31	163460	80.17	60	120	
Sc	45	2	NoGas	8172472	0.95	8842934	92.42	60	120	
Rh	103	1	He	805990	0.75	1010526	79.76	60	120	
In	115	1	He	213281	0.68	257801	82.73	60	120	
Tb	159	1	He	978314	0.28	1155473	84.67	60	120	
Ho	165	1	He	988768	0.34	1147359	86.18	60	120	
Bi	209	1	He	656616	0.90	790610	83.05	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	168_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:40:12-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.206	6.2	98143	0.6	8	
Be	9	45	2	NoGas	0.284	20.3	1382	18.9	1	
B	11	6	2	NoGas	2.800	6.2	21528	2.7	20	
Na	23	45	1	He	91.012	3.5	41771	4.5	1000	
Mg	24	45	1	He	71.139	1.7	15889	1.2	1000	
Al	27	45	1	He	1.870	13.0	409	6.2	50	
K	39	45	1	He	89.965	6.6	17972	1.8	1000	
Ca	44	45	1	He	66.359	3.7	1013	2.6	1000	
Ti	47	45	1	He	0.137	86.1	8	65.5	20	
V	51	45	1	He	0.158	146.8	382	90.8	2	
Cr	52	45	1	He	0.087	15.6	894	1.1	2	
Mn	55	45	1	He	0.300	47.4	1478	7.5	2	
Fe	56	45	1	He	45.240	3.8	70329	2.4	50	
Co	59	45	1	He	0.046	25.0	552	6.6	1	
Ni	60	45	1	He	0.039	46.4	231	7.9	2	
Cu	63	45	1	He	-0.883	-4.3	1902	3.9	2	
Zn	66	45	1	He	-3.374	-8.3	1605	4.8	20	
As	75	115	1	He	0.162	26.8	60	16.9	2	
Se	78	115	1	He	0.167	170.8	5	60.8	2	
Sr	88	103	1	He	0.113	24.8	200	13.2	10	
Mo	95	103	1	He	0.584	6.4	709	6.9	2	
Ag	107	103	1	He	0.148	9.2	637	9.3	0.2	
Cd	111	115	1	He	0.164	13.6	80	14.1	0.2	
Sn	118	115	1	He	-0.403	-16.0	970	7.5	10	
Sb	123	115	1	He	0.280	5.5	308	4.1	2	
Ba	137	115	1	He	0.191	18.7	74	15.7	5	
W	182	159	1	He	0.412	16.3	3523	9.5	10	
Tl	205	165	1	He	0.242	11.0	1899	11.7	0.5	
Pb	208	165	1	He	0.289	5.9	3976	3.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1393700	0.78	1276810	109.15	60	120	
Sc	45	1	He	132613	1.80	163460	81.13	60	120	
Sc	45	2	NoGas	8164251	0.63	8842934	92.33	60	120	
Rh	103	1	He	841882	0.65	1010526	83.31	60	120	
In	115	1	He	218331	1.53	257801	84.69	60	120	
Tb	159	1	He	988112	0.40	1155473	85.52	60	120	
Ho	165	1	He	990777	0.95	1147359	86.35	60	120	
Bi	209	1	He	672521	0.63	790610	85.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@10
Data File Name	169SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:44:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.642	10.642	0.93	245699	0.00	10000	
Be	9	45	2	NoGas	4.232	4.232	2.06	19522	0.02	2000	
B	11	6	2	NoGas	140.188	140.188	0.83	510191	0.03	300	
Na	23	45	1	He	516.076	516.076	1.00	201244	0.26	500000	
Mg	24	45	1	He	2794.306	2794.306	2.09	590782	0.47	500000	
Al	27	45	1	He	10862.383	10862.383	2.24	964370	1.13	200000	
K	39	45	1	He	1805.386	1805.386	0.45	195664	0.92	500000	
Ca	44	45	1	He	29010.138	29010.138	1.94	174866	16.59	500000	
Ti	47	45	1	He	250.866	250.866	4.04	10866	2.31	2500	
V	51	45	1	He	-21.655	-21.655	-69.30	-32055	0.07	10000	
Cr	52	45	1	He	5737.468	5737.468	1.58	10617895	0.05	10000	
Mn	55	45	1	He	15260.235	15260.235	1.21	14225820	0.11	10000	>LDR
Fe	56	45	1	He	46207.732	46207.732	0.88	67586575	0.07	200000	
Co	59	45	1	He	2605.919	2605.919	1.00	8748051	0.03	5000	
Ni	60	45	1	He	28302.155	28302.155	1.12	26384324	0.11	10000	>LDR
Cu	63	45	1	He	8518.197	8518.197	1.39	22392256	0.04	10000	
Zn	66	45	1	He	3033.688	3033.688	1.45	920939	0.33	10000	
As	75	115	1	He	164.709	164.709	0.54	34861	0.47	10000	
Se	78	115	1	He	264.318	264.318	1.02	2697	9.80	10000	
Sr	88	103	1	He	96.606	96.606	0.71	92259	0.10	10000	
Mo	95	103	1	He	22.111	22.111	0.69	25371	0.09	2000	
Ag	107	103	1	He	34.058	34.058	0.71	139880	0.02	300	
Cd	111	115	1	He	942.665	942.665	0.39	445170	0.21	4000	
Sn	118	115	1	He	659.884	659.884	1.25	590692	0.11	2000	
Sb	123	115	1	He	158.478	158.478	1.34	159442	0.10	200	
Ba	137	115	1	He	1537.501	1537.501	0.90	543965	0.28	10000	
W	182	159	1	He	7.701	7.701	2.17	40054	0.02	2500	
Tl	205	165	1	He	1.387	1.387	11.05	10709	0.01	2000	
Pb	208	165	1	He	15277.245	15277.245	0.93	154516349	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367260	0.65	1276810	107.08	60	120	
Sc	45	1	He	130582	0.40	163460	79.89	60	120	
Sc	45	2	NoGas	8237028	0.74	8842934	93.15	60	120	
Rh	103	1	He	819312	0.75	1010526	81.08	60	120	
In	115	1	He	214453	1.13	257801	83.19	60	120	
Tb	159	1	He	975138	0.38	1155473	84.39	60	120	
Ho	165	1	He	987375	0.81	1147359	86.06	60	120	
Bi	209	1	He	763703	1.34	790610	96.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	170_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:48:27-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.851	5.8	93773	0.8	8	
Be	9	45	2	NoGas	0.054	37.5	337	28.0	1	
B	11	6	2	NoGas	4.788	5.5	28608	2.5	20	
Na	23	45	1	He	5.178	7.9	8858	2.1	1000	
Mg	24	45	1	He	2.212	10.9	1100	4.4	1000	
Al	27	45	1	He	3.466	45.9	549	26.1	50	
K	39	45	1	He	9.480	28.1	9432	2.9	1000	
Ca	44	45	1	He	-55.028	-2.8	270	3.8	1000	
Ti	47	45	1	He	0.315	27.7	16	24.8	20	
V	51	45	1	He	-0.302	-31.8	-306	-47.0	2	
Cr	52	45	1	He	1.996	21.4	4452	18.1	2	
Mn	55	45	1	He	4.032	21.3	4976	16.4	2	Blank High
Fe	56	45	1	He	24.220	18.1	38859	16.8	50	
Co	59	45	1	He	0.868	16.8	3333	15.0	1	
Ni	60	45	1	He	9.336	16.8	8969	16.6	2	Blank High
Cu	63	45	1	He	1.646	34.0	8592	17.4	2	
Zn	66	45	1	He	-6.356	-1.8	683	4.9	20	
As	75	115	1	He	0.170	23.6	61	15.1	2	
Se	78	115	1	He	0.537	34.1	9	21.5	2	
Sr	88	103	1	He	0.011	191.4	100	20.3	10	
Mo	95	103	1	He	0.137	13.2	183	11.4	2	
Ag	107	103	1	He	0.009	53.4	51	41.4	0.2	
Cd	111	115	1	He	0.426	18.0	206	17.0	0.2	Blank High
Sn	118	115	1	He	0.560	22.7	1845	6.4	10	
Sb	123	115	1	He	0.475	12.6	508	11.3	2	
Ba	137	115	1	He	0.476	23.6	177	21.8	5	
W	182	159	1	He	0.052	131.2	1678	19.4	10	
Tl	205	165	1	He	0.015	58.2	147	47.0	0.5	
Pb	208	165	1	He	4.380	11.5	45281	11.5	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1387418	0.89	1276810	108.66	60	120	
Sc	45	1	He	131666	0.37	163460	80.55	60	120	
Sc	45	2	NoGas	8260484	1.10	8842934	93.41	60	120	
Rh	103	1	He	843883	0.48	1010526	83.51	60	120	
In	115	1	He	218282	1.11	257801	84.67	60	120	
Tb	159	1	He	981603	0.97	1155473	84.95	60	120	
Ho	165	1	He	985814	0.35	1147359	85.92	60	120	
Bi	209	1	He	669953	0.72	790610	84.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-7-a@2
Data File Name	171SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:52:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.104	28.104	1.04	541986	0.01	10000	
Be	9	45	2	NoGas	1.966	1.966	2.07	9555	0.02	2000	
B	11	6	2	NoGas	111.325	111.325	1.38	420044	0.03	300	
Na	23	45	1	He	810.438	810.438	3.71	321903	0.25	500000	
Mg	24	45	1	He	8403.040	8403.040	2.43	1831042	0.46	500000	
Al	27	45	1	He	21482.007	21482.007	2.00	1966866	1.09	200000	
K	39	45	1	He	2300.229	2300.229	2.05	254769	0.90	500000	
Ca	44	45	1	He	70797.254	70797.254	3.11	439220	16.12	500000	
Ti	47	45	1	He	782.839	782.839	3.40	34961	2.24	2500	
V	51	45	1	He	59.469	59.469	1.77	91355	0.07	10000	
Cr	52	45	1	He	200.449	200.449	3.16	383283	0.05	10000	
Mn	55	45	1	He	2264.662	2264.662	3.24	2178267	0.10	10000	
Fe	56	45	1	He	80253.871	80253.871	2.54	121065666	0.07	200000	
Co	59	45	1	He	4295.524	4295.524	2.80	14871779	0.03	5000	
Ni	60	45	1	He	115057.410	115057.410	3.17	110620462	0.10	10000	>LDR
Cu	63	45	1	He	1412.281	1412.281	3.76	3832214	0.04	10000	
Zn	66	45	1	He	1079.765	1079.765	3.04	339782	0.32	10000	
As	75	115	1	He	130.941	130.941	1.32	28321	0.46	10000	
Se	78	115	1	He	12.080	12.080	5.97	129	9.36	10000	
Sr	88	103	1	He	103.237	103.237	0.38	98626	0.10	10000	
Mo	95	103	1	He	12.724	12.724	0.87	14614	0.09	2000	
Ag	107	103	1	He	0.599	0.599	4.31	2472	0.02	300	
Cd	111	115	1	He	76.312	76.312	0.92	36823	0.21	4000	
Sn	118	115	1	He	52.862	52.862	3.67	49588	0.11	2000	
Sb	123	115	1	He	25.915	25.915	3.40	26653	0.10	200	
Ba	137	115	1	He	296.325	296.325	0.60	107124	0.28	10000	
W	182	159	1	He	0.926	0.926	5.97	6205	0.01	2500	
Tl	205	165	1	He	0.982	0.982	2.76	7746	0.01	2000	
Pb	208	165	1	He	678.222	678.222	1.96	7000396	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409732	1.82	1276810	110.41	60	120	
Sc	45	1	He	134711	1.29	163460	82.41	60	120	
Sc	45	2	NoGas	8632802	0.71	8842934	97.62	60	120	
Rh	103	1	He	819680	1.32	1010526	81.11	60	120	
In	115	1	He	219130	1.46	257801	85.00	60	120	
Tb	159	1	He	999084	1.01	1155473	86.47	60	120	
Ho	165	1	He	1007435	0.62	1147359	87.80	60	120	
Bi	209	1	He	680408	0.59	790610	86.06	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	172_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:56:47-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.852	11.5	97375	1.5	8	
Be	9	45	2	NoGas	0.056	24.4	359	17.9	1	
B	11	6	2	NoGas	6.370	4.1	36032	2.4	20	
Na	23	45	1	He	3.008	73.3	8232	8.5	1000	
Mg	24	45	1	He	2.116	61.0	1104	23.5	1000	
Al	27	45	1	He	5.237	39.9	723	24.4	50	
K	39	45	1	He	4.782	163.4	9162	7.0	1000	
Ca	44	45	1	He	-49.668	-31.5	310	29.8	1000	
Ti	47	45	1	He	0.582	28.7	28	25.0	20	
V	51	45	1	He	0.084	240.3	280	111.6	2	
Cr	52	45	1	He	0.116	55.1	966	11.4	2	
Mn	55	45	1	He	-0.159	-87.5	1062	10.4	2	
Fe	56	45	1	He	33.013	28.8	52994	25.1	50	
Co	59	45	1	He	1.377	21.4	5173	17.7	1	Blank High
Ni	60	45	1	He	33.411	24.5	32317	22.3	2	Blank High
Cu	63	45	1	He	-0.629	-17.1	2627	9.2	2	
Zn	66	45	1	He	-7.351	-1.7	389	8.0	20	
As	75	115	1	He	0.109	32.2	49	14.5	2	
Se	78	115	1	He	0.438	21.0	8	10.8	2	
Sr	88	103	1	He	-0.021	-81.2	70	24.7	10	
Mo	95	103	1	He	0.081	29.4	119	24.5	2	
Ag	107	103	1	He	0.002	38.7	20	16.7	0.2	
Cd	111	115	1	He	0.088	17.7	44	15.9	0.2	
Sn	118	115	1	He	-0.937	-4.5	496	6.8	10	
Sb	123	115	1	He	0.189	11.1	221	11.3	2	
Ba	137	115	1	He	0.126	10.7	52	9.7	5	
W	182	159	1	He	0.009	92.5	1504	3.1	10	
Tl	205	165	1	He	0.006	20.7	78	13.1	0.5	
Pb	208	165	1	He	0.492	6.2	6195	4.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456464	0.44	1276810	114.07	60	120	
Sc	45	1	He	135094	2.18	163460	82.65	60	120	
Sc	45	2	NoGas	8576417	0.19	8842934	96.99	60	120	
Rh	103	1	He	861694	0.58	1010526	85.27	60	120	
In	115	1	He	224058	1.60	257801	86.91	60	120	
Tb	159	1	He	1007046	0.30	1155473	87.15	60	120	
Ho	165	1	He	1016412	0.82	1147359	88.59	60	120	
Bi	209	1	He	691504	0.54	790610	87.46	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-1-a@2
Data File Name	173SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:01:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.899	27.899	0.93	523447	0.01	10000	
Be	9	45	2	NoGas	3.437	3.437	4.77	16159	0.02	2000	
B	11	6	2	NoGas	89.539	89.539	2.58	336537	0.03	300	
Na	23	45	1	He	715.935	715.935	1.79	286927	0.25	500000	
Mg	24	45	1	He	6711.784	6711.784	1.59	1471428	0.46	500000	
Al	27	45	1	He	30425.425	30425.425	1.40	2802222	1.09	200000	
K	39	45	1	He	3652.270	3652.270	1.65	401829	0.91	500000	
Ca	44	45	1	He	98013.262	98013.262	1.28	611515	16.03	500000	
Ti	47	45	1	He	878.232	878.232	1.42	39459	2.23	2500	
V	51	45	1	He	110.278	110.278	5.24	170258	0.06	10000	
Cr	52	45	1	He	2001.347	2001.347	1.82	3843234	0.05	10000	
Mn	55	45	1	He	39928.958	39928.958	1.35	38618257	0.10	10000	>LDR
Fe	56	45	1	He	87343.973	87343.973	1.53	132551288	0.07	200000	
Co	59	45	1	He	6515.509	6515.509	1.07	22693701	0.03	5000	>LDR
Ni	60	45	1	He	155179.250	155179.250	1.29	150099438	0.10	10000	>LDR
Cu	63	45	1	He	7107.603	7107.603	1.53	19386689	0.04	10000	
Zn	66	45	1	He	3090.621	3090.621	1.31	973411	0.32	10000	
As	75	115	1	He	582.696	582.696	0.82	124483	0.47	10000	
Se	78	115	1	He	72.380	72.380	1.53	748	9.67	10000	
Sr	88	103	1	He	218.705	218.705	1.50	207448	0.11	10000	
Mo	95	103	1	He	52.527	52.527	2.16	59866	0.09	2000	
Ag	107	103	1	He	26.076	26.076	1.89	106431	0.02	300	
Cd	111	115	1	He	346.033	346.033	0.59	165033	0.21	4000	
Sn	118	115	1	He	501.592	501.592	2.06	453709	0.11	2000	
Sb	123	115	1	He	425.500	425.500	1.31	432255	0.10	200	>LDR
Ba	137	115	1	He	1665.566	1665.566	0.95	595087	0.28	10000	
W	182	159	1	He	9.324	9.324	3.85	48845	0.02	2500	
Tl	205	165	1	He	4.197	4.197	1.66	32652	0.01	2000	
Pb	208	165	1	He	11146.455	11146.455	0.05	113827096	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1395098	1.36	1276810	109.26	60	120	
Sc	45	1	He	135497	0.55	163460	82.89	60	120	
Sc	45	2	NoGas	8389441	0.98	8842934	94.87	60	120	
Rh	103	1	He	814239	0.37	1010526	80.58	60	120	
In	115	1	He	216585	0.67	257801	84.01	60	120	
Tb	159	1	He	988293	0.53	1155473	85.53	60	120	
Ho	165	1	He	996913	0.30	1147359	86.89	60	120	
Bi	209	1	He	780916	0.83	790610	98.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	174_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:05:03-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.005	7.9	93209	0.9	8	
Be	9	45	2	NoGas	0.058	17.0	344	11.6	1	
B	11	6	2	NoGas	4.349	5.3	27443	2.7	20	
Na	23	45	1	He	1.196	112.1	7168	6.0	1000	
Mg	24	45	1	He	1.249	21.6	874	7.0	1000	
Al	27	45	1	He	9.398	23.1	1053	17.6	50	
K	39	45	1	He	9.533	55.9	9210	4.4	1000	
Ca	44	45	1	He	-45.814	-13.4	318	10.2	1000	
Ti	47	45	1	He	0.425	64.9	20	60.1	20	
V	51	45	1	He	-0.013	-1469.6	122	224.4	2	
Cr	52	45	1	He	0.663	39.8	1915	24.6	2	
Mn	55	45	1	He	13.016	24.0	13095	21.6	2	Blank High
Fe	56	45	1	He	40.632	27.0	61542	25.5	50	
Co	59	45	1	He	2.754	18.4	9484	17.5	1	Blank High
Ni	60	45	1	He	56.030	22.2	51579	21.8	2	Blank High
Cu	63	45	1	He	2.244	9.5	9935	5.3	2	Blank High
Zn	66	45	1	He	-6.343	-0.7	671	3.3	20	
As	75	115	1	He	0.341	28.9	97	21.1	2	
Se	78	115	1	He	0.175	101.6	5	36.1	2	
Sr	88	103	1	He	0.012	123.2	100	14.5	10	
Mo	95	103	1	He	0.108	3.6	147	4.5	2	
Ag	107	103	1	He	0.010	10.3	54	7.1	0.2	
Cd	111	115	1	He	0.151	2.8	73	3.5	0.2	
Sn	118	115	1	He	-0.386	-20.1	974	7.6	10	
Sb	123	115	1	He	1.108	8.3	1143	8.7	2	
Ba	137	115	1	He	0.516	26.5	189	25.2	5	
W	182	159	1	He	0.039	106.8	1611	12.1	10	
Tl	205	165	1	He	0.009	20.5	97	15.0	0.5	
Pb	208	165	1	He	3.411	11.3	35550	11.4	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409049	1.55	1276810	110.36	60	120	
Sc	45	1	He	128564	1.59	163460	78.65	60	120	
Sc	45	2	NoGas	8005915	1.02	8842934	90.53	60	120	
Rh	103	1	He	831722	1.55	1010526	82.31	60	120	
In	115	1	He	215753	0.74	257801	83.69	60	120	
Tb	159	1	He	980668	0.80	1155473	84.87	60	120	
Ho	165	1	He	987488	0.89	1147359	86.07	60	120	
Bi	209	1	He	683576	0.34	790610	86.46	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	175_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:09:15-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.045	0.403	908567	0.27	50	110.1	89.5	110.5	
Be	9	45	2	NoGas	51.206	0.778	228344	0.97	50	102.4	89.5	110.5	
B	11	6	2	NoGas	43.657	1.441	165166	1.99	50	87.3	89.5	110.5	CCV Failed
Na	23	45	1	He	24638.615	1.724	9053937	0.69	25000	98.6	89.5	110.5	
Mg	24	45	1	He	24405.238	1.616	5024663	0.21	25000	97.6	89.5	110.5	
Al	27	45	1	He	246.474	3.507	21550	2.05	250	98.6	89.5	110.5	
K	39	45	1	He	25594.807	1.550	2596403	0.47	25000	102.4	89.5	110.5	
Ca	44	45	1	He	25012.519	3.027	147015	1.40	25000	100.1	89.5	110.5	
Ti	47	45	1	He	49.195	2.181	2079	3.88	50	98.4	89.5	110.5	
V	51	45	1	He	50.534	2.986	73373	1.76	50	101.1	89.5	110.5	
Cr	52	45	1	He	49.981	3.363	90835	1.67	50	100.0	89.5	110.5	
Mn	55	45	1	He	251.235	1.919	229405	0.27	250	100.5	89.5	110.5	
Fe	56	45	1	He	12473.754	2.495	17784433	0.82	12500	99.8	89.5	110.5	
Co	59	45	1	He	50.602	3.148	165925	1.63	50	101.2	89.5	110.5	
Ni	60	45	1	He	61.712	2.189	56265	1.79	50	123.4	89.5	110.5	CCV Failed
Cu	63	45	1	He	50.077	1.956	132375	0.33	50	100.2	89.5	110.5	
Zn	66	45	1	He	47.096	2.104	16434	2.04	50	94.2	89.5	110.5	
As	75	115	1	He	48.073	0.212	9893	0.27	50	96.1	89.5	110.5	
Se	78	115	1	He	46.219	2.136	460	2.19	50	92.4	89.5	110.5	
Sr	88	103	1	He	50.119	2.596	46342	2.67	50	100.2	89.5	110.5	
Mo	95	103	1	He	51.232	1.657	56841	1.56	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.277	1.704	199749	1.60	50	100.6	89.5	110.5	
Cd	111	115	1	He	49.308	0.276	22605	0.45	50	98.6	89.5	110.5	
Sn	118	115	1	He	49.538	0.872	44221	0.85	50	99.1	89.5	110.5	
Sb	123	115	1	He	51.703	1.607	50506	1.77	50	103.4	89.5	110.5	
Ba	137	115	1	He	51.786	2.543	17791	2.64	50	103.6	89.5	110.5	
W	182	159	1	He	50.392	0.505	251564	0.94	50	100.8	89.5	110.5	
Tl	205	165	1	He	51.381	0.745	390322	1.42	50	102.8	89.5	110.5	
Pb	208	165	1	He	52.096	0.637	520810	0.29	50	104.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1355776	1.44	1276810	106.18	60	120	
Sc	45	1	He	127309	1.74	163460	77.88	60	120	
Sc	45	2	NoGas	7996256	0.63	8842934	90.43	60	120	
Rh	103	1	He	792590	0.24	1010526	78.43	60	120	
In	115	1	He	208178	0.18	257801	80.75	60	120	
Tb	159	1	He	964754	1.42	1155473	83.49	60	120	
Ho	165	1	He	974052	0.72	1147359	84.90	60	120	
Bi	209	1	He	649660	1.28	790610	82.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	176_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:13:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.172	5.3	94847	0.9	8	
Be	9	45	2	NoGas	0.254	22.1	1208	19.8	1	
B	11	6	2	NoGas	2.724	7.4	20961	2.7	20	
Na	23	45	1	He	86.284	2.2	38166	2.3	1000	
Mg	24	45	1	He	71.715	3.5	15300	3.6	1000	
Al	27	45	1	He	0.741	35.5	293	8.0	50	
K	39	45	1	He	84.714	6.8	16645	2.9	1000	
Ca	44	45	1	He	71.798	22.3	1000	10.0	1000	
Ti	47	45	1	He	0.277	57.3	13	50.0	20	
V	51	45	1	He	0.306	24.8	582	18.7	2	
Cr	52	45	1	He	0.200	33.8	1059	12.5	2	
Mn	55	45	1	He	1.638	4.4	2624	3.3	2	
Fe	56	45	1	He	43.785	3.2	65144	3.2	50	
Co	59	45	1	He	0.502	5.1	2012	5.0	1	
Ni	60	45	1	He	5.215	2.0	4902	1.7	2	CCB High
Cu	63	45	1	He	-0.453	-14.7	2915	6.5	2	
Zn	66	45	1	He	-3.245	-9.8	1571	6.1	20	
As	75	115	1	He	0.211	10.7	69	6.4	2	
Se	78	115	1	He	0.383	36.5	7	20.2	2	
Sr	88	103	1	He	0.166	26.7	249	18.8	10	
Mo	95	103	1	He	0.253	4.4	314	5.3	2	
Ag	107	103	1	He	0.145	5.9	614	6.3	0.2	
Cd	111	115	1	He	0.193	16.8	93	16.5	0.2	
Sn	118	115	1	He	-0.347	-22.8	1011	6.9	10	
Sb	123	115	1	He	0.397	3.0	424	2.3	2	
Ba	137	115	1	He	0.177	31.3	69	29.2	5	
W	182	159	1	He	0.404	13.3	3430	8.0	10	
Tl	205	165	1	He	0.231	5.4	1802	5.1	0.5	
Pb	208	165	1	He	0.501	4.2	6094	3.7	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1374833	1.30	1276810	107.68	60	120	
Sc	45	1	He	126688	1.07	163460	77.50	60	120	
Sc	45	2	NoGas	7932189	0.69	8842934	89.70	60	120	
Rh	103	1	He	830181	1.59	1010526	82.15	60	120	
In	115	1	He	216233	0.61	257801	83.88	60	120	
Tb	159	1	He	972541	0.43	1155473	84.17	60	120	
Ho	165	1	He	984469	0.43	1147359	85.80	60	120	
Bi	209	1	He	675409	0.21	790610	85.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-a@2
Data File Name	177SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:17:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	84.441	84.441	0.60	1364377	0.01	10000	
Be	9	45	2	NoGas	3.557	3.557	2.06	16085	0.02	2000	
B	11	6	2	NoGas	66.317	66.317	2.62	226738	0.03	300	
Na	23	45	1	He	842.277	842.277	1.37	330506	0.25	500000	
Mg	24	45	1	He	32059.480	32059.480	0.69	6904710	0.46	500000	
Al	27	45	1	He	46017.453	46017.453	1.60	4164992	1.10	200000	
K	39	45	1	He	7953.397	7953.397	0.85	849870	0.94	500000	
Ca	44	45	1	He	97949.283	97949.283	1.09	600561	16.31	500000	
Ti	47	45	1	He	555.406	555.406	1.43	24524	2.26	2500	
V	51	45	1	He	94.079	94.079	1.98	142778	0.07	10000	
Cr	52	45	1	He	1334.415	1334.415	1.91	2518545	0.05	10000	
Mn	55	45	1	He	4445.062	4445.062	1.25	4226010	0.11	10000	
Fe	56	45	1	He	112487.639	112487.639	2.06	167761878	0.07	200000	
Co	59	45	1	He	137803.915	137803.915	1.74	471669155	0.03	5000	>LDR
Ni	60	45	1	He	2901.738	2901.738	1.56	2758456	0.11	10000	
Cu	63	45	1	He	1496.213	1496.213	0.60	4014069	0.04	10000	
Zn	66	45	1	He	1690.763	1690.763	0.56	524528	0.32	10000	
As	75	115	1	He	703.086	703.086	0.99	146113	0.48	10000	
Se	78	115	1	He	12.839	12.839	6.26	132	9.75	10000	
Sr	88	103	1	He	251.479	251.479	2.23	242138	0.10	10000	
Mo	95	103	1	He	17.100	17.100	1.75	19799	0.09	2000	
Ag	107	103	1	He	15.856	15.856	1.29	65701	0.02	300	
Cd	111	115	1	He	71.355	71.355	0.54	33106	0.22	4000	
Sn	118	115	1	He	82.908	82.908	2.37	74035	0.11	2000	
Sb	123	115	1	He	402.002	402.002	1.25	397284	0.10	200	>LDR
Ba	137	115	1	He	1215.657	1215.657	1.06	422532	0.29	10000	
W	182	159	1	He	52.572	52.572	1.78	265709	0.02	2500	
Tl	205	165	1	He	7.001	7.001	9.36	54027	0.01	2000	
Pb	208	165	1	He	88060.685	88060.685	0.65	892365040	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1254532	2.90	1276810	98.26	60	120	
Sc	45	1	He	133153	0.39	163460	81.46	60	120	
Sc	45	2	NoGas	8068411	0.37	8842934	91.24	60	120	
Rh	103	1	He	826604	0.89	1010526	81.80	60	120	
In	115	1	He	210690	0.06	257801	81.73	60	120	
Tb	159	1	He	976798	1.15	1155473	84.54	60	120	
Ho	165	1	He	989263	0.81	1147359	86.22	60	120	
Bi	209	1	He	2114271	0.30	790610	267.42	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	178_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:21:41-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.041	3.6	91598	0.4	8	
Be	9	45	2	NoGas	0.041	41.4	263	27.5	1	
B	11	6	2	NoGas	2.130	3.5	18751	1.3	20	
Na	23	45	1	He	2.288	35.4	7272	2.7	1000	
Mg	24	45	1	He	9.084	31.0	2404	23.6	1000	
Al	27	45	1	He	12.714	42.8	1291	35.6	50	
K	39	45	1	He	16.389	27.5	9521	5.4	1000	
Ca	44	45	1	He	-34.031	-32.1	373	16.8	1000	
Ti	47	45	1	He	0.448	65.5	20	60.1	20	
V	51	45	1	He	-0.085	-183.5	18	1247.4	2	
Cr	52	45	1	He	0.387	50.1	1359	25.2	2	
Mn	55	45	1	He	0.566	94.3	1611	29.3	2	
Fe	56	45	1	He	46.768	34.5	67611	33.1	50	
Co	59	45	1	He	46.753	27.4	148717	27.4	1	Blank High
Ni	60	45	1	He	2.745	7.5	2600	7.7	2	Blank High
Cu	63	45	1	He	0.985	18.9	6416	8.2	2	
Zn	66	45	1	He	-7.197	-0.4	400	2.9	20	
As	75	115	1	He	0.931	6.1	217	4.6	2	
Se	78	115	1	He	0.202	150.4	5	59.1	2	
Sr	88	103	1	He	0.010	289.8	94	28.3	10	
Mo	95	103	1	He	0.042	40.0	68	28.0	2	
Ag	107	103	1	He	0.005	79.1	32	53.1	0.2	
Cd	111	115	1	He	0.054	18.1	26	16.8	0.2	
Sn	118	115	1	He	-1.090	-6.6	333	18.6	10	
Sb	123	115	1	He	1.328	2.6	1335	2.9	2	
Ba	137	115	1	He	0.310	29.9	113	28.1	5	
W	182	159	1	He	0.308	2.6	2897	1.3	10	
Tl	205	165	1	He	0.010	37.3	101	26.4	0.5	
Pb	208	165	1	He	23.433	20.7	233038	21.4	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1368268	0.58	1276810	107.16	60	120	
Sc	45	1	He	123426	1.27	163460	75.51	60	120	
Sc	45	2	NoGas	7821546	0.54	8842934	88.45	60	120	
Rh	103	1	He	805015	0.37	1010526	79.66	60	120	
In	115	1	He	210842	0.85	257801	81.78	60	120	
Tb	159	1	He	955492	0.39	1155473	82.69	60	120	
Ho	165	1	He	965704	0.67	1147359	84.17	60	120	
Bi	209	1	He	659279	0.97	790610	83.39	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-b-21-a@10
Data File Name	179SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:25:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.169	17.169	1.57	337875	0.01	10000	
Be	9	45	2	NoGas	0.797	0.797	1.26	3649	0.02	2000	
B	11	6	2	NoGas	14.784	14.784	4.16	63721	0.02	300	
Na	23	45	1	He	178.552	178.552	2.85	72929	0.24	500000	
Mg	24	45	1	He	6875.346	6875.346	1.06	1429970	0.48	500000	
Al	27	45	1	He	9021.074	9021.074	1.96	788342	1.14	200000	
K	39	45	1	He	1673.937	1673.937	2.47	179165	0.93	500000	
Ca	44	45	1	He	20623.990	20623.990	2.31	122527	16.83	500000	
Ti	47	45	1	He	119.091	119.091	2.80	5077	2.35	2500	
V	51	45	1	He	9.025	9.025	46.69	13393	0.07	10000	
Cr	52	45	1	He	263.491	263.491	1.73	480642	0.05	10000	
Mn	55	45	1	He	885.991	885.991	1.93	814041	0.11	10000	
Fe	56	45	1	He	23836.131	23836.131	1.89	34318526	0.07	200000	
Co	59	45	1	He	29381.552	29381.552	1.80	97079327	0.03	5000	>LDR
Ni	60	45	1	He	583.849	583.849	2.00	535920	0.11	10000	
Cu	63	45	1	He	307.062	307.062	1.54	798506	0.04	10000	
Zn	66	45	1	He	368.363	368.363	2.09	112314	0.33	10000	
As	75	115	1	He	142.238	142.238	1.45	29938	0.48	10000	
Se	78	115	1	He	2.486	2.486	9.49	28	8.77	10000	
Sr	88	103	1	He	51.631	51.631	0.72	49214	0.10	10000	
Mo	95	103	1	He	3.549	3.549	1.15	4078	0.09	2000	
Ag	107	103	1	He	3.329	3.329	3.80	13647	0.02	300	
Cd	111	115	1	He	15.054	15.054	2.42	7071	0.21	4000	
Sn	118	115	1	He	16.580	16.580	8.13	16027	0.10	2000	
Sb	123	115	1	He	82.252	82.252	1.80	82293	0.10	200	
Ba	137	115	1	He	244.840	244.840	1.88	86139	0.28	10000	
W	182	159	1	He	10.448	10.448	2.96	53999	0.02	2500	
Tl	205	165	1	He	1.364	1.364	13.52	10564	0.01	2000	
Pb	208	165	1	He	18028.049	18028.049	0.29	182968543	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1366498	1.80	1276810	107.02	60	120	
Sc	45	1	He	128547	0.99	163460	78.64	60	120	
Sc	45	2	NoGas	8016922	0.40	8842934	90.66	60	120	
Rh	103	1	He	817110	0.34	1010526	80.86	60	120	
In	115	1	He	213273	0.93	257801	82.73	60	120	
Tb	159	1	He	978008	0.22	1155473	84.64	60	120	
Ho	165	1	He	990777	0.60	1147359	86.35	60	120	
Bi	209	1	He	922255	0.50	790610	116.65	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	180_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:30:00-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.920	5.7	92658	0.3	8	
Be	9	45	2	NoGas	0.040	47.8	267	31.5	1	
B	11	6	2	NoGas	4.115	3.9	26360	1.7	20	
Na	23	45	1	He	-0.151	-75.2	6627	2.2	1000	
Mg	24	45	1	He	2.500	7.0	1126	2.5	1000	
Al	27	45	1	He	2.195	30.1	422	14.7	50	
K	39	45	1	He	6.596	78.3	8851	4.8	1000	
Ca	44	45	1	He	-61.783	-18.4	222	29.5	1000	
Ti	47	45	1	He	-0.015	-294.4	1	173.2	20	
V	51	45	1	He	0.038	107.9	198	32.1	2	
Cr	52	45	1	He	0.108	33.1	900	8.7	2	
Mn	55	45	1	He	-0.350	-27.1	832	12.0	2	
Fe	56	45	1	He	13.361	19.1	22185	18.1	50	
Co	59	45	1	He	16.473	10.5	54509	12.0	1	Blank High
Ni	60	45	1	He	1.803	3.1	1830	1.6	2	
Cu	63	45	1	He	-0.447	-60.6	2948	22.5	2	
Zn	66	45	1	He	-7.601	-1.2	294	10.1	20	
As	75	115	1	He	0.633	9.0	159	8.2	2	
Se	78	115	1	He	0.401	38.0	7	20.9	2	
Sr	88	103	1	He	-0.033	-50.8	56	30.2	10	
Mo	95	103	1	He	0.028	18.2	53	10.8	2	
Ag	107	103	1	He	0.001	198.6	14	48.0	0.2	
Cd	111	115	1	He	0.021	19.2	11	18.2	0.2	
Sn	118	115	1	He	-1.111	-6.9	322	21.0	10	
Sb	123	115	1	He	0.573	9.1	602	9.4	2	
Ba	137	115	1	He	0.097	26.6	40	22.0	5	
W	182	159	1	He	0.095	28.9	1885	7.6	10	
Tl	205	165	1	He	0.004	89.3	57	44.4	0.5	
Pb	208	165	1	He	8.630	19.3	87621	19.3	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1396978	1.37	1276810	109.41	60	120	
Sc	45	1	He	127688	1.53	163460	78.12	60	120	
Sc	45	2	NoGas	8069841	0.60	8842934	91.26	60	120	
Rh	103	1	He	826077	1.10	1010526	81.75	60	120	
In	115	1	He	215902	0.94	257801	83.75	60	120	
Tb	159	1	He	973945	0.53	1155473	84.29	60	120	
Ho	165	1	He	979190	0.25	1147359	85.34	60	120	
Bi	209	1	He	670298	1.06	790610	84.78	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-b ms@2
Data File Name	181SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:34:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	136.713	136.713	1.01	2281977	0.01	10000	
Be	9	45	2	NoGas	461.177	461.177	1.45	2191203	0.02	2000	
B	11	6	2	NoGas	118.895	118.895	0.50	385830	0.03	300	
Na	23	45	1	He	5210.007	5210.007	1.28	2052325	0.25	500000	
Mg	24	45	1	He	39578.442	39578.442	2.20	8710515	0.45	500000	
Al	27	45	1	He	61329.106	61329.106	2.55	5672033	1.08	200000	
K	39	45	1	He	15931.846	15931.846	1.87	1730987	0.92	500000	
Ca	44	45	1	He	112706.376	112706.376	2.01	706088	15.96	500000	
Ti	47	45	1	He	612.694	612.694	3.48	27643	2.22	2500	
V	51	45	1	He	599.748	599.748	2.59	929365	0.06	10000	
Cr	52	45	1	He	1411.978	1411.978	3.10	2723306	0.05	10000	
Mn	55	45	1	He	6179.131	6179.131	1.76	6003052	0.10	10000	
Fe	56	45	1	He	113117.443	113117.443	2.06	172398015	0.07	200000	
Co	59	45	1	He	8736.034	8736.034	2.50	30557522	0.03	5000	>LDR
Ni	60	45	1	He	1821.681	1821.681	2.51	1769842	0.10	10000	
Cu	63	45	1	He	1866.835	1866.835	2.45	5116743	0.04	10000	
Zn	66	45	1	He	1966.096	1966.096	1.89	622863	0.32	10000	
As	75	115	1	He	954.804	954.804	1.43	199101	0.48	10000	
Se	78	115	1	He	428.138	428.138	1.18	4305	9.95	10000	
Sr	88	103	1	He	792.109	792.109	0.88	845042	0.09	10000	
Mo	95	103	1	He	65.963	65.963	0.37	84586	0.08	2000	
Ag	107	103	1	He	47.726	47.726	0.92	219149	0.02	300	
Cd	111	115	1	He	478.768	478.768	1.03	222889	0.21	4000	
Sn	118	115	1	He	495.511	495.511	1.49	437561	0.11	2000	
Sb	123	115	1	He	350.161	350.161	1.58	347240	0.10	200	>LDR
Ba	137	115	1	He	3713.338	3713.338	1.38	1295078	0.29	10000	
W	182	159	1	He	50.369	50.369	2.08	260240	0.02	2500	
Tl	205	165	1	He	124.832	124.832	1.63	987662	0.01	2000	
Pb	208	165	1	He	205185.183	205185.183	0.83	2132481604	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1214360	1.71	1276810	95.11	60	120	
Sc	45	1	He	136081	1.00	163460	83.25	60	120	
Sc	45	2	NoGas	8523288	0.73	8842934	96.39	60	120	
Rh	103	1	He	916132	2.07	1010526	90.66	60	120	
In	115	1	He	211409	0.53	257801	82.00	60	120	
Tb	159	1	He	998338	0.73	1155473	86.40	60	120	
Ho	165	1	He	1014605	0.94	1147359	88.43	60	120	
Bi	209	1	He	1836707	1.81	790610	232.32	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	182_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:38:11-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.093	1.4	99569	0.4	8	
Be	9	45	2	NoGas	0.839	4.9	4034	5.0	1	
B	11	6	2	NoGas	4.696	9.2	29688	5.0	20	
Na	23	45	1	He	1.271	28.2	7576	1.3	1000	
Mg	24	45	1	He	10.532	31.7	2949	24.3	1000	
Al	27	45	1	He	17.019	53.6	1808	45.9	50	
K	39	45	1	He	8.382	48.2	9573	4.4	1000	
Ca	44	45	1	He	-45.616	-9.4	336	8.6	1000	
Ti	47	45	1	He	0.330	102.7	17	91.7	20	
V	51	45	1	He	0.141	197.1	366	116.2	2	
Cr	52	45	1	He	0.393	61.4	1499	30.4	2	
Mn	55	45	1	He	0.836	89.1	2025	35.0	2	
Fe	56	45	1	He	44.699	38.7	70880	36.5	50	
Co	59	45	1	He	6.065	17.7	21484	17.0	1	Blank High
Ni	60	45	1	He	1.209	19.5	1365	16.2	2	
Cu	63	45	1	He	1.039	18.1	7176	7.8	2	
Zn	66	45	1	He	-6.781	-0.2	569	0.3	20	
As	75	115	1	He	0.710	14.1	183	12.9	2	
Se	78	115	1	He	0.510	60.0	9	37.7	2	
Sr	88	103	1	He	0.201	56.5	296	38.8	10	
Mo	95	103	1	He	0.137	18.9	189	16.7	2	
Ag	107	103	1	He	0.012	30.4	62	24.7	0.2	
Cd	111	115	1	He	0.198	12.8	99	13.3	0.2	
Sn	118	115	1	He	-0.414	-15.5	989	6.7	10	
Sb	123	115	1	He	1.316	12.9	1412	13.5	2	
Ba	137	115	1	He	0.983	30.3	371	30.5	5	
W	182	159	1	He	0.239	30.1	2715	14.0	10	
Tl	205	165	1	He	0.151	20.3	1249	20.0	0.5	
Pb	208	165	1	He	55.914	22.9	594167	23.0	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456630	0.90	1276810	114.08	60	120	
Sc	45	1	He	135285	0.64	163460	82.76	60	120	
Sc	45	2	NoGas	8430960	0.18	8842934	95.34	60	120	
Rh	103	1	He	870155	0.06	1010526	86.11	60	120	
In	115	1	He	225002	0.68	257801	87.28	60	120	
Tb	159	1	He	1015129	0.39	1155473	87.85	60	120	
Ho	165	1	He	1035228	0.30	1147359	90.23	60	120	
Bi	209	1	He	708029	0.54	790610	89.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-c msd@2
Data File Name	183SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:42:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	143.925	143.925	0.30	2424558	0.01	10000	
Be	9	45	2	NoGas	475.342	475.342	1.72	2283439	0.02	2000	
B	11	6	2	NoGas	108.928	108.928	1.74	379450	0.03	300	
Na	23	45	1	He	5251.711	5251.711	1.70	2103903	0.25	500000	
Mg	24	45	1	He	38661.477	38661.477	0.82	8654236	0.45	500000	
Al	27	45	1	He	57350.979	57350.979	2.10	5395013	1.06	200000	
K	39	45	1	He	15420.423	15420.423	2.13	1704266	0.90	500000	
Ca	44	45	1	He	110523.648	110523.648	1.47	704279	15.69	500000	
Ti	47	45	1	He	593.455	593.455	1.07	27238	2.18	2500	
V	51	45	1	He	594.428	594.428	1.42	936853	0.06	10000	
Cr	52	45	1	He	1495.366	1495.366	0.65	2933513	0.05	10000	
Mn	55	45	1	He	6052.763	6052.763	1.32	5980494	0.10	10000	
Fe	56	45	1	He	123812.367	123812.367	1.56	191921530	0.06	200000	
Co	59	45	1	He	8041.803	8041.803	1.93	28608408	0.03	5000	>LDR
Ni	60	45	1	He	1645.174	1645.174	1.50	1625561	0.10	10000	
Cu	63	45	1	He	1492.625	1492.625	0.96	4162009	0.04	10000	
Zn	66	45	1	He	1711.166	1711.166	1.28	551702	0.31	10000	
As	75	115	1	He	913.208	913.208	1.40	191280	0.48	10000	
Se	78	115	1	He	421.781	421.781	0.67	4260	9.90	10000	
Sr	88	103	1	He	802.572	802.572	1.33	811295	0.10	10000	
Mo	95	103	1	He	68.667	68.667	1.06	83425	0.08	2000	
Ag	107	103	1	He	51.320	51.320	1.10	223294	0.02	300	
Cd	111	115	1	He	478.772	478.772	1.32	223897	0.21	4000	
Sn	118	115	1	He	489.802	489.802	1.27	434477	0.11	2000	
Sb	123	115	1	He	261.722	261.722	1.61	260711	0.10	200	>LDR
Ba	137	115	1	He	3671.259	3671.259	1.17	1286163	0.29	10000	
W	182	159	1	He	54.036	54.036	1.01	283385	0.02	2500	
Tl	205	165	1	He	121.718	121.718	1.07	963525	0.01	2000	
Pb	208	165	1	He	108727.947	108727.947	1.01	1130574595	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1300573	0.27	1276810	101.86	60	120	
Sc	45	1	He	138405	1.54	163460	84.67	60	120	
Sc	45	2	NoGas	8617416	1.02	8842934	97.45	60	120	
Rh	103	1	He	867982	0.26	1010526	85.89	60	120	
In	115	1	He	212370	0.60	257801	82.38	60	120	
Tb	159	1	He	1013803	0.67	1155473	87.74	60	120	
Ho	165	1	He	1015072	0.45	1147359	88.47	60	120	
Bi	209	1	He	1724984	1.42	790610	218.18	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	184_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:46:26-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.045	4.5	96900	0.4	8	
Be	9	45	2	NoGas	0.806	7.6	3804	7.9	1	
B	11	6	2	NoGas	2.484	4.7	21168	1.4	20	
Na	23	45	1	He	2.343	29.3	7872	3.1	1000	
Mg	24	45	1	He	11.148	25.1	3034	18.5	1000	
Al	27	45	1	He	18.374	29.2	1901	24.2	50	
K	39	45	1	He	6.761	31.4	9258	3.6	1000	
Ca	44	45	1	He	-32.942	-21.2	408	9.4	1000	
Ti	47	45	1	He	0.464	58.4	22	52.7	20	
V	51	45	1	He	0.042	79.9	212	25.2	2	
Cr	52	45	1	He	0.554	22.5	1780	12.1	2	
Mn	55	45	1	He	1.077	35.4	2222	15.0	2	
Fe	56	45	1	He	56.818	21.0	87810	18.9	50	Blank High
Co	59	45	1	He	5.045	12.3	17660	10.8	1	Blank High
Ni	60	45	1	He	0.982	21.2	1127	16.2	2	
Cu	63	45	1	He	0.398	58.7	5350	12.2	2	
Zn	66	45	1	He	-6.705	-2.3	583	7.2	20	
As	75	115	1	He	0.706	6.9	177	6.2	2	
Se	78	115	1	He	0.390	40.8	7	21.9	2	
Sr	88	103	1	He	0.212	41.9	299	29.4	10	
Mo	95	103	1	He	0.142	8.9	190	8.0	2	
Ag	107	103	1	He	0.014	33.1	72	28.2	0.2	
Cd	111	115	1	He	0.229	24.2	112	24.1	0.2	Blank High
Sn	118	115	1	He	-0.341	-65.2	1030	19.1	10	
Sb	123	115	1	He	0.945	13.2	993	12.2	2	
Ba	137	115	1	He	1.308	6.1	479	6.6	5	
W	182	159	1	He	0.307	16.3	2971	9.2	10	
Tl	205	165	1	He	0.183	21.5	1448	21.3	0.5	
Pb	208	165	1	He	41.956	9.6	429135	9.2	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1447442	0.84	1276810	113.36	60	120	
Sc	45	1	He	133228	1.24	163460	81.50	60	120	
Sc	45	2	NoGas	8268997	0.59	8842934	93.51	60	120	
Rh	103	1	He	848273	0.29	1010526	83.94	60	120	
In	115	1	He	219308	0.88	257801	85.07	60	120	
Tb	159	1	He	981479	0.67	1155473	84.94	60	120	
Ho	165	1	He	996303	0.52	1147359	86.83	60	120	
Bi	209	1	He	687915	0.83	790610	87.01	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-b-21-a@2
Data File Name	185SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:50:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	188.346	188.346	2.59	3008453	0.01	10000	
Be	9	45	2	NoGas	1052.785	1052.785	1.95	4834437	0.02	2000	
B	11	6	2	NoGas	155.571	155.571	1.38	519702	0.03	300	
Na	23	45	1	He	10574.039	10574.039	2.74	4075517	0.26	500000	
Mg	24	45	1	He	41237.513	41237.513	2.27	8896334	0.46	500000	
Al	27	45	1	He	55509.722	55509.722	1.35	5033181	1.10	200000	
K	39	45	1	He	18150.228	18150.228	2.69	1931752	0.94	500000	
Ca	44	45	1	He	106442.867	106442.867	1.76	653748	16.28	500000	
Ti	47	45	1	He	648.016	648.016	3.40	28659	2.26	2500	
V	51	45	1	He	1187.913	1187.913	2.29	1804297	0.07	10000	
Cr	52	45	1	He	2351.414	2351.414	1.91	4445304	0.05	10000	
Mn	55	45	1	He	5442.840	5442.840	1.38	5183807	0.10	10000	
Fe	56	45	1	He	122224.275	122224.275	1.81	182606602	0.07	200000	
Co	59	45	1	He	138178.745	138178.745	1.87	473796052	0.03	5000	>LDR
Ni	60	45	1	He	3913.209	3913.209	2.09	3726437	0.11	10000	
Cu	63	45	1	He	2487.262	2487.262	1.41	6682083	0.04	10000	
Zn	66	45	1	He	2695.820	2695.820	2.32	836184	0.32	10000	
As	75	115	1	He	1678.524	1678.524	2.23	344566	0.49	10000	
Se	78	115	1	He	935.933	935.933	1.70	9262	10.11	10000	
Sr	88	103	1	He	1211.438	1211.438	1.56	1166614	0.10	10000	
Mo	95	103	1	He	117.720	117.720	1.19	136239	0.09	2000	
Ag	107	103	1	He	110.409	110.409	1.59	457637	0.02	300	
Cd	111	115	1	He	1050.320	1050.320	2.29	481394	0.22	4000	
Sn	118	115	1	He	1119.778	1119.778	2.19	971895	0.12	2000	
Sb	123	115	1	He	504.997	504.997	2.13	493034	0.10	200	>LDR
Ba	137	115	1	He	2271.163	2271.163	2.11	779843	0.29	10000	
W	182	159	1	He	153.696	153.696	1.42	777230	0.02	2500	
Tl	205	165	1	He	290.433	290.433	0.56	2251288	0.01	2000	
Pb	208	165	1	He	86802.902	86802.902	1.65	883731156	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1257805	0.61	1276810	98.51	60	120	
Sc	45	1	He	133415	1.72	163460	81.62	60	120	
Sc	45	2	NoGas	8238421	1.12	8842934	93.16	60	120	
Rh	103	1	He	827002	1.26	1010526	81.84	60	120	
In	115	1	He	208193	1.82	257801	80.76	60	120	
Tb	159	1	He	980898	1.33	1155473	84.89	60	120	
Ho	165	1	He	994056	1.54	1147359	86.64	60	120	
Bi	209	1	He	2088184	1.34	790610	264.12	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	186_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:54:39-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.237	2.7	94942	0.4	8	
Be	9	45	2	NoGas	1.592	9.4	7061	9.9	1	Blank High
B	11	6	2	NoGas	2.498	8.5	20675	1.7	20	
Na	23	45	1	He	1.347	85.8	7091	6.3	1000	
Mg	24	45	1	He	9.687	25.6	2574	18.4	1000	
Al	27	45	1	He	13.977	46.6	1422	37.9	50	
K	39	45	1	He	7.190	29.4	8806	3.6	1000	
Ca	44	45	1	He	-47.409	-16.4	303	15.1	1000	
Ti	47	45	1	He	0.568	64.8	26	61.6	20	
V	51	45	1	He	0.320	79.3	597	59.5	2	
Cr	52	45	1	He	0.648	44.8	1849	26.6	2	
Mn	55	45	1	He	0.446	68.7	1536	16.6	2	
Fe	56	45	1	He	46.720	27.2	68860	24.8	50	
Co	59	45	1	He	41.800	22.2	135652	20.9	1	Blank High
Ni	60	45	1	He	1.385	27.8	1428	22.9	2	
Cu	63	45	1	He	0.051	298.3	4178	8.7	2	
Zn	66	45	1	He	-6.365	-2.1	652	7.0	20	
As	75	115	1	He	1.327	2.8	300	4.4	2	
Se	78	115	1	He	0.616	6.6	9	6.2	2	
Sr	88	103	1	He	0.273	22.5	350	17.2	10	
Mo	95	103	1	He	0.194	32.5	246	29.9	2	
Ag	107	103	1	He	0.027	19.8	121	18.3	0.2	
Cd	111	115	1	He	0.322	8.5	151	8.9	0.2	Blank High
Sn	118	115	1	He	0.551	56.0	1774	14.8	10	
Sb	123	115	1	He	1.312	1.4	1319	0.5	2	
Ba	137	115	1	He	0.650	34.1	232	34.9	5	
W	182	159	1	He	0.810	3.7	5399	3.2	10	
Tl	205	165	1	He	0.272	12.5	2096	11.4	0.5	
Pb	208	165	1	He	29.740	10.3	298129	9.7	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411105	2.45	1276810	110.52	60	120	
Sc	45	1	He	126104	1.39	163460	77.15	60	120	
Sc	45	2	NoGas	7859006	0.90	8842934	88.87	60	120	
Rh	103	1	He	826002	0.40	1010526	81.74	60	120	
In	115	1	He	210898	1.79	257801	81.81	60	120	
Tb	159	1	He	961658	0.55	1155473	83.23	60	120	
Ho	165	1	He	975606	0.87	1147359	85.03	60	120	
Bi	209	1	He	667353	0.92	790610	84.41	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	187_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:58:50-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.311	0.610	890914	0.33	50	110.6	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	52.058	0.746	226632	0.74	50	104.1	89.5	110.5	
B	11	6	2	NoGas	42.882	1.370	161695	0.51	50	85.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24458.999	0.493	8828728	0.40	25000	97.8	89.5	110.5	
Mg	24	45	1	He	24343.042	0.491	4923071	0.42	25000	97.4	89.5	110.5	
Al	27	45	1	He	245.086	1.288	21054	1.19	250	98.0	89.5	110.5	
K	39	45	1	He	25336.926	0.104	2524763	0.18	25000	101.3	89.5	110.5	
Ca	44	45	1	He	24990.476	1.482	144308	1.52	25000	100.0	89.5	110.5	
Ti	47	45	1	He	49.274	3.496	2045	3.42	50	98.5	89.5	110.5	
V	51	45	1	He	50.252	2.767	71681	2.80	50	100.5	89.5	110.5	
Cr	52	45	1	He	50.084	2.098	89427	2.09	50	100.2	89.5	110.5	
Mn	55	45	1	He	246.956	0.506	221531	0.56	250	98.8	89.5	110.5	
Fe	56	45	1	He	12416.492	1.157	17390920	1.11	12500	99.3	89.5	110.5	
Co	59	45	1	He	66.442	2.157	213924	2.21	50	132.9	89.5	110.5	CCV Failed
Ni	60	45	1	He	49.919	0.631	44740	0.54	50	99.8	89.5	110.5	
Cu	63	45	1	He	49.546	2.496	128697	2.44	50	99.1	89.5	110.5	
Zn	66	45	1	He	48.300	2.070	16490	1.67	50	96.6	89.5	110.5	
As	75	115	1	He	47.887	0.866	9775	0.63	50	95.8	89.5	110.5	
Se	78	115	1	He	45.530	1.966	450	2.67	50	91.1	89.5	110.5	
Sr	88	103	1	He	49.156	0.848	45310	0.85	50	98.3	89.5	110.5	
Mo	95	103	1	He	50.025	2.345	55329	2.36	50	100.1	89.5	110.5	
Ag	107	103	1	He	49.733	0.775	196972	0.83	50	99.5	89.5	110.5	
Cd	111	115	1	He	49.331	1.966	22430	1.22	50	98.7	89.5	110.5	
Sn	118	115	1	He	49.653	2.272	43965	2.55	50	99.3	89.5	110.5	
Sb	123	115	1	He	51.417	1.410	49817	0.76	50	102.8	89.5	110.5	
Ba	137	115	1	He	50.667	0.881	17265	0.33	50	101.3	89.5	110.5	
W	182	159	1	He	50.179	2.884	249225	3.15	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.328	0.710	382245	1.54	50	100.7	89.5	110.5	
Pb	208	165	1	He	63.081	0.481	630304	1.30	50	126.2	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349754	0.78	1276810	105.71	60	120	
Sc	45	1	He	125030	0.09	163460	76.49	60	120	
Sc	45	2	NoGas	7806466	0.43	8842934	88.28	60	120	
Rh	103	1	He	790111	0.06	1010526	78.19	60	120	
In	115	1	He	206495	0.78	257801	80.10	60	120	
Tb	159	1	He	959718	0.29	1155473	83.06	60	120	
Ho	165	1	He	973850	1.05	1147359	84.88	60	120	
Bi	209	1	He	645260	0.61	790610	81.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:03:01-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.326	5.8	97870	0.8	8	
Be	9	45	2	NoGas	0.493	6.8	2282	6.5	1	
B	11	6	2	NoGas	3.554	7.4	24584	2.6	20	
Na	23	45	1	He	81.563	1.3	36853	1.0	1000	
Mg	24	45	1	He	77.388	7.1	16653	7.4	1000	
Al	27	45	1	He	2.796	17.9	476	9.0	50	
K	39	45	1	He	91.505	1.9	17528	0.4	1000	
Ca	44	45	1	He	56.929	23.1	923	8.5	1000	
Ti	47	45	1	He	0.064	188.8	4	114.6	20	
V	51	45	1	He	0.179	28.5	404	18.3	2	
Cr	52	45	1	He	0.252	14.1	1165	5.6	2	
Mn	55	45	1	He	0.540	13.8	1649	4.7	2	
Fe	56	45	1	He	46.450	3.1	69717	3.5	50	
Co	59	45	1	He	9.880	6.9	32916	6.2	1	CCB High
Ni	60	45	1	He	0.787	4.5	907	3.8	2	
Cu	63	45	1	He	-0.544	-12.7	2711	6.1	2	
Zn	66	45	1	He	-3.015	-12.3	1658	7.3	20	
As	75	115	1	He	0.695	11.9	173	9.0	2	
Se	78	115	1	He	0.591	42.4	9	27.5	2	
Sr	88	103	1	He	0.224	37.1	302	26.3	10	
Mo	95	103	1	He	0.276	14.6	340	13.8	2	
Ag	107	103	1	He	0.150	6.3	632	6.3	0.2	
Cd	111	115	1	He	0.200	6.2	97	5.2	0.2	
Sn	118	115	1	He	-0.172	-155.5	1174	21.7	10	
Sb	123	115	1	He	0.510	19.6	540	17.8	2	
Ba	137	115	1	He	0.280	23.0	106	20.1	5	
W	182	159	1	He	0.413	11.6	3504	6.6	10	
Tl	205	165	1	He	0.262	11.5	2047	12.2	0.5	
Pb	208	165	1	He	7.032	9.3	72267	8.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1412436	1.65	1276810	110.62	60	120	
Sc	45	1	He	128125	0.60	163460	78.38	60	120	
Sc	45	2	NoGas	7990291	0.39	8842934	90.36	60	120	
Rh	103	1	He	825457	0.17	1010526	81.69	60	120	
In	115	1	He	216995	1.61	257801	84.17	60	120	
Tb	159	1	He	981442	0.48	1155473	84.94	60	120	
Ho	165	1	He	989041	0.78	1147359	86.20	60	120	
Bi	209	1	He	673060	0.34	790610	85.13	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-25-a@2
Data File Name	189SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:07:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	39.922	39.922	0.88	721998	0.01	10000	
Be	9	45	2	NoGas	3.888	3.888	2.92	18488	0.02	2000	
B	11	6	2	NoGas	62.758	62.758	1.05	219546	0.03	300	
Na	23	45	1	He	4403.182	4403.182	0.42	1695340	0.26	500000	
Mg	24	45	1	He	35542.805	35542.805	0.60	7641728	0.47	500000	
Al	27	45	1	He	37311.954	37311.954	1.24	3371254	1.11	200000	
K	39	45	1	He	5523.171	5523.171	0.82	591732	0.93	500000	
Ca	44	45	1	He	415329.651	415329.651	1.27	2540166	16.35	500000	
Ti	47	45	1	He	1790.952	1790.952	0.61	78944	2.27	2500	
V	51	45	1	He	81.607	81.607	3.68	123701	0.07	10000	
Cr	52	45	1	He	103.160	103.160	1.80	195061	0.05	10000	
Mn	55	45	1	He	1108.835	1108.835	0.91	1053334	0.11	10000	
Fe	56	45	1	He	63283.907	63283.907	0.98	94222125	0.07	200000	
Co	59	45	1	He	136.107	136.107	1.60	465505	0.03	5000	
Ni	60	45	1	He	755.971	755.971	1.56	717618	0.11	10000	
Cu	63	45	1	He	560.015	560.015	1.92	1502672	0.04	10000	
Zn	66	45	1	He	251.511	251.511	0.72	80151	0.31	10000	
As	75	115	1	He	104.880	104.880	0.81	21203	0.49	10000	
Se	78	115	1	He	13.968	13.968	1.69	139	10.05	10000	
Sr	88	103	1	He	356.844	356.844	1.01	381756	0.09	10000	
Mo	95	103	1	He	9.408	9.408	3.04	12115	0.08	2000	
Ag	107	103	1	He	10.368	10.368	1.59	47744	0.02	300	
Cd	111	115	1	He	10.028	10.028	2.26	4523	0.22	4000	
Sn	118	115	1	He	36.525	36.525	3.12	32402	0.11	2000	
Sb	123	115	1	He	129.416	129.416	1.44	124320	0.10	200	
Ba	137	115	1	He	842.890	842.890	0.82	284740	0.30	10000	
W	182	159	1	He	1.633	1.633	5.03	9648	0.02	2500	
Tl	205	165	1	He	16.366	16.366	14.05	126379	0.01	2000	
Pb	208	165	1	He	238251.367	238251.367	1.03	2420035975	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1279923	2.06	1276810	100.24	60	120	
Sc	45	1	He	132922	1.48	163460	81.32	60	120	
Sc	45	2	NoGas	8485934	0.97	8842934	95.96	60	120	
Rh	103	1	He	918411	1.04	1010526	90.88	60	120	
In	115	1	He	204764	0.73	257801	79.43	60	120	
Tb	159	1	He	979258	0.69	1155473	84.75	60	120	
Ho	165	1	He	991723	1.93	1147359	86.44	60	120	
Bi	209	1	He	1407035	7.53	790610	177.97	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	190_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:11:18-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.956	6.6	98295	1.0	8	
Be	9	45	2	NoGas	0.201	23.0	1048	22.0	1	
B	11	6	2	NoGas	4.799	4.7	30596	2.5	20	
Na	23	45	1	He	2.652	33.9	8221	4.7	1000	
Mg	24	45	1	He	6.700	32.7	2141	23.2	1000	
Al	27	45	1	He	7.083	45.8	909	33.8	50	
K	39	45	1	He	11.159	15.2	9999	2.0	1000	
Ca	44	45	1	He	6.064	354.5	667	20.8	1000	
Ti	47	45	1	He	1.132	31.9	53	31.2	20	
V	51	45	1	He	-0.073	-221.5	39	647.4	2	
Cr	52	45	1	He	0.027	218.5	809	14.2	2	
Mn	55	45	1	He	-0.786	-9.3	467	15.8	2	
Fe	56	45	1	He	22.295	33.6	37517	31.2	50	
Co	59	45	1	He	3.122	4.0	11406	4.2	1	Blank High
Ni	60	45	1	He	0.416	30.6	608	20.9	2	
Cu	63	45	1	He	0.403	94.6	5510	18.8	2	
Zn	66	45	1	He	-7.878	-1.4	228	15.4	20	
As	75	115	1	He	0.305	8.3	94	6.6	2	
Se	78	115	1	He	0.152	31.4	5	9.9	2	
Sr	88	103	1	He	0.017	20.0	110	3.0	10	
Mo	95	103	1	He	0.040	10.4	71	7.2	2	
Ag	107	103	1	He	0.007	48.1	43	35.2	0.2	
Cd	111	115	1	He	0.052	57.4	27	54.4	0.2	
Sn	118	115	1	He	-0.951	-4.2	489	8.2	10	
Sb	123	115	1	He	0.396	5.8	443	4.7	2	
Ba	137	115	1	He	0.231	31.8	92	30.3	5	
W	182	159	1	He	0.000	7895.7	1478	13.9	10	
Tl	205	165	1	He	0.034	14.0	299	12.3	0.5	
Pb	208	165	1	He	59.776	15.5	629071	16.0	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481728	1.35	1276810	116.05	60	120	
Sc	45	1	He	137025	0.48	163460	83.83	60	120	
Sc	45	2	NoGas	8510276	1.20	8842934	96.24	60	120	
Rh	103	1	He	877342	0.38	1010526	86.82	60	120	
In	115	1	He	226441	0.78	257801	87.84	60	120	
Tb	159	1	He	1019893	0.68	1155473	88.27	60	120	
Ho	165	1	He	1025048	0.55	1147359	89.34	60	120	
Bi	209	1	He	706889	0.27	790610	89.41	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@2
Data File Name	191SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:15:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	144.245	144.245	0.67	2516858	0.01	10000	
Be	9	45	2	NoGas	5.772	5.772	3.62	28823	0.02	2000	
B	11	6	2	NoGas	267.486	267.486	2.02	961427	0.03	300	
Na	23	45	1	He	1799.150	1799.150	0.66	742970	0.24	500000	
Mg	24	45	1	He	20501.472	20501.472	2.45	4699122	0.44	500000	
Al	27	45	1	He	98846.130	98846.130	2.44	9519826	1.04	200000	
K	39	45	1	He	25552.150	25552.150	1.26	2885949	0.89	500000	
Ca	44	45	1	He	108382.261	108382.261	1.95	707177	15.33	500000	
Ti	47	45	1	He	1184.982	1184.982	3.27	55674	2.13	2500	
V	51	45	1	He	131.191	131.191	11.13	211589	0.06	10000	
Cr	52	45	1	He	4343.388	4343.388	2.46	8721967	0.05	10000	
Mn	55	45	1	He	1134.900	1134.900	2.56	1149206	0.10	10000	
Fe	56	45	1	He	166068.229	166068.229	2.75	263566070	0.06	200000	
Co	59	45	1	He	125.002	125.002	2.26	455740	0.03	5000	
Ni	60	45	1	He	432.522	432.522	2.39	437739	0.10	10000	
Cu	63	45	1	He	382.803	382.803	2.40	1096324	0.03	10000	
Zn	66	45	1	He	1120.362	1120.362	3.00	370835	0.30	10000	
As	75	115	1	He	93.767	93.767	1.06	19563	0.48	10000	
Se	78	115	1	He	15.011	15.011	5.18	154	9.75	10000	
Sr	88	103	1	He	406.144	406.144	0.36	376530	0.11	10000	
Mo	95	103	1	He	17.675	17.675	2.88	19711	0.09	2000	
Ag	107	103	1	He	0.847	0.847	1.43	3390	0.02	300	
Cd	111	115	1	He	9.564	9.564	1.05	4450	0.21	4000	
Sn	118	115	1	He	55.116	55.116	1.83	49773	0.11	2000	
Sb	123	115	1	He	54.445	54.445	1.08	53967	0.10	200	
Ba	137	115	1	He	2719.825	2719.825	0.67	947885	0.29	10000	
W	182	159	1	He	3.059	3.059	5.19	17347	0.02	2500	
Tl	205	165	1	He	1.814	1.814	1.96	14460	0.01	2000	
Pb	208	165	1	He	2739.206	2739.206	1.55	28622497	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1364884	1.99	1276810	106.90	60	120	
Sc	45	1	He	141722	1.81	163460	86.70	60	120	
Sc	45	2	NoGas	8926325	0.41	8842934	100.94	60	120	
Rh	103	1	He	795934	1.47	1010526	78.76	60	120	
In	115	1	He	211267	2.06	257801	81.95	60	120	
Tb	159	1	He	1008774	1.39	1155473	87.30	60	120	
Ho	165	1	He	1020215	1.86	1147359	88.92	60	120	
Bi	209	1	He	680603	0.65	790610	86.09	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	192_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:19:37-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.073	5.3	98689	0.6	8	
Be	9	45	2	NoGas	0.157	13.3	826	11.8	1	
B	11	6	2	NoGas	4.220	2.5	27836	0.7	20	
Na	23	45	1	He	1.356	59.7	7465	4.7	1000	
Mg	24	45	1	He	5.408	33.8	1793	21.1	1000	
Al	27	45	1	He	24.896	39.8	2481	35.0	50	
K	39	45	1	He	9.670	57.7	9529	6.9	1000	
Ca	44	45	1	He	-32.342	-32.2	411	14.7	1000	
Ti	47	45	1	He	0.843	14.1	39	13.1	20	
V	51	45	1	He	-0.039	-465.1	87	316.2	2	
Cr	52	45	1	He	1.028	43.4	2660	30.6	2	
Mn	55	45	1	He	-0.707	-13.5	527	17.0	2	
Fe	56	45	1	He	61.848	34.4	94898	32.3	50	Blank High
Co	59	45	1	He	1.972	3.9	7123	2.7	1	Blank High
Ni	60	45	1	He	0.321	25.9	498	14.9	2	
Cu	63	45	1	He	-0.631	-3.1	2577	2.2	2	
Zn	66	45	1	He	-7.300	-4.8	398	26.3	20	
As	75	115	1	He	0.243	8.2	77	5.7	2	
Se	78	115	1	He	0.170	172.3	5	60.8	2	
Sr	88	103	1	He	0.053	32.0	142	11.8	10	
Mo	95	103	1	He	0.018	60.8	43	30.8	2	
Ag	107	103	1	He	0.001	720.7	13	114.6	0.2	
Cd	111	115	1	He	0.025	22.2	13	20.4	0.2	
Sn	118	115	1	He	-0.984	-1.8	441	3.8	10	
Sb	123	115	1	He	0.193	20.2	219	18.4	2	
Ba	137	115	1	He	0.677	25.0	249	24.1	5	
W	182	159	1	He	0.034	23.6	1600	2.5	10	
Tl	205	165	1	He	0.015	30.1	148	24.9	0.5	
Pb	208	165	1	He	12.616	12.6	129801	13.2	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1454010	0.81	1276810	113.88	60	120	
Sc	45	1	He	132693	0.99	163460	81.18	60	120	
Sc	45	2	NoGas	8383581	0.42	8842934	94.81	60	120	
Rh	103	1	He	851035	0.89	1010526	84.22	60	120	
In	115	1	He	217802	0.35	257801	84.48	60	120	
Tb	159	1	He	986220	1.02	1155473	85.35	60	120	
Ho	165	1	He	995713	1.26	1147359	86.78	60	120	
Bi	209	1	He	682657	1.04	790610	86.35	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	193_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:23:49-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.969	0.478	925745	0.54	50	109.9	89.5	110.5	
Be	9	45	2	NoGas	51.747	0.769	235414	0.93	50	103.5	89.5	110.5	
B	11	6	2	NoGas	43.220	1.254	168984	1.13	50	86.4	89.5	110.5	CCV Failed
Na	23	45	1	He	24646.114	1.970	9318884	0.34	25000	98.6	89.5	110.5	
Mg	24	45	1	He	24440.552	1.488	5178008	0.84	25000	97.8	89.5	110.5	
Al	27	45	1	He	245.507	3.380	22088	1.10	250	98.2	89.5	110.5	
K	39	45	1	He	25917.188	1.717	2705198	0.67	25000	103.7	89.5	110.5	
Ca	44	45	1	He	25141.182	2.356	152065	0.78	25000	100.6	89.5	110.5	
Ti	47	45	1	He	51.422	3.893	2237	5.96	50	102.8	89.5	110.5	
V	51	45	1	He	50.170	2.002	74975	2.16	50	100.3	89.5	110.5	
Cr	52	45	1	He	50.012	1.694	93546	0.86	50	100.0	89.5	110.5	
Mn	55	45	1	He	249.999	2.717	234880	1.07	250	100.0	89.5	110.5	
Fe	56	45	1	He	12601.945	2.422	18488594	1.05	12500	100.8	89.5	110.5	
Co	59	45	1	He	52.250	2.056	176302	0.60	50	104.5	89.5	110.5	
Ni	60	45	1	He	50.486	0.983	47405	1.81	50	101.0	89.5	110.5	
Cu	63	45	1	He	49.719	3.096	135247	0.73	50	99.4	89.5	110.5	
Zn	66	45	1	He	47.116	4.883	16910	2.59	50	94.2	89.5	110.5	
As	75	115	1	He	48.667	3.232	10217	1.88	50	97.3	89.5	110.5	
Se	78	115	1	He	47.719	5.834	485	5.19	50	95.4	89.5	110.5	
Sr	88	103	1	He	49.797	1.787	47402	1.69	50	99.6	89.5	110.5	
Mo	95	103	1	He	50.788	1.902	58017	2.56	50	101.6	89.5	110.5	
Ag	107	103	1	He	50.194	0.118	205313	0.76	50	100.4	89.5	110.5	
Cd	111	115	1	He	49.023	1.922	22929	0.63	50	98.0	89.5	110.5	
Sn	118	115	1	He	48.242	2.569	43969	1.45	50	96.5	89.5	110.5	
Sb	123	115	1	He	51.381	1.757	51207	0.41	50	102.8	89.5	110.5	
Ba	137	115	1	He	51.231	3.912	17953	2.77	50	102.5	89.5	110.5	
W	182	159	1	He	50.184	2.193	254353	2.41	50	100.4	89.5	110.5	
Tl	205	165	1	He	51.028	1.778	393075	2.02	50	102.1	89.5	110.5	
Pb	208	165	1	He	59.024	1.532	598200	1.02	50	118.0	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1400227	0.18	1276810	109.67	60	120	
Sc	45	1	He	131009	2.23	163460	80.15	60	120	
Sc	45	2	NoGas	8157647	0.20	8842934	92.25	60	120	
Rh	103	1	He	815994	0.75	1010526	80.75	60	120	
In	115	1	He	212426	1.34	257801	82.40	60	120	
Tb	159	1	He	979411	0.57	1155473	84.76	60	120	
Ho	165	1	He	987729	0.79	1147359	86.09	60	120	
Bi	209	1	He	652343	0.22	790610	82.51	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	194_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:28:02-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.243	5.3	97527	1.3	8	
Be	9	45	2	NoGas	0.446	1.6	2093	1.9	1	
B	11	6	2	NoGas	2.761	11.7	21372	4.8	20	
Na	23	45	1	He	87.302	4.4	39035	4.1	1000	
Mg	24	45	1	He	76.547	12.7	16493	11.9	1000	
Al	27	45	1	He	3.176	33.1	509	17.1	50	
K	39	45	1	He	88.374	2.1	17235	1.3	1000	
Ca	44	45	1	He	68.800	17.5	994	7.4	1000	
Ti	47	45	1	He	0.168	96.8	9	78.1	20	
V	51	45	1	He	0.087	103.9	269	48.1	2	
Cr	52	45	1	He	0.221	39.8	1109	14.0	2	
Mn	55	45	1	He	0.391	31.4	1515	7.4	2	
Fe	56	45	1	He	50.321	10.4	75379	10.1	50	CCB High
Co	59	45	1	He	2.201	4.5	7644	4.8	1	CCB High
Ni	60	45	1	He	0.374	19.1	530	12.6	2	
Cu	63	45	1	He	-0.483	-6.4	2876	3.5	2	
Zn	66	45	1	He	-3.039	-17.0	1653	10.1	20	
As	75	115	1	He	0.362	12.5	101	8.9	2	
Se	78	115	1	He	0.629	18.6	10	11.9	2	
Sr	88	103	1	He	0.148	10.1	231	6.0	10	
Mo	95	103	1	He	0.236	15.7	296	14.5	2	
Ag	107	103	1	He	0.163	11.3	692	11.1	0.2	
Cd	111	115	1	He	0.171	8.8	82	8.2	0.2	
Sn	118	115	1	He	-0.273	-21.5	1074	4.7	10	
Sb	123	115	1	He	0.279	5.4	303	4.8	2	
Ba	137	115	1	He	0.259	11.2	98	10.4	5	
W	182	159	1	He	0.390	1.9	3352	1.6	10	
Tl	205	165	1	He	0.258	16.3	2001	15.8	0.5	
Pb	208	165	1	He	6.640	5.0	67777	4.7	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1393055	1.52	1276810	109.10	60	120	
Sc	45	1	He	128313	0.87	163460	78.50	60	120	
Sc	45	2	NoGas	8064570	0.62	8842934	91.20	60	120	
Rh	103	1	He	832283	0.26	1010526	82.36	60	120	
In	115	1	He	215532	0.62	257801	83.60	60	120	
Tb	159	1	He	971431	0.61	1155473	84.07	60	120	
Ho	165	1	He	981300	0.86	1147359	85.53	60	120	
Bi	209	1	He	671878	0.81	790610	84.98	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	195_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:32:12-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.867	5.5	92866	0.3	8	
Be	9	45	2	NoGas	0.117	12.3	619	9.9	1	
B	11	6	2	NoGas	2.517	4.5	20371	2.0	20	
Na	23	45	1	He	2.384	76.8	7591	7.9	1000	
Mg	24	45	1	He	1.262	48.9	874	14.1	1000	
Al	27	45	1	He	-0.090	-222.0	224	6.9	50	
K	39	45	1	He	10.331	39.5	9273	3.5	1000	
Ca	44	45	1	He	-71.578	-0.7	166	1.8	1000	
Ti	47	45	1	He	0.090	182.5	6	124.9	20	
V	51	45	1	He	0.004	4145.8	147	144.7	2	
Cr	52	45	1	He	0.051	126.1	800	13.7	2	
Mn	55	45	1	He	-1.035	-4.5	208	19.6	2	
Fe	56	45	1	He	3.001	5.2	7364	2.2	50	
Co	59	45	1	He	2.180	1.9	7569	1.4	1	Blank High
Ni	60	45	1	He	0.190	17.1	361	8.4	2	
Cu	63	45	1	He	-0.893	-5.1	1816	7.4	2	
Zn	66	45	1	He	-8.012	-0.7	173	10.2	20	
As	75	115	1	He	0.246	12.0	76	7.0	2	
Se	78	115	1	He	0.500	57.7	8	36.6	2	
Sr	88	103	1	He	-0.035	-63.7	54	39.4	10	
Mo	95	103	1	He	0.015	70.5	39	32.4	2	
Ag	107	103	1	He	0.002	99.7	20	44.1	0.2	
Cd	111	115	1	He	0.023	33.5	12	30.1	0.2	
Sn	118	115	1	He	-1.006	-6.6	415	14.8	10	
Sb	123	115	1	He	0.063	33.4	84	23.8	2	
Ba	137	115	1	He	0.044	65.7	21	48.2	5	
W	182	159	1	He	0.012	211.0	1456	9.5	10	
Tl	205	165	1	He	0.019	29.8	173	25.0	0.5	
Pb	208	165	1	He	5.112	3.1	51902	2.6	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1384932	1.06	1276810	108.47	60	120	
Sc	45	1	He	128269	1.03	163460	78.47	60	120	
Sc	45	2	NoGas	8159410	0.74	8842934	92.27	60	120	
Rh	103	1	He	833754	0.64	1010526	82.51	60	120	
In	115	1	He	214786	1.53	257801	83.31	60	120	
Tb	159	1	He	964701	0.87	1155473	83.49	60	120	
Ho	165	1	He	971721	0.47	1147359	84.69	60	120	
Bi	209	1	He	664790	0.82	790610	84.09	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	196_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:36:24-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.812	1.9	92541	0.7	8	
Be	9	45	2	NoGas	0.112	34.3	600	29.1	1	
B	11	6	2	NoGas	3.662	5.4	24773	2.8	20	
Na	23	45	1	He	1.472	72.5	7380	4.0	1000	
Mg	24	45	1	He	0.446	91.0	719	13.5	1000	
Al	27	45	1	He	-0.474	-48.8	194	11.4	50	
K	39	45	1	He	9.862	47.2	9384	4.2	1000	
Ca	44	45	1	He	-68.865	-2.5	185	5.6	1000	
Ti	47	45	1	He	0.089	183.8	6	124.9	20	
V	51	45	1	He	0.069	138.2	247	57.9	2	
Cr	52	45	1	He	0.040	54.9	794	3.8	2	
Mn	55	45	1	He	-0.994	-3.5	250	11.4	2	
Fe	56	45	1	He	2.343	3.3	6530	1.0	50	
Co	59	45	1	He	2.285	3.8	8052	2.4	1	Blank High
Ni	60	45	1	He	0.172	17.5	351	9.5	2	
Cu	63	45	1	He	-0.922	-4.0	1770	7.1	2	
Zn	66	45	1	He	-7.812	-1.8	237	18.0	20	
As	75	115	1	He	0.224	3.2	73	2.7	2	
Se	78	115	1	He	0.250	50.2	6	21.6	2	
Sr	88	103	1	He	-0.048	-16.1	42	16.4	10	
Mo	95	103	1	He	-0.004	-120.8	17	34.6	2	
Ag	107	103	1	He	0.002	89.0	19	36.7	0.2	
Cd	111	115	1	He	0.015	45.0	8	38.6	0.2	
Sn	118	115	1	He	-1.110	-11.5	326	34.8	10	
Sb	123	115	1	He	0.092	17.1	116	13.0	2	
Ba	137	115	1	He	0.040	25.0	20	16.7	5	
W	182	159	1	He	0.022	99.3	1522	7.6	10	
Tl	205	165	1	He	0.013	10.3	131	7.8	0.5	
Pb	208	165	1	He	5.784	30.1	59248	29.6	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1400378	0.41	1276810	109.68	60	120	
Sc	45	1	He	130491	1.72	163460	79.83	60	120	
Sc	45	2	NoGas	8205086	0.44	8842934	92.79	60	120	
Rh	103	1	He	844048	1.34	1010526	83.53	60	120	
In	115	1	He	218201	2.19	257801	84.64	60	120	
Tb	159	1	He	977078	0.52	1155473	84.56	60	120	
Ho	165	1	He	982554	0.52	1147359	85.64	60	120	
Bi	209	1	He	678700	0.24	790610	85.85	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	197_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:40:40-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.810	0.562	929348	0.31	50	109.6	89.5	110.5	
Be	9	45	2	NoGas	51.347	1.643	235115	1.05	50	102.7	89.5	110.5	
B	11	6	2	NoGas	44.304	1.349	173099	1.00	50	88.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24813.084	3.219	9329307	0.67	25000	99.3	89.5	110.5	
Mg	24	45	1	He	24511.238	3.499	5163197	0.94	25000	98.0	89.5	110.5	
Al	27	45	1	He	243.288	3.278	21772	0.81	250	97.3	89.5	110.5	
K	39	45	1	He	25897.329	2.915	2688014	0.60	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25379.022	2.916	152651	0.59	25000	101.5	89.5	110.5	
Ti	47	45	1	He	50.592	3.984	2187	2.91	50	101.2	89.5	110.5	
V	51	45	1	He	50.959	2.821	75718	0.23	50	101.9	89.5	110.5	
Cr	52	45	1	He	50.296	3.159	93544	1.17	50	100.6	89.5	110.5	
Mn	55	45	1	He	252.350	3.221	235773	1.13	250	100.9	89.5	110.5	
Fe	56	45	1	He	12631.036	3.797	18426131	1.31	12500	101.0	89.5	110.5	
Co	59	45	1	He	52.751	3.325	176986	0.73	50	105.5	89.5	110.5	
Ni	60	45	1	He	51.517	3.762	48084	1.16	50	103.0	89.5	110.5	
Cu	63	45	1	He	50.280	2.686	135995	0.78	50	100.6	89.5	110.5	
Zn	66	45	1	He	47.770	2.333	17023	2.16	50	95.5	89.5	110.5	
As	75	115	1	He	48.246	1.648	10122	1.64	50	96.5	89.5	110.5	
Se	78	115	1	He	48.833	4.551	496	3.29	50	97.7	89.5	110.5	
Sr	88	103	1	He	49.669	0.456	47447	1.07	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.652	1.206	59212	2.44	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.022	0.136	205323	1.23	50	100.0	89.5	110.5	
Cd	111	115	1	He	49.641	1.475	23199	0.55	50	99.3	89.5	110.5	
Sn	118	115	1	He	48.385	1.855	44069	2.63	50	96.8	89.5	110.5	
Sb	123	115	1	He	51.990	2.160	51767	0.81	50	104.0	89.5	110.5	
Ba	137	115	1	He	51.341	0.619	17983	2.01	50	102.7	89.5	110.5	
W	182	159	1	He	49.851	1.699	254078	1.89	50	99.7	89.5	110.5	
Tl	205	165	1	He	50.834	1.832	395401	1.82	50	101.7	89.5	110.5	
Pb	208	165	1	He	55.661	1.439	569697	0.98	50	111.3	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1401573	0.52	1276810	109.77	60	120	
Sc	45	1	He	130307	2.59	163460	79.72	60	120	
Sc	45	2	NoGas	8211352	0.78	8842934	92.86	60	120	
Rh	103	1	He	818863	1.36	1010526	81.03	60	120	
In	115	1	He	212245	1.39	257801	82.33	60	120	
Tb	159	1	He	984839	0.23	1155473	85.23	60	120	
Ho	165	1	He	997386	0.70	1147359	86.93	60	120	
Bi	209	1	He	667592	0.72	790610	84.44	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	198_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:44:51-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.184	5.6	99146	1.3	8	
Be	9	45	2	NoGas	0.272	21.6	1348	21.3	1	
B	11	6	2	NoGas	4.561	4.5	28938	1.9	20	
Na	23	45	1	He	84.031	0.6	39309	0.9	1000	
Mg	24	45	1	He	68.444	3.2	15400	3.1	1000	
Al	27	45	1	He	0.632	17.5	299	3.6	50	
K	39	45	1	He	87.031	4.4	17772	2.9	1000	
Ca	44	45	1	He	66.155	13.2	1017	5.6	1000	
Ti	47	45	1	He	0.135	32.7	8	24.7	20	
V	51	45	1	He	0.135	51.1	352	29.2	2	
Cr	52	45	1	He	0.113	36.7	950	8.9	2	
Mn	55	45	1	He	0.247	28.4	1437	4.3	2	
Fe	56	45	1	He	42.008	3.0	65917	2.4	50	
Co	59	45	1	He	2.053	3.1	7438	3.4	1	CCB High
Ni	60	45	1	He	0.352	10.7	530	6.8	2	
Cu	63	45	1	He	-0.589	-14.8	2704	8.1	2	
Zn	66	45	1	He	-3.350	-11.7	1621	7.3	20	
As	75	115	1	He	0.377	4.3	108	3.4	2	
Se	78	115	1	He	0.396	74.6	7	41.6	2	
Sr	88	103	1	He	0.162	17.9	251	11.9	10	
Mo	95	103	1	He	0.238	5.3	306	4.4	2	
Ag	107	103	1	He	0.154	9.1	670	9.5	0.2	
Cd	111	115	1	He	0.165	11.6	82	11.3	0.2	
Sn	118	115	1	He	-0.250	-41.6	1130	8.4	10	
Sb	123	115	1	He	0.309	10.0	344	9.5	2	
Ba	137	115	1	He	0.178	20.6	71	18.9	5	
W	182	159	1	He	0.350	12.5	3260	6.4	10	
Tl	205	165	1	He	0.208	7.7	1673	7.0	0.5	
Pb	208	165	1	He	4.289	1.4	45708	1.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1444935	1.93	1276810	113.17	60	120	
Sc	45	1	He	133362	0.62	163460	81.59	60	120	
Sc	45	2	NoGas	8276012	1.02	8842934	93.59	60	120	
Rh	103	1	He	851527	0.48	1010526	84.27	60	120	
In	115	1	He	222429	0.17	257801	86.28	60	120	
Tb	159	1	He	1003483	0.91	1155473	86.85	60	120	
Ho	165	1	He	1015960	0.79	1147359	88.55	60	120	
Bi	209	1	He	693134	0.63	790610	87.67	60	120	

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AS 5/10/16

MTMSCCBDILH20-262 EPA Tune Solution Spex CL1-16MKBY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 5/9/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

Level I Analyst: Anjali Sharma Date: 5/10/16 Time: 11:39 – 4:26
Level I Analyst: _____ Date: _____ Time: _____

Level II Reviewer: Karen R Coutu Date: 5/10/16 Time: 11:39-4:26
Level II Reviewer: _____ Date: _____ Time: _____

Comments: _____

Current Signal

[NoGas]

Mass	Range	Count	Avg. Count	RSD [%]
7	5000	2608	2633.1	1.93
89	5000	4655	4650.2	1.73
205	5000	2399	2434.8	2.14
156/140	2	0.962 %	0.908 %	14.41
65	2000	1830	1850.2	3.71
11	2000	1552	1591.1	2.26
63	5000	4076	4155.4	2.92
60	500	317	306.7	9.73
45	500	142	172.2	14.75
6	2000	1245	1210.2	5.57
52	20000	11479	11741.0	2.01
208	500	190	201.4	12.24
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	14.8	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

Meters

IF/BK Press	2.08E+2	Pa	TMP Revolution	100.0	%	Forward Power	1600	W
Analyzer Press	8.68E-5	Pa	Carrier Gas(BP)	1.96E+2	kPa			

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Current Signal

[He]

Mass	Range	Count	Avg. Count	RSD [%]
59	1000	459	453.3	6.11
51	200	104	115.7	10.09
52	200	76	87.8	15.83
51/59	50	22.656 %	25.646 %	13.05
63	1000	506	478.0	7.25
65	500	222	241.3	6.21
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	2.8	V
Extract 2	-160.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-85	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	10.4	V
He Flow	4.4	mL/min	OctP Bias	-25.0	V			
H2 Flow	0.0	mL/min	OctP RF	200	V			

Meters

IF/BK Press	2.09E+2	Pa	TMP Revolution	100.0	%	Forward Power	1599	W
Analyzer Press	1.60E-4	Pa	Carrier Gas(BP)	1.96E+2	kPa			

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US EPA Tune Check Sample Report

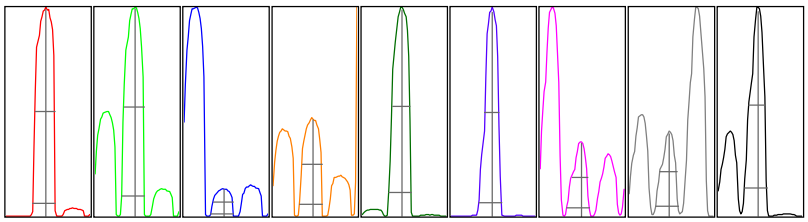
Batch Folder D:\Analytical Runs\I10050716G.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	42209	0.58	5.00	
24	176465	0.23	5.00	
25	22829	0.53	5.00	
26	25852	0.50	5.00	
59	168093	0.50	5.00	
115	217343	0.12	5.00	
206	47860	0.18	5.00	
207	41900	0.86	5.00	
208	97152	0.66	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	42187	41980	42581	42293	42002
24	176579	176482	176905	175808	176553
25	22958	22825	22809	22912	22640
26	25860	25942	25840	25646	25975
59	166789	168237	167843	168577	169020
115	217593	217074	217597	217082	217370
206	47982	47767	47860	47904	47789
207	41303	41852	41998	42135	42212
208	96500	97278	98016	97442	96526

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	6413	8.95	8.9 - 9.1		0.792	0.850	
24	27065	23.95	23.9 - 24.1		0.794	0.850	
25	3497	24.95	24.9 - 25.1		0.792	0.850	
26	3947	25.95	25.9 - 26.1		0.801	0.850	
59	27322	58.95	58.9 - 59.1		0.797	0.850	
115	39851	115.00	114.9 - 115.1		0.798	0.850	
206	8582	206.00	205.9 - 206.1		0.801	0.850	
207	7159	206.95	206.9 - 207.1		0.779	0.850	
208	17762	207.95	207.9 - 208.1		0.782	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	14.8	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:39:01-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	115398	0.00
Be	9	45	2	NoGas	181	21.69
B	11	45	2	NoGas	10403	0.03
Na	23	45	1	He	4879	0.10
Mg	24	45	1	He	615	3.72
Al	27	45	1	He	141	11.39
K	39	45	1	He	8851	0.03
Ca	44	45	1	He	167	13.81
V	51	45	1	He	47	1530.79
Cr	52	45	1	He	709	0.47
Mn	55	45	1	He	116	13.75
Fe	56	45	1	He	3613	0.25
Co	59	45	1	He	353	0.92
Ni	60	45	1	He	157	12.96
Cu	63	45	1	He	2760	0.07
Zn	66	45	1	He	136	11.66
As	75	103	1	He	25	132.46
Se	78	115	1	He	6	795.41
Sr	88	103	1	He	20	144.39
Mo	95	103	1	He	50	61.09
Ag	107	103	1	He	17	0.00
Cd	111	115	1	He	3	514.47
Sn	118	115	1	He	330	12.70
Sb	123	115	1	He	43	81.33
Ba	137	115	1	He	4	2579.17
W	182	159	1	He	1648	0.42
Tl	205	165	1	He	124	9.71
Pb	208	165	1	He	1249	0.39

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1850878	1.74
Sc	45	1	He	135266	1.55
Sc	45	2	NoGas	8204012	0.22
Rh	103	1	He	900008	0.69
In	115	1	He	224950	0.78
Tb	159	1	He	1053564	0.39
Ho	165	1	He	1062658	0.34
Bi	209	1	He	727675	1.00

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:43:16-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	116206	0.00
Be	9	45	2	NoGas	144	5.32
B	11	45	2	NoGas	8791	0.06
Na	23	45	1	He	4567	0.07
Mg	24	45	1	He	641	1.49
Al	27	45	1	He	111	6.79
K	39	45	1	He	8877	0.07
Ca	44	45	1	He	191	6.38
V	51	45	1	He	53	653.67
Cr	52	45	1	He	676	0.80
Mn	55	45	1	He	134	18.65
Fe	56	45	1	He	1998	0.29
Co	59	45	1	He	309	6.30
Ni	60	45	1	He	143	5.85
Cu	63	45	1	He	2417	0.26
Zn	66	45	1	He	148	13.16
As	75	103	1	He	18	19.15
Se	78	115	1	He	3	1913.98
Sr	88	103	1	He	39	33.67
Mo	95	103	1	He	13	374.91
Ag	107	103	1	He	8	841.82
Cd	111	115	1	He	2	2057.88
Sn	118	115	1	He	300	8.90
Sb	123	115	1	He	42	75.57
Ba	137	115	1	He	6	624.54
W	182	159	1	He	1422	0.99
Tl	205	165	1	He	40	36.09
Pb	208	165	1	He	1194	0.33

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1884762	1.33
Sc	45	1	He	134073	1.44
Sc	45	2	NoGas	8481025	0.69
Rh	103	1	He	903580	0.81
In	115	1	He	224817	0.40
Tb	159	1	He	1046002	0.13
Ho	165	1	He	1057439	0.80
Bi	209	1	He	731380	0.88

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Calibration Standard Report

Sample Table

Sample Name	STD1-2495516
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:47:29-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	333505	0.00
Be	9	2	NoGas	61179	0.00
B	11	2	NoGas	46043	0.01
Na	23	1	He	2067013	0.00
Mg	24	1	He	1107505	0.00
Al	27	1	He	6381	0.03
K	39	1	He	539387	0.00
Ca	44	1	He	31529	0.01
Ti	47	1	He	488	1.13
V	51	1	He	15132	0.02
Cr	52	1	He	20894	0.02
Mn	55	1	He	49748	0.00
Fe	56	1	He	3878041	0.00
Co	59	1	He	38207	0.00
Ni	60	1	He	10677	0.02
Cu	63	1	He	33575	0.00
Zn	66	1	He	4934	0.09
As	75	1	He	2189	0.08
Se	78	1	He	104	5.82
Sr	88	1	He	9598	0.05
Mo	95	1	He	12655	0.03
Ag	107	1	He	46791	0.00
Cd	111	1	He	5130	0.10
Sn	118	1	He	9396	0.03
Sb	123	1	He	11163	0.02
Ba	137	1	He	3692	0.19
W	182	1	He	56558	0.01
Tl	205	1	He	88186	0.00
Pb	208	1	He	117206	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1834825	1.16	1884762	97.35	60	120	
Sc	45	1	He	133195	1.41	134073	99.34	60	120	
Sc	45	2	NoGas	8415884	0.16	8481025	99.23	60	120	
Rh	103	1	He	878699	1.50	903580	97.25	60	120	
In	115	1	He	221379	0.37	224817	98.47	60	120	
Tb	159	1	He	1047379	0.63	1046002	100.13	60	120	
Ho	165	1	He	1042468	0.75	1057439	98.58	60	120	
Bi	209	1	He	721828	0.46	731380	98.69	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2517056
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:51:40-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	1221064	0.00
Be	9	2	NoGas	298907	0.00
B	11	2	NoGas	193108	0.00
Na	23	1	He	9903991	0.00
Mg	24	1	He	5450403	0.00
Al	27	1	He	22802	0.00
K	39	1	He	2605140	0.00
Ca	44	1	He	151819	0.00
Ti	47	1	He	2089	0.14
V	51	1	He	78201	0.01
Cr	52	1	He	98031	0.00
Mn	55	1	He	239872	0.00
Fe	56	1	He	18699473	0.00
Co	59	1	He	179393	0.00
Ni	60	1	He	50040	0.00
Cu	63	1	He	144292	0.00
Zn	66	1	He	18164	0.01
As	75	1	He	10689	0.01
Se	78	1	He	482	0.84
Sr	88	1	He	47613	0.00
Mo	95	1	He	62062	0.00
Ag	107	1	He	221220	0.00
Cd	111	1	He	24790	0.00
Sn	118	1	He	45636	0.01
Sb	123	1	He	53087	0.00
Ba	137	1	He	18349	0.01
W	182	1	He	271015	0.00
Tl	205	1	He	424662	0.00
Pb	208	1	He	557767	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1786213	0.90	1884762	94.77	60	120	
Sc	45	1	He	133227	1.70	134073	99.37	60	120	
Sc	45	2	NoGas	8341340	0.81	8481025	98.35	60	120	
Rh	103	1	He	870413	0.45	903580	96.33	60	120	
In	115	1	He	219613	1.04	224817	97.69	60	120	
Tb	159	1	He	1032207	0.46	1046002	98.68	60	120	
Ho	165	1	He	1036014	0.81	1057439	97.97	60	120	
Bi	209	1	He	702882	1.31	731380	96.10	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:55:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	117960	0.00
Be	9	2	NoGas	596369	0.00
B	11	2	NoGas	9358	0.04
Na	23	1	He	19792319	0.00
Mg	24	1	He	11025888	0.00
Al	27	1	He	45892	0.00
K	39	1	He	5245269	0.00
Ca	44	1	He	307127	0.00
Ti	47	1	He	4	1947.58
V	51	1	He	158771	0.00
Cr	52	1	He	196309	0.00
Mn	55	1	He	485415	0.00
Fe	56	1	He	37487419	0.00
Co	59	1	He	356991	0.00
Ni	60	1	He	100502	0.00
Cu	63	1	He	284885	0.00
Zn	66	1	He	36270	0.01
As	75	1	He	21582	0.01
Se	78	1	He	990	0.21
Sr	88	1	He	95209	0.00
Mo	95	1	He	171	12.59
Ag	107	1	He	437046	0.00
Cd	111	1	He	48836	0.00
Sn	118	1	He	259	2.52
Sb	123	1	He	184	10.48
Ba	137	1	He	36634	0.01
W	182	1	He	2548	0.06
Tl	205	1	He	838380	0.00
Pb	208	1	He	1100491	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1776811	1.65	1884762	94.27	60	120	
Sc	45	1	He	135468	1.79	134073	101.04	60	120	
Sc	45	2	NoGas	8478398	0.51	8481025	99.97	60	120	
Rh	103	1	He	860814	1.37	903580	95.27	60	120	
In	115	1	He	219826	1.82	224817	97.78	60	120	
Tb	159	1	He	1026026	0.69	1046002	98.09	60	120	
Ho	165	1	He	1026988	0.75	1057439	97.12	60	120	
Bi	209	1	He	694193	0.76	731380	94.92	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:00:02-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	2468152	0.00
Be	9	2	NoGas	448	2.09
B	11	2	NoGas	399450	0.00
Na	23	1	He	10533	0.11
Mg	24	1	He	2100	0.35
Al	27	1	He	29	180.13
K	39	1	He	10585	0.08
Ca	44	1	He	244	7.17
Ti	47	1	He	4718	0.12
V	51	1	He	41	2009.23
Cr	52	1	He	760	0.97
Mn	55	1	He	170	10.57
Fe	56	1	He	11302	0.22
Co	59	1	He	361	3.88
Ni	60	1	He	178	10.77
Cu	63	1	He	4030	0.19
Zn	66	1	He	77	44.30
As	75	1	He	41	69.27
Se	78	1	He	6	615.24
Sr	88	1	He	37	65.62
Mo	95	1	He	130435	0.00
Ag	107	1	He	74	48.62
Cd	111	1	He	13	116.26
Sn	118	1	He	101779	0.00
Sb	123	1	He	113151	0.00
Ba	137	1	He	31	120.94
W	182	1	He	558419	0.00
Tl	205	1	He	781	2.41
Pb	208	1	He	1982	0.13

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1890037	1.58	1884762	100.28	60	120	
Sc	45	1	He	142173	0.62	134073	106.04	60	120	
Sc	45	2	NoGas	8755479	0.97	8481025	103.24	60	120	
Rh	103	1	He	958828	0.90	903580	106.11	60	120	
In	115	1	He	238828	0.24	224817	106.23	60	120	
Tb	159	1	He	1085422	0.55	1046002	103.77	60	120	
Ho	165	1	He	1080321	0.22	1057439	102.16	60	120	
Bi	209	1	He	765917	1.22	731380	104.72	60	120	

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Calibration for 056SMPL.d

Batch Folder: D:\Analytical Runs\I10050916A.b\
Analysis File: I10050916A.batch.bin
DA Date-Time: 5/10/2016 8:45:43 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	5/9/2016 11:43:16 AM
2	003CALS.d	STD1-2495516	5/9/2016 11:47:29 AM
3	004CALS.d	STD2-2517056	5/9/2016 11:51:40 AM
4	005CALS.d	STD3-2510771	5/9/2016 11:55:52 AM
5	006CALS.d	STD4-2510772	5/9/2016 12:00:02 PM

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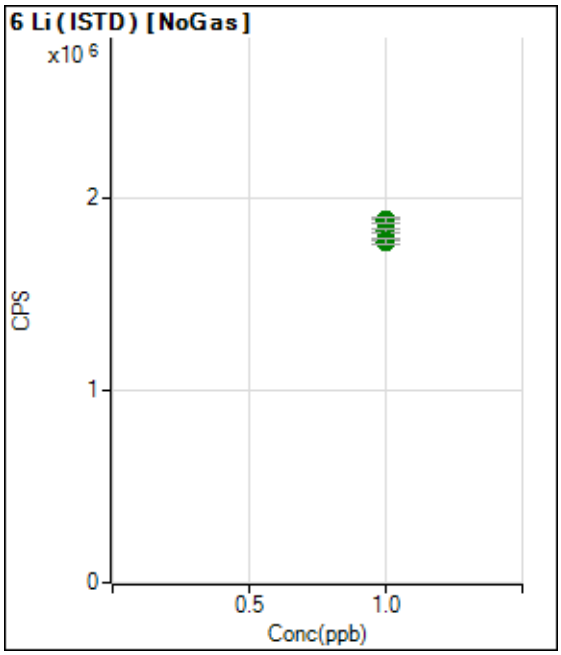
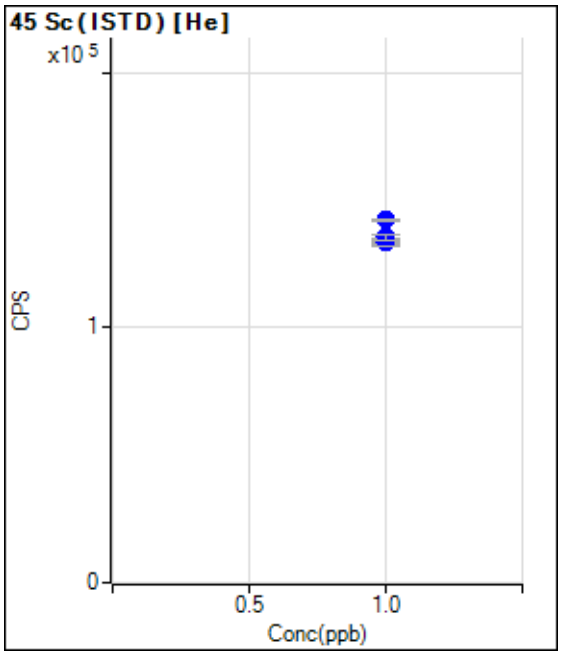
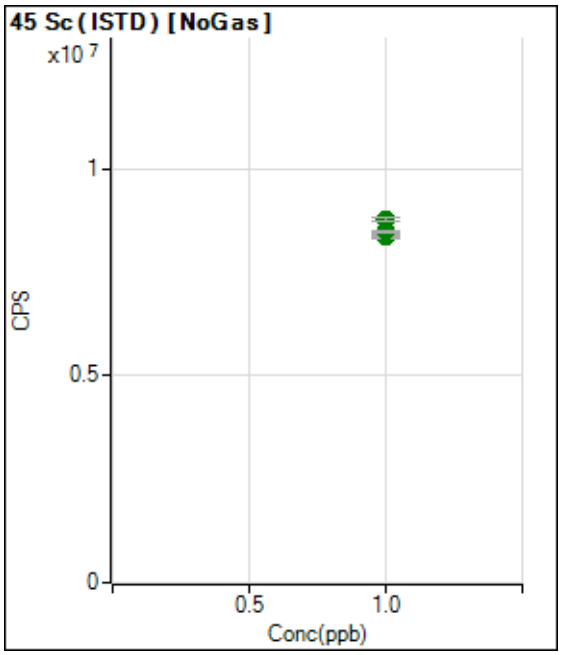


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1884762.26		A	1.3
2		1.000		1834825.36		A	1.2
3		1.000		1786212.79		A	0.9
4		1.000		1776810.54		A	1.6
5		1.000		1890037.48		A	1.6

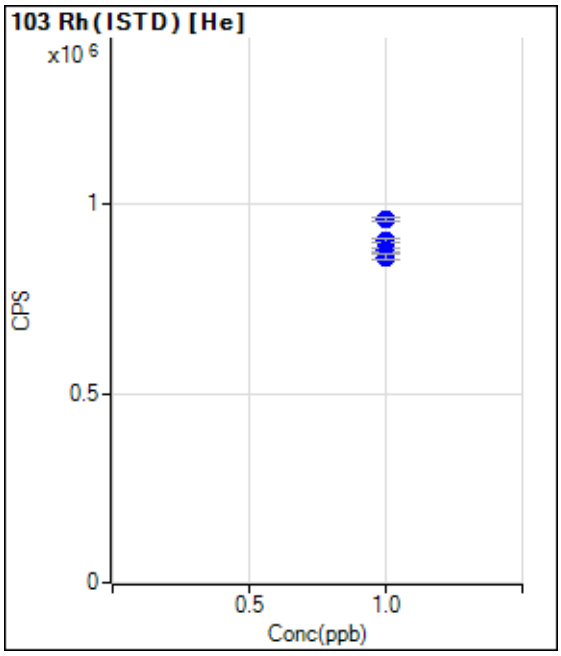


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		134073.27		P	1.4
2		1.000		133194.77		P	1.4
3		1.000		133226.88		P	1.7
4		1.000		135467.88		P	1.8
5		1.000		142173.08		P	0.6

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8481024.66		A	0.7
2	☐	1.000		8415883.83		A	0.2
3	☐	1.000		8341340.22		A	0.8
4	☐	1.000		8478398.27		A	0.5
5	☐	1.000		8755478.82		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		903579.86		P	0.8
2	☐	1.000		878698.66		P	1.5
3	☐	1.000		870413.40		P	0.4
4	☐	1.000		860814.15		P	1.4
5	☐	1.000		958827.85		P	0.9

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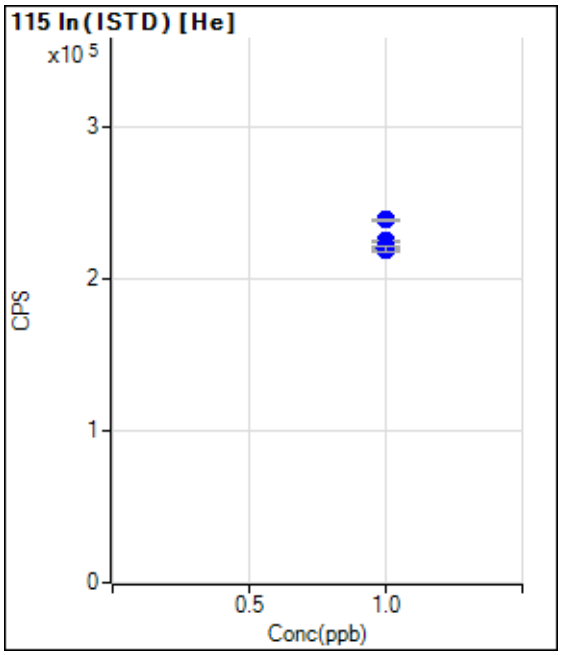
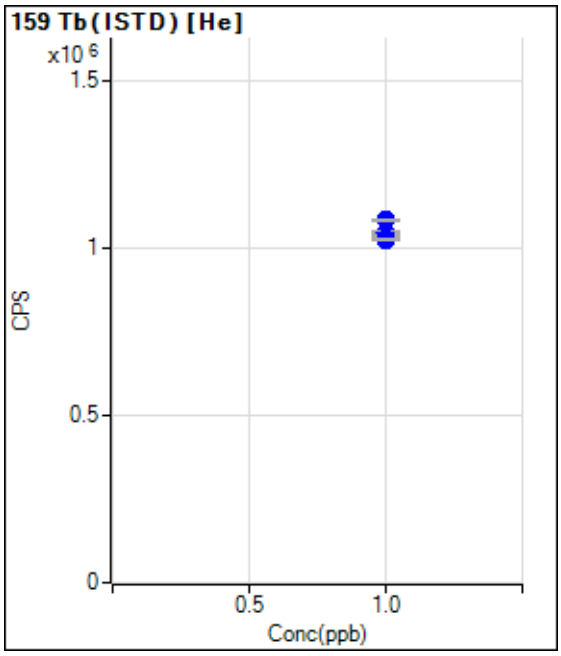
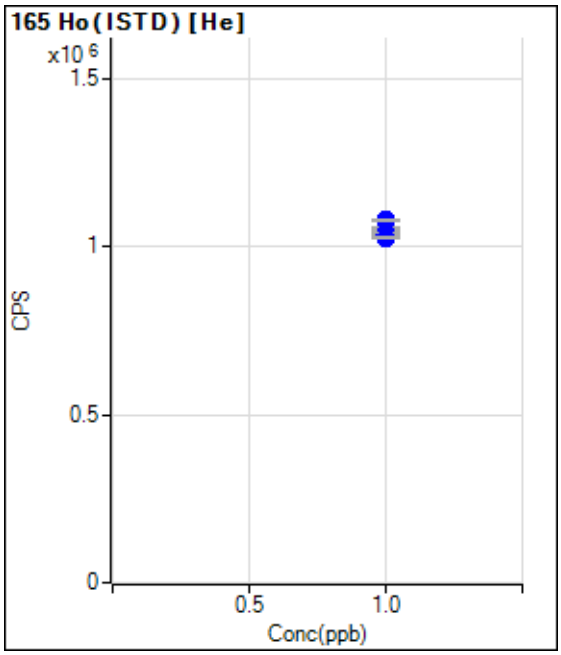


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		224817.47		P	0.4
2	☐	1.000		221379.40		P	0.4
3	☐	1.000		219613.21		P	1.0
4	☐	1.000		219826.47		P	1.8
5	☐	1.000		238828.16		P	0.2

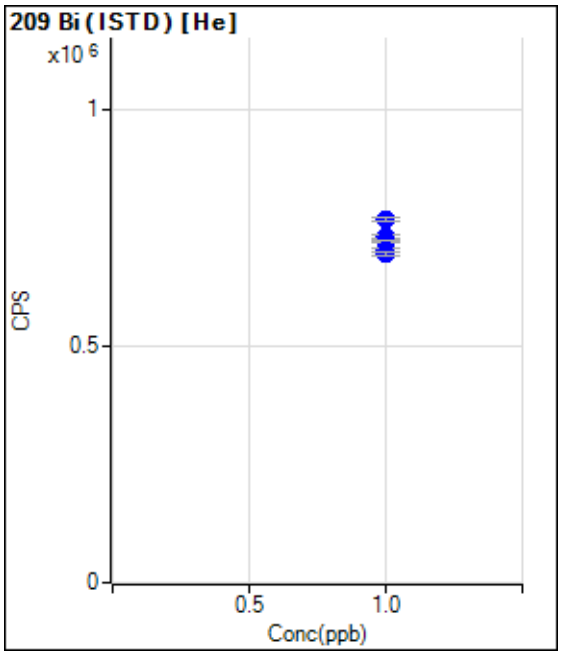


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1046002.14		P	0.1
2	☐	1.000		1047378.95		P	0.6
3	☐	1.000		1032206.86		P	0.5
4	☐	1.000		1026025.69		P	0.7
5	☐	1.000		1085421.89		P	0.6

PDF created with pdfFactory trial version www.pdffactory.com

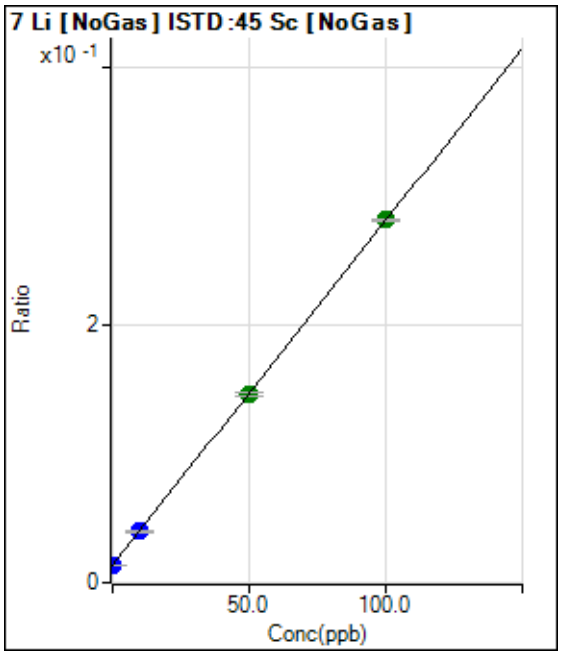


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1057438.50		P	0.8
2	☐	1.000		1042468.42		P	0.8
3	☐	1.000		1036014.23		P	0.8
4	☐	1.000		1026987.75		P	0.7
5	☐	1.000		1080321.37		P	0.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		731379.62		P	0.9
2	☐	1.000		721827.51		P	0.5
3	☐	1.000		702881.65		P	1.3
4	☐	1.000		694193.17		P	0.8
5	☐	1.000		765917.10		P	1.2

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116205.75	0.0137	P	0.5
2	☐	10.000	9.690	333504.54	0.0396	P	0.6
3	☐	50.000	49.595	1221063.63	0.1464	A	2.1
4	☐			117959.78	0.0139	P	0.9
5	☐	100.000	100.233	2468151.71	0.2819	A	0.7

y = 0.0027 * x + 0.0137

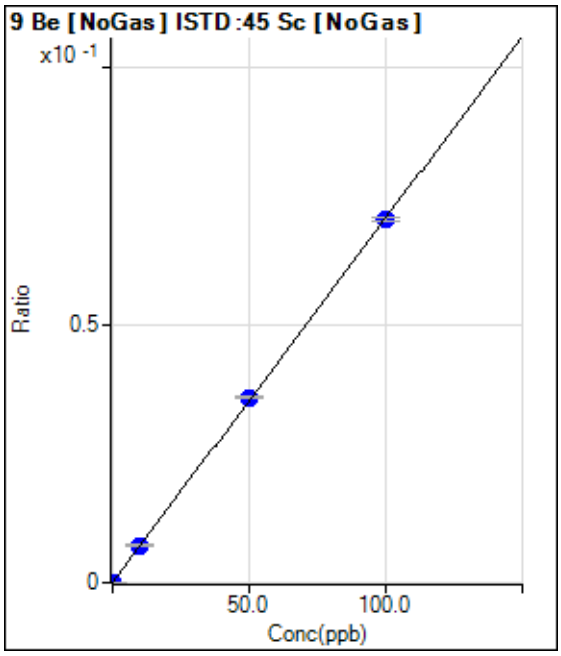
R = 1.0000

DL = 0.07115

BEC = 5.121

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0000	P	7.0
2	☐	10.000	10.272	61179.02	0.0073	P	1.4
3	☐	50.000	50.732	298906.82	0.0358	P	0.9
4	☐	100.000	99.607	596369.04	0.0703	P	1.0
5	☐			448.18	0.0001	P	10.3

y = 7.0603E-004 * x + 1.7027E-005

R = 1.0000

DL = 0.005099

BEC = 0.02412

Weight: <None>

Min Conc: <None>

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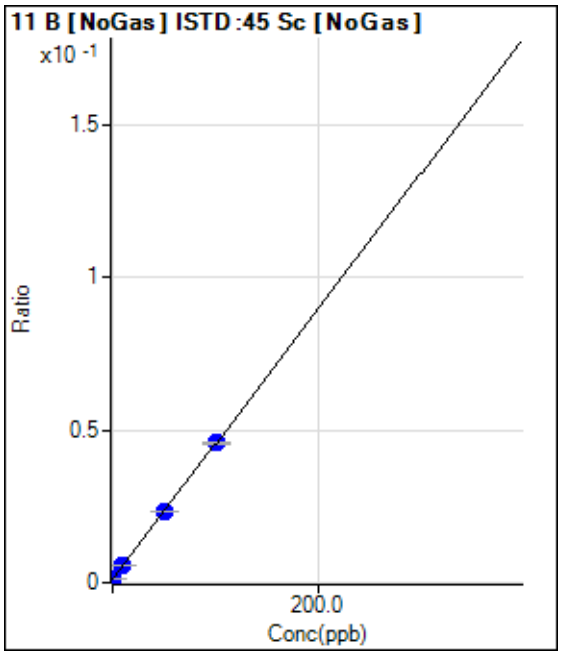
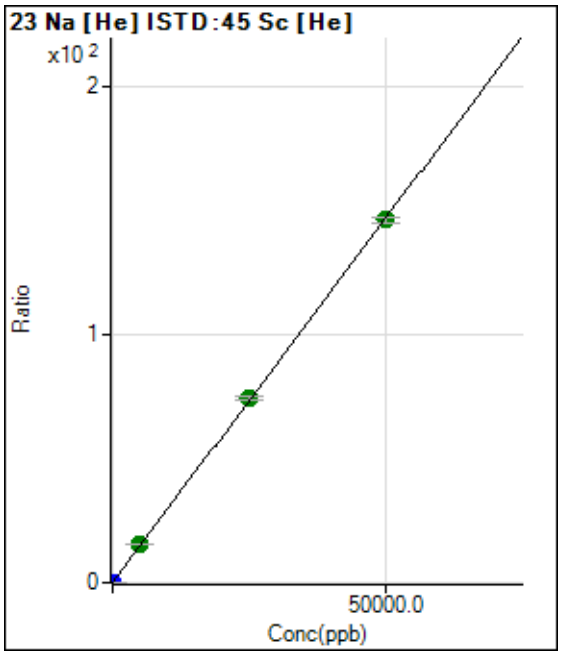


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8791.32	0.0010	P	5.9
2	☐	10.000	9.962	46043.15	0.0055	P	3.1
3	☐	50.000	49.682	193107.71	0.0232	P	1.3
4	☐			9358.28	0.0011	P	3.9
5	☐	100.000	100.163	399449.71	0.0456	P	0.4

y = 4.4513E-004 * x + 0.0010
R = 1.0000
DL = 0.4092
BEC = 2.329

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4567.44	0.0341	P	4.7
2	☐	5000.000	5279.940	2067013.17	15.5223	A	2.4
3	☐	25000.000	25338.738	9903991.28	74.3628	A	2.8
4	☐	50000.000	49802.637	19792319.12	146.1252	A	1.3
5	☐			10533.08	0.0741	P	11.0

y = 0.0029 * x + 0.0341
R = 1.0000
DL = 1.625
BEC = 11.62

Weight: <None>
Min Conc: <None>

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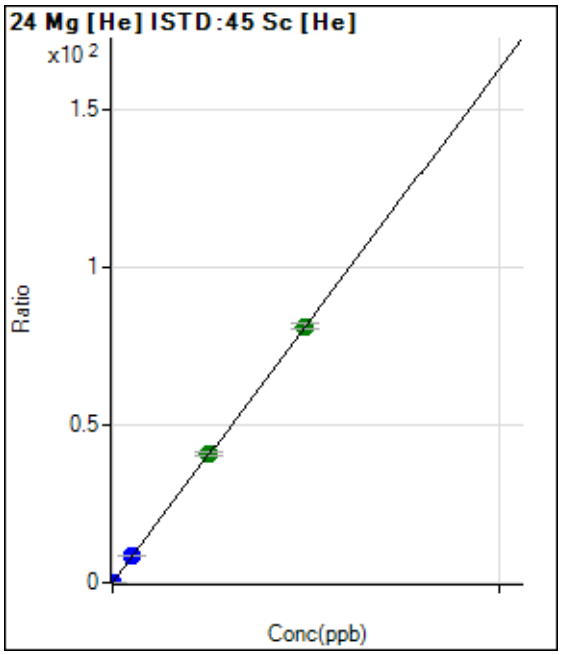
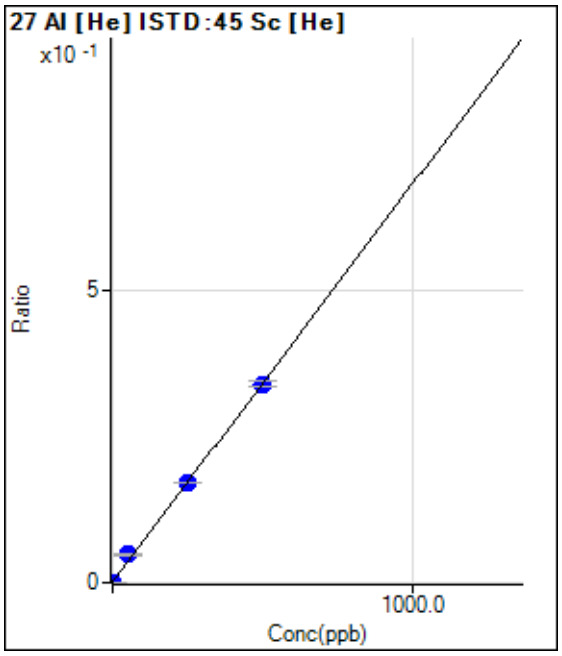


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	640.78	0.0048	P	9.3
2	☐	5000.000	5098.904	1107504.93	8.3158	P	1.5
3	☐	25000.000	25103.842	5450402.91	40.9229	A	2.6
4	☐	50000.000	49938.189	11025887.53	81.4017	A	1.9
5	☐			2100.22	0.0148	P	6.8

y = 0.0016 * x + 0.0048
R = 1.0000
DL = 0.8152
BEC = 2.932

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.11	0.0008	P	6.7
2	☐	50.000	69.325	6381.18	0.0479	P	2.3
3	☐	250.000	250.788	22801.95	0.1712	P	0.6
4	☐	500.000	497.674	45892.23	0.3388	P	2.9
5	☐			28.89	0.0002	P	51.7

y = 6.7920E-004 * x + 8.2846E-004
R = 0.9993
DL = 0.2444
BEC = 1.22

Weight: <None>
Min Conc: <None>

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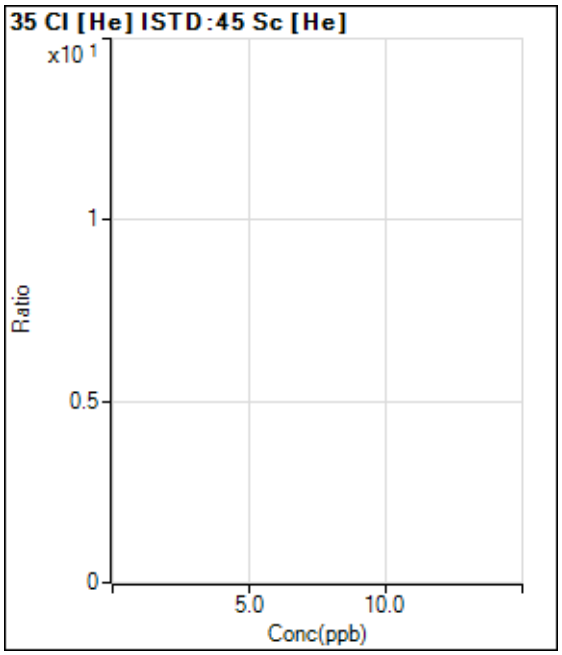

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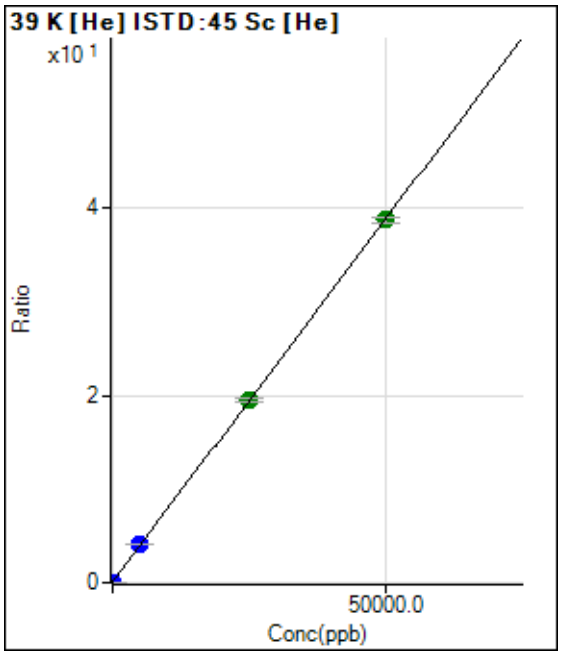
1	☐			10884009.29	81.1958	A	2.5
2	☐			11875525.68	89.1696	A	2.4
3	☐			11354444.22	85.2478	A	2.7
4	☐			12028696.28	88.7951	A	1.7
5	☐			12881961.53	90.6126	A	1.4

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8876.62	0.0662	P	6.2
2	☐	5000.000	5142.116	539386.52	4.0496	P	0.2
3	☐	25000.000	25162.943	2605140.41	19.5587	A	2.4
4	☐	50000.000	49904.317	5245269.35	38.7247	A	1.4
5	☐			10585.04	0.0745	P	8.6

y = 7.7465E-004 * x + 0.0662

R = 1.0000

DL = 15.83

BEC = 85.49

Weight: <None>

Min Conc: <None>

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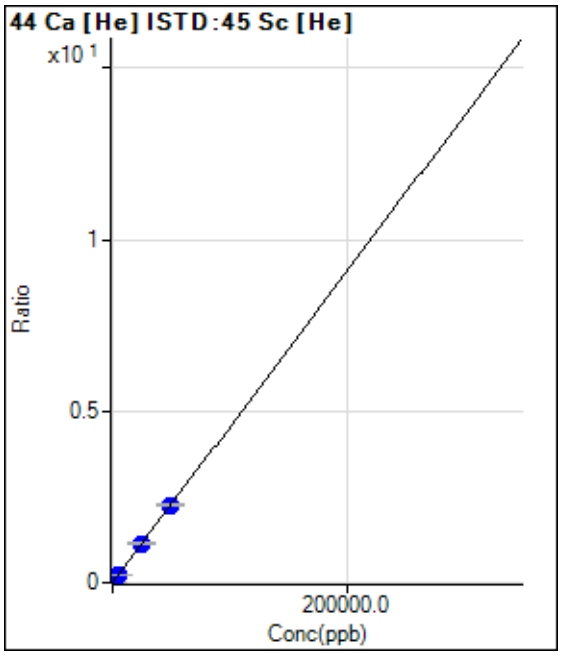
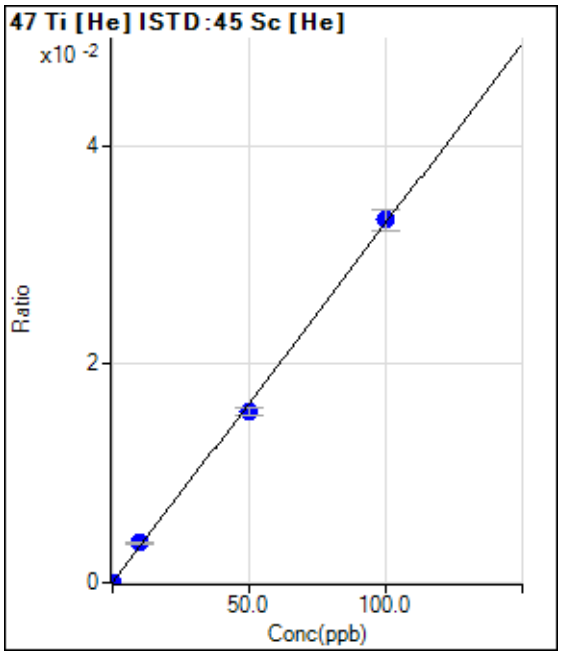


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.44	0.0014	P	13.5
2	☐	5000.000	5184.776	31528.99	0.2367	P	1.4
3	☐	25000.000	25088.859	151818.70	1.1399	P	2.5
4	☐	50000.000	49937.093	307126.94	2.2674	P	1.4
5	☐			243.72	0.0017	P	18.1

y = 4.5376E-005 * x + 0.0014
R = 1.0000
DL = 12.73
BEC = 31.5

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	10.000	11.144	487.79	0.0037	P	5.0
3	☐	50.000	47.743	2089.04	0.0157	P	4.7
4	☐			4.45	0.0000	P	86.6
5	☐	100.000	101.014	4718.46	0.0332	P	6.1

y = 3.2860E-004 * x + 0.0000E+000
R = 0.9994
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

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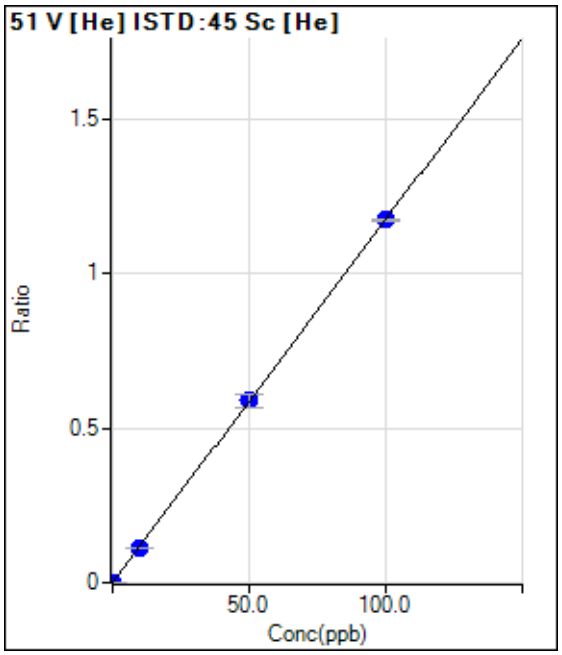
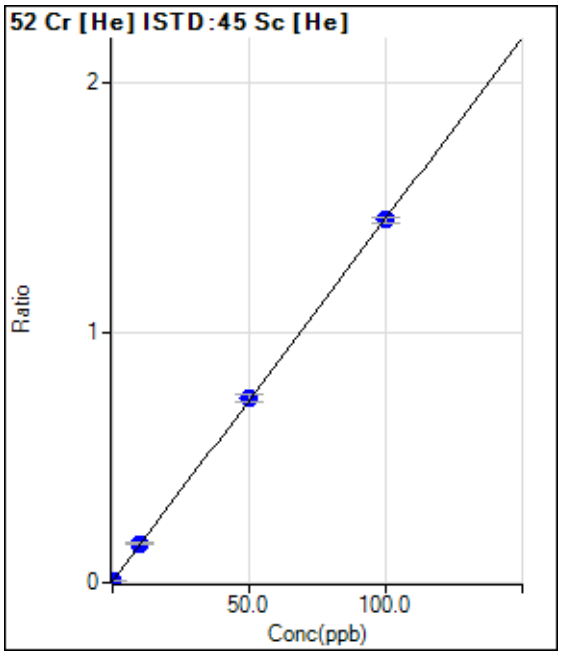


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.22	0.0004	P	343.5
2	☐	10.000	9.661	15132.46	0.1136	P	1.5
3	☐	50.000	50.096	78200.52	0.5874	P	6.5
4	☐	100.000	99.986	158770.57	1.1720	P	0.3
5	☐			41.02	0.0003	P	852.9

y = 0.0117 * x + 4.0182E-004
R = 1.0000
DL = 0.3534
BEC = 0.03429

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	675.58	0.0050	P	4.8
2	☐	10.000	10.485	20894.44	0.1569	P	3.4
3	☐	50.000	50.481	98030.99	0.7362	P	4.2
4	☐	100.000	99.711	196309.19	1.4491	P	1.9
5	☐			760.03	0.0053	P	7.6

y = 0.0145 * x + 0.0050
R = 1.0000
DL = 0.05006
BEC = 0.3479

Weight: <None>
Min Conc: <None>

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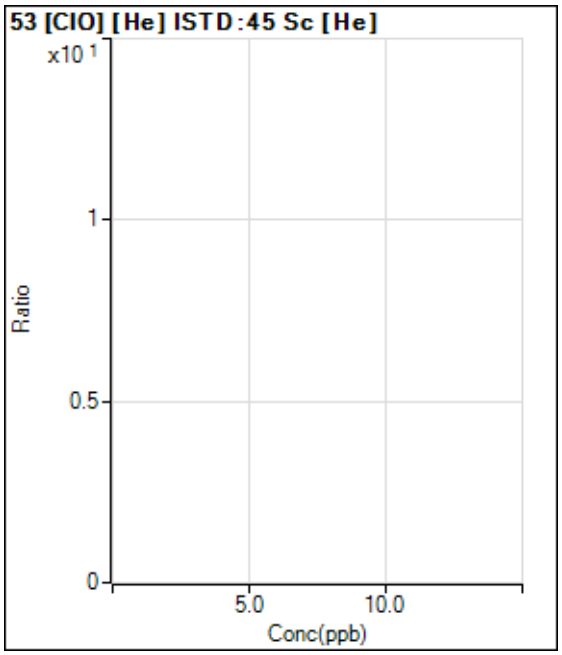
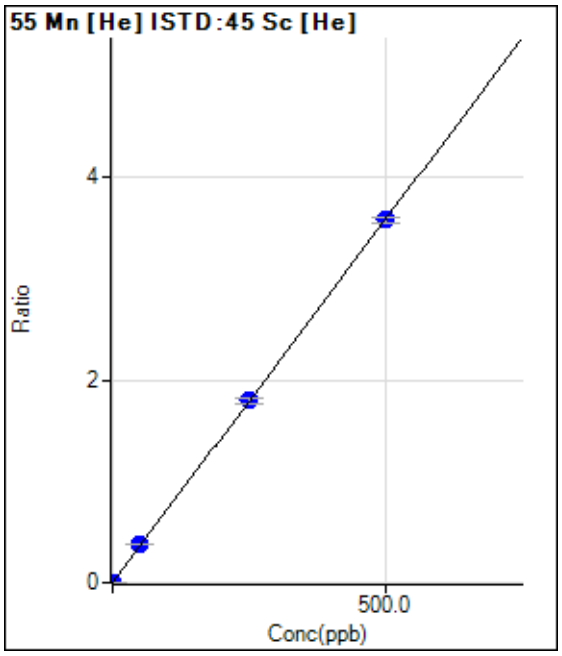


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			207.42	0.0015	P	33.5
2	☐			2896.67	0.0218	P	3.2
3	☐			11960.04	0.0898	P	1.8
4	☐			23950.08	0.1768	P	4.0
5	☐			240.75	0.0017	P	42.5

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.45	0.0010	P	24.1
2	☐	50.000	51.918	49748.14	0.3735	P	0.6
3	☐	250.000	250.886	239871.75	1.8010	P	2.8
4	☐	500.000	499.365	485415.49	3.5838	P	1.9
5	☐			170.01	0.0012	P	17.4

y = 0.0072 * x + 0.0010

R = 1.0000

DL = 0.1008

BEC = 0.1396

Weight: <None>

Min Conc: <None>

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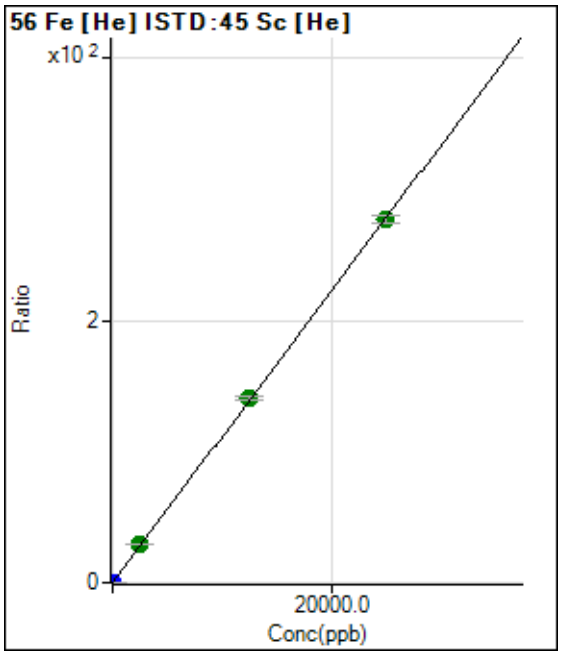
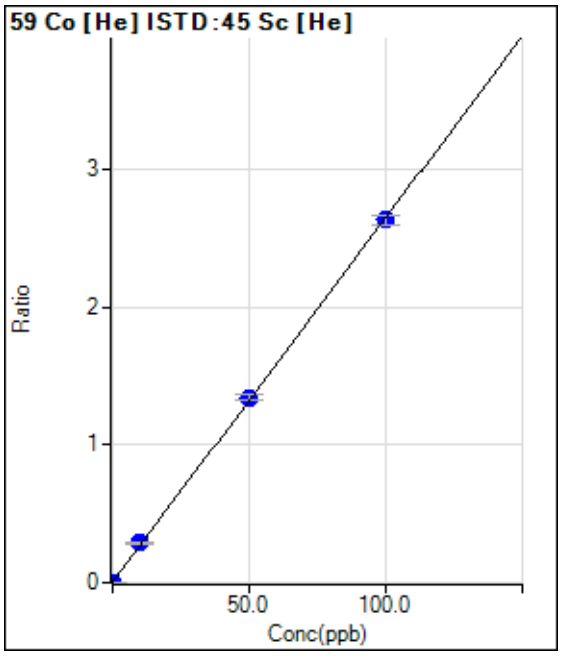


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1997.91	0.0149	P	4.5
2	☐	2500.000	2620.257	3878040.96	29.1167	A	0.5
3	☐	12500.000	12639.545	18699472.59	140.3957	A	2.4
4	☐	25000.000	24918.202	37487418.51	276.7683	A	2.1
5	☐			11301.62	0.0794	P	24.2

y = 0.0111 * x + 0.0149
R = 1.0000
DL = 0.1809
BEC = 1.341

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	308.89	0.0023	P	20.6
2	☐	10.000	10.753	38207.15	0.2869	P	1.9
3	☐	50.000	50.815	179393.20	1.3471	P	3.6
4	☐	100.000	99.517	356990.98	2.6359	P	2.8
5	☐			361.12	0.0025	P	14.3

y = 0.0265 * x + 0.0023
R = 0.9999
DL = 0.05386
BEC = 0.08719

Weight: <None>
Min Conc: <None>

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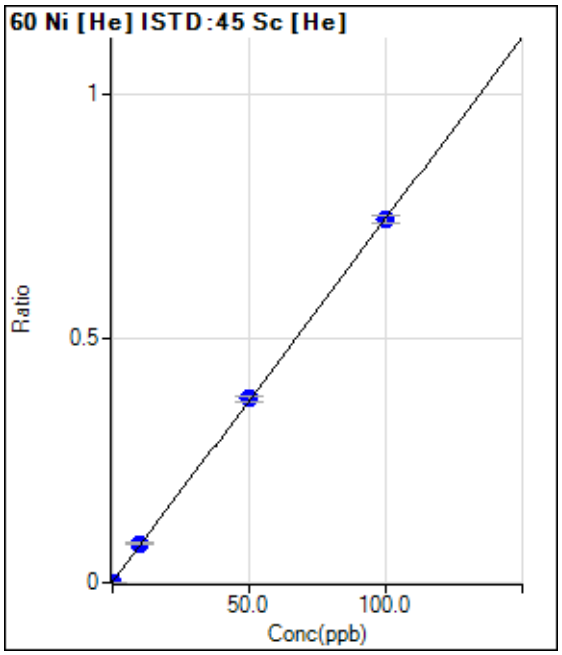


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.34	0.0011	P	9.0
2	☐	10.000	10.644	10676.61	0.0802	P	1.7
3	☐	50.000	50.424	50040.31	0.3757	P	3.5
4	☐	100.000	99.723	100502.48	0.7421	P	2.2
5	☐			177.78	0.0013	P	19.0

y = 0.0074 * x + 0.0011

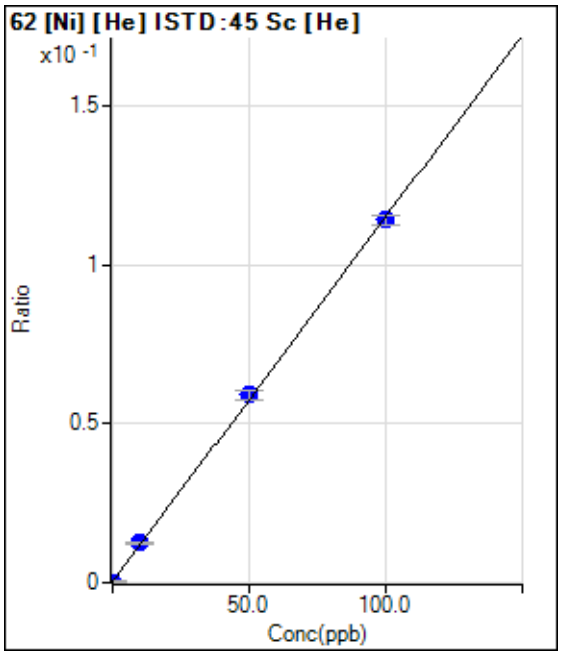
R = 1.0000

DL = 0.039

BEC = 0.1439

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0003	P	31.6
2	☐	10.000	10.773	1684.55	0.0126	P	3.9
3	☐	50.000	51.270	7875.14	0.0591	P	5.5
4	☐	100.000	99.288	15477.89	0.1143	P	2.9
5	☐			30.00	0.0002	P	50.7

y = 0.0011 * x + 2.7266E-004

R = 0.9999

DL = 0.2254

BEC = 0.2375

Weight: <None>

Min Conc: <None>

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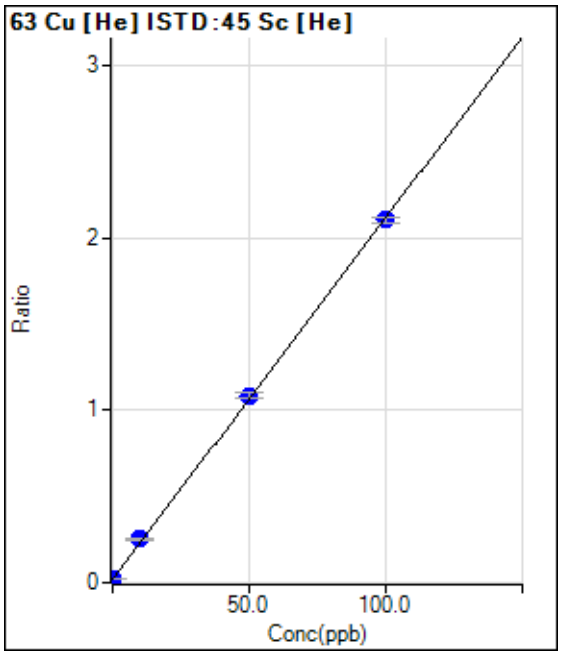
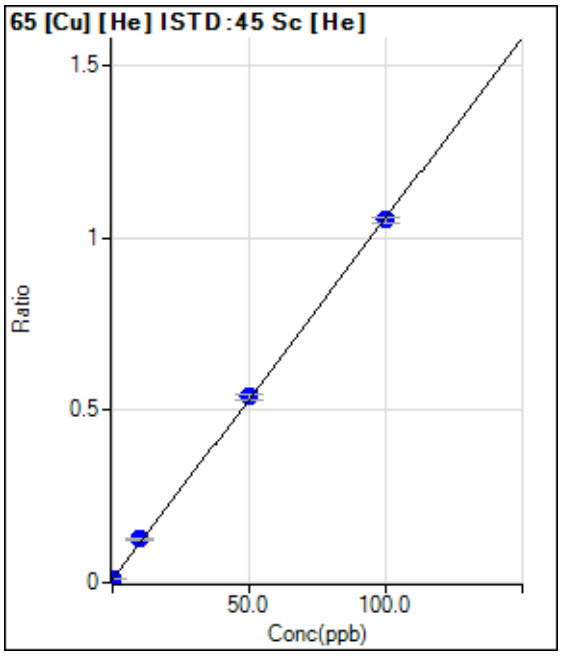


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2416.86	0.0180	P	5.1
2	☐	10.000	11.168	33574.80	0.2521	P	2.2
3	☐	50.000	50.824	144292.09	1.0834	P	2.9
4	☐	100.000	99.471	284885.13	2.1032	P	1.4
5	☐			4030.50	0.0283	P	7.1

y = 0.0210 * x + 0.0180
R = 0.9999
DL = 0.1303
BEC = 0.8596

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1167.83	0.0087	P	3.7
2	☐	10.000	11.207	16799.10	0.1261	P	1.2
3	☐	50.000	50.605	71769.06	0.5389	P	3.2
4	☐	100.000	99.577	142487.91	1.0519	P	1.4
5	☐			1886.79	0.0133	P	7.2

y = 0.0105 * x + 0.0087
R = 0.9999
DL = 0.09203
BEC = 0.8317

Weight: <None>
Min Conc: <None>

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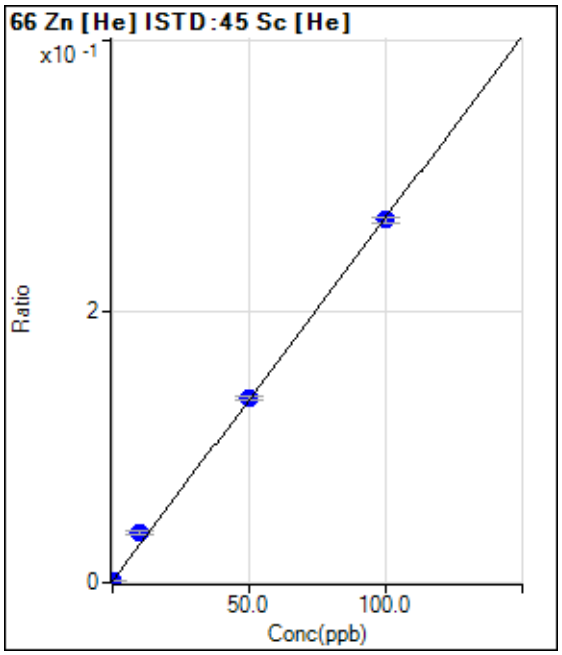
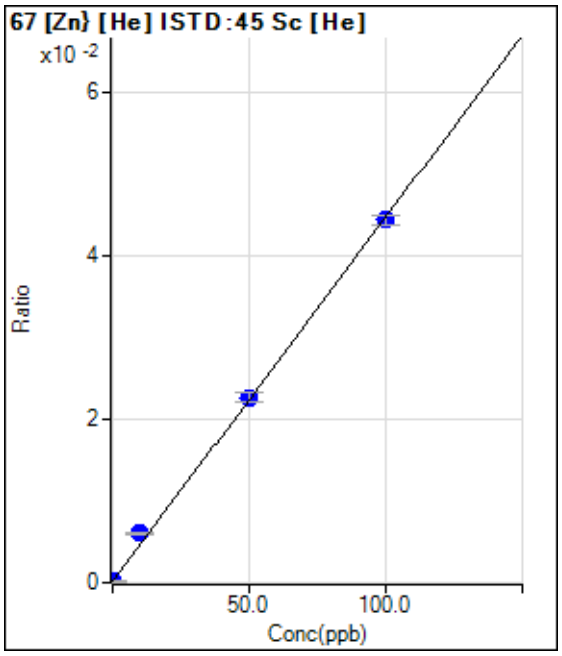


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	147.78	0.0011	P	18.1
2		10.000	13.411	4934.08	0.0371	P	5.5
3		50.000	50.446	18163.75	0.1364	P	2.7
4		100.000	99.436	36269.96	0.2677	P	1.7
5				76.67	0.0005	P	33.9

y = 0.0027 * x + 0.0011
R = 0.9994
DL = 0.2234
BEC = 0.4103

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	16.67	0.0001	P	20.2
2		10.000	13.317	806.70	0.0061	P	5.3
3		50.000	50.650	3023.63	0.0227	P	4.7
4		100.000	99.343	6015.53	0.0444	P	2.4
5				12.22	0.0001	P	83.9

y = 4.4565E-004 * x + 1.2437E-004
R = 0.9995
DL = 0.1688
BEC = 0.2791

Weight: <None>
Min Conc: <None>

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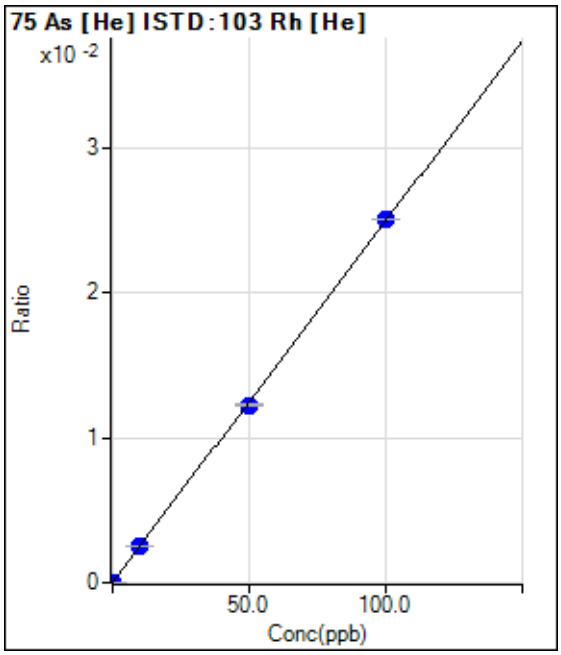


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17.63	0.0000	P	3.8
2	☐	10.000	9.911	2189.34	0.0025	P	1.9
3	☐	50.000	49.153	10689.25	0.0123	P	0.8
4	☐	100.000	100.432	21582.35	0.0251	P	0.1
5	☐			41.05	0.0000	P	27.7

y = 2.4944E-004 * x + 1.9510E-005

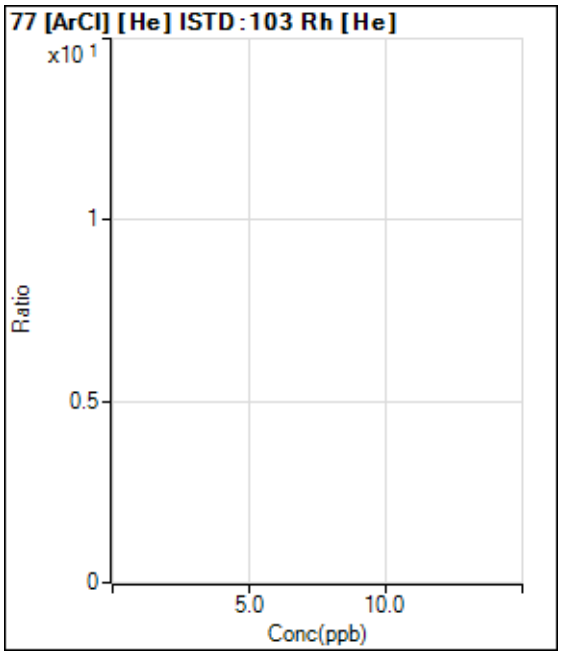
R = 0.9999

DL = 0.00883

BEC = 0.07821

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00	0.0000	P	
2	☐			25.93	0.0000	P	49.5
3	☐			159.27	0.0002	P	32.0
4	☐			370.39	0.0004	P	29.9
5	☐			18.52	0.0000	P	124.9

Excluded

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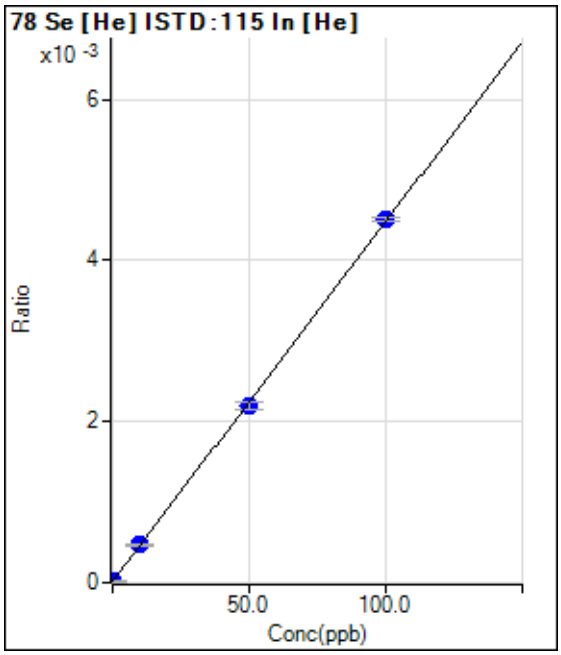


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.82	0.0000	P	54.1
2	☐	10.000	10.203	103.65	0.0005	P	6.2
3	☐	50.000	48.889	482.10	0.0022	P	5.0
4	☐	100.000	100.535	989.75	0.0045	P	0.9
5	☐			5.80	0.0000	P	35.7

y = 4.4659E-005 * x + 1.2555E-005

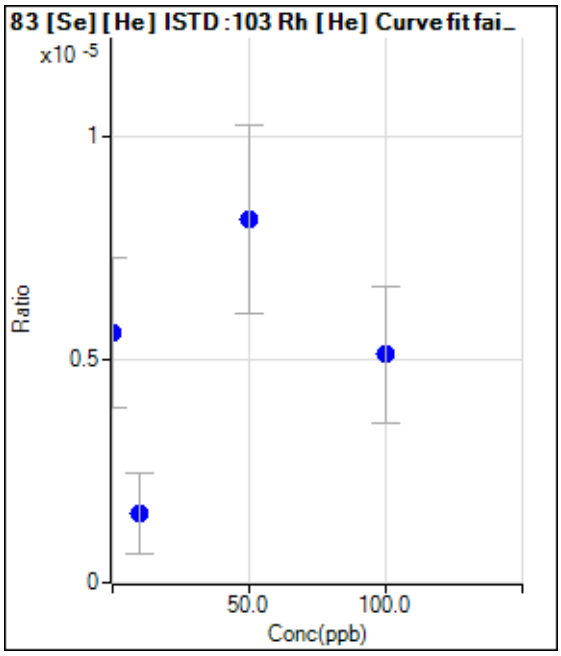
R = 0.9999

DL = 0.4566

BEC = 0.2811

Weight: <None>

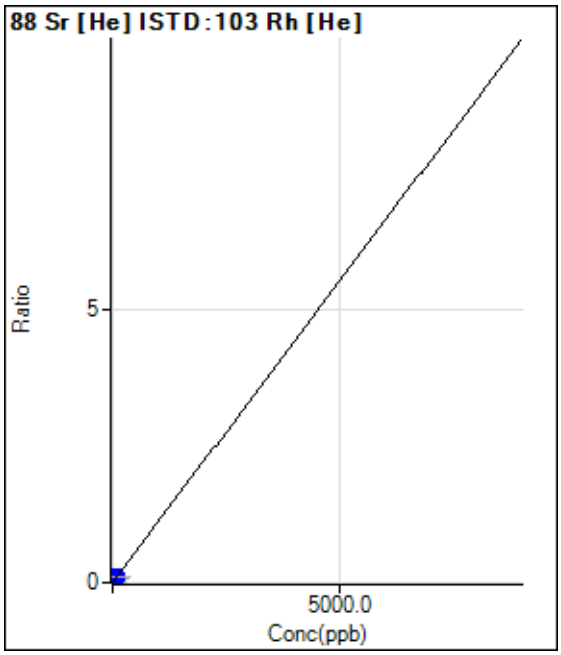
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		5.05	0.0000	P	60.7
2	☐	10.000		1.35	0.0000	P	115.7
3	☐	50.000		7.07	0.0000	P	51.8
4	☐	100.000		4.38	0.0000	P	59.4
5	☐			1.68	0.0000	P	124.3

Excluded

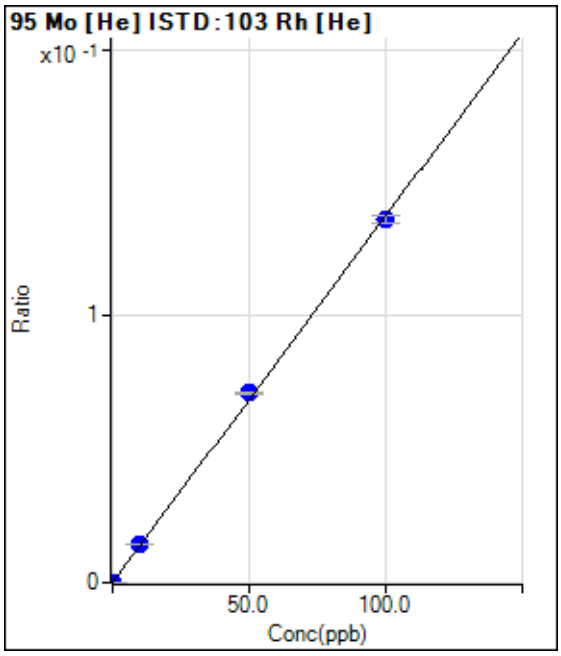
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	12.3
2	☐	10.000	9.863	9598.28	0.0109	P	4.0
3	☐	50.000	49.554	47613.05	0.0547	P	1.0
4	☐	100.000	100.237	95209.06	0.1106	P	0.6
5	☐			36.67	0.0000	P	25.0

y = 0.0011 * x + 4.3008E-005
R = 1.0000
DL = 0.01444
BEC = 0.03899

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	50.7
2	☐	10.000	10.471	12654.70	0.0144	P	3.9
3	☐	50.000	51.884	62061.62	0.0713	P	1.0
4	☐			171.11	0.0002	P	21.3
5	☐	100.000	99.011	130435.14	0.1361	P	2.0

y = 0.0014 * x + 1.4788E-005
R = 0.9997
DL = 0.01636
BEC = 0.01076

Weight: <None>
Min Conc: <None>

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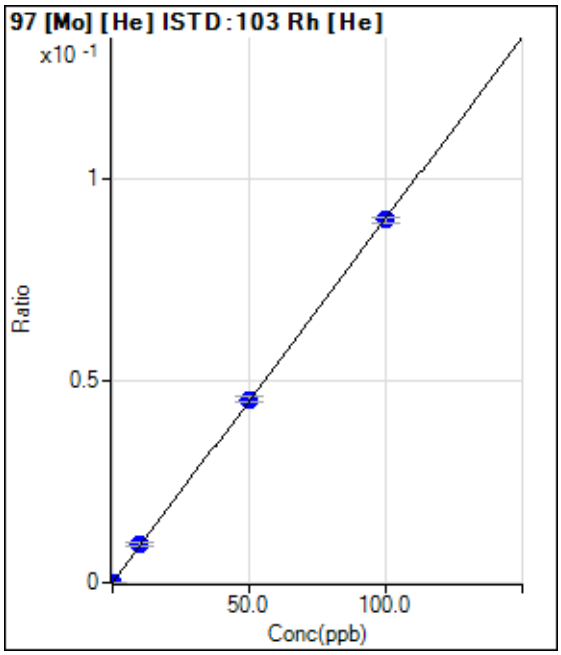


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	86.6
2	☐	10.000	10.619	8409.82	0.0096	P	7.6
3	☐	50.000	50.447	39557.24	0.0454	P	2.3
4	☐			140.75	0.0002	P	16.0
5	☐	100.000	99.715	86113.40	0.0898	P	1.5

y = 9.0066E-004 * x + 8.2110E-006

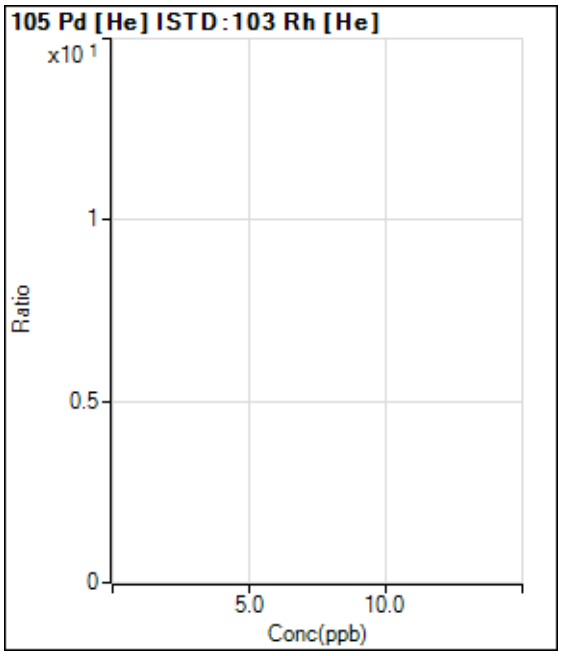
R = 1.0000

DL = 0.02369

BEC = 0.009117

Weight: <None>

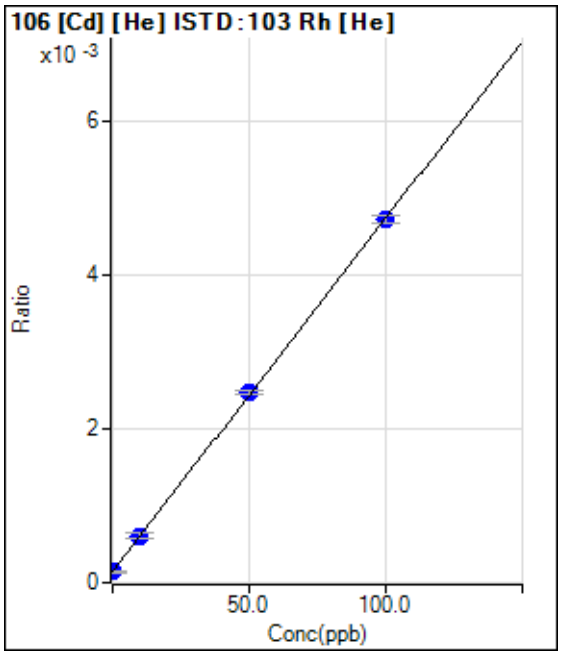
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			233.35	0.0003	P	13.7
2	☐			174.08	0.0002	P	19.8
3	☐			248.16	0.0003	P	22.4
4	☐			270.39	0.0003	P	11.7
5	☐			196.31	0.0002	P	33.1

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	129.29	0.0001	P	17.8
2	☐	10.000	10.169	536.37	0.0006	P	10.2
3	☐	50.000	50.773	2158.05	0.0025	P	1.1
4	☐	100.000	99.597	4068.17	0.0047	P	2.3
5	☐			162.97	0.0002	P	7.9

y = 4.6014E-005 * x + 1.4300E-004

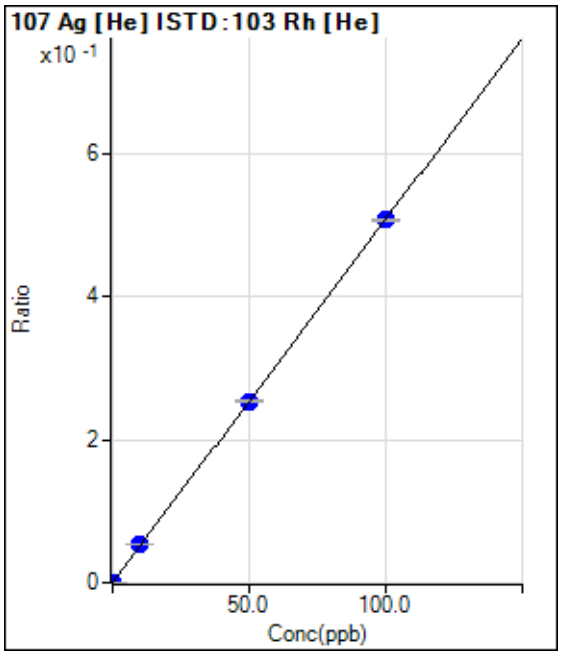
R = 0.9999

DL = 1.657

BEC = 3.108

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0000	P	66.2
2	☐	10.000	10.481	46790.68	0.0533	P	0.6
3	☐	50.000	50.026	221219.71	0.2542	P	0.5
4	☐	100.000	99.939	437046.08	0.5077	P	0.3
5	☐			74.44	0.0001	P	36.6

y = 0.0051 * x + 8.6369E-006

R = 1.0000

DL = 0.003379

BEC = 0.0017

Weight: <None>

Min Conc: <None>

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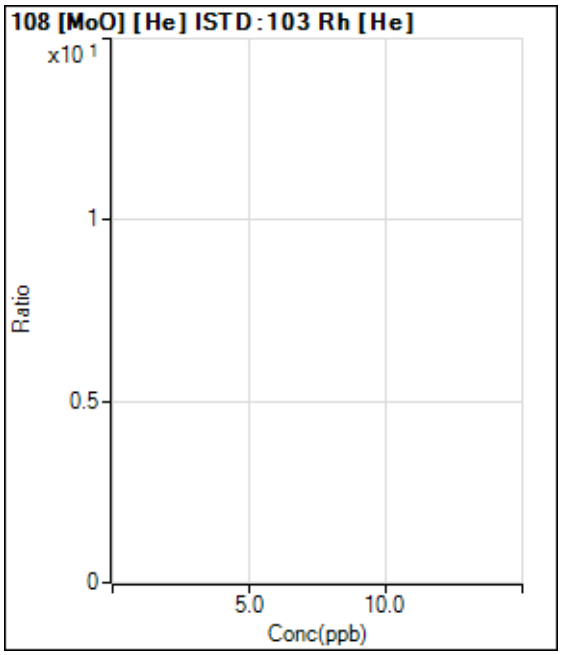

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00	0.0000	P	
2	☐			370.39	0.0004	P	16.7
3	☐			1659.42	0.0019	P	11.6
4	☐			3115.24	0.0036	P	5.7
5	☐			7.41	0.0000	P	86.6

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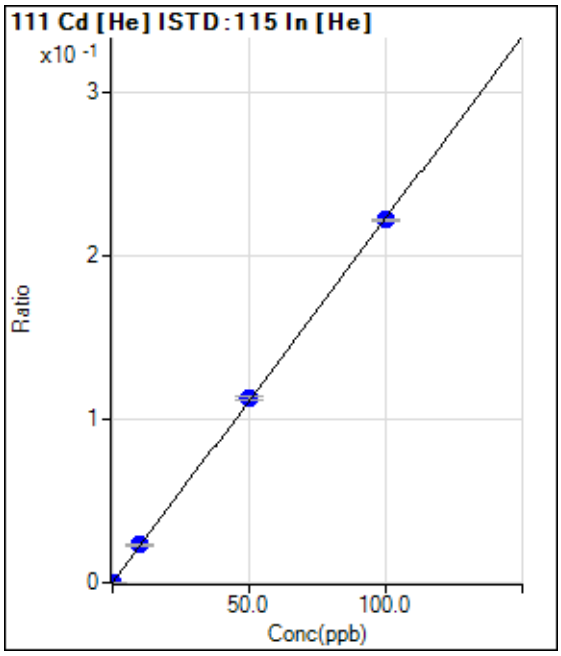

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.68	0.0000	P	34.5
2	☐	10.000	10.392	5129.86	0.0232	P	5.6
3	☐	50.000	50.636	24790.42	0.1129	P	1.8
4	☐	100.000	99.643	48835.54	0.2222	P	0.6
5	☐			13.43	0.0001	P	15.8

y = 0.0022 * x + 7.4832E-006

R = 1.0000

DL = 0.00347

BEC = 0.003357

Weight: <None>

Min Conc: <None>

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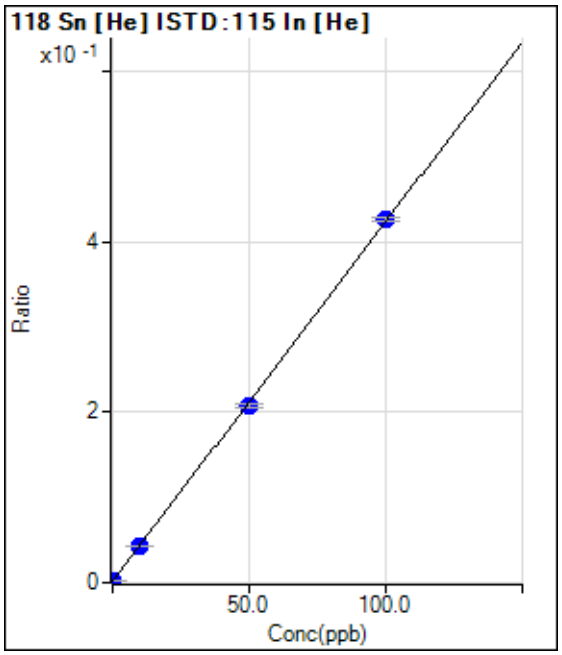
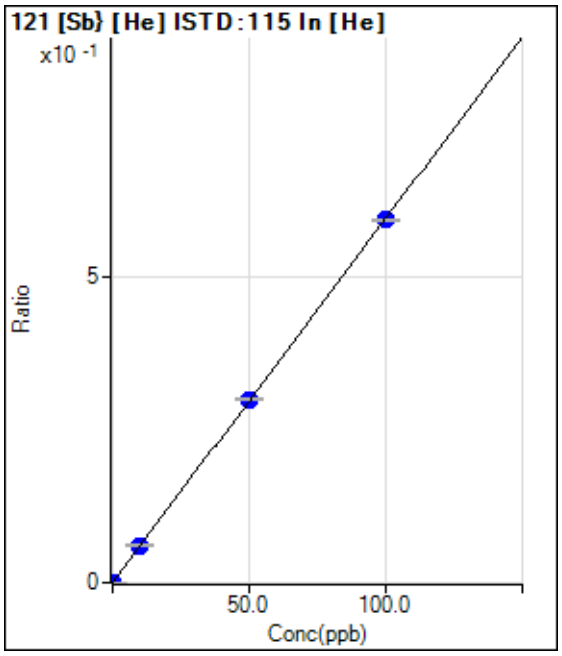


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.02	0.0013	P	26.9
2	☐	10.000	9.733	9395.58	0.0424	P	2.5
3	☐	50.000	48.880	45636.38	0.2078	P	2.1
4	☐			259.27	0.0012	P	8.1
5	☐	100.000	100.587	101779.07	0.4262	P	1.1

y = 0.0042 * x + 0.0013
R = 0.9999
DL = 0.2553
BEC = 0.3161

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0001	P	29.6
2	☐	10.000	10.196	13416.50	0.0606	P	2.6
3	☐	50.000	50.475	65764.13	0.2995	P	0.9
4	☐			223.34	0.0010	P	8.2
5	☐	100.000	99.743	141302.03	0.5916	P	0.6

y = 0.0059 * x + 1.3349E-004
R = 1.0000
DL = 0.02002
BEC = 0.02251

Weight: <None>
Min Conc: <None>

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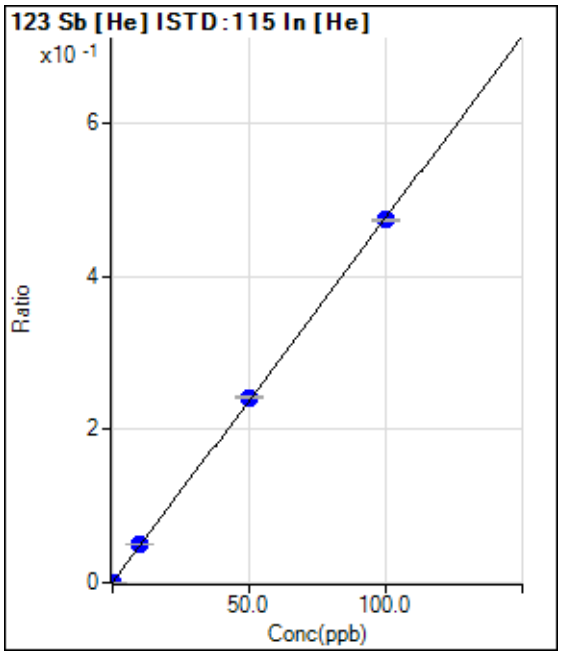


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42.22	0.0002	P	31.5
2	☐	10.000	10.560	11162.65	0.0504	P	1.6
3	☐	50.000	50.780	53087.40	0.2418	P	1.2
4	☐			184.45	0.0008	P	21.2
5	☐	100.000	99.554	113150.60	0.4738	P	0.8

y = 0.0048 * x + 1.8768E-004

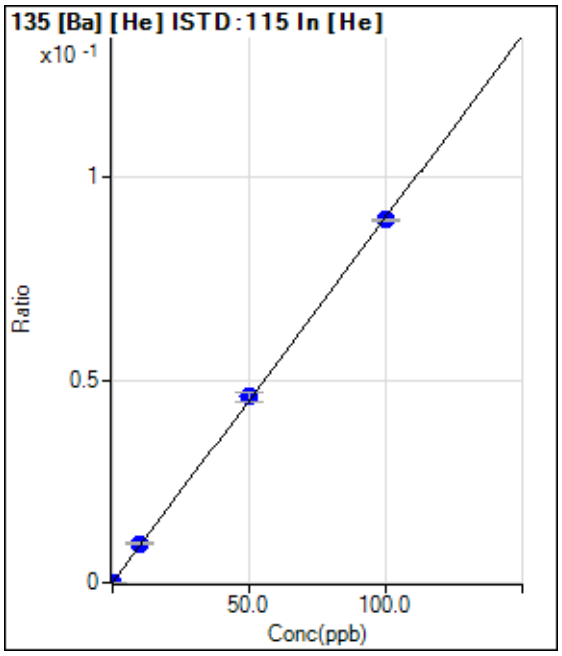
R = 0.9999

DL = 0.03732

BEC = 0.03945

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	10.000	10.769	2149.05	0.0097	P	2.3
3	☐	50.000	50.993	10078.65	0.0459	P	5.1
4	☐	100.000	99.427	19674.90	0.0895	P	0.7
5	☐			5.55	0.0000	P	125.1

y = 8.9999E-004 * x + 1.4851E-005

R = 0.9999

DL = 0.08574

BEC = 0.0165

Weight: <None>

Min Conc: <None>

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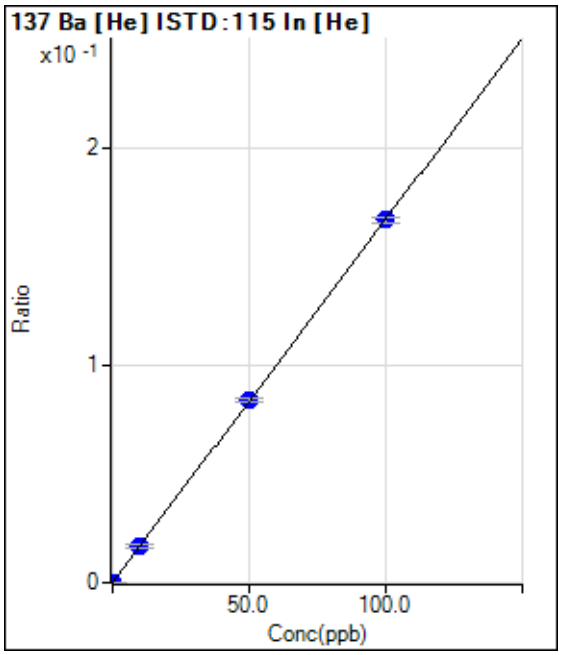
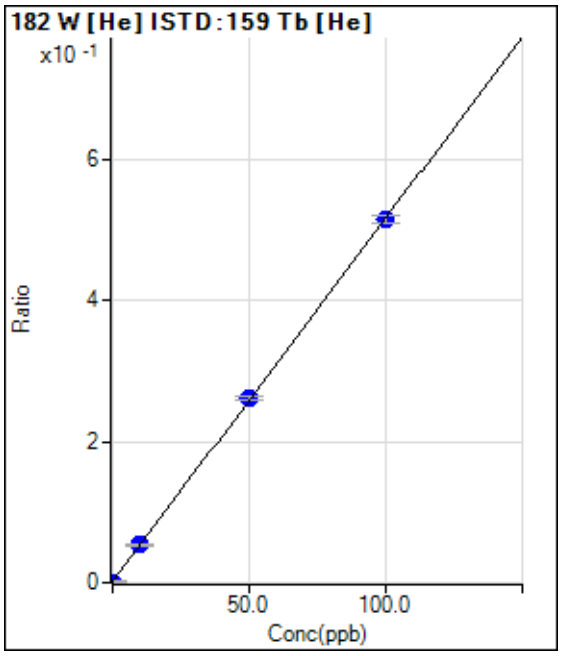


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	34.6
2	☐	10.000	9.989	3691.57	0.0167	P	7.4
3	☐	50.000	50.102	18349.02	0.0835	P	2.2
4	☐	100.000	99.950	36634.11	0.1666	P	1.4
5	☐			31.11	0.0001	P	37.9

y = 0.0017 * x + 2.4709E-005
R = 1.0000
DL = 0.01539
BEC = 0.01482

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1422.36	0.0014	P	14.1
2	☐	10.000	10.219	56558.15	0.0540	P	3.3
3	☐	50.000	50.710	271014.86	0.2626	P	1.7
4	☐			2548.48	0.0025	P	0.9
5	☐	100.000	99.623	558419.42	0.5145	P	2.1

y = 0.0052 * x + 0.0014
R = 1.0000
DL = 0.112
BEC = 0.264

Weight: <None>
Min Conc: <None>

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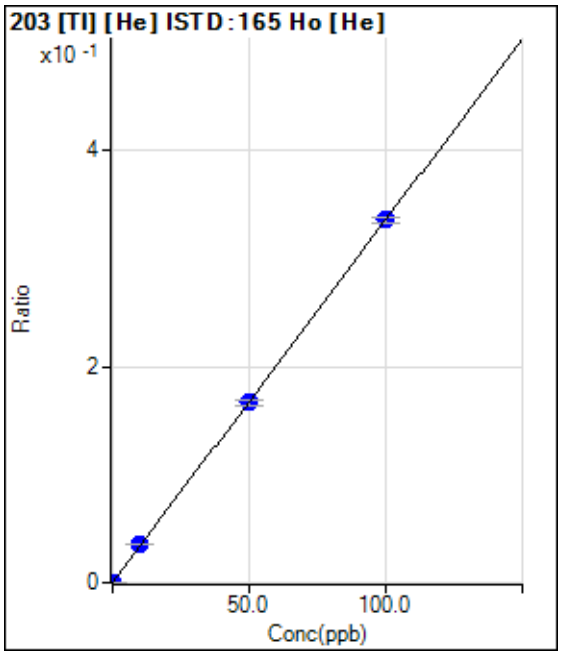
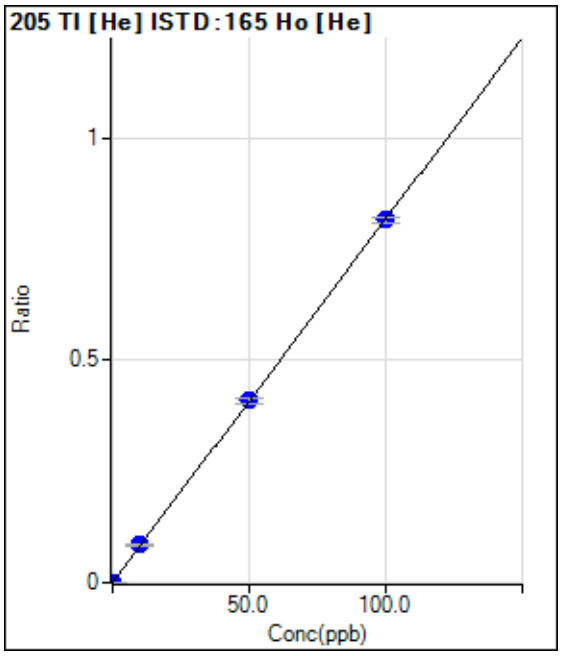


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.93	0.0000	P	107.3
2	☐	10.000	10.455	36546.49	0.0351	P	0.8
3	☐	50.000	49.681	172499.12	0.1665	P	2.6
4	☐	100.000	100.114	344574.15	0.3355	P	1.9
5	☐			492.62	0.0005	P	19.4

y = 0.0034 * x + 2.4477E-005
R = 1.0000
DL = 0.02351
BEC = 0.007304

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	14.7
2	☐	10.000	10.346	88186.34	0.0846	P	1.3
3	☐	50.000	50.157	424661.56	0.4099	P	2.7
4	☐	100.000	99.887	838379.62	0.8164	P	1.4
5	☐			781.14	0.0007	P	19.0

y = 0.0082 * x + 3.7835E-005
R = 1.0000
DL = 0.002041
BEC = 0.00463

Weight: <None>
Min Conc: <None>

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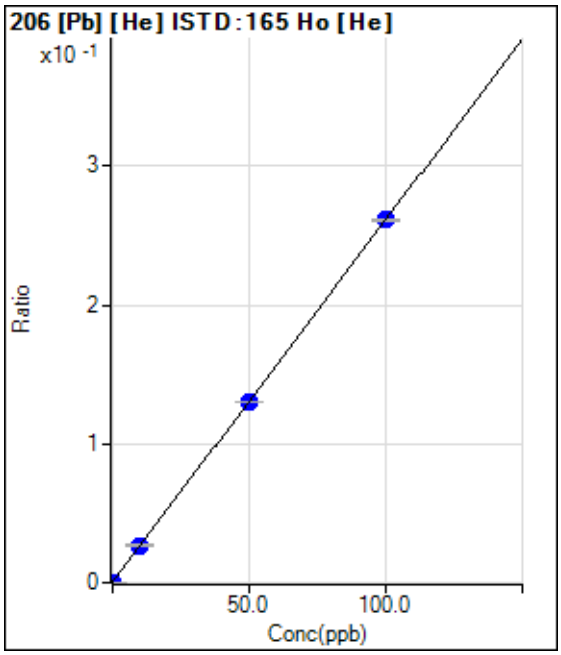


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	295.56	0.0003	P	11.7
2		10.000	10.185	27976.72	0.0268	P	2.4
3		50.000	49.828	134899.46	0.1302	P	0.8
4		100.000	100.068	268270.53	0.2612	P	0.8
5				466.68	0.0004	P	6.3

y = 0.0026 * x + 2.7934E-004

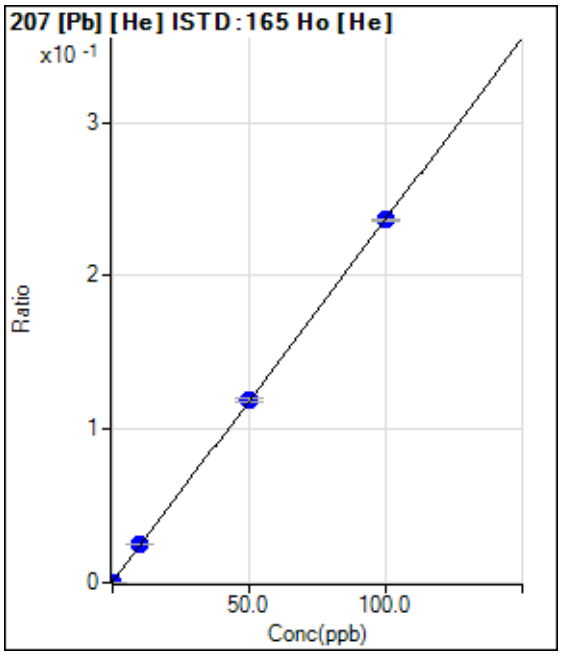
R = 1.0000

DL = 0.03769

BEC = 0.1071

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	218.89	0.0002	P	15.1
2		10.000	10.437	25964.45	0.0249	P	2.1
3		50.000	50.159	123169.31	0.1189	P	1.6
4		100.000	99.877	242924.38	0.2365	P	0.9
5				396.68	0.0004	P	3.0

y = 0.0024 * x + 2.0708E-004

R = 1.0000

DL = 0.03951

BEC = 0.08751

Weight: <None>

Min Conc: <None>

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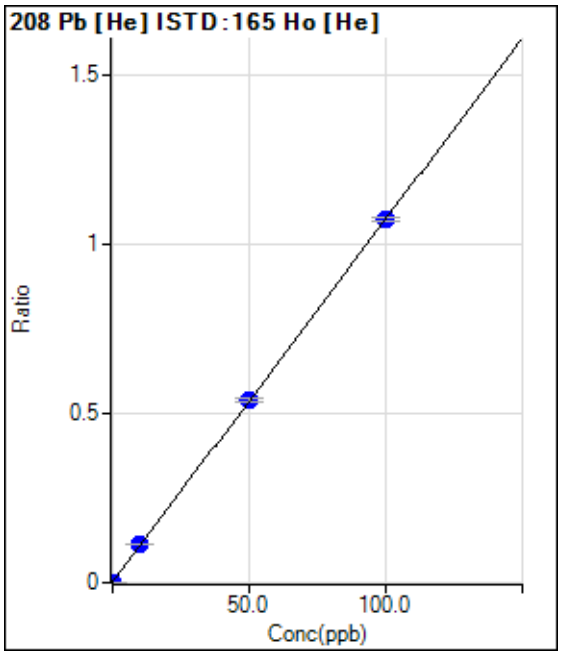

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1194.48	0.0011	P	4.7
2	☐	10.000	10.386	117206.25	0.1124	P	0.6
3	☐	50.000	50.138	557767.02	0.5384	P	1.7
4	☐	100.000	99.893	1100490.73	1.0716	P	1.1
5	☐			1982.30	0.0018	P	2.9

y = 0.0107 * x + 0.0011

R = 1.0000

DL = 0.01491

BEC = 0.1054

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2467071
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:04:12-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.137	1.398	1055564	1.30	40	92.8	89.5	110.5	
Be	9	45	NoGas	39.738	0.593	262079	0.49	40	99.3	89.5	110.5	
B	11	45	NoGas	40.728	1.402	178920	1.01	40	101.8	89.5	110.5	
Na	23	45	He	19590.443	3.871	8646864	0.76	20000	98.0	89.5	110.5	
Mg	24	45	He	19667.996	3.514	4822170	1.35	20000	98.3	89.5	110.5	
Al	27	45	He	200.937	3.372	20651	1.05	200	100.5	89.5	110.5	
K	39	45	He	19912.386	2.981	2330371	2.13	20000	99.6	89.5	110.5	
Ca	44	45	He	19510.315	3.696	133357	1.28	20000	97.6	89.5	110.5	
Ti	47	45	He	38.177	10.242	1883	6.65	40	95.4	89.5	110.5	
V	51	45	He	38.950	4.924	68680	2.10	40	97.4	89.5	110.5	
Cr	52	45	He	39.427	3.598	86640	1.80	40	98.6	89.5	110.5	
Mn	55	45	He	197.913	4.325	213680	1.90	200	99.0	89.5	110.5	
Fe	56	45	He	9931.016	4.716	16587230	2.23	10000	99.3	89.5	110.5	
Co	59	45	He	39.488	3.743	157503	0.94	40	98.7	89.5	110.5	
Ni	60	45	He	39.917	4.101	44762	1.19	40	99.8	89.5	110.5	
Cu	63	45	He	40.327	4.100	129828	0.96	40	100.8	89.5	110.5	
Zn	66	45	He	39.832	5.784	16219	1.55	40	99.6	89.5	110.5	
As	75	103	He	39.483	4.112	9543	0.33	40	98.7	89.5	110.5	
Se	78	115	He	39.804	4.443	438	5.54	40	99.5	89.5	110.5	
Sr	88	103	He	37.854	3.792	40425	0.80	40	94.6	89.5	110.5	
Mo	95	103	He	40.842	3.851	54298	2.55	40	102.1	89.5	110.5	
Ag	107	103	He	39.359	3.910	193394	0.12	40	98.4	89.5	110.5	
Cd	111	115	He	39.195	4.255	21352	1.35	40	98.0	89.5	110.5	
Sn	118	115	He	38.424	2.591	39996	1.75	40	96.1	89.5	110.5	
Sb	123	115	He	39.512	4.585	45969	1.69	40	98.8	89.5	110.5	
Ba	137	115	He	38.916	4.072	15859	1.54	40	97.3	89.5	110.5	
W	182	159	He	38.979	6.028	230219	2.09	40	97.4	89.5	110.5	
Tl	205	165	He	39.157	4.736	361596	1.33	40	97.9	89.5	110.5	
Pb	208	165	He	39.366	4.945	477841	0.48	40	98.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1947260	0.68	1884762	103.32	60	120	
Sc	45	He	150544	4.33	134073	112.29	60	120	
Sc	45	NoGas	9335645	0.42	8481025	110.08	60	120	
Rh	103	He	968145	4.00	903580	107.15	60	120	
In	115	He	244591	3.83	224817	108.80	60	120	
Tb	159	He	1141647	6.27	1046002	109.14	60	120	
Ho	165	He	1131627	5.19	1057439	107.02	60	120	
Bi	209	He	763707	3.07	731380	104.42	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:08:23-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.000	#DIV/0!	0	#DIV/0!	20	
W	182	1	He	0.196	37.3	2697	16.2	10	
Ca	44	1	He	6.610	66.7	258	11.6	1000	
Na	23	1	He	8.456	12.1	8791	5.1	1000	
Mg	24	1	He	2.046	41.6	1211	17.0	1000	
K	39	1	He	0.460	629.0	9940	3.5	1000	
V	51	1	He	-0.119	-87.7	-148	-123.1	2	
Cr	52	1	He	-0.004	-191.3	743	2.4	2	
Mn	55	1	He	0.080	60.5	236	22.1	2	
Fe	56	1	He	2.515	21.9	6395	14.4	50	
Co	59	1	He	-0.003	-101.5	333	3.5	1	
Ni	60	1	He	0.012	112.6	173	8.8	2	
Cu	63	1	He	0.158	49.7	3184	7.8	2	
Zn	66	1	He	0.433	19.8	338	10.1	20	
As	75	1	He	0.025	97.5	26	23.6	2	
Se	78	1	He	0.234	59.3	6	27.0	2	
Sr	88	1	He	-0.008	-63.7	34	14.8	10	
Mo	95	1	He	0.093	4.8	142	4.9	2	
Ag	107	1	He	0.003	62.8	26	41.9	0.2	
Cd	111	1	He	0.013	55.7	9	44.5	0.2	
Ba	137	1	He	-0.009	-100.5	2	173.2	5	
Sn	118	1	He	0.238	6.7	574	3.0	10	
Tl	205	1	He	0.038	15.3	393	14.0	0.5	
Pb	208	1	He	0.031	27.9	1670	6.1	0.5	
Al	27	1	He	0.194	144.6	143	19.9	50	
Sb	123	1	He	0.131	15.2	199	11.8	2	
B	11	2	NoGas	2.220	5.5	18762	2.1	20	
Be	9	2	NoGas	0.038	34.9	404	22.1	1	
Li	7	2	NoGas	0.043	55.5	128024	0.4	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017777	1.08	1884762	107.06	60	120	
Sc	45	1	He	149296	0.10	134073	111.35	60	120	
Sc	45	2	NoGas	9266330	0.86	8481025	109.26	60	120	
Rh	103	1	He	992870	0.55	903580	109.88	60	120	

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In	115	1	He	245247	0.10	224817	109.09	60	120	
Tb	159	1	He	1138675	0.32	1046002	108.86	60	120	
Ho	165	1	He	1140263	1.41	1057439	107.83	60	120	
Bi	209	1	He	780908	0.75	731380	106.77	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:12:36-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.680	7.680	1.217	316068	0.12	8	96.0	69.5	130.5	
Be	9	2	NoGas	1.077	1.077	7.130	7172	7.25	1	107.7	69.5	130.5	
B	11	2	NoGas	20.611	20.611	1.553	94234	1.72	20	103.1	69.5	130.5	
Na	23	1	He	988.262	988.262	2.145	435530	0.35	1000	98.8	69.5	130.5	
Mg	24	1	He	1003.123	1003.123	2.181	243497	0.47	1000	100.3	69.5	130.5	
Al	27	1	He	48.471	48.471	2.544	5012	1.95	50	96.9	69.5	130.5	
K	39	1	He	1005.498	1005.498	0.767	125521	1.57	1000	100.5	69.5	130.5	
Ca	44	1	He	975.575	975.575	3.403	6785	1.47	1000	97.6	69.5	130.5	
Ti	47	1	He	9.801	9.801	8.246	479	10.14	10	98.0	69.5	130.5	
V	51	1	He	5.315	5.315	7.995	9302	6.13	5	106.3	69.5	130.5	
Cr	52	1	He	2.050	2.050	4.290	5161	5.58	2	102.5	69.5	130.5	
Mn	55	1	He	5.160	5.160	4.011	5645	2.24	5	103.2	69.5	130.5	
Fe	56	1	He	110.646	110.646	3.525	184659	1.62	100	110.6	69.5	130.5	
Co	59	1	He	1.072	1.072	3.554	4555	1.76	1	107.2	69.5	130.5	
Ni	60	1	He	2.043	2.043	6.078	2412	4.87	2	102.1	69.5	130.5	
Cu	63	1	He	2.198	2.198	2.432	9519	0.79	2	109.9	69.5	130.5	
Zn	66	1	He	20.388	20.388	3.635	8280	1.55	20	101.9	69.5	130.5	
As	75	1	He	4.773	4.773	2.186	1185	2.21	5	95.5	69.5	130.5	
Se	78	1	He	4.464	4.464	1.809	52	3.33	5	89.3	69.5	130.5	
Sr	88	1	He	9.484	9.484	4.283	10283	3.74	10	94.8	69.5	130.5	
Mo	95	1	He	5.219	5.219	2.323	7035	2.28	5	104.4	69.5	130.5	
Ag	107	1	He	1.001	1.001	2.339	4986	2.53	1	100.1	69.5	130.5	
Cd	111	1	He	0.975	0.975	5.003	539	5.93	1	97.5	69.5	130.5	
Sn	118	1	He	9.702	9.702	2.732	10459	2.30	10	97.0	69.5	130.5	
Sb	123	1	He	1.987	1.987	3.934	2382	2.36	2	99.4	69.5	130.5	
Ba	137	1	He	4.881	4.881	7.619	2018	7.63	5	97.6	69.5	130.5	
W	182	1	He	10.401	10.401	2.791	62131	3.06	10	104.0	69.5	130.5	
Tl	205	1	He	1.030	1.030	1.868	9584	1.41	1	103.0	69.5	130.5	
Pb	208	1	He	1.020	1.020	2.443	13674	2.13	1	102.0	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2040599	0.23	1884762	108.27	60	120	
Sc	45	1	He	148534	2.08	134073	110.79	60	120	
Sc	45	2	NoGas	9228090	0.82	8481025	108.81	60	120	
Rh	103	1	He	979084	0.53	903580	108.36	60	120	
In	115	1	He	247242	1.87	224817	109.97	60	120	
Tb	159	1	He	1130925	0.34	1046002	108.12	60	120	
Ho	165	1	He	1133972	0.47	1057439	107.24	60	120	
Bi	209	1	He	789955	0.43	731380	108.01	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:16:50-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.319	41.0	127511	0.9	4	
Be	9	45	2	NoGas	0.020	126.9	270	56.1	2	
B	11	45	2	NoGas	1.293	1.6	14125	1.0	20	
Na	23	45	1	He	50116.323	1.7	20204540	0.2	75200	
Mg	24	45	1	He	50261.734	2.4	11256310	0.6	75200	
Al	27	45	1	He	51924.285	2.8	4845239	1.0	75200	
K	39	45	1	He	49164.705	1.7	5242176	0.6	75200	
Ca	44	45	1	He	49472.930	1.7	308652	0.4	75200	
Ti	47	45	1	He	998.148	2.6	45065	1.4	1505	
V	51	45	1	He	0.074	60.7	175	43.4	4	
Cr	52	45	1	He	0.633	3.3	1952	2.9	4	
Mn	55	45	1	He	0.238	18.4	372	10.0	4	
Fe	56	45	1	He	49354.225	2.0	75317066	0.3	75200	
Co	59	45	1	He	-0.012	-23.8	272	2.5	2	
Ni	60	45	1	He	0.041	13.6	189	4.4	4	
Cu	63	45	1	He	0.408	4.8	3653	2.3	4	
Zn	66	45	1	He	0.275	43.2	252	15.8	20	
As	75	103	1	He	0.091	41.9	36	22.4	4	
Se	78	115	1	He	0.157	100.0	4	35.2	4	
Sr	88	103	1	He	0.282	20.4	306	18.0	20	
Mo	95	103	1	He	1053.034	0.9	1246996	0.8	1505	
Ag	107	103	1	He	0.010	7.7	50	6.7	1	
Cd	111	115	1	He	-0.046	-66.6	-21	-72.1	1	
Sn	118	115	1	He	0.003	3760.5	296	29.1	20	
Sb	123	115	1	He	0.009	221.1	51	41.9	4	
Ba	137	115	1	He	0.279	15.6	108	14.0	2	
W	182	159	1	He	0.144	30.1	2252	10.4	20	
Tl	205	165	1	He	0.004	66.1	77	30.4	2	
Pb	208	165	1	He	0.101	21.8	2388	10.2	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1968766	0.90	1884762	104.46	60	120	
Sc	45	1	He	137431	1.83	134073	102.50	60	120	
Sc	45	2	NoGas	8762498	1.55	8481025	103.32	60	120	
Rh	103	1	He	861888	0.16	903580	95.39	60	120	
In	115	1	He	220563	0.89	224817	98.11	60	120	
Tb	159	1	He	1071292	0.30	1046002	102.42	60	120	
Ho	165	1	He	1077741	0.50	1057439	101.92	60	120	
Bi	209	1	He	708506	0.53	731380	96.87	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:21:00-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	101.501	0.606	2564174	1.07	100	101.5	49.5	150.5	
Be	9	45	2	NoGas	103.653	0.872	657902	1.08	100	103.7	49.5	150.5	
B	11	45	2	NoGas	102.111	0.578	417851	1.13	100	102.1	49.5	150.5	
Na	23	45	1	He	49357.870	2.375	20654250	1.18	50000	98.7	49.5	150.5	
Mg	24	45	1	He	49299.877	2.809	11460670	1.59	50000	98.6	49.5	150.5	
Al	27	45	1	He	50996.987	2.400	4940189	1.58	50000	102.0	49.5	150.5	
K	39	45	1	He	48829.814	0.817	5405061	1.13	50000	97.7	49.5	150.5	
Ca	44	45	1	He	49482.435	1.923	320443	0.76	50000	99.0	49.5	150.5	
Ti	47	45	1	He	1091.893	2.829	51173	2.10	1100	99.3	49.5	150.5	
V	51	45	1	He	101.403	3.770	169508	2.89	100	101.4	49.5	150.5	
Cr	52	45	1	He	100.091	1.896	207476	1.28	100	100.1	49.5	150.5	
Mn	55	45	1	He	101.138	2.593	103633	1.63	100	101.1	49.5	150.5	
Fe	56	45	1	He	48762.155	2.516	77240652	1.34	50000	97.5	49.5	150.5	
Co	59	45	1	He	100.846	2.400	380954	1.24	100	100.8	49.5	150.5	
Ni	60	45	1	He	100.619	2.337	106787	1.54	100	100.6	49.5	150.5	
Cu	63	45	1	He	100.464	2.089	302927	0.91	100	100.5	49.5	150.5	
Zn	66	45	1	He	98.110	0.875	37683	0.60	100	98.1	49.5	150.5	
As	75	103	1	He	102.720	0.344	22693	0.60	100	102.7	49.5	150.5	
Se	78	115	1	He	102.067	1.562	1024	1.55	100	102.1	49.5	150.5	
Sr	88	103	1	He	100.214	0.298	97860	0.54	100	100.2	49.5	150.5	
Mo	95	103	1	He	1165.970	1.273	1417744	1.52	1100	106.0	49.5	150.5	
Ag	107	103	1	He	100.155	0.492	450299	0.74	100	100.2	49.5	150.5	
Cd	111	115	1	He	101.073	0.480	50471	0.36	100	101.1	49.5	150.5	
Sn	118	115	1	He	113.127	1.394	107313	1.19	100	113.1	49.5	150.5	
Sb	123	115	1	He	102.832	2.014	109607	2.02	100	102.8	49.5	150.5	
Ba	137	115	1	He	101.687	2.204	37975	2.33	100	101.7	49.5	150.5	
W	182	159	1	He	102.759	2.791	576903	2.12	100	102.8	49.5	150.5	
Tl	205	165	1	He	96.904	1.495	865718	1.58	100	96.9	49.5	150.5	
Pb	208	165	1	He	98.282	0.602	1152494	0.53	100	98.3	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1922135	1.01	1884762	101.98	60	120	
Sc	45	1	He	142647	1.25	134073	106.39	60	120	
Sc	45	2	NoGas	8987980	0.86	8481025	105.98	60	120	
Rh	103	1	He	884969	0.26	903580	97.94	60	120	
In	115	1	He	223978	0.34	224817	99.63	60	120	
Tb	159	1	He	1087318	0.95	1046002	103.95	60	120	
Ho	165	1	He	1093105	0.51	1057439	103.37	60	120	
Bi	209	1	He	719071	0.32	731380	98.32	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:25:10-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.116	1.338	1322798	1.43	50	98.2	89.5	110.5	
Be	9	45	2	NoGas	49.938	1.759	321499	0.71	50	99.9	89.5	110.5	
B	11	45	2	NoGas	49.868	1.708	211768	0.79	50	99.7	89.5	110.5	
Na	23	45	1	He	25526.943	1.900	10617147	1.20	25000	102.1	89.5	110.5	
Mg	24	45	1	He	25221.603	2.305	5826455	0.91	25000	100.9	89.5	110.5	
Al	27	45	1	He	260.335	2.703	25173	0.68	250	104.1	89.5	110.5	
K	39	45	1	He	25294.399	1.130	2786551	1.12	25000	101.2	89.5	110.5	
Ca	44	45	1	He	25329.240	1.957	163090	1.18	25000	101.3	89.5	110.5	
Ti	47	45	1	He	52.736	7.806	2457	8.26	50	105.5	89.5	110.5	
V	51	45	1	He	50.715	3.286	84255	1.08	50	101.4	89.5	110.5	
Cr	52	45	1	He	51.406	1.757	106232	1.51	50	102.8	89.5	110.5	
Mn	55	45	1	He	253.542	1.034	257977	1.42	250	101.4	89.5	110.5	
Fe	56	45	1	He	12794.318	1.852	20140862	1.09	12500	102.4	89.5	110.5	
Co	59	45	1	He	51.549	0.400	193699	1.85	50	103.1	89.5	110.5	
Ni	60	45	1	He	51.323	1.429	54201	0.97	50	102.6	89.5	110.5	
Cu	63	45	1	He	51.777	1.869	156374	1.01	50	103.6	89.5	110.5	
Zn	66	45	1	He	50.320	2.772	19276	0.57	50	100.6	89.5	110.5	
As	75	103	1	He	49.408	0.208	11337	1.05	50	98.8	89.5	110.5	
Se	78	115	1	He	48.446	1.511	495	3.65	50	96.9	89.5	110.5	
Sr	88	103	1	He	49.893	0.623	50580	0.93	50	99.8	89.5	110.5	
Mo	95	103	1	He	54.319	0.811	68557	1.57	50	108.6	89.5	110.5	
Ag	107	103	1	He	49.967	0.647	233139	1.18	50	99.9	89.5	110.5	
Cd	111	115	1	He	50.953	0.472	25856	2.51	50	101.9	89.5	110.5	
Sn	118	115	1	He	51.099	2.585	49417	2.80	50	102.2	89.5	110.5	
Sb	123	115	1	He	51.238	1.628	55506	1.25	50	102.5	89.5	110.5	
Ba	137	115	1	He	50.556	0.559	19187	2.03	50	101.1	89.5	110.5	
W	182	159	1	He	51.265	0.830	286430	2.00	50	102.5	89.5	110.5	
Tl	205	165	1	He	49.380	1.310	438176	1.28	50	98.8	89.5	110.5	
Pb	208	165	1	He	49.382	1.615	575726	0.84	50	98.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1945031	1.06	1884762	103.20	60	120	
Sc	45	1	He	141757	2.26	134073	105.73	60	120	
Sc	45	2	NoGas	9115306	1.10	8481025	107.48	60	120	
Rh	103	1	He	918409	1.24	903580	101.64	60	120	
In	115	1	He	227593	2.19	224817	101.23	60	120	
Tb	159	1	He	1079170	1.71	1046002	103.17	60	120	
Ho	165	1	He	1085912	2.43	1057439	102.69	60	120	
Bi	209	1	He	720914	0.96	731380	98.57	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:29:21-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.119	-34.9	125560	0.7	8	
Be	9	45	2	NoGas	0.026	21.1	330	10.8	1	
B	11	45	2	NoGas	1.200	6.8	14740	2.5	20	
Na	23	45	1	He	12.354	10.9	10366	5.1	1000	
Mg	24	45	1	He	2.250	45.1	1245	19.1	1000	
Al	27	45	1	He	0.577	65.3	180	21.4	50	
K	39	45	1	He	2.445	107.7	10044	3.3	1000	
Ca	44	45	1	He	-1.250	-445.4	203	19.0	1000	
Ti	47	45	1	He	0.046	173.2	2	173.2	20	
V	51	45	1	He	0.062	138.2	167	89.5	2	
Cr	52	45	1	He	-0.022	-189.7	697	13.0	2	
Mn	55	45	1	He	-0.010	-301.6	137	24.0	2	
Fe	56	45	1	He	4.584	22.7	9698	17.2	50	
Co	59	45	1	He	-0.011	-59.5	298	9.0	1	
Ni	60	45	1	He	-0.003	-1181.1	154	24.5	2	
Cu	63	45	1	He	0.005	1520.2	2672	8.8	2	
Zn	66	45	1	He	0.028	434.6	173	27.7	20	
As	75	103	1	He	0.062	29.6	34	13.1	2	
Se	78	115	1	He	0.213	68.6	5	28.7	2	
Sr	88	103	1	He	-0.002	-561.7	40	30.0	10	
Mo	95	103	1	He	0.485	4.6	668	4.6	2	
Ag	107	103	1	He	0.008	50.3	50	41.6	0.2	
Cd	111	115	1	He	0.019	58.4	12	50.2	0.2	
Sn	118	115	1	He	0.153	39.0	478	12.9	10	
Sb	123	115	1	He	0.096	2.7	156	1.2	2	
Ba	137	115	1	He	-0.004	-329.4	4	114.6	5	
W	182	159	1	He	0.235	9.2	2849	4.8	10	
Tl	205	165	1	He	0.055	29.4	538	27.3	0.5	
Pb	208	165	1	He	0.021	84.8	1507	14.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2029099	0.55	1884762	107.66	60	120	
Sc	45	1	He	147445	0.56	134073	109.97	60	120	
Sc	45	2	NoGas	9382535	0.24	8481025	110.63	60	120	
Rh	103	1	He	980220	0.11	903580	108.48	60	120	
In	115	1	He	241066	0.88	224817	107.23	60	120	
Tb	159	1	He	1108932	0.48	1046002	106.02	60	120	
Ho	165	1	He	1108175	0.26	1057439	104.80	60	120	
Bi	209	1	He	770326	0.59	731380	105.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-5-a@10
Data File Name	014SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:40:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.502	0.502	6.29	136033	0.00	10000	
Be	9	45	2	NoGas	0.012	0.012	64.43	230	0.01	2000	
B	11	45	2	NoGas	62.505	62.505	1.05	260915	0.02	300	
Na	23	45	1	He	1188.150	1188.150	1.91	511321	0.23	500000	
Mg	24	45	1	He	676.465	676.465	2.71	160873	0.42	500000	
Al	27	45	1	He	21.001	21.001	4.14	2192	0.96	200000	
K	39	45	1	He	244.280	244.280	4.88	37117	0.66	500000	
Ca	44	45	1	He	9229.051	9229.051	1.56	61053	15.12	500000	
Ti	47	45	1	He	0.280	0.280	66.83	13	2.10	2500	
V	51	45	1	He	0.133	0.133	62.61	284	0.05	10000	
Cr	52	45	1	He	0.017	0.017	297.71	768	0.00	10000	
Mn	55	45	1	He	11.972	11.972	1.86	12627	0.09	10000	
Fe	56	45	1	He	153.378	153.378	1.92	249658	0.06	200000	
Co	59	45	1	He	-0.017	-0.017	-39.34	269	-0.01	5000	
Ni	60	45	1	He	-0.013	-0.013	-338.83	141	-0.01	10000	
Cu	63	45	1	He	0.180	0.180	29.03	3168	0.01	10000	
Zn	66	45	1	He	0.210	0.210	75.37	241	0.09	10000	
As	75	103	1	He	0.042	0.042	21.50	28	0.15	10000	
Se	78	115	1	He	0.146	0.146	94.72	5	3.14	10000	
Sr	88	103	1	He	57.916	57.916	0.89	60375	0.10	10000	
Mo	95	103	1	He	0.118	0.118	39.36	167	0.07	2000	
Ag	107	103	1	He	0.002	0.002	53.58	18	0.01	300	
Cd	111	115	1	He	0.008	0.008	70.90	6	0.13	4000	
Sn	118	115	1	He	-0.079	-0.079	-116.63	244	-0.03	2000	
Sb	123	115	1	He	-0.006	-0.006	-158.29	39	-0.02	200	
Ba	137	115	1	He	3.495	3.495	3.03	1425	0.25	10000	
W	182	159	1	He	-0.021	-0.021	-269.64	1371	0.00	2500	
Tl	205	165	1	He	0.003	0.003	28.31	64	0.00	2000	
Pb	208	165	1	He	0.000	0.000	-3849.06	1243	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1999129	1.22	1884762	106.07	60	120	
Sc	45	1	He	145321	1.88	134073	108.39	60	120	
Sc	45	2	NoGas	9041013	0.78	8481025	106.60	60	120	
Rh	103	1	He	944478	0.40	903580	104.53	60	120	
In	115	1	He	243449	0.42	224817	108.29	60	120	
Tb	159	1	He	1097739	0.66	1046002	104.95	60	120	
Ho	165	1	He	1101508	1.01	1057439	104.17	60	120	
Bi	209	1	He	780291	1.09	731380	106.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-11-a@5
Data File Name	015SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:44:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.573	2.573	1.66	187533	0.00	10000	
Be	9	45	2	NoGas	0.009	0.009	151.19	211	0.00	2000	
B	11	45	2	NoGas	94.423	94.423	1.65	392337	0.02	300	
Na	23	45	1	He	1973.552	1973.552	2.81	845261	0.23	500000	
Mg	24	45	1	He	557.280	557.280	3.97	132523	0.42	500000	
Al	27	45	1	He	0.944	0.944	59.21	213	0.44	200000	
K	39	45	1	He	448.140	448.140	3.20	60003	0.75	500000	
Ca	44	45	1	He	19822.097	19822.097	1.09	130791	15.16	500000	
Ti	47	45	1	He	0.047	0.047	173.21	2	2.10	2500	
V	51	45	1	He	0.068	0.068	195.07	174	0.04	10000	
Cr	52	45	1	He	-0.012	-0.012	-351.52	707	0.00	10000	
Mn	55	45	1	He	17.855	17.855	4.99	18735	0.10	10000	
Fe	56	45	1	He	817.570	817.570	6.54	1319625	0.06	200000	
Co	59	45	1	He	1.446	1.446	1.81	5891	0.02	5000	
Ni	60	45	1	He	0.244	0.244	22.85	419	0.06	10000	
Cu	63	45	1	He	0.122	0.122	45.50	2986	0.00	10000	
Zn	66	45	1	He	2.965	2.965	4.22	1315	0.23	10000	
As	75	103	1	He	1.249	1.249	0.79	312	0.40	10000	
Se	78	115	1	He	0.154	0.154	177.31	5	3.32	10000	
Sr	88	103	1	He	130.662	130.662	0.36	136032	0.10	10000	
Mo	95	103	1	He	9.507	9.507	3.35	12338	0.08	2000	
Ag	107	103	1	He	0.000	0.000	683.70	9	0.00	300	
Cd	111	115	1	He	0.003	0.003	88.03	4	0.09	4000	
Sn	118	115	1	He	-0.041	-0.041	-234.47	278	-0.01	2000	
Sb	123	115	1	He	0.005	0.005	159.43	51	0.01	200	
Ba	137	115	1	He	8.553	8.553	3.06	3415	0.25	10000	
W	182	159	1	He	0.001	0.001	1938.17	1508	0.00	2500	
Tl	205	165	1	He	0.002	0.002	80.62	60	0.00	2000	
Pb	208	165	1	He	-0.007	-0.007	-43.34	1167	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1981630	1.46	1884762	105.14	60	120	
Sc	45	1	He	145198	1.73	134073	108.30	60	120	
Sc	45	2	NoGas	9110209	0.90	8481025	107.42	60	120	
Rh	103	1	He	943597	0.43	903580	104.43	60	120	
In	115	1	He	239150	1.22	224817	106.38	60	120	
Tb	159	1	He	1103740	0.64	1046002	105.52	60	120	
Ho	165	1	He	1104035	0.52	1057439	104.41	60	120	
Bi	209	1	He	764624	0.59	731380	104.55	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	016_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:49:00-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	47.684	2.672	1342637	1.95	50	95.4	89.5	110.5	
Be	9	45	2	NoGas	48.902	0.593	328279	0.36	50	97.8	89.5	110.5	
B	11	45	2	NoGas	49.677	1.309	219992	0.76	50	99.4	89.5	110.5	
Na	23	45	1	He	25006.498	1.063	10951270	0.70	25000	100.0	89.5	110.5	
Mg	24	45	1	He	24832.192	2.016	6040296	1.39	25000	99.3	89.5	110.5	
Al	27	45	1	He	247.676	2.458	25225	1.99	250	99.1	89.5	110.5	
K	39	45	1	He	25122.948	0.540	2914073	0.56	25000	100.5	89.5	110.5	
Ca	44	45	1	He	24995.287	2.490	169450	1.86	25000	100.0	89.5	110.5	
Ti	47	45	1	He	51.352	4.578	2518	4.44	50	102.7	89.5	110.5	
V	51	45	1	He	49.829	1.883	87187	1.67	50	99.7	89.5	110.5	
Cr	52	45	1	He	50.511	1.915	109912	1.33	50	101.0	89.5	110.5	
Mn	55	45	1	He	251.172	2.199	269050	1.59	250	100.5	89.5	110.5	
Fe	56	45	1	He	12640.441	2.147	20950710	1.51	12500	101.1	89.5	110.5	
Co	59	45	1	He	50.837	2.181	201093	1.56	50	101.7	89.5	110.5	
Ni	60	45	1	He	51.171	2.710	56896	2.23	50	102.3	89.5	110.5	
Cu	63	45	1	He	51.134	1.633	162636	1.05	50	102.3	89.5	110.5	
Zn	66	45	1	He	49.658	1.875	20035	1.65	50	99.3	89.5	110.5	
As	75	103	1	He	49.054	0.905	11730	1.27	50	98.1	89.5	110.5	
Se	78	115	1	He	51.843	1.706	556	1.21	50	103.7	89.5	110.5	
Sr	88	103	1	He	48.978	0.987	51745	1.28	50	98.0	89.5	110.5	
Mo	95	103	1	He	52.142	1.007	68581	1.53	50	104.3	89.5	110.5	
Ag	107	103	1	He	50.053	0.727	243376	1.15	50	100.1	89.5	110.5	
Cd	111	115	1	He	50.523	1.538	26925	1.46	50	101.0	89.5	110.5	
Sn	118	115	1	He	50.571	2.983	51375	3.17	50	101.1	89.5	110.5	
Sb	123	115	1	He	50.787	0.768	57792	0.29	50	101.6	89.5	110.5	
Ba	137	115	1	He	49.748	2.805	19831	3.14	50	99.5	89.5	110.5	
W	182	159	1	He	50.525	0.540	294459	2.07	50	101.0	89.5	110.5	
Tl	205	165	1	He	48.990	0.969	450740	2.05	50	98.0	89.5	110.5	
Pb	208	165	1	He	49.109	0.916	593604	0.58	50	98.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1988522	0.16	1884762	105.51	60	120	
Sc	45	1	He	149229	0.64	134073	111.30	60	120	
Sc	45	2	NoGas	9503714	0.93	8481025	112.06	60	120	
Rh	103	1	He	957058	0.56	903580	105.92	60	120	
In	115	1	He	239032	0.56	224817	106.32	60	120	
Tb	159	1	He	1125543	1.55	1046002	107.60	60	120	
Ho	165	1	He	1125641	1.37	1057439	106.45	60	120	
Bi	209	1	He	743717	0.64	731380	101.69	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	017_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:53:12-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.130	-10.1	127141	0.7	8	
Be	9	45	2	NoGas	0.024	34.4	326	16.8	1	
B	11	45	2	NoGas	2.420	3.4	20126	1.2	20	
Na	23	45	1	He	7.653	19.3	8565	7.6	1000	
Mg	24	45	1	He	1.298	37.3	1045	11.3	1000	
Al	27	45	1	He	0.130	187.9	139	18.0	50	
K	39	45	1	He	3.932	49.9	10496	2.4	1000	
Ca	44	45	1	He	2.967	119.0	237	10.4	1000	
Ti	47	45	1	He	0.022	173.2	1	173.2	20	
V	51	45	1	He	0.080	98.5	203	68.9	2	
Cr	52	45	1	He	-0.029	-212.4	700	19.1	2	
Mn	55	45	1	He	0.000	4723.7	152	15.5	2	
Fe	56	45	1	He	2.464	32.9	6402	21.1	50	
Co	59	45	1	He	-0.026	-60.5	247	25.0	1	
Ni	60	45	1	He	-0.027	-100.7	132	22.9	2	
Cu	63	45	1	He	-0.026	-434.1	2648	13.4	2	
Zn	66	45	1	He	0.052	119.9	188	13.6	20	
As	75	103	1	He	0.030	68.0	27	18.7	2	
Se	78	115	1	He	0.114	255.5	4	74.1	2	
Sr	88	103	1	He	-0.005	-100.9	38	13.5	10	
Mo	95	103	1	He	0.123	32.7	183	29.9	2	
Ag	107	103	1	He	0.006	55.6	40	43.3	0.2	
Cd	111	115	1	He	0.014	49.5	9	40.6	0.2	
Sn	118	115	1	He	0.260	21.7	593	9.4	10	
Sb	123	115	1	He	0.079	29.1	138	20.3	2	
Ba	137	115	1	He	0.018	120.3	13	66.2	5	
W	182	159	1	He	0.189	44.2	2637	18.1	10	
Tl	205	165	1	He	0.034	18.3	363	15.7	0.5	
Pb	208	165	1	He	0.009	27.9	1396	1.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2051383	1.16	1884762	108.84	60	120	
Sc	45	1	He	151525	0.22	134073	113.02	60	120	
Sc	45	2	NoGas	9521197	0.86	8481025	112.26	60	120	
Rh	103	1	He	998095	0.55	903580	110.46	60	120	
In	115	1	He	243723	1.20	224817	108.41	60	120	
Tb	159	1	He	1131291	0.51	1046002	108.15	60	120	
Ho	165	1	He	1139033	0.49	1057439	107.72	60	120	
Bi	209	1	He	788645	0.48	731380	107.83	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	018CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:57:26-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.073	7.073	1.711	305891	0.81	8	88.4	69.5	130.5	
Be	9	2	NoGas	0.982	0.982	6.705	6661	6.07	1	98.2	69.5	130.5	
B	11	2	NoGas	20.183	20.183	0.969	93947	0.40	20	100.9	69.5	130.5	
Na	23	1	He	996.893	996.893	0.843	438106	1.17	1000	99.7	69.5	130.5	
Mg	24	1	He	1010.488	1010.488	1.538	244602	0.89	1000	101.0	69.5	130.5	
Al	27	1	He	50.298	50.298	5.771	5180	4.43	50	100.6	69.5	130.5	
K	39	1	He	1009.898	1009.898	2.162	125648	1.25	1000	101.0	69.5	130.5	
Ca	44	1	He	992.462	992.462	3.891	6883	4.80	1000	99.2	69.5	130.5	
Ti	47	1	He	10.544	10.544	7.807	513	8.74	10	105.4	69.5	130.5	
V	51	1	He	5.149	5.149	7.334	8989	6.01	5	103.0	69.5	130.5	
Cr	52	1	He	2.189	2.189	2.064	5440	1.10	2	109.4	69.5	130.5	
Mn	55	1	He	5.162	5.162	0.921	5633	1.73	5	103.2	69.5	130.5	
Fe	56	1	He	109.595	109.595	1.448	182450	0.73	100	109.6	69.5	130.5	
Co	59	1	He	1.010	1.010	4.288	4299	4.36	1	101.0	69.5	130.5	
Ni	60	1	He	2.066	2.066	4.360	2432	5.35	2	103.3	69.5	130.5	
Cu	63	1	He	2.043	2.043	1.445	9010	0.80	2	102.1	69.5	130.5	
Zn	66	1	He	20.566	20.566	0.769	8330	1.23	20	102.8	69.5	130.5	
As	75	1	He	5.076	5.076	1.107	1261	1.01	5	101.5	69.5	130.5	
Se	78	1	He	4.989	4.989	7.858	58	8.49	5	99.8	69.5	130.5	
Sr	88	1	He	9.303	9.303	1.495	10107	1.56	10	93.0	69.5	130.5	
Mo	95	1	He	5.431	5.431	2.770	7334	2.57	5	108.6	69.5	130.5	
Ag	107	1	He	1.005	1.005	5.172	5020	5.53	1	100.5	69.5	130.5	
Cd	111	1	He	0.981	0.981	7.951	538	7.69	1	98.1	69.5	130.5	
Sn	118	1	He	9.792	9.792	4.374	10459	3.32	10	97.9	69.5	130.5	
Sb	123	1	He	2.046	2.046	4.935	2431	5.74	2	102.3	69.5	130.5	
Ba	137	1	He	4.920	4.920	1.863	2016	0.95	5	98.4	69.5	130.5	
W	182	1	He	10.321	10.321	1.862	60703	1.78	10	103.2	69.5	130.5	
Tl	205	1	He	0.998	0.998	0.844	9178	0.60	1	99.8	69.5	130.5	
Pb	208	1	He	0.989	0.989	2.019	13143	1.54	1	98.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2000899	1.16	1884762	106.16	60	120	
Sc	45	1	He	148095	1.29	134073	110.46	60	120	
Sc	45	2	NoGas	9375319	0.47	8481025	110.54	60	120	
Rh	103	1	He	980951	0.54	903580	108.56	60	120	
In	115	1	He	245064	1.15	224817	109.01	60	120	
Tb	159	1	He	1113390	0.06	1046002	106.44	60	120	
Ho	165	1	He	1120460	0.34	1057439	105.96	60	120	
Bi	209	1	He	772923	0.48	731380	105.68	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	MB 240-228967/1-A
Data File Name	019_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:01:40-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.194	-7.5	122207	0.8	8	
Be	9	45	2	NoGas	0.003	276.8	178	31.2	1	
B	11	45	2	NoGas	1.600	11.9	16211	4.0	20	
Na	23	45	1	He	78.051	3.7	39057	3.0	1000	
Mg	24	45	1	He	125.853	0.4	31172	0.9	1000	
Al	27	45	1	He	1.945	37.2	319	22.3	50	
K	39	45	1	He	22.654	16.5	12438	2.9	1000	
Ca	44	45	1	He	382.862	5.7	2792	5.0	1000	
Ti	47	45	1	He	0.139	173.2	7	173.2	20	
V	51	45	1	He	0.028	366.1	109	161.4	2	
Cr	52	45	1	He	-0.005	-417.8	738	5.5	2	
Mn	55	45	1	He	1.156	6.0	1380	5.9	2	
Fe	56	45	1	He	6.737	2.7	13321	1.2	50	
Co	59	45	1	He	-0.043	-3.3	176	4.0	1	
Ni	60	45	1	He	0.147	30.2	321	15.9	2	
Cu	63	45	1	He	0.297	15.2	3602	4.8	2	
Zn	66	45	1	He	9.619	11.4	3991	9.7	20	
As	75	103	1	He	0.027	73.8	25	18.9	2	
Se	78	115	1	He	0.262	88.7	6	42.2	2	
Sr	88	103	1	He	0.931	13.7	1037	13.0	10	
Mo	95	103	1	He	0.039	41.9	67	32.8	2	
Ag	107	103	1	He	0.002	54.3	18	28.6	0.2	
Cd	111	115	1	He	0.002	171.4	3	57.3	0.2	
Sn	118	115	1	He	0.455	2.5	782	1.6	10	
Sb	123	115	1	He	-0.006	-154.9	38	31.0	2	
Ba	137	115	1	He	1.291	5.6	522	6.2	5	
W	182	159	1	He	0.061	47.3	1867	8.3	10	
Tl	205	165	1	He	0.001	154.8	54	34.8	0.5	
Pb	208	165	1	He	0.008	104.9	1350	6.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2032658	1.60	1884762	107.85	60	120	
Sc	45	1	He	148502	1.21	134073	110.76	60	120	
Sc	45	2	NoGas	9271313	0.81	8481025	109.32	60	120	
Rh	103	1	He	969511	0.21	903580	107.30	60	120	
In	115	1	He	239923	0.97	224817	106.72	60	120	
Tb	159	1	He	1114758	1.14	1046002	106.57	60	120	
Ho	165	1	He	1111200	0.86	1057439	105.08	60	120	
Bi	209	1	He	777063	0.93	731380	106.25	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 240-228967/2-A
Data File Name	020_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:05:51-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	94.786	94.786	0.836	2436438	1.20	100	94.8	84.5	115.5	
Be	9	2	NoGas	1032.881	1032.881	0.200	6646620	0.63	1000	103.3	84.5	115.5	
B	11	2	NoGas	97.284	97.284	0.964	404125	0.83	100	97.3	84.5	115.5	
Na	23	1	He	10190.186	10190.186	5.645	4219649	1.21	10000	101.9	84.5	115.5	
Mg	24	1	He	10515.737	10515.737	5.779	2417333	1.15	10000	105.2	84.5	115.5	
Al	27	1	He	9963.689	9963.689	5.691	954293	1.06	10000	99.6	84.5	115.5	
K	39	1	He	9982.985	9982.985	4.405	1100183	0.31	10000	99.8	84.5	115.5	
Ca	44	1	He	10857.298	10857.298	5.646	69667	0.99	10000	108.6	84.5	115.5	
Ti	47	1	He	99.352	99.352	9.269	4600	5.49	100	99.4	84.5	115.5	
V	51	1	He	1066.477	1066.477	4.283	1762848	0.75	1000	106.6	84.5	115.5	
Cr	52	1	He	1065.961	1065.961	6.125	2177159	1.50	1000	106.6	84.5	115.5	
Mn	55	1	He	1003.146	1003.146	4.829	1015225	0.20	1000	100.3	84.5	115.5	
Fe	56	1	He	10115.071	10115.071	4.691	15847268	0.23	10000	101.2	84.5	115.5	
Co	59	1	He	1066.935	1066.935	5.873	3981373	1.53	1000	106.7	84.5	115.5	
Ni	60	1	He	1033.197	1033.197	4.803	1082931	0.25	1000	103.3	84.5	115.5	
Cu	63	1	He	1059.810	1059.810	5.396	3135265	0.81	1000	106.0	84.5	115.5	
Zn	66	1	He	1028.187	1028.187	5.299	388951	0.65	1000	102.8	84.5	115.5	
As	75	1	He	988.999	988.999	1.672	225916	0.65	1000	98.9	84.5	115.5	
Se	78	1	He	1016.360	1016.360	1.962	10195	0.11	1000	101.6	84.5	115.5	
Sr	88	1	He	956.102	956.102	1.630	965703	0.60	1000	95.6	84.5	115.5	
Mo	95	1	He	103.716	103.716	1.563	130500	0.57	100	103.7	84.5	115.5	
Ag	107	1	He	101.553	101.553	0.710	472455	0.33	100	101.6	84.5	115.5	
Cd	111	1	He	1029.433	1029.433	2.461	515290	0.43	1000	102.9	84.5	115.5	
Sn	118	1	He	1022.335	1022.335	3.093	969689	1.06	1000	102.2	84.5	115.5	
Sb	123	1	He	102.561	102.561	3.266	109575	1.31	100	102.6	84.5	115.5	
Ba	137	1	He	1016.019	1016.019	1.828	380335	0.36	1000	101.6	84.5	115.5	
W	182	1	He	101.278	101.278	2.615	562175	1.69	100	101.3	84.5	115.5	
Tl	205	1	He	255.230	255.230	2.795	2251641	1.75	250	102.1	84.5	115.5	
Pb	208	1	He	1014.316	1014.316	1.362	11735706	0.23	1000	101.4	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1896196	1.51	1884762	100.61	60	120	
Sc	45	1	He	141254	4.79	134073	105.36	60	120	
Sc	45	2	NoGas	9114155	0.47	8481025	107.47	60	120	
Rh	103	1	He	915786	1.03	903580	101.35	60	120	
In	115	1	He	224600	2.03	224817	99.90	60	120	
Tb	159	1	He	1075078	1.43	1046002	102.78	60	120	
Ho	165	1	He	1079684	1.20	1057439	102.10	60	120	
Bi	209	1	He	716276	0.71	731380	97.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-A
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:09:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.947	15.947	0.18	538147	0.00	10000	
Be	9	45	2	NoGas	0.324	0.324	6.09	2348	0.01	2000	
B	11	45	2	NoGas	7.478	7.478	3.08	41674	0.02	300	
Na	23	45	1	He	7430.968	7430.968	2.01	3263905	0.23	500000	
Mg	24	45	1	He	38720.125	38720.125	3.15	9435668	0.41	500000	
Al	27	45	1	He	2.661	2.661	16.18	394	0.67	200000	
K	39	45	1	He	2992.467	2992.467	3.46	356444	0.84	500000	
Ca	44	45	1	He	111300.982	111300.982	2.86	755201	14.74	500000	
Ti	47	45	1	He	0.136	0.136	50.20	7	2.04	2500	
V	51	45	1	He	0.230	0.230	16.52	462	0.05	10000	
Cr	52	45	1	He	0.210	0.210	23.55	1209	0.02	10000	
Mn	55	45	1	He	1017.902	1017.902	3.12	1091886	0.09	10000	
Fe	56	45	1	He	347.061	347.061	2.61	578501	0.06	200000	
Co	59	45	1	He	5.017	5.017	5.65	20188	0.02	5000	
Ni	60	45	1	He	7.550	7.550	6.45	8550	0.09	10000	
Cu	63	45	1	He	0.341	0.341	8.24	3764	0.01	10000	
Zn	66	45	1	He	11.343	11.343	1.46	4713	0.24	10000	
As	75	103	1	He	0.863	0.863	14.24	216	0.40	10000	
Se	78	115	1	He	0.613	0.613	36.95	9	6.61	10000	
Sr	88	103	1	He	90.845	90.845	2.06	92359	0.10	10000	
Mo	95	103	1	He	0.476	0.476	3.56	617	0.08	2000	
Ag	107	103	1	He	0.018	0.018	26.54	91	0.02	300	
Cd	111	115	1	He	0.293	0.293	20.67	154	0.19	4000	
Sn	118	115	1	He	1.589	1.589	26.94	1871	0.08	2000	
Sb	123	115	1	He	0.185	0.185	18.00	248	0.07	200	
Ba	137	115	1	He	326.385	326.385	0.57	126604	0.26	10000	
W	182	159	1	He	1.168	1.168	8.44	7943	0.01	2500	
Tl	205	165	1	He	0.230	0.230	21.77	2065	0.01	2000	
Pb	208	165	1	He	0.173	0.173	19.75	3217	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1977505	0.60	1884762	104.92	60	120	
Sc	45	1	He	149525	1.48	134073	111.53	60	120	
Sc	45	2	NoGas	9546635	0.25	8481025	112.56	60	120	
Rh	103	1	He	921283	0.49	903580	101.96	60	120	
In	115	1	He	232669	0.65	224817	103.49	60	120	
Tb	159	1	He	1076789	0.66	1046002	102.94	60	120	
Ho	165	1	He	1077235	0.78	1057439	101.87	60	120	
Bi	209	1	He	720497	0.96	731380	98.51	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64160-D-4-A@5
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:14:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.952	2.952	2.68	202495	0.00	10000	
Be	9	45	2	NoGas	0.183	0.183	14.69	1370	0.01	2000	
B	11	45	2	NoGas	2.077	2.077	9.24	18391	0.01	300	
Na	23	45	1	He	1487.286	1487.286	0.30	675726	0.22	500000	
Mg	24	45	1	He	8092.822	8092.822	1.25	2027952	0.40	500000	
Al	27	45	1	He	0.462	0.462	111.45	176	0.26	200000	
K	39	45	1	He	617.253	617.253	1.15	83662	0.74	500000	
Ca	44	45	1	He	22759.834	22759.834	0.71	158937	14.32	500000	
Ti	47	45	1	He	0.088	0.088	86.60	4	1.98	2500	
V	51	45	1	He	-0.085	-0.085	-145.68	-90	0.09	10000	
Cr	52	45	1	He	-0.019	-0.019	-75.47	732	0.00	10000	
Mn	55	45	1	He	211.482	211.482	1.11	233340	0.09	10000	
Fe	56	45	1	He	70.948	70.948	0.21	123389	0.06	200000	
Co	59	45	1	He	0.985	0.985	5.35	4361	0.02	5000	
Ni	60	45	1	He	1.614	1.614	0.92	2008	0.08	10000	
Cu	63	45	1	He	0.030	0.030	429.50	2865	0.00	10000	
Zn	66	45	1	He	4.748	4.748	2.17	2126	0.22	10000	
As	75	103	1	He	0.199	0.199	9.99	67	0.30	10000	
Se	78	115	1	He	0.348	0.348	21.89	7	5.12	10000	
Sr	88	103	1	He	18.084	18.084	1.96	19387	0.09	10000	
Mo	95	103	1	He	0.069	0.069	19.70	107	0.06	2000	
Ag	107	103	1	He	0.006	0.006	28.22	40	0.02	300	
Cd	111	115	1	He	0.065	0.065	26.93	37	0.18	4000	
Sn	118	115	1	He	1.487	1.487	4.83	1845	0.08	2000	
Sb	123	115	1	He	0.053	0.053	24.01	107	0.05	200	
Ba	137	115	1	He	66.160	66.160	2.78	26721	0.25	10000	
W	182	159	1	He	0.213	0.213	7.93	2704	0.01	2500	
Tl	205	165	1	He	0.034	0.034	19.93	342	0.01	2000	
Pb	208	165	1	He	0.006	0.006	85.54	1302	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1921180	0.53	1884762	101.93	60	120	
Sc	45	1	He	153683	0.09	134073	114.63	60	120	
Sc	45	2	NoGas	9375443	0.88	8481025	110.55	60	120	
Rh	103	1	He	969898	0.61	903580	107.34	60	120	
In	115	1	He	242259	0.98	224817	107.76	60	120	
Tb	159	1	He	1100165	0.42	1046002	105.18	60	120	
Ho	165	1	He	1093727	0.34	1057439	103.43	60	120	
Bi	209	1	He	752689	0.85	731380	102.91	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64160-D-4-A
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:18:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	115.978	115.978	0.70	2980894	0.00	10000	
Be	9	45	2	NoGas	1073.586	1073.586	0.44	6973259	0.02	2000	
B	11	45	2	NoGas	109.470	109.470	1.00	457828	0.02	300	
Na	23	45	1	He	17855.972	17855.972	0.55	7610661	0.23	500000	
Mg	24	45	1	He	48589.388	48589.388	2.73	11499255	0.42	500000	
Al	27	45	1	He	10292.303	10292.303	2.14	1015123	1.01	200000	
K	39	45	1	He	13489.095	13489.095	1.39	1526918	0.88	500000	
Ca	44	45	1	He	120305.930	120305.930	1.81	792873	15.17	500000	
Ti	47	45	1	He	103.630	103.630	2.68	4944	2.10	2500	
V	51	45	1	He	1100.779	1100.779	2.45	1872805	0.06	10000	
Cr	52	45	1	He	1070.200	1070.200	1.98	2251313	0.05	10000	
Mn	55	45	1	He	2108.325	2108.325	2.37	2196384	0.10	10000	
Fe	56	45	1	He	10659.315	10659.315	2.16	17191298	0.06	200000	
Co	59	45	1	He	1067.094	1067.094	1.78	4100682	0.03	5000	
Ni	60	45	1	He	1024.546	1024.546	1.02	1105576	0.09	10000	
Cu	63	45	1	He	1046.961	1046.961	2.22	3189209	0.03	10000	
Zn	66	45	1	He	1012.970	1012.970	1.96	394550	0.26	10000	
As	75	103	1	He	1035.309	1035.309	1.93	235783	0.44	10000	
Se	78	115	1	He	1036.961	1036.961	2.07	10469	9.90	10000	
Sr	88	103	1	He	1086.086	1086.086	1.57	1093708	0.10	10000	
Mo	95	103	1	He	108.445	108.445	2.42	136035	0.08	2000	
Ag	107	103	1	He	101.594	101.594	1.61	471211	0.02	300	
Cd	111	115	1	He	1045.011	1045.011	2.40	526523	0.20	4000	
Sn	118	115	1	He	1042.906	1042.906	2.43	995773	0.10	2000	
Sb	123	115	1	He	104.971	104.971	1.91	112900	0.09	200	
Ba	137	115	1	He	1367.634	1367.634	2.28	515286	0.27	10000	
W	182	159	1	He	104.553	104.553	1.88	579918	0.02	2500	
Tl	205	165	1	He	261.777	261.777	2.72	2304947	0.01	2000	
Pb	208	165	1	He	1037.108	1037.108	1.10	11975413	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1893439	1.71	1884762	100.46	60	120	
Sc	45	1	He	145211	0.95	134073	108.31	60	120	
Sc	45	2	NoGas	9199623	0.41	8481025	108.47	60	120	
Rh	103	1	He	913015	0.74	903580	101.04	60	120	
In	115	1	He	226046	1.38	224817	100.55	60	120	
Tb	159	1	He	1074144	0.83	1046002	102.69	60	120	
Ho	165	1	He	1077480	1.03	1057439	101.90	60	120	
Bi	209	1	He	712802	1.71	731380	97.46	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-B MS
Data File Name	024SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:22:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	110.781	110.781	1.54	2880935	0.00	10000	
Be	9	45	2	NoGas	1022.741	1022.741	0.91	6708910	0.02	2000	
B	11	45	2	NoGas	106.220	106.220	1.09	448889	0.02	300	
Na	23	45	1	He	17352.647	17352.647	3.48	7357565	0.24	500000	
Mg	24	45	1	He	48972.996	48972.996	3.31	11531261	0.42	500000	
Al	27	45	1	He	9673.333	9673.333	2.79	949250	1.02	200000	
K	39	45	1	He	12998.531	12998.531	2.21	1464280	0.89	500000	
Ca	44	45	1	He	122882.086	122882.086	3.35	805660	15.25	500000	
Ti	47	45	1	He	103.100	103.100	6.16	4896	2.11	2500	
V	51	45	1	He	1040.801	1040.801	4.09	1761685	0.06	10000	
Cr	52	45	1	He	1017.723	1017.723	4.53	2129650	0.05	10000	
Mn	55	45	1	He	2088.824	2088.824	2.59	2165209	0.10	10000	
Fe	56	45	1	He	10111.521	10111.521	2.66	16225867	0.06	200000	
Co	59	45	1	He	1024.088	1024.088	2.47	3915546	0.03	5000	
Ni	60	45	1	He	973.959	973.959	3.14	1045580	0.09	10000	
Cu	63	45	1	He	992.540	992.540	2.67	3008417	0.03	10000	
Zn	66	45	1	He	957.028	957.028	2.18	370926	0.26	10000	
As	75	103	1	He	970.469	970.469	2.63	223927	0.43	10000	
Se	78	115	1	He	996.633	996.633	3.09	10043	9.92	10000	
Sr	88	103	1	He	1013.953	1013.953	3.03	1034456	0.10	10000	
Mo	95	103	1	He	103.068	103.068	3.21	130988	0.08	2000	
Ag	107	103	1	He	97.531	97.531	2.61	458306	0.02	300	
Cd	111	115	1	He	991.111	991.111	3.58	498401	0.20	4000	
Sn	118	115	1	He	1014.831	1014.831	3.77	967088	0.10	2000	
Sb	123	115	1	He	100.648	100.648	4.20	108033	0.09	200	
Ba	137	115	1	He	1311.860	1311.860	3.49	493311	0.27	10000	
W	182	159	1	He	100.511	100.511	2.88	560478	0.02	2500	
Tl	205	165	1	He	248.341	248.341	3.34	2204296	0.01	2000	
Pb	208	165	1	He	970.672	970.672	2.45	11299310	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1952589	0.74	1884762	103.60	60	120	
Sc	45	1	He	144512	2.02	134073	107.79	60	120	
Sc	45	2	NoGas	9291107	1.43	8481025	109.55	60	120	
Rh	103	1	He	925197	1.53	903580	102.39	60	120	
In	115	1	He	225693	2.42	224817	100.39	60	120	
Tb	159	1	He	1080124	1.77	1046002	103.26	60	120	
Ho	165	1	He	1086380	1.28	1057439	102.74	60	120	
Bi	209	1	He	716017	1.12	731380	97.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-C MSD
Data File Name	025SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:26:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	117.504	117.504	2.48	3019275	0.00	10000	
Be	9	45	2	NoGas	1099.047	1099.047	0.64	7141768	0.02	2000	
B	11	45	2	NoGas	114.293	114.293	1.53	477741	0.02	300	
Na	23	45	1	He	17805.788	17805.788	2.07	7821553	0.23	500000	
Mg	24	45	1	He	49858.366	49858.366	2.52	12161575	0.41	500000	
Al	27	45	1	He	9950.871	9950.871	2.35	1011509	0.98	200000	
K	39	45	1	He	13237.051	13237.051	2.19	1544394	0.86	500000	
Ca	44	45	1	He	125023.973	125023.973	2.49	849146	14.72	500000	
Ti	47	45	1	He	106.159	106.159	1.40	5221	2.03	2500	
V	51	45	1	He	1076.261	1076.261	1.60	1887440	0.06	10000	
Cr	52	45	1	He	1048.191	1048.191	2.71	2272379	0.05	10000	
Mn	55	45	1	He	2128.326	2128.326	2.79	2285148	0.09	10000	
Fe	56	45	1	He	10339.423	10339.423	2.83	17185718	0.06	200000	
Co	59	45	1	He	1045.233	1045.233	2.30	4139975	0.03	5000	
Ni	60	45	1	He	1006.609	1006.609	2.21	1119481	0.09	10000	
Cu	63	45	1	He	1020.348	1020.348	1.99	3203510	0.03	10000	
Zn	66	45	1	He	981.793	981.793	2.26	394137	0.25	10000	
As	75	103	1	He	1022.715	1022.715	1.69	238282	0.43	10000	
Se	78	115	1	He	1038.497	1038.497	2.06	10607	9.79	10000	
Sr	88	103	1	He	1073.236	1073.236	2.04	1105633	0.10	10000	
Mo	95	103	1	He	107.490	107.490	2.21	137944	0.08	2000	
Ag	107	103	1	He	102.154	102.154	1.18	484720	0.02	300	
Cd	111	115	1	He	1041.888	1041.888	2.59	531034	0.20	4000	
Sn	118	115	1	He	1052.772	1052.772	2.44	1016865	0.10	2000	
Sb	123	115	1	He	104.083	104.083	2.83	113239	0.09	200	
Ba	137	115	1	He	1375.970	1375.970	1.82	524464	0.26	10000	
W	182	159	1	He	103.942	103.942	1.93	597607	0.02	2500	
Tl	205	165	1	He	257.096	257.096	2.35	2336198	0.01	2000	
Pb	208	165	1	He	1010.897	1010.897	1.96	12046199	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1944259	1.98	1884762	103.16	60	120	
Sc	45	1	He	149680	1.56	134073	111.64	60	120	
Sc	45	2	NoGas	9203880	1.19	8481025	108.52	60	120	
Rh	103	1	He	934042	0.74	903580	103.37	60	120	
In	115	1	He	228682	1.63	224817	101.72	60	120	
Tb	159	1	He	1113536	1.32	1046002	106.46	60	120	
Ho	165	1	He	1112029	1.12	1057439	105.16	60	120	
Bi	209	1	He	727521	1.12	731380	99.47	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-B-1-A
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:30:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.262	15.262	1.40	531308	0.00	10000	
Be	9	45	2	NoGas	0.690	0.690	4.01	4916	0.01	2000	
B	11	45	2	NoGas	7.635	7.635	3.02	43222	0.02	300	
Na	23	45	1	He	3996.710	3996.710	2.44	1782390	0.22	500000	
Mg	24	45	1	He	24877.071	24877.071	2.27	6147442	0.40	500000	
Al	27	45	1	He	2.187	2.187	28.42	351	0.62	200000	
K	39	45	1	He	3544.214	3544.214	2.15	426234	0.83	500000	
Ca	44	45	1	He	69642.533	69642.533	1.43	479276	14.53	500000	
Ti	47	45	1	He	0.201	0.201	33.95	10	2.01	2500	
V	51	45	1	He	0.042	0.042	187.81	136	0.03	10000	
Cr	52	45	1	He	0.177	0.177	32.12	1153	0.02	10000	
Mn	55	45	1	He	68.212	68.212	1.73	74343	0.09	10000	
Fe	56	45	1	He	8.092	8.092	8.74	15888	0.05	200000	
Co	59	45	1	He	0.761	0.761	1.82	3401	0.02	5000	
Ni	60	45	1	He	4.242	4.242	3.69	4940	0.09	10000	
Cu	63	45	1	He	0.167	0.167	92.28	3264	0.01	10000	
Zn	66	45	1	He	2.025	2.025	5.44	990	0.20	10000	
As	75	103	1	He	0.510	0.510	13.51	141	0.36	10000	
Se	78	115	1	He	0.881	0.881	45.40	12	7.18	10000	
Sr	88	103	1	He	39.169	39.169	1.95	41519	0.09	10000	
Mo	95	103	1	He	0.242	0.242	10.22	333	0.07	2000	
Ag	107	103	1	He	0.016	0.016	27.50	87	0.02	300	
Cd	111	115	1	He	0.467	0.467	10.15	248	0.19	4000	
Sn	118	115	1	He	2.806	2.806	27.84	3123	0.09	2000	
Sb	123	115	1	He	0.268	0.268	18.98	346	0.08	200	
Ba	137	115	1	He	145.862	145.862	2.49	57440	0.25	10000	
W	182	159	1	He	0.535	0.535	13.47	4682	0.01	2500	
Tl	205	165	1	He	0.204	0.204	16.86	1937	0.01	2000	
Pb	208	165	1	He	0.141	0.141	26.89	2993	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108241	1.30	1884762	111.86	60	120	
Sc	45	1	He	151606	0.75	134073	113.08	60	120	
Sc	45	2	NoGas	9742773	1.33	8481025	114.88	60	120	
Rh	103	1	He	960102	0.40	903580	106.26	60	120	
In	115	1	He	236253	1.41	224817	105.09	60	120	
Tb	159	1	He	1136475	1.02	1046002	108.65	60	120	
Ho	165	1	He	1134001	0.72	1057439	107.24	60	120	
Bi	209	1	He	758539	0.58	731380	103.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-2-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:34:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.277	5.277	2.38	265277	0.00	10000	
Be	9	45	2	NoGas	0.611	0.611	3.69	4275	0.01	2000	
B	11	45	2	NoGas	5.320	5.320	1.63	32463	0.02	300	
Na	23	45	1	He	5048.632	5048.632	2.24	2228010	0.23	500000	
Mg	24	45	1	He	5395.092	5395.092	0.94	1320767	0.41	500000	
Al	27	45	1	He	22.476	22.476	1.77	2416	0.93	200000	
K	39	45	1	He	3791.009	3791.009	2.03	450736	0.84	500000	
Ca	44	45	1	He	9135.105	9135.105	1.24	62436	14.63	500000	
Ti	47	45	1	He	0.204	0.204	120.34	10	2.04	2500	
V	51	45	1	He	0.023	0.023	722.49	99	0.02	10000	
Cr	52	45	1	He	0.177	0.177	24.79	1140	0.02	10000	
Mn	55	45	1	He	1373.106	1373.106	3.04	1478840	0.09	10000	
Fe	56	45	1	He	1286.645	1286.645	1.21	2147312	0.06	200000	
Co	59	45	1	He	4.126	4.126	1.90	16737	0.02	5000	
Ni	60	45	1	He	6.257	6.257	2.08	7139	0.09	10000	
Cu	63	45	1	He	6.505	6.505	2.35	23173	0.03	10000	
Zn	66	45	1	He	31.813	31.813	2.91	12969	0.25	10000	
As	75	103	1	He	0.570	0.570	11.32	157	0.36	10000	
Se	78	115	1	He	0.438	0.438	30.43	8	5.62	10000	
Sr	88	103	1	He	40.311	40.311	1.57	43244	0.09	10000	
Mo	95	103	1	He	0.077	0.077	5.19	117	0.07	2000	
Ag	107	103	1	He	0.101	0.101	8.15	509	0.02	300	
Cd	111	115	1	He	0.386	0.386	7.79	210	0.18	4000	
Sn	118	115	1	He	0.776	0.776	24.60	1119	0.07	2000	
Sb	123	115	1	He	0.101	0.101	19.18	162	0.06	200	
Ba	137	115	1	He	119.367	119.367	1.05	48218	0.25	10000	
W	182	159	1	He	0.085	0.085	63.40	2026	0.00	2500	
Tl	205	165	1	He	0.109	0.109	7.41	1049	0.01	2000	
Pb	208	165	1	He	0.339	0.339	4.89	5403	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2128102	1.24	1884762	112.91	60	120	
Sc	45	1	He	150116	0.91	134073	111.97	60	120	
Sc	45	2	NoGas	9535583	1.11	8481025	112.43	60	120	
Rh	103	1	He	971650	0.44	903580	107.53	60	120	
In	115	1	He	242294	0.91	224817	107.77	60	120	
Tb	159	1	He	1125516	0.13	1046002	107.60	60	120	
Ho	165	1	He	1133486	0.16	1057439	107.19	60	120	
Bi	209	1	He	774837	0.65	731380	105.94	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	028_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:38:41-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.845	1.459	1358703	1.76	50	101.7	89.5	110.5	
Be	9	45	2	NoGas	52.126	1.175	334050	0.77	50	104.3	89.5	110.5	
B	11	45	2	NoGas	52.013	1.063	219471	1.14	50	104.0	89.5	110.5	
Na	23	45	1	He	25039.215	1.998	10962800	0.61	25000	100.2	89.5	110.5	
Mg	24	45	1	He	24774.786	2.017	6025082	0.60	25000	99.1	89.5	110.5	
Al	27	45	1	He	249.171	1.953	25374	1.87	250	99.7	89.5	110.5	
K	39	45	1	He	25060.418	2.475	2905800	0.14	25000	100.2	89.5	110.5	
Ca	44	45	1	He	24863.429	1.989	168528	0.77	25000	99.5	89.5	110.5	
Ti	47	45	1	He	48.944	5.559	2398	3.20	50	97.9	89.5	110.5	
V	51	45	1	He	49.816	1.474	87151	1.15	50	99.6	89.5	110.5	
Cr	52	45	1	He	49.775	2.719	108286	0.74	50	99.5	89.5	110.5	
Mn	55	45	1	He	244.524	2.736	261849	0.46	250	97.8	89.5	110.5	
Fe	56	45	1	He	12369.091	2.432	20495434	0.33	12500	99.0	89.5	110.5	
Co	59	45	1	He	50.042	1.939	197918	0.70	50	100.1	89.5	110.5	
Ni	60	45	1	He	49.884	2.030	55458	0.95	50	99.8	89.5	110.5	
Cu	63	45	1	He	49.823	2.579	158494	1.31	50	99.6	89.5	110.5	
Zn	66	45	1	He	48.410	1.995	19533	2.11	50	96.8	89.5	110.5	
As	75	103	1	He	48.731	3.722	11502	1.38	50	97.5	89.5	110.5	
Se	78	115	1	He	50.396	12.588	531	9.29	50	100.8	89.5	110.5	
Sr	88	103	1	He	49.112	1.596	51235	1.10	50	98.2	89.5	110.5	
Mo	95	103	1	He	51.360	2.947	66688	0.92	50	102.7	89.5	110.5	
Ag	107	103	1	He	49.465	1.952	237485	0.98	50	98.9	89.5	110.5	
Cd	111	115	1	He	50.440	2.989	26419	0.56	50	100.9	89.5	110.5	
Sn	118	115	1	He	49.416	4.006	49335	1.11	50	98.8	89.5	110.5	
Sb	123	115	1	He	49.796	3.486	55687	0.10	50	99.6	89.5	110.5	
Ba	137	115	1	He	48.477	3.312	18991	1.33	50	97.0	89.5	110.5	
W	182	159	1	He	51.178	3.274	295223	2.54	50	102.4	89.5	110.5	
Tl	205	165	1	He	48.356	2.669	442562	1.35	50	96.7	89.5	110.5	
Pb	208	165	1	He	48.562	2.350	584019	0.97	50	97.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2015843	0.70	1884762	106.95	60	120	
Sc	45	1	He	149238	2.63	134073	111.31	60	120	
Sc	45	2	NoGas	9073243	1.05	8481025	106.98	60	120	
Rh	103	1	He	945332	2.72	903580	104.62	60	120	
In	115	1	He	235093	3.60	224817	104.57	60	120	
Tb	159	1	He	1114621	2.79	1046002	106.56	60	120	
Ho	165	1	He	1120317	3.00	1057439	105.95	60	120	
Bi	209	1	He	736651	1.54	731380	100.72	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	029_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:42:50-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.010	403.6	129520	0.9	8	
Be	9	45	2	NoGas	0.267	6.5	1937	5.5	1	
B	11	45	2	NoGas	2.122	11.5	18688	4.9	20	
Na	23	45	1	He	9.960	12.5	9325	5.7	1000	
Mg	24	45	1	He	1.632	55.1	1096	19.9	1000	
Al	27	45	1	He	0.301	49.2	152	9.9	50	
K	39	45	1	He	3.045	75.7	10103	2.4	1000	
Ca	44	45	1	He	8.914	41.9	270	9.1	1000	
Ti	47	45	1	He	0.092	173.2	4	173.2	20	
V	51	45	1	He	-0.073	-233.8	-66	-443.2	2	
Cr	52	45	1	He	-0.016	-10.8	709	0.7	2	
Mn	55	45	1	He	0.041	88.2	191	20.2	2	
Fe	56	45	1	He	2.803	23.7	6783	16.3	50	
Co	59	45	1	He	-0.006	-190.4	316	14.8	1	
Ni	60	45	1	He	-0.023	-54.0	132	10.5	2	
Cu	63	45	1	He	-0.197	-19.7	2048	5.9	2	
Zn	66	45	1	He	0.107	16.6	204	3.4	20	
As	75	103	1	He	0.065	39.7	35	17.3	2	
Se	78	115	1	He	0.322	81.1	6	42.8	2	
Sr	88	103	1	He	0.005	320.5	48	38.4	10	
Mo	95	103	1	He	0.074	18.5	113	15.6	2	
Ag	107	103	1	He	0.009	22.4	54	18.7	0.2	
Cd	111	115	1	He	0.075	17.4	42	17.0	0.2	
Sn	118	115	1	He	0.351	21.7	678	11.8	10	
Sb	123	115	1	He	0.054	33.3	107	19.5	2	
Ba	137	115	1	He	0.027	82.2	17	52.9	5	
W	182	159	1	He	0.215	22.3	2719	9.8	10	
Tl	205	165	1	He	0.053	32.0	523	29.6	0.5	
Pb	208	165	1	He	0.020	29.1	1497	4.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2073432	1.25	1884762	110.01	60	120	
Sc	45	1	He	147324	0.22	134073	109.88	60	120	
Sc	45	2	NoGas	9434326	0.59	8481025	111.24	60	120	
Rh	103	1	He	977875	0.85	903580	108.22	60	120	
In	115	1	He	240385	0.46	224817	106.92	60	120	
Tb	159	1	He	1102783	0.32	1046002	105.43	60	120	
Ho	165	1	He	1112090	0.16	1057439	105.17	60	120	
Bi	209	1	He	760320	0.48	731380	103.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-3-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:47:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.577	25.577	1.40	803499	0.00	10000	
Be	9	45	2	NoGas	0.186	0.186	12.38	1452	0.01	2000	
B	11	45	2	NoGas	8.498	8.498	3.84	47142	0.02	300	
Na	23	45	1	He	5686.827	5686.827	1.95	2482650	0.23	500000	
Mg	24	45	1	He	49832.647	49832.647	1.44	12065006	0.41	500000	
Al	27	45	1	He	1.017	1.017	37.72	226	0.45	200000	
K	39	45	1	He	3934.613	3934.613	1.77	462479	0.85	500000	
Ca	44	45	1	He	138469.873	138469.873	1.80	933437	14.83	500000	
Ti	47	45	1	He	0.159	0.159	49.48	8	2.05	2500	
V	51	45	1	He	0.129	0.129	28.86	285	0.05	10000	
Cr	52	45	1	He	0.105	0.105	63.13	974	0.01	10000	
Mn	55	45	1	He	417.939	417.939	1.47	445494	0.09	10000	
Fe	56	45	1	He	1638.068	1638.068	1.89	2704279	0.06	200000	
Co	59	45	1	He	5.677	5.677	0.24	22657	0.03	5000	
Ni	60	45	1	He	15.170	15.170	3.00	16905	0.09	10000	
Cu	63	45	1	He	-0.197	-0.197	-33.41	2062	-0.01	10000	
Zn	66	45	1	He	5.598	5.598	5.10	2392	0.23	10000	
As	75	103	1	He	1.574	1.574	4.44	385	0.41	10000	
Se	78	115	1	He	0.260	0.260	92.26	6	4.61	10000	
Sr	88	103	1	He	84.835	84.835	0.92	87396	0.10	10000	
Mo	95	103	1	He	0.112	0.112	4.84	158	0.07	2000	
Ag	107	103	1	He	0.009	0.009	25.43	52	0.02	300	
Cd	111	115	1	He	0.043	0.043	32.98	24	0.18	4000	
Sn	118	115	1	He	0.156	0.156	37.12	467	0.03	2000	
Sb	123	115	1	He	0.043	0.043	57.49	92	0.05	200	
Ba	137	115	1	He	591.653	591.653	0.85	230813	0.26	10000	
W	182	159	1	He	0.054	0.054	61.95	1808	0.00	2500	
Tl	205	165	1	He	0.062	0.062	8.10	610	0.01	2000	
Pb	208	165	1	He	0.009	0.009	124.69	1361	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2095614	0.51	1884762	111.19	60	120	
Sc	45	1	He	148520	1.28	134073	110.78	60	120	
Sc	45	2	NoGas	9782521	0.62	8481025	115.35	60	120	
Rh	103	1	He	933518	1.07	903580	103.31	60	120	
In	115	1	He	234009	1.10	224817	104.09	60	120	
Tb	159	1	He	1102927	0.93	1046002	105.44	60	120	
Ho	165	1	He	1112518	0.91	1057439	105.21	60	120	
Bi	209	1	He	729489	0.49	731380	99.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-5-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:51:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.838	15.838	2.75	537401	0.00	10000	
Be	9	45	2	NoGas	0.194	0.194	6.80	1474	0.01	2000	
B	11	45	2	NoGas	7.580	7.580	6.24	42260	0.02	300	
Na	23	45	1	He	7121.215	7121.215	1.90	3157792	0.23	500000	
Mg	24	45	1	He	37410.256	37410.256	1.74	9203755	0.41	500000	
Al	27	45	1	He	1.146	1.146	31.35	242	0.47	200000	
K	39	45	1	He	2880.235	2880.235	1.44	346772	0.83	500000	
Ca	44	45	1	He	107118.995	107118.995	2.30	733780	14.60	500000	
Ti	47	45	1	He	0.133	0.133	86.61	7	2.00	2500	
V	51	45	1	He	-0.139	-0.139	-101.06	-185	0.07	10000	
Cr	52	45	1	He	0.002	0.002	1603.65	766	0.00	10000	
Mn	55	45	1	He	969.881	969.881	2.18	1050336	0.09	10000	
Fe	56	45	1	He	326.131	326.131	2.33	548909	0.06	200000	
Co	59	45	1	He	4.647	4.647	2.12	18912	0.02	5000	
Ni	60	45	1	He	7.000	7.000	5.64	8010	0.09	10000	
Cu	63	45	1	He	0.023	0.023	58.14	2794	0.00	10000	
Zn	66	45	1	He	11.060	11.060	5.02	4643	0.24	10000	
As	75	103	1	He	0.562	0.562	2.15	151	0.37	10000	
Se	78	115	1	He	0.303	0.303	48.83	6	4.94	10000	
Sr	88	103	1	He	83.994	83.994	0.87	87584	0.10	10000	
Mo	95	103	1	He	0.192	0.192	11.48	263	0.07	2000	
Ag	107	103	1	He	0.006	0.006	56.67	36	0.02	300	
Cd	111	115	1	He	0.050	0.050	10.77	28	0.18	4000	
Sn	118	115	1	He	0.042	0.042	21.25	356	0.01	2000	
Sb	123	115	1	He	0.023	0.023	54.17	70	0.03	200	
Ba	137	115	1	He	309.758	309.758	1.34	121552	0.25	10000	
W	182	159	1	He	0.700	0.700	2.35	5538	0.01	2500	
Tl	205	165	1	He	0.061	0.061	15.42	598	0.01	2000	
Pb	208	165	1	He	-0.008	-0.008	-172.99	1162	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2072325	0.70	1884762	109.95	60	120	
Sc	45	1	He	150951	1.63	134073	112.59	60	120	
Sc	45	2	NoGas	9585652	2.18	8481025	113.02	60	120	
Rh	103	1	He	944900	0.62	903580	104.57	60	120	
In	115	1	He	235375	0.75	224817	104.70	60	120	
Tb	159	1	He	1114952	1.52	1046002	106.59	60	120	
Ho	165	1	He	1115386	1.63	1057439	105.48	60	120	
Bi	209	1	He	735836	1.11	731380	100.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-6-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:55:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.276	4.276	2.89	232227	0.00	10000	
Be	9	45	2	NoGas	0.184	0.184	5.23	1356	0.01	2000	
B	11	45	2	NoGas	8.846	8.846	3.79	45950	0.02	300	
Na	23	45	1	He	2440.781	2440.781	2.05	1034730	0.24	500000	
Mg	24	45	1	He	17926.377	17926.377	2.47	4203156	0.43	500000	
Al	27	45	1	He	28.637	28.637	2.49	2918	0.98	200000	
K	39	45	1	He	2822.826	2822.826	1.86	324061	0.87	500000	
Ca	44	45	1	He	43090.503	43090.503	2.89	281426	15.31	500000	
Ti	47	45	1	He	0.610	0.610	16.16	29	2.11	2500	
V	51	45	1	He	-0.026	-0.026	-1180.43	15	-0.17	10000	
Cr	52	45	1	He	0.245	0.245	10.54	1235	0.02	10000	
Mn	55	45	1	He	11595.295	11595.295	3.03	11964704	0.10	10000	>LDR
Fe	56	45	1	He	4251.125	4251.125	2.35	6793250	0.06	200000	
Co	59	45	1	He	35.820	35.820	2.92	136665	0.03	5000	
Ni	60	45	1	He	7.628	7.628	2.34	8309	0.09	10000	
Cu	63	45	1	He	0.612	0.612	4.48	4437	0.01	10000	
Zn	66	45	1	He	8.517	8.517	7.06	3442	0.25	10000	
As	75	103	1	He	0.358	0.358	8.28	101	0.35	10000	
Se	78	115	1	He	0.394	0.394	104.75	7	5.66	10000	
Sr	88	103	1	He	128.561	128.561	1.45	131719	0.10	10000	
Mo	95	103	1	He	0.170	0.170	2.94	230	0.07	2000	
Ag	107	103	1	He	0.048	0.048	7.08	232	0.02	300	
Cd	111	115	1	He	0.205	0.205	19.16	107	0.19	4000	
Sn	118	115	1	He	0.045	0.045	420.49	352	0.01	2000	
Sb	123	115	1	He	0.037	0.037	90.57	84	0.04	200	
Ba	137	115	1	He	125.031	125.031	0.87	48241	0.26	10000	
W	182	159	1	He	0.010	0.010	448.96	1552	0.00	2500	
Tl	205	165	1	He	0.043	0.043	9.90	430	0.01	2000	
Pb	208	165	1	He	0.021	0.021	53.96	1490	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2081719	0.70	1884762	110.45	60	120	
Sc	45	1	He	143877	2.14	134073	107.31	60	120	
Sc	45	2	NoGas	9237685	1.20	8481025	108.92	60	120	
Rh	103	1	He	928588	0.55	903580	102.77	60	120	
In	115	1	He	231419	0.91	224817	102.94	60	120	
Tb	159	1	He	1100999	0.47	1046002	105.26	60	120	
Ho	165	1	He	1101363	0.37	1057439	104.15	60	120	
Bi	209	1	He	749493	0.75	731380	102.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-7-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:59:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.953	11.953	0.66	441807	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	9.14	1085	0.01	2000	
B	11	45	2	NoGas	10.536	10.536	4.04	55372	0.02	300	
Na	23	45	1	He	4078.190	4078.190	1.22	1774499	0.23	500000	
Mg	24	45	1	He	19241.407	19241.407	1.35	4640730	0.41	500000	
Al	27	45	1	He	16.176	16.176	4.26	1748	0.93	200000	
K	39	45	1	He	3210.291	3210.291	0.08	377668	0.85	500000	
Ca	44	45	1	He	68067.802	68067.802	0.23	457101	14.89	500000	
Ti	47	45	1	He	0.595	0.595	29.02	29	2.06	2500	
V	51	45	1	He	0.092	0.092	134.98	217	0.04	10000	
Cr	52	45	1	He	0.613	0.613	11.22	2059	0.03	10000	
Mn	55	45	1	He	3.536	3.536	7.43	3898	0.09	10000	
Fe	56	45	1	He	29.920	29.920	1.38	51358	0.06	200000	
Co	59	45	1	He	-0.007	-0.007	-13.42	314	0.00	5000	
Ni	60	45	1	He	0.127	0.127	24.39	298	0.04	10000	
Cu	63	45	1	He	-0.011	-0.011	-377.65	2631	0.00	10000	
Zn	66	45	1	He	1.242	1.242	6.35	656	0.19	10000	
As	75	103	1	He	0.108	0.108	33.52	43	0.25	10000	
Se	78	115	1	He	0.081	0.081	266.24	4	2.12	10000	
Sr	88	103	1	He	35.581	35.581	1.34	36722	0.10	10000	
Mo	95	103	1	He	0.250	0.250	3.88	334	0.07	2000	
Ag	107	103	1	He	0.001	0.001	107.46	14	0.01	300	
Cd	111	115	1	He	0.029	0.029	9.48	17	0.17	4000	
Sn	118	115	1	He	0.029	0.029	64.08	344	0.01	2000	
Sb	123	115	1	He	0.016	0.016	137.62	62	0.03	200	
Ba	137	115	1	He	181.846	181.846	0.64	71680	0.25	10000	
W	182	159	1	He	0.008	0.008	314.16	1537	0.00	2500	
Tl	205	165	1	He	0.006	0.006	18.40	98	0.01	2000	
Pb	208	165	1	He	0.026	0.026	7.42	1562	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2088060	1.28	1884762	110.79	60	120	
Sc	45	1	He	147927	1.64	134073	110.33	60	120	
Sc	45	2	NoGas	9670714	0.73	8481025	114.03	60	120	
Rh	103	1	He	934628	1.27	903580	103.44	60	120	
In	115	1	He	236424	0.86	224817	105.16	60	120	
Tb	159	1	He	1098514	0.46	1046002	105.02	60	120	
Ho	165	1	He	1106376	0.25	1057439	104.63	60	120	
Bi	209	1	He	748550	0.76	731380	102.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-8-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:03:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.398	9.398	1.51	372551	0.00	10000	
Be	9	45	2	NoGas	0.100	0.100	6.85	841	0.01	2000	
B	11	45	2	NoGas	4.309	4.309	7.98	28330	0.02	300	
Na	23	45	1	He	509.326	509.326	1.12	227759	0.22	500000	
Mg	24	45	1	He	18244.667	18244.667	0.93	4433083	0.41	500000	
Al	27	45	1	He	14.925	14.925	4.97	1635	0.91	200000	
K	39	45	1	He	1041.278	1041.278	1.93	130085	0.80	500000	
Ca	44	45	1	He	19958.210	19958.210	0.72	135197	14.76	500000	
Ti	47	45	1	He	0.543	0.543	49.43	27	2.04	2500	
V	51	45	1	He	-0.105	-0.105	-171.15	-124	0.08	10000	
Cr	52	45	1	He	1.711	1.711	3.61	4444	0.04	10000	
Mn	55	45	1	He	1.135	1.135	8.21	1363	0.08	10000	
Fe	56	45	1	He	15.316	15.316	0.92	27573	0.06	200000	
Co	59	45	1	He	-0.006	-0.006	-29.06	320	0.00	5000	
Ni	60	45	1	He	0.133	0.133	9.03	307	0.04	10000	
Cu	63	45	1	He	-0.137	-0.137	-27.07	2258	-0.01	10000	
Zn	66	45	1	He	1.981	1.981	9.10	956	0.21	10000	
As	75	103	1	He	0.105	0.105	12.16	44	0.24	10000	
Se	78	115	1	He	0.124	0.124	95.71	4	2.87	10000	
Sr	88	103	1	He	24.635	24.635	1.84	26180	0.09	10000	
Mo	95	103	1	He	0.210	0.210	2.50	292	0.07	2000	
Ag	107	103	1	He	0.005	0.005	33.81	34	0.02	300	
Cd	111	115	1	He	0.033	0.033	21.30	20	0.17	4000	
Sn	118	115	1	He	0.023	0.023	573.31	341	0.01	2000	
Sb	123	115	1	He	0.067	0.067	28.14	121	0.06	200	
Ba	137	115	1	He	776.232	776.232	0.58	308643	0.25	10000	
W	182	159	1	He	0.179	0.179	20.89	2567	0.01	2500	
Tl	205	165	1	He	0.005	0.005	24.31	90	0.01	2000	
Pb	208	165	1	He	0.045	0.045	22.53	1819	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089912	1.76	1884762	110.88	60	120	
Sc	45	1	He	149047	0.69	134073	111.17	60	120	
Sc	45	2	NoGas	9590292	0.71	8481025	113.08	60	120	
Rh	103	1	He	962093	1.32	903580	106.48	60	120	
In	115	1	He	238510	0.92	224817	106.09	60	120	
Tb	159	1	He	1125922	0.29	1046002	107.64	60	120	
Ho	165	1	He	1124891	0.16	1057439	106.38	60	120	
Bi	209	1	He	762414	0.22	731380	104.24	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-9-a
Data File Name	035SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:08:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.256	6.256	1.04	294290	0.00	10000	
Be	9	45	2	NoGas	0.105	0.105	15.46	882	0.01	2000	
B	11	45	2	NoGas	24.614	24.614	1.80	115944	0.02	300	
Na	23	45	1	He	2774.794	2774.794	3.86	1233192	0.23	500000	
Mg	24	45	1	He	27735.171	27735.171	1.28	6821320	0.41	500000	
Al	27	45	1	He	17.667	17.667	7.10	1936	0.91	200000	
K	39	45	1	He	1762.311	1762.311	1.06	215954	0.82	500000	
Ca	44	45	1	He	64875.849	64875.849	1.11	444348	14.60	500000	
Ti	47	45	1	He	0.224	0.224	45.98	11	2.02	2500	
V	51	45	1	He	0.028	0.028	409.84	110	0.03	10000	
Cr	52	45	1	He	0.930	0.930	5.52	2792	0.03	10000	
Mn	55	45	1	He	2.004	2.004	3.01	2320	0.09	10000	
Fe	56	45	1	He	33.560	33.560	1.92	58482	0.06	200000	
Co	59	45	1	He	0.035	0.035	61.78	488	0.01	5000	
Ni	60	45	1	He	0.874	0.874	8.35	1141	0.08	10000	
Cu	63	45	1	He	0.111	0.111	36.48	3070	0.00	10000	
Zn	66	45	1	He	6.425	6.425	6.34	2765	0.23	10000	
As	75	103	1	He	0.246	0.246	19.53	77	0.32	10000	
Se	78	115	1	He	0.798	0.798	39.04	11	6.98	10000	
Sr	88	103	1	He	61.656	61.656	1.95	64775	0.10	10000	
Mo	95	103	1	He	1.735	1.735	2.66	2284	0.08	2000	
Ag	107	103	1	He	0.006	0.006	35.04	39	0.02	300	
Cd	111	115	1	He	0.016	0.016	23.93	10	0.16	4000	
Sn	118	115	1	He	0.046	0.046	138.43	363	0.01	2000	
Sb	123	115	1	He	0.032	0.032	18.54	81	0.04	200	
Ba	137	115	1	He	165.079	165.079	0.72	65402	0.25	10000	
W	182	159	1	He	0.361	0.361	6.86	3604	0.01	2500	
Tl	205	165	1	He	0.030	0.030	14.68	314	0.01	2000	
Pb	208	165	1	He	0.045	0.045	16.56	1786	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089276	2.06	1884762	110.85	60	120	
Sc	45	1	He	150872	0.51	134073	112.53	60	120	
Sc	45	2	NoGas	9667645	0.39	8481025	113.99	60	120	
Rh	103	1	He	951791	0.73	903580	105.34	60	120	
In	115	1	He	237633	0.72	224817	105.70	60	120	
Tb	159	1	He	1118804	0.45	1046002	106.96	60	120	
Ho	165	1	He	1107563	0.11	1057439	104.74	60	120	
Bi	209	1	He	751118	0.45	731380	102.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-10-a
Data File Name	036SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:12:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.187	5.187	2.42	274245	0.00	10000	
Be	9	45	2	NoGas	0.082	0.082	6.17	748	0.01	2000	
B	11	45	2	NoGas	9.070	9.070	2.41	50450	0.02	300	
Na	23	45	1	He	568.284	568.284	1.06	260905	0.22	500000	
Mg	24	45	1	He	24400.748	24400.748	0.73	6100740	0.40	500000	
Al	27	45	1	He	5.724	5.724	4.80	723	0.79	200000	
K	39	45	1	He	1214.358	1214.358	0.75	154435	0.79	500000	
Ca	44	45	1	He	25694.174	25694.174	0.63	179037	14.35	500000	
Ti	47	45	1	He	0.132	0.132	50.40	7	1.99	2500	
V	51	45	1	He	0.018	0.018	1320.53	93	0.02	10000	
Cr	52	45	1	He	0.064	0.064	19.99	916	0.01	10000	
Mn	55	45	1	He	1.396	1.396	6.09	1690	0.08	10000	
Fe	56	45	1	He	18.070	18.070	2.53	33068	0.05	200000	
Co	59	45	1	He	0.017	0.017	61.53	423	0.00	5000	
Ni	60	45	1	He	0.075	0.075	34.07	250	0.03	10000	
Cu	63	45	1	He	-0.321	-0.321	-9.00	1732	-0.02	10000	
Zn	66	45	1	He	3.807	3.807	10.45	1735	0.22	10000	
As	75	103	1	He	0.292	0.292	3.64	90	0.32	10000	
Se	78	115	1	He	0.189	0.189	73.57	5	3.69	10000	
Sr	88	103	1	He	42.019	42.019	0.78	45133	0.09	10000	
Mo	95	103	1	He	2.332	2.332	1.14	3133	0.07	2000	
Ag	107	103	1	He	0.001	0.001	51.94	12	0.01	300	
Cd	111	115	1	He	0.019	0.019	53.44	12	0.16	4000	
Sn	118	115	1	He	0.028	0.028	314.51	356	0.01	2000	
Sb	123	115	1	He	0.022	0.022	66.56	71	0.03	200	
Ba	137	115	1	He	110.006	110.006	1.06	44860	0.25	10000	
W	182	159	1	He	0.002	0.002	1261.86	1545	0.00	2500	
Tl	205	165	1	He	0.003	0.003	57.97	76	0.00	2000	
Pb	208	165	1	He	-0.016	-0.016	-33.76	1098	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2147237	1.56	1884762	113.93	60	120	
Sc	45	1	He	153371	0.44	134073	114.39	60	120	
Sc	45	2	NoGas	9944246	1.12	8481025	117.25	60	120	
Rh	103	1	He	972957	0.92	903580	107.68	60	120	
In	115	1	He	244588	0.26	224817	108.79	60	120	
Tb	159	1	He	1127235	0.32	1046002	107.77	60	120	
Ho	165	1	He	1141374	0.57	1057439	107.94	60	120	
Bi	209	1	He	769929	0.32	731380	105.27	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-11-a
Data File Name	037SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:16:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.033	10.033	2.07	395240	0.00	10000	
Be	9	45	2	NoGas	0.100	0.100	10.72	856	0.01	2000	
B	11	45	2	NoGas	34.545	34.545	1.03	160014	0.02	300	
Na	23	45	1	He	4836.192	4836.192	0.25	2144218	0.23	500000	
Mg	24	45	1	He	24709.015	24709.015	0.80	6073012	0.41	500000	
Al	27	45	1	He	361.261	361.261	2.53	37115	0.97	200000	
K	39	45	1	He	2357.240	2357.240	1.08	285291	0.83	500000	
Ca	44	45	1	He	71778.619	71778.619	1.34	491269	14.61	500000	
Ti	47	45	1	He	7.918	7.918	3.98	392	2.02	2500	
V	51	45	1	He	1.541	1.541	12.34	2780	0.06	10000	
Cr	52	45	1	He	1.078	1.078	4.61	3113	0.03	10000	
Mn	55	45	1	He	33.474	33.474	1.89	36358	0.09	10000	
Fe	56	45	1	He	1446.722	1446.722	2.56	2424831	0.06	200000	
Co	59	45	1	He	0.163	0.163	17.35	998	0.02	5000	
Ni	60	45	1	He	0.254	0.254	8.08	446	0.06	10000	
Cu	63	45	1	He	0.069	0.069	31.57	2935	0.00	10000	
Zn	66	45	1	He	2.942	2.942	11.07	1357	0.22	10000	
As	75	103	1	He	0.491	0.491	6.63	136	0.36	10000	
Se	78	115	1	He	0.524	0.524	18.52	9	6.07	10000	
Sr	88	103	1	He	63.962	63.962	1.88	67782	0.09	10000	
Mo	95	103	1	He	0.467	0.467	22.38	630	0.07	2000	
Ag	107	103	1	He	0.001	0.001	180.11	11	0.01	300	
Cd	111	115	1	He	0.026	0.026	23.21	16	0.17	4000	
Sn	118	115	1	He	0.038	0.038	87.40	359	0.01	2000	
Sb	123	115	1	He	-0.001	-0.001	-2375.47	44	0.00	200	
Ba	137	115	1	He	183.678	183.678	0.63	73472	0.25	10000	
W	182	159	1	He	0.026	0.026	72.00	1682	0.00	2500	
Tl	205	165	1	He	0.018	0.018	23.39	208	0.01	2000	
Pb	208	165	1	He	0.369	0.369	5.34	5765	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2141030	1.00	1884762	113.60	60	120	
Sc	45	1	He	150782	1.47	134073	112.46	60	120	
Sc	45	2	NoGas	9748711	1.13	8481025	114.95	60	120	
Rh	103	1	He	960193	0.21	903580	106.27	60	120	
In	115	1	He	239924	0.06	224817	106.72	60	120	
Tb	159	1	He	1126525	0.32	1046002	107.70	60	120	
Ho	165	1	He	1134456	0.93	1057439	107.28	60	120	
Bi	209	1	He	762082	0.20	731380	104.20	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	038_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:20:31-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.178	0.516	1399147	0.66	50	102.4	89.5	110.5	
Be	9	45	2	NoGas	51.077	1.349	335111	1.55	50	102.2	89.5	110.5	
B	11	45	2	NoGas	51.330	0.572	221846	0.36	50	102.7	89.5	110.5	
Na	23	45	1	He	26012.480	2.008	11104893	0.49	25000	104.0	89.5	110.5	
Mg	24	45	1	He	25889.886	2.056	6139495	1.11	25000	103.6	89.5	110.5	
Al	27	45	1	He	258.179	1.688	25630	0.53	250	103.3	89.5	110.5	
K	39	45	1	He	25555.710	1.845	2889632	1.32	25000	102.2	89.5	110.5	
Ca	44	45	1	He	25471.342	1.541	168349	0.67	25000	101.9	89.5	110.5	
Ti	47	45	1	He	49.383	4.408	2361	5.07	50	98.8	89.5	110.5	
V	51	45	1	He	50.718	2.247	86525	2.71	50	101.4	89.5	110.5	
Cr	52	45	1	He	51.079	2.599	108338	0.70	50	102.2	89.5	110.5	
Mn	55	45	1	He	253.869	1.199	265133	0.82	250	101.5	89.5	110.5	
Fe	56	45	1	He	12775.109	1.516	20643252	0.43	12500	102.2	89.5	110.5	
Co	59	45	1	He	51.733	1.497	199505	0.85	50	103.5	89.5	110.5	
Ni	60	45	1	He	52.180	1.214	56566	1.47	50	104.4	89.5	110.5	
Cu	63	45	1	He	51.686	1.788	160235	0.57	50	103.4	89.5	110.5	
Zn	66	45	1	He	49.042	4.463	19285	2.67	50	98.1	89.5	110.5	
As	75	103	1	He	49.579	0.954	11569	0.77	50	99.2	89.5	110.5	
Se	78	115	1	He	51.331	8.853	529	8.57	50	102.7	89.5	110.5	
Sr	88	103	1	He	49.530	2.900	51064	2.72	50	99.1	89.5	110.5	
Mo	95	103	1	He	51.871	0.659	66577	0.73	50	103.7	89.5	110.5	
Ag	107	103	1	He	50.547	1.028	239846	0.91	50	101.1	89.5	110.5	
Cd	111	115	1	He	51.701	1.141	26459	0.46	50	103.4	89.5	110.5	
Sn	118	115	1	He	50.642	1.346	49402	0.88	50	101.3	89.5	110.5	
Sb	123	115	1	He	51.073	1.641	55809	0.95	50	102.1	89.5	110.5	
Ba	137	115	1	He	51.256	2.097	19618	1.44	50	102.5	89.5	110.5	
W	182	159	1	He	52.525	2.119	299775	2.20	50	105.0	89.5	110.5	
Tl	205	165	1	He	49.585	0.318	450626	0.59	50	99.2	89.5	110.5	
Pb	208	165	1	He	49.581	0.595	592034	0.41	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2063241	0.74	1884762	109.47	60	120	
Sc	45	1	He	145504	1.91	134073	108.53	60	120	
Sc	45	2	NoGas	9288106	0.20	8481025	109.52	60	120	
Rh	103	1	He	933979	0.18	903580	103.36	60	120	
In	115	1	He	229550	0.82	224817	102.11	60	120	
Tb	159	1	He	1102504	0.57	1046002	105.40	60	120	
Ho	165	1	He	1111909	0.31	1057439	105.15	60	120	
Bi	209	1	He	734450	0.41	731380	100.42	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:24:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.004	-116.9	126737	0.3	8	
Be	9	45	2	NoGas	0.120	17.6	945	14.7	1	
B	11	45	2	NoGas	1.873	2.6	17312	0.8	20	
Na	23	45	1	He	22.471	7.0	14547	4.3	1000	
Mg	24	45	1	He	11.438	11.3	3408	9.1	1000	
Al	27	45	1	He	-0.185	-62.7	102	10.5	50	
K	39	45	1	He	17.109	44.9	11560	6.9	1000	
Ca	44	45	1	He	10.540	69.8	277	17.3	1000	
Ti	47	45	1	He	0.046	86.6	2	86.6	20	
V	51	45	1	He	0.001	23169.9	59	524.0	2	
Cr	52	45	1	He	0.041	112.5	819	11.1	2	
Mn	55	45	1	He	0.170	12.9	323	6.3	2	
Fe	56	45	1	He	7.288	8.7	13943	7.3	50	
Co	59	45	1	He	-0.024	-9.3	244	4.4	1	
Ni	60	45	1	He	0.007	237.9	163	10.6	2	
Cu	63	45	1	He	-0.321	-15.9	1642	8.7	2	
Zn	66	45	1	He	0.053	210.9	181	25.1	20	
As	75	103	1	He	0.064	35.7	34	15.4	2	
Se	78	115	1	He	0.053	87.4	3	14.2	2	
Sr	88	103	1	He	0.029	36.2	71	15.1	10	
Mo	95	103	1	He	0.132	26.7	188	24.5	2	
Ag	107	103	1	He	0.025	10.6	129	10.5	0.2	
Cd	111	115	1	He	0.035	35.2	20	31.1	0.2	
Sn	118	115	1	He	0.292	45.7	600	22.5	10	
Sb	123	115	1	He	0.077	31.4	129	21.1	2	
Ba	137	115	1	He	0.037	164.6	20	116.7	5	
W	182	159	1	He	0.243	7.3	2826	3.5	10	
Tl	205	165	1	He	0.061	15.5	591	14.2	0.5	
Pb	208	165	1	He	0.014	60.6	1403	6.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2065906	2.47	1884762	109.61	60	120	
Sc	45	1	He	145495	0.92	134073	108.52	60	120	
Sc	45	2	NoGas	9257013	0.36	8481025	109.15	60	120	
Rh	103	1	He	954438	0.68	903580	105.63	60	120	
In	115	1	He	233343	1.49	224817	103.79	60	120	
Tb	159	1	He	1082199	0.08	1046002	103.46	60	120	
Ho	165	1	He	1097771	0.59	1057439	103.81	60	120	
Bi	209	1	He	745665	0.48	731380	101.95	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	040CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:28:53-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.361	7.361	1.037	306553	0.42	8	92.0	69.5	130.5	
Be	9	2	NoGas	1.072	1.072	9.326	7102	8.55	1	107.2	69.5	130.5	
B	11	2	NoGas	20.099	20.099	1.829	91644	2.21	20	100.5	69.5	130.5	
Na	23	1	He	1014.126	1014.126	1.700	430163	0.62	1000	101.4	69.5	130.5	
Mg	24	1	He	1009.965	1009.965	1.755	236041	1.54	1000	101.0	69.5	130.5	
Al	27	1	He	49.870	49.870	3.438	4962	3.88	50	99.7	69.5	130.5	
K	39	1	He	1013.391	1013.391	1.176	121702	0.39	1000	101.3	69.5	130.5	
Ca	44	1	He	995.577	995.577	0.408	6663	0.77	1000	99.6	69.5	130.5	
Ti	47	1	He	10.862	10.862	9.590	510	8.57	10	108.6	69.5	130.5	
V	51	1	He	5.301	5.301	0.882	8940	1.89	5	106.0	69.5	130.5	
Cr	52	1	He	2.078	2.078	6.136	5022	4.38	2	103.9	69.5	130.5	
Mn	55	1	He	5.199	5.199	1.465	5476	0.56	5	104.0	69.5	130.5	
Fe	56	1	He	109.559	109.559	2.508	176084	1.70	100	109.6	69.5	130.5	
Co	59	1	He	1.029	1.029	2.353	4225	2.76	1	102.9	69.5	130.5	
Ni	60	1	He	2.143	2.143	7.413	2430	7.15	2	107.2	69.5	130.5	
Cu	63	1	He	1.761	1.761	4.167	7855	2.76	2	88.1	69.5	130.5	
Zn	66	1	He	20.433	20.433	1.048	7992	2.10	20	102.2	69.5	130.5	
As	75	1	He	5.033	5.033	4.099	1212	3.82	5	100.7	69.5	130.5	
Se	78	1	He	5.304	5.304	23.413	58	22.09	5	106.1	69.5	130.5	
Sr	88	1	He	9.402	9.402	2.996	9898	3.02	10	94.0	69.5	130.5	
Mo	95	1	He	5.357	5.357	1.593	7009	1.50	5	107.1	69.5	130.5	
Ag	107	1	He	1.012	1.012	5.199	4897	5.79	1	101.2	69.5	130.5	
Cd	111	1	He	1.037	1.037	6.629	538	6.79	1	103.7	69.5	130.5	
Sn	118	1	He	9.868	9.868	8.504	9985	8.47	10	98.7	69.5	130.5	
Sb	123	1	He	1.997	1.997	3.283	2248	3.06	2	99.8	69.5	130.5	
Ba	137	1	He	5.022	5.022	2.922	1949	2.97	5	100.4	69.5	130.5	
W	182	1	He	10.142	10.142	0.393	58179	0.93	10	101.4	69.5	130.5	
Tl	205	1	He	0.993	0.993	2.365	8818	3.33	1	99.3	69.5	130.5	
Pb	208	1	He	1.002	1.002	3.381	12822	2.15	1	100.2	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1989974	0.81	1884762	105.58	60	120	
Sc	45	1	He	142980	1.12	134073	106.64	60	120	
Sc	45	2	NoGas	9178953	0.72	8481025	108.23	60	120	
Rh	103	1	He	950517	0.72	903580	105.19	60	120	
In	115	1	He	232100	0.26	224817	103.24	60	120	
Tb	159	1	He	1085464	1.15	1046002	103.77	60	120	
Ho	165	1	He	1081058	1.01	1057439	102.23	60	120	
Bi	209	1	He	749947	0.40	731380	102.54	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-3-a@5
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:33:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.900	2.900	3.83	195705	0.00	10000	
Be	9	45	2	NoGas	0.132	0.132	19.18	1007	0.01	2000	
B	11	45	2	NoGas	3.320	3.320	4.28	22933	0.01	300	
Na	23	45	1	He	5903.840	5903.840	2.49	2521404	0.23	500000	
Mg	24	45	1	He	91.161	91.161	4.74	22281	0.41	500000	
Al	27	45	1	He	20.204	20.204	6.07	2113	0.96	200000	
K	39	45	1	He	296.588	296.588	2.83	43011	0.69	500000	
Ca	44	45	1	He	1292.234	1292.234	1.58	8729	14.80	500000	
Ti	47	45	1	He	0.069	0.069	98.86	3	2.08	2500	
V	51	45	1	He	0.303	0.303	24.16	573	0.05	10000	
Cr	52	45	1	He	0.146	0.146	18.09	1039	0.01	10000	
Mn	55	45	1	He	10.524	10.524	0.82	11119	0.09	10000	
Fe	56	45	1	He	1083.117	1083.117	2.76	1750065	0.06	200000	
Co	59	45	1	He	2.062	2.062	3.26	8263	0.02	5000	
Ni	60	45	1	He	2.107	2.107	5.87	2429	0.09	10000	
Cu	63	45	1	He	-0.187	-0.187	-27.67	2048	-0.01	10000	
Zn	66	45	1	He	1.095	1.095	3.05	587	0.19	10000	
As	75	103	1	He	0.504	0.504	4.81	137	0.37	10000	
Se	78	115	1	He	0.285	0.285	91.03	6	4.78	10000	
Sr	88	103	1	He	55.431	55.431	1.53	57584	0.10	10000	
Mo	95	103	1	He	0.195	0.195	10.02	266	0.07	2000	
Ag	107	103	1	He	0.001	0.001	281.56	11	0.01	300	
Cd	111	115	1	He	0.012	0.012	42.85	8	0.15	4000	
Sn	118	115	1	He	0.045	0.045	186.44	359	0.01	2000	
Sb	123	115	1	He	0.033	0.033	58.04	81	0.04	200	
Ba	137	115	1	He	3.774	3.774	7.51	1489	0.25	10000	
W	182	159	1	He	0.081	0.081	36.89	1908	0.00	2500	
Tl	205	165	1	He	0.007	0.007	29.87	100	0.01	2000	
Pb	208	165	1	He	-0.003	-0.003	-184.75	1177	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2013461	1.54	1884762	106.83	60	120	
Sc	45	1	He	145349	1.87	134073	108.41	60	120	
Sc	45	2	NoGas	9119092	0.75	8481025	107.52	60	120	
Rh	103	1	He	941094	0.67	903580	104.15	60	120	
In	115	1	He	235758	0.90	224817	104.87	60	120	
Tb	159	1	He	1073123	0.20	1046002	102.59	60	120	
Ho	165	1	He	1076830	0.06	1057439	101.83	60	120	
Bi	209	1	He	751617	0.65	731380	102.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228794/1-a
Data File Name	042_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:37:15-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.002	-5318.2	126071	1.3	8	
Be	9	45	2	NoGas	0.050	40.0	485	27.6	1	
B	11	45	2	NoGas	1.948	14.0	17524	6.2	20	
Na	23	45	1	He	126.552	1.8	58864	0.2	1000	
Mg	24	45	1	He	125.110	1.4	30314	1.8	1000	
Al	27	45	1	He	1.799	4.2	298	1.7	50	
K	39	45	1	He	37.048	16.5	13795	6.4	1000	
Ca	44	45	1	He	444.069	3.5	3136	4.7	1000	
Ti	47	45	1	He	0.117	91.2	6	91.6	20	
V	51	45	1	He	0.112	98.0	248	75.3	2	
Cr	52	45	1	He	0.037	24.8	809	1.0	2	
Mn	55	45	1	He	0.521	0.2	689	1.7	2	
Fe	56	45	1	He	9.742	4.0	17882	4.3	50	
Co	59	45	1	He	-0.029	-20.8	223	11.8	1	
Ni	60	45	1	He	0.181	20.6	351	13.0	2	
Cu	63	45	1	He	0.314	13.9	3573	4.1	2	
Zn	66	45	1	He	2.604	4.1	1175	5.1	20	
As	75	103	1	He	0.064	72.1	34	33.1	2	
Se	78	115	1	He	0.215	100.6	5	43.5	2	
Sr	88	103	1	He	1.021	2.2	1124	2.7	10	
Mo	95	103	1	He	0.015	42.2	34	24.3	2	
Ag	107	103	1	He	0.002	101.5	18	54.1	0.2	
Cd	111	115	1	He	0.004	59.8	4	31.5	0.2	
Sn	118	115	1	He	0.176	76.5	482	26.7	10	
Sb	123	115	1	He	0.087	30.0	140	21.4	2	
Ba	137	115	1	He	1.360	12.1	531	11.2	5	
W	182	159	1	He	-0.003	-1017.3	1445	12.7	10	
Tl	205	165	1	He	0.001	126.4	49	21.9	0.5	
Pb	208	165	1	He	0.009	26.6	1310	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2019123	0.41	1884762	107.13	60	120	
Sc	45	1	He	145258	1.54	134073	108.34	60	120	
Sc	45	2	NoGas	9204967	0.60	8481025	108.54	60	120	
Rh	103	1	He	961448	0.51	903580	106.40	60	120	
In	115	1	He	231864	0.98	224817	103.13	60	120	
Tb	159	1	He	1075794	0.12	1046002	102.85	60	120	
Ho	165	1	He	1069041	0.52	1057439	101.10	60	120	
Bi	209	1	He	756183	0.45	731380	103.39	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228794/2-a
Data File Name	043_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:41:26-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	102.265	102.265	0.632	2540353	0.61	100	102.3	84.5	115.5	
Be	9	2	NoGas	1125.621	1125.621	0.924	7026428	0.87	1000	112.6	84.5	115.5	
B	11	2	NoGas	104.687	104.687	0.315	421164	0.41	100	104.7	84.5	115.5	
Na	23	1	He	10702.987	10702.987	1.236	4364140	1.67	10000	107.0	84.5	115.5	
Mg	24	1	He	10909.494	10909.494	0.823	2469646	1.04	10000	109.1	84.5	115.5	
Al	27	1	He	10323.706	10323.706	0.785	973726	1.44	10000	103.2	84.5	115.5	
K	39	1	He	10374.214	10374.214	0.578	1125041	1.02	10000	103.7	84.5	115.5	
Ca	44	1	He	11168.921	11168.921	1.047	70564	0.30	10000	111.7	84.5	115.5	
Ti	47	1	He	103.702	103.702	2.088	4732	2.60	100	103.7	84.5	115.5	
V	51	1	He	1095.916	1095.916	0.671	1783052	0.83	1000	109.6	84.5	115.5	
Cr	52	1	He	1083.903	1083.903	0.705	2180367	1.14	1000	108.4	84.5	115.5	
Mn	55	1	He	1039.851	1039.851	0.607	1036071	1.36	1000	104.0	84.5	115.5	
Fe	56	1	He	10499.358	10499.358	1.374	16194248	2.05	10000	105.0	84.5	115.5	
Co	59	1	He	1104.649	1104.649	0.755	4059515	1.53	1000	110.5	84.5	115.5	
Ni	60	1	He	1054.768	1054.768	0.600	1088410	1.37	1000	105.5	84.5	115.5	
Cu	63	1	He	1094.012	1094.012	0.912	3186741	1.30	1000	109.4	84.5	115.5	
Zn	66	1	He	1106.274	1106.274	0.703	412060	1.41	1000	110.6	84.5	115.5	
As	75	1	He	1006.010	1006.010	0.394	228373	1.05	1000	100.6	84.5	115.5	
Se	78	1	He	1035.045	1035.045	1.607	10316	0.67	1000	103.5	84.5	115.5	
Sr	88	1	He	977.570	977.570	0.540	981255	1.22	1000	97.8	84.5	115.5	
Mo	95	1	He	104.462	104.462	0.980	130623	1.62	100	104.5	84.5	115.5	
Ag	107	1	He	103.019	103.019	0.518	476256	0.83	100	103.0	84.5	115.5	
Cd	111	1	He	1066.743	1066.743	1.867	530620	0.93	1000	106.7	84.5	115.5	
Sn	118	1	He	1041.363	1041.363	3.108	981549	2.15	1000	104.1	84.5	115.5	
Sb	123	1	He	104.429	104.429	2.044	110882	1.21	100	104.4	84.5	115.5	
Ba	137	1	He	1037.473	1037.473	2.625	385879	1.66	1000	103.7	84.5	115.5	
W	182	1	He	103.461	103.461	1.170	562034	2.09	100	103.5	84.5	115.5	
Tl	205	1	He	271.091	271.091	2.320	2344652	1.85	250	108.4	84.5	115.5	
Pb	208	1	He	1062.850	1062.850	1.273	12055294	0.95	1000	106.3	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1943351	0.88	1884762	103.11	60	120	
Sc	45	1	He	138849	0.78	134073	103.56	60	120	
Sc	45	2	NoGas	8841226	0.11	8481025	104.25	60	120	
Rh	103	1	He	909977	0.72	903580	100.71	60	120	
In	115	1	He	223145	0.98	224817	99.26	60	120	
Tb	159	1	He	1051908	0.94	1046002	100.56	60	120	
Ho	165	1	He	1058367	0.56	1057439	100.09	60	120	
Bi	209	1	He	716626	0.09	731380	97.98	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-a
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:45:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.732	112.732	0.93	2914940	0.00	10000	
Be	9	45	2	NoGas	0.345	0.345	10.68	2408	0.01	2000	
B	11	45	2	NoGas	857.709	857.709	1.29	3538969	0.02	300	>LDR
Na	23	45	1	He	124300.772	124300.772	2.27	51081578	0.24	500000	
Mg	24	45	1	He	290624.319	290624.319	2.41	66356988	0.44	500000	
Al	27	45	1	He	5.040	5.040	6.38	596	0.85	200000	
K	39	45	1	He	6420.968	6420.968	1.21	706090	0.91	500000	
Ca	44	45	1	He	410724.855	410724.855	1.88	2611007	15.73	500000	
Ti	47	45	1	He	0.169	0.169	25.17	8	2.17	2500	
V	51	45	1	He	-0.143	-0.143	-259.76	-174	0.08	10000	
Cr	52	45	1	He	0.236	0.236	13.13	1184	0.02	10000	
Mn	55	45	1	He	35.276	35.276	2.22	35595	0.10	10000	
Fe	56	45	1	He	15.320	15.320	0.57	25925	0.06	200000	
Co	59	45	1	He	0.477	0.477	1.32	2092	0.02	5000	
Ni	60	45	1	He	5.275	5.275	0.27	5641	0.09	10000	
Cu	63	45	1	He	0.833	0.833	17.31	4972	0.02	10000	
Zn	66	45	1	He	9.253	9.253	5.12	3629	0.25	10000	
As	75	103	1	He	0.736	0.736	6.98	168	0.44	10000	
Se	78	115	1	He	1.397	1.397	14.40	16	8.69	10000	
Sr	88	103	1	He	13342.141	13342.141	0.16	12141325	0.11	10000	>LDR
Mo	95	103	1	He	22.110	22.110	0.65	25075	0.09	2000	
Ag	107	103	1	He	0.019	0.019	6.64	86	0.02	300	
Cd	111	115	1	He	0.356	0.356	9.45	172	0.21	4000	
Sn	118	115	1	He	1.924	1.924	16.86	2030	0.09	2000	
Sb	123	115	1	He	0.310	0.310	15.46	357	0.09	200	
Ba	137	115	1	He	6.933	6.933	3.37	2486	0.28	10000	
W	182	159	1	He	0.455	0.455	19.15	3673	0.01	2500	
Tl	205	165	1	He	0.405	0.405	4.73	3336	0.01	2000	
Pb	208	165	1	He	0.138	0.138	10.39	2600	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1939419	1.85	1884762	102.90	60	120	
Sc	45	1	He	140102	0.98	134073	104.50	60	120	
Sc	45	2	NoGas	9244093	0.67	8481025	109.00	60	120	
Rh	103	1	He	825016	0.14	903580	91.31	60	120	
In	115	1	He	214647	0.60	224817	95.48	60	120	
Tb	159	1	He	991775	0.38	1046002	94.82	60	120	
Ho	165	1	He	997274	1.20	1057439	94.31	60	120	
Bi	209	1	He	643013	1.43	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64104-e-1-a@5
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:49:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	21.592	21.592	1.06	732472	0.00	10000	
Be	9	45	2	NoGas	0.193	0.193	18.17	1571	0.01	2000	
B	11	45	2	NoGas	177.027	177.027	0.87	818151	0.02	300	
Na	23	45	1	He	25426.399	25426.399	1.50	11984822	0.21	500000	
Mg	24	45	1	He	59625.709	59625.709	1.45	15612832	0.38	500000	
Al	27	45	1	He	1.031	1.031	3.92	246	0.42	200000	
K	39	45	1	He	1289.772	1289.772	1.03	171129	0.75	500000	
Ca	44	45	1	He	78314.588	78314.588	0.75	571101	13.71	500000	
Ti	47	45	1	He	0.043	0.043	173.21	2	1.93	2500	
V	51	45	1	He	0.026	0.026	494.82	111	0.02	10000	
Cr	52	45	1	He	0.051	0.051	85.42	927	0.01	10000	
Mn	55	45	1	He	7.059	7.059	3.49	8294	0.09	10000	
Fe	56	45	1	He	2.553	2.553	5.67	6946	0.04	200000	
Co	59	45	1	He	0.062	0.062	35.36	636	0.01	5000	
Ni	60	45	1	He	0.980	0.980	12.59	1340	0.07	10000	
Cu	63	45	1	He	0.127	0.127	55.42	3320	0.00	10000	
Zn	66	45	1	He	1.931	1.931	3.45	1009	0.19	10000	
As	75	103	1	He	0.240	0.240	16.45	77	0.31	10000	
Se	78	115	1	He	0.298	0.298	62.57	6	4.72	10000	
Sr	88	103	1	He	2578.679	2578.679	1.27	2772941	0.09	10000	
Mo	95	103	1	He	4.247	4.247	3.65	5702	0.07	2000	
Ag	107	103	1	He	0.007	0.007	63.98	42	0.02	300	
Cd	111	115	1	He	0.102	0.102	23.34	57	0.18	4000	
Sn	118	115	1	He	0.342	0.342	11.04	678	0.05	2000	
Sb	123	115	1	He	0.062	0.062	7.96	118	0.05	200	
Ba	137	115	1	He	1.238	1.238	1.82	510	0.24	10000	
W	182	159	1	He	0.061	0.061	81.98	1856	0.00	2500	
Tl	205	165	1	He	0.084	0.084	5.76	808	0.01	2000	
Pb	208	165	1	He	0.027	0.027	45.31	1581	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2188571	0.56	1884762	116.12	60	120	
Sc	45	1	He	160636	1.51	134073	119.81	60	120	
Sc	45	2	NoGas	10247993	0.41	8481025	120.83	60	120	ISTD warning
Rh	103	1	He	974847	1.31	903580	107.89	60	120	
In	115	1	He	244105	0.82	224817	108.58	60	120	
Tb	159	1	He	1110368	1.01	1046002	106.15	60	120	
Ho	165	1	He	1115624	1.59	1057439	105.50	60	120	
Bi	209	1	He	749140	1.05	731380	102.43	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64104-e-1-a
Data File Name	046SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:53:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	208.319	208.319	0.85	5706940	0.00	10000	
Be	9	45	2	NoGas	1067.269	1067.269	0.89	7528979	0.01	2000	
B	11	45	2	NoGas	957.230	957.230	1.06	4268317	0.02	300	>LDR
Na	23	45	1	He	132086.293	132086.293	2.67	60060401	0.22	500000	
Mg	24	45	1	He	292543.524	292543.524	3.14	73906234	0.40	500000	
Al	27	45	1	He	10091.472	10091.472	2.59	1062488	0.95	200000	
K	39	45	1	He	16644.463	16644.463	2.86	2008758	0.83	500000	
Ca	44	45	1	He	406211.323	406211.323	2.94	2857096	14.22	500000	
Ti	47	45	1	He	103.011	103.011	2.87	5246	1.96	2500	
V	51	45	1	He	1087.294	1087.294	4.04	1974697	0.06	10000	
Cr	52	45	1	He	1060.658	1060.658	3.45	2381735	0.04	10000	
Mn	55	45	1	He	1021.643	1021.643	2.75	1136305	0.09	10000	
Fe	56	45	1	He	9973.264	9973.264	3.18	17170546	0.06	200000	
Co	59	45	1	He	1018.681	1018.681	3.59	4178499	0.02	5000	
Ni	60	45	1	He	974.909	974.909	1.85	1123017	0.09	10000	
Cu	63	45	1	He	984.364	984.364	2.43	3201154	0.03	10000	
Zn	66	45	1	He	944.808	944.808	2.01	392876	0.24	10000	
As	75	103	1	He	1100.527	1100.527	0.70	250757	0.44	10000	
Se	78	115	1	He	1160.916	1160.916	1.18	11793	9.84	10000	
Sr	88	103	1	He	13738.355	13738.355	0.59	13841287	0.10	10000	>LDR
Mo	95	103	1	He	133.135	133.135	2.10	167116	0.08	2000	
Ag	107	103	1	He	97.625	97.625	0.94	453026	0.02	300	
Cd	111	115	1	He	1009.431	1009.431	0.57	511806	0.20	4000	
Sn	118	115	1	He	1035.060	1035.060	0.42	994547	0.10	2000	
Sb	123	115	1	He	103.950	103.950	0.19	112511	0.09	200	
Ba	137	115	1	He	1041.818	1041.818	0.46	395015	0.26	10000	
W	182	159	1	He	103.696	103.696	1.41	594650	0.02	2500	
Tl	205	165	1	He	252.314	252.314	0.97	2294760	0.01	2000	
Pb	208	165	1	He	980.555	980.555	0.54	11694453	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2079807	2.48	1884762	110.35	60	120	
Sc	45	1	He	155020	1.04	134073	115.62	60	120	
Sc	45	2	NoGas	9992209	1.25	8481025	117.82	60	120	
Rh	103	1	He	913381	1.13	903580	101.08	60	120	
In	115	1	He	227445	2.17	224817	101.17	60	120	
Tb	159	1	He	1110380	1.30	1046002	106.15	60	120	
Ho	165	1	He	1112775	1.41	1057439	105.23	60	120	
Bi	209	1	He	701997	1.04	731380	95.98	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-b ms
Data File Name	047SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:57:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	201.672	201.672	1.89	5512352	0.00	10000	
Be	9	45	2	NoGas	973.353	973.353	1.19	6845939	0.01	2000	
B	11	45	2	NoGas	965.774	965.774	0.87	4292952	0.02	300	>LDR
Na	23	45	1	He	128302.467	128302.467	1.80	57796813	0.22	500000	
Mg	24	45	1	He	280523.309	280523.309	2.85	70207990	0.40	500000	
Al	27	45	1	He	8969.736	8969.736	2.71	935568	0.96	200000	
K	39	45	1	He	15574.688	15574.688	2.06	1862769	0.84	500000	
Ca	44	45	1	He	394129.216	394129.216	1.06	2746524	14.35	500000	
Ti	47	45	1	He	90.797	90.797	5.06	4582	1.98	2500	
V	51	45	1	He	981.990	981.990	2.50	1766892	0.06	10000	
Cr	52	45	1	He	930.144	930.144	2.66	2069235	0.04	10000	
Mn	55	45	1	He	917.109	917.109	2.68	1010494	0.09	10000	
Fe	56	45	1	He	8989.320	8989.320	1.97	15332941	0.06	200000	
Co	59	45	1	He	930.928	930.928	3.31	3783057	0.02	5000	
Ni	60	45	1	He	875.552	875.552	1.90	999150	0.09	10000	
Cu	63	45	1	He	893.091	893.091	2.52	2877373	0.03	10000	
Zn	66	45	1	He	839.892	839.892	1.89	345998	0.24	10000	
As	75	103	1	He	999.081	999.081	0.72	227716	0.44	10000	
Se	78	115	1	He	1050.349	1050.349	0.55	10742	9.78	10000	
Sr	88	103	1	He	13197.857	13197.857	1.32	13301031	0.10	10000	>LDR
Mo	95	103	1	He	120.624	120.624	1.13	151444	0.08	2000	
Ag	107	103	1	He	91.591	91.591	0.87	425158	0.02	300	
Cd	111	115	1	He	915.977	915.977	0.37	467554	0.20	4000	
Sn	118	115	1	He	927.582	927.582	0.64	897276	0.10	2000	
Sb	123	115	1	He	94.734	94.734	0.40	103219	0.09	200	
Ba	137	115	1	He	925.982	925.982	0.35	353431	0.26	10000	
W	182	159	1	He	95.593	95.593	1.59	550060	0.02	2500	
Tl	205	165	1	He	229.839	229.839	1.17	2114250	0.01	2000	
Pb	208	165	1	He	888.838	888.838	1.47	10722381	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2085911	1.40	1884762	110.67	60	120	
Sc	45	1	He	153565	0.68	134073	114.54	60	120	
Sc	45	2	NoGas	9962135	0.77	8481025	117.46	60	120	
Rh	103	1	He	913680	0.87	903580	101.12	60	120	
In	115	1	He	228953	1.14	224817	101.84	60	120	
Tb	159	1	He	1113992	0.73	1046002	106.50	60	120	
Ho	165	1	He	1125540	0.42	1057439	106.44	60	120	
Bi	209	1	He	706249	1.55	731380	96.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-c msd
Data File Name	048SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:01:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	217.595	217.595	2.78	5898339	0.00	10000	
Be	9	45	2	NoGas	1034.130	1034.130	1.33	7227700	0.01	2000	
B	11	45	2	NoGas	1013.650	1013.650	1.68	4476675	0.02	300	>LDR
Na	23	45	1	He	137697.096	137697.096	2.39	61744183	0.22	500000	
Mg	24	45	1	He	307332.609	307332.609	1.96	76570940	0.40	500000	
Al	27	45	1	He	10098.750	10098.750	2.01	1048565	0.96	200000	
K	39	45	1	He	17127.333	17127.333	2.46	2038071	0.84	500000	
Ca	44	45	1	He	428231.595	428231.595	2.13	2970370	14.42	500000	
Ti	47	45	1	He	99.541	99.541	2.72	5000	1.99	2500	
V	51	45	1	He	1065.111	1065.111	2.52	1907798	0.06	10000	
Cr	52	45	1	He	1026.748	1026.748	2.47	2273728	0.05	10000	
Mn	55	45	1	He	1001.563	1001.563	1.92	1098587	0.09	10000	
Fe	56	45	1	He	9994.693	9994.693	1.72	16971260	0.06	200000	
Co	59	45	1	He	1006.295	1006.295	1.17	4071266	0.02	5000	
Ni	60	45	1	He	949.641	949.641	1.36	1078835	0.09	10000	
Cu	63	45	1	He	969.255	969.255	0.92	3108732	0.03	10000	
Zn	66	45	1	He	920.929	920.929	1.37	377661	0.24	10000	
As	75	103	1	He	1076.159	1076.159	0.18	243010	0.44	10000	
Se	78	115	1	He	1134.085	1134.085	1.70	11500	9.86	10000	
Sr	88	103	1	He	14560.285	14560.285	1.20	14537688	0.10	10000	>LDR
Mo	95	103	1	He	132.726	132.726	0.81	165084	0.08	2000	
Ag	107	103	1	He	97.212	97.212	0.63	447057	0.02	300	
Cd	111	115	1	He	992.393	992.393	0.77	502272	0.20	4000	
Sn	118	115	1	He	1031.284	1031.284	0.95	989117	0.10	2000	
Sb	123	115	1	He	103.203	103.203	0.68	111498	0.09	200	
Ba	137	115	1	He	1025.290	1025.290	0.15	388046	0.26	10000	
W	182	159	1	He	104.854	104.854	0.59	604380	0.02	2500	
Tl	205	165	1	He	247.131	247.131	2.13	2278432	0.01	2000	
Pb	208	165	1	He	966.026	966.026	1.00	11680266	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2090251	0.27	1884762	110.90	60	120	
Sc	45	1	He	152875	1.09	134073	114.02	60	120	
Sc	45	2	NoGas	9899790	1.12	8481025	116.73	60	120	
Rh	103	1	He	905197	0.56	903580	100.18	60	120	
In	115	1	He	227025	0.64	224817	100.98	60	120	
Tb	159	1	He	1116261	0.32	1046002	106.72	60	120	
Ho	165	1	He	1128220	0.76	1057439	106.69	60	120	
Bi	209	1	He	702479	0.21	731380	96.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-2-a
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:05:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	61.231	61.231	2.08	1763909	0.00	10000	
Be	9	45	2	NoGas	0.729	0.729	4.30	5286	0.01	2000	
B	11	45	2	NoGas	746.909	746.909	1.08	3313917	0.02	300	>LDR
Na	23	45	1	He	59181.541	59181.541	1.39	26906881	0.22	500000	
Mg	24	45	1	He	168437.510	168437.510	0.98	42546420	0.40	500000	
Al	27	45	1	He	1.878	1.878	46.11	326	0.58	200000	
K	39	45	1	He	4557.770	4557.770	1.39	557381	0.82	500000	
Ca	44	45	1	He	183131.891	183131.891	2.72	1287746	14.22	500000	
Ti	47	45	1	He	0.065	0.065	100.71	3	1.95	2500	
V	51	45	1	He	0.089	0.089	193.14	219	0.04	10000	
Cr	52	45	1	He	0.153	0.153	20.57	1124	0.01	10000	
Mn	55	45	1	He	35.835	35.835	2.56	39992	0.09	10000	
Fe	56	45	1	He	47.586	47.586	1.55	84211	0.06	200000	
Co	59	45	1	He	0.169	0.169	18.15	1051	0.02	5000	
Ni	60	45	1	He	0.128	0.128	27.65	313	0.04	10000	
Cu	63	45	1	He	1.102	1.102	14.41	6377	0.02	10000	
Zn	66	45	1	He	1.029	1.029	11.34	599	0.17	10000	
As	75	103	1	He	0.565	0.565	8.26	151	0.37	10000	
Se	78	115	1	He	0.643	0.643	48.12	10	6.35	10000	
Sr	88	103	1	He	15947.422	15947.422	1.23	16600803	0.10	10000	>LDR
Mo	95	103	1	He	0.820	0.820	4.65	1077	0.08	2000	
Ag	107	103	1	He	0.015	0.015	39.36	80	0.02	300	
Cd	111	115	1	He	0.359	0.359	4.92	198	0.18	4000	
Sn	118	115	1	He	2.113	2.113	26.38	2515	0.08	2000	
Sb	123	115	1	He	0.238	0.238	13.67	323	0.07	200	
Ba	137	115	1	He	10.868	10.868	3.50	4450	0.24	10000	
W	182	159	1	He	0.441	0.441	21.11	4141	0.01	2500	
Tl	205	165	1	He	0.174	0.174	12.39	1690	0.01	2000	
Pb	208	165	1	He	0.149	0.149	29.64	3162	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2150728	1.72	1884762	114.11	60	120	
Sc	45	1	He	154988	1.96	134073	115.60	60	120	
Sc	45	2	NoGas	9937189	1.33	8481025	117.17	60	120	
Rh	103	1	He	943869	1.47	903580	104.46	60	120	
In	115	1	He	245279	0.60	224817	109.10	60	120	
Tb	159	1	He	1139091	0.92	1046002	108.90	60	120	
Ho	165	1	He	1157469	1.28	1057439	109.46	60	120	
Bi	209	1	He	746722	1.06	731380	102.10	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	050_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:09:54-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.749	1.460	1426333	0.82	50	99.5	89.5	110.5	
Be	9	45	2	NoGas	50.925	1.238	349473	0.77	50	101.9	89.5	110.5	
B	11	45	2	NoGas	66.108	0.645	295966	0.35	50	132.2	89.5	110.5	CCV Failed
Na	23	45	1	He	25300.573	0.993	11324408	0.14	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25321.923	0.509	6295825	0.65	25000	101.3	89.5	110.5	
Al	27	45	1	He	254.789	1.248	26522	1.96	250	101.9	89.5	110.5	
K	39	45	1	He	25133.154	1.282	2979459	0.57	25000	100.5	89.5	110.5	
Ca	44	45	1	He	25148.064	1.371	174266	1.54	25000	100.6	89.5	110.5	
Ti	47	45	1	He	48.377	0.178	2425	0.98	50	96.8	89.5	110.5	
V	51	45	1	He	49.373	0.634	88307	1.71	50	98.7	89.5	110.5	
Cr	52	45	1	He	49.944	2.525	111080	1.81	50	99.9	89.5	110.5	
Mn	55	45	1	He	249.871	1.718	273561	0.60	250	99.9	89.5	110.5	
Fe	56	45	1	He	12537.283	1.570	21238462	0.54	12500	100.3	89.5	110.5	
Co	59	45	1	He	50.558	1.052	204412	0.09	50	101.1	89.5	110.5	
Ni	60	45	1	He	50.223	1.418	57082	1.47	50	100.4	89.5	110.5	
Cu	63	45	1	He	50.848	1.251	165310	0.39	50	101.7	89.5	110.5	
Zn	66	45	1	He	49.656	2.022	20476	1.83	50	99.3	89.5	110.5	
As	75	103	1	He	50.555	0.699	12172	0.32	50	101.1	89.5	110.5	
Se	78	115	1	He	52.585	7.443	568	6.43	50	105.2	89.5	110.5	
Sr	88	103	1	He	51.804	1.171	55112	1.58	50	103.6	89.5	110.5	
Mo	95	103	1	He	52.137	0.935	69050	0.60	50	104.3	89.5	110.5	
Ag	107	103	1	He	50.132	0.580	245462	0.48	50	100.3	89.5	110.5	
Cd	111	115	1	He	51.265	2.164	27499	1.21	50	102.5	89.5	110.5	
Sn	118	115	1	He	51.563	3.204	52712	1.96	50	103.1	89.5	110.5	
Sb	123	115	1	He	51.153	2.675	58587	1.59	50	102.3	89.5	110.5	
Ba	137	115	1	He	49.946	2.367	20038	1.18	50	99.9	89.5	110.5	
W	182	159	1	He	51.504	2.049	305221	3.09	50	103.0	89.5	110.5	
Tl	205	165	1	He	48.948	0.441	461081	1.38	50	97.9	89.5	110.5	
Pb	208	165	1	He	48.971	0.882	606116	1.25	50	97.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136782	0.58	1884762	113.37	60	120	
Sc	45	1	He	152527	1.13	134073	113.76	60	120	
Sc	45	2	NoGas	9715663	0.61	8481025	114.56	60	120	
Rh	103	1	He	963761	0.42	903580	106.66	60	120	
In	115	1	He	240629	1.26	224817	107.03	60	120	
Tb	159	1	He	1144530	1.23	1046002	109.42	60	120	
Ho	165	1	He	1152505	1.05	1057439	108.99	60	120	
Bi	209	1	He	757844	0.60	731380	103.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	051_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:14:04-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.254	14.8	133956	0.7	8	
Be	9	45	2	NoGas	0.402	11.3	2804	10.7	1	
B	11	45	2	NoGas	12.421	1.4	61153	1.2	20	
Na	23	45	1	He	42.796	7.1	24087	5.4	1000	
Mg	24	45	1	He	19.477	5.0	5512	4.4	1000	
Al	27	45	1	He	0.634	37.5	190	12.6	50	
K	39	45	1	He	22.553	22.7	12631	4.9	1000	
Ca	44	45	1	He	22.353	22.5	369	9.5	1000	
Ti	47	45	1	He	0.157	49.5	8	49.5	20	
V	51	45	1	He	0.134	77.3	298	61.5	2	
Cr	52	45	1	He	0.064	45.5	900	7.1	2	
Mn	55	45	1	He	0.196	11.3	363	6.4	2	
Fe	56	45	1	He	9.385	7.7	17976	6.6	50	
Co	59	45	1	He	-0.004	-326.4	332	15.9	1	
Ni	60	45	1	He	0.012	147.2	174	10.9	2	
Cu	63	45	1	He	0.274	47.4	3586	11.3	2	
Zn	66	45	1	He	0.424	18.6	338	9.4	20	
As	75	103	1	He	0.136	26.8	53	18.9	2	
Se	78	115	1	He	0.274	7.1	6	4.7	2	
Sr	88	103	1	He	0.474	11.0	559	7.9	10	
Mo	95	103	1	He	0.118	3.7	174	2.9	2	
Ag	107	103	1	He	0.029	8.0	156	8.1	0.2	
Cd	111	115	1	He	0.138	16.1	78	14.2	0.2	
Sn	118	115	1	He	0.576	11.8	933	9.3	10	
Sb	123	115	1	He	0.142	29.4	213	20.3	2	
Ba	137	115	1	He	0.053	64.3	28	48.5	5	
W	182	159	1	He	0.233	29.6	2889	11.7	10	
Tl	205	165	1	He	0.107	27.8	1032	23.6	0.5	
Pb	208	165	1	He	0.067	24.5	2093	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2107970	0.72	1884762	111.84	60	120	
Sc	45	1	He	150910	0.18	134073	112.56	60	120	
Sc	45	2	NoGas	9313960	0.05	8481025	109.82	60	120	
Rh	103	1	He	988394	2.17	903580	109.39	60	120	
In	115	1	He	247595	2.50	224817	110.13	60	120	
Tb	159	1	He	1130433	2.47	1046002	108.07	60	120	
Ho	165	1	He	1136689	2.87	1057439	107.49	60	120	
Bi	209	1	He	777294	1.70	731380	106.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-3-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:18:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.490	17.490	1.68	604591	0.00	10000	
Be	9	45	2	NoGas	0.263	0.263	16.78	2026	0.01	2000	
B	11	45	2	NoGas	751.945	751.945	0.45	3355598	0.02	300	>LDR
Na	23	45	1	He	90432.611	90432.611	1.02	40784980	0.22	500000	
Mg	24	45	1	He	105230.426	105230.426	1.63	26372388	0.40	500000	
Al	27	45	1	He	1.229	1.229	23.32	256	0.48	200000	
K	39	45	1	He	4184.083	4184.083	1.30	508488	0.82	500000	
Ca	44	45	1	He	87009.057	87009.057	0.99	607223	14.33	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.134	0.134	107.34	305	0.04	10000	
Cr	52	45	1	He	0.098	0.098	24.20	992	0.01	10000	
Mn	55	45	1	He	22.517	22.517	0.79	24991	0.09	10000	
Fe	56	45	1	He	43.513	43.513	1.85	76597	0.06	200000	
Co	59	45	1	He	0.131	0.131	15.40	888	0.01	5000	
Ni	60	45	1	He	0.057	0.057	48.37	230	0.02	10000	
Cu	63	45	1	He	0.194	0.194	17.87	3395	0.01	10000	
Zn	66	45	1	He	1.692	1.692	2.08	867	0.20	10000	
As	75	103	1	He	0.236	0.236	30.54	73	0.32	10000	
Se	78	115	1	He	0.432	0.432	14.94	8	5.66	10000	
Sr	88	103	1	He	20245.448	20245.448	0.51	20805742	0.10	10000	>LDR
Mo	95	103	1	He	0.591	0.591	1.87	770	0.08	2000	
Ag	107	103	1	He	0.010	0.010	37.62	53	0.02	300	
Cd	111	115	1	He	0.075	0.075	24.87	42	0.18	4000	
Sn	118	115	1	He	0.491	0.491	34.72	819	0.06	2000	
Sb	123	115	1	He	0.071	0.071	27.58	126	0.06	200	
Ba	137	115	1	He	17.265	17.265	2.08	6898	0.25	10000	
W	182	159	1	He	0.165	0.165	27.99	2478	0.01	2500	
Tl	205	165	1	He	0.021	0.021	14.10	234	0.01	2000	
Pb	208	165	1	He	0.001	0.001	1203.99	1286	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2100016	0.17	1884762	111.42	60	120	
Sc	45	1	He	153734	1.10	134073	114.66	60	120	
Sc	45	2	NoGas	9993990	1.01	8481025	117.84	60	120	
Rh	103	1	He	931714	1.50	903580	103.11	60	120	
In	115	1	He	239464	2.14	224817	106.51	60	120	
Tb	159	1	He	1121972	1.01	1046002	107.26	60	120	
Ho	165	1	He	1128639	1.78	1057439	106.73	60	120	
Bi	209	1	He	733811	0.66	731380	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-4-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:22:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.454	27.454	2.12	890590	0.00	10000	
Be	9	45	2	NoGas	0.218	0.218	9.58	1748	0.01	2000	
B	11	45	2	NoGas	377.634	377.634	1.41	1728285	0.02	300	>LDR
Na	23	45	1	He	56504.585	56504.585	0.92	26588675	0.21	500000	
Mg	24	45	1	He	65326.589	65326.589	1.78	17077154	0.38	500000	
Al	27	45	1	He	4.382	4.382	11.48	610	0.72	200000	
K	39	45	1	He	4168.554	4168.554	1.13	528514	0.79	500000	
Ca	44	45	1	He	103353.419	103353.419	1.12	752374	13.74	500000	
Ti	47	45	1	He	0.105	0.105	91.25	6	1.90	2500	
V	51	45	1	He	0.066	0.066	407.34	186	0.04	10000	
Cr	52	45	1	He	0.128	0.128	60.21	1103	0.01	10000	
Mn	55	45	1	He	4.673	4.673	3.87	5536	0.08	10000	
Fe	56	45	1	He	3.278	3.278	2.06	8228	0.04	200000	
Co	59	45	1	He	-0.030	-0.030	-45.06	244	-0.01	5000	
Ni	60	45	1	He	-0.005	-0.005	-505.64	166	0.00	10000	
Cu	63	45	1	He	0.148	0.148	33.65	3387	0.00	10000	
Zn	66	45	1	He	2.335	2.335	9.80	1180	0.20	10000	
As	75	103	1	He	0.811	0.811	13.79	215	0.38	10000	
Se	78	115	1	He	0.286	0.286	39.88	6	4.54	10000	
Sr	88	103	1	He	4628.961	4628.961	0.89	4945045	0.09	10000	
Mo	95	103	1	He	0.037	0.037	35.04	63	0.06	2000	
Ag	107	103	1	He	0.007	0.007	51.00	43	0.02	300	
Cd	111	115	1	He	0.052	0.052	29.49	31	0.17	4000	
Sn	118	115	1	He	0.377	0.377	34.22	730	0.05	2000	
Sb	123	115	1	He	0.032	0.032	61.41	84	0.04	200	
Ba	137	115	1	He	13.347	13.347	5.55	5547	0.24	10000	
W	182	159	1	He	0.159	0.159	29.74	2493	0.01	2500	
Tl	205	165	1	He	0.012	0.012	26.21	154	0.01	2000	
Pb	208	165	1	He	0.001	0.001	719.81	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2148432	1.01	1884762	113.99	60	120	
Sc	45	1	He	160389	0.90	134073	119.63	60	120	
Sc	45	2	NoGas	10219787	1.56	8481025	120.50	60	120	ISTD warning
Rh	103	1	He	968547	0.74	903580	107.19	60	120	
In	115	1	He	248982	0.39	224817	110.75	60	120	
Tb	159	1	He	1145612	0.99	1046002	109.52	60	120	
Ho	165	1	He	1156798	1.47	1057439	109.40	60	120	
Bi	209	1	He	750898	0.60	731380	102.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-5-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:26:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.240	113.240	1.03	3191848	0.00	10000	
Be	9	45	2	NoGas	0.223	0.223	5.43	1759	0.01	2000	
B	11	45	2	NoGas	529.306	529.306	0.54	2385106	0.02	300	>LDR
Na	23	45	1	He	148710.290	148710.290	1.40	69567169	0.21	500000	
Mg	24	45	1	He	179917.149	179917.149	1.78	46763564	0.38	500000	
Al	27	45	1	He	2.000	2.000	10.92	349	0.57	200000	
K	39	45	1	He	925844.012	925844.012	0.80	114378407	0.81	500000	>LDR
Ca	44	45	1	He	427364.982	427364.982	1.53	3092721	13.82	500000	
Ti	47	45	1	He	0.149	0.149	66.42	8	1.92	2500	
V	51	45	1	He	-0.073	-0.073	-289.78	-70	0.10	10000	
Cr	52	45	1	He	0.512	0.512	2.15	1987	0.03	10000	
Mn	55	45	1	He	56.832	56.832	1.51	65185	0.09	10000	
Fe	56	45	1	He	870.375	870.375	1.56	1543865	0.06	200000	
Co	59	45	1	He	0.023	0.023	46.42	466	0.00	5000	
Ni	60	45	1	He	0.395	0.395	2.65	639	0.06	10000	
Cu	63	45	1	He	7.881	7.881	13.93	29209	0.03	10000	
Zn	66	45	1	He	2.981	2.981	4.31	1450	0.21	10000	
As	75	103	1	He	0.492	0.492	12.08	124	0.39	10000	
Se	78	115	1	He	1.201	1.201	20.20	15	7.78	10000	
Sr	88	103	1	He	15451.881	15451.881	1.42	14924813	0.10	10000	>LDR
Mo	95	103	1	He	8.027	8.027	2.50	9669	0.08	2000	
Ag	107	103	1	He	0.012	0.012	31.33	59	0.02	300	
Cd	111	115	1	He	0.069	0.069	19.96	38	0.18	4000	
Sn	118	115	1	He	0.494	0.494	8.20	796	0.06	2000	
Sb	123	115	1	He	0.056	0.056	27.33	106	0.05	200	
Ba	137	115	1	He	17.888	17.888	2.64	6952	0.26	10000	
W	182	159	1	He	0.160	0.160	27.28	2363	0.01	2500	
Tl	205	165	1	He	0.010	0.010	15.62	133	0.01	2000	
Pb	208	165	1	He	0.050	0.050	49.57	1813	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2140509	0.56	1884762	113.57	60	120	
Sc	45	1	He	159471	0.99	134073	118.94	60	120	
Sc	45	2	NoGas	10078806	0.61	8481025	118.84	60	120	
Rh	103	1	He	875676	0.54	903580	96.91	60	120	
In	115	1	He	232882	0.78	224817	103.59	60	120	
Tb	159	1	He	1082289	1.46	1046002	103.47	60	120	
Ho	165	1	He	1086875	0.93	1057439	102.78	60	120	
Bi	209	1	He	663641	1.71	731380	90.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-6-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:30:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	72.905	72.905	1.41	2089921	0.00	10000	
Be	9	45	2	NoGas	0.208	0.208	21.19	1637	0.01	2000	
B	11	45	2	NoGas	345.662	345.662	1.93	1550579	0.02	300	>LDR
Na	23	45	1	He	114022.945	114022.945	1.00	52133972	0.22	500000	
Mg	24	45	1	He	130457.180	130457.180	1.44	33140669	0.39	500000	
Al	27	45	1	He	2.002	2.002	12.83	341	0.59	200000	
K	39	45	1	He	304680.430	304680.430	1.16	36794705	0.83	500000	
Ca	44	45	1	He	290685.578	290685.578	0.93	2055986	14.14	500000	
Ti	47	45	1	He	0.109	0.109	124.66	6	1.96	2500	
V	51	45	1	He	-0.339	-0.339	-94.36	-558	0.06	10000	
Cr	52	45	1	He	1.008	1.008	7.92	3060	0.03	10000	
Mn	55	45	1	He	4.607	4.607	4.46	5306	0.09	10000	
Fe	56	45	1	He	12.668	12.668	1.75	24250	0.05	200000	
Co	59	45	1	He	-0.014	-0.014	-26.63	301	0.00	5000	
Ni	60	45	1	He	0.226	0.226	15.93	428	0.05	10000	
Cu	63	45	1	He	8.651	8.651	2.01	31069	0.03	10000	
Zn	66	45	1	He	1.257	1.257	13.00	697	0.18	10000	
As	75	103	1	He	0.421	0.421	15.62	110	0.38	10000	
Se	78	115	1	He	0.393	0.393	43.71	7	5.64	10000	
Sr	88	103	1	He	13057.474	13057.474	0.44	12745661	0.10	10000	>LDR
Mo	95	103	1	He	0.082	0.082	8.91	113	0.07	2000	
Ag	107	103	1	He	0.013	0.013	17.32	64	0.02	300	
Cd	111	115	1	He	0.076	0.076	26.09	41	0.19	4000	
Sn	118	115	1	He	0.271	0.271	7.74	574	0.05	2000	
Sb	123	115	1	He	0.041	0.041	32.29	89	0.05	200	
Ba	137	115	1	He	21.018	21.018	0.36	8115	0.26	10000	
W	182	159	1	He	0.085	0.085	7.74	1930	0.00	2500	
Tl	205	165	1	He	0.009	0.009	10.78	123	0.01	2000	
Pb	208	165	1	He	0.007	0.007	11.83	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2261230	0.74	1884762	119.97	60	120	
Sc	45	1	He	155860	0.80	134073	116.25	60	120	
Sc	45	2	NoGas	10011058	0.87	8481025	118.04	60	120	
Rh	103	1	He	884964	0.71	903580	97.94	60	120	
In	115	1	He	231458	1.04	224817	102.95	60	120	
Tb	159	1	He	1074094	0.76	1046002	102.69	60	120	
Ho	165	1	He	1090852	0.17	1057439	103.16	60	120	
Bi	209	1	He	683440	1.17	731380	93.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-k-7-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:34:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.201	26.201	1.29	855088	0.00	10000	
Be	9	45	2	NoGas	0.158	0.158	18.68	1311	0.01	2000	
B	11	45	2	NoGas	264.303	264.303	0.69	1211046	0.02	300	
Na	23	45	1	He	27627.481	27627.481	3.15	13049385	0.21	500000	
Mg	24	45	1	He	70660.743	70660.743	3.28	18537423	0.38	500000	
Al	27	45	1	He	910.769	910.769	2.12	99715	0.91	200000	
K	39	45	1	He	12281.445	12281.445	2.79	1541983	0.80	500000	
Ca	44	45	1	He	232936.205	232936.205	2.98	1701428	13.69	500000	
Ti	47	45	1	He	14.592	14.592	15.20	770	1.89	2500	
V	51	45	1	He	1.530	1.530	31.36	2932	0.05	10000	
Cr	52	45	1	He	12.524	12.524	5.48	29989	0.04	10000	
Mn	55	45	1	He	53.634	53.634	4.76	62074	0.09	10000	
Fe	56	45	1	He	975.512	975.512	4.08	1745815	0.06	200000	
Co	59	45	1	He	1.073	1.073	8.05	4941	0.02	5000	
Ni	60	45	1	He	35.861	35.861	2.34	43069	0.08	10000	
Cu	63	45	1	He	11.192	11.192	5.15	40728	0.03	10000	
Zn	66	45	1	He	33.617	33.617	3.31	14686	0.23	10000	
As	75	103	1	He	3.312	3.312	2.11	819	0.40	10000	
Se	78	115	1	He	0.627	0.627	52.32	10	6.19	10000	
Sr	88	103	1	He	6016.902	6016.902	1.17	6428849	0.09	10000	
Mo	95	103	1	He	56.459	56.459	1.44	75158	0.08	2000	
Ag	107	103	1	He	0.020	0.020	14.03	109	0.02	300	
Cd	111	115	1	He	0.098	0.098	11.46	56	0.17	4000	
Sn	118	115	1	He	0.421	0.421	17.45	774	0.05	2000	
Sb	123	115	1	He	3.735	3.735	4.52	4461	0.08	200	
Ba	137	115	1	He	23.795	23.795	2.49	9862	0.24	10000	
W	182	159	1	He	0.368	0.368	15.80	3778	0.01	2500	
Tl	205	165	1	He	0.063	0.063	2.10	654	0.01	2000	
Pb	208	165	1	He	0.564	0.564	1.07	8490	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2338795	0.52	1884762	124.09	60	120	ISTD warning
Sc	45	1	He	161055	3.31	134073	120.12	60	120	ISTD warning
Sc	45	2	NoGas	10203775	0.92	8481025	120.31	60	120	ISTD warning
Rh	103	1	He	968660	0.65	903580	107.20	60	120	
In	115	1	He	248521	1.79	224817	110.54	60	120	
Tb	159	1	He	1161648	1.26	1046002	111.06	60	120	
Ho	165	1	He	1183733	1.03	1057439	111.94	60	120	
Bi	209	1	He	767120	0.40	731380	104.89	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-8-a
Data File Name	057SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:39:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	61.212	61.212	9.78	1989950	0.00	10000	
Be	9	45	2	NoGas	0.111	0.111	18.18	1067	0.01	2000	
B	11	45	2	NoGas	281.732	281.732	7.29	1419860	0.02	300	
Na	23	45	1	He	107663.529	107663.529	1.20	50061963	0.22	500000	
Mg	24	45	1	He	123408.226	123408.226	0.33	31882986	0.39	500000	
Al	27	45	1	He	2.312	2.312	16.79	380	0.61	200000	
K	39	45	1	He	287967.683	287967.683	0.55	35368298	0.81	500000	
Ca	44	45	1	He	277873.943	277873.943	2.63	1998751	13.90	500000	
Ti	47	45	1	He	0.086	0.086	114.94	4	1.93	2500	
V	51	45	1	He	-0.002	-0.002	-13302.09	57	0.00	10000	
Cr	52	45	1	He	1.134	1.134	3.84	3401	0.03	10000	
Mn	55	45	1	He	4.724	4.724	5.39	5531	0.09	10000	
Fe	56	45	1	He	13.104	13.104	2.54	25432	0.05	200000	
Co	59	45	1	He	-0.008	-0.008	-152.43	332	0.00	5000	
Ni	60	45	1	He	0.193	0.193	10.51	397	0.05	10000	
Cu	63	45	1	He	5.560	5.560	14.35	21336	0.03	10000	
Zn	66	45	1	He	1.140	1.140	7.12	659	0.17	10000	
As	75	103	1	He	0.360	0.360	14.08	98	0.37	10000	
Se	78	115	1	He	0.374	0.374	44.58	7	5.50	10000	
Sr	88	103	1	He	12529.740	12529.740	1.08	12393510	0.10	10000	>LDR
Mo	95	103	1	He	0.206	0.206	5.89	267	0.08	2000	
Ag	107	103	1	He	0.011	0.011	3.68	58	0.02	300	
Cd	111	115	1	He	0.029	0.029	27.18	17	0.17	4000	
Sn	118	115	1	He	0.495	0.495	19.43	796	0.06	2000	
Sb	123	115	1	He	0.032	0.032	31.95	79	0.04	200	
Ba	137	115	1	He	20.439	20.439	3.15	7926	0.26	10000	
W	182	159	1	He	0.045	0.045	36.78	1752	0.00	2500	
Tl	205	165	1	He	0.003	0.003	73.69	67	0.00	2000	
Pb	208	165	1	He	-0.008	-0.008	-119.30	1167	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2549425	9.58	1884762	135.27	60	120	ISTD warning
Sc	45	1	He	158499	0.98	134073	118.22	60	120	
Sc	45	2	NoGas	11299067	12.86	8481025	133.23	60	120	ISTD warning
Rh	103	1	He	896754	0.18	903580	99.24	60	120	
In	115	1	He	232438	0.79	224817	103.39	60	120	
Tb	159	1	He	1100141	0.65	1046002	105.18	60	120	
Ho	165	1	He	1115492	1.19	1057439	105.49	60	120	
Bi	209	1	He	698043	1.21	731380	95.44	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-9-a
Data File Name	058SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:43:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.365	0.365	4.33	152473	0.00	10000	
Be	9	45	2	NoGas	0.126	0.126	5.62	1104	0.01	2000	
B	11	45	2	NoGas	15.504	15.504	1.09	82453	0.02	300	
Na	23	45	1	He	407.680	407.680	1.43	199325	0.20	500000	
Mg	24	45	1	He	95.745	95.745	2.22	26056	0.37	500000	
Al	27	45	1	He	2.681	2.681	11.01	429	0.63	200000	
K	39	45	1	He	239.140	239.140	4.72	40765	0.59	500000	
Ca	44	45	1	He	420.586	420.586	1.51	3324	12.65	500000	
Ti	47	45	1	He	0.021	0.021	173.21	1	1.91	2500	
V	51	45	1	He	-0.082	-0.082	-342.85	-94	0.09	10000	
Cr	52	45	1	He	0.224	0.224	31.97	1339	0.02	10000	
Mn	55	45	1	He	0.567	0.567	9.02	822	0.07	10000	
Fe	56	45	1	He	5.670	5.670	5.50	12609	0.04	200000	
Co	59	45	1	He	-0.028	-0.028	-30.70	256	-0.01	5000	
Ni	60	45	1	He	0.089	0.089	74.21	280	0.03	10000	
Cu	63	45	1	He	4.410	4.410	12.00	17927	0.02	10000	
Zn	66	45	1	He	6.869	6.869	1.48	3164	0.22	10000	
As	75	103	1	He	0.126	0.126	25.82	53	0.24	10000	
Se	78	115	1	He	0.085	0.085	270.06	4	2.06	10000	
Sr	88	103	1	He	8.423	8.423	2.49	9622	0.09	10000	
Mo	95	103	1	He	0.108	0.108	10.66	168	0.06	2000	
Ag	107	103	1	He	0.009	0.009	43.85	58	0.02	300	
Cd	111	115	1	He	0.043	0.043	7.02	27	0.16	4000	
Sn	118	115	1	He	1.272	1.272	20.17	1708	0.07	2000	
Sb	123	115	1	He	0.000	0.000	-17439.45	48	0.00	200	
Ba	137	115	1	He	0.481	0.481	11.59	211	0.23	10000	
W	182	159	1	He	0.020	0.020	100.43	1682	0.00	2500	
Tl	205	165	1	He	0.003	0.003	64.72	76	0.00	2000	
Pb	208	165	1	He	0.032	0.032	15.03	1716	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2414443	1.49	1884762	128.10	60	120	ISTD warning
Sc	45	1	He	162048	2.47	134073	120.87	60	120	ISTD warning
Sc	45	2	NoGas	10387235	0.27	8481025	122.48	60	120	ISTD warning
Rh	103	1	He	1030726	0.59	903580	114.07	60	120	
In	115	1	He	254882	1.50	224817	113.37	60	120	
Tb	159	1	He	1149296	1.02	1046002	109.88	60	120	
Ho	165	1	He	1162807	1.90	1057439	109.96	60	120	
Bi	209	1	He	791213	2.14	731380	108.18	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	059_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:47:21-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.979	0.562	1412683	0.69	50	102.0	89.5	110.5	
Be	9	45	2	NoGas	50.761	1.002	337481	1.99	50	101.5	89.5	110.5	
B	11	45	2	NoGas	61.504	1.714	267389	0.59	50	123.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25756.865	2.195	11070312	0.91	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25483.081	2.660	6083281	0.62	25000	101.9	89.5	110.5	
Al	27	45	1	He	255.325	1.365	25523	1.81	250	102.1	89.5	110.5	
K	39	45	1	He	25633.894	1.835	2917951	0.42	25000	102.5	89.5	110.5	
Ca	44	45	1	He	25353.887	1.341	168714	0.73	25000	101.4	89.5	110.5	
Ti	47	45	1	He	51.053	2.630	2457	1.47	50	102.1	89.5	110.5	
V	51	45	1	He	50.523	1.872	86764	0.95	50	101.0	89.5	110.5	
Cr	52	45	1	He	50.852	2.459	108594	0.96	50	101.7	89.5	110.5	
Mn	55	45	1	He	252.189	1.448	265159	0.70	250	100.9	89.5	110.5	
Fe	56	45	1	He	12572.321	1.092	20454776	1.08	12500	100.6	89.5	110.5	
Co	59	45	1	He	50.603	1.722	196472	0.46	50	101.2	89.5	110.5	
Ni	60	45	1	He	50.412	1.783	55018	0.37	50	100.8	89.5	110.5	
Cu	63	45	1	He	52.618	1.649	164188	1.02	50	105.2	89.5	110.5	
Zn	66	45	1	He	50.395	1.976	19952	0.37	50	100.8	89.5	110.5	
As	75	103	1	He	50.763	1.880	11709	1.10	50	101.5	89.5	110.5	
Se	78	115	1	He	50.458	4.634	524	3.38	50	100.9	89.5	110.5	
Sr	88	103	1	He	51.401	0.394	52391	0.60	50	102.8	89.5	110.5	
Mo	95	103	1	He	52.189	1.796	66219	1.11	50	104.4	89.5	110.5	
Ag	107	103	1	He	50.186	0.945	235427	0.78	50	100.4	89.5	110.5	
Cd	111	115	1	He	50.638	0.398	26120	1.13	50	101.3	89.5	110.5	
Sn	118	115	1	He	50.119	3.568	49268	2.34	50	100.2	89.5	110.5	
Sb	123	115	1	He	51.502	2.465	56716	1.41	50	103.0	89.5	110.5	
Ba	137	115	1	He	50.474	1.906	19474	2.49	50	100.9	89.5	110.5	
W	182	159	1	He	50.944	1.208	285820	0.99	50	101.9	89.5	110.5	
Tl	205	165	1	He	48.829	0.383	437171	1.07	50	97.7	89.5	110.5	
Pb	208	165	1	He	48.718	0.884	573104	0.68	50	97.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2119458	2.05	1884762	112.45	60	120	
Sc	45	1	He	146493	2.05	134073	109.26	60	120	
Sc	45	2	NoGas	9411624	1.14	8481025	110.97	60	120	
Rh	103	1	He	923388	0.82	903580	102.19	60	120	
In	115	1	He	231358	1.21	224817	102.91	60	120	
Tb	159	1	He	1083664	0.37	1046002	103.60	60	120	
Ho	165	1	He	1095418	0.97	1057439	103.59	60	120	
Bi	209	1	He	717984	1.17	731380	98.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	060_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:51:31-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.194	28.0	139310	0.2	8	
Be	9	45	2	NoGas	0.147	19.7	1185	16.1	1	
B	11	45	2	NoGas	12.663	1.8	65382	2.2	20	
Na	23	45	1	He	44.540	5.7	24784	4.5	1000	
Mg	24	45	1	He	18.440	6.9	5242	6.3	1000	
Al	27	45	1	He	0.530	111.1	179	33.8	50	
K	39	45	1	He	33.143	12.8	13824	3.1	1000	
Ca	44	45	1	He	16.558	73.5	328	25.4	1000	
Ti	47	45	1	He	0.112	124.7	6	124.9	20	
V	51	45	1	He	-0.022	-561.5	22	987.6	2	
Cr	52	45	1	He	0.023	75.5	808	4.1	2	
Mn	55	45	1	He	0.216	25.0	383	15.2	2	
Fe	56	45	1	He	9.403	6.7	17950	5.4	50	
Co	59	45	1	He	-0.021	-34.8	264	11.4	1	
Ni	60	45	1	He	-0.006	-447.0	154	19.6	2	
Cu	63	45	1	He	1.760	15.3	8259	9.8	2	
Zn	66	45	1	He	0.207	8.7	249	2.8	20	
As	75	103	1	He	0.083	32.5	39	16.8	2	
Se	78	115	1	He	0.137	123.8	4	40.0	2	
Sr	88	103	1	He	0.357	5.9	424	5.3	10	
Mo	95	103	1	He	0.101	21.4	149	19.0	2	
Ag	107	103	1	He	0.031	9.3	160	9.1	0.2	
Cd	111	115	1	He	0.054	23.9	31	22.2	0.2	
Sn	118	115	1	He	0.239	74.3	563	31.5	10	
Sb	123	115	1	He	0.086	17.6	143	12.3	2	
Ba	137	115	1	He	0.049	70.7	26	54.3	5	
W	182	159	1	He	0.193	34.3	2586	13.0	10	
Tl	205	165	1	He	0.074	17.3	704	15.2	0.5	
Pb	208	165	1	He	0.039	28.3	1708	7.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2199293	1.27	1884762	116.69	60	120	
Sc	45	1	He	150451	0.54	134073	112.22	60	120	
Sc	45	2	NoGas	9797185	1.10	8481025	115.52	60	120	
Rh	103	1	He	970963	0.38	903580	107.46	60	120	
In	115	1	He	240462	0.43	224817	106.96	60	120	
Tb	159	1	He	1098701	1.51	1046002	105.04	60	120	
Ho	165	1	He	1102008	1.07	1057439	104.21	60	120	
Bi	209	1	He	751871	0.63	731380	102.80	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-e-1-a
Data File Name	061SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:55:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.038	18.038	0.56	596101	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	22.69	1078	0.01	2000	
B	11	45	2	NoGas	88.615	88.615	0.72	389441	0.02	300	
Na	23	45	1	He	88249.222	88249.222	1.36	38364553	0.23	500000	
Mg	24	45	1	He	29916.647	29916.647	1.79	7226587	0.41	500000	
Al	27	45	1	He	5.338	5.338	9.70	660	0.81	200000	
K	39	45	1	He	9105.415	9105.415	0.54	1055044	0.86	500000	
Ca	44	45	1	He	149410.414	149410.414	1.30	1004855	14.87	500000	
Ti	47	45	1	He	0.799	0.799	25.37	39	2.06	2500	
V	51	45	1	He	0.674	0.674	3.25	1229	0.05	10000	
Cr	52	45	1	He	1.288	1.288	3.10	3512	0.04	10000	
Mn	55	45	1	He	462.904	462.904	1.76	492291	0.09	10000	
Fe	56	45	1	He	7920.682	7920.682	2.03	13037861	0.06	200000	
Co	59	45	1	He	0.575	0.575	2.61	2598	0.02	5000	
Ni	60	45	1	He	47.366	47.366	1.47	52311	0.09	10000	
Cu	63	45	1	He	29.162	29.162	2.59	93253	0.03	10000	
Zn	66	45	1	He	79.831	79.831	1.66	31884	0.25	10000	
As	75	103	1	He	4.040	4.040	5.34	932	0.43	10000	
Se	78	115	1	He	0.509	0.509	26.78	8	6.26	10000	
Sr	88	103	1	He	1570.396	1570.396	0.94	1572285	0.10	10000	
Mo	95	103	1	He	3.932	3.932	4.23	4915	0.08	2000	
Ag	107	103	1	He	0.008	0.008	43.83	47	0.02	300	
Cd	111	115	1	He	0.036	0.036	33.06	20	0.18	4000	
Sn	118	115	1	He	0.455	0.455	36.56	752	0.06	2000	
Sb	123	115	1	He	0.139	0.139	16.28	196	0.07	200	
Ba	137	115	1	He	157.565	157.565	1.72	60492	0.26	10000	
W	182	159	1	He	0.106	0.106	2.01	2085	0.01	2500	
Tl	205	165	1	He	0.012	0.012	17.52	147	0.01	2000	
Pb	208	165	1	He	1.904	1.904	0.81	23791	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2148954	0.29	1884762	114.02	60	120	
Sc	45	1	He	148187	0.56	134073	110.53	60	120	
Sc	45	2	NoGas	9619996	0.35	8481025	113.43	60	120	
Rh	103	1	He	907739	1.32	903580	100.46	60	120	
In	115	1	He	230314	1.92	224817	102.44	60	120	
Tb	159	1	He	1094826	0.57	1046002	104.67	60	120	
Ho	165	1	He	1104757	1.00	1057439	104.47	60	120	
Bi	209	1	He	716850	0.48	731380	98.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-e-2-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:59:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	19.683	19.683	0.42	635008	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	9.42	1119	0.01	2000	
B	11	45	2	NoGas	86.223	86.223	1.31	377179	0.02	300	
Na	23	45	1	He	89018.951	89018.951	1.03	37461091	0.24	500000	
Mg	24	45	1	He	31677.111	31677.111	0.76	7407089	0.43	500000	
Al	27	45	1	He	21.630	21.630	3.80	2226	0.97	200000	
K	39	45	1	He	9555.182	9555.182	1.07	1071226	0.89	500000	
Ca	44	45	1	He	155908.460	155908.460	1.12	1014982	15.36	500000	
Ti	47	45	1	He	1.226	1.226	23.24	58	2.12	2500	
V	51	45	1	He	0.718	0.718	47.01	1262	0.06	10000	
Cr	52	45	1	He	10.117	10.117	0.61	21741	0.05	10000	
Mn	55	45	1	He	507.329	507.329	1.66	522241	0.10	10000	
Fe	56	45	1	He	11454.694	11454.694	0.85	18250940	0.06	200000	
Co	59	45	1	He	1.100	1.100	3.70	4506	0.02	5000	
Ni	60	45	1	He	34.524	34.524	2.01	36948	0.09	10000	
Cu	63	45	1	He	4.658	4.658	2.52	16592	0.03	10000	
Zn	66	45	1	He	31003.795	31003.795	1.64	11924919	0.26	10000	>LDR
As	75	103	1	He	5.606	5.606	4.68	1278	0.44	10000	
Se	78	115	1	He	0.466	0.466	34.06	8	6.10	10000	
Sr	88	103	1	He	1596.467	1596.467	1.57	1586444	0.10	10000	
Mo	95	103	1	He	3.349	3.349	2.25	4159	0.08	2000	
Ag	107	103	1	He	0.007	0.007	13.93	41	0.02	300	
Cd	111	115	1	He	0.076	0.076	13.42	40	0.19	4000	
Sn	118	115	1	He	0.530	0.530	9.72	819	0.06	2000	
Sb	123	115	1	He	0.081	0.081	44.42	132	0.06	200	
Ba	137	115	1	He	177.098	177.098	0.88	67682	0.26	10000	
W	182	159	1	He	0.130	0.130	9.54	2208	0.01	2500	
Tl	205	165	1	He	0.046	0.046	14.15	453	0.01	2000	
Pb	208	165	1	He	9.550	9.550	1.25	113752	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2188955	1.55	1884762	116.14	60	120	
Sc	45	1	He	143449	0.94	134073	106.99	60	120	
Sc	45	2	NoGas	9568334	1.03	8481025	112.82	60	120	
Rh	103	1	He	900945	1.09	903580	99.71	60	120	
In	115	1	He	229240	1.41	224817	101.97	60	120	
Tb	159	1	He	1088995	1.38	1046002	104.11	60	120	
Ho	165	1	He	1099555	1.56	1057439	103.98	60	120	
Bi	209	1	He	715801	0.33	731380	97.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-4-a
Data File Name	063SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:03:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.630	18.630	1.48	598519	0.00	10000	
Be	9	45	2	NoGas	0.107	0.107	15.15	874	0.01	2000	
B	11	45	2	NoGas	89.864	89.864	1.26	386501	0.02	300	
Na	23	45	1	He	91489.729	91489.729	1.27	39548527	0.23	500000	
Mg	24	45	1	He	30940.711	30940.711	1.51	7431367	0.42	500000	
Al	27	45	1	He	6.907	6.907	4.82	813	0.85	200000	
K	39	45	1	He	9448.162	9448.162	0.73	1088210	0.87	500000	
Ca	44	45	1	He	153164.952	153164.952	1.65	1024214	14.95	500000	
Ti	47	45	1	He	0.300	0.300	48.69	14	2.07	2500	
V	51	45	1	He	0.793	0.793	29.78	1430	0.06	10000	
Cr	52	45	1	He	1.399	1.399	2.70	3727	0.04	10000	
Mn	55	45	1	He	468.170	468.170	0.88	495086	0.09	10000	
Fe	56	45	1	He	9383.005	9383.005	1.55	15356790	0.06	200000	
Co	59	45	1	He	1.216	1.216	3.85	5082	0.02	5000	
Ni	60	45	1	He	30.371	30.371	2.17	33407	0.09	10000	
Cu	63	45	1	He	7.025	7.025	1.87	24353	0.03	10000	
Zn	66	45	1	He	170.644	170.644	1.23	67584	0.25	10000	
As	75	103	1	He	3.185	3.185	3.80	733	0.43	10000	
Se	78	115	1	He	0.516	0.516	5.74	8	6.35	10000	
Sr	88	103	1	He	1615.172	1615.172	0.95	1603806	0.10	10000	
Mo	95	103	1	He	4.161	4.161	1.63	5161	0.08	2000	
Ag	107	103	1	He	0.003	0.003	55.62	23	0.01	300	
Cd	111	115	1	He	0.016	0.016	109.55	10	0.16	4000	
Sn	118	115	1	He	0.453	0.453	44.35	741	0.06	2000	
Sb	123	115	1	He	0.147	0.147	14.33	202	0.07	200	
Ba	137	115	1	He	160.967	160.967	0.55	61277	0.26	10000	
W	182	159	1	He	0.069	0.069	46.63	1867	0.00	2500	
Tl	205	165	1	He	0.004	0.004	31.98	82	0.01	2000	
Pb	208	165	1	He	6.182	6.182	1.33	74589	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2187935	1.07	1884762	116.09	60	120	
Sc	45	1	He	147358	1.27	134073	109.91	60	120	
Sc	45	2	NoGas	9418588	0.81	8481025	111.05	60	120	
Rh	103	1	He	900217	0.74	903580	99.63	60	120	
In	115	1	He	228333	0.66	224817	101.56	60	120	
Tb	159	1	He	1090462	1.12	1046002	104.25	60	120	
Ho	165	1	He	1107075	0.33	1057439	104.69	60	120	
Bi	209	1	He	722253	1.17	731380	98.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-5-a
Data File Name	064SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:08:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.054	18.054	0.92	562889	0.00	10000	
Be	9	45	2	NoGas	0.103	0.103	10.78	815	0.01	2000	
B	11	45	2	NoGas	85.201	85.201	0.01	353709	0.02	300	
Na	23	45	1	He	100884.616	100884.616	1.07	41545939	0.24	500000	
Mg	24	45	1	He	30448.094	30448.094	0.54	6967429	0.44	500000	
Al	27	45	1	He	8.624	8.624	7.00	939	0.92	200000	
K	39	45	1	He	9220.150	9220.150	0.90	1011908	0.91	500000	
Ca	44	45	1	He	149308.502	149308.502	0.96	951238	15.70	500000	
Ti	47	45	1	He	0.436	0.436	93.39	20	2.18	2500	
V	51	45	1	He	1.440	1.440	18.60	2422	0.06	10000	
Cr	52	45	1	He	2.333	2.333	4.07	5450	0.04	10000	
Mn	55	45	1	He	453.720	453.720	1.11	457097	0.10	10000	
Fe	56	45	1	He	12768.662	12768.662	0.73	19909381	0.06	200000	
Co	59	45	1	He	1.712	1.712	2.56	6685	0.03	5000	
Ni	60	45	1	He	34.170	34.170	4.11	35786	0.10	10000	
Cu	63	45	1	He	38.149	38.149	1.01	114784	0.03	10000	
Zn	66	45	1	He	176.424	176.424	0.81	66566	0.27	10000	
As	75	103	1	He	6.047	6.047	2.80	1320	0.46	10000	
Se	78	115	1	He	0.543	0.543	53.89	8	6.68	10000	
Sr	88	103	1	He	1492.525	1492.525	1.44	1421901	0.10	10000	
Mo	95	103	1	He	4.098	4.098	3.71	4875	0.08	2000	
Ag	107	103	1	He	0.007	0.007	26.49	39	0.02	300	
Cd	111	115	1	He	0.018	0.018	35.82	10	0.17	4000	
Sn	118	115	1	He	0.633	0.633	6.68	885	0.07	2000	
Sb	123	115	1	He	0.153	0.153	0.85	202	0.08	200	
Ba	137	115	1	He	161.569	161.569	0.64	59516	0.27	10000	
W	182	159	1	He	0.083	0.083	49.91	1896	0.00	2500	
Tl	205	165	1	He	0.011	0.011	54.06	137	0.01	2000	
Pb	208	165	1	He	5.696	5.696	1.37	66261	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2099837	0.54	1884762	111.41	60	120	
Sc	45	1	He	140381	0.83	134073	104.70	60	120	
Sc	45	2	NoGas	9078157	1.04	8481025	107.04	60	120	
Rh	103	1	He	863679	0.18	903580	95.58	60	120	
In	115	1	He	220949	0.68	224817	98.28	60	120	
Tb	159	1	He	1060718	0.73	1046002	101.41	60	120	
Ho	165	1	He	1065895	0.98	1057439	100.80	60	120	
Bi	209	1	He	693399	0.57	731380	94.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-6-a
Data File Name	065SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:12:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.363	13.363	1.00	443035	0.00	10000	
Be	9	45	2	NoGas	0.114	0.114	7.32	870	0.01	2000	
B	11	45	2	NoGas	83.832	83.832	1.00	343559	0.02	300	
Na	23	45	1	He	40598.029	40598.029	1.14	16040775	0.25	500000	
Mg	24	45	1	He	30632.868	30632.868	1.44	6723831	0.46	500000	
Al	27	45	1	He	7.544	7.544	9.13	801	0.94	200000	
K	39	45	1	He	8887.571	8887.571	2.44	935903	0.95	500000	
Ca	44	45	1	He	149990.950	149990.950	2.08	916589	16.36	500000	
Ti	47	45	1	He	0.605	0.605	67.36	27	2.27	2500	
V	51	45	1	He	1.252	1.252	26.52	2034	0.06	10000	
Cr	52	45	1	He	1.782	1.782	3.95	4153	0.04	10000	
Mn	55	45	1	He	426.713	426.713	1.56	412376	0.10	10000	
Fe	56	45	1	He	14263.656	14263.656	0.98	21334188	0.07	200000	
Co	59	45	1	He	1.931	1.931	3.09	7194	0.03	5000	
Ni	60	45	1	He	317.606	317.606	1.48	317924	0.10	10000	
Cu	63	45	1	He	18.097	18.097	1.95	53513	0.03	10000	
Zn	66	45	1	He	277.823	277.823	1.25	100465	0.28	10000	
As	75	103	1	He	5.874	5.874	3.99	1265	0.46	10000	
Se	78	115	1	He	0.601	0.601	38.96	8	7.11	10000	
Sr	88	103	1	He	1415.608	1415.608	1.25	1330443	0.11	10000	
Mo	95	103	1	He	3.614	3.614	5.37	4244	0.09	2000	
Ag	107	103	1	He	0.007	0.007	35.66	36	0.02	300	
Cd	111	115	1	He	0.115	0.115	12.81	57	0.20	4000	
Sn	118	115	1	He	1.643	1.643	11.23	1774	0.09	2000	
Sb	123	115	1	He	0.203	0.203	19.89	248	0.08	200	
Ba	137	115	1	He	162.807	162.807	1.26	58225	0.28	10000	
W	182	159	1	He	0.090	0.090	66.33	1874	0.00	2500	
Tl	205	165	1	He	0.012	0.012	16.43	143	0.01	2000	
Pb	208	165	1	He	9.496	9.496	0.84	107449	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2062020	0.42	1884762	109.40	60	120	
Sc	45	1	He	134668	1.23	134073	100.44	60	120	
Sc	45	2	NoGas	8958385	1.21	8481025	105.63	60	120	
Rh	103	1	He	852090	0.61	903580	94.30	60	120	
In	115	1	He	214518	0.57	224817	95.42	60	120	
Tb	159	1	He	1029159	0.30	1046002	98.39	60	120	
Ho	165	1	He	1044286	0.25	1057439	98.76	60	120	
Bi	209	1	He	676131	0.94	731380	92.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64303-e-1-a
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:16:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.246	3.246	2.42	199218	0.00	10000	
Be	9	45	2	NoGas	0.086	0.086	10.29	693	0.01	2000	
B	11	45	2	NoGas	92.679	92.679	1.20	376327	0.02	300	
Na	23	45	1	He	553129.477	553129.477	1.27	215797184	0.26	500000	>LDR
Mg	24	45	1	He	14303.526	14303.526	1.94	3101258	0.46	500000	
Al	27	45	1	He	20.827	20.827	2.41	1991	1.05	200000	
K	39	45	1	He	13194.328	13194.328	0.48	1368207	0.96	500000	
Ca	44	45	1	He	63035.859	63035.859	1.76	380606	16.56	500000	
Ti	47	45	1	He	0.152	0.152	86.62	7	2.29	2500	
V	51	45	1	He	0.277	0.277	63.47	486	0.06	10000	
Cr	52	45	1	He	0.126	0.126	8.43	912	0.01	10000	
Mn	55	45	1	He	14.713	14.713	0.79	14175	0.10	10000	
Fe	56	45	1	He	78.623	78.623	2.19	118113	0.07	200000	
Co	59	45	1	He	0.833	0.833	3.42	3237	0.03	5000	
Ni	60	45	1	He	2.160	2.160	8.14	2278	0.09	10000	
Cu	63	45	1	He	5.034	5.034	12.47	16433	0.03	10000	
Zn	66	45	1	He	9.499	9.499	8.93	3533	0.27	10000	
As	75	103	1	He	0.358	0.358	6.29	88	0.41	10000	
Se	78	115	1	He	0.630	0.630	9.57	8	7.45	10000	
Sr	88	103	1	He	237.312	237.312	0.59	210918	0.11	10000	
Mo	95	103	1	He	0.878	0.878	17.41	986	0.09	2000	
Ag	107	103	1	He	0.003	0.003	40.57	19	0.02	300	
Cd	111	115	1	He	0.017	0.017	39.08	9	0.18	4000	
Sn	118	115	1	He	0.135	0.135	62.73	396	0.03	2000	
Sb	123	115	1	He	1.109	1.109	6.19	1137	0.10	200	
Ba	137	115	1	He	35.326	35.326	4.58	12251	0.29	10000	
W	182	159	1	He	1.029	1.029	37.05	6598	0.02	2500	
Tl	205	165	1	He	0.007	0.007	44.15	94	0.01	2000	
Pb	208	165	1	He	0.388	0.388	4.32	5274	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1959430	0.86	1884762	103.96	60	120	
Sc	45	1	He	133006	1.29	134073	99.20	60	120	
Sc	45	2	NoGas	8898410	0.23	8481025	104.92	60	120	
Rh	103	1	He	805602	1.58	903580	89.16	60	120	
In	115	1	He	207946	1.25	224817	92.50	60	120	
Tb	159	1	He	989155	1.09	1046002	94.57	60	120	
Ho	165	1	He	998111	0.66	1057439	94.39	60	120	
Bi	209	1	He	630293	0.55	731380	86.18	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-d-1-b
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:20:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.514	17.514	0.60	536656	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	14.70	763	0.01	2000	
B	11	45	2	NoGas	80.870	80.870	1.05	328185	0.02	300	
Na	23	45	1	He	86425.746	86425.746	2.21	35131068	0.25	500000	
Mg	24	45	1	He	29306.300	29306.300	1.87	6619187	0.44	500000	
Al	27	45	1	He	0.939	0.939	43.37	203	0.46	200000	
K	39	45	1	He	8937.909	8937.909	1.14	968553	0.92	500000	
Ca	44	45	1	He	144367.010	144367.010	1.31	907899	15.90	500000	
Ti	47	45	1	He	0.244	0.244	16.26	11	2.19	2500	
V	51	45	1	He	0.235	0.235	138.06	434	0.05	10000	
Cr	52	45	1	He	0.756	0.756	10.71	2214	0.03	10000	
Mn	55	45	1	He	439.597	439.597	1.11	437165	0.10	10000	
Fe	56	45	1	He	48.050	48.050	2.17	76006	0.06	200000	
Co	59	45	1	He	0.564	0.564	7.47	2389	0.02	5000	
Ni	60	45	1	He	61.700	61.700	1.95	63673	0.10	10000	
Cu	63	45	1	He	4.409	4.409	4.15	15308	0.03	10000	
Zn	66	45	1	He	61.162	61.162	2.12	22878	0.27	10000	
As	75	103	1	He	1.949	1.949	1.34	430	0.45	10000	
Se	78	115	1	He	0.333	0.333	31.25	6	5.57	10000	
Sr	88	103	1	He	1442.673	1442.673	1.34	1354311	0.11	10000	
Mo	95	103	1	He	3.947	3.947	2.85	4627	0.09	2000	
Ag	107	103	1	He	0.004	0.004	84.88	23	0.02	300	
Cd	111	115	1	He	0.008	0.008	63.95	6	0.15	4000	
Sn	118	115	1	He	-0.014	-0.014	-471.06	278	-0.01	2000	
Sb	123	115	1	He	0.232	0.232	12.79	281	0.08	200	
Ba	137	115	1	He	132.053	132.053	1.39	47971	0.28	10000	
W	182	159	1	He	1.185	1.185	10.23	7639	0.02	2500	
Tl	205	165	1	He	0.004	0.004	112.10	73	0.01	2000	
Pb	208	165	1	He	0.001	0.001	971.91	1171	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1994838	0.73	1884762	105.84	60	120	
Sc	45	1	He	138573	0.98	134073	103.36	60	120	
Sc	45	2	NoGas	8861220	0.67	8481025	104.48	60	120	
Rh	103	1	He	851142	1.40	903580	94.20	60	120	
In	115	1	He	217897	0.74	224817	96.92	60	120	
Tb	159	1	He	1023506	0.16	1046002	97.85	60	120	
Ho	165	1	He	1029986	0.73	1057439	97.40	60	120	
Bi	209	1	He	677629	0.84	731380	92.65	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-d-2-b
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:24:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	19.634	19.634	1.16	608483	0.00	10000	
Be	9	45	2	NoGas	0.060	0.060	21.76	544	0.01	2000	
B	11	45	2	NoGas	80.780	80.780	0.83	339849	0.02	300	
Na	23	45	1	He	85858.520	85858.520	1.47	34891385	0.25	500000	
Mg	24	45	1	He	30971.272	30971.272	1.59	6993346	0.44	500000	
Al	27	45	1	He	8.709	8.709	17.42	933	0.93	200000	
K	39	45	1	He	9416.237	9416.237	1.46	1019575	0.92	500000	
Ca	44	45	1	He	151990.606	151990.606	1.97	955494	15.91	500000	
Ti	47	45	1	He	0.194	0.194	86.60	9	2.19	2500	
V	51	45	1	He	0.365	0.365	92.14	649	0.06	10000	
Cr	52	45	1	He	0.681	0.681	6.70	2065	0.03	10000	
Mn	55	45	1	He	509.274	509.274	0.96	506285	0.10	10000	
Fe	56	45	1	He	230.429	230.429	2.14	356552	0.06	200000	
Co	59	45	1	He	0.976	0.976	4.62	3896	0.03	5000	
Ni	60	45	1	He	11.193	11.193	2.83	11668	0.10	10000	
Cu	63	45	1	He	2.150	2.150	7.54	8741	0.02	10000	
Zn	66	45	1	He	9421.109	9421.109	1.66	3499545	0.27	10000	
As	75	103	1	He	0.902	0.902	5.76	209	0.43	10000	
Se	78	115	1	He	0.396	0.396	15.53	7	5.97	10000	
Sr	88	103	1	He	1596.232	1596.232	2.96	1503649	0.11	10000	
Mo	95	103	1	He	4.405	4.405	2.16	5181	0.09	2000	
Ag	107	103	1	He	0.008	0.008	57.56	40	0.02	300	
Cd	111	115	1	He	0.005	0.005	130.65	4	0.12	4000	
Sn	118	115	1	He	0.511	0.511	25.26	767	0.07	2000	
Sb	123	115	1	He	0.191	0.191	18.86	240	0.08	200	
Ba	137	115	1	He	142.818	142.818	2.27	52269	0.27	10000	
W	182	159	1	He	0.934	0.934	8.42	6379	0.01	2500	
Tl	205	165	1	He	0.000	0.000	428.93	42	0.00	2000	
Pb	208	165	1	He	0.040	0.040	21.00	1635	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2058134	2.41	1884762	109.20	60	120	
Sc	45	1	He	138530	0.94	134073	103.32	60	120	
Sc	45	2	NoGas	9186909	0.81	8481025	108.32	60	120	
Rh	103	1	He	853924	0.77	903580	94.50	60	120	
In	115	1	He	219527	1.17	224817	97.65	60	120	
Tb	159	1	He	1033191	1.17	1046002	98.78	60	120	
Ho	165	1	He	1049786	1.39	1057439	99.28	60	120	
Bi	209	1	He	679913	0.61	731380	92.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-4-b
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:29:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.599	17.599	2.20	551474	0.00	10000	
Be	9	45	2	NoGas	0.057	0.057	24.23	522	0.01	2000	
B	11	45	2	NoGas	82.758	82.758	2.25	343584	0.02	300	
Na	23	45	1	He	85350.963	85350.963	1.82	35060318	0.24	500000	
Mg	24	45	1	He	29071.981	29071.981	0.84	6635891	0.44	500000	
Al	27	45	1	He	0.600	0.600	78.24	173	0.35	200000	
K	39	45	1	He	8851.481	8851.481	1.19	969365	0.91	500000	
Ca	44	45	1	He	142639.060	142639.060	1.45	906457	15.74	500000	
Ti	47	45	1	He	0.266	0.266	42.04	12	2.18	2500	
V	51	45	1	He	0.139	0.139	85.33	284	0.05	10000	
Cr	52	45	1	He	0.818	0.818	6.13	2365	0.03	10000	
Mn	55	45	1	He	433.179	433.179	1.32	435316	0.10	10000	
Fe	56	45	1	He	34.517	34.517	0.62	55765	0.06	200000	
Co	59	45	1	He	1.182	1.182	4.57	4705	0.03	5000	
Ni	60	45	1	He	20.589	20.589	2.12	21572	0.10	10000	
Cu	63	45	1	He	1.626	1.626	1.35	7295	0.02	10000	
Zn	66	45	1	He	19.951	19.951	2.98	7645	0.26	10000	
As	75	103	1	He	1.229	1.229	3.95	281	0.44	10000	
Se	78	115	1	He	0.306	0.306	82.42	6	5.28	10000	
Sr	88	103	1	He	1425.438	1425.438	1.04	1355018	0.11	10000	
Mo	95	103	1	He	4.022	4.022	4.21	4775	0.08	2000	
Ag	107	103	1	He	0.000	0.000	692.96	9	0.00	300	
Cd	111	115	1	He	0.002	0.002	166.77	3	0.08	4000	
Sn	118	115	1	He	-0.078	-0.078	-92.76	222	-0.04	2000	
Sb	123	115	1	He	0.245	0.245	19.75	299	0.08	200	
Ba	137	115	1	He	125.483	125.483	1.69	46219	0.27	10000	
W	182	159	1	He	0.818	0.818	24.10	5872	0.01	2500	
Tl	205	165	1	He	-0.001	-0.001	-90.91	28	-0.01	2000	
Pb	208	165	1	He	-0.007	-0.007	-82.61	1110	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2109920	0.58	1884762	111.95	60	120	
Sc	45	1	He	140029	0.79	134073	104.44	60	120	
Sc	45	2	NoGas	9072576	0.88	8481025	106.98	60	120	
Rh	103	1	He	861833	0.62	903580	95.38	60	120	
In	115	1	He	220905	1.34	224817	98.26	60	120	
Tb	159	1	He	1053967	1.01	1046002	100.76	60	120	
Ho	165	1	He	1051121	0.67	1057439	99.40	60	120	
Bi	209	1	He	688658	0.17	731380	94.16	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-5-b
Data File Name	070SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:33:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.013	18.013	1.16	568277	0.00	10000	
Be	9	45	2	NoGas	0.057	0.057	11.99	526	0.01	2000	
B	11	45	2	NoGas	83.262	83.262	0.31	349773	0.02	300	
Na	23	45	1	He	100670.240	100670.240	1.83	40935672	0.25	500000	
Mg	24	45	1	He	29977.804	29977.804	1.90	6773500	0.44	500000	
Al	27	45	1	He	6.275	6.275	2.86	706	0.89	200000	
K	39	45	1	He	9249.657	9249.657	1.72	1002324	0.92	500000	
Ca	44	45	1	He	145334.754	145334.754	0.98	914359	15.89	500000	
Ti	47	45	1	He	0.242	0.242	74.11	11	2.18	2500	
V	51	45	1	He	0.392	0.392	35.35	692	0.06	10000	
Cr	52	45	1	He	0.857	0.857	4.52	2420	0.04	10000	
Mn	55	45	1	He	436.651	436.651	1.36	434417	0.10	10000	
Fe	56	45	1	He	48.146	48.146	0.42	76194	0.06	200000	
Co	59	45	1	He	1.651	1.651	4.40	6373	0.03	5000	
Ni	60	45	1	He	27.898	27.898	1.44	28884	0.10	10000	
Cu	63	45	1	He	4.670	4.670	3.78	16066	0.03	10000	
Zn	66	45	1	He	91.725	91.725	0.91	34248	0.27	10000	
As	75	103	1	He	1.150	1.150	1.12	265	0.43	10000	
Se	78	115	1	He	0.378	0.378	38.10	6	5.84	10000	
Sr	88	103	1	He	1420.214	1420.214	1.16	1356055	0.10	10000	
Mo	95	103	1	He	4.022	4.022	1.93	4796	0.08	2000	
Ag	107	103	1	He	0.000	0.000	3196.75	8	0.00	300	
Cd	111	115	1	He	0.014	0.014	25.58	9	0.17	4000	
Sn	118	115	1	He	0.087	0.087	70.56	374	0.02	2000	
Sb	123	115	1	He	0.283	0.283	15.50	338	0.08	200	
Ba	137	115	1	He	129.530	129.530	1.65	47569	0.27	10000	
W	182	159	1	He	0.649	0.649	4.78	4886	0.01	2500	
Tl	205	165	1	He	0.004	0.004	34.23	72	0.01	2000	
Pb	208	165	1	He	0.000	0.000	-976.21	1191	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136729	1.57	1884762	113.37	60	120	
Sc	45	1	He	138634	1.81	134073	103.40	60	120	
Sc	45	2	NoGas	9180606	0.12	8481025	108.25	60	120	
Rh	103	1	He	865582	0.80	903580	95.79	60	120	
In	115	1	He	220263	1.36	224817	97.97	60	120	
Tb	159	1	He	1039742	0.76	1046002	99.40	60	120	
Ho	165	1	He	1057813	0.87	1057439	100.04	60	120	
Bi	209	1	He	689671	0.57	731380	94.30	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	071_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:37:29-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.207	2.453	1365845	1.98	50	106.4	89.5	110.5	
Be	9	45	2	NoGas	52.536	1.765	324759	1.34	50	105.1	89.5	110.5	
B	11	45	2	NoGas	59.572	0.274	241153	0.55	50	119.1	89.5	110.5	CCV Failed
Na	23	45	1	He	26099.168	1.131	10328563	0.20	25000	104.4	89.5	110.5	
Mg	24	45	1	He	25798.716	0.713	5671300	0.26	25000	103.2	89.5	110.5	
Al	27	45	1	He	253.650	0.887	23344	0.36	250	101.5	89.5	110.5	
K	39	45	1	He	25895.289	1.442	2713931	0.52	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25509.167	0.805	156286	0.25	25000	102.0	89.5	110.5	
Ti	47	45	1	He	51.437	2.967	2279	2.20	50	102.9	89.5	110.5	
V	51	45	1	He	49.700	2.935	78577	2.01	50	99.4	89.5	110.5	
Cr	52	45	1	He	50.990	1.383	100263	0.74	50	102.0	89.5	110.5	
Mn	55	45	1	He	255.922	1.493	247738	0.76	250	102.4	89.5	110.5	
Fe	56	45	1	He	12784.261	1.971	19147976	1.04	12500	102.3	89.5	110.5	
Co	59	45	1	He	50.943	1.877	182106	1.25	50	101.9	89.5	110.5	
Ni	60	45	1	He	50.591	1.395	50837	0.93	50	101.2	89.5	110.5	
Cu	63	45	1	He	51.478	0.971	147952	0.94	50	103.0	89.5	110.5	
Zn	66	45	1	He	50.922	2.169	18562	1.93	50	101.8	89.5	110.5	
As	75	103	1	He	50.195	0.605	10839	0.95	50	100.4	89.5	110.5	
Se	78	115	1	He	51.411	1.508	502	0.99	50	102.8	89.5	110.5	
Sr	88	103	1	He	50.105	1.086	47804	0.80	50	100.2	89.5	110.5	
Mo	95	103	1	He	52.440	1.560	62286	1.43	50	104.9	89.5	110.5	
Ag	107	103	1	He	50.560	0.312	222013	0.37	50	101.1	89.5	110.5	
Cd	111	115	1	He	51.026	0.683	24756	0.37	50	102.1	89.5	110.5	
Sn	118	115	1	He	49.134	1.076	45447	0.37	50	98.3	89.5	110.5	
Sb	123	115	1	He	51.040	1.468	52875	1.01	50	102.1	89.5	110.5	
Ba	137	115	1	He	50.625	0.918	18370	0.19	50	101.3	89.5	110.5	
W	182	159	1	He	51.804	1.034	278374	0.94	50	103.6	89.5	110.5	
Tl	205	165	1	He	49.567	1.070	423858	1.25	50	99.1	89.5	110.5	
Pb	208	165	1	He	49.736	0.224	558803	0.28	50	99.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2042567	0.47	1884762	108.37	60	120	
Sc	45	1	He	134859	0.95	134073	100.59	60	120	
Sc	45	2	NoGas	8752072	0.75	8481025	103.20	60	120	
Rh	103	1	He	864314	0.39	903580	95.65	60	120	
In	115	1	He	217616	1.02	224817	96.80	60	120	
Tb	159	1	He	1037985	0.12	1046002	99.23	60	120	
Ho	165	1	He	1046230	0.24	1057439	98.94	60	120	
Bi	209	1	He	700481	0.74	731380	95.78	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	072_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:41:40-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.365	16.3	131852	1.6	8	
Be	9	45	2	NoGas	0.084	11.4	685	8.2	1	
B	11	45	2	NoGas	8.488	3.2	43244	1.7	20	
Na	23	45	1	He	63.654	5.1	30382	4.0	1000	
Mg	24	45	1	He	17.003	1.9	4471	1.3	1000	
Al	27	45	1	He	0.160	183.0	129	20.9	50	
K	39	45	1	He	24.189	11.6	11693	3.3	1000	
Ca	44	45	1	He	22.124	28.5	335	12.4	1000	
Ti	47	45	1	He	0.050	173.2	2	173.2	20	
V	51	45	1	He	0.046	137.2	130	79.1	2	
Cr	52	45	1	He	0.040	119.3	774	13.2	2	
Mn	55	45	1	He	0.183	19.4	319	11.7	2	
Fe	56	45	1	He	9.394	8.4	16409	7.5	50	
Co	59	45	1	He	-0.019	-72.7	250	19.4	1	
Ni	60	45	1	He	-0.045	-44.4	101	19.9	2	
Cu	63	45	1	He	0.448	13.4	3773	4.0	2	
Zn	66	45	1	He	0.933	22.2	496	15.3	20	
As	75	103	1	He	0.104	23.6	41	15.0	2	
Se	78	115	1	He	0.294	22.9	6	9.9	2	
Sr	88	103	1	He	0.211	6.8	249	5.4	10	
Mo	95	103	1	He	0.154	27.1	204	24.2	2	
Ag	107	103	1	He	0.036	7.2	172	6.8	0.2	
Cd	111	115	1	He	0.051	18.6	27	19.6	0.2	
Sn	118	115	1	He	0.271	41.9	559	18.0	10	
Sb	123	115	1	He	0.053	48.4	99	25.7	2	
Ba	137	115	1	He	0.020	39.4	13	25.0	5	
W	182	159	1	He	0.756	9.5	5468	4.5	10	
Tl	205	165	1	He	0.070	7.5	644	5.2	0.5	
Pb	208	165	1	He	0.023	65.4	1447	9.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2141723	1.23	1884762	113.63	60	120	
Sc	45	1	He	137613	0.84	134073	102.64	60	120	
Sc	45	2	NoGas	8982280	0.94	8481025	105.91	60	120	
Rh	103	1	He	903898	1.37	903580	100.04	60	120	
In	115	1	He	226174	2.26	224817	100.60	60	120	
Tb	159	1	He	1042500	2.73	1046002	99.67	60	120	
Ho	165	1	He	1055163	2.52	1057439	99.78	60	120	
Bi	209	1	He	722287	1.13	731380	98.76	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-6-b
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:45:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.622	13.622	1.26	447363	0.00	10000	
Be	9	45	2	NoGas	0.067	0.067	5.28	574	0.01	2000	
B	11	45	2	NoGas	76.539	76.539	1.64	313166	0.02	300	
Na	23	45	1	He	38553.276	38553.276	0.77	15221669	0.25	500000	
Mg	24	45	1	He	29095.305	29095.305	1.46	6381397	0.46	500000	
Al	27	45	1	He	0.591	0.591	29.09	166	0.36	200000	
K	39	45	1	He	8416.285	8416.285	0.75	886185	0.95	500000	
Ca	44	45	1	He	142858.145	142858.145	0.57	872430	16.37	500000	
Ti	47	45	1	He	0.201	0.201	86.64	9	2.26	2500	
V	51	45	1	He	0.303	0.303	63.57	529	0.06	10000	
Cr	52	45	1	He	0.759	0.759	5.73	2158	0.04	10000	
Mn	55	45	1	He	388.840	388.840	1.30	375494	0.10	10000	
Fe	56	45	1	He	39.705	39.705	0.71	61341	0.06	200000	
Co	59	45	1	He	1.775	1.775	3.39	6631	0.03	5000	
Ni	60	45	1	He	454.182	454.182	0.86	454232	0.10	10000	
Cu	63	45	1	He	3.615	3.615	5.41	12617	0.03	10000	
Zn	66	45	1	He	178.425	178.425	1.61	64523	0.28	10000	
As	75	103	1	He	1.326	1.326	14.76	299	0.44	10000	
Se	78	115	1	He	0.174	0.174	195.62	4	3.89	10000	
Sr	88	103	1	He	1339.957	1339.957	0.80	1261539	0.11	10000	
Mo	95	103	1	He	3.375	3.375	5.66	3968	0.09	2000	
Ag	107	103	1	He	0.005	0.005	92.26	27	0.02	300	
Cd	111	115	1	He	0.050	0.050	19.92	26	0.19	4000	
Sn	118	115	1	He	0.083	0.083	172.43	367	0.02	2000	
Sb	123	115	1	He	0.233	0.233	17.57	283	0.08	200	
Ba	137	115	1	He	123.180	123.180	2.31	44788	0.28	10000	
W	182	159	1	He	0.499	0.499	5.99	4078	0.01	2500	
Tl	205	165	1	He	0.016	0.016	20.78	179	0.01	2000	
Pb	208	165	1	He	0.002	0.002	315.49	1200	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2112394	0.78	1884762	112.08	60	120	
Sc	45	1	He	134564	1.61	134073	100.37	60	120	
Sc	45	2	NoGas	8920999	0.71	8481025	105.19	60	120	
Rh	103	1	He	853614	1.85	903580	94.47	60	120	
In	115	1	He	218149	2.16	224817	97.03	60	120	
Tb	159	1	He	1037046	1.52	1046002	99.14	60	120	
Ho	165	1	He	1040114	1.26	1057439	98.36	60	120	
Bi	209	1	He	692777	1.06	731380	94.72	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228610/1-a
Data File Name	074_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:50:06-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.368	11.2	135636	0.7	8	
Be	9	45	2	NoGas	0.044	14.1	444	9.0	1	
B	11	45	2	NoGas	9.058	2.7	46812	1.5	20	
Na	23	45	1	He	106.249	3.8	49103	0.8	1000	
Mg	24	45	1	He	121.066	3.4	28705	0.9	1000	
Al	27	45	1	He	4.147	3.0	518	1.3	50	
K	39	45	1	He	23.218	31.7	11956	5.3	1000	
Ca	44	45	1	He	396.977	3.8	2761	0.9	1000	
Ti	47	45	1	He	0.095	86.7	4	86.6	20	
V	51	45	1	He	-0.011	-687.6	41	307.5	2	
Cr	52	45	1	He	0.034	146.2	784	11.4	2	
Mn	55	45	1	He	0.848	4.4	1007	1.1	2	
Fe	56	45	1	He	7.039	4.9	13218	2.2	50	
Co	59	45	1	He	-0.051	-25.9	137	34.1	1	
Ni	60	45	1	He	0.044	82.8	199	19.9	2	
Cu	63	45	1	He	0.610	12.2	4379	6.0	2	
Zn	66	45	1	He	6.140	3.8	2497	5.4	20	
As	75	103	1	He	0.075	51.6	36	24.2	2	
Se	78	115	1	He	0.284	44.6	6	22.1	2	
Sr	88	103	1	He	1.144	7.2	1231	8.2	10	
Mo	95	103	1	He	0.061	29.6	92	24.1	2	
Ag	107	103	1	He	0.003	82.4	24	55.1	0.2	
Cd	111	115	1	He	0.009	132.3	6	95.3	0.2	
Sn	118	115	1	He	0.243	50.2	559	21.8	10	
Sb	123	115	1	He	0.000	-32065.6	44	24.1	2	
Ba	137	115	1	He	1.097	5.5	439	5.3	5	
W	182	159	1	He	0.453	1.9	3986	1.2	10	
Tl	205	165	1	He	0.003	118.3	66	44.4	0.5	
Pb	208	165	1	He	0.014	49.5	1379	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2162429	2.05	1884762	114.73	60	120	
Sc	45	1	He	142108	2.74	134073	105.99	60	120	
Sc	45	2	NoGas	9236279	0.91	8481025	108.91	60	120	
Rh	103	1	He	942834	1.32	903580	104.34	60	120	
In	115	1	He	236887	0.65	224817	105.37	60	120	
Tb	159	1	He	1079377	1.01	1046002	103.19	60	120	
Ho	165	1	He	1077934	0.57	1057439	101.94	60	120	
Bi	209	1	He	764871	1.51	731380	104.58	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228610/3-a
Data File Name	075_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:54:20-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	103.852	103.852	1.820	2600601	1.02	100	103.9	84.5	115.5	
Be	9	2	NoGas	1087.696	1087.696	1.376	6849549	0.34	1000	108.8	84.5	115.5	
B	11	2	NoGas	110.562	110.562	1.577	448192	0.51	100	110.6	84.5	115.5	
Na	23	1	He	9910.744	9910.744	1.344	3942753	0.33	10000	99.1	84.5	115.5	
Mg	24	1	He	10085.876	10085.876	2.425	2227390	1.41	10000	100.9	84.5	115.5	
Al	27	1	He	9542.499	9542.499	2.012	878025	0.99	10000	95.4	84.5	115.5	
K	39	1	He	9593.397	9593.397	1.598	1015642	0.74	10000	95.9	84.5	115.5	
Ca	44	1	He	9997.599	9997.599	2.154	61643	1.32	10000	100.0	84.5	115.5	
Ti	47	1	He	92.241	92.241	2.289	4106	2.23	100	92.2	84.5	115.5	
V	51	1	He	1019.260	1019.260	2.206	1617851	1.57	1000	101.9	84.5	115.5	
Cr	52	1	He	1007.607	1007.607	1.353	1977476	0.53	1000	100.8	84.5	115.5	
Mn	55	1	He	954.936	954.936	1.934	928198	0.98	1000	95.5	84.5	115.5	
Fe	56	1	He	9638.058	9638.058	2.447	14501293	1.42	10000	96.4	84.5	115.5	
Co	59	1	He	1010.428	1010.428	0.855	3622659	0.18	1000	101.0	84.5	115.5	
Ni	60	1	He	968.186	968.186	1.077	974689	0.19	1000	96.8	84.5	115.5	
Cu	63	1	He	1003.616	1003.616	2.503	2852079	1.60	1000	100.4	84.5	115.5	
Zn	66	1	He	972.252	972.252	1.315	353312	0.33	1000	97.2	84.5	115.5	
As	75	1	He	926.145	926.145	0.624	203190	0.67	1000	92.6	84.5	115.5	
Se	78	1	He	962.065	962.065	0.994	9353	0.83	1000	96.2	84.5	115.5	
Sr	88	1	He	922.060	922.060	0.383	894474	0.34	1000	92.2	84.5	115.5	
Mo	95	1	He	98.551	98.551	2.042	119095	2.08	100	98.6	84.5	115.5	
Ag	107	1	He	95.839	95.839	0.434	428204	0.44	100	95.8	84.5	115.5	
Cd	111	1	He	991.019	991.019	2.245	480757	0.47	1000	99.1	84.5	115.5	
Sn	118	1	He	975.152	975.152	2.103	896506	0.37	1000	97.5	84.5	115.5	
Sb	123	1	He	97.338	97.338	2.843	100791	1.04	100	97.3	84.5	115.5	
Ba	137	1	He	973.913	973.913	1.858	353316	0.67	1000	97.4	84.5	115.5	
W	182	1	He	97.863	97.863	1.431	527895	1.29	100	97.9	84.5	115.5	
Tl	205	1	He	250.376	250.376	0.349	2156577	0.22	250	100.2	84.5	115.5	
Pb	208	1	He	997.990	997.990	0.609	11272530	0.18	1000	99.8	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2103867	1.17	1884762	111.63	60	120	
Sc	45	1	He	135473	1.03	134073	101.04	60	120	
Sc	45	2	NoGas	8919972	1.03	8481025	105.18	60	120	
Rh	103	1	He	879456	0.05	903580	97.33	60	120	
In	115	1	He	217657	1.81	224817	96.81	60	120	
Tb	159	1	He	1044479	0.77	1046002	99.85	60	120	
Ho	165	1	He	1053945	0.57	1057439	99.67	60	120	
Bi	209	1	He	710497	0.79	731380	97.14	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-a
Data File Name	076SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:58:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.224	25.224	0.55	727164	0.00	10000	
Be	9	45	2	NoGas	0.400	0.400	8.33	2678	0.01	2000	
B	11	45	2	NoGas	420.506	420.506	0.45	1685677	0.02	300	>LDR
Na	23	45	1	He	63024.524	63024.524	0.72	25070993	0.25	500000	
Mg	24	45	1	He	70737.462	70737.462	1.41	15633972	0.45	500000	
Al	27	45	1	He	2.438	2.438	13.67	337	0.72	200000	
K	39	45	1	He	2770.889	2770.889	1.01	299999	0.92	500000	
Ca	44	45	1	He	437431.901	437431.901	1.08	2691347	16.25	500000	
Ti	47	45	1	He	0.049	0.049	173.21	2	2.21	2500	
V	51	45	1	He	0.147	0.147	127.68	287	0.05	10000	
Cr	52	45	1	He	0.140	0.140	49.80	958	0.01	10000	
Mn	55	45	1	He	20.469	20.469	2.00	20047	0.10	10000	
Fe	56	45	1	He	904.578	904.578	1.27	1364289	0.07	200000	
Co	59	45	1	He	0.112	0.112	24.75	713	0.02	5000	
Ni	60	45	1	He	0.503	0.503	8.32	651	0.08	10000	
Cu	63	45	1	He	0.287	0.287	23.95	3258	0.01	10000	
Zn	66	45	1	He	1.410	1.410	14.66	662	0.21	10000	
As	75	103	1	He	0.638	0.638	13.09	149	0.43	10000	
Se	78	115	1	He	1.018	1.018	18.41	12	8.18	10000	
Sr	88	103	1	He	11913.335	11913.335	1.54	10932241	0.11	10000	>LDR
Mo	95	103	1	He	1.693	1.693	5.45	1947	0.09	2000	
Ag	107	103	1	He	0.015	0.015	29.06	71	0.02	300	
Cd	111	115	1	He	0.225	0.225	15.84	109	0.21	4000	
Sn	118	115	1	He	1.782	1.782	15.94	1900	0.09	2000	
Sb	123	115	1	He	0.218	0.218	12.99	262	0.08	200	
Ba	137	115	1	He	18.149	18.149	2.79	6492	0.28	10000	
W	182	159	1	He	0.868	0.868	10.78	5979	0.01	2500	
Tl	205	165	1	He	0.149	0.149	14.69	1313	0.01	2000	
Pb	208	165	1	He	0.083	0.083	25.15	2120	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2115106	1.39	1884762	112.22	60	120	
Sc	45	1	He	135585	1.23	134073	101.13	60	120	
Sc	45	2	NoGas	8955905	0.40	8481025	105.60	60	120	
Rh	103	1	He	832021	0.86	903580	92.08	60	120	
In	115	1	He	214399	0.23	224817	95.37	60	120	
Tb	159	1	He	1025187	0.59	1046002	98.01	60	120	
Ho	165	1	He	1049152	0.36	1057439	99.22	60	120	
Bi	209	1	He	667272	0.69	731380	91.23	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64103-r-1-a@5
Data File Name	077SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:02:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.528	5.528	1.63	272492	0.00	10000	
Be	9	45	2	NoGas	0.217	0.217	8.86	1630	0.01	2000	
B	11	45	2	NoGas	98.026	98.026	0.97	427219	0.02	300	
Na	23	45	1	He	13100.131	13100.131	0.48	5592979	0.23	500000	
Mg	24	45	1	He	14604.371	14604.371	0.82	3462219	0.42	500000	
Al	27	45	1	He	1.097	1.097	16.77	229	0.48	200000	
K	39	45	1	He	560.430	560.430	1.69	72757	0.77	500000	
Ca	44	45	1	He	84329.735	84329.735	0.40	556633	15.15	500000	
Ti	47	45	1	He	0.023	0.023	173.21	1	2.09	2500	
V	51	45	1	He	-0.094	-0.094	-136.60	-102	0.09	10000	
Cr	52	45	1	He	0.033	0.033	96.16	802	0.00	10000	
Mn	55	45	1	He	4.330	4.330	4.71	4663	0.09	10000	
Fe	56	45	1	He	196.755	196.755	0.62	319939	0.06	200000	
Co	59	45	1	He	-0.008	-0.008	-82.78	304	0.00	5000	
Ni	60	45	1	He	0.023	0.023	107.38	180	0.01	10000	
Cu	63	45	1	He	0.066	0.066	117.04	2821	0.00	10000	
Zn	66	45	1	He	1.012	1.012	16.17	554	0.18	10000	
As	75	103	1	He	0.200	0.200	9.27	64	0.31	10000	
Se	78	115	1	He	0.419	0.419	18.17	7	5.74	10000	
Sr	88	103	1	He	2342.190	2342.190	1.31	2399011	0.10	10000	
Mo	95	103	1	He	0.408	0.408	13.19	534	0.08	2000	
Ag	107	103	1	He	0.002	0.002	119.23	18	0.01	300	
Cd	111	115	1	He	0.072	0.072	5.08	39	0.18	4000	
Sn	118	115	1	He	0.375	0.375	20.39	682	0.06	2000	
Sb	123	115	1	He	0.036	0.036	10.28	83	0.04	200	
Ba	137	115	1	He	3.599	3.599	5.91	1406	0.26	10000	
W	182	159	1	He	0.521	0.521	7.28	4471	0.01	2500	
Tl	205	165	1	He	0.032	0.032	24.90	331	0.01	2000	
Pb	208	165	1	He	0.017	0.017	93.11	1469	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2321934	0.60	1884762	123.20	60	120	ISTD warning
Sc	45	1	He	145413	0.72	134073	108.46	60	120	
Sc	45	2	NoGas	9563931	1.08	8481025	112.77	60	120	
Rh	103	1	He	928599	0.63	903580	102.77	60	120	
In	115	1	He	233417	1.12	224817	103.83	60	120	
Tb	159	1	He	1106218	0.41	1046002	105.76	60	120	
Ho	165	1	He	1116438	0.94	1057439	105.58	60	120	
Bi	209	1	He	750660	0.78	731380	102.64	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64103-r-1-a
Data File Name	078SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:06:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	139.961	139.961	1.89	3425590	0.00	10000	
Be	9	45	2	NoGas	1137.979	1137.979	0.08	7090545	0.02	2000	
B	11	45	2	NoGas	536.342	536.342	0.62	2116007	0.03	300	>LDR
Na	23	45	1	He	73541.117	73541.117	0.61	28937941	0.25	500000	
Mg	24	45	1	He	80487.312	80487.312	1.06	17595883	0.46	500000	
Al	27	45	1	He	10266.338	10266.338	1.96	935295	1.10	200000	
K	39	45	1	He	13063.138	13063.138	1.47	1366062	0.96	500000	
Ca	44	45	1	He	439279.805	439279.805	1.70	2673531	16.43	500000	
Ti	47	45	1	He	105.741	105.741	4.58	4660	2.27	2500	
V	51	45	1	He	1096.138	1096.138	2.13	1722625	0.06	10000	
Cr	52	45	1	He	1069.373	1069.373	1.90	2077832	0.05	10000	
Mn	55	45	1	He	1031.765	1031.765	1.39	992964	0.10	10000	
Fe	56	45	1	He	11121.951	11121.951	1.42	16569043	0.07	200000	
Co	59	45	1	He	1046.926	1046.926	2.16	3716087	0.03	5000	
Ni	60	45	1	He	983.627	983.627	1.05	980415	0.10	10000	
Cu	63	45	1	He	1009.807	1009.807	1.06	2841465	0.04	10000	
Zn	66	45	1	He	949.407	949.407	1.47	341591	0.28	10000	
As	75	103	1	He	1054.520	1054.520	0.42	219354	0.48	10000	
Se	78	115	1	He	1061.746	1061.746	0.84	9949	10.67	10000	
Sr	88	103	1	He	12540.073	12540.073	0.73	11533650	0.11	10000	>LDR
Mo	95	103	1	He	113.111	113.111	1.04	129599	0.09	2000	
Ag	107	103	1	He	100.045	100.045	0.53	423817	0.02	300	
Cd	111	115	1	He	1014.041	1014.041	0.64	474249	0.21	4000	
Sn	118	115	1	He	1046.032	1046.032	0.85	927126	0.11	2000	
Sb	123	115	1	He	105.129	105.129	1.64	104963	0.10	200	
Ba	137	115	1	He	1054.271	1054.271	0.23	368707	0.29	10000	
W	182	159	1	He	109.067	109.067	0.92	587721	0.02	2500	
Tl	205	165	1	He	257.609	257.609	1.03	2219960	0.01	2000	
Pb	208	165	1	He	1007.383	1007.383	1.46	11383959	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2132370	0.77	1884762	113.14	60	120	
Sc	45	1	He	134124	0.59	134073	100.04	60	120	
Sc	45	2	NoGas	8825004	0.58	8481025	104.06	60	120	
Rh	103	1	He	833838	0.33	903580	92.28	60	120	
In	115	1	He	209785	1.08	224817	93.31	60	120	
Tb	159	1	He	1043610	0.84	1046002	99.77	60	120	
Ho	165	1	He	1054455	0.63	1057439	99.72	60	120	
Bi	209	1	He	680722	0.77	731380	93.07	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-d du
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:10:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.041	25.041	1.45	728100	0.00	10000	
Be	9	45	2	NoGas	0.486	0.486	3.16	3249	0.01	2000	
B	11	45	2	NoGas	424.140	424.140	1.33	1712651	0.02	300	>LDR
Na	23	45	1	He	61146.912	61146.912	0.86	24772086	0.25	500000	
Mg	24	45	1	He	67407.924	67407.924	0.55	15172733	0.44	500000	
Al	27	45	1	He	2.835	2.835	12.72	380	0.75	200000	
K	39	45	1	He	2654.862	2654.862	0.75	293117	0.91	500000	
Ca	44	45	1	He	413679.284	413679.284	1.29	2592407	15.96	500000	
Ti	47	45	1	He	0.220	0.220	32.97	10	2.20	2500	
V	51	45	1	He	0.250	0.250	95.40	458	0.05	10000	
Cr	52	45	1	He	0.156	0.156	18.42	1008	0.02	10000	
Mn	55	45	1	He	19.832	19.832	1.82	19784	0.10	10000	
Fe	56	45	1	He	887.230	887.230	1.92	1362615	0.07	200000	
Co	59	45	1	He	0.094	0.094	20.80	661	0.01	5000	
Ni	60	45	1	He	0.494	0.494	4.49	654	0.08	10000	
Cu	63	45	1	He	0.493	0.493	15.86	3913	0.01	10000	
Zn	66	45	1	He	1.355	1.355	16.49	653	0.21	10000	
As	75	103	1	He	0.625	0.625	21.04	147	0.42	10000	
Se	78	115	1	He	0.786	0.786	44.76	10	7.64	10000	
Sr	88	103	1	He	11257.936	11257.936	0.73	10419237	0.11	10000	>LDR
Mo	95	103	1	He	1.606	1.606	8.90	1865	0.09	2000	
Ag	107	103	1	He	0.017	0.017	39.95	78	0.02	300	
Cd	111	115	1	He	0.269	0.269	15.53	131	0.21	4000	
Sn	118	115	1	He	2.980	2.980	22.70	3004	0.10	2000	
Sb	123	115	1	He	0.421	0.421	41.78	473	0.09	200	
Ba	137	115	1	He	16.631	16.631	3.38	5989	0.28	10000	
W	182	159	1	He	0.877	0.877	13.85	6094	0.01	2500	
Tl	205	165	1	He	0.129	0.129	23.83	1147	0.01	2000	
Pb	208	165	1	He	0.102	0.102	21.74	2323	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2183794	1.20	1884762	115.87	60	120	
Sc	45	1	He	138084	1.00	134073	102.99	60	120	
Sc	45	2	NoGas	9022187	0.63	8481025	106.38	60	120	
Rh	103	1	He	839060	0.30	903580	92.86	60	120	
In	115	1	He	215821	0.46	224817	96.00	60	120	
Tb	159	1	He	1037442	1.32	1046002	99.18	60	120	
Ho	165	1	He	1047283	0.56	1057439	99.04	60	120	
Bi	209	1	He	679792	1.15	731380	92.95	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-e ms
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:14:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	130.516	130.516	1.23	3232223	0.00	10000	
Be	9	45	2	NoGas	1077.406	1077.406	0.24	6775026	0.02	2000	
B	11	45	2	NoGas	532.230	532.230	0.83	2119298	0.03	300	>LDR
Na	23	45	1	He	73432.028	73432.028	2.16	28640408	0.26	500000	
Mg	24	45	1	He	79801.257	79801.257	2.62	17291135	0.46	500000	
Al	27	45	1	He	9692.807	9692.807	2.71	875218	1.11	200000	
K	39	45	1	He	12624.140	12624.140	3.70	1308628	0.96	500000	
Ca	44	45	1	He	439879.303	439879.303	3.66	2653055	16.58	500000	
Ti	47	45	1	He	95.864	95.864	5.11	4186	2.29	2500	
V	51	45	1	He	1036.725	1036.725	0.88	1615183	0.06	10000	
Cr	52	45	1	He	1001.121	1001.121	3.12	1927952	0.05	10000	
Mn	55	45	1	He	971.980	971.980	2.50	927147	0.10	10000	
Fe	56	45	1	He	10511.188	10511.188	3.09	15519664	0.07	200000	
Co	59	45	1	He	983.752	983.752	3.40	3460629	0.03	5000	
Ni	60	45	1	He	927.831	927.831	2.67	916577	0.10	10000	
Cu	63	45	1	He	946.333	946.333	2.82	2639232	0.04	10000	
Zn	66	45	1	He	894.473	894.473	2.44	318989	0.28	10000	
As	75	103	1	He	994.197	994.197	0.69	204898	0.49	10000	
Se	78	115	1	He	999.951	999.951	0.24	9445	10.59	10000	
Sr	88	103	1	He	12734.535	12734.535	0.89	11604530	0.11	10000	>LDR
Mo	95	103	1	He	107.427	107.427	1.33	121957	0.09	2000	
Ag	107	103	1	He	94.396	94.396	0.78	396189	0.02	300	
Cd	111	115	1	He	951.829	951.829	1.33	448666	0.21	4000	
Sn	118	115	1	He	973.077	973.077	1.07	869252	0.11	2000	
Sb	123	115	1	He	98.291	98.291	1.45	98899	0.10	200	
Ba	137	115	1	He	988.307	988.307	0.87	348363	0.28	10000	
W	182	159	1	He	102.758	102.758	0.23	551359	0.02	2500	
Tl	205	165	1	He	244.750	244.750	1.02	2108702	0.01	2000	
Pb	208	165	1	He	951.310	951.310	0.84	10747842	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2131076	1.36	1884762	113.07	60	120	
Sc	45	1	He	132965	1.74	134073	99.17	60	120	
Sc	45	2	NoGas	8906312	0.45	8481025	105.01	60	120	
Rh	103	1	He	826162	1.11	903580	91.43	60	120	
In	115	1	He	211433	0.44	224817	94.05	60	120	
Tb	159	1	He	1039020	1.48	1046002	99.33	60	120	
Ho	165	1	He	1054183	1.19	1057439	99.69	60	120	
Bi	209	1	He	673078	0.97	731380	92.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-f msd
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:18:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	133.496	133.496	0.46	3269548	0.00	10000	
Be	9	45	2	NoGas	1086.420	1086.420	0.38	6761821	0.02	2000	
B	11	45	2	NoGas	542.003	542.003	0.28	2135878	0.03	300	>LDR
Na	23	45	1	He	73584.062	73584.062	0.23	28941543	0.25	500000	
Mg	24	45	1	He	80199.430	80199.430	1.50	17525170	0.46	500000	
Al	27	45	1	He	9731.609	9731.609	1.61	886207	1.10	200000	
K	39	45	1	He	12703.385	12703.385	2.55	1328132	0.96	500000	
Ca	44	45	1	He	450622.044	450622.044	1.68	2741408	16.44	500000	
Ti	47	45	1	He	97.094	97.094	4.58	4277	2.27	2500	
V	51	45	1	He	1054.645	1054.645	1.37	1656727	0.06	10000	
Cr	52	45	1	He	1016.355	1016.355	2.01	1973992	0.05	10000	
Mn	55	45	1	He	981.872	981.872	0.61	944545	0.10	10000	
Fe	56	45	1	He	10583.747	10583.747	1.13	15760487	0.07	200000	
Co	59	45	1	He	996.161	996.161	0.31	3534471	0.03	5000	
Ni	60	45	1	He	940.771	940.771	0.98	937293	0.10	10000	
Cu	63	45	1	He	969.452	969.452	2.05	2726776	0.04	10000	
Zn	66	45	1	He	919.060	919.060	1.10	330533	0.28	10000	
As	75	103	1	He	1011.651	1011.651	0.54	211103	0.48	10000	
Se	78	115	1	He	1049.580	1049.580	2.37	9763	10.75	10000	
Sr	88	103	1	He	12809.879	12809.879	0.32	11819401	0.11	10000	>LDR
Mo	95	103	1	He	108.116	108.116	1.33	124272	0.09	2000	
Ag	107	103	1	He	95.496	95.496	0.64	405829	0.02	300	
Cd	111	115	1	He	987.736	987.736	1.09	458584	0.22	4000	
Sn	118	115	1	He	1010.985	1010.985	1.47	889479	0.11	2000	
Sb	123	115	1	He	103.083	103.083	0.96	102157	0.10	200	
Ba	137	115	1	He	1037.559	1037.559	1.01	360204	0.29	10000	
W	182	159	1	He	103.383	103.383	0.83	556592	0.02	2500	
Tl	205	165	1	He	247.150	247.150	1.95	2143803	0.01	2000	
Pb	208	165	1	He	969.936	969.936	1.36	11033012	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2083676	0.44	1884762	110.55	60	120	
Sc	45	1	He	134060	0.19	134073	99.99	60	120	
Sc	45	2	NoGas	8815130	0.61	8481025	103.94	60	120	
Rh	103	1	He	836502	0.66	903580	92.58	60	120	
In	115	1	He	208261	1.18	224817	92.64	60	120	
Tb	159	1	He	1042586	0.28	1046002	99.67	60	120	
Ho	165	1	He	1061386	0.48	1057439	100.37	60	120	
Bi	209	1	He	676773	1.09	731380	92.53	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-2-a
Data File Name	082SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:22:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.430	23.430	1.04	709606	0.00	10000	
Be	9	45	2	NoGas	0.792	0.792	5.08	5353	0.01	2000	
B	11	45	2	NoGas	594.418	594.418	0.48	2467434	0.02	300	>LDR
Na	23	45	1	He	56479.151	56479.151	0.93	22319319	0.25	500000	
Mg	24	45	1	He	112325.710	112325.710	1.50	24659364	0.46	500000	
Al	27	45	1	He	4.539	4.539	3.11	527	0.86	200000	
K	39	45	1	He	3185.360	3185.360	2.43	341181	0.93	500000	
Ca	44	45	1	He	428057.559	428057.559	1.70	2615946	16.36	500000	
Ti	47	45	1	He	0.099	0.099	113.41	4	2.22	2500	
V	51	45	1	He	0.227	0.227	97.92	410	0.06	10000	
Cr	52	45	1	He	0.310	0.310	23.33	1282	0.02	10000	
Mn	55	45	1	He	8.783	8.783	2.66	8620	0.10	10000	
Fe	56	45	1	He	845.159	845.159	1.63	1266214	0.07	200000	
Co	59	45	1	He	0.109	0.109	31.51	697	0.02	5000	
Ni	60	45	1	He	0.148	0.148	43.15	292	0.05	10000	
Cu	63	45	1	He	0.712	0.712	30.85	4430	0.02	10000	
Zn	66	45	1	He	3.892	3.892	5.76	1555	0.25	10000	
As	75	103	1	He	0.801	0.801	7.70	185	0.43	10000	
Se	78	115	1	He	1.260	1.260	33.57	15	8.35	10000	
Sr	88	103	1	He	12228.035	12228.035	1.42	11350083	0.11	10000	>LDR
Mo	95	103	1	He	5.438	5.438	2.31	6300	0.09	2000	
Ag	107	103	1	He	0.018	0.018	24.40	84	0.02	300	
Cd	111	115	1	He	0.321	0.321	21.18	158	0.20	4000	
Sn	118	115	1	He	4.420	4.420	20.37	4379	0.10	2000	
Sb	123	115	1	He	0.231	0.231	9.10	282	0.08	200	
Ba	137	115	1	He	6.390	6.390	4.44	2339	0.27	10000	
W	182	159	1	He	0.899	0.899	5.24	6242	0.01	2500	
Tl	205	165	1	He	0.211	0.211	13.76	1856	0.01	2000	
Pb	208	165	1	He	0.164	0.164	12.63	3042	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2251276	0.43	1884762	119.45	60	120	
Sc	45	1	He	134691	2.10	134073	100.46	60	120	
Sc	45	2	NoGas	9289001	0.59	8481025	109.53	60	120	
Rh	103	1	He	841440	1.04	903580	93.12	60	120	
In	115	1	He	219039	0.62	224817	97.43	60	120	
Tb	159	1	He	1041684	1.19	1046002	99.59	60	120	
Ho	165	1	He	1053978	1.14	1057439	99.67	60	120	
Bi	209	1	He	691880	0.82	731380	94.60	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	083_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:27:08-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.322	1.355	1472123	1.63	50	108.6	89.5	110.5	
Be	9	45	2	NoGas	52.627	0.685	344052	0.68	50	105.3	89.5	110.5	
B	11	45	2	NoGas	67.009	0.474	285658	0.08	50	134.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25083.885	1.158	10322270	0.53	25000	100.3	89.5	110.5	
Mg	24	45	1	He	25069.061	1.403	5730254	1.03	25000	100.3	89.5	110.5	
Al	27	45	1	He	246.162	1.811	23560	1.37	250	98.5	89.5	110.5	
K	39	45	1	He	25164.346	1.140	2742652	0.31	25000	100.7	89.5	110.5	
Ca	44	45	1	He	25115.422	1.605	159995	0.69	25000	100.5	89.5	110.5	
Ti	47	45	1	He	46.955	4.200	2163	4.04	50	93.9	89.5	110.5	
V	51	45	1	He	49.592	1.556	81536	0.84	50	99.2	89.5	110.5	
Cr	52	45	1	He	49.599	2.237	101432	2.02	50	99.2	89.5	110.5	
Mn	55	45	1	He	248.995	1.146	250637	0.22	250	99.6	89.5	110.5	
Fe	56	45	1	He	12489.860	1.379	19452892	0.75	12500	99.9	89.5	110.5	
Co	59	45	1	He	49.803	1.572	185126	0.65	50	99.6	89.5	110.5	
Ni	60	45	1	He	49.998	1.452	52243	0.86	50	100.0	89.5	110.5	
Cu	63	45	1	He	50.342	1.089	150498	0.16	50	100.7	89.5	110.5	
Zn	66	45	1	He	49.481	1.390	18760	1.50	50	99.0	89.5	110.5	
As	75	103	1	He	49.352	0.551	11084	0.16	50	98.7	89.5	110.5	
Se	78	115	1	He	49.070	0.636	504	0.85	50	98.1	89.5	110.5	
Sr	88	103	1	He	51.400	1.304	51001	0.90	50	102.8	89.5	110.5	
Mo	95	103	1	He	52.012	0.851	64254	1.30	50	104.0	89.5	110.5	
Ag	107	103	1	He	49.655	0.348	226774	0.47	50	99.3	89.5	110.5	
Cd	111	115	1	He	50.571	1.293	25776	1.78	50	101.1	89.5	110.5	
Sn	118	115	1	He	51.018	1.655	49569	2.54	50	102.0	89.5	110.5	
Sb	123	115	1	He	50.722	0.168	55201	0.77	50	101.4	89.5	110.5	
Ba	137	115	1	He	49.582	0.332	18901	0.60	50	99.2	89.5	110.5	
W	182	159	1	He	51.592	1.782	289535	1.44	50	103.2	89.5	110.5	
Tl	205	165	1	He	49.159	1.268	441723	1.51	50	98.3	89.5	110.5	
Pb	208	165	1	He	49.052	0.706	579128	0.70	50	98.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2210645	0.56	1884762	117.29	60	120	
Sc	45	1	He	140229	0.97	134073	104.59	60	120	
Sc	45	2	NoGas	9255420	0.50	8481025	109.13	60	120	
Rh	103	1	He	898935	0.50	903580	99.49	60	120	
In	115	1	He	228602	0.92	224817	101.68	60	120	
Tb	159	1	He	1084054	0.34	1046002	103.64	60	120	
Ho	165	1	He	1099381	0.25	1057439	103.97	60	120	
Bi	209	1	He	727403	0.45	731380	99.46	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	084_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:31:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.504	14.7	140732	0.6	8	
Be	9	45	2	NoGas	0.469	5.4	3256	5.0	1	
B	11	45	2	NoGas	17.131	1.0	81005	0.4	20	
Na	23	45	1	He	51.126	5.0	26067	4.2	1000	
Mg	24	45	1	He	15.908	11.8	4349	9.9	1000	
Al	27	45	1	He	0.559	8.0	171	2.3	50	
K	39	45	1	He	21.583	16.1	11749	4.0	1000	
Ca	44	45	1	He	31.089	8.6	402	3.4	1000	
Ti	47	45	1	He	0.047	173.2	2	173.2	20	
V	51	45	1	He	0.047	325.1	136	187.2	2	
Cr	52	45	1	He	0.033	66.5	781	4.9	2	
Mn	55	45	1	He	0.171	29.0	316	15.0	2	
Fe	56	45	1	He	9.876	8.6	17648	7.9	50	
Co	59	45	1	He	0.030	62.4	441	16.6	1	
Ni	60	45	1	He	0.008	181.8	160	9.1	2	
Cu	63	45	1	He	0.281	39.5	3387	10.1	2	
Zn	66	45	1	He	0.645	20.9	401	13.7	20	
As	75	103	1	He	0.143	10.5	53	6.9	2	
Se	78	115	1	He	0.324	75.2	6	40.7	2	
Sr	88	103	1	He	0.547	14.9	616	12.9	10	
Mo	95	103	1	He	0.151	16.2	212	15.7	2	
Ag	107	103	1	He	0.038	16.1	192	15.5	0.2	
Cd	111	115	1	He	0.129	5.3	70	5.4	0.2	
Sn	118	115	1	He	1.039	6.6	1367	4.3	10	
Sb	123	115	1	He	0.121	36.5	182	26.0	2	
Ba	137	115	1	He	0.086	53.8	40	46.4	5	
W	182	159	1	He	0.563	4.9	4734	2.4	10	
Tl	205	165	1	He	0.116	11.1	1107	10.7	0.5	
Pb	208	165	1	He	0.058	16.6	1961	6.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2291192	0.26	1884762	121.56	60	120	ISTD warning
Sc	45	1	He	141629	0.95	134073	105.64	60	120	
Sc	45	2	NoGas	9352073	0.83	8481025	110.27	60	120	
Rh	103	1	He	953342	1.15	903580	105.51	60	120	
In	115	1	He	238886	1.48	224817	106.26	60	120	
Tb	159	1	He	1111172	0.91	1046002	106.23	60	120	
Ho	165	1	He	1118465	0.22	1057439	105.77	60	120	
Bi	209	1	He	770448	0.32	731380	105.34	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-3-a
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:35:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.542	0.542	11.51	142491	0.00	10000	
Be	9	45	2	NoGas	0.290	0.290	3.34	2085	0.01	2000	
B	11	45	2	NoGas	18.618	18.618	1.44	87683	0.02	300	
Na	23	45	1	He	90.491	90.491	4.82	42520	0.21	500000	
Mg	24	45	1	He	2.426	2.426	7.03	1241	0.20	500000	
Al	27	45	1	He	1.009	1.009	30.65	214	0.47	200000	
K	39	45	1	He	23.582	23.582	50.88	11971	0.20	500000	
Ca	44	45	1	He	42.570	42.570	13.34	477	8.93	500000	
Ti	47	45	1	He	0.120	0.120	127.81	6	2.16	2500	
V	51	45	1	He	0.014	0.014	490.50	79	0.02	10000	
Cr	52	45	1	He	0.808	0.808	14.88	2372	0.03	10000	
Mn	55	45	1	He	0.057	0.057	76.63	202	0.03	10000	
Fe	56	45	1	He	1.835	1.835	15.22	4999	0.04	200000	
Co	59	45	1	He	0.023	0.023	106.15	410	0.01	5000	
Ni	60	45	1	He	1.533	1.533	5.36	1769	0.09	10000	
Cu	63	45	1	He	0.303	0.303	24.21	3468	0.01	10000	
Zn	66	45	1	He	1.435	1.435	23.61	699	0.21	10000	
As	75	103	1	He	0.092	0.092	54.51	41	0.23	10000	
Se	78	115	1	He	0.489	0.489	57.85	8	5.90	10000	
Sr	88	103	1	He	0.438	0.438	13.19	507	0.09	10000	
Mo	95	103	1	He	0.750	0.750	5.07	1009	0.07	2000	
Ag	107	103	1	He	0.003	0.003	58.24	24	0.01	300	
Cd	111	115	1	He	0.070	0.070	17.12	39	0.18	4000	
Sn	118	115	1	He	0.964	0.964	20.66	1315	0.07	2000	
Sb	123	115	1	He	0.056	0.056	38.48	110	0.05	200	
Ba	137	115	1	He	0.158	0.158	4.45	70	0.23	10000	
W	182	159	1	He	0.752	0.752	44.42	6095	0.01	2500	
Tl	205	165	1	He	0.035	0.035	5.88	378	0.01	2000	
Pb	208	165	1	He	0.020	0.020	67.41	1548	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2340685	1.74	1884762	124.19	60	120	ISTD warning
Sc	45	1	He	142153	5.42	134073	106.03	60	120	
Sc	45	2	NoGas	9403786	0.58	8481025	110.88	60	120	
Rh	103	1	He	965973	4.60	903580	106.91	60	120	
In	115	1	He	242502	3.04	224817	107.87	60	120	
Tb	159	1	He	1148583	6.37	1046002	109.81	60	120	
Ho	165	1	He	1151983	6.21	1057439	108.94	60	120	
Bi	209	1	He	799382	4.08	731380	109.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-4-a
Data File Name	086SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:39:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.857	23.857	0.15	720252	0.00	10000	
Be	9	45	2	NoGas	0.249	0.249	12.47	1789	0.01	2000	
B	11	45	2	NoGas	608.676	608.676	0.34	2526452	0.02	300	>LDR
Na	23	45	1	He	57499.728	57499.728	2.32	23196739	0.25	500000	
Mg	24	45	1	He	114292.360	114292.360	1.64	25617640	0.45	500000	
Al	27	45	1	He	4.344	4.344	8.42	520	0.84	200000	
K	39	45	1	He	3223.871	3223.871	3.16	352483	0.91	500000	
Ca	44	45	1	He	432186.348	432186.348	2.34	2696720	16.03	500000	
Ti	47	45	1	He	0.123	0.123	35.61	6	2.22	2500	
V	51	45	1	He	0.059	0.059	170.99	151	0.04	10000	
Cr	52	45	1	He	0.114	0.114	24.80	919	0.01	10000	
Mn	55	45	1	He	8.753	8.753	4.14	8776	0.10	10000	
Fe	56	45	1	He	852.438	852.438	1.92	1303931	0.07	200000	
Co	59	45	1	He	0.001	0.001	317.89	320	0.00	5000	
Ni	60	45	1	He	0.002	0.002	290.87	149	0.00	10000	
Cu	63	45	1	He	0.070	0.070	142.48	2679	0.00	10000	
Zn	66	45	1	He	0.775	0.775	25.64	437	0.18	10000	
As	75	103	1	He	0.489	0.489	11.27	122	0.40	10000	
Se	78	115	1	He	0.388	0.388	58.42	7	5.85	10000	
Sr	88	103	1	He	12431.102	12431.102	0.93	11783559	0.11	10000	>LDR
Mo	95	103	1	He	5.489	5.489	4.56	6496	0.08	2000	
Ag	107	103	1	He	0.004	0.004	28.76	24	0.02	300	
Cd	111	115	1	He	0.048	0.048	15.06	25	0.19	4000	
Sn	118	115	1	He	0.423	0.423	33.01	693	0.06	2000	
Sb	123	115	1	He	0.019	0.019	40.83	62	0.03	200	
Ba	137	115	1	He	6.856	6.856	7.27	2542	0.27	10000	
W	182	159	1	He	0.450	0.450	1.28	3930	0.01	2500	
Tl	205	165	1	He	0.019	0.019	12.91	210	0.01	2000	
Pb	208	165	1	He	0.001	0.001	265.34	1236	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2243326	0.11	1884762	119.02	60	120	
Sc	45	1	He	137522	1.27	134073	102.57	60	120	
Sc	45	2	NoGas	9289179	0.03	8481025	109.53	60	120	
Rh	103	1	He	859397	0.81	903580	95.11	60	120	
In	115	1	He	221975	0.20	224817	98.74	60	120	
Tb	159	1	He	1068967	1.20	1046002	102.20	60	120	
Ho	165	1	He	1080453	0.93	1057439	102.18	60	120	
Bi	209	1	He	710894	0.92	731380	97.20	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	087CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:43:52-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	8.871	8.871	0.541	347920	0.19	8	110.9	69.5	130.5	
Be	9	2	NoGas	1.298	1.298	3.217	8676	2.63	1	129.8	69.5	130.5	
B	11	2	NoGas	37.459	37.459	2.695	164601	2.55	20	187.3	69.5	130.5	6020A CR1 Failed
Na	23	1	He	1031.192	1031.192	2.125	432790	0.76	1000	103.1	69.5	130.5	
Mg	24	1	He	1009.228	1009.228	2.058	233420	1.11	1000	100.9	69.5	130.5	
Al	27	1	He	49.370	49.370	2.494	4862	2.24	50	98.7	69.5	130.5	
K	39	1	He	1035.686	1035.686	2.309	122881	0.99	1000	103.6	69.5	130.5	
Ca	44	1	He	1018.443	1018.443	5.440	6739	4.36	1000	101.8	69.5	130.5	
Ti	47	1	He	10.201	10.201	6.298	474	7.04	10	102.0	69.5	130.5	
V	51	1	He	5.228	5.228	5.208	8724	5.05	5	104.6	69.5	130.5	
Cr	52	1	He	2.149	2.149	3.517	5115	2.02	2	107.4	69.5	130.5	
Mn	55	1	He	4.866	4.866	1.130	5082	0.78	5	97.3	69.5	130.5	
Fe	56	1	He	108.481	108.481	1.872	172579	0.99	100	108.5	69.5	130.5	
Co	59	1	He	1.021	1.021	4.300	4148	2.96	1	102.1	69.5	130.5	
Ni	60	1	He	2.043	2.043	11.116	2298	9.14	2	102.2	69.5	130.5	
Cu	63	1	He	2.099	2.099	10.212	8773	7.00	2	104.9	69.5	130.5	
Zn	66	1	He	20.601	20.601	7.250	7969	5.98	20	103.0	69.5	130.5	
As	75	1	He	5.058	5.058	2.847	1191	3.37	5	101.2	69.5	130.5	
Se	78	1	He	4.879	4.879	9.311	54	8.84	5	97.6	69.5	130.5	
Sr	88	1	He	11.064	11.064	3.327	11380	2.70	10	110.6	69.5	130.5	
Mo	95	1	He	5.356	5.356	3.393	6854	4.02	5	107.1	69.5	130.5	
Ag	107	1	He	1.014	1.014	1.380	4797	0.80	1	101.4	69.5	130.5	
Cd	111	1	He	1.010	1.010	8.661	532	8.83	1	101.0	69.5	130.5	
Sn	118	1	He	9.999	9.999	2.726	10252	2.80	10	100.0	69.5	130.5	
Sb	123	1	He	2.063	2.063	4.513	2354	4.58	2	103.1	69.5	130.5	
Ba	137	1	He	4.871	4.871	4.262	1917	4.44	5	97.4	69.5	130.5	
W	182	1	He	10.775	10.775	4.386	61990	3.63	10	107.8	69.5	130.5	
Tl	205	1	He	1.018	1.018	2.682	9162	1.48	1	101.8	69.5	130.5	
Pb	208	1	He	1.019	1.019	1.647	13216	0.75	1	101.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2303605	1.10	1884762	122.22	60	120	ISTD warning
Sc	45	1	He	141509	1.35	134073	105.55	60	120	
Sc	45	2	NoGas	9293769	0.53	8481025	109.58	60	120	
Rh	103	1	He	929423	0.70	903580	102.86	60	120	
In	115	1	He	235315	0.20	224817	104.67	60	120	
Tb	159	1	He	1090462	1.34	1046002	104.25	60	120	
Ho	165	1	He	1096663	1.21	1057439	103.71	60	120	
Bi	209	1	He	762103	0.10	731380	104.20	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	088ICSA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:48:06-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.755	3.8	140394	0.8	4	
Be	9	45	2	NoGas	0.184	4.1	1311	4.5	2	
B	11	45	2	NoGas	14.038	0.8	65062	0.7	20	
Na	23	45	1	He	51259.356	1.0	19954911	1.6	75200	
Mg	24	45	1	He	50783.123	1.3	10983603	2.1	75200	
Al	27	45	1	He	52568.245	0.9	4737480	1.8	75200	
K	39	45	1	He	50405.669	0.5	5189535	1.4	75200	
Ca	44	45	1	He	50579.147	0.4	304701	1.3	75200	
Ti	47	45	1	He	1001.290	0.5	43655	1.4	1505	
V	51	45	1	He	-0.209	-27.8	-273	-33.9	4	
Cr	52	45	1	He	0.551	4.3	1728	3.1	4	
Mn	55	45	1	He	0.255	17.9	376	12.4	4	
Fe	56	45	1	He	49792.977	1.1	73379606	1.9	75200	
Co	59	45	1	He	-0.036	-10.3	180	8.1	2	
Ni	60	45	1	He	0.015	177.8	157	16.9	4	
Cu	63	45	1	He	0.336	21.9	3326	5.9	4	
Zn	66	45	1	He	0.585	39.1	354	23.5	20	
As	75	103	1	He	0.108	20.6	39	12.2	4	
Se	78	115	1	He	0.257	154.3	5	73.8	4	
Sr	88	103	1	He	0.783	6.3	770	5.2	20	
Mo	95	103	1	He	1044.113	1.7	1218835	1.9	1505	
Ag	107	103	1	He	0.011	18.6	54	15.4	1	
Cd	111	115	1	He	0.013	172.1	8	137.8	1	
Sn	118	115	1	He	0.291	23.1	548	11.2	20	
Sb	123	115	1	He	0.014	54.2	54	14.1	4	
Ba	137	115	1	He	0.175	34.2	68	31.6	2	
W	182	159	1	He	0.443	4.4	3827	2.3	20	
Tl	205	165	1	He	0.012	15.2	144	11.4	2	
Pb	208	165	1	He	0.085	13.6	2170	6.5	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2224037	0.34	1884762	118.00	60	120	
Sc	45	1	He	132677	0.92	134073	98.96	60	120	
Sc	45	2	NoGas	8930353	0.84	8481025	105.30	60	120	
Rh	103	1	He	849627	0.92	903580	94.03	60	120	
In	115	1	He	213718	0.25	224817	95.06	60	120	
Tb	159	1	He	1050374	0.69	1046002	100.42	60	120	
Ho	165	1	He	1065221	0.47	1057439	100.74	60	120	
Bi	209	1	He	710732	1.16	731380	97.18	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	089ICAB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:52:15-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	109.369	0.813	2845323	0.60	100	109.4	49.5	150.5	
Be	9	45	2	NoGas	107.278	0.452	703693	1.26	100	107.3	49.5	150.5	
B	11	45	2	NoGas	115.442	0.670	486932	1.03	100	115.4	49.5	150.5	
Na	23	45	1	He	50392.069	0.689	20464913	0.89	50000	100.8	49.5	150.5	
Mg	24	45	1	He	50036.326	1.102	11289232	1.30	50000	100.1	49.5	150.5	
Al	27	45	1	He	51690.337	1.908	4859601	2.14	50000	103.4	49.5	150.5	
K	39	45	1	He	50101.492	1.215	5381181	1.44	50000	100.2	49.5	150.5	
Ca	44	45	1	He	50187.642	0.903	315411	1.15	50000	100.4	49.5	150.5	
Ti	47	45	1	He	1087.417	0.621	49458	0.52	1100	98.9	49.5	150.5	
V	51	45	1	He	100.720	0.923	163411	1.19	100	100.7	49.5	150.5	
Cr	52	45	1	He	100.973	0.926	203111	1.15	100	101.0	49.5	150.5	
Mn	55	45	1	He	102.370	1.512	101800	1.66	100	102.4	49.5	150.5	
Fe	56	45	1	He	49105.674	1.012	75491701	1.25	50000	98.2	49.5	150.5	
Co	59	45	1	He	100.293	0.447	367689	0.70	100	100.3	49.5	150.5	
Ni	60	45	1	He	100.394	1.254	103402	1.43	100	100.4	49.5	150.5	
Cu	63	45	1	He	98.892	1.330	289422	1.37	100	98.9	49.5	150.5	
Zn	66	45	1	He	99.417	1.859	37051	1.65	100	99.4	49.5	150.5	
As	75	103	1	He	103.839	0.719	22497	1.40	100	103.8	49.5	150.5	
Se	78	115	1	He	102.342	2.425	1013	2.07	100	102.3	49.5	150.5	
Sr	88	103	1	He	100.177	0.488	95932	0.73	100	100.2	49.5	150.5	
Mo	95	103	1	He	1157.954	0.966	1380837	1.78	1100	105.3	49.5	150.5	
Ag	107	103	1	He	99.855	0.276	440278	1.09	100	99.9	49.5	150.5	
Cd	111	115	1	He	100.638	1.243	49602	1.20	100	100.6	49.5	150.5	
Sn	118	115	1	He	112.324	2.418	105182	2.88	100	112.3	49.5	150.5	
Sb	123	115	1	He	102.951	1.353	108309	1.16	100	103.0	49.5	150.5	
Ba	137	115	1	He	102.542	2.263	37794	1.83	100	102.5	49.5	150.5	
W	182	159	1	He	105.535	1.579	584401	1.74	100	105.5	49.5	150.5	
Tl	205	165	1	He	96.337	1.854	857197	1.84	100	96.3	49.5	150.5	
Pb	208	165	1	He	97.867	1.197	1143010	0.71	100	97.9	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2228392	0.76	1884762	118.23	60	120	
Sc	45	1	He	138412	0.26	134073	103.24	60	120	
Sc	45	2	NoGas	9288800	1.34	8481025	109.52	60	120	
Rh	103	1	He	867870	0.82	903580	96.05	60	120	
In	115	1	He	221073	0.48	224817	98.33	60	120	
Tb	159	1	He	1072407	0.85	1046002	102.52	60	120	
Ho	165	1	He	1088740	0.73	1057439	102.96	60	120	
Bi	209	1	He	713071	0.15	731380	97.50	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	090_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:56:25-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.274	0.230	1527858	1.34	50	110.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.387	1.419	356495	0.47	50	106.8	89.5	110.5	
B	11	45	2	NoGas	61.119	1.006	267011	0.85	50	122.2	89.5	110.5	CCV Failed
Na	23	45	1	He	25268.045	0.651	10523026	0.78	25000	101.1	89.5	110.5	
Mg	24	45	1	He	25039.745	1.542	5792091	1.13	25000	100.2	89.5	110.5	
Al	27	45	1	He	250.744	3.053	24285	3.12	250	100.3	89.5	110.5	
K	39	45	1	He	25362.972	1.049	2797406	0.76	25000	101.5	89.5	110.5	
Ca	44	45	1	He	25049.297	1.065	161494	0.74	25000	100.2	89.5	110.5	
Ti	47	45	1	He	49.690	3.804	2317	3.46	50	99.4	89.5	110.5	
V	51	45	1	He	49.535	4.676	82414	4.35	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.930	2.347	103327	2.11	50	99.9	89.5	110.5	
Mn	55	45	1	He	250.134	1.015	254805	0.68	250	100.1	89.5	110.5	
Fe	56	45	1	He	12553.371	1.548	19786345	1.23	12500	100.4	89.5	110.5	
Co	59	45	1	He	50.283	0.760	189160	0.79	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.186	1.433	53068	1.03	50	100.4	89.5	110.5	
Cu	63	45	1	He	50.086	0.417	151544	0.16	50	100.2	89.5	110.5	
Zn	66	45	1	He	49.914	3.004	19148	2.63	50	99.8	89.5	110.5	
As	75	103	1	He	49.305	1.911	11127	1.61	50	98.6	89.5	110.5	
Se	78	115	1	He	50.125	4.980	507	4.56	50	100.3	89.5	110.5	
Sr	88	103	1	He	49.853	0.302	49710	0.50	50	99.7	89.5	110.5	
Mo	95	103	1	He	53.755	0.725	66729	0.94	50	107.5	89.5	110.5	
Ag	107	103	1	He	50.078	0.590	229818	0.73	50	100.2	89.5	110.5	
Cd	111	115	1	He	50.609	1.281	25397	0.74	50	101.2	89.5	110.5	
Sn	118	115	1	He	51.149	4.425	48920	3.82	50	102.3	89.5	110.5	
Sb	123	115	1	He	51.933	1.769	55648	1.24	50	103.9	89.5	110.5	
Ba	137	115	1	He	50.782	2.963	19060	2.51	50	101.6	89.5	110.5	
W	182	159	1	He	52.680	1.015	293343	1.88	50	105.4	89.5	110.5	
Tl	205	165	1	He	48.889	1.117	439117	1.46	50	97.8	89.5	110.5	
Pb	208	165	1	He	48.854	0.720	576559	0.63	50	97.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2306367	0.60	1884762	122.37	60	120	ISTD warning
Sc	45	1	He	141905	0.41	134073	105.84	60	120	
Sc	45	2	NoGas	9454887	1.49	8481025	111.48	60	120	
Rh	103	1	He	903323	0.79	903580	99.97	60	120	
In	115	1	He	225095	0.61	224817	100.12	60	120	
Tb	159	1	He	1075631	1.04	1046002	102.83	60	120	
Ho	165	1	He	1098918	0.37	1057439	103.92	60	120	
Bi	209	1	He	725042	0.25	731380	99.13	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:00:35-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.582	7.5	144263	0.2	8	
Be	9	45	2	NoGas	0.197	7.0	1474	7.0	1	
B	11	45	2	NoGas	9.636	0.3	50361	1.0	20	
Na	23	45	1	He	48.127	2.9	25092	1.8	1000	
Mg	24	45	1	He	15.593	7.7	4323	6.3	1000	
Al	27	45	1	He	1.319	31.7	247	15.6	50	
K	39	45	1	He	28.643	3.7	12660	2.1	1000	
Ca	44	45	1	He	22.671	28.6	352	11.8	1000	
Ti	47	45	1	He	0.095	86.6	4	86.6	20	
V	51	45	1	He	0.111	173.9	242	132.1	2	
Cr	52	45	1	He	0.032	43.2	788	3.4	2	
Mn	55	45	1	He	0.172	14.6	320	8.3	2	
Fe	56	45	1	He	11.654	6.8	20679	7.5	50	
Co	59	45	1	He	-0.006	-135.4	307	11.0	1	
Ni	60	45	1	He	-0.028	-48.1	123	12.4	2	
Cu	63	45	1	He	-0.075	-120.9	2357	13.0	2	
Zn	66	45	1	He	0.392	12.8	308	5.1	20	
As	75	103	1	He	0.081	12.2	38	6.6	2	
Se	78	115	1	He	0.379	36.8	7	21.5	2	
Sr	88	103	1	He	0.242	10.0	293	7.9	10	
Mo	95	103	1	He	0.586	10.8	778	10.8	2	
Ag	107	103	1	He	0.033	15.1	168	14.6	0.2	
Cd	111	115	1	He	0.058	14.7	32	14.3	0.2	
Sn	118	115	1	He	0.471	20.1	785	11.9	10	
Sb	123	115	1	He	0.086	18.3	141	13.0	2	
Ba	137	115	1	He	0.064	7.2	31	6.2	5	
W	182	159	1	He	0.565	1.6	4686	0.7	10	
Tl	205	165	1	He	0.093	15.9	886	14.7	0.5	
Pb	208	165	1	He	0.027	55.0	1576	10.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2363829	1.46	1884762	125.42	60	120	ISTD warning
Sc	45	1	He	143193	1.42	134073	106.80	60	120	
Sc	45	2	NoGas	9455371	0.82	8481025	111.49	60	120	
Rh	103	1	He	948517	0.87	903580	104.97	60	120	
In	115	1	He	236255	0.52	224817	105.09	60	120	
Tb	159	1	He	1096895	0.83	1046002	104.87	60	120	
Ho	165	1	He	1111676	0.52	1057439	105.13	60	120	
Bi	209	1	He	763454	0.34	731380	104.39	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-a
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:04:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.164	2.164	4.96	188459	0.00	10000	
Be	9	45	2	NoGas	0.160	0.160	12.71	1256	0.01	2000	
B	11	45	2	NoGas	40.033	40.033	2.20	182314	0.02	300	
Na	23	45	1	He	29316.598	29316.598	1.64	12331706	0.24	500000	
Mg	24	45	1	He	23208.116	23208.116	1.06	5423438	0.43	500000	
Al	27	45	1	He	4.602	4.602	3.37	567	0.81	200000	
K	39	45	1	He	2328.225	2328.225	1.93	268005	0.87	500000	
Ca	44	45	1	He	68636.068	68636.068	1.01	446676	15.37	500000	
Ti	47	45	1	He	0.212	0.212	32.55	10	2.12	2500	
V	51	45	1	He	0.075	0.075	103.02	185	0.04	10000	
Cr	52	45	1	He	3.127	3.127	1.76	7217	0.04	10000	
Mn	55	45	1	He	59.240	59.240	0.68	61087	0.10	10000	
Fe	56	45	1	He	751.871	751.871	0.03	1199393	0.06	200000	
Co	59	45	1	He	0.021	0.021	53.38	411	0.01	5000	
Ni	60	45	1	He	1.909	1.909	5.89	2186	0.09	10000	
Cu	63	45	1	He	0.132	0.132	54.14	2979	0.00	10000	
Zn	66	45	1	He	1.832	1.832	12.12	861	0.21	10000	
As	75	103	1	He	3.789	3.789	3.86	882	0.43	10000	
Se	78	115	1	He	0.057	0.057	245.87	3	1.64	10000	
Sr	88	103	1	He	107.798	107.798	1.94	108818	0.10	10000	
Mo	95	103	1	He	1.624	1.624	5.73	2055	0.08	2000	
Ag	107	103	1	He	0.003	0.003	81.86	22	0.01	300	
Cd	111	115	1	He	0.036	0.036	11.88	20	0.18	4000	
Sn	118	115	1	He	0.859	0.859	16.26	1141	0.08	2000	
Sb	123	115	1	He	0.073	0.073	39.65	122	0.06	200	
Ba	137	115	1	He	108.371	108.371	1.40	41489	0.26	10000	
W	182	159	1	He	0.383	0.383	18.89	3678	0.01	2500	
Tl	205	165	1	He	0.020	0.020	27.29	223	0.01	2000	
Pb	208	165	1	He	0.070	0.070	17.76	2092	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2314123	0.92	1884762	122.78	60	120	ISTD warning
Sc	45	1	He	143373	2.14	134073	106.94	60	120	
Sc	45	2	NoGas	9668622	0.32	8481025	114.00	60	120	
Rh	103	1	He	914834	0.43	903580	101.25	60	120	
In	115	1	He	229627	1.54	224817	102.14	60	120	
Tb	159	1	He	1102989	0.65	1046002	105.45	60	120	
Ho	165	1	He	1111838	0.95	1057439	105.14	60	120	
Bi	209	1	He	742862	1.13	731380	101.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-d ms
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:09:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	107.698	107.698	0.74	2907018	0.00	10000	
Be	9	45	2	NoGas	1123.613	1123.613	0.95	7638975	0.01	2000	
B	11	45	2	NoGas	144.002	144.002	0.94	627205	0.02	300	
Na	23	45	1	He	38055.826	38055.826	1.68	16084626	0.24	500000	
Mg	24	45	1	He	32350.942	32350.942	2.03	7596279	0.43	500000	
Al	27	45	1	He	9822.783	9822.783	1.76	961101	1.02	200000	
K	39	45	1	He	12425.867	12425.867	1.36	1396065	0.89	500000	
Ca	44	45	1	He	75784.352	75784.352	1.69	495545	15.29	500000	
Ti	47	45	1	He	96.130	96.130	0.22	4551	2.11	2500	
V	51	45	1	He	1048.215	1048.215	0.59	1769405	0.06	10000	
Cr	52	45	1	He	1042.262	1042.262	2.27	2174937	0.05	10000	
Mn	55	45	1	He	1037.148	1037.148	1.94	1071968	0.10	10000	
Fe	56	45	1	He	10693.231	10693.231	1.97	17109328	0.06	200000	
Co	59	45	1	He	1022.656	1022.656	2.11	3898414	0.03	5000	
Ni	60	45	1	He	978.895	978.895	1.89	1047857	0.09	10000	
Cu	63	45	1	He	1014.482	1014.482	1.38	3065815	0.03	10000	
Zn	66	45	1	He	968.994	968.994	1.46	374440	0.26	10000	
As	75	103	1	He	1009.679	1009.679	1.01	229544	0.44	10000	
Se	78	115	1	He	1011.918	1011.918	1.59	10202	9.92	10000	
Sr	88	103	1	He	1068.557	1068.557	0.51	1074195	0.10	10000	
Mo	95	103	1	He	106.280	106.280	1.42	133099	0.08	2000	
Ag	107	103	1	He	98.771	98.771	0.87	457294	0.02	300	
Cd	111	115	1	He	1020.813	1020.813	1.09	513642	0.20	4000	
Sn	118	115	1	He	1021.849	1021.849	1.26	974349	0.10	2000	
Sb	123	115	1	He	102.238	102.238	0.55	109813	0.09	200	
Ba	137	115	1	He	1127.370	1127.370	1.15	424170	0.27	10000	
W	182	159	1	He	104.327	104.327	1.01	592461	0.02	2500	
Tl	205	165	1	He	252.944	252.944	1.70	2315599	0.01	2000	
Pb	208	165	1	He	999.801	999.801	1.12	12002631	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2294280	1.21	1884762	121.73	60	120	ISTD warning
Sc	45	1	He	144062	1.45	134073	107.45	60	120	
Sc	45	2	NoGas	9629656	1.11	8481025	113.54	60	120	
Rh	103	1	He	911383	1.14	903580	100.86	60	120	
In	115	1	He	225709	1.09	224817	100.40	60	120	
Tb	159	1	He	1099748	1.11	1046002	105.14	60	120	
Ho	165	1	He	1120229	1.12	1057439	105.94	60	120	
Bi	209	1	He	730203	0.30	731380	99.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-e msd
Data File Name	094SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:13:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	109.390	109.390	0.67	2924852	0.00	10000	
Be	9	45	2	NoGas	1136.924	1136.924	0.77	7662814	0.01	2000	
B	11	45	2	NoGas	150.389	150.389	0.89	648914	0.02	300	
Na	23	45	1	He	38927.855	38927.855	2.92	16423079	0.24	500000	
Mg	24	45	1	He	33166.067	33166.067	3.09	7772959	0.43	500000	
Al	27	45	1	He	9850.313	9850.313	3.81	961894	1.02	200000	
K	39	45	1	He	12426.267	12426.267	4.48	1393179	0.89	500000	
Ca	44	45	1	He	76889.895	76889.895	3.64	501782	15.32	500000	
Ti	47	45	1	He	99.761	99.761	6.26	4711	2.12	2500	
V	51	45	1	He	1042.112	1042.112	3.28	1755666	0.06	10000	
Cr	52	45	1	He	1030.791	1030.791	3.98	2146784	0.05	10000	
Mn	55	45	1	He	1039.837	1039.837	3.32	1072732	0.10	10000	
Fe	56	45	1	He	10702.706	10702.706	3.46	17091330	0.06	200000	
Co	59	45	1	He	1030.768	1030.768	3.00	3922349	0.03	5000	
Ni	60	45	1	He	981.878	981.878	3.49	1049039	0.09	10000	
Cu	63	45	1	He	1004.455	1004.455	3.43	3029679	0.03	10000	
Zn	66	45	1	He	967.311	967.311	3.41	373068	0.26	10000	
As	75	103	1	He	1009.780	1009.780	0.92	228999	0.44	10000	
Se	78	115	1	He	1001.408	1001.408	0.24	10149	9.87	10000	
Sr	88	103	1	He	1066.999	1066.999	1.12	1069930	0.10	10000	
Mo	95	103	1	He	106.323	106.323	2.17	132811	0.08	2000	
Ag	107	103	1	He	98.743	98.743	0.67	456046	0.02	300	
Cd	111	115	1	He	1009.291	1009.291	1.24	510467	0.20	4000	
Sn	118	115	1	He	1011.406	1011.406	1.51	969387	0.10	2000	
Sb	123	115	1	He	101.197	101.197	1.55	109254	0.09	200	
Ba	137	115	1	He	1118.475	1118.475	1.09	423010	0.26	10000	
W	182	159	1	He	104.534	104.534	1.81	595581	0.02	2500	
Tl	205	165	1	He	256.147	256.147	0.82	2342366	0.01	2000	
Pb	208	165	1	He	996.047	996.047	0.86	11944243	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2286388	1.11	1884762	121.31	60	120	ISTD warning
Sc	45	1	He	143851	2.61	134073	107.29	60	120	
Sc	45	2	NoGas	9545881	0.45	8481025	112.56	60	120	
Rh	103	1	He	909090	0.33	903580	100.61	60	120	
In	115	1	He	226871	0.49	224817	100.91	60	120	
Tb	159	1	He	1103418	0.48	1046002	105.49	60	120	
Ho	165	1	He	1118883	0.95	1057439	105.81	60	120	
Bi	209	1	He	731544	0.77	731380	100.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-1-a
Data File Name	095SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:17:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.013	2.013	1.90	186368	0.00	10000	
Be	9	45	2	NoGas	0.754	0.754	10.36	5364	0.01	2000	
B	11	45	2	NoGas	37.133	37.133	0.75	171521	0.02	300	
Na	23	45	1	He	17799.840	17799.840	1.54	7607553	0.23	500000	
Mg	24	45	1	He	21475.968	21475.968	2.15	5097200	0.42	500000	
Al	27	45	1	He	6.293	6.293	12.44	742	0.85	200000	
K	39	45	1	He	1150.944	1150.944	1.51	139461	0.83	500000	
Ca	44	45	1	He	75350.801	75350.801	0.77	498080	15.13	500000	
Ti	47	45	1	He	0.209	0.209	57.43	10	2.09	2500	
V	51	45	1	He	0.069	0.069	197.01	178	0.04	10000	
Cr	52	45	1	He	0.143	0.143	19.42	1036	0.01	10000	
Mn	55	45	1	He	26.941	26.941	0.22	28293	0.10	10000	
Fe	56	45	1	He	2760.403	2760.403	0.94	4466384	0.06	200000	
Co	59	45	1	He	0.178	0.178	19.95	1021	0.02	5000	
Ni	60	45	1	He	0.250	0.250	28.28	426	0.06	10000	
Cu	63	45	1	He	-0.025	-0.025	-243.20	2546	0.00	10000	
Zn	66	45	1	He	2.639	2.639	3.92	1191	0.22	10000	
As	75	103	1	He	19.229	19.229	1.90	4456	0.43	10000	
Se	78	115	1	He	0.662	0.662	9.17	10	6.76	10000	
Sr	88	103	1	He	69.225	69.225	0.79	70698	0.10	10000	
Mo	95	103	1	He	2.314	2.314	1.15	2956	0.08	2000	
Ag	107	103	1	He	0.016	0.016	26.03	83	0.02	300	
Cd	111	115	1	He	0.310	0.310	12.66	162	0.19	4000	
Sn	118	115	1	He	2.483	2.483	23.86	2745	0.09	2000	
Sb	123	115	1	He	0.238	0.238	28.48	307	0.08	200	
Ba	137	115	1	He	62.189	62.189	0.59	24097	0.26	10000	
W	182	159	1	He	0.844	0.844	11.64	6350	0.01	2500	
Tl	205	165	1	He	0.216	0.216	13.16	2032	0.01	2000	
Pb	208	165	1	He	0.123	0.123	11.89	2758	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2405713	0.76	1884762	127.64	60	120	ISTD warning
Sc	45	1	He	145624	1.51	134073	108.62	60	120	
Sc	45	2	NoGas	9764595	0.59	8481025	115.13	60	120	
Rh	103	1	He	925357	0.74	903580	102.41	60	120	
In	115	1	He	232387	0.92	224817	103.37	60	120	
Tb	159	1	He	1112459	0.99	1046002	106.35	60	120	
Ho	165	1	He	1127541	0.54	1057439	106.63	60	120	
Bi	209	1	He	761014	0.32	731380	104.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-2-a
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:21:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.892	1.892	0.47	176767	0.00	10000	
Be	9	45	2	NoGas	0.440	0.440	10.41	3089	0.01	2000	
B	11	45	2	NoGas	33.855	33.855	0.19	151728	0.02	300	
Na	23	45	1	He	18216.856	18216.856	1.11	7374696	0.25	500000	
Mg	24	45	1	He	22115.179	22115.179	0.94	4972118	0.44	500000	
Al	27	45	1	He	4.213	4.213	4.71	509	0.83	200000	
K	39	45	1	He	1198.288	1198.288	0.50	137166	0.87	500000	
Ca	44	45	1	He	77625.599	77625.599	0.16	486014	15.97	500000	
Ti	47	45	1	He	0.073	0.073	173.21	3	2.19	2500	
V	51	45	1	He	0.153	0.153	33.26	304	0.05	10000	
Cr	52	45	1	He	0.114	0.114	48.32	922	0.01	10000	
Mn	55	45	1	He	27.471	27.471	2.06	27321	0.10	10000	
Fe	56	45	1	He	2811.109	2811.109	0.43	4308313	0.07	200000	
Co	59	45	1	He	0.077	0.077	12.84	599	0.01	5000	
Ni	60	45	1	He	0.144	0.144	31.95	296	0.05	10000	
Cu	63	45	1	He	-0.065	-0.065	-70.31	2296	0.00	10000	
Zn	66	45	1	He	2.735	2.735	3.97	1163	0.24	10000	
As	75	103	1	He	19.204	19.204	0.46	4323	0.44	10000	
Se	78	115	1	He	0.293	0.293	35.07	6	5.05	10000	
Sr	88	103	1	He	69.569	69.569	1.65	68999	0.10	10000	
Mo	95	103	1	He	2.136	2.136	4.37	2651	0.08	2000	
Ag	107	103	1	He	0.002	0.002	18.72	18	0.01	300	
Cd	111	115	1	He	0.115	0.115	27.81	60	0.19	4000	
Sn	118	115	1	He	1.222	1.222	11.92	1471	0.08	2000	
Sb	123	115	1	He	0.068	0.068	41.56	116	0.06	200	
Ba	137	115	1	He	61.939	61.939	0.91	23381	0.26	10000	
W	182	159	1	He	0.469	0.469	8.78	4053	0.01	2500	
Tl	205	165	1	He	0.052	0.052	5.77	501	0.01	2000	
Pb	208	165	1	He	0.017	0.017	41.08	1420	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2318160	0.24	1884762	122.99	60	120	ISTD warning
Sc	45	1	He	137924	0.83	134073	102.87	60	120	
Sc	45	2	NoGas	9420118	0.35	8481025	111.07	60	120	
Rh	103	1	He	898661	0.28	903580	99.46	60	120	
In	115	1	He	226377	0.53	224817	100.69	60	120	
Tb	159	1	He	1073643	0.26	1046002	102.64	60	120	
Ho	165	1	He	1082914	0.90	1057439	102.41	60	120	
Bi	209	1	He	734589	0.54	731380	100.44	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-3-a
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:25:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.206	1.206	7.10	149582	0.00	10000	
Be	9	45	2	NoGas	0.360	0.360	9.74	2397	0.02	2000	
B	11	45	2	NoGas	33.862	33.862	1.36	142332	0.02	300	
Na	23	45	1	He	241105.259	241105.259	1.78	96087522	0.25	500000	
Mg	24	45	1	He	17026.911	17026.911	2.14	3770885	0.45	500000	
Al	27	45	1	He	41.952	41.952	2.90	3984	1.05	200000	
K	39	45	1	He	1464.671	1464.671	0.81	163146	0.90	500000	
Ca	44	45	1	He	89269.604	89269.604	1.57	550501	16.22	500000	
Ti	47	45	1	He	0.722	0.722	49.18	32	2.24	2500	
V	51	45	1	He	0.591	0.591	16.82	997	0.06	10000	
Cr	52	45	1	He	0.451	0.451	2.00	1572	0.03	10000	
Mn	55	45	1	He	507.508	507.508	0.67	494839	0.10	10000	
Fe	56	45	1	He	3056.292	3056.292	1.32	4613601	0.07	200000	
Co	59	45	1	He	3.075	3.075	4.92	11366	0.03	5000	
Ni	60	45	1	He	2.534	2.534	2.43	2704	0.09	10000	
Cu	63	45	1	He	1.149	1.149	26.12	5715	0.02	10000	
Zn	66	45	1	He	2.462	2.462	14.24	1046	0.24	10000	
As	75	103	1	He	4.099	4.099	5.97	875	0.47	10000	
Se	78	115	1	He	0.319	0.319	64.78	6	5.50	10000	
Sr	88	103	1	He	207.308	207.308	0.74	192041	0.11	10000	
Mo	95	103	1	He	0.898	0.898	8.67	1049	0.09	2000	
Ag	107	103	1	He	0.007	0.007	26.63	39	0.02	300	
Cd	111	115	1	He	0.117	0.117	21.76	58	0.20	4000	
Sn	118	115	1	He	0.536	0.536	13.16	778	0.07	2000	
Sb	123	115	1	He	0.074	0.074	27.66	117	0.06	200	
Ba	137	115	1	He	80.071	80.071	1.38	28881	0.28	10000	
W	182	159	1	He	0.364	0.364	9.00	3293	0.01	2500	
Tl	205	165	1	He	0.045	0.045	18.51	419	0.01	2000	
Pb	208	165	1	He	0.118	0.118	11.95	2477	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108268	0.97	1884762	111.86	60	120	
Sc	45	1	He	135867	0.94	134073	101.34	60	120	
Sc	45	2	NoGas	8835786	1.24	8481025	104.18	60	120	
Rh	103	1	He	839713	0.46	903580	92.93	60	120	
In	115	1	He	216345	0.92	224817	96.23	60	120	
Tb	159	1	He	1017823	0.55	1046002	97.31	60	120	
Ho	165	1	He	1034583	0.52	1057439	97.84	60	120	
Bi	209	1	He	675477	0.31	731380	92.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-4-a
Data File Name	098SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:29:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.788	1.788	1.20	157461	0.00	10000	
Be	9	45	2	NoGas	0.290	0.290	6.13	1889	0.02	2000	
B	11	45	2	NoGas	34.901	34.901	1.61	141150	0.02	300	
Na	23	45	1	He	20315.146	20315.146	3.14	7696638	0.26	500000	
Mg	24	45	1	He	16612.284	16612.284	3.81	3495316	0.48	500000	
Al	27	45	1	He	3.481	3.481	15.75	412	0.84	200000	
K	39	45	1	He	1620.347	1620.347	2.83	170579	0.95	500000	
Ca	44	45	1	He	67993.771	67993.771	2.44	398476	17.06	500000	
Ti	47	45	1	He	0.132	0.132	92.78	6	2.38	2500	
V	51	45	1	He	-0.004	-0.004	-1081.04	46	-0.01	10000	
Cr	52	45	1	He	0.046	0.046	32.23	737	0.01	10000	
Mn	55	45	1	He	40.779	40.779	1.84	37903	0.11	10000	
Fe	56	45	1	He	2092.305	2092.305	3.57	3001431	0.07	200000	
Co	59	45	1	He	0.043	0.043	25.37	447	0.01	5000	
Ni	60	45	1	He	0.184	0.184	28.03	314	0.06	10000	
Cu	63	45	1	He	1.625	1.625	9.60	6728	0.02	10000	
Zn	66	45	1	He	2.974	2.974	6.20	1171	0.25	10000	
As	75	103	1	He	7.250	7.250	3.74	1520	0.48	10000	
Se	78	115	1	He	0.419	0.419	20.15	7	6.32	10000	
Sr	88	103	1	He	102.145	102.145	1.07	93698	0.11	10000	
Mo	95	103	1	He	1.261	1.261	2.53	1452	0.09	2000	
Ag	107	103	1	He	0.000	0.000	403.76	9	0.00	300	
Cd	111	115	1	He	0.038	0.038	17.67	19	0.19	4000	
Sn	118	115	1	He	0.366	0.366	31.22	611	0.06	2000	
Sb	123	115	1	He	0.001	0.001	1527.81	41	0.00	200	
Ba	137	115	1	He	44.085	44.085	1.42	15601	0.28	10000	
W	182	159	1	He	0.338	0.338	6.54	3089	0.01	2500	
Tl	205	165	1	He	0.016	0.016	11.34	167	0.01	2000	
Pb	208	165	1	He	0.037	0.037	10.79	1537	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089426	0.66	1884762	110.86	60	120	
Sc	45	1	He	129142	2.38	134073	96.32	60	120	
Sc	45	2	NoGas	8517876	0.89	8481025	100.43	60	120	
Rh	103	1	He	831389	1.30	903580	92.01	60	120	
In	115	1	He	212213	0.61	224817	94.39	60	120	
Tb	159	1	He	997099	0.99	1046002	95.32	60	120	
Ho	165	1	He	1007345	0.67	1057439	95.26	60	120	
Bi	209	1	He	678564	1.33	731380	92.78	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-5-a
Data File Name	099SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:33:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.854	11.854	0.14	392642	0.00	10000	
Be	9	45	2	NoGas	0.956	0.956	5.13	5979	0.02	2000	
B	11	45	2	NoGas	31.311	31.311	1.26	129448	0.02	300	
Na	23	45	1	He	101714.997	101714.997	1.43	37997504	0.27	500000	
Mg	24	45	1	He	18605.289	18605.289	1.49	3862348	0.48	500000	
Al	27	45	1	He	19837.414	19837.414	0.70	1716105	1.16	200000	
K	39	45	1	He	3826.820	3826.820	0.80	385944	0.99	500000	
Ca	44	45	1	He	82667.480	82667.480	0.19	477893	17.30	500000	
Ti	47	45	1	He	273.173	273.173	1.46	11430	2.39	2500	
V	51	45	1	He	-304.749	-304.749	-15.84	-454062	0.07	10000	
Cr	52	45	1	He	8621.679	8621.679	0.34	15902758	0.05	10000	
Mn	55	45	1	He	3801.607	3801.607	0.62	3473527	0.11	10000	
Fe	56	45	1	He	77526.589	77526.589	0.58	109652300	0.07	200000	
Co	59	45	1	He	89.178	89.178	0.59	300830	0.03	5000	
Ni	60	45	1	He	1160.626	1160.626	0.22	1098418	0.11	10000	
Cu	63	45	1	He	234.942	234.942	0.28	629500	0.04	10000	
Zn	66	45	1	He	73.108	73.108	2.48	25101	0.29	10000	
As	75	103	1	He	15.349	15.349	2.82	3034	0.51	10000	
Se	78	115	1	He	3.193	3.193	16.43	31	10.24	10000	
Sr	88	103	1	He	154.446	154.446	0.81	134340	0.11	10000	
Mo	95	103	1	He	109.977	109.977	1.52	119142	0.09	2000	
Ag	107	103	1	He	0.072	0.072	12.33	294	0.02	300	
Cd	111	115	1	He	0.220	0.220	12.19	100	0.22	4000	
Sn	118	115	1	He	12.413	12.413	3.86	10785	0.12	2000	
Sb	123	115	1	He	1.123	1.123	4.54	1110	0.10	200	
Ba	137	115	1	He	223.737	223.737	1.81	74846	0.30	10000	
W	182	159	1	He	4.922	4.922	1.66	25959	0.02	2500	
Tl	205	165	1	He	0.287	0.287	2.93	2351	0.01	2000	
Pb	208	165	1	He	13.637	13.637	0.83	145191	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2072797	0.91	1884762	109.98	60	120	
Sc	45	1	He	127352	1.42	134073	94.99	60	120	
Sc	45	2	NoGas	8644933	0.48	8481025	101.93	60	120	
Rh	103	1	He	788416	1.07	903580	87.25	60	120	
In	115	1	He	200692	1.61	224817	89.27	60	120	
Tb	159	1	He	971765	1.51	1046002	92.90	60	120	
Ho	165	1	He	985926	0.90	1057439	93.24	60	120	
Bi	209	1	He	642310	0.37	731380	87.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-7-a
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:37:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.491	2.491	0.75	183124	0.00	10000	
Be	9	45	2	NoGas	0.233	0.233	10.38	1630	0.01	2000	
B	11	45	2	NoGas	55.349	55.349	1.35	230859	0.02	300	
Na	23	45	1	He	18333.880	18333.880	2.29	7244411	0.25	500000	
Mg	24	45	1	He	21957.205	21957.205	1.41	4818756	0.46	500000	
Al	27	45	1	He	24.616	24.616	8.23	2361	1.04	200000	
K	39	45	1	He	3419.949	3419.949	2.37	365559	0.94	500000	
Ca	44	45	1	He	97122.315	97122.315	3.19	593438	16.37	500000	
Ti	47	45	1	He	0.706	0.706	63.83	31	2.27	2500	
V	51	45	1	He	0.190	0.190	88.96	354	0.05	10000	
Cr	52	45	1	He	0.907	0.907	8.04	2448	0.04	10000	
Mn	55	45	1	He	142.061	142.061	3.15	137338	0.10	10000	
Fe	56	45	1	He	2459.839	2459.839	2.82	3679647	0.07	200000	
Co	59	45	1	He	0.013	0.013	225.10	358	0.00	5000	
Ni	60	45	1	He	0.744	0.744	5.41	889	0.08	10000	
Cu	63	45	1	He	5.189	5.189	4.56	17067	0.03	10000	
Zn	66	45	1	He	16.416	16.416	5.36	6073	0.27	10000	
As	75	103	1	He	3.193	3.193	1.76	697	0.46	10000	
Se	78	115	1	He	0.251	0.251	69.24	5	4.89	10000	
Sr	88	103	1	He	95.511	95.511	0.97	90069	0.11	10000	
Mo	95	103	1	He	2.562	2.562	1.93	3020	0.08	2000	
Ag	107	103	1	He	0.002	0.002	111.34	18	0.01	300	
Cd	111	115	1	He	0.024	0.024	18.90	13	0.18	4000	
Sn	118	115	1	He	3.864	3.864	1.93	3804	0.10	2000	
Sb	123	115	1	He	0.035	0.035	70.22	77	0.05	200	
Ba	137	115	1	He	46.452	46.452	1.58	16696	0.28	10000	
W	182	159	1	He	0.280	0.280	9.92	2863	0.01	2500	
Tl	205	165	1	He	0.014	0.014	24.27	157	0.01	2000	
Pb	208	165	1	He	0.188	0.188	2.51	3239	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2135613	2.26	1884762	113.31	60	120	
Sc	45	1	He	134637	1.00	134073	100.42	60	120	
Sc	45	2	NoGas	8991341	0.66	8481025	106.02	60	120	
Rh	103	1	He	854546	1.17	903580	94.57	60	120	
In	115	1	He	215541	2.12	224817	95.87	60	120	
Tb	159	1	He	1021256	1.13	1046002	97.63	60	120	
Ho	165	1	He	1029525	1.68	1057439	97.36	60	120	
Bi	209	1	He	692521	0.76	731380	94.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-8-a
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:42:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.479	2.479	1.61	183207	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	18.34	1667	0.01	2000	
B	11	45	2	NoGas	46.117	46.117	1.17	194304	0.02	300	
Na	23	45	1	He	20114.188	20114.188	2.82	8047024	0.25	500000	
Mg	24	45	1	He	15049.140	15049.140	3.90	3343747	0.45	500000	
Al	27	45	1	He	7.843	7.843	5.55	839	0.93	200000	
K	39	45	1	He	2031.267	2031.267	3.31	223499	0.91	500000	
Ca	44	45	1	He	88662.677	88662.677	2.42	548615	16.16	500000	
Ti	47	45	1	He	0.276	0.276	80.81	12	2.26	2500	
V	51	45	1	He	-0.111	-0.111	-115.70	-124	0.09	10000	
Cr	52	45	1	He	0.279	0.279	6.32	1238	0.02	10000	
Mn	55	45	1	He	84.571	84.571	2.73	82854	0.10	10000	
Fe	56	45	1	He	2200.745	2200.745	2.71	3333773	0.07	200000	
Co	59	45	1	He	0.016	0.016	60.45	373	0.00	5000	
Ni	60	45	1	He	0.252	0.252	16.40	402	0.06	10000	
Cu	63	45	1	He	-0.038	-0.038	-51.83	2349	0.00	10000	
Zn	66	45	1	He	1.601	1.601	0.94	736	0.22	10000	
As	75	103	1	He	1.318	1.318	8.81	302	0.44	10000	
Se	78	115	1	He	0.509	0.509	53.39	8	6.53	10000	
Sr	88	103	1	He	102.821	102.821	2.35	98290	0.10	10000	
Mo	95	103	1	He	2.158	2.158	5.78	2582	0.08	2000	
Ag	107	103	1	He	0.003	0.003	59.97	19	0.01	300	
Cd	111	115	1	He	0.018	0.018	64.22	11	0.17	4000	
Sn	118	115	1	He	0.459	0.459	33.81	722	0.06	2000	
Sb	123	115	1	He	-0.009	-0.009	-155.42	32	-0.03	200	
Ba	137	115	1	He	42.941	42.941	1.16	15792	0.27	10000	
W	182	159	1	He	0.255	0.255	4.68	2793	0.01	2500	
Tl	205	165	1	He	0.010	0.010	21.83	122	0.01	2000	
Pb	208	165	1	He	0.022	0.022	21.17	1448	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2195675	0.95	1884762	116.50	60	120	
Sc	45	1	He	136358	2.08	134073	101.70	60	120	
Sc	45	2	NoGas	9010085	0.15	8481025	106.24	60	120	
Rh	103	1	He	866589	1.86	903580	95.91	60	120	
In	115	1	He	220506	1.58	224817	98.08	60	120	
Tb	159	1	He	1044639	2.21	1046002	99.87	60	120	
Ho	165	1	He	1057231	1.41	1057439	99.98	60	120	
Bi	209	1	He	707681	0.99	731380	96.76	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	102_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:46:13-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.374	1.233	1444700	1.08	50	112.7	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.383	0.859	337278	0.86	50	108.8	89.5	110.5	
B	11	45	2	NoGas	64.751	0.863	262174	0.83	50	129.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25379.281	1.790	9967340	0.98	25000	101.5	89.5	110.5	
Mg	24	45	1	He	25172.880	1.795	5491491	1.06	25000	100.7	89.5	110.5	
Al	27	45	1	He	249.260	1.891	22766	0.95	250	99.7	89.5	110.5	
K	39	45	1	He	25557.130	0.797	2658428	0.45	25000	102.2	89.5	110.5	
Ca	44	45	1	He	25119.901	0.955	152736	0.25	25000	100.5	89.5	110.5	
Ti	47	45	1	He	51.255	4.232	2254	3.20	50	102.5	89.5	110.5	
V	51	45	1	He	50.250	2.352	78849	1.80	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.985	2.635	97545	1.54	50	100.0	89.5	110.5	
Mn	55	45	1	He	248.809	2.318	239015	1.29	250	99.5	89.5	110.5	
Fe	56	45	1	He	12545.118	2.265	18647046	1.31	12500	100.4	89.5	110.5	
Co	59	45	1	He	50.594	1.958	179484	1.02	50	101.2	89.5	110.5	
Ni	60	45	1	He	49.336	1.477	49202	0.57	50	98.7	89.5	110.5	
Cu	63	45	1	He	49.774	1.601	142038	0.51	50	99.5	89.5	110.5	
Zn	66	45	1	He	49.446	2.185	17890	1.20	50	98.9	89.5	110.5	
As	75	103	1	He	49.320	0.544	10601	0.21	50	98.6	89.5	110.5	
Se	78	115	1	He	49.652	3.619	484	3.05	50	99.3	89.5	110.5	
Sr	88	103	1	He	50.454	0.825	47914	0.25	50	100.9	89.5	110.5	
Mo	95	103	1	He	52.096	0.380	61593	0.92	50	104.2	89.5	110.5	
Ag	107	103	1	He	50.179	0.225	219326	0.47	50	100.4	89.5	110.5	
Cd	111	115	1	He	50.742	1.301	24569	0.63	50	101.5	89.5	110.5	
Sn	118	115	1	He	49.770	0.694	45944	1.25	50	99.5	89.5	110.5	
Sb	123	115	1	He	50.893	1.414	52624	1.95	50	101.8	89.5	110.5	
Ba	137	115	1	He	49.597	3.066	17960	2.14	50	99.2	89.5	110.5	
W	182	159	1	He	52.701	0.784	280389	1.47	50	105.4	89.5	110.5	
Tl	205	165	1	He	49.558	0.383	426367	0.58	50	99.1	89.5	110.5	
Pb	208	165	1	He	49.533	0.245	559943	0.99	50	99.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2178650	1.18	1884762	115.59	60	120	
Sc	45	1	He	133838	1.09	134073	99.82	60	120	
Sc	45	2	NoGas	8780365	0.61	8481025	103.53	60	120	
Rh	103	1	He	860336	0.64	903580	95.21	60	120	
In	115	1	He	217189	0.96	224817	96.61	60	120	
Tb	159	1	He	1027745	0.72	1046002	98.25	60	120	
Ho	165	1	He	1052639	0.76	1057439	99.55	60	120	
Bi	209	1	He	700029	0.07	731380	95.71	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:50:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.729	5.4	139660	0.5	8	
Be	9	45	2	NoGas	0.265	9.2	1822	8.4	1	
B	11	45	2	NoGas	11.084	3.4	53270	2.7	20	
Na	23	45	1	He	57.511	3.8	27128	3.6	1000	
Mg	24	45	1	He	27.194	1.7	6568	0.9	1000	
Al	27	45	1	He	0.677	61.6	172	21.8	50	
K	39	45	1	He	31.353	13.6	12104	2.5	1000	
Ca	44	45	1	He	33.755	8.5	396	3.0	1000	
Ti	47	45	1	He	0.125	123.5	6	124.9	20	
V	51	45	1	He	0.174	22.1	327	18.2	2	
Cr	52	45	1	He	0.066	80.0	800	10.6	2	
Mn	55	45	1	He	0.286	5.4	409	3.9	2	
Fe	56	45	1	He	16.697	2.0	26803	2.7	50	
Co	59	45	1	He	0.021	120.1	381	21.0	1	
Ni	60	45	1	He	0.036	68.1	179	13.1	2	
Cu	63	45	1	He	-0.276	-12.6	1639	7.7	2	
Zn	66	45	1	He	0.384	35.8	284	16.3	20	
As	75	103	1	He	0.116	34.3	43	20.2	2	
Se	78	115	1	He	0.104	69.1	4	19.9	2	
Sr	88	103	1	He	0.167	22.6	202	17.8	10	
Mo	95	103	1	He	0.173	15.6	226	15.4	2	
Ag	107	103	1	He	0.061	1.7	282	0.7	0.2	
Cd	111	115	1	He	0.090	21.5	46	22.0	0.2	
Sn	118	115	1	He	0.285	27.8	563	13.1	10	
Sb	123	115	1	He	0.161	26.4	211	20.0	2	
Ba	137	115	1	He	0.105	40.8	44	37.0	5	
W	182	159	1	He	0.509	13.8	4149	8.8	10	
Tl	205	165	1	He	0.100	7.8	900	7.5	0.5	
Pb	208	165	1	He	0.046	15.4	1705	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2331767	0.18	1884762	123.72	60	120	ISTD warning
Sc	45	1	He	133788	2.10	134073	99.79	60	120	
Sc	45	2	NoGas	8922452	0.15	8481025	105.20	60	120	
Rh	103	1	He	892157	0.95	903580	98.74	60	120	
In	115	1	He	221809	1.40	224817	98.66	60	120	
Tb	159	1	He	1042524	0.50	1046002	99.67	60	120	
Ho	165	1	He	1051728	0.36	1057439	99.46	60	120	
Bi	209	1	He	730845	0.24	731380	99.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-9-a
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:54:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.009	6.009	0.30	260967	0.00	10000	
Be	9	45	2	NoGas	0.170	0.170	17.05	1200	0.01	2000	
B	11	45	2	NoGas	118.726	118.726	0.38	472222	0.03	300	
Na	23	45	1	He	34246.281	34246.281	2.26	13220746	0.26	500000	
Mg	24	45	1	He	23749.251	23749.251	2.26	5093303	0.47	500000	
Al	27	45	1	He	14.062	14.062	1.67	1366	1.03	200000	
K	39	45	1	He	6174.240	6174.240	1.93	637951	0.97	500000	
Ca	44	45	1	He	243063.822	243063.822	2.89	1451166	16.75	500000	
Ti	47	45	1	He	1.053	1.053	47.64	46	2.31	2500	
V	51	45	1	He	2.351	2.351	4.10	3678	0.06	10000	
Cr	52	45	1	He	1.069	1.069	10.18	2699	0.04	10000	
Mn	55	45	1	He	746.701	746.701	2.12	704945	0.11	10000	
Fe	56	45	1	He	6930.984	6930.984	2.08	10129258	0.07	200000	
Co	59	45	1	He	0.371	0.371	5.88	1595	0.02	5000	
Ni	60	45	1	He	0.423	0.423	11.85	554	0.08	10000	
Cu	63	45	1	He	0.430	0.430	12.28	3556	0.01	10000	
Zn	66	45	1	He	1.482	1.482	10.90	668	0.22	10000	
As	75	103	1	He	0.401	0.401	14.09	98	0.41	10000	
Se	78	115	1	He	0.539	0.539	56.52	8	6.91	10000	
Sr	88	103	1	He	287.717	287.717	1.39	261653	0.11	10000	
Mo	95	103	1	He	0.350	0.350	12.49	409	0.09	2000	
Ag	107	103	1	He	0.007	0.007	55.51	36	0.02	300	
Cd	111	115	1	He	0.026	0.026	51.02	14	0.19	4000	
Sn	118	115	1	He	1.595	1.595	16.57	1711	0.09	2000	
Sb	123	115	1	He	0.062	0.062	30.06	102	0.06	200	
Ba	137	115	1	He	70.115	70.115	1.21	24804	0.28	10000	
W	182	159	1	He	0.348	0.348	9.82	3234	0.01	2500	
Tl	205	165	1	He	0.017	0.017	13.47	181	0.01	2000	
Pb	208	165	1	He	0.052	0.052	3.35	1749	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2255375	0.97	1884762	119.66	60	120	
Sc	45	1	He	131568	0.44	134073	98.13	60	120	
Sc	45	2	NoGas	8763467	0.28	8481025	103.33	60	120	
Rh	103	1	He	824357	0.56	903580	91.23	60	120	
In	115	1	He	212174	1.34	224817	94.38	60	120	
Tb	159	1	He	1025602	0.40	1046002	98.05	60	120	
Ho	165	1	He	1039649	0.52	1057439	98.32	60	120	
Bi	209	1	He	681748	0.47	731380	93.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-2-a
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:58:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.971	11.971	0.66	399751	0.00	10000	
Be	9	45	2	NoGas	0.136	0.136	19.10	989	0.01	2000	
B	11	45	2	NoGas	54.748	54.748	0.84	222085	0.02	300	
Na	23	45	1	He	15235.307	15235.307	1.68	5802345	0.26	500000	
Mg	24	45	1	He	35439.546	35439.546	1.27	7494651	0.47	500000	
Al	27	45	1	He	3.840	3.840	36.52	446	0.86	200000	
K	39	45	1	He	3063.484	3063.484	0.91	316469	0.97	500000	
Ca	44	45	1	He	107384.302	107384.302	1.19	632422	16.98	500000	
Ti	47	45	1	He	0.130	0.130	33.94	6	2.34	2500	
V	51	45	1	He	0.001	0.001	20821.89	55	0.00	10000	
Cr	52	45	1	He	0.038	0.038	135.06	727	0.01	10000	
Mn	55	45	1	He	9.062	9.062	3.73	8563	0.11	10000	
Fe	56	45	1	He	1606.409	1606.409	1.25	2316797	0.07	200000	
Co	59	45	1	He	-0.003	-0.003	-233.81	289	0.00	5000	
Ni	60	45	1	He	0.304	0.304	18.17	432	0.07	10000	
Cu	63	45	1	He	-0.268	-0.268	-20.40	1609	-0.02	10000	
Zn	66	45	1	He	1.141	1.141	11.02	540	0.21	10000	
As	75	103	1	He	1.401	1.401	3.00	308	0.45	10000	
Se	78	115	1	He	0.209	0.209	14.94	5	4.50	10000	
Sr	88	103	1	He	22722.910	22722.910	0.22	20947522	0.11	10000	>LDR
Mo	95	103	1	He	6.220	6.220	1.53	7156	0.09	2000	
Ag	107	103	1	He	0.009	0.009	59.58	47	0.02	300	
Cd	111	115	1	He	0.028	0.028	45.49	15	0.19	4000	
Sn	118	115	1	He	0.275	0.275	10.58	530	0.05	2000	
Sb	123	115	1	He	0.046	0.046	39.84	87	0.05	200	
Ba	137	115	1	He	112.493	112.493	1.39	39797	0.28	10000	
W	182	159	1	He	0.297	0.297	6.24	2952	0.01	2500	
Tl	205	165	1	He	0.018	0.018	29.10	193	0.01	2000	
Pb	208	165	1	He	0.013	0.013	77.05	1306	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2229162	0.71	1884762	118.27	60	120	
Sc	45	1	He	129743	1.20	134073	96.77	60	120	
Sc	45	2	NoGas	8741106	0.56	8481025	103.07	60	120	
Rh	103	1	He	835788	0.90	903580	92.50	60	120	
In	115	1	He	212186	0.16	224817	94.38	60	120	
Tb	159	1	He	1021032	1.34	1046002	97.61	60	120	
Ho	165	1	He	1029264	0.84	1057439	97.34	60	120	
Bi	209	1	He	686584	0.62	731380	93.88	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-3-a
Data File Name	106SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:02:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	14.606	14.606	0.18	462226	0.00	10000	
Be	9	45	2	NoGas	0.129	0.129	16.05	945	0.01	2000	
B	11	45	2	NoGas	64.993	64.993	1.22	262420	0.02	300	
Na	23	45	1	He	10090.614	10090.614	0.83	3885953	0.26	500000	
Mg	24	45	1	He	34417.822	34417.822	0.24	7356885	0.47	500000	
Al	27	45	1	He	27.550	27.550	6.71	2562	1.08	200000	
K	39	45	1	He	1261.512	1261.512	0.68	136830	0.92	500000	
Ca	44	45	1	He	91770.490	91770.490	2.18	546234	16.80	500000	
Ti	47	45	1	He	0.386	0.386	52.68	17	2.32	2500	
V	51	45	1	He	0.130	0.130	104.86	252	0.05	10000	
Cr	52	45	1	He	0.056	0.056	20.57	768	0.01	10000	
Mn	55	45	1	He	8.472	8.472	2.03	8102	0.10	10000	
Fe	56	45	1	He	768.424	768.424	1.90	1121098	0.07	200000	
Co	59	45	1	He	0.106	0.106	15.84	671	0.02	5000	
Ni	60	45	1	He	0.895	0.895	6.94	1012	0.09	10000	
Cu	63	45	1	He	-0.199	-0.199	-31.25	1815	-0.01	10000	
Zn	66	45	1	He	2.230	2.230	24.67	929	0.24	10000	
As	75	103	1	He	0.875	0.875	6.97	198	0.44	10000	
Se	78	115	1	He	0.263	0.263	85.66	5	5.12	10000	
Sr	88	103	1	He	32969.639	32969.639	0.72	30284468	0.11	10000	>LDR
Mo	95	103	1	He	4.954	4.954	2.96	5681	0.09	2000	
Ag	107	103	1	He	0.008	0.008	64.42	40	0.02	300	
Cd	111	115	1	He	0.349	0.349	25.69	167	0.21	4000	
Sn	118	115	1	He	0.035	0.035	139.07	315	0.01	2000	
Sb	123	115	1	He	0.020	0.020	131.20	60	0.03	200	
Ba	137	115	1	He	60.648	60.648	1.36	21454	0.28	10000	
W	182	159	1	He	0.517	0.517	3.76	4045	0.01	2500	
Tl	205	165	1	He	0.010	0.010	51.36	126	0.01	2000	
Pb	208	165	1	He	0.068	0.068	1.65	1892	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2202484	0.90	1884762	116.86	60	120	
Sc	45	1	He	131130	0.39	134073	97.80	60	120	
Sc	45	2	NoGas	8757205	0.73	8481025	103.26	60	120	
Rh	103	1	He	832753	0.87	903580	92.16	60	120	
In	115	1	He	212123	1.05	224817	94.35	60	120	
Tb	159	1	He	1005557	0.59	1046002	96.13	60	120	
Ho	165	1	He	1016707	0.55	1057439	96.15	60	120	
Bi	209	1	He	687625	0.18	731380	94.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-4-a
Data File Name	107SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:07:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.020	20.020	0.47	602023	0.00	10000	
Be	9	45	2	NoGas	0.111	0.111	14.18	856	0.01	2000	
B	11	45	2	NoGas	142.121	142.121	0.36	575454	0.02	300	
Na	23	45	1	He	10680.586	10680.586	1.66	4261122	0.25	500000	
Mg	24	45	1	He	32577.088	32577.088	1.83	7214520	0.45	500000	
Al	27	45	1	He	5.017	5.017	8.32	576	0.87	200000	
K	39	45	1	He	1793.929	1793.929	0.50	197804	0.91	500000	
Ca	44	45	1	He	102042.125	102042.125	2.17	629285	16.22	500000	
Ti	47	45	1	He	0.150	0.150	100.17	7	2.25	2500	
V	51	45	1	He	-0.069	-0.069	-154.27	-55	0.12	10000	
Cr	52	45	1	He	0.037	0.037	59.22	758	0.00	10000	
Mn	55	45	1	He	2.508	2.508	5.76	2581	0.10	10000	
Fe	56	45	1	He	798.790	798.790	1.27	1207356	0.07	200000	
Co	59	45	1	He	-0.016	-0.016	-32.50	254	-0.01	5000	
Ni	60	45	1	He	0.063	0.063	30.83	209	0.03	10000	
Cu	63	45	1	He	-0.339	-0.339	-6.53	1483	-0.02	10000	
Zn	66	45	1	He	2.283	2.283	12.73	981	0.23	10000	
As	75	103	1	He	2.758	2.758	2.31	613	0.45	10000	
Se	78	115	1	He	0.298	0.298	137.96	6	5.28	10000	
Sr	88	103	1	He	60423.988	60423.988	1.34	57750044	0.10	10000	>LDR
Mo	95	103	1	He	5.602	5.602	3.09	6681	0.08	2000	
Ag	107	103	1	He	0.017	0.017	13.05	83	0.02	300	
Cd	111	115	1	He	0.019	0.019	97.84	11	0.17	4000	
Sn	118	115	1	He	5.610	5.610	3.31	5449	0.10	2000	
Sb	123	115	1	He	0.051	0.051	88.00	93	0.05	200	
Ba	137	115	1	He	186.289	186.289	1.24	67624	0.28	10000	
W	182	159	1	He	0.219	0.219	27.15	2604	0.01	2500	
Tl	205	165	1	He	0.007	0.007	22.63	98	0.01	2000	
Pb	208	165	1	He	0.026	0.026	14.57	1481	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2252931	1.86	1884762	119.53	60	120	
Sc	45	1	He	135863	0.41	134073	101.33	60	120	
Sc	45	2	NoGas	8949694	0.48	8481025	105.53	60	120	
Rh	103	1	He	866515	0.42	903580	95.90	60	120	
In	115	1	He	217734	0.47	224817	96.85	60	120	
Tb	159	1	He	1045724	0.72	1046002	99.97	60	120	
Ho	165	1	He	1055424	0.46	1057439	99.81	60	120	
Bi	209	1	He	709485	0.42	731380	97.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-5-a
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:11:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.802	17.802	1.73	543947	0.00	10000	
Be	9	45	2	NoGas	0.131	0.131	20.83	970	0.01	2000	
B	11	45	2	NoGas	124.119	124.119	0.44	499205	0.02	300	
Na	23	45	1	He	9795.324	9795.324	5.61	3984940	0.25	500000	
Mg	24	45	1	He	33384.825	33384.825	6.55	7535586	0.44	500000	
Al	27	45	1	He	2.317	2.317	14.71	333	0.70	200000	
K	39	45	1	He	1620.051	1620.051	6.61	183011	0.89	500000	
Ca	44	45	1	He	105835.013	105835.013	6.56	665424	15.90	500000	
Ti	47	45	1	He	0.124	0.124	38.69	6	2.23	2500	
V	51	45	1	He	0.061	0.061	124.24	160	0.04	10000	
Cr	52	45	1	He	0.128	0.128	5.34	956	0.01	10000	
Mn	55	45	1	He	4.409	4.409	6.88	4521	0.10	10000	
Fe	56	45	1	He	1214.794	1214.794	4.56	1871844	0.06	200000	
Co	59	45	1	He	0.441	0.441	6.50	1936	0.02	5000	
Ni	60	45	1	He	4.320	4.320	2.87	4600	0.09	10000	
Cu	63	45	1	He	-0.301	-0.301	-17.61	1620	-0.02	10000	
Zn	66	45	1	He	7.283	7.283	5.86	2858	0.25	10000	
As	75	103	1	He	5.964	5.964	4.51	1330	0.45	10000	
Se	78	115	1	He	0.279	0.279	37.83	6	4.95	10000	
Sr	88	103	1	He	37210.195	37210.195	5.55	36210559	0.10	10000	>LDR
Mo	95	103	1	He	6.309	6.309	5.74	7661	0.08	2000	
Ag	107	103	1	He	0.009	0.009	26.98	49	0.02	300	
Cd	111	115	1	He	0.034	0.034	52.68	19	0.18	4000	
Sn	118	115	1	He	0.239	0.239	12.61	530	0.05	2000	
Sb	123	115	1	He	0.059	0.059	49.25	107	0.06	200	
Ba	137	115	1	He	46.450	46.450	7.11	17440	0.27	10000	
W	182	159	1	He	0.455	0.455	56.87	4027	0.01	2500	
Tl	205	165	1	He	0.014	0.014	10.39	164	0.01	2000	
Pb	208	165	1	He	0.081	0.081	2.28	2169	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2239097	0.22	1884762	118.80	60	120	
Sc	45	1	He	138821	5.80	134073	103.54	60	120	
Sc	45	2	NoGas	8869309	1.20	8481025	104.58	60	120	
Rh	103	1	He	883954	5.20	903580	97.83	60	120	
In	115	1	He	225620	5.23	224817	100.36	60	120	
Tb	159	1	He	1073565	5.47	1046002	102.64	60	120	
Ho	165	1	He	1085907	5.36	1057439	102.69	60	120	
Bi	209	1	He	717618	3.37	731380	98.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-6-a
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:15:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.661	17.661	0.62	543957	0.00	10000	
Be	9	45	2	NoGas	0.130	0.130	25.29	970	0.01	2000	
B	11	45	2	NoGas	126.126	126.126	0.83	510243	0.02	300	
Na	23	45	1	He	10335.292	10335.292	0.96	4044668	0.26	500000	
Mg	24	45	1	He	35363.767	35363.767	0.98	7682026	0.46	500000	
Al	27	45	1	He	2.979	2.979	6.07	380	0.78	200000	
K	39	45	1	He	1677.050	1677.050	1.16	181944	0.92	500000	
Ca	44	45	1	He	111586.170	111586.170	4.49	674806	16.54	500000	
Ti	47	45	1	He	0.101	0.101	113.95	4	2.27	2500	
V	51	45	1	He	-0.022	-0.022	-93.07	19	-0.12	10000	
Cr	52	45	1	He	0.048	0.048	100.56	763	0.01	10000	
Mn	55	45	1	He	4.062	4.062	1.47	4017	0.10	10000	
Fe	56	45	1	He	1293.112	1293.112	2.25	1915684	0.07	200000	
Co	59	45	1	He	0.488	0.488	2.30	2030	0.02	5000	
Ni	60	45	1	He	4.517	4.517	2.29	4615	0.10	10000	
Cu	63	45	1	He	-0.203	-0.203	-13.90	1835	-0.01	10000	
Zn	66	45	1	He	5.560	5.560	7.10	2133	0.26	10000	
As	75	103	1	He	6.342	6.342	1.54	1356	0.47	10000	
Se	78	115	1	He	0.322	0.322	9.23	6	5.54	10000	
Sr	88	103	1	He	39547.564	39547.564	0.57	36925939	0.11	10000	>LDR
Mo	95	103	1	He	6.521	6.521	1.02	7597	0.09	2000	
Ag	107	103	1	He	0.011	0.011	26.24	57	0.02	300	
Cd	111	115	1	He	0.036	0.036	7.57	19	0.19	4000	
Sn	118	115	1	He	0.062	0.062	163.67	344	0.02	2000	
Sb	123	115	1	He	0.048	0.048	41.37	90	0.05	200	
Ba	137	115	1	He	48.893	48.893	0.21	17574	0.28	10000	
W	182	159	1	He	0.232	0.232	7.91	2634	0.01	2500	
Tl	205	165	1	He	0.013	0.013	35.09	148	0.01	2000	
Pb	208	165	1	He	0.071	0.071	4.40	1982	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2232219	0.15	1884762	118.44	60	120	
Sc	45	1	He	133268	1.01	134073	99.40	60	120	
Sc	45	2	NoGas	8923808	0.66	8481025	105.22	60	120	
Rh	103	1	He	846549	1.06	903580	93.69	60	120	
In	115	1	He	215543	0.82	224817	95.87	60	120	
Tb	159	1	He	1031626	0.43	1046002	98.63	60	120	
Ho	165	1	He	1049241	1.00	1057439	99.22	60	120	
Bi	209	1	He	696199	0.31	731380	95.19	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-7-a
Data File Name	110SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:20:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.439	29.439	0.30	831557	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	8.85	748	0.01	2000	
B	11	45	2	NoGas	249.260	249.260	0.39	1007070	0.02	300	
Na	23	45	1	He	18135.674	18135.674	1.29	7049012	0.26	500000	
Mg	24	45	1	He	48352.029	48352.029	1.60	10436389	0.46	500000	
Al	27	45	1	He	1.553	1.553	49.92	249	0.62	200000	
K	39	45	1	He	2667.028	2667.028	1.74	282338	0.94	500000	
Ca	44	45	1	He	83156.140	83156.140	2.53	499806	16.64	500000	
Ti	47	45	1	He	0.077	0.077	173.21	3	2.31	2500	
V	51	45	1	He	-0.115	-0.115	-167.11	-123	0.09	10000	
Cr	52	45	1	He	0.092	0.092	46.39	844	0.01	10000	
Mn	55	45	1	He	5.796	5.796	2.70	5641	0.10	10000	
Fe	56	45	1	He	1081.447	1081.447	2.23	1592329	0.07	200000	
Co	59	45	1	He	-0.015	-0.015	-94.89	253	-0.01	5000	
Ni	60	45	1	He	0.189	0.189	10.11	328	0.06	10000	
Cu	63	45	1	He	-0.228	-0.228	-20.98	1753	-0.01	10000	
Zn	66	45	1	He	1.579	1.579	4.21	707	0.22	10000	
As	75	103	1	He	1.853	1.853	9.00	411	0.45	10000	
Se	78	115	1	He	0.149	0.149	174.73	4	3.59	10000	
Sr	88	103	1	He	34835.534	34835.534	0.97	32752701	0.11	10000	>LDR
Mo	95	103	1	He	5.936	5.936	2.10	6965	0.09	2000	
Ag	107	103	1	He	0.012	0.012	36.45	58	0.02	300	
Cd	111	115	1	He	0.028	0.028	18.23	15	0.19	4000	
Sn	118	115	1	He	0.478	0.478	25.94	722	0.07	2000	
Sb	123	115	1	He	0.048	0.048	12.05	90	0.05	200	
Ba	137	115	1	He	31.624	31.624	3.43	11373	0.28	10000	
W	182	159	1	He	0.265	0.265	28.22	2826	0.01	2500	
Tl	205	165	1	He	0.009	0.009	36.76	113	0.01	2000	
Pb	208	165	1	He	0.008	0.008	146.79	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2299495	0.68	1884762	122.00	60	120	ISTD warning
Sc	45	1	He	132430	1.16	134073	98.77	60	120	
Sc	45	2	NoGas	8992606	0.86	8481025	106.03	60	120	
Rh	103	1	He	852436	0.56	903580	94.34	60	120	
In	115	1	He	215662	0.86	224817	95.93	60	120	
Tb	159	1	He	1036063	0.62	1046002	99.05	60	120	
Ho	165	1	He	1052264	0.46	1057439	99.51	60	120	
Bi	209	1	He	698099	0.61	731380	95.45	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	111_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:24:12-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.456	1.193	1407121	0.47	50	114.9	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.907	0.637	325953	1.16	50	109.8	89.5	110.5	
B	11	45	2	NoGas	68.017	0.845	263160	0.40	50	136.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25586.072	2.006	9552700	0.68	25000	102.3	89.5	110.5	
Mg	24	45	1	He	25659.226	2.446	5320964	0.46	25000	102.6	89.5	110.5	
Al	27	45	1	He	255.552	3.940	22182	2.39	250	102.2	89.5	110.5	
K	39	45	1	He	25893.882	0.942	2560661	1.29	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25464.269	1.250	147195	0.94	25000	101.9	89.5	110.5	
Ti	47	45	1	He	51.500	6.076	2153	6.46	50	103.0	89.5	110.5	
V	51	45	1	He	50.870	1.057	75893	1.23	50	101.7	89.5	110.5	
Cr	52	45	1	He	50.847	2.108	94329	1.27	50	101.7	89.5	110.5	
Mn	55	45	1	He	253.609	2.443	231597	0.54	250	101.4	89.5	110.5	
Fe	56	45	1	He	12731.774	2.437	17990032	0.27	12500	101.9	89.5	110.5	
Co	59	45	1	He	50.920	2.341	171722	0.81	50	101.8	89.5	110.5	
Ni	60	45	1	He	50.773	2.296	48130	0.32	50	101.5	89.5	110.5	
Cu	63	45	1	He	50.825	1.577	137839	0.62	50	101.6	89.5	110.5	
Zn	66	45	1	He	50.118	6.198	17230	4.59	50	100.2	89.5	110.5	
As	75	103	1	He	50.142	1.597	10293	0.91	50	100.3	89.5	110.5	
Se	78	115	1	He	52.380	3.842	483	3.55	50	104.8	89.5	110.5	
Sr	88	103	1	He	55.674	1.617	50498	2.25	50	111.3	89.5	110.5	CCV Failed
Mo	95	103	1	He	53.059	1.269	59914	1.52	50	106.1	89.5	110.5	
Ag	107	103	1	He	50.644	1.315	211407	0.74	50	101.3	89.5	110.5	
Cd	111	115	1	He	51.558	0.391	23606	0.53	50	103.1	89.5	110.5	
Sn	118	115	1	He	50.814	0.384	44348	0.83	50	101.6	89.5	110.5	
Sb	123	115	1	He	52.024	1.304	50860	0.87	50	104.0	89.5	110.5	
Ba	137	115	1	He	51.371	1.952	17590	1.29	50	102.7	89.5	110.5	
W	182	159	1	He	53.475	2.196	275571	1.82	50	106.9	89.5	110.5	
Tl	205	165	1	He	50.047	0.832	412241	1.37	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.024	0.881	541372	0.77	50	100.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2165204	1.36	1884762	114.88	60	120	
Sc	45	1	He	127255	2.16	134073	94.91	60	120	
Sc	45	2	NoGas	8404604	1.15	8481025	99.10	60	120	
Rh	103	1	He	821695	0.76	903580	90.94	60	120	
In	115	1	He	205361	0.66	224817	91.35	60	120	
Tb	159	1	He	995647	0.74	1046002	95.19	60	120	
Ho	165	1	He	1007788	0.64	1057439	95.30	60	120	
Bi	209	1	He	675630	0.90	731380	92.38	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	112_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:28:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.824	10.7	136925	1.0	8	
Be	9	45	2	NoGas	0.167	4.6	1159	3.9	1	
B	11	45	2	NoGas	12.085	2.0	55234	1.3	20	
Na	23	45	1	He	54.492	1.7	24881	1.7	1000	
Mg	24	45	1	He	27.214	6.7	6305	6.5	1000	
Al	27	45	1	He	0.248	42.0	128	5.4	50	
K	39	45	1	He	35.976	11.3	12068	1.3	1000	
Ca	44	45	1	He	22.019	9.4	312	3.3	1000	
Ti	47	45	1	He	0.129	124.3	6	124.9	20	
V	51	45	1	He	0.074	121.5	163	84.7	2	
Cr	52	45	1	He	0.022	57.3	688	1.8	2	
Mn	55	45	1	He	0.336	2.7	438	4.2	2	
Fe	56	45	1	He	16.118	5.7	24877	5.2	50	
Co	59	45	1	He	0.011	77.2	332	6.0	1	
Ni	60	45	1	He	-0.032	-55.2	107	14.3	2	
Cu	63	45	1	He	-0.254	-20.4	1630	10.4	2	
Zn	66	45	1	He	0.214	22.4	214	5.9	20	
As	75	103	1	He	0.108	48.7	40	28.1	2	
Se	78	115	1	He	0.083	122.4	3	28.6	2	
Sr	88	103	1	He	1.696	2.8	1646	1.4	10	
Mo	95	103	1	He	0.188	7.4	234	7.2	2	
Ag	107	103	1	He	0.062	5.2	278	5.7	0.2	
Cd	111	115	1	He	0.078	26.2	39	24.8	0.2	
Sn	118	115	1	He	0.250	12.3	511	5.8	10	
Sb	123	115	1	He	0.142	28.6	184	21.7	2	
Ba	137	115	1	He	0.047	29.9	22	22.9	5	
W	182	159	1	He	0.468	10.4	3812	5.7	10	
Tl	205	165	1	He	0.098	16.2	859	15.2	0.5	
Pb	208	165	1	He	0.048	18.4	1682	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2279059	2.21	1884762	120.92	60	120	ISTD warning
Sc	45	1	He	128320	2.41	134073	95.71	60	120	
Sc	45	2	NoGas	8609117	0.51	8481025	101.51	60	120	
Rh	103	1	He	860149	1.46	903580	95.19	60	120	
In	115	1	He	213895	0.77	224817	95.14	60	120	
Tb	159	1	He	1010922	1.25	1046002	96.65	60	120	
Ho	165	1	He	1020040	0.51	1057439	96.46	60	120	
Bi	209	1	He	713443	0.52	731380	97.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-b ms@2
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:32:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	159.490	159.490	1.77	3938918	0.00	10000	
Be	9	45	2	NoGas	460.973	460.973	0.71	2910985	0.02	2000	
B	11	45	2	NoGas	106.276	106.276	0.97	432367	0.02	300	
Na	23	45	1	He	19351.233	19351.233	1.49	7517122	0.26	500000	
Mg	24	45	1	He	18032.210	18032.210	1.55	3890484	0.46	500000	
Al	27	45	1	He	57692.067	57692.067	1.95	5185914	1.11	200000	
K	39	45	1	He	14952.424	14952.424	1.93	1541713	0.97	500000	
Ca	44	45	1	He	99740.421	99740.421	1.50	599166	16.65	500000	
Ti	47	45	1	He	442.486	442.486	1.07	19244	2.30	2500	
V	51	45	1	He	478.191	478.191	1.23	741622	0.06	10000	
Cr	52	45	1	He	1516.342	1516.342	1.66	2907098	0.05	10000	
Mn	55	45	1	He	1880.099	1880.099	1.17	1785393	0.11	10000	
Fe	56	45	1	He	95701.644	95701.644	1.51	140673857	0.07	200000	
Co	59	45	1	He	513.166	513.166	1.82	1797650	0.03	5000	
Ni	60	45	1	He	3859.415	3859.415	1.67	3795473	0.10	10000	
Cu	63	45	1	He	2296.159	2296.159	1.22	6372598	0.04	10000	
Zn	66	45	1	He	790.907	790.907	1.22	280831	0.28	10000	
As	75	103	1	He	497.641	497.641	1.06	99013	0.50	10000	
Se	78	115	1	He	404.573	404.573	1.85	3629	11.15	10000	
Sr	88	103	1	He	600.863	600.863	0.74	528577	0.11	10000	
Mo	95	103	1	He	57.916	57.916	1.44	63471	0.09	2000	
Ag	107	103	1	He	43.658	43.658	0.34	176890	0.02	300	
Cd	111	115	1	He	420.180	420.180	1.63	188008	0.22	4000	
Sn	118	115	1	He	430.883	430.883	2.45	365494	0.12	2000	
Sb	123	115	1	He	26.214	26.214	4.82	25060	0.10	200	
Ba	137	115	1	He	754.052	754.052	2.30	252285	0.30	10000	
W	182	159	1	He	28.988	28.988	2.39	152605	0.02	2500	
Tl	205	165	1	He	101.574	101.574	0.57	852480	0.01	2000	
Pb	208	165	1	He	2025.438	2025.438	0.66	22290732	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2145860	1.63	1884762	113.85	60	120	
Sc	45	1	He	132351	0.43	134073	98.72	60	120	
Sc	45	2	NoGas	8944036	1.21	8481025	105.46	60	120	
Rh	103	1	He	797495	0.44	903580	88.26	60	120	
In	115	1	He	200723	1.07	224817	89.28	60	120	
Tb	159	1	He	1012829	0.69	1046002	96.83	60	120	
Ho	165	1	He	1026949	1.23	1057439	97.12	60	120	
Bi	209	1	He	674417	0.50	731380	92.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-c msd@2
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:36:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	157.006	157.006	0.35	4651353	0.00	10000	
Be	9	45	2	NoGas	399.031	399.031	0.42	3021022	0.01	2000	
B	11	45	2	NoGas	101.169	101.169	1.00	494028	0.02	300	
Na	23	45	1	He	19194.843	19194.843	1.05	7348096	0.26	500000	
Mg	24	45	1	He	30459.757	30459.757	1.45	6475854	0.47	500000	
Al	27	45	1	He	64459.049	64459.049	2.16	5710008	1.13	200000	
K	39	45	1	He	15083.510	15083.510	1.12	1532547	0.98	500000	
Ca	44	45	1	He	120920.747	120920.747	1.16	715804	16.89	500000	
Ti	47	45	1	He	637.969	637.969	0.47	27342	2.33	2500	
V	51	45	1	He	513.113	513.113	2.93	784230	0.07	10000	
Cr	52	45	1	He	1847.633	1847.633	1.40	3490669	0.05	10000	
Mn	55	45	1	He	2103.834	2103.834	1.24	1968804	0.11	10000	
Fe	56	45	1	He	121084.460	121084.460	1.48	175395851	0.07	200000	
Co	59	45	1	He	582.242	582.242	0.79	2009921	0.03	5000	
Ni	60	45	1	He	6533.512	6533.512	1.55	6331825	0.10	10000	
Cu	63	45	1	He	3402.670	3402.670	0.98	9305090	0.04	10000	
Zn	66	45	1	He	955.052	955.052	1.22	334154	0.29	10000	
As	75	103	1	He	559.744	559.744	0.12	111144	0.50	10000	
Se	78	115	1	He	437.151	437.151	0.52	3894	11.23	10000	
Sr	88	103	1	He	775.452	775.452	0.70	680793	0.11	10000	
Mo	95	103	1	He	64.901	64.901	1.90	70983	0.09	2000	
Ag	107	103	1	He	47.545	47.545	0.84	192251	0.02	300	
Cd	111	115	1	He	454.842	454.842	1.29	202095	0.23	4000	
Sn	118	115	1	He	500.687	500.687	0.99	421744	0.12	2000	
Sb	123	115	1	He	26.414	26.414	1.65	25082	0.11	200	
Ba	137	115	1	He	838.155	838.155	1.37	278488	0.30	10000	
W	182	159	1	He	32.449	32.449	1.58	168454	0.02	2500	
Tl	205	165	1	He	109.533	109.533	1.13	907772	0.01	2000	
Pb	208	165	1	He	3793.961	3793.961	0.35	41229780	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2369700	2.15	1884762	125.73	60	120	ISTD warning
Sc	45	1	He	130424	0.22	134073	97.28	60	120	
Sc	45	2	NoGas	10722464	1.33	8481025	126.43	60	120	ISTD warning
Rh	103	1	He	795909	0.09	903580	88.08	60	120	
In	115	1	He	199318	1.22	224817	88.66	60	120	
Tb	159	1	He	999752	0.12	1046002	95.58	60	120	
Ho	165	1	He	1014073	0.52	1057439	95.90	60	120	
Bi	209	1	He	662675	0.77	731380	90.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@2
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:40:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	138.395	138.395	1.88	3500672	0.00	10000	
Be	9	45	2	NoGas	6.105	6.105	1.96	39458	0.02	2000	
B	11	45	2	NoGas	317.729	317.729	1.53	1298983	0.02	300	>LDR
Na	23	45	1	He	1866.859	1866.859	0.85	748556	0.25	500000	
Mg	24	45	1	He	20965.335	20965.335	0.70	4642891	0.45	500000	
Al	27	45	1	He	99316.997	99316.997	0.24	9164199	1.08	200000	
K	39	45	1	He	25351.716	25351.716	1.12	2676820	0.95	500000	
Ca	44	45	1	He	108479.323	108479.323	0.40	668910	16.22	500000	
Ti	47	45	1	He	1201.557	1201.557	0.51	53640	2.24	2500	
V	51	45	1	He	77.759	77.759	7.85	123882	0.06	10000	
Cr	52	45	1	He	4229.901	4229.901	1.15	8323710	0.05	10000	
Mn	55	45	1	He	1134.794	1134.794	1.01	1106218	0.10	10000	
Fe	56	45	1	He	166314.048	166314.048	0.90	250943190	0.07	200000	
Co	59	45	1	He	123.026	123.026	0.50	442615	0.03	5000	
Ni	60	45	1	He	431.386	431.386	0.84	435598	0.10	10000	
Cu	63	45	1	He	380.568	380.568	0.38	1086202	0.04	10000	
Zn	66	45	1	He	1019.531	1019.531	0.22	371554	0.27	10000	
As	75	103	1	He	97.410	97.410	0.77	19245	0.51	10000	
Se	78	115	1	He	16.309	16.309	4.18	149	10.94	10000	
Sr	88	103	1	He	404.220	404.220	0.63	352886	0.11	10000	
Mo	95	103	1	He	18.530	18.530	2.19	20161	0.09	2000	
Ag	107	103	1	He	0.812	0.812	2.95	3274	0.02	300	
Cd	111	115	1	He	9.930	9.930	0.91	4455	0.22	4000	
Sn	118	115	1	He	55.639	55.639	2.80	47537	0.12	2000	
Sb	123	115	1	He	54.460	54.460	0.18	52158	0.10	200	
Ba	137	115	1	He	2663.289	2663.289	0.55	893209	0.30	10000	
W	182	159	1	He	3.926	3.926	2.83	21474	0.02	2500	
Tl	205	165	1	He	1.921	1.921	2.89	16006	0.01	2000	
Pb	208	165	1	He	2454.751	2454.751	0.58	26757930	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2112597	0.89	1884762	112.09	60	120	
Sc	45	1	He	135853	0.93	134073	101.33	60	120	
Sc	45	2	NoGas	9116927	0.91	8481025	107.50	60	120	
Rh	103	1	He	791441	1.17	903580	87.59	60	120	
In	115	1	He	201184	0.97	224817	89.49	60	120	
Tb	159	1	He	995222	0.89	1046002	95.15	60	120	
Ho	165	1	He	1017191	1.19	1057439	96.19	60	120	
Bi	209	1	He	669481	0.14	731380	91.54	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228777/1-a
Data File Name	116_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:44:43-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.758	7.8	138142	0.6	8	
Be	9	45	2	NoGas	0.314	2.3	2097	1.9	1	
B	11	45	2	NoGas	13.933	4.8	63583	4.4	20	
Na	23	45	1	He	21.523	5.3	12512	3.5	1000	
Mg	24	45	1	He	2.185	37.9	1074	16.8	1000	
Al	27	45	1	He	10.495	26.9	1024	24.3	50	
K	39	45	1	He	21.073	20.9	10622	3.4	1000	
Ca	44	45	1	He	17.470	27.3	286	10.3	1000	
Ti	47	45	1	He	0.578	34.3	24	34.3	20	
V	51	45	1	He	0.098	25.9	200	18.7	2	
Cr	52	45	1	He	0.392	32.9	1379	17.7	2	
Mn	55	45	1	He	5.976	4.5	5647	3.7	2	Blank High
Fe	56	45	1	He	29.085	29.9	43518	28.9	50	
Co	59	45	1	He	-0.041	-17.2	157	15.3	1	
Ni	60	45	1	He	0.168	14.8	299	8.7	2	
Cu	63	45	1	He	-0.181	-66.7	1832	17.9	2	
Zn	66	45	1	He	1.187	18.2	551	13.2	20	
As	75	103	1	He	0.124	83.1	44	49.7	2	
Se	78	115	1	He	0.433	50.0	7	30.4	2	
Sr	88	103	1	He	0.859	5.5	861	6.5	10	
Mo	95	103	1	He	0.086	16.5	116	14.2	2	
Ag	107	103	1	He	0.003	78.6	22	52.7	0.2	
Cd	111	115	1	He	0.060	2.0	30	1.9	0.2	
Sn	118	115	1	He	0.668	6.9	885	4.4	10	
Sb	123	115	1	He	0.079	26.9	120	18.2	2	
Ba	137	115	1	He	0.317	11.5	118	10.7	5	
W	182	159	1	He	0.219	17.7	2504	8.4	10	
Tl	205	165	1	He	0.039	14.8	359	14.2	0.5	
Pb	208	165	1	He	0.390	22.7	5375	16.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2277546	0.58	1884762	120.84	60	120	ISTD warning
Sc	45	1	He	128705	0.69	134073	96.00	60	120	
Sc	45	2	NoGas	8783142	0.39	8481025	103.56	60	120	
Rh	103	1	He	868685	1.33	903580	96.14	60	120	
In	115	1	He	213011	0.30	224817	94.75	60	120	
Tb	159	1	He	1007180	0.53	1046002	96.29	60	120	
Ho	165	1	He	1013459	1.15	1057439	95.84	60	120	
Bi	209	1	He	715333	0.87	731380	97.81	60	120	

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Sample Report

Sample Table

Sample Name	lcs 240-228777/2-a
Data File Name	117_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:48:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1084.376	1084.376	0.58	25773669	0.00	10000	
Be	9	45	2	NoGas	53.375	53.375	1.07	333321	0.02	2000	
B	11	45	2	NoGas	1081.921	1081.921	1.00	4267052	0.03	300	>LDR
Na	23	45	1	He	50403.260	50403.260	2.08	18955171	0.27	500000	
Mg	24	45	1	He	50258.184	50258.184	2.11	10499944	0.48	500000	
Al	27	45	1	He	2038.556	2038.556	2.20	177568	1.15	200000	
K	39	45	1	He	50327.010	50327.010	2.05	5005721	1.01	500000	
Ca	44	45	1	He	49656.387	49656.387	2.08	288986	17.18	500000	
Ti	47	45	1	He	1021.626	1021.626	1.68	43029	2.37	2500	
V	51	45	1	He	518.740	518.740	2.33	779119	0.07	10000	
Cr	52	45	1	He	203.593	203.593	2.35	378563	0.05	10000	
Mn	55	45	1	He	505.865	505.865	2.25	465314	0.11	10000	
Fe	56	45	1	He	1024.083	1024.083	2.90	1459679	0.07	200000	
Co	59	45	1	He	528.181	528.181	3.30	1791832	0.03	5000	
Ni	60	45	1	He	500.233	500.233	2.49	476546	0.10	10000	
Cu	63	45	1	He	250.871	250.871	2.61	676308	0.04	10000	
Zn	66	45	1	He	493.231	493.231	1.74	169663	0.29	10000	
As	75	103	1	He	2064.035	2064.035	1.34	421572	0.49	10000	
Se	78	115	1	He	2052.966	2052.966	1.46	18457	11.12	10000	
Sr	88	103	1	He	989.713	989.713	1.43	893897	0.11	10000	
Mo	95	103	1	He	1056.387	1056.387	1.65	1188425	0.09	2000	
Ag	107	103	1	He	49.877	49.877	0.51	207479	0.02	300	
Cd	111	115	1	He	52.454	52.454	2.17	23539	0.22	4000	
Sn	118	115	1	He	2210.857	2210.857	2.54	1879757	0.12	2000	>LDR
Sb	123	115	1	He	527.976	527.976	2.77	505542	0.10	200	>LDR
Ba	137	115	1	He	2114.685	2114.685	2.35	709579	0.30	10000	
W	182	159	1	He	0.374	0.374	9.30	3297	0.01	2500	
Tl	205	165	1	He	2028.785	2028.785	1.07	16798999	0.01	2000	>LDR
Pb	208	165	1	He	501.105	501.105	0.40	5441423	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1650085	1.78	1884762	87.55	60	120	
Sc	45	1	He	128189	1.27	134073	95.61	60	120	
Sc	45	2	NoGas	8841267	0.31	8481025	104.25	60	120	
Rh	103	1	He	818793	1.05	903580	90.62	60	120	
In	115	1	He	201304	1.18	224817	89.54	60	120	
Tb	159	1	He	1003236	1.26	1046002	95.91	60	120	
Ho	165	1	He	1013122	1.04	1057439	95.81	60	120	
Bi	209	1	He	659797	1.09	731380	90.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-a
Data File Name	118SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:53:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.316	12.316	1.49	413225	0.00	10000	
Be	9	45	2	NoGas	0.186	0.186	5.39	1311	0.01	2000	
B	11	45	2	NoGas	88.895	88.895	1.27	359670	0.02	300	
Na	23	45	1	He	91426.099	91426.099	1.97	36368060	0.25	500000	
Mg	24	45	1	He	10024.153	10024.153	1.21	2216208	0.45	500000	
Al	27	45	1	He	126.985	126.985	2.73	11807	1.08	200000	
K	39	45	1	He	9087.734	9087.734	1.32	963568	0.94	500000	
Ca	44	45	1	He	49729.499	49729.499	1.36	306175	16.24	500000	
Ti	47	45	1	He	1.698	1.698	17.02	76	2.25	2500	
V	51	45	1	He	2.745	2.745	2.64	4418	0.06	10000	
Cr	52	45	1	He	4.967	4.967	2.68	10436	0.05	10000	
Mn	55	45	1	He	4.448	4.448	4.42	4465	0.10	10000	
Fe	56	45	1	He	55.687	55.687	1.11	85887	0.06	200000	
Co	59	45	1	He	0.209	0.209	13.53	1061	0.02	5000	
Ni	60	45	1	He	2.042	2.042	6.29	2202	0.09	10000	
Cu	63	45	1	He	2.148	2.148	2.88	8550	0.03	10000	
Zn	66	45	1	He	3.054	3.054	6.97	1260	0.24	10000	
As	75	103	1	He	8.320	8.320	1.25	1761	0.47	10000	
Se	78	115	1	He	1.511	1.511	16.59	17	8.68	10000	
Sr	88	103	1	He	204.676	204.676	1.20	189814	0.11	10000	
Mo	95	103	1	He	14.096	14.096	0.57	16294	0.09	2000	
Ag	107	103	1	He	0.007	0.007	38.45	38	0.02	300	
Cd	111	115	1	He	0.075	0.075	8.31	38	0.20	4000	
Sn	118	115	1	He	4.085	4.085	28.14	4041	0.10	2000	
Sb	123	115	1	He	1.119	1.119	6.90	1199	0.09	200	
Ba	137	115	1	He	22.775	22.775	4.12	8264	0.28	10000	
W	182	159	1	He	1.824	1.824	1.97	11026	0.02	2500	
Tl	205	165	1	He	0.816	0.816	18.89	6999	0.01	2000	
Pb	208	165	1	He	0.254	0.254	5.87	4024	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2196267	0.73	1884762	116.53	60	120	
Sc	45	1	He	135618	1.68	134073	101.15	60	120	
Sc	45	2	NoGas	8857366	1.03	8481025	104.44	60	120	
Rh	103	1	He	840657	0.63	903580	93.04	60	120	
In	115	1	He	217547	0.30	224817	96.77	60	120	
Tb	159	1	He	1025445	0.27	1046002	98.03	60	120	
Ho	165	1	He	1044273	1.48	1057439	98.75	60	120	
Bi	209	1	He	684456	0.98	731380	93.58	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64213-g-7-a@5
Data File Name	119SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:57:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.281	3.281	2.72	198167	0.00	10000	
Be	9	45	2	NoGas	0.160	0.160	11.80	1145	0.01	2000	
B	11	45	2	NoGas	31.312	31.312	2.14	131995	0.02	300	
Na	23	45	1	He	19279.442	19279.442	1.48	7506160	0.26	500000	
Mg	24	45	1	He	2031.890	2031.890	1.73	439919	0.46	500000	
Al	27	45	1	He	27.098	27.098	2.12	2551	1.06	200000	
K	39	45	1	He	1898.032	1898.032	2.70	203795	0.93	500000	
Ca	44	45	1	He	10174.653	10174.653	1.47	61431	16.56	500000	
Ti	47	45	1	He	0.510	0.510	9.18	22	2.29	2500	
V	51	45	1	He	0.593	0.593	12.85	975	0.06	10000	
Cr	52	45	1	He	1.073	1.073	2.33	2729	0.04	10000	
Mn	55	45	1	He	1.000	1.000	7.23	1084	0.09	10000	
Fe	56	45	1	He	13.460	13.460	1.89	21805	0.06	200000	
Co	59	45	1	He	0.028	0.028	54.05	403	0.01	5000	
Ni	60	45	1	He	0.454	0.454	24.04	589	0.08	10000	
Cu	63	45	1	He	0.140	0.140	60.34	2782	0.01	10000	
Zn	66	45	1	He	0.864	0.864	4.03	453	0.19	10000	
As	75	103	1	He	1.639	1.639	5.91	371	0.44	10000	
Se	78	115	1	He	0.189	0.189	134.48	5	4.06	10000	
Sr	88	103	1	He	41.033	41.033	0.41	39178	0.10	10000	
Mo	95	103	1	He	2.773	2.773	3.95	3307	0.08	2000	
Ag	107	103	1	He	0.001	0.001	205.02	13	0.01	300	
Cd	111	115	1	He	0.036	0.036	48.19	20	0.18	4000	
Sn	118	115	1	He	0.766	0.766	6.21	1015	0.08	2000	
Sb	123	115	1	He	0.226	0.226	7.11	280	0.08	200	
Ba	137	115	1	He	4.653	4.653	5.18	1729	0.27	10000	
W	182	159	1	He	0.541	0.541	7.25	4267	0.01	2500	
Tl	205	165	1	He	0.225	0.225	10.91	1946	0.01	2000	
Pb	208	165	1	He	0.072	0.072	9.51	1970	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2255644	1.28	1884762	119.68	60	120	
Sc	45	1	He	132659	1.34	134073	98.95	60	120	
Sc	45	2	NoGas	8815385	0.83	8481025	103.94	60	120	
Rh	103	1	He	864817	0.36	903580	95.71	60	120	
In	115	1	He	222081	1.79	224817	98.78	60	120	
Tb	159	1	He	1028897	0.94	1046002	98.36	60	120	
Ho	165	1	He	1036517	0.09	1057439	98.02	60	120	
Bi	209	1	He	720225	1.00	731380	98.47	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64213-g-7-a
Data File Name	120SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:01:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	127.547	127.547	1.50	2974903	0.00	10000	
Be	9	45	2	NoGas	1170.200	1170.200	0.85	6924627	0.02	2000	
B	11	45	2	NoGas	184.846	184.846	0.96	698272	0.03	300	
Na	23	45	1	He	102080.861	102080.861	2.21	37399185	0.27	500000	
Mg	24	45	1	He	20363.487	20363.487	1.67	4145934	0.49	500000	
Al	27	45	1	He	10143.814	10143.814	3.36	860344	1.18	200000	
K	39	45	1	He	19438.073	19438.073	3.11	1888523	1.03	500000	
Ca	44	45	1	He	59250.574	59250.574	3.09	335887	17.64	500000	
Ti	47	45	1	He	98.507	98.507	9.60	4038	2.44	2500	
V	51	45	1	He	1083.348	1083.348	2.80	1585178	0.07	10000	
Cr	52	45	1	He	1065.004	1065.004	4.00	1926473	0.06	10000	
Mn	55	45	1	He	1008.584	1008.584	2.88	903720	0.11	10000	
Fe	56	45	1	He	10203.625	10203.625	3.06	14152421	0.07	200000	
Co	59	45	1	He	1057.786	1057.786	2.86	3495792	0.03	5000	
Ni	60	45	1	He	1004.945	1004.945	3.04	932544	0.11	10000	
Cu	63	45	1	He	1046.538	1046.538	3.33	2741534	0.04	10000	
Zn	66	45	1	He	995.128	995.128	2.39	333375	0.30	10000	
As	75	103	1	He	1026.714	1026.714	0.78	203391	0.50	10000	
Se	78	115	1	He	1006.412	1006.412	2.00	8985	11.20	10000	
Sr	88	103	1	He	1188.929	1188.929	0.52	1041424	0.11	10000	
Mo	95	103	1	He	123.074	123.074	0.79	134293	0.09	2000	
Ag	107	103	1	He	103.449	103.449	0.58	417351	0.02	300	
Cd	111	115	1	He	1027.143	1027.143	0.43	457695	0.22	4000	
Sn	118	115	1	He	1059.245	1059.245	1.24	894475	0.12	2000	
Sb	123	115	1	He	108.337	108.337	1.26	103041	0.11	200	
Ba	137	115	1	He	1060.800	1060.800	1.01	353460	0.30	10000	
W	182	159	1	He	111.092	111.092	2.11	564835	0.02	2500	
Tl	205	165	1	He	260.700	260.700	1.79	2128596	0.01	2000	
Pb	208	165	1	He	1027.989	1027.989	2.16	11006028	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2093155	1.43	1884762	111.06	60	120	
Sc	45	1	He	124923	2.26	134073	93.17	60	120	
Sc	45	2	NoGas	8381325	1.12	8481025	98.82	60	120	
Rh	103	1	He	794120	0.40	903580	87.89	60	120	
In	115	1	He	199879	0.87	224817	88.91	60	120	
Tb	159	1	He	984868	0.68	1046002	94.16	60	120	
Ho	165	1	He	999189	1.46	1057439	94.49	60	120	
Bi	209	1	He	656930	1.47	731380	89.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-b ms
Data File Name	121SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:05:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1072.689	1072.689	0.22	24648493	0.00	10000	
Be	9	45	2	NoGas	53.381	53.381	0.45	322270	0.02	2000	
B	11	45	2	NoGas	1136.884	1136.884	0.70	4334135	0.03	300	>LDR
Na	23	45	1	He	141925.210	141925.210	1.91	52564692	0.27	500000	
Mg	24	45	1	He	59648.421	59648.421	3.06	12273757	0.49	500000	
Al	27	45	1	He	2119.875	2119.875	2.78	181865	1.17	200000	
K	39	45	1	He	58749.731	58749.731	3.08	5753408	1.02	500000	
Ca	44	45	1	He	99176.356	99176.356	3.00	568275	17.45	500000	
Ti	47	45	1	He	1002.601	1002.601	3.22	41589	2.41	2500	
V	51	45	1	He	514.531	514.531	1.84	761222	0.07	10000	
Cr	52	45	1	He	204.498	204.498	2.01	374547	0.05	10000	
Mn	55	45	1	He	502.376	502.376	2.35	455164	0.11	10000	
Fe	56	45	1	He	1057.902	1057.902	3.76	1485007	0.07	200000	
Co	59	45	1	He	519.807	519.807	1.77	1737062	0.03	5000	
Ni	60	45	1	He	487.712	487.712	1.61	457672	0.11	10000	
Cu	63	45	1	He	247.409	247.409	2.23	657016	0.04	10000	
Zn	66	45	1	He	478.230	478.230	1.91	162040	0.30	10000	
As	75	103	1	He	2122.527	2122.527	0.67	413095	0.51	10000	
Se	78	115	1	He	2098.020	2098.020	1.26	17877	11.74	10000	
Sr	88	103	1	He	1212.276	1212.276	1.13	1043298	0.12	10000	
Mo	95	103	1	He	1085.957	1085.957	0.94	1164128	0.09	2000	
Ag	107	103	1	He	49.807	49.807	0.70	197412	0.03	300	
Cd	111	115	1	He	52.844	52.844	0.52	22477	0.24	4000	
Sn	118	115	1	He	2280.421	2280.421	1.49	1837727	0.12	2000	>LDR
Sb	123	115	1	He	541.782	541.782	0.95	491731	0.11	200	>LDR
Ba	137	115	1	He	2175.696	2175.696	1.10	691970	0.31	10000	
W	182	159	1	He	2.281	2.281	3.39	12687	0.02	2500	
Tl	205	165	1	He	1978.059	1978.059	0.76	15865285	0.01	2000	
Pb	208	165	1	He	495.510	495.510	0.45	5212461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1549079	0.61	1884762	82.19	60	120	
Sc	45	1	He	126272	1.41	134073	94.18	60	120	
Sc	45	2	NoGas	8546973	0.23	8481025	100.78	60	120	
Rh	103	1	He	780179	0.75	903580	86.34	60	120	
In	115	1	He	190779	0.27	224817	84.86	60	120	
Tb	159	1	He	967619	0.21	1046002	92.51	60	120	
Ho	165	1	He	981422	0.13	1057439	92.81	60	120	
Bi	209	1	He	635928	0.61	731380	86.95	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-c msd
Data File Name	122SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:09:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1043.211	1043.211	0.95	23587245	0.00	10000	
Be	9	45	2	NoGas	52.055	52.055	0.93	309234	0.02	2000	
B	11	45	2	NoGas	1113.016	1113.016	0.61	4175241	0.03	300	>LDR
Na	23	45	1	He	137426.523	137426.523	2.19	51045576	0.27	500000	
Mg	24	45	1	He	57545.915	57545.915	2.73	11875987	0.48	500000	
Al	27	45	1	He	2068.981	2068.981	2.32	178026	1.16	200000	
K	39	45	1	He	58254.746	58254.746	3.09	5721433	1.02	500000	
Ca	44	45	1	He	96457.941	96457.941	2.45	554337	17.40	500000	
Ti	47	45	1	He	975.129	975.129	1.71	40573	2.40	2500	
V	51	45	1	He	500.725	500.725	2.74	742878	0.07	10000	
Cr	52	45	1	He	199.251	199.251	2.43	366003	0.05	10000	
Mn	55	45	1	He	491.361	491.361	2.11	446495	0.11	10000	
Fe	56	45	1	He	1028.290	1028.290	2.27	1447893	0.07	200000	
Co	59	45	1	He	501.044	501.044	2.76	1679126	0.03	5000	
Ni	60	45	1	He	473.433	473.433	2.49	445535	0.11	10000	
Cu	63	45	1	He	240.888	240.888	2.11	641643	0.04	10000	
Zn	66	45	1	He	471.560	471.560	1.88	160249	0.29	10000	
As	75	103	1	He	2095.046	2095.046	0.79	408658	0.51	10000	
Se	78	115	1	He	2033.288	2033.288	0.69	17518	11.61	10000	
Sr	88	103	1	He	1183.065	1183.065	0.56	1020430	0.12	10000	
Mo	95	103	1	He	1056.860	1056.860	1.38	1135438	0.09	2000	
Ag	107	103	1	He	48.952	48.952	0.66	194471	0.03	300	
Cd	111	115	1	He	50.771	50.771	0.65	21834	0.23	4000	
Sn	118	115	1	He	2219.084	2219.084	0.54	1808183	0.12	2000	>LDR
Sb	123	115	1	He	524.162	524.162	0.43	481001	0.11	200	>LDR
Ba	137	115	1	He	2094.572	2094.572	0.71	673526	0.31	10000	
W	182	159	1	He	1.988	1.988	2.69	11056	0.02	2500	
Tl	205	165	1	He	1938.508	1938.508	0.17	15416921	0.01	2000	
Pb	208	165	1	He	479.831	479.831	0.53	5004933	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1536072	0.86	1884762	81.50	60	120	
Sc	45	1	He	126647	1.86	134073	94.46	60	120	
Sc	45	2	NoGas	8409614	1.35	8481025	99.16	60	120	
Rh	103	1	He	781965	0.40	903580	86.54	60	120	
In	115	1	He	192894	0.80	224817	85.80	60	120	
Tb	159	1	He	953310	0.42	1046002	91.14	60	120	
Ho	165	1	He	973145	0.45	1057439	92.03	60	120	
Bi	209	1	He	623268	0.99	731380	85.22	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	123_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:13:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.396	0.830	1361898	0.44	50	114.8	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.071	0.876	310961	1.19	50	108.1	89.5	110.5	
B	11	45	2	NoGas	72.131	0.620	269854	0.86	50	144.3	89.5	110.5	CCV Failed
Na	23	45	1	He	25272.311	2.469	9408957	0.37	25000	101.1	89.5	110.5	
Mg	24	45	1	He	25060.541	2.353	5182759	0.97	25000	100.2	89.5	110.5	
Al	27	45	1	He	248.833	2.000	21547	0.70	250	99.5	89.5	110.5	
K	39	45	1	He	25902.491	1.263	2554456	1.46	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25231.905	3.057	145412	0.52	25000	100.9	89.5	110.5	
Ti	47	45	1	He	50.957	5.098	2123	3.01	50	101.9	89.5	110.5	
V	51	45	1	He	49.789	3.089	74057	1.28	50	99.6	89.5	110.5	
Cr	52	45	1	He	49.972	2.679	92450	0.16	50	99.9	89.5	110.5	
Mn	55	45	1	He	250.721	2.323	228335	0.25	250	100.3	89.5	110.5	
Fe	56	45	1	He	12565.093	2.003	17707050	0.55	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.171	2.101	168742	0.93	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.302	1.412	47564	1.70	50	100.6	89.5	110.5	
Cu	63	45	1	He	50.128	3.051	135578	0.49	50	100.3	89.5	110.5	
Zn	66	45	1	He	50.227	2.776	17225	0.51	50	100.5	89.5	110.5	
As	75	103	1	He	51.350	1.210	10414	1.06	50	102.7	89.5	110.5	
Se	78	115	1	He	52.175	2.808	485	2.44	50	104.4	89.5	110.5	
Sr	88	103	1	He	51.550	0.092	46194	0.39	50	103.1	89.5	110.5	
Mo	95	103	1	He	54.299	0.674	60574	0.43	50	108.6	89.5	110.5	
Ag	107	103	1	He	50.584	0.444	208622	0.02	50	101.2	89.5	110.5	
Cd	111	115	1	He	50.626	0.700	23357	0.55	50	101.3	89.5	110.5	
Sn	118	115	1	He	52.978	3.380	46579	3.30	50	106.0	89.5	110.5	
Sb	123	115	1	He	52.415	1.067	51636	0.78	50	104.8	89.5	110.5	
Ba	137	115	1	He	50.887	1.958	17559	1.66	50	101.8	89.5	110.5	
W	182	159	1	He	50.281	2.130	254303	3.30	50	100.6	89.5	110.5	
Tl	205	165	1	He	50.453	0.773	402991	1.15	50	100.9	89.5	110.5	
Pb	208	165	1	He	49.468	0.887	519140	0.29	50	98.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2038022	1.83	1884762	108.13	60	120	
Sc	45	1	He	126913	2.56	134073	94.66	60	120	
Sc	45	2	NoGas	8141767	0.54	8481025	96.00	60	120	
Rh	103	1	He	811797	0.42	903580	89.84	60	120	
In	115	1	He	206941	0.71	224817	92.05	60	120	
Tb	159	1	He	976629	1.20	1046002	93.37	60	120	
Ho	165	1	He	977296	1.14	1057439	92.42	60	120	
Bi	209	1	He	654803	1.09	731380	89.53	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	124_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:17:55-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.942	23.9	166610	6.9	8	
Be	9	45	2	NoGas	0.227	3.7	1819	7.2	1	
B	11	45	2	NoGas	15.660	13.0	81813	0.9	20	
Na	23	45	1	He	63.798	6.7	28330	5.0	1000	
Mg	24	45	1	He	26.642	10.3	6172	8.5	1000	
Al	27	45	1	He	0.913	8.1	186	2.7	50	
K	39	45	1	He	44.371	5.3	12887	2.5	1000	
Ca	44	45	1	He	30.709	20.5	361	8.9	1000	
Ti	47	45	1	He	0.263	75.5	11	75.5	20	
V	51	45	1	He	0.014	1570.6	73	463.9	2	
Cr	52	45	1	He	0.064	24.5	763	3.3	2	
Mn	55	45	1	He	0.296	10.3	400	7.6	2	
Fe	56	45	1	He	16.510	8.3	25382	6.5	50	
Co	59	45	1	He	0.073	11.8	542	5.6	1	
Ni	60	45	1	He	0.017	80.5	153	9.5	2	
Cu	63	45	1	He	-0.334	-16.5	1410	9.3	2	
Zn	66	45	1	He	0.515	13.7	318	6.7	20	
As	75	103	1	He	0.279	8.5	76	8.1	2	
Se	78	115	1	He	1.045	60.0	13	45.7	2	
Sr	88	103	1	He	0.425	9.0	434	6.7	10	
Mo	95	103	1	He	0.631	13.3	749	12.5	2	
Ag	107	103	1	He	0.062	15.2	276	14.6	0.2	
Cd	111	115	1	He	0.086	24.3	43	21.5	0.2	
Sn	118	115	1	He	1.682	21.1	1800	15.6	10	
Sb	123	115	1	He	0.357	11.0	403	9.2	2	
Ba	137	115	1	He	0.190	28.2	73	27.7	5	
W	182	159	1	He	0.440	8.9	3589	3.8	10	
Tl	205	165	1	He	0.573	7.8	4719	6.1	0.5	CCB High
Pb	208	165	1	He	0.100	21.2	2201	8.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2434886	7.58	1884762	129.19	60	120	ISTD warning
Sc	45	1	He	128099	1.20	134073	95.54	60	120	
Sc	45	2	NoGas	10297345	10.37	8481025	121.42	60	120	ISTD warning
Rh	103	1	He	850089	1.48	903580	94.08	60	120	
In	115	1	He	213875	2.04	224817	95.13	60	120	
Tb	159	1	He	991171	1.78	1046002	94.76	60	120	
Ho	165	1	He	1001257	1.81	1057439	94.69	60	120	
Bi	209	1	He	696918	1.15	731380	95.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-7-a
Data File Name	125SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:22:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.036	12.036	0.48	389559	0.00	10000	
Be	9	45	2	NoGas	0.216	0.216	13.73	1441	0.02	2000	
B	11	45	2	NoGas	82.273	82.273	1.03	319582	0.03	300	
Na	23	45	1	He	89979.697	89979.697	2.05	33008339	0.27	500000	
Mg	24	45	1	He	9345.638	9345.638	1.89	1905357	0.49	500000	
Al	27	45	1	He	5.987	5.987	9.41	612	0.98	200000	
K	39	45	1	He	8865.427	8865.427	1.79	867046	1.02	500000	
Ca	44	45	1	He	39300.777	39300.777	2.26	223162	17.61	500000	
Ti	47	45	1	He	0.270	0.270	62.87	11	2.43	2500	
V	51	45	1	He	2.005	2.005	6.68	2990	0.07	10000	
Cr	52	45	1	He	2.822	2.822	3.66	5741	0.05	10000	
Mn	55	45	1	He	1.318	1.318	12.35	1307	0.10	10000	
Fe	56	45	1	He	6.555	6.555	2.62	10966	0.06	200000	
Co	59	45	1	He	0.321	0.321	4.89	1350	0.02	5000	
Ni	60	45	1	He	1.730	1.730	7.82	1740	0.10	10000	
Cu	63	45	1	He	0.757	0.757	13.91	4236	0.02	10000	
Zn	66	45	1	He	2.506	2.506	3.38	978	0.26	10000	
As	75	103	1	He	6.969	6.969	3.37	1416	0.49	10000	
Se	78	115	1	He	0.945	0.945	36.66	11	8.38	10000	
Sr	88	103	1	He	185.419	185.419	0.32	164712	0.11	10000	
Mo	95	103	1	He	12.050	12.050	3.75	13346	0.09	2000	
Ag	107	103	1	He	0.003	0.003	66.71	20	0.02	300	
Cd	111	115	1	He	0.047	0.047	24.03	23	0.20	4000	
Sn	118	115	1	He	1.195	1.195	25.67	1315	0.09	2000	
Sb	123	115	1	He	0.633	0.633	5.31	659	0.10	200	
Ba	137	115	1	He	19.167	19.167	5.39	6589	0.29	10000	
W	182	159	1	He	1.748	1.748	6.92	10259	0.02	2500	
Tl	205	165	1	He	0.224	0.224	2.93	1888	0.01	2000	
Pb	208	165	1	He	0.040	0.040	26.75	1572	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136610	1.54	1884762	113.36	60	120	
Sc	45	1	He	125064	1.42	134073	93.28	60	120	
Sc	45	2	NoGas	8485975	0.41	8481025	100.06	60	120	
Rh	103	1	He	805201	1.08	903580	89.11	60	120	
In	115	1	He	206063	0.31	224817	91.66	60	120	
Tb	159	1	He	990064	0.35	1046002	94.65	60	120	
Ho	165	1	He	1009777	0.37	1057439	95.49	60	120	
Bi	209	1	He	670158	0.19	731380	91.63	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-8-a
Data File Name	126SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:26:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	65.611	65.611	0.70	1600616	0.00	10000	
Be	9	45	2	NoGas	0.171	0.171	18.04	1167	0.01	2000	
B	11	45	2	NoGas	72.822	72.822	0.60	282927	0.03	300	
Na	23	45	1	He	114125.289	114125.289	2.76	43439401	0.26	500000	
Mg	24	45	1	He	18.440	18.440	8.05	4519	0.41	500000	
Al	27	45	1	He	1092.009	1092.009	2.49	96339	1.13	200000	
K	39	45	1	He	44278.890	44278.890	2.10	4459272	0.99	500000	
Ca	44	45	1	He	129993.448	129993.448	1.67	765574	16.98	500000	
Ti	47	45	1	He	0.890	0.890	41.26	38	2.36	2500	
V	51	45	1	He	1.744	1.744	5.59	2703	0.06	10000	
Cr	52	45	1	He	0.252	0.252	15.86	1128	0.02	10000	
Mn	55	45	1	He	2.474	2.474	6.72	2432	0.10	10000	
Fe	56	45	1	He	75.637	75.637	2.72	110925	0.07	200000	
Co	59	45	1	He	0.010	0.010	182.65	334	0.00	5000	
Ni	60	45	1	He	1.962	1.962	3.17	2030	0.10	10000	
Cu	63	45	1	He	0.126	0.126	35.40	2681	0.00	10000	
Zn	66	45	1	He	2.139	2.139	10.85	887	0.24	10000	
As	75	103	1	He	6.806	6.806	4.11	1389	0.49	10000	
Se	78	115	1	He	1.800	1.800	6.65	20	9.20	10000	
Sr	88	103	1	He	1051.569	1051.569	0.74	938223	0.11	10000	
Mo	95	103	1	He	20.500	20.500	3.04	22796	0.09	2000	
Ag	107	103	1	He	0.005	0.005	29.45	27	0.02	300	
Cd	111	115	1	He	0.013	0.013	16.28	7	0.17	4000	
Sn	118	115	1	He	0.650	0.650	20.68	859	0.08	2000	
Sb	123	115	1	He	0.217	0.217	17.79	257	0.08	200	
Ba	137	115	1	He	109.546	109.546	0.59	38465	0.28	10000	
W	182	159	1	He	0.872	0.872	7.09	5887	0.01	2500	
Tl	205	165	1	He	0.147	0.147	4.42	1267	0.01	2000	
Pb	208	165	1	He	0.095	0.095	13.02	2191	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108897	1.13	1884762	111.89	60	120	
Sc	45	1	He	129780	1.58	134073	96.80	60	120	
Sc	45	2	NoGas	8457581	0.83	8481025	99.72	60	120	
Rh	103	1	He	808910	1.18	903580	89.52	60	120	
In	115	1	He	210599	0.48	224817	93.68	60	120	
Tb	159	1	He	1005902	0.74	1046002	96.17	60	120	
Ho	165	1	He	1022394	1.23	1057439	96.69	60	120	
Bi	209	1	He	669642	0.37	731380	91.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-8-a
Data File Name	127SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:30:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	68.747	68.747	1.24	1609960	0.00	10000	
Be	9	45	2	NoGas	0.129	0.129	16.01	878	0.01	2000	
B	11	45	2	NoGas	71.612	71.612	0.05	268093	0.03	300	
Na	23	45	1	He	119221.218	119221.218	0.97	43542600	0.27	500000	
Mg	24	45	1	He	4.425	4.425	7.19	1493	0.30	500000	
Al	27	45	1	He	1150.863	1150.863	0.10	97417	1.18	200000	
K	39	45	1	He	46595.270	46595.270	0.37	4501893	1.04	500000	
Ca	44	45	1	He	136095.172	136095.172	1.06	768984	17.70	500000	
Ti	47	45	1	He	0.109	0.109	86.60	4	2.45	2500	
V	51	45	1	He	1.940	1.940	5.50	2880	0.07	10000	
Cr	52	45	1	He	0.019	0.019	73.53	661	0.00	10000	
Mn	55	45	1	He	0.770	0.770	6.41	812	0.09	10000	
Fe	56	45	1	He	49.690	49.690	0.46	70561	0.07	200000	
Co	59	45	1	He	0.173	0.173	11.68	858	0.02	5000	
Ni	60	45	1	He	2.087	2.087	1.20	2063	0.10	10000	
Cu	63	45	1	He	-0.106	-0.106	-37.41	1968	-0.01	10000	
Zn	66	45	1	He	1.224	1.224	9.02	546	0.22	10000	
As	75	103	1	He	6.708	6.708	1.48	1339	0.50	10000	
Se	78	115	1	He	2.204	2.204	32.80	23	9.63	10000	
Sr	88	103	1	He	1074.980	1074.980	0.91	937735	0.11	10000	
Mo	95	103	1	He	20.857	20.857	0.87	22676	0.09	2000	
Ag	107	103	1	He	0.002	0.002	24.86	14	0.01	300	
Cd	111	115	1	He	0.012	0.012	78.01	7	0.17	4000	
Sn	118	115	1	He	0.312	0.312	29.13	548	0.06	2000	
Sb	123	115	1	He	0.209	0.209	19.66	244	0.09	200	
Ba	137	115	1	He	114.505	114.505	2.31	39420	0.29	10000	
W	182	159	1	He	0.891	0.891	5.17	5842	0.02	2500	
Tl	205	165	1	He	0.097	0.097	5.57	828	0.01	2000	
Pb	208	165	1	He	0.004	0.004	57.29	1169	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098206	0.52	1884762	111.32	60	120	
Sc	45	1	He	124496	0.34	134073	92.86	60	120	
Sc	45	2	NoGas	8145394	0.49	8481025	96.04	60	120	
Rh	103	1	He	790892	1.15	903580	87.53	60	120	
In	115	1	He	206515	1.13	224817	91.86	60	120	
Tb	159	1	He	982126	1.33	1046002	93.89	60	120	
Ho	165	1	He	992318	0.89	1057439	93.84	60	120	
Bi	209	1	He	662009	0.45	731380	90.52	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-9-a
Data File Name	128SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:34:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	393.418	393.418	0.38	8460722	0.00	10000	
Be	9	45	2	NoGas	0.113	0.113	29.52	767	0.01	2000	
B	11	45	2	NoGas	40.522	40.522	1.21	151332	0.03	300	
Na	23	45	1	He	106278.834	106278.834	0.29	37810211	0.28	500000	
Mg	24	45	1	He	924.484	924.484	1.85	183311	0.50	500000	
Al	27	45	1	He	33.308	33.308	2.95	2844	1.17	200000	
K	39	45	1	He	203322.891	203322.891	1.21	19107586	1.06	500000	
Ca	44	45	1	He	314617.186	314617.186	0.66	1731396	18.17	500000	
Ti	47	45	1	He	0.837	0.837	36.22	33	2.51	2500	
V	51	45	1	He	-0.827	-0.827	-56.91	-1126	0.07	10000	
Cr	52	45	1	He	17.614	17.614	0.84	31546	0.06	10000	
Mn	55	45	1	He	2.917	2.917	1.70	2659	0.11	10000	
Fe	56	45	1	He	106.286	106.286	1.01	144954	0.07	200000	
Co	59	45	1	He	1.071	1.071	6.18	3718	0.03	5000	
Ni	60	45	1	He	2.611	2.611	3.17	2482	0.11	10000	
Cu	63	45	1	He	2.956	2.956	7.84	9698	0.03	10000	
Zn	66	45	1	He	2.730	2.730	5.98	1021	0.27	10000	
As	75	103	1	He	0.535	0.535	7.20	116	0.46	10000	
Se	78	115	1	He	0.257	0.257	86.17	5	5.33	10000	
Sr	88	103	1	He	8608.847	8608.847	1.36	7177259	0.12	10000	
Mo	95	103	1	He	16.812	16.812	4.10	17468	0.10	2000	
Ag	107	103	1	He	0.003	0.003	42.33	19	0.02	300	
Cd	111	115	1	He	0.056	0.056	16.37	26	0.21	4000	
Sn	118	115	1	He	0.326	0.326	42.79	541	0.06	2000	
Sb	123	115	1	He	0.200	0.200	11.03	228	0.09	200	
Ba	137	115	1	He	687.638	687.638	0.64	228970	0.30	10000	
W	182	159	1	He	0.354	0.354	19.96	3034	0.01	2500	
Tl	205	165	1	He	0.071	0.071	8.55	597	0.01	2000	
Pb	208	165	1	He	1.029	1.029	2.07	11797	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1914283	0.64	1884762	101.57	60	120	
Sc	45	1	He	121268	0.56	134073	90.45	60	120	
Sc	45	2	NoGas	7934011	0.67	8481025	93.55	60	120	
Rh	103	1	He	755915	1.00	903580	83.66	60	120	
In	115	1	He	199744	1.09	224817	88.85	60	120	
Tb	159	1	He	953742	0.44	1046002	91.18	60	120	
Ho	165	1	He	970246	0.74	1057439	91.75	60	120	
Bi	209	1	He	635553	0.70	731380	86.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-9-a
Data File Name	129SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:38:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	394.886	394.886	0.43	8277331	0.00	10000	
Be	9	45	2	NoGas	0.144	0.144	13.91	919	0.02	2000	
B	11	45	2	NoGas	38.008	38.008	0.91	138860	0.03	300	
Na	23	45	1	He	105835.286	105835.286	0.47	36549116	0.29	500000	
Mg	24	45	1	He	14.735	14.735	7.77	3389	0.43	500000	
Al	27	45	1	He	6.665	6.665	13.84	630	1.06	200000	
K	39	45	1	He	202479.254	202479.254	1.31	18470352	1.10	500000	
Ca	44	45	1	He	312195.560	312195.560	3.07	1667954	18.72	500000	
Ti	47	45	1	He	0.057	0.057	86.61	2	2.59	2500	
V	51	45	1	He	-0.379	-0.379	-151.66	-474	0.08	10000	
Cr	52	45	1	He	17.582	17.582	1.26	30566	0.06	10000	
Mn	55	45	1	He	0.871	0.871	8.14	853	0.10	10000	
Fe	56	45	1	He	5.867	5.867	2.26	9425	0.06	200000	
Co	59	45	1	He	1.292	1.292	2.48	4297	0.03	5000	
Ni	60	45	1	He	2.561	2.561	7.41	2366	0.11	10000	
Cu	63	45	1	He	3.256	3.256	4.40	10155	0.03	10000	
Zn	66	45	1	He	2.318	2.318	14.24	861	0.27	10000	
As	75	103	1	He	0.364	0.364	17.46	82	0.44	10000	
Se	78	115	1	He	0.435	0.435	54.20	6	6.90	10000	
Sr	88	103	1	He	8566.380	8566.380	0.19	7030122	0.12	10000	
Mo	95	103	1	He	16.019	16.019	3.25	16387	0.10	2000	
Ag	107	103	1	He	0.007	0.007	54.09	31	0.02	300	
Cd	111	115	1	He	0.036	0.036	36.10	17	0.21	4000	
Sn	118	115	1	He	0.663	0.663	11.06	815	0.08	2000	
Sb	123	115	1	He	0.335	0.335	16.37	351	0.10	200	
Ba	137	115	1	He	660.445	660.445	1.90	217016	0.30	10000	
W	182	159	1	He	0.386	0.386	13.84	3160	0.01	2500	
Tl	205	165	1	He	0.071	0.071	23.99	596	0.01	2000	
Pb	208	165	1	He	0.966	0.966	0.72	11025	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1861861	0.14	1884762	98.78	60	120	
Sc	45	1	He	117716	0.86	134073	87.80	60	120	
Sc	45	2	NoGas	7733812	0.69	8481025	91.19	60	120	
Rh	103	1	He	744020	0.50	903580	82.34	60	120	
In	115	1	He	197117	0.86	224817	87.68	60	120	
Tb	159	1	He	943150	0.84	1046002	90.17	60	120	
Ho	165	1	He	960102	0.81	1057439	90.80	60	120	
Bi	209	1	He	623700	1.57	731380	85.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-10-a
Data File Name	130SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:43:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.810	119.810	0.55	2524843	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	20.75	630	0.01	2000	
B	11	45	2	NoGas	78.437	78.437	0.35	271551	0.03	300	
Na	23	45	1	He	122277.574	122277.574	5.34	40982788	0.30	500000	
Mg	24	45	1	He	13.104	13.104	3.29	2989	0.44	500000	
Al	27	45	1	He	106.674	106.674	10.05	8359	1.28	200000	
K	39	45	1	He	46717.204	46717.204	5.91	4141250	1.13	500000	
Ca	44	45	1	He	248711.521	248711.521	5.64	1289361	19.29	500000	
Ti	47	45	1	He	0.438	0.438	49.26	17	2.63	2500	
V	51	45	1	He	2.550	2.550	3.97	3463	0.07	10000	
Cr	52	45	1	He	12.099	12.099	5.09	20597	0.06	10000	
Mn	55	45	1	He	3.119	3.119	7.14	2670	0.12	10000	
Fe	56	45	1	He	19.532	19.532	6.69	26477	0.07	200000	
Co	59	45	1	He	0.133	0.133	12.48	666	0.02	5000	
Ni	60	45	1	He	1.097	1.097	3.33	1054	0.10	10000	
Cu	63	45	1	He	2.390	2.390	4.66	7790	0.03	10000	
Zn	66	45	1	He	2.471	2.471	3.18	884	0.28	10000	
As	75	103	1	He	1.572	1.572	4.24	305	0.52	10000	
Se	78	115	1	He	2.783	2.783	13.35	27	10.42	10000	
Sr	88	103	1	He	1224.123	1224.123	4.88	1000000	0.12	10000	
Mo	95	103	1	He	21.371	21.371	4.54	21759	0.10	2000	
Ag	107	103	1	He	0.000	0.000	-846.93	6	-0.01	300	
Cd	111	115	1	He	0.019	0.019	55.59	10	0.20	4000	
Sn	118	115	1	He	0.213	0.213	11.67	437	0.05	2000	
Sb	123	115	1	He	0.117	0.117	32.40	146	0.08	200	
Ba	137	115	1	He	145.830	145.830	3.18	47527	0.31	10000	
W	182	159	1	He	0.893	0.893	11.16	5616	0.02	2500	
Tl	205	165	1	He	0.064	0.064	2.30	537	0.01	2000	
Pb	208	165	1	He	0.708	0.708	2.82	8352	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1927668	1.91	1884762	102.28	60	120	
Sc	45	1	He	114463	5.33	134073	85.37	60	120	
Sc	45	2	NoGas	7553463	1.28	8481025	89.06	60	120	
Rh	103	1	He	741647	4.35	903580	82.08	60	120	
In	115	1	He	195625	3.65	224817	87.02	60	120	
Tb	159	1	He	942340	3.64	1046002	90.09	60	120	
Ho	165	1	He	958663	4.38	1057439	90.66	60	120	
Bi	209	1	He	629413	3.98	731380	86.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-10-a
Data File Name	131SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:47:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.039	121.039	0.73	2562510	0.00	10000	
Be	9	45	2	NoGas	0.106	0.106	12.99	696	0.02	2000	
B	11	45	2	NoGas	82.816	82.816	1.48	287705	0.03	300	
Na	23	45	1	He	121177.910	121177.910	0.27	40778017	0.30	500000	
Mg	24	45	1	He	9.433	9.433	5.66	2311	0.41	500000	
Al	27	45	1	He	101.440	101.440	5.24	8000	1.27	200000	
K	39	45	1	He	46615.278	46615.278	0.91	4149550	1.12	500000	
Ca	44	45	1	He	253046.441	253046.441	1.00	1317235	19.21	500000	
Ti	47	45	1	He	0.206	0.206	88.98	8	2.65	2500	
V	51	45	1	He	2.494	2.494	4.71	3398	0.07	10000	
Cr	52	45	1	He	12.040	12.040	2.22	20581	0.06	10000	
Mn	55	45	1	He	0.855	0.855	3.92	819	0.10	10000	
Fe	56	45	1	He	7.346	7.346	2.64	11068	0.07	200000	
Co	59	45	1	He	0.222	0.222	13.97	940	0.02	5000	
Ni	60	45	1	He	1.005	1.005	0.89	979	0.10	10000	
Cu	63	45	1	He	2.396	2.396	2.64	7827	0.03	10000	
Zn	66	45	1	He	2.563	2.563	2.53	914	0.28	10000	
As	75	103	1	He	1.499	1.499	0.63	291	0.52	10000	
Se	78	115	1	He	2.267	2.267	10.50	22	10.20	10000	
Sr	88	103	1	He	1219.593	1219.593	0.84	995166	0.12	10000	
Mo	95	103	1	He	21.142	21.142	3.62	21496	0.10	2000	
Ag	107	103	1	He	0.007	0.007	51.64	31	0.02	300	
Cd	111	115	1	He	0.019	0.019	0.50	10	0.19	4000	
Sn	118	115	1	He	1.632	1.632	3.12	1608	0.10	2000	
Sb	123	115	1	He	0.258	0.258	2.38	277	0.09	200	
Ba	137	115	1	He	146.728	146.728	1.58	47787	0.31	10000	
W	182	159	1	He	0.841	0.841	4.94	5353	0.02	2500	
Tl	205	165	1	He	0.057	0.057	8.59	482	0.01	2000	
Pb	208	165	1	He	0.626	0.626	3.47	7472	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1934038	2.20	1884762	102.61	60	120	
Sc	45	1	He	114706	0.66	134073	85.56	60	120	
Sc	45	2	NoGas	7591077	0.31	8481025	89.51	60	120	
Rh	103	1	He	739786	1.00	903580	81.87	60	120	
In	115	1	He	195350	0.40	224817	86.89	60	120	
Tb	159	1	He	940232	0.40	1046002	89.89	60	120	
Ho	165	1	He	953602	0.27	1057439	90.18	60	120	
Bi	209	1	He	621597	0.16	731380	84.99	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-11-a
Data File Name	132SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:51:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	46.719	46.719	0.89	1052954	0.00	10000	
Be	9	45	2	NoGas	0.091	0.091	21.35	619	0.01	2000	
B	11	45	2	NoGas	74.091	74.091	1.41	258243	0.03	300	
Na	23	45	1	He	87984.768	87984.768	1.01	29854573	0.29	500000	
Mg	24	45	1	He	28.666	28.666	11.52	5957	0.48	500000	
Al	27	45	1	He	972.153	972.153	2.08	76461	1.27	200000	
K	39	45	1	He	37758.784	37758.784	0.61	3390781	1.11	500000	
Ca	44	45	1	He	111165.509	111165.509	1.04	583571	19.05	500000	
Ti	47	45	1	He	1.956	1.956	28.24	74	2.63	2500	
V	51	45	1	He	9.472	9.472	5.14	12882	0.07	10000	
Cr	52	45	1	He	1.378	1.378	9.25	2890	0.05	10000	
Mn	55	45	1	He	4.740	4.740	1.54	4049	0.12	10000	
Fe	56	45	1	He	118.419	118.419	2.11	153833	0.08	200000	
Co	59	45	1	He	0.142	0.142	18.52	701	0.02	5000	
Ni	60	45	1	He	2.792	2.792	4.46	2524	0.11	10000	
Cu	63	45	1	He	1.865	1.865	6.39	6605	0.03	10000	
Zn	66	45	1	He	2.180	2.180	5.87	803	0.27	10000	
As	75	103	1	He	6.448	6.448	3.16	1235	0.52	10000	
Se	78	115	1	He	1.879	1.879	30.54	19	9.85	10000	
Sr	88	103	1	He	752.235	752.235	0.85	629447	0.12	10000	
Mo	95	103	1	He	21.201	21.201	2.14	22106	0.10	2000	
Ag	107	103	1	He	0.001	0.001	42.24	11	0.01	300	
Cd	111	115	1	He	0.027	0.027	7.52	14	0.20	4000	
Sn	118	115	1	He	0.193	0.193	13.00	426	0.05	2000	
Sb	123	115	1	He	0.206	0.206	11.51	231	0.09	200	
Ba	137	115	1	He	46.950	46.950	2.26	15506	0.30	10000	
W	182	159	1	He	1.046	1.046	0.76	6402	0.02	2500	
Tl	205	165	1	He	0.050	0.050	9.31	438	0.01	2000	
Pb	208	165	1	He	0.208	0.208	2.68	3264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1987358	0.65	1884762	105.44	60	120	
Sc	45	1	He	115663	0.81	134073	86.27	60	120	
Sc	45	2	NoGas	7591589	1.25	8481025	89.51	60	120	
Rh	103	1	He	758580	0.38	903580	83.95	60	120	
In	115	1	He	198063	1.33	224817	88.10	60	120	
Tb	159	1	He	948988	0.12	1046002	90.73	60	120	
Ho	165	1	He	972684	0.21	1057439	91.98	60	120	
Bi	209	1	He	649084	0.50	731380	88.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-11-a
Data File Name	133SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:55:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.567	49.567	9.61	1181348	0.00	10000	
Be	9	45	2	NoGas	0.069	0.069	16.69	533	0.01	2000	
B	11	45	2	NoGas	73.683	73.683	9.13	273158	0.03	300	
Na	23	45	1	He	90122.076	90122.076	2.35	30870938	0.29	500000	
Mg	24	45	1	He	12.187	12.187	13.42	2878	0.42	500000	
Al	27	45	1	He	957.003	957.003	2.22	75992	1.26	200000	
K	39	45	1	He	38428.059	38428.059	1.75	3483649	1.10	500000	
Ca	44	45	1	He	114912.224	114912.224	1.21	609048	18.87	500000	
Ti	47	45	1	He	0.058	0.058	86.62	2	2.59	2500	
V	51	45	1	He	9.305	9.305	3.14	12777	0.07	10000	
Cr	52	45	1	He	1.017	1.017	6.26	2308	0.04	10000	
Mn	55	45	1	He	0.682	0.682	8.13	688	0.10	10000	
Fe	56	45	1	He	20.597	20.597	3.61	28449	0.07	200000	
Co	59	45	1	He	0.228	0.228	14.73	973	0.02	5000	
Ni	60	45	1	He	2.555	2.555	2.53	2341	0.11	10000	
Cu	63	45	1	He	1.645	1.645	6.72	6129	0.03	10000	
Zn	66	45	1	He	1.423	1.423	11.72	574	0.25	10000	
As	75	103	1	He	6.227	6.227	3.87	1191	0.52	10000	
Se	78	115	1	He	2.249	2.249	13.44	22	10.04	10000	
Sr	88	103	1	He	782.415	782.415	0.86	653450	0.12	10000	
Mo	95	103	1	He	22.351	22.351	2.38	23260	0.10	2000	
Ag	107	103	1	He	0.002	0.002	55.29	16	0.02	300	
Cd	111	115	1	He	0.018	0.018	75.07	9	0.19	4000	
Sn	118	115	1	He	0.437	0.437	10.22	630	0.07	2000	
Sb	123	115	1	He	0.324	0.324	14.38	342	0.09	200	
Ba	137	115	1	He	47.691	47.691	2.80	15752	0.30	10000	
W	182	159	1	He	1.155	1.155	4.92	6935	0.02	2500	
Tl	205	165	1	He	0.046	0.046	5.76	397	0.01	2000	
Pb	208	165	1	He	0.123	0.123	4.31	2366	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2061699	3.74	1884762	109.39	60	120	
Sc	45	1	He	116786	1.56	134073	87.11	60	120	
Sc	45	2	NoGas	8111196	8.13	8481025	95.64	60	120	
Rh	103	1	He	757180	0.92	903580	83.80	60	120	
In	115	1	He	198076	0.64	224817	88.11	60	120	
Tb	159	1	He	948703	1.22	1046002	90.70	60	120	
Ho	165	1	He	965216	1.15	1057439	91.28	60	120	
Bi	209	1	He	648036	0.70	731380	88.60	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	134_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:59:53-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	60.217	0.999	1342716	1.52	50	120.4	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	55.654	0.111	301914	0.84	50	111.3	89.5	110.5	CCV Failed
B	11	45	2	NoGas	68.344	1.201	241599	0.88	50	136.7	89.5	110.5	CCV Failed
Na	23	45	1	He	25300.255	4.262	8690662	1.46	25000	101.2	89.5	110.5	
Mg	24	45	1	He	24977.698	3.725	4766290	0.91	25000	99.9	89.5	110.5	
Al	27	45	1	He	253.697	3.312	20269	0.41	250	101.5	89.5	110.5	
K	39	45	1	He	25668.144	1.654	2336376	1.74	25000	102.7	89.5	110.5	
Ca	44	45	1	He	25411.829	2.960	135169	0.67	25000	101.6	89.5	110.5	
Ti	47	45	1	He	49.656	4.085	1911	4.65	50	99.3	89.5	110.5	
V	51	45	1	He	49.382	7.758	67727	4.92	50	98.8	89.5	110.5	
Cr	52	45	1	He	49.925	3.716	85229	0.54	50	99.9	89.5	110.5	
Mn	55	45	1	He	252.405	3.597	212106	0.62	250	101.0	89.5	110.5	
Fe	56	45	1	He	12714.179	4.151	16529715	1.00	12500	101.7	89.5	110.5	
Co	59	45	1	He	50.674	3.883	157243	0.54	50	101.3	89.5	110.5	
Ni	60	45	1	He	49.447	3.035	43142	0.95	50	98.9	89.5	110.5	
Cu	63	45	1	He	50.339	3.178	125646	0.35	50	100.7	89.5	110.5	
Zn	66	45	1	He	51.466	2.725	16288	0.93	50	102.9	89.5	110.5	
As	75	103	1	He	49.585	0.390	9439	0.51	50	99.2	89.5	110.5	
Se	78	115	1	He	48.499	0.835	431	0.90	50	97.0	89.5	110.5	
Sr	88	103	1	He	52.056	2.066	43779	1.17	50	104.1	89.5	110.5	
Mo	95	103	1	He	52.441	0.712	54912	0.76	50	104.9	89.5	110.5	
Ag	107	103	1	He	50.828	0.983	196760	0.65	50	101.7	89.5	110.5	
Cd	111	115	1	He	50.252	0.382	22168	1.03	50	100.5	89.5	110.5	
Sn	118	115	1	He	50.954	4.867	42833	3.95	50	101.9	89.5	110.5	
Sb	123	115	1	He	51.112	0.351	48145	1.06	50	102.2	89.5	110.5	
Ba	137	115	1	He	51.857	0.410	17110	1.15	50	103.7	89.5	110.5	
W	182	159	1	He	53.095	1.877	263261	1.87	50	106.2	89.5	110.5	
Tl	205	165	1	He	50.817	1.696	403495	1.43	50	101.6	89.5	110.5	
Pb	208	165	1	He	50.672	0.756	528639	0.62	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2032451	2.46	1884762	107.84	60	120	
Sc	45	1	He	117155	3.41	134073	87.38	60	120	
Sc	45	2	NoGas	7680190	0.72	8481025	90.56	60	120	
Rh	103	1	He	761986	0.89	903580	84.33	60	120	
In	115	1	He	197863	1.13	224817	88.01	60	120	
Tb	159	1	He	957892	0.84	1046002	91.58	60	120	
Ho	165	1	He	971512	0.29	1057439	91.87	60	120	
Bi	209	1	He	657044	0.69	731380	89.84	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	135_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:04:05-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.550	4.7	137454	0.8	8	
Be	9	45	2	NoGas	0.163	11.0	1015	9.3	1	
B	11	45	2	NoGas	13.392	2.4	53890	2.3	20	
Na	23	45	1	He	67.848	3.4	27173	3.3	1000	
Mg	24	45	1	He	24.834	4.6	5275	4.0	1000	
Al	27	45	1	He	0.800	41.7	160	17.1	50	
K	39	45	1	He	37.355	19.1	11093	6.0	1000	
Ca	44	45	1	He	26.190	28.2	305	13.1	1000	
Ti	47	45	1	He	0.058	173.2	2	173.2	20	
V	51	45	1	He	0.075	22.3	149	15.9	2	
Cr	52	45	1	He	0.042	49.2	659	5.8	2	
Mn	55	45	1	He	0.312	26.7	378	18.2	2	
Fe	56	45	1	He	16.402	8.5	22966	7.5	50	
Co	59	45	1	He	0.001	2778.5	271	21.7	1	
Ni	60	45	1	He	0.019	157.7	141	18.0	2	
Cu	63	45	1	He	-0.253	-28.1	1482	11.5	2	
Zn	66	45	1	He	0.276	36.0	214	14.0	20	
As	75	103	1	He	0.090	8.7	34	5.6	2	
Se	78	115	1	He	0.175	71.3	4	27.7	2	
Sr	88	103	1	He	0.671	6.3	628	5.1	10	
Mo	95	103	1	He	0.182	16.2	212	14.5	2	
Ag	107	103	1	He	0.057	14.9	240	15.0	0.2	
Cd	111	115	1	He	0.076	21.8	36	18.7	0.2	
Sn	118	115	1	He	0.333	31.2	556	13.9	10	
Sb	123	115	1	He	0.114	34.7	148	24.7	2	
Ba	137	115	1	He	0.114	37.1	43	30.8	5	
W	182	159	1	He	0.352	27.7	3041	15.2	10	
Tl	205	165	1	He	0.127	2.0	1046	1.5	0.5	
Pb	208	165	1	He	0.071	2.4	1835	1.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098940	0.16	1884762	111.36	60	120	
Sc	45	1	He	116561	0.54	134073	86.94	60	120	
Sc	45	2	NoGas	7700737	0.33	8481025	90.80	60	120	
Rh	103	1	He	801737	0.92	903580	88.73	60	120	
In	115	1	He	203222	2.10	224817	90.39	60	120	
Tb	159	1	He	959743	0.68	1046002	91.75	60	120	
Ho	165	1	He	969231	0.48	1057439	91.66	60	120	
Bi	209	1	He	677636	0.56	731380	92.65	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	136CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:08:17-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	10.364	10.364	1.908	319683	0.51	8	129.5	69.5	130.5	
Be	9	2	NoGas	1.205	1.205	3.958	6698	3.58	1	120.5	69.5	130.5	
B	11	2	NoGas	31.607	31.607	2.184	116554	1.21	20	158.0	69.5	130.5	6020A CR1 Failed
Na	23	1	He	1001.384	1001.384	1.313	348614	0.81	1000	100.1	69.5	130.5	
Mg	24	1	He	985.832	985.832	1.596	189067	0.72	1000	98.6	69.5	130.5	
Al	27	1	He	48.136	48.136	2.628	3934	3.69	50	96.3	69.5	130.5	
K	39	1	He	1015.462	1015.462	2.469	100047	1.45	1000	101.5	69.5	130.5	
Ca	44	1	He	977.843	977.843	3.440	5373	2.74	1000	97.8	69.5	130.5	
Ti	47	1	He	9.245	9.245	14.120	357	14.84	10	92.5	69.5	130.5	
V	51	1	He	5.168	5.168	9.554	7148	8.63	5	103.4	69.5	130.5	
Cr	52	1	He	2.087	2.087	6.675	4136	4.91	2	104.4	69.5	130.5	
Mn	55	1	He	5.053	5.053	8.840	4369	7.88	5	101.1	69.5	130.5	
Fe	56	1	He	107.653	107.653	1.351	142017	0.70	100	107.7	69.5	130.5	
Co	59	1	He	0.956	0.956	10.495	3241	10.54	1	95.6	69.5	130.5	
Ni	60	1	He	2.033	2.033	6.995	1897	5.79	2	101.6	69.5	130.5	
Cu	63	1	He	1.584	1.584	9.399	6010	5.71	2	79.2	69.5	130.5	
Zn	66	1	He	20.359	20.359	1.923	6534	1.12	20	101.8	69.5	130.5	
As	75	1	He	4.999	4.999	3.023	1002	3.94	5	100.0	69.5	130.5	
Se	78	1	He	5.535	5.535	5.802	53	5.21	5	110.7	69.5	130.5	
Sr	88	1	He	9.985	9.985	1.792	8743	1.93	10	99.9	69.5	130.5	
Mo	95	1	He	5.293	5.293	1.802	5762	1.72	5	105.9	69.5	130.5	
Ag	107	1	He	1.023	1.023	3.643	4116	3.57	1	102.3	69.5	130.5	
Cd	111	1	He	1.027	1.027	7.327	465	7.06	1	102.7	69.5	130.5	
Sn	118	1	He	9.991	9.991	7.576	8810	6.96	10	99.9	69.5	130.5	
Sb	123	1	He	2.094	2.094	1.206	2055	1.26	2	104.7	69.5	130.5	
Ba	137	1	He	4.763	4.763	5.201	1612	5.55	5	95.3	69.5	130.5	
W	182	1	He	10.672	10.672	1.665	53824	0.86	10	106.7	69.5	130.5	
Tl	205	1	He	1.061	1.061	3.951	8418	3.14	1	106.1	69.5	130.5	
Pb	208	1	He	1.027	1.027	1.656	11737	0.85	1	102.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2084457	0.33	1884762	110.60	60	120	
Sc	45	1	He	117326	1.11	134073	87.51	60	120	
Sc	45	2	NoGas	7716503	0.83	8481025	90.99	60	120	
Rh	103	1	He	790791	1.00	903580	87.52	60	120	
In	115	1	He	202410	0.38	224817	90.03	60	120	
Tb	159	1	He	955634	0.83	1046002	91.36	60	120	
Ho	165	1	He	966882	0.95	1057439	91.44	60	120	
Bi	209	1	He	685258	0.99	731380	93.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-1-a
Data File Name	137SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:12:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.843	13.843	0.78	392125	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	18.04	619	0.01	2000	
B	11	45	2	NoGas	970.921	970.921	0.64	3348015	0.03	300	>LDR
Na	23	45	1	He	56541.287	56541.287	2.01	19125411	0.30	500000	
Mg	24	45	1	He	21575.507	21575.507	3.43	4054887	0.53	500000	
Al	27	45	1	He	9.098	9.098	4.65	808	1.13	200000	
K	39	45	1	He	7062.897	7062.897	1.80	638386	1.11	500000	
Ca	44	45	1	He	74122.605	74122.605	2.54	387935	19.11	500000	
Ti	47	45	1	He	0.178	0.178	86.60	7	2.67	2500	
V	51	45	1	He	0.779	0.779	30.46	1095	0.07	10000	
Cr	52	45	1	He	0.483	0.483	7.01	1387	0.03	10000	
Mn	55	45	1	He	1628.793	1628.793	2.55	1347623	0.12	10000	
Fe	56	45	1	He	49678.033	49678.033	3.46	63605744	0.08	200000	
Co	59	45	1	He	0.502	0.502	10.58	1797	0.03	5000	
Ni	60	45	1	He	13.474	13.474	1.50	11667	0.12	10000	
Cu	63	45	1	He	-0.302	-0.302	-18.48	1348	-0.02	10000	
Zn	66	45	1	He	7.363	7.363	10.22	2405	0.31	10000	
As	75	103	1	He	1.265	1.265	10.45	251	0.50	10000	
Se	78	115	1	He	0.470	0.470	55.26	6	7.26	10000	
Sr	88	103	1	He	207.847	207.847	0.21	171949	0.12	10000	
Mo	95	103	1	He	0.639	0.639	9.26	670	0.10	2000	
Ag	107	103	1	He	0.005	0.005	42.99	26	0.02	300	
Cd	111	115	1	He	0.029	0.029	19.51	14	0.21	4000	
Sn	118	115	1	He	0.853	0.853	18.71	952	0.09	2000	
Sb	123	115	1	He	0.099	0.099	43.49	127	0.08	200	
Ba	137	115	1	He	67.402	67.402	0.18	21648	0.31	10000	
W	182	159	1	He	0.266	0.266	14.61	2548	0.01	2500	
Tl	205	165	1	He	0.025	0.025	11.20	230	0.01	2000	
Pb	208	165	1	He	0.031	0.031	58.58	1400	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2055105	0.70	1884762	109.04	60	120	
Sc	45	1	He	115310	1.99	134073	86.01	60	120	
Sc	45	2	NoGas	7727971	0.48	8481025	91.12	60	120	
Rh	103	1	He	749883	0.88	903580	82.99	60	120	
In	115	1	He	192622	1.32	224817	85.68	60	120	
Tb	159	1	He	933043	0.97	1046002	89.20	60	120	
Ho	165	1	He	954729	0.75	1057439	90.29	60	120	
Bi	209	1	He	642234	0.56	731380	87.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-2-a
Data File Name	138SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:16:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.016	6.016	0.52	230244	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	19.13	656	0.01	2000	
B	11	45	2	NoGas	1065.390	1065.390	0.41	3672210	0.03	300	>LDR
Na	23	45	1	He	138724.113	138724.113	2.24	46619063	0.30	500000	
Mg	24	45	1	He	21282.440	21282.440	1.41	3974491	0.54	500000	
Al	27	45	1	He	11.263	11.263	5.78	971	1.16	200000	
K	39	45	1	He	7922.770	7922.770	1.38	710673	1.11	500000	
Ca	44	45	1	He	111884.494	111884.494	1.81	581750	19.23	500000	
Ti	47	45	1	He	0.618	0.618	75.27	23	2.65	2500	
V	51	45	1	He	0.736	0.736	27.69	1034	0.07	10000	
Cr	52	45	1	He	0.753	0.753	6.23	1828	0.04	10000	
Mn	55	45	1	He	1225.210	1225.210	1.55	1007132	0.12	10000	
Fe	56	45	1	He	36518.506	36518.506	2.18	46462981	0.08	200000	
Co	59	45	1	He	0.777	0.777	0.62	2620	0.03	5000	
Ni	60	45	1	He	45.169	45.169	1.62	38571	0.12	10000	
Cu	63	45	1	He	-0.252	-0.252	-16.74	1459	-0.02	10000	
Zn	66	45	1	He	1.786	1.786	10.49	674	0.26	10000	
As	75	103	1	He	19.922	19.922	0.64	3689	0.54	10000	
Se	78	115	1	He	1.390	1.390	43.60	14	9.75	10000	
Sr	88	103	1	He	307.904	307.904	0.66	251178	0.12	10000	
Mo	95	103	1	He	12.262	12.262	0.98	12469	0.10	2000	
Ag	107	103	1	He	0.000	0.000	2079.83	7	0.00	300	
Cd	111	115	1	He	0.010	0.010	34.88	6	0.18	4000	
Sn	118	115	1	He	0.410	0.410	26.47	585	0.07	2000	
Sb	123	115	1	He	0.063	0.063	35.61	93	0.07	200	
Ba	137	115	1	He	44.474	44.474	3.34	14159	0.31	10000	
W	182	159	1	He	0.261	0.261	27.15	2497	0.01	2500	
Tl	205	165	1	He	0.018	0.018	22.41	172	0.01	2000	
Pb	208	165	1	He	0.003	0.003	107.71	1091	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2060000	0.65	1884762	109.30	60	120	
Sc	45	1	He	114569	1.04	134073	85.45	60	120	
Sc	45	2	NoGas	7726501	0.16	8481025	91.10	60	120	
Rh	103	1	He	739476	0.53	903580	81.84	60	120	
In	115	1	He	190930	0.41	224817	84.93	60	120	
Tb	159	1	He	922977	0.88	1046002	88.24	60	120	
Ho	165	1	He	941656	0.46	1057439	89.05	60	120	
Bi	209	1	He	614933	0.94	731380	84.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-3-a
Data File Name	139SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:20:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.403	31.403	0.13	779609	0.00	10000	
Be	9	45	2	NoGas	0.092	0.092	19.99	652	0.01	2000	
B	11	45	2	NoGas	15440.714	15440.714	0.43	54839274	0.03	300	>LDR
Na	23	45	1	He	42163.170	42163.170	2.44	14916686	0.28	500000	
Mg	24	45	1	He	3115.705	3115.705	2.84	612872	0.51	500000	
Al	27	45	1	He	17.208	17.208	7.23	1510	1.14	200000	
K	39	45	1	He	102077.046	102077.046	2.33	9542263	1.07	500000	
Ca	44	45	1	He	40134.892	40134.892	3.38	219731	18.27	500000	
Ti	47	45	1	He	0.448	0.448	38.84	18	2.52	2500	
V	51	45	1	He	3.653	3.653	3.28	5211	0.07	10000	
Cr	52	45	1	He	0.587	0.587	11.36	1631	0.04	10000	
Mn	55	45	1	He	417.573	417.573	2.35	361356	0.12	10000	
Fe	56	45	1	He	1236.080	1236.080	2.81	1657004	0.07	200000	
Co	59	45	1	He	1.041	1.041	5.66	3603	0.03	5000	
Ni	60	45	1	He	713.570	713.570	2.48	639428	0.11	10000	
Cu	63	45	1	He	2.326	2.326	4.63	8052	0.03	10000	
Zn	66	45	1	He	8.124	8.124	4.74	2759	0.29	10000	
As	75	103	1	He	2.924	2.924	4.58	583	0.50	10000	
Se	78	115	1	He	0.767	0.767	36.94	10	7.97	10000	
Sr	88	103	1	He	117.418	117.418	1.21	100876	0.12	10000	
Mo	95	103	1	He	8.230	8.230	2.70	8816	0.09	2000	
Ag	107	103	1	He	0.003	0.003	25.74	20	0.02	300	
Cd	111	115	1	He	0.014	0.014	8.51	8	0.17	4000	
Sn	118	115	1	He	0.294	0.294	46.02	530	0.06	2000	
Sb	123	115	1	He	2.764	2.764	4.17	2744	0.10	200	
Ba	137	115	1	He	17.907	17.907	3.57	6148	0.29	10000	
W	182	159	1	He	0.960	0.960	6.33	6146	0.02	2500	
Tl	205	165	1	He	0.017	0.017	16.18	177	0.01	2000	
Pb	208	165	1	He	0.613	0.613	0.61	7575	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2040264	1.20	1884762	108.25	60	120	
Sc	45	1	He	120607	1.78	134073	89.96	60	120	
Sc	45	2	NoGas	7977476	0.53	8481025	94.06	60	120	
Rh	103	1	He	778627	0.67	903580	86.17	60	120	
In	115	1	He	205744	0.69	224817	91.52	60	120	
Tb	159	1	He	974392	0.80	1046002	93.15	60	120	
Ho	165	1	He	984392	1.07	1057439	93.09	60	120	
Bi	209	1	He	662525	1.08	731380	90.59	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-4-a
Data File Name	140SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:25:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.834	10.834	1.00	335683	0.00	10000	
Be	9	45	2	NoGas	0.103	0.103	10.21	704	0.01	2000	
B	11	45	2	NoGas	496.434	496.434	0.83	1745820	0.03	300	>LDR
Na	23	45	1	He	56924.086	56924.086	1.50	19309571	0.29	500000	
Mg	24	45	1	He	14513.607	14513.607	2.40	2735191	0.53	500000	
Al	27	45	1	He	29.164	29.164	3.04	2386	1.22	200000	
K	39	45	1	He	2619.458	2619.458	2.85	242208	1.08	500000	
Ca	44	45	1	He	38783.801	38783.801	2.18	203609	19.05	500000	
Ti	47	45	1	He	0.239	0.239	116.04	9	2.68	2500	
V	51	45	1	He	0.099	0.099	219.68	185	0.05	10000	
Cr	52	45	1	He	0.215	0.215	21.31	944	0.02	10000	
Mn	55	45	1	He	2743.133	2743.133	2.13	2275330	0.12	10000	
Fe	56	45	1	He	26207.032	26207.032	2.43	33649148	0.08	200000	
Co	59	45	1	He	20.490	20.490	2.89	62946	0.03	5000	
Ni	60	45	1	He	21.101	21.101	4.19	18244	0.12	10000	
Cu	63	45	1	He	0.619	0.619	11.41	3582	0.02	10000	
Zn	66	45	1	He	7.871	7.871	8.23	2566	0.31	10000	
As	75	103	1	He	5.325	5.325	3.09	1013	0.53	10000	
Se	78	115	1	He	0.468	0.468	49.09	6	7.23	10000	
Sr	88	103	1	He	118.547	118.547	3.73	98239	0.12	10000	
Mo	95	103	1	He	1.691	1.691	4.32	1759	0.10	2000	
Ag	107	103	1	He	0.002	0.002	102.07	14	0.01	300	
Cd	111	115	1	He	0.595	0.595	6.16	259	0.23	4000	
Sn	118	115	1	He	3.163	3.163	12.10	2852	0.11	2000	
Sb	123	115	1	He	0.080	0.080	24.12	110	0.07	200	
Ba	137	115	1	He	35.832	35.832	3.41	11613	0.31	10000	
W	182	159	1	He	0.121	0.121	52.13	1867	0.01	2500	
Tl	205	165	1	He	0.105	0.105	5.56	853	0.01	2000	
Pb	208	165	1	He	0.121	0.121	6.74	2315	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2110515	1.53	1884762	111.98	60	120	
Sc	45	1	He	115645	2.55	134073	86.26	60	120	
Sc	45	2	NoGas	7863381	0.34	8481025	92.72	60	120	
Rh	103	1	He	751690	3.46	903580	83.19	60	120	
In	115	1	He	194445	2.76	224817	86.49	60	120	
Tb	159	1	He	942060	2.91	1046002	90.06	60	120	
Ho	165	1	He	953365	3.21	1057439	90.16	60	120	
Bi	209	1	He	644821	1.95	731380	88.17	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-6-a
Data File Name	141SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:29:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.025	28.025	0.58	687400	0.00	10000	
Be	9	45	2	NoGas	0.113	0.113	7.15	748	0.02	2000	
B	11	45	2	NoGas	993.844	993.844	0.89	3436798	0.03	300	>LDR
Na	23	45	1	He	149567.976	149567.976	2.88	50819300	0.29	500000	
Mg	24	45	1	He	17010.943	17010.943	1.57	3212476	0.53	500000	
Al	27	45	1	He	60.599	60.599	2.92	4863	1.25	200000	
K	39	45	1	He	16339.585	16339.585	3.13	1473643	1.11	500000	
Ca	44	45	1	He	54042.388	54042.388	1.86	284218	19.01	500000	
Ti	47	45	1	He	0.088	0.088	99.83	3	2.65	2500	
V	51	45	1	He	0.150	0.150	18.53	250	0.06	10000	
Cr	52	45	1	He	0.095	0.095	41.91	742	0.01	10000	
Mn	55	45	1	He	4456.394	4456.394	2.71	3703320	0.12	10000	
Fe	56	45	1	He	16571.725	16571.725	3.50	21317052	0.08	200000	
Co	59	45	1	He	53.302	53.302	3.13	163635	0.03	5000	
Ni	60	45	1	He	97.919	97.919	3.92	84383	0.12	10000	
Cu	63	45	1	He	-0.128	-0.128	-22.59	1778	-0.01	10000	
Zn	66	45	1	He	102.790	102.790	2.98	32053	0.32	10000	
As	75	103	1	He	2.836	2.836	11.40	545	0.52	10000	
Se	78	115	1	He	0.460	0.460	32.64	6	7.10	10000	
Sr	88	103	1	He	166.385	166.385	0.80	137566	0.12	10000	
Mo	95	103	1	He	0.538	0.538	15.51	566	0.10	2000	
Ag	107	103	1	He	0.003	0.003	74.22	18	0.02	300	
Cd	111	115	1	He	2.318	2.318	5.63	1012	0.23	4000	
Sn	118	115	1	He	0.133	0.133	88.68	370	0.04	2000	
Sb	123	115	1	He	0.054	0.054	88.72	87	0.06	200	
Ba	137	115	1	He	18.557	18.557	1.64	6057	0.31	10000	
W	182	159	1	He	0.182	0.182	9.46	2171	0.01	2500	
Tl	205	165	1	He	0.201	0.201	6.15	1607	0.01	2000	
Pb	208	165	1	He	0.110	0.110	10.54	2211	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2065000	0.20	1884762	109.56	60	120	
Sc	45	1	He	115860	1.86	134073	86.42	60	120	
Sc	45	2	NoGas	7750665	0.52	8481025	91.39	60	120	
Rh	103	1	He	749401	0.58	903580	82.94	60	120	
In	115	1	He	195619	1.08	224817	87.01	60	120	
Tb	159	1	He	943984	0.60	1046002	90.25	60	120	
Ho	165	1	He	957230	0.38	1057439	90.52	60	120	
Bi	209	1	He	643044	0.24	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-7-a
Data File Name	142SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:33:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	34.533	34.533	0.87	817137	0.00	10000	
Be	9	45	2	NoGas	0.075	0.075	16.29	541	0.01	2000	
B	11	45	2	NoGas	702.928	702.928	0.28	2417747	0.03	300	>LDR
Na	23	45	1	He	173325.005	173325.005	1.08	58996320	0.29	500000	
Mg	24	45	1	He	21587.971	21587.971	1.78	4083084	0.53	500000	
Al	27	45	1	He	4.417	4.417	16.37	444	0.99	200000	
K	39	45	1	He	7658.525	7658.525	0.37	696051	1.10	500000	
Ca	44	45	1	He	115622.698	115622.698	1.18	608919	18.99	500000	
Ti	47	45	1	He	0.204	0.204	108.07	8	2.62	2500	
V	51	45	1	He	0.115	0.115	90.63	203	0.06	10000	
Cr	52	45	1	He	0.147	0.147	23.73	831	0.02	10000	
Mn	55	45	1	He	980.408	980.408	1.57	816283	0.12	10000	
Fe	56	45	1	He	12087.911	12087.911	1.33	15578832	0.08	200000	
Co	59	45	1	He	19.378	19.378	2.66	59770	0.03	5000	
Ni	60	45	1	He	1830.386	1830.386	2.30	1578137	0.12	10000	
Cu	63	45	1	He	-0.235	-0.235	-24.15	1520	-0.02	10000	
Zn	66	45	1	He	54.896	54.896	2.15	17207	0.32	10000	
As	75	103	1	He	9.772	9.772	2.56	1814	0.54	10000	
Se	78	115	1	He	0.434	0.434	100.07	6	7.07	10000	
Sr	88	103	1	He	443.375	443.375	1.29	361044	0.12	10000	
Mo	95	103	1	He	23.142	23.142	1.96	23483	0.10	2000	
Ag	107	103	1	He	0.000	0.000	-489.84	6	0.00	300	
Cd	111	115	1	He	0.015	0.015	87.48	8	0.19	4000	
Sn	118	115	1	He	-0.010	-0.010	-395.98	248	0.00	2000	
Sb	123	115	1	He	0.095	0.095	47.63	123	0.08	200	
Ba	137	115	1	He	90.690	90.690	1.58	29003	0.31	10000	
W	182	159	1	He	0.168	0.168	19.88	2078	0.01	2500	
Tl	205	165	1	He	0.009	0.009	21.37	104	0.01	2000	
Pb	208	165	1	He	0.013	0.013	86.85	1212	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2045982	1.04	1884762	108.55	60	120	
Sc	45	1	He	116031	0.68	134073	86.54	60	120	
Sc	45	2	NoGas	7701523	0.45	8481025	90.81	60	120	
Rh	103	1	He	738208	1.06	903580	81.70	60	120	
In	115	1	He	191789	1.00	224817	85.31	60	120	
Tb	159	1	He	934721	1.03	1046002	89.36	60	120	
Ho	165	1	He	951834	1.02	1057439	90.01	60	120	
Bi	209	1	He	631598	0.43	731380	86.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-1-a
Data File Name	143SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:37:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.723	9.723	1.83	315671	0.00	10000	
Be	9	45	2	NoGas	0.205	0.205	112.95	1275	0.02	2000	
B	11	45	2	NoGas	101.846	101.846	0.92	368566	0.03	300	
Na	23	45	1	He	12333.279	12333.279	2.53	4289821	0.29	500000	
Mg	24	45	1	He	8165.552	8165.552	2.23	1577350	0.52	500000	
Al	27	45	1	He	1.022	1.022	31.22	180	0.57	200000	
K	39	45	1	He	2511.047	2511.047	1.43	238307	1.05	500000	
Ca	44	45	1	He	52181.763	52181.763	2.05	280703	18.59	500000	
Ti	47	45	1	He	0.202	0.202	100.25	8	2.59	2500	
V	51	45	1	He	0.009	0.009	871.36	62	0.01	10000	
Cr	52	45	1	He	0.000	0.000	-8906.94	597	0.00	10000	
Mn	55	45	1	He	184.678	184.678	2.41	157084	0.12	10000	
Fe	56	45	1	He	19707.627	19707.627	2.25	25932678	0.08	200000	
Co	59	45	1	He	0.042	0.042	9.83	407	0.01	5000	
Ni	60	45	1	He	0.324	0.324	27.82	411	0.08	10000	
Cu	63	45	1	He	-0.305	-0.305	-21.27	1377	-0.02	10000	
Zn	66	45	1	He	1.432	1.432	6.39	586	0.24	10000	
As	75	103	1	He	0.488	0.488	3.08	111	0.44	10000	
Se	78	115	1	He	0.233	0.233	92.82	5	5.02	10000	
Sr	88	103	1	He	171.909	171.909	1.22	148487	0.12	10000	
Mo	95	103	1	He	1.309	1.309	3.19	1420	0.09	2000	
Ag	107	103	1	He	0.002	0.002	19.76	16	0.01	300	
Cd	111	115	1	He	0.011	0.011	124.33	7	0.17	4000	
Sn	118	115	1	He	0.080	0.080	125.11	337	0.02	2000	
Sb	123	115	1	He	0.015	0.015	48.22	52	0.03	200	
Ba	137	115	1	He	6.745	6.745	6.37	2262	0.30	10000	
W	182	159	1	He	0.169	0.169	39.50	2137	0.01	2500	
Tl	205	165	1	He	0.013	0.013	16.93	140	0.01	2000	
Pb	208	165	1	He	-0.013	-0.013	-30.65	966	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2119209	0.30	1884762	112.44	60	120	
Sc	45	1	He	118505	2.48	134073	88.39	60	120	
Sc	45	2	NoGas	7948594	1.14	8481025	93.72	60	120	
Rh	103	1	He	782995	1.51	903580	86.65	60	120	
In	115	1	He	200939	2.38	224817	89.38	60	120	
Tb	159	1	He	957464	0.35	1046002	91.54	60	120	
Ho	165	1	He	970327	1.32	1057439	91.76	60	120	
Bi	209	1	He	670945	1.00	731380	91.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-2-a
Data File Name	144SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:41:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.137	6.137	1.30	237752	0.00	10000	
Be	9	45	2	NoGas	0.068	0.068	3.98	511	0.01	2000	
B	11	45	2	NoGas	72.154	72.154	1.63	261690	0.03	300	
Na	23	45	1	He	11020.506	11020.506	1.10	3780871	0.29	500000	
Mg	24	45	1	He	9677.247	9677.247	2.45	1843317	0.52	500000	
Al	27	45	1	He	2.812	2.812	11.34	320	0.88	200000	
K	39	45	1	He	1507.626	1507.626	0.49	144186	1.05	500000	
Ca	44	45	1	He	58612.591	58612.591	1.35	310891	18.85	500000	
Ti	47	45	1	He	0.289	0.289	96.01	11	2.60	2500	
V	51	45	1	He	0.206	0.206	82.00	329	0.06	10000	
Cr	52	45	1	He	0.523	0.523	11.58	1473	0.04	10000	
Mn	55	45	1	He	181.051	181.051	1.32	151880	0.12	10000	
Fe	56	45	1	He	3205.950	3205.950	2.17	4161578	0.08	200000	
Co	59	45	1	He	-0.036	-0.036	-5.20	158	-0.02	5000	
Ni	60	45	1	He	0.358	0.358	12.44	436	0.08	10000	
Cu	63	45	1	He	0.695	0.695	12.78	3807	0.02	10000	
Zn	66	45	1	He	2.214	2.214	10.91	822	0.27	10000	
As	75	103	1	He	0.460	0.460	6.61	105	0.44	10000	
Se	78	115	1	He	0.428	0.428	41.62	6	6.80	10000	
Sr	88	103	1	He	203.530	203.530	0.40	175650	0.12	10000	
Mo	95	103	1	He	0.636	0.636	9.50	696	0.09	2000	
Ag	107	103	1	He	0.000	0.000	739.13	8	0.00	300	
Cd	111	115	1	He	0.007	0.007	102.06	5	0.15	4000	
Sn	118	115	1	He	0.050	0.050	89.54	307	0.02	2000	
Sb	123	115	1	He	0.005	0.005	434.96	42	0.01	200	
Ba	137	115	1	He	3.030	3.030	5.07	1009	0.30	10000	
W	182	159	1	He	0.162	0.162	3.13	2108	0.01	2500	
Tl	205	165	1	He	0.010	0.010	30.76	119	0.01	2000	
Pb	208	165	1	He	-0.001	-0.001	-363.90	1087	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2079996	1.80	1884762	110.36	60	120	
Sc	45	1	He	116836	0.55	134073	87.14	60	120	
Sc	45	2	NoGas	7892980	0.85	8481025	93.07	60	120	
Rh	103	1	He	782269	0.65	903580	86.57	60	120	
In	115	1	He	198806	0.66	224817	88.43	60	120	
Tb	159	1	He	961133	1.00	1046002	91.89	60	120	
Ho	165	1	He	969693	0.49	1057439	91.70	60	120	
Bi	209	1	He	670592	0.33	731380	91.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-3-a
Data File Name	145SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:45:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.954	7.954	0.85	275889	0.00	10000	
Be	9	45	2	NoGas	0.236	0.236	8.64	1448	0.02	2000	
B	11	45	2	NoGas	89.661	89.661	1.06	322899	0.03	300	
Na	23	45	1	He	11335.326	11335.326	2.31	3850602	0.29	500000	
Mg	24	45	1	He	6631.235	6631.235	3.12	1250880	0.53	500000	
Al	27	45	1	He	78.556	78.556	5.03	6270	1.25	200000	
K	39	45	1	He	3454.528	3454.528	2.26	317239	1.09	500000	
Ca	44	45	1	He	33925.722	33925.722	2.30	178252	19.03	500000	
Ti	47	45	1	He	1.897	1.897	50.77	72	2.63	2500	
V	51	45	1	He	0.164	0.164	39.96	269	0.06	10000	
Cr	52	45	1	He	0.204	0.204	13.97	924	0.02	10000	
Mn	55	45	1	He	618.615	618.615	2.19	513565	0.12	10000	
Fe	56	45	1	He	17490.919	17490.919	2.19	22474736	0.08	200000	
Co	59	45	1	He	0.043	0.043	39.82	398	0.01	5000	
Ni	60	45	1	He	0.235	0.235	8.03	326	0.07	10000	
Cu	63	45	1	He	-0.375	-0.375	-14.15	1176	-0.03	10000	
Zn	66	45	1	He	4.957	4.957	5.49	1666	0.30	10000	
As	75	103	1	He	0.121	0.121	21.06	38	0.31	10000	
Se	78	115	1	He	0.091	0.091	192.97	3	2.75	10000	
Sr	88	103	1	He	142.497	142.497	1.67	121445	0.12	10000	
Mo	95	103	1	He	0.341	0.341	23.17	373	0.09	2000	
Ag	107	103	1	He	0.006	0.006	17.69	29	0.02	300	
Cd	111	115	1	He	0.003	0.003	176.58	3	0.11	4000	
Sn	118	115	1	He	0.016	0.016	425.26	282	0.01	2000	
Sb	123	115	1	He	0.007	0.007	95.04	44	0.02	200	
Ba	137	115	1	He	17.033	17.033	4.02	5695	0.30	10000	
W	182	159	1	He	0.170	0.170	26.40	2119	0.01	2500	
Tl	205	165	1	He	0.012	0.012	17.22	130	0.01	2000	
Pb	208	165	1	He	0.023	0.023	28.58	1330	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2094786	0.52	1884762	111.14	60	120	
Sc	45	1	He	115700	0.98	134073	86.30	60	120	
Sc	45	2	NoGas	7885988	0.62	8481025	92.98	60	120	
Rh	103	1	He	772502	0.51	903580	85.49	60	120	
In	115	1	He	200398	1.59	224817	89.14	60	120	
Tb	159	1	He	948212	0.54	1046002	90.65	60	120	
Ho	165	1	He	963774	0.70	1057439	91.14	60	120	
Bi	209	1	He	666086	0.43	731380	91.07	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	146_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:50:05-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.661	2.382	1324032	0.82	50	115.3	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.174	1.461	301669	2.11	50	108.3	89.5	110.5	
B	11	45	2	NoGas	89.732	1.220	323027	0.61	50	179.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25021.319	2.179	8603432	0.07	25000	100.1	89.5	110.5	
Mg	24	45	1	He	24755.070	3.808	4726938	1.70	25000	99.0	89.5	110.5	
Al	27	45	1	He	245.712	2.767	19648	0.68	250	98.3	89.5	110.5	
K	39	45	1	He	25740.771	2.105	2344137	1.21	25000	103.0	89.5	110.5	
Ca	44	45	1	He	25172.200	2.644	133984	0.51	25000	100.7	89.5	110.5	
Ti	47	45	1	He	51.211	1.435	1972	2.98	50	102.4	89.5	110.5	
V	51	45	1	He	49.613	5.125	68131	3.09	50	99.2	89.5	110.5	
Cr	52	45	1	He	50.753	3.333	86697	1.24	50	101.5	89.5	110.5	
Mn	55	45	1	He	253.445	2.617	213152	0.52	250	101.4	89.5	110.5	
Fe	56	45	1	He	12709.767	2.972	16538612	0.85	12500	101.7	89.5	110.5	
Co	59	45	1	He	50.422	2.812	156595	0.79	50	100.8	89.5	110.5	
Ni	60	45	1	He	50.317	2.151	43931	0.44	50	100.6	89.5	110.5	
Cu	63	45	1	He	49.913	3.478	124683	1.89	50	99.8	89.5	110.5	
Zn	66	45	1	He	49.534	2.734	15690	0.82	50	99.1	89.5	110.5	
As	75	103	1	He	49.152	0.676	9513	0.62	50	98.3	89.5	110.5	
Se	78	115	1	He	48.181	7.176	433	7.16	50	96.4	89.5	110.5	
Sr	88	103	1	He	50.622	2.155	43289	2.57	50	101.2	89.5	110.5	
Mo	95	103	1	He	51.944	1.925	55299	2.35	50	103.9	89.5	110.5	
Ag	107	103	1	He	49.911	0.974	196430	1.18	50	99.8	89.5	110.5	
Cd	111	115	1	He	49.476	1.949	22070	1.99	50	99.0	89.5	110.5	
Sn	118	115	1	He	48.896	1.087	41585	1.23	50	97.8	89.5	110.5	
Sb	123	115	1	He	50.755	1.569	48345	1.72	50	101.5	89.5	110.5	
Ba	137	115	1	He	49.873	2.702	16639	2.82	50	99.7	89.5	110.5	
W	182	159	1	He	52.124	2.220	255603	2.50	50	104.2	89.5	110.5	
Tl	205	165	1	He	49.653	2.340	390163	2.36	50	99.3	89.5	110.5	
Pb	208	165	1	He	49.862	0.520	514786	0.53	50	99.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2015324	1.47	1884762	106.93	60	120	
Sc	45	1	He	117199	2.15	134073	87.41	60	120	
Sc	45	2	NoGas	7883426	1.37	8481025	92.95	60	120	
Rh	103	1	He	774643	0.42	903580	85.73	60	120	
In	115	1	He	200071	0.15	224817	88.99	60	120	
Tb	159	1	He	947201	0.36	1046002	90.55	60	120	
Ho	165	1	He	961395	0.03	1057439	90.92	60	120	
Bi	209	1	He	647623	0.72	731380	88.55	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	147_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:54:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.068	7.6	128960	1.9	8	
Be	9	45	2	NoGas	0.129	18.2	841	14.6	1	
B	11	45	2	NoGas	43.775	0.3	159823	0.8	20	CCB High
Na	23	45	1	He	63.546	6.5	24554	3.2	1000	
Mg	24	45	1	He	27.870	5.6	5605	8.9	1000	
Al	27	45	1	He	0.570	54.9	136	18.8	50	
K	39	45	1	He	49.138	23.7	11593	0.9	1000	
Ca	44	45	1	He	24.050	30.6	281	15.7	1000	
Ti	47	45	1	He	0.119	108.8	4	114.6	20	
V	51	45	1	He	0.035	374.6	86	199.1	2	
Cr	52	45	1	He	0.049	154.1	642	22.1	2	
Mn	55	45	1	He	0.441	22.9	461	9.1	2	
Fe	56	45	1	He	18.188	5.8	24174	6.0	50	
Co	59	45	1	He	0.003	486.1	267	18.5	1	
Ni	60	45	1	He	0.020	176.9	137	25.5	2	
Cu	63	45	1	He	-0.464	-15.5	918	9.1	2	
Zn	66	45	1	He	0.344	67.6	222	21.5	20	
As	75	103	1	He	0.092	12.1	33	11.3	2	
Se	78	115	1	He	0.340	61.0	5	27.1	2	
Sr	88	103	1	He	0.596	5.9	539	1.3	10	
Mo	95	103	1	He	0.145	28.0	164	25.5	2	
Ag	107	103	1	He	0.057	12.2	230	5.8	0.2	
Cd	111	115	1	He	0.085	10.5	38	6.1	0.2	
Sn	118	115	1	He	0.343	25.6	541	16.7	10	
Sb	123	115	1	He	0.124	15.7	151	16.6	2	
Ba	137	115	1	He	0.073	81.9	28	66.1	5	
W	182	159	1	He	0.418	15.7	3223	15.8	10	
Tl	205	165	1	He	0.115	8.8	906	1.5	0.5	
Pb	208	165	1	He	0.067	14.9	1711	7.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2077748	1.39	1884762	110.24	60	120	
Sc	45	1	He	111707	8.41	134073	83.32	60	120	
Sc	45	2	NoGas	7787905	0.93	8481025	91.83	60	120	
Rh	103	1	He	771340	6.14	903580	85.36	60	120	
In	115	1	He	193763	5.62	224817	86.19	60	120	
Tb	159	1	He	913605	7.21	1046002	87.34	60	120	
Ho	165	1	He	927880	6.81	1057439	87.75	60	120	
Bi	209	1	He	648752	5.55	731380	88.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-4-a
Data File Name	148SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:58:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.884	4.884	2.11	213583	0.00	10000	
Be	9	45	2	NoGas	0.109	0.109	16.40	748	0.01	2000	
B	11	45	2	NoGas	51.204	51.204	2.79	190112	0.03	300	
Na	23	45	1	He	5483.864	5483.864	4.47	1893104	0.29	500000	
Mg	24	45	1	He	5678.073	5678.073	3.26	1087578	0.52	500000	
Al	27	45	1	He	1.260	1.260	17.95	198	0.64	200000	
K	39	45	1	He	2141.273	2141.273	3.24	202605	1.06	500000	
Ca	44	45	1	He	21449.349	21449.349	2.53	114492	18.73	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.030	0.030	90.85	89	0.03	10000	
Cr	52	45	1	He	0.069	0.069	87.45	709	0.01	10000	
Mn	55	45	1	He	231.737	231.737	3.54	195394	0.12	10000	
Fe	56	45	1	He	5585.755	5585.755	3.77	7287590	0.08	200000	
Co	59	45	1	He	0.293	0.293	3.02	1181	0.02	5000	
Ni	60	45	1	He	1.763	1.763	7.71	1665	0.11	10000	
Cu	63	45	1	He	-0.455	-0.455	-3.23	998	-0.05	10000	
Zn	66	45	1	He	2.492	2.492	6.48	914	0.27	10000	
As	75	103	1	He	0.096	0.096	24.07	34	0.28	10000	
Se	78	115	1	He	0.252	0.252	46.84	5	5.23	10000	
Sr	88	103	1	He	84.322	84.322	1.46	73645	0.11	10000	
Mo	95	103	1	He	0.213	0.213	11.37	243	0.09	2000	
Ag	107	103	1	He	0.002	0.002	155.05	17	0.01	300	
Cd	111	115	1	He	0.011	0.011	42.92	6	0.17	4000	
Sn	118	115	1	He	0.027	0.027	208.83	293	0.01	2000	
Sb	123	115	1	He	0.022	0.022	62.88	59	0.04	200	
Ba	137	115	1	He	12.565	12.565	2.05	4242	0.30	10000	
W	182	159	1	He	0.183	0.183	26.07	2222	0.01	2500	
Tl	205	165	1	He	0.022	0.022	9.46	217	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-144.54	1061	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2109939	1.29	1884762	111.95	60	120	
Sc	45	1	He	117501	2.03	134073	87.64	60	120	
Sc	45	2	NoGas	7978811	0.94	8481025	94.08	60	120	
Rh	103	1	He	791425	0.48	903580	87.59	60	120	
In	115	1	He	202297	1.91	224817	89.98	60	120	
Tb	159	1	He	964534	0.56	1046002	92.21	60	120	
Ho	165	1	He	984685	0.50	1057439	93.12	60	120	
Bi	209	1	He	685683	0.66	731380	93.75	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228603/1-a
Data File Name	149_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:02:43-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.104	5.6	130767	0.6	8	
Be	9	45	2	NoGas	0.051	45.8	419	31.7	1	
B	11	45	2	NoGas	51.234	0.2	187202	0.6	20	Blank High
Na	23	45	1	He	30.096	6.9	14388	6.3	1000	
Mg	24	45	1	He	-0.620	-139.3	444	38.5	1000	
Al	27	45	1	He	0.035	824.5	100	21.9	50	
K	39	45	1	He	12.540	50.5	8921	5.7	1000	
Ca	44	45	1	He	-6.509	-76.9	133	19.6	1000	
Ti	47	45	1	He	0.088	173.2	3	173.2	20	
V	51	45	1	He	-0.019	-216.2	21	266.4	2	
Cr	52	45	1	He	-0.014	-162.0	568	5.5	2	
Mn	55	45	1	He	0.068	67.9	176	23.2	2	
Fe	56	45	1	He	2.090	5.1	4479	4.2	50	
Co	59	45	1	He	-0.051	-18.6	112	27.6	1	
Ni	60	45	1	He	-0.049	-25.6	83	14.4	2	
Cu	63	45	1	He	-0.507	-9.4	870	14.9	2	
Zn	66	45	1	He	0.059	179.0	148	22.1	20	
As	75	103	1	He	0.030	82.3	22	23.0	2	
Se	78	115	1	He	0.171	99.5	4	38.5	2	
Sr	88	103	1	He	0.404	14.9	397	13.4	10	
Mo	95	103	1	He	0.038	51.1	54	39.8	2	
Ag	107	103	1	He	0.002	137.0	16	75.3	0.2	
Cd	111	115	1	He	0.001	211.6	2	50.3	0.2	
Sn	118	115	1	He	0.184	23.3	433	9.2	10	
Sb	123	115	1	He	0.029	79.5	67	32.8	2	
Ba	137	115	1	He	-0.002	-596.2	4	86.6	5	
W	182	159	1	He	0.125	35.3	1948	11.6	10	
Tl	205	165	1	He	0.014	30.4	148	23.2	0.5	
Pb	208	165	1	He	-0.017	-56.6	921	10.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2123451	0.68	1884762	112.66	60	120	
Sc	45	1	He	117531	1.45	134073	87.66	60	120	
Sc	45	2	NoGas	7851698	0.66	8481025	92.58	60	120	
Rh	103	1	He	812310	0.13	903580	89.90	60	120	
In	115	1	He	204980	1.06	224817	91.18	60	120	
Tb	159	1	He	971589	0.26	1046002	92.89	60	120	
Ho	165	1	He	975763	0.43	1057439	92.28	60	120	
Bi	209	1	He	705111	0.33	731380	96.41	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228603/2-a
Data File Name	150_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:06:57-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	116.187	116.187	1.463	2523886	0.56	100	116.2	84.5	115.5	LCS Failed
Be	9	2	NoGas	1168.554	1168.554	0.651	6415920	1.05	1000	116.9	84.5	115.5	LCS Failed
B	11	2	NoGas	141.106	141.106	1.137	496529	1.88	100	141.1	84.5	115.5	LCS Failed
Na	23	1	He	9922.935	9922.935	1.461	3390859	1.26	10000	99.2	84.5	115.5	
Mg	24	1	He	10085.467	10085.467	1.461	1913328	1.32	10000	100.9	84.5	115.5	
Al	27	1	He	9793.465	9793.465	2.056	774062	1.91	10000	97.9	84.5	115.5	
K	39	1	He	9852.832	9852.832	0.740	895810	0.67	10000	98.5	84.5	115.5	
Ca	44	1	He	9728.686	9728.686	1.638	51531	1.15	10000	97.3	84.5	115.5	
Ti	47	1	He	98.466	98.466	1.081	3765	0.98	100	98.5	84.5	115.5	
V	51	1	He	1038.559	1038.559	2.852	1415988	2.59	1000	103.9	84.5	115.5	
Cr	52	1	He	1028.944	1028.944	1.857	1734487	1.42	1000	102.9	84.5	115.5	
Mn	55	1	He	991.531	991.531	1.034	827876	0.82	1000	99.2	84.5	115.5	
Fe	56	1	He	9947.022	9947.022	0.806	12856366	0.36	10000	99.5	84.5	115.5	
Co	59	1	He	1047.727	1047.727	1.665	3226429	1.26	1000	104.8	84.5	115.5	
Ni	60	1	He	994.891	994.891	1.541	860288	1.20	1000	99.5	84.5	115.5	
Cu	63	1	He	1048.402	1048.402	0.296	2559299	0.38	1000	104.8	84.5	115.5	
Zn	66	1	He	999.660	999.660	1.454	312029	1.03	1000	100.0	84.5	115.5	
As	75	1	He	952.436	952.436	0.312	183487	0.73	1000	95.2	84.5	115.5	
Se	78	1	He	986.089	986.089	1.856	8491	1.10	1000	98.6	84.5	115.5	
Sr	88	1	He	956.718	956.718	0.410	814999	1.33	1000	95.7	84.5	115.5	
Mo	95	1	He	100.999	100.999	0.516	107181	1.50	100	101.0	84.5	115.5	
Ag	107	1	He	99.239	99.239	0.783	389338	0.41	100	99.2	84.5	115.5	
Cd	111	1	He	1020.613	1020.613	1.717	438575	0.71	1000	102.1	84.5	115.5	
Sn	118	1	He	1009.618	1009.618	1.666	822186	0.84	1000	101.0	84.5	115.5	
Sb	123	1	He	101.097	101.097	1.464	92736	0.49	100	101.1	84.5	115.5	
Ba	137	1	He	1023.924	1023.924	1.874	329019	0.99	1000	102.4	84.5	115.5	
W	182	1	He	103.104	103.104	1.827	506874	1.87	100	103.1	84.5	115.5	
Tl	205	1	He	262.934	262.934	1.810	2079697	1.33	250	105.2	84.5	115.5	
Pb	208	1	He	1036.230	1036.230	1.367	10748356	0.93	1000	103.6	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2051182	0.96	1884762	108.83	60	120	
Sc	45	1	He	116359	0.49	134073	86.79	60	120	
Sc	45	2	NoGas	7776419	0.85	8481025	91.69	60	120	
Rh	103	1	He	772273	1.01	903580	85.47	60	120	
In	115	1	He	192772	1.01	224817	85.75	60	120	
Tb	159	1	He	952007	0.20	1046002	91.01	60	120	
Ho	165	1	He	967882	0.69	1057439	91.53	60	120	
Bi	209	1	He	659587	0.80	731380	90.18	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-a
Data File Name	151SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:10:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	24.426	24.426	0.58	608221	0.00	10000	
Be	9	45	2	NoGas	0.502	0.502	14.88	2856	0.02	2000	
B	11	45	2	NoGas	286.476	286.476	0.47	989006	0.03	300	
Na	23	45	1	He	246084.821	246084.821	0.54	82922899	0.30	500000	
Mg	24	45	1	He	13696.262	13696.262	0.28	2564892	0.53	500000	
Al	27	45	1	He	4.449	4.449	9.41	442	1.01	200000	
K	39	45	1	He	1999.394	1999.394	0.84	185519	1.08	500000	
Ca	44	45	1	He	36478.039	36478.039	1.78	190296	19.17	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.239	0.239	91.63	368	0.06	10000	
Cr	52	45	1	He	0.182	0.182	29.54	881	0.02	10000	
Mn	55	45	1	He	19.274	19.274	1.55	15999	0.12	10000	
Fe	56	45	1	He	47.707	47.707	0.70	62575	0.08	200000	
Co	59	45	1	He	0.614	0.614	5.69	2131	0.03	5000	
Ni	60	45	1	He	0.443	0.443	11.02	501	0.09	10000	
Cu	63	45	1	He	0.169	0.169	6.26	2477	0.01	10000	
Zn	66	45	1	He	2.973	2.973	8.33	1042	0.29	10000	
As	75	103	1	He	0.458	0.458	22.26	98	0.47	10000	
Se	78	115	1	He	0.761	0.761	61.48	9	8.49	10000	
Sr	88	103	1	He	775.000	775.000	1.38	624384	0.12	10000	
Mo	95	103	1	He	3.009	3.009	8.78	3030	0.10	2000	
Ag	107	103	1	He	0.015	0.015	52.30	61	0.02	300	
Cd	111	115	1	He	0.213	0.213	12.00	93	0.23	4000	
Sn	118	115	1	He	1.703	1.703	37.18	1641	0.10	2000	
Sb	123	115	1	He	0.365	0.365	7.88	371	0.10	200	
Ba	137	115	1	He	75.505	75.505	2.92	24275	0.31	10000	
W	182	159	1	He	0.565	0.565	7.54	3956	0.01	2500	
Tl	205	165	1	He	0.167	0.167	22.42	1317	0.01	2000	
Pb	208	165	1	He	0.093	0.093	51.36	1996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017525	1.33	1884762	107.04	60	120	
Sc	45	1	He	114868	0.12	134073	85.68	60	120	
Sc	45	2	NoGas	7693312	0.54	8481025	90.71	60	120	
Rh	103	1	He	730413	0.44	903580	80.84	60	120	
In	115	1	He	192829	1.01	224817	85.77	60	120	
Tb	159	1	He	926532	1.26	1046002	88.58	60	120	
Ho	165	1	He	939629	0.62	1057439	88.86	60	120	
Bi	209	1	He	628046	0.07	731380	85.87	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64223-f-1-a@5
Data File Name	152SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:15:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.751	5.751	1.37	228048	0.00	10000	
Be	9	45	2	NoGas	0.206	0.206	9.77	1274	0.02	2000	
B	11	45	2	NoGas	79.976	79.976	1.27	287192	0.03	300	
Na	23	45	1	He	48562.079	48562.079	6.23	17457640	0.28	500000	
Mg	24	45	1	He	2588.808	2588.808	5.52	517732	0.50	500000	
Al	27	45	1	He	1.711	1.711	23.77	244	0.70	200000	
K	39	45	1	He	387.577	387.577	7.71	44901	0.86	500000	
Ca	44	45	1	He	7212.653	7212.653	7.45	40255	17.92	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.055	0.055	113.77	125	0.04	10000	
Cr	52	45	1	He	0.026	0.026	200.58	661	0.00	10000	
Mn	55	45	1	He	4.186	4.186	1.38	3810	0.11	10000	
Fe	56	45	1	He	9.290	9.290	7.87	14466	0.06	200000	
Co	59	45	1	He	0.102	0.102	12.37	614	0.02	5000	
Ni	60	45	1	He	0.036	0.036	202.06	163	0.02	10000	
Cu	63	45	1	He	-0.413	-0.413	-9.51	1146	-0.04	10000	
Zn	66	45	1	He	2.657	2.657	19.52	1003	0.26	10000	
As	75	103	1	He	0.108	0.108	18.62	37	0.29	10000	
Se	78	115	1	He	0.349	0.349	29.20	6	5.84	10000	
Sr	88	103	1	He	148.000	148.000	6.08	131173	0.11	10000	
Mo	95	103	1	He	0.636	0.636	3.41	716	0.09	2000	
Ag	107	103	1	He	0.001	0.001	109.32	11	0.01	300	
Cd	111	115	1	He	0.059	0.059	35.99	29	0.20	4000	
Sn	118	115	1	He	0.492	0.492	33.16	715	0.07	2000	
Sb	123	115	1	He	0.055	0.055	81.57	96	0.06	200	
Ba	137	115	1	He	14.952	14.952	6.18	5252	0.28	10000	
W	182	159	1	He	0.222	0.222	21.49	2493	0.01	2500	
Tl	205	165	1	He	0.038	0.038	10.98	353	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-63.46	1119	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2071974	0.28	1884762	109.93	60	120	
Sc	45	1	He	122837	6.21	134073	91.62	60	120	
Sc	45	2	NoGas	7840070	1.78	8481025	92.44	60	120	
Rh	103	1	He	805257	5.96	903580	89.12	60	120	
In	115	1	He	210972	5.66	224817	93.84	60	120	
Tb	159	1	He	993143	7.02	1046002	94.95	60	120	
Ho	165	1	He	1006155	6.81	1057439	95.15	60	120	
Bi	209	1	He	684352	5.52	731380	93.57	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64223-f-1-a
Data File Name	153SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:19:23-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	139.977	139.977	1.43	2943077	0.00	10000	
Be	9	45	2	NoGas	1168.584	1168.584	0.49	6254812	0.02	2000	
B	11	45	2	NoGas	405.870	405.870	0.29	1377467	0.03	300	>LDR
Na	23	45	1	He	249533.289	249533.289	1.87	82871454	0.30	500000	
Mg	24	45	1	He	23202.061	23202.061	2.11	4281912	0.54	500000	
Al	27	45	1	He	10061.705	10061.705	2.46	773739	1.30	200000	
K	39	45	1	He	12019.027	12019.027	1.41	1061534	1.13	500000	
Ca	44	45	1	He	46063.555	46063.555	1.86	236795	19.45	500000	
Ti	47	45	1	He	102.357	102.357	2.02	3808	2.69	2500	
V	51	45	1	He	1083.903	1083.903	3.97	1437854	0.08	10000	
Cr	52	45	1	He	1058.551	1058.551	2.91	1736169	0.06	10000	
Mn	55	45	1	He	1034.646	1034.646	1.80	840508	0.12	10000	
Fe	56	45	1	He	10235.622	10235.622	2.74	12871502	0.08	200000	
Co	59	45	1	He	1066.290	1066.290	2.26	3194810	0.03	5000	
Ni	60	45	1	He	993.533	993.533	2.09	835894	0.12	10000	
Cu	63	45	1	He	1036.921	1036.921	2.62	2462671	0.04	10000	
Zn	66	45	1	He	997.154	997.154	1.95	302830	0.33	10000	
As	75	103	1	He	1036.494	1036.494	1.18	188574	0.55	10000	
Se	78	115	1	He	999.657	999.657	1.02	8362	11.95	10000	
Sr	88	103	1	He	1819.454	1819.454	3.68	1463824	0.12	10000	
Mo	95	103	1	He	112.288	112.288	1.80	112530	0.10	2000	
Ag	107	103	1	He	101.969	101.969	0.99	377805	0.03	300	
Cd	111	115	1	He	1019.334	1019.334	1.86	425555	0.24	4000	
Sn	118	115	1	He	1048.925	1048.925	0.63	829942	0.13	2000	
Sb	123	115	1	He	107.462	107.462	0.32	95780	0.11	200	
Ba	137	115	1	He	1149.295	1149.295	1.00	358815	0.32	10000	
W	182	159	1	He	107.473	107.473	2.04	519512	0.02	2500	
Tl	205	165	1	He	260.520	260.520	0.41	2029671	0.01	2000	
Pb	208	165	1	He	1018.648	1018.648	0.72	10407376	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915690	1.56	1884762	101.64	60	120	
Sc	45	1	He	113216	0.82	134073	84.44	60	120	
Sc	45	2	NoGas	7580971	0.50	8481025	89.39	60	120	
Rh	103	1	He	729277	0.65	903580	80.71	60	120	
In	115	1	He	187291	2.18	224817	83.31	60	120	
Tb	159	1	He	936120	1.27	1046002	89.49	60	120	
Ho	165	1	He	953314	1.07	1057439	90.15	60	120	
Bi	209	1	He	614516	0.12	731380	84.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-b ms
Data File Name	154SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:23:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	134.806	134.806	0.79	2891302	0.00	10000	
Be	9	45	2	NoGas	1144.802	1144.802	1.22	6241746	0.02	2000	
B	11	45	2	NoGas	409.302	409.302	1.40	1414948	0.03	300	>LDR
Na	23	45	1	He	250137.616	250137.616	2.70	86488615	0.29	500000	
Mg	24	45	1	He	22611.027	22611.027	2.64	4344718	0.52	500000	
Al	27	45	1	He	9519.729	9519.729	2.82	762185	1.25	200000	
K	39	45	1	He	11571.287	11571.287	1.53	1064443	1.09	500000	
Ca	44	45	1	He	45634.736	45634.736	1.75	244260	18.68	500000	
Ti	47	45	1	He	97.333	97.333	1.06	3770	2.58	2500	
V	51	45	1	He	1023.088	1023.088	3.75	1412912	0.07	10000	
Cr	52	45	1	He	1010.861	1010.861	2.92	1726138	0.06	10000	
Mn	55	45	1	He	986.124	986.124	2.81	834031	0.12	10000	
Fe	56	45	1	He	9700.982	9700.982	2.41	12701429	0.08	200000	
Co	59	45	1	He	1002.198	1002.198	1.95	3126600	0.03	5000	
Ni	60	45	1	He	946.376	946.376	2.40	828998	0.11	10000	
Cu	63	45	1	He	979.882	979.882	2.01	2423373	0.04	10000	
Zn	66	45	1	He	949.043	949.043	2.08	300104	0.32	10000	
As	75	103	1	He	1016.208	1016.208	0.36	187607	0.54	10000	
Se	78	115	1	He	972.668	972.668	1.15	8324	11.69	10000	
Sr	88	103	1	He	1875.227	1875.227	2.53	1530905	0.12	10000	
Mo	95	103	1	He	109.297	109.297	0.80	111144	0.10	2000	
Ag	107	103	1	He	97.688	97.688	0.78	367264	0.03	300	
Cd	111	115	1	He	987.265	987.265	0.43	421644	0.23	4000	
Sn	118	115	1	He	1002.394	1002.394	0.88	811308	0.12	2000	
Sb	123	115	1	He	103.951	103.951	0.78	94765	0.11	200	
Ba	137	115	1	He	1119.074	1119.074	0.55	357395	0.31	10000	
W	182	159	1	He	102.496	102.496	0.69	501961	0.02	2500	
Tl	205	165	1	He	249.588	249.588	2.11	1973140	0.01	2000	
Pb	208	165	1	He	983.240	983.240	0.86	10193119	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1931750	0.46	1884762	102.49	60	120	
Sc	45	1	He	117897	1.45	134073	87.93	60	120	
Sc	45	2	NoGas	7722605	0.56	8481025	91.06	60	120	
Rh	103	1	He	740041	0.74	903580	81.90	60	120	
In	115	1	He	191573	0.80	224817	85.21	60	120	
Tb	159	1	He	948345	0.45	1046002	90.66	60	120	
Ho	165	1	He	967276	0.39	1057439	91.47	60	120	
Bi	209	1	He	623820	0.98	731380	85.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-c msd
Data File Name	155SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:27:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	130.300	130.300	1.41	2839520	0.00	10000	
Be	9	45	2	NoGas	1114.970	1114.970	0.78	6169295	0.02	2000	
B	11	45	2	NoGas	410.315	410.315	0.45	1439554	0.03	300	>LDR
Na	23	45	1	He	250893.878	250893.878	0.47	86815693	0.29	500000	
Mg	24	45	1	He	22822.679	22822.679	0.64	4388449	0.52	500000	
Al	27	45	1	He	9588.760	9588.760	0.36	768313	1.25	200000	
K	39	45	1	He	11655.511	11655.511	0.53	1072858	1.09	500000	
Ca	44	45	1	He	46168.576	46168.576	0.95	247292	18.67	500000	
Ti	47	45	1	He	99.167	99.167	0.27	3844	2.58	2500	
V	51	45	1	He	1035.014	1035.014	1.52	1430689	0.07	10000	
Cr	52	45	1	He	1013.117	1013.117	0.76	1731399	0.06	10000	
Mn	55	45	1	He	985.711	985.711	0.73	834350	0.12	10000	
Fe	56	45	1	He	9778.052	9778.052	0.52	12812049	0.08	200000	
Co	59	45	1	He	1006.929	1006.929	0.98	3143654	0.03	5000	
Ni	60	45	1	He	948.769	948.769	0.76	831718	0.11	10000	
Cu	63	45	1	He	985.622	985.622	0.93	2439214	0.04	10000	
Zn	66	45	1	He	954.241	954.241	0.90	301957	0.32	10000	
As	75	103	1	He	1007.079	1007.079	0.83	188828	0.53	10000	
Se	78	115	1	He	962.229	962.229	1.76	8431	11.41	10000	
Sr	88	103	1	He	1854.276	1854.276	1.46	1537379	0.12	10000	
Mo	95	103	1	He	108.277	108.277	1.19	111828	0.10	2000	
Ag	107	103	1	He	97.287	97.287	0.93	371496	0.03	300	
Cd	111	115	1	He	965.686	965.686	1.25	422284	0.23	4000	
Sn	118	115	1	He	990.196	990.196	0.91	820630	0.12	2000	
Sb	123	115	1	He	102.696	102.696	1.26	95865	0.11	200	
Ba	137	115	1	He	1093.051	1093.051	1.66	357413	0.31	10000	
W	182	159	1	He	100.581	100.581	0.90	502403	0.02	2500	
Tl	205	165	1	He	246.837	246.837	1.07	1969410	0.01	2000	
Pb	208	165	1	He	979.587	979.587	0.37	10249510	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915171	0.96	1884762	101.61	60	120	
Sc	45	1	He	117957	0.58	134073	87.98	60	120	
Sc	45	2	NoGas	7837211	1.01	8481025	92.41	60	120	
Rh	103	1	He	751636	0.60	903580	83.18	60	120	
In	115	1	He	196175	1.72	224817	87.26	60	120	
Tb	159	1	He	967220	0.04	1046002	92.47	60	120	
Ho	165	1	He	976281	0.30	1057439	92.33	60	120	
Bi	209	1	He	633851	0.52	731380	86.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-2-a
Data File Name	156SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:31:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	39.532	39.532	0.95	889039	0.00	10000	
Be	9	45	2	NoGas	0.906	0.906	2.19	4886	0.02	2000	
B	11	45	2	NoGas	387.324	387.324	0.53	1290626	0.03	300	>LDR
Na	23	45	1	He	362096.975	362096.975	1.43	126207417	0.29	500000	
Mg	24	45	1	He	22390.340	22390.340	1.12	4336846	0.52	500000	
Al	27	45	1	He	3.570	3.570	13.91	387	0.92	200000	
K	39	45	1	He	3259.502	3259.502	0.65	307886	1.06	500000	
Ca	44	45	1	He	65791.102	65791.102	0.37	354892	18.54	500000	
Ti	47	45	1	He	0.170	0.170	86.61	7	2.55	2500	
V	51	45	1	He	0.095	0.095	124.30	179	0.05	10000	
Cr	52	45	1	He	0.149	0.149	38.00	854	0.02	10000	
Mn	55	45	1	He	35.927	35.927	1.92	30748	0.12	10000	
Fe	56	45	1	He	79.093	79.093	1.35	106154	0.07	200000	
Co	59	45	1	He	0.389	0.389	8.05	1496	0.03	5000	
Ni	60	45	1	He	0.297	0.297	20.56	389	0.08	10000	
Cu	63	45	1	He	-0.009	-0.009	-750.03	2119	0.00	10000	
Zn	66	45	1	He	3.653	3.653	0.46	1295	0.28	10000	
As	75	103	1	He	0.565	0.565	4.09	119	0.47	10000	
Se	78	115	1	He	0.887	0.887	42.12	10	8.49	10000	
Sr	88	103	1	He	1323.261	1323.261	0.96	1084601	0.12	10000	
Mo	95	103	1	He	4.201	4.201	7.07	4302	0.10	2000	
Ag	107	103	1	He	0.014	0.014	46.37	58	0.02	300	
Cd	111	115	1	He	0.248	0.248	34.19	112	0.22	4000	
Sn	118	115	1	He	3.111	3.111	24.59	2897	0.11	2000	
Sb	123	115	1	He	0.483	0.483	1.81	497	0.10	200	
Ba	137	115	1	He	136.011	136.011	2.98	45306	0.30	10000	
W	182	159	1	He	0.781	0.781	4.93	5120	0.02	2500	
Tl	205	165	1	He	0.175	0.175	16.17	1411	0.01	2000	
Pb	208	165	1	He	0.123	0.123	17.69	2356	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915224	1.14	1884762	101.62	60	120	
Sc	45	1	He	118819	0.98	134073	88.62	60	120	
Sc	45	2	NoGas	7441240	0.82	8481025	87.74	60	120	
Rh	103	1	He	743069	0.82	903580	82.24	60	120	
In	115	1	He	199831	1.72	224817	88.89	60	120	
Tb	159	1	He	951636	1.60	1046002	90.98	60	120	
Ho	165	1	He	962679	1.09	1057439	91.04	60	120	
Bi	209	1	He	631712	0.95	731380	86.37	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-3-a
Data File Name	157SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:35:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.496	29.496	1.56	721142	0.00	10000	
Be	9	45	2	NoGas	0.580	0.580	5.53	3319	0.02	2000	
B	11	45	2	NoGas	274.430	274.430	1.05	959194	0.03	300	
Na	23	45	1	He	235040.820	235040.820	1.11	78527501	0.30	500000	
Mg	24	45	1	He	21249.505	21249.505	1.91	3945242	0.54	500000	
Al	27	45	1	He	2.688	2.688	41.35	302	0.89	200000	
K	39	45	1	He	2574.123	2574.123	1.42	234648	1.10	500000	
Ca	44	45	1	He	54724.689	54724.689	0.70	282974	19.34	500000	
Ti	47	45	1	He	0.298	0.298	105.34	11	2.68	2500	
V	51	45	1	He	-0.003	-0.003	-5637.37	42	-0.01	10000	
Cr	52	45	1	He	0.065	0.065	43.99	681	0.01	10000	
Mn	55	45	1	He	27.433	27.433	2.00	22531	0.12	10000	
Fe	56	45	1	He	124.776	124.776	1.49	159529	0.08	200000	
Co	59	45	1	He	0.353	0.353	7.30	1326	0.03	5000	
Ni	60	45	1	He	0.237	0.237	21.95	322	0.07	10000	
Cu	63	45	1	He	-0.307	-0.307	-11.39	1320	-0.02	10000	
Zn	66	45	1	He	2.911	2.911	9.46	1014	0.29	10000	
As	75	103	1	He	0.775	0.775	4.43	157	0.49	10000	
Se	78	115	1	He	0.645	0.645	47.38	8	7.94	10000	
Sr	88	103	1	He	1087.932	1087.932	0.28	886879	0.12	10000	
Mo	95	103	1	He	3.609	3.609	4.76	3675	0.10	2000	
Ag	107	103	1	He	0.005	0.005	26.69	27	0.02	300	
Cd	111	115	1	He	0.084	0.084	36.29	38	0.22	4000	
Sn	118	115	1	He	0.923	0.923	21.33	1033	0.09	2000	
Sb	123	115	1	He	0.302	0.302	4.55	320	0.09	200	
Ba	137	115	1	He	111.930	111.930	1.55	36793	0.30	10000	
W	182	159	1	He	0.320	0.320	10.46	2815	0.01	2500	
Tl	205	165	1	He	0.060	0.060	10.07	503	0.01	2000	
Pb	208	165	1	He	0.024	0.024	13.54	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1994483	1.21	1884762	105.82	60	120	
Sc	45	1	He	113888	0.41	134073	84.94	60	120	
Sc	45	2	NoGas	7786599	1.16	8481025	91.81	60	120	
Rh	103	1	He	739060	1.32	903580	81.79	60	120	
In	115	1	He	197193	1.77	224817	87.71	60	120	
Tb	159	1	He	935780	1.12	1046002	89.46	60	120	
Ho	165	1	He	951529	1.41	1057439	89.98	60	120	
Bi	209	1	He	624760	0.16	731380	85.42	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	158_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:39:59-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.447	0.234	1244129	0.99	50	114.9	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.724	1.049	287242	0.36	50	109.4	89.5	110.5	
B	11	45	2	NoGas	84.181	0.582	286178	1.11	50	168.4	89.5	110.5	CCV Failed
Na	23	45	1	He	24759.074	1.185	8300458	0.77	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24642.993	2.090	4588448	0.54	25000	98.6	89.5	110.5	
Al	27	45	1	He	252.691	3.114	19696	1.61	250	101.1	89.5	110.5	
K	39	45	1	He	25426.429	1.784	2257590	1.60	25000	101.7	89.5	110.5	
Ca	44	45	1	He	25538.154	2.242	132533	1.64	25000	102.2	89.5	110.5	
Ti	47	45	1	He	52.316	11.621	1962	10.72	50	104.6	89.5	110.5	
V	51	45	1	He	50.585	2.365	67748	1.13	50	101.2	89.5	110.5	
Cr	52	45	1	He	49.740	1.817	82860	0.25	50	99.5	89.5	110.5	
Mn	55	45	1	He	254.989	2.288	209078	1.01	250	102.0	89.5	110.5	
Fe	56	45	1	He	12755.642	1.986	16184064	1.04	12500	102.0	89.5	110.5	
Co	59	45	1	He	50.693	3.312	153483	2.07	50	101.4	89.5	110.5	
Ni	60	45	1	He	50.262	2.037	42781	0.28	50	100.5	89.5	110.5	
Cu	63	45	1	He	49.727	2.402	121120	1.15	50	99.5	89.5	110.5	
Zn	66	45	1	He	50.789	2.179	15683	1.48	50	101.6	89.5	110.5	
As	75	103	1	He	49.350	0.199	9336	0.61	50	98.7	89.5	110.5	
Se	78	115	1	He	48.763	6.939	428	5.54	50	97.5	89.5	110.5	
Sr	88	103	1	He	51.622	1.163	43148	0.92	50	103.2	89.5	110.5	
Mo	95	103	1	He	52.314	0.978	54437	0.74	50	104.6	89.5	110.5	
Ag	107	103	1	He	50.523	1.080	194362	0.80	50	101.0	89.5	110.5	
Cd	111	115	1	He	50.563	0.958	22042	0.83	50	101.1	89.5	110.5	
Sn	118	115	1	He	50.410	1.777	41890	1.32	50	100.8	89.5	110.5	
Sb	123	115	1	He	52.435	2.275	48805	1.49	50	104.9	89.5	110.5	
Ba	137	115	1	He	51.548	1.734	16807	1.62	50	103.1	89.5	110.5	
W	182	159	1	He	51.951	1.390	253801	0.63	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.796	0.749	395418	0.52	50	101.6	89.5	110.5	
Pb	208	165	1	He	50.711	0.801	518654	0.57	50	101.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1949271	1.04	1884762	103.42	60	120	
Sc	45	1	He	114251	1.93	134073	85.22	60	120	
Sc	45	2	NoGas	7431504	0.78	8481025	87.63	60	120	
Rh	103	1	He	757240	0.61	903580	83.80	60	120	
In	115	1	He	195546	1.50	224817	86.98	60	120	
Tb	159	1	He	943750	0.84	1046002	90.22	60	120	
Ho	165	1	He	952450	0.23	1057439	90.07	60	120	
Bi	209	1	He	649997	0.90	731380	88.87	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	159_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:44:09-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.054	6.0	122049	0.8	8	
Be	9	45	2	NoGas	0.469	12.5	2574	11.9	1	
B	11	45	2	NoGas	27.973	0.4	99646	0.6	20	CCB High
Na	23	45	1	He	86.485	3.3	31862	2.1	1000	
Mg	24	45	1	He	24.662	7.4	4981	6.8	1000	
Al	27	45	1	He	0.435	15.7	124	3.1	50	
K	39	45	1	He	36.580	6.7	10470	1.6	1000	
Ca	44	45	1	He	33.825	32.0	329	17.5	1000	
Ti	47	45	1	He	0.061	86.6	2	86.6	20	
V	51	45	1	He	-0.074	-85.5	-51	-159.4	2	
Cr	52	45	1	He	0.027	139.8	601	11.0	2	
Mn	55	45	1	He	0.360	2.8	397	2.2	2	
Fe	56	45	1	He	16.096	7.8	21433	5.9	50	
Co	59	45	1	He	0.028	40.9	337	8.5	1	
Ni	60	45	1	He	-0.022	-64.5	100	12.0	2	
Cu	63	45	1	He	-0.475	-7.4	893	8.8	2	
Zn	66	45	1	He	0.410	30.1	243	14.3	20	
As	75	103	1	He	0.137	22.9	42	14.8	2	
Se	78	115	1	He	0.370	21.1	6	13.1	2	
Sr	88	103	1	He	0.435	10.3	407	9.2	10	
Mo	95	103	1	He	0.166	17.6	189	15.8	2	
Ag	107	103	1	He	0.062	8.8	250	8.7	0.2	
Cd	111	115	1	He	0.106	12.3	49	11.4	0.2	
Sn	118	115	1	He	0.676	15.2	837	11.3	10	
Sb	123	115	1	He	0.109	18.2	141	13.8	2	
Ba	137	115	1	He	0.076	82.3	30	67.6	5	
W	182	159	1	He	0.421	9.7	3312	5.9	10	
Tl	205	165	1	He	0.128	3.9	1033	3.0	0.5	
Pb	208	165	1	He	0.069	9.4	1778	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1969015	1.21	1884762	104.47	60	120	
Sc	45	1	He	110739	1.43	134073	82.60	60	120	
Sc	45	2	NoGas	7387664	0.24	8481025	87.11	60	120	
Rh	103	1	He	778480	0.66	903580	86.16	60	120	
In	115	1	He	199623	1.19	224817	88.79	60	120	
Tb	159	1	He	938817	0.55	1046002	89.75	60	120	
Ho	165	1	He	952873	1.16	1057439	90.11	60	120	
Bi	209	1	He	671540	0.21	731380	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-4-a
Data File Name	160SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:48:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.533	31.533	0.27	746484	0.00	10000	
Be	9	45	2	NoGas	0.311	0.311	18.10	1800	0.02	2000	
B	11	45	2	NoGas	281.857	281.857	0.25	962855	0.03	300	
Na	23	45	1	He	273347.424	273347.424	0.34	89129021	0.31	500000	
Mg	24	45	1	He	21744.928	21744.928	1.08	3940105	0.55	500000	
Al	27	45	1	He	2.345	2.345	20.28	269	0.87	200000	
K	39	45	1	He	2944.668	2944.668	1.83	260902	1.13	500000	
Ca	44	45	1	He	57889.024	57889.024	2.27	292156	19.81	500000	
Ti	47	45	1	He	0.031	0.031	173.21	1	2.78	2500	
V	51	45	1	He	0.214	0.214	69.43	324	0.07	10000	
Cr	52	45	1	He	0.108	0.108	51.86	734	0.01	10000	
Mn	55	45	1	He	28.211	28.211	2.63	22611	0.12	10000	
Fe	56	45	1	He	119.020	119.020	1.54	148583	0.08	200000	
Co	59	45	1	He	0.575	0.575	2.55	1949	0.03	5000	
Ni	60	45	1	He	0.232	0.232	22.40	311	0.07	10000	
Cu	63	45	1	He	-0.386	-0.386	-1.77	1104	-0.03	10000	
Zn	66	45	1	He	2.810	2.810	5.16	960	0.29	10000	
As	75	103	1	He	0.682	0.682	9.32	135	0.51	10000	
Se	78	115	1	He	0.149	0.149	62.82	4	4.09	10000	
Sr	88	103	1	He	1166.680	1166.680	0.33	912547	0.13	10000	
Mo	95	103	1	He	4.010	4.010	3.74	3916	0.10	2000	
Ag	107	103	1	He	0.001	0.001	4.63	10	0.01	300	
Cd	111	115	1	He	0.039	0.039	41.47	18	0.22	4000	
Sn	118	115	1	He	0.298	0.298	59.70	493	0.06	2000	
Sb	123	115	1	He	0.379	0.379	13.44	379	0.10	200	
Ba	137	115	1	He	168.358	168.358	0.38	53368	0.32	10000	
W	182	159	1	He	0.306	0.306	5.79	2697	0.01	2500	
Tl	205	165	1	He	0.025	0.025	6.81	229	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-63.53	948	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1930539	0.76	1884762	102.43	60	120	
Sc	45	1	He	111154	1.29	134073	82.91	60	120	
Sc	45	2	NoGas	7611492	0.22	8481025	89.75	60	120	
Rh	103	1	He	709099	1.79	903580	78.48	60	120	
In	115	1	He	190128	1.37	224817	84.57	60	120	
Tb	159	1	He	918476	0.73	1046002	87.81	60	120	
Ho	165	1	He	932619	0.94	1057439	88.20	60	120	
Bi	209	1	He	615867	0.80	731380	84.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-5-a
Data File Name	161SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:52:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.081	26.081	0.72	655703	0.00	10000	
Be	9	45	2	NoGas	0.270	0.270	12.54	1630	0.02	2000	
B	11	45	2	NoGas	217.942	217.942	0.87	770114	0.03	300	
Na	23	45	1	He	162696.671	162696.671	0.96	56832396	0.29	500000	
Mg	24	45	1	He	21199.000	21199.000	1.46	4114997	0.52	500000	
Al	27	45	1	He	1.361	1.361	47.36	209	0.65	200000	
K	39	45	1	He	2514.179	2514.179	1.86	239781	1.05	500000	
Ca	44	45	1	He	58968.609	58968.609	1.19	318784	18.50	500000	
Ti	47	45	1	He	0.085	0.085	100.49	3	2.56	2500	
V	51	45	1	He	0.097	0.097	96.35	182	0.05	10000	
Cr	52	45	1	He	0.074	0.074	85.84	728	0.01	10000	
Mn	55	45	1	He	23.264	23.264	2.31	19996	0.12	10000	
Fe	56	45	1	He	607.985	607.985	2.21	805853	0.08	200000	
Co	59	45	1	He	0.247	0.247	13.51	1052	0.02	5000	
Ni	60	45	1	He	0.082	0.082	40.00	200	0.04	10000	
Cu	63	45	1	He	-0.291	-0.291	-7.74	1418	-0.02	10000	
Zn	66	45	1	He	2.168	2.168	3.11	823	0.26	10000	
As	75	103	1	He	0.948	0.948	2.75	194	0.49	10000	
Se	78	115	1	He	0.013	0.013	643.69	3	0.50	10000	
Sr	88	103	1	He	1092.731	1092.731	0.31	913314	0.12	10000	
Mo	95	103	1	He	2.810	2.810	4.14	2937	0.10	2000	
Ag	107	103	1	He	0.001	0.001	233.86	11	0.01	300	
Cd	111	115	1	He	0.025	0.025	19.73	13	0.20	4000	
Sn	118	115	1	He	0.040	0.040	80.69	304	0.01	2000	
Sb	123	115	1	He	0.246	0.246	10.78	274	0.09	200	
Ba	137	115	1	He	104.146	104.146	3.02	35070	0.30	10000	
W	182	159	1	He	0.222	0.222	10.08	2423	0.01	2500	
Tl	205	165	1	He	0.019	0.019	28.44	188	0.01	2000	
Pb	208	165	1	He	-0.006	-0.006	-146.40	1056	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2011365	1.49	1884762	106.72	60	120	
Sc	45	1	He	119071	0.68	134073	88.81	60	120	
Sc	45	2	NoGas	7854384	1.04	8481025	92.61	60	120	
Rh	103	1	He	757707	1.51	903580	83.86	60	120	
In	115	1	He	201981	0.62	224817	89.84	60	120	
Tb	159	1	He	968436	0.82	1046002	92.58	60	120	
Ho	165	1	He	990575	1.55	1057439	93.68	60	120	
Bi	209	1	He	650013	1.25	731380	88.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-6-a
Data File Name	162SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:56:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.201	20.201	1.94	513824	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	8.62	1404	0.02	2000	
B	11	45	2	NoGas	626.734	626.734	2.18	2123461	0.03	300	>LDR
Na	23	45	1	He	362038.553	362038.553	0.82	124549936	0.29	500000	
Mg	24	45	1	He	13564.106	13564.106	0.97	2593225	0.52	500000	
Al	27	45	1	He	3.815	3.815	15.10	401	0.95	200000	
K	39	45	1	He	1507.763	1507.763	0.28	144741	1.04	500000	
Ca	44	45	1	He	35931.739	35931.739	0.75	191370	18.78	500000	
Ti	47	45	1	He	0.144	0.144	92.10	6	2.59	2500	
V	51	45	1	He	-0.040	-0.040	-262.98	-8	0.48	10000	
Cr	52	45	1	He	0.061	0.061	17.50	694	0.01	10000	
Mn	55	45	1	He	21.950	21.950	0.53	18586	0.12	10000	
Fe	56	45	1	He	161.119	161.119	0.97	211595	0.08	200000	
Co	59	45	1	He	0.205	0.205	10.71	906	0.02	5000	
Ni	60	45	1	He	0.022	0.022	52.30	144	0.02	10000	
Cu	63	45	1	He	-0.288	-0.288	-20.44	1405	-0.02	10000	
Zn	66	45	1	He	1.154	1.154	8.49	492	0.23	10000	
As	75	103	1	He	2.451	2.451	4.19	473	0.52	10000	
Se	78	115	1	He	0.295	0.295	28.75	5	5.73	10000	
Sr	88	103	1	He	1006.582	1006.582	1.48	831909	0.12	10000	
Mo	95	103	1	He	11.655	11.655	3.10	12010	0.10	2000	
Ag	107	103	1	He	0.002	0.002	43.60	16	0.02	300	
Cd	111	115	1	He	0.030	0.030	33.43	15	0.20	4000	
Sn	118	115	1	He	0.525	0.525	38.19	711	0.07	2000	
Sb	123	115	1	He	0.173	0.173	3.56	202	0.09	200	
Ba	137	115	1	He	47.425	47.425	0.73	15822	0.30	10000	
W	182	159	1	He	0.227	0.227	8.48	2415	0.01	2500	
Tl	205	165	1	He	0.014	0.014	30.20	147	0.01	2000	
Pb	208	165	1	He	-0.003	-0.003	-342.32	1066	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1884377	1.20	1884762	99.98	60	120	
Sc	45	1	He	117276	1.05	134073	87.47	60	120	
Sc	45	2	NoGas	7584665	1.32	8481025	89.43	60	120	
Rh	103	1	He	749331	0.99	903580	82.93	60	120	
In	115	1	He	200064	0.43	224817	88.99	60	120	
Tb	159	1	He	954783	0.59	1046002	91.28	60	120	
Ho	165	1	He	967539	0.60	1057439	91.50	60	120	
Bi	209	1	He	630429	1.67	731380	86.20	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-7-a
Data File Name	163SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:00:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.217	31.217	0.99	749167	0.00	10000	
Be	9	45	2	NoGas	0.198	0.198	9.74	1208	0.02	2000	
B	11	45	2	NoGas	313.359	313.359	4.10	1082723	0.03	300	>LDR
Na	23	45	1	He	286054.785	286054.785	0.43	98127596	0.29	500000	
Mg	24	45	1	He	21759.490	21759.490	0.59	4147994	0.52	500000	
Al	27	45	1	He	3.077	3.077	11.24	341	0.90	200000	
K	39	45	1	He	3017.749	3017.749	1.46	281106	1.07	500000	
Ca	44	45	1	He	58816.192	58816.192	0.76	312259	18.84	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.62	2500	
V	51	45	1	He	0.162	0.162	82.69	268	0.06	10000	
Cr	52	45	1	He	0.093	0.093	51.27	746	0.01	10000	
Mn	55	45	1	He	35.023	35.023	2.33	29497	0.12	10000	
Fe	56	45	1	He	362.327	362.327	1.01	472318	0.08	200000	
Co	59	45	1	He	0.307	0.307	4.63	1221	0.03	5000	
Ni	60	45	1	He	0.449	0.449	13.52	514	0.09	10000	
Cu	63	45	1	He	-0.355	-0.355	-6.30	1236	-0.03	10000	
Zn	66	45	1	He	4.316	4.316	8.60	1482	0.29	10000	
As	75	103	1	He	1.078	1.078	4.83	216	0.50	10000	
Se	78	115	1	He	0.406	0.406	90.47	6	6.61	10000	
Sr	88	103	1	He	1207.644	1207.644	0.40	997725	0.12	10000	
Mo	95	103	1	He	3.125	3.125	4.45	3228	0.10	2000	
Ag	107	103	1	He	0.002	0.002	176.18	13	0.01	300	
Cd	111	115	1	He	0.030	0.030	19.51	15	0.20	4000	
Sn	118	115	1	He	0.637	0.637	42.17	804	0.08	2000	
Sb	123	115	1	He	0.267	0.267	8.66	291	0.09	200	
Ba	137	115	1	He	179.625	179.625	2.10	59801	0.30	10000	
W	182	159	1	He	0.326	0.326	12.73	2934	0.01	2500	
Tl	205	165	1	He	0.013	0.013	20.54	137	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-112.78	996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1905908	1.42	1884762	101.12	60	120	
Sc	45	1	He	116934	1.01	134073	87.22	60	120	
Sc	45	2	NoGas	7705373	0.60	8481025	90.85	60	120	
Rh	103	1	He	748979	1.03	903580	82.89	60	120	
In	115	1	He	199685	0.64	224817	88.82	60	120	
Tb	159	1	He	965090	1.22	1046002	92.26	60	120	
Ho	165	1	He	974554	0.89	1057439	92.16	60	120	
Bi	209	1	He	639086	1.03	731380	87.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-8-a
Data File Name	164SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:05:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.469	10.469	1.25	327381	0.00	10000	
Be	9	45	2	NoGas	0.175	0.175	2.63	1104	0.02	2000	
B	11	45	2	NoGas	197.824	197.824	0.81	699245	0.03	300	
Na	23	45	1	He	69692.139	69692.139	2.28	24127491	0.29	500000	
Mg	24	45	1	He	11784.079	11784.079	2.76	2266886	0.52	500000	
Al	27	45	1	He	2.269	2.269	14.00	280	0.81	200000	
K	39	45	1	He	1056.462	1056.462	2.55	104382	1.01	500000	
Ca	44	45	1	He	27849.096	27849.096	1.53	149299	18.65	500000	
Ti	47	45	1	He	0.142	0.142	67.75	6	2.56	2500	
V	51	45	1	He	0.010	0.010	2271.87	65	0.02	10000	
Cr	52	45	1	He	0.047	0.047	40.95	674	0.01	10000	
Mn	55	45	1	He	7.858	7.858	1.95	6771	0.12	10000	
Fe	56	45	1	He	181.149	181.149	3.09	239144	0.08	200000	
Co	59	45	1	He	0.057	0.057	16.23	449	0.01	5000	
Ni	60	45	1	He	-0.049	-0.049	-30.19	83	-0.06	10000	
Cu	63	45	1	He	-0.346	-0.346	-14.26	1270	-0.03	10000	
Zn	66	45	1	He	1.550	1.550	8.92	620	0.25	10000	
As	75	103	1	He	0.166	0.166	21.29	48	0.35	10000	
Se	78	115	1	He	0.127	0.127	173.92	4	3.34	10000	
Sr	88	103	1	He	586.587	586.587	0.85	505954	0.12	10000	
Mo	95	103	1	He	2.690	2.690	5.37	2901	0.09	2000	
Ag	107	103	1	He	0.003	0.003	16.25	19	0.02	300	
Cd	111	115	1	He	0.022	0.022	15.36	12	0.19	4000	
Sn	118	115	1	He	2.187	2.187	4.45	2208	0.10	2000	
Sb	123	115	1	He	0.109	0.109	41.45	148	0.07	200	
Ba	137	115	1	He	96.296	96.296	1.52	33525	0.29	10000	
W	182	159	1	He	0.186	0.186	28.02	2300	0.01	2500	
Tl	205	165	1	He	0.014	0.014	30.80	156	0.01	2000	
Pb	208	165	1	He	-0.006	-0.006	-165.86	1072	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1966666	1.28	1884762	104.35	60	120	
Sc	45	1	He	118034	1.95	134073	88.04	60	120	
Sc	45	2	NoGas	7848757	1.17	8481025	92.54	60	120	
Rh	103	1	He	781935	0.38	903580	86.54	60	120	
In	115	1	He	208810	0.33	224817	92.88	60	120	
Tb	159	1	He	992591	0.32	1046002	94.89	60	120	
Ho	165	1	He	1003574	0.59	1057439	94.91	60	120	
Bi	209	1	He	675077	0.36	731380	92.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-9-a
Data File Name	165SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:09:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	44.866	44.866	2.14	1021435	0.00	10000	
Be	9	45	2	NoGas	0.146	0.146	10.23	915	0.02	2000	
B	11	45	2	NoGas	397.412	397.412	1.06	1359069	0.03	300	>LDR
Na	23	45	1	He	481828.839	481828.839	1.00	166325193	0.29	500000	
Mg	24	45	1	He	20847.102	20847.102	1.40	3999120	0.52	500000	
Al	27	45	1	He	2.370	2.370	19.78	287	0.83	200000	
K	39	45	1	He	3574.666	3574.666	3.02	333610	1.07	500000	
Ca	44	45	1	He	64954.337	64954.337	1.86	346984	18.72	500000	
Ti	47	45	1	He	0.173	0.173	100.56	7	2.60	2500	
V	51	45	1	He	0.060	0.060	139.83	130	0.05	10000	
Cr	52	45	1	He	0.055	0.055	79.18	686	0.01	10000	
Mn	55	45	1	He	11.473	11.473	4.11	9806	0.12	10000	
Fe	56	45	1	He	587.661	587.661	1.90	769758	0.08	200000	
Co	59	45	1	He	0.346	0.346	7.17	1349	0.03	5000	
Ni	60	45	1	He	0.067	0.067	72.11	184	0.04	10000	
Cu	63	45	1	He	-0.287	-0.287	-11.49	1413	-0.02	10000	
Zn	66	45	1	He	2.205	2.205	8.03	826	0.27	10000	
As	75	103	1	He	1.183	1.183	2.15	233	0.51	10000	
Se	78	115	1	He	0.223	0.223	42.38	4	4.97	10000	
Sr	88	103	1	He	1397.764	1397.764	1.28	1140630	0.12	10000	
Mo	95	103	1	He	4.293	4.293	8.29	4374	0.10	2000	
Ag	107	103	1	He	0.001	0.001	92.98	10	0.01	300	
Cd	111	115	1	He	0.028	0.028	8.55	14	0.20	4000	
Sn	118	115	1	He	0.619	0.619	21.74	785	0.08	2000	
Sb	123	115	1	He	0.314	0.314	7.75	334	0.09	200	
Ba	137	115	1	He	68.400	68.400	1.66	22689	0.30	10000	
W	182	159	1	He	0.221	0.221	16.95	2385	0.01	2500	
Tl	205	165	1	He	0.010	0.010	22.63	120	0.01	2000	
Pb	208	165	1	He	-0.001	-0.001	-681.05	1082	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1896180	0.63	1884762	100.61	60	120	
Sc	45	1	He	117682	0.91	134073	87.77	60	120	
Sc	45	2	NoGas	7639004	2.09	8481025	90.07	60	120	
Rh	103	1	He	739830	0.37	903580	81.88	60	120	
In	115	1	He	198959	1.19	224817	88.50	60	120	
Tb	159	1	He	955200	1.12	1046002	91.32	60	120	
Ho	165	1	He	970861	0.40	1057439	91.81	60	120	
Bi	209	1	He	636892	0.58	731380	87.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-10-a
Data File Name	166SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:13:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	44.059	44.059	0.34	942566	0.00	10000	
Be	9	45	2	NoGas	0.125	0.125	6.21	756	0.02	2000	
B	11	45	2	NoGas	390.530	390.530	2.23	1252656	0.03	300	>LDR
Na	23	45	1	He	480954.107	480954.107	1.31	155220190	0.31	500000	
Mg	24	45	1	He	20866.351	20866.351	1.40	3742325	0.56	500000	
Al	27	45	1	He	1.443	1.443	21.36	199	0.73	200000	
K	39	45	1	He	3564.480	3564.480	1.18	311063	1.15	500000	
Ca	44	45	1	He	64524.155	64524.155	1.82	322251	20.02	500000	
Ti	47	45	1	He	0.093	0.093	173.21	3	2.80	2500	
V	51	45	1	He	0.158	0.158	42.83	249	0.06	10000	
Cr	52	45	1	He	0.111	0.111	10.29	731	0.02	10000	
Mn	55	45	1	He	10.642	10.642	4.76	8508	0.13	10000	
Fe	56	45	1	He	579.609	579.609	1.87	709836	0.08	200000	
Co	59	45	1	He	0.016	0.016	56.95	300	0.01	5000	
Ni	60	45	1	He	-0.062	-0.062	-28.64	67	-0.09	10000	
Cu	63	45	1	He	-0.249	-0.249	-18.96	1408	-0.02	10000	
Zn	66	45	1	He	1.824	1.824	10.03	659	0.28	10000	
As	75	103	1	He	1.261	1.261	3.04	232	0.54	10000	
Se	78	115	1	He	0.233	0.233	63.56	4	5.41	10000	
Sr	88	103	1	He	1397.895	1397.895	1.19	1072353	0.13	10000	
Mo	95	103	1	He	4.456	4.456	1.31	4268	0.10	2000	
Ag	107	103	1	He	0.000	0.000	957.99	7	0.00	300	
Cd	111	115	1	He	0.008	0.008	30.11	5	0.17	4000	
Sn	118	115	1	He	0.204	0.204	71.51	411	0.05	2000	
Sb	123	115	1	He	0.027	0.027	131.64	59	0.05	200	
Ba	137	115	1	He	67.223	67.223	1.60	21052	0.32	10000	
W	182	159	1	He	0.178	0.178	24.68	2034	0.01	2500	
Tl	205	165	1	He	0.004	0.004	38.03	62	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-85.66	977	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1761967	0.53	1884762	93.48	60	120	
Sc	45	1	He	110025	1.20	134073	82.06	60	120	
Sc	45	2	NoGas	7162917	0.27	8481025	84.46	60	120	
Rh	103	1	He	695528	1.23	903580	76.97	60	120	
In	115	1	He	187828	1.81	224817	83.55	60	120	
Tb	159	1	He	893336	0.17	1046002	85.40	60	120	
Ho	165	1	He	903056	0.10	1057439	85.40	60	120	
Bi	209	1	He	597758	2.36	731380	81.73	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-11-a
Data File Name	167SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:17:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	40.599	40.599	0.75	884586	0.00	10000	
Be	9	45	2	NoGas	0.101	0.101	32.41	641	0.02	2000	
B	11	45	2	NoGas	367.891	367.891	0.79	1191645	0.03	300	>LDR
Na	23	45	1	He	414817.646	414817.646	0.88	134893624	0.31	500000	
Mg	24	45	1	He	18560.159	18560.159	2.18	3353991	0.55	500000	
Al	27	45	1	He	2.057	2.057	17.66	247	0.83	200000	
K	39	45	1	He	3127.592	3127.592	0.73	275919	1.13	500000	
Ca	44	45	1	He	59270.563	59270.563	1.78	298293	19.87	500000	
Ti	47	45	1	He	0.061	0.061	173.21	2	2.75	2500	
V	51	45	1	He	-0.116	-0.116	-2.48	-106	0.11	10000	
Cr	52	45	1	He	0.027	0.027	48.78	602	0.00	10000	
Mn	55	45	1	He	10.317	10.317	3.20	8316	0.12	10000	
Fe	56	45	1	He	537.461	537.461	1.54	663362	0.08	200000	
Co	59	45	1	He	0.294	0.294	7.99	1119	0.03	5000	
Ni	60	45	1	He	0.019	0.019	269.11	134	0.01	10000	
Cu	63	45	1	He	-0.186	-0.186	-30.37	1566	-0.01	10000	
Zn	66	45	1	He	3.571	3.571	3.50	1183	0.30	10000	
As	75	103	1	He	1.459	1.459	6.29	268	0.54	10000	
Se	78	115	1	He	0.076	0.076	7.39	3	2.55	10000	
Sr	88	103	1	He	1310.629	1310.629	1.77	1011811	0.13	10000	
Mo	95	103	1	He	4.180	4.180	4.01	4029	0.10	2000	
Ag	107	103	1	He	0.000	0.000	536.61	7	0.00	300	
Cd	111	115	1	He	0.017	0.017	34.46	8	0.20	4000	
Sn	118	115	1	He	-0.054	-0.054	-26.42	207	-0.03	2000	
Sb	123	115	1	He	0.245	0.245	6.45	253	0.10	200	
Ba	137	115	1	He	59.041	59.041	1.40	18451	0.32	10000	
W	182	159	1	He	0.190	0.190	30.63	2115	0.01	2500	
Tl	205	165	1	He	0.005	0.005	40.97	71	0.01	2000	
Pb	208	165	1	He	0.007	0.007	138.14	1114	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1812283	1.22	1884762	96.15	60	120	
Sc	45	1	He	110856	0.39	134073	82.68	60	120	
Sc	45	2	NoGas	7231319	0.83	8481025	85.26	60	120	
Rh	103	1	He	699887	0.26	903580	77.46	60	120	
In	115	1	He	187417	1.56	224817	83.36	60	120	
Tb	159	1	He	904534	1.12	1046002	86.48	60	120	
Ho	165	1	He	923853	0.45	1057439	87.37	60	120	
Bi	209	1	He	601611	1.06	731380	82.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-12-a
Data File Name	168SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:21:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	33.375	33.375	0.28	755155	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	8.07	633	0.02	2000	
B	11	45	2	NoGas	308.418	308.418	0.49	1014113	0.03	300	>LDR
Na	23	45	1	He	306924.993	306924.993	2.42	100748540	0.30	500000	
Mg	24	45	1	He	20961.194	20961.194	2.67	3823518	0.55	500000	
Al	27	45	1	He	3.194	3.194	14.76	336	0.95	200000	
K	39	45	1	He	3267.489	3267.489	3.21	290641	1.12	500000	
Ca	44	45	1	He	55477.261	55477.261	1.95	281851	19.68	500000	
Ti	47	45	1	He	0.030	0.030	173.21	1	2.72	2500	
V	51	45	1	He	0.115	0.115	38.22	196	0.06	10000	
Cr	52	45	1	He	0.113	0.113	34.18	747	0.02	10000	
Mn	55	45	1	He	42.664	42.664	3.63	34363	0.12	10000	
Fe	56	45	1	He	291.653	291.653	2.39	364127	0.08	200000	
Co	59	45	1	He	0.239	0.239	7.77	966	0.02	5000	
Ni	60	45	1	He	0.129	0.129	15.05	227	0.06	10000	
Cu	63	45	1	He	-0.244	-0.244	-18.59	1443	-0.02	10000	
Zn	66	45	1	He	3.386	3.386	3.45	1139	0.30	10000	
As	75	103	1	He	0.844	0.844	5.38	166	0.51	10000	
Se	78	115	1	He	0.312	0.312	148.56	5	6.08	10000	
Sr	88	103	1	He	1256.537	1256.537	0.14	999591	0.13	10000	
Mo	95	103	1	He	2.252	2.252	2.10	2242	0.10	2000	
Ag	107	103	1	He	-0.001	-0.001	-411.71	4	-0.01	300	
Cd	111	115	1	He	0.008	0.008	2.10	5	0.16	4000	
Sn	118	115	1	He	0.439	0.439	58.18	619	0.07	2000	
Sb	123	115	1	He	0.349	0.349	15.00	358	0.10	200	
Ba	137	115	1	He	268.165	268.165	1.41	86699	0.31	10000	
W	182	159	1	He	0.398	0.398	19.85	3178	0.01	2500	
Tl	205	165	1	He	0.006	0.006	41.26	80	0.01	2000	
Pb	208	165	1	He	-0.004	-0.004	-69.58	1022	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1800610	1.00	1884762	95.54	60	120	
Sc	45	1	He	111906	0.53	134073	83.47	60	120	
Sc	45	2	NoGas	7331466	0.18	8481025	86.45	60	120	
Rh	103	1	He	721211	1.56	903580	79.82	60	120	
In	115	1	He	193916	1.37	224817	86.25	60	120	
Tb	159	1	He	932566	1.02	1046002	89.16	60	120	
Ho	165	1	He	939504	1.31	1057439	88.85	60	120	
Bi	209	1	He	617523	1.14	731380	84.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-13-a
Data File Name	169SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:26:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	21.913	21.913	0.98	516263	0.00	10000	
Be	9	45	2	NoGas	0.087	0.087	8.43	559	0.02	2000	
B	11	45	2	NoGas	229.143	229.143	0.30	735395	0.03	300	
Na	23	45	1	He	180910.189	180910.189	1.53	57819935	0.31	500000	
Mg	24	45	1	He	11945.246	11945.246	0.24	2121979	0.56	500000	
Al	27	45	1	He	4.380	4.380	4.21	414	1.06	200000	
K	39	45	1	He	2094.999	2094.999	0.71	184037	1.14	500000	
Ca	44	45	1	He	32996.760	32996.760	1.65	163279	20.21	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.039	0.039	194.36	93	0.04	10000	
Cr	52	45	1	He	0.029	0.029	54.74	594	0.00	10000	
Mn	55	45	1	He	7.168	7.168	0.84	5712	0.13	10000	
Fe	56	45	1	He	400.276	400.276	0.75	486019	0.08	200000	
Co	59	45	1	He	0.120	0.120	19.40	597	0.02	5000	
Ni	60	45	1	He	0.004	0.004	368.68	120	0.00	10000	
Cu	63	45	1	He	-0.167	-0.167	-24.53	1582	-0.01	10000	
Zn	66	45	1	He	2.333	2.333	13.85	801	0.29	10000	
As	75	103	1	He	1.066	1.066	9.59	203	0.52	10000	
Se	78	115	1	He	0.126	0.126	140.33	3	3.62	10000	
Sr	88	103	1	He	666.530	666.530	0.27	523531	0.13	10000	
Mo	95	103	1	He	4.250	4.250	0.58	4168	0.10	2000	
Ag	107	103	1	He	0.002	0.002	0.65	13	0.01	300	
Cd	111	115	1	He	0.004	0.004	217.06	3	0.12	4000	
Sn	118	115	1	He	0.250	0.250	57.40	459	0.05	2000	
Sb	123	115	1	He	0.192	0.192	23.49	211	0.09	200	
Ba	137	115	1	He	48.644	48.644	1.16	15575	0.31	10000	
W	182	159	1	He	0.162	0.162	20.00	2004	0.01	2500	
Tl	205	165	1	He	0.006	0.006	36.50	79	0.01	2000	
Pb	208	165	1	He	-0.004	-0.004	-249.55	1010	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1746196	0.86	1884762	92.65	60	120	
Sc	45	1	He	108958	0.97	134073	81.27	60	120	
Sc	45	2	NoGas	7137356	0.59	8481025	84.16	60	120	
Rh	103	1	He	712068	0.35	903580	78.81	60	120	
In	115	1	He	192007	1.13	224817	85.41	60	120	
Tb	159	1	He	911874	1.54	1046002	87.18	60	120	
Ho	165	1	He	926499	1.36	1057439	87.62	60	120	
Bi	209	1	He	619685	0.40	731380	84.73	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	170_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:30:19-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.568	1.211	1141943	1.26	50	113.1	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.793	1.181	262860	0.69	50	107.6	89.5	110.5	
B	11	45	2	NoGas	77.734	0.912	246555	0.72	50	155.5	89.5	110.5	CCV Failed
Na	23	45	1	He	24102.260	1.107	7523244	0.36	25000	96.4	89.5	110.5	
Mg	24	45	1	He	23729.891	2.037	4113945	0.90	25000	94.9	89.5	110.5	
Al	27	45	1	He	238.573	3.245	17319	2.20	250	95.4	89.5	110.5	
K	39	45	1	He	25760.681	1.862	2129338	0.82	25000	103.0	89.5	110.5	
Ca	44	45	1	He	25197.637	2.145	121749	1.17	25000	100.8	89.5	110.5	
Ti	47	45	1	He	47.887	3.331	1673	2.59	50	95.8	89.5	110.5	
V	51	45	1	He	48.955	2.490	61063	3.13	50	97.9	89.5	110.5	
Cr	52	45	1	He	49.172	2.367	76271	1.27	50	98.3	89.5	110.5	
Mn	55	45	1	He	251.361	1.390	191919	1.11	250	100.5	89.5	110.5	
Fe	56	45	1	He	12490.376	1.328	14756085	1.05	12500	99.9	89.5	110.5	
Co	59	45	1	He	49.199	1.838	138716	0.80	50	98.4	89.5	110.5	
Ni	60	45	1	He	49.155	2.006	38958	0.85	50	98.3	89.5	110.5	
Cu	63	45	1	He	48.902	1.690	110937	0.51	50	97.8	89.5	110.5	
Zn	66	45	1	He	50.683	1.263	14572	0.09	50	101.4	89.5	110.5	
As	75	103	1	He	48.624	1.876	8702	1.96	50	97.2	89.5	110.5	
Se	78	115	1	He	47.853	2.577	404	2.19	50	95.7	89.5	110.5	
Sr	88	103	1	He	51.369	0.928	40618	0.90	50	102.7	89.5	110.5	
Mo	95	103	1	He	51.203	1.180	50404	1.21	50	102.4	89.5	110.5	
Ag	107	103	1	He	49.776	1.084	181150	1.10	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.718	0.302	20859	0.25	50	99.4	89.5	110.5	
Sn	118	115	1	He	48.585	1.545	38867	1.96	50	97.2	89.5	110.5	
Sb	123	115	1	He	51.244	1.797	45910	2.19	50	102.5	89.5	110.5	
Ba	137	115	1	He	51.721	3.621	16229	3.44	50	103.4	89.5	110.5	
W	182	159	1	He	51.107	1.288	238735	1.98	50	102.2	89.5	110.5	
Tl	205	165	1	He	49.785	0.974	373350	1.55	50	99.6	89.5	110.5	
Pb	208	165	1	He	49.940	0.668	492059	0.97	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1755534	0.58	1884762	93.14	60	120	
Sc	45	1	He	106366	1.17	134073	79.33	60	120	
Sc	45	2	NoGas	6918693	1.33	8481025	81.58	60	120	
Rh	103	1	He	716329	0.27	903580	79.28	60	120	
In	115	1	He	188179	0.47	224817	83.70	60	120	
Tb	159	1	He	902204	0.84	1046002	86.25	60	120	
Ho	165	1	He	917506	0.68	1057439	86.77	60	120	
Bi	209	1	He	624260	0.64	731380	85.35	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:34:29-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.908	9.0	113297	0.1	8	
Be	9	45	2	NoGas	0.157	18.0	896	14.5	1	
B	11	45	2	NoGas	29.910	2.3	100782	0.8	20	CCB High
Na	23	45	1	He	101.412	1.5	35944	0.5	1000	
Mg	24	45	1	He	23.720	4.6	4708	2.9	1000	
Al	27	45	1	He	0.549	108.3	130	32.7	50	
K	39	45	1	He	39.527	4.4	10500	2.2	1000	
Ca	44	45	1	He	31.152	10.2	308	5.4	1000	
Ti	47	45	1	He	0.220	89.6	8	89.2	20	
V	51	45	1	He	0.053	389.6	109	239.0	2	
Cr	52	45	1	He	0.039	134.7	607	13.5	2	
Mn	55	45	1	He	0.268	23.6	317	15.3	2	
Fe	56	45	1	He	15.630	4.7	20440	5.1	50	
Co	59	45	1	He	0.010	165.0	279	18.0	1	
Ni	60	45	1	He	-0.038	-66.7	86	24.7	2	
Cu	63	45	1	He	-0.428	-3.7	980	4.0	2	
Zn	66	45	1	He	0.221	60.8	183	20.7	20	
As	75	103	1	He	0.101	12.0	34	6.7	2	
Se	78	115	1	He	0.316	58.4	5	33.0	2	
Sr	88	103	1	He	0.593	20.2	532	18.6	10	
Mo	95	103	1	He	0.139	33.0	157	30.9	2	
Ag	107	103	1	He	0.058	18.5	233	18.2	0.2	
Cd	111	115	1	He	0.072	22.1	33	21.9	0.2	
Sn	118	115	1	He	0.323	39.4	533	18.0	10	
Sb	123	115	1	He	0.122	31.8	152	23.4	2	
Ba	137	115	1	He	0.077	49.8	30	40.1	5	
W	182	159	1	He	0.332	20.5	2889	11.8	10	
Tl	205	165	1	He	0.105	18.4	853	18.1	0.5	
Pb	208	165	1	He	0.057	39.6	1666	14.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1813821	0.96	1884762	96.24	60	120	
Sc	45	1	He	108418	1.33	134073	80.86	60	120	
Sc	45	2	NoGas	7024188	1.40	8481025	82.82	60	120	
Rh	103	1	He	763326	0.49	903580	84.48	60	120	
In	115	1	He	198025	2.35	224817	88.08	60	120	
Tb	159	1	He	941455	0.41	1046002	90.01	60	120	
Ho	165	1	He	956101	0.41	1057439	90.42	60	120	
Bi	209	1	He	671540	0.71	731380	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-14-a
Data File Name	172SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:38:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.726	20.726	0.62	492652	0.00	10000	
Be	9	45	2	NoGas	0.108	0.108	7.91	663	0.02	2000	
B	11	45	2	NoGas	217.754	217.754	0.29	697863	0.03	300	
Na	23	45	1	He	150851.830	150851.830	0.53	47945541	0.31	500000	
Mg	24	45	1	He	12106.873	12106.873	1.33	2138556	0.57	500000	
Al	27	45	1	He	2.599	2.599	21.26	281	0.92	200000	
K	39	45	1	He	2029.696	2029.696	0.68	177523	1.14	500000	
Ca	44	45	1	He	31922.475	31922.475	1.52	157092	20.32	500000	
Ti	47	45	1	He	0.187	0.187	86.26	7	2.80	2500	
V	51	45	1	He	-0.035	-0.035	-129.63	0	11.06	10000	
Cr	52	45	1	He	0.103	0.103	4.77	708	0.01	10000	
Mn	55	45	1	He	7.171	7.171	2.47	5682	0.13	10000	
Fe	56	45	1	He	361.212	361.212	1.13	436266	0.08	200000	
Co	59	45	1	He	0.009	0.009	70.90	277	0.00	5000	
Ni	60	45	1	He	0.147	0.147	18.77	234	0.06	10000	
Cu	63	45	1	He	-0.230	-0.230	-6.36	1429	-0.02	10000	
Zn	66	45	1	He	2.920	2.920	11.48	968	0.30	10000	
As	75	103	1	He	0.781	0.781	2.35	153	0.51	10000	
Se	78	115	1	He	0.102	0.102	160.48	3	3.08	10000	
Sr	88	103	1	He	637.012	637.012	1.27	500556	0.13	10000	
Mo	95	103	1	He	4.235	4.235	4.86	4155	0.10	2000	
Ag	107	103	1	He	0.000	0.000	236.91	8	0.01	300	
Cd	111	115	1	He	0.019	0.019	32.43	10	0.20	4000	
Sn	118	115	1	He	0.667	0.667	17.62	804	0.08	2000	
Sb	123	115	1	He	0.068	0.068	25.77	99	0.07	200	
Ba	137	115	1	He	51.785	51.785	2.80	16720	0.31	10000	
W	182	159	1	He	0.193	0.193	10.73	2230	0.01	2500	
Tl	205	165	1	He	0.015	0.015	36.82	157	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-36.74	986	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1788053	0.54	1884762	94.87	60	120	
Sc	45	1	He	108341	0.41	134073	80.81	60	120	
Sc	45	2	NoGas	7123554	0.17	8481025	83.99	60	120	
Rh	103	1	He	712408	0.94	903580	78.84	60	120	
In	115	1	He	193624	0.48	224817	86.13	60	120	
Tb	159	1	He	946301	0.19	1046002	90.47	60	120	
Ho	165	1	He	961011	0.95	1057439	90.88	60	120	
Bi	209	1	He	643295	0.93	731380	87.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-15-a
Data File Name	173SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:42:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.328	23.328	0.67	537420	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	18.68	600	0.02	2000	
B	11	45	2	NoGas	215.967	215.967	1.28	686011	0.03	300	
Na	23	45	1	He	168354.942	168354.942	2.10	53557474	0.31	500000	
Mg	24	45	1	He	14430.850	14430.850	2.09	2551348	0.57	500000	
Al	27	45	1	He	6.082	6.082	6.76	538	1.13	200000	
K	39	45	1	He	1996.907	1996.907	1.64	174956	1.14	500000	
Ca	44	45	1	He	38071.741	38071.741	2.04	187500	20.30	500000	
Ti	47	45	1	He	0.030	0.030	173.21	1	2.74	2500	
V	51	45	1	He	-0.003	-0.003	-1715.94	38	-0.01	10000	
Cr	52	45	1	He	0.012	0.012	278.43	566	0.00	10000	
Mn	55	45	1	He	8.235	8.235	3.60	6515	0.13	10000	
Fe	56	45	1	He	385.468	385.468	2.43	465867	0.08	200000	
Co	59	45	1	He	0.007	0.007	338.76	270	0.00	5000	
Ni	60	45	1	He	-0.002	-0.002	-740.28	114	0.00	10000	
Cu	63	45	1	He	-0.277	-0.277	-2.41	1325	-0.02	10000	
Zn	66	45	1	He	4.107	4.107	2.54	1315	0.31	10000	
As	75	103	1	He	0.727	0.727	7.55	144	0.50	10000	
Se	78	115	1	He	0.273	0.273	62.09	5	5.67	10000	
Sr	88	103	1	He	807.015	807.015	0.98	639258	0.13	10000	
Mo	95	103	1	He	3.519	3.519	1.07	3483	0.10	2000	
Ag	107	103	1	He	0.003	0.003	158.88	17	0.02	300	
Cd	111	115	1	He	0.014	0.014	68.27	8	0.19	4000	
Sn	118	115	1	He	0.279	0.279	56.16	489	0.06	2000	
Sb	123	115	1	He	0.039	0.039	39.41	72	0.05	200	
Ba	137	115	1	He	71.641	71.641	1.56	23254	0.31	10000	
W	182	159	1	He	0.181	0.181	19.61	2141	0.01	2500	
Tl	205	165	1	He	0.007	0.007	22.54	93	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-53.36	968	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1774923	0.95	1884762	94.17	60	120	
Sc	45	1	He	108475	2.28	134073	80.91	60	120	
Sc	45	2	NoGas	7060473	1.02	8481025	83.25	60	120	
Rh	103	1	He	718113	0.50	903580	79.47	60	120	
In	115	1	He	194681	1.02	224817	86.60	60	120	
Tb	159	1	He	934234	0.09	1046002	89.31	60	120	
Ho	165	1	He	954282	1.11	1057439	90.24	60	120	
Bi	209	1	He	636467	0.94	731380	87.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-16-a
Data File Name	174SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:47:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.153	27.153	0.92	622050	0.00	10000	
Be	9	45	2	NoGas	0.063	0.063	32.12	444	0.01	2000	
B	11	45	2	NoGas	237.491	237.491	0.88	768975	0.03	300	
Na	23	45	1	He	206592.387	206592.387	1.49	65262214	0.32	500000	
Mg	24	45	1	He	20561.970	20561.970	1.66	3609572	0.57	500000	
Al	27	45	1	He	4.238	4.238	17.41	399	1.06	200000	
K	39	45	1	He	2229.617	2229.617	2.34	193111	1.15	500000	
Ca	44	45	1	He	55460.696	55460.696	1.17	271160	20.45	500000	
Ti	47	45	1	He	0.156	0.156	91.83	6	2.81	2500	
V	51	45	1	He	0.058	0.058	366.60	115	0.05	10000	
Cr	52	45	1	He	0.055	0.055	101.26	628	0.01	10000	
Mn	55	45	1	He	14.799	14.799	3.26	11540	0.13	10000	
Fe	56	45	1	He	497.039	497.039	1.91	596051	0.08	200000	
Co	59	45	1	He	0.391	0.391	7.97	1363	0.03	5000	
Ni	60	45	1	He	-0.029	-0.029	-38.51	92	-0.03	10000	
Cu	63	45	1	He	-0.247	-0.247	-2.02	1383	-0.02	10000	
Zn	66	45	1	He	4.875	4.875	6.69	1527	0.32	10000	
As	75	103	1	He	1.918	1.918	5.77	353	0.54	10000	
Se	78	115	1	He	0.123	0.123	80.19	3	3.53	10000	
Sr	88	103	1	He	1151.235	1151.235	0.50	901531	0.13	10000	
Mo	95	103	1	He	3.382	3.382	1.39	3309	0.10	2000	
Ag	107	103	1	He	0.002	0.002	122.55	13	0.01	300	
Cd	111	115	1	He	0.013	0.013	34.50	7	0.18	4000	
Sn	118	115	1	He	0.549	0.549	24.84	704	0.08	2000	
Sb	123	115	1	He	0.013	0.013	218.08	48	0.03	200	
Ba	137	115	1	He	86.423	86.423	2.50	27807	0.31	10000	
W	182	159	1	He	0.136	0.136	13.14	1915	0.01	2500	
Tl	205	165	1	He	0.004	0.004	34.33	64	0.01	2000	
Pb	208	165	1	He	-0.014	-0.014	-34.71	924	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1798971	1.32	1884762	95.45	60	120	
Sc	45	1	He	107694	0.95	134073	80.32	60	120	
Sc	45	2	NoGas	7203871	1.25	8481025	84.94	60	120	
Rh	103	1	He	709931	0.81	903580	78.57	60	120	
In	115	1	He	192995	2.51	224817	85.85	60	120	
Tb	159	1	He	929966	1.89	1046002	88.91	60	120	
Ho	165	1	He	944822	1.51	1057439	89.35	60	120	
Bi	209	1	He	625955	0.53	731380	85.59	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-17-a
Data File Name	175SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:51:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.252	9.252	1.18	277797	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	11.06	574	0.02	2000	
B	11	45	2	NoGas	214.529	214.529	0.35	697311	0.03	300	
Na	23	45	1	He	101792.145	101792.145	0.41	32980204	0.31	500000	
Mg	24	45	1	He	19685.041	19685.041	0.77	3543934	0.56	500000	
Al	27	45	1	He	4.933	4.933	20.47	461	1.07	200000	
K	39	45	1	He	1447.165	1447.165	0.88	131130	1.10	500000	
Ca	44	45	1	He	34283.043	34283.043	0.10	171963	19.94	500000	
Ti	47	45	1	He	0.214	0.214	107.00	8	2.75	2500	
V	51	45	1	He	0.195	0.195	50.73	296	0.07	10000	
Cr	52	45	1	He	0.388	0.388	11.42	1177	0.03	10000	
Mn	55	45	1	He	6.279	6.279	2.18	5085	0.12	10000	
Fe	56	45	1	He	78.450	78.450	0.76	97869	0.08	200000	
Co	59	45	1	He	0.257	0.257	9.49	1006	0.03	5000	
Ni	60	45	1	He	0.285	0.285	22.49	352	0.08	10000	
Cu	63	45	1	He	-0.357	-0.357	-11.95	1162	-0.03	10000	
Zn	66	45	1	He	4.325	4.325	4.49	1402	0.31	10000	
As	75	103	1	He	0.076	0.076	49.31	28	0.27	10000	
Se	78	115	1	He	0.044	0.044	622.84	3	1.56	10000	
Sr	88	103	1	He	1089.667	1089.667	0.90	875707	0.12	10000	
Mo	95	103	1	He	8.116	8.116	1.25	8135	0.10	2000	
Ag	107	103	1	He	0.002	0.002	89.67	16	0.02	300	
Cd	111	115	1	He	0.020	0.020	70.94	10	0.20	4000	
Sn	118	115	1	He	7.756	7.756	0.97	6668	0.12	2000	
Sb	123	115	1	He	0.205	0.205	5.16	228	0.09	200	
Ba	137	115	1	He	74.234	74.234	2.33	24205	0.31	10000	
W	182	159	1	He	0.180	0.180	24.52	2174	0.01	2500	
Tl	205	165	1	He	0.003	0.003	78.64	61	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-41.96	966	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816127	0.56	1884762	96.36	60	120	
Sc	45	1	He	110440	1.19	134073	82.37	60	120	
Sc	45	2	NoGas	7223929	1.14	8481025	85.18	60	120	
Rh	103	1	He	728599	0.80	903580	80.63	60	120	
In	115	1	He	195577	1.32	224817	86.99	60	120	
Tb	159	1	He	949959	1.45	1046002	90.82	60	120	
Ho	165	1	He	959531	1.69	1057439	90.74	60	120	
Bi	209	1	He	643017	1.10	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-18-a
Data File Name	176SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:55:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.130	20.130	1.08	515169	0.00	10000	
Be	9	45	2	NoGas	0.054	0.054	24.48	422	0.01	2000	
B	11	45	2	NoGas	205.501	205.501	1.91	705357	0.03	300	
Na	23	45	1	He	162698.866	162698.866	3.58	52183265	0.31	500000	
Mg	24	45	1	He	21194.427	21194.427	3.59	3777490	0.56	500000	
Al	27	45	1	He	1.258	1.258	39.74	184	0.68	200000	
K	39	45	1	He	2235.432	2235.432	3.06	196589	1.14	500000	
Ca	44	45	1	He	61028.696	61028.696	3.60	302929	20.15	500000	
Ti	47	45	1	He	0.094	0.094	99.63	3	2.81	2500	
V	51	45	1	He	0.004	0.004	4034.87	48	0.01	10000	
Cr	52	45	1	He	0.070	0.070	71.36	661	0.01	10000	
Mn	55	45	1	He	14.650	14.650	4.58	11603	0.13	10000	
Fe	56	45	1	He	605.409	605.409	3.74	736749	0.08	200000	
Co	59	45	1	He	0.008	0.008	165.10	274	0.00	5000	
Ni	60	45	1	He	0.049	0.049	78.54	157	0.03	10000	
Cu	63	45	1	He	-0.184	-0.184	-21.62	1549	-0.01	10000	
Zn	66	45	1	He	7.520	7.520	2.93	2326	0.32	10000	
As	75	103	1	He	2.805	2.805	2.41	525	0.53	10000	
Se	78	115	1	He	0.152	0.152	142.78	4	3.98	10000	
Sr	88	103	1	He	951.530	951.530	1.08	766353	0.12	10000	
Mo	95	103	1	He	2.860	2.860	4.15	2880	0.10	2000	
Ag	107	103	1	He	0.001	0.001	40.15	11	0.01	300	
Cd	111	115	1	He	0.008	0.008	52.78	5	0.16	4000	
Sn	118	115	1	He	0.135	0.135	134.68	378	0.04	2000	
Sb	123	115	1	He	0.101	0.101	40.96	132	0.08	200	
Ba	137	115	1	He	92.396	92.396	1.37	30470	0.30	10000	
W	182	159	1	He	0.085	0.085	75.82	1704	0.00	2500	
Tl	205	165	1	He	0.004	0.004	48.03	68	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-504.64	1058	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1784433	2.03	1884762	94.68	60	120	
Sc	45	1	He	109391	2.29	134073	81.59	60	120	
Sc	45	2	NoGas	7625431	1.03	8481025	89.91	60	120	
Rh	103	1	He	730191	0.79	903580	80.81	60	120	
In	115	1	He	197797	0.86	224817	87.98	60	120	
Tb	159	1	He	948390	0.34	1046002	90.67	60	120	
Ho	165	1	He	955692	0.48	1057439	90.38	60	120	
Bi	209	1	He	636326	0.77	731380	87.00	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-21-a
Data File Name	177SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:59:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	30.549	30.549	0.78	679638	0.00	10000	
Be	9	45	2	NoGas	0.066	0.066	40.13	456	0.01	2000	
B	11	45	2	NoGas	280.777	280.777	0.40	897381	0.03	300	
Na	23	45	1	He	288497.437	288497.437	4.61	94053389	0.31	500000	
Mg	24	45	1	He	22042.488	22042.488	5.43	3992488	0.55	500000	
Al	27	45	1	He	3.998	3.998	32.15	397	1.01	200000	
K	39	45	1	He	3094.439	3094.439	5.00	273739	1.13	500000	
Ca	44	45	1	He	60904.101	60904.101	5.51	307210	19.82	500000	
Ti	47	45	1	He	0.120	0.120	86.70	4	2.69	2500	
V	51	45	1	He	-0.086	-0.086	-180.68	-67	0.13	10000	
Cr	52	45	1	He	-0.032	-0.032	-118.88	509	-0.01	10000	
Mn	55	45	1	He	36.092	36.092	2.66	28908	0.12	10000	
Fe	56	45	1	He	481.412	481.412	5.26	595760	0.08	200000	
Co	59	45	1	He	0.176	0.176	8.12	776	0.02	5000	
Ni	60	45	1	He	0.252	0.252	19.74	327	0.08	10000	
Cu	63	45	1	He	-0.397	-0.397	-10.11	1077	-0.04	10000	
Zn	66	45	1	He	4.850	4.850	15.84	1565	0.31	10000	
As	75	103	1	He	0.986	0.986	4.92	192	0.51	10000	
Se	78	115	1	He	0.397	0.397	61.56	6	6.46	10000	
Sr	88	103	1	He	1267.403	1267.403	3.66	1012219	0.13	10000	
Mo	95	103	1	He	4.197	4.197	26.79	4187	0.10	2000	
Ag	107	103	1	He	0.006	0.006	19.47	29	0.02	300	
Cd	111	115	1	He	0.013	0.013	26.41	7	0.18	4000	
Sn	118	115	1	He	0.279	0.279	35.73	504	0.06	2000	
Sb	123	115	1	He	0.395	0.395	34.44	416	0.09	200	
Ba	137	115	1	He	178.192	178.192	4.70	59679	0.30	10000	
W	182	159	1	He	4.885	4.885	107.21	25272	0.02	2500	
Tl	205	165	1	He	0.005	0.005	70.00	77	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-60.25	1033	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1733604	1.76	1884762	91.98	60	120	
Sc	45	1	He	111276	4.18	134073	83.00	60	120	
Sc	45	2	NoGas	7121111	0.78	8481025	83.97	60	120	
Rh	103	1	He	724571	2.94	903580	80.19	60	120	
In	115	1	He	201120	3.79	224817	89.46	60	120	
Tb	159	1	He	949994	3.04	1046002	90.82	60	120	
Ho	165	1	He	964526	2.84	1057439	91.21	60	120	
Bi	209	1	He	641533	2.80	731380	87.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-22-a
Data File Name	178SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:03:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	30.086	30.086	1.21	673154	0.00	10000	
Be	9	45	2	NoGas	0.053	0.053	25.20	389	0.01	2000	
B	11	45	2	NoGas	282.604	282.604	1.07	906330	0.03	300	
Na	23	45	1	He	275912.009	275912.009	2.58	90145011	0.31	500000	
Mg	24	45	1	He	21078.521	21078.521	2.56	3826998	0.55	500000	
Al	27	45	1	He	1.237	1.237	36.18	186	0.67	200000	
K	39	45	1	He	2949.696	2949.696	2.66	261862	1.13	500000	
Ca	44	45	1	He	57788.835	57788.835	2.25	292224	19.78	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.076	0.076	131.73	144	0.05	10000	
Cr	52	45	1	He	0.001	0.001	2833.66	562	0.00	10000	
Mn	55	45	1	He	33.441	33.441	3.44	26830	0.12	10000	
Fe	56	45	1	He	333.181	333.181	3.68	413714	0.08	200000	
Co	59	45	1	He	0.019	0.019	78.08	314	0.01	5000	
Ni	60	45	1	He	0.228	0.228	4.91	308	0.07	10000	
Cu	63	45	1	He	-0.364	-0.364	-3.65	1158	-0.03	10000	
Zn	66	45	1	He	3.450	3.450	9.86	1154	0.30	10000	
As	75	103	1	He	0.876	0.876	4.74	172	0.51	10000	
Se	78	115	1	He	0.000	0.000	35856.29	2	0.01	10000	
Sr	88	103	1	He	1200.747	1200.747	0.23	957241	0.13	10000	
Mo	95	103	1	He	3.157	3.157	4.81	3146	0.10	2000	
Ag	107	103	1	He	0.000	0.000	331.77	8	0.01	300	
Cd	111	115	1	He	0.008	0.008	140.28	5	0.16	4000	
Sn	118	115	1	He	0.073	0.073	117.66	326	0.02	2000	
Sb	123	115	1	He	0.021	0.021	29.40	57	0.04	200	
Ba	137	115	1	He	170.782	170.782	1.87	56448	0.30	10000	
W	182	159	1	He	0.206	0.206	44.93	2308	0.01	2500	
Tl	205	165	1	He	0.004	0.004	71.09	69	0.01	2000	
Pb	208	165	1	He	-0.013	-0.013	-39.67	959	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1762172	0.89	1884762	93.50	60	120	
Sc	45	1	He	111423	2.60	134073	83.11	60	120	
Sc	45	2	NoGas	7146558	1.44	8481025	84.27	60	120	
Rh	103	1	He	722734	0.02	903580	79.99	60	120	
In	115	1	He	198271	0.83	224817	88.19	60	120	
Tb	159	1	He	951472	0.94	1046002	90.96	60	120	
Ho	165	1	He	972081	0.57	1057439	91.93	60	120	
Bi	209	1	He	639997	0.42	731380	87.51	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	179_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:08:06-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.124	1.654	1164321	0.95	50	114.2	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.064	0.925	266974	0.79	50	108.1	89.5	110.5	
B	11	45	2	NoGas	80.776	0.312	258622	0.33	50	161.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24202.307	0.795	7747987	0.96	25000	96.8	89.5	110.5	
Mg	24	45	1	He	24285.191	0.295	4318639	1.47	25000	97.1	89.5	110.5	
Al	27	45	1	He	251.086	1.172	18695	2.30	250	100.4	89.5	110.5	
K	39	45	1	He	25967.370	1.312	2201428	1.16	25000	103.9	89.5	110.5	
Ca	44	45	1	He	25611.062	0.941	126927	1.41	25000	102.4	89.5	110.5	
Ti	47	45	1	He	48.582	7.259	1742	8.35	50	97.2	89.5	110.5	
V	51	45	1	He	49.977	1.713	63934	2.84	50	100.0	89.5	110.5	
Cr	52	45	1	He	50.000	1.455	79534	0.32	50	100.0	89.5	110.5	
Mn	55	45	1	He	256.364	1.072	200742	0.69	250	102.5	89.5	110.5	
Fe	56	45	1	He	12723.132	0.819	15415947	1.05	12500	101.8	89.5	110.5	
Co	59	45	1	He	50.307	0.621	145481	1.39	50	100.6	89.5	110.5	
Ni	60	45	1	He	49.350	2.143	40111	0.86	50	98.7	89.5	110.5	
Cu	63	45	1	He	49.286	1.381	114660	1.21	50	98.6	89.5	110.5	
Zn	66	45	1	He	51.388	0.474	15152	1.30	50	102.8	89.5	110.5	
As	75	103	1	He	48.264	0.458	9077	0.85	50	96.5	89.5	110.5	
Se	78	115	1	He	48.312	4.434	435	6.13	50	96.6	89.5	110.5	
Sr	88	103	1	He	51.676	1.128	42941	1.89	50	103.4	89.5	110.5	
Mo	95	103	1	He	51.007	1.049	52767	1.73	50	102.0	89.5	110.5	
Ag	107	103	1	He	49.815	0.574	190513	1.12	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.125	1.351	21915	0.53	50	98.2	89.5	110.5	
Sn	118	115	1	He	50.068	3.371	42569	1.69	50	100.1	89.5	110.5	
Sb	123	115	1	He	50.700	1.736	48293	0.10	50	101.4	89.5	110.5	
Ba	137	115	1	He	51.958	2.207	17335	0.55	50	103.9	89.5	110.5	
W	182	159	1	He	50.923	1.355	255489	1.28	50	101.8	89.5	110.5	
Tl	205	165	1	He	49.988	1.535	400662	0.94	50	100.0	89.5	110.5	
Pb	208	165	1	He	50.469	0.809	531502	0.17	50	100.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1778725	0.92	1884762	94.37	60	120	
Sc	45	1	He	109092	1.76	134073	81.37	60	120	
Sc	45	2	NoGas	6991286	0.60	8481025	82.43	60	120	
Rh	103	1	He	752753	0.77	903580	83.31	60	120	
In	115	1	He	200120	1.70	224817	89.01	60	120	
Tb	159	1	He	969042	0.07	1046002	92.64	60	120	
Ho	165	1	He	980735	0.64	1057439	92.75	60	120	
Bi	209	1	He	674267	0.58	731380	92.19	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	180_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:12:17-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.874	0.5	111029	0.5	8	
Be	9	45	2	NoGas	0.139	22.9	796	20.0	1	
B	11	45	2	NoGas	25.253	1.0	84975	0.5	20	CCB High
Na	23	45	1	He	96.693	1.3	34299	0.9	1000	
Mg	24	45	1	He	23.998	12.6	4734	9.9	1000	
Al	27	45	1	He	0.162	212.1	101	23.9	50	
K	39	45	1	He	31.011	13.9	9740	2.5	1000	
Ca	44	45	1	He	26.245	41.4	283	17.6	1000	
Ti	47	45	1	He	0.217	89.0	8	89.2	20	
V	51	45	1	He	0.189	30.6	283	27.2	2	
Cr	52	45	1	He	0.021	77.8	577	3.5	2	
Mn	55	45	1	He	0.344	4.1	374	4.2	2	
Fe	56	45	1	He	15.593	6.4	20295	4.5	50	
Co	59	45	1	He	-0.014	-60.3	210	12.0	1	
Ni	60	45	1	He	-0.055	-38.8	71	23.6	2	
Cu	63	45	1	He	-0.483	-6.9	853	8.1	2	
Zn	66	45	1	He	0.265	10.0	196	2.6	20	
As	75	103	1	He	0.092	11.8	32	5.5	2	
Se	78	115	1	He	-0.076	-108.8	2	41.5	2	
Sr	88	103	1	He	0.473	7.6	430	6.8	10	
Mo	95	103	1	He	0.142	16.1	160	14.6	2	
Ag	107	103	1	He	0.055	18.1	218	18.1	0.2	
Cd	111	115	1	He	0.060	4.5	28	5.5	0.2	
Sn	118	115	1	He	0.292	16.4	511	6.5	10	
Sb	123	115	1	He	0.133	25.1	163	17.8	2	
Ba	137	115	1	He	0.089	22.0	34	20.1	5	
W	182	159	1	He	0.244	13.6	2508	5.8	10	
Tl	205	165	1	He	0.104	2.9	862	3.6	0.5	
Pb	208	165	1	He	0.060	16.9	1713	5.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816796	0.67	1884762	96.39	60	120	
Sc	45	1	He	107962	1.37	134073	80.52	60	120	
Sc	45	2	NoGas	6921424	0.53	8481025	81.61	60	120	
Rh	103	1	He	761346	0.87	903580	84.26	60	120	
In	115	1	He	199083	1.44	224817	88.55	60	120	
Tb	159	1	He	958875	0.78	1046002	91.67	60	120	
Ho	165	1	He	969345	1.15	1057439	91.67	60	120	
Bi	209	1	He	692080	0.13	731380	94.63	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228647/1-a@2
Data File Name	181_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:16:31-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.813	5.8	109323	0.5	8	
Be	9	45	2	NoGas	0.058	3.5	400	2.8	1	
B	11	45	2	NoGas	23.326	1.1	78632	0.8	20	Blank High
Na	23	45	1	He	91.182	5.1	31958	3.4	1000	
Mg	24	45	1	He	48.078	2.3	8814	1.5	1000	
Al	27	45	1	He	3.205	15.0	319	12.2	50	
K	39	45	1	He	23.208	11.4	8928	3.6	1000	
Ca	44	45	1	He	160.914	11.2	925	8.3	1000	
Ti	47	45	1	He	0.192	51.0	7	50.0	20	
V	51	45	1	He	0.157	131.5	235	108.4	2	
Cr	52	45	1	He	0.372	18.3	1106	9.4	2	
Mn	55	45	1	He	1.311	4.5	1103	4.5	2	
Fe	56	45	1	He	6.679	3.1	9441	1.4	50	
Co	59	45	1	He	-0.032	-20.0	156	10.8	1	
Ni	60	45	1	He	0.103	37.1	194	14.6	2	
Cu	63	45	1	He	-0.263	-9.8	1327	4.8	2	
Zn	66	45	1	He	1.916	16.6	662	15.0	20	
As	75	103	1	He	0.028	100.1	20	25.9	2	
Se	78	115	1	He	0.053	455.1	3	72.6	2	
Sr	88	103	1	He	0.668	5.6	584	5.7	10	
Mo	95	103	1	He	0.072	18.4	86	15.7	2	
Ag	107	103	1	He	0.004	67.8	22	48.2	0.2	
Cd	111	115	1	He	0.017	72.2	9	58.9	0.2	
Sn	118	115	1	He	23.458	2.0	19950	1.4	10	Blank High
Sb	123	115	1	He	0.007	182.6	44	30.3	2	
Ba	137	115	1	He	0.579	3.3	197	1.7	5	
W	182	159	1	He	0.300	7.6	2760	3.7	10	
Tl	205	165	1	He	0.031	2.3	282	2.7	0.5	
Pb	208	165	1	He	0.166	20.2	2808	13.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804759	0.24	1884762	95.76	60	120	
Sc	45	1	He	106018	1.31	134073	79.07	60	120	
Sc	45	2	NoGas	6885842	0.34	8481025	81.19	60	120	
Rh	103	1	He	749285	0.47	903580	82.92	60	120	
In	115	1	He	198710	1.56	224817	88.39	60	120	
Tb	159	1	He	950431	0.32	1046002	90.86	60	120	
Ho	165	1	He	964734	0.91	1057439	91.23	60	120	
Bi	209	1	He	691051	0.65	731380	94.49	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228647/3-a@2
Data File Name	182_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:20:43-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.067	51.067	0.335	1022306	0.44	50	102.1	79.5	120.5	
Be	9	2	NoGas	537.283	537.283	0.474	2579602	0.81	500	107.5	78.6	110.5	
B	11	2	NoGas	69.245	69.245	0.841	216647	1.09	50	138.5	79.5	120.5	LCSS Failed
Na	23	1	He	4858.159	4858.159	0.762	1491044	0.23	5000	97.2	79.5	120.5	
Mg	24	1	He	4486.514	4486.514	0.277	763834	1.00	5000	89.7	79.5	120.5	
Al	27	1	He	4625.293	4625.293	1.152	327983	0.44	5000	92.5	79.5	120.5	
K	39	1	He	4690.785	4690.785	0.915	386216	1.42	5000	93.8	79.5	120.5	
Ca	44	1	He	4825.792	4825.792	2.746	23006	2.64	5000	96.5	79.5	120.5	
Ti	47	1	He	46.818	46.818	8.611	1606	8.41	50	93.6	79.5	120.5	
V	51	1	He	452.526	452.526	2.019	553488	1.58	500	90.5	71.5	110.5	
Cr	52	1	He	464.994	464.994	1.272	703442	0.69	500	93.0	69.5	110.5	
Mn	55	1	He	477.471	477.471	1.522	357662	0.80	500	95.5	79.5	120.5	
Fe	56	1	He	4798.300	4798.300	1.629	5563853	0.89	5000	96.0	79.5	120.5	
Co	59	1	He	475.475	475.475	1.258	1313601	0.52	500	95.1	73.9	110.5	
Ni	60	1	He	473.768	473.768	0.905	367559	0.39	500	94.8	74.9	110.5	
Cu	63	1	He	474.278	474.278	0.922	1039595	0.28	500	94.9	72.6	110.5	
Zn	66	1	He	472.277	472.277	1.133	132299	0.42	500	94.5	71.5	113.4	
As	75	1	He	433.474	433.474	0.847	78714	0.23	500	86.7	73.4	110.5	
Se	78	1	He	430.156	430.156	1.768	3642	0.84	500	86.0	64.6	110.5	
Sr	88	1	He	458.257	458.257	0.770	367930	0.28	500	91.7	79.5	120.5	
Mo	95	1	He	48.085	48.085	0.658	48098	0.85	50	96.2	29.5	140.5	
Ag	107	1	He	47.915	47.915	0.875	177179	0.22	50	95.8	59.5	114.5	
Cd	111	1	He	467.598	467.598	1.548	197491	0.35	500	93.5	73.5	110.5	
Sn	118	1	He	494.266	494.266	2.205	395715	1.17	500	98.9	79.5	120.5	
Sb	123	1	He	47.618	47.618	0.331	42954	0.90	50	95.2	67.5	113.4	
Ba	137	1	He	488.884	488.884	1.323	154407	0.32	500	97.8	69.5	110.5	
W	182	1	He	48.556	48.556	1.383	237066	1.82	50	97.1	74.6	125.4	
Tl	205	1	He	117.616	117.616	0.513	923921	0.99	125	94.1	70.6	110.5	
Pb	208	1	He	481.695	481.695	0.893	4962341	0.37	500	96.3	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1748530	0.36	1884762	92.77	60	120	
Sc	45	1	He	104382	0.74	134073	77.85	60	120	
Sc	45	2	NoGas	6799921	0.41	8481025	80.18	60	120	
Rh	103	1	He	727874	0.67	903580	80.55	60	120	
In	115	1	He	189469	1.23	224817	84.28	60	120	
Tb	159	1	He	942721	0.68	1046002	90.13	60	120	
Ho	165	1	He	961160	0.75	1057439	90.90	60	120	
Bi	209	1	He	666712	0.73	731380	91.16	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-a@2
Data File Name	183SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:24:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	99.753	99.753	0.46	2072387	0.00	10000	
Be	9	45	2	NoGas	3.198	3.198	2.06	16797	0.02	2000	
B	11	45	2	NoGas	77.962	77.962	1.58	263923	0.03	300	
Na	23	45	1	He	496.328	496.328	2.39	171358	0.29	500000	
Mg	24	45	1	He	12756.308	12756.308	2.54	2391604	0.53	500000	
Al	27	45	1	He	48442.902	48442.902	0.66	3784242	1.28	200000	
K	39	45	1	He	5741.725	5741.725	0.84	519165	1.11	500000	
Ca	44	45	1	He	9201.587	9201.587	1.86	48188	19.10	500000	
Ti	47	45	1	He	283.999	283.999	3.98	10732	2.65	2500	
V	51	45	1	He	109.308	109.308	1.79	147347	0.07	10000	
Cr	52	45	1	He	72.037	72.037	2.49	120576	0.06	10000	
Mn	55	45	1	He	1461.898	1461.898	1.51	1206469	0.12	10000	
Fe	56	45	1	He	130559.601	130559.601	1.49	166774420	0.08	200000	
Co	59	45	1	He	40.586	40.586	2.23	123792	0.03	5000	
Ni	60	45	1	He	111.339	111.339	1.54	95280	0.12	10000	
Cu	63	45	1	He	88.674	88.674	2.15	215852	0.04	10000	
Zn	66	45	1	He	308.639	308.639	1.41	95311	0.32	10000	
As	75	103	1	He	77.550	77.550	0.56	14051	0.55	10000	
Se	78	115	1	He	14.413	14.413	5.81	126	11.42	10000	
Sr	88	103	1	He	37.643	37.643	0.83	30159	0.12	10000	
Mo	95	103	1	He	26.442	26.442	2.12	26368	0.10	2000	
Ag	107	103	1	He	0.180	0.180	6.27	670	0.03	300	
Cd	111	115	1	He	1.211	1.211	1.32	521	0.23	4000	
Sn	118	115	1	He	21.095	21.095	5.57	17395	0.12	2000	
Sb	123	115	1	He	0.960	0.960	6.51	916	0.10	200	
Ba	137	115	1	He	240.305	240.305	0.86	77086	0.31	10000	
W	182	159	1	He	0.677	0.677	23.74	4650	0.01	2500	
Tl	205	165	1	He	1.731	1.731	4.19	13836	0.01	2000	
Pb	208	165	1	He	60.985	60.985	0.90	638847	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1806413	0.56	1884762	95.84	60	120	
Sc	45	1	He	115018	1.50	134073	85.79	60	120	
Sc	45	2	NoGas	7385239	1.13	8481025	87.08	60	120	
Rh	103	1	He	725677	1.86	903580	80.31	60	120	
In	115	1	He	192432	2.30	224817	85.59	60	120	
Tb	159	1	He	960324	1.06	1046002	91.81	60	120	
Ho	165	1	He	975854	1.02	1057439	92.28	60	120	
Bi	209	1	He	660674	1.07	731380	90.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-a@20
Data File Name	184SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:29:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.493	10.493	2.28	304429	0.00	10000	
Be	9	45	2	NoGas	0.466	0.466	8.25	2523	0.02	2000	
B	11	45	2	NoGas	23.920	23.920	1.00	85157	0.03	300	
Na	23	45	1	He	97.180	97.180	3.63	34960	0.28	500000	
Mg	24	45	1	He	1368.509	1368.509	1.71	244890	0.56	500000	
Al	27	45	1	He	5074.244	5074.244	1.36	377665	1.34	200000	
K	39	45	1	He	635.059	635.059	3.41	61159	1.04	500000	
Ca	44	45	1	He	1004.313	1004.313	6.23	5149	19.50	500000	
Ti	47	45	1	He	31.272	31.272	7.35	1126	2.78	2500	
V	51	45	1	He	12.106	12.106	3.05	15589	0.08	10000	
Cr	52	45	1	He	8.070	8.070	2.47	13357	0.06	10000	
Mn	55	45	1	He	162.778	162.778	0.85	128066	0.13	10000	
Fe	56	45	1	He	14551.201	14551.201	1.57	17706503	0.08	200000	
Co	59	45	1	He	4.495	4.495	1.43	13286	0.03	5000	
Ni	60	45	1	He	12.650	12.650	2.52	10414	0.12	10000	
Cu	63	45	1	He	9.540	9.540	2.05	23884	0.04	10000	
Zn	66	45	1	He	35.757	35.757	2.06	10627	0.34	10000	
As	75	103	1	He	8.026	8.026	2.58	1514	0.53	10000	
Se	78	115	1	He	1.388	1.388	40.86	15	9.51	10000	
Sr	88	103	1	He	4.093	4.093	4.70	3417	0.12	10000	
Mo	95	103	1	He	2.772	2.772	5.22	2861	0.10	2000	
Ag	107	103	1	He	0.023	0.023	22.33	93	0.02	300	
Cd	111	115	1	He	0.172	0.172	15.61	77	0.22	4000	
Sn	118	115	1	He	2.052	2.052	15.25	1971	0.10	2000	
Sb	123	115	1	He	0.115	0.115	16.68	144	0.08	200	
Ba	137	115	1	He	24.920	24.920	1.87	8191	0.30	10000	
W	182	159	1	He	0.095	0.095	37.24	1737	0.01	2500	
Tl	205	165	1	He	0.196	0.196	9.46	1550	0.01	2000	
Pb	208	165	1	He	6.546	6.546	2.14	67532	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1898988	0.75	1884762	100.75	60	120	
Sc	45	1	He	109571	1.79	134073	81.72	60	120	
Sc	45	2	NoGas	7287809	1.26	8481025	85.93	60	120	
Rh	103	1	He	749179	2.71	903580	82.91	60	120	
In	115	1	He	197120	3.02	224817	87.68	60	120	
Tb	159	1	He	938011	1.89	1046002	89.68	60	120	
Ho	165	1	He	947722	1.96	1057439	89.62	60	120	
Bi	209	1	He	669537	1.55	731380	91.54	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-f-28-a@10
Data File Name	185SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:33:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.812	17.812	12.75	501840	0.00	10000	
Be	9	45	2	NoGas	0.640	0.640	15.19	3826	0.02	2000	
B	11	45	2	NoGas	31.655	31.655	11.97	123606	0.03	300	
Na	23	45	1	He	138.904	138.904	2.20	50087	0.28	500000	
Mg	24	45	1	He	2635.535	2635.535	1.67	487819	0.54	500000	
Al	27	45	1	He	9768.717	9768.717	1.44	752703	1.30	200000	
K	39	45	1	He	1231.667	1231.667	2.05	115731	1.06	500000	
Ca	44	45	1	He	1931.493	1931.493	3.32	10106	19.11	500000	
Ti	47	45	1	He	64.736	64.736	3.31	2414	2.68	2500	
V	51	45	1	He	23.361	23.361	0.65	31096	0.08	10000	
Cr	52	45	1	He	15.047	15.047	3.22	25294	0.06	10000	
Mn	55	45	1	He	315.211	315.211	0.98	256647	0.12	10000	
Fe	56	45	1	He	28043.700	28043.700	1.06	35332857	0.08	200000	
Co	59	45	1	He	8.784	8.784	2.21	26626	0.03	5000	
Ni	60	45	1	He	24.043	24.043	1.80	20386	0.12	10000	
Cu	63	45	1	He	18.721	18.721	1.06	46558	0.04	10000	
Zn	66	45	1	He	67.957	67.957	0.85	20796	0.33	10000	
As	75	103	1	He	15.889	15.889	2.67	3058	0.52	10000	
Se	78	115	1	He	2.916	2.916	24.34	29	10.11	10000	
Sr	88	103	1	He	7.728	7.728	2.09	6577	0.12	10000	
Mo	95	103	1	He	5.279	5.279	4.46	5579	0.09	2000	
Ag	107	103	1	He	0.034	0.034	18.91	141	0.02	300	
Cd	111	115	1	He	0.269	0.269	6.89	123	0.22	4000	
Sn	118	115	1	He	3.795	3.795	6.78	3515	0.11	2000	
Sb	123	115	1	He	0.169	0.169	15.04	201	0.08	200	
Ba	137	115	1	He	47.486	47.486	1.64	16027	0.30	10000	
W	182	159	1	He	0.146	0.146	14.65	2041	0.01	2500	
Tl	205	165	1	He	0.355	0.355	3.04	2855	0.01	2000	
Pb	208	165	1	He	12.643	12.643	0.33	132521	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1985989	5.26	1884762	105.37	60	120	
Sc	45	1	He	113436	0.89	134073	84.61	60	120	
Sc	45	2	NoGas	8240572	11.38	8481025	97.16	60	120	
Rh	103	1	He	767709	0.25	903580	84.96	60	120	
In	115	1	He	202417	1.33	224817	90.04	60	120	
Tb	159	1	He	965270	0.71	1046002	92.28	60	120	
Ho	165	1	He	970045	0.37	1057439	91.74	60	120	
Bi	209	1	He	675764	0.46	731380	92.40	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-f-28-a@100
Data File Name	186SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:37:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.713	2.713	1.39	154770	0.00	10000	
Be	9	45	2	NoGas	0.157	0.157	12.81	945	0.02	2000	
B	11	45	2	NoGas	27.607	27.607	1.89	98395	0.03	300	
Na	23	45	1	He	55.000	55.000	3.79	22114	0.25	500000	
Mg	24	45	1	He	267.512	267.512	2.05	49891	0.54	500000	
Al	27	45	1	He	998.256	998.256	3.23	76819	1.30	200000	
K	39	45	1	He	130.015	130.015	3.04	18899	0.69	500000	
Ca	44	45	1	He	210.321	210.321	7.45	1241	16.94	500000	
Ti	47	45	1	He	5.977	5.977	8.31	222	2.69	2500	
V	51	45	1	He	2.209	2.209	7.07	2974	0.07	10000	
Cr	52	45	1	He	1.467	1.467	5.63	2976	0.05	10000	
Mn	55	45	1	He	33.128	33.128	3.03	27011	0.12	10000	
Fe	56	45	1	He	2910.925	2910.925	2.38	3660588	0.08	200000	
Co	59	45	1	He	0.846	0.846	2.23	2797	0.03	5000	
Ni	60	45	1	He	2.352	2.352	10.14	2101	0.11	10000	
Cu	63	45	1	He	1.455	1.455	2.16	5494	0.03	10000	
Zn	66	45	1	He	6.878	6.878	5.71	2211	0.31	10000	
As	75	103	1	He	1.574	1.574	1.51	322	0.49	10000	
Se	78	115	1	He	0.232	0.232	56.38	5	4.99	10000	
Sr	88	103	1	He	1.048	1.048	3.66	937	0.11	10000	
Mo	95	103	1	He	0.568	0.568	5.72	621	0.09	2000	
Ag	107	103	1	He	0.006	0.006	62.61	29	0.02	300	
Cd	111	115	1	He	0.052	0.052	34.36	25	0.21	4000	
Sn	118	115	1	He	0.522	0.522	4.05	719	0.07	2000	
Sb	123	115	1	He	0.039	0.039	42.60	76	0.05	200	
Ba	137	115	1	He	4.882	4.882	5.41	1656	0.29	10000	
W	182	159	1	He	0.088	0.088	11.81	1752	0.01	2500	
Tl	205	165	1	He	0.052	0.052	13.63	454	0.01	2000	
Pb	208	165	1	He	1.252	1.252	1.73	14308	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1936281	1.96	1884762	102.73	60	120	
Sc	45	1	He	113204	1.74	134073	84.43	60	120	
Sc	45	2	NoGas	7383960	0.35	8481025	87.06	60	120	
Rh	103	1	He	781314	0.20	903580	86.47	60	120	
In	115	1	He	202896	1.20	224817	90.25	60	120	
Tb	159	1	He	965098	0.18	1046002	92.27	60	120	
Ho	165	1	He	983738	0.64	1057439	93.03	60	120	
Bi	209	1	He	691455	0.50	731380	94.54	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-f-28-a@2
Data File Name	187SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:41:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	211.496	211.496	0.63	4503263	0.00	10000	
Be	9	45	2	NoGas	1214.266	1214.266	0.98	6660800	0.02	2000	
B	11	45	2	NoGas	193.867	193.867	0.69	678521	0.03	300	
Na	23	45	1	He	10927.031	10927.031	0.79	3767241	0.29	500000	
Mg	24	45	1	He	23240.504	23240.504	0.47	4447920	0.52	500000	
Al	27	45	1	He	58764.964	58764.964	1.58	4686097	1.25	200000	
K	39	45	1	He	17020.256	17020.256	1.16	1555681	1.09	500000	
Ca	44	45	1	He	19942.846	19942.846	2.13	106409	18.74	500000	
Ti	47	45	1	He	397.898	397.898	3.85	15350	2.59	2500	
V	51	45	1	He	1250.009	1250.009	1.56	1719599	0.07	10000	
Cr	52	45	1	He	1201.863	1201.863	2.97	2044114	0.06	10000	
Mn	55	45	1	He	2661.609	2661.609	0.68	2242083	0.12	10000	
Fe	56	45	1	He	140484.232	140484.232	2.09	183179979	0.08	200000	
Co	59	45	1	He	1166.679	1166.679	1.56	3625051	0.03	5000	
Ni	60	45	1	He	1166.867	1166.867	0.84	1018071	0.11	10000	
Cu	63	45	1	He	1181.724	1181.724	1.42	2910458	0.04	10000	
Zn	66	45	1	He	1363.442	1363.442	1.40	429361	0.32	10000	
As	75	103	1	He	1171.881	1171.881	1.04	218053	0.54	10000	
Se	78	115	1	He	1084.572	1084.572	1.48	9399	11.54	10000	
Sr	88	103	1	He	1162.080	1162.080	0.98	956169	0.12	10000	
Mo	95	103	1	He	145.245	145.245	0.36	148876	0.10	2000	
Ag	107	103	1	He	113.441	113.441	1.62	429851	0.03	300	
Cd	111	115	1	He	1120.214	1120.214	1.47	484484	0.23	4000	
Sn	118	115	1	He	1179.055	1179.055	1.07	966371	0.12	2000	
Sb	123	115	1	He	116.645	116.645	2.28	107675	0.11	200	
Ba	137	115	1	He	1419.694	1419.694	1.67	459137	0.31	10000	
W	182	159	1	He	112.787	112.787	2.74	574712	0.02	2500	
Tl	205	165	1	He	290.901	290.901	0.68	2353597	0.01	2000	
Pb	208	165	1	He	1197.943	1197.943	0.35	12709681	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1812514	0.79	1884762	96.17	60	120	
Sc	45	1	He	117406	0.65	134073	87.57	60	120	
Sc	45	2	NoGas	7769728	1.04	8481025	91.61	60	120	
Rh	103	1	He	745968	1.47	903580	82.56	60	120	
In	115	1	He	194027	1.75	224817	86.30	60	120	
Tb	159	1	He	987066	0.65	1046002	94.37	60	120	
Ho	165	1	He	989972	0.82	1057439	93.62	60	120	
Bi	209	1	He	662557	0.81	731380	90.59	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-f-28-a@20
Data File Name	188SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:45:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	122.494	122.494	0.88	2575071	0.00	10000	
Be	9	45	2	NoGas	1142.780	1142.780	0.84	6084729	0.02	2000	
B	11	45	2	NoGas	130.436	130.436	0.49	445682	0.03	300	
Na	23	45	1	He	9989.896	9989.896	1.51	3316878	0.30	500000	
Mg	24	45	1	He	11366.486	11366.486	2.04	2095074	0.54	500000	
Al	27	45	1	He	14740.479	14740.479	0.74	1132013	1.30	200000	
K	39	45	1	He	10817.062	10817.062	0.94	954868	1.13	500000	
Ca	44	45	1	He	10951.940	10951.940	3.37	56342	19.44	500000	
Ti	47	45	1	He	133.198	133.198	0.74	4949	2.69	2500	
V	51	45	1	He	1091.133	1091.133	0.82	1445597	0.08	10000	
Cr	52	45	1	He	1062.641	1062.641	0.98	1740558	0.06	10000	
Mn	55	45	1	He	1180.253	1180.253	1.39	957474	0.12	10000	
Fe	56	45	1	He	24101.869	24101.869	1.36	30265704	0.08	200000	
Co	59	45	1	He	1077.797	1077.797	1.65	3224923	0.03	5000	
Ni	60	45	1	He	1031.822	1031.822	1.05	866937	0.12	10000	
Cu	63	45	1	He	1087.527	1087.527	0.86	2579444	0.04	10000	
Zn	66	45	1	He	1068.452	1068.452	0.65	324058	0.33	10000	
As	75	103	1	He	988.928	988.928	0.51	188977	0.52	10000	
Se	78	115	1	He	995.744	995.744	1.20	8724	11.41	10000	
Sr	88	103	1	He	1007.946	1007.946	0.38	851660	0.12	10000	
Mo	95	103	1	He	108.917	108.917	0.70	114642	0.10	2000	
Ag	107	103	1	He	101.994	101.994	0.79	396920	0.03	300	
Cd	111	115	1	He	1032.545	1032.545	0.79	451477	0.23	4000	
Sn	118	115	1	He	1040.719	1040.719	1.94	862265	0.12	2000	
Sb	123	115	1	He	105.131	105.131	0.91	98124	0.11	200	
Ba	137	115	1	He	1092.591	1092.591	0.47	357255	0.31	10000	
W	182	159	1	He	104.577	104.577	0.93	522706	0.02	2500	
Tl	205	165	1	He	268.910	268.910	1.53	2155211	0.01	2000	
Pb	208	165	1	He	1074.712	1074.712	1.47	11295200	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1900575	1.25	1884762	100.84	60	120	
Sc	45	1	He	113063	0.66	134073	84.33	60	120	
Sc	45	2	NoGas	7541438	0.29	8481025	88.92	60	120	
Rh	103	1	He	766024	0.65	903580	84.78	60	120	
In	115	1	He	196142	1.47	224817	87.24	60	120	
Tb	159	1	He	967963	0.66	1046002	92.54	60	120	
Ho	165	1	He	980751	0.97	1057439	92.75	60	120	
Bi	209	1	He	673289	1.32	731380	92.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-b ms@2
Data File Name	189SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:49:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	156.738	156.738	1.40	3305843	0.00	10000	
Be	9	45	2	NoGas	505.010	505.010	1.15	2721799	0.02	2000	
B	11	45	2	NoGas	136.981	136.981	0.62	473359	0.03	300	
Na	23	45	1	He	4833.977	4833.977	3.07	1647438	0.29	500000	
Mg	24	45	1	He	17425.115	17425.115	1.03	3293231	0.53	500000	
Al	27	45	1	He	62579.402	62579.402	2.61	4926645	1.27	200000	
K	39	45	1	He	11539.954	11539.954	1.32	1044016	1.11	500000	
Ca	44	45	1	He	13425.227	13425.227	1.48	70786	18.97	500000	
Ti	47	45	1	He	355.390	355.390	3.44	13536	2.63	2500	
V	51	45	1	He	552.529	552.529	1.92	750527	0.07	10000	
Cr	52	45	1	He	511.250	511.250	1.73	858910	0.06	10000	
Mn	55	45	1	He	2124.364	2124.364	2.08	1766906	0.12	10000	
Fe	56	45	1	He	135549.918	135549.918	2.01	174511451	0.08	200000	
Co	59	45	1	He	509.065	509.065	1.77	1562031	0.03	5000	
Ni	60	45	1	He	544.508	544.508	2.02	469118	0.12	10000	
Cu	63	45	1	He	520.188	520.188	1.87	1266093	0.04	10000	
Zn	66	45	1	He	752.608	752.608	1.26	234092	0.32	10000	
As	75	103	1	He	511.343	511.343	0.28	93617	0.55	10000	
Se	78	115	1	He	453.516	453.516	1.06	3856	11.76	10000	
Sr	88	103	1	He	507.232	507.232	0.70	410593	0.12	10000	
Mo	95	103	1	He	75.289	75.289	1.00	75922	0.10	2000	
Ag	107	103	1	He	46.378	46.378	0.62	172910	0.03	300	
Cd	111	115	1	He	456.716	456.716	0.77	193760	0.24	4000	
Sn	118	115	1	He	431.801	431.801	0.42	347308	0.12	2000	
Sb	123	115	1	He	17.554	17.554	2.09	15925	0.11	200	
Ba	137	115	1	He	725.469	725.469	0.54	230152	0.32	10000	
W	182	159	1	He	35.191	35.191	1.09	175302	0.02	2500	
Tl	205	165	1	He	114.477	114.477	0.44	909793	0.01	2000	
Pb	208	165	1	He	525.534	525.534	0.25	5477635	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1844633	0.26	1884762	97.87	60	120	
Sc	45	1	He	115944	1.82	134073	86.48	60	120	
Sc	45	2	NoGas	7633369	0.22	8481025	90.01	60	120	
Rh	103	1	He	733840	0.44	903580	81.21	60	120	
In	115	1	He	190303	0.91	224817	84.65	60	120	
Tb	159	1	He	959908	0.55	1046002	91.77	60	120	
Ho	165	1	He	972438	0.65	1057439	91.96	60	120	
Bi	209	1	He	660435	0.24	731380	90.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-b ms@20
Data File Name	190SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:53:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.888	16.888	1.21	421274	0.00	10000	
Be	9	45	2	NoGas	51.285	51.285	1.14	259143	0.02	2000	
B	11	45	2	NoGas	32.073	32.073	1.03	109549	0.03	300	
Na	23	45	1	He	482.213	482.213	6.03	169745	0.28	500000	
Mg	24	45	1	He	1654.503	1654.503	5.26	316637	0.52	500000	
Al	27	45	1	He	5784.638	5784.638	5.61	460532	1.26	200000	
K	39	45	1	He	1111.900	1111.900	5.34	108719	1.02	500000	
Ca	44	45	1	He	1340.572	1340.572	6.38	7295	18.38	500000	
Ti	47	45	1	He	34.219	34.219	1.75	1319	2.59	2500	
V	51	45	1	He	53.094	53.094	7.16	72942	0.07	10000	
Cr	52	45	1	He	49.262	49.262	5.72	84214	0.06	10000	
Mn	55	45	1	He	194.864	194.864	5.28	163980	0.12	10000	
Fe	56	45	1	He	13168.027	13168.027	4.94	17144515	0.08	200000	
Co	59	45	1	He	47.521	47.521	5.41	147657	0.03	5000	
Ni	60	45	1	He	54.152	54.152	6.82	47270	0.11	10000	
Cu	63	45	1	He	51.556	51.556	5.80	128759	0.04	10000	
Zn	66	45	1	He	75.974	75.974	4.09	24012	0.32	10000	
As	75	103	1	He	47.231	47.231	6.07	9354	0.50	10000	
Se	78	115	1	He	41.760	41.760	8.32	388	10.78	10000	
Sr	88	103	1	He	46.035	46.035	7.03	40283	0.11	10000	
Mo	95	103	1	He	7.313	7.313	4.83	7986	0.09	2000	
Ag	107	103	1	He	4.375	4.375	5.78	17629	0.02	300	
Cd	111	115	1	He	43.001	43.001	6.02	19803	0.22	4000	
Sn	118	115	1	He	38.167	38.167	9.16	33549	0.11	2000	
Sb	123	115	1	He	1.758	1.758	4.97	1767	0.10	200	
Ba	137	115	1	He	66.345	66.345	6.57	22847	0.29	10000	
W	182	159	1	He	5.037	5.037	35.42	27314	0.02	2500	
Tl	205	165	1	He	10.987	10.987	7.29	90415	0.01	2000	
Pb	208	165	1	He	49.880	49.880	7.04	539093	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1908754	0.95	1884762	101.27	60	120	
Sc	45	1	He	117346	3.64	134073	87.52	60	120	
Sc	45	2	NoGas	7153720	0.26	8481025	84.35	60	120	
Rh	103	1	He	794196	4.94	903580	87.89	60	120	
In	115	1	He	206903	4.30	224817	92.03	60	120	
Tb	159	1	He	996717	4.92	1046002	95.29	60	120	
Ho	165	1	He	1008731	5.14	1057439	95.39	60	120	
Bi	209	1	He	705059	2.61	731380	96.40	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	191_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:58:05-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.765	0.548	1191798	1.35	50	113.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.890	0.773	273950	0.54	50	107.8	89.5	110.5	
B	11	45	2	NoGas	68.010	0.389	225346	0.99	50	136.0	89.5	110.5	CCV Failed
Na	23	45	1	He	23942.087	2.124	7781363	0.66	25000	95.8	89.5	110.5	
Mg	24	45	1	He	24162.395	1.779	4362119	0.61	25000	96.6	89.5	110.5	
Al	27	45	1	He	251.453	2.555	19005	1.83	250	100.6	89.5	110.5	
K	39	45	1	He	25493.353	1.458	2194714	1.88	25000	102.0	89.5	110.5	
Ca	44	45	1	He	25126.027	2.018	126419	0.50	25000	100.5	89.5	110.5	
Ti	47	45	1	He	50.226	8.779	1827	7.62	50	100.5	89.5	110.5	
V	51	45	1	He	49.537	1.933	64341	2.72	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.900	0.923	80607	1.73	50	99.8	89.5	110.5	
Mn	55	45	1	He	253.354	1.249	201433	0.81	250	101.3	89.5	110.5	
Fe	56	45	1	He	12607.294	1.564	15508862	0.21	12500	100.9	89.5	110.5	
Co	59	45	1	He	49.976	1.030	146735	0.57	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.056	2.831	41306	1.47	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.417	1.467	116720	0.53	50	98.8	89.5	110.5	
Zn	66	45	1	He	51.465	2.622	15405	1.41	50	102.9	89.5	110.5	
As	75	103	1	He	48.002	0.968	8924	1.04	50	96.0	89.5	110.5	
Se	78	115	1	He	48.084	3.907	418	2.76	50	96.2	89.5	110.5	
Sr	88	103	1	He	51.196	3.532	42044	3.12	50	102.4	89.5	110.5	
Mo	95	103	1	He	51.920	0.509	53089	1.18	50	103.8	89.5	110.5	
Ag	107	103	1	He	49.769	0.852	188129	0.55	50	99.5	89.5	110.5	
Cd	111	115	1	He	49.543	0.363	21386	1.04	50	99.1	89.5	110.5	
Sn	118	115	1	He	49.600	1.368	40820	1.90	50	99.2	89.5	110.5	
Sb	123	115	1	He	51.484	0.867	47453	0.59	50	103.0	89.5	110.5	
Ba	137	115	1	He	51.720	1.183	16697	0.57	50	103.4	89.5	110.5	
W	182	159	1	He	50.980	1.882	248266	2.02	50	102.0	89.5	110.5	
Tl	205	165	1	He	49.500	1.136	388161	1.29	50	99.0	89.5	110.5	
Pb	208	165	1	He	49.490	0.701	509899	0.36	50	99.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1862748	2.01	1884762	98.83	60	120	
Sc	45	1	He	110765	1.52	134073	82.62	60	120	
Sc	45	2	NoGas	7197271	0.98	8481025	84.86	60	120	
Rh	103	1	He	744057	0.77	903580	82.35	60	120	
In	115	1	He	193621	1.40	224817	86.12	60	120	
Tb	159	1	He	940587	0.64	1046002	89.92	60	120	
Ho	165	1	He	959417	0.36	1057439	90.73	60	120	
Bi	209	1	He	651808	1.23	731380	89.12	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	192_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:02:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.926	6.7	116276	1.2	8	
Be	9	45	2	NoGas	0.429	1.7	2300	1.4	1	
B	11	45	2	NoGas	17.746	2.0	64219	1.9	20	
Na	23	45	1	He	61.369	1.9	23798	2.5	1000	
Mg	24	45	1	He	24.022	9.8	4886	9.9	1000	
Al	27	45	1	He	1.315	29.4	191	14.1	50	
K	39	45	1	He	25.420	19.7	9547	4.2	1000	
Ca	44	45	1	He	18.776	25.4	253	8.7	1000	
Ti	47	45	1	He	0.153	91.3	6	91.6	20	
V	51	45	1	He	0.261	74.6	385	66.1	2	
Cr	52	45	1	He	0.051	114.4	642	14.1	2	
Mn	55	45	1	He	0.360	30.0	399	22.7	2	
Fe	56	45	1	He	19.381	6.6	25589	7.2	50	
Co	59	45	1	He	0.085	19.2	506	9.1	1	
Ni	60	45	1	He	0.024	125.5	139	18.0	2	
Cu	63	45	1	He	-0.536	-6.1	756	11.2	2	
Zn	66	45	1	He	0.357	10.7	229	6.1	20	
As	75	103	1	He	0.157	19.5	45	13.4	2	
Se	78	115	1	He	0.353	26.6	6	13.5	2	
Sr	88	103	1	He	0.152	6.0	162	4.3	10	
Mo	95	103	1	He	0.133	39.8	152	37.2	2	
Ag	107	103	1	He	0.060	9.4	243	9.0	0.2	
Cd	111	115	1	He	0.128	15.0	59	15.8	0.2	
Sn	118	115	1	He	0.387	12.5	593	7.8	10	
Sb	123	115	1	He	0.122	21.2	153	15.2	2	
Ba	137	115	1	He	0.109	36.1	41	32.8	5	
W	182	159	1	He	0.341	36.0	2934	21.5	10	
Tl	205	165	1	He	0.146	8.0	1171	7.4	0.5	
Pb	208	165	1	He	0.074	7.1	1839	2.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1885347	1.09	1884762	100.03	60	120	
Sc	45	1	He	111142	1.16	134073	82.90	60	120	
Sc	45	2	NoGas	7186470	0.22	8481025	84.74	60	120	
Rh	103	1	He	771310	0.49	903580	85.36	60	120	
In	115	1	He	199423	1.34	224817	88.70	60	120	
Tb	159	1	He	939964	1.22	1046002	89.86	60	120	
Ho	165	1	He	954449	0.77	1057439	90.26	60	120	
Bi	209	1	He	673213	0.72	731380	92.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-c msd@2
Data File Name	193SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:06:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	156.549	156.549	1.22	3240389	0.00	10000	
Be	9	45	2	NoGas	498.477	498.477	1.63	2636327	0.02	2000	
B	11	45	2	NoGas	132.671	132.671	1.43	450141	0.03	300	
Na	23	45	1	He	4801.397	4801.397	0.56	1598836	0.30	500000	
Mg	24	45	1	He	17293.131	17293.131	1.03	3192450	0.54	500000	
Al	27	45	1	He	60931.875	60931.875	1.35	4686579	1.30	200000	
K	39	45	1	He	10672.152	10672.152	1.26	943664	1.13	500000	
Ca	44	45	1	He	14068.737	14068.737	1.59	72459	19.42	500000	
Ti	47	45	1	He	358.421	358.421	3.91	13341	2.69	2500	
V	51	45	1	He	550.320	550.320	1.79	730334	0.08	10000	
Cr	52	45	1	He	511.220	511.220	1.39	839064	0.06	10000	
Mn	55	45	1	He	1853.891	1853.891	1.10	1506538	0.12	10000	
Fe	56	45	1	He	132609.722	132609.722	1.21	166803953	0.08	200000	
Co	59	45	1	He	520.119	520.119	0.55	1559003	0.03	5000	
Ni	60	45	1	He	550.834	550.834	0.87	463638	0.12	10000	
Cu	63	45	1	He	526.667	526.667	1.44	1252293	0.04	10000	
Zn	66	45	1	He	758.941	758.941	1.59	230590	0.33	10000	
As	75	103	1	He	523.447	523.447	1.17	93781	0.56	10000	
Se	78	115	1	He	429.837	429.837	1.85	3683	11.67	10000	
Sr	88	103	1	He	510.837	510.837	0.73	404697	0.13	10000	
Mo	95	103	1	He	82.854	82.854	0.87	81769	0.10	2000	
Ag	107	103	1	He	46.943	46.943	1.50	171263	0.03	300	
Cd	111	115	1	He	447.906	447.906	1.84	191486	0.23	4000	
Sn	118	115	1	He	420.649	420.649	2.18	340997	0.12	2000	
Sb	123	115	1	He	16.805	16.805	2.93	15364	0.11	200	
Ba	137	115	1	He	697.527	697.527	1.53	223005	0.31	10000	
W	182	159	1	He	33.229	33.229	1.41	163484	0.02	2500	
Tl	205	165	1	He	112.327	112.327	0.81	881031	0.01	2000	
Pb	208	165	1	He	525.567	525.567	0.79	5406093	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1810562	0.98	1884762	96.06	60	120	
Sc	45	1	He	113248	1.40	134073	84.47	60	120	
Sc	45	2	NoGas	7491054	1.16	8481025	88.33	60	120	
Rh	103	1	He	718200	1.57	903580	79.48	60	120	
In	115	1	He	191788	1.95	224817	85.31	60	120	
Tb	159	1	He	947474	1.94	1046002	90.58	60	120	
Ho	165	1	He	959695	1.00	1057439	90.76	60	120	
Bi	209	1	He	651636	0.62	731380	89.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-c msd@20
Data File Name	194SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:10:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.145	16.145	0.51	419023	0.00	10000	
Be	9	45	2	NoGas	50.085	50.085	0.55	260531	0.02	2000	
B	11	45	2	NoGas	35.908	35.908	2.36	125338	0.03	300	
Na	23	45	1	He	508.379	508.379	1.48	167836	0.30	500000	
Mg	24	45	1	He	1774.130	1774.130	1.13	318709	0.56	500000	
Al	27	45	1	He	6071.936	6071.936	1.26	453866	1.34	200000	
K	39	45	1	He	1139.533	1139.533	0.84	104423	1.09	500000	
Ca	44	45	1	He	1430.413	1430.413	4.77	7297	19.60	500000	
Ti	47	45	1	He	37.873	37.873	5.25	1369	2.77	2500	
V	51	45	1	He	57.400	57.400	2.63	74053	0.08	10000	
Cr	52	45	1	He	53.822	53.822	1.84	86319	0.06	10000	
Mn	55	45	1	He	187.676	187.676	0.96	148274	0.13	10000	
Fe	56	45	1	He	14069.182	14069.182	1.08	17195283	0.08	200000	
Co	59	45	1	He	52.597	52.597	0.84	153413	0.03	5000	
Ni	60	45	1	He	58.860	58.860	3.18	48233	0.12	10000	
Cu	63	45	1	He	57.287	57.287	2.23	134103	0.04	10000	
Zn	66	45	1	He	85.044	85.044	1.74	25213	0.34	10000	
As	75	103	1	He	51.329	51.329	0.43	9765	0.53	10000	
Se	78	115	1	He	44.253	44.253	1.70	394	11.22	10000	
Sr	88	103	1	He	48.712	48.712	0.68	40945	0.12	10000	
Mo	95	103	1	He	8.166	8.166	2.49	8556	0.10	2000	
Ag	107	103	1	He	4.615	4.615	3.61	17857	0.03	300	
Cd	111	115	1	He	45.252	45.252	0.56	20007	0.23	4000	
Sn	118	115	1	He	42.534	42.534	2.15	35887	0.12	2000	
Sb	123	115	1	He	1.722	1.722	5.04	1661	0.10	200	
Ba	137	115	1	He	69.404	69.404	0.89	22949	0.30	10000	
W	182	159	1	He	3.610	3.610	3.86	19019	0.02	2500	
Tl	205	165	1	He	11.606	11.606	2.40	91754	0.01	2000	
Pb	208	165	1	He	53.604	53.604	0.76	556590	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1909028	1.52	1884762	101.29	60	120	
Sc	45	1	He	110042	1.27	134073	82.08	60	120	
Sc	45	2	NoGas	7364226	0.29	8481025	86.83	60	120	
Rh	103	1	He	761481	0.65	903580	84.27	60	120	
In	115	1	He	198312	0.95	224817	88.21	60	120	
Tb	159	1	He	953163	0.19	1046002	91.12	60	120	
Ho	165	1	He	967076	0.71	1057439	91.45	60	120	
Bi	209	1	He	676153	0.81	731380	92.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-38-c@2
Data File Name	195SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:14:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	90.668	90.668	0.62	1947833	0.00	10000	
Be	9	45	2	NoGas	3.212	3.212	2.57	17364	0.02	2000	
B	11	45	2	NoGas	70.722	70.722	0.57	247127	0.03	300	
Na	23	45	1	He	446.131	446.131	3.26	156872	0.28	500000	
Mg	24	45	1	He	13259.600	13259.600	2.77	2525659	0.52	500000	
Al	27	45	1	He	43748.221	43748.221	2.15	3472068	1.26	200000	
K	39	45	1	He	6045.246	6045.246	2.54	554894	1.09	500000	
Ca	44	45	1	He	7888.697	7888.697	4.00	41981	18.79	500000	
Ti	47	45	1	He	258.398	258.398	3.25	9922	2.60	2500	
V	51	45	1	He	93.175	93.175	1.41	127633	0.07	10000	
Cr	52	45	1	He	65.983	65.983	2.98	112234	0.06	10000	
Mn	55	45	1	He	1391.328	1391.328	2.98	1166372	0.12	10000	
Fe	56	45	1	He	110903.329	110903.329	2.88	143908590	0.08	200000	
Co	59	45	1	He	49.250	49.250	3.04	152539	0.03	5000	
Ni	60	45	1	He	118.170	118.170	2.45	102718	0.12	10000	
Cu	63	45	1	He	73.903	73.903	3.11	183098	0.04	10000	
Zn	66	45	1	He	319.915	319.915	2.76	100357	0.32	10000	
As	75	103	1	He	54.152	54.152	0.68	10161	0.53	10000	
Se	78	115	1	He	15.900	15.900	8.62	142	11.16	10000	
Sr	88	103	1	He	45.226	45.226	0.79	37501	0.12	10000	
Mo	95	103	1	He	24.006	24.006	1.33	24784	0.10	2000	
Ag	107	103	1	He	0.136	0.136	13.51	524	0.03	300	
Cd	111	115	1	He	1.210	1.210	6.05	533	0.23	4000	
Sn	118	115	1	He	21.292	21.292	2.79	17988	0.12	2000	
Sb	123	115	1	He	0.862	0.862	4.86	846	0.10	200	
Ba	137	115	1	He	339.748	339.748	0.35	111637	0.30	10000	
W	182	159	1	He	0.500	0.500	13.45	3857	0.01	2500	
Tl	205	165	1	He	2.201	2.201	1.88	17807	0.01	2000	
Pb	208	165	1	He	46.252	46.252	0.48	490843	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1875901	0.94	1884762	99.53	60	120	
Sc	45	1	He	116886	2.45	134073	87.18	60	120	
Sc	45	2	NoGas	7599873	0.41	8481025	89.61	60	120	
Rh	103	1	He	751124	0.39	903580	83.13	60	120	
In	115	1	He	197094	0.35	224817	87.67	60	120	
Tb	159	1	He	980433	0.65	1046002	93.73	60	120	
Ho	165	1	He	988055	0.46	1057439	93.44	60	120	
Bi	209	1	He	674622	0.61	731380	92.24	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-38-c@20
Data File Name	196SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:18:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.077	10.077	0.74	294474	0.00	10000	
Be	9	45	2	NoGas	0.573	0.573	6.60	3056	0.02	2000	
B	11	45	2	NoGas	28.725	28.725	0.63	100100	0.03	300	
Na	23	45	1	He	74.701	74.701	4.98	28193	0.26	500000	
Mg	24	45	1	He	1345.823	1345.823	1.51	244870	0.55	500000	
Al	27	45	1	He	4361.637	4361.637	2.43	330014	1.32	200000	
K	39	45	1	He	623.301	623.301	0.88	61163	1.02	500000	
Ca	44	45	1	He	796.856	796.856	3.48	4187	19.03	500000	
Ti	47	45	1	He	27.548	27.548	5.44	1008	2.73	2500	
V	51	45	1	He	9.918	9.918	1.56	12989	0.08	10000	
Cr	52	45	1	He	7.059	7.059	4.26	11944	0.06	10000	
Mn	55	45	1	He	146.258	146.258	2.39	116979	0.13	10000	
Fe	56	45	1	He	11683.617	11683.617	2.42	14453348	0.08	200000	
Co	59	45	1	He	5.204	5.204	2.69	15594	0.03	5000	
Ni	60	45	1	He	12.714	12.714	3.56	10642	0.12	10000	
Cu	63	45	1	He	7.528	7.528	2.88	19582	0.04	10000	
Zn	66	45	1	He	34.960	34.960	4.62	10561	0.33	10000	
As	75	103	1	He	5.418	5.418	1.95	1038	0.52	10000	
Se	78	115	1	He	1.956	1.956	23.21	20	9.91	10000	
Sr	88	103	1	He	4.294	4.294	3.27	3618	0.12	10000	
Mo	95	103	1	He	2.439	2.439	1.70	2548	0.10	2000	
Ag	107	103	1	He	0.014	0.014	13.79	59	0.02	300	
Cd	111	115	1	He	0.162	0.162	11.47	73	0.22	4000	
Sn	118	115	1	He	2.428	2.428	7.43	2285	0.11	2000	
Sb	123	115	1	He	0.122	0.122	10.81	151	0.08	200	
Ba	137	115	1	He	33.502	33.502	2.49	11020	0.30	10000	
W	182	159	1	He	0.127	0.127	27.05	1904	0.01	2500	
Tl	205	165	1	He	0.255	0.255	1.04	2046	0.01	2000	
Pb	208	165	1	He	4.824	4.824	0.46	50989	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1911718	0.65	1884762	101.43	60	120	
Sc	45	1	He	111406	2.07	134073	83.09	60	120	
Sc	45	2	NoGas	7241746	0.67	8481025	85.39	60	120	
Rh	103	1	He	757201	1.16	903580	83.80	60	120	
In	115	1	He	197268	1.13	224817	87.75	60	120	
Tb	159	1	He	945959	0.67	1046002	90.44	60	120	
Ho	165	1	He	965323	0.86	1057439	91.29	60	120	
Bi	209	1	He	677069	1.28	731380	92.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-39-e@2
Data File Name	197SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:23:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	105.597	105.597	2.54	2197592	0.00	10000	
Be	9	45	2	NoGas	3.332	3.332	2.00	17579	0.02	2000	
B	11	45	2	NoGas	68.139	68.139	0.74	232687	0.03	300	
Na	23	45	1	He	452.527	452.527	0.83	154449	0.29	500000	
Mg	24	45	1	He	15859.739	15859.739	1.79	2932700	0.54	500000	
Al	27	45	1	He	48026.846	48026.846	1.17	3700425	1.30	200000	
K	39	45	1	He	7046.489	7046.489	1.94	626651	1.12	500000	
Ca	44	45	1	He	8361.624	8361.624	1.53	43200	19.36	500000	
Ti	47	45	1	He	293.819	293.819	5.62	10950	2.68	2500	
V	51	45	1	He	103.180	103.180	1.41	137185	0.08	10000	
Cr	52	45	1	He	74.319	74.319	2.96	122641	0.06	10000	
Mn	55	45	1	He	1121.584	1121.584	2.46	912794	0.12	10000	
Fe	56	45	1	He	118475.141	118475.141	2.03	149253385	0.08	200000	
Co	59	45	1	He	48.690	48.690	1.31	146426	0.03	5000	
Ni	60	45	1	He	141.423	141.423	2.66	119310	0.12	10000	
Cu	63	45	1	He	75.445	75.445	1.28	181439	0.04	10000	
Zn	66	45	1	He	387.823	387.823	2.30	118079	0.33	10000	
As	75	103	1	He	49.670	49.670	1.10	9002	0.55	10000	
Se	78	115	1	He	17.007	17.007	6.17	146	11.61	10000	
Sr	88	103	1	He	47.583	47.583	1.44	38103	0.12	10000	
Mo	95	103	1	He	20.550	20.550	0.68	20492	0.10	2000	
Ag	107	103	1	He	0.163	0.163	11.32	608	0.03	300	
Cd	111	115	1	He	1.337	1.337	6.31	567	0.24	4000	
Sn	118	115	1	He	19.764	19.764	4.21	16082	0.12	2000	
Sb	123	115	1	He	0.779	0.779	11.00	738	0.11	200	
Ba	137	115	1	He	219.226	219.226	0.98	69321	0.32	10000	
W	182	159	1	He	0.406	0.406	4.37	3238	0.01	2500	
Tl	205	165	1	He	2.276	2.276	2.20	17739	0.01	2000	
Pb	208	165	1	He	46.219	46.219	0.85	472415	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1801877	0.18	1884762	95.60	60	120	
Sc	45	1	He	113449	1.74	134073	84.62	60	120	
Sc	45	2	NoGas	7418167	0.40	8481025	87.47	60	120	
Rh	103	1	He	725410	0.62	903580	80.28	60	120	
In	115	1	He	189673	1.03	224817	84.37	60	120	
Tb	159	1	He	938339	0.78	1046002	89.71	60	120	
Ho	165	1	He	951675	0.87	1057439	90.00	60	120	
Bi	209	1	He	658507	0.52	731380	90.04	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-39-e@20
Data File Name	198SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:27:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.128	11.128	1.39	305677	0.00	10000	
Be	9	45	2	NoGas	0.588	0.588	2.55	3037	0.02	2000	
B	11	45	2	NoGas	22.676	22.676	2.10	78249	0.03	300	
Na	23	45	1	He	74.239	74.239	5.76	26535	0.28	500000	
Mg	24	45	1	He	1623.260	1623.260	2.50	279281	0.58	500000	
Al	27	45	1	He	4827.875	4827.875	1.52	345583	1.40	200000	
K	39	45	1	He	733.520	733.520	0.37	66856	1.10	500000	
Ca	44	45	1	He	882.420	882.420	2.71	4371	20.19	500000	
Ti	47	45	1	He	30.197	30.197	0.94	1046	2.89	2500	
V	51	45	1	He	10.452	10.452	2.59	12946	0.08	10000	
Cr	52	45	1	He	7.803	7.803	2.50	12438	0.06	10000	
Mn	55	45	1	He	118.491	118.491	2.22	89673	0.13	10000	
Fe	56	45	1	He	12612.994	12612.994	0.85	14762384	0.09	200000	
Co	59	45	1	He	5.263	5.263	1.57	14917	0.04	5000	
Ni	60	45	1	He	15.221	15.221	2.18	12030	0.13	10000	
Cu	63	45	1	He	7.675	7.675	1.59	18851	0.04	10000	
Zn	66	45	1	He	43.322	43.322	1.69	12358	0.35	10000	
As	75	103	1	He	4.922	4.922	4.49	914	0.54	10000	
Se	78	115	1	He	1.329	1.329	28.52	14	9.65	10000	
Sr	88	103	1	He	4.547	4.547	1.64	3708	0.12	10000	
Mo	95	103	1	He	1.992	1.992	4.43	2017	0.10	2000	
Ag	107	103	1	He	0.012	0.012	29.88	51	0.02	300	
Cd	111	115	1	He	0.154	0.154	11.54	67	0.23	4000	
Sn	118	115	1	He	2.008	2.008	3.85	1878	0.11	2000	
Sb	123	115	1	He	0.063	0.063	78.80	93	0.07	200	
Ba	137	115	1	He	21.720	21.720	0.11	6931	0.31	10000	
W	182	159	1	He	0.128	0.128	23.95	1834	0.01	2500	
Tl	205	165	1	He	0.259	0.259	5.86	1996	0.01	2000	
Pb	208	165	1	He	4.771	4.771	0.63	48430	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1827885	0.96	1884762	96.98	60	120	
Sc	45	1	He	105378	1.47	134073	78.60	60	120	
Sc	45	2	NoGas	7030984	0.78	8481025	82.90	60	120	
Rh	103	1	He	733076	0.64	903580	81.13	60	120	
In	115	1	He	191298	0.51	224817	85.09	60	120	
Tb	159	1	He	908787	0.61	1046002	86.88	60	120	
Ho	165	1	He	926754	0.77	1057439	87.64	60	120	
Bi	209	1	He	654754	0.59	731380	89.52	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	199_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:31:31-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.108	1.905	1146418	0.62	50	112.2	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.662	1.178	265257	0.86	50	107.3	89.5	110.5	
B	11	45	2	NoGas	64.791	1.454	209078	0.73	50	129.6	89.5	110.5	CCV Failed
Na	23	45	1	He	23906.010	1.275	7461169	0.89	25000	95.6	89.5	110.5	
Mg	24	45	1	He	24068.254	1.555	4172255	0.51	25000	96.3	89.5	110.5	
Al	27	45	1	He	248.817	3.425	18056	1.83	250	99.5	89.5	110.5	
K	39	45	1	He	25587.862	1.111	2115006	0.88	25000	102.4	89.5	110.5	
Ca	44	45	1	He	25384.978	1.318	122646	0.56	25000	101.5	89.5	110.5	
Ti	47	45	1	He	51.924	7.868	1813	6.54	50	103.8	89.5	110.5	
V	51	45	1	He	50.027	3.521	62369	2.33	50	100.1	89.5	110.5	
Cr	52	45	1	He	49.510	1.823	76786	0.87	50	99.0	89.5	110.5	
Mn	55	45	1	He	253.835	2.614	193751	1.11	250	101.5	89.5	110.5	
Fe	56	45	1	He	12680.305	2.336	14976859	1.11	12500	101.4	89.5	110.5	
Co	59	45	1	He	49.760	2.744	140268	1.67	50	99.5	89.5	110.5	
Ni	60	45	1	He	49.822	2.915	39475	1.20	50	99.6	89.5	110.5	
Cu	63	45	1	He	49.265	2.230	111732	1.45	50	98.5	89.5	110.5	
Zn	66	45	1	He	50.473	2.353	14508	0.61	50	100.9	89.5	110.5	
As	75	103	1	He	49.015	1.183	8805	0.39	50	98.0	89.5	110.5	
Se	78	115	1	He	48.798	1.884	415	2.56	50	97.6	89.5	110.5	
Sr	88	103	1	He	50.644	1.276	40198	1.11	50	101.3	89.5	110.5	
Mo	95	103	1	He	50.716	2.600	50117	2.67	50	101.4	89.5	110.5	
Ag	107	103	1	He	49.810	1.488	181962	1.09	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.069	0.879	20734	1.41	50	98.1	89.5	110.5	
Sn	118	115	1	He	48.627	1.010	39176	1.19	50	97.3	89.5	110.5	
Sb	123	115	1	He	50.973	1.767	45992	2.11	50	101.9	89.5	110.5	
Ba	137	115	1	He	49.997	1.883	15801	2.10	50	100.0	89.5	110.5	
W	182	159	1	He	51.064	2.219	238394	1.81	50	102.1	89.5	110.5	
Tl	205	165	1	He	49.406	2.041	372120	1.65	50	98.8	89.5	110.5	
Pb	208	165	1	He	49.685	1.178	491703	0.59	50	99.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1778757	1.84	1884762	94.38	60	120	
Sc	45	1	He	106360	1.81	134073	79.33	60	120	
Sc	45	2	NoGas	6998548	1.13	8481025	82.52	60	120	
Rh	103	1	He	719093	0.96	903580	79.58	60	120	
In	115	1	He	189518	0.70	224817	84.30	60	120	
Tb	159	1	He	901766	0.45	1046002	86.21	60	120	
Ho	165	1	He	921615	1.20	1057439	87.16	60	120	
Bi	209	1	He	629500	0.63	731380	86.07	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	200_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:35:39-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.939	7.1	113332	0.8	8	
Be	9	45	2	NoGas	0.308	3.3	1637	3.3	1	
B	11	45	2	NoGas	16.394	0.5	58254	0.2	20	
Na	23	45	1	He	57.289	5.4	21654	4.5	1000	
Mg	24	45	1	He	28.137	5.7	5423	4.0	1000	
Al	27	45	1	He	3.076	19.8	312	13.2	50	
K	39	45	1	He	32.142	23.2	9759	5.5	1000	
Ca	44	45	1	He	32.207	19.8	310	9.1	1000	
Ti	47	45	1	He	0.191	99.9	7	100.0	20	
V	51	45	1	He	0.076	188.6	140	129.7	2	
Cr	52	45	1	He	0.043	144.9	607	15.5	2	
Mn	55	45	1	He	0.410	26.3	422	18.7	2	
Fe	56	45	1	He	26.932	3.8	33637	3.1	50	
Co	59	45	1	He	0.037	44.3	352	12.6	1	
Ni	60	45	1	He	-0.014	-189.4	103	19.6	2	
Cu	63	45	1	He	-0.567	-5.2	658	9.7	2	
Zn	66	45	1	He	0.344	13.3	217	5.5	20	
As	75	103	1	He	0.109	34.0	35	19.0	2	
Se	78	115	1	He	0.404	62.8	6	36.4	2	
Sr	88	103	1	He	0.125	30.5	136	24.3	10	
Mo	95	103	1	He	0.188	18.1	204	16.4	2	
Ag	107	103	1	He	0.062	10.0	241	10.7	0.2	
Cd	111	115	1	He	0.077	50.0	35	48.6	0.2	
Sn	118	115	1	He	0.217	11.7	441	3.9	10	
Sb	123	115	1	He	0.103	17.9	132	11.4	2	
Ba	137	115	1	He	0.080	56.2	31	48.3	5	
W	182	159	1	He	0.418	14.5	3215	9.3	10	
Tl	205	165	1	He	0.156	14.7	1213	13.9	0.5	
Pb	208	165	1	He	0.070	21.3	1740	8.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1864095	1.13	1884762	98.90	60	120	
Sc	45	1	He	107134	1.17	134073	79.91	60	120	
Sc	45	2	NoGas	6989839	0.37	8481025	82.42	60	120	
Rh	103	1	He	750132	0.99	903580	83.02	60	120	
In	115	1	He	195709	1.59	224817	87.05	60	120	
Tb	159	1	He	915017	0.69	1046002	87.48	60	120	
Ho	165	1	He	925496	0.37	1057439	87.52	60	120	
Bi	209	1	He	654467	1.13	731380	89.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-1-a@2
Data File Name	201SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:39:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	69.149	69.149	1.60	1508125	0.00	10000	
Be	9	45	2	NoGas	6.514	6.514	0.76	35034	0.02	2000	
B	11	45	2	NoGas	93.651	93.651	0.57	324224	0.03	300	
Na	23	45	1	He	32107.428	32107.428	1.44	10779932	0.30	500000	
Mg	24	45	1	He	37989.479	37989.479	1.54	7085204	0.54	500000	
Al	27	45	1	He	82717.215	82717.215	2.75	6427877	1.29	200000	
K	39	45	1	He	15936.885	15936.885	0.77	1420111	1.12	500000	
Ca	44	45	1	He	363405.958	363405.958	1.55	1886831	19.26	500000	
Ti	47	45	1	He	3118.307	3118.307	2.64	117237	2.66	2500	>LDR
V	51	45	1	He	32.411	32.411	60.76	43435	0.07	10000	
Cr	52	45	1	He	5351.888	5351.888	2.56	8868723	0.06	10000	
Mn	55	45	1	He	703.204	703.204	1.50	577370	0.12	10000	
Fe	56	45	1	He	102640.654	102640.654	2.31	130428693	0.08	200000	
Co	59	45	1	He	316.269	316.269	1.60	957877	0.03	5000	
Ni	60	45	1	He	8826.637	8826.637	1.35	7504211	0.12	10000	
Cu	63	45	1	He	366.573	366.573	1.77	881240	0.04	10000	
Zn	66	45	1	He	1070.929	1070.929	1.30	328693	0.33	10000	
As	75	103	1	He	57.939	57.939	0.94	10325	0.56	10000	
Se	78	115	1	He	13.708	13.708	6.44	115	11.96	10000	
Sr	88	103	1	He	642.141	642.141	0.94	505398	0.13	10000	
Mo	95	103	1	He	10.762	10.762	1.54	10559	0.10	2000	
Ag	107	103	1	He	1.964	1.964	3.98	7122	0.03	300	
Cd	111	115	1	He	38.944	38.944	1.36	15936	0.24	4000	
Sn	118	115	1	He	36.408	36.408	5.15	28458	0.13	2000	
Sb	123	115	1	He	53.217	53.217	1.06	46508	0.11	200	
Ba	137	115	1	He	714.834	714.834	0.22	218747	0.33	10000	
W	182	159	1	He	1.473	1.473	9.61	8199	0.02	2500	
Tl	205	165	1	He	6.340	6.340	14.04	48353	0.01	2000	
Pb	208	165	1	He	58975.718	58975.718	0.36	589640861	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1737509	0.53	1884762	92.19	60	120	
Sc	45	1	He	114418	0.41	134073	85.34	60	120	
Sc	45	2	NoGas	7589009	0.62	8481025	89.48	60	120	
Rh	103	1	He	713490	1.71	903580	78.96	60	120	
In	115	1	He	183561	1.89	224817	81.65	60	120	
Tb	159	1	He	916062	1.01	1046002	87.58	60	120	
Ho	165	1	He	932978	0.62	1057439	88.23	60	120	
Bi	209	1	He	713861	0.92	731380	97.60	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-1-a@20
Data File Name	202SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:43:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.658	7.658	2.47	252972	0.00	10000	
Be	9	45	2	NoGas	0.858	0.858	7.93	4612	0.02	2000	
B	11	45	2	NoGas	28.882	28.882	1.29	102792	0.03	300	
Na	23	45	1	He	3525.863	3525.863	4.80	1116621	0.32	500000	
Mg	24	45	1	He	4283.426	4283.426	5.17	751710	0.57	500000	
Al	27	45	1	He	8998.851	8998.851	4.49	657838	1.37	200000	
K	39	45	1	He	1778.460	1778.460	4.93	155379	1.14	500000	
Ca	44	45	1	He	39367.356	39367.356	4.88	192378	20.46	500000	
Ti	47	45	1	He	349.032	349.032	4.72	12342	2.83	2500	
V	51	45	1	He	-7.251	-7.251	-13.41	-9083	0.08	10000	
Cr	52	45	1	He	594.784	594.784	5.05	927408	0.06	10000	
Mn	55	45	1	He	81.718	81.718	4.30	63207	0.13	10000	
Fe	56	45	1	He	12053.618	12053.618	4.55	14408238	0.08	200000	
Co	59	45	1	He	37.379	37.379	5.11	106682	0.04	5000	
Ni	60	45	1	He	1028.090	1028.090	4.50	822222	0.13	10000	
Cu	63	45	1	He	44.016	44.016	4.70	101232	0.04	10000	
Zn	66	45	1	He	130.986	130.986	5.43	37909	0.35	10000	
As	75	103	1	He	6.238	6.238	4.84	1160	0.54	10000	
Se	78	115	1	He	1.504	1.504	24.42	15	9.75	10000	
Sr	88	103	1	He	66.827	66.827	5.34	54282	0.12	10000	
Mo	95	103	1	He	1.453	1.453	36.83	1466	0.10	2000	
Ag	107	103	1	He	0.221	0.221	9.71	834	0.03	300	
Cd	111	115	1	He	4.145	4.145	5.18	1785	0.23	4000	
Sn	118	115	1	He	3.981	3.981	11.90	3497	0.11	2000	
Sb	123	115	1	He	5.656	5.656	5.38	5228	0.11	200	
Ba	137	115	1	He	73.701	73.701	6.38	23702	0.31	10000	
W	182	159	1	He	1.682	1.682	130.64	8935	0.02	2500	
Tl	205	165	1	He	0.709	0.709	17.04	5445	0.01	2000	
Pb	208	165	1	He	6453.135	6453.135	3.61	64792590	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1888917	1.92	1884762	100.22	60	120	
Sc	45	1	He	107761	4.52	134073	80.38	60	120	
Sc	45	2	NoGas	7399411	0.80	8481025	87.25	60	120	
Rh	103	1	He	737299	4.99	903580	81.60	60	120	
In	115	1	He	193205	4.35	224817	85.94	60	120	
Tb	159	1	He	921537	4.32	1046002	88.10	60	120	
Ho	165	1	He	937811	3.91	1057439	88.69	60	120	
Bi	209	1	He	663659	4.33	731380	90.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-2-a@2
Data File Name	203SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:48:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.466	29.466	0.83	693421	0.00	10000	
Be	9	45	2	NoGas	2.864	2.864	4.64	15277	0.02	2000	
B	11	45	2	NoGas	120.576	120.576	1.25	409948	0.03	300	
Na	23	45	1	He	4430.907	4430.907	1.20	1451958	0.31	500000	
Mg	24	45	1	He	12806.886	12806.886	1.19	2326282	0.55	500000	
Al	27	45	1	He	36678.785	36678.785	1.53	2775810	1.32	200000	
K	39	45	1	He	8313.643	8313.643	1.14	724925	1.15	500000	
Ca	44	45	1	He	804443.362	804443.362	1.68	4066922	19.78	500000	>LDR
Ti	47	45	1	He	915.369	915.369	1.42	33512	2.73	2500	
V	51	45	1	He	32.831	32.831	9.47	42926	0.08	10000	
Cr	52	45	1	He	1633.159	1633.159	0.46	2635922	0.06	10000	
Mn	55	45	1	He	2480.278	2480.278	2.06	1982841	0.13	10000	
Fe	56	45	1	He	85656.673	85656.673	1.25	105996629	0.08	200000	
Co	59	45	1	He	2062.949	2062.949	1.63	6082667	0.03	5000	
Ni	60	45	1	He	3345.555	3345.555	1.40	2769836	0.12	10000	
Cu	63	45	1	He	818.819	818.819	2.57	1914362	0.04	10000	
Zn	66	45	1	He	674.262	674.262	1.22	201561	0.33	10000	
As	75	103	1	He	197.954	197.954	0.51	34746	0.57	10000	
Se	78	115	1	He	12.433	12.433	4.68	106	11.68	10000	
Sr	88	103	1	He	418.160	418.160	0.19	324456	0.13	10000	
Mo	95	103	1	He	9.711	9.711	2.24	9396	0.10	2000	
Ag	107	103	1	He	2.184	2.184	4.29	7811	0.03	300	
Cd	111	115	1	He	99.465	99.465	1.65	41574	0.24	4000	
Sn	118	115	1	He	102.698	102.698	2.67	81568	0.13	2000	
Sb	123	115	1	He	24381.629	24381.629	0.63	21743931	0.11	200	>LDR
Ba	137	115	1	He	1418.851	1418.851	0.72	443432	0.32	10000	
W	182	159	1	He	2.373	2.373	2.42	12465	0.02	2500	
Tl	205	165	1	He	2.131	2.131	12.90	16233	0.01	2000	
Pb	208	165	1	He	19953.614	19953.614	0.47	198962224	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1881590	1.02	1884762	99.83	60	120	
Sc	45	1	He	111419	1.01	134073	83.10	60	120	
Sc	45	2	NoGas	7493351	1.17	8481025	88.35	60	120	
Rh	103	1	He	703394	0.56	903580	77.85	60	120	
In	115	1	He	187476	0.73	224817	83.39	60	120	
Tb	159	1	He	917550	0.40	1046002	87.72	60	120	
Ho	165	1	He	930490	0.81	1057439	87.99	60	120	
Bi	209	1	He	739395	0.47	731380	101.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-2-a@20
Data File Name	204SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:52:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.742	3.742	1.62	177274	0.00	10000	
Be	9	45	2	NoGas	0.436	0.436	1.46	2426	0.02	2000	
B	11	45	2	NoGas	27.920	27.920	2.06	100651	0.03	300	
Na	23	45	1	He	473.953	473.953	2.85	158564	0.30	500000	
Mg	24	45	1	He	1310.068	1310.068	2.82	238244	0.55	500000	
Al	27	45	1	He	3632.049	3632.049	3.35	274670	1.32	200000	
K	39	45	1	He	876.187	876.187	3.49	82930	1.06	500000	
Ca	44	45	1	He	81575.463	81575.463	2.57	412225	19.79	500000	
Ti	47	45	1	He	95.598	95.598	9.60	3495	2.74	2500	
V	51	45	1	He	0.589	0.589	318.27	858	0.07	10000	
Cr	52	45	1	He	164.457	164.457	2.80	265697	0.06	10000	
Mn	55	45	1	He	251.472	251.472	1.90	200988	0.13	10000	
Fe	56	45	1	He	9214.361	9214.361	2.28	11394831	0.08	200000	
Co	59	45	1	He	214.066	214.066	2.32	630928	0.03	5000	
Ni	60	45	1	He	355.282	355.282	2.42	294009	0.12	10000	
Cu	63	45	1	He	87.737	87.737	2.69	206741	0.04	10000	
Zn	66	45	1	He	77.399	77.399	2.39	23229	0.33	10000	
As	75	103	1	He	19.367	19.367	4.65	3697	0.52	10000	
Se	78	115	1	He	1.446	1.446	41.77	15	9.37	10000	
Sr	88	103	1	He	40.173	40.173	1.92	33816	0.12	10000	
Mo	95	103	1	He	0.957	0.957	11.30	1014	0.09	2000	
Ag	107	103	1	He	0.236	0.236	8.36	922	0.03	300	
Cd	111	115	1	He	10.306	10.306	2.53	4598	0.22	4000	
Sn	118	115	1	He	9.928	9.928	4.36	8654	0.11	2000	
Sb	123	115	1	He	2477.680	2477.680	0.43	2357704	0.11	200	>LDR
Ba	137	115	1	He	140.995	140.995	1.18	47022	0.30	10000	
W	182	159	1	He	0.330	0.330	3.01	2900	0.01	2500	
Tl	205	165	1	He	0.232	0.232	10.84	1871	0.01	2000	
Pb	208	165	1	He	2087.792	2087.792	0.99	21618993	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1975450	0.99	1884762	104.81	60	120	
Sc	45	1	He	111373	2.69	134073	83.07	60	120	
Sc	45	2	NoGas	7475557	0.57	8481025	88.14	60	120	
Rh	103	1	He	762457	0.73	903580	84.38	60	120	
In	115	1	He	200031	0.20	224817	88.98	60	120	
Tb	159	1	He	947198	0.49	1046002	90.55	60	120	
Ho	165	1	He	966296	0.89	1057439	91.38	60	120	
Bi	209	1	He	687816	1.08	731380	94.04	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228809/1-a@2
Data File Name	205_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:56:14-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.818	4.7	113593	0.2	8	
Be	9	45	2	NoGas	0.119	30.6	722	25.9	1	
B	11	45	2	NoGas	16.626	1.4	60313	1.1	20	
Na	23	45	1	He	69.410	2.9	25496	2.0	1000	
Mg	24	45	1	He	41.845	3.5	7828	2.2	1000	
Al	27	45	1	He	6.944	24.6	596	21.8	50	
K	39	45	1	He	32.264	6.9	9785	1.4	1000	
Ca	44	45	1	He	200.534	11.1	1130	10.4	1000	
Ti	47	45	1	He	0.569	50.6	20	50.0	20	
V	51	45	1	He	0.048	117.8	104	69.4	2	
Cr	52	45	1	He	0.546	14.3	1389	8.3	2	
Mn	55	45	1	He	0.451	13.0	454	9.0	2	
Fe	56	45	1	He	19.619	6.7	24985	7.4	50	
Co	59	45	1	He	0.324	6.5	1167	6.1	1	
Ni	60	45	1	He	0.891	15.1	826	13.6	2	
Cu	63	45	1	He	-0.188	-20.5	1509	4.8	2	
Zn	66	45	1	He	2.429	2.8	817	2.0	20	
As	75	103	1	He	0.148	24.3	42	16.6	2	
Se	78	115	1	He	0.298	21.3	5	9.9	2	
Sr	88	103	1	He	0.428	5.7	384	5.0	10	
Mo	95	103	1	He	0.066	38.2	79	31.1	2	
Ag	107	103	1	He	0.002	176.4	13	90.1	0.2	
Cd	111	115	1	He	0.033	67.8	15	60.2	0.2	
Sn	118	115	1	He	20.289	3.0	16768	3.6	10	Blank High
Sb	123	115	1	He	14.616	7.9	13423	6.7	2	Blank High
Ba	137	115	1	He	0.628	9.9	207	10.6	5	
W	182	159	1	He	0.343	25.9	2849	15.0	10	
Tl	205	165	1	He	0.026	19.4	230	15.3	0.5	
Pb	208	165	1	He	6.304	1.7	63315	1.9	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1900265	1.09	1884762	100.82	60	120	
Sc	45	1	He	107279	1.07	134073	80.02	60	120	
Sc	45	2	NoGas	7148440	0.57	8481025	84.29	60	120	
Rh	103	1	He	746857	1.66	903580	82.66	60	120	
In	115	1	He	192658	1.16	224817	85.70	60	120	
Tb	159	1	He	910329	0.93	1046002	87.03	60	120	
Ho	165	1	He	921783	1.19	1057439	87.17	60	120	
Bi	209	1	He	656960	0.71	731380	89.82	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228809/3-a@2
Data File Name	206LCSS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:00:28-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.553	51.553	4.617	1073153	3.70	50	103.1	79.5	120.5	
Be	9	2	NoGas	526.206	526.206	0.038	2629670	0.73	500	105.2	78.6	110.5	
B	11	2	NoGas	59.836	59.836	1.945	195839	1.26	50	119.7	79.5	120.5	
Na	23	1	He	4560.235	4560.235	4.403	1416526	5.08	5000	91.2	79.5	120.5	
Mg	24	1	He	4465.431	4465.431	0.352	769141	1.11	5000	89.3	79.5	120.5	
Al	27	1	He	4556.919	4556.919	0.777	326947	1.59	5000	91.1	79.5	120.5	
K	39	1	He	4704.274	4704.274	0.867	391826	1.12	5000	94.1	79.5	120.5	
Ca	44	1	He	4885.403	4885.403	0.939	23561	1.11	5000	97.7	79.5	120.5	
Ti	47	1	He	45.564	45.564	2.475	1581	2.88	50	91.1	79.5	120.5	
V	51	1	He	457.131	457.131	0.810	565679	0.40	500	91.4	71.5	110.5	
Cr	52	1	He	465.290	465.290	0.171	712180	1.19	500	93.1	69.5	110.5	
Mn	55	1	He	478.313	478.313	0.150	362519	1.16	500	95.7	79.5	120.5	
Fe	56	1	He	4810.691	4810.691	0.162	5643978	1.00	5000	96.2	79.5	120.5	
Co	59	1	He	476.603	476.603	0.215	1332224	1.11	500	95.3	73.9	110.5	
Ni	60	1	He	477.130	477.130	0.332	374510	0.85	500	95.4	74.9	110.5	
Cu	63	1	He	477.781	477.781	0.518	1059544	0.74	500	95.6	72.6	110.5	
Zn	66	1	He	472.074	472.074	0.770	133803	1.60	500	94.4	71.5	113.4	
As	75	1	He	436.156	436.156	0.319	79584	0.18	500	87.2	73.4	110.5	
Se	78	1	He	434.340	434.340	2.631	3666	1.39	500	86.9	64.6	110.5	
Sr	88	1	He	451.724	451.724	1.538	364428	1.24	500	90.3	79.5	120.5	
Mo	95	1	He	46.922	46.922	1.933	47160	1.79	50	93.8	29.5	140.5	
Ag	107	1	He	47.105	47.105	0.683	175029	0.48	50	94.2	59.5	114.5	
Cd	111	1	He	459.833	459.833	1.358	193627	0.82	500	92.0	73.5	110.5	
Sn	118	1	He	483.494	483.494	2.231	385933	1.67	500	96.7	79.5	120.5	
Sb	123	1	He	50.829	50.829	2.685	45699	1.45	50	101.7	67.5	113.4	
Ba	137	1	He	475.934	475.934	1.429	149858	0.41	500	95.2	69.5	110.5	
W	182	1	He	46.915	46.915	2.205	223483	2.32	50	93.8	74.6	125.4	
Tl	205	1	He	116.628	116.628	0.954	891464	0.61	125	93.3	70.6	110.5	
Pb	208	1	He	478.610	478.610	2.313	4797888	2.20	500	95.7	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1894432	0.88	1884762	100.51	60	120	
Sc	45	1	He	105605	1.14	134073	78.77	60	120	
Sc	45	2	NoGas	7077897	0.76	8481025	83.46	60	120	
Rh	103	1	He	731372	0.31	903580	80.94	60	120	
In	115	1	He	188892	1.23	224817	84.02	60	120	
Tb	159	1	He	919660	0.78	1046002	87.92	60	120	
Ho	165	1	He	935277	0.35	1057439	88.45	60	120	
Bi	209	1	He	643597	0.81	731380	88.00	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-a@2
Data File Name	207SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:04:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	42.344	42.344	0.43	1000804	0.00	10000	
Be	9	45	2	NoGas	2.516	2.516	2.74	14135	0.02	2000	
B	11	45	2	NoGas	22.881	22.881	0.66	88431	0.03	300	
Na	23	45	1	He	1992.699	1992.699	0.46	692174	0.29	500000	
Mg	24	45	1	He	15415.606	15415.606	1.94	2958780	0.52	500000	
Al	27	45	1	He	49371.237	49371.237	1.85	3948012	1.25	200000	
K	39	45	1	He	2412.933	2412.933	0.92	227850	1.06	500000	
Ca	44	45	1	He	12147.174	12147.174	0.50	65060	18.67	500000	
Ti	47	45	1	He	3100.630	3100.630	1.56	119954	2.58	2500	>LDR
V	51	45	1	He	194.055	194.055	0.87	267748	0.07	10000	
Cr	52	45	1	He	132.128	132.128	0.87	225876	0.06	10000	
Mn	55	45	1	He	1643.288	1643.288	1.83	1388175	0.12	10000	
Fe	56	45	1	He	105824.456	105824.456	1.16	138377821	0.08	200000	
Co	59	45	1	He	44.134	44.134	1.03	137780	0.03	5000	
Ni	60	45	1	He	100.303	100.303	1.11	87871	0.11	10000	
Cu	63	45	1	He	93.297	93.297	0.62	232367	0.04	10000	
Zn	66	45	1	He	135.216	135.216	2.01	42820	0.32	10000	
As	75	103	1	He	15.014	15.014	0.73	2760	0.54	10000	
Se	78	115	1	He	13.520	13.520	2.58	118	11.48	10000	
Sr	88	103	1	He	69.356	69.356	1.05	56102	0.12	10000	
Mo	95	103	1	He	1.350	1.350	10.70	1370	0.10	2000	
Ag	107	103	1	He	0.108	0.108	11.38	408	0.03	300	
Cd	111	115	1	He	0.371	0.371	6.20	160	0.23	4000	
Sn	118	115	1	He	21.889	21.889	1.46	17914	0.12	2000	
Sb	123	115	1	He	2.916	2.916	3.33	2685	0.11	200	
Ba	137	115	1	He	214.506	214.506	0.62	68303	0.31	10000	
W	182	159	1	He	0.816	0.816	14.84	5249	0.02	2500	
Tl	205	165	1	He	0.501	0.501	9.32	3978	0.01	2000	
Pb	208	165	1	He	20.938	20.938	0.89	217134	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1872530	1.13	1884762	99.35	60	120	
Sc	45	1	He	117728	0.94	134073	87.81	60	120	
Sc	45	2	NoGas	7880338	0.16	8481025	92.92	60	120	
Rh	103	1	He	733002	1.34	903580	81.12	60	120	
In	115	1	He	191005	1.52	224817	84.96	60	120	
Tb	159	1	He	943508	0.87	1046002	90.20	60	120	
Ho	165	1	He	962856	0.52	1057439	91.06	60	120	
Bi	209	1	He	639947	0.55	731380	87.50	60	120	

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Sample Report

Sample Table

Sample Name	SD 310-79576-g-1-a@10
Data File Name	208SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:08:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.456	9.456	0.52	295114	0.00	10000	
Be	9	45	2	NoGas	0.546	0.546	9.18	3049	0.02	2000	
B	11	45	2	NoGas	18.150	18.150	2.35	68973	0.03	300	
Na	23	45	1	He	448.916	448.916	1.58	155024	0.29	500000	
Mg	24	45	1	He	3182.290	3182.290	0.98	595783	0.53	500000	
Al	27	45	1	He	10081.151	10081.151	1.78	785801	1.28	200000	
K	39	45	1	He	528.710	528.710	1.94	54597	0.97	500000	
Ca	44	45	1	He	2576.562	2576.562	2.87	13580	18.97	500000	
Ti	47	45	1	He	662.724	662.724	0.84	24992	2.65	2500	
V	51	45	1	He	42.132	42.132	2.16	56696	0.07	10000	
Cr	52	45	1	He	28.195	28.195	2.51	47435	0.06	10000	
Mn	55	45	1	He	348.112	348.112	0.99	286731	0.12	10000	
Fe	56	45	1	He	22676.712	22676.712	2.55	28901486	0.08	200000	
Co	59	45	1	He	9.443	9.443	1.60	28943	0.03	5000	
Ni	60	45	1	He	21.492	21.492	2.77	18448	0.12	10000	
Cu	63	45	1	He	20.074	20.074	1.21	50355	0.04	10000	
Zn	66	45	1	He	29.597	29.597	2.00	9235	0.32	10000	
As	75	103	1	He	3.283	3.283	7.00	644	0.51	10000	
Se	78	115	1	He	2.994	2.994	10.61	29	10.20	10000	
Sr	88	103	1	He	13.801	13.801	2.24	11732	0.12	10000	
Mo	95	103	1	He	0.287	0.287	15.81	314	0.09	2000	
Ag	107	103	1	He	0.027	0.027	18.67	112	0.02	300	
Cd	111	115	1	He	0.074	0.074	14.35	35	0.21	4000	
Sn	118	115	1	He	4.327	4.327	1.28	3934	0.11	2000	
Sb	123	115	1	He	1.481	1.481	1.40	1451	0.10	200	
Ba	137	115	1	He	42.949	42.949	2.69	14367	0.30	10000	
W	182	159	1	He	0.206	0.206	33.39	2308	0.01	2500	
Tl	205	165	1	He	0.095	0.095	5.07	786	0.01	2000	
Pb	208	165	1	He	4.836	4.836	0.85	50865	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1923900	1.23	1884762	102.08	60	120	
Sc	45	1	He	114760	0.72	134073	85.60	60	120	
Sc	45	2	NoGas	7566187	0.74	8481025	89.21	60	120	
Rh	103	1	He	768470	0.33	903580	85.05	60	120	
In	115	1	He	200607	0.99	224817	89.23	60	120	
Tb	159	1	He	952653	0.14	1046002	91.08	60	120	
Ho	165	1	He	960522	0.15	1057439	90.83	60	120	
Bi	209	1	He	667289	0.84	731380	91.24	60	120	

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Sample Report

Sample Table

Sample Name	PDS 310-79576-g-1-a@2
Data File Name	209SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:12:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	145.606	145.606	0.97	3147874	0.00	10000	
Be	9	45	2	NoGas	1053.287	1053.287	0.59	5804625	0.02	2000	
B	11	45	2	NoGas	120.499	120.499	1.06	426751	0.03	300	
Na	23	45	1	He	11208.253	11208.253	1.09	3907299	0.29	500000	
Mg	24	45	1	He	24149.947	24149.947	1.32	4673652	0.52	500000	
Al	27	45	1	He	58481.636	58481.636	1.48	4715611	1.24	200000	
K	39	45	1	He	11876.498	11876.498	0.59	1100096	1.08	500000	
Ca	44	45	1	He	21322.323	21322.323	0.70	115034	18.54	500000	
Ti	47	45	1	He	3154.825	3154.825	1.94	123081	2.56	2500	>LDR
V	51	45	1	He	1205.395	1205.395	0.22	1676922	0.07	10000	
Cr	52	45	1	He	1125.909	1125.909	1.57	1936467	0.06	10000	
Mn	55	45	1	He	2668.414	2668.414	0.20	2273061	0.12	10000	
Fe	56	45	1	He	113828.265	113828.265	0.71	150090305	0.08	200000	
Co	59	45	1	He	1050.689	1050.689	0.57	3301447	0.03	5000	
Ni	60	45	1	He	1036.068	1036.068	0.50	914120	0.11	10000	
Cu	63	45	1	He	1075.046	1075.046	0.60	2677641	0.04	10000	
Zn	66	45	1	He	1063.223	1063.223	0.61	338610	0.31	10000	
As	75	103	1	He	1003.189	1003.189	0.76	184790	0.54	10000	
Se	78	115	1	He	989.734	989.734	3.14	8426	11.75	10000	
Sr	88	103	1	He	1086.398	1086.398	1.38	884836	0.12	10000	
Mo	95	103	1	He	108.685	108.685	0.29	110277	0.10	2000	
Ag	107	103	1	He	102.251	102.251	1.36	383568	0.03	300	
Cd	111	115	1	He	1019.955	1019.955	2.11	433361	0.24	4000	
Sn	118	115	1	He	1066.776	1066.776	2.48	858906	0.12	2000	
Sb	123	115	1	He	106.205	106.205	1.71	96328	0.11	200	
Ba	137	115	1	He	1285.199	1285.199	2.07	408341	0.31	10000	
W	182	159	1	He	101.182	101.182	0.60	504849	0.02	2500	
Tl	205	165	1	He	262.729	262.729	1.14	2090499	0.01	2000	
Pb	208	165	1	He	1054.717	1054.717	0.45	11005490	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1795979	0.92	1884762	95.29	60	120	
Sc	45	1	He	118722	0.59	134073	88.55	60	120	
Sc	45	2	NoGas	7805374	0.13	8481025	92.03	60	120	
Rh	103	1	He	738414	0.55	903580	81.72	60	120	
In	115	1	He	190627	1.72	224817	84.79	60	120	
Tb	159	1	He	966157	0.51	1046002	92.37	60	120	
Ho	165	1	He	973622	0.40	1057439	92.07	60	120	
Bi	209	1	He	646416	0.22	731380	88.38	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-b ms@2
Data File Name	210SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:17:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	79.115	79.115	1.25	1778036	0.00	10000	
Be	9	45	2	NoGas	477.012	477.012	1.30	2656830	0.02	2000	
B	11	45	2	NoGas	71.142	71.142	2.27	257991	0.03	300	
Na	23	45	1	He	5946.304	5946.304	1.56	2069352	0.29	500000	
Mg	24	45	1	He	14833.994	14833.994	1.77	2863336	0.52	500000	
Al	27	45	1	He	49749.974	49749.974	1.57	4000972	1.24	200000	
K	39	45	1	He	6282.989	6282.989	1.19	584152	1.08	500000	
Ca	44	45	1	He	13480.129	13480.129	1.03	72596	18.57	500000	
Ti	47	45	1	He	2508.537	2508.537	1.84	97597	2.57	2500	>LDR
V	51	45	1	He	559.358	559.358	1.58	776085	0.07	10000	
Cr	52	45	1	He	526.981	526.981	1.82	904240	0.06	10000	
Mn	55	45	1	He	1151.425	1151.425	1.51	978267	0.12	10000	
Fe	56	45	1	He	78140.969	78140.969	2.24	102755220	0.08	200000	
Co	59	45	1	He	468.658	468.658	1.89	1468724	0.03	5000	
Ni	60	45	1	He	491.371	491.371	2.05	432417	0.11	10000	
Cu	63	45	1	He	496.107	496.107	1.59	1233478	0.04	10000	
Zn	66	45	1	He	512.234	512.234	1.13	162771	0.31	10000	
As	75	103	1	He	440.464	440.464	0.37	82289	0.54	10000	
Se	78	115	1	He	425.440	425.440	1.09	3715	11.45	10000	
Sr	88	103	1	He	509.128	509.128	0.45	420553	0.12	10000	
Mo	95	103	1	He	45.801	45.801	2.08	47134	0.10	2000	
Ag	107	103	1	He	45.135	45.135	0.39	171712	0.03	300	
Cd	111	115	1	He	444.455	444.455	1.29	193598	0.23	4000	
Sn	118	115	1	He	454.376	454.376	2.04	375198	0.12	2000	
Sb	123	115	1	He	22.316	22.316	1.32	20779	0.11	200	
Ba	137	115	1	He	639.234	639.234	1.10	208216	0.31	10000	
W	182	159	1	He	36.584	36.584	1.21	182852	0.02	2500	
Tl	205	165	1	He	110.045	110.045	1.07	889653	0.01	2000	
Pb	208	165	1	He	465.205	465.205	0.78	4932477	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1851655	0.89	1884762	98.24	60	120	
Sc	45	1	He	118416	1.20	134073	88.32	60	120	
Sc	45	2	NoGas	7889020	1.09	8481025	93.02	60	120	
Rh	103	1	He	748833	0.11	903580	82.87	60	120	
In	115	1	He	195396	0.89	224817	86.91	60	120	
Tb	159	1	He	963469	0.72	1046002	92.11	60	120	
Ho	165	1	He	989211	0.33	1057439	93.55	60	120	
Bi	209	1	He	657358	0.55	731380	89.88	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	211_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:21:08-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.731	0.840	1193215	0.26	50	113.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.796	1.563	279047	0.73	50	109.6	89.5	110.5	
B	11	45	2	NoGas	66.625	1.582	221311	1.88	50	133.2	89.5	110.5	CCV Failed
Na	23	45	1	He	24484.320	1.450	7822426	0.79	25000	97.9	89.5	110.5	
Mg	24	45	1	He	24472.465	1.504	4342838	0.53	25000	97.9	89.5	110.5	
Al	27	45	1	He	257.665	2.005	19141	1.36	250	103.1	89.5	110.5	
K	39	45	1	He	25943.352	1.488	2194986	0.60	25000	103.8	89.5	110.5	
Ca	44	45	1	He	25685.700	1.167	127038	0.52	25000	102.7	89.5	110.5	
Ti	47	45	1	He	56.391	5.861	2018	6.60	50	112.8	89.5	110.5	CCV Failed
V	51	45	1	He	49.751	5.570	63488	4.59	50	99.5	89.5	110.5	
Cr	52	45	1	He	50.642	2.040	80389	1.06	50	101.3	89.5	110.5	
Mn	55	45	1	He	256.764	1.412	200658	0.85	250	102.7	89.5	110.5	
Fe	56	45	1	He	12815.820	1.737	15496383	0.77	12500	102.5	89.5	110.5	
Co	59	45	1	He	51.447	1.253	148466	0.29	50	102.9	89.5	110.5	
Ni	60	45	1	He	51.297	1.947	41609	0.97	50	102.6	89.5	110.5	
Cu	63	45	1	He	50.561	1.286	117344	0.90	50	101.1	89.5	110.5	
Zn	66	45	1	He	51.656	2.801	15198	1.85	50	103.3	89.5	110.5	
As	75	103	1	He	48.870	0.501	9057	0.60	50	97.7	89.5	110.5	
Se	78	115	1	He	49.042	7.637	422	6.64	50	98.1	89.5	110.5	
Sr	88	103	1	He	50.588	1.650	41422	1.59	50	101.2	89.5	110.5	
Mo	95	103	1	He	51.970	0.404	52977	0.30	50	103.9	89.5	110.5	
Ag	107	103	1	He	50.339	0.210	189705	0.04	50	100.7	89.5	110.5	
Cd	111	115	1	He	50.681	1.983	21650	1.01	50	101.4	89.5	110.5	
Sn	118	115	1	He	51.467	0.343	41908	0.80	50	102.9	89.5	110.5	
Sb	123	115	1	He	52.544	0.618	47932	0.87	50	105.1	89.5	110.5	
Ba	137	115	1	He	51.943	0.413	16598	1.38	50	103.9	89.5	110.5	
W	182	159	1	He	51.961	0.496	252417	0.73	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.256	0.568	389769	1.11	50	100.5	89.5	110.5	
Pb	208	165	1	He	51.063	0.321	520303	0.35	50	102.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1886139	1.04	1884762	100.07	60	120	
Sc	45	1	He	108871	0.97	134073	81.20	60	120	
Sc	45	2	NoGas	7210260	0.89	8481025	85.02	60	120	
Rh	103	1	He	741782	0.19	903580	82.09	60	120	
In	115	1	He	191622	0.97	224817	85.23	60	120	
Tb	159	1	He	938357	0.74	1046002	89.71	60	120	
Ho	165	1	He	948897	0.58	1057439	89.74	60	120	
Bi	209	1	He	650796	0.45	731380	88.98	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	212_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:25:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.906	8.1	113906	0.2	8	
Be	9	45	2	NoGas	0.568	6.6	2956	7.1	1	
B	11	45	2	NoGas	16.444	0.5	59035	1.4	20	
Na	23	45	1	He	55.941	3.5	21458	1.4	1000	
Mg	24	45	1	He	27.417	4.2	5357	3.3	1000	
Al	27	45	1	He	3.507	3.3	348	3.9	50	
K	39	45	1	He	30.636	6.4	9744	3.0	1000	
Ca	44	45	1	He	17.459	37.6	240	12.0	1000	
Ti	47	45	1	He	0.652	49.8	23	51.5	20	
V	51	45	1	He	0.078	31.9	142	23.8	2	
Cr	52	45	1	He	0.048	54.1	620	4.9	2	
Mn	55	45	1	He	0.433	21.5	444	14.7	2	
Fe	56	45	1	He	25.600	8.1	32384	6.3	50	
Co	59	45	1	He	0.103	11.7	543	4.8	1	
Ni	60	45	1	He	0.072	34.5	173	10.0	2	
Cu	63	45	1	He	-0.510	-6.3	793	10.2	2	
Zn	66	45	1	He	0.361	43.5	224	21.6	20	
As	75	103	1	He	0.181	25.7	49	18.2	2	
Se	78	115	1	He	0.552	77.2	7	51.6	2	
Sr	88	103	1	He	0.143	35.5	152	27.7	10	
Mo	95	103	1	He	0.176	22.0	196	21.6	2	
Ag	107	103	1	He	0.056	17.9	221	17.5	0.2	
Cd	111	115	1	He	0.166	8.1	74	7.6	0.2	
Sn	118	115	1	He	0.521	22.5	693	14.6	10	
Sb	123	115	1	He	0.590	13.5	587	13.3	2	
Ba	137	115	1	He	0.203	11.7	71	10.8	5	
W	182	159	1	He	0.429	9.5	3312	6.4	10	
Tl	205	165	1	He	0.188	7.9	1486	8.0	0.5	
Pb	208	165	1	He	0.576	4.1	6888	2.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1855335	0.22	1884762	98.44	60	120	
Sc	45	1	He	108308	1.65	134073	80.78	60	120	
Sc	45	2	NoGas	7064616	0.97	8481025	83.30	60	120	
Rh	103	1	He	760067	0.82	903580	84.12	60	120	
In	115	1	He	195694	0.80	224817	87.05	60	120	
Tb	159	1	He	927306	0.60	1046002	88.65	60	120	
Ho	165	1	He	942977	0.65	1057439	89.18	60	120	
Bi	209	1	He	671100	0.72	731380	91.76	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-c msd@2
Data File Name	213SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:29:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	82.896	82.896	0.66	1780492	0.00	10000	
Be	9	45	2	NoGas	494.806	494.806	1.47	2641092	0.02	2000	
B	11	45	2	NoGas	65.526	65.526	1.50	228349	0.03	300	
Na	23	45	1	He	6180.090	6180.090	0.50	2046853	0.30	500000	
Mg	24	45	1	He	16165.348	16165.348	0.49	2969908	0.54	500000	
Al	27	45	1	He	49459.715	49459.715	0.92	3786363	1.31	200000	
K	39	45	1	He	6656.153	6656.153	0.60	588584	1.13	500000	
Ca	44	45	1	He	14937.426	14937.426	0.81	76553	19.51	500000	
Ti	47	45	1	He	2490.394	2490.394	1.34	92222	2.70	2500	
V	51	45	1	He	583.132	583.132	1.71	770169	0.08	10000	
Cr	52	45	1	He	531.491	531.491	0.95	868113	0.06	10000	
Mn	55	45	1	He	1907.154	1907.154	2.09	1542403	0.12	10000	
Fe	56	45	1	He	85854.911	85854.911	0.84	107470302	0.08	200000	
Co	59	45	1	He	493.623	493.623	2.56	1472800	0.03	5000	
Ni	60	45	1	He	509.092	509.092	1.22	426466	0.12	10000	
Cu	63	45	1	He	515.305	515.305	0.98	1219488	0.04	10000	
Zn	66	45	1	He	536.180	536.180	0.35	162168	0.33	10000	
As	75	103	1	He	449.505	449.505	0.10	80789	0.56	10000	
Se	78	115	1	He	447.897	447.897	1.92	3723	12.03	10000	
Sr	88	103	1	He	519.259	519.259	0.35	412657	0.13	10000	
Mo	95	103	1	He	47.799	47.799	0.49	47320	0.10	2000	
Ag	107	103	1	He	46.344	46.344	0.68	169619	0.03	300	
Cd	111	115	1	He	457.191	457.191	1.62	189590	0.24	4000	
Sn	118	115	1	He	473.767	473.767	1.78	372472	0.13	2000	
Sb	123	115	1	He	20.971	20.971	2.56	18592	0.11	200	
Ba	137	115	1	He	666.127	666.127	2.48	206561	0.32	10000	
W	182	159	1	He	36.936	36.936	0.35	177988	0.02	2500	
Tl	205	165	1	He	113.878	113.878	0.81	885651	0.01	2000	
Pb	208	165	1	He	481.200	481.200	0.31	4908331	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816504	0.70	1884762	96.38	60	120	
Sc	45	1	He	112700	1.50	134073	84.06	60	120	
Sc	45	2	NoGas	7560715	1.35	8481025	89.15	60	120	
Rh	103	1	He	720407	1.83	903580	79.73	60	120	
In	115	1	He	186026	1.57	224817	82.75	60	120	
Tb	159	1	He	928930	1.34	1046002	88.81	60	120	
Ho	165	1	He	951656	1.09	1057439	90.00	60	120	
Bi	209	1	He	647075	0.72	731380	88.47	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-2-a@2
Data File Name	214SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:33:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	32.652	32.652	0.50	743616	0.00	10000	
Be	9	45	2	NoGas	2.242	2.242	6.10	11771	0.02	2000	
B	11	45	2	NoGas	21.454	21.454	2.18	77889	0.03	300	
Na	23	45	1	He	1119.275	1119.275	1.07	362681	0.31	500000	
Mg	24	45	1	He	14408.631	14408.631	0.77	2568127	0.56	500000	
Al	27	45	1	He	30288.134	30288.134	1.53	2249153	1.35	200000	
K	39	45	1	He	2907.797	2907.797	0.85	253502	1.15	500000	
Ca	44	45	1	He	22802.045	22802.045	1.33	113272	20.13	500000	
Ti	47	45	1	He	2046.131	2046.131	1.88	73504	2.78	2500	
V	51	45	1	He	129.305	129.305	1.53	165685	0.08	10000	
Cr	52	45	1	He	120.502	120.502	2.11	191337	0.06	10000	
Mn	55	45	1	He	1326.979	1326.979	1.30	1040949	0.13	10000	
Fe	56	45	1	He	79005.344	79005.344	1.22	95930858	0.08	200000	
Co	59	45	1	He	29.254	29.254	1.68	84888	0.03	5000	
Ni	60	45	1	He	75.671	75.671	1.49	61587	0.12	10000	
Cu	63	45	1	He	85.624	85.624	1.22	198192	0.04	10000	
Zn	66	45	1	He	119.920	119.920	1.63	35275	0.34	10000	
As	75	103	1	He	11.539	11.539	1.96	2082	0.55	10000	
Se	78	115	1	He	8.601	8.601	9.90	75	11.40	10000	
Sr	88	103	1	He	58.031	58.031	1.18	46022	0.13	10000	
Mo	95	103	1	He	11.684	11.684	3.81	11545	0.10	2000	
Ag	107	103	1	He	1.551	1.551	3.13	5667	0.03	300	
Cd	111	115	1	He	0.834	0.834	9.61	355	0.23	4000	
Sn	118	115	1	He	23.185	23.185	2.07	18882	0.12	2000	
Sb	123	115	1	He	0.802	0.802	12.01	761	0.11	200	
Ba	137	115	1	He	137.116	137.116	1.18	43482	0.32	10000	
W	182	159	1	He	1.138	1.138	6.49	6657	0.02	2500	
Tl	205	165	1	He	0.437	0.437	5.43	3407	0.01	2000	
Pb	208	165	1	He	14.754	14.754	0.59	150434	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1784700	0.77	1884762	94.69	60	120	
Sc	45	1	He	109333	0.97	134073	81.55	60	120	
Sc	45	2	NoGas	7357677	0.27	8481025	86.75	60	120	
Rh	103	1	He	718553	0.76	903580	79.52	60	120	
In	115	1	He	190213	1.13	224817	84.61	60	120	
Tb	159	1	He	921769	0.78	1046002	88.12	60	120	
Ho	165	1	He	944698	0.23	1057439	89.34	60	120	
Bi	209	1	He	643816	0.94	731380	88.03	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-3-a@2
Data File Name	215SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:37:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	38.139	38.139	1.27	831270	0.00	10000	
Be	9	45	2	NoGas	1.901	1.901	3.97	9758	0.02	2000	
B	11	45	2	NoGas	20.407	20.407	0.73	72690	0.03	300	
Na	23	45	1	He	2208.446	2208.446	1.28	707778	0.31	500000	
Mg	24	45	1	He	16158.218	16158.218	1.77	2862802	0.56	500000	
Al	27	45	1	He	39955.256	39955.256	2.07	2949350	1.35	200000	
K	39	45	1	He	2787.255	2787.255	1.62	241853	1.15	500000	
Ca	44	45	1	He	11321.015	11321.015	1.99	55985	20.22	500000	
Ti	47	45	1	He	2430.306	2430.306	1.94	86790	2.80	2500	
V	51	45	1	He	161.521	161.521	0.31	205745	0.08	10000	
Cr	52	45	1	He	105.832	105.832	1.71	167126	0.06	10000	
Mn	55	45	1	He	1470.898	1470.898	1.76	1147028	0.13	10000	
Fe	56	45	1	He	87093.967	87093.967	2.34	105124849	0.08	200000	
Co	59	45	1	He	36.225	36.225	1.98	104437	0.03	5000	
Ni	60	45	1	He	91.852	91.852	1.01	74293	0.12	10000	
Cu	63	45	1	He	106.913	106.913	1.51	245526	0.04	10000	
Zn	66	45	1	He	151.476	151.476	1.78	44263	0.34	10000	
As	75	103	1	He	15.141	15.141	0.50	2706	0.56	10000	
Se	78	115	1	He	10.042	10.042	9.23	86	11.69	10000	
Sr	88	103	1	He	55.969	55.969	1.71	44033	0.13	10000	
Mo	95	103	1	He	1.897	1.897	3.48	1868	0.10	2000	
Ag	107	103	1	He	0.149	0.149	2.35	544	0.03	300	
Cd	111	115	1	He	0.362	0.362	7.99	152	0.24	4000	
Sn	118	115	1	He	25.371	25.371	1.44	20224	0.13	2000	
Sb	123	115	1	He	0.796	0.796	8.53	740	0.11	200	
Ba	137	115	1	He	214.248	214.248	0.16	66589	0.32	10000	
W	182	159	1	He	0.648	0.648	13.52	4338	0.01	2500	
Tl	205	165	1	He	0.384	0.384	3.19	2997	0.01	2000	
Pb	208	165	1	He	50.250	50.250	0.41	508746	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1748584	0.67	1884762	92.77	60	120	
Sc	45	1	He	108687	0.64	134073	81.07	60	120	
Sc	45	2	NoGas	7182072	1.06	8481025	84.68	60	120	
Rh	103	1	He	712769	0.69	903580	78.88	60	120	
In	115	1	He	186422	1.27	224817	82.92	60	120	
Tb	159	1	He	924221	1.05	1046002	88.36	60	120	
Ho	165	1	He	942786	0.35	1057439	89.16	60	120	
Bi	209	1	He	640539	0.96	731380	87.58	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-f-4-a@2
Data File Name	216SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:41:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	41.610	41.610	1.13	869930	0.00	10000	
Be	9	45	2	NoGas	1.946	1.946	1.59	9677	0.02	2000	
B	11	45	2	NoGas	23.789	23.789	2.75	80887	0.03	300	
Na	23	45	1	He	1902.349	1902.349	1.47	601204	0.32	500000	
Mg	24	45	1	He	17641.083	17641.083	1.45	3079763	0.57	500000	
Al	27	45	1	He	44563.701	44563.701	1.04	3241444	1.37	200000	
K	39	45	1	He	3826.778	3826.778	1.61	324529	1.18	500000	
Ca	44	45	1	He	11494.247	11494.247	0.69	56008	20.52	500000	
Ti	47	45	1	He	2636.892	2636.892	0.33	92794	2.84	2500	>LDR
V	51	45	1	He	173.292	173.292	0.74	217494	0.08	10000	
Cr	52	45	1	He	120.141	120.141	1.22	186867	0.06	10000	
Mn	55	45	1	He	1363.509	1363.509	1.20	1047687	0.13	10000	
Fe	56	45	1	He	92306.872	92306.872	0.45	109790873	0.08	200000	
Co	59	45	1	He	36.146	36.146	0.53	102693	0.04	5000	
Ni	60	45	1	He	98.534	98.534	0.81	78520	0.13	10000	
Cu	63	45	1	He	114.178	114.178	0.63	258240	0.04	10000	
Zn	66	45	1	He	123.381	123.381	1.74	35545	0.35	10000	
As	75	103	1	He	14.607	14.607	0.87	2540	0.58	10000	
Se	78	115	1	He	10.631	10.631	10.14	89	11.92	10000	
Sr	88	103	1	He	48.501	48.501	1.53	37127	0.13	10000	
Mo	95	103	1	He	2.208	2.208	6.96	2115	0.10	2000	
Ag	107	103	1	He	0.536	0.536	3.75	1895	0.03	300	
Cd	111	115	1	He	0.329	0.329	6.17	136	0.24	4000	
Sn	118	115	1	He	21.849	21.849	1.63	17139	0.13	2000	
Sb	123	115	1	He	0.701	0.701	4.98	644	0.11	200	
Ba	137	115	1	He	215.102	215.102	0.72	65652	0.33	10000	
W	182	159	1	He	0.901	0.901	8.71	5483	0.02	2500	
Tl	205	165	1	He	0.409	0.409	4.45	3149	0.01	2000	
Pb	208	165	1	He	21.219	21.219	1.30	213064	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1694743	1.99	1884762	89.92	60	120	
Sc	45	1	He	107094	1.20	134073	79.88	60	120	
Sc	45	2	NoGas	6957814	0.97	8481025	82.04	60	120	
Rh	103	1	He	693445	0.27	903580	76.74	60	120	
In	115	1	He	183072	0.25	224817	81.43	60	120	
Tb	159	1	He	914401	1.19	1046002	87.42	60	120	
Ho	165	1	He	932421	0.73	1057439	88.18	60	120	
Bi	209	1	He	633418	0.63	731380	86.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	217_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:46:10-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.838	0.591	1037629	0.53	50	105.7	89.5	110.5	
Be	9	45	2	NoGas	53.420	0.701	252472	0.77	50	106.8	89.5	110.5	
B	11	45	2	NoGas	66.740	0.772	205710	0.52	50	133.5	89.5	110.5	CCV Failed
Na	23	45	1	He	23737.535	1.269	7026845	0.74	25000	95.0	89.5	110.5	
Mg	24	45	1	He	23788.214	1.701	3911413	1.41	25000	95.2	89.5	110.5	
Al	27	45	1	He	247.019	1.585	17006	0.80	250	98.8	89.5	110.5	
K	39	45	1	He	25175.282	1.356	1973826	1.35	25000	100.7	89.5	110.5	
Ca	44	45	1	He	25220.039	0.341	115581	1.06	25000	100.9	89.5	110.5	
Ti	47	45	1	He	54.254	7.272	1798	6.78	50	108.5	89.5	110.5	
V	51	45	1	He	48.832	1.906	57757	1.92	50	97.7	89.5	110.5	
Cr	52	45	1	He	49.490	2.336	72801	1.72	50	99.0	89.5	110.5	
Mn	55	45	1	He	253.045	1.136	183226	0.67	250	101.2	89.5	110.5	
Fe	56	45	1	He	12602.251	2.370	14118612	1.78	12500	100.8	89.5	110.5	
Co	59	45	1	He	49.925	1.654	133494	0.98	50	99.8	89.5	110.5	
Ni	60	45	1	He	49.523	2.533	37224	2.14	50	99.0	89.5	110.5	
Cu	63	45	1	He	49.414	1.112	106303	1.37	50	98.8	89.5	110.5	
Zn	66	45	1	He	51.402	1.673	14013	0.80	50	102.8	89.5	110.5	
As	75	103	1	He	48.057	1.751	8299	2.93	50	96.1	89.5	110.5	
Se	78	115	1	He	46.413	6.696	378	7.72	50	92.8	89.5	110.5	
Sr	88	103	1	He	50.355	1.316	38415	1.66	50	100.7	89.5	110.5	
Mo	95	103	1	He	52.069	0.526	49453	1.35	50	104.1	89.5	110.5	
Ag	107	103	1	He	50.564	0.705	177533	0.76	50	101.1	89.5	110.5	
Cd	111	115	1	He	49.447	1.546	19997	1.59	50	98.9	89.5	110.5	
Sn	118	115	1	He	49.849	3.183	38422	1.70	50	99.7	89.5	110.5	
Sb	123	115	1	He	51.546	1.044	44513	1.53	50	103.1	89.5	110.5	
Ba	137	115	1	He	51.661	0.658	15626	1.00	50	103.3	89.5	110.5	
W	182	159	1	He	51.302	2.414	237922	3.29	50	102.6	89.5	110.5	
Tl	205	165	1	He	50.466	1.442	374475	1.32	50	100.9	89.5	110.5	
Pb	208	165	1	He	50.801	0.320	495279	0.66	50	101.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1736651	1.14	1884762	92.14	60	120	
Sc	45	1	He	100872	0.95	134073	75.24	60	120	
Sc	45	2	NoGas	6691005	0.39	8481025	78.89	60	120	
Rh	103	1	He	691119	1.24	903580	76.49	60	120	
In	115	1	He	181397	1.45	224817	80.69	60	120	
Tb	159	1	He	895656	1.06	1046002	85.63	60	120	
Ho	165	1	He	907916	0.87	1057439	85.86	60	120	
Bi	209	1	He	624525	0.56	731380	85.39	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	218_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:50:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.849	1.4	109208	0.4	8	
Be	9	45	2	NoGas	0.356	7.9	1834	7.6	1	
B	11	45	2	NoGas	21.039	2.4	71121	2.4	20	CCB High
Na	23	45	1	He	55.381	0.8	19882	2.1	1000	
Mg	24	45	1	He	28.075	9.7	5119	11.0	1000	
Al	27	45	1	He	2.725	12.2	271	9.2	50	
K	39	45	1	He	32.720	23.6	9255	4.4	1000	
Ca	44	45	1	He	34.956	15.5	305	6.5	1000	
Ti	47	45	1	He	0.633	53.9	21	55.4	20	
V	51	45	1	He	0.173	65.2	246	56.2	2	
Cr	52	45	1	He	0.058	83.8	593	10.7	2	
Mn	55	45	1	He	0.430	8.3	413	5.0	2	
Fe	56	45	1	He	25.146	3.9	29761	4.5	50	
Co	59	45	1	He	0.026	52.3	302	12.7	1	
Ni	60	45	1	He	0.049	130.6	144	31.4	2	
Cu	63	45	1	He	-0.580	-3.8	592	7.3	2	
Zn	66	45	1	He	0.441	56.0	230	26.6	20	
As	75	103	1	He	0.129	22.6	37	15.0	2	
Se	78	115	1	He	0.230	82.0	4	37.0	2	
Sr	88	103	1	He	0.080	32.8	94	20.7	10	
Mo	95	103	1	He	0.174	12.2	183	10.1	2	
Ag	107	103	1	He	0.066	5.3	248	4.7	0.2	
Cd	111	115	1	He	0.113	13.5	49	13.7	0.2	
Sn	118	115	1	He	0.506	23.7	656	15.5	10	
Sb	123	115	1	He	0.401	19.7	396	17.5	2	
Ba	137	115	1	He	0.045	46.9	19	36.7	5	
W	182	159	1	He	0.349	4.4	2852	3.5	10	
Tl	205	165	1	He	0.146	12.1	1133	12.2	0.5	
Pb	208	165	1	He	0.377	4.3	4750	2.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1789430	1.62	1884762	94.94	60	120	
Sc	45	1	He	101165	2.31	134073	75.45	60	120	
Sc	45	2	NoGas	6837170	0.23	8481025	80.62	60	120	
Rh	103	1	He	723371	1.32	903580	80.06	60	120	
In	115	1	He	188683	1.41	224817	83.93	60	120	
Tb	159	1	He	902694	1.29	1046002	86.30	60	120	
Ho	165	1	He	918674	0.66	1057439	86.88	60	120	
Bi	209	1	He	654811	1.02	731380	89.53	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	219CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:54:31-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	9.366	9.366	1.811	263138	0.39	8	117.1	69.5	130.5	
Be	9	2	NoGas	1.252	1.252	3.072	6116	1.64	1	125.2	69.5	130.5	
B	11	2	NoGas	36.019	36.019	3.238	115861	1.95	20	180.1	69.5	130.5	6020A CR1 Failed
Na	23	1	He	956.515	956.515	3.170	292891	1.29	1000	95.7	69.5	130.5	
Mg	24	1	He	954.525	954.525	3.951	160925	1.51	1000	95.5	69.5	130.5	
Al	27	1	He	51.390	51.390	1.214	3687	2.93	50	102.8	69.5	130.5	
K	39	1	He	999.530	999.530	3.767	86677	1.04	1000	100.0	69.5	130.5	
Ca	44	1	He	986.054	986.054	1.895	4765	3.87	1000	98.6	69.5	130.5	
Ti	47	1	He	9.959	9.959	2.762	338	4.97	10	99.6	69.5	130.5	
V	51	1	He	5.206	5.206	3.328	6336	4.34	5	104.1	69.5	130.5	
Cr	52	1	He	2.037	2.037	9.190	3559	5.58	2	101.8	69.5	130.5	
Mn	55	1	He	5.303	5.303	9.554	4024	7.03	5	106.1	69.5	130.5	
Fe	56	1	He	114.696	114.696	4.316	132887	1.94	100	114.7	69.5	130.5	
Co	59	1	He	1.041	1.041	5.410	3079	3.75	1	104.1	69.5	130.5	
Ni	60	1	He	2.038	2.038	1.424	1672	1.17	2	101.9	69.5	130.5	
Cu	63	1	He	1.535	1.535	4.823	5179	3.80	2	76.7	69.5	130.5	
Zn	66	1	He	20.974	20.974	0.212	5917	2.19	20	104.9	69.5	130.5	
As	75	1	He	4.821	4.821	2.199	885	1.96	5	96.4	69.5	130.5	
Se	78	1	He	5.443	5.443	15.063	49	14.66	5	108.9	69.5	130.5	
Sr	88	1	He	9.836	9.836	2.409	7891	1.55	10	98.4	69.5	130.5	
Mo	95	1	He	5.197	5.197	2.130	5183	1.25	5	103.9	69.5	130.5	
Ag	107	1	He	1.008	1.008	4.730	3718	5.27	1	100.8	69.5	130.5	
Cd	111	1	He	1.066	1.066	4.828	458	5.09	1	106.6	69.5	130.5	
Sn	118	1	He	9.795	9.795	4.930	8199	5.21	10	98.0	69.5	130.5	
Sb	123	1	He	2.247	2.247	2.567	2088	2.08	2	112.4	69.5	130.5	
Ba	137	1	He	5.018	5.018	10.260	1610	10.05	5	100.4	69.5	130.5	
W	182	1	He	10.487	10.487	1.660	50134	2.52	10	104.9	69.5	130.5	
Tl	205	1	He	1.072	1.072	0.461	8035	0.97	1	107.2	69.5	130.5	
Pb	208	1	He	1.326	1.326	2.957	14008	2.78	1	132.6	69.5	130.5	6020A CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1786221	1.43	1884762	94.77	60	120	
Sc	45	1	He	103181	2.39	134073	76.96	60	120	
Sc	45	2	NoGas	6789102	1.38	8481025	80.05	60	120	
Rh	103	1	He	724532	0.91	903580	80.18	60	120	
In	115	1	He	191950	0.45	224817	85.38	60	120	
Tb	159	1	He	905361	1.93	1046002	86.55	60	120	
Ho	165	1	He	913143	0.52	1057439	86.35	60	120	
Bi	209	1	He	658012	0.12	731380	89.97	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228999/1-a@2
Data File Name	220_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:58:45-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.752	10.7	106637	0.2	8	
Be	9	45	2	NoGas	0.189	16.5	1022	15.1	1	
B	11	45	2	NoGas	15.593	0.9	54150	1.8	20	
Na	23	45	1	He	61.373	5.4	21521	4.7	1000	
Mg	24	45	1	He	47.945	1.8	8336	2.3	1000	
Al	27	45	1	He	4.982	3.7	423	2.7	50	
K	39	45	1	He	19.871	36.0	8206	7.5	1000	
Ca	44	45	1	He	144.624	4.6	803	3.4	1000	
Ti	47	45	1	He	0.303	67.3	10	66.7	20	
V	51	45	1	He	-0.071	-408.1	-45	-761.4	2	
Cr	52	45	1	He	0.262	7.6	888	2.5	2	
Mn	55	45	1	He	0.333	3.8	341	2.5	2	
Fe	56	45	1	He	11.301	7.8	14108	6.2	50	
Co	59	45	1	He	0.017	117.7	278	18.8	1	
Ni	60	45	1	He	0.133	24.6	207	12.2	2	
Cu	63	45	1	He	-0.181	-18.8	1429	4.6	2	
Zn	66	45	1	He	2.825	7.3	872	6.9	20	
As	75	103	1	He	0.048	27.7	23	10.0	2	
Se	78	115	1	He	0.055	344.0	3	56.6	2	
Sr	88	103	1	He	0.389	20.1	342	19.1	10	
Mo	95	103	1	He	0.079	13.8	89	12.1	2	
Ag	107	103	1	He	0.003	95.3	17	60.0	0.2	
Cd	111	115	1	He	0.026	41.9	12	36.6	0.2	
Sn	118	115	1	He	32.951	1.9	26347	1.5	10	Blank High
Sb	123	115	1	He	0.270	33.3	276	28.0	2	
Ba	137	115	1	He	0.523	20.6	168	19.1	5	
W	182	159	1	He	0.360	8.4	2897	4.6	10	
Tl	205	165	1	He	0.026	19.8	228	17.0	0.5	
Pb	208	165	1	He	0.384	6.4	4760	5.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1782123	1.00	1884762	94.55	60	120	
Sc	45	1	He	100511	0.75	134073	74.97	60	120	
Sc	45	2	NoGas	6787302	1.22	8481025	80.03	60	120	
Rh	103	1	He	723394	0.86	903580	80.06	60	120	
In	115	1	He	187541	1.30	224817	83.42	60	120	
Tb	159	1	He	900867	0.26	1046002	86.12	60	120	
Ho	165	1	He	908222	0.18	1057439	85.89	60	120	
Bi	209	1	He	661544	0.32	731380	90.45	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228999/2-a@2
Data File Name	221LCSS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:02:56-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	50.140	50.140	0.250	993420	0.58	50	100.3	79.5	120.5	
Be	9	2	NoGas	527.518	527.518	0.652	2502443	0.98	500	105.5	78.6	110.5	
B	11	2	NoGas	59.013	59.013	0.720	183450	0.34	50	118.0	79.5	120.5	
Na	23	1	He	4619.580	4619.580	3.363	1368826	1.14	5000	92.4	79.5	120.5	
Mg	24	1	He	4420.591	4420.591	3.179	726485	0.27	5000	88.4	79.5	120.5	
Al	27	1	He	4541.457	4541.457	4.133	310820	1.24	5000	90.8	79.5	120.5	
K	39	1	He	4730.203	4730.203	3.463	375869	0.84	5000	94.6	79.5	120.5	
Ca	44	1	He	4874.124	4874.124	3.516	22428	1.19	5000	97.5	79.5	120.5	
Ti	47	1	He	46.237	46.237	9.812	1529	7.13	50	92.5	79.5	120.5	
V	51	1	He	456.688	456.688	3.558	539205	1.19	500	91.3	71.5	110.5	
Cr	52	1	He	465.892	465.892	3.797	680292	0.91	500	93.2	69.5	110.5	
Mn	55	1	He	479.654	479.654	3.063	346866	0.71	500	95.9	79.5	120.5	
Fe	56	1	He	4798.035	4798.035	3.673	5370342	0.77	5000	96.0	79.5	120.5	
Co	59	1	He	479.644	479.644	3.539	1279113	0.68	500	95.9	73.9	110.5	
Ni	60	1	He	477.675	477.675	3.155	357743	0.29	500	95.5	74.9	110.5	
Cu	63	1	He	478.167	478.167	3.265	1011754	0.36	500	95.6	72.6	110.5	
Zn	66	1	He	471.555	471.555	3.147	127532	1.68	500	94.3	71.5	113.4	
As	75	1	He	437.719	437.719	0.787	76604	0.65	500	87.5	73.4	110.5	
Se	78	1	He	438.580	438.580	3.457	3559	1.54	500	87.7	64.6	110.5	
Sr	88	1	He	457.388	457.388	1.522	353894	0.21	500	91.5	79.5	120.5	
Mo	95	1	He	48.143	48.143	0.832	46416	2.22	50	96.3	29.5	140.5	
Ag	107	1	He	47.616	47.616	1.522	169683	0.35	50	95.2	59.5	114.5	
Cd	111	1	He	464.508	464.508	0.823	188112	1.34	500	92.9	73.5	110.5	
Sn	118	1	He	494.168	494.168	1.618	379334	0.95	500	98.8	79.5	120.5	
Sb	123	1	He	48.008	48.008	2.958	41507	1.06	50	96.0	67.5	113.4	
Ba	137	1	He	491.847	491.847	1.171	148937	0.74	500	98.4	69.5	110.5	
W	182	1	He	48.712	48.712	1.642	226560	2.01	50	97.4	74.6	125.4	
Tl	205	1	He	118.673	118.673	1.507	888495	0.69	125	94.9	70.6	110.5	
Pb	208	1	He	485.293	485.293	1.514	4765106	0.67	500	97.1	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1738752	0.52	1884762	92.25	60	120	
Sc	45	1	He	100822	2.95	134073	75.20	60	120	
Sc	45	2	NoGas	6718604	0.36	8481025	79.22	60	120	
Rh	103	1	He	701513	1.39	903580	77.64	60	120	
In	115	1	He	181664	1.90	224817	80.81	60	120	
Tb	159	1	He	898068	0.39	1046002	85.86	60	120	
Ho	165	1	He	916163	0.94	1057439	86.64	60	120	
Bi	209	1	He	640436	0.74	731380	87.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-a@2
Data File Name	222SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:07:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	74.661	74.661	1.54	1533373	0.00	10000	
Be	9	45	2	NoGas	2.648	2.648	3.57	13554	0.02	2000	
B	11	45	2	NoGas	35.912	35.912	1.08	122290	0.03	300	
Na	23	45	1	He	589.678	589.678	1.64	186150	0.32	500000	
Mg	24	45	1	He	27691.556	27691.556	1.42	4763892	0.58	500000	
Al	27	45	1	He	33956.776	33956.776	1.62	2434104	1.40	200000	
K	39	45	1	He	5799.420	5799.420	1.72	481105	1.21	500000	
Ca	44	45	1	He	89828.439	89828.439	1.21	430320	20.87	500000	
Ti	47	45	1	He	311.294	311.294	3.14	10796	2.88	2500	
V	51	45	1	He	65.112	65.112	1.75	80559	0.08	10000	
Cr	52	45	1	He	51.947	51.947	0.32	79933	0.06	10000	
Mn	55	45	1	He	1202.490	1202.490	0.99	910636	0.13	10000	
Fe	56	45	1	He	83530.358	83530.358	1.49	97910761	0.09	200000	
Co	59	45	1	He	34.401	34.401	1.69	96323	0.04	5000	
Ni	60	45	1	He	89.570	89.570	2.04	70354	0.13	10000	
Cu	63	45	1	He	116.319	116.319	0.83	259236	0.04	10000	
Zn	66	45	1	He	249.898	249.898	1.43	70837	0.35	10000	
As	75	103	1	He	38.090	38.090	0.81	6584	0.58	10000	
Se	78	115	1	He	10.552	10.552	4.73	89	11.92	10000	
Sr	88	103	1	He	139.202	139.202	0.35	106206	0.13	10000	
Mo	95	103	1	He	16.295	16.295	0.34	15493	0.11	2000	
Ag	107	103	1	He	0.128	0.128	13.29	458	0.03	300	
Cd	111	115	1	He	0.794	0.794	6.15	325	0.24	4000	
Sn	118	115	1	He	19.552	19.552	4.68	15363	0.13	2000	
Sb	123	115	1	He	0.826	0.826	7.59	753	0.11	200	
Ba	137	115	1	He	228.917	228.917	1.73	69841	0.33	10000	
W	182	159	1	He	0.726	0.726	3.78	4627	0.02	2500	
Tl	205	165	1	He	1.408	1.408	1.53	10603	0.01	2000	
Pb	208	165	1	He	50.603	50.603	0.72	498888	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1752093	0.54	1884762	92.96	60	120	
Sc	45	1	He	105538	0.54	134073	78.72	60	120	
Sc	45	2	NoGas	7183711	0.98	8481025	84.70	60	120	
Rh	103	1	He	691517	1.63	903580	76.53	60	120	
In	115	1	He	183025	1.22	224817	81.41	60	120	
Tb	159	1	He	907355	1.25	1046002	86.75	60	120	
Ho	165	1	He	918126	1.03	1057439	86.83	60	120	
Bi	209	1	He	625168	0.57	731380	85.48	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64385-b-1-a@10
Data File Name	223SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:11:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.403	15.403	0.95	379700	0.00	10000	
Be	9	45	2	NoGas	0.669	0.669	5.17	3382	0.02	2000	
B	11	45	2	NoGas	16.252	16.252	0.37	57189	0.03	300	
Na	23	45	1	He	143.750	143.750	3.22	47477	0.30	500000	
Mg	24	45	1	He	5615.764	5615.764	1.88	954117	0.59	500000	
Al	27	45	1	He	6614.704	6614.704	2.37	468137	1.41	200000	
K	39	45	1	He	1200.135	1200.135	0.91	103775	1.16	500000	
Ca	44	45	1	He	18420.031	18420.031	2.24	87224	21.12	500000	
Ti	47	45	1	He	65.363	65.363	6.03	2237	2.92	2500	
V	51	45	1	He	13.001	13.001	2.54	15919	0.08	10000	
Cr	52	45	1	He	10.673	10.673	3.32	16627	0.06	10000	
Mn	55	45	1	He	250.533	250.533	1.95	187368	0.13	10000	
Fe	56	45	1	He	17475.511	17475.511	1.69	20222421	0.09	200000	
Co	59	45	1	He	7.250	7.250	3.36	20227	0.04	5000	
Ni	60	45	1	He	18.728	18.728	3.36	14610	0.13	10000	
Cu	63	45	1	He	24.539	24.539	2.57	55464	0.04	10000	
Zn	66	45	1	He	53.950	53.950	2.11	15187	0.36	10000	
As	75	103	1	He	7.403	7.403	1.57	1328	0.56	10000	
Se	78	115	1	He	2.419	2.419	11.12	23	10.65	10000	
Sr	88	103	1	He	27.672	27.672	1.91	21756	0.13	10000	
Mo	95	103	1	He	3.328	3.328	3.42	3265	0.10	2000	
Ag	107	103	1	He	0.025	0.025	8.53	96	0.03	300	
Cd	111	115	1	He	0.182	0.182	12.15	78	0.23	4000	
Sn	118	115	1	He	4.213	4.213	6.10	3604	0.12	2000	
Sb	123	115	1	He	0.215	0.215	15.61	228	0.09	200	
Ba	137	115	1	He	46.558	46.558	1.90	14630	0.32	10000	
W	182	159	1	He	0.150	0.150	21.51	1919	0.01	2500	
Tl	205	165	1	He	0.275	0.275	3.66	2096	0.01	2000	
Pb	208	165	1	He	10.573	10.573	0.69	104785	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1762797	0.25	1884762	93.53	60	120	
Sc	45	1	He	104197	1.27	134073	77.72	60	120	
Sc	45	2	NoGas	6914623	0.87	8481025	81.53	60	120	
Rh	103	1	He	711796	0.10	903580	78.78	60	120	
In	115	1	He	188433	0.15	224817	83.82	60	120	
Tb	159	1	He	899228	0.92	1046002	85.97	60	120	
Ho	165	1	He	915738	0.80	1057439	86.60	60	120	
Bi	209	1	He	644837	0.45	731380	88.17	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64385-b-1-a@2
Data File Name	224SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:15:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	181.348	181.348	1.15	3507159	0.01	10000	
Be	9	45	2	NoGas	1105.227	1105.227	0.63	5485272	0.02	2000	
B	11	45	2	NoGas	136.238	136.238	0.22	433586	0.03	300	
Na	23	45	1	He	10258.231	10258.231	0.32	3137331	0.33	500000	
Mg	24	45	1	He	37122.839	37122.839	0.24	6301987	0.59	500000	
Al	27	45	1	He	43417.831	43417.831	1.00	3071266	1.41	200000	
K	39	45	1	He	15835.237	15835.237	0.97	1284437	1.23	500000	
Ca	44	45	1	He	98157.808	98157.808	0.27	464003	21.15	500000	
Ti	47	45	1	He	406.323	406.323	1.27	13905	2.92	2500	
V	51	45	1	He	1136.152	1136.152	2.71	1386627	0.08	10000	
Cr	52	45	1	He	1104.652	1104.652	1.80	1666770	0.07	10000	
Mn	55	45	1	He	2301.983	2301.983	0.91	1720101	0.13	10000	
Fe	56	45	1	He	92003.972	92003.972	0.91	106421880	0.09	200000	
Co	59	45	1	He	1085.607	1085.607	0.64	2992296	0.04	5000	
Ni	60	45	1	He	1071.795	1071.795	0.74	829524	0.13	10000	
Cu	63	45	1	He	1144.912	1144.912	0.60	2501328	0.05	10000	
Zn	66	45	1	He	1228.337	1228.337	0.37	343147	0.36	10000	
As	75	103	1	He	1045.477	1045.477	0.64	178740	0.58	10000	
Se	78	115	1	He	992.223	992.223	0.70	7925	12.52	10000	
Sr	88	103	1	He	1168.437	1168.437	0.67	883252	0.13	10000	
Mo	95	103	1	He	125.631	125.631	1.11	118308	0.11	2000	
Ag	107	103	1	He	102.917	102.917	0.94	358315	0.03	300	
Cd	111	115	1	He	1017.608	1017.608	1.04	405626	0.25	4000	
Sn	118	115	1	He	1080.301	1080.301	0.96	816041	0.13	2000	
Sb	123	115	1	He	107.307	107.307	0.73	91304	0.12	200	
Ba	137	115	1	He	1313.389	1313.389	1.17	391482	0.34	10000	
W	182	159	1	He	104.597	104.597	2.22	489720	0.02	2500	
Tl	205	165	1	He	267.477	267.477	1.54	1999195	0.01	2000	
Pb	208	165	1	He	1098.805	1098.805	0.51	10769917	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1649851	1.28	1884762	87.54	60	120	
Sc	45	1	He	104143	0.55	134073	77.68	60	120	
Sc	45	2	NoGas	7029536	0.72	8481025	82.89	60	120	
Rh	103	1	He	685341	1.00	903580	75.85	60	120	
In	115	1	He	178805	0.85	224817	79.53	60	120	
Tb	159	1	He	906712	0.20	1046002	86.68	60	120	
Ho	165	1	He	914558	0.42	1057439	86.49	60	120	
Bi	209	1	He	613275	0.57	731380	83.85	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-b ms@2
Data File Name	225SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:19:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	150.603	150.603	1.12	2911848	0.01	10000	
Be	9	45	2	NoGas	492.196	492.196	0.93	2428622	0.02	2000	
B	11	45	2	NoGas	93.203	93.203	1.73	297176	0.03	300	
Na	23	45	1	He	4868.686	4868.686	1.93	1529817	0.32	500000	
Mg	24	45	1	He	35755.743	35755.743	2.62	6228052	0.57	500000	
Al	27	45	1	He	52949.391	52949.391	2.12	3843093	1.38	200000	
K	39	45	1	He	11691.343	11691.343	2.13	974897	1.20	500000	
Ca	44	45	1	He	113900.658	113900.658	2.33	552430	20.62	500000	
Ti	47	45	1	He	479.209	479.209	2.90	16826	2.85	2500	
V	51	45	1	He	506.307	506.307	1.95	634039	0.08	10000	
Cr	52	45	1	He	492.576	492.576	2.49	762835	0.06	10000	
Mn	55	45	1	He	1959.110	1959.110	2.91	1502036	0.13	10000	
Fe	56	45	1	He	106884.861	106884.861	1.46	126864102	0.08	200000	
Co	59	45	1	He	462.624	462.624	1.92	1308544	0.04	5000	
Ni	60	45	1	He	525.439	525.439	1.37	417359	0.13	10000	
Cu	63	45	1	He	566.737	566.737	2.18	1271418	0.04	10000	
Zn	66	45	1	He	732.425	732.425	1.82	209998	0.35	10000	
As	75	103	1	He	477.426	477.426	1.00	81534	0.59	10000	
Se	78	115	1	He	417.834	417.834	2.19	3349	12.47	10000	
Sr	88	103	1	He	635.172	635.172	1.38	479598	0.13	10000	
Mo	95	103	1	He	70.307	70.307	1.53	66135	0.11	2000	
Ag	107	103	1	He	45.299	45.299	0.95	157537	0.03	300	
Cd	111	115	1	He	436.875	436.875	2.03	174709	0.25	4000	
Sn	118	115	1	He	443.983	443.983	1.81	336625	0.13	2000	
Sb	123	115	1	He	18.287	18.287	3.33	15636	0.12	200	
Ba	137	115	1	He	763.448	763.448	2.62	228297	0.33	10000	
W	182	159	1	He	34.873	34.873	0.99	162530	0.02	2500	
Tl	205	165	1	He	109.821	109.821	1.46	822061	0.01	2000	
Pb	208	165	1	He	513.514	513.514	0.60	5041291	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1683953	0.53	1884762	89.35	60	120	
Sc	45	1	He	106882	1.52	134073	79.72	60	120	
Sc	45	2	NoGas	6988693	0.69	8481025	82.40	60	120	
Rh	103	1	He	684552	0.59	903580	75.76	60	120	
In	115	1	He	179417	1.63	224817	79.81	60	120	
Tb	159	1	He	898042	0.51	1046002	85.85	60	120	
Ho	165	1	He	915934	0.48	1057439	86.62	60	120	
Bi	209	1	He	615358	1.37	731380	84.14	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-c msd@2
Data File Name	226SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:23:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	181.993	181.993	0.94	3433876	0.01	10000	
Be	9	45	2	NoGas	504.977	504.977	0.59	2445400	0.02	2000	
B	11	45	2	NoGas	100.428	100.428	0.70	313720	0.03	300	
Na	23	45	1	He	5072.000	5072.000	1.48	1556467	0.33	500000	
Mg	24	45	1	He	35702.210	35702.210	1.97	6074234	0.59	500000	
Al	27	45	1	He	61446.776	61446.776	2.17	4355795	1.41	200000	
K	39	45	1	He	12827.123	12827.123	1.60	1044030	1.23	500000	
Ca	44	45	1	He	94781.657	94781.657	1.83	449034	21.11	500000	
Ti	47	45	1	He	500.199	500.199	2.21	17155	2.92	2500	
V	51	45	1	He	532.684	532.684	2.03	651527	0.08	10000	
Cr	52	45	1	He	513.707	513.707	2.43	776996	0.07	10000	
Mn	55	45	1	He	2825.059	2825.059	2.21	2115528	0.13	10000	
Fe	56	45	1	He	116632.894	116632.894	2.17	135200524	0.09	200000	
Co	59	45	1	He	492.021	492.021	5.97	1358912	0.04	5000	
Ni	60	45	1	He	550.603	550.603	2.11	427118	0.13	10000	
Cu	63	45	1	He	547.194	547.194	1.59	1199106	0.05	10000	
Zn	66	45	1	He	786.716	786.716	2.00	220297	0.36	10000	
As	75	103	1	He	486.590	486.590	0.48	81027	0.60	10000	
Se	78	115	1	He	437.098	437.098	2.93	3422	12.77	10000	
Sr	88	103	1	He	637.638	637.638	1.16	469446	0.14	10000	
Mo	95	103	1	He	75.502	75.502	0.84	69248	0.11	2000	
Ag	107	103	1	He	46.704	46.704	0.75	158373	0.03	300	
Cd	111	115	1	He	451.995	451.995	1.22	176530	0.26	4000	
Sn	118	115	1	He	453.683	453.683	1.79	335909	0.14	2000	
Sb	123	115	1	He	18.669	18.669	3.12	15589	0.12	200	
Ba	137	115	1	He	828.144	828.144	1.05	241864	0.34	10000	
W	182	159	1	He	35.530	35.530	1.30	165518	0.02	2500	
Tl	205	165	1	He	113.911	113.911	0.48	845792	0.01	2000	
Pb	208	165	1	He	542.045	542.045	0.41	5278176	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656581	0.48	1884762	87.89	60	120	
Sc	45	1	He	104392	1.67	134073	77.86	60	120	
Sc	45	2	NoGas	6858631	0.30	8481025	80.87	60	120	
Rh	103	1	He	667470	0.72	903580	73.87	60	120	
In	115	1	He	175193	0.74	224817	77.93	60	120	
Tb	159	1	He	897747	0.59	1046002	85.83	60	120	
Ho	165	1	He	908501	0.31	1057439	85.92	60	120	
Bi	209	1	He	615122	0.51	731380	84.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-2-a@2
Data File Name	227SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:27:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	104.869	104.869	0.69	1979024	0.01	10000	
Be	9	45	2	NoGas	3.754	3.754	1.48	17939	0.02	2000	
B	11	45	2	NoGas	46.647	46.647	0.67	146609	0.03	300	
Na	23	45	1	He	694.592	694.592	0.26	210273	0.33	500000	
Mg	24	45	1	He	29941.128	29941.128	1.22	4954125	0.60	500000	
Al	27	45	1	He	41966.279	41966.279	0.70	2893270	1.45	200000	
K	39	45	1	He	7035.248	7035.248	0.60	559896	1.26	500000	
Ca	44	45	1	He	85712.885	85712.885	0.69	394910	21.70	500000	
Ti	47	45	1	He	369.575	369.575	2.41	12328	3.00	2500	
V	51	45	1	He	80.318	80.318	2.54	95565	0.08	10000	
Cr	52	45	1	He	61.712	61.712	0.63	91228	0.07	10000	
Mn	55	45	1	He	1242.957	1242.957	0.62	905268	0.14	10000	
Fe	56	45	1	He	93371.523	93371.523	0.36	105261305	0.09	200000	
Co	59	45	1	He	43.802	43.802	1.07	117888	0.04	5000	
Ni	60	45	1	He	113.814	113.814	1.69	85946	0.13	10000	
Cu	63	45	1	He	92.245	92.245	0.68	198096	0.05	10000	
Zn	66	45	1	He	261.782	261.782	1.62	71360	0.37	10000	
As	75	103	1	He	39.207	39.207	0.23	6401	0.61	10000	
Se	78	115	1	He	14.078	14.078	5.64	111	12.71	10000	
Sr	88	103	1	He	142.923	142.923	0.42	102999	0.14	10000	
Mo	95	103	1	He	20.478	20.478	1.25	18388	0.11	2000	
Ag	107	103	1	He	0.173	0.173	7.65	580	0.03	300	
Cd	111	115	1	He	1.258	1.258	7.43	486	0.26	4000	
Sn	118	115	1	He	20.499	20.499	2.14	15196	0.13	2000	
Sb	123	115	1	He	0.744	0.744	11.77	643	0.12	200	
Ba	137	115	1	He	293.183	293.183	1.15	84465	0.35	10000	
W	182	159	1	He	0.583	0.583	17.97	3856	0.02	2500	
Tl	205	165	1	He	2.085	2.085	0.58	15256	0.01	2000	
Pb	208	165	1	He	57.160	57.160	0.76	548104	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1667960	0.37	1884762	88.50	60	120	
Sc	45	1	He	101502	0.60	134073	75.71	60	120	
Sc	45	2	NoGas	6724806	0.91	8481025	79.29	60	120	
Rh	103	1	He	653179	0.19	903580	72.29	60	120	
In	115	1	He	172822	1.37	224817	76.87	60	120	
Tb	159	1	He	884752	0.52	1046002	84.58	60	120	
Ho	165	1	He	893195	0.84	1057439	84.47	60	120	
Bi	209	1	He	615078	1.42	731380	84.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-3-a@2
Data File Name	228SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:31:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	92.619	92.619	1.74	1709331	0.01	10000	
Be	9	45	2	NoGas	3.185	3.185	2.78	14810	0.02	2000	
B	11	45	2	NoGas	39.474	39.474	1.28	121622	0.03	300	
Na	23	45	1	He	720.091	720.091	2.36	209859	0.34	500000	
Mg	24	45	1	He	23310.459	23310.459	1.24	3715307	0.63	500000	
Al	27	45	1	He	46883.395	46883.395	2.22	3113206	1.51	200000	
K	39	45	1	He	6737.379	6737.379	1.44	516770	1.30	500000	
Ca	44	45	1	He	55003.666	55003.666	1.27	244166	22.53	500000	
Ti	47	45	1	He	510.029	510.029	3.11	16384	3.11	2500	
V	51	45	1	He	97.912	97.912	2.63	112203	0.09	10000	
Cr	52	45	1	He	67.740	67.740	1.93	96409	0.07	10000	
Mn	55	45	1	He	1202.525	1202.525	1.45	843658	0.14	10000	
Fe	56	45	1	He	113500.373	113500.373	1.40	123251617	0.09	200000	
Co	59	45	1	He	44.307	44.307	1.89	114862	0.04	5000	
Ni	60	45	1	He	113.023	113.023	2.37	82209	0.14	10000	
Cu	63	45	1	He	102.875	102.875	1.02	212612	0.05	10000	
Zn	66	45	1	He	324.163	324.163	0.80	85102	0.38	10000	
As	75	103	1	He	42.980	42.980	3.30	6905	0.62	10000	
Se	78	115	1	He	15.107	15.107	3.67	116	12.98	10000	
Sr	88	103	1	He	121.098	121.098	2.06	85903	0.14	10000	
Mo	95	103	1	He	17.135	17.135	3.63	15144	0.11	2000	
Ag	107	103	1	He	0.139	0.139	10.74	460	0.03	300	
Cd	111	115	1	He	0.929	0.929	6.12	352	0.26	4000	
Sn	118	115	1	He	20.664	20.664	3.29	15011	0.14	2000	
Sb	123	115	1	He	0.877	0.877	4.31	739	0.12	200	
Ba	137	115	1	He	303.665	303.665	1.02	85770	0.35	10000	
W	182	159	1	He	0.663	0.663	10.45	4119	0.02	2500	
Tl	205	165	1	He	1.478	1.478	2.47	10594	0.01	2000	
Pb	208	165	1	He	61.734	61.734	0.41	579258	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1636937	0.59	1884762	86.85	60	120	
Sc	45	1	He	97782	1.21	134073	72.93	60	120	
Sc	45	2	NoGas	6536313	0.36	8481025	77.07	60	120	
Rh	103	1	He	642962	0.71	903580	71.16	60	120	
In	115	1	He	169421	0.56	224817	75.36	60	120	
Tb	159	1	He	862309	1.18	1046002	82.44	60	120	
Ho	165	1	He	874113	0.39	1057439	82.66	60	120	
Bi	209	1	He	599602	0.65	731380	81.98	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	229_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:36:09-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.664	1.358	962498	0.58	50	105.3	89.5	110.5	
Be	9	45	2	NoGas	52.654	1.028	231530	0.37	50	105.3	89.5	110.5	
B	11	45	2	NoGas	59.378	0.538	171001	0.67	50	118.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24106.651	1.452	6513000	0.41	25000	96.4	89.5	110.5	
Mg	24	45	1	He	24244.747	2.039	3638242	1.00	25000	97.0	89.5	110.5	
Al	27	45	1	He	252.195	2.304	15845	1.67	250	100.9	89.5	110.5	
K	39	45	1	He	25816.651	1.304	1847230	0.91	25000	103.3	89.5	110.5	
Ca	44	45	1	He	25589.577	1.588	107026	0.73	25000	102.4	89.5	110.5	
Ti	47	45	1	He	51.247	5.199	1550	4.75	50	102.5	89.5	110.5	
V	51	45	1	He	49.133	1.693	53035	0.48	50	98.3	89.5	110.5	
Cr	52	45	1	He	49.632	2.067	66635	1.04	50	99.3	89.5	110.5	
Mn	55	45	1	He	254.946	1.691	168484	1.02	250	102.0	89.5	110.5	
Fe	56	45	1	He	12764.066	1.692	13051599	0.43	12500	102.1	89.5	110.5	
Co	59	45	1	He	50.412	2.214	123022	1.12	50	100.8	89.5	110.5	
Ni	60	45	1	He	50.159	3.267	34408	2.77	50	100.3	89.5	110.5	
Cu	63	45	1	He	50.173	2.281	98474	1.17	50	100.3	89.5	110.5	
Zn	66	45	1	He	52.688	2.036	13107	0.74	50	105.4	89.5	110.5	
As	75	103	1	He	48.605	2.479	7771	2.08	50	97.2	89.5	110.5	
Se	78	115	1	He	46.743	5.610	354	4.80	50	93.5	89.5	110.5	
Sr	88	103	1	He	50.847	0.672	35919	0.85	50	101.7	89.5	110.5	
Mo	95	103	1	He	50.772	2.551	44646	1.79	50	101.5	89.5	110.5	
Ag	107	103	1	He	50.036	1.905	162667	1.05	50	100.1	89.5	110.5	
Cd	111	115	1	He	49.641	1.421	18638	0.57	50	99.3	89.5	110.5	
Sn	118	115	1	He	49.476	4.895	35404	3.74	50	99.0	89.5	110.5	
Sb	123	115	1	He	51.718	1.635	41464	1.62	50	103.4	89.5	110.5	
Ba	137	115	1	He	50.889	2.267	14289	1.37	50	101.8	89.5	110.5	
W	182	159	1	He	52.379	2.527	225238	2.47	50	104.8	89.5	110.5	
Tl	205	165	1	He	50.460	0.788	346880	0.82	50	100.9	89.5	110.5	
Pb	208	165	1	He	51.066	0.367	461214	0.34	50	102.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1618426	0.53	1884762	85.87	60	120	
Sc	45	1	He	92069	1.27	134073	68.67	60	120	
Sc	45	2	NoGas	6225582	0.85	8481025	73.41	60	120	
Rh	103	1	He	639969	0.97	903580	70.83	60	120	
In	115	1	He	168416	1.15	224817	74.91	60	120	
Tb	159	1	He	830681	0.14	1046002	79.41	60	120	
Ho	165	1	He	841081	0.17	1057439	79.54	60	120	
Bi	209	1	He	585948	0.70	731380	80.12	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	230_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:40:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.977	3.8	100628	0.1	8	
Be	9	45	2	NoGas	0.428	13.1	1971	12.8	1	
B	11	45	2	NoGas	10.559	3.2	35386	3.0	20	
Na	23	45	1	He	54.826	2.2	18202	1.6	1000	
Mg	24	45	1	He	27.680	6.6	4660	6.1	1000	
Al	27	45	1	He	2.828	34.2	257	23.8	50	
K	39	45	1	He	28.768	12.6	8265	2.8	1000	
Ca	44	45	1	He	37.749	18.0	294	10.3	1000	
Ti	47	45	1	He	0.217	132.2	7	132.3	20	
V	51	45	1	He	0.153	5.5	205	5.0	2	
Cr	52	45	1	He	0.045	162.6	531	18.2	2	
Mn	55	45	1	He	0.441	17.4	389	13.3	2	
Fe	56	45	1	He	26.821	4.4	29210	4.1	50	
Co	59	45	1	He	0.053	12.5	347	5.1	1	
Ni	60	45	1	He	0.040	153.9	128	33.2	2	
Cu	63	45	1	He	-0.568	-4.1	571	7.5	2	
Zn	66	45	1	He	0.477	28.9	222	15.8	20	
As	75	103	1	He	0.167	12.7	41	8.5	2	
Se	78	115	1	He	0.355	72.8	5	40.0	2	
Sr	88	103	1	He	0.097	7.6	100	5.8	10	
Mo	95	103	1	He	0.158	9.0	154	8.7	2	
Ag	107	103	1	He	0.052	17.7	183	17.3	0.2	
Cd	111	115	1	He	0.131	18.3	53	18.4	0.2	
Sn	118	115	1	He	0.168	66.1	359	23.6	10	
Sb	123	115	1	He	0.221	4.6	218	3.2	2	
Ba	137	115	1	He	0.095	27.8	32	23.9	5	
W	182	159	1	He	0.285	15.4	2374	8.0	10	
Tl	205	165	1	He	0.165	9.6	1179	9.5	0.5	
Pb	208	165	1	He	0.284	4.0	3546	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1600712	1.04	1884762	84.93	60	120	
Sc	45	1	He	93392	0.49	134073	69.66	60	120	
Sc	45	2	NoGas	6167941	0.73	8481025	72.73	60	120	
Rh	103	1	He	666366	0.36	903580	73.75	60	120	
In	115	1	He	175516	0.77	224817	78.07	60	120	
Tb	159	1	He	839613	0.52	1046002	80.27	60	120	
Ho	165	1	He	849395	0.82	1057439	80.33	60	120	
Bi	209	1	He	605905	0.71	731380	82.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-a-4-a@2
Data File Name	231SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:44:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	64.177	64.177	1.94	1218054	0.01	10000	
Be	9	45	2	NoGas	1.968	1.968	3.27	9240	0.02	2000	
B	11	45	2	NoGas	29.437	29.437	1.38	92890	0.03	300	
Na	23	45	1	He	856.872	856.872	0.87	247963	0.35	500000	
Mg	24	45	1	He	20767.908	20767.908	0.15	3295248	0.63	500000	
Al	27	45	1	He	30577.149	30577.149	1.41	2021516	1.51	200000	
K	39	45	1	He	4526.637	4526.637	1.29	347751	1.30	500000	
Ca	44	45	1	He	103623.839	103623.839	0.96	457819	22.63	500000	
Ti	47	45	1	He	298.678	298.678	1.09	9553	3.13	2500	
V	51	45	1	He	60.904	60.904	3.09	69508	0.09	10000	
Cr	52	45	1	He	56.157	56.157	1.00	79657	0.07	10000	
Mn	55	45	1	He	1211.506	1211.506	1.15	846181	0.14	10000	
Fe	56	45	1	He	71213.810	71213.810	1.15	76987832	0.09	200000	
Co	59	45	1	He	30.283	30.283	1.48	78231	0.04	5000	
Ni	60	45	1	He	72.653	72.653	0.96	52651	0.14	10000	
Cu	63	45	1	He	160.899	160.899	1.53	330057	0.05	10000	
Zn	66	45	1	He	404.958	404.958	1.24	105801	0.38	10000	
As	75	103	1	He	31.002	31.002	2.72	4963	0.62	10000	
Se	78	115	1	He	9.571	9.571	3.95	76	12.63	10000	
Sr	88	103	1	He	226.801	226.801	0.58	160215	0.14	10000	
Mo	95	103	1	He	9.415	9.415	3.21	8294	0.11	2000	
Ag	107	103	1	He	0.169	0.169	7.19	554	0.03	300	
Cd	111	115	1	He	0.873	0.873	4.28	336	0.26	4000	
Sn	118	115	1	He	20.105	20.105	3.06	14855	0.14	2000	
Sb	123	115	1	He	0.744	0.744	9.97	642	0.12	200	
Ba	137	115	1	He	177.110	177.110	0.97	50845	0.35	10000	
W	182	159	1	He	0.822	0.822	9.38	4776	0.02	2500	
Tl	205	165	1	He	1.053	1.053	2.23	7537	0.01	2000	
Pb	208	165	1	He	58.887	58.887	1.03	551024	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1595754	1.64	1884762	84.67	60	120	
Sc	45	1	He	97333	0.65	134073	72.60	60	120	
Sc	45	2	NoGas	6569608	0.76	8481025	77.46	60	120	
Rh	103	1	He	640327	1.10	903580	70.87	60	120	
In	115	1	He	172200	1.25	224817	76.60	60	120	
Tb	159	1	He	853563	1.42	1046002	81.60	60	120	
Ho	165	1	He	871665	0.70	1057439	82.43	60	120	
Bi	209	1	He	599831	0.79	731380	82.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-5-a@2
Data File Name	232SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:48:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	63.172	63.172	0.78	1209398	0.01	10000	
Be	9	45	2	NoGas	1.963	1.963	3.64	9284	0.02	2000	
B	11	45	2	NoGas	29.386	29.386	2.90	93429	0.03	300	
Na	23	45	1	He	588.362	588.362	2.96	173474	0.34	500000	
Mg	24	45	1	He	18325.988	18325.988	1.72	2945091	0.62	500000	
Al	27	45	1	He	29220.012	29220.012	3.44	1956107	1.49	200000	
K	39	45	1	He	4530.754	4530.754	2.44	352491	1.29	500000	
Ca	44	45	1	He	83711.936	83711.936	2.16	374579	22.35	500000	
Ti	47	45	1	He	318.372	318.372	4.62	10310	3.09	2500	
V	51	45	1	He	60.027	60.027	4.74	69354	0.09	10000	
Cr	52	45	1	He	51.840	51.840	2.73	74503	0.07	10000	
Mn	55	45	1	He	1062.437	1062.437	2.74	751453	0.14	10000	
Fe	56	45	1	He	72147.368	72147.368	2.34	78987732	0.09	200000	
Co	59	45	1	He	30.930	30.930	2.31	80912	0.04	5000	
Ni	60	45	1	He	74.639	74.639	3.60	54768	0.14	10000	
Cu	63	45	1	He	70.969	70.969	2.94	148411	0.05	10000	
Zn	66	45	1	He	328.064	328.064	2.36	86824	0.38	10000	
As	75	103	1	He	28.655	28.655	0.74	4708	0.61	10000	
Se	78	115	1	He	9.768	9.768	8.20	77	12.72	10000	
Sr	88	103	1	He	195.590	195.590	0.74	141736	0.14	10000	
Mo	95	103	1	He	10.964	10.964	1.66	9905	0.11	2000	
Ag	107	103	1	He	0.121	0.121	15.21	410	0.03	300	
Cd	111	115	1	He	0.710	0.710	9.56	272	0.26	4000	
Sn	118	115	1	He	21.598	21.598	6.09	15830	0.14	2000	
Sb	123	115	1	He	0.661	0.661	3.95	570	0.12	200	
Ba	137	115	1	He	172.981	172.981	1.26	49331	0.35	10000	
W	182	159	1	He	0.683	0.683	3.28	4208	0.02	2500	
Tl	205	165	1	He	1.002	1.002	1.36	7211	0.01	2000	
Pb	208	165	1	He	57.883	57.883	1.04	544703	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1615999	1.29	1884762	85.74	60	120	
Sc	45	1	He	98600	1.78	134073	73.54	60	120	
Sc	45	2	NoGas	6618621	0.48	8481025	78.04	60	120	
Rh	103	1	He	656855	0.26	903580	72.69	60	120	
In	115	1	He	171054	0.64	224817	76.09	60	120	
Tb	159	1	He	862721	0.70	1046002	82.48	60	120	
Ho	165	1	He	876640	1.38	1057439	82.90	60	120	
Bi	209	1	He	600496	0.58	731380	82.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-6-a@2
Data File Name	233SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:52:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	81.190	81.190	1.45	1554195	0.01	10000	
Be	9	45	2	NoGas	2.767	2.767	3.54	13261	0.02	2000	
B	11	45	2	NoGas	34.693	34.693	1.03	110909	0.03	300	
Na	23	45	1	He	1761.063	1761.063	0.40	532498	0.33	500000	
Mg	24	45	1	He	25953.897	25953.897	0.95	4332397	0.60	500000	
Al	27	45	1	He	38802.600	38802.600	0.84	2698801	1.44	200000	
K	39	45	1	He	5140.278	5140.278	0.82	414526	1.24	500000	
Ca	44	45	1	He	98565.267	98565.267	0.86	458131	21.51	500000	
Ti	47	45	1	He	339.034	339.034	3.90	11406	2.97	2500	
V	51	45	1	He	84.974	84.974	1.33	101999	0.08	10000	
Cr	52	45	1	He	69.897	69.897	2.64	104165	0.07	10000	
Mn	55	45	1	He	2307.705	2307.705	2.38	1695462	0.14	10000	
Fe	56	45	1	He	112756.974	112756.974	1.34	128239088	0.09	200000	
Co	59	45	1	He	52.213	52.213	1.32	141726	0.04	5000	
Ni	60	45	1	He	103.677	103.677	1.08	78997	0.13	10000	
Cu	63	45	1	He	99.746	99.746	1.38	215946	0.05	10000	
Zn	66	45	1	He	498.968	498.968	1.60	137119	0.36	10000	
As	75	103	1	He	57.410	57.410	2.21	9592	0.60	10000	
Se	78	115	1	He	14.451	14.451	9.01	117	12.40	10000	
Sr	88	103	1	He	193.383	193.383	1.04	142699	0.14	10000	
Mo	95	103	1	He	17.097	17.097	1.49	15724	0.11	2000	
Ag	107	103	1	He	0.154	0.154	10.64	528	0.03	300	
Cd	111	115	1	He	1.541	1.541	8.68	610	0.25	4000	
Sn	118	115	1	He	20.402	20.402	6.37	15508	0.13	2000	
Sb	123	115	1	He	0.771	0.771	7.10	683	0.11	200	
Ba	137	115	1	He	250.359	250.359	0.73	73962	0.34	10000	
W	182	159	1	He	0.755	0.755	13.21	4664	0.02	2500	
Tl	205	165	1	He	1.257	1.257	1.00	9332	0.01	2000	
Pb	208	165	1	He	107.367	107.367	0.60	1042079	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1613723	0.61	1884762	85.62	60	120	
Sc	45	1	He	102404	0.88	134073	76.38	60	120	
Sc	45	2	NoGas	6730456	1.01	8481025	79.36	60	120	
Rh	103	1	He	668898	0.87	903580	74.03	60	120	
In	115	1	He	177199	0.35	224817	78.82	60	120	
Tb	159	1	He	888364	0.78	1046002	84.93	60	120	
Ho	165	1	He	904818	0.31	1057439	85.57	60	120	
Bi	209	1	He	610209	0.26	731380	83.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-7-a@2
Data File Name	234SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:56:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	79.503	79.503	0.42	1480002	0.01	10000	
Be	9	45	2	NoGas	2.107	2.107	4.27	9836	0.02	2000	
B	11	45	2	NoGas	34.935	34.935	0.47	108420	0.03	300	
Na	23	45	1	He	611.426	611.426	2.43	177701	0.34	500000	
Mg	24	45	1	He	18460.811	18460.811	1.55	2926327	0.63	500000	
Al	27	45	1	He	37221.921	37221.921	1.20	2458349	1.51	200000	
K	39	45	1	He	5247.613	5247.613	1.69	401705	1.31	500000	
Ca	44	45	1	He	71060.523	71060.523	2.20	313663	22.66	500000	
Ti	47	45	1	He	355.095	355.095	3.05	11346	3.13	2500	
V	51	45	1	He	67.225	67.225	1.46	76635	0.09	10000	
Cr	52	45	1	He	56.132	56.132	1.23	79540	0.07	10000	
Mn	55	45	1	He	910.404	910.404	1.72	635242	0.14	10000	
Fe	56	45	1	He	80976.866	80976.866	1.56	87455734	0.09	200000	
Co	59	45	1	He	30.958	30.958	1.28	79889	0.04	5000	
Ni	60	45	1	He	82.293	82.293	1.42	59562	0.14	10000	
Cu	63	45	1	He	181.660	181.660	0.64	372049	0.05	10000	
Zn	66	45	1	He	258.109	258.109	0.95	67409	0.38	10000	
As	75	103	1	He	29.837	29.837	3.20	4788	0.62	10000	
Se	78	115	1	He	9.392	9.392	3.58	74	12.64	10000	
Sr	88	103	1	He	148.083	148.083	1.64	104836	0.14	10000	
Mo	95	103	1	He	7.339	7.339	1.97	6480	0.11	2000	
Ag	107	103	1	He	0.127	0.127	17.72	418	0.03	300	
Cd	111	115	1	He	0.705	0.705	6.19	272	0.26	4000	
Sn	118	115	1	He	19.562	19.562	5.31	14433	0.14	2000	
Sb	123	115	1	He	0.702	0.702	2.68	607	0.12	200	
Ba	137	115	1	He	204.739	204.739	3.24	58699	0.35	10000	
W	182	159	1	He	0.981	0.981	73.93	5456	0.02	2500	
Tl	205	165	1	He	1.158	1.158	2.08	8287	0.01	2000	
Pb	208	165	1	He	40.092	40.092	1.62	375507	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1625290	1.81	1884762	86.23	60	120	
Sc	45	1	He	97246	1.05	134073	72.53	60	120	
Sc	45	2	NoGas	6536291	0.31	8481025	77.07	60	120	
Rh	103	1	He	641818	2.21	903580	71.03	60	120	
In	115	1	He	172067	2.71	224817	76.54	60	120	
Tb	159	1	He	855065	1.34	1046002	81.75	60	120	
Ho	165	1	He	871910	2.16	1057439	82.45	60	120	
Bi	209	1	He	600252	1.47	731380	82.07	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-8-a@2
Data File Name	235SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:01:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	97.885	97.885	0.88	1749610	0.01	10000	
Be	9	45	2	NoGas	2.633	2.633	3.45	11912	0.02	2000	
B	11	45	2	NoGas	34.080	34.080	2.10	102878	0.03	300	
Na	23	45	1	He	614.659	614.659	3.35	179791	0.34	500000	
Mg	24	45	1	He	25176.119	25176.119	2.78	4016552	0.63	500000	
Al	27	45	1	He	44079.973	44079.973	3.54	2929797	1.50	200000	
K	39	45	1	He	6269.201	6269.201	2.84	481790	1.30	500000	
Ca	44	45	1	He	90793.166	90793.166	3.32	403307	22.51	500000	
Ti	47	45	1	He	380.939	380.939	3.47	12250	3.11	2500	
V	51	45	1	He	82.190	82.190	3.25	94286	0.09	10000	
Cr	52	45	1	He	65.268	65.268	3.35	92996	0.07	10000	
Mn	55	45	1	He	1223.655	1223.655	3.17	859296	0.14	10000	
Fe	56	45	1	He	96832.687	96832.687	3.18	105248627	0.09	200000	
Co	59	45	1	He	38.749	38.749	3.03	100581	0.04	5000	
Ni	60	45	1	He	101.884	101.884	2.82	74196	0.14	10000	
Cu	63	45	1	He	87.246	87.246	3.38	180738	0.05	10000	
Zn	66	45	1	He	287.291	287.291	3.18	75499	0.38	10000	
As	75	103	1	He	38.542	38.542	0.41	6090	0.63	10000	
Se	78	115	1	He	13.529	13.529	2.89	102	13.26	10000	
Sr	88	103	1	He	163.238	163.238	0.94	113859	0.14	10000	
Mo	95	103	1	He	11.686	11.686	0.79	10160	0.12	2000	
Ag	107	103	1	He	0.118	0.118	18.69	383	0.03	300	
Cd	111	115	1	He	0.603	0.603	4.13	224	0.27	4000	
Sn	118	115	1	He	19.796	19.796	2.88	14047	0.14	2000	
Sb	123	115	1	He	0.591	0.591	1.18	496	0.12	200	
Ba	137	115	1	He	264.283	264.283	0.73	72861	0.36	10000	
W	182	159	1	He	0.503	0.503	11.63	3363	0.01	2500	
Tl	205	165	1	He	1.395	1.395	3.37	9911	0.01	2000	
Pb	208	165	1	He	51.090	51.090	0.65	475251	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1565125	0.77	1884762	83.04	60	120	
Sc	45	1	He	97910	2.35	134073	73.03	60	120	
Sc	45	2	NoGas	6348387	0.80	8481025	74.85	60	120	
Rh	103	1	He	632207	0.39	903580	69.97	60	120	
In	115	1	He	165368	0.44	224817	73.56	60	120	
Tb	159	1	He	851800	0.49	1046002	81.43	60	120	
Ho	165	1	He	866270	0.63	1057439	81.92	60	120	
Bi	209	1	He	592607	0.30	731380	81.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-1-a@2
Data File Name	236SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:05:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	37.958	37.958	1.00	708460	0.01	10000	
Be	9	45	2	NoGas	2.830	2.830	0.65	12386	0.02	2000	
B	11	45	2	NoGas	24.563	24.563	1.27	73571	0.03	300	
Na	23	45	1	He	439.837	439.837	1.15	121869	0.36	500000	
Mg	24	45	1	He	6970.542	6970.542	2.63	1045797	0.67	500000	
Al	27	45	1	He	24259.281	24259.281	2.62	1516053	1.60	200000	
K	39	45	1	He	1731.603	1731.603	1.51	129539	1.34	500000	
Ca	44	45	1	He	23565.018	23565.018	1.66	98526	23.92	500000	
Ti	47	45	1	He	294.931	294.931	3.75	8916	3.31	2500	
V	51	45	1	He	60.080	60.080	3.79	64804	0.09	10000	
Cr	52	45	1	He	225.048	225.048	2.64	300342	0.07	10000	
Mn	55	45	1	He	8240.296	8240.296	2.21	5439989	0.15	10000	
Fe	56	45	1	He	89149.386	89149.386	2.29	91105239	0.10	200000	
Co	59	45	1	He	35.375	35.375	2.22	86350	0.04	5000	
Ni	60	45	1	He	124.213	124.213	2.34	85022	0.15	10000	
Cu	63	45	1	He	71.231	71.231	1.65	139063	0.05	10000	
Zn	66	45	1	He	602.923	602.923	2.46	148856	0.41	10000	
As	75	103	1	He	43.151	43.151	1.08	6777	0.64	10000	
Se	78	115	1	He	11.635	11.635	3.09	89	13.14	10000	
Sr	88	103	1	He	77.668	77.668	1.82	53867	0.14	10000	
Mo	95	103	1	He	48.009	48.009	1.78	41461	0.12	2000	
Ag	107	103	1	He	0.261	0.261	12.91	840	0.03	300	
Cd	111	115	1	He	2.047	2.047	1.91	761	0.27	4000	
Sn	118	115	1	He	22.469	22.469	3.93	16019	0.14	2000	
Sb	123	115	1	He	0.945	0.945	18.40	779	0.12	200	
Ba	137	115	1	He	488.143	488.143	0.87	135466	0.36	10000	
W	182	159	1	He	4.733	4.733	1.89	21634	0.02	2500	
Tl	205	165	1	He	0.594	0.594	1.63	4177	0.01	2000	
Pb	208	165	1	He	162.793	162.793	0.31	1491642	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1563465	0.56	1884762	82.95	60	120	
Sc	45	1	He	92039	2.03	134073	68.65	60	120	
Sc	45	2	NoGas	6146426	0.75	8481025	72.47	60	120	
Rh	103	1	He	628511	1.29	903580	69.56	60	120	
In	115	1	He	166480	1.88	224817	74.05	60	120	
Tb	159	1	He	840535	0.64	1046002	80.36	60	120	
Ho	165	1	He	854490	0.59	1057439	80.81	60	120	
Bi	209	1	He	595922	1.24	731380	81.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-2-a@2
Data File Name	237SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:09:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	36.672	36.672	1.49	660976	0.01	10000	
Be	9	45	2	NoGas	2.535	2.535	1.47	10681	0.02	2000	
B	11	45	2	NoGas	22.330	22.330	0.62	64880	0.03	300	
Na	23	45	1	He	470.894	470.894	0.92	126948	0.37	500000	
Mg	24	45	1	He	6724.505	6724.505	0.98	983491	0.68	500000	
Al	27	45	1	He	23480.531	23480.531	0.65	1430464	1.64	200000	
K	39	45	1	He	1614.350	1614.350	1.19	118105	1.37	500000	
Ca	44	45	1	He	21101.500	21101.500	0.05	86008	24.53	500000	
Ti	47	45	1	He	305.065	305.065	1.04	8991	3.39	2500	
V	51	45	1	He	51.917	51.917	2.44	54600	0.10	10000	
Cr	52	45	1	He	333.199	333.199	0.68	433277	0.08	10000	
Mn	55	45	1	He	6711.951	6711.951	0.53	4319327	0.16	10000	
Fe	56	45	1	He	83893.635	83893.635	0.90	83573174	0.10	200000	
Co	59	45	1	He	32.792	32.792	0.92	78041	0.04	5000	
Ni	60	45	1	He	119.470	119.470	0.49	79717	0.15	10000	
Cu	63	45	1	He	67.640	67.640	0.78	128787	0.05	10000	
Zn	66	45	1	He	569.263	569.263	0.65	137011	0.42	10000	
As	75	103	1	He	29.736	29.736	1.45	4565	0.65	10000	
Se	78	115	1	He	11.825	11.825	7.35	88	13.40	10000	
Sr	88	103	1	He	70.046	70.046	1.16	47454	0.15	10000	
Mo	95	103	1	He	42.825	42.825	1.51	36128	0.12	2000	
Ag	107	103	1	He	0.256	0.256	9.08	803	0.03	300	
Cd	111	115	1	He	1.771	1.771	5.91	646	0.27	4000	
Sn	118	115	1	He	21.465	21.465	0.63	15015	0.14	2000	
Sb	123	115	1	He	0.795	0.795	8.71	648	0.12	200	
Ba	137	115	1	He	419.106	419.106	1.48	114032	0.37	10000	
W	182	159	1	He	4.278	4.278	1.55	19438	0.02	2500	
Tl	205	165	1	He	0.646	0.646	2.56	4494	0.01	2000	
Pb	208	165	1	He	144.629	144.629	0.90	1310382	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1534081	0.93	1884762	81.39	60	120	
Sc	45	1	He	89691	0.22	134073	66.90	60	120	
Sc	45	2	NoGas	5910929	0.36	8481025	69.70	60	120	
Rh	103	1	He	613841	0.42	903580	67.93	60	120	
In	115	1	He	163211	0.41	224817	72.60	60	120	
Tb	159	1	He	830939	0.23	1046002	79.44	60	120	
Ho	165	1	He	844913	1.12	1057439	79.90	60	120	
Bi	209	1	He	591764	0.55	731380	80.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-3-a@2
Data File Name	238SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:13:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.495	31.495	0.27	559869	0.01	10000	
Be	9	45	2	NoGas	2.180	2.180	5.27	8895	0.02	2000	
B	11	45	2	NoGas	22.629	22.629	1.48	63487	0.04	300	
Na	23	45	1	He	487.139	487.139	1.96	127677	0.38	500000	
Mg	24	45	1	He	8257.010	8257.010	2.62	1174776	0.70	500000	
Al	27	45	1	He	20751.737	20751.737	2.67	1229913	1.69	200000	
K	39	45	1	He	1621.673	1621.673	3.87	115378	1.41	500000	
Ca	44	45	1	He	29537.249	29537.249	3.51	117066	25.23	500000	
Ti	47	45	1	He	329.202	329.202	4.12	9437	3.49	2500	
V	51	45	1	He	52.888	52.888	7.78	54064	0.10	10000	
Cr	52	45	1	He	321.846	321.846	3.08	407142	0.08	10000	
Mn	55	45	1	He	8964.758	8964.758	2.01	5612994	0.16	10000	
Fe	56	45	1	He	77141.968	77141.968	2.87	74758953	0.10	200000	
Co	59	45	1	He	32.520	32.520	3.23	75293	0.04	5000	
Ni	60	45	1	He	106.787	106.787	3.69	69319	0.15	10000	
Cu	63	45	1	He	84.120	84.120	2.64	155440	0.05	10000	
Zn	66	45	1	He	613.570	613.570	2.64	143660	0.43	10000	
As	75	103	1	He	31.951	31.951	1.08	4835	0.66	10000	
Se	78	115	1	He	11.616	11.616	12.96	87	13.42	10000	
Sr	88	103	1	He	75.117	75.117	0.75	50170	0.15	10000	
Mo	95	103	1	He	25.344	25.344	1.58	21082	0.12	2000	
Ag	107	103	1	He	0.320	0.320	12.55	989	0.03	300	
Cd	111	115	1	He	1.668	1.668	3.47	607	0.27	4000	
Sn	118	115	1	He	21.658	21.658	2.73	15126	0.14	2000	
Sb	123	115	1	He	0.859	0.859	6.62	697	0.12	200	
Ba	137	115	1	He	469.180	469.180	0.91	127494	0.37	10000	
W	182	159	1	He	4.912	4.912	1.46	21908	0.02	2500	
Tl	205	165	1	He	0.545	0.545	1.91	3756	0.01	2000	
Pb	208	165	1	He	131.423	131.423	0.89	1177991	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1476263	1.41	1884762	78.33	60	120	
Sc	45	1	He	87293	2.42	134073	65.11	60	120	
Sc	45	2	NoGas	5714535	0.35	8481025	67.38	60	120	
Rh	103	1	He	605242	1.13	903580	66.98	60	120	
In	115	1	He	163008	1.06	224817	72.51	60	120	
Tb	159	1	He	821837	1.20	1046002	78.57	60	120	
Ho	165	1	He	835828	1.36	1057439	79.04	60	120	
Bi	209	1	He	590578	0.29	731380	80.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-4-a@2
Data File Name	239SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:17:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	32.502	32.502	0.73	576864	0.01	10000	
Be	9	45	2	NoGas	2.431	2.431	5.74	9933	0.02	2000	
B	11	45	2	NoGas	29.737	29.737	1.35	81793	0.04	300	
Na	23	45	1	He	870.453	870.453	1.44	223075	0.39	500000	
Mg	24	45	1	He	13160.047	13160.047	1.96	1849541	0.71	500000	
Al	27	45	1	He	24912.383	24912.383	2.18	1458622	1.71	200000	
K	39	45	1	He	1715.559	1715.559	0.80	120297	1.43	500000	
Ca	44	45	1	He	37030.241	37030.241	2.22	144965	25.54	500000	
Ti	47	45	1	He	468.118	468.118	1.76	13261	3.53	2500	
V	51	45	1	He	60.815	60.815	6.57	61441	0.10	10000	
Cr	52	45	1	He	474.971	474.971	2.99	593343	0.08	10000	
Mn	55	45	1	He	7157.635	7157.635	2.53	4426682	0.16	10000	
Fe	56	45	1	He	94031.743	94031.743	2.60	90022419	0.10	200000	
Co	59	45	1	He	30.341	30.341	2.71	69409	0.04	5000	
Ni	60	45	1	He	114.880	114.880	2.33	73674	0.16	10000	
Cu	63	45	1	He	88.445	88.445	2.28	161370	0.05	10000	
Zn	66	45	1	He	608.553	608.553	2.16	140762	0.43	10000	
As	75	103	1	He	37.739	37.739	0.24	5663	0.67	10000	
Se	78	115	1	He	11.441	11.441	11.63	83	13.72	10000	
Sr	88	103	1	He	85.107	85.107	0.98	56381	0.15	10000	
Mo	95	103	1	He	33.721	33.721	1.03	27822	0.12	2000	
Ag	107	103	1	He	0.281	0.281	11.16	861	0.03	300	
Cd	111	115	1	He	1.630	1.630	1.91	580	0.28	4000	
Sn	118	115	1	He	24.020	24.020	4.85	16379	0.15	2000	
Sb	123	115	1	He	1.079	1.079	10.82	848	0.13	200	
Ba	137	115	1	He	461.690	461.690	1.30	122651	0.38	10000	
W	182	159	1	He	5.577	5.577	2.78	24809	0.02	2500	
Tl	205	165	1	He	0.552	0.552	4.11	3786	0.01	2000	
Pb	208	165	1	He	137.148	137.148	2.04	1223450	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1453576	1.31	1884762	77.12	60	120	
Sc	45	1	He	86224	1.90	134073	64.31	60	120	
Sc	45	2	NoGas	5730698	1.17	8481025	67.57	60	120	
Rh	103	1	He	600349	0.91	903580	66.44	60	120	
In	115	1	He	159352	0.21	224817	70.88	60	120	
Tb	159	1	He	824561	0.38	1046002	78.83	60	120	
Ho	165	1	He	831974	1.57	1057439	78.68	60	120	
Bi	209	1	He	586332	0.69	731380	80.17	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	240_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:22:00-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.910	0.894	893189	0.18	50	105.8	89.5	110.5	
Be	9	45	2	NoGas	52.335	0.373	212659	0.69	50	104.7	89.5	110.5	
B	11	45	2	NoGas	59.545	0.198	158441	0.92	50	119.1	89.5	110.5	CCV Failed
Na	23	45	1	He	23489.098	0.818	5995230	0.16	25000	94.0	89.5	110.5	
Mg	24	45	1	He	23727.573	2.965	3363375	1.99	25000	94.9	89.5	110.5	
Al	27	45	1	He	249.386	5.774	14798	4.84	250	99.8	89.5	110.5	
K	39	45	1	He	25215.674	0.795	1704515	0.18	25000	100.9	89.5	110.5	
Ca	44	45	1	He	24815.615	2.659	98042	1.80	25000	99.3	89.5	110.5	
Ti	47	45	1	He	48.281	3.467	1380	4.29	50	96.6	89.5	110.5	
V	51	45	1	He	48.103	7.338	49033	6.37	50	96.2	89.5	110.5	
Cr	52	45	1	He	49.402	2.045	62657	1.36	50	98.8	89.5	110.5	
Mn	55	45	1	He	255.591	2.695	159548	1.78	250	102.2	89.5	110.5	
Fe	56	45	1	He	12628.786	2.172	12198309	1.21	12500	101.0	89.5	110.5	
Co	59	45	1	He	49.420	1.278	113937	0.43	50	98.8	89.5	110.5	
Ni	60	45	1	He	49.620	1.647	32158	1.31	50	99.2	89.5	110.5	
Cu	63	45	1	He	49.074	1.242	91028	0.26	50	98.1	89.5	110.5	
Zn	66	45	1	He	50.899	5.124	11963	4.37	50	101.8	89.5	110.5	
As	75	103	1	He	46.069	0.644	7013	0.73	50	92.1	89.5	110.5	
Se	78	115	1	He	46.265	3.572	338	2.37	50	92.5	89.5	110.5	
Sr	88	103	1	He	49.642	0.686	33385	0.58	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.311	0.811	42959	0.91	50	102.6	89.5	110.5	
Ag	107	103	1	He	49.963	1.084	154646	1.21	50	99.9	89.5	110.5	
Cd	111	115	1	He	49.154	2.110	17812	1.34	50	98.3	89.5	110.5	
Sn	118	115	1	He	49.661	4.157	34306	3.53	50	99.3	89.5	110.5	
Sb	123	115	1	He	51.194	1.356	39617	1.47	50	102.4	89.5	110.5	
Ba	137	115	1	He	52.005	2.177	14099	3.33	50	104.0	89.5	110.5	
W	182	159	1	He	51.960	2.102	221356	2.37	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.499	1.681	345298	1.67	50	101.0	89.5	110.5	
Pb	208	165	1	He	50.932	0.867	457554	0.77	50	101.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1462765	1.78	1884762	77.61	60	120	
Sc	45	1	He	86971	0.97	134073	64.87	60	120	
Sc	45	2	NoGas	5752743	0.98	8481025	67.83	60	120	
Rh	103	1	He	609233	0.18	903580	67.42	60	120	
In	115	1	He	162557	1.22	224817	72.31	60	120	
Tb	159	1	He	822879	0.52	1046002	78.67	60	120	
Ho	165	1	He	836636	1.11	1057439	79.12	60	120	
Bi	209	1	He	577888	0.33	731380	79.01	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	241_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:26:11-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.962	3.7	95680	0.9	8	
Be	9	45	2	NoGas	0.224	16.3	1030	16.2	1	
B	11	45	2	NoGas	14.980	1.9	45289	0.6	20	
Na	23	45	1	He	52.408	2.7	16578	2.2	1000	
Mg	24	45	1	He	28.623	5.1	4538	2.6	1000	
Al	27	45	1	He	2.841	7.9	243	4.1	50	
K	39	45	1	He	29.840	5.8	7887	2.6	1000	
Ca	44	45	1	He	31.811	36.6	253	16.3	1000	
Ti	47	45	1	He	0.115	173.2	3	173.2	20	
V	51	45	1	He	0.107	72.9	145	53.3	2	
Cr	52	45	1	He	0.030	278.8	482	20.4	2	
Mn	55	45	1	He	1.121	9.7	798	6.5	2	
Fe	56	45	1	He	27.802	6.8	28553	4.7	50	
Co	59	45	1	He	0.002	785.6	208	15.2	1	
Ni	60	45	1	He	0.012	91.4	102	5.0	2	
Cu	63	45	1	He	-0.585	-2.9	508	4.7	2	
Zn	66	45	1	He	0.509	16.6	218	10.2	20	
As	75	103	1	He	0.074	20.6	25	9.6	2	
Se	78	115	1	He	0.092	255.9	3	61.8	2	
Sr	88	103	1	He	0.062	19.8	72	11.6	10	
Mo	95	103	1	He	0.153	14.5	146	13.2	2	
Ag	107	103	1	He	0.060	8.3	203	7.5	0.2	
Cd	111	115	1	He	0.071	2.6	28	3.6	0.2	
Sn	118	115	1	He	0.217	70.8	385	30.0	10	
Sb	123	115	1	He	0.164	23.4	164	17.2	2	
Ba	137	115	1	He	0.141	18.2	44	17.3	5	
W	182	159	1	He	0.360	7.9	2686	5.0	10	
Tl	205	165	1	He	0.136	9.7	973	9.5	0.5	
Pb	208	165	1	He	0.212	7.8	2879	5.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1537930	0.76	1884762	81.60	60	120	
Sc	45	1	He	88284	2.12	134073	65.85	60	120	
Sc	45	2	NoGas	5878986	1.48	8481025	69.32	60	120	
Rh	103	1	He	648050	0.68	903580	71.72	60	120	
In	115	1	He	170457	1.50	224817	75.82	60	120	
Tb	159	1	He	835592	0.66	1046002	79.88	60	120	
Ho	165	1	He	845177	0.21	1057439	79.93	60	120	
Bi	209	1	He	611086	0.93	731380	83.55	60	120	

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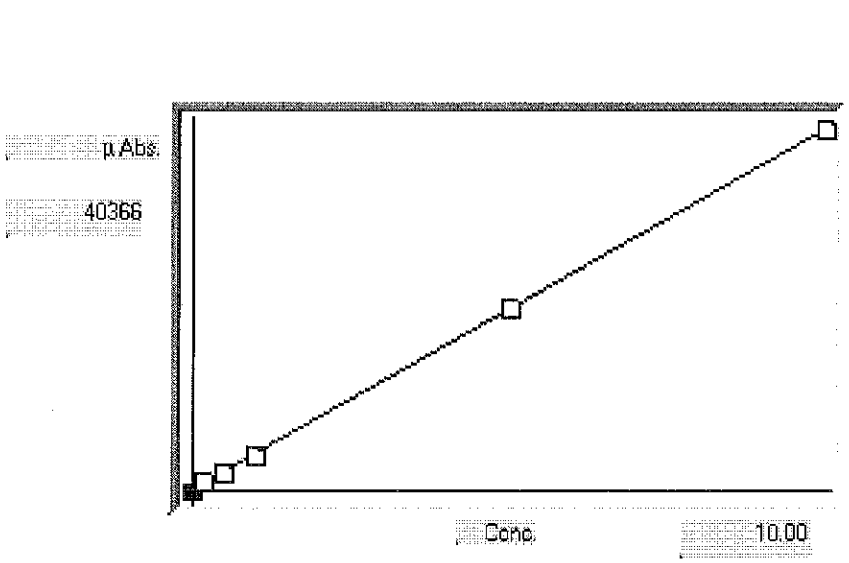
Protocol: Hg-7470A



S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	.0135	.0135	106	1	105				
02	.20000	.2339	.0339	996	0%	995				
03	.50000	.4683	-.0317	1943	0%	1942				
04	1.0000	.9566	-.0434	3915	0%	3914				
05	5.0000	5.046	.0464	20433	0%	20433				
06	10.000	9.981	-.0186	40366	0%	40366				
07										
08										
09										
10										

Protocol: Hg-7470A
POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 1 10:24:17 06 May 16 HG

Hg .0000 ppb 105

*** Standard: 2 Rep: 1 Seq: 2 10:26:39 06 May 16 HG

Hg .2000 ppb 995

*** Standard: 3 Rep: 1 Seq: 3 10:28:42 06 May 16 HG

Hg .5000 ppb 1942

*** Standard: 4 Rep: 1 Seq: 4 10:30:57 06 May 16 HG

Hg 1.000 ppb 3914

*** Standard: 5 Rep: 1 Seq: 5 10:34:02 06 May 16 HG

Hg 5.000 ppb 20433

*** Standard: 6 Rep: 1 Seq: 6 10:36:25 06 May 16 HG

Hg 10.00 ppb 40366

*** Check Standard: 2 Ck2ICV Seq: 7 10:46:10 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.29	4.864	5.000	ppb	.0000

*** Check Standard: 3 Ck3ICB Seq: 8 10:48:13 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0729	.0000	ppb	.0000

*** Check Standard: 4 Ck4CRA/MRL Seq: 9 10:50:44 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.62	.1952	.2000	ppb	.0000

*** Check Standard: 6 Ck6CCV Seq: 10 10:58:23 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		96.83	4.841	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 11 11:00:29 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0026	.2000	ppb	.0000

*** Sample ID: Seq: 12 11:02:30 06 May 16 HG
mb 240-228992/1-a
Hg .0143 ppb .0000 .0143

*** Sample ID: Seq: 13 11:04:30 06 May 16 HG
lcs 240-228992/2-a
Hg 4.734 ppb .0000 4.734

*** Sample ID: Seq: 14 11:06:43 06 May 16 HG
240-64130-n-1-d
Hg .0346 ppb .0000 .0346

*** Sample ID: Seq: 15 11:08:54 06 May 16 HG
240-64130-n-1-e ms
Hg .9070 ppb .0000 .9070

*** Sample ID: Seq: 16 11:11:00 06 May 16 HG
240-64130-n-1-f msd
Hg .9350 ppb .0000 .9350

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 17 11:13:04 06 May 16 HG
240-64130-o-11-d
Hg .0170 ppb .0000 .0170

*** Sample ID: Seq: 18 11:15:06 06 May 16 HG
240-64130-o-11-e ms
Hg .9580 ppb .0000 .9580

*** Sample ID: Seq: 19 11:17:29 06 May 16 HG
240-64130-o-11-f msd
Hg 1.001 ppb .0000 1.001

*** Sample ID: Seq: 20 11:19:43 06 May 16 HG
240-64130-d-3-b
Hg -.0026 ppb .0000 -.0026

*** Sample ID: Seq: 21 11:21:46 06 May 16 HG
240-64130-e-4-b
Hg .0254 ppb .0000 .0254

*** Check Standard: 6 Ck6CCV Seq: 22 11:23:51 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.62	4.681	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 23 11:25:52 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0541	.2000	ppb	.0000

*** Sample ID: Seq: 24 11:28:07 06 May 16 HG
240-64130-e-5-b
Hg .0237 ppb .0000 .0237

*** Sample ID: Seq: 25 11:30:11 06 May 16 HG
240-64130-e-7-b
Hg .0541 ppb .0000 .0541

*** Sample ID: Seq: 26 11:32:14 06 May 16 HG
240-64130-e-8-b
Hg .0888 ppb .0000 .0888

*** Sample ID: Seq: 27 11:34:16 06 May 16 HG
240-64130-e-9-b
Hg -.0355 ppb .0000 -.0355

*** Sample ID: Seq: 28 11:37:09 06 May 16 HG
240-64130-e-13-b
Hg -.0335 ppb .0000 -.0335

*** Sample ID: Seq: 29 11:39:45 06 May 16 HG
240-64130-d-14-b
Hg -.0251 ppb .0000 -.0251

*** Sample ID: Seq: 30 11:41:47 06 May 16 HG
240-64130-d-15-b
Hg .0338 ppb .0000 .0338

*** Sample ID: Seq: 31 11:44:14 06 May 16 HG
240-64130-e-17-b
Hg -.0444 ppb .0000 -.0444

*** Sample ID: Seq: 32 11:46:30 06 May 16 HG
240-64130-e-18-b
Hg .0046 ppb .0000 .0046

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 33 11:48:47 06 May 16 HG
240-64130-e-19-b
Hg .0175 ppb .0000 .0175

*** Check Standard: 6 Ck6CCV Seq: 34 11:50:59 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.37	4.869	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 35 11:54:12 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0293	.2000	ppb	.0000

*** Sample ID: Seq: 36 11:56:25 06 May 16 HG
240-64130-e-21-b
Hg -.0613 ppb .0000 -.0613

*** Sample ID: Seq: 37 11:59:10 06 May 16 HG
240-64130-e-22-b
Hg -.0467 ppb .0000 -.0467

*** Sample ID: Seq: 38 12:01:12 06 May 16 HG
240-64130-e-23-b
Hg -.0276 ppb .0000 -.0276

*** Sample ID: Seq: 39 12:03:14 06 May 16 HG
CRA
Hg .1888 ppb .0000 .1888

*** Sample ID: Seq: 40 12:05:45 06 May 16 HG
mb 240-229002/1-a
Hg -.0308 ppb .0000 -.0308

*** Sample ID: Seq: 41 12:07:58 06 May 16 HG
lcs 240-229002/2-a
Hg 4.554 ppb .0000 4.554

*** Sample ID: Seq: 42 12:10:15 06 May 16 HG
240-64364-a-1-d
Hg .0318 ppb .0000 .0318

*** Sample ID: Seq: 43 12:12:17 06 May 16 HG
240-64364-a-1-e ms
Hg 1.194 ppb .0000 1.194

*** Sample ID: Seq: 44 12:14:19 06 May 16 HG
240-64364-a-1-f msd
Hg 1.193 ppb .0000 1.193

*** Sample ID: Seq: 45 12:16:22 06 May 16 HG
240-64317-b-1-d
Hg .0224 ppb .0000 .0224

*** Check Standard: 6 Ck6CCV Seq: 46 12:18:36 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.36	4.868	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 47 12:21:00 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0246	.2000	ppb	.0000

*** Sample ID: Seq: 48 12:23:01 06 May 16 HG
190-10468-a-1-b

Hg .0355 ppb .0000 .0355

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 190-10511-b-1-b			Seq: 49	12:25:28 06 May 16	HG			
Hg	.0219	ppb	.0000	.0219				
*** Sample ID: 240-64322-a-6-b			Seq: 50	12:27:33 06 May 16	HG			
Hg	.0110	ppb	.0000	.0110				
*** Sample ID: 240-64356-a-1-b			Seq: 51	12:29:35 06 May 16	HG			
Hg	-.0600	ppb	.0000	-.0600				
*** Sample ID: 240-64366-a-1-b			Seq: 52	12:32:29 06 May 16	HG			
Hg	.0222	ppb	.0000	.0222				
*** Sample ID: 240-64375-c-2-b			Seq: 53	12:35:04 06 May 16	HG			
Hg	-.0046	ppb	.0000	-.0046				
*** Sample ID: mb 240-228970/1-a			Seq: 54	12:37:19 06 May 16	HG			
Hg	-.0100	ppb	.0000	-.0100				
*** Sample ID: lcs 240-228970/2-a			Seq: 55	12:39:33 06 May 16	HG			
Hg	4.832	ppb	.0000	4.832				
*** Sample ID: 240-64160-d-4-d			Seq: 56	12:42:05 06 May 16	HG			
Hg	-.0160	ppb	.0000	-.0160				
*** Sample ID: 240-64160-d-4-e ms			Seq: 57	12:44:17 06 May 16	HG			
Hg	.9496	ppb	.0000	.9496				

*** Check Standard: 6 Ck6CCV Seq: 58 12:46:29 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.53	4.777	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 59 12:48:40 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0308	.2000	ppb	.0000

*** Sample ID: 240-64160-d-4-f msd			Seq: 60	12:50:42 06 May 16	HG			
Hg	.9318	ppb	.0000	.9318				
*** Sample ID: 240-64160-b-1-b			Seq: 61	12:52:46 06 May 16	HG			
Hg	.0256	ppb	.0000	.0256				
*** Sample ID: 240-64160-b-2-b			Seq: 62	12:54:49 06 May 16	HG			
Hg	-.0333	ppb	.0000	-.0333				
*** Sample ID: 240-64160-b-3-b			Seq: 63	12:57:14 06 May 16	HG			
Hg	-.0598	ppb	.0000	-.0598				

*** Check Standard: 6 Ck6CCV Seq: 64 13:36:29 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.11	4.956	5.000	ppb	.0000

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 1 Ck1CCB Seq: 65 13:38:29 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg -.0662 .2000 ppb .0000

*** Sample ID: Seq: 66 13:40:34 06 May 16 HG
240-64160-b-5-b
Hg .0502 ppb .0000 .0502

*** Sample ID: Seq: 67 13:42:49 06 May 16 HG
240-64160-b-6-b
Hg .0732 ppb .0000 .0732

*** Sample ID: Seq: 68 13:44:53 06 May 16 HG
240-64160-a-7-b
Hg -.0211 ppb .0000 -.0211

*** Sample ID: Seq: 69 13:46:58 06 May 16 HG
240-64160-a-8-b
Hg .0014 ppb .0000 .0014

*** Sample ID: Seq: 70 13:49:04 06 May 16 HG
240-64160-a-9-b
Hg -.0122 ppb .0000 -.0122

*** Sample ID: Seq: 71 13:51:09 06 May 16 HG
240-64160-a-10-b
Hg -.0311 ppb .0000 -.0311

*** Sample ID: Seq: 72 13:53:11 06 May 16 HG
240-64160-a-11-b
Hg .0311 ppb .0000 .0311

*** Sample ID: Seq: 73 13:55:14 06 May 16 HG
240-64299-j-2-b
Hg .0563 ppb .0000 .0563

*** Sample ID: Seq: 74 13:57:28 06 May 16 HG
240-64299-k-2-b
Hg .0299 ppb .0000 .0299

*** Sample ID: Seq: 75 14:00:03 06 May 16 HG
240-64299-j-3-b
Hg -.0365 ppb .0000 -.0365

*** Check Standard: 6 Ck6CCV Seq: 76 14:02:08 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 96.44 4.822 5.000 ppb .0000

*** Check Standard: 1 Ck1CCB Seq: 77 14:04:23 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg -.0152 .2000 ppb .0000

*** Sample ID: Seq: 78 14:07:20 06 May 16 HG
240-64299-k-3-b
Hg -.0410 ppb .0000 -.0410

*** Sample ID: Seq: 79 14:09:34 06 May 16 HG
240-64299-j-4-b
Hg -.0033 ppb .0000 -.0033

*** Sample ID: Seq: 80 14:11:39 06 May 16 HG
240-64299-k-4-b
Hg -.0929 ppb .0000 -.0929

Line Conc. Units SD/RSD 1 2 3 4 5

*** Sample ID: Seq: 81 14:14:25 06 May 16 HG
240-64369-c-1-b
Hg -.0494 ppb .0000 -.0494

*** Sample ID: Seq: 82 14:16:39 06 May 16 HG
240-64320-a-1-a
Hg 9.288 ppb .0000 9.288

*** Sample ID: Seq: 83 14:19:36 06 May 16 HG
240-64320-a-2-a
Hg 12.58 H ppb .0000 12.58

*** Check Standard: 6 Ck6CCV Seq: 84 14:22:24 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg L 54.03 2.701 5.000 ppb .0000

*** Check Standard: 1 Ck1CCB Seq: 85 14:24:38 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg L -.3787 .2000 ppb .0000

*** Check Standard: 6 Ck6CCV Seq: 86 15:02:33 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 96.77 4.838 5.000 ppb .0000

*** Check Standard: 1 Ck1CCB Seq: 87 15:04:44 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg -.0142 .2000 ppb .0000

*** Sample ID: Seq: 88 15:07:00 06 May 16 HG
240-64299-k-3-b
Hg .0326 ppb .0000 .0326

*** Sample ID: Seq: 89 15:09:26 06 May 16 HG
240-64299-j-4-b
Hg .0435 ppb .0000 .0435

*** Sample ID: Seq: 90 15:11:40 06 May 16 HG
240-64299-k-4-b
Hg .0105 ppb .0000 .0105

*** Sample ID: Seq: 91 15:13:45 06 May 16 HG
240-64369-c-1-b
Hg .3834 ppb .0000 .3834

*** Sample ID: Seq: 92 15:16:02 06 May 16 HG
240-64320-a-1-a
Hg 9.105 ppb .0000 9.105

*** Sample ID: Seq: 93 15:19:07 06 May 16 HG
240-64320-a-2-a@2
Hg 17.57 H ppb .0000 17.57

*** Check Standard: 6 Ck6CCV Seq: 94 15:22:29 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 81.79 4.089 5.000 ppb .0000

*** Check Standard: 1 Ck1CCB Seq: 95 15:24:30 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg L -.2227 .2000 ppb .0000

*** Check Standard: 6 Ck6CCV Seq: 96 15:28:21 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 95.11 4.756 5.000 ppb .0000

Line Conc. Units SD/RSD 1 2 3 4 5

*** Check Standard: 1 Ck1CCB Seq: 97 15:30:34 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg -.0548 .2000 ppb .0000

*** Sample ID: Seq: 98 15:33:05 06 May 16 HG
lb 240-228988/1-d
Hg -.0372 ppb .0000 -.0372

*** Sample ID: Seq: 99 15:35:16 06 May 16 HG
mb 240-229008/2-a
Hg .0093 ppb .0000 .0093

*** Sample ID: Seq: 100 15:37:19 06 May 16 HG
lcs 240-229008/3-a
Hg 4.866 ppb .0000 4.866

*** Sample ID: Seq: 101 15:39:40 06 May 16 HG
240-64017-b-1-f
Hg -.0504 ppb .0000 -.0504

*** Sample ID: Seq: 102 15:41:46 06 May 16 HG
240-64017-b-1-g ms
Hg 4.899 ppb .0000 4.899

*** Sample ID: Seq: 103 15:44:02 06 May 16 HG
240-64017-b-1-h msd
Hg 4.151 ppb .0000 4.151

*** Sample ID: Seq: 104 15:46:05 06 May 16 HG
240-64041-a-1-c
Hg .0100 ppb .0000 .0100

*** Sample ID: Seq: 105 15:48:06 06 May 16 HG
mb 240-229017/2-a
Hg .0078 ppb .0000 .0078

*** Sample ID: Seq: 106 15:50:14 06 May 16 HG
lb 240-228981/1-c
Hg .0133 ppb .0000 .0133

*** Sample ID: Seq: 107 15:52:27 06 May 16 HG
lcs 240-229017/3-a
Hg 5.000 ppb .0000 5.000

*** Check Standard: 6 Ck6CCV Seq: 108 15:54:30 06 May 16 HG
Line Flag %Rcv. Found True Units SD/RSD
Hg 95.47 4.774 5.000 ppb .0000

*** Check Standard: 1 Ck1CCB Seq: 109 15:57:01 06 May 16 HG
Line Flag Found Range(+/-) Units SD/RSD
Hg -.0006 .2000 ppb .0000

*** Sample ID: Seq: 110 15:59:16 06 May 16 HG
240-64051-a-1-f
Hg .0091 ppb .0000 .0091

*** Sample ID: Seq: 111 16:01:19 06 May 16 HG
240-64051-a-1-g ms
Hg 5.034 ppb .0000 5.034

*** Sample ID: Seq: 112 16:04:11 06 May 16 HG
240-64051-a-1-h msd
Hg 4.868 ppb .0000 4.868

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 113 16:06:13 06 May 16 HG
190-10437-a-1-c
Hg .0464 ppb .0000 .0464

*** Sample ID: Seq: 114 16:20:04 06 May 16 HG
240-64011-a-1-b
Hg ^^^^^^O ppb ^^^^^^ ^^^^^^

*** Sample ID: Seq: 115 16:22:27 06 May 16 HG
240-64201-c-1-d
Hg -6.231 ppb .0000 -6.231

*** Check Standard: 6 Ck6CCV Seq: 116 16:41:10 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		90.96	4.548	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 117 16:43:12 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0080	.2000	ppb	.0000

*** Sample ID: Seq: 118 16:45:18 06 May 16 HG
240-64051-a-1-f
Hg -.0353 ppb .0000 -.0353

*** Sample ID: Seq: 119 16:47:43 06 May 16 HG
240-64051-a-1-g ms
Hg 4.842 ppb .0000 4.842

*** Sample ID: Seq: 120 16:49:49 06 May 16 HG
240-64051-a-1-h msd
Hg 4.676 ppb .0000 4.676

*** Sample ID: Seq: 121 16:52:03 06 May 16 HG
190-10437-a-1-c
Hg .0390 ppb .0000 .0390

*** Sample ID: Seq: 122 16:54:18 06 May 16 HG
zzzzz
Hg .0081 ppb .0000 .0081

*** Sample ID: Seq: 123 16:56:32 06 May 16 HG
240-64201-c-1-d
Hg 5.237 ppb .0000 5.237

*** Sample ID: Seq: 124 16:59:26 06 May 16 HG
240-64201-c-2-d
Hg .0125 ppb .0000 .0125

*** Sample ID: Seq: 125 17:02:14 06 May 16 HG
240-64154-a-1-c
Hg .0192 ppb .0000 .0192

*** Sample ID: Seq: 126 17:04:16 06 May 16 HG
mb 240-229012/2-a
Hg -.0093 ppb .0000 -.0093

*** Sample ID: Seq: 127 17:06:38 06 May 16 HG
lb 240-228989/1-c
Hg .0568 ppb .0000 .0568

*** Check Standard: 6 Ck6CCV Seq: 128 17:08:44 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.92	4.796	5.000	ppb	.0000

Protocol: Hg-7470A
POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 129 17:10:46 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0467	.2000	ppb	.0000

*** Sample ID: Seq: 130 17:12:49 06 May 16 HG
lcs 240-229012/3-a

Hg	4.845	ppb	.0000	4.845

*** Sample ID: Seq: 131 17:15:13 06 May 16 HG
240-63998-f-2-f

Hg	.0222	ppb	.0000	.0222

*** Sample ID: Seq: 132 17:17:15 06 May 16 HG
240-63998-f-2-g ms

Hg	4.826	ppb	.0000	4.826

*** Sample ID: Seq: 133 17:19:32 06 May 16 HG
240-63998-f-2-h msd

Hg	4.659	ppb	.0000	4.659

*** Sample ID: Seq: 134 17:21:35 06 May 16 HG
240-63998-h-1-d

Hg	.0115	ppb	.0000	.0115

*** Sample ID: Seq: 135 17:23:38 06 May 16 HG
240-64041-a-2-c

Hg	.0303	ppb	.0000	.0303

*** Sample ID: Seq: 136 17:25:59 06 May 16 HG
240-64041-a-4-c

Hg	.0454	ppb	.0000	.0454

*** Sample ID: Seq: 137 17:28:02 06 May 16 HG
lb 240-228983/1-c

Hg	-.0358	ppb	.0000	-.0358

*** Sample ID: Seq: 138 17:30:05 06 May 16 HG
mb 240-229015/2-a

Hg	-.0026	ppb	.0000	-.0026

*** Sample ID: Seq: 139 17:32:22 06 May 16 HG
lcs 240-229015/3-a

Hg	4.613	ppb	.0000	4.613

*** Check Standard: 6 Ck6CCV Seq: 140 17:34:49 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.70	4.735	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 141 17:36:53 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0479	.2000	ppb	.0000

*** Sample ID: Seq: 142 17:39:28 06 May 16 HG
190-10457-a-2-e

Hg	.0603	ppb	.0000	.0603

*** Sample ID: Seq: 143 17:42:04 06 May 16 HG
190-10457-a-2-f ms

Hg	4.645	ppb	.0000	4.645

*** Sample ID: Seq: 144 17:44:07 06 May 16 HG
190-10457-a-2-g ms

Hg	4.679	ppb	.0000	4.679

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 145 17:46:30 06 May 16 HG
190-10457-a-1-c
Hg -.0288 ppb .0000 -.0288

*** Sample ID: Seq: 146 17:49:02 06 May 16 HG
240-63923-b-1-i
Hg .0341 ppb .0000 .0341

*** Sample ID: Seq: 147 17:51:07 06 May 16 HG
240-64025-b-1-c
Hg -.0053 ppb .0000 -.0053

*** Sample ID: Seq: 148 17:53:14 06 May 16 HG
240-64025-a-2-d
Hg -.0164 ppb .0000 -.0164

*** Sample ID: Seq: 149 17:55:16 06 May 16 HG
240-64119-c-1-c
Hg -.0266 ppb .0000 -.0266

*** Sample ID: Seq: 150 17:57:39 06 May 16 HG
mb 240-228965/1-a
Hg -.0818 ppb .0000 -.0818

*** Sample ID: Seq: 151 17:59:52 06 May 16 HG
lcs 240-228965/2-a
Hg 4.685 ppb .0000 4.685

*** Check Standard: 6 Ck6CCV Seq: 152 18:02:47 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.25	4.712	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 153 18:04:51 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0192	.2000	ppb	.0000

*** Sample ID: Seq: 154 18:06:55 06 May 16 HG
240-64296-f-2-f
Hg -.0400 ppb .0000 -.0400

*** Sample ID: Seq: 155 18:09:02 06 May 16 HG
240-64296-f-2-g ms
Hg .9365 ppb .0000 .9365

*** Sample ID: Seq: 156 18:11:10 06 May 16 HG
240-64296-f-2-h msd
Hg .8999 ppb .0000 .8999

*** Sample ID: Seq: 157 18:13:13 06 May 16 HG
240-64296-f-3-b
Hg .0566 ppb .0000 .0566

*** Sample ID: Seq: 158 18:15:16 06 May 16 HG
240-64296-f-4-b
Hg -.0263 ppb .0000 -.0263

*** Sample ID: Seq: 159 18:17:30 06 May 16 HG
240-64296-f-5-b
Hg -.0462 ppb .0000 -.0462

*** Sample ID: Seq: 160 18:19:35 06 May 16 HG
240-64296-f-6-b

Hg .0086 ppb .0000 .0086

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 161 18:22:03 06 May 16 HG
240-64296-f-7-b
Hg -.0308 ppb .0000 -.0308

*** Sample ID: Seq: 162 18:24:06 06 May 16 HG
240-64296-f-8-b
Hg -.0147 ppb .0000 -.0147

*** Sample ID: Seq: 163 18:26:09 06 May 16 HG
240-64339-f-2-b
Hg -.0239 ppb .0000 -.0239

*** Check Standard: 6 Ck6CCV Seq: 164 18:29:22 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.14	4.707	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 165 18:31:23 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0830	.2000	ppb	.0000

*** Sample ID: Seq: 166 18:33:48 06 May 16 HG
240-64339-f-3-b
Hg -.0417 ppb .0000 -.0417

*** Sample ID: Seq: 167 18:36:03 06 May 16 HG
240-64339-f-4-b
Hg -.0068 ppb .0000 -.0068

*** Sample ID: Seq: 168 18:38:47 06 May 16 HG
240-64339-b-5-b
Hg .0118 ppb .0000 .0118

*** Sample ID: Seq: 169 18:40:55 06 May 16 HG
240-64339-f-6-b
Hg .0147 ppb .0000 .0147

*** Sample ID: Seq: 170 18:43:18 06 May 16 HG
240-64339-f-7-b
Hg .0318 ppb .0000 .0318

*** Sample ID: Seq: 171 18:45:23 06 May 16 HG
240-64339-f-8-b
Hg -.0288 ppb .0000 -.0288

*** Sample ID: Seq: 172 18:47:47 06 May 16 HG
240-64350-h-1-b
Hg .0234 ppb .0000 .0234

*** Sample ID: Seq: 173 18:50:42 06 May 16 HG
240-64350-i-1-b
Hg -.0219 ppb .0000 -.0219

*** Sample ID: Seq: 174 18:52:46 06 May 16 HG
240-64350-h-6-b
Hg -.0088 ppb .0000 -.0088

*** Sample ID: Seq: 175 18:55:29 06 May 16 HG
240-64350-i-6-b
Hg -.0177 ppb .0000 -.0177

*** Check Standard: 6 Ck6CCV Seq: 176 18:58:01 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.31	4.765	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 177 19:00:06 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0199	.2000	ppb	.0000

*** Sample ID: Seq: 178 19:02:23 06 May 16 HG
mb 240-228973/1-a

Hg	-.0167	ppb	.0000	-.0167

*** Sample ID: Seq: 179 19:04:27 06 May 16 HG
lcs 240-228973/2-a

Hg	4.890	ppb	.0000	4.890

*** Sample ID: Seq: 180 19:07:21 06 May 16 HG
240-64333-f-1-e

Hg	.0633	ppb	.0000	.0633

*** Sample ID: Seq: 181 19:09:25 06 May 16 HG
240-64333-f-1-f ms

Hg	.9942	ppb	.0000	.9942

*** Sample ID: Seq: 182 19:12:09 06 May 16 HG
240-64333-f-1-g msd

Hg	1.002	ppb	.0000	1.002

*** Sample ID: Seq: 183 19:14:17 06 May 16 HG
240-64333-g-1-b

Hg	.0606	ppb	.0000	.0606

*** Sample ID: Seq: 184 19:16:20 06 May 16 HG
240-64333-f-2-b

Hg	.0279	ppb	.0000	.0279

*** Sample ID: Seq: 185 19:18:43 06 May 16 HG
240-64333-g-2-b

Hg	.0204	ppb	.0000	.0204

*** Sample ID: Seq: 186 19:20:46 06 May 16 HG
240-64333-f-3-b

Hg	.0234	ppb	.0000	.0234

*** Sample ID: Seq: 187 19:22:49 06 May 16 HG
240-64333-g-3-b

Hg	.0140	ppb	.0000	.0140

*** Check Standard: 6 Ck6CCV Seq: 188 19:24:53 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.23	4.711	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 189 19:26:54 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0251	.2000	ppb	.0000

*** Sample ID: Seq: 190 19:28:56 06 May 16 HG
240-64333-f-4-b

Hg	.0172	ppb	.0000	.0172

*** Sample ID: Seq: 191 19:31:06 06 May 16 HG
240-64333-f-6-c

Hg	.0618	ppb	.0000	.0618

*** Sample ID: Seq: 192 19:33:09 06 May 16 HG
240-64333-g-6-b

Hg	.0407	ppb	.0000	.0407

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 193 19:35:18 06 May 16 HG
240-64333-g-7-b
Hg -.0090 ppb .0000 -.0090

*** Sample ID: Seq: 194 19:37:22 06 May 16 HG
240-64333-h-7-b
Hg .0019 ppb .0000 .0019

*** Sample ID: Seq: 195 19:39:27 06 May 16 HG
240-64333-g-8-b
Hg .0234 ppb .0000 .0234

*** Sample ID: Seq: 196 19:41:35 06 May 16 HG
240-64333-h-8-b
Hg .0187 ppb .0000 .0187

*** Sample ID: Seq: 197 19:43:49 06 May 16 HG
240-64333-g-9-b
Hg .0150 ppb .0000 .0150

*** Sample ID: Seq: 198 19:45:53 06 May 16 HG
240-64333-h-9-b
Hg -.0216 ppb .0000 -.0216

*** Sample ID: Seq: 199 19:47:58 06 May 16 HG
240-64333-g-10-b
Hg -.0308 ppb .0000 -.0308

*** Check Standard: 6 Ck6CCV Seq: 200 19:50:02 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.46	4.723	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 201 19:52:19 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0091	.2000	ppb	.0000

*** Sample ID: Seq: 202 19:54:31 06 May 16 HG
240-64320-a-2-a@4
Hg 19.14 H ppb .0000 19.14

*** Sample ID: Seq: 203 19:57:16 06 May 16 HG
240-64299-k-3-b
Hg -.9835 ppb .0000 -.9835

*** Sample ID: Seq: 204 19:59:34 06 May 16 HG
240-64299-j-4-b
Hg -.1246 ppb .0000 -.1246

*** Sample ID: Seq: 205 20:01:42 06 May 16 HG
240-64299-k-4-b
Hg -.0778 ppb .0000 -.0778

*** Sample ID: Seq: 206 20:03:51 06 May 16 HG
240-64369-c-1-b
Hg -.0551 ppb .0000 -.0551

*** Sample ID: Seq: 207 20:06:11 06 May 16 HG
240-64320-a-1-a
Hg 7.982 ppb .0000 7.982

*** Sample ID: Seq: 208 20:09:16 06 May 16 HG
240-64011-a-1-b@10
Hg 15.48 H ppb .0000 15.48

Protocol: Hg-7470A
POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 209 20:11:33 06 May 16 HG
240-64011-a-1-b@100

Hg	171.6 H	ppb	.0000	171.6

*** Check Standard: 6 Ck6CCV Seq: 210 20:13:58 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		82.79	4.139	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 211 20:15:59 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.1912	.2000	ppb	.0000

Test America Canton Hg Data Review Checklist

Curve Prep Batch: 229720

Circle Methods used: 7470A / 245.1 7471 Analytical Batch: 229365

Analysis Date: 5-6-16 Analyst: LCD Instrument: 14

Review Items
A. Calibration/Instrument Run QC
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria.
3. ICV/ICB analyzed at appropriate frequency and within acceptance criteria.
4. CRA analyzed at SOP or project specific frequency and within acceptance criteria. (project specific limits may vary)
B. Sample Results
1. Samples with concentrations > high calibration standard diluted and reanalyzed.
2. Sample analyses done within holding time.
C. Preparation/ Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
D. Other
1. All nonconformances documented appropriately in lims system.
2. All client/project specific requirements met.
3. Date of analysis verified as correct.

Level I

Analyst: [signature] Date/Time: 5-9-16 Reviewed from 10:24 to 20:15

Analyst: _____ Date/Time: _____ Reviewed from _____ to _____

Comments: _____

Level II

Reviewer: Karen Ward Date/Time: 5-9-16 Reviewed from 10:24 to 20:15

Reviewer: _____ Date/Time: _____ Reviewed from _____ to _____

Comments _____

Curve Date 5-6-16 Curve Time 7:30-9:30 DILUTION H20 0.0008

Revised 01/19/2016

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228967 Batch Start Date: 05/05/16 09:40 Batch Analyst: Colosi, Alexander J

Batch Method: 3005A Batch End Date: 05/05/16 17:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00024	MTICPMSA 00026	MTICPMSB 00027	MTTMHCL 00109
MB 240-228967/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-228967/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-64160-D-4	16WC1A	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-D-4 MS	16WC1A	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-64160-D-4 MSD	16WC1A	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-64160-B-1	16C1	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-B-2	16MW8	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-B-3	16MW9	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-B-5	16WDUP	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-B-6	16WC1B	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00085					
MB 240-228967/1		3005A, 6020A		1 mL					
LCS 240-228967/2		3005A, 6020A		1 mL					
240-64160-D-4	16WC1A	3005A, 6020A	R	1 mL					
240-64160-D-4 MS	16WC1A	3005A, 6020A	R	1 mL					
240-64160-D-4 MSD	16WC1A	3005A, 6020A	R	1 mL					
240-64160-B-1	16C1	3005A, 6020A	R	1 mL					
240-64160-B-2	16MW8	3005A, 6020A	R	1 mL					
240-64160-B-3	16MW9	3005A, 6020A	R	1 mL					
240-64160-B-5	16WDUP	3005A, 6020A	R	1 mL					
240-64160-B-6	16WC1B	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228967 Batch Start Date: 05/05/16 09:40 Batch Analyst: Colosi, Alexander J

Batch Method: 3005A Batch End Date: 05/05/16 17:40

Batch Notes	
Filter Paper ID	9656618
Hot Block ID	HB4
Pipette ID	MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228970 Batch Start Date: 05/05/16 12:00 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 05/05/16 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00041	MTH2S04 00030	MTHGCALW 01198	MTKMN04W 00106
MB 240-228970/1		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
LCS 240-228970/2		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-64160-D-4	16WC1A	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-D-4 MS	16WC1A	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL	0.5 mL	7.5 mL
240-64160-D-4 MSD	16WC1A	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL	0.5 mL	7.5 mL
240-64160-B-1	16C1	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-B-2	16MW8	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-B-3	16MW9	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-B-5	16WDUP	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-B-6	16WC1B	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00085					
MB 240-228970/1		7470A, 7470A		1.25 mL					
LCS 240-228970/2		7470A, 7470A		1.25 mL					
240-64160-D-4	16WC1A	7470A, 7470A	T	1.25 mL					
240-64160-D-4 MS	16WC1A	7470A, 7470A	T	1.25 mL					
240-64160-D-4 MSD	16WC1A	7470A, 7470A	T	1.25 mL					
240-64160-B-1	16C1	7470A, 7470A	T	1.25 mL					
240-64160-B-2	16MW8	7470A, 7470A	T	1.25 mL					
240-64160-B-3	16MW9	7470A, 7470A	T	1.25 mL					
240-64160-B-5	16WDUP	7470A, 7470A	T	1.25 mL					
240-64160-B-6	16WC1B	7470A, 7470A	T	1.25 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 228970 Batch Start Date: 05/05/16 12:00 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 05/05/16 14:00

Batch Notes	
Batch Comment	Take out temps within range
Hot Block ID	C1
Pipette ID	MP1-MP2
Digestion Tube/Cup ID	1509104

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229220 Batch Start Date: 05/06/16 07:30 Batch Analyst: Dillon, William K

Batch Method: 7470A Batch End Date: 05/06/16 09:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00041	MTH2S04 00030	MTHGCALW 01199	MTHgStd 00020
ICV 240-229220/7		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		0.25 mL
ICB 240-229220/8		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		
CRA 240-229220/9		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	0.1 mL	
CCV 240-229220/10		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	
CCB 240-229220/11		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00106	MTTMHNO3 00086				
ICV 240-229220/7		7470A, 7470A		7.5 mL	1.25 mL				
ICB 240-229220/8		7470A, 7470A		7.5 mL	1.25 mL				
CRA 240-229220/9		7470A, 7470A		7.5 mL	1.25 mL				
CCV 240-229220/10		7470A, 7470A		7.5 mL	1.25 mL				
CCB 240-229220/11		7470A, 7470A		7.5 mL	1.25 mL				

Batch Notes	
Batch Comment	take out temp in range
Hot Block ID	C3
Pipette ID	A6, MP1, MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG No.:

Project: RFAAP, Radford VA, HWMU16

Client Sample ID	Lab Sample ID
16C1	240-64160-1
16MW8	240-64160-2
16MW9	240-64160-3
16WC1A	240-64160-4
16WDUP	240-64160-5
16WC1B	240-64160-6

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16C1 Lab Sample ID: 240-64160-1

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 13:25

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	20	20	5.0	ug/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16MW8 Lab Sample ID: 240-64160-2

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 13:55

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	13	20	5.0	ug/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16MW9 Lab Sample ID: 240-64160-3

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2016 12:15

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	8.5	20	5.0	ug/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16WC1A
Lab Sample ID: 240-64160-4
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 10:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	19	20	5.0	ug/L	J	F1	1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16WDUP
Lab Sample ID: 240-64160-5
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 11:10
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	15	20	5.0	ug/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: 16WC1B
Lab Sample ID: 240-64160-6
Lab Name: TestAmerica Canton
Job No.: 240-64160-1
SDG ID.:
Matrix: Water
Date Sampled: 04/27/2016 09:50
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
57-12-5	Cyanide, Total	20	20	5.0	ug/L	U		1	9012B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Analyst: JWW Batch Start Date: 05/05/2016

Reporting Units: mg/L Analytical Batch No.: 229094

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	22:32	Cyanide, Total	0.100	0.100	100	90-110		WCCN.1CCV1_00250
14	CCB	22:32	Cyanide, Total	0.010				U	
24	CCV	22:37	Cyanide, Total	0.103	0.100	103	90-110		WCCN.1CCV1_00250
25	CCB	22:37	Cyanide, Total	0.010				U	
30	CCV	22:39	Cyanide, Total	0.0994	0.100	99	90-110		WCCN.1CCV1_00250
31	CCB	22:39	Cyanide, Total	0.010				U	
41	CCV	22:56	Cyanide, Total	0.102	0.100	102	90-110		WCCN.1CCV1_00250
42	CCB	22:56	Cyanide, Total	0.010				U	
47	CCV	23:35	Cyanide, Total	0.106	0.100	106	90-110		WCCN.1CCV1_00250
48	CCB	23:35	Cyanide, Total	0.010				U	
50	CCV	23:37	Cyanide, Total	0.105	0.100	105	90-110		WCCN.1CCV1_00250
51	CCB	23:37	Cyanide, Total	0.010				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Analyst: JWW Batch Start Date: 05/06/2016

Reporting Units: mg/L Analytical Batch No.: 229244

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
4	ICV	14:59	Cyanide, Total	0.0996	0.100	100	90-110		WCCN.1ICV2_00258
5	ICB	14:59	Cyanide, Total	0.010				U	
7	CCV	18:43	Cyanide, Total	0.0948	0.100	95	90-110		WCCN.1CCV1_00251
8	CCB	18:43	Cyanide, Total	0.010				U	
19	CCV	18:49	Cyanide, Total	0.0952	0.100	95	90-110		WCCN.1CCV1_00251
20	CCB	18:49	Cyanide, Total	0.010				U	
23	CCVL	18:49	Cyanide, Total	0.0226	0.0250	90	90-110		WCCN10PPM1_00258
30	CCV	18:54	Cyanide, Total	0.0954	0.100	95	90-110		WCCN.1CCV1_00251
31	CCB	18:54	Cyanide, Total	0.010				U	
36	CCV	18:56	Cyanide, Total	0.0946	0.100	95	90-110		WCCN.1CCV1_00251
37	CCB	18:56	Cyanide, Total	0.010				U	
45	CCV	19:07	Cyanide, Total	0.101	0.100	101	90-110		WCCN.1CCV1_00251
46	CCB	19:07	Cyanide, Total	0.010				U	
47	CCV	20:00	Cyanide, Total	0.0958	0.100	96	90-110		WCCN.1CCV1_00251
48	CCB	20:00	Cyanide, Total	0.010				U	
49	CCVH	20:00	Cyanide, Total	0.0918	0.100	92	90-110		WCCN10PPM1_00258
55	CCV	20:02	Cyanide, Total	0.0946	0.100	95	90-110		WCCN.1CCV1_00251
56	CCB	20:02	Cyanide, Total	0.010				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 229094	Date: 05/05/2016 22:32	Prep Batch: 229090	Date: 05/05/2016 20:57				
9012B	MB 240-229090/1-A	Cyanide, Total	20	U	ug/L	20	1
Batch ID: 229244	Date: 05/06/2016 18:49	Prep Batch: 229229	Date: 05/06/2016 16:08				
9012B	MB 240-229229/1-A	Cyanide, Total	20	U	ug/L	20	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 229094	Date: 05/05/2016 22:32		Prep Batch: 229090		Date: 05/05/2016 20:57						
9012B	240-64160-4	Cyanide, Total	18	J	ug/L						
9012B	240-64160-4 MS	Cyanide, Total	40.9		ug/L	40.0	57	42-140			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 229094	Date: 05/05/2016 22:32		Prep Batch: 229090		Date: 05/05/2016 20:57						
9012B	240-64160-4 MSD	Cyanide, Total	35.4		ug/L	40.0	40	42-140	15	20	F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 229094	Date: 05/05/2016 23:35		Prep Batch: 229090			Date: 05/05/2016 20:57					
						LCS Source: WCERAPHEN0L_00035					
9012B	LCS 240-229090/2-A	Cyanide, Total	31.9		ug/L	42.0	76	69-118			
Batch ID: 229244	Date: 05/06/2016 18:49		Prep Batch: 229229			Date: 05/06/2016 16:08					
						LCS Source: WCERAPHEN0L_00035					
9012B	LCS 240-229229/2-A	Cyanide, Total	35.6		ug/L	42.0	85	69-118			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 229244 Date: 05/06/2016 14:59											
						LCS Source: WCCN.01MRL1_00240					
9012B	MRL 240-229244/6	Cyanide, Total	0.0105		mg/L	0.0100	105	70-130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: SAURON

Method: 9012B XMDL Date: 05/04/2015 08:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.005

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-64160-1

SDG Number:

Matrix: Water Instrument ID: SAURON

Method: 9012B MDL Date: 04/28/2016 16:26

Prep Method: 9012B

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Cyanide, Total		20	5

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-229090/1-A	05/05/2016 20:57	229090		50	25
LCS 240-229090/2-A	05/05/2016 20:57	229090		50	25
240-64160-4	05/05/2016 20:57	229090		50	25
240-64160-4 MS	05/05/2016 20:57	229090		50	25
240-64160-4 MSD	05/05/2016 20:57	229090		50	25

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-229229/1-A	05/06/2016 16:08	229229		50	25
LCS 240-229229/2-A	05/06/2016 16:08	229229		50	25
240-64160-1	05/06/2016 16:08	229229		50	25
240-64160-2	05/06/2016 16:08	229229		50	25
240-64160-3	05/06/2016 16:08	229229		50	25
240-64160-5	05/06/2016 16:08	229229		50	25
240-64160-6	05/06/2016 16:08	229229		50	25

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: SAURON Analysis Method: 9012B

Start Date: 05/05/2016 22:27 End Date: 05/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes
				CN
CCV 240-229094/1			22:27	
CCB 240-229094/2			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
ZZZZZZ			22:27	
CCV 240-229094/13	1		22:32	X
CCB 240-229094/14	1		22:32	X
MB 240-229090/1-A	1	T	22:32	X
240-64160-4	1	T	22:32	X
240-64160-4 MS	1	T	22:32	X
240-64160-4 MSD	1	T	22:32	X
ZZZZZZ			22:32	
ZZZZZZ			22:32	
ZZZZZZ			22:33	
ZZZZZZ			22:33	
ZZZZZZ			22:33	
CCV 240-229094/24	1		22:37	X
CCB 240-229094/25	1		22:37	X
ZZZZZZ			22:37	
ZZZZZZ			22:37	
ZZZZZZ			22:37	
ZZZZZZ			22:37	
CCV 240-229094/30	1		22:39	X
CCB 240-229094/31	1		22:39	X
ZZZZZZ			22:49	
ZZZZZZ			22:50	
ZZZZZZ			22:53	
ZZZZZZ			22:53	
ZZZZZZ			22:54	
ZZZZZZ			22:54	
ZZZZZZ			22:54	
ZZZZZZ			22:54	
ZZZZZZ			22:54	
CCV 240-229094/41	1		22:56	X
CCB 240-229094/42	1		22:56	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: SAURON Analysis Method: 9012B

Start Date: 05/05/2016 22:27 End Date: 05/05/2016 23:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			22:57																									
ZZZZZZ			22:57																									
CCV 240-229094/45			23:02																									
CCB 240-229094/46			23:02																									
CCV 240-229094/47	1		23:35	X																								
CCB 240-229094/48	1		23:35	X																								
LCS 240-229090/2-A	1	T	23:35	X																								
CCV 240-229094/50	1		23:37	X																								
CCB 240-229094/51	1		23:37	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: SAURON Analysis Method: 9012B

Start Date: 05/06/2016 14:56 End Date: 05/06/2016 20:02

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			14:56	
ZZZZZZ			14:56	
ZZZZZZ			14:56	
ICV 240-229244/4	1		14:59	X
ICB 240-229244/5	1		14:59	X
MRL 240-229244/6	1	T	14:59	X
CCV 240-229244/7	1		18:43	X
CCB 240-229244/8	1		18:43	X
240-64160-5	1	T	18:43	X
240-64160-6	1	T	18:43	X
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
ZZZZZZ			18:43	
CCV 240-229244/19	1		18:49	X
CCB 240-229244/20	1		18:49	X
MB 240-229229/1-A	1	T	18:49	X
LCS 240-229229/2-A	1	T	18:49	X
CCVL 240-229229/4-A	1		18:49	X
ZZZZZZ			18:49	
ZZZZZZ			18:49	
ZZZZZZ			18:49	
ZZZZZZ			18:49	
ZZZZZZ			18:49	
ZZZZZZ			18:49	
CCV 240-229244/30	1		18:54	X
CCB 240-229244/31	1		18:54	X
ZZZZZZ			18:54	
240-64160-1	1	T	18:54	X
240-64160-2	1	T	18:54	X
240-64160-3	1	T	18:54	X
CCV 240-229244/36	1		18:56	X
CCB 240-229244/37	1		18:56	X
ZZZZZZ			19:02	
ZZZZZZ			19:02	
ZZZZZZ			19:06	
ZZZZZZ			19:06	
ZZZZZZ			19:06	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Instrument ID: SAURON Analysis Method: 9012B

Start Date: 05/06/2016 14:56 End Date: 05/06/2016 20:02

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			19:06																									
ZZZZZZ			19:06																									
CCV 240-229244/45	1		19:07	X																								
CCB 240-229244/46	1		19:07	X																								
CCV 240-229244/47	1		20:00	X																								
CCB 240-229244/48	1		20:00	X																								
CCVH 240-229229/3-A	1		20:00	X																								
ZZZZZZ			20:00																									
ZZZZZZ			20:00																									
ZZZZZZ			20:00																									
ZZZZZZ			20:00																									
ZZZZZZ			20:00																									
CCV 240-229244/55	1		20:02	X																								
CCB 240-229244/56	1		20:02	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

5/5/2016 14:25

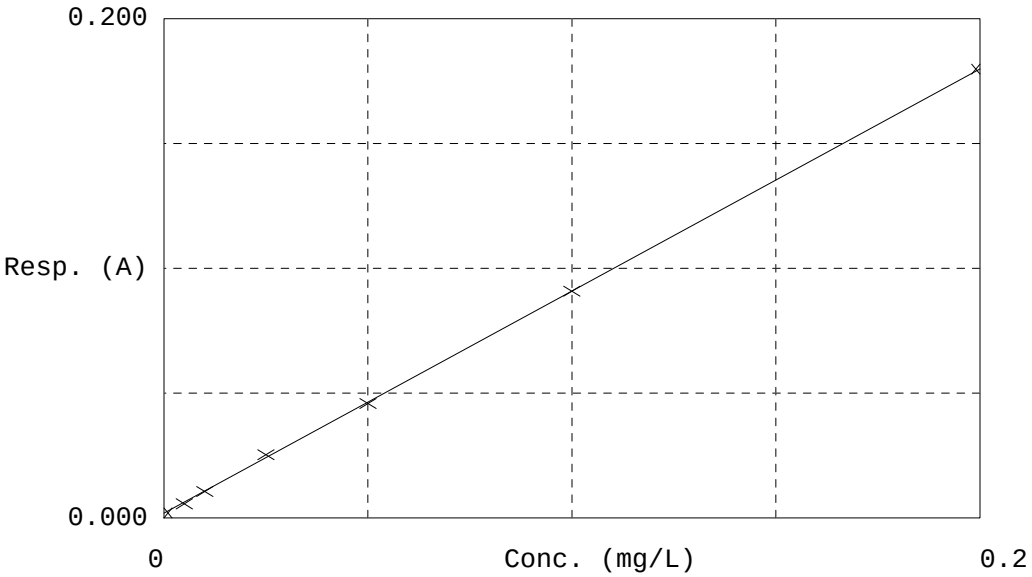
Test Cyanide

Accepted 5/5/2016 14:25

Factor 1.124
Bias 0.002

Coeff. of det. 0.999906

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.002	0.00010	0.00000	
2	CN-0.2	0.006	0.00424	0.00500	
3	CN-0.2	0.011	0.00985	0.01000	
4	CN-0.2	0.025	0.02641	0.02500	
5	CN-0.2	0.046	0.04938	0.05000	
6	CN-0.2	0.091	0.10004	0.10000	
7	CN-0.2	0.180	0.19999	0.20000	
8	A-ICV(control)	0.090	0.09952	0.10000	
9	B-ICB(control)	0.002	-0.00046	0.00000	
10	C-MRL(control)	0.011	0.00969	0.01000	

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

Date : 5/6/2016
Time : 0:03

Test : Cyanide
Unit : mg/L

Sample	Result	Date and Time	Note	Dilut
CCV-CN	0.0948	5/5/2016 22:27		
CCB-CN	-0.0002	5/5/2016 22:27		
240-64289-N-2-A	0.0003	5/5/2016 22:27		
240-64289-N-3-A	0.0212	5/5/2016 22:27		
240-64289-N-4-A	0.0178	5/5/2016 22:27		
240-64289-N-6-A	0.0034	5/5/2016 22:27		
240-64289-N-7-A	0.0141	5/5/2016 22:27		
240-64304-D-1-A	0.0005	5/5/2016 22:27		
190-10508-B-2-A	0.0053	5/5/2016 22:27		
240-64322-A-1-B	0.1165	5/5/2016 22:27		
190-10508-A-5-A	0.0041	5/5/2016 22:27		
190-10508-A-4-A	0.0028	5/5/2016 22:27		
CCV-CN	0.1002	5/5/2016 22:32		
CCB-CN	0.0002	5/5/2016 22:32		
MB 240-229090/1-	-0.0003	5/5/2016 22:32		
240-64160-C-4-A	0.0385	5/5/2016 22:32		
240-64160-C-4-B	0.0819	5/5/2016 22:32		
240-64160-C-4-C	0.0707	5/5/2016 22:32		
190-10468-A-3-B	0.0096	5/5/2016 22:32		
190-10468-A-4-B	0.0168	5/5/2016 22:33		
190-10468-A-5-B	0.0129	5/5/2016 22:33		
240-64236-A-1-B	0.0320	5/5/2016 22:33		
240-64233-A-2-B	0.0201	5/5/2016 22:33		
CCV-CN	0.1032	5/5/2016 22:37		
CCB-CN	0.0019	5/5/2016 22:37		
240-64175-A-2-B	0.1336	5/5/2016 22:37		
190-10466-A-5-A	0.0366	5/5/2016 22:37		
240-64440-D-1-A	0.0093	5/5/2016 22:37		
240-64289-N-1-A	0.0030	5/5/2016 22:37		
CCV-CN	0.0994	5/5/2016 22:39		
CCB-CN	0.0007	5/5/2016 22:39		
240-64236-A-1-B	0.0340	5/5/2016 22:49		
240-64160-C-4-A	0.0364	5/5/2016 22:50		
240-64289-N-7-A	0.0134	5/5/2016 22:53		
240-64322-A-1-B	0.1124	5/5/2016 22:53		
190-10468-A-4-B	0.0148	5/5/2016 22:54		
190-10468-A-5-B	0.0139	5/5/2016 22:54		
240-64233-A-2-B	0.0199	5/5/2016 22:54		
240-64289-N-3-A	0.0223	5/5/2016 22:54		
240-64289-N-4-A	0.0184	5/5/2016 22:54		
CCV-CN	0.1021	5/5/2016 22:56		
CCB-CN	0.0006	5/5/2016 22:56		
240-64175-A-2-B	0.1299	5/5/2016 22:57		
190-10466-A-5-A	0.0365	5/5/2016 22:57		
CCV-CN	0.1057	5/5/2016 23:02		
CCB-CN	-0.0001	5/5/2016 23:02		
CCV-CN	0.1058	5/5/2016 23:35		
CCB-CN	0.0002	5/5/2016 23:35		
LCS 240-229090/2	0.0638	5/5/2016 23:35		
CCV-CN	0.1050	5/5/2016 23:37		
CCB-CN	-0.0000	5/5/2016 23:37		

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E
5/6/2016 0:03

Test: Cyanide

Sample Id	Result	Dil. 1 +	Response	Errors
CCV-CN	0.0948	0.0	0.086	
CCB-CN	-0.0002	0.0	0.002	
240-64289-N-2-A	0.0003	0.0	0.002	
240-64289-N-3-A	0.0212	0.0	0.021	
240-64289-N-4-A	0.0178	0.0	0.018	
240-64289-N-6-A	0.0034	0.0	0.005	
240-64289-N-7-A	0.0141	0.0	0.014	
240-64304-D-1-A	0.0005	0.0	0.002	
190-10508-B-2-A	0.0053	0.0	0.007	
240-64322-A-1-B	0.1165	0.0	0.106	
190-10508-A-5-A	0.0041	0.0	0.006	
190-10508-A-4-A	0.0028	0.0	0.004	
CCV-CN	0.1002	0.0	0.091	
CCB-CN	0.0002	0.0	0.002	
MB 240-229090/1-	-0.0003	0.0	0.002	
LCS 240-229090/2	0.0464	0.0	0.043	
240-64160-C-4-A	0.0385	0.0	0.036	
240-64160-C-4-B	0.0819	0.0	0.075	
240-64160-C-4-C	0.0707	0.0	0.065	
190-10468-A-3-B	0.0096	0.0	0.010	
190-10468-A-4-B	0.0168	0.0	0.017	
190-10468-A-5-B	0.0129	0.0	0.013	
240-64236-A-1-B	0.0320	0.0	0.030	
240-64233-A-2-B	0.0201	0.0	0.020	
CCV-CN	0.1032	0.0	0.094	
CCB-CN	0.0019	0.0	0.004	
240-64175-A-2-B	0.1336	0.0	0.121	
190-10466-A-5-A	0.0366	0.0	0.035	
240-64440-D-1-A	0.0093	0.0	0.010	
240-64289-N-1-A	0.0030	0.0	0.005	
CCV-CN	0.0994	0.0	0.090	
CCB-CN	0.0007	0.0	0.003	
240-64236-A-1-B	0.0340	0.0	0.032	
240-64160-C-4-A	0.0364	0.0	0.034	
240-64289-N-7-A	0.0134	0.0	0.014	
240-64322-A-1-B	0.1124	0.0	0.102	
190-10468-A-4-B	0.0148	0.0	0.015	
190-10468-A-5-B	0.0139	0.0	0.014	
240-64233-A-2-B	0.0199	0.0	0.020	
240-64289-N-3-A	0.0223	0.0	0.022	
240-64289-N-4-A	0.0184	0.0	0.018	
CCV-CN	0.1021	0.0	0.093	
CCB-CN	0.0006	0.0	0.002	
240-64175-A-2-B	0.1299	0.0	0.118	
190-10466-A-5-A	0.0365	0.0	0.034	
CCV-CN	0.1057	0.0	0.096	
CCB-CN	-0.0001	0.0	0.002	
CCV-CN	0.1058	0.0	0.096	
CCB-CN	0.0002	0.0	0.002	
LCS 240-229090/2	0.0638	0.0	0.059	
CCV-CN	0.1050	0.0	0.095	
CCB-CN	-0.0000	0.0	0.002	

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

5/6/2016 0:03

Test: Cyanide

Sample Id	Result	Dil. 1 +	Response	Ô©ƒ

N	36
Mean	0.0337
SD	0.03763
CV%	111.70

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

5/6/2016 15:15

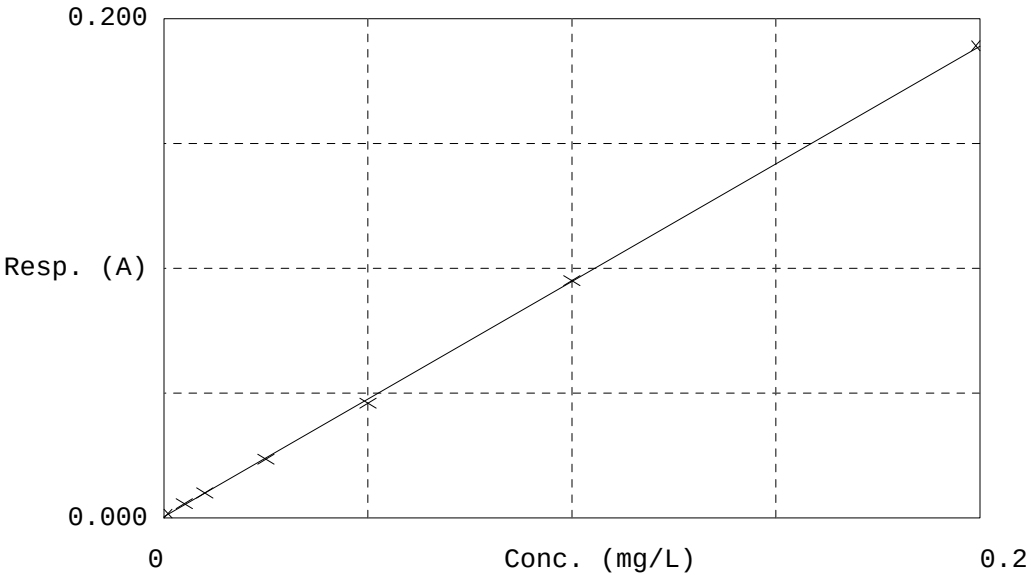
Test Cyanide

Accepted 5/6/2016 15:15

Factor 1.061
Bias 0.001

Coeff. of det. 0.999852

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.002	0.00101	0.00000	
2	CN-0.2	0.006	0.00549	0.00500	
3	CN-0.2	0.010	0.01008	0.01000	
4	CN-0.2	0.024	0.02448	0.02500	
5	CN-0.2	0.046	0.04829	0.05000	
6	CN-0.2	0.095	0.10035	0.10000	
7	CN-0.2	0.189	0.20030	0.20000	
8	A-ICV(control)	0.094	0.09955	0.10000	
9	B-ICB(control)	0.001	0.00049	0.00000	
10	C-MRL(control)	0.010	0.01051	0.01000	

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

Date : 5/6/2016
Time : 20:16

Test : Cyanide
Unit : mg/L

Sample	Result	Date and Time	Note	Dilut
A-ICV	0.0995	5/6/2016 14:59		
B-ICB	0.0005	5/6/2016 14:59		
C-MRL	0.0105	5/6/2016 14:59		
CCV-CN	0.0948	5/6/2016 18:43		
CCB-CN	0.0006	5/6/2016 18:43		
240-64160-A-5-B	0.0308	5/6/2016 18:43		
240-64160-A-6-B	0.0083	5/6/2016 18:43		
240-64317-A-1-B	0.0012	5/6/2016 18:43		
240-64349-N-2-B	0.0027	5/6/2016 18:43		
240-64349-N-5-B	0.0125	5/6/2016 18:43		
240-64349-N-4-B	0.0269	5/6/2016 18:43		
240-64359-N-1-B	0.0017	5/6/2016 18:43		
240-64359-N-2-B	0.0038	5/6/2016 18:43		
240-64359-N-3-B	0.0020	5/6/2016 18:43		
240-64359-N-4-B	0.0018	5/6/2016 18:43		
CCV-CN	0.0952	5/6/2016 18:49		
CCB-CN	0.0006	5/6/2016 18:49		
MB 240-229229/1-	0.0014	5/6/2016 18:49		
LCS 240-229229/2	0.0711	5/6/2016 18:49		
CCVL 240-229229/	0.0452	5/6/2016 18:49		
240-64349-AK-3-A	0.0203	5/6/2016 18:49		
240-64349-AK-3-B	0.0835	5/6/2016 18:49		
240-64349-AK-3-C	0.0732	5/6/2016 18:49		
240-64349-AD-1-A	0.0143	5/6/2016 18:49		
240-64359-N-5-B	0.0012	5/6/2016 18:49		
240-64359-N-6-B	0.0082	5/6/2016 18:49		
CCV-CN	0.0953	5/6/2016 18:54		
CCB-CN	0.0007	5/6/2016 18:54		
190-10468-A-2-C	0.0098	5/6/2016 18:54		
240-64160-A-1-B	0.0039	5/6/2016 18:54		
240-64160-A-2-B	0.0266	5/6/2016 18:54		
240-64160-A-3-B	0.0169	5/6/2016 18:54		
CCV-CN	0.0946	5/6/2016 18:56		
CCB-CN	0.0005	5/6/2016 18:56		
240-64349-AK-3-A	0.0194	5/6/2016 19:02		
240-64349-AD-1-A	0.0145	5/6/2016 19:02		
240-64349-AK-3-B	0.0831	5/6/2016 19:06		
240-64349-AK-3-C	0.0745	5/6/2016 19:06		
240-64160-A-5-B	0.0305	5/6/2016 19:06		
240-64349-N-5-B	0.0125	5/6/2016 19:06		
240-64349-N-4-B	0.0270	5/6/2016 19:06		
CCV-CN	0.1008	5/6/2016 19:07		
CCB-CN	0.0005	5/6/2016 19:07		
CCV-CN	0.0958	5/6/2016 20:00		
CCB-CN	0.0010	5/6/2016 20:00		
CCVH 240-229229/	0.1837	5/6/2016 20:00		
240-64349-AK-3-A	0.0198	5/6/2016 20:00		
240-64349-AD-1-B	0.0736	5/6/2016 20:00		
240-64349-AD-1-C	0.0766	5/6/2016 20:00		
240-64160-A-2-B	0.0257	5/6/2016 20:00		
240-64160-A-3-B	0.0166	5/6/2016 20:00		
CCV-CN	0.0946	5/6/2016 20:02		
CCB-CN	0.0007	5/6/2016 20:02		

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

5/6/2016 20:15

Test: Cyanide

Sample Id	Result	Dil. 1 +	Response	Errors
A-ICV	0.0995	0.0	0.094	
B-ICB	0.0005	0.0	0.001	
C-MRL	0.0105	0.0	0.010	
CCV-CN	0.0948	0.0	0.090	
CCB-CN	0.0006	0.0	0.001	
240-64160-A-5-B	0.0308	0.0	0.030	
240-64160-A-6-B	0.0083	0.0	0.008	
240-64317-A-1-B	0.0012	0.0	0.002	
240-64349-N-2-B	0.0027	0.0	0.003	
240-64349-N-5-B	0.0125	0.0	0.012	
240-64349-N-4-B	0.0269	0.0	0.026	
240-64359-N-1-B	0.0017	0.0	0.002	
240-64359-N-2-B	0.0038	0.0	0.004	
240-64359-N-3-B	0.0020	0.0	0.002	
240-64359-N-4-B	0.0018	0.0	0.002	
CCV-CN	0.0952	0.0	0.090	
CCB-CN	0.0006	0.0	0.001	
MB 240-229229/1-	0.0014	0.0	0.002	
LCS 240-229229/2	0.0711	0.0	0.068	
CCVH 240-229229/	0.1414	0.0	0.134	
CCVL 240-229229/	0.0452	0.0	0.043	
240-64349-AK-3-A	0.0203	0.0	0.020	
240-64349-AK-3-B	0.0835	0.0	0.079	
240-64349-AK-3-C	0.0732	0.0	0.070	
240-64349-AD-1-A	0.0143	0.0	0.014	
240-64359-N-5-B	0.0012	0.0	0.002	
240-64359-N-6-B	0.0082	0.0	0.008	
CCV-CN	0.0953	0.0	0.090	
CCB-CN	0.0007	0.0	0.001	
240-64349-AD-1-B	0.0578	0.0	0.055	
240-64349-AD-1-C	0.0773	0.0	0.073	
190-10468-A-2-C	0.0098	0.0	0.010	
240-64160-A-1-B	0.0039	0.0	0.004	
240-64160-A-2-B	0.0266	0.0	0.026	
240-64160-A-3-B	0.0169	0.0	0.016	
CCV-CN	0.0946	0.0	0.090	
CCB-CN	0.0005	0.0	0.001	
CCVH 240-229229/	0.1455	0.0	0.138	
240-64349-AK-3-A	0.0194	0.0	0.019	
240-64349-AD-1-A	0.0145	0.0	0.014	
240-64349-AK-3-B	0.0831	0.0	0.079	
240-64349-AK-3-C	0.0745	0.0	0.071	
240-64160-A-5-B	0.0305	0.0	0.029	
240-64349-N-5-B	0.0125	0.0	0.012	
240-64349-N-4-B	0.0270	0.0	0.026	
CCV-CN	0.1008	0.0	0.096	
CCB-CN	0.0005	0.0	0.001	
CCV-CN	0.0958	0.0	0.091	
CCB-CN	0.0010	0.0	0.002	
CCVH 240-229229/	0.1837	0.0	0.174	
240-64349-AK-3-A	0.0198	0.0	0.019	
240-64349-AD-1-B	0.0736	0.0	0.070	
240-64349-AD-1-C	0.0766	0.0	0.073	
240-64160-A-2-B	0.0257	0.0	0.025	
240-64160-A-3-B	0.0166	0.0	0.016	
CCV-CN	0.0946	0.0	0.090	
CCB-CN	0.0007	0.0	0.001	

TestAmerica Canton Laboratory
Konelab 250 Sauron
Cyanide methods: 9012A, 335.4, 4500CN E, I, G
Chloride methods: 9251, 4500Cl E

5/6/2016 20:15

Test: Cyanide

Sample Id	Result	Dil. 1 +	Response	Ô©ƒ

N	40
Mean	0.0387
SD	0.04386
CV%	113.43

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229090 Batch Start Date: 05/05/16 20:57 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/05/16 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ChlorineCheck	SulfideCheck	DistillpHCheck	DigestBlockID
MB 240-229090/1		9012B, 9012B		50 mL	25 mL	N	N	>12.0	B
LCS 240-229090/2		9012B, 9012B		50 mL	25 mL	N	N	>12.0	B
240-64160-C-4	16WC1A	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-C-4 MS	16WC1A	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-C-4 MSD	16WC1A	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B

Lab Sample ID	Client Sample ID	Method Chain	Basis	DigestBlockPos	WCCN1PPMMSD2 00271	WCERAPHEN0L 00035			
MB 240-229090/1		9012B, 9012B		10					
LCS 240-229090/2		9012B, 9012B		9		5 mL			
240-64160-C-4	16WC1A	9012B, 9012B	T	8					
240-64160-C-4 MS	16WC1A	9012B, 9012B	T	7	2 mL				
240-64160-C-4 MSD	16WC1A	9012B, 9012B	T	6	2 mL				

Batch Notes	
Batch Comment	25 mL Collection Traps:2454208/ 50 mL Beakers:2344333
Bismuth Nitrate ID	2157155
Ca(OCl)2 ID	2516426
Distillation Temperature	120 Degrees C
Magnesium Chloride ID	2425762
Sodium Hydroxide ID	2480992
Pipette ID	B5/C7/E4
Sulfamic Acid ID	2461576
Sulfuric Acid Reagent ID Number	2468901

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229094 Batch Start Date: 05/05/16 22:27 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 00:27

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCCN.1CCV1 00250			
CCV 240-229094/13		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/14		9012B		2.0 mL	2.0 mL				
MB 240-229090/1-A		9012B		2.0 mL	2.0 mL				
240-64160-C-4-A	16WC1A	9012B	T	2.0 mL	2.0 mL				
240-64160-C-4-B MS	16WC1A	9012B	T	2.0 mL	2.0 mL				
240-64160-C-4-C MSD	16WC1A	9012B	T	2.0 mL	2.0 mL				
CCV 240-229094/24		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/25		9012B		2.0 mL	2.0 mL				
CCV 240-229094/30		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/31		9012B		2.0 mL	2.0 mL				
240-64160-C-4-A	16WC1A	9012B	T	2.0 mL	2.0 mL				
CCV 240-229094/41		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/42		9012B		2.0 mL	2.0 mL				
CCV 240-229094/47		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/48		9012B		2.0 mL	2.0 mL				
LCS 240-229090/2-A		9012B		2.0 mL	2.0 mL				
CCV 240-229094/50		9012B		2.0 mL	2.0 mL	2 mL			
CCB 240-229094/51		9012B		2.0 mL	2.0 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229094 Batch Start Date: 05/05/16 22:27 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 00:27

Batch Notes	
Buffer Reagent ID Number	2092105
Chloramine-T ID	2056488
NaOH Lot #	2480992
Pyridine-Barbituric Acid ID	2056924-2056949

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229229 Batch Start Date: 05/06/16 16:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 18:18

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ChlorineCheck	SulfideCheck	DistillpHCheck	DigestBlockID
MB 240-229229/1		9012B, 9012B		50 mL	25 mL	N	N	>12.0	C
LCS 240-229229/2		9012B, 9012B		50 mL	25 mL	N	N	>12.0	C
CCVH 240-229229/3		9012B, 9012B		50 mL	25 mL	N	N	>12.0	C
CCVL 240-229229/4		9012B, 9012B		50 mL	25 mL	N	N	>12.0	C
240-64160-A-1	16C1	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-A-2	16MW8	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-A-3	16MW9	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-A-5	16WDUP	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B
240-64160-A-6	16WC1B	9012B, 9012B	T	50 mL	25 mL	N	N	>12.0	B

Lab Sample ID	Client Sample ID	Method Chain	Basis	DigestBlockPos	WCCN10PPM1 00258	WCERAPHEN0L 00035			
MB 240-229229/1		9012B, 9012B		1					
LCS 240-229229/2		9012B, 9012B		2		5 mL			
CCVH 240-229229/3		9012B, 9012B		3	0.5 mL				
CCVL 240-229229/4		9012B, 9012B		4	0.125 mL				
240-64160-A-1	16C1	9012B, 9012B	T	6					
240-64160-A-2	16MW8	9012B, 9012B	T	5					
240-64160-A-3	16MW9	9012B, 9012B	T	4					
240-64160-A-5	16WDUP	9012B, 9012B	T	3					
240-64160-A-6	16WC1B	9012B, 9012B	T	2					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229229 Batch Start Date: 05/06/16 16:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 18:18

Batch Notes	
Batch Comment	25 mL Collection Traps:2454208/ 50 mL Beakers:2344333
Bismuth Nitrate ID	2157155
Ca(OCl)2 ID	2516426
Distillation Temperature	120 Degrees C
Magnesium Chloride ID	2425762
Sodium Hydroxide ID	2480992
Pipette ID	E10/B5/C3
Sulfamic Acid ID	2461576
Sulfuric Acid Reagent ID Number	2468901

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229244 Batch Start Date: 05/06/16 14:56 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 21:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCCN.01MRL1 00240	WCCN.1CCV1 00251	WCCN.1ICV2 00258	
ICV 240-229244/4		9012B		2.0 mL	2.0 mL			2 mL	
ICB 240-229244/5		9012B		2.0 mL	2.0 mL				
MRL 240-229244/6		9012B		2.0 mL	2.0 mL	2 mL			
CCV 240-229244/7		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/8		9012B		2.0 mL	2.0 mL				
240-64160-A-5-B	16WDUP	9012B	T	2.0 mL	2.0 mL				
240-64160-A-6-B	16WC1B	9012B	T	2.0 mL	2.0 mL				
CCV 240-229244/19		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/20		9012B		2.0 mL	2.0 mL				
MB 240-229229/1-A		9012B		2.0 mL	2.0 mL				
LCS 240-229229/2-A		9012B		2.0 mL	2.0 mL				
CCVL 240-229229/4-A		9012B		2.0 mL	2.0 mL				
CCV 240-229244/30		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/31		9012B		2.0 mL	2.0 mL				
240-64160-A-1-B	16C1	9012B	T	2.0 mL	2.0 mL				
240-64160-A-2-B	16MW8	9012B	T	2.0 mL	2.0 mL				
240-64160-A-3-B	16MW9	9012B	T	2.0 mL	2.0 mL				
CCV 240-229244/36		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/37		9012B		2.0 mL	2.0 mL				
240-64160-A-5-B	16WDUP	9012B	T	2.0 mL	2.0 mL				
CCV 240-229244/45		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/46		9012B		2.0 mL	2.0 mL				
CCV 240-229244/47		9012B		2.0 mL	2.0 mL		2 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-1

SDG No.:

Batch Number: 229244 Batch Start Date: 05/06/16 14:56 Batch Analyst: Weimer, Joshua W

Batch Method: 9012B Batch End Date: 05/06/16 21:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCCN.01MRL1 00240	WCCN.1CCV1 00251	WCCN.1ICV2 00258	
CCB 240-229244/48		9012B		2.0 mL	2.0 mL				
CCVH 240-229229/3-A		9012B		2.0 mL	2.0 mL				
240-64160-A-2-B	16MW8	9012B	T	2.0 mL	2.0 mL				
240-64160-A-3-B	16MW9	9012B	T	2.0 mL	2.0 mL				
CCV 240-229244/55		9012B		2.0 mL	2.0 mL		2 mL		
CCB 240-229244/56		9012B		2.0 mL	2.0 mL				

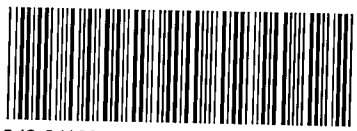
Batch Notes	
Buffer Reagent ID Number	2092105
Chloramine-T ID	2056488
NaOH Lot #	2480992
Pyridine-Barbituric Acid ID	2056924-2056949

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-64160 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

28/C2,3

3,2/C2,7

CHAIN OF CUSTODY RECORD

QC JVR 4/14/2016

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Manager/1-800-966-9279

Client: 0 **Attn:** 0 **Addres** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2Q 2016 Annual Groundwater Monitoring Event **DAA JN:** B03204-16 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 1Z2373010193052008 **Tracking Number:** 1Z2373010191979011

Box 1: Matrix SW Surface Water GW Groundwater L Leachate S Soil	T Trip Blank E Equipment Blan P Product O Other	**Box 2: Preservative** A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$	E NaOH F ZnAc G Other (Specify) H None	**Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic V VOA AG Amber Glass CG Clear Glass **Box 4: Sample Type** G Grab C Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G	G					
Box 3 - Filtered/Unfiltered					U	U	U	U					
Required pH of Sample						<2	<2	>12					
Box 2 - Preservative					H	B	B	E					
Box 5 - Sample Container Type					2-250mL AG	1-500 mL P		1-500 mL P					
Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	8270D/3510C (Semivolatiles)	ICP/MS 6020A/3005A (Metals-Total)	7470A (Mercury-Total)	9012B/9010C(Cyanide)					
16C1	4/27	1325	GW	4	X	X	X	X					
16MW8	4/26	1355	GW	4	X	X	X	X					
16MW9	4/27	1215	GW	4	X	X	X	X					
16WC1A	4/27	1050	GW	12	X	X	X	X					
16WDUP	4/27	1110	GW	4	X	X	X	X					
16WC1B	4/27	0950	GW	4	X	X	X	X					
16-2	4/26	1250	GW	1		X	X						
16-3	4/26	1450	GW	1		X	X						
16-5	4/26	1045	GW	1		X	X						
16WC2B	4/26	1155	GW	1		X	X						
16SPRING	4/26	1100	GW	1		X	X						

1150 4/27/16

GENERAL NOTES:

1. Report results to detection limit, with J flags, for italicized wells. Report to at or above QL for other locations
2. VELAP accreditation required.
3. Full Deliverable with EDD.
4. 8270 -Analyze for Hexachlorophene and Sulfotepp Only. 5. Metals -see attached list

Permit
QL = 100 ppb
DL = 10 ppb

QL = 10 ppb
DL = 1 ppb

USE FOR QC

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 4-26-16	#1 Relinquished by (Signature): Will Mason-Deese	Date: 4/27/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Will Mason-Deese	Date: 4-26-16	#1 Received by (Signature):	Date:	#2 Received by (Signature): Jacquelyn Sewell	Date: 4/28/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: TAN	Time: 1000	

✓ 4/14/16 1/5

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

HWMU 16

Analyte	Method Ref	LOQ	LOD	CAS#	Units
ANTIMONY	6020A	2	0.4	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.2	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1	7440-50-8	UG/L
LEAD	6020A	1	0.2	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	5	3	7782-49-2	UG/L
SILVER	6020A	1	0.2	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	1	7440-62-2	UG/L
ZINC	6020A	10	3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report estimated results.

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

~~3020A~~ 3005A JUR 4/18/2016

Method SW 846-6020A/~~3005~~A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	1
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	10

Report to at or above the QL. ✓ JUR 4/18/2016

Updated 4/8/2013 jcf

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

THIS APPLIES TO ALL WELLS AND QC

Method SW 7470A/CVAA		CAS#	Required QL/DL
12.	Mercury	7439-97-6	2 / 0.2 ug/l

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 4

These are Appendix IX wells. Report estimated results.

LOD based on MDL reported in 2012 Compuchem. Jun 4/16/07

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 64160**
Canton Facility

Client DRAPER ADEN Site Name _____ Cooler unpacked by: J. Reed

Cooler Received on 4/28/16 Opened on 4/28/16

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ____ ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4/Cooler (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC559158**
13. Were VOAs on the COC? Yes (No)
14. Were air bubbles >6 mm in any VOA vials? Yes No (NA)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative Canton Facility			Login # : 64460	
Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	18	2.8	2.3	IC
↓	↓	3.2	2.7	↓

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
16C1	240-64160-A-1	Plastic 250ml - with Sodium Hydro›	>12		
16C1	240-64160-B-1	Plastic 500ml - with Nitric Acid	<2		
16MW8	240-64160-A-2	Plastic 250ml - with Sodium Hydro›	>12		
16MW8	240-64160-B-2	Plastic 500ml - with Nitric Acid	<2		
16MW9	240-64160-A-3	Plastic 250ml - with Sodium Hydro›	>12		
16MW9	240-64160-B-3	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-A-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-B-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-C-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-D-4	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-E-4	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-F-4	Plastic 500ml - with Nitric Acid	<2		
16WDUP	240-64160-A-5	Plastic 250ml - with Sodium Hydro›	>12		
16WDUP	240-64160-B-5	Plastic 500ml - with Nitric Acid	<2		
16WC1B	240-64160-A-6	Plastic 250ml - with Sodium Hydro›	>12		
16WC1B	240-64160-B-6	Plastic 500ml - with Nitric Acid	<2		
16-2	240-64160-A-7	Plastic 500ml - with Nitric Acid	<2		
16-3	240-64160-A-8	Plastic 500ml - with Nitric Acid	<2		
16-5	240-64160-A-9	Plastic 500ml - with Nitric Acid	<2		
16WC2B	240-64160-A-10	Plastic 500ml - with Nitric Acid	<2		
16SPRING	240-64160-A-11	Plastic 500ml - with Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Draper Aden Associates, Inc.

Job Number: 240-64160-1

Login Number: 64160
List Number: 1
Creator: Maddux, Ann

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

ANALYTICAL REPORT

Job Number: 240-64160-2

Job Description: RFAAP, Radford VA, HWMU16

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
5/17/2016 2:55 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
05/17/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RFAAP, Radford VA, HWMU16

Report Number: 240-64160-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 4/28/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3º C and 2.7º C.

Samples 16-2 (240-64160-7), 16-3 (240-64160-8), 16-5 (240-64160-9), 16WC2B (240-64160-10) and 16SPRING (240-64160-11) were received and analyzed as noted below. The remaining samples on the chain of custody were analyzed under Report Number: 240-64160-1.

TOTAL RECOVERABLE METALS (ICPMS)

Samples 16-2 (240-64160-7), 16-3 (240-64160-8), 16-5 (240-64160-9), 16WC2B (240-64160-10) and 16SPRING (240-64160-11) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/05/2016 and analyzed on 05/07/2016 and 05/09/2016.

Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: 16-2 (240-64160-7), 16-3 (240-64160-8), 16-5 (240-64160-9), 16WC2B (240-64160-10) and 16SPRING (240-64160-11). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples 16-2 (240-64160-7), 16-3 (240-64160-8), 16-5 (240-64160-9), 16WC2B (240-64160-10) and 16SPRING (240-64160-11) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/05/2016 and analyzed on 05/06/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Client Sample ID: 16-2 — Lab Sample ID: 240-64160-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Barium	180		10		ug/L	1		6020A	Total Recoverable

Client Sample ID: 16-3 — Lab Sample ID: 240-64160-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Barium	750		10		ug/L	1		6020A	Total Recoverable

Client Sample ID: 16-5 — Lab Sample ID: 240-64160-9

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Barium	160		10		ug/L	1		6020A	Total Recoverable

Client Sample ID: 16WC2B — Lab Sample ID: 240-64160-10

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Barium	110		10		ug/L	1		6020A	Total Recoverable

Client Sample ID: 16SPRING — Lab Sample ID: 240-64160-11

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Barium	180		10		ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16-2

Lab Sample ID: 240-64160-7

Date Collected: 04/26/16 12:50

Matrix: Water

Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:50	1
Barium	**180**		10		ug/L		05/05/16 09:40	05/07/16 16:50	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:50	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:50	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:50	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:50	1
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 13:59	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:50	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:50	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:50	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 13:44	1

Client Sample ID: 16-3

Lab Sample ID: 240-64160-8

Date Collected: 04/26/16 14:50

Matrix: Water

Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:54	1
Barium	**750**		10		ug/L		05/05/16 09:40	05/07/16 16:54	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:54	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:54	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:54	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:54	1
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 14:03	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:54	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:54	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:54	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 13:46	1

Client Sample ID: 16-5

Lab Sample ID: 240-64160-9

Date Collected: 04/26/16 10:45

Matrix: Water

Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:59	1
Barium	**160**		10		ug/L		05/05/16 09:40	05/07/16 16:59	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:59	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:59	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:59	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 16:59	1

Client Sample ID: 16-5 — Lab Sample ID: 240-64160-9

Date Collected: 04/26/16 10:45 — **Matrix: Water**
Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 14:08	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:59	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 16:59	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:59	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 16:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 13:49	1

Client Sample ID: 16WC2B — Lab Sample ID: 240-64160-10

Date Collected: 04/26/16 11:55 — **Matrix: Water**
Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:11	1
Barium	**110**		10		ug/L		05/05/16 09:40	05/07/16 17:11	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:11	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:11	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 17:11	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 17:11	1
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 14:12	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:11	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:11	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:11	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 13:51	1

Client Sample ID: 16SPRING — Lab Sample ID: 240-64160-11

Date Collected: 04/26/16 11:00 — **Matrix: Water**
Date Received: 04/28/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:15	1
Barium	**180**		10		ug/L		05/05/16 09:40	05/07/16 17:15	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:15	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:15	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 17:15	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 17:15	1
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 14:16	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:15	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 17:15	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:15	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 17:15	1

Client Sample ID: 16SPRING

Date Collected: 04/26/16 11:00
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-11

Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 13:53	1

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	RL		Units	Method
Arsenic	10	10	ug/L	6020A
Barium	10	10	ug/L	6020A
Beryllium	1.0	1.0	ug/L	6020A
Cadmium	1.0	1.0	ug/L	6020A
Chromium	5.0	5.0	ug/L	6020A
Cobalt	5.0	5.0	ug/L	6020A
Copper	5.0	5.0	ug/L	6020A
Lead	1.0	1.0	ug/L	6020A
Nickel	10	10	ug/L	6020A
Vanadium	10	10	ug/L	6020A
Zinc	10	10	ug/L	6020A

Method: 7470A - Mercury (CVAA)

Analyte	RL		Units	Method
Mercury	2.0	0.20	ug/L	7470A

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-228967/1-A
Matrix: Water
Analysis Batch: 229385

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10	U	10		ug/L		05/05/16 09:40	05/07/16 15:52	1
Barium	10	U	10		ug/L		05/05/16 09:40	05/07/16 15:52	1
Beryllium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 15:52	1
Cadmium	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 15:52	1
Cobalt	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 15:52	1
Chromium	5.0	U	5.0		ug/L		05/05/16 09:40	05/07/16 15:52	1
Nickel	10	U	10		ug/L		05/05/16 09:40	05/07/16 15:52	1
Lead	1.0	U	1.0		ug/L		05/05/16 09:40	05/07/16 15:52	1
Vanadium	10	U	10		ug/L		05/05/16 09:40	05/07/16 15:52	1
Zinc	10	U	10		ug/L		05/05/16 09:40	05/07/16 15:52	1

Lab Sample ID: MB 240-228967/1-A
Matrix: Water
Analysis Batch: 229600

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Copper	5.0	U	5.0		ug/L		05/05/16 09:40	05/09/16 13:01	1

Lab Sample ID: LCS 240-228967/2-A
Matrix: Water
Analysis Batch: 229385

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			1000	999		ug/L		100	80 - 120		
Barium			1000	994		ug/L		99	80 - 120		
Beryllium			1000	1080		ug/L		108	80 - 120		
Cadmium			1000	1010		ug/L		101	80 - 120		
Cobalt			1000	1070		ug/L		107	80 - 120		
Chromium			1000	1050		ug/L		105	80 - 120		
Nickel			1000	1010		ug/L		101	80 - 120		
Lead			1000	1060		ug/L		106	80 - 120		
Vanadium			1000	1060		ug/L		106	80 - 120		
Zinc			1000	1100		ug/L		110	80 - 120		

Lab Sample ID: LCS 240-228967/2-A
Matrix: Water
Analysis Batch: 229600

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 228967

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Copper			1000	1060		ug/L		106	80 - 120		

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-228970/1-A
Matrix: Water
Analysis Batch: 229365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228970

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.0	U	2.0		ug/L		05/05/16 12:00	05/06/16 12:37	1

Lab Sample ID: LCS 240-228970/2-A
Matrix: Water
Analysis Batch: 229365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228970

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			5.00	4.83		ug/L		97	80 - 120		

Metals

Prep Batch: 228967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-7	16-2	Total Recoverable	Water	3005A	
240-64160-8	16-3	Total Recoverable	Water	3005A	
240-64160-9	16-5	Total Recoverable	Water	3005A	
240-64160-10	16WC2B	Total Recoverable	Water	3005A	
240-64160-11	16SPRING	Total Recoverable	Water	3005A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 228970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-7	16-2	Total/NA	Water	7470A	
240-64160-8	16-3	Total/NA	Water	7470A	
240-64160-9	16-5	Total/NA	Water	7470A	
240-64160-10	16WC2B	Total/NA	Water	7470A	
240-64160-11	16SPRING	Total/NA	Water	7470A	
LCS 240-228970/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-228970/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 229220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CRA 240-229220/9-A	DL		Water	7470A	

Analysis Batch: 229365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-7	16-2	Total/NA	Water	7470A	228970
240-64160-8	16-3	Total/NA	Water	7470A	228970
240-64160-9	16-5	Total/NA	Water	7470A	228970
240-64160-10	16WC2B	Total/NA	Water	7470A	228970
240-64160-11	16SPRING	Total/NA	Water	7470A	228970
CRA 240-229220/9-A	DL		Water	7470A	229220
LCS 240-228970/2-A	Lab Control Sample	Total/NA	Water	7470A	228970
MB 240-228970/1-A	Method Blank	Total/NA	Water	7470A	228970

Analysis Batch: 229385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-7	16-2	Total Recoverable	Water	6020A	228967
240-64160-8	16-3	Total Recoverable	Water	6020A	228967
240-64160-9	16-5	Total Recoverable	Water	6020A	228967
240-64160-10	16WC2B	Total Recoverable	Water	6020A	228967
240-64160-11	16SPRING	Total Recoverable	Water	6020A	228967
CRI 240-229385/65	DL		Water	6020A	
CRI 240-229385/9	DL		Water	6020A	
ICSA 240-229385/10	ICS		Water	6020A	
ICSAB 240-229385/11	ICS		Water	6020A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	6020A	228967
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	6020A	228967

Analysis Batch: 229600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-7	16-2	Total Recoverable	Water	6020A	228967
240-64160-8	16-3	Total Recoverable	Water	6020A	228967

Metals (Continued)

Analysis Batch: 229600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64160-9	16-5	Total Recoverable	Water	6020A	228967
240-64160-10	16WC2B	Total Recoverable	Water	6020A	228967
240-64160-11	16SPRING	Total Recoverable	Water	6020A	228967
CRI 240-229600/40	DL		Water	6020A	
CRI 240-229600/9	DL		Water	6020A	
ICSA 240-229600/10	ICS		Water	6020A	
ICSAB 240-229600/11	ICS		Water	6020A	
LCS 240-228967/2-A	Lab Control Sample	Total Recoverable	Water	6020A	228967
MB 240-228967/1-A	Method Blank	Total Recoverable	Water	6020A	228967

Client Sample ID: 16-2
Date Collected: 04/26/16 12:50
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:50	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 13:59	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:44	WKD	TAL CAN

Client Sample ID: 16-3
Date Collected: 04/26/16 14:50
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:54	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 14:03	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:46	WKD	TAL CAN

Client Sample ID: 16-5
Date Collected: 04/26/16 10:45
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 16:59	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 14:08	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:49	WKD	TAL CAN

Client Sample ID: 16WC2B
Date Collected: 04/26/16 11:55
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 17:11	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 14:12	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:51	WKD	TAL CAN

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Client Sample ID: 16SPRING

Date Collected: 04/26/16 11:00
Date Received: 04/28/16 10:00

Lab Sample ID: 240-64160-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229385	05/07/16 17:15	AS1	TAL CAN
Total Recoverable	Prep	3005A			228967	05/05/16 09:40	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	229600	05/09/16 14:16	AS1	TAL CAN
Total/NA	Prep	7470A			228970	05/05/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	229365	05/06/16 13:53	WKD	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Laboratory: TestAmerica Canton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460175	09-14-16

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RFAAP, Radford VA, HWMU16

TestAmerica Job ID: 240-64160-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-64160-7	16-2	Water	04/26/16 12:50	04/28/16 10:00
240-64160-8	16-3	Water	04/26/16 14:50	04/28/16 10:00
240-64160-9	16-5	Water	04/26/16 10:45	04/28/16 10:00
240-64160-10	16WC2B	Water	04/26/16 11:55	04/28/16 10:00
240-64160-11	16SPRING	Water	04/26/16 11:00	04/28/16 10:00

Detection Limit Exceptions Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-64160-2
Project/Site: RFAAP, Radford VA, HWMU16

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but great than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedure do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
6020A	Water	Zinc	ug/L	10	20

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
K2S2O8_00041	04/13/18	04/13/16	DIWATER, Lot DIWATER	2.5 L	MTK2S208_00028	125 g	Potassium persulfate	0.05 g/g
.MTK2S208_00028	07/27/18		Macron, Lot 0000070212		(Purchased Reagent)		Potassium persulfate	1 g/g
MTH2S04_00030	04/22/18		Macron, Lot 0000122132		(Purchased Reagent)		Sulfuric acid	100 %
MTHGCALW_01198	05/05/16	05/05/16	DIWATER, Lot DIWATER	100 mL	MTHGCAL_00022	1 mL	Mercury	100 ug/L
					MTTMHNO3_00085	0.125 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00022	04/29/18		INORGANIC VENTURES, Lot J2-HG02136		(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00085	04/14/18		Macron/Avantor, Lot 0000129810		(Purchased Reagent)		Nitric acid	100 %
MTHGCALW_01199	05/06/16	05/06/16	DIWATER, Lot DIWATER	100 mL	MTHGCAL_00022	1 mL	Mercury	100 ug/L
					MTTMHNO3_00085	0.125 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00022	04/29/18		INORGANIC VENTURES, Lot J2-HG02136		(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00085	04/14/18		Macron/Avantor, Lot 0000129810		(Purchased Reagent)		Nitric acid	100 %
MTHgStd_00020	05/18/16		HPS, Lot 1531727		(Purchased Reagent)		Mercury	1 ug/mL
MTICPMS2_00024	02/01/17		Inorganic Ventures, Lot K@-MEB615154		(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Na	1000 ug/mL
MTICPMSA_00026	02/01/17		Inorganic Ventures, Lot J2-MEB584095		(Purchased Reagent)		Arsenic	100 ug/mL
							Barium	100 ug/mL
							Beryllium	100 ug/mL
							Cadmium	100 ug/mL
							Chromium	100 ug/mL
							Cobalt	100 ug/mL
							Copper	100 ug/mL
							Lead	100 ug/mL
							Mn	100 ug/mL
							Nickel	100 ug/mL
							Se	100 ug/mL
							Sr	100 ug/mL
							Tl	25 ug/mL
							Vanadium	100 ug/mL
							Zinc	100 ug/mL
MTICPMSB_00027	02/01/17		Inorganic Ventures, Lot K@-MEB615153		(Purchased Reagent)		Ag	10 ug/mL
							B	10 ug/mL
							Li	10 ug/mL
							Mo	10 ug/mL
							Sb	10 ug/mL
							Sn	100 ug/mL
							Ti	10 ug/mL
							W	10 ug/mL
MTKMN04W_00106	04/26/18	04/26/16	DIWATER, Lot DIWATER	2.5 L	MTKMN04_00027	125 g	Potassium Permanganate	50000 mg/L
.MTKMN04_00027	12/30/20		Fisher, Lot 143416		(Purchased Reagent)		Potassium Permanganate	1 g/g
MTMSCAL2CCVW_00164	10/22/16	04/22/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	Arsenic	50 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Nickel	50 ug/L
							Vanadium	50 ug/L
							Zinc	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
MTMSCAL2CCVW_00165	11/01/16	05/04/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Nickel	50 ug/L
							Vanadium	50 ug/L
							Zinc	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
MTMSCAL3W_00058	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	10 mL	Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Vanadium	100 ug/L
							Zinc	100 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
MTMSCRI6020AW_00038	08/01/16	04/12/16	DIWATER, Lot DIWATER	500 mL	MS6020ACRIA_00003	0.5 mL	Arsenic	5 ug/L
							Barium	5 ug/L
							Beryllium	1 ug/L
							Cadmium	1 ug/L
							Chromium	2 ug/L
							Cobalt	1 ug/L
							Copper	2 ug/L
							Lead	1 ug/L
							Nickel	2 ug/L
							Vanadium	5 ug/L
							Zinc	20 ug/L
.MS6020ACRIA_00003	08/01/16	Inorganic Ventures, Lot J2-MEB592019			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	1 ug/mL
							Cadmium	1 ug/mL
							Chromium	2 ug/mL
							Cobalt	1 ug/mL
							Copper	2 ug/mL
							Lead	1 ug/mL
							Nickel	2 ug/mL
							Vanadium	5 ug/mL
							Zinc	20 ug/mL
MTMSICSABW_00066	06/08/16	05/06/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1100 ug/L
							Na	50000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ti	1100 ug/L
					MTMSICSABSOLA_00007	1 mL	Arsenic	100 ug/L
							B	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Li	100 ug/L
							Mn	100 ug/L
							Nickel	100 ug/L
							Se	100 ug/L
							Sr	100 ug/L
							Tl	100 ug/L
							Vanadium	100 ug/L
							Zinc	100 ug/L
					MTMSICSABSOLB_00007	1 mL	Ag	100 ug/L
							Mo	1100 ug/L
							Sb	100 ug/L
							Sn	100 ug/L
							Ti	1100 ug/L
							W	100 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
.MTMSICSABSOLA_00007	06/08/16	HIGH PURITY STANDARDS, Lot 1515332			(Purchased Reagent)		Arsenic	20 ug/mL
							B	20 ug/mL
							Barium	20 ug/mL
							Beryllium	20 ug/mL
							Cadmium	20 ug/mL
							Chromium	20 ug/mL
							Cobalt	20 ug/mL
							Copper	20 ug/mL
							Lead	20 ug/mL
							Li	20 ug/mL
							Mn	20 ug/mL
							Nickel	20 ug/mL
							Se	20 ug/mL
							Sr	20 ug/mL
							Tl	20 ug/mL
							Vanadium	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zinc	20 ug/mL
.MTMSICSABSOLB_00007	06/08/16	HIGH PURITY STANDARDS, Lot 1515333			(Purchased Reagent)		Ag	20 ug/mL
							Mo	20 ug/mL
							Sb	20 ug/mL
							Sn	20 ug/mL
							Ti	20 ug/mL
							W	20 ug/mL
MTMSICSAW_00068	10/04/16	04/04/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1000 ug/L
							Na	50000 ug/L
							Ti	1000 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
MTMSICVW_00067	09/29/16	03/29/16	DIWATER, Lot DIWATER	250 mL	MTMSICVA_00010	2.5 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Nickel	40 ug/L
							Vanadium	40 ug/L
							Zinc	40 ug/L
.MTMSICVA_00010	09/01/17	CPI, Lot 1087406			(Purchased Reagent)		Arsenic	4 mg/L
							Barium	4 mg/L
							Beryllium	4 mg/L
							Cadmium	4 mg/L
							Chromium	4 mg/L
							Cobalt	4 mg/L
							Copper	4 mg/L
							Lead	4 mg/L
							Nickel	4 mg/L
							Vanadium	4 mg/L
							Zinc	4 mg/L
MTMSSCAL1_00036	10/22/16	04/22/16	DIWATER, Lot DIWATER	250 mL	MTMSCAL3_00010	0.5 mL	Arsenic	10 ug/L
							Barium	10 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Cobalt	10 ug/L
							Copper	10 ug/L
							Lead	10 ug/L
							Nickel	10 ug/L
							Vanadium	10 ug/L
							Zinc	10 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Arsenic	5 ug/mL
							Barium	5 ug/mL
							Beryllium	5 ug/mL
							Cadmium	5 ug/mL
							Chromium	5 ug/mL
							Cobalt	5 ug/mL
							Copper	5 ug/mL
							Lead	5 ug/mL
							Nickel	5 ug/mL
							Vanadium	5 ug/mL
							Zinc	5 ug/mL
MTTMHCL_00109	04/29/18	Fisher, Lot 4115120			(Purchased Reagent)		Hydrogen Chloride	100 %
MTTMHNO3_00085	04/14/18	Macron/Avantor, Lot 0000129810			(Purchased Reagent)		Nitric acid	100 %
MTTMHNO3_00086	05/03/18	Macron/Avantor, Lot 0000129810			(Purchased Reagent)		Nitric acid	100 %

Reagent

MS6020ACRIA_00003

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-6020A-CRI-A-REV1
Lot Number:	J2-MEB592019
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea:
	Ca, K, Mg,
	Na,
	100 µg/mL ea:
	Fe,
	50 µg/mL ea:
	Al,
	20 µg/mL ea:
	B, Zn,
	10 µg/mL ea:
	Sr,
	5 µg/mL ea:
	As, Ba, Mn,
	Se, V,
	2 µg/mL ea:
	Cr3, Cu, Ni,
	1 µg/mL ea:
	Be, Cd, Co,
	Pb, Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	50.03 ± 0.28 µg/mL	Arsenic, As	5.000 ± 0.033 µg/mL
Barium, Ba	4.997 ± 0.029 µg/mL	Beryllium, Be	1.000 ± 0.006 µg/mL
Boron, B	20.00 ± 0.14 µg/mL	Cadmium, Cd	1.001 ± 0.007 µg/mL
Calcium, Ca	1 000 ± 5 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	1.000 ± 0.006 µg/mL	Copper, Cu	1.999 ± 0.010 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	1.000 ± 0.006 µg/mL
Magnesium, Mg	1 001 ± 5 µg/mL	Manganese, Mn	5.006 ± 0.029 µg/mL
Nickel, Ni	2.001 ± 0.014 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	5.003 ± 0.029 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	1.000 ± 0.008 µg/mL
Vanadium, V	5.005 ± 0.033 µg/mL	Zinc, Zn	20.00 ± 0.13 µg/mL

Certified Density: 1.039 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing,- Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing,- Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 14, 2015

11.2 Expiration Date

EXPIRES
1 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTHGCAL_00022

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS
[illegible]
Christiansburg, VA 24073 - USA
[illegible]

Rec'd 3-1-16 KW

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHGN-10PPM
Lot Number:	J2-HG02136
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea: Hg
Starting Material:	Hg metal
Starting Material Lot#:	1780
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.009 ± 0.047 µg/mL

Certified Density: 1.050 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) $= U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.006542	M	Eu	<	0.000218	O	Na		0.000005	O	Se	<	0.030000	O	Zn	<	0.000400
O	Al	<	0.001000	O	Fe	<	0.000800	M	Nb	<	0.002180	O	Si		0.000006	O	Zr	<	0.001000
M	As	<	0.006542	M	Ga	<	0.000436	M	Nd	<	0.000218	M	Sm	<	0.000218				
M	Au	<	0.004361	M	Gd	<	0.000218	O	Ni	<	0.002000	O	Sn	<	0.002000				
M	B	<	0.004361	M	Ge	<	0.001090	n	Os	<		O	Sr	<	0.000200				
O	Ba	<	0.000260	M	Hf	<	0.006542	O	P	<	0.030000	M	Ta	<	0.001090				
O	Be	<	0.000180	s	Hg	<		M	Pb	<	0.002180	M	Tb	<	0.000218				
M	Bi	<	0.002180	M	Ho	<	0.000218	M	Pd	<	0.008723	M	Te	<	0.010904				
O	Ca		0.000017	M	In	<	0.000218	M	Pr	<	0.000218	M	Th	<	0.000436				
O	Cd	<	0.000500	M	Ir	<	0.000218	M	Pt	<	0.000218	O	Ti	<	0.000600				
M	Ce	<	0.000218	O	K		0.000003	M	Rb	<	0.000218	O	Tl	<	0.010000				
M	Co	<	0.000436	M	La	<	0.000218	M	Re	<	0.000218	M	Tm	<	0.000218				
O	Cr	<	0.002000	O	Li	<	0.000040	M	Rh	<	0.000218	M	U	<	0.000218				
M	Cs	<	0.001090	M	Lu	<	0.000218	M	Ru	<	0.000218	O	V	<	0.000550				
M	Cu	<	0.002180	O	Mg		0.000003	O	S	<	0.030000	M	W	<	0.004361				
M	Dy	<	0.000218	O	Mn	<	0.000160	M	Sb	<	0.001090	M	Y	<	0.000218				
M	Er	<	0.000218	O	Mo	<	0.001500	O	Sc	<	0.000600	M	Yb	<	0.000218				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference

n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 29, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 29, 2018

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTHgStd_00020

HIGH-PURITY STANDARDS
www.highpuritystandards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Rec'd 11-20-15 KLL

Certificate of Analysis

Product Description:

Name:	Mercury	Source Material:	Mercury Metal
Part Number:	**1 33-1**	Material Purity:	99.9998%
Lot Number:	**1531727**	Matrix:	5% (v/v) HNO_3

Certified Value: 1.00 µg/mL ± 0.02 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3133 (lot number 061204) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of mercury, calibration of instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for six months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**November 13, 2015**
Shipped Date:	**November 18, 2015**
Expiration Date:	**May 18, 2016**
Certificate Issue Date:	**November 16, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

MTICPMS2_00024

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Rec'd 1-27-16 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-84
Lot Number:	K2-MEB615154
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Aluminum, Calcium, Iron, Potassium, Magnesium, Sodium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Magnesium, Mg	1 000 ± 4 µg/mL
Potassium, K	1 000 ± 4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	051220
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA, Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES: 1 FEB 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
QC Supervisor

Michael 2 Booth

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

MTICPMSA_00026

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CERTIFICATE OF ANALYSIS

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Rec'd 1-27-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1A
Lot Number:	J2-MEB584095
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

As, Ba, Be,
Cd, Co, Cr3,
Cu, Mn, Ni,
Pb, Se, Sr,
V, Zn,

25 µg/mL ea:
Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	100.0 ± 0.8 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.5 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium+3, Cr3	100.0 ± 0.5 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Lead, Pb	100.0 ± 0.5 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.5 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	25.00 ± 0.15 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Certified Density: 1.030 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 04, 2015

11.2 Expiration Date

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

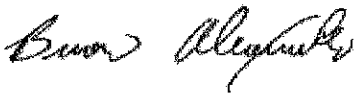
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMSB_00027

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CERTIFICATE OF ANALYSIS

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Rec'd 1-27-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1BREV2
Lot Number:	K2-MEB615153
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 µg/mL ea: Tin, 10 µg/mL ea: Silver, Boron, Lithium, Molybdenum, Antimony, Titanium, Tungsten

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	10.01 ± 0.08 µg/mL
Lithium, Li	10.01 ± 0.04 µg/mL	Molybdenum, Mo	10.00 ± 0.04 µg/mL
Silver, Ag	10.00 ± 0.06 µg/mL	Tin, Sn	100.0 ± 0.4 µg/mL
Titanium, Ti	9.99 ± 0.06 µg/mL	Tungsten, W	10.00 ± 0.06 µg/mL

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
B	ICP Assay	3107	110830
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date

EXPIRES
1 FEB 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSCAL3_00010

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CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLPA-CAL-SPECA-REV
Lot Number:	J2-MEB596139
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:
	Ca, K, Mg,
	Na,
	1 250 µg/mL ea:
	Fe,
	25 µg/mL ea:
	Al, Mn,
	5 µg/mL ea:
	Ag, As, Ba,
	Be, Cd, Co,
	Cr3, Cu, Ni,
	Pb, Se, Sr,
	Tl, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.14 µg/mL	Arsenic, As	5.001 ± 0.032 µg/mL
Barium, Ba	5.000 ± 0.032 µg/mL	Beryllium, Be	5.000 ± 0.029 µg/mL
Cadmium, Cd	4.999 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 12 µg/mL
Chromium+3, Cr3	5.000 ± 0.029 µg/mL	Cobalt, Co	5.001 ± 0.025 µg/mL
Copper, Cu	5.000 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	5.000 ± 0.026 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	25.00 ± 0.12 µg/mL	Nickel, Ni	5.001 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	5.001 ± 0.029 µg/mL
Silver, Ag	5.001 ± 0.036 µg/mL	Sodium, Na	2 501 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.001 ± 0.040 µg/mL
Vanadium, V	5.000 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.032 µg/mL

Certified Density: 1.049 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 13, 2015

11.2 Expiration Date

EXPIRES
1 NOV 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSA_00011

INORGANIC VENTURES™

CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	J2-MEB533111
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cl-, 2 000 µg/mL ea: C, 1 000 µg/mL ea: Al, Ca, Fe, K, Mg, Na, P, S, 20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 5 µg/mL	Calcium, Ca	1 001 ± 6 µg/mL
Carbon, C	2 002 ± 10 µg/mL	Chloride, Chloride	10 010.0 ± 50.0 µg/mL
Iron, Fe	1 001 ± 5 µg/mL	Magnesium, Mg	1 001 ± 6 µg/mL
Molybdenum, Mo	20.02 ± 0.09 µg/mL	Phosphorus, P	1 001 ± 8 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 7 µg/mL	Titanium, Ti	20.03 ± 0.13 µg/mL

Certified Density: 1.033 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.
[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	M	Eu	<	0.000102	s	Na	<		M	Se	<	0.001333	M	Zn		0.005643
s	Al	<		s	Fe	<		M	Nb	<	0.000102	n	Si	<		M	Zr	<	0.000410
M	As	<	0.015390	M	Ga	<	0.000102	M	Nd	<	0.000205	M	Sm	<	0.000102				
M	Au	<	0.001026	M	Gd	<	0.000102	M	Ni	<	0.002770	M	Sn	<	0.000615				
O	B	<	0.010330	O	Ge	<	0.020660	M	Os	<	0.000102	O	Sr		0.003543				
M	Ba	<	0.001846	M	Hf	<	0.000102	s	P	<		M	Ta	<	0.000102				
O	Be	<	0.000103	M	Hg	<	0.000307	M	Pb		0.003796	M	Tb	<	0.000102				
M	Bi	<	0.000205	M	Ho	<	0.000102	M	Pd	<	0.000102	M	Te	<	0.000205				
s	Ca	<		M	In	<	0.000102	M	Pr	<	0.000102	M	Th	<	0.000102				
O	Cd		0.001549	M	Ir	<	0.000102	M	Pt	<	0.000102	s	Ti	<					
M	Ce	<	0.000410	s	K	<		M	Rb		0.012927	M	Tl	<	0.000102				
M	Co	<	0.004309	M	La	<	0.000205	M	Re	<	0.000102	M	Tm	<	0.000102				
M	Cr		0.012619	O	Li		0.000999	M	Rh	<	0.000102	M	U	<	0.000102				
M	Cs	<	0.000205	M	Lu	<	0.000102	M	Ru	<	0.000102	M	V	<	0.001436				
O	Cu	<	0.015495	s	Mg	<		s	S	<		M	W		0.001128				
M	Dy	<	0.000102	O	Mn		0.001189	M	Sb	<	0.000615	M	Y	<	0.000102				
M	Er	<	0.000102	s	Mo	<		M	Sc	<	0.000102	M	Yb	<	0.000102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

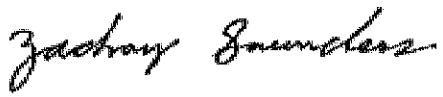
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSABSOLA_00007

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-606-139**
	Solution A
Lot Number:	**1515332**
Matrix:	2% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)			SRM ID	SRM Lot#
Cd	20.00	±	0.12	3108	130116
As	20.00	±	0.12	3103a	100818
Ba	20.00	±	0.12	*	
Be	20.0	±	0.2	3105a	090514
B	20.0	±	0.2	*	
Cr	20.00	±	0.12	3112a	030730
Ni	20.00	±	0.12	3136	120619
Co	20.00	±	0.12	3113	000630
Cu	20.00	±	0.12	3114	121207
Mn	20.0	±	0.3	3132	050429
Se	20.0	±	0.2	3149	100901
Sr	20.00	±	0.12	3153a	990906
Tl	20.00	±	0.12	3158	993012
Zn	20.00	±	0.12	3168a	120629
V	20.0	±	0.2	3165	992706
Pb	20.0	±	0.2	3128	101026
Li	20.0	±	0.2	3129a	100714

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally manufactured from CRM single element solutions that were prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Intended Use:

The CRM is intended for use as a calibration standard and QC control for instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**June 2, 2015**
Shipped Date:	**June 8, 2015**
Expiration Date:	**June 8, 2016**
Certificate Issue Date:	**June 5, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTMSICSABSOLB_00007

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-606-139**
	Solution B
Lot Number:	**1515333**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	20.0 ± 0.2	*		Sn	20.0 ± 0.2	*	
Mo	20.0 ± 0.2	3134	891307	Ti	20.0 ± 0.2	3162a	130925
Ag	20.00 ± 0.12	3151	992212	W	20.0 ± 0.3	3163	080331

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally manufactured from CRM single element solutions that were prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

The CRM is intended for use as a calibration standard and QC control for instruments such as ICPOES, ICPMS, AAS and XRF, and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**June 2, 2015**
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Certificate Issue Date:	**June 5, 2015**

Quality Information:

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Certificate Number AT-1529

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTMSICVA_00010

USA

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F: 707.545.7901

Europe

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Rec'd 3-7-16 KL

Additional Information:

Date Received: _____

Container: 16 oz (500 mL) Narrow Mouth, LDPE clean

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.
The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Aluminum	Al	7429-90-5	3101	060502	7001.46.8P	99.9995	20	0.06
Manganese	Mn	7439-96-5	3132	050429	7017.46.5P	99.95	20	0.06
Silver	Ag	7440-22-4	3151	992212	7000.29.1P	99.999	4	0.01
Arsenic	As	7440-38-2	3103	010713	7002.46.5P	99.9999	4	0.01
Boron	B	7440-42-8	3107	070514	7003.46.4P	99.999	4	0.01
Barium	Ba	7440-39-3	3104	070222	7004.29.3P	99.997	4	0.01
Beryllium	Be	7440-41-7	3105	892707	7005.46.5P	99.999	4	0.01
Cadmium	Cd	7440-43-9	3108	060531	7007.46.3P	99.9999	4	0.01
Cobalt	Co	7440-48-4	3113	000630	7008.409.1P	99.999	4	0.01
Chromium	Cr	7440-47-3	3112	030730	7009.46.2P	99.998	4	0.01
Copper	Cu	7440-50-8	3114	011017	7011.46.5P	99.9995	4	0.01
Lithium	Li	7439-93-2	3129	000505	7015.46.5P	99.999	4	0.01
Molybdenum	Mo	7439-98-7	3134	891307	7018.29.3P	99.999	4	0.01
Nickel	Ni	7440-02-0	3136	000612	7021.46.9P	99.995	4	0.01
Lead	Pb	7439-92-1	3128	030721	7023.29.3P	99.999	4	0.01
Antimony	Sb	7440-36-0	3102	061229	7026.46.3P	99.999	4	0.01
Selenium	Se	7782-49-2	3149	992106	7027.46.4P	99.999	4	0.01
Tin	Sn	7440-31-5	3161	070330	7029.46.4P	99.999	4	0.01
Strontium	Sr	7440-24-6	3153	990906	7030.409.1P	99.999	4	0.01
Titanium	Ti	7440-32-6	3162	060808	7033.38.2P	99.995	4	0.01
Thallium	Tl	7440-28-0	3158	993012	7034.29.4P	99.99	4	0.01
Vanadium	V	7440-62-2	3165	992706	7036.46.6P	99.995	4	0.01
Tungsten	W	7440-33-7	3163	080331	7072.46.2P	99.99	4	0.01
Zinc	Zn	7440-66-6	3168	080123	7037.46.5P	99.9995	4	0.01
Calcium	Ca	7440-70-2	3109	050825	7006.29.3P	99.999	2000	5.66
Potassium	K	7440-09-7	3141	051220	7013.409.1P	99.999	2000	5.66
Magnesium	Mg	7439-95-4	3131	050302	7016.46.5P	99.99	2000	5.66
Sodium	Na	7440-23-5	3152	010728	7020.46.7P	99.999	2000	5.66
Iron	Fe	7439-89-6	3126	051031	7012.409.1P	99.99	1000	2.83

USA

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F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Intended Uses:

This Certified Reference material, CRM, is intended for use as a calibration standard or a quality control standard for Inorganic Spectrometry Equipment such as ICP-OES, ICP-MS, AA, and XRF, It may aslo be used for various USEPA and ASTM methods.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with NIST traceable weights (NIST Test Number 822/264157-00). Only calibrated Class A volumetric glassware was used to prepare this standard. Sub-boiled distilled acid and 18 megaohm deionized water were used to stabilize the product. All raw materials were checked for stoichiometry and purity prior to use. This standard has been spectrometrically certified by an independent source, which is directly traceable to NIST.

Packaging and Storage:

The Solution should be kept trightly capped and stored under normal laboratory conditions. Pre-cleaned polyethlene bottles are used to package this material. Special storage information: Ambient

Glassware Calibration:

Only Class A glassware is used in the manufacture and quality control of Standards. All Glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used perform daily checks on balances calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to the National Institute of Standards and Technology (NIST). Balances are checked daily in accordance to in house procedure O2-LB-004. Balances are calibrated annually by an ISO 17025 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-10 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC Guide 17025:2005 and ISO Guide 34:2009. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous information:

Refer to MSDS

CPI INTERNATIONAL

USA

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The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:
$U=ku_c$ U=Expanded Uncertainty, k= the coverage factor at the 95% confidence level, k=2, u_c = the combined uncertainty
$u_c=\sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Mark Filla

Manufacture Date: 2/29/2016

Certified By:

Zachary Spinelli

Certified Date:2/29/2016

Released By:

HuiChen Stavros, Ph.D.

Original Issue Date: 2/29/2016

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-2

SDG No.:

Project: RFAAP, Radford VA, HWMU16

Client Sample ID	Lab Sample ID
16-2	240-64160-7
16-3	240-64160-8
16-5	240-64160-9
16WC2B	240-64160-10
16SPRING	240-64160-11

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-2 Lab Sample ID: 240-64160-7

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 12:50

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-2 | Lab Sample ID: 240-64160-7

Lab Name: TestAmerica Canton | Job No.: 240-64160-2

SDG ID.:

Matrix: Water | Date Sampled: 04/26/2016 12:50

Reporting Basis: WET | Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	10	10	ug/L	U		1	6020A
7440-39-3	Barium	180	10	ug/L			1	6020A
7440-41-7	Beryllium	1.0	1.0	ug/L	U		1	6020A
7440-43-9	Cadmium	1.0	1.0	ug/L	U		1	6020A
7440-48-4	Cobalt	5.0	5.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	ug/L	U		1	6020A
7440-02-0	Nickel	10	10	ug/L	U		1	6020A
7439-92-1	Lead	1.0	1.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-3 Lab Sample ID: 240-64160-8

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 14:50

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-3 | Lab Sample ID: 240-64160-8

Lab Name: TestAmerica Canton | Job No.: 240-64160-2

SDG ID.:

Matrix: Water | Date Sampled: 04/26/2016 14:50

Reporting Basis: WET | Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	10	10	ug/L	U		1	6020A
7440-39-3	Barium	750	10	ug/L			1	6020A
7440-41-7	Beryllium	1.0	1.0	ug/L	U		1	6020A
7440-43-9	Cadmium	1.0	1.0	ug/L	U		1	6020A
7440-48-4	Cobalt	5.0	5.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	ug/L	U		1	6020A
7440-02-0	Nickel	10	10	ug/L	U		1	6020A
7439-92-1	Lead	1.0	1.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16-5 Lab Sample ID: 240-64160-9

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG ID.:

Matrix: Water Date Sampled: 04/26/2016 10:45

Reporting Basis: WET Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16-5 | Lab Sample ID: 240-64160-9

Lab Name: TestAmerica Canton | Job No.: 240-64160-2

SDG ID.:

Matrix: Water | Date Sampled: 04/26/2016 10:45

Reporting Basis: WET | Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	10	10	ug/L	U		1	6020A
7440-39-3	Barium	160	10	ug/L			1	6020A
7440-41-7	Beryllium	1.0	1.0	ug/L	U		1	6020A
7440-43-9	Cadmium	1.0	1.0	ug/L	U		1	6020A
7440-48-4	Cobalt	5.0	5.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	ug/L	U		1	6020A
7440-02-0	Nickel	10	10	ug/L	U		1	6020A
7439-92-1	Lead	1.0	1.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16WC2B
Lab Sample ID: 240-64160-10
Lab Name: TestAmerica Canton
Job No.: 240-64160-2
SDG ID.:
Matrix: Water
Date Sampled: 04/26/2016 11:55
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WC2B
Lab Sample ID: 240-64160-10
Lab Name: TestAmerica Canton
Job No.: 240-64160-2
SDG ID.:
Matrix: Water
Date Sampled: 04/26/2016 11:55
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	10	10	ug/L	U		1	6020A
7440-39-3	Barium	110	10	ug/L			1	6020A
7440-41-7	Beryllium	1.0	1.0	ug/L	U		1	6020A
7440-43-9	Cadmium	1.0	1.0	ug/L	U		1	6020A
7440-48-4	Cobalt	5.0	5.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	ug/L	U		1	6020A
7440-02-0	Nickel	10	10	ug/L	U		1	6020A
7439-92-1	Lead	1.0	1.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 16SPRING
Lab Sample ID: 240-64160-11
Lab Name: TestAmerica Canton
Job No.: 240-64160-2
SDG ID.:
Matrix: Water
Date Sampled: 04/26/2016 11:00
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7439-97-6	Mercury	2.0	2.0	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16SPRING
Lab Sample ID: 240-64160-11
Lab Name: TestAmerica Canton
Job No.: 240-64160-2
SDG ID.:
Matrix: Water
Date Sampled: 04/26/2016 11:00
Reporting Basis: WET
Date Received: 04/28/2016 10:00

CAS No.	Analyte	Result	RL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	10	10	ug/L	U		1	6020A
7440-39-3	Barium	180	10	ug/L			1	6020A
7440-41-7	Beryllium	1.0	1.0	ug/L	U		1	6020A
7440-43-9	Cadmium	1.0	1.0	ug/L	U		1	6020A
7440-48-4	Cobalt	5.0	5.0	ug/L	U		1	6020A
7440-47-3	Chromium	5.0	5.0	ug/L	U		1	6020A
7440-50-8	Copper	5.0	5.0	ug/L	U		1	6020A
7440-02-0	Nickel	10	10	ug/L	U		1	6020A
7439-92-1	Lead	1.0	1.0	ug/L	U		1	6020A
7440-62-2	Vanadium	10	10	ug/L	U		1	6020A
7440-66-6	Zinc	10	10	ug/L	U		1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	ICV 240-229385/7 05/07/2016 13:23				CCV 240-229385/35 05/07/2016 15:23				CCV 240-229385/47 05/07/2016 16:13			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	41.2		40.0	103	50.4		50.0	101	51.5		50.0	103
Barium	39.1		40.0	98	50.2		50.0	100	51.5		50.0	103
Beryllium	40.1		40.0	100	50.6		50.0	101	51.1		50.0	102
Cadmium	40.6		40.0	102	50.6		50.0	101	50.7		50.0	101
Chromium	41.1		40.0	103	50.1		50.0	100	50.1		50.0	100
Cobalt	40.9		40.0	102	50.0		50.0	100	50.3		50.0	101
Lead	40.7		40.0	102	50.0		50.0	100	50.2		50.0	100
Nickel	40.9		40.0	102	50.3		50.0	101	50.7		50.0	101
Vanadium	41.7		40.0	104	50.7		50.0	101	50.2		50.0	100
Zinc	38.2		40.0	95	46.6		50.0	93	47.8		50.0	96
Copper	41.9		40.0	105	49.1		50.0	98	49.7		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	CCV 240-229385/59 05/07/2016 17:03				CCV 240-229385/63 05/07/2016 17:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	51.0		50.0	102	51.0		50.0	102				
Barium	49.7		50.0	99	50.0		50.0	100				
Beryllium	51.2		50.0	102	50.8		50.0	102				
Cadmium	50.2		50.0	100	49.8		50.0	100				
Chromium	49.9		50.0	100	50.4		50.0	101				
Cobalt	50.2		50.0	100	49.9		50.0	100				
Lead	50.4		50.0	101	49.8		50.0	100				
Nickel	50.6		50.0	101	50.0		50.0	100				
Vanadium	50.2		50.0	100	49.7		50.0	99				
Zinc	46.6		50.0	93	46.7		50.0	93				
Copper	49.5		50.0	99	48.8		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	ICV 240-229600/7 05/09/2016 12:04				CCV 240-229600/16 05/09/2016 12:49				CCV 240-229600/28 05/09/2016 13:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Copper	40.3		40.0	101	51.1		50.0	102	49.8		50.0	100
Arsenic	39.5		40.0	99	49.1		50.0	98	48.7		50.0	97
Barium	38.9		40.0	97	49.7		50.0	99	48.5		50.0	97
Beryllium	39.7		40.0	99	48.9		50.0	98	52.1		50.0	104
Cadmium	39.2		40.0	98	50.5		50.0	101	50.4		50.0	101
Chromium	39.4		40.0	99	50.5		50.0	101	49.8		50.0	100
Cobalt	39.5		40.0	99	50.8		50.0	102	50.0		50.0	100
Lead	39.4		40.0	98	49.1		50.0	98	48.6		50.0	97
Nickel	39.9		40.0	100	51.2		50.0	102	49.9		50.0	100
Vanadium	39.0		40.0	97	49.8		50.0	100	49.8		50.0	100
Zinc	39.8		40.0	100	49.7		50.0	99	48.4		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTMSICVW_00067 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00164

Analyte	CCV 240-229600/38 05/09/2016 14:20											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Copper	51.7		50.0	103								
Arsenic	49.6		50.0	99								
Barium	51.3		50.0	103								
Beryllium	51.1		50.0	102								
Cadmium	51.7		50.0	103								
Chromium	51.1		50.0	102								
Cobalt	51.7		50.0	103								
Lead	49.6		50.0	99								
Nickel	52.2		50.0	104								
Vanadium	50.7		50.0	101								
Zinc	49.0		50.0	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTHgStd_00020 Concentration Units: ug/L

CCV Source: MTHGCALW_01199

Analyte	ICV 240-229220/7-A 05/06/2016 10:46				CCV 240-229220/10-A 05/06/2016 12:18				CCV 240-229220/10-A 05/06/2016 12:46			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.86		5.00	97	4.87		5.00	97	4.78		5.00	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICV Source: MTHgStd_00020 Concentration Units: ug/L

CCV Source: MTHGCALW_01199

Analyte	CCV 240-229220/10-A 05/06/2016 13:36				CCV 240-229220/10-A 05/06/2016 14:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.96		5.00	99	4.82		5.00	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-229385/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	5.15		103	70-130
Barium	5.00	4.72	J	94	70-130
Beryllium	1.00	0.962	J	96	70-130
Cadmium	1.00	0.984	J	98	70-130
Cobalt	1.00	0.981	J	98	70-130
Chromium	2.00	2.08		104	70-130
Copper	2.00	1.80	J	90	70-130
Nickel	2.00	1.96	J	98	70-130
Lead	1.00	1.04		104	70-130
Vanadium	5.00	5.14		103	70-130
Zinc	20.0	14.0	J	70	70-130

Lab Sample ID: CRI 240-229385/65 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	5.06		101	70-130
Barium	5.00	4.93	J	99	70-130
Beryllium	1.00	1.08		108	70-130
Cadmium	1.00	1.03		103	70-130
Cobalt	1.00	0.932	J	93	70-130
Chromium	2.00	1.95	J	98	70-130
Nickel	2.00	2.03		101	70-130
Lead	1.00	0.987	J	99	70-130
Vanadium	5.00	5.09		102	70-130
Zinc	20.0	14.4	J	72	70-130

Lab Sample ID: CRI 240-229600/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	4.77	J	95	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-229600/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	5.00	4.88	J	98	70-130
Beryllium	1.00	1.08		108	70-130
Cadmium	1.00	0.975	J	98	70-130
Cobalt	1.00	1.07		107	70-130
Chromium	2.00	2.05		103	70-130
Copper	2.00	2.20		110	70-130
Nickel	2.00	2.04		102	70-130
Lead	1.00	1.02		102	70-130
Vanadium	5.00	5.32		106	70-130
Zinc	20.0	20.4		102	70-130

Lab Sample ID: CRI 240-229600/40 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	5.03		101	70-130
Barium	5.00	5.02		100	70-130
Beryllium	1.00	1.07		107	70-130
Cadmium	1.00	1.04		104	70-130
Cobalt	1.00	1.03		103	70-130
Chromium	2.00	2.08		104	70-130
Copper	2.00	1.76	J	88	70-130
Nickel	2.00	2.14		107	70-130
Lead	1.00	1.00		100	70-130
Vanadium	5.00	5.30		106	70-130
Zinc	20.0	20.4		102	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-229220/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_01199

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.195	J	98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229385/8 05/07/2016 13:27		CCB 240-229385/36 05/07/2016 15:27		CCB 240-229385/48 05/07/2016 16:17		CCB 240-229385/60 05/07/2016 17:07	
		Found	C	Found	C	Found	C	Found	C
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Zinc	20	20	U	20	U	20	U	20	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-229385/64 05/07/2016 17:24							
		Found	C	Found	C	Found	C	Found	C
Arsenic	5.0	5.0	U						
Barium	5.0	5.0	U						
Beryllium	1.0	1.0	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	2.0	U						
Cobalt	1.0	1.0	U						
Lead	1.0	1.0	U						
Nickel	2.0	2.0	U						
Vanadium	5.0	5.0	U						
Zinc	20	20	U						
Copper	2.0	2.0	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229600/8 05/09/2016 12:08		CCB 240-229600/17 05/09/2016 12:53		CCB 240-229600/29 05/09/2016 13:42		CCB 240-229600/39 05/09/2016 14:24	
		Found	C	Found	C	Found	C	Found	C
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-229220/8-A 05/06/2016 10:48		CCB 240-229220/11-A 05/06/2016 12:21		CCB 240-229220/11-A 05/06/2016 12:48		CCB 240-229220/11-A 05/06/2016 13:38	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-229220/11-A 05/06/2016 14:04							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228967/1-A

Instrument Code: I10 Batch No.: 229385

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	10	U		6020A
7440-39-3	Barium	10	U		6020A
7440-41-7	Beryllium	1.0	U		6020A
7440-43-9	Cadmium	1.0	U		6020A
7440-48-4	Cobalt	5.0	U		6020A
7440-47-3	Chromium	5.0	U		6020A
7440-02-0	Nickel	10	U		6020A
7439-92-1	Lead	1.0	U		6020A
7440-62-2	Vanadium	10	U		6020A
7440-66-6	Zinc	10	U		6020A

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228967/1-A

Instrument Code: I10 Batch No.: 229600

CAS No.	Analyte	Concentration	C	Q	Method
7440-50-8	Copper	5.0	U		6020A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-228970/1-A

Instrument Code: H4 Batch No.: 229365

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	2.0	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Lab Sample ID: ICSA 240-229385/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00068

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**0.0830**	
Barium		**0.0280**	
Beryllium		**0.0050**	
Cadmium		**-0.0320**	
Chromium		**0.663**	
Cobalt		**-0.0330**	
Lead		**0.101**	
Nickel		**-0.0430**	
Vanadium		**-0.209**	
Zinc		**-7.93**	
Aluminum	*50000*	*53498*	*107*
Antimony		*0.0550*	
Boron		*0.913*	
Calcium	*50000*	*50119*	*100*
Copper		*0.114*	
Iron	*50000*	*49855*	*100*
Lithium		*0.221*	
Magnesium	*50000*	*50727*	*101*
Manganese		*-0.847*	
Molybdenum	*1000*	*1107*	*111*
Potassium	*50000*	*49918*	*100*
Selenium		*0.428*	
Silver		*0.0130*	
Sodium	*50000*	*50631*	*101*
Strontium		*0.316*	
Thallium		*0.0060*	
Tin		*-1.14*	
Titanium	*1000*	*995*	*99*
Tungsten		*0.147*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Lab Sample ID: ICSAB 240-229385/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00066

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Arsenic	**100**	**107**	**107**
Barium	**100**	**103**	**103**
Beryllium	**100**	**102**	**102**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**103**	**103**
Cobalt	**100**	**104**	**104**
Lead	**100**	**101**	**101**
Nickel	**100**	**103**	**103**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**106**	**106**
Aluminum	*50000*	*53663*	*107*
Antimony	*100*	*103*	*103*
Boron	*100*	*107*	*107*
Calcium	*50000*	*50772*	*102*
Copper	*100*	*103*	*103*
Iron	*50000*	*50126*	*100*
Lithium	*100*	*102*	*102*
Magnesium	*50000*	*50897*	*102*
Manganese	*100*	*102*	*102*
Molybdenum	*1100*	*1239*	*113*
Potassium	*50000*	*51231*	*102*
Selenium	*100*	*104*	*104*
Silver	*100*	*102*	*102*
Sodium	*50000*	*50778*	*102*
Strontium	*100*	*102*	*102*
Thallium	*100*	*99.1*	*99*
Tin	*100*	*111*	*111*
Titanium	*1100*	*1117*	*102*
Tungsten	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Lab Sample ID: ICSA 240-229600/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00068

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Copper		**0.408**	
Aluminum	*50000*	*51924*	*104*
Antimony		*0.0090*	
Arsenic		*0.0910*	
Barium		*0.279*	
Beryllium		*0.0200*	
Boron		*1.29*	
Cadmium		*-0.0460*	
Calcium	*50000*	*49473*	*99*
Chromium		*0.633*	
Cobalt		*-0.0120*	
Iron	*50000*	*49354*	*99*
Lead		*0.101*	
Lithium		*0.319*	
Magnesium	*50000*	*50262*	*101*
Manganese		*0.238*	
Molybdenum	*1000*	*1053*	*105*
Nickel		*0.0410*	
Potassium	*50000*	*49165*	*98*
Selenium		*0.157*	
Silver		*0.0100*	
Sodium	*50000*	*50116*	*100*
Strontium		*0.282*	
Thallium		*0.0040*	
Tin		*0.0030*	
Titanium	*1000*	*998*	*100*
Tungsten		*0.144*	
Vanadium		*0.0740*	
Zinc		*0.275*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Lab Sample ID: ICSAB 240-229600/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00066

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Copper	**100**	**100**	**100**
Aluminum	*50000*	*50997*	*102*
Antimony	*100*	*103*	*103*
Arsenic	*100*	*103*	*103*
Barium	*100*	*102*	*102*
Beryllium	*100*	*104*	*104*
Boron	*100*	*102*	*102*
Cadmium	*100*	*101*	*101*
Calcium	*50000*	*49482*	*99*
Chromium	*100*	*100*	*100*
Cobalt	*100*	*101*	*101*
Iron	*50000*	*48762*	*98*
Lead	*100*	*98.3*	*98*
Lithium	*100*	*102*	*102*
Magnesium	*50000*	*49300*	*99*
Manganese	*100*	*101*	*101*
Molybdenum	*1100*	*1166*	*106*
Nickel	*100*	*101*	*101*
Potassium	*50000*	*48830*	*98*
Selenium	*100*	*102*	*102*
Silver	*100*	*100*	*100*
Sodium	*50000*	*49358*	*99*
Strontium	*100*	*100*	*100*
Thallium	*100*	*96.9*	*97*
Tin	*100*	*113*	*113*
Titanium	*1100*	*1092*	*99*
Tungsten	*100*	*103*	*103*
Vanadium	*100*	*101*	*101*
Zinc	*100*	*98.1*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-228967/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-2

Sample Matrix: Water LCS Source: MTICPMSA_00026

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	1000	999		100	80	120		6020A
Barium	1000	994		99	80	120		6020A
Beryllium	1000	1080		108	80	120		6020A
Cadmium	1000	1010		101	80	120		6020A
Cobalt	1000	1070		107	80	120		6020A
Chromium	1000	1050		105	80	120		6020A
Nickel	1000	1010		101	80	120		6020A
Lead	1000	1060		106	80	120		6020A
Vanadium	1000	1060		106	80	120		6020A
Zinc	1000	1100		110	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-228967/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-2

Sample Matrix: Water LCS Source: MTICPMSA_00026

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Copper	1000	1060		106	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-228970/2-A

Lab Name: TestAmerica Canton Job No.: 240-64160-2

Sample Matrix: Water LCS Source: MTHGCALW_01198

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.83		97	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-64160-2

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A RL Date: 04/29/2016 08:51

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	
Arsenic	75.00	10	
Barium	137.00	10	
Beryllium	9.00	1	
Cadmium	111.00	1	
Chromium	52.00	5	
Cobalt	59.00	5	
Copper	65.00	5	
Lead	208.00	1	
Nickel	60.00	10	
Vanadium	51.00	10	
Zinc	66.00	10	

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-64160-2

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 09/15/2014 17:03

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Arsenic	75.00	5	0.49
Barium	137.00	5	1.1
Beryllium	9.00	1	0.053
Cadmium	111.00	1	0.061
Chromium	52.00	2	0.6
Cobalt	59.00	1	0.021
Copper	65.00	2	0.75
Lead	208.00	1	0.11
Nickel	60.00	2	0.23
Vanadium	51.00	5	0.23
Zinc	66.00	20	7.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-2

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A RL Date: 04/28/2016 16:31

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	
Mercury	253.7	2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-64160-2

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 09/17/2014 14:07

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.09

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-64160-2

SDG No.:

Instrument ID: I10 Date: 04/12/2016 14:53

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		5000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-64160-2

SDG No.:

Instrument ID: H4 Date: 12/10/2013 15:55

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-228967/1-A	05/05/2016 09:40	228967		50	50
LCS 240-228967/2-A	05/05/2016 09:40	228967		50	50
240-64160-7	05/05/2016 09:40	228967		50	50
240-64160-8	05/05/2016 09:40	228967		50	50
240-64160-9	05/05/2016 09:40	228967		50	50
240-64160-10	05/05/2016 09:40	228967		50	50
240-64160-11	05/05/2016 09:40	228967		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-228970/1-A	05/05/2016 12:00	228970		50	50
LCS 240-228970/2-A	05/05/2016 12:00	228970		50	50
240-64160-7	05/05/2016 12:00	228970		50	50
240-64160-8	05/05/2016 12:00	228970		50	50
240-64160-9	05/05/2016 12:00	228970		50	50
240-64160-10	05/05/2016 12:00	228970		50	50
240-64160-11	05/05/2016 12:00	228970		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																									
				As	Ba	Be	Cd	Co	Cr	Ni	Pb	V	Zn																
ZZZZZZ			12:58																										
ICIS 240-229385/2	1		13:02	X	X	X	X	X	X	X	X	X	X																
STD1 240-229385/3 IC	1		13:07	X	X	X	X	X	X	X	X	X	X																
STD2 240-229385/4 IC	1		13:11	X	X	X	X	X	X	X	X	X	X																
STD3 240-229385/5 IC	1		13:15	X	X	X	X	X	X	X	X	X	X																
STD4 240-229385/6 IC	1		13:19	X	X	X	X	X	X	X	X	X	X																
ICV 240-229385/7	1		13:23	X	X	X	X	X	X	X	X	X	X																
ICB 240-229385/8	1		13:27	X	X	X	X	X	X	X	X	X	X																
CRI 240-229385/9	1		13:32	X	X	X	X	X	X	X	X	X	X																
ICSA 240-229385/10	1		13:36	X	X	X	X	X	X	X	X	X	X																
ICSAB 240-229385/11	1		13:40	X	X	X	X	X	X	X	X	X	X																
CCV 240-229385/12			13:44																										
CCB 240-229385/13			13:48																										
ZZZZZZ			13:56																										
ZZZZZZ			14:00																										
ZZZZZZ			14:04																										
ZZZZZZ			14:08																										
ZZZZZZ			14:12																										
ZZZZZZ			14:16																										
ZZZZZZ			14:20																										
ZZZZZZ			14:24																										
ZZZZZZ			14:28																										
ZZZZZZ			14:33																										
CCV 240-229385/24			14:37																										
CCB 240-229385/25			14:41																										
ZZZZZZ			14:45																										
ZZZZZZ			14:49																										
ZZZZZZ			14:53																										
ZZZZZZ			14:58																										
ZZZZZZ			15:02																										
ZZZZZZ			15:06																										
ZZZZZZ			15:10																										
ZZZZZZ			15:14																										
ZZZZZZ			15:19																										
CCV 240-229385/35	1		15:23	X	X	X	X	X	X	X	X	X	X																
CCB 240-229385/36	1		15:27	X	X	X	X	X	X	X	X	X	X																
CRI 240-229385/37			15:31																										
ZZZZZZ			15:35																										
ZZZZZZ			15:39																										
ZZZZZZ			15:44																										
ZZZZZZ			15:48																										
MB 240-228967/1-A	1	R	15:52	X	X	X	X	X	X	X	X	X	X																

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																										
				As	Ba	Be	Cd	Co	Cr	Ni	Pb	V	Zn																	
LCS 240-228967/2-A	1	R	15:56	X	X	X	X	X	X	X	X	X	X																	
ZZZZZZ			16:00																											
ZZZZZZ			16:05																											
ZZZZZZ			16:09																											
CCV 240-229385/47	1		16:13	X	X	X	X	X	X	X	X	X	X																	
CCB 240-229385/48	1		16:17	X	X	X	X	X	X	X	X	X	X																	
ZZZZZZ			16:21																											
ZZZZZZ			16:25																											
ZZZZZZ			16:29																											
ZZZZZZ			16:33																											
ZZZZZZ			16:38																											
ZZZZZZ			16:42																											
ZZZZZZ			16:46																											
240-64160-7	1	R	16:50	X	X	X	X	X	X	X	X	X	X																	
240-64160-8	1	R	16:54	X	X	X	X	X	X	X	X	X	X																	
240-64160-9	1	R	16:59	X	X	X	X	X	X	X	X	X	X																	
CCV 240-229385/59	1		17:03	X	X	X	X	X	X	X	X	X	X																	
CCB 240-229385/60	1		17:07	X	X	X	X	X	X	X	X	X	X																	
240-64160-10	1	R	17:11	X	X	X	X	X	X	X	X	X	X																	
240-64160-11	1	R	17:15	X	X	X	X	X	X	X	X	X	X																	
CCV 240-229385/63	1		17:19	X	X	X	X	X	X	X	X	X	X																	
CCB 240-229385/64	1		17:24	X	X	X	X	X	X	X	X	X	X																	
CRI 240-229385/65	1		17:28	X	X	X	X	X	X	X	X	X	X																	
ZZZZZZ			17:32																											
ZZZZZZ			17:36																											
ZZZZZZ			17:40																											
ZZZZZZ			17:45																											
ZZZZZZ			17:49																											
ZZZZZZ			17:53																											
ZZZZZZ			17:57																											
ZZZZZZ			18:01																											
ZZZZZZ			18:06																											
CCV 240-229385/75			18:10																											
CCB 240-229385/76			18:14																											
CCV 240-229385/77			18:19																											
CCB 240-229385/78			18:23																											
ZZZZZZ			18:27																											
ZZZZZZ			18:32																											
ZZZZZZ			18:37																											
ZZZZZZ			18:41																											
ZZZZZZ			18:46																											
ZZZZZZ			18:50																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																									
				As	Ba	Be	Cd	Co	Cr	Ni	Pb	V	Zn																
ZZZZZZ			18:54																										
CCV 240-229385/86			18:59																										
CCB 240-229385/87			19:03																										
ZZZZZZ			19:07																										
ZZZZZZ			19:11																										
ZZZZZZ			19:16																										
ZZZZZZ			19:20																										
ZZZZZZ			19:24																										
ZZZZZZ			19:28																										
ZZZZZZ			19:32																										
ZZZZZZ			19:36																										
ZZZZZZ			19:40																										
ZZZZZZ			19:44																										
CCV 240-229385/98			19:48																										
CCB 240-229385/99			19:53																										
ZZZZZZ			19:57																										
ZZZZZZ			20:01																										
ZZZZZZ			20:05																										
ZZZZZZ			20:09																										
ZZZZZZ			20:13																										
ZZZZZZ			20:17																										
ZZZZZZ			20:22																										
ZZZZZZ			20:26																										
ZZZZZZ			20:30																										
ZZZZZZ			20:34																										
CCV 240-229385/110			20:38																										
CCB 240-229385/111			20:42																										
ZZZZZZ			20:47																										
ZZZZZZ			20:51																										
ZZZZZZ			20:55																										
ZZZZZZ			20:59																										
ZZZZZZ			21:03																										
ZZZZZZ			21:07																										
ZZZZZZ			21:12																										
ZZZZZZ			21:16																										
ZZZZZZ			21:20																										
ZZZZZZ			21:24																										
CCV 240-229385/122			21:28																										
CCB 240-229385/123			21:32																										
ZZZZZZ			21:37																										
ZZZZZZ			21:41																										
ZZZZZZ			21:45																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				As	Ba	Be	Cd	Co	Cr	Ni	Pb	V	Zn															
ZZZZZZ			21:49																									
ICSA 240-229385/128			21:53																									
ICSAB 240-229385/129			21:57																									
CCV 240-229385/130			22:02																									
CCB 240-229385/131			22:06																									
ZZZZZZ			22:10																									
ZZZZZZ			22:14																									
ZZZZZZ			22:18																									
ZZZZZZ			22:23																									
ZZZZZZ			22:27																									
ZZZZZZ			22:31																									
ZZZZZZ			22:35																									
ZZZZZZ			22:39																									
ZZZZZZ			22:43																									
ZZZZZZ			22:47																									
CCV 240-229385/142			22:51																									
CCB 240-229385/143			22:55																									
ZZZZZZ			23:00																									
ZZZZZZ			23:04																									
ZZZZZZ			23:08																									
ZZZZZZ			23:12																									
ZZZZZZ			23:16																									
ZZZZZZ			23:20																									
ZZZZZZ			23:24																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
CCV 240-229385/154			23:41																									
CCB 240-229385/155			23:45																									
ZZZZZZ			23:49																									
ZZZZZZ			23:53																									
ZZZZZZ			23:57																									
ZZZZZZ			00:02																									
ZZZZZZ			00:06																									
ZZZZZZ			00:10																									
ZZZZZZ			00:15																									
ZZZZZZ			00:19																									
ZZZZZZ			00:23																									
ZZZZZZ			00:27																									
ZZZZZZ			00:31																									
CCV 240-229385/167			00:35																									
CCB 240-229385/168			00:40																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/07/2016 12:58 End Date: 05/08/2016 02:44

Lab Sample Id	D/F	Type	Time	Analytes																									
				As	Ba	Be	Cd	Co	Cr	Ni	Pb	V	Zn																
ZZZZZZ			00:44																										
ZZZZZZ			00:48																										
ZZZZZZ			00:52																										
ZZZZZZ			00:56																										
ZZZZZZ			01:01																										
ZZZZZZ			01:05																										
CCV 240-229385/175			01:09																										
CCB 240-229385/176			01:13																										
ZZZZZZ			01:17																										
ZZZZZZ			01:21																										
ZZZZZZ			01:25																										
ZZZZZZ			01:30																										
ZZZZZZ			01:34																										
ZZZZZZ			01:38																										
ZZZZZZ			01:42																										
ZZZZZZ			01:46																										
ZZZZZZ			01:50																										
ZZZZZZ			01:54																										
CCV 240-229385/187			01:58																										
CCB 240-229385/188			02:03																										
ZZZZZZ			02:07																										
ZZZZZZ			02:11																										
ZZZZZZ			02:15																										
ZZZZZZ			02:19																										
CCV 240-229385/193			02:23																										
CCB 240-229385/194			02:28																										
ZZZZZZ			02:32																										
ZZZZZZ			02:36																										
CCV 240-229385/197			02:40																										
CCB 240-229385/198			02:44																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes
				Cu
ZZZZZZ			11:39	
ICIS 240-229600/2	1		11:43	X
STD1 240-229600/3 IC	1		11:47	X
STD2 240-229600/4 IC	1		11:51	X
STD3 240-229600/5 IC	1		11:55	X
STD4 240-229600/6 IC	1		12:00	X
ICV 240-229600/7	1		12:04	X
ICB 240-229600/8	1		12:08	X
CRI 240-229600/9	1		12:12	X
ICSA 240-229600/10	1		12:16	X
ICSAB 240-229600/11	1		12:21	X
CCV 240-229600/12			12:25	
CCB 240-229600/13			12:29	
ZZZZZZ			12:40	
ZZZZZZ			12:44	
CCV 240-229600/16	1		12:49	X
CCB 240-229600/17	1		12:53	X
CRI 240-229600/18			12:57	
MB 240-228967/1-A	1	R	13:01	X
LCS 240-228967/2-A	1	R	13:05	X
ZZZZZZ			13:09	
ZZZZZZ			13:14	
ZZZZZZ			13:18	
ZZZZZZ			13:22	
ZZZZZZ			13:26	
ZZZZZZ			13:30	
ZZZZZZ			13:34	
CCV 240-229600/28	1		13:38	X
CCB 240-229600/29	1		13:42	X
ZZZZZZ			13:47	
ZZZZZZ			13:51	
ZZZZZZ			13:55	
240-64160-7	1	R	13:59	X
240-64160-8	1	R	14:03	X
240-64160-9	1	R	14:08	X
240-64160-10	1	R	14:12	X
240-64160-11	1	R	14:16	X
CCV 240-229600/38	1		14:20	X
CCB 240-229600/39	1		14:24	X
CRI 240-229600/40	1		14:28	X
ZZZZZZ			14:33	
ZZZZZZ			14:37	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes
				Cu
ZZZZZZ			14:41	
ZZZZZZ			14:45	
ZZZZZZ			14:49	
ZZZZZZ			14:53	
ZZZZZZ			14:57	
ZZZZZZ			15:01	
ZZZZZZ			15:05	
CCV 240-229600/50			15:09	
CCB 240-229600/51			15:14	
ZZZZZZ			15:18	
ZZZZZZ			15:22	
ZZZZZZ			15:26	
ZZZZZZ			15:30	
ZZZZZZ			15:34	
ZZZZZZ			15:39	
ZZZZZZ			15:43	
CCV 240-229600/59			15:47	
CCB 240-229600/60			15:51	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:08	
ZZZZZZ			16:12	
ZZZZZZ			16:16	
ZZZZZZ			16:20	
ZZZZZZ			16:24	
ZZZZZZ			16:29	
ZZZZZZ			16:33	
CCV 240-229600/71			16:37	
CCB 240-229600/72			16:41	
ZZZZZZ			16:45	
ZZZZZZ			16:50	
ZZZZZZ			16:54	
ZZZZZZ			16:58	
ZZZZZZ			17:02	
ZZZZZZ			17:06	
ZZZZZZ			17:10	
ZZZZZZ			17:14	
ZZZZZZ			17:18	
ZZZZZZ			17:22	
CCV 240-229600/83			17:27	
CCB 240-229600/84			17:31	

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
CRI 240-229600/87			17:43																									
ICSA 240-229600/88			17:48																									
ICSAB 240-229600/89			17:52																									
CCV 240-229600/90			17:56																									
CCB 240-229600/91			18:00																									
ZZZZZZ			18:04																									
ZZZZZZ			18:09																									
ZZZZZZ			18:13																									
ZZZZZZ			18:17																									
ZZZZZZ			18:21																									
ZZZZZZ			18:25																									
ZZZZZZ			18:29																									
ZZZZZZ			18:33																									
ZZZZZZ			18:37																									
ZZZZZZ			18:42																									
CCV 240-229600/102			18:46																									
CCB 240-229600/103			18:50																									
ZZZZZZ			18:54																									
ZZZZZZ			18:58																									
ZZZZZZ			19:02																									
ZZZZZZ			19:07																									
ZZZZZZ			19:11																									
ZZZZZZ			19:15																									
ZZZZZZ			19:20																									
CCV 240-229600/111			19:24																									
CCB 240-229600/112			19:28																									
ZZZZZZ			19:32																									
ZZZZZZ			19:36																									
ZZZZZZ			19:40																									
ZZZZZZ			19:44																									
ZZZZZZ			19:48																									
ZZZZZZ			19:53																									
ZZZZZZ			19:57																									
ZZZZZZ			20:01																									
ZZZZZZ			20:05																									
ZZZZZZ			20:09																									
CCV 240-229600/123			20:13																									
CCB 240-229600/124			20:17																									
ZZZZZZ			20:22																									
ZZZZZZ			20:26																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			20:30																									
ZZZZZZ			20:34																									
ZZZZZZ			20:38																									
ZZZZZZ			20:43																									
ZZZZZZ			20:47																									
ZZZZZZ			20:51																									
ZZZZZZ			20:55																									
CCV 240-229600/134			20:59																									
CCB 240-229600/135			21:04																									
CRI 240-229600/136			21:08																									
ZZZZZZ			21:12																									
ZZZZZZ			21:16																									
ZZZZZZ			21:20																									
ZZZZZZ			21:25																									
ZZZZZZ			21:29																									
ZZZZZZ			21:33																									
ZZZZZZ			21:37																									
ZZZZZZ			21:41																									
ZZZZZZ			21:45																									
CCV 240-229600/146			21:50																									
CCB 240-229600/147			21:54																									
ZZZZZZ			21:58																									
ZZZZZZ			22:02																									
ZZZZZZ			22:06																									
ZZZZZZ			22:10																									
ZZZZZZ			22:15																									
ZZZZZZ			22:19																									
ZZZZZZ			22:23																									
ZZZZZZ			22:27																									
ZZZZZZ			22:31																									
ZZZZZZ			22:35																									
CCV 240-229600/158			22:39																									
CCB 240-229600/159			22:44																									
ZZZZZZ			22:48																									
ZZZZZZ			22:52																									
ZZZZZZ			22:56																									
ZZZZZZ			23:00																									
ZZZZZZ			23:05																									
ZZZZZZ			23:09																									
ZZZZZZ			23:13																									
ZZZZZZ			23:17																									
ZZZZZZ			23:21																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cu																								
ZZZZZZ			23:26																									
CCV 240-229600/170			23:30																									
CCB 240-229600/171			23:34																									
ZZZZZZ			23:38																									
ZZZZZZ			23:42																									
ZZZZZZ			23:47																									
ZZZZZZ			23:51																									
ZZZZZZ			23:55																									
ZZZZZZ			23:59																									
ZZZZZZ			00:03																									
CCV 240-229600/179			00:08																									
CCB 240-229600/180			00:12																									
ZZZZZZ			00:16																									
ZZZZZZ			00:20																									
ZZZZZZ			00:24																									
ZZZZZZ			00:29																									
ZZZZZZ			00:33																									
ZZZZZZ			00:37																									
ZZZZZZ			00:41																									
ZZZZZZ			00:45																									
ZZZZZZ			00:49																									
ZZZZZZ			00:53																									
CCV 240-229600/191			00:58																									
CCB 240-229600/192			01:02																									
ZZZZZZ			01:06																									
ZZZZZZ			01:10																									
ZZZZZZ			01:14																									
ZZZZZZ			01:18																									
ZZZZZZ			01:23																									
ZZZZZZ			01:27																									
CCV 240-229600/199			01:31																									
CCB 240-229600/200			01:35																									
ZZZZZZ			01:39																									
ZZZZZZ			01:43																									
ZZZZZZ			01:48																									
ZZZZZZ			01:52																									
ZZZZZZ			01:56																									
ZZZZZZ			02:00																									
ZZZZZZ			02:04																									
ZZZZZZ			02:08																									
ZZZZZZ			02:12																									
ZZZZZZ			02:17																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 05/09/2016 11:39 End Date: 05/10/2016 04:26

Lab Sample Id	D/F	Type	Time	Analytes																									
				Cu																									
CCV 240-229600/211			02:21																										
CCB 240-229600/212			02:25																										
ZZZZZZ			02:29																										
ZZZZZZ			02:33																										
ZZZZZZ			02:37																										
ZZZZZZ			02:41																										
CCV 240-229600/217			02:46																										
CCB 240-229600/218			02:50																										
CRI 240-229600/219			02:54																										
ZZZZZZ			02:58																										
ZZZZZZ			03:02																										
ZZZZZZ			03:07																										
ZZZZZZ			03:11																										
ZZZZZZ			03:15																										
ZZZZZZ			03:19																										
ZZZZZZ			03:23																										
ZZZZZZ			03:27																										
ZZZZZZ			03:31																										
CCV 240-229600/229			03:36																										
CCB 240-229600/230			03:40																										
ZZZZZZ			03:44																										
ZZZZZZ			03:48																										
ZZZZZZ			03:52																										
ZZZZZZ			03:56																										
ZZZZZZ			04:01																										
ZZZZZZ			04:05																										
ZZZZZZ			04:09																										
ZZZZZZ			04:13																										
ZZZZZZ			04:17																										
CCV 240-229600/240			04:22																										
CCB 240-229600/241			04:26																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 240-229220/1-A			10:24	X																								
IC 240-229220/2-A			10:26	X																								
IC 240-229220/3-A			10:28	X																								
IC 240-229220/4-A			10:30	X																								
IC 240-229220/5-A			10:34	X																								
IC 240-229220/6-A			10:36	X																								
ICV 240-229220/7-A	1		10:46	X																								
ICB 240-229220/8-A	1		10:48	X																								
CRA 240-229220/9-A	1		10:50	X																								
CCV 240-229220/10-A			10:58																									
CCB 240-229220/11-A			11:00																									
ZZZZZZ			11:02																									
ZZZZZZ			11:04																									
ZZZZZZ			11:06																									
ZZZZZZ			11:08																									
ZZZZZZ			11:11																									
ZZZZZZ			11:13																									
ZZZZZZ			11:15																									
ZZZZZZ			11:17																									
ZZZZZZ			11:19																									
ZZZZZZ			11:21																									
CCV 240-229220/10-A			11:23																									
CCB 240-229220/11-A			11:25																									
ZZZZZZ			11:28																									
ZZZZZZ			11:30																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
ZZZZZZ			11:37																									
ZZZZZZ			11:39																									
ZZZZZZ			11:41																									
ZZZZZZ			11:44																									
ZZZZZZ			11:46																									
ZZZZZZ			11:48																									
CCV 240-229220/10-A			11:50																									
CCB 240-229220/11-A			11:54																									
ZZZZZZ			11:56																									
ZZZZZZ			11:59																									
ZZZZZZ			12:01																									
CRA 240-229365/39			12:03																									
ZZZZZZ			12:05																									
ZZZZZZ			12:07																									
ZZZZZZ			12:10																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			12:12	
ZZZZZZ			12:14	
ZZZZZZ			12:16	
CCV 240-229220/10-A	1		12:18	X
CCB 240-229220/11-A	1		12:21	X
ZZZZZZ			12:23	
ZZZZZZ			12:25	
ZZZZZZ			12:27	
ZZZZZZ			12:29	
ZZZZZZ			12:32	
ZZZZZZ			12:35	
MB 240-228970/1-A	1	T	12:37	X
LCS 240-228970/2-A	1	T	12:39	X
ZZZZZZ			12:42	
ZZZZZZ			12:44	
CCV 240-229220/10-A	1		12:46	X
CCB 240-229220/11-A	1		12:48	X
ZZZZZZ			12:50	
ZZZZZZ			12:52	
ZZZZZZ			12:54	
ZZZZZZ			12:57	
CCV 240-229220/10-A	1		13:36	X
CCB 240-229220/11-A	1		13:38	X
ZZZZZZ			13:40	
ZZZZZZ			13:42	
240-64160-7	1	T	13:44	X
240-64160-8	1	T	13:46	X
240-64160-9	1	T	13:49	X
240-64160-10	1	T	13:51	X
240-64160-11	1	T	13:53	X
ZZZZZZ			13:55	
ZZZZZZ			13:57	
ZZZZZZ			14:00	
CCV 240-229220/10-A	1		14:02	X
CCB 240-229220/11-A	1		14:04	X
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:11	
ZZZZZZ			14:14	
ZZZZZZ			14:16	
ZZZZZZ			14:19	
CCV 240-229220/10-A			14:22	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 240-229220/11-A			14:24																									
CCV 240-229220/10-A			15:02																									
CCB 240-229220/11-A			15:04																									
ZZZZZZ			15:07																									
ZZZZZZ			15:09																									
ZZZZZZ			15:11																									
ZZZZZZ			15:13																									
ZZZZZZ			15:16																									
ZZZZZZ			15:19																									
CCV 240-229220/10-A			15:22																									
CCB 240-229220/11-A			15:24																									
CCV 240-229220/10-A			15:28																									
CCB 240-229220/11-A			15:30																									
ZZZZZZ			15:33																									
ZZZZZZ			15:35																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									
ZZZZZZ			15:41																									
ZZZZZZ			15:44																									
ZZZZZZ			15:46																									
ZZZZZZ			15:48																									
ZZZZZZ			15:50																									
ZZZZZZ			15:52																									
CCV 240-229220/10-A			15:54																									
CCB 240-229220/11-A			15:57																									
ZZZZZZ			15:59																									
ZZZZZZ			16:01																									
ZZZZZZ			16:04																									
ZZZZZZ			16:06																									
ZZZZZZ			16:20																									
ZZZZZZ			16:22																									
CCV 240-229220/10-A			16:41																									
CCB 240-229220/11-A			16:43																									
ZZZZZZ			16:45																									
ZZZZZZ			16:47																									
ZZZZZZ			16:49																									
ZZZZZZ			16:52																									
ZZZZZZ			16:54																									
ZZZZZZ			16:56																									
ZZZZZZ			16:59																									
ZZZZZZ			17:02																									
ZZZZZZ			17:04																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			17:06																									
CCV 240-229220/10-A			17:08																									
CCB 240-229220/11-A			17:10																									
ZZZZZZ			17:12																									
ZZZZZZ			17:15																									
ZZZZZZ			17:17																									
ZZZZZZ			17:19																									
ZZZZZZ			17:21																									
ZZZZZZ			17:23																									
ZZZZZZ			17:25																									
ZZZZZZ			17:28																									
ZZZZZZ			17:30																									
ZZZZZZ			17:32																									
CCV 240-229220/10-A			17:34																									
CCB 240-229220/11-A			17:36																									
ZZZZZZ			17:39																									
ZZZZZZ			17:42																									
ZZZZZZ			17:44																									
ZZZZZZ			17:46																									
ZZZZZZ			17:49																									
ZZZZZZ			17:51																									
ZZZZZZ			17:53																									
ZZZZZZ			17:55																									
ZZZZZZ			17:57																									
ZZZZZZ			17:59																									
CCV 240-229220/10-A			18:02																									
CCB 240-229220/11-A			18:04																									
ZZZZZZ			18:06																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:13																									
ZZZZZZ			18:15																									
ZZZZZZ			18:17																									
ZZZZZZ			18:19																									
ZZZZZZ			18:22																									
ZZZZZZ			18:24																									
ZZZZZZ			18:26																									
CCV 240-229220/10-A			18:29																									
CCB 240-229220/11-A			18:31																									
ZZZZZZ			18:33																									
ZZZZZZ			18:36																									
ZZZZZZ			18:38																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			18:40																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
ZZZZZZ			18:50																									
ZZZZZZ			18:52																									
ZZZZZZ			18:55																									
CCV 240-229220/10-A			18:58																									
CCB 240-229220/11-A			19:00																									
ZZZZZZ			19:02																									
ZZZZZZ			19:04																									
ZZZZZZ			19:07																									
ZZZZZZ			19:09																									
ZZZZZZ			19:12																									
ZZZZZZ			19:14																									
ZZZZZZ			19:16																									
ZZZZZZ			19:18																									
ZZZZZZ			19:20																									
ZZZZZZ			19:22																									
CCV 240-229220/10-A			19:24																									
CCB 240-229220/11-A			19:26																									
ZZZZZZ			19:28																									
ZZZZZZ			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:35																									
ZZZZZZ			19:37																									
ZZZZZZ			19:39																									
ZZZZZZ			19:41																									
ZZZZZZ			19:43																									
ZZZZZZ			19:45																									
ZZZZZZ			19:47																									
CCV 240-229220/10-A			19:50																									
CCB 240-229220/11-A			19:52																									
ZZZZZZ			19:54																									
ZZZZZZ			19:57																									
ZZZZZZ			19:59																									
ZZZZZZ			20:01																									
ZZZZZZ			20:03																									
ZZZZZZ			20:06																									
ZZZZZZ			20:09																									
ZZZZZZ			20:11																									
CCV 240-229220/10-A			20:13																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2016 10:24 End Date: 05/06/2016 20:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 240-229220/11-A			20:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/07/2016 End Date: 05/07/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-229385/2	13:02	100		100		100		100		100	
STD1 240-229385/3 I	13:07	99		99		99		101		100	
STD2 240-229385/4 I	13:11	95		100		99		97		99	
STD3 240-229385/5 I	13:15	99		99		102		96		97	
STD4 240-229385/6 I	13:19	100		102		103		103		104	
ICV 240-229385/7	13:23	101		103		106		100		103	
ICB 240-229385/8	13:27	102		107		106		106		106	
CRI 240-229385/9	13:32	103		106		106		106		106	
ICSA 240-229385/10	13:36	99		99		101		93		95	
ICSAB 240-229385/11	13:40	97		100		104		96		97	
CCV 240-229385/35	15:23	111		105		110		102		101	
CCB 240-229385/36	15:27	115		106		113		107		105	
MB 240-228967/1-A	15:52	112		106		111		106		105	
LCS 240-228967/2-A	15:56	108		101		106		99		98	
CCV 240-229385/47	16:13	110		102		108		97		97	
CCB 240-229385/48	16:17	114		101		110		100		98	
240-64160-7	16:50	113		105		111		99		101	
240-64160-8	16:54	114		107		112		102		103	
240-64160-9	16:59	116		108		115		101		102	
CCV 240-229385/59	17:03	112		104		110		100		101	
CCB 240-229385/60	17:07	117		104		110		103		103	
240-64160-10	17:11	116		105		112		101		102	
240-64160-11	17:15	116		105		111		99		100	
CCV 240-229385/63	17:19	113		102		108		99		99	
CCB 240-229385/64	17:24	113		104		109		103		102	
CRI 240-229385/65	17:28	115		103		110		103		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/07/2016 End Date: 05/07/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-229385/2	13:02	100		100		100					
STD1 240-229385/3 I	13:07	102		102		100					
STD2 240-229385/4 I	13:11	98		100		96					
STD3 240-229385/5 I	13:15	98		100		94					
STD4 240-229385/6 I	13:19	101		103		101					
ICV 240-229385/7	13:23	102		102		98					
ICB 240-229385/8	13:27	103		104		102					
CRI 240-229385/9	13:32	102		104		101					
ICSA 240-229385/10	13:36	98		100		94					
ICSAB 240-229385/11	13:40	99		101		95					
CCV 240-229385/35	15:23	102		104		98					
CCB 240-229385/36	15:27	104		104		101					
MB 240-228967/1-A	15:52	102		104		102					
LCS 240-228967/2-A	15:56	99		102		95					
CCV 240-229385/47	16:13	98		100		94					
CCB 240-229385/48	16:17	97		98		95					
240-64160-7	16:50	100		101		96					
240-64160-8	16:54	101		103		99					
240-64160-9	16:59	102		103		98					
CCV 240-229385/59	17:03	100		102		96					
CCB 240-229385/60	17:07	101		102		100					
240-64160-10	17:11	101		102		98					
240-64160-11	17:15	100		102		97					
CCV 240-229385/63	17:19	99		100		94					
CCB 240-229385/64	17:24	99		100		97					
CRI 240-229385/65	17:28	99		101		98					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/09/2016 End Date: 05/09/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-229600/2	11:43	100		100		100		100		100	
STD1 240-229600/3 I	11:47	97		99		99		97		99	
STD2 240-229600/4 I	11:51	95		99		98		96		98	
STD3 240-229600/5 I	11:55	94		101		100		95		98	
STD4 240-229600/6 I	12:00	100		106		103		106		106	
ICV 240-229600/7	12:04	103		112		110		107		109	
ICB 240-229600/8	12:08	107		111		109		110		109	
CRI 240-229600/9	12:12	108		111		109		108		110	
ICSA 240-229600/10	12:16	105		103		103		95		98	
ICSAB 240-229600/11	12:21	102		106		106		98		100	
CCV 240-229600/16	12:49	106		111		112		106		106	
CCB 240-229600/17	12:53	109		113		112		111		108	
MB 240-228967/1-A	13:01	108		111		109		107		107	
LCS 240-228967/2-A	13:05	101		105		108		101		100	
CCV 240-229600/28	13:38	107		111		107		105		105	
CCB 240-229600/29	13:42	110		110		111		108		107	
240-64160-7	13:59	111		110		114		103		105	
240-64160-8	14:03	111		111		113		107		106	
240-64160-9	14:08	111		113		114		105		106	
240-64160-10	14:12	114		114		117		108		109	
240-64160-11	14:16	114		113		115		106		107	
CCV 240-229600/38	14:20	110		109		110		103		102	
CCB 240-229600/39	14:24	110		109		109		106		104	
CRI 240-229600/40	14:28	106		107		108		105		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 05/09/2016 End Date: 05/09/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-229600/2	11:43	100		100		100					
STD1 240-229600/3 I	11:47	100		99		99					
STD2 240-229600/4 I	11:51	99		98		96					
STD3 240-229600/5 I	11:55	98		97		95					
STD4 240-229600/6 I	12:00	104		102		105					
ICV 240-229600/7	12:04	109		107		104					
ICB 240-229600/8	12:08	109		108		107					
CRI 240-229600/9	12:12	108		107		108					
ICSA 240-229600/10	12:16	102		102		97					
ICSAB 240-229600/11	12:21	104		103		98					
CCV 240-229600/16	12:49	108		106		102					
CCB 240-229600/17	12:53	108		108		108					
MB 240-228967/1-A	13:01	107		105		106					
LCS 240-228967/2-A	13:05	103		102		98					
CCV 240-229600/28	13:38	107		106		101					
CCB 240-229600/29	13:42	105		105		104					
240-64160-7	13:59	105		105		102					
240-64160-8	14:03	108		106		104					
240-64160-9	14:08	107		105		103					
240-64160-10	14:12	108		108		105					
240-64160-11	14:16	108		107		104					
CCV 240-229600/38	14:20	105		105		100					
CCB 240-229600/39	14:24	104		104		102					
CRI 240-229600/40	14:28	104		102		103					

MTMSCCBDILH20-262 EPA Tune Solution Spex CL1-16MKBY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 5/7/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

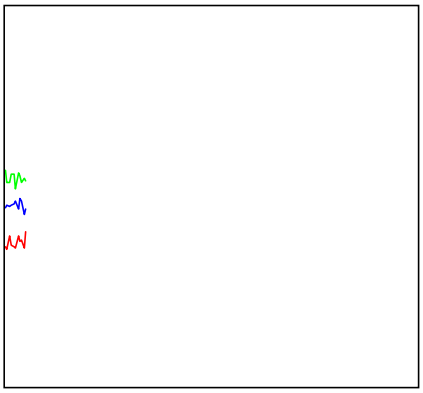
Level I Analyst: Anjali Sharma **Date:** 5/9/16 **Time:** 12:58 – 2:44
Level I Analyst: _____ **Date:** _____ **Time:** _____

Level II Reviewer: Karen L Conti **Date:** 5/9/16 **Time:** 12:58 - 2:44
Level II Reviewer: _____ **Date:** _____ **Time:** _____

Comments: _____

Current Signal

[NoGas]



Mass	Range	Count	Avg. Count	RSD [%]
7	5000	2023	1890.3	4.08
89	10000	5421	5472.8	2.65
205	5000	2328	2379.2	2.47
156/140	2	0.637 %	0.965 %	21.89
65	20000	10109	9901.0	1.47
11	2000	1390	1415.8	3.64
63	50000	22328	22176.1	0.89
60	500	294	292.2	4.91
45	5000	1858	1922.5	3.66
6	2000	1182	1184.4	3.82
52	10000	7552	7116.0	3.15
208	500	316	316.4	7.27
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	14.2	V
Extract 2	-155.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

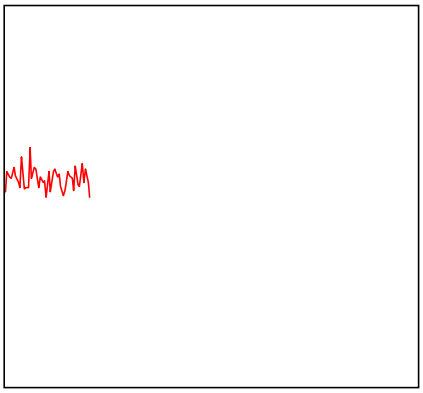
Meters

IF/BK Press	2.08E+2	Pa	TMP Revolution	100.0	%	Forward Power	1599	W
Analyzer Press	9.98E-5	Pa	Carrier Gas(BP)	1.93E+2	kPa			

PDF created with pdfFactory trial version www.pdffactory.com

Current Signal

[He]



Mass	Range	Count	Avg. Count	RSD [%]
59	1000	497	546.0	5.23
51	200	55	72.9	17.52
52	200	101	95.3	13.97
51/59	20	11.065 %	13.361 %	17.31
63	5000	2291	2312.8	2.62
65	2000	1095	1118.8	3.24
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	4.4	V
Extract 2	-155.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-75	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	10.0	V
He Flow	4.3	mL/min	OctP Bias	-25.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Meters

IF/BK Press	2.09E+2	Pa	TMP Revolution	100.0	%	Forward Power	1601	W
Analyzer Press	1.81E-4	Pa	Carrier Gas(BP)	1.93E+2	kPa			

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US EPA Tune Check Sample Report

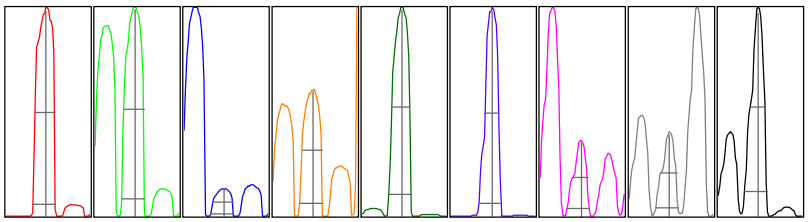
Batch Folder D:\Analytical Runs\I10050716A.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	31815	0.77	5.00	
24	148350	0.17	5.00	
25	19318	0.53	5.00	
26	22092	0.46	5.00	
59	168512	0.61	5.00	
115	211816	0.51	5.00	
206	44357	0.66	5.00	
207	38533	0.48	5.00	
208	90894	0.46	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	31758	31787	31450	32028	32050
24	148414	148558	148332	148505	147940
25	19420	19385	19157	19337	19289
26	22133	22182	22035	21942	22167
59	167479	167368	168867	169557	169287
115	209986	211826	212809	212172	212284
206	44068	44052	44379	44588	44698
207	38472	38416	38625	38346	38808
208	90508	91095	91483	90884	90498

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	4866	8.95	8.9 - 9.1		0.791	0.850	
24	22974	23.95	23.9 - 24.1		0.792	0.850	
25	3006	24.95	24.9 - 25.1		0.790	0.850	
26	3400	25.95	25.9 - 26.1		0.796	0.850	
59	27540	58.95	58.9 - 59.1		0.795	0.850	
115	39381	115.00	114.9 - 115.1		0.788	0.850	
206	8335	206.00	205.9 - 206.1		0.796	0.850	
207	6906	206.95	206.9 - 207.1		0.778	0.850	
208	17269	207.95	207.9 - 208.1		0.779	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-9.0	V	Omega Lens	7.1	V	Deflect	14.2	V
Extract 2	-155.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T12:58:41-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	87537	0.00
Be	9	45	2	NoGas	885	1.14
B	11	6	2	NoGas	10392	0.01
Na	23	45	1	He	10077	0.13
Mg	24	45	1	He	3271	2.43
Al	27	45	1	He	311	2.54
K	39	45	1	He	10889	0.02
Ca	44	45	1	He	897	2.21
Ti	47	45	1	He	4	2579.17
V	51	45	1	He	258	28.73
Cr	52	45	1	He	816	0.98
Mn	55	45	1	He	1611	0.36
Fe	56	45	1	He	15258	0.50
Co	59	45	1	He	551	3.05
Ni	60	45	1	He	258	7.97
Cu	63	45	1	He	5652	0.05
Zn	66	45	1	He	3061	0.24
As	75	115	1	He	34	49.99
Se	78	115	1	He	7	131.08
Sr	88	103	1	He	129	23.26
Mo	95	103	1	He	77	113.84
Ag	107	103	1	He	67	90.94
Cd	111	115	1	He	11	676.22
Sn	118	115	1	He	1482	1.55
Sb	123	115	1	He	77	51.98
Ba	137	115	1	He	14	92.44
W	182	159	1	He	2248	0.57
Tl	205	165	1	He	362	21.03
Pb	208	165	1	He	1309	1.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1278911	1.51
Sc	45	1	He	160665	1.37
Sc	45	2	NoGas	8828511	0.27
Rh	103	1	He	1010126	0.72
In	115	1	He	257178	0.66
Tb	159	1	He	1145559	0.26
Ho	165	1	He	1151095	0.74
Bi	209	1	He	789842	0.59

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:02:50-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	86188	0.00
Be	9	45	2	NoGas	96	48.42
B	11	6	2	NoGas	10414	0.05
Na	23	45	1	He	8550	0.04
Mg	24	45	1	He	782	1.64
Al	27	45	1	He	296	6.43
K	39	45	1	He	10477	0.01
Ca	44	45	1	He	749	0.96
Ti	47	45	1	He	2	7790.33
V	51	45	1	He	184	59.12
Cr	52	45	1	He	901	1.06
Mn	55	45	1	He	1473	0.37
Fe	56	45	1	He	3889	0.21
Co	59	45	1	He	488	1.77
Ni	60	45	1	He	239	1.78
Cu	63	45	1	He	5250	0.04
Zn	66	45	1	He	3258	0.21
As	75	115	1	He	29	28.50
Se	78	115	1	He	4	1424.93
Sr	88	103	1	He	107	29.73
Mo	95	103	1	He	26	241.24
Ag	107	103	1	He	13	495.90
Cd	111	115	1	He	1	8507.26
Sn	118	115	1	He	1578	0.54
Sb	123	115	1	He	26	147.36
Ba	137	115	1	He	7	1499.63
W	182	159	1	He	1671	0.06
Tl	205	165	1	He	33	90.02
Pb	208	165	1	He	1212	0.68

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1276810	0.35
Sc	45	1	He	163460	1.52
Sc	45	2	NoGas	8842934	0.43
Rh	103	1	He	1010526	1.06
In	115	1	He	257801	0.61
Tb	159	1	He	1155473	0.54
Ho	165	1	He	1147359	0.13
Bi	209	1	He	790610	0.70

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Calibration Standard Report

Sample Table

Sample Name	STD1-2495516
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:07:03-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	249336	0.00
Be	9	2	NoGas	49593	0.00
B	11	2	NoGas	42264	0.01
Na	23	1	He	2422426	0.00
Mg	24	1	He	1354457	0.00
Al	27	1	He	7704	0.04
K	39	1	He	651286	0.00
Ca	44	1	He	37722	0.01
Ti	47	1	He	533	2.82
V	51	1	He	18694	0.02
Cr	52	1	He	24403	0.00
Mn	55	1	He	59829	0.00
Fe	56	1	He	4685752	0.00
Co	59	1	He	43095	0.00
Ni	60	1	He	12143	0.03
Cu	63	1	He	40687	0.00
Zn	66	1	He	6046	0.07
As	75	1	He	2530	0.19
Se	78	1	He	118	4.97
Sr	88	1	He	11533	0.01
Mo	95	1	He	13973	0.01
Ag	107	1	He	50864	0.00
Cd	111	1	He	5723	0.01
Sn	118	1	He	11126	0.04
Sb	123	1	He	12044	0.02
Ba	137	1	He	4186	0.01
W	182	1	He	61365	0.00
Tl	205	1	He	92698	0.00
Pb	208	1	He	123698	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1260903	1.17	1276810	98.75	60	120	
Sc	45	1	He	161712	7.27	163460	98.93	60	120	
Sc	45	2	NoGas	8760325	1.18	8842934	99.07	60	120	
Rh	103	1	He	1016767	8.93	1010526	100.62	60	120	
In	115	1	He	256482	6.06	257801	99.49	60	120	
Tb	159	1	He	1178128	10.94	1155473	101.96	60	120	
Ho	165	1	He	1170678	10.90	1147359	102.03	60	120	
Bi	209	1	He	787231	5.41	790610	99.57	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2517056
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:11:14-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	881320	0.00
Be	9	2	NoGas	249560	0.00
B	11	2	NoGas	167862	0.00
Na	23	1	He	11764328	0.00
Mg	24	1	He	6572757	0.00
Al	27	1	He	27466	0.01
K	39	1	He	3228587	0.00
Ca	44	1	He	186769	0.00
Ti	47	1	He	2706	0.21
V	51	1	He	92851	0.00
Cr	52	1	He	115157	0.00
Mn	55	1	He	289610	0.00
Fe	56	1	He	22670796	0.00
Co	59	1	He	208894	0.00
Ni	60	1	He	58765	0.00
Cu	63	1	He	169197	0.00
Zn	66	1	He	21161	0.00
As	75	1	He	12393	0.00
Se	78	1	He	603	0.56
Sr	88	1	He	56278	0.00
Mo	95	1	He	70503	0.00
Ag	107	1	He	248839	0.00
Cd	111	1	He	27924	0.00
Sn	118	1	He	52508	0.00
Sb	123	1	He	60149	0.00
Ba	137	1	He	20318	0.00
W	182	1	He	299318	0.00
Tl	205	1	He	451677	0.00
Pb	208	1	He	595912	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1217288	0.55	1276810	95.34	60	120	
Sc	45	1	He	162960	0.75	163460	99.69	60	120	
Sc	45	2	NoGas	8765197	0.77	8842934	99.12	60	120	
Rh	103	1	He	982654	0.56	1010526	97.24	60	120	
In	115	1	He	254484	0.64	257801	98.71	60	120	
Tb	159	1	He	1135258	0.97	1155473	98.25	60	120	
Ho	165	1	He	1149496	0.44	1147359	100.19	60	120	
Bi	209	1	He	757430	0.37	790610	95.80	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:15:24-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	90916	0.00
Be	9	2	NoGas	498266	0.00
B	11	2	NoGas	11411	0.03
Na	23	1	He	23357043	0.00
Mg	24	1	He	13100274	0.00
Al	27	1	He	55390	0.00
K	39	1	He	6451736	0.00
Ca	44	1	He	373949	0.00
Ti	47	1	He	1	15604.06
V	51	1	He	184668	0.00
Cr	52	1	He	230930	0.00
Mn	55	1	He	580688	0.00
Fe	56	1	He	45405258	0.00
Co	59	1	He	417191	0.00
Ni	60	1	He	115642	0.00
Cu	63	1	He	330869	0.00
Zn	66	1	He	41341	0.00
As	75	1	He	24744	0.01
Se	78	1	He	1194	0.07
Sr	88	1	He	113377	0.00
Mo	95	1	He	191	13.30
Ag	107	1	He	483968	0.00
Cd	111	1	He	55021	0.00
Sn	118	1	He	385	10.63
Sb	123	1	He	198	7.10
Ba	137	1	He	41533	0.00
W	182	1	He	2700	0.17
Tl	205	1	He	891352	0.00
Pb	208	1	He	1171179	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1264815	0.92	1276810	99.06	60	120	
Sc	45	1	He	161970	1.90	163460	99.09	60	120	
Sc	45	2	NoGas	8985144	0.23	8842934	101.61	60	120	
Rh	103	1	He	968068	0.44	1010526	95.80	60	120	
In	115	1	He	249689	0.56	257801	96.85	60	120	
Tb	159	1	He	1134919	0.53	1155473	98.22	60	120	
Ho	165	1	He	1145456	0.84	1147359	99.83	60	120	
Bi	209	1	He	740693	1.26	790610	93.69	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:19:35-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	1824886	0.00
Be	9	2	NoGas	244	9.30
B	11	2	NoGas	342576	0.00
Na	23	1	He	12916	0.06
Mg	24	1	He	1582	0.68
Al	27	1	He	64	48.38
K	39	1	He	11882	0.02
Ca	44	1	He	184	9.96
Ti	47	1	He	5543	0.03
V	51	1	He	308	22.39
Cr	52	1	He	812	0.44
Mn	55	1	He	210	2.27
Fe	56	1	He	11212	0.23
Co	59	1	He	347	2.94
Ni	60	1	He	170	13.30
Cu	63	1	He	6019	0.07
Zn	66	1	He	67	19.84
As	75	1	He	32	14.12
Se	78	1	He	6	503.09
Sr	88	1	He	30	133.51
Mo	95	1	He	144829	0.00
Ag	107	1	He	59	78.28
Cd	111	1	He	20	140.01
Sn	118	1	He	114167	0.00
Sb	123	1	He	125184	0.00
Ba	137	1	He	17	120.06
W	182	1	He	596281	0.00
Tl	205	1	He	856	2.21
Pb	208	1	He	1749	0.41

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1274521	0.82	1276810	99.82	60	120	
Sc	45	1	He	167184	1.47	163460	102.28	60	120	
Sc	45	2	NoGas	9113379	0.91	8842934	103.06	60	120	
Rh	103	1	He	1041189	0.09	1010526	103.03	60	120	
In	115	1	He	267366	0.82	257801	103.71	60	120	
Tb	159	1	He	1160942	0.51	1155473	100.47	60	120	
Ho	165	1	He	1175513	1.18	1147359	102.45	60	120	
Bi	209	1	He	794357	1.16	790610	100.47	60	120	

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Calibration for 198_CCB.d

Batch Folder: D:\Analytical Runs\I10050716G.b\
Analysis File: I10050716G.batch.bin
DA Date-Time: 5/9/2016 8:22:24 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	5/7/2016 1:02:50 PM
2	003CALS.d	STD1-2495516	5/7/2016 1:07:03 PM
3	004CALS.d	STD2-2517056	5/7/2016 1:11:14 PM
4	005CALS.d	STD3-2510771	5/7/2016 1:15:24 PM
5	006CALS.d	STD4-2510772	5/7/2016 1:19:35 PM

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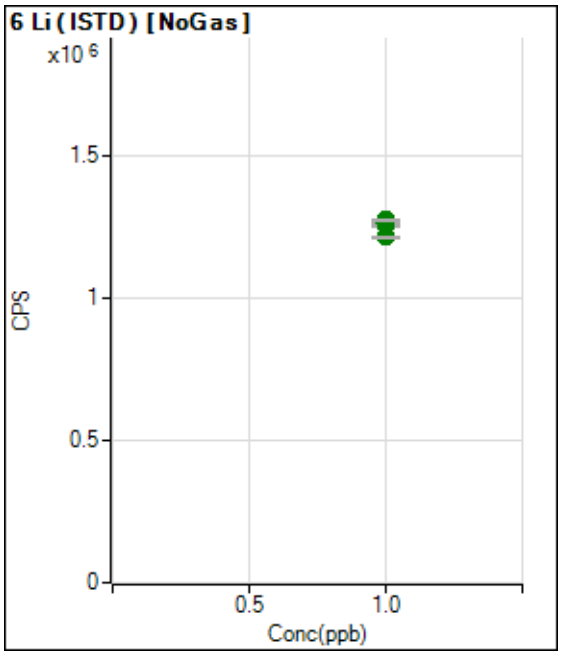
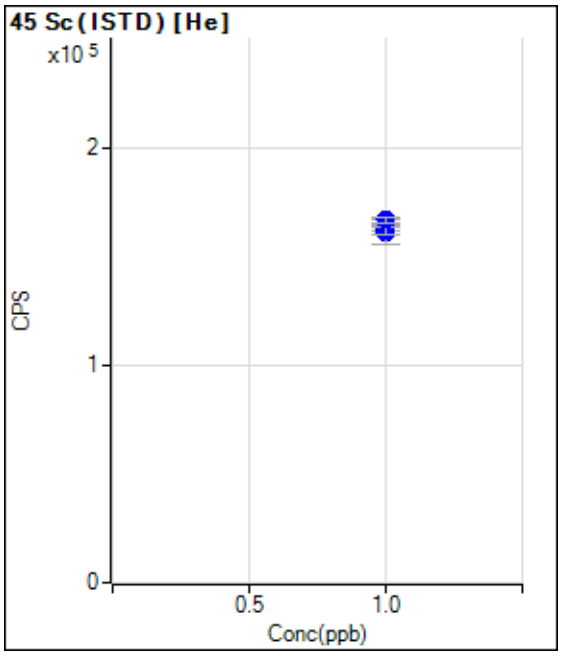


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1276809.76		A	0.4
2	☐	1.000		1260902.71		A	1.2
3	☐	1.000		1217287.58		A	0.5
4	☐	1.000		1264814.65		A	0.9
5	☐	1.000		1274520.93		A	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		163459.53		P	1.5
2	☐	1.000		161712.14		P	7.3
3	☐	1.000		162959.77		P	0.7
4	☐	1.000		161970.10		P	1.9
5	☐	1.000		167183.62		P	1.5

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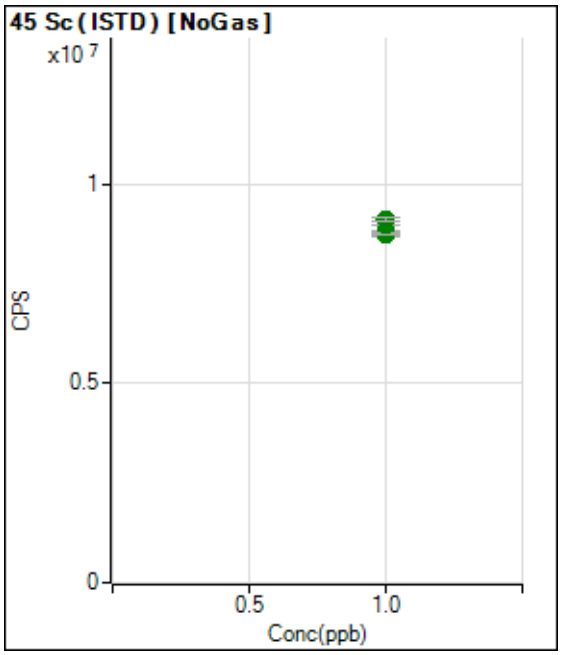
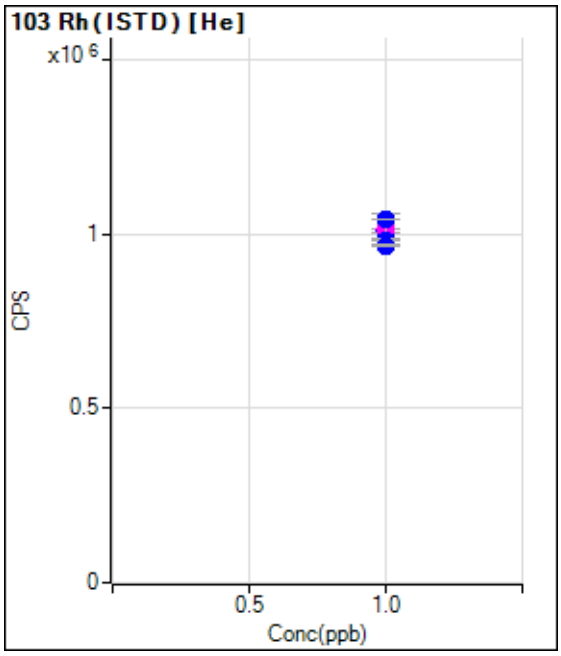


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8842934.09		A	0.4
2	☐	1.000		8760324.65		A	1.2
3	☐	1.000		8765197.43		A	0.8
4	☐	1.000		8985143.81		A	0.2
5	☐	1.000		9113378.52		A	0.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1010526.29		P	1.1
2	☐	1.000		1016766.63		M	8.9
3	☐	1.000		982654.00		P	0.6
4	☐	1.000		968068.32		P	0.4
5	☐	1.000		1041188.76		P	0.1

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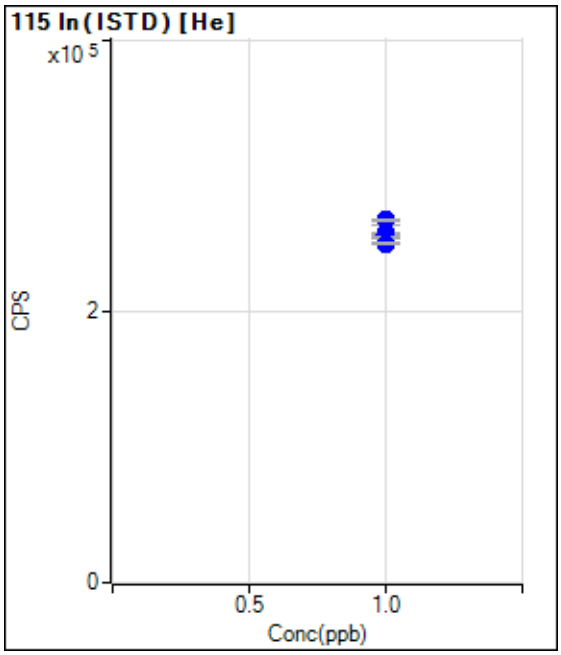
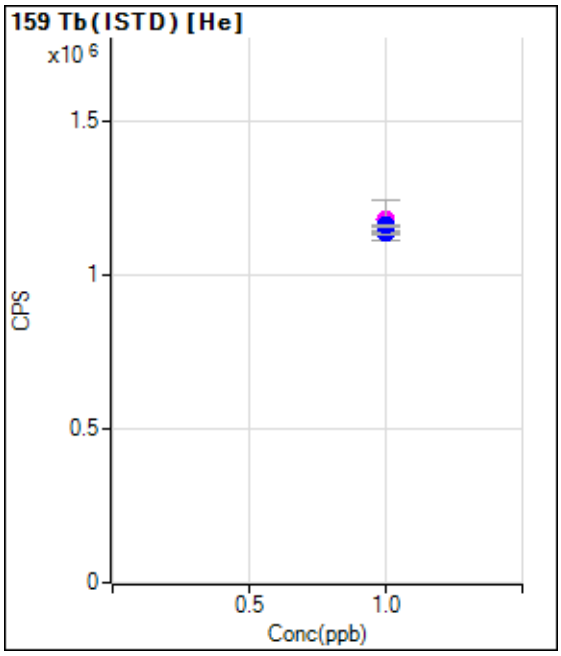


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		257800.69		P	0.6
2		1.000		256481.81		P	6.1
3		1.000		254483.61		P	0.6
4		1.000		249688.83		P	0.6
5		1.000		267365.94		P	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1155473.05		P	0.5
2		1.000		1178128.32		M	10.9
3		1.000		1135258.21		P	1.0
4		1.000		1134918.84		P	0.5
5		1.000		1160941.65		P	0.5

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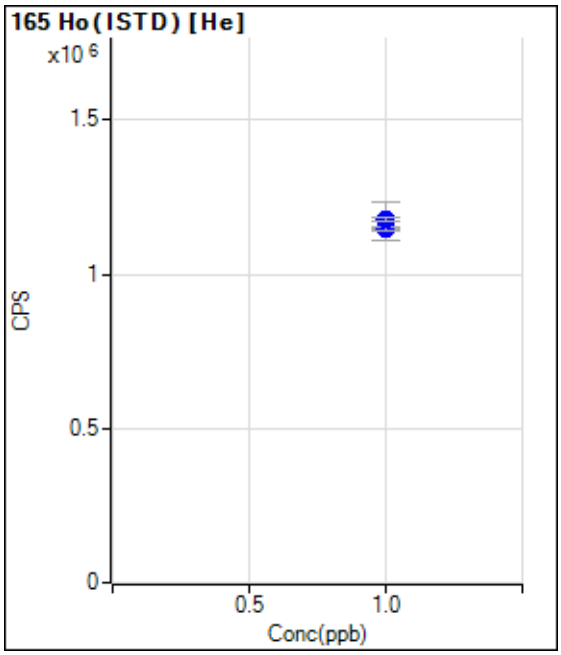
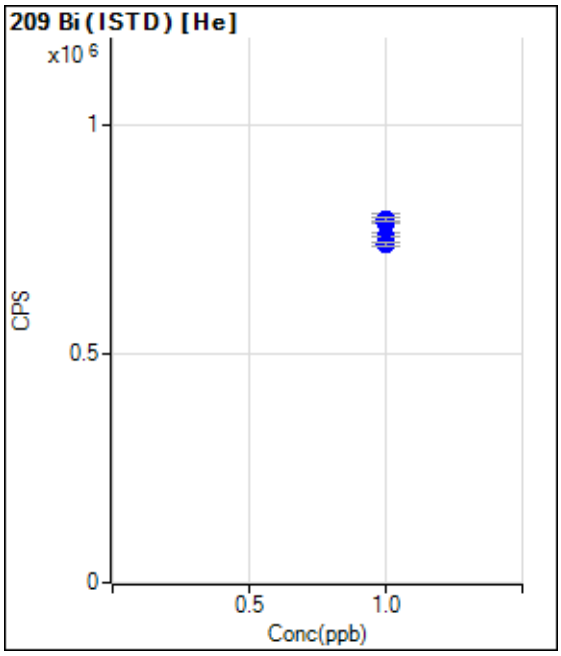
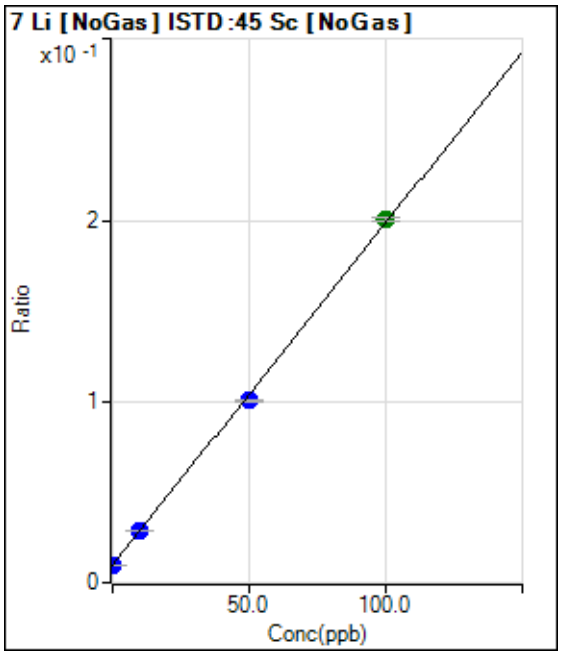


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1147358.76		P	0.1
2		1.000		1170678.29		M	10.9
3		1.000		1149496.08		P	0.4
4		1.000		1145455.74		P	0.8
5		1.000		1175512.66		P	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		790610.45		P	0.7
2		1.000		787230.98		P	5.4
3		1.000		757430.25		P	0.4
4		1.000		740693.45		P	1.3
5		1.000		794356.97		P	1.2

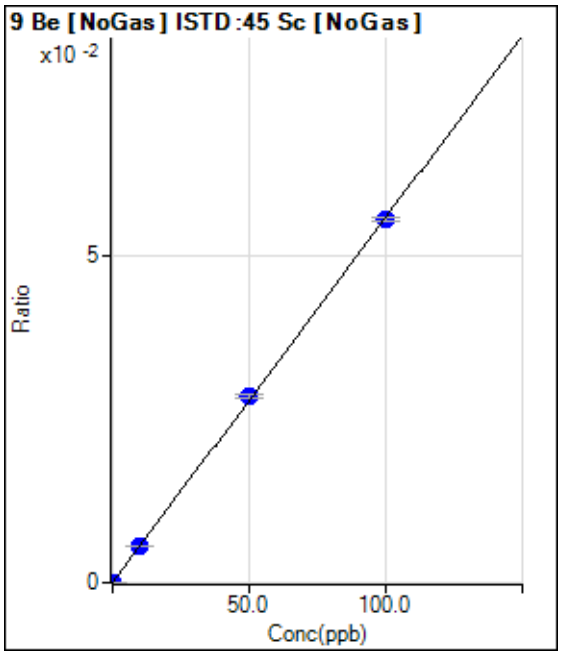
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86187.63	0.0097	P	0.2
2	☐	10.000	9.919	249335.75	0.0285	P	1.7
3	☐	50.000	48.119	881320.45	0.1006	P	1.3
4	☐			90916.28	0.0101	P	0.4
5	☐	100.000	100.949	1824886.32	0.2003	A	1.1

y = 0.0019 * x + 0.0097
R = 0.9997
DL = 0.0364
BEC = 5.165

Weight: <None>
Min Conc: <None>

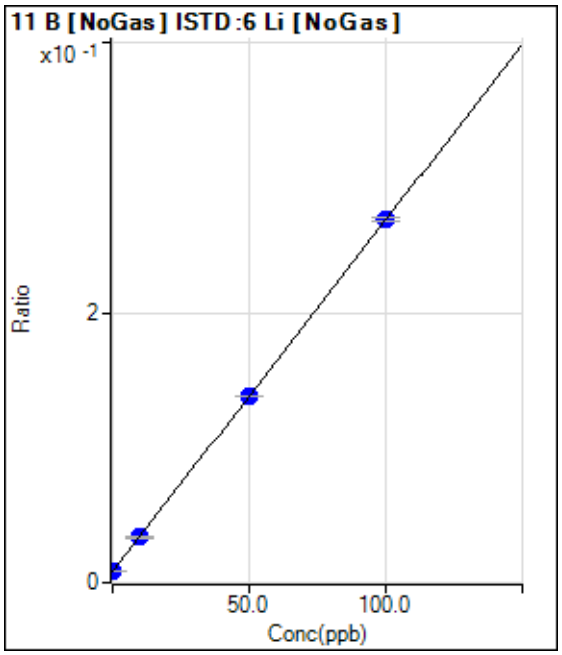


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.30	0.0000	P	46.4
2	☐	10.000	10.136	49592.73	0.0057	P	0.8
3	☐	50.000	51.057	249560.32	0.0285	P	1.5
4	☐	100.000	99.458	498266.48	0.0555	P	1.1
5	☐			244.46	0.0000	P	23.6

y = 5.5746E-004 * x + 1.0880E-005
R = 0.9999
DL = 0.02719
BEC = 0.01952

Weight: <None>
Min Conc: <None>

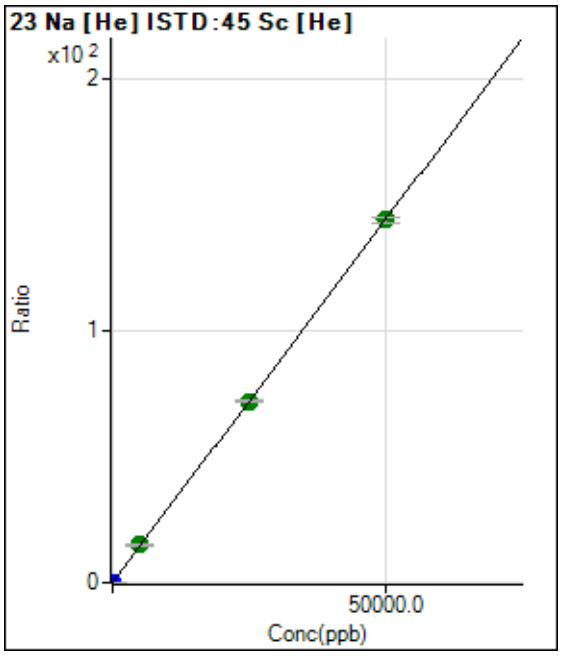
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10414.49	0.0082	P	5.1
2	☐	10.000	9.745	42264.05	0.0335	P	3.8
3	☐	50.000	49.832	167861.87	0.1379	P	0.3
4	☐			11411.44	0.0090	P	2.5
5	☐	100.000	100.110	342575.59	0.2688	P	1.1

y = 0.0026 * x + 0.0082
R = 1.0000
DL = 0.4754
BEC = 3.133

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8550.46	0.0523	P	5.2
2	☐	5000.000	5192.509	2422426.24	15.0319	A	7.2
3	☐	25000.000	25008.258	11764327.77	72.1974	A	1.6
4	☐	50000.000	49976.620	23357043.06	144.2273	A	1.3
5	☐			12916.22	0.0773	P	7.9

y = 0.0029 * x + 0.0523
R = 1.0000
DL = 2.827
BEC = 18.14

Weight: <None>
Min Conc: <None>

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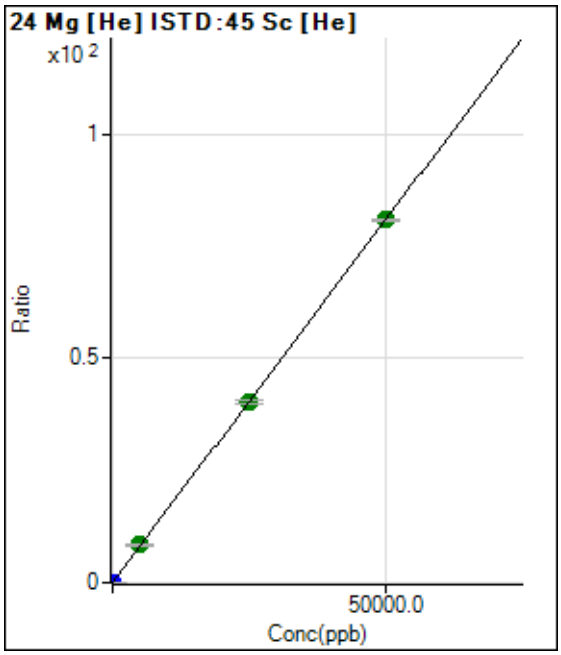
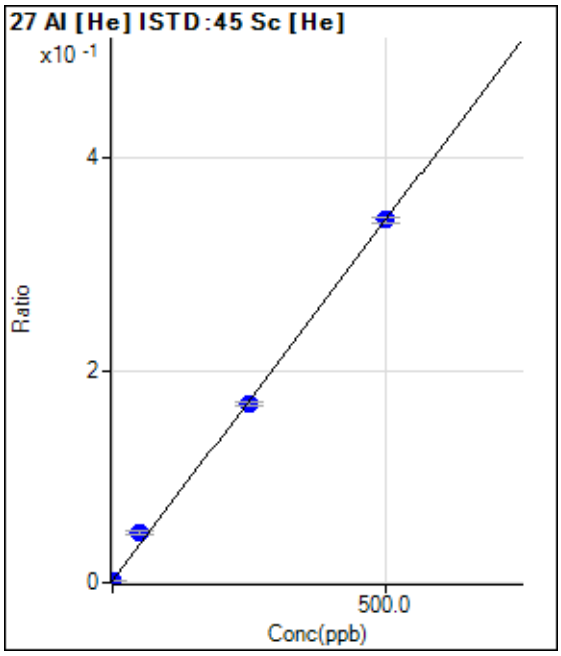


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	781.53	0.0048	P	12.0
2	☐	5000.000	5197.974	1354456.57	8.4115	A	8.8
3	☐	25000.000	24937.886	6572756.68	40.3371	A	1.7
4	☐	50000.000	50011.260	13100274.02	80.8886	A	0.8
5	☐			1581.62	0.0095	P	10.5

y = 0.0016 * x + 0.0048
R = 1.0000
DL = 1.06
BEC = 2.954

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	295.56	0.0018	P	20.6
2	☐	50.000	67.650	7703.92	0.0478	P	7.3
3	☐	250.000	245.342	27466.01	0.1686	P	3.0
4	☐	500.000	500.564	55390.09	0.3420	P	1.6
5	☐			64.44	0.0004	P	30.7

y = 6.7969E-004 * x + 0.0018
R = 0.9992
DL = 1.647
BEC = 2.666

Weight: <None>
Min Conc: <None>

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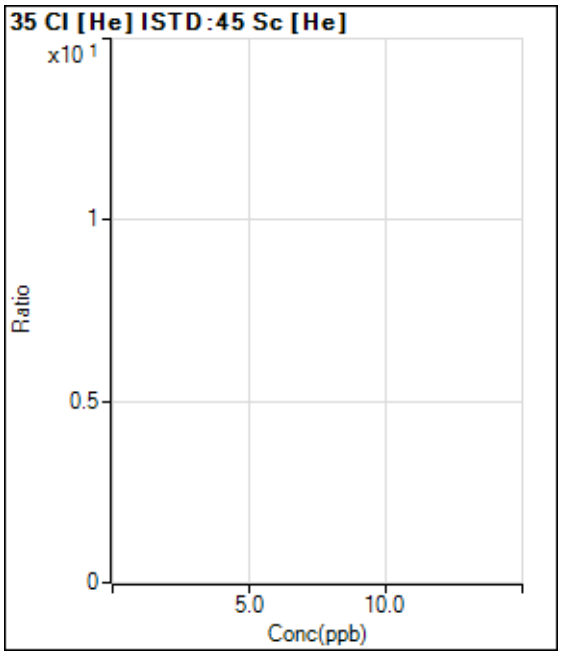
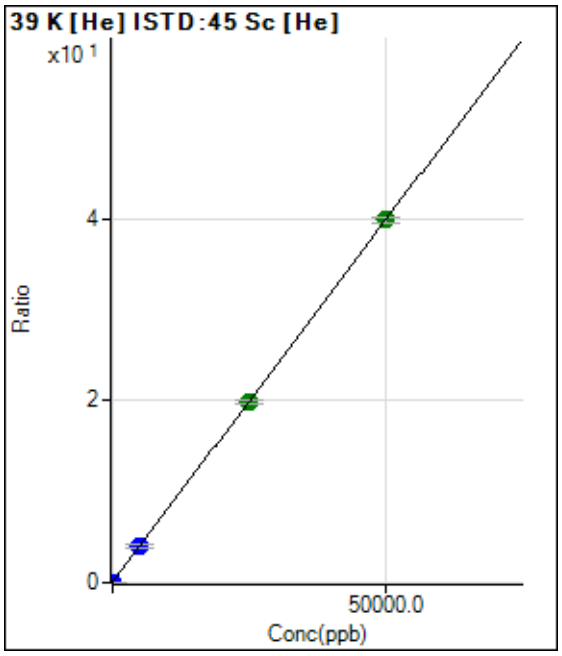


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			13370041.60	81.8128	A	2.4
2	☐			14607089.70	90.6940	A	8.3
3	☐			13982935.09	85.8148	A	2.3
4	☐			14515371.18	89.6247	A	1.3
5	☐			15091760.51	90.2908	A	2.3

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10477.46	0.0641	P	2.1
2	☐	5000.000	5007.575	651285.52	4.0424	P	7.6
3	☐	25000.000	24859.325	3228587.02	19.8137	A	1.7
4	☐	50000.000	50069.580	6451735.62	39.8422	A	1.9
5	☐			11882.25	0.0711	P	2.2

y = 7.9446E-004 * x + 0.0641

R = 1.0000

DL = 5.023

BEC = 80.7

Weight: <None>

Min Conc: <None>

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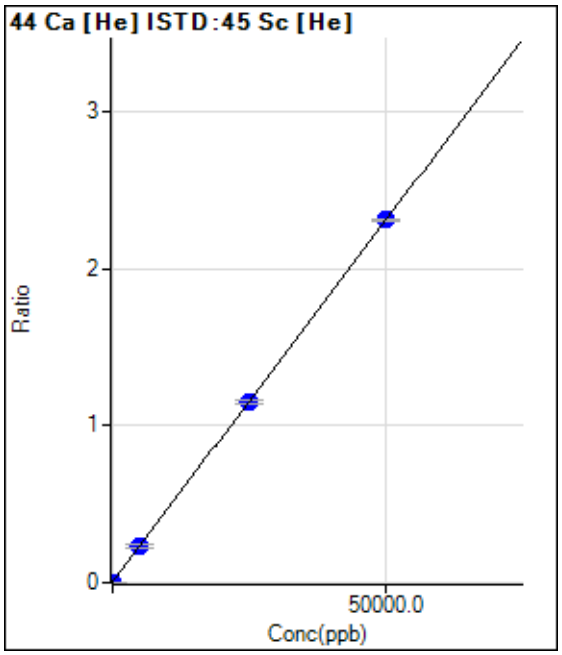
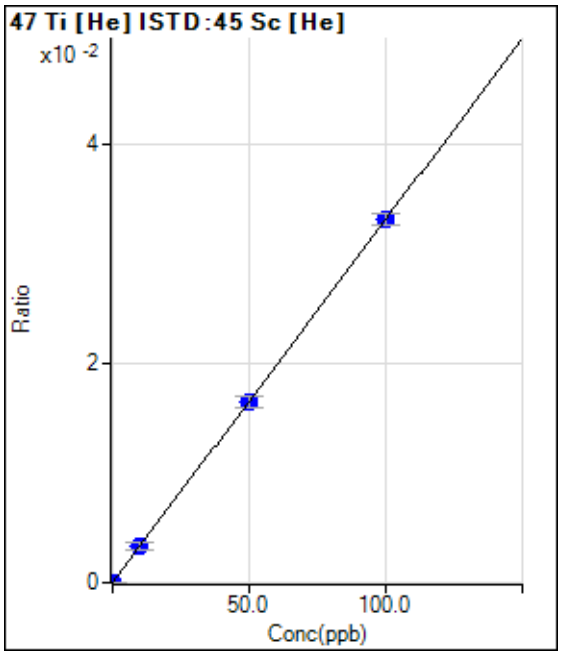


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	749.00	0.0046	P	7.6
2	☐	5000.000	4993.444	37722.12	0.2343	P	9.0
3	☐	25000.000	24817.202	186769.46	1.1462	P	1.8
4	☐	50000.000	50092.055	373949.48	2.3089	P	0.5
5	☐			183.85	0.0011	P	19.7

y = 4.6001E-005 * x + 0.0046
R = 1.0000
DL = 22.64
BEC = 99.64

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.22	0.0000	P	173.2
2	☐	10.000	10.010	533.35	0.0033	P	21.7
3	☐	50.000	50.045	2705.79	0.0166	P	6.4
4	☐			1.11	0.0000	P	173.2
5	☐	100.000	99.976	5543.15	0.0332	P	3.2

y = 3.3160E-004 * x + 1.3569E-005
R = 1.0000
DL = 0.2126
BEC = 0.04092

Weight: <None>
Min Conc: <None>

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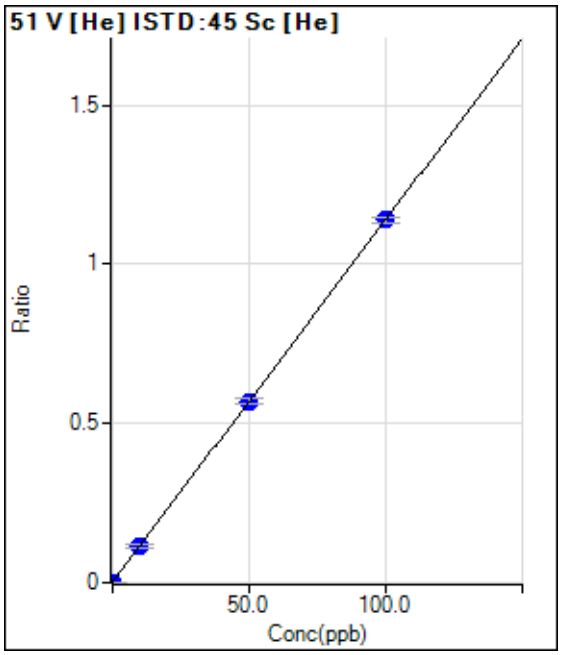
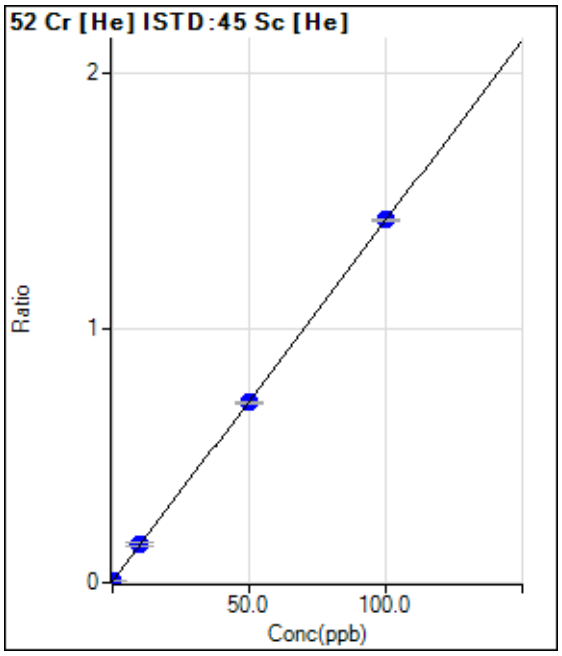


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.55	0.0011	P	108.6
2	☐	10.000	10.099	18693.60	0.1161	P	9.1
3	☐	50.000	49.947	92850.64	0.5698	P	3.3
4	☐	100.000	100.016	184667.65	1.1399	P	1.3
5	☐			307.80	0.0019	P	69.7

y = 0.0114 * x + 0.0011
R = 1.0000
DL = 0.3179
BEC = 0.09754

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	901.16	0.0055	P	10.8
2	☐	10.000	10.299	24403.22	0.1515	P	7.6
3	☐	50.000	49.483	115156.85	0.7067	P	1.8
4	☐	100.000	100.229	230929.55	1.4258	P	0.6
5	☐			812.25	0.0049	P	4.2

y = 0.0142 * x + 0.0055
R = 1.0000
DL = 0.1258
BEC = 0.3894

Weight: <None>
Min Conc: <None>

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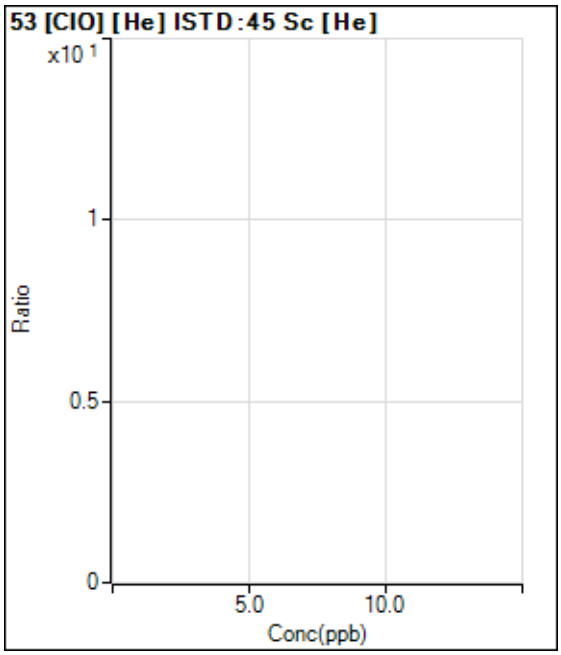
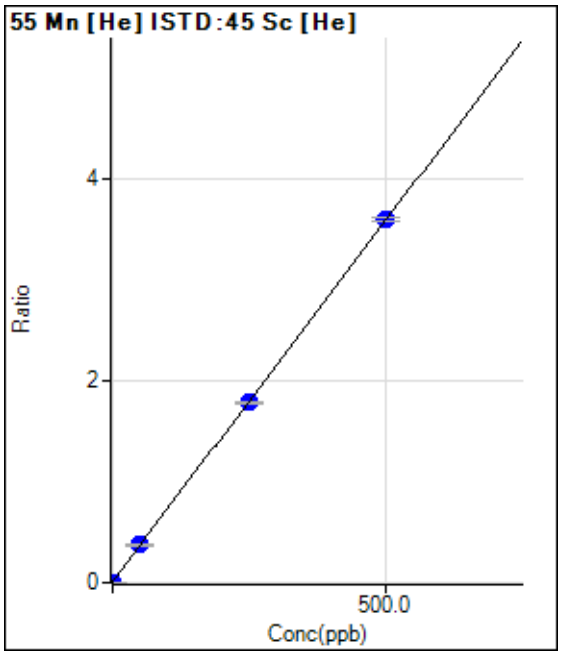


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			237.05	0.0015	P	30.2
2	☐			3144.87	0.0195	P	9.4
3	☐			14235.83	0.0874	P	4.5
4	☐			28627.22	0.1768	P	3.2
5	☐			192.60	0.0011	P	27.1

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1473.42	0.0090	P	4.7
2	☐	50.000	50.775	59829.37	0.3715	P	8.2
3	☐	250.000	247.722	289610.36	1.7773	P	1.5
4	☐	500.000	501.061	580688.19	3.5856	P	1.1
5	☐			210.00	0.0013	P	5.6

y = 0.0071 * x + 0.0090

R = 1.0000

DL = 0.1791

BEC = 1.263

Weight: <None>

Min Conc: <None>

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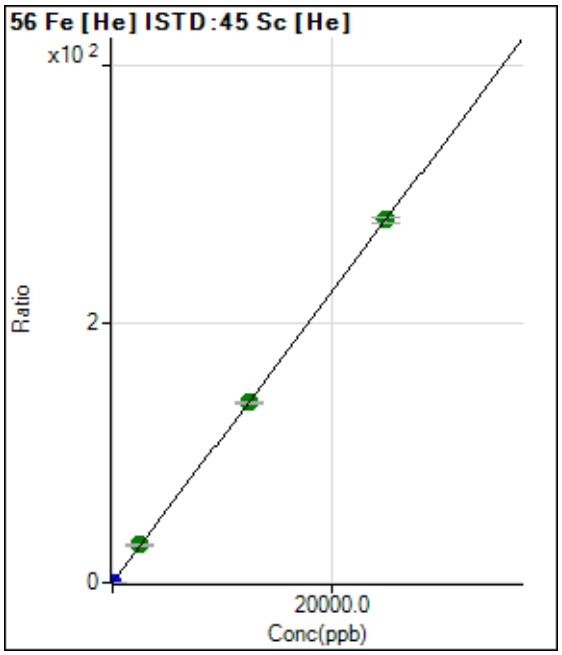
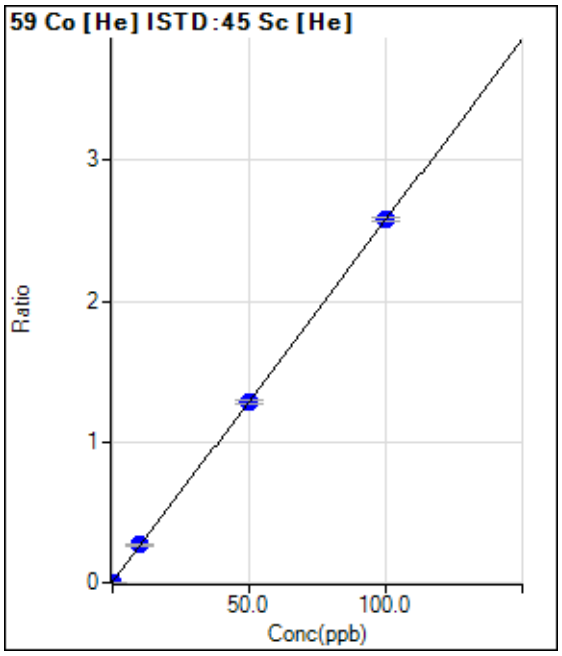


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3889.36	0.0238	P	9.3
2	☐	2500.000	2596.018	4685752.45	29.1004	A	8.8
3	☐	12500.000	12419.819	22670796.32	139.1312	A	1.8
4	☐	25000.000	25030.489	45405258.20	280.3763	A	1.3
5	☐			11211.57	0.0669	P	24.5

y = 0.0112 * x + 0.0238
R = 1.0000
DL = 0.5908
BEC = 2.126

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	487.79	0.0030	P	9.6
2	☐	10.000	10.296	43094.75	0.2676	P	8.9
3	☐	50.000	49.754	208893.82	1.2820	P	2.0
4	☐	100.000	100.093	417190.61	2.5760	P	0.9
5	☐			346.68	0.0021	P	10.6

y = 0.0257 * x + 0.0030
R = 1.0000
DL = 0.03358
BEC = 0.1162

Weight: <None>
Min Conc: <None>

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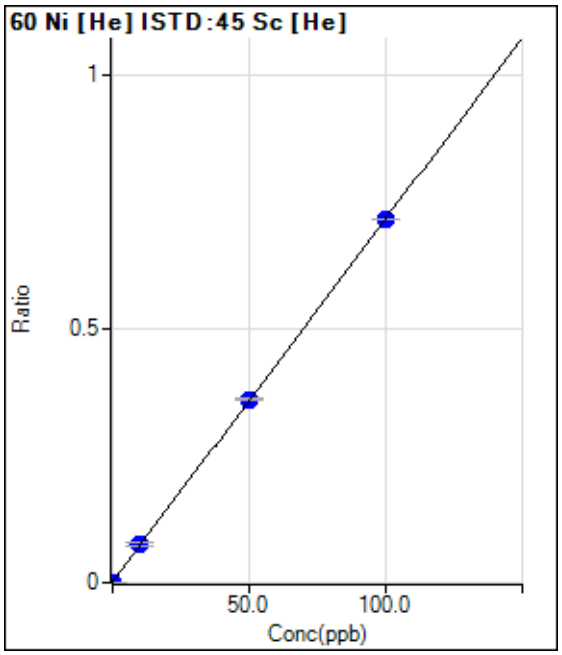
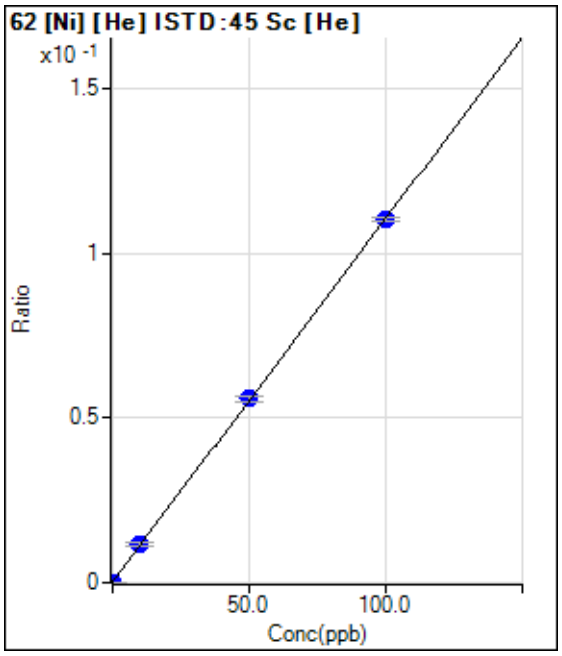


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	238.89	0.0015	P	3.8
2	☐	10.000	10.368	12143.11	0.0755	P	10.6
3	☐	50.000	50.312	58765.34	0.3606	P	1.5
4	☐	100.000	99.807	115642.15	0.7140	P	0.2
5	☐			170.00	0.0010	P	23.4

y = 0.0071 * x + 0.0015
R = 1.0000
DL = 0.02344
BEC = 0.2047

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.44	0.0002	P	15.0
2	☐	10.000	10.399	1874.57	0.0117	P	13.5
3	☐	50.000	50.418	9085.72	0.0558	P	2.6
4	☐	100.000	99.751	17837.88	0.1101	P	1.1
5	☐			38.89	0.0002	P	41.4

y = 0.0011 * x + 2.1081E-004
R = 1.0000
DL = 0.08631
BEC = 0.1913

Weight: <None>
Min Conc: <None>

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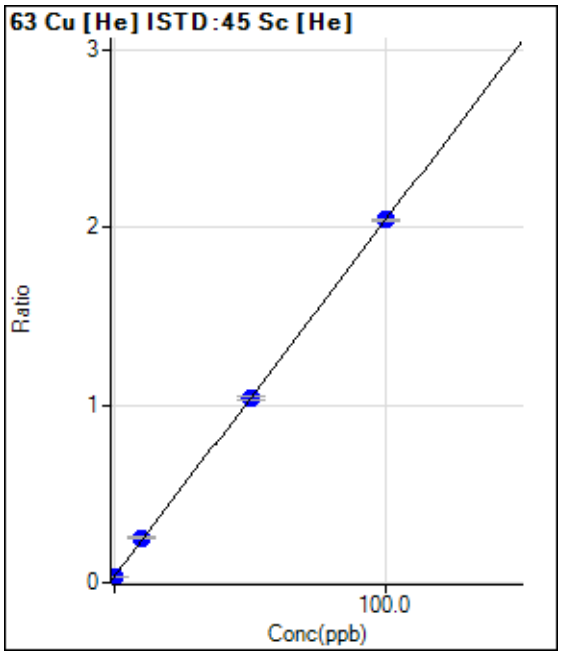
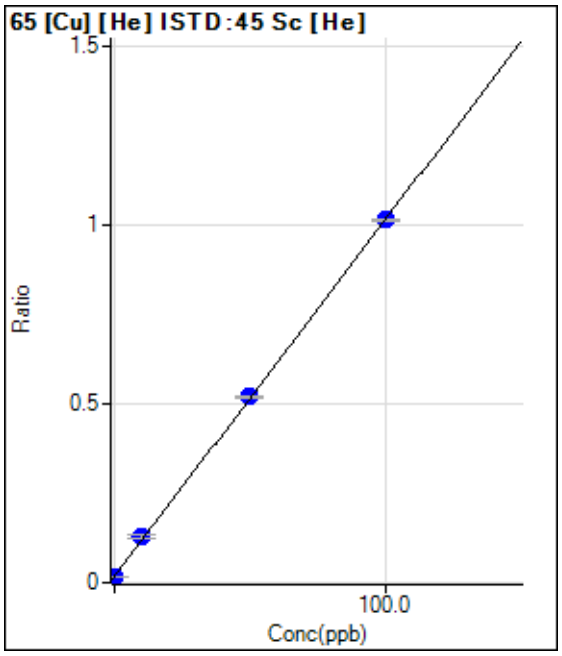


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	5249.71	0.0321	P	3.0
2		10.000	10.944	40687.00	0.2524	P	6.5
3		50.000	49.998	169197.18	1.0384	P	2.8
4		100.000	99.907	330868.78	2.0429	P	0.6
5				6018.84	0.0360	P	3.0

y = 0.0201 * x + 0.0321
R = 1.0000
DL = 0.1419
BEC = 1.596

Weight: <None>
Min Conc: <None>

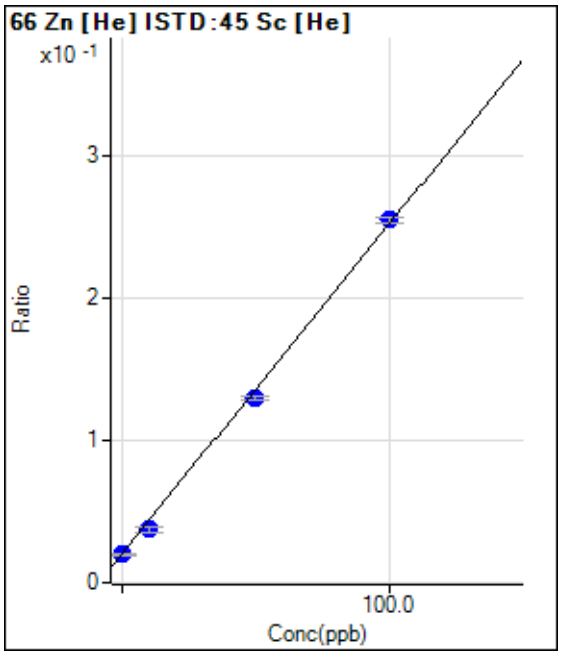


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	2530.21	0.0155	P	5.2
2		10.000	11.264	20638.65	0.1281	P	7.7
3		50.000	50.268	84421.15	0.5181	P	1.4
4		100.000	99.740	164023.11	1.0127	P	0.5
5				2865.82	0.0171	P	3.6

y = 0.0100 * x + 0.0155
R = 0.9999
DL = 0.2424
BEC = 1.548

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3258.12	0.0199	P	5.7
2	☐	10.000	7.613	6045.53	0.0376	P	10.5
3	☐	50.000	47.426	21161.47	0.1299	P	1.3
4	☐	100.000	101.526	41340.83	0.2553	P	1.3
5	☐			66.67	0.0004	P	14.5

y = 0.0023 * x + 0.0199

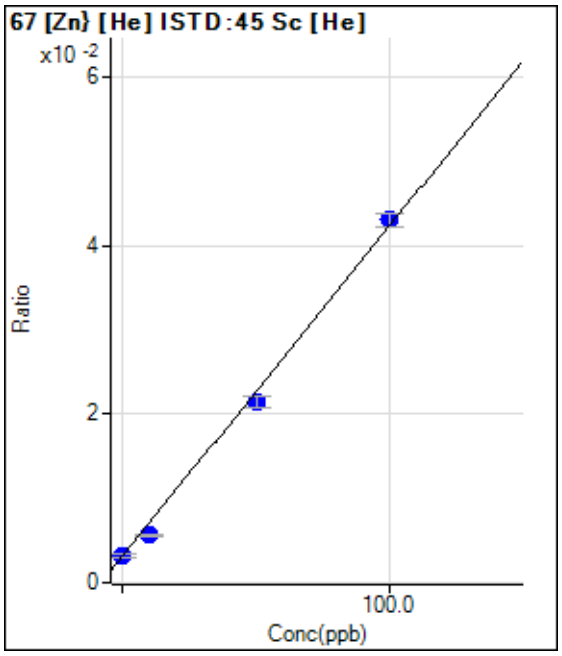
R = 0.9993

DL = 1.48

BEC = 8.595

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	522.24	0.0032	P	9.0
2	☐	10.000	6.209	907.81	0.0056	P	1.7
3	☐	50.000	46.811	3499.28	0.0215	P	6.0
4	☐	100.000	101.974	6963.68	0.0430	P	3.9
5	☐			11.11	0.0001	P	74.4

y = 3.9049E-004 * x + 0.0032

R = 0.9988

DL = 2.216

BEC = 8.177

Weight: <None>

Min Conc: <None>

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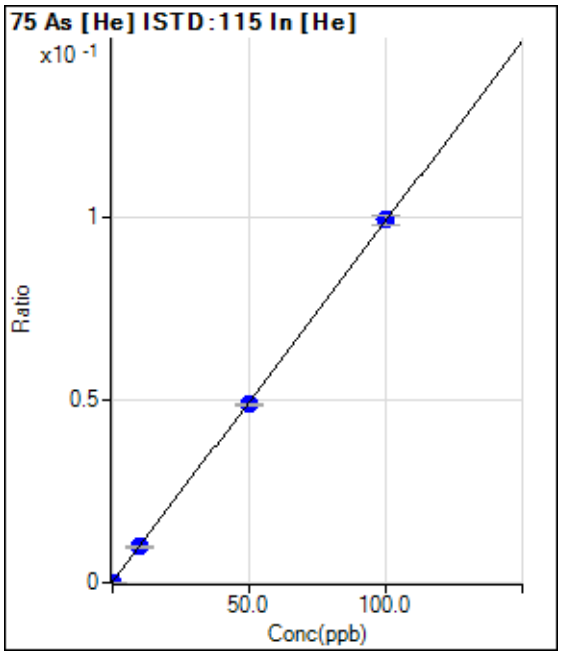


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29.08	0.0001	P	8.6
2	☐	10.000	9.907	2530.26	0.0099	P	6.4
3	☐	50.000	49.265	12392.67	0.0487	P	0.6
4	☐	100.000	100.377	24744.48	0.0991	P	2.4
5	☐			31.78	0.0001	P	4.6

y = 9.8620E-004 * x + 1.1282E-004

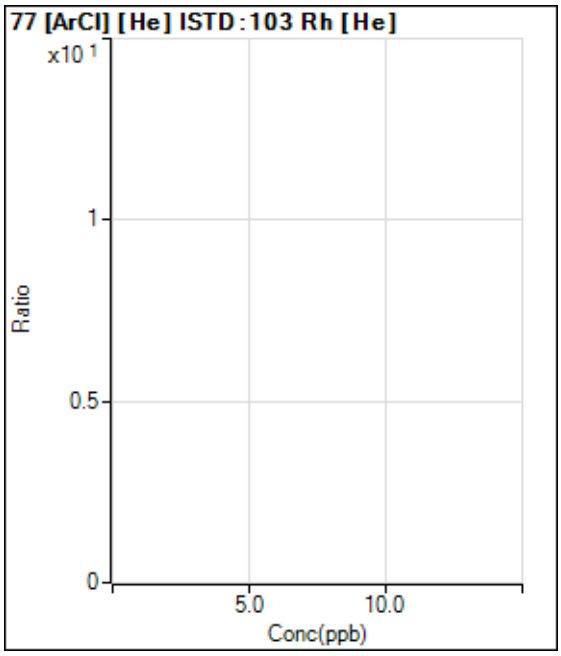
R = 1.0000

DL = 0.02942

BEC = 0.1144

Weight: <None>

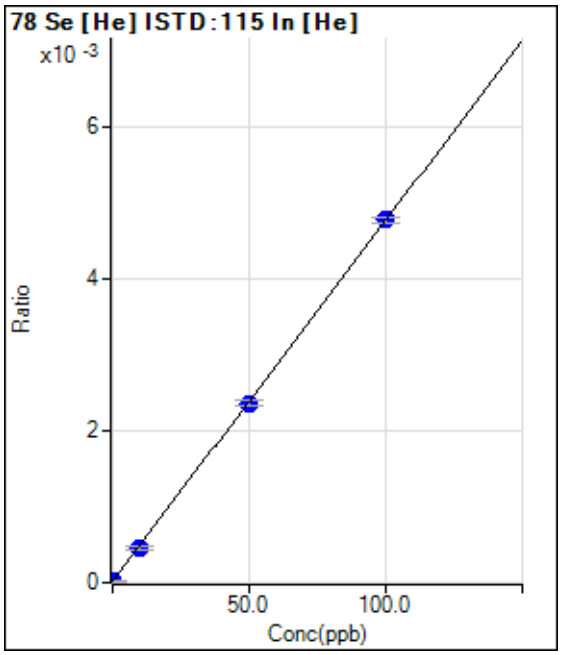
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			14.81	0.0000	P	86.6
2	☐			40.75	0.0000	P	11.9
3	☐			177.78	0.0002	P	41.3
4	☐			351.87	0.0004	P	22.1
5	☐			0.00	0.0000	P	

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.81	0.0000	P	54.0
2	☐	10.000	9.430	118.41	0.0005	P	8.9
3	☐	50.000	49.536	602.83	0.0024	P	3.6
4	☐	100.000	100.289	1193.74	0.0048	P	1.3
5	☐			5.97	0.0000	P	30.8

y = 4.7526E-005 * x + 1.4774E-005

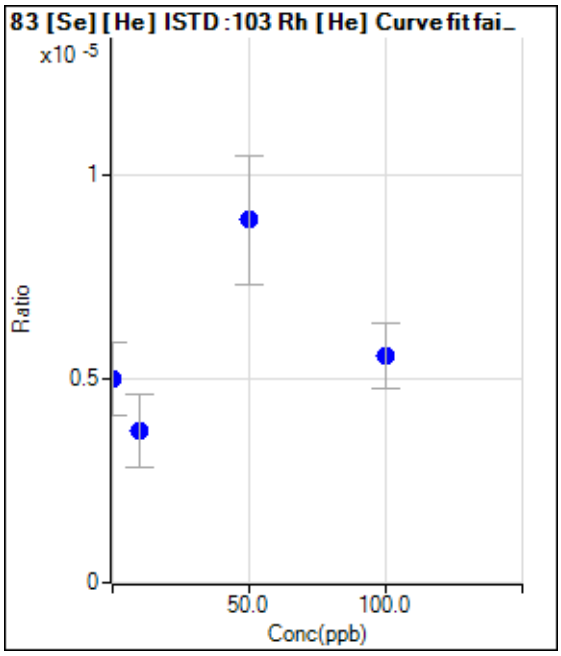
R = 1.0000

DL = 0.504

BEC = 0.3109

Weight: <None>

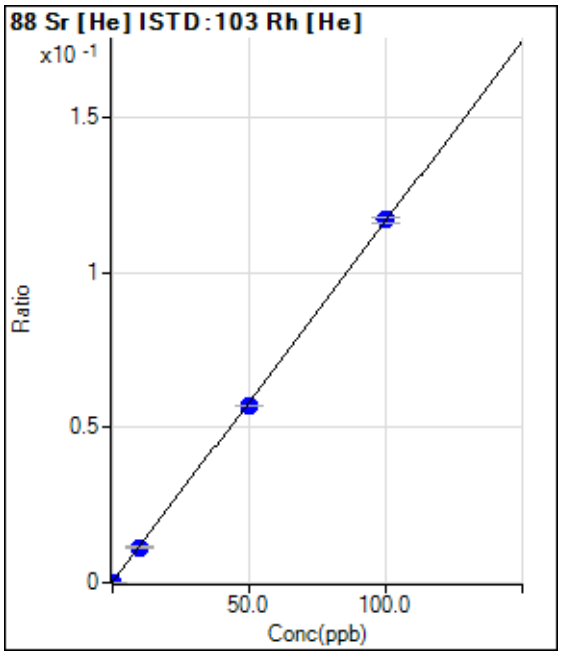
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		5.05	0.0000	P	35.3
2	☐	10.000		3.70	0.0000	P	48.0
3	☐	50.000		8.75	0.0000	P	35.5
4	☐	100.000		5.39	0.0000	P	28.8
5	☐			3.03	0.0000	P	33.3

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0001	P	32.8
2	☐	10.000	9.699	11532.78	0.0114	P	8.5
3	☐	50.000	49.091	56278.33	0.0573	P	0.2
4	☐	100.000	100.484	113377.44	0.1171	P	1.2
5	☐			30.00	0.0000	P	40.1

y = 0.0012 * x + 1.0580E-004

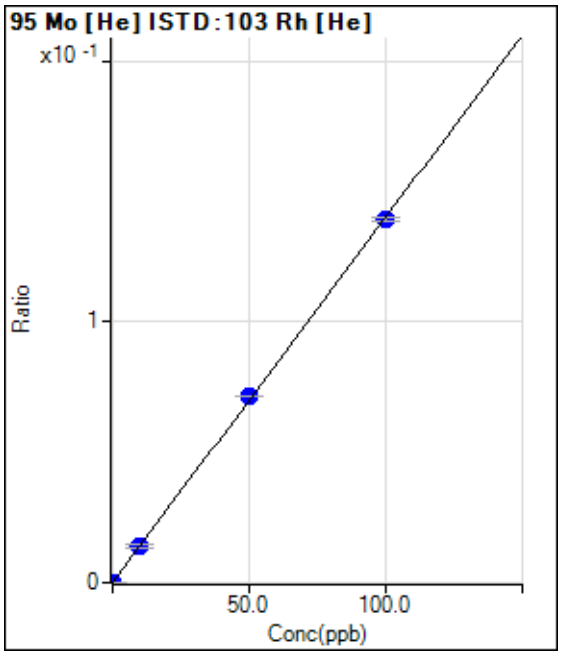
R = 0.9999

DL = 0.08928

BEC = 0.09086

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.55	0.0000	P	60.7
2	☐	10.000	9.863	13973.44	0.0138	P	10.1
3	☐	50.000	51.255	70503.11	0.0717	P	0.3
4	☐			191.11	0.0002	P	25.1
5	☐	100.000	99.386	144828.69	0.1391	P	1.1

y = 0.0014 * x + 2.5184E-005

R = 0.9999

DL = 0.03275

BEC = 0.018

Weight: <None>

Min Conc: <None>

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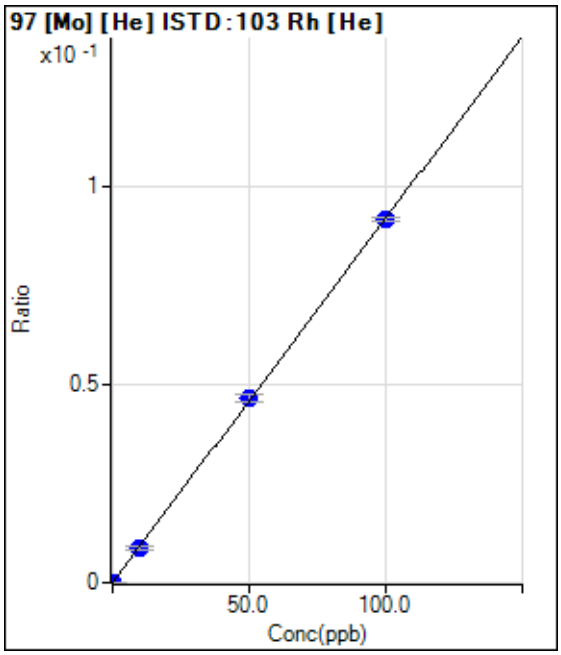


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	86.6
2	☐	10.000	9.683	9002.76	0.0089	P	11.2
3	☐	50.000	50.717	45839.54	0.0466	P	3.6
4	☐			96.30	0.0001	P	23.6
5	☐	100.000	99.673	95449.80	0.0917	P	1.0

y = 9.1967E-004 * x + 7.2912E-006

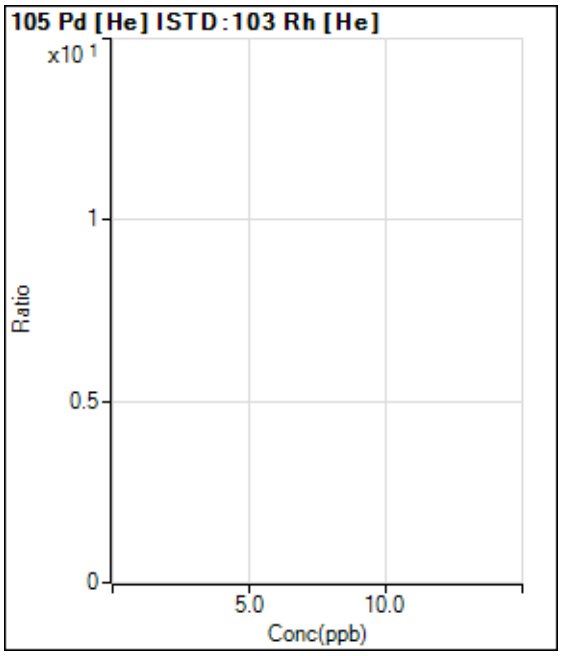
R = 0.9999

DL = 0.0206

BEC = 0.007928

Weight: <None>

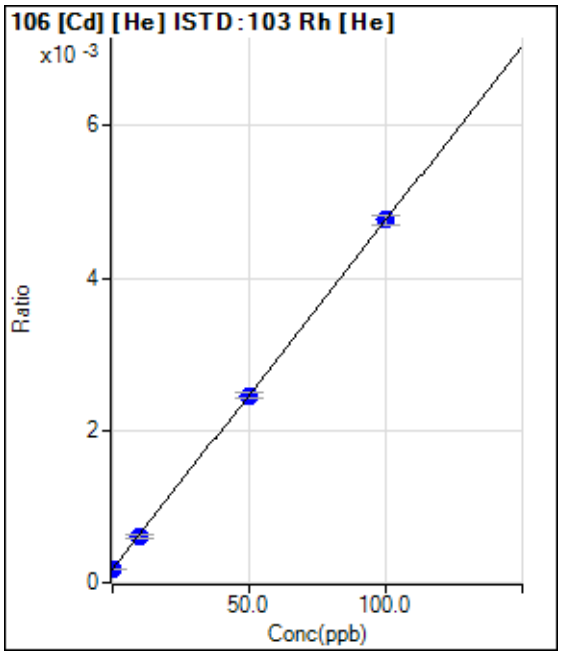
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			170.38	0.0002	P	37.2
2	☐			233.35	0.0002	P	60.7
3	☐			251.86	0.0003	P	32.8
4	☐			262.98	0.0003	P	6.9
5	☐			251.86	0.0002	P	12.7

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	179.80	0.0002	P	8.5
2	☐	10.000	9.528	622.24	0.0006	P	9.7
3	☐	50.000	49.797	2416.34	0.0025	P	3.5
4	☐	100.000	100.149	4613.76	0.0048	P	2.6
5	☐			173.07	0.0002	P	2.8

y = 4.5811E-005 * x + 1.7785E-004

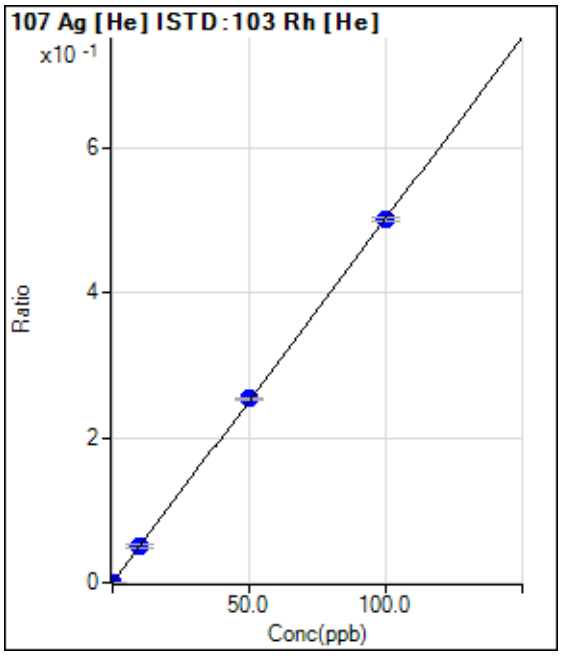
R = 1.0000

DL = 0.9896

BEC = 3.882

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	67.1
2	☐	10.000	10.037	50864.34	0.0503	P	10.1
3	☐	50.000	50.517	248838.85	0.2532	P	1.0
4	☐	100.000	99.738	483967.95	0.4999	P	0.9
5	☐			58.89	0.0001	P	46.1

y = 0.0050 * x + 1.3254E-005

R = 1.0000

DL = 0.005321

BEC = 0.002644

Weight: <None>

Min Conc: <None>

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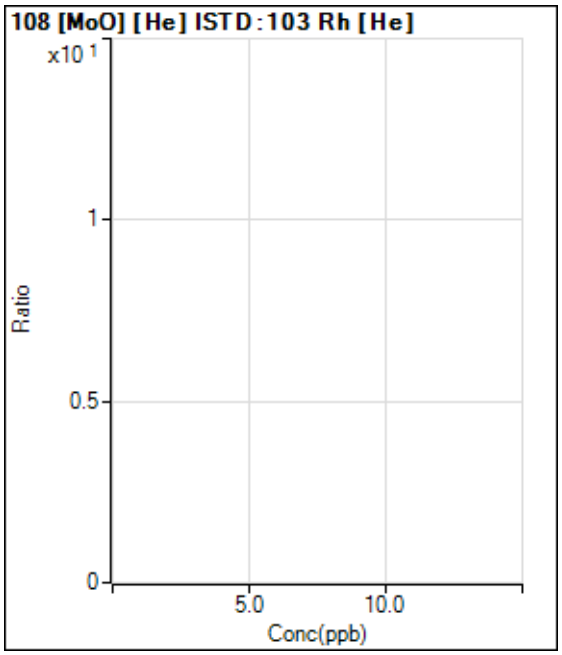
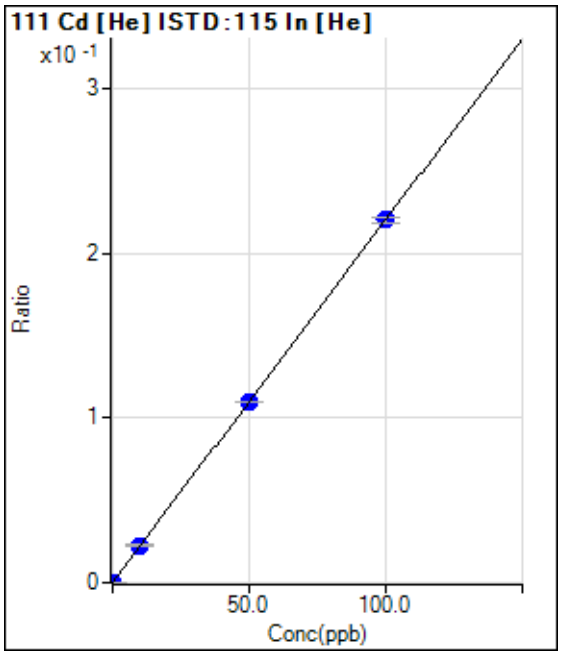


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.70	0.0000	P	173.2
2	☐			337.06	0.0003	P	30.9
3	☐			1637.19	0.0017	P	11.6
4	☐			3344.92	0.0035	P	7.9
5	☐			0.00	0.0000	P	

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.35	0.0000	P	114.1
2	☐	10.000	10.153	5722.88	0.0224	P	5.6
3	☐	50.000	49.827	27923.84	0.1097	P	0.8
4	☐	100.000	100.071	55020.51	0.2204	P	1.6
5	☐			20.16	0.0001	P	29.0

y = 0.0022 * x + 5.2026E-006

R = 1.0000

DL = 0.00809

BEC = 0.002363

Weight: <None>

Min Conc: <None>

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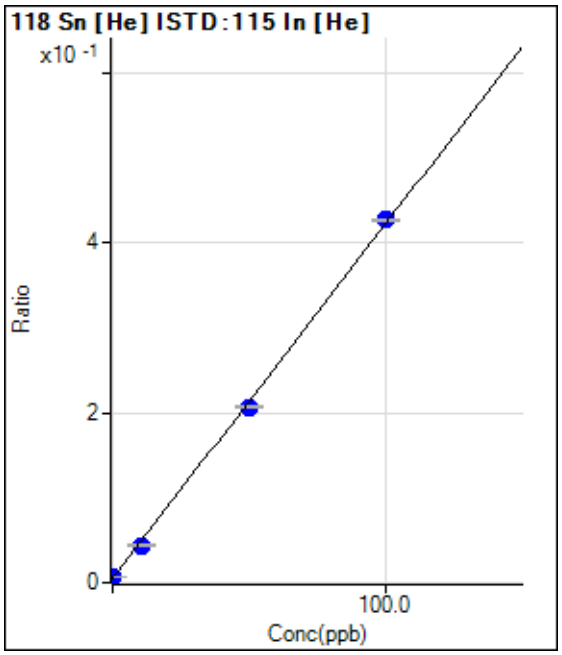
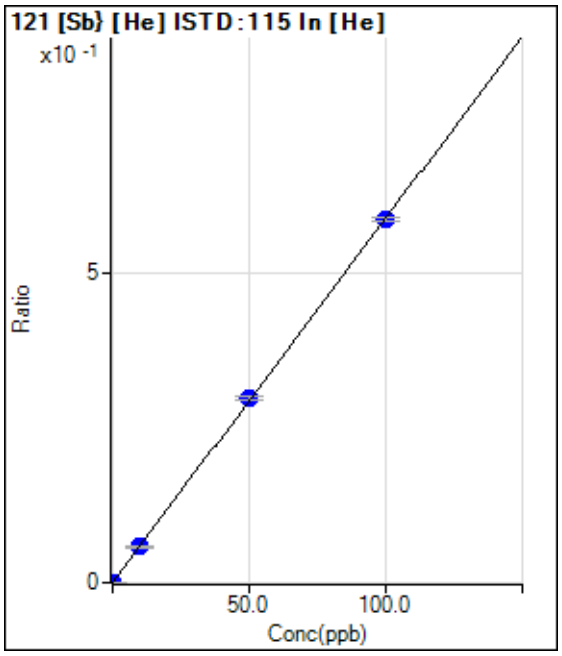


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1577.92	0.0061	P	8.4
2	☐	10.000	8.959	11126.29	0.0434	P	4.3
3	☐	50.000	48.074	52507.72	0.2063	P	1.0
4	☐			385.21	0.0015	P	40.6
5	☐	100.000	101.067	114166.51	0.4270	P	0.8

y = 0.0042 * x + 0.0061
R = 0.9997
DL = 0.3705
BEC = 1.47

Weight: <None>
Min Conc: <None>

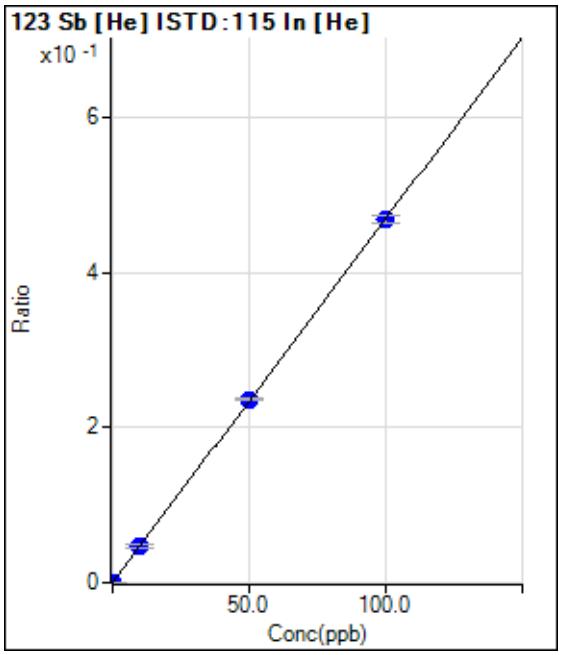


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.45	0.0001	P	20.6
2	☐	10.000	9.974	15051.20	0.0588	P	5.8
3	☐	50.000	50.671	75905.40	0.2983	P	1.6
4	☐			245.56	0.0010	P	14.5
5	☐	100.000	99.667	156810.44	0.5865	P	1.1

y = 0.0059 * x + 1.3372E-004
R = 1.0000
DL = 0.01406
BEC = 0.02273

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.56	0.0001	P	38.1
2	☐	10.000	10.024	12044.36	0.0471	P	8.2
3	☐	50.000	50.374	60149.39	0.2364	P	1.5
4	☐			197.78	0.0008	P	13.5
5	☐	100.000	99.811	125184.48	0.4682	P	2.1

y = 0.0047 * x + 9.9232E-005

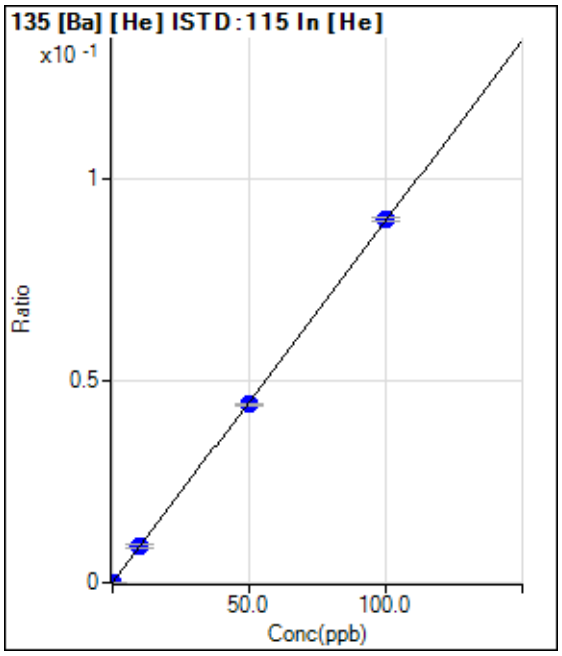
R = 1.0000

DL = 0.02418

BEC = 0.02116

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.44	0.0000	P	173.2
2	☐	10.000	10.316	2362.41	0.0092	P	10.5
3	☐	50.000	49.234	11217.16	0.0441	P	1.1
4	☐	100.000	100.352	22428.25	0.0898	P	1.1
5	☐			12.22	0.0000	P	78.8

y = 8.9495E-004 * x + 1.7278E-005

R = 0.9999

DL = 0.1003

BEC = 0.01931

Weight: <None>

Min Conc: <None>

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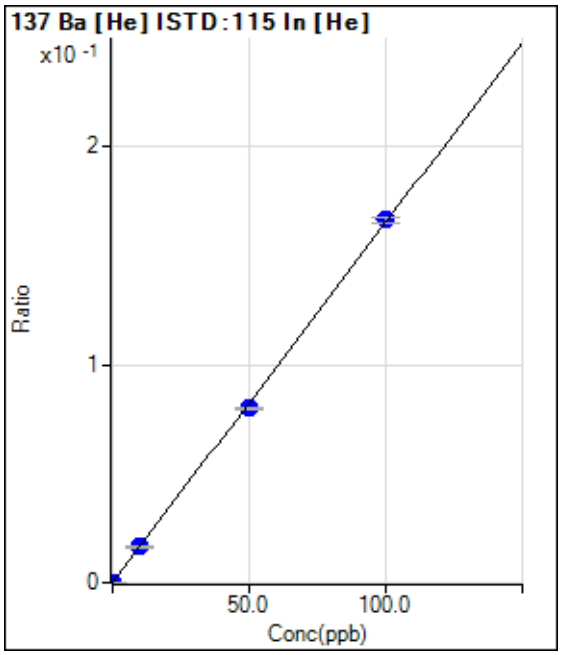
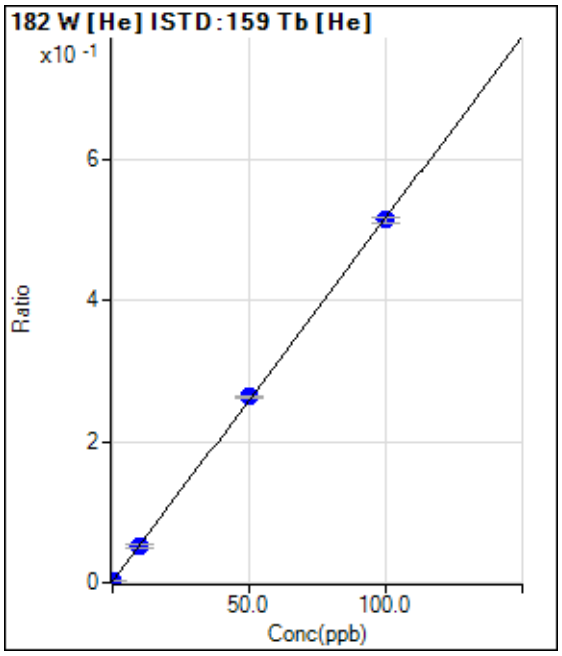


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	100.3
2	☐	10.000	9.901	4186.14	0.0164	P	5.6
3	☐	50.000	48.383	20317.92	0.0798	P	1.1
4	☐	100.000	100.818	41533.05	0.1663	P	1.3
5	☐			16.67	0.0001	P	19.2

y = 0.0016 * x + 2.5843E-005
R = 0.9998
DL = 0.04713
BEC = 0.01567

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1670.54	0.0014	P	1.3
2	☐	10.000	9.930	61365.16	0.0525	P	12.0
3	☐	50.000	50.952	299317.53	0.2636	P	1.1
4	☐			2700.37	0.0024	P	4.2
5	☐	100.000	99.531	596281.17	0.5136	P	1.9

y = 0.0051 * x + 0.0014
R = 0.9999
DL = 0.01134
BEC = 0.281

Weight: <None>
Min Conc: <None>

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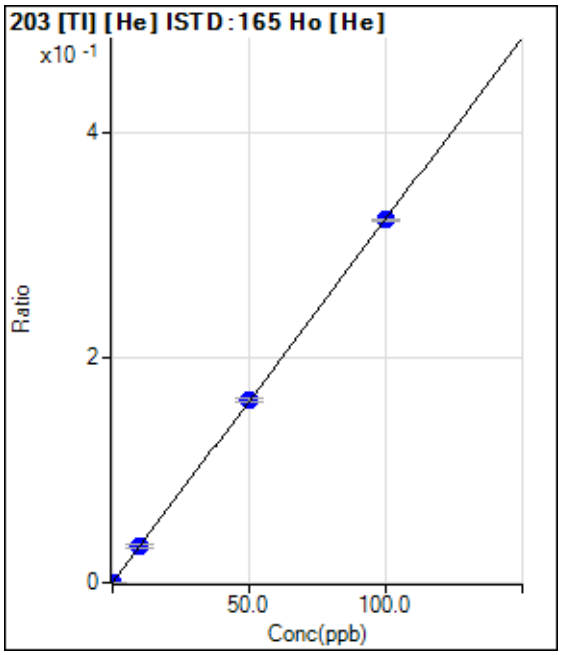
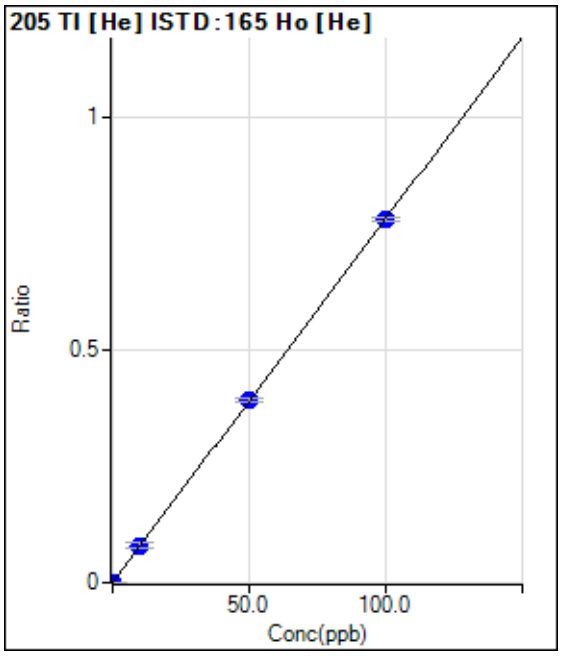


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.82	0.0000	P	114.5
2	☐	10.000	10.217	38261.57	0.0330	P	11.6
3	☐	50.000	50.267	186353.39	0.1621	P	1.2
4	☐	100.000	99.845	368816.13	0.3220	P	0.3
5	☐			425.95	0.0004	P	32.7

y = 0.0032 * x + 1.2912E-005
R = 1.0000
DL = 0.01375
BEC = 0.004004

Weight: <None>
Min Conc: <None>

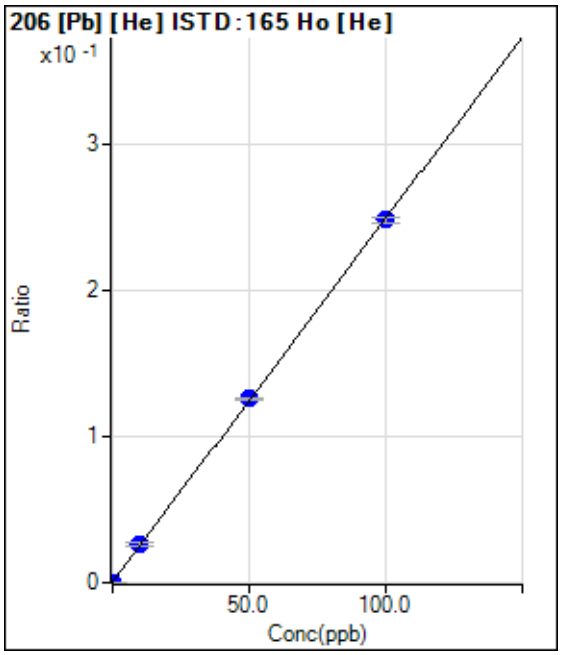


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	30.1
2	☐	10.000	10.244	92698.17	0.0799	P	12.5
3	☐	50.000	50.385	451677.01	0.3929	P	2.1
4	☐	100.000	99.783	891352.01	0.7782	P	1.2
5	☐			855.59	0.0007	P	18.6

y = 0.0078 * x + 2.9056E-005
R = 1.0000
DL = 0.003367
BEC = 0.003726

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	276.67	0.0002	P	20.0
2		10.000	10.396	30295.37	0.0261	P	10.9
3		50.000	50.521	144639.36	0.1258	P	1.6
4		100.000	99.700	284150.76	0.2481	P	1.3
5				380.01	0.0003	P	4.9

y = 0.0025 * x + 2.4111E-004

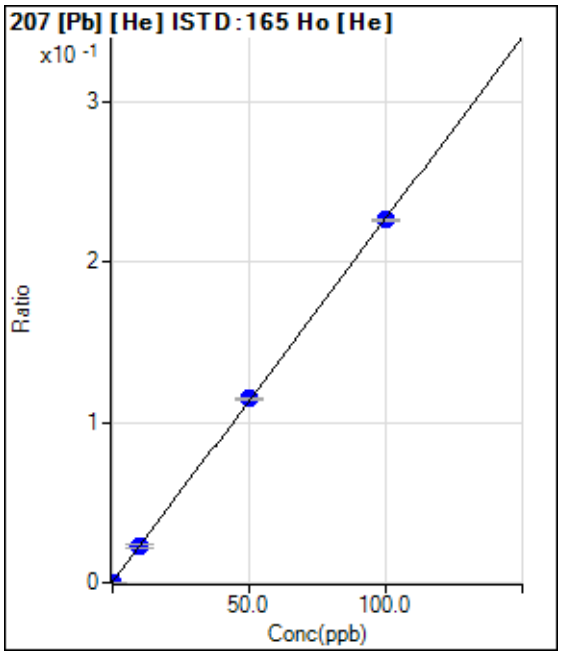
R = 1.0000

DL = 0.05808

BEC = 0.09699

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	270.01	0.0002	P	17.6
2		10.000	10.135	26978.34	0.0232	P	10.3
3		50.000	50.510	131931.61	0.1148	P	0.4
4		100.000	99.731	259311.88	0.2264	P	0.9
5				354.45	0.0003	P	3.3

y = 0.0023 * x + 2.3536E-004

R = 1.0000

DL = 0.05493

BEC = 0.1038

Weight: <None>

Min Conc: <None>

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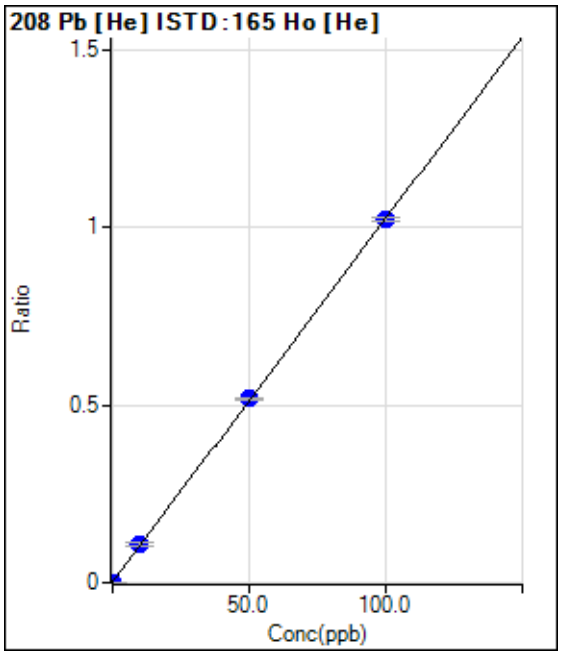

	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1212.26	0.0011	P	8.2
2	☐	10.000	10.295	123698.13	0.1065	P	11.0
3	☐	50.000	50.506	595912.18	0.5184	P	0.9
4	☐	100.000	99.717	1171179.22	1.0225	P	1.0
5	☐			1748.95	0.0015	P	6.7

y = 0.0102 * x + 0.0011

R = 1.0000

DL = 0.02534

BEC = 0.1031

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2467071
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:23:47-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.312	0.670	749554	0.66	40	93.3	89.5	110.5	
Be	9	45	NoGas	40.088	0.348	209067	0.51	40	100.2	89.5	110.5	
B	11	6	NoGas	40.946	2.800	148392	2.30	40	102.4	89.5	110.5	
Na	23	45	He	20525.175	1.534	9940411	0.53	20000	102.6	89.5	110.5	
Mg	24	45	He	20226.609	1.487	5487857	0.97	20000	101.1	89.5	110.5	
Al	27	45	He	205.232	1.484	23703	1.50	200	102.6	89.5	110.5	
K	39	45	He	20884.070	1.172	2793889	1.39	20000	104.4	89.5	110.5	
Ca	44	45	He	20257.055	1.417	157090	2.05	20000	101.3	89.5	110.5	
Ti	47	45	He	41.081	8.260	2287	7.82	40	102.7	89.5	110.5	
V	51	45	He	41.710	2.846	79843	2.14	40	104.3	89.5	110.5	
Cr	52	45	He	41.057	1.747	98520	1.90	40	102.6	89.5	110.5	
Mn	55	45	He	203.932	1.853	245689	1.73	200	102.0	89.5	110.5	
Fe	56	45	He	10133.365	1.470	19042529	1.55	10000	101.3	89.5	110.5	
Co	59	45	He	40.897	1.506	176841	1.11	40	102.2	89.5	110.5	
Ni	60	45	He	40.915	1.603	49237	0.27	40	102.3	89.5	110.5	
Cu	63	45	He	41.912	2.434	146876	1.70	40	104.8	89.5	110.5	
Zn	66	45	He	38.157	1.954	18178	1.04	40	95.4	89.5	110.5	
As	75	115	He	41.247	0.956	10788	0.54	40	103.1	89.5	110.5	
Se	78	115	He	41.351	4.352	524	3.63	40	103.4	89.5	110.5	
Sr	88	103	He	39.238	0.847	46457	0.67	40	98.1	89.5	110.5	
Mo	95	103	He	41.270	1.411	58608	1.45	40	103.2	89.5	110.5	
Ag	107	103	He	40.645	1.128	206677	1.10	40	101.6	89.5	110.5	
Cd	111	115	He	40.614	0.394	23654	0.43	40	101.5	89.5	110.5	
Sn	118	115	He	39.232	1.056	44826	0.66	40	98.1	89.5	110.5	
Sb	123	115	He	40.142	1.323	49822	1.72	40	100.4	89.5	110.5	
Ba	137	115	He	39.135	1.541	17080	0.84	40	97.8	89.5	110.5	
W	182	159	He	39.966	1.358	243248	1.71	40	99.9	89.5	110.5	
Tl	205	165	He	40.327	2.341	369052	1.86	40	100.8	89.5	110.5	
Pb	208	165	He	40.684	1.111	490280	0.50	40	101.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1293105	0.82	1276810	101.28	60	120	
Sc	45	He	167758	1.69	163460	102.63	60	120	
Sc	45	NoGas	9350753	0.79	8842934	105.74	60	120	
Rh	103	He	1014403	0.65	1010526	100.38	60	120	
In	115	He	264468	0.71	257801	102.59	60	120	
Tb	159	He	1174428	0.41	1155473	101.64	60	120	
Ho	165	He	1173520	0.61	1147359	102.28	60	120	
Bi	209	He	772554	0.73	790610	97.72	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:27:58-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.036	245.5	4	114.6	20	
W	182	1	He	0.189	18.7	2871	7.6	10	
Ca	44	1	He	-64.843	-7.9	279	14.2	1000	
Na	23	1	He	3.509	15.5	10878	2.6	1000	
Mg	24	1	He	0.136	269.6	870	11.9	1000	
K	39	1	He	-0.684	-636.4	11070	5.5	1000	
V	51	1	He	0.053	71.2	298	25.4	2	
Cr	52	1	He	-0.047	-39.8	846	5.0	2	
Mn	55	1	He	-1.117	-0.5	181	4.2	2	
Fe	56	1	He	1.521	34.6	7112	14.2	50	
Co	59	1	He	-0.042	-12.2	333	6.6	1	
Ni	60	1	He	-0.090	-36.5	142	29.3	2	
Cu	63	1	He	-0.168	-34.8	5006	3.6	2	
Zn	66	1	He	-8.125	-1.0	190	16.9	20	
As	75	1	He	0.036	30.7	41	7.9	2	
Se	78	1	He	0.059	308.2	5	48.8	2	
Sr	88	1	He	-0.037	-35.9	68	24.8	10	
Mo	95	1	He	0.092	41.0	166	34.3	2	
Ag	107	1	He	0.001	71.2	21	24.1	0.2	
Cd	111	1	He	0.017	31.8	11	28.4	0.2	
Ba	137	1	He	0.004	281.3	9	57.3	5	
Sn	118	1	He	-0.989	-0.3	548	1.2	10	
Tl	205	1	He	0.046	23.2	461	21.1	0.5	
Pb	208	1	He	0.015	101.3	1444	13.1	0.5	
Al	27	1	He	-1.097	-22.0	186	15.0	50	
Sb	123	1	He	0.123	24.4	186	20.4	2	
B	11	2	NoGas	0.863	6.9	13561	1.5	20	
Be	9	2	NoGas	0.012	85.3	167	33.3	1	
Li	7	2	NoGas	-0.086	-84.7	89774	1.3	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303390	0.16	1276810	102.08	60	120	
Sc	45	1	He	174157	0.48	163460	106.54	60	120	
Sc	45	2	NoGas	9366308	0.23	8842934	105.92	60	120	
Rh	103	1	He	1072314	1.18	1010526	106.11	60	120	

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In	115	1	He	273880	0.49	257801	106.24	60	120	
Tb	159	1	He	1187611	0.26	1155473	102.78	60	120	
Ho	165	1	He	1190989	0.32	1147359	103.80	60	120	
Bi	209	1	He	805091	1.08	790610	101.83	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:32:08-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.391	7.391	1.535	222689	0.56	8	92.4	69.5	130.5	
Be	9	2	NoGas	0.962	0.962	3.859	5145	4.17	1	96.2	69.5	130.5	
B	11	2	NoGas	19.749	19.749	1.527	77993	0.25	20	98.7	69.5	130.5	
Na	23	1	He	963.429	963.429	2.140	489659	0.85	1000	96.3	69.5	130.5	
Mg	24	1	He	974.802	974.802	1.856	273458	0.94	1000	97.5	69.5	130.5	
Al	27	1	He	49.625	49.625	2.002	6147	1.84	50	99.3	69.5	130.5	
K	39	1	He	979.055	979.055	1.967	145589	0.28	1000	97.9	69.5	130.5	
Ca	44	1	He	900.656	900.656	2.591	7957	1.65	1000	90.1	69.5	130.5	
Ti	47	1	He	10.012	10.012	16.938	576	15.48	10	100.1	69.5	130.5	
V	51	1	He	5.140	5.140	5.497	10309	3.75	5	102.8	69.5	130.5	
Cr	52	1	He	2.076	2.076	1.744	6042	0.52	2	103.8	69.5	130.5	
Mn	55	1	He	3.798	3.798	0.734	6248	1.47	5	76.0	69.5	130.5	
Fe	56	1	He	104.706	104.706	3.824	206874	2.24	100	104.7	69.5	130.5	
Co	59	1	He	0.981	0.981	3.375	4879	4.24	1	98.1	69.5	130.5	
Ni	60	1	He	1.957	1.957	3.486	2668	2.58	2	97.8	69.5	130.5	
Cu	63	1	He	1.797	1.797	4.978	11808	2.07	2	89.8	69.5	130.5	
Zn	66	1	He	13.982	13.982	6.669	9050	3.75	20	69.9	69.5	130.5	
As	75	1	He	5.154	5.154	2.475	1416	1.77	5	103.1	69.5	130.5	
Se	78	1	He	5.449	5.449	0.702	75	1.33	5	109.0	69.5	130.5	
Sr	88	1	He	9.302	9.302	2.296	11682	2.91	10	93.0	69.5	130.5	
Mo	95	1	He	5.180	5.180	3.126	7768	3.86	5	103.6	69.5	130.5	
Ag	107	1	He	1.015	1.015	1.024	5446	0.84	1	101.5	69.5	130.5	
Cd	111	1	He	0.984	0.984	3.877	592	3.50	1	98.4	69.5	130.5	
Sn	118	1	He	8.953	8.953	6.171	11834	5.52	10	89.5	69.5	130.5	
Sb	123	1	He	2.094	2.094	1.656	2705	1.23	2	104.7	69.5	130.5	
Ba	137	1	He	4.717	4.717	5.176	2128	4.57	5	94.3	69.5	130.5	
W	182	1	He	9.994	9.994	2.295	62455	2.59	10	99.9	69.5	130.5	
Tl	205	1	He	1.007	1.007	2.664	9395	1.81	1	100.7	69.5	130.5	
Pb	208	1	He	1.037	1.037	0.918	13925	0.68	1	103.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1309309	1.38	1276810	102.55	60	120	
Sc	45	1	He	172959	1.67	163460	105.81	60	120	
Sc	45	2	NoGas	9398141	0.39	8842934	106.28	60	120	
Rh	103	1	He	1067876	0.76	1010526	105.68	60	120	
In	115	1	He	272622	0.67	257801	105.75	60	120	
Tb	159	1	He	1181102	1.07	1155473	102.22	60	120	
Ho	165	1	He	1192264	0.87	1147359	103.91	60	120	
Bi	209	1	He	800242	0.74	790610	101.22	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:36:20-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.221	12.8	90844	0.8	4	
Be	9	45	2	NoGas	0.005	80.6	122	15.7	2	
B	11	6	2	NoGas	0.913	1.4	13302	0.6	20	
Na	23	45	1	He	50630.602	1.2	23548527	0.4	75200	
Mg	24	45	1	He	50726.899	1.2	13223125	0.7	75200	
Al	27	45	1	He	53498.082	1.2	5860697	0.6	75200	
K	39	45	1	He	49918.194	0.2	6402175	0.7	75200	
Ca	44	45	1	He	50118.852	1.8	372301	1.0	75200	
Ti	47	45	1	He	994.869	2.6	53171	2.4	1505	
V	51	45	1	He	-0.209	-39.9	-204	-74.0	4	
Cr	52	45	1	He	0.663	11.7	2404	7.2	4	
Mn	55	45	1	He	-0.847	-3.9	478	7.1	4	
Fe	56	45	1	He	49854.898	1.2	89998696	0.5	75200	
Co	59	45	1	He	-0.033	-28.9	344	11.5	2	
Ni	60	45	1	He	-0.043	-16.8	186	3.7	4	
Cu	63	45	1	He	0.114	8.4	5549	1.2	4	
Zn	66	45	1	He	-7.932	-0.7	248	9.5	20	
As	75	115	1	He	0.083	56.1	48	23.0	4	
Se	78	115	1	He	0.428	48.2	9	27.3	4	
Sr	88	103	1	He	0.316	11.7	448	9.2	20	
Mo	95	103	1	He	1106.971	3.8	1462272	3.7	1505	
Ag	107	103	1	He	0.013	35.7	72	29.7	1	
Cd	111	115	1	He	-0.032	-5.1	-16	-5.8	1	
Sn	118	115	1	He	-1.144	-10.4	333	36.1	20	
Sb	123	115	1	He	0.055	50.3	88	35.9	4	
Ba	137	115	1	He	0.028	74.0	18	47.2	2	
W	182	159	1	He	0.147	15.5	2497	6.7	20	
Tl	205	165	1	He	0.006	12.6	83	8.0	2	
Pb	208	165	1	He	0.101	6.6	2387	3.9	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1262797	0.84	1276810	98.90	60	120	
Sc	45	1	He	161177	0.88	163460	98.60	60	120	
Sc	45	2	NoGas	8938523	0.74	8842934	101.08	60	120	
Rh	103	1	He	944019	0.44	1010526	93.42	60	120	
In	115	1	He	245923	0.80	257801	95.39	60	120	
Tb	159	1	He	1134148	1.47	1155473	98.15	60	120	
Ho	165	1	He	1142916	0.73	1147359	99.61	60	120	
Bi	209	1	He	742094	0.37	790610	93.86	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:40:27-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	101.671	1.630	1854752	1.67	100	101.7	49.5	150.5	
Be	9	45	2	NoGas	101.847	0.112	522403	0.27	100	101.8	49.5	150.5	
B	11	6	2	NoGas	107.497	0.720	356357	0.60	100	107.5	49.5	150.5	
Na	23	45	1	He	50777.628	0.625	24003037	0.38	50000	101.6	49.5	150.5	
Mg	24	45	1	He	50896.593	0.680	13484160	0.50	50000	101.8	49.5	150.5	
Al	27	45	1	He	53663.033	1.094	5974796	0.90	50000	107.3	49.5	150.5	
K	39	45	1	He	51230.863	1.590	6677193	1.34	50000	102.5	49.5	150.5	
Ca	44	45	1	He	50772.097	2.155	383314	1.98	50000	101.5	49.5	150.5	
Ti	47	45	1	He	1116.844	2.262	60666	2.30	1100	101.5	49.5	150.5	
V	51	45	1	He	103.350	2.829	192950	3.05	100	103.3	49.5	150.5	
Cr	52	45	1	He	102.817	0.741	239564	0.94	100	102.8	49.5	150.5	
Mn	55	45	1	He	102.490	0.337	121312	0.58	100	102.5	49.5	150.5	
Fe	56	45	1	He	50125.696	1.634	91965743	1.48	50000	100.3	49.5	150.5	
Co	59	45	1	He	103.543	1.134	436471	0.89	100	103.5	49.5	150.5	
Ni	60	45	1	He	103.261	1.283	120988	1.04	100	103.3	49.5	150.5	
Cu	63	45	1	He	102.789	1.776	344143	1.86	100	102.8	49.5	150.5	
Zn	66	45	1	He	105.747	1.669	43417	1.49	100	105.7	49.5	150.5	
As	75	115	1	He	106.551	0.917	26428	1.64	100	106.6	49.5	150.5	
Se	78	115	1	He	103.860	4.637	1244	5.20	100	103.9	49.5	150.5	
Sr	88	103	1	He	102.023	0.708	114819	0.46	100	102.0	49.5	150.5	
Mo	95	103	1	He	1239.142	1.242	1674451	1.83	1100	112.6	49.5	150.5	
Ag	107	103	1	He	102.166	1.614	494492	1.39	100	102.2	49.5	150.5	
Cd	111	115	1	He	101.798	0.324	56317	0.52	100	101.8	49.5	150.5	
Sn	118	115	1	He	111.425	0.294	118113	0.78	100	111.4	49.5	150.5	
Sb	123	115	1	He	103.156	1.109	121580	1.51	100	103.2	49.5	150.5	
Ba	137	115	1	He	102.948	0.315	42672	0.88	100	102.9	49.5	150.5	
W	182	159	1	He	103.133	2.756	607599	2.00	100	103.1	49.5	150.5	
Tl	205	165	1	He	99.092	1.325	891641	0.97	100	99.1	49.5	150.5	
Pb	208	165	1	He	100.971	1.077	1194617	0.37	100	101.0	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1237238	0.98	1276810	96.90	60	120	
Sc	45	1	He	163802	0.24	163460	100.21	60	120	
Sc	45	2	NoGas	9199345	0.17	8842934	104.03	60	120	
Rh	103	1	He	965613	0.61	1010526	95.56	60	120	
In	115	1	He	251224	0.76	257801	97.45	60	120	
Tb	159	1	He	1141896	0.84	1155473	98.82	60	120	
Ho	165	1	He	1153882	0.74	1147359	100.57	60	120	
Bi	209	1	He	749556	2.10	790610	94.81	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:44:35-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	46.073	0.949	938858	0.23	50	92.1	89.5	110.5	
Be	9	45	2	NoGas	48.569	0.562	263010	1.02	50	97.1	89.5	110.5	
B	11	6	2	NoGas	49.463	2.116	184810	1.33	50	98.9	89.5	110.5	
Na	23	45	1	He	25528.748	2.798	12647318	1.52	25000	102.1	89.5	110.5	
Mg	24	45	1	He	25031.740	3.296	6947647	1.69	25000	100.1	89.5	110.5	
Al	27	45	1	He	255.079	2.245	30064	0.50	250	102.0	89.5	110.5	
K	39	45	1	He	25271.418	2.588	3456340	0.83	25000	101.1	89.5	110.5	
Ca	44	45	1	He	24838.746	2.743	196863	1.08	25000	99.4	89.5	110.5	
Ti	47	45	1	He	50.415	4.316	2871	3.86	50	100.8	89.5	110.5	
V	51	45	1	He	49.852	3.062	97596	1.43	50	99.7	89.5	110.5	
Cr	52	45	1	He	50.255	3.463	123144	1.84	50	100.5	89.5	110.5	
Mn	55	45	1	He	250.606	3.668	308486	1.91	250	100.2	89.5	110.5	
Fe	56	45	1	He	12586.012	3.851	24191580	2.10	12500	100.7	89.5	110.5	
Co	59	45	1	He	50.546	3.626	223459	1.90	50	101.1	89.5	110.5	
Ni	60	45	1	He	51.178	2.467	62949	0.78	50	102.4	89.5	110.5	
Cu	63	45	1	He	51.175	2.888	182265	1.36	50	102.4	89.5	110.5	
Zn	66	45	1	He	46.846	4.367	22053	2.25	50	93.7	89.5	110.5	
As	75	115	1	He	50.753	0.332	13214	1.05	50	101.5	89.5	110.5	
Se	78	115	1	He	51.523	2.015	649	2.75	50	103.0	89.5	110.5	
Sr	88	103	1	He	50.112	0.963	59503	1.70	50	100.2	89.5	110.5	
Mo	95	103	1	He	53.687	1.661	76490	1.99	50	107.4	89.5	110.5	
Ag	107	103	1	He	50.560	0.237	257954	0.81	50	101.1	89.5	110.5	
Cd	111	115	1	He	50.417	1.016	29246	1.76	50	100.8	89.5	110.5	
Sn	118	115	1	He	48.132	2.647	54410	2.76	50	96.3	89.5	110.5	
Sb	123	115	1	He	50.194	1.895	62041	2.40	50	100.4	89.5	110.5	
Ba	137	115	1	He	49.878	2.101	21678	1.65	50	99.8	89.5	110.5	
W	182	159	1	He	50.589	0.544	304813	1.28	50	101.2	89.5	110.5	
Tl	205	165	1	He	50.409	0.902	459718	1.37	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.243	0.775	603056	1.10	50	100.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349692	0.68	1276810	105.71	60	120	
Sc	45	1	He	171658	1.76	163460	105.02	60	120	
Sc	45	2	NoGas	9710041	0.67	8842934	109.81	60	120	
Rh	103	1	He	1017800	0.80	1010526	100.72	60	120	
In	115	1	He	263396	0.76	257801	102.17	60	120	
Tb	159	1	He	1164351	0.75	1155473	100.77	60	120	
Ho	165	1	He	1169355	0.75	1147359	101.92	60	120	
Bi	209	1	He	765724	0.99	790610	96.85	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:48:46-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.120	-31.6	93344	0.8	8	
Be	9	45	2	NoGas	0.088	8.3	589	6.8	1	
B	11	6	2	NoGas	2.347	6.2	19211	3.2	20	
Na	23	45	1	He	43.792	4.3	31721	1.9	1000	
Mg	24	45	1	He	36.213	5.4	11245	3.8	1000	
Al	27	45	1	He	1.200	12.4	467	5.0	50	
K	39	45	1	He	35.266	22.7	16360	7.1	1000	
Ca	44	45	1	He	52.912	28.0	1247	10.8	1000	
Ti	47	45	1	He	0.110	30.7	9	21.6	20	
V	51	45	1	He	0.037	422.4	274	115.8	2	
Cr	52	45	1	He	0.039	92.6	1079	9.6	2	
Mn	55	45	1	He	0.269	19.5	1941	2.6	2	
Fe	56	45	1	He	22.126	0.9	48240	2.0	50	
Co	59	45	1	He	0.020	44.7	620	6.5	1	
Ni	60	45	1	He	0.063	120.8	340	29.2	2	
Cu	63	45	1	He	0.039	303.7	5844	7.4	2	
Zn	66	45	1	He	-0.525	-62.8	3321	3.6	20	
As	75	115	1	He	0.111	9.0	61	4.1	2	
Se	78	115	1	He	0.186	108.5	6	40.7	2	
Sr	88	103	1	He	0.074	10.9	208	4.9	10	
Mo	95	103	1	He	0.565	6.9	882	7.0	2	
Ag	107	103	1	He	0.066	16.6	373	16.1	0.2	
Cd	111	115	1	He	0.101	8.8	62	8.9	0.2	
Sn	118	115	1	He	-0.020	-90.0	1652	1.0	10	
Sb	123	115	1	He	0.223	4.7	313	4.6	2	
Ba	137	115	1	He	0.078	24.1	42	19.9	5	
W	182	159	1	He	0.356	14.4	3908	7.7	10	
Tl	205	165	1	He	0.124	12.2	1187	11.5	0.5	
Pb	208	165	1	He	0.090	9.8	2360	4.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1346317	0.94	1276810	105.44	60	120	
Sc	45	1	He	177581	1.20	163460	108.64	60	120	
Sc	45	2	NoGas	9805804	0.03	8842934	110.89	60	120	
Rh	103	1	He	1081539	0.46	1010526	107.03	60	120	
In	115	1	He	273721	0.42	257801	106.18	60	120	
Tb	159	1	He	1192978	0.79	1155473	103.25	60	120	
Ho	165	1	He	1192086	0.34	1147359	103.90	60	120	
Bi	209	1	He	807766	0.87	790610	102.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228593/1-a
Data File Name	014_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T13:56:09-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.078	-37.9	94028	1.3	8	
Be	9	45	2	NoGas	0.015	96.0	189	41.2	1	
B	11	6	2	NoGas	2.134	12.3	19270	6.7	20	
Na	23	45	1	He	39.229	5.3	29383	3.8	1000	
Mg	24	45	1	He	78.761	3.7	23460	3.3	1000	
Al	27	45	1	He	0.807	26.1	419	5.3	50	
K	39	45	1	He	8.101	7.4	12523	0.3	1000	
Ca	44	45	1	He	163.929	5.8	2152	3.5	1000	
Ti	47	45	1	He	0.128	191.5	10	145.3	20	
V	51	45	1	He	-0.218	-107.9	-242	-196.2	2	
Cr	52	45	1	He	-0.005	-113.9	967	2.1	2	
Mn	55	45	1	He	-0.783	-5.2	608	9.3	2	
Fe	56	45	1	He	5.874	4.3	15904	2.5	50	
Co	59	45	1	He	-0.048	-9.0	313	6.6	1	
Ni	60	45	1	He	0.014	206.6	278	13.9	2	
Cu	63	45	1	He	0.547	28.5	7661	7.7	2	
Zn	66	45	1	He	-2.483	-13.9	2515	5.0	20	
As	75	115	1	He	0.022	80.9	37	13.1	2	
Se	78	115	1	He	-0.020	-428.6	4	30.1	2	
Sr	88	103	1	He	0.521	6.7	778	6.4	10	
Mo	95	103	1	He	0.152	6.5	259	5.2	2	
Ag	107	103	1	He	0.000	-13845.1	14	26.7	0.2	
Cd	111	115	1	He	0.006	97.4	5	71.3	0.2	
Sn	118	115	1	He	-0.637	-17.3	959	13.4	10	
Sb	123	115	1	He	0.047	11.1	89	7.8	2	
Ba	137	115	1	He	0.791	5.9	368	5.8	5	
W	182	159	1	He	0.058	27.4	2089	3.5	10	
Tl	205	165	1	He	0.006	36.5	91	22.1	0.5	
Pb	208	165	1	He	0.014	13.9	1441	1.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1404456	1.80	1276810	110.00	60	120	
Sc	45	1	He	177531	0.78	163460	108.61	60	120	
Sc	45	2	NoGas	9794847	0.89	8842934	110.76	60	120	
Rh	103	1	He	1091582	0.71	1010526	108.02	60	120	
In	115	1	He	276532	0.19	257801	107.27	60	120	
Tb	159	1	He	1199608	1.22	1155473	103.82	60	120	
Ho	165	1	He	1200253	1.02	1147359	104.61	60	120	
Bi	209	1	He	840466	0.17	790610	106.31	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228593/2-a
Data File Name	015_LCS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:00:21-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	95.366	95.366	1.073	1777171	1.20	100	95.4	84.5	115.5	
Be	9	2	NoGas	1034.362	1034.362	1.021	5401383	0.73	1000	103.4	84.5	115.5	
B	11	2	NoGas	101.204	101.204	2.043	345677	1.31	100	101.2	84.5	115.5	
Na	23	1	He	9862.299	9862.299	2.504	4829599	0.40	10000	98.6	84.5	115.5	
Mg	24	1	He	10073.695	10073.695	2.921	2761218	0.96	10000	100.7	84.5	115.5	
Al	27	1	He	9616.857	9616.857	2.094	1107909	0.30	10000	96.2	84.5	115.5	
K	39	1	He	9740.642	9740.642	2.870	1322000	0.77	10000	97.4	84.5	115.5	
Ca	44	1	He	10334.785	10334.785	1.879	81338	0.77	10000	103.3	84.5	115.5	
Ti	47	1	He	95.547	95.547	5.003	5370	3.64	100	95.5	84.5	115.5	
V	51	1	He	1065.278	1065.278	1.731	2055710	0.99	1000	106.5	84.5	115.5	
Cr	52	1	He	1033.776	1033.776	2.081	2483227	0.07	1000	103.4	84.5	115.5	
Mn	55	1	He	963.497	963.497	1.727	1166985	0.66	1000	96.3	84.5	115.5	
Fe	56	1	He	9825.241	9825.241	2.121	18652013	1.13	10000	98.3	84.5	115.5	
Co	59	1	He	1059.374	1059.374	3.249	4614235	1.14	1000	105.9	84.5	115.5	
Ni	60	1	He	1003.143	1003.143	2.167	1213726	0.29	1000	100.3	84.5	115.5	
Cu	63	1	He	1060.167	1060.167	3.011	3620654	0.99	1000	106.0	84.5	115.5	
Zn	66	1	He	1087.994	1087.994	2.182	430740	0.52	1000	108.8	84.5	115.5	
As	75	1	He	1010.322	1010.322	0.436	254086	0.17	1000	101.0	84.5	115.5	
Se	78	1	He	999.045	999.045	0.848	12110	0.79	1000	99.9	84.5	115.5	
Sr	88	1	He	926.501	926.501	0.483	1100938	0.74	1000	92.7	84.5	115.5	
Mo	95	1	He	99.583	99.583	0.830	142208	0.97	100	99.6	84.5	115.5	
Ag	107	1	He	97.443	97.443	0.718	498359	0.08	100	97.4	84.5	115.5	
Cd	111	1	He	995.346	995.346	1.350	558861	1.02	1000	99.5	84.5	115.5	
Sn	118	1	He	981.701	981.701	1.424	1043982	1.17	1000	98.2	84.5	115.5	
Sb	123	1	He	98.727	98.727	1.001	118097	0.86	100	98.7	84.5	115.5	
Ba	137	1	He	974.907	974.907	1.286	410084	1.11	1000	97.5	84.5	115.5	
W	182	1	He	97.006	97.006	1.433	576523	1.08	100	97.0	84.5	115.5	
Tl	205	1	He	274.175	274.175	1.635	2496506	0.69	250	109.7	84.5	115.5	
Pb	208	1	He	1073.783	1073.783	0.619	12845350	0.74	1000	107.4	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1272614	0.68	1276810	99.67	60	120	
Sc	45	1	He	169497	2.09	163460	103.69	60	120	
Sc	45	2	NoGas	9367322	0.30	8842934	105.93	60	120	
Rh	103	1	He	1020339	0.76	1010526	100.97	60	120	
In	115	1	He	254982	0.33	257801	98.91	60	120	
Tb	159	1	He	1151598	0.36	1155473	99.66	60	120	
Ho	165	1	He	1167752	0.95	1147359	101.78	60	120	
Bi	209	1	He	772836	0.85	790610	97.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-a
Data File Name	016SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:04:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.897	4.897	3.43	182198	0.00	10000	
Be	9	45	2	NoGas	0.234	0.234	11.80	1356	0.02	2000	
B	11	6	2	NoGas	31.585	31.585	1.15	121650	0.03	300	
Na	23	45	1	He	6706.856	6706.856	3.05	3332909	0.20	500000	
Mg	24	45	1	He	7345.197	7345.197	1.75	2041899	0.36	500000	
Al	27	45	1	He	19.412	19.412	3.18	2578	0.75	200000	
K	39	45	1	He	2934.875	2934.875	2.85	411585	0.71	500000	
Ca	44	45	1	He	75348.409	75348.409	2.60	596269	12.64	500000	
Ti	47	45	1	He	0.565	0.565	47.57	34	1.64	2500	
V	51	45	1	He	0.108	0.108	13.56	402	0.03	10000	
Cr	52	45	1	He	0.142	0.142	34.24	1296	0.01	10000	
Mn	55	45	1	He	61.224	61.224	3.11	76628	0.08	10000	
Fe	56	45	1	He	556.518	556.518	3.28	1074904	0.05	200000	
Co	59	45	1	He	0.056	0.056	61.57	760	0.01	5000	
Ni	60	45	1	He	0.021	0.021	167.69	277	0.01	10000	
Cu	63	45	1	He	0.153	0.153	56.32	6052	0.00	10000	
Zn	66	45	1	He	-6.117	-6.117	-3.83	988	-0.62	10000	
As	75	115	1	He	0.241	0.241	14.52	92	0.26	10000	
Se	78	115	1	He	0.212	0.212	101.51	6	3.27	10000	
Sr	88	103	1	He	488.863	488.863	0.12	577790	0.08	10000	
Mo	95	103	1	He	0.268	0.268	2.22	407	0.07	2000	
Ag	107	103	1	He	0.008	0.008	21.06	53	0.01	300	
Cd	111	115	1	He	0.202	0.202	28.26	117	0.17	4000	
Sn	118	115	1	He	0.273	0.273	161.67	1893	0.01	2000	
Sb	123	115	1	He	0.205	0.205	23.86	277	0.07	200	
Ba	137	115	1	He	52.220	52.220	1.14	22521	0.23	10000	
W	182	159	1	He	0.497	0.497	26.36	4597	0.01	2500	
Tl	205	165	1	He	0.171	0.171	19.85	1580	0.01	2000	
Pb	208	165	1	He	0.120	0.120	17.45	2650	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1345885	1.18	1276810	105.41	60	120	
Sc	45	1	He	171840	1.33	163460	105.13	60	120	
Sc	45	2	NoGas	9597033	1.52	8842934	108.53	60	120	
Rh	103	1	He	1014764	1.12	1010526	100.42	60	120	
In	115	1	He	261364	1.17	257801	101.38	60	120	
Tb	159	1	He	1148910	0.71	1155473	99.43	60	120	
Ho	165	1	He	1159620	0.45	1147359	101.07	60	120	
Bi	209	1	He	783772	0.90	790610	99.14	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64177-f-8-a@5
Data File Name	017SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:08:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.832	0.832	4.21	110658	0.00	10000	
Be	9	45	2	NoGas	0.109	0.109	14.81	700	0.02	2000	
B	11	6	2	NoGas	7.230	7.230	2.61	36592	0.02	300	
Na	23	45	1	He	1382.621	1382.621	1.87	703560	0.20	500000	
Mg	24	45	1	He	1538.338	1538.338	2.40	434018	0.35	500000	
Al	27	45	1	He	2.868	2.868	19.37	654	0.44	200000	
K	39	45	1	He	647.092	647.092	3.38	100654	0.64	500000	
Ca	44	45	1	He	16220.160	16220.160	3.08	130693	12.41	500000	
Ti	47	45	1	He	0.132	0.132	129.80	10	1.32	2500	
V	51	45	1	He	-0.191	-0.191	-26.88	-184	0.10	10000	
Cr	52	45	1	He	0.022	0.022	134.54	1016	0.00	10000	
Mn	55	45	1	He	14.764	14.764	3.33	19923	0.07	10000	
Fe	56	45	1	He	121.227	121.227	3.00	240519	0.05	200000	
Co	59	45	1	He	-0.030	-0.030	-14.52	384	-0.01	5000	
Ni	60	45	1	He	-0.075	-0.075	-43.20	162	-0.05	10000	
Cu	63	45	1	He	-0.410	-0.410	-2.20	4157	-0.01	10000	
Zn	66	45	1	He	-7.571	-7.571	-0.78	413	-1.83	10000	
As	75	115	1	He	0.091	0.091	35.72	55	0.17	10000	
Se	78	115	1	He	0.312	0.312	86.98	8	3.91	10000	
Sr	88	103	1	He	102.001	102.001	1.29	125577	0.08	10000	
Mo	95	103	1	He	0.062	0.062	9.68	118	0.05	2000	
Ag	107	103	1	He	0.001	0.001	94.71	20	0.01	300	
Cd	111	115	1	He	0.068	0.068	15.04	42	0.16	4000	
Sn	118	115	1	He	0.357	0.357	59.98	2045	0.02	2000	
Sb	123	115	1	He	0.056	0.056	28.99	97	0.06	200	
Ba	137	115	1	He	11.073	11.073	1.72	4919	0.23	10000	
W	182	159	1	He	0.044	0.044	123.97	1956	0.00	2500	
Tl	205	165	1	He	0.024	0.024	9.77	254	0.01	2000	
Pb	208	165	1	He	0.016	0.016	45.88	1437	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1356229	2.23	1276810	106.22	60	120	
Sc	45	1	He	174134	1.47	163460	106.53	60	120	
Sc	45	2	NoGas	9778552	0.56	8842934	110.58	60	120	
Rh	103	1	He	1056255	0.76	1010526	104.53	60	120	
In	115	1	He	268870	0.32	257801	104.29	60	120	
Tb	159	1	He	1170202	0.74	1155473	101.27	60	120	
Ho	165	1	He	1174342	0.28	1147359	102.35	60	120	
Bi	209	1	He	790859	0.64	790610	100.03	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64177-f-8-a
Data File Name	018SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:12:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	103.323	103.323	0.97	1955263	0.01	10000	
Be	9	45	2	NoGas	1066.520	1066.520	0.40	5678198	0.02	2000	
B	11	6	2	NoGas	141.992	141.992	0.15	478446	0.03	300	
Na	23	45	1	He	16689.539	16689.539	1.67	8273721	0.20	500000	
Mg	24	45	1	He	17442.381	17442.381	3.40	4842201	0.36	500000	
Al	27	45	1	He	10009.486	10009.486	2.65	1168019	0.86	200000	
K	39	45	1	He	13413.782	13413.782	0.93	1840480	0.73	500000	
Ca	44	45	1	He	83034.913	83034.913	1.66	656473	12.65	500000	
Ti	47	45	1	He	100.466	100.466	3.86	5720	1.76	2500	
V	51	45	1	He	1094.916	1094.916	2.97	2139944	0.05	10000	
Cr	52	45	1	He	1056.535	1056.535	3.41	2570493	0.04	10000	
Mn	55	45	1	He	1069.109	1069.109	1.43	1311756	0.08	10000	
Fe	56	45	1	He	10669.810	10669.810	2.32	20516620	0.05	200000	
Co	59	45	1	He	1071.207	1071.207	1.56	4727428	0.02	5000	
Ni	60	45	1	He	1011.672	1011.672	1.88	1239976	0.08	10000	
Cu	63	45	1	He	1069.381	1069.381	3.27	3699503	0.03	10000	
Zn	66	45	1	He	1096.349	1096.349	2.89	439616	0.25	10000	
As	75	115	1	He	1066.291	1066.291	1.27	265533	0.40	10000	
Se	78	115	1	He	1033.580	1033.580	0.40	12407	8.33	10000	
Sr	88	103	1	He	1554.749	1554.749	0.40	1828441	0.09	10000	
Mo	95	103	1	He	106.417	106.417	0.25	150407	0.07	2000	
Ag	107	103	1	He	101.416	101.416	1.20	513343	0.02	300	
Cd	111	115	1	He	1033.461	1033.461	1.42	574582	0.18	4000	
Sn	118	115	1	He	1044.622	1044.622	1.81	1099899	0.09	2000	
Sb	123	115	1	He	103.928	103.928	1.18	123101	0.08	200	
Ba	137	115	1	He	1070.537	1070.537	2.08	445874	0.24	10000	
W	182	159	1	He	101.716	101.716	2.10	609417	0.02	2500	
Tl	205	165	1	He	278.222	278.222	0.88	2533219	0.01	2000	
Pb	208	165	1	He	1078.190	1078.190	0.17	12896162	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1266243	1.07	1276810	99.17	60	120	
Sc	45	1	He	171692	1.83	163460	105.04	60	120	
Sc	45	2	NoGas	9550166	1.52	8842934	108.00	60	120	
Rh	103	1	He	1009857	0.71	1010526	99.93	60	120	
In	115	1	He	252505	1.12	257801	97.95	60	120	
Tb	159	1	He	1160982	0.68	1155473	100.48	60	120	
Ho	165	1	He	1167561	0.76	1147359	101.76	60	120	
Bi	209	1	He	738088	0.62	790610	93.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-b ms
Data File Name	019SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:16:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	100.722	100.722	2.47	1921417	0.01	10000	
Be	9	45	2	NoGas	1018.910	1018.910	0.48	5461747	0.02	2000	
B	11	6	2	NoGas	137.679	137.679	0.66	465454	0.03	300	
Na	23	45	1	He	16444.915	16444.915	1.53	8239683	0.20	500000	
Mg	24	45	1	He	16918.103	16918.103	2.11	4747819	0.36	500000	
Al	27	45	1	He	9642.210	9642.210	2.21	1137293	0.85	200000	
K	39	45	1	He	12743.874	12743.874	1.21	1767660	0.72	500000	
Ca	44	45	1	He	82793.738	82793.738	1.79	661548	12.52	500000	
Ti	47	45	1	He	98.259	98.259	8.48	5654	1.74	2500	
V	51	45	1	He	1055.748	1055.748	1.10	2085842	0.05	10000	
Cr	52	45	1	He	1024.300	1024.300	2.48	2519110	0.04	10000	
Mn	55	45	1	He	1011.662	1011.662	1.92	1254378	0.08	10000	
Fe	56	45	1	He	10093.342	10093.342	2.10	19616719	0.05	200000	
Co	59	45	1	He	1028.230	1028.230	1.60	4586234	0.02	5000	
Ni	60	45	1	He	972.362	972.362	1.03	1204602	0.08	10000	
Cu	63	45	1	He	1028.949	1028.949	2.73	3598290	0.03	10000	
Zn	66	45	1	He	1063.683	1063.683	1.52	431241	0.25	10000	
As	75	115	1	He	1026.809	1026.809	0.85	258816	0.40	10000	
Se	78	115	1	He	997.541	997.541	0.66	12120	8.23	10000	
Sr	88	103	1	He	1537.251	1537.251	0.75	1817263	0.08	10000	
Mo	95	103	1	He	101.805	101.805	0.86	144641	0.07	2000	
Ag	107	103	1	He	98.260	98.260	0.62	499986	0.02	300	
Cd	111	115	1	He	993.488	993.488	1.35	559091	0.18	4000	
Sn	118	115	1	He	1008.073	1008.073	1.27	1074428	0.09	2000	
Sb	123	115	1	He	100.643	100.643	0.75	120661	0.08	200	
Ba	137	115	1	He	1028.212	1028.212	0.40	433495	0.24	10000	
W	182	159	1	He	97.333	97.333	1.56	587653	0.02	2500	
Tl	205	165	1	He	265.153	265.153	1.61	2424283	0.01	2000	
Pb	208	165	1	He	1042.824	1042.824	0.76	12525613	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1269632	0.76	1276810	99.44	60	120	
Sc	45	1	He	173504	0.74	163460	106.14	60	120	
Sc	45	2	NoGas	9615425	0.13	8842934	108.74	60	120	
Rh	103	1	He	1015126	0.27	1010526	100.46	60	120	
In	115	1	He	255561	0.49	257801	99.13	60	120	
Tb	159	1	He	1169932	0.56	1155473	101.25	60	120	
Ho	165	1	He	1172477	0.37	1147359	102.19	60	120	
Bi	209	1	He	750075	0.21	790610	94.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-f-8-c msd
Data File Name	020SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:20:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	98.623	98.623	3.74	1892509	0.01	10000	
Be	9	45	2	NoGas	998.855	998.855	1.30	5381399	0.02	2000	
B	11	6	2	NoGas	133.083	133.083	1.00	459639	0.03	300	
Na	23	45	1	He	16242.041	16242.041	1.99	8152731	0.20	500000	
Mg	24	45	1	He	16952.652	16952.652	2.30	4766040	0.36	500000	
Al	27	45	1	He	9538.032	9538.032	1.11	1127076	0.85	200000	
K	39	45	1	He	12733.927	12733.927	1.23	1769437	0.72	500000	
Ca	44	45	1	He	83421.631	83421.631	0.85	667773	12.49	500000	
Ti	47	45	1	He	95.322	95.322	3.45	5496	1.73	2500	
V	51	45	1	He	1048.338	1048.338	1.15	2074866	0.05	10000	
Cr	52	45	1	He	1019.359	1019.359	1.56	2511535	0.04	10000	
Mn	55	45	1	He	1004.240	1004.240	1.19	1247459	0.08	10000	
Fe	56	45	1	He	10107.328	10107.328	0.99	19679973	0.05	200000	
Co	59	45	1	He	1020.671	1020.671	0.55	4560774	0.02	5000	
Ni	60	45	1	He	963.570	963.570	0.81	1195843	0.08	10000	
Cu	63	45	1	He	1022.290	1022.290	2.55	3581589	0.03	10000	
Zn	66	45	1	He	1041.229	1041.229	1.19	422973	0.25	10000	
As	75	115	1	He	1021.741	1021.741	0.85	255722	0.40	10000	
Se	78	115	1	He	990.503	990.503	0.71	11949	8.29	10000	
Sr	88	103	1	He	1510.656	1510.656	1.84	1781863	0.08	10000	
Mo	95	103	1	He	100.459	100.459	3.02	142411	0.07	2000	
Ag	107	103	1	He	96.358	96.358	0.82	489230	0.02	300	
Cd	111	115	1	He	988.849	988.849	0.62	552556	0.18	4000	
Sn	118	115	1	He	989.900	989.900	1.22	1047653	0.09	2000	
Sb	123	115	1	He	98.930	98.930	1.05	117779	0.08	200	
Ba	137	115	1	He	1026.919	1026.919	0.29	429913	0.24	10000	
W	182	159	1	He	96.755	96.755	1.26	578642	0.02	2500	
Tl	205	165	1	He	264.185	264.185	0.89	2417364	0.01	2000	
Pb	208	165	1	He	1037.205	1037.205	1.09	12467746	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1296116	1.11	1276810	101.51	60	120	
Sc	45	1	He	173808	0.28	163460	106.33	60	120	
Sc	45	2	NoGas	9665713	1.78	8842934	109.30	60	120	
Rh	103	1	He	1012916	0.52	1010526	100.24	60	120	
In	115	1	He	253765	1.26	257801	98.43	60	120	
Tb	159	1	He	1158730	0.94	1155473	100.28	60	120	
Ho	165	1	He	1173359	0.13	1147359	102.27	60	120	
Bi	209	1	He	746514	0.23	790610	94.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-1-a
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:24:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.763	2.763	4.48	146486	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	1.84	2886	0.02	2000	
B	11	6	2	NoGas	13.748	13.748	0.60	61692	0.02	300	
Na	23	45	1	He	6963.257	6963.257	1.30	3528394	0.20	500000	
Mg	24	45	1	He	3065.294	3065.294	2.19	869315	0.35	500000	
Al	27	45	1	He	3.214	3.214	11.87	700	0.46	200000	
K	39	45	1	He	771.517	771.517	3.03	118613	0.65	500000	
Ca	44	45	1	He	77498.718	77498.718	1.55	625352	12.39	500000	
Ti	47	45	1	He	0.189	0.189	60.91	13	1.42	2500	
V	51	45	1	He	0.148	0.148	105.90	492	0.03	10000	
Cr	52	45	1	He	0.158	0.158	11.91	1359	0.01	10000	
Mn	55	45	1	He	34.233	34.233	1.71	44388	0.08	10000	
Fe	56	45	1	He	1372.183	1372.183	1.88	2696616	0.05	200000	
Co	59	45	1	He	0.179	0.179	18.30	1331	0.01	5000	
Ni	60	45	1	He	0.164	0.164	4.25	461	0.04	10000	
Cu	63	45	1	He	0.099	0.099	69.21	5980	0.00	10000	
Zn	66	45	1	He	-4.891	-4.891	-5.09	1505	-0.33	10000	
As	75	115	1	He	1.373	1.373	3.09	394	0.35	10000	
Se	78	115	1	He	0.831	0.831	45.79	15	5.69	10000	
Sr	88	103	1	He	422.438	422.438	0.72	515072	0.08	10000	
Mo	95	103	1	He	0.237	0.237	14.82	373	0.06	2000	
Ag	107	103	1	He	0.008	0.008	45.57	53	0.01	300	
Cd	111	115	1	He	0.383	0.383	20.09	228	0.17	4000	
Sn	118	115	1	He	1.120	1.120	26.57	2893	0.04	2000	
Sb	123	115	1	He	0.321	0.321	14.11	430	0.07	200	
Ba	137	115	1	He	11.293	11.293	6.35	5006	0.23	10000	
W	182	159	1	He	0.539	0.539	17.79	4986	0.01	2500	
Tl	205	165	1	He	0.250	0.250	16.77	2347	0.01	2000	
Pb	208	165	1	He	0.195	0.195	12.38	3626	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403564	0.62	1276810	109.93	60	120	
Sc	45	1	He	175201	0.75	163460	107.18	60	120	
Sc	45	2	NoGas	9791390	1.14	8842934	110.73	60	120	
Rh	103	1	He	1046821	0.67	1010526	103.59	60	120	
In	115	1	He	268411	0.99	257801	104.12	60	120	
Tb	159	1	He	1180868	0.79	1155473	102.20	60	120	
Ho	165	1	He	1187914	0.49	1147359	103.53	60	120	
Bi	209	1	He	778132	0.91	790610	98.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-2-a
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:28:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.226	6.226	1.02	215200	0.00	10000	
Be	9	45	2	NoGas	0.318	0.318	8.07	1885	0.02	2000	
B	11	6	2	NoGas	27.169	27.169	1.68	110701	0.02	300	
Na	23	45	1	He	6686.756	6686.756	1.23	3408079	0.20	500000	
Mg	24	45	1	He	4308.428	4308.428	4.40	1228293	0.35	500000	
Al	27	45	1	He	1.133	1.133	64.62	456	0.25	200000	
K	39	45	1	He	2101.279	2101.279	1.04	305440	0.69	500000	
Ca	44	45	1	He	71083.812	71083.812	1.82	576931	12.32	500000	
Ti	47	45	1	He	0.092	0.092	93.84	8	1.18	2500	
V	51	45	1	He	0.081	0.081	165.00	356	0.02	10000	
Cr	52	45	1	He	0.124	0.124	33.73	1282	0.01	10000	
Mn	55	45	1	He	53.506	53.506	1.07	68884	0.08	10000	
Fe	56	45	1	He	144.303	144.303	2.14	288960	0.05	200000	
Co	59	45	1	He	0.046	0.046	21.74	732	0.01	5000	
Ni	60	45	1	He	-0.047	-0.047	-11.77	199	-0.02	10000	
Cu	63	45	1	He	0.033	0.033	162.71	5779	0.00	10000	
Zn	66	45	1	He	-6.013	-6.013	-2.76	1054	-0.57	10000	
As	75	115	1	He	0.189	0.189	30.70	81	0.23	10000	
Se	78	115	1	He	0.333	0.333	92.36	8	4.02	10000	
Sr	88	103	1	He	457.880	457.880	1.14	562464	0.08	10000	
Mo	95	103	1	He	0.125	0.125	15.82	211	0.06	2000	
Ag	107	103	1	He	0.005	0.005	46.84	39	0.01	300	
Cd	111	115	1	He	0.171	0.171	10.04	103	0.17	4000	
Sn	118	115	1	He	-0.538	-0.538	-25.84	1048	-0.05	2000	
Sb	123	115	1	He	0.125	0.125	15.43	186	0.07	200	
Ba	137	115	1	He	27.823	27.823	1.35	12421	0.22	10000	
W	182	159	1	He	0.138	0.138	19.03	2574	0.01	2500	
Tl	205	165	1	He	0.060	0.060	16.13	606	0.01	2000	
Pb	208	165	1	He	0.053	0.053	6.44	1933	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403261	1.02	1276810	109.90	60	120	
Sc	45	1	He	176211	1.11	163460	107.80	60	120	
Sc	45	2	NoGas	10011679	1.30	8842934	113.22	60	120	
Rh	103	1	He	1054653	0.42	1010526	104.37	60	120	
In	115	1	He	270446	1.21	257801	104.91	60	120	
Tb	159	1	He	1194765	0.77	1155473	103.40	60	120	
Ho	165	1	He	1211567	0.09	1147359	105.60	60	120	
Bi	209	1	He	799549	0.99	790610	101.13	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-3-a
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:33:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.390	1.390	1.76	124535	0.00	10000	
Be	9	45	2	NoGas	0.204	0.204	13.19	1252	0.02	2000	
B	11	6	2	NoGas	18.878	18.878	2.36	83112	0.02	300	
Na	23	45	1	He	7271.376	7271.376	2.34	3745866	0.19	500000	
Mg	24	45	1	He	1408.483	1408.483	2.63	406607	0.35	500000	
Al	27	45	1	He	9.157	9.157	6.82	1431	0.64	200000	
K	39	45	1	He	607.686	607.686	0.40	97433	0.62	500000	
Ca	44	45	1	He	91629.953	91629.953	2.08	751649	12.19	500000	
Ti	47	45	1	He	0.260	0.260	45.35	18	1.46	2500	
V	51	45	1	He	0.095	0.095	23.16	391	0.02	10000	
Cr	52	45	1	He	0.074	0.074	38.97	1171	0.01	10000	
Mn	55	45	1	He	40.939	40.939	2.03	53662	0.08	10000	
Fe	56	45	1	He	2113.294	2113.294	0.94	4221013	0.05	200000	
Co	59	45	1	He	0.049	0.049	8.03	758	0.01	5000	
Ni	60	45	1	He	-0.034	-0.034	-101.28	217	-0.02	10000	
Cu	63	45	1	He	-0.495	-0.495	-9.12	3949	-0.01	10000	
Zn	66	45	1	He	-7.002	-7.002	-2.67	658	-1.06	10000	
As	75	115	1	He	0.650	0.650	13.81	203	0.32	10000	
Se	78	115	1	He	0.403	0.403	59.42	9	4.41	10000	
Sr	88	103	1	He	353.358	353.358	0.85	435454	0.08	10000	
Mo	95	103	1	He	0.046	0.046	41.35	94	0.05	2000	
Ag	107	103	1	He	0.001	0.001	307.53	19	0.00	300	
Cd	111	115	1	He	0.108	0.108	18.92	66	0.17	4000	
Sn	118	115	1	He	-0.125	-0.125	-188.34	1508	-0.01	2000	
Sb	123	115	1	He	0.103	0.103	14.89	157	0.07	200	
Ba	137	115	1	He	33.675	33.675	1.56	14958	0.23	10000	
W	182	159	1	He	0.049	0.049	69.18	2045	0.00	2500	
Tl	205	165	1	He	0.026	0.026	10.26	279	0.01	2000	
Pb	208	165	1	He	0.045	0.045	23.24	1840	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1450400	0.79	1276810	113.60	60	120	
Sc	45	1	He	178156	1.06	163460	108.99	60	120	
Sc	45	2	NoGas	10068416	0.87	8842934	113.86	60	120	
Rh	103	1	He	1058029	0.62	1010526	104.70	60	120	
In	115	1	He	269135	0.49	257801	104.40	60	120	
Tb	159	1	He	1203382	0.56	1155473	104.15	60	120	
Ho	165	1	He	1212072	0.16	1147359	105.64	60	120	
Bi	209	1	He	803317	0.71	790610	101.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	024_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:37:09-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	47.056	0.777	965837	0.63	50	94.1	89.5	110.5	
Be	9	45	2	NoGas	49.179	0.759	268792	0.53	50	98.4	89.5	110.5	
B	11	6	2	NoGas	50.674	1.326	193871	1.23	50	101.3	89.5	110.5	
Na	23	45	1	He	25887.045	2.104	13017540	1.16	25000	103.5	89.5	110.5	
Mg	24	45	1	He	25547.286	2.021	7197745	0.47	25000	102.2	89.5	110.5	
Al	27	45	1	He	251.539	2.881	30092	0.96	250	100.6	89.5	110.5	
K	39	45	1	He	25149.367	2.992	3490955	1.24	25000	100.6	89.5	110.5	
Ca	44	45	1	He	24875.206	2.758	200095	0.91	25000	99.5	89.5	110.5	
Ti	47	45	1	He	51.089	8.519	2951	7.12	50	102.2	89.5	110.5	
V	51	45	1	He	49.953	1.267	99277	0.83	50	99.9	89.5	110.5	
Cr	52	45	1	He	50.244	3.731	124952	1.86	50	100.5	89.5	110.5	
Mn	55	45	1	He	248.529	2.320	310564	0.55	250	99.4	89.5	110.5	
Fe	56	45	1	He	12609.349	1.952	24604219	0.06	12500	100.9	89.5	110.5	
Co	59	45	1	He	50.669	2.369	227385	0.45	50	101.3	89.5	110.5	
Ni	60	45	1	He	50.567	2.118	63133	0.22	50	101.1	89.5	110.5	
Cu	63	45	1	He	50.427	2.053	182381	0.09	50	100.9	89.5	110.5	
Zn	66	45	1	He	47.675	3.571	22718	1.29	50	95.4	89.5	110.5	
As	75	115	1	He	51.702	1.461	13407	0.91	50	103.4	89.5	110.5	
Se	78	115	1	He	50.608	2.675	635	3.31	50	101.2	89.5	110.5	
Sr	88	103	1	He	49.744	1.784	59964	1.09	50	99.5	89.5	110.5	
Mo	95	103	1	He	51.728	1.156	74822	0.50	50	103.5	89.5	110.5	
Ag	107	103	1	He	50.447	0.353	261310	0.44	50	100.9	89.5	110.5	
Cd	111	115	1	He	50.669	1.516	29274	0.81	50	101.3	89.5	110.5	
Sn	118	115	1	He	48.853	0.850	54986	1.28	50	97.7	89.5	110.5	
Sb	123	115	1	He	51.089	0.588	62899	1.36	50	102.2	89.5	110.5	
Ba	137	115	1	He	49.262	3.924	21321	2.34	50	98.5	89.5	110.5	
W	182	159	1	He	51.599	2.520	313673	2.36	50	103.2	89.5	110.5	
Tl	205	165	1	He	50.342	2.027	466280	1.68	50	100.7	89.5	110.5	
Pb	208	165	1	He	50.140	0.673	611270	0.60	50	100.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1384047	1.78	1276810	108.40	60	120	
Sc	45	1	He	174228	1.95	163460	106.59	60	120	
Sc	45	2	NoGas	9801186	1.27	8842934	110.84	60	120	
Rh	103	1	He	1033368	0.76	1010526	102.26	60	120	
In	115	1	He	262388	1.59	257801	101.78	60	120	
Tb	159	1	He	1174948	0.28	1155473	101.69	60	120	
Ho	165	1	He	1187732	0.60	1147359	103.52	60	120	
Bi	209	1	He	771598	0.84	790610	97.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	025_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:41:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.031	-149.9	95112	0.4	8	
Be	9	45	2	NoGas	0.158	19.6	974	18.3	1	
B	11	6	2	NoGas	1.408	8.2	16534	2.7	20	
Na	23	45	1	He	16.560	8.3	17524	4.8	1000	
Mg	24	45	1	He	9.622	1.3	3560	1.9	1000	
Al	27	45	1	He	-0.414	-16.8	268	2.6	50	
K	39	45	1	He	15.933	26.6	13431	3.5	1000	
Ca	44	45	1	He	-10.222	-70.8	720	7.5	1000	
Ti	47	45	1	He	0.092	128.6	8	89.2	20	
V	51	45	1	He	0.015	728.5	225	98.0	2	
Cr	52	45	1	He	-0.023	-8.5	908	0.4	2	
Mn	55	45	1	He	-0.377	-17.0	1106	6.4	2	
Fe	56	45	1	He	6.507	10.1	16929	8.4	50	
Co	59	45	1	He	-0.012	-68.8	469	7.8	1	
Ni	60	45	1	He	-0.047	-19.2	197	6.1	2	
Cu	63	45	1	He	-0.614	-10.7	3461	7.5	2	
Zn	66	45	1	He	-3.636	-5.3	2011	3.0	20	
As	75	115	1	He	0.068	42.5	49	15.0	2	
Se	78	115	1	He	0.230	102.6	7	42.8	2	
Sr	88	103	1	He	0.014	174.3	132	24.0	10	
Mo	95	103	1	He	0.108	26.5	190	22.0	2	
Ag	107	103	1	He	0.022	9.1	132	7.7	0.2	
Cd	111	115	1	He	0.096	8.8	59	8.4	0.2	
Sn	118	115	1	He	-0.418	-19.1	1189	7.1	10	
Sb	123	115	1	He	0.108	12.8	164	11.5	2	
Ba	137	115	1	He	0.017	51.9	14	26.7	5	
W	182	159	1	He	0.221	20.2	3078	8.8	10	
Tl	205	165	1	He	0.075	17.5	742	16.1	0.5	
Pb	208	165	1	He	0.046	12.7	1833	3.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1398448	0.46	1276810	109.53	60	120	
Sc	45	1	He	175005	0.92	163460	107.06	60	120	
Sc	45	2	NoGas	9818208	0.82	8842934	111.03	60	120	
Rh	103	1	He	1082491	0.89	1010526	107.12	60	120	
In	115	1	He	271665	0.92	257801	105.38	60	120	
Tb	159	1	He	1191980	1.06	1155473	103.16	60	120	
Ho	165	1	He	1203944	0.57	1147359	104.93	60	120	
Bi	209	1	He	795519	1.05	790610	100.62	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-4-a
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:45:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.938	3.938	2.05	167736	0.00	10000	
Be	9	45	2	NoGas	0.144	0.144	4.61	889	0.02	2000	
B	11	6	2	NoGas	23.868	23.868	1.46	97059	0.02	300	
Na	23	45	1	He	6366.945	6366.945	1.03	3145646	0.20	500000	
Mg	24	45	1	He	4179.241	4179.241	1.24	1155060	0.36	500000	
Al	27	45	1	He	204.802	204.802	1.98	24081	0.85	200000	
K	39	45	1	He	3094.586	3094.586	1.47	430768	0.72	500000	
Ca	44	45	1	He	64787.005	64787.005	1.07	509717	12.71	500000	
Ti	47	45	1	He	2.411	2.411	24.89	139	1.74	2500	
V	51	45	1	He	0.561	0.561	73.97	1284	0.04	10000	
Cr	52	45	1	He	0.579	0.579	7.46	2344	0.02	10000	
Mn	55	45	1	He	19.830	19.830	2.08	25711	0.08	10000	
Fe	56	45	1	He	669.056	669.056	1.79	1283703	0.05	200000	
Co	59	45	1	He	0.053	0.053	3.90	743	0.01	5000	
Ni	60	45	1	He	0.056	0.056	30.78	318	0.02	10000	
Cu	63	45	1	He	-0.563	-0.563	-1.59	3552	-0.02	10000	
Zn	66	45	1	He	-4.940	-4.940	-2.75	1447	-0.34	10000	
As	75	115	1	He	0.425	0.425	8.24	142	0.30	10000	
Se	78	115	1	He	0.301	0.301	147.40	8	3.86	10000	
Sr	88	103	1	He	393.724	393.724	0.79	474358	0.08	10000	
Mo	95	103	1	He	0.191	0.191	6.43	302	0.06	2000	
Ag	107	103	1	He	0.004	0.004	7.39	32	0.01	300	
Cd	111	115	1	He	0.047	0.047	8.73	29	0.16	4000	
Sn	118	115	1	He	-1.073	-1.073	-7.18	441	-0.24	2000	
Sb	123	115	1	He	0.053	0.053	11.14	93	0.06	200	
Ba	137	115	1	He	55.237	55.237	0.92	24349	0.23	10000	
W	182	159	1	He	0.076	0.076	74.21	2160	0.00	2500	
Tl	205	165	1	He	0.024	0.024	26.50	253	0.01	2000	
Pb	208	165	1	He	0.084	0.084	10.48	2266	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380620	1.26	1276810	108.13	60	120	
Sc	45	1	He	170770	0.53	163460	104.47	60	120	
Sc	45	2	NoGas	9764737	0.53	8842934	110.42	60	120	
Rh	103	1	He	1034484	1.95	1010526	102.37	60	120	
In	115	1	He	267149	1.39	257801	103.63	60	120	
Tb	159	1	He	1175305	0.94	1155473	101.72	60	120	
Ho	165	1	He	1179283	1.58	1147359	102.78	60	120	
Bi	209	1	He	784440	0.93	790610	99.22	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-5-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:49:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.777	4.777	1.67	181372	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	10.10	833	0.02	2000	
B	11	6	2	NoGas	649.810	649.810	2.04	2355642	0.03	300	>LDR
Na	23	45	1	He	12102.580	12102.580	1.95	6064492	0.20	500000	
Mg	24	45	1	He	7071.236	7071.236	2.30	1984245	0.36	500000	
Al	27	45	1	He	203.153	203.153	4.11	24257	0.84	200000	
K	39	45	1	He	2432.109	2432.109	0.51	346284	0.70	500000	
Ca	44	45	1	He	91997.726	91997.726	1.52	734800	12.52	500000	
Ti	47	45	1	He	2.261	2.261	13.69	132	1.71	2500	
V	51	45	1	He	0.421	0.421	25.32	1025	0.04	10000	
Cr	52	45	1	He	0.584	0.584	3.16	2394	0.02	10000	
Mn	55	45	1	He	119.587	119.587	1.99	149613	0.08	10000	
Fe	56	45	1	He	1400.696	1400.696	1.25	2725328	0.05	200000	
Co	59	45	1	He	0.077	0.077	25.61	860	0.01	5000	
Ni	60	45	1	He	0.093	0.093	26.89	369	0.03	10000	
Cu	63	45	1	He	-0.653	-0.653	-9.01	3293	-0.02	10000	
Zn	66	45	1	He	-6.658	-6.658	-0.96	779	-0.85	10000	
As	75	115	1	He	0.168	0.168	9.33	74	0.23	10000	
Se	78	115	1	He	0.239	0.239	92.14	7	3.43	10000	
Sr	88	103	1	He	575.748	575.748	1.33	692289	0.08	10000	
Mo	95	103	1	He	0.248	0.248	2.42	384	0.06	2000	
Ag	107	103	1	He	0.004	0.004	78.31	33	0.01	300	
Cd	111	115	1	He	0.039	0.039	32.73	24	0.16	4000	
Sn	118	115	1	He	-1.049	-1.049	-2.99	467	-0.22	2000	
Sb	123	115	1	He	0.032	0.032	55.36	67	0.05	200	
Ba	137	115	1	He	32.680	32.680	1.52	14376	0.23	10000	
W	182	159	1	He	0.015	0.015	179.99	1785	0.00	2500	
Tl	205	165	1	He	0.011	0.011	3.86	133	0.01	2000	
Pb	208	165	1	He	0.142	0.142	10.05	2957	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386035	2.26	1276810	108.55	60	120	
Sc	45	1	He	173464	1.47	163460	106.12	60	120	
Sc	45	2	NoGas	9666905	0.70	8842934	109.32	60	120	
Rh	103	1	He	1032455	0.60	1010526	102.17	60	120	
In	115	1	He	266575	1.57	257801	103.40	60	120	
Tb	159	1	He	1172830	1.00	1155473	101.50	60	120	
Ho	165	1	He	1179196	0.72	1147359	102.77	60	120	
Bi	209	1	He	780744	0.35	790610	98.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-6-a
Data File Name	028SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:53:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.429	0.429	9.09	103966	0.00	10000	
Be	9	45	2	NoGas	0.097	0.097	16.17	637	0.02	2000	
B	11	6	2	NoGas	15.062	15.062	1.95	66571	0.02	300	
Na	23	45	1	He	6870.465	6870.465	1.73	3502042	0.20	500000	
Mg	24	45	1	He	1375.171	1375.171	3.34	392662	0.35	500000	
Al	27	45	1	He	25.205	25.205	2.09	3339	0.75	200000	
K	39	45	1	He	686.761	686.761	2.86	107429	0.64	500000	
Ca	44	45	1	He	31857.148	31857.148	3.81	258963	12.30	500000	
Ti	47	45	1	He	0.302	0.302	50.80	20	1.51	2500	
V	51	45	1	He	0.126	0.126	132.07	455	0.03	10000	
Cr	52	45	1	He	0.113	0.113	3.63	1255	0.01	10000	
Mn	55	45	1	He	0.266	0.266	35.17	1921	0.01	10000	
Fe	56	45	1	He	90.169	90.169	3.88	182101	0.05	200000	
Co	59	45	1	He	0.034	0.034	37.21	680	0.00	5000	
Ni	60	45	1	He	0.089	0.089	61.34	369	0.02	10000	
Cu	63	45	1	He	-0.634	-0.634	-6.38	3410	-0.02	10000	
Zn	66	45	1	He	-6.871	-6.871	-0.68	704	-0.98	10000	
As	75	115	1	He	0.128	0.128	7.42	66	0.19	10000	
Se	78	115	1	He	0.400	0.400	57.87	9	4.31	10000	
Sr	88	103	1	He	176.406	176.406	1.30	217745	0.08	10000	
Mo	95	103	1	He	0.021	0.021	79.90	58	0.04	2000	
Ag	107	103	1	He	0.000	0.000	-1657.73	13	0.00	300	
Cd	111	115	1	He	0.033	0.033	25.25	22	0.15	4000	
Sn	118	115	1	He	-1.075	-1.075	-2.09	452	-0.24	2000	
Sb	123	115	1	He	0.029	0.029	30.62	64	0.04	200	
Ba	137	115	1	He	17.955	17.955	3.41	8144	0.22	10000	
W	182	159	1	He	-0.009	-0.009	-319.41	1682	0.00	2500	
Tl	205	165	1	He	0.015	0.015	32.68	176	0.01	2000	
Pb	208	165	1	He	0.040	0.040	10.46	1770	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1405270	0.87	1276810	110.06	60	120	
Sc	45	1	He	176274	2.63	163460	107.84	60	120	
Sc	45	2	NoGas	9849849	0.58	8842934	111.39	60	120	
Rh	103	1	He	1059442	0.31	1010526	104.84	60	120	
In	115	1	He	274754	0.51	257801	106.58	60	120	
Tb	159	1	He	1203508	0.48	1155473	104.16	60	120	
Ho	165	1	He	1209727	0.73	1147359	105.44	60	120	
Bi	209	1	He	790514	0.90	790610	99.99	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-7-a
Data File Name	029SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T14:58:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.293	1.293	6.55	118752	0.00	10000	
Be	9	45	2	NoGas	0.146	0.146	18.75	896	0.02	2000	
B	11	6	2	NoGas	100.229	100.229	1.11	374094	0.03	300	
Na	23	45	1	He	30094.521	30094.521	1.13	15117856	0.20	500000	
Mg	24	45	1	He	2586.581	2586.581	1.65	728787	0.35	500000	
Al	27	45	1	He	129.291	129.291	3.13	15607	0.83	200000	
K	39	45	1	He	644.801	644.801	3.01	100289	0.64	500000	
Ca	44	45	1	He	99554.521	99554.521	2.75	797631	12.48	500000	
Ti	47	45	1	He	1.929	1.929	34.90	113	1.70	2500	
V	51	45	1	He	1.592	1.592	6.72	3347	0.05	10000	
Cr	52	45	1	He	0.625	0.625	3.27	2500	0.02	10000	
Mn	55	45	1	He	128.071	128.071	2.56	160635	0.08	10000	
Fe	56	45	1	He	6714.093	6714.093	2.82	13088727	0.05	200000	
Co	59	45	1	He	0.092	0.092	15.77	931	0.01	5000	
Ni	60	45	1	He	0.063	0.063	31.52	332	0.02	10000	
Cu	63	45	1	He	-0.554	-0.554	-5.88	3650	-0.02	10000	
Zn	66	45	1	He	-6.405	-6.405	-5.09	883	-0.73	10000	
As	75	115	1	He	0.435	0.435	13.67	144	0.30	10000	
Se	78	115	1	He	0.500	0.500	18.33	10	4.87	10000	
Sr	88	103	1	He	519.656	519.656	0.42	623162	0.08	10000	
Mo	95	103	1	He	0.068	0.068	28.25	124	0.05	2000	
Ag	107	103	1	He	0.001	0.001	137.42	21	0.01	300	
Cd	111	115	1	He	0.038	0.038	30.31	24	0.16	4000	
Sn	118	115	1	He	-1.133	-1.133	-1.97	374	-0.30	2000	
Sb	123	115	1	He	0.055	0.055	15.79	96	0.06	200	
Ba	137	115	1	He	53.947	53.947	1.82	23727	0.23	10000	
W	182	159	1	He	0.133	0.133	7.64	2515	0.01	2500	
Tl	205	165	1	He	0.007	0.007	21.95	99	0.01	2000	
Pb	208	165	1	He	0.072	0.072	17.97	2141	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1390200	1.01	1276810	108.88	60	120	
Sc	45	1	He	174039	1.38	163460	106.47	60	120	
Sc	45	2	NoGas	9745888	1.00	8842934	110.21	60	120	
Rh	103	1	He	1029639	0.83	1010526	101.89	60	120	
In	115	1	He	266525	0.86	257801	103.38	60	120	
Tb	159	1	He	1181625	1.44	1155473	102.26	60	120	
Ho	165	1	He	1194693	1.44	1147359	104.13	60	120	
Bi	209	1	He	773421	0.57	790610	97.83	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-9-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:02:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.029	2.029	6.32	136745	0.00	10000	
Be	9	45	2	NoGas	0.064	0.064	17.15	467	0.01	2000	
B	11	6	2	NoGas	20.074	20.074	1.40	89485	0.02	300	
Na	23	45	1	He	6625.799	6625.799	2.30	3436273	0.19	500000	
Mg	24	45	1	He	1567.099	1567.099	2.22	455266	0.34	500000	
Al	27	45	1	He	-0.580	-0.580	-24.20	254	-0.23	200000	
K	39	45	1	He	610.632	610.632	3.34	98461	0.62	500000	
Ca	44	45	1	He	78312.529	78312.529	2.32	646684	12.11	500000	
Ti	47	45	1	He	0.034	0.034	189.58	4	0.77	2500	
V	51	45	1	He	-0.044	-0.044	-117.79	111	-0.04	10000	
Cr	52	45	1	He	-0.016	-0.016	-244.70	948	0.00	10000	
Mn	55	45	1	He	1.126	1.126	9.61	3056	0.04	10000	
Fe	56	45	1	He	7.970	7.970	2.98	20283	0.04	200000	
Co	59	45	1	He	-0.040	-0.040	-31.97	352	-0.01	5000	
Ni	60	45	1	He	-0.043	-0.043	-26.94	207	-0.02	10000	
Cu	63	45	1	He	-0.538	-0.538	-5.51	3817	-0.01	10000	
Zn	66	45	1	He	-7.085	-7.085	-1.85	628	-1.13	10000	
As	75	115	1	He	0.179	0.179	7.96	80	0.22	10000	
Se	78	115	1	He	0.159	0.159	74.89	6	2.59	10000	
Sr	88	103	1	He	429.682	429.682	1.92	529034	0.08	10000	
Mo	95	103	1	He	0.450	0.450	11.26	692	0.06	2000	
Ag	107	103	1	He	-0.001	-0.001	-172.92	11	0.00	300	
Cd	111	115	1	He	0.020	0.020	57.79	14	0.15	4000	
Sn	118	115	1	He	-1.140	-1.140	-5.60	378	-0.30	2000	
Sb	123	115	1	He	0.056	0.056	16.21	100	0.06	200	
Ba	137	115	1	He	13.231	13.231	1.96	6013	0.22	10000	
W	182	159	1	He	0.043	0.043	127.02	2045	0.00	2500	
Tl	205	165	1	He	0.005	0.005	58.94	80	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-21.61	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1480981	0.48	1276810	115.99	60	120	
Sc	45	1	He	179331	1.78	163460	109.71	60	120	
Sc	45	2	NoGas	10072891	0.52	8842934	113.91	60	120	
Rh	103	1	He	1057150	0.53	1010526	104.61	60	120	
In	115	1	He	275203	0.83	257801	106.75	60	120	
Tb	159	1	He	1225602	0.46	1155473	106.07	60	120	
Ho	165	1	He	1236523	0.69	1147359	107.77	60	120	
Bi	209	1	He	811882	0.48	790610	102.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-10-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:06:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.197	0.197	30.37	102078	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	15.43	637	0.01	2000	
B	11	6	2	NoGas	16.097	16.097	1.22	75011	0.02	300	
Na	23	45	1	He	13731.542	13731.542	1.95	7023318	0.20	500000	
Mg	24	45	1	He	1564.022	1564.022	1.62	448744	0.35	500000	
Al	27	45	1	He	87.634	87.634	4.46	10866	0.81	200000	
K	39	45	1	He	259.629	259.629	5.06	47864	0.54	500000	
Ca	44	45	1	He	41662.181	41662.181	1.67	340161	12.25	500000	
Ti	47	45	1	He	1.133	1.133	21.18	69	1.64	2500	
V	51	45	1	He	1.049	1.049	13.12	2315	0.05	10000	
Cr	52	45	1	He	0.412	0.412	10.33	2010	0.02	10000	
Mn	55	45	1	He	134.598	134.598	1.90	171717	0.08	10000	
Fe	56	45	1	He	2542.486	2542.486	2.74	5046004	0.05	200000	
Co	59	45	1	He	0.498	0.498	2.33	2798	0.02	5000	
Ni	60	45	1	He	0.769	0.769	5.52	1231	0.06	10000	
Cu	63	45	1	He	-0.521	-0.521	-5.37	3829	-0.01	10000	
Zn	66	45	1	He	-5.051	-5.051	-3.50	1455	-0.35	10000	
As	75	115	1	He	0.685	0.685	9.07	213	0.32	10000	
Se	78	115	1	He	0.297	0.297	92.35	8	3.80	10000	
Sr	88	103	1	He	231.981	231.981	0.72	287394	0.08	10000	
Mo	95	103	1	He	0.056	0.056	25.67	110	0.05	2000	
Ag	107	103	1	He	0.001	0.001	110.45	21	0.01	300	
Cd	111	115	1	He	0.028	0.028	39.64	18	0.16	4000	
Sn	118	115	1	He	-1.035	-1.035	-11.41	489	-0.21	2000	
Sb	123	115	1	He	0.067	0.067	21.52	112	0.06	200	
Ba	137	115	1	He	29.799	29.799	2.02	13286	0.22	10000	
W	182	159	1	He	0.022	0.022	140.31	1882	0.00	2500	
Tl	205	165	1	He	0.014	0.014	13.04	168	0.01	2000	
Pb	208	165	1	He	0.175	0.175	4.35	3481	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1498320	1.15	1276810	117.35	60	120	
Sc	45	1	He	177095	1.44	163460	108.34	60	120	
Sc	45	2	NoGas	10089155	0.23	8842934	114.09	60	120	
Rh	103	1	He	1063479	0.45	1010526	105.24	60	120	
In	115	1	He	270141	0.41	257801	104.79	60	120	
Tb	159	1	He	1205561	0.66	1155473	104.33	60	120	
Ho	165	1	He	1223363	0.14	1147359	106.62	60	120	
Bi	209	1	He	807624	0.54	790610	102.15	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-11-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:10:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.909	13.909	1.15	354932	0.00	10000	
Be	9	45	2	NoGas	0.081	0.081	24.11	552	0.01	2000	
B	11	6	2	NoGas	471.774	471.774	2.00	1816950	0.03	300	>LDR
Na	23	45	1	He	10289.854	10289.854	1.59	5152735	0.20	500000	
Mg	24	45	1	He	2736.131	2736.131	2.31	767562	0.36	500000	
Al	27	45	1	He	1.530	1.530	54.02	494	0.31	200000	
K	39	45	1	He	2234.499	2234.499	1.35	318725	0.70	500000	
Ca	44	45	1	He	96406.234	96406.234	2.23	769200	12.53	500000	
Ti	47	45	1	He	0.075	0.075	78.11	7	1.13	2500	
V	51	45	1	He	0.187	0.187	78.57	563	0.03	10000	
Cr	52	45	1	He	0.070	0.070	39.77	1128	0.01	10000	
Mn	55	45	1	He	82.786	82.786	2.51	103949	0.08	10000	
Fe	56	45	1	He	3844.512	3844.512	2.18	7465088	0.05	200000	
Co	59	45	1	He	6.994	6.994	3.06	31669	0.02	5000	
Ni	60	45	1	He	1.269	1.269	2.90	1823	0.07	10000	
Cu	63	45	1	He	-0.188	-0.188	-6.97	4911	0.00	10000	
Zn	66	45	1	He	-1.731	-1.731	-9.88	2757	-0.06	10000	
As	75	115	1	He	5.912	5.912	2.18	1580	0.37	10000	
Se	78	115	1	He	0.135	0.135	88.12	6	2.40	10000	
Sr	88	103	1	He	635.645	635.645	1.65	768701	0.08	10000	
Mo	95	103	1	He	45.745	45.745	2.53	66494	0.07	2000	
Ag	107	103	1	He	0.000	0.000	-2904.87	13	0.00	300	
Cd	111	115	1	He	0.042	0.042	40.00	26	0.16	4000	
Sn	118	115	1	He	-1.192	-1.192	-2.85	307	-0.39	2000	
Sb	123	115	1	He	0.048	0.048	34.88	87	0.06	200	
Ba	137	115	1	He	41.062	41.062	0.55	18014	0.23	10000	
W	182	159	1	He	0.013	0.013	429.63	1819	0.00	2500	
Tl	205	165	1	He	0.012	0.012	20.43	146	0.01	2000	
Pb	208	165	1	He	0.002	0.002	94.64	1311	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1469695	1.26	1276810	115.11	60	120	
Sc	45	1	He	173299	1.23	163460	106.02	60	120	
Sc	45	2	NoGas	9860860	0.72	8842934	111.51	60	120	
Rh	103	1	He	1038377	0.24	1010526	102.76	60	120	
In	115	1	He	265833	0.78	257801	103.12	60	120	
Tb	159	1	He	1202684	0.77	1155473	104.09	60	120	
Ho	165	1	He	1211812	0.89	1147359	105.62	60	120	
Bi	209	1	He	792914	0.58	790610	100.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-12-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:14:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.073	0.073	18.72	99547	0.00	10000	
Be	9	45	2	NoGas	0.052	0.052	24.41	400	0.01	2000	
B	11	6	2	NoGas	7.833	7.833	3.10	42290	0.02	300	
Na	23	45	1	He	6.398	6.398	19.88	12479	0.05	500000	
Mg	24	45	1	He	-0.822	-0.822	-44.97	607	-0.14	500000	
Al	27	45	1	He	-0.707	-0.707	-53.44	234	-0.30	200000	
K	39	45	1	He	-2.340	-2.340	-95.54	10974	-0.02	500000	
Ca	44	45	1	He	-24.420	-24.420	-22.15	610	-4.00	500000	
Ti	47	45	1	He	-0.041	-0.041	0.00	0	#DIV/0!	2500	
V	51	45	1	He	-0.018	-0.018	-776.38	158	-0.01	10000	
Cr	52	45	1	He	0.037	0.037	36.68	1064	0.00	10000	
Mn	55	45	1	He	-0.920	-0.920	-3.76	431	-0.21	10000	
Fe	56	45	1	He	4.516	4.516	4.31	13120	0.03	200000	
Co	59	45	1	He	-0.046	-0.046	-9.51	317	-0.01	5000	
Ni	60	45	1	He	-0.059	-0.059	-18.86	183	-0.03	10000	
Cu	63	45	1	He	-0.857	-0.857	-2.26	2622	-0.03	10000	
Zn	66	45	1	He	-6.716	-6.716	-3.91	768	-0.87	10000	
As	75	115	1	He	0.038	0.038	28.70	41	0.09	10000	
Se	78	115	1	He	-0.070	-0.070	-164.23	3	-2.22	10000	
Sr	88	103	1	He	0.045	0.045	73.09	172	0.03	10000	
Mo	95	103	1	He	0.068	0.068	39.63	130	0.05	2000	
Ag	107	103	1	He	-0.001	-0.001	-92.90	9	-0.01	300	
Cd	111	115	1	He	0.014	0.014	69.79	10	0.14	4000	
Sn	118	115	1	He	-0.724	-0.724	-13.16	852	-0.08	2000	
Sb	123	115	1	He	0.056	0.056	28.67	99	0.06	200	
Ba	137	115	1	He	0.024	0.024	95.27	18	0.13	10000	
W	182	159	1	He	0.018	0.018	204.08	1852	0.00	2500	
Tl	205	165	1	He	0.001	0.001	288.38	43	0.00	2000	
Pb	208	165	1	He	0.004	0.004	71.96	1327	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481409	0.96	1276810	116.02	60	120	
Sc	45	1	He	176338	1.41	163460	107.88	60	120	
Sc	45	2	NoGas	10070909	0.79	8842934	113.89	60	120	
Rh	103	1	He	1085701	0.21	1010526	107.44	60	120	
In	115	1	He	274305	0.94	257801	106.40	60	120	
Tb	159	1	He	1204453	1.24	1155473	104.24	60	120	
Ho	165	1	He	1211932	1.06	1147359	105.63	60	120	
Bi	209	1	He	829885	1.01	790610	104.97	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-13-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:19:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.546	5.546	1.82	199330	0.00	10000	
Be	9	45	2	NoGas	0.045	0.045	17.75	352	0.01	2000	
B	11	6	2	NoGas	35.158	35.158	1.36	147348	0.02	300	
Na	23	45	1	He	7021.807	7021.807	1.80	3450877	0.20	500000	
Mg	24	45	1	He	7799.864	7799.864	2.78	2144184	0.36	500000	
Al	27	45	1	He	22.848	22.848	8.09	2946	0.78	200000	
K	39	45	1	He	3024.936	3024.936	1.71	419232	0.72	500000	
Ca	44	45	1	He	77215.881	77215.881	1.06	604344	12.78	500000	
Ti	47	45	1	He	0.529	0.529	62.65	32	1.64	2500	
V	51	45	1	He	0.022	0.022	396.17	232	0.01	10000	
Cr	52	45	1	He	0.029	0.029	42.74	1008	0.00	10000	
Mn	55	45	1	He	63.634	63.634	1.65	78713	0.08	10000	
Fe	56	45	1	He	613.786	613.786	1.77	1172159	0.05	200000	
Co	59	45	1	He	-0.030	-0.030	-12.32	376	-0.01	5000	
Ni	60	45	1	He	-0.100	-0.100	-28.13	127	-0.08	10000	
Cu	63	45	1	He	-0.686	-0.686	-3.59	3111	-0.02	10000	
Zn	66	45	1	He	-6.158	-6.158	-1.78	960	-0.64	10000	
As	75	115	1	He	0.049	0.049	27.34	42	0.12	10000	
Se	78	115	1	He	0.050	0.050	217.11	4	1.13	10000	
Sr	88	103	1	He	489.186	489.186	1.07	584486	0.08	10000	
Mo	95	103	1	He	0.074	0.074	19.82	132	0.06	2000	
Ag	107	103	1	He	0.001	0.001	158.74	19	0.01	300	
Cd	111	115	1	He	0.020	0.020	35.55	13	0.16	4000	
Sn	118	115	1	He	-0.911	-0.911	-3.62	607	-0.15	2000	
Sb	123	115	1	He	0.014	0.014	52.30	43	0.03	200	
Ba	137	115	1	He	53.212	53.212	0.45	22933	0.23	10000	
W	182	159	1	He	0.014	0.014	44.36	1808	0.00	2500	
Tl	205	165	1	He	0.002	0.002	234.49	49	0.00	2000	
Pb	208	165	1	He	0.012	0.012	38.35	1403	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1478032	0.54	1276810	115.76	60	120	
Sc	45	1	He	169929	0.68	163460	103.96	60	120	
Sc	45	2	NoGas	9862582	0.90	8842934	111.53	60	120	
Rh	103	1	He	1025854	0.24	1010526	101.52	60	120	
In	115	1	He	261168	1.03	257801	101.31	60	120	
Tb	159	1	He	1191794	0.49	1155473	103.14	60	120	
Ho	165	1	He	1191324	0.55	1147359	103.83	60	120	
Bi	209	1	He	796089	0.48	790610	100.69	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	035_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:23:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.127	0.551	991775	0.35	50	98.3	89.5	110.5	
Be	9	45	2	NoGas	50.643	1.858	273370	1.36	50	101.3	89.5	110.5	
B	11	6	2	NoGas	53.032	0.712	207244	0.38	50	106.1	89.5	110.5	
Na	23	45	1	He	25565.217	1.246	12685768	0.21	25000	102.3	89.5	110.5	
Mg	24	45	1	He	25438.695	1.469	7072488	0.66	25000	101.8	89.5	110.5	
Al	27	45	1	He	247.064	1.839	29175	1.25	250	98.8	89.5	110.5	
K	39	45	1	He	25239.052	1.520	3457486	0.66	25000	101.0	89.5	110.5	
Ca	44	45	1	He	24875.844	1.931	197468	0.80	25000	99.5	89.5	110.5	
Ti	47	45	1	He	49.367	2.505	2816	1.28	50	98.7	89.5	110.5	
V	51	45	1	He	50.732	3.156	99468	2.11	50	101.5	89.5	110.5	
Cr	52	45	1	He	50.141	2.338	123068	1.17	50	100.3	89.5	110.5	
Mn	55	45	1	He	245.128	2.037	302296	1.34	250	98.1	89.5	110.5	
Fe	56	45	1	He	12388.476	1.638	23853811	0.87	12500	99.1	89.5	110.5	
Co	59	45	1	He	50.025	1.110	221558	1.20	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.333	2.782	62008	1.80	50	100.7	89.5	110.5	
Cu	63	45	1	He	49.145	1.424	175541	1.08	50	98.3	89.5	110.5	
Zn	66	45	1	He	46.605	1.844	21996	1.73	50	93.2	89.5	110.5	
As	75	115	1	He	50.391	2.000	12958	1.45	50	100.8	89.5	110.5	
Se	78	115	1	He	50.818	7.112	632	6.42	50	101.6	89.5	110.5	
Sr	88	103	1	He	49.051	1.402	58747	1.30	50	98.1	89.5	110.5	
Mo	95	103	1	He	50.679	1.427	72830	1.49	50	101.4	89.5	110.5	
Ag	107	103	1	He	49.922	0.802	256901	0.39	50	99.8	89.5	110.5	
Cd	111	115	1	He	50.622	1.856	29002	1.02	50	101.2	89.5	110.5	
Sn	118	115	1	He	49.166	2.890	54855	1.70	50	98.3	89.5	110.5	
Sb	123	115	1	He	50.794	1.260	62012	1.49	50	101.6	89.5	110.5	
Ba	137	115	1	He	50.224	4.335	21557	3.15	50	100.4	89.5	110.5	
W	182	159	1	He	50.659	0.262	310121	0.78	50	101.3	89.5	110.5	
Tl	205	165	1	He	50.068	0.946	464787	1.05	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.044	0.904	611446	1.00	50	100.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1417255	0.42	1276810	111.00	60	120	
Sc	45	1	He	171902	1.25	163460	105.16	60	120	
Sc	45	2	NoGas	9680214	0.84	8842934	109.47	60	120	
Rh	103	1	He	1026620	0.70	1010526	101.59	60	120	
In	115	1	He	260191	1.33	257801	100.93	60	120	
Tb	159	1	He	1183032	0.61	1155473	102.39	60	120	
Ho	165	1	He	1190330	0.38	1147359	103.75	60	120	
Bi	209	1	He	771770	0.32	790610	97.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	036_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:27:21-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.103	27.7	98910	2.1	8	
Be	9	45	2	NoGas	0.087	14.5	589	13.6	1	
B	11	6	2	NoGas	3.766	2.1	26464	1.9	20	
Na	23	45	1	He	24.436	5.9	21361	4.1	1000	
Mg	24	45	1	He	15.531	8.8	5201	8.3	1000	
Al	27	45	1	He	-0.672	-30.7	236	10.2	50	
K	39	45	1	He	21.343	25.8	14099	5.9	1000	
Ca	44	45	1	He	-4.723	-237.1	759	11.7	1000	
Ti	47	45	1	He	0.056	61.3	6	34.7	20	
V	51	45	1	He	-0.009	-742.2	175	76.5	2	
Cr	52	45	1	He	-0.014	-134.8	926	4.3	2	
Mn	55	45	1	He	-0.438	-11.3	1024	6.9	2	
Fe	56	45	1	He	10.189	9.9	23992	8.9	50	
Co	59	45	1	He	-0.021	-96.1	424	21.2	1	
Ni	60	45	1	He	-0.057	-44.8	183	17.3	2	
Cu	63	45	1	He	-0.896	-1.9	2451	2.2	2	
Zn	66	45	1	He	-3.909	-12.3	1888	9.5	20	
As	75	115	1	He	0.085	19.4	53	8.1	2	
Se	78	115	1	He	0.075	51.9	5	9.9	2	
Sr	88	103	1	He	0.075	43.4	209	18.9	10	
Mo	95	103	1	He	0.116	21.7	203	17.7	2	
Ag	107	103	1	He	0.030	17.5	178	16.9	0.2	
Cd	111	115	1	He	0.049	10.8	31	10.1	0.2	
Sn	118	115	1	He	-0.455	-30.8	1148	13.6	10	
Sb	123	115	1	He	0.099	30.0	153	24.5	2	
Ba	137	115	1	He	0.049	84.0	29	63.6	5	
W	182	159	1	He	0.203	24.9	2978	10.5	10	
Tl	205	165	1	He	0.080	12.5	779	11.8	0.5	
Pb	208	165	1	He	0.040	33.2	1752	9.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1473161	0.71	1276810	115.38	60	120	
Sc	45	1	He	173886	0.90	163460	106.38	60	120	
Sc	45	2	NoGas	9950119	1.72	8842934	112.52	60	120	
Rh	103	1	He	1084619	1.10	1010526	107.33	60	120	
In	115	1	He	271701	0.20	257801	105.39	60	120	
Tb	159	1	He	1196347	0.07	1155473	103.54	60	120	
Ho	165	1	He	1197073	0.19	1147359	104.33	60	120	
Bi	209	1	He	798141	1.38	790610	100.95	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	037CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:31:35-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	9.358	9.358	4.344	232293	0.63	8	117.0	69.5	130.5	
Be	9	2	NoGas	1.247	1.247	4.221	5990	6.34	1	124.7	69.5	130.5	
B	11	2	NoGas	25.623	25.623	2.068	96836	2.10	20	128.1	69.5	130.5	
Na	23	1	He	996.320	996.320	3.367	505710	1.35	1000	99.6	69.5	130.5	
Mg	24	1	He	1001.655	1001.655	2.678	280781	0.60	1000	100.2	69.5	130.5	
Al	27	1	He	47.826	47.826	2.462	5931	0.25	50	95.7	69.5	130.5	
K	39	1	He	998.521	998.521	2.528	148176	0.50	1000	99.9	69.5	130.5	
Ca	44	1	He	911.673	911.673	2.981	8041	2.13	1000	91.2	69.5	130.5	
Ti	47	1	He	9.956	9.956	11.062	572	9.11	10	99.6	69.5	130.5	
V	51	1	He	5.107	5.107	4.545	10239	2.54	5	102.1	69.5	130.5	
Cr	52	1	He	2.146	2.146	4.425	6209	2.27	2	107.3	69.5	130.5	
Mn	55	1	He	3.780	3.780	6.986	6218	3.28	5	75.6	69.5	130.5	
Fe	56	1	He	103.517	103.517	2.607	204484	0.55	100	103.5	69.5	130.5	
Co	59	1	He	0.964	0.964	2.791	4800	1.90	1	96.4	69.5	130.5	
Ni	60	1	He	1.948	1.948	5.206	2655	2.86	2	97.4	69.5	130.5	
Cu	63	1	He	1.102	1.102	7.539	9385	2.26	2	55.1	69.5	130.5	6020A CR1 Failed
Zn	66	1	He	14.611	14.611	7.582	9295	3.19	20	73.1	69.5	130.5	
As	75	1	He	5.013	5.013	4.490	1364	4.23	5	100.3	69.5	130.5	
Se	78	1	He	4.798	4.798	2.114	66	1.16	5	96.0	69.5	130.5	
Sr	88	1	He	9.122	9.122	0.750	11508	0.66	10	91.2	69.5	130.5	
Mo	95	1	He	5.212	5.212	4.654	7850	4.42	5	104.2	69.5	130.5	
Ag	107	1	He	0.974	0.974	3.028	5250	3.24	1	97.4	69.5	130.5	
Cd	111	1	He	1.014	1.014	4.824	604	5.27	1	101.4	69.5	130.5	
Sn	118	1	He	8.658	8.658	5.597	11378	4.20	10	86.6	69.5	130.5	
Sb	123	1	He	1.945	1.945	6.090	2488	5.25	2	97.3	69.5	130.5	
Ba	137	1	He	4.862	4.862	1.791	2171	2.00	5	97.2	69.5	130.5	
W	182	1	He	10.258	10.258	1.897	64629	2.79	10	102.6	69.5	130.5	
Tl	205	1	He	1.018	1.018	0.739	9508	1.67	1	101.8	69.5	130.5	
Pb	208	1	He	1.014	1.014	2.598	13658	1.57	1	101.4	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1293371	0.74	1276810	101.30	60	120	
Sc	45	1	He	172878	2.12	163460	105.76	60	120	
Sc	45	2	NoGas	8479800	2.64	8842934	95.89	60	120	
Rh	103	1	He	1072724	0.24	1010526	106.15	60	120	
In	115	1	He	269823	0.85	257801	104.66	60	120	
Tb	159	1	He	1191513	1.10	1155473	103.12	60	120	
Ho	165	1	He	1193149	0.94	1147359	103.99	60	120	
Bi	209	1	He	802873	1.32	790610	101.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64205-a-1-a
Data File Name	038SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:35:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.095	4.095	1.38	164495	0.00	10000	
Be	9	45	2	NoGas	0.061	0.061	14.04	422	0.01	2000	
B	11	6	2	NoGas	109.973	109.973	2.29	406314	0.03	300	
Na	23	45	1	He	96232.146	96232.146	1.09	46178659	0.21	500000	
Mg	24	45	1	He	19275.949	19275.949	1.28	5185301	0.37	500000	
Al	27	45	1	He	1997.799	1997.799	1.96	226112	0.88	200000	
K	39	45	1	He	45181.300	45181.300	1.45	5980087	0.76	500000	
Ca	44	45	1	He	70131.663	70131.663	1.69	537263	13.05	500000	
Ti	47	45	1	He	23.949	23.949	6.85	1322	1.81	2500	
V	51	45	1	He	2.149	2.149	16.06	4254	0.05	10000	
Cr	52	45	1	He	6.164	6.164	4.22	15440	0.04	10000	
Mn	55	45	1	He	84.063	84.063	2.26	101280	0.08	10000	
Fe	56	45	1	He	2129.285	2129.285	1.23	3970198	0.05	200000	
Co	59	45	1	He	1.199	1.199	5.66	5623	0.02	5000	
Ni	60	45	1	He	10.826	10.826	0.80	13097	0.08	10000	
Cu	63	45	1	He	100.565	100.565	2.92	341896	0.03	10000	
Zn	66	45	1	He	361.882	361.882	2.34	142806	0.25	10000	
As	75	115	1	He	1.299	1.299	3.73	353	0.37	10000	
Se	78	115	1	He	2.050	2.050	20.56	28	7.23	10000	
Sr	88	103	1	He	224.128	224.128	1.00	256506	0.09	10000	
Mo	95	103	1	He	4.318	4.318	1.75	5960	0.07	2000	
Ag	107	103	1	He	0.144	0.144	17.43	724	0.02	300	
Cd	111	115	1	He	0.863	0.863	5.12	482	0.18	4000	
Sn	118	115	1	He	5.465	5.465	7.88	7306	0.07	2000	
Sb	123	115	1	He	0.994	0.994	4.82	1206	0.08	200	
Ba	137	115	1	He	88.945	88.945	0.63	37125	0.24	10000	
W	182	159	1	He	0.807	0.807	8.64	6439	0.01	2500	
Tl	205	165	1	He	0.038	0.038	16.36	377	0.01	2000	
Pb	208	165	1	He	7.886	7.886	0.77	95333	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380093	1.61	1276810	108.09	60	120	
Sc	45	1	He	166325	1.61	163460	101.75	60	120	
Sc	45	2	NoGas	9412961	0.25	8842934	106.45	60	120	
Rh	103	1	He	982416	0.85	1010526	97.22	60	120	
In	115	1	He	252980	1.53	257801	98.13	60	120	
Tb	159	1	He	1149706	0.82	1155473	99.50	60	120	
Ho	165	1	He	1164902	0.36	1147359	101.53	60	120	
Bi	209	1	He	1104225	0.38	790610	139.67	60	120	ISTD warning

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Sample Report

Sample Table

Sample Name	240-64205-a-4-a
Data File Name	039SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:39:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.626	1.626	3.01	121024	0.00	10000	
Be	9	45	2	NoGas	0.032	0.032	36.18	270	0.01	2000	
B	11	6	2	NoGas	124.408	124.408	1.38	462373	0.03	300	
Na	23	45	1	He	108610.320	108610.320	1.39	52183166	0.21	500000	
Mg	24	45	1	He	6470.924	6470.924	2.70	1743313	0.37	500000	
Al	27	45	1	He	3831.796	3831.796	1.87	433981	0.88	200000	
K	39	45	1	He	4608.894	4608.894	1.30	620416	0.74	500000	
Ca	44	45	1	He	44810.544	44810.544	1.53	344011	13.03	500000	
Ti	47	45	1	He	3.670	3.670	29.85	204	1.80	2500	
V	51	45	1	He	1.045	1.045	2.47	2167	0.05	10000	
Cr	52	45	1	He	3.461	3.461	4.29	9083	0.04	10000	
Mn	55	45	1	He	95.127	95.127	1.58	114570	0.08	10000	
Fe	56	45	1	He	243.576	243.576	1.28	458262	0.05	200000	
Co	59	45	1	He	0.526	0.526	4.20	2751	0.02	5000	
Ni	60	45	1	He	3.152	3.152	2.65	3992	0.08	10000	
Cu	63	45	1	He	22.771	22.771	2.25	81660	0.03	10000	
Zn	66	45	1	He	94.595	94.595	2.00	39831	0.24	10000	
As	75	115	1	He	0.629	0.629	5.08	186	0.34	10000	
Se	78	115	1	He	0.501	0.501	5.45	10	5.12	10000	
Sr	88	103	1	He	240.714	240.714	0.77	273270	0.09	10000	
Mo	95	103	1	He	2.100	2.100	5.46	2888	0.07	2000	
Ag	107	103	1	He	0.075	0.075	7.50	381	0.02	300	
Cd	111	115	1	He	0.157	0.157	13.07	89	0.18	4000	
Sn	118	115	1	He	-0.512	-0.512	-29.08	1011	-0.05	2000	
Sb	123	115	1	He	3.156	3.156	4.09	3779	0.08	200	
Ba	137	115	1	He	25.436	25.436	1.08	10652	0.24	10000	
W	182	159	1	He	1.285	1.285	4.72	9266	0.01	2500	
Tl	205	165	1	He	0.012	0.012	14.94	142	0.01	2000	
Pb	208	165	1	He	5.094	5.094	0.85	61803	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1392496	1.30	1276810	109.06	60	120	
Sc	45	1	He	166538	1.25	163460	101.88	60	120	
Sc	45	2	NoGas	9443447	0.21	8842934	106.79	60	120	
Rh	103	1	He	974523	0.22	1010526	96.44	60	120	
In	115	1	He	253703	0.84	257801	98.41	60	120	
Tb	159	1	He	1149963	0.62	1155473	99.52	60	120	
Ho	165	1	He	1160930	0.23	1147359	101.18	60	120	
Bi	209	1	He	740694	0.75	790610	93.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-23-a
Data File Name	040SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:44:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.126	28.126	3.21	600598	0.00	10000	
Be	9	45	2	NoGas	0.028	0.028	26.07	256	0.01	2000	
B	11	6	2	NoGas	264.463	264.463	1.04	958470	0.03	300	
Na	23	45	1	He	295027.096	295027.096	1.49	142329042	0.21	500000	
Mg	24	45	1	He	22195.457	22195.457	0.98	6003328	0.37	500000	
Al	27	45	1	He	2.917	2.917	13.76	634	0.46	200000	
K	39	45	1	He	2902.130	2902.130	1.06	396245	0.73	500000	
Ca	44	45	1	He	57242.390	57242.390	1.27	441075	12.98	500000	
Ti	47	45	1	He	0.099	0.099	92.79	8	1.28	2500	
V	51	45	1	He	-0.180	-0.180	-101.45	-156	0.12	10000	
Cr	52	45	1	He	0.110	0.110	20.16	1183	0.01	10000	
Mn	55	45	1	He	31.630	31.630	1.09	39260	0.08	10000	
Fe	56	45	1	He	354.287	354.287	1.38	667514	0.05	200000	
Co	59	45	1	He	-0.013	-0.013	-81.51	442	0.00	5000	
Ni	60	45	1	He	0.177	0.177	11.94	456	0.04	10000	
Cu	63	45	1	He	0.040	0.040	241.01	5505	0.00	10000	
Zn	66	45	1	He	-4.734	-4.734	-1.91	1497	-0.32	10000	
As	75	115	1	He	0.952	0.952	2.78	267	0.36	10000	
Se	78	115	1	He	0.199	0.199	107.84	6	3.24	10000	
Sr	88	103	1	He	1152.116	1152.116	1.71	1295454	0.09	10000	
Mo	95	103	1	He	3.042	3.042	4.95	4134	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-102.08	9	-0.01	300	
Cd	111	115	1	He	0.012	0.012	16.69	8	0.15	4000	
Sn	118	115	1	He	-1.136	-1.136	-2.56	352	-0.32	2000	
Sb	123	115	1	He	0.084	0.084	17.01	126	0.07	200	
Ba	137	115	1	He	167.000	167.000	0.31	69841	0.24	10000	
W	182	159	1	He	0.237	0.237	7.57	3056	0.01	2500	
Tl	205	165	1	He	0.002	0.002	47.90	48	0.00	2000	
Pb	208	165	1	He	-0.024	-0.024	-13.39	931	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1375714	0.09	1276810	107.75	60	120	
Sc	45	1	He	167215	0.36	163460	102.30	60	120	
Sc	45	2	NoGas	9563424	1.99	8842934	108.15	60	120	
Rh	103	1	He	965611	1.09	1010526	95.56	60	120	
In	115	1	He	253486	0.96	257801	98.33	60	120	
Tb	159	1	He	1146621	0.23	1155473	99.23	60	120	
Ho	165	1	He	1152731	0.39	1147359	100.47	60	120	
Bi	209	1	He	722798	0.35	790610	91.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-24-a
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:48:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.605	29.605	0.96	618431	0.00	10000	
Be	9	45	2	NoGas	0.044	0.044	27.68	333	0.01	2000	
B	11	6	2	NoGas	280.046	280.046	0.99	994008	0.03	300	
Na	23	45	1	He	309992.560	309992.560	1.22	150798842	0.21	500000	
Mg	24	45	1	He	23215.131	23215.131	1.84	6331451	0.37	500000	
Al	27	45	1	He	0.492	0.492	104.66	362	0.14	200000	
K	39	45	1	He	3045.433	3045.433	1.82	418755	0.73	500000	
Ca	44	45	1	He	60608.812	60608.812	1.46	470876	12.87	500000	
Ti	47	45	1	He	-0.021	-0.021	-163.58	1	-1.90	2500	
V	51	45	1	He	-0.112	-0.112	-115.82	-29	0.39	10000	
Cr	52	45	1	He	0.083	0.083	27.46	1128	0.01	10000	
Mn	55	45	1	He	33.301	33.301	1.93	41599	0.08	10000	
Fe	56	45	1	He	340.111	340.111	1.71	646317	0.05	200000	
Co	59	45	1	He	-0.003	-0.003	-213.97	492	0.00	5000	
Ni	60	45	1	He	0.186	0.186	21.40	470	0.04	10000	
Cu	63	45	1	He	-0.011	-0.011	-634.78	5380	0.00	10000	
Zn	66	45	1	He	-4.285	-4.285	-4.80	1685	-0.25	10000	
As	75	115	1	He	0.995	0.995	4.00	278	0.36	10000	
Se	78	115	1	He	0.005	0.005	2387.37	4	0.14	10000	
Sr	88	103	1	He	1252.084	1252.084	3.69	1411802	0.09	10000	
Mo	95	103	1	He	3.367	3.367	0.98	4586	0.07	2000	
Ag	107	103	1	He	0.001	0.001	63.51	19	0.01	300	
Cd	111	115	1	He	0.004	0.004	28.70	3	0.11	4000	
Sn	118	115	1	He	-0.934	-0.934	-11.17	567	-0.16	2000	
Sb	123	115	1	He	0.057	0.057	16.78	93	0.06	200	
Ba	137	115	1	He	175.251	175.251	0.85	73513	0.24	10000	
W	182	159	1	He	0.207	0.207	10.45	2893	0.01	2500	
Tl	205	165	1	He	0.000	0.000	-491.88	32	0.00	2000	
Pb	208	165	1	He	-0.012	-0.012	-44.67	1080	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348278	0.96	1276810	105.60	60	120	
Sc	45	1	He	168624	0.73	163460	103.16	60	120	
Sc	45	2	NoGas	9425338	1.04	8842934	106.59	60	120	
Rh	103	1	He	968207	0.20	1010526	95.81	60	120	
In	115	1	He	254261	0.79	257801	98.63	60	120	
Tb	159	1	He	1152507	0.21	1155473	99.74	60	120	
Ho	165	1	He	1157175	0.11	1147359	100.86	60	120	
Bi	209	1	He	715236	0.17	790610	90.47	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	MB 240-228967/1-A
Data File Name	042_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:52:37-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.080	129.0	97464	1.3	8	
Be	9	45	2	NoGas	0.022	39.8	230	21.8	1	
B	11	6	2	NoGas	7.698	4.7	40363	2.3	20	
Na	23	45	1	He	157.653	4.5	87619	7.0	1000	
Mg	24	45	1	He	128.570	1.6	36712	1.7	1000	
Al	27	45	1	He	0.017	1559.2	314	8.5	50	
K	39	45	1	He	24.394	37.0	14388	5.6	1000	
Ca	44	45	1	He	344.197	11.2	3521	7.2	1000	
Ti	47	45	1	He	0.056	121.1	6	69.3	20	
V	51	45	1	He	-0.221	-73.8	-244	-130.7	2	
Cr	52	45	1	He	-0.005	-696.3	940	9.8	2	
Mn	55	45	1	He	0.046	155.4	1611	3.9	2	
Fe	56	45	1	He	5.445	6.7	14625	1.9	50	
Co	59	45	1	He	-0.068	-8.8	216	14.6	1	
Ni	60	45	1	He	0.013	275.0	268	14.4	2	
Cu	63	45	1	He	0.179	36.0	6171	6.6	2	
Zn	66	45	1	He	2.565	19.7	4463	2.7	20	
As	75	115	1	He	0.023	35.8	37	6.8	2	
Se	78	115	1	He	0.077	104.2	5	20.0	2	
Sr	88	103	1	He	1.096	7.7	1478	6.7	10	
Mo	95	103	1	He	0.014	34.0	48	14.5	2	
Ag	107	103	1	He	0.000	-264.2	12	41.7	0.2	
Cd	111	115	1	He	0.004	133.6	4	83.3	0.2	
Sn	118	115	1	He	-1.098	-3.5	419	10.1	10	
Sb	123	115	1	He	0.015	68.5	46	27.7	2	
Ba	137	115	1	He	1.288	14.5	581	13.6	5	
W	182	159	1	He	0.004	435.2	1726	5.6	10	
Tl	205	165	1	He	0.000	-56.2	31	6.2	0.5	
Pb	208	165	1	He	0.015	31.3	1439	4.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1431687	1.26	1276810	112.13	60	120	
Sc	45	1	He	172638	3.10	163460	105.62	60	120	
Sc	45	2	NoGas	9848876	0.70	8842934	111.38	60	120	
Rh	103	1	He	1069387	0.42	1010526	105.82	60	120	
In	115	1	He	270497	0.79	257801	104.92	60	120	
Tb	159	1	He	1177199	0.67	1155473	101.88	60	120	
Ho	165	1	He	1190750	0.16	1147359	103.78	60	120	
Bi	209	1	He	805297	0.70	790610	101.86	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 240-228967/2-A
Data File Name	043_LCS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T15:56:51-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	105.424	105.424	0.853	1956923	0.71	100	105.4	84.5	115.5	
Be	9	2	NoGas	1079.461	1079.461	0.428	5642717	0.34	1000	107.9	84.5	115.5	
B	11	2	NoGas	104.588	104.588	1.545	387242	0.65	100	104.6	84.5	115.5	
Na	23	1	He	10316.346	10316.346	2.066	4936661	0.74	10000	103.2	84.5	115.5	
Mg	24	1	He	10266.498	10266.498	2.829	2749984	1.42	10000	102.7	84.5	115.5	
Al	27	1	He	9843.105	9843.105	2.059	1108128	0.99	10000	98.4	84.5	115.5	
K	39	1	He	9994.195	9994.195	0.901	1325502	0.70	10000	99.9	84.5	115.5	
Ca	44	1	He	10510.858	10510.858	1.103	80829	0.54	10000	105.1	84.5	115.5	
Ti	47	1	He	98.407	98.407	3.049	5405	2.02	100	98.4	84.5	115.5	
V	51	1	He	1064.664	1064.664	2.757	2007404	1.39	1000	106.5	84.5	115.5	
Cr	52	1	He	1051.164	1051.164	2.175	2467413	1.01	1000	105.1	84.5	115.5	
Mn	55	1	He	981.864	981.864	1.492	1162080	0.27	1000	98.2	84.5	115.5	
Fe	56	1	He	9935.007	9935.007	2.615	18429109	1.50	10000	99.4	84.5	115.5	
Co	59	1	He	1070.552	1070.552	1.687	4557506	0.37	1000	107.1	84.5	115.5	
Ni	60	1	He	1009.096	1009.096	1.430	1193172	0.32	1000	100.9	84.5	115.5	
Cu	63	1	He	1064.620	1064.620	2.925	3553177	1.76	1000	106.5	84.5	115.5	
Zn	66	1	He	1099.210	1099.210	1.429	425259	0.80	1000	109.9	84.5	115.5	
As	75	1	He	999.094	999.094	0.294	247813	0.21	1000	99.9	84.5	115.5	
Se	78	1	He	983.901	983.901	1.196	11763	1.14	1000	98.4	84.5	115.5	
Sr	88	1	He	948.090	948.090	0.431	1101687	0.59	1000	94.8	84.5	115.5	
Mo	95	1	He	101.315	101.315	0.963	141482	0.79	100	101.3	84.5	115.5	
Ag	107	1	He	101.047	101.047	0.580	505378	0.52	100	101.0	84.5	115.5	
Cd	111	1	He	1010.344	1010.344	0.914	559500	0.69	1000	101.0	84.5	115.5	
Sn	118	1	He	1014.202	1014.202	1.402	1063689	1.22	1000	101.4	84.5	115.5	
Sb	123	1	He	101.756	101.756	0.559	120049	0.52	100	101.8	84.5	115.5	
Ba	137	1	He	993.522	993.522	0.514	412179	0.35	1000	99.4	84.5	115.5	
W	182	1	He	99.595	99.595	1.997	589176	1.58	100	99.6	84.5	115.5	
Tl	205	1	He	270.618	270.618	1.558	2460297	1.39	250	108.2	84.5	115.5	
Pb	208	1	He	1062.135	1062.135	1.013	12685305	0.72	1000	106.2	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380900	1.34	1276810	108.15	60	120	
Sc	45	1	He	165616	1.40	163460	101.32	60	120	
Sc	45	2	NoGas	9376977	0.62	8842934	106.04	60	120	
Rh	103	1	He	997773	0.18	1010526	98.74	60	120	
In	115	1	He	251480	0.30	257801	97.55	60	120	
Tb	159	1	He	1146445	1.16	1155473	99.22	60	120	
Ho	165	1	He	1165860	0.74	1147359	101.61	60	120	
Bi	209	1	He	749790	1.17	790610	94.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-A
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:00:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.105	18.105	0.14	423686	0.00	10000	
Be	9	45	2	NoGas	0.297	0.297	6.69	1700	0.02	2000	
B	11	6	2	NoGas	12.797	12.797	1.03	59042	0.02	300	
Na	23	45	1	He	7520.032	7520.032	2.72	3616175	0.21	500000	
Mg	24	45	1	He	39600.167	39600.167	0.87	10650804	0.37	500000	
Al	27	45	1	He	3.158	3.158	146.59	659	0.48	200000	
K	39	45	1	He	2963.787	2963.787	1.66	402189	0.74	500000	
Ca	44	45	1	He	111005.192	111005.192	1.64	849876	13.06	500000	
Ti	47	45	1	He	0.281	0.281	81.27	18	1.58	2500	
V	51	45	1	He	0.157	0.157	11.55	482	0.03	10000	
Cr	52	45	1	He	0.100	0.100	47.38	1153	0.01	10000	
Mn	55	45	1	He	1020.311	1020.311	1.73	1212587	0.08	10000	
Fe	56	45	1	He	333.392	333.392	1.41	624887	0.05	200000	
Co	59	45	1	He	4.914	4.914	3.42	21502	0.02	5000	
Ni	60	45	1	He	7.591	7.591	3.67	9254	0.08	10000	
Cu	63	45	1	He	-0.215	-0.215	-17.57	4622	0.00	10000	
Zn	66	45	1	He	4.703	4.703	9.48	5126	0.09	10000	
As	75	115	1	He	0.851	0.851	5.52	237	0.36	10000	
Se	78	115	1	He	0.768	0.768	17.40	13	6.01	10000	
Sr	88	103	1	He	89.334	89.334	0.64	101484	0.09	10000	
Mo	95	103	1	He	0.462	0.462	12.24	654	0.07	2000	
Ag	107	103	1	He	0.015	0.015	29.89	84	0.02	300	
Cd	111	115	1	He	0.258	0.258	24.97	142	0.18	4000	
Sn	118	115	1	He	0.555	0.555	84.83	2097	0.03	2000	
Sb	123	115	1	He	0.234	0.234	24.63	298	0.08	200	
Ba	137	115	1	He	326.201	326.201	1.31	134141	0.24	10000	
W	182	159	1	He	1.164	1.164	7.94	8395	0.01	2500	
Tl	205	165	1	He	0.261	0.261	13.69	2361	0.01	2000	
Pb	208	165	1	He	0.154	0.154	26.90	3018	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1423570	1.26	1276810	111.49	60	120	
Sc	45	1	He	166289	0.45	163460	101.73	60	120	
Sc	45	2	NoGas	9648262	0.79	8842934	109.11	60	120	
Rh	103	1	He	974485	1.68	1010526	96.43	60	120	
In	115	1	He	249270	1.63	257801	96.69	60	120	
Tb	159	1	He	1129979	1.35	1155473	97.79	60	120	
Ho	165	1	He	1144832	0.98	1147359	99.78	60	120	
Bi	209	1	He	743500	0.47	790610	94.04	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64160-D-4-A@5
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:05:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.704	3.704	4.13	162097	0.00	10000	
Be	9	45	2	NoGas	0.157	0.157	1.20	956	0.02	2000	
B	11	6	2	NoGas	6.690	6.690	5.01	36522	0.02	300	
Na	23	45	1	He	1523.941	1523.941	1.18	761812	0.20	500000	
Mg	24	45	1	He	8116.584	8116.584	1.69	2248661	0.36	500000	
Al	27	45	1	He	-1.053	-1.053	-16.86	188	-0.56	200000	
K	39	45	1	He	599.328	599.328	1.79	92512	0.65	500000	
Ca	44	45	1	He	22445.816	22445.816	2.26	177587	12.64	500000	
Ti	47	45	1	He	-0.002	-0.002	-4383.64	2	-0.07	2500	
V	51	45	1	He	-0.059	-0.059	-140.55	77	-0.08	10000	
Cr	52	45	1	He	-0.017	-0.017	-63.23	903	0.00	10000	
Mn	55	45	1	He	206.939	206.939	1.84	254485	0.08	10000	
Fe	56	45	1	He	67.029	67.029	2.33	132629	0.05	200000	
Co	59	45	1	He	0.945	0.945	0.87	4670	0.02	5000	
Ni	60	45	1	He	1.417	1.417	6.77	1982	0.07	10000	
Cu	63	45	1	He	-0.759	-0.759	-8.54	2885	-0.03	10000	
Zn	66	45	1	He	-2.707	-2.707	-9.85	2337	-0.12	10000	
As	75	115	1	He	0.205	0.205	4.47	82	0.25	10000	
Se	78	115	1	He	0.170	0.170	92.85	6	2.85	10000	
Sr	88	103	1	He	17.813	17.813	1.29	21389	0.08	10000	
Mo	95	103	1	He	0.056	0.056	51.15	107	0.05	2000	
Ag	107	103	1	He	0.007	0.007	72.29	50	0.01	300	
Cd	111	115	1	He	0.083	0.083	25.79	49	0.17	4000	
Sn	118	115	1	He	0.252	0.252	78.57	1871	0.01	2000	
Sb	123	115	1	He	0.079	0.079	19.59	122	0.06	200	
Ba	137	115	1	He	64.383	64.383	1.30	27704	0.23	10000	
W	182	159	1	He	0.216	0.216	20.19	2963	0.01	2500	
Tl	205	165	1	He	0.055	0.055	14.83	524	0.01	2000	
Pb	208	165	1	He	0.007	0.007	89.17	1299	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1428212	0.48	1276810	111.86	60	120	
Sc	45	1	He	171260	1.15	163460	104.77	60	120	
Sc	45	2	NoGas	9686534	1.27	8842934	109.54	60	120	
Rh	103	1	He	1025890	0.29	1010526	101.52	60	120	
In	115	1	He	260769	0.51	257801	101.15	60	120	
Tb	159	1	He	1157367	0.66	1155473	100.16	60	120	
Ho	165	1	He	1151882	0.25	1147359	100.39	60	120	
Bi	209	1	He	771912	0.81	790610	97.63	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64160-D-4-A
Data File Name	046SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:09:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	122.881	122.881	0.91	2313586	0.01	10000	
Be	9	45	2	NoGas	1089.364	1089.364	1.61	5814322	0.02	2000	
B	11	6	2	NoGas	113.914	113.914	1.49	418375	0.03	300	
Na	23	45	1	He	17781.257	17781.257	2.40	8458664	0.21	500000	
Mg	24	45	1	He	48227.039	48227.039	3.23	12847985	0.38	500000	
Al	27	45	1	He	10101.031	10101.031	2.64	1131240	0.89	200000	
K	39	45	1	He	13295.503	13295.503	2.31	1750586	0.76	500000	
Ca	44	45	1	He	118230.685	118230.685	2.06	896717	13.18	500000	
Ti	47	45	1	He	100.363	100.363	7.31	5482	1.83	2500	
V	51	45	1	He	1102.755	1102.755	2.08	2068712	0.05	10000	
Cr	52	45	1	He	1074.367	1074.367	2.60	2508812	0.04	10000	
Mn	55	45	1	He	2089.420	2089.420	1.86	2458785	0.08	10000	
Fe	56	45	1	He	10362.239	10362.239	2.70	19121982	0.05	200000	
Co	59	45	1	He	1066.904	1066.904	3.19	4518024	0.02	5000	
Ni	60	45	1	He	1000.833	1000.833	3.02	1177131	0.09	10000	
Cu	63	45	1	He	1048.178	1048.178	3.43	3480040	0.03	10000	
Zn	66	45	1	He	1090.017	1090.017	2.53	419513	0.26	10000	
As	75	115	1	He	1047.145	1047.145	1.05	251208	0.42	10000	
Se	78	115	1	He	1012.964	1012.964	0.86	11713	8.65	10000	
Sr	88	103	1	He	1069.935	1069.935	0.84	1199722	0.09	10000	
Mo	95	103	1	He	106.604	106.604	1.64	143653	0.07	2000	
Ag	107	103	1	He	100.847	100.847	0.68	486719	0.02	300	
Cd	111	115	1	He	1023.789	1023.789	1.02	548344	0.19	4000	
Sn	118	115	1	He	1042.196	1042.196	0.56	1057228	0.10	2000	
Sb	123	115	1	He	103.415	103.415	1.45	117998	0.09	200	
Ba	137	115	1	He	1351.378	1351.378	1.29	542229	0.25	10000	
W	182	159	1	He	102.748	102.748	1.72	602120	0.02	2500	
Tl	205	165	1	He	275.022	275.022	2.09	2466241	0.01	2000	
Pb	208	165	1	He	1079.624	1079.624	1.72	12718986	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1372972	0.72	1276810	107.53	60	120	
Sc	45	1	He	164782	1.97	163460	100.81	60	120	
Sc	45	2	NoGas	9574622	0.45	8842934	108.27	60	120	
Rh	103	1	He	962856	0.56	1010526	95.28	60	120	
In	115	1	He	243238	0.88	257801	94.35	60	120	
Tb	159	1	He	1135754	0.70	1155473	98.29	60	120	
Ho	165	1	He	1150072	0.94	1147359	100.24	60	120	
Bi	209	1	He	730245	0.40	790610	92.36	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	047_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:13:16-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.377	0.357	981503	0.41	50	98.8	89.5	110.5	
Be	9	45	2	NoGas	51.123	0.594	271865	0.67	50	102.2	89.5	110.5	
B	11	6	2	NoGas	53.788	1.746	208321	1.13	50	107.6	89.5	110.5	
Na	23	45	1	He	25742.946	1.225	12380866	0.59	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25356.712	1.874	6832480	0.89	25000	101.4	89.5	110.5	
Al	27	45	1	He	253.323	1.488	28986	0.65	250	101.3	89.5	110.5	
K	39	45	1	He	25140.853	2.080	3337935	1.10	25000	100.6	89.5	110.5	
Ca	44	45	1	He	24828.727	1.486	191038	0.75	25000	99.3	89.5	110.5	
Ti	47	45	1	He	47.104	6.450	2604	5.56	50	94.2	89.5	110.5	
V	51	45	1	He	50.211	2.084	95433	1.88	50	100.4	89.5	110.5	
Cr	52	45	1	He	50.148	2.595	119296	1.61	50	100.3	89.5	110.5	
Mn	55	45	1	He	248.572	1.796	297086	0.94	250	99.4	89.5	110.5	
Fe	56	45	1	He	12564.861	1.478	23448680	0.48	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.282	1.665	215825	0.71	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.659	1.814	60491	0.85	50	101.3	89.5	110.5	
Cu	63	45	1	He	49.746	1.916	172142	0.85	50	99.5	89.5	110.5	
Zn	66	45	1	He	47.848	3.159	21796	1.80	50	95.7	89.5	110.5	
As	75	115	1	He	51.517	0.841	12762	0.38	50	103.0	89.5	110.5	
Se	78	115	1	He	51.025	4.568	611	4.37	50	102.0	89.5	110.5	
Sr	88	103	1	He	49.960	0.079	57315	0.82	50	99.9	89.5	110.5	
Mo	95	103	1	He	51.316	0.693	70641	1.46	50	102.6	89.5	110.5	
Ag	107	103	1	He	50.599	0.959	249408	0.33	50	101.2	89.5	110.5	
Cd	111	115	1	He	50.699	0.945	27982	0.60	50	101.4	89.5	110.5	
Sn	118	115	1	He	50.107	2.276	53830	1.77	50	100.2	89.5	110.5	
Sb	123	115	1	He	51.383	0.942	60429	1.19	50	102.8	89.5	110.5	
Ba	137	115	1	He	51.450	2.367	21278	2.02	50	102.9	89.5	110.5	
W	182	159	1	He	51.286	1.341	299410	2.10	50	102.6	89.5	110.5	
Tl	205	165	1	He	50.379	0.819	449593	1.31	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.175	0.177	589332	0.35	50	100.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1405791	0.91	1276810	110.10	60	120	
Sc	45	1	He	166608	1.04	163460	101.93	60	120	
Sc	45	2	NoGas	9535779	0.11	8842934	107.84	60	120	
Rh	103	1	He	983379	0.90	1010526	97.31	60	120	
In	115	1	He	250632	0.47	257801	97.22	60	120	
Tb	159	1	He	1128224	0.78	1155473	97.64	60	120	
Ho	165	1	He	1144282	0.51	1147359	99.73	60	120	
Bi	209	1	He	743580	0.25	790610	94.05	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	048_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:17:28-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.323	27.7	100404	1.1	8	
Be	9	45	2	NoGas	0.299	10.7	1719	9.4	1	
B	11	6	2	NoGas	7.312	3.5	39647	0.9	20	
Na	23	45	1	He	42.474	5.9	28719	2.2	1000	
Mg	24	45	1	He	21.971	3.2	6624	3.2	1000	
Al	27	45	1	He	-0.097	-255.7	287	8.4	50	
K	39	45	1	He	30.913	21.2	14558	3.7	1000	
Ca	44	45	1	He	13.423	8.3	855	1.7	1000	
Ti	47	45	1	He	0.104	151.7	8	107.8	20	
V	51	45	1	He	-0.009	-744.7	165	69.8	2	
Cr	52	45	1	He	0.072	37.7	1073	4.8	2	
Mn	55	45	1	He	-0.229	-13.1	1212	3.9	2	
Fe	56	45	1	He	11.853	5.8	25711	2.8	50	
Co	59	45	1	He	0.018	109.3	567	15.1	1	
Ni	60	45	1	He	-0.035	-69.5	199	12.1	2	
Cu	63	45	1	He	-0.730	-8.8	2861	5.4	2	
Zn	66	45	1	He	-3.400	-1.9	1979	3.2	20	
As	75	115	1	He	0.141	7.6	64	4.4	2	
Se	78	115	1	He	0.568	57.7	11	39.9	2	
Sr	88	103	1	He	0.141	16.0	272	12.0	10	
Mo	95	103	1	He	0.172	19.1	267	15.6	2	
Ag	107	103	1	He	0.038	17.4	206	19.0	0.2	
Cd	111	115	1	He	0.132	23.2	74	21.3	0.2	
Sn	118	115	1	He	0.091	170.4	1641	10.3	10	
Sb	123	115	1	He	0.180	35.6	239	32.6	2	
Ba	137	115	1	He	0.118	28.1	56	24.3	5	
W	182	159	1	He	0.349	22.1	3604	9.3	10	
Tl	205	165	1	He	0.154	10.0	1378	6.9	0.5	
Pb	208	165	1	He	0.070	18.1	1989	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1458357	2.02	1276810	114.22	60	120	
Sc	45	1	He	164324	2.12	163460	100.53	60	120	
Sc	45	2	NoGas	9694965	0.90	8842934	109.64	60	120	
Rh	103	1	He	1005167	3.23	1010526	99.47	60	120	
In	115	1	He	252458	2.72	257801	97.93	60	120	
Tb	159	1	He	1115181	2.96	1155473	96.51	60	120	
Ho	165	1	He	1124688	3.12	1147359	98.02	60	120	
Bi	209	1	He	754261	2.59	790610	95.40	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-B MS
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:21:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	118.485	118.485	0.95	2288014	0.01	10000	
Be	9	45	2	NoGas	1034.422	1034.422	1.28	5654216	0.02	2000	
B	11	6	2	NoGas	112.572	112.572	1.81	420152	0.03	300	
Na	23	45	1	He	17392.276	17392.276	1.39	8430225	0.21	500000	
Mg	24	45	1	He	48876.303	48876.303	1.38	13268658	0.37	500000	
Al	27	45	1	He	9535.422	9535.422	2.46	1088024	0.88	200000	
K	39	45	1	He	12710.835	12710.835	1.42	1705690	0.75	500000	
Ca	44	45	1	He	119915.121	119915.121	2.09	926603	12.94	500000	
Ti	47	45	1	He	93.848	93.848	2.52	5227	1.80	2500	
V	51	45	1	He	1041.514	1041.514	4.18	1990199	0.05	10000	
Cr	52	45	1	He	1007.360	1007.360	3.99	2396350	0.04	10000	
Mn	55	45	1	He	2091.464	2091.464	3.21	2506886	0.08	10000	
Fe	56	45	1	He	9818.710	9818.710	2.78	18460346	0.05	200000	
Co	59	45	1	He	1005.833	1005.833	2.92	4339870	0.02	5000	
Ni	60	45	1	He	950.795	950.795	2.45	1139413	0.08	10000	
Cu	63	45	1	He	1004.385	1004.385	1.06	3398612	0.03	10000	
Zn	66	45	1	He	1031.567	1031.567	2.04	404688	0.25	10000	
As	75	115	1	He	989.803	989.803	1.64	243558	0.41	10000	
Se	78	115	1	He	966.433	966.433	2.51	11462	8.43	10000	
Sr	88	103	1	He	1019.074	1019.074	0.59	1165875	0.09	10000	
Mo	95	103	1	He	102.549	102.549	1.19	140994	0.07	2000	
Ag	107	103	1	He	97.182	97.182	0.69	478524	0.02	300	
Cd	111	115	1	He	966.299	966.299	1.51	530869	0.18	4000	
Sn	118	115	1	He	993.588	993.588	1.74	1033832	0.10	2000	
Sb	123	115	1	He	99.290	99.290	1.09	116217	0.09	200	
Ba	137	115	1	He	1290.861	1290.861	2.43	531253	0.24	10000	
W	182	159	1	He	98.895	98.895	1.42	589918	0.02	2500	
Tl	205	165	1	He	262.076	262.076	0.89	2385165	0.01	2000	
Pb	208	165	1	He	1031.010	1031.010	0.50	12325805	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1394986	1.74	1276810	109.26	60	120	
Sc	45	1	He	167866	1.39	163460	102.70	60	120	
Sc	45	2	NoGas	9805667	0.76	8842934	110.89	60	120	
Rh	103	1	He	982353	0.55	1010526	97.21	60	120	
In	115	1	He	249506	0.96	257801	96.78	60	120	
Tb	159	1	He	1155796	0.96	1155473	100.03	60	120	
Ho	165	1	He	1167006	0.85	1147359	101.71	60	120	
Bi	209	1	He	747028	1.06	790610	94.49	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-C MSD
Data File Name	050SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:25:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	126.537	126.537	1.82	2387398	0.01	10000	
Be	9	45	2	NoGas	1109.925	1109.925	0.67	5943502	0.02	2000	
B	11	6	2	NoGas	115.909	115.909	1.68	434411	0.03	300	
Na	23	45	1	He	18296.258	18296.258	1.71	8819408	0.21	500000	
Mg	24	45	1	He	51132.917	51132.917	2.34	13804130	0.37	500000	
Al	27	45	1	He	10100.996	10100.996	2.34	1146256	0.88	200000	
K	39	45	1	He	13402.091	13402.091	1.90	1788131	0.75	500000	
Ca	44	45	1	He	125054.058	125054.058	1.92	961008	13.01	500000	
Ti	47	45	1	He	100.380	100.380	6.53	5555	1.81	2500	
V	51	45	1	He	1120.326	1120.326	2.75	2129326	0.05	10000	
Cr	52	45	1	He	1084.259	1084.259	1.37	2565793	0.04	10000	
Mn	55	45	1	He	2184.799	2184.799	2.23	2604618	0.08	10000	
Fe	56	45	1	He	10258.726	10258.726	2.63	19182748	0.05	200000	
Co	59	45	1	He	1079.626	1079.626	2.53	4632810	0.02	5000	
Ni	60	45	1	He	1003.144	1003.144	1.71	1195668	0.08	10000	
Cu	63	45	1	He	1048.107	1048.107	2.93	3526202	0.03	10000	
Zn	66	45	1	He	1088.235	1088.235	2.40	424394	0.26	10000	
As	75	115	1	He	1056.200	1056.200	1.09	255313	0.41	10000	
Se	78	115	1	He	1021.049	1021.049	1.85	11896	8.58	10000	
Sr	88	103	1	He	1070.986	1070.986	0.42	1221226	0.09	10000	
Mo	95	103	1	He	106.754	106.754	0.85	146289	0.07	2000	
Ag	107	103	1	He	100.832	100.832	0.86	494878	0.02	300	
Cd	111	115	1	He	1028.602	1028.602	0.70	555152	0.19	4000	
Sn	118	115	1	He	1058.793	1058.793	0.75	1082337	0.10	2000	
Sb	123	115	1	He	104.384	104.384	1.02	120019	0.09	200	
Ba	137	115	1	He	1372.725	1372.725	1.17	555025	0.25	10000	
W	182	159	1	He	103.783	103.783	1.65	614436	0.02	2500	
Tl	205	165	1	He	279.001	279.001	1.22	2535099	0.01	2000	
Pb	208	165	1	He	1090.798	1090.798	1.56	13020189	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1401837	1.47	1276810	109.79	60	120	
Sc	45	1	He	166959	1.79	163460	102.14	60	120	
Sc	45	2	NoGas	9606012	1.05	8842934	108.63	60	120	
Rh	103	1	He	979138	0.60	1010526	96.89	60	120	
In	115	1	He	245108	1.41	257801	95.08	60	120	
Tb	159	1	He	1147395	0.86	1155473	99.30	60	120	
Ho	165	1	He	1165249	0.93	1147359	101.56	60	120	
Bi	209	1	He	743557	0.48	790610	94.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-B-1-A
Data File Name	051SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:29:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.081	16.081	1.00	391702	0.00	10000	
Be	9	45	2	NoGas	0.519	0.519	8.17	2934	0.02	2000	
B	11	6	2	NoGas	8.929	8.929	4.35	46336	0.02	300	
Na	23	45	1	He	3884.244	3884.244	5.85	1935228	0.20	500000	
Mg	24	45	1	He	24123.141	24123.141	5.66	6707411	0.36	500000	
Al	27	45	1	He	0.931	0.931	79.64	418	0.22	200000	
K	39	45	1	He	3363.001	3363.001	4.99	470443	0.71	500000	
Ca	44	45	1	He	65920.397	65920.397	5.80	522064	12.63	500000	
Ti	47	45	1	He	-0.004	-0.004	-1406.18	2	-0.20	2500	
V	51	45	1	He	0.188	0.188	9.98	562	0.03	10000	
Cr	52	45	1	He	0.137	0.137	27.44	1282	0.01	10000	
Mn	55	45	1	He	64.026	64.026	6.19	80099	0.08	10000	
Fe	56	45	1	He	6.712	6.712	16.26	16977	0.04	200000	
Co	59	45	1	He	0.757	0.757	15.03	3849	0.02	5000	
Ni	60	45	1	He	3.899	3.899	6.43	5035	0.08	10000	
Cu	63	45	1	He	-0.679	-0.679	-13.66	3167	-0.02	10000	
Zn	66	45	1	He	-6.076	-6.076	-6.40	1000	-0.61	10000	
As	75	115	1	He	0.432	0.432	21.19	140	0.31	10000	
Se	78	115	1	He	1.102	1.102	26.98	17	6.33	10000	
Sr	88	103	1	He	37.084	37.084	5.96	44367	0.08	10000	
Mo	95	103	1	He	0.205	0.205	11.79	319	0.06	2000	
Ag	107	103	1	He	0.012	0.012	31.33	72	0.02	300	
Cd	111	115	1	He	0.417	0.417	18.99	240	0.17	4000	
Sn	118	115	1	He	1.295	1.295	28.50	2997	0.04	2000	
Sb	123	115	1	He	0.275	0.275	12.97	362	0.08	200	
Ba	137	115	1	He	136.212	136.212	6.46	58605	0.23	10000	
W	182	159	1	He	0.478	0.478	13.03	4675	0.01	2500	
Tl	205	165	1	He	0.263	0.263	22.96	2487	0.01	2000	
Pb	208	165	1	He	0.125	0.125	28.41	2803	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1475687	1.58	1276810	115.58	60	120	
Sc	45	1	He	172283	5.91	163460	105.40	60	120	
Sc	45	2	NoGas	9769591	0.09	8842934	110.48	60	120	
Rh	103	1	He	1027265	5.83	1010526	101.66	60	120	
In	115	1	He	261445	5.93	257801	101.41	60	120	
Tb	159	1	He	1202455	9.23	1155473	104.07	60	120	
Ho	165	1	He	1212605	9.82	1147359	105.69	60	120	
Bi	209	1	He	785719	5.18	790610	99.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-2-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:33:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.562	5.562	0.48	192756	0.00	10000	
Be	9	45	2	NoGas	0.543	0.543	9.26	2986	0.02	2000	
B	11	6	2	NoGas	7.103	7.103	2.93	37762	0.02	300	
Na	23	45	1	He	4935.285	4935.285	0.67	2404847	0.21	500000	
Mg	24	45	1	He	5296.044	5296.044	1.35	1442206	0.37	500000	
Al	27	45	1	He	19.846	19.846	4.13	2575	0.77	200000	
K	39	45	1	He	3659.255	3659.255	1.99	500008	0.73	500000	
Ca	44	45	1	He	8839.583	8839.583	2.27	69195	12.77	500000	
Ti	47	45	1	He	0.158	0.158	56.88	11	1.42	2500	
V	51	45	1	He	0.030	0.030	397.15	243	0.01	10000	
Cr	52	45	1	He	0.157	0.157	2.53	1302	0.01	10000	
Mn	55	45	1	He	1357.934	1357.934	1.28	1632694	0.08	10000	
Fe	56	45	1	He	1233.775	1233.775	2.58	2329356	0.05	200000	
Co	59	45	1	He	4.037	4.037	1.76	17966	0.02	5000	
Ni	60	45	1	He	6.062	6.062	5.10	7527	0.08	10000	
Cu	63	45	1	He	5.473	5.473	1.03	23944	0.02	10000	
Zn	66	45	1	He	26.563	26.563	1.75	13716	0.19	10000	
As	75	115	1	He	0.565	0.565	5.20	172	0.33	10000	
Se	78	115	1	He	0.546	0.546	34.00	10	5.23	10000	
Sr	88	103	1	He	39.388	39.388	0.07	46368	0.08	10000	
Mo	95	103	1	He	0.076	0.076	7.61	133	0.06	2000	
Ag	107	103	1	He	0.099	0.099	9.35	514	0.02	300	
Cd	111	115	1	He	0.402	0.402	10.55	229	0.18	4000	
Sn	118	115	1	He	-0.410	-0.410	-12.53	1133	-0.04	2000	
Sb	123	115	1	He	0.147	0.147	23.88	203	0.07	200	
Ba	137	115	1	He	117.426	117.426	2.73	49765	0.24	10000	
W	182	159	1	He	0.124	0.124	22.88	2374	0.01	2500	
Tl	205	165	1	He	0.144	0.144	5.53	1328	0.01	2000	
Pb	208	165	1	He	0.357	0.357	2.65	5415	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1417083	1.02	1276810	110.99	60	120	
Sc	45	1	He	168297	1.08	163460	102.96	60	120	
Sc	45	2	NoGas	9521804	0.50	8842934	107.68	60	120	
Rh	103	1	He	1008602	0.83	1010526	99.81	60	120	
In	115	1	He	256924	1.30	257801	99.66	60	120	
Tb	159	1	He	1139080	0.55	1155473	98.58	60	120	
Ho	165	1	He	1149072	1.16	1147359	100.15	60	120	
Bi	209	1	He	770192	1.67	790610	97.42	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-3-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:38:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.367	26.367	0.41	579240	0.00	10000	
Be	9	45	2	NoGas	0.228	0.228	8.92	1345	0.02	2000	
B	11	6	2	NoGas	10.579	10.579	4.62	50101	0.02	300	
Na	23	45	1	He	5576.209	5576.209	0.54	2669516	0.21	500000	
Mg	24	45	1	He	49473.949	49473.949	1.18	13236963	0.37	500000	
Al	27	45	1	He	0.005	0.005	8768.75	300	0.00	200000	
K	39	45	1	He	3875.947	3875.947	0.03	519960	0.75	500000	
Ca	44	45	1	He	135932.755	135932.755	0.25	1035109	13.13	500000	
Ti	47	45	1	He	0.060	0.060	154.08	6	1.08	2500	
V	51	45	1	He	-0.004	-0.004	-1642.92	177	0.00	10000	
Cr	52	45	1	He	0.031	0.031	28.61	986	0.00	10000	
Mn	55	45	1	He	406.910	406.910	0.52	481959	0.08	10000	
Fe	56	45	1	He	1597.400	1597.400	0.99	2963624	0.05	200000	
Co	59	45	1	He	5.487	5.487	1.32	23827	0.02	5000	
Ni	60	45	1	He	15.064	15.064	1.05	18029	0.08	10000	
Cu	63	45	1	He	-0.949	-0.949	-5.67	2153	-0.04	10000	
Zn	66	45	1	He	-1.551	-1.551	-12.06	2701	-0.06	10000	
As	75	115	1	He	1.567	1.567	3.74	413	0.38	10000	
Se	78	115	1	He	0.471	0.471	69.36	9	5.07	10000	
Sr	88	103	1	He	85.658	85.658	1.36	95746	0.09	10000	
Mo	95	103	1	He	0.044	0.044	13.18	83	0.05	2000	
Ag	107	103	1	He	0.007	0.007	36.16	47	0.02	300	
Cd	111	115	1	He	0.100	0.100	4.75	56	0.18	4000	
Sn	118	115	1	He	-0.688	-0.688	-9.28	811	-0.08	2000	
Sb	123	115	1	He	0.047	0.047	14.87	80	0.06	200	
Ba	137	115	1	He	586.939	586.939	0.79	240967	0.24	10000	
W	182	159	1	He	0.090	0.090	23.43	2145	0.00	2500	
Tl	205	165	1	He	0.079	0.079	5.60	728	0.01	2000	
Pb	208	165	1	He	0.008	0.008	101.57	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403437	0.67	1276810	109.92	60	120	
Sc	45	1	He	165414	0.84	163460	101.20	60	120	
Sc	45	2	NoGas	9734443	0.82	8842934	110.08	60	120	
Rh	103	1	He	958857	1.33	1010526	94.89	60	120	
In	115	1	He	248873	1.57	257801	96.54	60	120	
Tb	159	1	He	1124061	0.92	1155473	97.28	60	120	
Ho	165	1	He	1125383	1.68	1147359	98.08	60	120	
Bi	209	1	He	724610	1.48	790610	91.65	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-5-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:42:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.858	16.858	1.06	403479	0.00	10000	
Be	9	45	2	NoGas	0.231	0.231	22.32	1359	0.02	2000	
B	11	6	2	NoGas	9.399	9.399	3.34	47131	0.02	300	
Na	23	45	1	He	6902.457	6902.457	5.15	3496160	0.20	500000	
Mg	24	45	1	He	35851.350	35851.350	5.74	10152782	0.35	500000	
Al	27	45	1	He	-0.509	-0.509	-79.64	256	-0.20	200000	
K	39	45	1	He	2713.201	2713.201	4.67	388773	0.70	500000	
Ca	44	45	1	He	100727.284	100727.284	4.70	812351	12.40	500000	
Ti	47	45	1	He	-0.023	-0.023	-136.36	1	-2.06	2500	
V	51	45	1	He	-0.112	-0.112	-110.70	-29	0.39	10000	
Cr	52	45	1	He	-0.006	-0.006	-366.79	951	0.00	10000	
Mn	55	45	1	He	906.417	906.417	4.65	1134776	0.08	10000	
Fe	56	45	1	He	294.987	294.987	5.23	582736	0.05	200000	
Co	59	45	1	He	4.274	4.274	6.08	19758	0.02	5000	
Ni	60	45	1	He	6.336	6.336	9.10	8166	0.08	10000	
Cu	63	45	1	He	-0.719	-0.719	-8.09	3088	-0.02	10000	
Zn	66	45	1	He	3.439	3.439	12.18	4889	0.07	10000	
As	75	115	1	He	0.601	0.601	8.56	183	0.33	10000	
Se	78	115	1	He	0.365	0.365	26.84	8	4.40	10000	
Sr	88	103	1	He	79.991	79.991	8.97	96425	0.08	10000	
Mo	95	103	1	He	0.175	0.175	11.90	282	0.06	2000	
Ag	107	103	1	He	0.001	0.001	273.01	18	0.00	300	
Cd	111	115	1	He	0.092	0.092	10.40	54	0.17	4000	
Sn	118	115	1	He	-0.945	-0.945	-3.94	567	-0.17	2000	
Sb	123	115	1	He	0.062	0.062	55.94	100	0.06	200	
Ba	137	115	1	He	298.149	298.149	5.57	127404	0.23	10000	
W	182	159	1	He	0.785	0.785	35.20	6738	0.01	2500	
Tl	205	165	1	He	0.077	0.077	8.38	762	0.01	2000	
Pb	208	165	1	He	-0.007	-0.007	-144.78	1186	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1444815	1.83	1276810	113.16	60	120	
Sc	45	1	He	175418	5.08	163460	107.32	60	120	
Sc	45	2	NoGas	9708753	1.08	8842934	109.79	60	120	
Rh	103	1	He	1039549	8.93	1010526	102.87	60	120	
In	115	1	He	259571	5.83	257801	100.69	60	120	
Tb	159	1	He	1210267	8.83	1155473	104.74	60	120	
Ho	165	1	He	1213337	10.12	1147359	105.75	60	120	
Bi	209	1	He	768684	4.81	790610	97.23	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-6-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:46:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.449	4.449	4.05	173209	0.00	10000	
Be	9	45	2	NoGas	0.193	0.193	17.15	1130	0.02	2000	
B	11	6	2	NoGas	8.854	8.854	1.93	44354	0.02	300	
Na	23	45	1	He	2414.634	2414.634	0.78	1165666	0.21	500000	
Mg	24	45	1	He	17593.259	17593.259	0.72	4726701	0.37	500000	
Al	27	45	1	He	26.509	26.509	4.33	3294	0.80	200000	
K	39	45	1	He	2794.605	2794.605	1.52	379404	0.74	500000	
Ca	44	45	1	He	42319.561	42319.561	0.62	324100	13.06	500000	
Ti	47	45	1	He	0.403	0.403	31.07	24	1.65	2500	
V	51	45	1	He	0.002	0.002	7844.96	189	0.00	10000	
Cr	52	45	1	He	0.197	0.197	32.42	1379	0.01	10000	
Mn	55	45	1	He	11605.828	11605.828	1.44	13761182	0.08	10000	>LDR
Fe	56	45	1	He	4134.923	4134.923	1.02	7696161	0.05	200000	
Co	59	45	1	He	34.501	34.501	1.27	147803	0.02	5000	
Ni	60	45	1	He	7.217	7.217	0.93	8800	0.08	10000	
Cu	63	45	1	He	-0.214	-0.214	-4.52	4620	0.00	10000	
Zn	66	45	1	He	1.022	1.022	21.97	3703	0.03	10000	
As	75	115	1	He	0.344	0.344	19.50	115	0.30	10000	
Se	78	115	1	He	0.458	0.458	23.08	9	4.94	10000	
Sr	88	103	1	He	125.703	125.703	0.89	145114	0.09	10000	
Mo	95	103	1	He	0.041	0.041	25.18	81	0.05	2000	
Ag	107	103	1	He	0.046	0.046	8.57	241	0.02	300	
Cd	111	115	1	He	0.229	0.229	6.85	129	0.18	4000	
Sn	118	115	1	He	-1.057	-1.057	-11.84	437	-0.24	2000	
Sb	123	115	1	He	0.034	0.034	50.88	66	0.05	200	
Ba	137	115	1	He	122.635	122.635	1.69	51409	0.24	10000	
W	182	159	1	He	0.022	0.022	104.34	1774	0.00	2500	
Tl	205	165	1	He	0.051	0.051	2.79	488	0.01	2000	
Pb	208	165	1	He	0.022	0.022	61.21	1462	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1421117	0.29	1276810	111.30	60	120	
Sc	45	1	He	166090	0.23	163460	101.61	60	120	
Sc	45	2	NoGas	9547786	0.51	8842934	107.97	60	120	
Rh	103	1	He	990635	0.52	1010526	98.03	60	120	
In	115	1	He	254110	1.68	257801	98.57	60	120	
Tb	159	1	He	1138023	0.54	1155473	98.49	60	120	
Ho	165	1	He	1138137	0.70	1147359	99.20	60	120	
Bi	209	1	He	753327	0.64	790610	95.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-7-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:50:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.572	12.572	0.42	327496	0.00	10000	
Be	9	45	2	NoGas	0.124	0.124	5.10	785	0.02	2000	
B	11	6	2	NoGas	12.061	12.061	3.71	56999	0.02	300	
Na	23	45	1	He	4056.664	4056.664	1.75	2013288	0.20	500000	
Mg	24	45	1	He	18806.859	18806.859	3.77	5208817	0.36	500000	
Al	27	45	1	He	13.897	13.897	8.91	1927	0.72	200000	
K	39	45	1	He	3124.231	3124.231	2.96	436011	0.72	500000	
Ca	44	45	1	He	66184.386	66184.386	3.47	522103	12.68	500000	
Ti	47	45	1	He	0.217	0.217	111.41	14	1.50	2500	
V	51	45	1	He	0.125	0.125	66.75	436	0.03	10000	
Cr	52	45	1	He	0.578	0.578	12.08	2346	0.02	10000	
Mn	55	45	1	He	2.015	2.015	4.69	4009	0.05	10000	
Fe	56	45	1	He	26.824	26.824	3.80	55521	0.05	200000	
Co	59	45	1	He	-0.034	-0.034	-6.25	360	-0.01	5000	
Ni	60	45	1	He	0.034	0.034	127.54	291	0.01	10000	
Cu	63	45	1	He	-0.742	-0.742	-8.71	2944	-0.03	10000	
Zn	66	45	1	He	-6.742	-6.742	-1.33	736	-0.92	10000	
As	75	115	1	He	0.116	0.116	19.14	59	0.20	10000	
Se	78	115	1	He	0.390	0.390	40.00	9	4.52	10000	
Sr	88	103	1	He	34.611	34.611	1.70	40452	0.09	10000	
Mo	95	103	1	He	0.229	0.229	12.09	346	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-226.21	9	-0.01	300	
Cd	111	115	1	He	0.073	0.073	24.62	43	0.17	4000	
Sn	118	115	1	He	-1.103	-1.103	-13.37	396	-0.28	2000	
Sb	123	115	1	He	0.061	0.061	12.59	100	0.06	200	
Ba	137	115	1	He	178.889	178.889	1.30	76479	0.23	10000	
W	182	159	1	He	-0.003	-0.003	-1026.65	1645	0.00	2500	
Tl	205	165	1	He	0.014	0.014	30.33	156	0.01	2000	
Pb	208	165	1	He	0.029	0.029	24.49	1566	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1441073	0.82	1276810	112.87	60	120	
Sc	45	1	He	171307	2.00	163460	104.80	60	120	
Sc	45	2	NoGas	9784434	0.23	8842934	110.65	60	120	
Rh	103	1	He	1000941	1.09	1010526	99.05	60	120	
In	115	1	He	259146	0.85	257801	100.52	60	120	
Tb	159	1	He	1150388	1.34	1155473	99.56	60	120	
Ho	165	1	He	1154154	0.88	1147359	100.59	60	120	
Bi	209	1	He	756964	0.52	790610	95.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-8-a
Data File Name	057SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:54:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.793	9.793	0.47	278853	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	20.62	852	0.02	2000	
B	11	6	2	NoGas	6.518	6.518	1.59	36455	0.02	300	
Na	23	45	1	He	503.917	503.917	1.99	262312	0.19	500000	
Mg	24	45	1	He	17854.770	17854.770	1.91	5030326	0.35	500000	
Al	27	45	1	He	12.598	12.598	8.60	1807	0.70	200000	
K	39	45	1	He	1005.633	1005.633	1.37	150320	0.67	500000	
Ca	44	45	1	He	19275.120	19275.120	0.85	155239	12.42	500000	
Ti	47	45	1	He	0.248	0.248	81.05	17	1.49	2500	
V	51	45	1	He	-0.022	-0.022	-527.18	150	-0.01	10000	
Cr	52	45	1	He	1.593	1.593	4.57	4893	0.03	10000	
Mn	55	45	1	He	0.316	0.316	8.32	1962	0.02	10000	
Fe	56	45	1	He	13.385	13.385	3.25	30258	0.04	200000	
Co	59	45	1	He	-0.045	-0.045	-16.30	318	-0.01	5000	
Ni	60	45	1	He	0.078	0.078	50.53	351	0.02	10000	
Cu	63	45	1	He	-0.852	-0.852	-1.71	2610	-0.03	10000	
Zn	66	45	1	He	-6.008	-6.008	-3.75	1044	-0.58	10000	
As	75	115	1	He	0.113	0.113	14.47	60	0.19	10000	
Se	78	115	1	He	0.372	0.372	59.09	9	4.31	10000	
Sr	88	103	1	He	24.779	24.779	0.92	29729	0.08	10000	
Mo	95	103	1	He	0.155	0.155	9.80	249	0.06	2000	
Ag	107	103	1	He	0.006	0.006	58.39	42	0.01	300	
Cd	111	115	1	He	0.054	0.054	7.97	33	0.16	4000	
Sn	118	115	1	He	-1.005	-1.005	-8.79	515	-0.20	2000	
Sb	123	115	1	He	0.082	0.082	20.15	129	0.06	200	
Ba	137	115	1	He	748.076	748.076	1.27	328275	0.23	10000	
W	182	159	1	He	0.105	0.105	15.54	2322	0.00	2500	
Tl	205	165	1	He	0.013	0.013	8.07	157	0.01	2000	
Pb	208	165	1	He	0.035	0.035	10.45	1663	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1450894	0.62	1276810	113.63	60	120	
Sc	45	1	He	174181	0.46	163460	106.56	60	120	
Sc	45	2	NoGas	9878827	0.09	8842934	111.71	60	120	
Rh	103	1	He	1026580	1.18	1010526	101.59	60	120	
In	115	1	He	266008	0.44	257801	103.18	60	120	
Tb	159	1	He	1169238	0.80	1155473	101.19	60	120	
Ho	165	1	He	1178042	0.17	1147359	102.67	60	120	
Bi	209	1	He	780520	0.79	790610	98.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-9-a
Data File Name	058SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T16:59:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.708	6.708	0.20	226824	0.00	10000	
Be	9	45	2	NoGas	0.114	0.114	12.53	756	0.02	2000	
B	11	6	2	NoGas	25.459	25.459	2.61	110490	0.02	300	
Na	23	45	1	He	2751.624	2751.624	1.43	1403837	0.20	500000	
Mg	24	45	1	He	27167.351	27167.351	1.94	7719713	0.35	500000	
Al	27	45	1	He	15.423	15.423	4.68	2160	0.71	200000	
K	39	45	1	He	1710.786	1710.786	3.21	250005	0.68	500000	
Ca	44	45	1	He	63366.802	63366.802	1.66	512894	12.35	500000	
Ti	47	45	1	He	0.074	0.074	156.04	7	1.11	2500	
V	51	45	1	He	0.127	0.127	122.83	451	0.03	10000	
Cr	52	45	1	He	0.870	0.870	6.05	3134	0.03	10000	
Mn	55	45	1	He	0.841	0.841	4.65	2638	0.03	10000	
Fe	56	45	1	He	30.660	30.660	2.76	64515	0.05	200000	
Co	59	45	1	He	-0.010	-0.010	-146.00	478	0.00	5000	
Ni	60	45	1	He	0.718	0.718	7.43	1158	0.06	10000	
Cu	63	45	1	He	-0.625	-0.625	-4.94	3431	-0.02	10000	
Zn	66	45	1	He	-1.167	-1.167	-22.92	3026	-0.04	10000	
As	75	115	1	He	0.225	0.225	23.09	88	0.26	10000	
Se	78	115	1	He	0.760	0.760	21.73	13	5.66	10000	
Sr	88	103	1	He	61.832	61.832	0.85	73831	0.08	10000	
Mo	95	103	1	He	1.633	1.633	4.45	2365	0.07	2000	
Ag	107	103	1	He	0.003	0.003	62.42	30	0.01	300	
Cd	111	115	1	He	0.050	0.050	23.48	30	0.16	4000	
Sn	118	115	1	He	-0.971	-0.971	-6.40	548	-0.18	2000	
Sb	123	115	1	He	0.058	0.058	26.57	98	0.06	200	
Ba	137	115	1	He	162.242	162.242	3.04	70607	0.23	10000	
W	182	159	1	He	0.372	0.372	11.98	3949	0.01	2500	
Tl	205	165	1	He	0.042	0.042	12.67	426	0.01	2000	
Pb	208	165	1	He	0.053	0.053	19.41	1894	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1484961	3.48	1276810	116.30	60	120	
Sc	45	1	He	175694	1.02	163460	107.48	60	120	
Sc	45	2	NoGas	10123568	0.56	8842934	114.48	60	120	
Rh	103	1	He	1023848	0.96	1010526	101.32	60	120	
In	115	1	He	263762	0.68	257801	102.31	60	120	
Tb	159	1	He	1174313	0.79	1155473	101.63	60	120	
Ho	165	1	He	1181204	0.23	1147359	102.95	60	120	
Bi	209	1	He	776681	0.23	790610	98.24	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	059_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:03:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.028	2.259	1028918	2.23	50	102.1	89.5	110.5	
Be	9	45	2	NoGas	51.199	0.775	277034	0.89	50	102.4	89.5	110.5	
B	11	6	2	NoGas	52.475	0.415	206561	0.81	50	104.9	89.5	110.5	
Na	23	45	1	He	25699.505	1.659	12645385	0.78	25000	102.8	89.5	110.5	
Mg	24	45	1	He	25596.333	2.686	7055802	1.20	25000	102.4	89.5	110.5	
Al	27	45	1	He	252.645	0.747	29581	1.62	250	101.1	89.5	110.5	
K	39	45	1	He	25159.330	1.740	3417630	0.14	25000	100.6	89.5	110.5	
Ca	44	45	1	He	25026.704	1.868	196997	0.54	25000	100.1	89.5	110.5	
Ti	47	45	1	He	48.994	5.603	2772	6.37	50	98.0	89.5	110.5	
V	51	45	1	He	50.242	1.011	97703	0.86	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.938	1.483	121554	0.21	50	99.9	89.5	110.5	
Mn	55	45	1	He	249.727	1.495	305363	0.20	250	99.9	89.5	110.5	
Fe	56	45	1	He	12599.717	1.927	24056320	0.59	12500	100.8	89.5	110.5	
Co	59	45	1	He	50.153	1.577	220249	0.09	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.551	1.853	61757	0.87	50	101.1	89.5	110.5	
Cu	63	45	1	He	49.452	1.739	175116	0.53	50	98.9	89.5	110.5	
Zn	66	45	1	He	46.579	1.599	21800	0.27	50	93.2	89.5	110.5	
As	75	115	1	He	50.967	1.175	13090	0.96	50	101.9	89.5	110.5	
Se	78	115	1	He	48.788	3.377	606	3.16	50	97.6	89.5	110.5	
Sr	88	103	1	He	49.832	0.685	58742	0.75	50	99.7	89.5	110.5	
Mo	95	103	1	He	51.218	1.130	72444	1.06	50	102.4	89.5	110.5	
Ag	107	103	1	He	50.351	0.366	255029	0.45	50	100.7	89.5	110.5	
Cd	111	115	1	He	50.178	0.895	28713	0.95	50	100.4	89.5	110.5	
Sn	118	115	1	He	49.129	2.090	54752	1.87	50	98.3	89.5	110.5	
Sb	123	115	1	He	50.820	1.752	61965	2.07	50	101.6	89.5	110.5	
Ba	137	115	1	He	49.713	2.288	21316	2.09	50	99.4	89.5	110.5	
W	182	159	1	He	50.058	2.354	300432	2.34	50	100.1	89.5	110.5	
Tl	205	165	1	He	50.120	0.991	455246	1.32	50	100.2	89.5	110.5	
Pb	208	165	1	He	50.358	0.856	602001	0.74	50	100.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1426727	0.80	1276810	111.74	60	120	
Sc	45	1	He	170469	1.61	163460	104.29	60	120	
Sc	45	2	NoGas	9702515	0.19	8842934	109.72	60	120	
Rh	103	1	He	1010437	0.08	1010526	99.99	60	120	
In	115	1	He	259843	0.41	257801	100.79	60	120	
Tb	159	1	He	1159760	0.25	1155473	100.37	60	120	
Ho	165	1	He	1164698	1.12	1147359	101.51	60	120	
Bi	209	1	He	759156	0.63	790610	96.02	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	060_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:07:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.353	13.3	101416	0.9	8	
Be	9	45	2	NoGas	0.167	9.9	1015	9.2	1	
B	11	6	2	NoGas	4.373	4.3	29139	2.0	20	
Na	23	45	1	He	59.962	4.9	38282	4.9	1000	
Mg	24	45	1	He	39.135	5.2	11563	5.4	1000	
Al	27	45	1	He	-0.112	-362.7	294	14.7	50	
K	39	45	1	He	44.963	9.5	16960	4.5	1000	
Ca	44	45	1	He	33.661	20.0	1041	3.9	1000	
Ti	47	45	1	He	0.118	127.7	9	94.4	20	
V	51	45	1	He	-0.003	-2065.9	183	61.1	2	
Cr	52	45	1	He	0.035	41.5	1022	2.3	2	
Mn	55	45	1	He	0.114	31.6	1669	3.4	2	
Fe	56	45	1	He	21.500	5.3	44961	5.9	50	
Co	59	45	1	He	0.020	52.7	594	7.8	1	
Ni	60	45	1	He	-0.019	-66.3	226	7.6	2	
Cu	63	45	1	He	-0.943	-5.9	2232	9.4	2	
Zn	66	45	1	He	-3.574	-9.2	1978	7.6	20	
As	75	115	1	He	0.111	11.3	59	5.9	2	
Se	78	115	1	He	0.228	68.0	7	29.5	2	
Sr	88	103	1	He	0.139	5.5	280	4.1	10	
Mo	95	103	1	He	0.138	19.6	228	16.1	2	
Ag	107	103	1	He	0.082	9.8	442	9.1	0.2	
Cd	111	115	1	He	0.111	23.7	66	22.1	0.2	
Sn	118	115	1	He	-0.251	-87.6	1345	18.5	10	
Sb	123	115	1	He	0.142	8.2	202	7.6	2	
Ba	137	115	1	He	0.150	32.0	72	28.2	5	
W	182	159	1	He	0.239	19.2	3115	7.6	10	
Tl	205	165	1	He	0.126	6.7	1183	5.7	0.5	
Pb	208	165	1	He	0.087	19.8	2270	7.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1491291	1.90	1276810	116.80	60	120	
Sc	45	1	He	169849	1.20	163460	103.91	60	120	
Sc	45	2	NoGas	9740284	1.26	8842934	110.15	60	120	
Rh	103	1	He	1045203	1.25	1010526	103.43	60	120	
In	115	1	He	264919	1.00	257801	102.76	60	120	
Tb	159	1	He	1164746	1.33	1155473	100.80	60	120	
Ho	165	1	He	1168738	1.31	1147359	101.86	60	120	
Bi	209	1	He	789910	0.35	790610	99.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-10-a
Data File Name	061SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:11:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.890	5.890	3.04	206482	0.00	10000	
Be	9	45	2	NoGas	0.097	0.097	18.74	644	0.02	2000	
B	11	6	2	NoGas	9.295	9.295	1.95	47933	0.02	300	
Na	23	45	1	He	553.218	553.218	1.67	281982	0.20	500000	
Mg	24	45	1	He	23938.288	23938.288	1.94	6623925	0.36	500000	
Al	27	45	1	He	2.345	2.345	29.23	582	0.40	200000	
K	39	45	1	He	1167.567	1167.567	1.70	169650	0.69	500000	
Ca	44	45	1	He	24938.109	24938.109	1.95	197031	12.66	500000	
Ti	47	45	1	He	0.037	0.037	363.32	4	0.84	2500	
V	51	45	1	He	0.022	0.022	392.15	235	0.01	10000	
Cr	52	45	1	He	0.015	0.015	87.03	981	0.00	10000	
Mn	55	45	1	He	0.097	0.097	25.05	1660	0.01	10000	
Fe	56	45	1	He	16.186	16.186	1.81	35089	0.05	200000	
Co	59	45	1	He	-0.024	-0.024	-58.35	404	-0.01	5000	
Ni	60	45	1	He	-0.029	-0.029	-98.47	214	-0.01	10000	
Cu	63	45	1	He	-1.054	-1.054	-5.53	1866	-0.06	10000	
Zn	66	45	1	He	-3.709	-3.709	-18.28	1937	-0.19	10000	
As	75	115	1	He	0.195	0.195	26.88	80	0.24	10000	
Se	78	115	1	He	0.022	0.022	918.57	4	0.52	10000	
Sr	88	103	1	He	41.932	41.932	1.46	49739	0.08	10000	
Mo	95	103	1	He	2.178	2.178	1.69	3124	0.07	2000	
Ag	107	103	1	He	0.000	0.000	-432.13	11	0.00	300	
Cd	111	115	1	He	0.026	0.026	14.53	16	0.16	4000	
Sn	118	115	1	He	-1.061	-1.061	-11.44	448	-0.24	2000	
Sb	123	115	1	He	0.049	0.049	38.37	87	0.06	200	
Ba	137	115	1	He	108.010	108.010	1.25	46899	0.23	10000	
W	182	159	1	He	0.061	0.061	94.90	2045	0.00	2500	
Tl	205	165	1	He	0.015	0.015	30.69	168	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-60.76	1114	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481483	1.12	1276810	116.03	60	120	
Sc	45	1	He	171090	1.07	163460	104.67	60	120	
Sc	45	2	NoGas	9897579	0.32	8842934	111.93	60	120	
Rh	103	1	He	1016348	0.74	1010526	100.58	60	120	
In	115	1	He	263169	0.50	257801	102.08	60	120	
Tb	159	1	He	1162913	0.70	1155473	100.64	60	120	
Ho	165	1	He	1173090	0.99	1147359	102.24	60	120	
Bi	209	1	He	777593	0.73	790610	98.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-11-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:15:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.469	10.469	0.86	289458	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	11.54	596	0.01	2000	
B	11	6	2	NoGas	32.669	32.669	0.86	137507	0.02	300	
Na	23	45	1	He	4634.079	4634.079	1.61	2305643	0.20	500000	
Mg	24	45	1	He	23869.620	23869.620	1.23	6633152	0.36	500000	
Al	27	45	1	He	345.916	345.916	2.60	40700	0.85	200000	
K	39	45	1	He	2258.719	2258.719	1.87	319284	0.71	500000	
Ca	44	45	1	He	68969.884	68969.884	1.72	545833	12.64	500000	
Ti	47	45	1	He	8.906	8.906	8.35	510	1.75	2500	
V	51	45	1	He	1.391	1.391	6.56	2912	0.05	10000	
Cr	52	45	1	He	0.995	0.995	5.60	3371	0.03	10000	
Mn	55	45	1	He	30.596	30.596	1.17	39069	0.08	10000	
Fe	56	45	1	He	1370.816	1370.816	1.43	2641850	0.05	200000	
Co	59	45	1	He	0.125	0.125	14.33	1063	0.01	5000	
Ni	60	45	1	He	0.165	0.165	24.69	453	0.04	10000	
Cu	63	45	1	He	-0.727	-0.727	-5.91	3007	-0.02	10000	
Zn	66	45	1	He	-4.759	-4.759	-3.33	1528	-0.31	10000	
As	75	115	1	He	0.478	0.478	8.95	151	0.32	10000	
Se	78	115	1	He	0.420	0.420	42.17	9	4.69	10000	
Sr	88	103	1	He	63.644	63.644	1.20	74482	0.09	10000	
Mo	95	103	1	He	0.407	0.407	6.79	597	0.07	2000	
Ag	107	103	1	He	0.001	0.001	342.70	17	0.00	300	
Cd	111	115	1	He	0.039	0.039	13.74	23	0.17	4000	
Sn	118	115	1	He	-1.184	-1.184	-7.69	307	-0.39	2000	
Sb	123	115	1	He	0.044	0.044	45.96	79	0.06	200	
Ba	137	115	1	He	181.391	181.391	1.93	77153	0.24	10000	
W	182	159	1	He	0.020	0.020	180.48	1793	0.00	2500	
Tl	205	165	1	He	0.019	0.019	36.22	203	0.01	2000	
Pb	208	165	1	He	0.362	0.362	6.26	5549	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1475283	1.47	1276810	115.54	60	120	
Sc	45	1	He	171811	0.97	163460	105.11	60	120	
Sc	45	2	NoGas	9811060	1.18	8842934	110.95	60	120	
Rh	103	1	He	1003534	0.37	1010526	99.31	60	120	
In	115	1	He	257863	1.76	257801	100.02	60	120	
Tb	159	1	He	1157695	0.58	1155473	100.19	60	120	
Ho	165	1	He	1165277	0.91	1147359	101.56	60	120	
Bi	209	1	He	763300	0.43	790610	96.55	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	063_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:19:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.632	0.832	985967	0.54	50	99.3	89.5	110.5	
Be	9	45	2	NoGas	50.769	0.511	269961	1.17	50	101.5	89.5	110.5	
B	11	6	2	NoGas	48.898	2.265	195099	1.55	50	97.8	89.5	110.5	
Na	23	45	1	He	25753.040	1.568	12437747	0.96	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25439.203	1.450	6883754	0.33	25000	101.8	89.5	110.5	
Al	27	45	1	He	248.779	2.324	28590	1.39	250	99.5	89.5	110.5	
K	39	45	1	He	25331.886	1.065	3377640	0.56	25000	101.3	89.5	110.5	
Ca	44	45	1	He	25108.312	1.785	193986	0.46	25000	100.4	89.5	110.5	
Ti	47	45	1	He	50.872	1.489	2825	1.99	50	101.7	89.5	110.5	
V	51	45	1	He	49.655	1.130	94776	0.39	50	99.3	89.5	110.5	
Cr	52	45	1	He	50.377	1.435	120350	0.27	50	100.8	89.5	110.5	
Mn	55	45	1	He	247.790	1.244	297414	0.54	250	99.1	89.5	110.5	
Fe	56	45	1	He	12443.510	1.545	23319793	0.22	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.929	1.462	215216	0.26	50	99.9	89.5	110.5	
Ni	60	45	1	He	49.999	2.198	59955	1.08	50	100.0	89.5	110.5	
Cu	63	45	1	He	48.780	2.843	169606	1.70	50	97.6	89.5	110.5	
Zn	66	45	1	He	46.686	3.583	21435	1.71	50	93.4	89.5	110.5	
As	75	115	1	He	51.047	1.635	12824	0.71	50	102.1	89.5	110.5	
Se	78	115	1	He	50.434	3.234	613	2.76	50	100.9	89.5	110.5	
Sr	88	103	1	He	49.983	1.770	58180	1.95	50	100.0	89.5	110.5	
Mo	95	103	1	He	50.902	0.844	71096	1.47	50	101.8	89.5	110.5	
Ag	107	103	1	He	49.509	0.620	247624	1.24	50	99.0	89.5	110.5	
Cd	111	115	1	He	49.832	1.169	27894	1.41	50	99.7	89.5	110.5	
Sn	118	115	1	He	48.319	2.851	52708	3.31	50	96.6	89.5	110.5	
Sb	123	115	1	He	50.744	1.105	60526	1.81	50	101.5	89.5	110.5	
Ba	137	115	1	He	49.989	2.449	20970	3.01	50	100.0	89.5	110.5	
W	182	159	1	He	49.434	1.930	291004	1.43	50	98.9	89.5	110.5	
Tl	205	165	1	He	49.785	1.206	445959	1.35	50	99.6	89.5	110.5	
Pb	208	165	1	He	49.752	0.429	586576	0.40	50	99.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1440315	0.65	1276810	112.81	60	120	
Sc	45	1	He	167314	1.34	163460	102.36	60	120	
Sc	45	2	NoGas	9534702	0.70	8842934	107.82	60	120	
Rh	103	1	He	997752	0.65	1010526	98.74	60	120	
In	115	1	He	254187	0.97	257801	98.60	60	120	
Tb	159	1	He	1137608	1.47	1155473	98.45	60	120	
Ho	165	1	He	1148602	0.51	1147359	100.11	60	120	
Bi	209	1	He	741721	0.59	790610	93.82	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	064_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:24:09-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.269	25.3	98347	0.9	8	
Be	9	45	2	NoGas	0.125	7.3	774	5.8	1	
B	11	6	2	NoGas	2.484	2.4	21068	0.3	20	
Na	23	45	1	He	55.802	4.2	36207	2.2	1000	
Mg	24	45	1	He	39.248	2.2	11586	1.0	1000	
Al	27	45	1	He	-0.256	-122.6	278	11.7	50	
K	39	45	1	He	45.023	10.4	16957	4.1	1000	
Ca	44	45	1	He	35.614	35.1	1057	9.6	1000	
Ti	47	45	1	He	0.077	76.1	7	50.0	20	
V	51	45	1	He	0.015	434.9	218	58.5	2	
Cr	52	45	1	He	0.025	90.0	996	4.9	2	
Mn	55	45	1	He	-0.088	-66.5	1423	5.5	2	
Fe	56	45	1	He	19.732	7.2	41567	6.8	50	
Co	59	45	1	He	-0.008	-157.6	473	10.8	1	
Ni	60	45	1	He	-0.022	-86.1	221	10.3	2	
Cu	63	45	1	He	-0.960	-2.4	2172	4.2	2	
Zn	66	45	1	He	-3.734	-9.2	1913	7.8	20	
As	75	115	1	He	0.112	42.9	59	20.0	2	
Se	78	115	1	He	0.218	41.6	7	17.3	2	
Sr	88	103	1	He	0.102	15.6	232	8.7	10	
Mo	95	103	1	He	0.160	23.0	258	21.3	2	
Ag	107	103	1	He	0.076	3.2	408	2.9	0.2	
Cd	111	115	1	He	0.096	14.6	57	15.4	0.2	
Sn	118	115	1	He	-0.434	-21.7	1137	9.1	10	
Sb	123	115	1	He	0.144	12.3	204	10.9	2	
Ba	137	115	1	He	0.140	40.3	68	36.9	5	
W	182	159	1	He	0.267	21.7	3238	10.5	10	
Tl	205	165	1	He	0.130	7.5	1202	7.9	0.5	
Pb	208	165	1	He	0.082	13.9	2183	6.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1440778	0.91	1276810	112.84	60	120	
Sc	45	1	He	169770	1.33	163460	103.86	60	120	
Sc	45	2	NoGas	9591522	1.43	8842934	108.47	60	120	
Rh	103	1	He	1036515	0.52	1010526	102.57	60	120	
In	115	1	He	263712	1.21	257801	102.29	60	120	
Tb	159	1	He	1148476	0.05	1155473	99.39	60	120	
Ho	165	1	He	1152437	0.67	1147359	100.44	60	120	
Bi	209	1	He	769120	0.39	790610	97.28	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	065CRIA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:28:22-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	8.221	8.221	1.212	244997	0.82	8	102.8	69.5	130.5	
Be	9	2	NoGas	1.075	1.075	3.171	5916	2.67	1	107.5	69.5	130.5	
B	11	2	NoGas	20.340	20.340	1.561	89790	0.25	20	101.7	69.5	130.5	
Na	23	1	He	995.124	995.124	2.004	493931	0.07	1000	99.5	69.5	130.5	
Mg	24	1	He	987.828	987.828	2.740	270739	0.85	1000	98.8	69.5	130.5	
Al	27	1	He	48.306	48.306	3.372	5855	3.66	50	96.6	69.5	130.5	
K	39	1	He	1002.998	1002.998	2.104	145478	0.20	1000	100.3	69.5	130.5	
Ca	44	1	He	917.955	917.955	2.024	7912	3.10	1000	91.8	69.5	130.5	
Ti	47	1	He	9.875	9.875	8.191	556	7.92	10	98.7	69.5	130.5	
V	51	1	He	5.094	5.094	7.571	9983	6.10	5	101.9	69.5	130.5	
Cr	52	1	He	1.950	1.950	2.409	5604	3.26	2	97.5	69.5	130.5	
Mn	55	1	He	3.813	3.813	5.193	6121	2.44	5	76.3	69.5	130.5	
Fe	56	1	He	103.269	103.269	3.407	199448	2.10	100	103.3	69.5	130.5	
Co	59	1	He	0.932	0.932	0.517	4554	1.47	1	93.2	69.5	130.5	
Ni	60	1	He	2.028	2.028	7.823	2691	5.16	2	101.4	69.5	130.5	
Cu	63	1	He	0.926	0.926	16.356	8574	4.13	2	46.3	69.5	130.5	6020A CR1 Failed
Zn	66	1	He	14.355	14.355	2.179	8990	0.54	20	71.8	69.5	130.5	
As	75	1	He	5.059	5.059	4.043	1355	4.91	5	101.2	69.5	130.5	
Se	78	1	He	5.457	5.457	9.803	73	9.33	5	109.1	69.5	130.5	
Sr	88	1	He	9.133	9.133	2.061	11143	2.56	10	91.3	69.5	130.5	
Mo	95	1	He	5.213	5.213	2.259	7593	1.97	5	104.3	69.5	130.5	
Ag	107	1	He	0.986	0.986	0.930	5142	0.42	1	98.6	69.5	130.5	
Cd	111	1	He	1.028	1.028	1.622	603	1.43	1	102.8	69.5	130.5	
Sn	118	1	He	8.983	8.983	7.387	11556	5.32	10	89.8	69.5	130.5	
Sb	123	1	He	2.045	2.045	4.059	2574	3.32	2	102.3	69.5	130.5	
Ba	137	1	He	4.931	4.931	10.298	2167	9.88	5	98.6	69.5	130.5	
W	182	1	He	9.805	9.805	1.418	59621	2.08	10	98.0	69.5	130.5	
Tl	205	1	He	1.026	1.026	0.897	9277	0.83	1	102.6	69.5	130.5	
Pb	208	1	He	0.987	0.987	1.871	12903	0.88	1	98.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1469376	1.28	1276810	115.08	60	120	
Sc	45	1	He	169016	1.89	163460	103.40	60	120	
Sc	45	2	NoGas	9698948	1.03	8842934	109.68	60	120	
Rh	103	1	He	1037334	0.77	1010526	102.65	60	120	
In	115	1	He	265601	1.07	257801	103.03	60	120	
Tb	159	1	He	1148653	0.71	1155473	99.41	60	120	
Ho	165	1	He	1155628	1.20	1147359	100.72	60	120	
Bi	209	1	He	776005	0.68	790610	98.15	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-2-a
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:32:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.894	2.894	2.39	149517	0.00	10000	
Be	9	45	2	NoGas	2.913	2.913	5.39	16067	0.02	2000	
B	11	6	2	NoGas	9.512	9.512	4.01	49229	0.02	300	
Na	23	45	1	He	22040.701	22040.701	1.59	10840497	0.20	500000	
Mg	24	45	1	He	6877.779	6877.779	0.92	1895889	0.36	500000	
Al	27	45	1	He	92.797	92.797	3.41	11052	0.84	200000	
K	39	45	1	He	1679.925	1679.925	1.16	238304	0.70	500000	
Ca	44	45	1	He	2904.847	2904.847	2.18	23553	12.33	500000	
Ti	47	45	1	He	0.330	0.330	69.42	21	1.56	2500	
V	51	45	1	He	0.507	0.507	26.38	1175	0.04	10000	
Cr	52	45	1	He	0.337	0.337	8.25	1753	0.02	10000	
Mn	55	45	1	He	914.000	914.000	0.78	1113112	0.08	10000	
Fe	56	45	1	He	103449.127	103449.127	0.70	197421045	0.05	200000	
Co	59	45	1	He	66.635	66.635	1.42	292335	0.02	5000	
Ni	60	45	1	He	55.089	55.089	1.48	67247	0.08	10000	
Cu	63	45	1	He	2.205	2.205	5.03	13031	0.02	10000	
Zn	66	45	1	He	8.345	8.345	3.58	6690	0.12	10000	
As	75	115	1	He	3.143	3.143	1.87	843	0.37	10000	
Se	78	115	1	He	1.923	1.923	27.26	28	6.90	10000	
Sr	88	103	1	He	35.520	35.520	0.54	42408	0.08	10000	
Mo	95	103	1	He	0.295	0.295	12.66	448	0.07	2000	
Ag	107	103	1	He	0.031	0.031	11.74	173	0.02	300	
Cd	111	115	1	He	0.030	0.030	24.76	19	0.16	4000	
Sn	118	115	1	He	-1.056	-1.056	-6.22	452	-0.23	2000	
Sb	123	115	1	He	0.084	0.084	7.46	129	0.06	200	
Ba	137	115	1	He	94.381	94.381	1.81	40885	0.23	10000	
W	182	159	1	He	0.069	0.069	43.31	2100	0.00	2500	
Tl	205	165	1	He	0.014	0.014	23.94	162	0.01	2000	
Pb	208	165	1	He	0.257	0.257	4.84	4290	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1495440	0.38	1276810	117.12	60	120	
Sc	45	1	He	170389	2.21	163460	104.24	60	120	
Sc	45	2	NoGas	9831530	0.56	8842934	111.18	60	120	
Rh	103	1	He	1022691	0.82	1010526	101.20	60	120	
In	115	1	He	262546	0.69	257801	101.84	60	120	
Tb	159	1	He	1165815	1.08	1155473	100.90	60	120	
Ho	165	1	He	1163983	1.12	1147359	101.45	60	120	
Bi	209	1	He	767820	0.43	790610	97.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-2-a
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:36:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.617	2.617	2.14	148263	0.00	10000	
Be	9	45	2	NoGas	2.458	2.458	4.38	13939	0.02	2000	
B	11	6	2	NoGas	10.728	10.728	2.35	54543	0.02	300	
Na	23	45	1	He	22680.148	22680.148	1.56	11519499	0.20	500000	
Mg	24	45	1	He	7593.480	7593.480	1.50	2161336	0.35	500000	
Al	27	45	1	He	47.735	47.735	2.35	6028	0.79	200000	
K	39	45	1	He	1785.014	1785.014	0.72	260768	0.68	500000	
Ca	44	45	1	He	3306.406	3306.406	1.43	27565	11.99	500000	
Ti	47	45	1	He	0.054	0.054	220.10	6	0.97	2500	
V	51	45	1	He	0.335	0.335	69.15	866	0.04	10000	
Cr	52	45	1	He	0.271	0.271	12.34	1646	0.02	10000	
Mn	55	45	1	He	1008.228	1008.228	1.34	1267702	0.08	10000	
Fe	56	45	1	He	112200.788	112200.788	2.02	221078920	0.05	200000	
Co	59	45	1	He	63.923	63.923	1.85	289599	0.02	5000	
Ni	60	45	1	He	49.512	49.512	2.16	62438	0.08	10000	
Cu	63	45	1	He	-0.908	-0.908	-4.13	2437	-0.04	10000	
Zn	66	45	1	He	2.674	2.674	8.50	4596	0.06	10000	
As	75	115	1	He	3.543	3.543	2.25	953	0.37	10000	
Se	78	115	1	He	2.119	2.119	5.30	31	6.94	10000	
Sr	88	103	1	He	40.194	40.194	2.37	48698	0.08	10000	
Mo	95	103	1	He	0.048	0.048	35.80	97	0.05	2000	
Ag	107	103	1	He	-0.001	-0.001	-47.01	7	-0.02	300	
Cd	111	115	1	He	0.025	0.025	24.32	16	0.16	4000	
Sn	118	115	1	He	-0.928	-0.928	-2.67	596	-0.16	2000	
Sb	123	115	1	He	0.079	0.079	34.70	124	0.06	200	
Ba	137	115	1	He	98.373	98.373	0.99	42885	0.23	10000	
W	182	159	1	He	0.014	0.014	427.77	1782	0.00	2500	
Tl	205	165	1	He	0.010	0.010	20.29	124	0.01	2000	
Pb	208	165	1	He	0.021	0.021	62.19	1494	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1511432	0.21	1276810	118.38	60	120	
Sc	45	1	He	175938	1.00	163460	107.63	60	120	
Sc	45	2	NoGas	10096284	1.47	8842934	114.17	60	120	
Rh	103	1	He	1038251	1.05	1010526	102.74	60	120	
In	115	1	He	264220	0.36	257801	102.49	60	120	
Tb	159	1	He	1174699	0.32	1155473	101.66	60	120	
Ho	165	1	He	1175921	0.98	1147359	102.49	60	120	
Bi	209	1	He	767485	1.26	790610	97.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-3-a
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:40:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.229	13.229	13.39	382295	0.00	10000	
Be	9	45	2	NoGas	0.310	0.310	5.22	2034	0.02	2000	
B	11	6	2	NoGas	14.712	14.712	11.91	72453	0.02	300	
Na	23	45	1	He	28017.647	28017.647	1.41	14070393	0.20	500000	
Mg	24	45	1	He	426.915	426.915	1.16	120953	0.35	500000	
Al	27	45	1	He	92.990	92.990	3.09	11316	0.82	200000	
K	39	45	1	He	1416.320	1416.320	1.40	206908	0.68	500000	
Ca	44	45	1	He	6035.959	6035.959	0.45	49106	12.29	500000	
Ti	47	45	1	He	0.266	0.266	31.33	18	1.50	2500	
V	51	45	1	He	1.463	1.463	8.87	3090	0.05	10000	
Cr	52	45	1	He	0.597	0.597	2.09	2431	0.02	10000	
Mn	55	45	1	He	46.540	46.540	0.88	59367	0.08	10000	
Fe	56	45	1	He	5014.118	5014.118	0.96	9774688	0.05	200000	
Co	59	45	1	He	9.915	9.915	3.52	44852	0.02	5000	
Ni	60	45	1	He	9.811	9.811	0.38	12440	0.08	10000	
Cu	63	45	1	He	-0.102	-0.102	-26.60	5231	0.00	10000	
Zn	66	45	1	He	-6.013	-6.013	-0.73	1041	-0.58	10000	
As	75	115	1	He	2.286	2.286	0.72	635	0.36	10000	
Se	78	115	1	He	0.237	0.237	100.86	7	3.40	10000	
Sr	88	103	1	He	271.098	271.098	1.56	328025	0.08	10000	
Mo	95	103	1	He	0.848	0.848	7.61	1259	0.07	2000	
Ag	107	103	1	He	0.000	0.000	387.35	16	0.00	300	
Cd	111	115	1	He	0.023	0.023	28.08	15	0.15	4000	
Sn	118	115	1	He	-1.035	-1.035	-4.96	485	-0.21	2000	
Sb	123	115	1	He	0.268	0.268	3.97	363	0.07	200	
Ba	137	115	1	He	17.448	17.448	3.19	7722	0.23	10000	
W	182	159	1	He	0.063	0.063	64.14	2089	0.00	2500	
Tl	205	165	1	He	0.005	0.005	3.52	84	0.01	2000	
Pb	208	165	1	He	0.066	0.066	9.58	2060	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1566338	6.76	1276810	122.68	60	120	ISTD warning
Sc	45	1	He	173993	1.53	163460	106.44	60	120	
Sc	45	2	NoGas	11094430	11.39	8842934	125.46	60	120	ISTD warning
Rh	103	1	He	1038780	0.83	1010526	102.80	60	120	
In	115	1	He	268086	0.90	257801	103.99	60	120	
Tb	159	1	He	1178799	0.42	1155473	102.02	60	120	
Ho	165	1	He	1190853	1.08	1147359	103.79	60	120	
Bi	209	1	He	787969	0.94	790610	99.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-3-a
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:45:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	14.832	14.832	0.13	378807	0.00	10000	
Be	9	45	2	NoGas	0.281	0.281	14.15	1682	0.02	2000	
B	11	6	2	NoGas	16.094	16.094	1.16	75892	0.02	300	
Na	23	45	1	He	28137.000	28137.000	1.08	14077520	0.20	500000	
Mg	24	45	1	He	420.835	420.835	1.55	118794	0.35	500000	
Al	27	45	1	He	15.428	15.428	2.79	2131	0.72	200000	
K	39	45	1	He	1448.382	1448.382	2.41	210525	0.69	500000	
Ca	44	45	1	He	6067.154	6067.154	1.53	49165	12.34	500000	
Ti	47	45	1	He	0.036	0.036	184.89	4	0.81	2500	
V	51	45	1	He	0.355	0.355	26.98	892	0.04	10000	
Cr	52	45	1	He	0.259	0.259	20.01	1592	0.02	10000	
Mn	55	45	1	He	47.338	47.338	1.02	60129	0.08	10000	
Fe	56	45	1	He	4348.357	4348.357	2.34	8444424	0.05	200000	
Co	59	45	1	He	9.863	9.863	3.26	44452	0.02	5000	
Ni	60	45	1	He	11.225	11.225	3.07	14140	0.08	10000	
Cu	63	45	1	He	-0.778	-0.778	-1.16	2855	-0.03	10000	
Zn	66	45	1	He	-4.436	-4.436	-5.37	1671	-0.27	10000	
As	75	115	1	He	2.052	2.052	6.14	577	0.36	10000	
Se	78	115	1	He	0.361	0.361	55.26	9	4.19	10000	
Sr	88	103	1	He	271.771	271.771	0.41	328920	0.08	10000	
Mo	95	103	1	He	0.677	0.677	2.55	1011	0.07	2000	
Ag	107	103	1	He	-0.001	-0.001	-307.21	11	0.00	300	
Cd	111	115	1	He	0.024	0.024	38.92	16	0.15	4000	
Sn	118	115	1	He	-1.058	-1.058	-3.24	463	-0.23	2000	
Sb	123	115	1	He	0.236	0.236	23.81	326	0.07	200	
Ba	137	115	1	He	17.221	17.221	3.35	7676	0.22	10000	
W	182	159	1	He	0.025	0.025	155.71	1867	0.00	2500	
Tl	205	165	1	He	0.009	0.009	8.03	122	0.01	2000	
Pb	208	165	1	He	0.003	0.003	93.97	1292	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1515968	0.72	1276810	118.73	60	120	
Sc	45	1	He	173334	1.28	163460	106.04	60	120	
Sc	45	2	NoGas	10038246	0.89	8842934	113.52	60	120	
Rh	103	1	He	1039012	1.07	1010526	102.82	60	120	
In	115	1	He	269958	0.12	257801	104.72	60	120	
Tb	159	1	He	1184628	0.63	1155473	102.52	60	120	
Ho	165	1	He	1191391	0.25	1147359	103.84	60	120	
Bi	209	1	He	793212	0.95	790610	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-4-a
Data File Name	070SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:49:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	45.488	45.488	0.24	970490	0.00	10000	
Be	9	45	2	NoGas	4.387	4.387	4.05	24943	0.02	2000	
B	11	6	2	NoGas	12.029	12.029	1.55	61179	0.02	300	
Na	23	45	1	He	8052.787	8052.787	0.79	4047173	0.20	500000	
Mg	24	45	1	He	2548.551	2548.551	0.48	717290	0.36	500000	
Al	27	45	1	He	402.604	402.604	0.24	47882	0.84	200000	
K	39	45	1	He	2350.417	2350.417	1.02	335716	0.70	500000	
Ca	44	45	1	He	2093.088	2093.088	0.88	17533	11.94	500000	
Ti	47	45	1	He	0.307	0.307	50.57	20	1.53	2500	
V	51	45	1	He	-0.037	-0.037	-245.84	120	-0.03	10000	
Cr	52	45	1	He	0.031	0.031	26.79	1036	0.00	10000	
Mn	55	45	1	He	222.258	222.258	1.76	277329	0.08	10000	
Fe	56	45	1	He	29.423	29.423	1.29	61420	0.05	200000	
Co	59	45	1	He	222.571	222.571	1.09	995021	0.02	5000	
Ni	60	45	1	He	355.463	355.463	1.03	441345	0.08	10000	
Cu	63	45	1	He	77.399	77.399	1.26	276362	0.03	10000	
Zn	66	45	1	He	373.928	373.928	1.91	154131	0.24	10000	
As	75	115	1	He	0.114	0.114	33.89	61	0.19	10000	
Se	78	115	1	He	0.549	0.549	29.72	11	4.94	10000	
Sr	88	103	1	He	17.999	17.999	1.11	22345	0.08	10000	
Mo	95	103	1	He	0.018	0.018	54.54	53	0.03	2000	
Ag	107	103	1	He	0.005	0.005	66.83	40	0.01	300	
Cd	111	115	1	He	0.164	0.164	10.11	99	0.16	4000	
Sn	118	115	1	He	-1.107	-1.107	-1.53	411	-0.27	2000	
Sb	123	115	1	He	0.057	0.057	28.81	100	0.06	200	
Ba	137	115	1	He	55.604	55.604	2.68	24943	0.22	10000	
W	182	159	1	He	0.004	0.004	1044.38	1748	0.00	2500	
Tl	205	165	1	He	0.117	0.117	9.86	1135	0.01	2000	
Pb	208	165	1	He	0.763	0.763	3.56	10676	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1549888	0.97	1276810	121.39	60	120	ISTD warning
Sc	45	1	He	173824	0.53	163460	106.34	60	120	
Sc	45	2	NoGas	10152724	0.38	8842934	114.81	60	120	
Rh	103	1	He	1060773	0.09	1010526	104.97	60	120	
In	115	1	He	271861	0.86	257801	105.45	60	120	
Tb	159	1	He	1192548	0.72	1155473	103.21	60	120	
Ho	165	1	He	1202970	1.26	1147359	104.85	60	120	
Bi	209	1	He	815837	0.45	790610	103.19	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-k-4-a
Data File Name	071SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:53:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	46.782	46.782	1.02	975479	0.00	10000	
Be	9	45	2	NoGas	4.634	4.634	2.49	25811	0.02	2000	
B	11	6	2	NoGas	11.281	11.281	6.07	57189	0.02	300	
Na	23	45	1	He	8191.404	8191.404	1.78	4102433	0.20	500000	
Mg	24	45	1	He	2546.884	2546.884	1.17	714376	0.36	500000	
Al	27	45	1	He	375.546	375.546	0.39	44533	0.84	200000	
K	39	45	1	He	2325.337	2325.337	0.70	331158	0.70	500000	
Ca	44	45	1	He	2104.132	2104.132	1.14	17561	11.98	500000	
Ti	47	45	1	He	0.056	0.056	158.11	6	1.01	2500	
V	51	45	1	He	-0.006	-0.006	-3184.77	183	0.00	10000	
Cr	52	45	1	He	0.020	0.020	68.19	1004	0.00	10000	
Mn	55	45	1	He	221.497	221.497	1.13	275444	0.08	10000	
Fe	56	45	1	He	1.499	1.499	6.09	7035	0.02	200000	
Co	59	45	1	He	220.299	220.299	1.14	981510	0.02	5000	
Ni	60	45	1	He	355.682	355.682	1.29	440107	0.08	10000	
Cu	63	45	1	He	77.839	77.839	0.84	276961	0.03	10000	
Zn	66	45	1	He	377.751	377.751	1.31	155139	0.24	10000	
As	75	115	1	He	0.108	0.108	32.37	59	0.18	10000	
Se	78	115	1	He	0.394	0.394	15.04	9	4.40	10000	
Sr	88	103	1	He	18.419	18.419	2.26	22503	0.08	10000	
Mo	95	103	1	He	0.012	0.012	42.68	44	0.03	2000	
Ag	107	103	1	He	0.002	0.002	121.42	23	0.01	300	
Cd	111	115	1	He	0.131	0.131	15.29	78	0.17	4000	
Sn	118	115	1	He	-1.187	-1.187	-6.75	315	-0.38	2000	
Sb	123	115	1	He	0.037	0.037	38.58	72	0.05	200	
Ba	137	115	1	He	56.718	56.718	2.11	25003	0.23	10000	
W	182	159	1	He	0.014	0.014	196.31	1793	0.00	2500	
Tl	205	165	1	He	0.116	0.116	1.66	1110	0.01	2000	
Pb	208	165	1	He	0.761	0.761	3.19	10525	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1524349	1.03	1276810	119.39	60	120	
Sc	45	1	He	173239	0.95	163460	105.98	60	120	
Sc	45	2	NoGas	9951197	0.93	8842934	112.53	60	120	
Rh	103	1	He	1044043	0.11	1010526	103.32	60	120	
In	115	1	He	267171	1.28	257801	103.63	60	120	
Tb	159	1	He	1179749	0.56	1155473	102.10	60	120	
Ho	165	1	He	1189397	0.71	1147359	103.66	60	120	
Bi	209	1	He	804980	0.89	790610	101.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64369-c-1-a
Data File Name	072SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T17:57:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.750	5.750	1.22	207375	0.00	10000	
Be	9	45	2	NoGas	0.105	0.105	17.81	696	0.02	2000	
B	11	6	2	NoGas	75.734	75.734	1.16	314485	0.02	300	
Na	23	45	1	He	22225.852	22225.852	1.39	11127675	0.20	500000	
Mg	24	45	1	He	31226.262	31226.262	0.69	8758629	0.36	500000	
Al	27	45	1	He	1372.440	1372.440	1.73	162071	0.85	200000	
K	39	45	1	He	3624.118	3624.118	2.30	510367	0.71	500000	
Ca	44	45	1	He	148352.569	148352.569	1.99	1184148	12.53	500000	
Ti	47	45	1	He	12.523	12.523	10.23	722	1.73	2500	
V	51	45	1	He	2.472	2.472	12.38	5070	0.05	10000	
Cr	52	45	1	He	1.616	1.616	6.48	4926	0.03	10000	
Mn	55	45	1	He	177.955	177.955	1.73	221830	0.08	10000	
Fe	56	45	1	He	1094.498	1094.498	2.01	2129831	0.05	200000	
Co	59	45	1	He	0.756	0.756	1.21	3886	0.02	5000	
Ni	60	45	1	He	2.655	2.655	4.15	3540	0.08	10000	
Cu	63	45	1	He	2.997	2.997	4.30	16029	0.02	10000	
Zn	66	45	1	He	14.311	14.311	3.89	9209	0.16	10000	
As	75	115	1	He	1.218	1.218	1.14	347	0.35	10000	
Se	78	115	1	He	1.158	1.158	22.94	18	6.29	10000	
Sr	88	103	1	He	651.339	651.339	1.51	762522	0.09	10000	
Mo	95	103	1	He	2.442	2.442	4.43	3460	0.07	2000	
Ag	107	103	1	He	0.006	0.006	58.78	43	0.01	300	
Cd	111	115	1	He	0.090	0.090	14.55	54	0.17	4000	
Sn	118	115	1	He	-1.095	-1.095	-1.98	411	-0.27	2000	
Sb	123	115	1	He	0.664	0.664	5.11	848	0.08	200	
Ba	137	115	1	He	79.390	79.390	0.87	34562	0.23	10000	
W	182	159	1	He	0.032	0.032	55.52	1885	0.00	2500	
Tl	205	165	1	He	0.029	0.029	9.99	303	0.01	2000	
Pb	208	165	1	He	0.876	0.876	4.12	11881	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1531724	1.91	1276810	119.96	60	120	
Sc	45	1	He	173417	0.72	163460	106.09	60	120	
Sc	45	2	NoGas	10067895	0.54	8842934	113.85	60	120	
Rh	103	1	He	1005197	0.03	1010526	99.47	60	120	
In	115	1	He	263849	0.47	257801	102.35	60	120	
Tb	159	1	He	1170235	0.30	1155473	101.28	60	120	
Ho	165	1	He	1184898	0.92	1147359	103.27	60	120	
Bi	209	1	He	768976	0.61	790610	97.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64334-d-1-a
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:01:50-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.975	3.975	2.21	174018	0.00	10000	
Be	9	45	2	NoGas	0.071	0.071	28.57	507	0.01	2000	
B	11	6	2	NoGas	148.952	148.952	2.35	609051	0.02	300	
Na	23	45	1	He	49013.941	49013.941	1.88	24557194	0.20	500000	
Mg	24	45	1	He	21888.025	21888.025	2.03	6146561	0.36	500000	
Al	27	45	1	He	83.147	83.147	2.53	10126	0.82	200000	
K	39	45	1	He	7011.994	7011.994	1.08	978335	0.72	500000	
Ca	44	45	1	He	70140.966	70140.966	1.44	560984	12.50	500000	
Ti	47	45	1	He	1.735	1.735	9.95	102	1.70	2500	
V	51	45	1	He	0.157	0.157	50.79	503	0.03	10000	
Cr	52	45	1	He	0.092	0.092	89.06	1185	0.01	10000	
Mn	55	45	1	He	69.968	69.968	2.01	88272	0.08	10000	
Fe	56	45	1	He	193.716	193.716	2.09	380811	0.05	200000	
Co	59	45	1	He	0.794	0.794	1.89	4064	0.02	5000	
Ni	60	45	1	He	9.489	9.489	0.52	12015	0.08	10000	
Cu	63	45	1	He	-0.597	-0.597	-13.03	3491	-0.02	10000	
Zn	66	45	1	He	3.846	3.846	11.12	5006	0.08	10000	
As	75	115	1	He	4.952	4.952	1.20	1310	0.38	10000	
Se	78	115	1	He	0.208	0.208	125.82	6	3.21	10000	
Sr	88	103	1	He	325.220	325.220	1.16	383268	0.08	10000	
Mo	95	103	1	He	5.010	5.010	1.98	7118	0.07	2000	
Ag	107	103	1	He	0.002	0.002	109.98	21	0.01	300	
Cd	111	115	1	He	0.066	0.066	19.45	40	0.17	4000	
Sn	118	115	1	He	-1.184	-1.184	-4.70	311	-0.38	2000	
Sb	123	115	1	He	0.905	0.905	10.18	1139	0.08	200	
Ba	137	115	1	He	14.662	14.662	2.81	6348	0.23	10000	
W	182	159	1	He	0.031	0.031	21.96	1885	0.00	2500	
Tl	205	165	1	He	0.112	0.112	2.55	1066	0.01	2000	
Pb	208	165	1	He	0.518	0.518	1.24	7527	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1538849	3.01	1276810	120.52	60	120	ISTD warning
Sc	45	1	He	173629	0.88	163460	106.22	60	120	
Sc	45	2	NoGas	10088803	1.02	8842934	114.09	60	120	
Rh	103	1	He	1011768	0.88	1010526	100.12	60	120	
In	115	1	He	262144	1.29	257801	101.68	60	120	
Tb	159	1	He	1173734	0.43	1155473	101.58	60	120	
Ho	165	1	He	1183871	0.97	1147359	103.18	60	120	
Bi	209	1	He	761370	0.70	790610	96.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64336-a-1-a
Data File Name	074SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:06:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.822	3.822	1.98	171021	0.00	10000	
Be	9	45	2	NoGas	0.115	0.115	4.25	756	0.02	2000	
B	11	6	2	NoGas	68.619	68.619	0.85	285483	0.02	300	
Na	23	45	1	He	23502.407	23502.407	0.43	11843431	0.20	500000	
Mg	24	45	1	He	33065.728	33065.728	0.50	9335074	0.35	500000	
Al	27	45	1	He	1839.643	1839.643	0.97	218567	0.84	200000	
K	39	45	1	He	4989.920	4989.920	0.21	703131	0.71	500000	
Ca	44	45	1	He	63547.182	63547.182	1.22	511040	12.43	500000	
Ti	47	45	1	He	31.138	31.138	18.18	1805	1.73	2500	
V	51	45	1	He	4.062	4.062	5.23	8268	0.05	10000	
Cr	52	45	1	He	2.129	2.129	3.63	6229	0.03	10000	
Mn	55	45	1	He	111.360	111.360	1.36	140319	0.08	10000	
Fe	56	45	1	He	1770.612	1770.612	1.66	3465692	0.05	200000	
Co	59	45	1	He	0.897	0.897	1.66	4547	0.02	5000	
Ni	60	45	1	He	10.892	10.892	4.37	13828	0.08	10000	
Cu	63	45	1	He	3.065	3.065	0.95	16373	0.02	10000	
Zn	66	45	1	He	25.447	25.447	3.90	13774	0.18	10000	
As	75	115	1	He	3.475	3.475	4.43	914	0.38	10000	
Se	78	115	1	He	0.798	0.798	36.13	14	5.87	10000	
Sr	88	103	1	He	370.191	370.191	0.38	432367	0.09	10000	
Mo	95	103	1	He	4.792	4.792	2.12	6749	0.07	2000	
Ag	107	103	1	He	0.004	0.004	99.22	33	0.01	300	
Cd	111	115	1	He	0.050	0.050	15.61	29	0.17	4000	
Sn	118	115	1	He	-1.035	-1.035	-2.96	467	-0.22	2000	
Sb	123	115	1	He	1.323	1.323	3.92	1627	0.08	200	
Ba	137	115	1	He	110.950	110.950	0.33	47232	0.23	10000	
W	182	159	1	He	0.052	0.052	30.23	1993	0.00	2500	
Tl	205	165	1	He	0.023	0.023	17.14	247	0.01	2000	
Pb	208	165	1	He	1.023	1.023	2.37	13521	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1528190	0.39	1276810	119.69	60	120	
Sc	45	1	He	174544	0.12	163460	106.78	60	120	
Sc	45	2	NoGas	10084190	0.93	8842934	114.04	60	120	
Rh	103	1	He	1002725	0.86	1010526	99.23	60	120	
In	115	1	He	258021	0.76	257801	100.09	60	120	
Tb	159	1	He	1164435	1.07	1155473	100.78	60	120	
Ho	165	1	He	1171791	0.66	1147359	102.13	60	120	
Bi	209	1	He	762743	0.40	790610	96.48	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	075_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:10:18-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.714	1.895	1047146	1.71	50	103.4	89.5	110.5	
Be	9	45	2	NoGas	51.706	0.859	281301	0.93	50	103.4	89.5	110.5	
B	11	6	2	NoGas	51.215	2.606	208828	0.30	50	102.4	89.5	110.5	
Na	23	45	1	He	25511.077	0.386	12519884	0.68	25000	102.0	89.5	110.5	
Mg	24	45	1	He	24929.444	0.882	6854891	1.14	25000	99.7	89.5	110.5	
Al	27	45	1	He	249.881	2.353	29182	2.67	250	100.0	89.5	110.5	
K	39	45	1	He	25452.564	0.887	3448361	0.94	25000	101.8	89.5	110.5	
Ca	44	45	1	He	24974.602	1.020	196082	1.19	25000	99.9	89.5	110.5	
Ti	47	45	1	He	49.858	2.606	2812	1.72	50	99.7	89.5	110.5	
V	51	45	1	He	49.983	2.149	96954	3.03	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.747	0.911	120775	0.81	50	99.5	89.5	110.5	
Mn	55	45	1	He	247.556	1.114	301916	0.34	250	99.0	89.5	110.5	
Fe	56	45	1	He	12505.819	1.689	23814039	1.11	12500	100.0	89.5	110.5	
Co	59	45	1	He	50.077	0.944	219333	0.26	50	100.2	89.5	110.5	
Ni	60	45	1	He	50.357	1.372	61359	1.17	50	100.7	89.5	110.5	
Cu	63	45	1	He	49.161	0.209	173667	0.73	50	98.3	89.5	110.5	
Zn	66	45	1	He	46.486	2.274	21704	1.33	50	93.0	89.5	110.5	
As	75	115	1	He	50.532	1.080	12833	0.46	50	101.1	89.5	110.5	
Se	78	115	1	He	49.625	2.108	610	2.43	50	99.3	89.5	110.5	
Sr	88	103	1	He	49.824	1.104	58109	0.53	50	99.6	89.5	110.5	
Mo	95	103	1	He	51.670	1.476	72310	1.47	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.798	0.494	254577	0.86	50	101.6	89.5	110.5	
Cd	111	115	1	He	50.342	1.603	28482	0.71	50	100.7	89.5	110.5	
Sn	118	115	1	He	49.189	2.742	54198	1.84	50	98.4	89.5	110.5	
Sb	123	115	1	He	50.730	1.188	61157	0.28	50	101.5	89.5	110.5	
Ba	137	115	1	He	50.027	1.800	21210	1.56	50	100.1	89.5	110.5	
W	182	159	1	He	50.090	2.216	300501	2.42	50	100.2	89.5	110.5	
Tl	205	165	1	He	50.096	1.532	454352	1.10	50	100.2	89.5	110.5	
Pb	208	165	1	He	49.975	0.734	596580	0.28	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1476464	2.69	1276810	115.64	60	120	
Sc	45	1	He	169999	0.91	163460	104.00	60	120	
Sc	45	2	NoGas	9755452	0.07	8842934	110.32	60	120	
Rh	103	1	He	999760	0.62	1010526	98.93	60	120	
In	115	1	He	256937	0.92	257801	99.66	60	120	
Tb	159	1	He	1159270	0.57	1155473	100.33	60	120	
Ho	165	1	He	1163008	0.46	1147359	101.36	60	120	
Bi	209	1	He	749375	0.57	790610	94.78	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	076_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:14:30-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.233	35.1	100951	0.6	8	
Be	9	45	2	NoGas	0.125	33.6	800	30.1	1	
B	11	6	2	NoGas	3.115	8.5	24944	3.6	20	
Na	23	45	1	He	56.769	6.3	36478	4.4	1000	
Mg	24	45	1	He	36.339	3.9	10729	4.0	1000	
Al	27	45	1	He	0.007	457.9	307	1.9	50	
K	39	45	1	He	48.990	11.7	17390	3.9	1000	
Ca	44	45	1	He	27.125	25.5	984	5.3	1000	
Ti	47	45	1	He	0.139	114.4	10	88.2	20	
V	51	45	1	He	0.064	275.9	312	109.8	2	
Cr	52	45	1	He	0.034	36.2	1013	2.9	2	
Mn	55	45	1	He	-0.186	-33.9	1297	5.4	2	
Fe	56	45	1	He	20.191	2.8	42194	1.8	50	
Co	59	45	1	He	-0.010	-39.4	461	3.6	1	
Ni	60	45	1	He	-0.028	-71.4	213	10.2	2	
Cu	63	45	1	He	-0.841	-7.5	2566	7.9	2	
Zn	66	45	1	He	-3.595	-2.0	1957	1.1	20	
As	75	115	1	He	0.090	23.7	53	10.7	2	
Se	78	115	1	He	0.288	25.1	7	13.3	2	
Sr	88	103	1	He	0.144	32.1	283	19.3	10	
Mo	95	103	1	He	0.139	11.1	228	9.4	2	
Ag	107	103	1	He	0.080	5.9	428	6.5	0.2	
Cd	111	115	1	He	0.085	37.2	50	37.5	0.2	
Sn	118	115	1	He	-0.363	-6.6	1208	1.9	10	
Sb	123	115	1	He	0.154	18.8	214	15.6	2	
Ba	137	115	1	He	0.162	38.2	77	34.5	5	
W	182	159	1	He	0.314	7.4	3534	3.9	10	
Tl	205	165	1	He	0.116	11.9	1083	11.2	0.5	
Pb	208	165	1	He	0.067	14.7	2026	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1533910	2.66	1276810	120.14	60	120	ISTD warning
Sc	45	1	He	168821	0.86	163460	103.28	60	120	
Sc	45	2	NoGas	9911532	0.95	8842934	112.08	60	120	
Rh	103	1	He	1035672	0.76	1010526	102.49	60	120	
In	115	1	He	262036	1.29	257801	101.64	60	120	
Tb	159	1	He	1153949	0.02	1155473	99.87	60	120	
Ho	165	1	He	1159654	0.50	1147359	101.07	60	120	
Bi	209	1	He	778427	0.58	790610	98.46	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	077_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:19:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.950	0.307	1018940	0.75	50	101.9	89.5	110.5	
Be	9	45	2	NoGas	52.045	1.020	279256	0.47	50	104.1	89.5	110.5	
B	11	6	2	NoGas	50.486	3.028	200724	2.79	50	101.0	89.5	110.5	
Na	23	45	1	He	25834.052	2.110	12506114	0.70	25000	103.3	89.5	110.5	
Mg	24	45	1	He	25411.476	2.117	6892525	0.83	25000	101.6	89.5	110.5	
Al	27	45	1	He	250.312	3.026	28831	1.67	250	100.1	89.5	110.5	
K	39	45	1	He	25392.904	1.431	3393830	0.04	25000	101.6	89.5	110.5	
Ca	44	45	1	He	25032.656	1.750	193874	0.43	25000	100.1	89.5	110.5	
Ti	47	45	1	He	50.733	5.373	2822	4.02	50	101.5	89.5	110.5	
V	51	45	1	He	51.124	2.039	97804	0.90	50	102.2	89.5	110.5	
Cr	52	45	1	He	50.399	2.118	120687	0.79	50	100.8	89.5	110.5	
Mn	55	45	1	He	247.676	1.516	297991	0.30	250	99.1	89.5	110.5	
Fe	56	45	1	He	12516.483	2.324	23512001	1.08	12500	100.1	89.5	110.5	
Co	59	45	1	He	49.748	2.645	214935	1.28	50	99.5	89.5	110.5	
Ni	60	45	1	He	50.078	1.262	60199	0.15	50	100.2	89.5	110.5	
Cu	63	45	1	He	49.410	2.522	172145	1.17	50	98.8	89.5	110.5	
Zn	66	45	1	He	47.145	3.051	21667	1.21	50	94.3	89.5	110.5	
As	75	115	1	He	50.850	1.221	12842	0.31	50	101.7	89.5	110.5	
Se	78	115	1	He	50.654	3.202	619	1.87	50	101.3	89.5	110.5	
Sr	88	103	1	He	49.671	1.126	57669	0.72	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.655	0.672	71965	1.30	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.033	0.701	249608	1.11	50	100.1	89.5	110.5	
Cd	111	115	1	He	50.243	0.648	28271	0.83	50	100.5	89.5	110.5	
Sn	118	115	1	He	48.685	0.593	53373	1.65	50	97.4	89.5	110.5	
Sb	123	115	1	He	50.667	0.624	60748	0.83	50	101.3	89.5	110.5	
Ba	137	115	1	He	49.584	3.486	20902	2.15	50	99.2	89.5	110.5	
W	182	159	1	He	50.064	0.285	297121	1.07	50	100.1	89.5	110.5	
Tl	205	165	1	He	50.177	2.982	450885	1.95	50	100.4	89.5	110.5	
Pb	208	165	1	He	49.985	1.553	591257	0.99	50	100.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1437876	0.79	1276810	112.61	60	120	
Sc	45	1	He	167721	1.41	163460	102.61	60	120	
Sc	45	2	NoGas	9621896	0.60	8842934	108.81	60	120	
Rh	103	1	He	995240	0.65	1010526	98.49	60	120	
In	115	1	He	255529	1.41	257801	99.12	60	120	
Tb	159	1	He	1146837	0.79	1155473	99.25	60	120	
Ho	165	1	He	1152481	1.19	1147359	100.45	60	120	
Bi	209	1	He	754247	1.26	790610	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	078_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:23:27-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.294	32.8	100122	0.9	8	
Be	9	45	2	NoGas	0.108	12.6	689	11.3	1	
B	11	6	2	NoGas	3.031	10.1	23820	4.0	20	
Na	23	45	1	He	55.572	5.1	36133	3.8	1000	
Mg	24	45	1	He	37.656	2.2	11159	1.6	1000	
Al	27	45	1	He	-0.184	-110.7	287	8.8	50	
K	39	45	1	He	47.341	5.4	17283	1.6	1000	
Ca	44	45	1	He	26.679	3.4	987	1.3	1000	
Ti	47	45	1	He	0.058	59.3	6	34.7	20	
V	51	45	1	He	-0.037	-329.5	118	201.1	2	
Cr	52	45	1	He	-0.005	-201.8	927	2.9	2	
Mn	55	45	1	He	-0.126	-59.2	1379	6.4	2	
Fe	56	45	1	He	20.011	2.6	42131	2.7	50	
Co	59	45	1	He	0.004	298.1	526	9.8	1	
Ni	60	45	1	He	-0.008	-162.6	239	6.9	2	
Cu	63	45	1	He	-0.924	-8.5	2298	11.9	2	
Zn	66	45	1	He	-3.618	-7.1	1960	4.6	20	
As	75	115	1	He	0.099	11.5	56	6.3	2	
Se	78	115	1	He	0.317	74.0	8	38.0	2	
Sr	88	103	1	He	0.110	47.8	243	26.1	10	
Mo	95	103	1	He	0.140	11.6	231	10.2	2	
Ag	107	103	1	He	0.064	15.7	348	14.7	0.2	
Cd	111	115	1	He	0.088	21.0	53	21.0	0.2	
Sn	118	115	1	He	-0.405	-22.1	1182	8.9	10	
Sb	123	115	1	He	0.144	12.2	207	9.7	2	
Ba	137	115	1	He	0.116	44.1	58	38.4	5	
W	182	159	1	He	0.282	10.8	3356	5.7	10	
Tl	205	165	1	He	0.128	6.0	1203	5.4	0.5	
Pb	208	165	1	He	0.064	14.1	2002	4.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1484561	0.97	1276810	116.27	60	120	
Sc	45	1	He	169919	0.57	163460	103.95	60	120	
Sc	45	2	NoGas	9719960	1.25	8842934	109.92	60	120	
Rh	103	1	He	1042673	0.81	1010526	103.18	60	120	
In	115	1	He	266316	1.01	257801	103.30	60	120	
Tb	159	1	He	1158103	0.46	1155473	100.23	60	120	
Ho	165	1	He	1168901	0.46	1147359	101.88	60	120	
Bi	209	1	He	782445	0.89	790610	98.97	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-5-a
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:27:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.126	119.126	0.64	2344319	0.01	10000	
Be	9	45	2	NoGas	0.049	0.049	23.93	382	0.01	2000	
B	11	6	2	NoGas	504.433	504.433	0.81	1869799	0.03	300	>LDR
Na	23	45	1	He	148866.785	148866.785	1.46	74512719	0.20	500000	
Mg	24	45	1	He	179336.247	179336.247	1.75	50318481	0.36	500000	
Al	27	45	1	He	6.725	6.725	11.16	1106	0.61	200000	
K	39	45	1	He	932575.516	932575.516	0.78	128547436	0.73	500000	>LDR
Ca	44	45	1	He	431011.391	431011.391	1.35	3441818	12.52	500000	
Ti	47	45	1	He	0.189	0.189	50.46	13	1.42	2500	
V	51	45	1	He	-0.014	-0.014	-4160.31	190	-0.01	10000	
Cr	52	45	1	He	4.463	4.463	4.56	11940	0.04	10000	
Mn	55	45	1	He	57.443	57.443	1.57	72704	0.08	10000	
Fe	56	45	1	He	878.218	878.218	1.61	1710826	0.05	200000	
Co	59	45	1	He	0.003	0.003	426.42	533	0.00	5000	
Ni	60	45	1	He	1.093	1.093	8.43	1608	0.07	10000	
Cu	63	45	1	He	6.181	6.181	14.95	27229	0.02	10000	
Zn	66	45	1	He	-5.572	-5.572	-2.46	1216	-0.46	10000	
As	75	115	1	He	0.342	0.342	14.74	113	0.30	10000	
Se	78	115	1	He	0.898	0.898	10.28	14	6.23	10000	
Sr	88	103	1	He	15625.185	15625.185	0.61	16777256	0.09	10000	>LDR
Mo	95	103	1	He	7.743	7.743	0.97	10013	0.08	2000	
Ag	107	103	1	He	0.009	0.009	14.89	54	0.02	300	
Cd	111	115	1	He	0.022	0.022	51.10	13	0.16	4000	
Sn	118	115	1	He	-1.044	-1.044	-6.04	444	-0.23	2000	
Sb	123	115	1	He	0.075	0.075	15.59	113	0.07	200	
Ba	137	115	1	He	17.760	17.760	1.43	7357	0.24	10000	
W	182	159	1	He	0.254	0.254	20.45	3049	0.01	2500	
Tl	205	165	1	He	0.019	0.019	10.35	196	0.01	2000	
Pb	208	165	1	He	0.036	0.036	36.53	1596	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1414910	0.78	1276810	110.82	60	120	
Sc	45	1	He	173515	3.24	163460	106.15	60	120	
Sc	45	2	NoGas	9994593	0.58	8842934	113.02	60	120	
Rh	103	1	He	922052	2.33	1010526	91.24	60	120	
In	115	1	He	250905	2.36	257801	97.33	60	120	
Tb	159	1	He	1108503	1.41	1155473	95.93	60	120	
Ho	165	1	He	1118508	0.80	1147359	97.49	60	120	
Bi	209	1	He	666486	1.18	790610	84.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-5-a@20
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:32:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.236	6.236	1.27	209638	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	20.39	222	0.01	2000	
B	11	6	2	NoGas	29.764	29.764	1.47	128083	0.02	300	
Na	23	45	1	He	7918.448	7918.448	1.39	3995042	0.20	500000	
Mg	24	45	1	He	9562.269	9562.269	2.24	2699047	0.35	500000	
Al	27	45	1	He	-0.592	-0.592	-64.43	246	-0.24	200000	
K	39	45	1	He	48393.541	48393.541	1.28	6719707	0.72	500000	
Ca	44	45	1	He	20611.406	20611.406	1.35	166243	12.40	500000	
Ti	47	45	1	He	-0.002	-0.002	-3634.06	2	-0.08	2500	
V	51	45	1	He	-0.112	-0.112	-83.79	-30	0.38	10000	
Cr	52	45	1	He	0.183	0.183	3.86	1415	0.01	10000	
Mn	55	45	1	He	2.009	2.009	0.28	4075	0.05	10000	
Fe	56	45	1	He	46.200	46.200	2.98	94428	0.05	200000	
Co	59	45	1	He	-0.086	-0.086	-2.76	134	-0.06	5000	
Ni	60	45	1	He	-0.103	-0.103	-11.34	127	-0.08	10000	
Cu	63	45	1	He	1.058	1.058	11.92	9326	0.01	10000	
Zn	66	45	1	He	-7.371	-7.371	-2.21	494	-1.49	10000	
As	75	115	1	He	0.059	0.059	89.27	45	0.13	10000	
Se	78	115	1	He	0.188	0.188	47.27	6	2.97	10000	
Sr	88	103	1	He	691.643	691.643	1.09	821101	0.08	10000	
Mo	95	103	1	He	0.350	0.350	1.21	524	0.07	2000	
Ag	107	103	1	He	0.003	0.003	23.26	29	0.01	300	
Cd	111	115	1	He	0.053	0.053	2.47	33	0.16	4000	
Sn	118	115	1	He	-1.082	-1.082	-5.43	430	-0.25	2000	
Sb	123	115	1	He	0.036	0.036	47.18	71	0.05	200	
Ba	137	115	1	He	0.911	0.911	10.96	407	0.22	10000	
W	182	159	1	He	0.008	0.008	361.73	1708	0.00	2500	
Tl	205	165	1	He	0.011	0.011	20.21	128	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-238.80	1152	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1495493	0.74	1276810	117.13	60	120	
Sc	45	1	He	174515	1.73	163460	106.76	60	120	
Sc	45	2	NoGas	9743837	0.72	8842934	110.19	60	120	
Rh	103	1	He	1019405	0.89	1010526	100.88	60	120	
In	115	1	He	266111	0.76	257801	103.22	60	120	
Tb	159	1	He	1146889	0.28	1155473	99.26	60	120	
Ho	165	1	He	1149263	0.21	1147359	100.17	60	120	
Bi	209	1	He	758447	0.79	790610	95.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-6-a
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:37:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	80.441	80.441	1.72	1418948	0.01	10000	
Be	9	45	2	NoGas	0.043	0.043	29.41	304	0.01	2000	
B	11	6	2	NoGas	314.144	314.144	2.28	1114860	0.03	300	>LDR
Na	23	45	1	He	108747.187	108747.187	0.85	53418133	0.20	500000	
Mg	24	45	1	He	126843.788	126843.788	0.95	34926610	0.36	500000	
Al	27	45	1	He	16.284	16.284	5.29	2192	0.74	200000	
K	39	45	1	He	296879.034	296879.034	0.95	40164361	0.74	500000	
Ca	44	45	1	He	293198.079	293198.079	1.99	2296823	12.77	500000	
Ti	47	45	1	He	0.275	0.275	54.83	18	1.54	2500	
V	51	45	1	He	0.123	0.123	137.64	429	0.03	10000	
Cr	52	45	1	He	2.682	2.682	1.17	7409	0.04	10000	
Mn	55	45	1	He	9.935	9.935	1.68	13609	0.07	10000	
Fe	56	45	1	He	74.563	74.563	1.23	146232	0.05	200000	
Co	59	45	1	He	-0.008	-0.008	-72.94	474	0.00	5000	
Ni	60	45	1	He	1.331	1.331	2.90	1867	0.07	10000	
Cu	63	45	1	He	0.809	0.809	22.44	8243	0.01	10000	
Zn	66	45	1	He	-6.824	-6.824	-3.93	699	-0.98	10000	
As	75	115	1	He	0.279	0.279	16.27	97	0.29	10000	
Se	78	115	1	He	0.389	0.389	23.19	8	4.70	10000	
Sr	88	103	1	He	13136.317	13136.317	0.32	13977450	0.09	10000	>LDR
Mo	95	103	1	He	0.345	0.345	3.60	464	0.07	2000	
Ag	107	103	1	He	0.005	0.005	46.07	34	0.01	300	
Cd	111	115	1	He	0.044	0.044	23.90	25	0.17	4000	
Sn	118	115	1	He	-1.166	-1.166	-10.97	315	-0.37	2000	
Sb	123	115	1	He	0.048	0.048	19.50	81	0.06	200	
Ba	137	115	1	He	110.960	110.960	1.02	45624	0.24	10000	
W	182	159	1	He	0.033	0.033	66.59	1767	0.00	2500	
Tl	205	165	1	He	0.010	0.010	31.30	119	0.01	2000	
Pb	208	165	1	He	0.110	0.110	9.67	2403	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349862	1.37	1276810	105.72	60	120	
Sc	45	1	He	170251	0.68	163460	104.15	60	120	
Sc	45	2	NoGas	8784389	1.26	8842934	99.34	60	120	
Rh	103	1	He	913733	0.56	1010526	90.42	60	120	
In	115	1	He	249212	0.41	257801	96.67	60	120	
Tb	159	1	He	1095065	0.54	1155473	94.77	60	120	
Ho	165	1	He	1099908	0.46	1147359	95.86	60	120	
Bi	209	1	He	672633	0.66	790610	85.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-7-a
Data File Name	082SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:41:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	38.355	38.355	0.66	779721	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	2.17	2797	0.02	2000	
B	11	6	2	NoGas	256.379	256.379	1.60	983821	0.03	300	
Na	23	45	1	He	28749.816	28749.816	0.95	14315299	0.20	500000	
Mg	24	45	1	He	106134.186	106134.186	1.79	29603728	0.36	500000	
Al	27	45	1	He	9000.848	9000.848	2.11	1055341	0.85	200000	
K	39	45	1	He	15006.154	15006.154	1.51	2067180	0.73	500000	
Ca	44	45	1	He	405445.917	405445.917	0.73	3217997	12.60	500000	
Ti	47	45	1	He	134.297	134.297	4.01	7680	1.75	2500	
V	51	45	1	He	16.923	16.923	7.96	33412	0.05	10000	
Cr	52	45	1	He	127.759	127.759	1.88	313188	0.04	10000	
Mn	55	45	1	He	325.916	325.916	1.87	402775	0.08	10000	
Fe	56	45	1	He	9335.293	9335.293	2.51	18033783	0.05	200000	
Co	59	45	1	He	6.009	6.009	2.31	27152	0.02	5000	
Ni	60	45	1	He	108.363	108.363	1.01	133690	0.08	10000	
Cu	63	45	1	He	22.166	22.166	1.69	82481	0.03	10000	
Zn	66	45	1	He	43.215	43.215	1.68	20715	0.21	10000	
As	75	115	1	He	7.432	7.432	1.62	1886	0.39	10000	
Se	78	115	1	He	2.637	2.637	22.19	35	7.43	10000	
Sr	88	103	1	He	6775.578	6775.578	0.60	7552527	0.09	10000	
Mo	95	103	1	He	79.008	79.008	2.36	105834	0.07	2000	
Ag	107	103	1	He	0.058	0.058	16.66	290	0.02	300	
Cd	111	115	1	He	0.189	0.189	6.45	107	0.18	4000	
Sn	118	115	1	He	-0.411	-0.411	-21.73	1119	-0.04	2000	
Sb	123	115	1	He	3.828	3.828	3.46	4575	0.08	200	
Ba	137	115	1	He	101.806	101.806	2.73	42568	0.24	10000	
W	182	159	1	He	1.040	1.040	0.95	7754	0.01	2500	
Tl	205	165	1	He	0.355	0.355	0.03	3227	0.01	2000	
Pb	208	165	1	He	5.439	5.439	1.22	65438	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456376	1.92	1276810	114.06	60	120	
Sc	45	1	He	172523	3.26	163460	105.54	60	120	
Sc	45	2	NoGas	9494224	1.02	8842934	107.37	60	120	
Rh	103	1	He	957251	1.94	1010526	94.73	60	120	
In	115	1	He	253433	2.64	257801	98.31	60	120	
Tb	159	1	He	1141016	2.25	1155473	98.75	60	120	
Ho	165	1	He	1152879	2.67	1147359	100.48	60	120	
Bi	209	1	He	725130	2.02	790610	91.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-8-a
Data File Name	083SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:46:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	75.493	75.493	1.01	1403924	0.01	10000	
Be	9	45	2	NoGas	0.038	0.038	6.94	296	0.01	2000	
B	11	6	2	NoGas	297.591	297.591	1.86	1073708	0.03	300	
Na	23	45	1	He	113261.182	113261.182	0.97	52960453	0.21	500000	
Mg	24	45	1	He	131296.637	131296.637	1.20	34413068	0.38	500000	
Al	27	45	1	He	12.841	12.841	5.52	1708	0.75	200000	
K	39	45	1	He	305590.436	305590.436	0.80	39355002	0.78	500000	
Ca	44	45	1	He	297314.313	297314.313	1.36	2217159	13.41	500000	
Ti	47	45	1	He	0.270	0.270	61.19	17	1.62	2500	
V	51	45	1	He	-0.165	-0.165	-181.18	-122	0.14	10000	
Cr	52	45	1	He	2.706	2.706	3.71	7107	0.04	10000	
Mn	55	45	1	He	10.195	10.195	1.84	13254	0.08	10000	
Fe	56	45	1	He	67.715	67.715	1.78	126764	0.05	200000	
Co	59	45	1	He	-0.031	-0.031	-35.40	353	-0.01	5000	
Ni	60	45	1	He	1.129	1.129	1.31	1543	0.07	10000	
Cu	63	45	1	He	1.147	1.147	12.53	8950	0.01	10000	
Zn	66	45	1	He	-7.196	-7.196	-1.00	526	-1.37	10000	
As	75	115	1	He	0.274	0.274	14.19	92	0.30	10000	
Se	78	115	1	He	0.523	0.523	73.24	9	5.53	10000	
Sr	88	103	1	He	13259.759	13259.759	1.06	13602716	0.10	10000	>LDR
Mo	95	103	1	He	0.339	0.339	3.92	440	0.08	2000	
Ag	107	103	1	He	0.008	0.008	26.06	49	0.02	300	
Cd	111	115	1	He	0.027	0.027	16.13	15	0.17	4000	
Sn	118	115	1	He	-0.959	-0.959	-5.32	507	-0.19	2000	
Sb	123	115	1	He	0.056	0.056	27.71	87	0.06	200	
Ba	137	115	1	He	93.482	93.482	1.17	36814	0.25	10000	
W	182	159	1	He	0.068	0.068	43.45	1900	0.00	2500	
Tl	205	165	1	He	0.007	0.007	67.13	93	0.01	2000	
Pb	208	165	1	He	0.078	0.078	6.16	1982	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1371275	0.59	1276810	107.40	60	120	
Sc	45	1	He	162067	0.90	163460	99.15	60	120	
Sc	45	2	NoGas	9222783	1.35	8842934	104.30	60	120	
Rh	103	1	He	880963	0.27	1010526	87.18	60	120	
In	115	1	He	238680	0.26	257801	92.58	60	120	
Tb	159	1	He	1059365	1.21	1155473	91.68	60	120	
Ho	165	1	He	1071532	1.54	1147359	93.39	60	120	
Bi	209	1	He	659009	2.28	790610	83.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-m-9-a
Data File Name	084SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:50:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.576	0.576	16.30	102395	0.00	10000	
Be	9	45	2	NoGas	0.014	0.014	65.29	178	0.01	2000	
B	11	6	2	NoGas	10.452	10.452	3.66	52977	0.02	300	
Na	23	45	1	He	221.532	221.532	0.84	113773	0.19	500000	
Mg	24	45	1	He	103.500	103.500	0.85	28330	0.37	500000	
Al	27	45	1	He	6.188	6.188	6.57	990	0.62	200000	
K	39	45	1	He	208.740	208.740	6.47	37837	0.55	500000	
Ca	44	45	1	He	366.609	366.609	6.20	3529	10.39	500000	
Ti	47	45	1	He	0.264	0.264	82.84	17	1.58	2500	
V	51	45	1	He	-0.122	-0.122	-93.01	-47	0.26	10000	
Cr	52	45	1	He	0.175	0.175	8.51	1317	0.01	10000	
Mn	55	45	1	He	-0.658	-0.658	-3.79	710	-0.09	10000	
Fe	56	45	1	He	9.530	9.530	0.45	21481	0.04	200000	
Co	59	45	1	He	-0.090	-0.090	-9.07	109	-0.08	5000	
Ni	60	45	1	He	0.020	0.020	130.16	263	0.01	10000	
Cu	63	45	1	He	1.608	1.608	9.65	10611	0.02	10000	
Zn	66	45	1	He	0.323	0.323	118.33	3401	0.01	10000	
As	75	115	1	He	0.052	0.052	80.41	42	0.13	10000	
Se	78	115	1	He	0.214	0.214	179.29	6	3.39	10000	
Sr	88	103	1	He	8.390	8.390	4.53	9721	0.09	10000	
Mo	95	103	1	He	0.093	0.093	6.56	153	0.06	2000	
Ag	107	103	1	He	0.001	0.001	31.69	19	0.01	300	
Cd	111	115	1	He	0.039	0.039	19.00	23	0.17	4000	
Sn	118	115	1	He	-1.065	-1.065	-6.74	426	-0.25	2000	
Sb	123	115	1	He	0.061	0.061	35.97	98	0.06	200	
Ba	137	115	1	He	0.490	0.490	22.16	211	0.23	10000	
W	182	159	1	He	0.043	0.043	60.08	1811	0.00	2500	
Tl	205	165	1	He	0.004	0.004	45.85	68	0.01	2000	
Pb	208	165	1	He	0.045	0.045	19.06	1665	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1498000	0.74	1276810	117.32	60	120	
Sc	45	1	He	164546	0.40	163460	100.66	60	120	
Sc	45	2	NoGas	9451599	0.39	8842934	106.88	60	120	
Rh	103	1	He	984230	0.40	1010526	97.40	60	120	
In	115	1	He	253042	1.19	257801	98.15	60	120	
Tb	159	1	He	1086923	0.59	1155473	94.07	60	120	
Ho	165	1	He	1099713	0.68	1147359	95.85	60	120	
Bi	209	1	He	745429	0.81	790610	94.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-2-a@500
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:54:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.622	0.622	2.14	100569	0.00	10000	
Be	9	45	2	NoGas	0.038	0.038	69.23	296	0.01	2000	
B	11	6	2	NoGas	8.190	8.190	4.26	42676	0.02	300	
Na	23	45	1	He	98.645	98.645	2.98	53686	0.18	500000	
Mg	24	45	1	He	45.738	45.738	3.17	12549	0.36	500000	
Al	27	45	1	He	339.026	339.026	1.93	37003	0.92	200000	
K	39	45	1	He	281.538	281.538	1.36	45855	0.61	500000	
Ca	44	45	1	He	452.563	452.563	6.37	4047	11.18	500000	
Ti	47	45	1	He	12.411	12.411	4.07	658	1.89	2500	
V	51	45	1	He	0.760	0.760	9.59	1555	0.05	10000	
Cr	52	45	1	He	0.886	0.886	14.87	2880	0.03	10000	
Mn	55	45	1	He	7.125	7.125	2.82	9540	0.07	10000	
Fe	56	45	1	He	727.509	727.509	3.31	1301929	0.06	200000	
Co	59	45	1	He	2.295	2.295	1.06	9876	0.02	5000	
Ni	60	45	1	He	9.843	9.843	4.56	11428	0.09	10000	
Cu	63	45	1	He	10.740	10.740	1.70	39566	0.03	10000	
Zn	66	45	1	He	5.533	5.533	11.29	5217	0.11	10000	
As	75	115	1	He	39.297	39.297	1.40	9574	0.41	10000	
Se	78	115	1	He	0.128	0.128	148.06	5	2.49	10000	
Sr	88	103	1	He	2.815	2.815	6.22	3275	0.09	10000	
Mo	95	103	1	He	0.089	0.089	26.88	144	0.06	2000	
Ag	107	103	1	He	0.539	0.539	3.80	2628	0.02	300	
Cd	111	115	1	He	0.513	0.513	4.51	280	0.18	4000	
Sn	118	115	1	He	-0.683	-0.683	-14.00	807	-0.08	2000	
Sb	123	115	1	He	7.814	7.814	5.57	9051	0.09	200	
Ba	137	115	1	He	3.075	3.075	6.16	1256	0.24	10000	
W	182	159	1	He	-0.011	-0.011	-174.72	1504	0.00	2500	
Tl	205	165	1	He	0.115	0.115	27.26	1000	0.01	2000	
Pb	208	165	1	He	1709.770	1709.770	0.83	18999985	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1447350	1.06	1276810	113.36	60	120	
Sc	45	1	He	159345	0.98	163460	97.48	60	120	
Sc	45	2	NoGas	9209584	0.15	8842934	104.15	60	120	
Rh	103	1	He	967635	0.18	1010526	95.76	60	120	
In	115	1	He	246330	0.51	257801	95.55	60	120	
Tb	159	1	He	1081018	0.36	1155473	93.56	60	120	
Ho	165	1	He	1084816	0.71	1147359	94.55	60	120	
Bi	209	1	He	777537	0.60	790610	98.35	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	086_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T18:59:02-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.205	1.777	972842	0.70	50	104.4	89.5	110.5	
Be	9	45	2	NoGas	51.792	1.483	259538	0.77	50	103.6	89.5	110.5	
B	11	6	2	NoGas	53.063	1.788	203042	1.18	50	106.1	89.5	110.5	
Na	23	45	1	He	25740.329	0.567	11504785	0.63	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25337.918	1.145	6345324	1.26	25000	101.4	89.5	110.5	
Al	27	45	1	He	248.828	1.168	26466	1.39	250	99.5	89.5	110.5	
K	39	45	1	He	25258.370	1.151	3116756	1.37	25000	101.0	89.5	110.5	
Ca	44	45	1	He	25010.569	0.182	178836	0.38	25000	100.0	89.5	110.5	
Ti	47	45	1	He	47.553	2.185	2444	2.39	50	95.1	89.5	110.5	
V	51	45	1	He	49.983	0.742	88286	0.75	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.789	1.303	110090	1.46	50	99.6	89.5	110.5	
Mn	55	45	1	He	246.884	0.846	274238	0.93	250	98.8	89.5	110.5	
Fe	56	45	1	He	12353.576	0.798	21425940	0.92	12500	98.8	89.5	110.5	
Co	59	45	1	He	49.677	0.819	198172	0.86	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.579	0.845	55025	0.76	50	99.2	89.5	110.5	
Cu	63	45	1	He	50.461	0.223	162216	0.47	50	100.9	89.5	110.5	
Zn	66	45	1	He	46.028	1.425	19604	1.38	50	92.1	89.5	110.5	
As	75	115	1	He	50.537	1.086	11739	0.66	50	101.1	89.5	110.5	
Se	78	115	1	He	50.608	2.840	569	2.45	50	101.2	89.5	110.5	
Sr	88	103	1	He	51.541	1.815	54728	2.01	50	103.1	89.5	110.5	
Mo	95	103	1	He	51.441	1.048	65544	1.26	50	102.9	89.5	110.5	
Ag	107	103	1	He	50.223	0.541	229150	0.48	50	100.4	89.5	110.5	
Cd	111	115	1	He	49.800	1.147	25773	1.52	50	99.6	89.5	110.5	
Sn	118	115	1	He	48.520	0.929	48924	0.85	50	97.0	89.5	110.5	
Sb	123	115	1	He	51.002	0.939	56239	0.31	50	102.0	89.5	110.5	
Ba	137	115	1	He	50.294	1.401	19505	1.62	50	100.6	89.5	110.5	
W	182	159	1	He	50.384	1.280	274265	1.07	50	100.8	89.5	110.5	
Tl	205	165	1	He	50.072	1.002	416379	0.84	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.764	1.282	555575	0.99	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1387852	0.94	1276810	108.70	60	120	
Sc	45	1	He	154823	0.25	163460	94.72	60	120	
Sc	45	2	NoGas	8986665	1.03	8842934	101.63	60	120	
Rh	103	1	He	910216	0.23	1010526	90.07	60	120	
In	115	1	He	235006	0.69	257801	91.16	60	120	
Tb	159	1	He	1051975	0.74	1155473	91.04	60	120	
Ho	165	1	He	1066280	0.29	1147359	92.93	60	120	
Bi	209	1	He	690893	0.91	790610	87.39	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	087_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:03:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.571	9.5	96419	1.2	8	
Be	9	45	2	NoGas	0.081	34.6	496	27.4	1	
B	11	6	2	NoGas	6.872	11.4	37024	5.2	20	
Na	23	45	1	He	65.502	6.9	37135	4.9	1000	
Mg	24	45	1	He	39.946	1.9	10681	2.7	1000	
Al	27	45	1	He	0.232	136.3	303	11.6	50	
K	39	45	1	He	57.034	9.7	16838	2.9	1000	
Ca	44	45	1	He	29.283	20.0	913	4.6	1000	
Ti	47	45	1	He	0.024	272.3	3	100.1	20	
V	51	45	1	He	0.006	1892.1	181	107.7	2	
Cr	52	45	1	He	0.015	111.4	882	3.8	2	
Mn	55	45	1	He	-0.078	-19.3	1301	1.6	2	
Fe	56	45	1	He	19.992	4.4	38126	3.5	50	
Co	59	45	1	He	-0.016	-37.7	398	4.1	1	
Ni	60	45	1	He	-0.027	-97.9	196	13.2	2	
Cu	63	45	1	He	0.489	28.0	6461	7.1	2	
Zn	66	45	1	He	-3.572	-3.1	1792	2.7	20	
As	75	115	1	He	0.135	6.3	59	3.4	2	
Se	78	115	1	He	0.109	23.3	5	6.0	2	
Sr	88	103	1	He	0.388	4.4	524	3.5	10	
Mo	95	103	1	He	0.174	13.6	252	11.9	2	
Ag	107	103	1	He	0.070	8.3	343	7.7	0.2	
Cd	111	115	1	He	0.092	28.7	50	28.5	0.2	
Sn	118	115	1	He	-0.413	-21.3	1063	8.8	10	
Sb	123	115	1	He	0.190	8.2	239	7.0	2	
Ba	137	115	1	He	0.118	46.2	53	41.0	5	
W	182	159	1	He	0.292	28.4	3134	14.6	10	
Tl	205	165	1	He	0.115	6.6	988	6.3	0.5	
Pb	208	165	1	He	0.336	16.3	4804	12.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1423305	3.00	1276810	111.47	60	120	
Sc	45	1	He	153939	1.67	163460	94.18	60	120	
Sc	45	2	NoGas	8907741	0.57	8842934	100.73	60	120	
Rh	103	1	He	940993	0.48	1010526	93.12	60	120	
In	115	1	He	241431	0.55	257801	93.65	60	120	
Tb	159	1	He	1062666	0.37	1155473	91.97	60	120	
Ho	165	1	He	1066821	0.17	1147359	92.98	60	120	
Bi	209	1	He	716792	0.99	790610	90.66	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228170/1-a@2
Data File Name	088_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:07:36-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.613	12.9	95969	0.6	8	
Be	9	45	2	NoGas	0.021	33.8	200	16.7	1	
B	11	6	2	NoGas	5.930	6.5	33932	2.1	20	
Na	23	45	1	He	161.455	2.7	80007	2.8	1000	
Mg	24	45	1	He	52.547	9.7	13854	8.4	1000	
Al	27	45	1	He	1.716	17.6	460	7.7	50	
K	39	45	1	He	31.608	18.3	13776	5.1	1000	
Ca	44	45	1	He	115.652	9.4	1529	4.8	1000	
Ti	47	45	1	He	0.003	2629.9	2	173.2	20	
V	51	45	1	He	-0.015	-1166.9	147	204.8	2	
Cr	52	45	1	He	0.307	8.8	1525	4.3	2	
Mn	55	45	1	He	-0.495	-22.4	846	14.1	2	
Fe	56	45	1	He	10.976	4.9	22655	3.5	50	
Co	59	45	1	He	-0.075	-8.8	163	15.9	1	
Ni	60	45	1	He	0.663	6.1	957	5.3	2	
Cu	63	45	1	He	0.844	19.5	7584	7.0	2	
Zn	66	45	1	He	-2.770	-9.1	2085	3.6	20	
As	75	115	1	He	0.076	18.4	45	5.5	2	
Se	78	115	1	He	0.153	86.6	5	27.1	2	
Sr	88	103	1	He	0.614	13.3	770	10.9	10	
Mo	95	103	1	He	0.082	24.1	131	21.2	2	
Ag	107	103	1	He	0.003	138.9	26	71.8	0.2	
Cd	111	115	1	He	0.012	92.2	8	78.7	0.2	
Sn	118	115	1	He	18.392	7.5	19990	7.5	10	Blank High
Sb	123	115	1	He	0.047	65.3	78	47.2	2	
Ba	137	115	1	He	0.800	14.9	326	16.6	5	
W	182	159	1	He	0.154	9.2	2360	3.8	10	
Tl	205	165	1	He	0.016	12.6	163	10.6	0.5	
Pb	208	165	1	He	0.761	1.8	9367	1.3	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1438881	2.17	1276810	112.69	60	120	
Sc	45	1	He	154413	0.80	163460	94.47	60	120	
Sc	45	2	NoGas	8801821	1.02	8842934	99.54	60	120	
Rh	103	1	He	939363	2.08	1010526	92.96	60	120	
In	115	1	He	241640	1.96	257801	93.73	60	120	
Tb	159	1	He	1053489	0.55	1155473	91.17	60	120	
Ho	165	1	He	1058524	0.77	1147359	92.26	60	120	
Bi	209	1	He	734831	2.49	790610	92.94	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228170/2-a@2
Data File Name	089LCSS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:11:53-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.057	51.057	1.130	929040	0.30	50	102.1	79.5	120.5	
Be	9	2	NoGas	526.376	526.376	1.297	2569518	0.91	500	105.3	78.6	110.5	
B	11	2	NoGas	49.664	49.664	1.786	193710	1.31	50	99.3	79.5	120.5	
Na	23	1	He	5046.558	5046.558	0.107	2182925	1.19	5000	100.9	79.5	120.5	
Mg	24	1	He	4719.769	4719.769	1.570	1141116	1.61	5000	94.4	79.5	120.5	
Al	27	1	He	4736.237	4736.237	0.948	481206	0.89	5000	94.7	79.5	120.5	
K	39	1	He	4773.149	4773.149	0.847	576090	0.47	5000	95.5	79.5	120.5	
Ca	44	1	He	5060.398	5060.398	1.776	35460	1.31	5000	101.2	79.5	120.5	
Ti	47	1	He	47.288	47.288	6.652	2344	5.38	50	94.6	79.5	120.5	
V	51	1	He	469.081	469.081	2.264	798036	1.38	500	93.8	71.5	110.5	
Cr	52	1	He	471.710	471.710	1.630	999422	1.25	500	94.3	69.5	110.5	
Mn	55	1	He	474.464	474.464	1.717	507288	1.01	500	94.9	79.5	120.5	
Fe	56	1	He	4751.610	4751.610	1.474	7954072	0.79	5000	95.0	79.5	120.5	
Co	59	1	He	515.953	515.953	2.095	1981675	0.81	500	103.2	73.9	110.5	
Ni	60	1	He	478.678	478.678	1.470	510712	0.22	500	95.7	74.9	110.5	
Cu	63	1	He	508.099	508.099	1.543	1532577	1.43	500	101.6	72.6	110.5	
Zn	66	1	He	501.760	501.760	0.646	176754	1.32	500	100.4	71.5	113.4	
As	75	1	He	459.148	459.148	0.714	103904	0.67	500	91.8	73.4	110.5	
Se	78	1	He	446.533	446.533	1.375	4872	1.34	500	89.3	64.6	110.5	
Sr	88	1	He	456.708	456.708	0.865	479470	1.25	500	91.3	79.5	120.5	
Mo	95	1	He	48.593	48.593	2.091	61320	2.86	50	97.2	29.5	140.5	
Ag	107	1	He	47.687	47.687	0.562	215470	1.36	50	95.4	59.5	114.5	
Cd	111	1	He	466.801	466.801	0.655	235815	0.68	500	93.4	73.5	110.5	
Sn	118	1	He	504.565	504.565	0.379	483450	0.46	500	100.9	79.5	120.5	
Sb	123	1	He	47.638	47.638	2.206	51281	2.18	50	95.3	67.5	113.4	
Ba	137	1	He	477.092	477.092	1.471	180560	1.46	500	95.4	69.5	110.5	
W	182	1	He	47.742	47.742	1.388	256313	1.93	50	95.5	74.6	125.4	
Tl	205	1	He	119.597	119.597	0.359	980261	1.08	125	95.7	70.6	110.5	
Pb	208	1	He	500.266	500.266	0.452	5386981	0.87	500	100.1	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409242	0.53	1276810	110.37	60	120	
Sc	45	1	He	149405	1.29	163460	91.40	60	120	
Sc	45	2	NoGas	8756758	0.77	8842934	99.03	60	120	
Rh	103	1	He	901397	1.32	1010526	89.20	60	120	
In	115	1	He	229406	0.10	257801	88.99	60	120	
Tb	159	1	He	1037134	0.73	1155473	89.76	60	120	
Ho	165	1	He	1051018	0.85	1147359	91.60	60	120	
Bi	209	1	He	696462	0.67	790610	88.09	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-a@2
Data File Name	090SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:16:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	37.845	37.845	1.55	709904	0.01	10000	
Be	9	45	2	NoGas	2.296	2.296	4.55	11293	0.02	2000	
B	11	6	2	NoGas	199.346	199.346	1.15	727563	0.03	300	
Na	23	45	1	He	1311.364	1311.364	1.56	571370	0.23	500000	
Mg	24	45	1	He	164096.042	164096.042	1.35	39536668	0.42	500000	
Al	27	45	1	He	120346.414	120346.414	1.82	12186007	0.99	200000	
K	39	45	1	He	1366.202	1366.202	1.02	171238	0.80	500000	
Ca	44	45	1	He	714169.944	714169.944	0.84	4894732	14.59	500000	>LDR
Ti	47	45	1	He	7572.910	7572.910	1.86	374097	2.02	2500	>LDR
V	51	45	1	He	3151.906	3151.906	1.81	5346637	0.06	10000	
Cr	52	45	1	He	4090.300	4090.300	2.16	8635640	0.05	10000	
Mn	55	45	1	He	70210.204	70210.204	0.64	74659799	0.09	10000	>LDR
Fe	56	45	1	He	671261.233	671261.233	1.87	1120041698	0.06	200000	>LDR
Co	59	45	1	He	129.926	129.926	1.47	497993	0.03	5000	
Ni	60	45	1	He	1609.603	1609.603	1.52	1712037	0.09	10000	
Cu	63	45	1	He	340.423	340.423	1.40	1025479	0.03	10000	
Zn	66	45	1	He	925.913	925.913	1.01	322714	0.29	10000	
As	75	115	1	He	41.958	41.958	1.48	8749	0.48	10000	
Se	78	115	1	He	11.423	11.423	14.32	118	9.71	10000	
Sr	88	103	1	He	450.939	450.939	1.19	417464	0.11	10000	
Mo	95	103	1	He	34.587	34.587	1.93	38491	0.09	2000	
Ag	107	103	1	He	0.885	0.885	1.78	3536	0.03	300	
Cd	111	115	1	He	6.109	6.109	0.38	2838	0.22	4000	
Sn	118	115	1	He	79.699	79.699	1.72	71271	0.11	2000	
Sb	123	115	1	He	6.401	6.401	3.88	6351	0.10	200	
Ba	137	115	1	He	802.704	802.704	1.25	279225	0.29	10000	
W	182	159	1	He	132.049	132.049	1.03	677929	0.02	2500	
Tl	205	165	1	He	0.565	0.565	3.31	4481	0.01	2000	
Pb	208	165	1	He	399.142	399.142	1.17	4132187	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1380213	1.06	1276810	108.10	60	120	
Sc	45	1	He	148968	0.27	163460	91.13	60	120	
Sc	45	2	NoGas	8746888	1.00	8842934	98.91	60	120	
Rh	103	1	He	794875	1.22	1010526	78.66	60	120	
In	115	1	He	210850	0.96	257801	81.79	60	120	
Tb	159	1	He	995427	1.51	1155473	86.15	60	120	
Ho	165	1	He	1010514	1.49	1147359	88.07	60	120	
Bi	209	1	He	630105	0.74	790610	79.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-a@20
Data File Name	091SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:20:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.139	4.139	1.20	165200	0.00	10000	
Be	9	45	2	NoGas	0.343	0.343	1.34	1904	0.02	2000	
B	11	6	2	NoGas	28.363	28.363	1.16	122485	0.02	300	
Na	23	45	1	He	143.638	143.638	1.65	73357	0.20	500000	
Mg	24	45	1	He	17362.494	17362.494	0.50	4414423	0.39	500000	
Al	27	45	1	He	12038.755	12038.755	3.54	1286426	0.94	200000	
K	39	45	1	He	152.717	152.717	1.45	29147	0.52	500000	
Ca	44	45	1	He	70771.642	70771.642	0.99	512428	13.81	500000	
Ti	47	45	1	He	784.856	784.856	1.31	40909	1.92	2500	
V	51	45	1	He	304.634	304.634	0.40	545382	0.06	10000	
Cr	52	45	1	He	410.438	410.438	1.06	915046	0.04	10000	
Mn	55	45	1	He	7427.870	7427.870	0.64	8335198	0.09	10000	
Fe	56	45	1	He	71796.298	71796.298	0.78	126399315	0.06	200000	
Co	59	45	1	He	14.094	14.094	0.38	57414	0.02	5000	
Ni	60	45	1	He	166.289	166.289	1.14	186822	0.09	10000	
Cu	63	45	1	He	38.016	38.016	1.28	125313	0.03	10000	
Zn	66	45	1	He	98.779	98.779	0.16	39123	0.25	10000	
As	75	115	1	He	4.150	4.150	3.41	1013	0.41	10000	
Se	78	115	1	He	1.311	1.311	8.42	19	7.06	10000	
Sr	88	103	1	He	42.632	42.632	0.88	46322	0.09	10000	
Mo	95	103	1	He	3.389	3.389	3.98	4438	0.08	2000	
Ag	107	103	1	He	0.082	0.082	8.59	394	0.02	300	
Cd	111	115	1	He	0.690	0.690	2.30	367	0.19	4000	
Sn	118	115	1	He	6.508	6.508	3.72	8002	0.08	2000	
Sb	123	115	1	He	0.716	0.716	4.79	833	0.09	200	
Ba	137	115	1	He	79.003	79.003	1.54	31401	0.25	10000	
W	182	159	1	He	13.677	13.677	1.69	77426	0.02	2500	
Tl	205	165	1	He	0.065	0.065	12.43	582	0.01	2000	
Pb	208	165	1	He	39.820	39.820	0.88	446739	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1493830	1.93	1276810	117.00	60	120	
Sc	45	1	He	157179	0.02	163460	96.16	60	120	
Sc	45	2	NoGas	9409244	0.28	8842934	106.40	60	120	
Rh	103	1	He	931098	0.24	1010526	92.14	60	120	
In	115	1	He	240893	0.44	257801	93.44	60	120	
Tb	159	1	He	1077908	0.31	1155473	93.29	60	120	
Ho	165	1	He	1092405	0.45	1147359	95.21	60	120	
Bi	209	1	He	718627	0.57	790610	90.90	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64037-o-10-a@10
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:24:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.007	8.007	0.89	229680	0.00	10000	
Be	9	45	2	NoGas	0.494	0.494	19.06	2645	0.02	2000	
B	11	6	2	NoGas	46.602	46.602	1.74	190410	0.02	300	
Na	23	45	1	He	270.779	270.779	1.13	133507	0.20	500000	
Mg	24	45	1	He	34064.516	34064.516	2.33	8823885	0.39	500000	
Al	27	45	1	He	24766.468	24766.468	1.31	2696507	0.92	200000	
K	39	45	1	He	287.727	287.727	1.11	46884	0.61	500000	
Ca	44	45	1	He	141240.952	141240.952	1.60	1041332	13.56	500000	
Ti	47	45	1	He	1544.620	1544.620	1.86	82040	1.88	2500	
V	51	45	1	He	620.583	620.583	0.19	1132182	0.05	10000	
Cr	52	45	1	He	869.028	869.028	0.87	1973496	0.04	10000	
Mn	55	45	1	He	14698.453	14698.453	1.85	16805049	0.09	10000	>LDR
Fe	56	45	1	He	141552.140	141552.140	0.38	253975145	0.06	200000	
Co	59	45	1	He	27.542	27.542	1.67	113871	0.02	5000	
Ni	60	45	1	He	323.273	323.273	1.32	369875	0.09	10000	
Cu	63	45	1	He	74.082	74.082	1.47	243957	0.03	10000	
Zn	66	45	1	He	200.068	200.068	2.23	77465	0.26	10000	
As	75	115	1	He	8.424	8.424	0.52	1995	0.42	10000	
Se	78	115	1	He	2.559	2.559	12.26	32	7.91	10000	
Sr	88	103	1	He	87.140	87.140	1.70	92490	0.09	10000	
Mo	95	103	1	He	6.574	6.574	1.48	8400	0.08	2000	
Ag	107	103	1	He	0.178	0.178	5.29	826	0.02	300	
Cd	111	115	1	He	1.225	1.225	9.26	640	0.19	4000	
Sn	118	115	1	He	15.871	15.871	3.64	17109	0.09	2000	
Sb	123	115	1	He	1.340	1.340	3.29	1512	0.09	200	
Ba	137	115	1	He	157.912	157.912	1.30	61721	0.26	10000	
W	182	159	1	He	26.579	26.579	1.71	147084	0.02	2500	
Tl	205	165	1	He	0.109	0.109	2.87	950	0.01	2000	
Pb	208	165	1	He	80.517	80.517	0.44	888830	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1470670	1.29	1276810	115.18	60	120	
Sc	45	1	He	160195	2.04	163460	98.00	60	120	
Sc	45	2	NoGas	9239859	0.15	8842934	104.49	60	120	
Rh	103	1	He	910563	0.47	1010526	90.11	60	120	
In	115	1	He	236929	1.24	257801	91.90	60	120	
Tb	159	1	He	1063973	1.23	1155473	92.08	60	120	
Ho	165	1	He	1076284	0.32	1147359	93.81	60	120	
Bi	209	1	He	706701	0.24	790610	89.39	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64037-o-10-a@100
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:28:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.075	1.075	1.58	108906	0.00	10000	
Be	9	45	2	NoGas	0.090	0.090	28.84	567	0.02	2000	
B	11	6	2	NoGas	9.406	9.406	0.75	48716	0.02	300	
Na	23	45	1	He	34.898	34.898	1.73	23786	0.15	500000	
Mg	24	45	1	He	3378.285	3378.285	0.92	850083	0.40	500000	
Al	27	45	1	He	2352.605	2352.605	1.13	248854	0.95	200000	
K	39	45	1	He	34.884	34.884	8.04	14273	0.24	500000	
Ca	44	45	1	He	14174.956	14174.956	1.45	102075	13.89	500000	
Ti	47	45	1	He	153.413	153.413	2.29	7910	1.94	2500	
V	51	45	1	He	60.059	60.059	1.52	106475	0.06	10000	
Cr	52	45	1	He	82.389	82.389	1.17	182344	0.05	10000	
Mn	55	45	1	He	1518.300	1518.300	1.75	1686059	0.09	10000	
Fe	56	45	1	He	14594.733	14594.733	0.80	25414907	0.06	200000	
Co	59	45	1	He	2.746	2.746	1.29	11437	0.02	5000	
Ni	60	45	1	He	33.171	33.171	0.48	37040	0.09	10000	
Cu	63	45	1	He	7.296	7.296	2.19	27818	0.03	10000	
Zn	66	45	1	He	14.412	14.412	4.65	8290	0.17	10000	
As	75	115	1	He	0.864	0.864	1.41	232	0.37	10000	
Se	78	115	1	He	0.446	0.446	55.61	9	5.17	10000	
Sr	88	103	1	He	8.467	8.467	1.44	9185	0.09	10000	
Mo	95	103	1	He	0.695	0.695	9.30	919	0.08	2000	
Ag	107	103	1	He	0.018	0.018	13.22	97	0.02	300	
Cd	111	115	1	He	0.130	0.130	7.10	70	0.19	4000	
Sn	118	115	1	He	1.218	1.218	13.36	2689	0.05	2000	
Sb	123	115	1	He	0.160	0.160	24.33	204	0.08	200	
Ba	137	115	1	He	15.650	15.650	4.18	6208	0.25	10000	
W	182	159	1	He	2.832	2.832	5.29	16709	0.02	2500	
Tl	205	165	1	He	0.013	0.013	26.44	133	0.01	2000	
Pb	208	165	1	He	8.225	8.225	0.59	89789	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1492194	0.71	1276810	116.87	60	120	
Sc	45	1	He	155457	0.77	163460	95.10	60	120	
Sc	45	2	NoGas	9247952	0.59	8842934	104.58	60	120	
Rh	103	1	He	921637	0.39	1010526	91.20	60	120	
In	115	1	He	240288	1.28	257801	93.21	60	120	
Tb	159	1	He	1042904	1.05	1155473	90.26	60	120	
Ho	165	1	He	1052533	0.30	1147359	91.74	60	120	
Bi	209	1	He	710986	0.47	790610	89.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-b ms@2
Data File Name	094SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:32:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	78.860	78.860	0.87	1416314	0.01	10000	
Be	9	45	2	NoGas	444.516	444.516	1.03	2213447	0.02	2000	
B	11	6	2	NoGas	226.663	226.663	2.43	788161	0.03	300	
Na	23	45	1	He	5519.728	5519.728	0.95	2445939	0.23	500000	
Mg	24	45	1	He	138905.891	138905.891	0.64	34397519	0.40	500000	
Al	27	45	1	He	231544.956	231544.956	0.69	24097660	0.96	200000	>LDR
K	39	45	1	He	5156.040	5156.040	0.59	636984	0.81	500000	
Ca	44	45	1	He	709445.730	709445.730	1.07	4997531	14.20	500000	>LDR
Ti	47	45	1	He	6466.698	6466.698	0.55	328321	1.97	2500	>LDR
V	51	45	1	He	2721.098	2721.098	0.47	4744094	0.06	10000	
Cr	52	45	1	He	3057.124	3057.124	0.85	6633473	0.05	10000	
Mn	55	45	1	He	59342.605	59342.605	0.22	64858766	0.09	10000	>LDR
Fe	56	45	1	He	540082.763	540082.763	0.28	926186452	0.06	200000	>LDR
Co	59	45	1	He	517.917	517.917	0.67	2038866	0.03	5000	
Ni	60	45	1	He	1518.996	1518.996	1.01	1660488	0.09	10000	
Cu	63	45	1	He	721.472	721.472	0.31	2228214	0.03	10000	
Zn	66	45	1	He	921.963	921.963	1.19	330260	0.28	10000	
As	75	115	1	He	474.575	474.575	1.31	97490	0.49	10000	
Se	78	115	1	He	415.637	415.637	0.70	4117	10.10	10000	
Sr	88	103	1	He	958.917	958.917	1.00	886507	0.11	10000	
Mo	95	103	1	He	76.820	76.820	2.02	85354	0.09	2000	
Ag	107	103	1	He	44.305	44.305	0.76	176304	0.03	300	
Cd	111	115	1	He	415.196	415.196	1.20	190407	0.22	4000	
Sn	118	115	1	He	505.287	505.287	1.43	439486	0.11	2000	
Sb	123	115	1	He	24.657	24.657	2.91	24103	0.10	200	
Ba	137	115	1	He	969.157	969.157	2.11	332942	0.29	10000	
W	182	159	1	He	130.626	130.626	1.09	658699	0.02	2500	
Tl	205	165	1	He	104.429	104.429	0.57	802317	0.01	2000	
Pb	208	165	1	He	819.038	819.038	0.97	8266265	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1317835	2.32	1276810	103.21	60	120	
Sc	45	1	He	153112	1.09	163460	93.67	60	120	
Sc	45	2	NoGas	8932010	0.35	8842934	101.01	60	120	
Rh	103	1	He	793835	0.17	1010526	78.56	60	120	
In	115	1	He	208273	1.28	257801	80.79	60	120	
Tb	159	1	He	977742	0.90	1155473	84.62	60	120	
Ho	165	1	He	985176	0.68	1147359	85.86	60	120	
Bi	209	1	He	628999	0.84	790610	79.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-b ms@20
Data File Name	095SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:36:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.947	7.947	2.91	223017	0.00	10000	
Be	9	45	2	NoGas	44.305	44.305	2.05	222702	0.02	2000	
B	11	6	2	NoGas	27.576	27.576	1.50	112831	0.02	300	
Na	23	45	1	He	556.068	556.068	3.89	250582	0.22	500000	
Mg	24	45	1	He	14868.670	14868.670	2.32	3639014	0.41	500000	
Al	27	45	1	He	24796.655	24796.655	2.13	2550297	0.97	200000	
K	39	45	1	He	556.441	556.441	3.46	76583	0.73	500000	
Ca	44	45	1	He	72290.980	72290.980	2.10	503841	14.35	500000	
Ti	47	45	1	He	676.959	676.959	1.61	33970	1.99	2500	
V	51	45	1	He	265.932	265.932	1.25	458356	0.06	10000	
Cr	52	45	1	He	310.079	310.079	2.43	665629	0.05	10000	
Mn	55	45	1	He	6498.472	6498.472	2.12	7019723	0.09	10000	
Fe	56	45	1	He	58765.486	58765.486	2.96	99580276	0.06	200000	
Co	59	45	1	He	52.517	52.517	2.07	204710	0.03	5000	
Ni	60	45	1	He	158.834	158.834	2.64	171775	0.09	10000	
Cu	63	45	1	He	77.198	77.198	2.55	239933	0.03	10000	
Zn	66	45	1	He	101.573	101.573	1.99	38641	0.26	10000	
As	75	115	1	He	46.708	46.708	0.36	10669	0.44	10000	
Se	78	115	1	He	43.749	43.749	3.05	484	9.04	10000	
Sr	88	103	1	He	91.042	91.042	1.03	94931	0.10	10000	
Mo	95	103	1	He	7.239	7.239	1.77	9085	0.08	2000	
Ag	107	103	1	He	4.461	4.461	2.51	20016	0.02	300	
Cd	111	115	1	He	42.970	42.970	1.08	21862	0.20	4000	
Sn	118	115	1	He	49.977	49.977	1.24	49499	0.10	2000	
Sb	123	115	1	He	2.494	2.494	2.26	2726	0.09	200	
Ba	137	115	1	He	93.815	93.815	0.91	35763	0.26	10000	
W	182	159	1	He	13.770	13.770	2.88	74419	0.02	2500	
Tl	205	165	1	He	10.716	10.716	1.00	87038	0.01	2000	
Pb	208	165	1	He	78.414	78.414	0.14	837397	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411283	0.83	1276810	110.53	60	120	
Sc	45	1	He	151337	1.74	163460	92.58	60	120	
Sc	45	2	NoGas	9014168	1.13	8842934	101.94	60	120	
Rh	103	1	He	894523	0.33	1010526	88.52	60	120	
In	115	1	He	231038	0.64	257801	89.62	60	120	
Tb	159	1	He	1029156	0.44	1155473	89.07	60	120	
Ho	165	1	He	1041174	0.68	1147359	90.75	60	120	
Bi	209	1	He	677357	0.66	790610	85.68	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-c msd@2
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:40:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	86.755	86.755	0.05	1515034	0.01	10000	
Be	9	45	2	NoGas	453.477	453.477	0.98	2207953	0.02	2000	
B	11	6	2	NoGas	244.958	244.958	1.91	827312	0.03	300	
Na	23	45	1	He	5535.911	5535.911	0.39	2366713	0.23	500000	
Mg	24	45	1	He	152883.266	152883.266	1.72	36521441	0.42	500000	
Al	27	45	1	He	139445.178	139445.178	1.73	13999414	1.00	200000	
K	39	45	1	He	6206.914	6206.914	1.55	737808	0.84	500000	
Ca	44	45	1	He	705020.797	705020.797	2.02	4790950	14.72	500000	>LDR
Ti	47	45	1	He	7239.576	7239.576	1.80	354592	2.04	2500	>LDR
V	51	45	1	He	3494.505	3494.505	2.28	5877179	0.06	10000	
Cr	52	45	1	He	4030.835	4030.835	1.42	8437908	0.05	10000	
Mn	55	45	1	He	67582.055	67582.055	1.77	71255731	0.09	10000	>LDR
Fe	56	45	1	He	486976.959	486976.959	1.79	805646261	0.06	200000	>LDR
Co	59	45	1	He	555.818	555.818	1.52	2110778	0.03	5000	
Ni	60	45	1	He	1663.688	1663.688	1.00	1754589	0.09	10000	
Cu	63	45	1	He	864.271	864.271	0.62	2574135	0.03	10000	
Zn	66	45	1	He	1122.511	1122.511	1.26	387296	0.29	10000	
As	75	115	1	He	479.168	479.168	0.33	97261	0.49	10000	
Se	78	115	1	He	420.414	420.414	1.48	4115	10.22	10000	
Sr	88	103	1	He	933.658	933.658	1.07	847090	0.11	10000	
Mo	95	103	1	He	71.008	71.008	2.50	77436	0.09	2000	
Ag	107	103	1	He	44.037	44.037	1.60	171974	0.03	300	
Cd	111	115	1	He	415.645	415.645	1.03	188328	0.22	4000	
Sn	118	115	1	He	495.791	495.791	0.53	426115	0.12	2000	
Sb	123	115	1	He	26.122	26.122	2.11	25231	0.10	200	
Ba	137	115	1	He	1097.855	1097.855	0.53	372690	0.29	10000	
W	182	159	1	He	146.452	146.452	0.62	733066	0.02	2500	
Tl	205	165	1	He	104.531	104.531	1.29	797758	0.01	2000	
Pb	208	165	1	He	1049.265	1049.265	1.64	10519513	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1281020	1.31	1276810	100.33	60	120	
Sc	45	1	He	147711	0.77	163460	90.37	60	120	
Sc	45	2	NoGas	8733844	0.27	8842934	98.77	60	120	
Rh	103	1	He	779056	0.62	1010526	77.09	60	120	
In	115	1	He	205769	1.14	257801	79.82	60	120	
Tb	159	1	He	970782	1.20	1155473	84.02	60	120	
Ho	165	1	He	978750	1.69	1147359	85.30	60	120	
Bi	209	1	He	614524	0.42	790610	77.73	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-o-10-c msd@20
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:44:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.634	8.634	1.18	235240	0.00	10000	
Be	9	45	2	NoGas	44.192	44.192	1.03	222648	0.02	2000	
B	11	6	2	NoGas	28.945	28.945	1.58	117881	0.02	300	
Na	23	45	1	He	563.412	563.412	1.31	249379	0.23	500000	
Mg	24	45	1	He	16256.943	16256.943	0.58	3909217	0.42	500000	
Al	27	45	1	He	14802.706	14802.706	1.41	1495804	0.99	200000	
K	39	45	1	He	664.716	664.716	1.67	88027	0.76	500000	
Ca	44	45	1	He	71447.396	71447.396	0.81	489241	14.60	500000	
Ti	47	45	1	He	758.896	758.896	0.45	37413	2.03	2500	
V	51	45	1	He	340.172	340.172	1.49	576036	0.06	10000	
Cr	52	45	1	He	404.830	404.830	0.62	853667	0.05	10000	
Mn	55	45	1	He	7268.012	7268.012	1.18	7713427	0.09	10000	
Fe	56	45	1	He	52297.102	52297.102	0.43	87082921	0.06	200000	
Co	59	45	1	He	55.990	55.990	0.17	214405	0.03	5000	
Ni	60	45	1	He	172.841	172.841	1.33	183661	0.09	10000	
Cu	63	45	1	He	91.081	91.081	0.66	277303	0.03	10000	
Zn	66	45	1	He	124.590	124.590	1.76	45902	0.27	10000	
As	75	115	1	He	47.076	47.076	1.71	10699	0.44	10000	
Se	78	115	1	He	42.915	42.915	0.59	472	9.09	10000	
Sr	88	103	1	He	88.176	88.176	0.46	90947	0.10	10000	
Mo	95	103	1	He	6.695	6.695	2.75	8311	0.08	2000	
Ag	107	103	1	He	4.485	4.485	0.56	19900	0.02	300	
Cd	111	115	1	He	43.111	43.111	0.71	21827	0.20	4000	
Sn	118	115	1	He	47.718	47.718	3.04	47096	0.10	2000	
Sb	123	115	1	He	2.763	2.763	2.56	3001	0.09	200	
Ba	137	115	1	He	106.861	106.861	0.90	40535	0.26	10000	
W	182	159	1	He	15.009	15.009	0.36	80637	0.02	2500	
Tl	205	165	1	He	10.864	10.864	0.72	87595	0.01	2000	
Pb	208	165	1	He	101.928	101.928	0.28	1080249	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411446	0.34	1276810	110.54	60	120	
Sc	45	1	He	148658	1.17	163460	90.94	60	120	
Sc	45	2	NoGas	9033939	0.52	8842934	102.16	60	120	
Rh	103	1	He	884833	1.50	1010526	87.56	60	120	
In	115	1	He	229917	1.25	257801	89.18	60	120	
Tb	159	1	He	1024863	0.54	1155473	88.70	60	120	
Ho	165	1	He	1033580	1.19	1147359	90.08	60	120	
Bi	209	1	He	678443	0.74	790610	85.81	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	098_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:48:55-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.078	0.914	914989	0.40	50	104.2	89.5	110.5	
Be	9	45	2	NoGas	51.504	0.221	243284	0.45	50	103.0	89.5	110.5	
B	11	6	2	NoGas	50.037	2.014	183808	1.68	50	100.1	89.5	110.5	
Na	23	45	1	He	25504.217	0.468	10652631	1.12	25000	102.0	89.5	110.5	
Mg	24	45	1	He	25160.235	1.520	5887819	1.45	25000	100.6	89.5	110.5	
Al	27	45	1	He	252.542	2.347	25095	2.01	250	101.0	89.5	110.5	
K	39	45	1	He	26141.387	0.098	3014149	1.43	25000	104.6	89.5	110.5	
Ca	44	45	1	He	25076.186	1.466	167545	0.85	25000	100.3	89.5	110.5	
Ti	47	45	1	He	52.170	3.187	2505	2.86	50	104.3	89.5	110.5	
V	51	45	1	He	50.863	1.367	83944	0.21	50	101.7	89.5	110.5	
Cr	52	45	1	He	50.284	1.237	103884	0.52	50	100.6	89.5	110.5	
Mn	55	45	1	He	251.661	1.583	261178	0.41	250	100.7	89.5	110.5	
Fe	56	45	1	He	12504.106	1.027	20265942	1.24	12500	100.0	89.5	110.5	
Co	59	45	1	He	50.153	1.128	186947	0.41	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.516	1.947	52382	1.13	50	101.0	89.5	110.5	
Cu	63	45	1	He	50.345	1.074	151244	0.78	50	100.7	89.5	110.5	
Zn	66	45	1	He	46.859	0.868	18599	1.32	50	93.7	89.5	110.5	
As	75	115	1	He	50.215	1.510	11226	1.22	50	100.4	89.5	110.5	
Se	78	115	1	He	50.129	3.274	542	2.88	50	100.3	89.5	110.5	
Sr	88	103	1	He	49.987	2.491	50810	2.06	50	100.0	89.5	110.5	
Mo	95	103	1	He	51.355	1.333	62639	0.99	50	102.7	89.5	110.5	
Ag	107	103	1	He	50.376	1.595	220031	1.18	50	100.8	89.5	110.5	
Cd	111	115	1	He	49.517	1.966	24662	1.84	50	99.0	89.5	110.5	
Sn	118	115	1	He	47.719	0.671	46331	0.78	50	95.4	89.5	110.5	
Sb	123	115	1	He	50.431	0.630	53521	0.71	50	100.9	89.5	110.5	
Ba	137	115	1	He	49.777	2.064	18579	2.43	50	99.6	89.5	110.5	
W	182	159	1	He	49.812	1.722	258600	2.43	50	99.6	89.5	110.5	
Tl	205	165	1	He	50.410	0.744	397549	1.20	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.653	0.213	525753	0.75	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1327897	1.45	1276810	104.00	60	120	
Sc	45	1	He	144688	1.52	163460	88.52	60	120	
Sc	45	2	NoGas	8470255	0.55	8842934	95.79	60	120	
Rh	103	1	He	871399	1.10	1010526	86.23	60	120	
In	115	1	He	226172	0.42	257801	87.73	60	120	
Tb	159	1	He	1003109	0.83	1155473	86.81	60	120	
Ho	165	1	He	1011214	0.58	1147359	88.13	60	120	
Bi	209	1	He	659766	0.63	790610	83.45	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	099_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:53:05-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.529	4.4	92153	0.6	8	
Be	9	45	2	NoGas	0.206	11.7	1078	10.9	1	
B	11	6	2	NoGas	4.934	2.4	28571	2.2	20	
Na	23	45	1	He	54.154	3.3	29821	2.0	1000	
Mg	24	45	1	He	38.378	2.3	9558	1.7	1000	
Al	27	45	1	He	2.083	53.1	461	22.7	50	
K	39	45	1	He	49.134	9.9	14747	3.2	1000	
Ca	44	45	1	He	41.416	2.5	928	0.5	1000	
Ti	47	45	1	He	0.382	64.1	20	57.7	20	
V	51	45	1	He	0.063	109.3	261	43.0	2	
Cr	52	45	1	He	0.053	25.1	896	3.0	2	
Mn	55	45	1	He	1.232	16.7	2546	7.7	2	
Fe	56	45	1	He	30.051	4.5	51528	3.6	50	
Co	59	45	1	He	-0.007	-77.8	400	5.5	1	
Ni	60	45	1	He	0.003	817.6	212	12.7	2	
Cu	63	45	1	He	-0.658	-2.5	2699	2.2	2	
Zn	66	45	1	He	-3.214	-8.8	1783	4.7	20	
As	75	115	1	He	0.105	21.4	49	10.0	2	
Se	78	115	1	He	0.321	45.7	7	22.4	2	
Sr	88	103	1	He	0.121	22.5	220	13.6	10	
Mo	95	103	1	He	0.138	27.9	194	23.3	2	
Ag	107	103	1	He	0.085	13.5	392	13.6	0.2	
Cd	111	115	1	He	0.114	8.7	58	7.9	0.2	
Sn	118	115	1	He	-0.327	-39.5	1078	10.8	10	
Sb	123	115	1	He	0.151	29.5	183	25.8	2	
Ba	137	115	1	He	0.106	31.2	46	27.7	5	
W	182	159	1	He	0.330	7.1	3163	2.5	10	
Tl	205	165	1	He	0.141	18.1	1141	16.6	0.5	
Pb	208	165	1	He	0.117	5.6	2278	1.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1360301	1.15	1276810	106.54	60	120	
Sc	45	1	He	142998	0.58	163460	87.48	60	120	
Sc	45	2	NoGas	8576723	0.29	8842934	96.99	60	120	
Rh	103	1	He	890811	1.51	1010526	88.15	60	120	
In	115	1	He	226544	0.80	257801	87.88	60	120	
Tb	159	1	He	1006747	1.31	1155473	87.13	60	120	
Ho	165	1	He	1011115	1.45	1147359	88.13	60	120	
Bi	209	1	He	685797	0.62	790610	86.74	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64037-o-10-a@2
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T19:57:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	146.338	146.338	0.39	2414292	0.01	10000	
Be	9	45	2	NoGas	1057.728	1057.728	0.31	4979217	0.02	2000	
B	11	6	2	NoGas	293.300	293.300	1.19	958701	0.03	300	
Na	23	45	1	He	10808.151	10808.151	1.81	4509391	0.24	500000	
Mg	24	45	1	He	163290.568	163290.568	3.01	38131333	0.43	500000	
Al	27	45	1	He	121731.436	121731.436	2.33	11947117	1.02	200000	
K	39	45	1	He	10742.134	10742.134	1.51	1241526	0.87	500000	
Ca	44	45	1	He	690879.671	690879.671	1.31	4589554	15.05	500000	>LDR
Ti	47	45	1	He	7328.510	7328.510	2.25	350893	2.09	2500	>LDR
V	51	45	1	He	3990.521	3990.521	2.32	6561194	0.06	10000	
Cr	52	45	1	He	4856.347	4856.347	2.27	9937841	0.05	10000	
Mn	55	45	1	He	67677.402	67677.402	2.17	69753362	0.10	10000	>LDR
Fe	56	45	1	He	646447.607	646447.607	2.61	1045480243	0.06	200000	>LDR
Co	59	45	1	He	1109.580	1109.580	1.79	4119062	0.03	5000	
Ni	60	45	1	He	2481.549	2481.549	3.22	2558046	0.10	10000	
Cu	63	45	1	He	1289.008	1289.008	2.34	3750776	0.03	10000	
Zn	66	45	1	He	1812.245	1812.245	2.43	609461	0.30	10000	
As	75	115	1	He	1061.295	1061.295	1.98	211719	0.50	10000	
Se	78	115	1	He	959.066	959.066	2.43	9222	10.40	10000	
Sr	88	103	1	He	1469.195	1469.195	0.49	1321016	0.11	10000	
Mo	95	103	1	He	143.068	143.068	0.55	154604	0.09	2000	
Ag	107	103	1	He	98.836	98.836	0.91	382482	0.03	300	
Cd	111	115	1	He	961.303	961.303	1.31	428153	0.22	4000	
Sn	118	115	1	He	1114.052	1114.052	2.35	939615	0.12	2000	
Sb	123	115	1	He	106.975	106.975	0.77	101504	0.11	200	
Ba	137	115	1	He	1836.623	1836.623	2.30	612807	0.30	10000	
W	182	159	1	He	224.508	224.508	1.35	1110275	0.02	2500	
Tl	205	165	1	He	271.521	271.521	0.61	2058709	0.01	2000	
Pb	208	165	1	He	1439.957	1439.957	0.30	14341345	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1242216	0.59	1276810	97.29	60	120	
Sc	45	1	He	144399	0.97	163460	88.34	60	120	
Sc	45	2	NoGas	8444273	0.13	8842934	95.49	60	120	
Rh	103	1	He	772101	1.89	1010526	76.41	60	120	
In	115	1	He	202263	0.62	257801	78.46	60	120	
Tb	159	1	He	959650	1.89	1155473	83.05	60	120	
Ho	165	1	He	972222	1.61	1147359	84.74	60	120	
Bi	209	1	He	613608	0.69	790610	77.61	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64037-o-10-a@20
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:01:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.513	121.513	1.48	2000479	0.01	10000	
Be	9	45	2	NoGas	1159.042	1159.042	1.42	5406930	0.02	2000	
B	11	6	2	NoGas	121.633	121.633	1.14	430597	0.03	300	
Na	23	45	1	He	10322.239	10322.239	1.96	4413923	0.23	500000	
Mg	24	45	1	He	26068.636	26068.636	1.49	6239273	0.42	500000	
Al	27	45	1	He	22603.292	22603.292	2.76	2273318	0.99	200000	
K	39	45	1	He	10173.583	10173.583	1.09	1205489	0.84	500000	
Ca	44	45	1	He	78268.867	78268.867	1.71	533425	14.67	500000	
Ti	47	45	1	He	844.285	844.285	1.51	41428	2.04	2500	
V	51	45	1	He	1420.590	1420.590	1.69	2393603	0.06	10000	
Cr	52	45	1	He	1469.821	1469.821	2.82	3082513	0.05	10000	
Mn	55	45	1	He	8072.603	8072.603	1.99	8527649	0.09	10000	
Fe	56	45	1	He	77707.057	77707.057	2.67	128776199	0.06	200000	
Co	59	45	1	He	1060.420	1060.420	2.06	4033861	0.03	5000	
Ni	60	45	1	He	1138.301	1138.301	2.45	1202557	0.09	10000	
Cu	63	45	1	He	1091.748	1091.748	2.62	3255817	0.03	10000	
Zn	66	45	1	He	1158.152	1158.152	2.52	400173	0.29	10000	
As	75	115	1	He	1007.532	1007.532	1.28	225568	0.45	10000	
Se	78	115	1	He	970.036	970.036	2.27	10468	9.27	10000	
Sr	88	103	1	He	1038.766	1038.766	1.09	1050261	0.10	10000	
Mo	95	103	1	He	109.194	109.194	0.96	132677	0.08	2000	
Ag	107	103	1	He	100.720	100.720	0.34	438323	0.02	300	
Cd	111	115	1	He	984.911	984.911	1.57	492296	0.20	4000	
Sn	118	115	1	He	1030.075	1030.075	1.28	975113	0.11	2000	
Sb	123	115	1	He	103.318	103.318	1.16	110022	0.09	200	
Ba	137	115	1	He	1107.164	1107.164	1.27	414592	0.27	10000	
W	182	159	1	He	111.826	111.826	2.00	595193	0.02	2500	
Tl	205	165	1	He	277.658	277.658	2.24	2257565	0.01	2000	
Pb	208	165	1	He	1127.706	1127.706	0.50	12047264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1325560	0.17	1276810	103.82	60	120	
Sc	45	1	He	147989	1.35	163460	90.54	60	120	
Sc	45	2	NoGas	8369021	1.27	8842934	94.64	60	120	
Rh	103	1	He	868193	0.42	1010526	85.91	60	120	
In	115	1	He	226999	0.63	257801	88.05	60	120	
Tb	159	1	He	1031714	0.76	1155473	89.29	60	120	
Ho	165	1	He	1042856	1.48	1147359	90.89	60	120	
Bi	209	1	He	671443	0.74	790610	84.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@200
Data File Name	102SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:05:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.151	1.151	3.36	100441	0.00	10000	
Be	9	45	2	NoGas	0.754	0.754	7.15	3634	0.02	2000	
B	11	6	2	NoGas	15.475	15.475	1.82	66627	0.02	300	
Na	23	45	1	He	38.404	38.404	2.48	23100	0.17	500000	
Mg	24	45	1	He	163.220	163.220	3.02	38055	0.43	500000	
Al	27	45	1	He	627.111	627.111	2.28	60614	1.03	200000	
K	39	45	1	He	110.251	110.251	6.36	21484	0.51	500000	
Ca	44	45	1	He	1543.164	1543.164	1.82	10702	14.42	500000	
Ti	47	45	1	He	14.678	14.678	2.64	691	2.12	2500	
V	51	45	1	He	-11.159	-11.159	-23.70	-17833	0.06	10000	
Cr	52	45	1	He	301.769	301.769	1.85	606331	0.05	10000	
Mn	55	45	1	He	803.851	803.851	1.52	813830	0.10	10000	
Fe	56	45	1	He	2612.780	2612.780	1.36	4147529	0.06	200000	
Co	59	45	1	He	136.768	136.768	1.28	498300	0.03	5000	
Ni	60	45	1	He	1602.817	1602.817	1.03	1620685	0.10	10000	
Cu	63	45	1	He	455.099	455.099	1.58	1301648	0.03	10000	
Zn	66	45	1	He	163.382	163.382	2.86	56451	0.29	10000	
As	75	115	1	He	9.372	9.372	3.01	2161	0.43	10000	
Se	78	115	1	He	15.116	15.116	5.67	169	8.93	10000	
Sr	88	103	1	He	5.427	5.427	2.44	5693	0.10	10000	
Mo	95	103	1	He	1.404	1.404	2.20	1762	0.08	2000	
Ag	107	103	1	He	1.919	1.919	1.45	8533	0.02	300	
Cd	111	115	1	He	52.067	52.067	1.89	26485	0.20	4000	
Sn	118	115	1	He	36.867	36.867	1.65	36878	0.10	2000	
Sb	123	115	1	He	8.716	8.716	3.38	9465	0.09	200	
Ba	137	115	1	He	81.961	81.961	1.59	31239	0.26	10000	
W	182	159	1	He	1.098	1.098	8.06	7265	0.02	2500	
Tl	205	165	1	He	0.323	0.323	16.09	2614	0.01	2000	
Pb	208	165	1	He	833.204	833.204	0.79	8771102	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1375383	1.30	1276810	107.72	60	120	
Sc	45	1	He	141623	0.92	163460	86.64	60	120	
Sc	45	2	NoGas	8427576	1.14	8842934	95.30	60	120	
Rh	103	1	He	885929	0.78	1010526	87.67	60	120	
In	115	1	He	231015	1.12	257801	89.61	60	120	
Tb	159	1	He	1024246	0.40	1155473	88.64	60	120	
Ho	165	1	He	1027558	0.45	1147359	89.56	60	120	
Bi	209	1	He	698767	0.93	790610	88.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@500
Data File Name	103SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:09:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.797	0.797	10.31	94843	0.00	10000	
Be	9	45	2	NoGas	0.408	0.408	6.84	2008	0.02	2000	
B	11	6	2	NoGas	9.618	9.618	5.00	46125	0.02	300	
Na	23	45	1	He	16.734	16.734	5.44	14265	0.12	500000	
Mg	24	45	1	He	57.778	57.778	1.50	13928	0.41	500000	
Al	27	45	1	He	226.011	226.011	2.03	22035	1.03	200000	
K	39	45	1	He	40.434	40.434	5.96	13643	0.30	500000	
Ca	44	45	1	He	533.974	533.974	2.92	4133	12.92	500000	
Ti	47	45	1	He	5.913	5.913	4.04	280	2.11	2500	
V	51	45	1	He	-4.611	-4.611	-11.31	-7290	0.06	10000	
Cr	52	45	1	He	108.294	108.294	0.97	218358	0.05	10000	
Mn	55	45	1	He	288.128	288.128	1.23	292869	0.10	10000	
Fe	56	45	1	He	953.349	953.349	1.90	1517171	0.06	200000	
Co	59	45	1	He	49.251	49.251	1.42	179919	0.03	5000	
Ni	60	45	1	He	541.687	541.687	0.89	548488	0.10	10000	
Cu	63	45	1	He	163.675	163.675	0.72	471625	0.03	10000	
Zn	66	45	1	He	52.422	52.422	0.76	20055	0.26	10000	
As	75	115	1	He	3.366	3.366	6.73	785	0.43	10000	
Se	78	115	1	He	5.990	5.990	5.71	68	8.75	10000	
Sr	88	103	1	He	1.976	1.976	4.42	2113	0.09	10000	
Mo	95	103	1	He	0.473	0.473	1.10	603	0.08	2000	
Ag	107	103	1	He	0.692	0.692	3.74	3057	0.02	300	
Cd	111	115	1	He	19.061	19.061	0.53	9604	0.20	4000	
Sn	118	115	1	He	12.097	12.097	6.29	12924	0.09	2000	
Sb	123	115	1	He	3.247	3.247	0.98	3507	0.09	200	
Ba	137	115	1	He	30.111	30.111	1.30	11372	0.26	10000	
W	182	159	1	He	0.374	0.374	10.34	3415	0.01	2500	
Tl	205	165	1	He	0.102	0.102	0.95	840	0.01	2000	
Pb	208	165	1	He	290.162	290.162	1.14	3037341	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1389385	1.31	1276810	108.82	60	120	
Sc	45	1	He	141791	1.26	163460	86.74	60	120	
Sc	45	2	NoGas	8430471	0.46	8842934	95.34	60	120	
Rh	103	1	He	878029	0.97	1010526	86.89	60	120	
In	115	1	He	228792	1.73	257801	88.75	60	120	
Tb	159	1	He	1013471	0.17	1155473	87.71	60	120	
Ho	165	1	He	1021580	0.77	1147359	89.04	60	120	
Bi	209	1	He	696621	0.67	790610	88.11	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-7-a@200
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:13:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.967	0.967	4.30	97384	0.00	10000	
Be	9	45	2	NoGas	0.246	0.246	12.97	1245	0.02	2000	
B	11	6	2	NoGas	6.139	6.139	8.40	33865	0.02	300	
Na	23	45	1	He	13.539	13.539	7.13	13176	0.10	500000	
Mg	24	45	1	He	89.996	89.996	4.62	21665	0.42	500000	
Al	27	45	1	He	221.725	221.725	2.72	21985	1.01	200000	
K	39	45	1	He	34.064	34.064	1.83	13146	0.26	500000	
Ca	44	45	1	He	735.565	735.565	3.29	5539	13.28	500000	
Ti	47	45	1	He	8.386	8.386	15.21	402	2.08	2500	
V	51	45	1	He	0.630	0.630	29.46	1191	0.05	10000	
Cr	52	45	1	He	2.136	2.136	3.67	5157	0.04	10000	
Mn	55	45	1	He	23.210	23.210	3.66	25179	0.09	10000	
Fe	56	45	1	He	897.712	897.712	2.99	1452795	0.06	200000	
Co	59	45	1	He	44.431	44.431	1.81	165088	0.03	5000	
Ni	60	45	1	He	1220.325	1220.325	2.78	1256006	0.10	10000	
Cu	63	45	1	He	14.048	14.048	2.47	45389	0.03	10000	
Zn	66	45	1	He	5.390	5.390	24.51	4671	0.12	10000	
As	75	115	1	He	1.534	1.534	4.17	373	0.41	10000	
Se	78	115	1	He	0.465	0.465	17.36	8	5.49	10000	
Sr	88	103	1	He	1.094	1.094	8.23	1228	0.09	10000	
Mo	95	103	1	He	0.140	0.140	27.75	197	0.07	2000	
Ag	107	103	1	He	0.010	0.010	51.33	57	0.02	300	
Cd	111	115	1	He	0.988	0.988	5.55	501	0.20	4000	
Sn	118	115	1	He	-0.257	-0.257	-72.40	1159	-0.02	2000	
Sb	123	115	1	He	0.341	0.341	3.08	390	0.09	200	
Ba	137	115	1	He	3.350	3.350	5.26	1275	0.26	10000	
W	182	159	1	He	0.067	0.067	90.45	1830	0.00	2500	
Tl	205	165	1	He	0.043	0.043	12.06	374	0.01	2000	
Pb	208	165	1	He	6.967	6.967	0.43	74317	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1403810	1.86	1276810	109.95	60	120	
Sc	45	1	He	144197	1.86	163460	88.22	60	120	
Sc	45	2	NoGas	8415715	0.64	8842934	95.17	60	120	
Rh	103	1	He	889790	0.60	1010526	88.05	60	120	
In	115	1	He	229512	0.19	257801	89.03	60	120	
Tb	159	1	He	1022676	0.37	1155473	88.51	60	120	
Ho	165	1	He	1026162	0.47	1147359	89.44	60	120	
Bi	209	1	He	702913	0.42	790610	88.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-8-c@2
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:17:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	137.308	137.308	0.67	2452026	0.01	10000	
Be	9	45	2	NoGas	2.956	2.956	4.40	15125	0.02	2000	
B	11	6	2	NoGas	40.502	40.502	3.72	149426	0.03	300	
Na	23	45	1	He	485.088	485.088	2.46	215674	0.22	500000	
Mg	24	45	1	He	16536.415	16536.415	1.01	3975065	0.42	500000	
Al	27	45	1	He	59586.083	59586.083	1.38	6019521	0.99	200000	
K	39	45	1	He	9260.361	9260.361	0.71	1102866	0.84	500000	
Ca	44	45	1	He	12308.147	12308.147	1.56	84848	14.51	500000	
Ti	47	45	1	He	251.383	251.383	1.85	12388	2.03	2500	
V	51	45	1	He	86.383	86.383	1.14	146357	0.06	10000	
Cr	52	45	1	He	94.126	94.126	1.10	199048	0.05	10000	
Mn	55	45	1	He	704.289	704.289	1.22	748446	0.09	10000	
Fe	56	45	1	He	165619.182	165619.182	1.14	275666807	0.06	200000	
Co	59	45	1	He	61.766	61.766	1.53	236379	0.03	5000	
Ni	60	45	1	He	157.601	157.601	2.44	167409	0.09	10000	
Cu	63	45	1	He	85.587	85.587	1.64	260791	0.03	10000	
Zn	66	45	1	He	383.530	383.530	1.74	135079	0.28	10000	
As	75	115	1	He	139.956	139.956	2.31	30526	0.46	10000	
Se	78	115	1	He	10.375	10.375	7.75	112	9.24	10000	
Sr	88	103	1	He	90.567	90.567	0.47	88884	0.10	10000	
Mo	95	103	1	He	40.292	40.292	1.84	47485	0.08	2000	
Ag	107	103	1	He	0.087	0.087	7.61	380	0.02	300	
Cd	111	115	1	He	0.417	0.417	13.38	204	0.20	4000	
Sn	118	115	1	He	23.052	23.052	2.52	22568	0.10	2000	
Sb	123	115	1	He	1.050	1.050	6.61	1110	0.09	200	
Ba	137	115	1	He	423.120	423.120	0.90	154245	0.27	10000	
W	182	159	1	He	0.325	0.325	11.45	3160	0.01	2500	
Tl	205	165	1	He	2.684	2.684	1.96	21401	0.01	2000	
Pb	208	165	1	He	140.445	140.445	0.53	1469800	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1315633	1.42	1276810	103.04	60	120	
Sc	45	1	He	148632	3.00	163460	90.93	60	120	
Sc	45	2	NoGas	9119727	0.12	8842934	103.13	60	120	
Rh	103	1	He	841998	2.43	1010526	83.32	60	120	
In	115	1	He	220959	0.95	257801	85.71	60	120	
Tb	159	1	He	1013024	0.73	1155473	87.67	60	120	
Ho	165	1	He	1020944	1.19	1147359	88.98	60	120	
Bi	209	1	He	667269	0.68	790610	84.40	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-9-c@2
Data File Name	106SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:22:05-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	201.676	201.676	1.02	3574939	0.01	10000	
Be	9	45	2	NoGas	3.859	3.859	3.00	19800	0.02	2000	
B	11	6	2	NoGas	64.082	64.082	1.65	223686	0.03	300	
Na	23	45	1	He	923.253	923.253	1.24	417210	0.22	500000	
Mg	24	45	1	He	27365.422	27365.422	0.77	6799843	0.40	500000	
Al	27	45	1	He	66333.312	66333.312	1.16	6926617	0.96	200000	
K	39	45	1	He	15062.339	15062.339	0.45	1848167	0.81	500000	
Ca	44	45	1	He	5740.337	5740.337	1.25	41269	13.91	500000	
Ti	47	45	1	He	230.814	230.814	1.05	11761	1.96	2500	
V	51	45	1	He	86.039	86.039	2.57	150662	0.06	10000	
Cr	52	45	1	He	97.035	97.035	1.22	212083	0.05	10000	
Mn	55	45	1	He	744.860	744.860	0.91	818170	0.09	10000	
Fe	56	45	1	He	152941.123	152941.123	0.98	263157252	0.06	200000	
Co	59	45	1	He	82.477	82.477	1.94	326151	0.03	5000	
Ni	60	45	1	He	229.601	229.601	0.92	252027	0.09	10000	
Cu	63	45	1	He	102.320	102.320	1.36	321295	0.03	10000	
Zn	66	45	1	He	443.209	443.209	1.67	160890	0.28	10000	
As	75	115	1	He	138.974	138.974	0.89	31188	0.45	10000	
Se	78	115	1	He	12.719	12.719	1.30	141	9.03	10000	
Sr	88	103	1	He	89.657	89.657	0.54	90170	0.10	10000	
Mo	95	103	1	He	9.612	9.612	1.52	11626	0.08	2000	
Ag	107	103	1	He	0.088	0.088	11.89	393	0.02	300	
Cd	111	115	1	He	0.256	0.256	12.98	129	0.20	4000	
Sn	118	115	1	He	21.121	21.121	1.43	21392	0.10	2000	
Sb	123	115	1	He	0.699	0.699	5.09	768	0.09	200	
Ba	137	115	1	He	93.665	93.665	0.46	35139	0.27	10000	
W	182	159	1	He	0.265	0.265	21.45	2900	0.01	2500	
Tl	205	165	1	He	1.692	1.692	3.20	13747	0.01	2000	
Pb	208	165	1	He	123.898	123.898	0.58	1320871	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1278368	1.88	1276810	100.12	60	120	
Sc	45	1	He	153626	0.53	163460	93.98	60	120	
Sc	45	2	NoGas	9159182	1.17	8842934	103.58	60	120	
Rh	103	1	He	862796	0.56	1010526	85.38	60	120	
In	115	1	He	227371	0.30	257801	88.20	60	120	
Tb	159	1	He	1031709	0.33	1155473	89.29	60	120	
Ho	165	1	He	1039919	0.70	1147359	90.64	60	120	
Bi	209	1	He	669713	1.55	790610	84.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-11-c@2
Data File Name	107SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:26:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	151.251	151.251	1.80	2478308	0.01	10000	
Be	9	45	2	NoGas	3.837	3.837	4.32	18046	0.02	2000	
B	11	6	2	NoGas	63.879	63.879	0.67	220705	0.03	300	
Na	23	45	1	He	519.607	519.607	1.89	218792	0.24	500000	
Mg	24	45	1	He	41683.048	41683.048	1.38	9508468	0.44	500000	
Al	27	45	1	He	63206.519	63206.519	2.50	6058777	1.04	200000	
K	39	45	1	He	11832.949	11832.949	1.70	1334859	0.89	500000	
Ca	44	45	1	He	96892.158	96892.158	1.47	629255	15.40	500000	
Ti	47	45	1	He	714.384	714.384	0.87	33413	2.14	2500	
V	51	45	1	He	467.784	467.784	1.84	751358	0.06	10000	
Cr	52	45	1	He	744.568	744.568	1.89	1488778	0.05	10000	
Mn	55	45	1	He	11215.972	11215.972	2.02	11292166	0.10	10000	>LDR
Fe	56	45	1	He	179432.564	179432.564	1.30	283444878	0.06	200000	
Co	59	45	1	He	63.075	63.075	2.05	229087	0.03	5000	
Ni	60	45	1	He	319.736	319.736	1.25	322133	0.10	10000	
Cu	63	45	1	He	110.465	110.465	1.63	318090	0.03	10000	
Zn	66	45	1	He	338.596	338.596	2.13	113504	0.30	10000	
As	75	115	1	He	100.783	100.783	0.02	20947	0.48	10000	
Se	78	115	1	He	11.392	11.392	6.90	117	9.73	10000	
Sr	88	103	1	He	132.291	132.291	0.84	123560	0.11	10000	
Mo	95	103	1	He	15.231	15.231	0.67	17103	0.09	2000	
Ag	107	103	1	He	0.262	0.262	6.17	1064	0.02	300	
Cd	111	115	1	He	0.586	0.586	3.40	273	0.21	4000	
Sn	118	115	1	He	32.754	32.754	2.28	30005	0.11	2000	
Sb	123	115	1	He	1.038	1.038	7.08	1046	0.10	200	
Ba	137	115	1	He	209.723	209.723	0.91	72839	0.29	10000	
W	182	159	1	He	15.285	15.285	2.36	78557	0.02	2500	
Tl	205	165	1	He	1.099	1.099	1.07	8535	0.01	2000	
Pb	208	165	1	He	96.939	96.939	0.09	986188	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1265027	0.61	1276810	99.08	60	120	
Sc	45	1	He	141048	1.05	163460	86.29	60	120	
Sc	45	2	NoGas	8396647	0.78	8842934	94.95	60	120	
Rh	103	1	He	801550	0.65	1010526	79.32	60	120	
In	115	1	He	210513	0.38	257801	81.66	60	120	
Tb	159	1	He	980744	0.85	1155473	84.88	60	120	
Ho	165	1	He	992096	0.13	1147359	86.47	60	120	
Bi	209	1	He	639602	0.60	790610	80.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-11-c@20
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:30:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.412	15.412	0.84	318416	0.00	10000	
Be	9	45	2	NoGas	0.537	0.537	6.40	2545	0.02	2000	
B	11	6	2	NoGas	9.892	9.892	2.43	45041	0.02	300	
Na	23	45	1	He	56.508	56.508	5.60	29491	0.19	500000	
Mg	24	45	1	He	4179.839	4179.839	2.21	926533	0.45	500000	
Al	27	45	1	He	6130.176	6130.176	2.65	570876	1.07	200000	
K	39	45	1	He	1206.084	1206.084	1.79	140028	0.86	500000	
Ca	44	45	1	He	9988.748	9988.748	2.44	63558	15.72	500000	
Ti	47	45	1	He	72.985	72.985	6.50	3315	2.20	2500	
V	51	45	1	He	45.856	45.856	1.38	71677	0.06	10000	
Cr	52	45	1	He	71.572	71.572	2.97	139650	0.05	10000	
Mn	55	45	1	He	1105.780	1105.780	2.01	1082301	0.10	10000	
Fe	56	45	1	He	18801.315	18801.315	2.96	28841844	0.07	200000	
Co	59	45	1	He	6.651	6.651	1.91	23828	0.03	5000	
Ni	60	45	1	He	33.772	33.772	3.43	33216	0.10	10000	
Cu	63	45	1	He	10.950	10.950	3.31	34581	0.03	10000	
Zn	66	45	1	He	29.827	29.827	3.68	12198	0.24	10000	
As	75	115	1	He	9.720	9.720	0.94	2143	0.45	10000	
Se	78	115	1	He	1.225	1.225	41.83	16	7.61	10000	
Sr	88	103	1	He	12.334	12.334	1.41	12292	0.10	10000	
Mo	95	103	1	He	1.463	1.463	3.24	1761	0.08	2000	
Ag	107	103	1	He	0.025	0.025	9.29	119	0.02	300	
Cd	111	115	1	He	0.115	0.115	11.58	57	0.20	4000	
Sn	118	115	1	He	2.182	2.182	20.39	3360	0.06	2000	
Sb	123	115	1	He	0.115	0.115	42.04	141	0.08	200	
Ba	137	115	1	He	20.213	20.213	1.75	7372	0.27	10000	
W	182	159	1	He	1.492	1.492	2.24	9029	0.02	2500	
Tl	205	165	1	He	0.122	0.122	5.71	983	0.01	2000	
Pb	208	165	1	He	9.774	9.774	0.59	101324	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1328177	0.51	1276810	104.02	60	120	
Sc	45	1	He	136996	1.83	163460	83.81	60	120	
Sc	45	2	NoGas	8200226	0.98	8842934	92.73	60	120	
Rh	103	1	He	849634	0.28	1010526	84.08	60	120	
In	115	1	He	220934	1.05	257801	85.70	60	120	
Tb	159	1	He	989820	0.74	1155473	85.66	60	120	
Ho	165	1	He	1001480	0.39	1147359	87.29	60	120	
Bi	209	1	He	664219	1.64	790610	84.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-12-c@2
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:34:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	56.678	56.678	0.53	970135	0.01	10000	
Be	9	45	2	NoGas	5.067	5.067	3.50	23575	0.02	2000	
B	11	6	2	NoGas	228.097	228.097	1.62	749733	0.03	300	
Na	23	45	1	He	1823.823	1823.823	0.89	731393	0.25	500000	
Mg	24	45	1	He	173340.120	173340.120	1.68	38587541	0.45	500000	
Al	27	45	1	He	138169.421	138169.421	2.72	12925859	1.07	200000	
K	39	45	1	He	1749.694	1749.694	2.21	200133	0.87	500000	
Ca	44	45	1	He	782994.961	782994.961	2.67	4958490	15.79	500000	>LDR
Ti	47	45	1	He	8088.743	8088.743	2.35	369175	2.19	2500	>LDR
V	51	45	1	He	3228.479	3228.479	1.58	5059837	0.06	10000	
Cr	52	45	1	He	3352.849	3352.849	2.28	6540268	0.05	10000	
Mn	55	45	1	He	72538.234	72538.234	1.89	71267086	0.10	10000	>LDR
Fe	56	45	1	He	627586.590	627586.590	1.82	967458628	0.06	200000	>LDR
Co	59	45	1	He	41.773	41.773	2.02	148208	0.03	5000	
Ni	60	45	1	He	430.490	430.490	1.86	423212	0.10	10000	
Cu	63	45	1	He	182.265	182.265	1.92	509342	0.04	10000	
Zn	66	45	1	He	562.835	562.835	1.03	182332	0.31	10000	
As	75	115	1	He	80.313	80.313	1.04	15652	0.51	10000	
Se	78	115	1	He	10.789	10.789	9.38	104	10.36	10000	
Sr	88	103	1	He	644.121	644.121	0.57	549980	0.12	10000	
Mo	95	103	1	He	28.446	28.446	1.28	29202	0.10	2000	
Ag	107	103	1	He	0.576	0.576	1.54	2127	0.03	300	
Cd	111	115	1	He	4.232	4.232	2.39	1840	0.23	4000	
Sn	118	115	1	He	47.866	47.866	1.61	40548	0.12	2000	
Sb	123	115	1	He	4.552	4.552	1.27	4233	0.11	200	
Ba	137	115	1	He	735.035	735.035	0.34	239287	0.31	10000	
W	182	159	1	He	79.655	79.655	0.36	381412	0.02	2500	
Tl	205	165	1	He	0.337	0.337	2.58	2466	0.01	2000	
Pb	208	165	1	He	771.114	771.114	0.39	7332438	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1245531	1.43	1276810	97.55	60	120	
Sc	45	1	He	137649	1.42	163460	84.21	60	120	
Sc	45	2	NoGas	8312618	0.44	8842934	94.00	60	120	
Rh	103	1	He	733100	1.53	1010526	72.55	60	120	
In	115	1	He	197330	1.13	257801	76.54	60	120	
Tb	159	1	He	927229	1.58	1155473	80.25	60	120	
Ho	165	1	He	928146	0.97	1147359	80.89	60	120	
Bi	209	1	He	579212	1.02	790610	73.26	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	110_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:38:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.620	1.230	881684	0.17	50	105.2	89.5	110.5	
Be	9	45	2	NoGas	50.340	1.486	226977	0.47	50	100.7	89.5	110.5	
B	11	6	2	NoGas	47.168	0.063	171182	1.28	50	94.3	89.5	110.5	
Na	23	45	1	He	24693.438	1.654	9803244	1.10	25000	98.8	89.5	110.5	
Mg	24	45	1	He	24515.158	1.388	5452892	0.61	25000	98.1	89.5	110.5	
Al	27	45	1	He	261.005	0.731	24645	0.34	250	104.4	89.5	110.5	
K	39	45	1	He	25654.900	0.714	2811706	0.57	25000	102.6	89.5	110.5	
Ca	44	45	1	He	25109.980	1.392	159469	0.37	25000	100.4	89.5	110.5	
Ti	47	45	1	He	55.570	1.744	2536	0.72	50	111.1	89.5	110.5	CCV Failed
V	51	45	1	He	50.018	1.012	78473	0.11	50	100.0	89.5	110.5	
Cr	52	45	1	He	49.619	0.931	97453	0.75	50	99.2	89.5	110.5	
Mn	55	45	1	He	254.323	0.258	250905	1.23	250	101.7	89.5	110.5	
Fe	56	45	1	He	12432.447	0.658	19152740	0.43	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.718	1.021	176167	0.57	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.472	1.950	48770	1.87	50	98.9	89.5	110.5	
Cu	63	45	1	He	49.191	0.966	140570	0.57	50	98.4	89.5	110.5	
Zn	66	45	1	He	45.894	0.773	17372	1.62	50	91.8	89.5	110.5	
As	75	115	1	He	47.255	0.853	10398	0.21	50	94.5	89.5	110.5	
Se	78	115	1	He	44.482	5.429	474	6.07	50	89.0	89.5	110.5	CCV Failed
Sr	88	103	1	He	49.531	0.495	48897	0.87	50	99.1	89.5	110.5	
Mo	95	103	1	He	50.354	1.659	59643	1.32	50	100.7	89.5	110.5	
Ag	107	103	1	He	49.661	0.899	210643	0.38	50	99.3	89.5	110.5	
Cd	111	115	1	He	48.329	1.073	23689	0.39	50	96.7	89.5	110.5	
Sn	118	115	1	He	47.553	0.359	45443	0.43	50	95.1	89.5	110.5	
Sb	123	115	1	He	49.552	2.017	51751	1.24	50	99.1	89.5	110.5	
Ba	137	115	1	He	49.701	1.687	18256	1.35	50	99.4	89.5	110.5	
W	182	159	1	He	49.507	1.508	254902	0.96	50	99.0	89.5	110.5	
Tl	205	165	1	He	49.920	0.761	390771	0.90	50	99.8	89.5	110.5	
Pb	208	165	1	He	50.261	0.456	517831	0.14	50	100.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1307091	1.31	1276810	102.37	60	120	
Sc	45	1	He	137526	1.01	163460	84.13	60	120	
Sc	45	2	NoGas	8085884	1.01	8842934	91.44	60	120	
Rh	103	1	He	846199	0.55	1010526	83.74	60	120	
In	115	1	He	222592	0.77	257801	86.34	60	120	
Tb	159	1	He	994944	0.57	1155473	86.11	60	120	
Ho	165	1	He	1003755	0.59	1147359	87.48	60	120	
Bi	209	1	He	655122	0.09	790610	82.86	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	111_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:42:56-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.778	5.9	92778	0.2	8	
Be	9	45	2	NoGas	0.183	21.7	933	19.9	1	
B	11	6	2	NoGas	4.959	2.4	29027	1.4	20	
Na	23	45	1	He	50.156	1.9	27377	3.1	1000	
Mg	24	45	1	He	41.045	3.3	9884	2.9	1000	
Al	27	45	1	He	3.284	19.9	562	11.9	50	
K	39	45	1	He	45.640	11.8	13950	5.9	1000	
Ca	44	45	1	He	42.107	2.3	906	2.3	1000	
Ti	47	45	1	He	0.562	5.0	28	6.9	20	
V	51	45	1	He	0.141	40.7	377	24.1	2	
Cr	52	45	1	He	0.083	34.3	929	3.8	2	
Mn	55	45	1	He	2.071	5.9	3304	0.9	2	CCB High
Fe	56	45	1	He	39.790	2.2	65259	5.0	50	
Co	59	45	1	He	-0.034	-33.8	294	12.4	1	
Ni	60	45	1	He	-0.029	-31.1	174	7.2	2	
Cu	63	45	1	He	-0.922	-4.2	1886	5.8	2	
Zn	66	45	1	He	-3.940	-4.8	1499	3.9	20	
As	75	115	1	He	0.103	21.4	49	10.4	2	
Se	78	115	1	He	0.268	24.0	6	12.1	2	
Sr	88	103	1	He	0.112	46.2	206	24.6	10	
Mo	95	103	1	He	0.168	12.5	228	12.4	2	
Ag	107	103	1	He	0.074	17.5	337	16.5	0.2	
Cd	111	115	1	He	0.123	23.2	63	22.7	0.2	
Sn	118	115	1	He	-0.370	-28.5	1048	9.8	10	
Sb	123	115	1	He	0.127	19.9	159	16.0	2	
Ba	137	115	1	He	0.164	27.4	68	25.2	5	
W	182	159	1	He	0.324	1.9	3141	1.6	10	
Tl	205	165	1	He	0.122	4.5	1003	4.9	0.5	
Pb	208	165	1	He	0.106	3.8	2189	1.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1377760	0.34	1276810	107.91	60	120	
Sc	45	1	He	138952	2.99	163460	85.01	60	120	
Sc	45	2	NoGas	8273099	0.65	8842934	93.56	60	120	
Rh	103	1	He	873435	1.40	1010526	86.43	60	120	
In	115	1	He	228861	1.07	257801	88.77	60	120	
Tb	159	1	He	1008621	0.73	1155473	87.29	60	120	
Ho	165	1	He	1020458	0.95	1147359	88.94	60	120	
Bi	209	1	He	694091	0.63	790610	87.79	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-12-c@20
Data File Name	112SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:47:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.533	6.533	2.39	183581	0.00	10000	
Be	9	45	2	NoGas	0.628	0.628	4.10	3004	0.02	2000	
B	11	6	2	NoGas	26.279	26.279	2.38	103232	0.03	300	
Na	23	45	1	He	197.090	197.090	1.10	84805	0.23	500000	
Mg	24	45	1	He	18921.495	18921.495	1.08	4180394	0.45	500000	
Al	27	45	1	He	14667.407	14667.407	2.87	1361934	1.08	200000	
K	39	45	1	He	192.788	192.788	2.52	29673	0.65	500000	
Ca	44	45	1	He	80326.258	80326.258	0.72	505332	15.90	500000	
Ti	47	45	1	He	857.551	857.551	1.95	38856	2.21	2500	
V	51	45	1	He	317.401	317.401	1.52	493760	0.06	10000	
Cr	52	45	1	He	344.234	344.234	1.11	667046	0.05	10000	
Mn	55	45	1	He	8060.527	8060.527	1.23	7859844	0.10	10000	
Fe	56	45	1	He	68858.669	68858.669	0.66	105349116	0.07	200000	
Co	59	45	1	He	4.542	4.542	1.38	16355	0.03	5000	
Ni	60	45	1	He	48.209	48.209	0.95	47206	0.10	10000	
Cu	63	45	1	He	19.877	19.877	2.10	59033	0.03	10000	
Zn	66	45	1	He	59.351	59.351	0.86	21517	0.28	10000	
As	75	115	1	He	8.112	8.112	2.64	1769	0.46	10000	
Se	78	115	1	He	1.289	1.289	27.45	17	7.77	10000	
Sr	88	103	1	He	60.924	60.924	0.96	59471	0.10	10000	
Mo	95	103	1	He	2.546	2.546	0.96	3003	0.08	2000	
Ag	107	103	1	He	0.045	0.045	15.30	200	0.02	300	
Cd	111	115	1	He	0.463	0.463	9.35	223	0.21	4000	
Sn	118	115	1	He	3.598	3.598	7.65	4601	0.08	2000	
Sb	123	115	1	He	0.511	0.511	5.09	544	0.09	200	
Ba	137	115	1	He	73.951	73.951	1.14	26602	0.28	10000	
W	182	159	1	He	8.049	8.049	2.03	43099	0.02	2500	
Tl	205	165	1	He	0.043	0.043	14.41	370	0.01	2000	
Pb	208	165	1	He	74.240	74.240	1.18	767569	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348207	0.90	1276810	105.59	60	120	
Sc	45	1	He	136600	1.99	163460	83.57	60	120	
Sc	45	2	NoGas	8316271	0.72	8842934	94.04	60	120	
Rh	103	1	He	836935	1.59	1010526	82.82	60	120	
In	115	1	He	218006	0.77	257801	84.56	60	120	
Tb	159	1	He	1005603	1.70	1155473	87.03	60	120	
Ho	165	1	He	1008036	1.62	1147359	87.86	60	120	
Bi	209	1	He	666320	0.24	790610	84.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-13-c@2
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:51:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	90.713	90.713	0.34	1580510	0.01	10000	
Be	9	45	2	NoGas	2.025	2.025	4.70	9955	0.02	2000	
B	11	6	2	NoGas	41.007	41.007	2.58	151071	0.03	300	
Na	23	45	1	He	657.149	657.149	1.22	284778	0.23	500000	
Mg	24	45	1	He	14586.337	14586.337	0.88	3449640	0.42	500000	
Al	27	45	1	He	52931.175	52931.175	0.87	5259708	1.01	200000	
K	39	45	1	He	12169.637	12169.637	2.14	1422550	0.86	500000	
Ca	44	45	1	He	12629.099	12629.099	0.59	85604	14.75	500000	
Ti	47	45	1	He	214.107	214.107	3.15	10384	2.06	2500	
V	51	45	1	He	94.386	94.386	0.74	157288	0.06	10000	
Cr	52	45	1	He	98.212	98.212	0.28	204287	0.05	10000	
Mn	55	45	1	He	627.208	627.208	0.83	655859	0.10	10000	
Fe	56	45	1	He	161053.841	161053.841	0.67	263723198	0.06	200000	
Co	59	45	1	He	44.310	44.310	1.25	166948	0.03	5000	
Ni	60	45	1	He	149.716	149.716	0.97	156462	0.10	10000	
Cu	63	45	1	He	89.507	89.507	0.77	268061	0.03	10000	
Zn	66	45	1	He	269.934	269.934	0.56	94395	0.29	10000	
As	75	115	1	He	139.311	139.311	1.98	30382	0.46	10000	
Se	78	115	1	He	11.186	11.186	4.52	121	9.27	10000	
Sr	88	103	1	He	164.604	164.604	1.15	161432	0.10	10000	
Mo	95	103	1	He	43.309	43.309	1.46	51033	0.08	2000	
Ag	107	103	1	He	0.066	0.066	11.20	291	0.02	300	
Cd	111	115	1	He	0.775	0.775	9.23	378	0.20	4000	
Sn	118	115	1	He	20.681	20.681	3.24	20380	0.10	2000	
Sb	123	115	1	He	1.128	1.128	7.23	1191	0.09	200	
Ba	137	115	1	He	406.703	406.703	2.20	148247	0.27	10000	
W	182	159	1	He	0.305	0.305	35.11	3075	0.01	2500	
Tl	205	165	1	He	2.530	2.530	1.09	20228	0.01	2000	
Pb	208	165	1	He	178.084	178.084	0.47	1868273	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1314731	1.19	1276810	102.97	60	120	
Sc	45	1	He	146202	1.78	163460	89.44	60	120	
Sc	45	2	NoGas	8735260	0.77	8842934	98.78	60	120	
Rh	103	1	He	841712	0.86	1010526	83.29	60	120	
In	115	1	He	221008	1.97	257801	85.73	60	120	
Tb	159	1	He	1020456	1.30	1155473	88.32	60	120	
Ho	165	1	He	1023565	0.42	1147359	89.21	60	120	
Bi	209	1	He	677638	0.87	790610	85.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-f-14-c@2
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:55:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	215.493	215.493	1.14	3514048	0.01	10000	
Be	9	45	2	NoGas	4.211	4.211	5.01	19897	0.02	2000	
B	11	6	2	NoGas	65.365	65.365	2.14	221403	0.03	300	
Na	23	45	1	He	766.185	766.185	4.67	312170	0.25	500000	
Mg	24	45	1	He	65033.094	65033.094	3.30	14516602	0.45	500000	
Al	27	45	1	He	83227.895	83227.895	4.19	7805617	1.07	200000	
K	39	45	1	He	14584.158	14584.158	4.40	1607440	0.91	500000	
Ca	44	45	1	He	70794.247	70794.247	4.58	449924	15.73	500000	
Ti	47	45	1	He	442.405	442.405	4.36	20243	2.19	2500	
V	51	45	1	He	284.147	284.147	5.78	446387	0.06	10000	
Cr	52	45	1	He	416.677	416.677	4.04	815493	0.05	10000	
Mn	55	45	1	He	6591.984	6591.984	4.16	6493722	0.10	10000	
Fe	56	45	1	He	213796.694	213796.694	3.72	330448138	0.06	200000	>LDR
Co	59	45	1	He	115.032	115.032	4.09	408429	0.03	5000	
Ni	60	45	1	He	421.182	421.182	4.18	415074	0.10	10000	
Cu	63	45	1	He	166.550	166.550	4.02	466974	0.04	10000	
Zn	66	45	1	He	408.069	408.069	4.17	133273	0.31	10000	
As	75	115	1	He	163.686	163.686	4.32	33614	0.49	10000	
Se	78	115	1	He	10.718	10.718	10.40	109	9.84	10000	
Sr	88	103	1	He	120.540	120.540	3.66	110691	0.11	10000	
Mo	95	103	1	He	15.349	15.349	1.17	16955	0.09	2000	
Ag	107	103	1	He	0.484	0.484	2.50	1923	0.03	300	
Cd	111	115	1	He	4.143	4.143	3.66	1900	0.22	4000	
Sn	118	115	1	He	44.714	44.714	6.14	40000	0.11	2000	
Sb	123	115	1	He	0.995	0.995	3.24	993	0.10	200	
Ba	137	115	1	He	172.946	172.946	5.17	59357	0.29	10000	
W	182	159	1	He	13.882	13.882	3.82	71360	0.02	2500	
Tl	205	165	1	He	1.723	1.723	8.66	13339	0.01	2000	
Pb	208	165	1	He	164.438	164.438	4.23	1672019	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1241646	1.25	1276810	97.25	60	120	
Sc	45	1	He	138134	4.06	163460	84.51	60	120	
Sc	45	2	NoGas	8439601	1.32	8842934	95.44	60	120	
Rh	103	1	He	788720	3.78	1010526	78.05	60	120	
In	115	1	He	208366	4.76	257801	80.82	60	120	
Tb	159	1	He	980182	4.56	1155473	84.83	60	120	
Ho	165	1	He	993230	4.38	1147359	86.57	60	120	
Bi	209	1	He	653561	3.61	790610	82.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-15-a@2
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T20:59:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.081	1.081	4.82	93949	0.00	10000	
Be	9	45	2	NoGas	0.087	0.087	19.27	474	0.02	2000	
B	11	6	2	NoGas	6.167	6.167	6.89	32711	0.02	300	
Na	23	45	1	He	0.846	0.846	81.97	7365	0.01	500000	
Mg	24	45	1	He	12.829	12.829	36.46	3430	0.37	500000	
Al	27	45	1	He	18.137	18.137	36.35	1900	0.95	200000	
K	39	45	1	He	3.911	3.911	9.17	9036	0.04	500000	
Ca	44	45	1	He	-39.261	-39.261	-31.27	373	-10.52	500000	
Ti	47	45	1	He	0.358	0.358	67.31	18	2.01	2500	
V	51	45	1	He	-0.148	-0.148	-53.40	-78	0.19	10000	
Cr	52	45	1	He	0.036	0.036	146.21	811	0.00	10000	
Mn	55	45	1	He	0.807	0.807	75.92	1985	0.04	10000	
Fe	56	45	1	He	72.433	72.433	32.52	112221	0.06	200000	
Co	59	45	1	He	-0.077	-0.077	-7.91	137	-0.06	5000	
Ni	60	45	1	He	-0.069	-0.069	-70.66	130	-0.05	10000	
Cu	63	45	1	He	-1.094	-1.094	-1.53	1358	-0.08	10000	
Zn	66	45	1	He	-7.828	-7.828	-0.26	239	-3.28	10000	
As	75	115	1	He	0.101	0.101	33.09	47	0.21	10000	
Se	78	115	1	He	0.225	0.225	63.45	6	3.98	10000	
Sr	88	103	1	He	-0.027	-0.027	-65.50	63	-0.04	10000	
Mo	95	103	1	He	0.041	0.041	10.55	71	0.06	2000	
Ag	107	103	1	He	-0.001	-0.001	-80.65	9	-0.01	300	
Cd	111	115	1	He	0.027	0.027	24.14	14	0.19	4000	
Sn	118	115	1	He	0.438	0.438	55.95	1759	0.02	2000	
Sb	123	115	1	He	0.031	0.031	62.44	54	0.06	200	
Ba	137	115	1	He	0.058	0.058	115.43	27	0.22	10000	
W	182	159	1	He	0.144	0.144	24.92	2193	0.01	2500	
Tl	205	165	1	He	0.006	0.006	33.96	80	0.01	2000	
Pb	208	165	1	He	0.053	0.053	9.08	1618	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1351207	1.55	1276810	105.83	60	120	
Sc	45	1	He	134430	0.58	163460	82.24	60	120	
Sc	45	2	NoGas	7971256	0.24	8842934	90.14	60	120	
Rh	103	1	He	858032	0.90	1010526	84.91	60	120	
In	115	1	He	221510	0.75	257801	85.92	60	120	
Tb	159	1	He	1003337	0.76	1155473	86.83	60	120	
Ho	165	1	He	1010866	0.67	1147359	88.10	60	120	
Bi	209	1	He	685479	0.55	790610	86.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-16-a@2
Data File Name	116SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:03:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.518	119.518	1.30	2014017	0.01	10000	
Be	9	45	2	NoGas	3.729	3.729	0.96	17887	0.02	2000	
B	11	6	2	NoGas	49.174	49.174	1.05	179888	0.03	300	
Na	23	45	1	He	553.989	553.989	1.71	228991	0.24	500000	
Mg	24	45	1	He	17470.942	17470.942	1.31	3920898	0.45	500000	
Al	27	45	1	He	57353.807	57353.807	1.44	5408744	1.06	200000	
K	39	45	1	He	8001.217	8001.217	0.24	890835	0.90	500000	
Ca	44	45	1	He	43905.982	43905.982	1.24	280853	15.63	500000	
Ti	47	45	1	He	360.836	360.836	0.84	16603	2.17	2500	
V	51	45	1	He	127.288	127.288	0.83	201242	0.06	10000	
Cr	52	45	1	He	85.796	85.796	1.28	169445	0.05	10000	
Mn	55	45	1	He	1724.366	1724.366	0.79	1708994	0.10	10000	
Fe	56	45	1	He	116082.495	116082.495	1.52	180389642	0.06	200000	
Co	59	45	1	He	171.852	171.852	0.80	613327	0.03	5000	
Ni	60	45	1	He	6745.297	6745.297	1.28	6681182	0.10	10000	
Cu	63	45	1	He	208.972	208.972	0.92	587996	0.04	10000	
Zn	66	45	1	He	750.782	750.782	1.03	244230	0.31	10000	
As	75	115	1	He	71.024	71.024	1.01	15091	0.47	10000	
Se	78	115	1	He	20.498	20.498	6.57	213	9.63	10000	
Sr	88	103	1	He	102.497	102.497	0.69	98295	0.10	10000	
Mo	95	103	1	He	25.064	25.064	3.23	28877	0.09	2000	
Ag	107	103	1	He	0.380	0.380	7.86	1577	0.02	300	
Cd	111	115	1	He	12.871	12.871	1.62	6098	0.21	4000	
Sn	118	115	1	He	37.285	37.285	1.04	34718	0.11	2000	
Sb	123	115	1	He	1.958	1.958	8.32	1996	0.10	200	
Ba	137	115	1	He	334.404	334.404	0.71	118666	0.28	10000	
W	182	159	1	He	1.027	1.027	7.40	6876	0.01	2500	
Tl	205	165	1	He	2.233	2.233	1.40	17945	0.01	2000	
Pb	208	165	1	He	144.883	144.883	1.19	1527892	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320943	0.89	1276810	103.46	60	120	
Sc	45	1	He	138744	0.34	163460	84.88	60	120	
Sc	45	2	NoGas	8559482	0.30	8842934	96.79	60	120	
Rh	103	1	He	822834	0.48	1010526	81.43	60	120	
In	115	1	He	215104	0.75	257801	83.44	60	120	
Tb	159	1	He	1021500	0.72	1155473	88.41	60	120	
Ho	165	1	He	1028780	0.47	1147359	89.67	60	120	
Bi	209	1	He	674846	0.96	790610	85.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-17-a@2
Data File Name	117SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:07:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	78.034	78.034	2.37	1344790	0.01	10000	
Be	9	45	2	NoGas	2.424	2.424	3.35	11667	0.02	2000	
B	11	6	2	NoGas	30.216	30.216	1.09	115857	0.03	300	
Na	23	45	1	He	1551.417	1551.417	1.37	639693	0.24	500000	
Mg	24	45	1	He	9928.987	9928.987	0.66	2269512	0.44	500000	
Al	27	45	1	He	36743.309	36743.309	1.49	3528534	1.04	200000	
K	39	45	1	He	6310.008	6310.008	0.49	717278	0.88	500000	
Ca	44	45	1	He	5743.053	5743.053	1.41	37967	15.13	500000	
Ti	47	45	1	He	291.963	291.963	2.44	13678	2.13	2500	
V	51	45	1	He	92.206	92.206	1.91	148484	0.06	10000	
Cr	52	45	1	He	57.153	57.153	1.08	115206	0.05	10000	
Mn	55	45	1	He	1139.057	1139.057	0.60	1149976	0.10	10000	
Fe	56	45	1	He	117207.326	117207.326	0.30	185473362	0.06	200000	
Co	59	45	1	He	36.319	36.319	0.90	132323	0.03	5000	
Ni	60	45	1	He	544.899	544.899	0.82	549769	0.10	10000	
Cu	63	45	1	He	84.147	84.147	0.82	243793	0.03	10000	
Zn	66	45	1	He	306.691	306.691	2.18	103244	0.30	10000	
As	75	115	1	He	72.002	72.002	0.26	15548	0.46	10000	
Se	78	115	1	He	15.174	15.174	2.11	161	9.43	10000	
Sr	88	103	1	He	34.542	34.542	1.03	33902	0.10	10000	
Mo	95	103	1	He	25.893	25.893	0.70	30479	0.08	2000	
Ag	107	103	1	He	0.129	0.129	12.06	554	0.02	300	
Cd	111	115	1	He	3.044	3.044	1.26	1466	0.21	4000	
Sn	118	115	1	He	25.562	25.562	2.32	24611	0.10	2000	
Sb	123	115	1	He	1.027	1.027	4.51	1074	0.10	200	
Ba	137	115	1	He	174.819	174.819	0.92	63050	0.28	10000	
W	182	159	1	He	0.306	0.306	14.68	3126	0.01	2500	
Tl	205	165	1	He	1.735	1.735	2.41	14024	0.01	2000	
Pb	208	165	1	He	47.653	47.653	0.45	505862	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1334436	1.43	1276810	104.51	60	120	
Sc	45	1	He	141280	1.34	163460	86.43	60	120	
Sc	45	2	NoGas	8564730	0.43	8842934	96.85	60	120	
Rh	103	1	He	840627	0.25	1010526	83.19	60	120	
In	115	1	He	218610	1.17	257801	84.80	60	120	
Tb	159	1	He	1035453	0.56	1155473	89.61	60	120	
Ho	165	1	He	1034071	0.65	1147359	90.13	60	120	
Bi	209	1	He	670737	0.41	790610	84.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-18-a@2
Data File Name	118SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:12:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.996	113.996	1.37	1889410	0.01	10000	
Be	9	45	2	NoGas	5.232	5.232	2.93	24595	0.02	2000	
B	11	6	2	NoGas	76.514	76.514	0.13	265970	0.03	300	
Na	23	45	1	He	1611.554	1611.554	1.90	633061	0.25	500000	
Mg	24	45	1	He	135875.077	135875.077	1.40	29593222	0.46	500000	
Al	27	45	1	He	52076.499	52076.499	2.67	4766885	1.09	200000	
K	39	45	1	He	9080.352	9080.352	1.88	980071	0.93	500000	
Ca	44	45	1	He	367484.032	367484.032	1.98	2277007	16.14	500000	
Ti	47	45	1	He	613.983	613.983	2.19	27420	2.24	2500	
V	51	45	1	He	91.359	91.359	2.70	140237	0.07	10000	
Cr	52	45	1	He	73.013	73.013	2.10	140079	0.05	10000	
Mn	55	45	1	He	2570.426	2570.426	2.37	2472043	0.10	10000	
Fe	56	45	1	He	81954.727	81954.727	2.74	123621986	0.07	200000	
Co	59	45	1	He	32.337	32.337	1.96	112348	0.03	5000	
Ni	60	45	1	He	249.704	249.704	2.55	240252	0.10	10000	
Cu	63	45	1	He	110.082	110.082	2.40	302693	0.04	10000	
Zn	66	45	1	He	391.880	391.880	1.90	125017	0.31	10000	
As	75	115	1	He	47.668	47.668	1.40	9654	0.49	10000	
Se	78	115	1	He	14.512	14.512	5.61	144	10.06	10000	
Sr	88	103	1	He	370.506	370.506	0.67	330593	0.11	10000	
Mo	95	103	1	He	7.731	7.731	1.70	8308	0.09	2000	
Ag	107	103	1	He	0.231	0.231	7.08	896	0.03	300	
Cd	111	115	1	He	2.021	2.021	4.36	913	0.22	4000	
Sn	118	115	1	He	36.229	36.229	0.50	32165	0.11	2000	
Sb	123	115	1	He	1.495	1.495	4.21	1457	0.10	200	
Ba	137	115	1	He	417.852	417.852	1.22	141227	0.30	10000	
W	182	159	1	He	1.133	1.133	6.34	7102	0.02	2500	
Tl	205	165	1	He	0.735	0.735	2.37	5709	0.01	2000	
Pb	208	165	1	He	143.281	143.281	0.54	1454550	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1282591	0.34	1276810	100.45	60	120	
Sc	45	1	He	134665	1.13	163460	82.38	60	120	
Sc	45	2	NoGas	8402598	1.19	8842934	95.02	60	120	
Rh	103	1	He	766026	1.92	1010526	75.80	60	120	
In	115	1	He	204885	1.68	257801	79.47	60	120	
Tb	159	1	He	976167	0.63	1155473	84.48	60	120	
Ho	165	1	He	990320	0.77	1147359	86.31	60	120	
Bi	209	1	He	623768	1.01	790610	78.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-19-a@2
Data File Name	119SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:16:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	141.671	141.671	0.77	2411824	0.01	10000	
Be	9	45	2	NoGas	3.037	3.037	3.28	14832	0.02	2000	
B	11	6	2	NoGas	59.189	59.189	1.35	211520	0.03	300	
Na	23	45	1	He	655.273	655.273	2.05	276977	0.24	500000	
Mg	24	45	1	He	43253.301	43253.301	2.40	9974418	0.43	500000	
Al	27	45	1	He	53438.429	53438.429	2.15	5178883	1.03	200000	
K	39	45	1	He	10891.718	10891.718	1.60	1242874	0.88	500000	
Ca	44	45	1	He	120793.564	120793.564	1.59	792914	15.23	500000	
Ti	47	45	1	He	443.060	443.060	0.95	20952	2.11	2500	
V	51	45	1	He	89.985	89.985	2.20	146242	0.06	10000	
Cr	52	45	1	He	79.875	79.875	1.82	162172	0.05	10000	
Mn	55	45	1	He	1767.829	1767.829	2.53	1800529	0.10	10000	
Fe	56	45	1	He	109634.690	109634.690	1.87	175083037	0.06	200000	
Co	59	45	1	He	54.511	54.511	2.02	200214	0.03	5000	
Ni	60	45	1	He	140.721	140.721	1.53	143445	0.10	10000	
Cu	63	45	1	He	91.916	91.916	2.39	268350	0.03	10000	
Zn	66	45	1	He	306.095	306.095	1.24	104013	0.29	10000	
As	75	115	1	He	35.467	35.467	1.26	7491	0.47	10000	
Se	78	115	1	He	15.149	15.149	7.60	157	9.66	10000	
Sr	88	103	1	He	217.334	217.334	1.04	204243	0.11	10000	
Mo	95	103	1	He	14.498	14.498	1.39	16387	0.09	2000	
Ag	107	103	1	He	0.184	0.184	12.67	752	0.02	300	
Cd	111	115	1	He	0.647	0.647	5.42	305	0.21	4000	
Sn	118	115	1	He	19.041	19.041	3.03	18236	0.10	2000	
Sb	123	115	1	He	0.457	0.457	15.03	479	0.10	200	
Ba	137	115	1	He	445.067	445.067	1.66	156729	0.28	10000	
W	182	159	1	He	0.206	0.206	15.90	2534	0.01	2500	
Tl	205	165	1	He	1.542	1.542	1.32	12283	0.01	2000	
Pb	208	165	1	He	53.590	53.590	0.61	560291	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303678	1.00	1276810	102.10	60	120	
Sc	45	1	He	142590	0.88	163460	87.23	60	120	
Sc	45	2	NoGas	8703684	0.20	8842934	98.43	60	120	
Rh	103	1	He	806742	1.41	1010526	79.83	60	120	
In	115	1	He	213463	0.91	257801	82.80	60	120	
Tb	159	1	He	1012173	0.98	1155473	87.60	60	120	
Ho	165	1	He	1018750	1.20	1147359	88.79	60	120	
Bi	209	1	He	655127	0.55	790610	82.86	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-20-a@2
Data File Name	120SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:20:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	140.524	140.524	2.50	2384153	0.01	10000	
Be	9	45	2	NoGas	2.784	2.784	5.05	13554	0.02	2000	
B	11	6	2	NoGas	55.762	55.762	2.30	201674	0.03	300	
Na	23	45	1	He	872.929	872.929	1.64	361963	0.24	500000	
Mg	24	45	1	He	45406.632	45406.632	1.44	10341385	0.44	500000	
Al	27	45	1	He	52991.620	52991.620	1.75	5071738	1.04	200000	
K	39	45	1	He	10721.956	10721.956	1.29	1208463	0.89	500000	
Ca	44	45	1	He	136111.108	136111.108	1.44	882315	15.43	500000	
Ti	47	45	1	He	457.521	457.521	1.52	21365	2.14	2500	
V	51	45	1	He	91.109	91.109	1.31	146233	0.06	10000	
Cr	52	45	1	He	78.652	78.652	1.72	157717	0.05	10000	
Mn	55	45	1	He	1754.533	1754.533	2.10	1764959	0.10	10000	
Fe	56	45	1	He	110441.726	110441.726	1.48	174182349	0.06	200000	
Co	59	45	1	He	53.944	53.944	1.60	195675	0.03	5000	
Ni	60	45	1	He	138.718	138.718	2.39	139635	0.10	10000	
Cu	63	45	1	He	90.993	90.993	1.65	262397	0.03	10000	
Zn	66	45	1	He	276.176	276.176	2.19	92949	0.30	10000	
As	75	115	1	He	41.446	41.446	0.90	8751	0.47	10000	
Se	78	115	1	He	13.722	13.722	5.22	142	9.63	10000	
Sr	88	103	1	He	262.479	262.479	1.64	247448	0.11	10000	
Mo	95	103	1	He	13.863	13.863	0.41	15722	0.09	2000	
Ag	107	103	1	He	0.197	0.197	8.34	808	0.02	300	
Cd	111	115	1	He	0.496	0.496	3.24	234	0.21	4000	
Sn	118	115	1	He	22.294	22.294	3.18	21129	0.11	2000	
Sb	123	115	1	He	0.415	0.415	1.32	437	0.09	200	
Ba	137	115	1	He	357.653	357.653	0.99	125985	0.28	10000	
W	182	159	1	He	0.231	0.231	2.31	2660	0.01	2500	
Tl	205	165	1	He	1.479	1.479	1.49	11722	0.01	2000	
Pb	208	165	1	He	52.107	52.107	0.16	542083	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1315300	0.75	1276810	103.01	60	120	
Sc	45	1	He	140826	1.47	163460	86.15	60	120	
Sc	45	2	NoGas	8673198	1.78	8842934	98.08	60	120	
Rh	103	1	He	809360	0.78	1010526	80.09	60	120	
In	115	1	He	213525	0.91	257801	82.83	60	120	
Tb	159	1	He	1010031	0.58	1155473	87.41	60	120	
Ho	165	1	He	1013582	0.83	1147359	88.34	60	120	
Bi	209	1	He	647499	1.44	790610	81.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-1-a@200
Data File Name	121SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:24:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.241	1.241	4.22	98564	0.00	10000	
Be	9	45	2	NoGas	0.065	0.065	12.88	385	0.02	2000	
B	11	6	2	NoGas	4.963	4.963	4.39	28460	0.02	300	
Na	23	45	1	He	11.572	11.572	2.20	11545	0.10	500000	
Mg	24	45	1	He	86.246	86.246	3.47	19426	0.44	500000	
Al	27	45	1	He	366.902	366.902	3.36	33825	1.08	200000	
K	39	45	1	He	51.571	51.571	12.03	14147	0.36	500000	
Ca	44	45	1	He	1095.992	1095.992	2.14	7406	14.80	500000	
Ti	47	45	1	He	10.163	10.163	6.95	456	2.23	2500	
V	51	45	1	He	1.215	1.215	35.35	2010	0.06	10000	
Cr	52	45	1	He	21.068	21.068	1.92	40946	0.05	10000	
Mn	55	45	1	He	423.172	423.172	1.10	408013	0.10	10000	
Fe	56	45	1	He	1058.776	1058.776	3.89	1599749	0.07	200000	
Co	59	45	1	He	70.225	70.225	1.46	243501	0.03	5000	
Ni	60	45	1	He	1854.961	1854.961	1.14	1783575	0.10	10000	
Cu	63	45	1	He	78.191	78.191	1.30	216259	0.04	10000	
Zn	66	45	1	He	29.723	29.723	2.83	11962	0.25	10000	
As	75	115	1	He	6.123	6.123	1.32	1377	0.44	10000	
Se	78	115	1	He	0.921	0.921	11.77	13	7.03	10000	
Sr	88	103	1	He	2.370	2.370	5.00	2432	0.10	10000	
Mo	95	103	1	He	0.630	0.630	9.61	770	0.08	2000	
Ag	107	103	1	He	0.278	0.278	4.13	1196	0.02	300	
Cd	111	115	1	He	3.827	3.827	0.44	1887	0.20	4000	
Sn	118	115	1	He	4.382	4.382	11.90	5457	0.08	2000	
Sb	123	115	1	He	4.511	4.511	1.53	4757	0.09	200	
Ba	137	115	1	He	17.812	17.812	3.16	6580	0.27	10000	
W	182	159	1	He	0.104	0.104	49.40	1963	0.01	2500	
Tl	205	165	1	He	0.050	0.050	17.88	421	0.01	2000	
Pb	208	165	1	He	112.345	112.345	1.21	1154210	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1350175	0.34	1276810	105.75	60	120	
Sc	45	1	He	134687	1.66	163460	82.40	60	120	
Sc	45	2	NoGas	8153573	0.69	8842934	92.20	60	120	
Rh	103	1	He	849053	0.97	1010526	84.02	60	120	
In	115	1	He	223792	1.06	257801	86.81	60	120	
Tb	159	1	He	991773	1.28	1155473	85.83	60	120	
Ho	165	1	He	1002131	1.24	1147359	87.34	60	120	
Bi	209	1	He	692668	0.42	790610	87.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	122_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:28:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.374	1.326	888220	0.71	50	106.7	89.5	110.5	
Be	9	45	2	NoGas	50.762	0.867	227616	0.43	50	101.5	89.5	110.5	
B	11	6	2	NoGas	45.416	1.036	164750	1.06	50	90.8	89.5	110.5	
Na	23	45	1	He	24630.070	0.132	9541751	0.43	25000	98.5	89.5	110.5	
Mg	24	45	1	He	24443.993	1.588	5305904	2.04	25000	97.8	89.5	110.5	
Al	27	45	1	He	247.367	3.291	22804	3.12	250	98.9	89.5	110.5	
K	39	45	1	He	25443.256	0.653	2721027	0.52	25000	101.8	89.5	110.5	
Ca	44	45	1	He	24766.748	0.767	153501	1.22	25000	99.1	89.5	110.5	
Ti	47	45	1	He	52.210	4.786	2325	4.26	50	104.4	89.5	110.5	
V	51	45	1	He	49.961	1.023	76490	1.50	50	99.9	89.5	110.5	
Cr	52	45	1	He	49.848	1.075	95530	1.30	50	99.7	89.5	110.5	
Mn	55	45	1	He	246.939	1.060	237745	1.26	250	98.8	89.5	110.5	
Fe	56	45	1	He	12388.292	1.345	18622016	1.00	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.471	0.273	171052	0.56	50	98.9	89.5	110.5	
Ni	60	45	1	He	49.867	1.357	47969	1.68	50	99.7	89.5	110.5	
Cu	63	45	1	He	48.962	1.114	136550	1.40	50	97.9	89.5	110.5	
Zn	66	45	1	He	45.797	1.346	16920	1.65	50	91.6	89.5	110.5	
As	75	115	1	He	48.071	0.934	10165	0.24	50	96.1	89.5	110.5	
Se	78	115	1	He	49.448	3.293	506	2.85	50	98.9	89.5	110.5	
Sr	88	103	1	He	50.783	2.143	48439	2.35	50	101.6	89.5	110.5	
Mo	95	103	1	He	50.993	3.195	58367	3.51	50	102.0	89.5	110.5	
Ag	107	103	1	He	50.122	0.186	205425	0.22	50	100.2	89.5	110.5	
Cd	111	115	1	He	49.300	1.314	23223	0.88	50	98.6	89.5	110.5	
Sn	118	115	1	He	49.993	2.432	45840	1.81	50	100.0	89.5	110.5	
Sb	123	115	1	He	50.074	1.342	50258	0.48	50	100.1	89.5	110.5	
Ba	137	115	1	He	51.849	3.100	18299	2.11	50	103.7	89.5	110.5	
W	182	159	1	He	50.193	0.382	255481	1.06	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.390	1.663	388786	1.93	50	100.8	89.5	110.5	
Pb	208	165	1	He	50.760	0.455	515440	0.36	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1303489	1.62	1276810	102.09	60	120	
Sc	45	1	He	134190	0.55	163460	82.09	60	120	
Sc	45	2	NoGas	8040726	0.85	8842934	90.93	60	120	
Rh	103	1	He	817623	0.32	1010526	80.91	60	120	
In	115	1	He	213914	0.99	257801	82.98	60	120	
Tb	159	1	He	983582	0.83	1155473	85.12	60	120	
Ho	165	1	He	989327	0.81	1147359	86.23	60	120	
Bi	209	1	He	646487	1.20	790610	81.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	123_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:32:56-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.082	1.7	94863	0.3	8	
Be	9	45	2	NoGas	0.299	2.1	1430	2.4	1	
B	11	6	2	NoGas	4.017	3.6	24917	1.4	20	
Na	23	45	1	He	55.522	6.9	28456	5.1	1000	
Mg	24	45	1	He	44.100	16.4	10192	15.5	1000	
Al	27	45	1	He	1.277	10.8	359	3.5	50	
K	39	45	1	He	50.495	6.5	13958	2.8	1000	
Ca	44	45	1	He	33.614	44.4	821	11.2	1000	
Ti	47	45	1	He	0.109	119.0	7	86.6	20	
V	51	45	1	He	0.073	24.6	261	10.2	2	
Cr	52	45	1	He	0.041	20.5	817	1.5	2	
Mn	55	45	1	He	0.247	19.3	1443	3.4	2	
Fe	56	45	1	He	31.517	15.4	50461	14.4	50	
Co	59	45	1	He	-0.008	-275.2	371	21.1	1	
Ni	60	45	1	He	0.058	109.7	251	24.1	2	
Cu	63	45	1	He	-0.940	-7.7	1767	10.9	2	
Zn	66	45	1	He	-3.785	-10.3	1493	8.5	20	
As	75	115	1	He	0.115	20.8	50	11.0	2	
Se	78	115	1	He	0.539	8.1	9	5.5	2	
Sr	88	103	1	He	0.092	62.0	182	31.2	10	
Mo	95	103	1	He	0.191	11.7	250	10.6	2	
Ag	107	103	1	He	0.084	13.6	372	13.2	0.2	
Cd	111	115	1	He	0.100	12.1	50	12.3	0.2	
Sn	118	115	1	He	-0.394	-57.5	993	21.4	10	
Sb	123	115	1	He	0.162	22.7	190	19.9	2	
Ba	137	115	1	He	0.121	19.4	50	17.6	5	
W	182	159	1	He	0.329	10.0	3097	5.1	10	
Tl	205	165	1	He	0.170	30.0	1350	29.4	0.5	
Pb	208	165	1	He	0.118	10.5	2259	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1338503	0.56	1276810	104.83	60	120	
Sc	45	1	He	133913	0.48	163460	81.92	60	120	
Sc	45	2	NoGas	8047261	0.47	8842934	91.00	60	120	
Rh	103	1	He	853995	0.09	1010526	84.51	60	120	
In	115	1	He	221596	0.55	257801	85.96	60	120	
Tb	159	1	He	986806	0.47	1155473	85.40	60	120	
Ho	165	1	He	997375	0.36	1147359	86.93	60	120	
Bi	209	1	He	674352	0.81	790610	85.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-2-a@2
Data File Name	124SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:37:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.879	113.879	1.51	1978844	0.01	10000	
Be	9	45	2	NoGas	2.838	2.838	1.08	14032	0.02	2000	
B	11	6	2	NoGas	29.325	29.325	1.40	112466	0.03	300	
Na	23	45	1	He	238.426	238.426	2.54	103347	0.23	500000	
Mg	24	45	1	He	12211.096	12211.096	4.04	2758228	0.44	500000	
Al	27	45	1	He	49081.329	49081.329	3.02	4660003	1.05	200000	
K	39	45	1	He	7528.396	7528.396	2.12	844277	0.89	500000	
Ca	44	45	1	He	13993.247	13993.247	3.09	90538	15.46	500000	
Ti	47	45	1	He	286.508	286.508	2.78	13275	2.16	2500	
V	51	45	1	He	107.523	107.523	2.32	171156	0.06	10000	
Cr	52	45	1	He	98.698	98.698	2.60	196101	0.05	10000	
Mn	55	45	1	He	1268.285	1268.285	2.21	1265621	0.10	10000	
Fe	56	45	1	He	109334.528	109334.528	2.69	171038651	0.06	200000	
Co	59	45	1	He	531.102	531.102	2.51	1907248	0.03	5000	
Ni	60	45	1	He	7535.044	7535.044	1.82	7513032	0.10	10000	
Cu	63	45	1	He	91.622	91.622	2.14	262028	0.03	10000	
Zn	66	45	1	He	428.831	428.831	3.30	141584	0.30	10000	
As	75	115	1	He	56.822	56.822	1.19	12116	0.47	10000	
Se	78	115	1	He	15.124	15.124	2.60	158	9.55	10000	
Sr	88	103	1	He	27.532	27.532	1.98	26496	0.10	10000	
Mo	95	103	1	He	26.927	26.927	1.75	31056	0.09	2000	
Ag	107	103	1	He	0.160	0.160	15.64	670	0.02	300	
Cd	111	115	1	He	1.639	1.639	5.54	779	0.21	4000	
Sn	118	115	1	He	20.709	20.709	3.92	19916	0.10	2000	
Sb	123	115	1	He	0.755	0.755	8.27	786	0.10	200	
Ba	137	115	1	He	134.412	134.412	2.33	47834	0.28	10000	
W	182	159	1	He	0.335	0.335	20.37	3175	0.01	2500	
Tl	205	165	1	He	2.640	2.640	1.42	20771	0.01	2000	
Pb	208	165	1	He	50.246	50.246	0.64	519514	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1330888	0.82	1276810	104.24	60	120	
Sc	45	1	He	139678	2.30	163460	85.45	60	120	
Sc	45	2	NoGas	8809092	0.84	8842934	99.62	60	120	
Rh	103	1	He	823565	1.26	1010526	81.50	60	120	
In	115	1	He	215777	3.22	257801	83.70	60	120	
Tb	159	1	He	1001484	1.24	1155473	86.67	60	120	
Ho	165	1	He	1007248	1.17	1147359	87.79	60	120	
Bi	209	1	He	673564	1.19	790610	85.20	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-3-a@2
Data File Name	125SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:41:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	94.291	94.291	1.54	1568540	0.01	10000	
Be	9	45	2	NoGas	2.912	2.912	2.69	13657	0.02	2000	
B	11	6	2	NoGas	30.893	30.893	2.26	116487	0.03	300	
Na	23	45	1	He	256.336	256.336	2.06	108144	0.24	500000	
Mg	24	45	1	He	11278.518	11278.518	1.60	2491615	0.45	500000	
Al	27	45	1	He	39785.764	39785.764	0.97	3693394	1.08	200000	
K	39	45	1	He	7127.939	7127.939	0.33	782156	0.91	500000	
Ca	44	45	1	He	5677.623	5677.623	2.03	36291	15.64	500000	
Ti	47	45	1	He	295.798	295.798	0.90	13397	2.21	2500	
V	51	45	1	He	92.624	92.624	2.71	144164	0.06	10000	
Cr	52	45	1	He	82.347	82.347	1.32	160109	0.05	10000	
Mn	55	45	1	He	763.739	763.739	1.43	745758	0.10	10000	
Fe	56	45	1	He	95316.957	95316.957	1.51	145793608	0.07	200000	
Co	59	45	1	He	638.154	638.154	1.79	2240570	0.03	5000	
Ni	60	45	1	He	7157.805	7157.805	0.52	6978993	0.10	10000	
Cu	63	45	1	He	113.822	113.822	0.95	317248	0.04	10000	
Zn	66	45	1	He	413.310	413.310	1.98	133555	0.31	10000	
As	75	115	1	He	40.022	40.022	0.36	8346	0.48	10000	
Se	78	115	1	He	20.282	20.282	3.55	206	9.83	10000	
Sr	88	103	1	He	30.063	30.063	2.16	28183	0.11	10000	
Mo	95	103	1	He	25.842	25.842	0.84	29044	0.09	2000	
Ag	107	103	1	He	0.159	0.159	10.15	652	0.02	300	
Cd	111	115	1	He	4.974	4.974	2.55	2311	0.22	4000	
Sn	118	115	1	He	20.937	20.937	0.55	19675	0.11	2000	
Sb	123	115	1	He	1.032	1.032	6.66	1042	0.10	200	
Ba	137	115	1	He	251.362	251.362	0.30	87437	0.29	10000	
W	182	159	1	He	0.405	0.405	8.69	3527	0.01	2500	
Tl	205	165	1	He	2.156	2.156	0.32	16786	0.01	2000	
Pb	208	165	1	He	51.493	51.493	0.05	526780	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1314929	0.19	1276810	102.99	60	120	
Sc	45	1	He	136578	1.34	163460	83.55	60	120	
Sc	45	2	NoGas	8357768	0.91	8842934	94.51	60	120	
Rh	103	1	He	802610	0.09	1010526	79.42	60	120	
In	115	1	He	210850	1.07	257801	81.79	60	120	
Tb	159	1	He	998646	1.05	1155473	86.43	60	120	
Ho	165	1	He	996699	0.32	1147359	86.87	60	120	
Bi	209	1	He	655312	0.77	790610	82.89	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-4-a@2
Data File Name	126SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:45:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	102.303	102.303	0.91	1710357	0.01	10000	
Be	9	45	2	NoGas	9.911	9.911	1.06	46689	0.02	2000	
B	11	6	2	NoGas	76.591	76.591	1.26	267904	0.03	300	
Na	23	45	1	He	3687.440	3687.440	3.56	1407228	0.26	500000	
Mg	24	45	1	He	73180.490	73180.490	1.98	15580519	0.47	500000	
Al	27	45	1	He	61069.580	61069.580	2.83	5464301	1.12	200000	
K	39	45	1	He	6483.067	6483.067	2.63	686419	0.94	500000	
Ca	44	45	1	He	375605.832	375605.832	2.67	2275049	16.51	500000	
Ti	47	45	1	He	738.298	738.298	3.48	32227	2.29	2500	
V	51	45	1	He	51.969	51.969	4.44	78033	0.07	10000	
Cr	52	45	1	He	133.656	133.656	2.80	250040	0.05	10000	
Mn	55	45	1	He	3046.775	3046.775	2.20	2864012	0.11	10000	
Fe	56	45	1	He	77883.486	77883.486	2.81	114832029	0.07	200000	
Co	59	45	1	He	38.080	38.080	3.59	129249	0.03	5000	
Ni	60	45	1	He	359.376	359.376	3.64	337908	0.11	10000	
Cu	63	45	1	He	141.572	141.572	2.44	379310	0.04	10000	
Zn	66	45	1	He	293.450	293.450	3.10	92168	0.32	10000	
As	75	115	1	He	111.772	111.772	1.65	22193	0.50	10000	
Se	78	115	1	He	18.388	18.388	3.81	179	10.29	10000	
Sr	88	103	1	He	557.892	557.892	1.78	486504	0.11	10000	
Mo	95	103	1	He	14.037	14.037	1.29	14724	0.10	2000	
Ag	107	103	1	He	0.658	0.658	2.05	2480	0.03	300	
Cd	111	115	1	He	41.681	41.681	1.88	18463	0.23	4000	
Sn	118	115	1	He	25.650	25.650	1.26	22716	0.11	2000	
Sb	123	115	1	He	23.085	23.085	1.23	21797	0.11	200	
Ba	137	115	1	He	599.250	599.250	0.85	198833	0.30	10000	
W	182	159	1	He	0.715	0.715	5.64	4923	0.01	2500	
Tl	205	165	1	He	1.026	1.026	2.98	7840	0.01	2000	
Pb	208	165	1	He	2061.759	2061.759	1.29	20619723	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1290745	0.78	1276810	101.09	60	120	
Sc	45	1	He	131637	0.36	163460	80.53	60	120	
Sc	45	2	NoGas	8433687	0.71	8842934	95.37	60	120	
Rh	103	1	He	748694	1.69	1010526	74.09	60	120	
In	115	1	He	201112	1.46	257801	78.01	60	120	
Tb	159	1	He	960941	0.58	1155473	83.16	60	120	
Ho	165	1	He	976252	0.48	1147359	85.09	60	120	
Bi	209	1	He	615199	0.94	790610	77.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-5-a@2
Data File Name	127SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:49:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.535	49.535	1.52	861304	0.01	10000	
Be	9	45	2	NoGas	2.279	2.279	3.95	10689	0.02	2000	
B	11	6	2	NoGas	35.580	35.580	1.73	133005	0.03	300	
Na	23	45	1	He	752.325	752.325	2.05	302712	0.25	500000	
Mg	24	45	1	He	36140.772	36140.772	2.52	7960725	0.45	500000	
Al	27	45	1	He	26275.945	26275.945	2.78	2432378	1.08	200000	
K	39	45	1	He	4340.679	4340.679	2.57	478355	0.91	500000	
Ca	44	45	1	He	162901.072	162901.072	2.69	1021109	15.95	500000	
Ti	47	45	1	He	406.221	406.221	3.73	18344	2.21	2500	
V	51	45	1	He	57.443	57.443	3.58	89214	0.06	10000	
Cr	52	45	1	He	37.146	37.146	4.78	72415	0.05	10000	
Mn	55	45	1	He	2435.071	2435.071	3.32	2368129	0.10	10000	
Fe	56	45	1	He	78754.686	78754.686	3.26	120117315	0.07	200000	
Co	59	45	1	He	32.469	32.469	3.04	114066	0.03	5000	
Ni	60	45	1	He	105.809	105.809	2.80	103064	0.10	10000	
Cu	63	45	1	He	82.044	82.044	3.63	229222	0.04	10000	
Zn	66	45	1	He	252.136	252.136	2.87	82307	0.31	10000	
As	75	115	1	He	267.811	267.811	0.84	55785	0.48	10000	
Se	78	115	1	He	14.447	14.447	11.63	148	9.76	10000	
Sr	88	103	1	He	221.161	221.161	0.43	207002	0.11	10000	
Mo	95	103	1	He	19.899	19.899	2.52	22393	0.09	2000	
Ag	107	103	1	He	0.127	0.127	1.19	521	0.02	300	
Cd	111	115	1	He	6.726	6.726	2.18	3129	0.21	4000	
Sn	118	115	1	He	19.307	19.307	4.80	18266	0.11	2000	
Sb	123	115	1	He	1.661	1.661	7.18	1666	0.10	200	
Ba	137	115	1	He	283.333	283.333	1.08	98685	0.29	10000	
W	182	159	1	He	0.305	0.305	14.32	2986	0.01	2500	
Tl	205	165	1	He	1.067	1.067	1.04	8371	0.01	2000	
Pb	208	165	1	He	51.587	51.587	0.57	530749	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1319685	1.10	1276810	103.36	60	120	
Sc	45	1	He	136225	1.87	163460	83.34	60	120	
Sc	45	2	NoGas	8344921	1.44	8842934	94.37	60	120	
Rh	103	1	He	803439	0.45	1010526	79.51	60	120	
In	115	1	He	211138	1.58	257801	81.90	60	120	
Tb	159	1	He	990135	1.77	1155473	85.69	60	120	
Ho	165	1	He	1002414	0.99	1147359	87.37	60	120	
Bi	209	1	He	642481	1.17	790610	81.26	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	128ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:53:45-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.185	6.4	97848	1.1	4	
Be	9	45	2	NoGas	0.072	7.9	419	6.7	2	
B	11	6	2	NoGas	3.329	3.5	22466	2.1	20	
Na	23	45	1	He	51896.655	4.0	19020003	0.9	75200	
Mg	24	45	1	He	51885.732	3.5	10658825	0.3	75200	
Al	27	45	1	He	54725.213	4.5	4723477	0.9	75200	
K	39	45	1	He	53411.301	3.4	5397710	0.3	75200	
Ca	44	45	1	He	52671.185	4.2	308272	0.6	75200	
Ti	47	45	1	He	1052.687	2.8	44345	0.8	1505	
V	51	45	1	He	-0.017	-780.1	116	162.3	4	
Cr	52	45	1	He	0.698	20.5	1952	9.6	4	
Mn	55	45	1	He	-0.168	-62.8	993	10.2	4	
Fe	56	45	1	He	51836.919	4.1	73736890	1.0	75200	
Co	59	45	1	He	-0.071	-10.6	147	17.2	2	
Ni	60	45	1	He	0.083	55.6	262	19.0	4	
Cu	63	45	1	He	-0.684	-9.8	2331	5.1	4	
Zn	66	45	1	He	-7.481	-0.8	328	2.9	20	
As	75	115	1	He	0.122	23.3	48	9.3	4	
Se	78	115	1	He	0.027	188.1	3	17.2	4	
Sr	88	103	1	He	0.305	6.3	358	5.7	20	
Mo	95	103	1	He	1078.712	3.4	1170472	0.1	1505	
Ag	107	103	1	He	0.009	60.0	43	42.8	1	
Cd	111	115	1	He	-0.026	-16.2	-11	-19.2	1	
Sn	118	115	1	He	-1.186	-7.3	244	31.8	20	
Sb	123	115	1	He	0.040	57.0	59	34.6	4	
Ba	137	115	1	He	0.184	22.6	68	17.3	2	
W	182	159	1	He	0.085	21.4	1789	1.6	20	
Tl	205	165	1	He	0.005	57.7	63	27.9	2	
Pb	208	165	1	He	0.223	22.3	3211	10.8	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1335262	0.37	1276810	104.58	60	120	
Sc	45	1	He	127115	3.51	163460	77.77	60	120	
Sc	45	2	NoGas	8165699	0.95	8842934	92.34	60	120	
Rh	103	1	He	775975	3.27	1010526	76.79	60	120	
In	115	1	He	206489	3.75	257801	80.10	60	120	
Tb	159	1	He	951516	3.35	1155473	82.35	60	120	
Ho	165	1	He	965147	4.13	1147359	84.12	60	120	
Bi	209	1	He	630029	2.66	790610	79.69	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	129ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T21:57:56-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	112.873	1.319	1851822	0.30	100	112.9	49.5	150.5	
Be	9	45	2	NoGas	104.556	0.811	484658	0.61	100	104.6	49.5	150.5	
B	11	6	2	NoGas	92.855	0.552	330052	0.71	100	92.9	49.5	150.5	
Na	23	45	1	He	49746.665	2.205	19231691	0.55	50000	99.5	49.5	150.5	
Mg	24	45	1	He	49394.523	1.904	10702731	0.83	50000	98.8	49.5	150.5	
Al	27	45	1	He	52347.478	2.179	4766554	0.55	50000	104.7	49.5	150.5	
K	39	45	1	He	51303.921	2.244	5468574	0.61	50000	102.6	49.5	150.5	
Ca	44	45	1	He	50599.851	1.514	312479	1.73	50000	101.2	49.5	150.5	
Ti	47	45	1	He	1108.755	2.165	49254	0.68	1100	100.8	49.5	150.5	
V	51	45	1	He	102.243	2.145	156115	1.62	100	102.2	49.5	150.5	
Cr	52	45	1	He	101.075	2.316	192608	0.90	100	101.1	49.5	150.5	
Mn	55	45	1	He	102.473	2.560	99192	1.15	100	102.5	49.5	150.5	
Fe	56	45	1	He	49421.480	1.864	74161559	1.21	50000	98.8	49.5	150.5	
Co	59	45	1	He	101.516	1.948	349995	0.91	100	101.5	49.5	150.5	
Ni	60	45	1	He	101.129	2.650	96901	0.08	100	101.1	49.5	150.5	
Cu	63	45	1	He	100.258	2.185	274621	0.78	100	100.3	49.5	150.5	
Zn	66	45	1	He	102.170	3.141	34392	0.21	100	102.2	49.5	150.5	
As	75	115	1	He	101.164	1.931	21252	1.26	100	101.2	49.5	150.5	
Se	78	115	1	He	97.673	3.038	991	3.71	100	97.7	49.5	150.5	
Sr	88	103	1	He	103.125	0.853	96246	0.24	100	103.1	49.5	150.5	
Mo	95	103	1	He	1155.721	0.604	1295166	1.66	1100	105.1	49.5	150.5	
Ag	107	103	1	He	101.399	0.532	407030	1.31	100	101.4	49.5	150.5	
Cd	111	115	1	He	98.514	2.548	46159	1.98	100	98.5	49.5	150.5	
Sn	118	115	1	He	113.353	2.686	101742	1.95	100	113.4	49.5	150.5	
Sb	123	115	1	He	103.189	1.943	103006	1.52	100	103.2	49.5	150.5	
Ba	137	115	1	He	105.285	2.035	36961	1.32	100	105.3	49.5	150.5	
W	182	159	1	He	101.529	1.142	514350	1.60	100	101.5	49.5	150.5	
Tl	205	165	1	He	100.073	1.051	775386	1.96	100	100.1	49.5	150.5	
Pb	208	165	1	He	101.931	0.081	1038390	0.95	100	101.9	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320660	0.54	1276810	103.43	60	120	
Sc	45	1	He	134013	2.75	163460	81.99	60	120	
Sc	45	2	NoGas	8314134	1.30	8842934	94.02	60	120	
Rh	103	1	He	800805	1.08	1010526	79.25	60	120	
In	115	1	He	212794	0.71	257801	82.54	60	120	
Tb	159	1	He	981703	0.52	1155473	84.96	60	120	
Ho	165	1	He	993495	0.92	1147359	86.59	60	120	
Bi	209	1	He	641872	0.30	790610	81.19	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	130_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:02:06-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.762	0.326	909464	0.55	50	109.5	89.5	110.5	
Be	9	45	2	NoGas	51.565	1.031	231266	1.48	50	103.1	89.5	110.5	
B	11	6	2	NoGas	43.574	2.330	164132	2.15	50	87.1	89.5	110.5	CCV Failed
Na	23	45	1	He	24759.643	0.987	9476876	1.19	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24313.330	1.846	5213397	0.62	25000	97.3	89.5	110.5	
Al	27	45	1	He	260.767	3.128	23735	2.33	250	104.3	89.5	110.5	
K	39	45	1	He	25771.801	1.559	2722775	0.25	25000	103.1	89.5	110.5	
Ca	44	45	1	He	24900.673	1.255	152464	0.36	25000	99.6	89.5	110.5	
Ti	47	45	1	He	51.611	3.619	2270	2.20	50	103.2	89.5	110.5	
V	51	45	1	He	49.500	5.337	74838	3.77	50	99.0	89.5	110.5	
Cr	52	45	1	He	49.500	2.988	93710	1.74	50	99.0	89.5	110.5	
Mn	55	45	1	He	247.025	1.422	234954	0.21	250	98.8	89.5	110.5	
Fe	56	45	1	He	12385.148	1.516	18393042	0.43	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.696	1.703	169749	0.17	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.672	0.868	47207	0.72	50	99.3	89.5	110.5	
Cu	63	45	1	He	49.091	1.742	135245	0.97	50	98.2	89.5	110.5	
Zn	66	45	1	He	46.021	2.069	16785	1.36	50	92.0	89.5	110.5	
As	75	115	1	He	48.298	1.268	10151	0.92	50	96.6	89.5	110.5	
Se	78	115	1	He	47.221	3.307	480	3.08	50	94.4	89.5	110.5	
Sr	88	103	1	He	50.152	2.088	47964	2.15	50	100.3	89.5	110.5	
Mo	95	103	1	He	53.286	1.517	61147	1.31	50	106.6	89.5	110.5	
Ag	107	103	1	He	49.643	0.634	204004	0.84	50	99.3	89.5	110.5	
Cd	111	115	1	He	48.986	0.621	22937	1.22	50	98.0	89.5	110.5	
Sn	118	115	1	He	49.247	1.635	44905	1.14	50	98.5	89.5	110.5	
Sb	123	115	1	He	51.012	1.175	50895	1.74	50	102.0	89.5	110.5	
Ba	137	115	1	He	52.107	1.384	18281	0.99	50	104.2	89.5	110.5	
W	182	159	1	He	50.192	1.106	252714	1.98	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.183	0.774	385329	1.21	50	100.4	89.5	110.5	
Pb	208	165	1	He	50.389	0.735	509234	1.19	50	100.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349773	1.24	1276810	105.71	60	120	
Sc	45	1	He	132589	1.52	163460	81.11	60	120	
Sc	45	2	NoGas	8042018	0.81	8842934	90.94	60	120	
Rh	103	1	He	819795	0.46	1010526	81.13	60	120	
In	115	1	He	212617	0.64	257801	82.47	60	120	
Tb	159	1	He	972909	0.90	1155473	84.20	60	120	
Ho	165	1	He	984561	0.59	1147359	85.81	60	120	
Bi	209	1	He	639827	0.44	790610	80.93	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	131_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:06:15-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.089	5.0	95298	0.2	8	
Be	9	45	2	NoGas	0.248	21.2	1204	19.2	1	
B	11	6	2	NoGas	3.167	3.3	22195	2.8	20	
Na	23	45	1	He	93.948	3.3	43070	3.1	1000	
Mg	24	45	1	He	73.630	0.8	16497	0.9	1000	
Al	27	45	1	He	4.098	11.0	612	6.5	50	
K	39	45	1	He	88.633	0.4	17917	0.5	1000	
Ca	44	45	1	He	69.896	12.3	1039	4.9	1000	
Ti	47	45	1	He	0.286	40.3	14	35.3	20	
V	51	45	1	He	0.178	22.0	418	14.3	2	
Cr	52	45	1	He	0.100	38.3	924	8.1	2	
Mn	55	45	1	He	0.420	11.3	1600	2.9	2	
Fe	56	45	1	He	46.180	1.7	72060	1.6	50	
Co	59	45	1	He	0.057	36.4	593	12.2	1	
Ni	60	45	1	He	0.125	24.6	313	9.6	2	
Cu	63	45	1	He	-0.947	-3.3	1741	5.1	2	
Zn	66	45	1	He	-3.416	-1.7	1599	1.0	20	
As	75	115	1	He	0.158	2.6	59	3.1	2	
Se	78	115	1	He	0.278	59.5	6	28.5	2	
Sr	88	103	1	He	0.151	29.5	237	18.3	10	
Mo	95	103	1	He	0.681	9.5	823	9.3	2	
Ag	107	103	1	He	0.149	8.0	640	7.7	0.2	
Cd	111	115	1	He	0.163	20.7	80	21.2	0.2	
Sn	118	115	1	He	-0.211	-53.0	1148	7.5	10	
Sb	123	115	1	He	0.306	6.6	337	7.9	2	
Ba	137	115	1	He	0.227	16.4	88	17.1	5	
W	182	159	1	He	0.452	5.7	3689	2.9	10	
Tl	205	165	1	He	0.239	2.6	1888	2.2	0.5	
Pb	208	165	1	He	0.177	4.6	2858	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1353196	2.68	1276810	105.98	60	120	
Sc	45	1	He	133187	0.27	163460	81.48	60	120	
Sc	45	2	NoGas	8075431	0.85	8842934	91.32	60	120	
Rh	103	1	He	841604	0.10	1010526	83.28	60	120	
In	115	1	He	219170	1.76	257801	85.02	60	120	
Tb	159	1	He	978671	0.72	1155473	84.70	60	120	
Ho	165	1	He	996239	0.37	1147359	86.83	60	120	
Bi	209	1	He	673877	1.64	790610	85.23	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228602/1-a@2
Data File Name	132_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:10:27-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.941	5.4	93321	0.8	8	
Be	9	45	2	NoGas	0.058	20.1	348	15.1	1	
B	11	6	2	NoGas	2.954	7.8	21558	3.6	20	
Na	23	45	1	He	34.782	5.5	20301	3.0	1000	
Mg	24	45	1	He	55.487	3.7	12568	3.0	1000	
Al	27	45	1	He	13.040	7.7	1419	5.2	50	
K	39	45	1	He	26.120	3.0	11285	1.3	1000	
Ca	44	45	1	He	112.515	13.5	1297	6.3	1000	
Ti	47	45	1	He	0.111	119.4	7	86.6	20	
V	51	45	1	He	-0.027	-444.8	105	172.5	2	
Cr	52	45	1	He	0.333	1.2	1361	1.0	2	
Mn	55	45	1	He	0.065	41.8	1260	2.9	2	
Fe	56	45	1	He	10.827	4.6	19288	2.5	50	
Co	59	45	1	He	-0.046	-23.4	239	14.0	1	
Ni	60	45	1	He	0.058	31.1	249	6.2	2	
Cu	63	45	1	He	-0.942	-3.8	1749	4.1	2	
Zn	66	45	1	He	-6.014	-2.1	796	4.5	20	
As	75	115	1	He	0.034	38.2	32	9.2	2	
Se	78	115	1	He	0.027	343.9	3	28.6	2	
Sr	88	103	1	He	0.392	12.9	470	11.3	10	
Mo	95	103	1	He	0.339	8.3	417	7.7	2	
Ag	107	103	1	He	0.007	35.7	40	25.0	0.2	
Cd	111	115	1	He	0.014	22.7	8	20.0	0.2	
Sn	118	115	1	He	18.037	1.7	17599	2.4	10	Blank High
Sb	123	115	1	He	0.065	47.3	88	35.3	2	
Ba	137	115	1	He	0.708	18.1	259	18.4	5	
W	182	159	1	He	0.209	15.3	2460	6.2	10	
Tl	205	165	1	He	0.059	14.1	479	12.6	0.5	
Pb	208	165	1	He	0.457	10.5	5644	9.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1360497	1.64	1276810	106.55	60	120	
Sc	45	1	He	132994	1.53	163460	81.36	60	120	
Sc	45	2	NoGas	8099116	0.06	8842934	91.59	60	120	
Rh	103	1	He	834914	0.86	1010526	82.62	60	120	
In	115	1	He	216639	1.80	257801	84.03	60	120	
Tb	159	1	He	974716	0.71	1155473	84.36	60	120	
Ho	165	1	He	983658	0.80	1147359	85.73	60	120	
Bi	209	1	He	678580	0.77	790610	85.83	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228602/2-a@2
Data File Name	133LCSS.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:14:42-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	52.960	52.960	1.018	870751	0.47	50	105.9	79.5	120.5	
Be	9	2	NoGas	518.748	518.748	1.561	2295693	1.29	500	103.7	78.6	110.5	
B	11	2	NoGas	43.658	43.658	1.740	164209	1.45	50	87.3	79.5	120.5	
Na	23	1	He	4839.259	4839.259	1.734	1789391	1.52	5000	96.8	79.5	120.5	
Mg	24	1	He	4613.528	4613.528	1.128	953400	0.01	5000	92.3	79.5	120.5	
Al	27	1	He	4627.390	4627.390	1.369	401849	0.37	5000	92.5	79.5	120.5	
K	39	1	He	4746.318	4746.318	1.418	489682	0.63	5000	94.9	79.5	120.5	
Ca	44	1	He	4976.642	4976.642	2.156	29817	1.40	5000	99.5	79.5	120.5	
Ti	47	1	He	48.547	48.547	3.151	2058	4.10	50	97.1	79.5	120.5	
V	51	1	He	464.950	464.950	1.763	676144	0.81	500	93.0	71.5	110.5	
Cr	52	1	He	473.059	473.059	1.948	856664	1.03	500	94.6	69.5	110.5	
Mn	55	1	He	474.095	474.095	1.705	433269	0.69	500	94.8	79.5	120.5	
Fe	56	1	He	4798.592	4798.592	1.656	6865870	0.61	5000	96.0	79.5	120.5	
Co	59	1	He	518.344	518.344	2.453	1701709	1.49	500	103.7	73.9	110.5	
Ni	60	1	He	489.060	489.060	2.159	445981	1.05	500	97.8	74.9	110.5	
Cu	63	1	He	484.638	484.638	1.766	1249604	0.77	500	96.9	72.6	110.5	
Zn	66	1	He	515.057	515.057	1.744	155004	1.13	500	103.0	71.5	113.4	
As	75	1	He	445.758	445.758	0.218	90973	0.41	500	89.2	73.4	110.5	
Se	78	1	He	428.712	428.712	1.303	4218	0.91	500	85.7	64.6	110.5	
Sr	88	1	He	454.444	454.444	0.694	424983	0.57	500	90.9	79.5	120.5	
Mo	95	1	He	48.740	48.740	0.729	54784	1.15	50	97.5	29.5	140.5	
Ag	107	1	He	48.317	48.317	0.471	194468	0.32	50	96.6	59.5	114.5	
Cd	111	1	He	462.214	462.214	0.806	210579	0.98	500	92.4	73.5	110.5	
Sn	118	1	He	505.914	505.914	1.263	437145	0.96	500	101.2	79.5	120.5	
Sb	123	1	He	47.896	47.896	0.332	46499	0.72	50	95.8	67.5	113.4	
Ba	137	1	He	489.640	489.640	1.099	167120	1.18	500	97.9	69.5	110.5	
W	182	1	He	47.324	47.324	0.858	235384	0.85	50	94.6	74.6	125.4	
Tl	205	1	He	121.472	121.472	0.853	911641	1.04	125	97.2	70.6	110.5	
Pb	208	1	He	512.397	512.397	0.260	5052177	0.32	500	102.5	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1348127	2.07	1276810	105.59	60	120	
Sc	45	1	He	127705	1.13	163460	78.13	60	120	
Sc	45	2	NoGas	7938496	0.45	8842934	89.77	60	120	
Rh	103	1	He	802928	0.44	1010526	79.46	60	120	
In	115	1	He	206888	0.40	257801	80.25	60	120	
Tb	159	1	He	960875	1.12	1155473	83.16	60	120	
Ho	165	1	He	962362	0.34	1147359	83.88	60	120	
Bi	209	1	He	650365	1.13	790610	82.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-a@200
Data File Name	134SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:18:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.724	1.724	2.78	106383	0.00	10000	
Be	9	45	2	NoGas	0.571	0.571	6.45	2693	0.02	2000	
B	11	6	2	NoGas	4.475	4.475	6.01	27540	0.02	300	
Na	23	45	1	He	16.625	16.625	5.18	13294	0.13	500000	
Mg	24	45	1	He	364.501	364.501	2.33	78746	0.46	500000	
Al	27	45	1	He	502.804	502.804	1.47	45525	1.10	200000	
K	39	45	1	He	100.860	100.860	5.43	19115	0.53	500000	
Ca	44	45	1	He	1082.609	1082.609	1.72	7206	15.02	500000	
Ti	47	45	1	He	5.805	5.805	23.29	257	2.26	2500	
V	51	45	1	He	0.512	0.512	118.53	927	0.06	10000	
Cr	52	45	1	He	14.424	14.424	2.44	27812	0.05	10000	
Mn	55	45	1	He	48.413	48.413	2.90	46981	0.10	10000	
Fe	56	45	1	He	1346.209	1346.209	1.69	2001104	0.07	200000	
Co	59	45	1	He	1626.952	1626.952	1.88	5542061	0.03	5000	
Ni	60	45	1	He	32.056	32.056	2.49	30517	0.11	10000	
Cu	63	45	1	He	16.030	16.030	2.34	47006	0.03	10000	
Zn	66	45	1	He	15.276	15.276	4.69	7332	0.21	10000	
As	75	115	1	He	7.781	7.781	3.97	1697	0.46	10000	
Se	78	115	1	He	0.570	0.570	92.82	9	6.25	10000	
Sr	88	103	1	He	2.896	2.896	5.57	2928	0.10	10000	
Mo	95	103	1	He	0.314	0.314	18.97	391	0.08	2000	
Ag	107	103	1	He	0.179	0.179	10.84	767	0.02	300	
Cd	111	115	1	He	1.022	1.022	5.26	492	0.21	4000	
Sn	118	115	1	He	0.415	0.415	17.68	1711	0.02	2000	
Sb	123	115	1	He	4.480	4.480	3.70	4603	0.10	200	
Ba	137	115	1	He	13.560	13.560	0.52	4883	0.28	10000	
W	182	159	1	He	0.773	0.773	3.38	5342	0.01	2500	
Tl	205	165	1	He	0.206	0.206	8.00	1631	0.01	2000	
Pb	208	165	1	He	983.447	983.447	0.03	10056103	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1390399	0.93	1276810	108.90	60	120	
Sc	45	1	He	132522	1.21	163460	81.07	60	120	
Sc	45	2	NoGas	8183232	0.34	8842934	92.54	60	120	
Rh	103	1	He	841947	0.47	1010526	83.32	60	120	
In	115	1	He	218046	1.05	257801	84.58	60	120	
Tb	159	1	He	984821	0.48	1155473	85.23	60	120	
Ho	165	1	He	998127	0.46	1147359	86.99	60	120	
Bi	209	1	He	693804	0.32	790610	87.76	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-b-21-a@1000
Data File Name	135SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:23:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.973	0.973	7.07	93572	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	29.43	726	0.02	2000	
B	11	6	2	NoGas	4.069	4.069	2.32	25678	0.02	300	
Na	23	45	1	He	6.822	6.822	8.96	9540	0.07	500000	
Mg	24	45	1	He	71.106	71.106	1.85	15867	0.45	500000	
Al	27	45	1	He	97.160	97.160	4.44	8988	1.08	200000	
K	39	45	1	He	25.525	25.525	26.97	11174	0.23	500000	
Ca	44	45	1	He	164.741	164.741	5.76	1611	10.23	500000	
Ti	47	45	1	He	1.252	1.252	43.34	57	2.21	2500	
V	51	45	1	He	0.068	0.068	180.12	252	0.03	10000	
Cr	52	45	1	He	2.810	2.810	4.15	6004	0.05	10000	
Mn	55	45	1	He	8.702	8.702	4.44	9420	0.09	10000	
Fe	56	45	1	He	270.071	270.071	2.20	403827	0.07	200000	
Co	59	45	1	He	301.562	301.562	1.70	1027251	0.03	5000	
Ni	60	45	1	He	6.497	6.497	4.38	6336	0.10	10000	
Cu	63	45	1	He	2.233	2.233	4.53	10206	0.02	10000	
Zn	66	45	1	He	-3.226	-3.226	-19.12	1648	-0.20	10000	
As	75	115	1	He	1.553	1.553	1.64	363	0.43	10000	
Se	78	115	1	He	0.164	0.164	101.89	5	3.29	10000	
Sr	88	103	1	He	0.489	0.489	11.99	570	0.09	10000	
Mo	95	103	1	He	0.097	0.097	17.87	136	0.07	2000	
Ag	107	103	1	He	0.039	0.039	16.99	176	0.02	300	
Cd	111	115	1	He	0.209	0.209	17.18	103	0.20	4000	
Sn	118	115	1	He	0.435	0.435	24.37	1752	0.02	2000	
Sb	123	115	1	He	0.958	0.958	3.43	1014	0.09	200	
Ba	137	115	1	He	2.537	2.537	8.95	930	0.27	10000	
W	182	159	1	He	0.150	0.150	9.76	2189	0.01	2500	
Tl	205	165	1	He	0.038	0.038	10.14	323	0.01	2000	
Pb	208	165	1	He	178.817	178.817	0.76	1825136	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1369334	0.62	1276810	107.25	60	120	
Sc	45	1	He	132482	1.30	163460	81.05	60	120	
Sc	45	2	NoGas	8078870	0.74	8842934	91.36	60	120	
Rh	103	1	He	844702	0.12	1010526	83.59	60	120	
In	115	1	He	220875	0.42	257801	85.68	60	120	
Tb	159	1	He	986317	1.27	1155473	85.36	60	120	
Ho	165	1	He	995852	0.52	1147359	86.80	60	120	
Bi	209	1	He	688316	0.21	790610	87.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-b ms@200
Data File Name	136SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:27:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.297	2.297	4.43	113803	0.00	10000	
Be	9	45	2	NoGas	5.054	5.054	1.59	22855	0.02	2000	
B	11	6	2	NoGas	4.894	4.894	3.63	28352	0.02	300	
Na	23	45	1	He	59.960	59.960	6.06	29788	0.20	500000	
Mg	24	45	1	He	442.975	442.975	1.80	95327	0.46	500000	
Al	27	45	1	He	659.590	659.590	2.86	59491	1.11	200000	
K	39	45	1	He	182.518	182.518	2.43	27640	0.66	500000	
Ca	44	45	1	He	1219.854	1219.854	3.98	8022	15.21	500000	
Ti	47	45	1	He	7.164	7.164	10.79	316	2.27	2500	
V	51	45	1	He	5.995	5.995	8.66	9165	0.07	10000	
Cr	52	45	1	He	14.775	14.775	4.02	28398	0.05	10000	
Mn	55	45	1	He	64.312	64.312	2.04	61867	0.10	10000	
Fe	56	45	1	He	1295.033	1295.033	2.77	1920174	0.07	200000	
Co	59	45	1	He	90.878	90.878	2.55	309149	0.03	5000	
Ni	60	45	1	He	19.134	19.134	4.62	18243	0.10	10000	
Cu	63	45	1	He	19.855	19.855	3.10	57061	0.03	10000	
Zn	66	45	1	He	16.845	16.845	4.08	7795	0.22	10000	
As	75	115	1	He	10.066	10.066	1.42	2196	0.46	10000	
Se	78	115	1	He	4.816	4.816	19.53	53	9.02	10000	
Sr	88	103	1	He	9.303	9.303	3.87	9219	0.10	10000	
Mo	95	103	1	He	0.816	0.816	9.50	983	0.08	2000	
Ag	107	103	1	He	0.592	0.592	0.59	2512	0.02	300	
Cd	111	115	1	He	5.219	5.219	2.33	2515	0.21	4000	
Sn	118	115	1	He	3.940	3.940	11.64	4927	0.08	2000	
Sb	123	115	1	He	3.562	3.562	3.94	3676	0.10	200	
Ba	137	115	1	He	38.000	38.000	2.15	13719	0.28	10000	
W	182	159	1	He	0.592	0.592	13.58	4412	0.01	2500	
Tl	205	165	1	He	1.378	1.378	1.22	10655	0.01	2000	
Pb	208	165	1	He	2310.773	2310.773	0.50	23409553	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1356532	0.70	1276810	106.24	60	120	
Sc	45	1	He	132200	1.52	163460	80.88	60	120	
Sc	45	2	NoGas	8082446	1.32	8842934	91.40	60	120	
Rh	103	1	He	842930	0.68	1010526	83.41	60	120	
In	115	1	He	218762	1.67	257801	84.86	60	120	
Tb	159	1	He	982418	0.84	1155473	85.02	60	120	
Ho	165	1	He	988934	0.09	1147359	86.19	60	120	
Bi	209	1	He	683893	1.32	790610	86.50	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-c msd@200
Data File Name	137SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:31:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.490	2.490	1.91	116273	0.00	10000	
Be	9	45	2	NoGas	5.302	5.302	1.62	23879	0.02	2000	
B	11	6	2	NoGas	4.071	4.071	12.13	25852	0.02	300	
Na	23	45	1	He	59.687	59.687	1.72	29636	0.20	500000	
Mg	24	45	1	He	439.918	439.918	2.09	94538	0.47	500000	
Al	27	45	1	He	618.708	618.708	2.07	55743	1.11	200000	
K	39	45	1	He	170.838	170.838	2.49	26383	0.65	500000	
Ca	44	45	1	He	1180.923	1180.923	3.01	7775	15.19	500000	
Ti	47	45	1	He	6.209	6.209	12.97	273	2.27	2500	
V	51	45	1	He	5.431	5.431	9.33	8309	0.07	10000	
Cr	52	45	1	He	16.123	16.123	1.13	30886	0.05	10000	
Mn	55	45	1	He	65.333	65.333	2.75	62739	0.10	10000	
Fe	56	45	1	He	1453.875	1453.875	1.97	2152428	0.07	200000	
Co	59	45	1	He	88.563	88.563	2.50	300867	0.03	5000	
Ni	60	45	1	He	18.313	18.313	1.97	17449	0.10	10000	
Cu	63	45	1	He	15.788	15.788	2.50	46185	0.03	10000	
Zn	66	45	1	He	12.318	12.318	2.94	6400	0.19	10000	
As	75	115	1	He	9.701	9.701	1.76	2080	0.47	10000	
Se	78	115	1	He	5.259	5.259	9.81	57	9.24	10000	
Sr	88	103	1	He	8.919	8.919	1.06	8683	0.10	10000	
Mo	95	103	1	He	0.761	0.761	6.20	902	0.08	2000	
Ag	107	103	1	He	0.587	0.587	5.19	2448	0.02	300	
Cd	111	115	1	He	5.336	5.336	1.11	2526	0.21	4000	
Sn	118	115	1	He	3.959	3.959	5.91	4856	0.08	2000	
Sb	123	115	1	He	2.866	2.866	6.15	2910	0.10	200	
Ba	137	115	1	He	39.554	39.554	0.62	14025	0.28	10000	
W	182	159	1	He	0.590	0.590	14.90	4360	0.01	2500	
Tl	205	165	1	He	1.329	1.329	2.15	10241	0.01	2000	
Pb	208	165	1	He	1227.830	1227.830	0.60	12390632	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1378235	0.13	1276810	107.94	60	120	
Sc	45	1	He	132008	1.24	163460	80.76	60	120	
Sc	45	2	NoGas	8049485	1.01	8842934	91.03	60	120	
Rh	103	1	He	827637	0.60	1010526	81.90	60	120	
In	115	1	He	214854	0.75	257801	83.34	60	120	
Tb	159	1	He	972070	0.65	1155473	84.13	60	120	
Ho	165	1	He	985085	0.21	1147359	85.86	60	120	
Bi	209	1	He	685770	0.36	790610	86.74	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-b-21-a@200
Data File Name	138SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:35:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.968	119.968	1.04	1896602	0.01	10000	
Be	9	45	2	NoGas	1135.856	1135.856	0.99	5085044	0.02	2000	
B	11	6	2	NoGas	91.365	91.365	2.04	324957	0.03	300	
Na	23	45	1	He	10275.853	10275.853	3.78	3914909	0.26	500000	
Mg	24	45	1	He	10599.523	10599.523	4.99	2259878	0.47	500000	
Al	27	45	1	He	10375.524	10375.524	4.67	929728	1.12	200000	
K	39	45	1	He	10210.958	10210.958	3.99	1077828	0.95	500000	
Ca	44	45	1	He	11256.087	11256.087	5.20	68841	16.35	500000	
Ti	47	45	1	He	106.153	106.153	7.52	4640	2.29	2500	
V	51	45	1	He	1114.884	1114.884	6.60	1672496	0.07	10000	
Cr	52	45	1	He	1089.412	1089.412	6.22	2034630	0.05	10000	
Mn	55	45	1	He	1056.298	1056.298	4.39	995046	0.11	10000	
Fe	56	45	1	He	11410.622	11410.622	4.53	16848706	0.07	200000	
Co	59	45	1	He	2602.342	2602.342	4.92	8816823	0.03	5000	
Ni	60	45	1	He	1048.374	1048.374	4.40	986704	0.11	10000	
Cu	63	45	1	He	1122.968	1122.968	4.11	2983697	0.04	10000	
Zn	66	45	1	He	1129.852	1129.852	3.77	347914	0.32	10000	
As	75	115	1	He	982.606	982.606	2.10	205358	0.48	10000	
Se	78	115	1	He	950.469	950.469	2.73	9575	9.93	10000	
Sr	88	103	1	He	981.029	981.029	1.53	939790	0.10	10000	
Mo	95	103	1	He	103.552	103.552	2.13	119210	0.09	2000	
Ag	107	103	1	He	101.324	101.324	1.23	417792	0.02	300	
Cd	111	115	1	He	1004.835	1004.835	2.01	468866	0.21	4000	
Sn	118	115	1	He	1026.372	1026.372	2.77	906950	0.11	2000	
Sb	123	115	1	He	106.963	106.963	1.86	106329	0.10	200	
Ba	137	115	1	He	1062.503	1062.503	1.79	371418	0.29	10000	
W	182	159	1	He	102.766	102.766	3.45	518731	0.02	2500	
Tl	205	165	1	He	290.545	290.545	1.32	2238749	0.01	2000	
Pb	208	165	1	He	2084.923	2084.923	2.31	21101650	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1320835	0.38	1276810	103.45	60	120	
Sc	45	1	He	131955	3.75	163460	80.73	60	120	
Sc	45	2	NoGas	8031043	0.88	8842934	90.82	60	120	
Rh	103	1	He	822661	1.07	1010526	81.41	60	120	
In	115	1	He	211934	1.51	257801	82.21	60	120	
Tb	159	1	He	978501	1.42	1155473	84.68	60	120	
Ho	165	1	He	988207	1.43	1147359	86.13	60	120	
Bi	209	1	He	675037	2.13	790610	85.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-a@2
Data File Name	139SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:39:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.551	121.551	1.75	2089985	0.01	10000	
Be	9	45	2	NoGas	6.248	6.248	2.84	30537	0.02	2000	
B	11	6	2	NoGas	41.457	41.457	2.24	153856	0.03	300	
Na	23	45	1	He	15076.389	15076.389	2.08	6006572	0.25	500000	
Mg	24	45	1	He	14007.584	14007.584	2.87	3125585	0.45	500000	
Al	27	45	1	He	50906.383	50906.383	3.52	4772967	1.07	200000	
K	39	45	1	He	10308.824	10308.824	2.16	1138547	0.91	500000	
Ca	44	45	1	He	57927.952	57927.952	2.30	368201	15.73	500000	
Ti	47	45	1	He	371.799	371.799	1.58	17008	2.19	2500	
V	51	45	1	He	91.689	91.689	7.31	144170	0.06	10000	
Cr	52	45	1	He	1231.418	1231.418	2.52	2407786	0.05	10000	
Mn	55	45	1	He	1605.222	1605.222	3.39	1581759	0.10	10000	
Fe	56	45	1	He	110396.269	110396.269	2.81	170560873	0.06	200000	
Co	59	45	1	He	117.148	117.148	2.80	415801	0.03	5000	
Ni	60	45	1	He	5853.355	5853.355	2.82	5764181	0.10	10000	
Cu	63	45	1	He	3433.817	3433.817	2.49	9537572	0.04	10000	
Zn	66	45	1	He	575.824	575.824	2.56	186871	0.31	10000	
As	75	115	1	He	110.686	110.686	1.03	22961	0.48	10000	
Se	78	115	1	He	15.697	15.697	8.10	160	9.83	10000	
Sr	88	103	1	He	200.805	200.805	1.85	184326	0.11	10000	
Mo	95	103	1	He	19.308	19.308	1.43	21309	0.09	2000	
Ag	107	103	1	He	2.387	2.387	0.42	9436	0.03	300	
Cd	111	115	1	He	5.457	5.457	1.70	2525	0.22	4000	
Sn	118	115	1	He	95.054	95.054	1.89	84475	0.11	2000	
Sb	123	115	1	He	12.332	12.332	1.90	12172	0.10	200	
Ba	137	115	1	He	365.692	365.692	0.37	126760	0.29	10000	
W	182	159	1	He	0.984	0.984	6.84	6357	0.02	2500	
Tl	205	165	1	He	3.139	3.139	1.69	23872	0.01	2000	
Pb	208	165	1	He	2636.189	2636.189	1.68	26306167	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1325407	0.87	1276810	103.81	60	120	
Sc	45	1	He	137938	0.09	163460	84.39	60	120	
Sc	45	2	NoGas	8740165	0.46	8842934	98.84	60	120	
Rh	103	1	He	787871	0.64	1010526	77.97	60	120	
In	115	1	He	210106	1.79	257801	81.50	60	120	
Tb	159	1	He	976531	0.97	1155473	84.51	60	120	
Ho	165	1	He	974166	0.84	1147359	84.91	60	120	
Bi	209	1	He	646971	0.94	790610	81.83	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-b ms@2
Data File Name	140SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:43:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	158.990	158.990	1.20	2675800	0.01	10000	
Be	9	45	2	NoGas	432.374	432.374	2.34	2082186	0.02	2000	
B	11	6	2	NoGas	88.201	88.201	1.71	306558	0.03	300	
Na	23	45	1	He	18794.319	18794.319	1.39	7664716	0.25	500000	
Mg	24	45	1	He	17327.992	17327.992	3.08	3958006	0.44	500000	
Al	27	45	1	He	56465.076	56465.076	2.43	5419985	1.04	200000	
K	39	45	1	He	15160.488	15160.488	2.44	1709910	0.89	500000	
Ca	44	45	1	He	98623.476	98623.476	1.85	641349	15.38	500000	
Ti	47	45	1	He	448.987	448.987	2.93	21028	2.14	2500	
V	51	45	1	He	491.967	491.967	2.65	791206	0.06	10000	
Cr	52	45	1	He	1536.509	1536.509	2.33	3075549	0.05	10000	
Mn	55	45	1	He	1933.465	1933.465	3.09	1950128	0.10	10000	
Fe	56	45	1	He	94669.915	94669.915	2.87	149735483	0.06	200000	
Co	59	45	1	He	523.692	523.692	1.99	1901573	0.03	5000	
Ni	60	45	1	He	3984.982	3984.982	2.19	4017707	0.10	10000	
Cu	63	45	1	He	2377.353	2377.353	1.61	6762044	0.04	10000	
Zn	66	45	1	He	851.307	851.307	1.62	281514	0.30	10000	
As	75	115	1	He	490.332	490.332	0.65	101583	0.48	10000	
Se	78	115	1	He	388.372	388.372	1.67	3880	10.01	10000	
Sr	88	103	1	He	614.615	614.615	0.28	570895	0.11	10000	
Mo	95	103	1	He	57.531	57.531	1.05	64228	0.09	2000	
Ag	107	103	1	He	43.549	43.549	0.75	174109	0.03	300	
Cd	111	115	1	He	404.203	404.203	0.42	186942	0.22	4000	
Sn	118	115	1	He	429.199	429.199	0.41	376710	0.11	2000	
Sb	123	115	1	He	25.856	25.856	1.88	25488	0.10	200	
Ba	137	115	1	He	761.154	761.154	0.55	263724	0.29	10000	
W	182	159	1	He	27.265	27.265	1.77	139190	0.02	2500	
Tl	205	165	1	He	102.721	102.721	0.13	798080	0.01	2000	
Pb	208	165	1	He	2182.318	2182.318	0.48	22271600	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1289214	0.44	1276810	100.97	60	120	
Sc	45	1	He	141246	1.31	163460	86.41	60	120	
Sc	45	2	NoGas	8638082	1.28	8842934	97.68	60	120	
Rh	103	1	He	797543	0.33	1010526	78.92	60	120	
In	115	1	He	210031	1.21	257801	81.47	60	120	
Tb	159	1	He	981919	0.17	1155473	84.98	60	120	
Ho	165	1	He	996279	1.20	1147359	86.83	60	120	
Bi	209	1	He	634592	0.14	790610	80.27	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-c msd@2
Data File Name	141SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:47:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	187.758	187.758	0.40	3099420	0.01	10000	
Be	9	45	2	NoGas	470.364	470.364	0.10	2232334	0.02	2000	
B	11	6	2	NoGas	106.064	106.064	0.50	360927	0.03	300	
Na	23	45	1	He	18397.375	18397.375	1.13	7429806	0.25	500000	
Mg	24	45	1	He	28714.391	28714.391	2.13	6494956	0.44	500000	
Al	27	45	1	He	62282.795	62282.795	2.24	5920165	1.05	200000	
K	39	45	1	He	14978.159	14978.159	1.33	1673106	0.90	500000	
Ca	44	45	1	He	117891.293	117891.293	1.71	759047	15.53	500000	
Ti	47	45	1	He	618.292	618.292	3.12	28672	2.16	2500	
V	51	45	1	He	528.462	528.462	2.89	841589	0.06	10000	
Cr	52	45	1	He	1829.750	1829.750	2.36	3626639	0.05	10000	
Mn	55	45	1	He	2100.936	2100.936	1.98	2098451	0.10	10000	
Fe	56	45	1	He	118092.674	118092.674	1.83	184974637	0.06	200000	
Co	59	45	1	He	582.536	582.536	1.16	2094668	0.03	5000	
Ni	60	45	1	He	6697.860	6697.860	2.47	6686718	0.10	10000	
Cu	63	45	1	He	3451.057	3451.057	1.37	9718344	0.04	10000	
Zn	66	45	1	He	1013.031	1013.031	0.72	331214	0.31	10000	
As	75	115	1	He	545.671	545.671	1.00	112376	0.49	10000	
Se	78	115	1	He	414.336	414.336	0.62	4114	10.07	10000	
Sr	88	103	1	He	788.539	788.539	0.27	724398	0.11	10000	
Mo	95	103	1	He	64.702	64.702	1.40	71441	0.09	2000	
Ag	107	103	1	He	47.561	47.561	0.74	188064	0.03	300	
Cd	111	115	1	He	434.280	434.280	1.30	199658	0.22	4000	
Sn	118	115	1	He	493.310	493.310	1.53	430182	0.11	2000	
Sb	123	115	1	He	26.404	26.404	2.26	25878	0.10	200	
Ba	137	115	1	He	839.950	839.950	1.35	289294	0.29	10000	
W	182	159	1	He	29.954	29.954	4.18	152078	0.02	2500	
Tl	205	165	1	He	110.786	110.786	1.75	850799	0.01	2000	
Pb	208	165	1	He	4089.906	4089.906	1.08	41259922	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1269534	1.04	1276810	99.43	60	120	
Sc	45	1	He	139862	1.03	163460	85.56	60	120	
Sc	45	2	NoGas	8513131	0.53	8842934	96.27	60	120	
Rh	103	1	He	788812	0.77	1010526	78.06	60	120	
In	115	1	He	208781	0.55	257801	80.99	60	120	
Tb	159	1	He	977400	0.09	1155473	84.59	60	120	
Ho	165	1	He	984940	1.72	1147359	85.84	60	120	
Bi	209	1	He	629134	0.36	790610	79.58	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	142_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:51:42-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.548	0.668	896973	0.47	50	109.1	89.5	110.5	
Be	9	45	2	NoGas	52.130	0.838	231406	0.79	50	104.3	89.5	110.5	
B	11	6	2	NoGas	43.881	1.920	163068	1.19	50	87.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24754.228	1.291	9422920	0.40	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24701.026	2.019	5267779	0.80	25000	98.8	89.5	110.5	
Al	27	45	1	He	263.234	2.556	23828	1.37	250	105.3	89.5	110.5	
K	39	45	1	He	25825.706	0.997	2713819	0.32	25000	103.3	89.5	110.5	
Ca	44	45	1	He	25083.745	0.485	152762	1.14	25000	100.3	89.5	110.5	
Ti	47	45	1	He	48.056	4.766	2102	3.65	50	96.1	89.5	110.5	
V	51	45	1	He	50.445	3.267	75874	2.48	50	100.9	89.5	110.5	
Cr	52	45	1	He	50.341	1.728	94784	0.50	50	100.7	89.5	110.5	
Mn	55	45	1	He	247.034	1.953	233682	0.78	250	98.8	89.5	110.5	
Fe	56	45	1	He	12449.213	1.904	18387581	0.80	12500	99.6	89.5	110.5	
Co	59	45	1	He	49.890	1.581	169491	0.70	50	99.8	89.5	110.5	
Ni	60	45	1	He	51.997	1.550	49139	1.29	50	104.0	89.5	110.5	
Cu	63	45	1	He	50.388	1.870	137951	0.69	50	100.8	89.5	110.5	
Zn	66	45	1	He	46.716	1.034	16907	0.97	50	93.4	89.5	110.5	
As	75	115	1	He	48.642	0.698	10090	0.24	50	97.3	89.5	110.5	
Se	78	115	1	He	46.795	3.040	470	3.42	50	93.6	89.5	110.5	
Sr	88	103	1	He	50.551	0.877	47799	1.24	50	101.1	89.5	110.5	
Mo	95	103	1	He	50.923	1.483	57778	1.78	50	101.8	89.5	110.5	
Ag	107	103	1	He	49.474	0.697	201005	0.40	50	98.9	89.5	110.5	
Cd	111	115	1	He	49.531	1.815	22887	1.01	50	99.1	89.5	110.5	
Sn	118	115	1	He	50.105	2.132	45072	2.27	50	100.2	89.5	110.5	
Sb	123	115	1	He	50.704	2.702	49919	1.76	50	101.4	89.5	110.5	
Ba	137	115	1	He	51.581	0.975	17861	0.06	50	103.2	89.5	110.5	
W	182	159	1	He	49.643	1.754	247715	1.89	50	99.3	89.5	110.5	
Tl	205	165	1	He	50.415	0.513	380316	1.32	50	100.8	89.5	110.5	
Pb	208	165	1	He	51.785	0.929	514089	0.22	50	103.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1332474	2.03	1276810	104.36	60	120	
Sc	45	1	He	131868	1.23	163460	80.67	60	120	
Sc	45	2	NoGas	7959920	0.14	8842934	90.01	60	120	
Rh	103	1	He	810529	0.61	1010526	80.21	60	120	
In	115	1	He	209848	0.93	257801	81.40	60	120	
Tb	159	1	He	964201	0.63	1155473	83.45	60	120	
Ho	165	1	He	967265	0.81	1147359	84.30	60	120	
Bi	209	1	He	637203	0.84	790610	80.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	143_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T22:55:53-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.117	6.5	97405	0.9	8	
Be	9	45	2	NoGas	0.605	4.8	2860	5.1	1	
B	11	6	2	NoGas	3.902	13.4	25092	6.2	20	
Na	23	45	1	He	88.776	5.6	40645	1.9	1000	
Mg	24	45	1	He	75.882	12.6	16775	8.8	1000	
Al	27	45	1	He	5.282	10.0	713	9.4	50	
K	39	45	1	He	88.427	11.0	17702	2.9	1000	
Ca	44	45	1	He	71.839	27.1	1038	8.0	1000	
Ti	47	45	1	He	0.292	56.9	14	48.0	20	
V	51	45	1	He	0.208	39.3	461	29.2	2	
Cr	52	45	1	He	0.287	11.5	1262	2.1	2	
Mn	55	45	1	He	0.706	11.3	1852	1.4	2	
Fe	56	45	1	He	52.970	10.9	81218	7.2	50	CCB High
Co	59	45	1	He	0.160	31.0	933	15.8	1	
Ni	60	45	1	He	0.585	9.4	744	9.9	2	
Cu	63	45	1	He	-0.609	-5.9	2620	3.6	2	
Zn	66	45	1	He	-3.356	-8.8	1600	3.1	20	
As	75	115	1	He	0.242	18.0	77	13.7	2	
Se	78	115	1	He	0.530	49.4	9	32.7	2	
Sr	88	103	1	He	0.188	18.9	269	11.5	10	
Mo	95	103	1	He	0.302	14.8	371	12.3	2	
Ag	107	103	1	He	0.152	5.0	644	3.6	0.2	
Cd	111	115	1	He	0.248	1.4	121	2.9	0.2	CCB High
Sn	118	115	1	He	0.125	134.3	1452	9.1	10	
Sb	123	115	1	He	0.270	6.7	299	4.6	2	
Ba	137	115	1	He	0.233	24.3	90	24.3	5	
W	182	159	1	He	0.429	32.9	3541	19.3	10	
Tl	205	165	1	He	0.286	18.2	2186	17.4	0.5	
Pb	208	165	1	He	0.528	10.7	6264	9.1	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1370816	1.31	1276810	107.36	60	120	
Sc	45	1	He	131898	3.12	163460	80.69	60	120	
Sc	45	2	NoGas	8216905	0.47	8842934	92.92	60	120	
Rh	103	1	He	830236	1.63	1010526	82.16	60	120	
In	115	1	He	218909	2.13	257801	84.91	60	120	
Tb	159	1	He	969552	0.61	1155473	83.91	60	120	
Ho	165	1	He	969483	1.22	1147359	84.50	60	120	
Bi	209	1	He	655608	1.48	790610	82.92	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-c-24-a@2
Data File Name	144SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:00:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	227.304	227.304	0.58	3659328	0.01	10000	
Be	9	45	2	NoGas	1058.438	1058.438	1.35	4921622	0.02	2000	
B	11	6	2	NoGas	134.348	134.348	0.32	442714	0.03	300	
Na	23	45	1	He	24239.561	24239.561	2.72	9614864	0.25	500000	
Mg	24	45	1	He	22982.746	22982.746	3.11	5107513	0.45	500000	
Al	27	45	1	He	59366.934	59366.934	3.25	5544185	1.07	200000	
K	39	45	1	He	20265.784	20265.784	3.15	2220819	0.91	500000	
Ca	44	45	1	He	66180.661	66180.661	3.60	418896	15.80	500000	
Ti	47	45	1	He	462.340	462.340	3.24	21067	2.19	2500	
V	51	45	1	He	1131.801	1131.801	3.44	1770707	0.06	10000	
Cr	52	45	1	He	2186.580	2186.580	3.47	4257785	0.05	10000	
Mn	55	45	1	He	2606.287	2606.287	2.78	2557363	0.10	10000	
Fe	56	45	1	He	117319.303	117319.303	3.32	180540082	0.06	200000	
Co	59	45	1	He	1148.181	1148.181	2.84	4055685	0.03	5000	
Ni	60	45	1	He	6636.695	6636.695	3.11	6509982	0.10	10000	
Cu	63	45	1	He	4325.738	4325.738	3.23	11966400	0.04	10000	
Zn	66	45	1	He	1573.358	1573.358	3.04	503853	0.31	10000	
As	75	115	1	He	1086.893	1086.893	1.75	222864	0.49	10000	
Se	78	115	1	He	933.186	933.186	2.09	9223	10.12	10000	
Sr	88	103	1	He	1200.683	1200.683	0.75	1106153	0.11	10000	
Mo	95	103	1	He	125.856	125.856	1.57	139352	0.09	2000	
Ag	107	103	1	He	103.223	103.223	0.61	409298	0.03	300	
Cd	111	115	1	He	983.202	983.202	1.49	450105	0.22	4000	
Sn	118	115	1	He	1122.972	1122.972	1.66	973509	0.12	2000	
Sb	123	115	1	He	113.587	113.587	1.18	110783	0.10	200	
Ba	137	115	1	He	1403.933	1403.933	1.71	481489	0.29	10000	
W	182	159	1	He	98.077	98.077	2.50	502608	0.02	2500	
Tl	205	165	1	He	276.042	276.042	1.18	2139945	0.01	2000	
Pb	208	165	1	He	3551.695	3551.695	1.77	36166834	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1236820	0.29	1276810	96.87	60	120	
Sc	45	1	He	137431	1.47	163460	84.08	60	120	
Sc	45	2	NoGas	8341381	0.68	8842934	94.33	60	120	
Rh	103	1	He	791055	1.10	1010526	78.28	60	120	
In	115	1	He	207908	1.23	257801	80.65	60	120	
Tb	159	1	He	993009	0.11	1155473	85.94	60	120	
Ho	165	1	He	994177	1.06	1147359	86.65	60	120	
Bi	209	1	He	640658	0.48	790610	81.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-19-a@2
Data File Name	145SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:04:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.229	23.229	1.24	489902	0.00	10000	
Be	9	45	2	NoGas	2.391	2.391	1.46	12286	0.02	2000	
B	11	6	2	NoGas	41.386	41.386	3.28	165312	0.03	300	
Na	23	45	1	He	2235.238	2235.238	1.18	868475	0.26	500000	
Mg	24	45	1	He	7662.998	7662.998	2.01	1656505	0.46	500000	
Al	27	45	1	He	27465.579	27465.579	0.54	2494199	1.10	200000	
K	39	45	1	He	8901.950	8901.950	1.74	953452	0.93	500000	
Ca	44	45	1	He	840627.165	840627.165	1.92	5166924	16.27	500000	>LDR
Ti	47	45	1	He	326.481	326.481	2.73	14465	2.26	2500	
V	51	45	1	He	35.304	35.304	3.58	53866	0.07	10000	
Cr	52	45	1	He	172.643	172.643	1.62	327606	0.05	10000	
Mn	55	45	1	He	437.213	437.213	1.74	418178	0.10	10000	
Fe	56	45	1	He	19523.136	19523.136	1.50	29218490	0.07	200000	
Co	59	45	1	He	96.004	96.004	1.63	330133	0.03	5000	
Ni	60	45	1	He	287.104	287.104	2.09	274049	0.10	10000	
Cu	63	45	1	He	67.099	67.099	2.74	184745	0.04	10000	
Zn	66	45	1	He	89.421	89.421	1.18	30356	0.29	10000	
As	75	115	1	He	68.388	68.388	0.66	13966	0.49	10000	
Se	78	115	1	He	4.412	4.412	4.72	46	9.50	10000	
Sr	88	103	1	He	163.126	163.126	0.53	146012	0.11	10000	
Mo	95	103	1	He	4.607	4.607	3.75	4969	0.09	2000	
Ag	107	103	1	He	0.693	0.693	3.65	2678	0.03	300	
Cd	111	115	1	He	5.339	5.339	2.12	2432	0.22	4000	
Sn	118	115	1	He	57.051	57.051	2.79	50375	0.11	2000	
Sb	123	115	1	He	1364.557	1364.557	0.68	1323258	0.10	200	>LDR
Ba	137	115	1	He	392.180	392.180	1.57	133763	0.29	10000	
W	182	159	1	He	1.123	1.123	7.99	6846	0.02	2500	
Tl	205	165	1	He	1.128	1.128	11.53	8539	0.01	2000	
Pb	208	165	1	He	8687.558	8687.558	0.34	86220645	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1426510	1.07	1276810	111.72	60	120	
Sc	45	1	He	133589	1.37	163460	81.73	60	120	
Sc	45	2	NoGas	9143069	0.50	8842934	103.39	60	120	
Rh	103	1	He	768197	2.53	1010526	76.02	60	120	
In	115	1	He	206752	2.27	257801	80.20	60	120	
Tb	159	1	He	947131	2.43	1155473	81.97	60	120	
Ho	165	1	He	968876	1.63	1147359	84.44	60	120	
Bi	209	1	He	626899	1.64	790610	79.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-19-a@20
Data File Name	146SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:08:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.840	2.840	0.42	142195	0.00	10000	
Be	9	45	2	NoGas	0.523	0.523	8.10	2848	0.02	2000	
B	11	6	2	NoGas	7.827	7.827	4.45	42379	0.02	300	
Na	23	45	1	He	234.258	234.258	11.09	110189	0.21	500000	
Mg	24	45	1	He	743.592	743.592	10.45	182705	0.41	500000	
Al	27	45	1	He	2593.115	2593.115	11.78	266728	0.97	200000	
K	39	45	1	He	910.730	910.730	10.31	119257	0.76	500000	
Ca	44	45	1	He	82304.837	82304.837	11.31	573248	14.36	500000	
Ti	47	45	1	He	34.583	34.583	15.69	1731	2.00	2500	
V	51	45	1	He	3.500	3.500	14.88	6206	0.06	10000	
Cr	52	45	1	He	18.003	18.003	12.46	39392	0.05	10000	
Mn	55	45	1	He	45.573	45.573	10.22	50606	0.09	10000	
Fe	56	45	1	He	2062.059	2062.059	11.40	3496074	0.06	200000	
Co	59	45	1	He	10.169	10.169	11.71	39975	0.03	5000	
Ni	60	45	1	He	31.439	31.439	12.60	34135	0.09	10000	
Cu	63	45	1	He	7.112	7.112	11.85	26533	0.03	10000	
Zn	66	45	1	He	3.584	3.584	30.93	4276	0.08	10000	
As	75	115	1	He	6.821	6.821	5.84	1706	0.40	10000	
Se	78	115	1	He	0.807	0.807	20.40	13	6.08	10000	
Sr	88	103	1	He	15.543	15.543	9.77	17045	0.09	10000	
Mo	95	103	1	He	0.485	0.485	6.88	661	0.07	2000	
Ag	107	103	1	He	0.069	0.069	6.70	340	0.02	300	
Cd	111	115	1	He	0.666	0.666	6.62	367	0.18	4000	
Sn	118	115	1	He	4.424	4.424	11.57	6113	0.07	2000	
Sb	123	115	1	He	135.258	135.258	8.70	158008	0.09	200	
Ba	137	115	1	He	38.071	38.071	8.42	15650	0.24	10000	
W	182	159	1	He	0.260	0.260	64.61	3160	0.01	2500	
Tl	205	165	1	He	0.146	0.146	7.09	1348	0.01	2000	
Pb	208	165	1	He	876.735	876.735	13.32	10273827	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1485584	1.53	1276810	116.35	60	120	
Sc	45	1	He	152367	9.95	163460	93.21	60	120	
Sc	45	2	NoGas	9413546	0.56	8842934	106.45	60	120	
Rh	103	1	He	941333	8.32	1010526	93.15	60	120	
In	115	1	He	250132	7.65	257801	97.03	60	120	
Tb	159	1	He	1143309	12.97	1155473	98.95	60	120	
Ho	165	1	He	1156563	12.41	1147359	100.80	60	120	
Bi	209	1	He	759920	7.12	790610	96.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-20-a@2
Data File Name	147SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:12:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	140.242	140.242	0.78	2763638	0.01	10000	
Be	9	45	2	NoGas	3.225	3.225	1.96	18217	0.02	2000	
B	11	6	2	NoGas	43.316	43.316	0.45	179906	0.02	300	
Na	23	45	1	He	705.219	705.219	1.26	327710	0.22	500000	
Mg	24	45	1	He	42657.075	42657.075	1.89	10835045	0.39	500000	
Al	27	45	1	He	54823.911	54823.911	2.43	5851177	0.94	200000	
K	39	45	1	He	11200.984	11200.984	2.76	1407345	0.80	500000	
Ca	44	45	1	He	128244.612	128244.612	1.55	927177	13.83	500000	
Ti	47	45	1	He	431.637	431.637	1.83	22487	1.92	2500	
V	51	45	1	He	95.101	95.101	1.38	170236	0.06	10000	
Cr	52	45	1	He	83.780	83.780	1.68	187314	0.04	10000	
Mn	55	45	1	He	1595.931	1595.931	1.12	1790407	0.09	10000	
Fe	56	45	1	He	117556.721	117556.721	1.97	206761761	0.06	200000	
Co	59	45	1	He	59.877	59.877	2.13	242175	0.02	5000	
Ni	60	45	1	He	144.646	144.646	2.02	162386	0.09	10000	
Cu	63	45	1	He	101.860	101.860	1.74	326963	0.03	10000	
Zn	66	45	1	He	322.582	322.582	2.89	120547	0.27	10000	
As	75	115	1	He	69.554	69.554	0.60	16079	0.43	10000	
Se	78	115	1	He	15.632	15.632	5.45	177	8.82	10000	
Sr	88	103	1	He	185.366	185.366	1.02	192929	0.10	10000	
Mo	95	103	1	He	16.096	16.096	3.43	20155	0.08	2000	
Ag	107	103	1	He	0.167	0.167	4.69	760	0.02	300	
Cd	111	115	1	He	0.768	0.768	7.81	397	0.19	4000	
Sn	118	115	1	He	19.337	19.337	1.31	20276	0.10	2000	
Sb	123	115	1	He	2.402	2.402	11.97	2656	0.09	200	
Ba	137	115	1	He	445.709	445.709	1.35	172059	0.26	10000	
W	182	159	1	He	0.290	0.290	10.68	3264	0.01	2500	
Tl	205	165	1	He	1.670	1.670	1.36	14516	0.01	2000	
Pb	208	165	1	He	63.916	63.916	0.63	729532	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1487615	0.20	1276810	116.51	60	120	
Sc	45	1	He	157061	2.07	163460	96.09	60	120	
Sc	45	2	NoGas	10071279	0.19	8842934	113.89	60	120	
Rh	103	1	He	893451	2.03	1010526	88.41	60	120	
In	115	1	He	234032	1.94	257801	90.78	60	120	
Tb	159	1	He	1110777	0.57	1155473	96.13	60	120	
Ho	165	1	He	1112529	1.32	1147359	96.96	60	120	
Bi	209	1	He	719011	0.54	790610	90.94	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-22-a@2
Data File Name	148SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:16:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	100.337	100.337	1.81	1897391	0.01	10000	
Be	9	45	2	NoGas	2.696	2.696	4.08	14425	0.02	2000	
B	11	6	2	NoGas	31.311	31.311	0.88	131507	0.02	300	
Na	23	45	1	He	388.743	388.743	2.56	182652	0.21	500000	
Mg	24	45	1	He	12327.744	12327.744	1.39	3103516	0.40	500000	
Al	27	45	1	He	45714.113	45714.113	2.08	4835542	0.95	200000	
K	39	45	1	He	6384.601	6384.601	0.89	799390	0.80	500000	
Ca	44	45	1	He	8575.092	8575.092	0.51	62101	13.81	500000	
Ti	47	45	1	He	318.832	318.832	0.43	16455	1.94	2500	
V	51	45	1	He	97.756	97.756	2.60	173373	0.06	10000	
Cr	52	45	1	He	65.372	65.372	2.45	145005	0.05	10000	
Mn	55	45	1	He	1124.042	1124.042	1.80	1249999	0.09	10000	
Fe	56	45	1	He	105798.734	105798.734	1.37	184416446	0.06	200000	
Co	59	45	1	He	53.017	53.017	1.16	212555	0.02	5000	
Ni	60	45	1	He	164.252	164.252	0.81	182723	0.09	10000	
Cu	63	45	1	He	75.785	75.785	1.06	242365	0.03	10000	
Zn	66	45	1	He	371.901	371.901	1.02	137259	0.27	10000	
As	75	115	1	He	50.562	50.562	1.21	11928	0.42	10000	
Se	78	115	1	He	14.632	14.632	3.52	169	8.63	10000	
Sr	88	103	1	He	44.926	44.926	0.77	47971	0.09	10000	
Mo	95	103	1	He	21.008	21.008	2.86	26928	0.08	2000	
Ag	107	103	1	He	0.075	0.075	9.91	354	0.02	300	
Cd	111	115	1	He	2.617	2.617	1.23	1377	0.19	4000	
Sn	118	115	1	He	20.269	20.269	1.59	21603	0.09	2000	
Sb	123	115	1	He	1.048	1.048	1.57	1197	0.09	200	
Ba	137	115	1	He	221.839	221.839	1.28	87358	0.25	10000	
W	182	159	1	He	0.216	0.216	6.36	2849	0.01	2500	
Tl	205	165	1	He	1.867	1.867	2.75	16326	0.01	2000	
Pb	208	165	1	He	64.683	64.683	0.35	742665	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1466424	0.25	1276810	114.85	60	120	
Sc	45	1	He	155626	1.07	163460	95.21	60	120	
Sc	45	2	NoGas	9530335	0.45	8842934	107.77	60	120	
Rh	103	1	He	915106	0.82	1010526	90.56	60	120	
In	115	1	He	238662	1.32	257801	92.58	60	120	
Tb	159	1	He	1114253	1.70	1155473	96.43	60	120	
Ho	165	1	He	1119083	1.39	1147359	97.54	60	120	
Bi	209	1	He	732953	1.50	790610	92.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-23-a@2
Data File Name	149SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:20:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	53.433	53.433	0.31	991954	0.01	10000	
Be	9	45	2	NoGas	5.932	5.932	0.69	29762	0.02	2000	
B	11	6	2	NoGas	152.700	152.700	2.50	562304	0.03	300	
Na	23	45	1	He	2170.183	2170.183	1.40	914262	0.24	500000	
Mg	24	45	1	He	159349.515	159349.515	1.72	37322547	0.43	500000	
Al	27	45	1	He	51414.110	51414.110	1.45	5061169	1.02	200000	
K	39	45	1	He	3471.449	3471.449	1.64	408689	0.85	500000	
Ca	44	45	1	He	832588.998	832588.998	1.33	5547390	15.01	500000	>LDR
Ti	47	45	1	He	1282.249	1282.249	0.70	61584	2.08	2500	
V	51	45	1	He	68.284	68.284	1.56	112792	0.06	10000	
Cr	52	45	1	He	375.227	375.227	1.85	770812	0.05	10000	
Mn	55	45	1	He	3814.835	3814.835	1.95	3944770	0.10	10000	
Fe	56	45	1	He	64614.814	64614.814	2.28	104803449	0.06	200000	
Co	59	45	1	He	340.877	340.877	1.70	1269408	0.03	5000	
Ni	60	45	1	He	1860.571	1860.571	1.23	1923843	0.10	10000	
Cu	63	45	1	He	992.296	992.296	1.26	2897032	0.03	10000	
Zn	66	45	1	He	616.757	616.757	0.89	209953	0.29	10000	
As	75	115	1	He	46.298	46.298	1.04	9586	0.48	10000	
Se	78	115	1	He	12.570	12.570	5.74	128	9.81	10000	
Sr	88	103	1	He	732.761	732.761	0.89	678709	0.11	10000	
Mo	95	103	1	He	10.742	10.742	1.40	11974	0.09	2000	
Ag	107	103	1	He	0.645	0.645	3.28	2581	0.02	300	
Cd	111	115	1	He	112.126	112.126	1.26	51711	0.22	4000	
Sn	118	115	1	He	106.887	106.887	1.51	94505	0.11	2000	
Sb	123	115	1	He	12.503	12.503	1.31	12302	0.10	200	
Ba	137	115	1	He	997.147	997.147	0.59	344513	0.29	10000	
W	182	159	1	He	0.785	0.785	9.35	5535	0.01	2500	
Tl	205	165	1	He	0.818	0.818	3.80	6556	0.01	2000	
Pb	208	165	1	He	2034.619	2034.619	0.49	21333716	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386355	1.96	1276810	108.58	60	120	
Sc	45	1	He	144841	1.50	163460	88.61	60	120	
Sc	45	2	NoGas	8970209	0.43	8842934	101.44	60	120	
Rh	103	1	He	795320	0.31	1010526	78.70	60	120	
In	115	1	He	209433	0.50	257801	81.24	60	120	
Tb	159	1	He	1008337	0.47	1155473	87.27	60	120	
Ho	165	1	He	1023577	0.48	1147359	89.21	60	120	
Bi	209	1	He	626422	0.59	790610	79.23	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-25-a@200
Data File Name	150SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:24:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.233	1.233	3.12	105195	0.00	10000	
Be	9	45	2	NoGas	0.225	0.225	18.00	1189	0.02	2000	
B	11	6	2	NoGas	3.072	3.072	6.64	23037	0.01	300	
Na	23	45	1	He	58.742	58.742	3.47	30941	0.19	500000	
Mg	24	45	1	He	444.696	444.696	0.89	101009	0.44	500000	
Al	27	45	1	He	417.832	417.832	1.63	39874	1.05	200000	
K	39	45	1	He	72.784	72.784	9.15	17009	0.43	500000	
Ca	44	45	1	He	4671.575	4671.575	1.13	30621	15.26	500000	
Ti	47	45	1	He	20.024	20.024	11.31	929	2.16	2500	
V	51	45	1	He	0.731	0.731	5.34	1317	0.06	10000	
Cr	52	45	1	He	1.290	1.290	5.92	3320	0.04	10000	
Mn	55	45	1	He	12.946	12.946	2.41	14151	0.09	10000	
Fe	56	45	1	He	801.155	801.155	1.37	1255233	0.06	200000	
Co	59	45	1	He	1.585	1.585	1.79	6101	0.03	5000	
Ni	60	45	1	He	9.830	9.830	1.39	9995	0.10	10000	
Cu	63	45	1	He	6.080	6.080	2.04	21556	0.03	10000	
Zn	66	45	1	He	-3.712	-3.712	-9.44	1579	-0.24	10000	
As	75	115	1	He	1.149	1.149	1.36	287	0.40	10000	
Se	78	115	1	He	0.263	0.263	98.73	6	4.18	10000	
Sr	88	103	1	He	4.498	4.498	1.12	4752	0.09	10000	
Mo	95	103	1	He	0.114	0.114	23.02	164	0.07	2000	
Ag	107	103	1	He	0.144	0.144	12.88	654	0.02	300	
Cd	111	115	1	He	0.195	0.195	7.68	100	0.20	4000	
Sn	118	115	1	He	-0.494	-0.494	-24.83	933	-0.05	2000	
Sb	123	115	1	He	1.585	1.585	3.59	1732	0.09	200	
Ba	137	115	1	He	9.455	9.455	0.83	3593	0.26	10000	
W	182	159	1	He	0.044	0.044	31.07	1715	0.00	2500	
Tl	205	165	1	He	0.207	0.207	18.86	1697	0.01	2000	
Pb	208	165	1	He	2706.558	2706.558	2.24	28641903	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1425631	1.27	1276810	111.66	60	120	
Sc	45	1	He	139522	0.88	163460	85.36	60	120	
Sc	45	2	NoGas	8713183	0.66	8842934	98.53	60	120	
Rh	103	1	He	889302	1.05	1010526	88.00	60	120	
In	115	1	He	229970	1.49	257801	89.20	60	120	
Tb	159	1	He	1026482	2.62	1155473	88.84	60	120	
Ho	165	1	He	1033354	2.29	1147359	90.06	60	120	
Bi	209	1	He	711613	1.84	790610	90.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-26-a@2
Data File Name	151SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:28:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	141.599	141.599	1.12	2532247	0.01	10000	
Be	9	45	2	NoGas	4.032	4.032	4.02	20657	0.02	2000	
B	11	6	2	NoGas	136.224	136.224	1.53	496366	0.03	300	
Na	23	45	1	He	16027.787	16027.787	0.55	6645469	0.24	500000	
Mg	24	45	1	He	15421.098	15421.098	0.88	3581261	0.43	500000	
Al	27	45	1	He	77705.308	77705.308	1.86	7583909	1.02	200000	
K	39	45	1	He	19072.527	19072.527	1.24	2184483	0.87	500000	
Ca	44	45	1	He	6523.982	6523.982	0.64	43743	14.91	500000	
Ti	47	45	1	He	385.156	385.156	1.61	18335	2.10	2500	
V	51	45	1	He	180.941	180.941	2.21	295971	0.06	10000	
Cr	52	45	1	He	172.275	172.275	1.18	351283	0.05	10000	
Mn	55	45	1	He	1711.165	1711.165	1.46	1755045	0.10	10000	
Fe	56	45	1	He	120544.879	120544.879	1.57	193853917	0.06	200000	
Co	59	45	1	He	80.714	80.714	1.05	298306	0.03	5000	
Ni	60	45	1	He	393.726	393.726	0.96	403750	0.10	10000	
Cu	63	45	1	He	106.379	106.379	0.62	312003	0.03	10000	
Zn	66	45	1	He	394.411	394.411	1.05	134125	0.29	10000	
As	75	115	1	He	79.477	79.477	1.06	17050	0.47	10000	
Se	78	115	1	He	19.122	19.122	3.54	201	9.53	10000	
Sr	88	103	1	He	73.937	73.937	1.09	70837	0.10	10000	
Mo	95	103	1	He	16.625	16.625	1.62	19136	0.09	2000	
Ag	107	103	1	He	0.174	0.174	11.13	727	0.02	300	
Cd	111	115	1	He	2.593	2.593	4.36	1242	0.21	4000	
Sn	118	115	1	He	21.623	21.623	4.84	20902	0.10	2000	
Sb	123	115	1	He	1.531	1.531	6.65	1580	0.10	200	
Ba	137	115	1	He	386.178	386.178	0.59	138389	0.28	10000	
W	182	159	1	He	0.383	0.383	19.23	3508	0.01	2500	
Tl	205	165	1	He	2.538	2.538	1.23	20475	0.01	2000	
Pb	208	165	1	He	705.525	705.525	0.43	7466924	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1368224	1.35	1276810	107.16	60	120	
Sc	45	1	He	143571	1.94	163460	87.83	60	120	
Sc	45	2	NoGas	9143425	1.08	8842934	103.40	60	120	
Rh	103	1	He	821671	1.94	1010526	81.31	60	120	
In	115	1	He	217229	2.03	257801	84.26	60	120	
Tb	159	1	He	1026930	1.43	1155473	88.88	60	120	
Ho	165	1	He	1033073	1.51	1147359	90.04	60	120	
Bi	209	1	He	666759	0.81	790610	84.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-27-a@2
Data File Name	152SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:33:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	82.373	82.373	0.54	1513912	0.01	10000	
Be	9	45	2	NoGas	3.569	3.569	3.40	18332	0.02	2000	
B	11	6	2	NoGas	182.483	182.483	2.51	669672	0.03	300	
Na	23	45	1	He	1220.295	1220.295	3.00	503494	0.24	500000	
Mg	24	45	1	He	9468.769	9468.769	2.22	2159405	0.44	500000	
Al	27	45	1	He	59544.806	59544.806	2.08	5705280	1.04	200000	
K	39	45	1	He	14419.741	14419.741	2.76	1623576	0.89	500000	
Ca	44	45	1	He	104244.225	104244.225	2.73	676525	15.41	500000	
Ti	47	45	1	He	1320.964	1320.964	2.47	61741	2.14	2500	
V	51	45	1	He	128.796	128.796	2.36	206989	0.06	10000	
Cr	52	45	1	He	3176.473	3176.473	2.42	6345562	0.05	10000	
Mn	55	45	1	He	797.074	797.074	2.84	803156	0.10	10000	
Fe	56	45	1	He	132173.569	132173.569	2.05	208690543	0.06	200000	
Co	59	45	1	He	367.182	367.182	2.96	1330665	0.03	5000	
Ni	60	45	1	He	297.491	297.491	2.85	299520	0.10	10000	
Cu	63	45	1	He	261.469	261.469	2.46	746282	0.04	10000	
Zn	66	45	1	He	334.614	334.614	4.05	112104	0.30	10000	
As	75	115	1	He	98.379	98.379	2.43	21216	0.46	10000	
Se	78	115	1	He	10.352	10.352	7.34	111	9.33	10000	
Sr	88	103	1	He	259.114	259.114	2.39	247150	0.10	10000	
Mo	95	103	1	He	15.230	15.230	0.85	17477	0.09	2000	
Ag	107	103	1	He	1.810	1.810	4.96	7439	0.02	300	
Cd	111	115	1	He	4.495	4.495	4.51	2164	0.21	4000	
Sn	118	115	1	He	58.532	58.532	3.91	54559	0.11	2000	
Sb	123	115	1	He	18.500	18.500	4.85	18965	0.10	200	
Ba	137	115	1	He	1869.141	1869.141	2.83	673436	0.28	10000	
W	182	159	1	He	1.558	1.558	5.25	9444	0.02	2500	
Tl	205	165	1	He	1.592	1.592	4.63	12660	0.01	2000	
Pb	208	165	1	He	2411.367	2411.367	2.74	25137058	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1386187	2.18	1276810	108.57	60	120	
Sc	45	1	He	141022	3.38	163460	86.27	60	120	
Sc	45	2	NoGas	9164260	0.86	8842934	103.63	60	120	
Rh	103	1	He	819183	2.85	1010526	81.06	60	120	
In	115	1	He	218545	3.72	257801	84.77	60	120	
Tb	159	1	He	999070	3.60	1155473	86.46	60	120	
Ho	165	1	He	1018298	3.67	1147359	88.75	60	120	
Bi	209	1	He	692637	2.23	790610	87.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-29-a@2
Data File Name	153SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:37:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.435	112.435	0.42	2022720	0.01	10000	
Be	9	45	2	NoGas	3.168	3.168	3.16	16193	0.02	2000	
B	11	6	2	NoGas	64.416	64.416	1.49	240492	0.03	300	
Na	23	45	1	He	482.599	482.599	0.80	213581	0.23	500000	
Mg	24	45	1	He	14373.204	14373.204	1.04	3437823	0.42	500000	
Al	27	45	1	He	49315.860	49315.860	0.70	4956499	0.99	200000	
K	39	45	1	He	7109.987	7109.987	0.45	844649	0.84	500000	
Ca	44	45	1	He	4798.278	4798.278	1.72	33313	14.40	500000	
Ti	47	45	1	He	313.763	313.763	1.46	15387	2.04	2500	
V	51	45	1	He	116.854	116.854	0.85	196907	0.06	10000	
Cr	52	45	1	He	76.819	76.819	1.26	161776	0.05	10000	
Mn	55	45	1	He	1512.975	1512.975	1.67	1598208	0.09	10000	
Fe	56	45	1	He	128309.637	128309.637	1.46	212505116	0.06	200000	
Co	59	45	1	He	51.157	51.157	0.70	194885	0.03	5000	
Ni	60	45	1	He	129.547	129.547	0.49	136958	0.09	10000	
Cu	63	45	1	He	98.688	98.688	0.73	298428	0.03	10000	
Zn	66	45	1	He	381.368	381.368	1.26	133670	0.29	10000	
As	75	115	1	He	77.786	77.786	1.64	17404	0.45	10000	
Se	78	115	1	He	17.360	17.360	8.77	190	9.13	10000	
Sr	88	103	1	He	35.339	35.339	1.34	35535	0.10	10000	
Mo	95	103	1	He	36.895	36.895	0.75	44494	0.08	2000	
Ag	107	103	1	He	0.099	0.099	18.40	437	0.02	300	
Cd	111	115	1	He	0.972	0.972	6.18	486	0.20	4000	
Sn	118	115	1	He	20.455	20.455	1.39	20684	0.10	2000	
Sb	123	115	1	He	1.187	1.187	5.37	1283	0.09	200	
Ba	137	115	1	He	211.973	211.973	0.71	79221	0.27	10000	
W	182	159	1	He	0.235	0.235	27.72	2823	0.01	2500	
Tl	205	165	1	He	2.578	2.578	1.80	21421	0.01	2000	
Pb	208	165	1	He	59.781	59.781	0.65	652619	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367601	1.29	1276810	107.11	60	120	
Sc	45	1	He	147858	0.89	163460	90.46	60	120	
Sc	45	2	NoGas	9114429	0.76	8842934	103.07	60	120	
Rh	103	1	He	861396	1.51	1010526	85.24	60	120	
In	115	1	He	226528	0.54	257801	87.87	60	120	
Tb	159	1	He	1063765	1.38	1155473	92.06	60	120	
Ho	165	1	He	1063953	1.31	1147359	92.73	60	120	
Bi	209	1	He	687152	0.59	790610	86.91	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	154_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:41:17-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.198	1.011	940130	0.95	50	106.4	89.5	110.5	
Be	9	45	2	NoGas	50.931	0.725	242445	0.75	50	101.9	89.5	110.5	
B	11	6	2	NoGas	46.595	2.950	179896	1.96	50	93.2	89.5	110.5	
Na	23	45	1	He	24490.798	0.779	9903034	0.30	25000	98.0	89.5	110.5	
Mg	24	45	1	He	24133.752	1.074	5467576	0.89	25000	96.5	89.5	110.5	
Al	27	45	1	He	254.602	3.243	24488	2.45	250	101.8	89.5	110.5	
K	39	45	1	He	25431.206	1.750	2838738	1.40	25000	101.7	89.5	110.5	
Ca	44	45	1	He	24941.086	1.754	161332	1.24	25000	99.8	89.5	110.5	
Ti	47	45	1	He	51.034	1.182	2372	1.97	50	102.1	89.5	110.5	
V	51	45	1	He	51.308	0.627	81989	1.51	50	102.6	89.5	110.5	
Cr	52	45	1	He	49.845	1.369	99701	0.90	50	99.7	89.5	110.5	
Mn	55	45	1	He	247.890	1.329	249089	0.45	250	99.2	89.5	110.5	
Fe	56	45	1	He	12403.512	1.142	19461077	0.48	12500	99.2	89.5	110.5	
Co	59	45	1	He	49.678	0.766	179282	0.53	50	99.4	89.5	110.5	
Ni	60	45	1	He	49.582	1.820	49779	0.92	50	99.2	89.5	110.5	
Cu	63	45	1	He	49.119	0.866	142965	0.47	50	98.2	89.5	110.5	
Zn	66	45	1	He	47.014	1.907	18057	2.25	50	94.0	89.5	110.5	
As	75	115	1	He	47.594	0.309	10721	0.53	50	95.2	89.5	110.5	
Se	78	115	1	He	47.765	3.675	521	4.39	50	95.5	89.5	110.5	
Sr	88	103	1	He	50.695	1.851	50633	2.29	50	101.4	89.5	110.5	
Mo	95	103	1	He	51.324	0.719	61506	0.95	50	102.6	89.5	110.5	
Ag	107	103	1	He	49.835	0.300	213860	0.37	50	99.7	89.5	110.5	
Cd	111	115	1	He	48.549	1.838	24361	1.43	50	97.1	89.5	110.5	
Sn	118	115	1	He	48.269	1.762	47200	1.79	50	96.5	89.5	110.5	
Sb	123	115	1	He	50.093	1.214	53564	1.95	50	100.2	89.5	110.5	
Ba	137	115	1	He	50.494	2.568	18985	2.09	50	101.0	89.5	110.5	
W	182	159	1	He	49.547	2.046	261180	2.80	50	99.1	89.5	110.5	
Tl	205	165	1	He	50.518	0.381	403063	0.54	50	101.0	89.5	110.5	
Pb	208	165	1	He	51.003	0.408	535574	0.39	50	102.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1389691	1.10	1276810	108.84	60	120	
Sc	45	1	He	140068	0.90	163460	85.69	60	120	
Sc	45	2	NoGas	8536227	1.23	8842934	96.53	60	120	
Rh	103	1	He	856107	0.60	1010526	84.72	60	120	
In	115	1	He	227868	0.77	257801	88.39	60	120	
Tb	159	1	He	1018480	0.81	1155473	88.14	60	120	
Ho	165	1	He	1023072	0.61	1147359	89.17	60	120	
Bi	209	1	He	679192	0.59	790610	85.91	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	155_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:45:29-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.001	6.4	100531	0.9	8	
Be	9	45	2	NoGas	0.311	17.2	1593	16.1	1	
B	11	6	2	NoGas	5.896	2.6	33553	0.9	20	
Na	23	45	1	He	85.545	0.7	41355	1.1	1000	
Mg	24	45	1	He	71.863	2.4	16727	1.5	1000	
Al	27	45	1	He	3.175	10.5	549	6.0	50	
K	39	45	1	He	88.148	3.1	18543	0.7	1000	
Ca	44	45	1	He	74.494	17.2	1107	7.5	1000	
Ti	47	45	1	He	0.468	40.6	23	37.8	20	
V	51	45	1	He	0.066	149.1	257	60.0	2	
Cr	52	45	1	He	0.132	11.1	1021	2.5	2	
Mn	55	45	1	He	0.439	16.9	1679	4.0	2	
Fe	56	45	1	He	50.142	3.8	80942	4.0	50	CCB High
Co	59	45	1	He	0.085	25.4	713	10.4	1	
Ni	60	45	1	He	0.048	138.7	249	25.5	2	
Cu	63	45	1	He	-0.825	-3.8	2145	3.3	2	
Zn	66	45	1	He	-3.325	-6.3	1689	3.8	20	
As	75	115	1	He	0.181	2.8	67	2.6	2	
Se	78	115	1	He	0.325	71.9	7	37.1	2	
Sr	88	103	1	He	0.141	39.5	239	24.0	10	
Mo	95	103	1	He	0.212	10.2	284	9.4	2	
Ag	107	103	1	He	0.138	10.7	622	10.6	0.2	
Cd	111	115	1	He	0.200	5.1	102	5.0	0.2	
Sn	118	115	1	He	-0.300	-74.0	1122	19.8	10	
Sb	123	115	1	He	0.295	7.2	341	7.5	2	
Ba	137	115	1	He	0.250	22.6	101	22.4	5	
W	182	159	1	He	0.366	7.9	3419	4.7	10	
Tl	205	165	1	He	0.222	11.7	1822	11.5	0.5	
Pb	208	165	1	He	0.410	9.4	5438	7.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1427449	1.15	1276810	111.80	60	120	
Sc	45	1	He	138254	0.89	163460	84.58	60	120	
Sc	45	2	NoGas	8639625	0.15	8842934	97.70	60	120	
Rh	103	1	He	883929	0.05	1010526	87.47	60	120	
In	115	1	He	230128	1.12	257801	89.27	60	120	
Tb	159	1	He	1027314	0.42	1155473	88.91	60	120	
Ho	165	1	He	1035831	0.75	1147359	90.28	60	120	
Bi	209	1	He	702602	0.64	790610	88.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-30-a@2
Data File Name	156SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:49:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	118.671	118.671	0.98	2167452	0.01	10000	
Be	9	45	2	NoGas	4.029	4.029	2.61	20935	0.02	2000	
B	11	6	2	NoGas	58.084	58.084	2.87	222683	0.03	300	
Na	23	45	1	He	711.782	711.782	0.32	309166	0.23	500000	
Mg	24	45	1	He	19044.898	19044.898	0.61	4522880	0.42	500000	
Al	27	45	1	He	56402.391	56402.391	0.23	5628979	1.00	200000	
K	39	45	1	He	8834.854	8834.854	0.68	1039851	0.85	500000	
Ca	44	45	1	He	64023.348	64023.348	0.35	433101	14.78	500000	
Ti	47	45	1	He	483.693	483.693	1.24	23554	2.05	2500	
V	51	45	1	He	91.340	91.340	0.75	152853	0.06	10000	
Cr	52	45	1	He	105.172	105.172	0.32	219635	0.05	10000	
Mn	55	45	1	He	1982.452	1982.452	1.20	2079306	0.10	10000	
Fe	56	45	1	He	127651.043	127651.043	0.43	209932654	0.06	200000	
Co	59	45	1	He	108.998	108.998	0.49	411818	0.03	5000	
Ni	60	45	1	He	1175.321	1175.321	0.54	1232150	0.10	10000	
Cu	63	45	1	He	726.975	726.975	0.50	2152833	0.03	10000	
Zn	66	45	1	He	1250.068	1250.068	0.43	428363	0.29	10000	
As	75	115	1	He	1226.548	1226.548	1.56	268903	0.46	10000	
Se	78	115	1	He	20.081	20.081	7.89	215	9.32	10000	
Sr	88	103	1	He	160.623	160.623	0.61	157954	0.10	10000	
Mo	95	103	1	He	15.541	15.541	0.53	18374	0.08	2000	
Ag	107	103	1	He	4.086	4.086	0.62	17297	0.02	300	
Cd	111	115	1	He	3.465	3.465	1.39	1697	0.20	4000	
Sn	118	115	1	He	32.384	32.384	3.55	31326	0.10	2000	
Sb	123	115	1	He	10.672	10.672	3.03	11152	0.10	200	
Ba	137	115	1	He	330.442	330.442	0.91	121179	0.27	10000	
W	182	159	1	He	0.575	0.575	5.34	4605	0.01	2500	
Tl	205	165	1	He	4.876	4.876	1.85	40230	0.01	2000	
Pb	208	165	1	He	9133.809	9133.809	0.53	98939493	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1397351	0.82	1276810	109.44	60	120	
Sc	45	1	He	146821	2.08	163460	89.82	60	120	
Sc	45	2	NoGas	9274875	0.57	8842934	104.88	60	120	
Rh	103	1	He	843942	1.88	1010526	83.52	60	120	
In	115	1	He	222319	2.59	257801	86.24	60	120	
Tb	159	1	He	1046097	1.52	1155473	90.53	60	120	
Ho	165	1	He	1057456	1.12	1147359	92.16	60	120	
Bi	209	1	He	707864	0.73	790610	89.53	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-30-a@20
Data File Name	157SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:53:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.757	12.757	0.45	296514	0.00	10000	
Be	9	45	2	NoGas	0.509	0.509	4.40	2582	0.02	2000	
B	11	6	2	NoGas	8.276	8.276	4.58	43396	0.02	300	
Na	23	45	1	He	79.756	79.756	3.48	39903	0.20	500000	
Mg	24	45	1	He	1971.188	1971.188	0.54	451140	0.44	500000	
Al	27	45	1	He	5636.818	5636.818	1.08	541621	1.04	200000	
K	39	45	1	He	938.178	938.178	0.94	114378	0.82	500000	
Ca	44	45	1	He	6779.248	6779.248	1.00	44714	15.16	500000	
Ti	47	45	1	He	51.189	51.189	4.40	2400	2.13	2500	
V	51	45	1	He	9.828	9.828	2.47	15971	0.06	10000	
Cr	52	45	1	He	11.443	11.443	1.27	23692	0.05	10000	
Mn	55	45	1	He	195.424	195.424	0.74	198379	0.10	10000	
Fe	56	45	1	He	13643.252	13643.252	1.58	21595031	0.06	200000	
Co	59	45	1	He	11.596	11.596	2.66	42540	0.03	5000	
Ni	60	45	1	He	128.355	128.355	0.34	129683	0.10	10000	
Cu	63	45	1	He	73.336	73.336	0.45	213104	0.03	10000	
Zn	66	45	1	He	132.015	132.015	0.64	46058	0.29	10000	
As	75	115	1	He	123.902	123.902	1.46	27867	0.44	10000	
Se	78	115	1	He	2.398	2.398	19.52	29	8.17	10000	
Sr	88	103	1	He	15.582	15.582	1.68	16016	0.10	10000	
Mo	95	103	1	He	1.514	1.514	4.36	1881	0.08	2000	
Ag	107	103	1	He	0.425	0.425	6.98	1880	0.02	300	
Cd	111	115	1	He	0.395	0.395	1.68	200	0.20	4000	
Sn	118	115	1	He	1.908	1.908	9.66	3204	0.06	2000	
Sb	123	115	1	He	1.168	1.168	4.66	1270	0.09	200	
Ba	137	115	1	He	32.748	32.748	2.29	12316	0.27	10000	
W	182	159	1	He	0.067	0.067	25.63	1841	0.00	2500	
Tl	205	165	1	He	0.511	0.511	2.36	4163	0.01	2000	
Pb	208	165	1	He	972.557	972.557	1.25	10340253	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1460876	0.63	1276810	114.42	60	120	
Sc	45	1	He	141301	0.45	163460	86.44	60	120	
Sc	45	2	NoGas	8767189	0.35	8842934	99.14	60	120	
Rh	103	1	He	877680	0.96	1010526	86.85	60	120	
In	115	1	He	227867	0.94	257801	88.39	60	120	
Tb	159	1	He	1029329	0.70	1155473	89.08	60	120	
Ho	165	1	He	1037895	0.86	1147359	90.46	60	120	
Bi	209	1	He	704330	0.67	790610	89.09	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@500
Data File Name	158SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-07T23:57:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.534	1.534	1.35	108119	0.00	10000	
Be	9	45	2	NoGas	0.104	0.104	15.95	589	0.02	2000	
B	11	6	2	NoGas	3.165	3.165	3.70	23656	0.01	300	
Na	23	45	1	He	11.131	11.131	10.42	11886	0.09	500000	
Mg	24	45	1	He	96.997	96.997	0.50	22759	0.43	500000	
Al	27	45	1	He	460.711	460.711	2.19	44336	1.04	200000	
K	39	45	1	He	126.939	126.939	2.22	23223	0.55	500000	
Ca	44	45	1	He	458.893	458.893	2.55	3617	12.69	500000	
Ti	47	45	1	He	5.723	5.723	13.52	269	2.13	2500	
V	51	45	1	He	0.743	0.743	61.97	1346	0.06	10000	
Cr	52	45	1	He	20.409	20.409	1.14	41493	0.05	10000	
Mn	55	45	1	He	5.009	5.009	4.93	6301	0.08	10000	
Fe	56	45	1	He	852.700	852.700	3.29	1347901	0.06	200000	
Co	59	45	1	He	0.544	0.544	2.37	2388	0.02	5000	
Ni	60	45	1	He	2.143	2.143	9.82	2360	0.09	10000	
Cu	63	45	1	He	0.845	0.845	10.21	6918	0.01	10000	
Zn	66	45	1	He	-2.038	-2.038	-29.39	2139	-0.10	10000	
As	75	115	1	He	0.610	0.610	6.41	163	0.37	10000	
Se	78	115	1	He	0.440	0.440	41.92	8	5.41	10000	
Sr	88	103	1	He	1.690	1.690	4.87	1817	0.09	10000	
Mo	95	103	1	He	0.091	0.091	12.10	133	0.07	2000	
Ag	107	103	1	He	0.006	0.006	39.24	37	0.02	300	
Cd	111	115	1	He	0.086	0.086	26.25	44	0.19	4000	
Sn	118	115	1	He	-0.954	-0.954	-8.68	489	-0.20	2000	
Sb	123	115	1	He	0.281	0.281	18.83	323	0.09	200	
Ba	137	115	1	He	12.473	12.473	4.69	4694	0.27	10000	
W	182	159	1	He	0.036	0.036	47.45	1656	0.00	2500	
Tl	205	165	1	He	0.016	0.016	17.52	158	0.01	2000	
Pb	208	165	1	He	13.048	13.048	1.39	138742	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1442616	0.65	1276810	112.99	60	120	
Sc	45	1	He	140797	1.45	163460	86.14	60	120	
Sc	45	2	NoGas	8552476	0.23	8842934	96.72	60	120	
Rh	103	1	He	876080	0.50	1010526	86.70	60	120	
In	115	1	He	227813	0.27	257801	88.37	60	120	
Tb	159	1	He	1015877	0.86	1155473	87.92	60	120	
Ho	165	1	He	1029879	0.14	1147359	89.76	60	120	
Bi	209	1	He	700138	0.91	790610	88.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-32-a@2
Data File Name	159SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:02:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	159.466	159.466	1.81	2874016	0.01	10000	
Be	9	45	2	NoGas	4.497	4.497	3.39	23286	0.02	2000	
B	11	6	2	NoGas	272.777	272.777	0.08	938412	0.03	300	
Na	23	45	1	He	2063.998	2063.998	0.66	895901	0.23	500000	
Mg	24	45	1	He	22312.177	22312.177	0.12	5383398	0.41	500000	
Al	27	45	1	He	123753.005	123753.005	0.44	12546608	0.99	200000	
K	39	45	1	He	29615.159	29615.159	1.31	3518784	0.84	500000	
Ca	44	45	1	He	126286.435	126286.435	0.42	867192	14.56	500000	
Ti	47	45	1	He	1390.492	1390.492	0.41	68776	2.02	2500	
V	51	45	1	He	191.386	191.386	7.80	324988	0.06	10000	
Cr	52	45	1	He	2613.019	2613.019	0.39	5523980	0.05	10000	
Mn	55	45	1	He	1111.875	1111.875	1.06	1185224	0.09	10000	
Fe	56	45	1	He	159452.162	159452.162	1.44	266416896	0.06	200000	
Co	59	45	1	He	78.117	78.117	1.01	299986	0.03	5000	
Ni	60	45	1	He	322.333	322.333	0.56	343440	0.09	10000	
Cu	63	45	1	He	335.226	335.226	0.70	1011159	0.03	10000	
Zn	66	45	1	He	767.089	767.089	0.82	268197	0.29	10000	
As	75	115	1	He	95.536	95.536	0.85	20283	0.47	10000	
Se	78	115	1	He	19.600	19.600	1.95	203	9.63	10000	
Sr	88	103	1	He	471.749	471.749	0.73	445445	0.11	10000	
Mo	95	103	1	He	25.607	25.607	0.87	29068	0.09	2000	
Ag	107	103	1	He	0.741	0.741	3.00	3019	0.02	300	
Cd	111	115	1	He	5.208	5.208	2.36	2466	0.21	4000	
Sn	118	115	1	He	71.516	71.516	1.64	65359	0.11	2000	
Sb	123	115	1	He	48.823	48.823	1.69	49264	0.10	200	
Ba	137	115	1	He	3535.029	3535.029	0.83	1253944	0.28	10000	
W	182	159	1	He	3.455	3.455	2.47	19690	0.02	2500	
Tl	205	165	1	He	2.094	2.094	1.35	16971	0.01	2000	
Pb	208	165	1	He	2966.341	2966.341	0.72	31520365	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1306324	0.80	1276810	102.31	60	120	
Sc	45	1	He	149162	1.63	163460	91.25	60	120	
Sc	45	2	NoGas	9252026	1.34	8842934	104.63	60	120	
Rh	103	1	He	810724	1.98	1010526	80.23	60	120	
In	115	1	He	215013	0.89	257801	83.40	60	120	
Tb	159	1	He	1024233	1.89	1155473	88.64	60	120	
Ho	165	1	He	1037330	1.32	1147359	90.41	60	120	
Bi	209	1	He	663831	0.72	790610	83.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-33-a@2
Data File Name	160SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:06:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	102.640	102.640	1.60	1780557	0.01	10000	
Be	9	45	2	NoGas	2.501	2.501	3.46	12297	0.02	2000	
B	11	6	2	NoGas	219.887	219.887	1.32	778848	0.03	300	
Na	23	45	1	He	903.017	903.017	1.29	379769	0.24	500000	
Mg	24	45	1	He	15479.010	15479.010	0.79	3578259	0.43	500000	
Al	27	45	1	He	47623.306	47623.306	1.87	4626125	1.03	200000	
K	39	45	1	He	13043.871	13043.871	1.85	1490016	0.88	500000	
Ca	44	45	1	He	62890.820	62890.820	0.99	414096	15.19	500000	
Ti	47	45	1	He	269.764	269.764	1.88	12786	2.11	2500	
V	51	45	1	He	94.312	94.312	2.70	153634	0.06	10000	
Cr	52	45	1	He	379.542	379.542	1.66	769397	0.05	10000	
Mn	55	45	1	He	1134.635	1134.635	0.88	1158706	0.10	10000	
Fe	56	45	1	He	150077.284	150077.284	1.08	240220648	0.06	200000	
Co	59	45	1	He	50.343	50.343	1.30	185362	0.03	5000	
Ni	60	45	1	He	191.098	191.098	1.49	195173	0.10	10000	
Cu	63	45	1	He	97.392	97.392	1.26	284718	0.03	10000	
Zn	66	45	1	He	437.495	437.495	1.47	147779	0.30	10000	
As	75	115	1	He	108.161	108.161	1.97	23577	0.46	10000	
Se	78	115	1	He	9.996	9.996	7.72	108	9.24	10000	
Sr	88	103	1	He	195.217	195.217	1.56	188496	0.10	10000	
Mo	95	103	1	He	17.753	17.753	0.83	20609	0.09	2000	
Ag	107	103	1	He	0.128	0.128	4.52	544	0.02	300	
Cd	111	115	1	He	8.826	8.826	2.00	4293	0.21	4000	
Sn	118	115	1	He	20.366	20.366	3.15	20087	0.10	2000	
Sb	123	115	1	He	1.699	1.699	7.31	1781	0.10	200	
Ba	137	115	1	He	337.481	337.481	1.29	122935	0.27	10000	
W	182	159	1	He	0.196	0.196	11.71	2493	0.01	2500	
Tl	205	165	1	He	3.385	3.385	2.07	27080	0.01	2000	
Pb	208	165	1	He	156.843	156.843	0.75	1647443	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1341467	1.24	1276810	105.06	60	120	
Sc	45	1	He	142906	0.40	163460	87.43	60	120	
Sc	45	2	NoGas	8751693	0.37	8842934	98.97	60	120	
Rh	103	1	He	828798	0.84	1010526	82.02	60	120	
In	115	1	He	220828	1.36	257801	85.66	60	120	
Tb	159	1	He	1014449	1.31	1155473	87.80	60	120	
Ho	165	1	He	1024765	0.90	1147359	89.32	60	120	
Bi	209	1	He	668033	0.84	790610	84.50	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-34-a@2
Data File Name	161SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:10:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	91.459	91.459	2.26	1600507	0.01	10000	
Be	9	45	2	NoGas	2.624	2.624	5.43	12938	0.02	2000	
B	11	6	2	NoGas	235.548	235.548	1.49	849765	0.03	300	
Na	23	45	1	He	1770.161	1770.161	1.90	741524	0.24	500000	
Mg	24	45	1	He	12193.459	12193.459	1.39	2835249	0.43	500000	
Al	27	45	1	He	39112.249	39112.249	1.39	3821768	1.02	200000	
K	39	45	1	He	5175.764	5175.764	2.03	600217	0.86	500000	
Ca	44	45	1	He	3789.933	3789.933	1.59	25719	14.74	500000	
Ti	47	45	1	He	277.185	277.185	1.26	13216	2.10	2500	
V	51	45	1	He	90.676	90.676	2.27	148552	0.06	10000	
Cr	52	45	1	He	62.974	62.974	1.84	129053	0.05	10000	
Mn	55	45	1	He	1440.434	1440.434	1.59	1479473	0.10	10000	
Fe	56	45	1	He	119268.196	119268.196	1.67	192018970	0.06	200000	
Co	59	45	1	He	47.976	47.976	1.29	177710	0.03	5000	
Ni	60	45	1	He	122.945	122.945	1.65	126364	0.10	10000	
Cu	63	45	1	He	82.158	82.158	2.00	242294	0.03	10000	
Zn	66	45	1	He	339.265	339.265	1.29	115914	0.29	10000	
As	75	115	1	He	69.089	69.089	1.70	15228	0.45	10000	
Se	78	115	1	He	16.079	16.079	6.21	174	9.25	10000	
Sr	88	103	1	He	30.747	30.747	3.47	30157	0.10	10000	
Mo	95	103	1	He	29.830	29.830	3.35	35077	0.09	2000	
Ag	107	103	1	He	0.069	0.069	15.93	303	0.02	300	
Cd	111	115	1	He	0.477	0.477	15.11	236	0.20	4000	
Sn	118	115	1	He	19.094	19.094	1.85	19108	0.10	2000	
Sb	123	115	1	He	1.032	1.032	4.27	1102	0.09	200	
Ba	137	115	1	He	208.302	208.302	0.72	76680	0.27	10000	
W	182	159	1	He	0.165	0.165	23.74	2356	0.01	2500	
Tl	205	165	1	He	1.979	1.979	2.47	16098	0.01	2000	
Pb	208	165	1	He	50.106	50.106	0.06	535567	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367613	1.77	1276810	107.11	60	120	
Sc	45	1	He	143763	2.04	163460	87.95	60	120	
Sc	45	2	NoGas	8778017	0.74	8842934	99.27	60	120	
Rh	103	1	He	839785	0.50	1010526	83.10	60	120	
In	115	1	He	223134	1.26	257801	86.55	60	120	
Tb	159	1	He	1026674	1.17	1155473	88.85	60	120	
Ho	165	1	He	1041307	0.78	1147359	90.76	60	120	
Bi	209	1	He	670728	1.10	790610	84.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-35-a@2
Data File Name	162SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:15:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	58.608	58.608	0.42	1015097	0.01	10000	
Be	9	45	2	NoGas	1.552	1.552	6.75	7391	0.02	2000	
B	11	6	2	NoGas	39.956	39.956	0.12	155781	0.03	300	
Na	23	45	1	He	447.661	447.661	2.84	178771	0.25	500000	
Mg	24	45	1	He	47085.660	47085.660	1.62	10132777	0.46	500000	
Al	27	45	1	He	24101.935	24101.935	2.77	2179494	1.11	200000	
K	39	45	1	He	5076.114	5076.114	2.51	545006	0.93	500000	
Ca	44	45	1	He	173790.735	173790.735	2.15	1064198	16.33	500000	
Ti	47	45	1	He	394.298	394.298	3.95	17393	2.27	2500	
V	51	45	1	He	60.753	60.753	2.13	92183	0.07	10000	
Cr	52	45	1	He	42.895	42.895	2.52	81600	0.05	10000	
Mn	55	45	1	He	1824.262	1824.262	3.28	1733205	0.11	10000	
Fe	56	45	1	He	83750.230	83750.230	2.69	124789524	0.07	200000	
Co	59	45	1	He	33.224	33.224	2.54	114015	0.03	5000	
Ni	60	45	1	He	85.422	85.422	3.03	81324	0.11	10000	
Cu	63	45	1	He	89.621	89.621	2.53	244250	0.04	10000	
Zn	66	45	1	He	294.552	294.552	1.87	93497	0.32	10000	
As	75	115	1	He	53.893	53.893	2.34	11285	0.48	10000	
Se	78	115	1	He	13.551	13.551	11.41	139	9.72	10000	
Sr	88	103	1	He	211.277	211.277	0.79	195513	0.11	10000	
Mo	95	103	1	He	21.219	21.219	0.09	23606	0.09	2000	
Ag	107	103	1	He	0.189	0.189	13.55	762	0.02	300	
Cd	111	115	1	He	0.984	0.984	9.70	460	0.21	4000	
Sn	118	115	1	He	20.596	20.596	5.07	19467	0.11	2000	
Sb	123	115	1	He	0.798	0.798	9.16	813	0.10	200	
Ba	137	115	1	He	166.299	166.299	1.79	58130	0.29	10000	
W	182	159	1	He	0.244	0.244	18.41	2689	0.01	2500	
Tl	205	165	1	He	1.258	1.258	0.49	9880	0.01	2000	
Pb	208	165	1	He	58.801	58.801	0.31	606108	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1388585	0.88	1276810	108.75	60	120	
Sc	45	1	He	133096	3.14	163460	81.42	60	120	
Sc	45	2	NoGas	8434650	0.25	8842934	95.38	60	120	
Rh	103	1	He	794331	0.79	1010526	78.61	60	120	
In	115	1	He	211902	1.40	257801	82.20	60	120	
Tb	159	1	He	995625	1.11	1155473	86.17	60	120	
Ho	165	1	He	1004511	0.29	1147359	87.55	60	120	
Bi	209	1	He	654756	0.29	790610	82.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-36-a@2
Data File Name	163SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:19:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	50.634	50.634	1.65	918966	0.01	10000	
Be	9	45	2	NoGas	1.256	1.256	3.24	6209	0.02	2000	
B	11	6	2	NoGas	36.300	36.300	1.43	144943	0.03	300	
Na	23	45	1	He	390.947	390.947	1.97	162184	0.24	500000	
Mg	24	45	1	He	45109.461	45109.461	1.97	10026972	0.45	500000	
Al	27	45	1	He	20526.315	20526.315	2.03	1917607	1.07	200000	
K	39	45	1	He	4082.822	4082.822	0.86	454596	0.90	500000	
Ca	44	45	1	He	165150.789	165150.789	1.45	1044702	15.81	500000	
Ti	47	45	1	He	333.523	333.523	2.93	15201	2.19	2500	
V	51	45	1	He	50.996	50.996	4.39	79938	0.06	10000	
Cr	52	45	1	He	33.531	33.531	2.61	66054	0.05	10000	
Mn	55	45	1	He	1612.103	1612.103	1.95	1582674	0.10	10000	
Fe	56	45	1	He	72378.770	72378.770	1.85	111411702	0.06	200000	
Co	59	45	1	He	28.490	28.490	2.11	101056	0.03	5000	
Ni	60	45	1	He	73.390	73.390	2.25	72200	0.10	10000	
Cu	63	45	1	He	77.622	77.622	2.37	219117	0.04	10000	
Zn	66	45	1	He	233.113	233.113	2.02	77001	0.30	10000	
As	75	115	1	He	46.521	46.521	1.87	9877	0.47	10000	
Se	78	115	1	He	12.216	12.216	2.30	128	9.55	10000	
Sr	88	103	1	He	202.189	202.189	1.37	191724	0.11	10000	
Mo	95	103	1	He	18.657	18.657	1.38	21271	0.09	2000	
Ag	107	103	1	He	0.186	0.186	7.43	768	0.02	300	
Cd	111	115	1	He	0.868	0.868	3.89	412	0.21	4000	
Sn	118	115	1	He	20.459	20.459	4.47	19612	0.10	2000	
Sb	123	115	1	He	0.688	0.688	17.40	714	0.10	200	
Ba	137	115	1	He	128.836	128.836	1.86	45649	0.28	10000	
W	182	159	1	He	0.219	0.219	26.31	2612	0.01	2500	
Tl	205	165	1	He	1.146	1.146	2.82	9173	0.01	2000	
Pb	208	165	1	He	54.714	54.714	0.39	574518	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411839	0.78	1276810	110.58	60	120	
Sc	45	1	He	137441	0.92	163460	84.08	60	120	
Sc	45	2	NoGas	8727866	0.95	8842934	98.70	60	120	
Rh	103	1	He	813948	0.14	1010526	80.55	60	120	
In	115	1	He	214758	0.19	257801	83.30	60	120	
Tb	159	1	He	1015620	0.52	1155473	87.90	60	120	
Ho	165	1	He	1023177	0.96	1147359	89.18	60	120	
Bi	209	1	He	661778	0.56	790610	83.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-g-37-a@2
Data File Name	164SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:23:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	74.907	74.907	0.72	1339450	0.01	10000	
Be	9	45	2	NoGas	1.950	1.950	1.41	9733	0.02	2000	
B	11	6	2	NoGas	84.736	84.736	1.03	325135	0.03	300	
Na	23	45	1	He	567.051	567.051	0.27	238449	0.24	500000	
Mg	24	45	1	He	47092.885	47092.885	0.35	10758551	0.44	500000	
Al	27	45	1	He	34504.423	34504.423	0.33	3312822	1.04	200000	
K	39	45	1	He	6914.764	6914.764	0.43	784949	0.88	500000	
Ca	44	45	1	He	176749.567	176749.567	0.20	1149069	15.38	500000	
Ti	47	45	1	He	540.596	540.596	0.75	25322	2.13	2500	
V	51	45	1	He	81.158	81.158	1.50	130677	0.06	10000	
Cr	52	45	1	He	52.843	52.843	0.45	106546	0.05	10000	
Mn	55	45	1	He	1814.411	1814.411	0.61	1830634	0.10	10000	
Fe	56	45	1	He	94224.287	94224.287	0.53	149060830	0.06	200000	
Co	59	45	1	He	39.362	39.362	0.55	143335	0.03	5000	
Ni	60	45	1	He	107.285	107.285	0.99	108378	0.10	10000	
Cu	63	45	1	He	107.438	107.438	0.90	309955	0.03	10000	
Zn	66	45	1	He	342.078	342.078	1.22	114814	0.30	10000	
As	75	115	1	He	59.875	59.875	1.10	12854	0.47	10000	
Se	78	115	1	He	14.832	14.832	5.08	156	9.48	10000	
Sr	88	103	1	He	240.144	240.144	0.85	228819	0.10	10000	
Mo	95	103	1	He	20.939	20.939	0.63	23987	0.09	2000	
Ag	107	103	1	He	0.221	0.221	9.54	919	0.02	300	
Cd	111	115	1	He	1.090	1.090	9.04	522	0.21	4000	
Sn	118	115	1	He	22.312	22.312	4.21	21511	0.10	2000	
Sb	123	115	1	He	1.984	1.984	1.43	2043	0.10	200	
Ba	137	115	1	He	208.968	208.968	0.69	74904	0.28	10000	
W	182	159	1	He	0.269	0.269	12.74	2919	0.01	2500	
Tl	205	165	1	He	1.310	1.310	1.28	10684	0.01	2000	
Pb	208	165	1	He	410.788	410.788	0.85	4390150	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1421276	0.95	1276810	111.31	60	120	
Sc	45	1	He	141243	1.11	163460	86.41	60	120	
Sc	45	2	NoGas	8863838	1.03	8842934	100.24	60	120	
Rh	103	1	He	817954	0.92	1010526	80.94	60	120	
In	115	1	He	217282	1.59	257801	84.28	60	120	
Tb	159	1	He	1032607	1.11	1155473	89.37	60	120	
Ho	165	1	He	1043019	0.52	1147359	90.91	60	120	
Bi	209	1	He	671093	0.73	790610	84.88	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ZZZZ
Data File Name	165ICSA.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:27:40-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.356	3.3	105273	1.3	4	
Be	9	45	2	NoGas	0.068	20.7	419	16.9	2	
B	11	6	2	NoGas	5.394	0.3	32021	0.9	20	
Na	23	45	1	He	49187.708	0.6	19427081	0.4	75200	
Mg	24	45	1	He	48853.105	0.2	10814138	0.8	75200	
Al	27	45	1	He	52230.296	1.2	4858801	1.3	75200	
K	39	45	1	He	50787.482	0.8	5530697	0.4	75200	
Ca	44	45	1	He	50446.050	0.7	318225	1.1	75200	
Ti	47	45	1	He	995.924	1.5	45197	0.9	1505	
V	51	45	1	He	-0.066	-169.9	48	361.2	4	
Cr	52	45	1	He	0.698	1.9	2109	0.6	4	
Mn	55	45	1	He	-0.271	-22.0	969	5.8	4	
Fe	56	45	1	He	49476.332	0.8	75842890	0.4	75200	
Co	59	45	1	He	-0.072	-6.8	157	11.3	2	
Ni	60	45	1	He	-0.033	-52.9	168	10.9	4	
Cu	63	45	1	He	-0.701	-12.3	2464	9.0	4	
Zn	66	45	1	He	-7.467	-3.6	358	23.4	20	
As	75	115	1	He	0.082	30.1	42	13.1	4	
Se	78	115	1	He	0.106	255.3	4	65.6	4	
Sr	88	103	1	He	0.353	8.8	421	7.5	20	
Mo	95	103	1	He	1060.995	1.4	1209977	1.1	1505	
Ag	107	103	1	He	0.012	43.4	61	36.3	1	
Cd	111	115	1	He	-0.003	-1525.2	0	-10092.2	1	
Sn	118	115	1	He	-1.129	-6.7	307	21.8	20	
Sb	123	115	1	He	0.036	9.7	58	6.7	4	
Ba	137	115	1	He	0.161	65.3	63	59.8	2	
W	182	159	1	He	0.061	52.2	1774	9.4	20	
Tl	205	165	1	He	0.007	29.8	82	18.7	2	
Pb	208	165	1	He	0.395	5.7	5238	4.8	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1442319	0.73	1276810	112.96	60	120	
Sc	45	1	He	136861	0.77	163460	83.73	60	120	
Sc	45	2	NoGas	8554971	0.79	8842934	96.74	60	120	
Rh	103	1	He	814991	0.79	1010526	80.65	60	120	
In	115	1	He	216782	0.66	257801	84.09	60	120	
Tb	159	1	He	1009521	0.60	1155473	87.37	60	120	
Ho	165	1	He	1025849	0.28	1147359	89.41	60	120	
Bi	209	1	He	671245	1.05	790610	84.90	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ZZZZ
Data File Name	166ICAB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:31:49-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	116.760	1.359	1872691	0.68	100	116.8	49.5	150.5	
Be	9	45	2	NoGas	106.041	1.709	481205	1.09	100	106.0	49.5	150.5	
B	11	6	2	NoGas	93.499	1.056	332047	0.71	100	93.5	49.5	150.5	
Na	23	45	1	He	9241.349	104.070	6894825	100.09	50000	18.5	49.5	150.5	Fail
Mg	24	45	1	He	9188.741	105.524	3831938	101.80	50000	18.4	49.5	150.5	Fail
Al	27	45	1	He	9437.142	107.623	1654234	103.79	50000	18.9	49.5	150.5	Fail
K	39	45	1	He	9444.026	108.325	1953333	103.46	50000	18.9	49.5	150.5	Fail
Ca	44	45	1	He	9181.277	106.688	110170	101.72	50000	18.4	49.5	150.5	Fail
Ti	47	45	1	He	198.441	105.117	16983	101.30	1100	18.0	49.5	150.5	Fail
V	51	45	1	He	18.001	108.107	53272	103.39	100	18.0	49.5	150.5	Fail
Cr	52	45	1	He	18.511	105.346	68881	99.86	100	18.5	49.5	150.5	Fail
Mn	55	45	1	He	17.653	112.811	34834	101.50	100	17.7	49.5	150.5	Fail
Fe	56	45	1	He	9005.128	107.065	26022244	103.21	50000	18.0	49.5	150.5	Fail
Co	59	45	1	He	18.468	107.278	123231	102.79	100	18.5	49.5	150.5	Fail
Ni	60	45	1	He	18.216	106.823	33908	101.91	100	18.2	49.5	150.5	Fail
Cu	63	45	1	He	17.187	114.713	97484	101.26	100	17.2	49.5	150.5	Fail
Zn	66	45	1	He	11.501	189.654	12015	104.66	100	11.5	49.5	150.5	Fail
As	75	115	1	He	18.232	118.659	7132	107.67	100	18.2	49.5	150.5	Fail
Se	78	115	1	He	17.652	123.358	336	110.91	100	17.7	49.5	150.5	Fail
Sr	88	103	1	He	18.386	112.636	34217	102.17	100	18.4	49.5	150.5	Fail
Mo	95	103	1	He	199.044	118.070	442423	108.08	1100	18.1	49.5	150.5	Fail
Ag	107	103	1	He	18.024	113.254	143875	103.14	100	18.0	49.5	150.5	Fail
Cd	111	115	1	He	18.298	114.823	15918	104.41	100	18.3	49.5	150.5	Fail
Sn	118	115	1	He	20.971	122.716	36866	104.44	100	21.0	49.5	150.5	Fail
Sb	123	115	1	He	20.142	109.416	37269	99.38	100	20.1	49.5	150.5	Fail
Ba	137	115	1	He	20.795	113.468	13534	103.28	100	20.8	49.5	150.5	Fail
W	182	159	1	He	19.501	91.016	201748	82.03	100	19.5	49.5	150.5	Fail
Tl	205	165	1	He	16.254	123.267	257533	112.56	100	16.3	49.5	150.5	Fail
Pb	208	165	1	He	19.212	107.488	402648	96.65	100	19.2	49.5	150.5	Fail

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1319826	0.33	1276810	103.37	60	120	
Sc	45	1	He	262278	25.89	163460	160.45	60	120	ISTD warning
Sc	45	2	NoGas	8139315	0.62	8842934	92.04	60	120	
Rh	103	1	He	1711042	27.60	1010526	169.32	60	120	ISTD warning
In	115	1	He	426866	29.23	257801	165.58	60	120	ISTD warning
Tb	159	1	He	2141707	28.32	1155473	185.35	60	120	ISTD warning
Ho	165	1	He	2192447	28.14	1147359	191.09	60	120	ISTD warning
Bi	209	1	He	1496114	26.54	790610	189.24	60	120	ISTD warning

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	167_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:35:58-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.047	0.918	944010	0.29	50	112.1	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	51.916	1.378	236621	1.95	50	103.8	89.5	110.5	
B	11	6	2	NoGas	43.927	2.057	170083	0.42	50	87.9	89.5	110.5	CCV Failed
Na	23	45	1	He	24814.828	1.445	9386273	0.14	25000	99.3	89.5	110.5	
Mg	24	45	1	He	24360.419	1.881	5162456	0.57	25000	97.4	89.5	110.5	
Al	27	45	1	He	244.772	3.034	22033	1.98	250	97.9	89.5	110.5	
K	39	45	1	He	25771.931	2.035	2690907	0.93	25000	103.1	89.5	110.5	
Ca	44	45	1	He	25073.773	1.808	151719	0.63	25000	100.3	89.5	110.5	
Ti	47	45	1	He	49.415	6.823	2150	8.09	50	98.8	89.5	110.5	
V	51	45	1	He	50.814	2.329	75962	2.62	50	101.6	89.5	110.5	
Cr	52	45	1	He	49.763	2.496	93107	1.17	50	99.5	89.5	110.5	
Mn	55	45	1	He	247.584	1.944	232723	0.69	250	99.0	89.5	110.5	
Fe	56	45	1	He	12538.101	2.446	18402065	1.70	12500	100.3	89.5	110.5	
Co	59	45	1	He	49.979	2.173	168712	0.93	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.040	1.557	46997	0.32	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.119	1.433	133739	0.19	50	98.2	89.5	110.5	
Zn	66	45	1	He	46.425	2.480	16710	0.97	50	92.9	89.5	110.5	
As	75	115	1	He	48.117	0.821	10145	0.88	50	96.2	89.5	110.5	
Se	78	115	1	He	49.291	5.615	503	4.92	50	98.6	89.5	110.5	
Sr	88	103	1	He	51.108	0.587	48052	0.31	50	102.2	89.5	110.5	
Mo	95	103	1	He	53.839	2.403	60737	1.89	50	107.7	89.5	110.5	
Ag	107	103	1	He	50.246	0.755	202999	0.32	50	100.5	89.5	110.5	
Cd	111	115	1	He	49.110	1.360	23066	1.15	50	98.2	89.5	110.5	
Sn	118	115	1	He	49.986	3.658	45699	3.21	50	100.0	89.5	110.5	
Sb	123	115	1	He	51.697	1.905	51734	1.65	50	103.4	89.5	110.5	
Ba	137	115	1	He	51.776	1.892	18221	1.20	50	103.6	89.5	110.5	
W	182	159	1	He	50.361	1.245	254956	1.38	50	100.7	89.5	110.5	
Tl	205	165	1	He	50.920	1.742	392663	1.95	50	101.8	89.5	110.5	
Pb	208	165	1	He	51.274	0.572	520374	0.69	50	102.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1388548	2.30	1276810	108.75	60	120	
Sc	45	1	He	131038	1.31	163460	80.17	60	120	
Sc	45	2	NoGas	8172472	0.95	8842934	92.42	60	120	
Rh	103	1	He	805990	0.75	1010526	79.76	60	120	
In	115	1	He	213281	0.68	257801	82.73	60	120	
Tb	159	1	He	978314	0.28	1155473	84.67	60	120	
Ho	165	1	He	988768	0.34	1147359	86.18	60	120	
Bi	209	1	He	656616	0.90	790610	83.05	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	168_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:40:12-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.206	6.2	98143	0.6	8	
Be	9	45	2	NoGas	0.284	20.3	1382	18.9	1	
B	11	6	2	NoGas	2.800	6.2	21528	2.7	20	
Na	23	45	1	He	91.012	3.5	41771	4.5	1000	
Mg	24	45	1	He	71.139	1.7	15889	1.2	1000	
Al	27	45	1	He	1.870	13.0	409	6.2	50	
K	39	45	1	He	89.965	6.6	17972	1.8	1000	
Ca	44	45	1	He	66.359	3.7	1013	2.6	1000	
Ti	47	45	1	He	0.137	86.1	8	65.5	20	
V	51	45	1	He	0.158	146.8	382	90.8	2	
Cr	52	45	1	He	0.087	15.6	894	1.1	2	
Mn	55	45	1	He	0.300	47.4	1478	7.5	2	
Fe	56	45	1	He	45.240	3.8	70329	2.4	50	
Co	59	45	1	He	0.046	25.0	552	6.6	1	
Ni	60	45	1	He	0.039	46.4	231	7.9	2	
Cu	63	45	1	He	-0.883	-4.3	1902	3.9	2	
Zn	66	45	1	He	-3.374	-8.3	1605	4.8	20	
As	75	115	1	He	0.162	26.8	60	16.9	2	
Se	78	115	1	He	0.167	170.8	5	60.8	2	
Sr	88	103	1	He	0.113	24.8	200	13.2	10	
Mo	95	103	1	He	0.584	6.4	709	6.9	2	
Ag	107	103	1	He	0.148	9.2	637	9.3	0.2	
Cd	111	115	1	He	0.164	13.6	80	14.1	0.2	
Sn	118	115	1	He	-0.403	-16.0	970	7.5	10	
Sb	123	115	1	He	0.280	5.5	308	4.1	2	
Ba	137	115	1	He	0.191	18.7	74	15.7	5	
W	182	159	1	He	0.412	16.3	3523	9.5	10	
Tl	205	165	1	He	0.242	11.0	1899	11.7	0.5	
Pb	208	165	1	He	0.289	5.9	3976	3.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1393700	0.78	1276810	109.15	60	120	
Sc	45	1	He	132613	1.80	163460	81.13	60	120	
Sc	45	2	NoGas	8164251	0.63	8842934	92.33	60	120	
Rh	103	1	He	841882	0.65	1010526	83.31	60	120	
In	115	1	He	218331	1.53	257801	84.69	60	120	
Tb	159	1	He	988112	0.40	1155473	85.52	60	120	
Ho	165	1	He	990777	0.95	1147359	86.35	60	120	
Bi	209	1	He	672521	0.63	790610	85.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-6-a@10
Data File Name	169SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:44:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.642	10.642	0.93	245699	0.00	10000	
Be	9	45	2	NoGas	4.232	4.232	2.06	19522	0.02	2000	
B	11	6	2	NoGas	140.188	140.188	0.83	510191	0.03	300	
Na	23	45	1	He	516.076	516.076	1.00	201244	0.26	500000	
Mg	24	45	1	He	2794.306	2794.306	2.09	590782	0.47	500000	
Al	27	45	1	He	10862.383	10862.383	2.24	964370	1.13	200000	
K	39	45	1	He	1805.386	1805.386	0.45	195664	0.92	500000	
Ca	44	45	1	He	29010.138	29010.138	1.94	174866	16.59	500000	
Ti	47	45	1	He	250.866	250.866	4.04	10866	2.31	2500	
V	51	45	1	He	-21.655	-21.655	-69.30	-32055	0.07	10000	
Cr	52	45	1	He	5737.468	5737.468	1.58	10617895	0.05	10000	
Mn	55	45	1	He	15260.235	15260.235	1.21	14225820	0.11	10000	>LDR
Fe	56	45	1	He	46207.732	46207.732	0.88	67586575	0.07	200000	
Co	59	45	1	He	2605.919	2605.919	1.00	8748051	0.03	5000	
Ni	60	45	1	He	28302.155	28302.155	1.12	26384324	0.11	10000	>LDR
Cu	63	45	1	He	8518.197	8518.197	1.39	22392256	0.04	10000	
Zn	66	45	1	He	3033.688	3033.688	1.45	920939	0.33	10000	
As	75	115	1	He	164.709	164.709	0.54	34861	0.47	10000	
Se	78	115	1	He	264.318	264.318	1.02	2697	9.80	10000	
Sr	88	103	1	He	96.606	96.606	0.71	92259	0.10	10000	
Mo	95	103	1	He	22.111	22.111	0.69	25371	0.09	2000	
Ag	107	103	1	He	34.058	34.058	0.71	139880	0.02	300	
Cd	111	115	1	He	942.665	942.665	0.39	445170	0.21	4000	
Sn	118	115	1	He	659.884	659.884	1.25	590692	0.11	2000	
Sb	123	115	1	He	158.478	158.478	1.34	159442	0.10	200	
Ba	137	115	1	He	1537.501	1537.501	0.90	543965	0.28	10000	
W	182	159	1	He	7.701	7.701	2.17	40054	0.02	2500	
Tl	205	165	1	He	1.387	1.387	11.05	10709	0.01	2000	
Pb	208	165	1	He	15277.245	15277.245	0.93	154516349	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1367260	0.65	1276810	107.08	60	120	
Sc	45	1	He	130582	0.40	163460	79.89	60	120	
Sc	45	2	NoGas	8237028	0.74	8842934	93.15	60	120	
Rh	103	1	He	819312	0.75	1010526	81.08	60	120	
In	115	1	He	214453	1.13	257801	83.19	60	120	
Tb	159	1	He	975138	0.38	1155473	84.39	60	120	
Ho	165	1	He	987375	0.81	1147359	86.06	60	120	
Bi	209	1	He	763703	1.34	790610	96.60	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	170_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:48:27-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.851	5.8	93773	0.8	8	
Be	9	45	2	NoGas	0.054	37.5	337	28.0	1	
B	11	6	2	NoGas	4.788	5.5	28608	2.5	20	
Na	23	45	1	He	5.178	7.9	8858	2.1	1000	
Mg	24	45	1	He	2.212	10.9	1100	4.4	1000	
Al	27	45	1	He	3.466	45.9	549	26.1	50	
K	39	45	1	He	9.480	28.1	9432	2.9	1000	
Ca	44	45	1	He	-55.028	-2.8	270	3.8	1000	
Ti	47	45	1	He	0.315	27.7	16	24.8	20	
V	51	45	1	He	-0.302	-31.8	-306	-47.0	2	
Cr	52	45	1	He	1.996	21.4	4452	18.1	2	
Mn	55	45	1	He	4.032	21.3	4976	16.4	2	Blank High
Fe	56	45	1	He	24.220	18.1	38859	16.8	50	
Co	59	45	1	He	0.868	16.8	3333	15.0	1	
Ni	60	45	1	He	9.336	16.8	8969	16.6	2	Blank High
Cu	63	45	1	He	1.646	34.0	8592	17.4	2	
Zn	66	45	1	He	-6.356	-1.8	683	4.9	20	
As	75	115	1	He	0.170	23.6	61	15.1	2	
Se	78	115	1	He	0.537	34.1	9	21.5	2	
Sr	88	103	1	He	0.011	191.4	100	20.3	10	
Mo	95	103	1	He	0.137	13.2	183	11.4	2	
Ag	107	103	1	He	0.009	53.4	51	41.4	0.2	
Cd	111	115	1	He	0.426	18.0	206	17.0	0.2	Blank High
Sn	118	115	1	He	0.560	22.7	1845	6.4	10	
Sb	123	115	1	He	0.475	12.6	508	11.3	2	
Ba	137	115	1	He	0.476	23.6	177	21.8	5	
W	182	159	1	He	0.052	131.2	1678	19.4	10	
Tl	205	165	1	He	0.015	58.2	147	47.0	0.5	
Pb	208	165	1	He	4.380	11.5	45281	11.5	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1387418	0.89	1276810	108.66	60	120	
Sc	45	1	He	131666	0.37	163460	80.55	60	120	
Sc	45	2	NoGas	8260484	1.10	8842934	93.41	60	120	
Rh	103	1	He	843883	0.48	1010526	83.51	60	120	
In	115	1	He	218282	1.11	257801	84.67	60	120	
Tb	159	1	He	981603	0.97	1155473	84.95	60	120	
Ho	165	1	He	985814	0.35	1147359	85.92	60	120	
Bi	209	1	He	669953	0.72	790610	84.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64037-b-7-a@2
Data File Name	171SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:52:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.104	28.104	1.04	541986	0.01	10000	
Be	9	45	2	NoGas	1.966	1.966	2.07	9555	0.02	2000	
B	11	6	2	NoGas	111.325	111.325	1.38	420044	0.03	300	
Na	23	45	1	He	810.438	810.438	3.71	321903	0.25	500000	
Mg	24	45	1	He	8403.040	8403.040	2.43	1831042	0.46	500000	
Al	27	45	1	He	21482.007	21482.007	2.00	1966866	1.09	200000	
K	39	45	1	He	2300.229	2300.229	2.05	254769	0.90	500000	
Ca	44	45	1	He	70797.254	70797.254	3.11	439220	16.12	500000	
Ti	47	45	1	He	782.839	782.839	3.40	34961	2.24	2500	
V	51	45	1	He	59.469	59.469	1.77	91355	0.07	10000	
Cr	52	45	1	He	200.449	200.449	3.16	383283	0.05	10000	
Mn	55	45	1	He	2264.662	2264.662	3.24	2178267	0.10	10000	
Fe	56	45	1	He	80253.871	80253.871	2.54	121065666	0.07	200000	
Co	59	45	1	He	4295.524	4295.524	2.80	14871779	0.03	5000	
Ni	60	45	1	He	115057.410	115057.410	3.17	110620462	0.10	10000	>LDR
Cu	63	45	1	He	1412.281	1412.281	3.76	3832214	0.04	10000	
Zn	66	45	1	He	1079.765	1079.765	3.04	339782	0.32	10000	
As	75	115	1	He	130.941	130.941	1.32	28321	0.46	10000	
Se	78	115	1	He	12.080	12.080	5.97	129	9.36	10000	
Sr	88	103	1	He	103.237	103.237	0.38	98626	0.10	10000	
Mo	95	103	1	He	12.724	12.724	0.87	14614	0.09	2000	
Ag	107	103	1	He	0.599	0.599	4.31	2472	0.02	300	
Cd	111	115	1	He	76.312	76.312	0.92	36823	0.21	4000	
Sn	118	115	1	He	52.862	52.862	3.67	49588	0.11	2000	
Sb	123	115	1	He	25.915	25.915	3.40	26653	0.10	200	
Ba	137	115	1	He	296.325	296.325	0.60	107124	0.28	10000	
W	182	159	1	He	0.926	0.926	5.97	6205	0.01	2500	
Tl	205	165	1	He	0.982	0.982	2.76	7746	0.01	2000	
Pb	208	165	1	He	678.222	678.222	1.96	7000396	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409732	1.82	1276810	110.41	60	120	
Sc	45	1	He	134711	1.29	163460	82.41	60	120	
Sc	45	2	NoGas	8632802	0.71	8842934	97.62	60	120	
Rh	103	1	He	819680	1.32	1010526	81.11	60	120	
In	115	1	He	219130	1.46	257801	85.00	60	120	
Tb	159	1	He	999084	1.01	1155473	86.47	60	120	
Ho	165	1	He	1007435	0.62	1147359	87.80	60	120	
Bi	209	1	He	680408	0.59	790610	86.06	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	172_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T00:56:47-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.852	11.5	97375	1.5	8	
Be	9	45	2	NoGas	0.056	24.4	359	17.9	1	
B	11	6	2	NoGas	6.370	4.1	36032	2.4	20	
Na	23	45	1	He	3.008	73.3	8232	8.5	1000	
Mg	24	45	1	He	2.116	61.0	1104	23.5	1000	
Al	27	45	1	He	5.237	39.9	723	24.4	50	
K	39	45	1	He	4.782	163.4	9162	7.0	1000	
Ca	44	45	1	He	-49.668	-31.5	310	29.8	1000	
Ti	47	45	1	He	0.582	28.7	28	25.0	20	
V	51	45	1	He	0.084	240.3	280	111.6	2	
Cr	52	45	1	He	0.116	55.1	966	11.4	2	
Mn	55	45	1	He	-0.159	-87.5	1062	10.4	2	
Fe	56	45	1	He	33.013	28.8	52994	25.1	50	
Co	59	45	1	He	1.377	21.4	5173	17.7	1	Blank High
Ni	60	45	1	He	33.411	24.5	32317	22.3	2	Blank High
Cu	63	45	1	He	-0.629	-17.1	2627	9.2	2	
Zn	66	45	1	He	-7.351	-1.7	389	8.0	20	
As	75	115	1	He	0.109	32.2	49	14.5	2	
Se	78	115	1	He	0.438	21.0	8	10.8	2	
Sr	88	103	1	He	-0.021	-81.2	70	24.7	10	
Mo	95	103	1	He	0.081	29.4	119	24.5	2	
Ag	107	103	1	He	0.002	38.7	20	16.7	0.2	
Cd	111	115	1	He	0.088	17.7	44	15.9	0.2	
Sn	118	115	1	He	-0.937	-4.5	496	6.8	10	
Sb	123	115	1	He	0.189	11.1	221	11.3	2	
Ba	137	115	1	He	0.126	10.7	52	9.7	5	
W	182	159	1	He	0.009	92.5	1504	3.1	10	
Tl	205	165	1	He	0.006	20.7	78	13.1	0.5	
Pb	208	165	1	He	0.492	6.2	6195	4.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456464	0.44	1276810	114.07	60	120	
Sc	45	1	He	135094	2.18	163460	82.65	60	120	
Sc	45	2	NoGas	8576417	0.19	8842934	96.99	60	120	
Rh	103	1	He	861694	0.58	1010526	85.27	60	120	
In	115	1	He	224058	1.60	257801	86.91	60	120	
Tb	159	1	He	1007046	0.30	1155473	87.15	60	120	
Ho	165	1	He	1016412	0.82	1147359	88.59	60	120	
Bi	209	1	He	691504	0.54	790610	87.46	60	120	

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Sample Report

Sample Table

Sample Name	240-64075-b-1-a@2
Data File Name	173SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:01:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.899	27.899	0.93	523447	0.01	10000	
Be	9	45	2	NoGas	3.437	3.437	4.77	16159	0.02	2000	
B	11	6	2	NoGas	89.539	89.539	2.58	336537	0.03	300	
Na	23	45	1	He	715.935	715.935	1.79	286927	0.25	500000	
Mg	24	45	1	He	6711.784	6711.784	1.59	1471428	0.46	500000	
Al	27	45	1	He	30425.425	30425.425	1.40	2802222	1.09	200000	
K	39	45	1	He	3652.270	3652.270	1.65	401829	0.91	500000	
Ca	44	45	1	He	98013.262	98013.262	1.28	611515	16.03	500000	
Ti	47	45	1	He	878.232	878.232	1.42	39459	2.23	2500	
V	51	45	1	He	110.278	110.278	5.24	170258	0.06	10000	
Cr	52	45	1	He	2001.347	2001.347	1.82	3843234	0.05	10000	
Mn	55	45	1	He	39928.958	39928.958	1.35	38618257	0.10	10000	>LDR
Fe	56	45	1	He	87343.973	87343.973	1.53	132551288	0.07	200000	
Co	59	45	1	He	6515.509	6515.509	1.07	22693701	0.03	5000	>LDR
Ni	60	45	1	He	155179.250	155179.250	1.29	150099438	0.10	10000	>LDR
Cu	63	45	1	He	7107.603	7107.603	1.53	19386689	0.04	10000	
Zn	66	45	1	He	3090.621	3090.621	1.31	973411	0.32	10000	
As	75	115	1	He	582.696	582.696	0.82	124483	0.47	10000	
Se	78	115	1	He	72.380	72.380	1.53	748	9.67	10000	
Sr	88	103	1	He	218.705	218.705	1.50	207448	0.11	10000	
Mo	95	103	1	He	52.527	52.527	2.16	59866	0.09	2000	
Ag	107	103	1	He	26.076	26.076	1.89	106431	0.02	300	
Cd	111	115	1	He	346.033	346.033	0.59	165033	0.21	4000	
Sn	118	115	1	He	501.592	501.592	2.06	453709	0.11	2000	
Sb	123	115	1	He	425.500	425.500	1.31	432255	0.10	200	>LDR
Ba	137	115	1	He	1665.566	1665.566	0.95	595087	0.28	10000	
W	182	159	1	He	9.324	9.324	3.85	48845	0.02	2500	
Tl	205	165	1	He	4.197	4.197	1.66	32652	0.01	2000	
Pb	208	165	1	He	11146.455	11146.455	0.05	113827096	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1395098	1.36	1276810	109.26	60	120	
Sc	45	1	He	135497	0.55	163460	82.89	60	120	
Sc	45	2	NoGas	8389441	0.98	8842934	94.87	60	120	
Rh	103	1	He	814239	0.37	1010526	80.58	60	120	
In	115	1	He	216585	0.67	257801	84.01	60	120	
Tb	159	1	He	988293	0.53	1155473	85.53	60	120	
Ho	165	1	He	996913	0.30	1147359	86.89	60	120	
Bi	209	1	He	780916	0.83	790610	98.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	174_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:05:03-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.005	7.9	93209	0.9	8	
Be	9	45	2	NoGas	0.058	17.0	344	11.6	1	
B	11	6	2	NoGas	4.349	5.3	27443	2.7	20	
Na	23	45	1	He	1.196	112.1	7168	6.0	1000	
Mg	24	45	1	He	1.249	21.6	874	7.0	1000	
Al	27	45	1	He	9.398	23.1	1053	17.6	50	
K	39	45	1	He	9.533	55.9	9210	4.4	1000	
Ca	44	45	1	He	-45.814	-13.4	318	10.2	1000	
Ti	47	45	1	He	0.425	64.9	20	60.1	20	
V	51	45	1	He	-0.013	-1469.6	122	224.4	2	
Cr	52	45	1	He	0.663	39.8	1915	24.6	2	
Mn	55	45	1	He	13.016	24.0	13095	21.6	2	Blank High
Fe	56	45	1	He	40.632	27.0	61542	25.5	50	
Co	59	45	1	He	2.754	18.4	9484	17.5	1	Blank High
Ni	60	45	1	He	56.030	22.2	51579	21.8	2	Blank High
Cu	63	45	1	He	2.244	9.5	9935	5.3	2	Blank High
Zn	66	45	1	He	-6.343	-0.7	671	3.3	20	
As	75	115	1	He	0.341	28.9	97	21.1	2	
Se	78	115	1	He	0.175	101.6	5	36.1	2	
Sr	88	103	1	He	0.012	123.2	100	14.5	10	
Mo	95	103	1	He	0.108	3.6	147	4.5	2	
Ag	107	103	1	He	0.010	10.3	54	7.1	0.2	
Cd	111	115	1	He	0.151	2.8	73	3.5	0.2	
Sn	118	115	1	He	-0.386	-20.1	974	7.6	10	
Sb	123	115	1	He	1.108	8.3	1143	8.7	2	
Ba	137	115	1	He	0.516	26.5	189	25.2	5	
W	182	159	1	He	0.039	106.8	1611	12.1	10	
Tl	205	165	1	He	0.009	20.5	97	15.0	0.5	
Pb	208	165	1	He	3.411	11.3	35550	11.4	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1409049	1.55	1276810	110.36	60	120	
Sc	45	1	He	128564	1.59	163460	78.65	60	120	
Sc	45	2	NoGas	8005915	1.02	8842934	90.53	60	120	
Rh	103	1	He	831722	1.55	1010526	82.31	60	120	
In	115	1	He	215753	0.74	257801	83.69	60	120	
Tb	159	1	He	980668	0.80	1155473	84.87	60	120	
Ho	165	1	He	987488	0.89	1147359	86.07	60	120	
Bi	209	1	He	683576	0.34	790610	86.46	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	175_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:09:15-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.045	0.403	908567	0.27	50	110.1	89.5	110.5	
Be	9	45	2	NoGas	51.206	0.778	228344	0.97	50	102.4	89.5	110.5	
B	11	6	2	NoGas	43.657	1.441	165166	1.99	50	87.3	89.5	110.5	CCV Failed
Na	23	45	1	He	24638.615	1.724	9053937	0.69	25000	98.6	89.5	110.5	
Mg	24	45	1	He	24405.238	1.616	5024663	0.21	25000	97.6	89.5	110.5	
Al	27	45	1	He	246.474	3.507	21550	2.05	250	98.6	89.5	110.5	
K	39	45	1	He	25594.807	1.550	2596403	0.47	25000	102.4	89.5	110.5	
Ca	44	45	1	He	25012.519	3.027	147015	1.40	25000	100.1	89.5	110.5	
Ti	47	45	1	He	49.195	2.181	2079	3.88	50	98.4	89.5	110.5	
V	51	45	1	He	50.534	2.986	73373	1.76	50	101.1	89.5	110.5	
Cr	52	45	1	He	49.981	3.363	90835	1.67	50	100.0	89.5	110.5	
Mn	55	45	1	He	251.235	1.919	229405	0.27	250	100.5	89.5	110.5	
Fe	56	45	1	He	12473.754	2.495	17784433	0.82	12500	99.8	89.5	110.5	
Co	59	45	1	He	50.602	3.148	165925	1.63	50	101.2	89.5	110.5	
Ni	60	45	1	He	61.712	2.189	56265	1.79	50	123.4	89.5	110.5	CCV Failed
Cu	63	45	1	He	50.077	1.956	132375	0.33	50	100.2	89.5	110.5	
Zn	66	45	1	He	47.096	2.104	16434	2.04	50	94.2	89.5	110.5	
As	75	115	1	He	48.073	0.212	9893	0.27	50	96.1	89.5	110.5	
Se	78	115	1	He	46.219	2.136	460	2.19	50	92.4	89.5	110.5	
Sr	88	103	1	He	50.119	2.596	46342	2.67	50	100.2	89.5	110.5	
Mo	95	103	1	He	51.232	1.657	56841	1.56	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.277	1.704	199749	1.60	50	100.6	89.5	110.5	
Cd	111	115	1	He	49.308	0.276	22605	0.45	50	98.6	89.5	110.5	
Sn	118	115	1	He	49.538	0.872	44221	0.85	50	99.1	89.5	110.5	
Sb	123	115	1	He	51.703	1.607	50506	1.77	50	103.4	89.5	110.5	
Ba	137	115	1	He	51.786	2.543	17791	2.64	50	103.6	89.5	110.5	
W	182	159	1	He	50.392	0.505	251564	0.94	50	100.8	89.5	110.5	
Tl	205	165	1	He	51.381	0.745	390322	1.42	50	102.8	89.5	110.5	
Pb	208	165	1	He	52.096	0.637	520810	0.29	50	104.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1355776	1.44	1276810	106.18	60	120	
Sc	45	1	He	127309	1.74	163460	77.88	60	120	
Sc	45	2	NoGas	7996256	0.63	8842934	90.43	60	120	
Rh	103	1	He	792590	0.24	1010526	78.43	60	120	
In	115	1	He	208178	0.18	257801	80.75	60	120	
Tb	159	1	He	964754	1.42	1155473	83.49	60	120	
Ho	165	1	He	974052	0.72	1147359	84.90	60	120	
Bi	209	1	He	649660	1.28	790610	82.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	176_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:13:26-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.172	5.3	94847	0.9	8	
Be	9	45	2	NoGas	0.254	22.1	1208	19.8	1	
B	11	6	2	NoGas	2.724	7.4	20961	2.7	20	
Na	23	45	1	He	86.284	2.2	38166	2.3	1000	
Mg	24	45	1	He	71.715	3.5	15300	3.6	1000	
Al	27	45	1	He	0.741	35.5	293	8.0	50	
K	39	45	1	He	84.714	6.8	16645	2.9	1000	
Ca	44	45	1	He	71.798	22.3	1000	10.0	1000	
Ti	47	45	1	He	0.277	57.3	13	50.0	20	
V	51	45	1	He	0.306	24.8	582	18.7	2	
Cr	52	45	1	He	0.200	33.8	1059	12.5	2	
Mn	55	45	1	He	1.638	4.4	2624	3.3	2	
Fe	56	45	1	He	43.785	3.2	65144	3.2	50	
Co	59	45	1	He	0.502	5.1	2012	5.0	1	
Ni	60	45	1	He	5.215	2.0	4902	1.7	2	CCB High
Cu	63	45	1	He	-0.453	-14.7	2915	6.5	2	
Zn	66	45	1	He	-3.245	-9.8	1571	6.1	20	
As	75	115	1	He	0.211	10.7	69	6.4	2	
Se	78	115	1	He	0.383	36.5	7	20.2	2	
Sr	88	103	1	He	0.166	26.7	249	18.8	10	
Mo	95	103	1	He	0.253	4.4	314	5.3	2	
Ag	107	103	1	He	0.145	5.9	614	6.3	0.2	
Cd	111	115	1	He	0.193	16.8	93	16.5	0.2	
Sn	118	115	1	He	-0.347	-22.8	1011	6.9	10	
Sb	123	115	1	He	0.397	3.0	424	2.3	2	
Ba	137	115	1	He	0.177	31.3	69	29.2	5	
W	182	159	1	He	0.404	13.3	3430	8.0	10	
Tl	205	165	1	He	0.231	5.4	1802	5.1	0.5	
Pb	208	165	1	He	0.501	4.2	6094	3.7	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1374833	1.30	1276810	107.68	60	120	
Sc	45	1	He	126688	1.07	163460	77.50	60	120	
Sc	45	2	NoGas	7932189	0.69	8842934	89.70	60	120	
Rh	103	1	He	830181	1.59	1010526	82.15	60	120	
In	115	1	He	216233	0.61	257801	83.88	60	120	
Tb	159	1	He	972541	0.43	1155473	84.17	60	120	
Ho	165	1	He	984469	0.43	1147359	85.80	60	120	
Bi	209	1	He	675409	0.21	790610	85.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-a@2
Data File Name	177SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:17:39-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	84.441	84.441	0.60	1364377	0.01	10000	
Be	9	45	2	NoGas	3.557	3.557	2.06	16085	0.02	2000	
B	11	6	2	NoGas	66.317	66.317	2.62	226738	0.03	300	
Na	23	45	1	He	842.277	842.277	1.37	330506	0.25	500000	
Mg	24	45	1	He	32059.480	32059.480	0.69	6904710	0.46	500000	
Al	27	45	1	He	46017.453	46017.453	1.60	4164992	1.10	200000	
K	39	45	1	He	7953.397	7953.397	0.85	849870	0.94	500000	
Ca	44	45	1	He	97949.283	97949.283	1.09	600561	16.31	500000	
Ti	47	45	1	He	555.406	555.406	1.43	24524	2.26	2500	
V	51	45	1	He	94.079	94.079	1.98	142778	0.07	10000	
Cr	52	45	1	He	1334.415	1334.415	1.91	2518545	0.05	10000	
Mn	55	45	1	He	4445.062	4445.062	1.25	4226010	0.11	10000	
Fe	56	45	1	He	112487.639	112487.639	2.06	167761878	0.07	200000	
Co	59	45	1	He	137803.915	137803.915	1.74	471669155	0.03	5000	>LDR
Ni	60	45	1	He	2901.738	2901.738	1.56	2758456	0.11	10000	
Cu	63	45	1	He	1496.213	1496.213	0.60	4014069	0.04	10000	
Zn	66	45	1	He	1690.763	1690.763	0.56	524528	0.32	10000	
As	75	115	1	He	703.086	703.086	0.99	146113	0.48	10000	
Se	78	115	1	He	12.839	12.839	6.26	132	9.75	10000	
Sr	88	103	1	He	251.479	251.479	2.23	242138	0.10	10000	
Mo	95	103	1	He	17.100	17.100	1.75	19799	0.09	2000	
Ag	107	103	1	He	15.856	15.856	1.29	65701	0.02	300	
Cd	111	115	1	He	71.355	71.355	0.54	33106	0.22	4000	
Sn	118	115	1	He	82.908	82.908	2.37	74035	0.11	2000	
Sb	123	115	1	He	402.002	402.002	1.25	397284	0.10	200	>LDR
Ba	137	115	1	He	1215.657	1215.657	1.06	422532	0.29	10000	
W	182	159	1	He	52.572	52.572	1.78	265709	0.02	2500	
Tl	205	165	1	He	7.001	7.001	9.36	54027	0.01	2000	
Pb	208	165	1	He	88060.685	88060.685	0.65	892365040	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1254532	2.90	1276810	98.26	60	120	
Sc	45	1	He	133153	0.39	163460	81.46	60	120	
Sc	45	2	NoGas	8068411	0.37	8842934	91.24	60	120	
Rh	103	1	He	826604	0.89	1010526	81.80	60	120	
In	115	1	He	210690	0.06	257801	81.73	60	120	
Tb	159	1	He	976798	1.15	1155473	84.54	60	120	
Ho	165	1	He	989263	0.81	1147359	86.22	60	120	
Bi	209	1	He	2114271	0.30	790610	267.42	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	178_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:21:41-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.041	3.6	91598	0.4	8	
Be	9	45	2	NoGas	0.041	41.4	263	27.5	1	
B	11	6	2	NoGas	2.130	3.5	18751	1.3	20	
Na	23	45	1	He	2.288	35.4	7272	2.7	1000	
Mg	24	45	1	He	9.084	31.0	2404	23.6	1000	
Al	27	45	1	He	12.714	42.8	1291	35.6	50	
K	39	45	1	He	16.389	27.5	9521	5.4	1000	
Ca	44	45	1	He	-34.031	-32.1	373	16.8	1000	
Ti	47	45	1	He	0.448	65.5	20	60.1	20	
V	51	45	1	He	-0.085	-183.5	18	1247.4	2	
Cr	52	45	1	He	0.387	50.1	1359	25.2	2	
Mn	55	45	1	He	0.566	94.3	1611	29.3	2	
Fe	56	45	1	He	46.768	34.5	67611	33.1	50	
Co	59	45	1	He	46.753	27.4	148717	27.4	1	Blank High
Ni	60	45	1	He	2.745	7.5	2600	7.7	2	Blank High
Cu	63	45	1	He	0.985	18.9	6416	8.2	2	
Zn	66	45	1	He	-7.197	-0.4	400	2.9	20	
As	75	115	1	He	0.931	6.1	217	4.6	2	
Se	78	115	1	He	0.202	150.4	5	59.1	2	
Sr	88	103	1	He	0.010	289.8	94	28.3	10	
Mo	95	103	1	He	0.042	40.0	68	28.0	2	
Ag	107	103	1	He	0.005	79.1	32	53.1	0.2	
Cd	111	115	1	He	0.054	18.1	26	16.8	0.2	
Sn	118	115	1	He	-1.090	-6.6	333	18.6	10	
Sb	123	115	1	He	1.328	2.6	1335	2.9	2	
Ba	137	115	1	He	0.310	29.9	113	28.1	5	
W	182	159	1	He	0.308	2.6	2897	1.3	10	
Tl	205	165	1	He	0.010	37.3	101	26.4	0.5	
Pb	208	165	1	He	23.433	20.7	233038	21.4	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1368268	0.58	1276810	107.16	60	120	
Sc	45	1	He	123426	1.27	163460	75.51	60	120	
Sc	45	2	NoGas	7821546	0.54	8842934	88.45	60	120	
Rh	103	1	He	805015	0.37	1010526	79.66	60	120	
In	115	1	He	210842	0.85	257801	81.78	60	120	
Tb	159	1	He	955492	0.39	1155473	82.69	60	120	
Ho	165	1	He	965704	0.67	1147359	84.17	60	120	
Bi	209	1	He	659279	0.97	790610	83.39	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-b-21-a@10
Data File Name	179SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:25:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.169	17.169	1.57	337875	0.01	10000	
Be	9	45	2	NoGas	0.797	0.797	1.26	3649	0.02	2000	
B	11	6	2	NoGas	14.784	14.784	4.16	63721	0.02	300	
Na	23	45	1	He	178.552	178.552	2.85	72929	0.24	500000	
Mg	24	45	1	He	6875.346	6875.346	1.06	1429970	0.48	500000	
Al	27	45	1	He	9021.074	9021.074	1.96	788342	1.14	200000	
K	39	45	1	He	1673.937	1673.937	2.47	179165	0.93	500000	
Ca	44	45	1	He	20623.990	20623.990	2.31	122527	16.83	500000	
Ti	47	45	1	He	119.091	119.091	2.80	5077	2.35	2500	
V	51	45	1	He	9.025	9.025	46.69	13393	0.07	10000	
Cr	52	45	1	He	263.491	263.491	1.73	480642	0.05	10000	
Mn	55	45	1	He	885.991	885.991	1.93	814041	0.11	10000	
Fe	56	45	1	He	23836.131	23836.131	1.89	34318526	0.07	200000	
Co	59	45	1	He	29381.552	29381.552	1.80	97079327	0.03	5000	>LDR
Ni	60	45	1	He	583.849	583.849	2.00	535920	0.11	10000	
Cu	63	45	1	He	307.062	307.062	1.54	798506	0.04	10000	
Zn	66	45	1	He	368.363	368.363	2.09	112314	0.33	10000	
As	75	115	1	He	142.238	142.238	1.45	29938	0.48	10000	
Se	78	115	1	He	2.486	2.486	9.49	28	8.77	10000	
Sr	88	103	1	He	51.631	51.631	0.72	49214	0.10	10000	
Mo	95	103	1	He	3.549	3.549	1.15	4078	0.09	2000	
Ag	107	103	1	He	3.329	3.329	3.80	13647	0.02	300	
Cd	111	115	1	He	15.054	15.054	2.42	7071	0.21	4000	
Sn	118	115	1	He	16.580	16.580	8.13	16027	0.10	2000	
Sb	123	115	1	He	82.252	82.252	1.80	82293	0.10	200	
Ba	137	115	1	He	244.840	244.840	1.88	86139	0.28	10000	
W	182	159	1	He	10.448	10.448	2.96	53999	0.02	2500	
Tl	205	165	1	He	1.364	1.364	13.52	10564	0.01	2000	
Pb	208	165	1	He	18028.049	18028.049	0.29	182968543	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1366498	1.80	1276810	107.02	60	120	
Sc	45	1	He	128547	0.99	163460	78.64	60	120	
Sc	45	2	NoGas	8016922	0.40	8842934	90.66	60	120	
Rh	103	1	He	817110	0.34	1010526	80.86	60	120	
In	115	1	He	213273	0.93	257801	82.73	60	120	
Tb	159	1	He	978008	0.22	1155473	84.64	60	120	
Ho	165	1	He	990777	0.60	1147359	86.35	60	120	
Bi	209	1	He	922255	0.50	790610	116.65	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	180_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:30:00-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.920	5.7	92658	0.3	8	
Be	9	45	2	NoGas	0.040	47.8	267	31.5	1	
B	11	6	2	NoGas	4.115	3.9	26360	1.7	20	
Na	23	45	1	He	-0.151	-75.2	6627	2.2	1000	
Mg	24	45	1	He	2.500	7.0	1126	2.5	1000	
Al	27	45	1	He	2.195	30.1	422	14.7	50	
K	39	45	1	He	6.596	78.3	8851	4.8	1000	
Ca	44	45	1	He	-61.783	-18.4	222	29.5	1000	
Ti	47	45	1	He	-0.015	-294.4	1	173.2	20	
V	51	45	1	He	0.038	107.9	198	32.1	2	
Cr	52	45	1	He	0.108	33.1	900	8.7	2	
Mn	55	45	1	He	-0.350	-27.1	832	12.0	2	
Fe	56	45	1	He	13.361	19.1	22185	18.1	50	
Co	59	45	1	He	16.473	10.5	54509	12.0	1	Blank High
Ni	60	45	1	He	1.803	3.1	1830	1.6	2	
Cu	63	45	1	He	-0.447	-60.6	2948	22.5	2	
Zn	66	45	1	He	-7.601	-1.2	294	10.1	20	
As	75	115	1	He	0.633	9.0	159	8.2	2	
Se	78	115	1	He	0.401	38.0	7	20.9	2	
Sr	88	103	1	He	-0.033	-50.8	56	30.2	10	
Mo	95	103	1	He	0.028	18.2	53	10.8	2	
Ag	107	103	1	He	0.001	198.6	14	48.0	0.2	
Cd	111	115	1	He	0.021	19.2	11	18.2	0.2	
Sn	118	115	1	He	-1.111	-6.9	322	21.0	10	
Sb	123	115	1	He	0.573	9.1	602	9.4	2	
Ba	137	115	1	He	0.097	26.6	40	22.0	5	
W	182	159	1	He	0.095	28.9	1885	7.6	10	
Tl	205	165	1	He	0.004	89.3	57	44.4	0.5	
Pb	208	165	1	He	8.630	19.3	87621	19.3	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1396978	1.37	1276810	109.41	60	120	
Sc	45	1	He	127688	1.53	163460	78.12	60	120	
Sc	45	2	NoGas	8069841	0.60	8842934	91.26	60	120	
Rh	103	1	He	826077	1.10	1010526	81.75	60	120	
In	115	1	He	215902	0.94	257801	83.75	60	120	
Tb	159	1	He	973945	0.53	1155473	84.29	60	120	
Ho	165	1	He	979190	0.25	1147359	85.34	60	120	
Bi	209	1	He	670298	1.06	790610	84.78	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-b ms@2
Data File Name	181SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:34:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	136.713	136.713	1.01	2281977	0.01	10000	
Be	9	45	2	NoGas	461.177	461.177	1.45	2191203	0.02	2000	
B	11	6	2	NoGas	118.895	118.895	0.50	385830	0.03	300	
Na	23	45	1	He	5210.007	5210.007	1.28	2052325	0.25	500000	
Mg	24	45	1	He	39578.442	39578.442	2.20	8710515	0.45	500000	
Al	27	45	1	He	61329.106	61329.106	2.55	5672033	1.08	200000	
K	39	45	1	He	15931.846	15931.846	1.87	1730987	0.92	500000	
Ca	44	45	1	He	112706.376	112706.376	2.01	706088	15.96	500000	
Ti	47	45	1	He	612.694	612.694	3.48	27643	2.22	2500	
V	51	45	1	He	599.748	599.748	2.59	929365	0.06	10000	
Cr	52	45	1	He	1411.978	1411.978	3.10	2723306	0.05	10000	
Mn	55	45	1	He	6179.131	6179.131	1.76	6003052	0.10	10000	
Fe	56	45	1	He	113117.443	113117.443	2.06	172398015	0.07	200000	
Co	59	45	1	He	8736.034	8736.034	2.50	30557522	0.03	5000	>LDR
Ni	60	45	1	He	1821.681	1821.681	2.51	1769842	0.10	10000	
Cu	63	45	1	He	1866.835	1866.835	2.45	5116743	0.04	10000	
Zn	66	45	1	He	1966.096	1966.096	1.89	622863	0.32	10000	
As	75	115	1	He	954.804	954.804	1.43	199101	0.48	10000	
Se	78	115	1	He	428.138	428.138	1.18	4305	9.95	10000	
Sr	88	103	1	He	792.109	792.109	0.88	845042	0.09	10000	
Mo	95	103	1	He	65.963	65.963	0.37	84586	0.08	2000	
Ag	107	103	1	He	47.726	47.726	0.92	219149	0.02	300	
Cd	111	115	1	He	478.768	478.768	1.03	222889	0.21	4000	
Sn	118	115	1	He	495.511	495.511	1.49	437561	0.11	2000	
Sb	123	115	1	He	350.161	350.161	1.58	347240	0.10	200	>LDR
Ba	137	115	1	He	3713.338	3713.338	1.38	1295078	0.29	10000	
W	182	159	1	He	50.369	50.369	2.08	260240	0.02	2500	
Tl	205	165	1	He	124.832	124.832	1.63	987662	0.01	2000	
Pb	208	165	1	He	205185.183	205185.183	0.83	2132481604	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1214360	1.71	1276810	95.11	60	120	
Sc	45	1	He	136081	1.00	163460	83.25	60	120	
Sc	45	2	NoGas	8523288	0.73	8842934	96.39	60	120	
Rh	103	1	He	916132	2.07	1010526	90.66	60	120	
In	115	1	He	211409	0.53	257801	82.00	60	120	
Tb	159	1	He	998338	0.73	1155473	86.40	60	120	
Ho	165	1	He	1014605	0.94	1147359	88.43	60	120	
Bi	209	1	He	1836707	1.81	790610	232.32	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	182_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:38:11-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.093	1.4	99569	0.4	8	
Be	9	45	2	NoGas	0.839	4.9	4034	5.0	1	
B	11	6	2	NoGas	4.696	9.2	29688	5.0	20	
Na	23	45	1	He	1.271	28.2	7576	1.3	1000	
Mg	24	45	1	He	10.532	31.7	2949	24.3	1000	
Al	27	45	1	He	17.019	53.6	1808	45.9	50	
K	39	45	1	He	8.382	48.2	9573	4.4	1000	
Ca	44	45	1	He	-45.616	-9.4	336	8.6	1000	
Ti	47	45	1	He	0.330	102.7	17	91.7	20	
V	51	45	1	He	0.141	197.1	366	116.2	2	
Cr	52	45	1	He	0.393	61.4	1499	30.4	2	
Mn	55	45	1	He	0.836	89.1	2025	35.0	2	
Fe	56	45	1	He	44.699	38.7	70880	36.5	50	
Co	59	45	1	He	6.065	17.7	21484	17.0	1	Blank High
Ni	60	45	1	He	1.209	19.5	1365	16.2	2	
Cu	63	45	1	He	1.039	18.1	7176	7.8	2	
Zn	66	45	1	He	-6.781	-0.2	569	0.3	20	
As	75	115	1	He	0.710	14.1	183	12.9	2	
Se	78	115	1	He	0.510	60.0	9	37.7	2	
Sr	88	103	1	He	0.201	56.5	296	38.8	10	
Mo	95	103	1	He	0.137	18.9	189	16.7	2	
Ag	107	103	1	He	0.012	30.4	62	24.7	0.2	
Cd	111	115	1	He	0.198	12.8	99	13.3	0.2	
Sn	118	115	1	He	-0.414	-15.5	989	6.7	10	
Sb	123	115	1	He	1.316	12.9	1412	13.5	2	
Ba	137	115	1	He	0.983	30.3	371	30.5	5	
W	182	159	1	He	0.239	30.1	2715	14.0	10	
Tl	205	165	1	He	0.151	20.3	1249	20.0	0.5	
Pb	208	165	1	He	55.914	22.9	594167	23.0	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1456630	0.90	1276810	114.08	60	120	
Sc	45	1	He	135285	0.64	163460	82.76	60	120	
Sc	45	2	NoGas	8430960	0.18	8842934	95.34	60	120	
Rh	103	1	He	870155	0.06	1010526	86.11	60	120	
In	115	1	He	225002	0.68	257801	87.28	60	120	
Tb	159	1	He	1015129	0.39	1155473	87.85	60	120	
Ho	165	1	He	1035228	0.30	1147359	90.23	60	120	
Bi	209	1	He	708029	0.54	790610	89.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-21-c msd@2
Data File Name	183SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:42:25-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	143.925	143.925	0.30	2424558	0.01	10000	
Be	9	45	2	NoGas	475.342	475.342	1.72	2283439	0.02	2000	
B	11	6	2	NoGas	108.928	108.928	1.74	379450	0.03	300	
Na	23	45	1	He	5251.711	5251.711	1.70	2103903	0.25	500000	
Mg	24	45	1	He	38661.477	38661.477	0.82	8654236	0.45	500000	
Al	27	45	1	He	57350.979	57350.979	2.10	5395013	1.06	200000	
K	39	45	1	He	15420.423	15420.423	2.13	1704266	0.90	500000	
Ca	44	45	1	He	110523.648	110523.648	1.47	704279	15.69	500000	
Ti	47	45	1	He	593.455	593.455	1.07	27238	2.18	2500	
V	51	45	1	He	594.428	594.428	1.42	936853	0.06	10000	
Cr	52	45	1	He	1495.366	1495.366	0.65	2933513	0.05	10000	
Mn	55	45	1	He	6052.763	6052.763	1.32	5980494	0.10	10000	
Fe	56	45	1	He	123812.367	123812.367	1.56	191921530	0.06	200000	
Co	59	45	1	He	8041.803	8041.803	1.93	28608408	0.03	5000	>LDR
Ni	60	45	1	He	1645.174	1645.174	1.50	1625561	0.10	10000	
Cu	63	45	1	He	1492.625	1492.625	0.96	4162009	0.04	10000	
Zn	66	45	1	He	1711.166	1711.166	1.28	551702	0.31	10000	
As	75	115	1	He	913.208	913.208	1.40	191280	0.48	10000	
Se	78	115	1	He	421.781	421.781	0.67	4260	9.90	10000	
Sr	88	103	1	He	802.572	802.572	1.33	811295	0.10	10000	
Mo	95	103	1	He	68.667	68.667	1.06	83425	0.08	2000	
Ag	107	103	1	He	51.320	51.320	1.10	223294	0.02	300	
Cd	111	115	1	He	478.772	478.772	1.32	223897	0.21	4000	
Sn	118	115	1	He	489.802	489.802	1.27	434477	0.11	2000	
Sb	123	115	1	He	261.722	261.722	1.61	260711	0.10	200	>LDR
Ba	137	115	1	He	3671.259	3671.259	1.17	1286163	0.29	10000	
W	182	159	1	He	54.036	54.036	1.01	283385	0.02	2500	
Tl	205	165	1	He	121.718	121.718	1.07	963525	0.01	2000	
Pb	208	165	1	He	108727.947	108727.947	1.01	1130574595	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1300573	0.27	1276810	101.86	60	120	
Sc	45	1	He	138405	1.54	163460	84.67	60	120	
Sc	45	2	NoGas	8617416	1.02	8842934	97.45	60	120	
Rh	103	1	He	867982	0.26	1010526	85.89	60	120	
In	115	1	He	212370	0.60	257801	82.38	60	120	
Tb	159	1	He	1013803	0.67	1155473	87.74	60	120	
Ho	165	1	He	1015072	0.45	1147359	88.47	60	120	
Bi	209	1	He	1724984	1.42	790610	218.18	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	184_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:46:26-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.045	4.5	96900	0.4	8	
Be	9	45	2	NoGas	0.806	7.6	3804	7.9	1	
B	11	6	2	NoGas	2.484	4.7	21168	1.4	20	
Na	23	45	1	He	2.343	29.3	7872	3.1	1000	
Mg	24	45	1	He	11.148	25.1	3034	18.5	1000	
Al	27	45	1	He	18.374	29.2	1901	24.2	50	
K	39	45	1	He	6.761	31.4	9258	3.6	1000	
Ca	44	45	1	He	-32.942	-21.2	408	9.4	1000	
Ti	47	45	1	He	0.464	58.4	22	52.7	20	
V	51	45	1	He	0.042	79.9	212	25.2	2	
Cr	52	45	1	He	0.554	22.5	1780	12.1	2	
Mn	55	45	1	He	1.077	35.4	2222	15.0	2	
Fe	56	45	1	He	56.818	21.0	87810	18.9	50	Blank High
Co	59	45	1	He	5.045	12.3	17660	10.8	1	Blank High
Ni	60	45	1	He	0.982	21.2	1127	16.2	2	
Cu	63	45	1	He	0.398	58.7	5350	12.2	2	
Zn	66	45	1	He	-6.705	-2.3	583	7.2	20	
As	75	115	1	He	0.706	6.9	177	6.2	2	
Se	78	115	1	He	0.390	40.8	7	21.9	2	
Sr	88	103	1	He	0.212	41.9	299	29.4	10	
Mo	95	103	1	He	0.142	8.9	190	8.0	2	
Ag	107	103	1	He	0.014	33.1	72	28.2	0.2	
Cd	111	115	1	He	0.229	24.2	112	24.1	0.2	Blank High
Sn	118	115	1	He	-0.341	-65.2	1030	19.1	10	
Sb	123	115	1	He	0.945	13.2	993	12.2	2	
Ba	137	115	1	He	1.308	6.1	479	6.6	5	
W	182	159	1	He	0.307	16.3	2971	9.2	10	
Tl	205	165	1	He	0.183	21.5	1448	21.3	0.5	
Pb	208	165	1	He	41.956	9.6	429135	9.2	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1447442	0.84	1276810	113.36	60	120	
Sc	45	1	He	133228	1.24	163460	81.50	60	120	
Sc	45	2	NoGas	8268997	0.59	8842934	93.51	60	120	
Rh	103	1	He	848273	0.29	1010526	83.94	60	120	
In	115	1	He	219308	0.88	257801	85.07	60	120	
Tb	159	1	He	981479	0.67	1155473	84.94	60	120	
Ho	165	1	He	996303	0.52	1147359	86.83	60	120	
Bi	209	1	He	687915	0.83	790610	87.01	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-b-21-a@2
Data File Name	185SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:50:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	188.346	188.346	2.59	3008453	0.01	10000	
Be	9	45	2	NoGas	1052.785	1052.785	1.95	4834437	0.02	2000	
B	11	6	2	NoGas	155.571	155.571	1.38	519702	0.03	300	
Na	23	45	1	He	10574.039	10574.039	2.74	4075517	0.26	500000	
Mg	24	45	1	He	41237.513	41237.513	2.27	8896334	0.46	500000	
Al	27	45	1	He	55509.722	55509.722	1.35	5033181	1.10	200000	
K	39	45	1	He	18150.228	18150.228	2.69	1931752	0.94	500000	
Ca	44	45	1	He	106442.867	106442.867	1.76	653748	16.28	500000	
Ti	47	45	1	He	648.016	648.016	3.40	28659	2.26	2500	
V	51	45	1	He	1187.913	1187.913	2.29	1804297	0.07	10000	
Cr	52	45	1	He	2351.414	2351.414	1.91	4445304	0.05	10000	
Mn	55	45	1	He	5442.840	5442.840	1.38	5183807	0.10	10000	
Fe	56	45	1	He	122224.275	122224.275	1.81	182606602	0.07	200000	
Co	59	45	1	He	138178.745	138178.745	1.87	473796052	0.03	5000	>LDR
Ni	60	45	1	He	3913.209	3913.209	2.09	3726437	0.11	10000	
Cu	63	45	1	He	2487.262	2487.262	1.41	6682083	0.04	10000	
Zn	66	45	1	He	2695.820	2695.820	2.32	836184	0.32	10000	
As	75	115	1	He	1678.524	1678.524	2.23	344566	0.49	10000	
Se	78	115	1	He	935.933	935.933	1.70	9262	10.11	10000	
Sr	88	103	1	He	1211.438	1211.438	1.56	1166614	0.10	10000	
Mo	95	103	1	He	117.720	117.720	1.19	136239	0.09	2000	
Ag	107	103	1	He	110.409	110.409	1.59	457637	0.02	300	
Cd	111	115	1	He	1050.320	1050.320	2.29	481394	0.22	4000	
Sn	118	115	1	He	1119.778	1119.778	2.19	971895	0.12	2000	
Sb	123	115	1	He	504.997	504.997	2.13	493034	0.10	200	>LDR
Ba	137	115	1	He	2271.163	2271.163	2.11	779843	0.29	10000	
W	182	159	1	He	153.696	153.696	1.42	777230	0.02	2500	
Tl	205	165	1	He	290.433	290.433	0.56	2251288	0.01	2000	
Pb	208	165	1	He	86802.902	86802.902	1.65	883731156	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1257805	0.61	1276810	98.51	60	120	
Sc	45	1	He	133415	1.72	163460	81.62	60	120	
Sc	45	2	NoGas	8238421	1.12	8842934	93.16	60	120	
Rh	103	1	He	827002	1.26	1010526	81.84	60	120	
In	115	1	He	208193	1.82	257801	80.76	60	120	
Tb	159	1	He	980898	1.33	1155473	84.89	60	120	
Ho	165	1	He	994056	1.54	1147359	86.64	60	120	
Bi	209	1	He	2088184	1.34	790610	264.12	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	186_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:54:39-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.237	2.7	94942	0.4	8	
Be	9	45	2	NoGas	1.592	9.4	7061	9.9	1	Blank High
B	11	6	2	NoGas	2.498	8.5	20675	1.7	20	
Na	23	45	1	He	1.347	85.8	7091	6.3	1000	
Mg	24	45	1	He	9.687	25.6	2574	18.4	1000	
Al	27	45	1	He	13.977	46.6	1422	37.9	50	
K	39	45	1	He	7.190	29.4	8806	3.6	1000	
Ca	44	45	1	He	-47.409	-16.4	303	15.1	1000	
Ti	47	45	1	He	0.568	64.8	26	61.6	20	
V	51	45	1	He	0.320	79.3	597	59.5	2	
Cr	52	45	1	He	0.648	44.8	1849	26.6	2	
Mn	55	45	1	He	0.446	68.7	1536	16.6	2	
Fe	56	45	1	He	46.720	27.2	68860	24.8	50	
Co	59	45	1	He	41.800	22.2	135652	20.9	1	Blank High
Ni	60	45	1	He	1.385	27.8	1428	22.9	2	
Cu	63	45	1	He	0.051	298.3	4178	8.7	2	
Zn	66	45	1	He	-6.365	-2.1	652	7.0	20	
As	75	115	1	He	1.327	2.8	300	4.4	2	
Se	78	115	1	He	0.616	6.6	9	6.2	2	
Sr	88	103	1	He	0.273	22.5	350	17.2	10	
Mo	95	103	1	He	0.194	32.5	246	29.9	2	
Ag	107	103	1	He	0.027	19.8	121	18.3	0.2	
Cd	111	115	1	He	0.322	8.5	151	8.9	0.2	Blank High
Sn	118	115	1	He	0.551	56.0	1774	14.8	10	
Sb	123	115	1	He	1.312	1.4	1319	0.5	2	
Ba	137	115	1	He	0.650	34.1	232	34.9	5	
W	182	159	1	He	0.810	3.7	5399	3.2	10	
Tl	205	165	1	He	0.272	12.5	2096	11.4	0.5	
Pb	208	165	1	He	29.740	10.3	298129	9.7	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1411105	2.45	1276810	110.52	60	120	
Sc	45	1	He	126104	1.39	163460	77.15	60	120	
Sc	45	2	NoGas	7859006	0.90	8842934	88.87	60	120	
Rh	103	1	He	826002	0.40	1010526	81.74	60	120	
In	115	1	He	210898	1.79	257801	81.81	60	120	
Tb	159	1	He	961658	0.55	1155473	83.23	60	120	
Ho	165	1	He	975606	0.87	1147359	85.03	60	120	
Bi	209	1	He	667353	0.92	790610	84.41	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	187_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T01:58:50-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.311	0.610	890914	0.33	50	110.6	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	52.058	0.746	226632	0.74	50	104.1	89.5	110.5	
B	11	6	2	NoGas	42.882	1.370	161695	0.51	50	85.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24458.999	0.493	8828728	0.40	25000	97.8	89.5	110.5	
Mg	24	45	1	He	24343.042	0.491	4923071	0.42	25000	97.4	89.5	110.5	
Al	27	45	1	He	245.086	1.288	21054	1.19	250	98.0	89.5	110.5	
K	39	45	1	He	25336.926	0.104	2524763	0.18	25000	101.3	89.5	110.5	
Ca	44	45	1	He	24990.476	1.482	144308	1.52	25000	100.0	89.5	110.5	
Ti	47	45	1	He	49.274	3.496	2045	3.42	50	98.5	89.5	110.5	
V	51	45	1	He	50.252	2.767	71681	2.80	50	100.5	89.5	110.5	
Cr	52	45	1	He	50.084	2.098	89427	2.09	50	100.2	89.5	110.5	
Mn	55	45	1	He	246.956	0.506	221531	0.56	250	98.8	89.5	110.5	
Fe	56	45	1	He	12416.492	1.157	17390920	1.11	12500	99.3	89.5	110.5	
Co	59	45	1	He	66.442	2.157	213924	2.21	50	132.9	89.5	110.5	CCV Failed
Ni	60	45	1	He	49.919	0.631	44740	0.54	50	99.8	89.5	110.5	
Cu	63	45	1	He	49.546	2.496	128697	2.44	50	99.1	89.5	110.5	
Zn	66	45	1	He	48.300	2.070	16490	1.67	50	96.6	89.5	110.5	
As	75	115	1	He	47.887	0.866	9775	0.63	50	95.8	89.5	110.5	
Se	78	115	1	He	45.530	1.966	450	2.67	50	91.1	89.5	110.5	
Sr	88	103	1	He	49.156	0.848	45310	0.85	50	98.3	89.5	110.5	
Mo	95	103	1	He	50.025	2.345	55329	2.36	50	100.1	89.5	110.5	
Ag	107	103	1	He	49.733	0.775	196972	0.83	50	99.5	89.5	110.5	
Cd	111	115	1	He	49.331	1.966	22430	1.22	50	98.7	89.5	110.5	
Sn	118	115	1	He	49.653	2.272	43965	2.55	50	99.3	89.5	110.5	
Sb	123	115	1	He	51.417	1.410	49817	0.76	50	102.8	89.5	110.5	
Ba	137	115	1	He	50.667	0.881	17265	0.33	50	101.3	89.5	110.5	
W	182	159	1	He	50.179	2.884	249225	3.15	50	100.4	89.5	110.5	
Tl	205	165	1	He	50.328	0.710	382245	1.54	50	100.7	89.5	110.5	
Pb	208	165	1	He	63.081	0.481	630304	1.30	50	126.2	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1349754	0.78	1276810	105.71	60	120	
Sc	45	1	He	125030	0.09	163460	76.49	60	120	
Sc	45	2	NoGas	7806466	0.43	8842934	88.28	60	120	
Rh	103	1	He	790111	0.06	1010526	78.19	60	120	
In	115	1	He	206495	0.78	257801	80.10	60	120	
Tb	159	1	He	959718	0.29	1155473	83.06	60	120	
Ho	165	1	He	973850	1.05	1147359	84.88	60	120	
Bi	209	1	He	645260	0.61	790610	81.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	188_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:03:01-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.326	5.8	97870	0.8	8	
Be	9	45	2	NoGas	0.493	6.8	2282	6.5	1	
B	11	6	2	NoGas	3.554	7.4	24584	2.6	20	
Na	23	45	1	He	81.563	1.3	36853	1.0	1000	
Mg	24	45	1	He	77.388	7.1	16653	7.4	1000	
Al	27	45	1	He	2.796	17.9	476	9.0	50	
K	39	45	1	He	91.505	1.9	17528	0.4	1000	
Ca	44	45	1	He	56.929	23.1	923	8.5	1000	
Ti	47	45	1	He	0.064	188.8	4	114.6	20	
V	51	45	1	He	0.179	28.5	404	18.3	2	
Cr	52	45	1	He	0.252	14.1	1165	5.6	2	
Mn	55	45	1	He	0.540	13.8	1649	4.7	2	
Fe	56	45	1	He	46.450	3.1	69717	3.5	50	
Co	59	45	1	He	9.880	6.9	32916	6.2	1	CCB High
Ni	60	45	1	He	0.787	4.5	907	3.8	2	
Cu	63	45	1	He	-0.544	-12.7	2711	6.1	2	
Zn	66	45	1	He	-3.015	-12.3	1658	7.3	20	
As	75	115	1	He	0.695	11.9	173	9.0	2	
Se	78	115	1	He	0.591	42.4	9	27.5	2	
Sr	88	103	1	He	0.224	37.1	302	26.3	10	
Mo	95	103	1	He	0.276	14.6	340	13.8	2	
Ag	107	103	1	He	0.150	6.3	632	6.3	0.2	
Cd	111	115	1	He	0.200	6.2	97	5.2	0.2	
Sn	118	115	1	He	-0.172	-155.5	1174	21.7	10	
Sb	123	115	1	He	0.510	19.6	540	17.8	2	
Ba	137	115	1	He	0.280	23.0	106	20.1	5	
W	182	159	1	He	0.413	11.6	3504	6.6	10	
Tl	205	165	1	He	0.262	11.5	2047	12.2	0.5	
Pb	208	165	1	He	7.032	9.3	72267	8.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1412436	1.65	1276810	110.62	60	120	
Sc	45	1	He	128125	0.60	163460	78.38	60	120	
Sc	45	2	NoGas	7990291	0.39	8842934	90.36	60	120	
Rh	103	1	He	825457	0.17	1010526	81.69	60	120	
In	115	1	He	216995	1.61	257801	84.17	60	120	
Tb	159	1	He	981442	0.48	1155473	84.94	60	120	
Ho	165	1	He	989041	0.78	1147359	86.20	60	120	
Bi	209	1	He	673060	0.34	790610	85.13	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-b-25-a@2
Data File Name	189SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:07:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	39.922	39.922	0.88	721998	0.01	10000	
Be	9	45	2	NoGas	3.888	3.888	2.92	18488	0.02	2000	
B	11	6	2	NoGas	62.758	62.758	1.05	219546	0.03	300	
Na	23	45	1	He	4403.182	4403.182	0.42	1695340	0.26	500000	
Mg	24	45	1	He	35542.805	35542.805	0.60	7641728	0.47	500000	
Al	27	45	1	He	37311.954	37311.954	1.24	3371254	1.11	200000	
K	39	45	1	He	5523.171	5523.171	0.82	591732	0.93	500000	
Ca	44	45	1	He	415329.651	415329.651	1.27	2540166	16.35	500000	
Ti	47	45	1	He	1790.952	1790.952	0.61	78944	2.27	2500	
V	51	45	1	He	81.607	81.607	3.68	123701	0.07	10000	
Cr	52	45	1	He	103.160	103.160	1.80	195061	0.05	10000	
Mn	55	45	1	He	1108.835	1108.835	0.91	1053334	0.11	10000	
Fe	56	45	1	He	63283.907	63283.907	0.98	94222125	0.07	200000	
Co	59	45	1	He	136.107	136.107	1.60	465505	0.03	5000	
Ni	60	45	1	He	755.971	755.971	1.56	717618	0.11	10000	
Cu	63	45	1	He	560.015	560.015	1.92	1502672	0.04	10000	
Zn	66	45	1	He	251.511	251.511	0.72	80151	0.31	10000	
As	75	115	1	He	104.880	104.880	0.81	21203	0.49	10000	
Se	78	115	1	He	13.968	13.968	1.69	139	10.05	10000	
Sr	88	103	1	He	356.844	356.844	1.01	381756	0.09	10000	
Mo	95	103	1	He	9.408	9.408	3.04	12115	0.08	2000	
Ag	107	103	1	He	10.368	10.368	1.59	47744	0.02	300	
Cd	111	115	1	He	10.028	10.028	2.26	4523	0.22	4000	
Sn	118	115	1	He	36.525	36.525	3.12	32402	0.11	2000	
Sb	123	115	1	He	129.416	129.416	1.44	124320	0.10	200	
Ba	137	115	1	He	842.890	842.890	0.82	284740	0.30	10000	
W	182	159	1	He	1.633	1.633	5.03	9648	0.02	2500	
Tl	205	165	1	He	16.366	16.366	14.05	126379	0.01	2000	
Pb	208	165	1	He	238251.367	238251.367	1.03	2420035975	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1279923	2.06	1276810	100.24	60	120	
Sc	45	1	He	132922	1.48	163460	81.32	60	120	
Sc	45	2	NoGas	8485934	0.97	8842934	95.96	60	120	
Rh	103	1	He	918411	1.04	1010526	90.88	60	120	
In	115	1	He	204764	0.73	257801	79.43	60	120	
Tb	159	1	He	979258	0.69	1155473	84.75	60	120	
Ho	165	1	He	991723	1.93	1147359	86.44	60	120	
Bi	209	1	He	1407035	7.53	790610	177.97	60	120	ISTD warning

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	190_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:11:18-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.956	6.6	98295	1.0	8	
Be	9	45	2	NoGas	0.201	23.0	1048	22.0	1	
B	11	6	2	NoGas	4.799	4.7	30596	2.5	20	
Na	23	45	1	He	2.652	33.9	8221	4.7	1000	
Mg	24	45	1	He	6.700	32.7	2141	23.2	1000	
Al	27	45	1	He	7.083	45.8	909	33.8	50	
K	39	45	1	He	11.159	15.2	9999	2.0	1000	
Ca	44	45	1	He	6.064	354.5	667	20.8	1000	
Ti	47	45	1	He	1.132	31.9	53	31.2	20	
V	51	45	1	He	-0.073	-221.5	39	647.4	2	
Cr	52	45	1	He	0.027	218.5	809	14.2	2	
Mn	55	45	1	He	-0.786	-9.3	467	15.8	2	
Fe	56	45	1	He	22.295	33.6	37517	31.2	50	
Co	59	45	1	He	3.122	4.0	11406	4.2	1	Blank High
Ni	60	45	1	He	0.416	30.6	608	20.9	2	
Cu	63	45	1	He	0.403	94.6	5510	18.8	2	
Zn	66	45	1	He	-7.878	-1.4	228	15.4	20	
As	75	115	1	He	0.305	8.3	94	6.6	2	
Se	78	115	1	He	0.152	31.4	5	9.9	2	
Sr	88	103	1	He	0.017	20.0	110	3.0	10	
Mo	95	103	1	He	0.040	10.4	71	7.2	2	
Ag	107	103	1	He	0.007	48.1	43	35.2	0.2	
Cd	111	115	1	He	0.052	57.4	27	54.4	0.2	
Sn	118	115	1	He	-0.951	-4.2	489	8.2	10	
Sb	123	115	1	He	0.396	5.8	443	4.7	2	
Ba	137	115	1	He	0.231	31.8	92	30.3	5	
W	182	159	1	He	0.000	7895.7	1478	13.9	10	
Tl	205	165	1	He	0.034	14.0	299	12.3	0.5	
Pb	208	165	1	He	59.776	15.5	629071	16.0	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1481728	1.35	1276810	116.05	60	120	
Sc	45	1	He	137025	0.48	163460	83.83	60	120	
Sc	45	2	NoGas	8510276	1.20	8842934	96.24	60	120	
Rh	103	1	He	877342	0.38	1010526	86.82	60	120	
In	115	1	He	226441	0.78	257801	87.84	60	120	
Tb	159	1	He	1019893	0.68	1155473	88.27	60	120	
Ho	165	1	He	1025048	0.55	1147359	89.34	60	120	
Bi	209	1	He	706889	0.27	790610	89.41	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@2
Data File Name	191SMPL.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:15:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	144.245	144.245	0.67	2516858	0.01	10000	
Be	9	45	2	NoGas	5.772	5.772	3.62	28823	0.02	2000	
B	11	6	2	NoGas	267.486	267.486	2.02	961427	0.03	300	
Na	23	45	1	He	1799.150	1799.150	0.66	742970	0.24	500000	
Mg	24	45	1	He	20501.472	20501.472	2.45	4699122	0.44	500000	
Al	27	45	1	He	98846.130	98846.130	2.44	9519826	1.04	200000	
K	39	45	1	He	25552.150	25552.150	1.26	2885949	0.89	500000	
Ca	44	45	1	He	108382.261	108382.261	1.95	707177	15.33	500000	
Ti	47	45	1	He	1184.982	1184.982	3.27	55674	2.13	2500	
V	51	45	1	He	131.191	131.191	11.13	211589	0.06	10000	
Cr	52	45	1	He	4343.388	4343.388	2.46	8721967	0.05	10000	
Mn	55	45	1	He	1134.900	1134.900	2.56	1149206	0.10	10000	
Fe	56	45	1	He	166068.229	166068.229	2.75	263566070	0.06	200000	
Co	59	45	1	He	125.002	125.002	2.26	455740	0.03	5000	
Ni	60	45	1	He	432.522	432.522	2.39	437739	0.10	10000	
Cu	63	45	1	He	382.803	382.803	2.40	1096324	0.03	10000	
Zn	66	45	1	He	1120.362	1120.362	3.00	370835	0.30	10000	
As	75	115	1	He	93.767	93.767	1.06	19563	0.48	10000	
Se	78	115	1	He	15.011	15.011	5.18	154	9.75	10000	
Sr	88	103	1	He	406.144	406.144	0.36	376530	0.11	10000	
Mo	95	103	1	He	17.675	17.675	2.88	19711	0.09	2000	
Ag	107	103	1	He	0.847	0.847	1.43	3390	0.02	300	
Cd	111	115	1	He	9.564	9.564	1.05	4450	0.21	4000	
Sn	118	115	1	He	55.116	55.116	1.83	49773	0.11	2000	
Sb	123	115	1	He	54.445	54.445	1.08	53967	0.10	200	
Ba	137	115	1	He	2719.825	2719.825	0.67	947885	0.29	10000	
W	182	159	1	He	3.059	3.059	5.19	17347	0.02	2500	
Tl	205	165	1	He	1.814	1.814	1.96	14460	0.01	2000	
Pb	208	165	1	He	2739.206	2739.206	1.55	28622497	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1364884	1.99	1276810	106.90	60	120	
Sc	45	1	He	141722	1.81	163460	86.70	60	120	
Sc	45	2	NoGas	8926325	0.41	8842934	100.94	60	120	
Rh	103	1	He	795934	1.47	1010526	78.76	60	120	
In	115	1	He	211267	2.06	257801	81.95	60	120	
Tb	159	1	He	1008774	1.39	1155473	87.30	60	120	
Ho	165	1	He	1020215	1.86	1147359	88.92	60	120	
Bi	209	1	He	680603	0.65	790610	86.09	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	192_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:19:37-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.073	5.3	98689	0.6	8	
Be	9	45	2	NoGas	0.157	13.3	826	11.8	1	
B	11	6	2	NoGas	4.220	2.5	27836	0.7	20	
Na	23	45	1	He	1.356	59.7	7465	4.7	1000	
Mg	24	45	1	He	5.408	33.8	1793	21.1	1000	
Al	27	45	1	He	24.896	39.8	2481	35.0	50	
K	39	45	1	He	9.670	57.7	9529	6.9	1000	
Ca	44	45	1	He	-32.342	-32.2	411	14.7	1000	
Ti	47	45	1	He	0.843	14.1	39	13.1	20	
V	51	45	1	He	-0.039	-465.1	87	316.2	2	
Cr	52	45	1	He	1.028	43.4	2660	30.6	2	
Mn	55	45	1	He	-0.707	-13.5	527	17.0	2	
Fe	56	45	1	He	61.848	34.4	94898	32.3	50	Blank High
Co	59	45	1	He	1.972	3.9	7123	2.7	1	Blank High
Ni	60	45	1	He	0.321	25.9	498	14.9	2	
Cu	63	45	1	He	-0.631	-3.1	2577	2.2	2	
Zn	66	45	1	He	-7.300	-4.8	398	26.3	20	
As	75	115	1	He	0.243	8.2	77	5.7	2	
Se	78	115	1	He	0.170	172.3	5	60.8	2	
Sr	88	103	1	He	0.053	32.0	142	11.8	10	
Mo	95	103	1	He	0.018	60.8	43	30.8	2	
Ag	107	103	1	He	0.001	720.7	13	114.6	0.2	
Cd	111	115	1	He	0.025	22.2	13	20.4	0.2	
Sn	118	115	1	He	-0.984	-1.8	441	3.8	10	
Sb	123	115	1	He	0.193	20.2	219	18.4	2	
Ba	137	115	1	He	0.677	25.0	249	24.1	5	
W	182	159	1	He	0.034	23.6	1600	2.5	10	
Tl	205	165	1	He	0.015	30.1	148	24.9	0.5	
Pb	208	165	1	He	12.616	12.6	129801	13.2	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1454010	0.81	1276810	113.88	60	120	
Sc	45	1	He	132693	0.99	163460	81.18	60	120	
Sc	45	2	NoGas	8383581	0.42	8842934	94.81	60	120	
Rh	103	1	He	851035	0.89	1010526	84.22	60	120	
In	115	1	He	217802	0.35	257801	84.48	60	120	
Tb	159	1	He	986220	1.02	1155473	85.35	60	120	
Ho	165	1	He	995713	1.26	1147359	86.78	60	120	
Bi	209	1	He	682657	1.04	790610	86.35	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	193_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:23:49-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.969	0.478	925745	0.54	50	109.9	89.5	110.5	
Be	9	45	2	NoGas	51.747	0.769	235414	0.93	50	103.5	89.5	110.5	
B	11	6	2	NoGas	43.220	1.254	168984	1.13	50	86.4	89.5	110.5	CCV Failed
Na	23	45	1	He	24646.114	1.970	9318884	0.34	25000	98.6	89.5	110.5	
Mg	24	45	1	He	24440.552	1.488	5178008	0.84	25000	97.8	89.5	110.5	
Al	27	45	1	He	245.507	3.380	22088	1.10	250	98.2	89.5	110.5	
K	39	45	1	He	25917.188	1.717	2705198	0.67	25000	103.7	89.5	110.5	
Ca	44	45	1	He	25141.182	2.356	152065	0.78	25000	100.6	89.5	110.5	
Ti	47	45	1	He	51.422	3.893	2237	5.96	50	102.8	89.5	110.5	
V	51	45	1	He	50.170	2.002	74975	2.16	50	100.3	89.5	110.5	
Cr	52	45	1	He	50.012	1.694	93546	0.86	50	100.0	89.5	110.5	
Mn	55	45	1	He	249.999	2.717	234880	1.07	250	100.0	89.5	110.5	
Fe	56	45	1	He	12601.945	2.422	18488594	1.05	12500	100.8	89.5	110.5	
Co	59	45	1	He	52.250	2.056	176302	0.60	50	104.5	89.5	110.5	
Ni	60	45	1	He	50.486	0.983	47405	1.81	50	101.0	89.5	110.5	
Cu	63	45	1	He	49.719	3.096	135247	0.73	50	99.4	89.5	110.5	
Zn	66	45	1	He	47.116	4.883	16910	2.59	50	94.2	89.5	110.5	
As	75	115	1	He	48.667	3.232	10217	1.88	50	97.3	89.5	110.5	
Se	78	115	1	He	47.719	5.834	485	5.19	50	95.4	89.5	110.5	
Sr	88	103	1	He	49.797	1.787	47402	1.69	50	99.6	89.5	110.5	
Mo	95	103	1	He	50.788	1.902	58017	2.56	50	101.6	89.5	110.5	
Ag	107	103	1	He	50.194	0.118	205313	0.76	50	100.4	89.5	110.5	
Cd	111	115	1	He	49.023	1.922	22929	0.63	50	98.0	89.5	110.5	
Sn	118	115	1	He	48.242	2.569	43969	1.45	50	96.5	89.5	110.5	
Sb	123	115	1	He	51.381	1.757	51207	0.41	50	102.8	89.5	110.5	
Ba	137	115	1	He	51.231	3.912	17953	2.77	50	102.5	89.5	110.5	
W	182	159	1	He	50.184	2.193	254353	2.41	50	100.4	89.5	110.5	
Tl	205	165	1	He	51.028	1.778	393075	2.02	50	102.1	89.5	110.5	
Pb	208	165	1	He	59.024	1.532	598200	1.02	50	118.0	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1400227	0.18	1276810	109.67	60	120	
Sc	45	1	He	131009	2.23	163460	80.15	60	120	
Sc	45	2	NoGas	8157647	0.20	8842934	92.25	60	120	
Rh	103	1	He	815994	0.75	1010526	80.75	60	120	
In	115	1	He	212426	1.34	257801	82.40	60	120	
Tb	159	1	He	979411	0.57	1155473	84.76	60	120	
Ho	165	1	He	987729	0.79	1147359	86.09	60	120	
Bi	209	1	He	652343	0.22	790610	82.51	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	194_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:28:02-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.243	5.3	97527	1.3	8	
Be	9	45	2	NoGas	0.446	1.6	2093	1.9	1	
B	11	6	2	NoGas	2.761	11.7	21372	4.8	20	
Na	23	45	1	He	87.302	4.4	39035	4.1	1000	
Mg	24	45	1	He	76.547	12.7	16493	11.9	1000	
Al	27	45	1	He	3.176	33.1	509	17.1	50	
K	39	45	1	He	88.374	2.1	17235	1.3	1000	
Ca	44	45	1	He	68.800	17.5	994	7.4	1000	
Ti	47	45	1	He	0.168	96.8	9	78.1	20	
V	51	45	1	He	0.087	103.9	269	48.1	2	
Cr	52	45	1	He	0.221	39.8	1109	14.0	2	
Mn	55	45	1	He	0.391	31.4	1515	7.4	2	
Fe	56	45	1	He	50.321	10.4	75379	10.1	50	CCB High
Co	59	45	1	He	2.201	4.5	7644	4.8	1	CCB High
Ni	60	45	1	He	0.374	19.1	530	12.6	2	
Cu	63	45	1	He	-0.483	-6.4	2876	3.5	2	
Zn	66	45	1	He	-3.039	-17.0	1653	10.1	20	
As	75	115	1	He	0.362	12.5	101	8.9	2	
Se	78	115	1	He	0.629	18.6	10	11.9	2	
Sr	88	103	1	He	0.148	10.1	231	6.0	10	
Mo	95	103	1	He	0.236	15.7	296	14.5	2	
Ag	107	103	1	He	0.163	11.3	692	11.1	0.2	
Cd	111	115	1	He	0.171	8.8	82	8.2	0.2	
Sn	118	115	1	He	-0.273	-21.5	1074	4.7	10	
Sb	123	115	1	He	0.279	5.4	303	4.8	2	
Ba	137	115	1	He	0.259	11.2	98	10.4	5	
W	182	159	1	He	0.390	1.9	3352	1.6	10	
Tl	205	165	1	He	0.258	16.3	2001	15.8	0.5	
Pb	208	165	1	He	6.640	5.0	67777	4.7	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1393055	1.52	1276810	109.10	60	120	
Sc	45	1	He	128313	0.87	163460	78.50	60	120	
Sc	45	2	NoGas	8064570	0.62	8842934	91.20	60	120	
Rh	103	1	He	832283	0.26	1010526	82.36	60	120	
In	115	1	He	215532	0.62	257801	83.60	60	120	
Tb	159	1	He	971431	0.61	1155473	84.07	60	120	
Ho	165	1	He	981300	0.86	1147359	85.53	60	120	
Bi	209	1	He	671878	0.81	790610	84.98	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	195_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:32:12-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.867	5.5	92866	0.3	8	
Be	9	45	2	NoGas	0.117	12.3	619	9.9	1	
B	11	6	2	NoGas	2.517	4.5	20371	2.0	20	
Na	23	45	1	He	2.384	76.8	7591	7.9	1000	
Mg	24	45	1	He	1.262	48.9	874	14.1	1000	
Al	27	45	1	He	-0.090	-222.0	224	6.9	50	
K	39	45	1	He	10.331	39.5	9273	3.5	1000	
Ca	44	45	1	He	-71.578	-0.7	166	1.8	1000	
Ti	47	45	1	He	0.090	182.5	6	124.9	20	
V	51	45	1	He	0.004	4145.8	147	144.7	2	
Cr	52	45	1	He	0.051	126.1	800	13.7	2	
Mn	55	45	1	He	-1.035	-4.5	208	19.6	2	
Fe	56	45	1	He	3.001	5.2	7364	2.2	50	
Co	59	45	1	He	2.180	1.9	7569	1.4	1	Blank High
Ni	60	45	1	He	0.190	17.1	361	8.4	2	
Cu	63	45	1	He	-0.893	-5.1	1816	7.4	2	
Zn	66	45	1	He	-8.012	-0.7	173	10.2	20	
As	75	115	1	He	0.246	12.0	76	7.0	2	
Se	78	115	1	He	0.500	57.7	8	36.6	2	
Sr	88	103	1	He	-0.035	-63.7	54	39.4	10	
Mo	95	103	1	He	0.015	70.5	39	32.4	2	
Ag	107	103	1	He	0.002	99.7	20	44.1	0.2	
Cd	111	115	1	He	0.023	33.5	12	30.1	0.2	
Sn	118	115	1	He	-1.006	-6.6	415	14.8	10	
Sb	123	115	1	He	0.063	33.4	84	23.8	2	
Ba	137	115	1	He	0.044	65.7	21	48.2	5	
W	182	159	1	He	0.012	211.0	1456	9.5	10	
Tl	205	165	1	He	0.019	29.8	173	25.0	0.5	
Pb	208	165	1	He	5.112	3.1	51902	2.6	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1384932	1.06	1276810	108.47	60	120	
Sc	45	1	He	128269	1.03	163460	78.47	60	120	
Sc	45	2	NoGas	8159410	0.74	8842934	92.27	60	120	
Rh	103	1	He	833754	0.64	1010526	82.51	60	120	
In	115	1	He	214786	1.53	257801	83.31	60	120	
Tb	159	1	He	964701	0.87	1155473	83.49	60	120	
Ho	165	1	He	971721	0.47	1147359	84.69	60	120	
Bi	209	1	He	664790	0.82	790610	84.09	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	BLANK
Data File Name	196_Blk.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:36:24-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.812	1.9	92541	0.7	8	
Be	9	45	2	NoGas	0.112	34.3	600	29.1	1	
B	11	6	2	NoGas	3.662	5.4	24773	2.8	20	
Na	23	45	1	He	1.472	72.5	7380	4.0	1000	
Mg	24	45	1	He	0.446	91.0	719	13.5	1000	
Al	27	45	1	He	-0.474	-48.8	194	11.4	50	
K	39	45	1	He	9.862	47.2	9384	4.2	1000	
Ca	44	45	1	He	-68.865	-2.5	185	5.6	1000	
Ti	47	45	1	He	0.089	183.8	6	124.9	20	
V	51	45	1	He	0.069	138.2	247	57.9	2	
Cr	52	45	1	He	0.040	54.9	794	3.8	2	
Mn	55	45	1	He	-0.994	-3.5	250	11.4	2	
Fe	56	45	1	He	2.343	3.3	6530	1.0	50	
Co	59	45	1	He	2.285	3.8	8052	2.4	1	Blank High
Ni	60	45	1	He	0.172	17.5	351	9.5	2	
Cu	63	45	1	He	-0.922	-4.0	1770	7.1	2	
Zn	66	45	1	He	-7.812	-1.8	237	18.0	20	
As	75	115	1	He	0.224	3.2	73	2.7	2	
Se	78	115	1	He	0.250	50.2	6	21.6	2	
Sr	88	103	1	He	-0.048	-16.1	42	16.4	10	
Mo	95	103	1	He	-0.004	-120.8	17	34.6	2	
Ag	107	103	1	He	0.002	89.0	19	36.7	0.2	
Cd	111	115	1	He	0.015	45.0	8	38.6	0.2	
Sn	118	115	1	He	-1.110	-11.5	326	34.8	10	
Sb	123	115	1	He	0.092	17.1	116	13.0	2	
Ba	137	115	1	He	0.040	25.0	20	16.7	5	
W	182	159	1	He	0.022	99.3	1522	7.6	10	
Tl	205	165	1	He	0.013	10.3	131	7.8	0.5	
Pb	208	165	1	He	5.784	30.1	59248	29.6	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1400378	0.41	1276810	109.68	60	120	
Sc	45	1	He	130491	1.72	163460	79.83	60	120	
Sc	45	2	NoGas	8205086	0.44	8842934	92.79	60	120	
Rh	103	1	He	844048	1.34	1010526	83.53	60	120	
In	115	1	He	218201	2.19	257801	84.64	60	120	
Tb	159	1	He	977078	0.52	1155473	84.56	60	120	
Ho	165	1	He	982554	0.52	1147359	85.64	60	120	
Bi	209	1	He	678700	0.24	790610	85.85	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	197_CCV.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:40:40-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.810	0.562	929348	0.31	50	109.6	89.5	110.5	
Be	9	45	2	NoGas	51.347	1.643	235115	1.05	50	102.7	89.5	110.5	
B	11	6	2	NoGas	44.304	1.349	173099	1.00	50	88.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24813.084	3.219	9329307	0.67	25000	99.3	89.5	110.5	
Mg	24	45	1	He	24511.238	3.499	5163197	0.94	25000	98.0	89.5	110.5	
Al	27	45	1	He	243.288	3.278	21772	0.81	250	97.3	89.5	110.5	
K	39	45	1	He	25897.329	2.915	2688014	0.60	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25379.022	2.916	152651	0.59	25000	101.5	89.5	110.5	
Ti	47	45	1	He	50.592	3.984	2187	2.91	50	101.2	89.5	110.5	
V	51	45	1	He	50.959	2.821	75718	0.23	50	101.9	89.5	110.5	
Cr	52	45	1	He	50.296	3.159	93544	1.17	50	100.6	89.5	110.5	
Mn	55	45	1	He	252.350	3.221	235773	1.13	250	100.9	89.5	110.5	
Fe	56	45	1	He	12631.036	3.797	18426131	1.31	12500	101.0	89.5	110.5	
Co	59	45	1	He	52.751	3.325	176986	0.73	50	105.5	89.5	110.5	
Ni	60	45	1	He	51.517	3.762	48084	1.16	50	103.0	89.5	110.5	
Cu	63	45	1	He	50.280	2.686	135995	0.78	50	100.6	89.5	110.5	
Zn	66	45	1	He	47.770	2.333	17023	2.16	50	95.5	89.5	110.5	
As	75	115	1	He	48.246	1.648	10122	1.64	50	96.5	89.5	110.5	
Se	78	115	1	He	48.833	4.551	496	3.29	50	97.7	89.5	110.5	
Sr	88	103	1	He	49.669	0.456	47447	1.07	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.652	1.206	59212	2.44	50	103.3	89.5	110.5	
Ag	107	103	1	He	50.022	0.136	205323	1.23	50	100.0	89.5	110.5	
Cd	111	115	1	He	49.641	1.475	23199	0.55	50	99.3	89.5	110.5	
Sn	118	115	1	He	48.385	1.855	44069	2.63	50	96.8	89.5	110.5	
Sb	123	115	1	He	51.990	2.160	51767	0.81	50	104.0	89.5	110.5	
Ba	137	115	1	He	51.341	0.619	17983	2.01	50	102.7	89.5	110.5	
W	182	159	1	He	49.851	1.699	254078	1.89	50	99.7	89.5	110.5	
Tl	205	165	1	He	50.834	1.832	395401	1.82	50	101.7	89.5	110.5	
Pb	208	165	1	He	55.661	1.439	569697	0.98	50	111.3	89.5	110.5	CCV Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1401573	0.52	1276810	109.77	60	120	
Sc	45	1	He	130307	2.59	163460	79.72	60	120	
Sc	45	2	NoGas	8211352	0.78	8842934	92.86	60	120	
Rh	103	1	He	818863	1.36	1010526	81.03	60	120	
In	115	1	He	212245	1.39	257801	82.33	60	120	
Tb	159	1	He	984839	0.23	1155473	85.23	60	120	
Ho	165	1	He	997386	0.70	1147359	86.93	60	120	
Bi	209	1	He	667592	0.72	790610	84.44	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	198_CCB.d
Data Path Name	D:\Analytical Runs\I10050716G.b
Acq Date Time	2016-05-08T02:44:51-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.184	5.6	99146	1.3	8	
Be	9	45	2	NoGas	0.272	21.6	1348	21.3	1	
B	11	6	2	NoGas	4.561	4.5	28938	1.9	20	
Na	23	45	1	He	84.031	0.6	39309	0.9	1000	
Mg	24	45	1	He	68.444	3.2	15400	3.1	1000	
Al	27	45	1	He	0.632	17.5	299	3.6	50	
K	39	45	1	He	87.031	4.4	17772	2.9	1000	
Ca	44	45	1	He	66.155	13.2	1017	5.6	1000	
Ti	47	45	1	He	0.135	32.7	8	24.7	20	
V	51	45	1	He	0.135	51.1	352	29.2	2	
Cr	52	45	1	He	0.113	36.7	950	8.9	2	
Mn	55	45	1	He	0.247	28.4	1437	4.3	2	
Fe	56	45	1	He	42.008	3.0	65917	2.4	50	
Co	59	45	1	He	2.053	3.1	7438	3.4	1	CCB High
Ni	60	45	1	He	0.352	10.7	530	6.8	2	
Cu	63	45	1	He	-0.589	-14.8	2704	8.1	2	
Zn	66	45	1	He	-3.350	-11.7	1621	7.3	20	
As	75	115	1	He	0.377	4.3	108	3.4	2	
Se	78	115	1	He	0.396	74.6	7	41.6	2	
Sr	88	103	1	He	0.162	17.9	251	11.9	10	
Mo	95	103	1	He	0.238	5.3	306	4.4	2	
Ag	107	103	1	He	0.154	9.1	670	9.5	0.2	
Cd	111	115	1	He	0.165	11.6	82	11.3	0.2	
Sn	118	115	1	He	-0.250	-41.6	1130	8.4	10	
Sb	123	115	1	He	0.309	10.0	344	9.5	2	
Ba	137	115	1	He	0.178	20.6	71	18.9	5	
W	182	159	1	He	0.350	12.5	3260	6.4	10	
Tl	205	165	1	He	0.208	7.7	1673	7.0	0.5	
Pb	208	165	1	He	4.289	1.4	45708	1.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1444935	1.93	1276810	113.17	60	120	
Sc	45	1	He	133362	0.62	163460	81.59	60	120	
Sc	45	2	NoGas	8276012	1.02	8842934	93.59	60	120	
Rh	103	1	He	851527	0.48	1010526	84.27	60	120	
In	115	1	He	222429	0.17	257801	86.28	60	120	
Tb	159	1	He	1003483	0.91	1155473	86.85	60	120	
Ho	165	1	He	1015960	0.79	1147359	88.55	60	120	
Bi	209	1	He	693134	0.63	790610	87.67	60	120	

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AS 5/10/16

MTMSCCBDILH20-262 EPA Tune Solution Spex CL1-16MKBY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 5/9/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

Level I Analyst: Anjali Sharma Date: 5/10/16 Time: 11:39 – 4:26
Level I Analyst: _____ Date: _____ Time: _____

Level II Reviewer: Karen R Coutu Date: 5/10/16 Time: 11:39-4:26
Level II Reviewer: _____ Date: _____ Time: _____

Comments: _____

Current Signal

[NoGas]

Mass	Range	Count	Avg. Count	RSD [%]
7	5000	2608	2633.1	1.93
89	5000	4655	4650.2	1.73
205	5000	2399	2434.8	2.14
156/140	2	0.962 %	0.908 %	14.41
65	2000	1830	1850.2	3.71
11	2000	1552	1591.1	2.26
63	5000	4076	4155.4	2.92
60	500	317	306.7	9.73
45	500	142	172.2	14.75
6	2000	1245	1210.2	5.57
52	20000	11479	11741.0	2.01
208	500	190	201.4	12.24
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	14.8	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

Meters

IF/BK Press	2.08E+2	Pa	TMP Revolution	100.0	%	Forward Power	1600	W
Analyzer Press	8.68E-5	Pa	Carrier Gas(BP)	1.96E+2	kPa			

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Current Signal

[He]

Mass	Range	Count	Avg. Count	RSD [%]
59	1000	459	453.3	6.11
51	200	104	115.7	10.09
52	200	76	87.8	15.83
51/59	50	22.656 %	25.646 %	13.05
63	1000	506	478.0	7.25
65	500	222	241.3	6.21
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	2.8	V
Extract 2	-160.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-85	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	10.4	V
He Flow	4.4	mL/min	OctP Bias	-25.0	V			
H2 Flow	0.0	mL/min	OctP RF	200	V			

Meters

IF/BK Press	2.09E+2	Pa	TMP Revolution	100.0	%	Forward Power	1599	W
Analyzer Press	1.60E-4	Pa	Carrier Gas(BP)	1.96E+2	kPa			

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US EPA Tune Check Sample Report

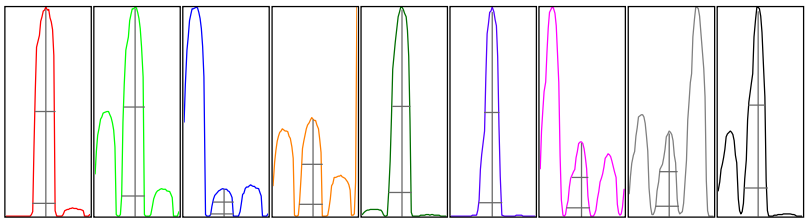
Batch Folder D:\Analytical Runs\I10050716G.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	42209	0.58	5.00	
24	176465	0.23	5.00	
25	22829	0.53	5.00	
26	25852	0.50	5.00	
59	168093	0.50	5.00	
115	217343	0.12	5.00	
206	47860	0.18	5.00	
207	41900	0.86	5.00	
208	97152	0.66	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	42187	41980	42581	42293	42002
24	176579	176482	176905	175808	176553
25	22958	22825	22809	22912	22640
26	25860	25942	25840	25646	25975
59	166789	168237	167843	168577	169020
115	217593	217074	217597	217082	217370
206	47982	47767	47860	47904	47789
207	41303	41852	41998	42135	42212
208	96500	97278	98016	97442	96526

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	6413	8.95	8.9 - 9.1		0.792	0.850	
24	27065	23.95	23.9 - 24.1		0.794	0.850	
25	3497	24.95	24.9 - 25.1		0.792	0.850	
26	3947	25.95	25.9 - 26.1		0.801	0.850	
59	27322	58.95	58.9 - 59.1		0.797	0.850	
115	39851	115.00	114.9 - 115.1		0.798	0.850	
206	8582	206.00	205.9 - 206.1		0.801	0.850	
207	7159	206.95	206.9 - 207.1		0.779	0.850	
208	17762	207.95	207.9 - 208.1		0.782	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-9.0	V	Omega Lens	8.1	V	Deflect	14.8	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:39:01-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	115398	0.00
Be	9	45	2	NoGas	181	21.69
B	11	45	2	NoGas	10403	0.03
Na	23	45	1	He	4879	0.10
Mg	24	45	1	He	615	3.72
Al	27	45	1	He	141	11.39
K	39	45	1	He	8851	0.03
Ca	44	45	1	He	167	13.81
V	51	45	1	He	47	1530.79
Cr	52	45	1	He	709	0.47
Mn	55	45	1	He	116	13.75
Fe	56	45	1	He	3613	0.25
Co	59	45	1	He	353	0.92
Ni	60	45	1	He	157	12.96
Cu	63	45	1	He	2760	0.07
Zn	66	45	1	He	136	11.66
As	75	103	1	He	25	132.46
Se	78	115	1	He	6	795.41
Sr	88	103	1	He	20	144.39
Mo	95	103	1	He	50	61.09
Ag	107	103	1	He	17	0.00
Cd	111	115	1	He	3	514.47
Sn	118	115	1	He	330	12.70
Sb	123	115	1	He	43	81.33
Ba	137	115	1	He	4	2579.17
W	182	159	1	He	1648	0.42
Tl	205	165	1	He	124	9.71
Pb	208	165	1	He	1249	0.39

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1850878	1.74
Sc	45	1	He	135266	1.55
Sc	45	2	NoGas	8204012	0.22
Rh	103	1	He	900008	0.69
In	115	1	He	224950	0.78
Tb	159	1	He	1053564	0.39
Ho	165	1	He	1062658	0.34
Bi	209	1	He	727675	1.00

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:43:16-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	116206	0.00
Be	9	45	2	NoGas	144	5.32
B	11	45	2	NoGas	8791	0.06
Na	23	45	1	He	4567	0.07
Mg	24	45	1	He	641	1.49
Al	27	45	1	He	111	6.79
K	39	45	1	He	8877	0.07
Ca	44	45	1	He	191	6.38
V	51	45	1	He	53	653.67
Cr	52	45	1	He	676	0.80
Mn	55	45	1	He	134	18.65
Fe	56	45	1	He	1998	0.29
Co	59	45	1	He	309	6.30
Ni	60	45	1	He	143	5.85
Cu	63	45	1	He	2417	0.26
Zn	66	45	1	He	148	13.16
As	75	103	1	He	18	19.15
Se	78	115	1	He	3	1913.98
Sr	88	103	1	He	39	33.67
Mo	95	103	1	He	13	374.91
Ag	107	103	1	He	8	841.82
Cd	111	115	1	He	2	2057.88
Sn	118	115	1	He	300	8.90
Sb	123	115	1	He	42	75.57
Ba	137	115	1	He	6	624.54
W	182	159	1	He	1422	0.99
Tl	205	165	1	He	40	36.09
Pb	208	165	1	He	1194	0.33

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1884762	1.33
Sc	45	1	He	134073	1.44
Sc	45	2	NoGas	8481025	0.69
Rh	103	1	He	903580	0.81
In	115	1	He	224817	0.40
Tb	159	1	He	1046002	0.13
Ho	165	1	He	1057439	0.80
Bi	209	1	He	731380	0.88

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Calibration Standard Report

Sample Table

Sample Name	STD1-2495516
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:47:29-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	333505	0.00
Be	9	2	NoGas	61179	0.00
B	11	2	NoGas	46043	0.01
Na	23	1	He	2067013	0.00
Mg	24	1	He	1107505	0.00
Al	27	1	He	6381	0.03
K	39	1	He	539387	0.00
Ca	44	1	He	31529	0.01
Ti	47	1	He	488	1.13
V	51	1	He	15132	0.02
Cr	52	1	He	20894	0.02
Mn	55	1	He	49748	0.00
Fe	56	1	He	3878041	0.00
Co	59	1	He	38207	0.00
Ni	60	1	He	10677	0.02
Cu	63	1	He	33575	0.00
Zn	66	1	He	4934	0.09
As	75	1	He	2189	0.08
Se	78	1	He	104	5.82
Sr	88	1	He	9598	0.05
Mo	95	1	He	12655	0.03
Ag	107	1	He	46791	0.00
Cd	111	1	He	5130	0.10
Sn	118	1	He	9396	0.03
Sb	123	1	He	11163	0.02
Ba	137	1	He	3692	0.19
W	182	1	He	56558	0.01
Tl	205	1	He	88186	0.00
Pb	208	1	He	117206	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1834825	1.16	1884762	97.35	60	120	
Sc	45	1	He	133195	1.41	134073	99.34	60	120	
Sc	45	2	NoGas	8415884	0.16	8481025	99.23	60	120	
Rh	103	1	He	878699	1.50	903580	97.25	60	120	
In	115	1	He	221379	0.37	224817	98.47	60	120	
Tb	159	1	He	1047379	0.63	1046002	100.13	60	120	
Ho	165	1	He	1042468	0.75	1057439	98.58	60	120	
Bi	209	1	He	721828	0.46	731380	98.69	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2517056
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:51:40-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	1221064	0.00
Be	9	2	NoGas	298907	0.00
B	11	2	NoGas	193108	0.00
Na	23	1	He	9903991	0.00
Mg	24	1	He	5450403	0.00
Al	27	1	He	22802	0.00
K	39	1	He	2605140	0.00
Ca	44	1	He	151819	0.00
Ti	47	1	He	2089	0.14
V	51	1	He	78201	0.01
Cr	52	1	He	98031	0.00
Mn	55	1	He	239872	0.00
Fe	56	1	He	18699473	0.00
Co	59	1	He	179393	0.00
Ni	60	1	He	50040	0.00
Cu	63	1	He	144292	0.00
Zn	66	1	He	18164	0.01
As	75	1	He	10689	0.01
Se	78	1	He	482	0.84
Sr	88	1	He	47613	0.00
Mo	95	1	He	62062	0.00
Ag	107	1	He	221220	0.00
Cd	111	1	He	24790	0.00
Sn	118	1	He	45636	0.01
Sb	123	1	He	53087	0.00
Ba	137	1	He	18349	0.01
W	182	1	He	271015	0.00
Tl	205	1	He	424662	0.00
Pb	208	1	He	557767	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1786213	0.90	1884762	94.77	60	120	
Sc	45	1	He	133227	1.70	134073	99.37	60	120	
Sc	45	2	NoGas	8341340	0.81	8481025	98.35	60	120	
Rh	103	1	He	870413	0.45	903580	96.33	60	120	
In	115	1	He	219613	1.04	224817	97.69	60	120	
Tb	159	1	He	1032207	0.46	1046002	98.68	60	120	
Ho	165	1	He	1036014	0.81	1057439	97.97	60	120	
Bi	209	1	He	702882	1.31	731380	96.10	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T11:55:52-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	117960	0.00
Be	9	2	NoGas	596369	0.00
B	11	2	NoGas	9358	0.04
Na	23	1	He	19792319	0.00
Mg	24	1	He	11025888	0.00
Al	27	1	He	45892	0.00
K	39	1	He	5245269	0.00
Ca	44	1	He	307127	0.00
Ti	47	1	He	4	1947.58
V	51	1	He	158771	0.00
Cr	52	1	He	196309	0.00
Mn	55	1	He	485415	0.00
Fe	56	1	He	37487419	0.00
Co	59	1	He	356991	0.00
Ni	60	1	He	100502	0.00
Cu	63	1	He	284885	0.00
Zn	66	1	He	36270	0.01
As	75	1	He	21582	0.01
Se	78	1	He	990	0.21
Sr	88	1	He	95209	0.00
Mo	95	1	He	171	12.59
Ag	107	1	He	437046	0.00
Cd	111	1	He	48836	0.00
Sn	118	1	He	259	2.52
Sb	123	1	He	184	10.48
Ba	137	1	He	36634	0.01
W	182	1	He	2548	0.06
Tl	205	1	He	838380	0.00
Pb	208	1	He	1100491	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1776811	1.65	1884762	94.27	60	120	
Sc	45	1	He	135468	1.79	134073	101.04	60	120	
Sc	45	2	NoGas	8478398	0.51	8481025	99.97	60	120	
Rh	103	1	He	860814	1.37	903580	95.27	60	120	
In	115	1	He	219826	1.82	224817	97.78	60	120	
Tb	159	1	He	1026026	0.69	1046002	98.09	60	120	
Ho	165	1	He	1026988	0.75	1057439	97.12	60	120	
Bi	209	1	He	694193	0.76	731380	94.92	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:00:02-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	2468152	0.00
Be	9	2	NoGas	448	2.09
B	11	2	NoGas	399450	0.00
Na	23	1	He	10533	0.11
Mg	24	1	He	2100	0.35
Al	27	1	He	29	180.13
K	39	1	He	10585	0.08
Ca	44	1	He	244	7.17
Ti	47	1	He	4718	0.12
V	51	1	He	41	2009.23
Cr	52	1	He	760	0.97
Mn	55	1	He	170	10.57
Fe	56	1	He	11302	0.22
Co	59	1	He	361	3.88
Ni	60	1	He	178	10.77
Cu	63	1	He	4030	0.19
Zn	66	1	He	77	44.30
As	75	1	He	41	69.27
Se	78	1	He	6	615.24
Sr	88	1	He	37	65.62
Mo	95	1	He	130435	0.00
Ag	107	1	He	74	48.62
Cd	111	1	He	13	116.26
Sn	118	1	He	101779	0.00
Sb	123	1	He	113151	0.00
Ba	137	1	He	31	120.94
W	182	1	He	558419	0.00
Tl	205	1	He	781	2.41
Pb	208	1	He	1982	0.13

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1890037	1.58	1884762	100.28	60	120	
Sc	45	1	He	142173	0.62	134073	106.04	60	120	
Sc	45	2	NoGas	8755479	0.97	8481025	103.24	60	120	
Rh	103	1	He	958828	0.90	903580	106.11	60	120	
In	115	1	He	238828	0.24	224817	106.23	60	120	
Tb	159	1	He	1085422	0.55	1046002	103.77	60	120	
Ho	165	1	He	1080321	0.22	1057439	102.16	60	120	
Bi	209	1	He	765917	1.22	731380	104.72	60	120	

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Calibration for 056SMPL.d

Batch Folder: D:\Analytical Runs\I10050916A.b\
Analysis File: I10050916A.batch.bin
DA Date-Time: 5/10/2016 8:45:43 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	5/9/2016 11:43:16 AM
2	003CALS.d	STD1-2495516	5/9/2016 11:47:29 AM
3	004CALS.d	STD2-2517056	5/9/2016 11:51:40 AM
4	005CALS.d	STD3-2510771	5/9/2016 11:55:52 AM
5	006CALS.d	STD4-2510772	5/9/2016 12:00:02 PM

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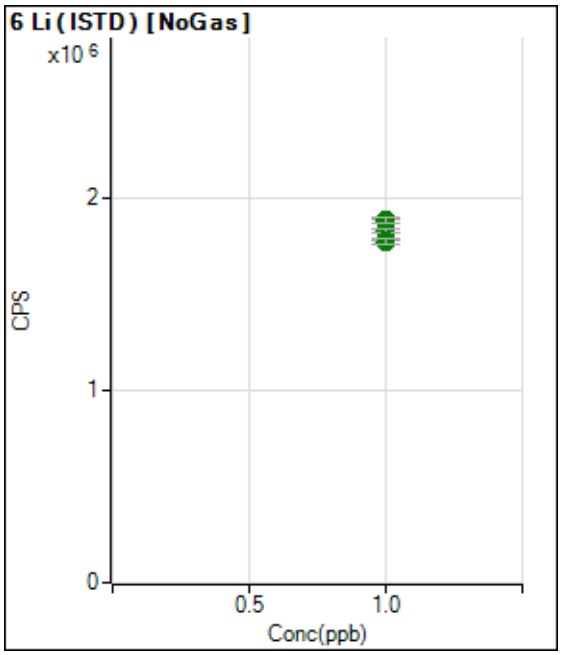
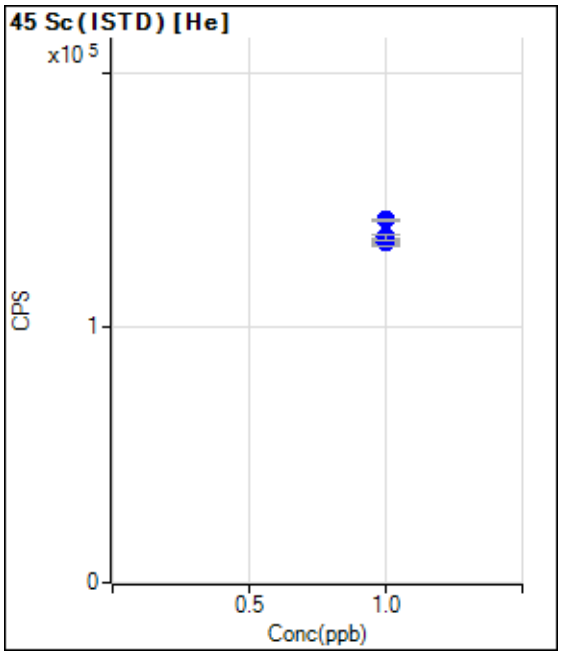


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1884762.26		A	1.3
2		1.000		1834825.36		A	1.2
3		1.000		1786212.79		A	0.9
4		1.000		1776810.54		A	1.6
5		1.000		1890037.48		A	1.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		134073.27		P	1.4
2		1.000		133194.77		P	1.4
3		1.000		133226.88		P	1.7
4		1.000		135467.88		P	1.8
5		1.000		142173.08		P	0.6

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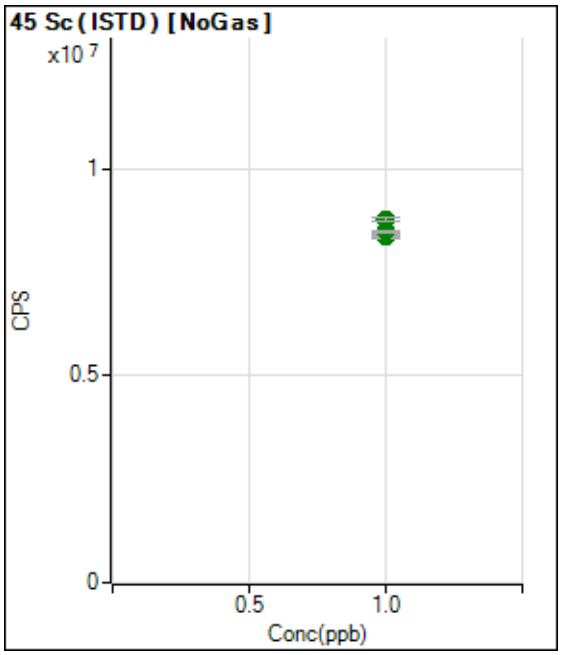
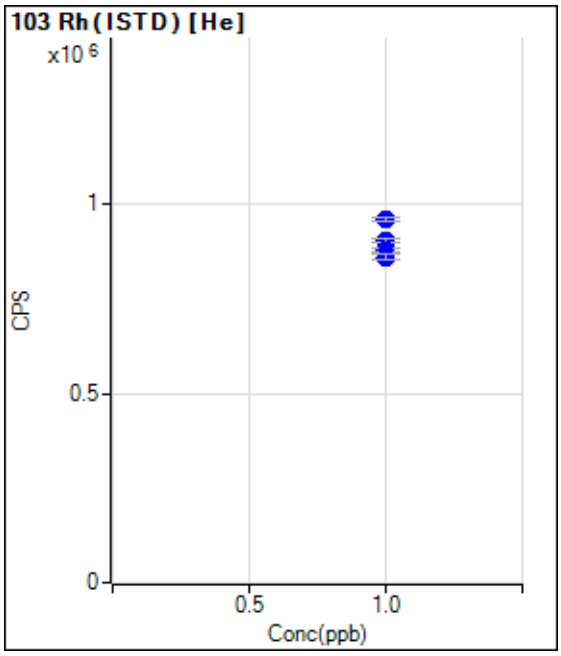


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8481024.66		A	0.7
2	☐	1.000		8415883.83		A	0.2
3	☐	1.000		8341340.22		A	0.8
4	☐	1.000		8478398.27		A	0.5
5	☐	1.000		8755478.82		A	1.0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		903579.86		P	0.8
2	☐	1.000		878698.66		P	1.5
3	☐	1.000		870413.40		P	0.4
4	☐	1.000		860814.15		P	1.4
5	☐	1.000		958827.85		P	0.9

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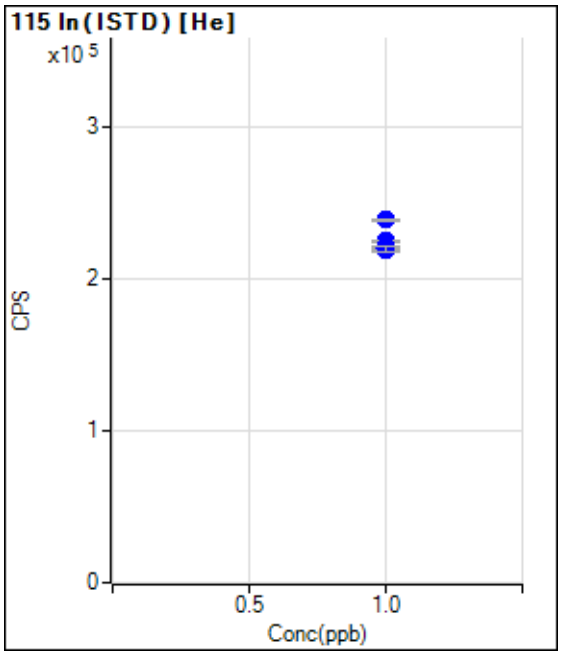
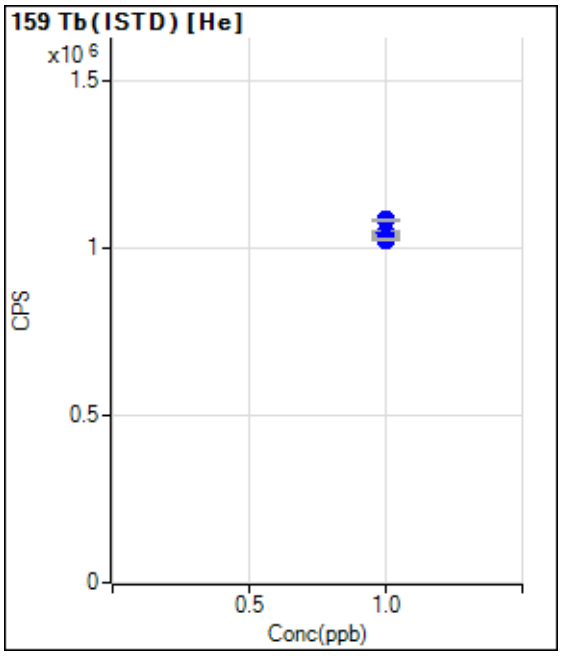


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		224817.47		P	0.4
2	☐	1.000		221379.40		P	0.4
3	☐	1.000		219613.21		P	1.0
4	☐	1.000		219826.47		P	1.8
5	☐	1.000		238828.16		P	0.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1046002.14		P	0.1
2	☐	1.000		1047378.95		P	0.6
3	☐	1.000		1032206.86		P	0.5
4	☐	1.000		1026025.69		P	0.7
5	☐	1.000		1085421.89		P	0.6

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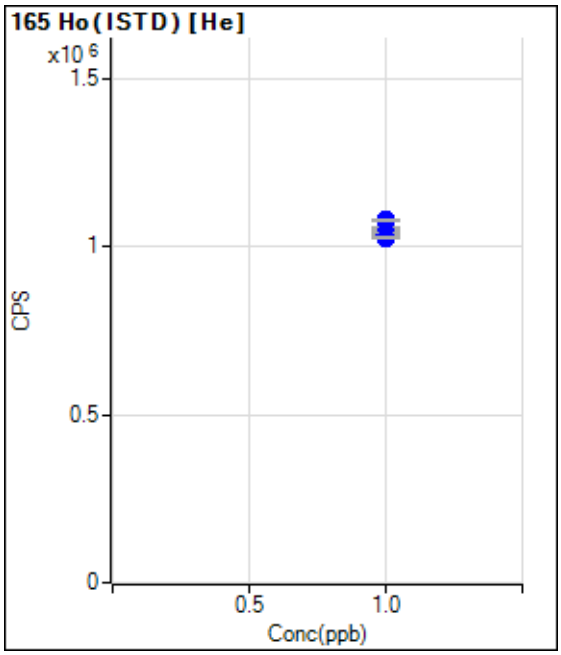
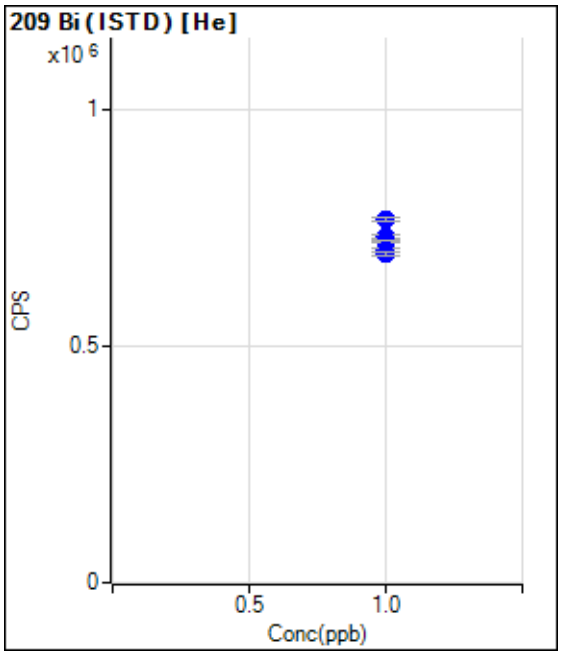


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1057438.50		P	0.8
2	☐	1.000		1042468.42		P	0.8
3	☐	1.000		1036014.23		P	0.8
4	☐	1.000		1026987.75		P	0.7
5	☐	1.000		1080321.37		P	0.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		731379.62		P	0.9
2	☐	1.000		721827.51		P	0.5
3	☐	1.000		702881.65		P	1.3
4	☐	1.000		694193.17		P	0.8
5	☐	1.000		765917.10		P	1.2

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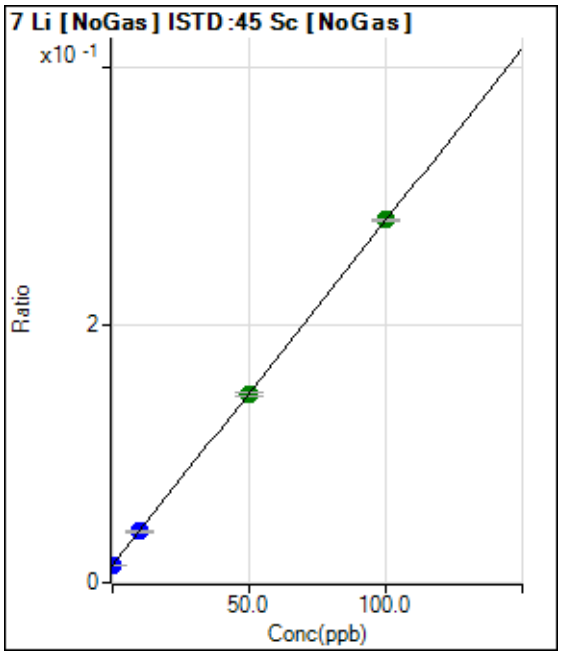
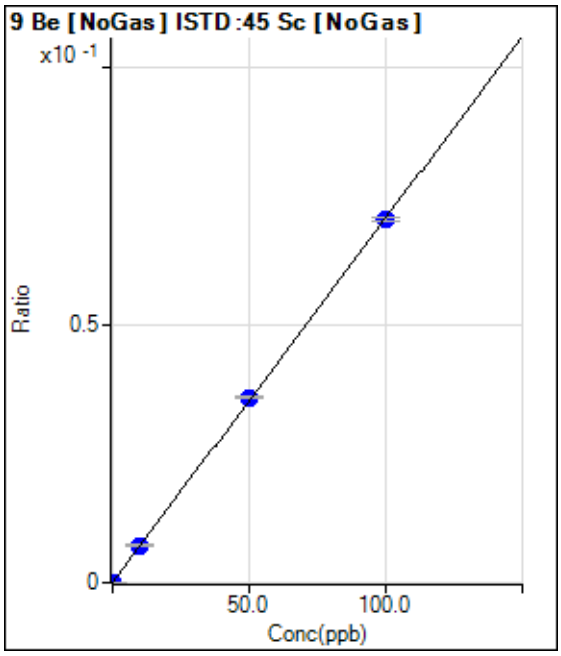


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116205.75	0.0137	P	0.5
2	☐	10.000	9.690	333504.54	0.0396	P	0.6
3	☐	50.000	49.595	1221063.63	0.1464	A	2.1
4	☐			117959.78	0.0139	P	0.9
5	☐	100.000	100.233	2468151.71	0.2819	A	0.7

y = 0.0027 * x + 0.0137
R = 1.0000
DL = 0.07115
BEC = 5.121

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0000	P	7.0
2	☐	10.000	10.272	61179.02	0.0073	P	1.4
3	☐	50.000	50.732	298906.82	0.0358	P	0.9
4	☐	100.000	99.607	596369.04	0.0703	P	1.0
5	☐			448.18	0.0001	P	10.3

y = 7.0603E-004 * x + 1.7027E-005
R = 1.0000
DL = 0.005099
BEC = 0.02412

Weight: <None>
Min Conc: <None>

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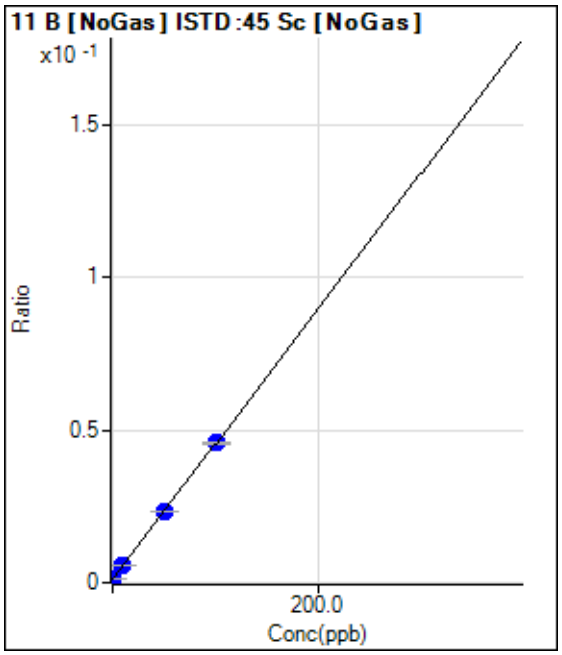
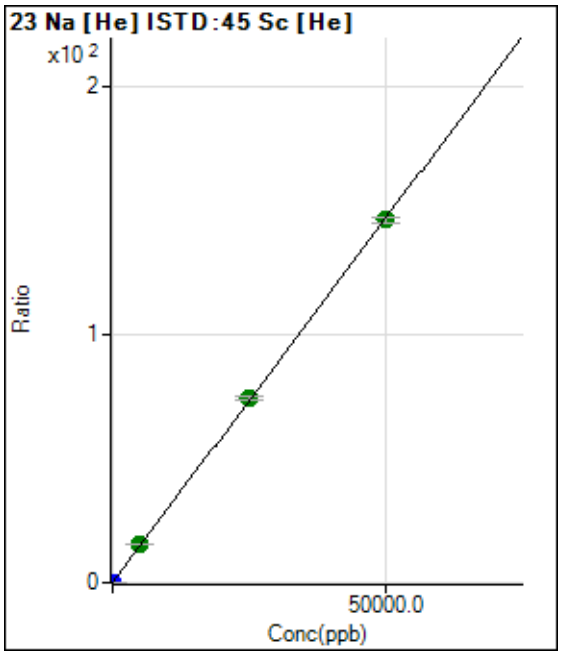


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8791.32	0.0010	P	5.9
2	☐	10.000	9.962	46043.15	0.0055	P	3.1
3	☐	50.000	49.682	193107.71	0.0232	P	1.3
4	☐			9358.28	0.0011	P	3.9
5	☐	100.000	100.163	399449.71	0.0456	P	0.4

y = 4.4513E-004 * x + 0.0010
R = 1.0000
DL = 0.4092
BEC = 2.329

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4567.44	0.0341	P	4.7
2	☐	5000.000	5279.940	2067013.17	15.5223	A	2.4
3	☐	25000.000	25338.738	9903991.28	74.3628	A	2.8
4	☐	50000.000	49802.637	19792319.12	146.1252	A	1.3
5	☐			10533.08	0.0741	P	11.0

y = 0.0029 * x + 0.0341
R = 1.0000
DL = 1.625
BEC = 11.62

Weight: <None>
Min Conc: <None>

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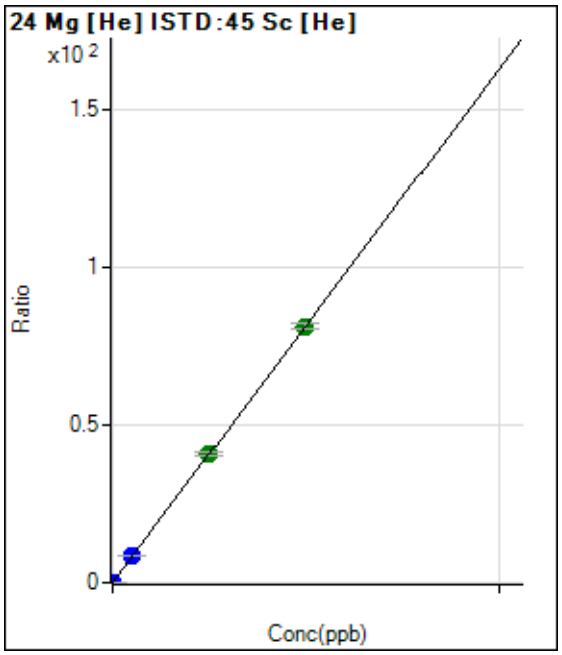
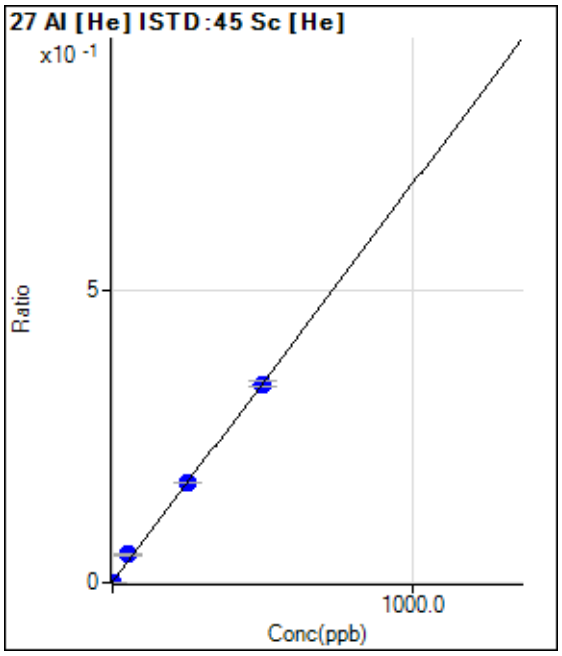


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	640.78	0.0048	P	9.3
2	☐	5000.000	5098.904	1107504.93	8.3158	P	1.5
3	☐	25000.000	25103.842	5450402.91	40.9229	A	2.6
4	☐	50000.000	49938.189	11025887.53	81.4017	A	1.9
5	☐			2100.22	0.0148	P	6.8

y = 0.0016 * x + 0.0048
R = 1.0000
DL = 0.8152
BEC = 2.932

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.11	0.0008	P	6.7
2	☐	50.000	69.325	6381.18	0.0479	P	2.3
3	☐	250.000	250.788	22801.95	0.1712	P	0.6
4	☐	500.000	497.674	45892.23	0.3388	P	2.9
5	☐			28.89	0.0002	P	51.7

y = 6.7920E-004 * x + 8.2846E-004
R = 0.9993
DL = 0.2444
BEC = 1.22

Weight: <None>
Min Conc: <None>

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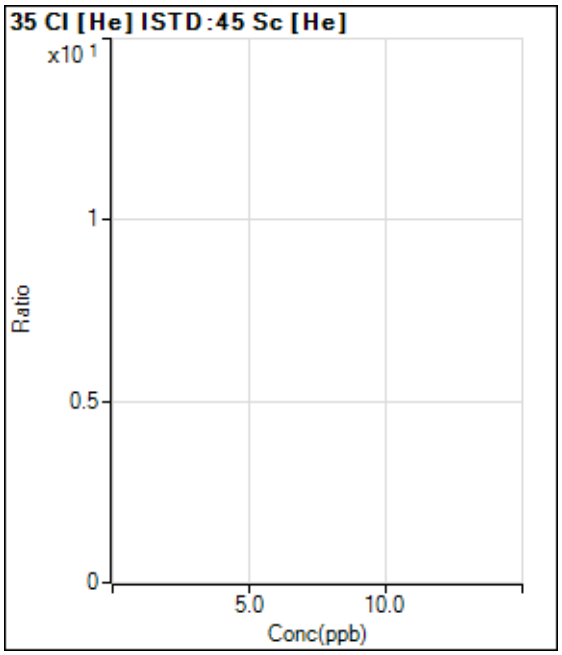
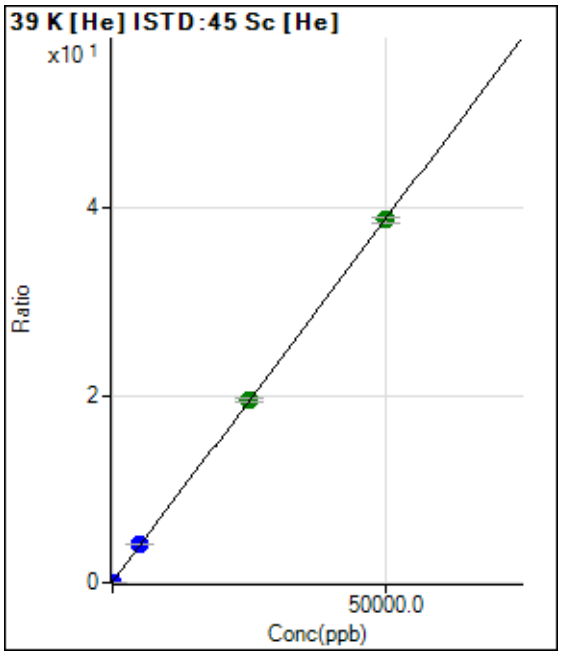


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			10884009.29	81.1958	A	2.5
2	☐			11875525.68	89.1696	A	2.4
3	☐			11354444.22	85.2478	A	2.7
4	☐			12028696.28	88.7951	A	1.7
5	☐			12881961.53	90.6126	A	1.4

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8876.62	0.0662	P	6.2
2	☐	5000.000	5142.116	539386.52	4.0496	P	0.2
3	☐	25000.000	25162.943	2605140.41	19.5587	A	2.4
4	☐	50000.000	49904.317	5245269.35	38.7247	A	1.4
5	☐			10585.04	0.0745	P	8.6

y = 7.7465E-004 * x + 0.0662

R = 1.0000

DL = 15.83

BEC = 85.49

Weight: <None>

Min Conc: <None>

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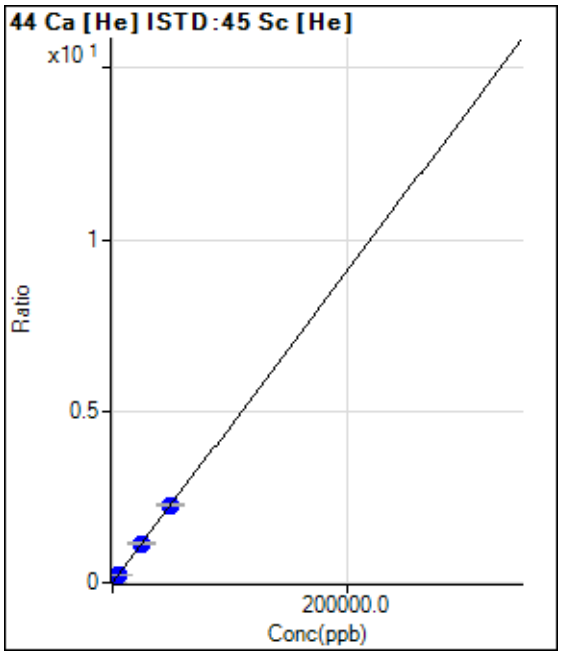
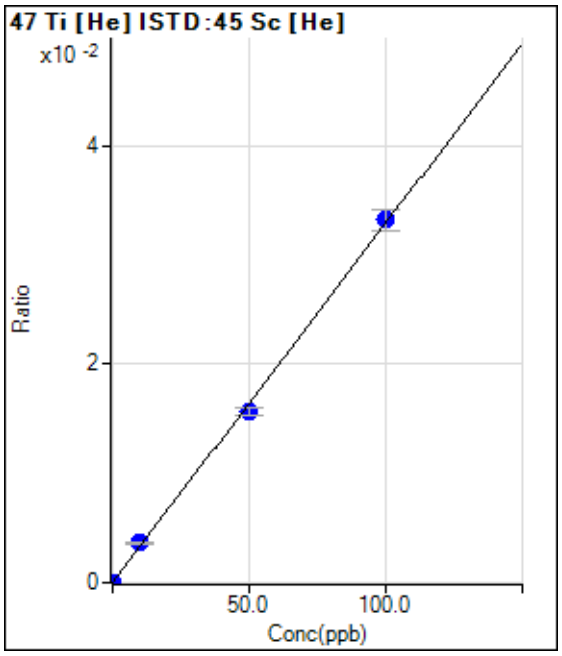


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	191.44	0.0014	P	13.5
2	☐	5000.000	5184.776	31528.99	0.2367	P	1.4
3	☐	25000.000	25088.859	151818.70	1.1399	P	2.5
4	☐	50000.000	49937.093	307126.94	2.2674	P	1.4
5	☐			243.72	0.0017	P	18.1

y = 4.5376E-005 * x + 0.0014
R = 1.0000
DL = 12.73
BEC = 31.5

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	10.000	11.144	487.79	0.0037	P	5.0
3	☐	50.000	47.743	2089.04	0.0157	P	4.7
4	☐			4.45	0.0000	P	86.6
5	☐	100.000	101.014	4718.46	0.0332	P	6.1

y = 3.2860E-004 * x + 0.0000E+000
R = 0.9994
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

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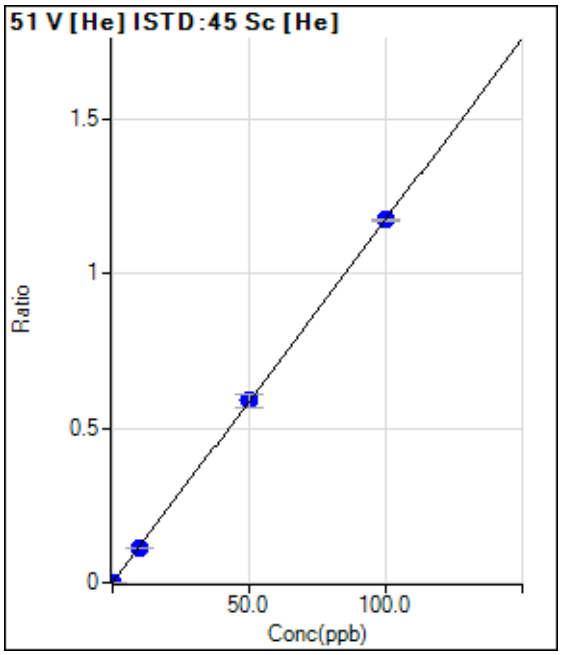
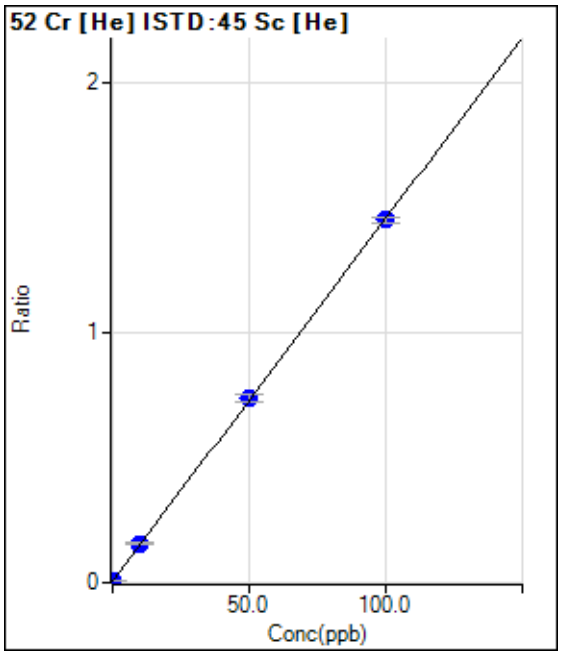


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.22	0.0004	P	343.5
2	☐	10.000	9.661	15132.46	0.1136	P	1.5
3	☐	50.000	50.096	78200.52	0.5874	P	6.5
4	☐	100.000	99.986	158770.57	1.1720	P	0.3
5	☐			41.02	0.0003	P	852.9

y = 0.0117 * x + 4.0182E-004
R = 1.0000
DL = 0.3534
BEC = 0.03429

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	675.58	0.0050	P	4.8
2	☐	10.000	10.485	20894.44	0.1569	P	3.4
3	☐	50.000	50.481	98030.99	0.7362	P	4.2
4	☐	100.000	99.711	196309.19	1.4491	P	1.9
5	☐			760.03	0.0053	P	7.6

y = 0.0145 * x + 0.0050
R = 1.0000
DL = 0.05006
BEC = 0.3479

Weight: <None>
Min Conc: <None>

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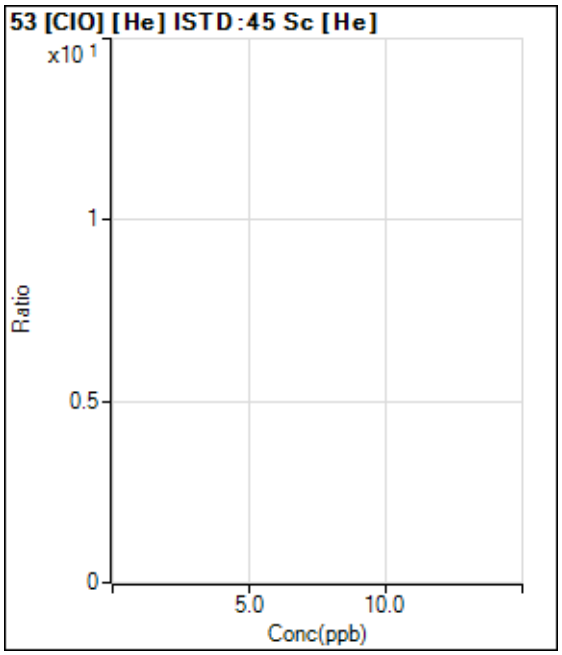
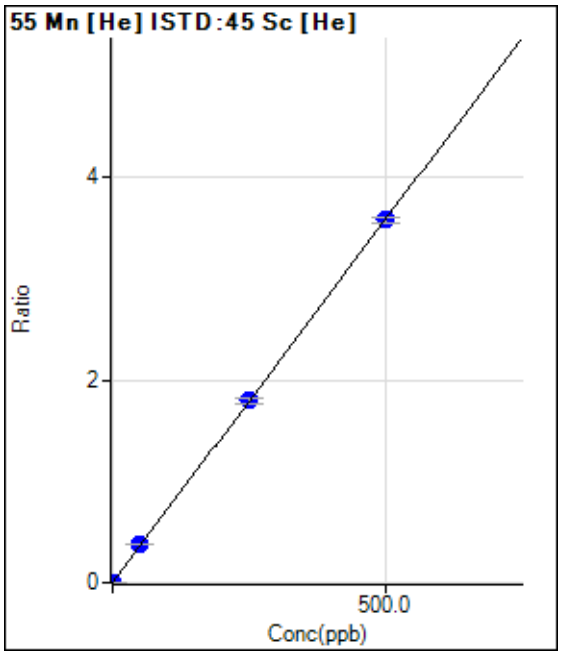


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			207.42	0.0015	P	33.5
2	☐			2896.67	0.0218	P	3.2
3	☐			11960.04	0.0898	P	1.8
4	☐			23950.08	0.1768	P	4.0
5	☐			240.75	0.0017	P	42.5

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	134.45	0.0010	P	24.1
2	☐	50.000	51.918	49748.14	0.3735	P	0.6
3	☐	250.000	250.886	239871.75	1.8010	P	2.8
4	☐	500.000	499.365	485415.49	3.5838	P	1.9
5	☐			170.01	0.0012	P	17.4

y = 0.0072 * x + 0.0010

R = 1.0000

DL = 0.1008

BEC = 0.1396

Weight: <None>

Min Conc: <None>

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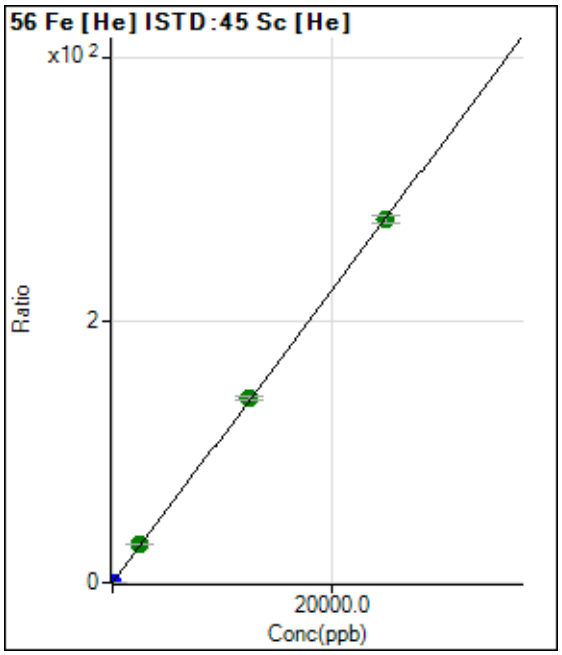
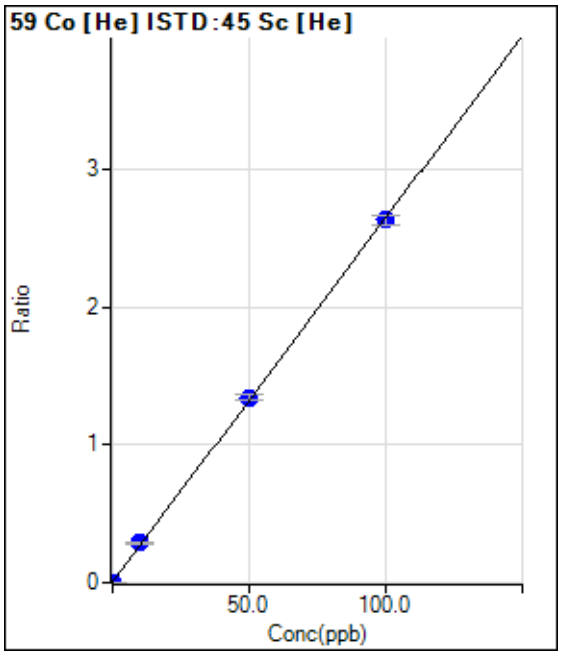


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1997.91	0.0149	P	4.5
2	☐	2500.000	2620.257	3878040.96	29.1167	A	0.5
3	☐	12500.000	12639.545	18699472.59	140.3957	A	2.4
4	☐	25000.000	24918.202	37487418.51	276.7683	A	2.1
5	☐			11301.62	0.0794	P	24.2

y = 0.0111 * x + 0.0149
R = 1.0000
DL = 0.1809
BEC = 1.341

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	308.89	0.0023	P	20.6
2	☐	10.000	10.753	38207.15	0.2869	P	1.9
3	☐	50.000	50.815	179393.20	1.3471	P	3.6
4	☐	100.000	99.517	356990.98	2.6359	P	2.8
5	☐			361.12	0.0025	P	14.3

y = 0.0265 * x + 0.0023
R = 0.9999
DL = 0.05386
BEC = 0.08719

Weight: <None>
Min Conc: <None>

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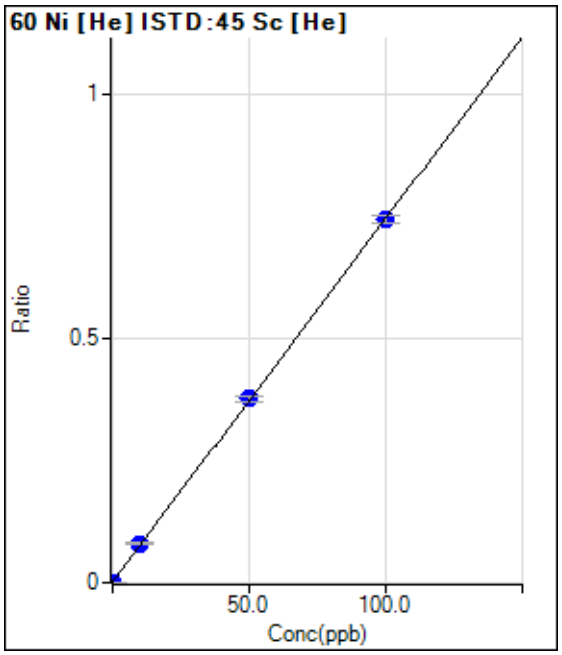


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.34	0.0011	P	9.0
2	☐	10.000	10.644	10676.61	0.0802	P	1.7
3	☐	50.000	50.424	50040.31	0.3757	P	3.5
4	☐	100.000	99.723	100502.48	0.7421	P	2.2
5	☐			177.78	0.0013	P	19.0

y = 0.0074 * x + 0.0011

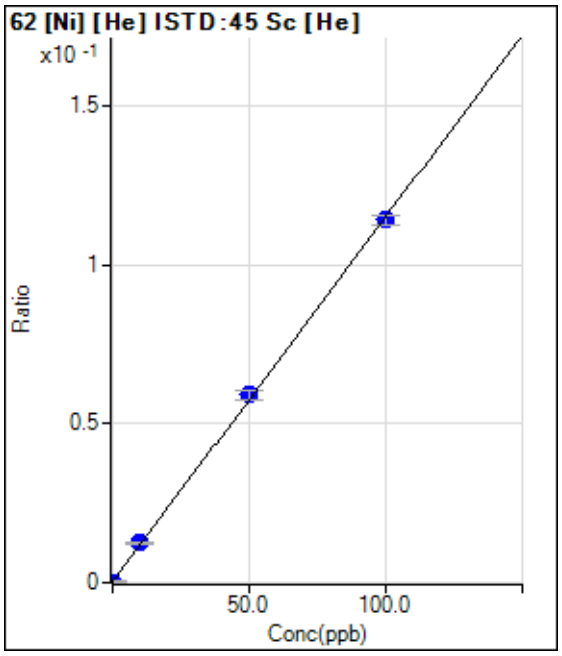
R = 1.0000

DL = 0.039

BEC = 0.1439

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0003	P	31.6
2	☐	10.000	10.773	1684.55	0.0126	P	3.9
3	☐	50.000	51.270	7875.14	0.0591	P	5.5
4	☐	100.000	99.288	15477.89	0.1143	P	2.9
5	☐			30.00	0.0002	P	50.7

y = 0.0011 * x + 2.7266E-004

R = 0.9999

DL = 0.2254

BEC = 0.2375

Weight: <None>

Min Conc: <None>

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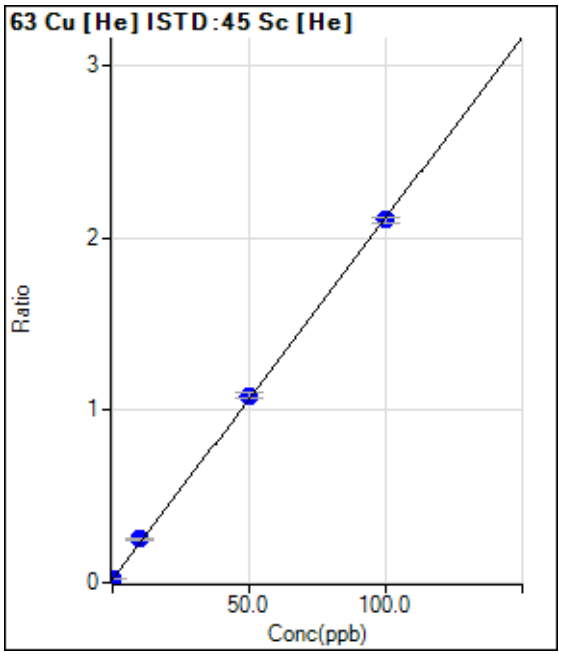
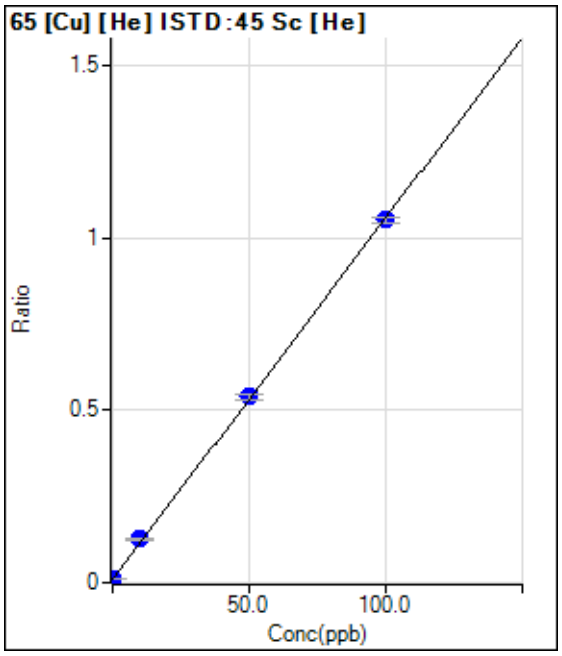


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2416.86	0.0180	P	5.1
2	☐	10.000	11.168	33574.80	0.2521	P	2.2
3	☐	50.000	50.824	144292.09	1.0834	P	2.9
4	☐	100.000	99.471	284885.13	2.1032	P	1.4
5	☐			4030.50	0.0283	P	7.1

y = 0.0210 * x + 0.0180
R = 0.9999
DL = 0.1303
BEC = 0.8596

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1167.83	0.0087	P	3.7
2	☐	10.000	11.207	16799.10	0.1261	P	1.2
3	☐	50.000	50.605	71769.06	0.5389	P	3.2
4	☐	100.000	99.577	142487.91	1.0519	P	1.4
5	☐			1886.79	0.0133	P	7.2

y = 0.0105 * x + 0.0087
R = 0.9999
DL = 0.09203
BEC = 0.8317

Weight: <None>
Min Conc: <None>

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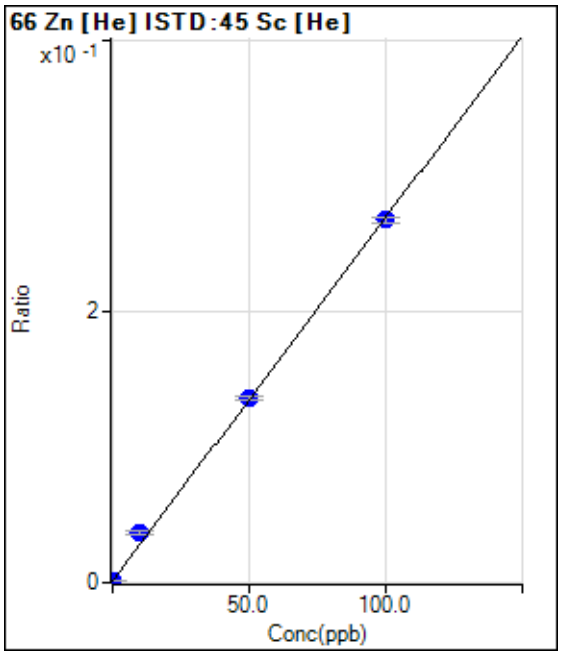


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.78	0.0011	P	18.1
2	☐	10.000	13.411	4934.08	0.0371	P	5.5
3	☐	50.000	50.446	18163.75	0.1364	P	2.7
4	☐	100.000	99.436	36269.96	0.2677	P	1.7
5	☐			76.67	0.0005	P	33.9

y = 0.0027 * x + 0.0011

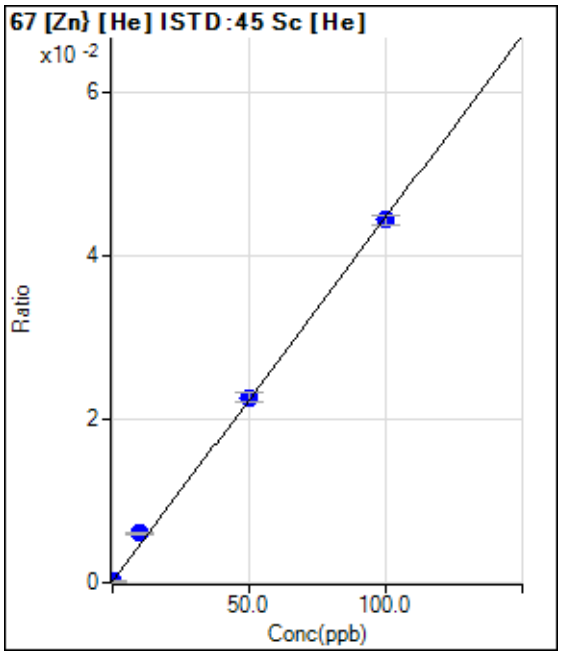
R = 0.9994

DL = 0.2234

BEC = 0.4103

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	20.2
2	☐	10.000	13.317	806.70	0.0061	P	5.3
3	☐	50.000	50.650	3023.63	0.0227	P	4.7
4	☐	100.000	99.343	6015.53	0.0444	P	2.4
5	☐			12.22	0.0001	P	83.9

y = 4.4565E-004 * x + 1.2437E-004

R = 0.9995

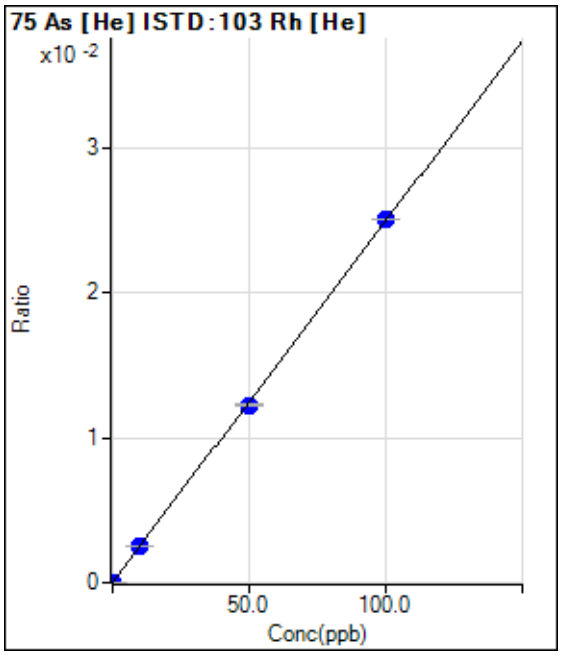
DL = 0.1688

BEC = 0.2791

Weight: <None>

Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17.63	0.0000	P	3.8
2	☐	10.000	9.911	2189.34	0.0025	P	1.9
3	☐	50.000	49.153	10689.25	0.0123	P	0.8
4	☐	100.000	100.432	21582.35	0.0251	P	0.1
5	☐			41.05	0.0000	P	27.7

y = 2.4944E-004 * x + 1.9510E-005

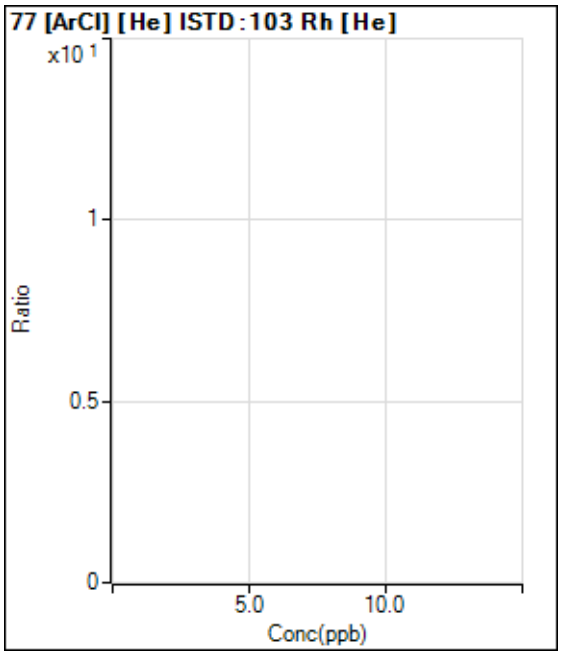
R = 0.9999

DL = 0.00883

BEC = 0.07821

Weight: <None>

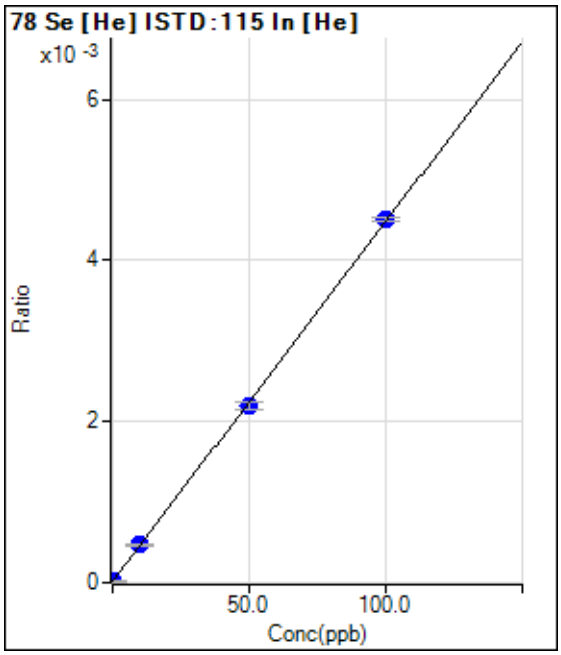
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00	0.0000	P	
2	☐			25.93	0.0000	P	49.5
3	☐			159.27	0.0002	P	32.0
4	☐			370.39	0.0004	P	29.9
5	☐			18.52	0.0000	P	124.9

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.82	0.0000	P	54.1
2	☐	10.000	10.203	103.65	0.0005	P	6.2
3	☐	50.000	48.889	482.10	0.0022	P	5.0
4	☐	100.000	100.535	989.75	0.0045	P	0.9
5	☐			5.80	0.0000	P	35.7

y = 4.4659E-005 * x + 1.2555E-005

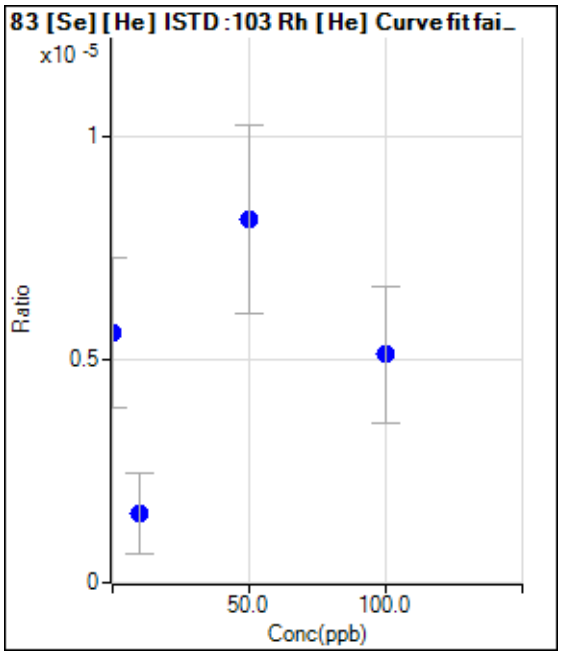
R = 0.9999

DL = 0.4566

BEC = 0.2811

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		5.05	0.0000	P	60.7
2	☐	10.000		1.35	0.0000	P	115.7
3	☐	50.000		7.07	0.0000	P	51.8
4	☐	100.000		4.38	0.0000	P	59.4
5	☐			1.68	0.0000	P	124.3

Excluded

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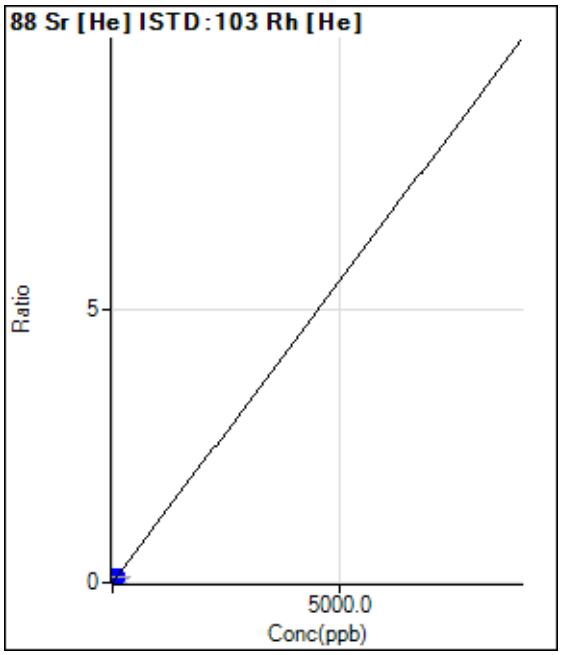
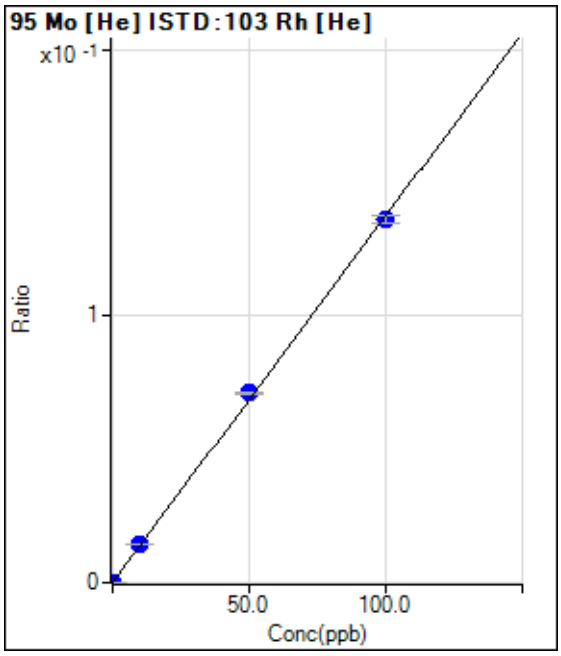


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	12.3
2	☐	10.000	9.863	9598.28	0.0109	P	4.0
3	☐	50.000	49.554	47613.05	0.0547	P	1.0
4	☐	100.000	100.237	95209.06	0.1106	P	0.6
5	☐			36.67	0.0000	P	25.0

y = 0.0011 * x + 4.3008E-005
R = 1.0000
DL = 0.01444
BEC = 0.03899

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	50.7
2	☐	10.000	10.471	12654.70	0.0144	P	3.9
3	☐	50.000	51.884	62061.62	0.0713	P	1.0
4	☐			171.11	0.0002	P	21.3
5	☐	100.000	99.011	130435.14	0.1361	P	2.0

y = 0.0014 * x + 1.4788E-005
R = 0.9997
DL = 0.01636
BEC = 0.01076

Weight: <None>
Min Conc: <None>

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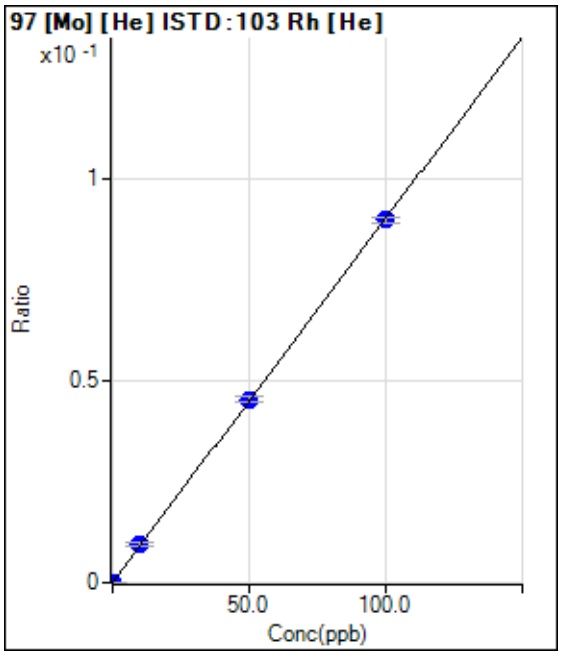


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.41	0.0000	P	86.6
2	☐	10.000	10.619	8409.82	0.0096	P	7.6
3	☐	50.000	50.447	39557.24	0.0454	P	2.3
4	☐			140.75	0.0002	P	16.0
5	☐	100.000	99.715	86113.40	0.0898	P	1.5

y = 9.0066E-004 * x + 8.2110E-006

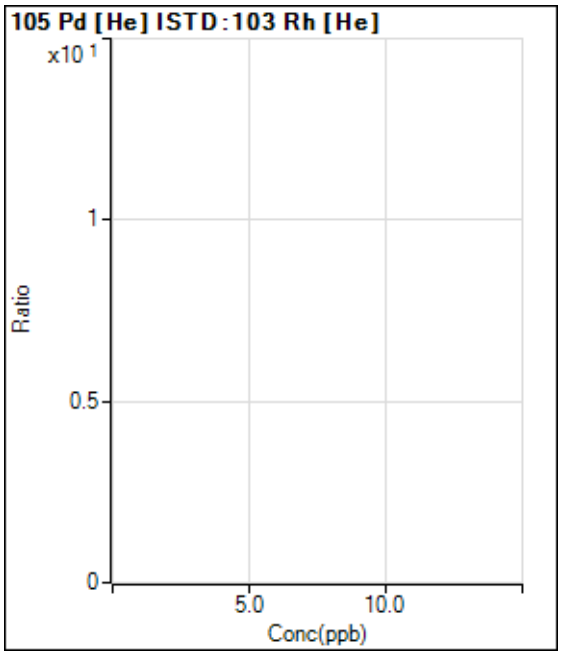
R = 1.0000

DL = 0.02369

BEC = 0.009117

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			233.35	0.0003	P	13.7
2	☐			174.08	0.0002	P	19.8
3	☐			248.16	0.0003	P	22.4
4	☐			270.39	0.0003	P	11.7
5	☐			196.31	0.0002	P	33.1

Excluded

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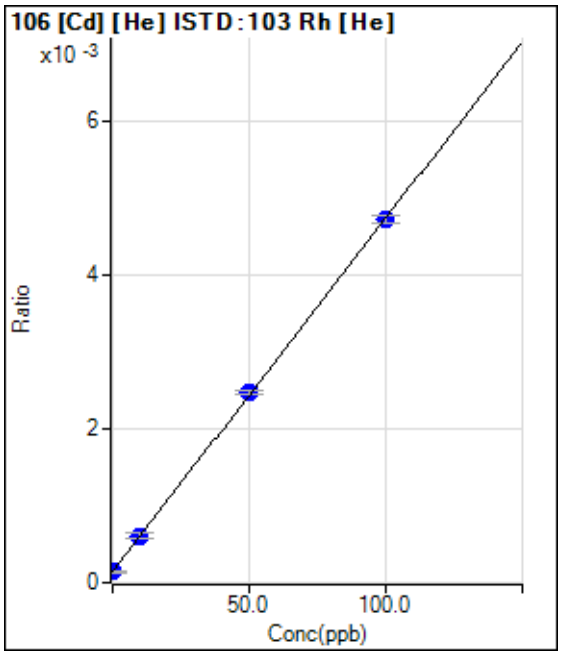


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	129.29	0.0001	P	17.8
2		10.000	10.169	536.37	0.0006	P	10.2
3		50.000	50.773	2158.05	0.0025	P	1.1
4		100.000	99.597	4068.17	0.0047	P	2.3
5				162.97	0.0002	P	7.9

y = 4.6014E-005 * x + 1.4300E-004

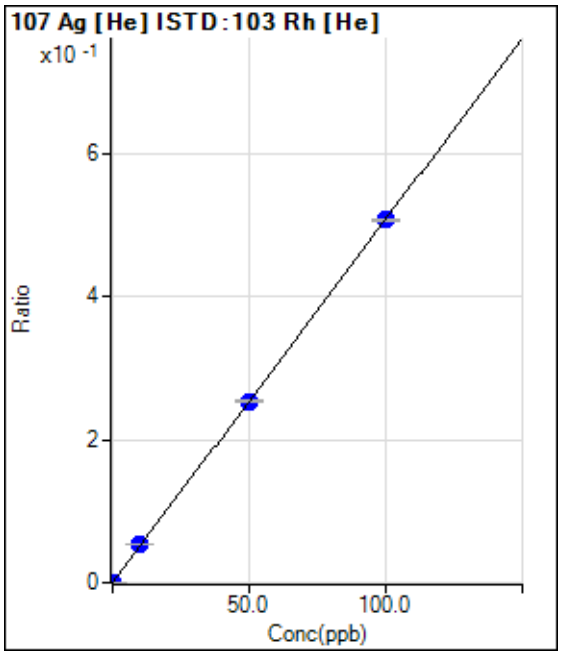
R = 0.9999

DL = 1.657

BEC = 3.108

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	7.78	0.0000	P	66.2
2		10.000	10.481	46790.68	0.0533	P	0.6
3		50.000	50.026	221219.71	0.2542	P	0.5
4		100.000	99.939	437046.08	0.5077	P	0.3
5				74.44	0.0001	P	36.6

y = 0.0051 * x + 8.6369E-006

R = 1.0000

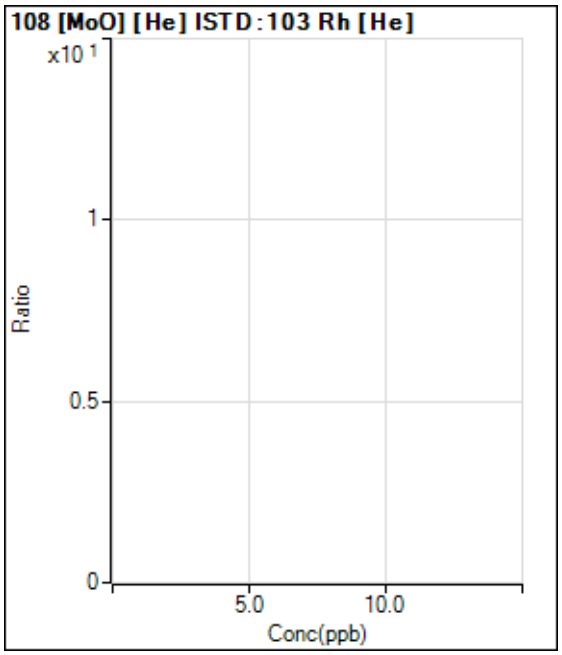
DL = 0.003379

BEC = 0.0017

Weight: <None>

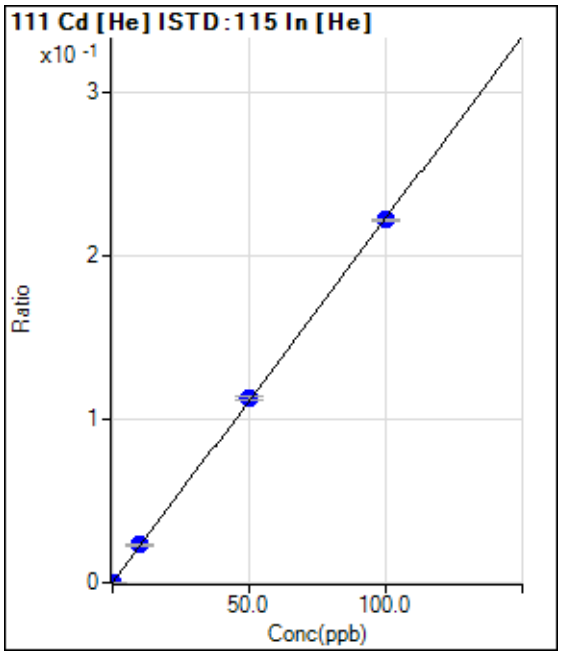
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			0.00	0.0000	P	
2	☐			370.39	0.0004	P	16.7
3	☐			1659.42	0.0019	P	11.6
4	☐			3115.24	0.0036	P	5.7
5	☐			7.41	0.0000	P	86.6

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.68	0.0000	P	34.5
2	☐	10.000	10.392	5129.86	0.0232	P	5.6
3	☐	50.000	50.636	24790.42	0.1129	P	1.8
4	☐	100.000	99.643	48835.54	0.2222	P	0.6
5	☐			13.43	0.0001	P	15.8

y = 0.0022 * x + 7.4832E-006

R = 1.0000

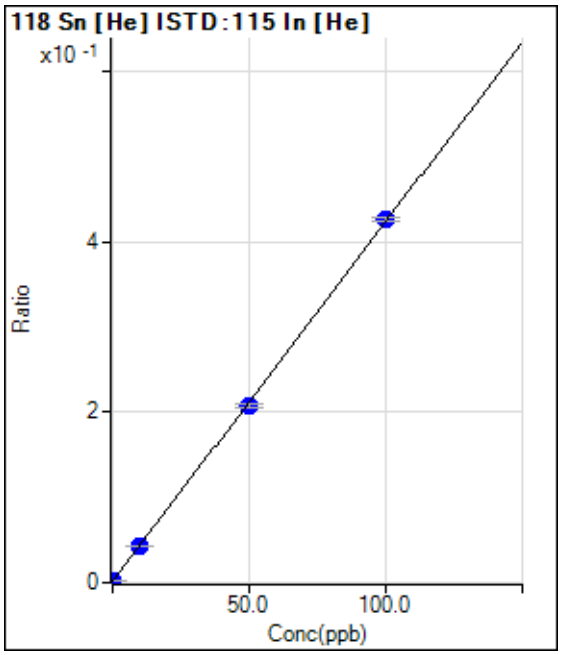
DL = 0.00347

BEC = 0.003357

Weight: <None>

Min Conc: <None>

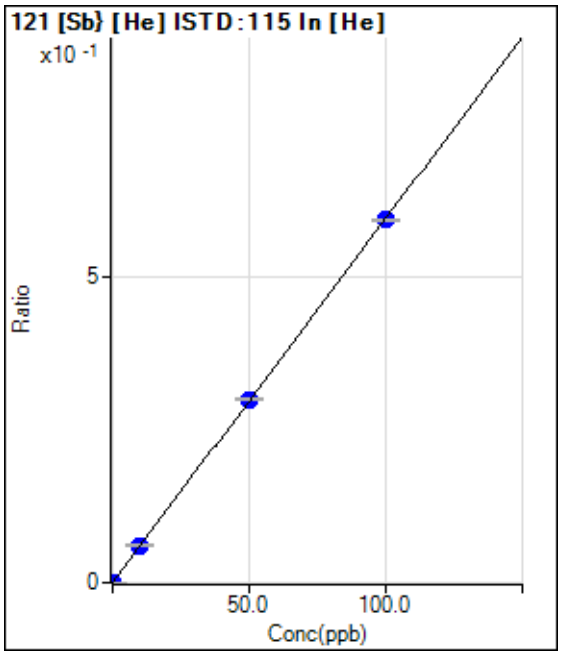
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.02	0.0013	P	26.9
2	☐	10.000	9.733	9395.58	0.0424	P	2.5
3	☐	50.000	48.880	45636.38	0.2078	P	2.1
4	☐			259.27	0.0012	P	8.1
5	☐	100.000	100.587	101779.07	0.4262	P	1.1

y = 0.0042 * x + 0.0013
R = 0.9999
DL = 0.2553
BEC = 0.3161

Weight: <None>
Min Conc: <None>

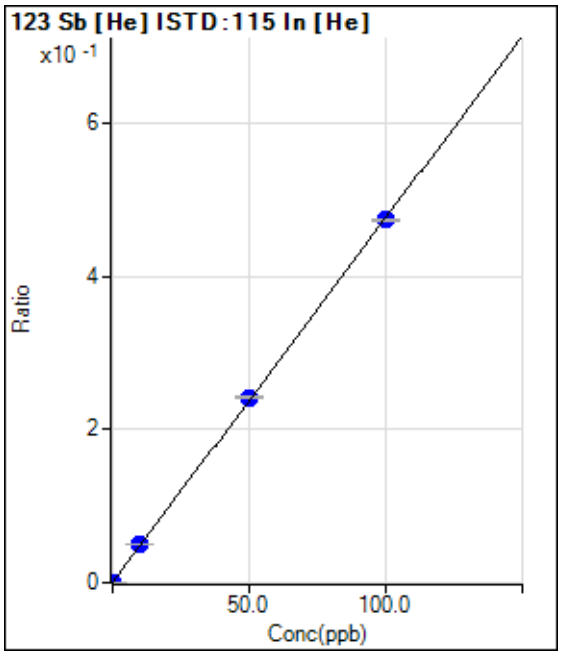


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0001	P	29.6
2	☐	10.000	10.196	13416.50	0.0606	P	2.6
3	☐	50.000	50.475	65764.13	0.2995	P	0.9
4	☐			223.34	0.0010	P	8.2
5	☐	100.000	99.743	141302.03	0.5916	P	0.6

y = 0.0059 * x + 1.3349E-004
R = 1.0000
DL = 0.02002
BEC = 0.02251

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42.22	0.0002	P	31.5
2	☐	10.000	10.560	11162.65	0.0504	P	1.6
3	☐	50.000	50.780	53087.40	0.2418	P	1.2
4	☐			184.45	0.0008	P	21.2
5	☐	100.000	99.554	113150.60	0.4738	P	0.8

y = 0.0048 * x + 1.8768E-004

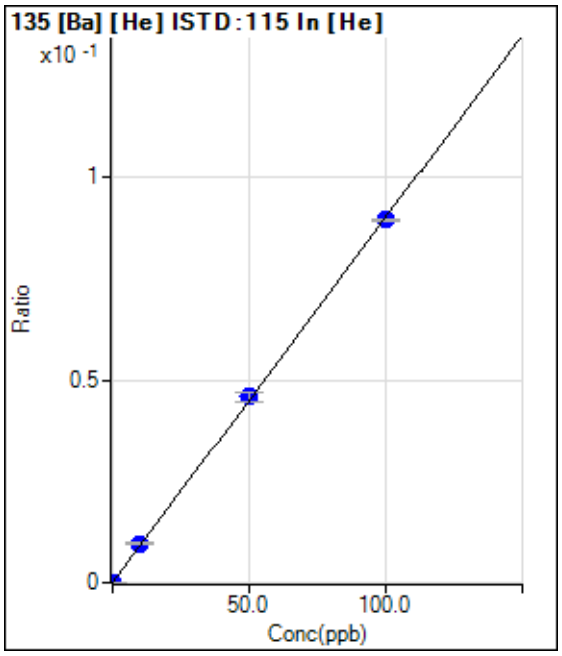
R = 0.9999

DL = 0.03732

BEC = 0.03945

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	10.000	10.769	2149.05	0.0097	P	2.3
3	☐	50.000	50.993	10078.65	0.0459	P	5.1
4	☐	100.000	99.427	19674.90	0.0895	P	0.7
5	☐			5.55	0.0000	P	125.1

y = 8.9999E-004 * x + 1.4851E-005

R = 0.9999

DL = 0.08574

BEC = 0.0165

Weight: <None>

Min Conc: <None>

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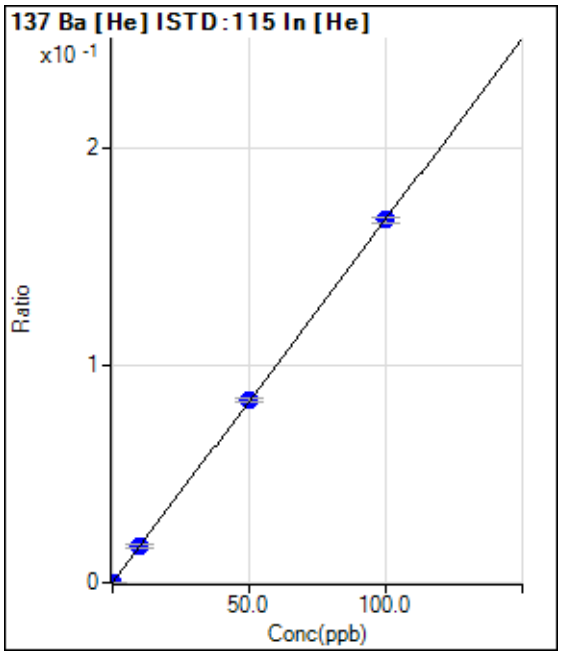
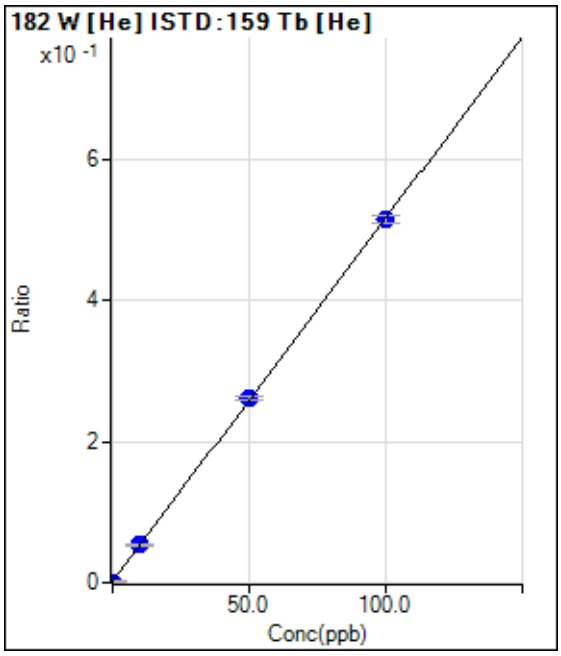


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	34.6
2	☐	10.000	9.989	3691.57	0.0167	P	7.4
3	☐	50.000	50.102	18349.02	0.0835	P	2.2
4	☐	100.000	99.950	36634.11	0.1666	P	1.4
5	☐			31.11	0.0001	P	37.9

y = 0.0017 * x + 2.4709E-005
R = 1.0000
DL = 0.01539
BEC = 0.01482

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1422.36	0.0014	P	14.1
2	☐	10.000	10.219	56558.15	0.0540	P	3.3
3	☐	50.000	50.710	271014.86	0.2626	P	1.7
4	☐			2548.48	0.0025	P	0.9
5	☐	100.000	99.623	558419.42	0.5145	P	2.1

y = 0.0052 * x + 0.0014
R = 1.0000
DL = 0.112
BEC = 0.264

Weight: <None>
Min Conc: <None>

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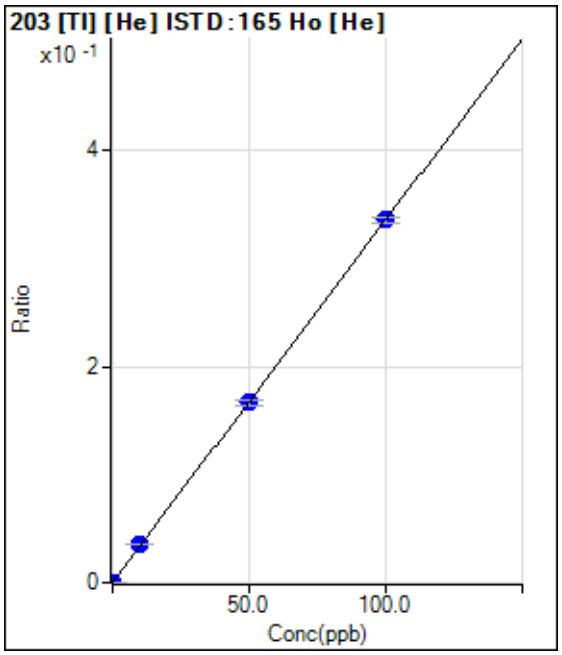
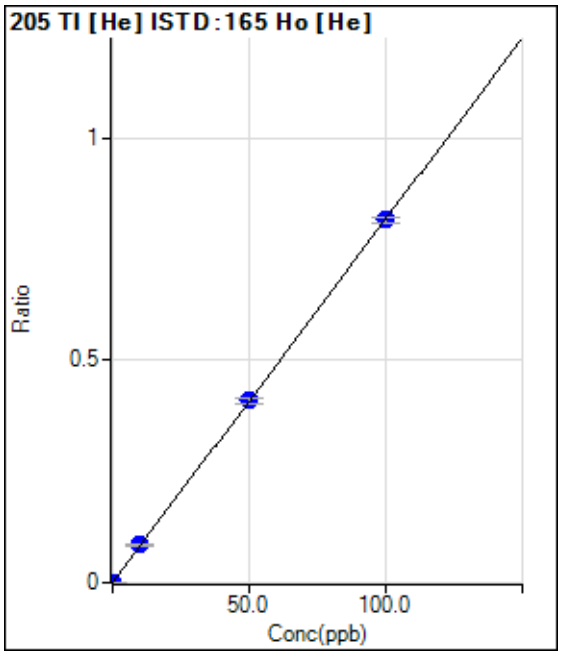


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.93	0.0000	P	107.3
2	☐	10.000	10.455	36546.49	0.0351	P	0.8
3	☐	50.000	49.681	172499.12	0.1665	P	2.6
4	☐	100.000	100.114	344574.15	0.3355	P	1.9
5	☐			492.62	0.0005	P	19.4

y = 0.0034 * x + 2.4477E-005
R = 1.0000
DL = 0.02351
BEC = 0.007304

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	14.7
2	☐	10.000	10.346	88186.34	0.0846	P	1.3
3	☐	50.000	50.157	424661.56	0.4099	P	2.7
4	☐	100.000	99.887	838379.62	0.8164	P	1.4
5	☐			781.14	0.0007	P	19.0

y = 0.0082 * x + 3.7835E-005
R = 1.0000
DL = 0.002041
BEC = 0.00463

Weight: <None>
Min Conc: <None>

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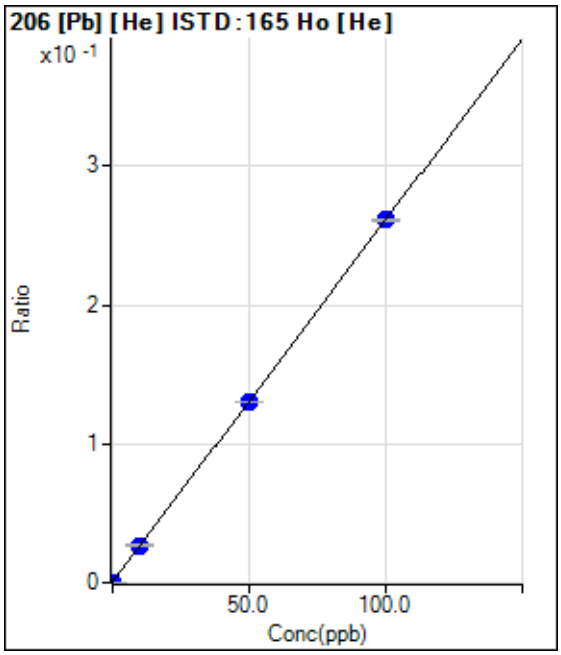


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	295.56	0.0003	P	11.7
2		10.000	10.185	27976.72	0.0268	P	2.4
3		50.000	49.828	134899.46	0.1302	P	0.8
4		100.000	100.068	268270.53	0.2612	P	0.8
5				466.68	0.0004	P	6.3

y = 0.0026 * x + 2.7934E-004

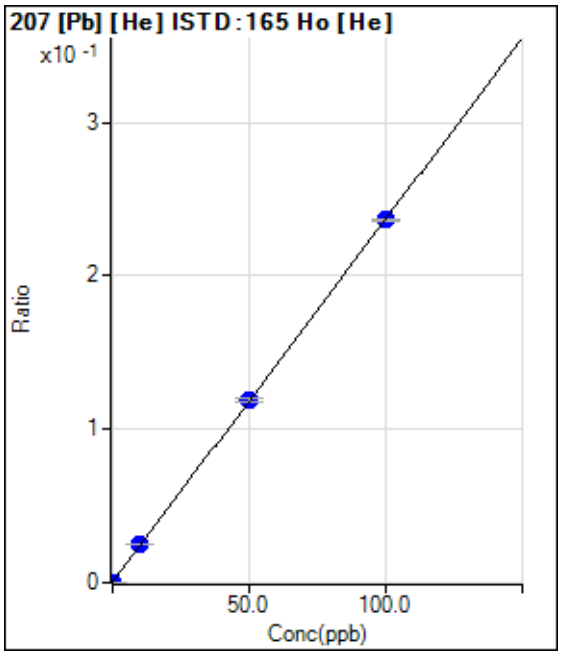
R = 1.0000

DL = 0.03769

BEC = 0.1071

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	218.89	0.0002	P	15.1
2		10.000	10.437	25964.45	0.0249	P	2.1
3		50.000	50.159	123169.31	0.1189	P	1.6
4		100.000	99.877	242924.38	0.2365	P	0.9
5				396.68	0.0004	P	3.0

y = 0.0024 * x + 2.0708E-004

R = 1.0000

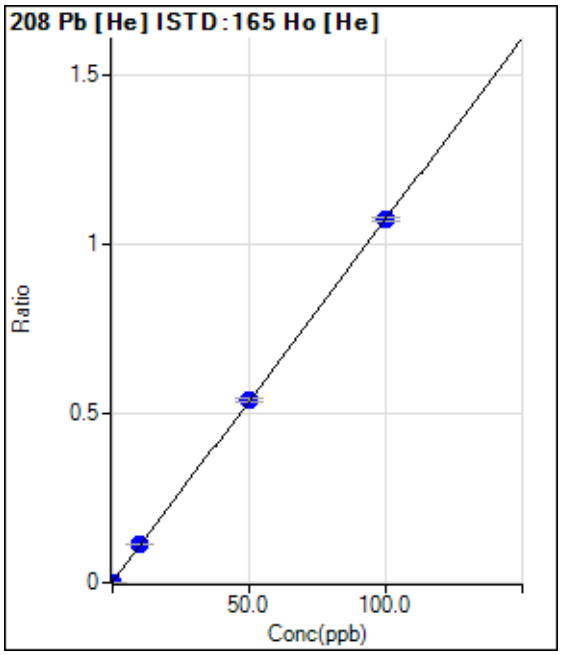
DL = 0.03951

BEC = 0.08751

Weight: <None>

Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1194.48	0.0011	P	4.7
2	☐	10.000	10.386	117206.25	0.1124	P	0.6
3	☐	50.000	50.138	557767.02	0.5384	P	1.7
4	☐	100.000	99.893	1100490.73	1.0716	P	1.1
5	☐			1982.30	0.0018	P	2.9

y = 0.0107 * x + 0.0011

R = 1.0000

DL = 0.01491

BEC = 0.1054

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2467071
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:04:12-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.137	1.398	1055564	1.30	40	92.8	89.5	110.5	
Be	9	45	NoGas	39.738	0.593	262079	0.49	40	99.3	89.5	110.5	
B	11	45	NoGas	40.728	1.402	178920	1.01	40	101.8	89.5	110.5	
Na	23	45	He	19590.443	3.871	8646864	0.76	20000	98.0	89.5	110.5	
Mg	24	45	He	19667.996	3.514	4822170	1.35	20000	98.3	89.5	110.5	
Al	27	45	He	200.937	3.372	20651	1.05	200	100.5	89.5	110.5	
K	39	45	He	19912.386	2.981	2330371	2.13	20000	99.6	89.5	110.5	
Ca	44	45	He	19510.315	3.696	133357	1.28	20000	97.6	89.5	110.5	
Ti	47	45	He	38.177	10.242	1883	6.65	40	95.4	89.5	110.5	
V	51	45	He	38.950	4.924	68680	2.10	40	97.4	89.5	110.5	
Cr	52	45	He	39.427	3.598	86640	1.80	40	98.6	89.5	110.5	
Mn	55	45	He	197.913	4.325	213680	1.90	200	99.0	89.5	110.5	
Fe	56	45	He	9931.016	4.716	16587230	2.23	10000	99.3	89.5	110.5	
Co	59	45	He	39.488	3.743	157503	0.94	40	98.7	89.5	110.5	
Ni	60	45	He	39.917	4.101	44762	1.19	40	99.8	89.5	110.5	
Cu	63	45	He	40.327	4.100	129828	0.96	40	100.8	89.5	110.5	
Zn	66	45	He	39.832	5.784	16219	1.55	40	99.6	89.5	110.5	
As	75	103	He	39.483	4.112	9543	0.33	40	98.7	89.5	110.5	
Se	78	115	He	39.804	4.443	438	5.54	40	99.5	89.5	110.5	
Sr	88	103	He	37.854	3.792	40425	0.80	40	94.6	89.5	110.5	
Mo	95	103	He	40.842	3.851	54298	2.55	40	102.1	89.5	110.5	
Ag	107	103	He	39.359	3.910	193394	0.12	40	98.4	89.5	110.5	
Cd	111	115	He	39.195	4.255	21352	1.35	40	98.0	89.5	110.5	
Sn	118	115	He	38.424	2.591	39996	1.75	40	96.1	89.5	110.5	
Sb	123	115	He	39.512	4.585	45969	1.69	40	98.8	89.5	110.5	
Ba	137	115	He	38.916	4.072	15859	1.54	40	97.3	89.5	110.5	
W	182	159	He	38.979	6.028	230219	2.09	40	97.4	89.5	110.5	
Tl	205	165	He	39.157	4.736	361596	1.33	40	97.9	89.5	110.5	
Pb	208	165	He	39.366	4.945	477841	0.48	40	98.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1947260	0.68	1884762	103.32	60	120	
Sc	45	He	150544	4.33	134073	112.29	60	120	
Sc	45	NoGas	9335645	0.42	8481025	110.08	60	120	
Rh	103	He	968145	4.00	903580	107.15	60	120	
In	115	He	244591	3.83	224817	108.80	60	120	
Tb	159	He	1141647	6.27	1046002	109.14	60	120	
Ho	165	He	1131627	5.19	1057439	107.02	60	120	
Bi	209	He	763707	3.07	731380	104.42	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:08:23-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.000	#DIV/0!	0	#DIV/0!	20	
W	182	1	He	0.196	37.3	2697	16.2	10	
Ca	44	1	He	6.610	66.7	258	11.6	1000	
Na	23	1	He	8.456	12.1	8791	5.1	1000	
Mg	24	1	He	2.046	41.6	1211	17.0	1000	
K	39	1	He	0.460	629.0	9940	3.5	1000	
V	51	1	He	-0.119	-87.7	-148	-123.1	2	
Cr	52	1	He	-0.004	-191.3	743	2.4	2	
Mn	55	1	He	0.080	60.5	236	22.1	2	
Fe	56	1	He	2.515	21.9	6395	14.4	50	
Co	59	1	He	-0.003	-101.5	333	3.5	1	
Ni	60	1	He	0.012	112.6	173	8.8	2	
Cu	63	1	He	0.158	49.7	3184	7.8	2	
Zn	66	1	He	0.433	19.8	338	10.1	20	
As	75	1	He	0.025	97.5	26	23.6	2	
Se	78	1	He	0.234	59.3	6	27.0	2	
Sr	88	1	He	-0.008	-63.7	34	14.8	10	
Mo	95	1	He	0.093	4.8	142	4.9	2	
Ag	107	1	He	0.003	62.8	26	41.9	0.2	
Cd	111	1	He	0.013	55.7	9	44.5	0.2	
Ba	137	1	He	-0.009	-100.5	2	173.2	5	
Sn	118	1	He	0.238	6.7	574	3.0	10	
Tl	205	1	He	0.038	15.3	393	14.0	0.5	
Pb	208	1	He	0.031	27.9	1670	6.1	0.5	
Al	27	1	He	0.194	144.6	143	19.9	50	
Sb	123	1	He	0.131	15.2	199	11.8	2	
B	11	2	NoGas	2.220	5.5	18762	2.1	20	
Be	9	2	NoGas	0.038	34.9	404	22.1	1	
Li	7	2	NoGas	0.043	55.5	128024	0.4	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017777	1.08	1884762	107.06	60	120	
Sc	45	1	He	149296	0.10	134073	111.35	60	120	
Sc	45	2	NoGas	9266330	0.86	8481025	109.26	60	120	
Rh	103	1	He	992870	0.55	903580	109.88	60	120	

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In	115	1	He	245247	0.10	224817	109.09	60	120	
Tb	159	1	He	1138675	0.32	1046002	108.86	60	120	
Ho	165	1	He	1140263	1.41	1057439	107.83	60	120	
Bi	209	1	He	780908	0.75	731380	106.77	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:12:36-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.680	7.680	1.217	316068	0.12	8	96.0	69.5	130.5	
Be	9	2	NoGas	1.077	1.077	7.130	7172	7.25	1	107.7	69.5	130.5	
B	11	2	NoGas	20.611	20.611	1.553	94234	1.72	20	103.1	69.5	130.5	
Na	23	1	He	988.262	988.262	2.145	435530	0.35	1000	98.8	69.5	130.5	
Mg	24	1	He	1003.123	1003.123	2.181	243497	0.47	1000	100.3	69.5	130.5	
Al	27	1	He	48.471	48.471	2.544	5012	1.95	50	96.9	69.5	130.5	
K	39	1	He	1005.498	1005.498	0.767	125521	1.57	1000	100.5	69.5	130.5	
Ca	44	1	He	975.575	975.575	3.403	6785	1.47	1000	97.6	69.5	130.5	
Ti	47	1	He	9.801	9.801	8.246	479	10.14	10	98.0	69.5	130.5	
V	51	1	He	5.315	5.315	7.995	9302	6.13	5	106.3	69.5	130.5	
Cr	52	1	He	2.050	2.050	4.290	5161	5.58	2	102.5	69.5	130.5	
Mn	55	1	He	5.160	5.160	4.011	5645	2.24	5	103.2	69.5	130.5	
Fe	56	1	He	110.646	110.646	3.525	184659	1.62	100	110.6	69.5	130.5	
Co	59	1	He	1.072	1.072	3.554	4555	1.76	1	107.2	69.5	130.5	
Ni	60	1	He	2.043	2.043	6.078	2412	4.87	2	102.1	69.5	130.5	
Cu	63	1	He	2.198	2.198	2.432	9519	0.79	2	109.9	69.5	130.5	
Zn	66	1	He	20.388	20.388	3.635	8280	1.55	20	101.9	69.5	130.5	
As	75	1	He	4.773	4.773	2.186	1185	2.21	5	95.5	69.5	130.5	
Se	78	1	He	4.464	4.464	1.809	52	3.33	5	89.3	69.5	130.5	
Sr	88	1	He	9.484	9.484	4.283	10283	3.74	10	94.8	69.5	130.5	
Mo	95	1	He	5.219	5.219	2.323	7035	2.28	5	104.4	69.5	130.5	
Ag	107	1	He	1.001	1.001	2.339	4986	2.53	1	100.1	69.5	130.5	
Cd	111	1	He	0.975	0.975	5.003	539	5.93	1	97.5	69.5	130.5	
Sn	118	1	He	9.702	9.702	2.732	10459	2.30	10	97.0	69.5	130.5	
Sb	123	1	He	1.987	1.987	3.934	2382	2.36	2	99.4	69.5	130.5	
Ba	137	1	He	4.881	4.881	7.619	2018	7.63	5	97.6	69.5	130.5	
W	182	1	He	10.401	10.401	2.791	62131	3.06	10	104.0	69.5	130.5	
Tl	205	1	He	1.030	1.030	1.868	9584	1.41	1	103.0	69.5	130.5	
Pb	208	1	He	1.020	1.020	2.443	13674	2.13	1	102.0	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2040599	0.23	1884762	108.27	60	120	
Sc	45	1	He	148534	2.08	134073	110.79	60	120	
Sc	45	2	NoGas	9228090	0.82	8481025	108.81	60	120	
Rh	103	1	He	979084	0.53	903580	108.36	60	120	
In	115	1	He	247242	1.87	224817	109.97	60	120	
Tb	159	1	He	1130925	0.34	1046002	108.12	60	120	
Ho	165	1	He	1133972	0.47	1057439	107.24	60	120	
Bi	209	1	He	789955	0.43	731380	108.01	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:16:50-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.319	41.0	127511	0.9	4	
Be	9	45	2	NoGas	0.020	126.9	270	56.1	2	
B	11	45	2	NoGas	1.293	1.6	14125	1.0	20	
Na	23	45	1	He	50116.323	1.7	20204540	0.2	75200	
Mg	24	45	1	He	50261.734	2.4	11256310	0.6	75200	
Al	27	45	1	He	51924.285	2.8	4845239	1.0	75200	
K	39	45	1	He	49164.705	1.7	5242176	0.6	75200	
Ca	44	45	1	He	49472.930	1.7	308652	0.4	75200	
Ti	47	45	1	He	998.148	2.6	45065	1.4	1505	
V	51	45	1	He	0.074	60.7	175	43.4	4	
Cr	52	45	1	He	0.633	3.3	1952	2.9	4	
Mn	55	45	1	He	0.238	18.4	372	10.0	4	
Fe	56	45	1	He	49354.225	2.0	75317066	0.3	75200	
Co	59	45	1	He	-0.012	-23.8	272	2.5	2	
Ni	60	45	1	He	0.041	13.6	189	4.4	4	
Cu	63	45	1	He	0.408	4.8	3653	2.3	4	
Zn	66	45	1	He	0.275	43.2	252	15.8	20	
As	75	103	1	He	0.091	41.9	36	22.4	4	
Se	78	115	1	He	0.157	100.0	4	35.2	4	
Sr	88	103	1	He	0.282	20.4	306	18.0	20	
Mo	95	103	1	He	1053.034	0.9	1246996	0.8	1505	
Ag	107	103	1	He	0.010	7.7	50	6.7	1	
Cd	111	115	1	He	-0.046	-66.6	-21	-72.1	1	
Sn	118	115	1	He	0.003	3760.5	296	29.1	20	
Sb	123	115	1	He	0.009	221.1	51	41.9	4	
Ba	137	115	1	He	0.279	15.6	108	14.0	2	
W	182	159	1	He	0.144	30.1	2252	10.4	20	
Tl	205	165	1	He	0.004	66.1	77	30.4	2	
Pb	208	165	1	He	0.101	21.8	2388	10.2	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1968766	0.90	1884762	104.46	60	120	
Sc	45	1	He	137431	1.83	134073	102.50	60	120	
Sc	45	2	NoGas	8762498	1.55	8481025	103.32	60	120	
Rh	103	1	He	861888	0.16	903580	95.39	60	120	
In	115	1	He	220563	0.89	224817	98.11	60	120	
Tb	159	1	He	1071292	0.30	1046002	102.42	60	120	
Ho	165	1	He	1077741	0.50	1057439	101.92	60	120	
Bi	209	1	He	708506	0.53	731380	96.87	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:21:00-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	101.501	0.606	2564174	1.07	100	101.5	49.5	150.5	
Be	9	45	2	NoGas	103.653	0.872	657902	1.08	100	103.7	49.5	150.5	
B	11	45	2	NoGas	102.111	0.578	417851	1.13	100	102.1	49.5	150.5	
Na	23	45	1	He	49357.870	2.375	20654250	1.18	50000	98.7	49.5	150.5	
Mg	24	45	1	He	49299.877	2.809	11460670	1.59	50000	98.6	49.5	150.5	
Al	27	45	1	He	50996.987	2.400	4940189	1.58	50000	102.0	49.5	150.5	
K	39	45	1	He	48829.814	0.817	5405061	1.13	50000	97.7	49.5	150.5	
Ca	44	45	1	He	49482.435	1.923	320443	0.76	50000	99.0	49.5	150.5	
Ti	47	45	1	He	1091.893	2.829	51173	2.10	1100	99.3	49.5	150.5	
V	51	45	1	He	101.403	3.770	169508	2.89	100	101.4	49.5	150.5	
Cr	52	45	1	He	100.091	1.896	207476	1.28	100	100.1	49.5	150.5	
Mn	55	45	1	He	101.138	2.593	103633	1.63	100	101.1	49.5	150.5	
Fe	56	45	1	He	48762.155	2.516	77240652	1.34	50000	97.5	49.5	150.5	
Co	59	45	1	He	100.846	2.400	380954	1.24	100	100.8	49.5	150.5	
Ni	60	45	1	He	100.619	2.337	106787	1.54	100	100.6	49.5	150.5	
Cu	63	45	1	He	100.464	2.089	302927	0.91	100	100.5	49.5	150.5	
Zn	66	45	1	He	98.110	0.875	37683	0.60	100	98.1	49.5	150.5	
As	75	103	1	He	102.720	0.344	22693	0.60	100	102.7	49.5	150.5	
Se	78	115	1	He	102.067	1.562	1024	1.55	100	102.1	49.5	150.5	
Sr	88	103	1	He	100.214	0.298	97860	0.54	100	100.2	49.5	150.5	
Mo	95	103	1	He	1165.970	1.273	1417744	1.52	1100	106.0	49.5	150.5	
Ag	107	103	1	He	100.155	0.492	450299	0.74	100	100.2	49.5	150.5	
Cd	111	115	1	He	101.073	0.480	50471	0.36	100	101.1	49.5	150.5	
Sn	118	115	1	He	113.127	1.394	107313	1.19	100	113.1	49.5	150.5	
Sb	123	115	1	He	102.832	2.014	109607	2.02	100	102.8	49.5	150.5	
Ba	137	115	1	He	101.687	2.204	37975	2.33	100	101.7	49.5	150.5	
W	182	159	1	He	102.759	2.791	576903	2.12	100	102.8	49.5	150.5	
Tl	205	165	1	He	96.904	1.495	865718	1.58	100	96.9	49.5	150.5	
Pb	208	165	1	He	98.282	0.602	1152494	0.53	100	98.3	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1922135	1.01	1884762	101.98	60	120	
Sc	45	1	He	142647	1.25	134073	106.39	60	120	
Sc	45	2	NoGas	8987980	0.86	8481025	105.98	60	120	
Rh	103	1	He	884969	0.26	903580	97.94	60	120	
In	115	1	He	223978	0.34	224817	99.63	60	120	
Tb	159	1	He	1087318	0.95	1046002	103.95	60	120	
Ho	165	1	He	1093105	0.51	1057439	103.37	60	120	
Bi	209	1	He	719071	0.32	731380	98.32	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:25:10-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.116	1.338	1322798	1.43	50	98.2	89.5	110.5	
Be	9	45	2	NoGas	49.938	1.759	321499	0.71	50	99.9	89.5	110.5	
B	11	45	2	NoGas	49.868	1.708	211768	0.79	50	99.7	89.5	110.5	
Na	23	45	1	He	25526.943	1.900	10617147	1.20	25000	102.1	89.5	110.5	
Mg	24	45	1	He	25221.603	2.305	5826455	0.91	25000	100.9	89.5	110.5	
Al	27	45	1	He	260.335	2.703	25173	0.68	250	104.1	89.5	110.5	
K	39	45	1	He	25294.399	1.130	2786551	1.12	25000	101.2	89.5	110.5	
Ca	44	45	1	He	25329.240	1.957	163090	1.18	25000	101.3	89.5	110.5	
Ti	47	45	1	He	52.736	7.806	2457	8.26	50	105.5	89.5	110.5	
V	51	45	1	He	50.715	3.286	84255	1.08	50	101.4	89.5	110.5	
Cr	52	45	1	He	51.406	1.757	106232	1.51	50	102.8	89.5	110.5	
Mn	55	45	1	He	253.542	1.034	257977	1.42	250	101.4	89.5	110.5	
Fe	56	45	1	He	12794.318	1.852	20140862	1.09	12500	102.4	89.5	110.5	
Co	59	45	1	He	51.549	0.400	193699	1.85	50	103.1	89.5	110.5	
Ni	60	45	1	He	51.323	1.429	54201	0.97	50	102.6	89.5	110.5	
Cu	63	45	1	He	51.777	1.869	156374	1.01	50	103.6	89.5	110.5	
Zn	66	45	1	He	50.320	2.772	19276	0.57	50	100.6	89.5	110.5	
As	75	103	1	He	49.408	0.208	11337	1.05	50	98.8	89.5	110.5	
Se	78	115	1	He	48.446	1.511	495	3.65	50	96.9	89.5	110.5	
Sr	88	103	1	He	49.893	0.623	50580	0.93	50	99.8	89.5	110.5	
Mo	95	103	1	He	54.319	0.811	68557	1.57	50	108.6	89.5	110.5	
Ag	107	103	1	He	49.967	0.647	233139	1.18	50	99.9	89.5	110.5	
Cd	111	115	1	He	50.953	0.472	25856	2.51	50	101.9	89.5	110.5	
Sn	118	115	1	He	51.099	2.585	49417	2.80	50	102.2	89.5	110.5	
Sb	123	115	1	He	51.238	1.628	55506	1.25	50	102.5	89.5	110.5	
Ba	137	115	1	He	50.556	0.559	19187	2.03	50	101.1	89.5	110.5	
W	182	159	1	He	51.265	0.830	286430	2.00	50	102.5	89.5	110.5	
Tl	205	165	1	He	49.380	1.310	438176	1.28	50	98.8	89.5	110.5	
Pb	208	165	1	He	49.382	1.615	575726	0.84	50	98.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1945031	1.06	1884762	103.20	60	120	
Sc	45	1	He	141757	2.26	134073	105.73	60	120	
Sc	45	2	NoGas	9115306	1.10	8481025	107.48	60	120	
Rh	103	1	He	918409	1.24	903580	101.64	60	120	
In	115	1	He	227593	2.19	224817	101.23	60	120	
Tb	159	1	He	1079170	1.71	1046002	103.17	60	120	
Ho	165	1	He	1085912	2.43	1057439	102.69	60	120	
Bi	209	1	He	720914	0.96	731380	98.57	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:29:21-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.119	-34.9	125560	0.7	8	
Be	9	45	2	NoGas	0.026	21.1	330	10.8	1	
B	11	45	2	NoGas	1.200	6.8	14740	2.5	20	
Na	23	45	1	He	12.354	10.9	10366	5.1	1000	
Mg	24	45	1	He	2.250	45.1	1245	19.1	1000	
Al	27	45	1	He	0.577	65.3	180	21.4	50	
K	39	45	1	He	2.445	107.7	10044	3.3	1000	
Ca	44	45	1	He	-1.250	-445.4	203	19.0	1000	
Ti	47	45	1	He	0.046	173.2	2	173.2	20	
V	51	45	1	He	0.062	138.2	167	89.5	2	
Cr	52	45	1	He	-0.022	-189.7	697	13.0	2	
Mn	55	45	1	He	-0.010	-301.6	137	24.0	2	
Fe	56	45	1	He	4.584	22.7	9698	17.2	50	
Co	59	45	1	He	-0.011	-59.5	298	9.0	1	
Ni	60	45	1	He	-0.003	-1181.1	154	24.5	2	
Cu	63	45	1	He	0.005	1520.2	2672	8.8	2	
Zn	66	45	1	He	0.028	434.6	173	27.7	20	
As	75	103	1	He	0.062	29.6	34	13.1	2	
Se	78	115	1	He	0.213	68.6	5	28.7	2	
Sr	88	103	1	He	-0.002	-561.7	40	30.0	10	
Mo	95	103	1	He	0.485	4.6	668	4.6	2	
Ag	107	103	1	He	0.008	50.3	50	41.6	0.2	
Cd	111	115	1	He	0.019	58.4	12	50.2	0.2	
Sn	118	115	1	He	0.153	39.0	478	12.9	10	
Sb	123	115	1	He	0.096	2.7	156	1.2	2	
Ba	137	115	1	He	-0.004	-329.4	4	114.6	5	
W	182	159	1	He	0.235	9.2	2849	4.8	10	
Tl	205	165	1	He	0.055	29.4	538	27.3	0.5	
Pb	208	165	1	He	0.021	84.8	1507	14.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2029099	0.55	1884762	107.66	60	120	
Sc	45	1	He	147445	0.56	134073	109.97	60	120	
Sc	45	2	NoGas	9382535	0.24	8481025	110.63	60	120	
Rh	103	1	He	980220	0.11	903580	108.48	60	120	
In	115	1	He	241066	0.88	224817	107.23	60	120	
Tb	159	1	He	1108932	0.48	1046002	106.02	60	120	
Ho	165	1	He	1108175	0.26	1057439	104.80	60	120	
Bi	209	1	He	770326	0.59	731380	105.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-5-a@10
Data File Name	014SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:40:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.502	0.502	6.29	136033	0.00	10000	
Be	9	45	2	NoGas	0.012	0.012	64.43	230	0.01	2000	
B	11	45	2	NoGas	62.505	62.505	1.05	260915	0.02	300	
Na	23	45	1	He	1188.150	1188.150	1.91	511321	0.23	500000	
Mg	24	45	1	He	676.465	676.465	2.71	160873	0.42	500000	
Al	27	45	1	He	21.001	21.001	4.14	2192	0.96	200000	
K	39	45	1	He	244.280	244.280	4.88	37117	0.66	500000	
Ca	44	45	1	He	9229.051	9229.051	1.56	61053	15.12	500000	
Ti	47	45	1	He	0.280	0.280	66.83	13	2.10	2500	
V	51	45	1	He	0.133	0.133	62.61	284	0.05	10000	
Cr	52	45	1	He	0.017	0.017	297.71	768	0.00	10000	
Mn	55	45	1	He	11.972	11.972	1.86	12627	0.09	10000	
Fe	56	45	1	He	153.378	153.378	1.92	249658	0.06	200000	
Co	59	45	1	He	-0.017	-0.017	-39.34	269	-0.01	5000	
Ni	60	45	1	He	-0.013	-0.013	-338.83	141	-0.01	10000	
Cu	63	45	1	He	0.180	0.180	29.03	3168	0.01	10000	
Zn	66	45	1	He	0.210	0.210	75.37	241	0.09	10000	
As	75	103	1	He	0.042	0.042	21.50	28	0.15	10000	
Se	78	115	1	He	0.146	0.146	94.72	5	3.14	10000	
Sr	88	103	1	He	57.916	57.916	0.89	60375	0.10	10000	
Mo	95	103	1	He	0.118	0.118	39.36	167	0.07	2000	
Ag	107	103	1	He	0.002	0.002	53.58	18	0.01	300	
Cd	111	115	1	He	0.008	0.008	70.90	6	0.13	4000	
Sn	118	115	1	He	-0.079	-0.079	-116.63	244	-0.03	2000	
Sb	123	115	1	He	-0.006	-0.006	-158.29	39	-0.02	200	
Ba	137	115	1	He	3.495	3.495	3.03	1425	0.25	10000	
W	182	159	1	He	-0.021	-0.021	-269.64	1371	0.00	2500	
Tl	205	165	1	He	0.003	0.003	28.31	64	0.00	2000	
Pb	208	165	1	He	0.000	0.000	-3849.06	1243	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1999129	1.22	1884762	106.07	60	120	
Sc	45	1	He	145321	1.88	134073	108.39	60	120	
Sc	45	2	NoGas	9041013	0.78	8481025	106.60	60	120	
Rh	103	1	He	944478	0.40	903580	104.53	60	120	
In	115	1	He	243449	0.42	224817	108.29	60	120	
Tb	159	1	He	1097739	0.66	1046002	104.95	60	120	
Ho	165	1	He	1101508	1.01	1057439	104.17	60	120	
Bi	209	1	He	780291	1.09	731380	106.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64177-b-11-a@5
Data File Name	015SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:44:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.573	2.573	1.66	187533	0.00	10000	
Be	9	45	2	NoGas	0.009	0.009	151.19	211	0.00	2000	
B	11	45	2	NoGas	94.423	94.423	1.65	392337	0.02	300	
Na	23	45	1	He	1973.552	1973.552	2.81	845261	0.23	500000	
Mg	24	45	1	He	557.280	557.280	3.97	132523	0.42	500000	
Al	27	45	1	He	0.944	0.944	59.21	213	0.44	200000	
K	39	45	1	He	448.140	448.140	3.20	60003	0.75	500000	
Ca	44	45	1	He	19822.097	19822.097	1.09	130791	15.16	500000	
Ti	47	45	1	He	0.047	0.047	173.21	2	2.10	2500	
V	51	45	1	He	0.068	0.068	195.07	174	0.04	10000	
Cr	52	45	1	He	-0.012	-0.012	-351.52	707	0.00	10000	
Mn	55	45	1	He	17.855	17.855	4.99	18735	0.10	10000	
Fe	56	45	1	He	817.570	817.570	6.54	1319625	0.06	200000	
Co	59	45	1	He	1.446	1.446	1.81	5891	0.02	5000	
Ni	60	45	1	He	0.244	0.244	22.85	419	0.06	10000	
Cu	63	45	1	He	0.122	0.122	45.50	2986	0.00	10000	
Zn	66	45	1	He	2.965	2.965	4.22	1315	0.23	10000	
As	75	103	1	He	1.249	1.249	0.79	312	0.40	10000	
Se	78	115	1	He	0.154	0.154	177.31	5	3.32	10000	
Sr	88	103	1	He	130.662	130.662	0.36	136032	0.10	10000	
Mo	95	103	1	He	9.507	9.507	3.35	12338	0.08	2000	
Ag	107	103	1	He	0.000	0.000	683.70	9	0.00	300	
Cd	111	115	1	He	0.003	0.003	88.03	4	0.09	4000	
Sn	118	115	1	He	-0.041	-0.041	-234.47	278	-0.01	2000	
Sb	123	115	1	He	0.005	0.005	159.43	51	0.01	200	
Ba	137	115	1	He	8.553	8.553	3.06	3415	0.25	10000	
W	182	159	1	He	0.001	0.001	1938.17	1508	0.00	2500	
Tl	205	165	1	He	0.002	0.002	80.62	60	0.00	2000	
Pb	208	165	1	He	-0.007	-0.007	-43.34	1167	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1981630	1.46	1884762	105.14	60	120	
Sc	45	1	He	145198	1.73	134073	108.30	60	120	
Sc	45	2	NoGas	9110209	0.90	8481025	107.42	60	120	
Rh	103	1	He	943597	0.43	903580	104.43	60	120	
In	115	1	He	239150	1.22	224817	106.38	60	120	
Tb	159	1	He	1103740	0.64	1046002	105.52	60	120	
Ho	165	1	He	1104035	0.52	1057439	104.41	60	120	
Bi	209	1	He	764624	0.59	731380	104.55	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	016_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:49:00-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	47.684	2.672	1342637	1.95	50	95.4	89.5	110.5	
Be	9	45	2	NoGas	48.902	0.593	328279	0.36	50	97.8	89.5	110.5	
B	11	45	2	NoGas	49.677	1.309	219992	0.76	50	99.4	89.5	110.5	
Na	23	45	1	He	25006.498	1.063	10951270	0.70	25000	100.0	89.5	110.5	
Mg	24	45	1	He	24832.192	2.016	6040296	1.39	25000	99.3	89.5	110.5	
Al	27	45	1	He	247.676	2.458	25225	1.99	250	99.1	89.5	110.5	
K	39	45	1	He	25122.948	0.540	2914073	0.56	25000	100.5	89.5	110.5	
Ca	44	45	1	He	24995.287	2.490	169450	1.86	25000	100.0	89.5	110.5	
Ti	47	45	1	He	51.352	4.578	2518	4.44	50	102.7	89.5	110.5	
V	51	45	1	He	49.829	1.883	87187	1.67	50	99.7	89.5	110.5	
Cr	52	45	1	He	50.511	1.915	109912	1.33	50	101.0	89.5	110.5	
Mn	55	45	1	He	251.172	2.199	269050	1.59	250	100.5	89.5	110.5	
Fe	56	45	1	He	12640.441	2.147	20950710	1.51	12500	101.1	89.5	110.5	
Co	59	45	1	He	50.837	2.181	201093	1.56	50	101.7	89.5	110.5	
Ni	60	45	1	He	51.171	2.710	56896	2.23	50	102.3	89.5	110.5	
Cu	63	45	1	He	51.134	1.633	162636	1.05	50	102.3	89.5	110.5	
Zn	66	45	1	He	49.658	1.875	20035	1.65	50	99.3	89.5	110.5	
As	75	103	1	He	49.054	0.905	11730	1.27	50	98.1	89.5	110.5	
Se	78	115	1	He	51.843	1.706	556	1.21	50	103.7	89.5	110.5	
Sr	88	103	1	He	48.978	0.987	51745	1.28	50	98.0	89.5	110.5	
Mo	95	103	1	He	52.142	1.007	68581	1.53	50	104.3	89.5	110.5	
Ag	107	103	1	He	50.053	0.727	243376	1.15	50	100.1	89.5	110.5	
Cd	111	115	1	He	50.523	1.538	26925	1.46	50	101.0	89.5	110.5	
Sn	118	115	1	He	50.571	2.983	51375	3.17	50	101.1	89.5	110.5	
Sb	123	115	1	He	50.787	0.768	57792	0.29	50	101.6	89.5	110.5	
Ba	137	115	1	He	49.748	2.805	19831	3.14	50	99.5	89.5	110.5	
W	182	159	1	He	50.525	0.540	294459	2.07	50	101.0	89.5	110.5	
Tl	205	165	1	He	48.990	0.969	450740	2.05	50	98.0	89.5	110.5	
Pb	208	165	1	He	49.109	0.916	593604	0.58	50	98.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1988522	0.16	1884762	105.51	60	120	
Sc	45	1	He	149229	0.64	134073	111.30	60	120	
Sc	45	2	NoGas	9503714	0.93	8481025	112.06	60	120	
Rh	103	1	He	957058	0.56	903580	105.92	60	120	
In	115	1	He	239032	0.56	224817	106.32	60	120	
Tb	159	1	He	1125543	1.55	1046002	107.60	60	120	
Ho	165	1	He	1125641	1.37	1057439	106.45	60	120	
Bi	209	1	He	743717	0.64	731380	101.69	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	017_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:53:12-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.130	-10.1	127141	0.7	8	
Be	9	45	2	NoGas	0.024	34.4	326	16.8	1	
B	11	45	2	NoGas	2.420	3.4	20126	1.2	20	
Na	23	45	1	He	7.653	19.3	8565	7.6	1000	
Mg	24	45	1	He	1.298	37.3	1045	11.3	1000	
Al	27	45	1	He	0.130	187.9	139	18.0	50	
K	39	45	1	He	3.932	49.9	10496	2.4	1000	
Ca	44	45	1	He	2.967	119.0	237	10.4	1000	
Ti	47	45	1	He	0.022	173.2	1	173.2	20	
V	51	45	1	He	0.080	98.5	203	68.9	2	
Cr	52	45	1	He	-0.029	-212.4	700	19.1	2	
Mn	55	45	1	He	0.000	4723.7	152	15.5	2	
Fe	56	45	1	He	2.464	32.9	6402	21.1	50	
Co	59	45	1	He	-0.026	-60.5	247	25.0	1	
Ni	60	45	1	He	-0.027	-100.7	132	22.9	2	
Cu	63	45	1	He	-0.026	-434.1	2648	13.4	2	
Zn	66	45	1	He	0.052	119.9	188	13.6	20	
As	75	103	1	He	0.030	68.0	27	18.7	2	
Se	78	115	1	He	0.114	255.5	4	74.1	2	
Sr	88	103	1	He	-0.005	-100.9	38	13.5	10	
Mo	95	103	1	He	0.123	32.7	183	29.9	2	
Ag	107	103	1	He	0.006	55.6	40	43.3	0.2	
Cd	111	115	1	He	0.014	49.5	9	40.6	0.2	
Sn	118	115	1	He	0.260	21.7	593	9.4	10	
Sb	123	115	1	He	0.079	29.1	138	20.3	2	
Ba	137	115	1	He	0.018	120.3	13	66.2	5	
W	182	159	1	He	0.189	44.2	2637	18.1	10	
Tl	205	165	1	He	0.034	18.3	363	15.7	0.5	
Pb	208	165	1	He	0.009	27.9	1396	1.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2051383	1.16	1884762	108.84	60	120	
Sc	45	1	He	151525	0.22	134073	113.02	60	120	
Sc	45	2	NoGas	9521197	0.86	8481025	112.26	60	120	
Rh	103	1	He	998095	0.55	903580	110.46	60	120	
In	115	1	He	243723	1.20	224817	108.41	60	120	
Tb	159	1	He	1131291	0.51	1046002	108.15	60	120	
Ho	165	1	He	1139033	0.49	1057439	107.72	60	120	
Bi	209	1	He	788645	0.48	731380	107.83	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	018CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T12:57:26-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.073	7.073	1.711	305891	0.81	8	88.4	69.5	130.5	
Be	9	2	NoGas	0.982	0.982	6.705	6661	6.07	1	98.2	69.5	130.5	
B	11	2	NoGas	20.183	20.183	0.969	93947	0.40	20	100.9	69.5	130.5	
Na	23	1	He	996.893	996.893	0.843	438106	1.17	1000	99.7	69.5	130.5	
Mg	24	1	He	1010.488	1010.488	1.538	244602	0.89	1000	101.0	69.5	130.5	
Al	27	1	He	50.298	50.298	5.771	5180	4.43	50	100.6	69.5	130.5	
K	39	1	He	1009.898	1009.898	2.162	125648	1.25	1000	101.0	69.5	130.5	
Ca	44	1	He	992.462	992.462	3.891	6883	4.80	1000	99.2	69.5	130.5	
Ti	47	1	He	10.544	10.544	7.807	513	8.74	10	105.4	69.5	130.5	
V	51	1	He	5.149	5.149	7.334	8989	6.01	5	103.0	69.5	130.5	
Cr	52	1	He	2.189	2.189	2.064	5440	1.10	2	109.4	69.5	130.5	
Mn	55	1	He	5.162	5.162	0.921	5633	1.73	5	103.2	69.5	130.5	
Fe	56	1	He	109.595	109.595	1.448	182450	0.73	100	109.6	69.5	130.5	
Co	59	1	He	1.010	1.010	4.288	4299	4.36	1	101.0	69.5	130.5	
Ni	60	1	He	2.066	2.066	4.360	2432	5.35	2	103.3	69.5	130.5	
Cu	63	1	He	2.043	2.043	1.445	9010	0.80	2	102.1	69.5	130.5	
Zn	66	1	He	20.566	20.566	0.769	8330	1.23	20	102.8	69.5	130.5	
As	75	1	He	5.076	5.076	1.107	1261	1.01	5	101.5	69.5	130.5	
Se	78	1	He	4.989	4.989	7.858	58	8.49	5	99.8	69.5	130.5	
Sr	88	1	He	9.303	9.303	1.495	10107	1.56	10	93.0	69.5	130.5	
Mo	95	1	He	5.431	5.431	2.770	7334	2.57	5	108.6	69.5	130.5	
Ag	107	1	He	1.005	1.005	5.172	5020	5.53	1	100.5	69.5	130.5	
Cd	111	1	He	0.981	0.981	7.951	538	7.69	1	98.1	69.5	130.5	
Sn	118	1	He	9.792	9.792	4.374	10459	3.32	10	97.9	69.5	130.5	
Sb	123	1	He	2.046	2.046	4.935	2431	5.74	2	102.3	69.5	130.5	
Ba	137	1	He	4.920	4.920	1.863	2016	0.95	5	98.4	69.5	130.5	
W	182	1	He	10.321	10.321	1.862	60703	1.78	10	103.2	69.5	130.5	
Tl	205	1	He	0.998	0.998	0.844	9178	0.60	1	99.8	69.5	130.5	
Pb	208	1	He	0.989	0.989	2.019	13143	1.54	1	98.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2000899	1.16	1884762	106.16	60	120	
Sc	45	1	He	148095	1.29	134073	110.46	60	120	
Sc	45	2	NoGas	9375319	0.47	8481025	110.54	60	120	
Rh	103	1	He	980951	0.54	903580	108.56	60	120	
In	115	1	He	245064	1.15	224817	109.01	60	120	
Tb	159	1	He	1113390	0.06	1046002	106.44	60	120	
Ho	165	1	He	1120460	0.34	1057439	105.96	60	120	
Bi	209	1	He	772923	0.48	731380	105.68	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	MB 240-228967/1-A
Data File Name	019_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:01:40-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.194	-7.5	122207	0.8	8	
Be	9	45	2	NoGas	0.003	276.8	178	31.2	1	
B	11	45	2	NoGas	1.600	11.9	16211	4.0	20	
Na	23	45	1	He	78.051	3.7	39057	3.0	1000	
Mg	24	45	1	He	125.853	0.4	31172	0.9	1000	
Al	27	45	1	He	1.945	37.2	319	22.3	50	
K	39	45	1	He	22.654	16.5	12438	2.9	1000	
Ca	44	45	1	He	382.862	5.7	2792	5.0	1000	
Ti	47	45	1	He	0.139	173.2	7	173.2	20	
V	51	45	1	He	0.028	366.1	109	161.4	2	
Cr	52	45	1	He	-0.005	-417.8	738	5.5	2	
Mn	55	45	1	He	1.156	6.0	1380	5.9	2	
Fe	56	45	1	He	6.737	2.7	13321	1.2	50	
Co	59	45	1	He	-0.043	-3.3	176	4.0	1	
Ni	60	45	1	He	0.147	30.2	321	15.9	2	
Cu	63	45	1	He	0.297	15.2	3602	4.8	2	
Zn	66	45	1	He	9.619	11.4	3991	9.7	20	
As	75	103	1	He	0.027	73.8	25	18.9	2	
Se	78	115	1	He	0.262	88.7	6	42.2	2	
Sr	88	103	1	He	0.931	13.7	1037	13.0	10	
Mo	95	103	1	He	0.039	41.9	67	32.8	2	
Ag	107	103	1	He	0.002	54.3	18	28.6	0.2	
Cd	111	115	1	He	0.002	171.4	3	57.3	0.2	
Sn	118	115	1	He	0.455	2.5	782	1.6	10	
Sb	123	115	1	He	-0.006	-154.9	38	31.0	2	
Ba	137	115	1	He	1.291	5.6	522	6.2	5	
W	182	159	1	He	0.061	47.3	1867	8.3	10	
Tl	205	165	1	He	0.001	154.8	54	34.8	0.5	
Pb	208	165	1	He	0.008	104.9	1350	6.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2032658	1.60	1884762	107.85	60	120	
Sc	45	1	He	148502	1.21	134073	110.76	60	120	
Sc	45	2	NoGas	9271313	0.81	8481025	109.32	60	120	
Rh	103	1	He	969511	0.21	903580	107.30	60	120	
In	115	1	He	239923	0.97	224817	106.72	60	120	
Tb	159	1	He	1114758	1.14	1046002	106.57	60	120	
Ho	165	1	He	1111200	0.86	1057439	105.08	60	120	
Bi	209	1	He	777063	0.93	731380	106.25	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 240-228967/2-A
Data File Name	020_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:05:51-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	94.786	94.786	0.836	2436438	1.20	100	94.8	84.5	115.5	
Be	9	2	NoGas	1032.881	1032.881	0.200	6646620	0.63	1000	103.3	84.5	115.5	
B	11	2	NoGas	97.284	97.284	0.964	404125	0.83	100	97.3	84.5	115.5	
Na	23	1	He	10190.186	10190.186	5.645	4219649	1.21	10000	101.9	84.5	115.5	
Mg	24	1	He	10515.737	10515.737	5.779	2417333	1.15	10000	105.2	84.5	115.5	
Al	27	1	He	9963.689	9963.689	5.691	954293	1.06	10000	99.6	84.5	115.5	
K	39	1	He	9982.985	9982.985	4.405	1100183	0.31	10000	99.8	84.5	115.5	
Ca	44	1	He	10857.298	10857.298	5.646	69667	0.99	10000	108.6	84.5	115.5	
Ti	47	1	He	99.352	99.352	9.269	4600	5.49	100	99.4	84.5	115.5	
V	51	1	He	1066.477	1066.477	4.283	1762848	0.75	1000	106.6	84.5	115.5	
Cr	52	1	He	1065.961	1065.961	6.125	2177159	1.50	1000	106.6	84.5	115.5	
Mn	55	1	He	1003.146	1003.146	4.829	1015225	0.20	1000	100.3	84.5	115.5	
Fe	56	1	He	10115.071	10115.071	4.691	15847268	0.23	10000	101.2	84.5	115.5	
Co	59	1	He	1066.935	1066.935	5.873	3981373	1.53	1000	106.7	84.5	115.5	
Ni	60	1	He	1033.197	1033.197	4.803	1082931	0.25	1000	103.3	84.5	115.5	
Cu	63	1	He	1059.810	1059.810	5.396	3135265	0.81	1000	106.0	84.5	115.5	
Zn	66	1	He	1028.187	1028.187	5.299	388951	0.65	1000	102.8	84.5	115.5	
As	75	1	He	988.999	988.999	1.672	225916	0.65	1000	98.9	84.5	115.5	
Se	78	1	He	1016.360	1016.360	1.962	10195	0.11	1000	101.6	84.5	115.5	
Sr	88	1	He	956.102	956.102	1.630	965703	0.60	1000	95.6	84.5	115.5	
Mo	95	1	He	103.716	103.716	1.563	130500	0.57	100	103.7	84.5	115.5	
Ag	107	1	He	101.553	101.553	0.710	472455	0.33	100	101.6	84.5	115.5	
Cd	111	1	He	1029.433	1029.433	2.461	515290	0.43	1000	102.9	84.5	115.5	
Sn	118	1	He	1022.335	1022.335	3.093	969689	1.06	1000	102.2	84.5	115.5	
Sb	123	1	He	102.561	102.561	3.266	109575	1.31	100	102.6	84.5	115.5	
Ba	137	1	He	1016.019	1016.019	1.828	380335	0.36	1000	101.6	84.5	115.5	
W	182	1	He	101.278	101.278	2.615	562175	1.69	100	101.3	84.5	115.5	
Tl	205	1	He	255.230	255.230	2.795	2251641	1.75	250	102.1	84.5	115.5	
Pb	208	1	He	1014.316	1014.316	1.362	11735706	0.23	1000	101.4	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1896196	1.51	1884762	100.61	60	120	
Sc	45	1	He	141254	4.79	134073	105.36	60	120	
Sc	45	2	NoGas	9114155	0.47	8481025	107.47	60	120	
Rh	103	1	He	915786	1.03	903580	101.35	60	120	
In	115	1	He	224600	2.03	224817	99.90	60	120	
Tb	159	1	He	1075078	1.43	1046002	102.78	60	120	
Ho	165	1	He	1079684	1.20	1057439	102.10	60	120	
Bi	209	1	He	716276	0.71	731380	97.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-A
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:09:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.947	15.947	0.18	538147	0.00	10000	
Be	9	45	2	NoGas	0.324	0.324	6.09	2348	0.01	2000	
B	11	45	2	NoGas	7.478	7.478	3.08	41674	0.02	300	
Na	23	45	1	He	7430.968	7430.968	2.01	3263905	0.23	500000	
Mg	24	45	1	He	38720.125	38720.125	3.15	9435668	0.41	500000	
Al	27	45	1	He	2.661	2.661	16.18	394	0.67	200000	
K	39	45	1	He	2992.467	2992.467	3.46	356444	0.84	500000	
Ca	44	45	1	He	111300.982	111300.982	2.86	755201	14.74	500000	
Ti	47	45	1	He	0.136	0.136	50.20	7	2.04	2500	
V	51	45	1	He	0.230	0.230	16.52	462	0.05	10000	
Cr	52	45	1	He	0.210	0.210	23.55	1209	0.02	10000	
Mn	55	45	1	He	1017.902	1017.902	3.12	1091886	0.09	10000	
Fe	56	45	1	He	347.061	347.061	2.61	578501	0.06	200000	
Co	59	45	1	He	5.017	5.017	5.65	20188	0.02	5000	
Ni	60	45	1	He	7.550	7.550	6.45	8550	0.09	10000	
Cu	63	45	1	He	0.341	0.341	8.24	3764	0.01	10000	
Zn	66	45	1	He	11.343	11.343	1.46	4713	0.24	10000	
As	75	103	1	He	0.863	0.863	14.24	216	0.40	10000	
Se	78	115	1	He	0.613	0.613	36.95	9	6.61	10000	
Sr	88	103	1	He	90.845	90.845	2.06	92359	0.10	10000	
Mo	95	103	1	He	0.476	0.476	3.56	617	0.08	2000	
Ag	107	103	1	He	0.018	0.018	26.54	91	0.02	300	
Cd	111	115	1	He	0.293	0.293	20.67	154	0.19	4000	
Sn	118	115	1	He	1.589	1.589	26.94	1871	0.08	2000	
Sb	123	115	1	He	0.185	0.185	18.00	248	0.07	200	
Ba	137	115	1	He	326.385	326.385	0.57	126604	0.26	10000	
W	182	159	1	He	1.168	1.168	8.44	7943	0.01	2500	
Tl	205	165	1	He	0.230	0.230	21.77	2065	0.01	2000	
Pb	208	165	1	He	0.173	0.173	19.75	3217	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1977505	0.60	1884762	104.92	60	120	
Sc	45	1	He	149525	1.48	134073	111.53	60	120	
Sc	45	2	NoGas	9546635	0.25	8481025	112.56	60	120	
Rh	103	1	He	921283	0.49	903580	101.96	60	120	
In	115	1	He	232669	0.65	224817	103.49	60	120	
Tb	159	1	He	1076789	0.66	1046002	102.94	60	120	
Ho	165	1	He	1077235	0.78	1057439	101.87	60	120	
Bi	209	1	He	720497	0.96	731380	98.51	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64160-D-4-A@5
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:14:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.952	2.952	2.68	202495	0.00	10000	
Be	9	45	2	NoGas	0.183	0.183	14.69	1370	0.01	2000	
B	11	45	2	NoGas	2.077	2.077	9.24	18391	0.01	300	
Na	23	45	1	He	1487.286	1487.286	0.30	675726	0.22	500000	
Mg	24	45	1	He	8092.822	8092.822	1.25	2027952	0.40	500000	
Al	27	45	1	He	0.462	0.462	111.45	176	0.26	200000	
K	39	45	1	He	617.253	617.253	1.15	83662	0.74	500000	
Ca	44	45	1	He	22759.834	22759.834	0.71	158937	14.32	500000	
Ti	47	45	1	He	0.088	0.088	86.60	4	1.98	2500	
V	51	45	1	He	-0.085	-0.085	-145.68	-90	0.09	10000	
Cr	52	45	1	He	-0.019	-0.019	-75.47	732	0.00	10000	
Mn	55	45	1	He	211.482	211.482	1.11	233340	0.09	10000	
Fe	56	45	1	He	70.948	70.948	0.21	123389	0.06	200000	
Co	59	45	1	He	0.985	0.985	5.35	4361	0.02	5000	
Ni	60	45	1	He	1.614	1.614	0.92	2008	0.08	10000	
Cu	63	45	1	He	0.030	0.030	429.50	2865	0.00	10000	
Zn	66	45	1	He	4.748	4.748	2.17	2126	0.22	10000	
As	75	103	1	He	0.199	0.199	9.99	67	0.30	10000	
Se	78	115	1	He	0.348	0.348	21.89	7	5.12	10000	
Sr	88	103	1	He	18.084	18.084	1.96	19387	0.09	10000	
Mo	95	103	1	He	0.069	0.069	19.70	107	0.06	2000	
Ag	107	103	1	He	0.006	0.006	28.22	40	0.02	300	
Cd	111	115	1	He	0.065	0.065	26.93	37	0.18	4000	
Sn	118	115	1	He	1.487	1.487	4.83	1845	0.08	2000	
Sb	123	115	1	He	0.053	0.053	24.01	107	0.05	200	
Ba	137	115	1	He	66.160	66.160	2.78	26721	0.25	10000	
W	182	159	1	He	0.213	0.213	7.93	2704	0.01	2500	
Tl	205	165	1	He	0.034	0.034	19.93	342	0.01	2000	
Pb	208	165	1	He	0.006	0.006	85.54	1302	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1921180	0.53	1884762	101.93	60	120	
Sc	45	1	He	153683	0.09	134073	114.63	60	120	
Sc	45	2	NoGas	9375443	0.88	8481025	110.55	60	120	
Rh	103	1	He	969898	0.61	903580	107.34	60	120	
In	115	1	He	242259	0.98	224817	107.76	60	120	
Tb	159	1	He	1100165	0.42	1046002	105.18	60	120	
Ho	165	1	He	1093727	0.34	1057439	103.43	60	120	
Bi	209	1	He	752689	0.85	731380	102.91	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64160-D-4-A
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:18:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	115.978	115.978	0.70	2980894	0.00	10000	
Be	9	45	2	NoGas	1073.586	1073.586	0.44	6973259	0.02	2000	
B	11	45	2	NoGas	109.470	109.470	1.00	457828	0.02	300	
Na	23	45	1	He	17855.972	17855.972	0.55	7610661	0.23	500000	
Mg	24	45	1	He	48589.388	48589.388	2.73	11499255	0.42	500000	
Al	27	45	1	He	10292.303	10292.303	2.14	1015123	1.01	200000	
K	39	45	1	He	13489.095	13489.095	1.39	1526918	0.88	500000	
Ca	44	45	1	He	120305.930	120305.930	1.81	792873	15.17	500000	
Ti	47	45	1	He	103.630	103.630	2.68	4944	2.10	2500	
V	51	45	1	He	1100.779	1100.779	2.45	1872805	0.06	10000	
Cr	52	45	1	He	1070.200	1070.200	1.98	2251313	0.05	10000	
Mn	55	45	1	He	2108.325	2108.325	2.37	2196384	0.10	10000	
Fe	56	45	1	He	10659.315	10659.315	2.16	17191298	0.06	200000	
Co	59	45	1	He	1067.094	1067.094	1.78	4100682	0.03	5000	
Ni	60	45	1	He	1024.546	1024.546	1.02	1105576	0.09	10000	
Cu	63	45	1	He	1046.961	1046.961	2.22	3189209	0.03	10000	
Zn	66	45	1	He	1012.970	1012.970	1.96	394550	0.26	10000	
As	75	103	1	He	1035.309	1035.309	1.93	235783	0.44	10000	
Se	78	115	1	He	1036.961	1036.961	2.07	10469	9.90	10000	
Sr	88	103	1	He	1086.086	1086.086	1.57	1093708	0.10	10000	
Mo	95	103	1	He	108.445	108.445	2.42	136035	0.08	2000	
Ag	107	103	1	He	101.594	101.594	1.61	471211	0.02	300	
Cd	111	115	1	He	1045.011	1045.011	2.40	526523	0.20	4000	
Sn	118	115	1	He	1042.906	1042.906	2.43	995773	0.10	2000	
Sb	123	115	1	He	104.971	104.971	1.91	112900	0.09	200	
Ba	137	115	1	He	1367.634	1367.634	2.28	515286	0.27	10000	
W	182	159	1	He	104.553	104.553	1.88	579918	0.02	2500	
Tl	205	165	1	He	261.777	261.777	2.72	2304947	0.01	2000	
Pb	208	165	1	He	1037.108	1037.108	1.10	11975413	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1893439	1.71	1884762	100.46	60	120	
Sc	45	1	He	145211	0.95	134073	108.31	60	120	
Sc	45	2	NoGas	9199623	0.41	8481025	108.47	60	120	
Rh	103	1	He	913015	0.74	903580	101.04	60	120	
In	115	1	He	226046	1.38	224817	100.55	60	120	
Tb	159	1	He	1074144	0.83	1046002	102.69	60	120	
Ho	165	1	He	1077480	1.03	1057439	101.90	60	120	
Bi	209	1	He	712802	1.71	731380	97.46	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-B MS
Data File Name	024SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:22:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	110.781	110.781	1.54	2880935	0.00	10000	
Be	9	45	2	NoGas	1022.741	1022.741	0.91	6708910	0.02	2000	
B	11	45	2	NoGas	106.220	106.220	1.09	448889	0.02	300	
Na	23	45	1	He	17352.647	17352.647	3.48	7357565	0.24	500000	
Mg	24	45	1	He	48972.996	48972.996	3.31	11531261	0.42	500000	
Al	27	45	1	He	9673.333	9673.333	2.79	949250	1.02	200000	
K	39	45	1	He	12998.531	12998.531	2.21	1464280	0.89	500000	
Ca	44	45	1	He	122882.086	122882.086	3.35	805660	15.25	500000	
Ti	47	45	1	He	103.100	103.100	6.16	4896	2.11	2500	
V	51	45	1	He	1040.801	1040.801	4.09	1761685	0.06	10000	
Cr	52	45	1	He	1017.723	1017.723	4.53	2129650	0.05	10000	
Mn	55	45	1	He	2088.824	2088.824	2.59	2165209	0.10	10000	
Fe	56	45	1	He	10111.521	10111.521	2.66	16225867	0.06	200000	
Co	59	45	1	He	1024.088	1024.088	2.47	3915546	0.03	5000	
Ni	60	45	1	He	973.959	973.959	3.14	1045580	0.09	10000	
Cu	63	45	1	He	992.540	992.540	2.67	3008417	0.03	10000	
Zn	66	45	1	He	957.028	957.028	2.18	370926	0.26	10000	
As	75	103	1	He	970.469	970.469	2.63	223927	0.43	10000	
Se	78	115	1	He	996.633	996.633	3.09	10043	9.92	10000	
Sr	88	103	1	He	1013.953	1013.953	3.03	1034456	0.10	10000	
Mo	95	103	1	He	103.068	103.068	3.21	130988	0.08	2000	
Ag	107	103	1	He	97.531	97.531	2.61	458306	0.02	300	
Cd	111	115	1	He	991.111	991.111	3.58	498401	0.20	4000	
Sn	118	115	1	He	1014.831	1014.831	3.77	967088	0.10	2000	
Sb	123	115	1	He	100.648	100.648	4.20	108033	0.09	200	
Ba	137	115	1	He	1311.860	1311.860	3.49	493311	0.27	10000	
W	182	159	1	He	100.511	100.511	2.88	560478	0.02	2500	
Tl	205	165	1	He	248.341	248.341	3.34	2204296	0.01	2000	
Pb	208	165	1	He	970.672	970.672	2.45	11299310	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1952589	0.74	1884762	103.60	60	120	
Sc	45	1	He	144512	2.02	134073	107.79	60	120	
Sc	45	2	NoGas	9291107	1.43	8481025	109.55	60	120	
Rh	103	1	He	925197	1.53	903580	102.39	60	120	
In	115	1	He	225693	2.42	224817	100.39	60	120	
Tb	159	1	He	1080124	1.77	1046002	103.26	60	120	
Ho	165	1	He	1086380	1.28	1057439	102.74	60	120	
Bi	209	1	He	716017	1.12	731380	97.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-D-4-C MSD
Data File Name	025SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:26:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	117.504	117.504	2.48	3019275	0.00	10000	
Be	9	45	2	NoGas	1099.047	1099.047	0.64	7141768	0.02	2000	
B	11	45	2	NoGas	114.293	114.293	1.53	477741	0.02	300	
Na	23	45	1	He	17805.788	17805.788	2.07	7821553	0.23	500000	
Mg	24	45	1	He	49858.366	49858.366	2.52	12161575	0.41	500000	
Al	27	45	1	He	9950.871	9950.871	2.35	1011509	0.98	200000	
K	39	45	1	He	13237.051	13237.051	2.19	1544394	0.86	500000	
Ca	44	45	1	He	125023.973	125023.973	2.49	849146	14.72	500000	
Ti	47	45	1	He	106.159	106.159	1.40	5221	2.03	2500	
V	51	45	1	He	1076.261	1076.261	1.60	1887440	0.06	10000	
Cr	52	45	1	He	1048.191	1048.191	2.71	2272379	0.05	10000	
Mn	55	45	1	He	2128.326	2128.326	2.79	2285148	0.09	10000	
Fe	56	45	1	He	10339.423	10339.423	2.83	17185718	0.06	200000	
Co	59	45	1	He	1045.233	1045.233	2.30	4139975	0.03	5000	
Ni	60	45	1	He	1006.609	1006.609	2.21	1119481	0.09	10000	
Cu	63	45	1	He	1020.348	1020.348	1.99	3203510	0.03	10000	
Zn	66	45	1	He	981.793	981.793	2.26	394137	0.25	10000	
As	75	103	1	He	1022.715	1022.715	1.69	238282	0.43	10000	
Se	78	115	1	He	1038.497	1038.497	2.06	10607	9.79	10000	
Sr	88	103	1	He	1073.236	1073.236	2.04	1105633	0.10	10000	
Mo	95	103	1	He	107.490	107.490	2.21	137944	0.08	2000	
Ag	107	103	1	He	102.154	102.154	1.18	484720	0.02	300	
Cd	111	115	1	He	1041.888	1041.888	2.59	531034	0.20	4000	
Sn	118	115	1	He	1052.772	1052.772	2.44	1016865	0.10	2000	
Sb	123	115	1	He	104.083	104.083	2.83	113239	0.09	200	
Ba	137	115	1	He	1375.970	1375.970	1.82	524464	0.26	10000	
W	182	159	1	He	103.942	103.942	1.93	597607	0.02	2500	
Tl	205	165	1	He	257.096	257.096	2.35	2336198	0.01	2000	
Pb	208	165	1	He	1010.897	1010.897	1.96	12046199	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1944259	1.98	1884762	103.16	60	120	
Sc	45	1	He	149680	1.56	134073	111.64	60	120	
Sc	45	2	NoGas	9203880	1.19	8481025	108.52	60	120	
Rh	103	1	He	934042	0.74	903580	103.37	60	120	
In	115	1	He	228682	1.63	224817	101.72	60	120	
Tb	159	1	He	1113536	1.32	1046002	106.46	60	120	
Ho	165	1	He	1112029	1.12	1057439	105.16	60	120	
Bi	209	1	He	727521	1.12	731380	99.47	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-B-1-A
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:30:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.262	15.262	1.40	531308	0.00	10000	
Be	9	45	2	NoGas	0.690	0.690	4.01	4916	0.01	2000	
B	11	45	2	NoGas	7.635	7.635	3.02	43222	0.02	300	
Na	23	45	1	He	3996.710	3996.710	2.44	1782390	0.22	500000	
Mg	24	45	1	He	24877.071	24877.071	2.27	6147442	0.40	500000	
Al	27	45	1	He	2.187	2.187	28.42	351	0.62	200000	
K	39	45	1	He	3544.214	3544.214	2.15	426234	0.83	500000	
Ca	44	45	1	He	69642.533	69642.533	1.43	479276	14.53	500000	
Ti	47	45	1	He	0.201	0.201	33.95	10	2.01	2500	
V	51	45	1	He	0.042	0.042	187.81	136	0.03	10000	
Cr	52	45	1	He	0.177	0.177	32.12	1153	0.02	10000	
Mn	55	45	1	He	68.212	68.212	1.73	74343	0.09	10000	
Fe	56	45	1	He	8.092	8.092	8.74	15888	0.05	200000	
Co	59	45	1	He	0.761	0.761	1.82	3401	0.02	5000	
Ni	60	45	1	He	4.242	4.242	3.69	4940	0.09	10000	
Cu	63	45	1	He	0.167	0.167	92.28	3264	0.01	10000	
Zn	66	45	1	He	2.025	2.025	5.44	990	0.20	10000	
As	75	103	1	He	0.510	0.510	13.51	141	0.36	10000	
Se	78	115	1	He	0.881	0.881	45.40	12	7.18	10000	
Sr	88	103	1	He	39.169	39.169	1.95	41519	0.09	10000	
Mo	95	103	1	He	0.242	0.242	10.22	333	0.07	2000	
Ag	107	103	1	He	0.016	0.016	27.50	87	0.02	300	
Cd	111	115	1	He	0.467	0.467	10.15	248	0.19	4000	
Sn	118	115	1	He	2.806	2.806	27.84	3123	0.09	2000	
Sb	123	115	1	He	0.268	0.268	18.98	346	0.08	200	
Ba	137	115	1	He	145.862	145.862	2.49	57440	0.25	10000	
W	182	159	1	He	0.535	0.535	13.47	4682	0.01	2500	
Tl	205	165	1	He	0.204	0.204	16.86	1937	0.01	2000	
Pb	208	165	1	He	0.141	0.141	26.89	2993	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108241	1.30	1884762	111.86	60	120	
Sc	45	1	He	151606	0.75	134073	113.08	60	120	
Sc	45	2	NoGas	9742773	1.33	8481025	114.88	60	120	
Rh	103	1	He	960102	0.40	903580	106.26	60	120	
In	115	1	He	236253	1.41	224817	105.09	60	120	
Tb	159	1	He	1136475	1.02	1046002	108.65	60	120	
Ho	165	1	He	1134001	0.72	1057439	107.24	60	120	
Bi	209	1	He	758539	0.58	731380	103.71	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-2-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:34:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.277	5.277	2.38	265277	0.00	10000	
Be	9	45	2	NoGas	0.611	0.611	3.69	4275	0.01	2000	
B	11	45	2	NoGas	5.320	5.320	1.63	32463	0.02	300	
Na	23	45	1	He	5048.632	5048.632	2.24	2228010	0.23	500000	
Mg	24	45	1	He	5395.092	5395.092	0.94	1320767	0.41	500000	
Al	27	45	1	He	22.476	22.476	1.77	2416	0.93	200000	
K	39	45	1	He	3791.009	3791.009	2.03	450736	0.84	500000	
Ca	44	45	1	He	9135.105	9135.105	1.24	62436	14.63	500000	
Ti	47	45	1	He	0.204	0.204	120.34	10	2.04	2500	
V	51	45	1	He	0.023	0.023	722.49	99	0.02	10000	
Cr	52	45	1	He	0.177	0.177	24.79	1140	0.02	10000	
Mn	55	45	1	He	1373.106	1373.106	3.04	1478840	0.09	10000	
Fe	56	45	1	He	1286.645	1286.645	1.21	2147312	0.06	200000	
Co	59	45	1	He	4.126	4.126	1.90	16737	0.02	5000	
Ni	60	45	1	He	6.257	6.257	2.08	7139	0.09	10000	
Cu	63	45	1	He	6.505	6.505	2.35	23173	0.03	10000	
Zn	66	45	1	He	31.813	31.813	2.91	12969	0.25	10000	
As	75	103	1	He	0.570	0.570	11.32	157	0.36	10000	
Se	78	115	1	He	0.438	0.438	30.43	8	5.62	10000	
Sr	88	103	1	He	40.311	40.311	1.57	43244	0.09	10000	
Mo	95	103	1	He	0.077	0.077	5.19	117	0.07	2000	
Ag	107	103	1	He	0.101	0.101	8.15	509	0.02	300	
Cd	111	115	1	He	0.386	0.386	7.79	210	0.18	4000	
Sn	118	115	1	He	0.776	0.776	24.60	1119	0.07	2000	
Sb	123	115	1	He	0.101	0.101	19.18	162	0.06	200	
Ba	137	115	1	He	119.367	119.367	1.05	48218	0.25	10000	
W	182	159	1	He	0.085	0.085	63.40	2026	0.00	2500	
Tl	205	165	1	He	0.109	0.109	7.41	1049	0.01	2000	
Pb	208	165	1	He	0.339	0.339	4.89	5403	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2128102	1.24	1884762	112.91	60	120	
Sc	45	1	He	150116	0.91	134073	111.97	60	120	
Sc	45	2	NoGas	9535583	1.11	8481025	112.43	60	120	
Rh	103	1	He	971650	0.44	903580	107.53	60	120	
In	115	1	He	242294	0.91	224817	107.77	60	120	
Tb	159	1	He	1125516	0.13	1046002	107.60	60	120	
Ho	165	1	He	1133486	0.16	1057439	107.19	60	120	
Bi	209	1	He	774837	0.65	731380	105.94	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	028_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:38:41-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.845	1.459	1358703	1.76	50	101.7	89.5	110.5	
Be	9	45	2	NoGas	52.126	1.175	334050	0.77	50	104.3	89.5	110.5	
B	11	45	2	NoGas	52.013	1.063	219471	1.14	50	104.0	89.5	110.5	
Na	23	45	1	He	25039.215	1.998	10962800	0.61	25000	100.2	89.5	110.5	
Mg	24	45	1	He	24774.786	2.017	6025082	0.60	25000	99.1	89.5	110.5	
Al	27	45	1	He	249.171	1.953	25374	1.87	250	99.7	89.5	110.5	
K	39	45	1	He	25060.418	2.475	2905800	0.14	25000	100.2	89.5	110.5	
Ca	44	45	1	He	24863.429	1.989	168528	0.77	25000	99.5	89.5	110.5	
Ti	47	45	1	He	48.944	5.559	2398	3.20	50	97.9	89.5	110.5	
V	51	45	1	He	49.816	1.474	87151	1.15	50	99.6	89.5	110.5	
Cr	52	45	1	He	49.775	2.719	108286	0.74	50	99.5	89.5	110.5	
Mn	55	45	1	He	244.524	2.736	261849	0.46	250	97.8	89.5	110.5	
Fe	56	45	1	He	12369.091	2.432	20495434	0.33	12500	99.0	89.5	110.5	
Co	59	45	1	He	50.042	1.939	197918	0.70	50	100.1	89.5	110.5	
Ni	60	45	1	He	49.884	2.030	55458	0.95	50	99.8	89.5	110.5	
Cu	63	45	1	He	49.823	2.579	158494	1.31	50	99.6	89.5	110.5	
Zn	66	45	1	He	48.410	1.995	19533	2.11	50	96.8	89.5	110.5	
As	75	103	1	He	48.731	3.722	11502	1.38	50	97.5	89.5	110.5	
Se	78	115	1	He	50.396	12.588	531	9.29	50	100.8	89.5	110.5	
Sr	88	103	1	He	49.112	1.596	51235	1.10	50	98.2	89.5	110.5	
Mo	95	103	1	He	51.360	2.947	66688	0.92	50	102.7	89.5	110.5	
Ag	107	103	1	He	49.465	1.952	237485	0.98	50	98.9	89.5	110.5	
Cd	111	115	1	He	50.440	2.989	26419	0.56	50	100.9	89.5	110.5	
Sn	118	115	1	He	49.416	4.006	49335	1.11	50	98.8	89.5	110.5	
Sb	123	115	1	He	49.796	3.486	55687	0.10	50	99.6	89.5	110.5	
Ba	137	115	1	He	48.477	3.312	18991	1.33	50	97.0	89.5	110.5	
W	182	159	1	He	51.178	3.274	295223	2.54	50	102.4	89.5	110.5	
Tl	205	165	1	He	48.356	2.669	442562	1.35	50	96.7	89.5	110.5	
Pb	208	165	1	He	48.562	2.350	584019	0.97	50	97.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2015843	0.70	1884762	106.95	60	120	
Sc	45	1	He	149238	2.63	134073	111.31	60	120	
Sc	45	2	NoGas	9073243	1.05	8481025	106.98	60	120	
Rh	103	1	He	945332	2.72	903580	104.62	60	120	
In	115	1	He	235093	3.60	224817	104.57	60	120	
Tb	159	1	He	1114621	2.79	1046002	106.56	60	120	
Ho	165	1	He	1120317	3.00	1057439	105.95	60	120	
Bi	209	1	He	736651	1.54	731380	100.72	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	029_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:42:50-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.010	403.6	129520	0.9	8	
Be	9	45	2	NoGas	0.267	6.5	1937	5.5	1	
B	11	45	2	NoGas	2.122	11.5	18688	4.9	20	
Na	23	45	1	He	9.960	12.5	9325	5.7	1000	
Mg	24	45	1	He	1.632	55.1	1096	19.9	1000	
Al	27	45	1	He	0.301	49.2	152	9.9	50	
K	39	45	1	He	3.045	75.7	10103	2.4	1000	
Ca	44	45	1	He	8.914	41.9	270	9.1	1000	
Ti	47	45	1	He	0.092	173.2	4	173.2	20	
V	51	45	1	He	-0.073	-233.8	-66	-443.2	2	
Cr	52	45	1	He	-0.016	-10.8	709	0.7	2	
Mn	55	45	1	He	0.041	88.2	191	20.2	2	
Fe	56	45	1	He	2.803	23.7	6783	16.3	50	
Co	59	45	1	He	-0.006	-190.4	316	14.8	1	
Ni	60	45	1	He	-0.023	-54.0	132	10.5	2	
Cu	63	45	1	He	-0.197	-19.7	2048	5.9	2	
Zn	66	45	1	He	0.107	16.6	204	3.4	20	
As	75	103	1	He	0.065	39.7	35	17.3	2	
Se	78	115	1	He	0.322	81.1	6	42.8	2	
Sr	88	103	1	He	0.005	320.5	48	38.4	10	
Mo	95	103	1	He	0.074	18.5	113	15.6	2	
Ag	107	103	1	He	0.009	22.4	54	18.7	0.2	
Cd	111	115	1	He	0.075	17.4	42	17.0	0.2	
Sn	118	115	1	He	0.351	21.7	678	11.8	10	
Sb	123	115	1	He	0.054	33.3	107	19.5	2	
Ba	137	115	1	He	0.027	82.2	17	52.9	5	
W	182	159	1	He	0.215	22.3	2719	9.8	10	
Tl	205	165	1	He	0.053	32.0	523	29.6	0.5	
Pb	208	165	1	He	0.020	29.1	1497	4.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2073432	1.25	1884762	110.01	60	120	
Sc	45	1	He	147324	0.22	134073	109.88	60	120	
Sc	45	2	NoGas	9434326	0.59	8481025	111.24	60	120	
Rh	103	1	He	977875	0.85	903580	108.22	60	120	
In	115	1	He	240385	0.46	224817	106.92	60	120	
Tb	159	1	He	1102783	0.32	1046002	105.43	60	120	
Ho	165	1	He	1112090	0.16	1057439	105.17	60	120	
Bi	209	1	He	760320	0.48	731380	103.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-3-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:47:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.577	25.577	1.40	803499	0.00	10000	
Be	9	45	2	NoGas	0.186	0.186	12.38	1452	0.01	2000	
B	11	45	2	NoGas	8.498	8.498	3.84	47142	0.02	300	
Na	23	45	1	He	5686.827	5686.827	1.95	2482650	0.23	500000	
Mg	24	45	1	He	49832.647	49832.647	1.44	12065006	0.41	500000	
Al	27	45	1	He	1.017	1.017	37.72	226	0.45	200000	
K	39	45	1	He	3934.613	3934.613	1.77	462479	0.85	500000	
Ca	44	45	1	He	138469.873	138469.873	1.80	933437	14.83	500000	
Ti	47	45	1	He	0.159	0.159	49.48	8	2.05	2500	
V	51	45	1	He	0.129	0.129	28.86	285	0.05	10000	
Cr	52	45	1	He	0.105	0.105	63.13	974	0.01	10000	
Mn	55	45	1	He	417.939	417.939	1.47	445494	0.09	10000	
Fe	56	45	1	He	1638.068	1638.068	1.89	2704279	0.06	200000	
Co	59	45	1	He	5.677	5.677	0.24	22657	0.03	5000	
Ni	60	45	1	He	15.170	15.170	3.00	16905	0.09	10000	
Cu	63	45	1	He	-0.197	-0.197	-33.41	2062	-0.01	10000	
Zn	66	45	1	He	5.598	5.598	5.10	2392	0.23	10000	
As	75	103	1	He	1.574	1.574	4.44	385	0.41	10000	
Se	78	115	1	He	0.260	0.260	92.26	6	4.61	10000	
Sr	88	103	1	He	84.835	84.835	0.92	87396	0.10	10000	
Mo	95	103	1	He	0.112	0.112	4.84	158	0.07	2000	
Ag	107	103	1	He	0.009	0.009	25.43	52	0.02	300	
Cd	111	115	1	He	0.043	0.043	32.98	24	0.18	4000	
Sn	118	115	1	He	0.156	0.156	37.12	467	0.03	2000	
Sb	123	115	1	He	0.043	0.043	57.49	92	0.05	200	
Ba	137	115	1	He	591.653	591.653	0.85	230813	0.26	10000	
W	182	159	1	He	0.054	0.054	61.95	1808	0.00	2500	
Tl	205	165	1	He	0.062	0.062	8.10	610	0.01	2000	
Pb	208	165	1	He	0.009	0.009	124.69	1361	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2095614	0.51	1884762	111.19	60	120	
Sc	45	1	He	148520	1.28	134073	110.78	60	120	
Sc	45	2	NoGas	9782521	0.62	8481025	115.35	60	120	
Rh	103	1	He	933518	1.07	903580	103.31	60	120	
In	115	1	He	234009	1.10	224817	104.09	60	120	
Tb	159	1	He	1102927	0.93	1046002	105.44	60	120	
Ho	165	1	He	1112518	0.91	1057439	105.21	60	120	
Bi	209	1	He	729489	0.49	731380	99.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-5-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:51:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.838	15.838	2.75	537401	0.00	10000	
Be	9	45	2	NoGas	0.194	0.194	6.80	1474	0.01	2000	
B	11	45	2	NoGas	7.580	7.580	6.24	42260	0.02	300	
Na	23	45	1	He	7121.215	7121.215	1.90	3157792	0.23	500000	
Mg	24	45	1	He	37410.256	37410.256	1.74	9203755	0.41	500000	
Al	27	45	1	He	1.146	1.146	31.35	242	0.47	200000	
K	39	45	1	He	2880.235	2880.235	1.44	346772	0.83	500000	
Ca	44	45	1	He	107118.995	107118.995	2.30	733780	14.60	500000	
Ti	47	45	1	He	0.133	0.133	86.61	7	2.00	2500	
V	51	45	1	He	-0.139	-0.139	-101.06	-185	0.07	10000	
Cr	52	45	1	He	0.002	0.002	1603.65	766	0.00	10000	
Mn	55	45	1	He	969.881	969.881	2.18	1050336	0.09	10000	
Fe	56	45	1	He	326.131	326.131	2.33	548909	0.06	200000	
Co	59	45	1	He	4.647	4.647	2.12	18912	0.02	5000	
Ni	60	45	1	He	7.000	7.000	5.64	8010	0.09	10000	
Cu	63	45	1	He	0.023	0.023	58.14	2794	0.00	10000	
Zn	66	45	1	He	11.060	11.060	5.02	4643	0.24	10000	
As	75	103	1	He	0.562	0.562	2.15	151	0.37	10000	
Se	78	115	1	He	0.303	0.303	48.83	6	4.94	10000	
Sr	88	103	1	He	83.994	83.994	0.87	87584	0.10	10000	
Mo	95	103	1	He	0.192	0.192	11.48	263	0.07	2000	
Ag	107	103	1	He	0.006	0.006	56.67	36	0.02	300	
Cd	111	115	1	He	0.050	0.050	10.77	28	0.18	4000	
Sn	118	115	1	He	0.042	0.042	21.25	356	0.01	2000	
Sb	123	115	1	He	0.023	0.023	54.17	70	0.03	200	
Ba	137	115	1	He	309.758	309.758	1.34	121552	0.25	10000	
W	182	159	1	He	0.700	0.700	2.35	5538	0.01	2500	
Tl	205	165	1	He	0.061	0.061	15.42	598	0.01	2000	
Pb	208	165	1	He	-0.008	-0.008	-172.99	1162	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2072325	0.70	1884762	109.95	60	120	
Sc	45	1	He	150951	1.63	134073	112.59	60	120	
Sc	45	2	NoGas	9585652	2.18	8481025	113.02	60	120	
Rh	103	1	He	944900	0.62	903580	104.57	60	120	
In	115	1	He	235375	0.75	224817	104.70	60	120	
Tb	159	1	He	1114952	1.52	1046002	106.59	60	120	
Ho	165	1	He	1115386	1.63	1057439	105.48	60	120	
Bi	209	1	He	735836	1.11	731380	100.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-b-6-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:55:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.276	4.276	2.89	232227	0.00	10000	
Be	9	45	2	NoGas	0.184	0.184	5.23	1356	0.01	2000	
B	11	45	2	NoGas	8.846	8.846	3.79	45950	0.02	300	
Na	23	45	1	He	2440.781	2440.781	2.05	1034730	0.24	500000	
Mg	24	45	1	He	17926.377	17926.377	2.47	4203156	0.43	500000	
Al	27	45	1	He	28.637	28.637	2.49	2918	0.98	200000	
K	39	45	1	He	2822.826	2822.826	1.86	324061	0.87	500000	
Ca	44	45	1	He	43090.503	43090.503	2.89	281426	15.31	500000	
Ti	47	45	1	He	0.610	0.610	16.16	29	2.11	2500	
V	51	45	1	He	-0.026	-0.026	-1180.43	15	-0.17	10000	
Cr	52	45	1	He	0.245	0.245	10.54	1235	0.02	10000	
Mn	55	45	1	He	11595.295	11595.295	3.03	11964704	0.10	10000	>LDR
Fe	56	45	1	He	4251.125	4251.125	2.35	6793250	0.06	200000	
Co	59	45	1	He	35.820	35.820	2.92	136665	0.03	5000	
Ni	60	45	1	He	7.628	7.628	2.34	8309	0.09	10000	
Cu	63	45	1	He	0.612	0.612	4.48	4437	0.01	10000	
Zn	66	45	1	He	8.517	8.517	7.06	3442	0.25	10000	
As	75	103	1	He	0.358	0.358	8.28	101	0.35	10000	
Se	78	115	1	He	0.394	0.394	104.75	7	5.66	10000	
Sr	88	103	1	He	128.561	128.561	1.45	131719	0.10	10000	
Mo	95	103	1	He	0.170	0.170	2.94	230	0.07	2000	
Ag	107	103	1	He	0.048	0.048	7.08	232	0.02	300	
Cd	111	115	1	He	0.205	0.205	19.16	107	0.19	4000	
Sn	118	115	1	He	0.045	0.045	420.49	352	0.01	2000	
Sb	123	115	1	He	0.037	0.037	90.57	84	0.04	200	
Ba	137	115	1	He	125.031	125.031	0.87	48241	0.26	10000	
W	182	159	1	He	0.010	0.010	448.96	1552	0.00	2500	
Tl	205	165	1	He	0.043	0.043	9.90	430	0.01	2000	
Pb	208	165	1	He	0.021	0.021	53.96	1490	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2081719	0.70	1884762	110.45	60	120	
Sc	45	1	He	143877	2.14	134073	107.31	60	120	
Sc	45	2	NoGas	9237685	1.20	8481025	108.92	60	120	
Rh	103	1	He	928588	0.55	903580	102.77	60	120	
In	115	1	He	231419	0.91	224817	102.94	60	120	
Tb	159	1	He	1100999	0.47	1046002	105.26	60	120	
Ho	165	1	He	1101363	0.37	1057439	104.15	60	120	
Bi	209	1	He	749493	0.75	731380	102.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-7-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T13:59:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.953	11.953	0.66	441807	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	9.14	1085	0.01	2000	
B	11	45	2	NoGas	10.536	10.536	4.04	55372	0.02	300	
Na	23	45	1	He	4078.190	4078.190	1.22	1774499	0.23	500000	
Mg	24	45	1	He	19241.407	19241.407	1.35	4640730	0.41	500000	
Al	27	45	1	He	16.176	16.176	4.26	1748	0.93	200000	
K	39	45	1	He	3210.291	3210.291	0.08	377668	0.85	500000	
Ca	44	45	1	He	68067.802	68067.802	0.23	457101	14.89	500000	
Ti	47	45	1	He	0.595	0.595	29.02	29	2.06	2500	
V	51	45	1	He	0.092	0.092	134.98	217	0.04	10000	
Cr	52	45	1	He	0.613	0.613	11.22	2059	0.03	10000	
Mn	55	45	1	He	3.536	3.536	7.43	3898	0.09	10000	
Fe	56	45	1	He	29.920	29.920	1.38	51358	0.06	200000	
Co	59	45	1	He	-0.007	-0.007	-13.42	314	0.00	5000	
Ni	60	45	1	He	0.127	0.127	24.39	298	0.04	10000	
Cu	63	45	1	He	-0.011	-0.011	-377.65	2631	0.00	10000	
Zn	66	45	1	He	1.242	1.242	6.35	656	0.19	10000	
As	75	103	1	He	0.108	0.108	33.52	43	0.25	10000	
Se	78	115	1	He	0.081	0.081	266.24	4	2.12	10000	
Sr	88	103	1	He	35.581	35.581	1.34	36722	0.10	10000	
Mo	95	103	1	He	0.250	0.250	3.88	334	0.07	2000	
Ag	107	103	1	He	0.001	0.001	107.46	14	0.01	300	
Cd	111	115	1	He	0.029	0.029	9.48	17	0.17	4000	
Sn	118	115	1	He	0.029	0.029	64.08	344	0.01	2000	
Sb	123	115	1	He	0.016	0.016	137.62	62	0.03	200	
Ba	137	115	1	He	181.846	181.846	0.64	71680	0.25	10000	
W	182	159	1	He	0.008	0.008	314.16	1537	0.00	2500	
Tl	205	165	1	He	0.006	0.006	18.40	98	0.01	2000	
Pb	208	165	1	He	0.026	0.026	7.42	1562	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2088060	1.28	1884762	110.79	60	120	
Sc	45	1	He	147927	1.64	134073	110.33	60	120	
Sc	45	2	NoGas	9670714	0.73	8481025	114.03	60	120	
Rh	103	1	He	934628	1.27	903580	103.44	60	120	
In	115	1	He	236424	0.86	224817	105.16	60	120	
Tb	159	1	He	1098514	0.46	1046002	105.02	60	120	
Ho	165	1	He	1106376	0.25	1057439	104.63	60	120	
Bi	209	1	He	748550	0.76	731380	102.35	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-8-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:03:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.398	9.398	1.51	372551	0.00	10000	
Be	9	45	2	NoGas	0.100	0.100	6.85	841	0.01	2000	
B	11	45	2	NoGas	4.309	4.309	7.98	28330	0.02	300	
Na	23	45	1	He	509.326	509.326	1.12	227759	0.22	500000	
Mg	24	45	1	He	18244.667	18244.667	0.93	4433083	0.41	500000	
Al	27	45	1	He	14.925	14.925	4.97	1635	0.91	200000	
K	39	45	1	He	1041.278	1041.278	1.93	130085	0.80	500000	
Ca	44	45	1	He	19958.210	19958.210	0.72	135197	14.76	500000	
Ti	47	45	1	He	0.543	0.543	49.43	27	2.04	2500	
V	51	45	1	He	-0.105	-0.105	-171.15	-124	0.08	10000	
Cr	52	45	1	He	1.711	1.711	3.61	4444	0.04	10000	
Mn	55	45	1	He	1.135	1.135	8.21	1363	0.08	10000	
Fe	56	45	1	He	15.316	15.316	0.92	27573	0.06	200000	
Co	59	45	1	He	-0.006	-0.006	-29.06	320	0.00	5000	
Ni	60	45	1	He	0.133	0.133	9.03	307	0.04	10000	
Cu	63	45	1	He	-0.137	-0.137	-27.07	2258	-0.01	10000	
Zn	66	45	1	He	1.981	1.981	9.10	956	0.21	10000	
As	75	103	1	He	0.105	0.105	12.16	44	0.24	10000	
Se	78	115	1	He	0.124	0.124	95.71	4	2.87	10000	
Sr	88	103	1	He	24.635	24.635	1.84	26180	0.09	10000	
Mo	95	103	1	He	0.210	0.210	2.50	292	0.07	2000	
Ag	107	103	1	He	0.005	0.005	33.81	34	0.02	300	
Cd	111	115	1	He	0.033	0.033	21.30	20	0.17	4000	
Sn	118	115	1	He	0.023	0.023	573.31	341	0.01	2000	
Sb	123	115	1	He	0.067	0.067	28.14	121	0.06	200	
Ba	137	115	1	He	776.232	776.232	0.58	308643	0.25	10000	
W	182	159	1	He	0.179	0.179	20.89	2567	0.01	2500	
Tl	205	165	1	He	0.005	0.005	24.31	90	0.01	2000	
Pb	208	165	1	He	0.045	0.045	22.53	1819	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089912	1.76	1884762	110.88	60	120	
Sc	45	1	He	149047	0.69	134073	111.17	60	120	
Sc	45	2	NoGas	9590292	0.71	8481025	113.08	60	120	
Rh	103	1	He	962093	1.32	903580	106.48	60	120	
In	115	1	He	238510	0.92	224817	106.09	60	120	
Tb	159	1	He	1125922	0.29	1046002	107.64	60	120	
Ho	165	1	He	1124891	0.16	1057439	106.38	60	120	
Bi	209	1	He	762414	0.22	731380	104.24	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-9-a
Data File Name	035SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:08:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.256	6.256	1.04	294290	0.00	10000	
Be	9	45	2	NoGas	0.105	0.105	15.46	882	0.01	2000	
B	11	45	2	NoGas	24.614	24.614	1.80	115944	0.02	300	
Na	23	45	1	He	2774.794	2774.794	3.86	1233192	0.23	500000	
Mg	24	45	1	He	27735.171	27735.171	1.28	6821320	0.41	500000	
Al	27	45	1	He	17.667	17.667	7.10	1936	0.91	200000	
K	39	45	1	He	1762.311	1762.311	1.06	215954	0.82	500000	
Ca	44	45	1	He	64875.849	64875.849	1.11	444348	14.60	500000	
Ti	47	45	1	He	0.224	0.224	45.98	11	2.02	2500	
V	51	45	1	He	0.028	0.028	409.84	110	0.03	10000	
Cr	52	45	1	He	0.930	0.930	5.52	2792	0.03	10000	
Mn	55	45	1	He	2.004	2.004	3.01	2320	0.09	10000	
Fe	56	45	1	He	33.560	33.560	1.92	58482	0.06	200000	
Co	59	45	1	He	0.035	0.035	61.78	488	0.01	5000	
Ni	60	45	1	He	0.874	0.874	8.35	1141	0.08	10000	
Cu	63	45	1	He	0.111	0.111	36.48	3070	0.00	10000	
Zn	66	45	1	He	6.425	6.425	6.34	2765	0.23	10000	
As	75	103	1	He	0.246	0.246	19.53	77	0.32	10000	
Se	78	115	1	He	0.798	0.798	39.04	11	6.98	10000	
Sr	88	103	1	He	61.656	61.656	1.95	64775	0.10	10000	
Mo	95	103	1	He	1.735	1.735	2.66	2284	0.08	2000	
Ag	107	103	1	He	0.006	0.006	35.04	39	0.02	300	
Cd	111	115	1	He	0.016	0.016	23.93	10	0.16	4000	
Sn	118	115	1	He	0.046	0.046	138.43	363	0.01	2000	
Sb	123	115	1	He	0.032	0.032	18.54	81	0.04	200	
Ba	137	115	1	He	165.079	165.079	0.72	65402	0.25	10000	
W	182	159	1	He	0.361	0.361	6.86	3604	0.01	2500	
Tl	205	165	1	He	0.030	0.030	14.68	314	0.01	2000	
Pb	208	165	1	He	0.045	0.045	16.56	1786	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089276	2.06	1884762	110.85	60	120	
Sc	45	1	He	150872	0.51	134073	112.53	60	120	
Sc	45	2	NoGas	9667645	0.39	8481025	113.99	60	120	
Rh	103	1	He	951791	0.73	903580	105.34	60	120	
In	115	1	He	237633	0.72	224817	105.70	60	120	
Tb	159	1	He	1118804	0.45	1046002	106.96	60	120	
Ho	165	1	He	1107563	0.11	1057439	104.74	60	120	
Bi	209	1	He	751118	0.45	731380	102.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-10-a
Data File Name	036SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:12:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.187	5.187	2.42	274245	0.00	10000	
Be	9	45	2	NoGas	0.082	0.082	6.17	748	0.01	2000	
B	11	45	2	NoGas	9.070	9.070	2.41	50450	0.02	300	
Na	23	45	1	He	568.284	568.284	1.06	260905	0.22	500000	
Mg	24	45	1	He	24400.748	24400.748	0.73	6100740	0.40	500000	
Al	27	45	1	He	5.724	5.724	4.80	723	0.79	200000	
K	39	45	1	He	1214.358	1214.358	0.75	154435	0.79	500000	
Ca	44	45	1	He	25694.174	25694.174	0.63	179037	14.35	500000	
Ti	47	45	1	He	0.132	0.132	50.40	7	1.99	2500	
V	51	45	1	He	0.018	0.018	1320.53	93	0.02	10000	
Cr	52	45	1	He	0.064	0.064	19.99	916	0.01	10000	
Mn	55	45	1	He	1.396	1.396	6.09	1690	0.08	10000	
Fe	56	45	1	He	18.070	18.070	2.53	33068	0.05	200000	
Co	59	45	1	He	0.017	0.017	61.53	423	0.00	5000	
Ni	60	45	1	He	0.075	0.075	34.07	250	0.03	10000	
Cu	63	45	1	He	-0.321	-0.321	-9.00	1732	-0.02	10000	
Zn	66	45	1	He	3.807	3.807	10.45	1735	0.22	10000	
As	75	103	1	He	0.292	0.292	3.64	90	0.32	10000	
Se	78	115	1	He	0.189	0.189	73.57	5	3.69	10000	
Sr	88	103	1	He	42.019	42.019	0.78	45133	0.09	10000	
Mo	95	103	1	He	2.332	2.332	1.14	3133	0.07	2000	
Ag	107	103	1	He	0.001	0.001	51.94	12	0.01	300	
Cd	111	115	1	He	0.019	0.019	53.44	12	0.16	4000	
Sn	118	115	1	He	0.028	0.028	314.51	356	0.01	2000	
Sb	123	115	1	He	0.022	0.022	66.56	71	0.03	200	
Ba	137	115	1	He	110.006	110.006	1.06	44860	0.25	10000	
W	182	159	1	He	0.002	0.002	1261.86	1545	0.00	2500	
Tl	205	165	1	He	0.003	0.003	57.97	76	0.00	2000	
Pb	208	165	1	He	-0.016	-0.016	-33.76	1098	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2147237	1.56	1884762	113.93	60	120	
Sc	45	1	He	153371	0.44	134073	114.39	60	120	
Sc	45	2	NoGas	9944246	1.12	8481025	117.25	60	120	
Rh	103	1	He	972957	0.92	903580	107.68	60	120	
In	115	1	He	244588	0.26	224817	108.79	60	120	
Tb	159	1	He	1127235	0.32	1046002	107.77	60	120	
Ho	165	1	He	1141374	0.57	1057439	107.94	60	120	
Bi	209	1	He	769929	0.32	731380	105.27	60	120	

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Sample Report

Sample Table

Sample Name	240-64160-a-11-a
Data File Name	037SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:16:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.033	10.033	2.07	395240	0.00	10000	
Be	9	45	2	NoGas	0.100	0.100	10.72	856	0.01	2000	
B	11	45	2	NoGas	34.545	34.545	1.03	160014	0.02	300	
Na	23	45	1	He	4836.192	4836.192	0.25	2144218	0.23	500000	
Mg	24	45	1	He	24709.015	24709.015	0.80	6073012	0.41	500000	
Al	27	45	1	He	361.261	361.261	2.53	37115	0.97	200000	
K	39	45	1	He	2357.240	2357.240	1.08	285291	0.83	500000	
Ca	44	45	1	He	71778.619	71778.619	1.34	491269	14.61	500000	
Ti	47	45	1	He	7.918	7.918	3.98	392	2.02	2500	
V	51	45	1	He	1.541	1.541	12.34	2780	0.06	10000	
Cr	52	45	1	He	1.078	1.078	4.61	3113	0.03	10000	
Mn	55	45	1	He	33.474	33.474	1.89	36358	0.09	10000	
Fe	56	45	1	He	1446.722	1446.722	2.56	2424831	0.06	200000	
Co	59	45	1	He	0.163	0.163	17.35	998	0.02	5000	
Ni	60	45	1	He	0.254	0.254	8.08	446	0.06	10000	
Cu	63	45	1	He	0.069	0.069	31.57	2935	0.00	10000	
Zn	66	45	1	He	2.942	2.942	11.07	1357	0.22	10000	
As	75	103	1	He	0.491	0.491	6.63	136	0.36	10000	
Se	78	115	1	He	0.524	0.524	18.52	9	6.07	10000	
Sr	88	103	1	He	63.962	63.962	1.88	67782	0.09	10000	
Mo	95	103	1	He	0.467	0.467	22.38	630	0.07	2000	
Ag	107	103	1	He	0.001	0.001	180.11	11	0.01	300	
Cd	111	115	1	He	0.026	0.026	23.21	16	0.17	4000	
Sn	118	115	1	He	0.038	0.038	87.40	359	0.01	2000	
Sb	123	115	1	He	-0.001	-0.001	-2375.47	44	0.00	200	
Ba	137	115	1	He	183.678	183.678	0.63	73472	0.25	10000	
W	182	159	1	He	0.026	0.026	72.00	1682	0.00	2500	
Tl	205	165	1	He	0.018	0.018	23.39	208	0.01	2000	
Pb	208	165	1	He	0.369	0.369	5.34	5765	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2141030	1.00	1884762	113.60	60	120	
Sc	45	1	He	150782	1.47	134073	112.46	60	120	
Sc	45	2	NoGas	9748711	1.13	8481025	114.95	60	120	
Rh	103	1	He	960193	0.21	903580	106.27	60	120	
In	115	1	He	239924	0.06	224817	106.72	60	120	
Tb	159	1	He	1126525	0.32	1046002	107.70	60	120	
Ho	165	1	He	1134456	0.93	1057439	107.28	60	120	
Bi	209	1	He	762082	0.20	731380	104.20	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	038_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:20:31-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.178	0.516	1399147	0.66	50	102.4	89.5	110.5	
Be	9	45	2	NoGas	51.077	1.349	335111	1.55	50	102.2	89.5	110.5	
B	11	45	2	NoGas	51.330	0.572	221846	0.36	50	102.7	89.5	110.5	
Na	23	45	1	He	26012.480	2.008	11104893	0.49	25000	104.0	89.5	110.5	
Mg	24	45	1	He	25889.886	2.056	6139495	1.11	25000	103.6	89.5	110.5	
Al	27	45	1	He	258.179	1.688	25630	0.53	250	103.3	89.5	110.5	
K	39	45	1	He	25555.710	1.845	2889632	1.32	25000	102.2	89.5	110.5	
Ca	44	45	1	He	25471.342	1.541	168349	0.67	25000	101.9	89.5	110.5	
Ti	47	45	1	He	49.383	4.408	2361	5.07	50	98.8	89.5	110.5	
V	51	45	1	He	50.718	2.247	86525	2.71	50	101.4	89.5	110.5	
Cr	52	45	1	He	51.079	2.599	108338	0.70	50	102.2	89.5	110.5	
Mn	55	45	1	He	253.869	1.199	265133	0.82	250	101.5	89.5	110.5	
Fe	56	45	1	He	12775.109	1.516	20643252	0.43	12500	102.2	89.5	110.5	
Co	59	45	1	He	51.733	1.497	199505	0.85	50	103.5	89.5	110.5	
Ni	60	45	1	He	52.180	1.214	56566	1.47	50	104.4	89.5	110.5	
Cu	63	45	1	He	51.686	1.788	160235	0.57	50	103.4	89.5	110.5	
Zn	66	45	1	He	49.042	4.463	19285	2.67	50	98.1	89.5	110.5	
As	75	103	1	He	49.579	0.954	11569	0.77	50	99.2	89.5	110.5	
Se	78	115	1	He	51.331	8.853	529	8.57	50	102.7	89.5	110.5	
Sr	88	103	1	He	49.530	2.900	51064	2.72	50	99.1	89.5	110.5	
Mo	95	103	1	He	51.871	0.659	66577	0.73	50	103.7	89.5	110.5	
Ag	107	103	1	He	50.547	1.028	239846	0.91	50	101.1	89.5	110.5	
Cd	111	115	1	He	51.701	1.141	26459	0.46	50	103.4	89.5	110.5	
Sn	118	115	1	He	50.642	1.346	49402	0.88	50	101.3	89.5	110.5	
Sb	123	115	1	He	51.073	1.641	55809	0.95	50	102.1	89.5	110.5	
Ba	137	115	1	He	51.256	2.097	19618	1.44	50	102.5	89.5	110.5	
W	182	159	1	He	52.525	2.119	299775	2.20	50	105.0	89.5	110.5	
Tl	205	165	1	He	49.585	0.318	450626	0.59	50	99.2	89.5	110.5	
Pb	208	165	1	He	49.581	0.595	592034	0.41	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2063241	0.74	1884762	109.47	60	120	
Sc	45	1	He	145504	1.91	134073	108.53	60	120	
Sc	45	2	NoGas	9288106	0.20	8481025	109.52	60	120	
Rh	103	1	He	933979	0.18	903580	103.36	60	120	
In	115	1	He	229550	0.82	224817	102.11	60	120	
Tb	159	1	He	1102504	0.57	1046002	105.40	60	120	
Ho	165	1	He	1111909	0.31	1057439	105.15	60	120	
Bi	209	1	He	734450	0.41	731380	100.42	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	039_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:24:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.004	-116.9	126737	0.3	8	
Be	9	45	2	NoGas	0.120	17.6	945	14.7	1	
B	11	45	2	NoGas	1.873	2.6	17312	0.8	20	
Na	23	45	1	He	22.471	7.0	14547	4.3	1000	
Mg	24	45	1	He	11.438	11.3	3408	9.1	1000	
Al	27	45	1	He	-0.185	-62.7	102	10.5	50	
K	39	45	1	He	17.109	44.9	11560	6.9	1000	
Ca	44	45	1	He	10.540	69.8	277	17.3	1000	
Ti	47	45	1	He	0.046	86.6	2	86.6	20	
V	51	45	1	He	0.001	23169.9	59	524.0	2	
Cr	52	45	1	He	0.041	112.5	819	11.1	2	
Mn	55	45	1	He	0.170	12.9	323	6.3	2	
Fe	56	45	1	He	7.288	8.7	13943	7.3	50	
Co	59	45	1	He	-0.024	-9.3	244	4.4	1	
Ni	60	45	1	He	0.007	237.9	163	10.6	2	
Cu	63	45	1	He	-0.321	-15.9	1642	8.7	2	
Zn	66	45	1	He	0.053	210.9	181	25.1	20	
As	75	103	1	He	0.064	35.7	34	15.4	2	
Se	78	115	1	He	0.053	87.4	3	14.2	2	
Sr	88	103	1	He	0.029	36.2	71	15.1	10	
Mo	95	103	1	He	0.132	26.7	188	24.5	2	
Ag	107	103	1	He	0.025	10.6	129	10.5	0.2	
Cd	111	115	1	He	0.035	35.2	20	31.1	0.2	
Sn	118	115	1	He	0.292	45.7	600	22.5	10	
Sb	123	115	1	He	0.077	31.4	129	21.1	2	
Ba	137	115	1	He	0.037	164.6	20	116.7	5	
W	182	159	1	He	0.243	7.3	2826	3.5	10	
Tl	205	165	1	He	0.061	15.5	591	14.2	0.5	
Pb	208	165	1	He	0.014	60.6	1403	6.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2065906	2.47	1884762	109.61	60	120	
Sc	45	1	He	145495	0.92	134073	108.52	60	120	
Sc	45	2	NoGas	9257013	0.36	8481025	109.15	60	120	
Rh	103	1	He	954438	0.68	903580	105.63	60	120	
In	115	1	He	233343	1.49	224817	103.79	60	120	
Tb	159	1	He	1082199	0.08	1046002	103.46	60	120	
Ho	165	1	He	1097771	0.59	1057439	103.81	60	120	
Bi	209	1	He	745665	0.48	731380	101.95	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	040CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:28:53-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.361	7.361	1.037	306553	0.42	8	92.0	69.5	130.5	
Be	9	2	NoGas	1.072	1.072	9.326	7102	8.55	1	107.2	69.5	130.5	
B	11	2	NoGas	20.099	20.099	1.829	91644	2.21	20	100.5	69.5	130.5	
Na	23	1	He	1014.126	1014.126	1.700	430163	0.62	1000	101.4	69.5	130.5	
Mg	24	1	He	1009.965	1009.965	1.755	236041	1.54	1000	101.0	69.5	130.5	
Al	27	1	He	49.870	49.870	3.438	4962	3.88	50	99.7	69.5	130.5	
K	39	1	He	1013.391	1013.391	1.176	121702	0.39	1000	101.3	69.5	130.5	
Ca	44	1	He	995.577	995.577	0.408	6663	0.77	1000	99.6	69.5	130.5	
Ti	47	1	He	10.862	10.862	9.590	510	8.57	10	108.6	69.5	130.5	
V	51	1	He	5.301	5.301	0.882	8940	1.89	5	106.0	69.5	130.5	
Cr	52	1	He	2.078	2.078	6.136	5022	4.38	2	103.9	69.5	130.5	
Mn	55	1	He	5.199	5.199	1.465	5476	0.56	5	104.0	69.5	130.5	
Fe	56	1	He	109.559	109.559	2.508	176084	1.70	100	109.6	69.5	130.5	
Co	59	1	He	1.029	1.029	2.353	4225	2.76	1	102.9	69.5	130.5	
Ni	60	1	He	2.143	2.143	7.413	2430	7.15	2	107.2	69.5	130.5	
Cu	63	1	He	1.761	1.761	4.167	7855	2.76	2	88.1	69.5	130.5	
Zn	66	1	He	20.433	20.433	1.048	7992	2.10	20	102.2	69.5	130.5	
As	75	1	He	5.033	5.033	4.099	1212	3.82	5	100.7	69.5	130.5	
Se	78	1	He	5.304	5.304	23.413	58	22.09	5	106.1	69.5	130.5	
Sr	88	1	He	9.402	9.402	2.996	9898	3.02	10	94.0	69.5	130.5	
Mo	95	1	He	5.357	5.357	1.593	7009	1.50	5	107.1	69.5	130.5	
Ag	107	1	He	1.012	1.012	5.199	4897	5.79	1	101.2	69.5	130.5	
Cd	111	1	He	1.037	1.037	6.629	538	6.79	1	103.7	69.5	130.5	
Sn	118	1	He	9.868	9.868	8.504	9985	8.47	10	98.7	69.5	130.5	
Sb	123	1	He	1.997	1.997	3.283	2248	3.06	2	99.8	69.5	130.5	
Ba	137	1	He	5.022	5.022	2.922	1949	2.97	5	100.4	69.5	130.5	
W	182	1	He	10.142	10.142	0.393	58179	0.93	10	101.4	69.5	130.5	
Tl	205	1	He	0.993	0.993	2.365	8818	3.33	1	99.3	69.5	130.5	
Pb	208	1	He	1.002	1.002	3.381	12822	2.15	1	100.2	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1989974	0.81	1884762	105.58	60	120	
Sc	45	1	He	142980	1.12	134073	106.64	60	120	
Sc	45	2	NoGas	9178953	0.72	8481025	108.23	60	120	
Rh	103	1	He	950517	0.72	903580	105.19	60	120	
In	115	1	He	232100	0.26	224817	103.24	60	120	
Tb	159	1	He	1085464	1.15	1046002	103.77	60	120	
Ho	165	1	He	1081058	1.01	1057439	102.23	60	120	
Bi	209	1	He	749947	0.40	731380	102.54	60	120	

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Sample Report

Sample Table

Sample Name	240-64299-j-3-a@5
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:33:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.900	2.900	3.83	195705	0.00	10000	
Be	9	45	2	NoGas	0.132	0.132	19.18	1007	0.01	2000	
B	11	45	2	NoGas	3.320	3.320	4.28	22933	0.01	300	
Na	23	45	1	He	5903.840	5903.840	2.49	2521404	0.23	500000	
Mg	24	45	1	He	91.161	91.161	4.74	22281	0.41	500000	
Al	27	45	1	He	20.204	20.204	6.07	2113	0.96	200000	
K	39	45	1	He	296.588	296.588	2.83	43011	0.69	500000	
Ca	44	45	1	He	1292.234	1292.234	1.58	8729	14.80	500000	
Ti	47	45	1	He	0.069	0.069	98.86	3	2.08	2500	
V	51	45	1	He	0.303	0.303	24.16	573	0.05	10000	
Cr	52	45	1	He	0.146	0.146	18.09	1039	0.01	10000	
Mn	55	45	1	He	10.524	10.524	0.82	11119	0.09	10000	
Fe	56	45	1	He	1083.117	1083.117	2.76	1750065	0.06	200000	
Co	59	45	1	He	2.062	2.062	3.26	8263	0.02	5000	
Ni	60	45	1	He	2.107	2.107	5.87	2429	0.09	10000	
Cu	63	45	1	He	-0.187	-0.187	-27.67	2048	-0.01	10000	
Zn	66	45	1	He	1.095	1.095	3.05	587	0.19	10000	
As	75	103	1	He	0.504	0.504	4.81	137	0.37	10000	
Se	78	115	1	He	0.285	0.285	91.03	6	4.78	10000	
Sr	88	103	1	He	55.431	55.431	1.53	57584	0.10	10000	
Mo	95	103	1	He	0.195	0.195	10.02	266	0.07	2000	
Ag	107	103	1	He	0.001	0.001	281.56	11	0.01	300	
Cd	111	115	1	He	0.012	0.012	42.85	8	0.15	4000	
Sn	118	115	1	He	0.045	0.045	186.44	359	0.01	2000	
Sb	123	115	1	He	0.033	0.033	58.04	81	0.04	200	
Ba	137	115	1	He	3.774	3.774	7.51	1489	0.25	10000	
W	182	159	1	He	0.081	0.081	36.89	1908	0.00	2500	
Tl	205	165	1	He	0.007	0.007	29.87	100	0.01	2000	
Pb	208	165	1	He	-0.003	-0.003	-184.75	1177	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2013461	1.54	1884762	106.83	60	120	
Sc	45	1	He	145349	1.87	134073	108.41	60	120	
Sc	45	2	NoGas	9119092	0.75	8481025	107.52	60	120	
Rh	103	1	He	941094	0.67	903580	104.15	60	120	
In	115	1	He	235758	0.90	224817	104.87	60	120	
Tb	159	1	He	1073123	0.20	1046002	102.59	60	120	
Ho	165	1	He	1076830	0.06	1057439	101.83	60	120	
Bi	209	1	He	751617	0.65	731380	102.77	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228794/1-a
Data File Name	042_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:37:15-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.002	-5318.2	126071	1.3	8	
Be	9	45	2	NoGas	0.050	40.0	485	27.6	1	
B	11	45	2	NoGas	1.948	14.0	17524	6.2	20	
Na	23	45	1	He	126.552	1.8	58864	0.2	1000	
Mg	24	45	1	He	125.110	1.4	30314	1.8	1000	
Al	27	45	1	He	1.799	4.2	298	1.7	50	
K	39	45	1	He	37.048	16.5	13795	6.4	1000	
Ca	44	45	1	He	444.069	3.5	3136	4.7	1000	
Ti	47	45	1	He	0.117	91.2	6	91.6	20	
V	51	45	1	He	0.112	98.0	248	75.3	2	
Cr	52	45	1	He	0.037	24.8	809	1.0	2	
Mn	55	45	1	He	0.521	0.2	689	1.7	2	
Fe	56	45	1	He	9.742	4.0	17882	4.3	50	
Co	59	45	1	He	-0.029	-20.8	223	11.8	1	
Ni	60	45	1	He	0.181	20.6	351	13.0	2	
Cu	63	45	1	He	0.314	13.9	3573	4.1	2	
Zn	66	45	1	He	2.604	4.1	1175	5.1	20	
As	75	103	1	He	0.064	72.1	34	33.1	2	
Se	78	115	1	He	0.215	100.6	5	43.5	2	
Sr	88	103	1	He	1.021	2.2	1124	2.7	10	
Mo	95	103	1	He	0.015	42.2	34	24.3	2	
Ag	107	103	1	He	0.002	101.5	18	54.1	0.2	
Cd	111	115	1	He	0.004	59.8	4	31.5	0.2	
Sn	118	115	1	He	0.176	76.5	482	26.7	10	
Sb	123	115	1	He	0.087	30.0	140	21.4	2	
Ba	137	115	1	He	1.360	12.1	531	11.2	5	
W	182	159	1	He	-0.003	-1017.3	1445	12.7	10	
Tl	205	165	1	He	0.001	126.4	49	21.9	0.5	
Pb	208	165	1	He	0.009	26.6	1310	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2019123	0.41	1884762	107.13	60	120	
Sc	45	1	He	145258	1.54	134073	108.34	60	120	
Sc	45	2	NoGas	9204967	0.60	8481025	108.54	60	120	
Rh	103	1	He	961448	0.51	903580	106.40	60	120	
In	115	1	He	231864	0.98	224817	103.13	60	120	
Tb	159	1	He	1075794	0.12	1046002	102.85	60	120	
Ho	165	1	He	1069041	0.52	1057439	101.10	60	120	
Bi	209	1	He	756183	0.45	731380	103.39	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228794/2-a
Data File Name	043_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:41:26-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	102.265	102.265	0.632	2540353	0.61	100	102.3	84.5	115.5	
Be	9	2	NoGas	1125.621	1125.621	0.924	7026428	0.87	1000	112.6	84.5	115.5	
B	11	2	NoGas	104.687	104.687	0.315	421164	0.41	100	104.7	84.5	115.5	
Na	23	1	He	10702.987	10702.987	1.236	4364140	1.67	10000	107.0	84.5	115.5	
Mg	24	1	He	10909.494	10909.494	0.823	2469646	1.04	10000	109.1	84.5	115.5	
Al	27	1	He	10323.706	10323.706	0.785	973726	1.44	10000	103.2	84.5	115.5	
K	39	1	He	10374.214	10374.214	0.578	1125041	1.02	10000	103.7	84.5	115.5	
Ca	44	1	He	11168.921	11168.921	1.047	70564	0.30	10000	111.7	84.5	115.5	
Ti	47	1	He	103.702	103.702	2.088	4732	2.60	100	103.7	84.5	115.5	
V	51	1	He	1095.916	1095.916	0.671	1783052	0.83	1000	109.6	84.5	115.5	
Cr	52	1	He	1083.903	1083.903	0.705	2180367	1.14	1000	108.4	84.5	115.5	
Mn	55	1	He	1039.851	1039.851	0.607	1036071	1.36	1000	104.0	84.5	115.5	
Fe	56	1	He	10499.358	10499.358	1.374	16194248	2.05	10000	105.0	84.5	115.5	
Co	59	1	He	1104.649	1104.649	0.755	4059515	1.53	1000	110.5	84.5	115.5	
Ni	60	1	He	1054.768	1054.768	0.600	1088410	1.37	1000	105.5	84.5	115.5	
Cu	63	1	He	1094.012	1094.012	0.912	3186741	1.30	1000	109.4	84.5	115.5	
Zn	66	1	He	1106.274	1106.274	0.703	412060	1.41	1000	110.6	84.5	115.5	
As	75	1	He	1006.010	1006.010	0.394	228373	1.05	1000	100.6	84.5	115.5	
Se	78	1	He	1035.045	1035.045	1.607	10316	0.67	1000	103.5	84.5	115.5	
Sr	88	1	He	977.570	977.570	0.540	981255	1.22	1000	97.8	84.5	115.5	
Mo	95	1	He	104.462	104.462	0.980	130623	1.62	100	104.5	84.5	115.5	
Ag	107	1	He	103.019	103.019	0.518	476256	0.83	100	103.0	84.5	115.5	
Cd	111	1	He	1066.743	1066.743	1.867	530620	0.93	1000	106.7	84.5	115.5	
Sn	118	1	He	1041.363	1041.363	3.108	981549	2.15	1000	104.1	84.5	115.5	
Sb	123	1	He	104.429	104.429	2.044	110882	1.21	100	104.4	84.5	115.5	
Ba	137	1	He	1037.473	1037.473	2.625	385879	1.66	1000	103.7	84.5	115.5	
W	182	1	He	103.461	103.461	1.170	562034	2.09	100	103.5	84.5	115.5	
Tl	205	1	He	271.091	271.091	2.320	2344652	1.85	250	108.4	84.5	115.5	
Pb	208	1	He	1062.850	1062.850	1.273	12055294	0.95	1000	106.3	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1943351	0.88	1884762	103.11	60	120	
Sc	45	1	He	138849	0.78	134073	103.56	60	120	
Sc	45	2	NoGas	8841226	0.11	8481025	104.25	60	120	
Rh	103	1	He	909977	0.72	903580	100.71	60	120	
In	115	1	He	223145	0.98	224817	99.26	60	120	
Tb	159	1	He	1051908	0.94	1046002	100.56	60	120	
Ho	165	1	He	1058367	0.56	1057439	100.09	60	120	
Bi	209	1	He	716626	0.09	731380	97.98	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-a
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:45:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.732	112.732	0.93	2914940	0.00	10000	
Be	9	45	2	NoGas	0.345	0.345	10.68	2408	0.01	2000	
B	11	45	2	NoGas	857.709	857.709	1.29	3538969	0.02	300	>LDR
Na	23	45	1	He	124300.772	124300.772	2.27	51081578	0.24	500000	
Mg	24	45	1	He	290624.319	290624.319	2.41	66356988	0.44	500000	
Al	27	45	1	He	5.040	5.040	6.38	596	0.85	200000	
K	39	45	1	He	6420.968	6420.968	1.21	706090	0.91	500000	
Ca	44	45	1	He	410724.855	410724.855	1.88	2611007	15.73	500000	
Ti	47	45	1	He	0.169	0.169	25.17	8	2.17	2500	
V	51	45	1	He	-0.143	-0.143	-259.76	-174	0.08	10000	
Cr	52	45	1	He	0.236	0.236	13.13	1184	0.02	10000	
Mn	55	45	1	He	35.276	35.276	2.22	35595	0.10	10000	
Fe	56	45	1	He	15.320	15.320	0.57	25925	0.06	200000	
Co	59	45	1	He	0.477	0.477	1.32	2092	0.02	5000	
Ni	60	45	1	He	5.275	5.275	0.27	5641	0.09	10000	
Cu	63	45	1	He	0.833	0.833	17.31	4972	0.02	10000	
Zn	66	45	1	He	9.253	9.253	5.12	3629	0.25	10000	
As	75	103	1	He	0.736	0.736	6.98	168	0.44	10000	
Se	78	115	1	He	1.397	1.397	14.40	16	8.69	10000	
Sr	88	103	1	He	13342.141	13342.141	0.16	12141325	0.11	10000	>LDR
Mo	95	103	1	He	22.110	22.110	0.65	25075	0.09	2000	
Ag	107	103	1	He	0.019	0.019	6.64	86	0.02	300	
Cd	111	115	1	He	0.356	0.356	9.45	172	0.21	4000	
Sn	118	115	1	He	1.924	1.924	16.86	2030	0.09	2000	
Sb	123	115	1	He	0.310	0.310	15.46	357	0.09	200	
Ba	137	115	1	He	6.933	6.933	3.37	2486	0.28	10000	
W	182	159	1	He	0.455	0.455	19.15	3673	0.01	2500	
Tl	205	165	1	He	0.405	0.405	4.73	3336	0.01	2000	
Pb	208	165	1	He	0.138	0.138	10.39	2600	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1939419	1.85	1884762	102.90	60	120	
Sc	45	1	He	140102	0.98	134073	104.50	60	120	
Sc	45	2	NoGas	9244093	0.67	8481025	109.00	60	120	
Rh	103	1	He	825016	0.14	903580	91.31	60	120	
In	115	1	He	214647	0.60	224817	95.48	60	120	
Tb	159	1	He	991775	0.38	1046002	94.82	60	120	
Ho	165	1	He	997274	1.20	1057439	94.31	60	120	
Bi	209	1	He	643013	1.43	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64104-e-1-a@5
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:49:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	21.592	21.592	1.06	732472	0.00	10000	
Be	9	45	2	NoGas	0.193	0.193	18.17	1571	0.01	2000	
B	11	45	2	NoGas	177.027	177.027	0.87	818151	0.02	300	
Na	23	45	1	He	25426.399	25426.399	1.50	11984822	0.21	500000	
Mg	24	45	1	He	59625.709	59625.709	1.45	15612832	0.38	500000	
Al	27	45	1	He	1.031	1.031	3.92	246	0.42	200000	
K	39	45	1	He	1289.772	1289.772	1.03	171129	0.75	500000	
Ca	44	45	1	He	78314.588	78314.588	0.75	571101	13.71	500000	
Ti	47	45	1	He	0.043	0.043	173.21	2	1.93	2500	
V	51	45	1	He	0.026	0.026	494.82	111	0.02	10000	
Cr	52	45	1	He	0.051	0.051	85.42	927	0.01	10000	
Mn	55	45	1	He	7.059	7.059	3.49	8294	0.09	10000	
Fe	56	45	1	He	2.553	2.553	5.67	6946	0.04	200000	
Co	59	45	1	He	0.062	0.062	35.36	636	0.01	5000	
Ni	60	45	1	He	0.980	0.980	12.59	1340	0.07	10000	
Cu	63	45	1	He	0.127	0.127	55.42	3320	0.00	10000	
Zn	66	45	1	He	1.931	1.931	3.45	1009	0.19	10000	
As	75	103	1	He	0.240	0.240	16.45	77	0.31	10000	
Se	78	115	1	He	0.298	0.298	62.57	6	4.72	10000	
Sr	88	103	1	He	2578.679	2578.679	1.27	2772941	0.09	10000	
Mo	95	103	1	He	4.247	4.247	3.65	5702	0.07	2000	
Ag	107	103	1	He	0.007	0.007	63.98	42	0.02	300	
Cd	111	115	1	He	0.102	0.102	23.34	57	0.18	4000	
Sn	118	115	1	He	0.342	0.342	11.04	678	0.05	2000	
Sb	123	115	1	He	0.062	0.062	7.96	118	0.05	200	
Ba	137	115	1	He	1.238	1.238	1.82	510	0.24	10000	
W	182	159	1	He	0.061	0.061	81.98	1856	0.00	2500	
Tl	205	165	1	He	0.084	0.084	5.76	808	0.01	2000	
Pb	208	165	1	He	0.027	0.027	45.31	1581	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2188571	0.56	1884762	116.12	60	120	
Sc	45	1	He	160636	1.51	134073	119.81	60	120	
Sc	45	2	NoGas	10247993	0.41	8481025	120.83	60	120	ISTD warning
Rh	103	1	He	974847	1.31	903580	107.89	60	120	
In	115	1	He	244105	0.82	224817	108.58	60	120	
Tb	159	1	He	1110368	1.01	1046002	106.15	60	120	
Ho	165	1	He	1115624	1.59	1057439	105.50	60	120	
Bi	209	1	He	749140	1.05	731380	102.43	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64104-e-1-a
Data File Name	046SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:53:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	208.319	208.319	0.85	5706940	0.00	10000	
Be	9	45	2	NoGas	1067.269	1067.269	0.89	7528979	0.01	2000	
B	11	45	2	NoGas	957.230	957.230	1.06	4268317	0.02	300	>LDR
Na	23	45	1	He	132086.293	132086.293	2.67	60060401	0.22	500000	
Mg	24	45	1	He	292543.524	292543.524	3.14	73906234	0.40	500000	
Al	27	45	1	He	10091.472	10091.472	2.59	1062488	0.95	200000	
K	39	45	1	He	16644.463	16644.463	2.86	2008758	0.83	500000	
Ca	44	45	1	He	406211.323	406211.323	2.94	2857096	14.22	500000	
Ti	47	45	1	He	103.011	103.011	2.87	5246	1.96	2500	
V	51	45	1	He	1087.294	1087.294	4.04	1974697	0.06	10000	
Cr	52	45	1	He	1060.658	1060.658	3.45	2381735	0.04	10000	
Mn	55	45	1	He	1021.643	1021.643	2.75	1136305	0.09	10000	
Fe	56	45	1	He	9973.264	9973.264	3.18	17170546	0.06	200000	
Co	59	45	1	He	1018.681	1018.681	3.59	4178499	0.02	5000	
Ni	60	45	1	He	974.909	974.909	1.85	1123017	0.09	10000	
Cu	63	45	1	He	984.364	984.364	2.43	3201154	0.03	10000	
Zn	66	45	1	He	944.808	944.808	2.01	392876	0.24	10000	
As	75	103	1	He	1100.527	1100.527	0.70	250757	0.44	10000	
Se	78	115	1	He	1160.916	1160.916	1.18	11793	9.84	10000	
Sr	88	103	1	He	13738.355	13738.355	0.59	13841287	0.10	10000	>LDR
Mo	95	103	1	He	133.135	133.135	2.10	167116	0.08	2000	
Ag	107	103	1	He	97.625	97.625	0.94	453026	0.02	300	
Cd	111	115	1	He	1009.431	1009.431	0.57	511806	0.20	4000	
Sn	118	115	1	He	1035.060	1035.060	0.42	994547	0.10	2000	
Sb	123	115	1	He	103.950	103.950	0.19	112511	0.09	200	
Ba	137	115	1	He	1041.818	1041.818	0.46	395015	0.26	10000	
W	182	159	1	He	103.696	103.696	1.41	594650	0.02	2500	
Tl	205	165	1	He	252.314	252.314	0.97	2294760	0.01	2000	
Pb	208	165	1	He	980.555	980.555	0.54	11694453	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2079807	2.48	1884762	110.35	60	120	
Sc	45	1	He	155020	1.04	134073	115.62	60	120	
Sc	45	2	NoGas	9992209	1.25	8481025	117.82	60	120	
Rh	103	1	He	913381	1.13	903580	101.08	60	120	
In	115	1	He	227445	2.17	224817	101.17	60	120	
Tb	159	1	He	1110380	1.30	1046002	106.15	60	120	
Ho	165	1	He	1112775	1.41	1057439	105.23	60	120	
Bi	209	1	He	701997	1.04	731380	95.98	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-b ms
Data File Name	047SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T14:57:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	201.672	201.672	1.89	5512352	0.00	10000	
Be	9	45	2	NoGas	973.353	973.353	1.19	6845939	0.01	2000	
B	11	45	2	NoGas	965.774	965.774	0.87	4292952	0.02	300	>LDR
Na	23	45	1	He	128302.467	128302.467	1.80	57796813	0.22	500000	
Mg	24	45	1	He	280523.309	280523.309	2.85	70207990	0.40	500000	
Al	27	45	1	He	8969.736	8969.736	2.71	935568	0.96	200000	
K	39	45	1	He	15574.688	15574.688	2.06	1862769	0.84	500000	
Ca	44	45	1	He	394129.216	394129.216	1.06	2746524	14.35	500000	
Ti	47	45	1	He	90.797	90.797	5.06	4582	1.98	2500	
V	51	45	1	He	981.990	981.990	2.50	1766892	0.06	10000	
Cr	52	45	1	He	930.144	930.144	2.66	2069235	0.04	10000	
Mn	55	45	1	He	917.109	917.109	2.68	1010494	0.09	10000	
Fe	56	45	1	He	8989.320	8989.320	1.97	15332941	0.06	200000	
Co	59	45	1	He	930.928	930.928	3.31	3783057	0.02	5000	
Ni	60	45	1	He	875.552	875.552	1.90	999150	0.09	10000	
Cu	63	45	1	He	893.091	893.091	2.52	2877373	0.03	10000	
Zn	66	45	1	He	839.892	839.892	1.89	345998	0.24	10000	
As	75	103	1	He	999.081	999.081	0.72	227716	0.44	10000	
Se	78	115	1	He	1050.349	1050.349	0.55	10742	9.78	10000	
Sr	88	103	1	He	13197.857	13197.857	1.32	13301031	0.10	10000	>LDR
Mo	95	103	1	He	120.624	120.624	1.13	151444	0.08	2000	
Ag	107	103	1	He	91.591	91.591	0.87	425158	0.02	300	
Cd	111	115	1	He	915.977	915.977	0.37	467554	0.20	4000	
Sn	118	115	1	He	927.582	927.582	0.64	897276	0.10	2000	
Sb	123	115	1	He	94.734	94.734	0.40	103219	0.09	200	
Ba	137	115	1	He	925.982	925.982	0.35	353431	0.26	10000	
W	182	159	1	He	95.593	95.593	1.59	550060	0.02	2500	
Tl	205	165	1	He	229.839	229.839	1.17	2114250	0.01	2000	
Pb	208	165	1	He	888.838	888.838	1.47	10722381	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2085911	1.40	1884762	110.67	60	120	
Sc	45	1	He	153565	0.68	134073	114.54	60	120	
Sc	45	2	NoGas	9962135	0.77	8481025	117.46	60	120	
Rh	103	1	He	913680	0.87	903580	101.12	60	120	
In	115	1	He	228953	1.14	224817	101.84	60	120	
Tb	159	1	He	1113992	0.73	1046002	106.50	60	120	
Ho	165	1	He	1125540	0.42	1057439	106.44	60	120	
Bi	209	1	He	706249	1.55	731380	96.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-1-c msd
Data File Name	048SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:01:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	217.595	217.595	2.78	5898339	0.00	10000	
Be	9	45	2	NoGas	1034.130	1034.130	1.33	7227700	0.01	2000	
B	11	45	2	NoGas	1013.650	1013.650	1.68	4476675	0.02	300	>LDR
Na	23	45	1	He	137697.096	137697.096	2.39	61744183	0.22	500000	
Mg	24	45	1	He	307332.609	307332.609	1.96	76570940	0.40	500000	
Al	27	45	1	He	10098.750	10098.750	2.01	1048565	0.96	200000	
K	39	45	1	He	17127.333	17127.333	2.46	2038071	0.84	500000	
Ca	44	45	1	He	428231.595	428231.595	2.13	2970370	14.42	500000	
Ti	47	45	1	He	99.541	99.541	2.72	5000	1.99	2500	
V	51	45	1	He	1065.111	1065.111	2.52	1907798	0.06	10000	
Cr	52	45	1	He	1026.748	1026.748	2.47	2273728	0.05	10000	
Mn	55	45	1	He	1001.563	1001.563	1.92	1098587	0.09	10000	
Fe	56	45	1	He	9994.693	9994.693	1.72	16971260	0.06	200000	
Co	59	45	1	He	1006.295	1006.295	1.17	4071266	0.02	5000	
Ni	60	45	1	He	949.641	949.641	1.36	1078835	0.09	10000	
Cu	63	45	1	He	969.255	969.255	0.92	3108732	0.03	10000	
Zn	66	45	1	He	920.929	920.929	1.37	377661	0.24	10000	
As	75	103	1	He	1076.159	1076.159	0.18	243010	0.44	10000	
Se	78	115	1	He	1134.085	1134.085	1.70	11500	9.86	10000	
Sr	88	103	1	He	14560.285	14560.285	1.20	14537688	0.10	10000	>LDR
Mo	95	103	1	He	132.726	132.726	0.81	165084	0.08	2000	
Ag	107	103	1	He	97.212	97.212	0.63	447057	0.02	300	
Cd	111	115	1	He	992.393	992.393	0.77	502272	0.20	4000	
Sn	118	115	1	He	1031.284	1031.284	0.95	989117	0.10	2000	
Sb	123	115	1	He	103.203	103.203	0.68	111498	0.09	200	
Ba	137	115	1	He	1025.290	1025.290	0.15	388046	0.26	10000	
W	182	159	1	He	104.854	104.854	0.59	604380	0.02	2500	
Tl	205	165	1	He	247.131	247.131	2.13	2278432	0.01	2000	
Pb	208	165	1	He	966.026	966.026	1.00	11680266	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2090251	0.27	1884762	110.90	60	120	
Sc	45	1	He	152875	1.09	134073	114.02	60	120	
Sc	45	2	NoGas	9899790	1.12	8481025	116.73	60	120	
Rh	103	1	He	905197	0.56	903580	100.18	60	120	
In	115	1	He	227025	0.64	224817	100.98	60	120	
Tb	159	1	He	1116261	0.32	1046002	106.72	60	120	
Ho	165	1	He	1128220	0.76	1057439	106.69	60	120	
Bi	209	1	He	702479	0.21	731380	96.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-2-a
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:05:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	61.231	61.231	2.08	1763909	0.00	10000	
Be	9	45	2	NoGas	0.729	0.729	4.30	5286	0.01	2000	
B	11	45	2	NoGas	746.909	746.909	1.08	3313917	0.02	300	>LDR
Na	23	45	1	He	59181.541	59181.541	1.39	26906881	0.22	500000	
Mg	24	45	1	He	168437.510	168437.510	0.98	42546420	0.40	500000	
Al	27	45	1	He	1.878	1.878	46.11	326	0.58	200000	
K	39	45	1	He	4557.770	4557.770	1.39	557381	0.82	500000	
Ca	44	45	1	He	183131.891	183131.891	2.72	1287746	14.22	500000	
Ti	47	45	1	He	0.065	0.065	100.71	3	1.95	2500	
V	51	45	1	He	0.089	0.089	193.14	219	0.04	10000	
Cr	52	45	1	He	0.153	0.153	20.57	1124	0.01	10000	
Mn	55	45	1	He	35.835	35.835	2.56	39992	0.09	10000	
Fe	56	45	1	He	47.586	47.586	1.55	84211	0.06	200000	
Co	59	45	1	He	0.169	0.169	18.15	1051	0.02	5000	
Ni	60	45	1	He	0.128	0.128	27.65	313	0.04	10000	
Cu	63	45	1	He	1.102	1.102	14.41	6377	0.02	10000	
Zn	66	45	1	He	1.029	1.029	11.34	599	0.17	10000	
As	75	103	1	He	0.565	0.565	8.26	151	0.37	10000	
Se	78	115	1	He	0.643	0.643	48.12	10	6.35	10000	
Sr	88	103	1	He	15947.422	15947.422	1.23	16600803	0.10	10000	>LDR
Mo	95	103	1	He	0.820	0.820	4.65	1077	0.08	2000	
Ag	107	103	1	He	0.015	0.015	39.36	80	0.02	300	
Cd	111	115	1	He	0.359	0.359	4.92	198	0.18	4000	
Sn	118	115	1	He	2.113	2.113	26.38	2515	0.08	2000	
Sb	123	115	1	He	0.238	0.238	13.67	323	0.07	200	
Ba	137	115	1	He	10.868	10.868	3.50	4450	0.24	10000	
W	182	159	1	He	0.441	0.441	21.11	4141	0.01	2500	
Tl	205	165	1	He	0.174	0.174	12.39	1690	0.01	2000	
Pb	208	165	1	He	0.149	0.149	29.64	3162	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2150728	1.72	1884762	114.11	60	120	
Sc	45	1	He	154988	1.96	134073	115.60	60	120	
Sc	45	2	NoGas	9937189	1.33	8481025	117.17	60	120	
Rh	103	1	He	943869	1.47	903580	104.46	60	120	
In	115	1	He	245279	0.60	224817	109.10	60	120	
Tb	159	1	He	1139091	0.92	1046002	108.90	60	120	
Ho	165	1	He	1157469	1.28	1057439	109.46	60	120	
Bi	209	1	He	746722	1.06	731380	102.10	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	050_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:09:54-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	49.749	1.460	1426333	0.82	50	99.5	89.5	110.5	
Be	9	45	2	NoGas	50.925	1.238	349473	0.77	50	101.9	89.5	110.5	
B	11	45	2	NoGas	66.108	0.645	295966	0.35	50	132.2	89.5	110.5	CCV Failed
Na	23	45	1	He	25300.573	0.993	11324408	0.14	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25321.923	0.509	6295825	0.65	25000	101.3	89.5	110.5	
Al	27	45	1	He	254.789	1.248	26522	1.96	250	101.9	89.5	110.5	
K	39	45	1	He	25133.154	1.282	2979459	0.57	25000	100.5	89.5	110.5	
Ca	44	45	1	He	25148.064	1.371	174266	1.54	25000	100.6	89.5	110.5	
Ti	47	45	1	He	48.377	0.178	2425	0.98	50	96.8	89.5	110.5	
V	51	45	1	He	49.373	0.634	88307	1.71	50	98.7	89.5	110.5	
Cr	52	45	1	He	49.944	2.525	111080	1.81	50	99.9	89.5	110.5	
Mn	55	45	1	He	249.871	1.718	273561	0.60	250	99.9	89.5	110.5	
Fe	56	45	1	He	12537.283	1.570	21238462	0.54	12500	100.3	89.5	110.5	
Co	59	45	1	He	50.558	1.052	204412	0.09	50	101.1	89.5	110.5	
Ni	60	45	1	He	50.223	1.418	57082	1.47	50	100.4	89.5	110.5	
Cu	63	45	1	He	50.848	1.251	165310	0.39	50	101.7	89.5	110.5	
Zn	66	45	1	He	49.656	2.022	20476	1.83	50	99.3	89.5	110.5	
As	75	103	1	He	50.555	0.699	12172	0.32	50	101.1	89.5	110.5	
Se	78	115	1	He	52.585	7.443	568	6.43	50	105.2	89.5	110.5	
Sr	88	103	1	He	51.804	1.171	55112	1.58	50	103.6	89.5	110.5	
Mo	95	103	1	He	52.137	0.935	69050	0.60	50	104.3	89.5	110.5	
Ag	107	103	1	He	50.132	0.580	245462	0.48	50	100.3	89.5	110.5	
Cd	111	115	1	He	51.265	2.164	27499	1.21	50	102.5	89.5	110.5	
Sn	118	115	1	He	51.563	3.204	52712	1.96	50	103.1	89.5	110.5	
Sb	123	115	1	He	51.153	2.675	58587	1.59	50	102.3	89.5	110.5	
Ba	137	115	1	He	49.946	2.367	20038	1.18	50	99.9	89.5	110.5	
W	182	159	1	He	51.504	2.049	305221	3.09	50	103.0	89.5	110.5	
Tl	205	165	1	He	48.948	0.441	461081	1.38	50	97.9	89.5	110.5	
Pb	208	165	1	He	48.971	0.882	606116	1.25	50	97.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136782	0.58	1884762	113.37	60	120	
Sc	45	1	He	152527	1.13	134073	113.76	60	120	
Sc	45	2	NoGas	9715663	0.61	8481025	114.56	60	120	
Rh	103	1	He	963761	0.42	903580	106.66	60	120	
In	115	1	He	240629	1.26	224817	107.03	60	120	
Tb	159	1	He	1144530	1.23	1046002	109.42	60	120	
Ho	165	1	He	1152505	1.05	1057439	108.99	60	120	
Bi	209	1	He	757844	0.60	731380	103.62	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	051_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:14:04-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.254	14.8	133956	0.7	8	
Be	9	45	2	NoGas	0.402	11.3	2804	10.7	1	
B	11	45	2	NoGas	12.421	1.4	61153	1.2	20	
Na	23	45	1	He	42.796	7.1	24087	5.4	1000	
Mg	24	45	1	He	19.477	5.0	5512	4.4	1000	
Al	27	45	1	He	0.634	37.5	190	12.6	50	
K	39	45	1	He	22.553	22.7	12631	4.9	1000	
Ca	44	45	1	He	22.353	22.5	369	9.5	1000	
Ti	47	45	1	He	0.157	49.5	8	49.5	20	
V	51	45	1	He	0.134	77.3	298	61.5	2	
Cr	52	45	1	He	0.064	45.5	900	7.1	2	
Mn	55	45	1	He	0.196	11.3	363	6.4	2	
Fe	56	45	1	He	9.385	7.7	17976	6.6	50	
Co	59	45	1	He	-0.004	-326.4	332	15.9	1	
Ni	60	45	1	He	0.012	147.2	174	10.9	2	
Cu	63	45	1	He	0.274	47.4	3586	11.3	2	
Zn	66	45	1	He	0.424	18.6	338	9.4	20	
As	75	103	1	He	0.136	26.8	53	18.9	2	
Se	78	115	1	He	0.274	7.1	6	4.7	2	
Sr	88	103	1	He	0.474	11.0	559	7.9	10	
Mo	95	103	1	He	0.118	3.7	174	2.9	2	
Ag	107	103	1	He	0.029	8.0	156	8.1	0.2	
Cd	111	115	1	He	0.138	16.1	78	14.2	0.2	
Sn	118	115	1	He	0.576	11.8	933	9.3	10	
Sb	123	115	1	He	0.142	29.4	213	20.3	2	
Ba	137	115	1	He	0.053	64.3	28	48.5	5	
W	182	159	1	He	0.233	29.6	2889	11.7	10	
Tl	205	165	1	He	0.107	27.8	1032	23.6	0.5	
Pb	208	165	1	He	0.067	24.5	2093	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2107970	0.72	1884762	111.84	60	120	
Sc	45	1	He	150910	0.18	134073	112.56	60	120	
Sc	45	2	NoGas	9313960	0.05	8481025	109.82	60	120	
Rh	103	1	He	988394	2.17	903580	109.39	60	120	
In	115	1	He	247595	2.50	224817	110.13	60	120	
Tb	159	1	He	1130433	2.47	1046002	108.07	60	120	
Ho	165	1	He	1136689	2.87	1057439	107.49	60	120	
Bi	209	1	He	777294	1.70	731380	106.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-3-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:18:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.490	17.490	1.68	604591	0.00	10000	
Be	9	45	2	NoGas	0.263	0.263	16.78	2026	0.01	2000	
B	11	45	2	NoGas	751.945	751.945	0.45	3355598	0.02	300	>LDR
Na	23	45	1	He	90432.611	90432.611	1.02	40784980	0.22	500000	
Mg	24	45	1	He	105230.426	105230.426	1.63	26372388	0.40	500000	
Al	27	45	1	He	1.229	1.229	23.32	256	0.48	200000	
K	39	45	1	He	4184.083	4184.083	1.30	508488	0.82	500000	
Ca	44	45	1	He	87009.057	87009.057	0.99	607223	14.33	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.134	0.134	107.34	305	0.04	10000	
Cr	52	45	1	He	0.098	0.098	24.20	992	0.01	10000	
Mn	55	45	1	He	22.517	22.517	0.79	24991	0.09	10000	
Fe	56	45	1	He	43.513	43.513	1.85	76597	0.06	200000	
Co	59	45	1	He	0.131	0.131	15.40	888	0.01	5000	
Ni	60	45	1	He	0.057	0.057	48.37	230	0.02	10000	
Cu	63	45	1	He	0.194	0.194	17.87	3395	0.01	10000	
Zn	66	45	1	He	1.692	1.692	2.08	867	0.20	10000	
As	75	103	1	He	0.236	0.236	30.54	73	0.32	10000	
Se	78	115	1	He	0.432	0.432	14.94	8	5.66	10000	
Sr	88	103	1	He	20245.448	20245.448	0.51	20805742	0.10	10000	>LDR
Mo	95	103	1	He	0.591	0.591	1.87	770	0.08	2000	
Ag	107	103	1	He	0.010	0.010	37.62	53	0.02	300	
Cd	111	115	1	He	0.075	0.075	24.87	42	0.18	4000	
Sn	118	115	1	He	0.491	0.491	34.72	819	0.06	2000	
Sb	123	115	1	He	0.071	0.071	27.58	126	0.06	200	
Ba	137	115	1	He	17.265	17.265	2.08	6898	0.25	10000	
W	182	159	1	He	0.165	0.165	27.99	2478	0.01	2500	
Tl	205	165	1	He	0.021	0.021	14.10	234	0.01	2000	
Pb	208	165	1	He	0.001	0.001	1203.99	1286	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2100016	0.17	1884762	111.42	60	120	
Sc	45	1	He	153734	1.10	134073	114.66	60	120	
Sc	45	2	NoGas	9993990	1.01	8481025	117.84	60	120	
Rh	103	1	He	931714	1.50	903580	103.11	60	120	
In	115	1	He	239464	2.14	224817	106.51	60	120	
Tb	159	1	He	1121972	1.01	1046002	107.26	60	120	
Ho	165	1	He	1128639	1.78	1057439	106.73	60	120	
Bi	209	1	He	733811	0.66	731380	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-e-4-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:22:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.454	27.454	2.12	890590	0.00	10000	
Be	9	45	2	NoGas	0.218	0.218	9.58	1748	0.01	2000	
B	11	45	2	NoGas	377.634	377.634	1.41	1728285	0.02	300	>LDR
Na	23	45	1	He	56504.585	56504.585	0.92	26588675	0.21	500000	
Mg	24	45	1	He	65326.589	65326.589	1.78	17077154	0.38	500000	
Al	27	45	1	He	4.382	4.382	11.48	610	0.72	200000	
K	39	45	1	He	4168.554	4168.554	1.13	528514	0.79	500000	
Ca	44	45	1	He	103353.419	103353.419	1.12	752374	13.74	500000	
Ti	47	45	1	He	0.105	0.105	91.25	6	1.90	2500	
V	51	45	1	He	0.066	0.066	407.34	186	0.04	10000	
Cr	52	45	1	He	0.128	0.128	60.21	1103	0.01	10000	
Mn	55	45	1	He	4.673	4.673	3.87	5536	0.08	10000	
Fe	56	45	1	He	3.278	3.278	2.06	8228	0.04	200000	
Co	59	45	1	He	-0.030	-0.030	-45.06	244	-0.01	5000	
Ni	60	45	1	He	-0.005	-0.005	-505.64	166	0.00	10000	
Cu	63	45	1	He	0.148	0.148	33.65	3387	0.00	10000	
Zn	66	45	1	He	2.335	2.335	9.80	1180	0.20	10000	
As	75	103	1	He	0.811	0.811	13.79	215	0.38	10000	
Se	78	115	1	He	0.286	0.286	39.88	6	4.54	10000	
Sr	88	103	1	He	4628.961	4628.961	0.89	4945045	0.09	10000	
Mo	95	103	1	He	0.037	0.037	35.04	63	0.06	2000	
Ag	107	103	1	He	0.007	0.007	51.00	43	0.02	300	
Cd	111	115	1	He	0.052	0.052	29.49	31	0.17	4000	
Sn	118	115	1	He	0.377	0.377	34.22	730	0.05	2000	
Sb	123	115	1	He	0.032	0.032	61.41	84	0.04	200	
Ba	137	115	1	He	13.347	13.347	5.55	5547	0.24	10000	
W	182	159	1	He	0.159	0.159	29.74	2493	0.01	2500	
Tl	205	165	1	He	0.012	0.012	26.21	154	0.01	2000	
Pb	208	165	1	He	0.001	0.001	719.81	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2148432	1.01	1884762	113.99	60	120	
Sc	45	1	He	160389	0.90	134073	119.63	60	120	
Sc	45	2	NoGas	10219787	1.56	8481025	120.50	60	120	ISTD warning
Rh	103	1	He	968547	0.74	903580	107.19	60	120	
In	115	1	He	248982	0.39	224817	110.75	60	120	
Tb	159	1	He	1145612	0.99	1046002	109.52	60	120	
Ho	165	1	He	1156798	1.47	1057439	109.40	60	120	
Bi	209	1	He	750898	0.60	731380	102.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-5-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:26:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	113.240	113.240	1.03	3191848	0.00	10000	
Be	9	45	2	NoGas	0.223	0.223	5.43	1759	0.01	2000	
B	11	45	2	NoGas	529.306	529.306	0.54	2385106	0.02	300	>LDR
Na	23	45	1	He	148710.290	148710.290	1.40	69567169	0.21	500000	
Mg	24	45	1	He	179917.149	179917.149	1.78	46763564	0.38	500000	
Al	27	45	1	He	2.000	2.000	10.92	349	0.57	200000	
K	39	45	1	He	925844.012	925844.012	0.80	114378407	0.81	500000	>LDR
Ca	44	45	1	He	427364.982	427364.982	1.53	3092721	13.82	500000	
Ti	47	45	1	He	0.149	0.149	66.42	8	1.92	2500	
V	51	45	1	He	-0.073	-0.073	-289.78	-70	0.10	10000	
Cr	52	45	1	He	0.512	0.512	2.15	1987	0.03	10000	
Mn	55	45	1	He	56.832	56.832	1.51	65185	0.09	10000	
Fe	56	45	1	He	870.375	870.375	1.56	1543865	0.06	200000	
Co	59	45	1	He	0.023	0.023	46.42	466	0.00	5000	
Ni	60	45	1	He	0.395	0.395	2.65	639	0.06	10000	
Cu	63	45	1	He	7.881	7.881	13.93	29209	0.03	10000	
Zn	66	45	1	He	2.981	2.981	4.31	1450	0.21	10000	
As	75	103	1	He	0.492	0.492	12.08	124	0.39	10000	
Se	78	115	1	He	1.201	1.201	20.20	15	7.78	10000	
Sr	88	103	1	He	15451.881	15451.881	1.42	14924813	0.10	10000	>LDR
Mo	95	103	1	He	8.027	8.027	2.50	9669	0.08	2000	
Ag	107	103	1	He	0.012	0.012	31.33	59	0.02	300	
Cd	111	115	1	He	0.069	0.069	19.96	38	0.18	4000	
Sn	118	115	1	He	0.494	0.494	8.20	796	0.06	2000	
Sb	123	115	1	He	0.056	0.056	27.33	106	0.05	200	
Ba	137	115	1	He	17.888	17.888	2.64	6952	0.26	10000	
W	182	159	1	He	0.160	0.160	27.28	2363	0.01	2500	
Tl	205	165	1	He	0.010	0.010	15.62	133	0.01	2000	
Pb	208	165	1	He	0.050	0.050	49.57	1813	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2140509	0.56	1884762	113.57	60	120	
Sc	45	1	He	159471	0.99	134073	118.94	60	120	
Sc	45	2	NoGas	10078806	0.61	8481025	118.84	60	120	
Rh	103	1	He	875676	0.54	903580	96.91	60	120	
In	115	1	He	232882	0.78	224817	103.59	60	120	
Tb	159	1	He	1082289	1.46	1046002	103.47	60	120	
Ho	165	1	He	1086875	0.93	1057439	102.78	60	120	
Bi	209	1	He	663641	1.71	731380	90.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-6-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:30:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	72.905	72.905	1.41	2089921	0.00	10000	
Be	9	45	2	NoGas	0.208	0.208	21.19	1637	0.01	2000	
B	11	45	2	NoGas	345.662	345.662	1.93	1550579	0.02	300	>LDR
Na	23	45	1	He	114022.945	114022.945	1.00	52133972	0.22	500000	
Mg	24	45	1	He	130457.180	130457.180	1.44	33140669	0.39	500000	
Al	27	45	1	He	2.002	2.002	12.83	341	0.59	200000	
K	39	45	1	He	304680.430	304680.430	1.16	36794705	0.83	500000	
Ca	44	45	1	He	290685.578	290685.578	0.93	2055986	14.14	500000	
Ti	47	45	1	He	0.109	0.109	124.66	6	1.96	2500	
V	51	45	1	He	-0.339	-0.339	-94.36	-558	0.06	10000	
Cr	52	45	1	He	1.008	1.008	7.92	3060	0.03	10000	
Mn	55	45	1	He	4.607	4.607	4.46	5306	0.09	10000	
Fe	56	45	1	He	12.668	12.668	1.75	24250	0.05	200000	
Co	59	45	1	He	-0.014	-0.014	-26.63	301	0.00	5000	
Ni	60	45	1	He	0.226	0.226	15.93	428	0.05	10000	
Cu	63	45	1	He	8.651	8.651	2.01	31069	0.03	10000	
Zn	66	45	1	He	1.257	1.257	13.00	697	0.18	10000	
As	75	103	1	He	0.421	0.421	15.62	110	0.38	10000	
Se	78	115	1	He	0.393	0.393	43.71	7	5.64	10000	
Sr	88	103	1	He	13057.474	13057.474	0.44	12745661	0.10	10000	>LDR
Mo	95	103	1	He	0.082	0.082	8.91	113	0.07	2000	
Ag	107	103	1	He	0.013	0.013	17.32	64	0.02	300	
Cd	111	115	1	He	0.076	0.076	26.09	41	0.19	4000	
Sn	118	115	1	He	0.271	0.271	7.74	574	0.05	2000	
Sb	123	115	1	He	0.041	0.041	32.29	89	0.05	200	
Ba	137	115	1	He	21.018	21.018	0.36	8115	0.26	10000	
W	182	159	1	He	0.085	0.085	7.74	1930	0.00	2500	
Tl	205	165	1	He	0.009	0.009	10.78	123	0.01	2000	
Pb	208	165	1	He	0.007	0.007	11.83	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2261230	0.74	1884762	119.97	60	120	
Sc	45	1	He	155860	0.80	134073	116.25	60	120	
Sc	45	2	NoGas	10011058	0.87	8481025	118.04	60	120	
Rh	103	1	He	884964	0.71	903580	97.94	60	120	
In	115	1	He	231458	1.04	224817	102.95	60	120	
Tb	159	1	He	1074094	0.76	1046002	102.69	60	120	
Ho	165	1	He	1090852	0.17	1057439	103.16	60	120	
Bi	209	1	He	683440	1.17	731380	93.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-k-7-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:34:52-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.201	26.201	1.29	855088	0.00	10000	
Be	9	45	2	NoGas	0.158	0.158	18.68	1311	0.01	2000	
B	11	45	2	NoGas	264.303	264.303	0.69	1211046	0.02	300	
Na	23	45	1	He	27627.481	27627.481	3.15	13049385	0.21	500000	
Mg	24	45	1	He	70660.743	70660.743	3.28	18537423	0.38	500000	
Al	27	45	1	He	910.769	910.769	2.12	99715	0.91	200000	
K	39	45	1	He	12281.445	12281.445	2.79	1541983	0.80	500000	
Ca	44	45	1	He	232936.205	232936.205	2.98	1701428	13.69	500000	
Ti	47	45	1	He	14.592	14.592	15.20	770	1.89	2500	
V	51	45	1	He	1.530	1.530	31.36	2932	0.05	10000	
Cr	52	45	1	He	12.524	12.524	5.48	29989	0.04	10000	
Mn	55	45	1	He	53.634	53.634	4.76	62074	0.09	10000	
Fe	56	45	1	He	975.512	975.512	4.08	1745815	0.06	200000	
Co	59	45	1	He	1.073	1.073	8.05	4941	0.02	5000	
Ni	60	45	1	He	35.861	35.861	2.34	43069	0.08	10000	
Cu	63	45	1	He	11.192	11.192	5.15	40728	0.03	10000	
Zn	66	45	1	He	33.617	33.617	3.31	14686	0.23	10000	
As	75	103	1	He	3.312	3.312	2.11	819	0.40	10000	
Se	78	115	1	He	0.627	0.627	52.32	10	6.19	10000	
Sr	88	103	1	He	6016.902	6016.902	1.17	6428849	0.09	10000	
Mo	95	103	1	He	56.459	56.459	1.44	75158	0.08	2000	
Ag	107	103	1	He	0.020	0.020	14.03	109	0.02	300	
Cd	111	115	1	He	0.098	0.098	11.46	56	0.17	4000	
Sn	118	115	1	He	0.421	0.421	17.45	774	0.05	2000	
Sb	123	115	1	He	3.735	3.735	4.52	4461	0.08	200	
Ba	137	115	1	He	23.795	23.795	2.49	9862	0.24	10000	
W	182	159	1	He	0.368	0.368	15.80	3778	0.01	2500	
Tl	205	165	1	He	0.063	0.063	2.10	654	0.01	2000	
Pb	208	165	1	He	0.564	0.564	1.07	8490	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2338795	0.52	1884762	124.09	60	120	ISTD warning
Sc	45	1	He	161055	3.31	134073	120.12	60	120	ISTD warning
Sc	45	2	NoGas	10203775	0.92	8481025	120.31	60	120	ISTD warning
Rh	103	1	He	968660	0.65	903580	107.20	60	120	
In	115	1	He	248521	1.79	224817	110.54	60	120	
Tb	159	1	He	1161648	1.26	1046002	111.06	60	120	
Ho	165	1	He	1183733	1.03	1057439	111.94	60	120	
Bi	209	1	He	767120	0.40	731380	104.89	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-8-a
Data File Name	057SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:39:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	61.212	61.212	9.78	1989950	0.00	10000	
Be	9	45	2	NoGas	0.111	0.111	18.18	1067	0.01	2000	
B	11	45	2	NoGas	281.732	281.732	7.29	1419860	0.02	300	
Na	23	45	1	He	107663.529	107663.529	1.20	50061963	0.22	500000	
Mg	24	45	1	He	123408.226	123408.226	0.33	31882986	0.39	500000	
Al	27	45	1	He	2.312	2.312	16.79	380	0.61	200000	
K	39	45	1	He	287967.683	287967.683	0.55	35368298	0.81	500000	
Ca	44	45	1	He	277873.943	277873.943	2.63	1998751	13.90	500000	
Ti	47	45	1	He	0.086	0.086	114.94	4	1.93	2500	
V	51	45	1	He	-0.002	-0.002	-13302.09	57	0.00	10000	
Cr	52	45	1	He	1.134	1.134	3.84	3401	0.03	10000	
Mn	55	45	1	He	4.724	4.724	5.39	5531	0.09	10000	
Fe	56	45	1	He	13.104	13.104	2.54	25432	0.05	200000	
Co	59	45	1	He	-0.008	-0.008	-152.43	332	0.00	5000	
Ni	60	45	1	He	0.193	0.193	10.51	397	0.05	10000	
Cu	63	45	1	He	5.560	5.560	14.35	21336	0.03	10000	
Zn	66	45	1	He	1.140	1.140	7.12	659	0.17	10000	
As	75	103	1	He	0.360	0.360	14.08	98	0.37	10000	
Se	78	115	1	He	0.374	0.374	44.58	7	5.50	10000	
Sr	88	103	1	He	12529.740	12529.740	1.08	12393510	0.10	10000	>LDR
Mo	95	103	1	He	0.206	0.206	5.89	267	0.08	2000	
Ag	107	103	1	He	0.011	0.011	3.68	58	0.02	300	
Cd	111	115	1	He	0.029	0.029	27.18	17	0.17	4000	
Sn	118	115	1	He	0.495	0.495	19.43	796	0.06	2000	
Sb	123	115	1	He	0.032	0.032	31.95	79	0.04	200	
Ba	137	115	1	He	20.439	20.439	3.15	7926	0.26	10000	
W	182	159	1	He	0.045	0.045	36.78	1752	0.00	2500	
Tl	205	165	1	He	0.003	0.003	73.69	67	0.00	2000	
Pb	208	165	1	He	-0.008	-0.008	-119.30	1167	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2549425	9.58	1884762	135.27	60	120	ISTD warning
Sc	45	1	He	158499	0.98	134073	118.22	60	120	
Sc	45	2	NoGas	11299067	12.86	8481025	133.23	60	120	ISTD warning
Rh	103	1	He	896754	0.18	903580	99.24	60	120	
In	115	1	He	232438	0.79	224817	103.39	60	120	
Tb	159	1	He	1100141	0.65	1046002	105.18	60	120	
Ho	165	1	He	1115492	1.19	1057439	105.49	60	120	
Bi	209	1	He	698043	1.21	731380	95.44	60	120	

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Sample Report

Sample Table

Sample Name	240-64104-I-9-a
Data File Name	058SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:43:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.365	0.365	4.33	152473	0.00	10000	
Be	9	45	2	NoGas	0.126	0.126	5.62	1104	0.01	2000	
B	11	45	2	NoGas	15.504	15.504	1.09	82453	0.02	300	
Na	23	45	1	He	407.680	407.680	1.43	199325	0.20	500000	
Mg	24	45	1	He	95.745	95.745	2.22	26056	0.37	500000	
Al	27	45	1	He	2.681	2.681	11.01	429	0.63	200000	
K	39	45	1	He	239.140	239.140	4.72	40765	0.59	500000	
Ca	44	45	1	He	420.586	420.586	1.51	3324	12.65	500000	
Ti	47	45	1	He	0.021	0.021	173.21	1	1.91	2500	
V	51	45	1	He	-0.082	-0.082	-342.85	-94	0.09	10000	
Cr	52	45	1	He	0.224	0.224	31.97	1339	0.02	10000	
Mn	55	45	1	He	0.567	0.567	9.02	822	0.07	10000	
Fe	56	45	1	He	5.670	5.670	5.50	12609	0.04	200000	
Co	59	45	1	He	-0.028	-0.028	-30.70	256	-0.01	5000	
Ni	60	45	1	He	0.089	0.089	74.21	280	0.03	10000	
Cu	63	45	1	He	4.410	4.410	12.00	17927	0.02	10000	
Zn	66	45	1	He	6.869	6.869	1.48	3164	0.22	10000	
As	75	103	1	He	0.126	0.126	25.82	53	0.24	10000	
Se	78	115	1	He	0.085	0.085	270.06	4	2.06	10000	
Sr	88	103	1	He	8.423	8.423	2.49	9622	0.09	10000	
Mo	95	103	1	He	0.108	0.108	10.66	168	0.06	2000	
Ag	107	103	1	He	0.009	0.009	43.85	58	0.02	300	
Cd	111	115	1	He	0.043	0.043	7.02	27	0.16	4000	
Sn	118	115	1	He	1.272	1.272	20.17	1708	0.07	2000	
Sb	123	115	1	He	0.000	0.000	-17439.45	48	0.00	200	
Ba	137	115	1	He	0.481	0.481	11.59	211	0.23	10000	
W	182	159	1	He	0.020	0.020	100.43	1682	0.00	2500	
Tl	205	165	1	He	0.003	0.003	64.72	76	0.00	2000	
Pb	208	165	1	He	0.032	0.032	15.03	1716	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2414443	1.49	1884762	128.10	60	120	ISTD warning
Sc	45	1	He	162048	2.47	134073	120.87	60	120	ISTD warning
Sc	45	2	NoGas	10387235	0.27	8481025	122.48	60	120	ISTD warning
Rh	103	1	He	1030726	0.59	903580	114.07	60	120	
In	115	1	He	254882	1.50	224817	113.37	60	120	
Tb	159	1	He	1149296	1.02	1046002	109.88	60	120	
Ho	165	1	He	1162807	1.90	1057439	109.96	60	120	
Bi	209	1	He	791213	2.14	731380	108.18	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	059_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:47:21-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.979	0.562	1412683	0.69	50	102.0	89.5	110.5	
Be	9	45	2	NoGas	50.761	1.002	337481	1.99	50	101.5	89.5	110.5	
B	11	45	2	NoGas	61.504	1.714	267389	0.59	50	123.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25756.865	2.195	11070312	0.91	25000	103.0	89.5	110.5	
Mg	24	45	1	He	25483.081	2.660	6083281	0.62	25000	101.9	89.5	110.5	
Al	27	45	1	He	255.325	1.365	25523	1.81	250	102.1	89.5	110.5	
K	39	45	1	He	25633.894	1.835	2917951	0.42	25000	102.5	89.5	110.5	
Ca	44	45	1	He	25353.887	1.341	168714	0.73	25000	101.4	89.5	110.5	
Ti	47	45	1	He	51.053	2.630	2457	1.47	50	102.1	89.5	110.5	
V	51	45	1	He	50.523	1.872	86764	0.95	50	101.0	89.5	110.5	
Cr	52	45	1	He	50.852	2.459	108594	0.96	50	101.7	89.5	110.5	
Mn	55	45	1	He	252.189	1.448	265159	0.70	250	100.9	89.5	110.5	
Fe	56	45	1	He	12572.321	1.092	20454776	1.08	12500	100.6	89.5	110.5	
Co	59	45	1	He	50.603	1.722	196472	0.46	50	101.2	89.5	110.5	
Ni	60	45	1	He	50.412	1.783	55018	0.37	50	100.8	89.5	110.5	
Cu	63	45	1	He	52.618	1.649	164188	1.02	50	105.2	89.5	110.5	
Zn	66	45	1	He	50.395	1.976	19952	0.37	50	100.8	89.5	110.5	
As	75	103	1	He	50.763	1.880	11709	1.10	50	101.5	89.5	110.5	
Se	78	115	1	He	50.458	4.634	524	3.38	50	100.9	89.5	110.5	
Sr	88	103	1	He	51.401	0.394	52391	0.60	50	102.8	89.5	110.5	
Mo	95	103	1	He	52.189	1.796	66219	1.11	50	104.4	89.5	110.5	
Ag	107	103	1	He	50.186	0.945	235427	0.78	50	100.4	89.5	110.5	
Cd	111	115	1	He	50.638	0.398	26120	1.13	50	101.3	89.5	110.5	
Sn	118	115	1	He	50.119	3.568	49268	2.34	50	100.2	89.5	110.5	
Sb	123	115	1	He	51.502	2.465	56716	1.41	50	103.0	89.5	110.5	
Ba	137	115	1	He	50.474	1.906	19474	2.49	50	100.9	89.5	110.5	
W	182	159	1	He	50.944	1.208	285820	0.99	50	101.9	89.5	110.5	
Tl	205	165	1	He	48.829	0.383	437171	1.07	50	97.7	89.5	110.5	
Pb	208	165	1	He	48.718	0.884	573104	0.68	50	97.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2119458	2.05	1884762	112.45	60	120	
Sc	45	1	He	146493	2.05	134073	109.26	60	120	
Sc	45	2	NoGas	9411624	1.14	8481025	110.97	60	120	
Rh	103	1	He	923388	0.82	903580	102.19	60	120	
In	115	1	He	231358	1.21	224817	102.91	60	120	
Tb	159	1	He	1083664	0.37	1046002	103.60	60	120	
Ho	165	1	He	1095418	0.97	1057439	103.59	60	120	
Bi	209	1	He	717984	1.17	731380	98.17	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	060_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:51:31-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.194	28.0	139310	0.2	8	
Be	9	45	2	NoGas	0.147	19.7	1185	16.1	1	
B	11	45	2	NoGas	12.663	1.8	65382	2.2	20	
Na	23	45	1	He	44.540	5.7	24784	4.5	1000	
Mg	24	45	1	He	18.440	6.9	5242	6.3	1000	
Al	27	45	1	He	0.530	111.1	179	33.8	50	
K	39	45	1	He	33.143	12.8	13824	3.1	1000	
Ca	44	45	1	He	16.558	73.5	328	25.4	1000	
Ti	47	45	1	He	0.112	124.7	6	124.9	20	
V	51	45	1	He	-0.022	-561.5	22	987.6	2	
Cr	52	45	1	He	0.023	75.5	808	4.1	2	
Mn	55	45	1	He	0.216	25.0	383	15.2	2	
Fe	56	45	1	He	9.403	6.7	17950	5.4	50	
Co	59	45	1	He	-0.021	-34.8	264	11.4	1	
Ni	60	45	1	He	-0.006	-447.0	154	19.6	2	
Cu	63	45	1	He	1.760	15.3	8259	9.8	2	
Zn	66	45	1	He	0.207	8.7	249	2.8	20	
As	75	103	1	He	0.083	32.5	39	16.8	2	
Se	78	115	1	He	0.137	123.8	4	40.0	2	
Sr	88	103	1	He	0.357	5.9	424	5.3	10	
Mo	95	103	1	He	0.101	21.4	149	19.0	2	
Ag	107	103	1	He	0.031	9.3	160	9.1	0.2	
Cd	111	115	1	He	0.054	23.9	31	22.2	0.2	
Sn	118	115	1	He	0.239	74.3	563	31.5	10	
Sb	123	115	1	He	0.086	17.6	143	12.3	2	
Ba	137	115	1	He	0.049	70.7	26	54.3	5	
W	182	159	1	He	0.193	34.3	2586	13.0	10	
Tl	205	165	1	He	0.074	17.3	704	15.2	0.5	
Pb	208	165	1	He	0.039	28.3	1708	7.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2199293	1.27	1884762	116.69	60	120	
Sc	45	1	He	150451	0.54	134073	112.22	60	120	
Sc	45	2	NoGas	9797185	1.10	8481025	115.52	60	120	
Rh	103	1	He	970963	0.38	903580	107.46	60	120	
In	115	1	He	240462	0.43	224817	106.96	60	120	
Tb	159	1	He	1098701	1.51	1046002	105.04	60	120	
Ho	165	1	He	1102008	1.07	1057439	104.21	60	120	
Bi	209	1	He	751871	0.63	731380	102.80	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-e-1-a
Data File Name	061SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:55:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.038	18.038	0.56	596101	0.00	10000	
Be	9	45	2	NoGas	0.135	0.135	22.69	1078	0.01	2000	
B	11	45	2	NoGas	88.615	88.615	0.72	389441	0.02	300	
Na	23	45	1	He	88249.222	88249.222	1.36	38364553	0.23	500000	
Mg	24	45	1	He	29916.647	29916.647	1.79	7226587	0.41	500000	
Al	27	45	1	He	5.338	5.338	9.70	660	0.81	200000	
K	39	45	1	He	9105.415	9105.415	0.54	1055044	0.86	500000	
Ca	44	45	1	He	149410.414	149410.414	1.30	1004855	14.87	500000	
Ti	47	45	1	He	0.799	0.799	25.37	39	2.06	2500	
V	51	45	1	He	0.674	0.674	3.25	1229	0.05	10000	
Cr	52	45	1	He	1.288	1.288	3.10	3512	0.04	10000	
Mn	55	45	1	He	462.904	462.904	1.76	492291	0.09	10000	
Fe	56	45	1	He	7920.682	7920.682	2.03	13037861	0.06	200000	
Co	59	45	1	He	0.575	0.575	2.61	2598	0.02	5000	
Ni	60	45	1	He	47.366	47.366	1.47	52311	0.09	10000	
Cu	63	45	1	He	29.162	29.162	2.59	93253	0.03	10000	
Zn	66	45	1	He	79.831	79.831	1.66	31884	0.25	10000	
As	75	103	1	He	4.040	4.040	5.34	932	0.43	10000	
Se	78	115	1	He	0.509	0.509	26.78	8	6.26	10000	
Sr	88	103	1	He	1570.396	1570.396	0.94	1572285	0.10	10000	
Mo	95	103	1	He	3.932	3.932	4.23	4915	0.08	2000	
Ag	107	103	1	He	0.008	0.008	43.83	47	0.02	300	
Cd	111	115	1	He	0.036	0.036	33.06	20	0.18	4000	
Sn	118	115	1	He	0.455	0.455	36.56	752	0.06	2000	
Sb	123	115	1	He	0.139	0.139	16.28	196	0.07	200	
Ba	137	115	1	He	157.565	157.565	1.72	60492	0.26	10000	
W	182	159	1	He	0.106	0.106	2.01	2085	0.01	2500	
Tl	205	165	1	He	0.012	0.012	17.52	147	0.01	2000	
Pb	208	165	1	He	1.904	1.904	0.81	23791	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2148954	0.29	1884762	114.02	60	120	
Sc	45	1	He	148187	0.56	134073	110.53	60	120	
Sc	45	2	NoGas	9619996	0.35	8481025	113.43	60	120	
Rh	103	1	He	907739	1.32	903580	100.46	60	120	
In	115	1	He	230314	1.92	224817	102.44	60	120	
Tb	159	1	He	1094826	0.57	1046002	104.67	60	120	
Ho	165	1	He	1104757	1.00	1057439	104.47	60	120	
Bi	209	1	He	716850	0.48	731380	98.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-e-2-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T15:59:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	19.683	19.683	0.42	635008	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	9.42	1119	0.01	2000	
B	11	45	2	NoGas	86.223	86.223	1.31	377179	0.02	300	
Na	23	45	1	He	89018.951	89018.951	1.03	37461091	0.24	500000	
Mg	24	45	1	He	31677.111	31677.111	0.76	7407089	0.43	500000	
Al	27	45	1	He	21.630	21.630	3.80	2226	0.97	200000	
K	39	45	1	He	9555.182	9555.182	1.07	1071226	0.89	500000	
Ca	44	45	1	He	155908.460	155908.460	1.12	1014982	15.36	500000	
Ti	47	45	1	He	1.226	1.226	23.24	58	2.12	2500	
V	51	45	1	He	0.718	0.718	47.01	1262	0.06	10000	
Cr	52	45	1	He	10.117	10.117	0.61	21741	0.05	10000	
Mn	55	45	1	He	507.329	507.329	1.66	522241	0.10	10000	
Fe	56	45	1	He	11454.694	11454.694	0.85	18250940	0.06	200000	
Co	59	45	1	He	1.100	1.100	3.70	4506	0.02	5000	
Ni	60	45	1	He	34.524	34.524	2.01	36948	0.09	10000	
Cu	63	45	1	He	4.658	4.658	2.52	16592	0.03	10000	
Zn	66	45	1	He	31003.795	31003.795	1.64	11924919	0.26	10000	>LDR
As	75	103	1	He	5.606	5.606	4.68	1278	0.44	10000	
Se	78	115	1	He	0.466	0.466	34.06	8	6.10	10000	
Sr	88	103	1	He	1596.467	1596.467	1.57	1586444	0.10	10000	
Mo	95	103	1	He	3.349	3.349	2.25	4159	0.08	2000	
Ag	107	103	1	He	0.007	0.007	13.93	41	0.02	300	
Cd	111	115	1	He	0.076	0.076	13.42	40	0.19	4000	
Sn	118	115	1	He	0.530	0.530	9.72	819	0.06	2000	
Sb	123	115	1	He	0.081	0.081	44.42	132	0.06	200	
Ba	137	115	1	He	177.098	177.098	0.88	67682	0.26	10000	
W	182	159	1	He	0.130	0.130	9.54	2208	0.01	2500	
Tl	205	165	1	He	0.046	0.046	14.15	453	0.01	2000	
Pb	208	165	1	He	9.550	9.550	1.25	113752	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2188955	1.55	1884762	116.14	60	120	
Sc	45	1	He	143449	0.94	134073	106.99	60	120	
Sc	45	2	NoGas	9568334	1.03	8481025	112.82	60	120	
Rh	103	1	He	900945	1.09	903580	99.71	60	120	
In	115	1	He	229240	1.41	224817	101.97	60	120	
Tb	159	1	He	1088995	1.38	1046002	104.11	60	120	
Ho	165	1	He	1099555	1.56	1057439	103.98	60	120	
Bi	209	1	He	715801	0.33	731380	97.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-4-a
Data File Name	063SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:03:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.630	18.630	1.48	598519	0.00	10000	
Be	9	45	2	NoGas	0.107	0.107	15.15	874	0.01	2000	
B	11	45	2	NoGas	89.864	89.864	1.26	386501	0.02	300	
Na	23	45	1	He	91489.729	91489.729	1.27	39548527	0.23	500000	
Mg	24	45	1	He	30940.711	30940.711	1.51	7431367	0.42	500000	
Al	27	45	1	He	6.907	6.907	4.82	813	0.85	200000	
K	39	45	1	He	9448.162	9448.162	0.73	1088210	0.87	500000	
Ca	44	45	1	He	153164.952	153164.952	1.65	1024214	14.95	500000	
Ti	47	45	1	He	0.300	0.300	48.69	14	2.07	2500	
V	51	45	1	He	0.793	0.793	29.78	1430	0.06	10000	
Cr	52	45	1	He	1.399	1.399	2.70	3727	0.04	10000	
Mn	55	45	1	He	468.170	468.170	0.88	495086	0.09	10000	
Fe	56	45	1	He	9383.005	9383.005	1.55	15356790	0.06	200000	
Co	59	45	1	He	1.216	1.216	3.85	5082	0.02	5000	
Ni	60	45	1	He	30.371	30.371	2.17	33407	0.09	10000	
Cu	63	45	1	He	7.025	7.025	1.87	24353	0.03	10000	
Zn	66	45	1	He	170.644	170.644	1.23	67584	0.25	10000	
As	75	103	1	He	3.185	3.185	3.80	733	0.43	10000	
Se	78	115	1	He	0.516	0.516	5.74	8	6.35	10000	
Sr	88	103	1	He	1615.172	1615.172	0.95	1603806	0.10	10000	
Mo	95	103	1	He	4.161	4.161	1.63	5161	0.08	2000	
Ag	107	103	1	He	0.003	0.003	55.62	23	0.01	300	
Cd	111	115	1	He	0.016	0.016	109.55	10	0.16	4000	
Sn	118	115	1	He	0.453	0.453	44.35	741	0.06	2000	
Sb	123	115	1	He	0.147	0.147	14.33	202	0.07	200	
Ba	137	115	1	He	160.967	160.967	0.55	61277	0.26	10000	
W	182	159	1	He	0.069	0.069	46.63	1867	0.00	2500	
Tl	205	165	1	He	0.004	0.004	31.98	82	0.01	2000	
Pb	208	165	1	He	6.182	6.182	1.33	74589	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2187935	1.07	1884762	116.09	60	120	
Sc	45	1	He	147358	1.27	134073	109.91	60	120	
Sc	45	2	NoGas	9418588	0.81	8481025	111.05	60	120	
Rh	103	1	He	900217	0.74	903580	99.63	60	120	
In	115	1	He	228333	0.66	224817	101.56	60	120	
Tb	159	1	He	1090462	1.12	1046002	104.25	60	120	
Ho	165	1	He	1107075	0.33	1057439	104.69	60	120	
Bi	209	1	He	722253	1.17	731380	98.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-5-a
Data File Name	064SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:08:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.054	18.054	0.92	562889	0.00	10000	
Be	9	45	2	NoGas	0.103	0.103	10.78	815	0.01	2000	
B	11	45	2	NoGas	85.201	85.201	0.01	353709	0.02	300	
Na	23	45	1	He	100884.616	100884.616	1.07	41545939	0.24	500000	
Mg	24	45	1	He	30448.094	30448.094	0.54	6967429	0.44	500000	
Al	27	45	1	He	8.624	8.624	7.00	939	0.92	200000	
K	39	45	1	He	9220.150	9220.150	0.90	1011908	0.91	500000	
Ca	44	45	1	He	149308.502	149308.502	0.96	951238	15.70	500000	
Ti	47	45	1	He	0.436	0.436	93.39	20	2.18	2500	
V	51	45	1	He	1.440	1.440	18.60	2422	0.06	10000	
Cr	52	45	1	He	2.333	2.333	4.07	5450	0.04	10000	
Mn	55	45	1	He	453.720	453.720	1.11	457097	0.10	10000	
Fe	56	45	1	He	12768.662	12768.662	0.73	19909381	0.06	200000	
Co	59	45	1	He	1.712	1.712	2.56	6685	0.03	5000	
Ni	60	45	1	He	34.170	34.170	4.11	35786	0.10	10000	
Cu	63	45	1	He	38.149	38.149	1.01	114784	0.03	10000	
Zn	66	45	1	He	176.424	176.424	0.81	66566	0.27	10000	
As	75	103	1	He	6.047	6.047	2.80	1320	0.46	10000	
Se	78	115	1	He	0.543	0.543	53.89	8	6.68	10000	
Sr	88	103	1	He	1492.525	1492.525	1.44	1421901	0.10	10000	
Mo	95	103	1	He	4.098	4.098	3.71	4875	0.08	2000	
Ag	107	103	1	He	0.007	0.007	26.49	39	0.02	300	
Cd	111	115	1	He	0.018	0.018	35.82	10	0.17	4000	
Sn	118	115	1	He	0.633	0.633	6.68	885	0.07	2000	
Sb	123	115	1	He	0.153	0.153	0.85	202	0.08	200	
Ba	137	115	1	He	161.569	161.569	0.64	59516	0.27	10000	
W	182	159	1	He	0.083	0.083	49.91	1896	0.00	2500	
Tl	205	165	1	He	0.011	0.011	54.06	137	0.01	2000	
Pb	208	165	1	He	5.696	5.696	1.37	66261	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2099837	0.54	1884762	111.41	60	120	
Sc	45	1	He	140381	0.83	134073	104.70	60	120	
Sc	45	2	NoGas	9078157	1.04	8481025	107.04	60	120	
Rh	103	1	He	863679	0.18	903580	95.58	60	120	
In	115	1	He	220949	0.68	224817	98.28	60	120	
Tb	159	1	He	1060718	0.73	1046002	101.41	60	120	
Ho	165	1	He	1065895	0.98	1057439	100.80	60	120	
Bi	209	1	He	693399	0.57	731380	94.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-b-6-a
Data File Name	065SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:12:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.363	13.363	1.00	443035	0.00	10000	
Be	9	45	2	NoGas	0.114	0.114	7.32	870	0.01	2000	
B	11	45	2	NoGas	83.832	83.832	1.00	343559	0.02	300	
Na	23	45	1	He	40598.029	40598.029	1.14	16040775	0.25	500000	
Mg	24	45	1	He	30632.868	30632.868	1.44	6723831	0.46	500000	
Al	27	45	1	He	7.544	7.544	9.13	801	0.94	200000	
K	39	45	1	He	8887.571	8887.571	2.44	935903	0.95	500000	
Ca	44	45	1	He	149990.950	149990.950	2.08	916589	16.36	500000	
Ti	47	45	1	He	0.605	0.605	67.36	27	2.27	2500	
V	51	45	1	He	1.252	1.252	26.52	2034	0.06	10000	
Cr	52	45	1	He	1.782	1.782	3.95	4153	0.04	10000	
Mn	55	45	1	He	426.713	426.713	1.56	412376	0.10	10000	
Fe	56	45	1	He	14263.656	14263.656	0.98	21334188	0.07	200000	
Co	59	45	1	He	1.931	1.931	3.09	7194	0.03	5000	
Ni	60	45	1	He	317.606	317.606	1.48	317924	0.10	10000	
Cu	63	45	1	He	18.097	18.097	1.95	53513	0.03	10000	
Zn	66	45	1	He	277.823	277.823	1.25	100465	0.28	10000	
As	75	103	1	He	5.874	5.874	3.99	1265	0.46	10000	
Se	78	115	1	He	0.601	0.601	38.96	8	7.11	10000	
Sr	88	103	1	He	1415.608	1415.608	1.25	1330443	0.11	10000	
Mo	95	103	1	He	3.614	3.614	5.37	4244	0.09	2000	
Ag	107	103	1	He	0.007	0.007	35.66	36	0.02	300	
Cd	111	115	1	He	0.115	0.115	12.81	57	0.20	4000	
Sn	118	115	1	He	1.643	1.643	11.23	1774	0.09	2000	
Sb	123	115	1	He	0.203	0.203	19.89	248	0.08	200	
Ba	137	115	1	He	162.807	162.807	1.26	58225	0.28	10000	
W	182	159	1	He	0.090	0.090	66.33	1874	0.00	2500	
Tl	205	165	1	He	0.012	0.012	16.43	143	0.01	2000	
Pb	208	165	1	He	9.496	9.496	0.84	107449	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2062020	0.42	1884762	109.40	60	120	
Sc	45	1	He	134668	1.23	134073	100.44	60	120	
Sc	45	2	NoGas	8958385	1.21	8481025	105.63	60	120	
Rh	103	1	He	852090	0.61	903580	94.30	60	120	
In	115	1	He	214518	0.57	224817	95.42	60	120	
Tb	159	1	He	1029159	0.30	1046002	98.39	60	120	
Ho	165	1	He	1044286	0.25	1057439	98.76	60	120	
Bi	209	1	He	676131	0.94	731380	92.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64303-e-1-a
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:16:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.246	3.246	2.42	199218	0.00	10000	
Be	9	45	2	NoGas	0.086	0.086	10.29	693	0.01	2000	
B	11	45	2	NoGas	92.679	92.679	1.20	376327	0.02	300	
Na	23	45	1	He	553129.477	553129.477	1.27	215797184	0.26	500000	>LDR
Mg	24	45	1	He	14303.526	14303.526	1.94	3101258	0.46	500000	
Al	27	45	1	He	20.827	20.827	2.41	1991	1.05	200000	
K	39	45	1	He	13194.328	13194.328	0.48	1368207	0.96	500000	
Ca	44	45	1	He	63035.859	63035.859	1.76	380606	16.56	500000	
Ti	47	45	1	He	0.152	0.152	86.62	7	2.29	2500	
V	51	45	1	He	0.277	0.277	63.47	486	0.06	10000	
Cr	52	45	1	He	0.126	0.126	8.43	912	0.01	10000	
Mn	55	45	1	He	14.713	14.713	0.79	14175	0.10	10000	
Fe	56	45	1	He	78.623	78.623	2.19	118113	0.07	200000	
Co	59	45	1	He	0.833	0.833	3.42	3237	0.03	5000	
Ni	60	45	1	He	2.160	2.160	8.14	2278	0.09	10000	
Cu	63	45	1	He	5.034	5.034	12.47	16433	0.03	10000	
Zn	66	45	1	He	9.499	9.499	8.93	3533	0.27	10000	
As	75	103	1	He	0.358	0.358	6.29	88	0.41	10000	
Se	78	115	1	He	0.630	0.630	9.57	8	7.45	10000	
Sr	88	103	1	He	237.312	237.312	0.59	210918	0.11	10000	
Mo	95	103	1	He	0.878	0.878	17.41	986	0.09	2000	
Ag	107	103	1	He	0.003	0.003	40.57	19	0.02	300	
Cd	111	115	1	He	0.017	0.017	39.08	9	0.18	4000	
Sn	118	115	1	He	0.135	0.135	62.73	396	0.03	2000	
Sb	123	115	1	He	1.109	1.109	6.19	1137	0.10	200	
Ba	137	115	1	He	35.326	35.326	4.58	12251	0.29	10000	
W	182	159	1	He	1.029	1.029	37.05	6598	0.02	2500	
Tl	205	165	1	He	0.007	0.007	44.15	94	0.01	2000	
Pb	208	165	1	He	0.388	0.388	4.32	5274	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1959430	0.86	1884762	103.96	60	120	
Sc	45	1	He	133006	1.29	134073	99.20	60	120	
Sc	45	2	NoGas	8898410	0.23	8481025	104.92	60	120	
Rh	103	1	He	805602	1.58	903580	89.16	60	120	
In	115	1	He	207946	1.25	224817	92.50	60	120	
Tb	159	1	He	989155	1.09	1046002	94.57	60	120	
Ho	165	1	He	998111	0.66	1057439	94.39	60	120	
Bi	209	1	He	630293	0.55	731380	86.18	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-d-1-b
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:20:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.514	17.514	0.60	536656	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	14.70	763	0.01	2000	
B	11	45	2	NoGas	80.870	80.870	1.05	328185	0.02	300	
Na	23	45	1	He	86425.746	86425.746	2.21	35131068	0.25	500000	
Mg	24	45	1	He	29306.300	29306.300	1.87	6619187	0.44	500000	
Al	27	45	1	He	0.939	0.939	43.37	203	0.46	200000	
K	39	45	1	He	8937.909	8937.909	1.14	968553	0.92	500000	
Ca	44	45	1	He	144367.010	144367.010	1.31	907899	15.90	500000	
Ti	47	45	1	He	0.244	0.244	16.26	11	2.19	2500	
V	51	45	1	He	0.235	0.235	138.06	434	0.05	10000	
Cr	52	45	1	He	0.756	0.756	10.71	2214	0.03	10000	
Mn	55	45	1	He	439.597	439.597	1.11	437165	0.10	10000	
Fe	56	45	1	He	48.050	48.050	2.17	76006	0.06	200000	
Co	59	45	1	He	0.564	0.564	7.47	2389	0.02	5000	
Ni	60	45	1	He	61.700	61.700	1.95	63673	0.10	10000	
Cu	63	45	1	He	4.409	4.409	4.15	15308	0.03	10000	
Zn	66	45	1	He	61.162	61.162	2.12	22878	0.27	10000	
As	75	103	1	He	1.949	1.949	1.34	430	0.45	10000	
Se	78	115	1	He	0.333	0.333	31.25	6	5.57	10000	
Sr	88	103	1	He	1442.673	1442.673	1.34	1354311	0.11	10000	
Mo	95	103	1	He	3.947	3.947	2.85	4627	0.09	2000	
Ag	107	103	1	He	0.004	0.004	84.88	23	0.02	300	
Cd	111	115	1	He	0.008	0.008	63.95	6	0.15	4000	
Sn	118	115	1	He	-0.014	-0.014	-471.06	278	-0.01	2000	
Sb	123	115	1	He	0.232	0.232	12.79	281	0.08	200	
Ba	137	115	1	He	132.053	132.053	1.39	47971	0.28	10000	
W	182	159	1	He	1.185	1.185	10.23	7639	0.02	2500	
Tl	205	165	1	He	0.004	0.004	112.10	73	0.01	2000	
Pb	208	165	1	He	0.001	0.001	971.91	1171	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1994838	0.73	1884762	105.84	60	120	
Sc	45	1	He	138573	0.98	134073	103.36	60	120	
Sc	45	2	NoGas	8861220	0.67	8481025	104.48	60	120	
Rh	103	1	He	851142	1.40	903580	94.20	60	120	
In	115	1	He	217897	0.74	224817	96.92	60	120	
Tb	159	1	He	1023506	0.16	1046002	97.85	60	120	
Ho	165	1	He	1029986	0.73	1057439	97.40	60	120	
Bi	209	1	He	677629	0.84	731380	92.65	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-d-2-b
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:24:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	19.634	19.634	1.16	608483	0.00	10000	
Be	9	45	2	NoGas	0.060	0.060	21.76	544	0.01	2000	
B	11	45	2	NoGas	80.780	80.780	0.83	339849	0.02	300	
Na	23	45	1	He	85858.520	85858.520	1.47	34891385	0.25	500000	
Mg	24	45	1	He	30971.272	30971.272	1.59	6993346	0.44	500000	
Al	27	45	1	He	8.709	8.709	17.42	933	0.93	200000	
K	39	45	1	He	9416.237	9416.237	1.46	1019575	0.92	500000	
Ca	44	45	1	He	151990.606	151990.606	1.97	955494	15.91	500000	
Ti	47	45	1	He	0.194	0.194	86.60	9	2.19	2500	
V	51	45	1	He	0.365	0.365	92.14	649	0.06	10000	
Cr	52	45	1	He	0.681	0.681	6.70	2065	0.03	10000	
Mn	55	45	1	He	509.274	509.274	0.96	506285	0.10	10000	
Fe	56	45	1	He	230.429	230.429	2.14	356552	0.06	200000	
Co	59	45	1	He	0.976	0.976	4.62	3896	0.03	5000	
Ni	60	45	1	He	11.193	11.193	2.83	11668	0.10	10000	
Cu	63	45	1	He	2.150	2.150	7.54	8741	0.02	10000	
Zn	66	45	1	He	9421.109	9421.109	1.66	3499545	0.27	10000	
As	75	103	1	He	0.902	0.902	5.76	209	0.43	10000	
Se	78	115	1	He	0.396	0.396	15.53	7	5.97	10000	
Sr	88	103	1	He	1596.232	1596.232	2.96	1503649	0.11	10000	
Mo	95	103	1	He	4.405	4.405	2.16	5181	0.09	2000	
Ag	107	103	1	He	0.008	0.008	57.56	40	0.02	300	
Cd	111	115	1	He	0.005	0.005	130.65	4	0.12	4000	
Sn	118	115	1	He	0.511	0.511	25.26	767	0.07	2000	
Sb	123	115	1	He	0.191	0.191	18.86	240	0.08	200	
Ba	137	115	1	He	142.818	142.818	2.27	52269	0.27	10000	
W	182	159	1	He	0.934	0.934	8.42	6379	0.01	2500	
Tl	205	165	1	He	0.000	0.000	428.93	42	0.00	2000	
Pb	208	165	1	He	0.040	0.040	21.00	1635	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2058134	2.41	1884762	109.20	60	120	
Sc	45	1	He	138530	0.94	134073	103.32	60	120	
Sc	45	2	NoGas	9186909	0.81	8481025	108.32	60	120	
Rh	103	1	He	853924	0.77	903580	94.50	60	120	
In	115	1	He	219527	1.17	224817	97.65	60	120	
Tb	159	1	He	1033191	1.17	1046002	98.78	60	120	
Ho	165	1	He	1049786	1.39	1057439	99.28	60	120	
Bi	209	1	He	679913	0.61	731380	92.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-4-b
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:29:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.599	17.599	2.20	551474	0.00	10000	
Be	9	45	2	NoGas	0.057	0.057	24.23	522	0.01	2000	
B	11	45	2	NoGas	82.758	82.758	2.25	343584	0.02	300	
Na	23	45	1	He	85350.963	85350.963	1.82	35060318	0.24	500000	
Mg	24	45	1	He	29071.981	29071.981	0.84	6635891	0.44	500000	
Al	27	45	1	He	0.600	0.600	78.24	173	0.35	200000	
K	39	45	1	He	8851.481	8851.481	1.19	969365	0.91	500000	
Ca	44	45	1	He	142639.060	142639.060	1.45	906457	15.74	500000	
Ti	47	45	1	He	0.266	0.266	42.04	12	2.18	2500	
V	51	45	1	He	0.139	0.139	85.33	284	0.05	10000	
Cr	52	45	1	He	0.818	0.818	6.13	2365	0.03	10000	
Mn	55	45	1	He	433.179	433.179	1.32	435316	0.10	10000	
Fe	56	45	1	He	34.517	34.517	0.62	55765	0.06	200000	
Co	59	45	1	He	1.182	1.182	4.57	4705	0.03	5000	
Ni	60	45	1	He	20.589	20.589	2.12	21572	0.10	10000	
Cu	63	45	1	He	1.626	1.626	1.35	7295	0.02	10000	
Zn	66	45	1	He	19.951	19.951	2.98	7645	0.26	10000	
As	75	103	1	He	1.229	1.229	3.95	281	0.44	10000	
Se	78	115	1	He	0.306	0.306	82.42	6	5.28	10000	
Sr	88	103	1	He	1425.438	1425.438	1.04	1355018	0.11	10000	
Mo	95	103	1	He	4.022	4.022	4.21	4775	0.08	2000	
Ag	107	103	1	He	0.000	0.000	692.96	9	0.00	300	
Cd	111	115	1	He	0.002	0.002	166.77	3	0.08	4000	
Sn	118	115	1	He	-0.078	-0.078	-92.76	222	-0.04	2000	
Sb	123	115	1	He	0.245	0.245	19.75	299	0.08	200	
Ba	137	115	1	He	125.483	125.483	1.69	46219	0.27	10000	
W	182	159	1	He	0.818	0.818	24.10	5872	0.01	2500	
Tl	205	165	1	He	-0.001	-0.001	-90.91	28	-0.01	2000	
Pb	208	165	1	He	-0.007	-0.007	-82.61	1110	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2109920	0.58	1884762	111.95	60	120	
Sc	45	1	He	140029	0.79	134073	104.44	60	120	
Sc	45	2	NoGas	9072576	0.88	8481025	106.98	60	120	
Rh	103	1	He	861833	0.62	903580	95.38	60	120	
In	115	1	He	220905	1.34	224817	98.26	60	120	
Tb	159	1	He	1053967	1.01	1046002	100.76	60	120	
Ho	165	1	He	1051121	0.67	1057439	99.40	60	120	
Bi	209	1	He	688658	0.17	731380	94.16	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-5-b
Data File Name	070SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:33:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	18.013	18.013	1.16	568277	0.00	10000	
Be	9	45	2	NoGas	0.057	0.057	11.99	526	0.01	2000	
B	11	45	2	NoGas	83.262	83.262	0.31	349773	0.02	300	
Na	23	45	1	He	100670.240	100670.240	1.83	40935672	0.25	500000	
Mg	24	45	1	He	29977.804	29977.804	1.90	6773500	0.44	500000	
Al	27	45	1	He	6.275	6.275	2.86	706	0.89	200000	
K	39	45	1	He	9249.657	9249.657	1.72	1002324	0.92	500000	
Ca	44	45	1	He	145334.754	145334.754	0.98	914359	15.89	500000	
Ti	47	45	1	He	0.242	0.242	74.11	11	2.18	2500	
V	51	45	1	He	0.392	0.392	35.35	692	0.06	10000	
Cr	52	45	1	He	0.857	0.857	4.52	2420	0.04	10000	
Mn	55	45	1	He	436.651	436.651	1.36	434417	0.10	10000	
Fe	56	45	1	He	48.146	48.146	0.42	76194	0.06	200000	
Co	59	45	1	He	1.651	1.651	4.40	6373	0.03	5000	
Ni	60	45	1	He	27.898	27.898	1.44	28884	0.10	10000	
Cu	63	45	1	He	4.670	4.670	3.78	16066	0.03	10000	
Zn	66	45	1	He	91.725	91.725	0.91	34248	0.27	10000	
As	75	103	1	He	1.150	1.150	1.12	265	0.43	10000	
Se	78	115	1	He	0.378	0.378	38.10	6	5.84	10000	
Sr	88	103	1	He	1420.214	1420.214	1.16	1356055	0.10	10000	
Mo	95	103	1	He	4.022	4.022	1.93	4796	0.08	2000	
Ag	107	103	1	He	0.000	0.000	3196.75	8	0.00	300	
Cd	111	115	1	He	0.014	0.014	25.58	9	0.17	4000	
Sn	118	115	1	He	0.087	0.087	70.56	374	0.02	2000	
Sb	123	115	1	He	0.283	0.283	15.50	338	0.08	200	
Ba	137	115	1	He	129.530	129.530	1.65	47569	0.27	10000	
W	182	159	1	He	0.649	0.649	4.78	4886	0.01	2500	
Tl	205	165	1	He	0.004	0.004	34.23	72	0.01	2000	
Pb	208	165	1	He	0.000	0.000	-976.21	1191	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136729	1.57	1884762	113.37	60	120	
Sc	45	1	He	138634	1.81	134073	103.40	60	120	
Sc	45	2	NoGas	9180606	0.12	8481025	108.25	60	120	
Rh	103	1	He	865582	0.80	903580	95.79	60	120	
In	115	1	He	220263	1.36	224817	97.97	60	120	
Tb	159	1	He	1039742	0.76	1046002	99.40	60	120	
Ho	165	1	He	1057813	0.87	1057439	100.04	60	120	
Bi	209	1	He	689671	0.57	731380	94.30	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	071_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:37:29-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.207	2.453	1365845	1.98	50	106.4	89.5	110.5	
Be	9	45	2	NoGas	52.536	1.765	324759	1.34	50	105.1	89.5	110.5	
B	11	45	2	NoGas	59.572	0.274	241153	0.55	50	119.1	89.5	110.5	CCV Failed
Na	23	45	1	He	26099.168	1.131	10328563	0.20	25000	104.4	89.5	110.5	
Mg	24	45	1	He	25798.716	0.713	5671300	0.26	25000	103.2	89.5	110.5	
Al	27	45	1	He	253.650	0.887	23344	0.36	250	101.5	89.5	110.5	
K	39	45	1	He	25895.289	1.442	2713931	0.52	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25509.167	0.805	156286	0.25	25000	102.0	89.5	110.5	
Ti	47	45	1	He	51.437	2.967	2279	2.20	50	102.9	89.5	110.5	
V	51	45	1	He	49.700	2.935	78577	2.01	50	99.4	89.5	110.5	
Cr	52	45	1	He	50.990	1.383	100263	0.74	50	102.0	89.5	110.5	
Mn	55	45	1	He	255.922	1.493	247738	0.76	250	102.4	89.5	110.5	
Fe	56	45	1	He	12784.261	1.971	19147976	1.04	12500	102.3	89.5	110.5	
Co	59	45	1	He	50.943	1.877	182106	1.25	50	101.9	89.5	110.5	
Ni	60	45	1	He	50.591	1.395	50837	0.93	50	101.2	89.5	110.5	
Cu	63	45	1	He	51.478	0.971	147952	0.94	50	103.0	89.5	110.5	
Zn	66	45	1	He	50.922	2.169	18562	1.93	50	101.8	89.5	110.5	
As	75	103	1	He	50.195	0.605	10839	0.95	50	100.4	89.5	110.5	
Se	78	115	1	He	51.411	1.508	502	0.99	50	102.8	89.5	110.5	
Sr	88	103	1	He	50.105	1.086	47804	0.80	50	100.2	89.5	110.5	
Mo	95	103	1	He	52.440	1.560	62286	1.43	50	104.9	89.5	110.5	
Ag	107	103	1	He	50.560	0.312	222013	0.37	50	101.1	89.5	110.5	
Cd	111	115	1	He	51.026	0.683	24756	0.37	50	102.1	89.5	110.5	
Sn	118	115	1	He	49.134	1.076	45447	0.37	50	98.3	89.5	110.5	
Sb	123	115	1	He	51.040	1.468	52875	1.01	50	102.1	89.5	110.5	
Ba	137	115	1	He	50.625	0.918	18370	0.19	50	101.3	89.5	110.5	
W	182	159	1	He	51.804	1.034	278374	0.94	50	103.6	89.5	110.5	
Tl	205	165	1	He	49.567	1.070	423858	1.25	50	99.1	89.5	110.5	
Pb	208	165	1	He	49.736	0.224	558803	0.28	50	99.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2042567	0.47	1884762	108.37	60	120	
Sc	45	1	He	134859	0.95	134073	100.59	60	120	
Sc	45	2	NoGas	8752072	0.75	8481025	103.20	60	120	
Rh	103	1	He	864314	0.39	903580	95.65	60	120	
In	115	1	He	217616	1.02	224817	96.80	60	120	
Tb	159	1	He	1037985	0.12	1046002	99.23	60	120	
Ho	165	1	He	1046230	0.24	1057439	98.94	60	120	
Bi	209	1	He	700481	0.74	731380	95.78	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	072_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:41:40-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.365	16.3	131852	1.6	8	
Be	9	45	2	NoGas	0.084	11.4	685	8.2	1	
B	11	45	2	NoGas	8.488	3.2	43244	1.7	20	
Na	23	45	1	He	63.654	5.1	30382	4.0	1000	
Mg	24	45	1	He	17.003	1.9	4471	1.3	1000	
Al	27	45	1	He	0.160	183.0	129	20.9	50	
K	39	45	1	He	24.189	11.6	11693	3.3	1000	
Ca	44	45	1	He	22.124	28.5	335	12.4	1000	
Ti	47	45	1	He	0.050	173.2	2	173.2	20	
V	51	45	1	He	0.046	137.2	130	79.1	2	
Cr	52	45	1	He	0.040	119.3	774	13.2	2	
Mn	55	45	1	He	0.183	19.4	319	11.7	2	
Fe	56	45	1	He	9.394	8.4	16409	7.5	50	
Co	59	45	1	He	-0.019	-72.7	250	19.4	1	
Ni	60	45	1	He	-0.045	-44.4	101	19.9	2	
Cu	63	45	1	He	0.448	13.4	3773	4.0	2	
Zn	66	45	1	He	0.933	22.2	496	15.3	20	
As	75	103	1	He	0.104	23.6	41	15.0	2	
Se	78	115	1	He	0.294	22.9	6	9.9	2	
Sr	88	103	1	He	0.211	6.8	249	5.4	10	
Mo	95	103	1	He	0.154	27.1	204	24.2	2	
Ag	107	103	1	He	0.036	7.2	172	6.8	0.2	
Cd	111	115	1	He	0.051	18.6	27	19.6	0.2	
Sn	118	115	1	He	0.271	41.9	559	18.0	10	
Sb	123	115	1	He	0.053	48.4	99	25.7	2	
Ba	137	115	1	He	0.020	39.4	13	25.0	5	
W	182	159	1	He	0.756	9.5	5468	4.5	10	
Tl	205	165	1	He	0.070	7.5	644	5.2	0.5	
Pb	208	165	1	He	0.023	65.4	1447	9.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2141723	1.23	1884762	113.63	60	120	
Sc	45	1	He	137613	0.84	134073	102.64	60	120	
Sc	45	2	NoGas	8982280	0.94	8481025	105.91	60	120	
Rh	103	1	He	903898	1.37	903580	100.04	60	120	
In	115	1	He	226174	2.26	224817	100.60	60	120	
Tb	159	1	He	1042500	2.73	1046002	99.67	60	120	
Ho	165	1	He	1055163	2.52	1057439	99.78	60	120	
Bi	209	1	He	722287	1.13	731380	98.76	60	120	

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Sample Report

Sample Table

Sample Name	240-64288-a-6-b
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:45:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.622	13.622	1.26	447363	0.00	10000	
Be	9	45	2	NoGas	0.067	0.067	5.28	574	0.01	2000	
B	11	45	2	NoGas	76.539	76.539	1.64	313166	0.02	300	
Na	23	45	1	He	38553.276	38553.276	0.77	15221669	0.25	500000	
Mg	24	45	1	He	29095.305	29095.305	1.46	6381397	0.46	500000	
Al	27	45	1	He	0.591	0.591	29.09	166	0.36	200000	
K	39	45	1	He	8416.285	8416.285	0.75	886185	0.95	500000	
Ca	44	45	1	He	142858.145	142858.145	0.57	872430	16.37	500000	
Ti	47	45	1	He	0.201	0.201	86.64	9	2.26	2500	
V	51	45	1	He	0.303	0.303	63.57	529	0.06	10000	
Cr	52	45	1	He	0.759	0.759	5.73	2158	0.04	10000	
Mn	55	45	1	He	388.840	388.840	1.30	375494	0.10	10000	
Fe	56	45	1	He	39.705	39.705	0.71	61341	0.06	200000	
Co	59	45	1	He	1.775	1.775	3.39	6631	0.03	5000	
Ni	60	45	1	He	454.182	454.182	0.86	454232	0.10	10000	
Cu	63	45	1	He	3.615	3.615	5.41	12617	0.03	10000	
Zn	66	45	1	He	178.425	178.425	1.61	64523	0.28	10000	
As	75	103	1	He	1.326	1.326	14.76	299	0.44	10000	
Se	78	115	1	He	0.174	0.174	195.62	4	3.89	10000	
Sr	88	103	1	He	1339.957	1339.957	0.80	1261539	0.11	10000	
Mo	95	103	1	He	3.375	3.375	5.66	3968	0.09	2000	
Ag	107	103	1	He	0.005	0.005	92.26	27	0.02	300	
Cd	111	115	1	He	0.050	0.050	19.92	26	0.19	4000	
Sn	118	115	1	He	0.083	0.083	172.43	367	0.02	2000	
Sb	123	115	1	He	0.233	0.233	17.57	283	0.08	200	
Ba	137	115	1	He	123.180	123.180	2.31	44788	0.28	10000	
W	182	159	1	He	0.499	0.499	5.99	4078	0.01	2500	
Tl	205	165	1	He	0.016	0.016	20.78	179	0.01	2000	
Pb	208	165	1	He	0.002	0.002	315.49	1200	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2112394	0.78	1884762	112.08	60	120	
Sc	45	1	He	134564	1.61	134073	100.37	60	120	
Sc	45	2	NoGas	8920999	0.71	8481025	105.19	60	120	
Rh	103	1	He	853614	1.85	903580	94.47	60	120	
In	115	1	He	218149	2.16	224817	97.03	60	120	
Tb	159	1	He	1037046	1.52	1046002	99.14	60	120	
Ho	165	1	He	1040114	1.26	1057439	98.36	60	120	
Bi	209	1	He	692777	1.06	731380	94.72	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228610/1-a
Data File Name	074_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:50:06-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.368	11.2	135636	0.7	8	
Be	9	45	2	NoGas	0.044	14.1	444	9.0	1	
B	11	45	2	NoGas	9.058	2.7	46812	1.5	20	
Na	23	45	1	He	106.249	3.8	49103	0.8	1000	
Mg	24	45	1	He	121.066	3.4	28705	0.9	1000	
Al	27	45	1	He	4.147	3.0	518	1.3	50	
K	39	45	1	He	23.218	31.7	11956	5.3	1000	
Ca	44	45	1	He	396.977	3.8	2761	0.9	1000	
Ti	47	45	1	He	0.095	86.7	4	86.6	20	
V	51	45	1	He	-0.011	-687.6	41	307.5	2	
Cr	52	45	1	He	0.034	146.2	784	11.4	2	
Mn	55	45	1	He	0.848	4.4	1007	1.1	2	
Fe	56	45	1	He	7.039	4.9	13218	2.2	50	
Co	59	45	1	He	-0.051	-25.9	137	34.1	1	
Ni	60	45	1	He	0.044	82.8	199	19.9	2	
Cu	63	45	1	He	0.610	12.2	4379	6.0	2	
Zn	66	45	1	He	6.140	3.8	2497	5.4	20	
As	75	103	1	He	0.075	51.6	36	24.2	2	
Se	78	115	1	He	0.284	44.6	6	22.1	2	
Sr	88	103	1	He	1.144	7.2	1231	8.2	10	
Mo	95	103	1	He	0.061	29.6	92	24.1	2	
Ag	107	103	1	He	0.003	82.4	24	55.1	0.2	
Cd	111	115	1	He	0.009	132.3	6	95.3	0.2	
Sn	118	115	1	He	0.243	50.2	559	21.8	10	
Sb	123	115	1	He	0.000	-32065.6	44	24.1	2	
Ba	137	115	1	He	1.097	5.5	439	5.3	5	
W	182	159	1	He	0.453	1.9	3986	1.2	10	
Tl	205	165	1	He	0.003	118.3	66	44.4	0.5	
Pb	208	165	1	He	0.014	49.5	1379	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2162429	2.05	1884762	114.73	60	120	
Sc	45	1	He	142108	2.74	134073	105.99	60	120	
Sc	45	2	NoGas	9236279	0.91	8481025	108.91	60	120	
Rh	103	1	He	942834	1.32	903580	104.34	60	120	
In	115	1	He	236887	0.65	224817	105.37	60	120	
Tb	159	1	He	1079377	1.01	1046002	103.19	60	120	
Ho	165	1	He	1077934	0.57	1057439	101.94	60	120	
Bi	209	1	He	764871	1.51	731380	104.58	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228610/3-a
Data File Name	075_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:54:20-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	103.852	103.852	1.820	2600601	1.02	100	103.9	84.5	115.5	
Be	9	2	NoGas	1087.696	1087.696	1.376	6849549	0.34	1000	108.8	84.5	115.5	
B	11	2	NoGas	110.562	110.562	1.577	448192	0.51	100	110.6	84.5	115.5	
Na	23	1	He	9910.744	9910.744	1.344	3942753	0.33	10000	99.1	84.5	115.5	
Mg	24	1	He	10085.876	10085.876	2.425	2227390	1.41	10000	100.9	84.5	115.5	
Al	27	1	He	9542.499	9542.499	2.012	878025	0.99	10000	95.4	84.5	115.5	
K	39	1	He	9593.397	9593.397	1.598	1015642	0.74	10000	95.9	84.5	115.5	
Ca	44	1	He	9997.599	9997.599	2.154	61643	1.32	10000	100.0	84.5	115.5	
Ti	47	1	He	92.241	92.241	2.289	4106	2.23	100	92.2	84.5	115.5	
V	51	1	He	1019.260	1019.260	2.206	1617851	1.57	1000	101.9	84.5	115.5	
Cr	52	1	He	1007.607	1007.607	1.353	1977476	0.53	1000	100.8	84.5	115.5	
Mn	55	1	He	954.936	954.936	1.934	928198	0.98	1000	95.5	84.5	115.5	
Fe	56	1	He	9638.058	9638.058	2.447	14501293	1.42	10000	96.4	84.5	115.5	
Co	59	1	He	1010.428	1010.428	0.855	3622659	0.18	1000	101.0	84.5	115.5	
Ni	60	1	He	968.186	968.186	1.077	974689	0.19	1000	96.8	84.5	115.5	
Cu	63	1	He	1003.616	1003.616	2.503	2852079	1.60	1000	100.4	84.5	115.5	
Zn	66	1	He	972.252	972.252	1.315	353312	0.33	1000	97.2	84.5	115.5	
As	75	1	He	926.145	926.145	0.624	203190	0.67	1000	92.6	84.5	115.5	
Se	78	1	He	962.065	962.065	0.994	9353	0.83	1000	96.2	84.5	115.5	
Sr	88	1	He	922.060	922.060	0.383	894474	0.34	1000	92.2	84.5	115.5	
Mo	95	1	He	98.551	98.551	2.042	119095	2.08	100	98.6	84.5	115.5	
Ag	107	1	He	95.839	95.839	0.434	428204	0.44	100	95.8	84.5	115.5	
Cd	111	1	He	991.019	991.019	2.245	480757	0.47	1000	99.1	84.5	115.5	
Sn	118	1	He	975.152	975.152	2.103	896506	0.37	1000	97.5	84.5	115.5	
Sb	123	1	He	97.338	97.338	2.843	100791	1.04	100	97.3	84.5	115.5	
Ba	137	1	He	973.913	973.913	1.858	353316	0.67	1000	97.4	84.5	115.5	
W	182	1	He	97.863	97.863	1.431	527895	1.29	100	97.9	84.5	115.5	
Tl	205	1	He	250.376	250.376	0.349	2156577	0.22	250	100.2	84.5	115.5	
Pb	208	1	He	997.990	997.990	0.609	11272530	0.18	1000	99.8	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2103867	1.17	1884762	111.63	60	120	
Sc	45	1	He	135473	1.03	134073	101.04	60	120	
Sc	45	2	NoGas	8919972	1.03	8481025	105.18	60	120	
Rh	103	1	He	879456	0.05	903580	97.33	60	120	
In	115	1	He	217657	1.81	224817	96.81	60	120	
Tb	159	1	He	1044479	0.77	1046002	99.85	60	120	
Ho	165	1	He	1053945	0.57	1057439	99.67	60	120	
Bi	209	1	He	710497	0.79	731380	97.14	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-a
Data File Name	076SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T16:58:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.224	25.224	0.55	727164	0.00	10000	
Be	9	45	2	NoGas	0.400	0.400	8.33	2678	0.01	2000	
B	11	45	2	NoGas	420.506	420.506	0.45	1685677	0.02	300	>LDR
Na	23	45	1	He	63024.524	63024.524	0.72	25070993	0.25	500000	
Mg	24	45	1	He	70737.462	70737.462	1.41	15633972	0.45	500000	
Al	27	45	1	He	2.438	2.438	13.67	337	0.72	200000	
K	39	45	1	He	2770.889	2770.889	1.01	299999	0.92	500000	
Ca	44	45	1	He	437431.901	437431.901	1.08	2691347	16.25	500000	
Ti	47	45	1	He	0.049	0.049	173.21	2	2.21	2500	
V	51	45	1	He	0.147	0.147	127.68	287	0.05	10000	
Cr	52	45	1	He	0.140	0.140	49.80	958	0.01	10000	
Mn	55	45	1	He	20.469	20.469	2.00	20047	0.10	10000	
Fe	56	45	1	He	904.578	904.578	1.27	1364289	0.07	200000	
Co	59	45	1	He	0.112	0.112	24.75	713	0.02	5000	
Ni	60	45	1	He	0.503	0.503	8.32	651	0.08	10000	
Cu	63	45	1	He	0.287	0.287	23.95	3258	0.01	10000	
Zn	66	45	1	He	1.410	1.410	14.66	662	0.21	10000	
As	75	103	1	He	0.638	0.638	13.09	149	0.43	10000	
Se	78	115	1	He	1.018	1.018	18.41	12	8.18	10000	
Sr	88	103	1	He	11913.335	11913.335	1.54	10932241	0.11	10000	>LDR
Mo	95	103	1	He	1.693	1.693	5.45	1947	0.09	2000	
Ag	107	103	1	He	0.015	0.015	29.06	71	0.02	300	
Cd	111	115	1	He	0.225	0.225	15.84	109	0.21	4000	
Sn	118	115	1	He	1.782	1.782	15.94	1900	0.09	2000	
Sb	123	115	1	He	0.218	0.218	12.99	262	0.08	200	
Ba	137	115	1	He	18.149	18.149	2.79	6492	0.28	10000	
W	182	159	1	He	0.868	0.868	10.78	5979	0.01	2500	
Tl	205	165	1	He	0.149	0.149	14.69	1313	0.01	2000	
Pb	208	165	1	He	0.083	0.083	25.15	2120	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2115106	1.39	1884762	112.22	60	120	
Sc	45	1	He	135585	1.23	134073	101.13	60	120	
Sc	45	2	NoGas	8955905	0.40	8481025	105.60	60	120	
Rh	103	1	He	832021	0.86	903580	92.08	60	120	
In	115	1	He	214399	0.23	224817	95.37	60	120	
Tb	159	1	He	1025187	0.59	1046002	98.01	60	120	
Ho	165	1	He	1049152	0.36	1057439	99.22	60	120	
Bi	209	1	He	667272	0.69	731380	91.23	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64103-r-1-a@5
Data File Name	077SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:02:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.528	5.528	1.63	272492	0.00	10000	
Be	9	45	2	NoGas	0.217	0.217	8.86	1630	0.01	2000	
B	11	45	2	NoGas	98.026	98.026	0.97	427219	0.02	300	
Na	23	45	1	He	13100.131	13100.131	0.48	5592979	0.23	500000	
Mg	24	45	1	He	14604.371	14604.371	0.82	3462219	0.42	500000	
Al	27	45	1	He	1.097	1.097	16.77	229	0.48	200000	
K	39	45	1	He	560.430	560.430	1.69	72757	0.77	500000	
Ca	44	45	1	He	84329.735	84329.735	0.40	556633	15.15	500000	
Ti	47	45	1	He	0.023	0.023	173.21	1	2.09	2500	
V	51	45	1	He	-0.094	-0.094	-136.60	-102	0.09	10000	
Cr	52	45	1	He	0.033	0.033	96.16	802	0.00	10000	
Mn	55	45	1	He	4.330	4.330	4.71	4663	0.09	10000	
Fe	56	45	1	He	196.755	196.755	0.62	319939	0.06	200000	
Co	59	45	1	He	-0.008	-0.008	-82.78	304	0.00	5000	
Ni	60	45	1	He	0.023	0.023	107.38	180	0.01	10000	
Cu	63	45	1	He	0.066	0.066	117.04	2821	0.00	10000	
Zn	66	45	1	He	1.012	1.012	16.17	554	0.18	10000	
As	75	103	1	He	0.200	0.200	9.27	64	0.31	10000	
Se	78	115	1	He	0.419	0.419	18.17	7	5.74	10000	
Sr	88	103	1	He	2342.190	2342.190	1.31	2399011	0.10	10000	
Mo	95	103	1	He	0.408	0.408	13.19	534	0.08	2000	
Ag	107	103	1	He	0.002	0.002	119.23	18	0.01	300	
Cd	111	115	1	He	0.072	0.072	5.08	39	0.18	4000	
Sn	118	115	1	He	0.375	0.375	20.39	682	0.06	2000	
Sb	123	115	1	He	0.036	0.036	10.28	83	0.04	200	
Ba	137	115	1	He	3.599	3.599	5.91	1406	0.26	10000	
W	182	159	1	He	0.521	0.521	7.28	4471	0.01	2500	
Tl	205	165	1	He	0.032	0.032	24.90	331	0.01	2000	
Pb	208	165	1	He	0.017	0.017	93.11	1469	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2321934	0.60	1884762	123.20	60	120	ISTD warning
Sc	45	1	He	145413	0.72	134073	108.46	60	120	
Sc	45	2	NoGas	9563931	1.08	8481025	112.77	60	120	
Rh	103	1	He	928599	0.63	903580	102.77	60	120	
In	115	1	He	233417	1.12	224817	103.83	60	120	
Tb	159	1	He	1106218	0.41	1046002	105.76	60	120	
Ho	165	1	He	1116438	0.94	1057439	105.58	60	120	
Bi	209	1	He	750660	0.78	731380	102.64	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64103-r-1-a
Data File Name	078SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:06:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	139.961	139.961	1.89	3425590	0.00	10000	
Be	9	45	2	NoGas	1137.979	1137.979	0.08	7090545	0.02	2000	
B	11	45	2	NoGas	536.342	536.342	0.62	2116007	0.03	300	>LDR
Na	23	45	1	He	73541.117	73541.117	0.61	28937941	0.25	500000	
Mg	24	45	1	He	80487.312	80487.312	1.06	17595883	0.46	500000	
Al	27	45	1	He	10266.338	10266.338	1.96	935295	1.10	200000	
K	39	45	1	He	13063.138	13063.138	1.47	1366062	0.96	500000	
Ca	44	45	1	He	439279.805	439279.805	1.70	2673531	16.43	500000	
Ti	47	45	1	He	105.741	105.741	4.58	4660	2.27	2500	
V	51	45	1	He	1096.138	1096.138	2.13	1722625	0.06	10000	
Cr	52	45	1	He	1069.373	1069.373	1.90	2077832	0.05	10000	
Mn	55	45	1	He	1031.765	1031.765	1.39	992964	0.10	10000	
Fe	56	45	1	He	11121.951	11121.951	1.42	16569043	0.07	200000	
Co	59	45	1	He	1046.926	1046.926	2.16	3716087	0.03	5000	
Ni	60	45	1	He	983.627	983.627	1.05	980415	0.10	10000	
Cu	63	45	1	He	1009.807	1009.807	1.06	2841465	0.04	10000	
Zn	66	45	1	He	949.407	949.407	1.47	341591	0.28	10000	
As	75	103	1	He	1054.520	1054.520	0.42	219354	0.48	10000	
Se	78	115	1	He	1061.746	1061.746	0.84	9949	10.67	10000	
Sr	88	103	1	He	12540.073	12540.073	0.73	11533650	0.11	10000	>LDR
Mo	95	103	1	He	113.111	113.111	1.04	129599	0.09	2000	
Ag	107	103	1	He	100.045	100.045	0.53	423817	0.02	300	
Cd	111	115	1	He	1014.041	1014.041	0.64	474249	0.21	4000	
Sn	118	115	1	He	1046.032	1046.032	0.85	927126	0.11	2000	
Sb	123	115	1	He	105.129	105.129	1.64	104963	0.10	200	
Ba	137	115	1	He	1054.271	1054.271	0.23	368707	0.29	10000	
W	182	159	1	He	109.067	109.067	0.92	587721	0.02	2500	
Tl	205	165	1	He	257.609	257.609	1.03	2219960	0.01	2000	
Pb	208	165	1	He	1007.383	1007.383	1.46	11383959	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2132370	0.77	1884762	113.14	60	120	
Sc	45	1	He	134124	0.59	134073	100.04	60	120	
Sc	45	2	NoGas	8825004	0.58	8481025	104.06	60	120	
Rh	103	1	He	833838	0.33	903580	92.28	60	120	
In	115	1	He	209785	1.08	224817	93.31	60	120	
Tb	159	1	He	1043610	0.84	1046002	99.77	60	120	
Ho	165	1	He	1054455	0.63	1057439	99.72	60	120	
Bi	209	1	He	680722	0.77	731380	93.07	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-d du
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:10:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	25.041	25.041	1.45	728100	0.00	10000	
Be	9	45	2	NoGas	0.486	0.486	3.16	3249	0.01	2000	
B	11	45	2	NoGas	424.140	424.140	1.33	1712651	0.02	300	>LDR
Na	23	45	1	He	61146.912	61146.912	0.86	24772086	0.25	500000	
Mg	24	45	1	He	67407.924	67407.924	0.55	15172733	0.44	500000	
Al	27	45	1	He	2.835	2.835	12.72	380	0.75	200000	
K	39	45	1	He	2654.862	2654.862	0.75	293117	0.91	500000	
Ca	44	45	1	He	413679.284	413679.284	1.29	2592407	15.96	500000	
Ti	47	45	1	He	0.220	0.220	32.97	10	2.20	2500	
V	51	45	1	He	0.250	0.250	95.40	458	0.05	10000	
Cr	52	45	1	He	0.156	0.156	18.42	1008	0.02	10000	
Mn	55	45	1	He	19.832	19.832	1.82	19784	0.10	10000	
Fe	56	45	1	He	887.230	887.230	1.92	1362615	0.07	200000	
Co	59	45	1	He	0.094	0.094	20.80	661	0.01	5000	
Ni	60	45	1	He	0.494	0.494	4.49	654	0.08	10000	
Cu	63	45	1	He	0.493	0.493	15.86	3913	0.01	10000	
Zn	66	45	1	He	1.355	1.355	16.49	653	0.21	10000	
As	75	103	1	He	0.625	0.625	21.04	147	0.42	10000	
Se	78	115	1	He	0.786	0.786	44.76	10	7.64	10000	
Sr	88	103	1	He	11257.936	11257.936	0.73	10419237	0.11	10000	>LDR
Mo	95	103	1	He	1.606	1.606	8.90	1865	0.09	2000	
Ag	107	103	1	He	0.017	0.017	39.95	78	0.02	300	
Cd	111	115	1	He	0.269	0.269	15.53	131	0.21	4000	
Sn	118	115	1	He	2.980	2.980	22.70	3004	0.10	2000	
Sb	123	115	1	He	0.421	0.421	41.78	473	0.09	200	
Ba	137	115	1	He	16.631	16.631	3.38	5989	0.28	10000	
W	182	159	1	He	0.877	0.877	13.85	6094	0.01	2500	
Tl	205	165	1	He	0.129	0.129	23.83	1147	0.01	2000	
Pb	208	165	1	He	0.102	0.102	21.74	2323	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2183794	1.20	1884762	115.87	60	120	
Sc	45	1	He	138084	1.00	134073	102.99	60	120	
Sc	45	2	NoGas	9022187	0.63	8481025	106.38	60	120	
Rh	103	1	He	839060	0.30	903580	92.86	60	120	
In	115	1	He	215821	0.46	224817	96.00	60	120	
Tb	159	1	He	1037442	1.32	1046002	99.18	60	120	
Ho	165	1	He	1047283	0.56	1057439	99.04	60	120	
Bi	209	1	He	679792	1.15	731380	92.95	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-e ms
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:14:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	130.516	130.516	1.23	3232223	0.00	10000	
Be	9	45	2	NoGas	1077.406	1077.406	0.24	6775026	0.02	2000	
B	11	45	2	NoGas	532.230	532.230	0.83	2119298	0.03	300	>LDR
Na	23	45	1	He	73432.028	73432.028	2.16	28640408	0.26	500000	
Mg	24	45	1	He	79801.257	79801.257	2.62	17291135	0.46	500000	
Al	27	45	1	He	9692.807	9692.807	2.71	875218	1.11	200000	
K	39	45	1	He	12624.140	12624.140	3.70	1308628	0.96	500000	
Ca	44	45	1	He	439879.303	439879.303	3.66	2653055	16.58	500000	
Ti	47	45	1	He	95.864	95.864	5.11	4186	2.29	2500	
V	51	45	1	He	1036.725	1036.725	0.88	1615183	0.06	10000	
Cr	52	45	1	He	1001.121	1001.121	3.12	1927952	0.05	10000	
Mn	55	45	1	He	971.980	971.980	2.50	927147	0.10	10000	
Fe	56	45	1	He	10511.188	10511.188	3.09	15519664	0.07	200000	
Co	59	45	1	He	983.752	983.752	3.40	3460629	0.03	5000	
Ni	60	45	1	He	927.831	927.831	2.67	916577	0.10	10000	
Cu	63	45	1	He	946.333	946.333	2.82	2639232	0.04	10000	
Zn	66	45	1	He	894.473	894.473	2.44	318989	0.28	10000	
As	75	103	1	He	994.197	994.197	0.69	204898	0.49	10000	
Se	78	115	1	He	999.951	999.951	0.24	9445	10.59	10000	
Sr	88	103	1	He	12734.535	12734.535	0.89	11604530	0.11	10000	>LDR
Mo	95	103	1	He	107.427	107.427	1.33	121957	0.09	2000	
Ag	107	103	1	He	94.396	94.396	0.78	396189	0.02	300	
Cd	111	115	1	He	951.829	951.829	1.33	448666	0.21	4000	
Sn	118	115	1	He	973.077	973.077	1.07	869252	0.11	2000	
Sb	123	115	1	He	98.291	98.291	1.45	98899	0.10	200	
Ba	137	115	1	He	988.307	988.307	0.87	348363	0.28	10000	
W	182	159	1	He	102.758	102.758	0.23	551359	0.02	2500	
Tl	205	165	1	He	244.750	244.750	1.02	2108702	0.01	2000	
Pb	208	165	1	He	951.310	951.310	0.84	10747842	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2131076	1.36	1884762	113.07	60	120	
Sc	45	1	He	132965	1.74	134073	99.17	60	120	
Sc	45	2	NoGas	8906312	0.45	8481025	105.01	60	120	
Rh	103	1	He	826162	1.11	903580	91.43	60	120	
In	115	1	He	211433	0.44	224817	94.05	60	120	
Tb	159	1	He	1039020	1.48	1046002	99.33	60	120	
Ho	165	1	He	1054183	1.19	1057439	99.69	60	120	
Bi	209	1	He	673078	0.97	731380	92.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-r-1-f msd
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:18:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	133.496	133.496	0.46	3269548	0.00	10000	
Be	9	45	2	NoGas	1086.420	1086.420	0.38	6761821	0.02	2000	
B	11	45	2	NoGas	542.003	542.003	0.28	2135878	0.03	300	>LDR
Na	23	45	1	He	73584.062	73584.062	0.23	28941543	0.25	500000	
Mg	24	45	1	He	80199.430	80199.430	1.50	17525170	0.46	500000	
Al	27	45	1	He	9731.609	9731.609	1.61	886207	1.10	200000	
K	39	45	1	He	12703.385	12703.385	2.55	1328132	0.96	500000	
Ca	44	45	1	He	450622.044	450622.044	1.68	2741408	16.44	500000	
Ti	47	45	1	He	97.094	97.094	4.58	4277	2.27	2500	
V	51	45	1	He	1054.645	1054.645	1.37	1656727	0.06	10000	
Cr	52	45	1	He	1016.355	1016.355	2.01	1973992	0.05	10000	
Mn	55	45	1	He	981.872	981.872	0.61	944545	0.10	10000	
Fe	56	45	1	He	10583.747	10583.747	1.13	15760487	0.07	200000	
Co	59	45	1	He	996.161	996.161	0.31	3534471	0.03	5000	
Ni	60	45	1	He	940.771	940.771	0.98	937293	0.10	10000	
Cu	63	45	1	He	969.452	969.452	2.05	2726776	0.04	10000	
Zn	66	45	1	He	919.060	919.060	1.10	330533	0.28	10000	
As	75	103	1	He	1011.651	1011.651	0.54	211103	0.48	10000	
Se	78	115	1	He	1049.580	1049.580	2.37	9763	10.75	10000	
Sr	88	103	1	He	12809.879	12809.879	0.32	11819401	0.11	10000	>LDR
Mo	95	103	1	He	108.116	108.116	1.33	124272	0.09	2000	
Ag	107	103	1	He	95.496	95.496	0.64	405829	0.02	300	
Cd	111	115	1	He	987.736	987.736	1.09	458584	0.22	4000	
Sn	118	115	1	He	1010.985	1010.985	1.47	889479	0.11	2000	
Sb	123	115	1	He	103.083	103.083	0.96	102157	0.10	200	
Ba	137	115	1	He	1037.559	1037.559	1.01	360204	0.29	10000	
W	182	159	1	He	103.383	103.383	0.83	556592	0.02	2500	
Tl	205	165	1	He	247.150	247.150	1.95	2143803	0.01	2000	
Pb	208	165	1	He	969.936	969.936	1.36	11033012	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2083676	0.44	1884762	110.55	60	120	
Sc	45	1	He	134060	0.19	134073	99.99	60	120	
Sc	45	2	NoGas	8815130	0.61	8481025	103.94	60	120	
Rh	103	1	He	836502	0.66	903580	92.58	60	120	
In	115	1	He	208261	1.18	224817	92.64	60	120	
Tb	159	1	He	1042586	0.28	1046002	99.67	60	120	
Ho	165	1	He	1061386	0.48	1057439	100.37	60	120	
Bi	209	1	He	676773	1.09	731380	92.53	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-2-a
Data File Name	082SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:22:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.430	23.430	1.04	709606	0.00	10000	
Be	9	45	2	NoGas	0.792	0.792	5.08	5353	0.01	2000	
B	11	45	2	NoGas	594.418	594.418	0.48	2467434	0.02	300	>LDR
Na	23	45	1	He	56479.151	56479.151	0.93	22319319	0.25	500000	
Mg	24	45	1	He	112325.710	112325.710	1.50	24659364	0.46	500000	
Al	27	45	1	He	4.539	4.539	3.11	527	0.86	200000	
K	39	45	1	He	3185.360	3185.360	2.43	341181	0.93	500000	
Ca	44	45	1	He	428057.559	428057.559	1.70	2615946	16.36	500000	
Ti	47	45	1	He	0.099	0.099	113.41	4	2.22	2500	
V	51	45	1	He	0.227	0.227	97.92	410	0.06	10000	
Cr	52	45	1	He	0.310	0.310	23.33	1282	0.02	10000	
Mn	55	45	1	He	8.783	8.783	2.66	8620	0.10	10000	
Fe	56	45	1	He	845.159	845.159	1.63	1266214	0.07	200000	
Co	59	45	1	He	0.109	0.109	31.51	697	0.02	5000	
Ni	60	45	1	He	0.148	0.148	43.15	292	0.05	10000	
Cu	63	45	1	He	0.712	0.712	30.85	4430	0.02	10000	
Zn	66	45	1	He	3.892	3.892	5.76	1555	0.25	10000	
As	75	103	1	He	0.801	0.801	7.70	185	0.43	10000	
Se	78	115	1	He	1.260	1.260	33.57	15	8.35	10000	
Sr	88	103	1	He	12228.035	12228.035	1.42	11350083	0.11	10000	>LDR
Mo	95	103	1	He	5.438	5.438	2.31	6300	0.09	2000	
Ag	107	103	1	He	0.018	0.018	24.40	84	0.02	300	
Cd	111	115	1	He	0.321	0.321	21.18	158	0.20	4000	
Sn	118	115	1	He	4.420	4.420	20.37	4379	0.10	2000	
Sb	123	115	1	He	0.231	0.231	9.10	282	0.08	200	
Ba	137	115	1	He	6.390	6.390	4.44	2339	0.27	10000	
W	182	159	1	He	0.899	0.899	5.24	6242	0.01	2500	
Tl	205	165	1	He	0.211	0.211	13.76	1856	0.01	2000	
Pb	208	165	1	He	0.164	0.164	12.63	3042	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2251276	0.43	1884762	119.45	60	120	
Sc	45	1	He	134691	2.10	134073	100.46	60	120	
Sc	45	2	NoGas	9289001	0.59	8481025	109.53	60	120	
Rh	103	1	He	841440	1.04	903580	93.12	60	120	
In	115	1	He	219039	0.62	224817	97.43	60	120	
Tb	159	1	He	1041684	1.19	1046002	99.59	60	120	
Ho	165	1	He	1053978	1.14	1057439	99.67	60	120	
Bi	209	1	He	691880	0.82	731380	94.60	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	083_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:27:08-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.322	1.355	1472123	1.63	50	108.6	89.5	110.5	
Be	9	45	2	NoGas	52.627	0.685	344052	0.68	50	105.3	89.5	110.5	
B	11	45	2	NoGas	67.009	0.474	285658	0.08	50	134.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25083.885	1.158	10322270	0.53	25000	100.3	89.5	110.5	
Mg	24	45	1	He	25069.061	1.403	5730254	1.03	25000	100.3	89.5	110.5	
Al	27	45	1	He	246.162	1.811	23560	1.37	250	98.5	89.5	110.5	
K	39	45	1	He	25164.346	1.140	2742652	0.31	25000	100.7	89.5	110.5	
Ca	44	45	1	He	25115.422	1.605	159995	0.69	25000	100.5	89.5	110.5	
Ti	47	45	1	He	46.955	4.200	2163	4.04	50	93.9	89.5	110.5	
V	51	45	1	He	49.592	1.556	81536	0.84	50	99.2	89.5	110.5	
Cr	52	45	1	He	49.599	2.237	101432	2.02	50	99.2	89.5	110.5	
Mn	55	45	1	He	248.995	1.146	250637	0.22	250	99.6	89.5	110.5	
Fe	56	45	1	He	12489.860	1.379	19452892	0.75	12500	99.9	89.5	110.5	
Co	59	45	1	He	49.803	1.572	185126	0.65	50	99.6	89.5	110.5	
Ni	60	45	1	He	49.998	1.452	52243	0.86	50	100.0	89.5	110.5	
Cu	63	45	1	He	50.342	1.089	150498	0.16	50	100.7	89.5	110.5	
Zn	66	45	1	He	49.481	1.390	18760	1.50	50	99.0	89.5	110.5	
As	75	103	1	He	49.352	0.551	11084	0.16	50	98.7	89.5	110.5	
Se	78	115	1	He	49.070	0.636	504	0.85	50	98.1	89.5	110.5	
Sr	88	103	1	He	51.400	1.304	51001	0.90	50	102.8	89.5	110.5	
Mo	95	103	1	He	52.012	0.851	64254	1.30	50	104.0	89.5	110.5	
Ag	107	103	1	He	49.655	0.348	226774	0.47	50	99.3	89.5	110.5	
Cd	111	115	1	He	50.571	1.293	25776	1.78	50	101.1	89.5	110.5	
Sn	118	115	1	He	51.018	1.655	49569	2.54	50	102.0	89.5	110.5	
Sb	123	115	1	He	50.722	0.168	55201	0.77	50	101.4	89.5	110.5	
Ba	137	115	1	He	49.582	0.332	18901	0.60	50	99.2	89.5	110.5	
W	182	159	1	He	51.592	1.782	289535	1.44	50	103.2	89.5	110.5	
Tl	205	165	1	He	49.159	1.268	441723	1.51	50	98.3	89.5	110.5	
Pb	208	165	1	He	49.052	0.706	579128	0.70	50	98.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2210645	0.56	1884762	117.29	60	120	
Sc	45	1	He	140229	0.97	134073	104.59	60	120	
Sc	45	2	NoGas	9255420	0.50	8481025	109.13	60	120	
Rh	103	1	He	898935	0.50	903580	99.49	60	120	
In	115	1	He	228602	0.92	224817	101.68	60	120	
Tb	159	1	He	1084054	0.34	1046002	103.64	60	120	
Ho	165	1	He	1099381	0.25	1057439	103.97	60	120	
Bi	209	1	He	727403	0.45	731380	99.46	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	084_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:31:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.504	14.7	140732	0.6	8	
Be	9	45	2	NoGas	0.469	5.4	3256	5.0	1	
B	11	45	2	NoGas	17.131	1.0	81005	0.4	20	
Na	23	45	1	He	51.126	5.0	26067	4.2	1000	
Mg	24	45	1	He	15.908	11.8	4349	9.9	1000	
Al	27	45	1	He	0.559	8.0	171	2.3	50	
K	39	45	1	He	21.583	16.1	11749	4.0	1000	
Ca	44	45	1	He	31.089	8.6	402	3.4	1000	
Ti	47	45	1	He	0.047	173.2	2	173.2	20	
V	51	45	1	He	0.047	325.1	136	187.2	2	
Cr	52	45	1	He	0.033	66.5	781	4.9	2	
Mn	55	45	1	He	0.171	29.0	316	15.0	2	
Fe	56	45	1	He	9.876	8.6	17648	7.9	50	
Co	59	45	1	He	0.030	62.4	441	16.6	1	
Ni	60	45	1	He	0.008	181.8	160	9.1	2	
Cu	63	45	1	He	0.281	39.5	3387	10.1	2	
Zn	66	45	1	He	0.645	20.9	401	13.7	20	
As	75	103	1	He	0.143	10.5	53	6.9	2	
Se	78	115	1	He	0.324	75.2	6	40.7	2	
Sr	88	103	1	He	0.547	14.9	616	12.9	10	
Mo	95	103	1	He	0.151	16.2	212	15.7	2	
Ag	107	103	1	He	0.038	16.1	192	15.5	0.2	
Cd	111	115	1	He	0.129	5.3	70	5.4	0.2	
Sn	118	115	1	He	1.039	6.6	1367	4.3	10	
Sb	123	115	1	He	0.121	36.5	182	26.0	2	
Ba	137	115	1	He	0.086	53.8	40	46.4	5	
W	182	159	1	He	0.563	4.9	4734	2.4	10	
Tl	205	165	1	He	0.116	11.1	1107	10.7	0.5	
Pb	208	165	1	He	0.058	16.6	1961	6.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2291192	0.26	1884762	121.56	60	120	ISTD warning
Sc	45	1	He	141629	0.95	134073	105.64	60	120	
Sc	45	2	NoGas	9352073	0.83	8481025	110.27	60	120	
Rh	103	1	He	953342	1.15	903580	105.51	60	120	
In	115	1	He	238886	1.48	224817	106.26	60	120	
Tb	159	1	He	1111172	0.91	1046002	106.23	60	120	
Ho	165	1	He	1118465	0.22	1057439	105.77	60	120	
Bi	209	1	He	770448	0.32	731380	105.34	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-3-a
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:35:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.542	0.542	11.51	142491	0.00	10000	
Be	9	45	2	NoGas	0.290	0.290	3.34	2085	0.01	2000	
B	11	45	2	NoGas	18.618	18.618	1.44	87683	0.02	300	
Na	23	45	1	He	90.491	90.491	4.82	42520	0.21	500000	
Mg	24	45	1	He	2.426	2.426	7.03	1241	0.20	500000	
Al	27	45	1	He	1.009	1.009	30.65	214	0.47	200000	
K	39	45	1	He	23.582	23.582	50.88	11971	0.20	500000	
Ca	44	45	1	He	42.570	42.570	13.34	477	8.93	500000	
Ti	47	45	1	He	0.120	0.120	127.81	6	2.16	2500	
V	51	45	1	He	0.014	0.014	490.50	79	0.02	10000	
Cr	52	45	1	He	0.808	0.808	14.88	2372	0.03	10000	
Mn	55	45	1	He	0.057	0.057	76.63	202	0.03	10000	
Fe	56	45	1	He	1.835	1.835	15.22	4999	0.04	200000	
Co	59	45	1	He	0.023	0.023	106.15	410	0.01	5000	
Ni	60	45	1	He	1.533	1.533	5.36	1769	0.09	10000	
Cu	63	45	1	He	0.303	0.303	24.21	3468	0.01	10000	
Zn	66	45	1	He	1.435	1.435	23.61	699	0.21	10000	
As	75	103	1	He	0.092	0.092	54.51	41	0.23	10000	
Se	78	115	1	He	0.489	0.489	57.85	8	5.90	10000	
Sr	88	103	1	He	0.438	0.438	13.19	507	0.09	10000	
Mo	95	103	1	He	0.750	0.750	5.07	1009	0.07	2000	
Ag	107	103	1	He	0.003	0.003	58.24	24	0.01	300	
Cd	111	115	1	He	0.070	0.070	17.12	39	0.18	4000	
Sn	118	115	1	He	0.964	0.964	20.66	1315	0.07	2000	
Sb	123	115	1	He	0.056	0.056	38.48	110	0.05	200	
Ba	137	115	1	He	0.158	0.158	4.45	70	0.23	10000	
W	182	159	1	He	0.752	0.752	44.42	6095	0.01	2500	
Tl	205	165	1	He	0.035	0.035	5.88	378	0.01	2000	
Pb	208	165	1	He	0.020	0.020	67.41	1548	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2340685	1.74	1884762	124.19	60	120	ISTD warning
Sc	45	1	He	142153	5.42	134073	106.03	60	120	
Sc	45	2	NoGas	9403786	0.58	8481025	110.88	60	120	
Rh	103	1	He	965973	4.60	903580	106.91	60	120	
In	115	1	He	242502	3.04	224817	107.87	60	120	
Tb	159	1	He	1148583	6.37	1046002	109.81	60	120	
Ho	165	1	He	1151983	6.21	1057439	108.94	60	120	
Bi	209	1	He	799382	4.08	731380	109.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64103-f-4-a
Data File Name	086SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:39:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.857	23.857	0.15	720252	0.00	10000	
Be	9	45	2	NoGas	0.249	0.249	12.47	1789	0.01	2000	
B	11	45	2	NoGas	608.676	608.676	0.34	2526452	0.02	300	>LDR
Na	23	45	1	He	57499.728	57499.728	2.32	23196739	0.25	500000	
Mg	24	45	1	He	114292.360	114292.360	1.64	25617640	0.45	500000	
Al	27	45	1	He	4.344	4.344	8.42	520	0.84	200000	
K	39	45	1	He	3223.871	3223.871	3.16	352483	0.91	500000	
Ca	44	45	1	He	432186.348	432186.348	2.34	2696720	16.03	500000	
Ti	47	45	1	He	0.123	0.123	35.61	6	2.22	2500	
V	51	45	1	He	0.059	0.059	170.99	151	0.04	10000	
Cr	52	45	1	He	0.114	0.114	24.80	919	0.01	10000	
Mn	55	45	1	He	8.753	8.753	4.14	8776	0.10	10000	
Fe	56	45	1	He	852.438	852.438	1.92	1303931	0.07	200000	
Co	59	45	1	He	0.001	0.001	317.89	320	0.00	5000	
Ni	60	45	1	He	0.002	0.002	290.87	149	0.00	10000	
Cu	63	45	1	He	0.070	0.070	142.48	2679	0.00	10000	
Zn	66	45	1	He	0.775	0.775	25.64	437	0.18	10000	
As	75	103	1	He	0.489	0.489	11.27	122	0.40	10000	
Se	78	115	1	He	0.388	0.388	58.42	7	5.85	10000	
Sr	88	103	1	He	12431.102	12431.102	0.93	11783559	0.11	10000	>LDR
Mo	95	103	1	He	5.489	5.489	4.56	6496	0.08	2000	
Ag	107	103	1	He	0.004	0.004	28.76	24	0.02	300	
Cd	111	115	1	He	0.048	0.048	15.06	25	0.19	4000	
Sn	118	115	1	He	0.423	0.423	33.01	693	0.06	2000	
Sb	123	115	1	He	0.019	0.019	40.83	62	0.03	200	
Ba	137	115	1	He	6.856	6.856	7.27	2542	0.27	10000	
W	182	159	1	He	0.450	0.450	1.28	3930	0.01	2500	
Tl	205	165	1	He	0.019	0.019	12.91	210	0.01	2000	
Pb	208	165	1	He	0.001	0.001	265.34	1236	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2243326	0.11	1884762	119.02	60	120	
Sc	45	1	He	137522	1.27	134073	102.57	60	120	
Sc	45	2	NoGas	9289179	0.03	8481025	109.53	60	120	
Rh	103	1	He	859397	0.81	903580	95.11	60	120	
In	115	1	He	221975	0.20	224817	98.74	60	120	
Tb	159	1	He	1068967	1.20	1046002	102.20	60	120	
Ho	165	1	He	1080453	0.93	1057439	102.18	60	120	
Bi	209	1	He	710894	0.92	731380	97.20	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	087CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:43:52-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	8.871	8.871	0.541	347920	0.19	8	110.9	69.5	130.5	
Be	9	2	NoGas	1.298	1.298	3.217	8676	2.63	1	129.8	69.5	130.5	
B	11	2	NoGas	37.459	37.459	2.695	164601	2.55	20	187.3	69.5	130.5	6020A CR1 Failed
Na	23	1	He	1031.192	1031.192	2.125	432790	0.76	1000	103.1	69.5	130.5	
Mg	24	1	He	1009.228	1009.228	2.058	233420	1.11	1000	100.9	69.5	130.5	
Al	27	1	He	49.370	49.370	2.494	4862	2.24	50	98.7	69.5	130.5	
K	39	1	He	1035.686	1035.686	2.309	122881	0.99	1000	103.6	69.5	130.5	
Ca	44	1	He	1018.443	1018.443	5.440	6739	4.36	1000	101.8	69.5	130.5	
Ti	47	1	He	10.201	10.201	6.298	474	7.04	10	102.0	69.5	130.5	
V	51	1	He	5.228	5.228	5.208	8724	5.05	5	104.6	69.5	130.5	
Cr	52	1	He	2.149	2.149	3.517	5115	2.02	2	107.4	69.5	130.5	
Mn	55	1	He	4.866	4.866	1.130	5082	0.78	5	97.3	69.5	130.5	
Fe	56	1	He	108.481	108.481	1.872	172579	0.99	100	108.5	69.5	130.5	
Co	59	1	He	1.021	1.021	4.300	4148	2.96	1	102.1	69.5	130.5	
Ni	60	1	He	2.043	2.043	11.116	2298	9.14	2	102.2	69.5	130.5	
Cu	63	1	He	2.099	2.099	10.212	8773	7.00	2	104.9	69.5	130.5	
Zn	66	1	He	20.601	20.601	7.250	7969	5.98	20	103.0	69.5	130.5	
As	75	1	He	5.058	5.058	2.847	1191	3.37	5	101.2	69.5	130.5	
Se	78	1	He	4.879	4.879	9.311	54	8.84	5	97.6	69.5	130.5	
Sr	88	1	He	11.064	11.064	3.327	11380	2.70	10	110.6	69.5	130.5	
Mo	95	1	He	5.356	5.356	3.393	6854	4.02	5	107.1	69.5	130.5	
Ag	107	1	He	1.014	1.014	1.380	4797	0.80	1	101.4	69.5	130.5	
Cd	111	1	He	1.010	1.010	8.661	532	8.83	1	101.0	69.5	130.5	
Sn	118	1	He	9.999	9.999	2.726	10252	2.80	10	100.0	69.5	130.5	
Sb	123	1	He	2.063	2.063	4.513	2354	4.58	2	103.1	69.5	130.5	
Ba	137	1	He	4.871	4.871	4.262	1917	4.44	5	97.4	69.5	130.5	
W	182	1	He	10.775	10.775	4.386	61990	3.63	10	107.8	69.5	130.5	
Tl	205	1	He	1.018	1.018	2.682	9162	1.48	1	101.8	69.5	130.5	
Pb	208	1	He	1.019	1.019	1.647	13216	0.75	1	101.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2303605	1.10	1884762	122.22	60	120	ISTD warning
Sc	45	1	He	141509	1.35	134073	105.55	60	120	
Sc	45	2	NoGas	9293769	0.53	8481025	109.58	60	120	
Rh	103	1	He	929423	0.70	903580	102.86	60	120	
In	115	1	He	235315	0.20	224817	104.67	60	120	
Tb	159	1	He	1090462	1.34	1046002	104.25	60	120	
Ho	165	1	He	1096663	1.21	1057439	103.71	60	120	
Bi	209	1	He	762103	0.10	731380	104.20	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2467104
Data File Name	088ICSA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:48:06-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.755	3.8	140394	0.8	4	
Be	9	45	2	NoGas	0.184	4.1	1311	4.5	2	
B	11	45	2	NoGas	14.038	0.8	65062	0.7	20	
Na	23	45	1	He	51259.356	1.0	19954911	1.6	75200	
Mg	24	45	1	He	50783.123	1.3	10983603	2.1	75200	
Al	27	45	1	He	52568.245	0.9	4737480	1.8	75200	
K	39	45	1	He	50405.669	0.5	5189535	1.4	75200	
Ca	44	45	1	He	50579.147	0.4	304701	1.3	75200	
Ti	47	45	1	He	1001.290	0.5	43655	1.4	1505	
V	51	45	1	He	-0.209	-27.8	-273	-33.9	4	
Cr	52	45	1	He	0.551	4.3	1728	3.1	4	
Mn	55	45	1	He	0.255	17.9	376	12.4	4	
Fe	56	45	1	He	49792.977	1.1	73379606	1.9	75200	
Co	59	45	1	He	-0.036	-10.3	180	8.1	2	
Ni	60	45	1	He	0.015	177.8	157	16.9	4	
Cu	63	45	1	He	0.336	21.9	3326	5.9	4	
Zn	66	45	1	He	0.585	39.1	354	23.5	20	
As	75	103	1	He	0.108	20.6	39	12.2	4	
Se	78	115	1	He	0.257	154.3	5	73.8	4	
Sr	88	103	1	He	0.783	6.3	770	5.2	20	
Mo	95	103	1	He	1044.113	1.7	1218835	1.9	1505	
Ag	107	103	1	He	0.011	18.6	54	15.4	1	
Cd	111	115	1	He	0.013	172.1	8	137.8	1	
Sn	118	115	1	He	0.291	23.1	548	11.2	20	
Sb	123	115	1	He	0.014	54.2	54	14.1	4	
Ba	137	115	1	He	0.175	34.2	68	31.6	2	
W	182	159	1	He	0.443	4.4	3827	2.3	20	
Tl	205	165	1	He	0.012	15.2	144	11.4	2	
Pb	208	165	1	He	0.085	13.6	2170	6.5	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2224037	0.34	1884762	118.00	60	120	
Sc	45	1	He	132677	0.92	134073	98.96	60	120	
Sc	45	2	NoGas	8930353	0.84	8481025	105.30	60	120	
Rh	103	1	He	849627	0.92	903580	94.03	60	120	
In	115	1	He	213718	0.25	224817	95.06	60	120	
Tb	159	1	He	1050374	0.69	1046002	100.42	60	120	
Ho	165	1	He	1065221	0.47	1057439	100.74	60	120	
Bi	209	1	He	710732	1.16	731380	97.18	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2521827
Data File Name	089ICAB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:52:15-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	109.369	0.813	2845323	0.60	100	109.4	49.5	150.5	
Be	9	45	2	NoGas	107.278	0.452	703693	1.26	100	107.3	49.5	150.5	
B	11	45	2	NoGas	115.442	0.670	486932	1.03	100	115.4	49.5	150.5	
Na	23	45	1	He	50392.069	0.689	20464913	0.89	50000	100.8	49.5	150.5	
Mg	24	45	1	He	50036.326	1.102	11289232	1.30	50000	100.1	49.5	150.5	
Al	27	45	1	He	51690.337	1.908	4859601	2.14	50000	103.4	49.5	150.5	
K	39	45	1	He	50101.492	1.215	5381181	1.44	50000	100.2	49.5	150.5	
Ca	44	45	1	He	50187.642	0.903	315411	1.15	50000	100.4	49.5	150.5	
Ti	47	45	1	He	1087.417	0.621	49458	0.52	1100	98.9	49.5	150.5	
V	51	45	1	He	100.720	0.923	163411	1.19	100	100.7	49.5	150.5	
Cr	52	45	1	He	100.973	0.926	203111	1.15	100	101.0	49.5	150.5	
Mn	55	45	1	He	102.370	1.512	101800	1.66	100	102.4	49.5	150.5	
Fe	56	45	1	He	49105.674	1.012	75491701	1.25	50000	98.2	49.5	150.5	
Co	59	45	1	He	100.293	0.447	367689	0.70	100	100.3	49.5	150.5	
Ni	60	45	1	He	100.394	1.254	103402	1.43	100	100.4	49.5	150.5	
Cu	63	45	1	He	98.892	1.330	289422	1.37	100	98.9	49.5	150.5	
Zn	66	45	1	He	99.417	1.859	37051	1.65	100	99.4	49.5	150.5	
As	75	103	1	He	103.839	0.719	22497	1.40	100	103.8	49.5	150.5	
Se	78	115	1	He	102.342	2.425	1013	2.07	100	102.3	49.5	150.5	
Sr	88	103	1	He	100.177	0.488	95932	0.73	100	100.2	49.5	150.5	
Mo	95	103	1	He	1157.954	0.966	1380837	1.78	1100	105.3	49.5	150.5	
Ag	107	103	1	He	99.855	0.276	440278	1.09	100	99.9	49.5	150.5	
Cd	111	115	1	He	100.638	1.243	49602	1.20	100	100.6	49.5	150.5	
Sn	118	115	1	He	112.324	2.418	105182	2.88	100	112.3	49.5	150.5	
Sb	123	115	1	He	102.951	1.353	108309	1.16	100	103.0	49.5	150.5	
Ba	137	115	1	He	102.542	2.263	37794	1.83	100	102.5	49.5	150.5	
W	182	159	1	He	105.535	1.579	584401	1.74	100	105.5	49.5	150.5	
Tl	205	165	1	He	96.337	1.854	857197	1.84	100	96.3	49.5	150.5	
Pb	208	165	1	He	97.867	1.197	1143010	0.71	100	97.9	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2228392	0.76	1884762	118.23	60	120	
Sc	45	1	He	138412	0.26	134073	103.24	60	120	
Sc	45	2	NoGas	9288800	1.34	8481025	109.52	60	120	
Rh	103	1	He	867870	0.82	903580	96.05	60	120	
In	115	1	He	221073	0.48	224817	98.33	60	120	
Tb	159	1	He	1072407	0.85	1046002	102.52	60	120	
Ho	165	1	He	1088740	0.73	1057439	102.96	60	120	
Bi	209	1	He	713071	0.15	731380	97.50	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	090_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T17:56:25-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	55.274	0.230	1527858	1.34	50	110.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.387	1.419	356495	0.47	50	106.8	89.5	110.5	
B	11	45	2	NoGas	61.119	1.006	267011	0.85	50	122.2	89.5	110.5	CCV Failed
Na	23	45	1	He	25268.045	0.651	10523026	0.78	25000	101.1	89.5	110.5	
Mg	24	45	1	He	25039.745	1.542	5792091	1.13	25000	100.2	89.5	110.5	
Al	27	45	1	He	250.744	3.053	24285	3.12	250	100.3	89.5	110.5	
K	39	45	1	He	25362.972	1.049	2797406	0.76	25000	101.5	89.5	110.5	
Ca	44	45	1	He	25049.297	1.065	161494	0.74	25000	100.2	89.5	110.5	
Ti	47	45	1	He	49.690	3.804	2317	3.46	50	99.4	89.5	110.5	
V	51	45	1	He	49.535	4.676	82414	4.35	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.930	2.347	103327	2.11	50	99.9	89.5	110.5	
Mn	55	45	1	He	250.134	1.015	254805	0.68	250	100.1	89.5	110.5	
Fe	56	45	1	He	12553.371	1.548	19786345	1.23	12500	100.4	89.5	110.5	
Co	59	45	1	He	50.283	0.760	189160	0.79	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.186	1.433	53068	1.03	50	100.4	89.5	110.5	
Cu	63	45	1	He	50.086	0.417	151544	0.16	50	100.2	89.5	110.5	
Zn	66	45	1	He	49.914	3.004	19148	2.63	50	99.8	89.5	110.5	
As	75	103	1	He	49.305	1.911	11127	1.61	50	98.6	89.5	110.5	
Se	78	115	1	He	50.125	4.980	507	4.56	50	100.3	89.5	110.5	
Sr	88	103	1	He	49.853	0.302	49710	0.50	50	99.7	89.5	110.5	
Mo	95	103	1	He	53.755	0.725	66729	0.94	50	107.5	89.5	110.5	
Ag	107	103	1	He	50.078	0.590	229818	0.73	50	100.2	89.5	110.5	
Cd	111	115	1	He	50.609	1.281	25397	0.74	50	101.2	89.5	110.5	
Sn	118	115	1	He	51.149	4.425	48920	3.82	50	102.3	89.5	110.5	
Sb	123	115	1	He	51.933	1.769	55648	1.24	50	103.9	89.5	110.5	
Ba	137	115	1	He	50.782	2.963	19060	2.51	50	101.6	89.5	110.5	
W	182	159	1	He	52.680	1.015	293343	1.88	50	105.4	89.5	110.5	
Tl	205	165	1	He	48.889	1.117	439117	1.46	50	97.8	89.5	110.5	
Pb	208	165	1	He	48.854	0.720	576559	0.63	50	97.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2306367	0.60	1884762	122.37	60	120	ISTD warning
Sc	45	1	He	141905	0.41	134073	105.84	60	120	
Sc	45	2	NoGas	9454887	1.49	8481025	111.48	60	120	
Rh	103	1	He	903323	0.79	903580	99.97	60	120	
In	115	1	He	225095	0.61	224817	100.12	60	120	
Tb	159	1	He	1075631	1.04	1046002	102.83	60	120	
Ho	165	1	He	1098918	0.37	1057439	103.92	60	120	
Bi	209	1	He	725042	0.25	731380	99.13	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	091_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:00:35-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.582	7.5	144263	0.2	8	
Be	9	45	2	NoGas	0.197	7.0	1474	7.0	1	
B	11	45	2	NoGas	9.636	0.3	50361	1.0	20	
Na	23	45	1	He	48.127	2.9	25092	1.8	1000	
Mg	24	45	1	He	15.593	7.7	4323	6.3	1000	
Al	27	45	1	He	1.319	31.7	247	15.6	50	
K	39	45	1	He	28.643	3.7	12660	2.1	1000	
Ca	44	45	1	He	22.671	28.6	352	11.8	1000	
Ti	47	45	1	He	0.095	86.6	4	86.6	20	
V	51	45	1	He	0.111	173.9	242	132.1	2	
Cr	52	45	1	He	0.032	43.2	788	3.4	2	
Mn	55	45	1	He	0.172	14.6	320	8.3	2	
Fe	56	45	1	He	11.654	6.8	20679	7.5	50	
Co	59	45	1	He	-0.006	-135.4	307	11.0	1	
Ni	60	45	1	He	-0.028	-48.1	123	12.4	2	
Cu	63	45	1	He	-0.075	-120.9	2357	13.0	2	
Zn	66	45	1	He	0.392	12.8	308	5.1	20	
As	75	103	1	He	0.081	12.2	38	6.6	2	
Se	78	115	1	He	0.379	36.8	7	21.5	2	
Sr	88	103	1	He	0.242	10.0	293	7.9	10	
Mo	95	103	1	He	0.586	10.8	778	10.8	2	
Ag	107	103	1	He	0.033	15.1	168	14.6	0.2	
Cd	111	115	1	He	0.058	14.7	32	14.3	0.2	
Sn	118	115	1	He	0.471	20.1	785	11.9	10	
Sb	123	115	1	He	0.086	18.3	141	13.0	2	
Ba	137	115	1	He	0.064	7.2	31	6.2	5	
W	182	159	1	He	0.565	1.6	4686	0.7	10	
Tl	205	165	1	He	0.093	15.9	886	14.7	0.5	
Pb	208	165	1	He	0.027	55.0	1576	10.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2363829	1.46	1884762	125.42	60	120	ISTD warning
Sc	45	1	He	143193	1.42	134073	106.80	60	120	
Sc	45	2	NoGas	9455371	0.82	8481025	111.49	60	120	
Rh	103	1	He	948517	0.87	903580	104.97	60	120	
In	115	1	He	236255	0.52	224817	105.09	60	120	
Tb	159	1	He	1096895	0.83	1046002	104.87	60	120	
Ho	165	1	He	1111676	0.52	1057439	105.13	60	120	
Bi	209	1	He	763454	0.34	731380	104.39	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-a
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:04:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.164	2.164	4.96	188459	0.00	10000	
Be	9	45	2	NoGas	0.160	0.160	12.71	1256	0.01	2000	
B	11	45	2	NoGas	40.033	40.033	2.20	182314	0.02	300	
Na	23	45	1	He	29316.598	29316.598	1.64	12331706	0.24	500000	
Mg	24	45	1	He	23208.116	23208.116	1.06	5423438	0.43	500000	
Al	27	45	1	He	4.602	4.602	3.37	567	0.81	200000	
K	39	45	1	He	2328.225	2328.225	1.93	268005	0.87	500000	
Ca	44	45	1	He	68636.068	68636.068	1.01	446676	15.37	500000	
Ti	47	45	1	He	0.212	0.212	32.55	10	2.12	2500	
V	51	45	1	He	0.075	0.075	103.02	185	0.04	10000	
Cr	52	45	1	He	3.127	3.127	1.76	7217	0.04	10000	
Mn	55	45	1	He	59.240	59.240	0.68	61087	0.10	10000	
Fe	56	45	1	He	751.871	751.871	0.03	1199393	0.06	200000	
Co	59	45	1	He	0.021	0.021	53.38	411	0.01	5000	
Ni	60	45	1	He	1.909	1.909	5.89	2186	0.09	10000	
Cu	63	45	1	He	0.132	0.132	54.14	2979	0.00	10000	
Zn	66	45	1	He	1.832	1.832	12.12	861	0.21	10000	
As	75	103	1	He	3.789	3.789	3.86	882	0.43	10000	
Se	78	115	1	He	0.057	0.057	245.87	3	1.64	10000	
Sr	88	103	1	He	107.798	107.798	1.94	108818	0.10	10000	
Mo	95	103	1	He	1.624	1.624	5.73	2055	0.08	2000	
Ag	107	103	1	He	0.003	0.003	81.86	22	0.01	300	
Cd	111	115	1	He	0.036	0.036	11.88	20	0.18	4000	
Sn	118	115	1	He	0.859	0.859	16.26	1141	0.08	2000	
Sb	123	115	1	He	0.073	0.073	39.65	122	0.06	200	
Ba	137	115	1	He	108.371	108.371	1.40	41489	0.26	10000	
W	182	159	1	He	0.383	0.383	18.89	3678	0.01	2500	
Tl	205	165	1	He	0.020	0.020	27.29	223	0.01	2000	
Pb	208	165	1	He	0.070	0.070	17.76	2092	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2314123	0.92	1884762	122.78	60	120	ISTD warning
Sc	45	1	He	143373	2.14	134073	106.94	60	120	
Sc	45	2	NoGas	9668622	0.32	8481025	114.00	60	120	
Rh	103	1	He	914834	0.43	903580	101.25	60	120	
In	115	1	He	229627	1.54	224817	102.14	60	120	
Tb	159	1	He	1102989	0.65	1046002	105.45	60	120	
Ho	165	1	He	1111838	0.95	1057439	105.14	60	120	
Bi	209	1	He	742862	1.13	731380	101.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-d ms
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:09:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	107.698	107.698	0.74	2907018	0.00	10000	
Be	9	45	2	NoGas	1123.613	1123.613	0.95	7638975	0.01	2000	
B	11	45	2	NoGas	144.002	144.002	0.94	627205	0.02	300	
Na	23	45	1	He	38055.826	38055.826	1.68	16084626	0.24	500000	
Mg	24	45	1	He	32350.942	32350.942	2.03	7596279	0.43	500000	
Al	27	45	1	He	9822.783	9822.783	1.76	961101	1.02	200000	
K	39	45	1	He	12425.867	12425.867	1.36	1396065	0.89	500000	
Ca	44	45	1	He	75784.352	75784.352	1.69	495545	15.29	500000	
Ti	47	45	1	He	96.130	96.130	0.22	4551	2.11	2500	
V	51	45	1	He	1048.215	1048.215	0.59	1769405	0.06	10000	
Cr	52	45	1	He	1042.262	1042.262	2.27	2174937	0.05	10000	
Mn	55	45	1	He	1037.148	1037.148	1.94	1071968	0.10	10000	
Fe	56	45	1	He	10693.231	10693.231	1.97	17109328	0.06	200000	
Co	59	45	1	He	1022.656	1022.656	2.11	3898414	0.03	5000	
Ni	60	45	1	He	978.895	978.895	1.89	1047857	0.09	10000	
Cu	63	45	1	He	1014.482	1014.482	1.38	3065815	0.03	10000	
Zn	66	45	1	He	968.994	968.994	1.46	374440	0.26	10000	
As	75	103	1	He	1009.679	1009.679	1.01	229544	0.44	10000	
Se	78	115	1	He	1011.918	1011.918	1.59	10202	9.92	10000	
Sr	88	103	1	He	1068.557	1068.557	0.51	1074195	0.10	10000	
Mo	95	103	1	He	106.280	106.280	1.42	133099	0.08	2000	
Ag	107	103	1	He	98.771	98.771	0.87	457294	0.02	300	
Cd	111	115	1	He	1020.813	1020.813	1.09	513642	0.20	4000	
Sn	118	115	1	He	1021.849	1021.849	1.26	974349	0.10	2000	
Sb	123	115	1	He	102.238	102.238	0.55	109813	0.09	200	
Ba	137	115	1	He	1127.370	1127.370	1.15	424170	0.27	10000	
W	182	159	1	He	104.327	104.327	1.01	592461	0.02	2500	
Tl	205	165	1	He	252.944	252.944	1.70	2315599	0.01	2000	
Pb	208	165	1	He	999.801	999.801	1.12	12002631	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2294280	1.21	1884762	121.73	60	120	ISTD warning
Sc	45	1	He	144062	1.45	134073	107.45	60	120	
Sc	45	2	NoGas	9629656	1.11	8481025	113.54	60	120	
Rh	103	1	He	911383	1.14	903580	100.86	60	120	
In	115	1	He	225709	1.09	224817	100.40	60	120	
Tb	159	1	He	1099748	1.11	1046002	105.14	60	120	
Ho	165	1	He	1120229	1.12	1057439	105.94	60	120	
Bi	209	1	He	730203	0.30	731380	99.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-m-6-e msd
Data File Name	094SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:13:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	109.390	109.390	0.67	2924852	0.00	10000	
Be	9	45	2	NoGas	1136.924	1136.924	0.77	7662814	0.01	2000	
B	11	45	2	NoGas	150.389	150.389	0.89	648914	0.02	300	
Na	23	45	1	He	38927.855	38927.855	2.92	16423079	0.24	500000	
Mg	24	45	1	He	33166.067	33166.067	3.09	7772959	0.43	500000	
Al	27	45	1	He	9850.313	9850.313	3.81	961894	1.02	200000	
K	39	45	1	He	12426.267	12426.267	4.48	1393179	0.89	500000	
Ca	44	45	1	He	76889.895	76889.895	3.64	501782	15.32	500000	
Ti	47	45	1	He	99.761	99.761	6.26	4711	2.12	2500	
V	51	45	1	He	1042.112	1042.112	3.28	1755666	0.06	10000	
Cr	52	45	1	He	1030.791	1030.791	3.98	2146784	0.05	10000	
Mn	55	45	1	He	1039.837	1039.837	3.32	1072732	0.10	10000	
Fe	56	45	1	He	10702.706	10702.706	3.46	17091330	0.06	200000	
Co	59	45	1	He	1030.768	1030.768	3.00	3922349	0.03	5000	
Ni	60	45	1	He	981.878	981.878	3.49	1049039	0.09	10000	
Cu	63	45	1	He	1004.455	1004.455	3.43	3029679	0.03	10000	
Zn	66	45	1	He	967.311	967.311	3.41	373068	0.26	10000	
As	75	103	1	He	1009.780	1009.780	0.92	228999	0.44	10000	
Se	78	115	1	He	1001.408	1001.408	0.24	10149	9.87	10000	
Sr	88	103	1	He	1066.999	1066.999	1.12	1069930	0.10	10000	
Mo	95	103	1	He	106.323	106.323	2.17	132811	0.08	2000	
Ag	107	103	1	He	98.743	98.743	0.67	456046	0.02	300	
Cd	111	115	1	He	1009.291	1009.291	1.24	510467	0.20	4000	
Sn	118	115	1	He	1011.406	1011.406	1.51	969387	0.10	2000	
Sb	123	115	1	He	101.197	101.197	1.55	109254	0.09	200	
Ba	137	115	1	He	1118.475	1118.475	1.09	423010	0.26	10000	
W	182	159	1	He	104.534	104.534	1.81	595581	0.02	2500	
Tl	205	165	1	He	256.147	256.147	0.82	2342366	0.01	2000	
Pb	208	165	1	He	996.047	996.047	0.86	11944243	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2286388	1.11	1884762	121.31	60	120	ISTD warning
Sc	45	1	He	143851	2.61	134073	107.29	60	120	
Sc	45	2	NoGas	9545881	0.45	8481025	112.56	60	120	
Rh	103	1	He	909090	0.33	903580	100.61	60	120	
In	115	1	He	226871	0.49	224817	100.91	60	120	
Tb	159	1	He	1103418	0.48	1046002	105.49	60	120	
Ho	165	1	He	1118883	0.95	1057439	105.81	60	120	
Bi	209	1	He	731544	0.77	731380	100.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-1-a
Data File Name	095SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:17:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.013	2.013	1.90	186368	0.00	10000	
Be	9	45	2	NoGas	0.754	0.754	10.36	5364	0.01	2000	
B	11	45	2	NoGas	37.133	37.133	0.75	171521	0.02	300	
Na	23	45	1	He	17799.840	17799.840	1.54	7607553	0.23	500000	
Mg	24	45	1	He	21475.968	21475.968	2.15	5097200	0.42	500000	
Al	27	45	1	He	6.293	6.293	12.44	742	0.85	200000	
K	39	45	1	He	1150.944	1150.944	1.51	139461	0.83	500000	
Ca	44	45	1	He	75350.801	75350.801	0.77	498080	15.13	500000	
Ti	47	45	1	He	0.209	0.209	57.43	10	2.09	2500	
V	51	45	1	He	0.069	0.069	197.01	178	0.04	10000	
Cr	52	45	1	He	0.143	0.143	19.42	1036	0.01	10000	
Mn	55	45	1	He	26.941	26.941	0.22	28293	0.10	10000	
Fe	56	45	1	He	2760.403	2760.403	0.94	4466384	0.06	200000	
Co	59	45	1	He	0.178	0.178	19.95	1021	0.02	5000	
Ni	60	45	1	He	0.250	0.250	28.28	426	0.06	10000	
Cu	63	45	1	He	-0.025	-0.025	-243.20	2546	0.00	10000	
Zn	66	45	1	He	2.639	2.639	3.92	1191	0.22	10000	
As	75	103	1	He	19.229	19.229	1.90	4456	0.43	10000	
Se	78	115	1	He	0.662	0.662	9.17	10	6.76	10000	
Sr	88	103	1	He	69.225	69.225	0.79	70698	0.10	10000	
Mo	95	103	1	He	2.314	2.314	1.15	2956	0.08	2000	
Ag	107	103	1	He	0.016	0.016	26.03	83	0.02	300	
Cd	111	115	1	He	0.310	0.310	12.66	162	0.19	4000	
Sn	118	115	1	He	2.483	2.483	23.86	2745	0.09	2000	
Sb	123	115	1	He	0.238	0.238	28.48	307	0.08	200	
Ba	137	115	1	He	62.189	62.189	0.59	24097	0.26	10000	
W	182	159	1	He	0.844	0.844	11.64	6350	0.01	2500	
Tl	205	165	1	He	0.216	0.216	13.16	2032	0.01	2000	
Pb	208	165	1	He	0.123	0.123	11.89	2758	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2405713	0.76	1884762	127.64	60	120	ISTD warning
Sc	45	1	He	145624	1.51	134073	108.62	60	120	
Sc	45	2	NoGas	9764595	0.59	8481025	115.13	60	120	
Rh	103	1	He	925357	0.74	903580	102.41	60	120	
In	115	1	He	232387	0.92	224817	103.37	60	120	
Tb	159	1	He	1112459	0.99	1046002	106.35	60	120	
Ho	165	1	He	1127541	0.54	1057439	106.63	60	120	
Bi	209	1	He	761014	0.32	731380	104.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-2-a
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:21:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.892	1.892	0.47	176767	0.00	10000	
Be	9	45	2	NoGas	0.440	0.440	10.41	3089	0.01	2000	
B	11	45	2	NoGas	33.855	33.855	0.19	151728	0.02	300	
Na	23	45	1	He	18216.856	18216.856	1.11	7374696	0.25	500000	
Mg	24	45	1	He	22115.179	22115.179	0.94	4972118	0.44	500000	
Al	27	45	1	He	4.213	4.213	4.71	509	0.83	200000	
K	39	45	1	He	1198.288	1198.288	0.50	137166	0.87	500000	
Ca	44	45	1	He	77625.599	77625.599	0.16	486014	15.97	500000	
Ti	47	45	1	He	0.073	0.073	173.21	3	2.19	2500	
V	51	45	1	He	0.153	0.153	33.26	304	0.05	10000	
Cr	52	45	1	He	0.114	0.114	48.32	922	0.01	10000	
Mn	55	45	1	He	27.471	27.471	2.06	27321	0.10	10000	
Fe	56	45	1	He	2811.109	2811.109	0.43	4308313	0.07	200000	
Co	59	45	1	He	0.077	0.077	12.84	599	0.01	5000	
Ni	60	45	1	He	0.144	0.144	31.95	296	0.05	10000	
Cu	63	45	1	He	-0.065	-0.065	-70.31	2296	0.00	10000	
Zn	66	45	1	He	2.735	2.735	3.97	1163	0.24	10000	
As	75	103	1	He	19.204	19.204	0.46	4323	0.44	10000	
Se	78	115	1	He	0.293	0.293	35.07	6	5.05	10000	
Sr	88	103	1	He	69.569	69.569	1.65	68999	0.10	10000	
Mo	95	103	1	He	2.136	2.136	4.37	2651	0.08	2000	
Ag	107	103	1	He	0.002	0.002	18.72	18	0.01	300	
Cd	111	115	1	He	0.115	0.115	27.81	60	0.19	4000	
Sn	118	115	1	He	1.222	1.222	11.92	1471	0.08	2000	
Sb	123	115	1	He	0.068	0.068	41.56	116	0.06	200	
Ba	137	115	1	He	61.939	61.939	0.91	23381	0.26	10000	
W	182	159	1	He	0.469	0.469	8.78	4053	0.01	2500	
Tl	205	165	1	He	0.052	0.052	5.77	501	0.01	2000	
Pb	208	165	1	He	0.017	0.017	41.08	1420	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2318160	0.24	1884762	122.99	60	120	ISTD warning
Sc	45	1	He	137924	0.83	134073	102.87	60	120	
Sc	45	2	NoGas	9420118	0.35	8481025	111.07	60	120	
Rh	103	1	He	898661	0.28	903580	99.46	60	120	
In	115	1	He	226377	0.53	224817	100.69	60	120	
Tb	159	1	He	1073643	0.26	1046002	102.64	60	120	
Ho	165	1	He	1082914	0.90	1057439	102.41	60	120	
Bi	209	1	He	734589	0.54	731380	100.44	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-3-a
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:25:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.206	1.206	7.10	149582	0.00	10000	
Be	9	45	2	NoGas	0.360	0.360	9.74	2397	0.02	2000	
B	11	45	2	NoGas	33.862	33.862	1.36	142332	0.02	300	
Na	23	45	1	He	241105.259	241105.259	1.78	96087522	0.25	500000	
Mg	24	45	1	He	17026.911	17026.911	2.14	3770885	0.45	500000	
Al	27	45	1	He	41.952	41.952	2.90	3984	1.05	200000	
K	39	45	1	He	1464.671	1464.671	0.81	163146	0.90	500000	
Ca	44	45	1	He	89269.604	89269.604	1.57	550501	16.22	500000	
Ti	47	45	1	He	0.722	0.722	49.18	32	2.24	2500	
V	51	45	1	He	0.591	0.591	16.82	997	0.06	10000	
Cr	52	45	1	He	0.451	0.451	2.00	1572	0.03	10000	
Mn	55	45	1	He	507.508	507.508	0.67	494839	0.10	10000	
Fe	56	45	1	He	3056.292	3056.292	1.32	4613601	0.07	200000	
Co	59	45	1	He	3.075	3.075	4.92	11366	0.03	5000	
Ni	60	45	1	He	2.534	2.534	2.43	2704	0.09	10000	
Cu	63	45	1	He	1.149	1.149	26.12	5715	0.02	10000	
Zn	66	45	1	He	2.462	2.462	14.24	1046	0.24	10000	
As	75	103	1	He	4.099	4.099	5.97	875	0.47	10000	
Se	78	115	1	He	0.319	0.319	64.78	6	5.50	10000	
Sr	88	103	1	He	207.308	207.308	0.74	192041	0.11	10000	
Mo	95	103	1	He	0.898	0.898	8.67	1049	0.09	2000	
Ag	107	103	1	He	0.007	0.007	26.63	39	0.02	300	
Cd	111	115	1	He	0.117	0.117	21.76	58	0.20	4000	
Sn	118	115	1	He	0.536	0.536	13.16	778	0.07	2000	
Sb	123	115	1	He	0.074	0.074	27.66	117	0.06	200	
Ba	137	115	1	He	80.071	80.071	1.38	28881	0.28	10000	
W	182	159	1	He	0.364	0.364	9.00	3293	0.01	2500	
Tl	205	165	1	He	0.045	0.045	18.51	419	0.01	2000	
Pb	208	165	1	He	0.118	0.118	11.95	2477	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108268	0.97	1884762	111.86	60	120	
Sc	45	1	He	135867	0.94	134073	101.34	60	120	
Sc	45	2	NoGas	8835786	1.24	8481025	104.18	60	120	
Rh	103	1	He	839713	0.46	903580	92.93	60	120	
In	115	1	He	216345	0.92	224817	96.23	60	120	
Tb	159	1	He	1017823	0.55	1046002	97.31	60	120	
Ho	165	1	He	1034583	0.52	1057439	97.84	60	120	
Bi	209	1	He	675477	0.31	731380	92.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-4-a
Data File Name	098SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:29:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.788	1.788	1.20	157461	0.00	10000	
Be	9	45	2	NoGas	0.290	0.290	6.13	1889	0.02	2000	
B	11	45	2	NoGas	34.901	34.901	1.61	141150	0.02	300	
Na	23	45	1	He	20315.146	20315.146	3.14	7696638	0.26	500000	
Mg	24	45	1	He	16612.284	16612.284	3.81	3495316	0.48	500000	
Al	27	45	1	He	3.481	3.481	15.75	412	0.84	200000	
K	39	45	1	He	1620.347	1620.347	2.83	170579	0.95	500000	
Ca	44	45	1	He	67993.771	67993.771	2.44	398476	17.06	500000	
Ti	47	45	1	He	0.132	0.132	92.78	6	2.38	2500	
V	51	45	1	He	-0.004	-0.004	-1081.04	46	-0.01	10000	
Cr	52	45	1	He	0.046	0.046	32.23	737	0.01	10000	
Mn	55	45	1	He	40.779	40.779	1.84	37903	0.11	10000	
Fe	56	45	1	He	2092.305	2092.305	3.57	3001431	0.07	200000	
Co	59	45	1	He	0.043	0.043	25.37	447	0.01	5000	
Ni	60	45	1	He	0.184	0.184	28.03	314	0.06	10000	
Cu	63	45	1	He	1.625	1.625	9.60	6728	0.02	10000	
Zn	66	45	1	He	2.974	2.974	6.20	1171	0.25	10000	
As	75	103	1	He	7.250	7.250	3.74	1520	0.48	10000	
Se	78	115	1	He	0.419	0.419	20.15	7	6.32	10000	
Sr	88	103	1	He	102.145	102.145	1.07	93698	0.11	10000	
Mo	95	103	1	He	1.261	1.261	2.53	1452	0.09	2000	
Ag	107	103	1	He	0.000	0.000	403.76	9	0.00	300	
Cd	111	115	1	He	0.038	0.038	17.67	19	0.19	4000	
Sn	118	115	1	He	0.366	0.366	31.22	611	0.06	2000	
Sb	123	115	1	He	0.001	0.001	1527.81	41	0.00	200	
Ba	137	115	1	He	44.085	44.085	1.42	15601	0.28	10000	
W	182	159	1	He	0.338	0.338	6.54	3089	0.01	2500	
Tl	205	165	1	He	0.016	0.016	11.34	167	0.01	2000	
Pb	208	165	1	He	0.037	0.037	10.79	1537	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089426	0.66	1884762	110.86	60	120	
Sc	45	1	He	129142	2.38	134073	96.32	60	120	
Sc	45	2	NoGas	8517876	0.89	8481025	100.43	60	120	
Rh	103	1	He	831389	1.30	903580	92.01	60	120	
In	115	1	He	212213	0.61	224817	94.39	60	120	
Tb	159	1	He	997099	0.99	1046002	95.32	60	120	
Ho	165	1	He	1007345	0.67	1057439	95.26	60	120	
Bi	209	1	He	678564	1.33	731380	92.78	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-5-a
Data File Name	099SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:33:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.854	11.854	0.14	392642	0.00	10000	
Be	9	45	2	NoGas	0.956	0.956	5.13	5979	0.02	2000	
B	11	45	2	NoGas	31.311	31.311	1.26	129448	0.02	300	
Na	23	45	1	He	101714.997	101714.997	1.43	37997504	0.27	500000	
Mg	24	45	1	He	18605.289	18605.289	1.49	3862348	0.48	500000	
Al	27	45	1	He	19837.414	19837.414	0.70	1716105	1.16	200000	
K	39	45	1	He	3826.820	3826.820	0.80	385944	0.99	500000	
Ca	44	45	1	He	82667.480	82667.480	0.19	477893	17.30	500000	
Ti	47	45	1	He	273.173	273.173	1.46	11430	2.39	2500	
V	51	45	1	He	-304.749	-304.749	-15.84	-454062	0.07	10000	
Cr	52	45	1	He	8621.679	8621.679	0.34	15902758	0.05	10000	
Mn	55	45	1	He	3801.607	3801.607	0.62	3473527	0.11	10000	
Fe	56	45	1	He	77526.589	77526.589	0.58	109652300	0.07	200000	
Co	59	45	1	He	89.178	89.178	0.59	300830	0.03	5000	
Ni	60	45	1	He	1160.626	1160.626	0.22	1098418	0.11	10000	
Cu	63	45	1	He	234.942	234.942	0.28	629500	0.04	10000	
Zn	66	45	1	He	73.108	73.108	2.48	25101	0.29	10000	
As	75	103	1	He	15.349	15.349	2.82	3034	0.51	10000	
Se	78	115	1	He	3.193	3.193	16.43	31	10.24	10000	
Sr	88	103	1	He	154.446	154.446	0.81	134340	0.11	10000	
Mo	95	103	1	He	109.977	109.977	1.52	119142	0.09	2000	
Ag	107	103	1	He	0.072	0.072	12.33	294	0.02	300	
Cd	111	115	1	He	0.220	0.220	12.19	100	0.22	4000	
Sn	118	115	1	He	12.413	12.413	3.86	10785	0.12	2000	
Sb	123	115	1	He	1.123	1.123	4.54	1110	0.10	200	
Ba	137	115	1	He	223.737	223.737	1.81	74846	0.30	10000	
W	182	159	1	He	4.922	4.922	1.66	25959	0.02	2500	
Tl	205	165	1	He	0.287	0.287	2.93	2351	0.01	2000	
Pb	208	165	1	He	13.637	13.637	0.83	145191	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2072797	0.91	1884762	109.98	60	120	
Sc	45	1	He	127352	1.42	134073	94.99	60	120	
Sc	45	2	NoGas	8644933	0.48	8481025	101.93	60	120	
Rh	103	1	He	788416	1.07	903580	87.25	60	120	
In	115	1	He	200692	1.61	224817	89.27	60	120	
Tb	159	1	He	971765	1.51	1046002	92.90	60	120	
Ho	165	1	He	985926	0.90	1057439	93.24	60	120	
Bi	209	1	He	642310	0.37	731380	87.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-7-a
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:37:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.491	2.491	0.75	183124	0.00	10000	
Be	9	45	2	NoGas	0.233	0.233	10.38	1630	0.01	2000	
B	11	45	2	NoGas	55.349	55.349	1.35	230859	0.02	300	
Na	23	45	1	He	18333.880	18333.880	2.29	7244411	0.25	500000	
Mg	24	45	1	He	21957.205	21957.205	1.41	4818756	0.46	500000	
Al	27	45	1	He	24.616	24.616	8.23	2361	1.04	200000	
K	39	45	1	He	3419.949	3419.949	2.37	365559	0.94	500000	
Ca	44	45	1	He	97122.315	97122.315	3.19	593438	16.37	500000	
Ti	47	45	1	He	0.706	0.706	63.83	31	2.27	2500	
V	51	45	1	He	0.190	0.190	88.96	354	0.05	10000	
Cr	52	45	1	He	0.907	0.907	8.04	2448	0.04	10000	
Mn	55	45	1	He	142.061	142.061	3.15	137338	0.10	10000	
Fe	56	45	1	He	2459.839	2459.839	2.82	3679647	0.07	200000	
Co	59	45	1	He	0.013	0.013	225.10	358	0.00	5000	
Ni	60	45	1	He	0.744	0.744	5.41	889	0.08	10000	
Cu	63	45	1	He	5.189	5.189	4.56	17067	0.03	10000	
Zn	66	45	1	He	16.416	16.416	5.36	6073	0.27	10000	
As	75	103	1	He	3.193	3.193	1.76	697	0.46	10000	
Se	78	115	1	He	0.251	0.251	69.24	5	4.89	10000	
Sr	88	103	1	He	95.511	95.511	0.97	90069	0.11	10000	
Mo	95	103	1	He	2.562	2.562	1.93	3020	0.08	2000	
Ag	107	103	1	He	0.002	0.002	111.34	18	0.01	300	
Cd	111	115	1	He	0.024	0.024	18.90	13	0.18	4000	
Sn	118	115	1	He	3.864	3.864	1.93	3804	0.10	2000	
Sb	123	115	1	He	0.035	0.035	70.22	77	0.05	200	
Ba	137	115	1	He	46.452	46.452	1.58	16696	0.28	10000	
W	182	159	1	He	0.280	0.280	9.92	2863	0.01	2500	
Tl	205	165	1	He	0.014	0.014	24.27	157	0.01	2000	
Pb	208	165	1	He	0.188	0.188	2.51	3239	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2135613	2.26	1884762	113.31	60	120	
Sc	45	1	He	134637	1.00	134073	100.42	60	120	
Sc	45	2	NoGas	8991341	0.66	8481025	106.02	60	120	
Rh	103	1	He	854546	1.17	903580	94.57	60	120	
In	115	1	He	215541	2.12	224817	95.87	60	120	
Tb	159	1	He	1021256	1.13	1046002	97.63	60	120	
Ho	165	1	He	1029525	1.68	1057439	97.36	60	120	
Bi	209	1	He	692521	0.76	731380	94.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-8-a
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:42:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.479	2.479	1.61	183207	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	18.34	1667	0.01	2000	
B	11	45	2	NoGas	46.117	46.117	1.17	194304	0.02	300	
Na	23	45	1	He	20114.188	20114.188	2.82	8047024	0.25	500000	
Mg	24	45	1	He	15049.140	15049.140	3.90	3343747	0.45	500000	
Al	27	45	1	He	7.843	7.843	5.55	839	0.93	200000	
K	39	45	1	He	2031.267	2031.267	3.31	223499	0.91	500000	
Ca	44	45	1	He	88662.677	88662.677	2.42	548615	16.16	500000	
Ti	47	45	1	He	0.276	0.276	80.81	12	2.26	2500	
V	51	45	1	He	-0.111	-0.111	-115.70	-124	0.09	10000	
Cr	52	45	1	He	0.279	0.279	6.32	1238	0.02	10000	
Mn	55	45	1	He	84.571	84.571	2.73	82854	0.10	10000	
Fe	56	45	1	He	2200.745	2200.745	2.71	3333773	0.07	200000	
Co	59	45	1	He	0.016	0.016	60.45	373	0.00	5000	
Ni	60	45	1	He	0.252	0.252	16.40	402	0.06	10000	
Cu	63	45	1	He	-0.038	-0.038	-51.83	2349	0.00	10000	
Zn	66	45	1	He	1.601	1.601	0.94	736	0.22	10000	
As	75	103	1	He	1.318	1.318	8.81	302	0.44	10000	
Se	78	115	1	He	0.509	0.509	53.39	8	6.53	10000	
Sr	88	103	1	He	102.821	102.821	2.35	98290	0.10	10000	
Mo	95	103	1	He	2.158	2.158	5.78	2582	0.08	2000	
Ag	107	103	1	He	0.003	0.003	59.97	19	0.01	300	
Cd	111	115	1	He	0.018	0.018	64.22	11	0.17	4000	
Sn	118	115	1	He	0.459	0.459	33.81	722	0.06	2000	
Sb	123	115	1	He	-0.009	-0.009	-155.42	32	-0.03	200	
Ba	137	115	1	He	42.941	42.941	1.16	15792	0.27	10000	
W	182	159	1	He	0.255	0.255	4.68	2793	0.01	2500	
Tl	205	165	1	He	0.010	0.010	21.83	122	0.01	2000	
Pb	208	165	1	He	0.022	0.022	21.17	1448	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2195675	0.95	1884762	116.50	60	120	
Sc	45	1	He	136358	2.08	134073	101.70	60	120	
Sc	45	2	NoGas	9010085	0.15	8481025	106.24	60	120	
Rh	103	1	He	866589	1.86	903580	95.91	60	120	
In	115	1	He	220506	1.58	224817	98.08	60	120	
Tb	159	1	He	1044639	2.21	1046002	99.87	60	120	
Ho	165	1	He	1057231	1.41	1057439	99.98	60	120	
Bi	209	1	He	707681	0.99	731380	96.76	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	102_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:46:13-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.374	1.233	1444700	1.08	50	112.7	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.383	0.859	337278	0.86	50	108.8	89.5	110.5	
B	11	45	2	NoGas	64.751	0.863	262174	0.83	50	129.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25379.281	1.790	9967340	0.98	25000	101.5	89.5	110.5	
Mg	24	45	1	He	25172.880	1.795	5491491	1.06	25000	100.7	89.5	110.5	
Al	27	45	1	He	249.260	1.891	22766	0.95	250	99.7	89.5	110.5	
K	39	45	1	He	25557.130	0.797	2658428	0.45	25000	102.2	89.5	110.5	
Ca	44	45	1	He	25119.901	0.955	152736	0.25	25000	100.5	89.5	110.5	
Ti	47	45	1	He	51.255	4.232	2254	3.20	50	102.5	89.5	110.5	
V	51	45	1	He	50.250	2.352	78849	1.80	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.985	2.635	97545	1.54	50	100.0	89.5	110.5	
Mn	55	45	1	He	248.809	2.318	239015	1.29	250	99.5	89.5	110.5	
Fe	56	45	1	He	12545.118	2.265	18647046	1.31	12500	100.4	89.5	110.5	
Co	59	45	1	He	50.594	1.958	179484	1.02	50	101.2	89.5	110.5	
Ni	60	45	1	He	49.336	1.477	49202	0.57	50	98.7	89.5	110.5	
Cu	63	45	1	He	49.774	1.601	142038	0.51	50	99.5	89.5	110.5	
Zn	66	45	1	He	49.446	2.185	17890	1.20	50	98.9	89.5	110.5	
As	75	103	1	He	49.320	0.544	10601	0.21	50	98.6	89.5	110.5	
Se	78	115	1	He	49.652	3.619	484	3.05	50	99.3	89.5	110.5	
Sr	88	103	1	He	50.454	0.825	47914	0.25	50	100.9	89.5	110.5	
Mo	95	103	1	He	52.096	0.380	61593	0.92	50	104.2	89.5	110.5	
Ag	107	103	1	He	50.179	0.225	219326	0.47	50	100.4	89.5	110.5	
Cd	111	115	1	He	50.742	1.301	24569	0.63	50	101.5	89.5	110.5	
Sn	118	115	1	He	49.770	0.694	45944	1.25	50	99.5	89.5	110.5	
Sb	123	115	1	He	50.893	1.414	52624	1.95	50	101.8	89.5	110.5	
Ba	137	115	1	He	49.597	3.066	17960	2.14	50	99.2	89.5	110.5	
W	182	159	1	He	52.701	0.784	280389	1.47	50	105.4	89.5	110.5	
Tl	205	165	1	He	49.558	0.383	426367	0.58	50	99.1	89.5	110.5	
Pb	208	165	1	He	49.533	0.245	559943	0.99	50	99.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2178650	1.18	1884762	115.59	60	120	
Sc	45	1	He	133838	1.09	134073	99.82	60	120	
Sc	45	2	NoGas	8780365	0.61	8481025	103.53	60	120	
Rh	103	1	He	860336	0.64	903580	95.21	60	120	
In	115	1	He	217189	0.96	224817	96.61	60	120	
Tb	159	1	He	1027745	0.72	1046002	98.25	60	120	
Ho	165	1	He	1052639	0.76	1057439	99.55	60	120	
Bi	209	1	He	700029	0.07	731380	95.71	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	103_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:50:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.729	5.4	139660	0.5	8	
Be	9	45	2	NoGas	0.265	9.2	1822	8.4	1	
B	11	45	2	NoGas	11.084	3.4	53270	2.7	20	
Na	23	45	1	He	57.511	3.8	27128	3.6	1000	
Mg	24	45	1	He	27.194	1.7	6568	0.9	1000	
Al	27	45	1	He	0.677	61.6	172	21.8	50	
K	39	45	1	He	31.353	13.6	12104	2.5	1000	
Ca	44	45	1	He	33.755	8.5	396	3.0	1000	
Ti	47	45	1	He	0.125	123.5	6	124.9	20	
V	51	45	1	He	0.174	22.1	327	18.2	2	
Cr	52	45	1	He	0.066	80.0	800	10.6	2	
Mn	55	45	1	He	0.286	5.4	409	3.9	2	
Fe	56	45	1	He	16.697	2.0	26803	2.7	50	
Co	59	45	1	He	0.021	120.1	381	21.0	1	
Ni	60	45	1	He	0.036	68.1	179	13.1	2	
Cu	63	45	1	He	-0.276	-12.6	1639	7.7	2	
Zn	66	45	1	He	0.384	35.8	284	16.3	20	
As	75	103	1	He	0.116	34.3	43	20.2	2	
Se	78	115	1	He	0.104	69.1	4	19.9	2	
Sr	88	103	1	He	0.167	22.6	202	17.8	10	
Mo	95	103	1	He	0.173	15.6	226	15.4	2	
Ag	107	103	1	He	0.061	1.7	282	0.7	0.2	
Cd	111	115	1	He	0.090	21.5	46	22.0	0.2	
Sn	118	115	1	He	0.285	27.8	563	13.1	10	
Sb	123	115	1	He	0.161	26.4	211	20.0	2	
Ba	137	115	1	He	0.105	40.8	44	37.0	5	
W	182	159	1	He	0.509	13.8	4149	8.8	10	
Tl	205	165	1	He	0.100	7.8	900	7.5	0.5	
Pb	208	165	1	He	0.046	15.4	1705	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2331767	0.18	1884762	123.72	60	120	ISTD warning
Sc	45	1	He	133788	2.10	134073	99.79	60	120	
Sc	45	2	NoGas	8922452	0.15	8481025	105.20	60	120	
Rh	103	1	He	892157	0.95	903580	98.74	60	120	
In	115	1	He	221809	1.40	224817	98.66	60	120	
Tb	159	1	He	1042524	0.50	1046002	99.67	60	120	
Ho	165	1	He	1051728	0.36	1057439	99.46	60	120	
Bi	209	1	He	730845	0.24	731380	99.93	60	120	

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Sample Report

Sample Table

Sample Name	240-64147-e-9-a
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:54:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.009	6.009	0.30	260967	0.00	10000	
Be	9	45	2	NoGas	0.170	0.170	17.05	1200	0.01	2000	
B	11	45	2	NoGas	118.726	118.726	0.38	472222	0.03	300	
Na	23	45	1	He	34246.281	34246.281	2.26	13220746	0.26	500000	
Mg	24	45	1	He	23749.251	23749.251	2.26	5093303	0.47	500000	
Al	27	45	1	He	14.062	14.062	1.67	1366	1.03	200000	
K	39	45	1	He	6174.240	6174.240	1.93	637951	0.97	500000	
Ca	44	45	1	He	243063.822	243063.822	2.89	1451166	16.75	500000	
Ti	47	45	1	He	1.053	1.053	47.64	46	2.31	2500	
V	51	45	1	He	2.351	2.351	4.10	3678	0.06	10000	
Cr	52	45	1	He	1.069	1.069	10.18	2699	0.04	10000	
Mn	55	45	1	He	746.701	746.701	2.12	704945	0.11	10000	
Fe	56	45	1	He	6930.984	6930.984	2.08	10129258	0.07	200000	
Co	59	45	1	He	0.371	0.371	5.88	1595	0.02	5000	
Ni	60	45	1	He	0.423	0.423	11.85	554	0.08	10000	
Cu	63	45	1	He	0.430	0.430	12.28	3556	0.01	10000	
Zn	66	45	1	He	1.482	1.482	10.90	668	0.22	10000	
As	75	103	1	He	0.401	0.401	14.09	98	0.41	10000	
Se	78	115	1	He	0.539	0.539	56.52	8	6.91	10000	
Sr	88	103	1	He	287.717	287.717	1.39	261653	0.11	10000	
Mo	95	103	1	He	0.350	0.350	12.49	409	0.09	2000	
Ag	107	103	1	He	0.007	0.007	55.51	36	0.02	300	
Cd	111	115	1	He	0.026	0.026	51.02	14	0.19	4000	
Sn	118	115	1	He	1.595	1.595	16.57	1711	0.09	2000	
Sb	123	115	1	He	0.062	0.062	30.06	102	0.06	200	
Ba	137	115	1	He	70.115	70.115	1.21	24804	0.28	10000	
W	182	159	1	He	0.348	0.348	9.82	3234	0.01	2500	
Tl	205	165	1	He	0.017	0.017	13.47	181	0.01	2000	
Pb	208	165	1	He	0.052	0.052	3.35	1749	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2255375	0.97	1884762	119.66	60	120	
Sc	45	1	He	131568	0.44	134073	98.13	60	120	
Sc	45	2	NoGas	8763467	0.28	8481025	103.33	60	120	
Rh	103	1	He	824357	0.56	903580	91.23	60	120	
In	115	1	He	212174	1.34	224817	94.38	60	120	
Tb	159	1	He	1025602	0.40	1046002	98.05	60	120	
Ho	165	1	He	1039649	0.52	1057439	98.32	60	120	
Bi	209	1	He	681748	0.47	731380	93.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-2-a
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T18:58:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.971	11.971	0.66	399751	0.00	10000	
Be	9	45	2	NoGas	0.136	0.136	19.10	989	0.01	2000	
B	11	45	2	NoGas	54.748	54.748	0.84	222085	0.02	300	
Na	23	45	1	He	15235.307	15235.307	1.68	5802345	0.26	500000	
Mg	24	45	1	He	35439.546	35439.546	1.27	7494651	0.47	500000	
Al	27	45	1	He	3.840	3.840	36.52	446	0.86	200000	
K	39	45	1	He	3063.484	3063.484	0.91	316469	0.97	500000	
Ca	44	45	1	He	107384.302	107384.302	1.19	632422	16.98	500000	
Ti	47	45	1	He	0.130	0.130	33.94	6	2.34	2500	
V	51	45	1	He	0.001	0.001	20821.89	55	0.00	10000	
Cr	52	45	1	He	0.038	0.038	135.06	727	0.01	10000	
Mn	55	45	1	He	9.062	9.062	3.73	8563	0.11	10000	
Fe	56	45	1	He	1606.409	1606.409	1.25	2316797	0.07	200000	
Co	59	45	1	He	-0.003	-0.003	-233.81	289	0.00	5000	
Ni	60	45	1	He	0.304	0.304	18.17	432	0.07	10000	
Cu	63	45	1	He	-0.268	-0.268	-20.40	1609	-0.02	10000	
Zn	66	45	1	He	1.141	1.141	11.02	540	0.21	10000	
As	75	103	1	He	1.401	1.401	3.00	308	0.45	10000	
Se	78	115	1	He	0.209	0.209	14.94	5	4.50	10000	
Sr	88	103	1	He	22722.910	22722.910	0.22	20947522	0.11	10000	>LDR
Mo	95	103	1	He	6.220	6.220	1.53	7156	0.09	2000	
Ag	107	103	1	He	0.009	0.009	59.58	47	0.02	300	
Cd	111	115	1	He	0.028	0.028	45.49	15	0.19	4000	
Sn	118	115	1	He	0.275	0.275	10.58	530	0.05	2000	
Sb	123	115	1	He	0.046	0.046	39.84	87	0.05	200	
Ba	137	115	1	He	112.493	112.493	1.39	39797	0.28	10000	
W	182	159	1	He	0.297	0.297	6.24	2952	0.01	2500	
Tl	205	165	1	He	0.018	0.018	29.10	193	0.01	2000	
Pb	208	165	1	He	0.013	0.013	77.05	1306	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2229162	0.71	1884762	118.27	60	120	
Sc	45	1	He	129743	1.20	134073	96.77	60	120	
Sc	45	2	NoGas	8741106	0.56	8481025	103.07	60	120	
Rh	103	1	He	835788	0.90	903580	92.50	60	120	
In	115	1	He	212186	0.16	224817	94.38	60	120	
Tb	159	1	He	1021032	1.34	1046002	97.61	60	120	
Ho	165	1	He	1029264	0.84	1057439	97.34	60	120	
Bi	209	1	He	686584	0.62	731380	93.88	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-3-a
Data File Name	106SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:02:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	14.606	14.606	0.18	462226	0.00	10000	
Be	9	45	2	NoGas	0.129	0.129	16.05	945	0.01	2000	
B	11	45	2	NoGas	64.993	64.993	1.22	262420	0.02	300	
Na	23	45	1	He	10090.614	10090.614	0.83	3885953	0.26	500000	
Mg	24	45	1	He	34417.822	34417.822	0.24	7356885	0.47	500000	
Al	27	45	1	He	27.550	27.550	6.71	2562	1.08	200000	
K	39	45	1	He	1261.512	1261.512	0.68	136830	0.92	500000	
Ca	44	45	1	He	91770.490	91770.490	2.18	546234	16.80	500000	
Ti	47	45	1	He	0.386	0.386	52.68	17	2.32	2500	
V	51	45	1	He	0.130	0.130	104.86	252	0.05	10000	
Cr	52	45	1	He	0.056	0.056	20.57	768	0.01	10000	
Mn	55	45	1	He	8.472	8.472	2.03	8102	0.10	10000	
Fe	56	45	1	He	768.424	768.424	1.90	1121098	0.07	200000	
Co	59	45	1	He	0.106	0.106	15.84	671	0.02	5000	
Ni	60	45	1	He	0.895	0.895	6.94	1012	0.09	10000	
Cu	63	45	1	He	-0.199	-0.199	-31.25	1815	-0.01	10000	
Zn	66	45	1	He	2.230	2.230	24.67	929	0.24	10000	
As	75	103	1	He	0.875	0.875	6.97	198	0.44	10000	
Se	78	115	1	He	0.263	0.263	85.66	5	5.12	10000	
Sr	88	103	1	He	32969.639	32969.639	0.72	30284468	0.11	10000	>LDR
Mo	95	103	1	He	4.954	4.954	2.96	5681	0.09	2000	
Ag	107	103	1	He	0.008	0.008	64.42	40	0.02	300	
Cd	111	115	1	He	0.349	0.349	25.69	167	0.21	4000	
Sn	118	115	1	He	0.035	0.035	139.07	315	0.01	2000	
Sb	123	115	1	He	0.020	0.020	131.20	60	0.03	200	
Ba	137	115	1	He	60.648	60.648	1.36	21454	0.28	10000	
W	182	159	1	He	0.517	0.517	3.76	4045	0.01	2500	
Tl	205	165	1	He	0.010	0.010	51.36	126	0.01	2000	
Pb	208	165	1	He	0.068	0.068	1.65	1892	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2202484	0.90	1884762	116.86	60	120	
Sc	45	1	He	131130	0.39	134073	97.80	60	120	
Sc	45	2	NoGas	8757205	0.73	8481025	103.26	60	120	
Rh	103	1	He	832753	0.87	903580	92.16	60	120	
In	115	1	He	212123	1.05	224817	94.35	60	120	
Tb	159	1	He	1005557	0.59	1046002	96.13	60	120	
Ho	165	1	He	1016707	0.55	1057439	96.15	60	120	
Bi	209	1	He	687625	0.18	731380	94.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-4-a
Data File Name	107SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:07:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.020	20.020	0.47	602023	0.00	10000	
Be	9	45	2	NoGas	0.111	0.111	14.18	856	0.01	2000	
B	11	45	2	NoGas	142.121	142.121	0.36	575454	0.02	300	
Na	23	45	1	He	10680.586	10680.586	1.66	4261122	0.25	500000	
Mg	24	45	1	He	32577.088	32577.088	1.83	7214520	0.45	500000	
Al	27	45	1	He	5.017	5.017	8.32	576	0.87	200000	
K	39	45	1	He	1793.929	1793.929	0.50	197804	0.91	500000	
Ca	44	45	1	He	102042.125	102042.125	2.17	629285	16.22	500000	
Ti	47	45	1	He	0.150	0.150	100.17	7	2.25	2500	
V	51	45	1	He	-0.069	-0.069	-154.27	-55	0.12	10000	
Cr	52	45	1	He	0.037	0.037	59.22	758	0.00	10000	
Mn	55	45	1	He	2.508	2.508	5.76	2581	0.10	10000	
Fe	56	45	1	He	798.790	798.790	1.27	1207356	0.07	200000	
Co	59	45	1	He	-0.016	-0.016	-32.50	254	-0.01	5000	
Ni	60	45	1	He	0.063	0.063	30.83	209	0.03	10000	
Cu	63	45	1	He	-0.339	-0.339	-6.53	1483	-0.02	10000	
Zn	66	45	1	He	2.283	2.283	12.73	981	0.23	10000	
As	75	103	1	He	2.758	2.758	2.31	613	0.45	10000	
Se	78	115	1	He	0.298	0.298	137.96	6	5.28	10000	
Sr	88	103	1	He	60423.988	60423.988	1.34	57750044	0.10	10000	>LDR
Mo	95	103	1	He	5.602	5.602	3.09	6681	0.08	2000	
Ag	107	103	1	He	0.017	0.017	13.05	83	0.02	300	
Cd	111	115	1	He	0.019	0.019	97.84	11	0.17	4000	
Sn	118	115	1	He	5.610	5.610	3.31	5449	0.10	2000	
Sb	123	115	1	He	0.051	0.051	88.00	93	0.05	200	
Ba	137	115	1	He	186.289	186.289	1.24	67624	0.28	10000	
W	182	159	1	He	0.219	0.219	27.15	2604	0.01	2500	
Tl	205	165	1	He	0.007	0.007	22.63	98	0.01	2000	
Pb	208	165	1	He	0.026	0.026	14.57	1481	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2252931	1.86	1884762	119.53	60	120	
Sc	45	1	He	135863	0.41	134073	101.33	60	120	
Sc	45	2	NoGas	8949694	0.48	8481025	105.53	60	120	
Rh	103	1	He	866515	0.42	903580	95.90	60	120	
In	115	1	He	217734	0.47	224817	96.85	60	120	
Tb	159	1	He	1045724	0.72	1046002	99.97	60	120	
Ho	165	1	He	1055424	0.46	1057439	99.81	60	120	
Bi	209	1	He	709485	0.42	731380	97.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-5-a
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:11:16-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.802	17.802	1.73	543947	0.00	10000	
Be	9	45	2	NoGas	0.131	0.131	20.83	970	0.01	2000	
B	11	45	2	NoGas	124.119	124.119	0.44	499205	0.02	300	
Na	23	45	1	He	9795.324	9795.324	5.61	3984940	0.25	500000	
Mg	24	45	1	He	33384.825	33384.825	6.55	7535586	0.44	500000	
Al	27	45	1	He	2.317	2.317	14.71	333	0.70	200000	
K	39	45	1	He	1620.051	1620.051	6.61	183011	0.89	500000	
Ca	44	45	1	He	105835.013	105835.013	6.56	665424	15.90	500000	
Ti	47	45	1	He	0.124	0.124	38.69	6	2.23	2500	
V	51	45	1	He	0.061	0.061	124.24	160	0.04	10000	
Cr	52	45	1	He	0.128	0.128	5.34	956	0.01	10000	
Mn	55	45	1	He	4.409	4.409	6.88	4521	0.10	10000	
Fe	56	45	1	He	1214.794	1214.794	4.56	1871844	0.06	200000	
Co	59	45	1	He	0.441	0.441	6.50	1936	0.02	5000	
Ni	60	45	1	He	4.320	4.320	2.87	4600	0.09	10000	
Cu	63	45	1	He	-0.301	-0.301	-17.61	1620	-0.02	10000	
Zn	66	45	1	He	7.283	7.283	5.86	2858	0.25	10000	
As	75	103	1	He	5.964	5.964	4.51	1330	0.45	10000	
Se	78	115	1	He	0.279	0.279	37.83	6	4.95	10000	
Sr	88	103	1	He	37210.195	37210.195	5.55	36210559	0.10	10000	>LDR
Mo	95	103	1	He	6.309	6.309	5.74	7661	0.08	2000	
Ag	107	103	1	He	0.009	0.009	26.98	49	0.02	300	
Cd	111	115	1	He	0.034	0.034	52.68	19	0.18	4000	
Sn	118	115	1	He	0.239	0.239	12.61	530	0.05	2000	
Sb	123	115	1	He	0.059	0.059	49.25	107	0.06	200	
Ba	137	115	1	He	46.450	46.450	7.11	17440	0.27	10000	
W	182	159	1	He	0.455	0.455	56.87	4027	0.01	2500	
Tl	205	165	1	He	0.014	0.014	10.39	164	0.01	2000	
Pb	208	165	1	He	0.081	0.081	2.28	2169	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2239097	0.22	1884762	118.80	60	120	
Sc	45	1	He	138821	5.80	134073	103.54	60	120	
Sc	45	2	NoGas	8869309	1.20	8481025	104.58	60	120	
Rh	103	1	He	883954	5.20	903580	97.83	60	120	
In	115	1	He	225620	5.23	224817	100.36	60	120	
Tb	159	1	He	1073565	5.47	1046002	102.64	60	120	
Ho	165	1	He	1085907	5.36	1057439	102.69	60	120	
Bi	209	1	He	717618	3.37	731380	98.12	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-6-a
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:15:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.661	17.661	0.62	543957	0.00	10000	
Be	9	45	2	NoGas	0.130	0.130	25.29	970	0.01	2000	
B	11	45	2	NoGas	126.126	126.126	0.83	510243	0.02	300	
Na	23	45	1	He	10335.292	10335.292	0.96	4044668	0.26	500000	
Mg	24	45	1	He	35363.767	35363.767	0.98	7682026	0.46	500000	
Al	27	45	1	He	2.979	2.979	6.07	380	0.78	200000	
K	39	45	1	He	1677.050	1677.050	1.16	181944	0.92	500000	
Ca	44	45	1	He	111586.170	111586.170	4.49	674806	16.54	500000	
Ti	47	45	1	He	0.101	0.101	113.95	4	2.27	2500	
V	51	45	1	He	-0.022	-0.022	-93.07	19	-0.12	10000	
Cr	52	45	1	He	0.048	0.048	100.56	763	0.01	10000	
Mn	55	45	1	He	4.062	4.062	1.47	4017	0.10	10000	
Fe	56	45	1	He	1293.112	1293.112	2.25	1915684	0.07	200000	
Co	59	45	1	He	0.488	0.488	2.30	2030	0.02	5000	
Ni	60	45	1	He	4.517	4.517	2.29	4615	0.10	10000	
Cu	63	45	1	He	-0.203	-0.203	-13.90	1835	-0.01	10000	
Zn	66	45	1	He	5.560	5.560	7.10	2133	0.26	10000	
As	75	103	1	He	6.342	6.342	1.54	1356	0.47	10000	
Se	78	115	1	He	0.322	0.322	9.23	6	5.54	10000	
Sr	88	103	1	He	39547.564	39547.564	0.57	36925939	0.11	10000	>LDR
Mo	95	103	1	He	6.521	6.521	1.02	7597	0.09	2000	
Ag	107	103	1	He	0.011	0.011	26.24	57	0.02	300	
Cd	111	115	1	He	0.036	0.036	7.57	19	0.19	4000	
Sn	118	115	1	He	0.062	0.062	163.67	344	0.02	2000	
Sb	123	115	1	He	0.048	0.048	41.37	90	0.05	200	
Ba	137	115	1	He	48.893	48.893	0.21	17574	0.28	10000	
W	182	159	1	He	0.232	0.232	7.91	2634	0.01	2500	
Tl	205	165	1	He	0.013	0.013	35.09	148	0.01	2000	
Pb	208	165	1	He	0.071	0.071	4.40	1982	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2232219	0.15	1884762	118.44	60	120	
Sc	45	1	He	133268	1.01	134073	99.40	60	120	
Sc	45	2	NoGas	8923808	0.66	8481025	105.22	60	120	
Rh	103	1	He	846549	1.06	903580	93.69	60	120	
In	115	1	He	215543	0.82	224817	95.87	60	120	
Tb	159	1	He	1031626	0.43	1046002	98.63	60	120	
Ho	165	1	He	1049241	1.00	1057439	99.22	60	120	
Bi	209	1	He	696199	0.31	731380	95.19	60	120	

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Sample Report

Sample Table

Sample Name	240-64209-f-7-a
Data File Name	110SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:20:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.439	29.439	0.30	831557	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	8.85	748	0.01	2000	
B	11	45	2	NoGas	249.260	249.260	0.39	1007070	0.02	300	
Na	23	45	1	He	18135.674	18135.674	1.29	7049012	0.26	500000	
Mg	24	45	1	He	48352.029	48352.029	1.60	10436389	0.46	500000	
Al	27	45	1	He	1.553	1.553	49.92	249	0.62	200000	
K	39	45	1	He	2667.028	2667.028	1.74	282338	0.94	500000	
Ca	44	45	1	He	83156.140	83156.140	2.53	499806	16.64	500000	
Ti	47	45	1	He	0.077	0.077	173.21	3	2.31	2500	
V	51	45	1	He	-0.115	-0.115	-167.11	-123	0.09	10000	
Cr	52	45	1	He	0.092	0.092	46.39	844	0.01	10000	
Mn	55	45	1	He	5.796	5.796	2.70	5641	0.10	10000	
Fe	56	45	1	He	1081.447	1081.447	2.23	1592329	0.07	200000	
Co	59	45	1	He	-0.015	-0.015	-94.89	253	-0.01	5000	
Ni	60	45	1	He	0.189	0.189	10.11	328	0.06	10000	
Cu	63	45	1	He	-0.228	-0.228	-20.98	1753	-0.01	10000	
Zn	66	45	1	He	1.579	1.579	4.21	707	0.22	10000	
As	75	103	1	He	1.853	1.853	9.00	411	0.45	10000	
Se	78	115	1	He	0.149	0.149	174.73	4	3.59	10000	
Sr	88	103	1	He	34835.534	34835.534	0.97	32752701	0.11	10000	>LDR
Mo	95	103	1	He	5.936	5.936	2.10	6965	0.09	2000	
Ag	107	103	1	He	0.012	0.012	36.45	58	0.02	300	
Cd	111	115	1	He	0.028	0.028	18.23	15	0.19	4000	
Sn	118	115	1	He	0.478	0.478	25.94	722	0.07	2000	
Sb	123	115	1	He	0.048	0.048	12.05	90	0.05	200	
Ba	137	115	1	He	31.624	31.624	3.43	11373	0.28	10000	
W	182	159	1	He	0.265	0.265	28.22	2826	0.01	2500	
Tl	205	165	1	He	0.009	0.009	36.76	113	0.01	2000	
Pb	208	165	1	He	0.008	0.008	146.79	1280	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2299495	0.68	1884762	122.00	60	120	ISTD warning
Sc	45	1	He	132430	1.16	134073	98.77	60	120	
Sc	45	2	NoGas	8992606	0.86	8481025	106.03	60	120	
Rh	103	1	He	852436	0.56	903580	94.34	60	120	
In	115	1	He	215662	0.86	224817	95.93	60	120	
Tb	159	1	He	1036063	0.62	1046002	99.05	60	120	
Ho	165	1	He	1052264	0.46	1057439	99.51	60	120	
Bi	209	1	He	698099	0.61	731380	95.45	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	111_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:24:12-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.456	1.193	1407121	0.47	50	114.9	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.907	0.637	325953	1.16	50	109.8	89.5	110.5	
B	11	45	2	NoGas	68.017	0.845	263160	0.40	50	136.0	89.5	110.5	CCV Failed
Na	23	45	1	He	25586.072	2.006	9552700	0.68	25000	102.3	89.5	110.5	
Mg	24	45	1	He	25659.226	2.446	5320964	0.46	25000	102.6	89.5	110.5	
Al	27	45	1	He	255.552	3.940	22182	2.39	250	102.2	89.5	110.5	
K	39	45	1	He	25893.882	0.942	2560661	1.29	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25464.269	1.250	147195	0.94	25000	101.9	89.5	110.5	
Ti	47	45	1	He	51.500	6.076	2153	6.46	50	103.0	89.5	110.5	
V	51	45	1	He	50.870	1.057	75893	1.23	50	101.7	89.5	110.5	
Cr	52	45	1	He	50.847	2.108	94329	1.27	50	101.7	89.5	110.5	
Mn	55	45	1	He	253.609	2.443	231597	0.54	250	101.4	89.5	110.5	
Fe	56	45	1	He	12731.774	2.437	17990032	0.27	12500	101.9	89.5	110.5	
Co	59	45	1	He	50.920	2.341	171722	0.81	50	101.8	89.5	110.5	
Ni	60	45	1	He	50.773	2.296	48130	0.32	50	101.5	89.5	110.5	
Cu	63	45	1	He	50.825	1.577	137839	0.62	50	101.6	89.5	110.5	
Zn	66	45	1	He	50.118	6.198	17230	4.59	50	100.2	89.5	110.5	
As	75	103	1	He	50.142	1.597	10293	0.91	50	100.3	89.5	110.5	
Se	78	115	1	He	52.380	3.842	483	3.55	50	104.8	89.5	110.5	
Sr	88	103	1	He	55.674	1.617	50498	2.25	50	111.3	89.5	110.5	CCV Failed
Mo	95	103	1	He	53.059	1.269	59914	1.52	50	106.1	89.5	110.5	
Ag	107	103	1	He	50.644	1.315	211407	0.74	50	101.3	89.5	110.5	
Cd	111	115	1	He	51.558	0.391	23606	0.53	50	103.1	89.5	110.5	
Sn	118	115	1	He	50.814	0.384	44348	0.83	50	101.6	89.5	110.5	
Sb	123	115	1	He	52.024	1.304	50860	0.87	50	104.0	89.5	110.5	
Ba	137	115	1	He	51.371	1.952	17590	1.29	50	102.7	89.5	110.5	
W	182	159	1	He	53.475	2.196	275571	1.82	50	106.9	89.5	110.5	
Tl	205	165	1	He	50.047	0.832	412241	1.37	50	100.1	89.5	110.5	
Pb	208	165	1	He	50.024	0.881	541372	0.77	50	100.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2165204	1.36	1884762	114.88	60	120	
Sc	45	1	He	127255	2.16	134073	94.91	60	120	
Sc	45	2	NoGas	8404604	1.15	8481025	99.10	60	120	
Rh	103	1	He	821695	0.76	903580	90.94	60	120	
In	115	1	He	205361	0.66	224817	91.35	60	120	
Tb	159	1	He	995647	0.74	1046002	95.19	60	120	
Ho	165	1	He	1007788	0.64	1057439	95.30	60	120	
Bi	209	1	He	675630	0.90	731380	92.38	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	112_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:28:22-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.824	10.7	136925	1.0	8	
Be	9	45	2	NoGas	0.167	4.6	1159	3.9	1	
B	11	45	2	NoGas	12.085	2.0	55234	1.3	20	
Na	23	45	1	He	54.492	1.7	24881	1.7	1000	
Mg	24	45	1	He	27.214	6.7	6305	6.5	1000	
Al	27	45	1	He	0.248	42.0	128	5.4	50	
K	39	45	1	He	35.976	11.3	12068	1.3	1000	
Ca	44	45	1	He	22.019	9.4	312	3.3	1000	
Ti	47	45	1	He	0.129	124.3	6	124.9	20	
V	51	45	1	He	0.074	121.5	163	84.7	2	
Cr	52	45	1	He	0.022	57.3	688	1.8	2	
Mn	55	45	1	He	0.336	2.7	438	4.2	2	
Fe	56	45	1	He	16.118	5.7	24877	5.2	50	
Co	59	45	1	He	0.011	77.2	332	6.0	1	
Ni	60	45	1	He	-0.032	-55.2	107	14.3	2	
Cu	63	45	1	He	-0.254	-20.4	1630	10.4	2	
Zn	66	45	1	He	0.214	22.4	214	5.9	20	
As	75	103	1	He	0.108	48.7	40	28.1	2	
Se	78	115	1	He	0.083	122.4	3	28.6	2	
Sr	88	103	1	He	1.696	2.8	1646	1.4	10	
Mo	95	103	1	He	0.188	7.4	234	7.2	2	
Ag	107	103	1	He	0.062	5.2	278	5.7	0.2	
Cd	111	115	1	He	0.078	26.2	39	24.8	0.2	
Sn	118	115	1	He	0.250	12.3	511	5.8	10	
Sb	123	115	1	He	0.142	28.6	184	21.7	2	
Ba	137	115	1	He	0.047	29.9	22	22.9	5	
W	182	159	1	He	0.468	10.4	3812	5.7	10	
Tl	205	165	1	He	0.098	16.2	859	15.2	0.5	
Pb	208	165	1	He	0.048	18.4	1682	5.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2279059	2.21	1884762	120.92	60	120	ISTD warning
Sc	45	1	He	128320	2.41	134073	95.71	60	120	
Sc	45	2	NoGas	8609117	0.51	8481025	101.51	60	120	
Rh	103	1	He	860149	1.46	903580	95.19	60	120	
In	115	1	He	213895	0.77	224817	95.14	60	120	
Tb	159	1	He	1010922	1.25	1046002	96.65	60	120	
Ho	165	1	He	1020040	0.51	1057439	96.46	60	120	
Bi	209	1	He	713443	0.52	731380	97.55	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-b ms@2
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:32:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	159.490	159.490	1.77	3938918	0.00	10000	
Be	9	45	2	NoGas	460.973	460.973	0.71	2910985	0.02	2000	
B	11	45	2	NoGas	106.276	106.276	0.97	432367	0.02	300	
Na	23	45	1	He	19351.233	19351.233	1.49	7517122	0.26	500000	
Mg	24	45	1	He	18032.210	18032.210	1.55	3890484	0.46	500000	
Al	27	45	1	He	57692.067	57692.067	1.95	5185914	1.11	200000	
K	39	45	1	He	14952.424	14952.424	1.93	1541713	0.97	500000	
Ca	44	45	1	He	99740.421	99740.421	1.50	599166	16.65	500000	
Ti	47	45	1	He	442.486	442.486	1.07	19244	2.30	2500	
V	51	45	1	He	478.191	478.191	1.23	741622	0.06	10000	
Cr	52	45	1	He	1516.342	1516.342	1.66	2907098	0.05	10000	
Mn	55	45	1	He	1880.099	1880.099	1.17	1785393	0.11	10000	
Fe	56	45	1	He	95701.644	95701.644	1.51	140673857	0.07	200000	
Co	59	45	1	He	513.166	513.166	1.82	1797650	0.03	5000	
Ni	60	45	1	He	3859.415	3859.415	1.67	3795473	0.10	10000	
Cu	63	45	1	He	2296.159	2296.159	1.22	6372598	0.04	10000	
Zn	66	45	1	He	790.907	790.907	1.22	280831	0.28	10000	
As	75	103	1	He	497.641	497.641	1.06	99013	0.50	10000	
Se	78	115	1	He	404.573	404.573	1.85	3629	11.15	10000	
Sr	88	103	1	He	600.863	600.863	0.74	528577	0.11	10000	
Mo	95	103	1	He	57.916	57.916	1.44	63471	0.09	2000	
Ag	107	103	1	He	43.658	43.658	0.34	176890	0.02	300	
Cd	111	115	1	He	420.180	420.180	1.63	188008	0.22	4000	
Sn	118	115	1	He	430.883	430.883	2.45	365494	0.12	2000	
Sb	123	115	1	He	26.214	26.214	4.82	25060	0.10	200	
Ba	137	115	1	He	754.052	754.052	2.30	252285	0.30	10000	
W	182	159	1	He	28.988	28.988	2.39	152605	0.02	2500	
Tl	205	165	1	He	101.574	101.574	0.57	852480	0.01	2000	
Pb	208	165	1	He	2025.438	2025.438	0.66	22290732	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2145860	1.63	1884762	113.85	60	120	
Sc	45	1	He	132351	0.43	134073	98.72	60	120	
Sc	45	2	NoGas	8944036	1.21	8481025	105.46	60	120	
Rh	103	1	He	797495	0.44	903580	88.26	60	120	
In	115	1	He	200723	1.07	224817	89.28	60	120	
Tb	159	1	He	1012829	0.69	1046002	96.83	60	120	
Ho	165	1	He	1026949	1.23	1057439	97.12	60	120	
Bi	209	1	He	674417	0.50	731380	92.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-24-c msd@2
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:36:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	157.006	157.006	0.35	4651353	0.00	10000	
Be	9	45	2	NoGas	399.031	399.031	0.42	3021022	0.01	2000	
B	11	45	2	NoGas	101.169	101.169	1.00	494028	0.02	300	
Na	23	45	1	He	19194.843	19194.843	1.05	7348096	0.26	500000	
Mg	24	45	1	He	30459.757	30459.757	1.45	6475854	0.47	500000	
Al	27	45	1	He	64459.049	64459.049	2.16	5710008	1.13	200000	
K	39	45	1	He	15083.510	15083.510	1.12	1532547	0.98	500000	
Ca	44	45	1	He	120920.747	120920.747	1.16	715804	16.89	500000	
Ti	47	45	1	He	637.969	637.969	0.47	27342	2.33	2500	
V	51	45	1	He	513.113	513.113	2.93	784230	0.07	10000	
Cr	52	45	1	He	1847.633	1847.633	1.40	3490669	0.05	10000	
Mn	55	45	1	He	2103.834	2103.834	1.24	1968804	0.11	10000	
Fe	56	45	1	He	121084.460	121084.460	1.48	175395851	0.07	200000	
Co	59	45	1	He	582.242	582.242	0.79	2009921	0.03	5000	
Ni	60	45	1	He	6533.512	6533.512	1.55	6331825	0.10	10000	
Cu	63	45	1	He	3402.670	3402.670	0.98	9305090	0.04	10000	
Zn	66	45	1	He	955.052	955.052	1.22	334154	0.29	10000	
As	75	103	1	He	559.744	559.744	0.12	111144	0.50	10000	
Se	78	115	1	He	437.151	437.151	0.52	3894	11.23	10000	
Sr	88	103	1	He	775.452	775.452	0.70	680793	0.11	10000	
Mo	95	103	1	He	64.901	64.901	1.90	70983	0.09	2000	
Ag	107	103	1	He	47.545	47.545	0.84	192251	0.02	300	
Cd	111	115	1	He	454.842	454.842	1.29	202095	0.23	4000	
Sn	118	115	1	He	500.687	500.687	0.99	421744	0.12	2000	
Sb	123	115	1	He	26.414	26.414	1.65	25082	0.11	200	
Ba	137	115	1	He	838.155	838.155	1.37	278488	0.30	10000	
W	182	159	1	He	32.449	32.449	1.58	168454	0.02	2500	
Tl	205	165	1	He	109.533	109.533	1.13	907772	0.01	2000	
Pb	208	165	1	He	3793.961	3793.961	0.35	41229780	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2369700	2.15	1884762	125.73	60	120	ISTD warning
Sc	45	1	He	130424	0.22	134073	97.28	60	120	
Sc	45	2	NoGas	10722464	1.33	8481025	126.43	60	120	ISTD warning
Rh	103	1	He	795909	0.09	903580	88.08	60	120	
In	115	1	He	199318	1.22	224817	88.66	60	120	
Tb	159	1	He	999752	0.12	1046002	95.58	60	120	
Ho	165	1	He	1014073	0.52	1057439	95.90	60	120	
Bi	209	1	He	662675	0.77	731380	90.61	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-c-31-a@2
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:40:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	138.395	138.395	1.88	3500672	0.00	10000	
Be	9	45	2	NoGas	6.105	6.105	1.96	39458	0.02	2000	
B	11	45	2	NoGas	317.729	317.729	1.53	1298983	0.02	300	>LDR
Na	23	45	1	He	1866.859	1866.859	0.85	748556	0.25	500000	
Mg	24	45	1	He	20965.335	20965.335	0.70	4642891	0.45	500000	
Al	27	45	1	He	99316.997	99316.997	0.24	9164199	1.08	200000	
K	39	45	1	He	25351.716	25351.716	1.12	2676820	0.95	500000	
Ca	44	45	1	He	108479.323	108479.323	0.40	668910	16.22	500000	
Ti	47	45	1	He	1201.557	1201.557	0.51	53640	2.24	2500	
V	51	45	1	He	77.759	77.759	7.85	123882	0.06	10000	
Cr	52	45	1	He	4229.901	4229.901	1.15	8323710	0.05	10000	
Mn	55	45	1	He	1134.794	1134.794	1.01	1106218	0.10	10000	
Fe	56	45	1	He	166314.048	166314.048	0.90	250943190	0.07	200000	
Co	59	45	1	He	123.026	123.026	0.50	442615	0.03	5000	
Ni	60	45	1	He	431.386	431.386	0.84	435598	0.10	10000	
Cu	63	45	1	He	380.568	380.568	0.38	1086202	0.04	10000	
Zn	66	45	1	He	1019.531	1019.531	0.22	371554	0.27	10000	
As	75	103	1	He	97.410	97.410	0.77	19245	0.51	10000	
Se	78	115	1	He	16.309	16.309	4.18	149	10.94	10000	
Sr	88	103	1	He	404.220	404.220	0.63	352886	0.11	10000	
Mo	95	103	1	He	18.530	18.530	2.19	20161	0.09	2000	
Ag	107	103	1	He	0.812	0.812	2.95	3274	0.02	300	
Cd	111	115	1	He	9.930	9.930	0.91	4455	0.22	4000	
Sn	118	115	1	He	55.639	55.639	2.80	47537	0.12	2000	
Sb	123	115	1	He	54.460	54.460	0.18	52158	0.10	200	
Ba	137	115	1	He	2663.289	2663.289	0.55	893209	0.30	10000	
W	182	159	1	He	3.926	3.926	2.83	21474	0.02	2500	
Tl	205	165	1	He	1.921	1.921	2.89	16006	0.01	2000	
Pb	208	165	1	He	2454.751	2454.751	0.58	26757930	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2112597	0.89	1884762	112.09	60	120	
Sc	45	1	He	135853	0.93	134073	101.33	60	120	
Sc	45	2	NoGas	9116927	0.91	8481025	107.50	60	120	
Rh	103	1	He	791441	1.17	903580	87.59	60	120	
In	115	1	He	201184	0.97	224817	89.49	60	120	
Tb	159	1	He	995222	0.89	1046002	95.15	60	120	
Ho	165	1	He	1017191	1.19	1057439	96.19	60	120	
Bi	209	1	He	669481	0.14	731380	91.54	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228777/1-a
Data File Name	116_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:44:43-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.758	7.8	138142	0.6	8	
Be	9	45	2	NoGas	0.314	2.3	2097	1.9	1	
B	11	45	2	NoGas	13.933	4.8	63583	4.4	20	
Na	23	45	1	He	21.523	5.3	12512	3.5	1000	
Mg	24	45	1	He	2.185	37.9	1074	16.8	1000	
Al	27	45	1	He	10.495	26.9	1024	24.3	50	
K	39	45	1	He	21.073	20.9	10622	3.4	1000	
Ca	44	45	1	He	17.470	27.3	286	10.3	1000	
Ti	47	45	1	He	0.578	34.3	24	34.3	20	
V	51	45	1	He	0.098	25.9	200	18.7	2	
Cr	52	45	1	He	0.392	32.9	1379	17.7	2	
Mn	55	45	1	He	5.976	4.5	5647	3.7	2	Blank High
Fe	56	45	1	He	29.085	29.9	43518	28.9	50	
Co	59	45	1	He	-0.041	-17.2	157	15.3	1	
Ni	60	45	1	He	0.168	14.8	299	8.7	2	
Cu	63	45	1	He	-0.181	-66.7	1832	17.9	2	
Zn	66	45	1	He	1.187	18.2	551	13.2	20	
As	75	103	1	He	0.124	83.1	44	49.7	2	
Se	78	115	1	He	0.433	50.0	7	30.4	2	
Sr	88	103	1	He	0.859	5.5	861	6.5	10	
Mo	95	103	1	He	0.086	16.5	116	14.2	2	
Ag	107	103	1	He	0.003	78.6	22	52.7	0.2	
Cd	111	115	1	He	0.060	2.0	30	1.9	0.2	
Sn	118	115	1	He	0.668	6.9	885	4.4	10	
Sb	123	115	1	He	0.079	26.9	120	18.2	2	
Ba	137	115	1	He	0.317	11.5	118	10.7	5	
W	182	159	1	He	0.219	17.7	2504	8.4	10	
Tl	205	165	1	He	0.039	14.8	359	14.2	0.5	
Pb	208	165	1	He	0.390	22.7	5375	16.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2277546	0.58	1884762	120.84	60	120	ISTD warning
Sc	45	1	He	128705	0.69	134073	96.00	60	120	
Sc	45	2	NoGas	8783142	0.39	8481025	103.56	60	120	
Rh	103	1	He	868685	1.33	903580	96.14	60	120	
In	115	1	He	213011	0.30	224817	94.75	60	120	
Tb	159	1	He	1007180	0.53	1046002	96.29	60	120	
Ho	165	1	He	1013459	1.15	1057439	95.84	60	120	
Bi	209	1	He	715333	0.87	731380	97.81	60	120	

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Sample Report

Sample Table

Sample Name	lcs 240-228777/2-a
Data File Name	117_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:48:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1084.376	1084.376	0.58	25773669	0.00	10000	
Be	9	45	2	NoGas	53.375	53.375	1.07	333321	0.02	2000	
B	11	45	2	NoGas	1081.921	1081.921	1.00	4267052	0.03	300	>LDR
Na	23	45	1	He	50403.260	50403.260	2.08	18955171	0.27	500000	
Mg	24	45	1	He	50258.184	50258.184	2.11	10499944	0.48	500000	
Al	27	45	1	He	2038.556	2038.556	2.20	177568	1.15	200000	
K	39	45	1	He	50327.010	50327.010	2.05	5005721	1.01	500000	
Ca	44	45	1	He	49656.387	49656.387	2.08	288986	17.18	500000	
Ti	47	45	1	He	1021.626	1021.626	1.68	43029	2.37	2500	
V	51	45	1	He	518.740	518.740	2.33	779119	0.07	10000	
Cr	52	45	1	He	203.593	203.593	2.35	378563	0.05	10000	
Mn	55	45	1	He	505.865	505.865	2.25	465314	0.11	10000	
Fe	56	45	1	He	1024.083	1024.083	2.90	1459679	0.07	200000	
Co	59	45	1	He	528.181	528.181	3.30	1791832	0.03	5000	
Ni	60	45	1	He	500.233	500.233	2.49	476546	0.10	10000	
Cu	63	45	1	He	250.871	250.871	2.61	676308	0.04	10000	
Zn	66	45	1	He	493.231	493.231	1.74	169663	0.29	10000	
As	75	103	1	He	2064.035	2064.035	1.34	421572	0.49	10000	
Se	78	115	1	He	2052.966	2052.966	1.46	18457	11.12	10000	
Sr	88	103	1	He	989.713	989.713	1.43	893897	0.11	10000	
Mo	95	103	1	He	1056.387	1056.387	1.65	1188425	0.09	2000	
Ag	107	103	1	He	49.877	49.877	0.51	207479	0.02	300	
Cd	111	115	1	He	52.454	52.454	2.17	23539	0.22	4000	
Sn	118	115	1	He	2210.857	2210.857	2.54	1879757	0.12	2000	>LDR
Sb	123	115	1	He	527.976	527.976	2.77	505542	0.10	200	>LDR
Ba	137	115	1	He	2114.685	2114.685	2.35	709579	0.30	10000	
W	182	159	1	He	0.374	0.374	9.30	3297	0.01	2500	
Tl	205	165	1	He	2028.785	2028.785	1.07	16798999	0.01	2000	>LDR
Pb	208	165	1	He	501.105	501.105	0.40	5441423	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1650085	1.78	1884762	87.55	60	120	
Sc	45	1	He	128189	1.27	134073	95.61	60	120	
Sc	45	2	NoGas	8841267	0.31	8481025	104.25	60	120	
Rh	103	1	He	818793	1.05	903580	90.62	60	120	
In	115	1	He	201304	1.18	224817	89.54	60	120	
Tb	159	1	He	1003236	1.26	1046002	95.91	60	120	
Ho	165	1	He	1013122	1.04	1057439	95.81	60	120	
Bi	209	1	He	659797	1.09	731380	90.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-a
Data File Name	118SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:53:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.316	12.316	1.49	413225	0.00	10000	
Be	9	45	2	NoGas	0.186	0.186	5.39	1311	0.01	2000	
B	11	45	2	NoGas	88.895	88.895	1.27	359670	0.02	300	
Na	23	45	1	He	91426.099	91426.099	1.97	36368060	0.25	500000	
Mg	24	45	1	He	10024.153	10024.153	1.21	2216208	0.45	500000	
Al	27	45	1	He	126.985	126.985	2.73	11807	1.08	200000	
K	39	45	1	He	9087.734	9087.734	1.32	963568	0.94	500000	
Ca	44	45	1	He	49729.499	49729.499	1.36	306175	16.24	500000	
Ti	47	45	1	He	1.698	1.698	17.02	76	2.25	2500	
V	51	45	1	He	2.745	2.745	2.64	4418	0.06	10000	
Cr	52	45	1	He	4.967	4.967	2.68	10436	0.05	10000	
Mn	55	45	1	He	4.448	4.448	4.42	4465	0.10	10000	
Fe	56	45	1	He	55.687	55.687	1.11	85887	0.06	200000	
Co	59	45	1	He	0.209	0.209	13.53	1061	0.02	5000	
Ni	60	45	1	He	2.042	2.042	6.29	2202	0.09	10000	
Cu	63	45	1	He	2.148	2.148	2.88	8550	0.03	10000	
Zn	66	45	1	He	3.054	3.054	6.97	1260	0.24	10000	
As	75	103	1	He	8.320	8.320	1.25	1761	0.47	10000	
Se	78	115	1	He	1.511	1.511	16.59	17	8.68	10000	
Sr	88	103	1	He	204.676	204.676	1.20	189814	0.11	10000	
Mo	95	103	1	He	14.096	14.096	0.57	16294	0.09	2000	
Ag	107	103	1	He	0.007	0.007	38.45	38	0.02	300	
Cd	111	115	1	He	0.075	0.075	8.31	38	0.20	4000	
Sn	118	115	1	He	4.085	4.085	28.14	4041	0.10	2000	
Sb	123	115	1	He	1.119	1.119	6.90	1199	0.09	200	
Ba	137	115	1	He	22.775	22.775	4.12	8264	0.28	10000	
W	182	159	1	He	1.824	1.824	1.97	11026	0.02	2500	
Tl	205	165	1	He	0.816	0.816	18.89	6999	0.01	2000	
Pb	208	165	1	He	0.254	0.254	5.87	4024	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2196267	0.73	1884762	116.53	60	120	
Sc	45	1	He	135618	1.68	134073	101.15	60	120	
Sc	45	2	NoGas	8857366	1.03	8481025	104.44	60	120	
Rh	103	1	He	840657	0.63	903580	93.04	60	120	
In	115	1	He	217547	0.30	224817	96.77	60	120	
Tb	159	1	He	1025445	0.27	1046002	98.03	60	120	
Ho	165	1	He	1044273	1.48	1057439	98.75	60	120	
Bi	209	1	He	684456	0.98	731380	93.58	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64213-g-7-a@5
Data File Name	119SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T19:57:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.281	3.281	2.72	198167	0.00	10000	
Be	9	45	2	NoGas	0.160	0.160	11.80	1145	0.01	2000	
B	11	45	2	NoGas	31.312	31.312	2.14	131995	0.02	300	
Na	23	45	1	He	19279.442	19279.442	1.48	7506160	0.26	500000	
Mg	24	45	1	He	2031.890	2031.890	1.73	439919	0.46	500000	
Al	27	45	1	He	27.098	27.098	2.12	2551	1.06	200000	
K	39	45	1	He	1898.032	1898.032	2.70	203795	0.93	500000	
Ca	44	45	1	He	10174.653	10174.653	1.47	61431	16.56	500000	
Ti	47	45	1	He	0.510	0.510	9.18	22	2.29	2500	
V	51	45	1	He	0.593	0.593	12.85	975	0.06	10000	
Cr	52	45	1	He	1.073	1.073	2.33	2729	0.04	10000	
Mn	55	45	1	He	1.000	1.000	7.23	1084	0.09	10000	
Fe	56	45	1	He	13.460	13.460	1.89	21805	0.06	200000	
Co	59	45	1	He	0.028	0.028	54.05	403	0.01	5000	
Ni	60	45	1	He	0.454	0.454	24.04	589	0.08	10000	
Cu	63	45	1	He	0.140	0.140	60.34	2782	0.01	10000	
Zn	66	45	1	He	0.864	0.864	4.03	453	0.19	10000	
As	75	103	1	He	1.639	1.639	5.91	371	0.44	10000	
Se	78	115	1	He	0.189	0.189	134.48	5	4.06	10000	
Sr	88	103	1	He	41.033	41.033	0.41	39178	0.10	10000	
Mo	95	103	1	He	2.773	2.773	3.95	3307	0.08	2000	
Ag	107	103	1	He	0.001	0.001	205.02	13	0.01	300	
Cd	111	115	1	He	0.036	0.036	48.19	20	0.18	4000	
Sn	118	115	1	He	0.766	0.766	6.21	1015	0.08	2000	
Sb	123	115	1	He	0.226	0.226	7.11	280	0.08	200	
Ba	137	115	1	He	4.653	4.653	5.18	1729	0.27	10000	
W	182	159	1	He	0.541	0.541	7.25	4267	0.01	2500	
Tl	205	165	1	He	0.225	0.225	10.91	1946	0.01	2000	
Pb	208	165	1	He	0.072	0.072	9.51	1970	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2255644	1.28	1884762	119.68	60	120	
Sc	45	1	He	132659	1.34	134073	98.95	60	120	
Sc	45	2	NoGas	8815385	0.83	8481025	103.94	60	120	
Rh	103	1	He	864817	0.36	903580	95.71	60	120	
In	115	1	He	222081	1.79	224817	98.78	60	120	
Tb	159	1	He	1028897	0.94	1046002	98.36	60	120	
Ho	165	1	He	1036517	0.09	1057439	98.02	60	120	
Bi	209	1	He	720225	1.00	731380	98.47	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64213-g-7-a
Data File Name	120SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:01:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	127.547	127.547	1.50	2974903	0.00	10000	
Be	9	45	2	NoGas	1170.200	1170.200	0.85	6924627	0.02	2000	
B	11	45	2	NoGas	184.846	184.846	0.96	698272	0.03	300	
Na	23	45	1	He	102080.861	102080.861	2.21	37399185	0.27	500000	
Mg	24	45	1	He	20363.487	20363.487	1.67	4145934	0.49	500000	
Al	27	45	1	He	10143.814	10143.814	3.36	860344	1.18	200000	
K	39	45	1	He	19438.073	19438.073	3.11	1888523	1.03	500000	
Ca	44	45	1	He	59250.574	59250.574	3.09	335887	17.64	500000	
Ti	47	45	1	He	98.507	98.507	9.60	4038	2.44	2500	
V	51	45	1	He	1083.348	1083.348	2.80	1585178	0.07	10000	
Cr	52	45	1	He	1065.004	1065.004	4.00	1926473	0.06	10000	
Mn	55	45	1	He	1008.584	1008.584	2.88	903720	0.11	10000	
Fe	56	45	1	He	10203.625	10203.625	3.06	14152421	0.07	200000	
Co	59	45	1	He	1057.786	1057.786	2.86	3495792	0.03	5000	
Ni	60	45	1	He	1004.945	1004.945	3.04	932544	0.11	10000	
Cu	63	45	1	He	1046.538	1046.538	3.33	2741534	0.04	10000	
Zn	66	45	1	He	995.128	995.128	2.39	333375	0.30	10000	
As	75	103	1	He	1026.714	1026.714	0.78	203391	0.50	10000	
Se	78	115	1	He	1006.412	1006.412	2.00	8985	11.20	10000	
Sr	88	103	1	He	1188.929	1188.929	0.52	1041424	0.11	10000	
Mo	95	103	1	He	123.074	123.074	0.79	134293	0.09	2000	
Ag	107	103	1	He	103.449	103.449	0.58	417351	0.02	300	
Cd	111	115	1	He	1027.143	1027.143	0.43	457695	0.22	4000	
Sn	118	115	1	He	1059.245	1059.245	1.24	894475	0.12	2000	
Sb	123	115	1	He	108.337	108.337	1.26	103041	0.11	200	
Ba	137	115	1	He	1060.800	1060.800	1.01	353460	0.30	10000	
W	182	159	1	He	111.092	111.092	2.11	564835	0.02	2500	
Tl	205	165	1	He	260.700	260.700	1.79	2128596	0.01	2000	
Pb	208	165	1	He	1027.989	1027.989	2.16	11006028	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2093155	1.43	1884762	111.06	60	120	
Sc	45	1	He	124923	2.26	134073	93.17	60	120	
Sc	45	2	NoGas	8381325	1.12	8481025	98.82	60	120	
Rh	103	1	He	794120	0.40	903580	87.89	60	120	
In	115	1	He	199879	0.87	224817	88.91	60	120	
Tb	159	1	He	984868	0.68	1046002	94.16	60	120	
Ho	165	1	He	999189	1.46	1057439	94.49	60	120	
Bi	209	1	He	656930	1.47	731380	89.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-b ms
Data File Name	121SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:05:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1072.689	1072.689	0.22	24648493	0.00	10000	
Be	9	45	2	NoGas	53.381	53.381	0.45	322270	0.02	2000	
B	11	45	2	NoGas	1136.884	1136.884	0.70	4334135	0.03	300	>LDR
Na	23	45	1	He	141925.210	141925.210	1.91	52564692	0.27	500000	
Mg	24	45	1	He	59648.421	59648.421	3.06	12273757	0.49	500000	
Al	27	45	1	He	2119.875	2119.875	2.78	181865	1.17	200000	
K	39	45	1	He	58749.731	58749.731	3.08	5753408	1.02	500000	
Ca	44	45	1	He	99176.356	99176.356	3.00	568275	17.45	500000	
Ti	47	45	1	He	1002.601	1002.601	3.22	41589	2.41	2500	
V	51	45	1	He	514.531	514.531	1.84	761222	0.07	10000	
Cr	52	45	1	He	204.498	204.498	2.01	374547	0.05	10000	
Mn	55	45	1	He	502.376	502.376	2.35	455164	0.11	10000	
Fe	56	45	1	He	1057.902	1057.902	3.76	1485007	0.07	200000	
Co	59	45	1	He	519.807	519.807	1.77	1737062	0.03	5000	
Ni	60	45	1	He	487.712	487.712	1.61	457672	0.11	10000	
Cu	63	45	1	He	247.409	247.409	2.23	657016	0.04	10000	
Zn	66	45	1	He	478.230	478.230	1.91	162040	0.30	10000	
As	75	103	1	He	2122.527	2122.527	0.67	413095	0.51	10000	
Se	78	115	1	He	2098.020	2098.020	1.26	17877	11.74	10000	
Sr	88	103	1	He	1212.276	1212.276	1.13	1043298	0.12	10000	
Mo	95	103	1	He	1085.957	1085.957	0.94	1164128	0.09	2000	
Ag	107	103	1	He	49.807	49.807	0.70	197412	0.03	300	
Cd	111	115	1	He	52.844	52.844	0.52	22477	0.24	4000	
Sn	118	115	1	He	2280.421	2280.421	1.49	1837727	0.12	2000	>LDR
Sb	123	115	1	He	541.782	541.782	0.95	491731	0.11	200	>LDR
Ba	137	115	1	He	2175.696	2175.696	1.10	691970	0.31	10000	
W	182	159	1	He	2.281	2.281	3.39	12687	0.02	2500	
Tl	205	165	1	He	1978.059	1978.059	0.76	15865285	0.01	2000	
Pb	208	165	1	He	495.510	495.510	0.45	5212461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1549079	0.61	1884762	82.19	60	120	
Sc	45	1	He	126272	1.41	134073	94.18	60	120	
Sc	45	2	NoGas	8546973	0.23	8481025	100.78	60	120	
Rh	103	1	He	780179	0.75	903580	86.34	60	120	
In	115	1	He	190779	0.27	224817	84.86	60	120	
Tb	159	1	He	967619	0.21	1046002	92.51	60	120	
Ho	165	1	He	981422	0.13	1057439	92.81	60	120	
Bi	209	1	He	635928	0.61	731380	86.95	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-7-c msd
Data File Name	122SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:09:36-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1043.211	1043.211	0.95	23587245	0.00	10000	
Be	9	45	2	NoGas	52.055	52.055	0.93	309234	0.02	2000	
B	11	45	2	NoGas	1113.016	1113.016	0.61	4175241	0.03	300	>LDR
Na	23	45	1	He	137426.523	137426.523	2.19	51045576	0.27	500000	
Mg	24	45	1	He	57545.915	57545.915	2.73	11875987	0.48	500000	
Al	27	45	1	He	2068.981	2068.981	2.32	178026	1.16	200000	
K	39	45	1	He	58254.746	58254.746	3.09	5721433	1.02	500000	
Ca	44	45	1	He	96457.941	96457.941	2.45	554337	17.40	500000	
Ti	47	45	1	He	975.129	975.129	1.71	40573	2.40	2500	
V	51	45	1	He	500.725	500.725	2.74	742878	0.07	10000	
Cr	52	45	1	He	199.251	199.251	2.43	366003	0.05	10000	
Mn	55	45	1	He	491.361	491.361	2.11	446495	0.11	10000	
Fe	56	45	1	He	1028.290	1028.290	2.27	1447893	0.07	200000	
Co	59	45	1	He	501.044	501.044	2.76	1679126	0.03	5000	
Ni	60	45	1	He	473.433	473.433	2.49	445535	0.11	10000	
Cu	63	45	1	He	240.888	240.888	2.11	641643	0.04	10000	
Zn	66	45	1	He	471.560	471.560	1.88	160249	0.29	10000	
As	75	103	1	He	2095.046	2095.046	0.79	408658	0.51	10000	
Se	78	115	1	He	2033.288	2033.288	0.69	17518	11.61	10000	
Sr	88	103	1	He	1183.065	1183.065	0.56	1020430	0.12	10000	
Mo	95	103	1	He	1056.860	1056.860	1.38	1135438	0.09	2000	
Ag	107	103	1	He	48.952	48.952	0.66	194471	0.03	300	
Cd	111	115	1	He	50.771	50.771	0.65	21834	0.23	4000	
Sn	118	115	1	He	2219.084	2219.084	0.54	1808183	0.12	2000	>LDR
Sb	123	115	1	He	524.162	524.162	0.43	481001	0.11	200	>LDR
Ba	137	115	1	He	2094.572	2094.572	0.71	673526	0.31	10000	
W	182	159	1	He	1.988	1.988	2.69	11056	0.02	2500	
Tl	205	165	1	He	1938.508	1938.508	0.17	15416921	0.01	2000	
Pb	208	165	1	He	479.831	479.831	0.53	5004933	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1536072	0.86	1884762	81.50	60	120	
Sc	45	1	He	126647	1.86	134073	94.46	60	120	
Sc	45	2	NoGas	8409614	1.35	8481025	99.16	60	120	
Rh	103	1	He	781965	0.40	903580	86.54	60	120	
In	115	1	He	192894	0.80	224817	85.80	60	120	
Tb	159	1	He	953310	0.42	1046002	91.14	60	120	
Ho	165	1	He	973145	0.45	1057439	92.03	60	120	
Bi	209	1	He	623268	0.99	731380	85.22	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	123_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:13:44-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.396	0.830	1361898	0.44	50	114.8	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.071	0.876	310961	1.19	50	108.1	89.5	110.5	
B	11	45	2	NoGas	72.131	0.620	269854	0.86	50	144.3	89.5	110.5	CCV Failed
Na	23	45	1	He	25272.311	2.469	9408957	0.37	25000	101.1	89.5	110.5	
Mg	24	45	1	He	25060.541	2.353	5182759	0.97	25000	100.2	89.5	110.5	
Al	27	45	1	He	248.833	2.000	21547	0.70	250	99.5	89.5	110.5	
K	39	45	1	He	25902.491	1.263	2554456	1.46	25000	103.6	89.5	110.5	
Ca	44	45	1	He	25231.905	3.057	145412	0.52	25000	100.9	89.5	110.5	
Ti	47	45	1	He	50.957	5.098	2123	3.01	50	101.9	89.5	110.5	
V	51	45	1	He	49.789	3.089	74057	1.28	50	99.6	89.5	110.5	
Cr	52	45	1	He	49.972	2.679	92450	0.16	50	99.9	89.5	110.5	
Mn	55	45	1	He	250.721	2.323	228335	0.25	250	100.3	89.5	110.5	
Fe	56	45	1	He	12565.093	2.003	17707050	0.55	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.171	2.101	168742	0.93	50	100.3	89.5	110.5	
Ni	60	45	1	He	50.302	1.412	47564	1.70	50	100.6	89.5	110.5	
Cu	63	45	1	He	50.128	3.051	135578	0.49	50	100.3	89.5	110.5	
Zn	66	45	1	He	50.227	2.776	17225	0.51	50	100.5	89.5	110.5	
As	75	103	1	He	51.350	1.210	10414	1.06	50	102.7	89.5	110.5	
Se	78	115	1	He	52.175	2.808	485	2.44	50	104.4	89.5	110.5	
Sr	88	103	1	He	51.550	0.092	46194	0.39	50	103.1	89.5	110.5	
Mo	95	103	1	He	54.299	0.674	60574	0.43	50	108.6	89.5	110.5	
Ag	107	103	1	He	50.584	0.444	208622	0.02	50	101.2	89.5	110.5	
Cd	111	115	1	He	50.626	0.700	23357	0.55	50	101.3	89.5	110.5	
Sn	118	115	1	He	52.978	3.380	46579	3.30	50	106.0	89.5	110.5	
Sb	123	115	1	He	52.415	1.067	51636	0.78	50	104.8	89.5	110.5	
Ba	137	115	1	He	50.887	1.958	17559	1.66	50	101.8	89.5	110.5	
W	182	159	1	He	50.281	2.130	254303	3.30	50	100.6	89.5	110.5	
Tl	205	165	1	He	50.453	0.773	402991	1.15	50	100.9	89.5	110.5	
Pb	208	165	1	He	49.468	0.887	519140	0.29	50	98.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2038022	1.83	1884762	108.13	60	120	
Sc	45	1	He	126913	2.56	134073	94.66	60	120	
Sc	45	2	NoGas	8141767	0.54	8481025	96.00	60	120	
Rh	103	1	He	811797	0.42	903580	89.84	60	120	
In	115	1	He	206941	0.71	224817	92.05	60	120	
Tb	159	1	He	976629	1.20	1046002	93.37	60	120	
Ho	165	1	He	977296	1.14	1057439	92.42	60	120	
Bi	209	1	He	654803	1.09	731380	89.53	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	124_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:17:55-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.942	23.9	166610	6.9	8	
Be	9	45	2	NoGas	0.227	3.7	1819	7.2	1	
B	11	45	2	NoGas	15.660	13.0	81813	0.9	20	
Na	23	45	1	He	63.798	6.7	28330	5.0	1000	
Mg	24	45	1	He	26.642	10.3	6172	8.5	1000	
Al	27	45	1	He	0.913	8.1	186	2.7	50	
K	39	45	1	He	44.371	5.3	12887	2.5	1000	
Ca	44	45	1	He	30.709	20.5	361	8.9	1000	
Ti	47	45	1	He	0.263	75.5	11	75.5	20	
V	51	45	1	He	0.014	1570.6	73	463.9	2	
Cr	52	45	1	He	0.064	24.5	763	3.3	2	
Mn	55	45	1	He	0.296	10.3	400	7.6	2	
Fe	56	45	1	He	16.510	8.3	25382	6.5	50	
Co	59	45	1	He	0.073	11.8	542	5.6	1	
Ni	60	45	1	He	0.017	80.5	153	9.5	2	
Cu	63	45	1	He	-0.334	-16.5	1410	9.3	2	
Zn	66	45	1	He	0.515	13.7	318	6.7	20	
As	75	103	1	He	0.279	8.5	76	8.1	2	
Se	78	115	1	He	1.045	60.0	13	45.7	2	
Sr	88	103	1	He	0.425	9.0	434	6.7	10	
Mo	95	103	1	He	0.631	13.3	749	12.5	2	
Ag	107	103	1	He	0.062	15.2	276	14.6	0.2	
Cd	111	115	1	He	0.086	24.3	43	21.5	0.2	
Sn	118	115	1	He	1.682	21.1	1800	15.6	10	
Sb	123	115	1	He	0.357	11.0	403	9.2	2	
Ba	137	115	1	He	0.190	28.2	73	27.7	5	
W	182	159	1	He	0.440	8.9	3589	3.8	10	
Tl	205	165	1	He	0.573	7.8	4719	6.1	0.5	CCB High
Pb	208	165	1	He	0.100	21.2	2201	8.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2434886	7.58	1884762	129.19	60	120	ISTD warning
Sc	45	1	He	128099	1.20	134073	95.54	60	120	
Sc	45	2	NoGas	10297345	10.37	8481025	121.42	60	120	ISTD warning
Rh	103	1	He	850089	1.48	903580	94.08	60	120	
In	115	1	He	213875	2.04	224817	95.13	60	120	
Tb	159	1	He	991171	1.78	1046002	94.76	60	120	
Ho	165	1	He	1001257	1.81	1057439	94.69	60	120	
Bi	209	1	He	696918	1.15	731380	95.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-7-a
Data File Name	125SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:22:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.036	12.036	0.48	389559	0.00	10000	
Be	9	45	2	NoGas	0.216	0.216	13.73	1441	0.02	2000	
B	11	45	2	NoGas	82.273	82.273	1.03	319582	0.03	300	
Na	23	45	1	He	89979.697	89979.697	2.05	33008339	0.27	500000	
Mg	24	45	1	He	9345.638	9345.638	1.89	1905357	0.49	500000	
Al	27	45	1	He	5.987	5.987	9.41	612	0.98	200000	
K	39	45	1	He	8865.427	8865.427	1.79	867046	1.02	500000	
Ca	44	45	1	He	39300.777	39300.777	2.26	223162	17.61	500000	
Ti	47	45	1	He	0.270	0.270	62.87	11	2.43	2500	
V	51	45	1	He	2.005	2.005	6.68	2990	0.07	10000	
Cr	52	45	1	He	2.822	2.822	3.66	5741	0.05	10000	
Mn	55	45	1	He	1.318	1.318	12.35	1307	0.10	10000	
Fe	56	45	1	He	6.555	6.555	2.62	10966	0.06	200000	
Co	59	45	1	He	0.321	0.321	4.89	1350	0.02	5000	
Ni	60	45	1	He	1.730	1.730	7.82	1740	0.10	10000	
Cu	63	45	1	He	0.757	0.757	13.91	4236	0.02	10000	
Zn	66	45	1	He	2.506	2.506	3.38	978	0.26	10000	
As	75	103	1	He	6.969	6.969	3.37	1416	0.49	10000	
Se	78	115	1	He	0.945	0.945	36.66	11	8.38	10000	
Sr	88	103	1	He	185.419	185.419	0.32	164712	0.11	10000	
Mo	95	103	1	He	12.050	12.050	3.75	13346	0.09	2000	
Ag	107	103	1	He	0.003	0.003	66.71	20	0.02	300	
Cd	111	115	1	He	0.047	0.047	24.03	23	0.20	4000	
Sn	118	115	1	He	1.195	1.195	25.67	1315	0.09	2000	
Sb	123	115	1	He	0.633	0.633	5.31	659	0.10	200	
Ba	137	115	1	He	19.167	19.167	5.39	6589	0.29	10000	
W	182	159	1	He	1.748	1.748	6.92	10259	0.02	2500	
Tl	205	165	1	He	0.224	0.224	2.93	1888	0.01	2000	
Pb	208	165	1	He	0.040	0.040	26.75	1572	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2136610	1.54	1884762	113.36	60	120	
Sc	45	1	He	125064	1.42	134073	93.28	60	120	
Sc	45	2	NoGas	8485975	0.41	8481025	100.06	60	120	
Rh	103	1	He	805201	1.08	903580	89.11	60	120	
In	115	1	He	206063	0.31	224817	91.66	60	120	
Tb	159	1	He	990064	0.35	1046002	94.65	60	120	
Ho	165	1	He	1009777	0.37	1057439	95.49	60	120	
Bi	209	1	He	670158	0.19	731380	91.63	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-8-a
Data File Name	126SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:26:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	65.611	65.611	0.70	1600616	0.00	10000	
Be	9	45	2	NoGas	0.171	0.171	18.04	1167	0.01	2000	
B	11	45	2	NoGas	72.822	72.822	0.60	282927	0.03	300	
Na	23	45	1	He	114125.289	114125.289	2.76	43439401	0.26	500000	
Mg	24	45	1	He	18.440	18.440	8.05	4519	0.41	500000	
Al	27	45	1	He	1092.009	1092.009	2.49	96339	1.13	200000	
K	39	45	1	He	44278.890	44278.890	2.10	4459272	0.99	500000	
Ca	44	45	1	He	129993.448	129993.448	1.67	765574	16.98	500000	
Ti	47	45	1	He	0.890	0.890	41.26	38	2.36	2500	
V	51	45	1	He	1.744	1.744	5.59	2703	0.06	10000	
Cr	52	45	1	He	0.252	0.252	15.86	1128	0.02	10000	
Mn	55	45	1	He	2.474	2.474	6.72	2432	0.10	10000	
Fe	56	45	1	He	75.637	75.637	2.72	110925	0.07	200000	
Co	59	45	1	He	0.010	0.010	182.65	334	0.00	5000	
Ni	60	45	1	He	1.962	1.962	3.17	2030	0.10	10000	
Cu	63	45	1	He	0.126	0.126	35.40	2681	0.00	10000	
Zn	66	45	1	He	2.139	2.139	10.85	887	0.24	10000	
As	75	103	1	He	6.806	6.806	4.11	1389	0.49	10000	
Se	78	115	1	He	1.800	1.800	6.65	20	9.20	10000	
Sr	88	103	1	He	1051.569	1051.569	0.74	938223	0.11	10000	
Mo	95	103	1	He	20.500	20.500	3.04	22796	0.09	2000	
Ag	107	103	1	He	0.005	0.005	29.45	27	0.02	300	
Cd	111	115	1	He	0.013	0.013	16.28	7	0.17	4000	
Sn	118	115	1	He	0.650	0.650	20.68	859	0.08	2000	
Sb	123	115	1	He	0.217	0.217	17.79	257	0.08	200	
Ba	137	115	1	He	109.546	109.546	0.59	38465	0.28	10000	
W	182	159	1	He	0.872	0.872	7.09	5887	0.01	2500	
Tl	205	165	1	He	0.147	0.147	4.42	1267	0.01	2000	
Pb	208	165	1	He	0.095	0.095	13.02	2191	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2108897	1.13	1884762	111.89	60	120	
Sc	45	1	He	129780	1.58	134073	96.80	60	120	
Sc	45	2	NoGas	8457581	0.83	8481025	99.72	60	120	
Rh	103	1	He	808910	1.18	903580	89.52	60	120	
In	115	1	He	210599	0.48	224817	93.68	60	120	
Tb	159	1	He	1005902	0.74	1046002	96.17	60	120	
Ho	165	1	He	1022394	1.23	1057439	96.69	60	120	
Bi	209	1	He	669642	0.37	731380	91.56	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-8-a
Data File Name	127SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:30:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	68.747	68.747	1.24	1609960	0.00	10000	
Be	9	45	2	NoGas	0.129	0.129	16.01	878	0.01	2000	
B	11	45	2	NoGas	71.612	71.612	0.05	268093	0.03	300	
Na	23	45	1	He	119221.218	119221.218	0.97	43542600	0.27	500000	
Mg	24	45	1	He	4.425	4.425	7.19	1493	0.30	500000	
Al	27	45	1	He	1150.863	1150.863	0.10	97417	1.18	200000	
K	39	45	1	He	46595.270	46595.270	0.37	4501893	1.04	500000	
Ca	44	45	1	He	136095.172	136095.172	1.06	768984	17.70	500000	
Ti	47	45	1	He	0.109	0.109	86.60	4	2.45	2500	
V	51	45	1	He	1.940	1.940	5.50	2880	0.07	10000	
Cr	52	45	1	He	0.019	0.019	73.53	661	0.00	10000	
Mn	55	45	1	He	0.770	0.770	6.41	812	0.09	10000	
Fe	56	45	1	He	49.690	49.690	0.46	70561	0.07	200000	
Co	59	45	1	He	0.173	0.173	11.68	858	0.02	5000	
Ni	60	45	1	He	2.087	2.087	1.20	2063	0.10	10000	
Cu	63	45	1	He	-0.106	-0.106	-37.41	1968	-0.01	10000	
Zn	66	45	1	He	1.224	1.224	9.02	546	0.22	10000	
As	75	103	1	He	6.708	6.708	1.48	1339	0.50	10000	
Se	78	115	1	He	2.204	2.204	32.80	23	9.63	10000	
Sr	88	103	1	He	1074.980	1074.980	0.91	937735	0.11	10000	
Mo	95	103	1	He	20.857	20.857	0.87	22676	0.09	2000	
Ag	107	103	1	He	0.002	0.002	24.86	14	0.01	300	
Cd	111	115	1	He	0.012	0.012	78.01	7	0.17	4000	
Sn	118	115	1	He	0.312	0.312	29.13	548	0.06	2000	
Sb	123	115	1	He	0.209	0.209	19.66	244	0.09	200	
Ba	137	115	1	He	114.505	114.505	2.31	39420	0.29	10000	
W	182	159	1	He	0.891	0.891	5.17	5842	0.02	2500	
Tl	205	165	1	He	0.097	0.097	5.57	828	0.01	2000	
Pb	208	165	1	He	0.004	0.004	57.29	1169	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098206	0.52	1884762	111.32	60	120	
Sc	45	1	He	124496	0.34	134073	92.86	60	120	
Sc	45	2	NoGas	8145394	0.49	8481025	96.04	60	120	
Rh	103	1	He	790892	1.15	903580	87.53	60	120	
In	115	1	He	206515	1.13	224817	91.86	60	120	
Tb	159	1	He	982126	1.33	1046002	93.89	60	120	
Ho	165	1	He	992318	0.89	1057439	93.84	60	120	
Bi	209	1	He	662009	0.45	731380	90.52	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-9-a
Data File Name	128SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:34:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	393.418	393.418	0.38	8460722	0.00	10000	
Be	9	45	2	NoGas	0.113	0.113	29.52	767	0.01	2000	
B	11	45	2	NoGas	40.522	40.522	1.21	151332	0.03	300	
Na	23	45	1	He	106278.834	106278.834	0.29	37810211	0.28	500000	
Mg	24	45	1	He	924.484	924.484	1.85	183311	0.50	500000	
Al	27	45	1	He	33.308	33.308	2.95	2844	1.17	200000	
K	39	45	1	He	203322.891	203322.891	1.21	19107586	1.06	500000	
Ca	44	45	1	He	314617.186	314617.186	0.66	1731396	18.17	500000	
Ti	47	45	1	He	0.837	0.837	36.22	33	2.51	2500	
V	51	45	1	He	-0.827	-0.827	-56.91	-1126	0.07	10000	
Cr	52	45	1	He	17.614	17.614	0.84	31546	0.06	10000	
Mn	55	45	1	He	2.917	2.917	1.70	2659	0.11	10000	
Fe	56	45	1	He	106.286	106.286	1.01	144954	0.07	200000	
Co	59	45	1	He	1.071	1.071	6.18	3718	0.03	5000	
Ni	60	45	1	He	2.611	2.611	3.17	2482	0.11	10000	
Cu	63	45	1	He	2.956	2.956	7.84	9698	0.03	10000	
Zn	66	45	1	He	2.730	2.730	5.98	1021	0.27	10000	
As	75	103	1	He	0.535	0.535	7.20	116	0.46	10000	
Se	78	115	1	He	0.257	0.257	86.17	5	5.33	10000	
Sr	88	103	1	He	8608.847	8608.847	1.36	7177259	0.12	10000	
Mo	95	103	1	He	16.812	16.812	4.10	17468	0.10	2000	
Ag	107	103	1	He	0.003	0.003	42.33	19	0.02	300	
Cd	111	115	1	He	0.056	0.056	16.37	26	0.21	4000	
Sn	118	115	1	He	0.326	0.326	42.79	541	0.06	2000	
Sb	123	115	1	He	0.200	0.200	11.03	228	0.09	200	
Ba	137	115	1	He	687.638	687.638	0.64	228970	0.30	10000	
W	182	159	1	He	0.354	0.354	19.96	3034	0.01	2500	
Tl	205	165	1	He	0.071	0.071	8.55	597	0.01	2000	
Pb	208	165	1	He	1.029	1.029	2.07	11797	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1914283	0.64	1884762	101.57	60	120	
Sc	45	1	He	121268	0.56	134073	90.45	60	120	
Sc	45	2	NoGas	7934011	0.67	8481025	93.55	60	120	
Rh	103	1	He	755915	1.00	903580	83.66	60	120	
In	115	1	He	199744	1.09	224817	88.85	60	120	
Tb	159	1	He	953742	0.44	1046002	91.18	60	120	
Ho	165	1	He	970246	0.74	1057439	91.75	60	120	
Bi	209	1	He	635553	0.70	731380	86.90	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-9-a
Data File Name	129SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:38:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	394.886	394.886	0.43	8277331	0.00	10000	
Be	9	45	2	NoGas	0.144	0.144	13.91	919	0.02	2000	
B	11	45	2	NoGas	38.008	38.008	0.91	138860	0.03	300	
Na	23	45	1	He	105835.286	105835.286	0.47	36549116	0.29	500000	
Mg	24	45	1	He	14.735	14.735	7.77	3389	0.43	500000	
Al	27	45	1	He	6.665	6.665	13.84	630	1.06	200000	
K	39	45	1	He	202479.254	202479.254	1.31	18470352	1.10	500000	
Ca	44	45	1	He	312195.560	312195.560	3.07	1667954	18.72	500000	
Ti	47	45	1	He	0.057	0.057	86.61	2	2.59	2500	
V	51	45	1	He	-0.379	-0.379	-151.66	-474	0.08	10000	
Cr	52	45	1	He	17.582	17.582	1.26	30566	0.06	10000	
Mn	55	45	1	He	0.871	0.871	8.14	853	0.10	10000	
Fe	56	45	1	He	5.867	5.867	2.26	9425	0.06	200000	
Co	59	45	1	He	1.292	1.292	2.48	4297	0.03	5000	
Ni	60	45	1	He	2.561	2.561	7.41	2366	0.11	10000	
Cu	63	45	1	He	3.256	3.256	4.40	10155	0.03	10000	
Zn	66	45	1	He	2.318	2.318	14.24	861	0.27	10000	
As	75	103	1	He	0.364	0.364	17.46	82	0.44	10000	
Se	78	115	1	He	0.435	0.435	54.20	6	6.90	10000	
Sr	88	103	1	He	8566.380	8566.380	0.19	7030122	0.12	10000	
Mo	95	103	1	He	16.019	16.019	3.25	16387	0.10	2000	
Ag	107	103	1	He	0.007	0.007	54.09	31	0.02	300	
Cd	111	115	1	He	0.036	0.036	36.10	17	0.21	4000	
Sn	118	115	1	He	0.663	0.663	11.06	815	0.08	2000	
Sb	123	115	1	He	0.335	0.335	16.37	351	0.10	200	
Ba	137	115	1	He	660.445	660.445	1.90	217016	0.30	10000	
W	182	159	1	He	0.386	0.386	13.84	3160	0.01	2500	
Tl	205	165	1	He	0.071	0.071	23.99	596	0.01	2000	
Pb	208	165	1	He	0.966	0.966	0.72	11025	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1861861	0.14	1884762	98.78	60	120	
Sc	45	1	He	117716	0.86	134073	87.80	60	120	
Sc	45	2	NoGas	7733812	0.69	8481025	91.19	60	120	
Rh	103	1	He	744020	0.50	903580	82.34	60	120	
In	115	1	He	197117	0.86	224817	87.68	60	120	
Tb	159	1	He	943150	0.84	1046002	90.17	60	120	
Ho	165	1	He	960102	0.81	1057439	90.80	60	120	
Bi	209	1	He	623700	1.57	731380	85.28	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-10-a
Data File Name	130SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:43:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	119.810	119.810	0.55	2524843	0.00	10000	
Be	9	45	2	NoGas	0.094	0.094	20.75	630	0.01	2000	
B	11	45	2	NoGas	78.437	78.437	0.35	271551	0.03	300	
Na	23	45	1	He	122277.574	122277.574	5.34	40982788	0.30	500000	
Mg	24	45	1	He	13.104	13.104	3.29	2989	0.44	500000	
Al	27	45	1	He	106.674	106.674	10.05	8359	1.28	200000	
K	39	45	1	He	46717.204	46717.204	5.91	4141250	1.13	500000	
Ca	44	45	1	He	248711.521	248711.521	5.64	1289361	19.29	500000	
Ti	47	45	1	He	0.438	0.438	49.26	17	2.63	2500	
V	51	45	1	He	2.550	2.550	3.97	3463	0.07	10000	
Cr	52	45	1	He	12.099	12.099	5.09	20597	0.06	10000	
Mn	55	45	1	He	3.119	3.119	7.14	2670	0.12	10000	
Fe	56	45	1	He	19.532	19.532	6.69	26477	0.07	200000	
Co	59	45	1	He	0.133	0.133	12.48	666	0.02	5000	
Ni	60	45	1	He	1.097	1.097	3.33	1054	0.10	10000	
Cu	63	45	1	He	2.390	2.390	4.66	7790	0.03	10000	
Zn	66	45	1	He	2.471	2.471	3.18	884	0.28	10000	
As	75	103	1	He	1.572	1.572	4.24	305	0.52	10000	
Se	78	115	1	He	2.783	2.783	13.35	27	10.42	10000	
Sr	88	103	1	He	1224.123	1224.123	4.88	1000000	0.12	10000	
Mo	95	103	1	He	21.371	21.371	4.54	21759	0.10	2000	
Ag	107	103	1	He	0.000	0.000	-846.93	6	-0.01	300	
Cd	111	115	1	He	0.019	0.019	55.59	10	0.20	4000	
Sn	118	115	1	He	0.213	0.213	11.67	437	0.05	2000	
Sb	123	115	1	He	0.117	0.117	32.40	146	0.08	200	
Ba	137	115	1	He	145.830	145.830	3.18	47527	0.31	10000	
W	182	159	1	He	0.893	0.893	11.16	5616	0.02	2500	
Tl	205	165	1	He	0.064	0.064	2.30	537	0.01	2000	
Pb	208	165	1	He	0.708	0.708	2.82	8352	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1927668	1.91	1884762	102.28	60	120	
Sc	45	1	He	114463	5.33	134073	85.37	60	120	
Sc	45	2	NoGas	7553463	1.28	8481025	89.06	60	120	
Rh	103	1	He	741647	4.35	903580	82.08	60	120	
In	115	1	He	195625	3.65	224817	87.02	60	120	
Tb	159	1	He	942340	3.64	1046002	90.09	60	120	
Ho	165	1	He	958663	4.38	1057439	90.66	60	120	
Bi	209	1	He	629413	3.98	731380	86.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-10-a
Data File Name	131SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:47:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	121.039	121.039	0.73	2562510	0.00	10000	
Be	9	45	2	NoGas	0.106	0.106	12.99	696	0.02	2000	
B	11	45	2	NoGas	82.816	82.816	1.48	287705	0.03	300	
Na	23	45	1	He	121177.910	121177.910	0.27	40778017	0.30	500000	
Mg	24	45	1	He	9.433	9.433	5.66	2311	0.41	500000	
Al	27	45	1	He	101.440	101.440	5.24	8000	1.27	200000	
K	39	45	1	He	46615.278	46615.278	0.91	4149550	1.12	500000	
Ca	44	45	1	He	253046.441	253046.441	1.00	1317235	19.21	500000	
Ti	47	45	1	He	0.206	0.206	88.98	8	2.65	2500	
V	51	45	1	He	2.494	2.494	4.71	3398	0.07	10000	
Cr	52	45	1	He	12.040	12.040	2.22	20581	0.06	10000	
Mn	55	45	1	He	0.855	0.855	3.92	819	0.10	10000	
Fe	56	45	1	He	7.346	7.346	2.64	11068	0.07	200000	
Co	59	45	1	He	0.222	0.222	13.97	940	0.02	5000	
Ni	60	45	1	He	1.005	1.005	0.89	979	0.10	10000	
Cu	63	45	1	He	2.396	2.396	2.64	7827	0.03	10000	
Zn	66	45	1	He	2.563	2.563	2.53	914	0.28	10000	
As	75	103	1	He	1.499	1.499	0.63	291	0.52	10000	
Se	78	115	1	He	2.267	2.267	10.50	22	10.20	10000	
Sr	88	103	1	He	1219.593	1219.593	0.84	995166	0.12	10000	
Mo	95	103	1	He	21.142	21.142	3.62	21496	0.10	2000	
Ag	107	103	1	He	0.007	0.007	51.64	31	0.02	300	
Cd	111	115	1	He	0.019	0.019	0.50	10	0.19	4000	
Sn	118	115	1	He	1.632	1.632	3.12	1608	0.10	2000	
Sb	123	115	1	He	0.258	0.258	2.38	277	0.09	200	
Ba	137	115	1	He	146.728	146.728	1.58	47787	0.31	10000	
W	182	159	1	He	0.841	0.841	4.94	5353	0.02	2500	
Tl	205	165	1	He	0.057	0.057	8.59	482	0.01	2000	
Pb	208	165	1	He	0.626	0.626	3.47	7472	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1934038	2.20	1884762	102.61	60	120	
Sc	45	1	He	114706	0.66	134073	85.56	60	120	
Sc	45	2	NoGas	7591077	0.31	8481025	89.51	60	120	
Rh	103	1	He	739786	1.00	903580	81.87	60	120	
In	115	1	He	195350	0.40	224817	86.89	60	120	
Tb	159	1	He	940232	0.40	1046002	89.89	60	120	
Ho	165	1	He	953602	0.27	1057439	90.18	60	120	
Bi	209	1	He	621597	0.16	731380	84.99	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-g-11-a
Data File Name	132SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:51:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	46.719	46.719	0.89	1052954	0.00	10000	
Be	9	45	2	NoGas	0.091	0.091	21.35	619	0.01	2000	
B	11	45	2	NoGas	74.091	74.091	1.41	258243	0.03	300	
Na	23	45	1	He	87984.768	87984.768	1.01	29854573	0.29	500000	
Mg	24	45	1	He	28.666	28.666	11.52	5957	0.48	500000	
Al	27	45	1	He	972.153	972.153	2.08	76461	1.27	200000	
K	39	45	1	He	37758.784	37758.784	0.61	3390781	1.11	500000	
Ca	44	45	1	He	111165.509	111165.509	1.04	583571	19.05	500000	
Ti	47	45	1	He	1.956	1.956	28.24	74	2.63	2500	
V	51	45	1	He	9.472	9.472	5.14	12882	0.07	10000	
Cr	52	45	1	He	1.378	1.378	9.25	2890	0.05	10000	
Mn	55	45	1	He	4.740	4.740	1.54	4049	0.12	10000	
Fe	56	45	1	He	118.419	118.419	2.11	153833	0.08	200000	
Co	59	45	1	He	0.142	0.142	18.52	701	0.02	5000	
Ni	60	45	1	He	2.792	2.792	4.46	2524	0.11	10000	
Cu	63	45	1	He	1.865	1.865	6.39	6605	0.03	10000	
Zn	66	45	1	He	2.180	2.180	5.87	803	0.27	10000	
As	75	103	1	He	6.448	6.448	3.16	1235	0.52	10000	
Se	78	115	1	He	1.879	1.879	30.54	19	9.85	10000	
Sr	88	103	1	He	752.235	752.235	0.85	629447	0.12	10000	
Mo	95	103	1	He	21.201	21.201	2.14	22106	0.10	2000	
Ag	107	103	1	He	0.001	0.001	42.24	11	0.01	300	
Cd	111	115	1	He	0.027	0.027	7.52	14	0.20	4000	
Sn	118	115	1	He	0.193	0.193	13.00	426	0.05	2000	
Sb	123	115	1	He	0.206	0.206	11.51	231	0.09	200	
Ba	137	115	1	He	46.950	46.950	2.26	15506	0.30	10000	
W	182	159	1	He	1.046	1.046	0.76	6402	0.02	2500	
Tl	205	165	1	He	0.050	0.050	9.31	438	0.01	2000	
Pb	208	165	1	He	0.208	0.208	2.68	3264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1987358	0.65	1884762	105.44	60	120	
Sc	45	1	He	115663	0.81	134073	86.27	60	120	
Sc	45	2	NoGas	7591589	1.25	8481025	89.51	60	120	
Rh	103	1	He	758580	0.38	903580	83.95	60	120	
In	115	1	He	198063	1.33	224817	88.10	60	120	
Tb	159	1	He	948988	0.12	1046002	90.73	60	120	
Ho	165	1	He	972684	0.21	1057439	91.98	60	120	
Bi	209	1	He	649084	0.50	731380	88.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64213-h-11-a
Data File Name	133SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:55:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.567	49.567	9.61	1181348	0.00	10000	
Be	9	45	2	NoGas	0.069	0.069	16.69	533	0.01	2000	
B	11	45	2	NoGas	73.683	73.683	9.13	273158	0.03	300	
Na	23	45	1	He	90122.076	90122.076	2.35	30870938	0.29	500000	
Mg	24	45	1	He	12.187	12.187	13.42	2878	0.42	500000	
Al	27	45	1	He	957.003	957.003	2.22	75992	1.26	200000	
K	39	45	1	He	38428.059	38428.059	1.75	3483649	1.10	500000	
Ca	44	45	1	He	114912.224	114912.224	1.21	609048	18.87	500000	
Ti	47	45	1	He	0.058	0.058	86.62	2	2.59	2500	
V	51	45	1	He	9.305	9.305	3.14	12777	0.07	10000	
Cr	52	45	1	He	1.017	1.017	6.26	2308	0.04	10000	
Mn	55	45	1	He	0.682	0.682	8.13	688	0.10	10000	
Fe	56	45	1	He	20.597	20.597	3.61	28449	0.07	200000	
Co	59	45	1	He	0.228	0.228	14.73	973	0.02	5000	
Ni	60	45	1	He	2.555	2.555	2.53	2341	0.11	10000	
Cu	63	45	1	He	1.645	1.645	6.72	6129	0.03	10000	
Zn	66	45	1	He	1.423	1.423	11.72	574	0.25	10000	
As	75	103	1	He	6.227	6.227	3.87	1191	0.52	10000	
Se	78	115	1	He	2.249	2.249	13.44	22	10.04	10000	
Sr	88	103	1	He	782.415	782.415	0.86	653450	0.12	10000	
Mo	95	103	1	He	22.351	22.351	2.38	23260	0.10	2000	
Ag	107	103	1	He	0.002	0.002	55.29	16	0.02	300	
Cd	111	115	1	He	0.018	0.018	75.07	9	0.19	4000	
Sn	118	115	1	He	0.437	0.437	10.22	630	0.07	2000	
Sb	123	115	1	He	0.324	0.324	14.38	342	0.09	200	
Ba	137	115	1	He	47.691	47.691	2.80	15752	0.30	10000	
W	182	159	1	He	1.155	1.155	4.92	6935	0.02	2500	
Tl	205	165	1	He	0.046	0.046	5.76	397	0.01	2000	
Pb	208	165	1	He	0.123	0.123	4.31	2366	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2061699	3.74	1884762	109.39	60	120	
Sc	45	1	He	116786	1.56	134073	87.11	60	120	
Sc	45	2	NoGas	8111196	8.13	8481025	95.64	60	120	
Rh	103	1	He	757180	0.92	903580	83.80	60	120	
In	115	1	He	198076	0.64	224817	88.11	60	120	
Tb	159	1	He	948703	1.22	1046002	90.70	60	120	
Ho	165	1	He	965216	1.15	1057439	91.28	60	120	
Bi	209	1	He	648036	0.70	731380	88.60	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	134_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T20:59:53-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	60.217	0.999	1342716	1.52	50	120.4	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	55.654	0.111	301914	0.84	50	111.3	89.5	110.5	CCV Failed
B	11	45	2	NoGas	68.344	1.201	241599	0.88	50	136.7	89.5	110.5	CCV Failed
Na	23	45	1	He	25300.255	4.262	8690662	1.46	25000	101.2	89.5	110.5	
Mg	24	45	1	He	24977.698	3.725	4766290	0.91	25000	99.9	89.5	110.5	
Al	27	45	1	He	253.697	3.312	20269	0.41	250	101.5	89.5	110.5	
K	39	45	1	He	25668.144	1.654	2336376	1.74	25000	102.7	89.5	110.5	
Ca	44	45	1	He	25411.829	2.960	135169	0.67	25000	101.6	89.5	110.5	
Ti	47	45	1	He	49.656	4.085	1911	4.65	50	99.3	89.5	110.5	
V	51	45	1	He	49.382	7.758	67727	4.92	50	98.8	89.5	110.5	
Cr	52	45	1	He	49.925	3.716	85229	0.54	50	99.9	89.5	110.5	
Mn	55	45	1	He	252.405	3.597	212106	0.62	250	101.0	89.5	110.5	
Fe	56	45	1	He	12714.179	4.151	16529715	1.00	12500	101.7	89.5	110.5	
Co	59	45	1	He	50.674	3.883	157243	0.54	50	101.3	89.5	110.5	
Ni	60	45	1	He	49.447	3.035	43142	0.95	50	98.9	89.5	110.5	
Cu	63	45	1	He	50.339	3.178	125646	0.35	50	100.7	89.5	110.5	
Zn	66	45	1	He	51.466	2.725	16288	0.93	50	102.9	89.5	110.5	
As	75	103	1	He	49.585	0.390	9439	0.51	50	99.2	89.5	110.5	
Se	78	115	1	He	48.499	0.835	431	0.90	50	97.0	89.5	110.5	
Sr	88	103	1	He	52.056	2.066	43779	1.17	50	104.1	89.5	110.5	
Mo	95	103	1	He	52.441	0.712	54912	0.76	50	104.9	89.5	110.5	
Ag	107	103	1	He	50.828	0.983	196760	0.65	50	101.7	89.5	110.5	
Cd	111	115	1	He	50.252	0.382	22168	1.03	50	100.5	89.5	110.5	
Sn	118	115	1	He	50.954	4.867	42833	3.95	50	101.9	89.5	110.5	
Sb	123	115	1	He	51.112	0.351	48145	1.06	50	102.2	89.5	110.5	
Ba	137	115	1	He	51.857	0.410	17110	1.15	50	103.7	89.5	110.5	
W	182	159	1	He	53.095	1.877	263261	1.87	50	106.2	89.5	110.5	
Tl	205	165	1	He	50.817	1.696	403495	1.43	50	101.6	89.5	110.5	
Pb	208	165	1	He	50.672	0.756	528639	0.62	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2032451	2.46	1884762	107.84	60	120	
Sc	45	1	He	117155	3.41	134073	87.38	60	120	
Sc	45	2	NoGas	7680190	0.72	8481025	90.56	60	120	
Rh	103	1	He	761986	0.89	903580	84.33	60	120	
In	115	1	He	197863	1.13	224817	88.01	60	120	
Tb	159	1	He	957892	0.84	1046002	91.58	60	120	
Ho	165	1	He	971512	0.29	1057439	91.87	60	120	
Bi	209	1	He	657044	0.69	731380	89.84	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	135_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:04:05-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.550	4.7	137454	0.8	8	
Be	9	45	2	NoGas	0.163	11.0	1015	9.3	1	
B	11	45	2	NoGas	13.392	2.4	53890	2.3	20	
Na	23	45	1	He	67.848	3.4	27173	3.3	1000	
Mg	24	45	1	He	24.834	4.6	5275	4.0	1000	
Al	27	45	1	He	0.800	41.7	160	17.1	50	
K	39	45	1	He	37.355	19.1	11093	6.0	1000	
Ca	44	45	1	He	26.190	28.2	305	13.1	1000	
Ti	47	45	1	He	0.058	173.2	2	173.2	20	
V	51	45	1	He	0.075	22.3	149	15.9	2	
Cr	52	45	1	He	0.042	49.2	659	5.8	2	
Mn	55	45	1	He	0.312	26.7	378	18.2	2	
Fe	56	45	1	He	16.402	8.5	22966	7.5	50	
Co	59	45	1	He	0.001	2778.5	271	21.7	1	
Ni	60	45	1	He	0.019	157.7	141	18.0	2	
Cu	63	45	1	He	-0.253	-28.1	1482	11.5	2	
Zn	66	45	1	He	0.276	36.0	214	14.0	20	
As	75	103	1	He	0.090	8.7	34	5.6	2	
Se	78	115	1	He	0.175	71.3	4	27.7	2	
Sr	88	103	1	He	0.671	6.3	628	5.1	10	
Mo	95	103	1	He	0.182	16.2	212	14.5	2	
Ag	107	103	1	He	0.057	14.9	240	15.0	0.2	
Cd	111	115	1	He	0.076	21.8	36	18.7	0.2	
Sn	118	115	1	He	0.333	31.2	556	13.9	10	
Sb	123	115	1	He	0.114	34.7	148	24.7	2	
Ba	137	115	1	He	0.114	37.1	43	30.8	5	
W	182	159	1	He	0.352	27.7	3041	15.2	10	
Tl	205	165	1	He	0.127	2.0	1046	1.5	0.5	
Pb	208	165	1	He	0.071	2.4	1835	1.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098940	0.16	1884762	111.36	60	120	
Sc	45	1	He	116561	0.54	134073	86.94	60	120	
Sc	45	2	NoGas	7700737	0.33	8481025	90.80	60	120	
Rh	103	1	He	801737	0.92	903580	88.73	60	120	
In	115	1	He	203222	2.10	224817	90.39	60	120	
Tb	159	1	He	959743	0.68	1046002	91.75	60	120	
Ho	165	1	He	969231	0.48	1057439	91.66	60	120	
Bi	209	1	He	677636	0.56	731380	92.65	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	136CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:08:17-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	10.364	10.364	1.908	319683	0.51	8	129.5	69.5	130.5	
Be	9	2	NoGas	1.205	1.205	3.958	6698	3.58	1	120.5	69.5	130.5	
B	11	2	NoGas	31.607	31.607	2.184	116554	1.21	20	158.0	69.5	130.5	6020A CR1 Failed
Na	23	1	He	1001.384	1001.384	1.313	348614	0.81	1000	100.1	69.5	130.5	
Mg	24	1	He	985.832	985.832	1.596	189067	0.72	1000	98.6	69.5	130.5	
Al	27	1	He	48.136	48.136	2.628	3934	3.69	50	96.3	69.5	130.5	
K	39	1	He	1015.462	1015.462	2.469	100047	1.45	1000	101.5	69.5	130.5	
Ca	44	1	He	977.843	977.843	3.440	5373	2.74	1000	97.8	69.5	130.5	
Ti	47	1	He	9.245	9.245	14.120	357	14.84	10	92.5	69.5	130.5	
V	51	1	He	5.168	5.168	9.554	7148	8.63	5	103.4	69.5	130.5	
Cr	52	1	He	2.087	2.087	6.675	4136	4.91	2	104.4	69.5	130.5	
Mn	55	1	He	5.053	5.053	8.840	4369	7.88	5	101.1	69.5	130.5	
Fe	56	1	He	107.653	107.653	1.351	142017	0.70	100	107.7	69.5	130.5	
Co	59	1	He	0.956	0.956	10.495	3241	10.54	1	95.6	69.5	130.5	
Ni	60	1	He	2.033	2.033	6.995	1897	5.79	2	101.6	69.5	130.5	
Cu	63	1	He	1.584	1.584	9.399	6010	5.71	2	79.2	69.5	130.5	
Zn	66	1	He	20.359	20.359	1.923	6534	1.12	20	101.8	69.5	130.5	
As	75	1	He	4.999	4.999	3.023	1002	3.94	5	100.0	69.5	130.5	
Se	78	1	He	5.535	5.535	5.802	53	5.21	5	110.7	69.5	130.5	
Sr	88	1	He	9.985	9.985	1.792	8743	1.93	10	99.9	69.5	130.5	
Mo	95	1	He	5.293	5.293	1.802	5762	1.72	5	105.9	69.5	130.5	
Ag	107	1	He	1.023	1.023	3.643	4116	3.57	1	102.3	69.5	130.5	
Cd	111	1	He	1.027	1.027	7.327	465	7.06	1	102.7	69.5	130.5	
Sn	118	1	He	9.991	9.991	7.576	8810	6.96	10	99.9	69.5	130.5	
Sb	123	1	He	2.094	2.094	1.206	2055	1.26	2	104.7	69.5	130.5	
Ba	137	1	He	4.763	4.763	5.201	1612	5.55	5	95.3	69.5	130.5	
W	182	1	He	10.672	10.672	1.665	53824	0.86	10	106.7	69.5	130.5	
Tl	205	1	He	1.061	1.061	3.951	8418	3.14	1	106.1	69.5	130.5	
Pb	208	1	He	1.027	1.027	1.656	11737	0.85	1	102.7	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2084457	0.33	1884762	110.60	60	120	
Sc	45	1	He	117326	1.11	134073	87.51	60	120	
Sc	45	2	NoGas	7716503	0.83	8481025	90.99	60	120	
Rh	103	1	He	790791	1.00	903580	87.52	60	120	
In	115	1	He	202410	0.38	224817	90.03	60	120	
Tb	159	1	He	955634	0.83	1046002	91.36	60	120	
Ho	165	1	He	966882	0.95	1057439	91.44	60	120	
Bi	209	1	He	685258	0.99	731380	93.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-1-a
Data File Name	137SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:12:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	13.843	13.843	0.78	392125	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	18.04	619	0.01	2000	
B	11	45	2	NoGas	970.921	970.921	0.64	3348015	0.03	300	>LDR
Na	23	45	1	He	56541.287	56541.287	2.01	19125411	0.30	500000	
Mg	24	45	1	He	21575.507	21575.507	3.43	4054887	0.53	500000	
Al	27	45	1	He	9.098	9.098	4.65	808	1.13	200000	
K	39	45	1	He	7062.897	7062.897	1.80	638386	1.11	500000	
Ca	44	45	1	He	74122.605	74122.605	2.54	387935	19.11	500000	
Ti	47	45	1	He	0.178	0.178	86.60	7	2.67	2500	
V	51	45	1	He	0.779	0.779	30.46	1095	0.07	10000	
Cr	52	45	1	He	0.483	0.483	7.01	1387	0.03	10000	
Mn	55	45	1	He	1628.793	1628.793	2.55	1347623	0.12	10000	
Fe	56	45	1	He	49678.033	49678.033	3.46	63605744	0.08	200000	
Co	59	45	1	He	0.502	0.502	10.58	1797	0.03	5000	
Ni	60	45	1	He	13.474	13.474	1.50	11667	0.12	10000	
Cu	63	45	1	He	-0.302	-0.302	-18.48	1348	-0.02	10000	
Zn	66	45	1	He	7.363	7.363	10.22	2405	0.31	10000	
As	75	103	1	He	1.265	1.265	10.45	251	0.50	10000	
Se	78	115	1	He	0.470	0.470	55.26	6	7.26	10000	
Sr	88	103	1	He	207.847	207.847	0.21	171949	0.12	10000	
Mo	95	103	1	He	0.639	0.639	9.26	670	0.10	2000	
Ag	107	103	1	He	0.005	0.005	42.99	26	0.02	300	
Cd	111	115	1	He	0.029	0.029	19.51	14	0.21	4000	
Sn	118	115	1	He	0.853	0.853	18.71	952	0.09	2000	
Sb	123	115	1	He	0.099	0.099	43.49	127	0.08	200	
Ba	137	115	1	He	67.402	67.402	0.18	21648	0.31	10000	
W	182	159	1	He	0.266	0.266	14.61	2548	0.01	2500	
Tl	205	165	1	He	0.025	0.025	11.20	230	0.01	2000	
Pb	208	165	1	He	0.031	0.031	58.58	1400	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2055105	0.70	1884762	109.04	60	120	
Sc	45	1	He	115310	1.99	134073	86.01	60	120	
Sc	45	2	NoGas	7727971	0.48	8481025	91.12	60	120	
Rh	103	1	He	749883	0.88	903580	82.99	60	120	
In	115	1	He	192622	1.32	224817	85.68	60	120	
Tb	159	1	He	933043	0.97	1046002	89.20	60	120	
Ho	165	1	He	954729	0.75	1057439	90.29	60	120	
Bi	209	1	He	642234	0.56	731380	87.81	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-2-a
Data File Name	138SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:16:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.016	6.016	0.52	230244	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	19.13	656	0.01	2000	
B	11	45	2	NoGas	1065.390	1065.390	0.41	3672210	0.03	300	>LDR
Na	23	45	1	He	138724.113	138724.113	2.24	46619063	0.30	500000	
Mg	24	45	1	He	21282.440	21282.440	1.41	3974491	0.54	500000	
Al	27	45	1	He	11.263	11.263	5.78	971	1.16	200000	
K	39	45	1	He	7922.770	7922.770	1.38	710673	1.11	500000	
Ca	44	45	1	He	111884.494	111884.494	1.81	581750	19.23	500000	
Ti	47	45	1	He	0.618	0.618	75.27	23	2.65	2500	
V	51	45	1	He	0.736	0.736	27.69	1034	0.07	10000	
Cr	52	45	1	He	0.753	0.753	6.23	1828	0.04	10000	
Mn	55	45	1	He	1225.210	1225.210	1.55	1007132	0.12	10000	
Fe	56	45	1	He	36518.506	36518.506	2.18	46462981	0.08	200000	
Co	59	45	1	He	0.777	0.777	0.62	2620	0.03	5000	
Ni	60	45	1	He	45.169	45.169	1.62	38571	0.12	10000	
Cu	63	45	1	He	-0.252	-0.252	-16.74	1459	-0.02	10000	
Zn	66	45	1	He	1.786	1.786	10.49	674	0.26	10000	
As	75	103	1	He	19.922	19.922	0.64	3689	0.54	10000	
Se	78	115	1	He	1.390	1.390	43.60	14	9.75	10000	
Sr	88	103	1	He	307.904	307.904	0.66	251178	0.12	10000	
Mo	95	103	1	He	12.262	12.262	0.98	12469	0.10	2000	
Ag	107	103	1	He	0.000	0.000	2079.83	7	0.00	300	
Cd	111	115	1	He	0.010	0.010	34.88	6	0.18	4000	
Sn	118	115	1	He	0.410	0.410	26.47	585	0.07	2000	
Sb	123	115	1	He	0.063	0.063	35.61	93	0.07	200	
Ba	137	115	1	He	44.474	44.474	3.34	14159	0.31	10000	
W	182	159	1	He	0.261	0.261	27.15	2497	0.01	2500	
Tl	205	165	1	He	0.018	0.018	22.41	172	0.01	2000	
Pb	208	165	1	He	0.003	0.003	107.71	1091	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2060000	0.65	1884762	109.30	60	120	
Sc	45	1	He	114569	1.04	134073	85.45	60	120	
Sc	45	2	NoGas	7726501	0.16	8481025	91.10	60	120	
Rh	103	1	He	739476	0.53	903580	81.84	60	120	
In	115	1	He	190930	0.41	224817	84.93	60	120	
Tb	159	1	He	922977	0.88	1046002	88.24	60	120	
Ho	165	1	He	941656	0.46	1057439	89.05	60	120	
Bi	209	1	He	614933	0.94	731380	84.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-3-a
Data File Name	139SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:20:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.403	31.403	0.13	779609	0.00	10000	
Be	9	45	2	NoGas	0.092	0.092	19.99	652	0.01	2000	
B	11	45	2	NoGas	15440.714	15440.714	0.43	54839274	0.03	300	>LDR
Na	23	45	1	He	42163.170	42163.170	2.44	14916686	0.28	500000	
Mg	24	45	1	He	3115.705	3115.705	2.84	612872	0.51	500000	
Al	27	45	1	He	17.208	17.208	7.23	1510	1.14	200000	
K	39	45	1	He	102077.046	102077.046	2.33	9542263	1.07	500000	
Ca	44	45	1	He	40134.892	40134.892	3.38	219731	18.27	500000	
Ti	47	45	1	He	0.448	0.448	38.84	18	2.52	2500	
V	51	45	1	He	3.653	3.653	3.28	5211	0.07	10000	
Cr	52	45	1	He	0.587	0.587	11.36	1631	0.04	10000	
Mn	55	45	1	He	417.573	417.573	2.35	361356	0.12	10000	
Fe	56	45	1	He	1236.080	1236.080	2.81	1657004	0.07	200000	
Co	59	45	1	He	1.041	1.041	5.66	3603	0.03	5000	
Ni	60	45	1	He	713.570	713.570	2.48	639428	0.11	10000	
Cu	63	45	1	He	2.326	2.326	4.63	8052	0.03	10000	
Zn	66	45	1	He	8.124	8.124	4.74	2759	0.29	10000	
As	75	103	1	He	2.924	2.924	4.58	583	0.50	10000	
Se	78	115	1	He	0.767	0.767	36.94	10	7.97	10000	
Sr	88	103	1	He	117.418	117.418	1.21	100876	0.12	10000	
Mo	95	103	1	He	8.230	8.230	2.70	8816	0.09	2000	
Ag	107	103	1	He	0.003	0.003	25.74	20	0.02	300	
Cd	111	115	1	He	0.014	0.014	8.51	8	0.17	4000	
Sn	118	115	1	He	0.294	0.294	46.02	530	0.06	2000	
Sb	123	115	1	He	2.764	2.764	4.17	2744	0.10	200	
Ba	137	115	1	He	17.907	17.907	3.57	6148	0.29	10000	
W	182	159	1	He	0.960	0.960	6.33	6146	0.02	2500	
Tl	205	165	1	He	0.017	0.017	16.18	177	0.01	2000	
Pb	208	165	1	He	0.613	0.613	0.61	7575	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2040264	1.20	1884762	108.25	60	120	
Sc	45	1	He	120607	1.78	134073	89.96	60	120	
Sc	45	2	NoGas	7977476	0.53	8481025	94.06	60	120	
Rh	103	1	He	778627	0.67	903580	86.17	60	120	
In	115	1	He	205744	0.69	224817	91.52	60	120	
Tb	159	1	He	974392	0.80	1046002	93.15	60	120	
Ho	165	1	He	984392	1.07	1057439	93.09	60	120	
Bi	209	1	He	662525	1.08	731380	90.59	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-4-a
Data File Name	140SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:25:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.834	10.834	1.00	335683	0.00	10000	
Be	9	45	2	NoGas	0.103	0.103	10.21	704	0.01	2000	
B	11	45	2	NoGas	496.434	496.434	0.83	1745820	0.03	300	>LDR
Na	23	45	1	He	56924.086	56924.086	1.50	19309571	0.29	500000	
Mg	24	45	1	He	14513.607	14513.607	2.40	2735191	0.53	500000	
Al	27	45	1	He	29.164	29.164	3.04	2386	1.22	200000	
K	39	45	1	He	2619.458	2619.458	2.85	242208	1.08	500000	
Ca	44	45	1	He	38783.801	38783.801	2.18	203609	19.05	500000	
Ti	47	45	1	He	0.239	0.239	116.04	9	2.68	2500	
V	51	45	1	He	0.099	0.099	219.68	185	0.05	10000	
Cr	52	45	1	He	0.215	0.215	21.31	944	0.02	10000	
Mn	55	45	1	He	2743.133	2743.133	2.13	2275330	0.12	10000	
Fe	56	45	1	He	26207.032	26207.032	2.43	33649148	0.08	200000	
Co	59	45	1	He	20.490	20.490	2.89	62946	0.03	5000	
Ni	60	45	1	He	21.101	21.101	4.19	18244	0.12	10000	
Cu	63	45	1	He	0.619	0.619	11.41	3582	0.02	10000	
Zn	66	45	1	He	7.871	7.871	8.23	2566	0.31	10000	
As	75	103	1	He	5.325	5.325	3.09	1013	0.53	10000	
Se	78	115	1	He	0.468	0.468	49.09	6	7.23	10000	
Sr	88	103	1	He	118.547	118.547	3.73	98239	0.12	10000	
Mo	95	103	1	He	1.691	1.691	4.32	1759	0.10	2000	
Ag	107	103	1	He	0.002	0.002	102.07	14	0.01	300	
Cd	111	115	1	He	0.595	0.595	6.16	259	0.23	4000	
Sn	118	115	1	He	3.163	3.163	12.10	2852	0.11	2000	
Sb	123	115	1	He	0.080	0.080	24.12	110	0.07	200	
Ba	137	115	1	He	35.832	35.832	3.41	11613	0.31	10000	
W	182	159	1	He	0.121	0.121	52.13	1867	0.01	2500	
Tl	205	165	1	He	0.105	0.105	5.56	853	0.01	2000	
Pb	208	165	1	He	0.121	0.121	6.74	2315	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2110515	1.53	1884762	111.98	60	120	
Sc	45	1	He	115645	2.55	134073	86.26	60	120	
Sc	45	2	NoGas	7863381	0.34	8481025	92.72	60	120	
Rh	103	1	He	751690	3.46	903580	83.19	60	120	
In	115	1	He	194445	2.76	224817	86.49	60	120	
Tb	159	1	He	942060	2.91	1046002	90.06	60	120	
Ho	165	1	He	953365	3.21	1057439	90.16	60	120	
Bi	209	1	He	644821	1.95	731380	88.17	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-6-a
Data File Name	141SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:29:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	28.025	28.025	0.58	687400	0.00	10000	
Be	9	45	2	NoGas	0.113	0.113	7.15	748	0.02	2000	
B	11	45	2	NoGas	993.844	993.844	0.89	3436798	0.03	300	>LDR
Na	23	45	1	He	149567.976	149567.976	2.88	50819300	0.29	500000	
Mg	24	45	1	He	17010.943	17010.943	1.57	3212476	0.53	500000	
Al	27	45	1	He	60.599	60.599	2.92	4863	1.25	200000	
K	39	45	1	He	16339.585	16339.585	3.13	1473643	1.11	500000	
Ca	44	45	1	He	54042.388	54042.388	1.86	284218	19.01	500000	
Ti	47	45	1	He	0.088	0.088	99.83	3	2.65	2500	
V	51	45	1	He	0.150	0.150	18.53	250	0.06	10000	
Cr	52	45	1	He	0.095	0.095	41.91	742	0.01	10000	
Mn	55	45	1	He	4456.394	4456.394	2.71	3703320	0.12	10000	
Fe	56	45	1	He	16571.725	16571.725	3.50	21317052	0.08	200000	
Co	59	45	1	He	53.302	53.302	3.13	163635	0.03	5000	
Ni	60	45	1	He	97.919	97.919	3.92	84383	0.12	10000	
Cu	63	45	1	He	-0.128	-0.128	-22.59	1778	-0.01	10000	
Zn	66	45	1	He	102.790	102.790	2.98	32053	0.32	10000	
As	75	103	1	He	2.836	2.836	11.40	545	0.52	10000	
Se	78	115	1	He	0.460	0.460	32.64	6	7.10	10000	
Sr	88	103	1	He	166.385	166.385	0.80	137566	0.12	10000	
Mo	95	103	1	He	0.538	0.538	15.51	566	0.10	2000	
Ag	107	103	1	He	0.003	0.003	74.22	18	0.02	300	
Cd	111	115	1	He	2.318	2.318	5.63	1012	0.23	4000	
Sn	118	115	1	He	0.133	0.133	88.68	370	0.04	2000	
Sb	123	115	1	He	0.054	0.054	88.72	87	0.06	200	
Ba	137	115	1	He	18.557	18.557	1.64	6057	0.31	10000	
W	182	159	1	He	0.182	0.182	9.46	2171	0.01	2500	
Tl	205	165	1	He	0.201	0.201	6.15	1607	0.01	2000	
Pb	208	165	1	He	0.110	0.110	10.54	2211	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2065000	0.20	1884762	109.56	60	120	
Sc	45	1	He	115860	1.86	134073	86.42	60	120	
Sc	45	2	NoGas	7750665	0.52	8481025	91.39	60	120	
Rh	103	1	He	749401	0.58	903580	82.94	60	120	
In	115	1	He	195619	1.08	224817	87.01	60	120	
Tb	159	1	He	943984	0.60	1046002	90.25	60	120	
Ho	165	1	He	957230	0.38	1057439	90.52	60	120	
Bi	209	1	He	643044	0.24	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	240-64289-p-7-a
Data File Name	142SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:33:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	34.533	34.533	0.87	817137	0.00	10000	
Be	9	45	2	NoGas	0.075	0.075	16.29	541	0.01	2000	
B	11	45	2	NoGas	702.928	702.928	0.28	2417747	0.03	300	>LDR
Na	23	45	1	He	173325.005	173325.005	1.08	58996320	0.29	500000	
Mg	24	45	1	He	21587.971	21587.971	1.78	4083084	0.53	500000	
Al	27	45	1	He	4.417	4.417	16.37	444	0.99	200000	
K	39	45	1	He	7658.525	7658.525	0.37	696051	1.10	500000	
Ca	44	45	1	He	115622.698	115622.698	1.18	608919	18.99	500000	
Ti	47	45	1	He	0.204	0.204	108.07	8	2.62	2500	
V	51	45	1	He	0.115	0.115	90.63	203	0.06	10000	
Cr	52	45	1	He	0.147	0.147	23.73	831	0.02	10000	
Mn	55	45	1	He	980.408	980.408	1.57	816283	0.12	10000	
Fe	56	45	1	He	12087.911	12087.911	1.33	15578832	0.08	200000	
Co	59	45	1	He	19.378	19.378	2.66	59770	0.03	5000	
Ni	60	45	1	He	1830.386	1830.386	2.30	1578137	0.12	10000	
Cu	63	45	1	He	-0.235	-0.235	-24.15	1520	-0.02	10000	
Zn	66	45	1	He	54.896	54.896	2.15	17207	0.32	10000	
As	75	103	1	He	9.772	9.772	2.56	1814	0.54	10000	
Se	78	115	1	He	0.434	0.434	100.07	6	7.07	10000	
Sr	88	103	1	He	443.375	443.375	1.29	361044	0.12	10000	
Mo	95	103	1	He	23.142	23.142	1.96	23483	0.10	2000	
Ag	107	103	1	He	0.000	0.000	-489.84	6	0.00	300	
Cd	111	115	1	He	0.015	0.015	87.48	8	0.19	4000	
Sn	118	115	1	He	-0.010	-0.010	-395.98	248	0.00	2000	
Sb	123	115	1	He	0.095	0.095	47.63	123	0.08	200	
Ba	137	115	1	He	90.690	90.690	1.58	29003	0.31	10000	
W	182	159	1	He	0.168	0.168	19.88	2078	0.01	2500	
Tl	205	165	1	He	0.009	0.009	21.37	104	0.01	2000	
Pb	208	165	1	He	0.013	0.013	86.85	1212	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2045982	1.04	1884762	108.55	60	120	
Sc	45	1	He	116031	0.68	134073	86.54	60	120	
Sc	45	2	NoGas	7701523	0.45	8481025	90.81	60	120	
Rh	103	1	He	738208	1.06	903580	81.70	60	120	
In	115	1	He	191789	1.00	224817	85.31	60	120	
Tb	159	1	He	934721	1.03	1046002	89.36	60	120	
Ho	165	1	He	951834	1.02	1057439	90.01	60	120	
Bi	209	1	He	631598	0.43	731380	86.36	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-1-a
Data File Name	143SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:37:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.723	9.723	1.83	315671	0.00	10000	
Be	9	45	2	NoGas	0.205	0.205	112.95	1275	0.02	2000	
B	11	45	2	NoGas	101.846	101.846	0.92	368566	0.03	300	
Na	23	45	1	He	12333.279	12333.279	2.53	4289821	0.29	500000	
Mg	24	45	1	He	8165.552	8165.552	2.23	1577350	0.52	500000	
Al	27	45	1	He	1.022	1.022	31.22	180	0.57	200000	
K	39	45	1	He	2511.047	2511.047	1.43	238307	1.05	500000	
Ca	44	45	1	He	52181.763	52181.763	2.05	280703	18.59	500000	
Ti	47	45	1	He	0.202	0.202	100.25	8	2.59	2500	
V	51	45	1	He	0.009	0.009	871.36	62	0.01	10000	
Cr	52	45	1	He	0.000	0.000	-8906.94	597	0.00	10000	
Mn	55	45	1	He	184.678	184.678	2.41	157084	0.12	10000	
Fe	56	45	1	He	19707.627	19707.627	2.25	25932678	0.08	200000	
Co	59	45	1	He	0.042	0.042	9.83	407	0.01	5000	
Ni	60	45	1	He	0.324	0.324	27.82	411	0.08	10000	
Cu	63	45	1	He	-0.305	-0.305	-21.27	1377	-0.02	10000	
Zn	66	45	1	He	1.432	1.432	6.39	586	0.24	10000	
As	75	103	1	He	0.488	0.488	3.08	111	0.44	10000	
Se	78	115	1	He	0.233	0.233	92.82	5	5.02	10000	
Sr	88	103	1	He	171.909	171.909	1.22	148487	0.12	10000	
Mo	95	103	1	He	1.309	1.309	3.19	1420	0.09	2000	
Ag	107	103	1	He	0.002	0.002	19.76	16	0.01	300	
Cd	111	115	1	He	0.011	0.011	124.33	7	0.17	4000	
Sn	118	115	1	He	0.080	0.080	125.11	337	0.02	2000	
Sb	123	115	1	He	0.015	0.015	48.22	52	0.03	200	
Ba	137	115	1	He	6.745	6.745	6.37	2262	0.30	10000	
W	182	159	1	He	0.169	0.169	39.50	2137	0.01	2500	
Tl	205	165	1	He	0.013	0.013	16.93	140	0.01	2000	
Pb	208	165	1	He	-0.013	-0.013	-30.65	966	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2119209	0.30	1884762	112.44	60	120	
Sc	45	1	He	118505	2.48	134073	88.39	60	120	
Sc	45	2	NoGas	7948594	1.14	8481025	93.72	60	120	
Rh	103	1	He	782995	1.51	903580	86.65	60	120	
In	115	1	He	200939	2.38	224817	89.38	60	120	
Tb	159	1	He	957464	0.35	1046002	91.54	60	120	
Ho	165	1	He	970327	1.32	1057439	91.76	60	120	
Bi	209	1	He	670945	1.00	731380	91.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-2-a
Data File Name	144SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:41:44-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.137	6.137	1.30	237752	0.00	10000	
Be	9	45	2	NoGas	0.068	0.068	3.98	511	0.01	2000	
B	11	45	2	NoGas	72.154	72.154	1.63	261690	0.03	300	
Na	23	45	1	He	11020.506	11020.506	1.10	3780871	0.29	500000	
Mg	24	45	1	He	9677.247	9677.247	2.45	1843317	0.52	500000	
Al	27	45	1	He	2.812	2.812	11.34	320	0.88	200000	
K	39	45	1	He	1507.626	1507.626	0.49	144186	1.05	500000	
Ca	44	45	1	He	58612.591	58612.591	1.35	310891	18.85	500000	
Ti	47	45	1	He	0.289	0.289	96.01	11	2.60	2500	
V	51	45	1	He	0.206	0.206	82.00	329	0.06	10000	
Cr	52	45	1	He	0.523	0.523	11.58	1473	0.04	10000	
Mn	55	45	1	He	181.051	181.051	1.32	151880	0.12	10000	
Fe	56	45	1	He	3205.950	3205.950	2.17	4161578	0.08	200000	
Co	59	45	1	He	-0.036	-0.036	-5.20	158	-0.02	5000	
Ni	60	45	1	He	0.358	0.358	12.44	436	0.08	10000	
Cu	63	45	1	He	0.695	0.695	12.78	3807	0.02	10000	
Zn	66	45	1	He	2.214	2.214	10.91	822	0.27	10000	
As	75	103	1	He	0.460	0.460	6.61	105	0.44	10000	
Se	78	115	1	He	0.428	0.428	41.62	6	6.80	10000	
Sr	88	103	1	He	203.530	203.530	0.40	175650	0.12	10000	
Mo	95	103	1	He	0.636	0.636	9.50	696	0.09	2000	
Ag	107	103	1	He	0.000	0.000	739.13	8	0.00	300	
Cd	111	115	1	He	0.007	0.007	102.06	5	0.15	4000	
Sn	118	115	1	He	0.050	0.050	89.54	307	0.02	2000	
Sb	123	115	1	He	0.005	0.005	434.96	42	0.01	200	
Ba	137	115	1	He	3.030	3.030	5.07	1009	0.30	10000	
W	182	159	1	He	0.162	0.162	3.13	2108	0.01	2500	
Tl	205	165	1	He	0.010	0.010	30.76	119	0.01	2000	
Pb	208	165	1	He	-0.001	-0.001	-363.90	1087	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2079996	1.80	1884762	110.36	60	120	
Sc	45	1	He	116836	0.55	134073	87.14	60	120	
Sc	45	2	NoGas	7892980	0.85	8481025	93.07	60	120	
Rh	103	1	He	782269	0.65	903580	86.57	60	120	
In	115	1	He	198806	0.66	224817	88.43	60	120	
Tb	159	1	He	961133	1.00	1046002	91.89	60	120	
Ho	165	1	He	969693	0.49	1057439	91.70	60	120	
Bi	209	1	He	670592	0.33	731380	91.69	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-3-a
Data File Name	145SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:45:56-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.954	7.954	0.85	275889	0.00	10000	
Be	9	45	2	NoGas	0.236	0.236	8.64	1448	0.02	2000	
B	11	45	2	NoGas	89.661	89.661	1.06	322899	0.03	300	
Na	23	45	1	He	11335.326	11335.326	2.31	3850602	0.29	500000	
Mg	24	45	1	He	6631.235	6631.235	3.12	1250880	0.53	500000	
Al	27	45	1	He	78.556	78.556	5.03	6270	1.25	200000	
K	39	45	1	He	3454.528	3454.528	2.26	317239	1.09	500000	
Ca	44	45	1	He	33925.722	33925.722	2.30	178252	19.03	500000	
Ti	47	45	1	He	1.897	1.897	50.77	72	2.63	2500	
V	51	45	1	He	0.164	0.164	39.96	269	0.06	10000	
Cr	52	45	1	He	0.204	0.204	13.97	924	0.02	10000	
Mn	55	45	1	He	618.615	618.615	2.19	513565	0.12	10000	
Fe	56	45	1	He	17490.919	17490.919	2.19	22474736	0.08	200000	
Co	59	45	1	He	0.043	0.043	39.82	398	0.01	5000	
Ni	60	45	1	He	0.235	0.235	8.03	326	0.07	10000	
Cu	63	45	1	He	-0.375	-0.375	-14.15	1176	-0.03	10000	
Zn	66	45	1	He	4.957	4.957	5.49	1666	0.30	10000	
As	75	103	1	He	0.121	0.121	21.06	38	0.31	10000	
Se	78	115	1	He	0.091	0.091	192.97	3	2.75	10000	
Sr	88	103	1	He	142.497	142.497	1.67	121445	0.12	10000	
Mo	95	103	1	He	0.341	0.341	23.17	373	0.09	2000	
Ag	107	103	1	He	0.006	0.006	17.69	29	0.02	300	
Cd	111	115	1	He	0.003	0.003	176.58	3	0.11	4000	
Sn	118	115	1	He	0.016	0.016	425.26	282	0.01	2000	
Sb	123	115	1	He	0.007	0.007	95.04	44	0.02	200	
Ba	137	115	1	He	17.033	17.033	4.02	5695	0.30	10000	
W	182	159	1	He	0.170	0.170	26.40	2119	0.01	2500	
Tl	205	165	1	He	0.012	0.012	17.22	130	0.01	2000	
Pb	208	165	1	He	0.023	0.023	28.58	1330	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2094786	0.52	1884762	111.14	60	120	
Sc	45	1	He	115700	0.98	134073	86.30	60	120	
Sc	45	2	NoGas	7885988	0.62	8481025	92.98	60	120	
Rh	103	1	He	772502	0.51	903580	85.49	60	120	
In	115	1	He	200398	1.59	224817	89.14	60	120	
Tb	159	1	He	948212	0.54	1046002	90.65	60	120	
Ho	165	1	He	963774	0.70	1057439	91.14	60	120	
Bi	209	1	He	666086	0.43	731380	91.07	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	146_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:50:05-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.661	2.382	1324032	0.82	50	115.3	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.174	1.461	301669	2.11	50	108.3	89.5	110.5	
B	11	45	2	NoGas	89.732	1.220	323027	0.61	50	179.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25021.319	2.179	8603432	0.07	25000	100.1	89.5	110.5	
Mg	24	45	1	He	24755.070	3.808	4726938	1.70	25000	99.0	89.5	110.5	
Al	27	45	1	He	245.712	2.767	19648	0.68	250	98.3	89.5	110.5	
K	39	45	1	He	25740.771	2.105	2344137	1.21	25000	103.0	89.5	110.5	
Ca	44	45	1	He	25172.200	2.644	133984	0.51	25000	100.7	89.5	110.5	
Ti	47	45	1	He	51.211	1.435	1972	2.98	50	102.4	89.5	110.5	
V	51	45	1	He	49.613	5.125	68131	3.09	50	99.2	89.5	110.5	
Cr	52	45	1	He	50.753	3.333	86697	1.24	50	101.5	89.5	110.5	
Mn	55	45	1	He	253.445	2.617	213152	0.52	250	101.4	89.5	110.5	
Fe	56	45	1	He	12709.767	2.972	16538612	0.85	12500	101.7	89.5	110.5	
Co	59	45	1	He	50.422	2.812	156595	0.79	50	100.8	89.5	110.5	
Ni	60	45	1	He	50.317	2.151	43931	0.44	50	100.6	89.5	110.5	
Cu	63	45	1	He	49.913	3.478	124683	1.89	50	99.8	89.5	110.5	
Zn	66	45	1	He	49.534	2.734	15690	0.82	50	99.1	89.5	110.5	
As	75	103	1	He	49.152	0.676	9513	0.62	50	98.3	89.5	110.5	
Se	78	115	1	He	48.181	7.176	433	7.16	50	96.4	89.5	110.5	
Sr	88	103	1	He	50.622	2.155	43289	2.57	50	101.2	89.5	110.5	
Mo	95	103	1	He	51.944	1.925	55299	2.35	50	103.9	89.5	110.5	
Ag	107	103	1	He	49.911	0.974	196430	1.18	50	99.8	89.5	110.5	
Cd	111	115	1	He	49.476	1.949	22070	1.99	50	99.0	89.5	110.5	
Sn	118	115	1	He	48.896	1.087	41585	1.23	50	97.8	89.5	110.5	
Sb	123	115	1	He	50.755	1.569	48345	1.72	50	101.5	89.5	110.5	
Ba	137	115	1	He	49.873	2.702	16639	2.82	50	99.7	89.5	110.5	
W	182	159	1	He	52.124	2.220	255603	2.50	50	104.2	89.5	110.5	
Tl	205	165	1	He	49.653	2.340	390163	2.36	50	99.3	89.5	110.5	
Pb	208	165	1	He	49.862	0.520	514786	0.53	50	99.7	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2015324	1.47	1884762	106.93	60	120	
Sc	45	1	He	117199	2.15	134073	87.41	60	120	
Sc	45	2	NoGas	7883426	1.37	8481025	92.95	60	120	
Rh	103	1	He	774643	0.42	903580	85.73	60	120	
In	115	1	He	200071	0.15	224817	88.99	60	120	
Tb	159	1	He	947201	0.36	1046002	90.55	60	120	
Ho	165	1	He	961395	0.03	1057439	90.92	60	120	
Bi	209	1	He	647623	0.72	731380	88.55	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	147_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:54:18-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.068	7.6	128960	1.9	8	
Be	9	45	2	NoGas	0.129	18.2	841	14.6	1	
B	11	45	2	NoGas	43.775	0.3	159823	0.8	20	CCB High
Na	23	45	1	He	63.546	6.5	24554	3.2	1000	
Mg	24	45	1	He	27.870	5.6	5605	8.9	1000	
Al	27	45	1	He	0.570	54.9	136	18.8	50	
K	39	45	1	He	49.138	23.7	11593	0.9	1000	
Ca	44	45	1	He	24.050	30.6	281	15.7	1000	
Ti	47	45	1	He	0.119	108.8	4	114.6	20	
V	51	45	1	He	0.035	374.6	86	199.1	2	
Cr	52	45	1	He	0.049	154.1	642	22.1	2	
Mn	55	45	1	He	0.441	22.9	461	9.1	2	
Fe	56	45	1	He	18.188	5.8	24174	6.0	50	
Co	59	45	1	He	0.003	486.1	267	18.5	1	
Ni	60	45	1	He	0.020	176.9	137	25.5	2	
Cu	63	45	1	He	-0.464	-15.5	918	9.1	2	
Zn	66	45	1	He	0.344	67.6	222	21.5	20	
As	75	103	1	He	0.092	12.1	33	11.3	2	
Se	78	115	1	He	0.340	61.0	5	27.1	2	
Sr	88	103	1	He	0.596	5.9	539	1.3	10	
Mo	95	103	1	He	0.145	28.0	164	25.5	2	
Ag	107	103	1	He	0.057	12.2	230	5.8	0.2	
Cd	111	115	1	He	0.085	10.5	38	6.1	0.2	
Sn	118	115	1	He	0.343	25.6	541	16.7	10	
Sb	123	115	1	He	0.124	15.7	151	16.6	2	
Ba	137	115	1	He	0.073	81.9	28	66.1	5	
W	182	159	1	He	0.418	15.7	3223	15.8	10	
Tl	205	165	1	He	0.115	8.8	906	1.5	0.5	
Pb	208	165	1	He	0.067	14.9	1711	7.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2077748	1.39	1884762	110.24	60	120	
Sc	45	1	He	111707	8.41	134073	83.32	60	120	
Sc	45	2	NoGas	7787905	0.93	8481025	91.83	60	120	
Rh	103	1	He	771340	6.14	903580	85.36	60	120	
In	115	1	He	193763	5.62	224817	86.19	60	120	
Tb	159	1	He	913605	7.21	1046002	87.34	60	120	
Ho	165	1	He	927880	6.81	1057439	87.75	60	120	
Bi	209	1	He	648752	5.55	731380	88.70	60	120	

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Sample Report

Sample Table

Sample Name	240-64287-d-4-a
Data File Name	148SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T21:58:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.884	4.884	2.11	213583	0.00	10000	
Be	9	45	2	NoGas	0.109	0.109	16.40	748	0.01	2000	
B	11	45	2	NoGas	51.204	51.204	2.79	190112	0.03	300	
Na	23	45	1	He	5483.864	5483.864	4.47	1893104	0.29	500000	
Mg	24	45	1	He	5678.073	5678.073	3.26	1087578	0.52	500000	
Al	27	45	1	He	1.260	1.260	17.95	198	0.64	200000	
K	39	45	1	He	2141.273	2141.273	3.24	202605	1.06	500000	
Ca	44	45	1	He	21449.349	21449.349	2.53	114492	18.73	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.030	0.030	90.85	89	0.03	10000	
Cr	52	45	1	He	0.069	0.069	87.45	709	0.01	10000	
Mn	55	45	1	He	231.737	231.737	3.54	195394	0.12	10000	
Fe	56	45	1	He	5585.755	5585.755	3.77	7287590	0.08	200000	
Co	59	45	1	He	0.293	0.293	3.02	1181	0.02	5000	
Ni	60	45	1	He	1.763	1.763	7.71	1665	0.11	10000	
Cu	63	45	1	He	-0.455	-0.455	-3.23	998	-0.05	10000	
Zn	66	45	1	He	2.492	2.492	6.48	914	0.27	10000	
As	75	103	1	He	0.096	0.096	24.07	34	0.28	10000	
Se	78	115	1	He	0.252	0.252	46.84	5	5.23	10000	
Sr	88	103	1	He	84.322	84.322	1.46	73645	0.11	10000	
Mo	95	103	1	He	0.213	0.213	11.37	243	0.09	2000	
Ag	107	103	1	He	0.002	0.002	155.05	17	0.01	300	
Cd	111	115	1	He	0.011	0.011	42.92	6	0.17	4000	
Sn	118	115	1	He	0.027	0.027	208.83	293	0.01	2000	
Sb	123	115	1	He	0.022	0.022	62.88	59	0.04	200	
Ba	137	115	1	He	12.565	12.565	2.05	4242	0.30	10000	
W	182	159	1	He	0.183	0.183	26.07	2222	0.01	2500	
Tl	205	165	1	He	0.022	0.022	9.46	217	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-144.54	1061	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2109939	1.29	1884762	111.95	60	120	
Sc	45	1	He	117501	2.03	134073	87.64	60	120	
Sc	45	2	NoGas	7978811	0.94	8481025	94.08	60	120	
Rh	103	1	He	791425	0.48	903580	87.59	60	120	
In	115	1	He	202297	1.91	224817	89.98	60	120	
Tb	159	1	He	964534	0.56	1046002	92.21	60	120	
Ho	165	1	He	984685	0.50	1057439	93.12	60	120	
Bi	209	1	He	685683	0.66	731380	93.75	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228603/1-a
Data File Name	149_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:02:43-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.104	5.6	130767	0.6	8	
Be	9	45	2	NoGas	0.051	45.8	419	31.7	1	
B	11	45	2	NoGas	51.234	0.2	187202	0.6	20	Blank High
Na	23	45	1	He	30.096	6.9	14388	6.3	1000	
Mg	24	45	1	He	-0.620	-139.3	444	38.5	1000	
Al	27	45	1	He	0.035	824.5	100	21.9	50	
K	39	45	1	He	12.540	50.5	8921	5.7	1000	
Ca	44	45	1	He	-6.509	-76.9	133	19.6	1000	
Ti	47	45	1	He	0.088	173.2	3	173.2	20	
V	51	45	1	He	-0.019	-216.2	21	266.4	2	
Cr	52	45	1	He	-0.014	-162.0	568	5.5	2	
Mn	55	45	1	He	0.068	67.9	176	23.2	2	
Fe	56	45	1	He	2.090	5.1	4479	4.2	50	
Co	59	45	1	He	-0.051	-18.6	112	27.6	1	
Ni	60	45	1	He	-0.049	-25.6	83	14.4	2	
Cu	63	45	1	He	-0.507	-9.4	870	14.9	2	
Zn	66	45	1	He	0.059	179.0	148	22.1	20	
As	75	103	1	He	0.030	82.3	22	23.0	2	
Se	78	115	1	He	0.171	99.5	4	38.5	2	
Sr	88	103	1	He	0.404	14.9	397	13.4	10	
Mo	95	103	1	He	0.038	51.1	54	39.8	2	
Ag	107	103	1	He	0.002	137.0	16	75.3	0.2	
Cd	111	115	1	He	0.001	211.6	2	50.3	0.2	
Sn	118	115	1	He	0.184	23.3	433	9.2	10	
Sb	123	115	1	He	0.029	79.5	67	32.8	2	
Ba	137	115	1	He	-0.002	-596.2	4	86.6	5	
W	182	159	1	He	0.125	35.3	1948	11.6	10	
Tl	205	165	1	He	0.014	30.4	148	23.2	0.5	
Pb	208	165	1	He	-0.017	-56.6	921	10.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2123451	0.68	1884762	112.66	60	120	
Sc	45	1	He	117531	1.45	134073	87.66	60	120	
Sc	45	2	NoGas	7851698	0.66	8481025	92.58	60	120	
Rh	103	1	He	812310	0.13	903580	89.90	60	120	
In	115	1	He	204980	1.06	224817	91.18	60	120	
Tb	159	1	He	971589	0.26	1046002	92.89	60	120	
Ho	165	1	He	975763	0.43	1057439	92.28	60	120	
Bi	209	1	He	705111	0.33	731380	96.41	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228603/2-a
Data File Name	150_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:06:57-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	116.187	116.187	1.463	2523886	0.56	100	116.2	84.5	115.5	LCS Failed
Be	9	2	NoGas	1168.554	1168.554	0.651	6415920	1.05	1000	116.9	84.5	115.5	LCS Failed
B	11	2	NoGas	141.106	141.106	1.137	496529	1.88	100	141.1	84.5	115.5	LCS Failed
Na	23	1	He	9922.935	9922.935	1.461	3390859	1.26	10000	99.2	84.5	115.5	
Mg	24	1	He	10085.467	10085.467	1.461	1913328	1.32	10000	100.9	84.5	115.5	
Al	27	1	He	9793.465	9793.465	2.056	774062	1.91	10000	97.9	84.5	115.5	
K	39	1	He	9852.832	9852.832	0.740	895810	0.67	10000	98.5	84.5	115.5	
Ca	44	1	He	9728.686	9728.686	1.638	51531	1.15	10000	97.3	84.5	115.5	
Ti	47	1	He	98.466	98.466	1.081	3765	0.98	100	98.5	84.5	115.5	
V	51	1	He	1038.559	1038.559	2.852	1415988	2.59	1000	103.9	84.5	115.5	
Cr	52	1	He	1028.944	1028.944	1.857	1734487	1.42	1000	102.9	84.5	115.5	
Mn	55	1	He	991.531	991.531	1.034	827876	0.82	1000	99.2	84.5	115.5	
Fe	56	1	He	9947.022	9947.022	0.806	12856366	0.36	10000	99.5	84.5	115.5	
Co	59	1	He	1047.727	1047.727	1.665	3226429	1.26	1000	104.8	84.5	115.5	
Ni	60	1	He	994.891	994.891	1.541	860288	1.20	1000	99.5	84.5	115.5	
Cu	63	1	He	1048.402	1048.402	0.296	2559299	0.38	1000	104.8	84.5	115.5	
Zn	66	1	He	999.660	999.660	1.454	312029	1.03	1000	100.0	84.5	115.5	
As	75	1	He	952.436	952.436	0.312	183487	0.73	1000	95.2	84.5	115.5	
Se	78	1	He	986.089	986.089	1.856	8491	1.10	1000	98.6	84.5	115.5	
Sr	88	1	He	956.718	956.718	0.410	814999	1.33	1000	95.7	84.5	115.5	
Mo	95	1	He	100.999	100.999	0.516	107181	1.50	100	101.0	84.5	115.5	
Ag	107	1	He	99.239	99.239	0.783	389338	0.41	100	99.2	84.5	115.5	
Cd	111	1	He	1020.613	1020.613	1.717	438575	0.71	1000	102.1	84.5	115.5	
Sn	118	1	He	1009.618	1009.618	1.666	822186	0.84	1000	101.0	84.5	115.5	
Sb	123	1	He	101.097	101.097	1.464	92736	0.49	100	101.1	84.5	115.5	
Ba	137	1	He	1023.924	1023.924	1.874	329019	0.99	1000	102.4	84.5	115.5	
W	182	1	He	103.104	103.104	1.827	506874	1.87	100	103.1	84.5	115.5	
Tl	205	1	He	262.934	262.934	1.810	2079697	1.33	250	105.2	84.5	115.5	
Pb	208	1	He	1036.230	1036.230	1.367	10748356	0.93	1000	103.6	84.5	115.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2051182	0.96	1884762	108.83	60	120	
Sc	45	1	He	116359	0.49	134073	86.79	60	120	
Sc	45	2	NoGas	7776419	0.85	8481025	91.69	60	120	
Rh	103	1	He	772273	1.01	903580	85.47	60	120	
In	115	1	He	192772	1.01	224817	85.75	60	120	
Tb	159	1	He	952007	0.20	1046002	91.01	60	120	
Ho	165	1	He	967882	0.69	1057439	91.53	60	120	
Bi	209	1	He	659587	0.80	731380	90.18	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-a
Data File Name	151SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:10:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	24.426	24.426	0.58	608221	0.00	10000	
Be	9	45	2	NoGas	0.502	0.502	14.88	2856	0.02	2000	
B	11	45	2	NoGas	286.476	286.476	0.47	989006	0.03	300	
Na	23	45	1	He	246084.821	246084.821	0.54	82922899	0.30	500000	
Mg	24	45	1	He	13696.262	13696.262	0.28	2564892	0.53	500000	
Al	27	45	1	He	4.449	4.449	9.41	442	1.01	200000	
K	39	45	1	He	1999.394	1999.394	0.84	185519	1.08	500000	
Ca	44	45	1	He	36478.039	36478.039	1.78	190296	19.17	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.239	0.239	91.63	368	0.06	10000	
Cr	52	45	1	He	0.182	0.182	29.54	881	0.02	10000	
Mn	55	45	1	He	19.274	19.274	1.55	15999	0.12	10000	
Fe	56	45	1	He	47.707	47.707	0.70	62575	0.08	200000	
Co	59	45	1	He	0.614	0.614	5.69	2131	0.03	5000	
Ni	60	45	1	He	0.443	0.443	11.02	501	0.09	10000	
Cu	63	45	1	He	0.169	0.169	6.26	2477	0.01	10000	
Zn	66	45	1	He	2.973	2.973	8.33	1042	0.29	10000	
As	75	103	1	He	0.458	0.458	22.26	98	0.47	10000	
Se	78	115	1	He	0.761	0.761	61.48	9	8.49	10000	
Sr	88	103	1	He	775.000	775.000	1.38	624384	0.12	10000	
Mo	95	103	1	He	3.009	3.009	8.78	3030	0.10	2000	
Ag	107	103	1	He	0.015	0.015	52.30	61	0.02	300	
Cd	111	115	1	He	0.213	0.213	12.00	93	0.23	4000	
Sn	118	115	1	He	1.703	1.703	37.18	1641	0.10	2000	
Sb	123	115	1	He	0.365	0.365	7.88	371	0.10	200	
Ba	137	115	1	He	75.505	75.505	2.92	24275	0.31	10000	
W	182	159	1	He	0.565	0.565	7.54	3956	0.01	2500	
Tl	205	165	1	He	0.167	0.167	22.42	1317	0.01	2000	
Pb	208	165	1	He	0.093	0.093	51.36	1996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017525	1.33	1884762	107.04	60	120	
Sc	45	1	He	114868	0.12	134073	85.68	60	120	
Sc	45	2	NoGas	7693312	0.54	8481025	90.71	60	120	
Rh	103	1	He	730413	0.44	903580	80.84	60	120	
In	115	1	He	192829	1.01	224817	85.77	60	120	
Tb	159	1	He	926532	1.26	1046002	88.58	60	120	
Ho	165	1	He	939629	0.62	1057439	88.86	60	120	
Bi	209	1	He	628046	0.07	731380	85.87	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64223-f-1-a@5
Data File Name	152SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:15:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.751	5.751	1.37	228048	0.00	10000	
Be	9	45	2	NoGas	0.206	0.206	9.77	1274	0.02	2000	
B	11	45	2	NoGas	79.976	79.976	1.27	287192	0.03	300	
Na	23	45	1	He	48562.079	48562.079	6.23	17457640	0.28	500000	
Mg	24	45	1	He	2588.808	2588.808	5.52	517732	0.50	500000	
Al	27	45	1	He	1.711	1.711	23.77	244	0.70	200000	
K	39	45	1	He	387.577	387.577	7.71	44901	0.86	500000	
Ca	44	45	1	He	7212.653	7212.653	7.45	40255	17.92	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.055	0.055	113.77	125	0.04	10000	
Cr	52	45	1	He	0.026	0.026	200.58	661	0.00	10000	
Mn	55	45	1	He	4.186	4.186	1.38	3810	0.11	10000	
Fe	56	45	1	He	9.290	9.290	7.87	14466	0.06	200000	
Co	59	45	1	He	0.102	0.102	12.37	614	0.02	5000	
Ni	60	45	1	He	0.036	0.036	202.06	163	0.02	10000	
Cu	63	45	1	He	-0.413	-0.413	-9.51	1146	-0.04	10000	
Zn	66	45	1	He	2.657	2.657	19.52	1003	0.26	10000	
As	75	103	1	He	0.108	0.108	18.62	37	0.29	10000	
Se	78	115	1	He	0.349	0.349	29.20	6	5.84	10000	
Sr	88	103	1	He	148.000	148.000	6.08	131173	0.11	10000	
Mo	95	103	1	He	0.636	0.636	3.41	716	0.09	2000	
Ag	107	103	1	He	0.001	0.001	109.32	11	0.01	300	
Cd	111	115	1	He	0.059	0.059	35.99	29	0.20	4000	
Sn	118	115	1	He	0.492	0.492	33.16	715	0.07	2000	
Sb	123	115	1	He	0.055	0.055	81.57	96	0.06	200	
Ba	137	115	1	He	14.952	14.952	6.18	5252	0.28	10000	
W	182	159	1	He	0.222	0.222	21.49	2493	0.01	2500	
Tl	205	165	1	He	0.038	0.038	10.98	353	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-63.46	1119	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2071974	0.28	1884762	109.93	60	120	
Sc	45	1	He	122837	6.21	134073	91.62	60	120	
Sc	45	2	NoGas	7840070	1.78	8481025	92.44	60	120	
Rh	103	1	He	805257	5.96	903580	89.12	60	120	
In	115	1	He	210972	5.66	224817	93.84	60	120	
Tb	159	1	He	993143	7.02	1046002	94.95	60	120	
Ho	165	1	He	1006155	6.81	1057439	95.15	60	120	
Bi	209	1	He	684352	5.52	731380	93.57	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64223-f-1-a
Data File Name	153SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:19:23-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	139.977	139.977	1.43	2943077	0.00	10000	
Be	9	45	2	NoGas	1168.584	1168.584	0.49	6254812	0.02	2000	
B	11	45	2	NoGas	405.870	405.870	0.29	1377467	0.03	300	>LDR
Na	23	45	1	He	249533.289	249533.289	1.87	82871454	0.30	500000	
Mg	24	45	1	He	23202.061	23202.061	2.11	4281912	0.54	500000	
Al	27	45	1	He	10061.705	10061.705	2.46	773739	1.30	200000	
K	39	45	1	He	12019.027	12019.027	1.41	1061534	1.13	500000	
Ca	44	45	1	He	46063.555	46063.555	1.86	236795	19.45	500000	
Ti	47	45	1	He	102.357	102.357	2.02	3808	2.69	2500	
V	51	45	1	He	1083.903	1083.903	3.97	1437854	0.08	10000	
Cr	52	45	1	He	1058.551	1058.551	2.91	1736169	0.06	10000	
Mn	55	45	1	He	1034.646	1034.646	1.80	840508	0.12	10000	
Fe	56	45	1	He	10235.622	10235.622	2.74	12871502	0.08	200000	
Co	59	45	1	He	1066.290	1066.290	2.26	3194810	0.03	5000	
Ni	60	45	1	He	993.533	993.533	2.09	835894	0.12	10000	
Cu	63	45	1	He	1036.921	1036.921	2.62	2462671	0.04	10000	
Zn	66	45	1	He	997.154	997.154	1.95	302830	0.33	10000	
As	75	103	1	He	1036.494	1036.494	1.18	188574	0.55	10000	
Se	78	115	1	He	999.657	999.657	1.02	8362	11.95	10000	
Sr	88	103	1	He	1819.454	1819.454	3.68	1463824	0.12	10000	
Mo	95	103	1	He	112.288	112.288	1.80	112530	0.10	2000	
Ag	107	103	1	He	101.969	101.969	0.99	377805	0.03	300	
Cd	111	115	1	He	1019.334	1019.334	1.86	425555	0.24	4000	
Sn	118	115	1	He	1048.925	1048.925	0.63	829942	0.13	2000	
Sb	123	115	1	He	107.462	107.462	0.32	95780	0.11	200	
Ba	137	115	1	He	1149.295	1149.295	1.00	358815	0.32	10000	
W	182	159	1	He	107.473	107.473	2.04	519512	0.02	2500	
Tl	205	165	1	He	260.520	260.520	0.41	2029671	0.01	2000	
Pb	208	165	1	He	1018.648	1018.648	0.72	10407376	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915690	1.56	1884762	101.64	60	120	
Sc	45	1	He	113216	0.82	134073	84.44	60	120	
Sc	45	2	NoGas	7580971	0.50	8481025	89.39	60	120	
Rh	103	1	He	729277	0.65	903580	80.71	60	120	
In	115	1	He	187291	2.18	224817	83.31	60	120	
Tb	159	1	He	936120	1.27	1046002	89.49	60	120	
Ho	165	1	He	953314	1.07	1057439	90.15	60	120	
Bi	209	1	He	614516	0.12	731380	84.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-b ms
Data File Name	154SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:23:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	134.806	134.806	0.79	2891302	0.00	10000	
Be	9	45	2	NoGas	1144.802	1144.802	1.22	6241746	0.02	2000	
B	11	45	2	NoGas	409.302	409.302	1.40	1414948	0.03	300	>LDR
Na	23	45	1	He	250137.616	250137.616	2.70	86488615	0.29	500000	
Mg	24	45	1	He	22611.027	22611.027	2.64	4344718	0.52	500000	
Al	27	45	1	He	9519.729	9519.729	2.82	762185	1.25	200000	
K	39	45	1	He	11571.287	11571.287	1.53	1064443	1.09	500000	
Ca	44	45	1	He	45634.736	45634.736	1.75	244260	18.68	500000	
Ti	47	45	1	He	97.333	97.333	1.06	3770	2.58	2500	
V	51	45	1	He	1023.088	1023.088	3.75	1412912	0.07	10000	
Cr	52	45	1	He	1010.861	1010.861	2.92	1726138	0.06	10000	
Mn	55	45	1	He	986.124	986.124	2.81	834031	0.12	10000	
Fe	56	45	1	He	9700.982	9700.982	2.41	12701429	0.08	200000	
Co	59	45	1	He	1002.198	1002.198	1.95	3126600	0.03	5000	
Ni	60	45	1	He	946.376	946.376	2.40	828998	0.11	10000	
Cu	63	45	1	He	979.882	979.882	2.01	2423373	0.04	10000	
Zn	66	45	1	He	949.043	949.043	2.08	300104	0.32	10000	
As	75	103	1	He	1016.208	1016.208	0.36	187607	0.54	10000	
Se	78	115	1	He	972.668	972.668	1.15	8324	11.69	10000	
Sr	88	103	1	He	1875.227	1875.227	2.53	1530905	0.12	10000	
Mo	95	103	1	He	109.297	109.297	0.80	111144	0.10	2000	
Ag	107	103	1	He	97.688	97.688	0.78	367264	0.03	300	
Cd	111	115	1	He	987.265	987.265	0.43	421644	0.23	4000	
Sn	118	115	1	He	1002.394	1002.394	0.88	811308	0.12	2000	
Sb	123	115	1	He	103.951	103.951	0.78	94765	0.11	200	
Ba	137	115	1	He	1119.074	1119.074	0.55	357395	0.31	10000	
W	182	159	1	He	102.496	102.496	0.69	501961	0.02	2500	
Tl	205	165	1	He	249.588	249.588	2.11	1973140	0.01	2000	
Pb	208	165	1	He	983.240	983.240	0.86	10193119	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1931750	0.46	1884762	102.49	60	120	
Sc	45	1	He	117897	1.45	134073	87.93	60	120	
Sc	45	2	NoGas	7722605	0.56	8481025	91.06	60	120	
Rh	103	1	He	740041	0.74	903580	81.90	60	120	
In	115	1	He	191573	0.80	224817	85.21	60	120	
Tb	159	1	He	948345	0.45	1046002	90.66	60	120	
Ho	165	1	He	967276	0.39	1057439	91.47	60	120	
Bi	209	1	He	623820	0.98	731380	85.29	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-1-c msd
Data File Name	155SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:27:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	130.300	130.300	1.41	2839520	0.00	10000	
Be	9	45	2	NoGas	1114.970	1114.970	0.78	6169295	0.02	2000	
B	11	45	2	NoGas	410.315	410.315	0.45	1439554	0.03	300	>LDR
Na	23	45	1	He	250893.878	250893.878	0.47	86815693	0.29	500000	
Mg	24	45	1	He	22822.679	22822.679	0.64	4388449	0.52	500000	
Al	27	45	1	He	9588.760	9588.760	0.36	768313	1.25	200000	
K	39	45	1	He	11655.511	11655.511	0.53	1072858	1.09	500000	
Ca	44	45	1	He	46168.576	46168.576	0.95	247292	18.67	500000	
Ti	47	45	1	He	99.167	99.167	0.27	3844	2.58	2500	
V	51	45	1	He	1035.014	1035.014	1.52	1430689	0.07	10000	
Cr	52	45	1	He	1013.117	1013.117	0.76	1731399	0.06	10000	
Mn	55	45	1	He	985.711	985.711	0.73	834350	0.12	10000	
Fe	56	45	1	He	9778.052	9778.052	0.52	12812049	0.08	200000	
Co	59	45	1	He	1006.929	1006.929	0.98	3143654	0.03	5000	
Ni	60	45	1	He	948.769	948.769	0.76	831718	0.11	10000	
Cu	63	45	1	He	985.622	985.622	0.93	2439214	0.04	10000	
Zn	66	45	1	He	954.241	954.241	0.90	301957	0.32	10000	
As	75	103	1	He	1007.079	1007.079	0.83	188828	0.53	10000	
Se	78	115	1	He	962.229	962.229	1.76	8431	11.41	10000	
Sr	88	103	1	He	1854.276	1854.276	1.46	1537379	0.12	10000	
Mo	95	103	1	He	108.277	108.277	1.19	111828	0.10	2000	
Ag	107	103	1	He	97.287	97.287	0.93	371496	0.03	300	
Cd	111	115	1	He	965.686	965.686	1.25	422284	0.23	4000	
Sn	118	115	1	He	990.196	990.196	0.91	820630	0.12	2000	
Sb	123	115	1	He	102.696	102.696	1.26	95865	0.11	200	
Ba	137	115	1	He	1093.051	1093.051	1.66	357413	0.31	10000	
W	182	159	1	He	100.581	100.581	0.90	502403	0.02	2500	
Tl	205	165	1	He	246.837	246.837	1.07	1969410	0.01	2000	
Pb	208	165	1	He	979.587	979.587	0.37	10249510	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915171	0.96	1884762	101.61	60	120	
Sc	45	1	He	117957	0.58	134073	87.98	60	120	
Sc	45	2	NoGas	7837211	1.01	8481025	92.41	60	120	
Rh	103	1	He	751636	0.60	903580	83.18	60	120	
In	115	1	He	196175	1.72	224817	87.26	60	120	
Tb	159	1	He	967220	0.04	1046002	92.47	60	120	
Ho	165	1	He	976281	0.30	1057439	92.33	60	120	
Bi	209	1	He	633851	0.52	731380	86.67	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-2-a
Data File Name	156SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:31:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	39.532	39.532	0.95	889039	0.00	10000	
Be	9	45	2	NoGas	0.906	0.906	2.19	4886	0.02	2000	
B	11	45	2	NoGas	387.324	387.324	0.53	1290626	0.03	300	>LDR
Na	23	45	1	He	362096.975	362096.975	1.43	126207417	0.29	500000	
Mg	24	45	1	He	22390.340	22390.340	1.12	4336846	0.52	500000	
Al	27	45	1	He	3.570	3.570	13.91	387	0.92	200000	
K	39	45	1	He	3259.502	3259.502	0.65	307886	1.06	500000	
Ca	44	45	1	He	65791.102	65791.102	0.37	354892	18.54	500000	
Ti	47	45	1	He	0.170	0.170	86.61	7	2.55	2500	
V	51	45	1	He	0.095	0.095	124.30	179	0.05	10000	
Cr	52	45	1	He	0.149	0.149	38.00	854	0.02	10000	
Mn	55	45	1	He	35.927	35.927	1.92	30748	0.12	10000	
Fe	56	45	1	He	79.093	79.093	1.35	106154	0.07	200000	
Co	59	45	1	He	0.389	0.389	8.05	1496	0.03	5000	
Ni	60	45	1	He	0.297	0.297	20.56	389	0.08	10000	
Cu	63	45	1	He	-0.009	-0.009	-750.03	2119	0.00	10000	
Zn	66	45	1	He	3.653	3.653	0.46	1295	0.28	10000	
As	75	103	1	He	0.565	0.565	4.09	119	0.47	10000	
Se	78	115	1	He	0.887	0.887	42.12	10	8.49	10000	
Sr	88	103	1	He	1323.261	1323.261	0.96	1084601	0.12	10000	
Mo	95	103	1	He	4.201	4.201	7.07	4302	0.10	2000	
Ag	107	103	1	He	0.014	0.014	46.37	58	0.02	300	
Cd	111	115	1	He	0.248	0.248	34.19	112	0.22	4000	
Sn	118	115	1	He	3.111	3.111	24.59	2897	0.11	2000	
Sb	123	115	1	He	0.483	0.483	1.81	497	0.10	200	
Ba	137	115	1	He	136.011	136.011	2.98	45306	0.30	10000	
W	182	159	1	He	0.781	0.781	4.93	5120	0.02	2500	
Tl	205	165	1	He	0.175	0.175	16.17	1411	0.01	2000	
Pb	208	165	1	He	0.123	0.123	17.69	2356	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1915224	1.14	1884762	101.62	60	120	
Sc	45	1	He	118819	0.98	134073	88.62	60	120	
Sc	45	2	NoGas	7441240	0.82	8481025	87.74	60	120	
Rh	103	1	He	743069	0.82	903580	82.24	60	120	
In	115	1	He	199831	1.72	224817	88.89	60	120	
Tb	159	1	He	951636	1.60	1046002	90.98	60	120	
Ho	165	1	He	962679	1.09	1057439	91.04	60	120	
Bi	209	1	He	631712	0.95	731380	86.37	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-3-a
Data File Name	157SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:35:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.496	29.496	1.56	721142	0.00	10000	
Be	9	45	2	NoGas	0.580	0.580	5.53	3319	0.02	2000	
B	11	45	2	NoGas	274.430	274.430	1.05	959194	0.03	300	
Na	23	45	1	He	235040.820	235040.820	1.11	78527501	0.30	500000	
Mg	24	45	1	He	21249.505	21249.505	1.91	3945242	0.54	500000	
Al	27	45	1	He	2.688	2.688	41.35	302	0.89	200000	
K	39	45	1	He	2574.123	2574.123	1.42	234648	1.10	500000	
Ca	44	45	1	He	54724.689	54724.689	0.70	282974	19.34	500000	
Ti	47	45	1	He	0.298	0.298	105.34	11	2.68	2500	
V	51	45	1	He	-0.003	-0.003	-5637.37	42	-0.01	10000	
Cr	52	45	1	He	0.065	0.065	43.99	681	0.01	10000	
Mn	55	45	1	He	27.433	27.433	2.00	22531	0.12	10000	
Fe	56	45	1	He	124.776	124.776	1.49	159529	0.08	200000	
Co	59	45	1	He	0.353	0.353	7.30	1326	0.03	5000	
Ni	60	45	1	He	0.237	0.237	21.95	322	0.07	10000	
Cu	63	45	1	He	-0.307	-0.307	-11.39	1320	-0.02	10000	
Zn	66	45	1	He	2.911	2.911	9.46	1014	0.29	10000	
As	75	103	1	He	0.775	0.775	4.43	157	0.49	10000	
Se	78	115	1	He	0.645	0.645	47.38	8	7.94	10000	
Sr	88	103	1	He	1087.932	1087.932	0.28	886879	0.12	10000	
Mo	95	103	1	He	3.609	3.609	4.76	3675	0.10	2000	
Ag	107	103	1	He	0.005	0.005	26.69	27	0.02	300	
Cd	111	115	1	He	0.084	0.084	36.29	38	0.22	4000	
Sn	118	115	1	He	0.923	0.923	21.33	1033	0.09	2000	
Sb	123	115	1	He	0.302	0.302	4.55	320	0.09	200	
Ba	137	115	1	He	111.930	111.930	1.55	36793	0.30	10000	
W	182	159	1	He	0.320	0.320	10.46	2815	0.01	2500	
Tl	205	165	1	He	0.060	0.060	10.07	503	0.01	2000	
Pb	208	165	1	He	0.024	0.024	13.54	1316	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1994483	1.21	1884762	105.82	60	120	
Sc	45	1	He	113888	0.41	134073	84.94	60	120	
Sc	45	2	NoGas	7786599	1.16	8481025	91.81	60	120	
Rh	103	1	He	739060	1.32	903580	81.79	60	120	
In	115	1	He	197193	1.77	224817	87.71	60	120	
Tb	159	1	He	935780	1.12	1046002	89.46	60	120	
Ho	165	1	He	951529	1.41	1057439	89.98	60	120	
Bi	209	1	He	624760	0.16	731380	85.42	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	158_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:39:59-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.447	0.234	1244129	0.99	50	114.9	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.724	1.049	287242	0.36	50	109.4	89.5	110.5	
B	11	45	2	NoGas	84.181	0.582	286178	1.11	50	168.4	89.5	110.5	CCV Failed
Na	23	45	1	He	24759.074	1.185	8300458	0.77	25000	99.0	89.5	110.5	
Mg	24	45	1	He	24642.993	2.090	4588448	0.54	25000	98.6	89.5	110.5	
Al	27	45	1	He	252.691	3.114	19696	1.61	250	101.1	89.5	110.5	
K	39	45	1	He	25426.429	1.784	2257590	1.60	25000	101.7	89.5	110.5	
Ca	44	45	1	He	25538.154	2.242	132533	1.64	25000	102.2	89.5	110.5	
Ti	47	45	1	He	52.316	11.621	1962	10.72	50	104.6	89.5	110.5	
V	51	45	1	He	50.585	2.365	67748	1.13	50	101.2	89.5	110.5	
Cr	52	45	1	He	49.740	1.817	82860	0.25	50	99.5	89.5	110.5	
Mn	55	45	1	He	254.989	2.288	209078	1.01	250	102.0	89.5	110.5	
Fe	56	45	1	He	12755.642	1.986	16184064	1.04	12500	102.0	89.5	110.5	
Co	59	45	1	He	50.693	3.312	153483	2.07	50	101.4	89.5	110.5	
Ni	60	45	1	He	50.262	2.037	42781	0.28	50	100.5	89.5	110.5	
Cu	63	45	1	He	49.727	2.402	121120	1.15	50	99.5	89.5	110.5	
Zn	66	45	1	He	50.789	2.179	15683	1.48	50	101.6	89.5	110.5	
As	75	103	1	He	49.350	0.199	9336	0.61	50	98.7	89.5	110.5	
Se	78	115	1	He	48.763	6.939	428	5.54	50	97.5	89.5	110.5	
Sr	88	103	1	He	51.622	1.163	43148	0.92	50	103.2	89.5	110.5	
Mo	95	103	1	He	52.314	0.978	54437	0.74	50	104.6	89.5	110.5	
Ag	107	103	1	He	50.523	1.080	194362	0.80	50	101.0	89.5	110.5	
Cd	111	115	1	He	50.563	0.958	22042	0.83	50	101.1	89.5	110.5	
Sn	118	115	1	He	50.410	1.777	41890	1.32	50	100.8	89.5	110.5	
Sb	123	115	1	He	52.435	2.275	48805	1.49	50	104.9	89.5	110.5	
Ba	137	115	1	He	51.548	1.734	16807	1.62	50	103.1	89.5	110.5	
W	182	159	1	He	51.951	1.390	253801	0.63	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.796	0.749	395418	0.52	50	101.6	89.5	110.5	
Pb	208	165	1	He	50.711	0.801	518654	0.57	50	101.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1949271	1.04	1884762	103.42	60	120	
Sc	45	1	He	114251	1.93	134073	85.22	60	120	
Sc	45	2	NoGas	7431504	0.78	8481025	87.63	60	120	
Rh	103	1	He	757240	0.61	903580	83.80	60	120	
In	115	1	He	195546	1.50	224817	86.98	60	120	
Tb	159	1	He	943750	0.84	1046002	90.22	60	120	
Ho	165	1	He	952450	0.23	1057439	90.07	60	120	
Bi	209	1	He	649997	0.90	731380	88.87	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	159_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:44:09-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	1.054	6.0	122049	0.8	8	
Be	9	45	2	NoGas	0.469	12.5	2574	11.9	1	
B	11	45	2	NoGas	27.973	0.4	99646	0.6	20	CCB High
Na	23	45	1	He	86.485	3.3	31862	2.1	1000	
Mg	24	45	1	He	24.662	7.4	4981	6.8	1000	
Al	27	45	1	He	0.435	15.7	124	3.1	50	
K	39	45	1	He	36.580	6.7	10470	1.6	1000	
Ca	44	45	1	He	33.825	32.0	329	17.5	1000	
Ti	47	45	1	He	0.061	86.6	2	86.6	20	
V	51	45	1	He	-0.074	-85.5	-51	-159.4	2	
Cr	52	45	1	He	0.027	139.8	601	11.0	2	
Mn	55	45	1	He	0.360	2.8	397	2.2	2	
Fe	56	45	1	He	16.096	7.8	21433	5.9	50	
Co	59	45	1	He	0.028	40.9	337	8.5	1	
Ni	60	45	1	He	-0.022	-64.5	100	12.0	2	
Cu	63	45	1	He	-0.475	-7.4	893	8.8	2	
Zn	66	45	1	He	0.410	30.1	243	14.3	20	
As	75	103	1	He	0.137	22.9	42	14.8	2	
Se	78	115	1	He	0.370	21.1	6	13.1	2	
Sr	88	103	1	He	0.435	10.3	407	9.2	10	
Mo	95	103	1	He	0.166	17.6	189	15.8	2	
Ag	107	103	1	He	0.062	8.8	250	8.7	0.2	
Cd	111	115	1	He	0.106	12.3	49	11.4	0.2	
Sn	118	115	1	He	0.676	15.2	837	11.3	10	
Sb	123	115	1	He	0.109	18.2	141	13.8	2	
Ba	137	115	1	He	0.076	82.3	30	67.6	5	
W	182	159	1	He	0.421	9.7	3312	5.9	10	
Tl	205	165	1	He	0.128	3.9	1033	3.0	0.5	
Pb	208	165	1	He	0.069	9.4	1778	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1969015	1.21	1884762	104.47	60	120	
Sc	45	1	He	110739	1.43	134073	82.60	60	120	
Sc	45	2	NoGas	7387664	0.24	8481025	87.11	60	120	
Rh	103	1	He	778480	0.66	903580	86.16	60	120	
In	115	1	He	199623	1.19	224817	88.79	60	120	
Tb	159	1	He	938817	0.55	1046002	89.75	60	120	
Ho	165	1	He	952873	1.16	1057439	90.11	60	120	
Bi	209	1	He	671540	0.21	731380	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-4-a
Data File Name	160SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:48:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.533	31.533	0.27	746484	0.00	10000	
Be	9	45	2	NoGas	0.311	0.311	18.10	1800	0.02	2000	
B	11	45	2	NoGas	281.857	281.857	0.25	962855	0.03	300	
Na	23	45	1	He	273347.424	273347.424	0.34	89129021	0.31	500000	
Mg	24	45	1	He	21744.928	21744.928	1.08	3940105	0.55	500000	
Al	27	45	1	He	2.345	2.345	20.28	269	0.87	200000	
K	39	45	1	He	2944.668	2944.668	1.83	260902	1.13	500000	
Ca	44	45	1	He	57889.024	57889.024	2.27	292156	19.81	500000	
Ti	47	45	1	He	0.031	0.031	173.21	1	2.78	2500	
V	51	45	1	He	0.214	0.214	69.43	324	0.07	10000	
Cr	52	45	1	He	0.108	0.108	51.86	734	0.01	10000	
Mn	55	45	1	He	28.211	28.211	2.63	22611	0.12	10000	
Fe	56	45	1	He	119.020	119.020	1.54	148583	0.08	200000	
Co	59	45	1	He	0.575	0.575	2.55	1949	0.03	5000	
Ni	60	45	1	He	0.232	0.232	22.40	311	0.07	10000	
Cu	63	45	1	He	-0.386	-0.386	-1.77	1104	-0.03	10000	
Zn	66	45	1	He	2.810	2.810	5.16	960	0.29	10000	
As	75	103	1	He	0.682	0.682	9.32	135	0.51	10000	
Se	78	115	1	He	0.149	0.149	62.82	4	4.09	10000	
Sr	88	103	1	He	1166.680	1166.680	0.33	912547	0.13	10000	
Mo	95	103	1	He	4.010	4.010	3.74	3916	0.10	2000	
Ag	107	103	1	He	0.001	0.001	4.63	10	0.01	300	
Cd	111	115	1	He	0.039	0.039	41.47	18	0.22	4000	
Sn	118	115	1	He	0.298	0.298	59.70	493	0.06	2000	
Sb	123	115	1	He	0.379	0.379	13.44	379	0.10	200	
Ba	137	115	1	He	168.358	168.358	0.38	53368	0.32	10000	
W	182	159	1	He	0.306	0.306	5.79	2697	0.01	2500	
Tl	205	165	1	He	0.025	0.025	6.81	229	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-63.53	948	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1930539	0.76	1884762	102.43	60	120	
Sc	45	1	He	111154	1.29	134073	82.91	60	120	
Sc	45	2	NoGas	7611492	0.22	8481025	89.75	60	120	
Rh	103	1	He	709099	1.79	903580	78.48	60	120	
In	115	1	He	190128	1.37	224817	84.57	60	120	
Tb	159	1	He	918476	0.73	1046002	87.81	60	120	
Ho	165	1	He	932619	0.94	1057439	88.20	60	120	
Bi	209	1	He	615867	0.80	731380	84.21	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-5-a
Data File Name	161SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:52:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	26.081	26.081	0.72	655703	0.00	10000	
Be	9	45	2	NoGas	0.270	0.270	12.54	1630	0.02	2000	
B	11	45	2	NoGas	217.942	217.942	0.87	770114	0.03	300	
Na	23	45	1	He	162696.671	162696.671	0.96	56832396	0.29	500000	
Mg	24	45	1	He	21199.000	21199.000	1.46	4114997	0.52	500000	
Al	27	45	1	He	1.361	1.361	47.36	209	0.65	200000	
K	39	45	1	He	2514.179	2514.179	1.86	239781	1.05	500000	
Ca	44	45	1	He	58968.609	58968.609	1.19	318784	18.50	500000	
Ti	47	45	1	He	0.085	0.085	100.49	3	2.56	2500	
V	51	45	1	He	0.097	0.097	96.35	182	0.05	10000	
Cr	52	45	1	He	0.074	0.074	85.84	728	0.01	10000	
Mn	55	45	1	He	23.264	23.264	2.31	19996	0.12	10000	
Fe	56	45	1	He	607.985	607.985	2.21	805853	0.08	200000	
Co	59	45	1	He	0.247	0.247	13.51	1052	0.02	5000	
Ni	60	45	1	He	0.082	0.082	40.00	200	0.04	10000	
Cu	63	45	1	He	-0.291	-0.291	-7.74	1418	-0.02	10000	
Zn	66	45	1	He	2.168	2.168	3.11	823	0.26	10000	
As	75	103	1	He	0.948	0.948	2.75	194	0.49	10000	
Se	78	115	1	He	0.013	0.013	643.69	3	0.50	10000	
Sr	88	103	1	He	1092.731	1092.731	0.31	913314	0.12	10000	
Mo	95	103	1	He	2.810	2.810	4.14	2937	0.10	2000	
Ag	107	103	1	He	0.001	0.001	233.86	11	0.01	300	
Cd	111	115	1	He	0.025	0.025	19.73	13	0.20	4000	
Sn	118	115	1	He	0.040	0.040	80.69	304	0.01	2000	
Sb	123	115	1	He	0.246	0.246	10.78	274	0.09	200	
Ba	137	115	1	He	104.146	104.146	3.02	35070	0.30	10000	
W	182	159	1	He	0.222	0.222	10.08	2423	0.01	2500	
Tl	205	165	1	He	0.019	0.019	28.44	188	0.01	2000	
Pb	208	165	1	He	-0.006	-0.006	-146.40	1056	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2011365	1.49	1884762	106.72	60	120	
Sc	45	1	He	119071	0.68	134073	88.81	60	120	
Sc	45	2	NoGas	7854384	1.04	8481025	92.61	60	120	
Rh	103	1	He	757707	1.51	903580	83.86	60	120	
In	115	1	He	201981	0.62	224817	89.84	60	120	
Tb	159	1	He	968436	0.82	1046002	92.58	60	120	
Ho	165	1	He	990575	1.55	1057439	93.68	60	120	
Bi	209	1	He	650013	1.25	731380	88.87	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-6-a
Data File Name	162SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T22:56:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.201	20.201	1.94	513824	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	8.62	1404	0.02	2000	
B	11	45	2	NoGas	626.734	626.734	2.18	2123461	0.03	300	>LDR
Na	23	45	1	He	362038.553	362038.553	0.82	124549936	0.29	500000	
Mg	24	45	1	He	13564.106	13564.106	0.97	2593225	0.52	500000	
Al	27	45	1	He	3.815	3.815	15.10	401	0.95	200000	
K	39	45	1	He	1507.763	1507.763	0.28	144741	1.04	500000	
Ca	44	45	1	He	35931.739	35931.739	0.75	191370	18.78	500000	
Ti	47	45	1	He	0.144	0.144	92.10	6	2.59	2500	
V	51	45	1	He	-0.040	-0.040	-262.98	-8	0.48	10000	
Cr	52	45	1	He	0.061	0.061	17.50	694	0.01	10000	
Mn	55	45	1	He	21.950	21.950	0.53	18586	0.12	10000	
Fe	56	45	1	He	161.119	161.119	0.97	211595	0.08	200000	
Co	59	45	1	He	0.205	0.205	10.71	906	0.02	5000	
Ni	60	45	1	He	0.022	0.022	52.30	144	0.02	10000	
Cu	63	45	1	He	-0.288	-0.288	-20.44	1405	-0.02	10000	
Zn	66	45	1	He	1.154	1.154	8.49	492	0.23	10000	
As	75	103	1	He	2.451	2.451	4.19	473	0.52	10000	
Se	78	115	1	He	0.295	0.295	28.75	5	5.73	10000	
Sr	88	103	1	He	1006.582	1006.582	1.48	831909	0.12	10000	
Mo	95	103	1	He	11.655	11.655	3.10	12010	0.10	2000	
Ag	107	103	1	He	0.002	0.002	43.60	16	0.02	300	
Cd	111	115	1	He	0.030	0.030	33.43	15	0.20	4000	
Sn	118	115	1	He	0.525	0.525	38.19	711	0.07	2000	
Sb	123	115	1	He	0.173	0.173	3.56	202	0.09	200	
Ba	137	115	1	He	47.425	47.425	0.73	15822	0.30	10000	
W	182	159	1	He	0.227	0.227	8.48	2415	0.01	2500	
Tl	205	165	1	He	0.014	0.014	30.20	147	0.01	2000	
Pb	208	165	1	He	-0.003	-0.003	-342.32	1066	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1884377	1.20	1884762	99.98	60	120	
Sc	45	1	He	117276	1.05	134073	87.47	60	120	
Sc	45	2	NoGas	7584665	1.32	8481025	89.43	60	120	
Rh	103	1	He	749331	0.99	903580	82.93	60	120	
In	115	1	He	200064	0.43	224817	88.99	60	120	
Tb	159	1	He	954783	0.59	1046002	91.28	60	120	
Ho	165	1	He	967539	0.60	1057439	91.50	60	120	
Bi	209	1	He	630429	1.67	731380	86.20	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-7-a
Data File Name	163SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:00:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.217	31.217	0.99	749167	0.00	10000	
Be	9	45	2	NoGas	0.198	0.198	9.74	1208	0.02	2000	
B	11	45	2	NoGas	313.359	313.359	4.10	1082723	0.03	300	>LDR
Na	23	45	1	He	286054.785	286054.785	0.43	98127596	0.29	500000	
Mg	24	45	1	He	21759.490	21759.490	0.59	4147994	0.52	500000	
Al	27	45	1	He	3.077	3.077	11.24	341	0.90	200000	
K	39	45	1	He	3017.749	3017.749	1.46	281106	1.07	500000	
Ca	44	45	1	He	58816.192	58816.192	0.76	312259	18.84	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.62	2500	
V	51	45	1	He	0.162	0.162	82.69	268	0.06	10000	
Cr	52	45	1	He	0.093	0.093	51.27	746	0.01	10000	
Mn	55	45	1	He	35.023	35.023	2.33	29497	0.12	10000	
Fe	56	45	1	He	362.327	362.327	1.01	472318	0.08	200000	
Co	59	45	1	He	0.307	0.307	4.63	1221	0.03	5000	
Ni	60	45	1	He	0.449	0.449	13.52	514	0.09	10000	
Cu	63	45	1	He	-0.355	-0.355	-6.30	1236	-0.03	10000	
Zn	66	45	1	He	4.316	4.316	8.60	1482	0.29	10000	
As	75	103	1	He	1.078	1.078	4.83	216	0.50	10000	
Se	78	115	1	He	0.406	0.406	90.47	6	6.61	10000	
Sr	88	103	1	He	1207.644	1207.644	0.40	997725	0.12	10000	
Mo	95	103	1	He	3.125	3.125	4.45	3228	0.10	2000	
Ag	107	103	1	He	0.002	0.002	176.18	13	0.01	300	
Cd	111	115	1	He	0.030	0.030	19.51	15	0.20	4000	
Sn	118	115	1	He	0.637	0.637	42.17	804	0.08	2000	
Sb	123	115	1	He	0.267	0.267	8.66	291	0.09	200	
Ba	137	115	1	He	179.625	179.625	2.10	59801	0.30	10000	
W	182	159	1	He	0.326	0.326	12.73	2934	0.01	2500	
Tl	205	165	1	He	0.013	0.013	20.54	137	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-112.78	996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1905908	1.42	1884762	101.12	60	120	
Sc	45	1	He	116934	1.01	134073	87.22	60	120	
Sc	45	2	NoGas	7705373	0.60	8481025	90.85	60	120	
Rh	103	1	He	748979	1.03	903580	82.89	60	120	
In	115	1	He	199685	0.64	224817	88.82	60	120	
Tb	159	1	He	965090	1.22	1046002	92.26	60	120	
Ho	165	1	He	974554	0.89	1057439	92.16	60	120	
Bi	209	1	He	639086	1.03	731380	87.38	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-8-a
Data File Name	164SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:05:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.469	10.469	1.25	327381	0.00	10000	
Be	9	45	2	NoGas	0.175	0.175	2.63	1104	0.02	2000	
B	11	45	2	NoGas	197.824	197.824	0.81	699245	0.03	300	
Na	23	45	1	He	69692.139	69692.139	2.28	24127491	0.29	500000	
Mg	24	45	1	He	11784.079	11784.079	2.76	2266886	0.52	500000	
Al	27	45	1	He	2.269	2.269	14.00	280	0.81	200000	
K	39	45	1	He	1056.462	1056.462	2.55	104382	1.01	500000	
Ca	44	45	1	He	27849.096	27849.096	1.53	149299	18.65	500000	
Ti	47	45	1	He	0.142	0.142	67.75	6	2.56	2500	
V	51	45	1	He	0.010	0.010	2271.87	65	0.02	10000	
Cr	52	45	1	He	0.047	0.047	40.95	674	0.01	10000	
Mn	55	45	1	He	7.858	7.858	1.95	6771	0.12	10000	
Fe	56	45	1	He	181.149	181.149	3.09	239144	0.08	200000	
Co	59	45	1	He	0.057	0.057	16.23	449	0.01	5000	
Ni	60	45	1	He	-0.049	-0.049	-30.19	83	-0.06	10000	
Cu	63	45	1	He	-0.346	-0.346	-14.26	1270	-0.03	10000	
Zn	66	45	1	He	1.550	1.550	8.92	620	0.25	10000	
As	75	103	1	He	0.166	0.166	21.29	48	0.35	10000	
Se	78	115	1	He	0.127	0.127	173.92	4	3.34	10000	
Sr	88	103	1	He	586.587	586.587	0.85	505954	0.12	10000	
Mo	95	103	1	He	2.690	2.690	5.37	2901	0.09	2000	
Ag	107	103	1	He	0.003	0.003	16.25	19	0.02	300	
Cd	111	115	1	He	0.022	0.022	15.36	12	0.19	4000	
Sn	118	115	1	He	2.187	2.187	4.45	2208	0.10	2000	
Sb	123	115	1	He	0.109	0.109	41.45	148	0.07	200	
Ba	137	115	1	He	96.296	96.296	1.52	33525	0.29	10000	
W	182	159	1	He	0.186	0.186	28.02	2300	0.01	2500	
Tl	205	165	1	He	0.014	0.014	30.80	156	0.01	2000	
Pb	208	165	1	He	-0.006	-0.006	-165.86	1072	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1966666	1.28	1884762	104.35	60	120	
Sc	45	1	He	118034	1.95	134073	88.04	60	120	
Sc	45	2	NoGas	7848757	1.17	8481025	92.54	60	120	
Rh	103	1	He	781935	0.38	903580	86.54	60	120	
In	115	1	He	208810	0.33	224817	92.88	60	120	
Tb	159	1	He	992591	0.32	1046002	94.89	60	120	
Ho	165	1	He	1003574	0.59	1057439	94.91	60	120	
Bi	209	1	He	675077	0.36	731380	92.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-9-a
Data File Name	165SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:09:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	44.866	44.866	2.14	1021435	0.00	10000	
Be	9	45	2	NoGas	0.146	0.146	10.23	915	0.02	2000	
B	11	45	2	NoGas	397.412	397.412	1.06	1359069	0.03	300	>LDR
Na	23	45	1	He	481828.839	481828.839	1.00	166325193	0.29	500000	
Mg	24	45	1	He	20847.102	20847.102	1.40	3999120	0.52	500000	
Al	27	45	1	He	2.370	2.370	19.78	287	0.83	200000	
K	39	45	1	He	3574.666	3574.666	3.02	333610	1.07	500000	
Ca	44	45	1	He	64954.337	64954.337	1.86	346984	18.72	500000	
Ti	47	45	1	He	0.173	0.173	100.56	7	2.60	2500	
V	51	45	1	He	0.060	0.060	139.83	130	0.05	10000	
Cr	52	45	1	He	0.055	0.055	79.18	686	0.01	10000	
Mn	55	45	1	He	11.473	11.473	4.11	9806	0.12	10000	
Fe	56	45	1	He	587.661	587.661	1.90	769758	0.08	200000	
Co	59	45	1	He	0.346	0.346	7.17	1349	0.03	5000	
Ni	60	45	1	He	0.067	0.067	72.11	184	0.04	10000	
Cu	63	45	1	He	-0.287	-0.287	-11.49	1413	-0.02	10000	
Zn	66	45	1	He	2.205	2.205	8.03	826	0.27	10000	
As	75	103	1	He	1.183	1.183	2.15	233	0.51	10000	
Se	78	115	1	He	0.223	0.223	42.38	4	4.97	10000	
Sr	88	103	1	He	1397.764	1397.764	1.28	1140630	0.12	10000	
Mo	95	103	1	He	4.293	4.293	8.29	4374	0.10	2000	
Ag	107	103	1	He	0.001	0.001	92.98	10	0.01	300	
Cd	111	115	1	He	0.028	0.028	8.55	14	0.20	4000	
Sn	118	115	1	He	0.619	0.619	21.74	785	0.08	2000	
Sb	123	115	1	He	0.314	0.314	7.75	334	0.09	200	
Ba	137	115	1	He	68.400	68.400	1.66	22689	0.30	10000	
W	182	159	1	He	0.221	0.221	16.95	2385	0.01	2500	
Tl	205	165	1	He	0.010	0.010	22.63	120	0.01	2000	
Pb	208	165	1	He	-0.001	-0.001	-681.05	1082	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1896180	0.63	1884762	100.61	60	120	
Sc	45	1	He	117682	0.91	134073	87.77	60	120	
Sc	45	2	NoGas	7639004	2.09	8481025	90.07	60	120	
Rh	103	1	He	739830	0.37	903580	81.88	60	120	
In	115	1	He	198959	1.19	224817	88.50	60	120	
Tb	159	1	He	955200	1.12	1046002	91.32	60	120	
Ho	165	1	He	970861	0.40	1057439	91.81	60	120	
Bi	209	1	He	636892	0.58	731380	87.08	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-10-a
Data File Name	166SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:13:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	44.059	44.059	0.34	942566	0.00	10000	
Be	9	45	2	NoGas	0.125	0.125	6.21	756	0.02	2000	
B	11	45	2	NoGas	390.530	390.530	2.23	1252656	0.03	300	>LDR
Na	23	45	1	He	480954.107	480954.107	1.31	155220190	0.31	500000	
Mg	24	45	1	He	20866.351	20866.351	1.40	3742325	0.56	500000	
Al	27	45	1	He	1.443	1.443	21.36	199	0.73	200000	
K	39	45	1	He	3564.480	3564.480	1.18	311063	1.15	500000	
Ca	44	45	1	He	64524.155	64524.155	1.82	322251	20.02	500000	
Ti	47	45	1	He	0.093	0.093	173.21	3	2.80	2500	
V	51	45	1	He	0.158	0.158	42.83	249	0.06	10000	
Cr	52	45	1	He	0.111	0.111	10.29	731	0.02	10000	
Mn	55	45	1	He	10.642	10.642	4.76	8508	0.13	10000	
Fe	56	45	1	He	579.609	579.609	1.87	709836	0.08	200000	
Co	59	45	1	He	0.016	0.016	56.95	300	0.01	5000	
Ni	60	45	1	He	-0.062	-0.062	-28.64	67	-0.09	10000	
Cu	63	45	1	He	-0.249	-0.249	-18.96	1408	-0.02	10000	
Zn	66	45	1	He	1.824	1.824	10.03	659	0.28	10000	
As	75	103	1	He	1.261	1.261	3.04	232	0.54	10000	
Se	78	115	1	He	0.233	0.233	63.56	4	5.41	10000	
Sr	88	103	1	He	1397.895	1397.895	1.19	1072353	0.13	10000	
Mo	95	103	1	He	4.456	4.456	1.31	4268	0.10	2000	
Ag	107	103	1	He	0.000	0.000	957.99	7	0.00	300	
Cd	111	115	1	He	0.008	0.008	30.11	5	0.17	4000	
Sn	118	115	1	He	0.204	0.204	71.51	411	0.05	2000	
Sb	123	115	1	He	0.027	0.027	131.64	59	0.05	200	
Ba	137	115	1	He	67.223	67.223	1.60	21052	0.32	10000	
W	182	159	1	He	0.178	0.178	24.68	2034	0.01	2500	
Tl	205	165	1	He	0.004	0.004	38.03	62	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-85.66	977	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1761967	0.53	1884762	93.48	60	120	
Sc	45	1	He	110025	1.20	134073	82.06	60	120	
Sc	45	2	NoGas	7162917	0.27	8481025	84.46	60	120	
Rh	103	1	He	695528	1.23	903580	76.97	60	120	
In	115	1	He	187828	1.81	224817	83.55	60	120	
Tb	159	1	He	893336	0.17	1046002	85.40	60	120	
Ho	165	1	He	903056	0.10	1057439	85.40	60	120	
Bi	209	1	He	597758	2.36	731380	81.73	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-11-a
Data File Name	167SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:17:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	40.599	40.599	0.75	884586	0.00	10000	
Be	9	45	2	NoGas	0.101	0.101	32.41	641	0.02	2000	
B	11	45	2	NoGas	367.891	367.891	0.79	1191645	0.03	300	>LDR
Na	23	45	1	He	414817.646	414817.646	0.88	134893624	0.31	500000	
Mg	24	45	1	He	18560.159	18560.159	2.18	3353991	0.55	500000	
Al	27	45	1	He	2.057	2.057	17.66	247	0.83	200000	
K	39	45	1	He	3127.592	3127.592	0.73	275919	1.13	500000	
Ca	44	45	1	He	59270.563	59270.563	1.78	298293	19.87	500000	
Ti	47	45	1	He	0.061	0.061	173.21	2	2.75	2500	
V	51	45	1	He	-0.116	-0.116	-2.48	-106	0.11	10000	
Cr	52	45	1	He	0.027	0.027	48.78	602	0.00	10000	
Mn	55	45	1	He	10.317	10.317	3.20	8316	0.12	10000	
Fe	56	45	1	He	537.461	537.461	1.54	663362	0.08	200000	
Co	59	45	1	He	0.294	0.294	7.99	1119	0.03	5000	
Ni	60	45	1	He	0.019	0.019	269.11	134	0.01	10000	
Cu	63	45	1	He	-0.186	-0.186	-30.37	1566	-0.01	10000	
Zn	66	45	1	He	3.571	3.571	3.50	1183	0.30	10000	
As	75	103	1	He	1.459	1.459	6.29	268	0.54	10000	
Se	78	115	1	He	0.076	0.076	7.39	3	2.55	10000	
Sr	88	103	1	He	1310.629	1310.629	1.77	1011811	0.13	10000	
Mo	95	103	1	He	4.180	4.180	4.01	4029	0.10	2000	
Ag	107	103	1	He	0.000	0.000	536.61	7	0.00	300	
Cd	111	115	1	He	0.017	0.017	34.46	8	0.20	4000	
Sn	118	115	1	He	-0.054	-0.054	-26.42	207	-0.03	2000	
Sb	123	115	1	He	0.245	0.245	6.45	253	0.10	200	
Ba	137	115	1	He	59.041	59.041	1.40	18451	0.32	10000	
W	182	159	1	He	0.190	0.190	30.63	2115	0.01	2500	
Tl	205	165	1	He	0.005	0.005	40.97	71	0.01	2000	
Pb	208	165	1	He	0.007	0.007	138.14	1114	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1812283	1.22	1884762	96.15	60	120	
Sc	45	1	He	110856	0.39	134073	82.68	60	120	
Sc	45	2	NoGas	7231319	0.83	8481025	85.26	60	120	
Rh	103	1	He	699887	0.26	903580	77.46	60	120	
In	115	1	He	187417	1.56	224817	83.36	60	120	
Tb	159	1	He	904534	1.12	1046002	86.48	60	120	
Ho	165	1	He	923853	0.45	1057439	87.37	60	120	
Bi	209	1	He	601611	1.06	731380	82.26	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-12-a
Data File Name	168SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:21:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	33.375	33.375	0.28	755155	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	8.07	633	0.02	2000	
B	11	45	2	NoGas	308.418	308.418	0.49	1014113	0.03	300	>LDR
Na	23	45	1	He	306924.993	306924.993	2.42	100748540	0.30	500000	
Mg	24	45	1	He	20961.194	20961.194	2.67	3823518	0.55	500000	
Al	27	45	1	He	3.194	3.194	14.76	336	0.95	200000	
K	39	45	1	He	3267.489	3267.489	3.21	290641	1.12	500000	
Ca	44	45	1	He	55477.261	55477.261	1.95	281851	19.68	500000	
Ti	47	45	1	He	0.030	0.030	173.21	1	2.72	2500	
V	51	45	1	He	0.115	0.115	38.22	196	0.06	10000	
Cr	52	45	1	He	0.113	0.113	34.18	747	0.02	10000	
Mn	55	45	1	He	42.664	42.664	3.63	34363	0.12	10000	
Fe	56	45	1	He	291.653	291.653	2.39	364127	0.08	200000	
Co	59	45	1	He	0.239	0.239	7.77	966	0.02	5000	
Ni	60	45	1	He	0.129	0.129	15.05	227	0.06	10000	
Cu	63	45	1	He	-0.244	-0.244	-18.59	1443	-0.02	10000	
Zn	66	45	1	He	3.386	3.386	3.45	1139	0.30	10000	
As	75	103	1	He	0.844	0.844	5.38	166	0.51	10000	
Se	78	115	1	He	0.312	0.312	148.56	5	6.08	10000	
Sr	88	103	1	He	1256.537	1256.537	0.14	999591	0.13	10000	
Mo	95	103	1	He	2.252	2.252	2.10	2242	0.10	2000	
Ag	107	103	1	He	-0.001	-0.001	-411.71	4	-0.01	300	
Cd	111	115	1	He	0.008	0.008	2.10	5	0.16	4000	
Sn	118	115	1	He	0.439	0.439	58.18	619	0.07	2000	
Sb	123	115	1	He	0.349	0.349	15.00	358	0.10	200	
Ba	137	115	1	He	268.165	268.165	1.41	86699	0.31	10000	
W	182	159	1	He	0.398	0.398	19.85	3178	0.01	2500	
Tl	205	165	1	He	0.006	0.006	41.26	80	0.01	2000	
Pb	208	165	1	He	-0.004	-0.004	-69.58	1022	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1800610	1.00	1884762	95.54	60	120	
Sc	45	1	He	111906	0.53	134073	83.47	60	120	
Sc	45	2	NoGas	7331466	0.18	8481025	86.45	60	120	
Rh	103	1	He	721211	1.56	903580	79.82	60	120	
In	115	1	He	193916	1.37	224817	86.25	60	120	
Tb	159	1	He	932566	1.02	1046002	89.16	60	120	
Ho	165	1	He	939504	1.31	1057439	88.85	60	120	
Bi	209	1	He	617523	1.14	731380	84.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-13-a
Data File Name	169SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:26:09-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	21.913	21.913	0.98	516263	0.00	10000	
Be	9	45	2	NoGas	0.087	0.087	8.43	559	0.02	2000	
B	11	45	2	NoGas	229.143	229.143	0.30	735395	0.03	300	
Na	23	45	1	He	180910.189	180910.189	1.53	57819935	0.31	500000	
Mg	24	45	1	He	11945.246	11945.246	0.24	2121979	0.56	500000	
Al	27	45	1	He	4.380	4.380	4.21	414	1.06	200000	
K	39	45	1	He	2094.999	2094.999	0.71	184037	1.14	500000	
Ca	44	45	1	He	32996.760	32996.760	1.65	163279	20.21	500000	
Ti	47	45	1	He	0.000	0.000	#DIV/0!	0	#DIV/0!	2500	
V	51	45	1	He	0.039	0.039	194.36	93	0.04	10000	
Cr	52	45	1	He	0.029	0.029	54.74	594	0.00	10000	
Mn	55	45	1	He	7.168	7.168	0.84	5712	0.13	10000	
Fe	56	45	1	He	400.276	400.276	0.75	486019	0.08	200000	
Co	59	45	1	He	0.120	0.120	19.40	597	0.02	5000	
Ni	60	45	1	He	0.004	0.004	368.68	120	0.00	10000	
Cu	63	45	1	He	-0.167	-0.167	-24.53	1582	-0.01	10000	
Zn	66	45	1	He	2.333	2.333	13.85	801	0.29	10000	
As	75	103	1	He	1.066	1.066	9.59	203	0.52	10000	
Se	78	115	1	He	0.126	0.126	140.33	3	3.62	10000	
Sr	88	103	1	He	666.530	666.530	0.27	523531	0.13	10000	
Mo	95	103	1	He	4.250	4.250	0.58	4168	0.10	2000	
Ag	107	103	1	He	0.002	0.002	0.65	13	0.01	300	
Cd	111	115	1	He	0.004	0.004	217.06	3	0.12	4000	
Sn	118	115	1	He	0.250	0.250	57.40	459	0.05	2000	
Sb	123	115	1	He	0.192	0.192	23.49	211	0.09	200	
Ba	137	115	1	He	48.644	48.644	1.16	15575	0.31	10000	
W	182	159	1	He	0.162	0.162	20.00	2004	0.01	2500	
Tl	205	165	1	He	0.006	0.006	36.50	79	0.01	2000	
Pb	208	165	1	He	-0.004	-0.004	-249.55	1010	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1746196	0.86	1884762	92.65	60	120	
Sc	45	1	He	108958	0.97	134073	81.27	60	120	
Sc	45	2	NoGas	7137356	0.59	8481025	84.16	60	120	
Rh	103	1	He	712068	0.35	903580	78.81	60	120	
In	115	1	He	192007	1.13	224817	85.41	60	120	
Tb	159	1	He	911874	1.54	1046002	87.18	60	120	
Ho	165	1	He	926499	1.36	1057439	87.62	60	120	
Bi	209	1	He	619685	0.40	731380	84.73	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	170_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:30:19-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.568	1.211	1141943	1.26	50	113.1	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.793	1.181	262860	0.69	50	107.6	89.5	110.5	
B	11	45	2	NoGas	77.734	0.912	246555	0.72	50	155.5	89.5	110.5	CCV Failed
Na	23	45	1	He	24102.260	1.107	7523244	0.36	25000	96.4	89.5	110.5	
Mg	24	45	1	He	23729.891	2.037	4113945	0.90	25000	94.9	89.5	110.5	
Al	27	45	1	He	238.573	3.245	17319	2.20	250	95.4	89.5	110.5	
K	39	45	1	He	25760.681	1.862	2129338	0.82	25000	103.0	89.5	110.5	
Ca	44	45	1	He	25197.637	2.145	121749	1.17	25000	100.8	89.5	110.5	
Ti	47	45	1	He	47.887	3.331	1673	2.59	50	95.8	89.5	110.5	
V	51	45	1	He	48.955	2.490	61063	3.13	50	97.9	89.5	110.5	
Cr	52	45	1	He	49.172	2.367	76271	1.27	50	98.3	89.5	110.5	
Mn	55	45	1	He	251.361	1.390	191919	1.11	250	100.5	89.5	110.5	
Fe	56	45	1	He	12490.376	1.328	14756085	1.05	12500	99.9	89.5	110.5	
Co	59	45	1	He	49.199	1.838	138716	0.80	50	98.4	89.5	110.5	
Ni	60	45	1	He	49.155	2.006	38958	0.85	50	98.3	89.5	110.5	
Cu	63	45	1	He	48.902	1.690	110937	0.51	50	97.8	89.5	110.5	
Zn	66	45	1	He	50.683	1.263	14572	0.09	50	101.4	89.5	110.5	
As	75	103	1	He	48.624	1.876	8702	1.96	50	97.2	89.5	110.5	
Se	78	115	1	He	47.853	2.577	404	2.19	50	95.7	89.5	110.5	
Sr	88	103	1	He	51.369	0.928	40618	0.90	50	102.7	89.5	110.5	
Mo	95	103	1	He	51.203	1.180	50404	1.21	50	102.4	89.5	110.5	
Ag	107	103	1	He	49.776	1.084	181150	1.10	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.718	0.302	20859	0.25	50	99.4	89.5	110.5	
Sn	118	115	1	He	48.585	1.545	38867	1.96	50	97.2	89.5	110.5	
Sb	123	115	1	He	51.244	1.797	45910	2.19	50	102.5	89.5	110.5	
Ba	137	115	1	He	51.721	3.621	16229	3.44	50	103.4	89.5	110.5	
W	182	159	1	He	51.107	1.288	238735	1.98	50	102.2	89.5	110.5	
Tl	205	165	1	He	49.785	0.974	373350	1.55	50	99.6	89.5	110.5	
Pb	208	165	1	He	49.940	0.668	492059	0.97	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1755534	0.58	1884762	93.14	60	120	
Sc	45	1	He	106366	1.17	134073	79.33	60	120	
Sc	45	2	NoGas	6918693	1.33	8481025	81.58	60	120	
Rh	103	1	He	716329	0.27	903580	79.28	60	120	
In	115	1	He	188179	0.47	224817	83.70	60	120	
Tb	159	1	He	902204	0.84	1046002	86.25	60	120	
Ho	165	1	He	917506	0.68	1057439	86.77	60	120	
Bi	209	1	He	624260	0.64	731380	85.35	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:34:29-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.908	9.0	113297	0.1	8	
Be	9	45	2	NoGas	0.157	18.0	896	14.5	1	
B	11	45	2	NoGas	29.910	2.3	100782	0.8	20	CCB High
Na	23	45	1	He	101.412	1.5	35944	0.5	1000	
Mg	24	45	1	He	23.720	4.6	4708	2.9	1000	
Al	27	45	1	He	0.549	108.3	130	32.7	50	
K	39	45	1	He	39.527	4.4	10500	2.2	1000	
Ca	44	45	1	He	31.152	10.2	308	5.4	1000	
Ti	47	45	1	He	0.220	89.6	8	89.2	20	
V	51	45	1	He	0.053	389.6	109	239.0	2	
Cr	52	45	1	He	0.039	134.7	607	13.5	2	
Mn	55	45	1	He	0.268	23.6	317	15.3	2	
Fe	56	45	1	He	15.630	4.7	20440	5.1	50	
Co	59	45	1	He	0.010	165.0	279	18.0	1	
Ni	60	45	1	He	-0.038	-66.7	86	24.7	2	
Cu	63	45	1	He	-0.428	-3.7	980	4.0	2	
Zn	66	45	1	He	0.221	60.8	183	20.7	20	
As	75	103	1	He	0.101	12.0	34	6.7	2	
Se	78	115	1	He	0.316	58.4	5	33.0	2	
Sr	88	103	1	He	0.593	20.2	532	18.6	10	
Mo	95	103	1	He	0.139	33.0	157	30.9	2	
Ag	107	103	1	He	0.058	18.5	233	18.2	0.2	
Cd	111	115	1	He	0.072	22.1	33	21.9	0.2	
Sn	118	115	1	He	0.323	39.4	533	18.0	10	
Sb	123	115	1	He	0.122	31.8	152	23.4	2	
Ba	137	115	1	He	0.077	49.8	30	40.1	5	
W	182	159	1	He	0.332	20.5	2889	11.8	10	
Tl	205	165	1	He	0.105	18.4	853	18.1	0.5	
Pb	208	165	1	He	0.057	39.6	1666	14.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1813821	0.96	1884762	96.24	60	120	
Sc	45	1	He	108418	1.33	134073	80.86	60	120	
Sc	45	2	NoGas	7024188	1.40	8481025	82.82	60	120	
Rh	103	1	He	763326	0.49	903580	84.48	60	120	
In	115	1	He	198025	2.35	224817	88.08	60	120	
Tb	159	1	He	941455	0.41	1046002	90.01	60	120	
Ho	165	1	He	956101	0.41	1057439	90.42	60	120	
Bi	209	1	He	671540	0.71	731380	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-14-a
Data File Name	172SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:38:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.726	20.726	0.62	492652	0.00	10000	
Be	9	45	2	NoGas	0.108	0.108	7.91	663	0.02	2000	
B	11	45	2	NoGas	217.754	217.754	0.29	697863	0.03	300	
Na	23	45	1	He	150851.830	150851.830	0.53	47945541	0.31	500000	
Mg	24	45	1	He	12106.873	12106.873	1.33	2138556	0.57	500000	
Al	27	45	1	He	2.599	2.599	21.26	281	0.92	200000	
K	39	45	1	He	2029.696	2029.696	0.68	177523	1.14	500000	
Ca	44	45	1	He	31922.475	31922.475	1.52	157092	20.32	500000	
Ti	47	45	1	He	0.187	0.187	86.26	7	2.80	2500	
V	51	45	1	He	-0.035	-0.035	-129.63	0	11.06	10000	
Cr	52	45	1	He	0.103	0.103	4.77	708	0.01	10000	
Mn	55	45	1	He	7.171	7.171	2.47	5682	0.13	10000	
Fe	56	45	1	He	361.212	361.212	1.13	436266	0.08	200000	
Co	59	45	1	He	0.009	0.009	70.90	277	0.00	5000	
Ni	60	45	1	He	0.147	0.147	18.77	234	0.06	10000	
Cu	63	45	1	He	-0.230	-0.230	-6.36	1429	-0.02	10000	
Zn	66	45	1	He	2.920	2.920	11.48	968	0.30	10000	
As	75	103	1	He	0.781	0.781	2.35	153	0.51	10000	
Se	78	115	1	He	0.102	0.102	160.48	3	3.08	10000	
Sr	88	103	1	He	637.012	637.012	1.27	500556	0.13	10000	
Mo	95	103	1	He	4.235	4.235	4.86	4155	0.10	2000	
Ag	107	103	1	He	0.000	0.000	236.91	8	0.01	300	
Cd	111	115	1	He	0.019	0.019	32.43	10	0.20	4000	
Sn	118	115	1	He	0.667	0.667	17.62	804	0.08	2000	
Sb	123	115	1	He	0.068	0.068	25.77	99	0.07	200	
Ba	137	115	1	He	51.785	51.785	2.80	16720	0.31	10000	
W	182	159	1	He	0.193	0.193	10.73	2230	0.01	2500	
Tl	205	165	1	He	0.015	0.015	36.82	157	0.01	2000	
Pb	208	165	1	He	-0.010	-0.010	-36.74	986	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1788053	0.54	1884762	94.87	60	120	
Sc	45	1	He	108341	0.41	134073	80.81	60	120	
Sc	45	2	NoGas	7123554	0.17	8481025	83.99	60	120	
Rh	103	1	He	712408	0.94	903580	78.84	60	120	
In	115	1	He	193624	0.48	224817	86.13	60	120	
Tb	159	1	He	946301	0.19	1046002	90.47	60	120	
Ho	165	1	He	961011	0.95	1057439	90.88	60	120	
Bi	209	1	He	643295	0.93	731380	87.96	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-15-a
Data File Name	173SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:42:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.328	23.328	0.67	537420	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	18.68	600	0.02	2000	
B	11	45	2	NoGas	215.967	215.967	1.28	686011	0.03	300	
Na	23	45	1	He	168354.942	168354.942	2.10	53557474	0.31	500000	
Mg	24	45	1	He	14430.850	14430.850	2.09	2551348	0.57	500000	
Al	27	45	1	He	6.082	6.082	6.76	538	1.13	200000	
K	39	45	1	He	1996.907	1996.907	1.64	174956	1.14	500000	
Ca	44	45	1	He	38071.741	38071.741	2.04	187500	20.30	500000	
Ti	47	45	1	He	0.030	0.030	173.21	1	2.74	2500	
V	51	45	1	He	-0.003	-0.003	-1715.94	38	-0.01	10000	
Cr	52	45	1	He	0.012	0.012	278.43	566	0.00	10000	
Mn	55	45	1	He	8.235	8.235	3.60	6515	0.13	10000	
Fe	56	45	1	He	385.468	385.468	2.43	465867	0.08	200000	
Co	59	45	1	He	0.007	0.007	338.76	270	0.00	5000	
Ni	60	45	1	He	-0.002	-0.002	-740.28	114	0.00	10000	
Cu	63	45	1	He	-0.277	-0.277	-2.41	1325	-0.02	10000	
Zn	66	45	1	He	4.107	4.107	2.54	1315	0.31	10000	
As	75	103	1	He	0.727	0.727	7.55	144	0.50	10000	
Se	78	115	1	He	0.273	0.273	62.09	5	5.67	10000	
Sr	88	103	1	He	807.015	807.015	0.98	639258	0.13	10000	
Mo	95	103	1	He	3.519	3.519	1.07	3483	0.10	2000	
Ag	107	103	1	He	0.003	0.003	158.88	17	0.02	300	
Cd	111	115	1	He	0.014	0.014	68.27	8	0.19	4000	
Sn	118	115	1	He	0.279	0.279	56.16	489	0.06	2000	
Sb	123	115	1	He	0.039	0.039	39.41	72	0.05	200	
Ba	137	115	1	He	71.641	71.641	1.56	23254	0.31	10000	
W	182	159	1	He	0.181	0.181	19.61	2141	0.01	2500	
Tl	205	165	1	He	0.007	0.007	22.54	93	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-53.36	968	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1774923	0.95	1884762	94.17	60	120	
Sc	45	1	He	108475	2.28	134073	80.91	60	120	
Sc	45	2	NoGas	7060473	1.02	8481025	83.25	60	120	
Rh	103	1	He	718113	0.50	903580	79.47	60	120	
In	115	1	He	194681	1.02	224817	86.60	60	120	
Tb	159	1	He	934234	0.09	1046002	89.31	60	120	
Ho	165	1	He	954282	1.11	1057439	90.24	60	120	
Bi	209	1	He	636467	0.94	731380	87.02	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-16-a
Data File Name	174SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:47:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	27.153	27.153	0.92	622050	0.00	10000	
Be	9	45	2	NoGas	0.063	0.063	32.12	444	0.01	2000	
B	11	45	2	NoGas	237.491	237.491	0.88	768975	0.03	300	
Na	23	45	1	He	206592.387	206592.387	1.49	65262214	0.32	500000	
Mg	24	45	1	He	20561.970	20561.970	1.66	3609572	0.57	500000	
Al	27	45	1	He	4.238	4.238	17.41	399	1.06	200000	
K	39	45	1	He	2229.617	2229.617	2.34	193111	1.15	500000	
Ca	44	45	1	He	55460.696	55460.696	1.17	271160	20.45	500000	
Ti	47	45	1	He	0.156	0.156	91.83	6	2.81	2500	
V	51	45	1	He	0.058	0.058	366.60	115	0.05	10000	
Cr	52	45	1	He	0.055	0.055	101.26	628	0.01	10000	
Mn	55	45	1	He	14.799	14.799	3.26	11540	0.13	10000	
Fe	56	45	1	He	497.039	497.039	1.91	596051	0.08	200000	
Co	59	45	1	He	0.391	0.391	7.97	1363	0.03	5000	
Ni	60	45	1	He	-0.029	-0.029	-38.51	92	-0.03	10000	
Cu	63	45	1	He	-0.247	-0.247	-2.02	1383	-0.02	10000	
Zn	66	45	1	He	4.875	4.875	6.69	1527	0.32	10000	
As	75	103	1	He	1.918	1.918	5.77	353	0.54	10000	
Se	78	115	1	He	0.123	0.123	80.19	3	3.53	10000	
Sr	88	103	1	He	1151.235	1151.235	0.50	901531	0.13	10000	
Mo	95	103	1	He	3.382	3.382	1.39	3309	0.10	2000	
Ag	107	103	1	He	0.002	0.002	122.55	13	0.01	300	
Cd	111	115	1	He	0.013	0.013	34.50	7	0.18	4000	
Sn	118	115	1	He	0.549	0.549	24.84	704	0.08	2000	
Sb	123	115	1	He	0.013	0.013	218.08	48	0.03	200	
Ba	137	115	1	He	86.423	86.423	2.50	27807	0.31	10000	
W	182	159	1	He	0.136	0.136	13.14	1915	0.01	2500	
Tl	205	165	1	He	0.004	0.004	34.33	64	0.01	2000	
Pb	208	165	1	He	-0.014	-0.014	-34.71	924	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1798971	1.32	1884762	95.45	60	120	
Sc	45	1	He	107694	0.95	134073	80.32	60	120	
Sc	45	2	NoGas	7203871	1.25	8481025	84.94	60	120	
Rh	103	1	He	709931	0.81	903580	78.57	60	120	
In	115	1	He	192995	2.51	224817	85.85	60	120	
Tb	159	1	He	929966	1.89	1046002	88.91	60	120	
Ho	165	1	He	944822	1.51	1057439	89.35	60	120	
Bi	209	1	He	625955	0.53	731380	85.59	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-17-a
Data File Name	175SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:51:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.252	9.252	1.18	277797	0.00	10000	
Be	9	45	2	NoGas	0.089	0.089	11.06	574	0.02	2000	
B	11	45	2	NoGas	214.529	214.529	0.35	697311	0.03	300	
Na	23	45	1	He	101792.145	101792.145	0.41	32980204	0.31	500000	
Mg	24	45	1	He	19685.041	19685.041	0.77	3543934	0.56	500000	
Al	27	45	1	He	4.933	4.933	20.47	461	1.07	200000	
K	39	45	1	He	1447.165	1447.165	0.88	131130	1.10	500000	
Ca	44	45	1	He	34283.043	34283.043	0.10	171963	19.94	500000	
Ti	47	45	1	He	0.214	0.214	107.00	8	2.75	2500	
V	51	45	1	He	0.195	0.195	50.73	296	0.07	10000	
Cr	52	45	1	He	0.388	0.388	11.42	1177	0.03	10000	
Mn	55	45	1	He	6.279	6.279	2.18	5085	0.12	10000	
Fe	56	45	1	He	78.450	78.450	0.76	97869	0.08	200000	
Co	59	45	1	He	0.257	0.257	9.49	1006	0.03	5000	
Ni	60	45	1	He	0.285	0.285	22.49	352	0.08	10000	
Cu	63	45	1	He	-0.357	-0.357	-11.95	1162	-0.03	10000	
Zn	66	45	1	He	4.325	4.325	4.49	1402	0.31	10000	
As	75	103	1	He	0.076	0.076	49.31	28	0.27	10000	
Se	78	115	1	He	0.044	0.044	622.84	3	1.56	10000	
Sr	88	103	1	He	1089.667	1089.667	0.90	875707	0.12	10000	
Mo	95	103	1	He	8.116	8.116	1.25	8135	0.10	2000	
Ag	107	103	1	He	0.002	0.002	89.67	16	0.02	300	
Cd	111	115	1	He	0.020	0.020	70.94	10	0.20	4000	
Sn	118	115	1	He	7.756	7.756	0.97	6668	0.12	2000	
Sb	123	115	1	He	0.205	0.205	5.16	228	0.09	200	
Ba	137	115	1	He	74.234	74.234	2.33	24205	0.31	10000	
W	182	159	1	He	0.180	0.180	24.52	2174	0.01	2500	
Tl	205	165	1	He	0.003	0.003	78.64	61	0.01	2000	
Pb	208	165	1	He	-0.011	-0.011	-41.96	966	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816127	0.56	1884762	96.36	60	120	
Sc	45	1	He	110440	1.19	134073	82.37	60	120	
Sc	45	2	NoGas	7223929	1.14	8481025	85.18	60	120	
Rh	103	1	He	728599	0.80	903580	80.63	60	120	
In	115	1	He	195577	1.32	224817	86.99	60	120	
Tb	159	1	He	949959	1.45	1046002	90.82	60	120	
Ho	165	1	He	959531	1.69	1057439	90.74	60	120	
Bi	209	1	He	643017	1.10	731380	87.92	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-f-18-a
Data File Name	176SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:55:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	20.130	20.130	1.08	515169	0.00	10000	
Be	9	45	2	NoGas	0.054	0.054	24.48	422	0.01	2000	
B	11	45	2	NoGas	205.501	205.501	1.91	705357	0.03	300	
Na	23	45	1	He	162698.866	162698.866	3.58	52183265	0.31	500000	
Mg	24	45	1	He	21194.427	21194.427	3.59	3777490	0.56	500000	
Al	27	45	1	He	1.258	1.258	39.74	184	0.68	200000	
K	39	45	1	He	2235.432	2235.432	3.06	196589	1.14	500000	
Ca	44	45	1	He	61028.696	61028.696	3.60	302929	20.15	500000	
Ti	47	45	1	He	0.094	0.094	99.63	3	2.81	2500	
V	51	45	1	He	0.004	0.004	4034.87	48	0.01	10000	
Cr	52	45	1	He	0.070	0.070	71.36	661	0.01	10000	
Mn	55	45	1	He	14.650	14.650	4.58	11603	0.13	10000	
Fe	56	45	1	He	605.409	605.409	3.74	736749	0.08	200000	
Co	59	45	1	He	0.008	0.008	165.10	274	0.00	5000	
Ni	60	45	1	He	0.049	0.049	78.54	157	0.03	10000	
Cu	63	45	1	He	-0.184	-0.184	-21.62	1549	-0.01	10000	
Zn	66	45	1	He	7.520	7.520	2.93	2326	0.32	10000	
As	75	103	1	He	2.805	2.805	2.41	525	0.53	10000	
Se	78	115	1	He	0.152	0.152	142.78	4	3.98	10000	
Sr	88	103	1	He	951.530	951.530	1.08	766353	0.12	10000	
Mo	95	103	1	He	2.860	2.860	4.15	2880	0.10	2000	
Ag	107	103	1	He	0.001	0.001	40.15	11	0.01	300	
Cd	111	115	1	He	0.008	0.008	52.78	5	0.16	4000	
Sn	118	115	1	He	0.135	0.135	134.68	378	0.04	2000	
Sb	123	115	1	He	0.101	0.101	40.96	132	0.08	200	
Ba	137	115	1	He	92.396	92.396	1.37	30470	0.30	10000	
W	182	159	1	He	0.085	0.085	75.82	1704	0.00	2500	
Tl	205	165	1	He	0.004	0.004	48.03	68	0.01	2000	
Pb	208	165	1	He	-0.002	-0.002	-504.64	1058	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1784433	2.03	1884762	94.68	60	120	
Sc	45	1	He	109391	2.29	134073	81.59	60	120	
Sc	45	2	NoGas	7625431	1.03	8481025	89.91	60	120	
Rh	103	1	He	730191	0.79	903580	80.81	60	120	
In	115	1	He	197797	0.86	224817	87.98	60	120	
Tb	159	1	He	948390	0.34	1046002	90.67	60	120	
Ho	165	1	He	955692	0.48	1057439	90.38	60	120	
Bi	209	1	He	636326	0.77	731380	87.00	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-21-a
Data File Name	177SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-09T23:59:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	30.549	30.549	0.78	679638	0.00	10000	
Be	9	45	2	NoGas	0.066	0.066	40.13	456	0.01	2000	
B	11	45	2	NoGas	280.777	280.777	0.40	897381	0.03	300	
Na	23	45	1	He	288497.437	288497.437	4.61	94053389	0.31	500000	
Mg	24	45	1	He	22042.488	22042.488	5.43	3992488	0.55	500000	
Al	27	45	1	He	3.998	3.998	32.15	397	1.01	200000	
K	39	45	1	He	3094.439	3094.439	5.00	273739	1.13	500000	
Ca	44	45	1	He	60904.101	60904.101	5.51	307210	19.82	500000	
Ti	47	45	1	He	0.120	0.120	86.70	4	2.69	2500	
V	51	45	1	He	-0.086	-0.086	-180.68	-67	0.13	10000	
Cr	52	45	1	He	-0.032	-0.032	-118.88	509	-0.01	10000	
Mn	55	45	1	He	36.092	36.092	2.66	28908	0.12	10000	
Fe	56	45	1	He	481.412	481.412	5.26	595760	0.08	200000	
Co	59	45	1	He	0.176	0.176	8.12	776	0.02	5000	
Ni	60	45	1	He	0.252	0.252	19.74	327	0.08	10000	
Cu	63	45	1	He	-0.397	-0.397	-10.11	1077	-0.04	10000	
Zn	66	45	1	He	4.850	4.850	15.84	1565	0.31	10000	
As	75	103	1	He	0.986	0.986	4.92	192	0.51	10000	
Se	78	115	1	He	0.397	0.397	61.56	6	6.46	10000	
Sr	88	103	1	He	1267.403	1267.403	3.66	1012219	0.13	10000	
Mo	95	103	1	He	4.197	4.197	26.79	4187	0.10	2000	
Ag	107	103	1	He	0.006	0.006	19.47	29	0.02	300	
Cd	111	115	1	He	0.013	0.013	26.41	7	0.18	4000	
Sn	118	115	1	He	0.279	0.279	35.73	504	0.06	2000	
Sb	123	115	1	He	0.395	0.395	34.44	416	0.09	200	
Ba	137	115	1	He	178.192	178.192	4.70	59679	0.30	10000	
W	182	159	1	He	4.885	4.885	107.21	25272	0.02	2500	
Tl	205	165	1	He	0.005	0.005	70.00	77	0.01	2000	
Pb	208	165	1	He	-0.005	-0.005	-60.25	1033	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1733604	1.76	1884762	91.98	60	120	
Sc	45	1	He	111276	4.18	134073	83.00	60	120	
Sc	45	2	NoGas	7121111	0.78	8481025	83.97	60	120	
Rh	103	1	He	724571	2.94	903580	80.19	60	120	
In	115	1	He	201120	3.79	224817	89.46	60	120	
Tb	159	1	He	949994	3.04	1046002	90.82	60	120	
Ho	165	1	He	964526	2.84	1057439	91.21	60	120	
Bi	209	1	He	641533	2.80	731380	87.72	60	120	

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Sample Report

Sample Table

Sample Name	240-64223-a-22-a
Data File Name	178SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:03:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	30.086	30.086	1.21	673154	0.00	10000	
Be	9	45	2	NoGas	0.053	0.053	25.20	389	0.01	2000	
B	11	45	2	NoGas	282.604	282.604	1.07	906330	0.03	300	
Na	23	45	1	He	275912.009	275912.009	2.58	90145011	0.31	500000	
Mg	24	45	1	He	21078.521	21078.521	2.56	3826998	0.55	500000	
Al	27	45	1	He	1.237	1.237	36.18	186	0.67	200000	
K	39	45	1	He	2949.696	2949.696	2.66	261862	1.13	500000	
Ca	44	45	1	He	57788.835	57788.835	2.25	292224	19.78	500000	
Ti	47	45	1	He	0.029	0.029	173.21	1	2.65	2500	
V	51	45	1	He	0.076	0.076	131.73	144	0.05	10000	
Cr	52	45	1	He	0.001	0.001	2833.66	562	0.00	10000	
Mn	55	45	1	He	33.441	33.441	3.44	26830	0.12	10000	
Fe	56	45	1	He	333.181	333.181	3.68	413714	0.08	200000	
Co	59	45	1	He	0.019	0.019	78.08	314	0.01	5000	
Ni	60	45	1	He	0.228	0.228	4.91	308	0.07	10000	
Cu	63	45	1	He	-0.364	-0.364	-3.65	1158	-0.03	10000	
Zn	66	45	1	He	3.450	3.450	9.86	1154	0.30	10000	
As	75	103	1	He	0.876	0.876	4.74	172	0.51	10000	
Se	78	115	1	He	0.000	0.000	35856.29	2	0.01	10000	
Sr	88	103	1	He	1200.747	1200.747	0.23	957241	0.13	10000	
Mo	95	103	1	He	3.157	3.157	4.81	3146	0.10	2000	
Ag	107	103	1	He	0.000	0.000	331.77	8	0.01	300	
Cd	111	115	1	He	0.008	0.008	140.28	5	0.16	4000	
Sn	118	115	1	He	0.073	0.073	117.66	326	0.02	2000	
Sb	123	115	1	He	0.021	0.021	29.40	57	0.04	200	
Ba	137	115	1	He	170.782	170.782	1.87	56448	0.30	10000	
W	182	159	1	He	0.206	0.206	44.93	2308	0.01	2500	
Tl	205	165	1	He	0.004	0.004	71.09	69	0.01	2000	
Pb	208	165	1	He	-0.013	-0.013	-39.67	959	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1762172	0.89	1884762	93.50	60	120	
Sc	45	1	He	111423	2.60	134073	83.11	60	120	
Sc	45	2	NoGas	7146558	1.44	8481025	84.27	60	120	
Rh	103	1	He	722734	0.02	903580	79.99	60	120	
In	115	1	He	198271	0.83	224817	88.19	60	120	
Tb	159	1	He	951472	0.94	1046002	90.96	60	120	
Ho	165	1	He	972081	0.57	1057439	91.93	60	120	
Bi	209	1	He	639997	0.42	731380	87.51	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	179_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:08:06-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	57.124	1.654	1164321	0.95	50	114.2	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.064	0.925	266974	0.79	50	108.1	89.5	110.5	
B	11	45	2	NoGas	80.776	0.312	258622	0.33	50	161.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24202.307	0.795	7747987	0.96	25000	96.8	89.5	110.5	
Mg	24	45	1	He	24285.191	0.295	4318639	1.47	25000	97.1	89.5	110.5	
Al	27	45	1	He	251.086	1.172	18695	2.30	250	100.4	89.5	110.5	
K	39	45	1	He	25967.370	1.312	2201428	1.16	25000	103.9	89.5	110.5	
Ca	44	45	1	He	25611.062	0.941	126927	1.41	25000	102.4	89.5	110.5	
Ti	47	45	1	He	48.582	7.259	1742	8.35	50	97.2	89.5	110.5	
V	51	45	1	He	49.977	1.713	63934	2.84	50	100.0	89.5	110.5	
Cr	52	45	1	He	50.000	1.455	79534	0.32	50	100.0	89.5	110.5	
Mn	55	45	1	He	256.364	1.072	200742	0.69	250	102.5	89.5	110.5	
Fe	56	45	1	He	12723.132	0.819	15415947	1.05	12500	101.8	89.5	110.5	
Co	59	45	1	He	50.307	0.621	145481	1.39	50	100.6	89.5	110.5	
Ni	60	45	1	He	49.350	2.143	40111	0.86	50	98.7	89.5	110.5	
Cu	63	45	1	He	49.286	1.381	114660	1.21	50	98.6	89.5	110.5	
Zn	66	45	1	He	51.388	0.474	15152	1.30	50	102.8	89.5	110.5	
As	75	103	1	He	48.264	0.458	9077	0.85	50	96.5	89.5	110.5	
Se	78	115	1	He	48.312	4.434	435	6.13	50	96.6	89.5	110.5	
Sr	88	103	1	He	51.676	1.128	42941	1.89	50	103.4	89.5	110.5	
Mo	95	103	1	He	51.007	1.049	52767	1.73	50	102.0	89.5	110.5	
Ag	107	103	1	He	49.815	0.574	190513	1.12	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.125	1.351	21915	0.53	50	98.2	89.5	110.5	
Sn	118	115	1	He	50.068	3.371	42569	1.69	50	100.1	89.5	110.5	
Sb	123	115	1	He	50.700	1.736	48293	0.10	50	101.4	89.5	110.5	
Ba	137	115	1	He	51.958	2.207	17335	0.55	50	103.9	89.5	110.5	
W	182	159	1	He	50.923	1.355	255489	1.28	50	101.8	89.5	110.5	
Tl	205	165	1	He	49.988	1.535	400662	0.94	50	100.0	89.5	110.5	
Pb	208	165	1	He	50.469	0.809	531502	0.17	50	100.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1778725	0.92	1884762	94.37	60	120	
Sc	45	1	He	109092	1.76	134073	81.37	60	120	
Sc	45	2	NoGas	6991286	0.60	8481025	82.43	60	120	
Rh	103	1	He	752753	0.77	903580	83.31	60	120	
In	115	1	He	200120	1.70	224817	89.01	60	120	
Tb	159	1	He	969042	0.07	1046002	92.64	60	120	
Ho	165	1	He	980735	0.64	1057439	92.75	60	120	
Bi	209	1	He	674267	0.58	731380	92.19	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	180_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:12:17-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.874	0.5	111029	0.5	8	
Be	9	45	2	NoGas	0.139	22.9	796	20.0	1	
B	11	45	2	NoGas	25.253	1.0	84975	0.5	20	CCB High
Na	23	45	1	He	96.693	1.3	34299	0.9	1000	
Mg	24	45	1	He	23.998	12.6	4734	9.9	1000	
Al	27	45	1	He	0.162	212.1	101	23.9	50	
K	39	45	1	He	31.011	13.9	9740	2.5	1000	
Ca	44	45	1	He	26.245	41.4	283	17.6	1000	
Ti	47	45	1	He	0.217	89.0	8	89.2	20	
V	51	45	1	He	0.189	30.6	283	27.2	2	
Cr	52	45	1	He	0.021	77.8	577	3.5	2	
Mn	55	45	1	He	0.344	4.1	374	4.2	2	
Fe	56	45	1	He	15.593	6.4	20295	4.5	50	
Co	59	45	1	He	-0.014	-60.3	210	12.0	1	
Ni	60	45	1	He	-0.055	-38.8	71	23.6	2	
Cu	63	45	1	He	-0.483	-6.9	853	8.1	2	
Zn	66	45	1	He	0.265	10.0	196	2.6	20	
As	75	103	1	He	0.092	11.8	32	5.5	2	
Se	78	115	1	He	-0.076	-108.8	2	41.5	2	
Sr	88	103	1	He	0.473	7.6	430	6.8	10	
Mo	95	103	1	He	0.142	16.1	160	14.6	2	
Ag	107	103	1	He	0.055	18.1	218	18.1	0.2	
Cd	111	115	1	He	0.060	4.5	28	5.5	0.2	
Sn	118	115	1	He	0.292	16.4	511	6.5	10	
Sb	123	115	1	He	0.133	25.1	163	17.8	2	
Ba	137	115	1	He	0.089	22.0	34	20.1	5	
W	182	159	1	He	0.244	13.6	2508	5.8	10	
Tl	205	165	1	He	0.104	2.9	862	3.6	0.5	
Pb	208	165	1	He	0.060	16.9	1713	5.0	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816796	0.67	1884762	96.39	60	120	
Sc	45	1	He	107962	1.37	134073	80.52	60	120	
Sc	45	2	NoGas	6921424	0.53	8481025	81.61	60	120	
Rh	103	1	He	761346	0.87	903580	84.26	60	120	
In	115	1	He	199083	1.44	224817	88.55	60	120	
Tb	159	1	He	958875	0.78	1046002	91.67	60	120	
Ho	165	1	He	969345	1.15	1057439	91.67	60	120	
Bi	209	1	He	692080	0.13	731380	94.63	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228647/1-a@2
Data File Name	181_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:16:31-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.813	5.8	109323	0.5	8	
Be	9	45	2	NoGas	0.058	3.5	400	2.8	1	
B	11	45	2	NoGas	23.326	1.1	78632	0.8	20	Blank High
Na	23	45	1	He	91.182	5.1	31958	3.4	1000	
Mg	24	45	1	He	48.078	2.3	8814	1.5	1000	
Al	27	45	1	He	3.205	15.0	319	12.2	50	
K	39	45	1	He	23.208	11.4	8928	3.6	1000	
Ca	44	45	1	He	160.914	11.2	925	8.3	1000	
Ti	47	45	1	He	0.192	51.0	7	50.0	20	
V	51	45	1	He	0.157	131.5	235	108.4	2	
Cr	52	45	1	He	0.372	18.3	1106	9.4	2	
Mn	55	45	1	He	1.311	4.5	1103	4.5	2	
Fe	56	45	1	He	6.679	3.1	9441	1.4	50	
Co	59	45	1	He	-0.032	-20.0	156	10.8	1	
Ni	60	45	1	He	0.103	37.1	194	14.6	2	
Cu	63	45	1	He	-0.263	-9.8	1327	4.8	2	
Zn	66	45	1	He	1.916	16.6	662	15.0	20	
As	75	103	1	He	0.028	100.1	20	25.9	2	
Se	78	115	1	He	0.053	455.1	3	72.6	2	
Sr	88	103	1	He	0.668	5.6	584	5.7	10	
Mo	95	103	1	He	0.072	18.4	86	15.7	2	
Ag	107	103	1	He	0.004	67.8	22	48.2	0.2	
Cd	111	115	1	He	0.017	72.2	9	58.9	0.2	
Sn	118	115	1	He	23.458	2.0	19950	1.4	10	Blank High
Sb	123	115	1	He	0.007	182.6	44	30.3	2	
Ba	137	115	1	He	0.579	3.3	197	1.7	5	
W	182	159	1	He	0.300	7.6	2760	3.7	10	
Tl	205	165	1	He	0.031	2.3	282	2.7	0.5	
Pb	208	165	1	He	0.166	20.2	2808	13.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804759	0.24	1884762	95.76	60	120	
Sc	45	1	He	106018	1.31	134073	79.07	60	120	
Sc	45	2	NoGas	6885842	0.34	8481025	81.19	60	120	
Rh	103	1	He	749285	0.47	903580	82.92	60	120	
In	115	1	He	198710	1.56	224817	88.39	60	120	
Tb	159	1	He	950431	0.32	1046002	90.86	60	120	
Ho	165	1	He	964734	0.91	1057439	91.23	60	120	
Bi	209	1	He	691051	0.65	731380	94.49	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228647/3-a@2
Data File Name	182_LCS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:20:43-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.067	51.067	0.335	1022306	0.44	50	102.1	79.5	120.5	
Be	9	2	NoGas	537.283	537.283	0.474	2579602	0.81	500	107.5	78.6	110.5	
B	11	2	NoGas	69.245	69.245	0.841	216647	1.09	50	138.5	79.5	120.5	LCSS Failed
Na	23	1	He	4858.159	4858.159	0.762	1491044	0.23	5000	97.2	79.5	120.5	
Mg	24	1	He	4486.514	4486.514	0.277	763834	1.00	5000	89.7	79.5	120.5	
Al	27	1	He	4625.293	4625.293	1.152	327983	0.44	5000	92.5	79.5	120.5	
K	39	1	He	4690.785	4690.785	0.915	386216	1.42	5000	93.8	79.5	120.5	
Ca	44	1	He	4825.792	4825.792	2.746	23006	2.64	5000	96.5	79.5	120.5	
Ti	47	1	He	46.818	46.818	8.611	1606	8.41	50	93.6	79.5	120.5	
V	51	1	He	452.526	452.526	2.019	553488	1.58	500	90.5	71.5	110.5	
Cr	52	1	He	464.994	464.994	1.272	703442	0.69	500	93.0	69.5	110.5	
Mn	55	1	He	477.471	477.471	1.522	357662	0.80	500	95.5	79.5	120.5	
Fe	56	1	He	4798.300	4798.300	1.629	5563853	0.89	5000	96.0	79.5	120.5	
Co	59	1	He	475.475	475.475	1.258	1313601	0.52	500	95.1	73.9	110.5	
Ni	60	1	He	473.768	473.768	0.905	367559	0.39	500	94.8	74.9	110.5	
Cu	63	1	He	474.278	474.278	0.922	1039595	0.28	500	94.9	72.6	110.5	
Zn	66	1	He	472.277	472.277	1.133	132299	0.42	500	94.5	71.5	113.4	
As	75	1	He	433.474	433.474	0.847	78714	0.23	500	86.7	73.4	110.5	
Se	78	1	He	430.156	430.156	1.768	3642	0.84	500	86.0	64.6	110.5	
Sr	88	1	He	458.257	458.257	0.770	367930	0.28	500	91.7	79.5	120.5	
Mo	95	1	He	48.085	48.085	0.658	48098	0.85	50	96.2	29.5	140.5	
Ag	107	1	He	47.915	47.915	0.875	177179	0.22	50	95.8	59.5	114.5	
Cd	111	1	He	467.598	467.598	1.548	197491	0.35	500	93.5	73.5	110.5	
Sn	118	1	He	494.266	494.266	2.205	395715	1.17	500	98.9	79.5	120.5	
Sb	123	1	He	47.618	47.618	0.331	42954	0.90	50	95.2	67.5	113.4	
Ba	137	1	He	488.884	488.884	1.323	154407	0.32	500	97.8	69.5	110.5	
W	182	1	He	48.556	48.556	1.383	237066	1.82	50	97.1	74.6	125.4	
Tl	205	1	He	117.616	117.616	0.513	923921	0.99	125	94.1	70.6	110.5	
Pb	208	1	He	481.695	481.695	0.893	4962341	0.37	500	96.3	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1748530	0.36	1884762	92.77	60	120	
Sc	45	1	He	104382	0.74	134073	77.85	60	120	
Sc	45	2	NoGas	6799921	0.41	8481025	80.18	60	120	
Rh	103	1	He	727874	0.67	903580	80.55	60	120	
In	115	1	He	189469	1.23	224817	84.28	60	120	
Tb	159	1	He	942721	0.68	1046002	90.13	60	120	
Ho	165	1	He	961160	0.75	1057439	90.90	60	120	
Bi	209	1	He	666712	0.73	731380	91.16	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-a@2
Data File Name	183SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:24:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	99.753	99.753	0.46	2072387	0.00	10000	
Be	9	45	2	NoGas	3.198	3.198	2.06	16797	0.02	2000	
B	11	45	2	NoGas	77.962	77.962	1.58	263923	0.03	300	
Na	23	45	1	He	496.328	496.328	2.39	171358	0.29	500000	
Mg	24	45	1	He	12756.308	12756.308	2.54	2391604	0.53	500000	
Al	27	45	1	He	48442.902	48442.902	0.66	3784242	1.28	200000	
K	39	45	1	He	5741.725	5741.725	0.84	519165	1.11	500000	
Ca	44	45	1	He	9201.587	9201.587	1.86	48188	19.10	500000	
Ti	47	45	1	He	283.999	283.999	3.98	10732	2.65	2500	
V	51	45	1	He	109.308	109.308	1.79	147347	0.07	10000	
Cr	52	45	1	He	72.037	72.037	2.49	120576	0.06	10000	
Mn	55	45	1	He	1461.898	1461.898	1.51	1206469	0.12	10000	
Fe	56	45	1	He	130559.601	130559.601	1.49	166774420	0.08	200000	
Co	59	45	1	He	40.586	40.586	2.23	123792	0.03	5000	
Ni	60	45	1	He	111.339	111.339	1.54	95280	0.12	10000	
Cu	63	45	1	He	88.674	88.674	2.15	215852	0.04	10000	
Zn	66	45	1	He	308.639	308.639	1.41	95311	0.32	10000	
As	75	103	1	He	77.550	77.550	0.56	14051	0.55	10000	
Se	78	115	1	He	14.413	14.413	5.81	126	11.42	10000	
Sr	88	103	1	He	37.643	37.643	0.83	30159	0.12	10000	
Mo	95	103	1	He	26.442	26.442	2.12	26368	0.10	2000	
Ag	107	103	1	He	0.180	0.180	6.27	670	0.03	300	
Cd	111	115	1	He	1.211	1.211	1.32	521	0.23	4000	
Sn	118	115	1	He	21.095	21.095	5.57	17395	0.12	2000	
Sb	123	115	1	He	0.960	0.960	6.51	916	0.10	200	
Ba	137	115	1	He	240.305	240.305	0.86	77086	0.31	10000	
W	182	159	1	He	0.677	0.677	23.74	4650	0.01	2500	
Tl	205	165	1	He	1.731	1.731	4.19	13836	0.01	2000	
Pb	208	165	1	He	60.985	60.985	0.90	638847	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1806413	0.56	1884762	95.84	60	120	
Sc	45	1	He	115018	1.50	134073	85.79	60	120	
Sc	45	2	NoGas	7385239	1.13	8481025	87.08	60	120	
Rh	103	1	He	725677	1.86	903580	80.31	60	120	
In	115	1	He	192432	2.30	224817	85.59	60	120	
Tb	159	1	He	960324	1.06	1046002	91.81	60	120	
Ho	165	1	He	975854	1.02	1057439	92.28	60	120	
Bi	209	1	He	660674	1.07	731380	90.33	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-a@20
Data File Name	184SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:29:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.493	10.493	2.28	304429	0.00	10000	
Be	9	45	2	NoGas	0.466	0.466	8.25	2523	0.02	2000	
B	11	45	2	NoGas	23.920	23.920	1.00	85157	0.03	300	
Na	23	45	1	He	97.180	97.180	3.63	34960	0.28	500000	
Mg	24	45	1	He	1368.509	1368.509	1.71	244890	0.56	500000	
Al	27	45	1	He	5074.244	5074.244	1.36	377665	1.34	200000	
K	39	45	1	He	635.059	635.059	3.41	61159	1.04	500000	
Ca	44	45	1	He	1004.313	1004.313	6.23	5149	19.50	500000	
Ti	47	45	1	He	31.272	31.272	7.35	1126	2.78	2500	
V	51	45	1	He	12.106	12.106	3.05	15589	0.08	10000	
Cr	52	45	1	He	8.070	8.070	2.47	13357	0.06	10000	
Mn	55	45	1	He	162.778	162.778	0.85	128066	0.13	10000	
Fe	56	45	1	He	14551.201	14551.201	1.57	17706503	0.08	200000	
Co	59	45	1	He	4.495	4.495	1.43	13286	0.03	5000	
Ni	60	45	1	He	12.650	12.650	2.52	10414	0.12	10000	
Cu	63	45	1	He	9.540	9.540	2.05	23884	0.04	10000	
Zn	66	45	1	He	35.757	35.757	2.06	10627	0.34	10000	
As	75	103	1	He	8.026	8.026	2.58	1514	0.53	10000	
Se	78	115	1	He	1.388	1.388	40.86	15	9.51	10000	
Sr	88	103	1	He	4.093	4.093	4.70	3417	0.12	10000	
Mo	95	103	1	He	2.772	2.772	5.22	2861	0.10	2000	
Ag	107	103	1	He	0.023	0.023	22.33	93	0.02	300	
Cd	111	115	1	He	0.172	0.172	15.61	77	0.22	4000	
Sn	118	115	1	He	2.052	2.052	15.25	1971	0.10	2000	
Sb	123	115	1	He	0.115	0.115	16.68	144	0.08	200	
Ba	137	115	1	He	24.920	24.920	1.87	8191	0.30	10000	
W	182	159	1	He	0.095	0.095	37.24	1737	0.01	2500	
Tl	205	165	1	He	0.196	0.196	9.46	1550	0.01	2000	
Pb	208	165	1	He	6.546	6.546	2.14	67532	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1898988	0.75	1884762	100.75	60	120	
Sc	45	1	He	109571	1.79	134073	81.72	60	120	
Sc	45	2	NoGas	7287809	1.26	8481025	85.93	60	120	
Rh	103	1	He	749179	2.71	903580	82.91	60	120	
In	115	1	He	197120	3.02	224817	87.68	60	120	
Tb	159	1	He	938011	1.89	1046002	89.68	60	120	
Ho	165	1	He	947722	1.96	1057439	89.62	60	120	
Bi	209	1	He	669537	1.55	731380	91.54	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-f-28-a@10
Data File Name	185SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:33:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.812	17.812	12.75	501840	0.00	10000	
Be	9	45	2	NoGas	0.640	0.640	15.19	3826	0.02	2000	
B	11	45	2	NoGas	31.655	31.655	11.97	123606	0.03	300	
Na	23	45	1	He	138.904	138.904	2.20	50087	0.28	500000	
Mg	24	45	1	He	2635.535	2635.535	1.67	487819	0.54	500000	
Al	27	45	1	He	9768.717	9768.717	1.44	752703	1.30	200000	
K	39	45	1	He	1231.667	1231.667	2.05	115731	1.06	500000	
Ca	44	45	1	He	1931.493	1931.493	3.32	10106	19.11	500000	
Ti	47	45	1	He	64.736	64.736	3.31	2414	2.68	2500	
V	51	45	1	He	23.361	23.361	0.65	31096	0.08	10000	
Cr	52	45	1	He	15.047	15.047	3.22	25294	0.06	10000	
Mn	55	45	1	He	315.211	315.211	0.98	256647	0.12	10000	
Fe	56	45	1	He	28043.700	28043.700	1.06	35332857	0.08	200000	
Co	59	45	1	He	8.784	8.784	2.21	26626	0.03	5000	
Ni	60	45	1	He	24.043	24.043	1.80	20386	0.12	10000	
Cu	63	45	1	He	18.721	18.721	1.06	46558	0.04	10000	
Zn	66	45	1	He	67.957	67.957	0.85	20796	0.33	10000	
As	75	103	1	He	15.889	15.889	2.67	3058	0.52	10000	
Se	78	115	1	He	2.916	2.916	24.34	29	10.11	10000	
Sr	88	103	1	He	7.728	7.728	2.09	6577	0.12	10000	
Mo	95	103	1	He	5.279	5.279	4.46	5579	0.09	2000	
Ag	107	103	1	He	0.034	0.034	18.91	141	0.02	300	
Cd	111	115	1	He	0.269	0.269	6.89	123	0.22	4000	
Sn	118	115	1	He	3.795	3.795	6.78	3515	0.11	2000	
Sb	123	115	1	He	0.169	0.169	15.04	201	0.08	200	
Ba	137	115	1	He	47.486	47.486	1.64	16027	0.30	10000	
W	182	159	1	He	0.146	0.146	14.65	2041	0.01	2500	
Tl	205	165	1	He	0.355	0.355	3.04	2855	0.01	2000	
Pb	208	165	1	He	12.643	12.643	0.33	132521	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1985989	5.26	1884762	105.37	60	120	
Sc	45	1	He	113436	0.89	134073	84.61	60	120	
Sc	45	2	NoGas	8240572	11.38	8481025	97.16	60	120	
Rh	103	1	He	767709	0.25	903580	84.96	60	120	
In	115	1	He	202417	1.33	224817	90.04	60	120	
Tb	159	1	He	965270	0.71	1046002	92.28	60	120	
Ho	165	1	He	970045	0.37	1057439	91.74	60	120	
Bi	209	1	He	675764	0.46	731380	92.40	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64152-f-28-a@100
Data File Name	186SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:37:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.713	2.713	1.39	154770	0.00	10000	
Be	9	45	2	NoGas	0.157	0.157	12.81	945	0.02	2000	
B	11	45	2	NoGas	27.607	27.607	1.89	98395	0.03	300	
Na	23	45	1	He	55.000	55.000	3.79	22114	0.25	500000	
Mg	24	45	1	He	267.512	267.512	2.05	49891	0.54	500000	
Al	27	45	1	He	998.256	998.256	3.23	76819	1.30	200000	
K	39	45	1	He	130.015	130.015	3.04	18899	0.69	500000	
Ca	44	45	1	He	210.321	210.321	7.45	1241	16.94	500000	
Ti	47	45	1	He	5.977	5.977	8.31	222	2.69	2500	
V	51	45	1	He	2.209	2.209	7.07	2974	0.07	10000	
Cr	52	45	1	He	1.467	1.467	5.63	2976	0.05	10000	
Mn	55	45	1	He	33.128	33.128	3.03	27011	0.12	10000	
Fe	56	45	1	He	2910.925	2910.925	2.38	3660588	0.08	200000	
Co	59	45	1	He	0.846	0.846	2.23	2797	0.03	5000	
Ni	60	45	1	He	2.352	2.352	10.14	2101	0.11	10000	
Cu	63	45	1	He	1.455	1.455	2.16	5494	0.03	10000	
Zn	66	45	1	He	6.878	6.878	5.71	2211	0.31	10000	
As	75	103	1	He	1.574	1.574	1.51	322	0.49	10000	
Se	78	115	1	He	0.232	0.232	56.38	5	4.99	10000	
Sr	88	103	1	He	1.048	1.048	3.66	937	0.11	10000	
Mo	95	103	1	He	0.568	0.568	5.72	621	0.09	2000	
Ag	107	103	1	He	0.006	0.006	62.61	29	0.02	300	
Cd	111	115	1	He	0.052	0.052	34.36	25	0.21	4000	
Sn	118	115	1	He	0.522	0.522	4.05	719	0.07	2000	
Sb	123	115	1	He	0.039	0.039	42.60	76	0.05	200	
Ba	137	115	1	He	4.882	4.882	5.41	1656	0.29	10000	
W	182	159	1	He	0.088	0.088	11.81	1752	0.01	2500	
Tl	205	165	1	He	0.052	0.052	13.63	454	0.01	2000	
Pb	208	165	1	He	1.252	1.252	1.73	14308	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1936281	1.96	1884762	102.73	60	120	
Sc	45	1	He	113204	1.74	134073	84.43	60	120	
Sc	45	2	NoGas	7383960	0.35	8481025	87.06	60	120	
Rh	103	1	He	781314	0.20	903580	86.47	60	120	
In	115	1	He	202896	1.20	224817	90.25	60	120	
Tb	159	1	He	965098	0.18	1046002	92.27	60	120	
Ho	165	1	He	983738	0.64	1057439	93.03	60	120	
Bi	209	1	He	691455	0.50	731380	94.54	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-f-28-a@2
Data File Name	187SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:41:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	211.496	211.496	0.63	4503263	0.00	10000	
Be	9	45	2	NoGas	1214.266	1214.266	0.98	6660800	0.02	2000	
B	11	45	2	NoGas	193.867	193.867	0.69	678521	0.03	300	
Na	23	45	1	He	10927.031	10927.031	0.79	3767241	0.29	500000	
Mg	24	45	1	He	23240.504	23240.504	0.47	4447920	0.52	500000	
Al	27	45	1	He	58764.964	58764.964	1.58	4686097	1.25	200000	
K	39	45	1	He	17020.256	17020.256	1.16	1555681	1.09	500000	
Ca	44	45	1	He	19942.846	19942.846	2.13	106409	18.74	500000	
Ti	47	45	1	He	397.898	397.898	3.85	15350	2.59	2500	
V	51	45	1	He	1250.009	1250.009	1.56	1719599	0.07	10000	
Cr	52	45	1	He	1201.863	1201.863	2.97	2044114	0.06	10000	
Mn	55	45	1	He	2661.609	2661.609	0.68	2242083	0.12	10000	
Fe	56	45	1	He	140484.232	140484.232	2.09	183179979	0.08	200000	
Co	59	45	1	He	1166.679	1166.679	1.56	3625051	0.03	5000	
Ni	60	45	1	He	1166.867	1166.867	0.84	1018071	0.11	10000	
Cu	63	45	1	He	1181.724	1181.724	1.42	2910458	0.04	10000	
Zn	66	45	1	He	1363.442	1363.442	1.40	429361	0.32	10000	
As	75	103	1	He	1171.881	1171.881	1.04	218053	0.54	10000	
Se	78	115	1	He	1084.572	1084.572	1.48	9399	11.54	10000	
Sr	88	103	1	He	1162.080	1162.080	0.98	956169	0.12	10000	
Mo	95	103	1	He	145.245	145.245	0.36	148876	0.10	2000	
Ag	107	103	1	He	113.441	113.441	1.62	429851	0.03	300	
Cd	111	115	1	He	1120.214	1120.214	1.47	484484	0.23	4000	
Sn	118	115	1	He	1179.055	1179.055	1.07	966371	0.12	2000	
Sb	123	115	1	He	116.645	116.645	2.28	107675	0.11	200	
Ba	137	115	1	He	1419.694	1419.694	1.67	459137	0.31	10000	
W	182	159	1	He	112.787	112.787	2.74	574712	0.02	2500	
Tl	205	165	1	He	290.901	290.901	0.68	2353597	0.01	2000	
Pb	208	165	1	He	1197.943	1197.943	0.35	12709681	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1812514	0.79	1884762	96.17	60	120	
Sc	45	1	He	117406	0.65	134073	87.57	60	120	
Sc	45	2	NoGas	7769728	1.04	8481025	91.61	60	120	
Rh	103	1	He	745968	1.47	903580	82.56	60	120	
In	115	1	He	194027	1.75	224817	86.30	60	120	
Tb	159	1	He	987066	0.65	1046002	94.37	60	120	
Ho	165	1	He	989972	0.82	1057439	93.62	60	120	
Bi	209	1	He	662557	0.81	731380	90.59	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64152-f-28-a@20
Data File Name	188SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:45:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	122.494	122.494	0.88	2575071	0.00	10000	
Be	9	45	2	NoGas	1142.780	1142.780	0.84	6084729	0.02	2000	
B	11	45	2	NoGas	130.436	130.436	0.49	445682	0.03	300	
Na	23	45	1	He	9989.896	9989.896	1.51	3316878	0.30	500000	
Mg	24	45	1	He	11366.486	11366.486	2.04	2095074	0.54	500000	
Al	27	45	1	He	14740.479	14740.479	0.74	1132013	1.30	200000	
K	39	45	1	He	10817.062	10817.062	0.94	954868	1.13	500000	
Ca	44	45	1	He	10951.940	10951.940	3.37	56342	19.44	500000	
Ti	47	45	1	He	133.198	133.198	0.74	4949	2.69	2500	
V	51	45	1	He	1091.133	1091.133	0.82	1445597	0.08	10000	
Cr	52	45	1	He	1062.641	1062.641	0.98	1740558	0.06	10000	
Mn	55	45	1	He	1180.253	1180.253	1.39	957474	0.12	10000	
Fe	56	45	1	He	24101.869	24101.869	1.36	30265704	0.08	200000	
Co	59	45	1	He	1077.797	1077.797	1.65	3224923	0.03	5000	
Ni	60	45	1	He	1031.822	1031.822	1.05	866937	0.12	10000	
Cu	63	45	1	He	1087.527	1087.527	0.86	2579444	0.04	10000	
Zn	66	45	1	He	1068.452	1068.452	0.65	324058	0.33	10000	
As	75	103	1	He	988.928	988.928	0.51	188977	0.52	10000	
Se	78	115	1	He	995.744	995.744	1.20	8724	11.41	10000	
Sr	88	103	1	He	1007.946	1007.946	0.38	851660	0.12	10000	
Mo	95	103	1	He	108.917	108.917	0.70	114642	0.10	2000	
Ag	107	103	1	He	101.994	101.994	0.79	396920	0.03	300	
Cd	111	115	1	He	1032.545	1032.545	0.79	451477	0.23	4000	
Sn	118	115	1	He	1040.719	1040.719	1.94	862265	0.12	2000	
Sb	123	115	1	He	105.131	105.131	0.91	98124	0.11	200	
Ba	137	115	1	He	1092.591	1092.591	0.47	357255	0.31	10000	
W	182	159	1	He	104.577	104.577	0.93	522706	0.02	2500	
Tl	205	165	1	He	268.910	268.910	1.53	2155211	0.01	2000	
Pb	208	165	1	He	1074.712	1074.712	1.47	11295200	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1900575	1.25	1884762	100.84	60	120	
Sc	45	1	He	113063	0.66	134073	84.33	60	120	
Sc	45	2	NoGas	7541438	0.29	8481025	88.92	60	120	
Rh	103	1	He	766024	0.65	903580	84.78	60	120	
In	115	1	He	196142	1.47	224817	87.24	60	120	
Tb	159	1	He	967963	0.66	1046002	92.54	60	120	
Ho	165	1	He	980751	0.97	1057439	92.75	60	120	
Bi	209	1	He	673289	1.32	731380	92.06	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-b ms@2
Data File Name	189SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:49:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	156.738	156.738	1.40	3305843	0.00	10000	
Be	9	45	2	NoGas	505.010	505.010	1.15	2721799	0.02	2000	
B	11	45	2	NoGas	136.981	136.981	0.62	473359	0.03	300	
Na	23	45	1	He	4833.977	4833.977	3.07	1647438	0.29	500000	
Mg	24	45	1	He	17425.115	17425.115	1.03	3293231	0.53	500000	
Al	27	45	1	He	62579.402	62579.402	2.61	4926645	1.27	200000	
K	39	45	1	He	11539.954	11539.954	1.32	1044016	1.11	500000	
Ca	44	45	1	He	13425.227	13425.227	1.48	70786	18.97	500000	
Ti	47	45	1	He	355.390	355.390	3.44	13536	2.63	2500	
V	51	45	1	He	552.529	552.529	1.92	750527	0.07	10000	
Cr	52	45	1	He	511.250	511.250	1.73	858910	0.06	10000	
Mn	55	45	1	He	2124.364	2124.364	2.08	1766906	0.12	10000	
Fe	56	45	1	He	135549.918	135549.918	2.01	174511451	0.08	200000	
Co	59	45	1	He	509.065	509.065	1.77	1562031	0.03	5000	
Ni	60	45	1	He	544.508	544.508	2.02	469118	0.12	10000	
Cu	63	45	1	He	520.188	520.188	1.87	1266093	0.04	10000	
Zn	66	45	1	He	752.608	752.608	1.26	234092	0.32	10000	
As	75	103	1	He	511.343	511.343	0.28	93617	0.55	10000	
Se	78	115	1	He	453.516	453.516	1.06	3856	11.76	10000	
Sr	88	103	1	He	507.232	507.232	0.70	410593	0.12	10000	
Mo	95	103	1	He	75.289	75.289	1.00	75922	0.10	2000	
Ag	107	103	1	He	46.378	46.378	0.62	172910	0.03	300	
Cd	111	115	1	He	456.716	456.716	0.77	193760	0.24	4000	
Sn	118	115	1	He	431.801	431.801	0.42	347308	0.12	2000	
Sb	123	115	1	He	17.554	17.554	2.09	15925	0.11	200	
Ba	137	115	1	He	725.469	725.469	0.54	230152	0.32	10000	
W	182	159	1	He	35.191	35.191	1.09	175302	0.02	2500	
Tl	205	165	1	He	114.477	114.477	0.44	909793	0.01	2000	
Pb	208	165	1	He	525.534	525.534	0.25	5477635	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1844633	0.26	1884762	97.87	60	120	
Sc	45	1	He	115944	1.82	134073	86.48	60	120	
Sc	45	2	NoGas	7633369	0.22	8481025	90.01	60	120	
Rh	103	1	He	733840	0.44	903580	81.21	60	120	
In	115	1	He	190303	0.91	224817	84.65	60	120	
Tb	159	1	He	959908	0.55	1046002	91.77	60	120	
Ho	165	1	He	972438	0.65	1057439	91.96	60	120	
Bi	209	1	He	660435	0.24	731380	90.30	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-b ms@20
Data File Name	190SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:53:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.888	16.888	1.21	421274	0.00	10000	
Be	9	45	2	NoGas	51.285	51.285	1.14	259143	0.02	2000	
B	11	45	2	NoGas	32.073	32.073	1.03	109549	0.03	300	
Na	23	45	1	He	482.213	482.213	6.03	169745	0.28	500000	
Mg	24	45	1	He	1654.503	1654.503	5.26	316637	0.52	500000	
Al	27	45	1	He	5784.638	5784.638	5.61	460532	1.26	200000	
K	39	45	1	He	1111.900	1111.900	5.34	108719	1.02	500000	
Ca	44	45	1	He	1340.572	1340.572	6.38	7295	18.38	500000	
Ti	47	45	1	He	34.219	34.219	1.75	1319	2.59	2500	
V	51	45	1	He	53.094	53.094	7.16	72942	0.07	10000	
Cr	52	45	1	He	49.262	49.262	5.72	84214	0.06	10000	
Mn	55	45	1	He	194.864	194.864	5.28	163980	0.12	10000	
Fe	56	45	1	He	13168.027	13168.027	4.94	17144515	0.08	200000	
Co	59	45	1	He	47.521	47.521	5.41	147657	0.03	5000	
Ni	60	45	1	He	54.152	54.152	6.82	47270	0.11	10000	
Cu	63	45	1	He	51.556	51.556	5.80	128759	0.04	10000	
Zn	66	45	1	He	75.974	75.974	4.09	24012	0.32	10000	
As	75	103	1	He	47.231	47.231	6.07	9354	0.50	10000	
Se	78	115	1	He	41.760	41.760	8.32	388	10.78	10000	
Sr	88	103	1	He	46.035	46.035	7.03	40283	0.11	10000	
Mo	95	103	1	He	7.313	7.313	4.83	7986	0.09	2000	
Ag	107	103	1	He	4.375	4.375	5.78	17629	0.02	300	
Cd	111	115	1	He	43.001	43.001	6.02	19803	0.22	4000	
Sn	118	115	1	He	38.167	38.167	9.16	33549	0.11	2000	
Sb	123	115	1	He	1.758	1.758	4.97	1767	0.10	200	
Ba	137	115	1	He	66.345	66.345	6.57	22847	0.29	10000	
W	182	159	1	He	5.037	5.037	35.42	27314	0.02	2500	
Tl	205	165	1	He	10.987	10.987	7.29	90415	0.01	2000	
Pb	208	165	1	He	49.880	49.880	7.04	539093	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1908754	0.95	1884762	101.27	60	120	
Sc	45	1	He	117346	3.64	134073	87.52	60	120	
Sc	45	2	NoGas	7153720	0.26	8481025	84.35	60	120	
Rh	103	1	He	794196	4.94	903580	87.89	60	120	
In	115	1	He	206903	4.30	224817	92.03	60	120	
Tb	159	1	He	996717	4.92	1046002	95.29	60	120	
Ho	165	1	He	1008731	5.14	1057439	95.39	60	120	
Bi	209	1	He	705059	2.61	731380	96.40	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	191_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T00:58:05-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.765	0.548	1191798	1.35	50	113.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.890	0.773	273950	0.54	50	107.8	89.5	110.5	
B	11	45	2	NoGas	68.010	0.389	225346	0.99	50	136.0	89.5	110.5	CCV Failed
Na	23	45	1	He	23942.087	2.124	7781363	0.66	25000	95.8	89.5	110.5	
Mg	24	45	1	He	24162.395	1.779	4362119	0.61	25000	96.6	89.5	110.5	
Al	27	45	1	He	251.453	2.555	19005	1.83	250	100.6	89.5	110.5	
K	39	45	1	He	25493.353	1.458	2194714	1.88	25000	102.0	89.5	110.5	
Ca	44	45	1	He	25126.027	2.018	126419	0.50	25000	100.5	89.5	110.5	
Ti	47	45	1	He	50.226	8.779	1827	7.62	50	100.5	89.5	110.5	
V	51	45	1	He	49.537	1.933	64341	2.72	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.900	0.923	80607	1.73	50	99.8	89.5	110.5	
Mn	55	45	1	He	253.354	1.249	201433	0.81	250	101.3	89.5	110.5	
Fe	56	45	1	He	12607.294	1.564	15508862	0.21	12500	100.9	89.5	110.5	
Co	59	45	1	He	49.976	1.030	146735	0.57	50	100.0	89.5	110.5	
Ni	60	45	1	He	50.056	2.831	41306	1.47	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.417	1.467	116720	0.53	50	98.8	89.5	110.5	
Zn	66	45	1	He	51.465	2.622	15405	1.41	50	102.9	89.5	110.5	
As	75	103	1	He	48.002	0.968	8924	1.04	50	96.0	89.5	110.5	
Se	78	115	1	He	48.084	3.907	418	2.76	50	96.2	89.5	110.5	
Sr	88	103	1	He	51.196	3.532	42044	3.12	50	102.4	89.5	110.5	
Mo	95	103	1	He	51.920	0.509	53089	1.18	50	103.8	89.5	110.5	
Ag	107	103	1	He	49.769	0.852	188129	0.55	50	99.5	89.5	110.5	
Cd	111	115	1	He	49.543	0.363	21386	1.04	50	99.1	89.5	110.5	
Sn	118	115	1	He	49.600	1.368	40820	1.90	50	99.2	89.5	110.5	
Sb	123	115	1	He	51.484	0.867	47453	0.59	50	103.0	89.5	110.5	
Ba	137	115	1	He	51.720	1.183	16697	0.57	50	103.4	89.5	110.5	
W	182	159	1	He	50.980	1.882	248266	2.02	50	102.0	89.5	110.5	
Tl	205	165	1	He	49.500	1.136	388161	1.29	50	99.0	89.5	110.5	
Pb	208	165	1	He	49.490	0.701	509899	0.36	50	99.0	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1862748	2.01	1884762	98.83	60	120	
Sc	45	1	He	110765	1.52	134073	82.62	60	120	
Sc	45	2	NoGas	7197271	0.98	8481025	84.86	60	120	
Rh	103	1	He	744057	0.77	903580	82.35	60	120	
In	115	1	He	193621	1.40	224817	86.12	60	120	
Tb	159	1	He	940587	0.64	1046002	89.92	60	120	
Ho	165	1	He	959417	0.36	1057439	90.73	60	120	
Bi	209	1	He	651808	1.23	731380	89.12	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	192_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:02:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.926	6.7	116276	1.2	8	
Be	9	45	2	NoGas	0.429	1.7	2300	1.4	1	
B	11	45	2	NoGas	17.746	2.0	64219	1.9	20	
Na	23	45	1	He	61.369	1.9	23798	2.5	1000	
Mg	24	45	1	He	24.022	9.8	4886	9.9	1000	
Al	27	45	1	He	1.315	29.4	191	14.1	50	
K	39	45	1	He	25.420	19.7	9547	4.2	1000	
Ca	44	45	1	He	18.776	25.4	253	8.7	1000	
Ti	47	45	1	He	0.153	91.3	6	91.6	20	
V	51	45	1	He	0.261	74.6	385	66.1	2	
Cr	52	45	1	He	0.051	114.4	642	14.1	2	
Mn	55	45	1	He	0.360	30.0	399	22.7	2	
Fe	56	45	1	He	19.381	6.6	25589	7.2	50	
Co	59	45	1	He	0.085	19.2	506	9.1	1	
Ni	60	45	1	He	0.024	125.5	139	18.0	2	
Cu	63	45	1	He	-0.536	-6.1	756	11.2	2	
Zn	66	45	1	He	0.357	10.7	229	6.1	20	
As	75	103	1	He	0.157	19.5	45	13.4	2	
Se	78	115	1	He	0.353	26.6	6	13.5	2	
Sr	88	103	1	He	0.152	6.0	162	4.3	10	
Mo	95	103	1	He	0.133	39.8	152	37.2	2	
Ag	107	103	1	He	0.060	9.4	243	9.0	0.2	
Cd	111	115	1	He	0.128	15.0	59	15.8	0.2	
Sn	118	115	1	He	0.387	12.5	593	7.8	10	
Sb	123	115	1	He	0.122	21.2	153	15.2	2	
Ba	137	115	1	He	0.109	36.1	41	32.8	5	
W	182	159	1	He	0.341	36.0	2934	21.5	10	
Tl	205	165	1	He	0.146	8.0	1171	7.4	0.5	
Pb	208	165	1	He	0.074	7.1	1839	2.7	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1885347	1.09	1884762	100.03	60	120	
Sc	45	1	He	111142	1.16	134073	82.90	60	120	
Sc	45	2	NoGas	7186470	0.22	8481025	84.74	60	120	
Rh	103	1	He	771310	0.49	903580	85.36	60	120	
In	115	1	He	199423	1.34	224817	88.70	60	120	
Tb	159	1	He	939964	1.22	1046002	89.86	60	120	
Ho	165	1	He	954449	0.77	1057439	90.26	60	120	
Bi	209	1	He	673213	0.72	731380	92.05	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-c msd@2
Data File Name	193SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:06:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	156.549	156.549	1.22	3240389	0.00	10000	
Be	9	45	2	NoGas	498.477	498.477	1.63	2636327	0.02	2000	
B	11	45	2	NoGas	132.671	132.671	1.43	450141	0.03	300	
Na	23	45	1	He	4801.397	4801.397	0.56	1598836	0.30	500000	
Mg	24	45	1	He	17293.131	17293.131	1.03	3192450	0.54	500000	
Al	27	45	1	He	60931.875	60931.875	1.35	4686579	1.30	200000	
K	39	45	1	He	10672.152	10672.152	1.26	943664	1.13	500000	
Ca	44	45	1	He	14068.737	14068.737	1.59	72459	19.42	500000	
Ti	47	45	1	He	358.421	358.421	3.91	13341	2.69	2500	
V	51	45	1	He	550.320	550.320	1.79	730334	0.08	10000	
Cr	52	45	1	He	511.220	511.220	1.39	839064	0.06	10000	
Mn	55	45	1	He	1853.891	1853.891	1.10	1506538	0.12	10000	
Fe	56	45	1	He	132609.722	132609.722	1.21	166803953	0.08	200000	
Co	59	45	1	He	520.119	520.119	0.55	1559003	0.03	5000	
Ni	60	45	1	He	550.834	550.834	0.87	463638	0.12	10000	
Cu	63	45	1	He	526.667	526.667	1.44	1252293	0.04	10000	
Zn	66	45	1	He	758.941	758.941	1.59	230590	0.33	10000	
As	75	103	1	He	523.447	523.447	1.17	93781	0.56	10000	
Se	78	115	1	He	429.837	429.837	1.85	3683	11.67	10000	
Sr	88	103	1	He	510.837	510.837	0.73	404697	0.13	10000	
Mo	95	103	1	He	82.854	82.854	0.87	81769	0.10	2000	
Ag	107	103	1	He	46.943	46.943	1.50	171263	0.03	300	
Cd	111	115	1	He	447.906	447.906	1.84	191486	0.23	4000	
Sn	118	115	1	He	420.649	420.649	2.18	340997	0.12	2000	
Sb	123	115	1	He	16.805	16.805	2.93	15364	0.11	200	
Ba	137	115	1	He	697.527	697.527	1.53	223005	0.31	10000	
W	182	159	1	He	33.229	33.229	1.41	163484	0.02	2500	
Tl	205	165	1	He	112.327	112.327	0.81	881031	0.01	2000	
Pb	208	165	1	He	525.567	525.567	0.79	5406093	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1810562	0.98	1884762	96.06	60	120	
Sc	45	1	He	113248	1.40	134073	84.47	60	120	
Sc	45	2	NoGas	7491054	1.16	8481025	88.33	60	120	
Rh	103	1	He	718200	1.57	903580	79.48	60	120	
In	115	1	He	191788	1.95	224817	85.31	60	120	
Tb	159	1	He	947474	1.94	1046002	90.58	60	120	
Ho	165	1	He	959695	1.00	1057439	90.76	60	120	
Bi	209	1	He	651636	0.62	731380	89.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-f-28-c msd@20
Data File Name	194SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:10:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.145	16.145	0.51	419023	0.00	10000	
Be	9	45	2	NoGas	50.085	50.085	0.55	260531	0.02	2000	
B	11	45	2	NoGas	35.908	35.908	2.36	125338	0.03	300	
Na	23	45	1	He	508.379	508.379	1.48	167836	0.30	500000	
Mg	24	45	1	He	1774.130	1774.130	1.13	318709	0.56	500000	
Al	27	45	1	He	6071.936	6071.936	1.26	453866	1.34	200000	
K	39	45	1	He	1139.533	1139.533	0.84	104423	1.09	500000	
Ca	44	45	1	He	1430.413	1430.413	4.77	7297	19.60	500000	
Ti	47	45	1	He	37.873	37.873	5.25	1369	2.77	2500	
V	51	45	1	He	57.400	57.400	2.63	74053	0.08	10000	
Cr	52	45	1	He	53.822	53.822	1.84	86319	0.06	10000	
Mn	55	45	1	He	187.676	187.676	0.96	148274	0.13	10000	
Fe	56	45	1	He	14069.182	14069.182	1.08	17195283	0.08	200000	
Co	59	45	1	He	52.597	52.597	0.84	153413	0.03	5000	
Ni	60	45	1	He	58.860	58.860	3.18	48233	0.12	10000	
Cu	63	45	1	He	57.287	57.287	2.23	134103	0.04	10000	
Zn	66	45	1	He	85.044	85.044	1.74	25213	0.34	10000	
As	75	103	1	He	51.329	51.329	0.43	9765	0.53	10000	
Se	78	115	1	He	44.253	44.253	1.70	394	11.22	10000	
Sr	88	103	1	He	48.712	48.712	0.68	40945	0.12	10000	
Mo	95	103	1	He	8.166	8.166	2.49	8556	0.10	2000	
Ag	107	103	1	He	4.615	4.615	3.61	17857	0.03	300	
Cd	111	115	1	He	45.252	45.252	0.56	20007	0.23	4000	
Sn	118	115	1	He	42.534	42.534	2.15	35887	0.12	2000	
Sb	123	115	1	He	1.722	1.722	5.04	1661	0.10	200	
Ba	137	115	1	He	69.404	69.404	0.89	22949	0.30	10000	
W	182	159	1	He	3.610	3.610	3.86	19019	0.02	2500	
Tl	205	165	1	He	11.606	11.606	2.40	91754	0.01	2000	
Pb	208	165	1	He	53.604	53.604	0.76	556590	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1909028	1.52	1884762	101.29	60	120	
Sc	45	1	He	110042	1.27	134073	82.08	60	120	
Sc	45	2	NoGas	7364226	0.29	8481025	86.83	60	120	
Rh	103	1	He	761481	0.65	903580	84.27	60	120	
In	115	1	He	198312	0.95	224817	88.21	60	120	
Tb	159	1	He	953163	0.19	1046002	91.12	60	120	
Ho	165	1	He	967076	0.71	1057439	91.45	60	120	
Bi	209	1	He	676153	0.81	731380	92.45	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-38-c@2
Data File Name	195SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:14:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	90.668	90.668	0.62	1947833	0.00	10000	
Be	9	45	2	NoGas	3.212	3.212	2.57	17364	0.02	2000	
B	11	45	2	NoGas	70.722	70.722	0.57	247127	0.03	300	
Na	23	45	1	He	446.131	446.131	3.26	156872	0.28	500000	
Mg	24	45	1	He	13259.600	13259.600	2.77	2525659	0.52	500000	
Al	27	45	1	He	43748.221	43748.221	2.15	3472068	1.26	200000	
K	39	45	1	He	6045.246	6045.246	2.54	554894	1.09	500000	
Ca	44	45	1	He	7888.697	7888.697	4.00	41981	18.79	500000	
Ti	47	45	1	He	258.398	258.398	3.25	9922	2.60	2500	
V	51	45	1	He	93.175	93.175	1.41	127633	0.07	10000	
Cr	52	45	1	He	65.983	65.983	2.98	112234	0.06	10000	
Mn	55	45	1	He	1391.328	1391.328	2.98	1166372	0.12	10000	
Fe	56	45	1	He	110903.329	110903.329	2.88	143908590	0.08	200000	
Co	59	45	1	He	49.250	49.250	3.04	152539	0.03	5000	
Ni	60	45	1	He	118.170	118.170	2.45	102718	0.12	10000	
Cu	63	45	1	He	73.903	73.903	3.11	183098	0.04	10000	
Zn	66	45	1	He	319.915	319.915	2.76	100357	0.32	10000	
As	75	103	1	He	54.152	54.152	0.68	10161	0.53	10000	
Se	78	115	1	He	15.900	15.900	8.62	142	11.16	10000	
Sr	88	103	1	He	45.226	45.226	0.79	37501	0.12	10000	
Mo	95	103	1	He	24.006	24.006	1.33	24784	0.10	2000	
Ag	107	103	1	He	0.136	0.136	13.51	524	0.03	300	
Cd	111	115	1	He	1.210	1.210	6.05	533	0.23	4000	
Sn	118	115	1	He	21.292	21.292	2.79	17988	0.12	2000	
Sb	123	115	1	He	0.862	0.862	4.86	846	0.10	200	
Ba	137	115	1	He	339.748	339.748	0.35	111637	0.30	10000	
W	182	159	1	He	0.500	0.500	13.45	3857	0.01	2500	
Tl	205	165	1	He	2.201	2.201	1.88	17807	0.01	2000	
Pb	208	165	1	He	46.252	46.252	0.48	490843	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1875901	0.94	1884762	99.53	60	120	
Sc	45	1	He	116886	2.45	134073	87.18	60	120	
Sc	45	2	NoGas	7599873	0.41	8481025	89.61	60	120	
Rh	103	1	He	751124	0.39	903580	83.13	60	120	
In	115	1	He	197094	0.35	224817	87.67	60	120	
Tb	159	1	He	980433	0.65	1046002	93.73	60	120	
Ho	165	1	He	988055	0.46	1057439	93.44	60	120	
Bi	209	1	He	674622	0.61	731380	92.24	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-38-c@20
Data File Name	196SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:18:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.077	10.077	0.74	294474	0.00	10000	
Be	9	45	2	NoGas	0.573	0.573	6.60	3056	0.02	2000	
B	11	45	2	NoGas	28.725	28.725	0.63	100100	0.03	300	
Na	23	45	1	He	74.701	74.701	4.98	28193	0.26	500000	
Mg	24	45	1	He	1345.823	1345.823	1.51	244870	0.55	500000	
Al	27	45	1	He	4361.637	4361.637	2.43	330014	1.32	200000	
K	39	45	1	He	623.301	623.301	0.88	61163	1.02	500000	
Ca	44	45	1	He	796.856	796.856	3.48	4187	19.03	500000	
Ti	47	45	1	He	27.548	27.548	5.44	1008	2.73	2500	
V	51	45	1	He	9.918	9.918	1.56	12989	0.08	10000	
Cr	52	45	1	He	7.059	7.059	4.26	11944	0.06	10000	
Mn	55	45	1	He	146.258	146.258	2.39	116979	0.13	10000	
Fe	56	45	1	He	11683.617	11683.617	2.42	14453348	0.08	200000	
Co	59	45	1	He	5.204	5.204	2.69	15594	0.03	5000	
Ni	60	45	1	He	12.714	12.714	3.56	10642	0.12	10000	
Cu	63	45	1	He	7.528	7.528	2.88	19582	0.04	10000	
Zn	66	45	1	He	34.960	34.960	4.62	10561	0.33	10000	
As	75	103	1	He	5.418	5.418	1.95	1038	0.52	10000	
Se	78	115	1	He	1.956	1.956	23.21	20	9.91	10000	
Sr	88	103	1	He	4.294	4.294	3.27	3618	0.12	10000	
Mo	95	103	1	He	2.439	2.439	1.70	2548	0.10	2000	
Ag	107	103	1	He	0.014	0.014	13.79	59	0.02	300	
Cd	111	115	1	He	0.162	0.162	11.47	73	0.22	4000	
Sn	118	115	1	He	2.428	2.428	7.43	2285	0.11	2000	
Sb	123	115	1	He	0.122	0.122	10.81	151	0.08	200	
Ba	137	115	1	He	33.502	33.502	2.49	11020	0.30	10000	
W	182	159	1	He	0.127	0.127	27.05	1904	0.01	2500	
Tl	205	165	1	He	0.255	0.255	1.04	2046	0.01	2000	
Pb	208	165	1	He	4.824	4.824	0.46	50989	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1911718	0.65	1884762	101.43	60	120	
Sc	45	1	He	111406	2.07	134073	83.09	60	120	
Sc	45	2	NoGas	7241746	0.67	8481025	85.39	60	120	
Rh	103	1	He	757201	1.16	903580	83.80	60	120	
In	115	1	He	197268	1.13	224817	87.75	60	120	
Tb	159	1	He	945959	0.67	1046002	90.44	60	120	
Ho	165	1	He	965323	0.86	1057439	91.29	60	120	
Bi	209	1	He	677069	1.28	731380	92.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-39-e@2
Data File Name	197SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:23:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	105.597	105.597	2.54	2197592	0.00	10000	
Be	9	45	2	NoGas	3.332	3.332	2.00	17579	0.02	2000	
B	11	45	2	NoGas	68.139	68.139	0.74	232687	0.03	300	
Na	23	45	1	He	452.527	452.527	0.83	154449	0.29	500000	
Mg	24	45	1	He	15859.739	15859.739	1.79	2932700	0.54	500000	
Al	27	45	1	He	48026.846	48026.846	1.17	3700425	1.30	200000	
K	39	45	1	He	7046.489	7046.489	1.94	626651	1.12	500000	
Ca	44	45	1	He	8361.624	8361.624	1.53	43200	19.36	500000	
Ti	47	45	1	He	293.819	293.819	5.62	10950	2.68	2500	
V	51	45	1	He	103.180	103.180	1.41	137185	0.08	10000	
Cr	52	45	1	He	74.319	74.319	2.96	122641	0.06	10000	
Mn	55	45	1	He	1121.584	1121.584	2.46	912794	0.12	10000	
Fe	56	45	1	He	118475.141	118475.141	2.03	149253385	0.08	200000	
Co	59	45	1	He	48.690	48.690	1.31	146426	0.03	5000	
Ni	60	45	1	He	141.423	141.423	2.66	119310	0.12	10000	
Cu	63	45	1	He	75.445	75.445	1.28	181439	0.04	10000	
Zn	66	45	1	He	387.823	387.823	2.30	118079	0.33	10000	
As	75	103	1	He	49.670	49.670	1.10	9002	0.55	10000	
Se	78	115	1	He	17.007	17.007	6.17	146	11.61	10000	
Sr	88	103	1	He	47.583	47.583	1.44	38103	0.12	10000	
Mo	95	103	1	He	20.550	20.550	0.68	20492	0.10	2000	
Ag	107	103	1	He	0.163	0.163	11.32	608	0.03	300	
Cd	111	115	1	He	1.337	1.337	6.31	567	0.24	4000	
Sn	118	115	1	He	19.764	19.764	4.21	16082	0.12	2000	
Sb	123	115	1	He	0.779	0.779	11.00	738	0.11	200	
Ba	137	115	1	He	219.226	219.226	0.98	69321	0.32	10000	
W	182	159	1	He	0.406	0.406	4.37	3238	0.01	2500	
Tl	205	165	1	He	2.276	2.276	2.20	17739	0.01	2000	
Pb	208	165	1	He	46.219	46.219	0.85	472415	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1801877	0.18	1884762	95.60	60	120	
Sc	45	1	He	113449	1.74	134073	84.62	60	120	
Sc	45	2	NoGas	7418167	0.40	8481025	87.47	60	120	
Rh	103	1	He	725410	0.62	903580	80.28	60	120	
In	115	1	He	189673	1.03	224817	84.37	60	120	
Tb	159	1	He	938339	0.78	1046002	89.71	60	120	
Ho	165	1	He	951675	0.87	1057439	90.00	60	120	
Bi	209	1	He	658507	0.52	731380	90.04	60	120	

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Sample Report

Sample Table

Sample Name	240-64152-h-39-e@20
Data File Name	198SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:27:20-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.128	11.128	1.39	305677	0.00	10000	
Be	9	45	2	NoGas	0.588	0.588	2.55	3037	0.02	2000	
B	11	45	2	NoGas	22.676	22.676	2.10	78249	0.03	300	
Na	23	45	1	He	74.239	74.239	5.76	26535	0.28	500000	
Mg	24	45	1	He	1623.260	1623.260	2.50	279281	0.58	500000	
Al	27	45	1	He	4827.875	4827.875	1.52	345583	1.40	200000	
K	39	45	1	He	733.520	733.520	0.37	66856	1.10	500000	
Ca	44	45	1	He	882.420	882.420	2.71	4371	20.19	500000	
Ti	47	45	1	He	30.197	30.197	0.94	1046	2.89	2500	
V	51	45	1	He	10.452	10.452	2.59	12946	0.08	10000	
Cr	52	45	1	He	7.803	7.803	2.50	12438	0.06	10000	
Mn	55	45	1	He	118.491	118.491	2.22	89673	0.13	10000	
Fe	56	45	1	He	12612.994	12612.994	0.85	14762384	0.09	200000	
Co	59	45	1	He	5.263	5.263	1.57	14917	0.04	5000	
Ni	60	45	1	He	15.221	15.221	2.18	12030	0.13	10000	
Cu	63	45	1	He	7.675	7.675	1.59	18851	0.04	10000	
Zn	66	45	1	He	43.322	43.322	1.69	12358	0.35	10000	
As	75	103	1	He	4.922	4.922	4.49	914	0.54	10000	
Se	78	115	1	He	1.329	1.329	28.52	14	9.65	10000	
Sr	88	103	1	He	4.547	4.547	1.64	3708	0.12	10000	
Mo	95	103	1	He	1.992	1.992	4.43	2017	0.10	2000	
Ag	107	103	1	He	0.012	0.012	29.88	51	0.02	300	
Cd	111	115	1	He	0.154	0.154	11.54	67	0.23	4000	
Sn	118	115	1	He	2.008	2.008	3.85	1878	0.11	2000	
Sb	123	115	1	He	0.063	0.063	78.80	93	0.07	200	
Ba	137	115	1	He	21.720	21.720	0.11	6931	0.31	10000	
W	182	159	1	He	0.128	0.128	23.95	1834	0.01	2500	
Tl	205	165	1	He	0.259	0.259	5.86	1996	0.01	2000	
Pb	208	165	1	He	4.771	4.771	0.63	48430	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1827885	0.96	1884762	96.98	60	120	
Sc	45	1	He	105378	1.47	134073	78.60	60	120	
Sc	45	2	NoGas	7030984	0.78	8481025	82.90	60	120	
Rh	103	1	He	733076	0.64	903580	81.13	60	120	
In	115	1	He	191298	0.51	224817	85.09	60	120	
Tb	159	1	He	908787	0.61	1046002	86.88	60	120	
Ho	165	1	He	926754	0.77	1057439	87.64	60	120	
Bi	209	1	He	654754	0.59	731380	89.52	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	199_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:31:31-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.108	1.905	1146418	0.62	50	112.2	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.662	1.178	265257	0.86	50	107.3	89.5	110.5	
B	11	45	2	NoGas	64.791	1.454	209078	0.73	50	129.6	89.5	110.5	CCV Failed
Na	23	45	1	He	23906.010	1.275	7461169	0.89	25000	95.6	89.5	110.5	
Mg	24	45	1	He	24068.254	1.555	4172255	0.51	25000	96.3	89.5	110.5	
Al	27	45	1	He	248.817	3.425	18056	1.83	250	99.5	89.5	110.5	
K	39	45	1	He	25587.862	1.111	2115006	0.88	25000	102.4	89.5	110.5	
Ca	44	45	1	He	25384.978	1.318	122646	0.56	25000	101.5	89.5	110.5	
Ti	47	45	1	He	51.924	7.868	1813	6.54	50	103.8	89.5	110.5	
V	51	45	1	He	50.027	3.521	62369	2.33	50	100.1	89.5	110.5	
Cr	52	45	1	He	49.510	1.823	76786	0.87	50	99.0	89.5	110.5	
Mn	55	45	1	He	253.835	2.614	193751	1.11	250	101.5	89.5	110.5	
Fe	56	45	1	He	12680.305	2.336	14976859	1.11	12500	101.4	89.5	110.5	
Co	59	45	1	He	49.760	2.744	140268	1.67	50	99.5	89.5	110.5	
Ni	60	45	1	He	49.822	2.915	39475	1.20	50	99.6	89.5	110.5	
Cu	63	45	1	He	49.265	2.230	111732	1.45	50	98.5	89.5	110.5	
Zn	66	45	1	He	50.473	2.353	14508	0.61	50	100.9	89.5	110.5	
As	75	103	1	He	49.015	1.183	8805	0.39	50	98.0	89.5	110.5	
Se	78	115	1	He	48.798	1.884	415	2.56	50	97.6	89.5	110.5	
Sr	88	103	1	He	50.644	1.276	40198	1.11	50	101.3	89.5	110.5	
Mo	95	103	1	He	50.716	2.600	50117	2.67	50	101.4	89.5	110.5	
Ag	107	103	1	He	49.810	1.488	181962	1.09	50	99.6	89.5	110.5	
Cd	111	115	1	He	49.069	0.879	20734	1.41	50	98.1	89.5	110.5	
Sn	118	115	1	He	48.627	1.010	39176	1.19	50	97.3	89.5	110.5	
Sb	123	115	1	He	50.973	1.767	45992	2.11	50	101.9	89.5	110.5	
Ba	137	115	1	He	49.997	1.883	15801	2.10	50	100.0	89.5	110.5	
W	182	159	1	He	51.064	2.219	238394	1.81	50	102.1	89.5	110.5	
Tl	205	165	1	He	49.406	2.041	372120	1.65	50	98.8	89.5	110.5	
Pb	208	165	1	He	49.685	1.178	491703	0.59	50	99.4	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1778757	1.84	1884762	94.38	60	120	
Sc	45	1	He	106360	1.81	134073	79.33	60	120	
Sc	45	2	NoGas	6998548	1.13	8481025	82.52	60	120	
Rh	103	1	He	719093	0.96	903580	79.58	60	120	
In	115	1	He	189518	0.70	224817	84.30	60	120	
Tb	159	1	He	901766	0.45	1046002	86.21	60	120	
Ho	165	1	He	921615	1.20	1057439	87.16	60	120	
Bi	209	1	He	629500	0.63	731380	86.07	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	200_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:35:39-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.939	7.1	113332	0.8	8	
Be	9	45	2	NoGas	0.308	3.3	1637	3.3	1	
B	11	45	2	NoGas	16.394	0.5	58254	0.2	20	
Na	23	45	1	He	57.289	5.4	21654	4.5	1000	
Mg	24	45	1	He	28.137	5.7	5423	4.0	1000	
Al	27	45	1	He	3.076	19.8	312	13.2	50	
K	39	45	1	He	32.142	23.2	9759	5.5	1000	
Ca	44	45	1	He	32.207	19.8	310	9.1	1000	
Ti	47	45	1	He	0.191	99.9	7	100.0	20	
V	51	45	1	He	0.076	188.6	140	129.7	2	
Cr	52	45	1	He	0.043	144.9	607	15.5	2	
Mn	55	45	1	He	0.410	26.3	422	18.7	2	
Fe	56	45	1	He	26.932	3.8	33637	3.1	50	
Co	59	45	1	He	0.037	44.3	352	12.6	1	
Ni	60	45	1	He	-0.014	-189.4	103	19.6	2	
Cu	63	45	1	He	-0.567	-5.2	658	9.7	2	
Zn	66	45	1	He	0.344	13.3	217	5.5	20	
As	75	103	1	He	0.109	34.0	35	19.0	2	
Se	78	115	1	He	0.404	62.8	6	36.4	2	
Sr	88	103	1	He	0.125	30.5	136	24.3	10	
Mo	95	103	1	He	0.188	18.1	204	16.4	2	
Ag	107	103	1	He	0.062	10.0	241	10.7	0.2	
Cd	111	115	1	He	0.077	50.0	35	48.6	0.2	
Sn	118	115	1	He	0.217	11.7	441	3.9	10	
Sb	123	115	1	He	0.103	17.9	132	11.4	2	
Ba	137	115	1	He	0.080	56.2	31	48.3	5	
W	182	159	1	He	0.418	14.5	3215	9.3	10	
Tl	205	165	1	He	0.156	14.7	1213	13.9	0.5	
Pb	208	165	1	He	0.070	21.3	1740	8.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1864095	1.13	1884762	98.90	60	120	
Sc	45	1	He	107134	1.17	134073	79.91	60	120	
Sc	45	2	NoGas	6989839	0.37	8481025	82.42	60	120	
Rh	103	1	He	750132	0.99	903580	83.02	60	120	
In	115	1	He	195709	1.59	224817	87.05	60	120	
Tb	159	1	He	915017	0.69	1046002	87.48	60	120	
Ho	165	1	He	925496	0.37	1057439	87.52	60	120	
Bi	209	1	He	654467	1.13	731380	89.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-1-a@2
Data File Name	201SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:39:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	69.149	69.149	1.60	1508125	0.00	10000	
Be	9	45	2	NoGas	6.514	6.514	0.76	35034	0.02	2000	
B	11	45	2	NoGas	93.651	93.651	0.57	324224	0.03	300	
Na	23	45	1	He	32107.428	32107.428	1.44	10779932	0.30	500000	
Mg	24	45	1	He	37989.479	37989.479	1.54	7085204	0.54	500000	
Al	27	45	1	He	82717.215	82717.215	2.75	6427877	1.29	200000	
K	39	45	1	He	15936.885	15936.885	0.77	1420111	1.12	500000	
Ca	44	45	1	He	363405.958	363405.958	1.55	1886831	19.26	500000	
Ti	47	45	1	He	3118.307	3118.307	2.64	117237	2.66	2500	>LDR
V	51	45	1	He	32.411	32.411	60.76	43435	0.07	10000	
Cr	52	45	1	He	5351.888	5351.888	2.56	8868723	0.06	10000	
Mn	55	45	1	He	703.204	703.204	1.50	577370	0.12	10000	
Fe	56	45	1	He	102640.654	102640.654	2.31	130428693	0.08	200000	
Co	59	45	1	He	316.269	316.269	1.60	957877	0.03	5000	
Ni	60	45	1	He	8826.637	8826.637	1.35	7504211	0.12	10000	
Cu	63	45	1	He	366.573	366.573	1.77	881240	0.04	10000	
Zn	66	45	1	He	1070.929	1070.929	1.30	328693	0.33	10000	
As	75	103	1	He	57.939	57.939	0.94	10325	0.56	10000	
Se	78	115	1	He	13.708	13.708	6.44	115	11.96	10000	
Sr	88	103	1	He	642.141	642.141	0.94	505398	0.13	10000	
Mo	95	103	1	He	10.762	10.762	1.54	10559	0.10	2000	
Ag	107	103	1	He	1.964	1.964	3.98	7122	0.03	300	
Cd	111	115	1	He	38.944	38.944	1.36	15936	0.24	4000	
Sn	118	115	1	He	36.408	36.408	5.15	28458	0.13	2000	
Sb	123	115	1	He	53.217	53.217	1.06	46508	0.11	200	
Ba	137	115	1	He	714.834	714.834	0.22	218747	0.33	10000	
W	182	159	1	He	1.473	1.473	9.61	8199	0.02	2500	
Tl	205	165	1	He	6.340	6.340	14.04	48353	0.01	2000	
Pb	208	165	1	He	58975.718	58975.718	0.36	589640861	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1737509	0.53	1884762	92.19	60	120	
Sc	45	1	He	114418	0.41	134073	85.34	60	120	
Sc	45	2	NoGas	7589009	0.62	8481025	89.48	60	120	
Rh	103	1	He	713490	1.71	903580	78.96	60	120	
In	115	1	He	183561	1.89	224817	81.65	60	120	
Tb	159	1	He	916062	1.01	1046002	87.58	60	120	
Ho	165	1	He	932978	0.62	1057439	88.23	60	120	
Bi	209	1	He	713861	0.92	731380	97.60	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-1-a@20
Data File Name	202SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:43:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.658	7.658	2.47	252972	0.00	10000	
Be	9	45	2	NoGas	0.858	0.858	7.93	4612	0.02	2000	
B	11	45	2	NoGas	28.882	28.882	1.29	102792	0.03	300	
Na	23	45	1	He	3525.863	3525.863	4.80	1116621	0.32	500000	
Mg	24	45	1	He	4283.426	4283.426	5.17	751710	0.57	500000	
Al	27	45	1	He	8998.851	8998.851	4.49	657838	1.37	200000	
K	39	45	1	He	1778.460	1778.460	4.93	155379	1.14	500000	
Ca	44	45	1	He	39367.356	39367.356	4.88	192378	20.46	500000	
Ti	47	45	1	He	349.032	349.032	4.72	12342	2.83	2500	
V	51	45	1	He	-7.251	-7.251	-13.41	-9083	0.08	10000	
Cr	52	45	1	He	594.784	594.784	5.05	927408	0.06	10000	
Mn	55	45	1	He	81.718	81.718	4.30	63207	0.13	10000	
Fe	56	45	1	He	12053.618	12053.618	4.55	14408238	0.08	200000	
Co	59	45	1	He	37.379	37.379	5.11	106682	0.04	5000	
Ni	60	45	1	He	1028.090	1028.090	4.50	822222	0.13	10000	
Cu	63	45	1	He	44.016	44.016	4.70	101232	0.04	10000	
Zn	66	45	1	He	130.986	130.986	5.43	37909	0.35	10000	
As	75	103	1	He	6.238	6.238	4.84	1160	0.54	10000	
Se	78	115	1	He	1.504	1.504	24.42	15	9.75	10000	
Sr	88	103	1	He	66.827	66.827	5.34	54282	0.12	10000	
Mo	95	103	1	He	1.453	1.453	36.83	1466	0.10	2000	
Ag	107	103	1	He	0.221	0.221	9.71	834	0.03	300	
Cd	111	115	1	He	4.145	4.145	5.18	1785	0.23	4000	
Sn	118	115	1	He	3.981	3.981	11.90	3497	0.11	2000	
Sb	123	115	1	He	5.656	5.656	5.38	5228	0.11	200	
Ba	137	115	1	He	73.701	73.701	6.38	23702	0.31	10000	
W	182	159	1	He	1.682	1.682	130.64	8935	0.02	2500	
Tl	205	165	1	He	0.709	0.709	17.04	5445	0.01	2000	
Pb	208	165	1	He	6453.135	6453.135	3.61	64792590	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1888917	1.92	1884762	100.22	60	120	
Sc	45	1	He	107761	4.52	134073	80.38	60	120	
Sc	45	2	NoGas	7399411	0.80	8481025	87.25	60	120	
Rh	103	1	He	737299	4.99	903580	81.60	60	120	
In	115	1	He	193205	4.35	224817	85.94	60	120	
Tb	159	1	He	921537	4.32	1046002	88.10	60	120	
Ho	165	1	He	937811	3.91	1057439	88.69	60	120	
Bi	209	1	He	663659	4.33	731380	90.74	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-2-a@2
Data File Name	203SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:48:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	29.466	29.466	0.83	693421	0.00	10000	
Be	9	45	2	NoGas	2.864	2.864	4.64	15277	0.02	2000	
B	11	45	2	NoGas	120.576	120.576	1.25	409948	0.03	300	
Na	23	45	1	He	4430.907	4430.907	1.20	1451958	0.31	500000	
Mg	24	45	1	He	12806.886	12806.886	1.19	2326282	0.55	500000	
Al	27	45	1	He	36678.785	36678.785	1.53	2775810	1.32	200000	
K	39	45	1	He	8313.643	8313.643	1.14	724925	1.15	500000	
Ca	44	45	1	He	804443.362	804443.362	1.68	4066922	19.78	500000	>LDR
Ti	47	45	1	He	915.369	915.369	1.42	33512	2.73	2500	
V	51	45	1	He	32.831	32.831	9.47	42926	0.08	10000	
Cr	52	45	1	He	1633.159	1633.159	0.46	2635922	0.06	10000	
Mn	55	45	1	He	2480.278	2480.278	2.06	1982841	0.13	10000	
Fe	56	45	1	He	85656.673	85656.673	1.25	105996629	0.08	200000	
Co	59	45	1	He	2062.949	2062.949	1.63	6082667	0.03	5000	
Ni	60	45	1	He	3345.555	3345.555	1.40	2769836	0.12	10000	
Cu	63	45	1	He	818.819	818.819	2.57	1914362	0.04	10000	
Zn	66	45	1	He	674.262	674.262	1.22	201561	0.33	10000	
As	75	103	1	He	197.954	197.954	0.51	34746	0.57	10000	
Se	78	115	1	He	12.433	12.433	4.68	106	11.68	10000	
Sr	88	103	1	He	418.160	418.160	0.19	324456	0.13	10000	
Mo	95	103	1	He	9.711	9.711	2.24	9396	0.10	2000	
Ag	107	103	1	He	2.184	2.184	4.29	7811	0.03	300	
Cd	111	115	1	He	99.465	99.465	1.65	41574	0.24	4000	
Sn	118	115	1	He	102.698	102.698	2.67	81568	0.13	2000	
Sb	123	115	1	He	24381.629	24381.629	0.63	21743931	0.11	200	>LDR
Ba	137	115	1	He	1418.851	1418.851	0.72	443432	0.32	10000	
W	182	159	1	He	2.373	2.373	2.42	12465	0.02	2500	
Tl	205	165	1	He	2.131	2.131	12.90	16233	0.01	2000	
Pb	208	165	1	He	19953.614	19953.614	0.47	198962224	0.01	4000	>LDR

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1881590	1.02	1884762	99.83	60	120	
Sc	45	1	He	111419	1.01	134073	83.10	60	120	
Sc	45	2	NoGas	7493351	1.17	8481025	88.35	60	120	
Rh	103	1	He	703394	0.56	903580	77.85	60	120	
In	115	1	He	187476	0.73	224817	83.39	60	120	
Tb	159	1	He	917550	0.40	1046002	87.72	60	120	
Ho	165	1	He	930490	0.81	1057439	87.99	60	120	
Bi	209	1	He	739395	0.47	731380	101.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64185-b-2-a@20
Data File Name	204SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:52:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.742	3.742	1.62	177274	0.00	10000	
Be	9	45	2	NoGas	0.436	0.436	1.46	2426	0.02	2000	
B	11	45	2	NoGas	27.920	27.920	2.06	100651	0.03	300	
Na	23	45	1	He	473.953	473.953	2.85	158564	0.30	500000	
Mg	24	45	1	He	1310.068	1310.068	2.82	238244	0.55	500000	
Al	27	45	1	He	3632.049	3632.049	3.35	274670	1.32	200000	
K	39	45	1	He	876.187	876.187	3.49	82930	1.06	500000	
Ca	44	45	1	He	81575.463	81575.463	2.57	412225	19.79	500000	
Ti	47	45	1	He	95.598	95.598	9.60	3495	2.74	2500	
V	51	45	1	He	0.589	0.589	318.27	858	0.07	10000	
Cr	52	45	1	He	164.457	164.457	2.80	265697	0.06	10000	
Mn	55	45	1	He	251.472	251.472	1.90	200988	0.13	10000	
Fe	56	45	1	He	9214.361	9214.361	2.28	11394831	0.08	200000	
Co	59	45	1	He	214.066	214.066	2.32	630928	0.03	5000	
Ni	60	45	1	He	355.282	355.282	2.42	294009	0.12	10000	
Cu	63	45	1	He	87.737	87.737	2.69	206741	0.04	10000	
Zn	66	45	1	He	77.399	77.399	2.39	23229	0.33	10000	
As	75	103	1	He	19.367	19.367	4.65	3697	0.52	10000	
Se	78	115	1	He	1.446	1.446	41.77	15	9.37	10000	
Sr	88	103	1	He	40.173	40.173	1.92	33816	0.12	10000	
Mo	95	103	1	He	0.957	0.957	11.30	1014	0.09	2000	
Ag	107	103	1	He	0.236	0.236	8.36	922	0.03	300	
Cd	111	115	1	He	10.306	10.306	2.53	4598	0.22	4000	
Sn	118	115	1	He	9.928	9.928	4.36	8654	0.11	2000	
Sb	123	115	1	He	2477.680	2477.680	0.43	2357704	0.11	200	>LDR
Ba	137	115	1	He	140.995	140.995	1.18	47022	0.30	10000	
W	182	159	1	He	0.330	0.330	3.01	2900	0.01	2500	
Tl	205	165	1	He	0.232	0.232	10.84	1871	0.01	2000	
Pb	208	165	1	He	2087.792	2087.792	0.99	21618993	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1975450	0.99	1884762	104.81	60	120	
Sc	45	1	He	111373	2.69	134073	83.07	60	120	
Sc	45	2	NoGas	7475557	0.57	8481025	88.14	60	120	
Rh	103	1	He	762457	0.73	903580	84.38	60	120	
In	115	1	He	200031	0.20	224817	88.98	60	120	
Tb	159	1	He	947198	0.49	1046002	90.55	60	120	
Ho	165	1	He	966296	0.89	1057439	91.38	60	120	
Bi	209	1	He	687816	1.08	731380	94.04	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228809/1-a@2
Data File Name	205_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T01:56:14-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.818	4.7	113593	0.2	8	
Be	9	45	2	NoGas	0.119	30.6	722	25.9	1	
B	11	45	2	NoGas	16.626	1.4	60313	1.1	20	
Na	23	45	1	He	69.410	2.9	25496	2.0	1000	
Mg	24	45	1	He	41.845	3.5	7828	2.2	1000	
Al	27	45	1	He	6.944	24.6	596	21.8	50	
K	39	45	1	He	32.264	6.9	9785	1.4	1000	
Ca	44	45	1	He	200.534	11.1	1130	10.4	1000	
Ti	47	45	1	He	0.569	50.6	20	50.0	20	
V	51	45	1	He	0.048	117.8	104	69.4	2	
Cr	52	45	1	He	0.546	14.3	1389	8.3	2	
Mn	55	45	1	He	0.451	13.0	454	9.0	2	
Fe	56	45	1	He	19.619	6.7	24985	7.4	50	
Co	59	45	1	He	0.324	6.5	1167	6.1	1	
Ni	60	45	1	He	0.891	15.1	826	13.6	2	
Cu	63	45	1	He	-0.188	-20.5	1509	4.8	2	
Zn	66	45	1	He	2.429	2.8	817	2.0	20	
As	75	103	1	He	0.148	24.3	42	16.6	2	
Se	78	115	1	He	0.298	21.3	5	9.9	2	
Sr	88	103	1	He	0.428	5.7	384	5.0	10	
Mo	95	103	1	He	0.066	38.2	79	31.1	2	
Ag	107	103	1	He	0.002	176.4	13	90.1	0.2	
Cd	111	115	1	He	0.033	67.8	15	60.2	0.2	
Sn	118	115	1	He	20.289	3.0	16768	3.6	10	Blank High
Sb	123	115	1	He	14.616	7.9	13423	6.7	2	Blank High
Ba	137	115	1	He	0.628	9.9	207	10.6	5	
W	182	159	1	He	0.343	25.9	2849	15.0	10	
Tl	205	165	1	He	0.026	19.4	230	15.3	0.5	
Pb	208	165	1	He	6.304	1.7	63315	1.9	0.5	Blank High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1900265	1.09	1884762	100.82	60	120	
Sc	45	1	He	107279	1.07	134073	80.02	60	120	
Sc	45	2	NoGas	7148440	0.57	8481025	84.29	60	120	
Rh	103	1	He	746857	1.66	903580	82.66	60	120	
In	115	1	He	192658	1.16	224817	85.70	60	120	
Tb	159	1	He	910329	0.93	1046002	87.03	60	120	
Ho	165	1	He	921783	1.19	1057439	87.17	60	120	
Bi	209	1	He	656960	0.71	731380	89.82	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228809/3-a@2
Data File Name	206LCSS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:00:28-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	51.553	51.553	4.617	1073153	3.70	50	103.1	79.5	120.5	
Be	9	2	NoGas	526.206	526.206	0.038	2629670	0.73	500	105.2	78.6	110.5	
B	11	2	NoGas	59.836	59.836	1.945	195839	1.26	50	119.7	79.5	120.5	
Na	23	1	He	4560.235	4560.235	4.403	1416526	5.08	5000	91.2	79.5	120.5	
Mg	24	1	He	4465.431	4465.431	0.352	769141	1.11	5000	89.3	79.5	120.5	
Al	27	1	He	4556.919	4556.919	0.777	326947	1.59	5000	91.1	79.5	120.5	
K	39	1	He	4704.274	4704.274	0.867	391826	1.12	5000	94.1	79.5	120.5	
Ca	44	1	He	4885.403	4885.403	0.939	23561	1.11	5000	97.7	79.5	120.5	
Ti	47	1	He	45.564	45.564	2.475	1581	2.88	50	91.1	79.5	120.5	
V	51	1	He	457.131	457.131	0.810	565679	0.40	500	91.4	71.5	110.5	
Cr	52	1	He	465.290	465.290	0.171	712180	1.19	500	93.1	69.5	110.5	
Mn	55	1	He	478.313	478.313	0.150	362519	1.16	500	95.7	79.5	120.5	
Fe	56	1	He	4810.691	4810.691	0.162	5643978	1.00	5000	96.2	79.5	120.5	
Co	59	1	He	476.603	476.603	0.215	1332224	1.11	500	95.3	73.9	110.5	
Ni	60	1	He	477.130	477.130	0.332	374510	0.85	500	95.4	74.9	110.5	
Cu	63	1	He	477.781	477.781	0.518	1059544	0.74	500	95.6	72.6	110.5	
Zn	66	1	He	472.074	472.074	0.770	133803	1.60	500	94.4	71.5	113.4	
As	75	1	He	436.156	436.156	0.319	79584	0.18	500	87.2	73.4	110.5	
Se	78	1	He	434.340	434.340	2.631	3666	1.39	500	86.9	64.6	110.5	
Sr	88	1	He	451.724	451.724	1.538	364428	1.24	500	90.3	79.5	120.5	
Mo	95	1	He	46.922	46.922	1.933	47160	1.79	50	93.8	29.5	140.5	
Ag	107	1	He	47.105	47.105	0.683	175029	0.48	50	94.2	59.5	114.5	
Cd	111	1	He	459.833	459.833	1.358	193627	0.82	500	92.0	73.5	110.5	
Sn	118	1	He	483.494	483.494	2.231	385933	1.67	500	96.7	79.5	120.5	
Sb	123	1	He	50.829	50.829	2.685	45699	1.45	50	101.7	67.5	113.4	
Ba	137	1	He	475.934	475.934	1.429	149858	0.41	500	95.2	69.5	110.5	
W	182	1	He	46.915	46.915	2.205	223483	2.32	50	93.8	74.6	125.4	
Tl	205	1	He	116.628	116.628	0.954	891464	0.61	125	93.3	70.6	110.5	
Pb	208	1	He	478.610	478.610	2.313	4797888	2.20	500	95.7	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1894432	0.88	1884762	100.51	60	120	
Sc	45	1	He	105605	1.14	134073	78.77	60	120	
Sc	45	2	NoGas	7077897	0.76	8481025	83.46	60	120	
Rh	103	1	He	731372	0.31	903580	80.94	60	120	
In	115	1	He	188892	1.23	224817	84.02	60	120	
Tb	159	1	He	919660	0.78	1046002	87.92	60	120	
Ho	165	1	He	935277	0.35	1057439	88.45	60	120	
Bi	209	1	He	643597	0.81	731380	88.00	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-a@2
Data File Name	207SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:04:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	42.344	42.344	0.43	1000804	0.00	10000	
Be	9	45	2	NoGas	2.516	2.516	2.74	14135	0.02	2000	
B	11	45	2	NoGas	22.881	22.881	0.66	88431	0.03	300	
Na	23	45	1	He	1992.699	1992.699	0.46	692174	0.29	500000	
Mg	24	45	1	He	15415.606	15415.606	1.94	2958780	0.52	500000	
Al	27	45	1	He	49371.237	49371.237	1.85	3948012	1.25	200000	
K	39	45	1	He	2412.933	2412.933	0.92	227850	1.06	500000	
Ca	44	45	1	He	12147.174	12147.174	0.50	65060	18.67	500000	
Ti	47	45	1	He	3100.630	3100.630	1.56	119954	2.58	2500	>LDR
V	51	45	1	He	194.055	194.055	0.87	267748	0.07	10000	
Cr	52	45	1	He	132.128	132.128	0.87	225876	0.06	10000	
Mn	55	45	1	He	1643.288	1643.288	1.83	1388175	0.12	10000	
Fe	56	45	1	He	105824.456	105824.456	1.16	138377821	0.08	200000	
Co	59	45	1	He	44.134	44.134	1.03	137780	0.03	5000	
Ni	60	45	1	He	100.303	100.303	1.11	87871	0.11	10000	
Cu	63	45	1	He	93.297	93.297	0.62	232367	0.04	10000	
Zn	66	45	1	He	135.216	135.216	2.01	42820	0.32	10000	
As	75	103	1	He	15.014	15.014	0.73	2760	0.54	10000	
Se	78	115	1	He	13.520	13.520	2.58	118	11.48	10000	
Sr	88	103	1	He	69.356	69.356	1.05	56102	0.12	10000	
Mo	95	103	1	He	1.350	1.350	10.70	1370	0.10	2000	
Ag	107	103	1	He	0.108	0.108	11.38	408	0.03	300	
Cd	111	115	1	He	0.371	0.371	6.20	160	0.23	4000	
Sn	118	115	1	He	21.889	21.889	1.46	17914	0.12	2000	
Sb	123	115	1	He	2.916	2.916	3.33	2685	0.11	200	
Ba	137	115	1	He	214.506	214.506	0.62	68303	0.31	10000	
W	182	159	1	He	0.816	0.816	14.84	5249	0.02	2500	
Tl	205	165	1	He	0.501	0.501	9.32	3978	0.01	2000	
Pb	208	165	1	He	20.938	20.938	0.89	217134	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1872530	1.13	1884762	99.35	60	120	
Sc	45	1	He	117728	0.94	134073	87.81	60	120	
Sc	45	2	NoGas	7880338	0.16	8481025	92.92	60	120	
Rh	103	1	He	733002	1.34	903580	81.12	60	120	
In	115	1	He	191005	1.52	224817	84.96	60	120	
Tb	159	1	He	943508	0.87	1046002	90.20	60	120	
Ho	165	1	He	962856	0.52	1057439	91.06	60	120	
Bi	209	1	He	639947	0.55	731380	87.50	60	120	

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Sample Report

Sample Table

Sample Name	SD 310-79576-g-1-a@10
Data File Name	208SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:08:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.456	9.456	0.52	295114	0.00	10000	
Be	9	45	2	NoGas	0.546	0.546	9.18	3049	0.02	2000	
B	11	45	2	NoGas	18.150	18.150	2.35	68973	0.03	300	
Na	23	45	1	He	448.916	448.916	1.58	155024	0.29	500000	
Mg	24	45	1	He	3182.290	3182.290	0.98	595783	0.53	500000	
Al	27	45	1	He	10081.151	10081.151	1.78	785801	1.28	200000	
K	39	45	1	He	528.710	528.710	1.94	54597	0.97	500000	
Ca	44	45	1	He	2576.562	2576.562	2.87	13580	18.97	500000	
Ti	47	45	1	He	662.724	662.724	0.84	24992	2.65	2500	
V	51	45	1	He	42.132	42.132	2.16	56696	0.07	10000	
Cr	52	45	1	He	28.195	28.195	2.51	47435	0.06	10000	
Mn	55	45	1	He	348.112	348.112	0.99	286731	0.12	10000	
Fe	56	45	1	He	22676.712	22676.712	2.55	28901486	0.08	200000	
Co	59	45	1	He	9.443	9.443	1.60	28943	0.03	5000	
Ni	60	45	1	He	21.492	21.492	2.77	18448	0.12	10000	
Cu	63	45	1	He	20.074	20.074	1.21	50355	0.04	10000	
Zn	66	45	1	He	29.597	29.597	2.00	9235	0.32	10000	
As	75	103	1	He	3.283	3.283	7.00	644	0.51	10000	
Se	78	115	1	He	2.994	2.994	10.61	29	10.20	10000	
Sr	88	103	1	He	13.801	13.801	2.24	11732	0.12	10000	
Mo	95	103	1	He	0.287	0.287	15.81	314	0.09	2000	
Ag	107	103	1	He	0.027	0.027	18.67	112	0.02	300	
Cd	111	115	1	He	0.074	0.074	14.35	35	0.21	4000	
Sn	118	115	1	He	4.327	4.327	1.28	3934	0.11	2000	
Sb	123	115	1	He	1.481	1.481	1.40	1451	0.10	200	
Ba	137	115	1	He	42.949	42.949	2.69	14367	0.30	10000	
W	182	159	1	He	0.206	0.206	33.39	2308	0.01	2500	
Tl	205	165	1	He	0.095	0.095	5.07	786	0.01	2000	
Pb	208	165	1	He	4.836	4.836	0.85	50865	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1923900	1.23	1884762	102.08	60	120	
Sc	45	1	He	114760	0.72	134073	85.60	60	120	
Sc	45	2	NoGas	7566187	0.74	8481025	89.21	60	120	
Rh	103	1	He	768470	0.33	903580	85.05	60	120	
In	115	1	He	200607	0.99	224817	89.23	60	120	
Tb	159	1	He	952653	0.14	1046002	91.08	60	120	
Ho	165	1	He	960522	0.15	1057439	90.83	60	120	
Bi	209	1	He	667289	0.84	731380	91.24	60	120	

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Sample Report

Sample Table

Sample Name	PDS 310-79576-g-1-a@2
Data File Name	209SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:12:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	145.606	145.606	0.97	3147874	0.00	10000	
Be	9	45	2	NoGas	1053.287	1053.287	0.59	5804625	0.02	2000	
B	11	45	2	NoGas	120.499	120.499	1.06	426751	0.03	300	
Na	23	45	1	He	11208.253	11208.253	1.09	3907299	0.29	500000	
Mg	24	45	1	He	24149.947	24149.947	1.32	4673652	0.52	500000	
Al	27	45	1	He	58481.636	58481.636	1.48	4715611	1.24	200000	
K	39	45	1	He	11876.498	11876.498	0.59	1100096	1.08	500000	
Ca	44	45	1	He	21322.323	21322.323	0.70	115034	18.54	500000	
Ti	47	45	1	He	3154.825	3154.825	1.94	123081	2.56	2500	>LDR
V	51	45	1	He	1205.395	1205.395	0.22	1676922	0.07	10000	
Cr	52	45	1	He	1125.909	1125.909	1.57	1936467	0.06	10000	
Mn	55	45	1	He	2668.414	2668.414	0.20	2273061	0.12	10000	
Fe	56	45	1	He	113828.265	113828.265	0.71	150090305	0.08	200000	
Co	59	45	1	He	1050.689	1050.689	0.57	3301447	0.03	5000	
Ni	60	45	1	He	1036.068	1036.068	0.50	914120	0.11	10000	
Cu	63	45	1	He	1075.046	1075.046	0.60	2677641	0.04	10000	
Zn	66	45	1	He	1063.223	1063.223	0.61	338610	0.31	10000	
As	75	103	1	He	1003.189	1003.189	0.76	184790	0.54	10000	
Se	78	115	1	He	989.734	989.734	3.14	8426	11.75	10000	
Sr	88	103	1	He	1086.398	1086.398	1.38	884836	0.12	10000	
Mo	95	103	1	He	108.685	108.685	0.29	110277	0.10	2000	
Ag	107	103	1	He	102.251	102.251	1.36	383568	0.03	300	
Cd	111	115	1	He	1019.955	1019.955	2.11	433361	0.24	4000	
Sn	118	115	1	He	1066.776	1066.776	2.48	858906	0.12	2000	
Sb	123	115	1	He	106.205	106.205	1.71	96328	0.11	200	
Ba	137	115	1	He	1285.199	1285.199	2.07	408341	0.31	10000	
W	182	159	1	He	101.182	101.182	0.60	504849	0.02	2500	
Tl	205	165	1	He	262.729	262.729	1.14	2090499	0.01	2000	
Pb	208	165	1	He	1054.717	1054.717	0.45	11005490	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1795979	0.92	1884762	95.29	60	120	
Sc	45	1	He	118722	0.59	134073	88.55	60	120	
Sc	45	2	NoGas	7805374	0.13	8481025	92.03	60	120	
Rh	103	1	He	738414	0.55	903580	81.72	60	120	
In	115	1	He	190627	1.72	224817	84.79	60	120	
Tb	159	1	He	966157	0.51	1046002	92.37	60	120	
Ho	165	1	He	973622	0.40	1057439	92.07	60	120	
Bi	209	1	He	646416	0.22	731380	88.38	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-b ms@2
Data File Name	210SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:17:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	79.115	79.115	1.25	1778036	0.00	10000	
Be	9	45	2	NoGas	477.012	477.012	1.30	2656830	0.02	2000	
B	11	45	2	NoGas	71.142	71.142	2.27	257991	0.03	300	
Na	23	45	1	He	5946.304	5946.304	1.56	2069352	0.29	500000	
Mg	24	45	1	He	14833.994	14833.994	1.77	2863336	0.52	500000	
Al	27	45	1	He	49749.974	49749.974	1.57	4000972	1.24	200000	
K	39	45	1	He	6282.989	6282.989	1.19	584152	1.08	500000	
Ca	44	45	1	He	13480.129	13480.129	1.03	72596	18.57	500000	
Ti	47	45	1	He	2508.537	2508.537	1.84	97597	2.57	2500	>LDR
V	51	45	1	He	559.358	559.358	1.58	776085	0.07	10000	
Cr	52	45	1	He	526.981	526.981	1.82	904240	0.06	10000	
Mn	55	45	1	He	1151.425	1151.425	1.51	978267	0.12	10000	
Fe	56	45	1	He	78140.969	78140.969	2.24	102755220	0.08	200000	
Co	59	45	1	He	468.658	468.658	1.89	1468724	0.03	5000	
Ni	60	45	1	He	491.371	491.371	2.05	432417	0.11	10000	
Cu	63	45	1	He	496.107	496.107	1.59	1233478	0.04	10000	
Zn	66	45	1	He	512.234	512.234	1.13	162771	0.31	10000	
As	75	103	1	He	440.464	440.464	0.37	82289	0.54	10000	
Se	78	115	1	He	425.440	425.440	1.09	3715	11.45	10000	
Sr	88	103	1	He	509.128	509.128	0.45	420553	0.12	10000	
Mo	95	103	1	He	45.801	45.801	2.08	47134	0.10	2000	
Ag	107	103	1	He	45.135	45.135	0.39	171712	0.03	300	
Cd	111	115	1	He	444.455	444.455	1.29	193598	0.23	4000	
Sn	118	115	1	He	454.376	454.376	2.04	375198	0.12	2000	
Sb	123	115	1	He	22.316	22.316	1.32	20779	0.11	200	
Ba	137	115	1	He	639.234	639.234	1.10	208216	0.31	10000	
W	182	159	1	He	36.584	36.584	1.21	182852	0.02	2500	
Tl	205	165	1	He	110.045	110.045	1.07	889653	0.01	2000	
Pb	208	165	1	He	465.205	465.205	0.78	4932477	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1851655	0.89	1884762	98.24	60	120	
Sc	45	1	He	118416	1.20	134073	88.32	60	120	
Sc	45	2	NoGas	7889020	1.09	8481025	93.02	60	120	
Rh	103	1	He	748833	0.11	903580	82.87	60	120	
In	115	1	He	195396	0.89	224817	86.91	60	120	
Tb	159	1	He	963469	0.72	1046002	92.11	60	120	
Ho	165	1	He	989211	0.33	1057439	93.55	60	120	
Bi	209	1	He	657358	0.55	731380	89.88	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	211_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:21:08-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.731	0.840	1193215	0.26	50	113.5	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	54.796	1.563	279047	0.73	50	109.6	89.5	110.5	
B	11	45	2	NoGas	66.625	1.582	221311	1.88	50	133.2	89.5	110.5	CCV Failed
Na	23	45	1	He	24484.320	1.450	7822426	0.79	25000	97.9	89.5	110.5	
Mg	24	45	1	He	24472.465	1.504	4342838	0.53	25000	97.9	89.5	110.5	
Al	27	45	1	He	257.665	2.005	19141	1.36	250	103.1	89.5	110.5	
K	39	45	1	He	25943.352	1.488	2194986	0.60	25000	103.8	89.5	110.5	
Ca	44	45	1	He	25685.700	1.167	127038	0.52	25000	102.7	89.5	110.5	
Ti	47	45	1	He	56.391	5.861	2018	6.60	50	112.8	89.5	110.5	CCV Failed
V	51	45	1	He	49.751	5.570	63488	4.59	50	99.5	89.5	110.5	
Cr	52	45	1	He	50.642	2.040	80389	1.06	50	101.3	89.5	110.5	
Mn	55	45	1	He	256.764	1.412	200658	0.85	250	102.7	89.5	110.5	
Fe	56	45	1	He	12815.820	1.737	15496383	0.77	12500	102.5	89.5	110.5	
Co	59	45	1	He	51.447	1.253	148466	0.29	50	102.9	89.5	110.5	
Ni	60	45	1	He	51.297	1.947	41609	0.97	50	102.6	89.5	110.5	
Cu	63	45	1	He	50.561	1.286	117344	0.90	50	101.1	89.5	110.5	
Zn	66	45	1	He	51.656	2.801	15198	1.85	50	103.3	89.5	110.5	
As	75	103	1	He	48.870	0.501	9057	0.60	50	97.7	89.5	110.5	
Se	78	115	1	He	49.042	7.637	422	6.64	50	98.1	89.5	110.5	
Sr	88	103	1	He	50.588	1.650	41422	1.59	50	101.2	89.5	110.5	
Mo	95	103	1	He	51.970	0.404	52977	0.30	50	103.9	89.5	110.5	
Ag	107	103	1	He	50.339	0.210	189705	0.04	50	100.7	89.5	110.5	
Cd	111	115	1	He	50.681	1.983	21650	1.01	50	101.4	89.5	110.5	
Sn	118	115	1	He	51.467	0.343	41908	0.80	50	102.9	89.5	110.5	
Sb	123	115	1	He	52.544	0.618	47932	0.87	50	105.1	89.5	110.5	
Ba	137	115	1	He	51.943	0.413	16598	1.38	50	103.9	89.5	110.5	
W	182	159	1	He	51.961	0.496	252417	0.73	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.256	0.568	389769	1.11	50	100.5	89.5	110.5	
Pb	208	165	1	He	51.063	0.321	520303	0.35	50	102.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1886139	1.04	1884762	100.07	60	120	
Sc	45	1	He	108871	0.97	134073	81.20	60	120	
Sc	45	2	NoGas	7210260	0.89	8481025	85.02	60	120	
Rh	103	1	He	741782	0.19	903580	82.09	60	120	
In	115	1	He	191622	0.97	224817	85.23	60	120	
Tb	159	1	He	938357	0.74	1046002	89.71	60	120	
Ho	165	1	He	948897	0.58	1057439	89.74	60	120	
Bi	209	1	He	650796	0.45	731380	88.98	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	212_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:25:16-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.906	8.1	113906	0.2	8	
Be	9	45	2	NoGas	0.568	6.6	2956	7.1	1	
B	11	45	2	NoGas	16.444	0.5	59035	1.4	20	
Na	23	45	1	He	55.941	3.5	21458	1.4	1000	
Mg	24	45	1	He	27.417	4.2	5357	3.3	1000	
Al	27	45	1	He	3.507	3.3	348	3.9	50	
K	39	45	1	He	30.636	6.4	9744	3.0	1000	
Ca	44	45	1	He	17.459	37.6	240	12.0	1000	
Ti	47	45	1	He	0.652	49.8	23	51.5	20	
V	51	45	1	He	0.078	31.9	142	23.8	2	
Cr	52	45	1	He	0.048	54.1	620	4.9	2	
Mn	55	45	1	He	0.433	21.5	444	14.7	2	
Fe	56	45	1	He	25.600	8.1	32384	6.3	50	
Co	59	45	1	He	0.103	11.7	543	4.8	1	
Ni	60	45	1	He	0.072	34.5	173	10.0	2	
Cu	63	45	1	He	-0.510	-6.3	793	10.2	2	
Zn	66	45	1	He	0.361	43.5	224	21.6	20	
As	75	103	1	He	0.181	25.7	49	18.2	2	
Se	78	115	1	He	0.552	77.2	7	51.6	2	
Sr	88	103	1	He	0.143	35.5	152	27.7	10	
Mo	95	103	1	He	0.176	22.0	196	21.6	2	
Ag	107	103	1	He	0.056	17.9	221	17.5	0.2	
Cd	111	115	1	He	0.166	8.1	74	7.6	0.2	
Sn	118	115	1	He	0.521	22.5	693	14.6	10	
Sb	123	115	1	He	0.590	13.5	587	13.3	2	
Ba	137	115	1	He	0.203	11.7	71	10.8	5	
W	182	159	1	He	0.429	9.5	3312	6.4	10	
Tl	205	165	1	He	0.188	7.9	1486	8.0	0.5	
Pb	208	165	1	He	0.576	4.1	6888	2.8	0.5	CCB High

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1855335	0.22	1884762	98.44	60	120	
Sc	45	1	He	108308	1.65	134073	80.78	60	120	
Sc	45	2	NoGas	7064616	0.97	8481025	83.30	60	120	
Rh	103	1	He	760067	0.82	903580	84.12	60	120	
In	115	1	He	195694	0.80	224817	87.05	60	120	
Tb	159	1	He	927306	0.60	1046002	88.65	60	120	
Ho	165	1	He	942977	0.65	1057439	89.18	60	120	
Bi	209	1	He	671100	0.72	731380	91.76	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-1-c msd@2
Data File Name	213SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:29:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	82.896	82.896	0.66	1780492	0.00	10000	
Be	9	45	2	NoGas	494.806	494.806	1.47	2641092	0.02	2000	
B	11	45	2	NoGas	65.526	65.526	1.50	228349	0.03	300	
Na	23	45	1	He	6180.090	6180.090	0.50	2046853	0.30	500000	
Mg	24	45	1	He	16165.348	16165.348	0.49	2969908	0.54	500000	
Al	27	45	1	He	49459.715	49459.715	0.92	3786363	1.31	200000	
K	39	45	1	He	6656.153	6656.153	0.60	588584	1.13	500000	
Ca	44	45	1	He	14937.426	14937.426	0.81	76553	19.51	500000	
Ti	47	45	1	He	2490.394	2490.394	1.34	92222	2.70	2500	
V	51	45	1	He	583.132	583.132	1.71	770169	0.08	10000	
Cr	52	45	1	He	531.491	531.491	0.95	868113	0.06	10000	
Mn	55	45	1	He	1907.154	1907.154	2.09	1542403	0.12	10000	
Fe	56	45	1	He	85854.911	85854.911	0.84	107470302	0.08	200000	
Co	59	45	1	He	493.623	493.623	2.56	1472800	0.03	5000	
Ni	60	45	1	He	509.092	509.092	1.22	426466	0.12	10000	
Cu	63	45	1	He	515.305	515.305	0.98	1219488	0.04	10000	
Zn	66	45	1	He	536.180	536.180	0.35	162168	0.33	10000	
As	75	103	1	He	449.505	449.505	0.10	80789	0.56	10000	
Se	78	115	1	He	447.897	447.897	1.92	3723	12.03	10000	
Sr	88	103	1	He	519.259	519.259	0.35	412657	0.13	10000	
Mo	95	103	1	He	47.799	47.799	0.49	47320	0.10	2000	
Ag	107	103	1	He	46.344	46.344	0.68	169619	0.03	300	
Cd	111	115	1	He	457.191	457.191	1.62	189590	0.24	4000	
Sn	118	115	1	He	473.767	473.767	1.78	372472	0.13	2000	
Sb	123	115	1	He	20.971	20.971	2.56	18592	0.11	200	
Ba	137	115	1	He	666.127	666.127	2.48	206561	0.32	10000	
W	182	159	1	He	36.936	36.936	0.35	177988	0.02	2500	
Tl	205	165	1	He	113.878	113.878	0.81	885651	0.01	2000	
Pb	208	165	1	He	481.200	481.200	0.31	4908331	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1816504	0.70	1884762	96.38	60	120	
Sc	45	1	He	112700	1.50	134073	84.06	60	120	
Sc	45	2	NoGas	7560715	1.35	8481025	89.15	60	120	
Rh	103	1	He	720407	1.83	903580	79.73	60	120	
In	115	1	He	186026	1.57	224817	82.75	60	120	
Tb	159	1	He	928930	1.34	1046002	88.81	60	120	
Ho	165	1	He	951656	1.09	1057439	90.00	60	120	
Bi	209	1	He	647075	0.72	731380	88.47	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-2-a@2
Data File Name	214SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:33:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	32.652	32.652	0.50	743616	0.00	10000	
Be	9	45	2	NoGas	2.242	2.242	6.10	11771	0.02	2000	
B	11	45	2	NoGas	21.454	21.454	2.18	77889	0.03	300	
Na	23	45	1	He	1119.275	1119.275	1.07	362681	0.31	500000	
Mg	24	45	1	He	14408.631	14408.631	0.77	2568127	0.56	500000	
Al	27	45	1	He	30288.134	30288.134	1.53	2249153	1.35	200000	
K	39	45	1	He	2907.797	2907.797	0.85	253502	1.15	500000	
Ca	44	45	1	He	22802.045	22802.045	1.33	113272	20.13	500000	
Ti	47	45	1	He	2046.131	2046.131	1.88	73504	2.78	2500	
V	51	45	1	He	129.305	129.305	1.53	165685	0.08	10000	
Cr	52	45	1	He	120.502	120.502	2.11	191337	0.06	10000	
Mn	55	45	1	He	1326.979	1326.979	1.30	1040949	0.13	10000	
Fe	56	45	1	He	79005.344	79005.344	1.22	95930858	0.08	200000	
Co	59	45	1	He	29.254	29.254	1.68	84888	0.03	5000	
Ni	60	45	1	He	75.671	75.671	1.49	61587	0.12	10000	
Cu	63	45	1	He	85.624	85.624	1.22	198192	0.04	10000	
Zn	66	45	1	He	119.920	119.920	1.63	35275	0.34	10000	
As	75	103	1	He	11.539	11.539	1.96	2082	0.55	10000	
Se	78	115	1	He	8.601	8.601	9.90	75	11.40	10000	
Sr	88	103	1	He	58.031	58.031	1.18	46022	0.13	10000	
Mo	95	103	1	He	11.684	11.684	3.81	11545	0.10	2000	
Ag	107	103	1	He	1.551	1.551	3.13	5667	0.03	300	
Cd	111	115	1	He	0.834	0.834	9.61	355	0.23	4000	
Sn	118	115	1	He	23.185	23.185	2.07	18882	0.12	2000	
Sb	123	115	1	He	0.802	0.802	12.01	761	0.11	200	
Ba	137	115	1	He	137.116	137.116	1.18	43482	0.32	10000	
W	182	159	1	He	1.138	1.138	6.49	6657	0.02	2500	
Tl	205	165	1	He	0.437	0.437	5.43	3407	0.01	2000	
Pb	208	165	1	He	14.754	14.754	0.59	150434	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1784700	0.77	1884762	94.69	60	120	
Sc	45	1	He	109333	0.97	134073	81.55	60	120	
Sc	45	2	NoGas	7357677	0.27	8481025	86.75	60	120	
Rh	103	1	He	718553	0.76	903580	79.52	60	120	
In	115	1	He	190213	1.13	224817	84.61	60	120	
Tb	159	1	He	921769	0.78	1046002	88.12	60	120	
Ho	165	1	He	944698	0.23	1057439	89.34	60	120	
Bi	209	1	He	643816	0.94	731380	88.03	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-g-3-a@2
Data File Name	215SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:37:46-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	38.139	38.139	1.27	831270	0.00	10000	
Be	9	45	2	NoGas	1.901	1.901	3.97	9758	0.02	2000	
B	11	45	2	NoGas	20.407	20.407	0.73	72690	0.03	300	
Na	23	45	1	He	2208.446	2208.446	1.28	707778	0.31	500000	
Mg	24	45	1	He	16158.218	16158.218	1.77	2862802	0.56	500000	
Al	27	45	1	He	39955.256	39955.256	2.07	2949350	1.35	200000	
K	39	45	1	He	2787.255	2787.255	1.62	241853	1.15	500000	
Ca	44	45	1	He	11321.015	11321.015	1.99	55985	20.22	500000	
Ti	47	45	1	He	2430.306	2430.306	1.94	86790	2.80	2500	
V	51	45	1	He	161.521	161.521	0.31	205745	0.08	10000	
Cr	52	45	1	He	105.832	105.832	1.71	167126	0.06	10000	
Mn	55	45	1	He	1470.898	1470.898	1.76	1147028	0.13	10000	
Fe	56	45	1	He	87093.967	87093.967	2.34	105124849	0.08	200000	
Co	59	45	1	He	36.225	36.225	1.98	104437	0.03	5000	
Ni	60	45	1	He	91.852	91.852	1.01	74293	0.12	10000	
Cu	63	45	1	He	106.913	106.913	1.51	245526	0.04	10000	
Zn	66	45	1	He	151.476	151.476	1.78	44263	0.34	10000	
As	75	103	1	He	15.141	15.141	0.50	2706	0.56	10000	
Se	78	115	1	He	10.042	10.042	9.23	86	11.69	10000	
Sr	88	103	1	He	55.969	55.969	1.71	44033	0.13	10000	
Mo	95	103	1	He	1.897	1.897	3.48	1868	0.10	2000	
Ag	107	103	1	He	0.149	0.149	2.35	544	0.03	300	
Cd	111	115	1	He	0.362	0.362	7.99	152	0.24	4000	
Sn	118	115	1	He	25.371	25.371	1.44	20224	0.13	2000	
Sb	123	115	1	He	0.796	0.796	8.53	740	0.11	200	
Ba	137	115	1	He	214.248	214.248	0.16	66589	0.32	10000	
W	182	159	1	He	0.648	0.648	13.52	4338	0.01	2500	
Tl	205	165	1	He	0.384	0.384	3.19	2997	0.01	2000	
Pb	208	165	1	He	50.250	50.250	0.41	508746	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1748584	0.67	1884762	92.77	60	120	
Sc	45	1	He	108687	0.64	134073	81.07	60	120	
Sc	45	2	NoGas	7182072	1.06	8481025	84.68	60	120	
Rh	103	1	He	712769	0.69	903580	78.88	60	120	
In	115	1	He	186422	1.27	224817	82.92	60	120	
Tb	159	1	He	924221	1.05	1046002	88.36	60	120	
Ho	165	1	He	942786	0.35	1057439	89.16	60	120	
Bi	209	1	He	640539	0.96	731380	87.58	60	120	

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Sample Report

Sample Table

Sample Name	310-79576-f-4-a@2
Data File Name	216SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:41:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	41.610	41.610	1.13	869930	0.00	10000	
Be	9	45	2	NoGas	1.946	1.946	1.59	9677	0.02	2000	
B	11	45	2	NoGas	23.789	23.789	2.75	80887	0.03	300	
Na	23	45	1	He	1902.349	1902.349	1.47	601204	0.32	500000	
Mg	24	45	1	He	17641.083	17641.083	1.45	3079763	0.57	500000	
Al	27	45	1	He	44563.701	44563.701	1.04	3241444	1.37	200000	
K	39	45	1	He	3826.778	3826.778	1.61	324529	1.18	500000	
Ca	44	45	1	He	11494.247	11494.247	0.69	56008	20.52	500000	
Ti	47	45	1	He	2636.892	2636.892	0.33	92794	2.84	2500	>LDR
V	51	45	1	He	173.292	173.292	0.74	217494	0.08	10000	
Cr	52	45	1	He	120.141	120.141	1.22	186867	0.06	10000	
Mn	55	45	1	He	1363.509	1363.509	1.20	1047687	0.13	10000	
Fe	56	45	1	He	92306.872	92306.872	0.45	109790873	0.08	200000	
Co	59	45	1	He	36.146	36.146	0.53	102693	0.04	5000	
Ni	60	45	1	He	98.534	98.534	0.81	78520	0.13	10000	
Cu	63	45	1	He	114.178	114.178	0.63	258240	0.04	10000	
Zn	66	45	1	He	123.381	123.381	1.74	35545	0.35	10000	
As	75	103	1	He	14.607	14.607	0.87	2540	0.58	10000	
Se	78	115	1	He	10.631	10.631	10.14	89	11.92	10000	
Sr	88	103	1	He	48.501	48.501	1.53	37127	0.13	10000	
Mo	95	103	1	He	2.208	2.208	6.96	2115	0.10	2000	
Ag	107	103	1	He	0.536	0.536	3.75	1895	0.03	300	
Cd	111	115	1	He	0.329	0.329	6.17	136	0.24	4000	
Sn	118	115	1	He	21.849	21.849	1.63	17139	0.13	2000	
Sb	123	115	1	He	0.701	0.701	4.98	644	0.11	200	
Ba	137	115	1	He	215.102	215.102	0.72	65652	0.33	10000	
W	182	159	1	He	0.901	0.901	8.71	5483	0.02	2500	
Tl	205	165	1	He	0.409	0.409	4.45	3149	0.01	2000	
Pb	208	165	1	He	21.219	21.219	1.30	213064	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1694743	1.99	1884762	89.92	60	120	
Sc	45	1	He	107094	1.20	134073	79.88	60	120	
Sc	45	2	NoGas	6957814	0.97	8481025	82.04	60	120	
Rh	103	1	He	693445	0.27	903580	76.74	60	120	
In	115	1	He	183072	0.25	224817	81.43	60	120	
Tb	159	1	He	914401	1.19	1046002	87.42	60	120	
Ho	165	1	He	932421	0.73	1057439	88.18	60	120	
Bi	209	1	He	633418	0.63	731380	86.61	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	217_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:46:10-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.838	0.591	1037629	0.53	50	105.7	89.5	110.5	
Be	9	45	2	NoGas	53.420	0.701	252472	0.77	50	106.8	89.5	110.5	
B	11	45	2	NoGas	66.740	0.772	205710	0.52	50	133.5	89.5	110.5	CCV Failed
Na	23	45	1	He	23737.535	1.269	7026845	0.74	25000	95.0	89.5	110.5	
Mg	24	45	1	He	23788.214	1.701	3911413	1.41	25000	95.2	89.5	110.5	
Al	27	45	1	He	247.019	1.585	17006	0.80	250	98.8	89.5	110.5	
K	39	45	1	He	25175.282	1.356	1973826	1.35	25000	100.7	89.5	110.5	
Ca	44	45	1	He	25220.039	0.341	115581	1.06	25000	100.9	89.5	110.5	
Ti	47	45	1	He	54.254	7.272	1798	6.78	50	108.5	89.5	110.5	
V	51	45	1	He	48.832	1.906	57757	1.92	50	97.7	89.5	110.5	
Cr	52	45	1	He	49.490	2.336	72801	1.72	50	99.0	89.5	110.5	
Mn	55	45	1	He	253.045	1.136	183226	0.67	250	101.2	89.5	110.5	
Fe	56	45	1	He	12602.251	2.370	14118612	1.78	12500	100.8	89.5	110.5	
Co	59	45	1	He	49.925	1.654	133494	0.98	50	99.8	89.5	110.5	
Ni	60	45	1	He	49.523	2.533	37224	2.14	50	99.0	89.5	110.5	
Cu	63	45	1	He	49.414	1.112	106303	1.37	50	98.8	89.5	110.5	
Zn	66	45	1	He	51.402	1.673	14013	0.80	50	102.8	89.5	110.5	
As	75	103	1	He	48.057	1.751	8299	2.93	50	96.1	89.5	110.5	
Se	78	115	1	He	46.413	6.696	378	7.72	50	92.8	89.5	110.5	
Sr	88	103	1	He	50.355	1.316	38415	1.66	50	100.7	89.5	110.5	
Mo	95	103	1	He	52.069	0.526	49453	1.35	50	104.1	89.5	110.5	
Ag	107	103	1	He	50.564	0.705	177533	0.76	50	101.1	89.5	110.5	
Cd	111	115	1	He	49.447	1.546	19997	1.59	50	98.9	89.5	110.5	
Sn	118	115	1	He	49.849	3.183	38422	1.70	50	99.7	89.5	110.5	
Sb	123	115	1	He	51.546	1.044	44513	1.53	50	103.1	89.5	110.5	
Ba	137	115	1	He	51.661	0.658	15626	1.00	50	103.3	89.5	110.5	
W	182	159	1	He	51.302	2.414	237922	3.29	50	102.6	89.5	110.5	
Tl	205	165	1	He	50.466	1.442	374475	1.32	50	100.9	89.5	110.5	
Pb	208	165	1	He	50.801	0.320	495279	0.66	50	101.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1736651	1.14	1884762	92.14	60	120	
Sc	45	1	He	100872	0.95	134073	75.24	60	120	
Sc	45	2	NoGas	6691005	0.39	8481025	78.89	60	120	
Rh	103	1	He	691119	1.24	903580	76.49	60	120	
In	115	1	He	181397	1.45	224817	80.69	60	120	
Tb	159	1	He	895656	1.06	1046002	85.63	60	120	
Ho	165	1	He	907916	0.87	1057439	85.86	60	120	
Bi	209	1	He	624525	0.56	731380	85.39	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	218_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:50:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.849	1.4	109208	0.4	8	
Be	9	45	2	NoGas	0.356	7.9	1834	7.6	1	
B	11	45	2	NoGas	21.039	2.4	71121	2.4	20	CCB High
Na	23	45	1	He	55.381	0.8	19882	2.1	1000	
Mg	24	45	1	He	28.075	9.7	5119	11.0	1000	
Al	27	45	1	He	2.725	12.2	271	9.2	50	
K	39	45	1	He	32.720	23.6	9255	4.4	1000	
Ca	44	45	1	He	34.956	15.5	305	6.5	1000	
Ti	47	45	1	He	0.633	53.9	21	55.4	20	
V	51	45	1	He	0.173	65.2	246	56.2	2	
Cr	52	45	1	He	0.058	83.8	593	10.7	2	
Mn	55	45	1	He	0.430	8.3	413	5.0	2	
Fe	56	45	1	He	25.146	3.9	29761	4.5	50	
Co	59	45	1	He	0.026	52.3	302	12.7	1	
Ni	60	45	1	He	0.049	130.6	144	31.4	2	
Cu	63	45	1	He	-0.580	-3.8	592	7.3	2	
Zn	66	45	1	He	0.441	56.0	230	26.6	20	
As	75	103	1	He	0.129	22.6	37	15.0	2	
Se	78	115	1	He	0.230	82.0	4	37.0	2	
Sr	88	103	1	He	0.080	32.8	94	20.7	10	
Mo	95	103	1	He	0.174	12.2	183	10.1	2	
Ag	107	103	1	He	0.066	5.3	248	4.7	0.2	
Cd	111	115	1	He	0.113	13.5	49	13.7	0.2	
Sn	118	115	1	He	0.506	23.7	656	15.5	10	
Sb	123	115	1	He	0.401	19.7	396	17.5	2	
Ba	137	115	1	He	0.045	46.9	19	36.7	5	
W	182	159	1	He	0.349	4.4	2852	3.5	10	
Tl	205	165	1	He	0.146	12.1	1133	12.2	0.5	
Pb	208	165	1	He	0.377	4.3	4750	2.8	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1789430	1.62	1884762	94.94	60	120	
Sc	45	1	He	101165	2.31	134073	75.45	60	120	
Sc	45	2	NoGas	6837170	0.23	8481025	80.62	60	120	
Rh	103	1	He	723371	1.32	903580	80.06	60	120	
In	115	1	He	188683	1.41	224817	83.93	60	120	
Tb	159	1	He	902694	1.29	1046002	86.30	60	120	
Ho	165	1	He	918674	0.66	1057439	86.88	60	120	
Bi	209	1	He	654811	1.02	731380	89.53	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	219CRIA.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:54:31-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	9.366	9.366	1.811	263138	0.39	8	117.1	69.5	130.5	
Be	9	2	NoGas	1.252	1.252	3.072	6116	1.64	1	125.2	69.5	130.5	
B	11	2	NoGas	36.019	36.019	3.238	115861	1.95	20	180.1	69.5	130.5	6020A CR1 Failed
Na	23	1	He	956.515	956.515	3.170	292891	1.29	1000	95.7	69.5	130.5	
Mg	24	1	He	954.525	954.525	3.951	160925	1.51	1000	95.5	69.5	130.5	
Al	27	1	He	51.390	51.390	1.214	3687	2.93	50	102.8	69.5	130.5	
K	39	1	He	999.530	999.530	3.767	86677	1.04	1000	100.0	69.5	130.5	
Ca	44	1	He	986.054	986.054	1.895	4765	3.87	1000	98.6	69.5	130.5	
Ti	47	1	He	9.959	9.959	2.762	338	4.97	10	99.6	69.5	130.5	
V	51	1	He	5.206	5.206	3.328	6336	4.34	5	104.1	69.5	130.5	
Cr	52	1	He	2.037	2.037	9.190	3559	5.58	2	101.8	69.5	130.5	
Mn	55	1	He	5.303	5.303	9.554	4024	7.03	5	106.1	69.5	130.5	
Fe	56	1	He	114.696	114.696	4.316	132887	1.94	100	114.7	69.5	130.5	
Co	59	1	He	1.041	1.041	5.410	3079	3.75	1	104.1	69.5	130.5	
Ni	60	1	He	2.038	2.038	1.424	1672	1.17	2	101.9	69.5	130.5	
Cu	63	1	He	1.535	1.535	4.823	5179	3.80	2	76.7	69.5	130.5	
Zn	66	1	He	20.974	20.974	0.212	5917	2.19	20	104.9	69.5	130.5	
As	75	1	He	4.821	4.821	2.199	885	1.96	5	96.4	69.5	130.5	
Se	78	1	He	5.443	5.443	15.063	49	14.66	5	108.9	69.5	130.5	
Sr	88	1	He	9.836	9.836	2.409	7891	1.55	10	98.4	69.5	130.5	
Mo	95	1	He	5.197	5.197	2.130	5183	1.25	5	103.9	69.5	130.5	
Ag	107	1	He	1.008	1.008	4.730	3718	5.27	1	100.8	69.5	130.5	
Cd	111	1	He	1.066	1.066	4.828	458	5.09	1	106.6	69.5	130.5	
Sn	118	1	He	9.795	9.795	4.930	8199	5.21	10	98.0	69.5	130.5	
Sb	123	1	He	2.247	2.247	2.567	2088	2.08	2	112.4	69.5	130.5	
Ba	137	1	He	5.018	5.018	10.260	1610	10.05	5	100.4	69.5	130.5	
W	182	1	He	10.487	10.487	1.660	50134	2.52	10	104.9	69.5	130.5	
Tl	205	1	He	1.072	1.072	0.461	8035	0.97	1	107.2	69.5	130.5	
Pb	208	1	He	1.326	1.326	2.957	14008	2.78	1	132.6	69.5	130.5	6020A CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1786221	1.43	1884762	94.77	60	120	
Sc	45	1	He	103181	2.39	134073	76.96	60	120	
Sc	45	2	NoGas	6789102	1.38	8481025	80.05	60	120	
Rh	103	1	He	724532	0.91	903580	80.18	60	120	
In	115	1	He	191950	0.45	224817	85.38	60	120	
Tb	159	1	He	905361	1.93	1046002	86.55	60	120	
Ho	165	1	He	913143	0.52	1057439	86.35	60	120	
Bi	209	1	He	658012	0.12	731380	89.97	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-228999/1-a@2
Data File Name	220_Blk.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T02:58:45-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.752	10.7	106637	0.2	8	
Be	9	45	2	NoGas	0.189	16.5	1022	15.1	1	
B	11	45	2	NoGas	15.593	0.9	54150	1.8	20	
Na	23	45	1	He	61.373	5.4	21521	4.7	1000	
Mg	24	45	1	He	47.945	1.8	8336	2.3	1000	
Al	27	45	1	He	4.982	3.7	423	2.7	50	
K	39	45	1	He	19.871	36.0	8206	7.5	1000	
Ca	44	45	1	He	144.624	4.6	803	3.4	1000	
Ti	47	45	1	He	0.303	67.3	10	66.7	20	
V	51	45	1	He	-0.071	-408.1	-45	-761.4	2	
Cr	52	45	1	He	0.262	7.6	888	2.5	2	
Mn	55	45	1	He	0.333	3.8	341	2.5	2	
Fe	56	45	1	He	11.301	7.8	14108	6.2	50	
Co	59	45	1	He	0.017	117.7	278	18.8	1	
Ni	60	45	1	He	0.133	24.6	207	12.2	2	
Cu	63	45	1	He	-0.181	-18.8	1429	4.6	2	
Zn	66	45	1	He	2.825	7.3	872	6.9	20	
As	75	103	1	He	0.048	27.7	23	10.0	2	
Se	78	115	1	He	0.055	344.0	3	56.6	2	
Sr	88	103	1	He	0.389	20.1	342	19.1	10	
Mo	95	103	1	He	0.079	13.8	89	12.1	2	
Ag	107	103	1	He	0.003	95.3	17	60.0	0.2	
Cd	111	115	1	He	0.026	41.9	12	36.6	0.2	
Sn	118	115	1	He	32.951	1.9	26347	1.5	10	Blank High
Sb	123	115	1	He	0.270	33.3	276	28.0	2	
Ba	137	115	1	He	0.523	20.6	168	19.1	5	
W	182	159	1	He	0.360	8.4	2897	4.6	10	
Tl	205	165	1	He	0.026	19.8	228	17.0	0.5	
Pb	208	165	1	He	0.384	6.4	4760	5.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1782123	1.00	1884762	94.55	60	120	
Sc	45	1	He	100511	0.75	134073	74.97	60	120	
Sc	45	2	NoGas	6787302	1.22	8481025	80.03	60	120	
Rh	103	1	He	723394	0.86	903580	80.06	60	120	
In	115	1	He	187541	1.30	224817	83.42	60	120	
Tb	159	1	He	900867	0.26	1046002	86.12	60	120	
Ho	165	1	He	908222	0.18	1057439	85.89	60	120	
Bi	209	1	He	661544	0.32	731380	90.45	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-228999/2-a@2
Data File Name	221LCSS.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:02:56-04:00
Sample Type	LCSS
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	50.140	50.140	0.250	993420	0.58	50	100.3	79.5	120.5	
Be	9	2	NoGas	527.518	527.518	0.652	2502443	0.98	500	105.5	78.6	110.5	
B	11	2	NoGas	59.013	59.013	0.720	183450	0.34	50	118.0	79.5	120.5	
Na	23	1	He	4619.580	4619.580	3.363	1368826	1.14	5000	92.4	79.5	120.5	
Mg	24	1	He	4420.591	4420.591	3.179	726485	0.27	5000	88.4	79.5	120.5	
Al	27	1	He	4541.457	4541.457	4.133	310820	1.24	5000	90.8	79.5	120.5	
K	39	1	He	4730.203	4730.203	3.463	375869	0.84	5000	94.6	79.5	120.5	
Ca	44	1	He	4874.124	4874.124	3.516	22428	1.19	5000	97.5	79.5	120.5	
Ti	47	1	He	46.237	46.237	9.812	1529	7.13	50	92.5	79.5	120.5	
V	51	1	He	456.688	456.688	3.558	539205	1.19	500	91.3	71.5	110.5	
Cr	52	1	He	465.892	465.892	3.797	680292	0.91	500	93.2	69.5	110.5	
Mn	55	1	He	479.654	479.654	3.063	346866	0.71	500	95.9	79.5	120.5	
Fe	56	1	He	4798.035	4798.035	3.673	5370342	0.77	5000	96.0	79.5	120.5	
Co	59	1	He	479.644	479.644	3.539	1279113	0.68	500	95.9	73.9	110.5	
Ni	60	1	He	477.675	477.675	3.155	357743	0.29	500	95.5	74.9	110.5	
Cu	63	1	He	478.167	478.167	3.265	1011754	0.36	500	95.6	72.6	110.5	
Zn	66	1	He	471.555	471.555	3.147	127532	1.68	500	94.3	71.5	113.4	
As	75	1	He	437.719	437.719	0.787	76604	0.65	500	87.5	73.4	110.5	
Se	78	1	He	438.580	438.580	3.457	3559	1.54	500	87.7	64.6	110.5	
Sr	88	1	He	457.388	457.388	1.522	353894	0.21	500	91.5	79.5	120.5	
Mo	95	1	He	48.143	48.143	0.832	46416	2.22	50	96.3	29.5	140.5	
Ag	107	1	He	47.616	47.616	1.522	169683	0.35	50	95.2	59.5	114.5	
Cd	111	1	He	464.508	464.508	0.823	188112	1.34	500	92.9	73.5	110.5	
Sn	118	1	He	494.168	494.168	1.618	379334	0.95	500	98.8	79.5	120.5	
Sb	123	1	He	48.008	48.008	2.958	41507	1.06	50	96.0	67.5	113.4	
Ba	137	1	He	491.847	491.847	1.171	148937	0.74	500	98.4	69.5	110.5	
W	182	1	He	48.712	48.712	1.642	226560	2.01	50	97.4	74.6	125.4	
Tl	205	1	He	118.673	118.673	1.507	888495	0.69	125	94.9	70.6	110.5	
Pb	208	1	He	485.293	485.293	1.514	4765106	0.67	500	97.1	74.6	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1738752	0.52	1884762	92.25	60	120	
Sc	45	1	He	100822	2.95	134073	75.20	60	120	
Sc	45	2	NoGas	6718604	0.36	8481025	79.22	60	120	
Rh	103	1	He	701513	1.39	903580	77.64	60	120	
In	115	1	He	181664	1.90	224817	80.81	60	120	
Tb	159	1	He	898068	0.39	1046002	85.86	60	120	
Ho	165	1	He	916163	0.94	1057439	86.64	60	120	
Bi	209	1	He	640436	0.74	731380	87.57	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-a@2
Data File Name	222SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:07:06-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	74.661	74.661	1.54	1533373	0.00	10000	
Be	9	45	2	NoGas	2.648	2.648	3.57	13554	0.02	2000	
B	11	45	2	NoGas	35.912	35.912	1.08	122290	0.03	300	
Na	23	45	1	He	589.678	589.678	1.64	186150	0.32	500000	
Mg	24	45	1	He	27691.556	27691.556	1.42	4763892	0.58	500000	
Al	27	45	1	He	33956.776	33956.776	1.62	2434104	1.40	200000	
K	39	45	1	He	5799.420	5799.420	1.72	481105	1.21	500000	
Ca	44	45	1	He	89828.439	89828.439	1.21	430320	20.87	500000	
Ti	47	45	1	He	311.294	311.294	3.14	10796	2.88	2500	
V	51	45	1	He	65.112	65.112	1.75	80559	0.08	10000	
Cr	52	45	1	He	51.947	51.947	0.32	79933	0.06	10000	
Mn	55	45	1	He	1202.490	1202.490	0.99	910636	0.13	10000	
Fe	56	45	1	He	83530.358	83530.358	1.49	97910761	0.09	200000	
Co	59	45	1	He	34.401	34.401	1.69	96323	0.04	5000	
Ni	60	45	1	He	89.570	89.570	2.04	70354	0.13	10000	
Cu	63	45	1	He	116.319	116.319	0.83	259236	0.04	10000	
Zn	66	45	1	He	249.898	249.898	1.43	70837	0.35	10000	
As	75	103	1	He	38.090	38.090	0.81	6584	0.58	10000	
Se	78	115	1	He	10.552	10.552	4.73	89	11.92	10000	
Sr	88	103	1	He	139.202	139.202	0.35	106206	0.13	10000	
Mo	95	103	1	He	16.295	16.295	0.34	15493	0.11	2000	
Ag	107	103	1	He	0.128	0.128	13.29	458	0.03	300	
Cd	111	115	1	He	0.794	0.794	6.15	325	0.24	4000	
Sn	118	115	1	He	19.552	19.552	4.68	15363	0.13	2000	
Sb	123	115	1	He	0.826	0.826	7.59	753	0.11	200	
Ba	137	115	1	He	228.917	228.917	1.73	69841	0.33	10000	
W	182	159	1	He	0.726	0.726	3.78	4627	0.02	2500	
Tl	205	165	1	He	1.408	1.408	1.53	10603	0.01	2000	
Pb	208	165	1	He	50.603	50.603	0.72	498888	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1752093	0.54	1884762	92.96	60	120	
Sc	45	1	He	105538	0.54	134073	78.72	60	120	
Sc	45	2	NoGas	7183711	0.98	8481025	84.70	60	120	
Rh	103	1	He	691517	1.63	903580	76.53	60	120	
In	115	1	He	183025	1.22	224817	81.41	60	120	
Tb	159	1	He	907355	1.25	1046002	86.75	60	120	
Ho	165	1	He	918126	1.03	1057439	86.83	60	120	
Bi	209	1	He	625168	0.57	731380	85.48	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-64385-b-1-a@10
Data File Name	223SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:11:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.403	15.403	0.95	379700	0.00	10000	
Be	9	45	2	NoGas	0.669	0.669	5.17	3382	0.02	2000	
B	11	45	2	NoGas	16.252	16.252	0.37	57189	0.03	300	
Na	23	45	1	He	143.750	143.750	3.22	47477	0.30	500000	
Mg	24	45	1	He	5615.764	5615.764	1.88	954117	0.59	500000	
Al	27	45	1	He	6614.704	6614.704	2.37	468137	1.41	200000	
K	39	45	1	He	1200.135	1200.135	0.91	103775	1.16	500000	
Ca	44	45	1	He	18420.031	18420.031	2.24	87224	21.12	500000	
Ti	47	45	1	He	65.363	65.363	6.03	2237	2.92	2500	
V	51	45	1	He	13.001	13.001	2.54	15919	0.08	10000	
Cr	52	45	1	He	10.673	10.673	3.32	16627	0.06	10000	
Mn	55	45	1	He	250.533	250.533	1.95	187368	0.13	10000	
Fe	56	45	1	He	17475.511	17475.511	1.69	20222421	0.09	200000	
Co	59	45	1	He	7.250	7.250	3.36	20227	0.04	5000	
Ni	60	45	1	He	18.728	18.728	3.36	14610	0.13	10000	
Cu	63	45	1	He	24.539	24.539	2.57	55464	0.04	10000	
Zn	66	45	1	He	53.950	53.950	2.11	15187	0.36	10000	
As	75	103	1	He	7.403	7.403	1.57	1328	0.56	10000	
Se	78	115	1	He	2.419	2.419	11.12	23	10.65	10000	
Sr	88	103	1	He	27.672	27.672	1.91	21756	0.13	10000	
Mo	95	103	1	He	3.328	3.328	3.42	3265	0.10	2000	
Ag	107	103	1	He	0.025	0.025	8.53	96	0.03	300	
Cd	111	115	1	He	0.182	0.182	12.15	78	0.23	4000	
Sn	118	115	1	He	4.213	4.213	6.10	3604	0.12	2000	
Sb	123	115	1	He	0.215	0.215	15.61	228	0.09	200	
Ba	137	115	1	He	46.558	46.558	1.90	14630	0.32	10000	
W	182	159	1	He	0.150	0.150	21.51	1919	0.01	2500	
Tl	205	165	1	He	0.275	0.275	3.66	2096	0.01	2000	
Pb	208	165	1	He	10.573	10.573	0.69	104785	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1762797	0.25	1884762	93.53	60	120	
Sc	45	1	He	104197	1.27	134073	77.72	60	120	
Sc	45	2	NoGas	6914623	0.87	8481025	81.53	60	120	
Rh	103	1	He	711796	0.10	903580	78.78	60	120	
In	115	1	He	188433	0.15	224817	83.82	60	120	
Tb	159	1	He	899228	0.92	1046002	85.97	60	120	
Ho	165	1	He	915738	0.80	1057439	86.60	60	120	
Bi	209	1	He	644837	0.45	731380	88.17	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-64385-b-1-a@2
Data File Name	224SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:15:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	181.348	181.348	1.15	3507159	0.01	10000	
Be	9	45	2	NoGas	1105.227	1105.227	0.63	5485272	0.02	2000	
B	11	45	2	NoGas	136.238	136.238	0.22	433586	0.03	300	
Na	23	45	1	He	10258.231	10258.231	0.32	3137331	0.33	500000	
Mg	24	45	1	He	37122.839	37122.839	0.24	6301987	0.59	500000	
Al	27	45	1	He	43417.831	43417.831	1.00	3071266	1.41	200000	
K	39	45	1	He	15835.237	15835.237	0.97	1284437	1.23	500000	
Ca	44	45	1	He	98157.808	98157.808	0.27	464003	21.15	500000	
Ti	47	45	1	He	406.323	406.323	1.27	13905	2.92	2500	
V	51	45	1	He	1136.152	1136.152	2.71	1386627	0.08	10000	
Cr	52	45	1	He	1104.652	1104.652	1.80	1666770	0.07	10000	
Mn	55	45	1	He	2301.983	2301.983	0.91	1720101	0.13	10000	
Fe	56	45	1	He	92003.972	92003.972	0.91	106421880	0.09	200000	
Co	59	45	1	He	1085.607	1085.607	0.64	2992296	0.04	5000	
Ni	60	45	1	He	1071.795	1071.795	0.74	829524	0.13	10000	
Cu	63	45	1	He	1144.912	1144.912	0.60	2501328	0.05	10000	
Zn	66	45	1	He	1228.337	1228.337	0.37	343147	0.36	10000	
As	75	103	1	He	1045.477	1045.477	0.64	178740	0.58	10000	
Se	78	115	1	He	992.223	992.223	0.70	7925	12.52	10000	
Sr	88	103	1	He	1168.437	1168.437	0.67	883252	0.13	10000	
Mo	95	103	1	He	125.631	125.631	1.11	118308	0.11	2000	
Ag	107	103	1	He	102.917	102.917	0.94	358315	0.03	300	
Cd	111	115	1	He	1017.608	1017.608	1.04	405626	0.25	4000	
Sn	118	115	1	He	1080.301	1080.301	0.96	816041	0.13	2000	
Sb	123	115	1	He	107.307	107.307	0.73	91304	0.12	200	
Ba	137	115	1	He	1313.389	1313.389	1.17	391482	0.34	10000	
W	182	159	1	He	104.597	104.597	2.22	489720	0.02	2500	
Tl	205	165	1	He	267.477	267.477	1.54	1999195	0.01	2000	
Pb	208	165	1	He	1098.805	1098.805	0.51	10769917	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1649851	1.28	1884762	87.54	60	120	
Sc	45	1	He	104143	0.55	134073	77.68	60	120	
Sc	45	2	NoGas	7029536	0.72	8481025	82.89	60	120	
Rh	103	1	He	685341	1.00	903580	75.85	60	120	
In	115	1	He	178805	0.85	224817	79.53	60	120	
Tb	159	1	He	906712	0.20	1046002	86.68	60	120	
Ho	165	1	He	914558	0.42	1057439	86.49	60	120	
Bi	209	1	He	613275	0.57	731380	83.85	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-b ms@2
Data File Name	225SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:19:33-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	150.603	150.603	1.12	2911848	0.01	10000	
Be	9	45	2	NoGas	492.196	492.196	0.93	2428622	0.02	2000	
B	11	45	2	NoGas	93.203	93.203	1.73	297176	0.03	300	
Na	23	45	1	He	4868.686	4868.686	1.93	1529817	0.32	500000	
Mg	24	45	1	He	35755.743	35755.743	2.62	6228052	0.57	500000	
Al	27	45	1	He	52949.391	52949.391	2.12	3843093	1.38	200000	
K	39	45	1	He	11691.343	11691.343	2.13	974897	1.20	500000	
Ca	44	45	1	He	113900.658	113900.658	2.33	552430	20.62	500000	
Ti	47	45	1	He	479.209	479.209	2.90	16826	2.85	2500	
V	51	45	1	He	506.307	506.307	1.95	634039	0.08	10000	
Cr	52	45	1	He	492.576	492.576	2.49	762835	0.06	10000	
Mn	55	45	1	He	1959.110	1959.110	2.91	1502036	0.13	10000	
Fe	56	45	1	He	106884.861	106884.861	1.46	126864102	0.08	200000	
Co	59	45	1	He	462.624	462.624	1.92	1308544	0.04	5000	
Ni	60	45	1	He	525.439	525.439	1.37	417359	0.13	10000	
Cu	63	45	1	He	566.737	566.737	2.18	1271418	0.04	10000	
Zn	66	45	1	He	732.425	732.425	1.82	209998	0.35	10000	
As	75	103	1	He	477.426	477.426	1.00	81534	0.59	10000	
Se	78	115	1	He	417.834	417.834	2.19	3349	12.47	10000	
Sr	88	103	1	He	635.172	635.172	1.38	479598	0.13	10000	
Mo	95	103	1	He	70.307	70.307	1.53	66135	0.11	2000	
Ag	107	103	1	He	45.299	45.299	0.95	157537	0.03	300	
Cd	111	115	1	He	436.875	436.875	2.03	174709	0.25	4000	
Sn	118	115	1	He	443.983	443.983	1.81	336625	0.13	2000	
Sb	123	115	1	He	18.287	18.287	3.33	15636	0.12	200	
Ba	137	115	1	He	763.448	763.448	2.62	228297	0.33	10000	
W	182	159	1	He	34.873	34.873	0.99	162530	0.02	2500	
Tl	205	165	1	He	109.821	109.821	1.46	822061	0.01	2000	
Pb	208	165	1	He	513.514	513.514	0.60	5041291	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1683953	0.53	1884762	89.35	60	120	
Sc	45	1	He	106882	1.52	134073	79.72	60	120	
Sc	45	2	NoGas	6988693	0.69	8481025	82.40	60	120	
Rh	103	1	He	684552	0.59	903580	75.76	60	120	
In	115	1	He	179417	1.63	224817	79.81	60	120	
Tb	159	1	He	898042	0.51	1046002	85.85	60	120	
Ho	165	1	He	915934	0.48	1057439	86.62	60	120	
Bi	209	1	He	615358	1.37	731380	84.14	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-1-c msd@2
Data File Name	226SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:23:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	181.993	181.993	0.94	3433876	0.01	10000	
Be	9	45	2	NoGas	504.977	504.977	0.59	2445400	0.02	2000	
B	11	45	2	NoGas	100.428	100.428	0.70	313720	0.03	300	
Na	23	45	1	He	5072.000	5072.000	1.48	1556467	0.33	500000	
Mg	24	45	1	He	35702.210	35702.210	1.97	6074234	0.59	500000	
Al	27	45	1	He	61446.776	61446.776	2.17	4355795	1.41	200000	
K	39	45	1	He	12827.123	12827.123	1.60	1044030	1.23	500000	
Ca	44	45	1	He	94781.657	94781.657	1.83	449034	21.11	500000	
Ti	47	45	1	He	500.199	500.199	2.21	17155	2.92	2500	
V	51	45	1	He	532.684	532.684	2.03	651527	0.08	10000	
Cr	52	45	1	He	513.707	513.707	2.43	776996	0.07	10000	
Mn	55	45	1	He	2825.059	2825.059	2.21	2115528	0.13	10000	
Fe	56	45	1	He	116632.894	116632.894	2.17	135200524	0.09	200000	
Co	59	45	1	He	492.021	492.021	5.97	1358912	0.04	5000	
Ni	60	45	1	He	550.603	550.603	2.11	427118	0.13	10000	
Cu	63	45	1	He	547.194	547.194	1.59	1199106	0.05	10000	
Zn	66	45	1	He	786.716	786.716	2.00	220297	0.36	10000	
As	75	103	1	He	486.590	486.590	0.48	81027	0.60	10000	
Se	78	115	1	He	437.098	437.098	2.93	3422	12.77	10000	
Sr	88	103	1	He	637.638	637.638	1.16	469446	0.14	10000	
Mo	95	103	1	He	75.502	75.502	0.84	69248	0.11	2000	
Ag	107	103	1	He	46.704	46.704	0.75	158373	0.03	300	
Cd	111	115	1	He	451.995	451.995	1.22	176530	0.26	4000	
Sn	118	115	1	He	453.683	453.683	1.79	335909	0.14	2000	
Sb	123	115	1	He	18.669	18.669	3.12	15589	0.12	200	
Ba	137	115	1	He	828.144	828.144	1.05	241864	0.34	10000	
W	182	159	1	He	35.530	35.530	1.30	165518	0.02	2500	
Tl	205	165	1	He	113.911	113.911	0.48	845792	0.01	2000	
Pb	208	165	1	He	542.045	542.045	0.41	5278176	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656581	0.48	1884762	87.89	60	120	
Sc	45	1	He	104392	1.67	134073	77.86	60	120	
Sc	45	2	NoGas	6858631	0.30	8481025	80.87	60	120	
Rh	103	1	He	667470	0.72	903580	73.87	60	120	
In	115	1	He	175193	0.74	224817	77.93	60	120	
Tb	159	1	He	897747	0.59	1046002	85.83	60	120	
Ho	165	1	He	908501	0.31	1057439	85.92	60	120	
Bi	209	1	He	615122	0.51	731380	84.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-2-a@2
Data File Name	227SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:27:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	104.869	104.869	0.69	1979024	0.01	10000	
Be	9	45	2	NoGas	3.754	3.754	1.48	17939	0.02	2000	
B	11	45	2	NoGas	46.647	46.647	0.67	146609	0.03	300	
Na	23	45	1	He	694.592	694.592	0.26	210273	0.33	500000	
Mg	24	45	1	He	29941.128	29941.128	1.22	4954125	0.60	500000	
Al	27	45	1	He	41966.279	41966.279	0.70	2893270	1.45	200000	
K	39	45	1	He	7035.248	7035.248	0.60	559896	1.26	500000	
Ca	44	45	1	He	85712.885	85712.885	0.69	394910	21.70	500000	
Ti	47	45	1	He	369.575	369.575	2.41	12328	3.00	2500	
V	51	45	1	He	80.318	80.318	2.54	95565	0.08	10000	
Cr	52	45	1	He	61.712	61.712	0.63	91228	0.07	10000	
Mn	55	45	1	He	1242.957	1242.957	0.62	905268	0.14	10000	
Fe	56	45	1	He	93371.523	93371.523	0.36	105261305	0.09	200000	
Co	59	45	1	He	43.802	43.802	1.07	117888	0.04	5000	
Ni	60	45	1	He	113.814	113.814	1.69	85946	0.13	10000	
Cu	63	45	1	He	92.245	92.245	0.68	198096	0.05	10000	
Zn	66	45	1	He	261.782	261.782	1.62	71360	0.37	10000	
As	75	103	1	He	39.207	39.207	0.23	6401	0.61	10000	
Se	78	115	1	He	14.078	14.078	5.64	111	12.71	10000	
Sr	88	103	1	He	142.923	142.923	0.42	102999	0.14	10000	
Mo	95	103	1	He	20.478	20.478	1.25	18388	0.11	2000	
Ag	107	103	1	He	0.173	0.173	7.65	580	0.03	300	
Cd	111	115	1	He	1.258	1.258	7.43	486	0.26	4000	
Sn	118	115	1	He	20.499	20.499	2.14	15196	0.13	2000	
Sb	123	115	1	He	0.744	0.744	11.77	643	0.12	200	
Ba	137	115	1	He	293.183	293.183	1.15	84465	0.35	10000	
W	182	159	1	He	0.583	0.583	17.97	3856	0.02	2500	
Tl	205	165	1	He	2.085	2.085	0.58	15256	0.01	2000	
Pb	208	165	1	He	57.160	57.160	0.76	548104	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1667960	0.37	1884762	88.50	60	120	
Sc	45	1	He	101502	0.60	134073	75.71	60	120	
Sc	45	2	NoGas	6724806	0.91	8481025	79.29	60	120	
Rh	103	1	He	653179	0.19	903580	72.29	60	120	
In	115	1	He	172822	1.37	224817	76.87	60	120	
Tb	159	1	He	884752	0.52	1046002	84.58	60	120	
Ho	165	1	He	893195	0.84	1057439	84.47	60	120	
Bi	209	1	He	615078	1.42	731380	84.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-3-a@2
Data File Name	228SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:31:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	92.619	92.619	1.74	1709331	0.01	10000	
Be	9	45	2	NoGas	3.185	3.185	2.78	14810	0.02	2000	
B	11	45	2	NoGas	39.474	39.474	1.28	121622	0.03	300	
Na	23	45	1	He	720.091	720.091	2.36	209859	0.34	500000	
Mg	24	45	1	He	23310.459	23310.459	1.24	3715307	0.63	500000	
Al	27	45	1	He	46883.395	46883.395	2.22	3113206	1.51	200000	
K	39	45	1	He	6737.379	6737.379	1.44	516770	1.30	500000	
Ca	44	45	1	He	55003.666	55003.666	1.27	244166	22.53	500000	
Ti	47	45	1	He	510.029	510.029	3.11	16384	3.11	2500	
V	51	45	1	He	97.912	97.912	2.63	112203	0.09	10000	
Cr	52	45	1	He	67.740	67.740	1.93	96409	0.07	10000	
Mn	55	45	1	He	1202.525	1202.525	1.45	843658	0.14	10000	
Fe	56	45	1	He	113500.373	113500.373	1.40	123251617	0.09	200000	
Co	59	45	1	He	44.307	44.307	1.89	114862	0.04	5000	
Ni	60	45	1	He	113.023	113.023	2.37	82209	0.14	10000	
Cu	63	45	1	He	102.875	102.875	1.02	212612	0.05	10000	
Zn	66	45	1	He	324.163	324.163	0.80	85102	0.38	10000	
As	75	103	1	He	42.980	42.980	3.30	6905	0.62	10000	
Se	78	115	1	He	15.107	15.107	3.67	116	12.98	10000	
Sr	88	103	1	He	121.098	121.098	2.06	85903	0.14	10000	
Mo	95	103	1	He	17.135	17.135	3.63	15144	0.11	2000	
Ag	107	103	1	He	0.139	0.139	10.74	460	0.03	300	
Cd	111	115	1	He	0.929	0.929	6.12	352	0.26	4000	
Sn	118	115	1	He	20.664	20.664	3.29	15011	0.14	2000	
Sb	123	115	1	He	0.877	0.877	4.31	739	0.12	200	
Ba	137	115	1	He	303.665	303.665	1.02	85770	0.35	10000	
W	182	159	1	He	0.663	0.663	10.45	4119	0.02	2500	
Tl	205	165	1	He	1.478	1.478	2.47	10594	0.01	2000	
Pb	208	165	1	He	61.734	61.734	0.41	579258	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1636937	0.59	1884762	86.85	60	120	
Sc	45	1	He	97782	1.21	134073	72.93	60	120	
Sc	45	2	NoGas	6536313	0.36	8481025	77.07	60	120	
Rh	103	1	He	642962	0.71	903580	71.16	60	120	
In	115	1	He	169421	0.56	224817	75.36	60	120	
Tb	159	1	He	862309	1.18	1046002	82.44	60	120	
Ho	165	1	He	874113	0.39	1057439	82.66	60	120	
Bi	209	1	He	599602	0.65	731380	81.98	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	229_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:36:09-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.664	1.358	962498	0.58	50	105.3	89.5	110.5	
Be	9	45	2	NoGas	52.654	1.028	231530	0.37	50	105.3	89.5	110.5	
B	11	45	2	NoGas	59.378	0.538	171001	0.67	50	118.8	89.5	110.5	CCV Failed
Na	23	45	1	He	24106.651	1.452	6513000	0.41	25000	96.4	89.5	110.5	
Mg	24	45	1	He	24244.747	2.039	3638242	1.00	25000	97.0	89.5	110.5	
Al	27	45	1	He	252.195	2.304	15845	1.67	250	100.9	89.5	110.5	
K	39	45	1	He	25816.651	1.304	1847230	0.91	25000	103.3	89.5	110.5	
Ca	44	45	1	He	25589.577	1.588	107026	0.73	25000	102.4	89.5	110.5	
Ti	47	45	1	He	51.247	5.199	1550	4.75	50	102.5	89.5	110.5	
V	51	45	1	He	49.133	1.693	53035	0.48	50	98.3	89.5	110.5	
Cr	52	45	1	He	49.632	2.067	66635	1.04	50	99.3	89.5	110.5	
Mn	55	45	1	He	254.946	1.691	168484	1.02	250	102.0	89.5	110.5	
Fe	56	45	1	He	12764.066	1.692	13051599	0.43	12500	102.1	89.5	110.5	
Co	59	45	1	He	50.412	2.214	123022	1.12	50	100.8	89.5	110.5	
Ni	60	45	1	He	50.159	3.267	34408	2.77	50	100.3	89.5	110.5	
Cu	63	45	1	He	50.173	2.281	98474	1.17	50	100.3	89.5	110.5	
Zn	66	45	1	He	52.688	2.036	13107	0.74	50	105.4	89.5	110.5	
As	75	103	1	He	48.605	2.479	7771	2.08	50	97.2	89.5	110.5	
Se	78	115	1	He	46.743	5.610	354	4.80	50	93.5	89.5	110.5	
Sr	88	103	1	He	50.847	0.672	35919	0.85	50	101.7	89.5	110.5	
Mo	95	103	1	He	50.772	2.551	44646	1.79	50	101.5	89.5	110.5	
Ag	107	103	1	He	50.036	1.905	162667	1.05	50	100.1	89.5	110.5	
Cd	111	115	1	He	49.641	1.421	18638	0.57	50	99.3	89.5	110.5	
Sn	118	115	1	He	49.476	4.895	35404	3.74	50	99.0	89.5	110.5	
Sb	123	115	1	He	51.718	1.635	41464	1.62	50	103.4	89.5	110.5	
Ba	137	115	1	He	50.889	2.267	14289	1.37	50	101.8	89.5	110.5	
W	182	159	1	He	52.379	2.527	225238	2.47	50	104.8	89.5	110.5	
Tl	205	165	1	He	50.460	0.788	346880	0.82	50	100.9	89.5	110.5	
Pb	208	165	1	He	51.066	0.367	461214	0.34	50	102.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1618426	0.53	1884762	85.87	60	120	
Sc	45	1	He	92069	1.27	134073	68.67	60	120	
Sc	45	2	NoGas	6225582	0.85	8481025	73.41	60	120	
Rh	103	1	He	639969	0.97	903580	70.83	60	120	
In	115	1	He	168416	1.15	224817	74.91	60	120	
Tb	159	1	He	830681	0.14	1046002	79.41	60	120	
Ho	165	1	He	841081	0.17	1057439	79.54	60	120	
Bi	209	1	He	585948	0.70	731380	80.12	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	230_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:40:19-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.977	3.8	100628	0.1	8	
Be	9	45	2	NoGas	0.428	13.1	1971	12.8	1	
B	11	45	2	NoGas	10.559	3.2	35386	3.0	20	
Na	23	45	1	He	54.826	2.2	18202	1.6	1000	
Mg	24	45	1	He	27.680	6.6	4660	6.1	1000	
Al	27	45	1	He	2.828	34.2	257	23.8	50	
K	39	45	1	He	28.768	12.6	8265	2.8	1000	
Ca	44	45	1	He	37.749	18.0	294	10.3	1000	
Ti	47	45	1	He	0.217	132.2	7	132.3	20	
V	51	45	1	He	0.153	5.5	205	5.0	2	
Cr	52	45	1	He	0.045	162.6	531	18.2	2	
Mn	55	45	1	He	0.441	17.4	389	13.3	2	
Fe	56	45	1	He	26.821	4.4	29210	4.1	50	
Co	59	45	1	He	0.053	12.5	347	5.1	1	
Ni	60	45	1	He	0.040	153.9	128	33.2	2	
Cu	63	45	1	He	-0.568	-4.1	571	7.5	2	
Zn	66	45	1	He	0.477	28.9	222	15.8	20	
As	75	103	1	He	0.167	12.7	41	8.5	2	
Se	78	115	1	He	0.355	72.8	5	40.0	2	
Sr	88	103	1	He	0.097	7.6	100	5.8	10	
Mo	95	103	1	He	0.158	9.0	154	8.7	2	
Ag	107	103	1	He	0.052	17.7	183	17.3	0.2	
Cd	111	115	1	He	0.131	18.3	53	18.4	0.2	
Sn	118	115	1	He	0.168	66.1	359	23.6	10	
Sb	123	115	1	He	0.221	4.6	218	3.2	2	
Ba	137	115	1	He	0.095	27.8	32	23.9	5	
W	182	159	1	He	0.285	15.4	2374	8.0	10	
Tl	205	165	1	He	0.165	9.6	1179	9.5	0.5	
Pb	208	165	1	He	0.284	4.0	3546	2.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1600712	1.04	1884762	84.93	60	120	
Sc	45	1	He	93392	0.49	134073	69.66	60	120	
Sc	45	2	NoGas	6167941	0.73	8481025	72.73	60	120	
Rh	103	1	He	666366	0.36	903580	73.75	60	120	
In	115	1	He	175516	0.77	224817	78.07	60	120	
Tb	159	1	He	839613	0.52	1046002	80.27	60	120	
Ho	165	1	He	849395	0.82	1057439	80.33	60	120	
Bi	209	1	He	605905	0.71	731380	82.84	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-a-4-a@2
Data File Name	231SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:44:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	64.177	64.177	1.94	1218054	0.01	10000	
Be	9	45	2	NoGas	1.968	1.968	3.27	9240	0.02	2000	
B	11	45	2	NoGas	29.437	29.437	1.38	92890	0.03	300	
Na	23	45	1	He	856.872	856.872	0.87	247963	0.35	500000	
Mg	24	45	1	He	20767.908	20767.908	0.15	3295248	0.63	500000	
Al	27	45	1	He	30577.149	30577.149	1.41	2021516	1.51	200000	
K	39	45	1	He	4526.637	4526.637	1.29	347751	1.30	500000	
Ca	44	45	1	He	103623.839	103623.839	0.96	457819	22.63	500000	
Ti	47	45	1	He	298.678	298.678	1.09	9553	3.13	2500	
V	51	45	1	He	60.904	60.904	3.09	69508	0.09	10000	
Cr	52	45	1	He	56.157	56.157	1.00	79657	0.07	10000	
Mn	55	45	1	He	1211.506	1211.506	1.15	846181	0.14	10000	
Fe	56	45	1	He	71213.810	71213.810	1.15	76987832	0.09	200000	
Co	59	45	1	He	30.283	30.283	1.48	78231	0.04	5000	
Ni	60	45	1	He	72.653	72.653	0.96	52651	0.14	10000	
Cu	63	45	1	He	160.899	160.899	1.53	330057	0.05	10000	
Zn	66	45	1	He	404.958	404.958	1.24	105801	0.38	10000	
As	75	103	1	He	31.002	31.002	2.72	4963	0.62	10000	
Se	78	115	1	He	9.571	9.571	3.95	76	12.63	10000	
Sr	88	103	1	He	226.801	226.801	0.58	160215	0.14	10000	
Mo	95	103	1	He	9.415	9.415	3.21	8294	0.11	2000	
Ag	107	103	1	He	0.169	0.169	7.19	554	0.03	300	
Cd	111	115	1	He	0.873	0.873	4.28	336	0.26	4000	
Sn	118	115	1	He	20.105	20.105	3.06	14855	0.14	2000	
Sb	123	115	1	He	0.744	0.744	9.97	642	0.12	200	
Ba	137	115	1	He	177.110	177.110	0.97	50845	0.35	10000	
W	182	159	1	He	0.822	0.822	9.38	4776	0.02	2500	
Tl	205	165	1	He	1.053	1.053	2.23	7537	0.01	2000	
Pb	208	165	1	He	58.887	58.887	1.03	551024	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1595754	1.64	1884762	84.67	60	120	
Sc	45	1	He	97333	0.65	134073	72.60	60	120	
Sc	45	2	NoGas	6569608	0.76	8481025	77.46	60	120	
Rh	103	1	He	640327	1.10	903580	70.87	60	120	
In	115	1	He	172200	1.25	224817	76.60	60	120	
Tb	159	1	He	853563	1.42	1046002	81.60	60	120	
Ho	165	1	He	871665	0.70	1057439	82.43	60	120	
Bi	209	1	He	599831	0.79	731380	82.01	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-5-a@2
Data File Name	232SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:48:42-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	63.172	63.172	0.78	1209398	0.01	10000	
Be	9	45	2	NoGas	1.963	1.963	3.64	9284	0.02	2000	
B	11	45	2	NoGas	29.386	29.386	2.90	93429	0.03	300	
Na	23	45	1	He	588.362	588.362	2.96	173474	0.34	500000	
Mg	24	45	1	He	18325.988	18325.988	1.72	2945091	0.62	500000	
Al	27	45	1	He	29220.012	29220.012	3.44	1956107	1.49	200000	
K	39	45	1	He	4530.754	4530.754	2.44	352491	1.29	500000	
Ca	44	45	1	He	83711.936	83711.936	2.16	374579	22.35	500000	
Ti	47	45	1	He	318.372	318.372	4.62	10310	3.09	2500	
V	51	45	1	He	60.027	60.027	4.74	69354	0.09	10000	
Cr	52	45	1	He	51.840	51.840	2.73	74503	0.07	10000	
Mn	55	45	1	He	1062.437	1062.437	2.74	751453	0.14	10000	
Fe	56	45	1	He	72147.368	72147.368	2.34	78987732	0.09	200000	
Co	59	45	1	He	30.930	30.930	2.31	80912	0.04	5000	
Ni	60	45	1	He	74.639	74.639	3.60	54768	0.14	10000	
Cu	63	45	1	He	70.969	70.969	2.94	148411	0.05	10000	
Zn	66	45	1	He	328.064	328.064	2.36	86824	0.38	10000	
As	75	103	1	He	28.655	28.655	0.74	4708	0.61	10000	
Se	78	115	1	He	9.768	9.768	8.20	77	12.72	10000	
Sr	88	103	1	He	195.590	195.590	0.74	141736	0.14	10000	
Mo	95	103	1	He	10.964	10.964	1.66	9905	0.11	2000	
Ag	107	103	1	He	0.121	0.121	15.21	410	0.03	300	
Cd	111	115	1	He	0.710	0.710	9.56	272	0.26	4000	
Sn	118	115	1	He	21.598	21.598	6.09	15830	0.14	2000	
Sb	123	115	1	He	0.661	0.661	3.95	570	0.12	200	
Ba	137	115	1	He	172.981	172.981	1.26	49331	0.35	10000	
W	182	159	1	He	0.683	0.683	3.28	4208	0.02	2500	
Tl	205	165	1	He	1.002	1.002	1.36	7211	0.01	2000	
Pb	208	165	1	He	57.883	57.883	1.04	544703	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1615999	1.29	1884762	85.74	60	120	
Sc	45	1	He	98600	1.78	134073	73.54	60	120	
Sc	45	2	NoGas	6618621	0.48	8481025	78.04	60	120	
Rh	103	1	He	656855	0.26	903580	72.69	60	120	
In	115	1	He	171054	0.64	224817	76.09	60	120	
Tb	159	1	He	862721	0.70	1046002	82.48	60	120	
Ho	165	1	He	876640	1.38	1057439	82.90	60	120	
Bi	209	1	He	600496	0.58	731380	82.10	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-6-a@2
Data File Name	233SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:52:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	81.190	81.190	1.45	1554195	0.01	10000	
Be	9	45	2	NoGas	2.767	2.767	3.54	13261	0.02	2000	
B	11	45	2	NoGas	34.693	34.693	1.03	110909	0.03	300	
Na	23	45	1	He	1761.063	1761.063	0.40	532498	0.33	500000	
Mg	24	45	1	He	25953.897	25953.897	0.95	4332397	0.60	500000	
Al	27	45	1	He	38802.600	38802.600	0.84	2698801	1.44	200000	
K	39	45	1	He	5140.278	5140.278	0.82	414526	1.24	500000	
Ca	44	45	1	He	98565.267	98565.267	0.86	458131	21.51	500000	
Ti	47	45	1	He	339.034	339.034	3.90	11406	2.97	2500	
V	51	45	1	He	84.974	84.974	1.33	101999	0.08	10000	
Cr	52	45	1	He	69.897	69.897	2.64	104165	0.07	10000	
Mn	55	45	1	He	2307.705	2307.705	2.38	1695462	0.14	10000	
Fe	56	45	1	He	112756.974	112756.974	1.34	128239088	0.09	200000	
Co	59	45	1	He	52.213	52.213	1.32	141726	0.04	5000	
Ni	60	45	1	He	103.677	103.677	1.08	78997	0.13	10000	
Cu	63	45	1	He	99.746	99.746	1.38	215946	0.05	10000	
Zn	66	45	1	He	498.968	498.968	1.60	137119	0.36	10000	
As	75	103	1	He	57.410	57.410	2.21	9592	0.60	10000	
Se	78	115	1	He	14.451	14.451	9.01	117	12.40	10000	
Sr	88	103	1	He	193.383	193.383	1.04	142699	0.14	10000	
Mo	95	103	1	He	17.097	17.097	1.49	15724	0.11	2000	
Ag	107	103	1	He	0.154	0.154	10.64	528	0.03	300	
Cd	111	115	1	He	1.541	1.541	8.68	610	0.25	4000	
Sn	118	115	1	He	20.402	20.402	6.37	15508	0.13	2000	
Sb	123	115	1	He	0.771	0.771	7.10	683	0.11	200	
Ba	137	115	1	He	250.359	250.359	0.73	73962	0.34	10000	
W	182	159	1	He	0.755	0.755	13.21	4664	0.02	2500	
Tl	205	165	1	He	1.257	1.257	1.00	9332	0.01	2000	
Pb	208	165	1	He	107.367	107.367	0.60	1042079	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1613723	0.61	1884762	85.62	60	120	
Sc	45	1	He	102404	0.88	134073	76.38	60	120	
Sc	45	2	NoGas	6730456	1.01	8481025	79.36	60	120	
Rh	103	1	He	668898	0.87	903580	74.03	60	120	
In	115	1	He	177199	0.35	224817	78.82	60	120	
Tb	159	1	He	888364	0.78	1046002	84.93	60	120	
Ho	165	1	He	904818	0.31	1057439	85.57	60	120	
Bi	209	1	He	610209	0.26	731380	83.43	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-7-a@2
Data File Name	234SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T03:56:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	79.503	79.503	0.42	1480002	0.01	10000	
Be	9	45	2	NoGas	2.107	2.107	4.27	9836	0.02	2000	
B	11	45	2	NoGas	34.935	34.935	0.47	108420	0.03	300	
Na	23	45	1	He	611.426	611.426	2.43	177701	0.34	500000	
Mg	24	45	1	He	18460.811	18460.811	1.55	2926327	0.63	500000	
Al	27	45	1	He	37221.921	37221.921	1.20	2458349	1.51	200000	
K	39	45	1	He	5247.613	5247.613	1.69	401705	1.31	500000	
Ca	44	45	1	He	71060.523	71060.523	2.20	313663	22.66	500000	
Ti	47	45	1	He	355.095	355.095	3.05	11346	3.13	2500	
V	51	45	1	He	67.225	67.225	1.46	76635	0.09	10000	
Cr	52	45	1	He	56.132	56.132	1.23	79540	0.07	10000	
Mn	55	45	1	He	910.404	910.404	1.72	635242	0.14	10000	
Fe	56	45	1	He	80976.866	80976.866	1.56	87455734	0.09	200000	
Co	59	45	1	He	30.958	30.958	1.28	79889	0.04	5000	
Ni	60	45	1	He	82.293	82.293	1.42	59562	0.14	10000	
Cu	63	45	1	He	181.660	181.660	0.64	372049	0.05	10000	
Zn	66	45	1	He	258.109	258.109	0.95	67409	0.38	10000	
As	75	103	1	He	29.837	29.837	3.20	4788	0.62	10000	
Se	78	115	1	He	9.392	9.392	3.58	74	12.64	10000	
Sr	88	103	1	He	148.083	148.083	1.64	104836	0.14	10000	
Mo	95	103	1	He	7.339	7.339	1.97	6480	0.11	2000	
Ag	107	103	1	He	0.127	0.127	17.72	418	0.03	300	
Cd	111	115	1	He	0.705	0.705	6.19	272	0.26	4000	
Sn	118	115	1	He	19.562	19.562	5.31	14433	0.14	2000	
Sb	123	115	1	He	0.702	0.702	2.68	607	0.12	200	
Ba	137	115	1	He	204.739	204.739	3.24	58699	0.35	10000	
W	182	159	1	He	0.981	0.981	73.93	5456	0.02	2500	
Tl	205	165	1	He	1.158	1.158	2.08	8287	0.01	2000	
Pb	208	165	1	He	40.092	40.092	1.62	375507	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1625290	1.81	1884762	86.23	60	120	
Sc	45	1	He	97246	1.05	134073	72.53	60	120	
Sc	45	2	NoGas	6536291	0.31	8481025	77.07	60	120	
Rh	103	1	He	641818	2.21	903580	71.03	60	120	
In	115	1	He	172067	2.71	224817	76.54	60	120	
Tb	159	1	He	855065	1.34	1046002	81.75	60	120	
Ho	165	1	He	871910	2.16	1057439	82.45	60	120	
Bi	209	1	He	600252	1.47	731380	82.07	60	120	

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Sample Report

Sample Table

Sample Name	240-64385-b-8-a@2
Data File Name	235SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:01:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	97.885	97.885	0.88	1749610	0.01	10000	
Be	9	45	2	NoGas	2.633	2.633	3.45	11912	0.02	2000	
B	11	45	2	NoGas	34.080	34.080	2.10	102878	0.03	300	
Na	23	45	1	He	614.659	614.659	3.35	179791	0.34	500000	
Mg	24	45	1	He	25176.119	25176.119	2.78	4016552	0.63	500000	
Al	27	45	1	He	44079.973	44079.973	3.54	2929797	1.50	200000	
K	39	45	1	He	6269.201	6269.201	2.84	481790	1.30	500000	
Ca	44	45	1	He	90793.166	90793.166	3.32	403307	22.51	500000	
Ti	47	45	1	He	380.939	380.939	3.47	12250	3.11	2500	
V	51	45	1	He	82.190	82.190	3.25	94286	0.09	10000	
Cr	52	45	1	He	65.268	65.268	3.35	92996	0.07	10000	
Mn	55	45	1	He	1223.655	1223.655	3.17	859296	0.14	10000	
Fe	56	45	1	He	96832.687	96832.687	3.18	105248627	0.09	200000	
Co	59	45	1	He	38.749	38.749	3.03	100581	0.04	5000	
Ni	60	45	1	He	101.884	101.884	2.82	74196	0.14	10000	
Cu	63	45	1	He	87.246	87.246	3.38	180738	0.05	10000	
Zn	66	45	1	He	287.291	287.291	3.18	75499	0.38	10000	
As	75	103	1	He	38.542	38.542	0.41	6090	0.63	10000	
Se	78	115	1	He	13.529	13.529	2.89	102	13.26	10000	
Sr	88	103	1	He	163.238	163.238	0.94	113859	0.14	10000	
Mo	95	103	1	He	11.686	11.686	0.79	10160	0.12	2000	
Ag	107	103	1	He	0.118	0.118	18.69	383	0.03	300	
Cd	111	115	1	He	0.603	0.603	4.13	224	0.27	4000	
Sn	118	115	1	He	19.796	19.796	2.88	14047	0.14	2000	
Sb	123	115	1	He	0.591	0.591	1.18	496	0.12	200	
Ba	137	115	1	He	264.283	264.283	0.73	72861	0.36	10000	
W	182	159	1	He	0.503	0.503	11.63	3363	0.01	2500	
Tl	205	165	1	He	1.395	1.395	3.37	9911	0.01	2000	
Pb	208	165	1	He	51.090	51.090	0.65	475251	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1565125	0.77	1884762	83.04	60	120	
Sc	45	1	He	97910	2.35	134073	73.03	60	120	
Sc	45	2	NoGas	6348387	0.80	8481025	74.85	60	120	
Rh	103	1	He	632207	0.39	903580	69.97	60	120	
In	115	1	He	165368	0.44	224817	73.56	60	120	
Tb	159	1	He	851800	0.49	1046002	81.43	60	120	
Ho	165	1	He	866270	0.63	1057439	81.92	60	120	
Bi	209	1	He	592607	0.30	731380	81.03	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-1-a@2
Data File Name	236SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:05:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	37.958	37.958	1.00	708460	0.01	10000	
Be	9	45	2	NoGas	2.830	2.830	0.65	12386	0.02	2000	
B	11	45	2	NoGas	24.563	24.563	1.27	73571	0.03	300	
Na	23	45	1	He	439.837	439.837	1.15	121869	0.36	500000	
Mg	24	45	1	He	6970.542	6970.542	2.63	1045797	0.67	500000	
Al	27	45	1	He	24259.281	24259.281	2.62	1516053	1.60	200000	
K	39	45	1	He	1731.603	1731.603	1.51	129539	1.34	500000	
Ca	44	45	1	He	23565.018	23565.018	1.66	98526	23.92	500000	
Ti	47	45	1	He	294.931	294.931	3.75	8916	3.31	2500	
V	51	45	1	He	60.080	60.080	3.79	64804	0.09	10000	
Cr	52	45	1	He	225.048	225.048	2.64	300342	0.07	10000	
Mn	55	45	1	He	8240.296	8240.296	2.21	5439989	0.15	10000	
Fe	56	45	1	He	89149.386	89149.386	2.29	91105239	0.10	200000	
Co	59	45	1	He	35.375	35.375	2.22	86350	0.04	5000	
Ni	60	45	1	He	124.213	124.213	2.34	85022	0.15	10000	
Cu	63	45	1	He	71.231	71.231	1.65	139063	0.05	10000	
Zn	66	45	1	He	602.923	602.923	2.46	148856	0.41	10000	
As	75	103	1	He	43.151	43.151	1.08	6777	0.64	10000	
Se	78	115	1	He	11.635	11.635	3.09	89	13.14	10000	
Sr	88	103	1	He	77.668	77.668	1.82	53867	0.14	10000	
Mo	95	103	1	He	48.009	48.009	1.78	41461	0.12	2000	
Ag	107	103	1	He	0.261	0.261	12.91	840	0.03	300	
Cd	111	115	1	He	2.047	2.047	1.91	761	0.27	4000	
Sn	118	115	1	He	22.469	22.469	3.93	16019	0.14	2000	
Sb	123	115	1	He	0.945	0.945	18.40	779	0.12	200	
Ba	137	115	1	He	488.143	488.143	0.87	135466	0.36	10000	
W	182	159	1	He	4.733	4.733	1.89	21634	0.02	2500	
Tl	205	165	1	He	0.594	0.594	1.63	4177	0.01	2000	
Pb	208	165	1	He	162.793	162.793	0.31	1491642	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1563465	0.56	1884762	82.95	60	120	
Sc	45	1	He	92039	2.03	134073	68.65	60	120	
Sc	45	2	NoGas	6146426	0.75	8481025	72.47	60	120	
Rh	103	1	He	628511	1.29	903580	69.56	60	120	
In	115	1	He	166480	1.88	224817	74.05	60	120	
Tb	159	1	He	840535	0.64	1046002	80.36	60	120	
Ho	165	1	He	854490	0.59	1057439	80.81	60	120	
Bi	209	1	He	595922	1.24	731380	81.48	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-2-a@2
Data File Name	237SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:09:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	36.672	36.672	1.49	660976	0.01	10000	
Be	9	45	2	NoGas	2.535	2.535	1.47	10681	0.02	2000	
B	11	45	2	NoGas	22.330	22.330	0.62	64880	0.03	300	
Na	23	45	1	He	470.894	470.894	0.92	126948	0.37	500000	
Mg	24	45	1	He	6724.505	6724.505	0.98	983491	0.68	500000	
Al	27	45	1	He	23480.531	23480.531	0.65	1430464	1.64	200000	
K	39	45	1	He	1614.350	1614.350	1.19	118105	1.37	500000	
Ca	44	45	1	He	21101.500	21101.500	0.05	86008	24.53	500000	
Ti	47	45	1	He	305.065	305.065	1.04	8991	3.39	2500	
V	51	45	1	He	51.917	51.917	2.44	54600	0.10	10000	
Cr	52	45	1	He	333.199	333.199	0.68	433277	0.08	10000	
Mn	55	45	1	He	6711.951	6711.951	0.53	4319327	0.16	10000	
Fe	56	45	1	He	83893.635	83893.635	0.90	83573174	0.10	200000	
Co	59	45	1	He	32.792	32.792	0.92	78041	0.04	5000	
Ni	60	45	1	He	119.470	119.470	0.49	79717	0.15	10000	
Cu	63	45	1	He	67.640	67.640	0.78	128787	0.05	10000	
Zn	66	45	1	He	569.263	569.263	0.65	137011	0.42	10000	
As	75	103	1	He	29.736	29.736	1.45	4565	0.65	10000	
Se	78	115	1	He	11.825	11.825	7.35	88	13.40	10000	
Sr	88	103	1	He	70.046	70.046	1.16	47454	0.15	10000	
Mo	95	103	1	He	42.825	42.825	1.51	36128	0.12	2000	
Ag	107	103	1	He	0.256	0.256	9.08	803	0.03	300	
Cd	111	115	1	He	1.771	1.771	5.91	646	0.27	4000	
Sn	118	115	1	He	21.465	21.465	0.63	15015	0.14	2000	
Sb	123	115	1	He	0.795	0.795	8.71	648	0.12	200	
Ba	137	115	1	He	419.106	419.106	1.48	114032	0.37	10000	
W	182	159	1	He	4.278	4.278	1.55	19438	0.02	2500	
Tl	205	165	1	He	0.646	0.646	2.56	4494	0.01	2000	
Pb	208	165	1	He	144.629	144.629	0.90	1310382	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1534081	0.93	1884762	81.39	60	120	
Sc	45	1	He	89691	0.22	134073	66.90	60	120	
Sc	45	2	NoGas	5910929	0.36	8481025	69.70	60	120	
Rh	103	1	He	613841	0.42	903580	67.93	60	120	
In	115	1	He	163211	0.41	224817	72.60	60	120	
Tb	159	1	He	830939	0.23	1046002	79.44	60	120	
Ho	165	1	He	844913	1.12	1057439	79.90	60	120	
Bi	209	1	He	591764	0.55	731380	80.91	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-3-a@2
Data File Name	238SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:13:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	31.495	31.495	0.27	559869	0.01	10000	
Be	9	45	2	NoGas	2.180	2.180	5.27	8895	0.02	2000	
B	11	45	2	NoGas	22.629	22.629	1.48	63487	0.04	300	
Na	23	45	1	He	487.139	487.139	1.96	127677	0.38	500000	
Mg	24	45	1	He	8257.010	8257.010	2.62	1174776	0.70	500000	
Al	27	45	1	He	20751.737	20751.737	2.67	1229913	1.69	200000	
K	39	45	1	He	1621.673	1621.673	3.87	115378	1.41	500000	
Ca	44	45	1	He	29537.249	29537.249	3.51	117066	25.23	500000	
Ti	47	45	1	He	329.202	329.202	4.12	9437	3.49	2500	
V	51	45	1	He	52.888	52.888	7.78	54064	0.10	10000	
Cr	52	45	1	He	321.846	321.846	3.08	407142	0.08	10000	
Mn	55	45	1	He	8964.758	8964.758	2.01	5612994	0.16	10000	
Fe	56	45	1	He	77141.968	77141.968	2.87	74758953	0.10	200000	
Co	59	45	1	He	32.520	32.520	3.23	75293	0.04	5000	
Ni	60	45	1	He	106.787	106.787	3.69	69319	0.15	10000	
Cu	63	45	1	He	84.120	84.120	2.64	155440	0.05	10000	
Zn	66	45	1	He	613.570	613.570	2.64	143660	0.43	10000	
As	75	103	1	He	31.951	31.951	1.08	4835	0.66	10000	
Se	78	115	1	He	11.616	11.616	12.96	87	13.42	10000	
Sr	88	103	1	He	75.117	75.117	0.75	50170	0.15	10000	
Mo	95	103	1	He	25.344	25.344	1.58	21082	0.12	2000	
Ag	107	103	1	He	0.320	0.320	12.55	989	0.03	300	
Cd	111	115	1	He	1.668	1.668	3.47	607	0.27	4000	
Sn	118	115	1	He	21.658	21.658	2.73	15126	0.14	2000	
Sb	123	115	1	He	0.859	0.859	6.62	697	0.12	200	
Ba	137	115	1	He	469.180	469.180	0.91	127494	0.37	10000	
W	182	159	1	He	4.912	4.912	1.46	21908	0.02	2500	
Tl	205	165	1	He	0.545	0.545	1.91	3756	0.01	2000	
Pb	208	165	1	He	131.423	131.423	0.89	1177991	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1476263	1.41	1884762	78.33	60	120	
Sc	45	1	He	87293	2.42	134073	65.11	60	120	
Sc	45	2	NoGas	5714535	0.35	8481025	67.38	60	120	
Rh	103	1	He	605242	1.13	903580	66.98	60	120	
In	115	1	He	163008	1.06	224817	72.51	60	120	
Tb	159	1	He	821837	1.20	1046002	78.57	60	120	
Ho	165	1	He	835828	1.36	1057439	79.04	60	120	
Bi	209	1	He	590578	0.29	731380	80.75	60	120	

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Sample Report

Sample Table

Sample Name	240-64321-c-4-a@2
Data File Name	239SMPL.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:17:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	32.502	32.502	0.73	576864	0.01	10000	
Be	9	45	2	NoGas	2.431	2.431	5.74	9933	0.02	2000	
B	11	45	2	NoGas	29.737	29.737	1.35	81793	0.04	300	
Na	23	45	1	He	870.453	870.453	1.44	223075	0.39	500000	
Mg	24	45	1	He	13160.047	13160.047	1.96	1849541	0.71	500000	
Al	27	45	1	He	24912.383	24912.383	2.18	1458622	1.71	200000	
K	39	45	1	He	1715.559	1715.559	0.80	120297	1.43	500000	
Ca	44	45	1	He	37030.241	37030.241	2.22	144965	25.54	500000	
Ti	47	45	1	He	468.118	468.118	1.76	13261	3.53	2500	
V	51	45	1	He	60.815	60.815	6.57	61441	0.10	10000	
Cr	52	45	1	He	474.971	474.971	2.99	593343	0.08	10000	
Mn	55	45	1	He	7157.635	7157.635	2.53	4426682	0.16	10000	
Fe	56	45	1	He	94031.743	94031.743	2.60	90022419	0.10	200000	
Co	59	45	1	He	30.341	30.341	2.71	69409	0.04	5000	
Ni	60	45	1	He	114.880	114.880	2.33	73674	0.16	10000	
Cu	63	45	1	He	88.445	88.445	2.28	161370	0.05	10000	
Zn	66	45	1	He	608.553	608.553	2.16	140762	0.43	10000	
As	75	103	1	He	37.739	37.739	0.24	5663	0.67	10000	
Se	78	115	1	He	11.441	11.441	11.63	83	13.72	10000	
Sr	88	103	1	He	85.107	85.107	0.98	56381	0.15	10000	
Mo	95	103	1	He	33.721	33.721	1.03	27822	0.12	2000	
Ag	107	103	1	He	0.281	0.281	11.16	861	0.03	300	
Cd	111	115	1	He	1.630	1.630	1.91	580	0.28	4000	
Sn	118	115	1	He	24.020	24.020	4.85	16379	0.15	2000	
Sb	123	115	1	He	1.079	1.079	10.82	848	0.13	200	
Ba	137	115	1	He	461.690	461.690	1.30	122651	0.38	10000	
W	182	159	1	He	5.577	5.577	2.78	24809	0.02	2500	
Tl	205	165	1	He	0.552	0.552	4.11	3786	0.01	2000	
Pb	208	165	1	He	137.148	137.148	2.04	1223450	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1453576	1.31	1884762	77.12	60	120	
Sc	45	1	He	86224	1.90	134073	64.31	60	120	
Sc	45	2	NoGas	5730698	1.17	8481025	67.57	60	120	
Rh	103	1	He	600349	0.91	903580	66.44	60	120	
In	115	1	He	159352	0.21	224817	70.88	60	120	
Tb	159	1	He	824561	0.38	1046002	78.83	60	120	
Ho	165	1	He	831974	1.57	1057439	78.68	60	120	
Bi	209	1	He	586332	0.69	731380	80.17	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2495517
Data File Name	240_CCV.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:22:00-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.910	0.894	893189	0.18	50	105.8	89.5	110.5	
Be	9	45	2	NoGas	52.335	0.373	212659	0.69	50	104.7	89.5	110.5	
B	11	45	2	NoGas	59.545	0.198	158441	0.92	50	119.1	89.5	110.5	CCV Failed
Na	23	45	1	He	23489.098	0.818	5995230	0.16	25000	94.0	89.5	110.5	
Mg	24	45	1	He	23727.573	2.965	3363375	1.99	25000	94.9	89.5	110.5	
Al	27	45	1	He	249.386	5.774	14798	4.84	250	99.8	89.5	110.5	
K	39	45	1	He	25215.674	0.795	1704515	0.18	25000	100.9	89.5	110.5	
Ca	44	45	1	He	24815.615	2.659	98042	1.80	25000	99.3	89.5	110.5	
Ti	47	45	1	He	48.281	3.467	1380	4.29	50	96.6	89.5	110.5	
V	51	45	1	He	48.103	7.338	49033	6.37	50	96.2	89.5	110.5	
Cr	52	45	1	He	49.402	2.045	62657	1.36	50	98.8	89.5	110.5	
Mn	55	45	1	He	255.591	2.695	159548	1.78	250	102.2	89.5	110.5	
Fe	56	45	1	He	12628.786	2.172	12198309	1.21	12500	101.0	89.5	110.5	
Co	59	45	1	He	49.420	1.278	113937	0.43	50	98.8	89.5	110.5	
Ni	60	45	1	He	49.620	1.647	32158	1.31	50	99.2	89.5	110.5	
Cu	63	45	1	He	49.074	1.242	91028	0.26	50	98.1	89.5	110.5	
Zn	66	45	1	He	50.899	5.124	11963	4.37	50	101.8	89.5	110.5	
As	75	103	1	He	46.069	0.644	7013	0.73	50	92.1	89.5	110.5	
Se	78	115	1	He	46.265	3.572	338	2.37	50	92.5	89.5	110.5	
Sr	88	103	1	He	49.642	0.686	33385	0.58	50	99.3	89.5	110.5	
Mo	95	103	1	He	51.311	0.811	42959	0.91	50	102.6	89.5	110.5	
Ag	107	103	1	He	49.963	1.084	154646	1.21	50	99.9	89.5	110.5	
Cd	111	115	1	He	49.154	2.110	17812	1.34	50	98.3	89.5	110.5	
Sn	118	115	1	He	49.661	4.157	34306	3.53	50	99.3	89.5	110.5	
Sb	123	115	1	He	51.194	1.356	39617	1.47	50	102.4	89.5	110.5	
Ba	137	115	1	He	52.005	2.177	14099	3.33	50	104.0	89.5	110.5	
W	182	159	1	He	51.960	2.102	221356	2.37	50	103.9	89.5	110.5	
Tl	205	165	1	He	50.499	1.681	345298	1.67	50	101.0	89.5	110.5	
Pb	208	165	1	He	50.932	0.867	457554	0.77	50	101.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1462765	1.78	1884762	77.61	60	120	
Sc	45	1	He	86971	0.97	134073	64.87	60	120	
Sc	45	2	NoGas	5752743	0.98	8481025	67.83	60	120	
Rh	103	1	He	609233	0.18	903580	67.42	60	120	
In	115	1	He	162557	1.22	224817	72.31	60	120	
Tb	159	1	He	822879	0.52	1046002	78.67	60	120	
Ho	165	1	He	836636	1.11	1057439	79.12	60	120	
Bi	209	1	He	577888	0.33	731380	79.01	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	241_CCB.d
Data Path Name	D:\Analytical Runs\I10050916A.b
Acq Date Time	2016-05-10T04:26:11-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.962	3.7	95680	0.9	8	
Be	9	45	2	NoGas	0.224	16.3	1030	16.2	1	
B	11	45	2	NoGas	14.980	1.9	45289	0.6	20	
Na	23	45	1	He	52.408	2.7	16578	2.2	1000	
Mg	24	45	1	He	28.623	5.1	4538	2.6	1000	
Al	27	45	1	He	2.841	7.9	243	4.1	50	
K	39	45	1	He	29.840	5.8	7887	2.6	1000	
Ca	44	45	1	He	31.811	36.6	253	16.3	1000	
Ti	47	45	1	He	0.115	173.2	3	173.2	20	
V	51	45	1	He	0.107	72.9	145	53.3	2	
Cr	52	45	1	He	0.030	278.8	482	20.4	2	
Mn	55	45	1	He	1.121	9.7	798	6.5	2	
Fe	56	45	1	He	27.802	6.8	28553	4.7	50	
Co	59	45	1	He	0.002	785.6	208	15.2	1	
Ni	60	45	1	He	0.012	91.4	102	5.0	2	
Cu	63	45	1	He	-0.585	-2.9	508	4.7	2	
Zn	66	45	1	He	0.509	16.6	218	10.2	20	
As	75	103	1	He	0.074	20.6	25	9.6	2	
Se	78	115	1	He	0.092	255.9	3	61.8	2	
Sr	88	103	1	He	0.062	19.8	72	11.6	10	
Mo	95	103	1	He	0.153	14.5	146	13.2	2	
Ag	107	103	1	He	0.060	8.3	203	7.5	0.2	
Cd	111	115	1	He	0.071	2.6	28	3.6	0.2	
Sn	118	115	1	He	0.217	70.8	385	30.0	10	
Sb	123	115	1	He	0.164	23.4	164	17.2	2	
Ba	137	115	1	He	0.141	18.2	44	17.3	5	
W	182	159	1	He	0.360	7.9	2686	5.0	10	
Tl	205	165	1	He	0.136	9.7	973	9.5	0.5	
Pb	208	165	1	He	0.212	7.8	2879	5.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1537930	0.76	1884762	81.60	60	120	
Sc	45	1	He	88284	2.12	134073	65.85	60	120	
Sc	45	2	NoGas	5878986	1.48	8481025	69.32	60	120	
Rh	103	1	He	648050	0.68	903580	71.72	60	120	
In	115	1	He	170457	1.50	224817	75.82	60	120	
Tb	159	1	He	835592	0.66	1046002	79.88	60	120	
Ho	165	1	He	845177	0.21	1057439	79.93	60	120	
Bi	209	1	He	611086	0.93	731380	83.55	60	120	

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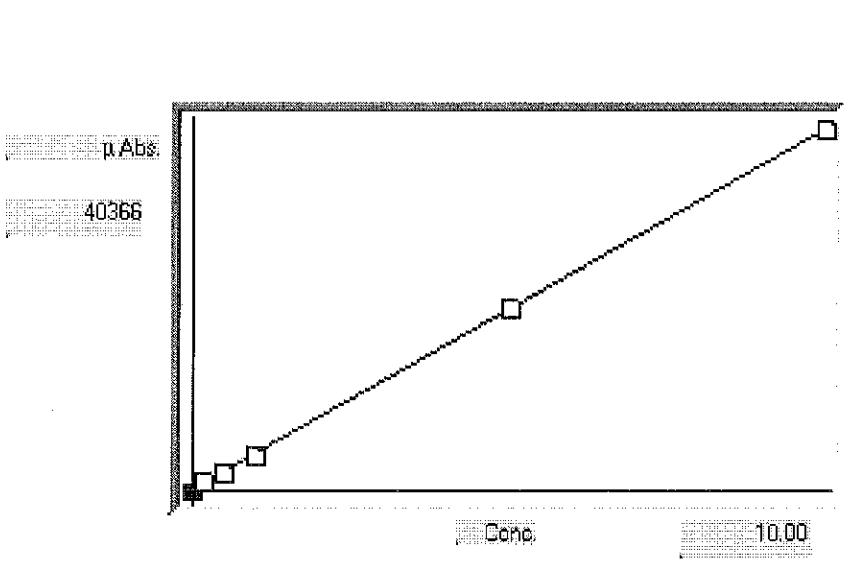
Protocol: Hg-7470A



S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	.0135	.0135	106	1	105				
02	.20000	.2339	.0339	996	0%	995				
03	.50000	.4683	-.0317	1943	0%	1942				
04	1.0000	.9566	-.0434	3915	0%	3914				
05	5.0000	5.046	.0464	20433	0%	20433				
06	10.000	9.981	-.0186	40366	0%	40366				
07										
08										
09										
10										

Protocol: Hg-7470A
POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 1 10:24:17 06 May 16 HG

Hg .0000 ppb 105

*** Standard: 2 Rep: 1 Seq: 2 10:26:39 06 May 16 HG

Hg .2000 ppb 995

*** Standard: 3 Rep: 1 Seq: 3 10:28:42 06 May 16 HG

Hg .5000 ppb 1942

*** Standard: 4 Rep: 1 Seq: 4 10:30:57 06 May 16 HG

Hg 1.000 ppb 3914

*** Standard: 5 Rep: 1 Seq: 5 10:34:02 06 May 16 HG

Hg 5.000 ppb 20433

*** Standard: 6 Rep: 1 Seq: 6 10:36:25 06 May 16 HG

Hg 10.00 ppb 40366

*** Check Standard: 2 Ck2ICV Seq: 7 10:46:10 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.29	4.864	5.000	ppb	.0000

*** Check Standard: 3 Ck3ICB Seq: 8 10:48:13 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		^^^^^^	-.0729	.0000	ppb	.0000

*** Check Standard: 4 Ck4CRA/MRL Seq: 9 10:50:44 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.62	.1952	.2000	ppb	.0000

*** Check Standard: 6 Ck6CCV Seq: 10 10:58:23 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		96.83	4.841	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 11 11:00:29 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0026	.2000	ppb	.0000

*** Sample ID: Seq: 12 11:02:30 06 May 16 HG
mb 240-228992/1-a
Hg .0143 ppb .0000 .0143

*** Sample ID: Seq: 13 11:04:30 06 May 16 HG
lcs 240-228992/2-a
Hg 4.734 ppb .0000 4.734

*** Sample ID: Seq: 14 11:06:43 06 May 16 HG
240-64130-n-1-d
Hg .0346 ppb .0000 .0346

*** Sample ID: Seq: 15 11:08:54 06 May 16 HG
240-64130-n-1-e ms
Hg .9070 ppb .0000 .9070

*** Sample ID: Seq: 16 11:11:00 06 May 16 HG
240-64130-n-1-f msd

Hg .9350 ppb .0000 .9350

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 17 11:13:04 06 May 16 HG
240-64130-o-11-d
Hg .0170 ppb .0000 .0170

*** Sample ID: Seq: 18 11:15:06 06 May 16 HG
240-64130-o-11-e ms
Hg .9580 ppb .0000 .9580

*** Sample ID: Seq: 19 11:17:29 06 May 16 HG
240-64130-o-11-f msd
Hg 1.001 ppb .0000 1.001

*** Sample ID: Seq: 20 11:19:43 06 May 16 HG
240-64130-d-3-b
Hg -.0026 ppb .0000 -.0026

*** Sample ID: Seq: 21 11:21:46 06 May 16 HG
240-64130-e-4-b
Hg .0254 ppb .0000 .0254

*** Check Standard: 6 Ck6CCV Seq: 22 11:23:51 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		93.62	4.681	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 23 11:25:52 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0541	.2000	ppb	.0000

*** Sample ID: Seq: 24 11:28:07 06 May 16 HG
240-64130-e-5-b
Hg .0237 ppb .0000 .0237

*** Sample ID: Seq: 25 11:30:11 06 May 16 HG
240-64130-e-7-b
Hg .0541 ppb .0000 .0541

*** Sample ID: Seq: 26 11:32:14 06 May 16 HG
240-64130-e-8-b
Hg .0888 ppb .0000 .0888

*** Sample ID: Seq: 27 11:34:16 06 May 16 HG
240-64130-e-9-b
Hg -.0355 ppb .0000 -.0355

*** Sample ID: Seq: 28 11:37:09 06 May 16 HG
240-64130-e-13-b
Hg -.0335 ppb .0000 -.0335

*** Sample ID: Seq: 29 11:39:45 06 May 16 HG
240-64130-d-14-b
Hg -.0251 ppb .0000 -.0251

*** Sample ID: Seq: 30 11:41:47 06 May 16 HG
240-64130-d-15-b
Hg .0338 ppb .0000 .0338

*** Sample ID: Seq: 31 11:44:14 06 May 16 HG
240-64130-e-17-b
Hg -.0444 ppb .0000 -.0444

*** Sample ID: Seq: 32 11:46:30 06 May 16 HG
240-64130-e-18-b

Hg .0046 ppb .0000 .0046

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 33 11:48:47 06 May 16 HG
240-64130-e-19-b
Hg .0175 ppb .0000 .0175

*** Check Standard: 6 Ck6CCV Seq: 34 11:50:59 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.37	4.869	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 35 11:54:12 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0293	.2000	ppb	.0000

*** Sample ID: Seq: 36 11:56:25 06 May 16 HG
240-64130-e-21-b
Hg -.0613 ppb .0000 -.0613

*** Sample ID: Seq: 37 11:59:10 06 May 16 HG
240-64130-e-22-b
Hg -.0467 ppb .0000 -.0467

*** Sample ID: Seq: 38 12:01:12 06 May 16 HG
240-64130-e-23-b
Hg -.0276 ppb .0000 -.0276

*** Sample ID: Seq: 39 12:03:14 06 May 16 HG
CRA
Hg .1888 ppb .0000 .1888

*** Sample ID: Seq: 40 12:05:45 06 May 16 HG
mb 240-229002/1-a
Hg -.0308 ppb .0000 -.0308

*** Sample ID: Seq: 41 12:07:58 06 May 16 HG
lcs 240-229002/2-a
Hg 4.554 ppb .0000 4.554

*** Sample ID: Seq: 42 12:10:15 06 May 16 HG
240-64364-a-1-d
Hg .0318 ppb .0000 .0318

*** Sample ID: Seq: 43 12:12:17 06 May 16 HG
240-64364-a-1-e ms
Hg 1.194 ppb .0000 1.194

*** Sample ID: Seq: 44 12:14:19 06 May 16 HG
240-64364-a-1-f msd
Hg 1.193 ppb .0000 1.193

*** Sample ID: Seq: 45 12:16:22 06 May 16 HG
240-64317-b-1-d
Hg .0224 ppb .0000 .0224

*** Check Standard: 6 Ck6CCV Seq: 46 12:18:36 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		97.36	4.868	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 47 12:21:00 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0246	.2000	ppb	.0000

*** Sample ID: Seq: 48 12:23:01 06 May 16 HG
190-10468-a-1-b

Hg .0355 ppb .0000 .0355

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 190-10511-b-1-b					Seq: 49	12:25:28 06 May 16	HG	
Hg	.0219	ppb	.0000	.0219				
*** Sample ID: 240-64322-a-6-b					Seq: 50	12:27:33 06 May 16	HG	
Hg	.0110	ppb	.0000	.0110				
*** Sample ID: 240-64356-a-1-b					Seq: 51	12:29:35 06 May 16	HG	
Hg	-.0600	ppb	.0000	-.0600				
*** Sample ID: 240-64366-a-1-b					Seq: 52	12:32:29 06 May 16	HG	
Hg	.0222	ppb	.0000	.0222				
*** Sample ID: 240-64375-c-2-b					Seq: 53	12:35:04 06 May 16	HG	
Hg	-.0046	ppb	.0000	-.0046				
*** Sample ID: mb 240-228970/1-a					Seq: 54	12:37:19 06 May 16	HG	
Hg	-.0100	ppb	.0000	-.0100				
*** Sample ID: lcs 240-228970/2-a					Seq: 55	12:39:33 06 May 16	HG	
Hg	4.832	ppb	.0000	4.832				
*** Sample ID: 240-64160-d-4-d					Seq: 56	12:42:05 06 May 16	HG	
Hg	-.0160	ppb	.0000	-.0160				
*** Sample ID: 240-64160-d-4-e ms					Seq: 57	12:44:17 06 May 16	HG	
Hg	.9496	ppb	.0000	.9496				

*** Check Standard: 6 Ck6CCV Seq: 58 12:46:29 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.53	4.777	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 59 12:48:40 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0308	.2000	ppb	.0000

*** Sample ID: 240-64160-d-4-f msd					Seq: 60	12:50:42 06 May 16	HG	
Hg	.9318	ppb	.0000	.9318				
*** Sample ID: 240-64160-b-1-b					Seq: 61	12:52:46 06 May 16	HG	
Hg	.0256	ppb	.0000	.0256				
*** Sample ID: 240-64160-b-2-b					Seq: 62	12:54:49 06 May 16	HG	
Hg	-.0333	ppb	.0000	-.0333				
*** Sample ID: 240-64160-b-3-b					Seq: 63	12:57:14 06 May 16	HG	
Hg	-.0598	ppb	.0000	-.0598				

*** Check Standard: 6 Ck6CCV Seq: 64 13:36:29 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		99.11	4.956	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 65 13:38:29 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0662	.2000	ppb	.0000

*** Sample ID: Seq: 66 13:40:34 06 May 16 HG
240-64160-b-5-b

Hg	.0502	ppb	.0000	.0502

*** Sample ID: Seq: 67 13:42:49 06 May 16 HG
240-64160-b-6-b

Hg	.0732	ppb	.0000	.0732

*** Sample ID: Seq: 68 13:44:53 06 May 16 HG
240-64160-a-7-b

Hg	-.0211	ppb	.0000	-.0211

*** Sample ID: Seq: 69 13:46:58 06 May 16 HG
240-64160-a-8-b

Hg	.0014	ppb	.0000	.0014

*** Sample ID: Seq: 70 13:49:04 06 May 16 HG
240-64160-a-9-b

Hg	-.0122	ppb	.0000	-.0122

*** Sample ID: Seq: 71 13:51:09 06 May 16 HG
240-64160-a-10-b

Hg	-.0311	ppb	.0000	-.0311

*** Sample ID: Seq: 72 13:53:11 06 May 16 HG
240-64160-a-11-b

Hg	.0311	ppb	.0000	.0311

*** Sample ID: Seq: 73 13:55:14 06 May 16 HG
240-64299-j-2-b

Hg	.0563	ppb	.0000	.0563

*** Sample ID: Seq: 74 13:57:28 06 May 16 HG
240-64299-k-2-b

Hg	.0299	ppb	.0000	.0299

*** Sample ID: Seq: 75 14:00:03 06 May 16 HG
240-64299-j-3-b

Hg	-.0365	ppb	.0000	-.0365

*** Check Standard: 6 Ck6CCV Seq: 76 14:02:08 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		96.44	4.822	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 77 14:04:23 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0152	.2000	ppb	.0000

*** Sample ID: Seq: 78 14:07:20 06 May 16 HG
240-64299-k-3-b

Hg	-.0410	ppb	.0000	-.0410

*** Sample ID: Seq: 79 14:09:34 06 May 16 HG
240-64299-j-4-b

Hg	-.0033	ppb	.0000	-.0033

*** Sample ID: Seq: 80 14:11:39 06 May 16 HG
240-64299-k-4-b

Hg	-.0929	ppb	.0000	-.0929

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 81 14:14:25 06 May 16 HG
240-64369-c-1-b
Hg -.0494 ppb .0000 -.0494

*** Sample ID: Seq: 82 14:16:39 06 May 16 HG
240-64320-a-1-a
Hg 9.288 ppb .0000 9.288

*** Sample ID: Seq: 83 14:19:36 06 May 16 HG
240-64320-a-2-a
Hg 12.58 H ppb .0000 12.58

*** Check Standard: 6 Ck6CCV Seq: 84 14:22:24 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg	L	54.03	2.701	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 85 14:24:38 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg	L	-.3787	.2000	ppb	.0000

*** Check Standard: 6 Ck6CCV Seq: 86 15:02:33 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		96.77	4.838	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 87 15:04:44 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0142	.2000	ppb	.0000

*** Sample ID: Seq: 88 15:07:00 06 May 16 HG
240-64299-k-3-b
Hg .0326 ppb .0000 .0326

*** Sample ID: Seq: 89 15:09:26 06 May 16 HG
240-64299-j-4-b
Hg .0435 ppb .0000 .0435

*** Sample ID: Seq: 90 15:11:40 06 May 16 HG
240-64299-k-4-b
Hg .0105 ppb .0000 .0105

*** Sample ID: Seq: 91 15:13:45 06 May 16 HG
240-64369-c-1-b
Hg .3834 ppb .0000 .3834

*** Sample ID: Seq: 92 15:16:02 06 May 16 HG
240-64320-a-1-a
Hg 9.105 ppb .0000 9.105

*** Sample ID: Seq: 93 15:19:07 06 May 16 HG
240-64320-a-2-a@2
Hg 17.57 H ppb .0000 17.57

*** Check Standard: 6 Ck6CCV Seq: 94 15:22:29 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		81.79	4.089	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 95 15:24:30 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg	L	-.2227	.2000	ppb	.0000

*** Check Standard: 6 Ck6CCV Seq: 96 15:28:21 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.11	4.756	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 97 15:30:34 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0548	.2000	ppb	.0000

*** Sample ID: Seq: 98 15:33:05 06 May 16 HG
lb 240-228988/1-d

Hg	-.0372	ppb	.0000	-.0372

*** Sample ID: Seq: 99 15:35:16 06 May 16 HG
mb 240-229008/2-a

Hg	.0093	ppb	.0000	.0093

*** Sample ID: Seq: 100 15:37:19 06 May 16 HG
lcs 240-229008/3-a

Hg	4.866	ppb	.0000	4.866

*** Sample ID: Seq: 101 15:39:40 06 May 16 HG
240-64017-b-1-f

Hg	-.0504	ppb	.0000	-.0504

*** Sample ID: Seq: 102 15:41:46 06 May 16 HG
240-64017-b-1-g ms

Hg	4.899	ppb	.0000	4.899

*** Sample ID: Seq: 103 15:44:02 06 May 16 HG
240-64017-b-1-h msd

Hg	4.151	ppb	.0000	4.151

*** Sample ID: Seq: 104 15:46:05 06 May 16 HG
240-64041-a-1-c

Hg	.0100	ppb	.0000	.0100

*** Sample ID: Seq: 105 15:48:06 06 May 16 HG
mb 240-229017/2-a

Hg	.0078	ppb	.0000	.0078

*** Sample ID: Seq: 106 15:50:14 06 May 16 HG
lb 240-228981/1-c

Hg	.0133	ppb	.0000	.0133

*** Sample ID: Seq: 107 15:52:27 06 May 16 HG
lcs 240-229017/3-a

Hg	5.000	ppb	.0000	5.000

*** Check Standard: 6 Ck6CCV Seq: 108 15:54:30 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.47	4.774	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 109 15:57:01 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0006	.2000	ppb	.0000

*** Sample ID: Seq: 110 15:59:16 06 May 16 HG
240-64051-a-1-f

Hg	.0091	ppb	.0000	.0091

*** Sample ID: Seq: 111 16:01:19 06 May 16 HG
240-64051-a-1-g ms

Hg	5.034	ppb	.0000	5.034

*** Sample ID: Seq: 112 16:04:11 06 May 16 HG
240-64051-a-1-h msd

Hg	4.868	ppb	.0000	4.868

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 113 16:06:13 06 May 16 HG
190-10437-a-1-c
Hg .0464 ppb .0000 .0464

*** Sample ID: Seq: 114 16:20:04 06 May 16 HG
240-64011-a-1-b
Hg ^^^^^^O ppb ^^^^^^ ^^^^^^

*** Sample ID: Seq: 115 16:22:27 06 May 16 HG
240-64201-c-1-d
Hg -6.231 ppb .0000 -6.231

*** Check Standard: 6 Ck6CCV Seq: 116 16:41:10 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		90.96	4.548	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 117 16:43:12 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0080	.2000	ppb	.0000

*** Sample ID: Seq: 118 16:45:18 06 May 16 HG
240-64051-a-1-f
Hg -.0353 ppb .0000 -.0353

*** Sample ID: Seq: 119 16:47:43 06 May 16 HG
240-64051-a-1-g ms
Hg 4.842 ppb .0000 4.842

*** Sample ID: Seq: 120 16:49:49 06 May 16 HG
240-64051-a-1-h msd
Hg 4.676 ppb .0000 4.676

*** Sample ID: Seq: 121 16:52:03 06 May 16 HG
190-10437-a-1-c
Hg .0390 ppb .0000 .0390

*** Sample ID: Seq: 122 16:54:18 06 May 16 HG
zzzzz
Hg .0081 ppb .0000 .0081

*** Sample ID: Seq: 123 16:56:32 06 May 16 HG
240-64201-c-1-d
Hg 5.237 ppb .0000 5.237

*** Sample ID: Seq: 124 16:59:26 06 May 16 HG
240-64201-c-2-d
Hg .0125 ppb .0000 .0125

*** Sample ID: Seq: 125 17:02:14 06 May 16 HG
240-64154-a-1-c
Hg .0192 ppb .0000 .0192

*** Sample ID: Seq: 126 17:04:16 06 May 16 HG
mb 240-229012/2-a
Hg -.0093 ppb .0000 -.0093

*** Sample ID: Seq: 127 17:06:38 06 May 16 HG
lb 240-228989/1-c
Hg .0568 ppb .0000 .0568

*** Check Standard: 6 Ck6CCV Seq: 128 17:08:44 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.92	4.796	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 129 17:10:46 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0467	.2000	ppb	.0000

*** Sample ID: Seq: 130 17:12:49 06 May 16 HG
lcs 240-229012/3-a

Hg	4.845	ppb	.0000	4.845

*** Sample ID: Seq: 131 17:15:13 06 May 16 HG
240-63998-f-2-f

Hg	.0222	ppb	.0000	.0222

*** Sample ID: Seq: 132 17:17:15 06 May 16 HG
240-63998-f-2-g ms

Hg	4.826	ppb	.0000	4.826

*** Sample ID: Seq: 133 17:19:32 06 May 16 HG
240-63998-f-2-h msd

Hg	4.659	ppb	.0000	4.659

*** Sample ID: Seq: 134 17:21:35 06 May 16 HG
240-63998-h-1-d

Hg	.0115	ppb	.0000	.0115

*** Sample ID: Seq: 135 17:23:38 06 May 16 HG
240-64041-a-2-c

Hg	.0303	ppb	.0000	.0303

*** Sample ID: Seq: 136 17:25:59 06 May 16 HG
240-64041-a-4-c

Hg	.0454	ppb	.0000	.0454

*** Sample ID: Seq: 137 17:28:02 06 May 16 HG
lb 240-228983/1-c

Hg	-.0358	ppb	.0000	-.0358

*** Sample ID: Seq: 138 17:30:05 06 May 16 HG
mb 240-229015/2-a

Hg	-.0026	ppb	.0000	-.0026

*** Sample ID: Seq: 139 17:32:22 06 May 16 HG
lcs 240-229015/3-a

Hg	4.613	ppb	.0000	4.613

*** Check Standard: 6 Ck6CCV Seq: 140 17:34:49 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.70	4.735	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 141 17:36:53 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0479	.2000	ppb	.0000

*** Sample ID: Seq: 142 17:39:28 06 May 16 HG
190-10457-a-2-e

Hg	.0603	ppb	.0000	.0603

*** Sample ID: Seq: 143 17:42:04 06 May 16 HG
190-10457-a-2-f ms

Hg	4.645	ppb	.0000	4.645

*** Sample ID: Seq: 144 17:44:07 06 May 16 HG
190-10457-a-2-g msd

Hg	4.679	ppb	.0000	4.679

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 145 17:46:30 06 May 16 HG
190-10457-a-1-c
Hg -.0288 ppb .0000 -.0288

*** Sample ID: Seq: 146 17:49:02 06 May 16 HG
240-63923-b-1-i
Hg .0341 ppb .0000 .0341

*** Sample ID: Seq: 147 17:51:07 06 May 16 HG
240-64025-b-1-c
Hg -.0053 ppb .0000 -.0053

*** Sample ID: Seq: 148 17:53:14 06 May 16 HG
240-64025-a-2-d
Hg -.0164 ppb .0000 -.0164

*** Sample ID: Seq: 149 17:55:16 06 May 16 HG
240-64119-c-1-c
Hg -.0266 ppb .0000 -.0266

*** Sample ID: Seq: 150 17:57:39 06 May 16 HG
mb 240-228965/1-a
Hg -.0818 ppb .0000 -.0818

*** Sample ID: Seq: 151 17:59:52 06 May 16 HG
lcs 240-228965/2-a
Hg 4.685 ppb .0000 4.685

*** Check Standard: 6 Ck6CCV Seq: 152 18:02:47 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.25	4.712	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 153 18:04:51 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0192	.2000	ppb	.0000

*** Sample ID: Seq: 154 18:06:55 06 May 16 HG
240-64296-f-2-f
Hg -.0400 ppb .0000 -.0400

*** Sample ID: Seq: 155 18:09:02 06 May 16 HG
240-64296-f-2-g ms
Hg .9365 ppb .0000 .9365

*** Sample ID: Seq: 156 18:11:10 06 May 16 HG
240-64296-f-2-h msd
Hg .8999 ppb .0000 .8999

*** Sample ID: Seq: 157 18:13:13 06 May 16 HG
240-64296-f-3-b
Hg .0566 ppb .0000 .0566

*** Sample ID: Seq: 158 18:15:16 06 May 16 HG
240-64296-f-4-b
Hg -.0263 ppb .0000 -.0263

*** Sample ID: Seq: 159 18:17:30 06 May 16 HG
240-64296-f-5-b
Hg -.0462 ppb .0000 -.0462

*** Sample ID: Seq: 160 18:19:35 06 May 16 HG
240-64296-f-6-b

Hg .0086 ppb .0000 .0086

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 161 18:22:03 06 May 16 HG
240-64296-f-7-b
Hg -.0308 ppb .0000 -.0308

*** Sample ID: Seq: 162 18:24:06 06 May 16 HG
240-64296-f-8-b
Hg -.0147 ppb .0000 -.0147

*** Sample ID: Seq: 163 18:26:09 06 May 16 HG
240-64339-f-2-b
Hg -.0239 ppb .0000 -.0239

*** Check Standard: 6 Ck6CCV Seq: 164 18:29:22 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.14	4.707	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 165 18:31:23 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0830	.2000	ppb	.0000

*** Sample ID: Seq: 166 18:33:48 06 May 16 HG
240-64339-f-3-b
Hg -.0417 ppb .0000 -.0417

*** Sample ID: Seq: 167 18:36:03 06 May 16 HG
240-64339-f-4-b
Hg -.0068 ppb .0000 -.0068

*** Sample ID: Seq: 168 18:38:47 06 May 16 HG
240-64339-b-5-b
Hg .0118 ppb .0000 .0118

*** Sample ID: Seq: 169 18:40:55 06 May 16 HG
240-64339-f-6-b
Hg .0147 ppb .0000 .0147

*** Sample ID: Seq: 170 18:43:18 06 May 16 HG
240-64339-f-7-b
Hg .0318 ppb .0000 .0318

*** Sample ID: Seq: 171 18:45:23 06 May 16 HG
240-64339-f-8-b
Hg -.0288 ppb .0000 -.0288

*** Sample ID: Seq: 172 18:47:47 06 May 16 HG
240-64350-h-1-b
Hg .0234 ppb .0000 .0234

*** Sample ID: Seq: 173 18:50:42 06 May 16 HG
240-64350-i-1-b
Hg -.0219 ppb .0000 -.0219

*** Sample ID: Seq: 174 18:52:46 06 May 16 HG
240-64350-h-6-b
Hg -.0088 ppb .0000 -.0088

*** Sample ID: Seq: 175 18:55:29 06 May 16 HG
240-64350-i-6-b
Hg -.0177 ppb .0000 -.0177

*** Check Standard: 6 Ck6CCV Seq: 176 18:58:01 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		95.31	4.765	5.000	ppb	.0000

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 1 Ck1CCB Seq: 177 19:00:06 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.0199	.2000	ppb	.0000

*** Sample ID: Seq: 178 19:02:23 06 May 16 HG
mb 240-228973/1-a

Hg	-.0167	ppb	.0000	-.0167

*** Sample ID: Seq: 179 19:04:27 06 May 16 HG
lcs 240-228973/2-a

Hg	4.890	ppb	.0000	4.890

*** Sample ID: Seq: 180 19:07:21 06 May 16 HG
240-64333-f-1-e

Hg	.0633	ppb	.0000	.0633

*** Sample ID: Seq: 181 19:09:25 06 May 16 HG
240-64333-f-1-f ms

Hg	.9942	ppb	.0000	.9942

*** Sample ID: Seq: 182 19:12:09 06 May 16 HG
240-64333-f-1-g msd

Hg	1.002	ppb	.0000	1.002

*** Sample ID: Seq: 183 19:14:17 06 May 16 HG
240-64333-g-1-b

Hg	.0606	ppb	.0000	.0606

*** Sample ID: Seq: 184 19:16:20 06 May 16 HG
240-64333-f-2-b

Hg	.0279	ppb	.0000	.0279

*** Sample ID: Seq: 185 19:18:43 06 May 16 HG
240-64333-g-2-b

Hg	.0204	ppb	.0000	.0204

*** Sample ID: Seq: 186 19:20:46 06 May 16 HG
240-64333-f-3-b

Hg	.0234	ppb	.0000	.0234

*** Sample ID: Seq: 187 19:22:49 06 May 16 HG
240-64333-g-3-b

Hg	.0140	ppb	.0000	.0140

*** Check Standard: 6 Ck6CCV Seq: 188 19:24:53 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.23	4.711	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 189 19:26:54 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0251	.2000	ppb	.0000

*** Sample ID: Seq: 190 19:28:56 06 May 16 HG
240-64333-f-4-b

Hg	.0172	ppb	.0000	.0172

*** Sample ID: Seq: 191 19:31:06 06 May 16 HG
240-64333-f-6-c

Hg	.0618	ppb	.0000	.0618

*** Sample ID: Seq: 192 19:33:09 06 May 16 HG
240-64333-g-6-b

Hg	.0407	ppb	.0000	.0407

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 240-64333-g-7-b				Seq: 193	19:35:18 06 May 16	HG		
Hg	-.0090	ppb	.0000	-.0090				
*** Sample ID: 240-64333-h-7-b				Seq: 194	19:37:22 06 May 16	HG		
Hg	.0019	ppb	.0000	.0019				
*** Sample ID: 240-64333-g-8-b				Seq: 195	19:39:27 06 May 16	HG		
Hg	.0234	ppb	.0000	.0234				
*** Sample ID: 240-64333-h-8-b				Seq: 196	19:41:35 06 May 16	HG		
Hg	.0187	ppb	.0000	.0187				
*** Sample ID: 240-64333-g-9-b				Seq: 197	19:43:49 06 May 16	HG		
Hg	.0150	ppb	.0000	.0150				
*** Sample ID: 240-64333-h-9-b				Seq: 198	19:45:53 06 May 16	HG		
Hg	-.0216	ppb	.0000	-.0216				
*** Sample ID: 240-64333-g-10-b				Seq: 199	19:47:58 06 May 16	HG		
Hg	-.0308	ppb	.0000	-.0308				

*** Check Standard: 6 Ck6CCV Seq: 200 19:50:02 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		94.46	4.723	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 201 19:52:19 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		.0091	.2000	ppb	.0000

*** Sample ID: 240-64320-a-2-a@4				Seq: 202	19:54:31 06 May 16	HG		
Hg	19.14 H	ppb	.0000	19.14				
*** Sample ID: 240-64299-k-3-b				Seq: 203	19:57:16 06 May 16	HG		
Hg	-.9835	ppb	.0000	-.9835				
*** Sample ID: 240-64299-j-4-b				Seq: 204	19:59:34 06 May 16	HG		
Hg	-.1246	ppb	.0000	-.1246				
*** Sample ID: 240-64299-k-4-b				Seq: 205	20:01:42 06 May 16	HG		
Hg	-.0778	ppb	.0000	-.0778				
*** Sample ID: 240-64369-c-1-b				Seq: 206	20:03:51 06 May 16	HG		
Hg	-.0551	ppb	.0000	-.0551				
*** Sample ID: 240-64320-a-1-a				Seq: 207	20:06:11 06 May 16	HG		
Hg	7.982	ppb	.0000	7.982				
*** Sample ID: 240-64011-a-1-b@10				Seq: 208	20:09:16 06 May 16	HG		
Hg	15.48 H	ppb	.0000	15.48				

Protocol: Hg-7470A
POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: Seq: 209 20:11:33 06 May 16 HG
240-64011-a-1-b@100

Hg	171.6 H	ppb	.0000	171.6

*** Check Standard: 6 Ck6CCV Seq: 210 20:13:58 06 May 16 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		82.79	4.139	5.000	ppb	.0000

*** Check Standard: 1 Ck1CCB Seq: 211 20:15:59 06 May 16 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.1912	.2000	ppb	.0000

Test America Canton Hg Data Review Checklist

Curve Prep Batch: 229720

Circle Methods used: 7470A / 245.1 7471 Analytical Batch: 229365

Analysis Date: 5-6-16 Analyst: LCD Instrument: 14

Review Items
A. Calibration/Instrument Run QC
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria.
3. ICV/ICB analyzed at appropriate frequency and within acceptance criteria.
4. CRA analyzed at SOP or project specific frequency and within acceptance criteria. (project specific limits may vary)
B. Sample Results
1. Samples with concentrations > high calibration standard diluted and reanalyzed.
2. Sample analyses done within holding time.
C. Preparation/ Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
D. Other
1. All nonconformances documented appropriately in lims system.
2. All client/project specific requirements met.
3. Date of analysis verified as correct.

Level I

Analyst: [signature] Date/Time: 5-9-16 Reviewed from 10:24 to 20:15

Analyst: _____ Date/Time: _____ Reviewed from _____ to _____

Comments: _____

Level II

Reviewer: Karen Ward Date/Time: 5-9-16 Reviewed from 10:24 to 20:15

Reviewer: _____ Date/Time: _____ Reviewed from _____ to _____

Comments _____

Curve Date 5-6-16 Curve Time 7:30-9:30 DILUTION H20 0.0008

Revised 01/19/2016

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Batch Number: 228967 Batch Start Date: 05/05/16 09:40 Batch Analyst: Colosi, Alexander J

Batch Method: 3005A Batch End Date: 05/05/16 17:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00024	MTICPMSA 00026	MTICPMSB 00027	MTTMHCL 00109
MB 240-228967/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-228967/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-64160-A-7	16-2	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-A-8	16-3	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-A-9	16-5	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-A-10	16WC2B	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-64160-A-11	16SPRING	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00085					
MB 240-228967/1		3005A, 6020A		1 mL					
LCS 240-228967/2		3005A, 6020A		1 mL					
240-64160-A-7	16-2	3005A, 6020A	R	1 mL					
240-64160-A-8	16-3	3005A, 6020A	R	1 mL					
240-64160-A-9	16-5	3005A, 6020A	R	1 mL					
240-64160-A-10	16WC2B	3005A, 6020A	R	1 mL					
240-64160-A-11	16SPRING	3005A, 6020A	R	1 mL					

Batch Notes	
Filter Paper ID	9656618
Hot Block ID	HB4
Pipette ID	MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Batch Number: 228970 Batch Start Date: 05/05/16 12:00 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 05/05/16 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00041	MTH2S04 00030	MTHGCALW 01198	MTKMN04W 00106
MB 240-228970/1		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
LCS 240-228970/2		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-64160-A-7	16-2	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-A-8	16-3	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-A-9	16-5	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-A-10	16WC2B	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-64160-A-11	16SPRING	7470A, 7470A	T	50 mL	50 mL	4 mL	2.5 mL		7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00085					
MB 240-228970/1		7470A, 7470A		1.25 mL					
LCS 240-228970/2		7470A, 7470A		1.25 mL					
240-64160-A-7	16-2	7470A, 7470A	T	1.25 mL					
240-64160-A-8	16-3	7470A, 7470A	T	1.25 mL					
240-64160-A-9	16-5	7470A, 7470A	T	1.25 mL					
240-64160-A-10	16WC2B	7470A, 7470A	T	1.25 mL					
240-64160-A-11	16SPRING	7470A, 7470A	T	1.25 mL					

Batch Notes	
Batch Comment	Take out temps within range
Hot Block ID	C1
Pipette ID	MP1-MP2
Digestion Tube/Cup ID	1509104

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-64160-2

SDG No.:

Batch Number: 229220 Batch Start Date: 05/06/16 07:30 Batch Analyst: Dillon, William K

Batch Method: 7470A Batch End Date: 05/06/16 09:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00041	MTH2S04 00030	MTHGCALW 01199	MTHgStd 00020
ICV 240-229220/7		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		0.25 mL
ICB 240-229220/8		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		
CRA 240-229220/9		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	0.1 mL	
CCV 240-229220/10		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	
CCB 240-229220/11		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00106	MTTMHNO3 00086				
ICV 240-229220/7		7470A, 7470A		7.5 mL	1.25 mL				
ICB 240-229220/8		7470A, 7470A		7.5 mL	1.25 mL				
CRA 240-229220/9		7470A, 7470A		7.5 mL	1.25 mL				
CCV 240-229220/10		7470A, 7470A		7.5 mL	1.25 mL				
CCB 240-229220/11		7470A, 7470A		7.5 mL	1.25 mL				

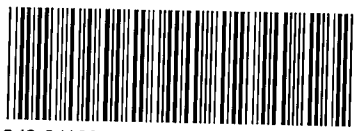
Batch Notes	
Batch Comment	take out temp in range
Hot Block ID	C3
Pipette ID	A6, MP1, MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-64160 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

28/C2,3

3,2/C2,7

CHAIN OF CUSTODY RECORD

QC JVR 4/14/2016

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Manager/1-800-966-9279

Client: 0 **Attn:** 0 **Addres** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2Q 2016 Annual Groundwater Monitoring Event **DAA JN:** B03204-16 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS **Carrier:** 1Z2373010193052008 **Tracking Number:** 1Z2373010191979011

Box 1: Matrix			Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T	Trip Blank	A HCL	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E	Equipment Blar	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P	Product	C H_2SO_4	G Other (Specify)	**Box 5: Sample Container Type**		Preserved and shipped on ice: YES
S Soil	O	Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

Box 4 - Sample Type	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U
Required pH of Sample		<2	<2	>12
Box 2 - Preservative	H	B	B	E
Box 5 - Sample Container Type	2-250mL AG	1-500 mL P		1-500 mL P

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	8270D/3510C (Semivolatiles)	ICP/MS 6020A/3005A (Metals-Total)	7470A (Mercury-Total)	9012B/9010C(Cyanide)
16C1	4/27	1325	GW	4	X	X	X	X
16MW8	4/26	1355	GW	4	X	X	X	X
16MW9	4/27	1215	GW	4	X	X	X	X
16WC1A	4/27	1050	GW	12	X	X	X	X
16WDUP	4/27	1110	GW	4	X	X	X	X
16WC1B	4/27	0950	GW	4	X	X	X	X
16-2	4/26	1250	GW	1		X	X	
16-3	4/26	1450	GW	1		X	X	
16-5	4/26	1045	GW	1		X	X	
16WC2B	4/26	1155	GW	1		X	X	
16SPRING	4/26	1100	GW	1		X	X	

1 4/27/16

GENERAL NOTES:

1. Report results to detection limit, with J flags, for italicized wells. Report to at or above QL for other locations
2. VELAP accreditation required.
3. Full Deliverable with EDD.
4. 8270 -Analyze for Hexachlorophene and Sulfotepp Only. 5. Metals -see attached list

Permit: QL = 100 ppb, DL = 10 ppb

QL = 10 ppb, DL = 1 ppb

USE FOR QC

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No

Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 4-26-16	#1 Relinquished by (Signature): Will Mason-Deese	Date: 4/27/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Will Mason-Deese	Date: 4-26-16	#1 Received by (Signature):	Date:	#2 Received by (Signature): Jacquelyn Sewell	Date: 4/28/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: TAN	Time: 1000	

✓ 1/5

OK 4/14/16

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

HWMU 16

Analyte	Method Ref	LOQ	LOD	CAS#	Units
ANTIMONY	6020A	2	0.4	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.2	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1	7440-50-8	UG/L
LEAD	6020A	1	0.2	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	5	3	7782-49-2	UG/L
SILVER	6020A	1	0.2	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	1	7440-62-2	UG/L
ZINC	6020A	10	3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report estimated results.

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

~~3020A~~ 3005A JUR 4/18/2016

Method SW 846-6020A/~~3005~~A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	1
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	10

Report to at or above the QL. ✓ JUR 4/18/2016

Updated 4/8/2013 jcf

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

THIS APPLIES TO ALL WELLS AND QC

Method SW 7470A/CVAA		CAS#	Required QL/DL
12.	Mercury	7439-97-6	2 / 0.2 ug/l

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 4

These are Appendix IX wells. Report estimated results.

LOD based on MDL reported in 2012 Compuchem. Jun 4/16/07

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 64160**
Canton Facility

Client DRAPER ADEN Site Name _____ Cooler unpacked by: J. Reed

Cooler Received on 4/28/16 Opened on 4/28/16

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ____ ☑ See Multiple Cooler Form
   IR GUN# 48 (CF **-1.9** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# 36 (CF **-1.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN# I8 (CF **-0.5** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4/Cooler Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC559158**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative Canton Facility			Login # : 64460	
Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	18	2.8	2.3	ICE
↓	↓	3.2	2.7	↓

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
16C1	240-64160-A-1	Plastic 250ml - with Sodium Hydro›	>12		
16C1	240-64160-B-1	Plastic 500ml - with Nitric Acid	<2		
16MW8	240-64160-A-2	Plastic 250ml - with Sodium Hydro›	>12		
16MW8	240-64160-B-2	Plastic 500ml - with Nitric Acid	<2		
16MW9	240-64160-A-3	Plastic 250ml - with Sodium Hydro›	>12		
16MW9	240-64160-B-3	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-A-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-B-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-C-4	Plastic 250ml - with Sodium Hydro›	>12		
16WC1A	240-64160-D-4	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-E-4	Plastic 500ml - with Nitric Acid	<2		
16WC1A	240-64160-F-4	Plastic 500ml - with Nitric Acid	<2		
16WDUP	240-64160-A-5	Plastic 250ml - with Sodium Hydro›	>12		
16WDUP	240-64160-B-5	Plastic 500ml - with Nitric Acid	<2		
16WC1B	240-64160-A-6	Plastic 250ml - with Sodium Hydro›	>12		
16WC1B	240-64160-B-6	Plastic 500ml - with Nitric Acid	<2		
16-2	240-64160-A-7	Plastic 500ml - with Nitric Acid	<2		
16-3	240-64160-A-8	Plastic 500ml - with Nitric Acid	<2		
16-5	240-64160-A-9	Plastic 500ml - with Nitric Acid	<2		
16WC2B	240-64160-A-10	Plastic 500ml - with Nitric Acid	<2		
16SPRING	240-64160-A-11	Plastic 500ml - with Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Draper Aden Associates, Inc.

Job Number: 240-64160-2

Login Number: 64160
List Number: 1
Creator: Maddux, Ann

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 06/16/16

SDG# RAE66

GROUP	SAMPLE NUMBERS
1673591	8433275-8433281

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **07/11/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAE66
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.

Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8433275	16MW8	06/16/2016 11:00	06/17/2016 09:20
8433276	16MW9	06/16/2016 13:40	06/17/2016 09:20
8433277	16MW9 MS	06/16/2016 13:40	06/17/2016 09:20
8433278	16MW9 MSD	06/16/2016 13:40	06/17/2016 09:20
8433279	16MW9 DUP	06/16/2016 13:40	06/17/2016 09:20
8433280	16WC1A	06/16/2016 12:25	06/17/2016 09:20
8433281	Trip Blank	06/16/2016 00:00	06/17/2016 09:20

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Sample pH Log

SDG: RAE66

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8433275	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA
8433275	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8433276	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA
8433276	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8433277	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8433278	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8433280	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA
8433280	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
8433281	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

08255 Total Cyanide (water)

During the distillation step, complex cyanides are converted to hydrogen cyanide which readily reacts with chloramine T. Simple cyanides are converted to cyanogen chloride by reaction with chloramine T. This reacts with pyridine and barbituric acid to give a red colored complex determined colorimetrically.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 9012B Rev. 2, November 2004.

08256 Cyanide Water Distillation

The sample is acidified and distilled. Cyanide is released as hydrogen cyanide and is absorbed in a sodium hydroxide solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 9012B Rev. 2, November 2004.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: June 23, 2016

Project: RAAP - Radford, VA - HWMU16

Submittal Date: 06/17/2016
Group Number: 1673591
SDG: RAE66
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
16MW8 Grab Groundwater	8433275
16MW9 Grab Groundwater	8433276
16MW9 MS Grab Groundwater	8433277
16MW9 MSD Grab Groundwater	8433278
16MW9 DUP Grab Groundwater	8433279
16WC1A Grab Groundwater	8433280
Trip Blank Water	8433281

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU16
LL Group #: 1673591

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: 16MW8 Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433275
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 11:00 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16M8 SDG#: RAE66-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Tetrahydrofuran	109-99-9	N.D.	2.0	25	1
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/22/2016 00:43	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/22/2016 00:43	Matthew S Krause	1
08255	Total Cyanide (water)	SW-846 9012B	1	16173117101A	06/22/2016 21:27	James S Mathiot	1
08256	Cyanide Water Distillation	SW-846 9012B	1	16173117101A	06/21/2016 17:20	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433276
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16M9 SDG#: RAE66-02BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Vinyl Chloride	75-01-4	N.D.	0.2	1.0	1
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/21/2016 22:41	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/21/2016 22:41	Matthew S Krause	1
08255	Total Cyanide (water)	SW-846 9012B	1	16173117101A	06/22/2016 21:28	James S Mathiot	1
08256	Cyanide Water Distillation	SW-846 9012B	1	16173117101A	06/21/2016 17:20	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 MS Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433277
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16M9 SDG#: RAE66-02MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Vinyl Chloride	75-01-4	5.6	0.2	1.0	1
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	0.18	0.0050	0.020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/21/2016 23:01	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/21/2016 23:01	Matthew S Krause	1
08255	Total Cyanide (water)	SW-846 9012B	1	16173117101A	06/22/2016 21:29	James S Mathiot	1
08256	Cyanide Water Distillation	SW-846 9012B	1	16173117101A	06/21/2016 17:20	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 MSD Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433278
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16M9 SDG#: RAE66-02MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Vinyl Chloride	75-01-4	5.5	0.2	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/21/2016 23:22	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/21/2016 23:22	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 DUP Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433279
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16M9 SDG#: RAE66-02DUP

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08255	Total Cyanide (water)	SW-846 9012B	1	16173117101A	06/22/2016 21:33	James S Mathiot	1
08256	Cyanide Water Distillation	SW-846 9012B	1	16173117101A	06/21/2016 17:20	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: 16WC1A Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433280
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 12:25 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16C1 SDG#: RAE66-03

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11996	Tetrahydrofuran	109-99-9	2.3	J	2.0	25	1
11996	Vinyl Chloride	75-01-4	N.D.		0.2	1.0	1
Wet Chemistry	**SW-846 9012B**		**mg/l**		**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.		0.0050	0.020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/22/2016 01:03	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/22/2016 01:03	Matthew S Krause	1
08255	Total Cyanide (water)	SW-846 9012B	1	16173117101A	06/22/2016 21:34	James S Mathiot	1
08256	Cyanide Water Distillation	SW-846 9012B	1	16173117101A	06/21/2016 17:20	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: Trip Blank Water
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433281
LL Group # 1673591
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:26

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R16TB SDG#: RAE66-04TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11996	Tetrahydrofuran	109-99-9	N.D.	2.0	25	1
11996	Vinyl Chloride	75-01-4	N.D.	0.2	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C	1	H161732AA	06/22/2016 00:02	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H161732AA	06/22/2016 00:02	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1673591
Reported: 06/23/2016 09:26

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: H161732AA	Sample number(s): 8433275-8433278,8433280-8433281		
Tetrahydrofuran	N.D.	2.0	25
Vinyl Chloride	N.D.	0.2	1.0
	mg/l	mg/l	mg/l
Batch number: 16173117101A	Sample number(s): 8433275-8433277,8433279-8433280		
Total Cyanide (water)	N.D.	0.0050	0.020

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: H161732AA	Sample number(s): 8433275-8433278,8433280-8433281								
Tetrahydrofuran	25	22.82			91		64-132		
Vinyl Chloride	5.00	4.72			94		62-128		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16173117101A	Sample number(s): 8433275-8433277,8433279-8433280								
Total Cyanide (water)	0.200	0.194			97		90-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: H161732AA	Sample number(s): 8433275-8433278,8433280-8433281 UNSPK: 8433276, P433276									
Tetrahydrofuran	N.D.	25	23.77	25	23.89	95	96	64-132	0	30
Vinyl Chloride	N.D.	5.00	5.65	5.00	5.53	113	111	62-128	2	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16173117101A	Sample number(s): 8433275-8433277,8433279-8433280 UNSPK: 8433276									
Total Cyanide (water)	N.D.	0.200	0.183			91		72-114		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1673591
Reported: 06/23/2016 09:26

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 16173117101A	Sample number(s): 8433275-8433277,8433279-8433280			BKG: 8433276
Total Cyanide (water)	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: H161732AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8433275	105	105	92	93
8433276	100	102	96	91
8433277	100	107	96	97
8433278	101	100	97	96
8433280	105	102	93	91
8433281	109	110	92	93
Blank	103	98	94	91
LCS	105	101	93	97
MS	100	107	96	97
MSD	101	100	97	96
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200 / 1673284 / 8431654-57 — 1673591, 8433275-81 ③ KMR 6/20/16

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC , 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 AT 6/14/16

Client: 0 Attn: 0 Addres 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: HWMU16 Event: 2016 Verification Monitoring Event DAA JN: B03204-16A Lab JN:	Project Specific (PS) or Batch (B) QC: ~~Sample Collection~~ for Project Complete? YES Carrier: UPS Tracking Number: 1Z75Y02XY044521847		

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCL	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E Equipment Blar	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P Product	C H_2SO_4	G Other (Specify)	Box 5: Sample Container Type		Preserved and shipped on Ice: YES
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

Box 4 - Sample Type	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U
Required pH of Sample	<2	<2	<2	>12
Box 2 - Preservative	B	A	A	E
Box 5 - Sample Container Type	1-500 mL P	3-40 mL V	3-40 mL V	1-500 mL P

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Total Metals - 6020A (Cobalt ONLY)	8260C - 25 mL purge (Tetrahydrofuran Only)	8260C - 25 mL purge (Vinyl Chloride Only)	Cyanide - 9012B	
16MW8	6-16	1100	GW	4		X		X	
16MW9	6-16	1340	GW	4	X (1)		X (6)	X (1)	Use for QC
16WC1A	6-16	1225	GW	4		X	X	X	
Trip Blank	6-16	—	GW	3		X	X		

GENERAL NOTES:

1. Level 1 deliverable with EDD and pdf.
2. Report DL/QL and estimated results.
3. VELAP accreditation required.
4. Report result at or above project DL and QL.

Cobalt: QL- 5 ug/L, DL- 1 ug/L.
Tetrahydrofuran: QL- 25 ug/L, DL- 2 ug/L.
Vinyl Chloride: QL- 1 ug/L, DL- 0.2 ug/L.
Cyanide: QL- 20 ug/L, DL- 5 ug/L.

* Need Results by On or before 22nd/June. JCF 6/14/16

Clients Special Instructions:

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No

Describe problems, if any:

Sampler Name (Print): Will Mason-Deese	Date: 6-16-16	#1 Relinquished by (Signature):	Date: 6-16-16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): MICHAEL NELSON	Date: 6-16-16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 6/17/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name: ECLE	Time: 920	

Y, JCF 6/14/16

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Sample Administration Receipt Documentation Log

Doc Log ID: 150799

Group Number(s): ~~1673284~~ 1673591

Client: Draper Aden

⑤ KM2 6/20/16

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	06/17/2016 9:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Joseph Huber (7831) at 10:41 on 06/17/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8433275	16MW8	X		1	
8433276	16MW9	X		1	Unspiked
8433277	16MW9 MS	X		1	Matrix Spike
8433278	16MW9 MSD	X		1	Matrix Spike Duplicate
8433280	16WC1A	X		1	
8433281	Trip Blank	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
8260C (25 ml)	H161732AA	VBLKH62	06/21/2016 22:18:00
		LCSH62	06/21/2016 21:17:00
		8433275	06/22/2016 00:43:00
		8433276 UNSPK	06/21/2016 22:41:00
		8433277 MS	06/21/2016 23:01:00
		8433278 MSD	06/21/2016 23:22:00
		8433280	06/22/2016 01:03:00
		8433281	06/22/2016 00:02:00

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAE66
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161732AA / VBLKH62 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	06/21/16	N.D.	ug/l	0.2	1.0
Tetrahydrofuran	06/21/16	N.D.	ug/l	2.0	25

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAE66
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H161732AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH62	98	74 - 113	91	78 - 110	103	77 - 114	94	77 - 110
LCSH62	101	74 - 113	97	78 - 110	105	77 - 114	93	77 - 110
8433275	105	74 - 113	93	78 - 110	105	77 - 114	92	77 - 110
8433276 UNSPK	102	74 - 113	91	78 - 110	100	77 - 114	96	77 - 110
8433277 MS	107	74 - 113	97	78 - 110	100	77 - 114	96	77 - 110
8433278 MSD	100	74 - 113	96	78 - 110	101	77 - 114	97	77 - 110
8433280	102	74 - 113	91	78 - 110	105	77 - 114	93	77 - 110
8433281	110	74 - 113	93	78 - 110	109	77 - 114	92	77 - 110

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 8433276 MS: 8433277 MSD: 8433278 **Analyte**	Batch: **H161732AA** (Sample number(s): 8433275-8433278, 8433280-8433281)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	5.00	N.D.	5.65	5.53	113	111	62-128	2	30
Tetrahydrofuran	25	N.D.	23.77 J	23.89 J	95	96	64-132	0	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAE66
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH62	Batch: **H161732AA** (Sample number(s): 8433275-8433278, 8433280-8433281)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	5.00	4.72	NA	94	NA	62-128	NA	NA
Tetrahydrofuran	25	22.82 J	NA	91	NA	64-132	NA	NA

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE66___

Lab File ID: hm14t01.d BFB Injection Date: 03/14/16

Instrument ID: HP19094 BFB Injection Time: 10:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.66
75	30.0 - 60.0% of mass 95	47.24
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.04
173	Less than 2.0% of mass 174	1.08 (1.29)1
174	Greater than 50.0% of mass 95	83.27
175	5.0 - 9.0% of mass 174	5.47 (6.57)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.30 (95.23)1
177	5.0 - 9.0% of mass 176	5.20 (6.56)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hm14i11.d	03/14/16	11:30
02	VSTD10	hm14i12.d	03/14/16	11:51
03	VSTD5	hm14i13.d	03/14/16	12:11
04	VSTD2	hm14i14.d	03/14/16	12:31
05	VSTD1	hm14i15.d	03/14/16	12:51
06	VSTD.5	hm14i16.d	03/14/16	13:12
07	VSTD.2	hm14i17.d	03/14/16	13:32
08	MDL0.1 - MDL0.1	hm14m11.d	03/14/16	13:53
09	VSTD25	hm14i01.d	03/14/16	14:53
10	VSTD10	hm14i02.d	03/14/16	15:14
11	VSTD5	hm14i03.d	03/14/16	15:34
12	VSTD2	hm14i04.d	03/14/16	15:54
13	VSTD1	hm14i05.d	03/14/16	16:15
14	VSTD.5	hm14i06.d	03/14/16	16:35
15	VSTD.2	hm14i07.d	03/14/16	16:55
16	MDL0.1 - MDL0.1	hm14m01.d	03/14/16	17:16
17	MDL0.4 - MDL0.4	hm14m02.d	03/14/16	17:36
18	LCSHLG	hm14cv1.d	03/14/16	17:56
19	LCSHSM	hm14cv12.d	03/14/16	19:18

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE66___

Lab File ID: hu21t08.d BFB Injection Date: 06/21/16

Instrument ID: HP19094 BFB Injection Time: 19:55

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.60
75	30.0 - 60.0% of mass 95	49.43
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.44
173	Less than 2.0% of mass 174	1.08 (1.20)1
174	Greater than 50.0% of mass 95	89.40
175	5.0 - 9.0% of mass 174	7.46 (8.34)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.99 (97.30)1
177	5.0 - 9.0% of mass 176	6.37 (7.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hu21c05.d	06/21/16	20:36
02	VSTD10	hu21c06.d	06/21/16	20:56
03	LCSH62	hu21s41.d	06/21/16	21:17
04	LCSH63	hu21s71.d	06/21/16	21:17
05	MDLH010 - MDLH010	hu21m05.d	06/21/16	21:37
06	LCSH64	hu21s72.d	06/21/16	21:57
07	VBLKH62	hu21b05.d	06/21/16	22:18
08	VBLKH63	hu21b10.d	06/21/16	22:18
09	8433276	hu21s42.d	06/21/16	22:41
10	8433277MS	hu21s43.d	06/21/16	23:01
11	8433278MSD	hu21s44.d	06/21/16	23:22
12	8433281	hu21s46.d	06/22/16	00:02
13	8431658	hu21s47.d	06/22/16	00:23
14	8433275	hu21s48.d	06/22/16	00:43
15	8433280	hu21s49.d	06/22/16	01:03
16	8426258	hu21s73.d	06/22/16	01:44
17	8426259MS	hu21s74.d	06/22/16	02:04
18	8426260MSD	hu21s75.d	06/22/16	02:25
19	8426259MSMS1	hu21s76.d	06/22/16	02:45
20	8426260MSDMS	hu21s77.d	06/22/16	03:06
21	8426261	hu21s78.d	06/22/16	03:26
22	8426262	hu21s79.d	06/22/16	03:46

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE66___

Lab File ID: hu21t08.d BFB Injection Date: 06/21/16

Instrument ID: HP19094 BFB Injection Time: 19:55

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.60
75	30.0 - 60.0% of mass 95	49.43
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.44
173	Less than 2.0% of mass 174	1.08 (1.20)1
174	Greater than 50.0% of mass 95	89.40
175	5.0 - 9.0% of mass 174	7.46 (8.34)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.99 (97.30)1
177	5.0 - 9.0% of mass 176	6.37 (7.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	8426263	hu21s80.d	06/22/16	04:06
24	8426264	hu21s81.d	06/22/16	04:27
25	8426266	hu21s83.d	06/22/16	05:07
26	8432180	hu21s84.d	06/22/16	05:28
27	8432187	hu21s85.d	06/22/16	05:48
28	8432188	hu21s86.d	06/22/16	06:08
29	8432189	hu21s87.d	06/22/16	06:29
30	8432190	hu21s88.d	06/22/16	06:49

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3794	0.3441	0.3851	0.2972	0.3177	0.3339	0.3560	0.3448	9	AVG #
Chloromethane	#	0.3712	0.3682	0.3027	0.3172	0.3277	0.3421	0.3382	8	AVG #
Vinyl Chloride	#0.3755	0.3230	0.3289	0.2741	0.2857	0.2988	0.3159	0.3145	11	AVG #
1,3-Butadiene	0.2859	0.2734	0.2478	0.2197	0.2031	0.2123	0.2231	0.2379	13	AVG
Bromomethane	#0.2381	0.2203	0.2196	0.1882	0.1971	0.1982	0.1998	0.2088	8	AVG #
Chloroethane	#0.2565	0.2082	0.2037	0.1691	0.1669	0.1735	0.1793	0.1939	17	AVG #
Dichlorofluoromethane	0.5349	0.4694	0.4719	0.3925	0.3894	0.4005	0.4213	0.4400	12	AVG
Trichlorofluoromethane	#0.4707	0.4254	0.4341	0.3636	0.3752	0.3872	0.4122	0.4098	9	AVG #
Ethyl ether	0.1857	0.1752	0.1684	0.1577	0.1594	0.1640	0.1730	0.1690	6	AVG
Freon 123a	0.3525	0.3296	0.3442	0.2782	0.2855	0.2931	0.3111	0.3135	9	AVG
Acrolein	3.0810	3.0839	2.9370	2.6300	2.6469	2.7838	2.7934	2.8508	7	AVG
1,1-Dichloroethene	#0.2575	0.2475	0.2493	0.2136	0.2256	0.2203	0.2320	0.2351	7	AVG #
Freon 113	#0.2438	0.2619	0.2664	0.2271	0.2344	0.2321	0.2457	0.2445	6	AVG #
Acetone	#	4.9423	4.0349	3.7140	3.5429	3.5833	3.7525	3.9283	13	AVG #
Methyl Iodide	0.4526	0.4598	0.4688	0.3991	0.4142	0.4155	0.4368	0.4353	6	AVG
Carbon Disulfide	#0.8414	0.7753	0.7634	0.6532	0.6735	0.6684	0.7068	0.7260	10	AVG #
Allyl Chloride	0.5146	0.4938	0.4351	0.4030	0.4025	0.4192	0.4437	0.4446	10	AVG
Methyl Acetate	#	9.6189	9.8815	10.128	8.9854	9.9432	9.8765	9.7388	4	AVG #
Methylene Chloride	#0.2618	0.2683	0.2715	0.2275	0.2397	0.2393	0.2508	0.2513	7	AVG #
t-Butyl Alcohol	1.4728	1.3976	1.4476	1.2056	1.2831	1.2273	1.3767	1.3444	8	AVG
Acrylonitrile	4.6277	5.0863	4.8259	4.3907	4.5424	4.6835	4.8382	4.7135	5	AVG
trans-1,2-Dichloroethene	#0.2610	0.2743	0.2723	0.2322	0.2426	0.2400	0.2498	0.2532	6	AVG #
Methyl Tertiary Butyl Ether	#0.5745	0.5608	0.5650	0.4970	0.5216	0.5235	0.5549	0.5425	5	AVG #
n-Hexane	0.4682	0.4550	0.4726	0.3859	0.4031	0.4001	0.4234	0.4297	8	AVG
1,1-Dichloroethane	#0.5492	0.5496	0.5313	0.4745	0.4916	0.4956	0.5203	0.5160	6	AVG #
di-Isopropyl Ether	0.9437	0.9424	0.9408	0.8273	0.8653	0.8697	0.9162	0.9007	5	AVG
2-Chloro-1,3-Butadiene	0.4430	0.4527	0.4533	0.3852	0.4029	0.4049	0.4231	0.4236	6	AVG
Ethyl t-butyl ether	0.7963	0.7919	0.7979	0.7010	0.7285	0.7331	0.7683	0.7596	5	AVG
cis-1,2-Dichloroethene	#0.2916	0.2956	0.2975	0.2577	0.2692	0.2704	0.2811	0.2804	5	AVG #
2,2-Dichloropropane	0.4409	0.4494	0.4402	0.3767	0.3870	0.3896	0.4062	0.4129	7	AVG
2-Butanone	#7.1976	7.0728	6.7420	6.3690	6.3071	6.5701	6.5977	6.6938	5	AVG #
Propionitrile	1.7329	1.6974	1.7303	1.5321	1.6258	1.6606	1.7047	1.6691	4	AVG
Methacrylonitrile	6.0702	6.0783	5.6869	5.4434	5.4279	5.6371	5.6608	5.7149	5	AVG
Bromochloromethane	0.1053	0.1122	0.1099	0.1013	0.1011	0.1054	0.1118	0.1067	4	AVG
Tetrahydrofuran	1.8630	1.8410	1.7011	1.5806	1.5751	1.6475	1.6453	1.6934	7	AVG
Chloroform	#0.5267	0.4894	0.4962	0.4270	0.4488	0.4474	0.4659	0.4716	7	AVG #
1,1,1-Trichloroethane	#0.4356	0.4299	0.4162	0.3669	0.3846	0.3836	0.3994	0.4023	6	AVG #
Cyclohexane	#0.6211	0.5867	0.5669	0.4571	0.4771	0.4731	0.4980	0.5257	12	AVG #
Cyclohexane(2)	#0.4116	0.4874	0.4351	0.3560	0.3722	0.3679	0.3874	0.4025	11	AVG #
Cyclohexane(3)	#0.1683	0.1617	0.1642	0.1345	0.1397	0.1386	0.1456	0.1504	9	AVG #
1,1-Dichloropropene	0.4002	0.4068	0.4150	0.3551	0.3701	0.3683	0.3877	0.3862	6	AVG
Carbon Tetrachloride	#0.3819	0.3849	0.3908	0.3354	0.3500	0.3486	0.3688	0.3658	6	AVG #
Isobutyl Alcohol		0.4905	0.4930	0.4034	0.4320	0.4316	0.4668	0.4529	8	AVG
Benzene	#1.1561	1.1416	1.1296	0.9906	1.0233	1.0189	1.0629	1.0747	6	AVG #
1,2-Dichloroethane	#0.3027	0.2858	0.2930	0.2557	0.2657	0.2677	0.2786	0.2785	6	AVG #
t-Amyl methyl ether	0.6605	0.6314	0.6607	0.5706	0.5980	0.5975	0.6262	0.6207	5	AVG
n-Heptane	0.5259	0.5187	0.5506	0.4408	0.4535	0.4416	0.4691	0.4857	9	AVG
n-Butanol	0.4418	0.3794	0.4190	0.3499	0.3627	0.3616	0.3695	0.3834	9	AVG
Trichloroethene	#0.3019	0.2903	0.2968	0.2571	0.2666	0.2681	0.2801	0.2801	6	AVG #
Methylcyclohexane	#0.4816	0.5047	0.4851	0.4210	0.4188	0.4370	0.4637	0.4588	7	AVG #
1,2-Dichloropropane	#0.2940	0.2983	0.2982	0.2545	0.2676	0.2659	0.2803	0.2798	6	AVG #
Methyl Methacrylate	12.213	12.795	11.713	11.371	11.444	11.950	12.097	11.940	4	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1232	0.1196	0.1196	0.1059	0.1110	0.1109	0.1168	0.1153	5	AVG
1,4-Dioxane		0.0537	0.0908	0.0768	0.0806	0.0776	0.0738	0.0755	16	AVG
Bromodichloromethane	#0.3243	0.3276	0.3367	0.2969	0.3144	0.3178	0.3351	0.3218	4	AVG #
2-Nitropropane	4.6486	4.2279	3.9219	3.3782	3.3840	3.6094	3.6231	3.8276	12	AVG
cis-1,3-Dichloropropene	#0.4198	0.3874	0.4098	0.3659	0.3855	0.3903	0.4098	0.3955	5	AVG #
4-Methyl-2-Pentanone	#17.171	17.506	16.820	15.707	15.605	16.287	16.220	16.473	4	AVG #
Toluene	#1.0550	1.0527	1.0130	0.8930	0.9025	0.8812	0.9200	0.9596	8	AVG #
trans-1,3-Dichloropropene	#0.4726	0.4707	0.4637	0.4207	0.4297	0.4283	0.4626	0.4497	5	AVG #
Ethyl Methacrylate	0.3469	0.3663	0.3613	0.3299	0.3364	0.3285	0.3524	0.3460	4	AVG
1,1,2-Trichloroethane	#0.2624	0.2456	0.2366	0.2185	0.2206	0.2162	0.2271	0.2324	7	AVG #
Tetrachloroethene	#0.5043	0.5013	0.4768	0.4156	0.4281	0.4126	0.4334	0.4532	9	AVG #
1,3-Dichloropropane	0.4378	0.4422	0.4381	0.3911	0.4040	0.3958	0.4165	0.4179	5	AVG
2-Hexanone	#13.649	11.440	12.122	11.015	10.889	11.290	11.127	11.647	8	AVG #
Dibromochloromethane	#0.2954	0.3167	0.3053	0.2757	0.2929	0.2899	0.3098	0.2979	5	AVG #
1,2-Dibromoethane	#0.2193	0.2394	0.2244	0.2075	0.2119	0.2092	0.2206	0.2189	5	AVG #
Chlorobenzene	#1.1380	1.1259	1.0962	0.9786	0.9874	0.9721	1.0139	1.0446	7	AVG #
1,1,1,2-Tetrachloroethane	0.3893	0.3720	0.3747	0.3345	0.3422	0.3368	0.3587	0.3583	6	AVG
Ethylbenzene	#2.1134	2.0137	1.9778	1.7409	1.7751	1.7289	1.7981	1.8783	8	AVG #
m+p-Xylene	#0.7815	0.7778	0.7550	0.6751	0.6720	0.6631	0.6905	0.7164	7	AVG #
o-Xylene	#0.7409	0.7607	0.7306	0.6493	0.6587	0.6515	0.6748	0.6952	7	AVG #
Styrene	#1.1801	1.1939	1.1620	1.0453	1.0648	1.0475	1.0916	1.1122	6	AVG #
Bromoform	#0.1725	0.1661	0.1672	0.1518	0.1610	0.1624	0.1757	0.1653	5	AVG #
Isopropylbenzene	#1.9851	2.0226	1.9572	1.7234	1.7365	1.6980	1.7743	1.8424	8	AVG #
1,1,2,2-Tetrachloroethane	#0.7438	0.6570	0.6509	0.5873	0.5855	0.5746	0.5821	0.6259	10	AVG #
Bromobenzene	1.0718	1.0292	0.9496	0.8694	0.8672	0.8647	0.8735	0.9322	9	AVG
trans-1,4-Dichloro-2-butene	4.8925	5.1777	5.1676	4.8188	4.9855	5.2640	5.2041	5.0729	3	AVG
1,2,3-Trichloropropane	0.1617	0.1778	0.1600	0.1528	0.1505	0.1473	0.1500	0.1571	7	AVG
n-Propylbenzene	5.8971	5.5876	5.2562	4.6713	4.6938	4.5895	4.6004	5.0423	11	AVG
2-Chlorotoluene	1.0885	1.0938	1.0038	0.9132	0.9073	0.8964	0.9029	0.9722	9	AVG
1,3,5-Trimethylbenzene	3.9321	3.9313	3.6885	3.2926	3.2746	3.2247	3.2638	3.5154	9	AVG
4-Chlorotoluene	1.1414	1.0760	1.0337	0.9389	0.9250	0.9058	0.9148	0.9908	9	AVG
tert-Butylbenzene	0.8221	0.8390	0.7950	0.7043	0.7007	0.6866	0.6982	0.7494	9	AVG
Pentachloroethane	0.6147	0.5969	0.5624	0.5292	0.5334	0.5506	0.5719	0.5656	6	AVG
1,2,4-Trimethylbenzene	3.9524	3.8986	3.6380	3.3087	3.2987	3.2420	3.2664	3.5150	9	AVG
sec-Butylbenzene	5.1612	5.0374	4.8561	4.2226	4.2314	4.1748	4.1768	4.5515	10	AVG
1,3-Dichlorobenzene	#2.0613	1.9935	1.8790	1.7282	1.6916	1.6946	1.7160	1.8235	8	AVG #
p-Isopropyltoluene	4.2749	4.2752	3.9843	3.6106	3.6455	3.5773	3.6033	3.8530	8	AVG
1,4-Dichlorobenzene	#2.2361	2.0721	1.9006	1.7257	1.6934	1.6593	1.6813	1.8526	12	AVG #
1,2,3-Trimethylbenzene	1.7273	1.6490	1.4414	1.3854	1.3246	1.3313	1.3446	1.4577	11	AVG
Benzyl Chloride	0.2225	0.2825	0.2499	0.2367	0.2480	0.2433	0.2528	0.2480	7	AVG
n-Butylbenzene	2.1531	1.9654	1.9531	1.7450	1.7845	1.7824	1.8102	1.8848	8	AVG
1,2-Dichlorobenzene	#1.8464	1.8109	1.6965	1.5178	1.5019	1.4784	1.4854	1.6196	10	AVG #
1,2-Dibromo-3-chloropropane	#2.9098	2.5381	2.5710	2.5040	2.4300	2.6883	2.6777	2.6170	6	AVG #
1,2,4-Trichlorobenzene	#1.4608	1.2962	1.1812	1.0543	1.0372	1.0385	1.0422	1.1586	14	AVG #
Hexachlorobutadiene	0.6982	0.6346	0.6641	0.5313	0.5592	0.5562	0.5941	0.6054	10	AVG
Naphthalene		2.2854	2.0615	1.8226	1.7195	1.6642	1.5895	1.8571	14	AVG
1,2,3-Trichlorobenzene		1.1571	1.0236	0.8912	0.8513	0.8193	0.8098	0.9254	15	AVG
Dibromofluoromethane	0.2305	0.2299	0.2370	0.2300	0.2397	0.2405	0.2419	0.2356	2	AVG
Dibromofluoromethane(2)	0.2370	0.2374	0.2440	0.2384	0.2439	0.2475	0.2492	0.2425	2	AVG
1,2-Dichloroethane-d4	0.0378	0.0383	0.0390	0.0378	0.0404	0.0402	0.0396	0.0390	3	AVG
1,2-Dichloroethane-d4(2)	0.1928	0.1919	0.2018	0.1975	0.2036	0.2021	0.2049	0.1992	3	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 03/14/16 03/14/16

Heated Purge: (Y/N) Y Calibration Times: 14:53 16:55

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hm14i07.d RRF0.5= hm14i06.d RRF 1 = hm14i05.d
RRF 2 = hm14i04.d RRF 5 = hm14i03.d RRF 10= hm14i02.d RRF 25= hm14i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(3)	0.0237	0.0231	0.0251	0.0245	0.0250	0.0255	0.0256	0.0246	4	AVG
Toluene-d8	1.4649	1.4592	1.4179	1.4398	1.4104	1.3887	1.3910	1.4246	2	AVG
Toluene-d8(2)	0.9435	0.9474	0.9141	0.9318	0.9107	0.9040	0.9033	0.9221	2	AVG
4-Bromofluorobenzene	0.4499	0.4509	0.4653	0.4562	0.4616	0.4617	0.4688	0.4592	2	AVG
4-Bromofluorobenzene(2)	0.3747	0.3779	0.3838	0.3812	0.3859	0.3861	0.3903	0.3828	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i01.d	VSTD025
/chem2/HP19094.i/16mar14a.b/hm14i02.d	VSTD010
/chem2/HP19094.i/16mar14a.b/hm14i03.d	VSTD005
/chem2/HP19094.i/16mar14a.b/hm14i04.d	VSTD002
/chem2/HP19094.i/16mar14a.b/hm14i05.d	VSTD001
/chem2/HP19094.i/16mar14a.b/hm14i06.d	VSTD0.5
/chem2/HP19094.i/16mar14a.b/hm14i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	111147	106258	114879	109317	115170	106301	108855	110275	3	Yes
Fluorobenzene	2257211	2270797	2341151	2353241	2358734	2335462	2342480	2322725	2	Yes
Chlorobenzene-d5	1599038	1617323	1635921	1595701	1632519	1554894	1562481	1599697	2	Yes
1,4-Dichlorobenzene-d4	737864	725016	731141	699859	732410	663285	656295	706553	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hm14i01.d	hm14i02.d	hm14i03.d	hm14i04.d	hm14i05.d	hm14i06.d	hm14i07.d	Avg. RT
t-Butyl Alcohol-d10	4.281	4.275	4.281	4.281	4.288	4.275	4.281	4.281
Fluorobenzene	7.805	7.805	7.805	7.805	7.805	7.805	7.805	7.805
Chlorobenzene-d5	11.262	11.262	11.262	11.262	11.262	11.262	11.262	11.262
1,4-Dichlorobenzene-d4	13.146	13.146	13.146	13.145	13.146	13.146	13.146	13.146

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 03/14/2016 at 18:26.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.2869	4.16	5	-17	#
# Chloromethane	0.3382	0.3005	4.44	5	-11	#
# Vinyl Chloride	0.3145	0.2814	4.47	5	-11	#
1,3-Butadiene	0.2379	0.2129	4.47	5	-11	
# Bromomethane	0.2088	0.1862	4.46	5	-11	#
# Chloroethane	0.1939	0.1691	4.36	5	-13	#
Dichlorofluoromethane	0.4400	0.4339	4.93	5	-1	
# Trichlorofluoromethane	0.4098	0.3885	4.74	5	-5	#
Ethyl ether	0.1690	0.1791	5.30	5	6	
Freon 123a	0.3135	0.3086	4.92	5	-2	
Acrolein	2.8508	2.6518	34.88	37.5	-7	
# 1,1-Dichloroethene	0.2351	0.2224	4.73	5	-5	#
# Freon 113	0.2445	0.2348	4.80	5	-4	#
# Acetone	3.9283	3.4222	32.67	37.5	-13	#
Methyl Iodide	0.4353	0.4152	4.77	5	-5	
# Carbon Disulfide	0.7260	0.6225	4.29	5	-14	#
Allyl Chloride	0.4446	0.4460	5.02	5	0	
# Methyl Acetate	9.7388	9.0187	4.63	5	-7	#
# Methylene Chloride	0.2513	0.2371	4.72	5	-6	#
t-Butyl Alcohol	1.3444	1.3828	51.43	50	3	
Acrylonitrile	4.7135	4.5543	24.16	25	-3	
# trans-1,2-Dichloroethene	0.2532	0.2494	4.92	5	-2	#
# Methyl Tertiary Butyl Ether	0.5425	0.5217	4.81	5	-4	#
n-Hexane	0.4297	0.4096	4.77	5	-5	
# 1,1-Dichloroethane	0.5160	0.4949	4.80	5	-4	#
di-Isopropyl Ether	0.9007	0.9135	5.07	5	1	
2-Chloro-1,3-Butadiene	0.4236	0.3837	4.53	5	-9	
Ethyl t-butyl ether	0.7596	0.7366	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2804	0.2746	4.90	5	-2	#
2,2-Dichloropropane	0.4129	0.3968	4.80	5	-4	
# 2-Butanone	6.6938	6.3917	35.81	37.5	-5	#
Propionitrile	1.6691	1.6206	36.41	37.5	-3	
Methacrylonitrile	5.7149	5.7301	37.60	37.5	0	
Bromochloromethane	0.1067	0.1083	5.08	5	2	
Tetrahydrofuran	1.6934	1.5668	23.13	25	-7	
# Chloroform	0.4716	0.4589	4.86	5	-3	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1,1,1-Trichloroethane	0.4023	0.3935	4.89	5	-2	#
Cyclohexane	0.5257	0.4856	4.62	5	-8	#
1,1-Dichloropropene	0.3862	0.3590	4.65	5	-7	
Carbon Tetrachloride	0.3658	0.3606	4.93	5	-1	#
Isobutyl Alcohol	0.4529	0.4698	129.67	125	4	
Benzene	1.0747	1.0422	4.85	5	-3	#
1,2-Dichloroethane	0.2785	0.2730	4.90	5	-2	#
t-Amyl methyl ether	0.6207	0.6059	4.88	5	-2	
n-Heptane	0.4857	0.4729	4.87	5	-3	
n-Butanol	0.3834	0.3583	233.61	250	-7	
Trichloroethene	0.2801	0.2798	4.99	5	0	#
Methylcyclohexane	0.4588	0.4593	5.01	5	0	#
1,2-Dichloropropane	0.2798	0.2759	4.93	5	-1	#
Methyl Methacrylate	11.940	11.8571	4.97	5	-1	
Dibromomethane	0.1153	0.1094	4.75	5	-5	
1,4-Dioxane	0.0755	0.0843	139.58	125	12	
Bromodichloromethane	0.3218	0.3160	4.91	5	-2	#
2-Nitropropane	3.8276	3.4176	4.46	5	-11	
cis-1,3-Dichloropropene	0.3955	0.3901	4.93	5	-1	#
4-Methyl-2-Pentanone	16.473	15.6459	23.74	25	-5	#
Toluene	0.9596	0.9407	4.90	5	-2	#
trans-1,3-Dichloropropene	0.4497	0.4515	5.02	5	0	#
Ethyl Methacrylate	0.3460	0.3509	5.07	5	1	
1,1,2-Trichloroethane	0.2324	0.2233	4.80	5	-4	#
Tetrachloroethene	0.4532	0.4458	4.92	5	-2	#
1,3-Dichloropropane	0.4179	0.4093	4.90	5	-2	
2-Hexanone	11.647	11.1994	24.04	25	-4	#
Dibromochloromethane	0.2979	0.2889	4.85	5	-3	#
1,2-Dibromoethane	0.2189	0.2225	5.08	5	2	#
Chlorobenzene	1.0446	1.0197	4.88	5	-2	#
1,1,1,2-Tetrachloroethane	0.3583	0.3524	4.92	5	-2	
Ethylbenzene	1.8783	1.8452	4.91	5	-2	#
m+p-Xylene	0.7164	0.7004	9.78	10	-2	#
o-Xylene	0.6952	0.6721	4.83	5	-3	#
Styrene	1.1122	1.0972	4.93	5	-1	#
Bromoform	0.1653	0.1583	4.79	5	-4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 03/14/16 Time: 17:56

Lab File ID: hm14cv1.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Isopropylbenzene	1.8424	1.8341	4.98	5	0	#
#	1,1,2,2-Tetrachloroethane	0.6259	0.5866	4.69	5	-6	#
	Bromobenzene	0.9322	0.9029	4.84	5	-3	
	trans-1,4-Dichloro-2-butene	5.0729	4.9756	24.52	25	-2	
	1,2,3-Trichloropropane	0.1571	0.1558	4.96	5	-1	
	n-Propylbenzene	5.0423	4.9524	4.91	5	-2	
	2-Chlorotoluene	0.9722	0.9485	4.88	5	-2	
	1,3,5-Trimethylbenzene	3.5154	3.4299	4.88	5	-2	
	4-Chlorotoluene	0.9908	0.9498	4.79	5	-4	
	tert-Butylbenzene	0.7494	0.7459	4.98	5	0	
	Pentachloroethane	0.5656	0.5688	5.03	5	1	
	1,2,4-Trimethylbenzene	3.5150	3.4285	4.88	5	-2	
	sec-Butylbenzene	4.5515	4.4795	4.92	5	-2	
#	1,3-Dichlorobenzene	1.8235	1.7406	4.77	5	-5	#
	p-Isopropyltoluene	3.8530	3.7502	4.87	5	-3	
#	1,4-Dichlorobenzene	1.8526	1.7439	4.71	5	-6	#
	1,2,3-Trimethylbenzene	1.4577	1.4042	4.82	5	-4	
	Benzyl Chloride	0.2480	0.2436	4.91	5	-2	
	n-Butylbenzene	1.8848	1.8861	5.00	5	0	
#	1,2-Dichlorobenzene	1.6196	1.5372	4.75	5	-5	#
#	1,2-Dibromo-3-chloropropane	2.6170	2.5079	4.79	5	-4	#
#	1,2,4-Trichlorobenzene	1.1586	0.9938	4.29	5	-14	#
	Hexachlorobutadiene	0.6054	0.5862	4.84	5	-3	
	Naphthalene	1.8571	1.5831	4.26	5	-15	
	1,2,3-Trichlorobenzene	0.9254	0.7706	4.16	5	-17	

Average %Drift 4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/16mar14a.b/hm14i07.d
/chem2/HP19094.i/16mar14a.b/hm14i06.d
/chem2/HP19094.i/16mar14a.b/hm14i05.d
/chem2/HP19094.i/16mar14a.b/hm14i04.d
/chem2/HP19094.i/16mar14a.b/hm14i03.d
/chem2/HP19094.i/16mar14a.b/hm14i02.d
/chem2/HP19094.i/16mar14a.b/hm14i01.d

File /chem2/HP19094.i/16mar14a.b/hm14i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/16jun21b.b/hu21c05.d

RT Summary

Internal Standard Name	File ID: hu21c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.263	4.275	Yes
Fluorobenzene	7.793	7.805	Yes
Chlorobenzene-d5	11.250	11.262	Yes
1,4-Dichlorobenzene-d4	13.127	13.146	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hu21c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	105096	106258	53129	212516	Yes
Fluorobenzene	2119584	2270797	1135398	4541594	Yes
Chlorobenzene-d5	1747547	1617323	808662	3234646	Yes
1,4-Dichlorobenzene-d4	853631	725016	362508	1450032	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 06/21/2016 at 21:00

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 06/21/16 Time: 20:36

Lab File ID: hu21c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3448	0.3168	9.19	10	-8	#
# Chloromethane	0.3382	0.3381	10.00	10	0	#
# Vinyl Chloride	0.3145	0.3285	10.45	10	4	#
1,3-Butadiene	0.2379	0.4913	20.65	10	106	<-
# Bromomethane	0.2088	0.2324	11.13	10	11	#
# Chloroethane	0.1939	0.1918	9.89	10	-1	#
Dichlorofluoromethane	0.4400	0.4735	10.76	10	8	
# Trichlorofluoromethane	0.4098	0.4236	10.34	10	3	#
Ethyl ether	0.1690	0.1850	10.94	10	9	
Freon 123a	0.3135	0.3224	10.28	10	3	
Acrolein	2.8508	2.6209	459.67	500	-8	
# 1,1-Dichloroethene	0.2351	0.2331	9.92	10	-1	#
# Freon 113	0.2445	0.2435	9.96	10	0	#
# Acetone	3.9283	3.6218	92.20	100	-8	#
Methyl Iodide	0.4353	0.4581	10.53	10	5	
# Carbon Disulfide	0.7260	0.6221	8.57	10	-14	#
Allyl Chloride	0.4446	0.4207	9.46	10	-5	
# Methyl Acetate	9.7388	9.3933	9.65	10	-4	#
# Methylene Chloride	0.2513	0.2540	10.11	10	1	#
t-Butyl Alcohol	1.3444	1.2947	192.60	200	-4	
Acrylonitrile	4.7135	4.6037	48.84	50	-2	
# trans-1,2-Dichloroethene	0.2532	0.2582	10.20	10	2	#
# Methyl Tertiary Butyl Ether	0.5425	0.5339	9.84	10	-2	#
n-Hexane	0.4297	0.3771	8.77	10	-12	
# 1,1-Dichloroethane	0.5160	0.4985	9.66	10	-3	#
di-Isopropyl Ether	0.9007	0.8479	9.41	10	-6	
2-Chloro-1,3-Butadiene	0.4236	0.4232	9.99	10	0	
Ethyl t-butyl ether	0.7596	0.7070	9.31	10	-7	
# cis-1,2-Dichloroethene	0.2804	0.3009	10.73	10	7	#
2,2-Dichloropropane	0.4129	0.3700	8.96	10	-10	
# 2-Butanone	6.6938	6.1851	92.40	100	-8	#
Propionitrile	1.6691	1.7822	213.55	200	7	
Methacrylonitrile	5.7149	6.0746	106.29	100	6	
Bromochloromethane	0.1067	0.1281	12.01	10	20	
Tetrahydrofuran	1.6934	1.6664	98.40	100	-2	
# Chloroform	0.4716	0.4987	10.57	10	6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 06/21/16 Time: 20:36

Lab File ID: hu21c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4023	0.3817	9.49	10	-5	#
# Cyclohexane	0.5257	0.4651	8.85	10	-12	#
# Cyclohexane(2)	0.4025	0.3758	9.34	10	-7	#
# Cyclohexane(3)	0.1504	0.1386	9.22	10	-8	#
1,1-Dichloropropene	0.3862	0.3851	9.97	10	0	
# Carbon Tetrachloride	0.3658	0.3548	9.70	10	-3	#
Isobutyl Alcohol	0.4529	0.4663	514.80	500	3	
# Benzene	1.0747	1.1192	10.41	10	4	#
# 1,2-Dichloroethane	0.2785	0.2869	10.30	10	3	#
t-Amyl methyl ether	0.6207	0.6137	9.89	10	-1	
n-Heptane	0.4857	0.4261	8.77	10	-12	
n-Butanol	0.3834	0.3962	1033.44	1000	3	
# Trichloroethene	0.2801	0.3010	10.74	10	7	#
# Methylcyclohexane	0.4588	0.4880	10.63	10	6	#
# 1,2-Dichloropropane	0.2798	0.2910	10.40	10	4	#
Methyl Methacrylate	11.9400	11.4399	9.58	10	-4	
Dibromomethane	0.1153	0.1272	11.04	10	10	
1,4-Dioxane	0.0755	0.1163	769.70	500	54	<-
# Bromodichloromethane	0.3218	0.3278	10.19	10	2	#
2-Nitropropane	3.8276	3.4094	89.08	100	-11	
# cis-1,3-Dichloropropene	0.3955	0.3909	9.88	10	-1	#
# 4-Methyl-2-Pentanone	16.4730	15.3500	93.18	100	-7	#
# Toluene	0.9596	0.8548	8.91	10	-11	#
# trans-1,3-Dichloropropene	0.4497	0.3729	8.29	10	-17	#
Ethyl Methacrylate	0.3460	0.2892	8.36	10	-16	
# 1,1,2-Trichloroethane	0.2324	0.2154	9.27	10	-7	#
# Tetrachloroethene	0.4532	0.4073	8.99	10	-10	#
1,3-Dichloropropane	0.4179	0.3789	9.07	10	-9	
# 2-Hexanone	11.6470	10.6816	91.71	100	-8	#
# Dibromochloromethane	0.2979	0.2642	8.87	10	-11	#
# 1,2-Dibromoethane	0.2189	0.2066	9.44	10	-6	#
# Chlorobenzene	1.0446	0.9845	9.42	10	-6	#
1,1,1,2-Tetrachloroethane	0.3583	0.3288	9.18	10	-8	
# Ethylbenzene	1.8783	1.6859	8.98	10	-10	#
# m+p-Xylene	0.7164	0.6640	18.54	20	-7	#
# o-Xylene	0.6952	0.6481	9.32	10	-7	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 06/21/16 Time: 20:36

Lab File ID: hu21c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.1122	1.0590	9.52	10	-5	#
# Bromoform	0.1653	0.1475	8.92	10	-11	#
# Isopropylbenzene	1.8424	1.6513	8.96	10	-10	#
# 1,1,2,2-Tetrachloroethane	0.6259	0.5296	8.46	10	-15	#
Bromobenzene	0.9322	0.8254	8.85	10	-11	
trans-1,4-Dichloro-2-butene	5.0729	4.2356	83.49	100	-17	
1,2,3-Trichloropropane	0.1571	0.1363	8.68	10	-13	
n-Propylbenzene	5.0423	4.1188	8.17	10	-18	
2-Chlorotoluene	0.9722	0.8345	8.58	10	-14	
1,3,5-Trimethylbenzene	3.5154	2.9133	8.29	10	-17	
4-Chlorotoluene	0.9908	0.8690	8.77	10	-12	
tert-Butylbenzene	0.7494	0.6640	8.86	10	-11	
Pentachloroethane	0.5656	0.4965	8.78	10	-12	
1,2,4-Trimethylbenzene	3.5150	2.9979	8.53	10	-15	
sec-Butylbenzene	4.5515	3.7606	8.26	10	-17	
# 1,3-Dichlorobenzene	1.8235	1.6230	8.90	10	-11	#
p-Isopropyltoluene	3.8530	3.3090	8.59	10	-14	
# 1,4-Dichlorobenzene	1.8526	1.6028	8.65	10	-13	#
1,2,3-Trimethylbenzene	1.4577	1.2914	8.86	10	-11	
Benzyl Chloride	0.2480	0.2074	8.36	10	-16	
n-Butylbenzene	1.8848	1.6624	8.82	10	-12	
# 1,2-Dichlorobenzene	1.6196	1.4284	8.82	10	-12	#
# 1,2-Dibromo-3-chloropropane	2.6170	2.8329	10.83	10	8	#
# 1,2,4-Trichlorobenzene	1.1586	0.9817	8.47	10	-15	#
Hexachlorobutadiene	0.6054	0.5329	8.80	10	-12	
Naphthalene	1.8571	1.3843	7.45	10	-25	<-
1,2,3-Trichlorobenzene	0.9254	0.7628	8.24	10	-18	
Dibromofluoromethane	0.2356	0.2561	10.87	10	9	
Dibromofluoromethane(2)	0.2425	0.2663	10.98	10	10	
1,2-Dichloroethane-d4	0.0390	0.0431	11.03	10	10	
1,2-Dichloroethane-d4(2)	0.1992	0.2069	10.38	10	4	
1,2-Dichloroethane-d4(3)	0.0246	0.0276	11.19	10	12	
Toluene-d8	1.4246	1.2671	8.89	10	-11	
Toluene-d8(2)	0.9221	0.8167	8.86	10	-11	
4-Bromofluorobenzene	0.4592	0.4497	9.79	10	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 06/21/16 Time: 20:36

Lab File ID: hu21c05.d Init. Calib. Date(s): 03/14/16 03/14/16

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.3828	0.4058	10.60	10	6

Average %Drift 10

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE66___

Lab File ID (Standard): hu21c05.d Date Analyzed: 06/21/16

Instrument ID: HP19094 Time Analyzed: 20:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	105096	4.263	2119584	7.793	1747547	11.250	853631	13.127
UPPER LIMIT	210192	4.763	4239168	8.293	3495094	11.750	1707262	13.627
LOWER LIMIT	52548	3.763	1059792	7.293	873774	10.750	426816	12.627
LAB SAMPLE ID								
01 LCSH62	108258	4.275	2220800	7.793	1753541	11.250	837654	13.127
02 LCSH63	108259	4.275	2220800	7.793	1753541	11.250	837654	13.127
03 MDLH010 - M	94039	4.263	2168637	7.793	1728891	11.250	776904	13.127
04 LCSH64	97520	4.275	2139022	7.793	1650943	11.250	729111	13.127
05 VBLKH62	93368	4.257	2165033	7.787	1650766	11.250	708002	13.127
06 VBLKH63	93368	4.257	2165033	7.787	1650766	11.250	708002	13.127
07 8433276	102590	4.269	2180503	7.787	1631314	11.250	713907	13.127
08 8433277MS	102470	4.275	2094452	7.793	1567262	11.250	728633	13.127
09 8433278MSD	102730	4.263	2161159	7.793	1612726	11.250	747154	13.127
10 8433281	94769	4.263	2092219	7.793	1675469	11.250	752466	13.127
11 8431658	92285	4.275	2057754	7.793	1621869	11.249	731672	13.127
12 8433275	90890	4.269	2105778	7.793	1656482	11.250	728157	13.127
13 8433280	93306	4.275	2104124	7.787	1629817	11.250	716913	13.127
14 8426258	90743	4.263	2093730	7.787	1562136	11.250	671084	13.127
15 8426259MS	92336	4.269	2114759	7.793	1604431	11.249	739174	13.127
16 8426260MSD	95656	4.257	2118568	7.787	1599489	11.249	729235	13.127
17 8426259MSMS1	96807	4.269	2104243	7.793	1568852	11.250	695709	13.127
18 8426260MSDMS	88850	4.275	2108288	7.793	1629679	11.250	724115	13.127
19 8426261	86208	4.275	2087988	7.793	1647062	11.250	739538	13.127
20 8426262	89808	4.281	2079351	7.793	1630284	11.249	732342	13.127
21 8426263	92044	4.269	2075572	7.793	1646932	11.250	750977	13.127
22 8426264	88231	4.275	2094646	7.793	1614149	11.250	719286	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAE66___

Lab File ID (Standard): hu21c05.d Date Analyzed: 06/21/16

Instrument ID: HP19094 Time Analyzed: 20:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	105096	4.263	2119584	7.793	1747547	11.250	853631	13.127
UPPER LIMIT	210192	4.763	4239168	8.293	3495094	11.750	1707262	13.627
LOWER LIMIT	52548	3.763	1059792	7.293	873774	10.750	426816	12.627
LAB SAMPLE ID								
23 8426266	87199	4.263	2081343	7.787	1568775	11.250	684635	13.127
24 8432180	83307	4.275	2040749	7.787	1553008	11.250	688927	13.127
25 8432187	91508	4.269	2053643	7.793	1531472	11.249	672232	13.127
26 8432188	87410	4.257	2057638	7.787	1552003	11.250	666247	13.127
27 8432189	93160	4.287	2008502	7.793	1510947	11.249	655833	13.127
28 8432190	89245	4.275	2033073	7.793	1602247	11.250	705812	13.127

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.2	1.0	ug/l
Tetrahydrofuran	2.0	25	ug/l

R16M8 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8433275

Data file: /chem2/HP19094.i/16jun21b.b/hu21s48.d Injection date and time: **22-JUN-2016 00:43**
Data file Sample Info. Line: R16M8;8433275;1;0;;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 22-Jun-2016 01:02 Automation

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **12305**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.006)	440	65	90890	(-14)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2105778	(-1)	10.00	
97) Chlorobenzene-d5	11.249	(0.000)	1585	117	1656482	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	728157	(-15)	10.00	

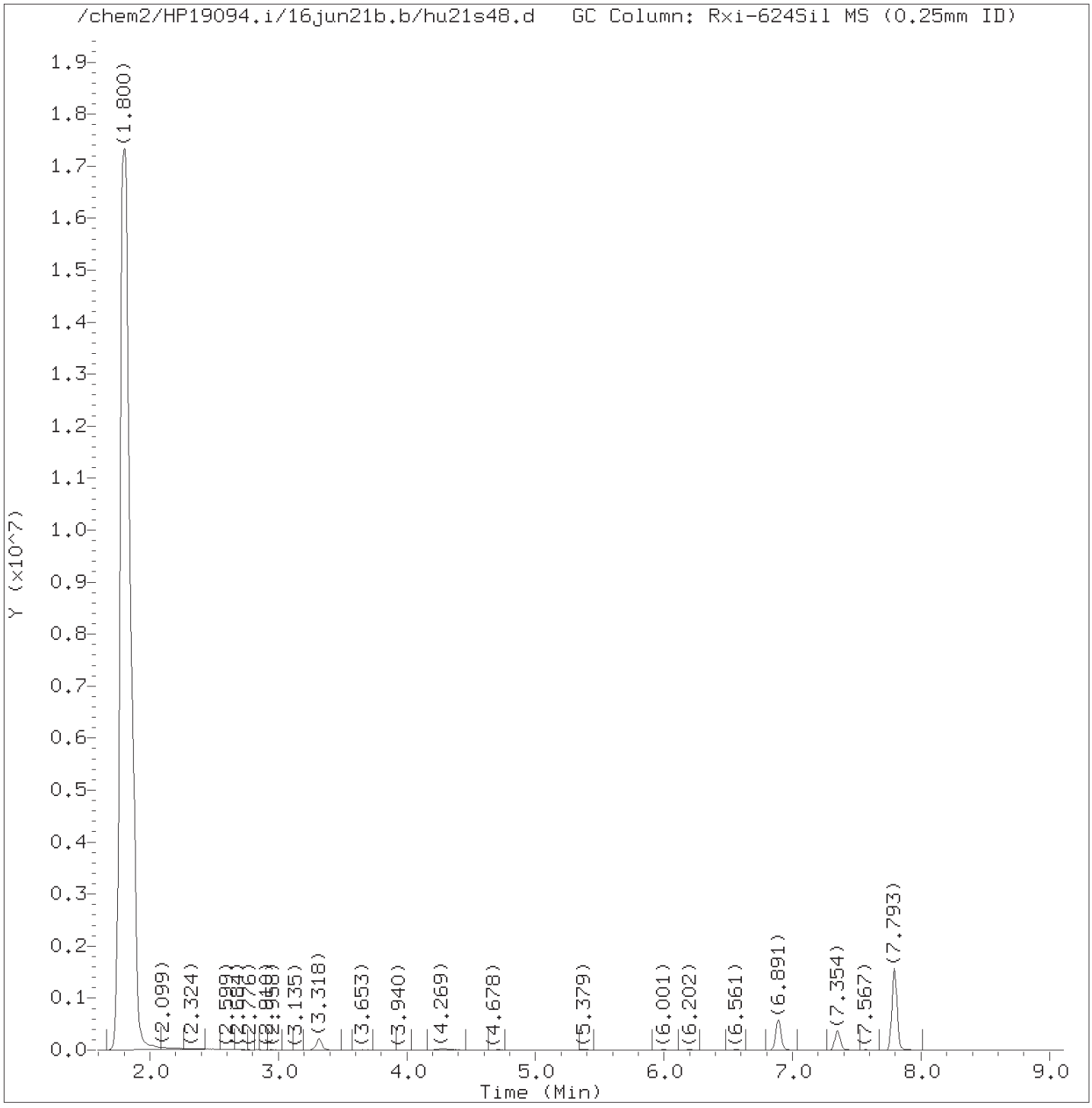
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	521394	10.508	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	86047	10.470	105%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2181845	9.246	92%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	707602	9.303	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
48) Tetrahydrofuran	(1)				Not Detected					2	25

Total number of targets = 1

Digitally signed by Kerri E. Koch Legerlotz on 06/22/2016 at 11:26. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

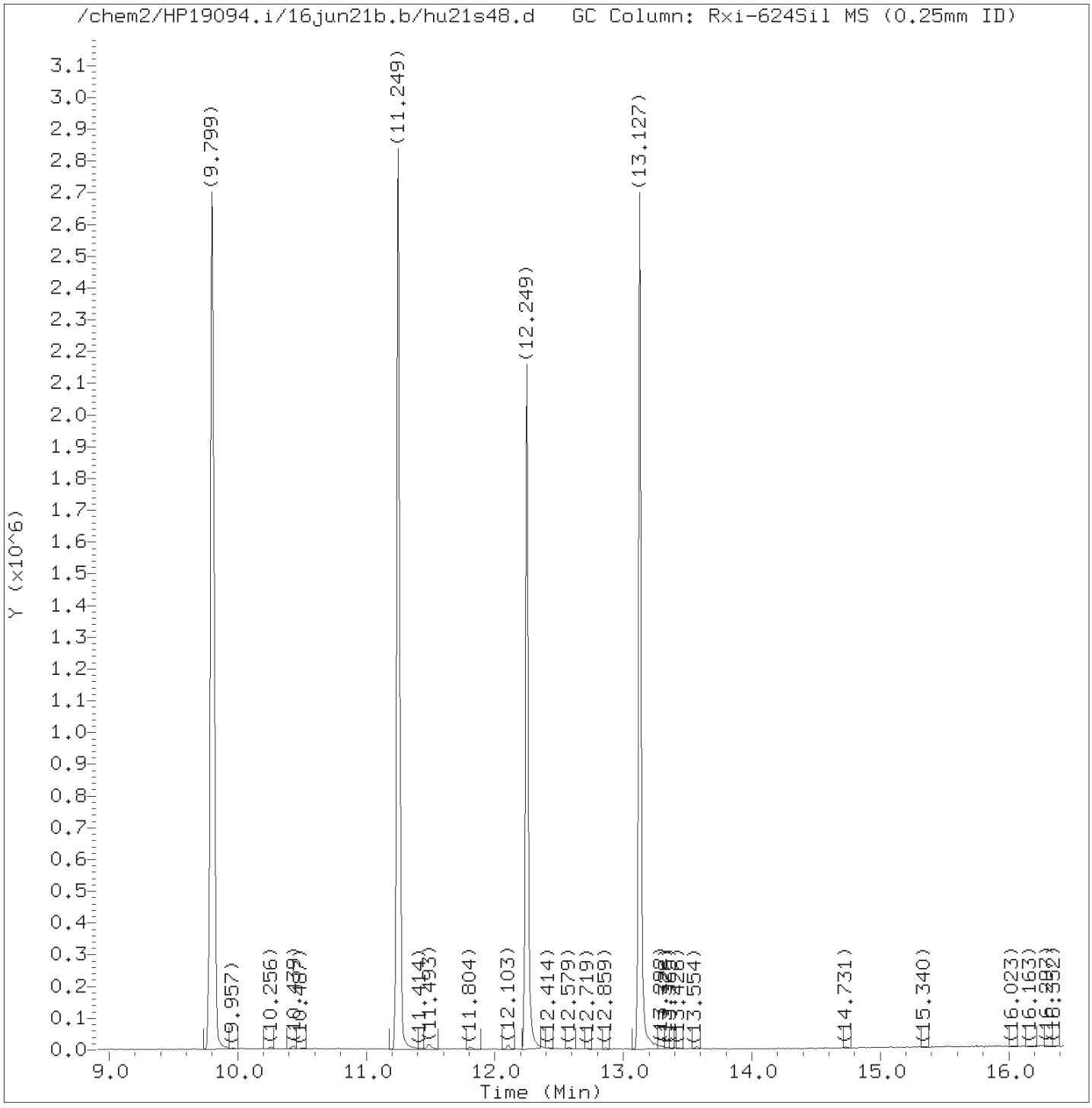
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s48.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:43 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 12305
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:02 Automation

Sample Name: R16M8 Lab Sample ID: 8433275

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s48.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:43 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 12305
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:02 Automation

Sample Name: R16M8 Lab Sample ID: 8433275

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s48.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:43 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 12305
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:02 Automation

Sample Name: R16M8 Lab Sample ID: 8433275

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	90890	50.000
50)$Dibromofluoromethane	(2)	6.891	113	521394	10.508
57)$1,2-Dichloroethane-d4	(2)	7.348	102	86047	10.470
63)*Fluorobenzene	(2)	7.793	96	2105778	10.000
82)$Toluene-d8	(3)	9.799	98	2181845	9.246
97)*Chlorobenzene-d5	(3)	11.249	117	1656482	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	707602	9.303
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	728157	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973

R16M9 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8433276

Data file: /chem2/HP19094.i/16jun21b.b/hu21s42.d Injection date and time: **21-JUN-2016 22:41**
Data file Sample Info. Line: R16M9;8433276;1;0;;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 21-Jun-2016 23:00 Automation

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **19827**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.269	(-0.006)	440	65	102590	(-2)	50.00	
63) Fluorobenzene	7.787	(0.006)	1017	96	2180503	(3)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1631314	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	713907	(-16)	10.00	

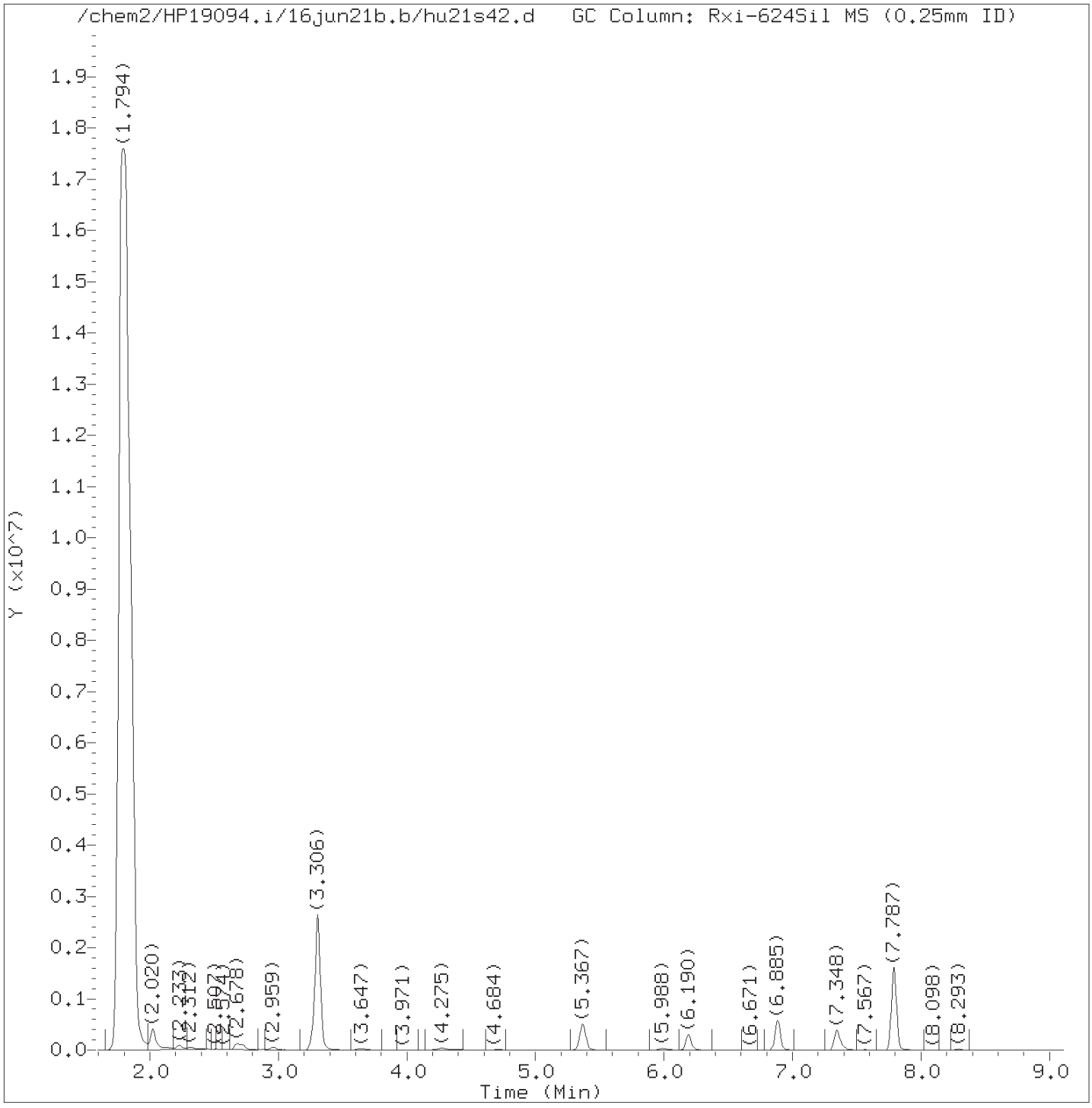
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.000)	113	512241	9.969	100%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	86920	10.213	102%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2241418	9.645	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	683501	9.124	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.2	1

Total number of targets = 1

Digitally signed by Matthew S. Krause on 06/21/2016 at 23:13. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

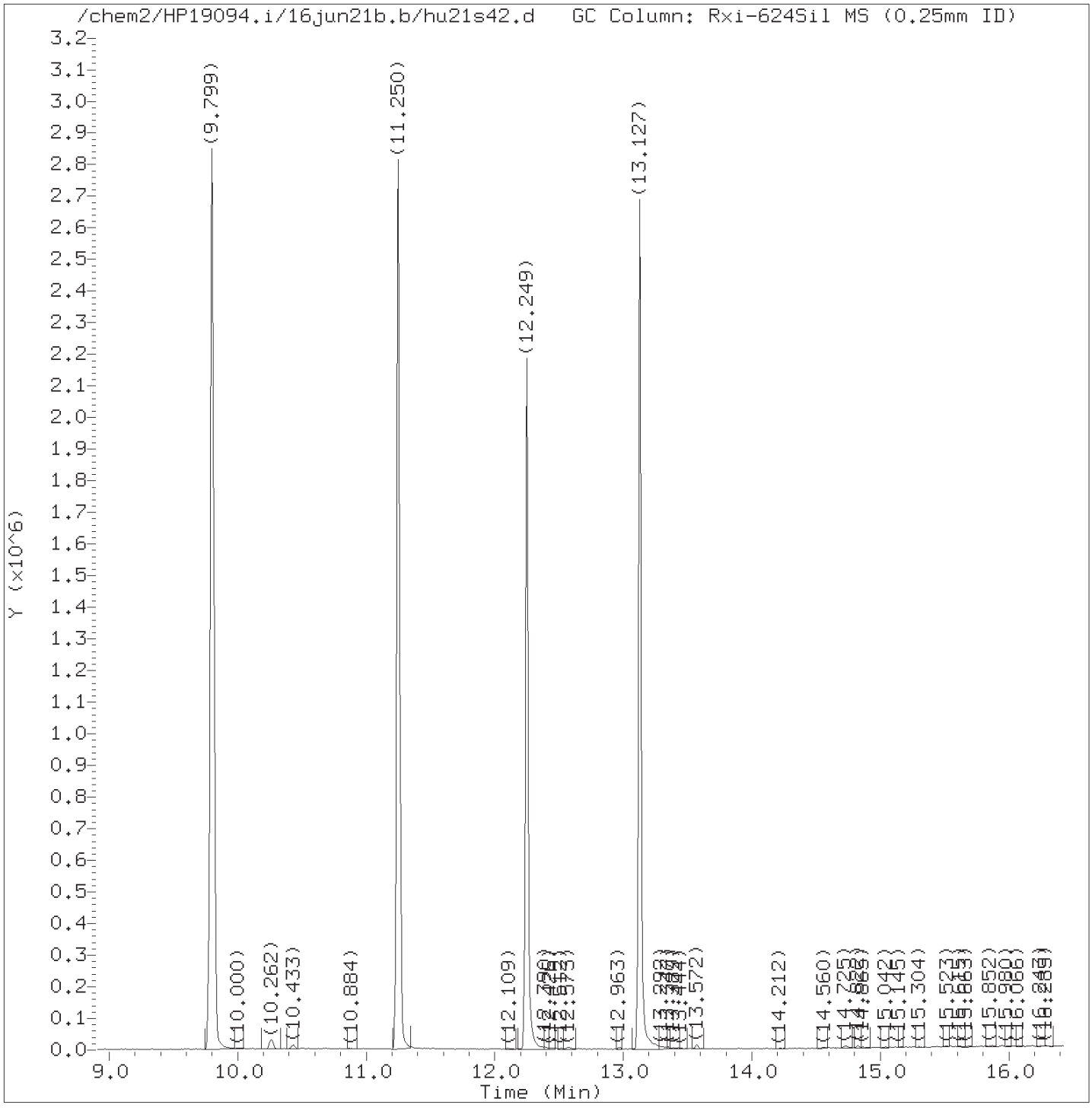
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s42.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:41 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:00 Automation

Sample Name: R16M9 Lab Sample ID: 8433276

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:13.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s42.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:41 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:00 Automation

Sample Name: R16M9 Lab Sample ID: 8433276

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:13.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s42.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:41 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:00 Automation

Sample Name: R16M9 Lab Sample ID: 8433276

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.269	65	102590	50.000
50)$Dibromofluoromethane	(2)	6.885	113	512241	9.969
57)$1,2-Dichloroethane-d4	(2)	7.342	102	86920	10.213
63)*Fluorobenzene	(2)	7.787	96	2180503	10.000
82)$Toluene-d8	(3)	9.799	98	2241418	9.645
97)*Chlorobenzene-d5	(3)	11.250	117	1631314	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	683501	9.124
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	713907	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:13.
Target 3.5 esignature user ID: msk07970

R16C1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 8433280

Data file: /chem2/HP19094.i/16jun21b.b/hu21s49.d Injection date and time: **22-JUN-2016 01:03**
Data file Sample Info. Line: R16C1;8433280;1;0;;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 22-Jun-2016 01:23 Automation

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **19814**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.012)	441	65	93306	(-11)	50.00	
63) Fluorobenzene	7.787	(0.006)	1017	96	2104124	(-1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1629817	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	716913	(-16)	10.00	

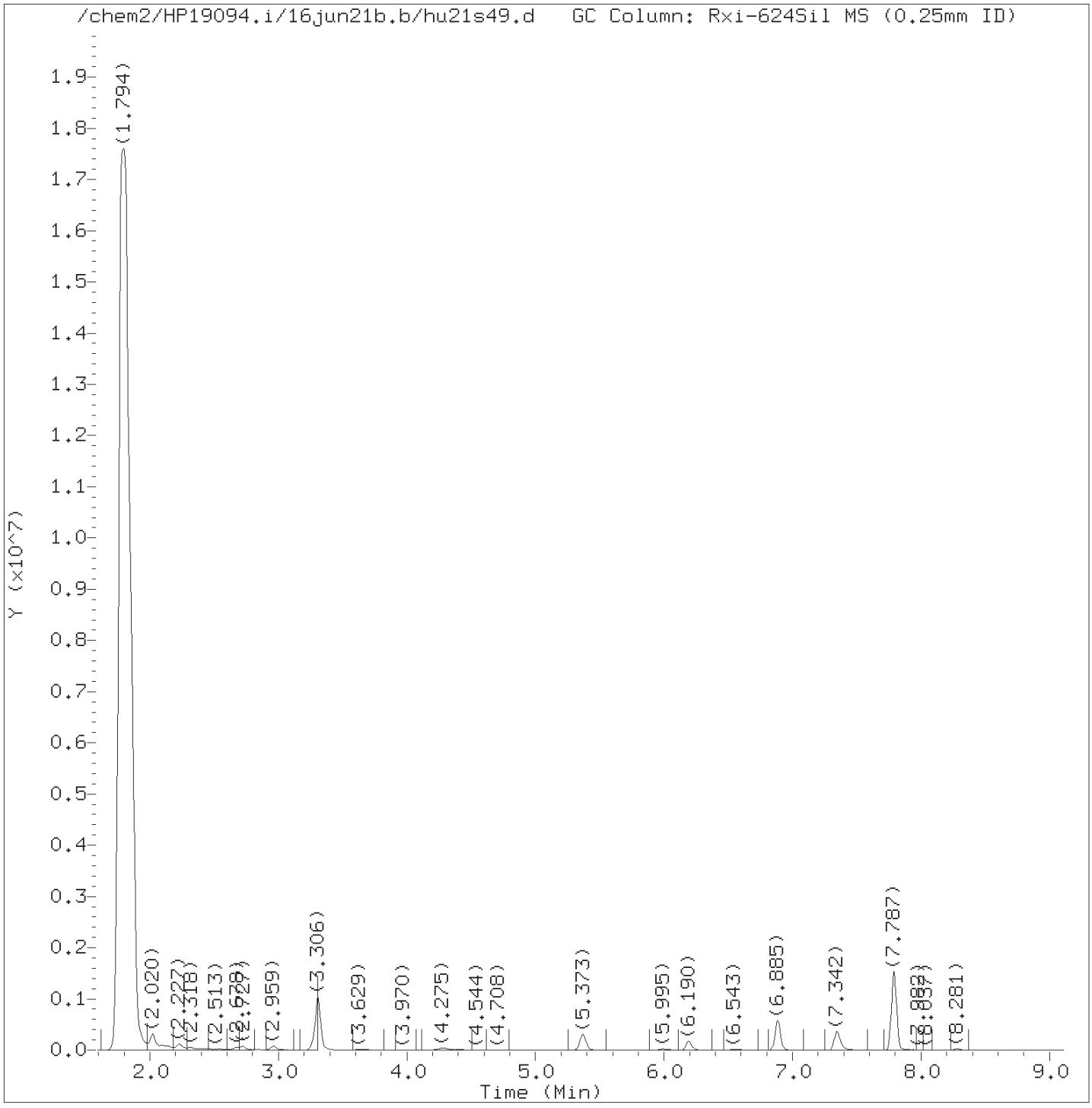
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.000)	113	519711	10.482	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.000)	102	83570	10.176	102%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2161435	9.309	93%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	681966	9.112	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.2	1
48) Tetrahydrofuran	(1)	6.561	(0.001)	71	7137	2.259	2.26		J	2	25

Total number of targets = 2

Digitally signed by Kerri E. Koch Legerlotz on 06/22/2016 at 11:27. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

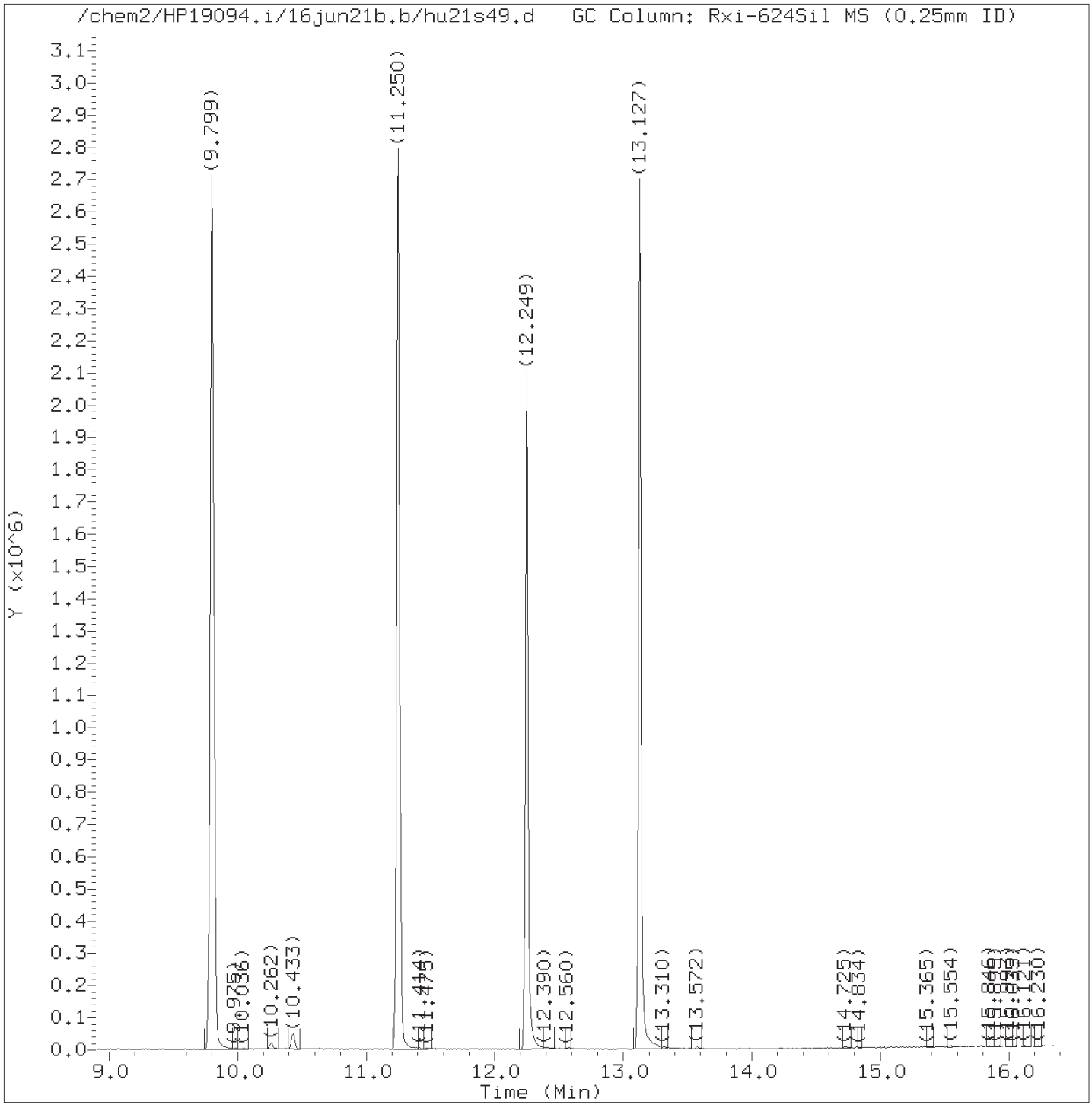
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s49.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 01:03 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:23 Automation

Sample Name: R16C1 Lab Sample ID: 8433280

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:27.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s49.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 01:03 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:23 Automation

Sample Name: R16C1 Lab Sample ID: 8433280

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:27.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s49.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 01:03 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:23 Automation

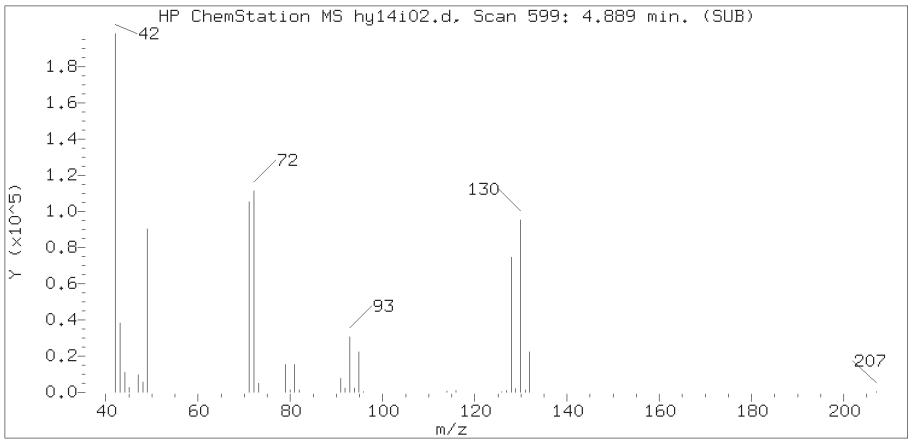
Sample Name: R16C1 Lab Sample ID: 8433280

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.275	65	93306	50.000
48) Tetrahydrofuran	(1)	6.561	71	7137	2.259
50)$Dibromofluoromethane	(2)	6.885	113	519711	10.482
57)$1,2-Dichloroethane-d4	(2)	7.348	102	83570	10.176
63)*Fluorobenzene	(2)	7.787	96	2104124	10.000
82)$Toluene-d8	(3)	9.799	98	2161435	9.309
97)*Chlorobenzene-d5	(3)	11.250	117	1629817	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	681966	9.112
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	716913	10.000

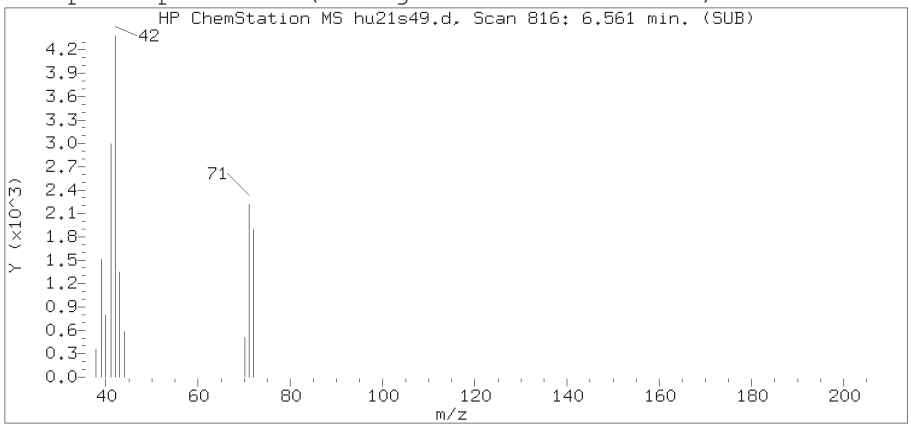
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:27.
Target 3.5 esignature user ID: kel01973

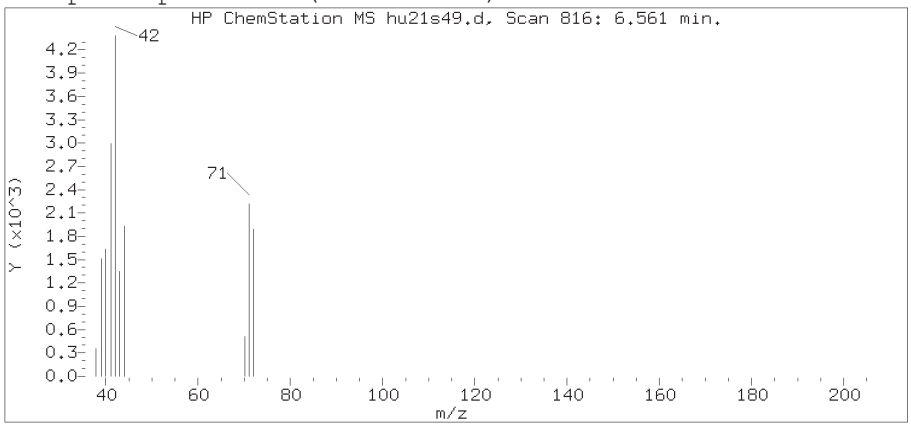
Reference Standard Spectrum for Tetrahydrofuran

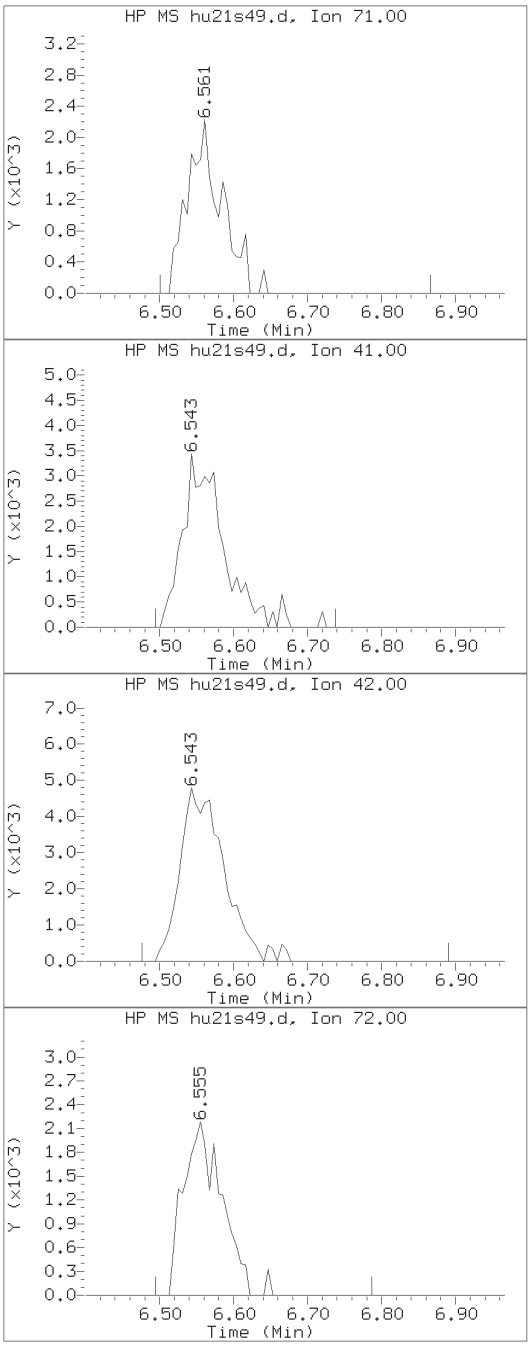


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/16jun21b.b/hu21s49.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 01:03 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 01:23 Automation

Sample Name: R16C1 Lab Sample ID: 8433280

Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 816
Retention Time (minutes)	: 6.561
Relative Retention Time	: 0.00152
Quant Ion	: 71.00
Area (flag)	: 7137
On-Column Amount (ng)	: 2.2586

Digitally signed by Kerri E. Koch Legerlotz on 06/22/2016 at 11:27.
Target 3.5 esignature [illegible]

R16TB

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8433281

Data file: /chem2/HP19094.i/16jun21b.b/hu21s46.d Injection date and time: **22-JUN-2016 00:02**
Data file Sample Info. Line: R16TB;8433281;1;0;;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 22-Jun-2016 00:22 Automation

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **19814**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(0.000)	439	65	94769	(-10)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2092219	(-1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1675469	(-4)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	752466	(-12)	10.00	

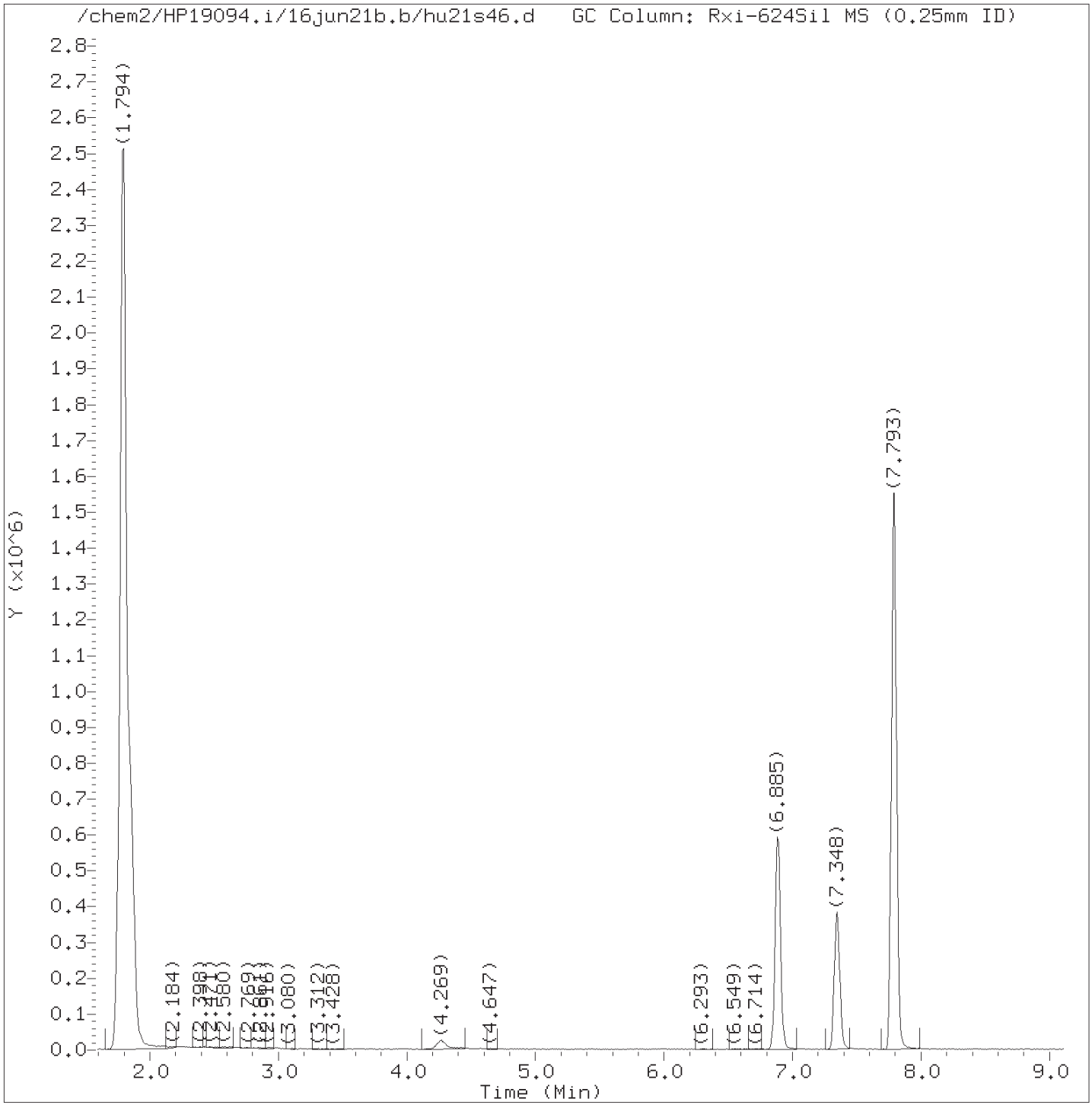
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.001)	113	535164	10.855	109%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	89758	10.992	110%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2187570	9.165	92%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	718405	9.338	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.2	1
48) Tetrahydrofuran	(1)				Not Detected					2	25

Total number of targets = 2

Digitally signed by Kerri E. Koch Legerlotz on 06/22/2016 at 11:26. Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

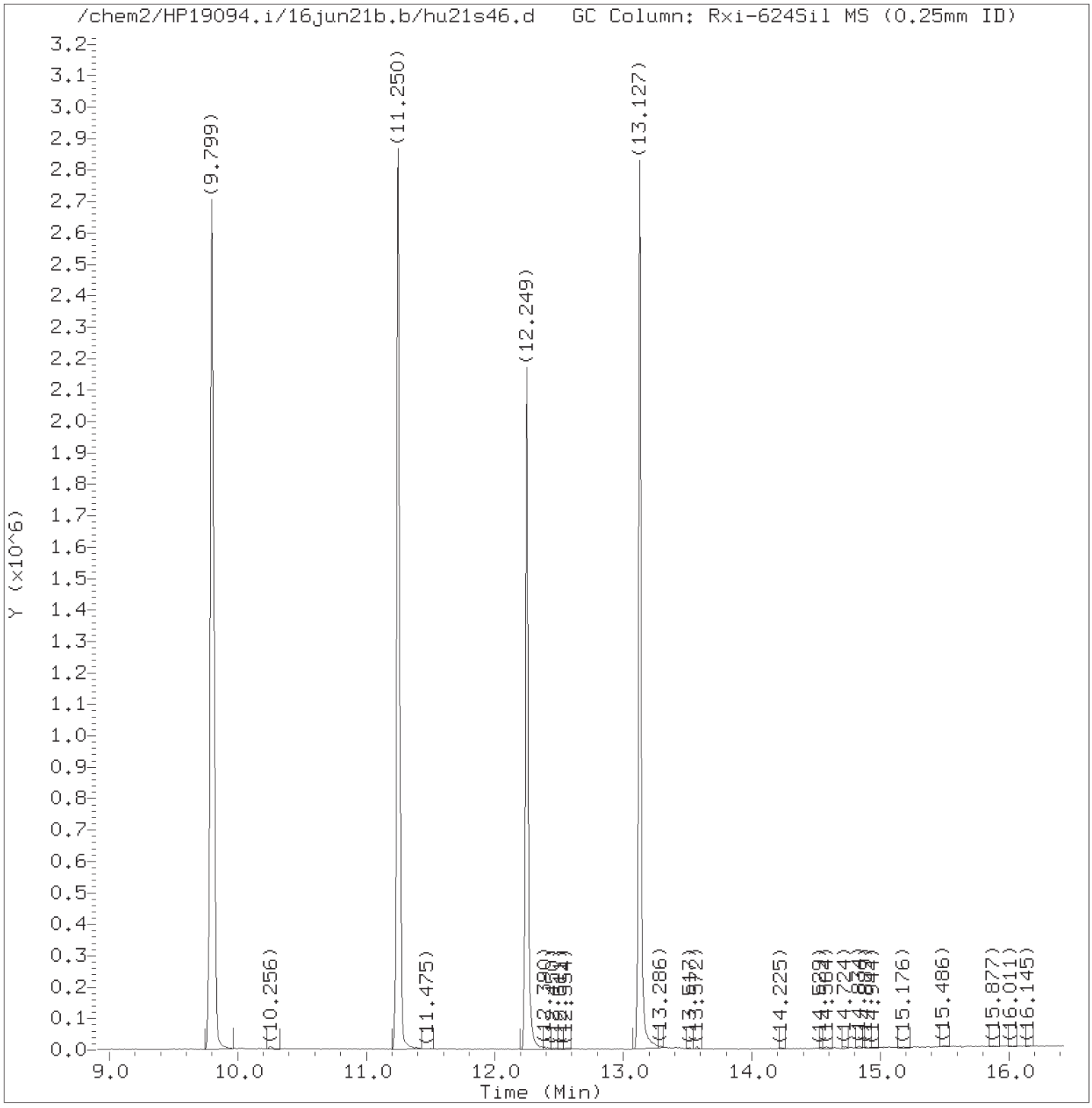
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s46.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:02 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 00:22 Automation

Sample Name: R16TB Lab Sample ID: 8433281

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s46.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:02 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 00:22 Automation

Sample Name: R16TB Lab Sample ID: 8433281

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s46.d Instrument ID: HP19094.i
Injection date and time: 22-JUN-2016 00:02 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19814
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 22-Jun-2016 00:22 Automation

Sample Name: R16TB Lab Sample ID: 8433281

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.263	65	94769	50.000
50)$Dibromofluoromethane	(2)	6.885	113	535164	10.855
57)$1,2-Dichloroethane-d4	(2)	7.348	102	89758	10.992
63)*Fluorobenzene	(2)	7.793	96	2092219	10.000
82)$Toluene-d8	(3)	9.799	98	2187570	9.165
97)*Chlorobenzene-d5	(3)	11.250	117	1675469	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	718405	9.338
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	752466	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 06/22/2016 at 11:26.
Target 3.5 esignature user ID: kel01973

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\DATA\16MAR14A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kel01973	hm14t01.D	bfb FEB23-16	03/14/2016	10:34		
kel01973	HM14X05.D	blk	03/14/2016	11:10		
kel01973	HM14i11.D	VSTD025	03/14/2016	11:30		
kel01973	HM14i12.D	VSTD010	03/14/2016	11:51		
kel01973	HM14i13.D	VSTD005	03/14/2016	12:11		
kel01973	HM14i14.D	VSTD002	03/14/2016	12:31		
kel01973	HM14i15.D	VSTD001	03/14/2016	12:51		
kel01973	HM14i16.D	VSTD0.5	03/14/2016	13:12		
kel01973	HM14i17.D	VSTD0.2	03/14/2016	13:32		
kel01973	HM14m11.D	MDL0.1	03/14/2016	13:53		
kel01973	HM14cv11.D	LCSHSM	03/14/2016	14:13		
kel01973	HM14X06.D	blk	03/14/2016	14:33		
kel01973	HM14i01.D	VSTD025	03/14/2016	14:53		
kel01973	HM14i02.D	VSTD010	03/14/2016	15:14		
kel01973	HM14i03.D	VSTD005	03/14/2016	15:34		
kel01973	HM14i04.D	VSTD002	03/14/2016	15:54		
kel01973	HM14i05.D	VSTD001	03/14/2016	16:15		
kel01973	HM14i06.D	VSTD0.5	03/14/2016	16:35		
kel01973	HM14i07.D	VSTD0.2	03/14/2016	16:55		
kel01973	HM14m01.D	MDL0.1	03/14/2016	17:16		
kel01973	HM14m02.D	MDL0.4	03/14/2016	17:36		
kel01973	HM14cv1.D	LCSHLG	03/14/2016	17:56		
kel01973	HM14X07.D	blk	03/14/2016	18:58		
kel01973	HM14cv12.D	LCSHSM	03/14/2016	19:18		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\data\16jun21B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
MSK07970	HU21T05.D	50NGBFB	06/21/2016	19:29	H161732AA	
MSK07970	HU21T06.D	50NGBFB	06/21/2016	19:39	H161732AA	
MSK07970	HU21T07.D	50NGBFB	06/21/2016	19:47	H161732AA	
MSK07970	HU21T08.D	50NGBFB	06/21/2016	19:55	H161732AA	
MSK07970	HU21X05.D	VBLKH62	06/21/2016	20:16	H161732AA	
MSK07970	HU21C05.D	VSTD010	06/21/2016	20:36	H161732AA	
MSK07970	HU21C06.D	VSTD010	06/21/2016	20:56	H161733AA	
MSK07970	HU21S41.D	LCSH62	06/21/2016	21:17	H161732AA	
MSK07970	HU21M05.D	MDLH010	06/21/2016	21:37	H161732AA	
MSK07970	HU21S72.D	LCSH64	06/21/2016	21:57	H161733AA	
MSK07970	HU21B05.D	VBLKH62	06/21/2016	22:18	H161732AA	
MSK07970	HU21S42.D	8433276	06/21/2016	22:41	H161732AA	
MSK07970	HU21S43.D	8433277MS	06/21/2016	23:01	H161732AA	
MSK07970	HU21S44.D	8433278MSD	06/21/2016	23:22	H161732AA	
MSK07970	HU21S45.D	8433276DL	06/21/2016	23:42	H161732AA	10
MSK07970	HU21S46.D	8433281	06/22/2016	00:02	H161732AA	
MSK07970	HU21S47.D	8431658	06/22/2016	00:23	H161732AA	
MSK07970	HU21S48.D	8433275	06/22/2016	00:43	H161732AA	
MSK07970	HU21S49.D	8433280	06/22/2016	01:03	H161732AA	
MSK07970	HU21S50.D	8433280DL	06/22/2016	01:24	H161732AA	10
MSK07970	HU21S73.D	8426258	06/22/2016	01:44	H161733AA	
MSK07970	HU21S74.D	8426259MS	06/22/2016	02:04	H161733AA	
MSK07970	HU21S75.D	8426260MSD	06/22/2016	02:25	H161733AA	
MSK07970	HU21S76.D	8426259MS	06/22/2016	02:45	H161733AA	
MSK07970	HU21S77.D	8426260MSD	06/22/2016	03:06	H161733AA	
MSK07970	HU21S78.D	8426261	06/22/2016	03:26	H161733AA	
MSK07970	HU21S79.D	8426262	06/22/2016	03:46	H161733AA	
MSK07970	HU21S80.D	8426263	06/22/2016	04:06	H161733AA	
MSK07970	HU21S81.D	8426264	06/22/2016	04:27	H161733AA	
MSK07970	HU21S82.D	8426265	06/22/2016	04:47	H161733AA	
MSK07970	HU21S83.D	8426266	06/22/2016	05:07	H161733AA	
MSK07970	HU21S84.D	8432180	06/22/2016	05:28	H161733AA	
MSK07970	HU21S85.D	8432187	06/22/2016	05:48	H161733AA	
MSK07970	HU21S86.D	8432188	06/22/2016	06:08	H161733AA	
MSK07970	HU21S87.D	8432189	06/22/2016	06:29	H161733AA	
MSK07970	HU21S88.D	8432190	06/22/2016	06:49	H161733AA	

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

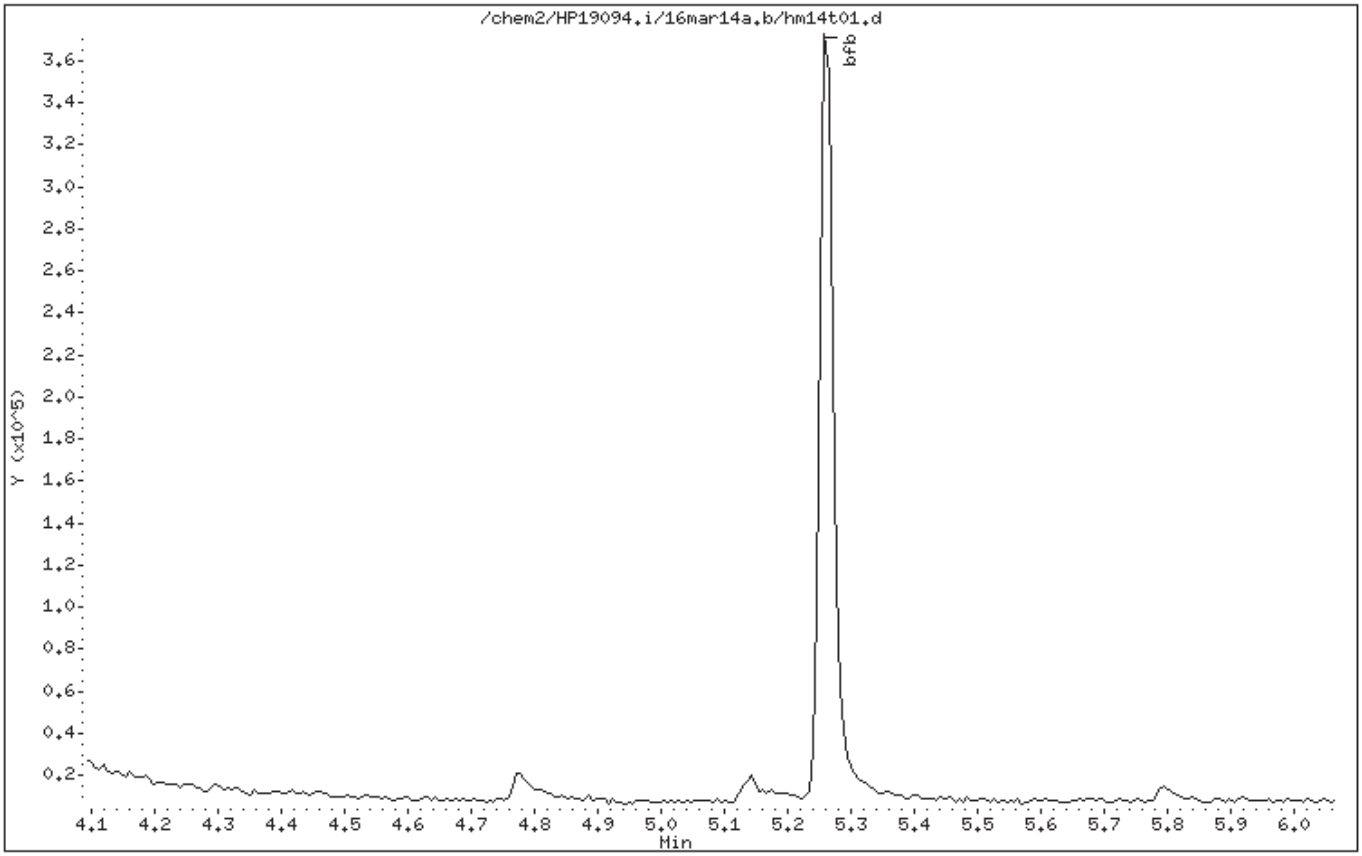
Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973

Data File: /chem2/HP19094.i/16mar14a.b/hm14t01.d

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng

Instrument: HP19094.i

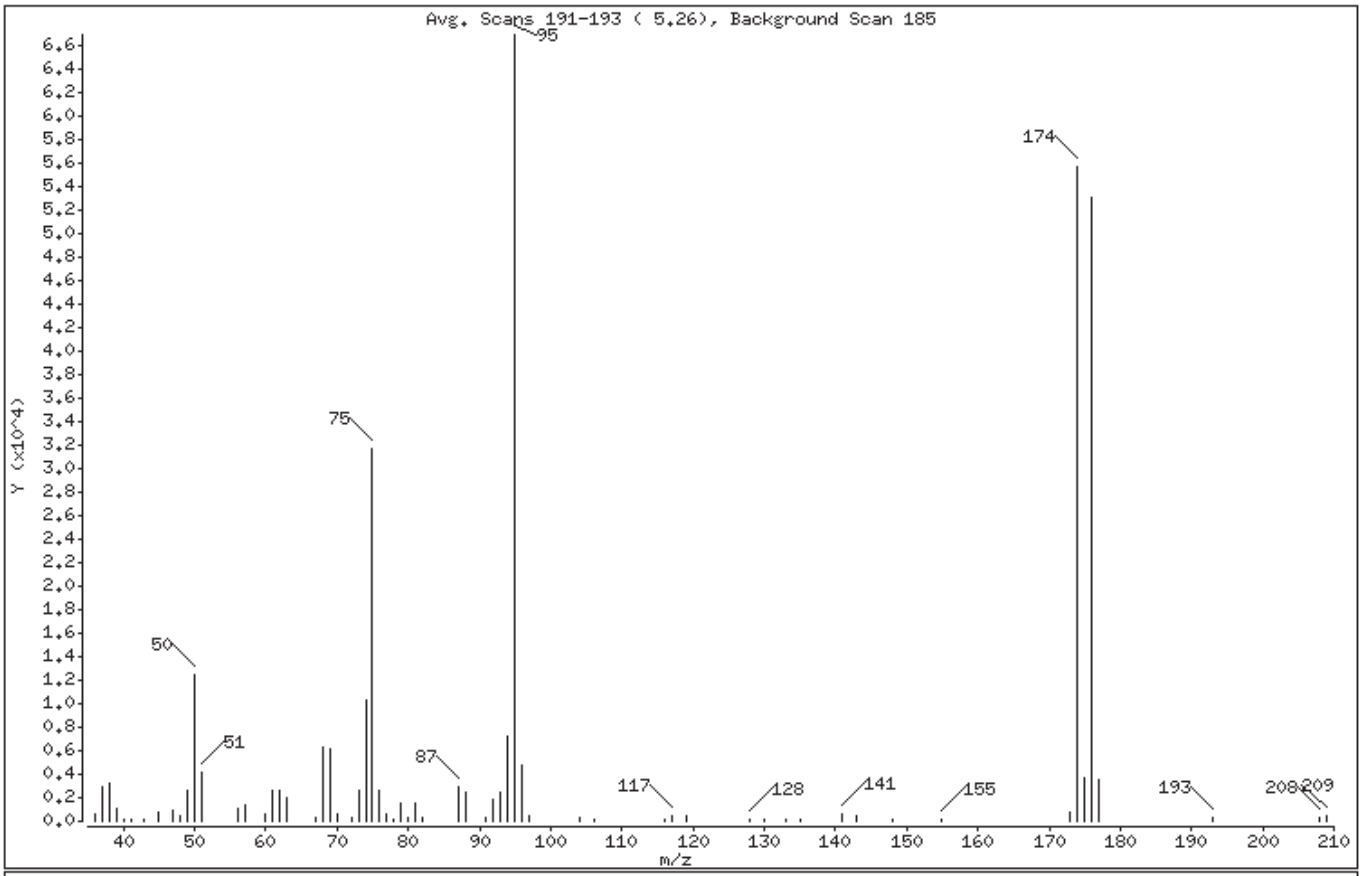
Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

Operator: kel01973

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.66
75	30.00 - 60.00% of mass 95	47.24
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	1.08 (1.29)
174	50.00 - 100.00% of mass 95	83.27
175	5.00 - 9.00% of mass 174	5.47 (6.57)
176	95.00 - 101.00% of mass 174	79.30 (95.23)
177	5.00 - 9.00% of mass 176	5.20 (6.56)

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973

Date : 14-MAR-2016 10:34

Client ID: bfb 50ng Instrument: HP19094.i

Sample Info: bfb 50ng;bfb FEB23-16;1;3;;;;;

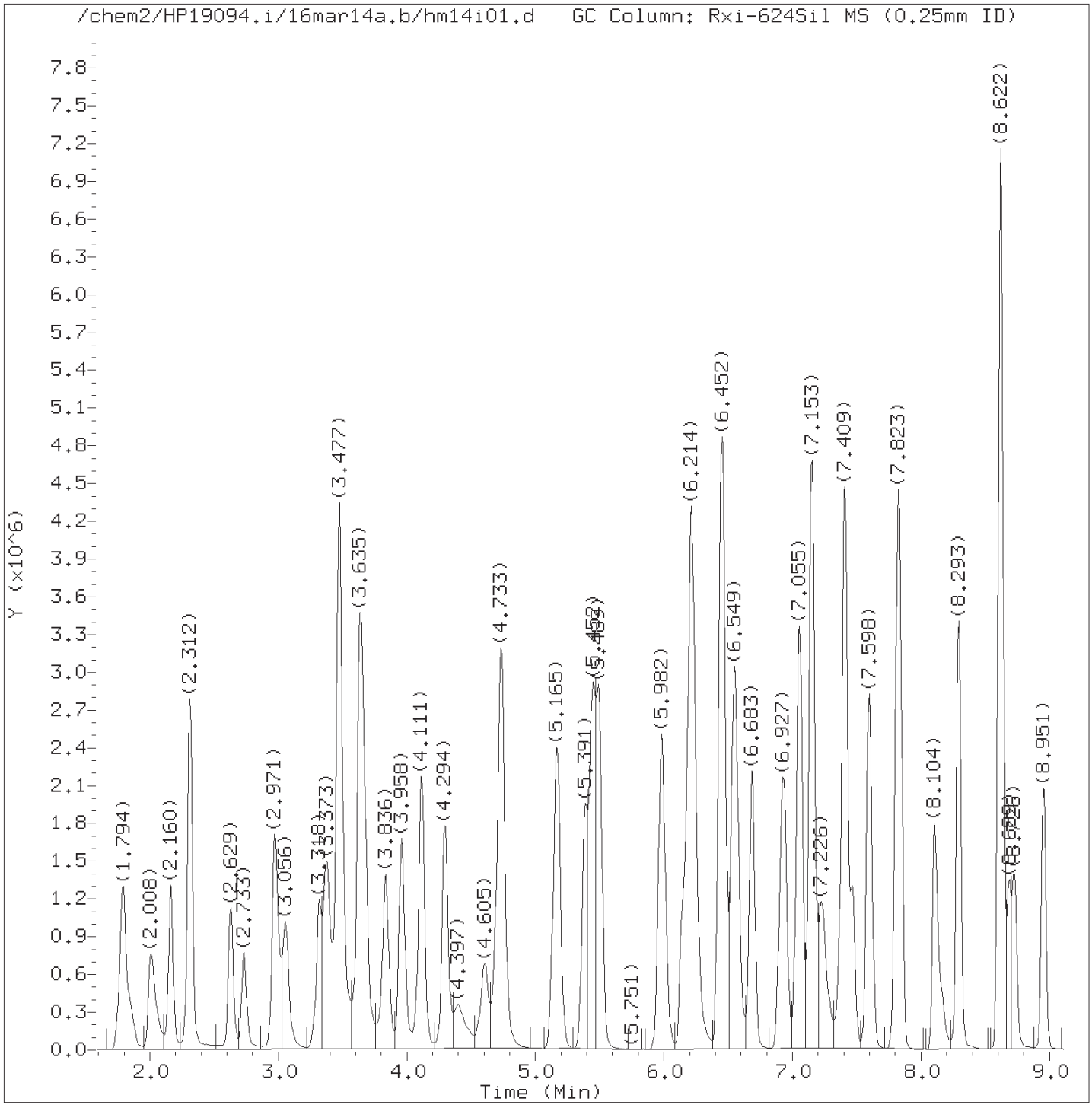
Operator: kel01973

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hm14t01.d
Spectrum: Avg. Scans 191-193 (5.26), Background Scan 185
Location of Maximum: 95.00
Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	568	62.00	2690	87.00	2937	135.00	88
37.00	2915	63.00	1978	88.00	2489	141.00	601
38.00	3227	67.00	295	91.00	352	143.00	452
39.00	1041	68.00	6248	92.00	1831	148.00	106
40.00	211	69.00	6175	93.00	2405	155.00	102
41.00	138	70.00	603	94.00	7195	173.00	721
43.00	80	72.00	384	95.00	66888	174.00	55696
45.00	819	73.00	2572	96.00	4710	175.00	3661
47.00	979	74.00	10334	97.00	454	176.00	53040
48.00	502	75.00	31600	104.00	282	177.00	3478
49.00	2564	76.00	2635	106.00	220	193.00	329
50.00	12480	77.00	553	116.00	198	208.00	291
51.00	4076	78.00	227	117.00	435	209.00	398
56.00	1053	79.00	1490	119.00	416		
57.00	1417	80.00	341	128.00	174		
60.00	691	81.00	1539	130.00	130		
61.00	2576	82.00	332	133.00	162		

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 10:42.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

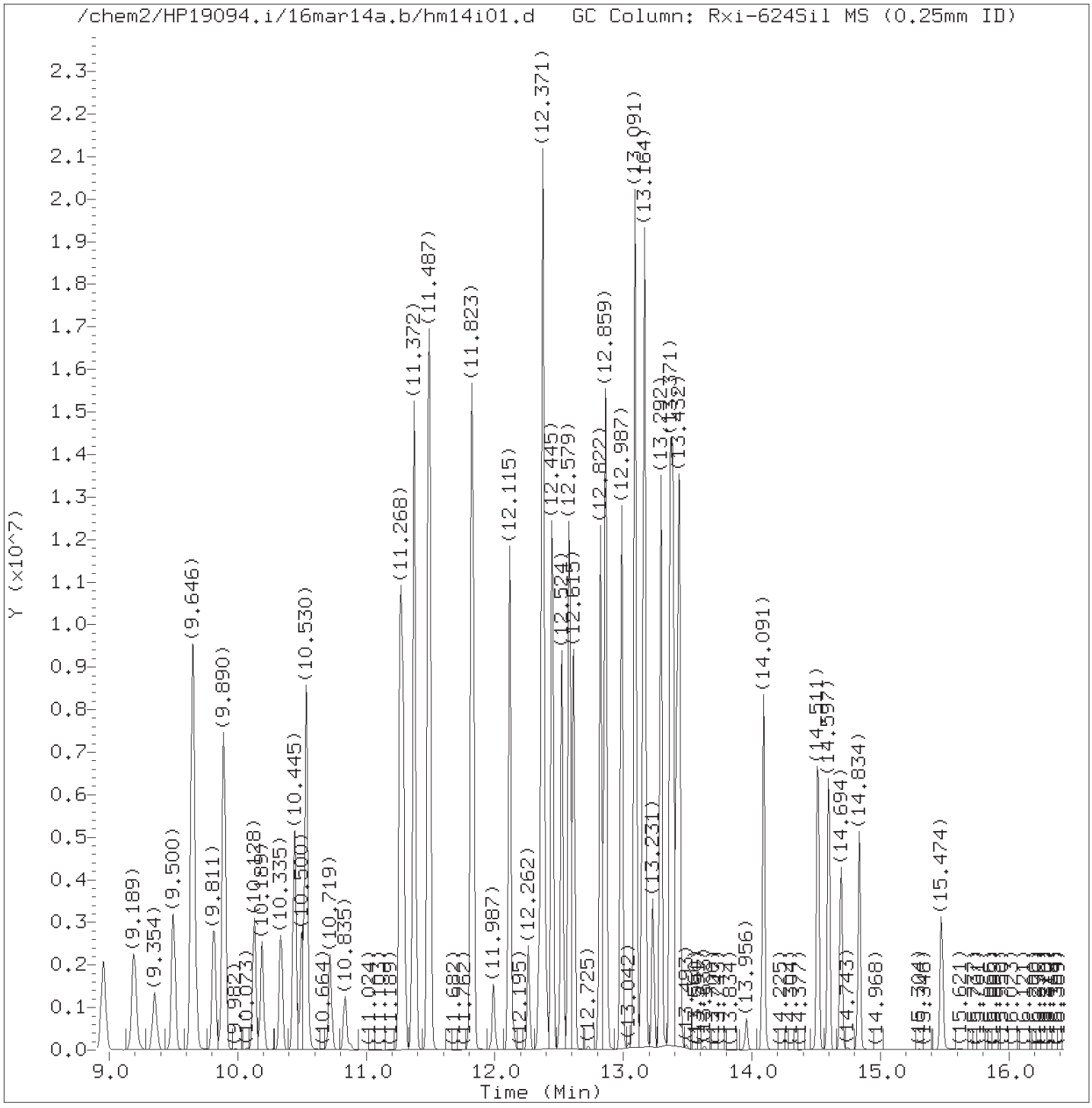
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	2008997	25.815
2) Chloromethane	(2)	2.160	50	1930677	25.291
5) Vinyl Chloride	(2)	2.300	62	1782605	25.108
6) 1,3-Butadiene	(2)	2.318	39	1259167	23.448
7) Bromomethane	(2)	2.629	94	1127283	23.922
8) Chloroethane	(2)	2.733	64	1011870	23.121
9) Dichlorofluoromethane	(2)	2.971	67	2377573	23.939
10) Trichlorofluoromethane	(2)	3.056	101	2325783	25.146
11) Ethyl ether	(2)	3.312	59	976265	25.585
12) Freon 123a	(2)	3.373	67	1755457	24.811
13) Acrolein	(1)	3.477	56	7761893	1224.807
15) 1,1-Dichloroethene	(2)	3.629	96	1309324	24.672
14) Acetone	(1)	3.641	43	2085385	238.809
16) Freon 113	(2)	3.666	101	1386666	25.128
17) Methyl Iodide	(2)	3.836	142	2464824	25.088
18) Carbon Disulfide	(2)	3.958	76	3988224	24.337
21) Methyl Acetate	(1)	4.080	43	548869	22.378
22) Allyl Chloride	(2)	4.117	41	2503549	24.949
26)*t-Butyl Alcohol-d10	(1)	4.281	65	111147M	50.000
23) Methylene Chloride	(2)	4.300	84	1415279	24.953
28) t-Butyl Alcohol	(1)	4.403	59	1530138	512.007
29) Acrylonitrile	(1)	4.605	53	1344372	128.306
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	3131373	25.573
31) trans-1,2-Dichloroethene	(2)	4.739	96	1409407	24.663
32) n-Hexane	(2)	5.165	57	2389053	24.629
33) 1,1-Dichloroethane	(2)	5.385	63	2935899	25.206
34) di-Isopropyl Ether	(2)	5.446	45	5169991	25.428
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	2387583	24.972
37) Ethyl t-butyl ether	(2)	5.982	59	4335697	25.288
40) 1,2-Dichloroethene (Total)	(2)		96	2995941	49.726
38) 2-Butanone	(1)	6.153	43	3666599	246.413
39) cis-1,2-Dichloroethene	(2)	6.208	96	1586534	25.063
42) Propionitrile	(1)	6.220	54	1894772	510.674
41) 2,2-Dichloropropane	(2)	6.232	77	2291981	24.594
45) Methacrylonitrile	(1)	6.452	67	3145891	247.630
47) Bromochloromethane	(2)	6.543	128	630660	26.187
48) Tetrahydrofuran	(1)	6.562	71	914371	242.906
49) Chloroform	(2)	6.690	83	2629287	24.697

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546108	10.267
50)$Dibromofluoromethane	(2)	6.903	111	562451	10.277
51) 1,1,1-Trichloroethane	(2)	6.933	97	2254077	24.822
52) Cyclohexane	(2)	7.055	56	2810155	23.681
52) Cyclohexane	(2)	7.055	84	2186157	24.061
52) Cyclohexane	(2)	7.055	69	821906	24.214
55) 1,1-Dichloropropene	(2)	7.147	75	2187719	25.099
54) Carbon Tetrachloride	(2)	7.159	117	2081377	25.209
56) Isobutyl Alcohol	(1)	7.226	41	1297190	1225.034
57)$1,2-Dichloroethane-d4	(2)	7.366	102	89493	10.158
57)$1,2-Dichloroethane-d4	(2)	7.366	65	462443	10.282
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57884	10.406
58) Benzene	(2)	7.409	78	5997923	24.725
59) 1,2-Dichloroethane	(2)	7.470	62	1572413M	25.017
60) t-Amyl methyl ether	(2)	7.598	73	3533776	25.222
63)*Fluorobenzene	(2)	7.805	96	2257211	10.000
62) n-Heptane	(2)	7.836	43	2647219	24.144
65) n-Butanol	(1)	8.104	56	2053515	2409.417
67) Trichloroethene	(2)	8.293	95	1580529	24.997
70) 1,2-Dichloropropane	(2)	8.616	63	1581786	25.042
69) Methylcyclohexane	(2)	8.622	83	2616789	25.266
71) Methyl Methacrylate	(1)	8.683	69	672245	25.327
72) 1,4-Dioxane	(1)	8.707	88	205013M	1220.938
73) Dibromomethane	(2)	8.726	93	658959	25.328
74) Bromodichloromethane	(2)	8.951	83	1891232	26.035
76) 2-Nitropropane	(1)	9.189	41	2013504	236.646
80) cis-1,3-Dichloropropene	(2)	9.500	75	2312738	25.907
81) 4-Methyl-2-Pentanone	(1)	9.646	43	9014052	246.150
82)$Toluene-d8	(3)	9.811	98	2224229	9.764
82)$Toluene-d8	(3)	9.811	100	1444488	9.796
83) Toluene	(3)	9.890	92	3677619	23.967
84) trans-1,3-Dichloropropene	(3)	10.128	75	1849106	25.712
85) 1,3-Dichloropropene (total)	(3)		75	4161844	51.619
86) Ethyl Methacrylate	(3)	10.189	69	1408940	25.467
88) 1,1,2-Trichloroethane	(3)	10.335	97	907741	24.424
89) Tetrachloroethene	(3)	10.445	166	1732530	23.909
90) 1,3-Dichloropropane	(3)	10.500	76	1664933	24.914
91) 2-Hexanone	(1)	10.530	43	6183877	238.836

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	1238486	25.994
95) 1,2-Dibromoethane	(3)	10.835	107	882013	25.195
97)*Chlorobenzene-d5	(3)	11.262	117	1599038	10.000
98) Chlorobenzene	(3)	11.286	112	4053298	24.267
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	1433933	25.027
100) Ethylbenzene	(3)	11.378	91	7188062	23.933
101) m+p-Xylene	(3)	11.487	106	5520871	48.193
105) Xylene (Total)	(3)		106	8218402	72.456
104) o-Xylene	(3)	11.817	106	2697531	24.266
106) Styrene	(3)	11.829	104	4363621	24.536
107) Bromoform	(3)	11.987	173	702183	26.571
108) Isopropylbenzene	(3)	12.115	105	7093094	24.076
111)$4-Bromofluorobenzene	(3)	12.262	95	749580	10.209
111)$4-Bromofluorobenzene	(3)	12.262	174	624138	10.195
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	1073753M	23.250
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	2892089	256.466
114) Bromobenzene	(4)	12.377	156	1611323	23.425
116) 1,2,3-Trichloropropane	(4)	12.396	110	276663	23.862
117) n-Propylbenzene	(4)	12.445	91	8486136	22.809
119) 2-Chlorotoluene	(4)	12.524	126	1665528	23.216
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	6020587	23.211
122) 4-Chlorotoluene	(4)	12.615	126	1687462	23.082
125) tert-Butylbenzene	(4)	12.822	134	1287997M	23.293
126) Pentachloroethane	(4)	12.853	167	1054918	25.278
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	6025338	23.232
128) sec-Butylbenzene	(4)	12.987	105	7704726	22.942
131) 1,3-Dichlorobenzene	(4)	13.085	146	3165482	23.527
132) p-Isopropyltoluene	(4)	13.097	119	6646807	23.380
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	737864	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	3101519	22.689
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	2480382	23.061
136) Benzyl Chloride	(4)	13.231	126	466327	25.487
138) n-Butylbenzene	(4)	13.383	92	3339202	24.011
139) 1,2-Dichlorobenzene	(4)	13.420	146	2740022	22.928
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	148809	25.580
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	1922561	22.489
146) Hexachlorobutadiene	(4)	14.597	225	1095991	24.535
147) Naphthalene	(4)	14.694	128	2932131	19.951

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.834	180	1493780	21.877

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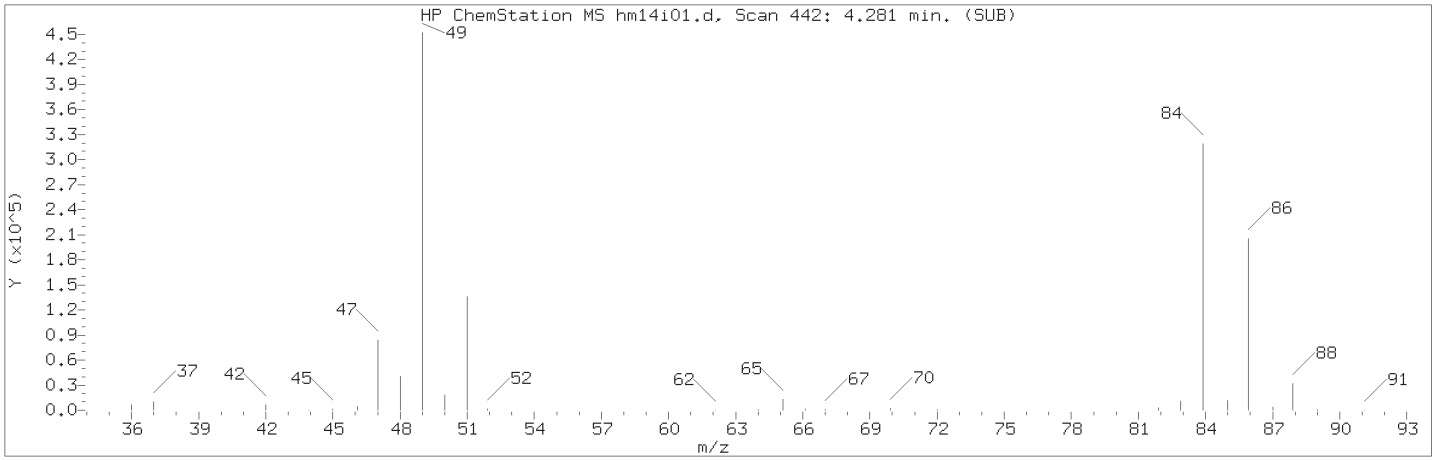
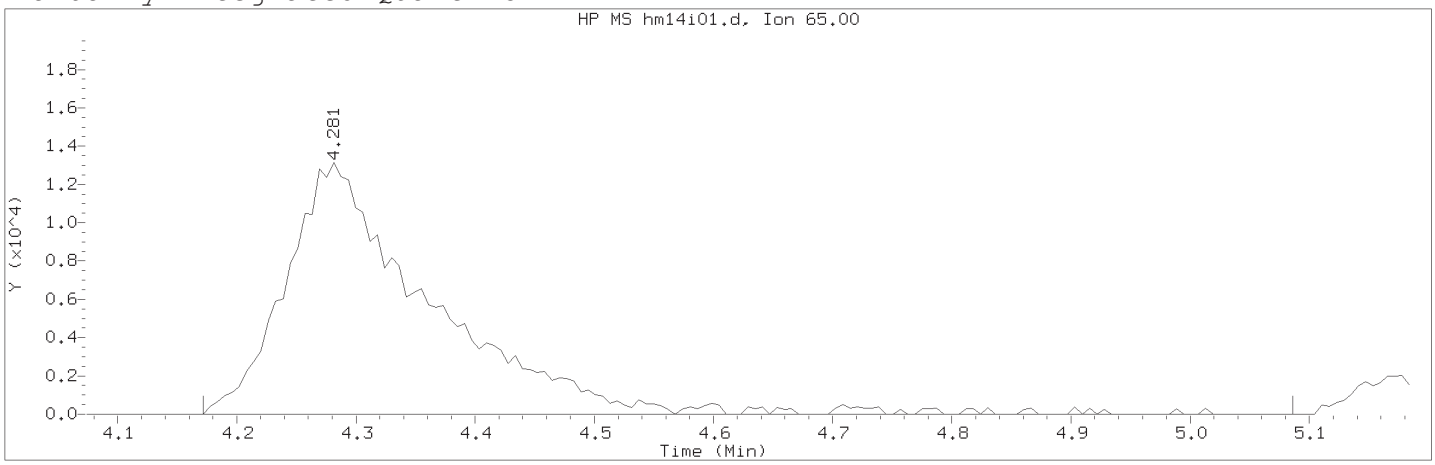
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

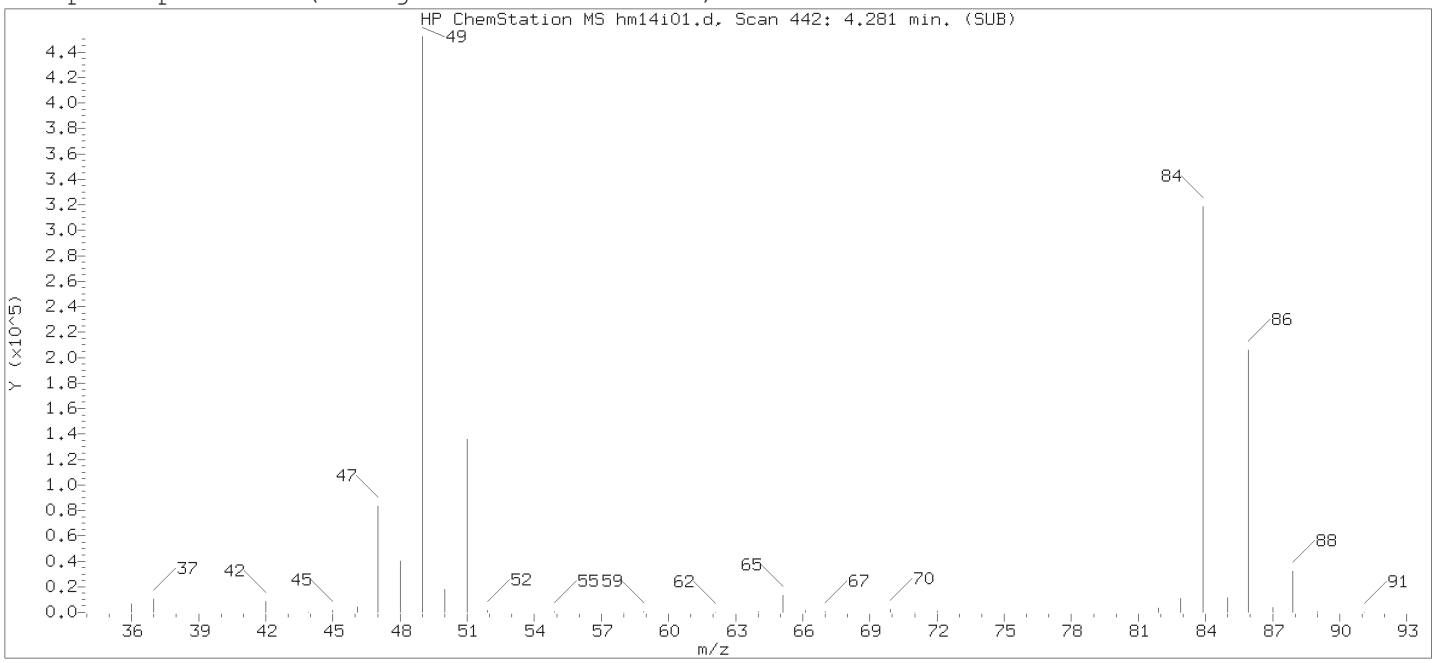
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 111147M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

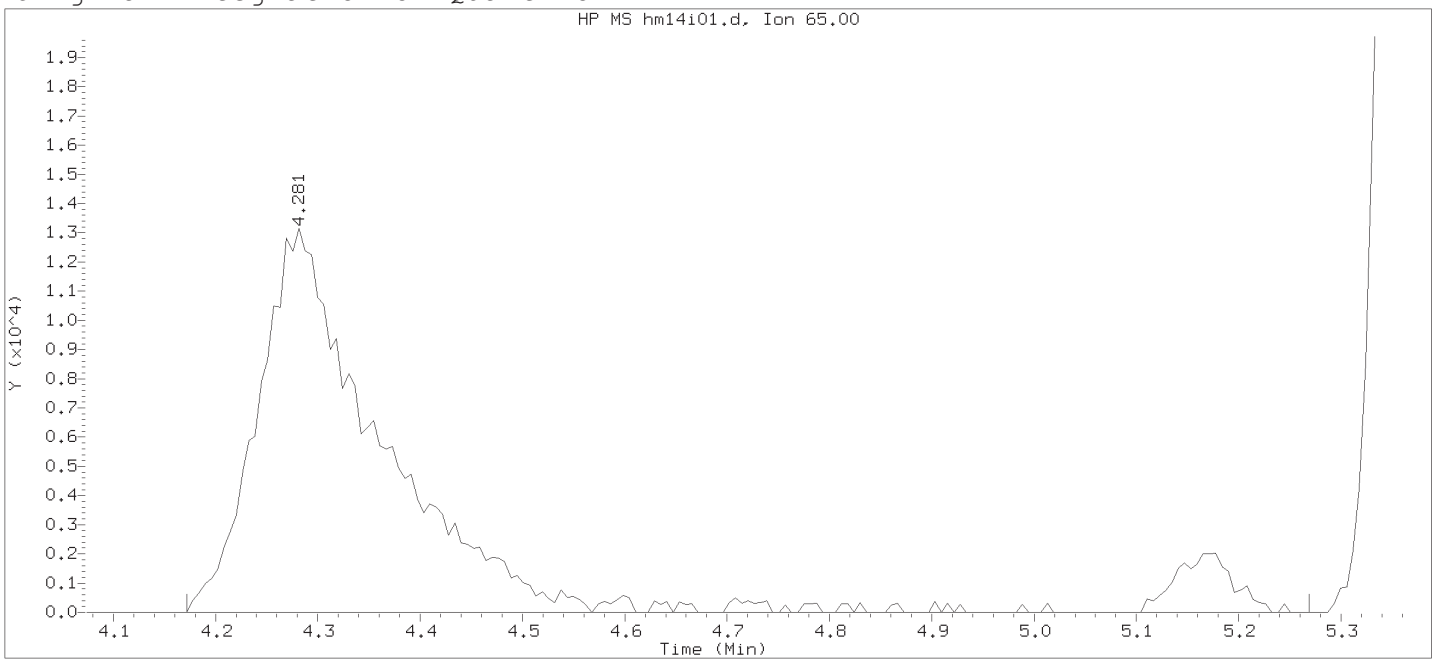
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

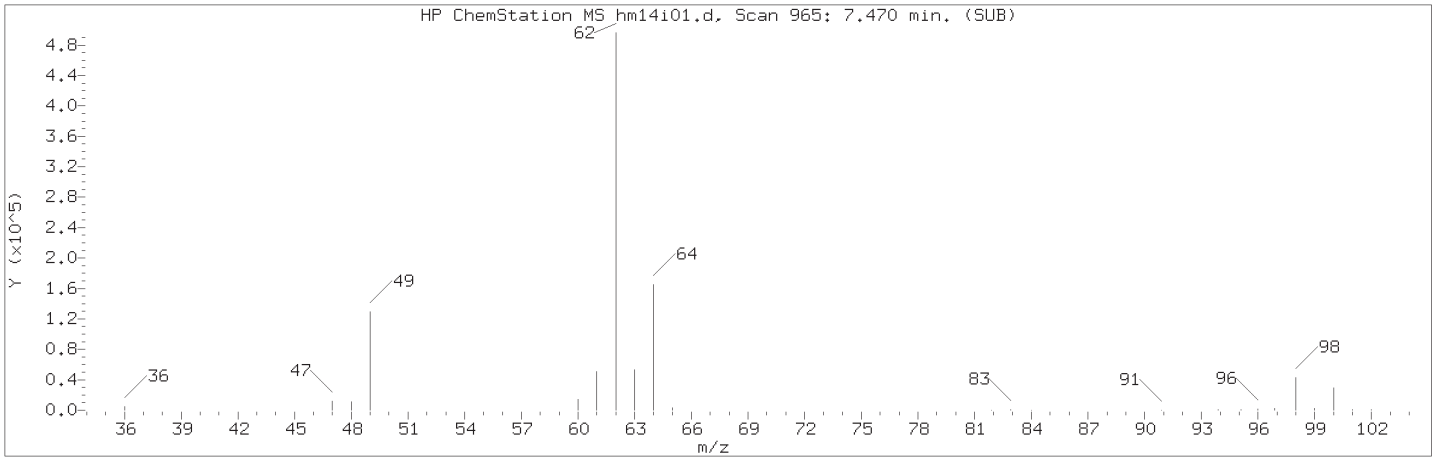
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

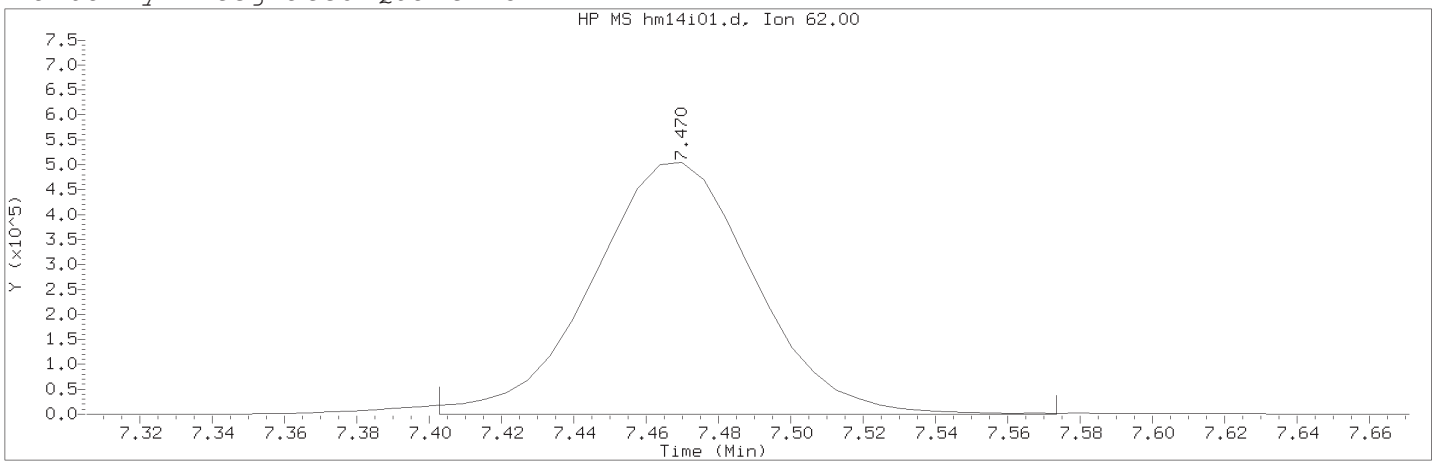
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 119286
On-column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

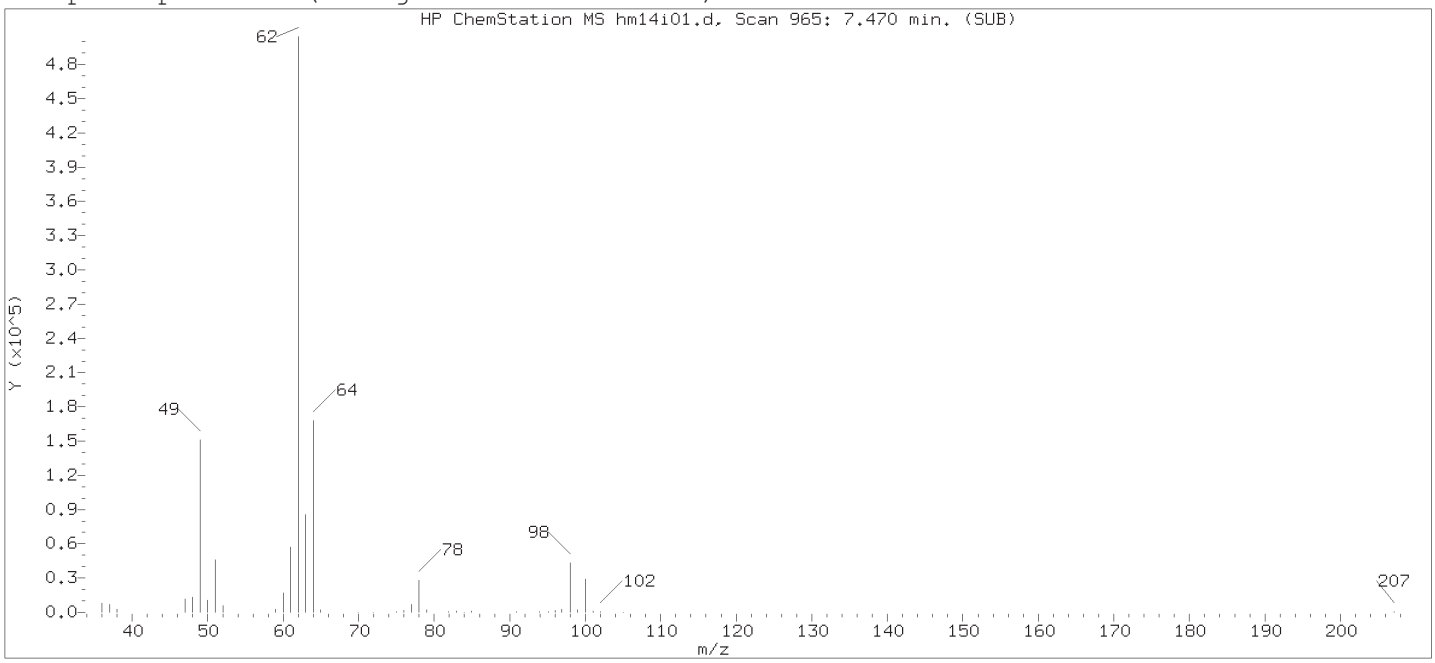
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 1572413M
On-Column Amount (ng) : 25.0167
Integration start scan : 953 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

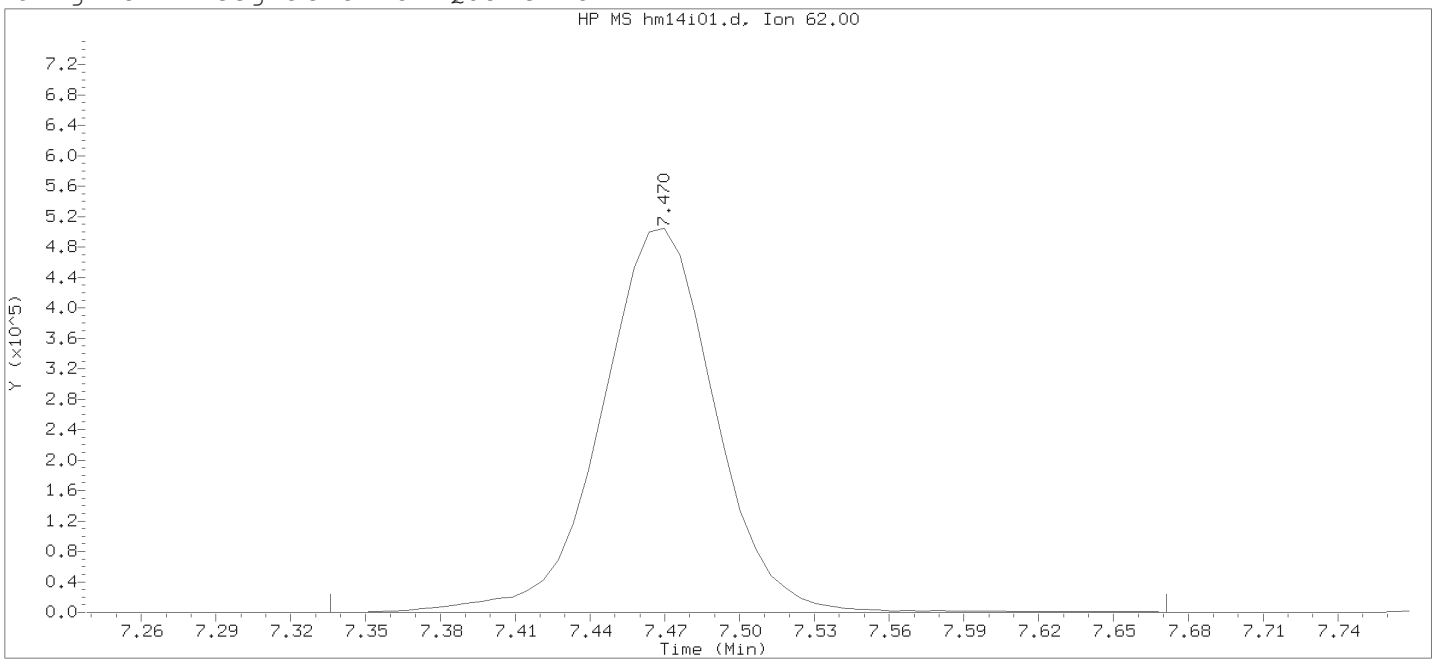
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

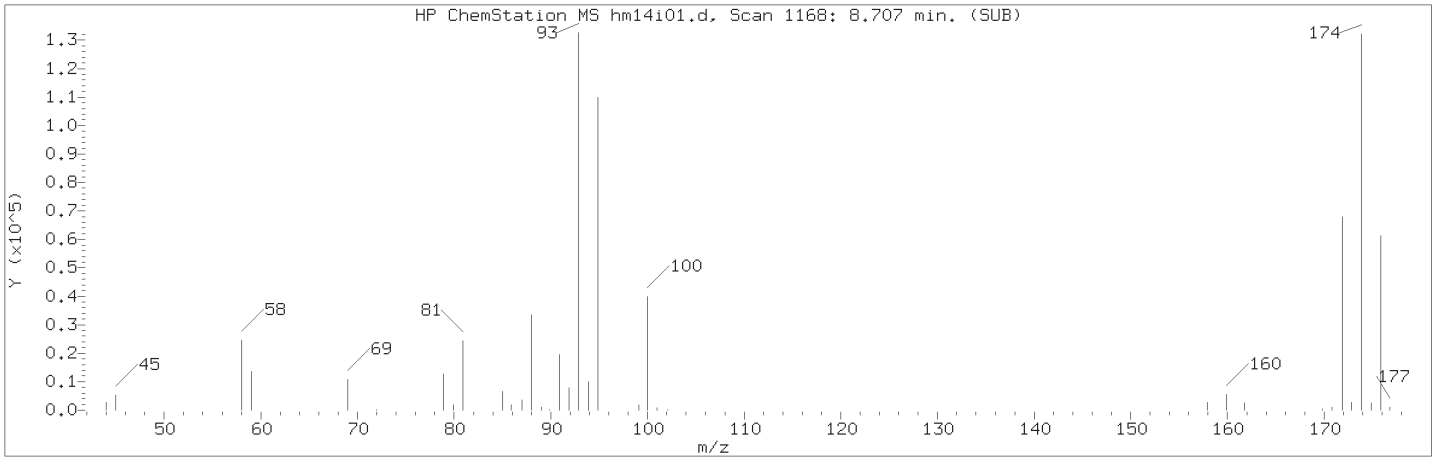
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

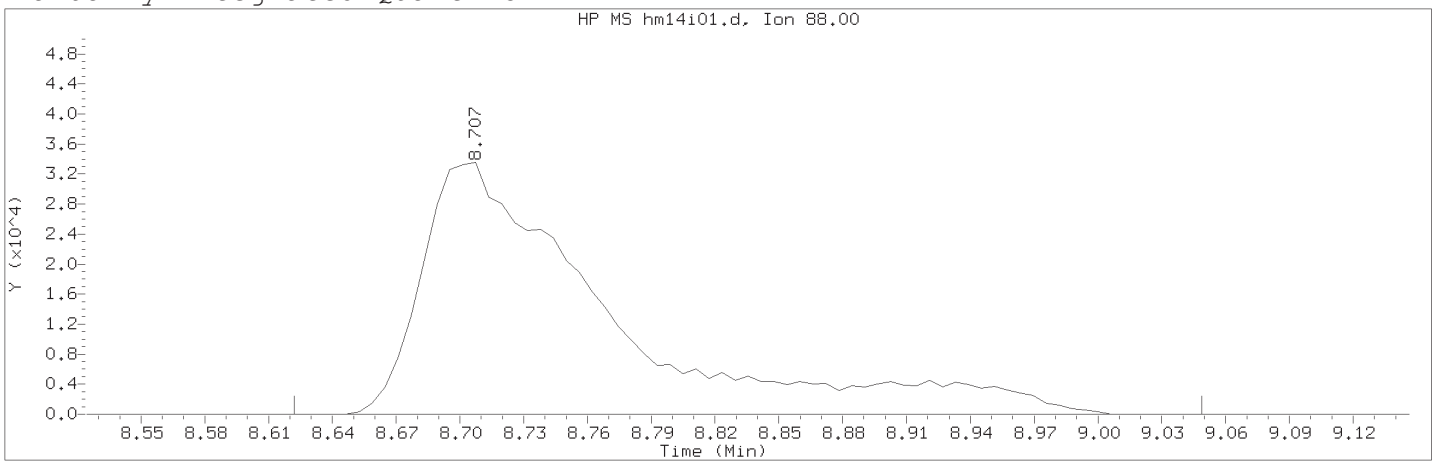
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 1596005
On-column Amount (ng) : 25.0000
Integration start scan : 942 Integration stop scan: 997
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

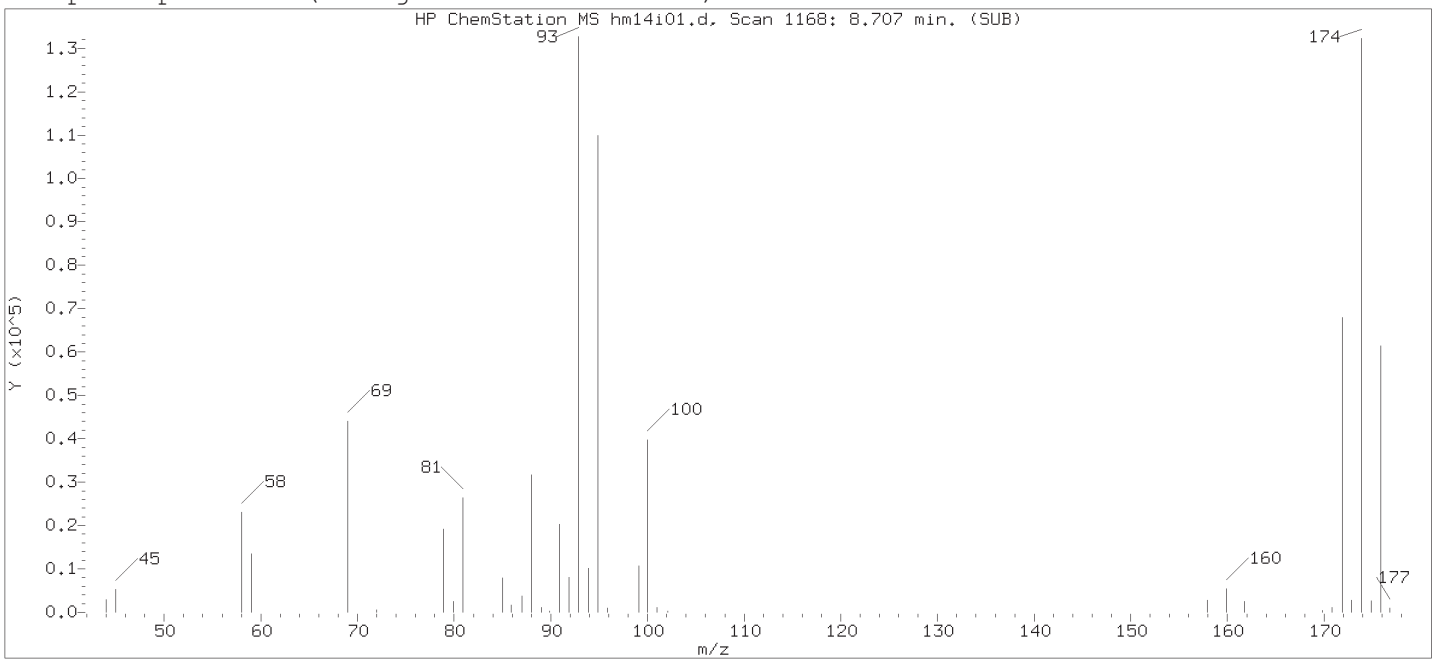
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area (flag) : 205013M
On-Column Amount (ng) : 1220.9383
Integration start scan : 1153 Integration stop scan: 1223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

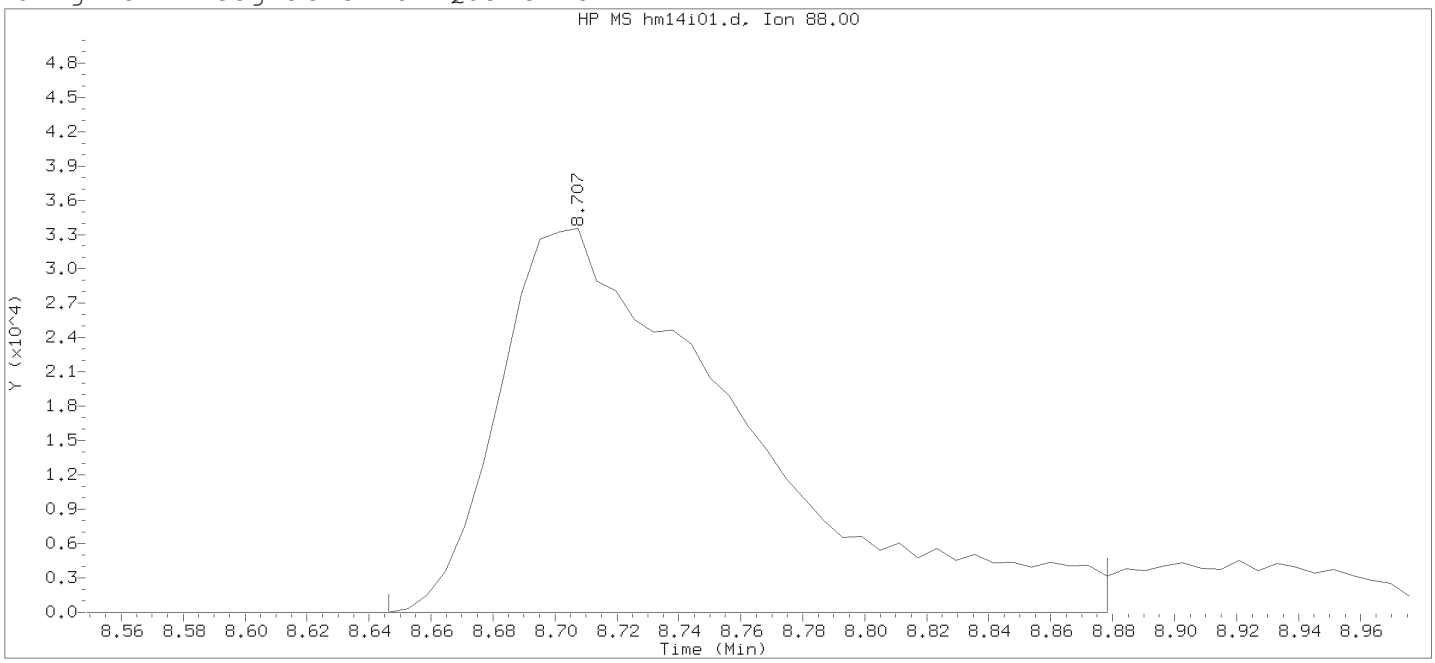
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

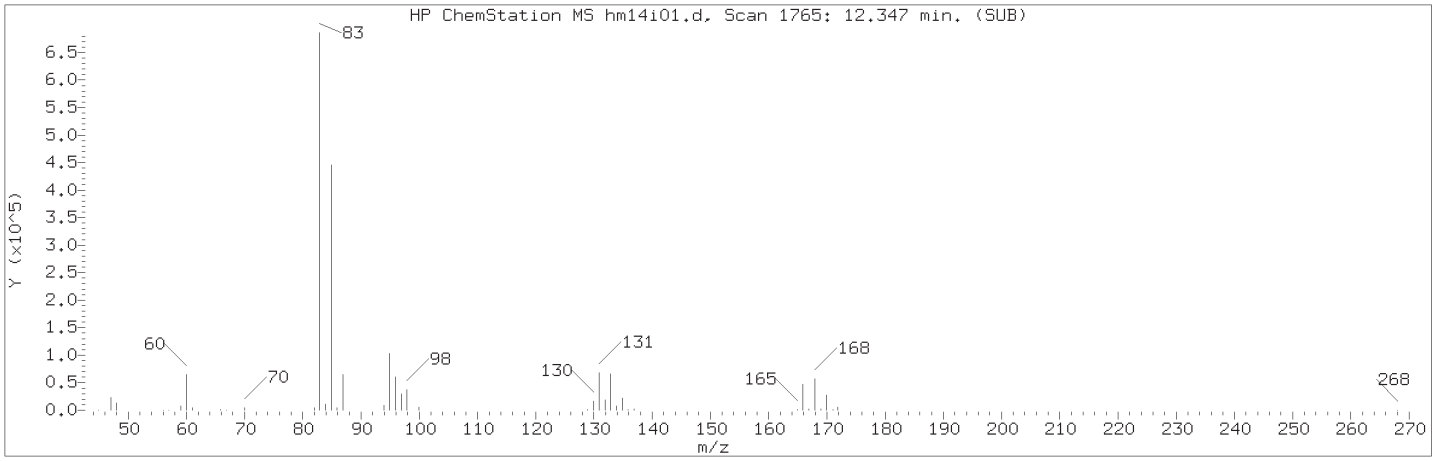
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

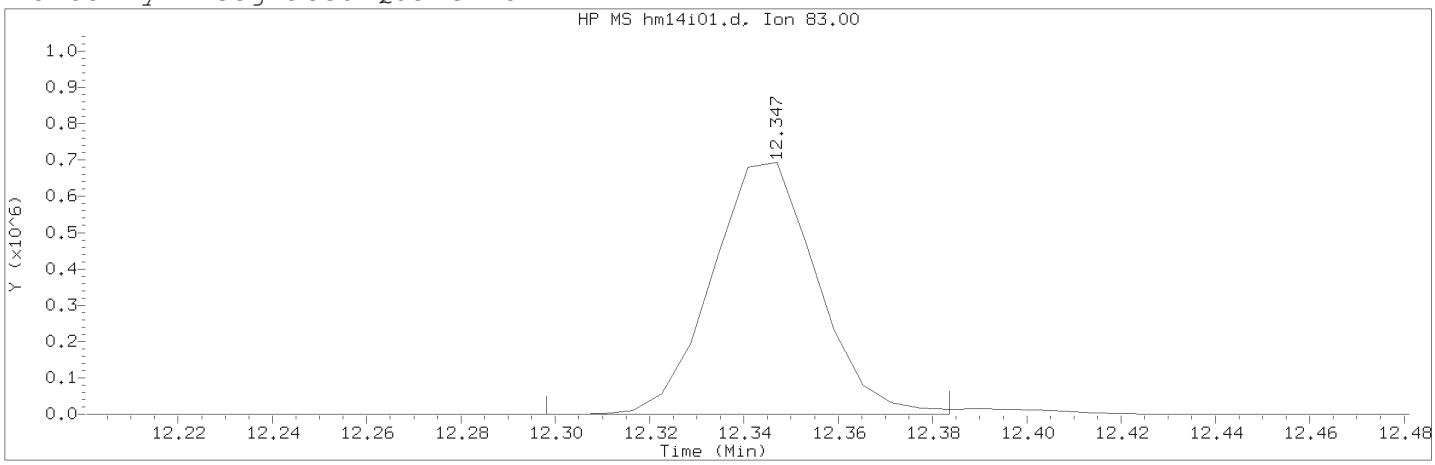
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1168
Retention Time (minutes): 8.707
Quant Ion : 88.00
Area : 182586
On-column Amount (ng) : 1250.0000
Integration start scan : 1157 Integration stop scan: 1195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

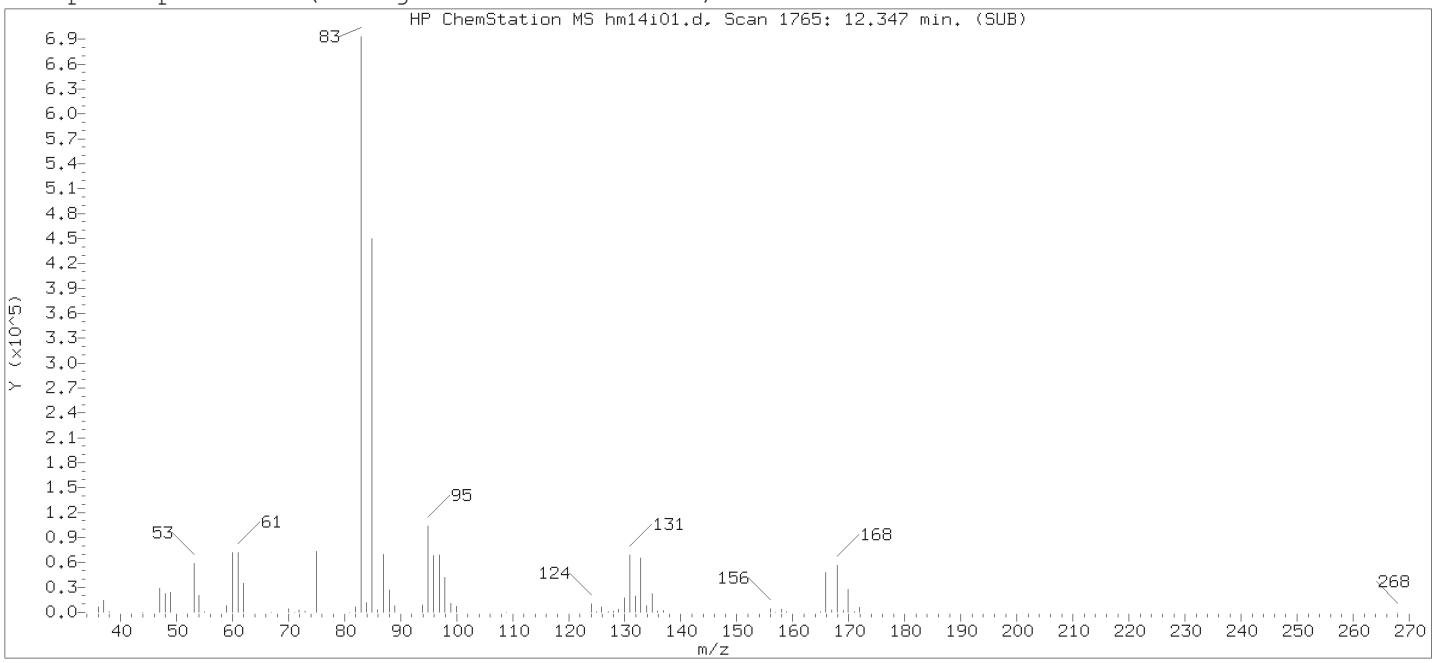
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 1073753M
On-Column Amount (ng) : 23.2501
Integration start scan : 1756 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

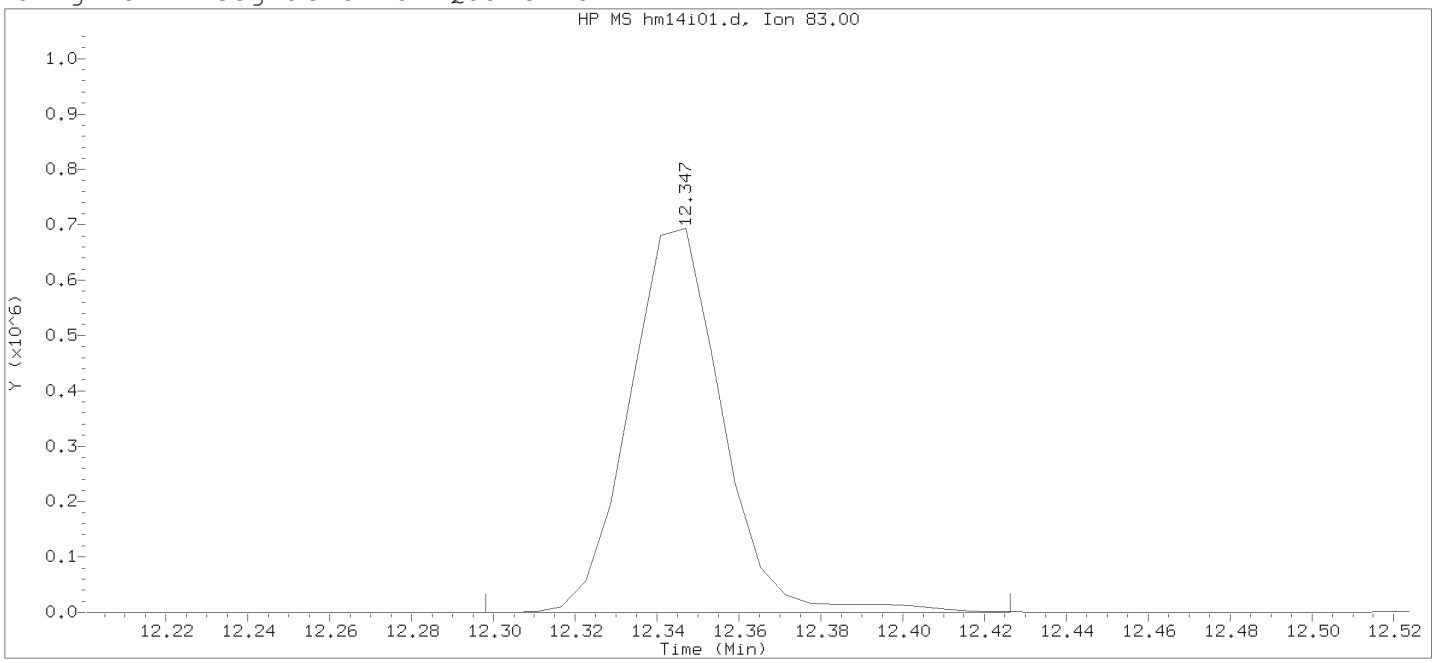
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

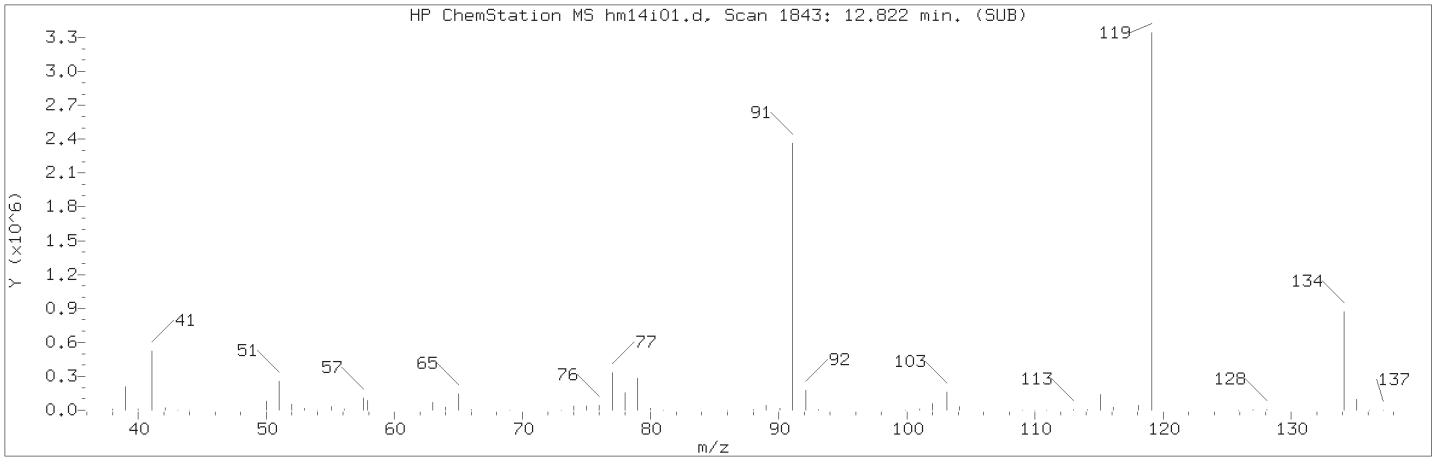
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

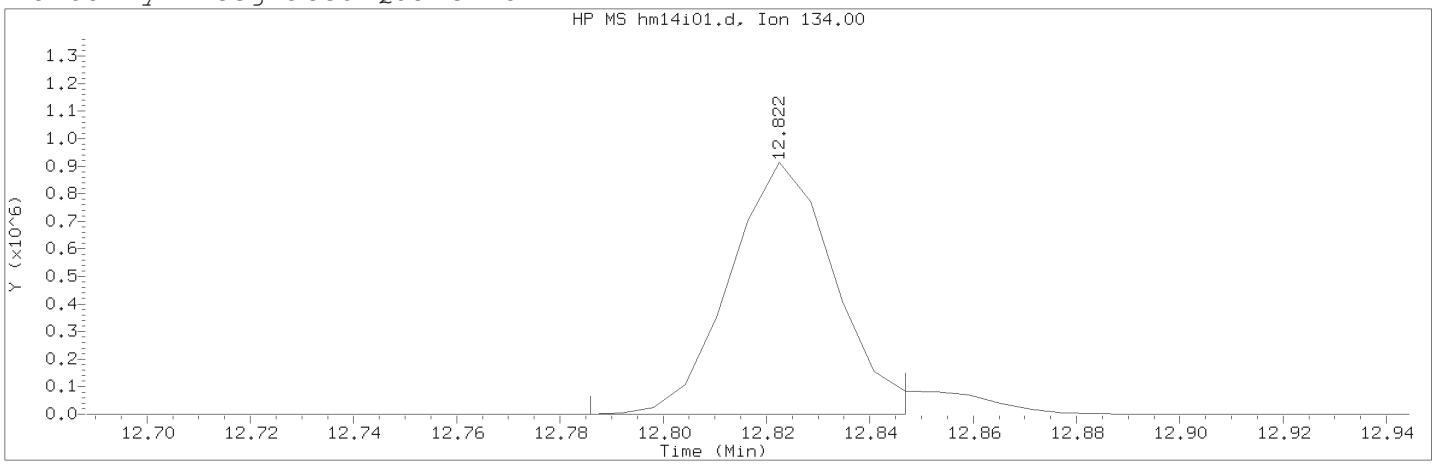
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 1092930
On-column Amount (ng) : 25.0000
Integration start scan : 1756 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD025 Lab Sample ID: VSTD025

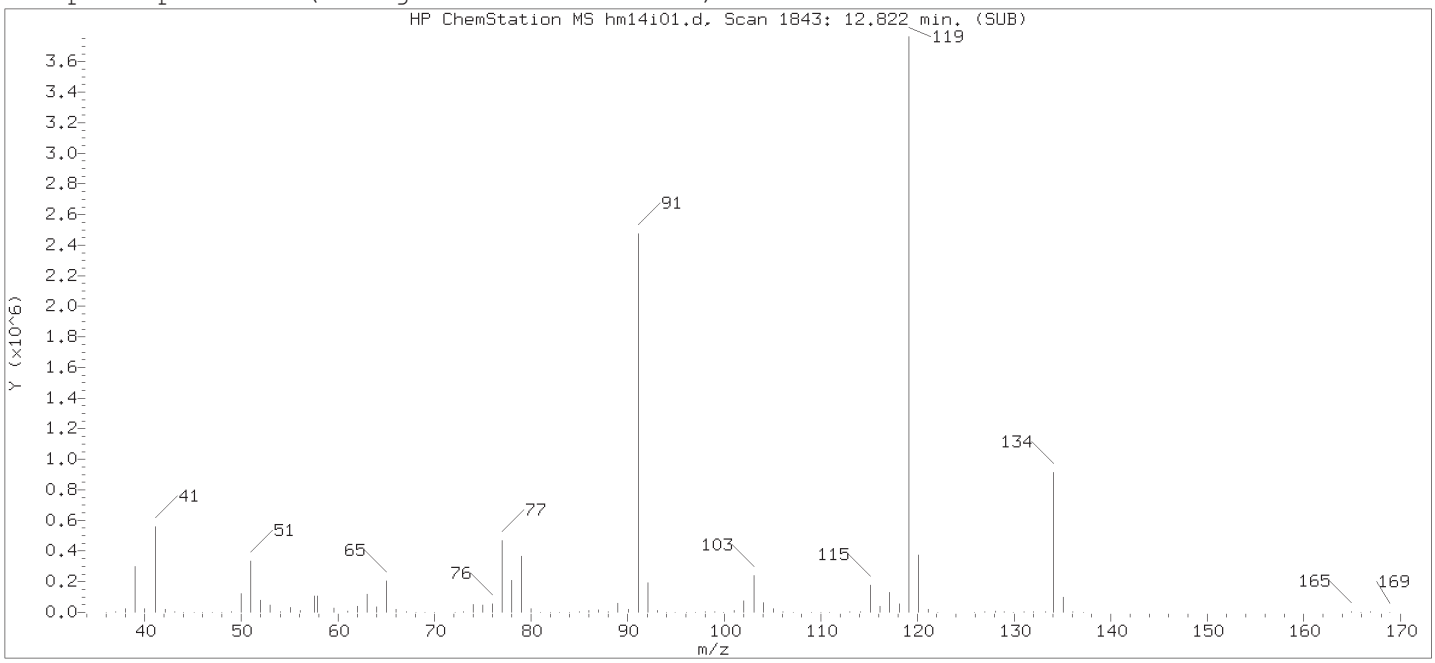
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 1287997M
On-Column Amount (ng) : 23.2927
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

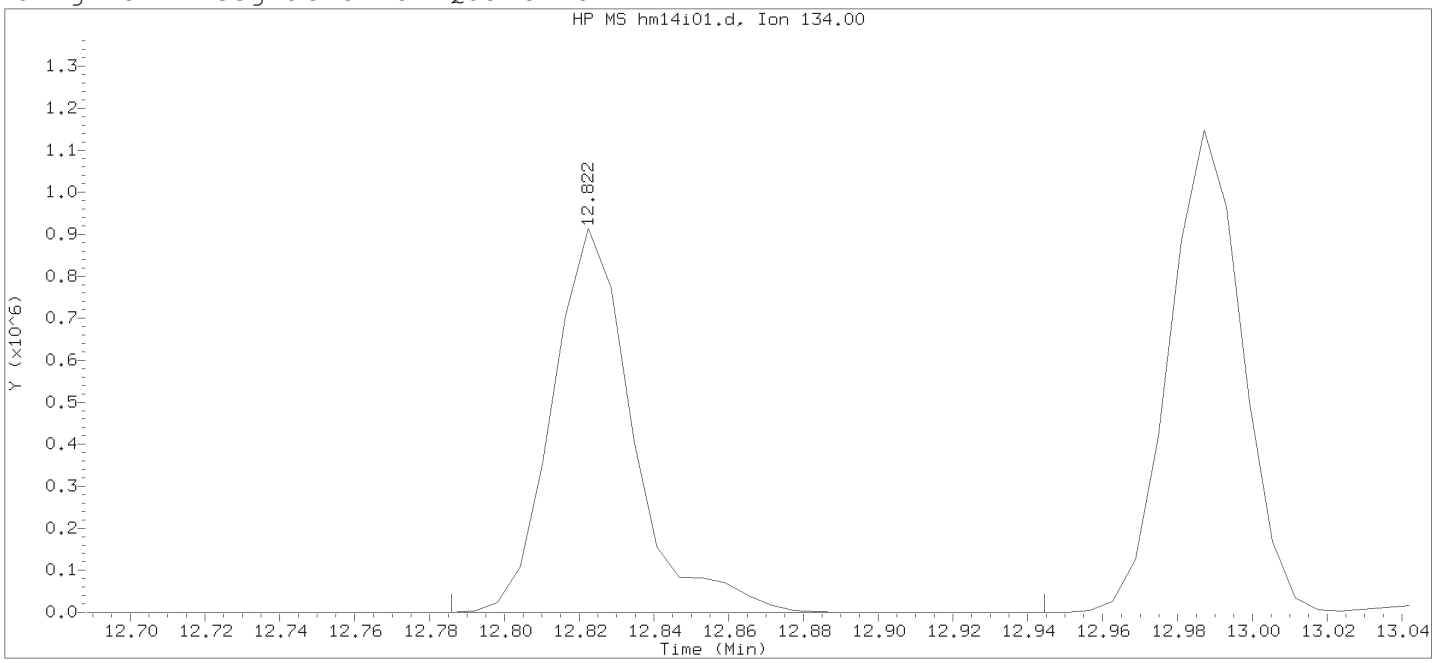
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 14:53 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:12
Date, time and analyst ID of latest file update: 14-Mar-2016 15:12 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 1366807
On-column Amount (ng) : 25.0000
Integration start scan : 1836 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

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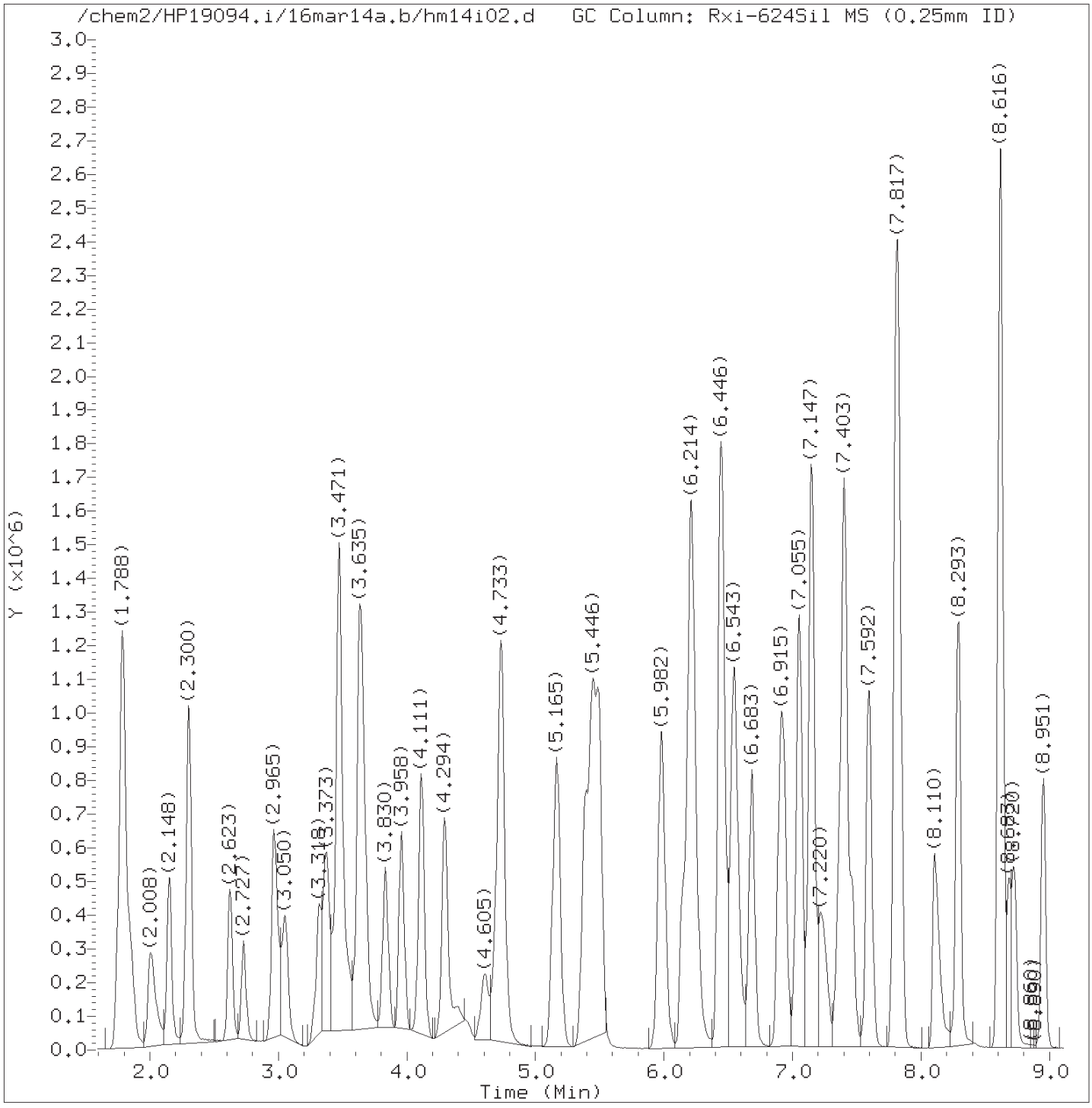
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

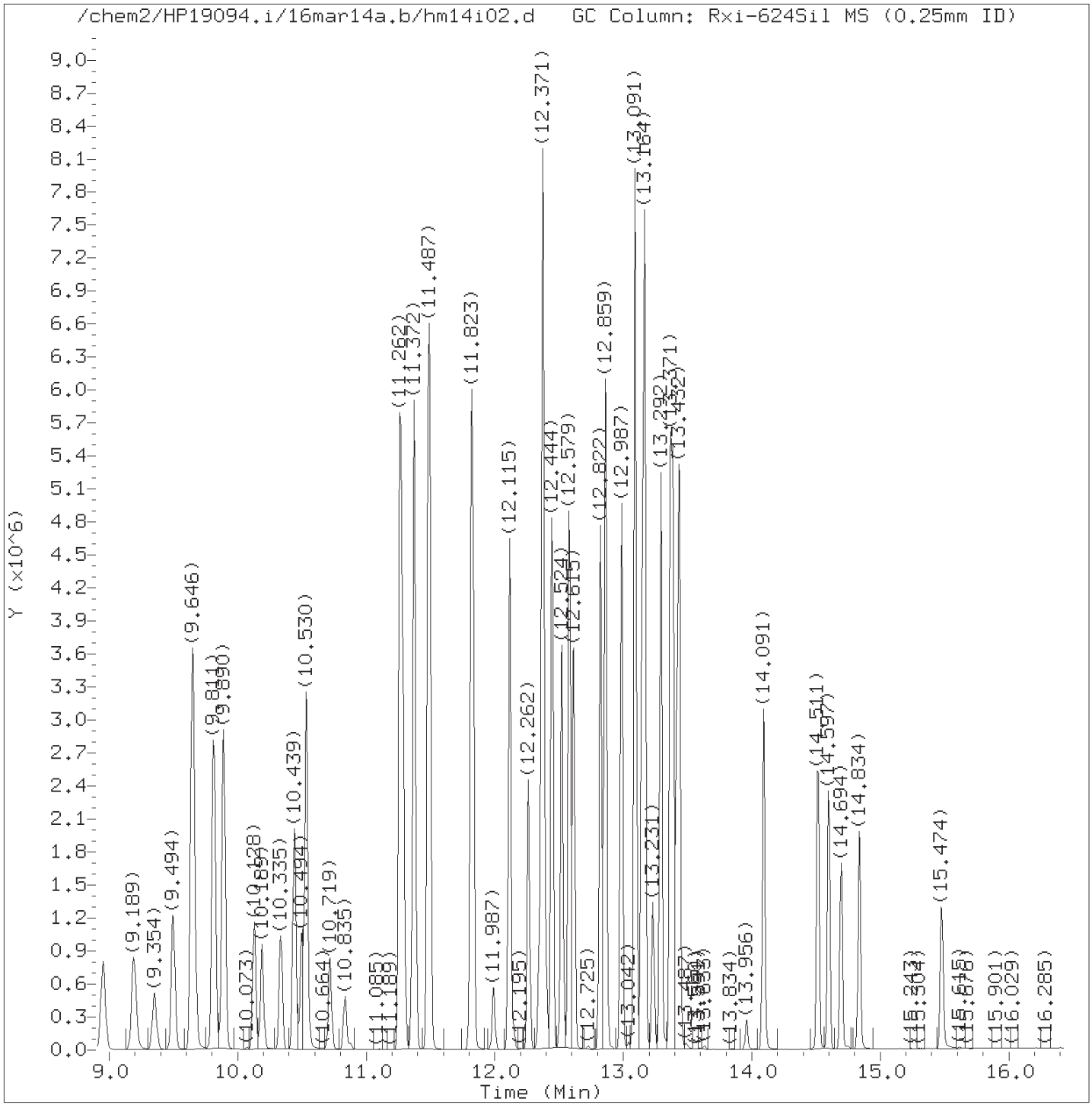
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	758272	9.685
2) Chloromethane	(2)	2.148	50	744162	9.690
5) Vinyl Chloride	(2)	2.288	62	678425	9.498
6) 1,3-Butadiene	(2)	2.306	39	482193	8.926
7) Bromomethane	(2)	2.623	94	450112	9.495
8) Chloroethane	(2)	2.727	64	393994	8.949
9) Dichlorofluoromethane	(2)	2.965	67	909527	9.103
10) Trichlorofluoromethane	(2)	3.056	101	879230	9.449
11) Ethyl ether	(2)	3.312	59	372383	9.701
12) Freon 123a	(2)	3.367	67	665574	9.351
13) Acrolein	(1)	3.471	56	2957969	488.236
15) 1,1-Dichloroethene	(2)	3.629	96	500183	9.369
14) Acetone	(1)	3.641	43	761515M	91.218
16) Freon 113	(2)	3.660	101	527043	9.493
17) Methyl Iodide	(2)	3.830	142	943626	9.547
18) Carbon Disulfide	(2)	3.958	76	1517826	9.207
21) Methyl Acetate	(1)	4.074	43	211309	9.012
22) Allyl Chloride	(2)	4.111	41	951813	9.428
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106258M	50.000
23) Methylene Chloride	(2)	4.294	84	543334	9.522
28) t-Butyl Alcohol	(1)	4.403	59	521660	182.586
29) Acrylonitrile	(1)	4.605	53	497658	49.681
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	1188852	9.651
31) trans-1,2-Dichloroethene	(2)	4.739	96	544914	9.478
32) n-Hexane	(2)	5.165	57	908578	9.311
33) 1,1-Dichloroethane	(2)	5.385	63	1125385	9.604
34) di-Isopropyl Ether	(2)	5.446	45	1974977	9.656
35) 2-Chloro-1,3-Butadiene	(2)	5.495	53	919425	9.559
37) Ethyl t-butyl ether	(2)	5.982	59	1664806	9.652
40) 1,2-Dichloroethene (Total)	(2)		96	1158873	19.119
38) 2-Butanone	(1)	6.147	43	1396262	98.153
39) cis-1,2-Dichloroethene	(2)	6.208	96	613959	9.641
42) Propionitrile	(1)	6.220	54	705816	198.982
41) 2,2-Dichloropropane	(2)	6.232	77	884733	9.437
45) Methacrylonitrile	(1)	6.446	67	1197973	98.638
47) Bromochloromethane	(2)	6.537	128	239261	9.875
48) Tetrahydrofuran	(1)	6.549	71	350126	97.292
49) Chloroform	(2)	6.683	83	1016040	9.487

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	546085	10.205
50)$Dibromofluoromethane	(2)	6.903	111	562057	10.208
51) 1,1,1-Trichloroethane	(2)	6.933	97	871071	9.535
52) Cyclohexane	(2)	7.055	56	1074292	8.999
52) Cyclohexane	(2)	7.055	84	835438	9.140
52) Cyclohexane	(2)	7.049	69	314832	9.220
55) 1,1-Dichloropropene	(2)	7.147	75	836378	9.538
54) Carbon Tetrachloride	(2)	7.159	117	791512	9.529
56) Isobutyl Alcohol	(1)	7.226	41	458659M	453.075
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91172M	10.287
57)$1,2-Dichloroethane-d4	(2)	7.360	65	459039	10.145
57)$1,2-Dichloroethane-d4	(2)	7.366	104	57870	10.341
58) Benzene	(2)	7.403	78	2313730	9.481
59) 1,2-Dichloroethane	(2)	7.464	62	607813M	9.612
60) t-Amyl methyl ether	(2)	7.598	73	1356799	9.626
63)*Fluorobenzene	(2)	7.805	96	2270797	10.000
62) n-Heptane	(2)	7.830	43	1002679	9.090
65) n-Butanol	(1)	8.110	56	768455	943.123
67) Trichloroethene	(2)	8.293	95	608730	9.570
70) 1,2-Dichloropropane	(2)	8.616	63	603857	9.503
69) Methylcyclohexane	(2)	8.622	83	992242	9.523
71) Methyl Methacrylate	(1)	8.683	69	253966M	10.008
72) 1,4-Dioxane	(1)	8.720	88	82405	513.336
73) Dibromomethane	(2)	8.726	93	251750	9.618
74) Bromodichloromethane	(2)	8.951	83	721713	9.876
76) 2-Nitropropane	(1)	9.189	41	767062	94.300
80) cis-1,3-Dichloropropene	(2)	9.494	75	886193	9.868
81) 4-Methyl-2-Pentanone	(1)	9.646	43	3461188	98.865
82)$Toluene-d8	(3)	9.811	98	2246008	9.748
82)$Toluene-d8	(3)	9.811	100	1462137	9.804
83) Toluene	(3)	9.890	92	1425153	9.183
84) trans-1,3-Dichloropropene	(3)	10.128	75	692682	9.523
85) 1,3-Dichloropropene (total)	(3)		75	1578875	19.391
86) Ethyl Methacrylate	(3)	10.189	69	531314	9.495
88) 1,1,2-Trichloroethane	(3)	10.335	97	349734	9.304
89) Tetrachloroethene	(3)	10.439	166	667231	9.104
90) 1,3-Dichloropropane	(3)	10.500	76	640156	9.471
91) 2-Hexanone	(1)	10.530	43	2399359	96.933

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	468929	9.731
95) 1,2-Dibromoethane	(3)	10.835	107	338365	9.556
97)*Chlorobenzene-d5	(3)	11.262	117	1617323	10.000
98) Chlorobenzene	(3)	11.286	112	1572207	9.306
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	544790	9.401
100) Ethylbenzene	(3)	11.372	91	2796238	9.205
101) m+p-Xylene	(3)	11.487	106	2144836	18.511
105) Xylene (Total)	(3)		106	3198492	27.880
104) o-Xylene	(3)	11.817	106	1053656	9.371
106) Styrene	(3)	11.829	104	1694211	9.419
107) Bromoform	(3)	11.993	173	262691	9.828
108) Isopropylbenzene	(3)	12.115	105	2746137	9.216
111)$4-Bromofluorobenzene	(3)	12.262	95	746740	10.055
111)$4-Bromofluorobenzene	(3)	12.262	174	624403	10.084
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	416614M	9.181
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	1118677	103.767
114) Bromobenzene	(4)	12.377	156	626886	9.275
116) 1,2,3-Trichloropropane	(4)	12.396	110	106766	9.372
117) n-Propylbenzene	(4)	12.444	91	3327479	9.102
119) 2-Chlorotoluene	(4)	12.524	126	649916	9.220
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	2337991	9.173
122) 4-Chlorotoluene	(4)	12.615	126	656708	9.142
125) tert-Butylbenzene	(4)	12.822	134	497778M	9.162
126) Pentachloroethane	(4)	12.853	167	399158	9.734
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	2350492	9.223
128) sec-Butylbenzene	(4)	12.987	105	3026768	9.172
131) 1,3-Dichlorobenzene	(4)	13.091	146	1228582	9.293
132) p-Isopropyltoluene	(4)	13.097	119	2593636	9.285
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	725016	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	1202986	8.956
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	965211	9.133
136) Benzyl Chloride	(4)	13.231	126	176407	9.812
138) n-Butylbenzene	(4)	13.383	92	1292257	9.457
139) 1,2-Dichlorobenzene	(4)	13.420	146	1071844	9.128
143) 1,2-Dibromo-3-chloropropane	(1)	13.956	155	57131	10.273
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	752893	8.963
146) Hexachlorobutadiene	(4)	14.597	225	403240	9.187
147) Naphthalene	(4)	14.694	128	1206602	8.356

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	594025	8.854

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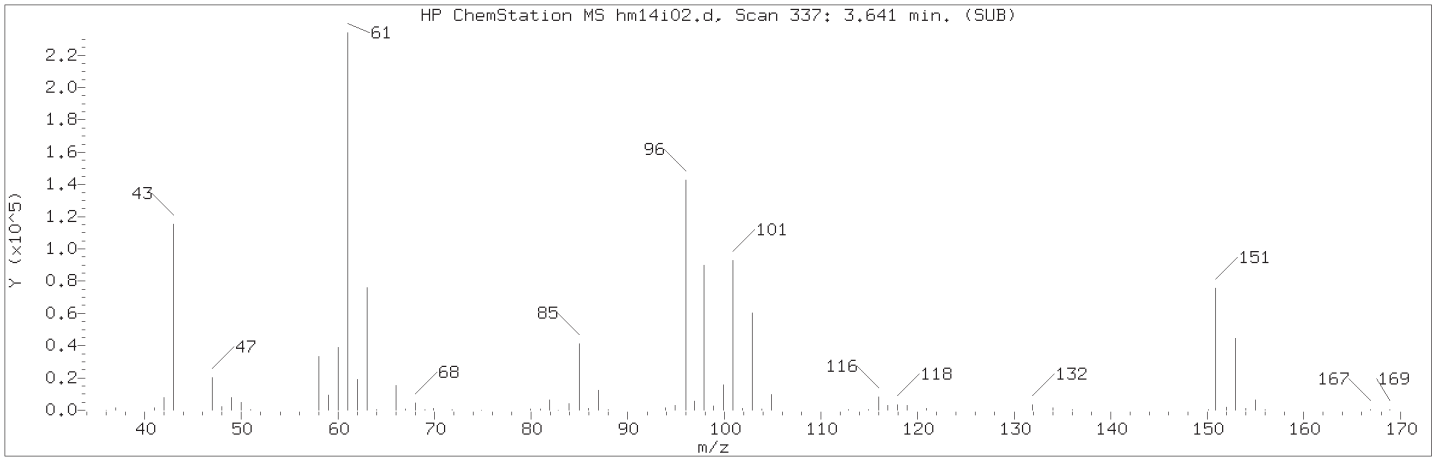
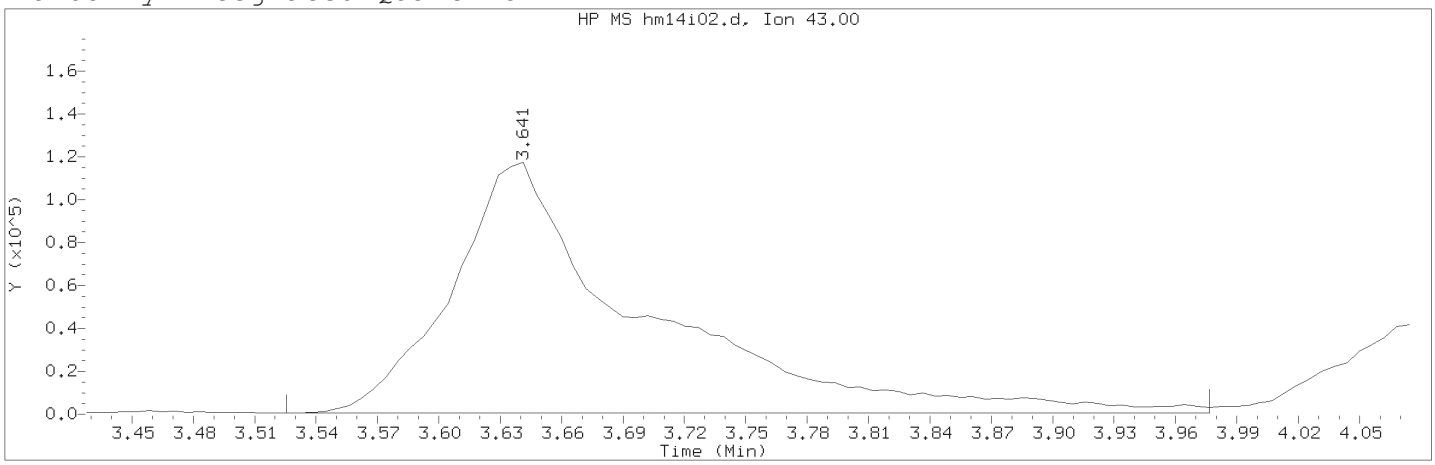
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

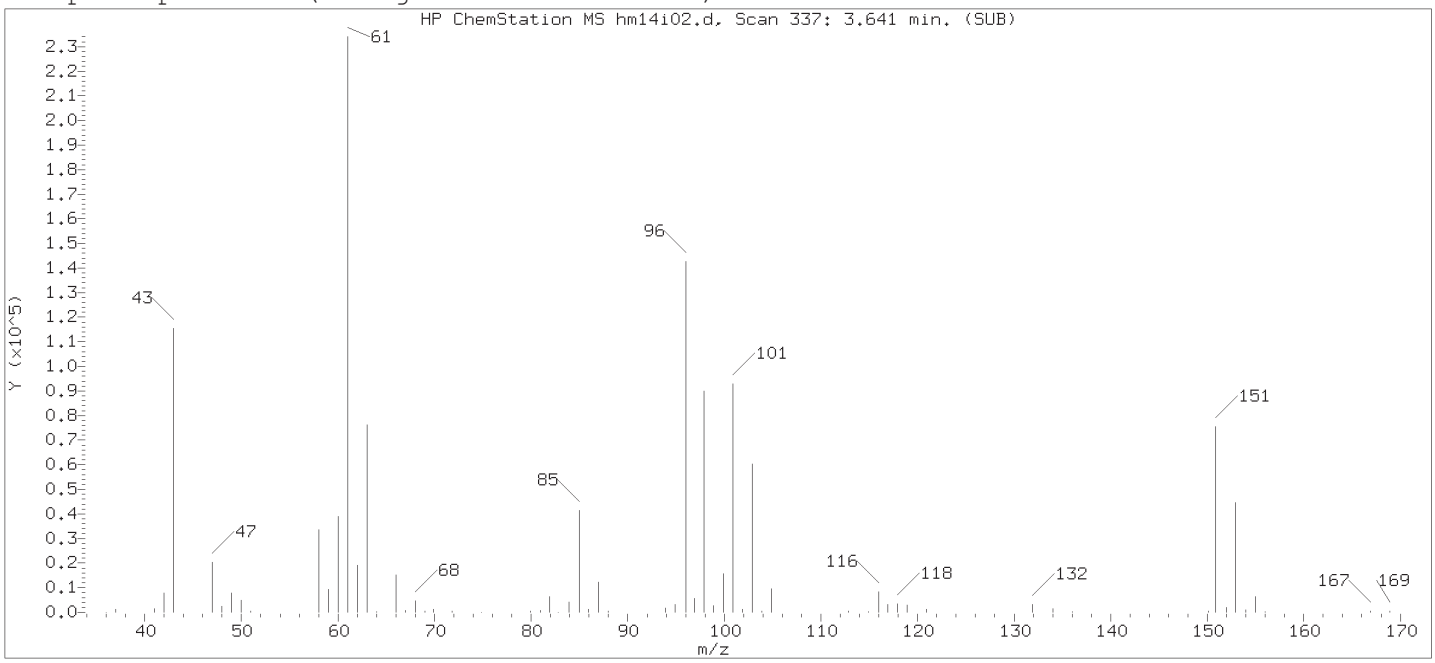
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 761515M
On-Column Amount (ng) : 91.2179
Integration start scan : 317 Integration stop scan: 391
Y at integration start : 433 Y at integration end: 433

Reason for manual integration: improper integration

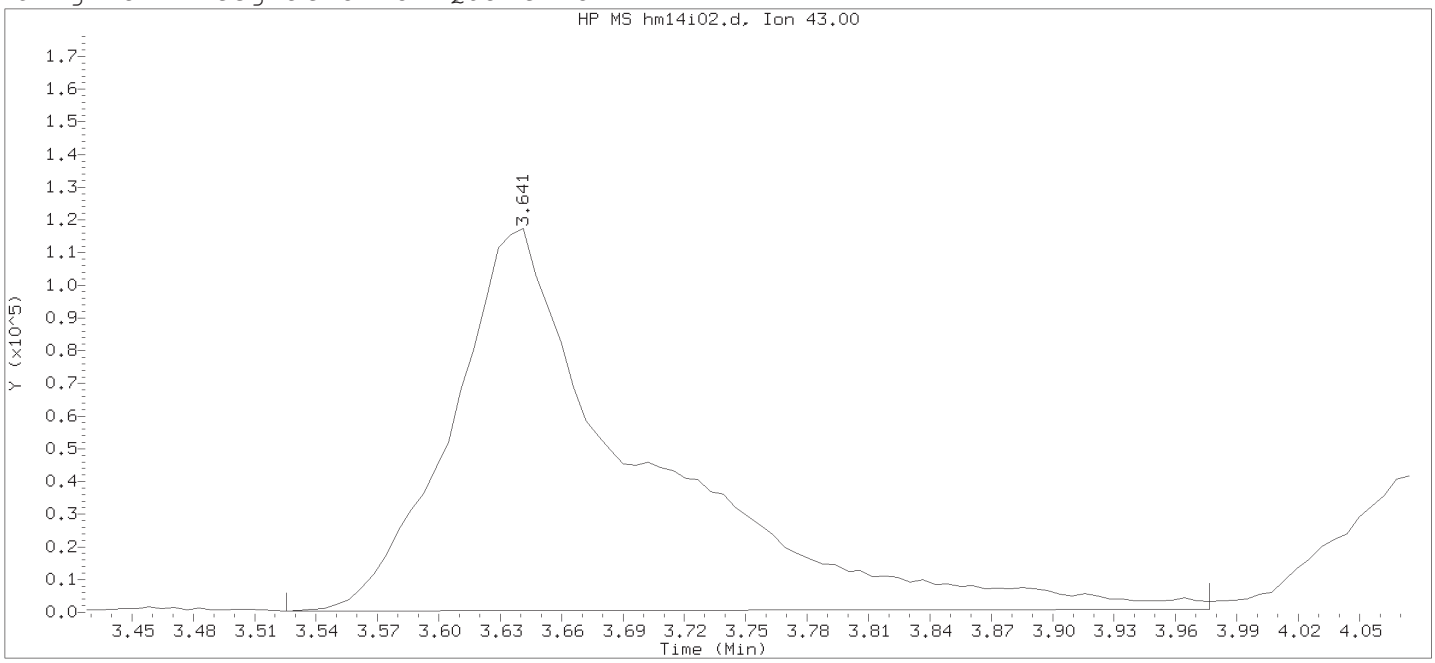
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 337		
Retention Time (minutes)	: 3.641		
Quant Ion	: 43.00		
Area	: 753577		
On-column Amount (ng)	: 98.9310		
Integration start scan	: 317	Integration stop scan:	391
Y at integration start	: 443	Y at integration end:	971

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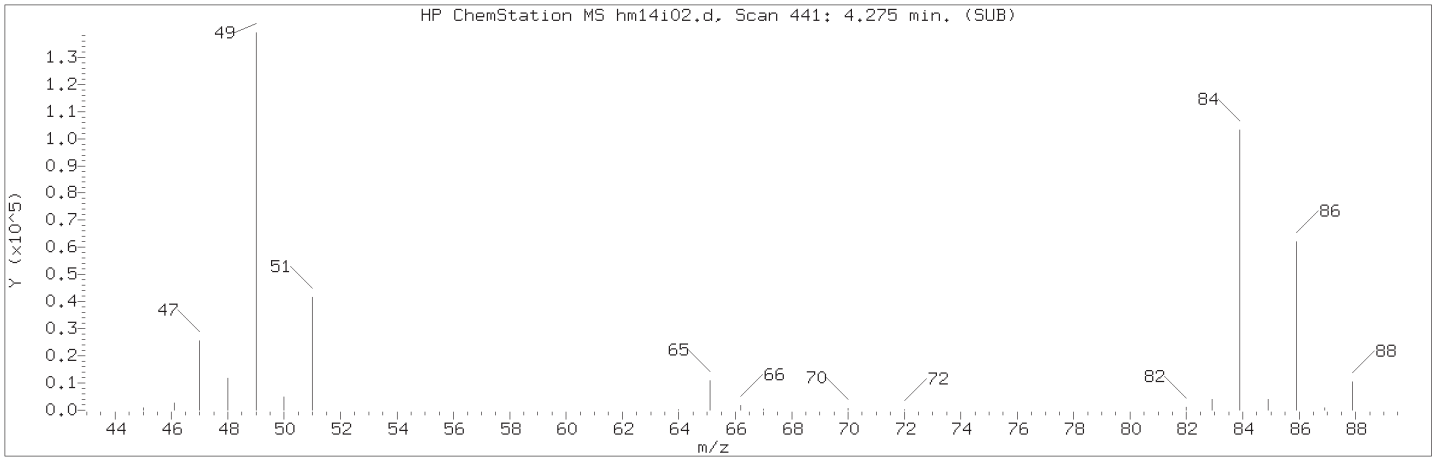
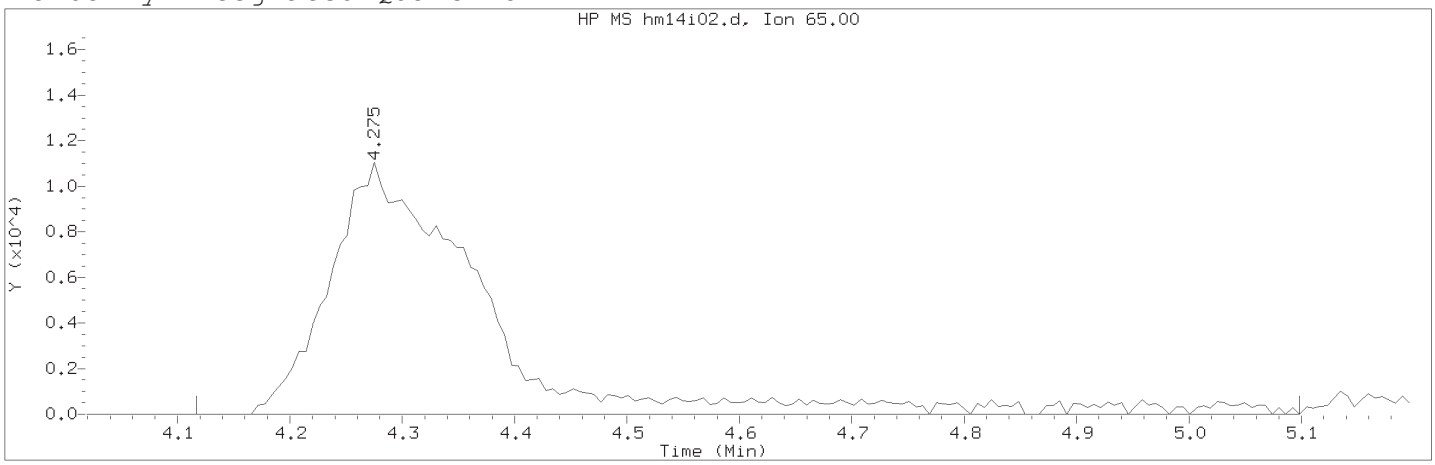
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

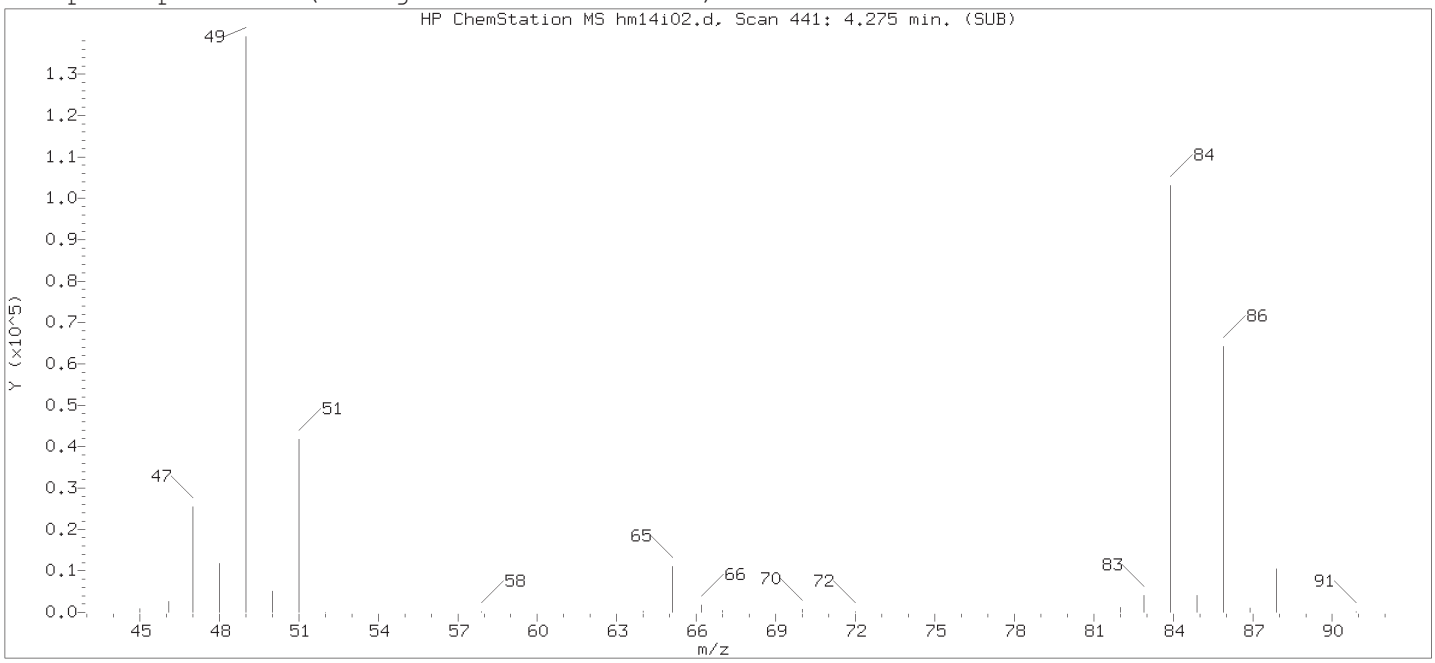
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area (flag) : 106258M
On-Column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 575
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

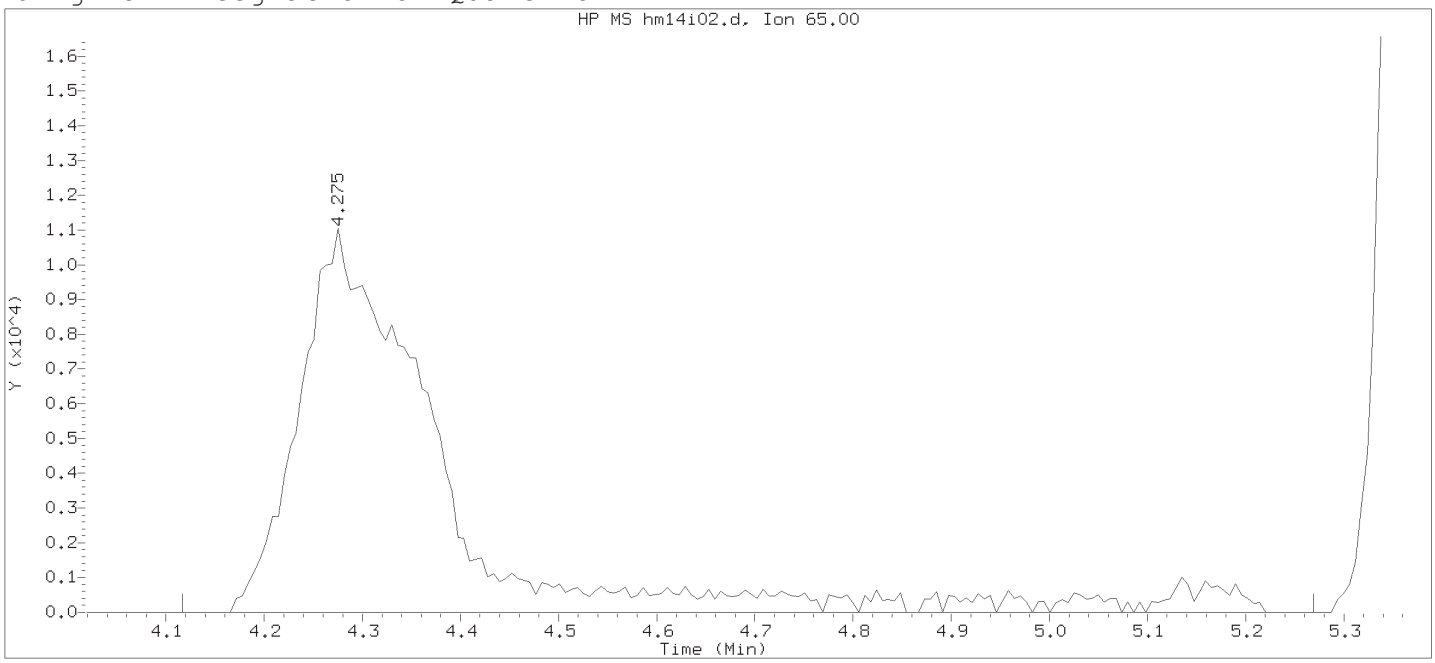
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

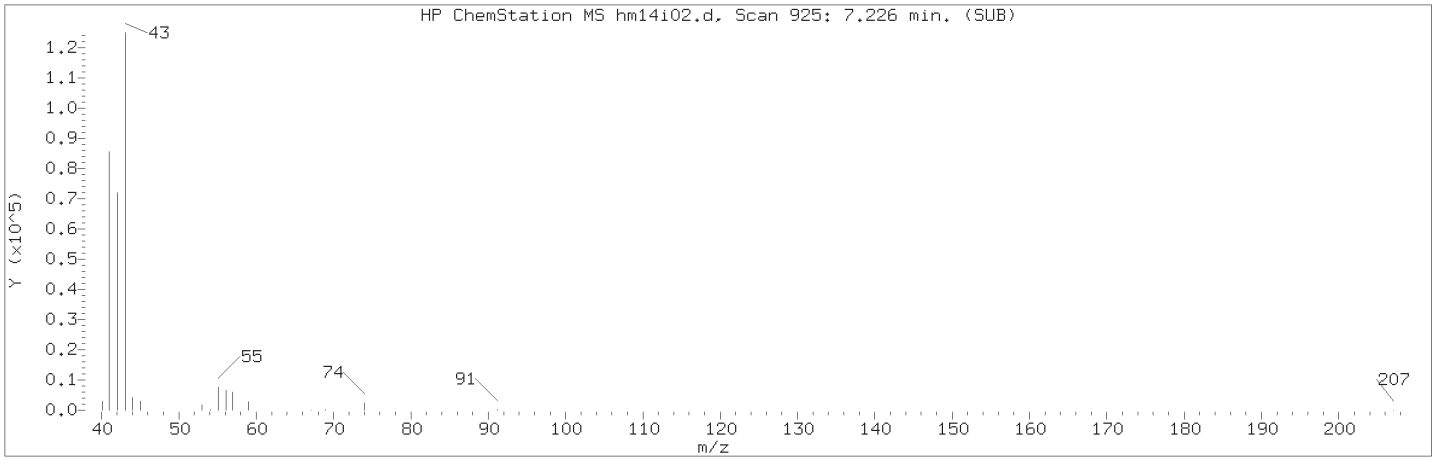
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

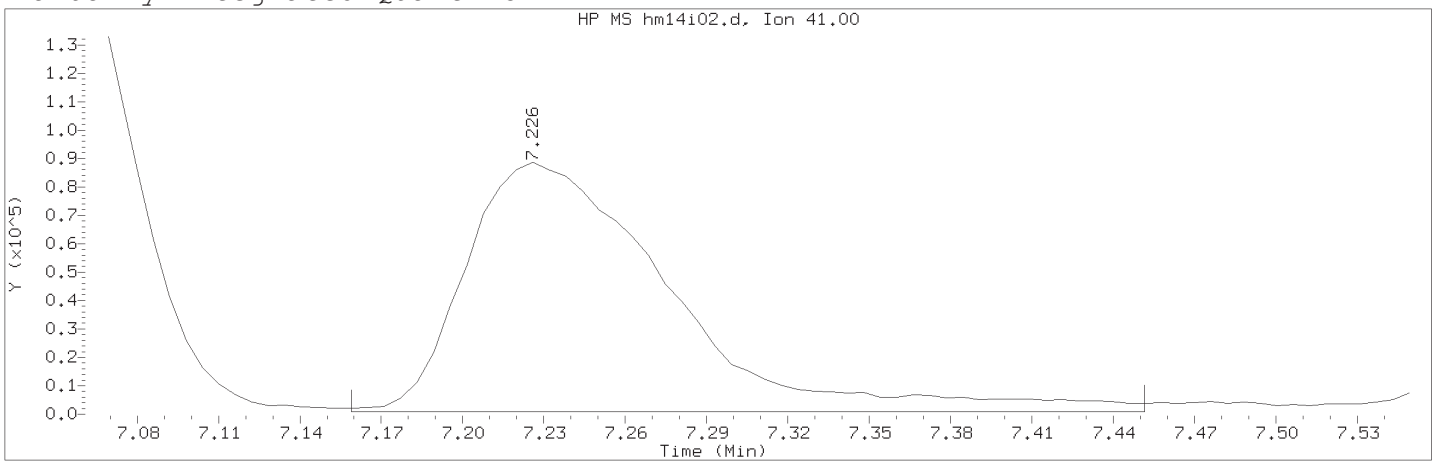
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 441
Retention Time (minutes): 4.275
Quant Ion : 65.00
Area : 110092
On-column Amount (ng) : 50.0000
Integration start scan : 414 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

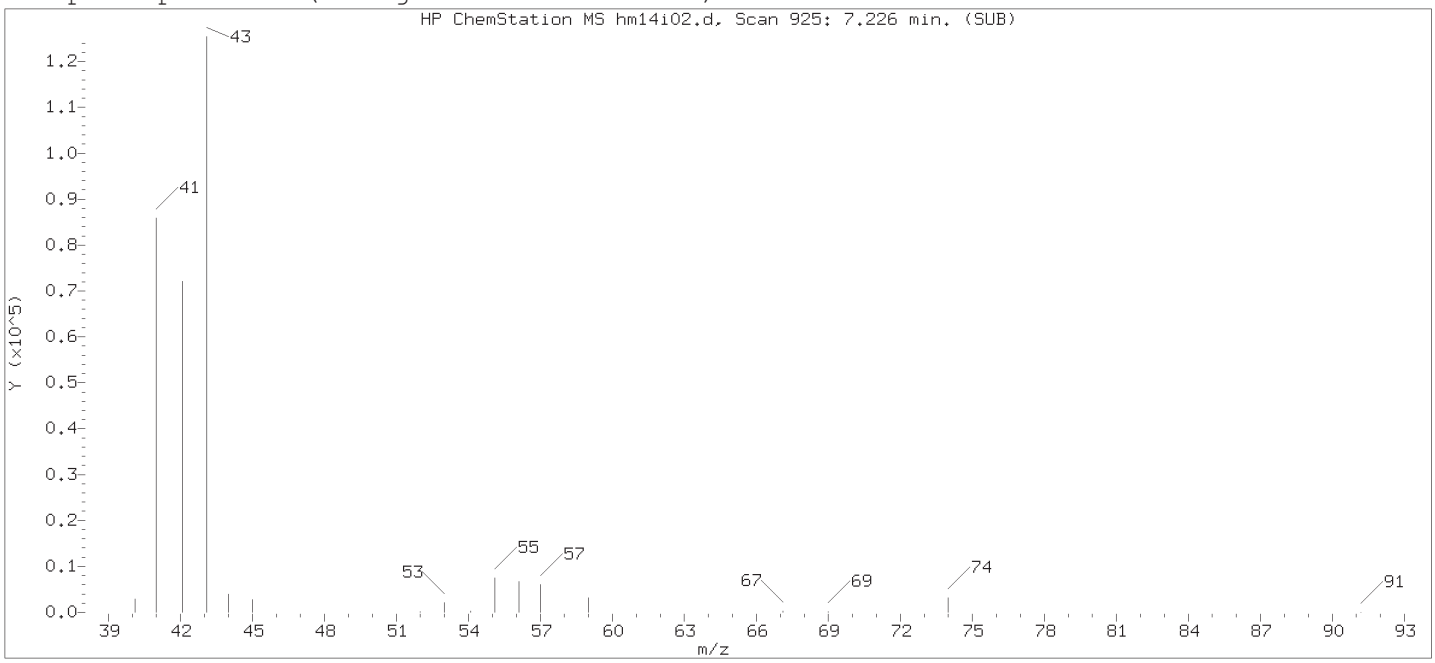
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 458659M
On-Column Amount (ng) : 453.0753
Integration start scan : 913 Integration stop scan: 961
Y at integration start : 855 Y at integration end: 855

Reason for manual integration: improper integration

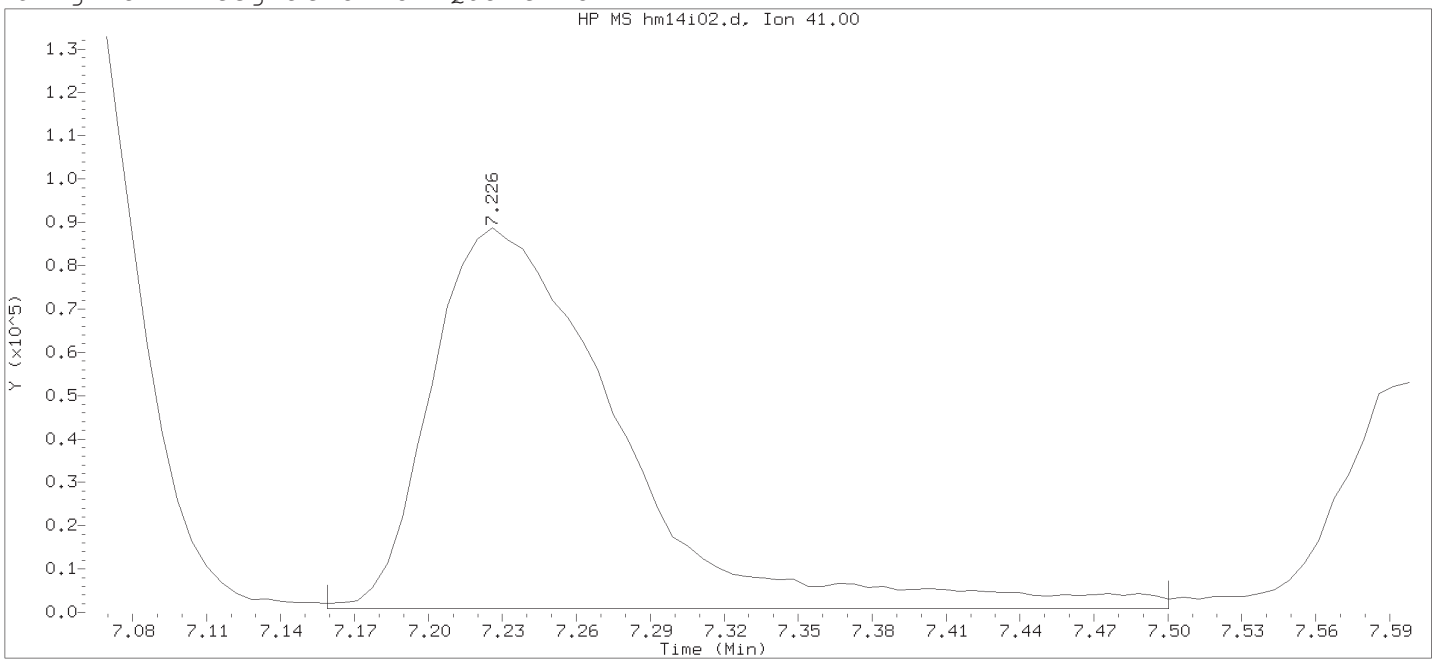
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

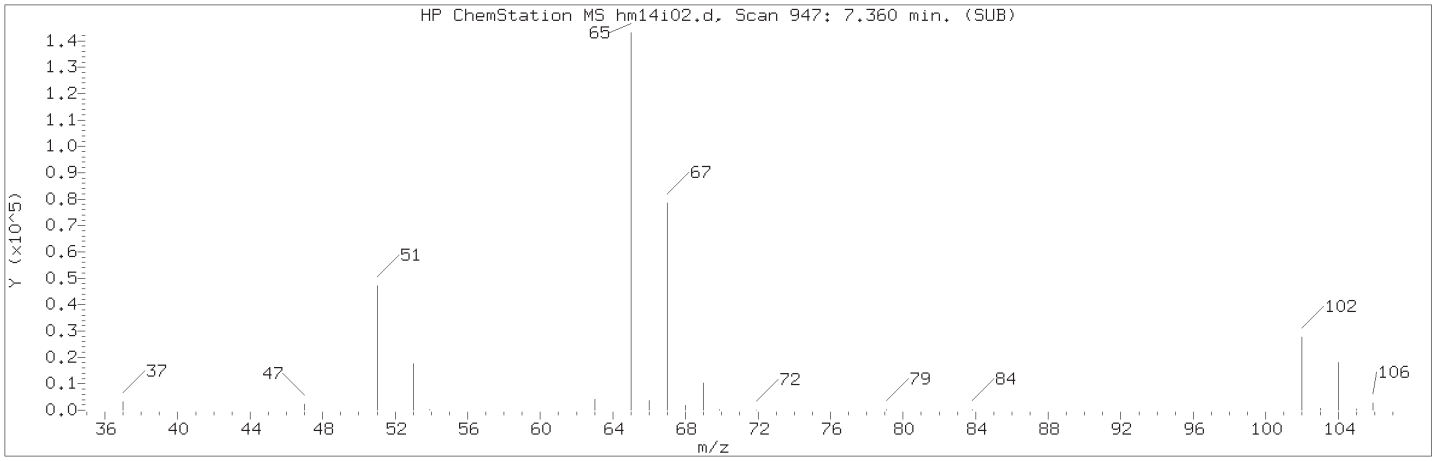
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

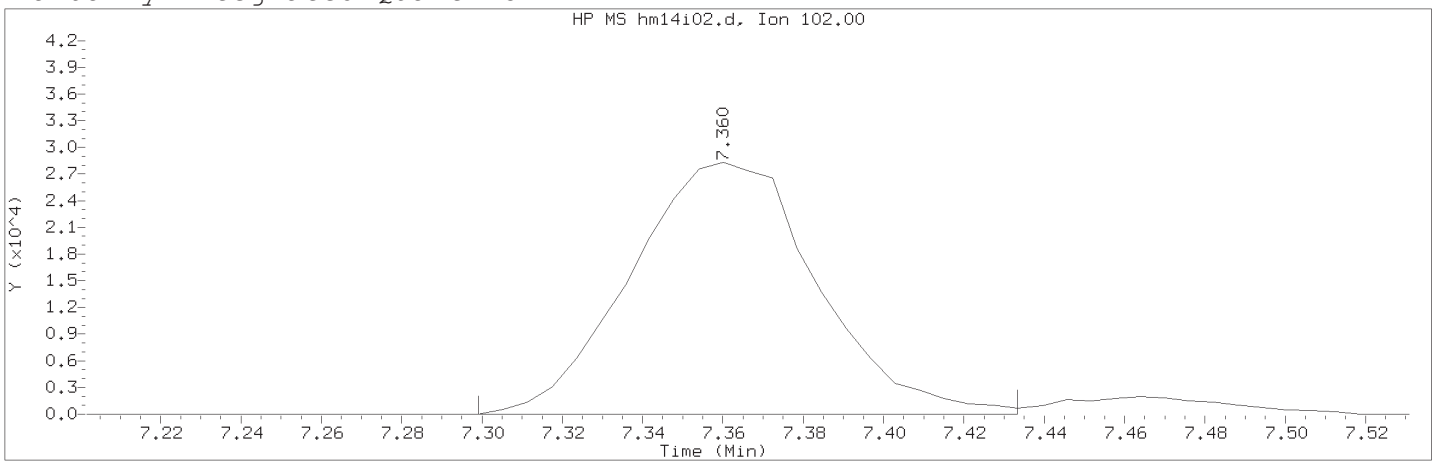
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 467057
On-column Amount (ng) : 493.7484
Integration start scan : 913 Integration stop scan: 969
Y at integration start : 855 Y at integration end: 855

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

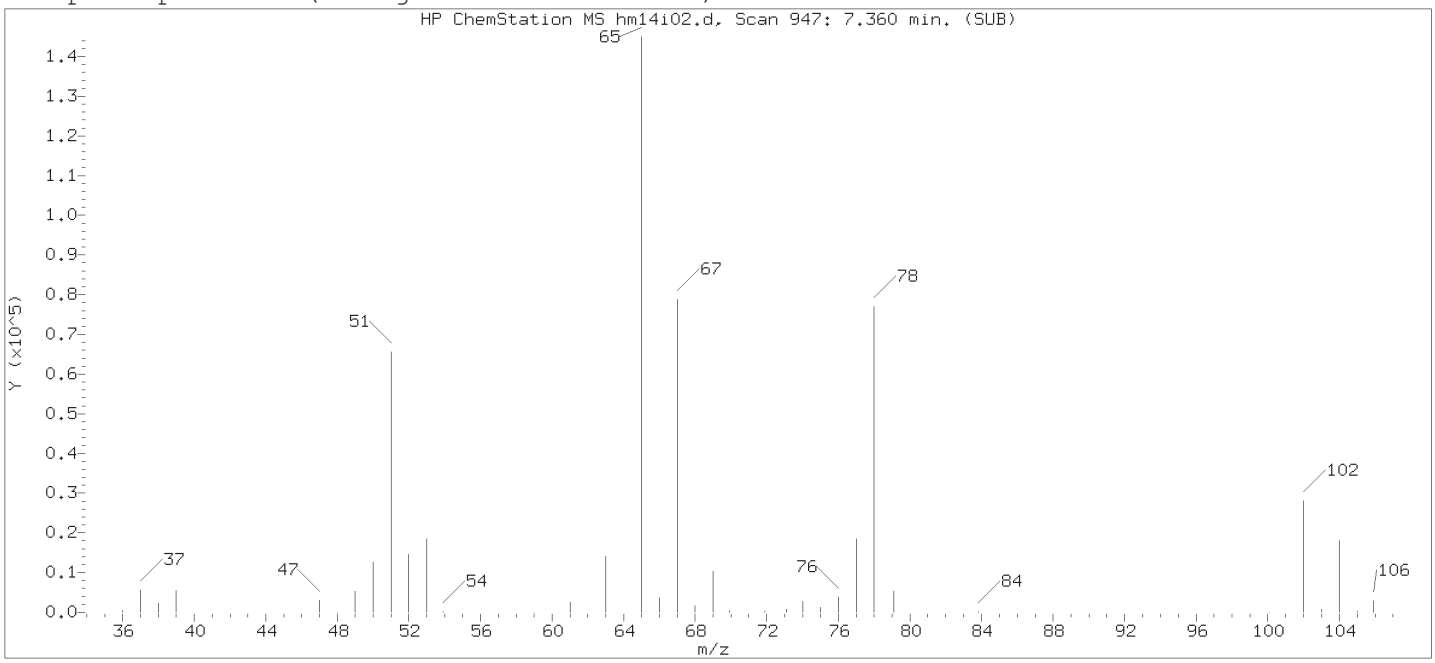
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 91172M
On-Column Amount (ng) : 10.2870
Integration start scan : 936 Integration stop scan: 958
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

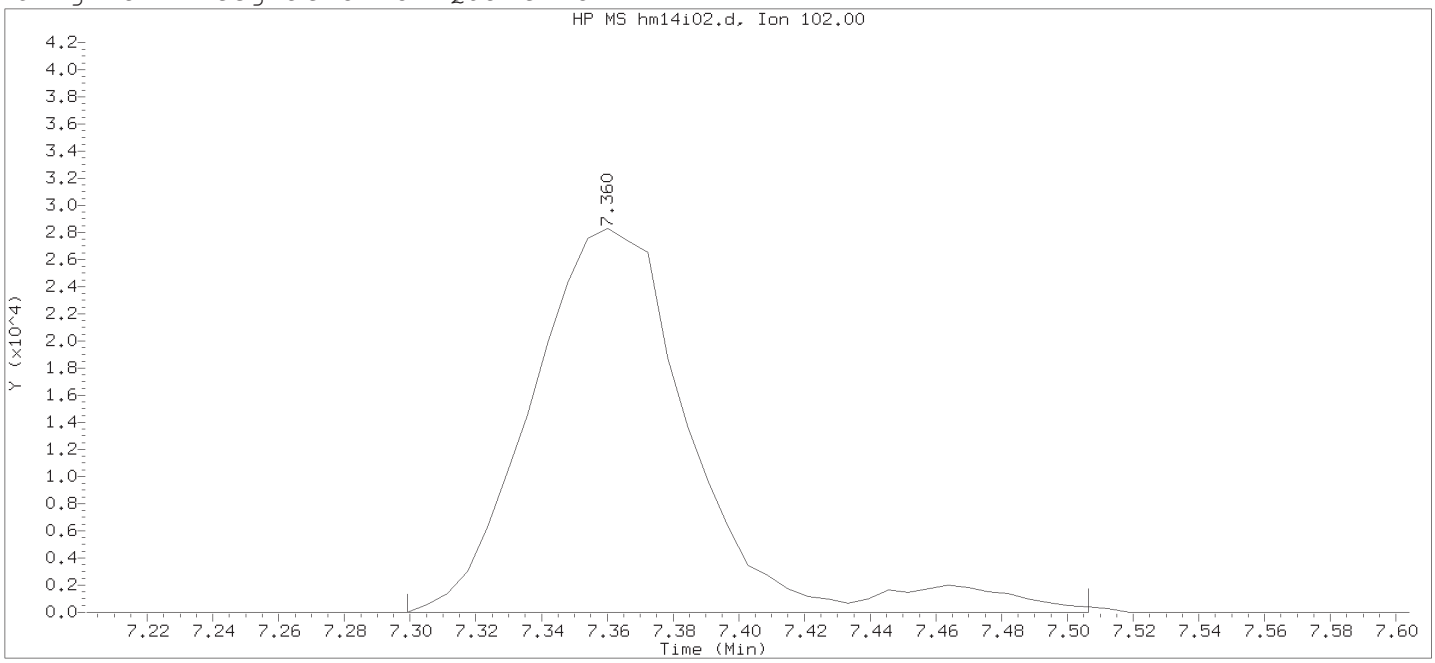
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

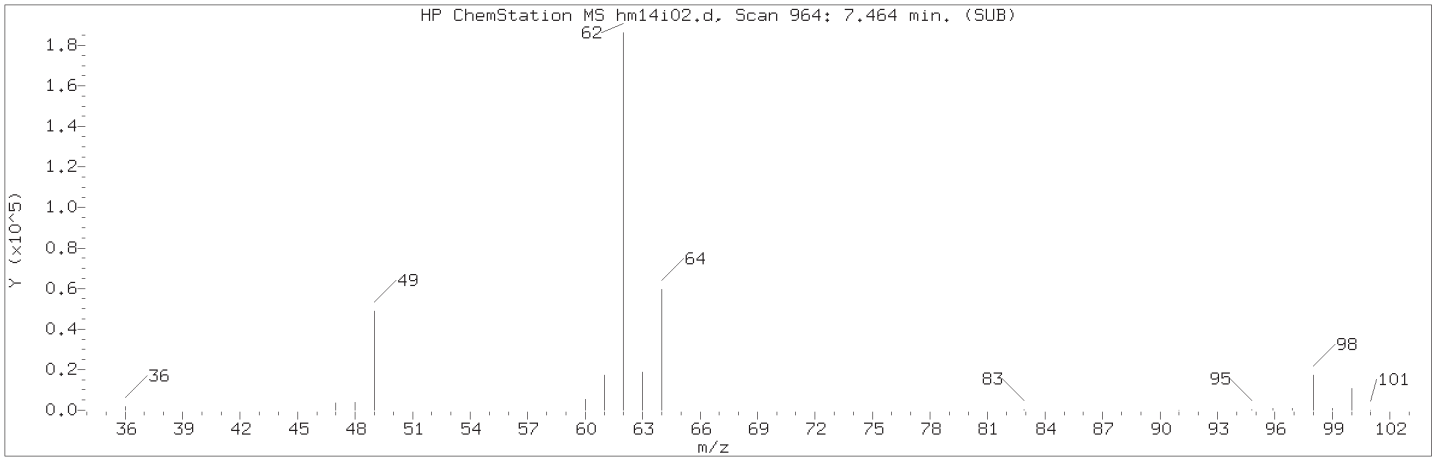
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

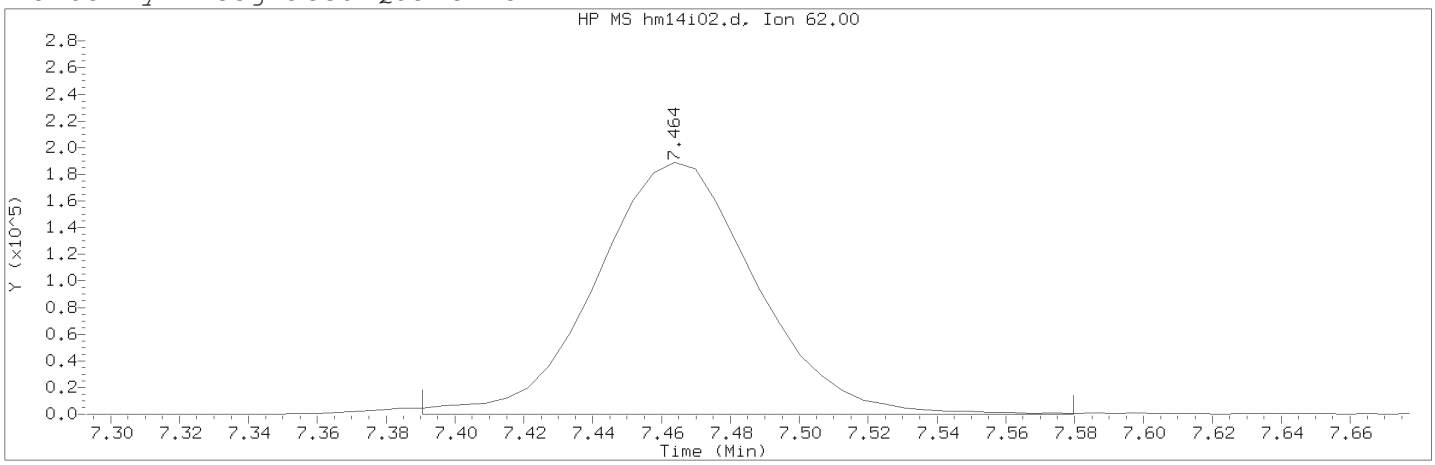
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 96625
On-column Amount (ng) : 10.3533
Integration start scan : 936 Integration stop scan: 970
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

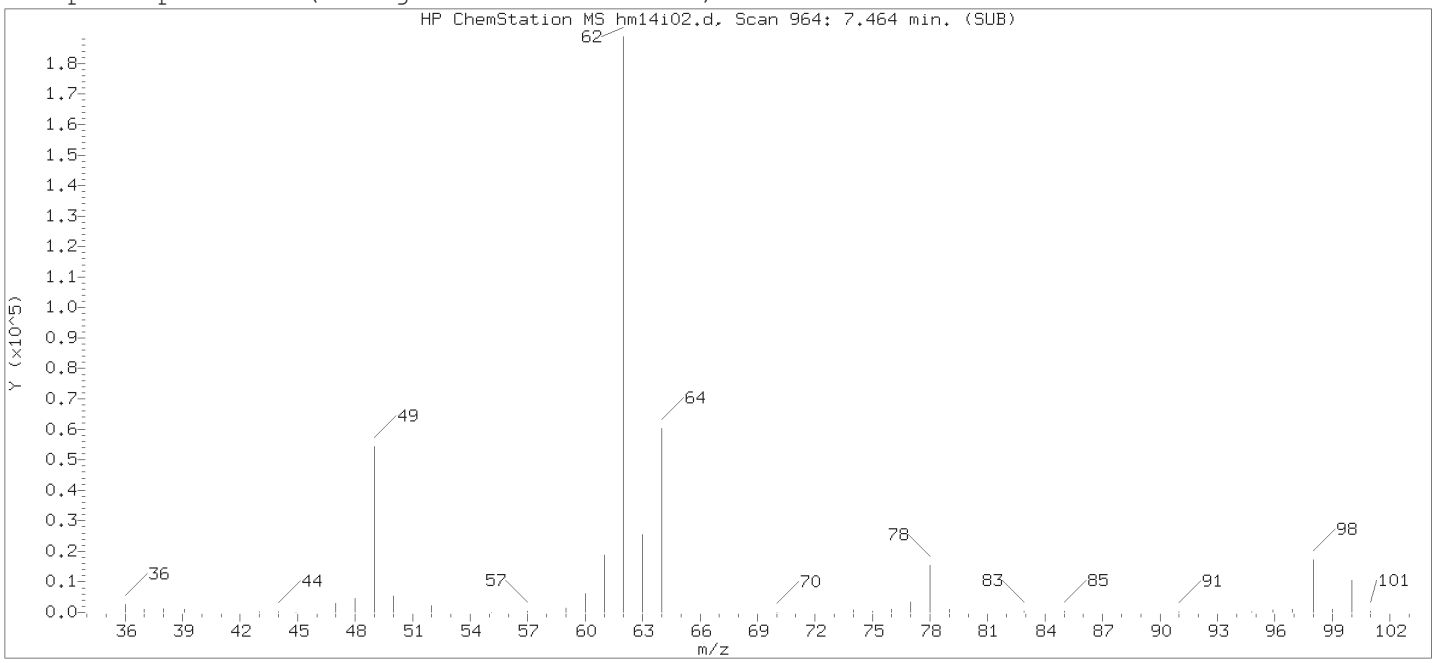
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 607813M
On-Column Amount (ng) : 9.6123
Integration start scan : 951 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

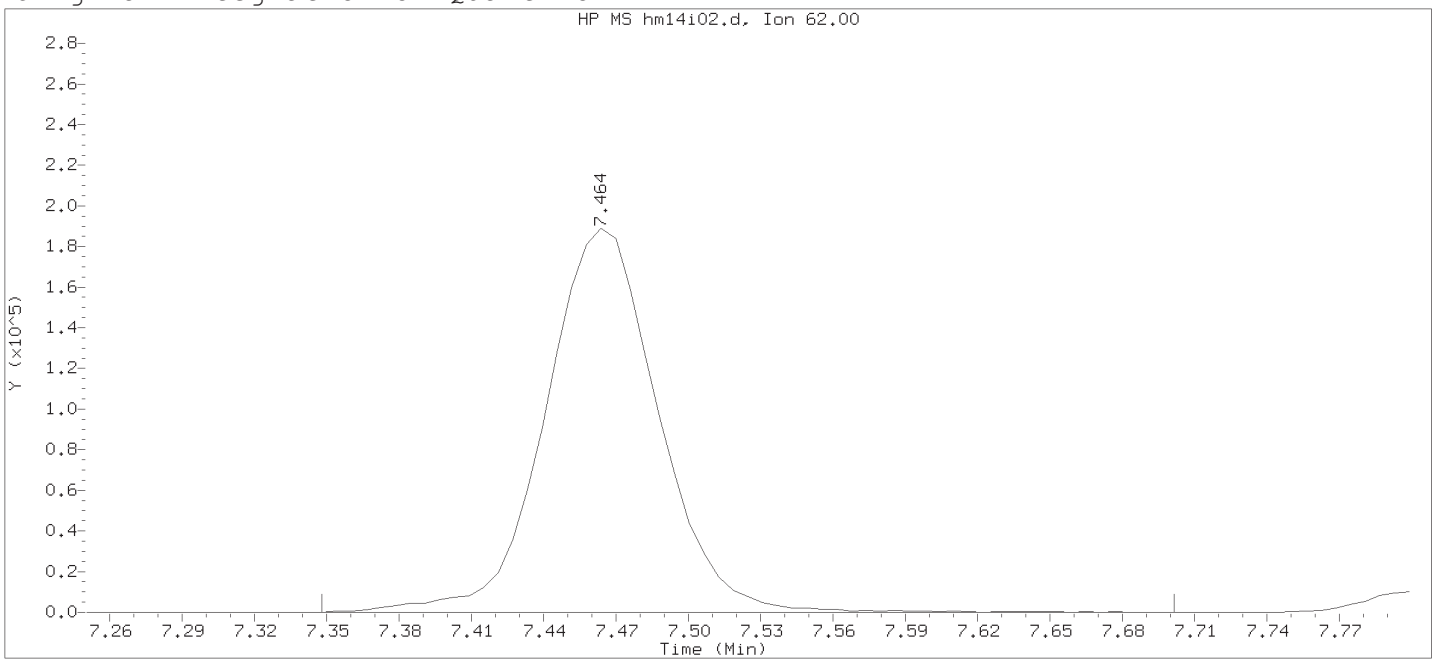
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

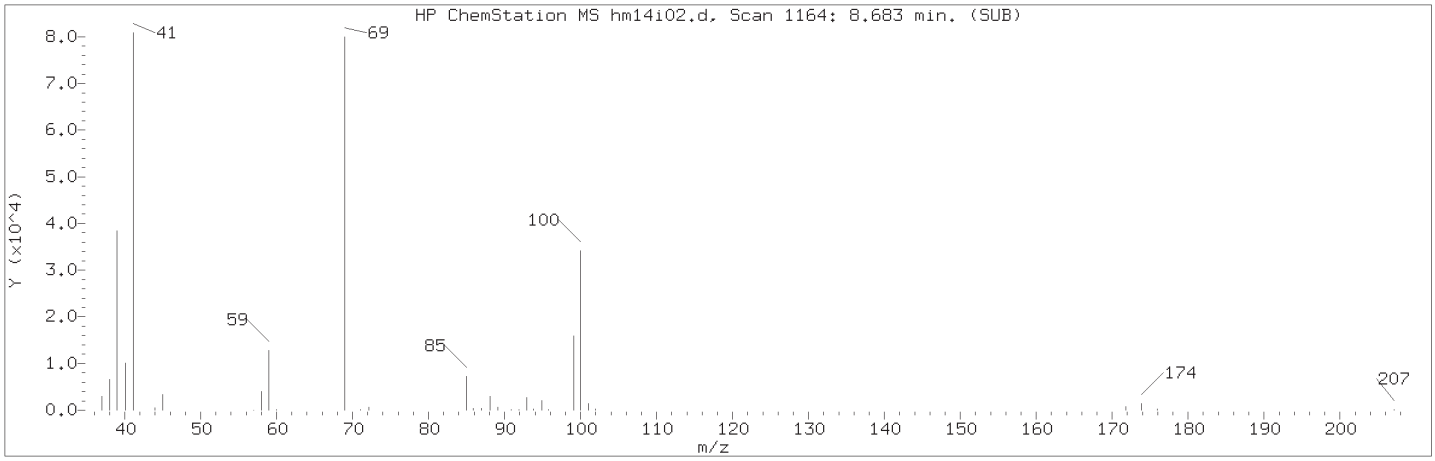
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

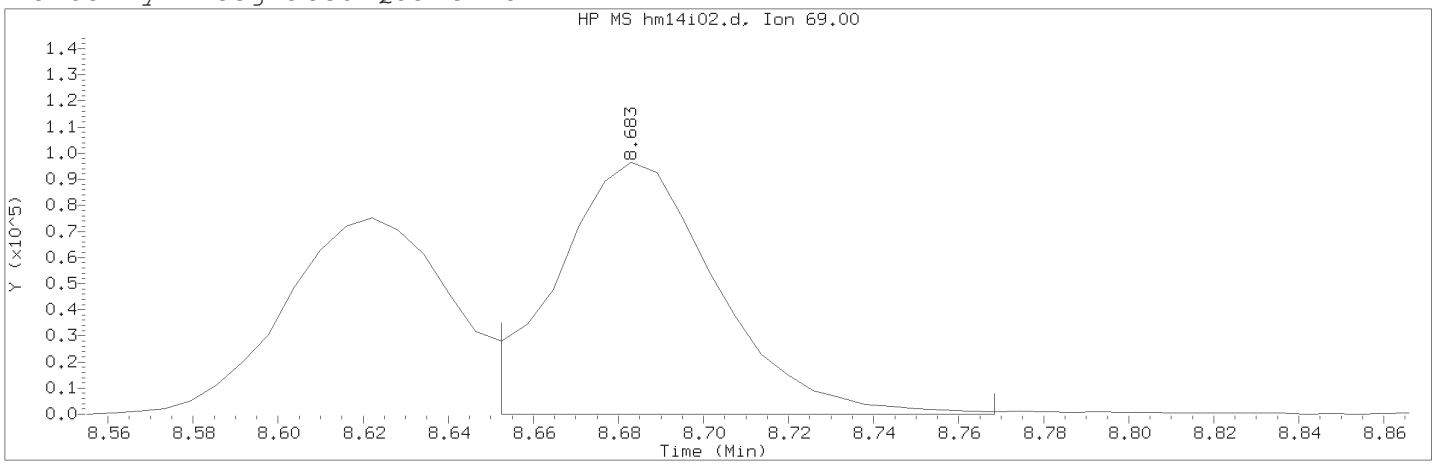
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 614292
On-column Amount (ng) : 9.7775
Integration start scan : 944 Integration stop scan: 1002
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

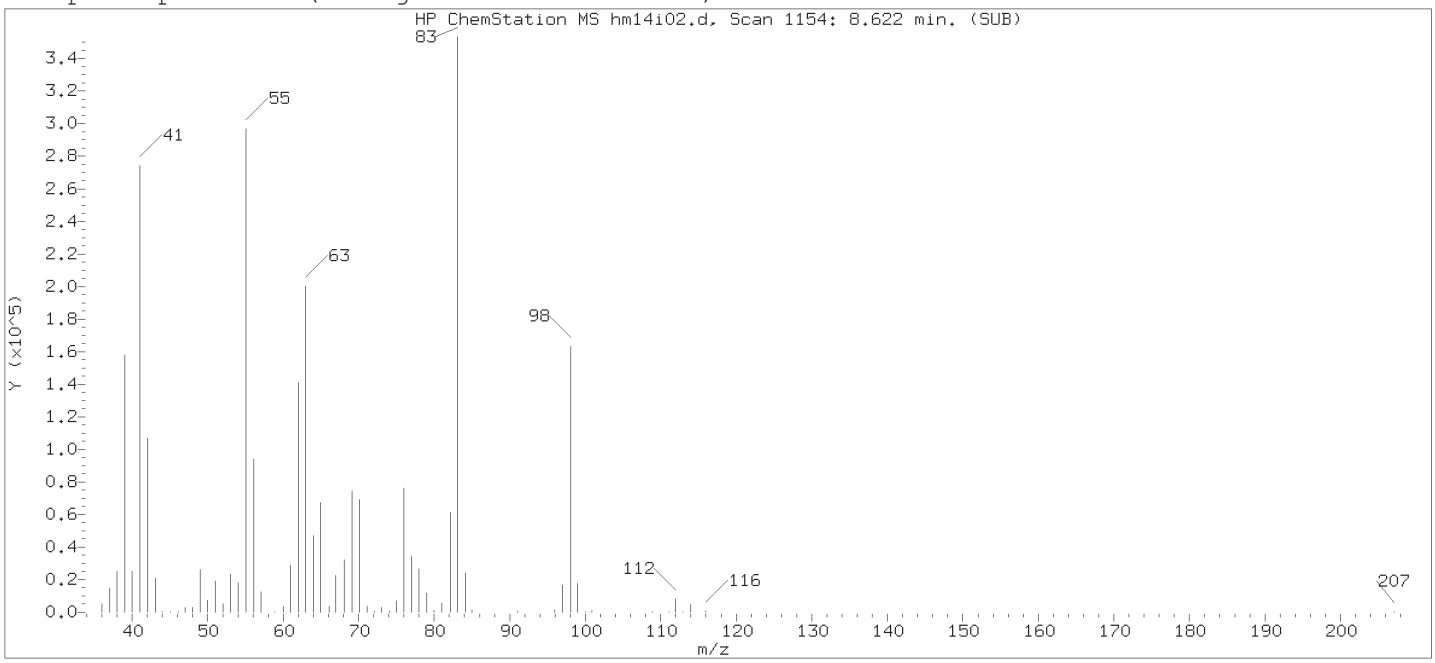
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 253966M
On-Column Amount (ng) : 10.0084
Integration start scan : 1158 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

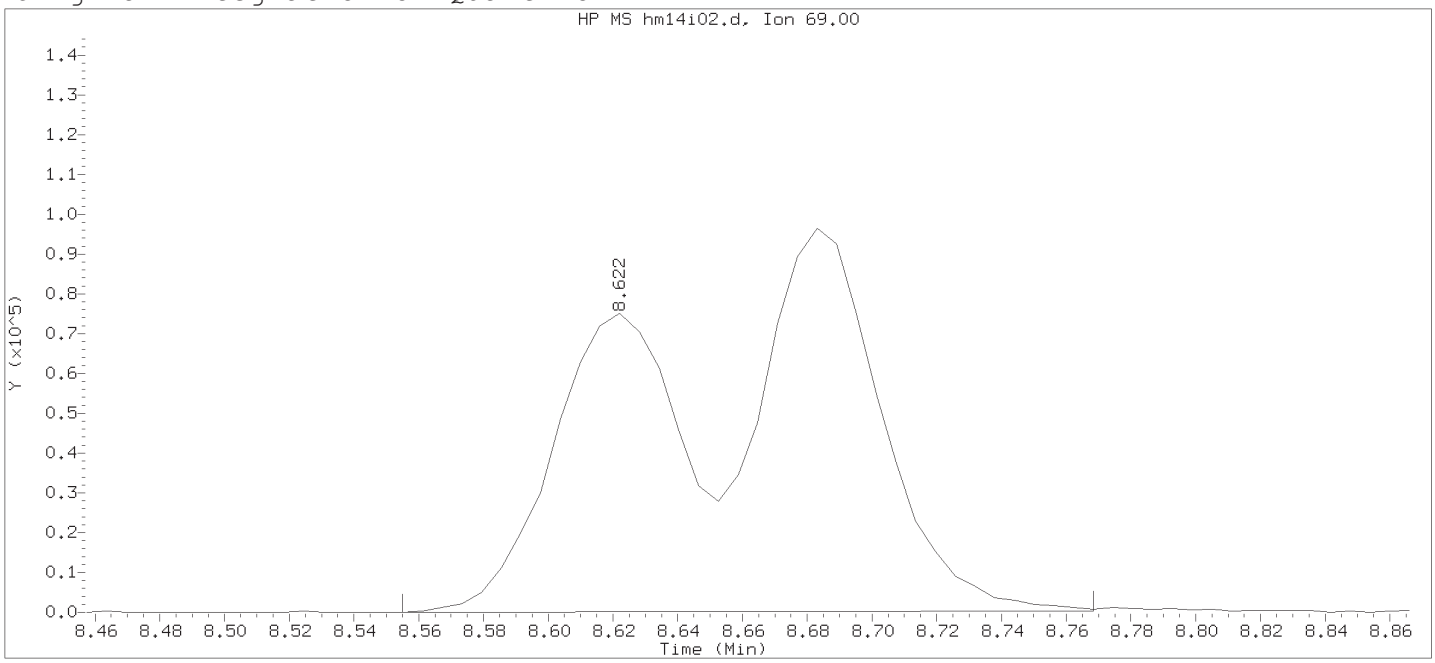
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

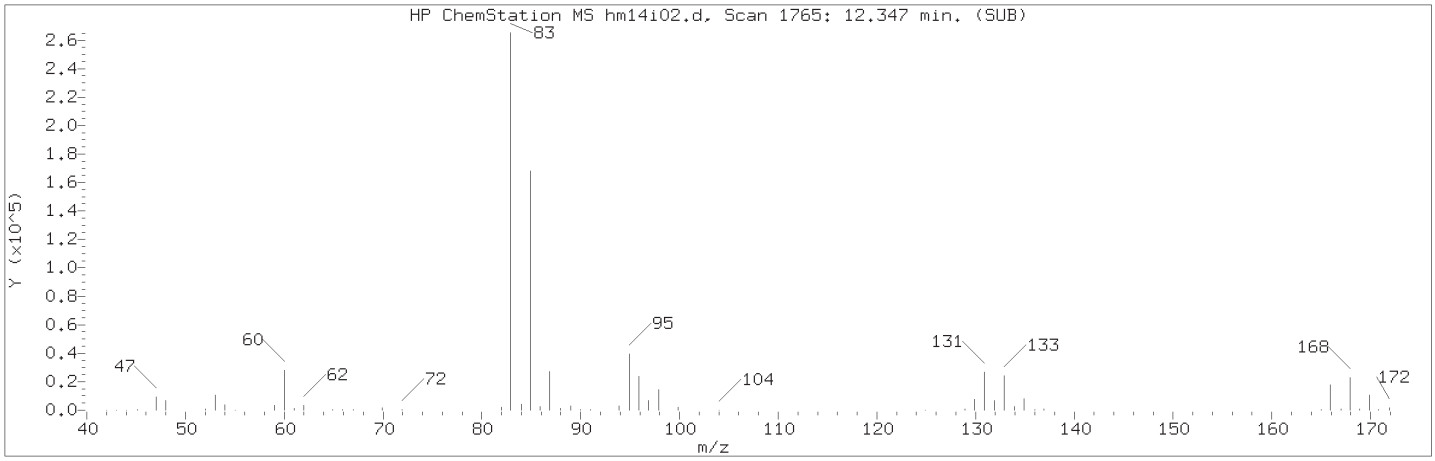
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

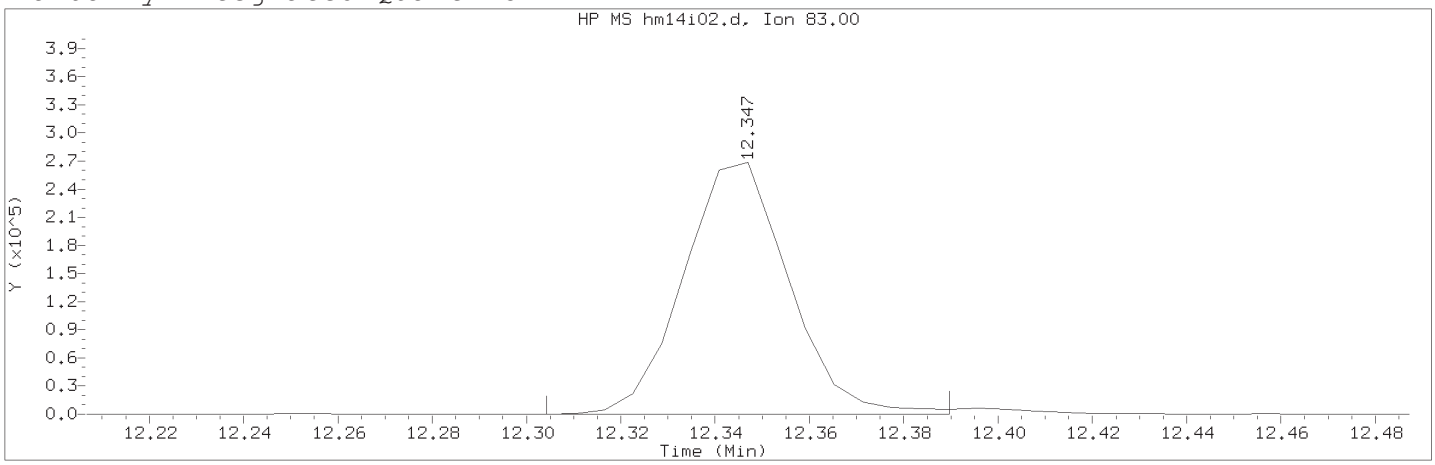
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 448439
On-column Amount (ng) : 12.8749
Integration start scan : 1142 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 342

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

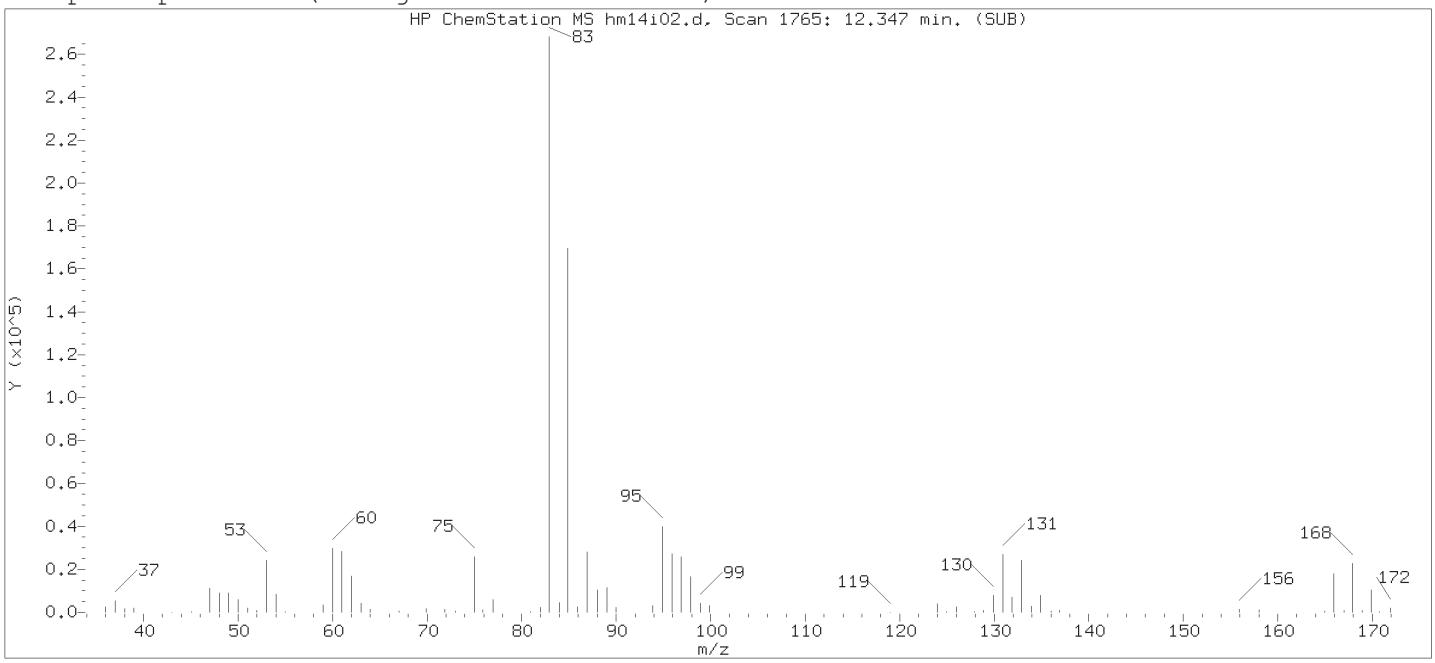
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 416614M
On-Column Amount (ng) : 9.1808
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

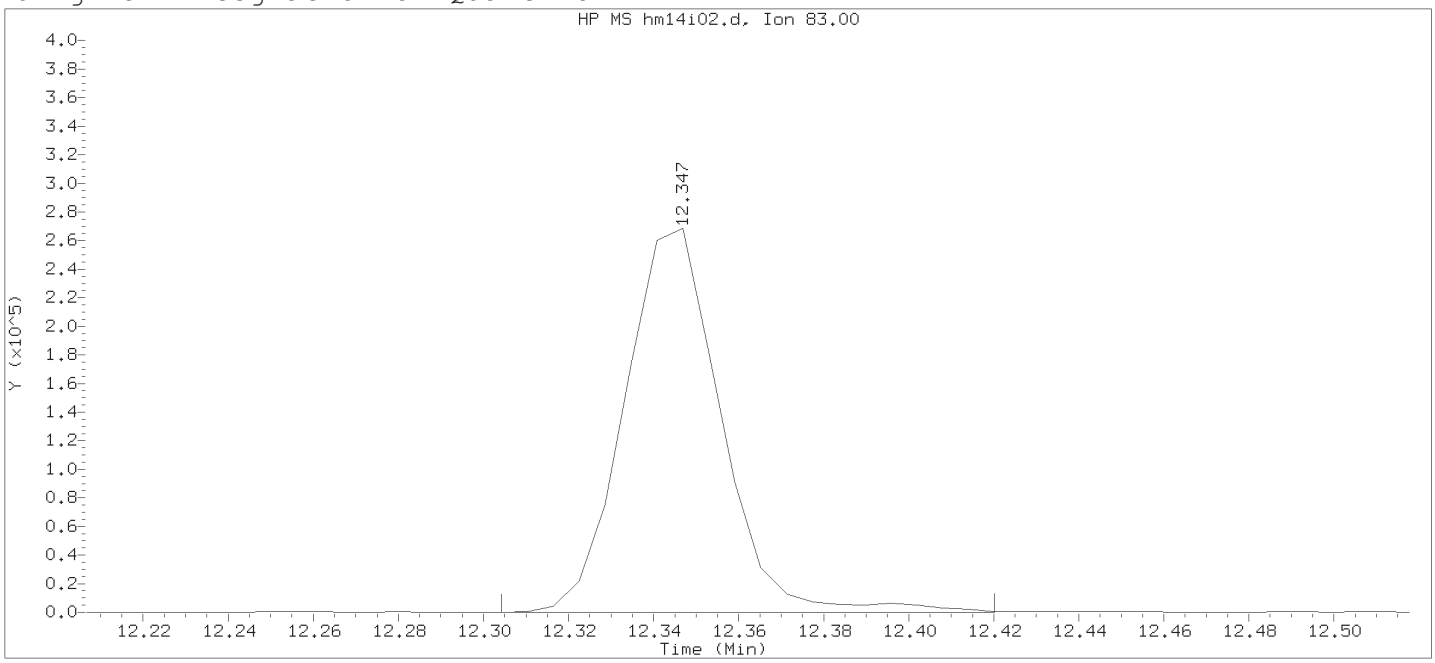
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

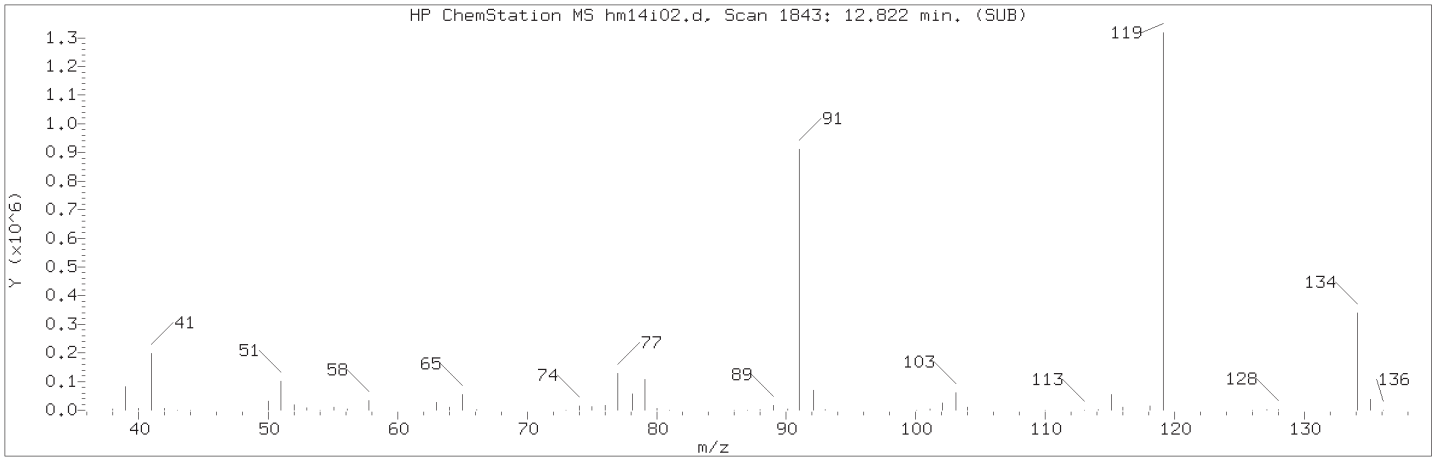
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

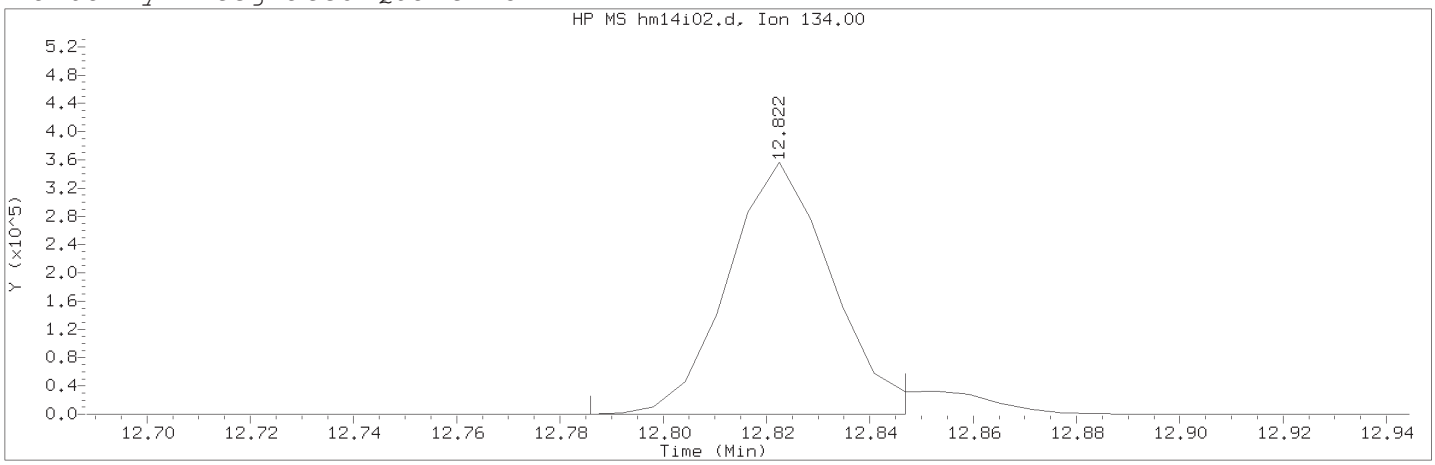
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 422693
On-column Amount (ng) : 9.9194
Integration start scan : 1757 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD010 Lab Sample ID: VSTD010

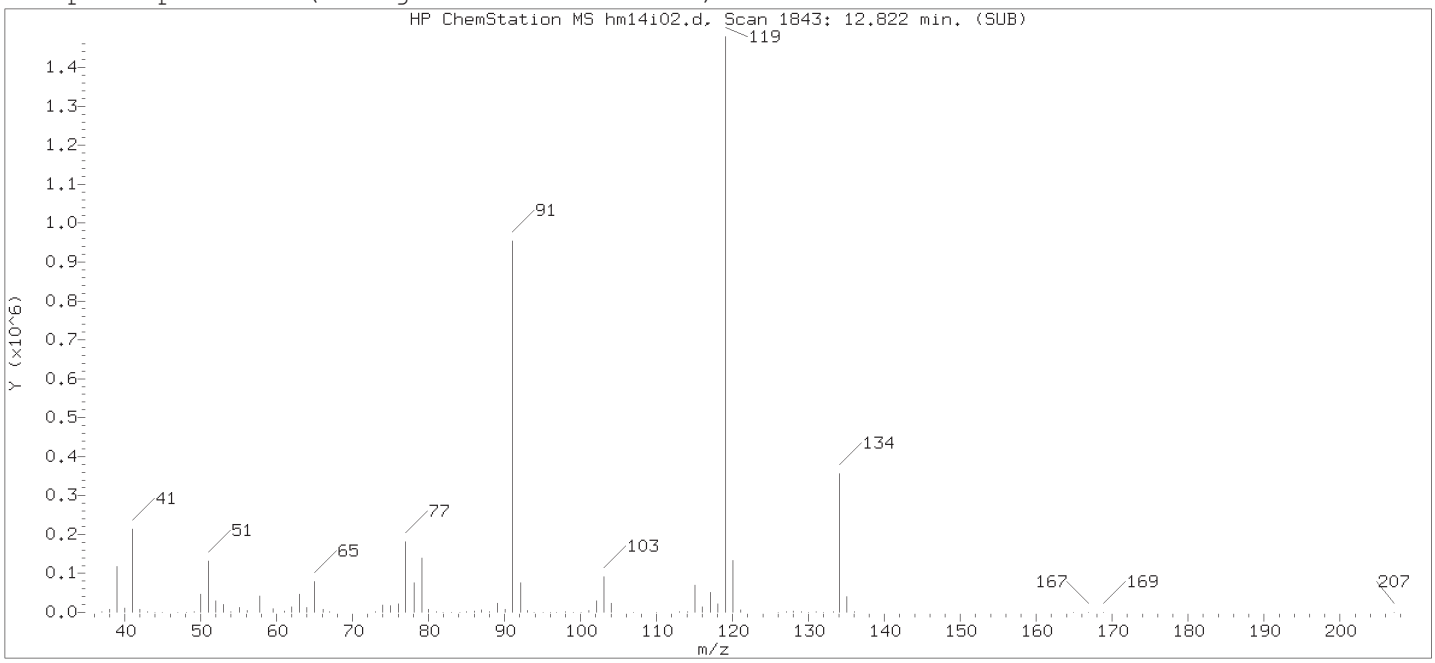
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 497778M
On-Column Amount (ng) : 9.1615
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

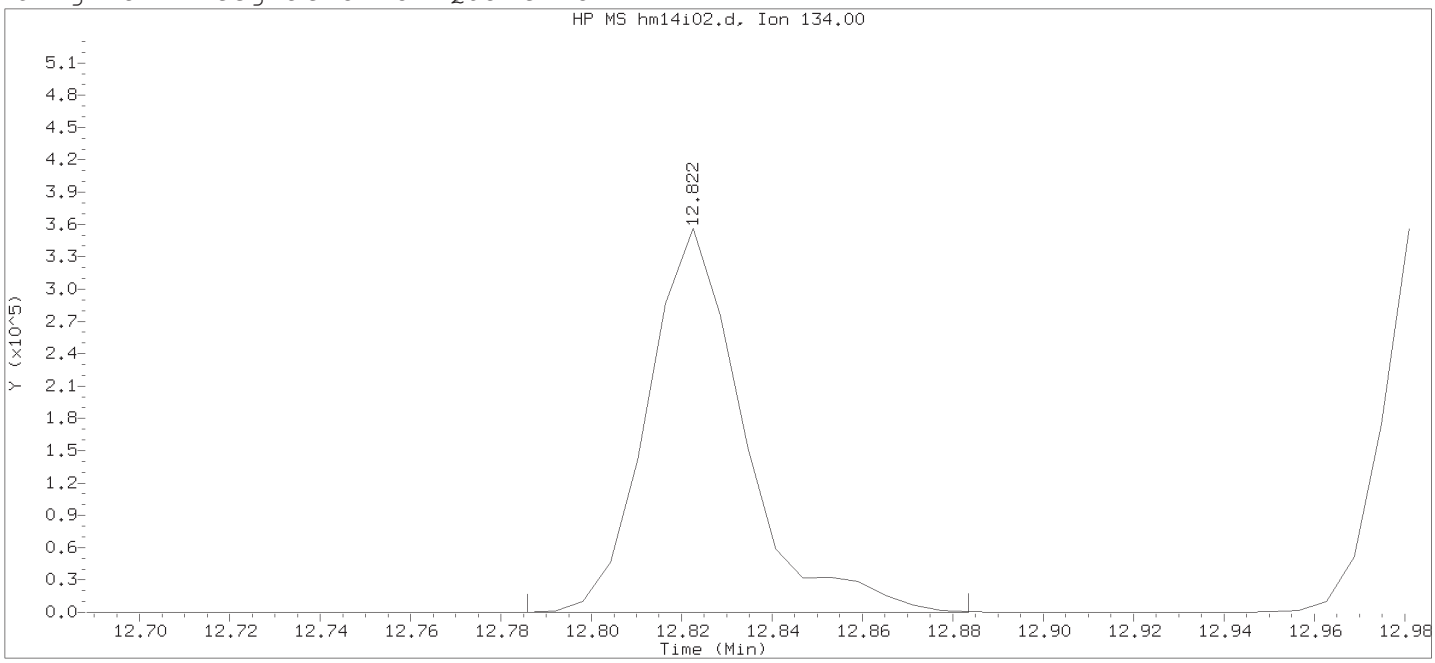
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



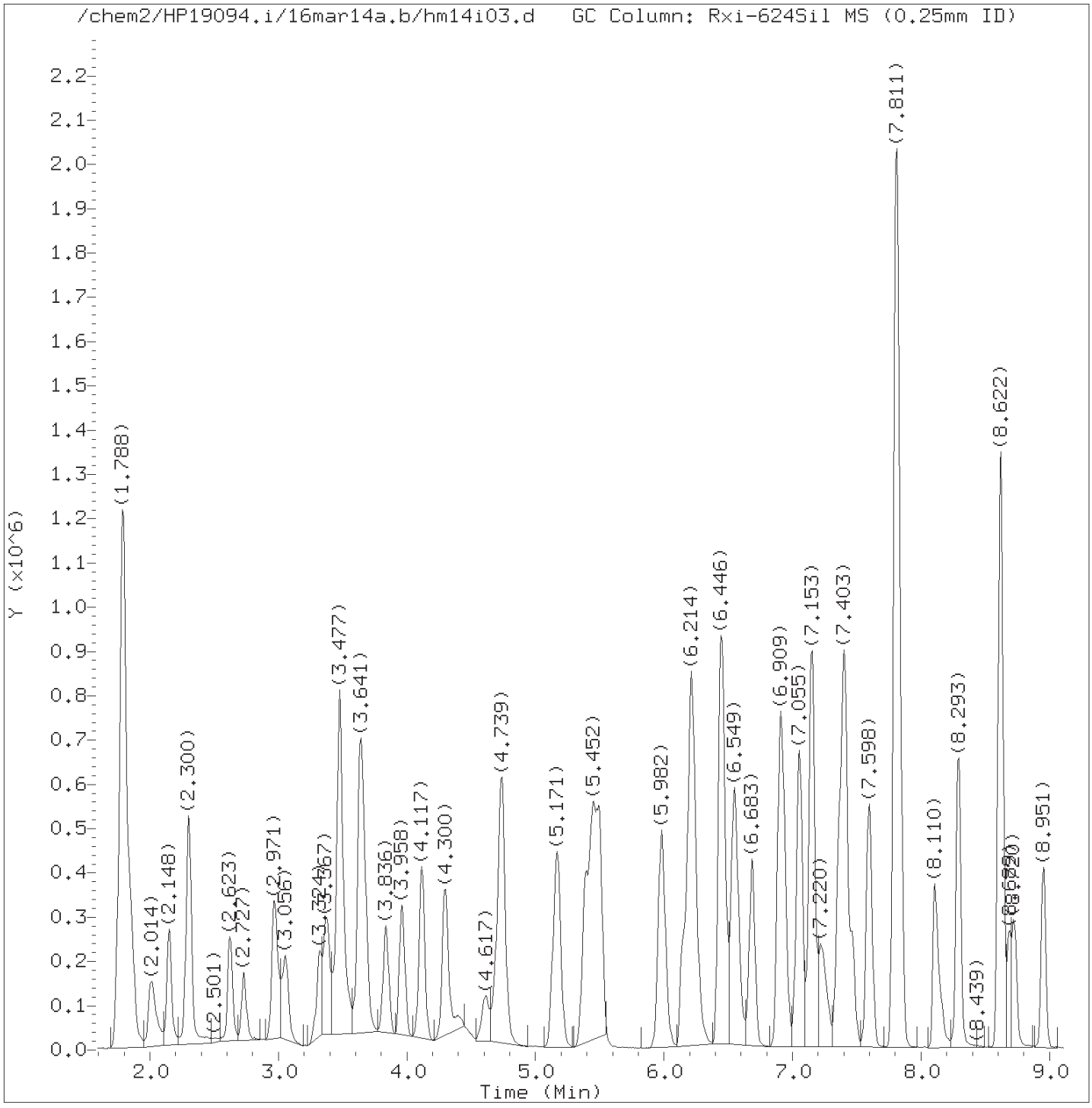
Data File: /chem2/HP19094.i/16mar14a.b/hm14i02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:14 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:33
Date, time and analyst ID of latest file update: 14-Mar-2016 15:33 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1843		
Retention Time (minutes)	: 12.822		
Quant Ion	: 134.00		
Area	: 528844		
On-column Amount (ng)	: 9.9216		
Integration start scan	: 1836	Integration stop scan:	1852
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973



Total Ion Chromatogram (TIC)

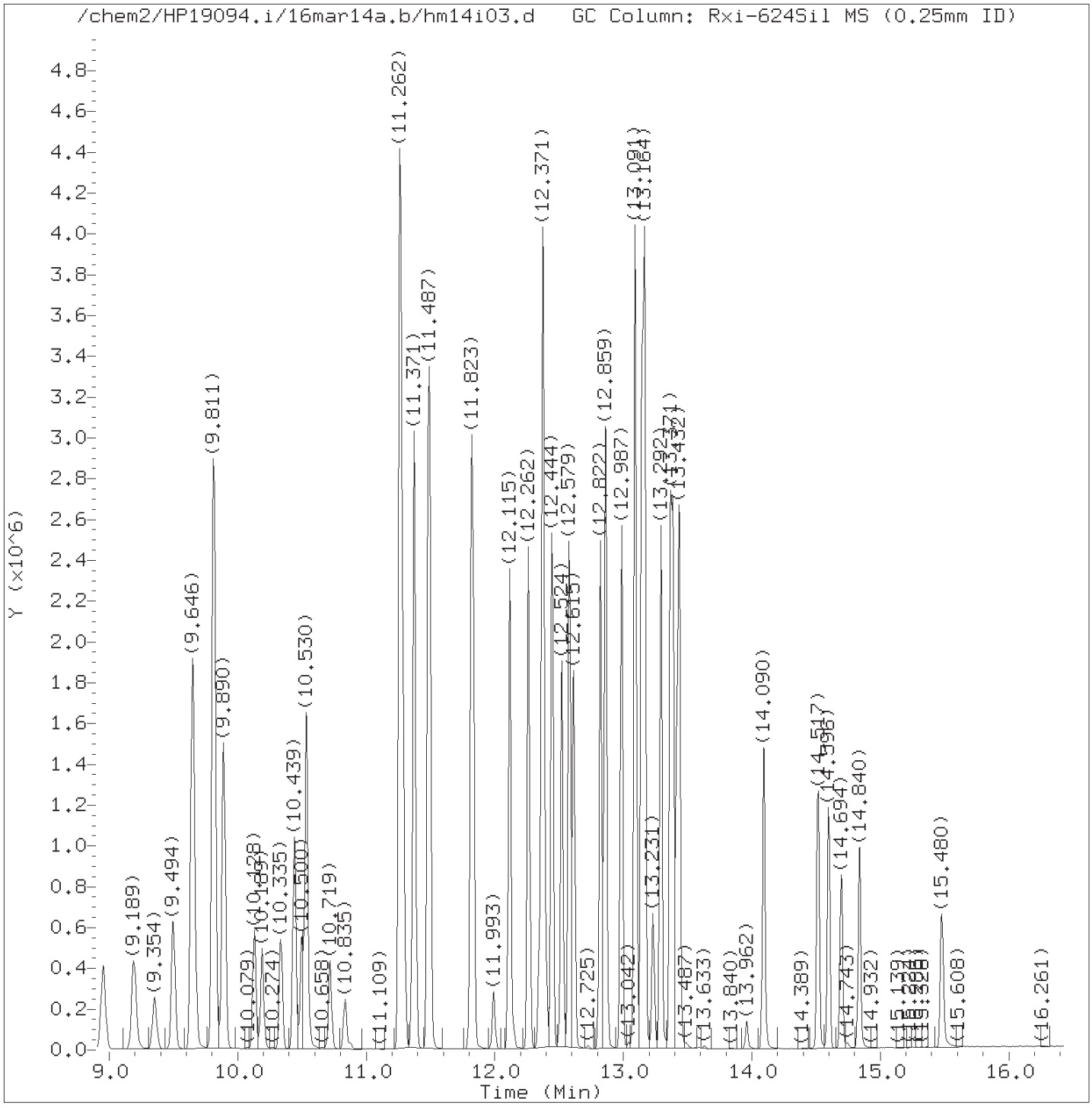
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	371892	4.607
2) Chloromethane	(2)	2.148	50	371363	4.690
5) Vinyl Chloride	(2)	2.288	62	334404	4.541
6) 1,3-Butadiene	(2)	2.306	39	237702	4.268
7) Bromomethane	(2)	2.623	94	230727	4.721
8) Chloroethane	(2)	2.727	64	195395	4.305
9) Dichlorofluoromethane	(2)	2.965	67	455840	4.425
10) Trichlorofluoromethane	(2)	3.056	101	439145	4.578
11) Ethyl ether	(2)	3.318	59	186575	4.714
12) Freon 123a	(2)	3.373	67	334257	4.555
13) Acrolein	(1)	3.477	56	1520359	232.115
15) 1,1-Dichloroethene	(2)	3.635	96	264048	4.797
14) Acetone	(1)	3.641	43	407008M	45.095
16) Freon 113	(2)	3.666	101	274365	4.794
17) Methyl Iodide	(2)	3.836	142	484906	4.759
18) Carbon Disulfide	(2)	3.958	76	788356	4.638
21) Methyl Acetate	(1)	4.086	43	103223	4.072
22) Allyl Chloride	(2)	4.117	41	471192	4.527
26)*t-Butyl Alcohol-d10	(1)	4.281	65	114879M	50.000
23) Methylene Chloride	(2)	4.300	84	280635	4.770
28) t-Butyl Alcohol	(1)	4.415	59	294800	95.440
29) Acrylonitrile	(1)	4.617	53	260911	24.092
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	610597	4.808
31) trans-1,2-Dichloroethene	(2)	4.739	96	284034	4.792
32) n-Hexane	(2)	5.171	57	471915	4.691
33) 1,1-Dichloroethane	(2)	5.385	63	575491	4.764
34) di-Isopropyl Ether	(2)	5.446	45	1012862	4.803
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	471646	4.756
37) Ethyl t-butyl ether	(2)	5.982	59	852742	4.795
40) 1,2-Dichloroethene (Total)	(2)		96	599149	9.592
38) 2-Butanone	(1)	6.153	43	724555	47.112
39) cis-1,2-Dichloroethene	(2)	6.208	96	315115	4.800
42) Propionitrile	(1)	6.220	54	373531	97.403
41) 2,2-Dichloropropane	(2)	6.232	77	453046	4.687
45) Methacrylonitrile	(1)	6.452	67	623555	47.489
47) Bromochloromethane	(2)	6.543	128	118335	4.737
48) Tetrahydrofuran	(1)	6.549	71	180949	46.508
49) Chloroform	(2)	6.683	83	525408	4.758

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	561160	10.172
50)$Dibromofluoromethane	(2)	6.903	111	570981	10.059
51) 1,1,1-Trichloroethane	(2)	6.933	97	450232	4.780
52) Cyclohexane	(2)	7.055	56	558514	4.538
52) Cyclohexane	(2)	7.055	84	435746	4.624
52) Cyclohexane	(2)	7.049	69	163572	4.646
55) 1,1-Dichloropropene	(2)	7.147	75	433185	4.792
54) Carbon Tetrachloride	(2)	7.159	117	409702	4.784
56) Isobutyl Alcohol	(1)	7.220	41	248139M	226.723
57)$1,2-Dichloroethane-d4	(2)	7.360	102	94691	10.363
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476757	10.220
57)$1,2-Dichloroethane-d4	(2)	7.360	104	58559	10.150
58) Benzene	(2)	7.409	78	1197894	4.761
59) 1,2-Dichloroethane	(2)	7.464	62	311010M	4.771
60) t-Amyl methyl ether	(2)	7.598	73	700009	4.817
63)*Fluorobenzene	(2)	7.805	96	2341151	10.000
62) n-Heptane	(2)	7.829	43	530860	4.668
65) n-Butanol	(1)	8.110	56	416627	472.954
67) Trichloroethene	(2)	8.293	95	312040	4.758
70) 1,2-Dichloropropane	(2)	8.616	63	313225	4.781
69) Methylcyclohexane	(2)	8.622	83	490226	4.564
71) Methyl Methacrylate	(1)	8.683	69	131470A	4.792
72) 1,4-Dioxane	(1)	8.713	88	46287	266.703
73) Dibromomethane	(2)	8.726	93	129894	4.814
74) Bromodichloromethane	(2)	8.951	83	367976	4.884
76) 2-Nitropropane	(1)	9.189	41	388746	44.205
80) cis-1,3-Dichloropropene	(2)	9.494	75	451220	4.873
81) 4-Methyl-2-Pentanone	(1)	9.646	43	1792678	47.363
82)$Toluene-d8	(3)	9.811	98	2307236	9.900
82)$Toluene-d8	(3)	9.811	100	1489785	9.876
83) Toluene	(3)	9.890	92	738213	4.702
84) trans-1,3-Dichloropropene	(3)	10.128	75	351450	4.777
85) 1,3-Dichloropropene (total)	(3)		75	802670	9.650
86) Ethyl Methacrylate	(3)	10.189	69	275188	4.862
88) 1,1,2-Trichloroethane	(3)	10.335	97	180447	4.746
89) Tetrachloroethene	(3)	10.445	166	350153	4.723
90) 1,3-Dichloropropane	(3)	10.500	76	330475	4.834
91) 2-Hexanone	(1)	10.530	43	1250901	46.743

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	239573	4.915
95) 1,2-Dibromoethane	(3)	10.835	107	173349	4.840
97)*Chlorobenzene-d5	(3)	11.262	117	1635921	10.000
98) Chlorobenzene	(3)	11.286	112	807623	4.726
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	279929	4.776
100) Ethylbenzene	(3)	11.371	91	1451953	4.725
101) m+p-Xylene	(3)	11.487	106	1099307	9.380
105) Xylene (Total)	(3)		106	1638133	14.117
104) o-Xylene	(3)	11.816	106	538826	4.738
106) Styrene	(3)	11.829	104	870981	4.787
107) Bromoform	(3)	11.993	173	131706	4.872
108) Isopropylbenzene	(3)	12.115	105	1420386	4.712
111)$4-Bromofluorobenzene	(3)	12.262	95	755184	10.053
111)$4-Bromofluorobenzene	(3)	12.262	174	631325	10.080
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	214047M	4.677
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	572735	49.139
114) Bromobenzene	(4)	12.377	156	317033	4.651
116) 1,2,3-Trichloropropane	(4)	12.396	110	55006M	4.788
117) n-Propylbenzene	(4)	12.444	91	1715901	4.654
119) 2-Chlorotoluene	(4)	12.524	126	331681	4.666
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	1197091	4.658
122) 4-Chlorotoluene	(4)	12.615	126	338136	4.668
125) tert-Butylbenzene	(4)	12.822	134	256144M	4.675
126) Pentachloroethane	(4)	12.853	167	194984	4.715
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1205906	4.692
128) sec-Butylbenzene	(4)	12.987	105	1546890	4.648
131) 1,3-Dichlorobenzene	(4)	13.091	146	618407	4.638
132) p-Isopropyltoluene	(4)	13.097	119	1332677	4.731
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	731141	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	619072	4.570
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	484232	4.544
136) Benzyl Chloride	(4)	13.231	126	90666	5.001
138) n-Butylbenzene	(4)	13.383	92	652357	4.734
139) 1,2-Dichlorobenzene	(4)	13.420	146	549041	4.637
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27916	4.643
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	379175	4.476
146) Hexachlorobutadiene	(4)	14.596	225	204443	4.619
147) Naphthalene	(4)	14.694	128	628588	4.316

M = Compound was manually integrated.
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Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	311205	4.600

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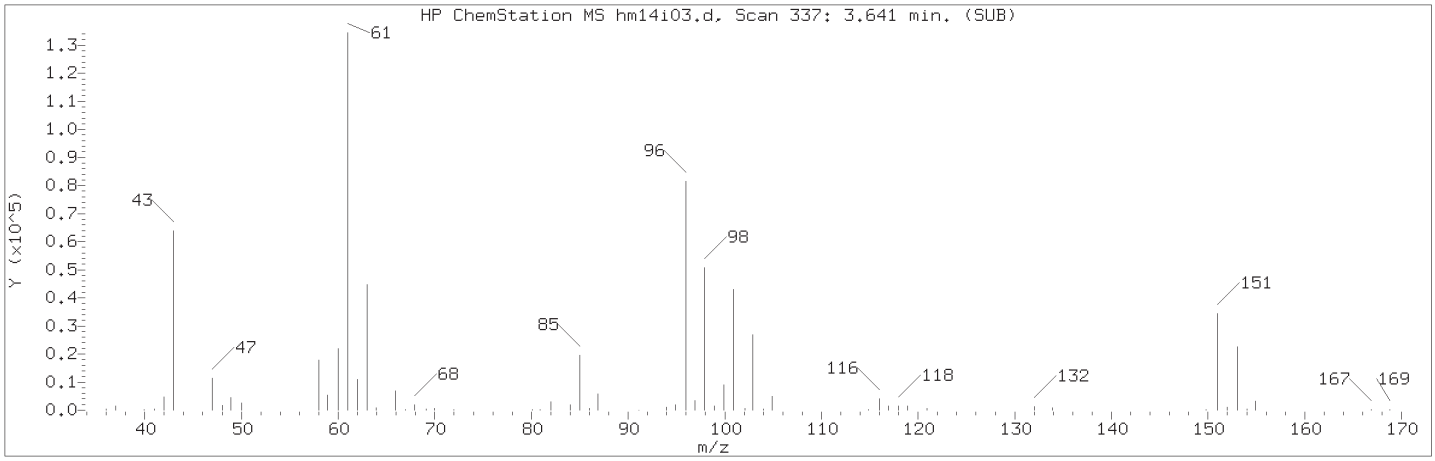
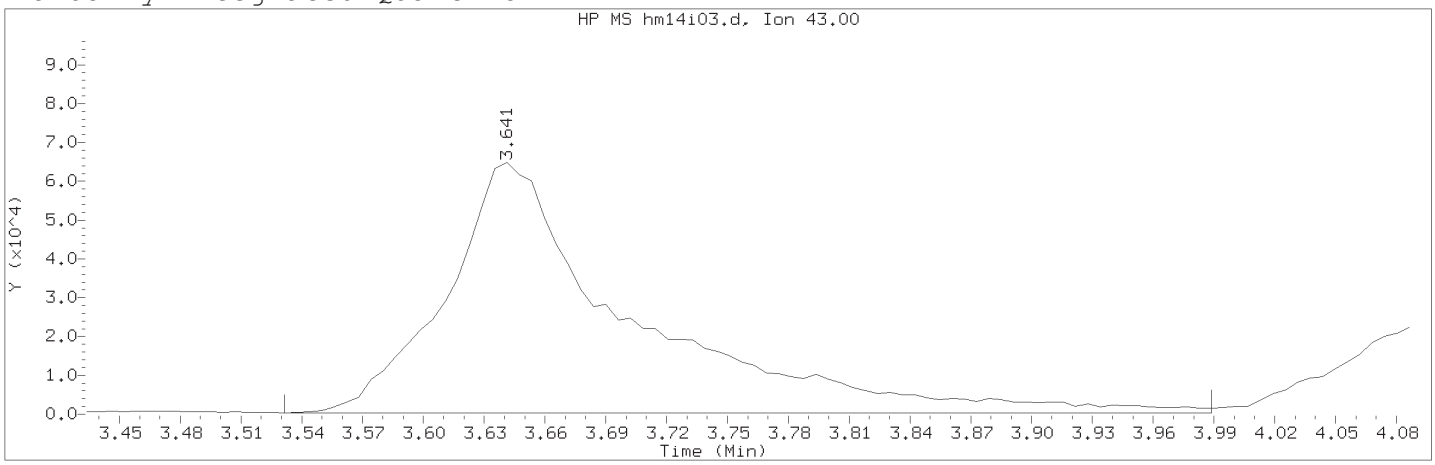
on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

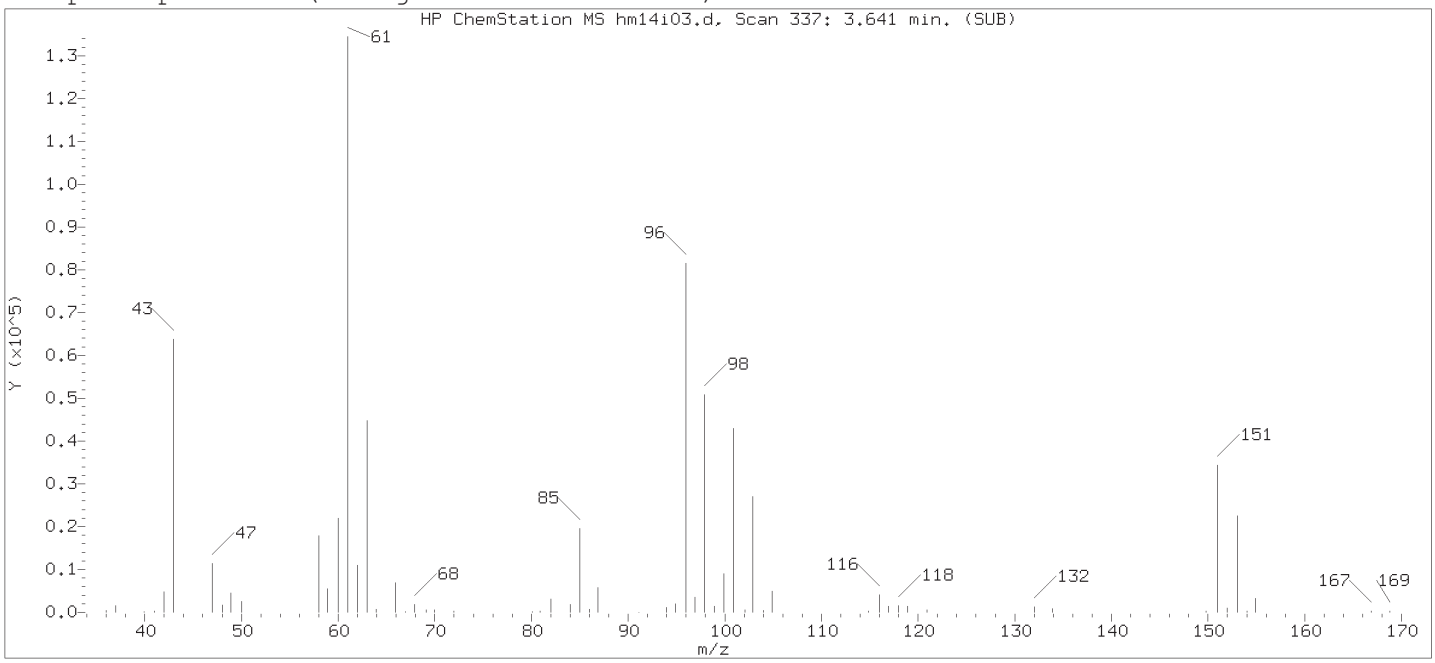
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area (flag) : 407008M
On-Column Amount (ng) : 45.0947
Integration start scan : 318 Integration stop scan: 393
Y at integration start : 297 Y at integration end: 297

Reason for manual integration: improper integration

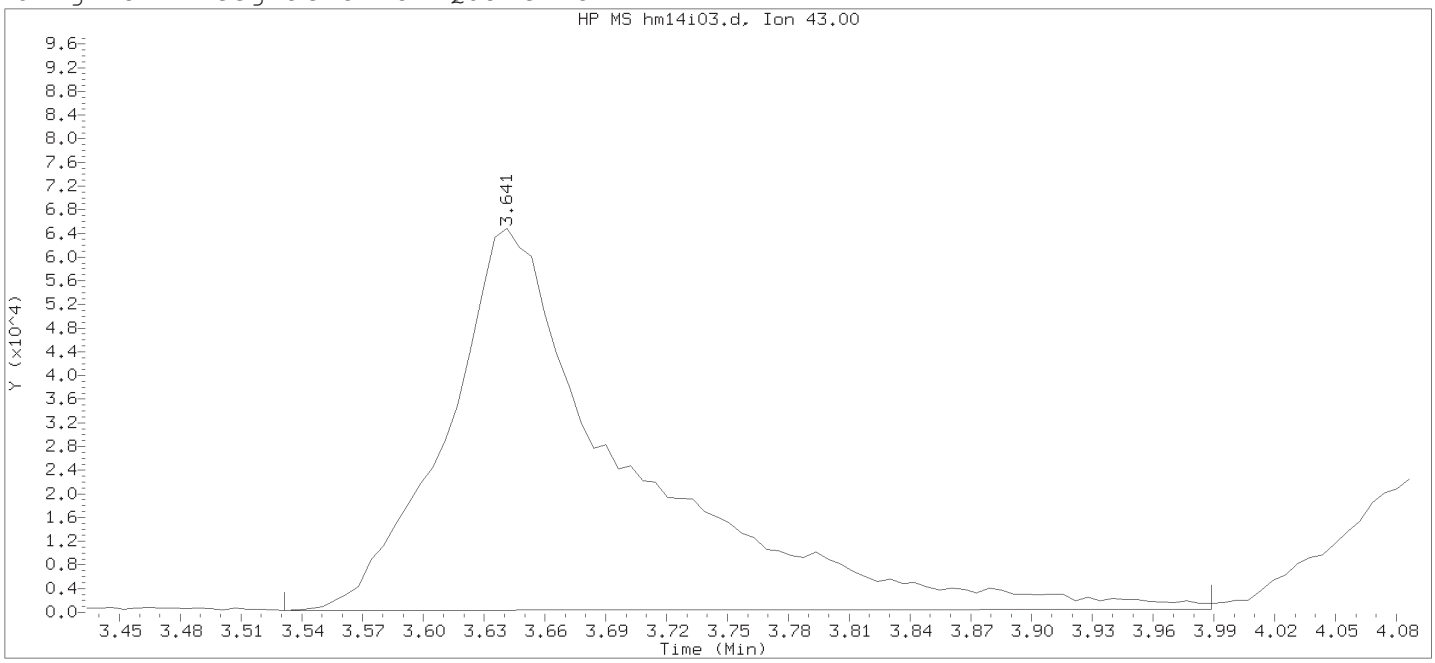
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

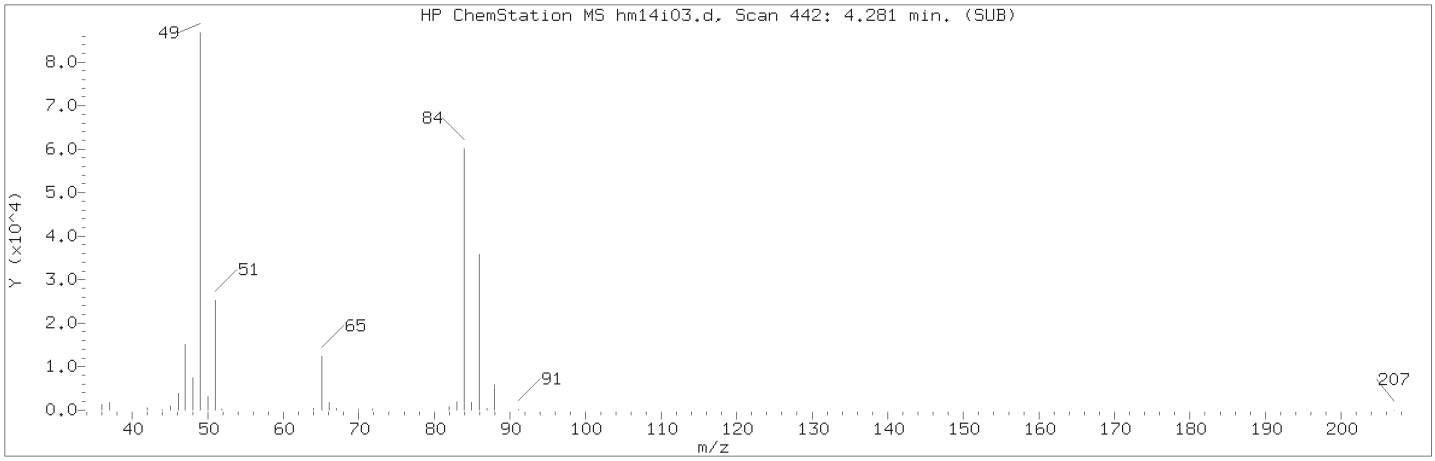
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

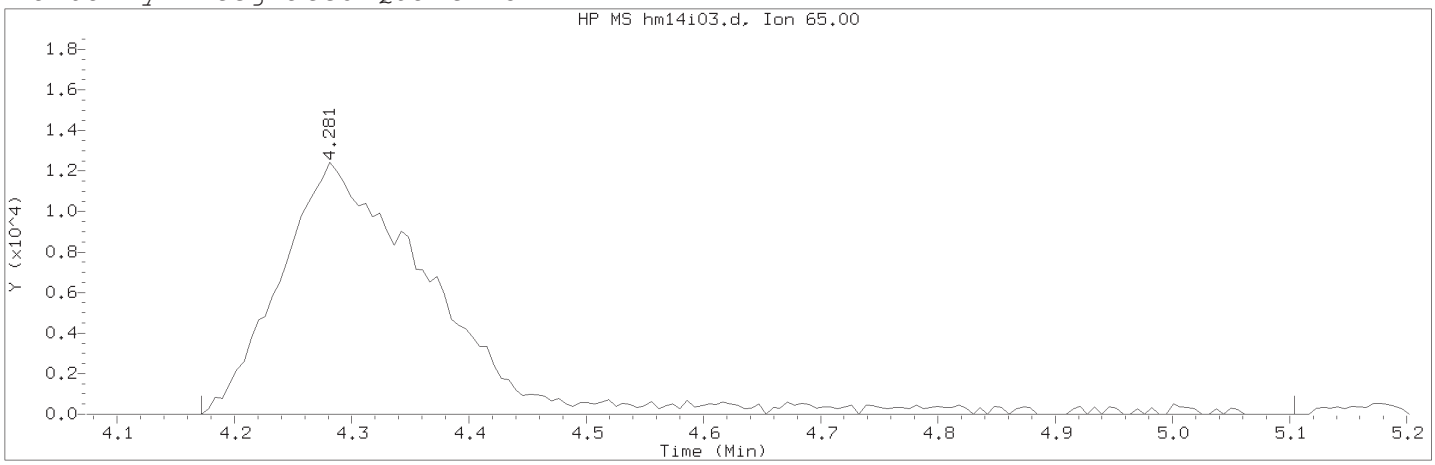
Compound Number : 14
Compound Name : Acetone
Scan Number : 337
Retention Time (minutes): 3.641
Quant Ion : 43.00
Area : 403107
On-column Amount (ng) : 49.9647
Integration start scan : 318 Integration stop scan: 393
Y at integration start : 309 Y at integration end: 553

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

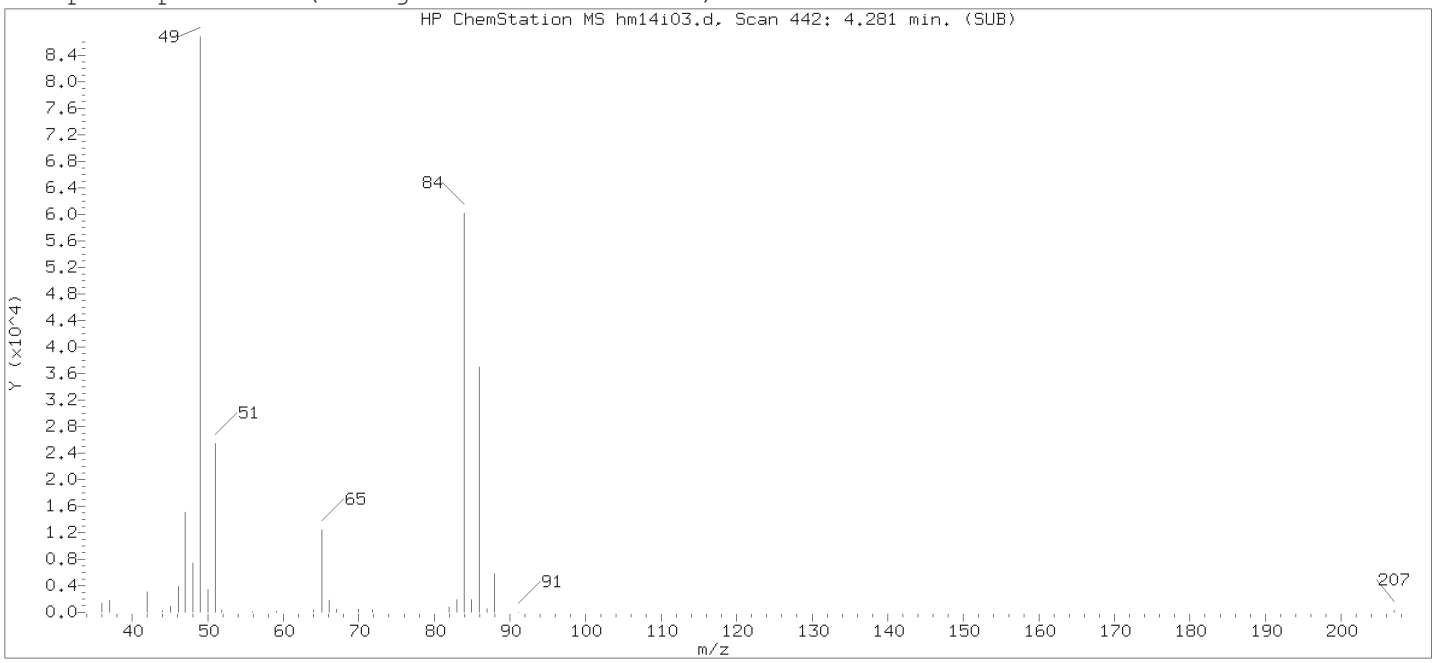
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 114879M
On-Column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

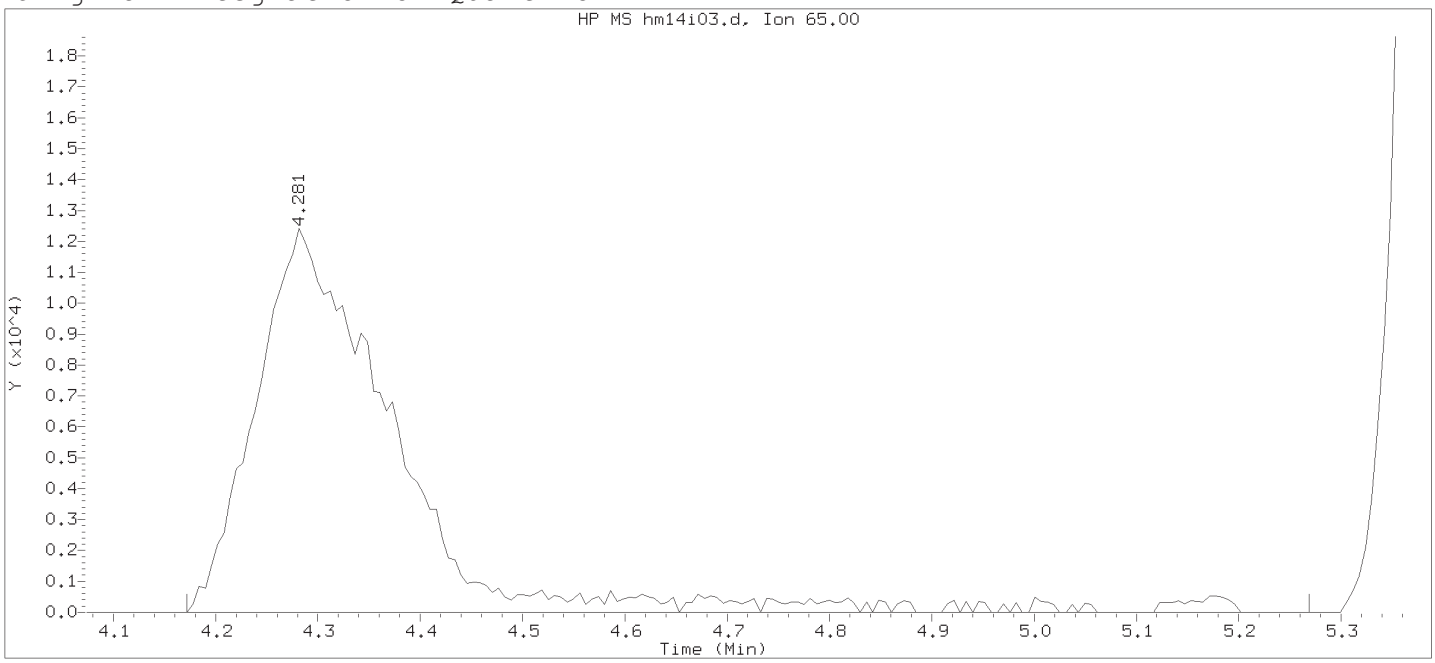
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

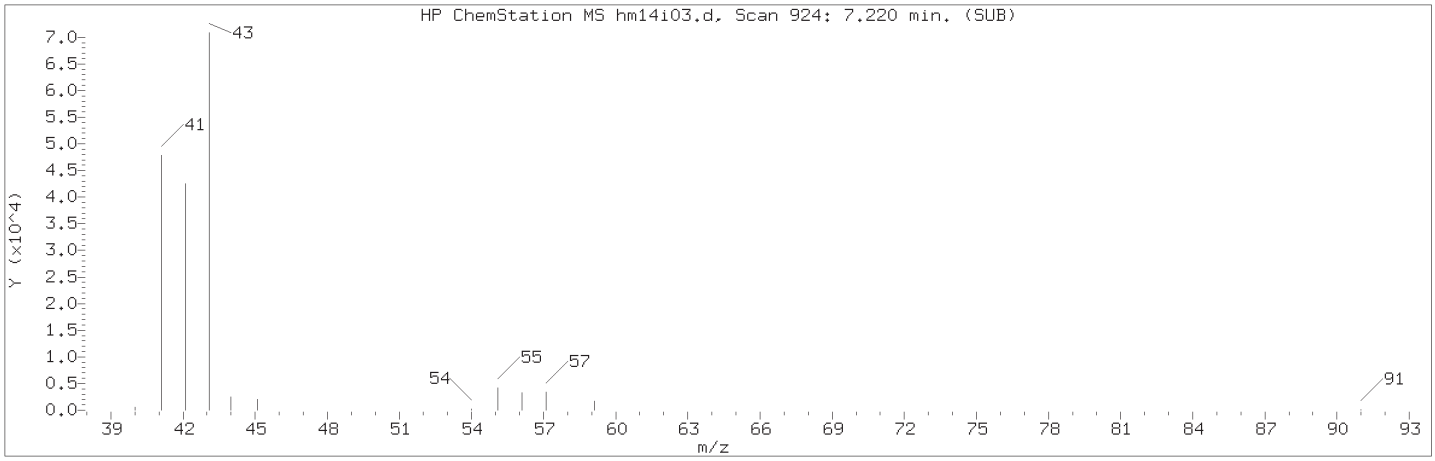
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

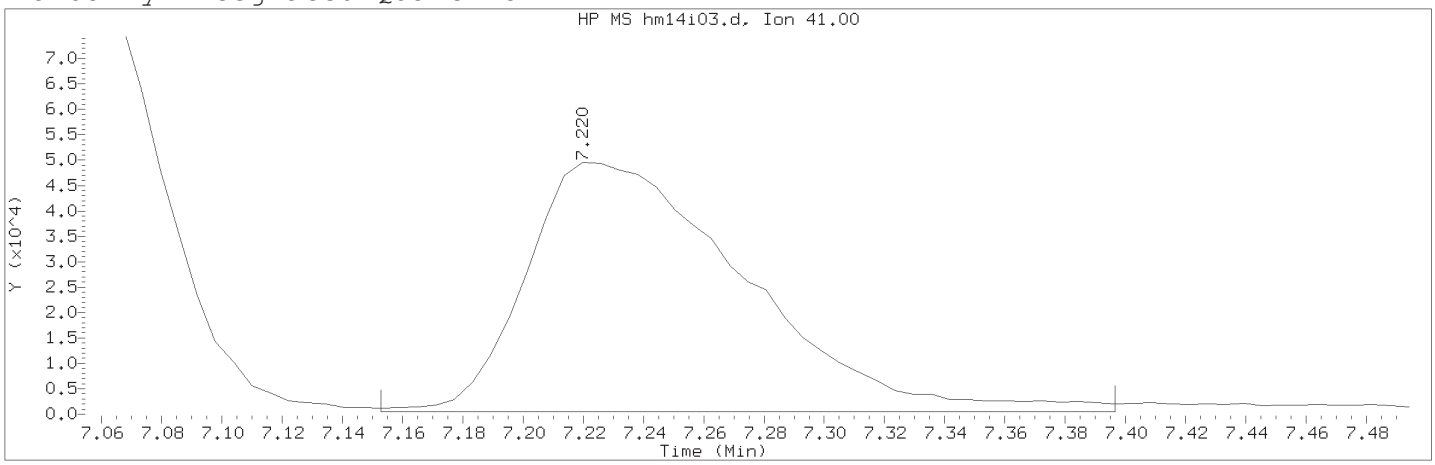
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 116646
On-column Amount (ng) : 50.0000
Integration start scan : 423 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

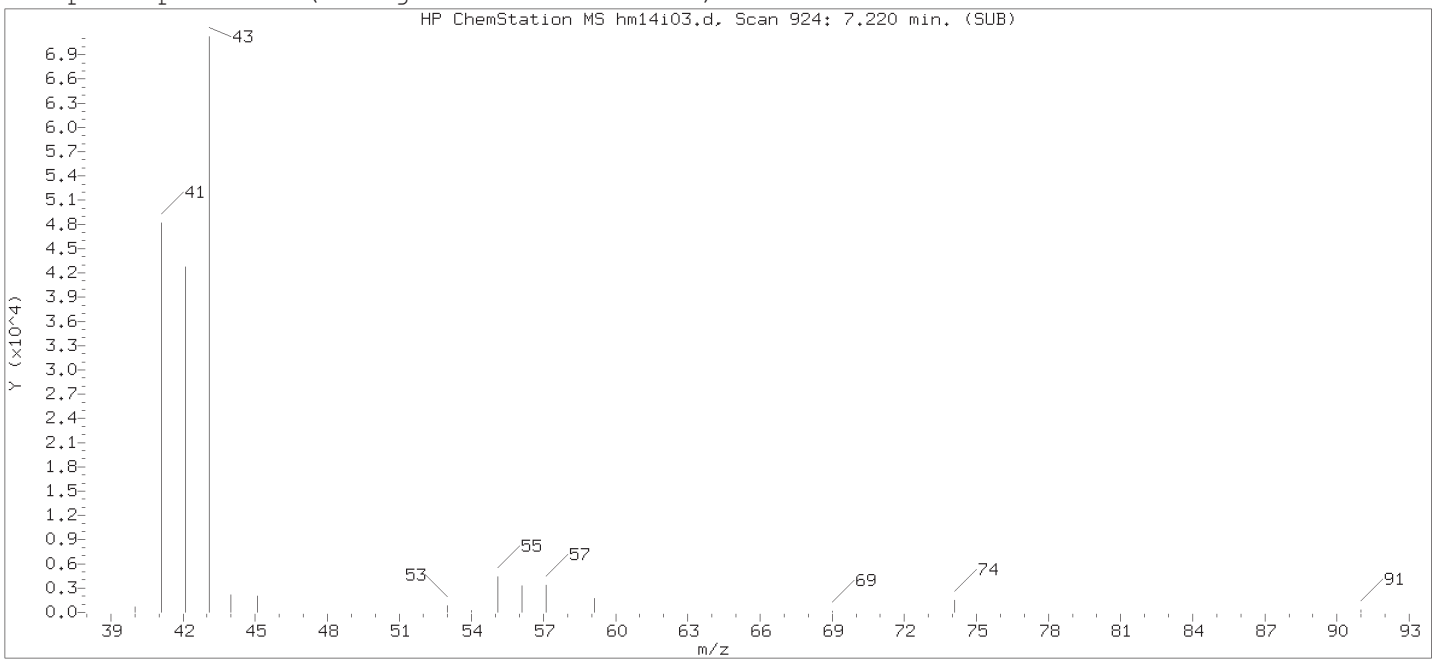
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area (flag) : 248139M
On-Column Amount (ng) : 226.7235
Integration start scan : 912 Integration stop scan: 952
Y at integration start : 518 Y at integration end: 518

Reason for manual integration: improper integration

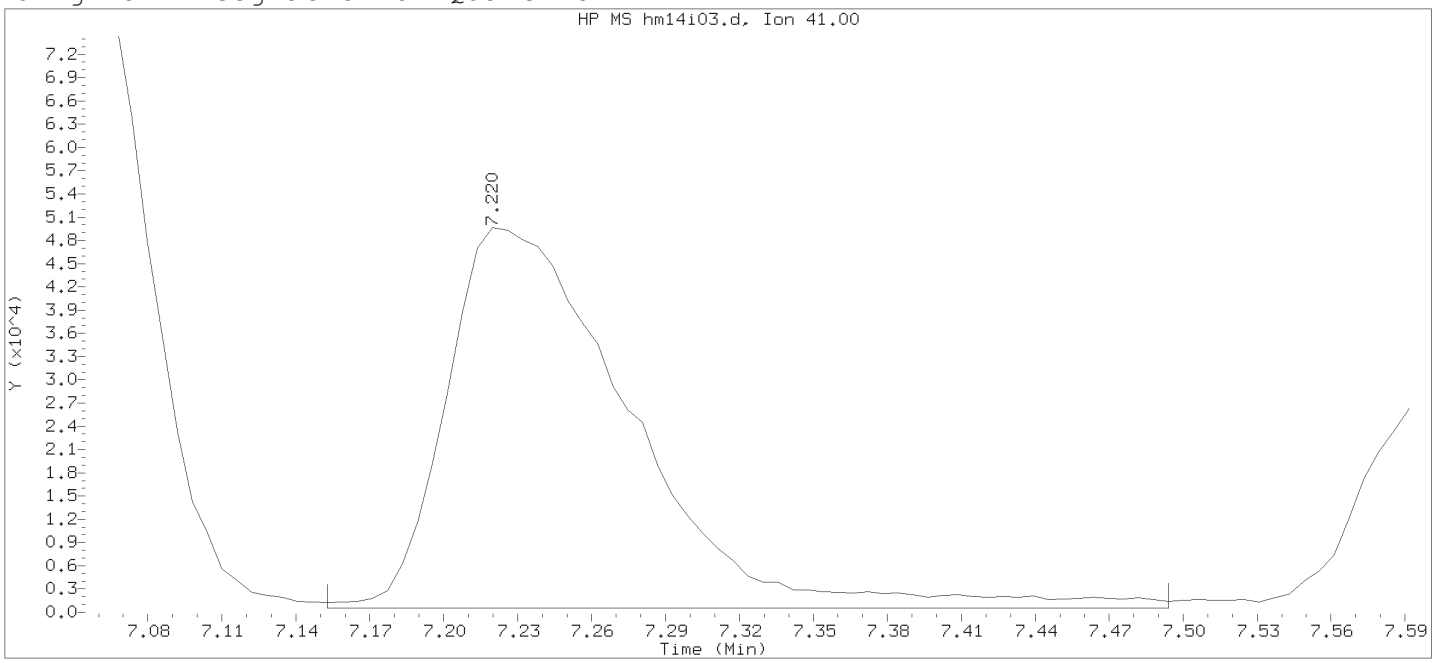
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

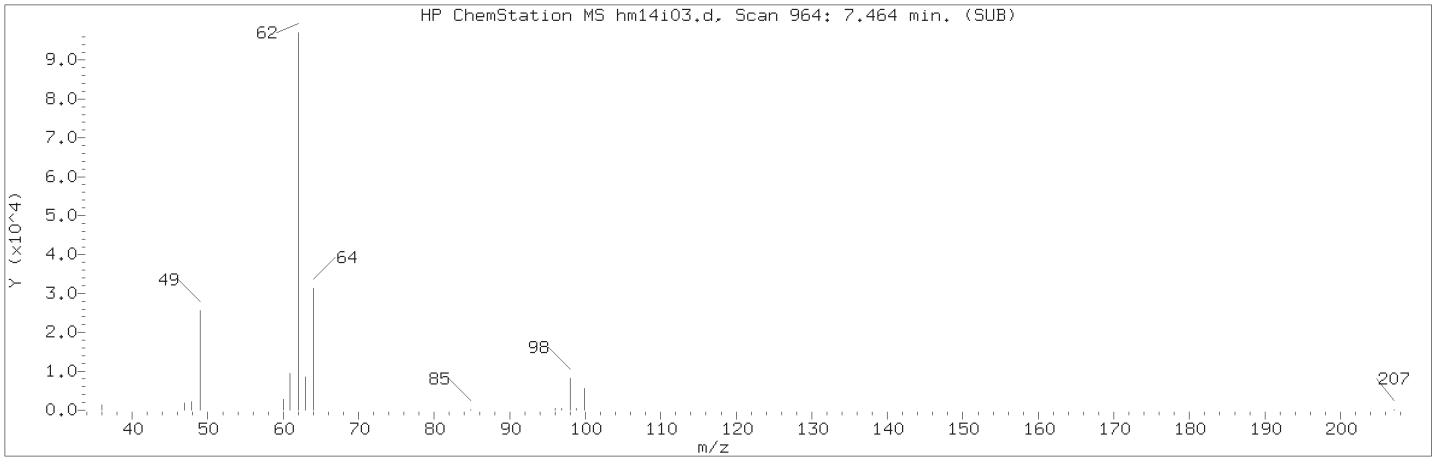
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

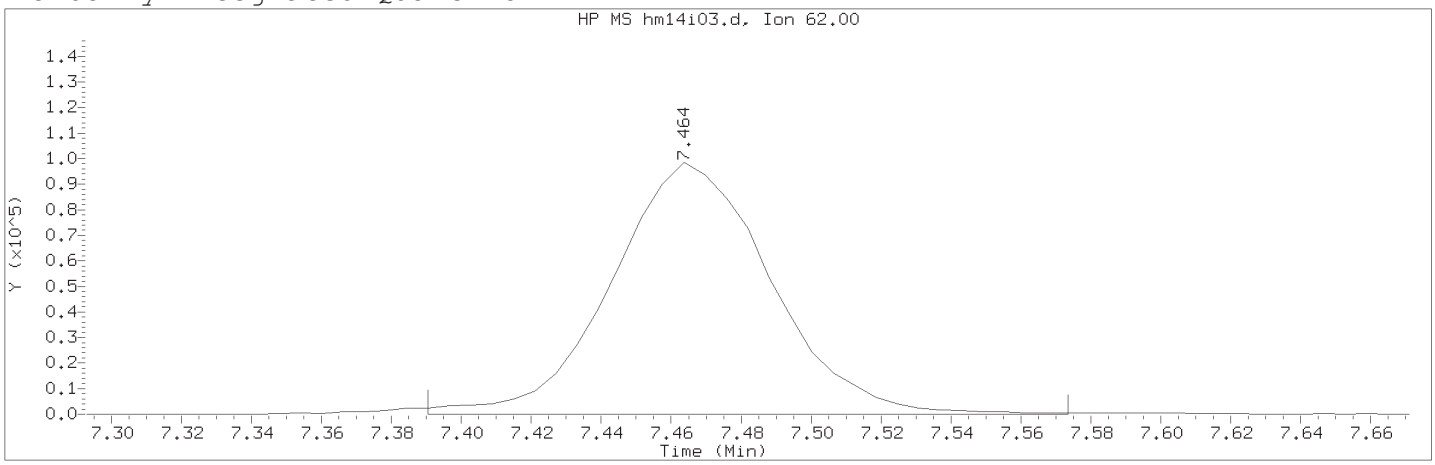
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 924
Retention Time (minutes): 7.220
Quant Ion : 41.00
Area : 255850
On-column Amount (ng) : 253.4913
Integration start scan : 912 Integration stop scan: 968
Y at integration start : 518 Y at integration end: 518

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

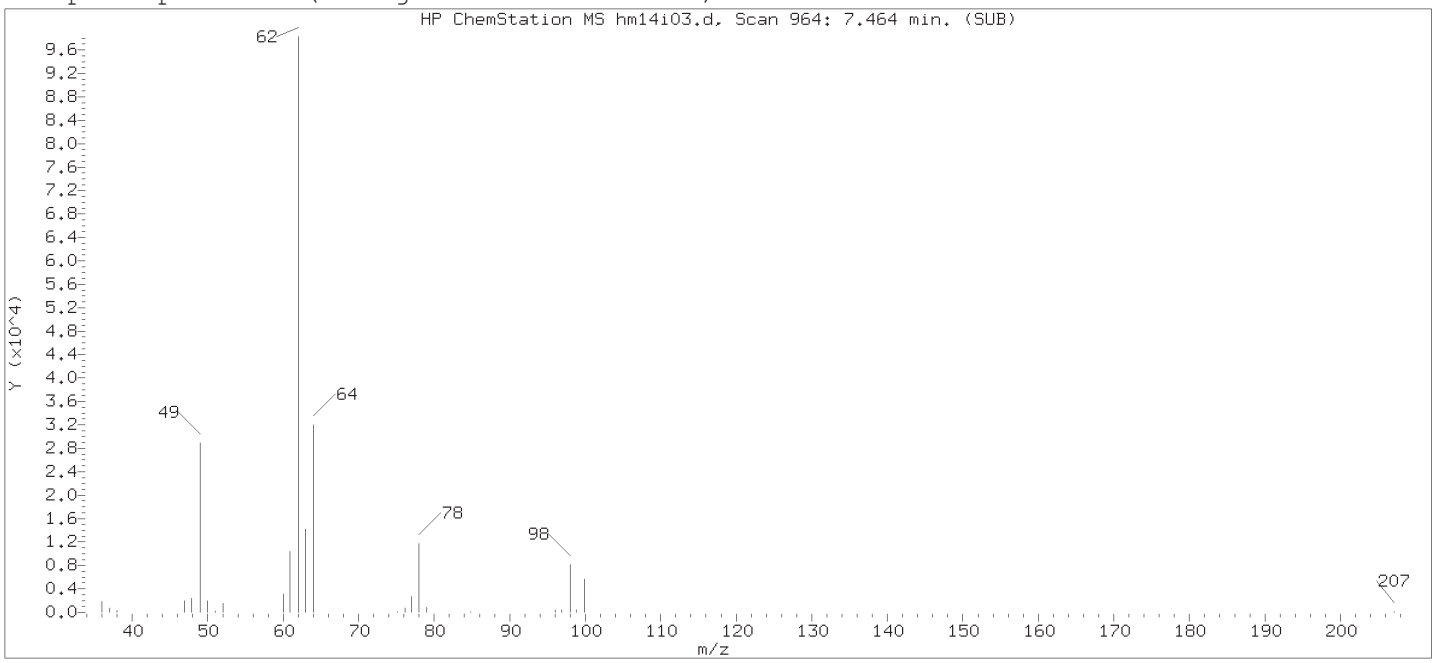
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 311010M
On-Column Amount (ng) : 4.7707
Integration start scan : 951 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

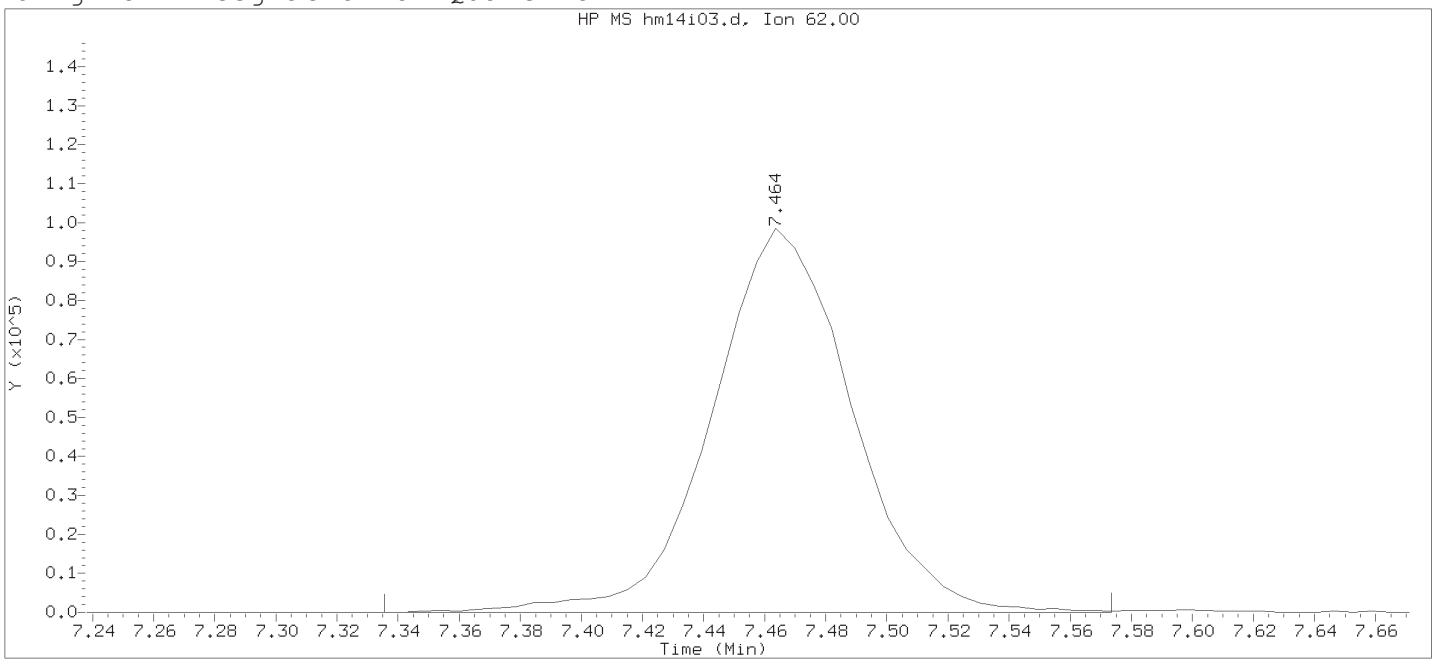
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

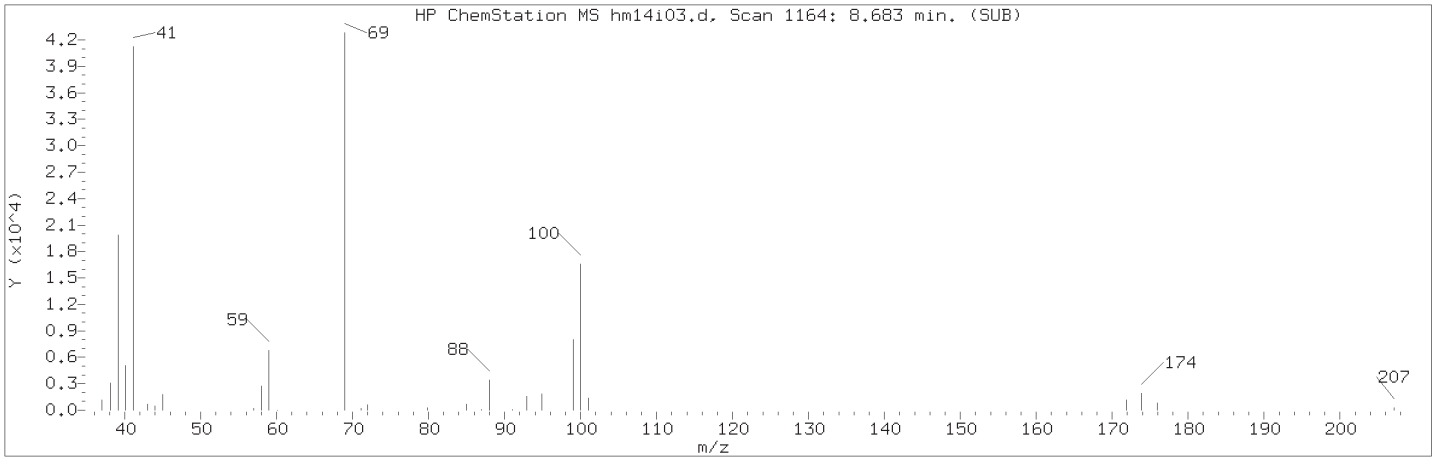
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

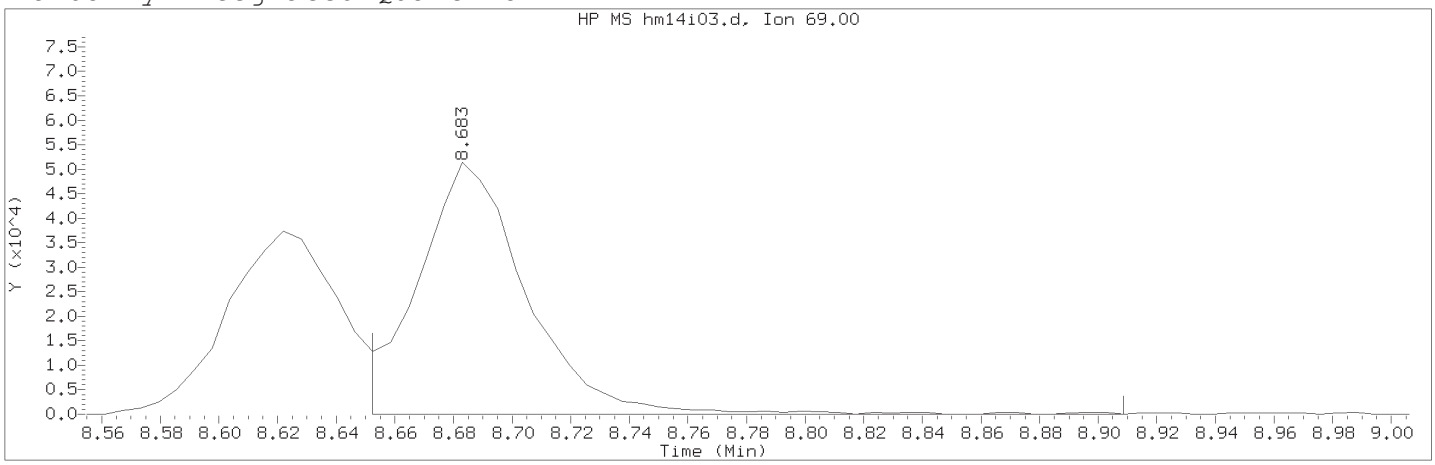
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 313394
On-column Amount (ng) : 4.8910
Integration start scan : 942 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

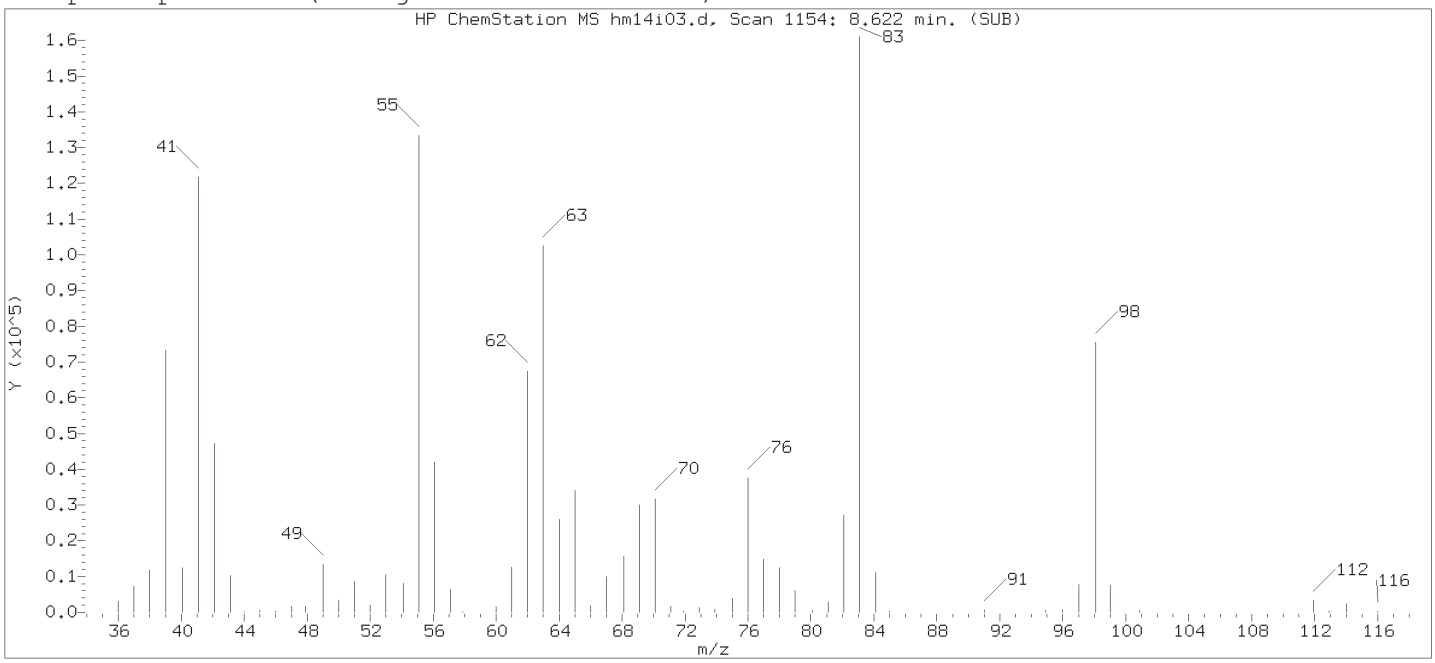
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1164
Retention Time (minutes): 8.683
Quant Ion : 69.00
Area (flag) : 131470A
On-Column Amount (ng) : 4.7922
Integration start scan : 1158 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

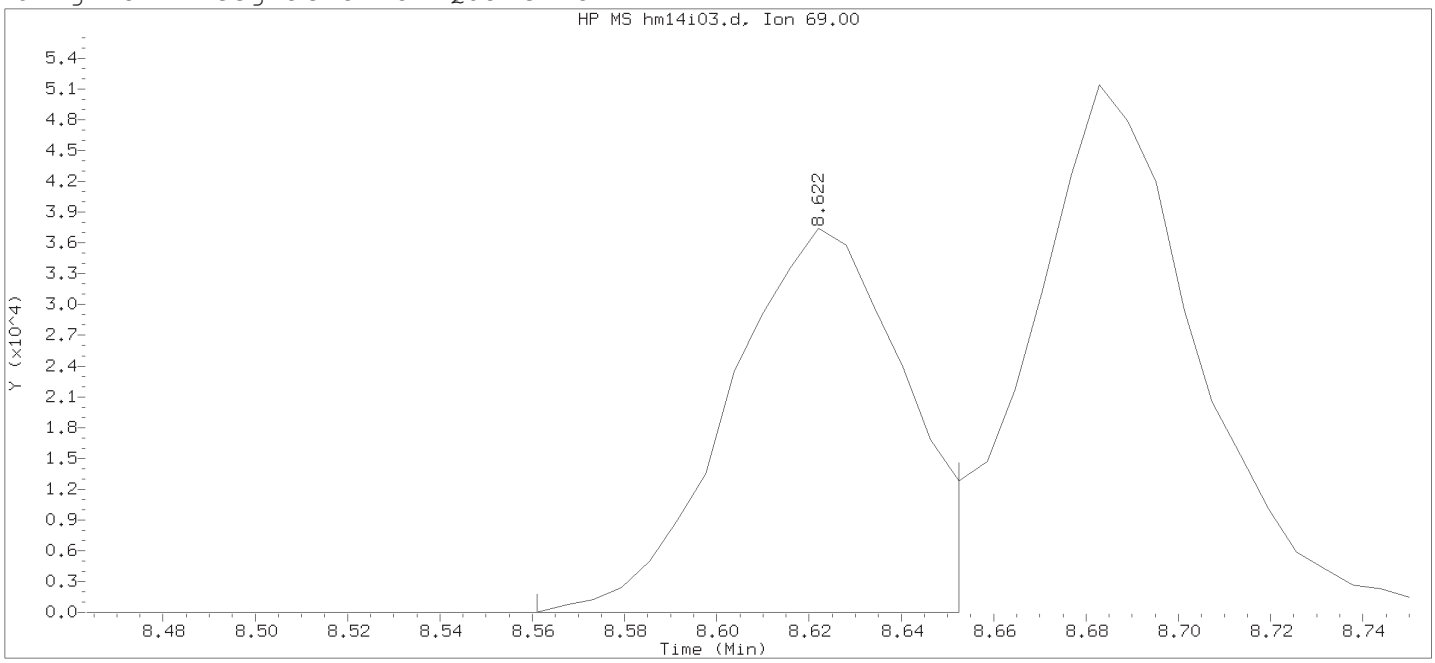
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

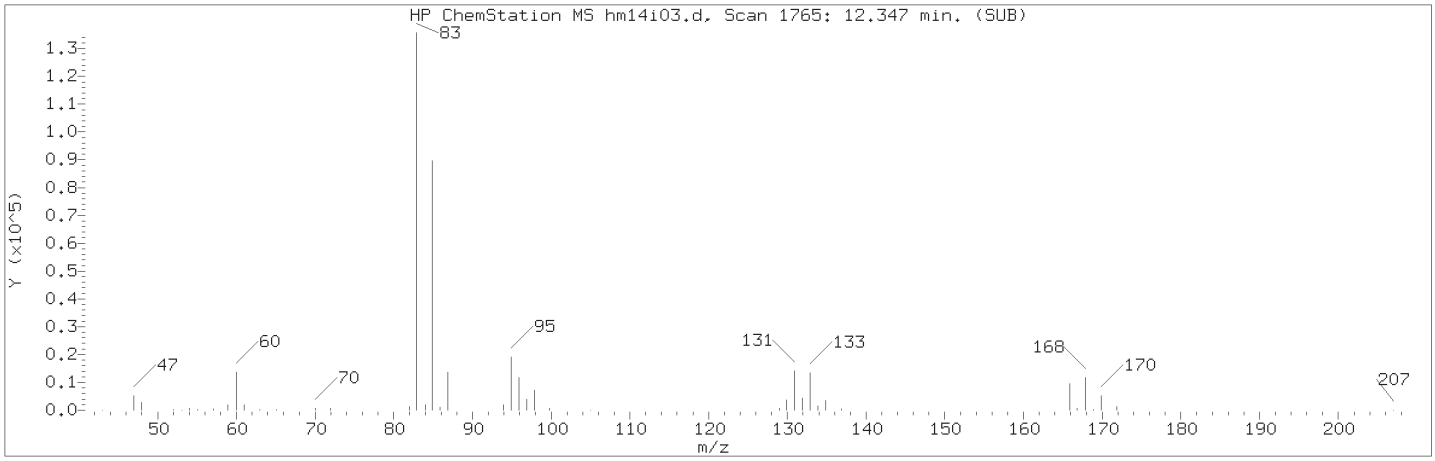
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

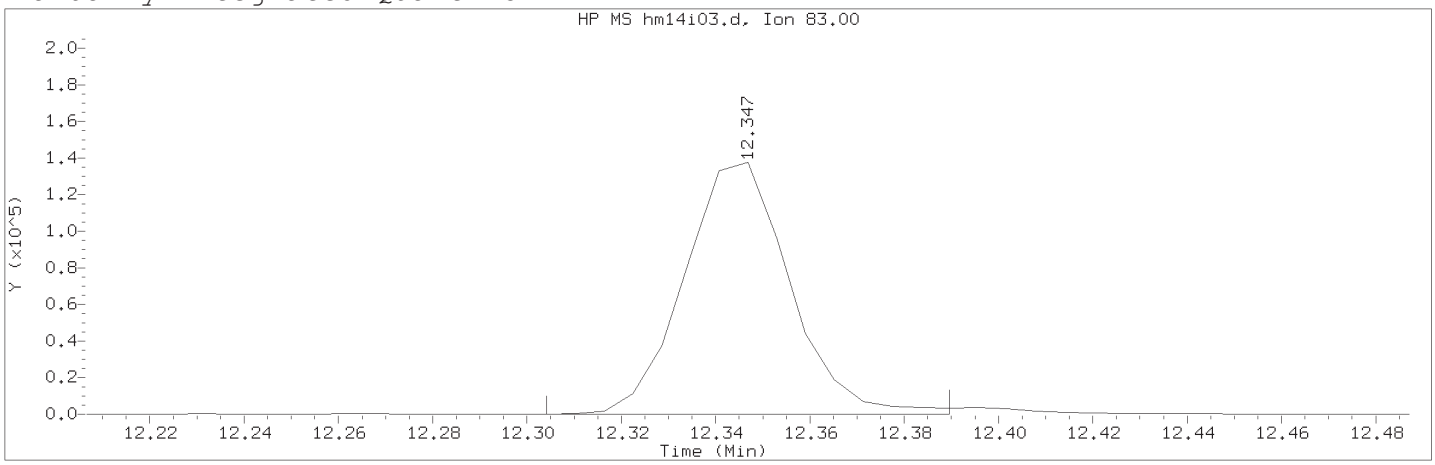
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 97947
On-column Amount (ng) : 3.1461
Integration start scan : 1143 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

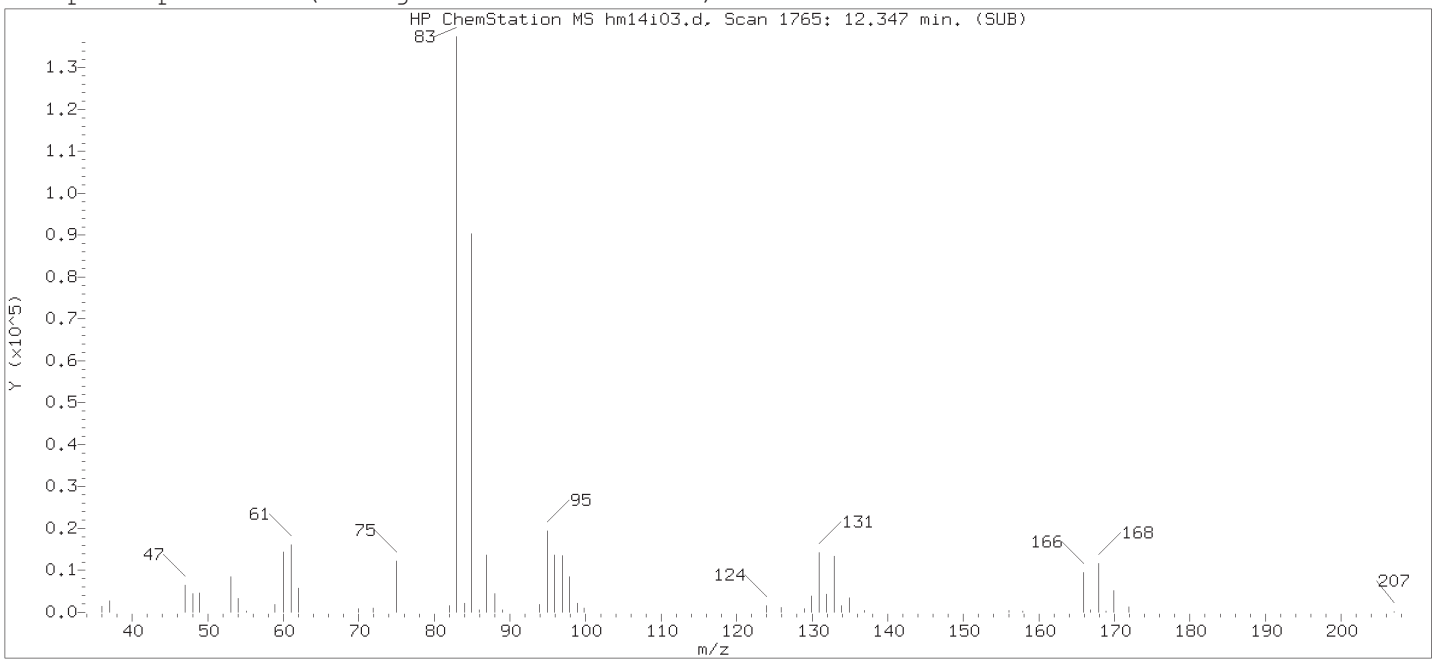
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 214047M
On-Column Amount (ng) : 4.6774
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

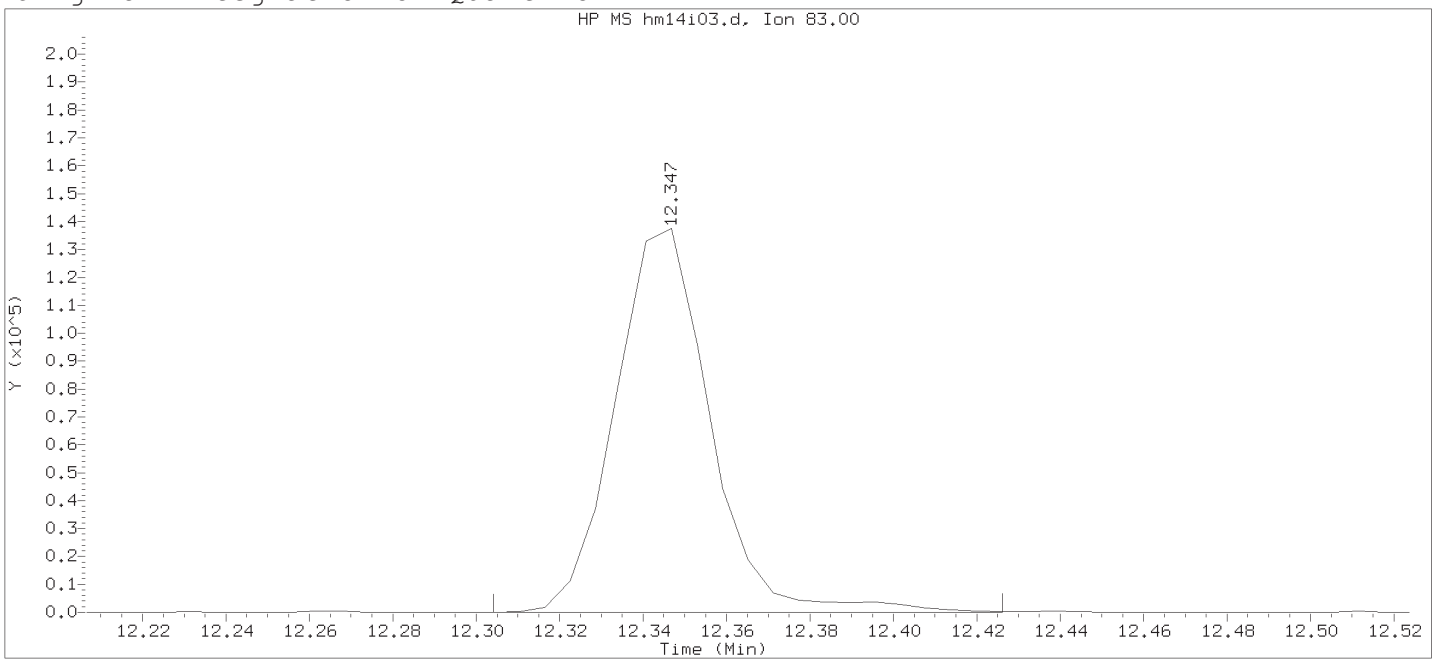
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

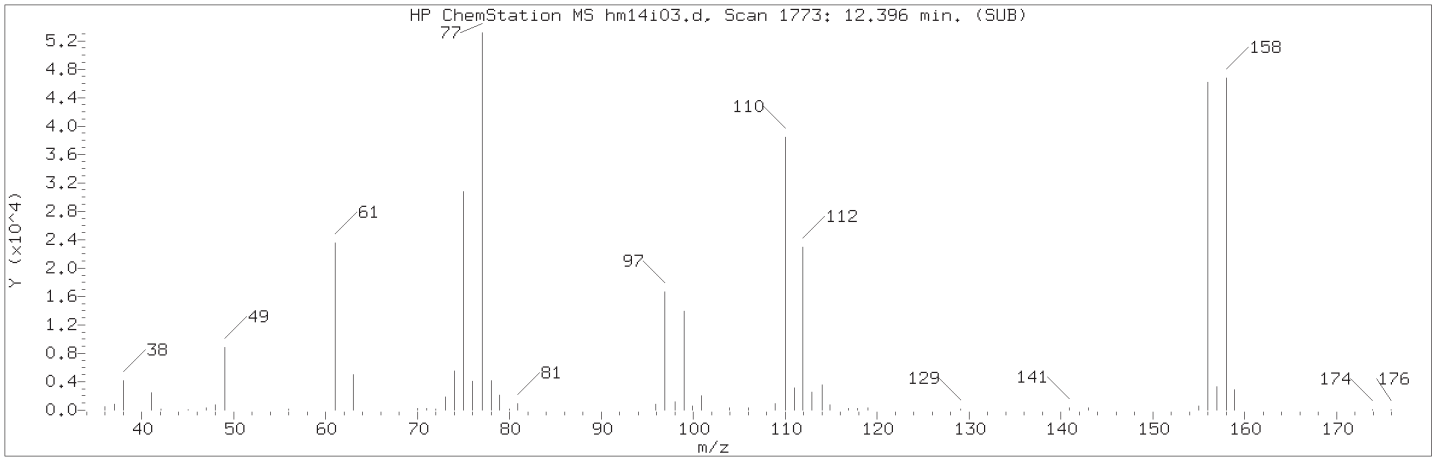
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

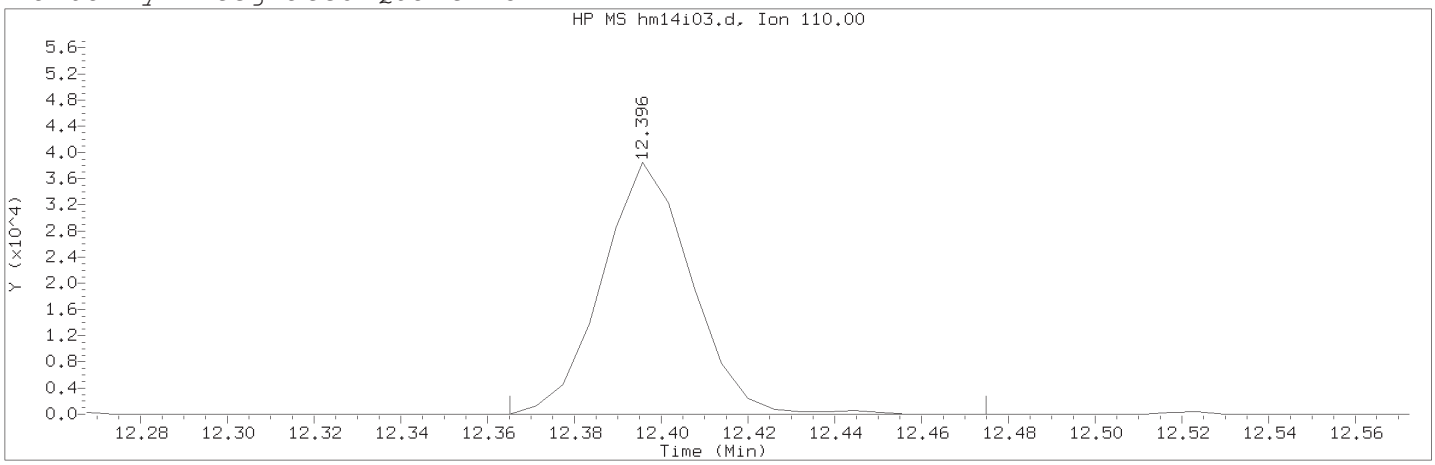
Compound Number	: 113
Compound Name	: 1,1,2,2-Tetrachloroethane
Scan Number	: 1765
Retention Time (minutes)	: 12.347
Quant Ion	: 83.00
Area	: 217575
On-column Amount (ng)	: 5.0419
Integration start scan	: 1757 Integration stop scan: 1777
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

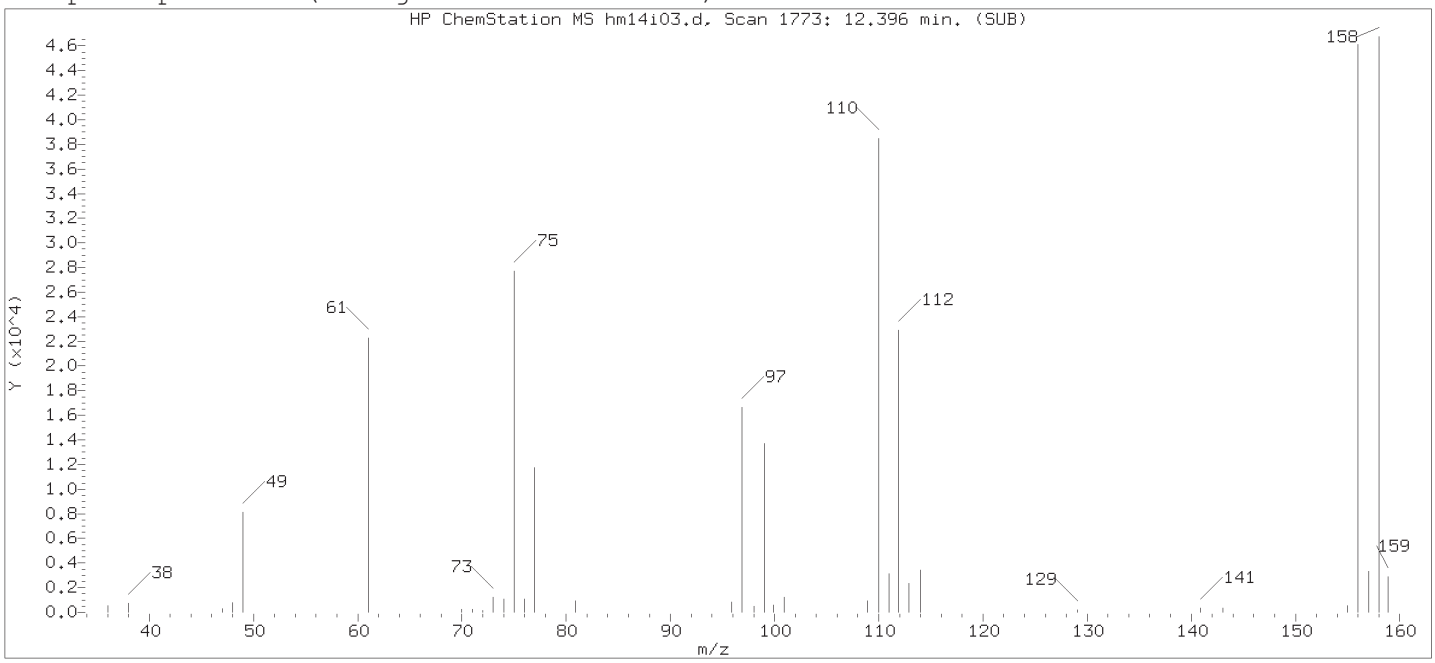
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area (flag) : 55006M
On-Column Amount (ng) : 4.7878
Integration start scan : 1767 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

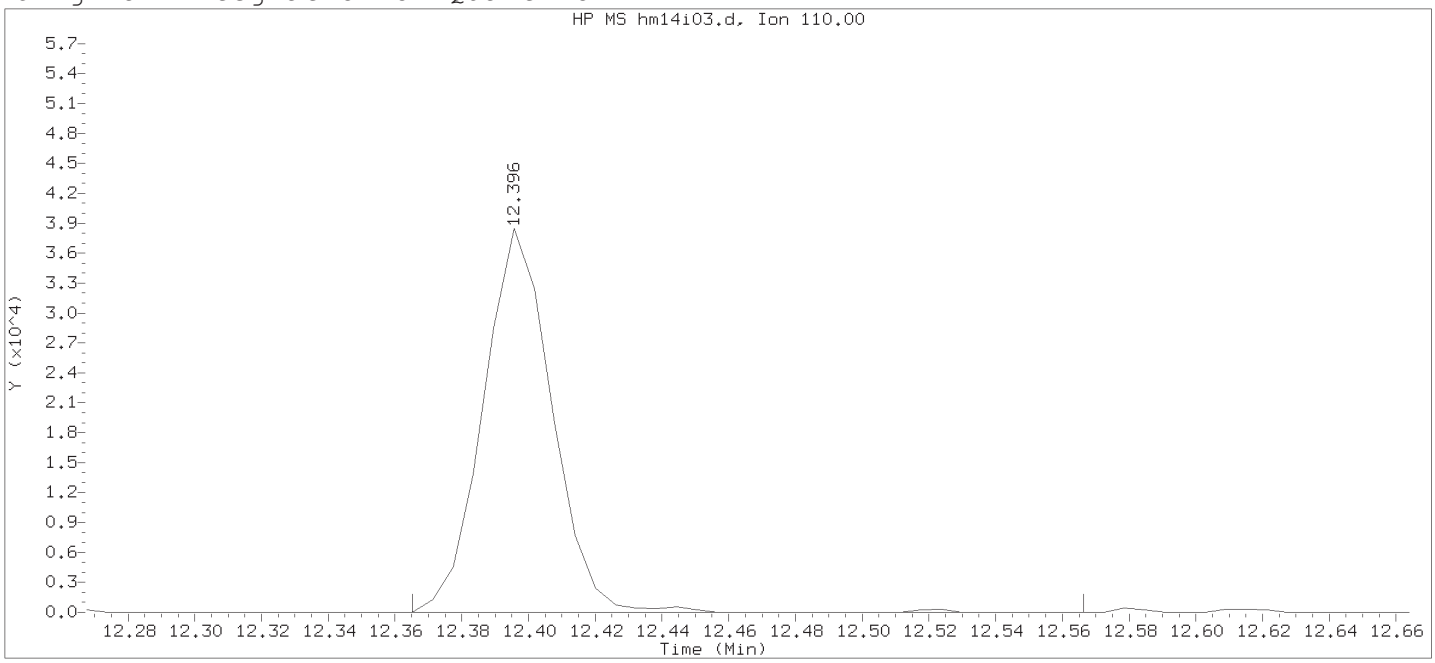
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

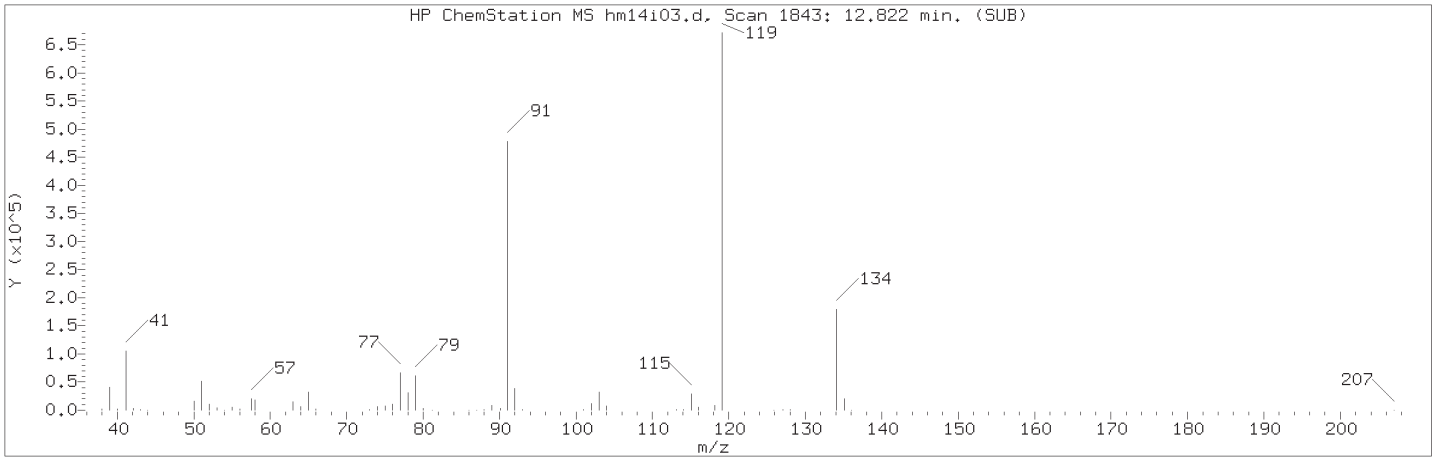
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

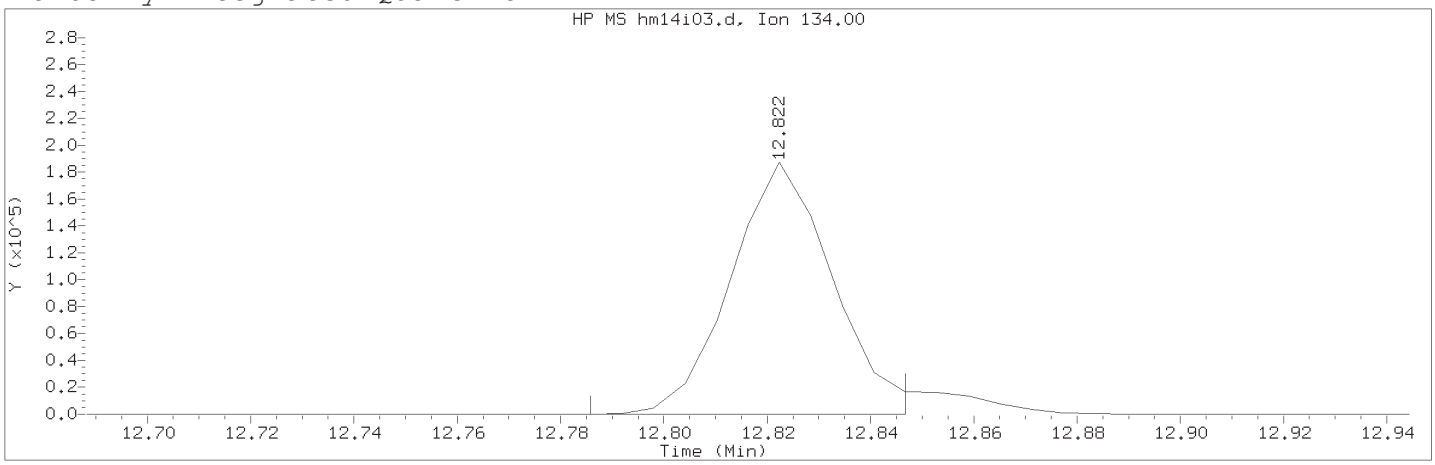
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1773
Retention Time (minutes): 12.396
Quant Ion : 110.00
Area : 55224
On-column Amount (ng) : 5.0545
Integration start scan : 1767 Integration stop scan: 1800
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD005 Lab Sample ID: VSTD005

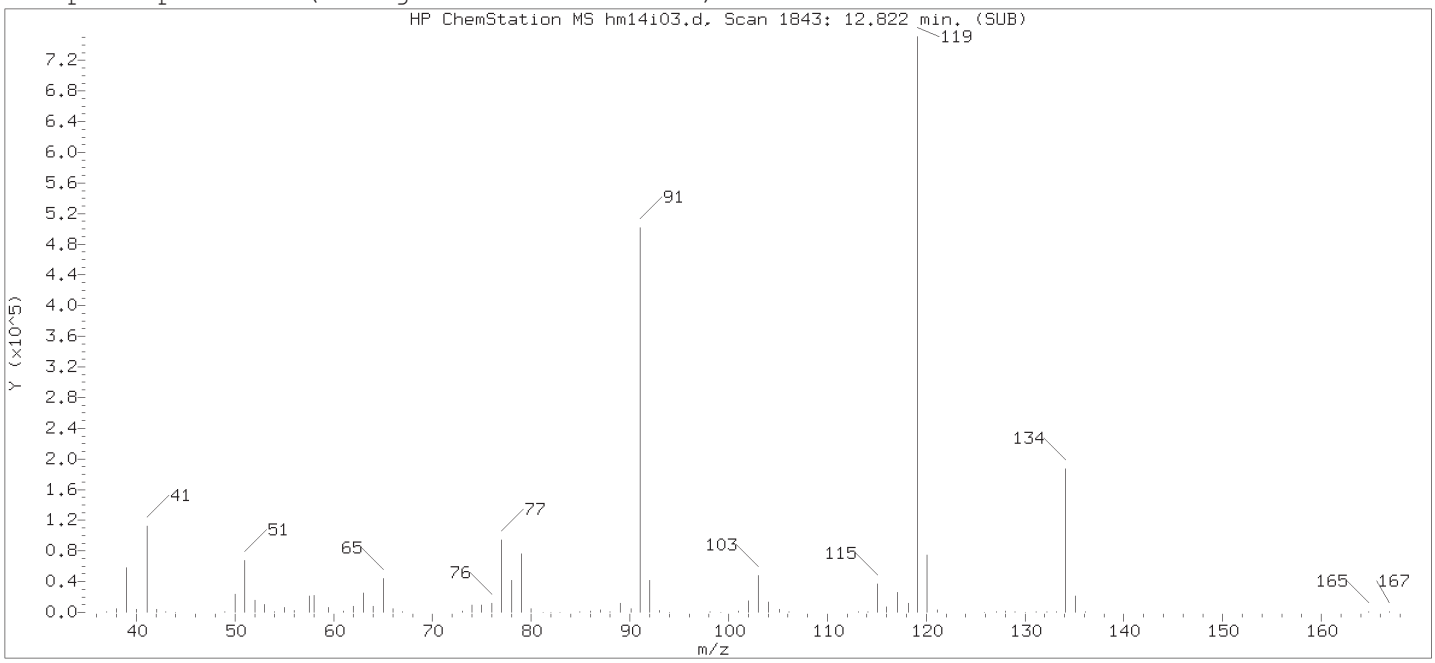
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 256144M
On-Column Amount (ng) : 4.6748
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

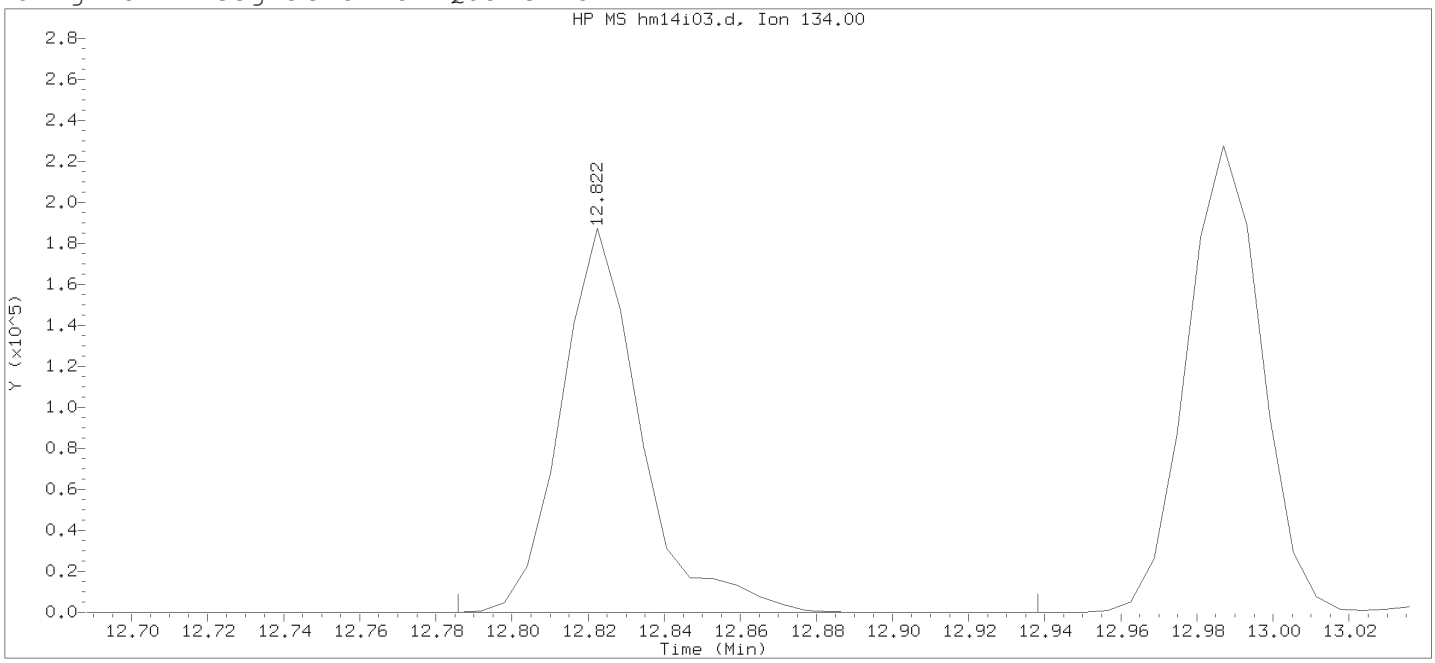
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



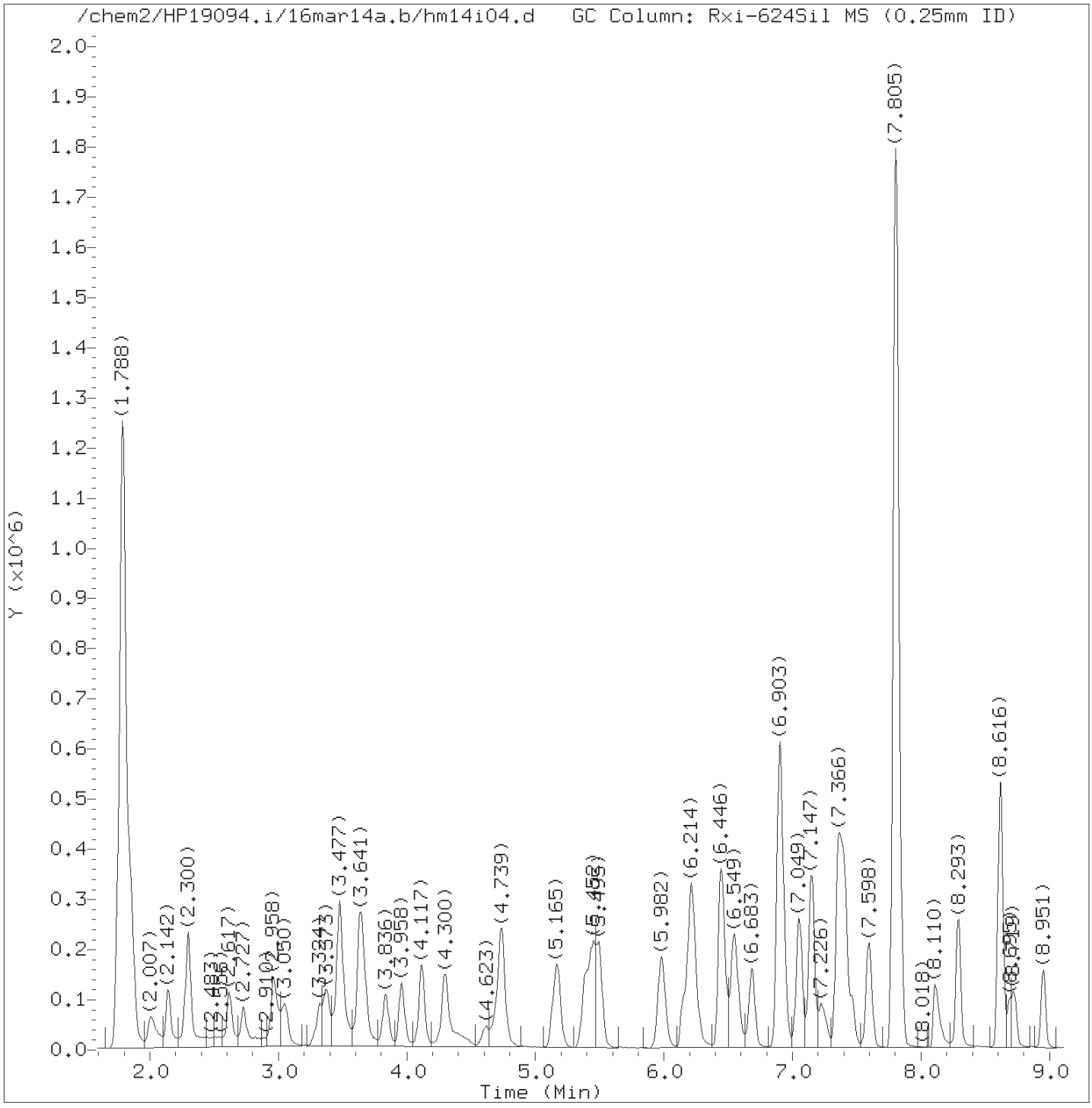
Data File: /chem2/HP19094.i/16mar14a.b/hm14i03.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:34 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 15:53
Date, time and analyst ID of latest file update: 14-Mar-2016 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 271684
On-column Amount (ng) : 5.0361
Integration start scan : 1836 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:14.
Target 3.5 esignature User ID: kel01973



Total Ion Chromatogram (TIC)

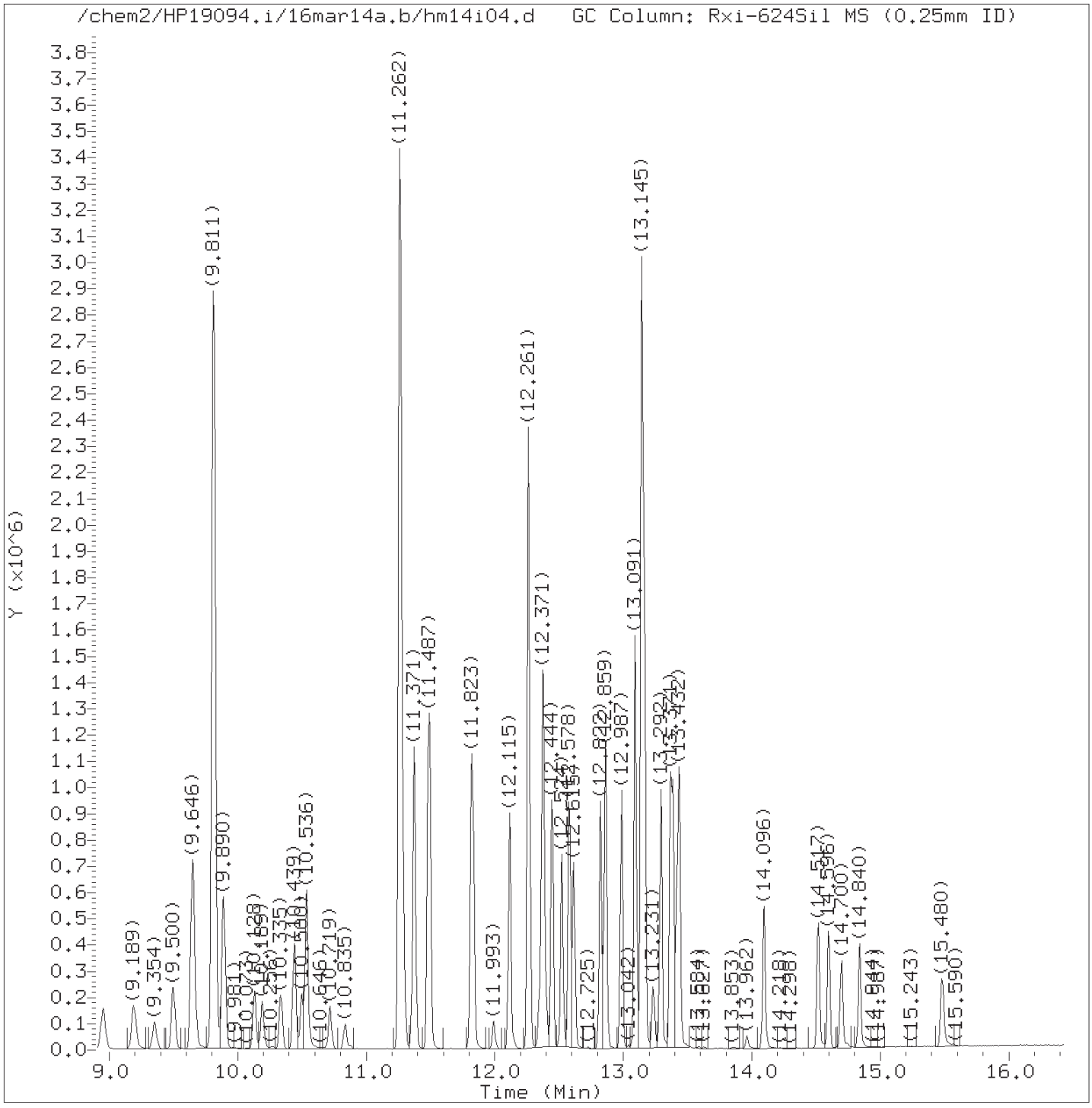
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	139885	1.724
2) Chloromethane	(2)	2.142	50	142464	1.790
5) Vinyl Chloride	(2)	2.282	62	129023	1.743
6) 1,3-Butadiene	(2)	2.300	39	103398	1.847
7) Bromomethane	(2)	2.617	94	88576	1.803
8) Chloroethane	(2)	2.727	64	79594	1.744
9) Dichlorofluoromethane	(2)	2.958	67	184744	1.784
10) Trichlorofluoromethane	(2)	3.050	101	171114	1.775
11) Ethyl ether	(2)	3.318	59	74208	1.865
12) Freon 123a	(2)	3.373	67	130927	1.775
13) Acrolein	(1)	3.477	56	574998	92.252
15) 1,1-Dichloroethene	(2)	3.635	96	100525	1.817
14) Acetone	(1)	3.641	43	162401	18.909
16) Freon 113	(2)	3.653	101	106894	1.858
17) Methyl Iodide	(2)	3.830	142	187827	1.834
18) Carbon Disulfide	(2)	3.958	76	307437	1.800
21) Methyl Acetate	(1)	4.086	43	44285	1.836
22) Allyl Chloride	(2)	4.111	41	189683	1.813
26)*t-Butyl Alcohol-d10	(1)	4.281	65	109317M	50.000
23) Methylene Chloride	(2)	4.306	84	107068	1.811
28) t-Butyl Alcohol	(1)	4.415	59	105430	35.869
29) Acrylonitrile	(1)	4.623	53	95995	9.315
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	233893	1.832
31) trans-1,2-Dichloroethene	(2)	4.739	96	109284	1.834
32) n-Hexane	(2)	5.165	57	181618	1.796
33) 1,1-Dichloroethane	(2)	5.385	63	223342	1.839
34) di-Isopropyl Ether	(2)	5.452	45	389368	1.837
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	181278	1.819
37) Ethyl t-butyl ether	(2)	5.982	59	329916	1.846
40) 1,2-Dichloroethene (Total)	(2)		96	230554	3.672
38) 2-Butanone	(1)	6.153	43	278494	19.029
39) cis-1,2-Dichloroethene	(2)	6.208	96	121270	1.838
42) Propionitrile	(1)	6.220	54	133985	36.716
41) 2,2-Dichloropropane	(2)	6.226	77	177302	1.825
45) Methacrylonitrile	(1)	6.446	67	238023	19.050
47) Bromochloromethane	(2)	6.543	128	47663	1.898
48) Tetrahydrofuran	(1)	6.543	71	69113	18.667
49) Chloroform	(2)	6.683	83	200949	1.811

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	541274	9.761
50)$Dibromofluoromethane	(2)	6.897	111	560925	9.831
51) 1,1,1-Trichloroethane	(2)	6.933	97	172678	1.824
52) Cyclohexane	(2)	7.049	56	215153	1.739
52) Cyclohexane	(2)	7.055	84	167560	1.769
52) Cyclohexane	(2)	7.049	69	63301	1.789
55) 1,1-Dichloropropene	(2)	7.147	75	167116	1.839
54) Carbon Tetrachloride	(2)	7.153	117	157879	1.834
56) Isobutyl Alcohol	(1)	7.232	41	88204M	84.692
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88937M	9.683
57)$1,2-Dichloroethane-d4	(2)	7.354	65	464876	9.914
57)$1,2-Dichloroethane-d4	(2)	7.360	104	57550	9.924
58) Benzene	(2)	7.403	78	466216	1.843
59) 1,2-Dichloroethane	(2)	7.464	62	120356M	1.837
60) t-Amyl methyl ether	(2)	7.598	73	268537	1.838
63)*Fluorobenzene	(2)	7.805	96	2353241	10.000
62) n-Heptane	(2)	7.836	43	207480	1.815
65) n-Butanol	(1)	8.116	56	152979	182.497
67) Trichloroethene	(2)	8.287	95	120987	1.835
70) 1,2-Dichloropropane	(2)	8.610	63	119785	1.819
69) Methylcyclohexane	(2)	8.616	83	198138	1.835
71) Methyl Methacrylate	(1)	8.689	69	49722A	1.905
72) 1,4-Dioxane	(1)	8.701	88	16792	101.677
73) Dibromomethane	(2)	8.719	93	49857	1.838
74) Bromodichloromethane	(2)	8.951	83	139727	1.845
76) 2-Nitropropane	(1)	9.189	41	147718	17.652
80) cis-1,3-Dichloropropene	(2)	9.494	75	172194	1.850
81) 4-Methyl-2-Pentanone	(1)	9.646	43	686835	19.070
82)$Toluene-d8	(3)	9.811	98	2297550	10.107
82)$Toluene-d8	(3)	9.811	100	1486837	10.105
83) Toluene	(3)	9.890	92	285003	1.861
84) trans-1,3-Dichloropropene	(3)	10.128	75	134261	1.871
85) 1,3-Dichloropropene (total)	(3)		75	306455	3.721
86) Ethyl Methacrylate	(3)	10.189	69	105288	1.907
88) 1,1,2-Trichloroethane	(3)	10.335	97	69730	1.880
89) Tetrachloroethene	(3)	10.445	166	132643	1.834
90) 1,3-Dichloropropane	(3)	10.500	76	124831	1.872
91) 2-Hexanone	(1)	10.536	43	481671	18.915

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	87977	1.850
95) 1,2-Dibromoethane	(3)	10.835	107	66221	1.896
97)*Chlorobenzene-d5	(3)	11.262	117	1595701	10.000
98) Chlorobenzene	(3)	11.286	112	312300	1.874
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	106742	1.867
100) Ethylbenzene	(3)	11.371	91	555580	1.854
101) m+p-Xylene	(3)	11.487	106	430889	3.769
105) Xylene (Total)	(3)		106	638092	5.637
104) o-Xylene	(3)	11.816	106	207203	1.868
106) Styrene	(3)	11.829	104	333612	1.880
107) Bromoform	(3)	11.987	173	48461	1.838
108) Isopropylbenzene	(3)	12.115	105	550002	1.871
111)$4-Bromofluorobenzene	(3)	12.261	95	727976	9.935
111)$4-Bromofluorobenzene	(3)	12.261	174	608350	9.958
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	82205M	1.877
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	210710	18.998
114) Bromobenzene	(4)	12.377	156	121698	1.865
116) 1,2,3-Trichloropropane	(4)	12.396	110	21388	1.945
117) n-Propylbenzene	(4)	12.444	91	653852	1.853
119) 2-Chlorotoluene	(4)	12.524	126	127817	1.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	460865	1.873
122) 4-Chlorotoluene	(4)	12.615	126	131416	1.895
125) tert-Butylbenzene	(4)	12.822	134	98583M	1.880
126) Pentachloroethane	(4)	12.853	167	74073	1.871
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	463124	1.883
128) sec-Butylbenzene	(4)	12.987	105	591046	1.855
131) 1,3-Dichlorobenzene	(4)	13.091	146	241904	1.896
132) p-Isopropyltoluene	(4)	13.097	119	505380	1.874
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	699859	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	241546	1.863
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	193916	1.901
136) Benzyl Chloride	(4)	13.237	126	33133	1.909
138) n-Butylbenzene	(4)	13.389	92	244250	1.852
139) 1,2-Dichlorobenzene	(4)	13.420	146	212444	1.874
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	10949	1.914
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	147571	1.820
146) Hexachlorobutadiene	(4)	14.596	225	74368	1.755
147) Naphthalene	(4)	14.700	128	255107	1.830

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	124736	1.926

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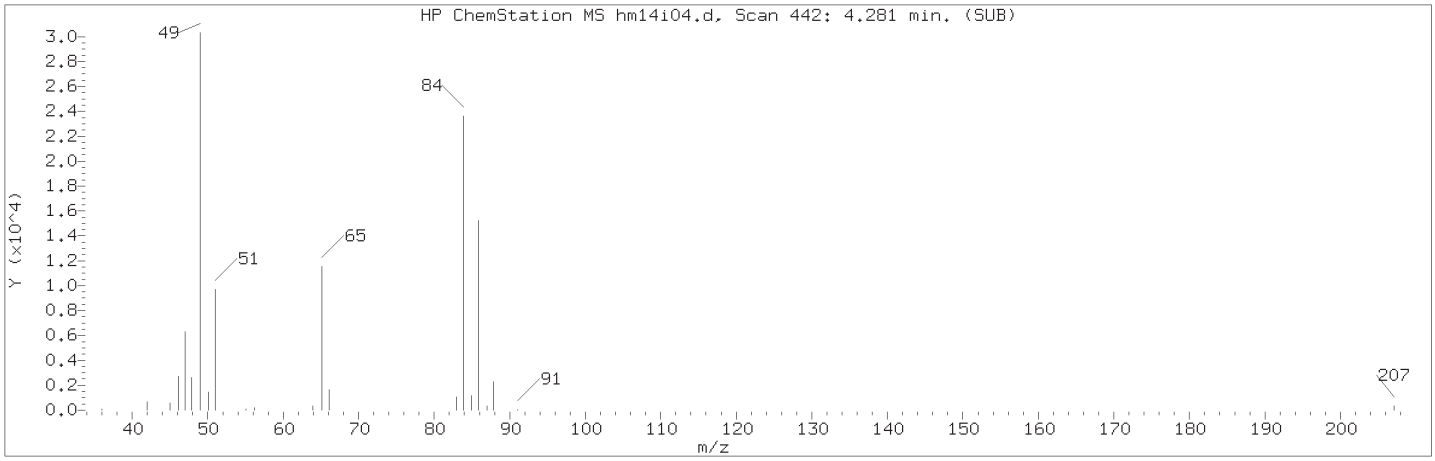
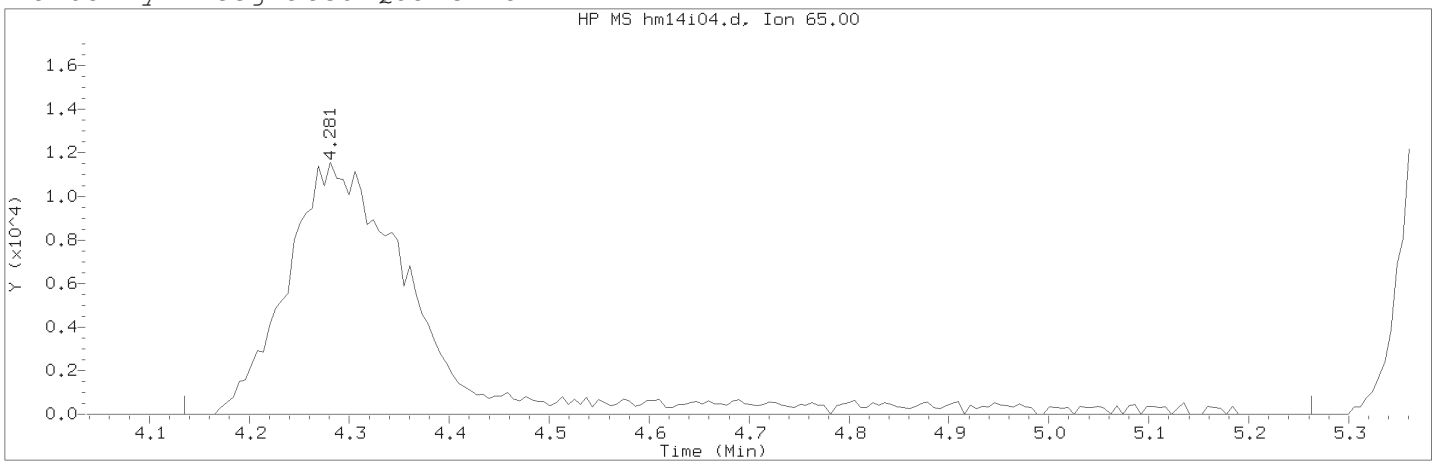
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

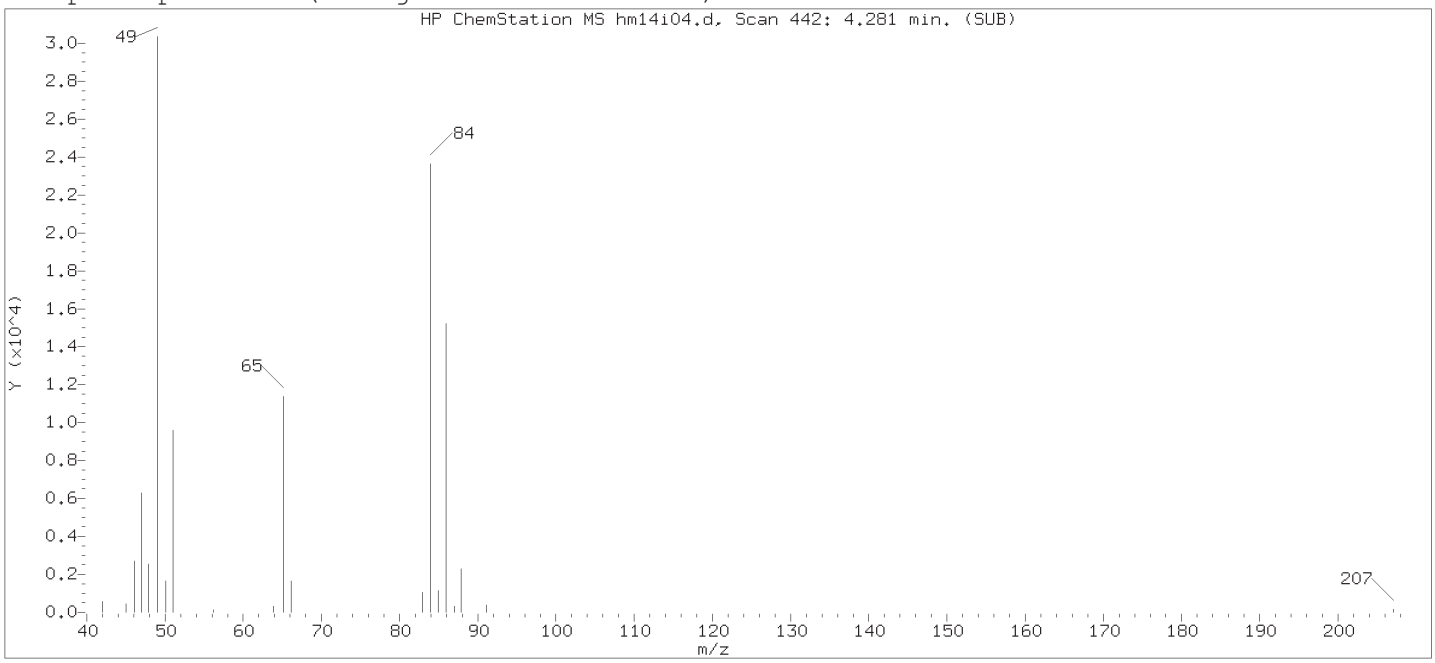
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 109317M
On-Column Amount (ng) : 50.0000
Integration start scan : 417 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

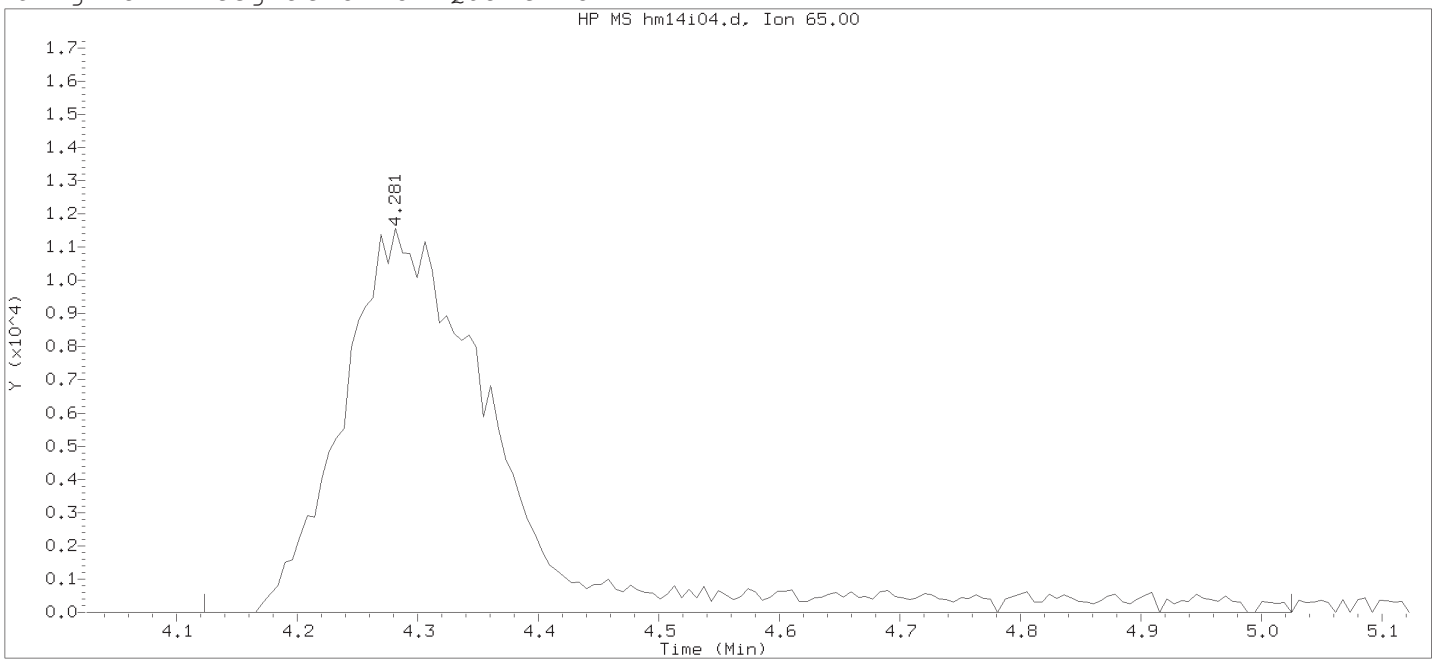
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

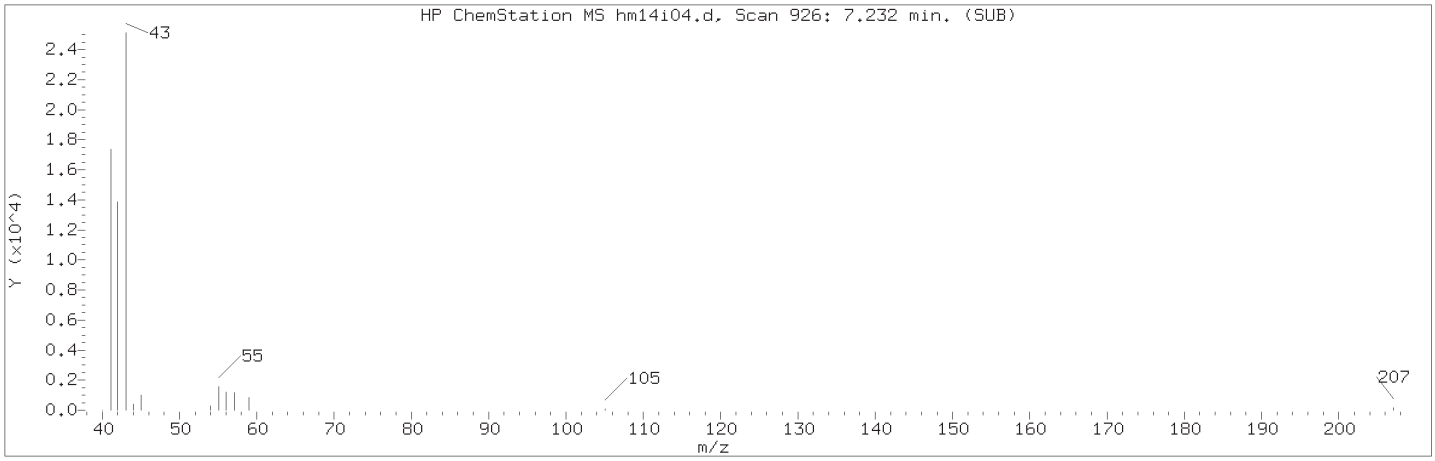
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

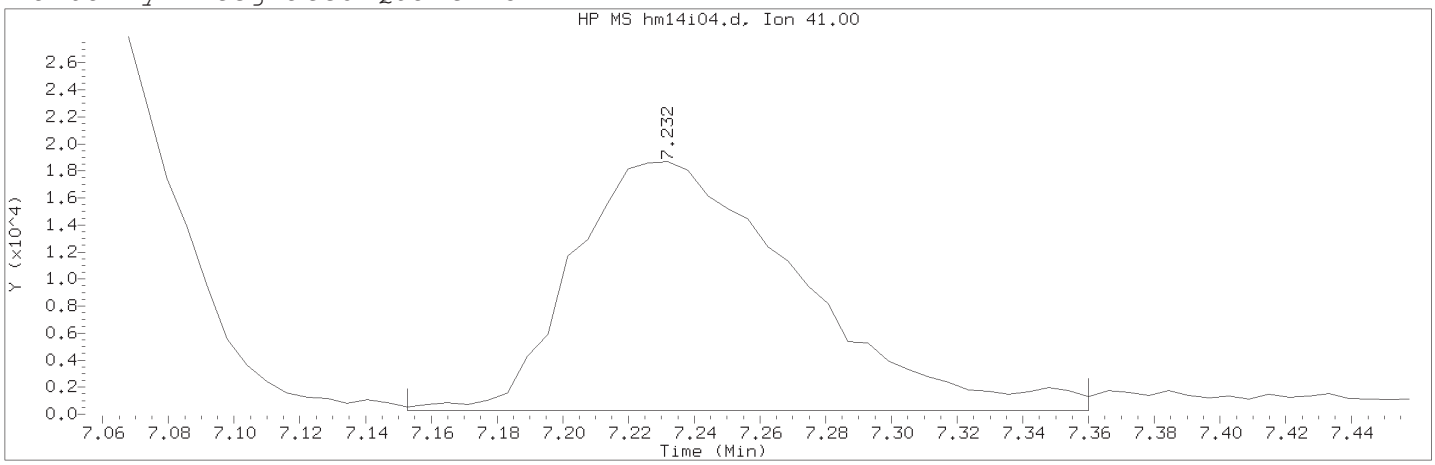
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 107024
On-column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

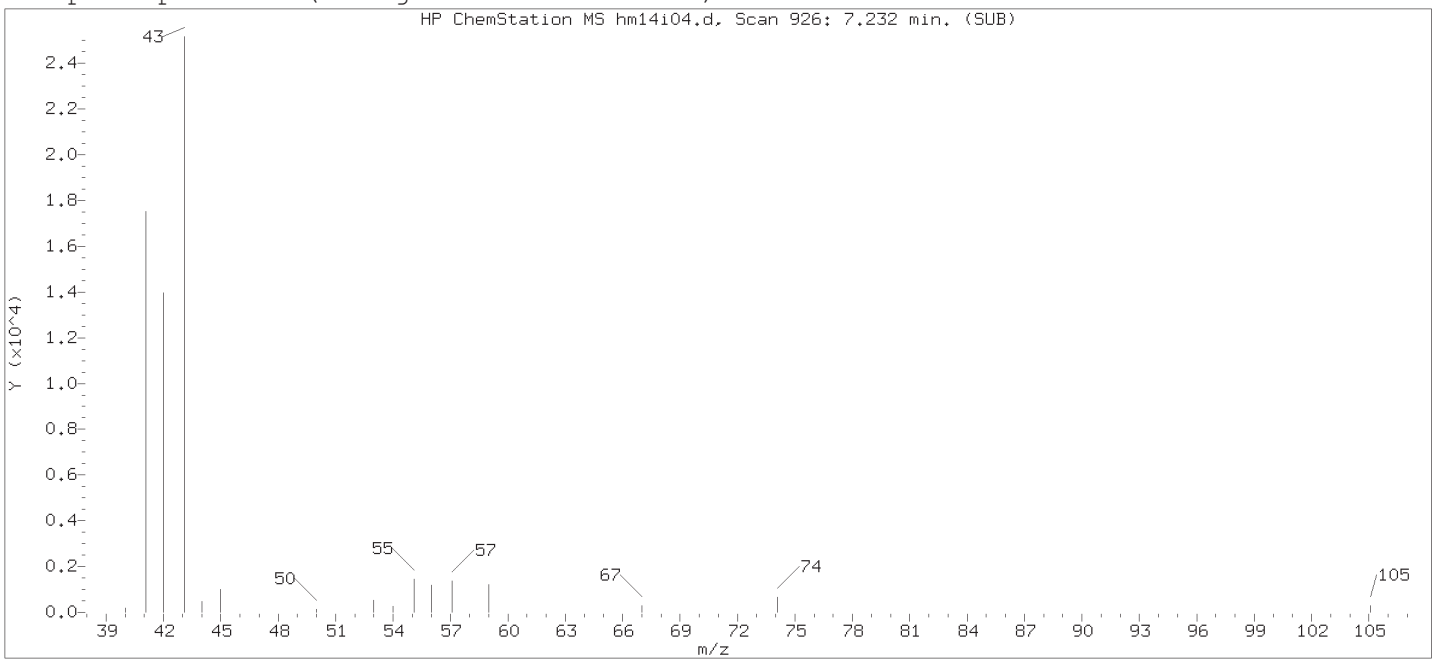
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area (flag) : 88204M
On-Column Amount (ng) : 84.6921
Integration start scan : 912 Integration stop scan: 946
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

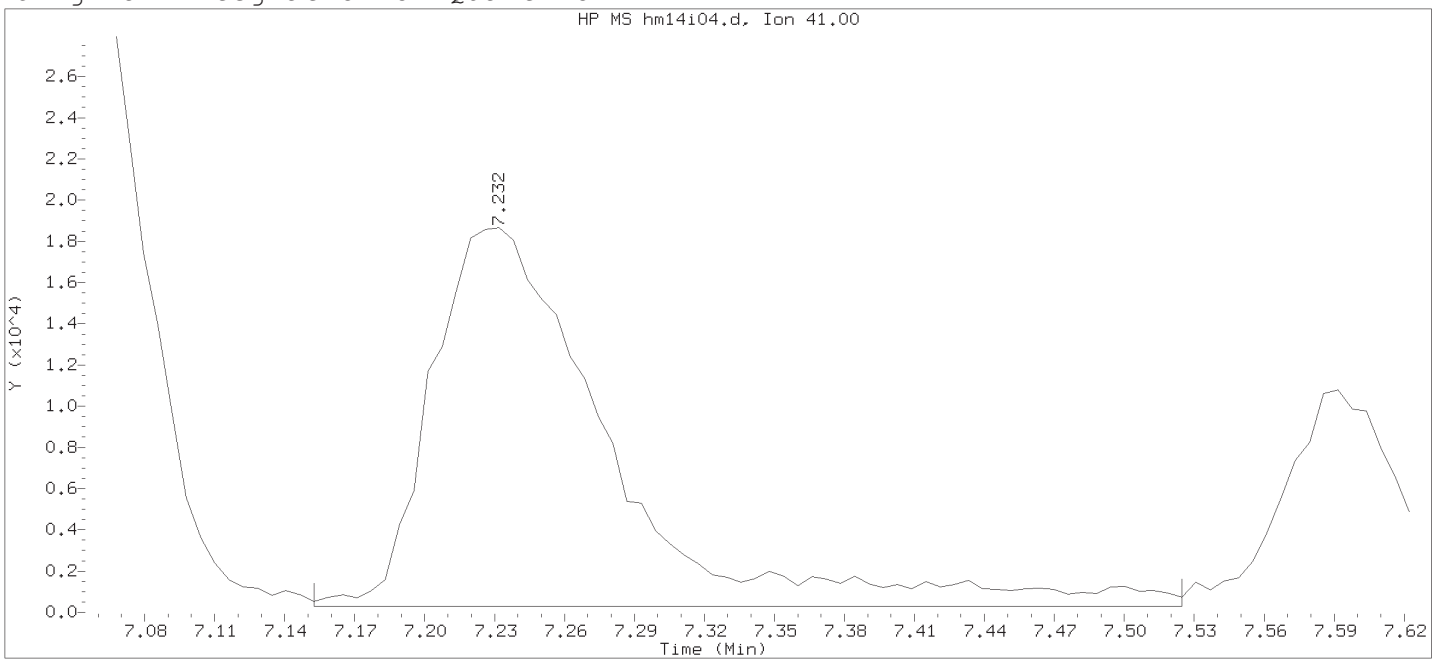
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

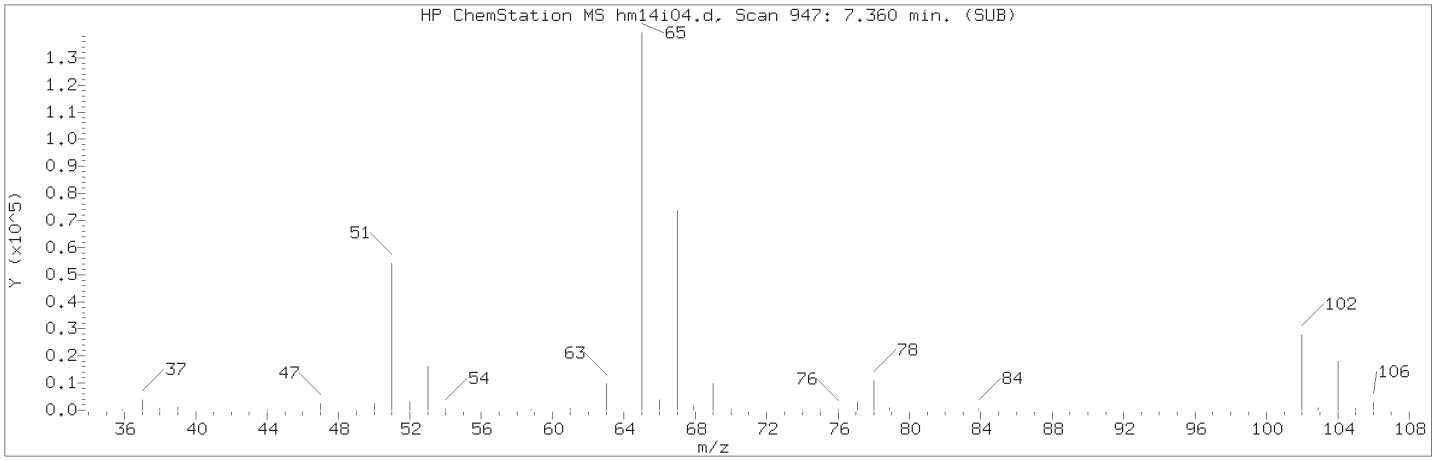
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

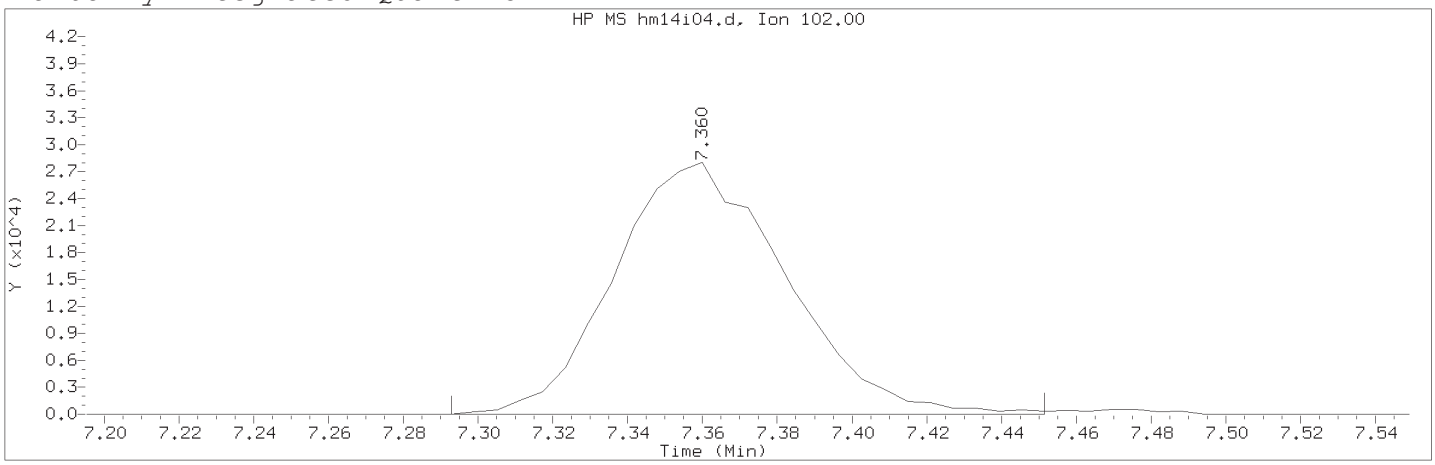
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 926
Retention Time (minutes): 7.232
Quant Ion : 41.00
Area : 97287
On-column Amount (ng) : 103.7447
Integration start scan : 912 Integration stop scan: 973
Y at integration start : 285 Y at integration end: 285

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

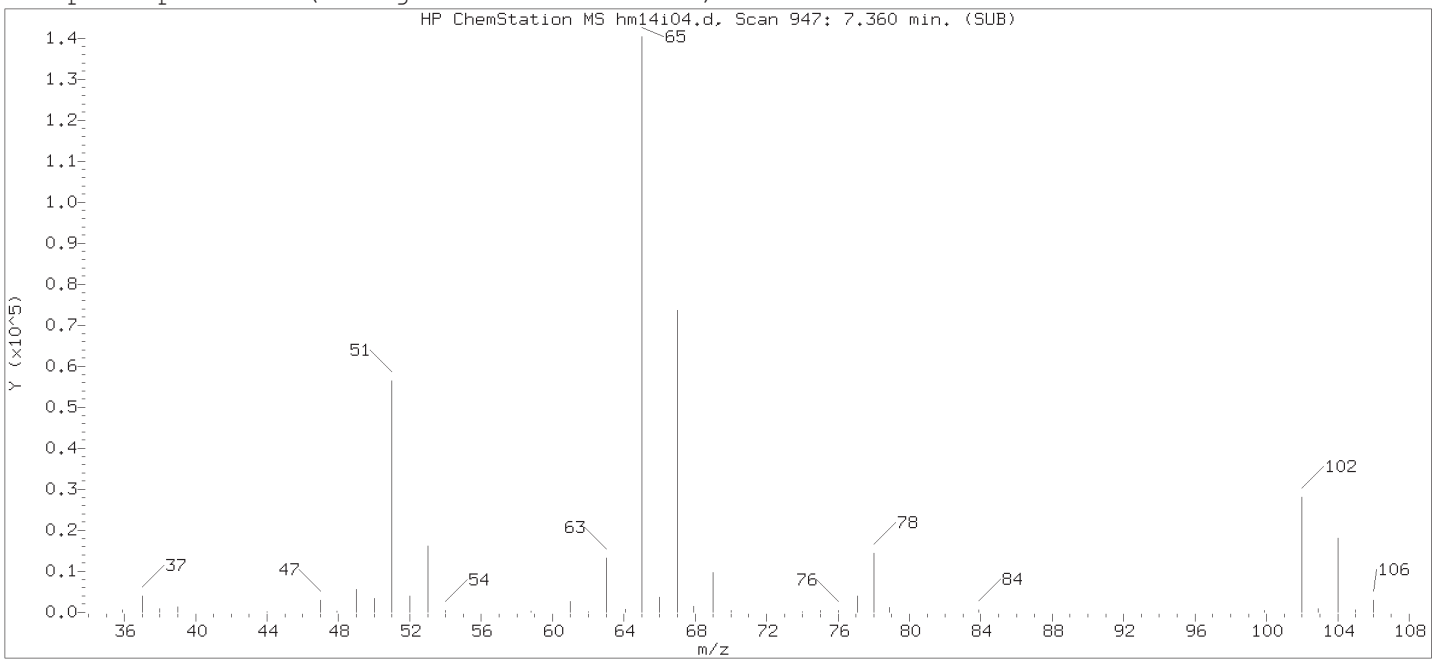
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area (flag) : 88937M
On-Column Amount (ng) : 9.6833
Integration start scan : 935 Integration stop scan: 961
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

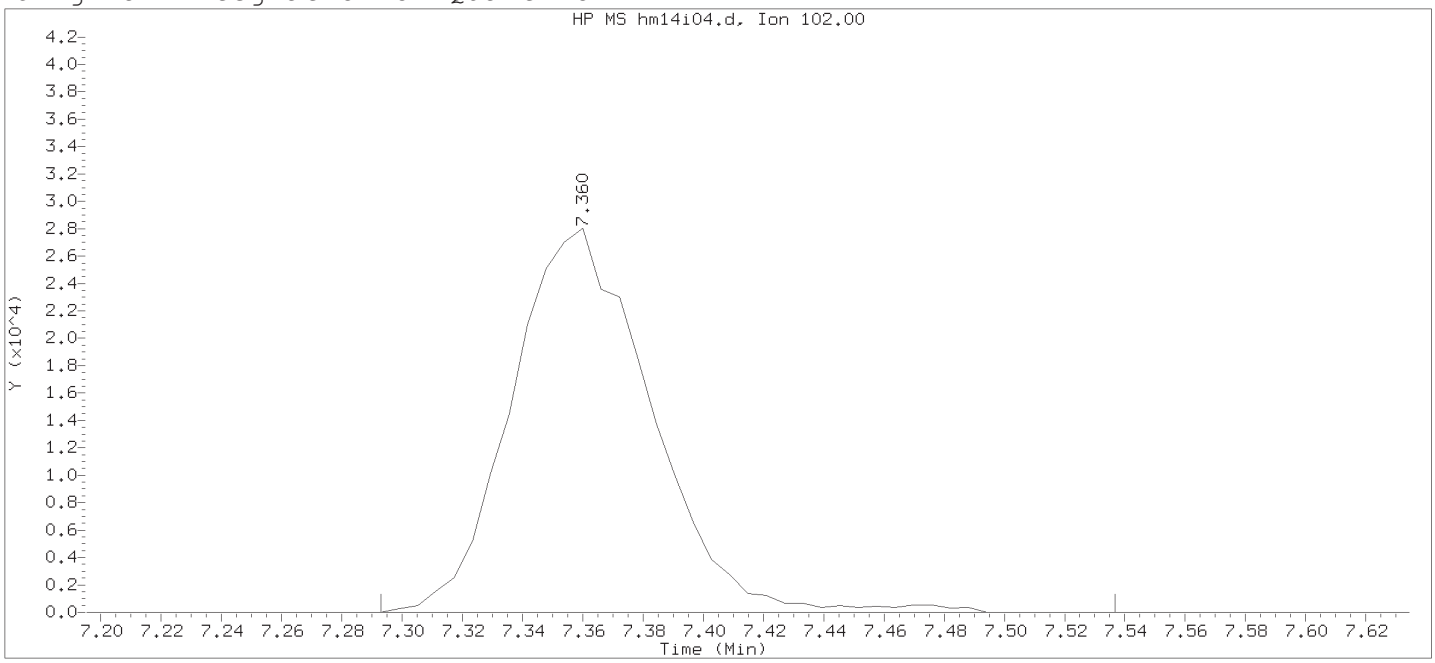
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

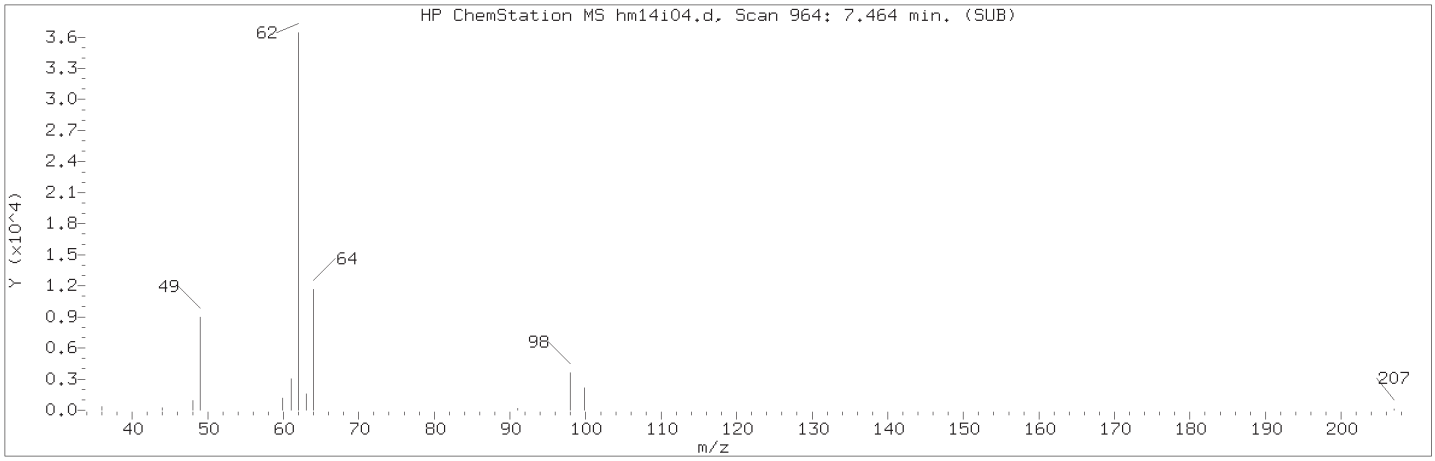
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

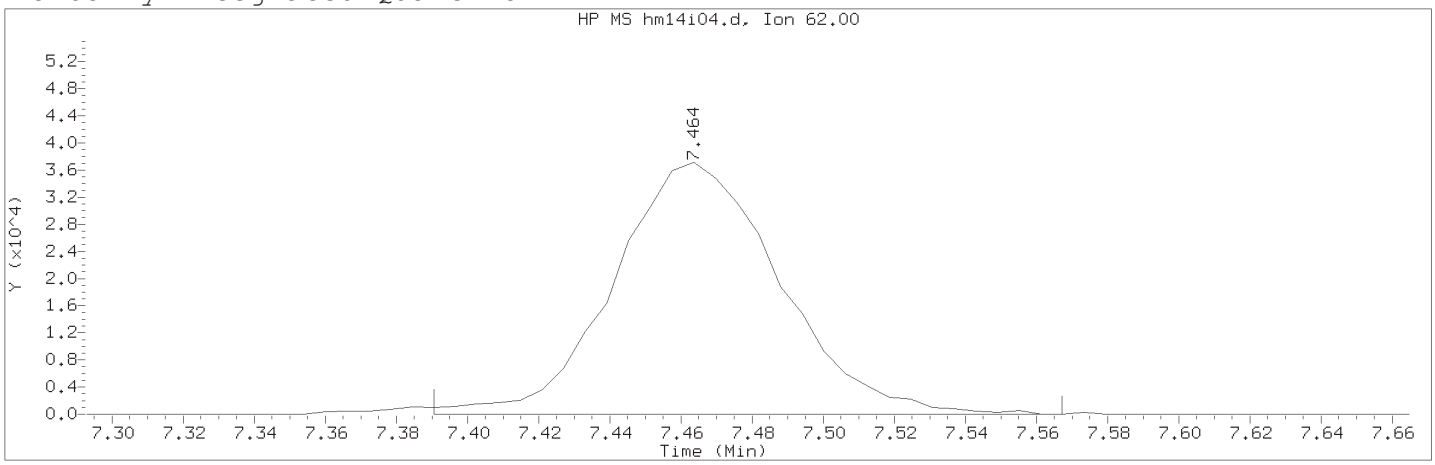
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 947
Retention Time (minutes): 7.360
Quant Ion : 102.00
Area : 89840
On-column Amount (ng) : 9.4955
Integration start scan : 935 Integration stop scan: 975
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

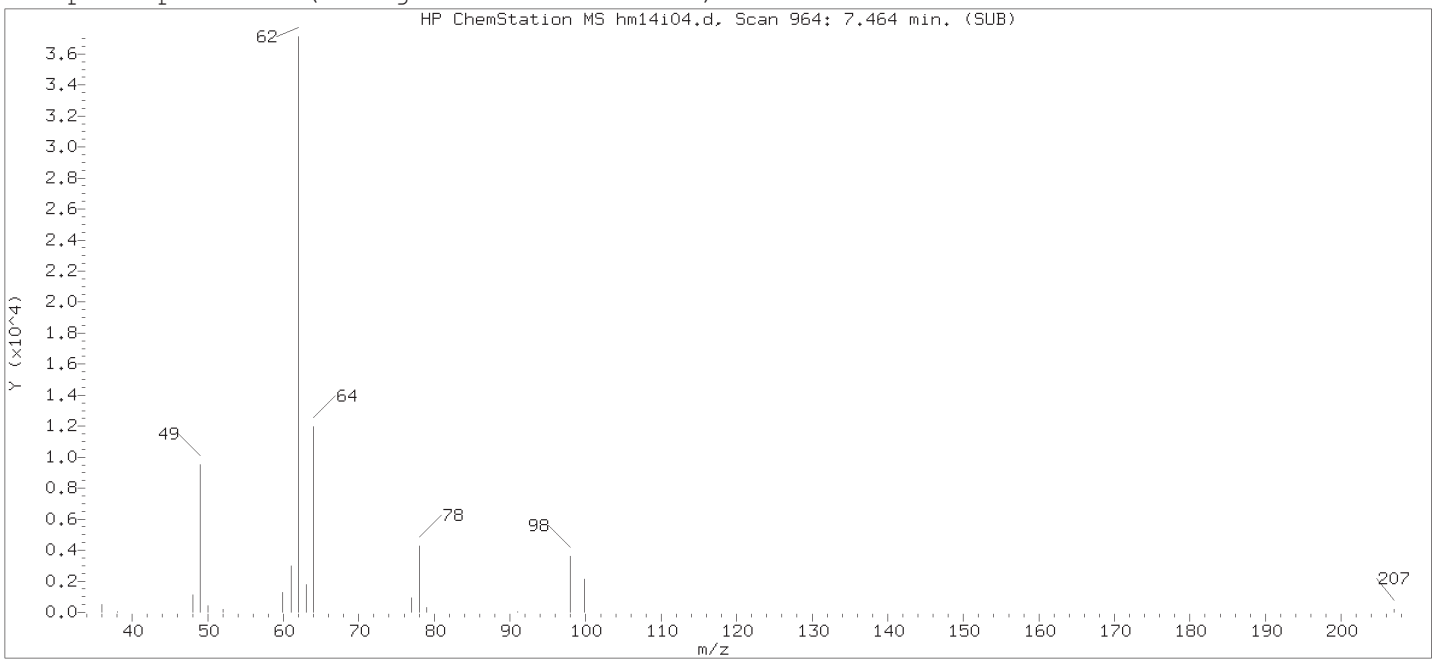
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 120356M
On-Column Amount (ng) : 1.8367
Integration start scan : 951 Integration stop scan: 980
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

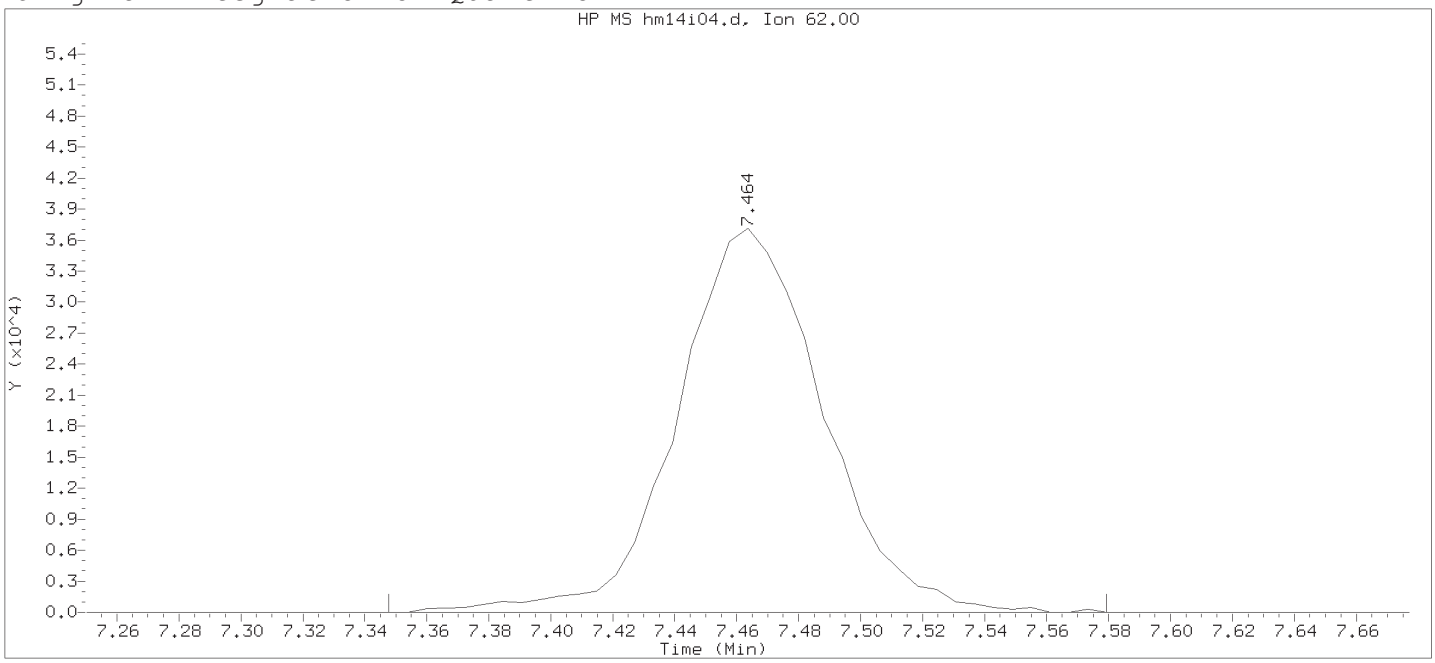
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

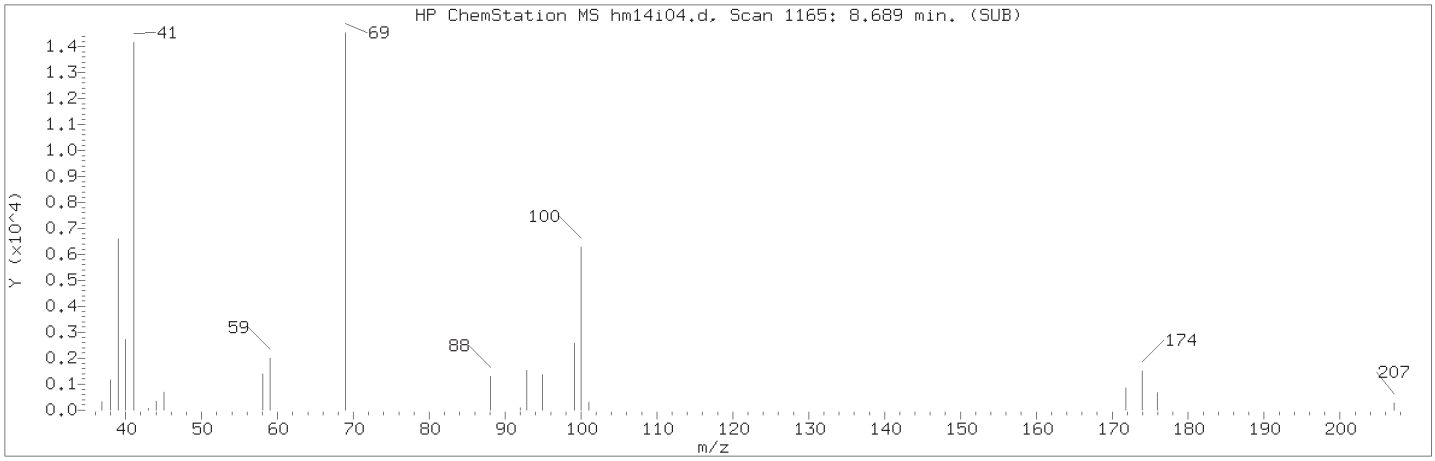
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

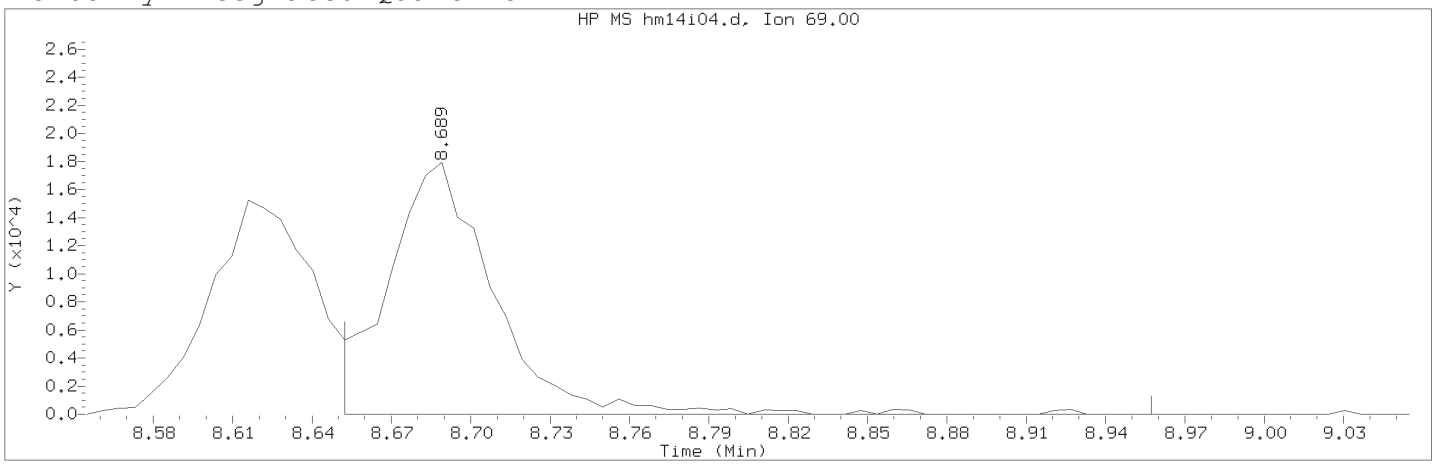
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 121600
On-column Amount (ng) : 1.9148
Integration start scan : 944 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

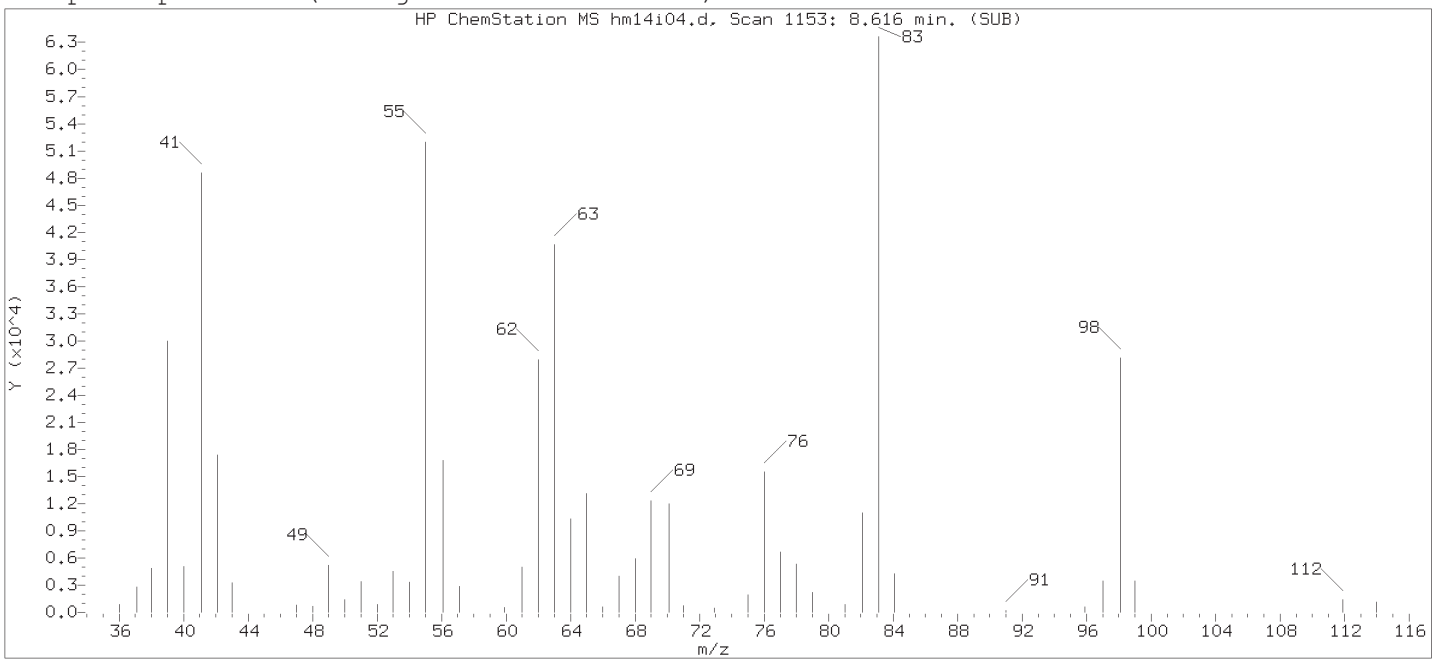
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 49722A
On-Column Amount (ng) : 1.9046
Integration start scan : 1158 Integration stop scan: 1208
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

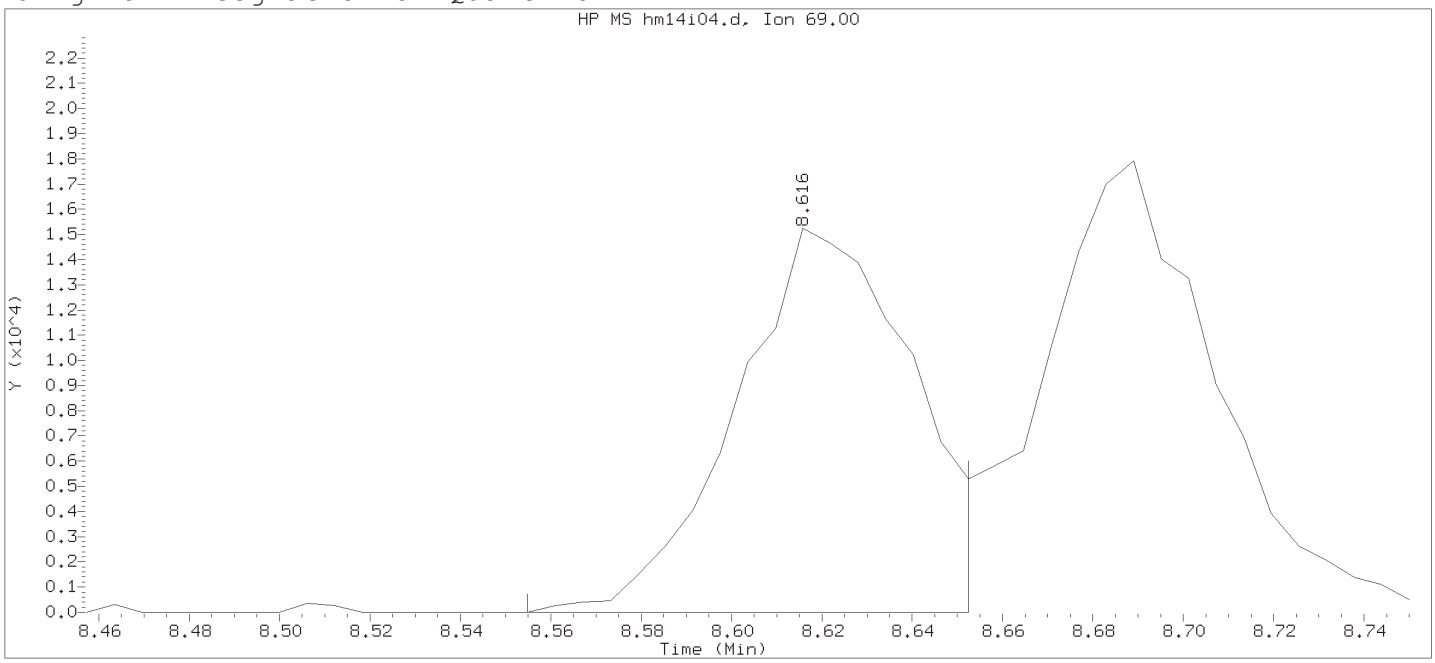
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

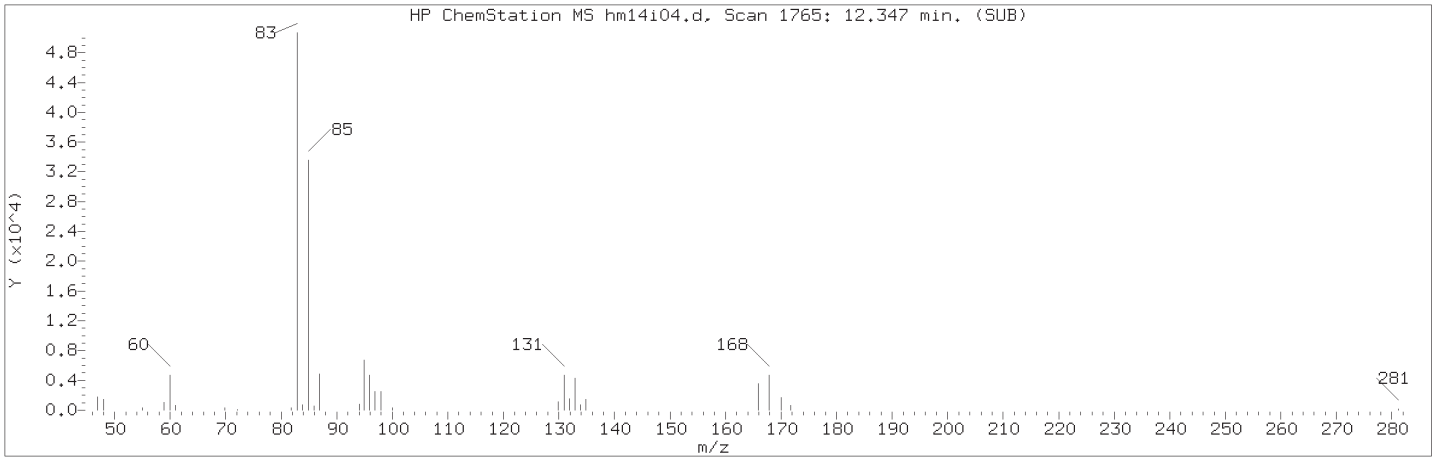
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

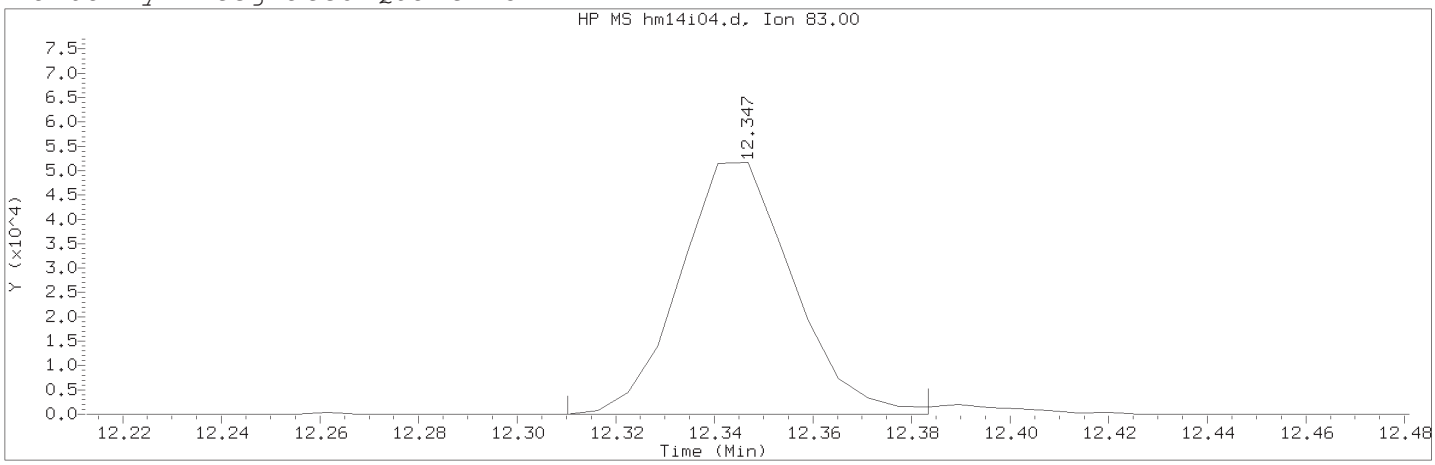
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1153
Retention Time (minutes): 8.616
Quant Ion : 69.00
Area : 40958
On-column Amount (ng) : 1.5431
Integration start scan : 1142 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

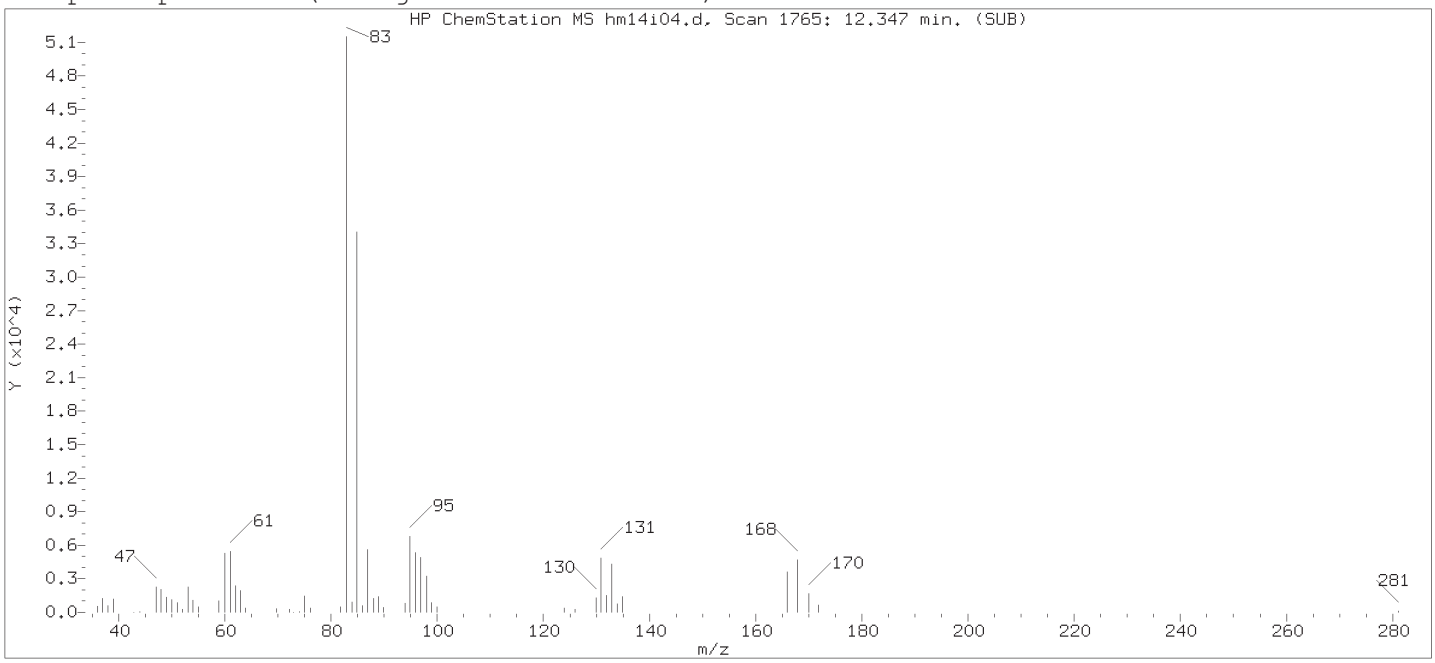
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 82205M
On-Column Amount (ng) : 1.8767
Integration start scan : 1758 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

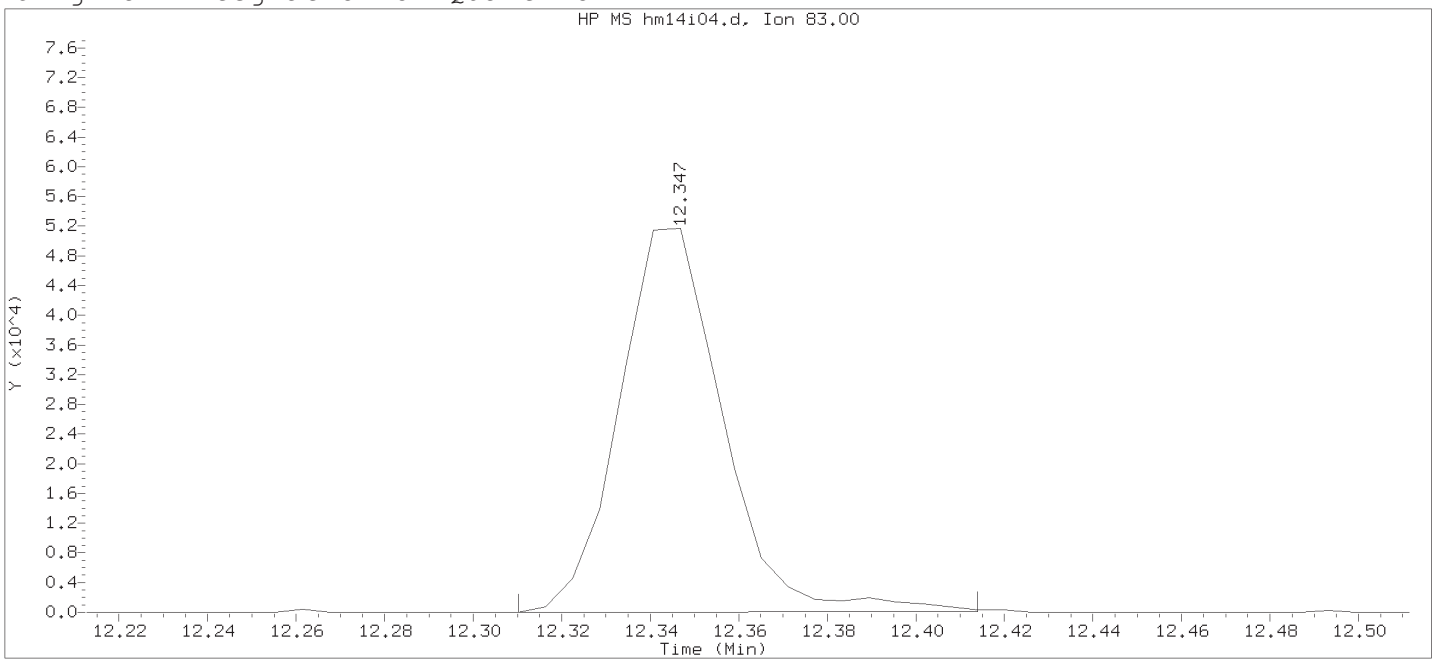
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

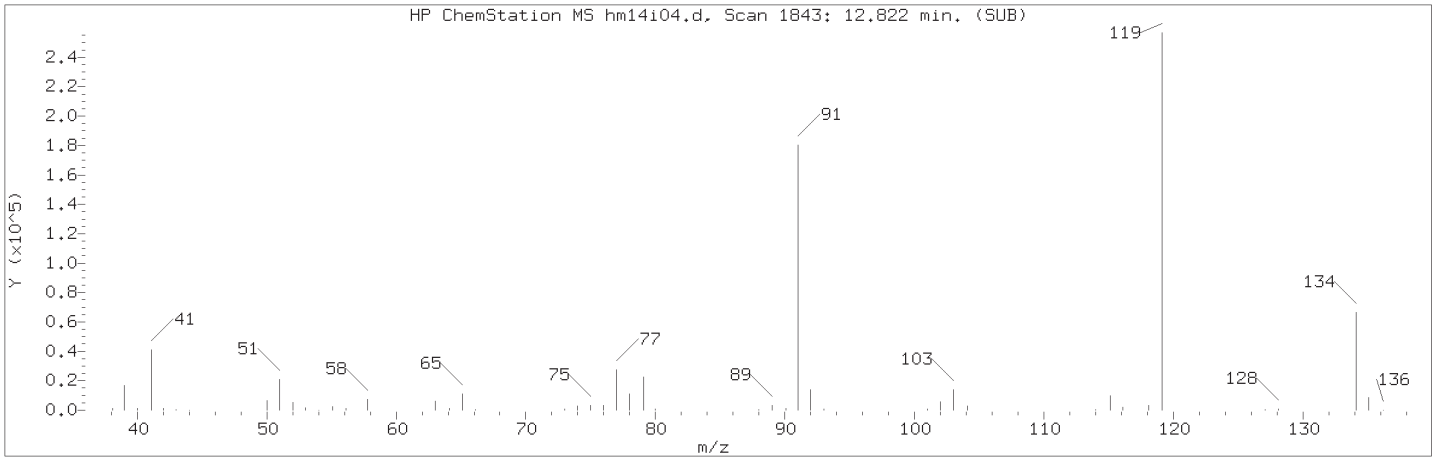
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

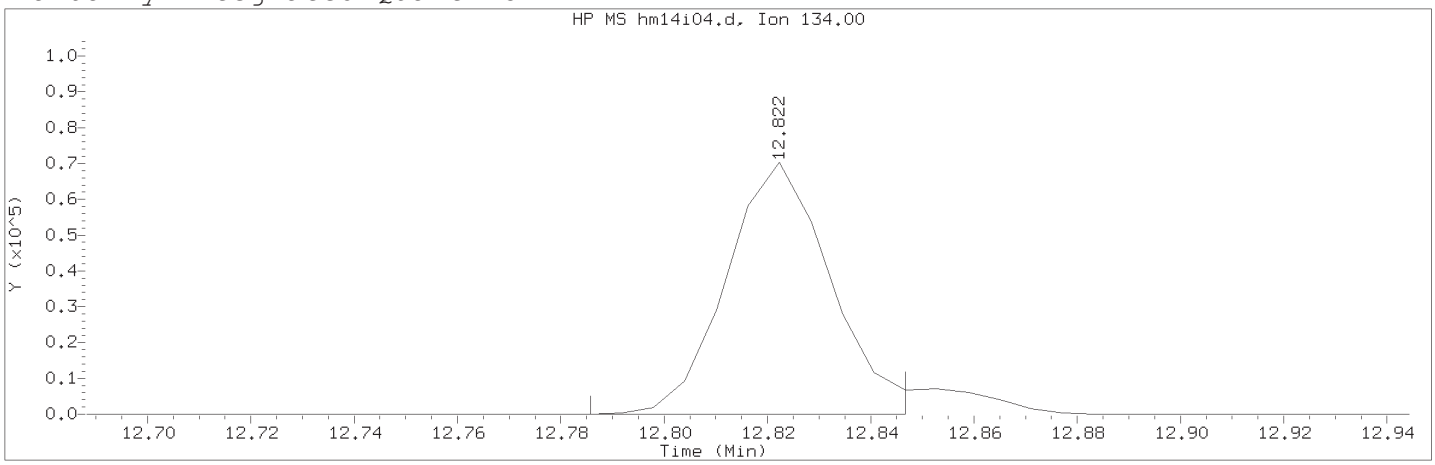
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 83949
On-column Amount (ng) : 2.0241
Integration start scan : 1758 Integration stop scan: 1775
Y at integration start : 0 Y at integration end: 78

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD002 Lab Sample ID: VSTD002

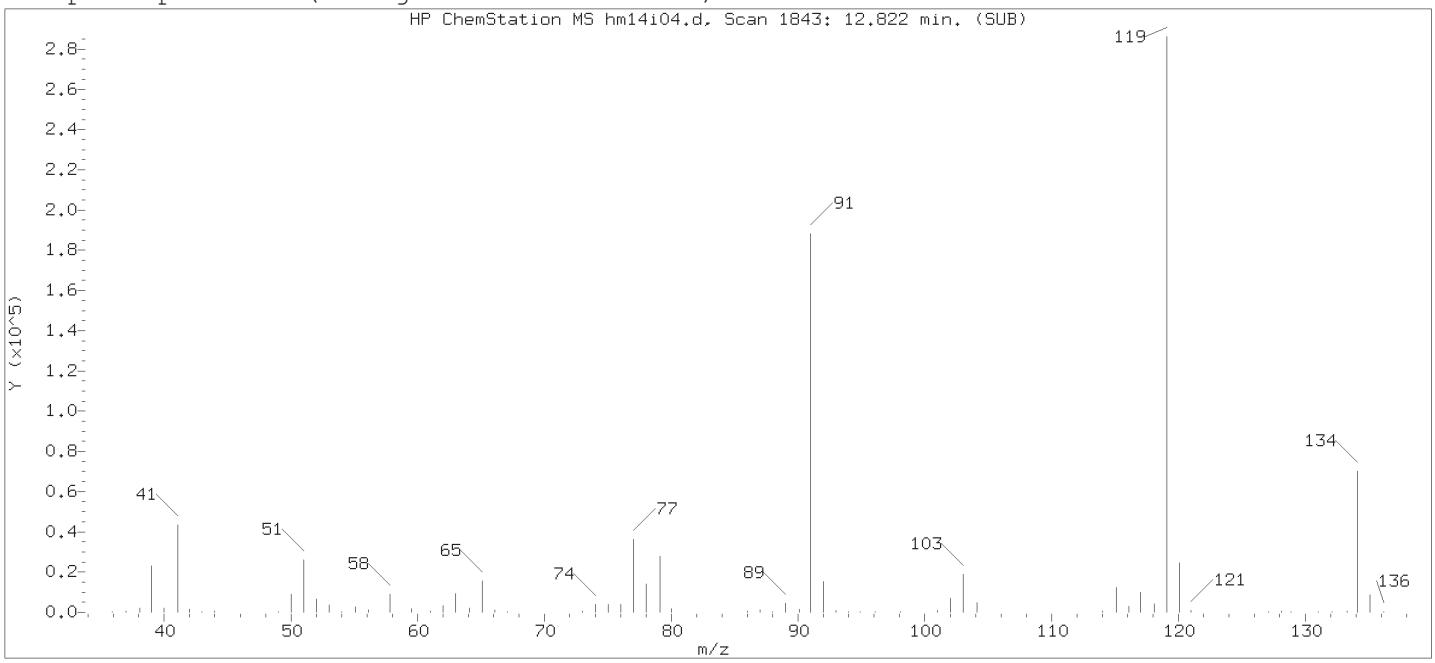
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 98583M
On-Column Amount (ng) : 1.8796
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

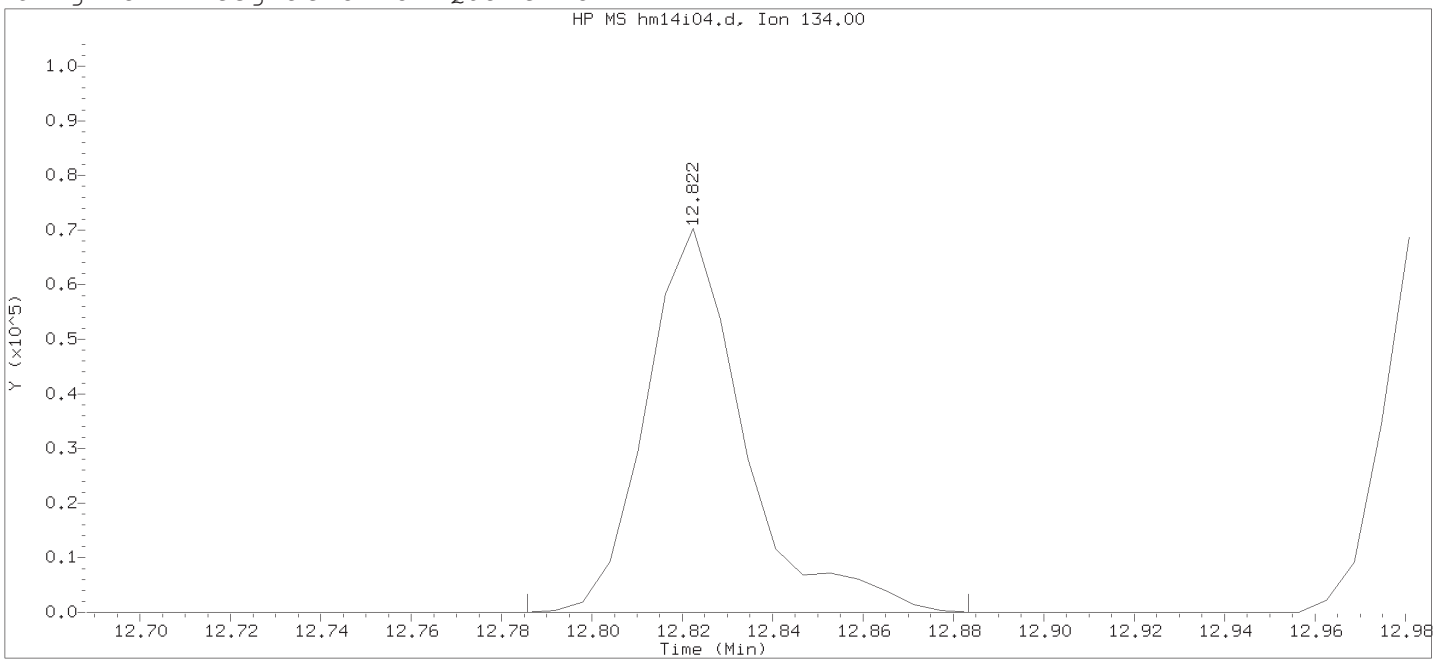
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



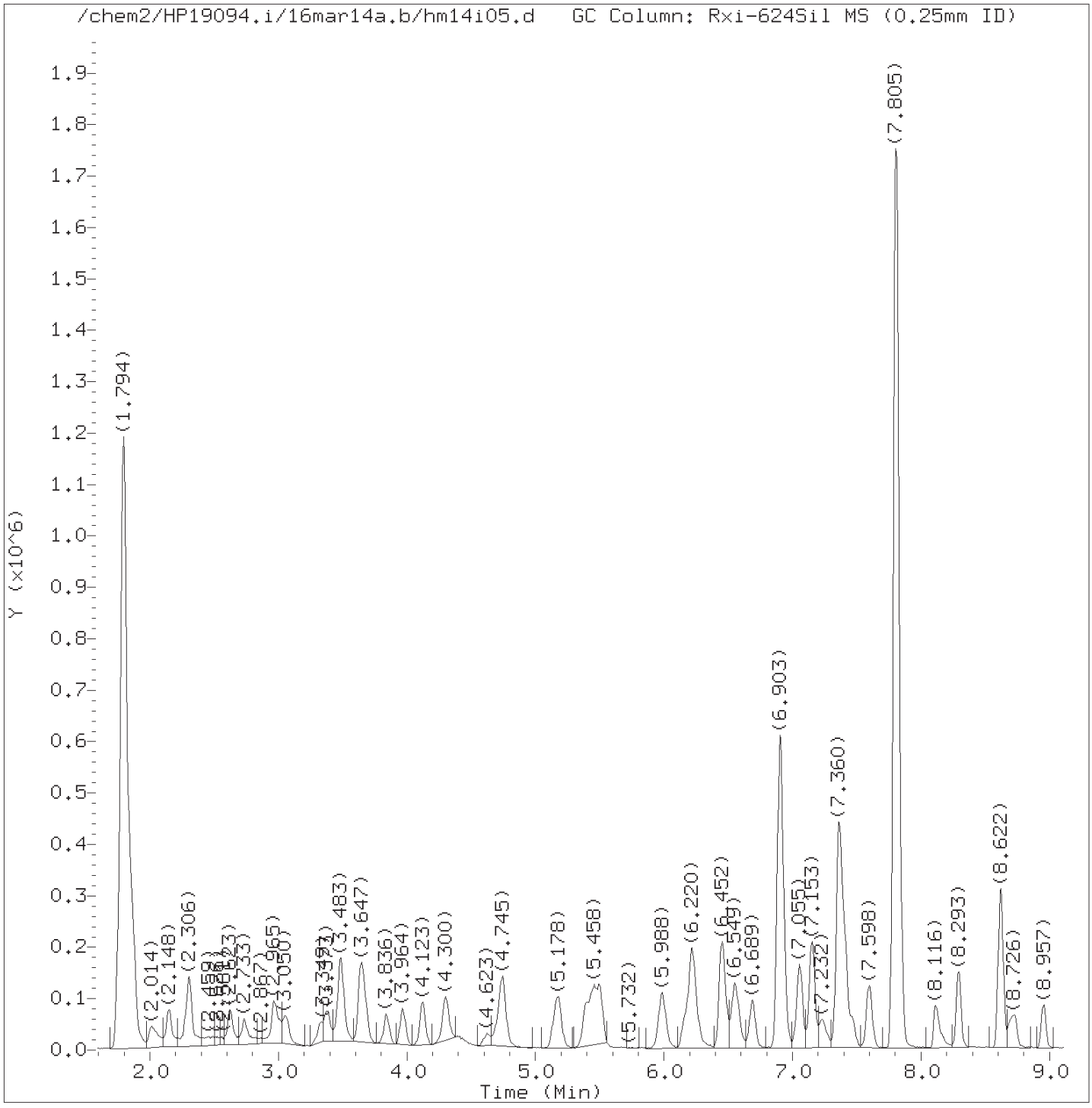
Data File: /chem2/HP19094.i/16mar14a.b/hm14i04.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 15:54 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:13
Date, time and analyst ID of latest file update: 14-Mar-2016 16:13 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 105559
On-column Amount (ng) : 2.0329
Integration start scan : 1836 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

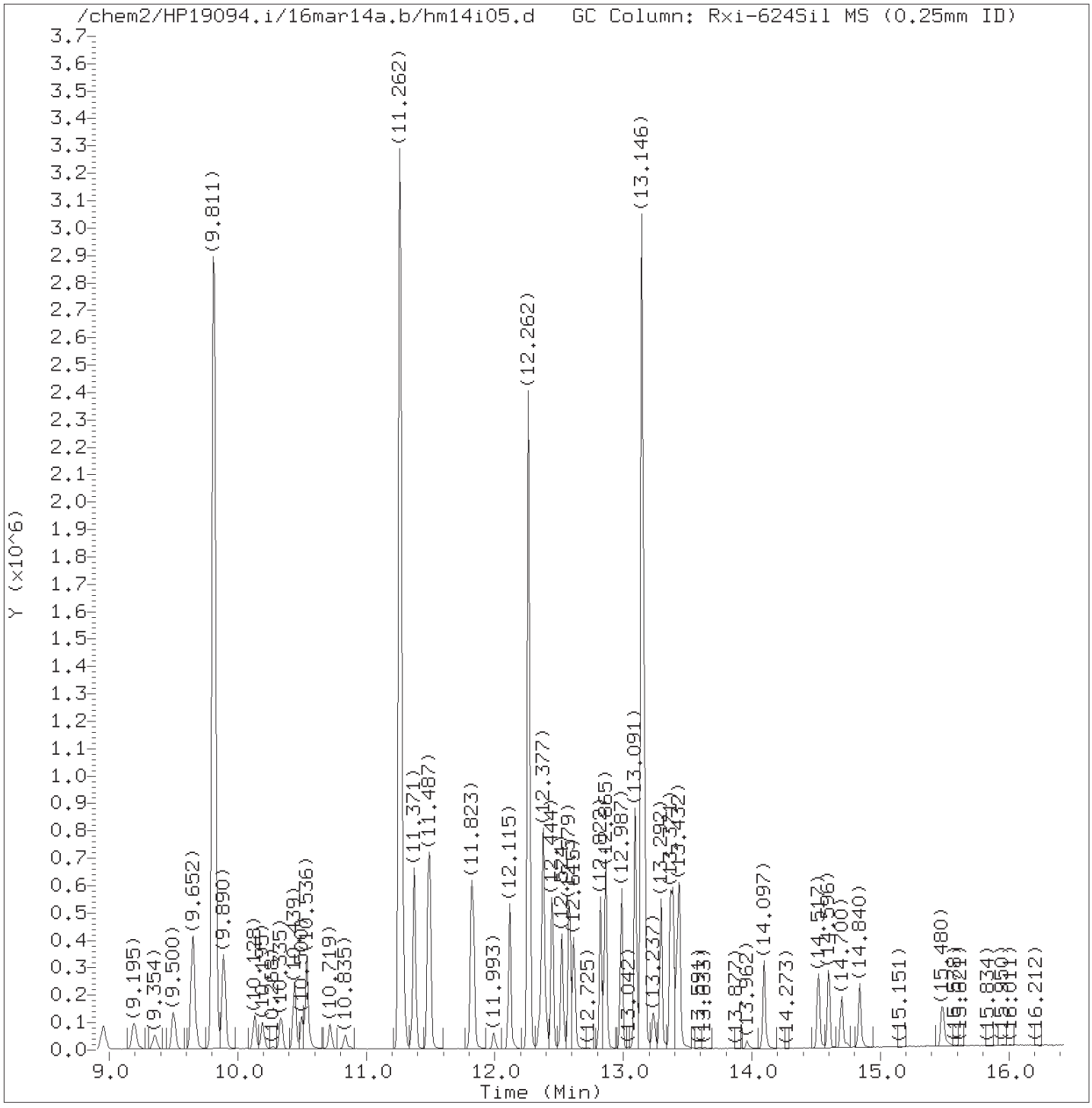
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.014	85	90824	1.117
2) Chloromethane	(2)	2.148	50	86848	1.089
5) Vinyl Chloride	(2)	2.282	62	77575	1.046
6) 1,3-Butadiene	(2)	2.306	39	58441M	1.041
7) Bromomethane	(2)	2.617	94	51798	1.052
8) Chloroethane	(2)	2.739	64	48041	1.050
9) Dichlorofluoromethane	(2)	2.965	67	111313	1.073
10) Trichlorofluoromethane	(2)	3.050	101	102392	1.059
11) Ethyl ether	(2)	3.318	59	39723	0.996
12) Freon 123a	(2)	3.385	67	81176	1.098
13) Acrolein	(1)	3.483	56	338250	51.511
15) 1,1-Dichloroethene	(2)	3.635	96	58799	1.060
14) Acetone	(1)	3.647	43	92940M	10.271
16) Freon 113	(2)	3.666	101	62827	1.089
17) Methyl Iodide	(2)	3.836	142	110580	1.077
18) Carbon Disulfide	(2)	3.964	76	180063	1.052
21) Methyl Acetate	(1)	4.092	43	22761	0.896
22) Allyl Chloride	(2)	4.123	41	102626	0.979
26)*t-Butyl Alcohol-d10	(1)	4.288	65	115170	50.000
23) Methylene Chloride	(2)	4.306	84	64037	1.080
28) t-Butyl Alcohol	(1)	4.416	59	66690M	21.536
29) Acrylonitrile	(1)	4.623	53	55580	5.119
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	133271	1.042
31) trans-1,2-Dichloroethene	(2)	4.751	96	64235	1.076
32) n-Hexane	(2)	5.178	57	111465	1.100
33) 1,1-Dichloroethane	(2)	5.391	63	125312	1.030
34) di-Isopropyl Ether	(2)	5.458	45	221898	1.044
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	106915	1.070
37) Ethyl t-butyl ether	(2)	5.988	59	188215M	1.051
40) 1,2-Dichloroethene (Total)	(2)		96	134411	2.137
38) 2-Butanone	(1)	6.165	43	155295	10.072
39) cis-1,2-Dichloroethene	(2)	6.214	96	70176	1.061
42) Propionitrile	(1)	6.226	54	79710	20.733
41) 2,2-Dichloropropane	(2)	6.232	77	103830	1.066
45) Methacrylonitrile	(1)	6.458	67	130992	9.951
47) Bromochloromethane	(2)	6.549	128	25933	1.030
48) Tetrahydrofuran	(1)	6.555	71	39184	10.046
49) Chloroform	(2)	6.689	83	117044	1.052

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	558930	10.056
50)$Dibromofluoromethane	(2)	6.903	111	575455	10.062
51) 1,1,1-Trichloroethane	(2)	6.939	97	98160	1.034
52) Cyclohexane	(2)	7.061	56	133716	1.078
52) Cyclohexane	(2)	7.055	84	102626	1.081
52) Cyclohexane	(2)	7.055	69	38732	1.092
55) 1,1-Dichloropropene	(2)	7.147	75	97878	1.075
54) Carbon Tetrachloride	(2)	7.159	117	92169	1.068
56) Isobutyl Alcohol	(1)	7.232	41	56777	51.746
57)$1,2-Dichloroethane-d4	(2)	7.360	102	92087	10.003
57)$1,2-Dichloroethane-d4	(2)	7.360	65	476091	10.130
57)$1,2-Dichloroethane-d4	(2)	7.360	104	59190	10.183
58) Benzene	(2)	7.409	78	266449	1.051
59) 1,2-Dichloroethane	(2)	7.464	62	69113M	1.052
60) t-Amyl methyl ether	(2)	7.598	73	155840	1.064
63)*Fluorobenzene	(2)	7.805	96	2358734	10.000
62) n-Heptane	(2)	7.830	43	129863	1.133
65) n-Butanol	(1)	8.116	56	96518	109.290
67) Trichloroethene	(2)	8.293	95	70014	1.060
70) 1,2-Dichloropropane	(2)	8.622	63	70333	1.066
69) Methylcyclohexane	(2)	8.628	83	114418	1.057
71) Methyl Methacrylate	(1)	8.695	69	26979A	0.981
72) 1,4-Dioxane	(1)	8.713	88	10458	60.106
73) Dibromomethane	(2)	8.732	93	28208	1.038
74) Bromodichloromethane	(2)	8.957	83	79407	1.046
76) 2-Nitropropane	(1)	9.195	41	90337	10.246
80) cis-1,3-Dichloropropene	(2)	9.500	75	96651	1.036
81) 4-Methyl-2-Pentanone	(1)	9.652	43	387421	10.210
82)$Toluene-d8	(3)	9.811	98	2314810	9.954
82)$Toluene-d8	(3)	9.811	100	1492208	9.913
83) Toluene	(3)	9.890	92	165369	1.056
84) trans-1,3-Dichloropropene	(3)	10.128	75	75692	1.031
85) 1,3-Dichloropropene (total)	(3)		75	172343	2.067
86) Ethyl Methacrylate	(3)	10.195	69	58979M	1.044
88) 1,1,2-Trichloroethane	(3)	10.335	97	38621	1.018
89) Tetrachloroethene	(3)	10.445	166	77846	1.052
90) 1,3-Dichloropropane	(3)	10.500	76	71521	1.048
91) 2-Hexanone	(1)	10.536	43	279210	10.407

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	49840	1.025
95) 1,2-Dibromoethane	(3)	10.835	107	36641	1.025
97)*Chlorobenzene-d5	(3)	11.262	117	1632519	10.000
98) Chlorobenzene	(3)	11.292	112	178955	1.049
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	61163	1.046
100) Ethylbenzene	(3)	11.378	91	322880	1.053
101) m+p-Xylene	(3)	11.493	106	246499	2.108
105) Xylene (Total)	(3)		106	365764	3.159
104) o-Xylene	(3)	11.817	106	119265	1.051
106) Styrene	(3)	11.835	104	189698	1.045
107) Bromoform	(3)	11.993	173	27300	1.012
108) Isopropylbenzene	(3)	12.115	105	319515	1.062
111)$4-Bromofluorobenzene	(3)	12.262	95	759607	10.133
111)$4-Bromofluorobenzene	(3)	12.262	174	626593	10.025
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	47675	1.040
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	119030A	10.187
114) Bromobenzene	(4)	12.383	156	69551	1.019
116) 1,2,3-Trichloropropane	(4)	12.402	110	11715	1.018
117) n-Propylbenzene	(4)	12.444	91	384967	1.042
119) 2-Chlorotoluene	(4)	12.524	126	73519	1.032
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	270152	1.049
122) 4-Chlorotoluene	(4)	12.615	126	75710	1.043
125) tert-Butylbenzene	(4)	12.822	134	58224M	1.061
126) Pentachloroethane	(4)	12.853	167	41190	0.994
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	266450	1.035
128) sec-Butylbenzene	(4)	12.987	105	355663	1.067
131) 1,3-Dichlorobenzene	(4)	13.091	146	137619	1.030
132) p-Isopropyltoluene	(4)	13.097	119	291814	1.034
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	732410	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	139199	1.026
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	105569	0.989
136) Benzyl Chloride	(4)	13.231	126	18304	1.008
138) n-Butylbenzene	(4)	13.389	92	143045	1.036
139) 1,2-Dichlorobenzene	(4)	13.420	146	124256	1.047
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	5922	0.982
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	86509	1.019
146) Hexachlorobutadiene	(4)	14.596	225	48640	1.097
147) Naphthalene	(4)	14.700	128	150985	1.035

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Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

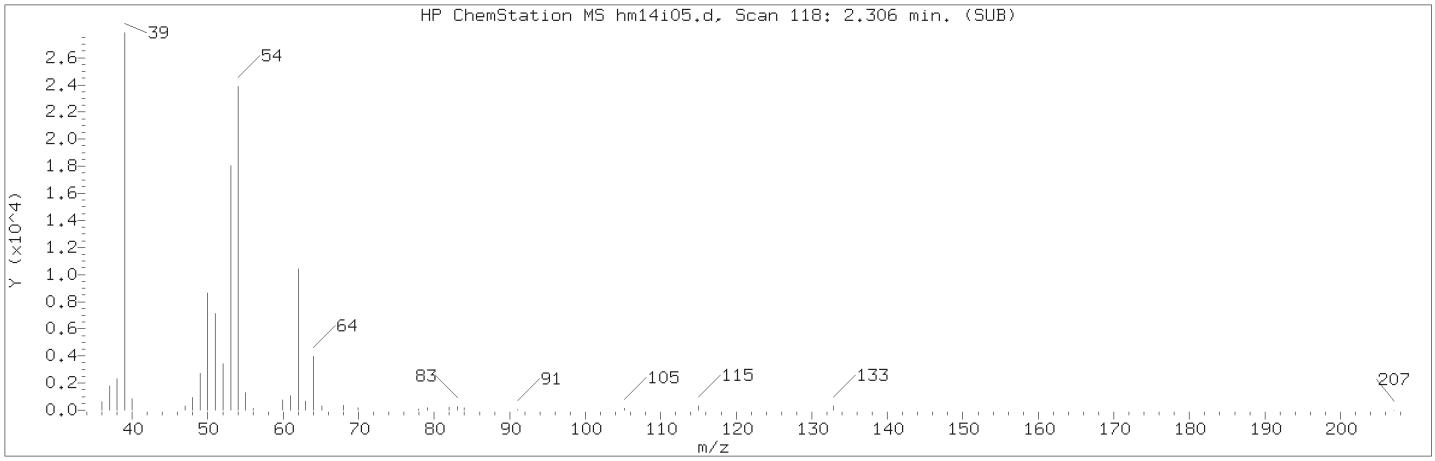
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

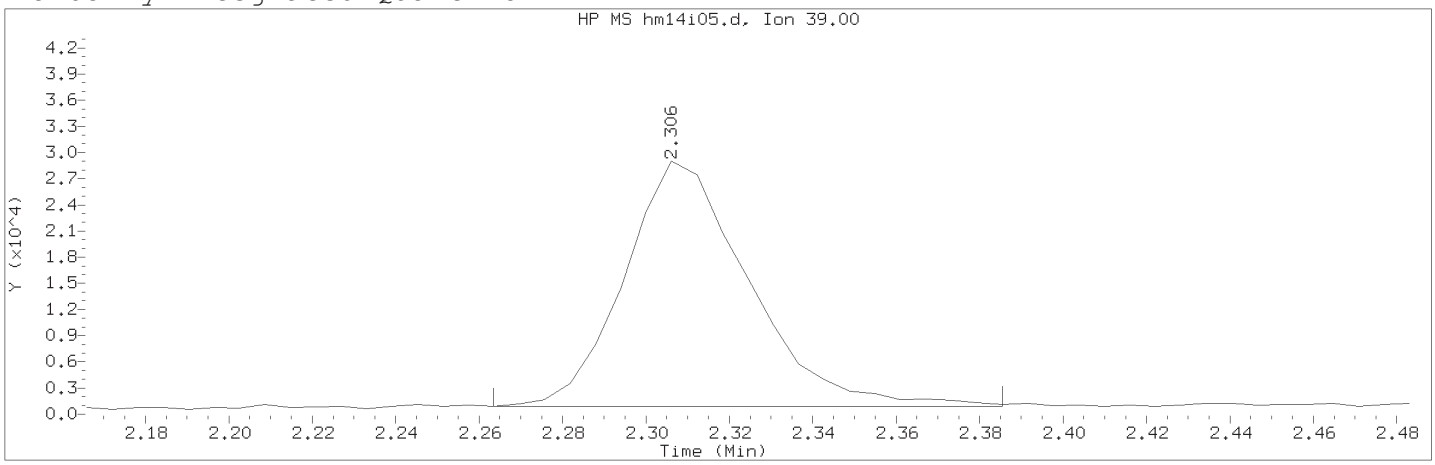
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	74970	1.106

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

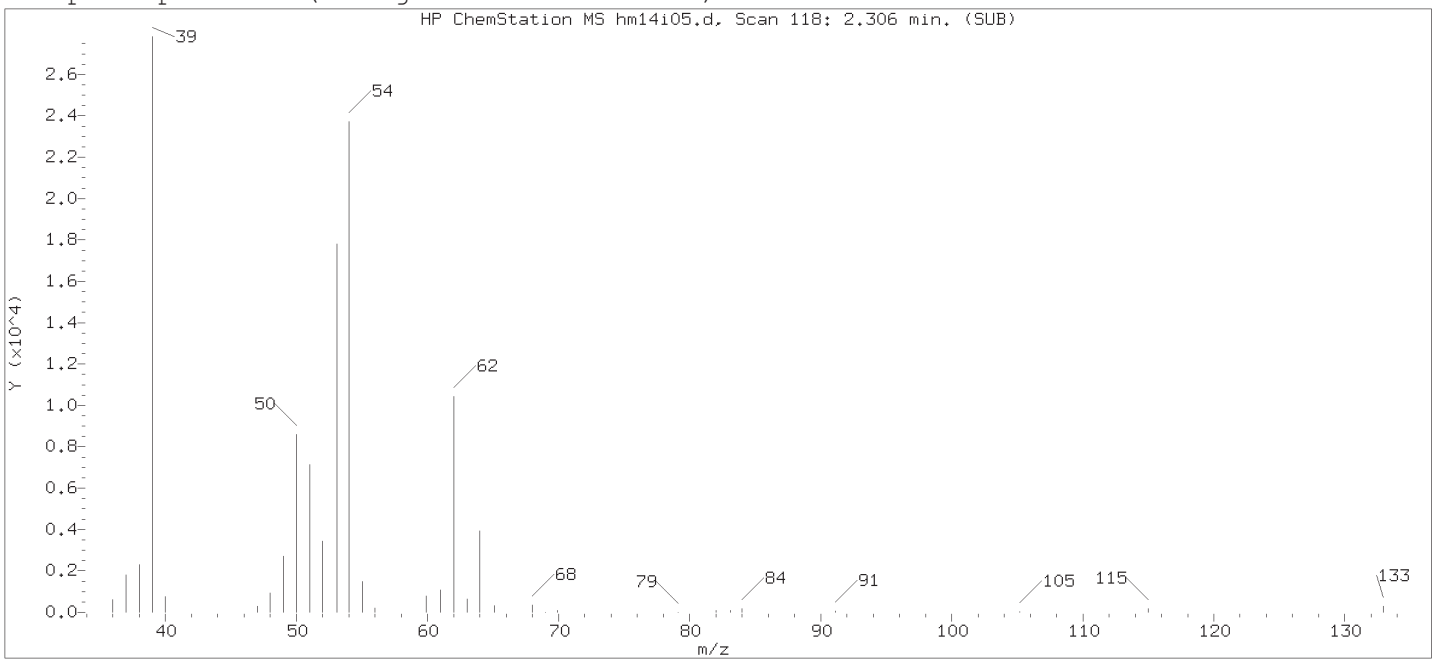
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 58441M
On-Column Amount (ng) : 1.0414
Integration start scan : 110 Integration stop scan: 130
Y at integration start : 866 Y at integration end: 866

Reason for manual integration: improper integration

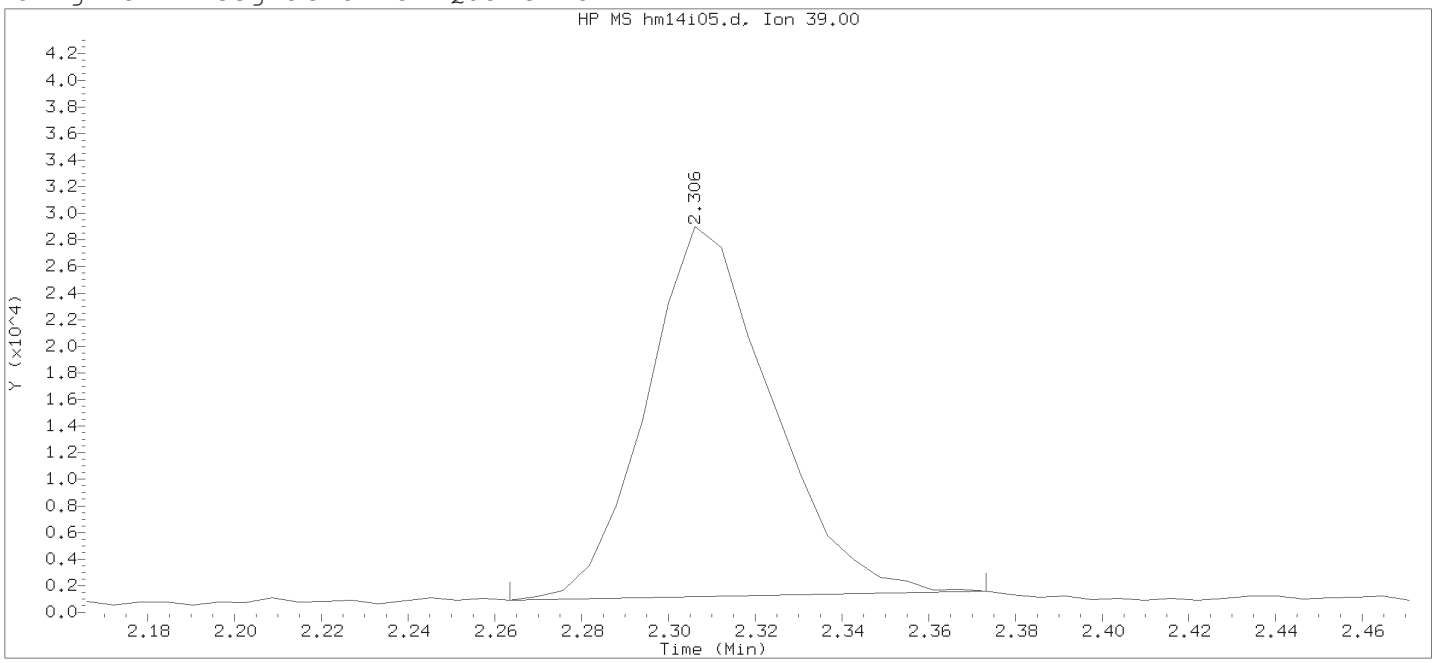
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

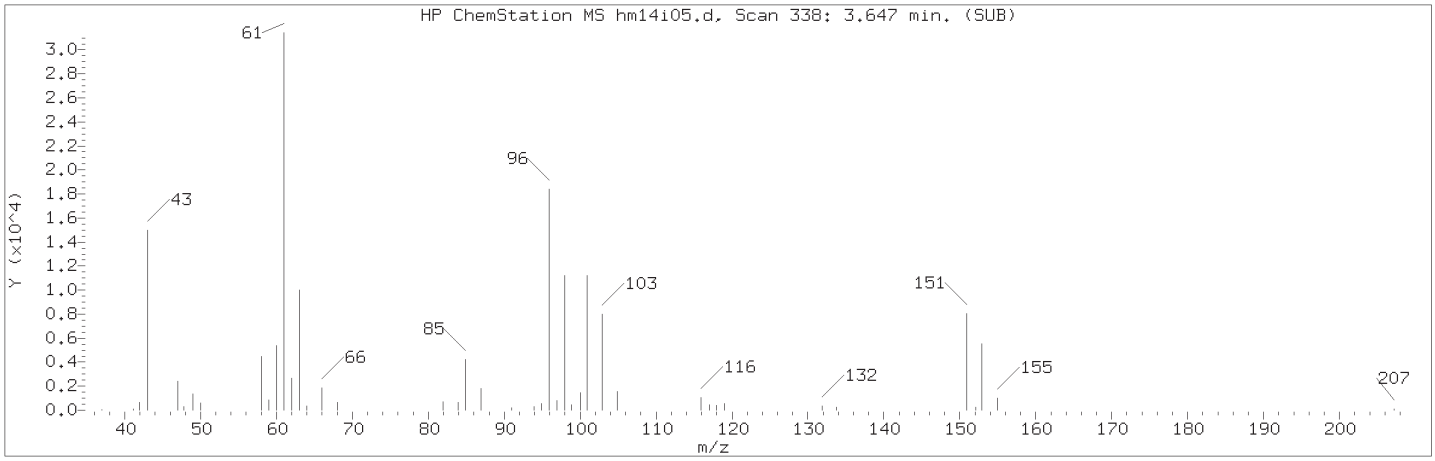
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

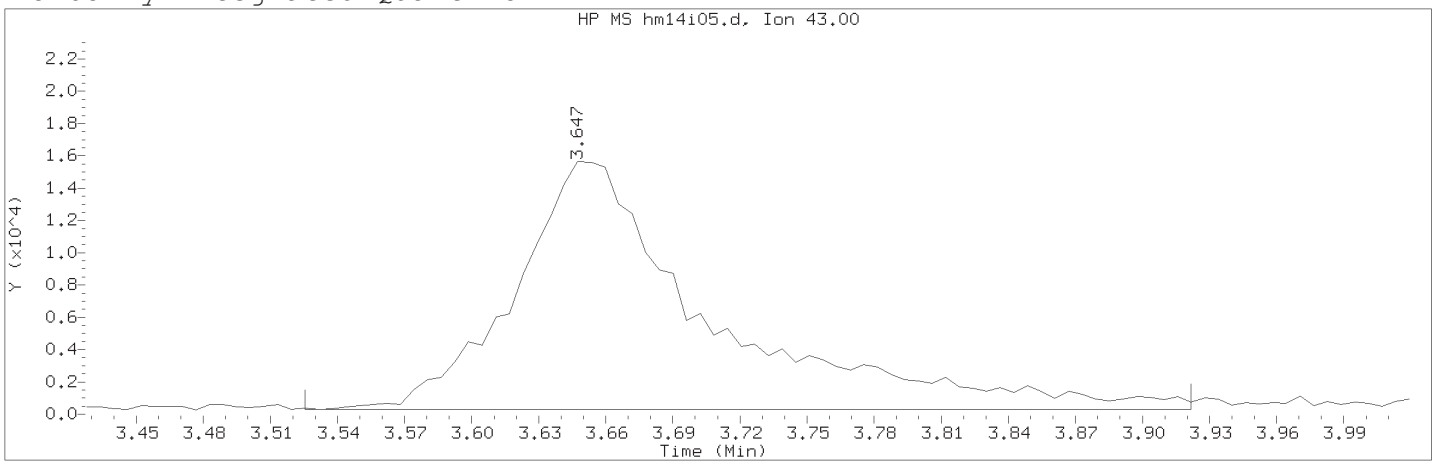
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 55576
On-column Amount (ng) : 1.0770
Integration start scan : 110 Integration stop scan: 128
Y at integration start : 903 Y at integration end: 1582

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

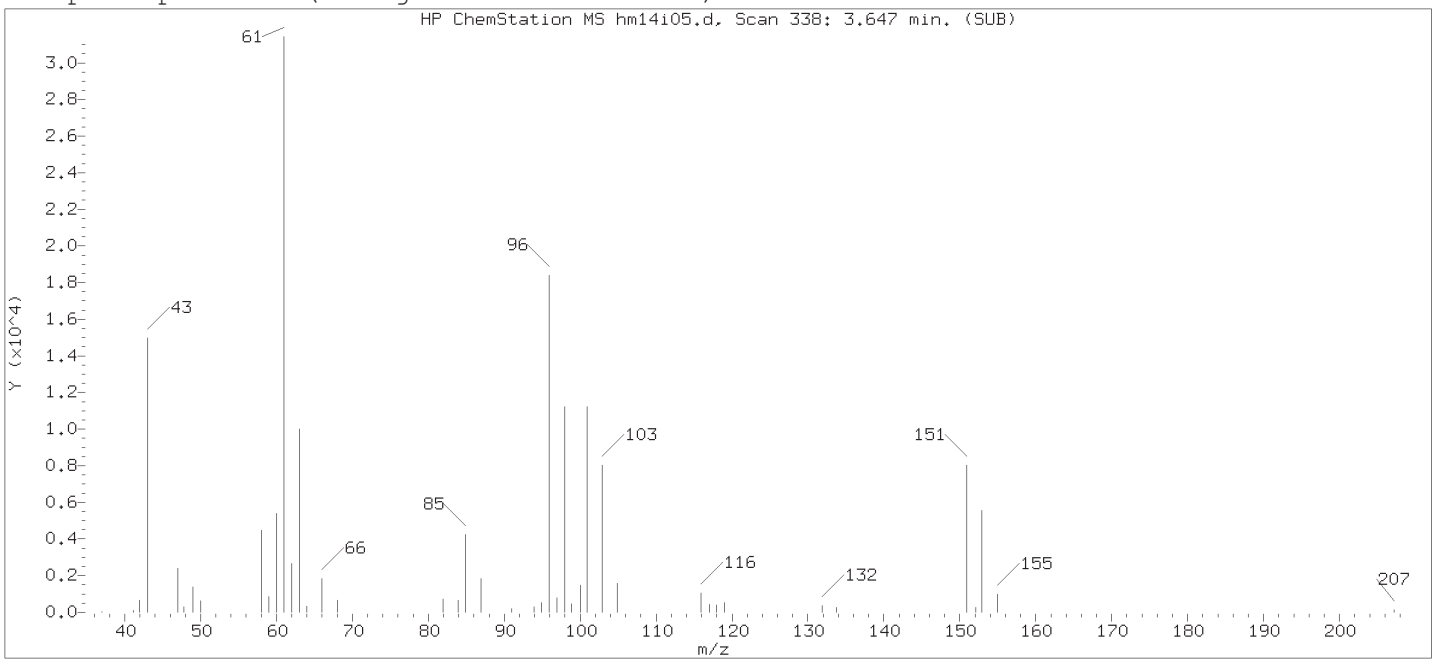
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 92940M
On-Column Amount (ng) : 10.2713
Integration start scan : 317 Integration stop scan: 382
Y at integration start : 282 Y at integration end: 282

Reason for manual integration: improper integration

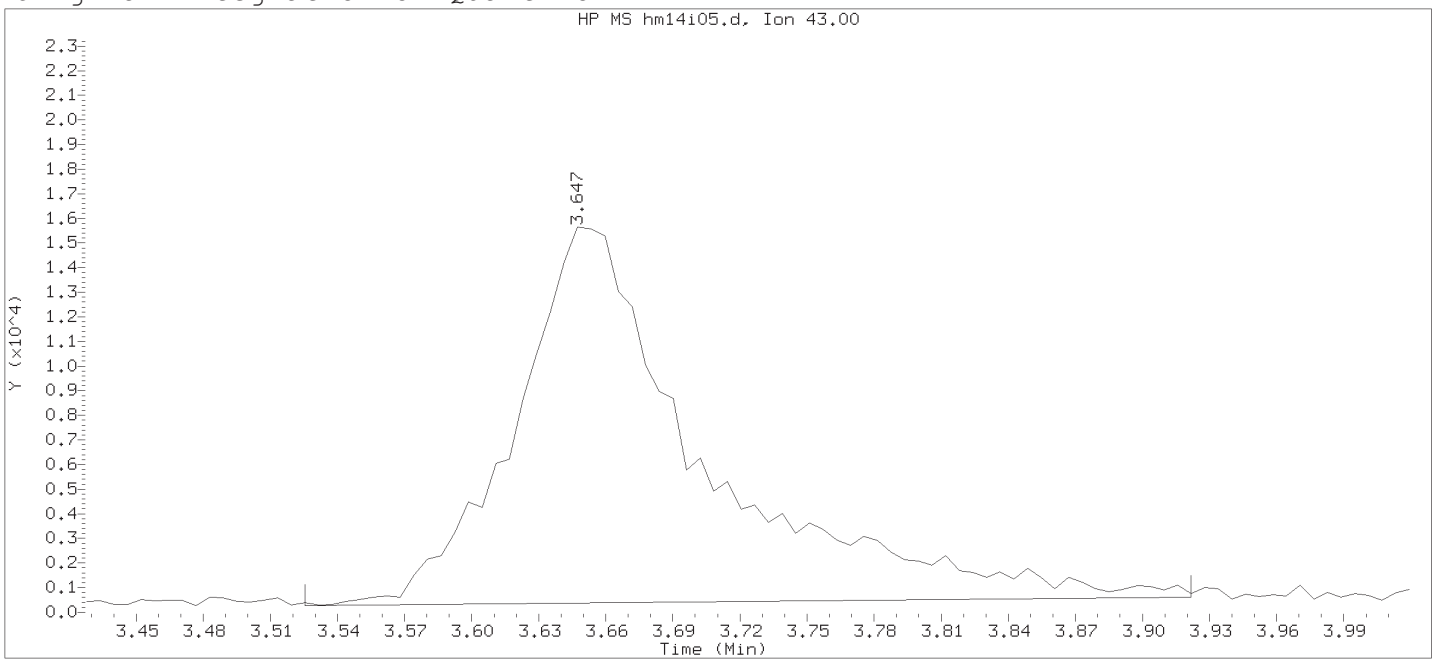
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

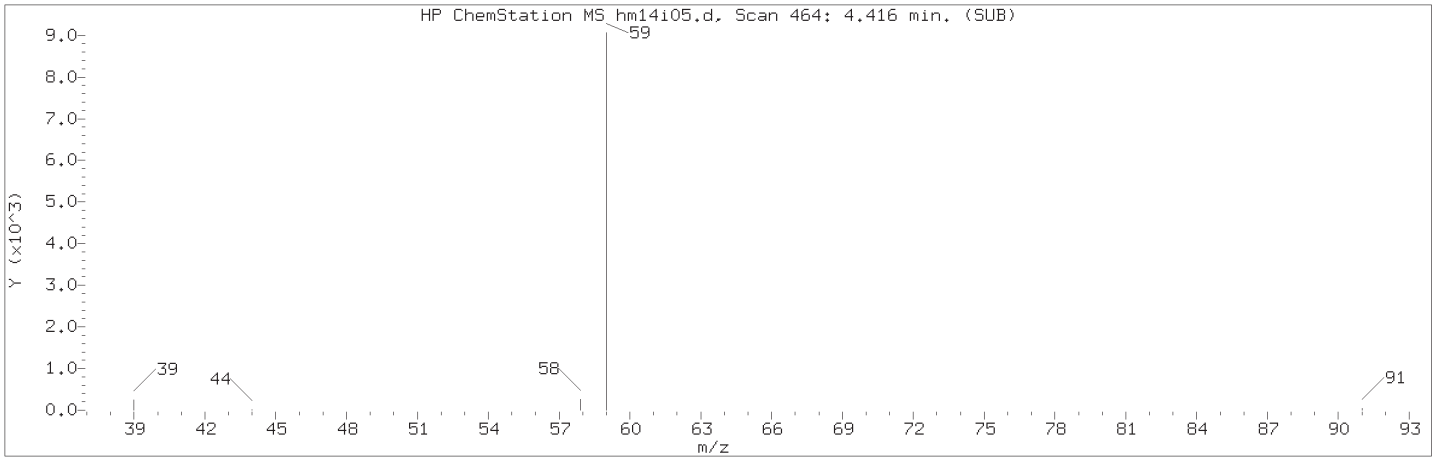
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

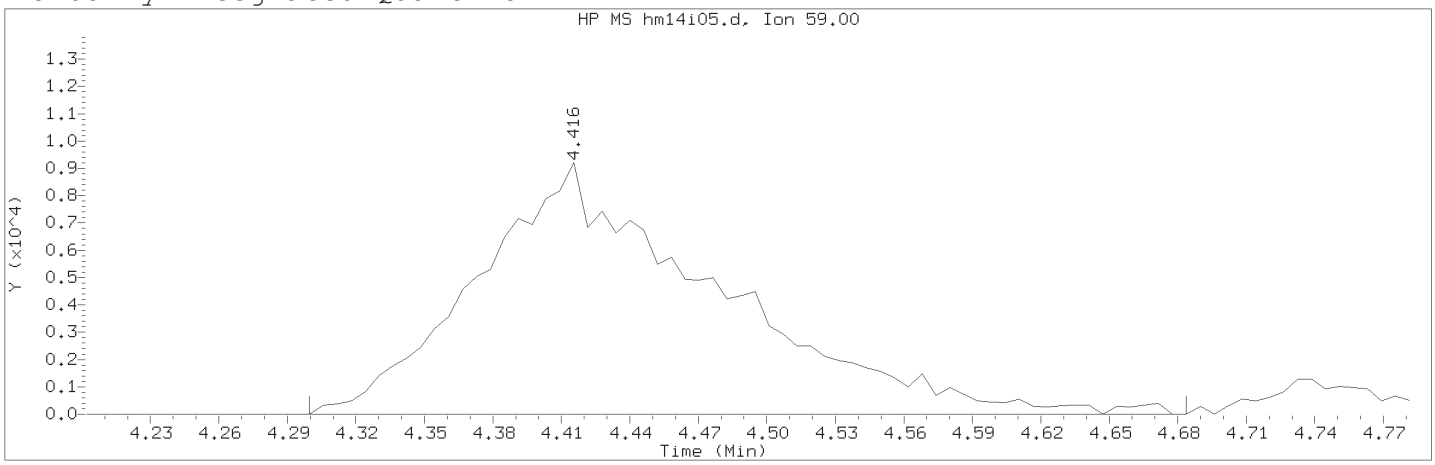
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 89041		
On-column Amount (ng)	: 10.7176		
Integration start scan	: 317	Integration stop scan:	382
Y at integration start	: 276	Y at integration end:	607

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

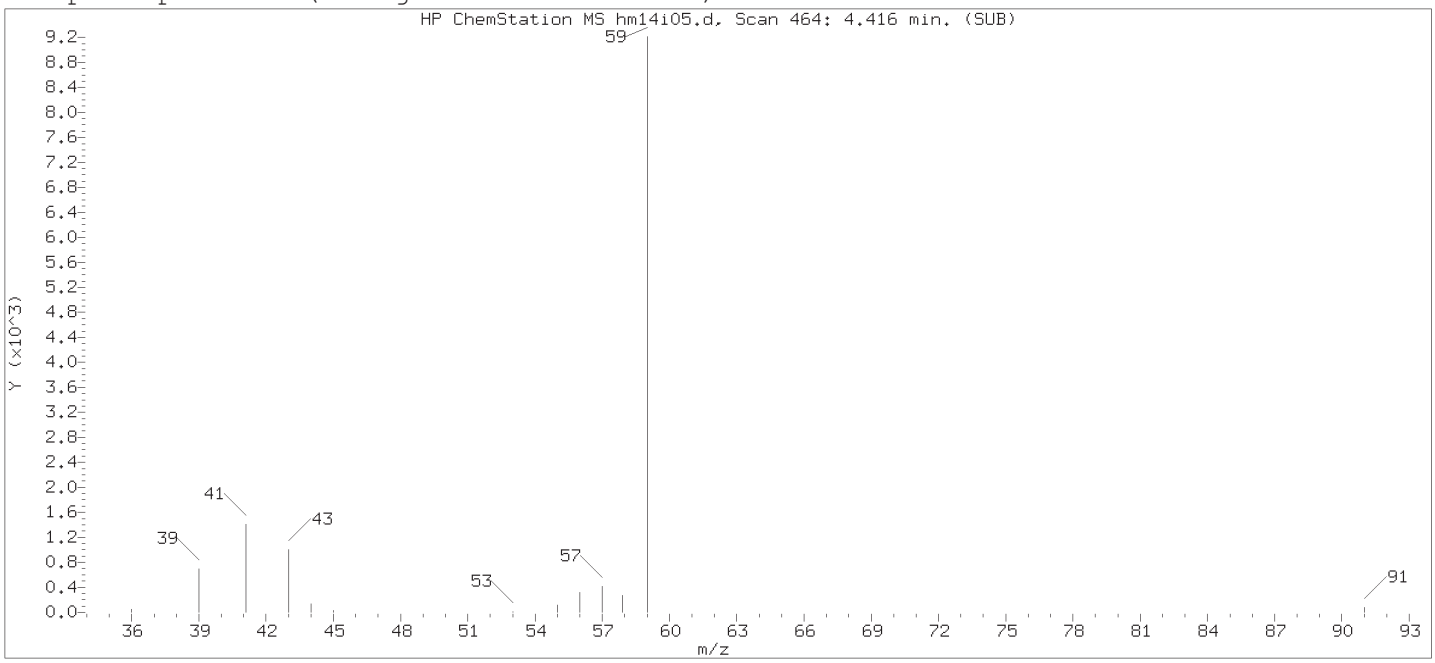
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area (flag) : 66690M
On-Column Amount (ng) : 21.5360
Integration start scan : 444 Integration stop scan: 507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

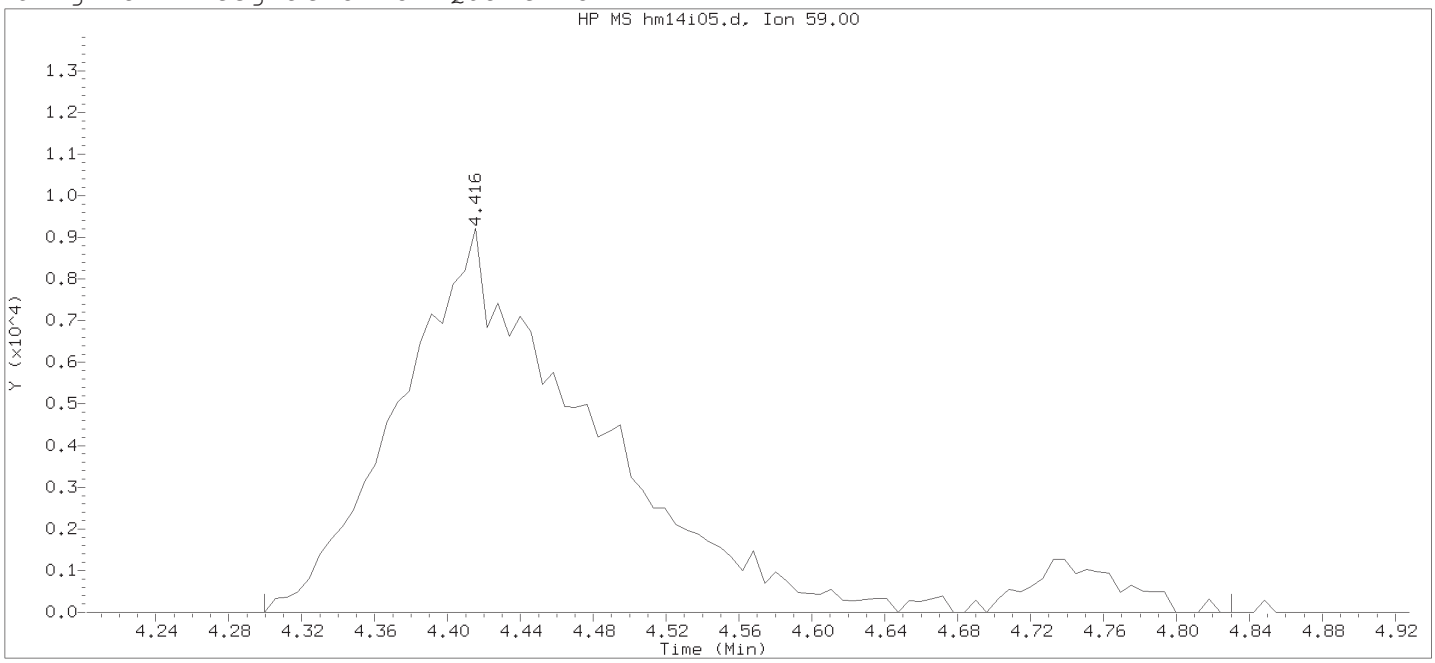
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

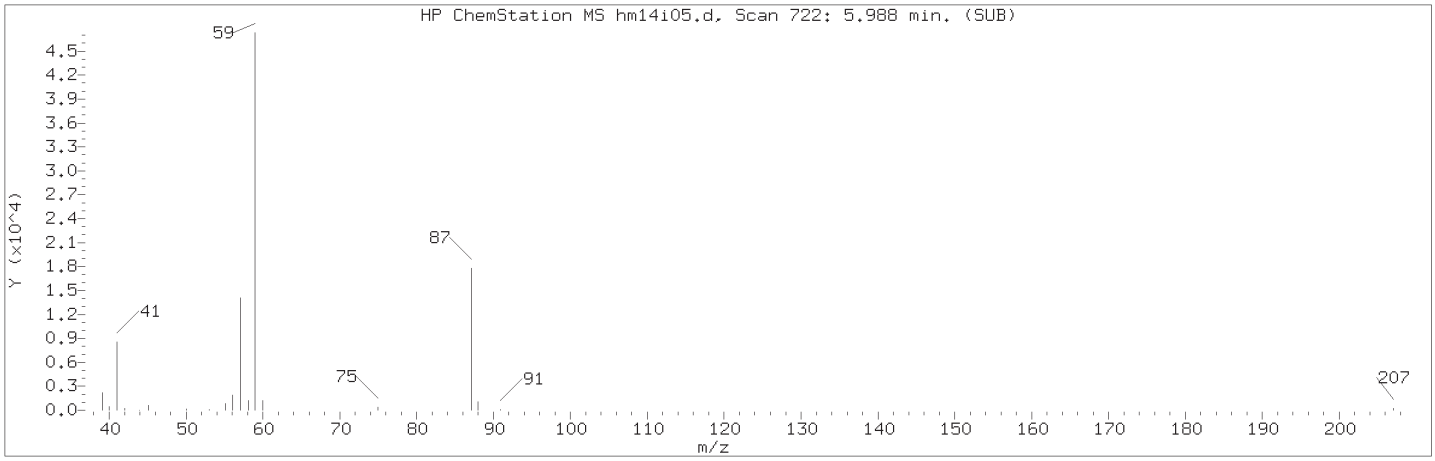
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

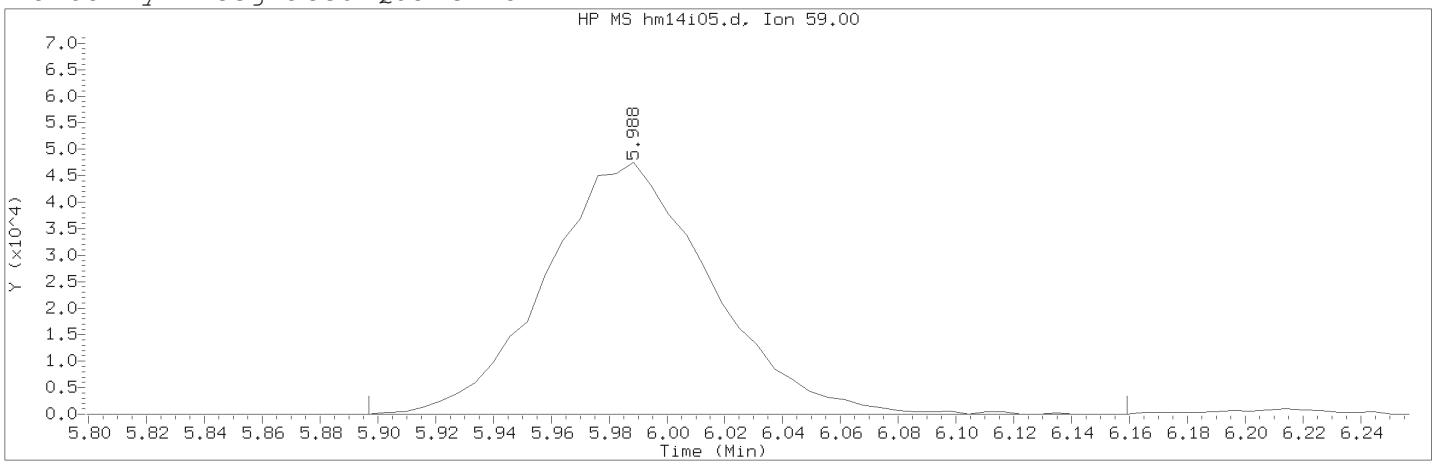
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 464
Retention Time (minutes): 4.416
Quant Ion : 59.00
Area : 71245
On-column Amount (ng) : 23.7600
Integration start scan : 444 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

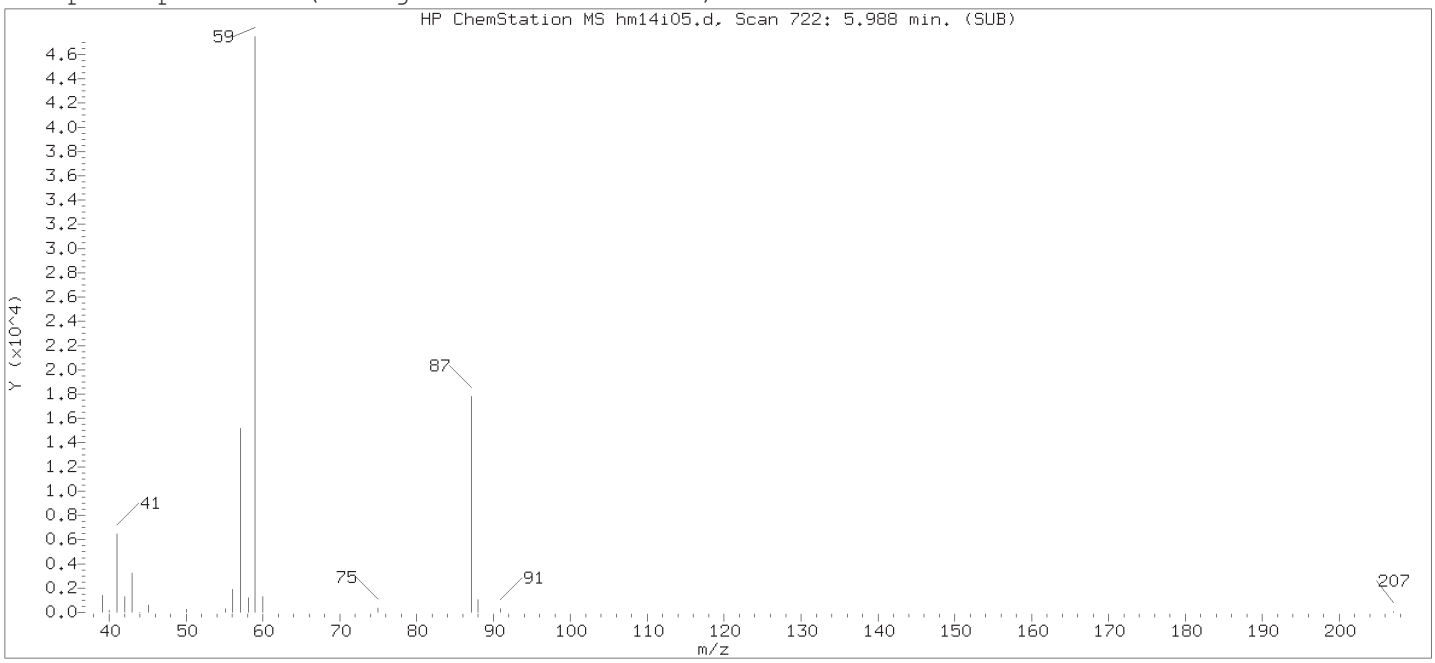
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 722
Retention Time (minutes): 5.988
Quant Ion : 59.00
Area (flag) : 188215M
On-Column Amount (ng) : 1.0505
Integration start scan : 706 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

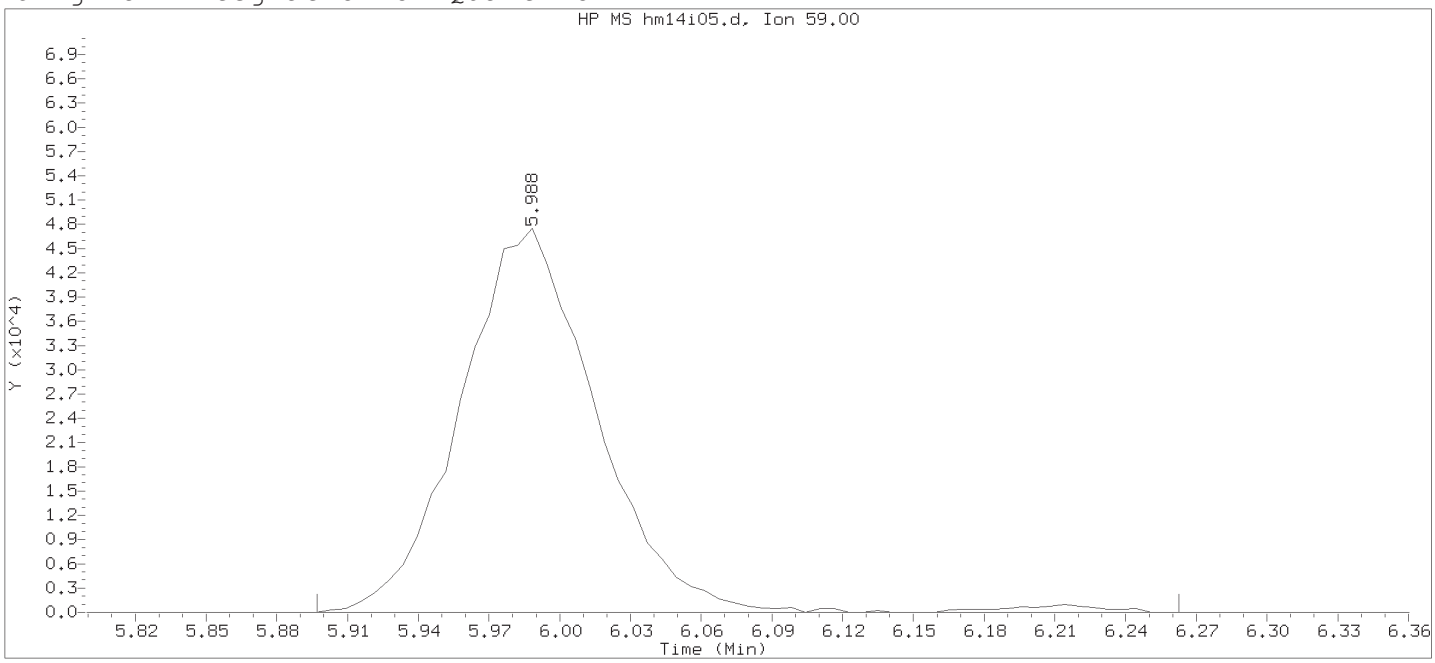
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

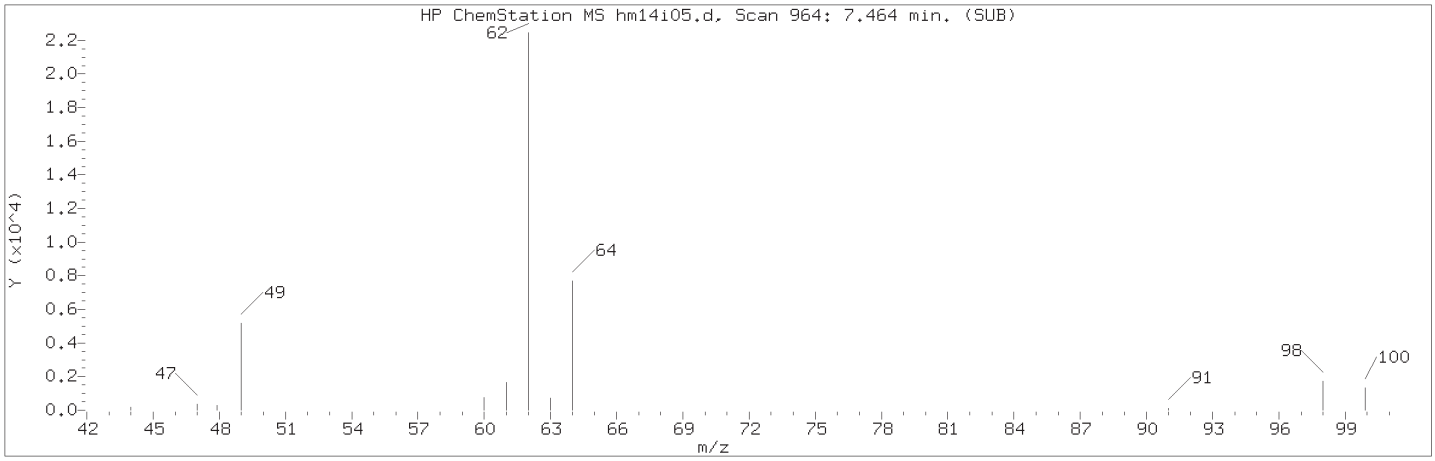
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

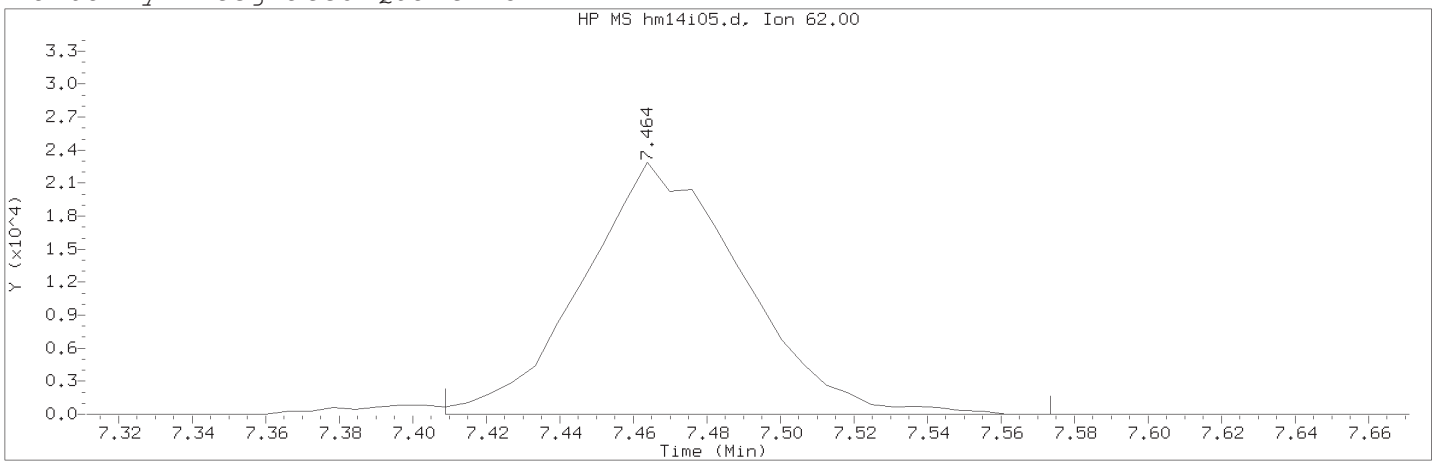
Compound Number	: 37		
Compound Name	: Ethyl t-butyl ether		
Scan Number	: 722		
Retention Time (minutes)	: 5.988		
Quant Ion	: 59.00		
Area	: 190932		
On-column Amount (ng)	: 1.0821		
Integration start scan	: 706	Integration stop scan:	766
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

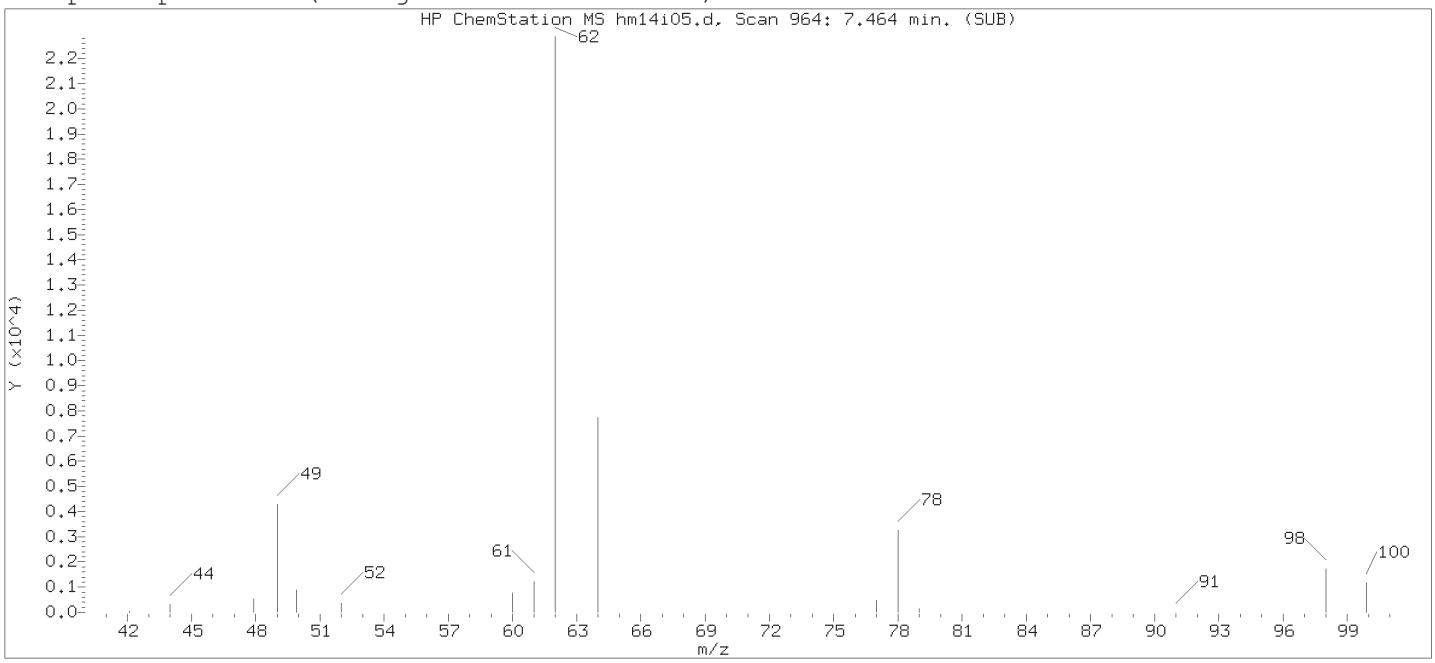
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 69113M
On-Column Amount (ng) : 1.0522
Integration start scan : 954 Integration stop scan: 981
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

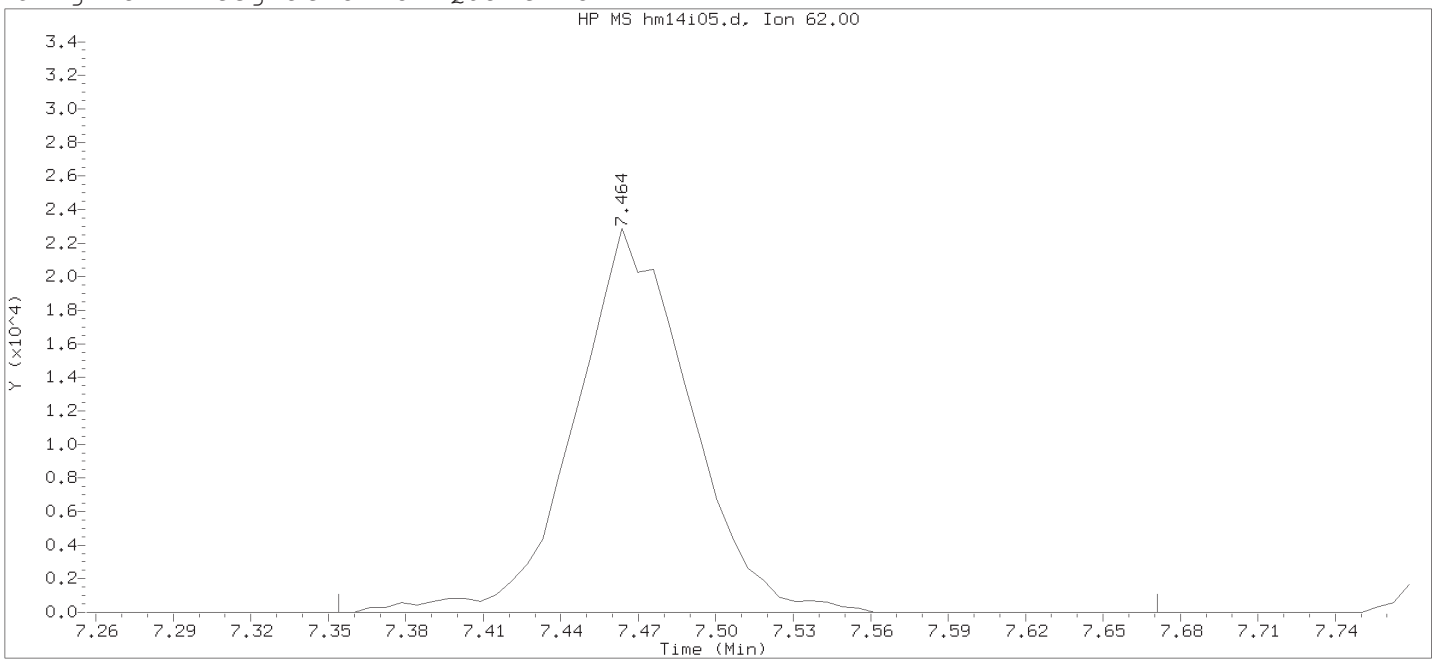
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

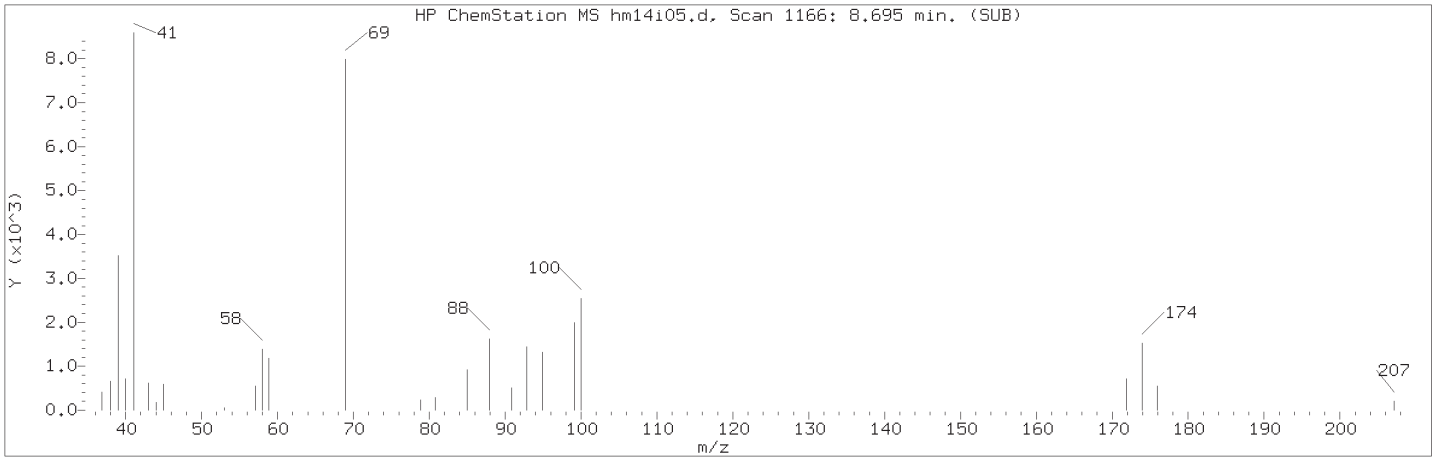
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

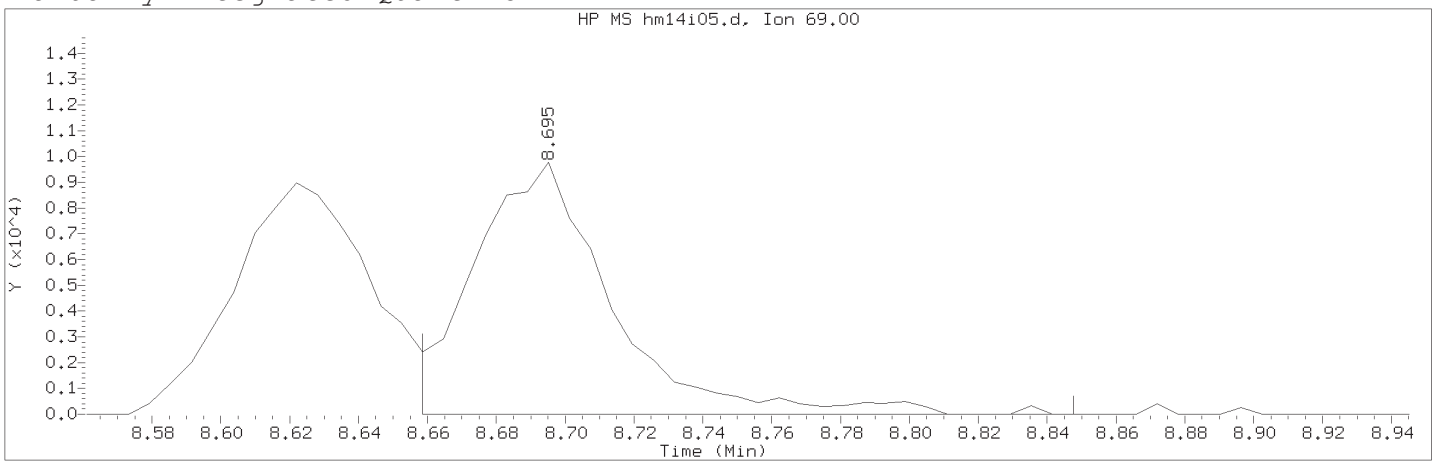
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 70540
On-column Amount (ng) : 1.0847
Integration start scan : 945 Integration stop scan: 997
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

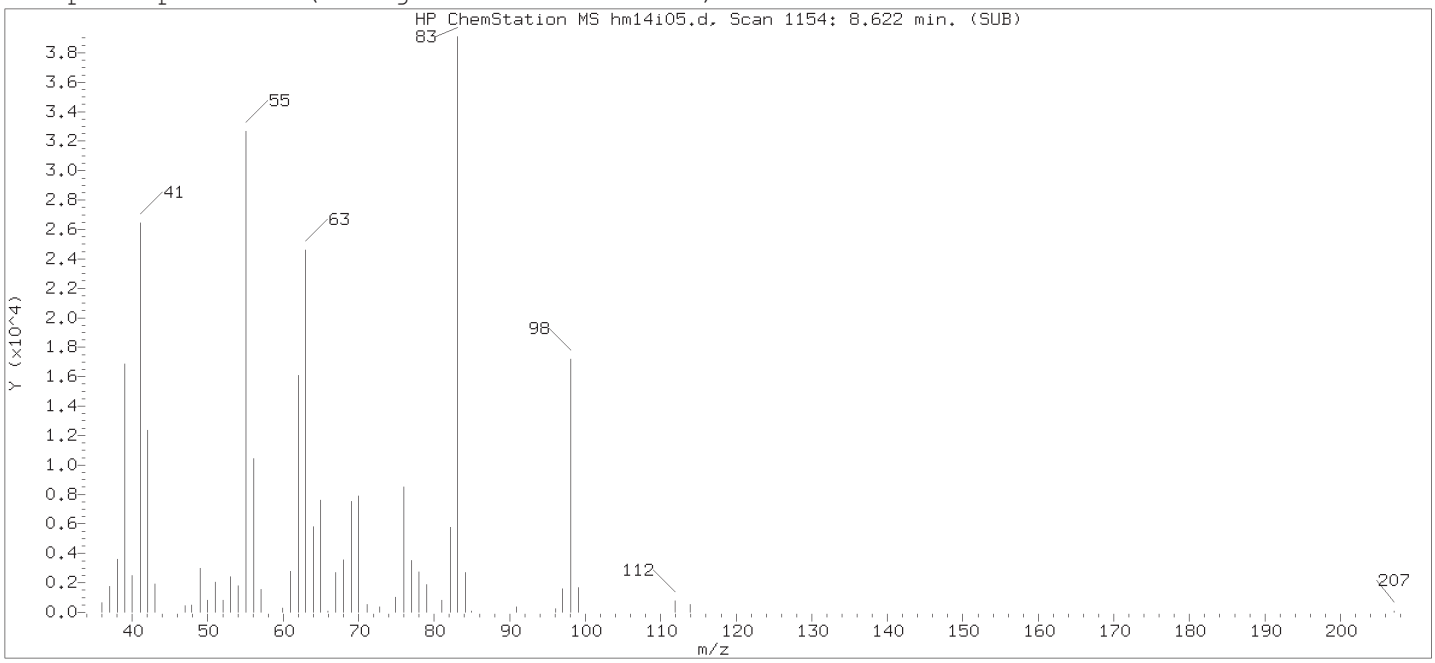
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 26979A
On-Column Amount (ng) : 0.9809
Integration start scan : 1159 Integration stop scan: 1190
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

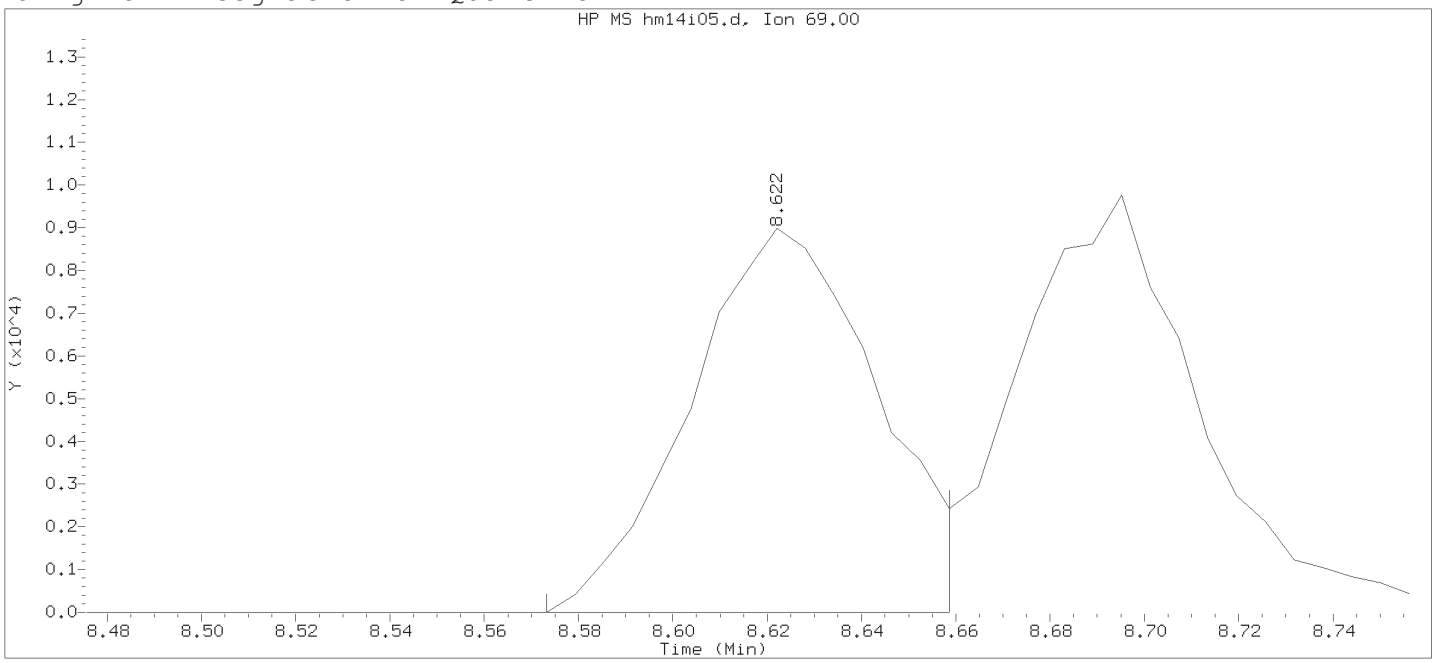
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

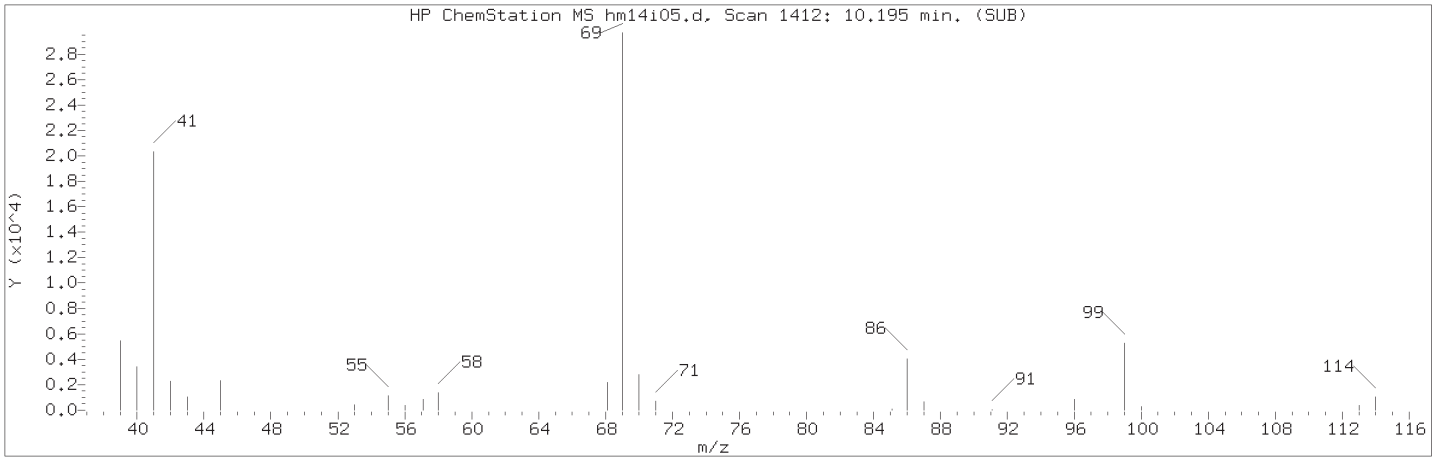
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

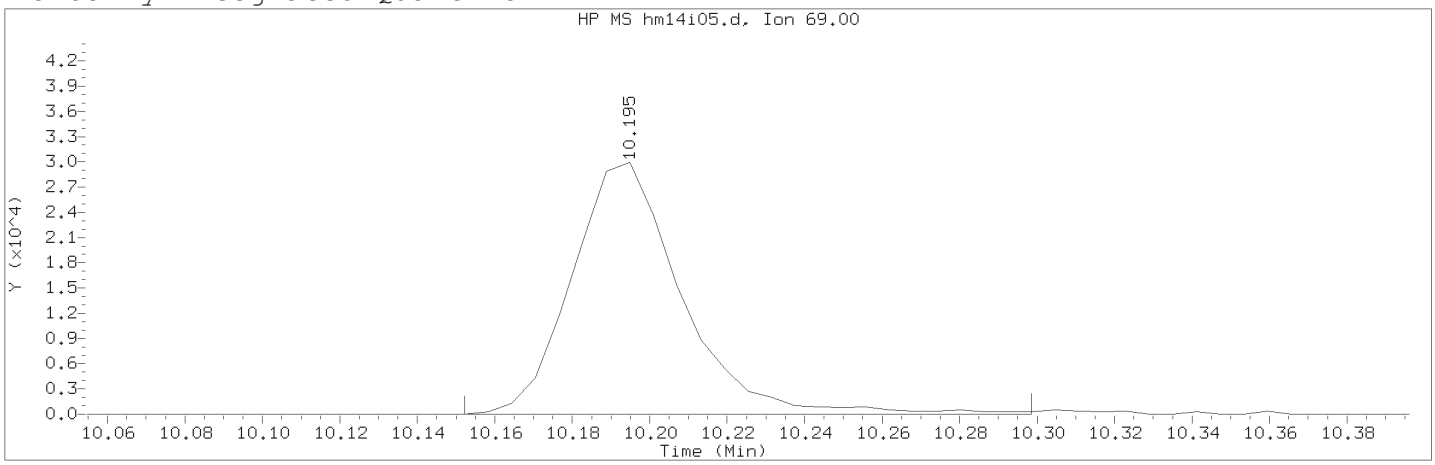
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 24473
On-column Amount (ng) : 0.8821
Integration start scan : 1145 Integration stop scan: 1159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

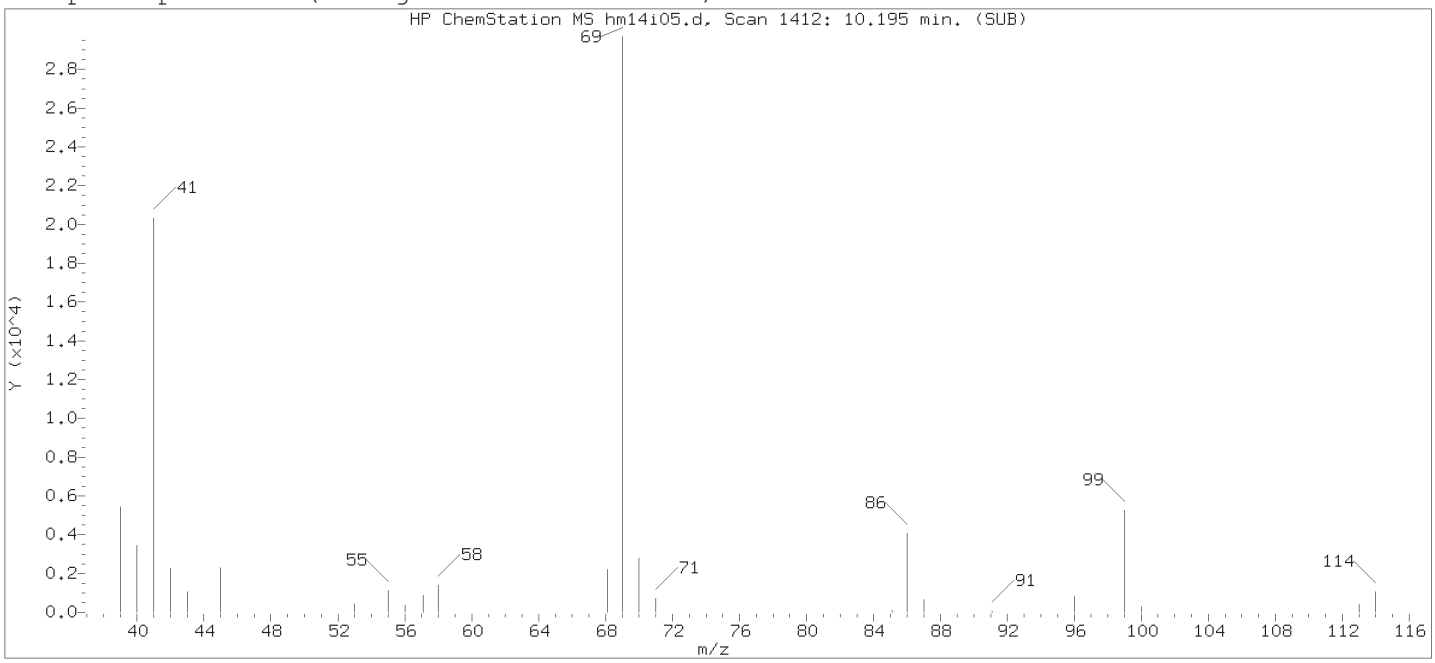
Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area (flag) : 58979M
On-Column Amount (ng) : 1.0442
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

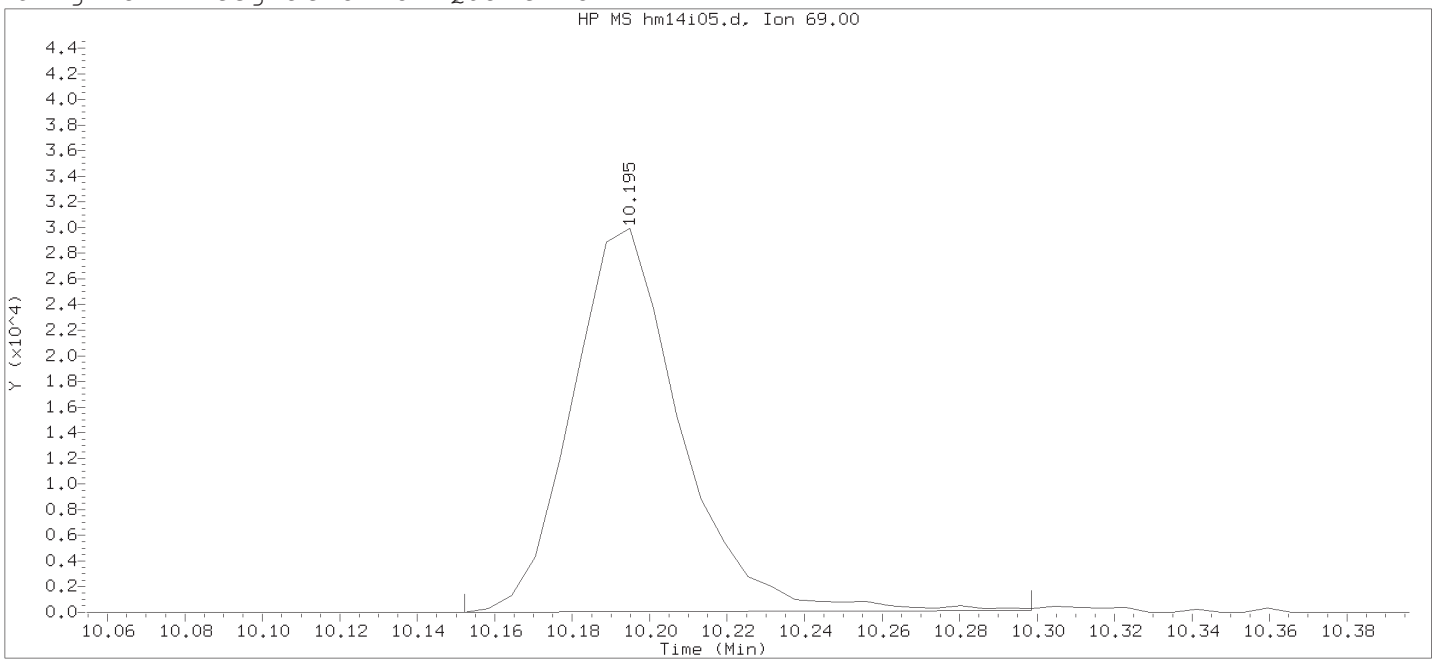
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

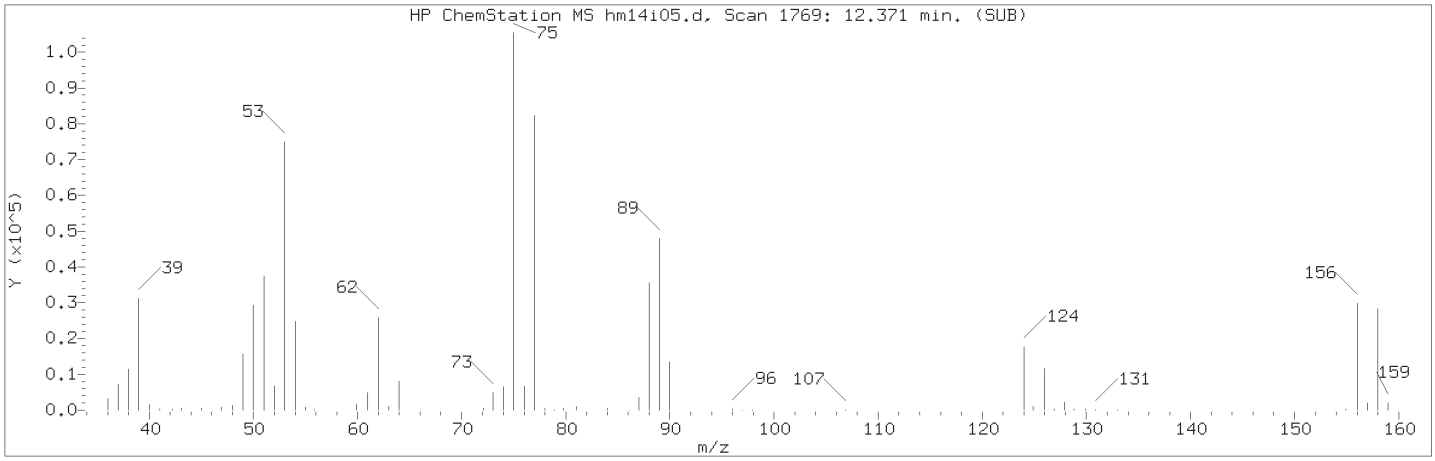
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

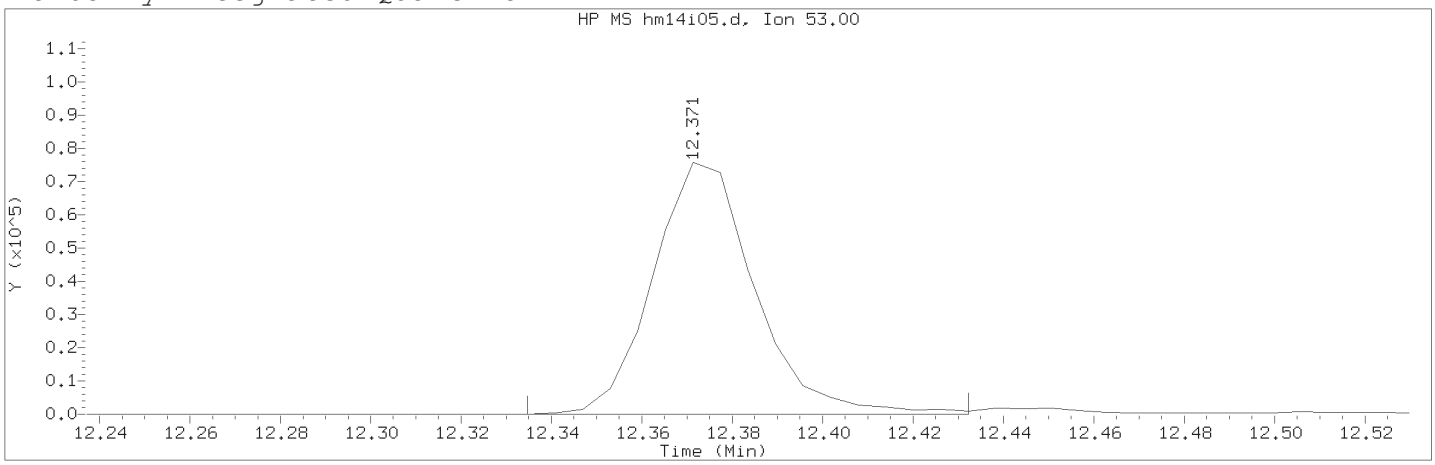
Compound Number : 86
Compound Name : Ethyl Methacrylate
Scan Number : 1412
Retention Time (minutes): 10.195
Quant Ion : 69.00
Area : 58269
On-column Amount (ng) : 1.0472
Integration start scan : 1404 Integration stop scan: 1428
Y at integration start : 0 Y at integration end: 149

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

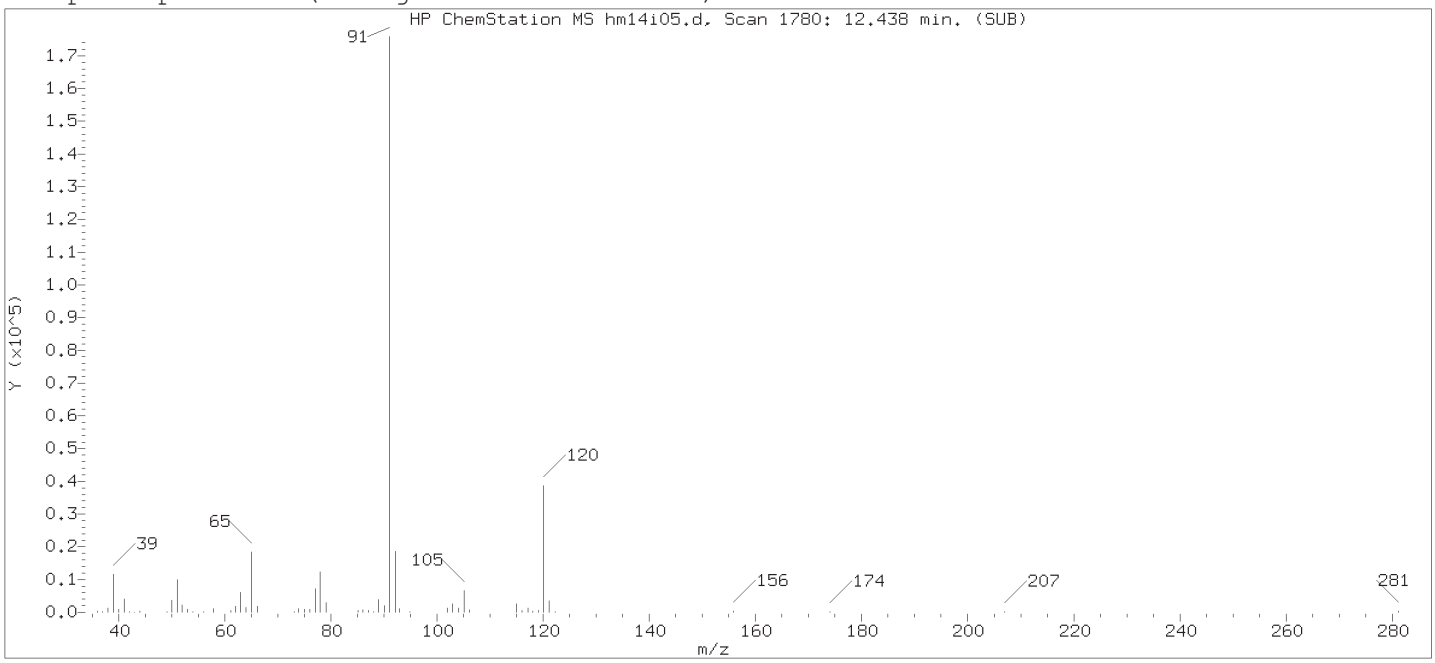
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1769
Retention Time (minutes): 12.371
Quant Ion : 53.00
Area (flag) : 119030A
On-Column Amount (ng) : 10.1867
Integration start scan : 1762 Integration stop scan: 1778
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

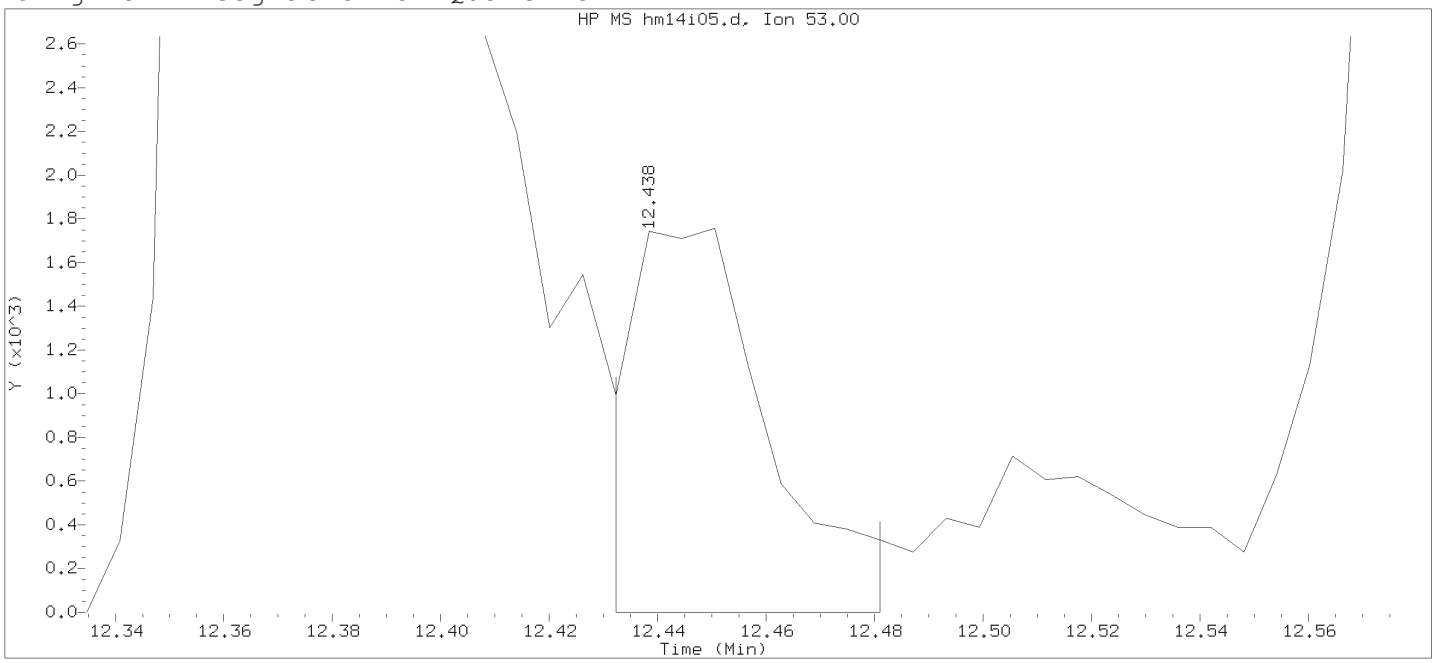
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

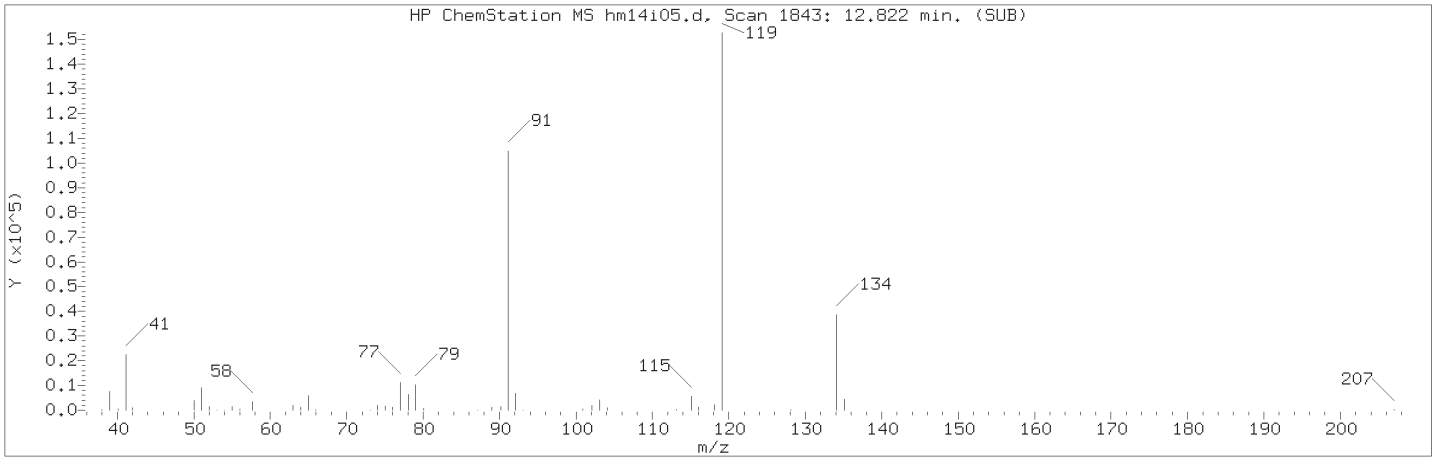
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

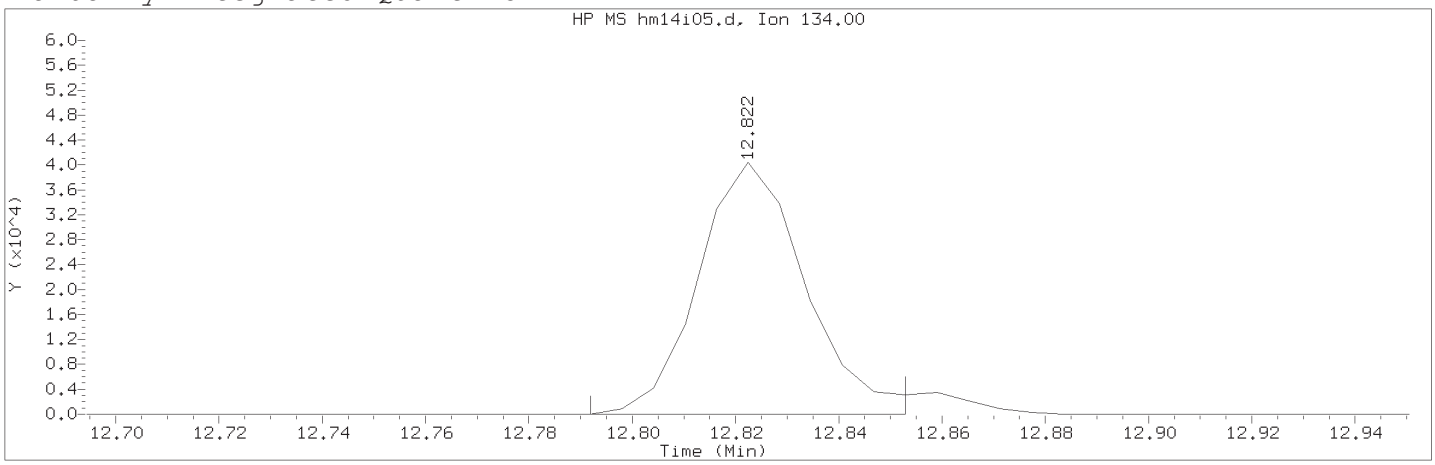
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1780
Retention Time (minutes): 12.438
Quant Ion : 53.00
Area : 3064
On-column Amount (ng) : 0.3344
Integration start scan : 1778 Integration stop scan: 1786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD001 Lab Sample ID: VSTD001

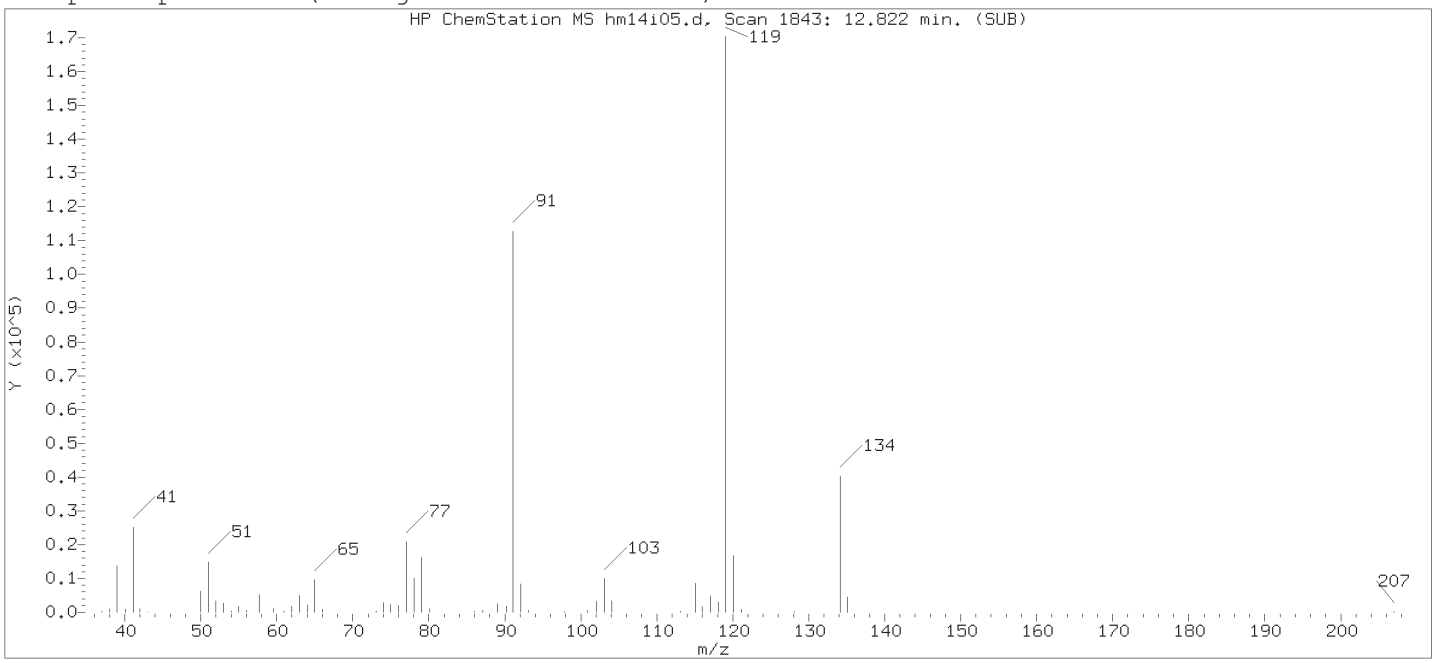
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 58224M
On-Column Amount (ng) : 1.0608
Integration start scan : 1837 Integration stop scan: 1847
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

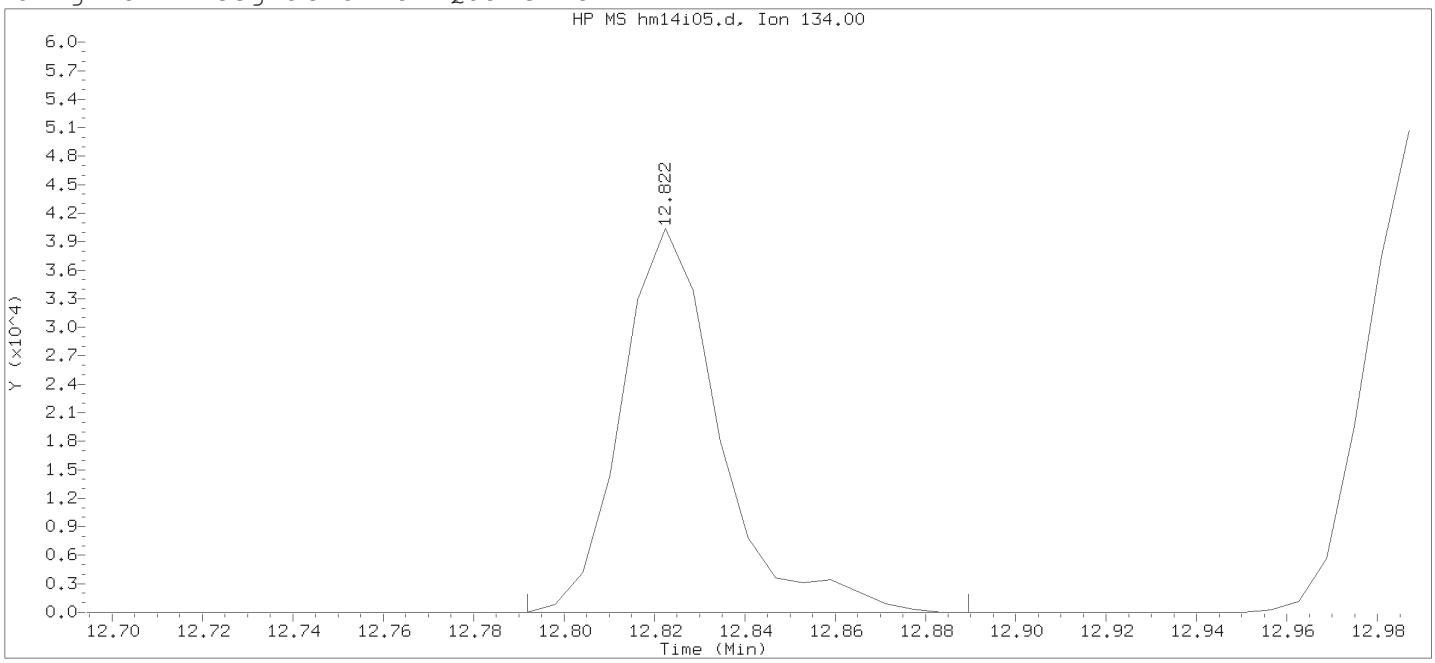
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



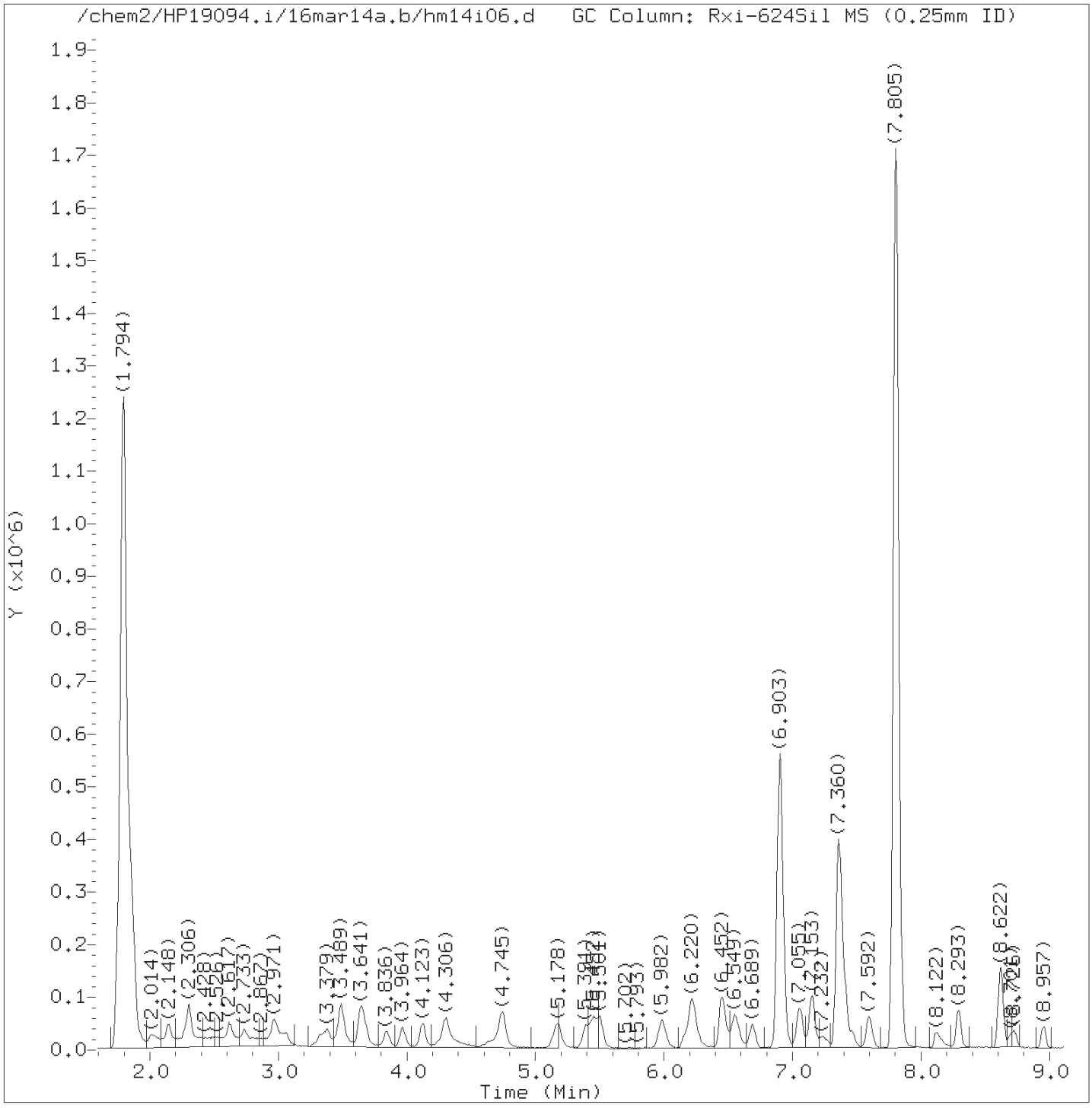
Data File: /chem2/HP19094.i/16mar14a.b/hm14i05.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:15 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:33
Date, time and analyst ID of latest file update: 14-Mar-2016 16:33 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 60718
On-column Amount (ng) : 1.0918
Integration start scan : 1837 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

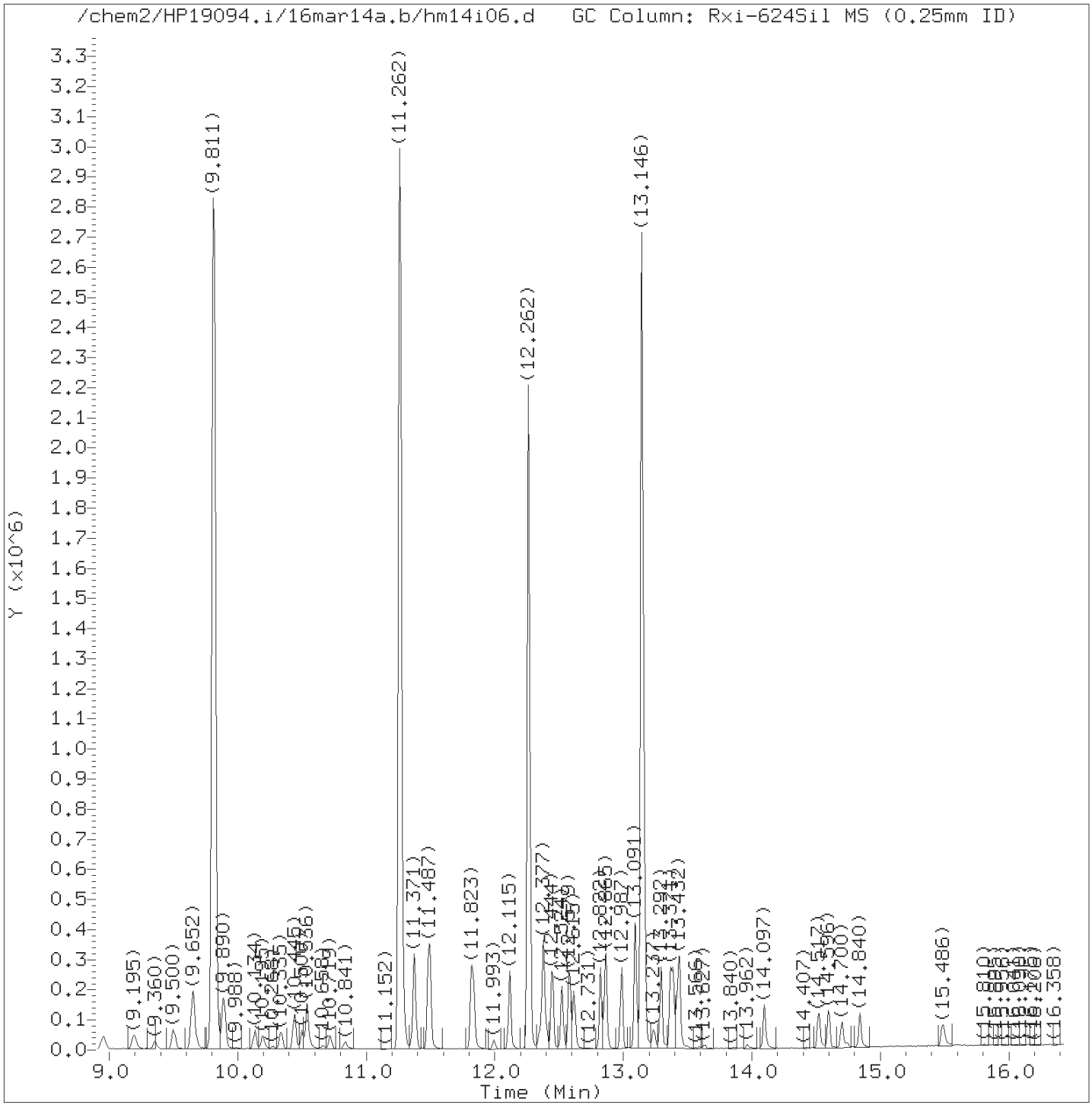
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	40184	0.499
2) Chloromethane	(2)	2.148	50	43348	0.549
5) Vinyl Chloride	(2)	2.282	62	37713	0.513
6) 1,3-Butadiene	(2)	2.306	39	31929M	0.575
7) Bromomethane	(2)	2.617	94	25727	0.528
8) Chloroethane	(2)	2.733	64	24311	0.537
9) Dichlorofluoromethane	(2)	2.965	67	54811	0.533
10) Trichlorofluoromethane	(2)	3.056	101	49676	0.519
11) Ethyl ether	(2)	3.324	59	20456	0.518
12) Freon 123a	(2)	3.373	67	38493	0.526
13) Acrolein	(1)	3.489	56	163912	27.044
15) 1,1-Dichloroethene	(2)	3.641	96	28901	0.526
16) Freon 113	(2)	3.660	101	30580	0.536
14) Acetone	(1)	3.660	43	52537	6.291
17) Methyl Iodide	(2)	3.842	142	53694	0.528
18) Carbon Disulfide	(2)	3.964	76	90535	0.534
21) Methyl Acetate	(1)	4.111	43	10225M	0.436
22) Allyl Chloride	(2)	4.129	41	57668	0.555
26)*t-Butyl Alcohol-d10	(1)	4.275	65	106301	50.000
23) Methylene Chloride	(2)	4.300	84	31336	0.534
28) t-Butyl Alcohol	(1)	4.440	59	29714	10.396
29) Acrylonitrile	(1)	4.629	53	27034	2.698
30) Methyl Tertiary Butyl Ether	(2)	4.726	73	65484	0.517
31) trans-1,2-Dichloroethene	(2)	4.745	96	32032	0.542
32) n-Hexane	(2)	5.178	57	53126	0.529
33) 1,1-Dichloroethane	(2)	5.391	63	64178	0.533
34) di-Isopropyl Ether	(2)	5.452	45	110047	0.523
35) 2-Chloro-1,3-Butadiene	(2)	5.507	53	52860	0.534
37) Ethyl t-butyl ether	(2)	5.976	59	92475	0.521
40) 1,2-Dichloroethene (Total)	(2)		96	66546	1.069
38) 2-Butanone	(1)	6.165	43	75185	5.283
39) cis-1,2-Dichloroethene	(2)	6.214	96	34514	0.527
41) 2,2-Dichloropropane	(2)	6.226	77	52479	0.544
42) Propionitrile	(1)	6.238	54	36087	10.169
45) Methacrylonitrile	(1)	6.452	67	64613	5.318
47) Bromochloromethane	(2)	6.549	128	13099	0.526
48) Tetrahydrofuran	(1)	6.568	71	19570	5.436
49) Chloroform	(2)	6.683	83	57150	0.519

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	536851	9.755
50)$Dibromofluoromethane	(2)	6.903	111	554348	9.790
51) 1,1,1-Trichloroethane	(2)	6.939	97	50196	0.534
52) Cyclohexane	(2)	7.061	56	68514	0.558
52) Cyclohexane	(2)	7.055	84	56914	0.605
52) Cyclohexane	(2)	7.061	69	18877	0.537
55) 1,1-Dichloropropene	(2)	7.147	75	47498	0.527
54) Carbon Tetrachloride	(2)	7.159	117	44948	0.526
56) Isobutyl Alcohol	(1)	7.250	41	26068	25.740
57)$1,2-Dichloroethane-d4	(2)	7.360	102	89545	9.824
57)$1,2-Dichloroethane-d4	(2)	7.360	65	448273	9.633
57)$1,2-Dichloroethane-d4	(2)	7.360	104	54035	9.389
58) Benzene	(2)	7.409	78	133306	0.531
59) 1,2-Dichloroethane	(2)	7.470	62	33374M	0.513
60) t-Amyl methyl ether	(2)	7.598	73	73732	0.509
63)*Fluorobenzene	(2)	7.805	96	2335462	10.000
62) n-Heptane	(2)	7.829	43	60575M	0.534
65) n-Butanol	(1)	8.122	56	40331	49.478
67) Trichloroethene	(2)	8.293	95	33901	0.518
70) 1,2-Dichloropropane	(2)	8.610	63	34835	0.533
69) Methylcyclohexane	(2)	8.622	83	58941	0.550
71) Methyl Methacrylate	(1)	8.689	69	13601A	0.536
72) 1,4-Dioxane	(1)	8.713	88	2854	17.772
73) Dibromomethane	(2)	8.726	93	13961	0.519
74) Bromodichloromethane	(2)	8.957	83	38256	0.509
76) 2-Nitropropane	(1)	9.195	41	44943	5.523
80) cis-1,3-Dichloropropene	(2)	9.500	75	45238	0.490
81) 4-Methyl-2-Pentanone	(1)	9.652	43	186093	5.313
82)$Toluene-d8	(3)	9.811	98	2268918	10.243
82)$Toluene-d8	(3)	9.811	100	1473141	10.274
83) Toluene	(3)	9.890	92	81840	0.548
84) trans-1,3-Dichloropropene	(3)	10.134	75	36598	0.523
85) 1,3-Dichloropropene (total)	(3)		75	81836	1.013
86) Ethyl Methacrylate	(3)	10.195	69	28481	0.529
88) 1,1,2-Trichloroethane	(3)	10.335	97	19097	0.528
89) Tetrachloroethene	(3)	10.445	166	38977	0.553
90) 1,3-Dichloropropane	(3)	10.500	76	34375	0.529
91) 2-Hexanone	(1)	10.536	43	121611M	4.911

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	24621	0.531
95) 1,2-Dibromoethane	(3)	10.835	107	18616	0.547
97)*Chlorobenzene-d5	(3)	11.262	117	1554894	10.000
98) Chlorobenzene	(3)	11.286	112	87530	0.539
99) 1,1,1,2-Tetrachloroethane	(3)	11.371	131	28920	0.519
100) Ethylbenzene	(3)	11.371	91	156551	0.536
101) m+p-Xylene	(3)	11.493	106	120935	1.086
105) Xylene (Total)	(3)		106	180074	1.633
104) o-Xylene	(3)	11.816	106	59139	0.547
106) Styrene	(3)	11.835	104	92822	0.537
107) Bromoform	(3)	11.993	173	12916	0.503
108) Isopropylbenzene	(3)	12.115	105	157247	0.549
111)$4-Bromofluorobenzene	(3)	12.262	95	701040	9.819
111)$4-Bromofluorobenzene	(3)	12.262	174	587578	9.870
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	21790M	0.525
114) Bromobenzene	(4)	12.377	156	34134	0.552
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	55039	5.103
116) 1,2,3-Trichloropropane	(4)	12.396	110	5897	0.566
117) n-Propylbenzene	(4)	12.444	91	185309	0.554
119) 2-Chlorotoluene	(4)	12.524	126	36274	0.562
121) 1,3,5-Trimethylbenzene	(4)	12.579	105	130379	0.559
122) 4-Chlorotoluene	(4)	12.615	126	35686	0.543
125) tert-Butylbenzene	(4)	12.822	134	27825M	0.560
126) Pentachloroethane	(4)	12.853	167	19797	0.528
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	129293	0.555
128) sec-Butylbenzene	(4)	12.987	105	167062	0.553
131) 1,3-Dichlorobenzene	(4)	13.091	146	66114	0.547
132) p-Isopropyltoluene	(4)	13.097	119	141783	0.555
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	663285	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	68720	0.559
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	54688	0.566
136) Benzyl Chloride	(4)	13.237	126	9369	0.570
138) n-Butylbenzene	(4)	13.389	92	65180M	0.521
139) 1,2-Dichlorobenzene	(4)	13.420	146	60057	0.559
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	2698	0.485
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	42987	0.559
146) Hexachlorobutadiene	(4)	14.596	225	21047	0.524
147) Naphthalene	(4)	14.700	128	75793	0.574

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Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

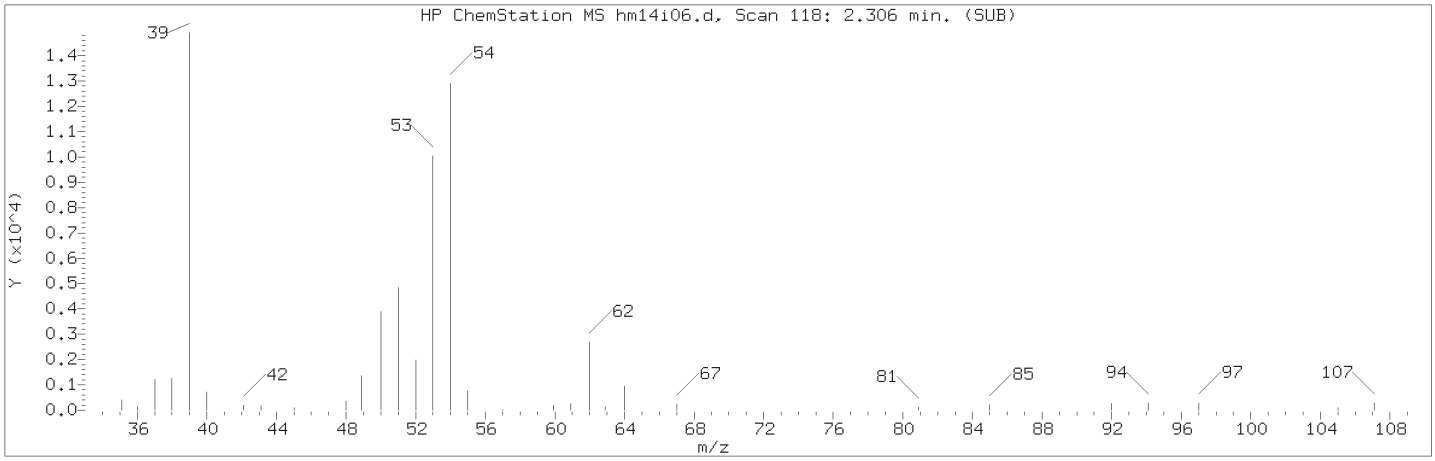
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

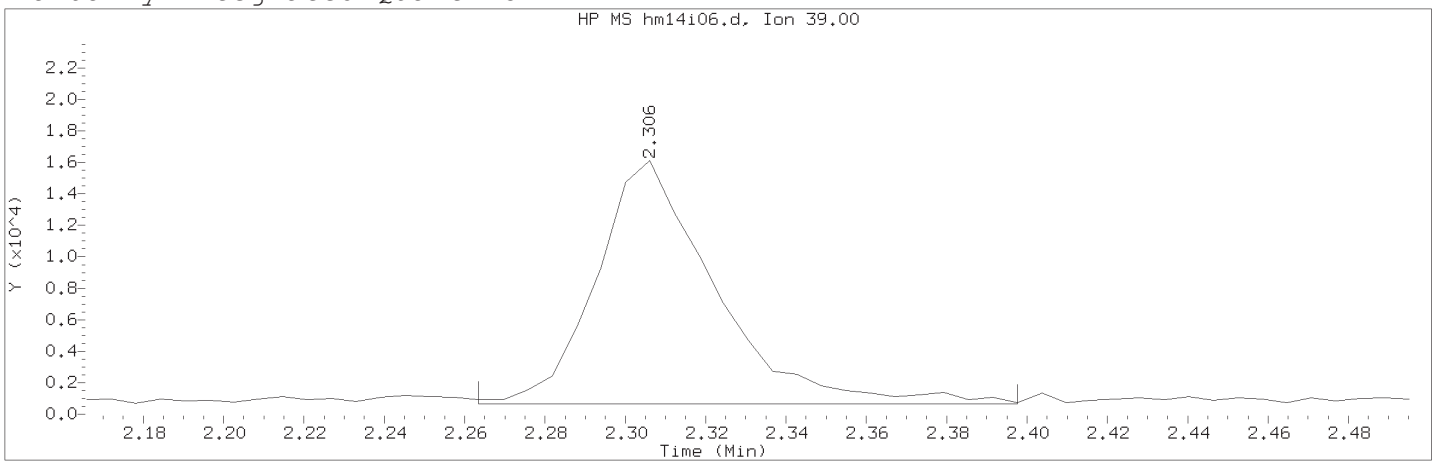
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	38375	0.625

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

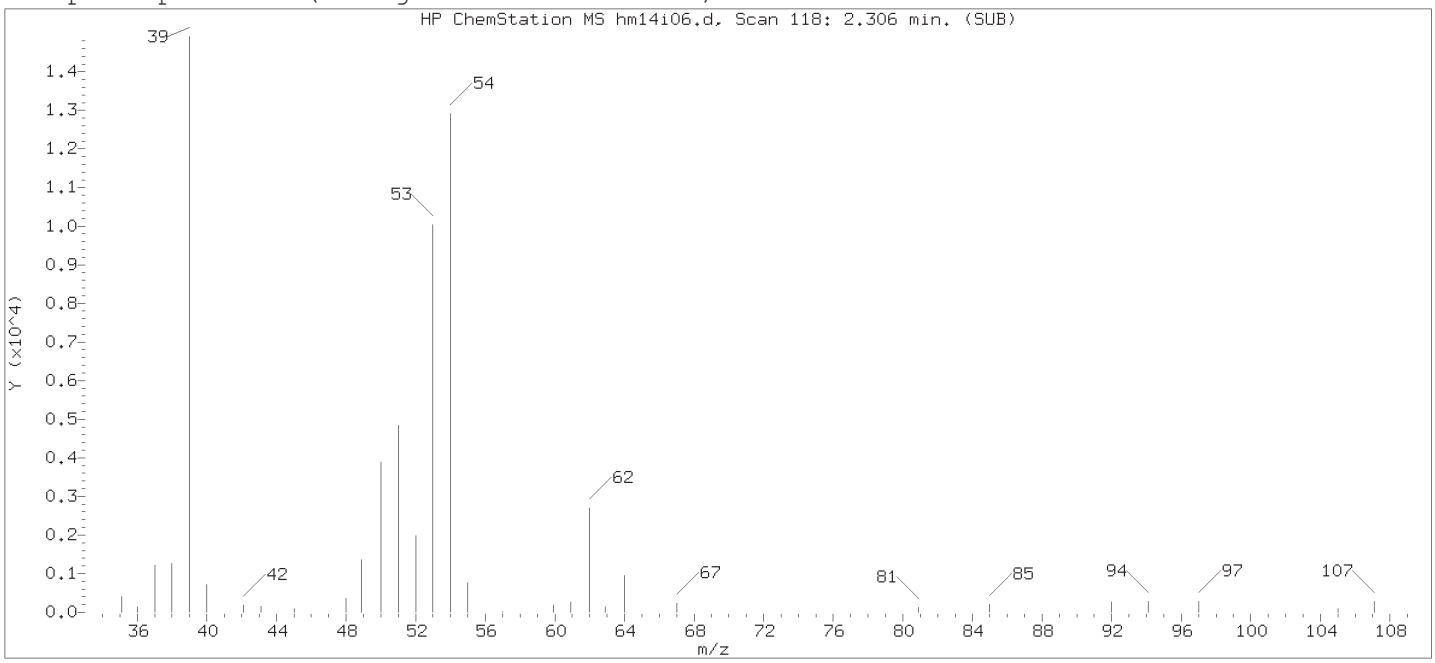
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 31929M
On-Column Amount (ng) : 0.5747
Integration start scan : 110 Integration stop scan: 132
Y at integration start : 658 Y at integration end: 658

Reason for manual integration: improper integration

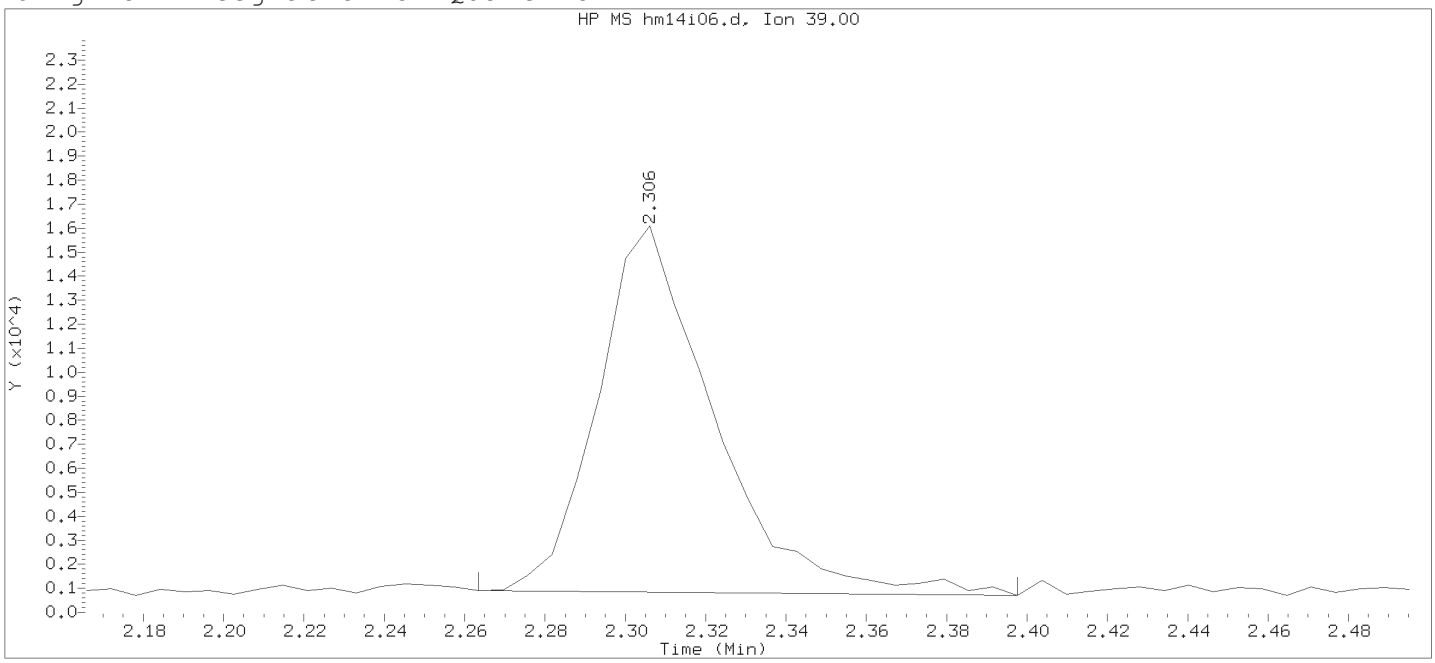
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

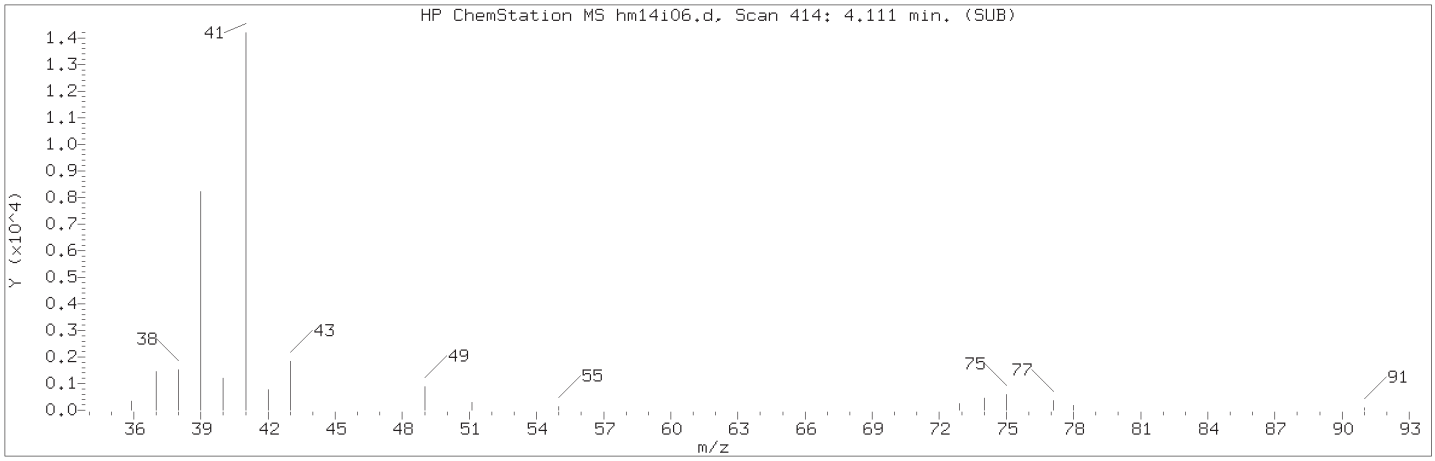
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

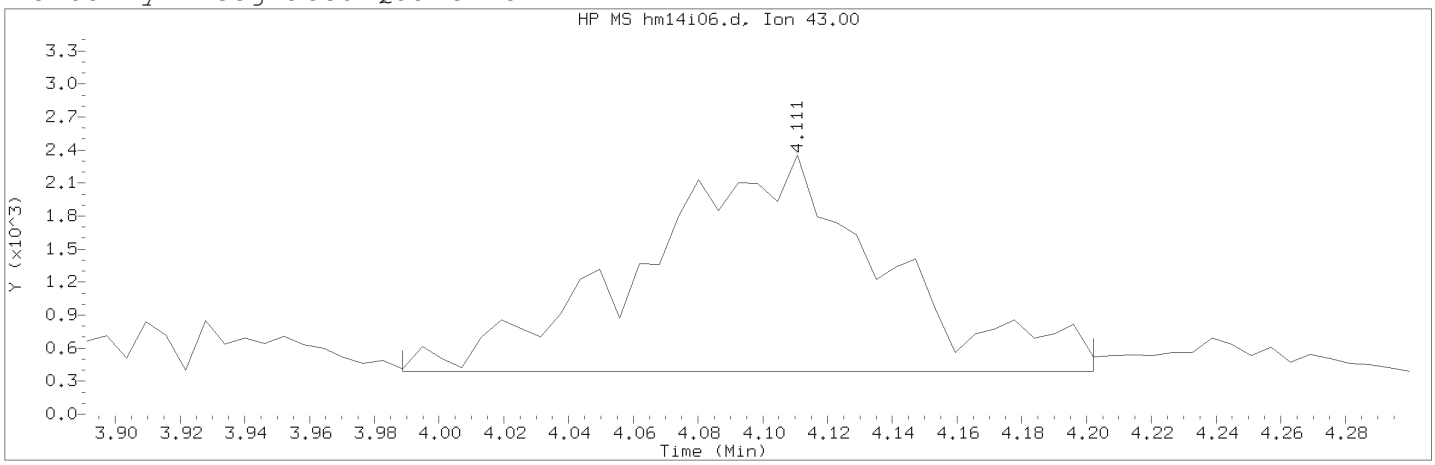
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 30607
On-column Amount (ng) : 0.5799
Integration start scan : 110 Integration stop scan: 132
Y at integration start : 916 Y at integration end: 714

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

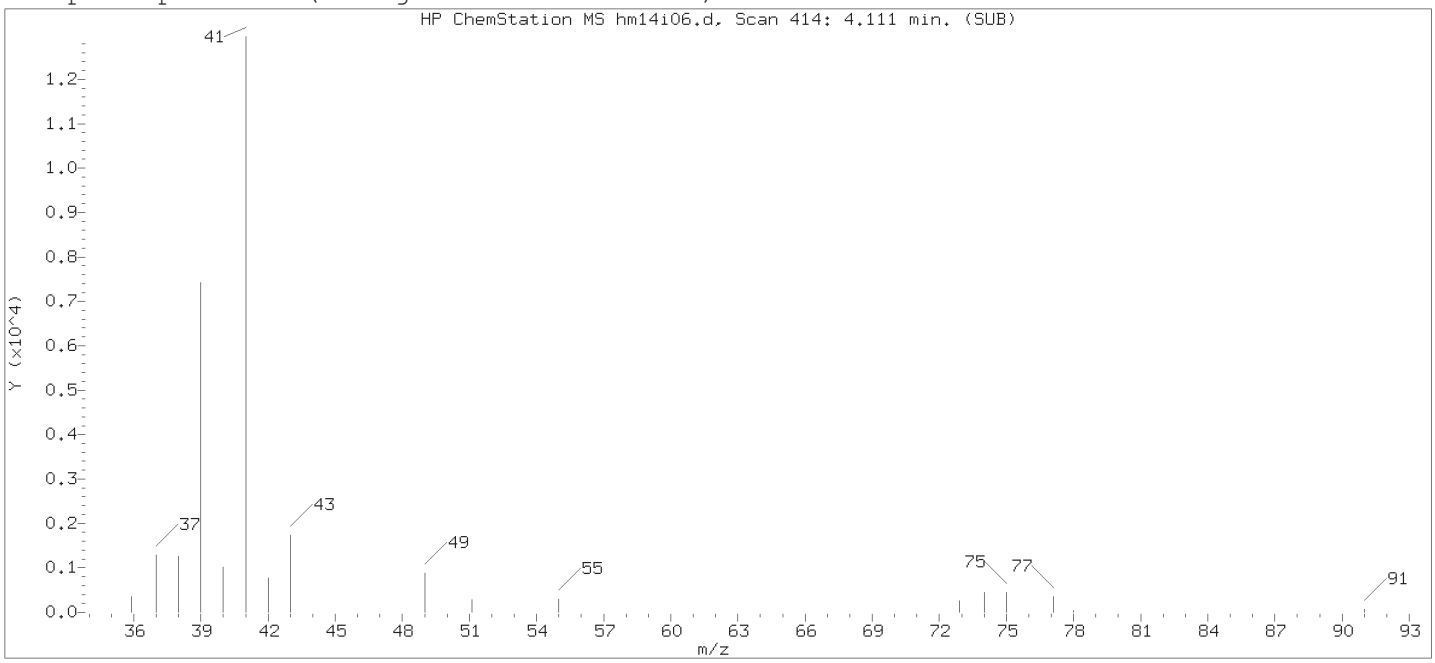
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area (flag) : 10225M
On-Column Amount (ng) : 0.4359
Integration start scan : 393 Integration stop scan: 428
Y at integration start : 392 Y at integration end: 392

Reason for manual integration: improper integration

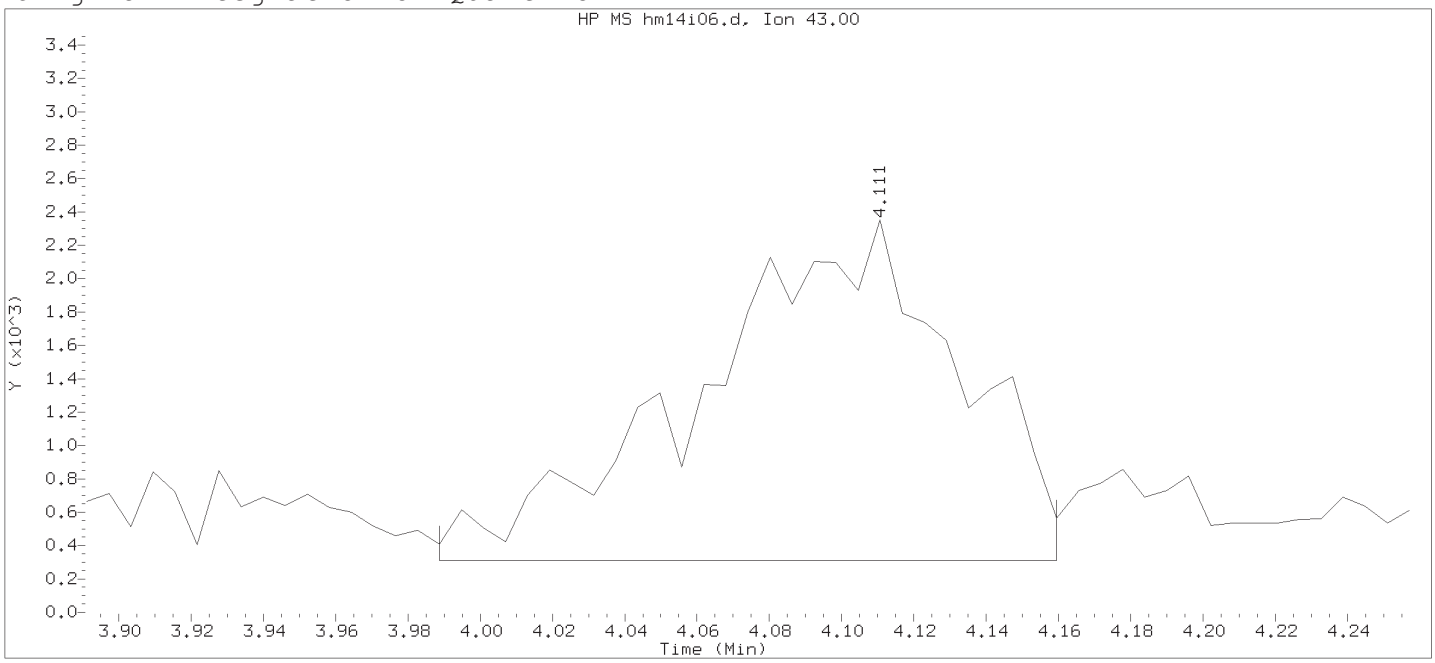
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

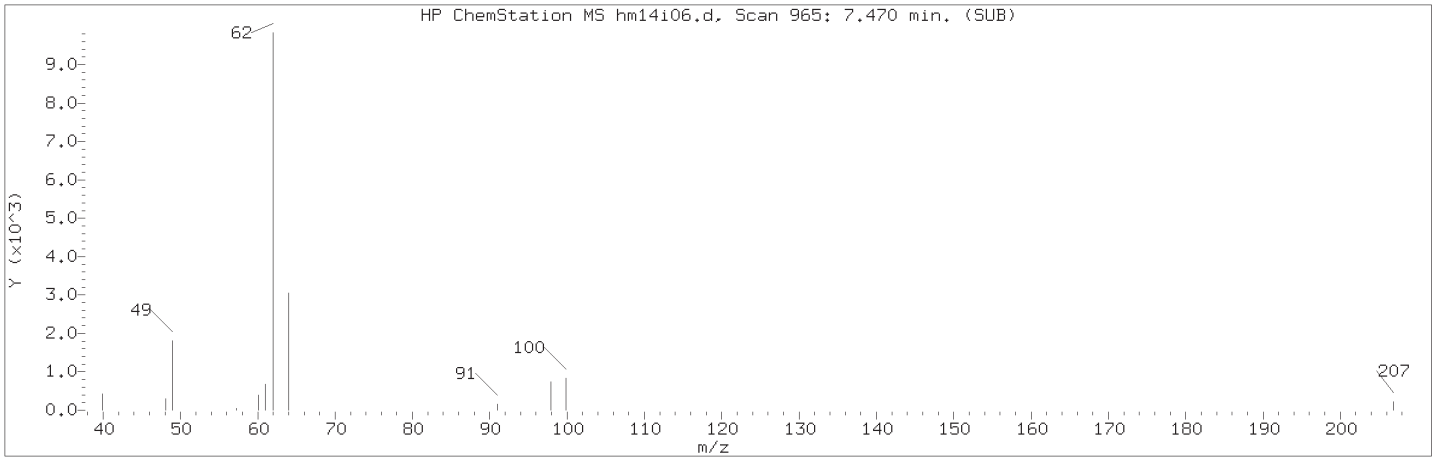
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

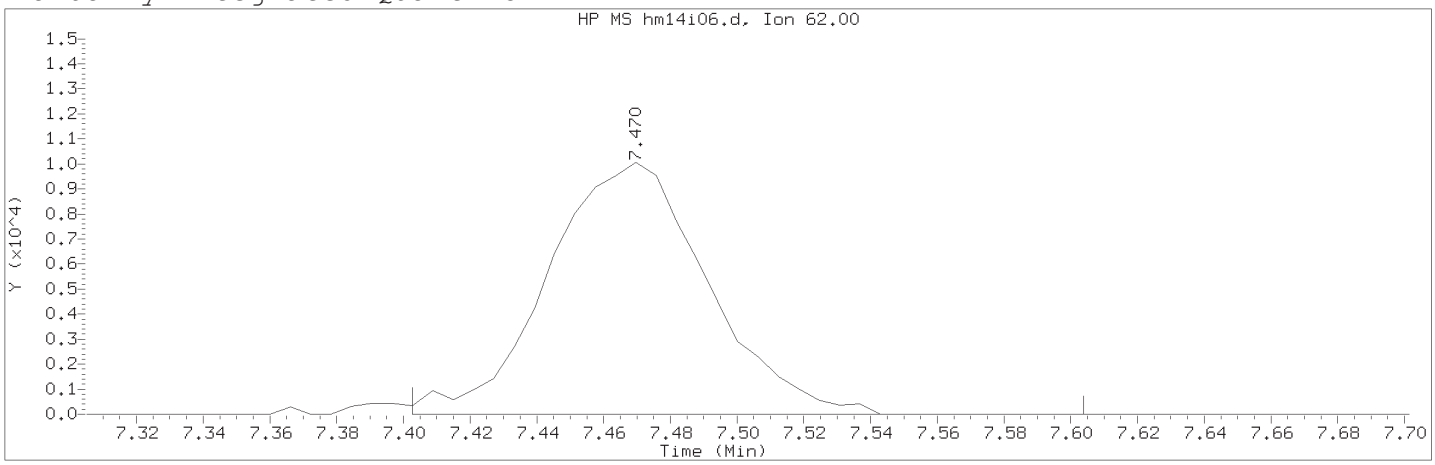
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 414
Retention Time (minutes): 4.111
Quant Ion : 43.00
Area : 10172
On-column Amount (ng) : 0.4998
Integration start scan : 393 Integration stop scan: 421
Y at integration start : 309 Y at integration end: 309

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

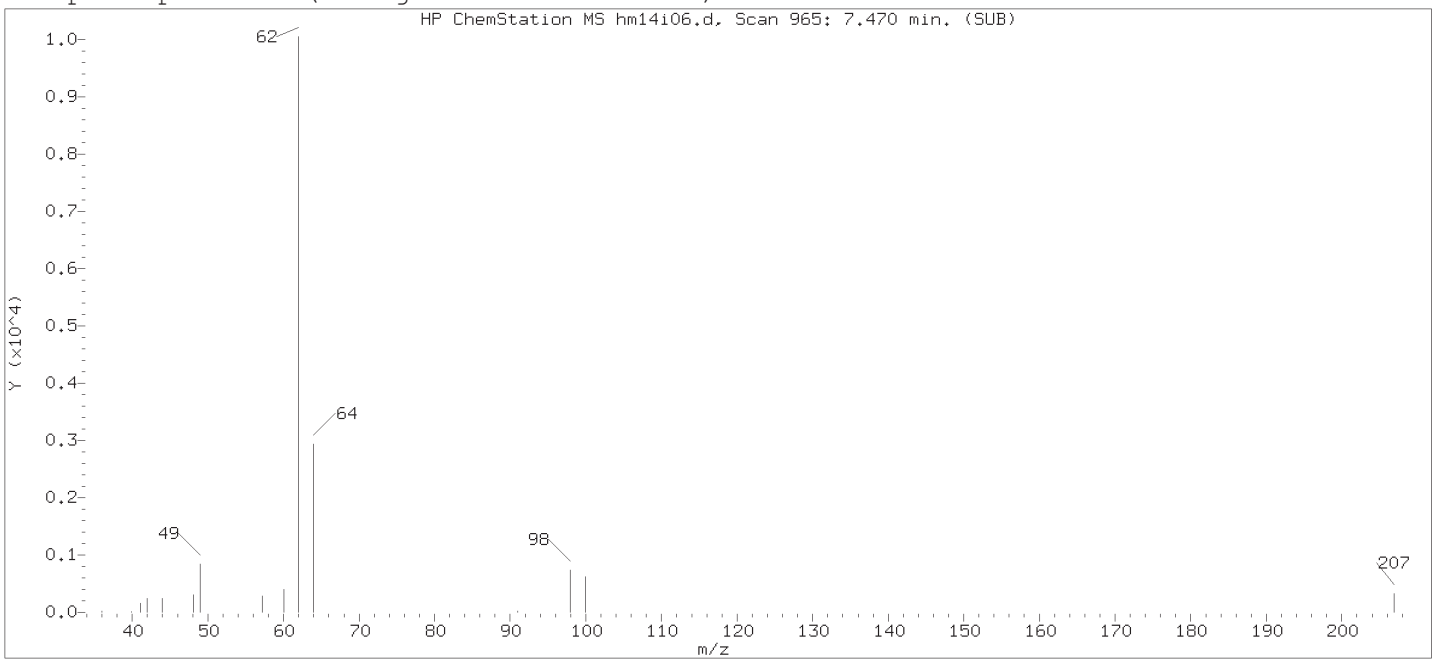
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area (flag) : 33374M
On-Column Amount (ng) : 0.5132
Integration start scan : 953 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

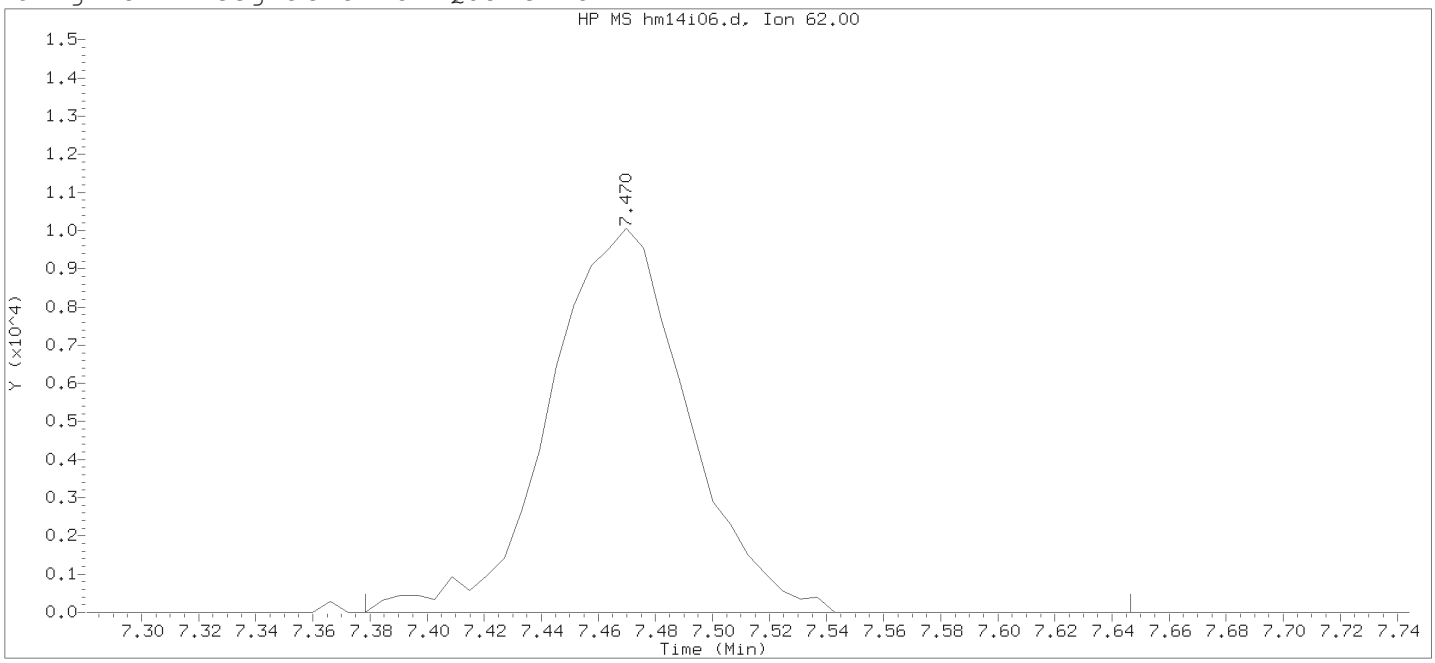
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

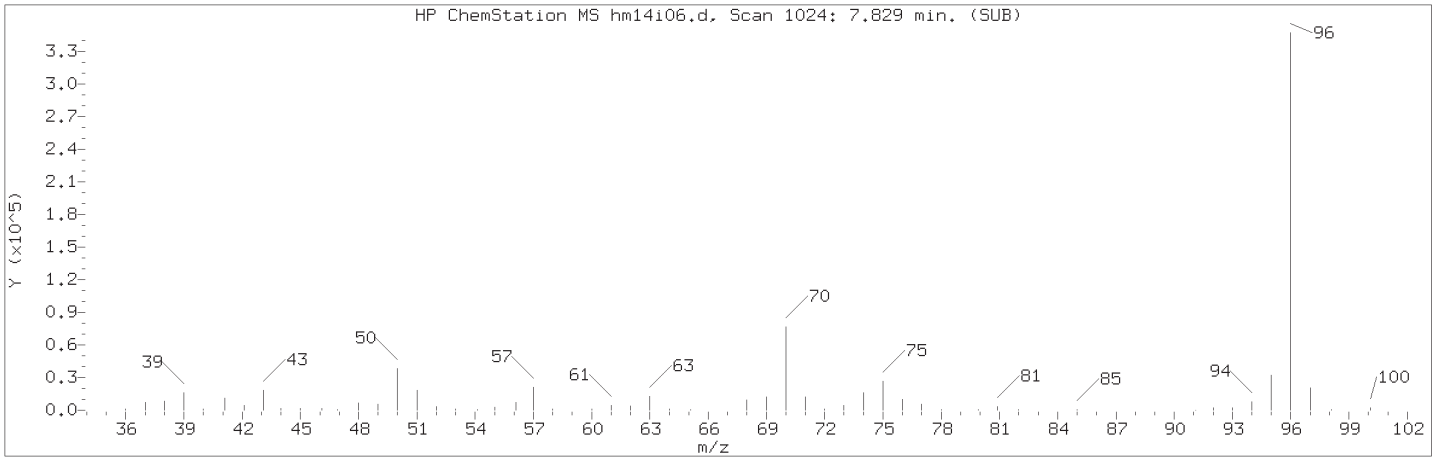
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

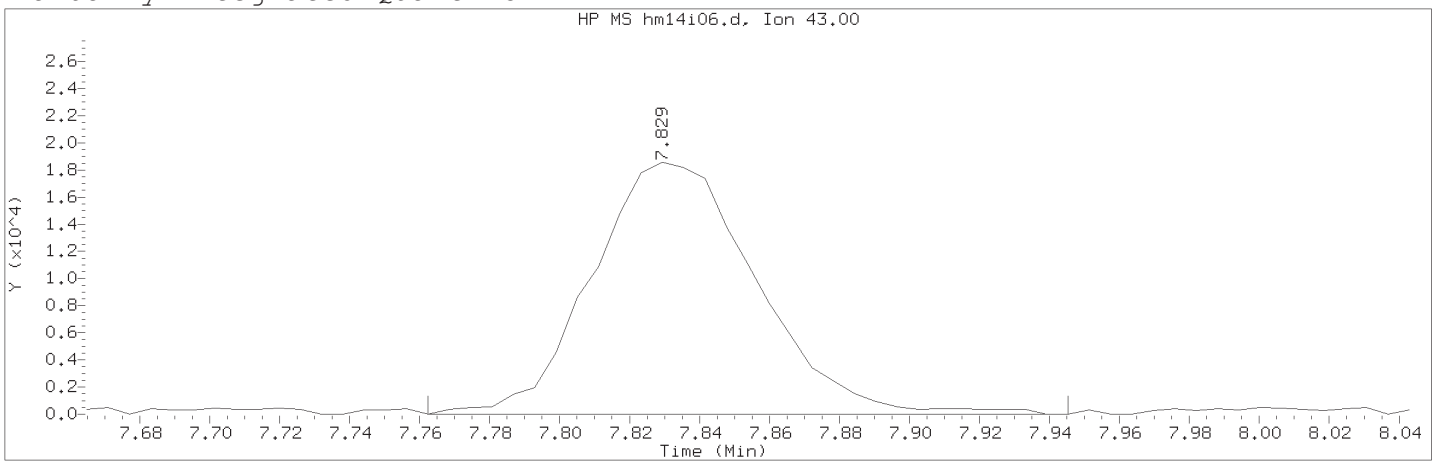
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 965
Retention Time (minutes): 7.470
Quant Ion : 62.00
Area : 33809
On-column Amount (ng) : 0.5207
Integration start scan : 949 Integration stop scan: 993
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

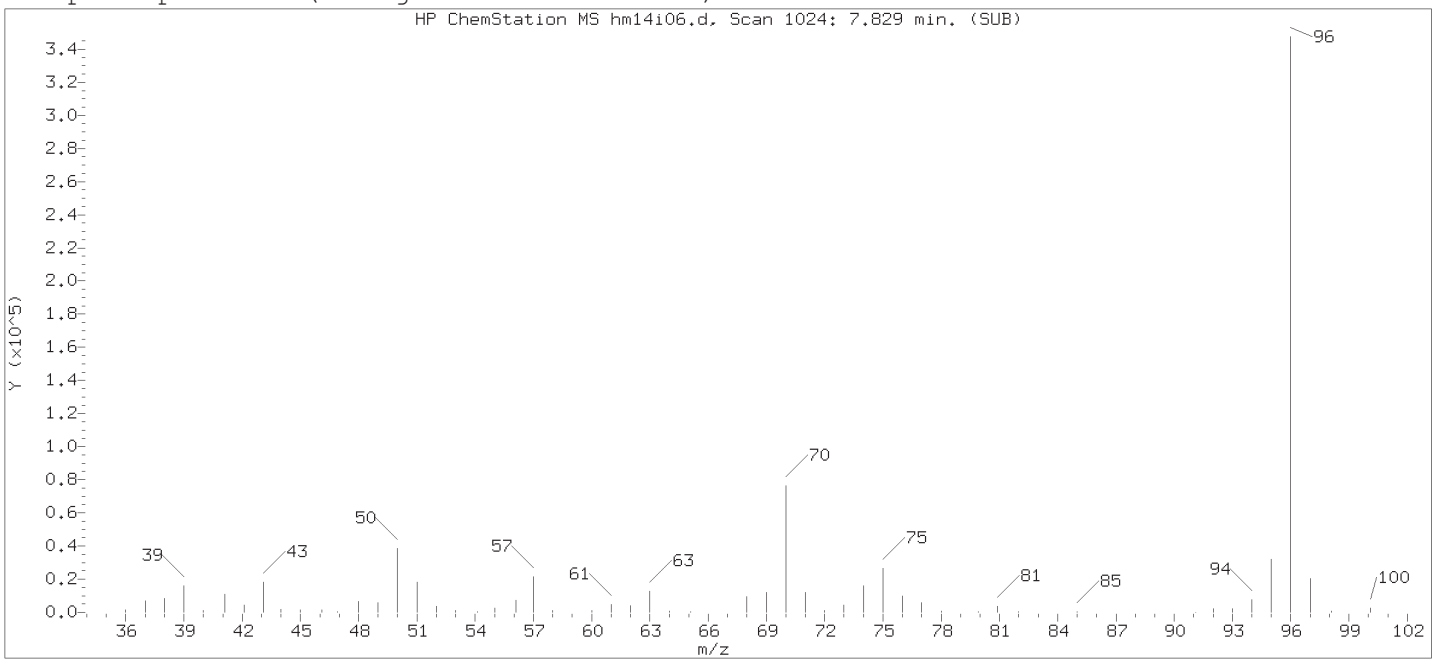
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area (flag) : 60575M
On-Column Amount (ng) : 0.5340
Integration start scan : 1012 Integration stop scan: 1042
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

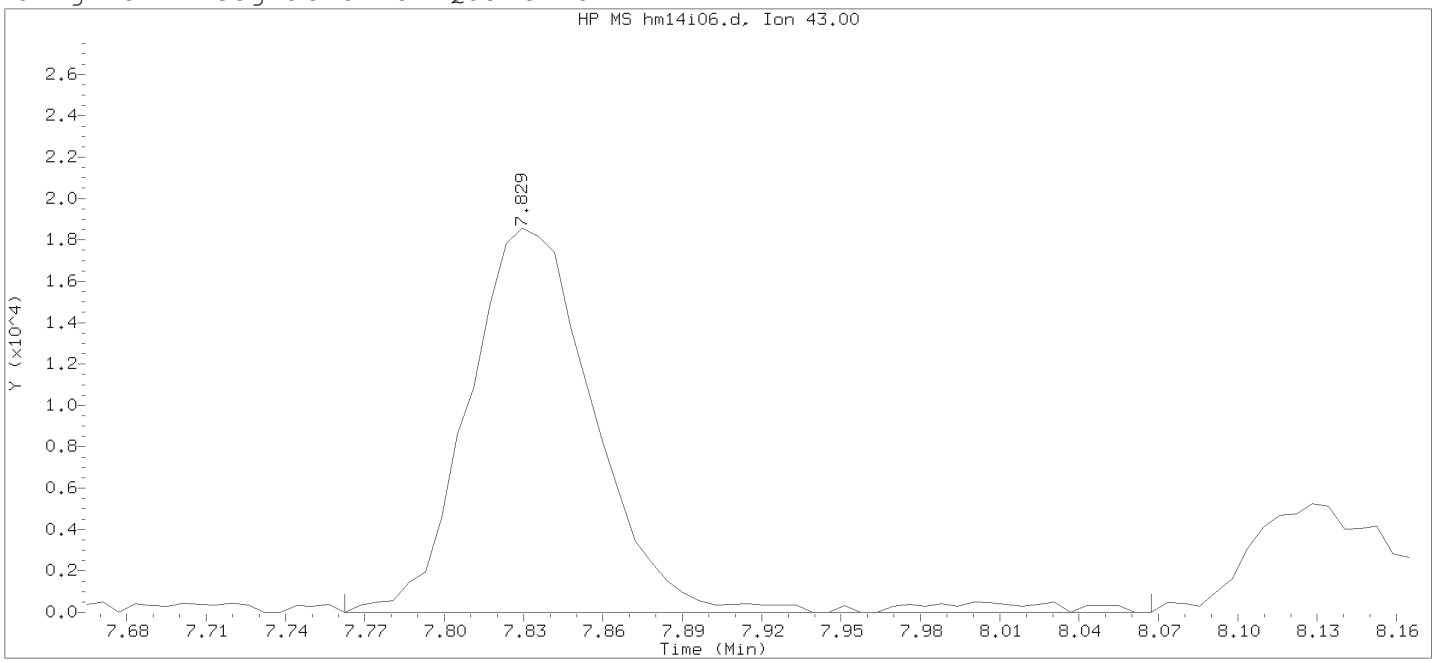
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

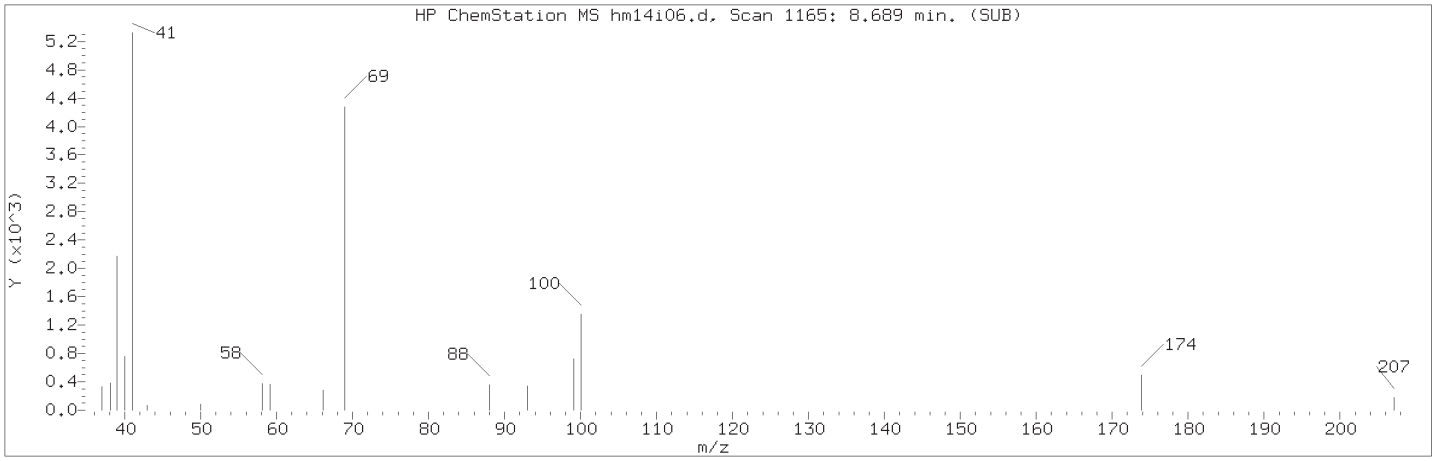
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

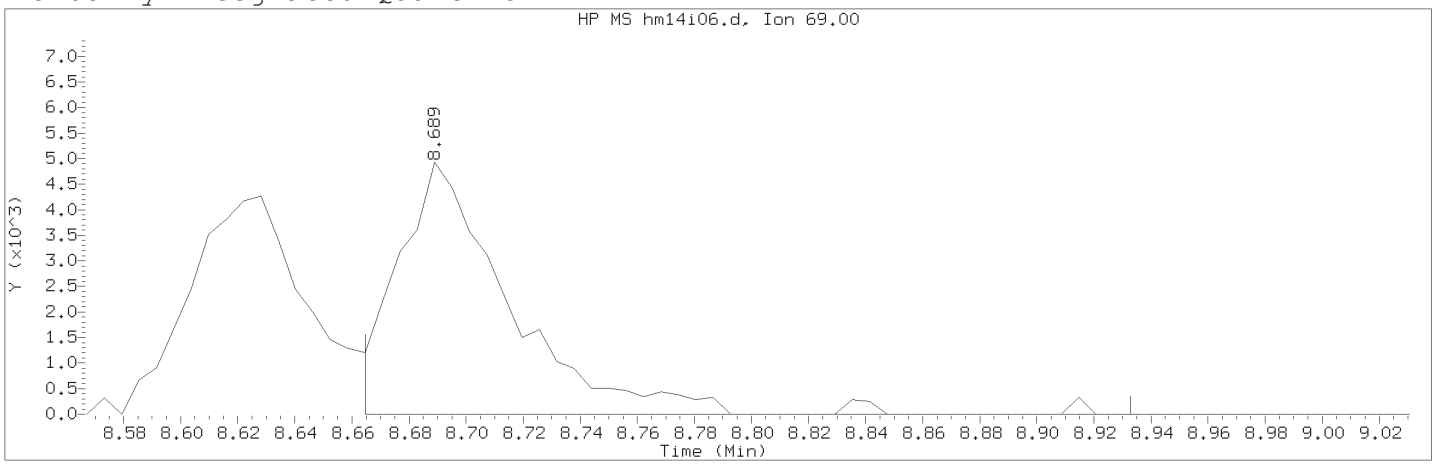
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1024
Retention Time (minutes): 7.829
Quant Ion : 43.00
Area : 62549
On-column Amount (ng) : 0.5558
Integration start scan : 1012 Integration stop scan: 1062
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

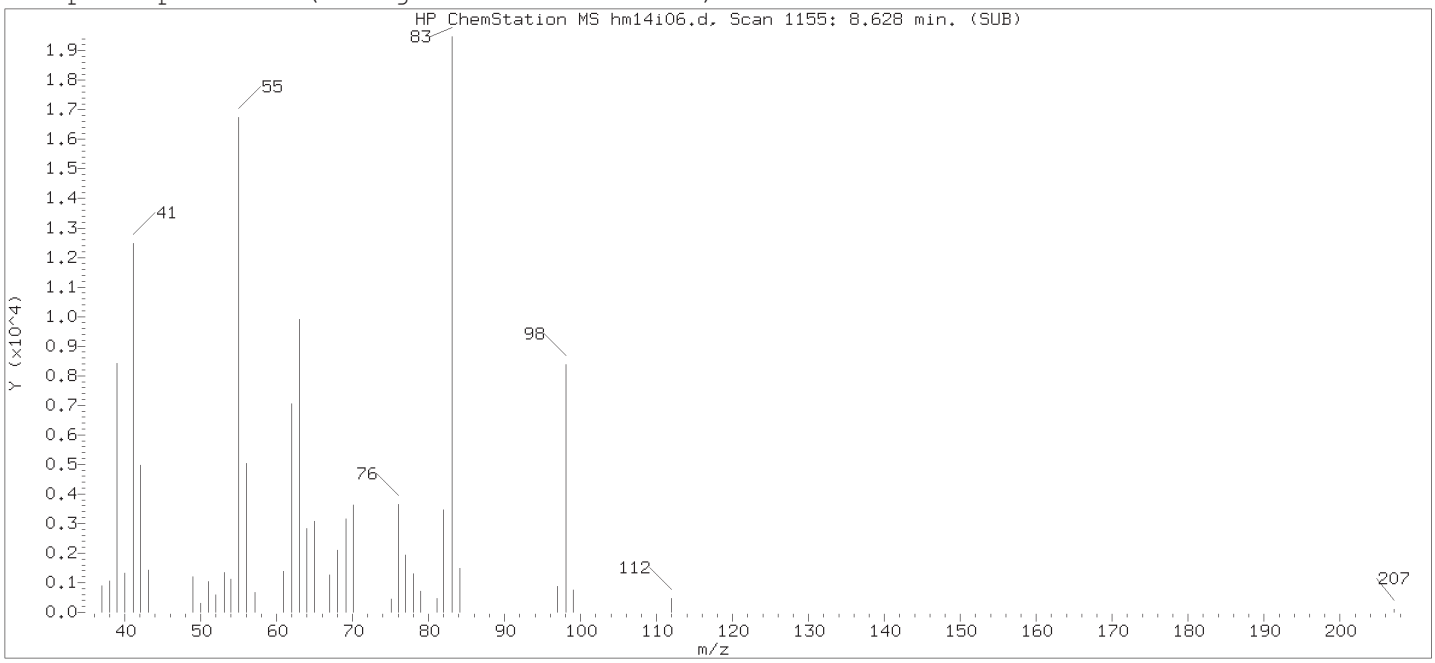
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1165
Retention Time (minutes): 8.689
Quant Ion : 69.00
Area (flag) : 13601A
On-Column Amount (ng) : 0.5358
Integration start scan : 1160 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

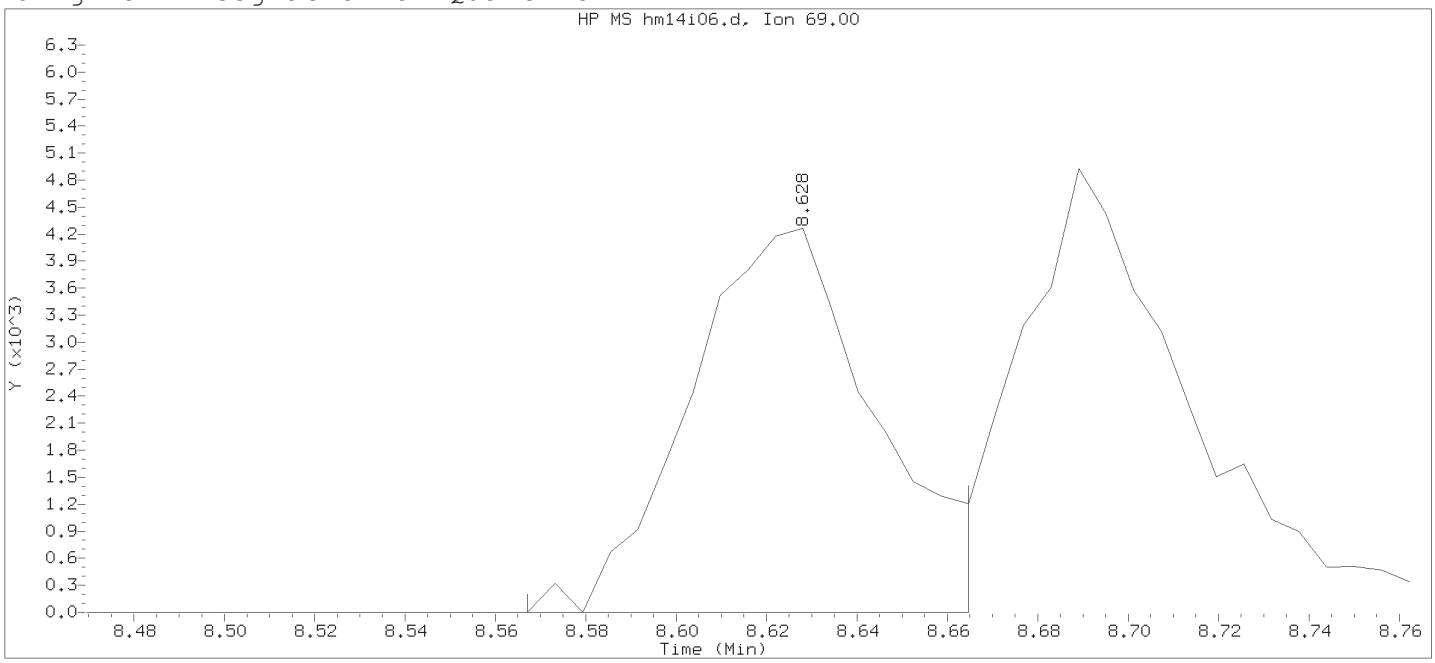
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

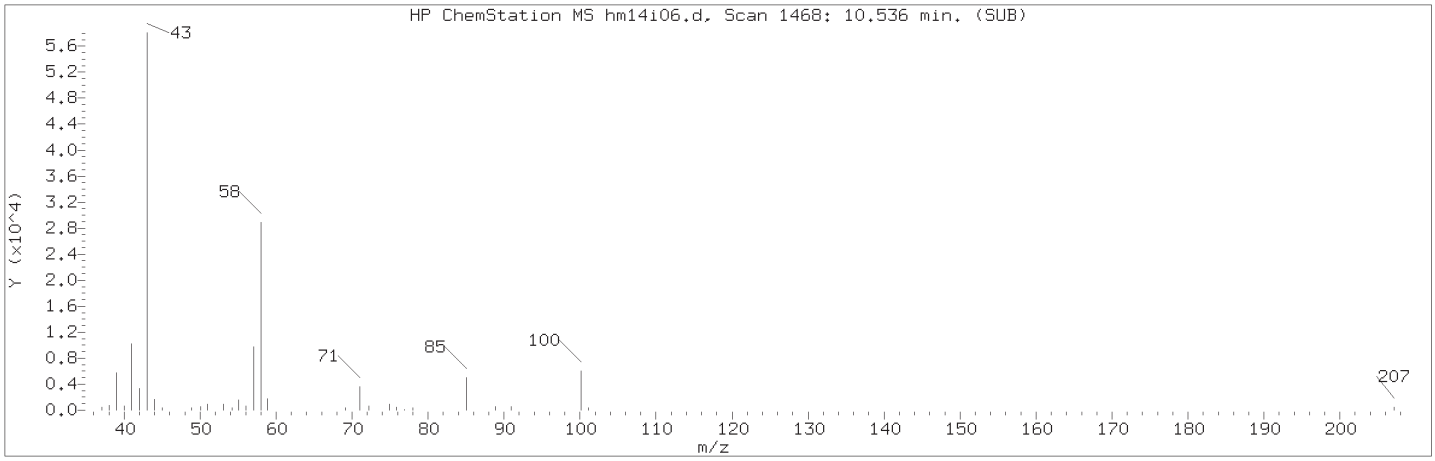
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

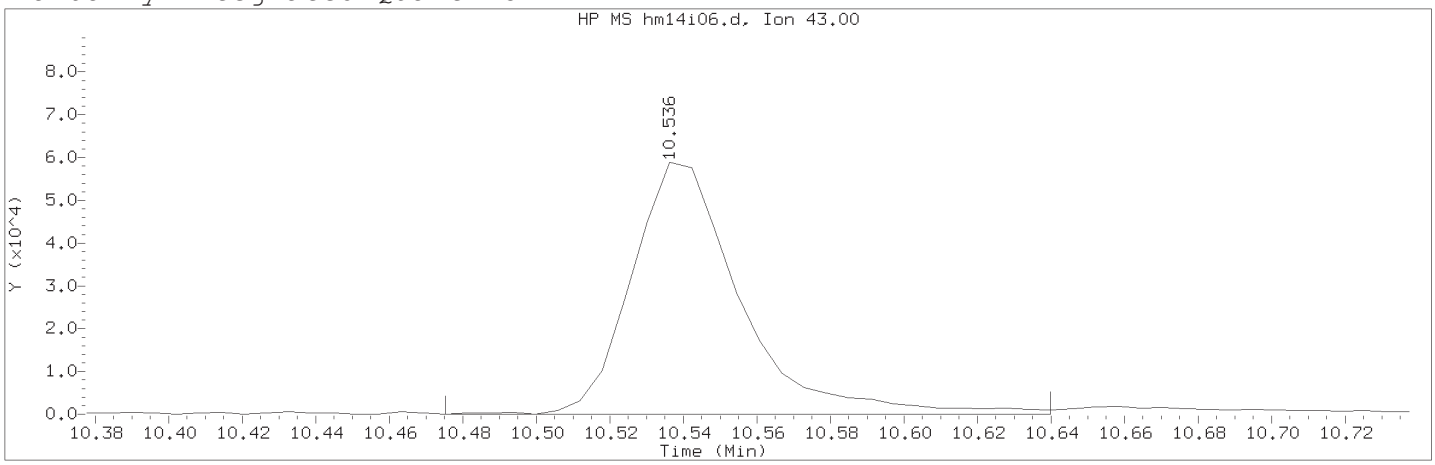
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1155
Retention Time (minutes): 8.628
Quant Ion : 69.00
Area : 12059
On-column Amount (ng) : 0.4755
Integration start scan : 1144 Integration stop scan: 1160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

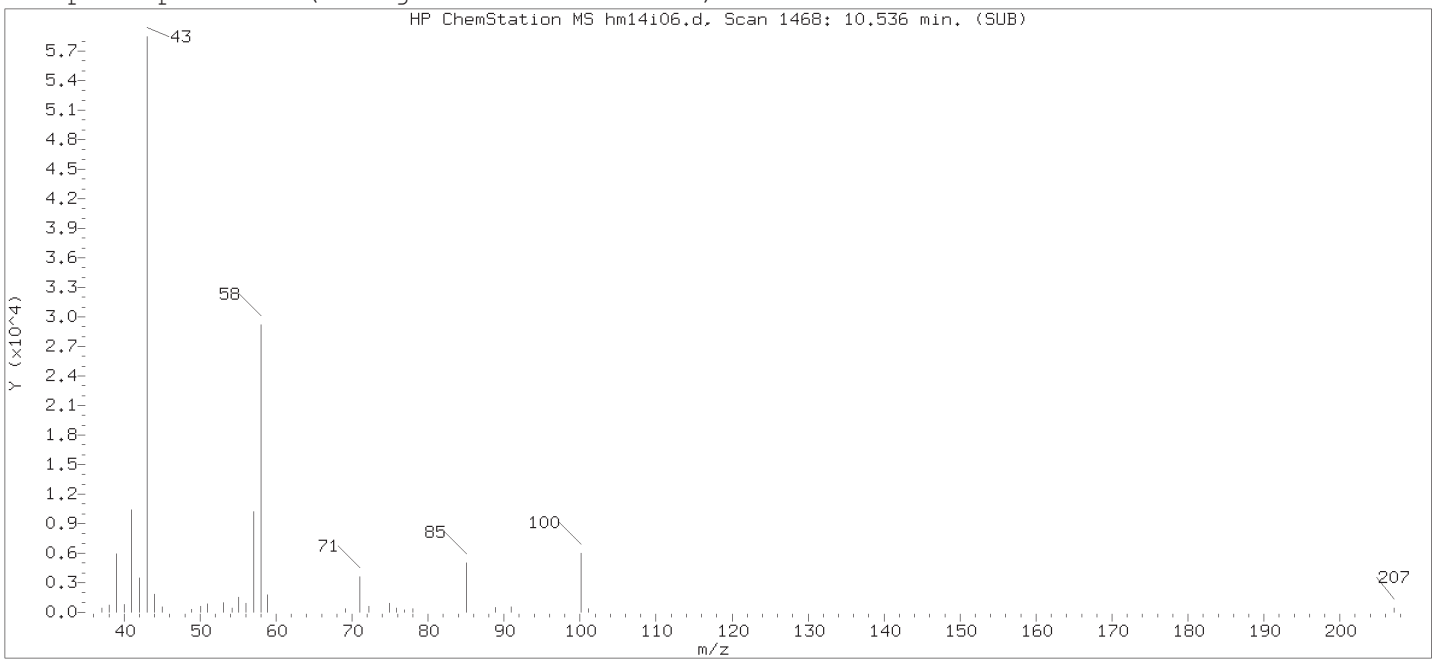
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area (flag) : 121611M
On-Column Amount (ng) : 4.9110
Integration start scan : 1457 Integration stop scan: 1484
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

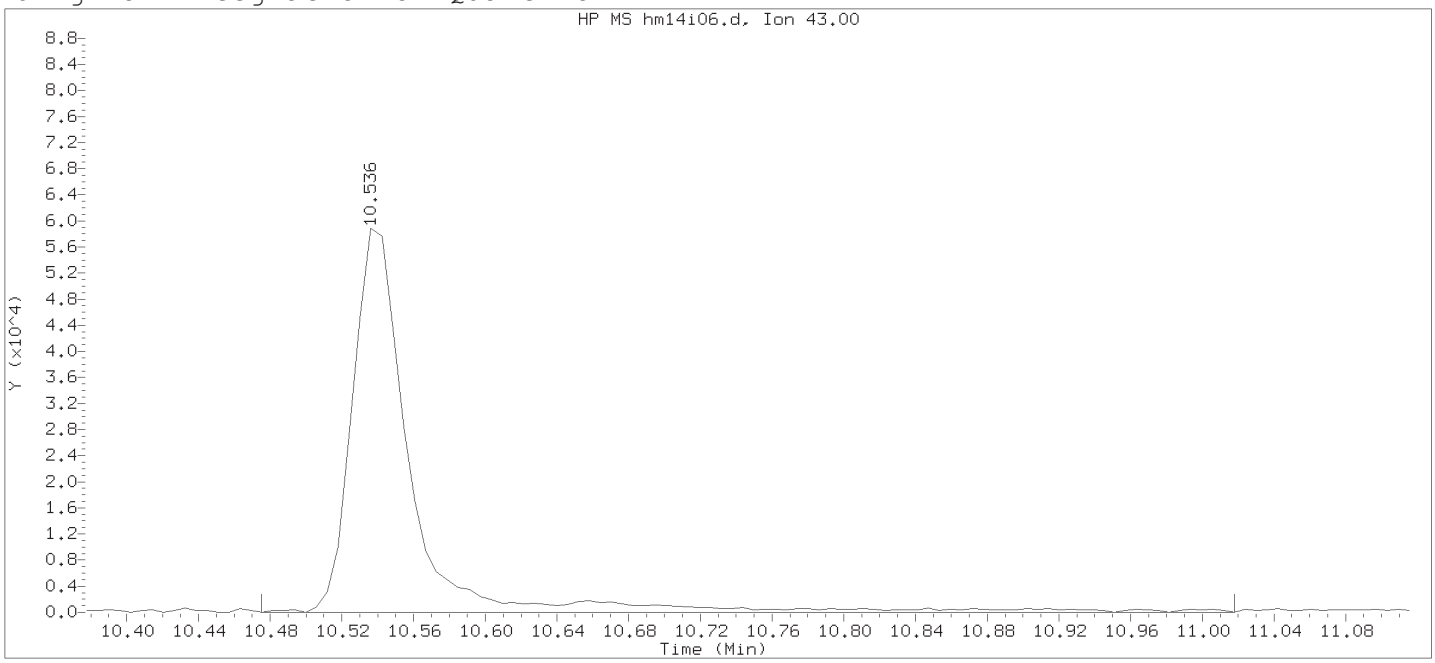
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

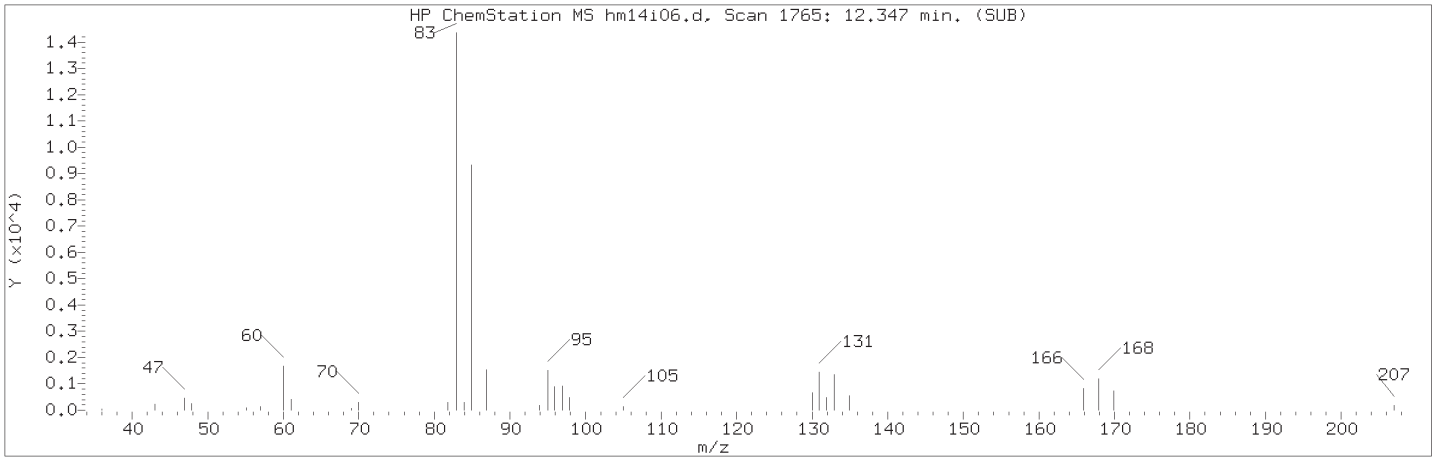
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

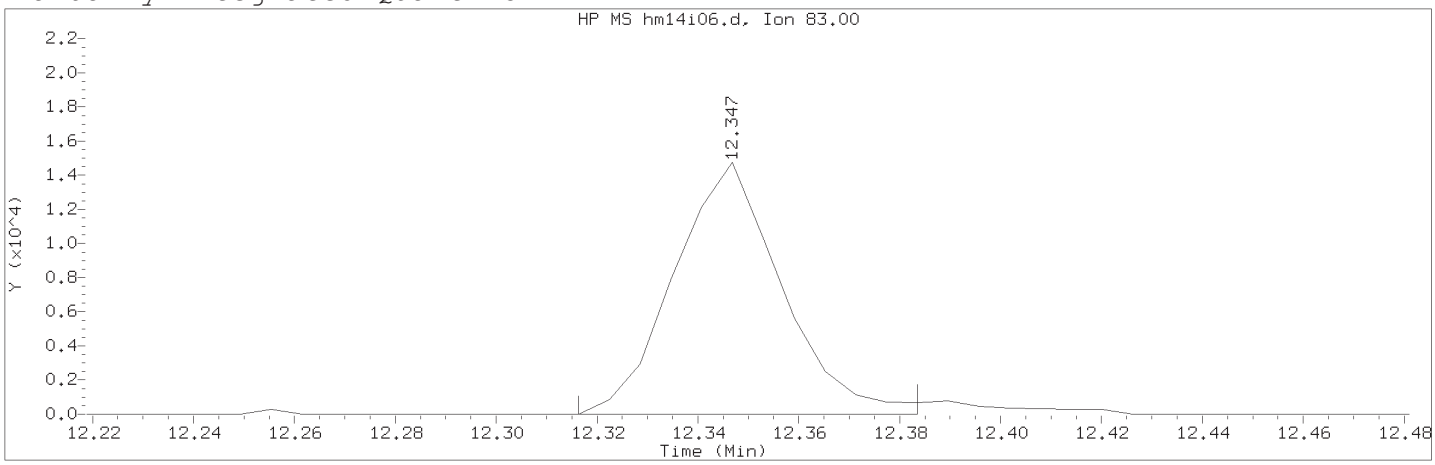
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1468
Retention Time (minutes): 10.536
Quant Ion : 43.00
Area : 134712
On-column Amount (ng) : 5.5880
Integration start scan : 1457 Integration stop scan: 1546
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

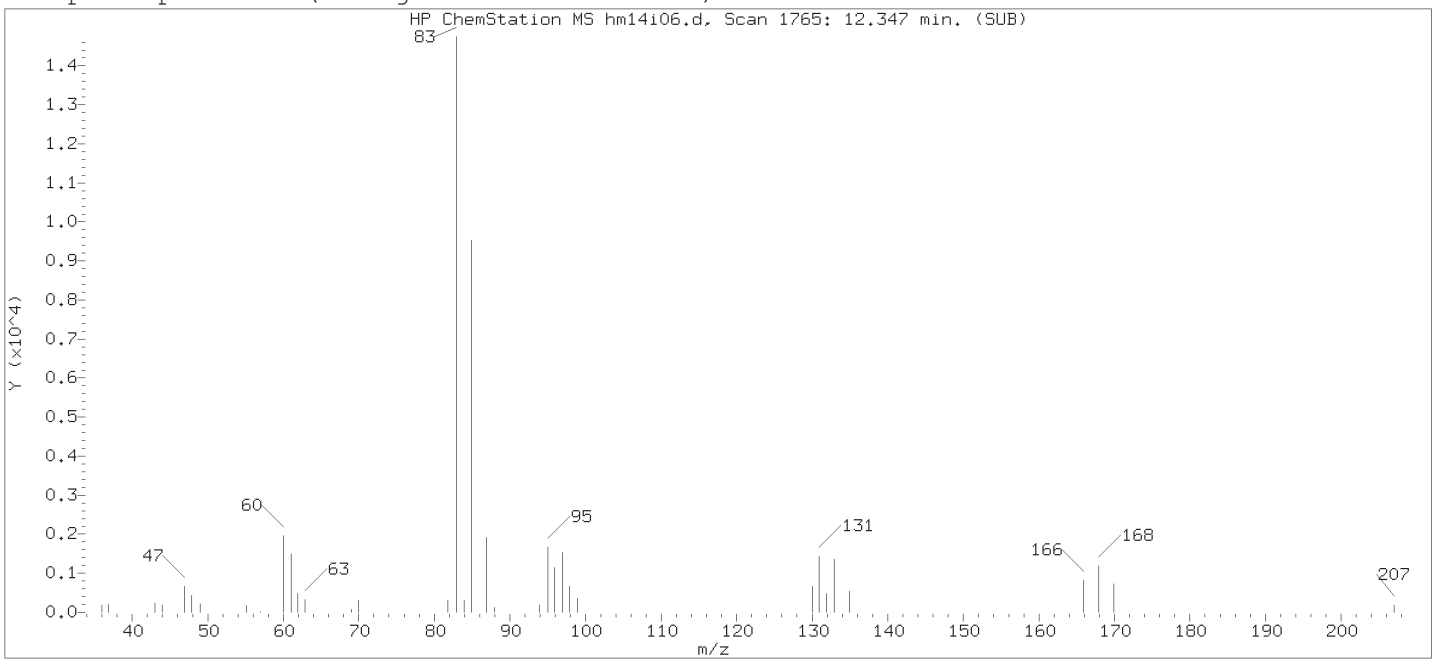
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 21790M
On-Column Amount (ng) : 0.5249
Integration start scan : 1759 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

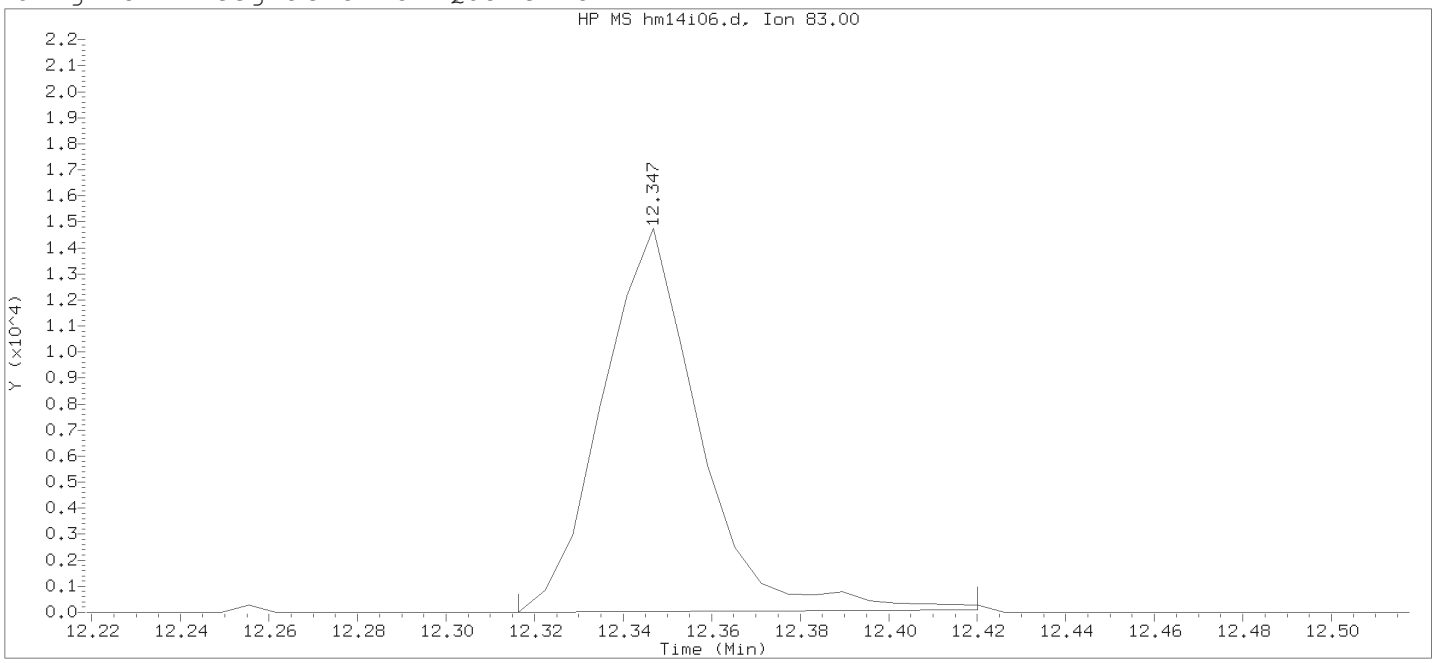
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

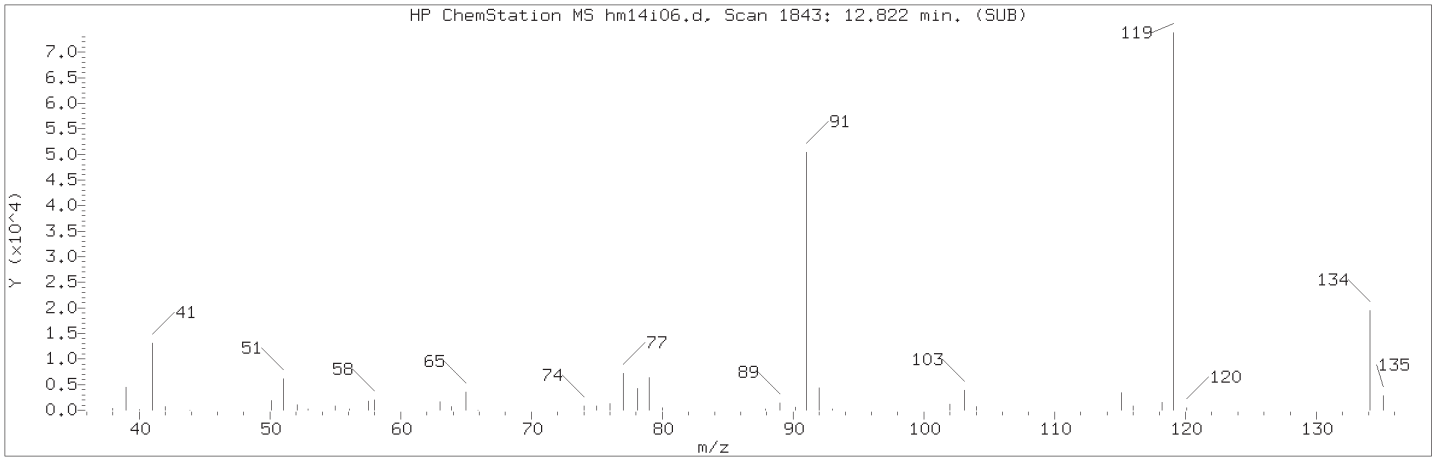
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

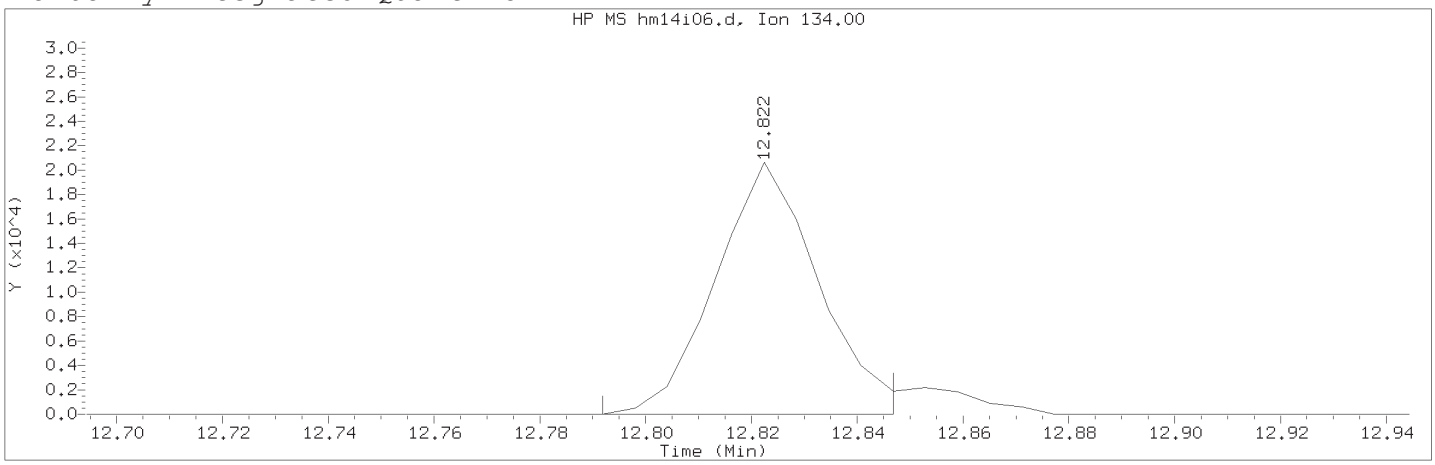
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 22370
On-column Amount (ng) : 0.5475
Integration start scan : 1759 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 87

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

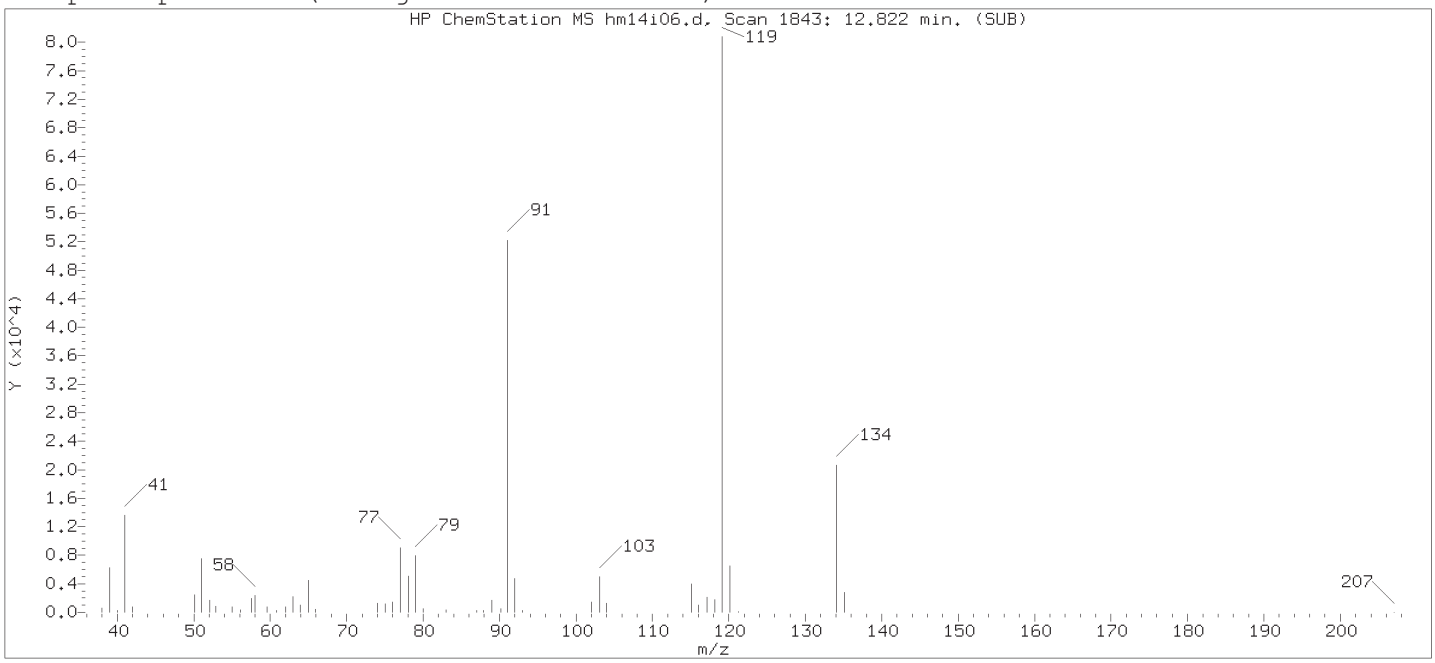
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 27825M
On-Column Amount (ng) : 0.5598
Integration start scan : 1837 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

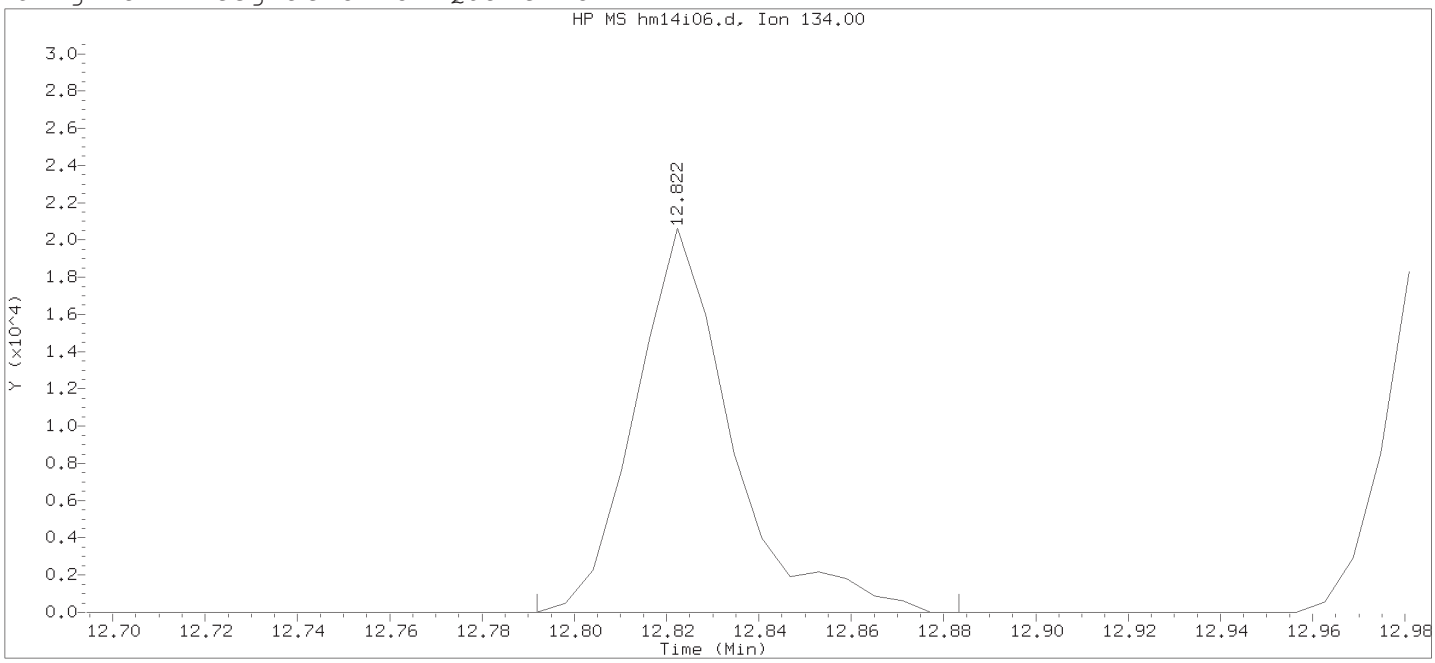
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

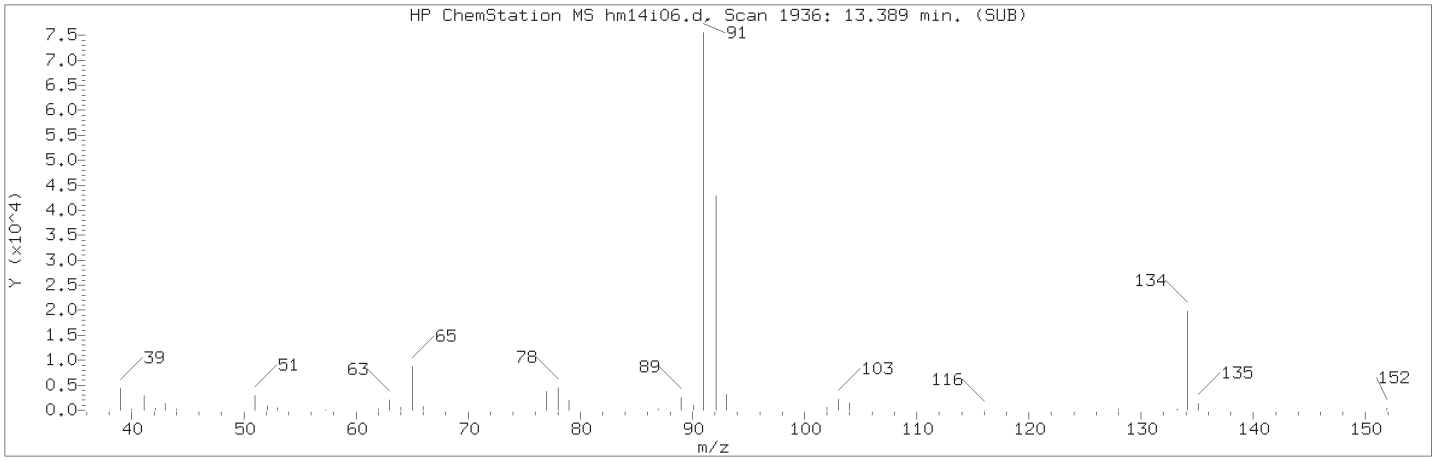
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

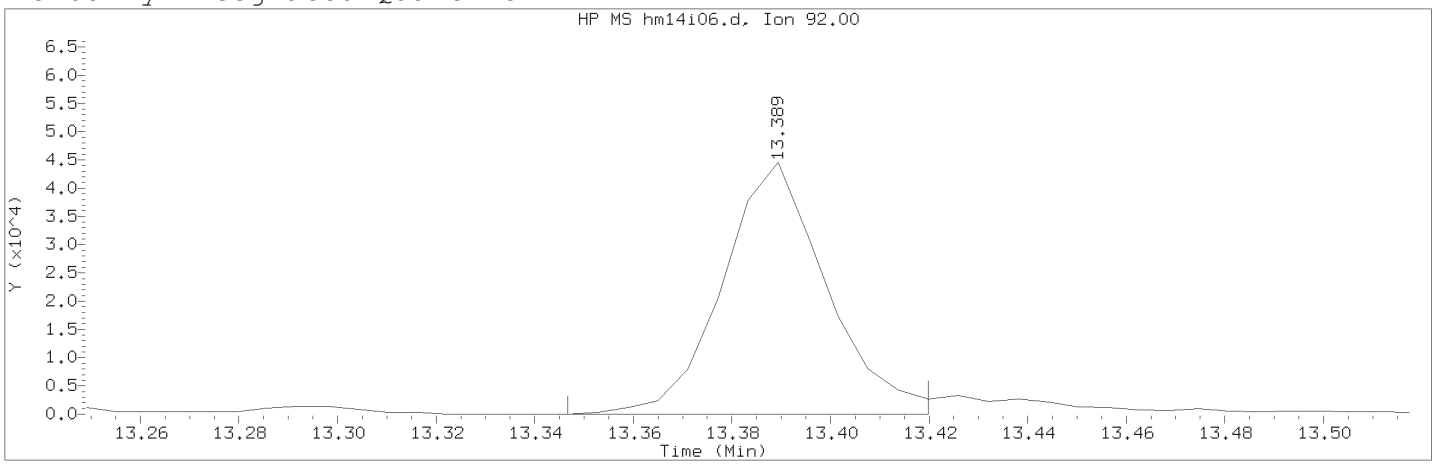
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 29830
On-column Amount (ng) : 0.5746
Integration start scan : 1837 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

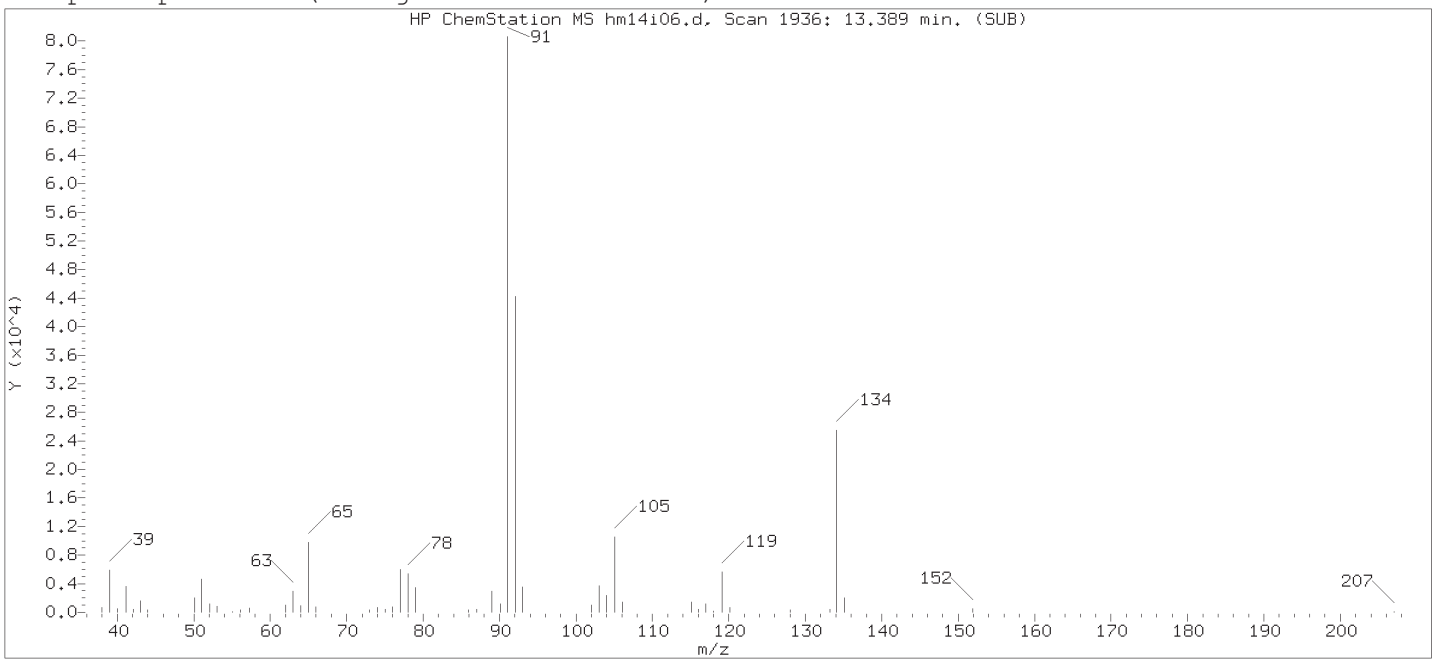
Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1936
Retention Time (minutes): 13.389
Quant Ion : 92.00
Area (flag) : 65180M
On-Column Amount (ng) : 0.5214
Integration start scan : 1928 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

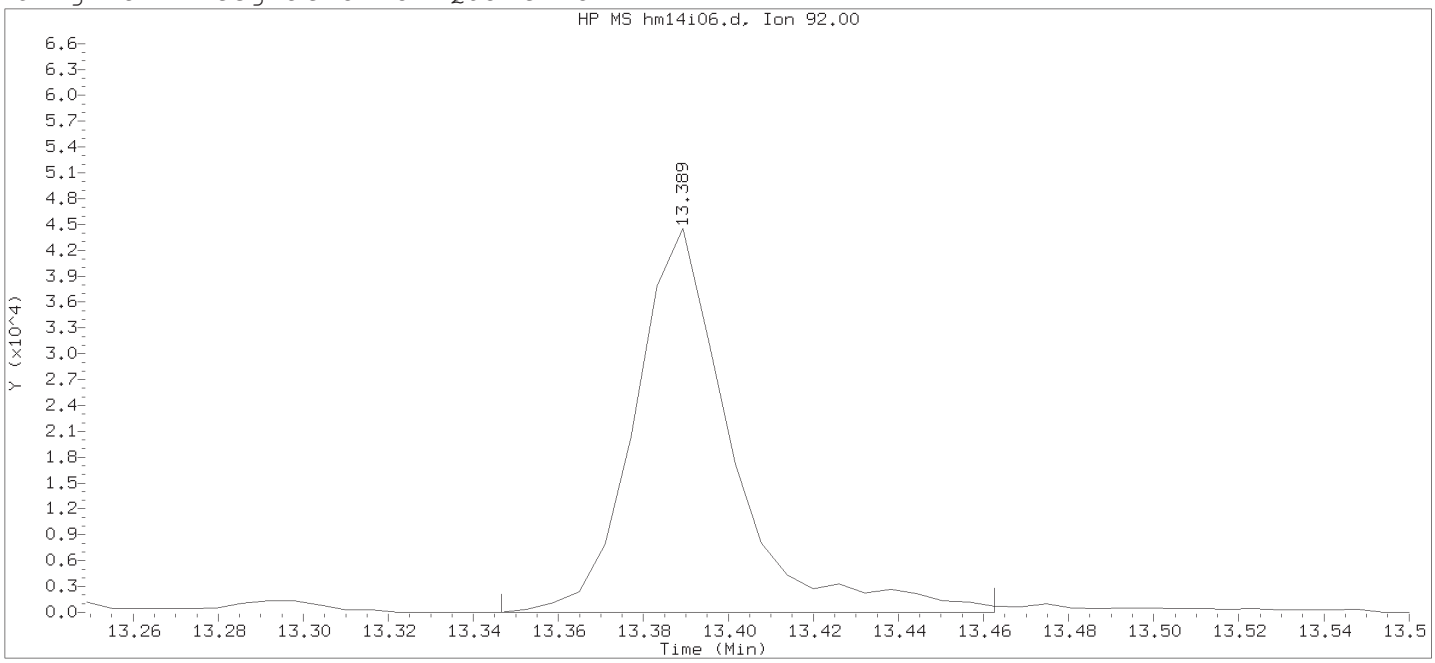
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



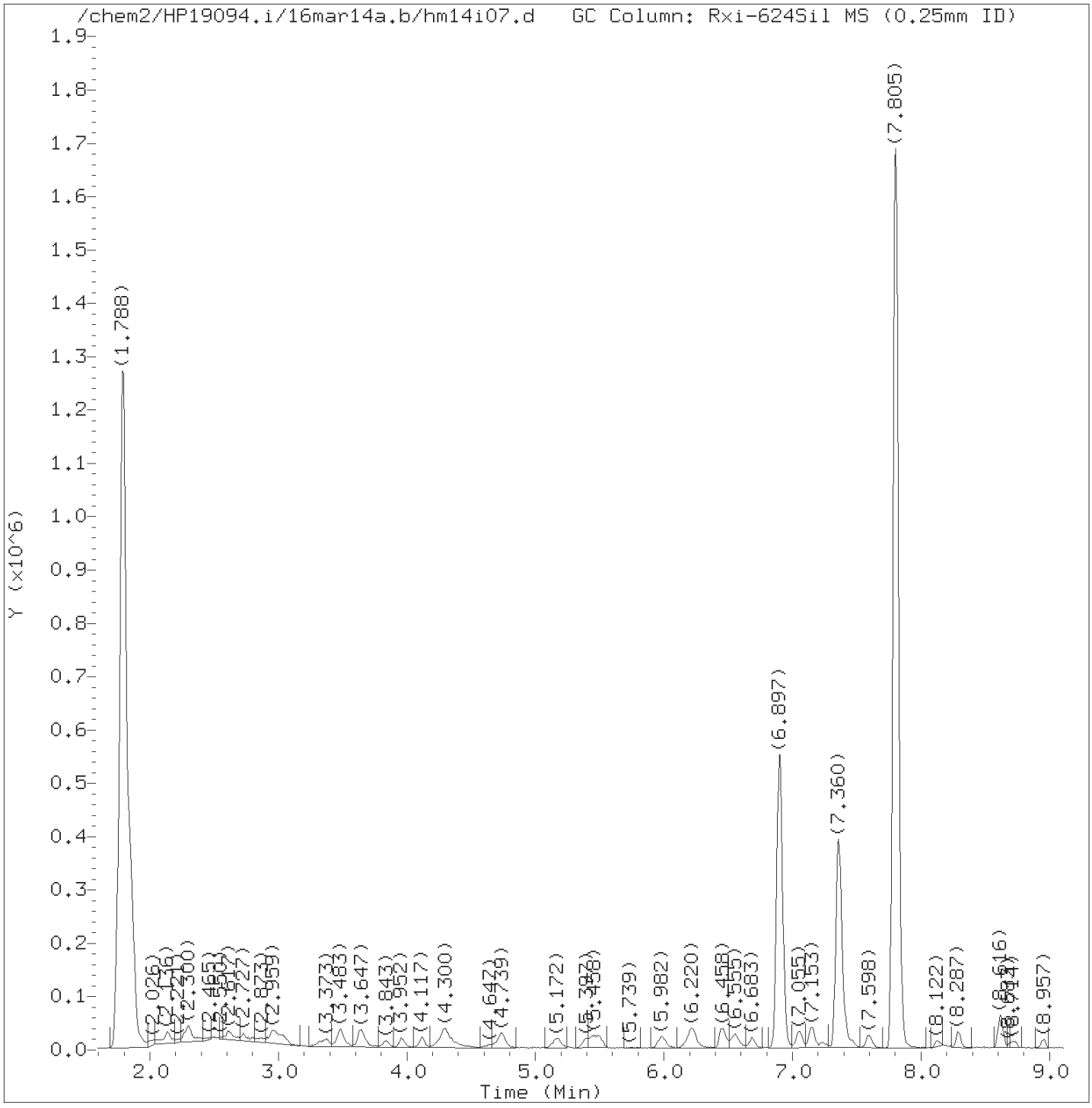
Data File: /chem2/HP19094.i/16mar14a.b/hm14i06.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:35 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 16:54
Date, time and analyst ID of latest file update: 14-Mar-2016 16:54 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1936
Retention Time (minutes): 13.389
Quant Ion : 92.00
Area : 70021
On-column Amount (ng) : 0.5662
Integration start scan : 1928 Integration stop scan: 1947
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

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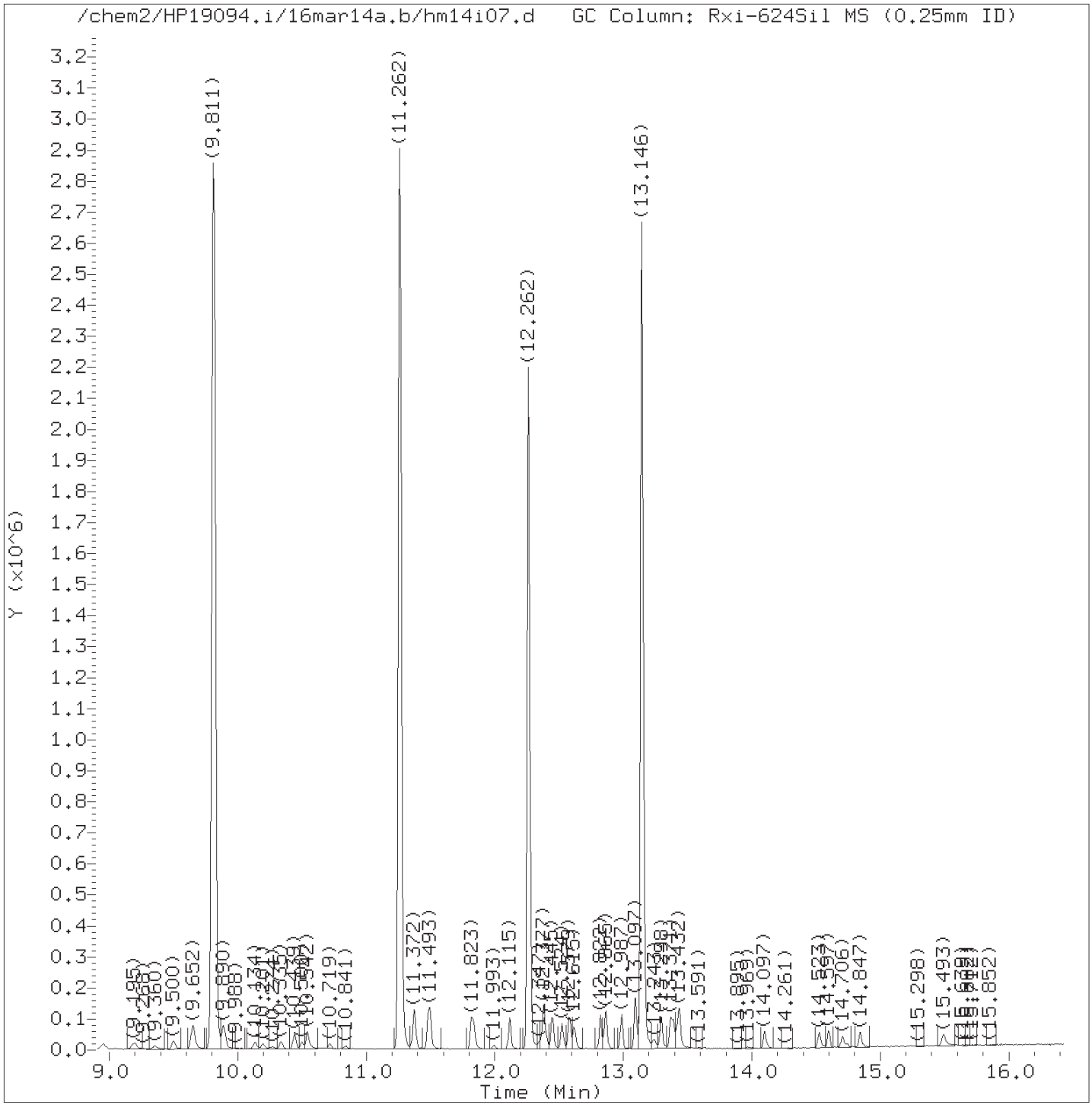
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.008	85	17775	0.220
2) Chloromethane	(2)	2.136	50	20194	0.255
5) Vinyl Chloride	(2)	2.276	62	17591	0.239
6) 1,3-Butadiene	(2)	2.300	39	13395M	0.240
7) Bromomethane	(2)	2.617	94	11157	0.228
8) Chloroethane	(2)	2.727	64	12016	0.265
9) Dichlorofluoromethane	(2)	2.965	67	25059	0.243
10) Trichlorofluoromethane	(2)	3.050	101	22054	0.230
11) Ethyl ether	(2)	3.318	59	8699	0.220
12) Freon 123a	(2)	3.367	67	16514	0.225
13) Acrolein	(1)	3.483	56	67076	10.807
15) 1,1-Dichloroethene	(2)	3.635	96	12065	0.219
14) Acetone	(1)	3.647	43	26660M	3.117
16) Freon 113	(2)	3.666	101	11422	0.199
17) Methyl Iodide	(2)	3.830	142	21202	0.208
18) Carbon Disulfide	(2)	3.952	76	39421	0.232
21) Methyl Acetate	(1)	4.068	43	8187	0.341
22) Allyl Chloride	(2)	4.117	41	24111	0.232
26)*t-Butyl Alcohol-d10	(1)	4.281	65	108855M	50.000
23) Methylene Chloride	(2)	4.300	84	12265	0.208
28) t-Butyl Alcohol	(1)	4.428	59	12826	4.382
29) Acrylonitrile	(1)	4.641	53	10075	0.982
30) Methyl Tertiary Butyl Ether	(2)	4.714	73	26917	0.212
31) trans-1,2-Dichloroethene	(2)	4.739	96	12229	0.206
32) n-Hexane	(2)	5.172	57	21934	0.218
33) 1,1-Dichloroethane	(2)	5.385	63	25729	0.213
34) di-Isopropyl Ether	(2)	5.446	45	44211	0.210
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	20753	0.209
37) Ethyl t-butyl ether	(2)	5.988	59	37305	0.210
40) 1,2-Dichloroethene (Total)	(2)		96	25891	0.414
38) 2-Butanone	(1)	6.177	43	31340	2.151
39) cis-1,2-Dichloroethene	(2)	6.208	96	13662	0.208
41) 2,2-Dichloropropane	(2)	6.232	77	20656	0.214
42) Propionitrile	(1)	6.251	54	15091	4.153
45) Methacrylonitrile	(1)	6.458	67	26431	2.124
47) Bromochloromethane	(2)	6.543	128	4931	0.197
48) Tetrahydrofuran	(1)	6.568	71	8112	2.200
49) Chloroform	(2)	6.683	83	24677	0.223

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	540029	9.783
50)$Dibromofluoromethane	(2)	6.903	111	555065	9.773
51) 1,1,1-Trichloroethane	(2)	6.939	97	20406	0.217
52) Cyclohexane	(2)	7.061	56	29098	0.236
52) Cyclohexane	(2)	7.049	84	19283	0.205
52) Cyclohexane	(2)	7.043	69	7883	0.224
55) 1,1-Dichloropropene	(2)	7.147	75	18750	0.207
54) Carbon Tetrachloride	(2)	7.159	117	17892	0.209
56) Isobutyl Alcohol	(1)	7.226	41	13435M	12.955
57)$1,2-Dichloroethane-d4	(2)	7.360	102	88516	9.682
57)$1,2-Dichloroethane-d4	(2)	7.354	65	451656	9.676
57)$1,2-Dichloroethane-d4	(2)	7.360	104	55455	9.607
58) Benzene	(2)	7.403	78	54162	0.215
59) 1,2-Dichloroethane	(2)	7.464	62	14181	0.217
60) t-Amyl methyl ether	(2)	7.598	73	30946	0.213
63)*Fluorobenzene	(2)	7.805	96	2342480	10.000
62) n-Heptane	(2)	7.823	43	24636	0.217
65) n-Butanol	(1)	8.134	56	19236	23.045
67) Trichloroethene	(2)	8.287	95	14143	0.216
70) 1,2-Dichloropropane	(2)	8.616	63	13776	0.210
69) Methylcyclohexane	(2)	8.628	83	22564	0.210
71) Methyl Methacrylate	(1)	8.695	69	5318M	0.205
72) 1,4-Dioxane	(1)	8.714	88	1121	6.817
73) Dibromomethane	(2)	8.732	93	5770	0.214
74) Bromodichloromethane	(2)	8.951	83	15194	0.202
76) 2-Nitropropane	(1)	9.195	41	20241	2.429
80) cis-1,3-Dichloropropene	(2)	9.494	75	19669	0.212
81) 4-Methyl-2-Pentanone	(1)	9.652	43	74767	2.085
82)$Toluene-d8	(3)	9.811	98	2288811	10.283
82)$Toluene-d8	(3)	9.811	100	1474233	10.232
83) Toluene	(3)	9.890	92	32967	0.220
84) trans-1,3-Dichloropropene	(3)	10.134	75	14768	0.210
85) 1,3-Dichloropropene (total)	(3)		75	34437	0.422
86) Ethyl Methacrylate	(3)	10.201	69	10842	0.201
88) 1,1,2-Trichloroethane	(3)	10.341	97	8199	0.226
89) Tetrachloroethene	(3)	10.439	166	15760	0.223
90) 1,3-Dichloropropane	(3)	10.500	76	13680	0.209
91) 2-Hexanone	(1)	10.542	43	59429	2.344

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Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.719	129	9231	0.198
95) 1,2-Dibromoethane	(3)	10.841	107	6853	0.200
97)*Chlorobenzene-d5	(3)	11.262	117	1562481	10.000
98) Chlorobenzene	(3)	11.292	112	35561	0.218
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	12166	0.217
100) Ethylbenzene	(3)	11.378	91	66043	0.225
101) m+p-Xylene	(3)	11.487	106	48843	0.436
105) Xylene (Total)	(3)		106	71996	0.650
104) o-Xylene	(3)	11.817	106	23153	0.213
106) Styrene	(3)	11.835	104	36879	0.212
107) Bromoform	(3)	11.993	173	5392	0.209
108) Isopropylbenzene	(3)	12.115	105	62034	0.215
111)$4-Bromofluorobenzene	(3)	12.262	95	702914	9.797
111)$4-Bromofluorobenzene	(3)	12.262	174	585424	9.787
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	9763	0.238
115) trans-1,4-Dichloro-2-butene	(1)	12.377	53	21303M	1.929
114) Bromobenzene	(4)	12.377	156	14069	0.230
116) 1,2,3-Trichloropropane	(4)	12.402	110	2122	0.206
117) n-Propylbenzene	(4)	12.451	91	77405	0.234
119) 2-Chlorotoluene	(4)	12.530	126	14287	0.224
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	51612	0.224
122) 4-Chlorotoluene	(4)	12.621	126	14982	0.230
125) tert-Butylbenzene	(4)	12.822	134	10791M	0.219
126) Pentachloroethane	(4)	12.853	167	8069	0.217
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	51879	0.225
128) sec-Butylbenzene	(4)	12.987	105	67745	0.227
131) 1,3-Dichlorobenzene	(4)	13.091	146	27056	0.226
132) p-Isopropyltoluene	(4)	13.097	119	56112	0.222
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	656295	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	29351	0.241
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	22673M	0.237
136) Benzyl Chloride	(4)	13.237	126	2921	0.179
138) n-Butylbenzene	(4)	13.389	92	28261	0.228
139) 1,2-Dichlorobenzene	(4)	13.426	146	24236	0.228
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	1267	0.222
145) 1,2,4-Trichlorobenzene	(4)	14.523	180	19174	0.252
146) Hexachlorobutadiene	(4)	14.603	225	9164	0.231
147) Naphthalene	(4)	14.706	128	36748	0.281

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on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

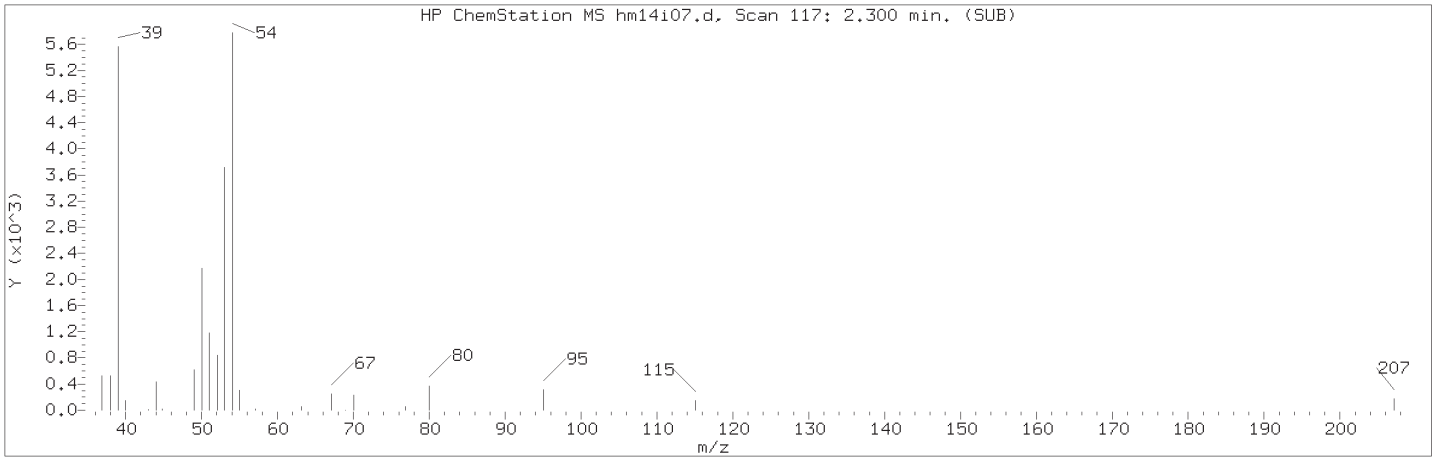
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

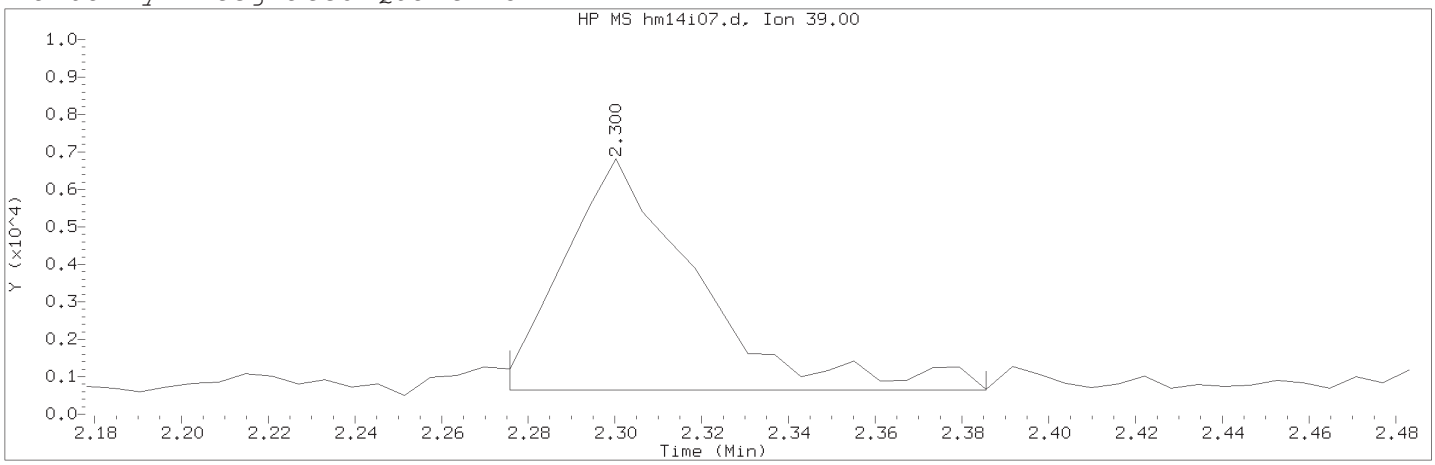
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.847	180	18503	0.305

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

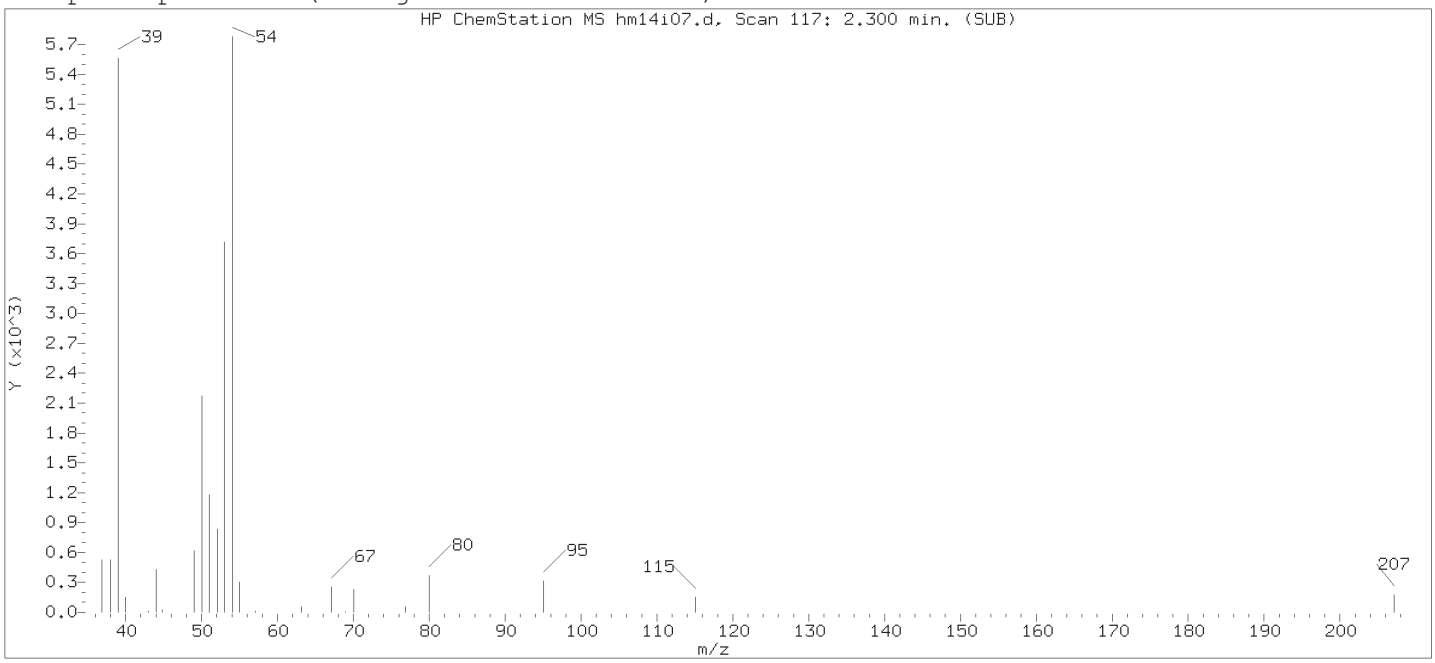
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area (flag) : 13395M
On-Column Amount (ng) : 0.2404
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 637 Y at integration end: 637

Reason for manual integration: improper integration

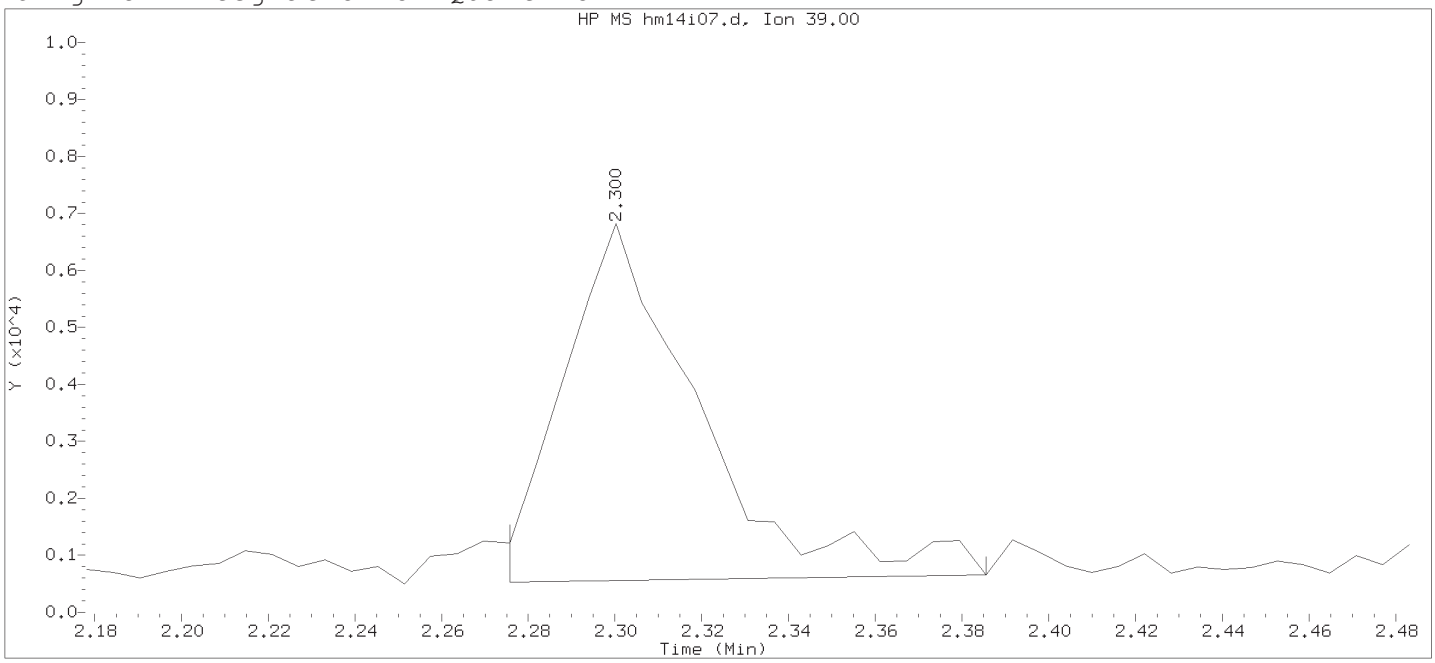
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

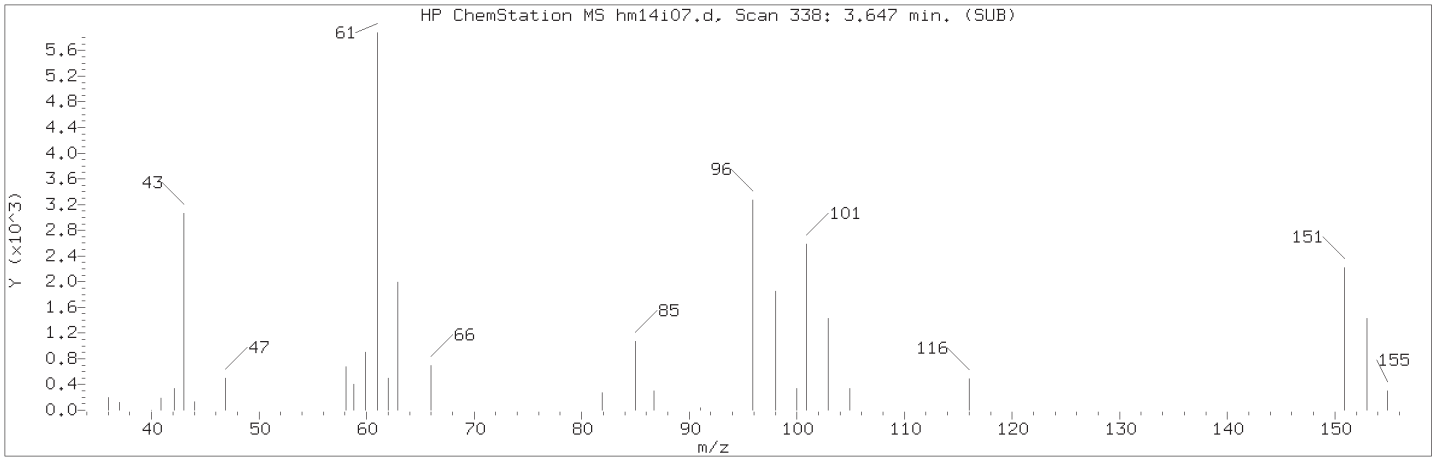
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

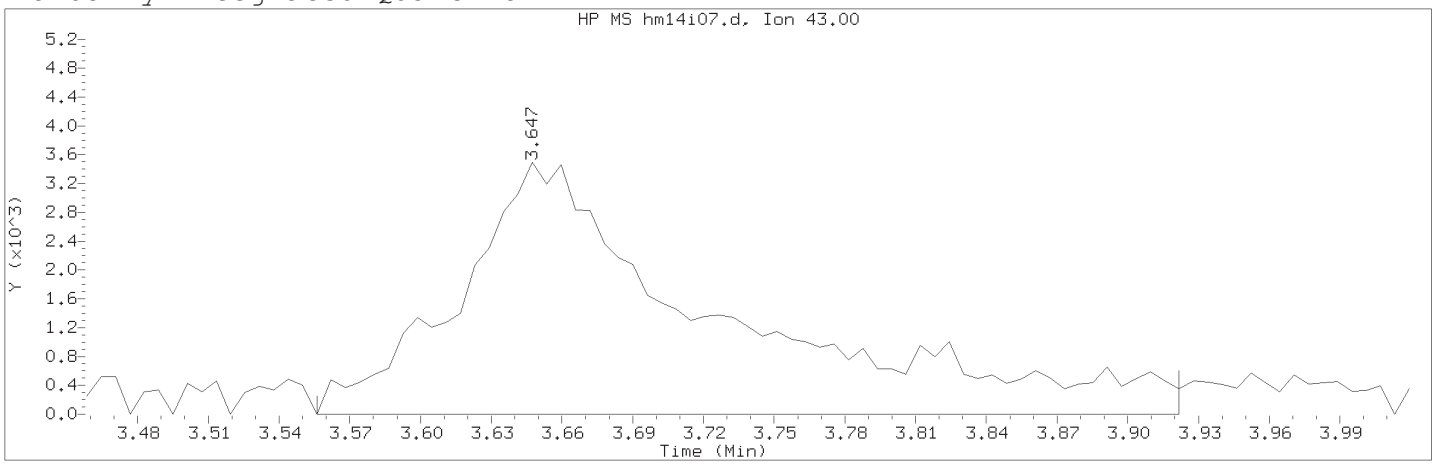
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 117
Retention Time (minutes): 2.300
Quant Ion : 39.00
Area : 13576
On-column Amount (ng) : 0.2465
Integration start scan : 112 Integration stop scan: 130
Y at integration start : 529 Y at integration end: 657

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

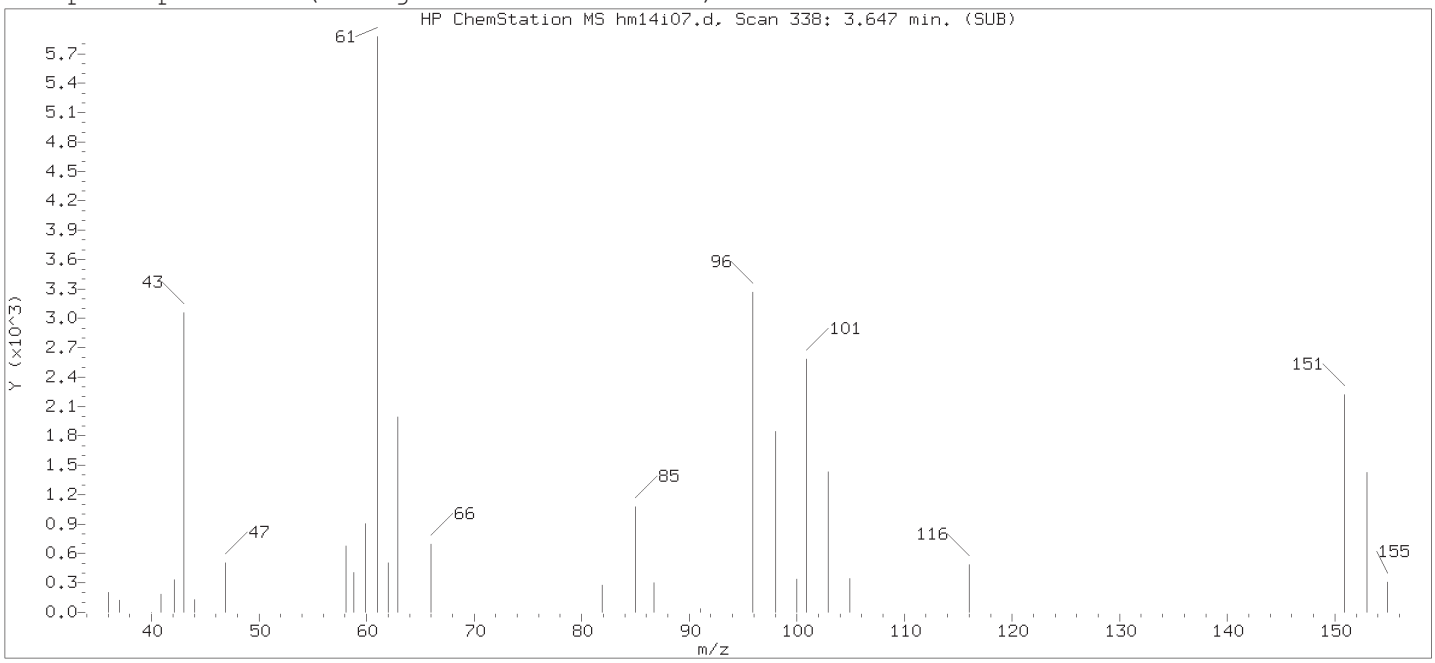
Compound Number : 14
Compound Name : Acetone
Scan Number : 338
Retention Time (minutes): 3.647
Quant Ion : 43.00
Area (flag) : 26660M
On-Column Amount (ng) : 3.1173
Integration start scan : 322 Integration stop scan: 382
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

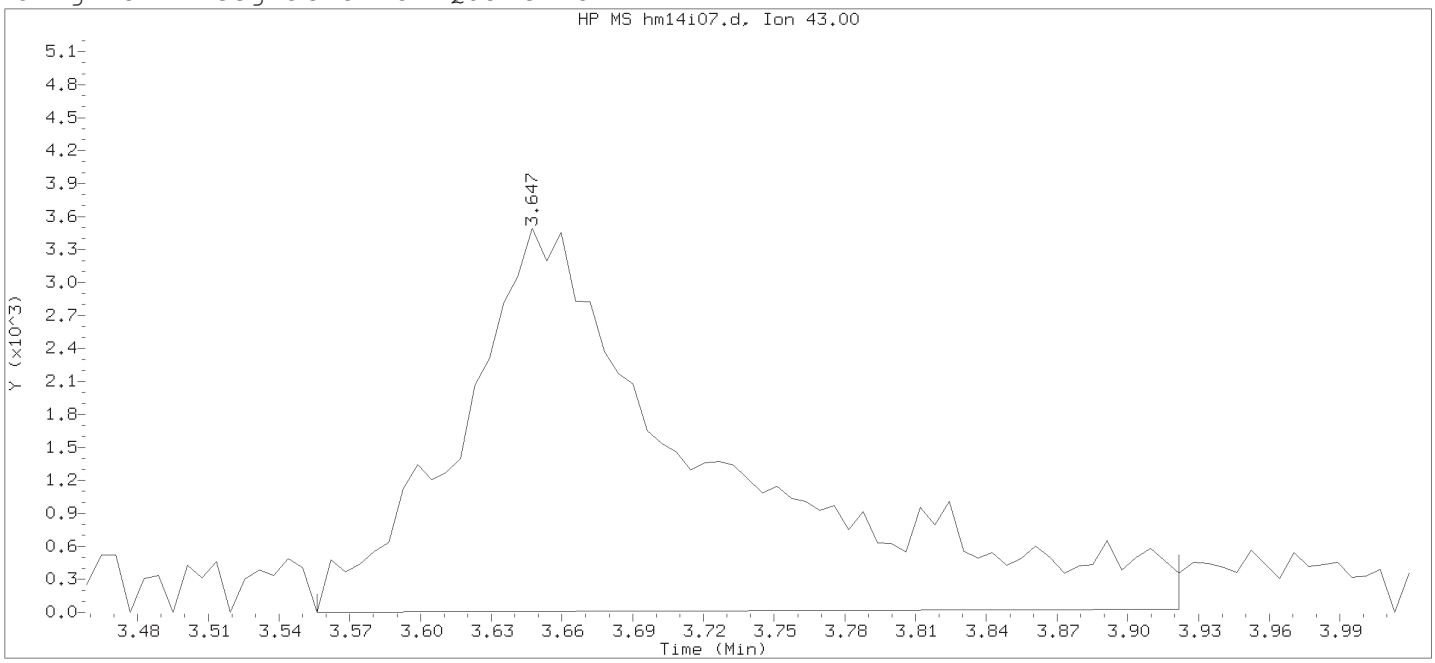
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

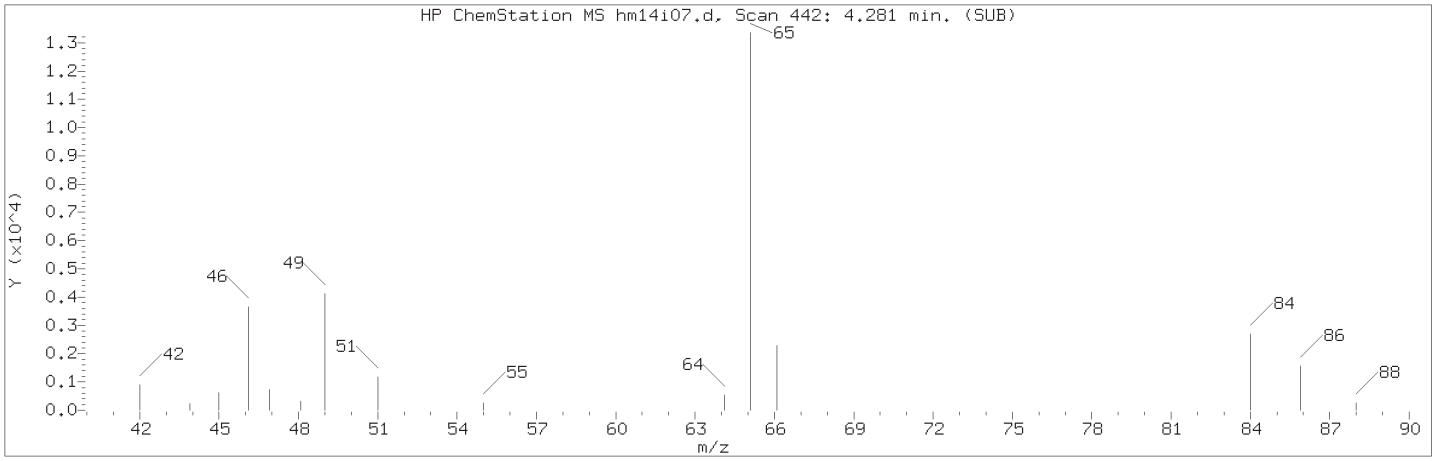
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

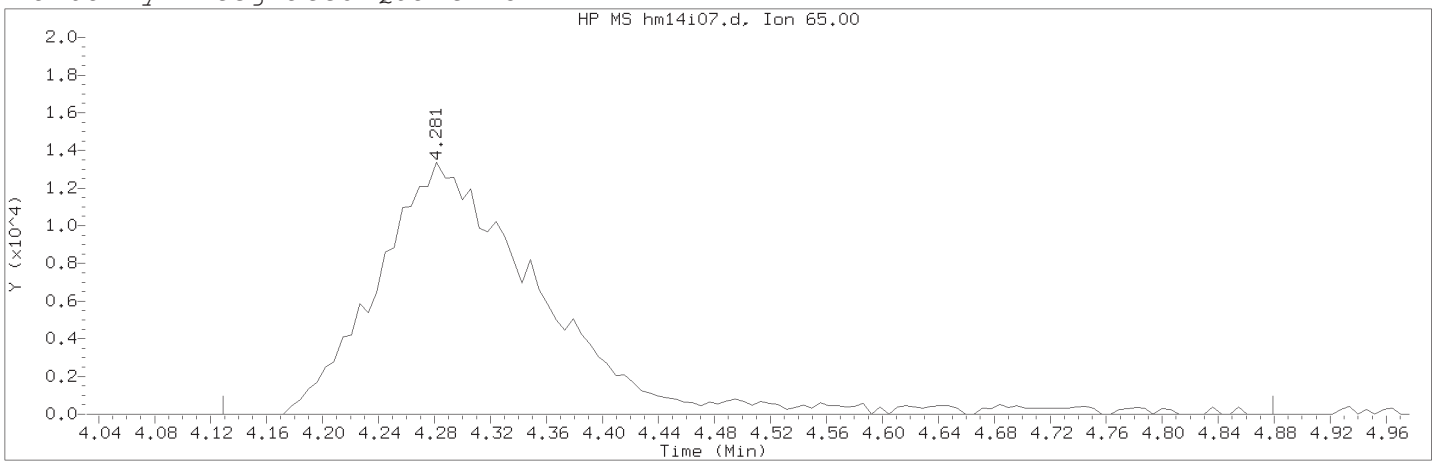
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 338		
Retention Time (minutes)	: 3.647		
Quant Ion	: 43.00		
Area	: 26310		
On-column Amount (ng)	: 3.2378		
Integration start scan	: 322	Integration stop scan:	382
Y at integration start	: 0	Y at integration end:	26

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

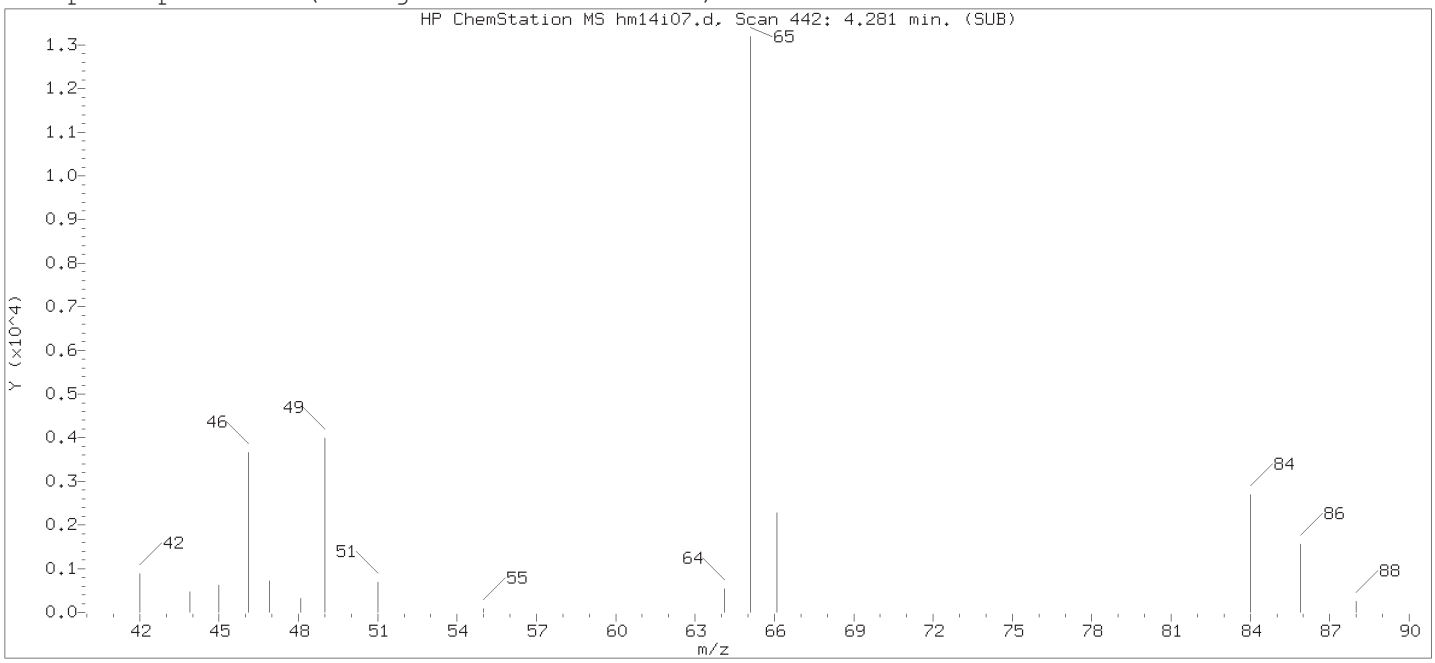
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area (flag) : 108855M
On-Column Amount (ng) : 50.0000
Integration start scan : 416 Integration stop scan: 539
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

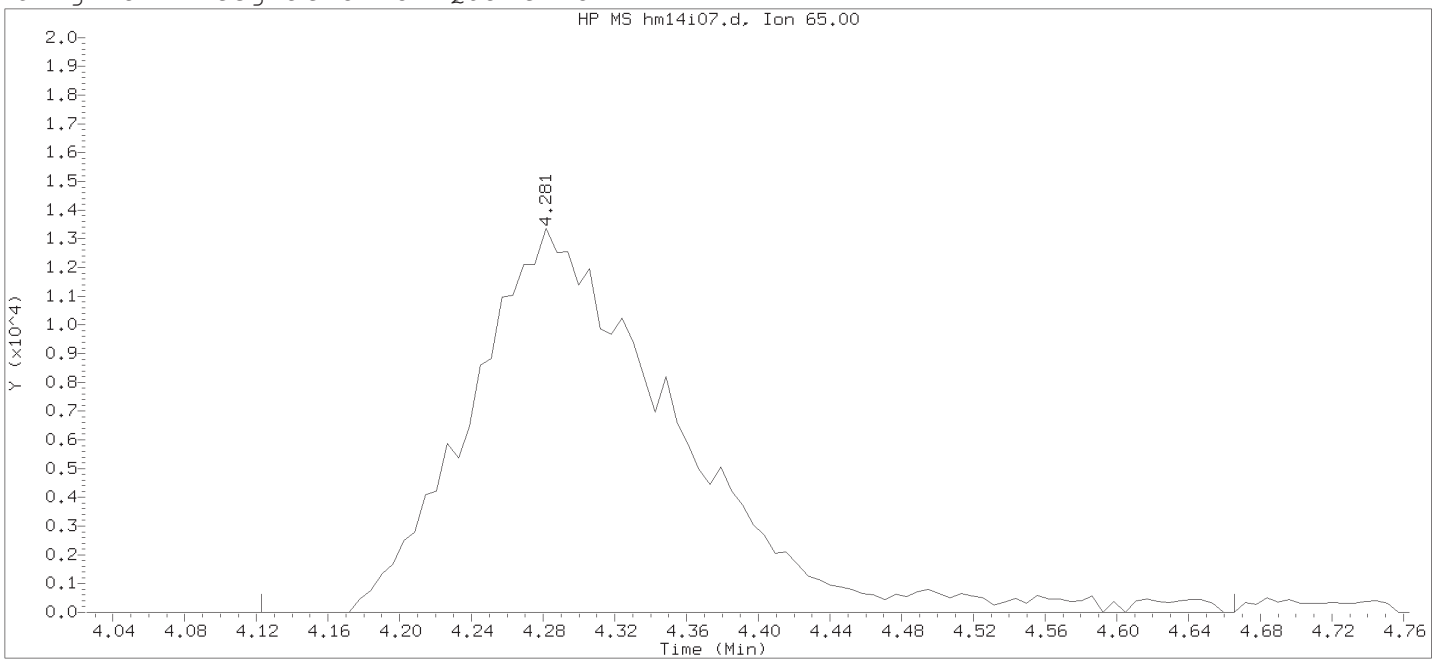
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

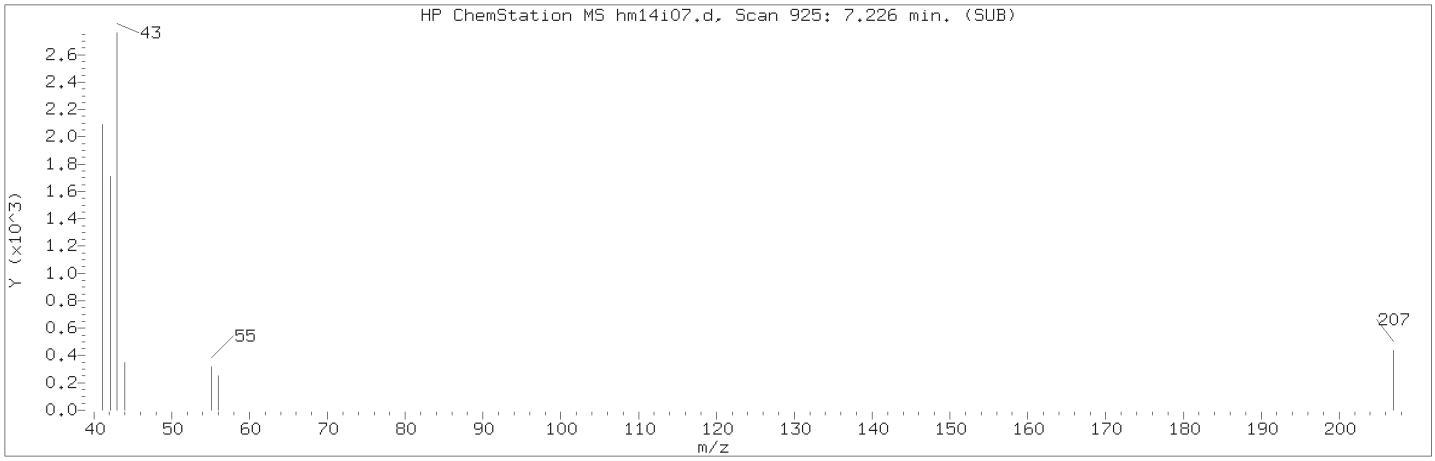
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

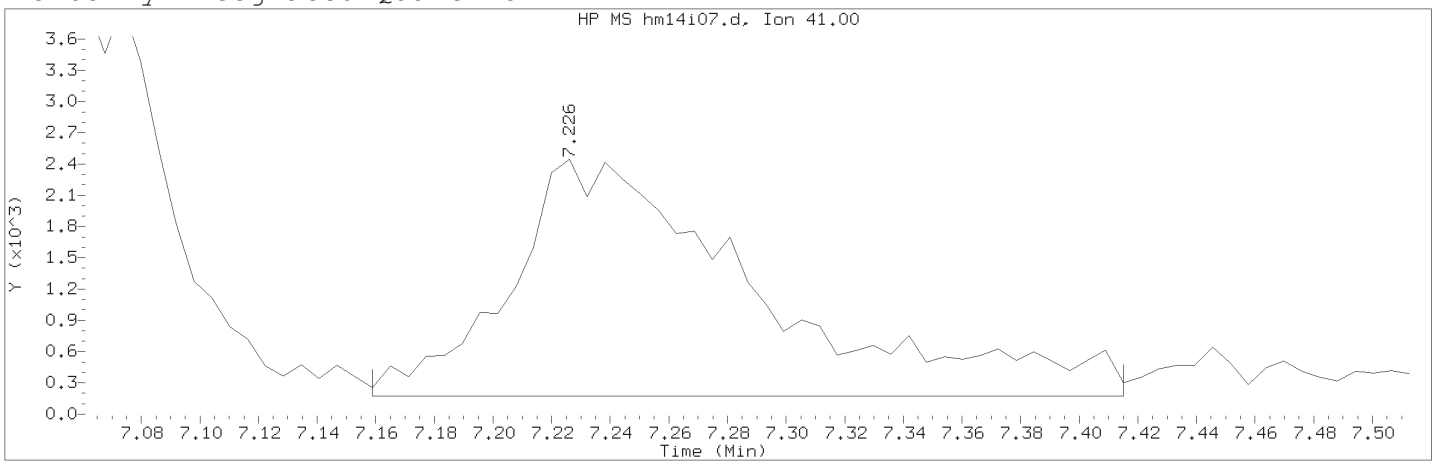
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 442
Retention Time (minutes): 4.281
Quant Ion : 65.00
Area : 106099
On-column Amount (ng) : 50.0000
Integration start scan : 415 Integration stop scan: 504
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

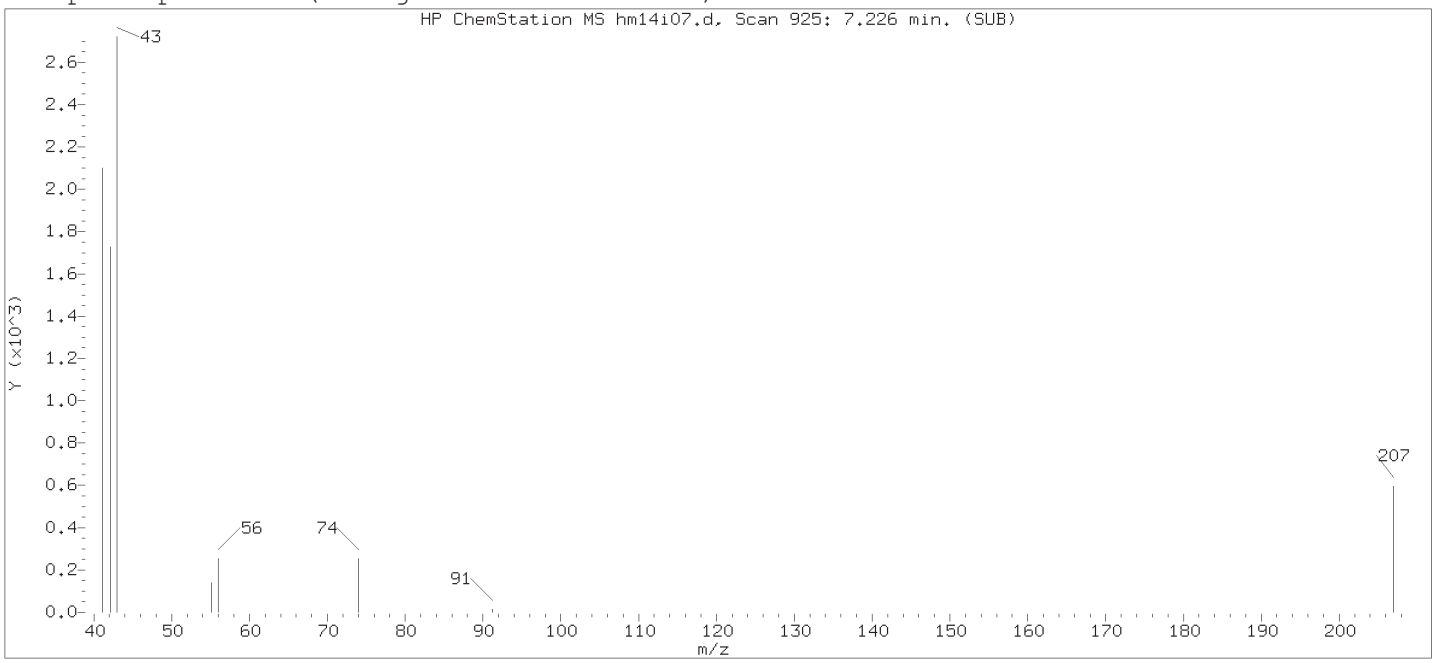
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area (flag) : 13435M
On-Column Amount (ng) : 12.9548
Integration start scan : 913 Integration stop scan: 955
Y at integration start : 173 Y at integration end: 173

Reason for manual integration: improper integration

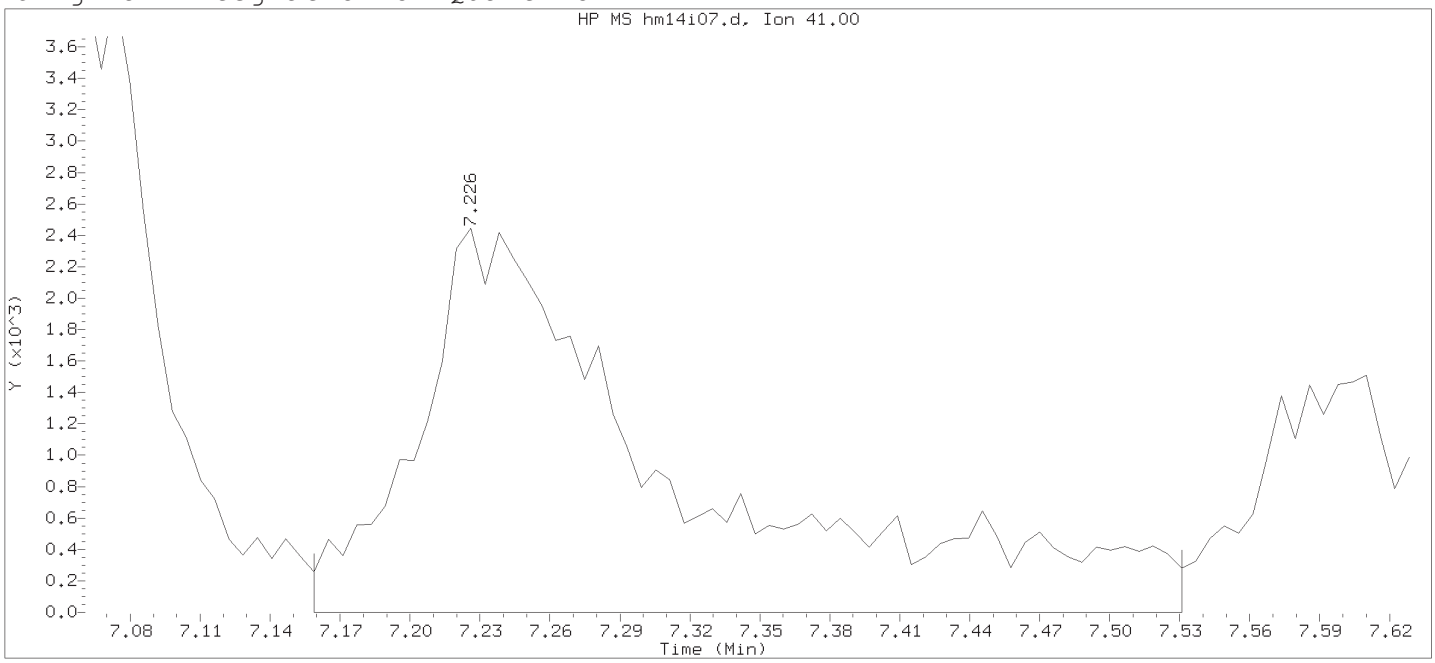
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

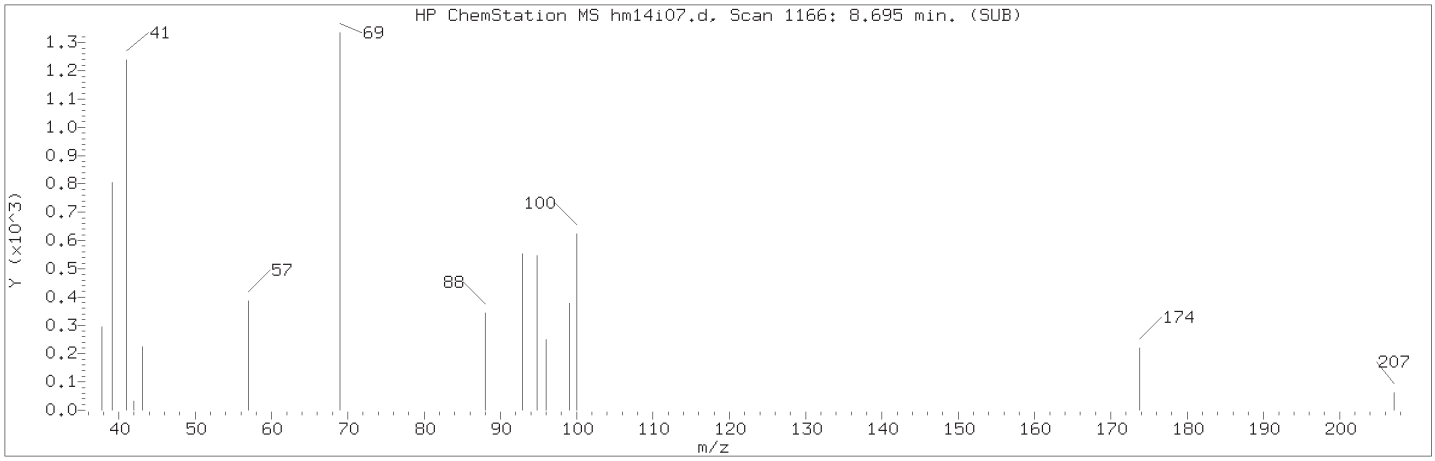
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

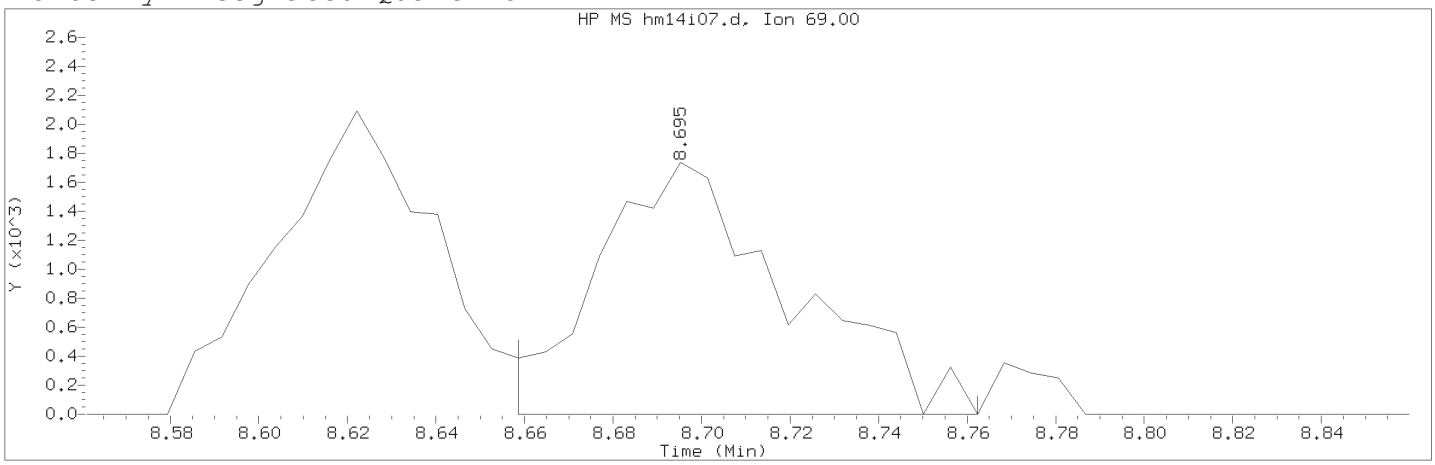
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 925
Retention Time (minutes): 7.226
Quant Ion : 41.00
Area : 18938
On-column Amount (ng) : 17.2181
Integration start scan : 913 Integration stop scan: 974
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

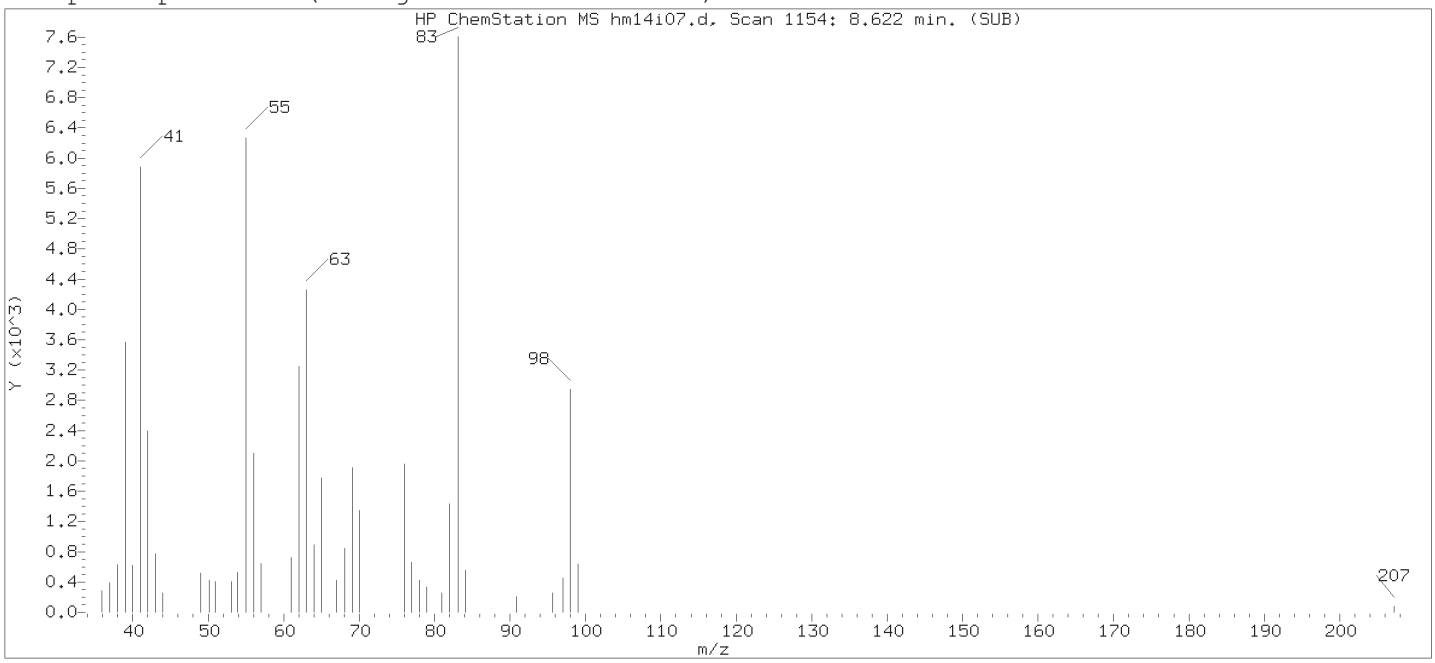
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1166
Retention Time (minutes): 8.695
Quant Ion : 69.00
Area (flag) : 5318M
On-Column Amount (ng) : 0.2046
Integration start scan : 1159 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

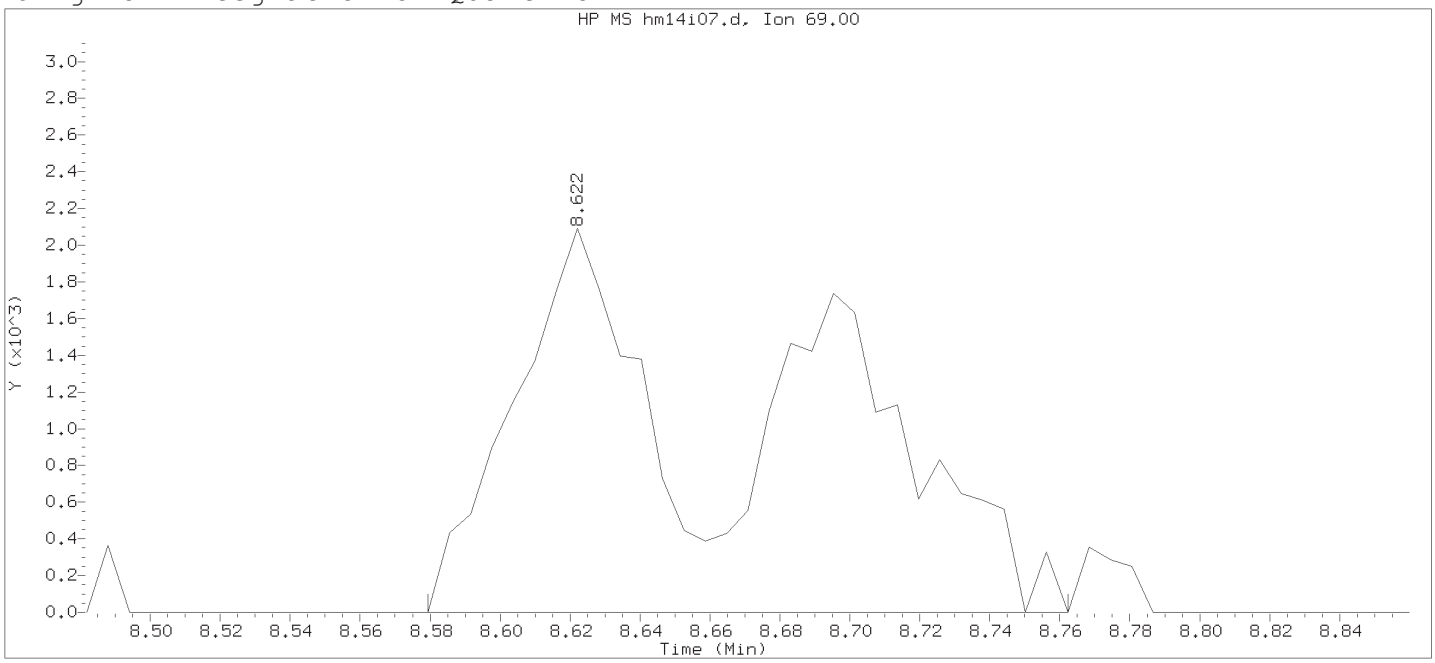
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

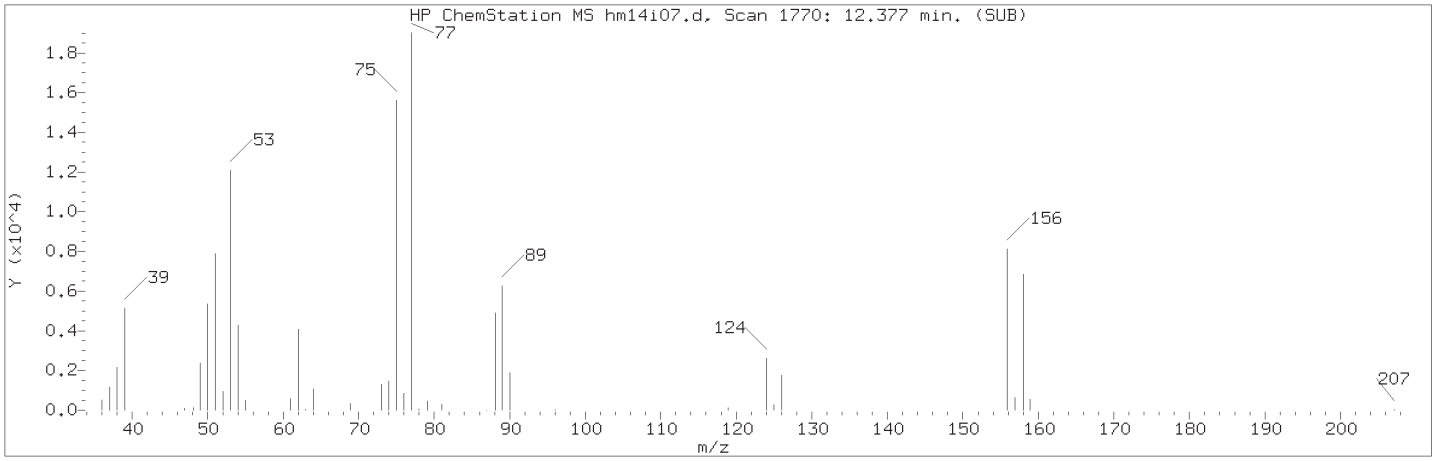
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

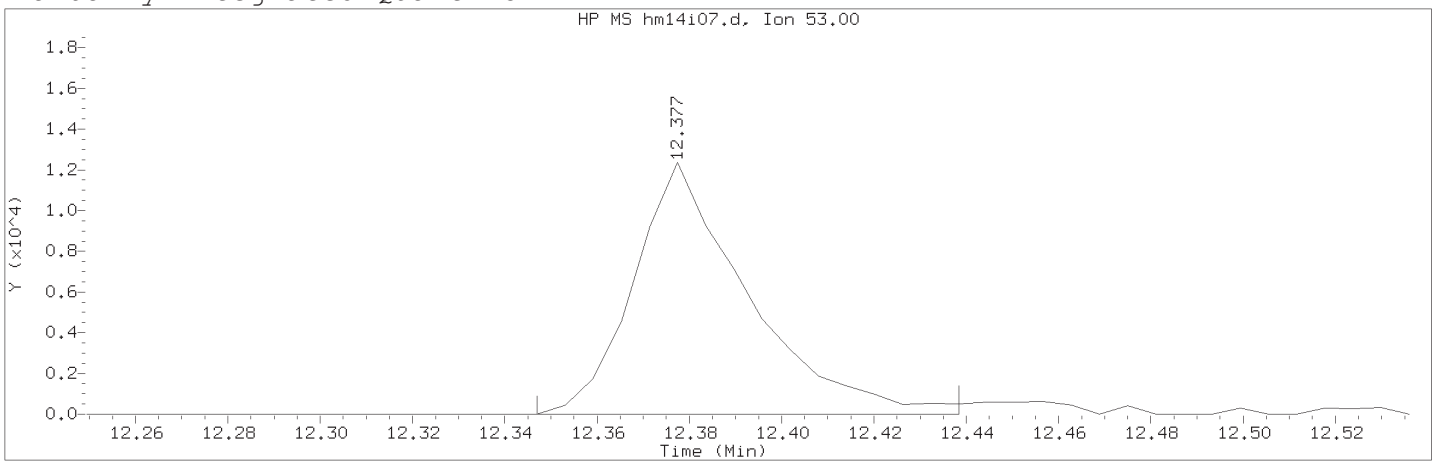
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 10420
On-column Amount (ng) : 0.3576
Integration start scan : 1146 Integration stop scan: 1176
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

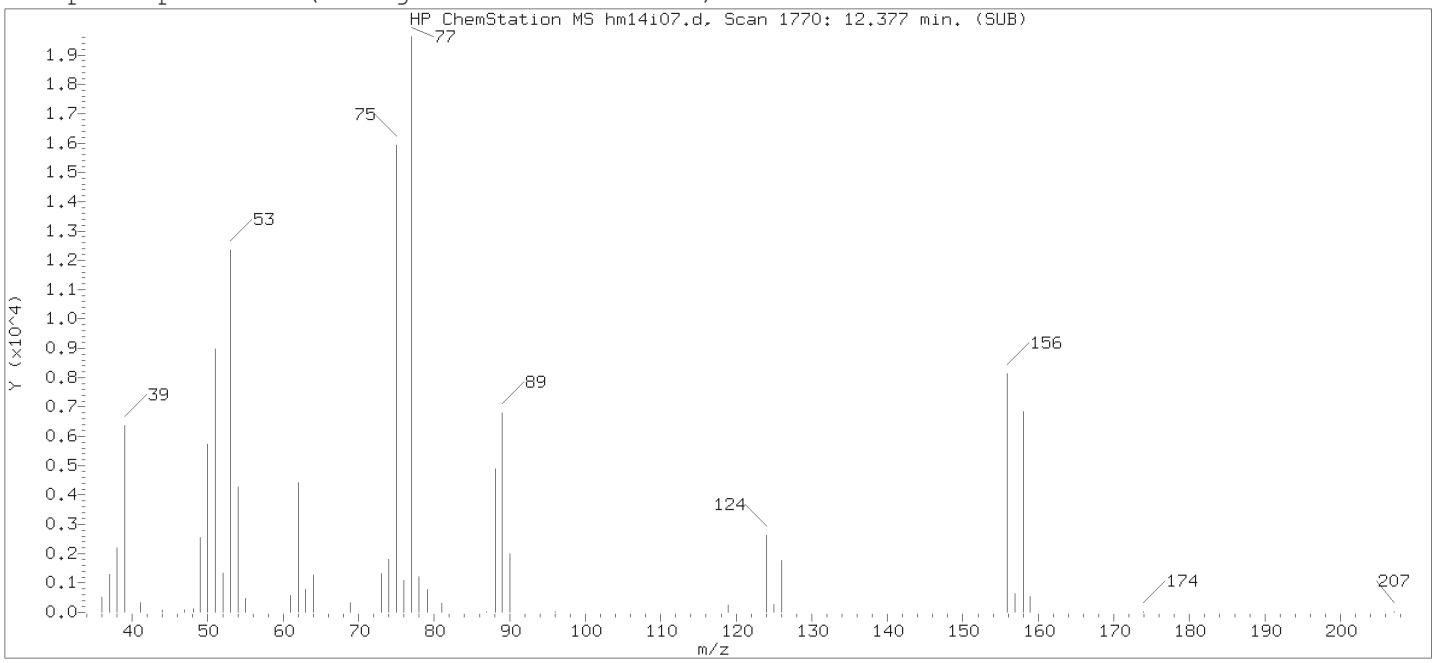
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area (flag) : 21303M
On-Column Amount (ng) : 1.9289
Integration start scan : 1764 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

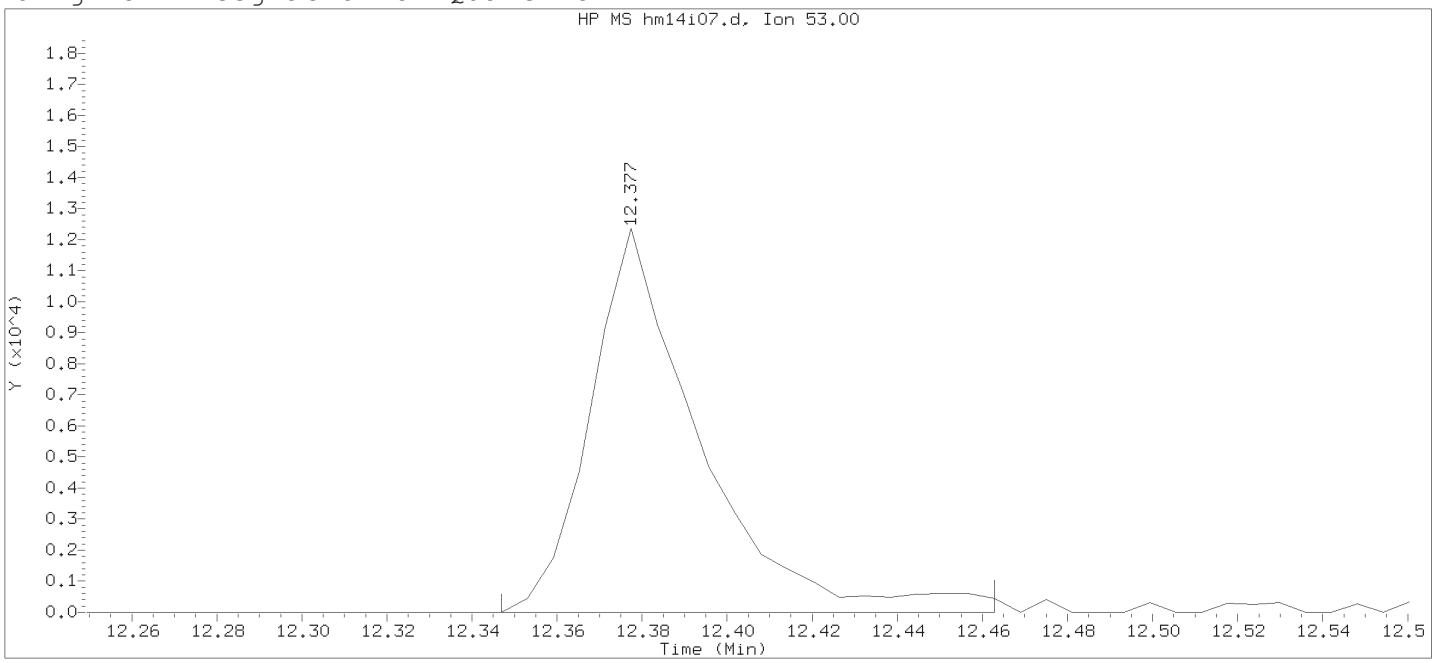
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

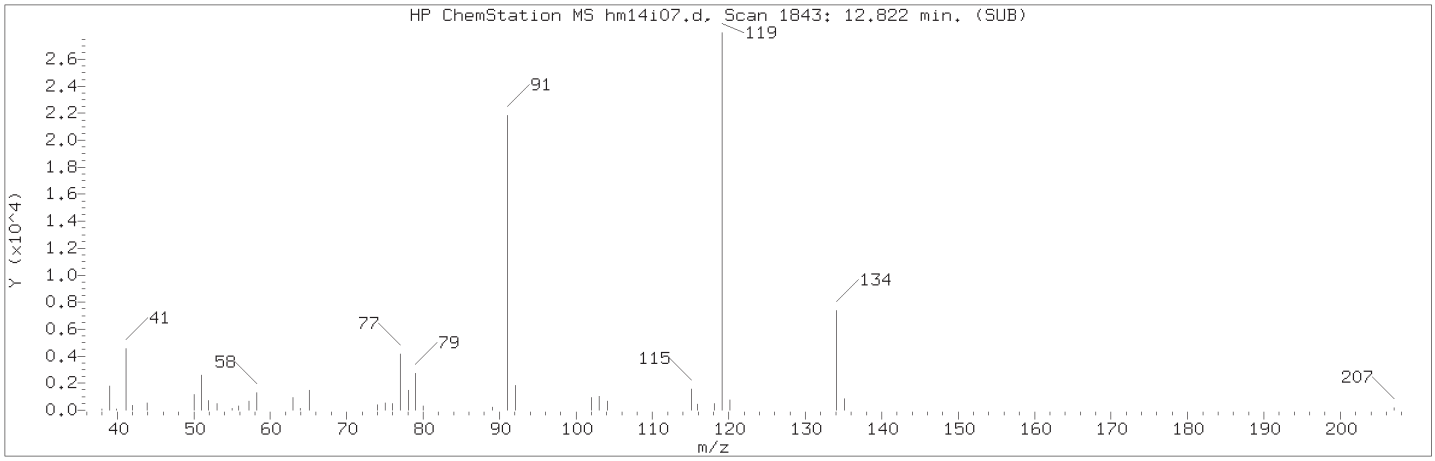
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

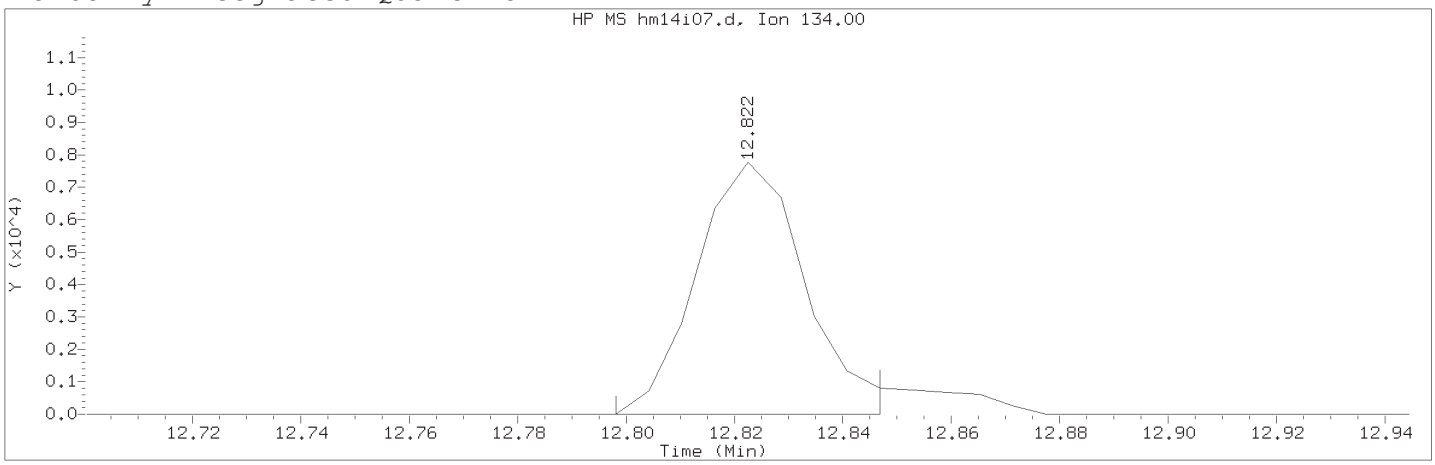
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 22042
On-column Amount (ng) : 2.4024
Integration start scan : 1764 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

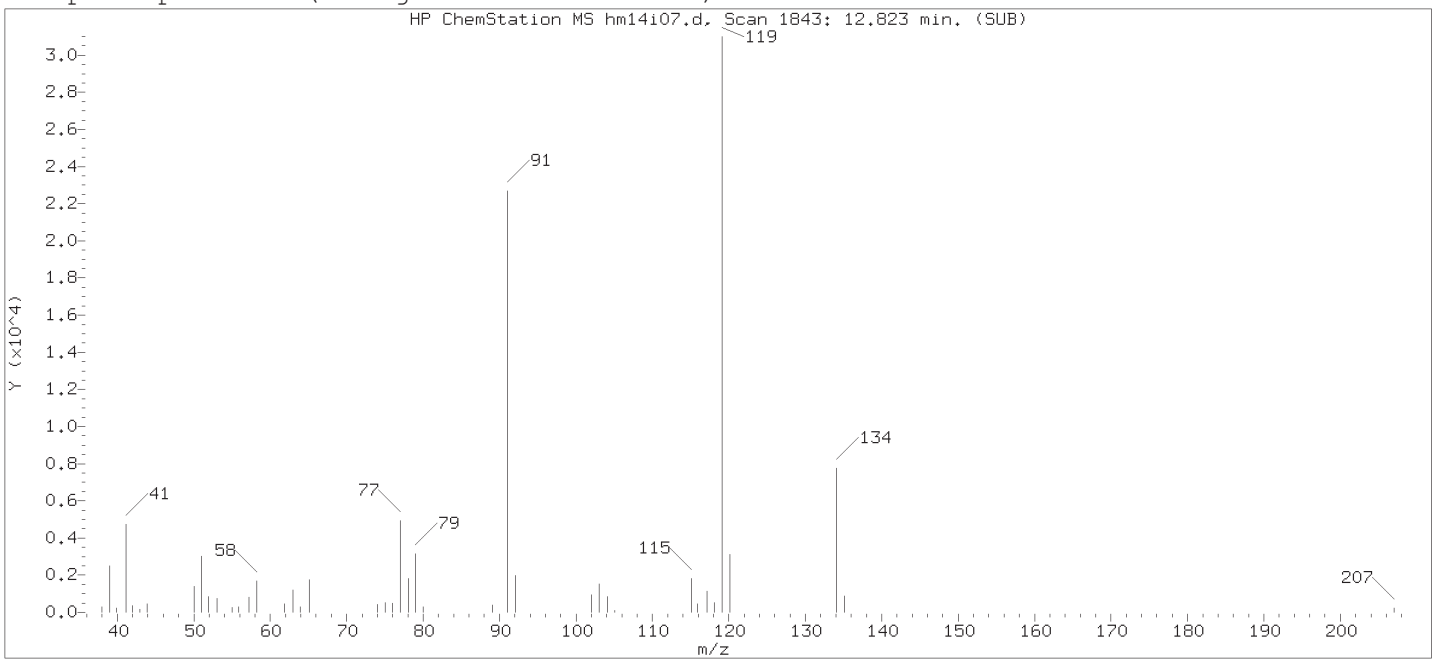
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 10791M
On-Column Amount (ng) : 0.2194
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

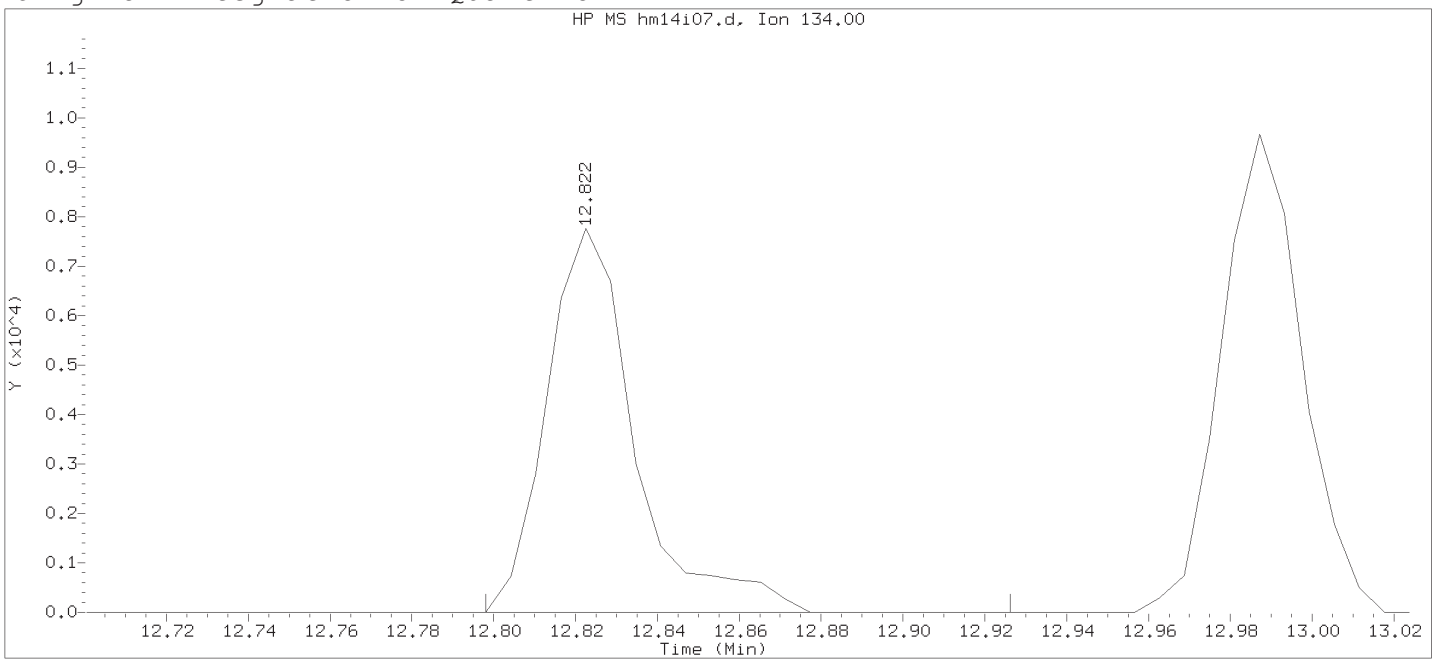
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

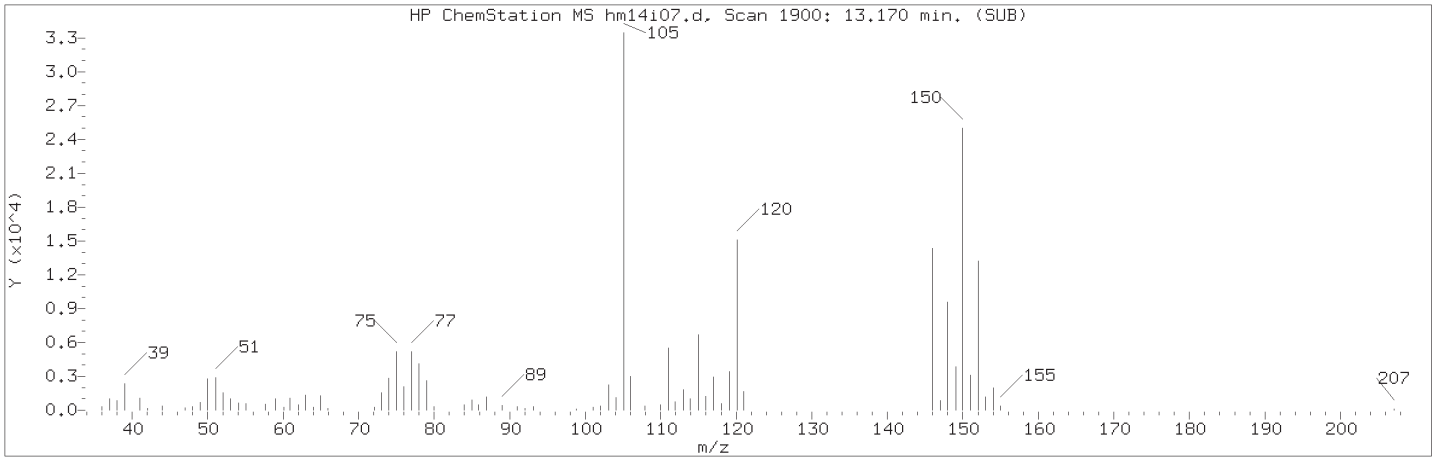
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

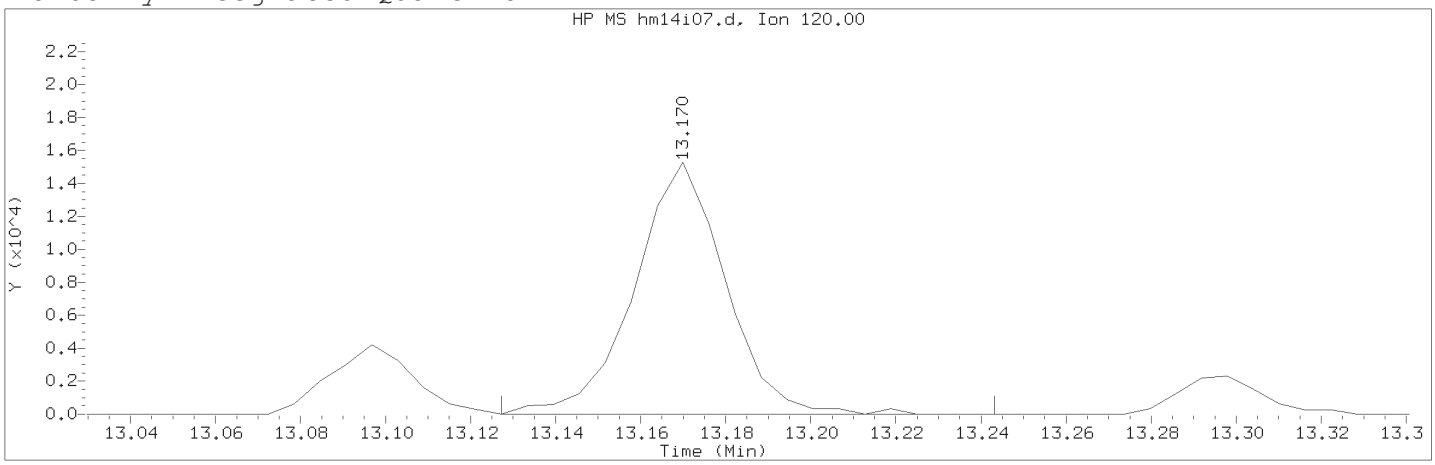
Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1843		
Retention Time (minutes)	: 12.822		
Quant Ion	: 134.00		
Area	: 11628		
On-column Amount (ng)	: 0.2222		
Integration start scan	: 1838	Integration stop scan:	1859
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:11
Date, time and analyst ID of latest file update: 14-Mar-2016 18:11 kel01973

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

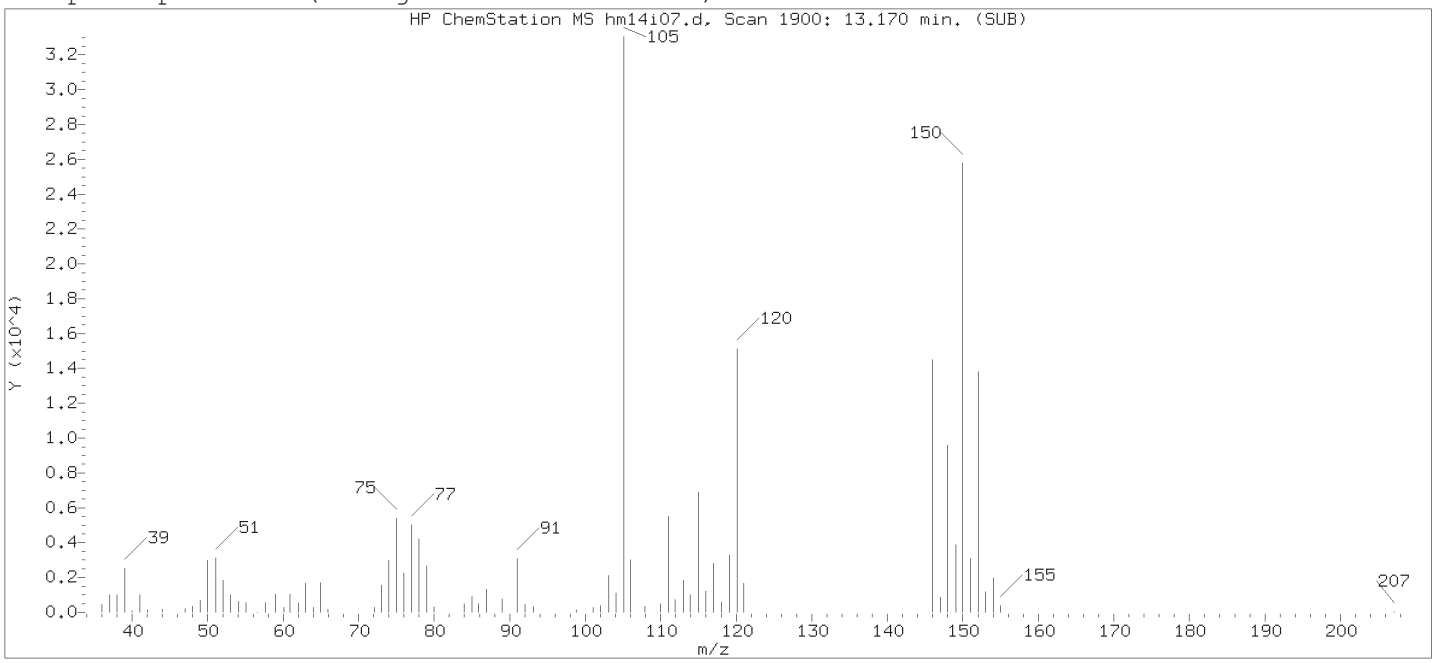
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 22673M
On-Column Amount (ng) : 0.2370
Integration start scan : 1892 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

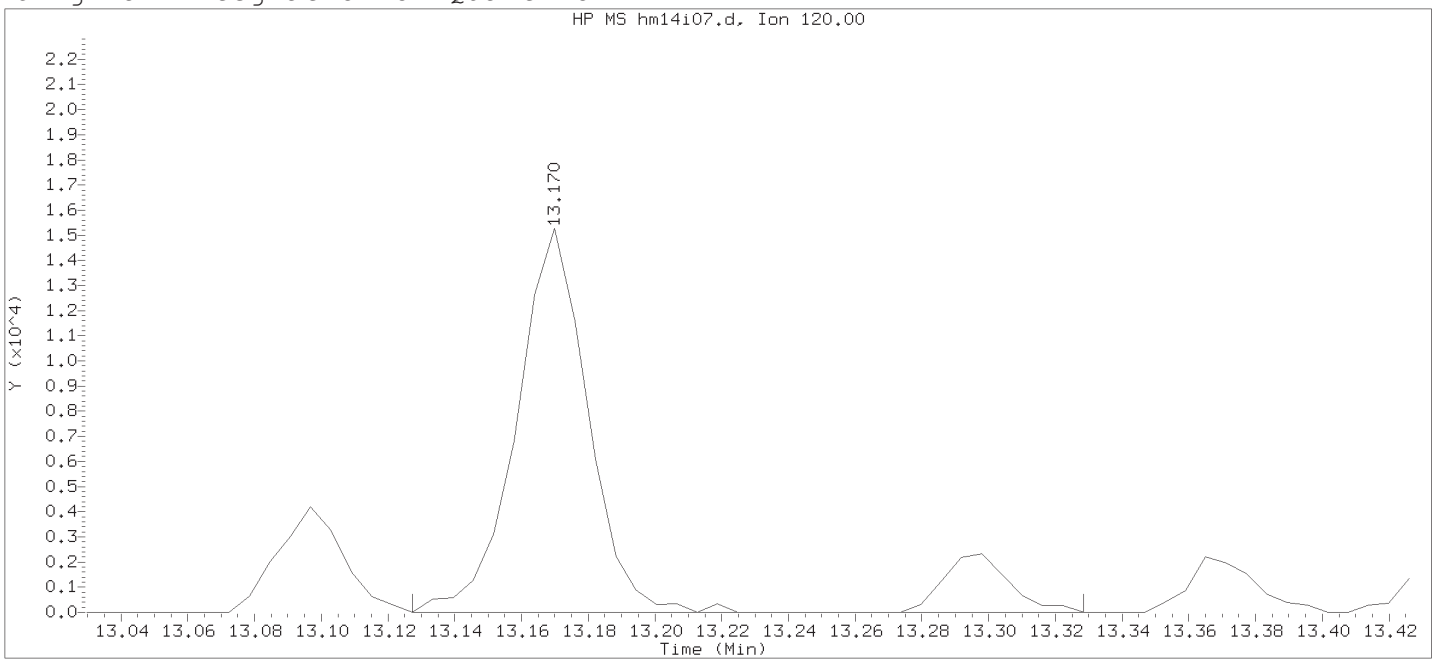
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



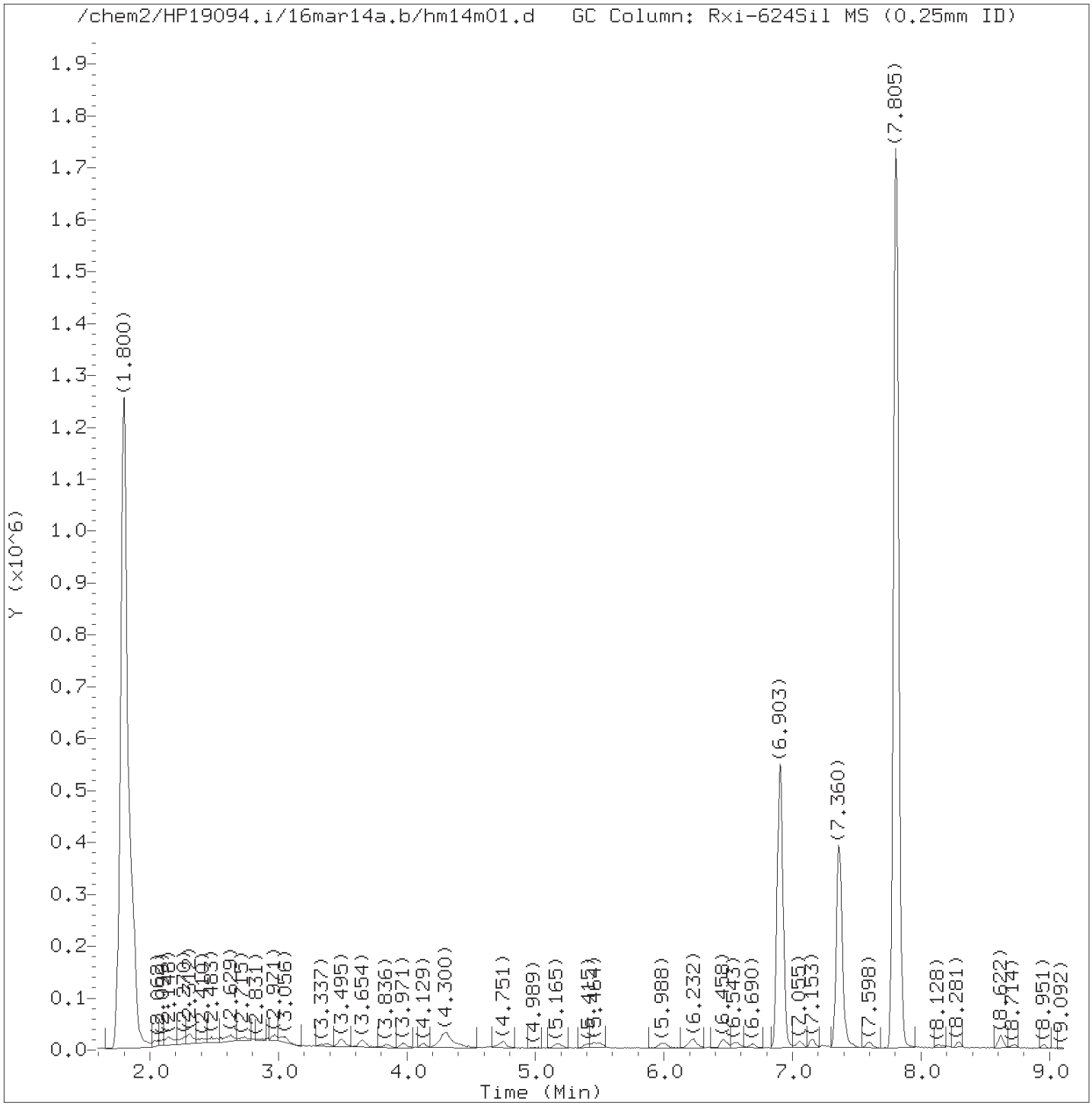
Data File: /chem2/HP19094.i/16mar14a.b/hm14i07.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 16:55 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 17:14
Date, time and analyst ID of latest file update: 14-Mar-2016 17:14 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 25865
On-column Amount (ng) : 0.2641
Integration start scan : 1892 Integration stop scan: 1925
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:15.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

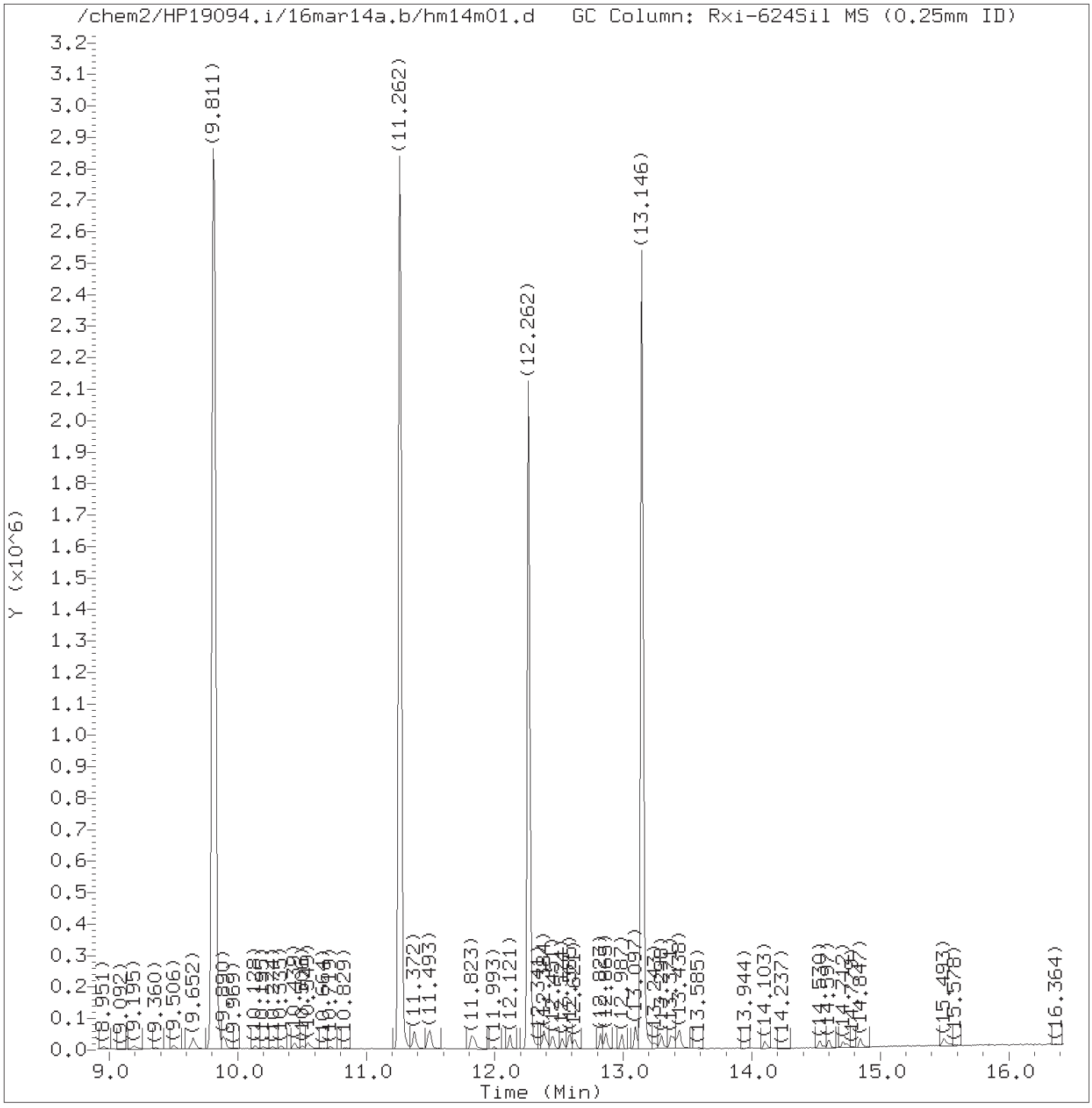
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.026	85	6696	0.082
2) Chloromethane	(2)	2.148	50	9614	0.121
5) Vinyl Chloride	(2)	2.276	62	7085	0.096
6) 1,3-Butadiene	(2)	2.306	39	5670M	0.101
7) Bromomethane	(2)	2.623	94	4812	0.098
8) Chloroethane	(2)	2.727	64	5751	0.126
9) Dichlorofluoromethane	(2)	2.971	67	10742M	0.104
10) Trichlorofluoromethane	(2)	3.038	101	7789	0.081
11) Ethyl ether	(2)	3.337	59	3631	0.091
12) Freon 123a	(2)	3.379	67	7477	0.101
13) Acrolein	(1)	3.495	56	32120	5.112
15) 1,1-Dichloroethene	(2)	3.647	96	4952	0.089
16) Freon 113	(2)	3.666	101	4280	0.074
14) Acetone	(1)	3.666	43	14842	1.714
17) Methyl Iodide	(2)	3.855	142	8881	0.087
18) Carbon Disulfide	(2)	3.971	76	18311	0.107
21) Methyl Acetate	(1)	4.105	43	1472M	0.069
22) Allyl Chloride	(2)	4.129	41	15054	0.144
26)*t-Butyl Alcohol-d10	(1)	4.300	65	110195	50.000
23) Methylene Chloride	(2)	4.306	84	5972	0.101
28) t-Butyl Alcohol	(1)	4.416	59	5844	1.972
29) Acrylonitrile	(1)	4.653	53	3931	0.378
30) Methyl Tertiary Butyl Ether	(2)	4.727	73	12091	0.095
31) trans-1,2-Dichloroethene	(2)	4.751	96	6174	0.103
32) n-Hexane	(2)	5.172	57	9215	0.091
33) 1,1-Dichloroethane	(2)	5.397	63	10893	0.090
34) di-Isopropyl Ether	(2)	5.458	45	20098	0.095
35) 2-Chloro-1,3-Butadiene	(2)	5.513	53	9367	0.094
37) Ethyl t-butyl ether	(2)	5.976	59	15662	0.088
40) 1,2-Dichloroethene (Total)	(2)		96	12317	0.196
38) 2-Butanone	(1)	6.171	43	14238	0.965
39) cis-1,2-Dichloroethene	(2)	6.214	96	6143	0.093
41) 2,2-Dichloropropane	(2)	6.232	77	9828	0.101
42) Propionitrile	(1)	6.251	54	5878	1.598
45) Methacrylonitrile	(1)	6.458	67	11576	0.919
47) Bromochloromethane	(2)	6.543	128	2206	0.088
48) Tetrahydrofuran	(1)	6.574	71	3515	0.942
49) Chloroform	(2)	6.702	83	10638	0.096

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.903	113	530960	9.562
51) 1,1,1-Trichloroethane	(2)	6.933	97	8879	0.094
52) Cyclohexane	(2)	7.055	56	11628	0.094
55) 1,1-Dichloropropene	(2)	7.147	75	8426	0.093
54) Carbon Tetrachloride	(2)	7.165	117	7632	0.089
56) Isobutyl Alcohol	(1)	7.232	41	9169	9.186
57)$1,2-Dichloroethane-d4	(2)	7.354	102	87351	9.498
58) Benzene	(2)	7.403	78	23626	0.093
59) 1,2-Dichloroethane	(2)	7.470	62	7033	0.107
60) t-Amyl methyl ether	(2)	7.598	73	13048	0.089
63)*Fluorobenzene	(2)	7.805	96	2356396	10.000
62) n-Heptane	(2)	7.836	43	11952	0.104
65) n-Butanol	(1)	8.140	56	8938M	10.579
67) Trichloroethene	(2)	8.299	95	6124	0.093
69) Methylcyclohexane	(2)	8.616	83	8271	0.076
70) 1,2-Dichloropropane	(2)	8.616	63	5958	0.090
71) Methyl Methacrylate	(1)	8.714	69	2158M	0.082
72) 1,4-Dioxane	(1)	8.732	88	326	1.958
73) Dibromomethane	(2)	8.738	93	2535	0.093
74) Bromodichloromethane	(2)	8.957	83	6776	0.089
76) 2-Nitropropane	(1)	9.201	41	10978M	1.301
80) cis-1,3-Dichloropropene	(2)	9.506	75	7727	0.083
81) 4-Methyl-2-Pentanone	(1)	9.652	43	33110	0.912
82)$Toluene-d8	(3)	9.811	98	2286073	10.383
83) Toluene	(3)	9.896	92	14724	0.099
84) trans-1,3-Dichloropropene	(3)	10.134	75	6281	0.090
85) 1,3-Dichloropropene (total)	(3)		75	14008	0.173
86) Ethyl Methacrylate	(3)	10.201	69	5026	0.094
88) 1,1,2-Trichloroethane	(3)	10.335	97	3199	0.089
89) Tetrachloroethene	(3)	10.445	166	6977	0.100
90) 1,3-Dichloropropane	(3)	10.500	76	5803	0.090
91) 2-Hexanone	(1)	10.549	43	22438M	0.874
93) Dibromochloromethane	(3)	10.719	129	4035	0.088
95) 1,2-Dibromoethane	(3)	10.841	107	2950	0.087
97)*Chlorobenzene-d5	(3)	11.262	117	1545583	10.000
98) Chlorobenzene	(3)	11.292	112	15041	0.093
99) 1,1,1,2-Tetrachloroethane	(3)	11.372	131	5096	0.092
100) Ethylbenzene	(3)	11.378	91	29367	0.101

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.500	106	20833	0.188
105) Xylene (Total)	(3)		106	31010	0.283
104) o-Xylene	(3)	11.823	106	10177	0.095
106) Styrene	(3)	11.841	104	15819	0.092
107) Bromoform	(3)	11.993	173	2673	0.105
108) Isopropylbenzene	(3)	12.121	105	27703	0.097
111)$4-Bromofluorobenzene	(3)	12.262	95	688635	9.703
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	4168	0.103
115) trans-1,4-Dichloro-2-butene	(1)	12.384	53	9161	0.819
114) Bromobenzene	(4)	12.384	156	6169	0.102
116) 1,2,3-Trichloropropane	(4)	12.402	110	637	0.062
117) n-Propylbenzene	(4)	12.445	91	32243	0.098
119) 2-Chlorotoluene	(4)	12.524	126	6039	0.096
121) 1,3,5-Trimethylbenzene	(4)	12.585	105	23290	0.102
122) 4-Chlorotoluene	(4)	12.621	126	6581	0.102
125) tert-Butylbenzene	(4)	12.823	134	4695M	0.096
126) Pentachloroethane	(4)	12.853	167	3455	0.094
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	22439	0.098
128) sec-Butylbenzene	(4)	12.987	105	29894	0.101
131) 1,3-Dichlorobenzene	(4)	13.097	146	11583	0.098
132) p-Isopropyltoluene	(4)	13.097	119	23890	0.095
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	649366	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	12863	0.107
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	10366M	0.110
136) Benzyl Chloride	(4)	13.249	126	1282	0.080
138) n-Butylbenzene	(4)	13.396	92	9637	0.079
139) 1,2-Dichlorobenzene	(4)	13.426	146	10813	0.103
143) 1,2-Dibromo-3-chloropropane	(1)	13.969	155	358	0.062
145) 1,2,4-Trichlorobenzene	(4)	14.530	180	9978	0.133
146) Hexachlorobutadiene	(4)	14.597	225	4369	0.111
147) Naphthalene	(4)	14.712	128	19939	0.165
148) 1,2,3-Trichlorobenzene	(4)	14.853	180	10320	0.172

M = Compound was manually integrated.
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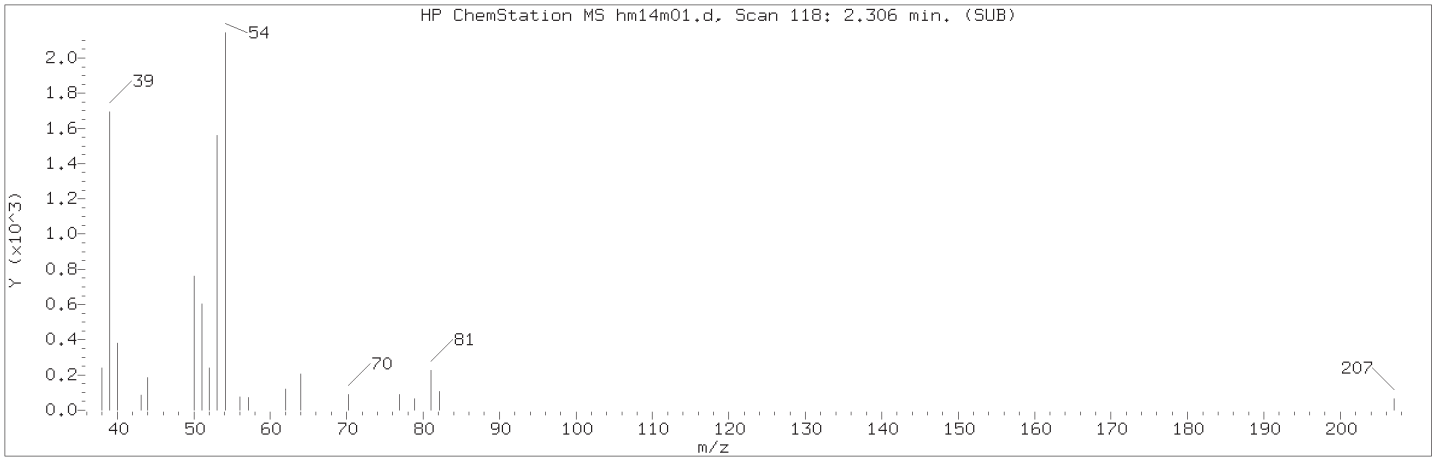
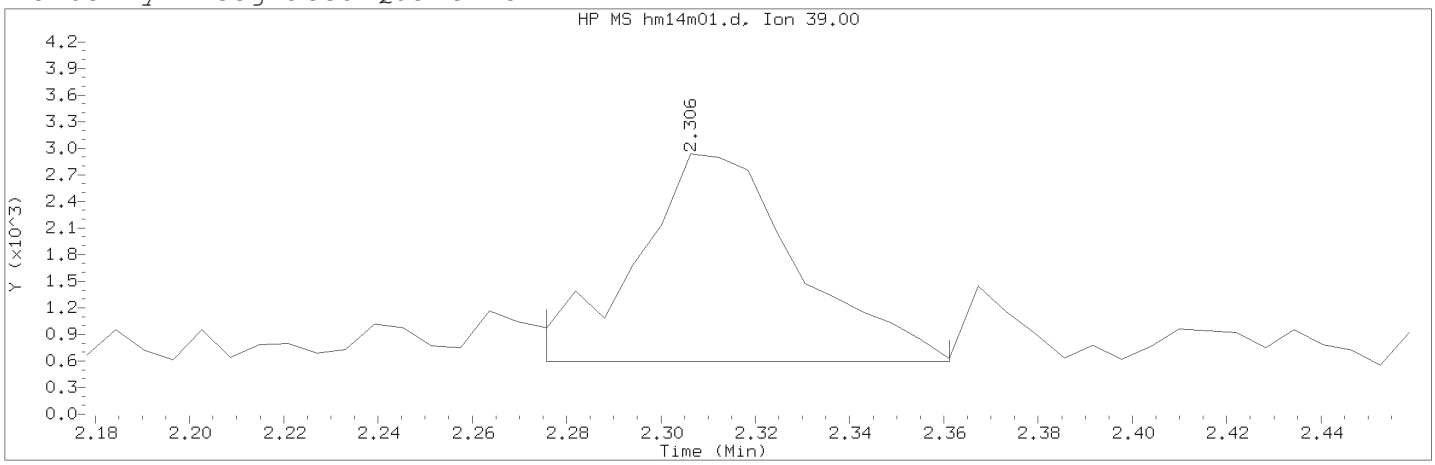
Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

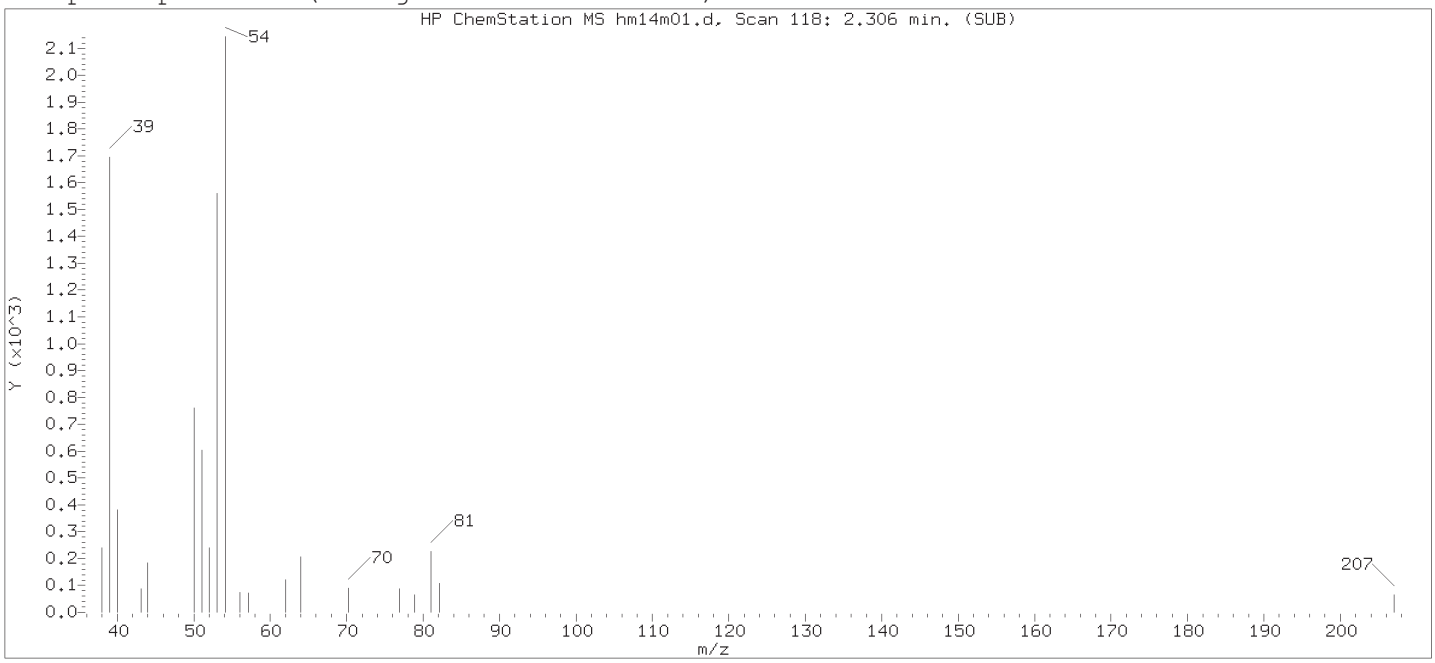
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area (flag) : 5670M
On-Column Amount (ng) : 0.1012
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 590 Y at integration end: 590

Reason for manual integration: improper integration

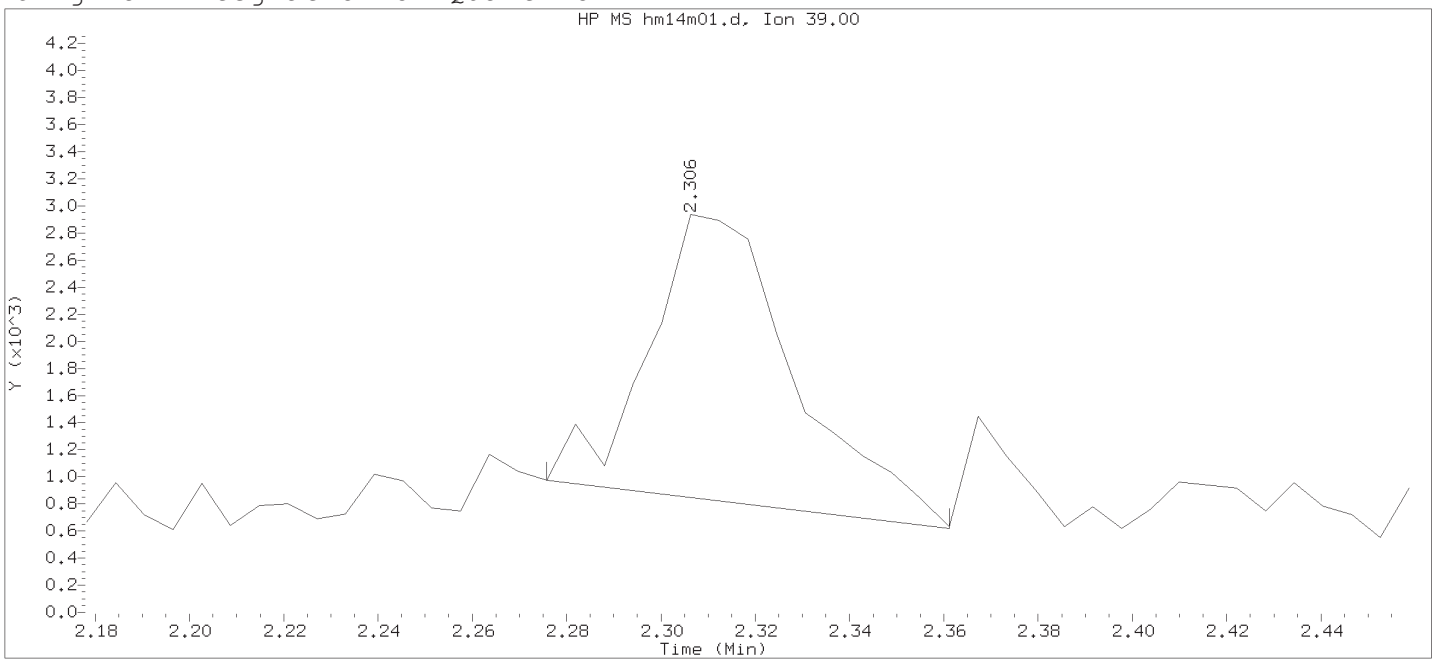
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

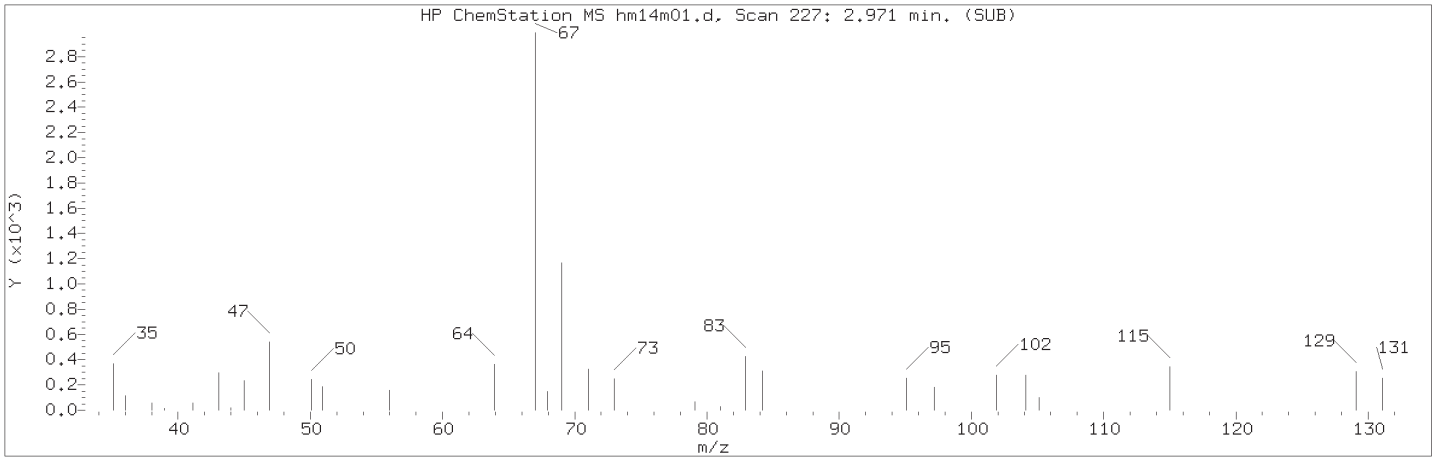
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

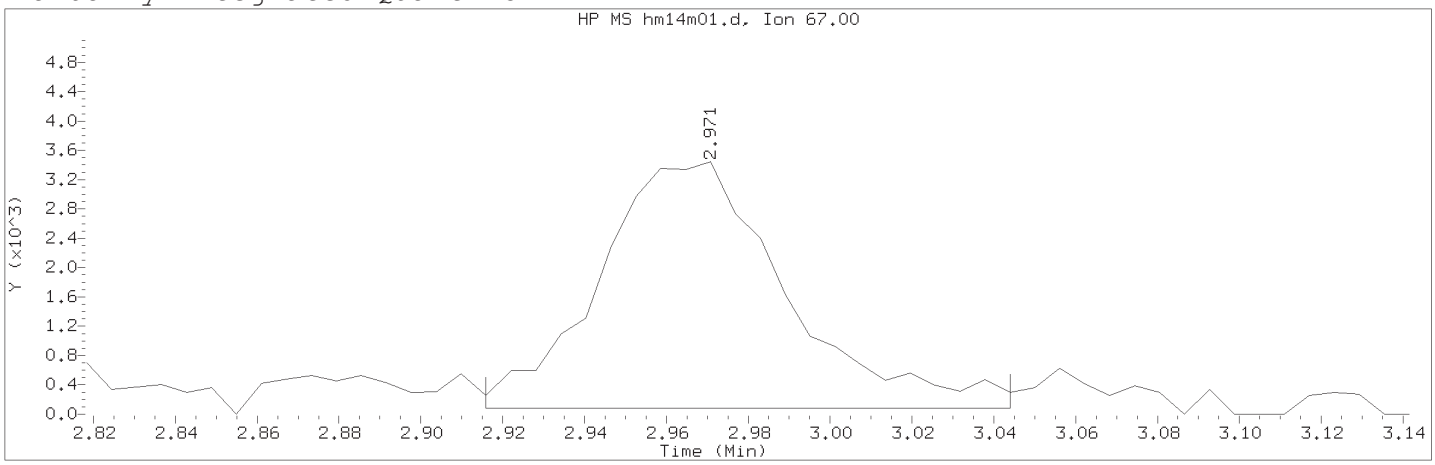
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 118
Retention Time (minutes): 2.306
Quant Ion : 39.00
Area : 4538
On-column Amount (ng) : 0.0810
Integration start scan : 112 Integration stop scan: 126
Y at integration start : 973 Y at integration end: 619

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

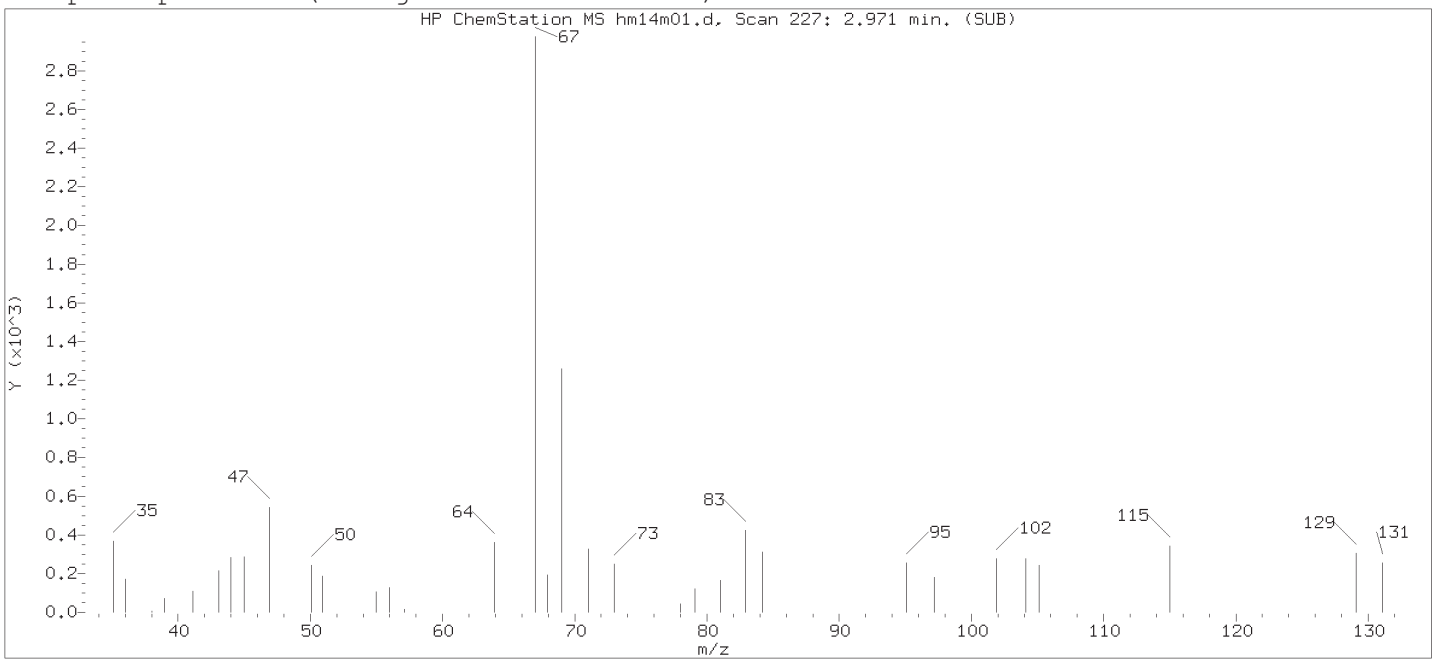
Compound Number : 9
Compound Name : Dichlorofluoromethane
Scan Number : 227
Retention Time (minutes): 2.971
Quant Ion : 67.00
Area (flag) : 10742M
On-Column Amount (ng) : 0.1036
Integration start scan : 217 Integration stop scan: 238
Y at integration start : 82 Y at integration end: 82

Reason for manual integration: improper integration

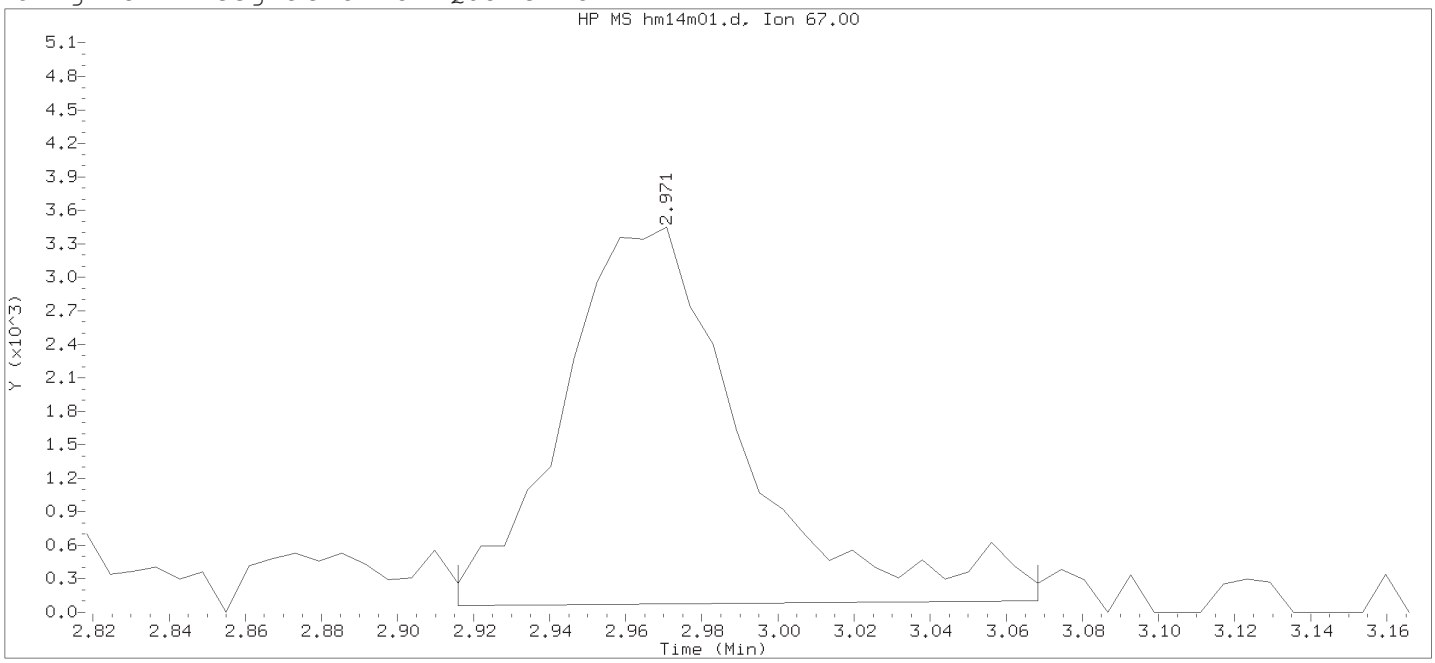
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

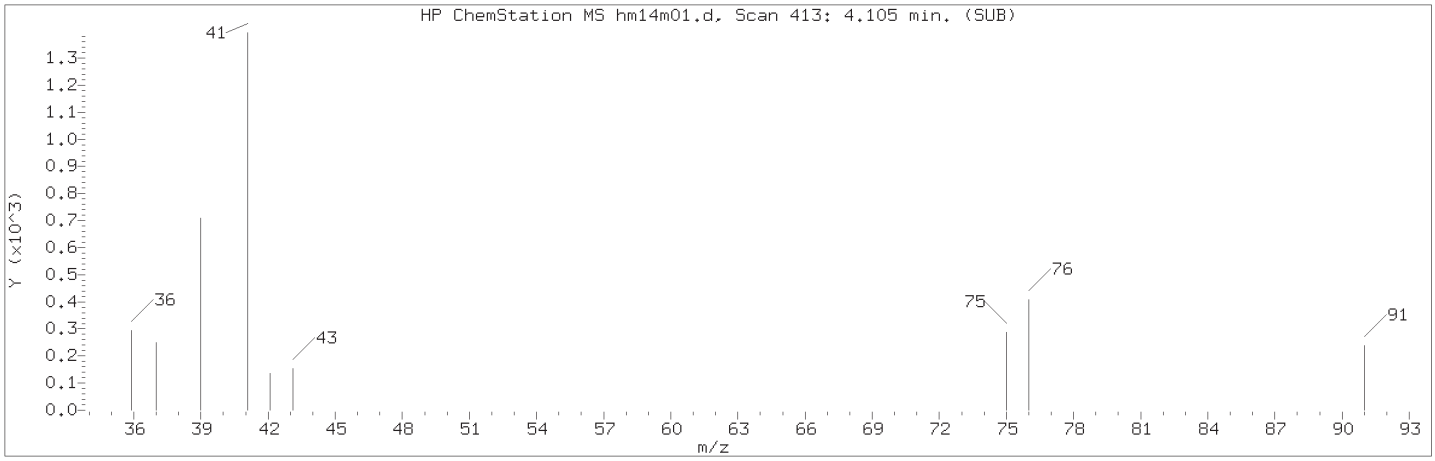
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

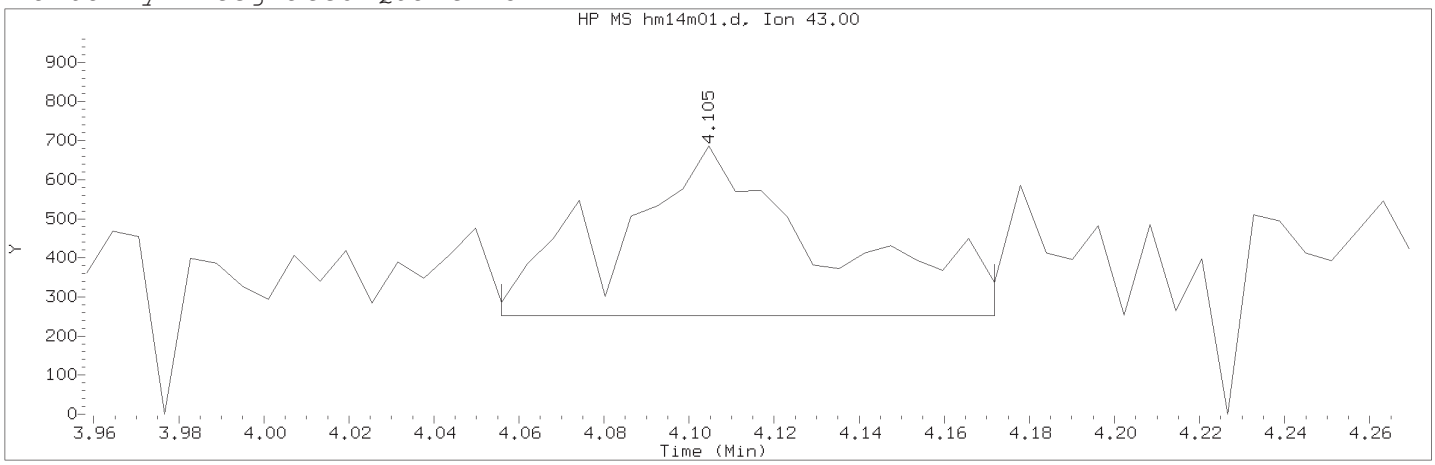
Compound Number : 9
Compound Name : Dichlorofluoromethane
Scan Number : 227
Retention Time (minutes): 2.971
Quant Ion : 67.00
Area : 11158
On-column Amount (ng) : 0.1076
Integration start scan : 217 Integration stop scan: 242
Y at integration start : 62 Y at integration end: 103

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

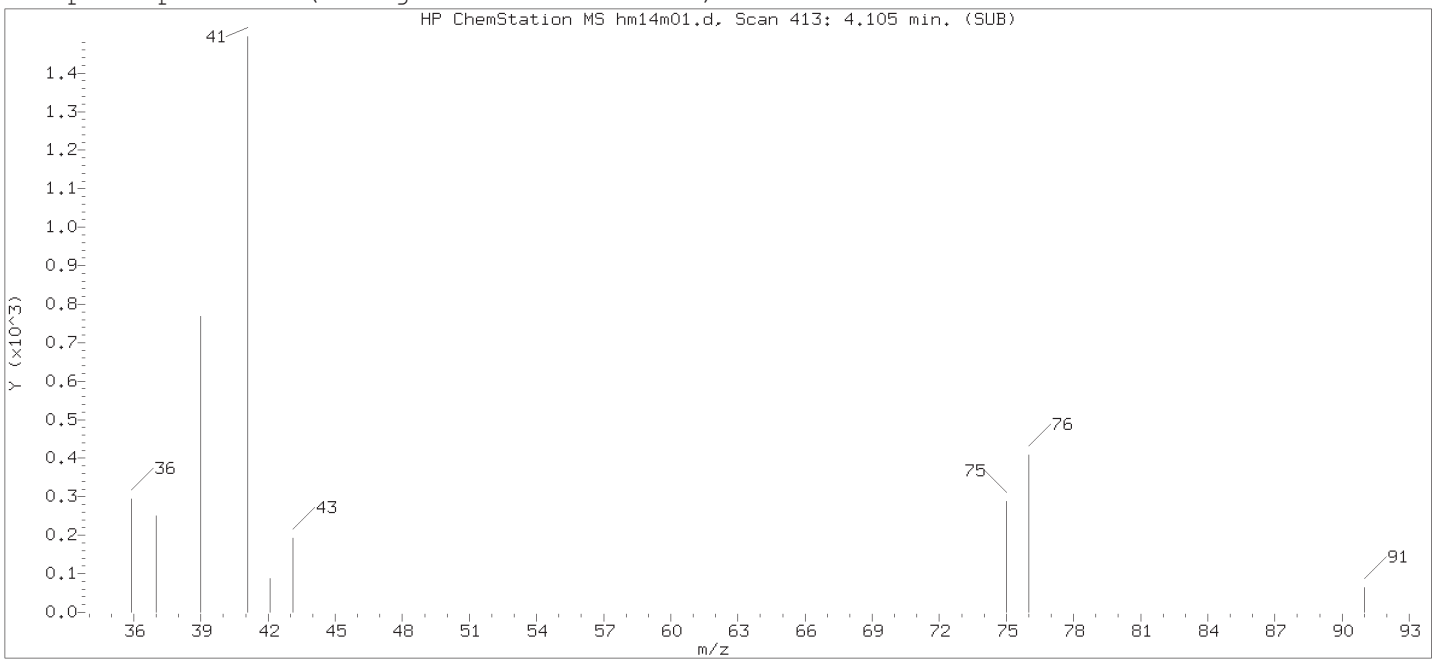
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area (flag) : 1472M
On-Column Amount (ng) : 0.0686
Integration start scan : 404 Integration stop scan: 423
Y at integration start : 252 Y at integration end: 252

Reason for manual integration: improper integration

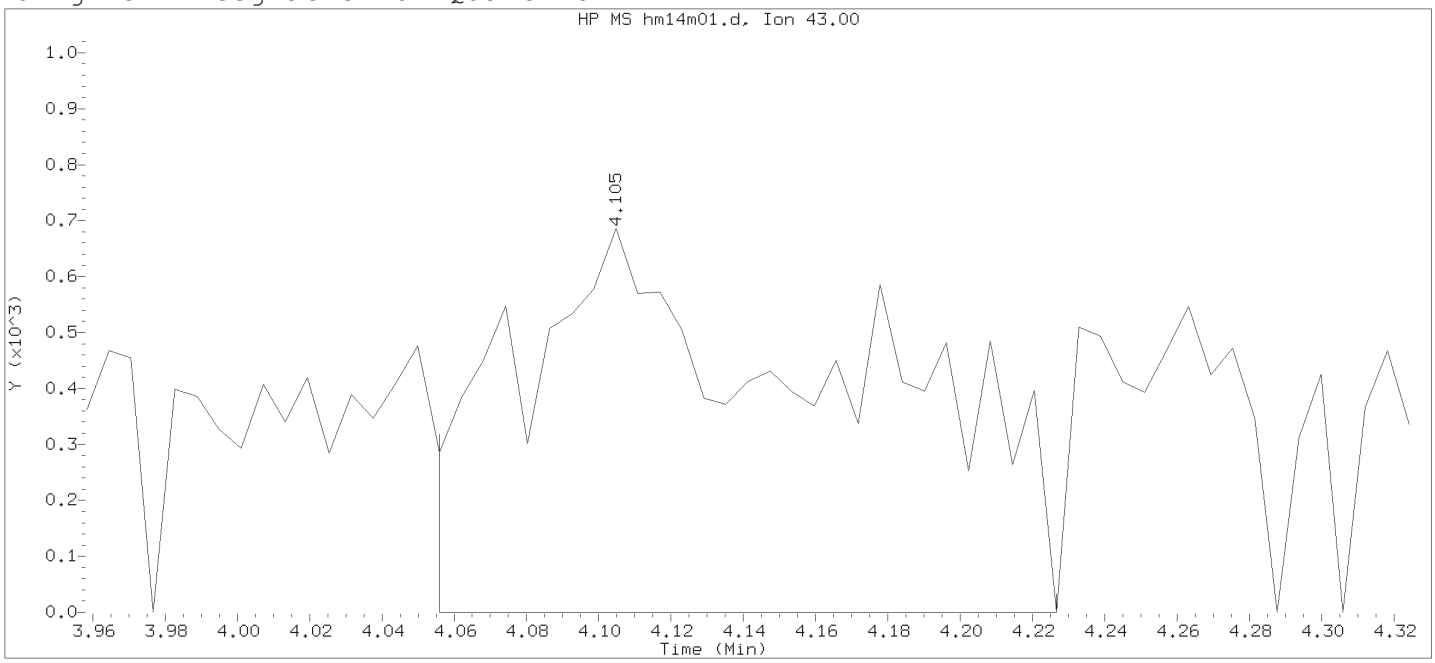
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

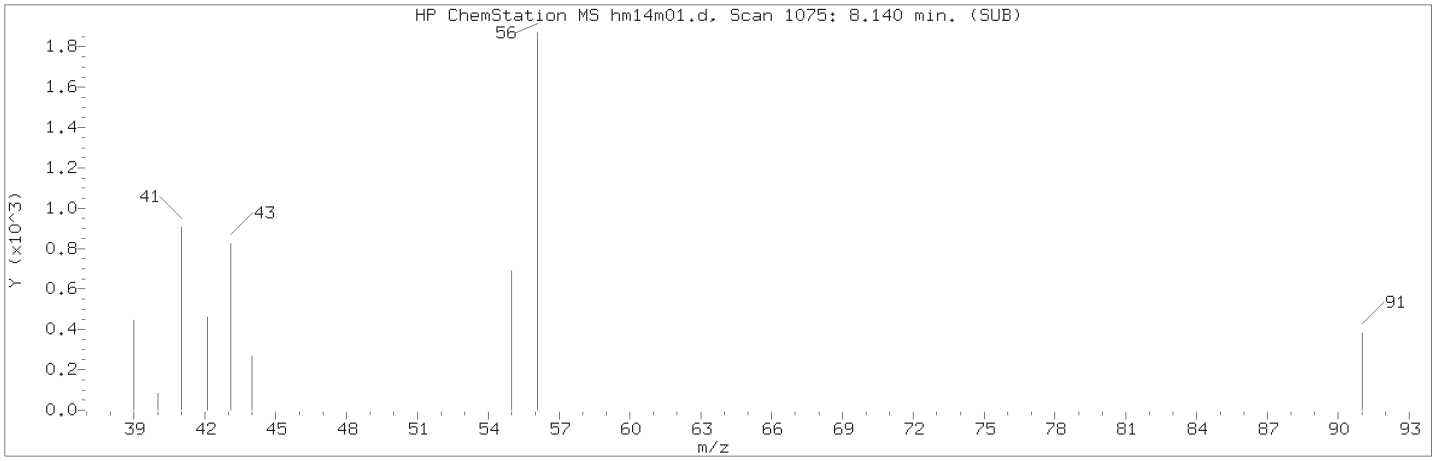
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

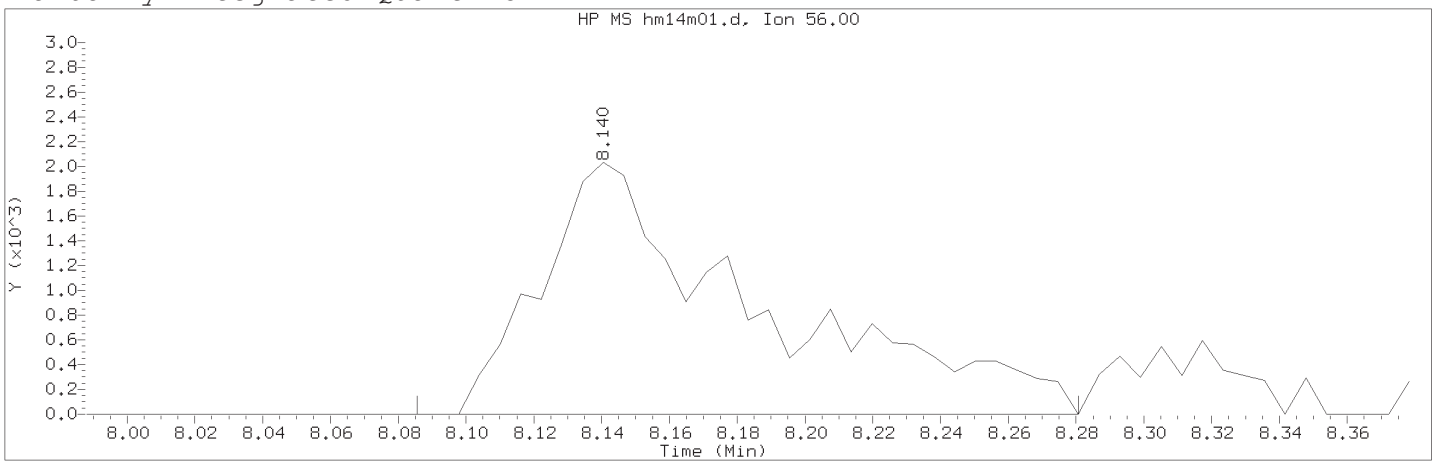
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 413
Retention Time (minutes): 4.105
Quant Ion : 43.00
Area : 4461
On-column Amount (ng) : 0.2079
Integration start scan : 404 Integration stop scan: 432
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

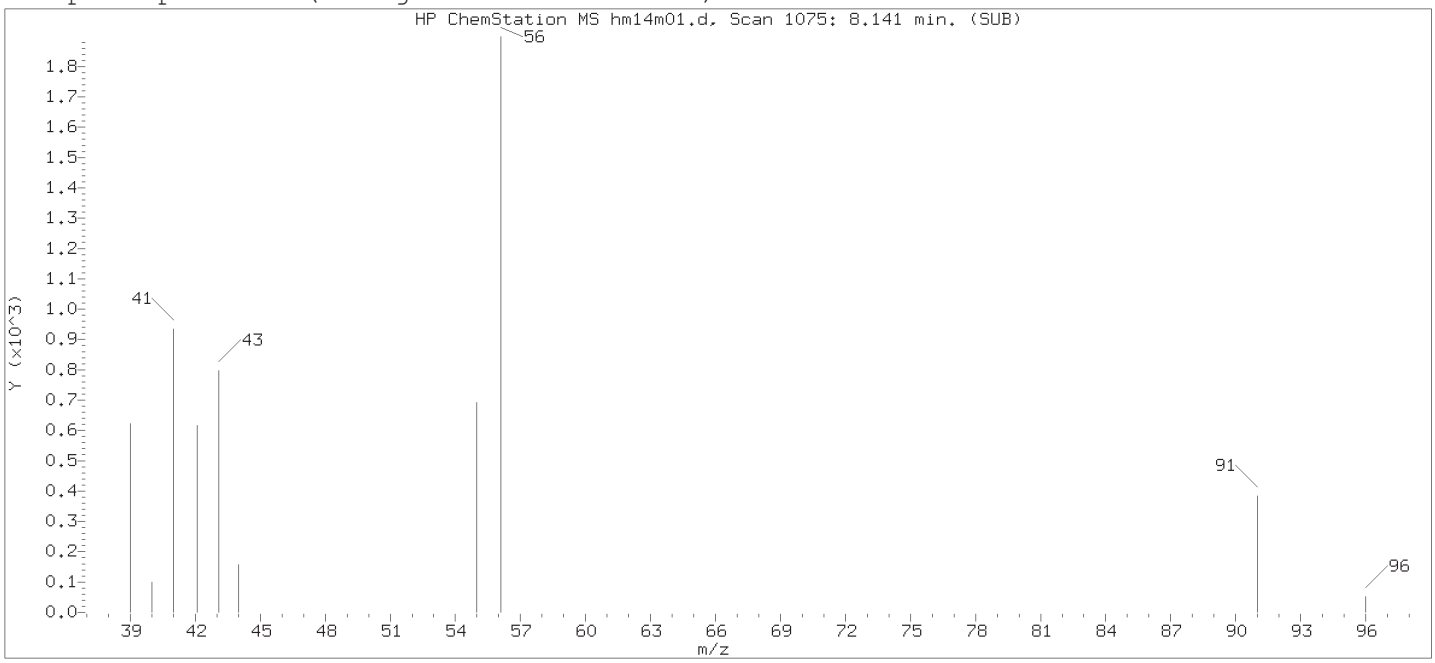
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area (flag) : 8938M
On-Column Amount (ng) : 10.5787
Integration start scan : 1065 Integration stop scan: 1097
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

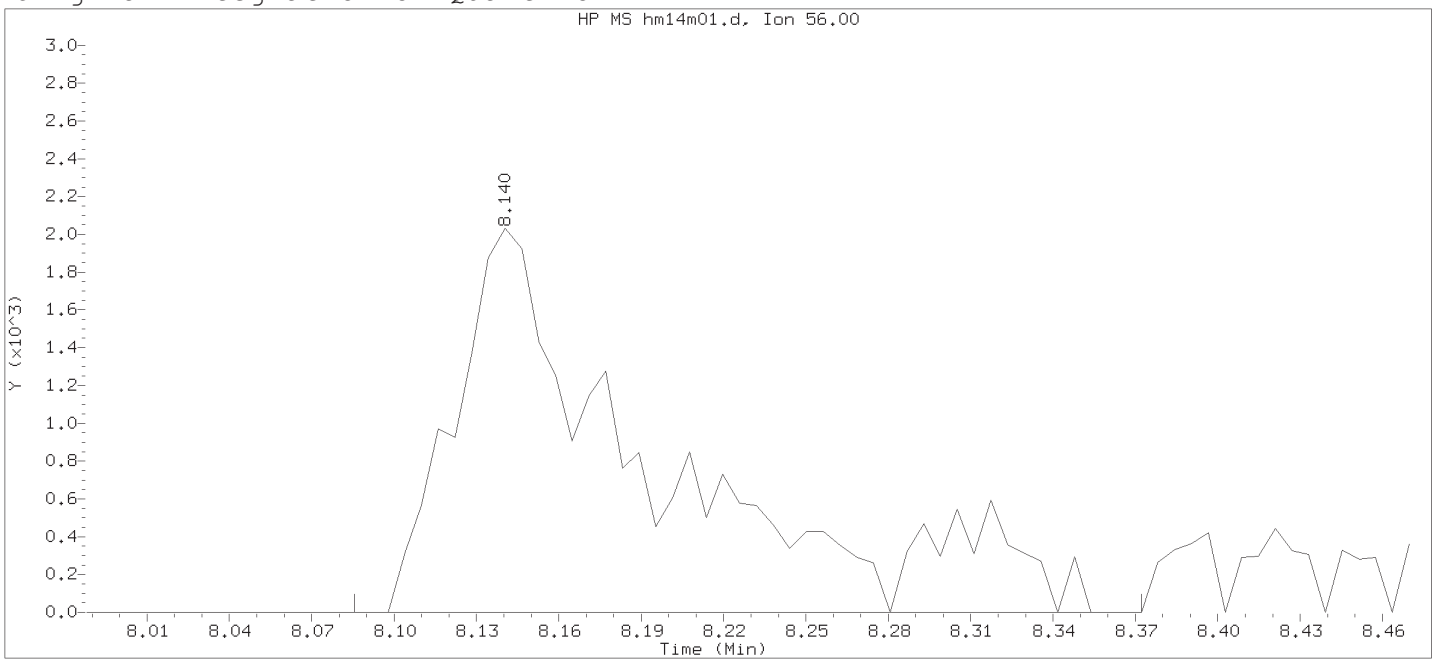
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

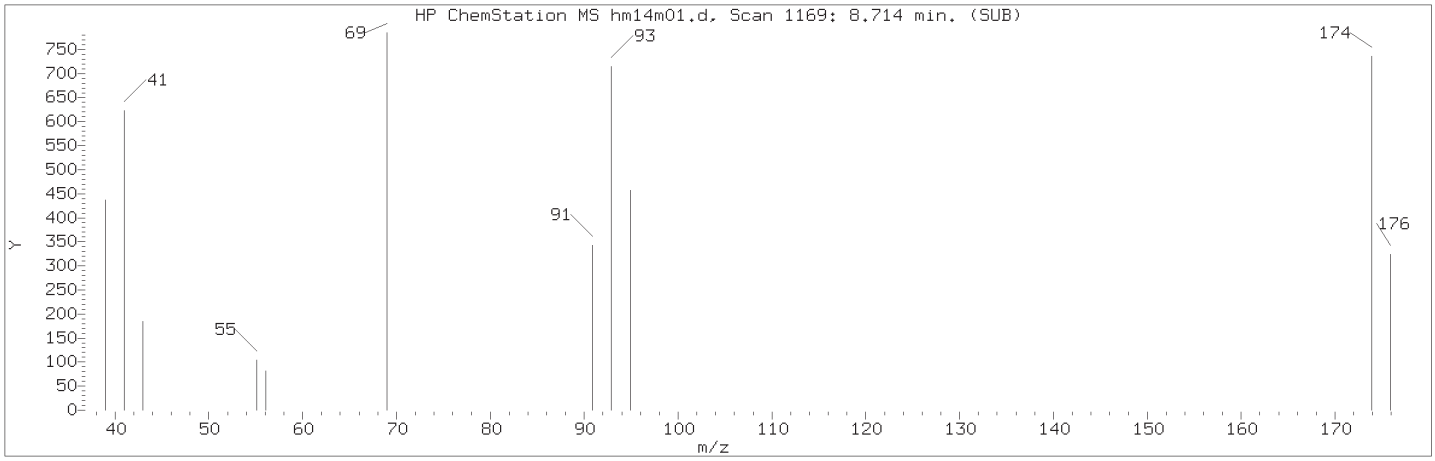
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

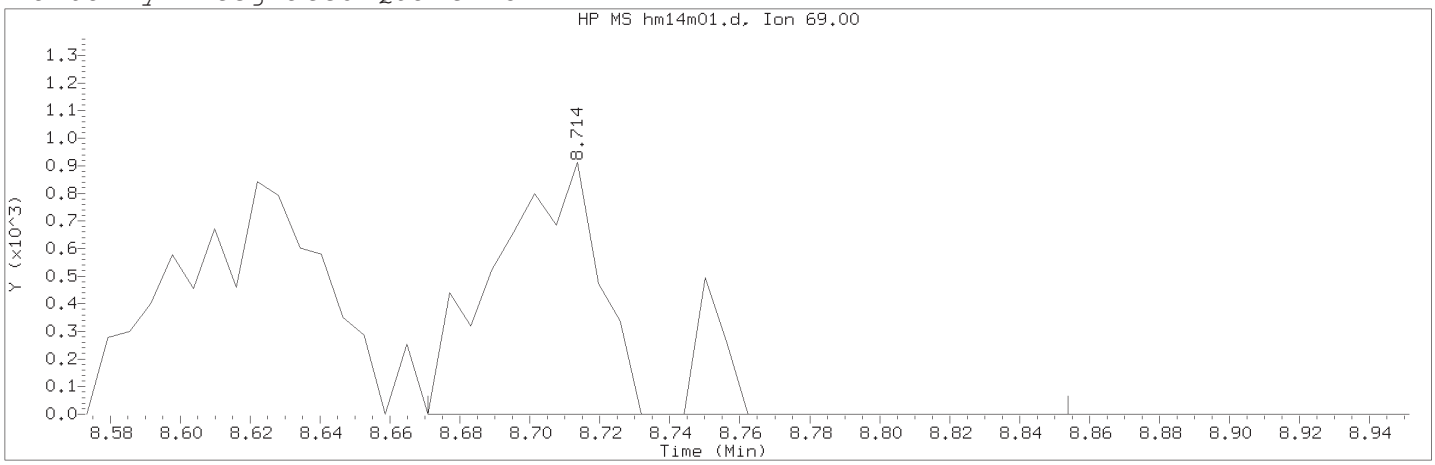
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1075
Retention Time (minutes): 8.140
Quant Ion : 56.00
Area : 10317
On-column Amount (ng) : 12.2097
Integration start scan : 1065 Integration stop scan: 1112
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

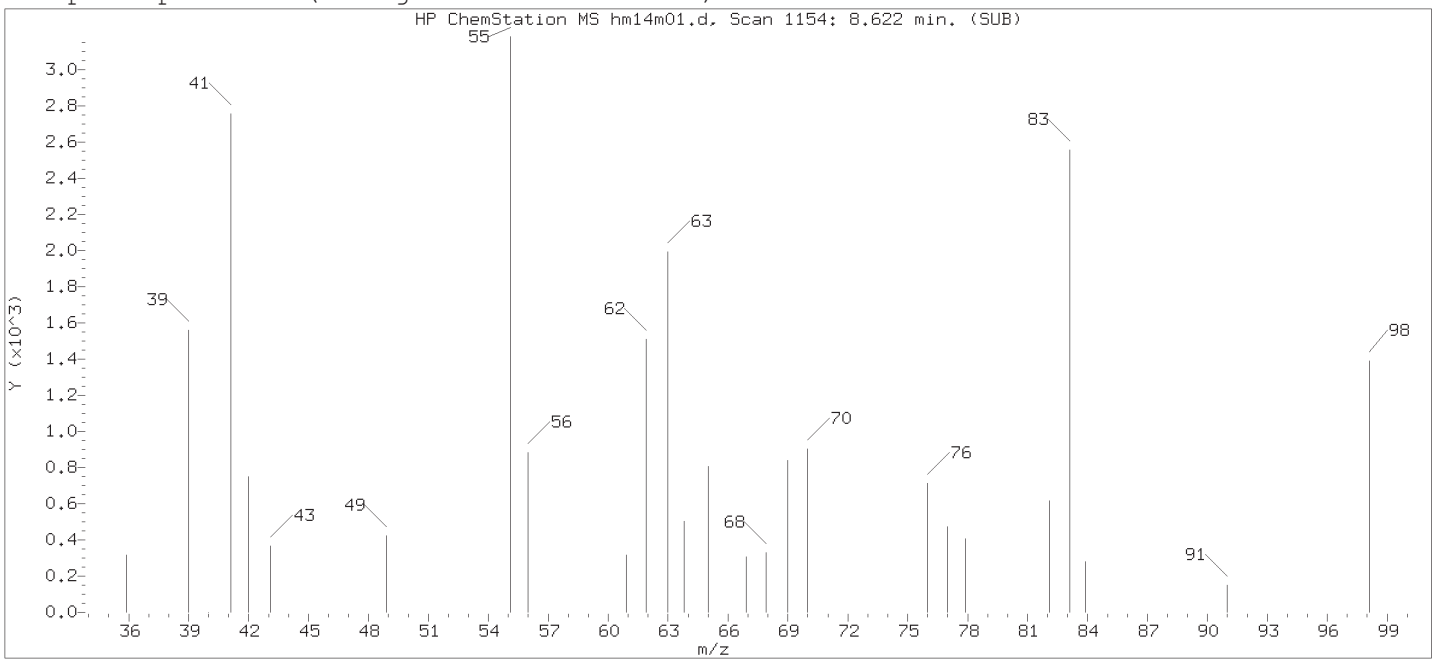
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1169
Retention Time (minutes): 8.714
Quant Ion : 69.00
Area (flag) : 2158M
On-Column Amount (ng) : 0.0820
Integration start scan : 1161 Integration stop scan: 1191
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

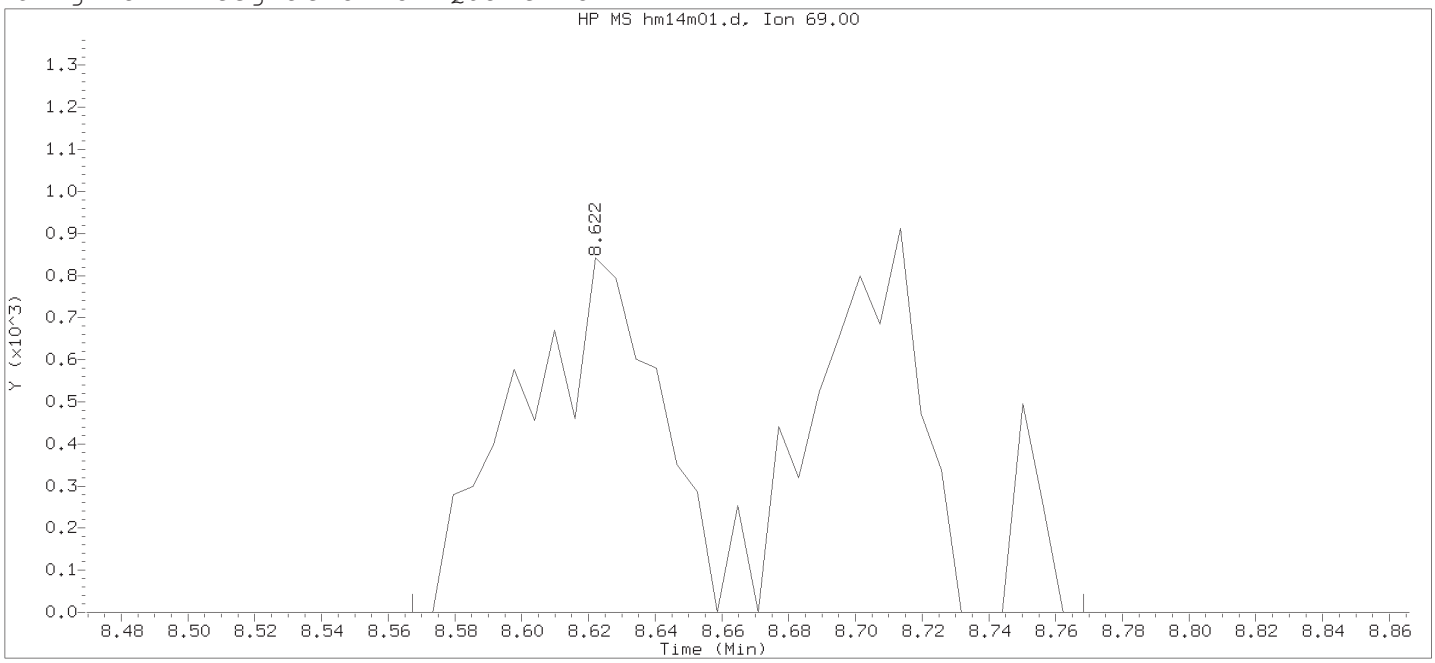
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

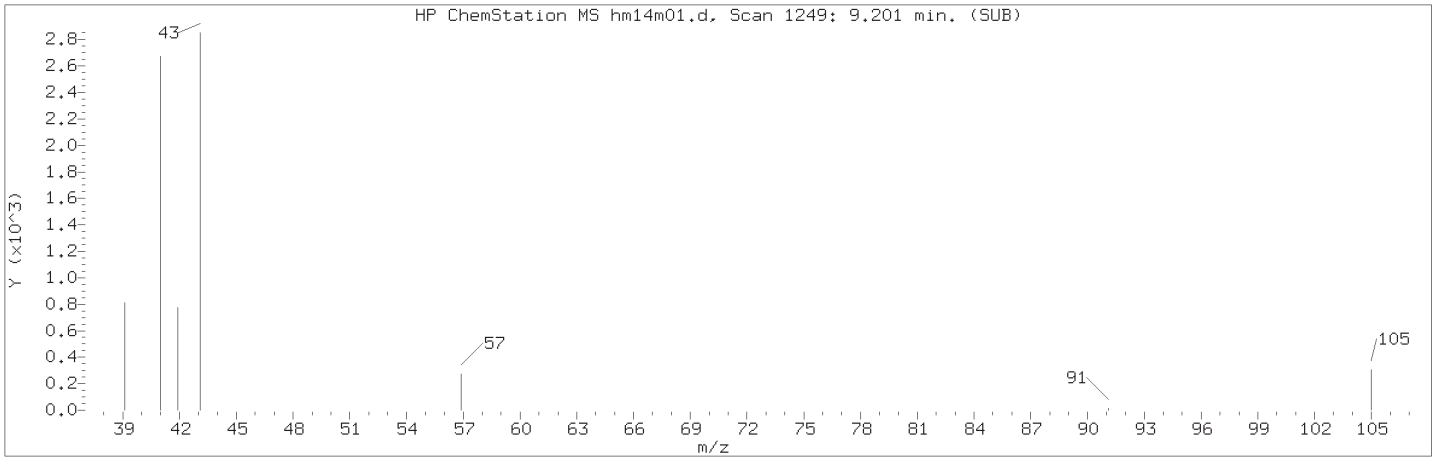
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

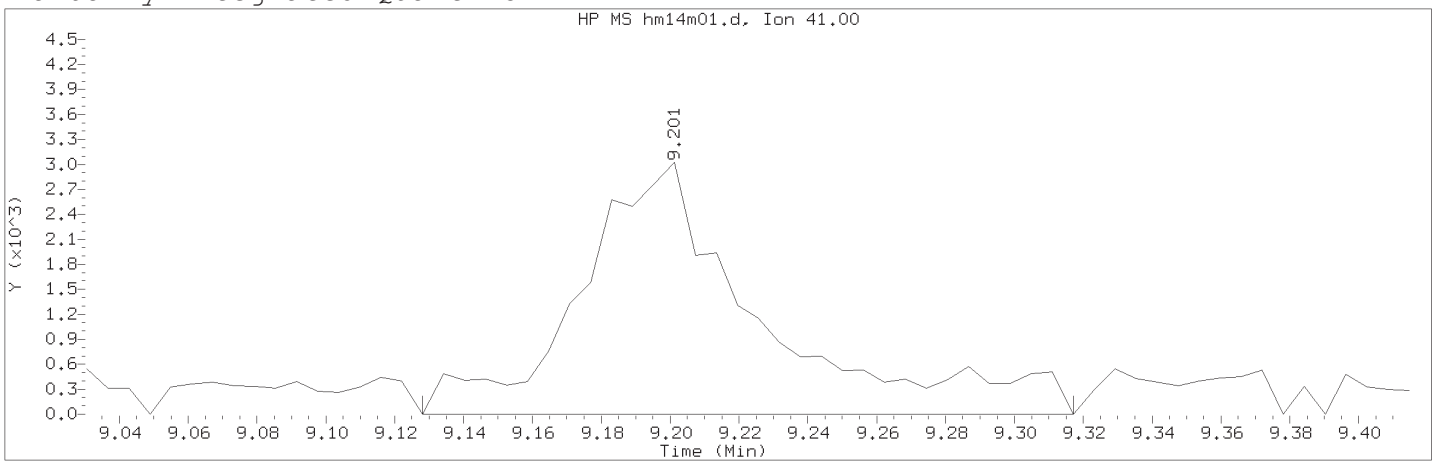
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1154
Retention Time (minutes): 8.622
Quant Ion : 69.00
Area : 4664
On-column Amount (ng) : 0.1772
Integration start scan : 1144 Integration stop scan: 1177
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

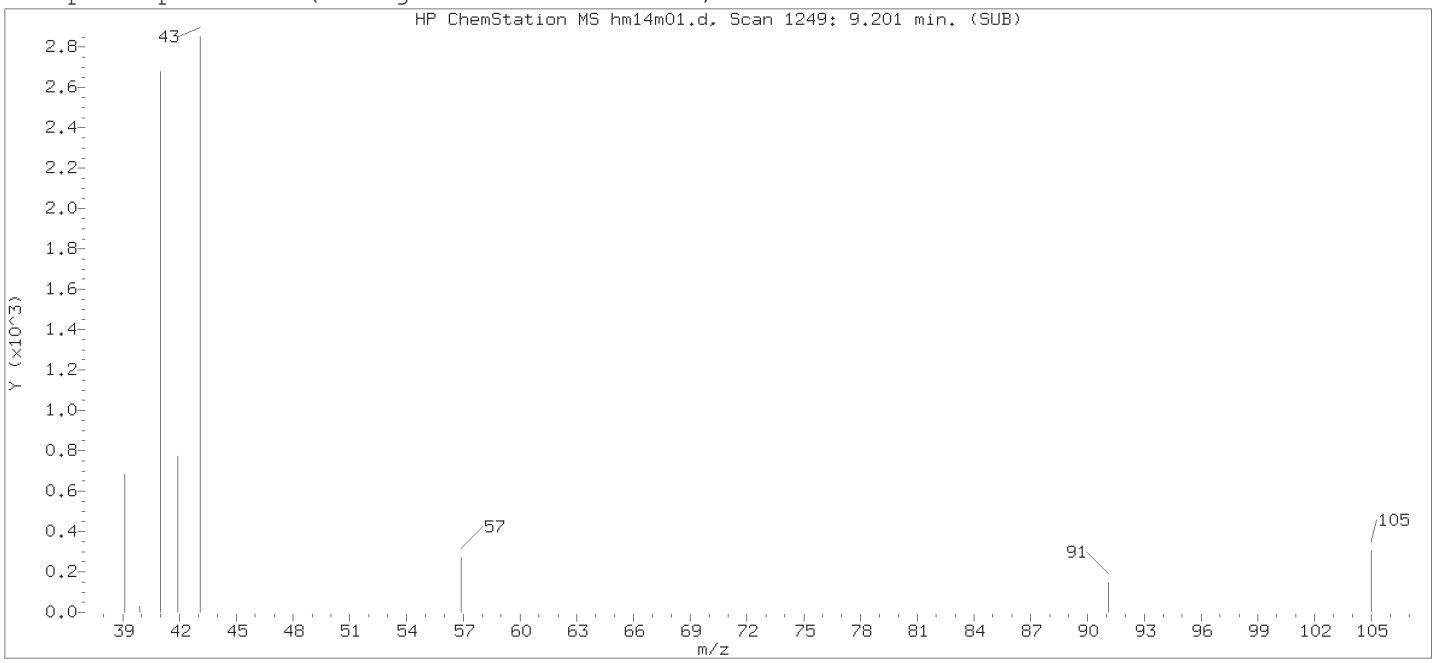
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area (flag) : 10978M
On-Column Amount (ng) : 1.3014
Integration start scan : 1236 Integration stop scan: 1267
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

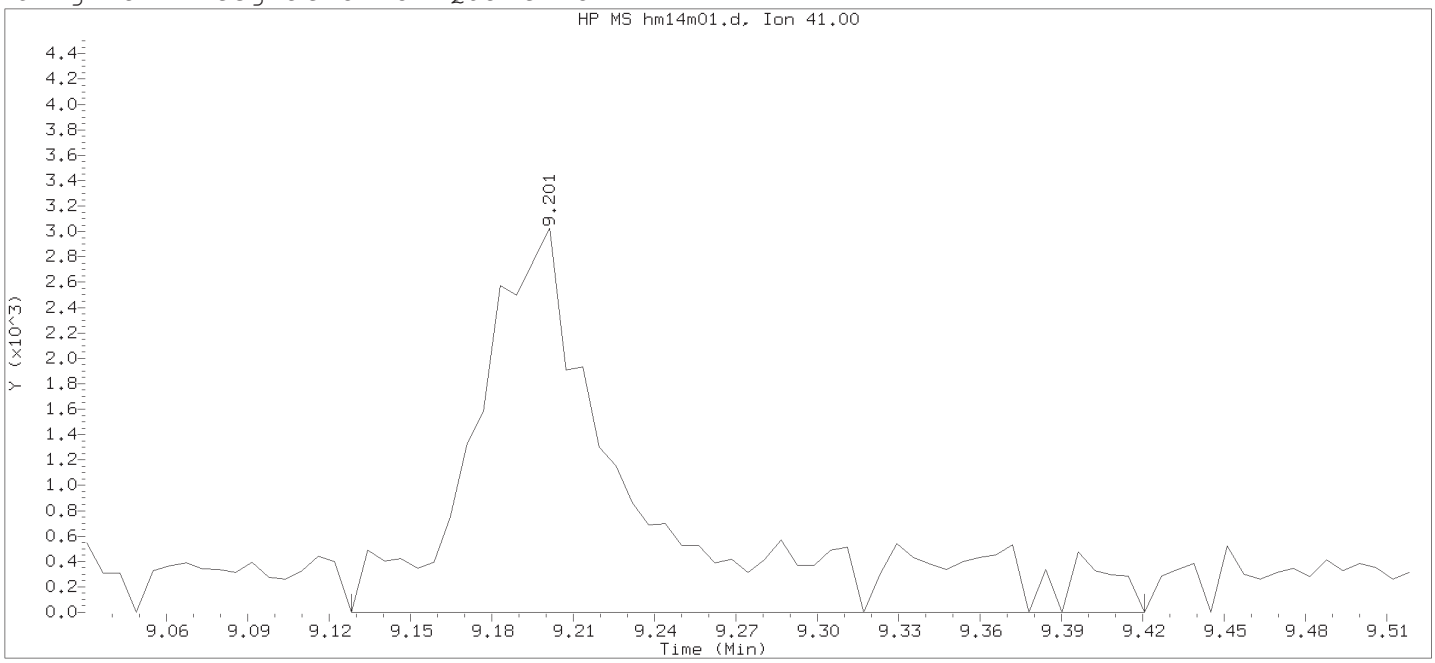
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

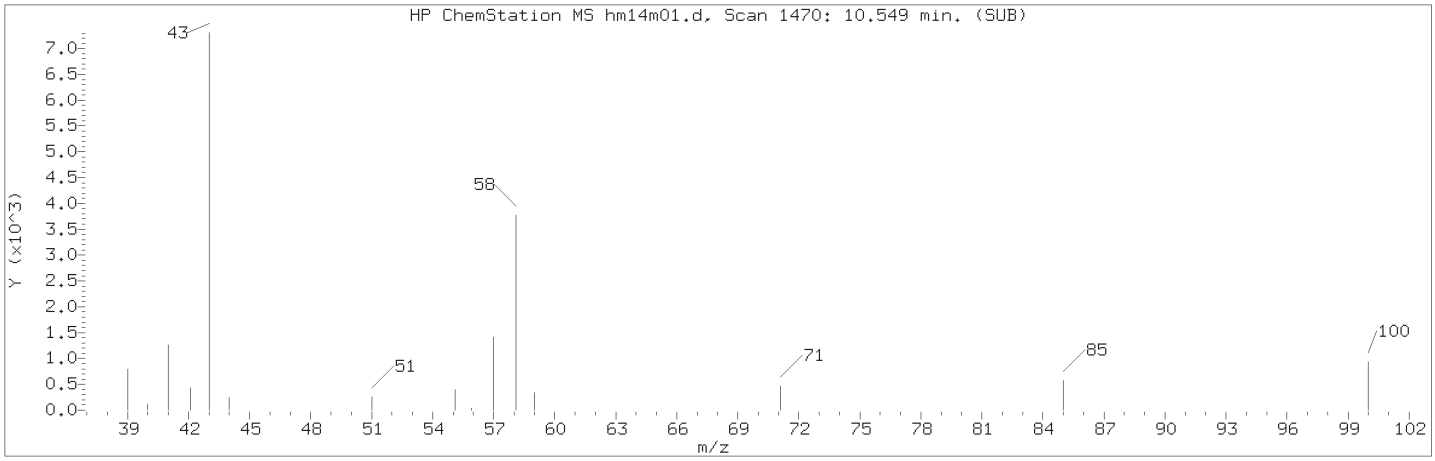
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

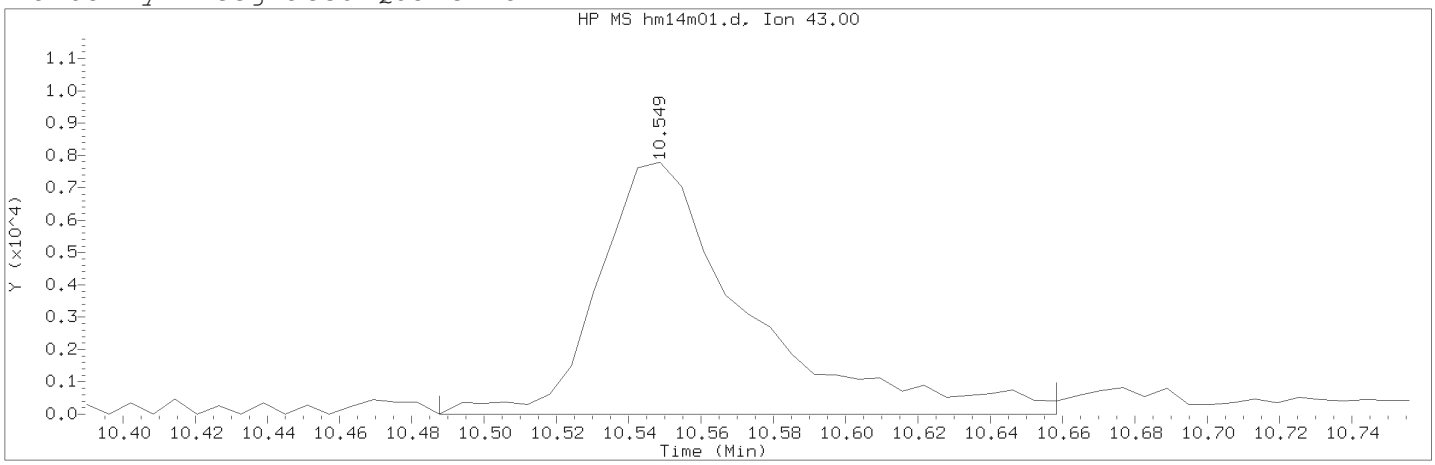
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 41.00
Area : 12999
On-column Amount (ng) : 1.5410
Integration start scan : 1236 Integration stop scan: 1284
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

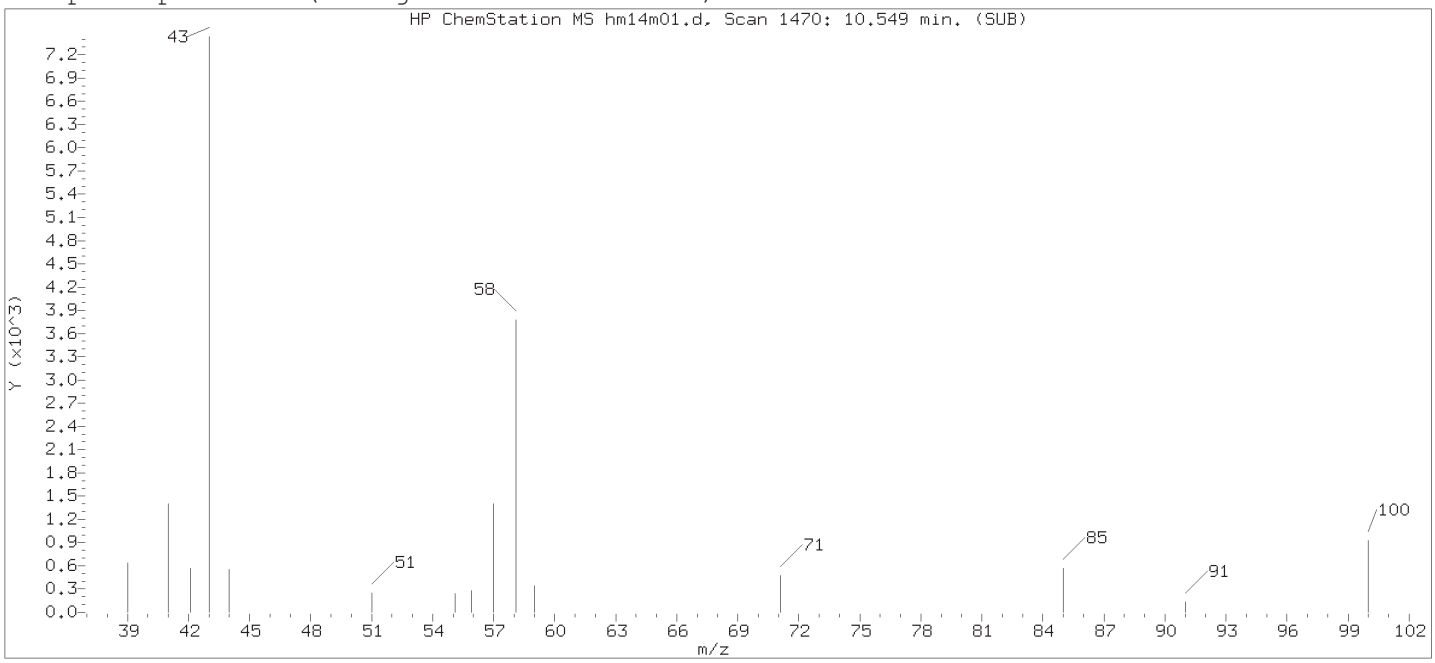
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area (flag) : 22438M
On-Column Amount (ng) : 0.8741
Integration start scan : 1459 Integration stop scan: 1487
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

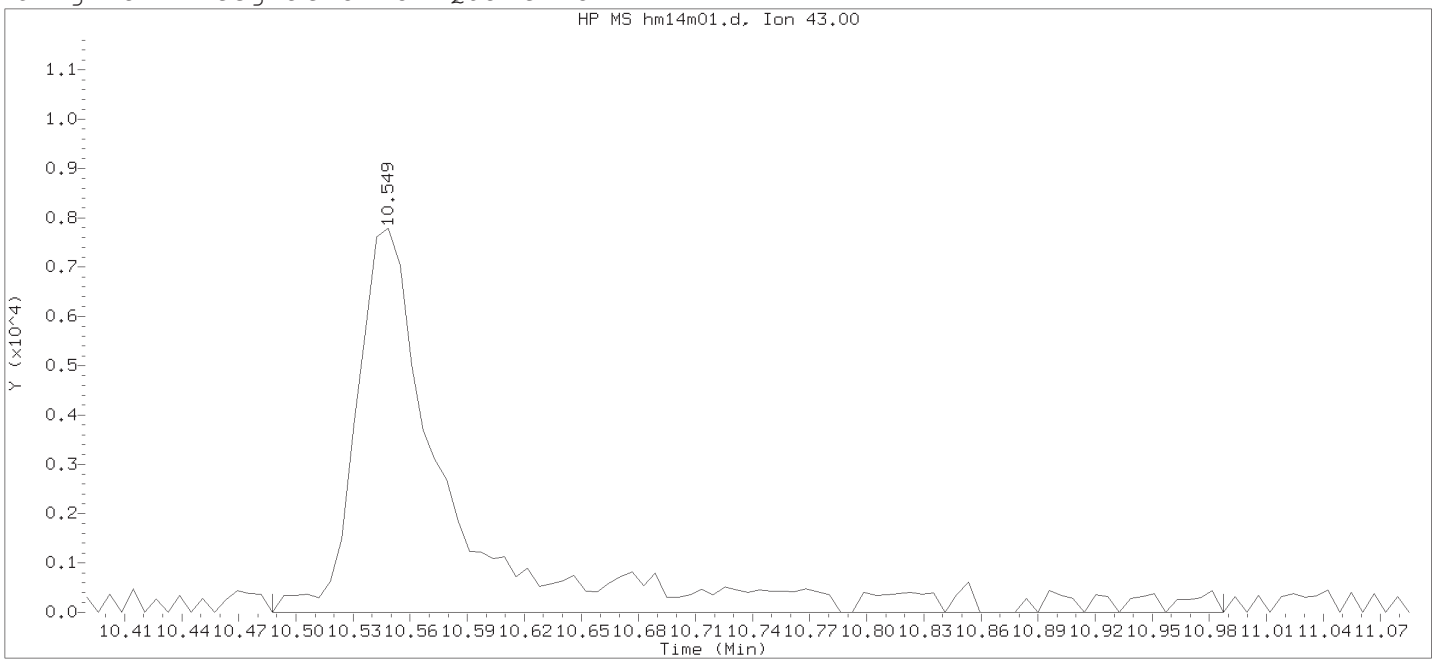
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

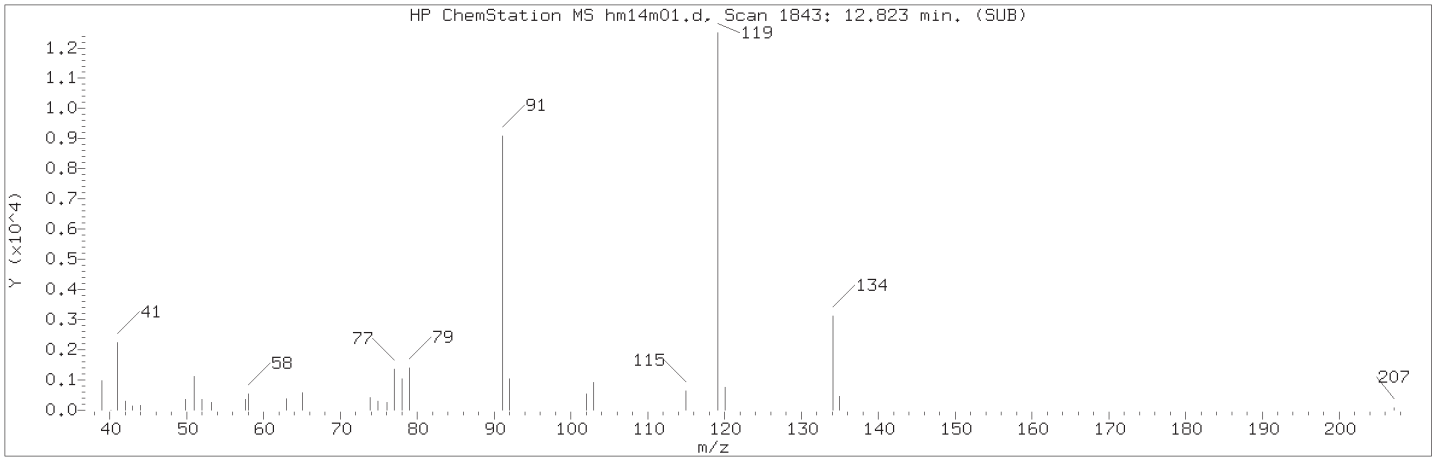
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

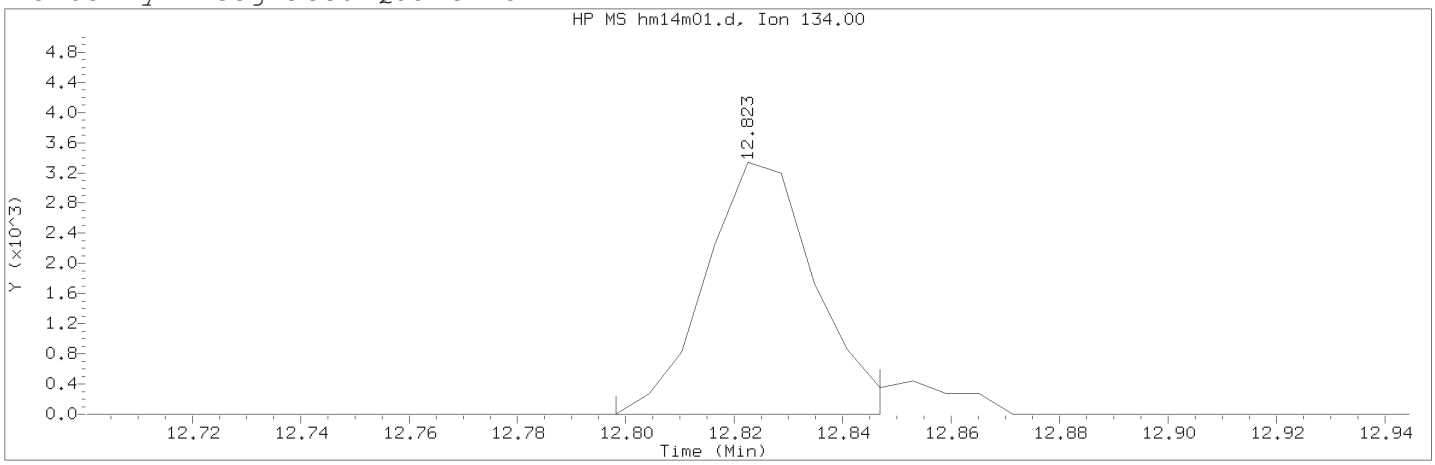
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1470
Retention Time (minutes): 10.549
Quant Ion : 43.00
Area : 28808
On-column Amount (ng) : 1.1223
Integration start scan : 1459 Integration stop scan: 1541
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

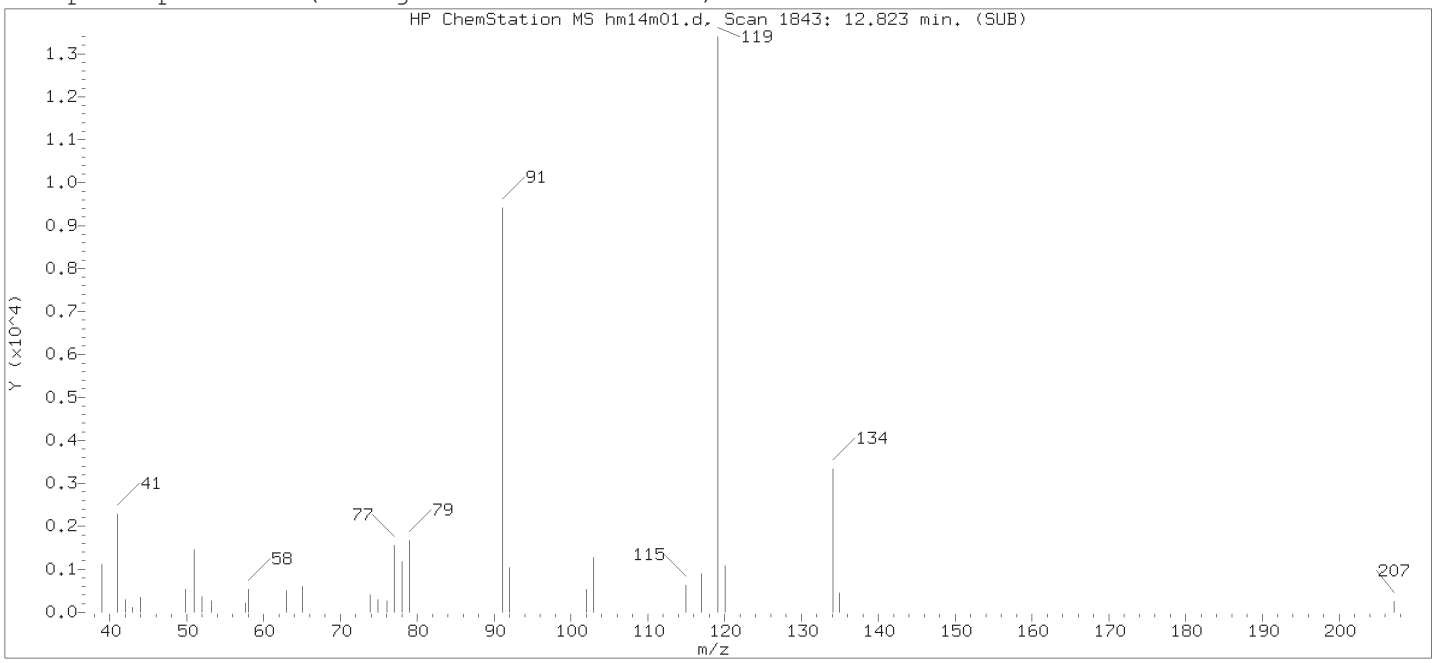
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area (flag) : 4695M
On-Column Amount (ng) : 0.0965
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

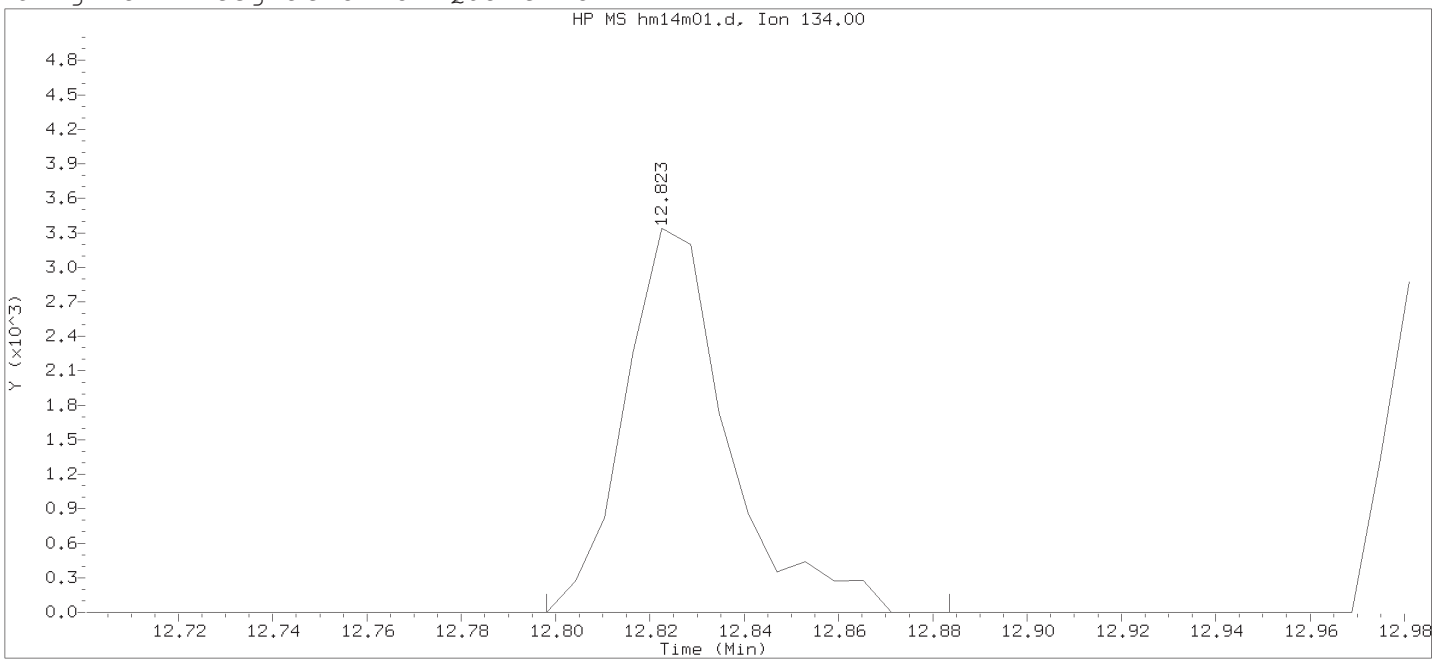
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

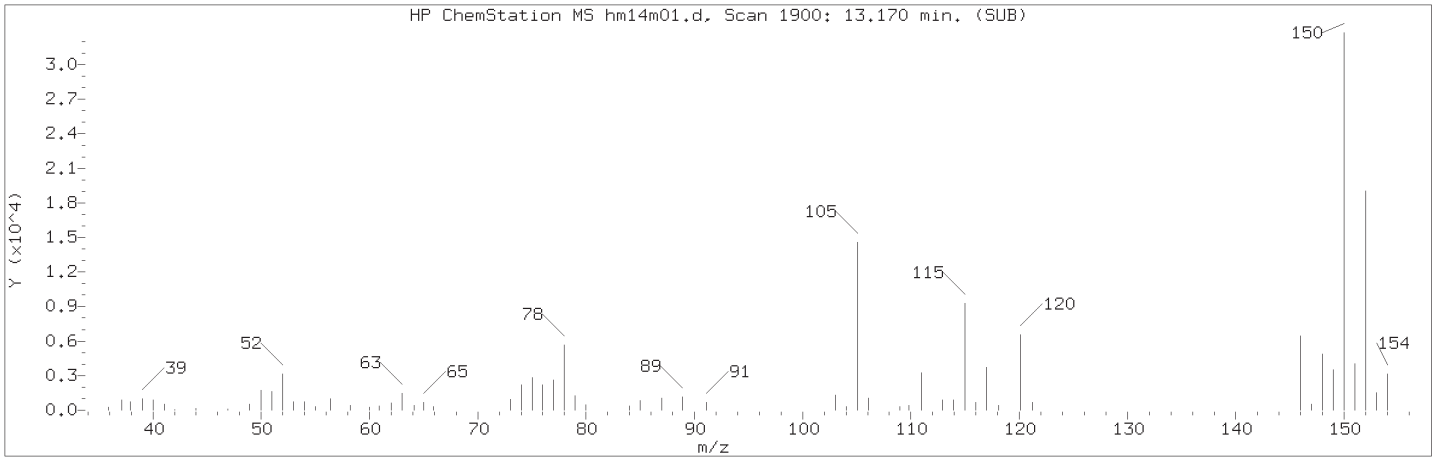
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

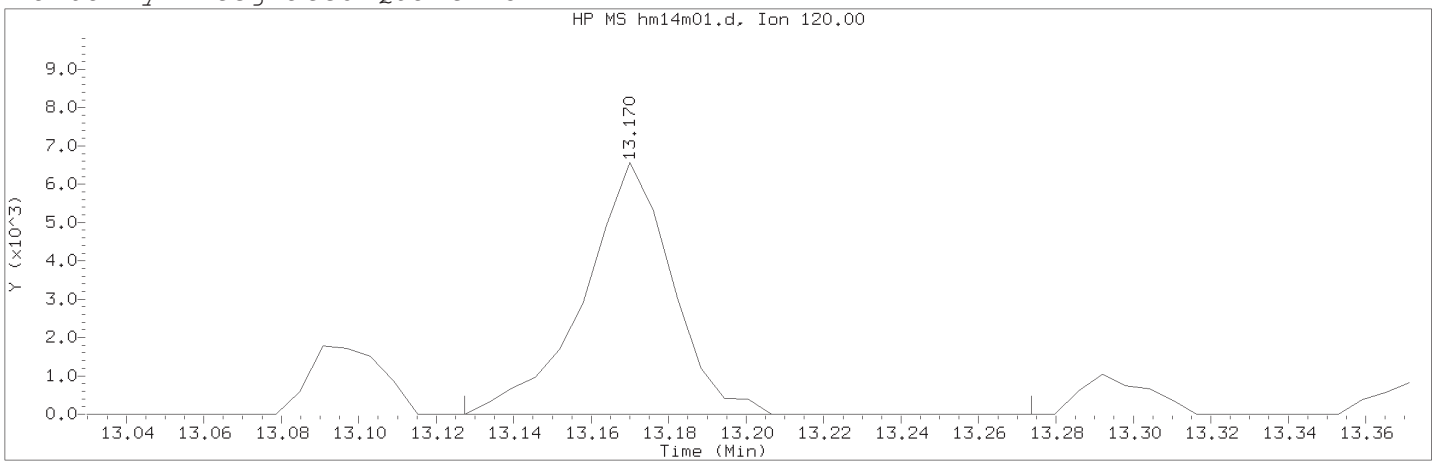
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.823
Quant Ion : 134.00
Area : 5056
On-column Amount (ng) : 0.1039
Integration start scan : 1838 Integration stop scan: 1852
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:21 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

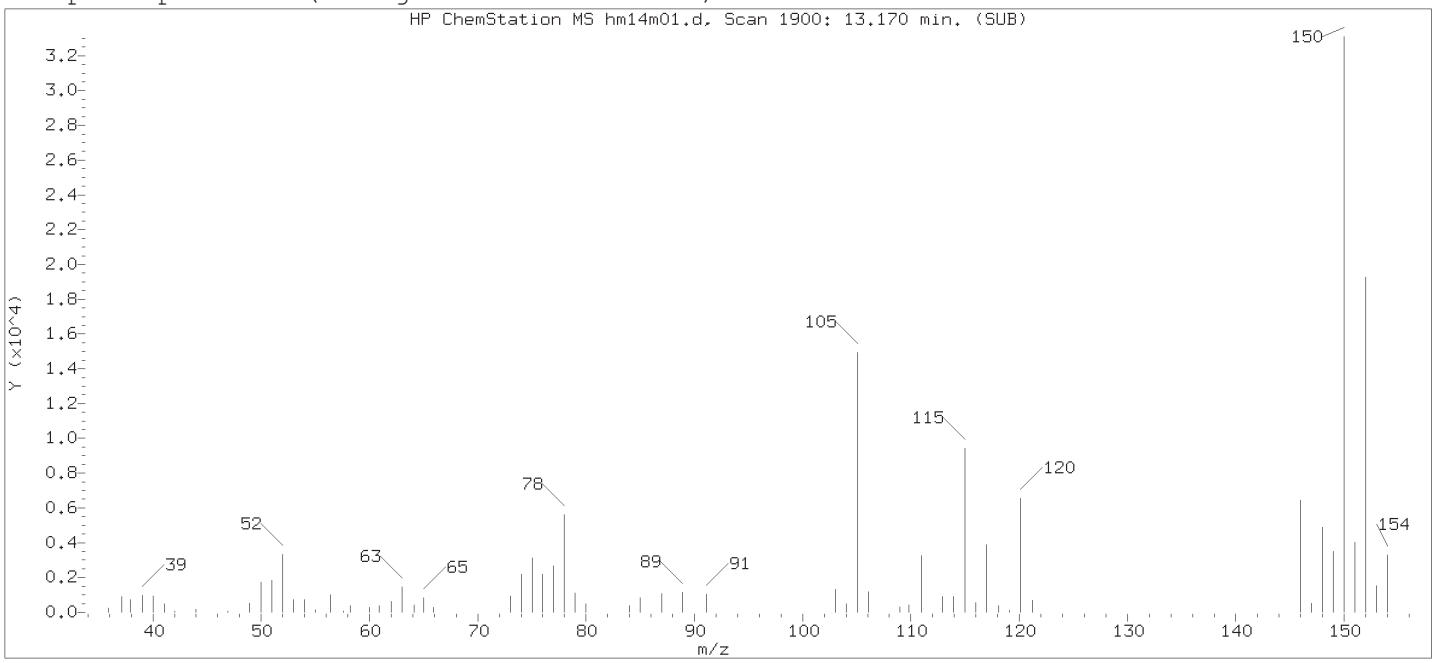
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area (flag) : 10366M
On-Column Amount (ng) : 0.1095
Integration start scan : 1892 Integration stop scan: 1916
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

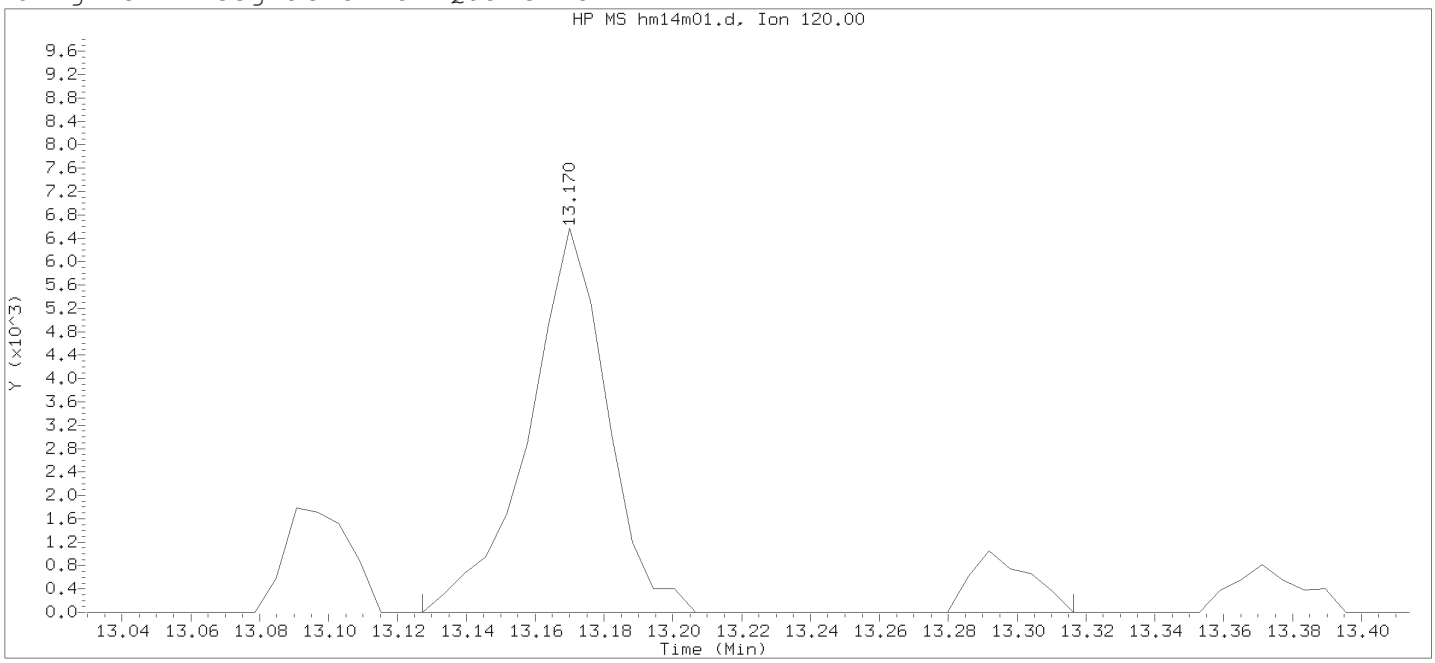
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



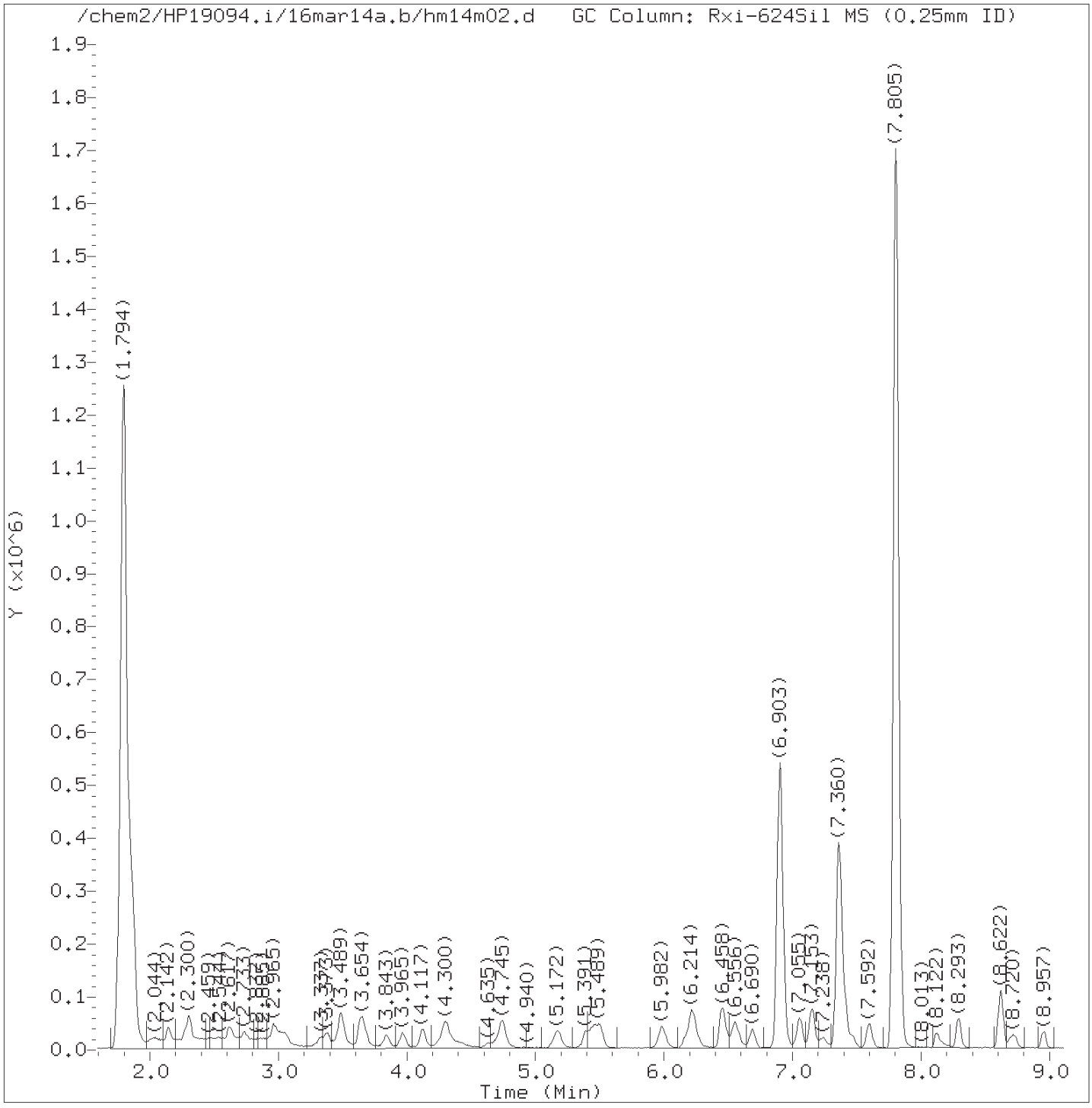
Data File: /chem2/HP19094.i/16mar14a.b/hm14m01.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:16 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1900
Retention Time (minutes): 13.170
Quant Ion : 120.00
Area : 11622
On-column Amount (ng) : 0.1228
Integration start scan : 1892 Integration stop scan: 1923
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:21.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

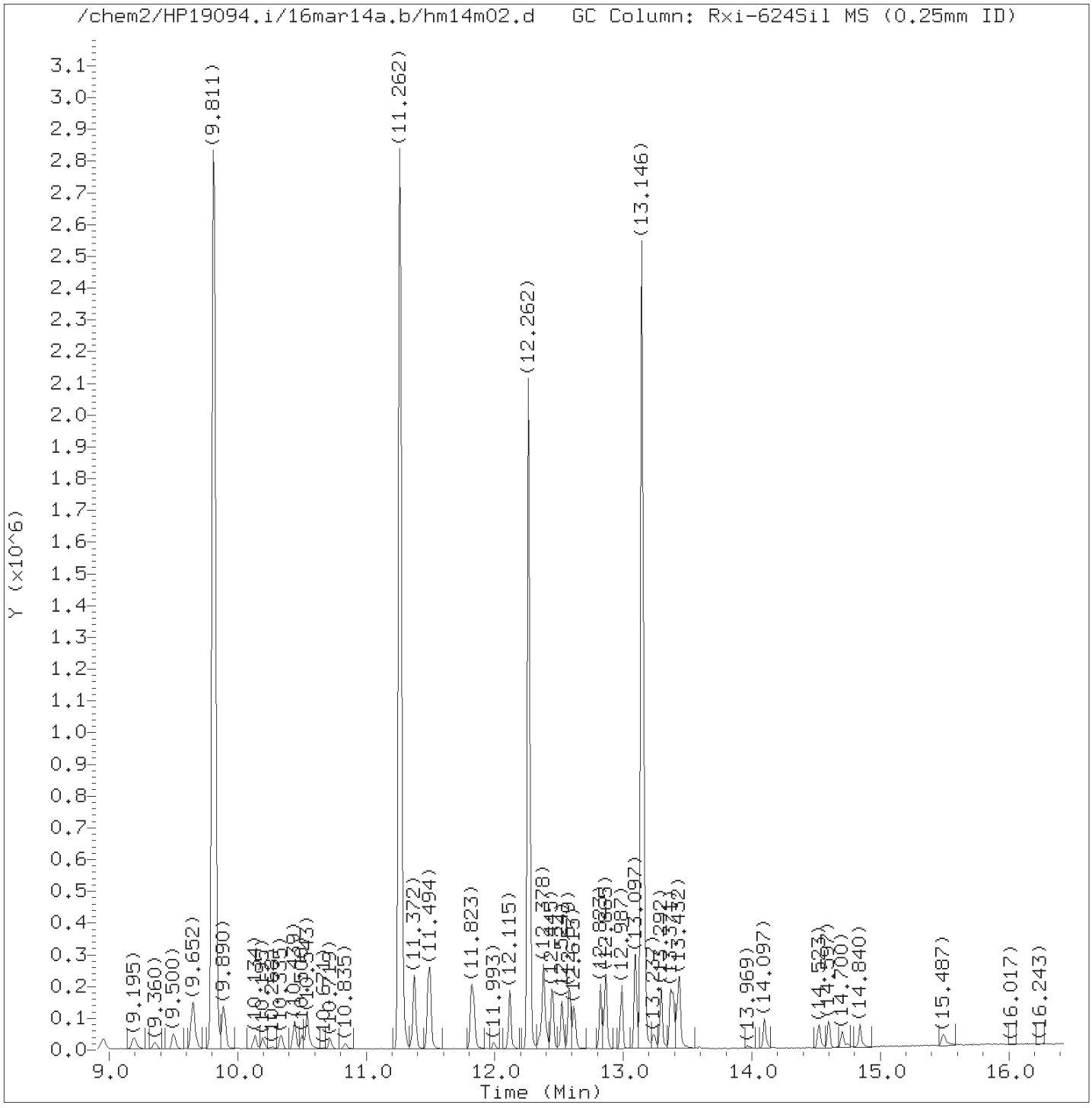
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14m02.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:36 Analyst ID: kel01973

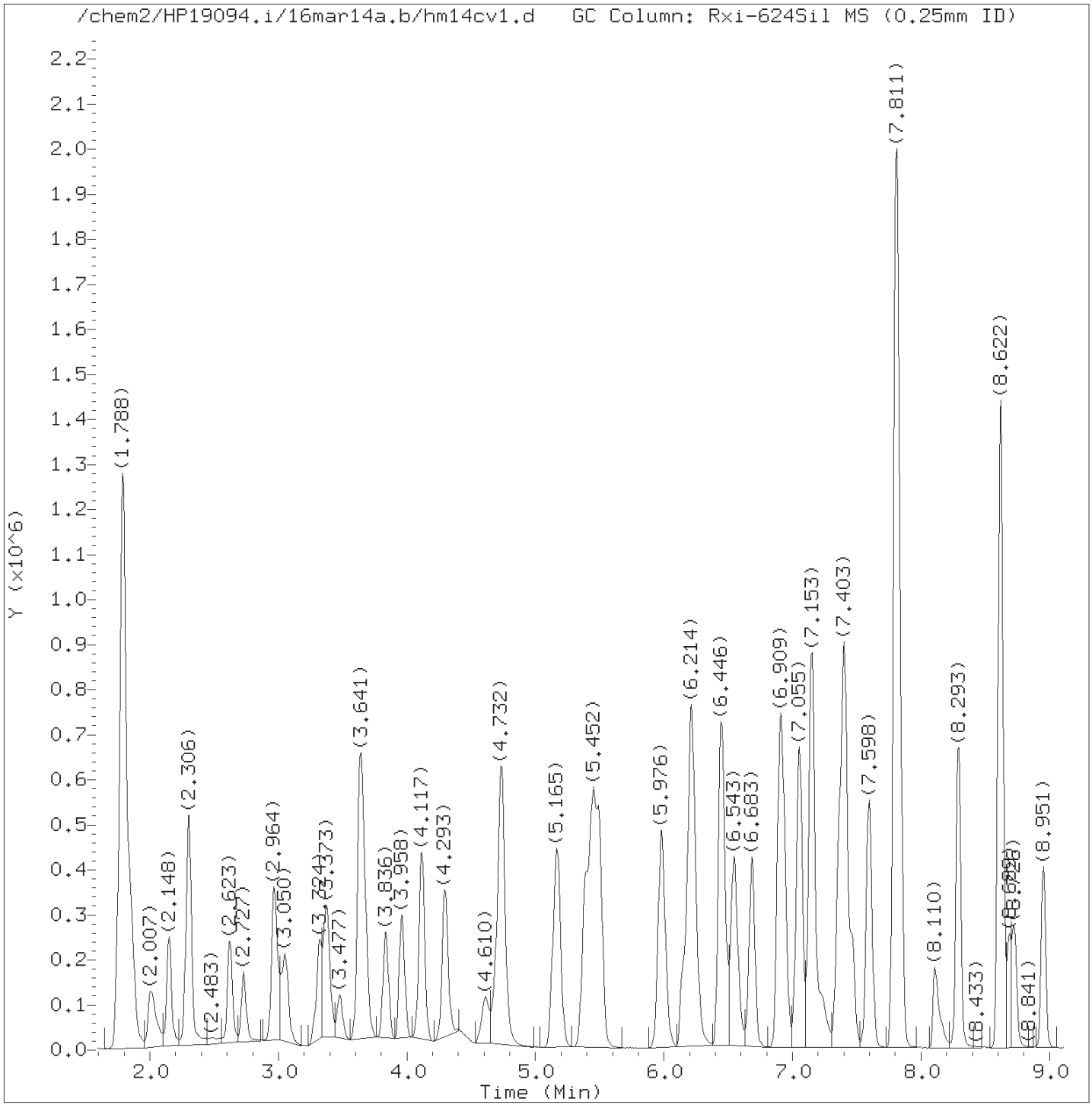
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 14DIOX
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:16 kel01973

Sample Name: MDL0.4 Lab Sample ID: MDL0.4

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.294	65	110415	50.000
50)$Dibromofluoromethane	(2)	6.903	113	514833	9.537
57)$1,2-Dichloroethane-d4	(2)	7.360	102	85992	9.618
63)*Fluorobenzene	(2)	7.805	96	2290874	10.000
72) 1,4-Dioxane	(1)	8.708	88	2930	17.567
82)$Toluene-d8	(3)	9.811	98	2229175	10.562
97)*Chlorobenzene-d5	(3)	11.262	117	1481588	10.000
111)$4-Bromofluorobenzene	(3)	12.262	95	671822	9.875
133)*1,4-Dichlorobenzene-d4	(4)	13.146	152	624400	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:22.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

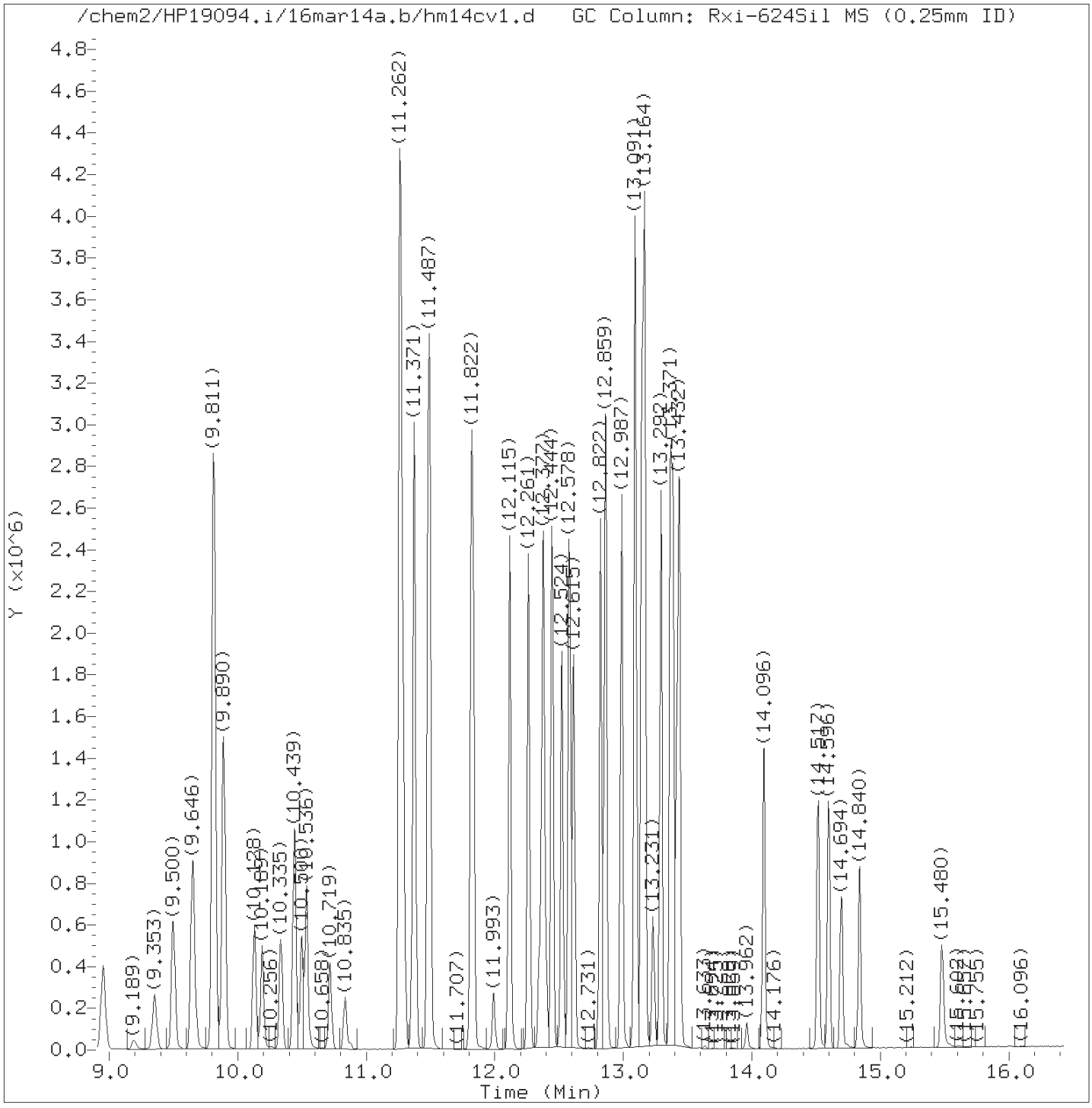
Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.007	85	328771	4.161
2) Chloromethane	(2)	2.148	50	344269	4.442
5) Vinyl Chloride	(2)	2.288	62	322391	4.473
6) 1,3-Butadiene	(2)	2.306	39	243952	4.474
7) Bromomethane	(2)	2.623	94	213394	4.460
8) Chloroethane	(2)	2.727	64	193746	4.360
9) Dichlorofluoromethane	(2)	2.964	67	497189	4.931
10) Trichlorofluoromethane	(2)	3.050	101	445190	4.741
11) Ethyl ether	(2)	3.318	59	205267	5.299
12) Freon 123a	(2)	3.373	67	353620	4.923
13) Acrolein	(1)	3.477	56	218457	34.882
15) 1,1-Dichloroethene	(2)	3.629	96	254825	4.730
14) Acetone	(1)	3.641	43	281922	32.668
16) Freon 113	(2)	3.666	101	269029	4.802
17) Methyl Iodide	(2)	3.836	142	475759	4.770
18) Carbon Disulfide	(2)	3.958	76	713266	4.287
21) Methyl Acetate	(1)	4.086	43	99062	4.630
22) Allyl Chloride	(2)	4.117	41	511077	5.016
26)*t-Butyl Alcohol-d10	(1)	4.275	65	109841	50.000
23) Methylene Chloride	(2)	4.300	84	271623	4.717
28) t-Butyl Alcohol	(1)	4.397	59	151885	51.427
29) Acrylonitrile	(1)	4.604	53	250122	24.155
30) Methyl Tertiary Butyl Ether	(2)	4.720	73	597823	4.809
31) trans-1,2-Dichloroethene	(2)	4.739	96	285728	4.925
32) n-Hexane	(2)	5.165	57	469293	4.765
33) 1,1-Dichloroethane	(2)	5.385	63	567103	4.796
34) di-Isopropyl Ether	(2)	5.446	45	1046719	5.071
35) 2-Chloro-1,3-Butadiene	(2)	5.501	53	439660	4.529
37) Ethyl t-butyl ether	(2)	5.982	59	844012	4.849
40) 1,2-Dichloroethene (Total)	(2)		96	600327	9.820
38) 2-Butanone	(1)	6.147	43	526550	35.807
39) cis-1,2-Dichloroethene	(2)	6.208	96	314599	4.895
42) Propionitrile	(1)	6.220	54	133510	36.411
41) 2,2-Dichloropropane	(2)	6.226	77	454613	4.805
45) Methacrylonitrile	(1)	6.452	67	472050	37.599
47) Bromochloromethane	(2)	6.543	128	124104	5.076
48) Tetrahydrofuran	(1)	6.555	71	86049	23.131
49) Chloroform	(2)	6.683	83	525783	4.864

* = Compound is an internal standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.897	113	539982	9.999
51) 1,1,1-Trichloroethane	(2)	6.933	97	450922	4.891
52) Cyclohexane	(2)	7.055	56	556433	4.619
55) 1,1-Dichloropropene	(2)	7.147	75	411399	4.649
54) Carbon Tetrachloride	(2)	7.159	117	413241	4.930
56) Isobutyl Alcohol	(1)	7.232	41	129013	129.671
57)$1,2-Dichloroethane-d4	(2)	7.360	102	91183	10.195
58) Benzene	(2)	7.403	78	1194211	4.849
59) 1,2-Dichloroethane	(2)	7.464	62	312832M	4.902
60) t-Amyl methyl ether	(2)	7.598	73	694215	4.880
63)*Fluorobenzene	(2)	7.805	96	2291680	10.000
62) n-Heptane	(2)	7.835	43	541861	4.868
65) n-Butanol	(1)	8.110	56	196761	233.607
67) Trichloroethene	(2)	8.287	95	320611	4.994
70) 1,2-Dichloropropane	(2)	8.616	63	316169	4.930
69) Methylcyclohexane	(2)	8.622	83	526322	5.005
71) Methyl Methacrylate	(1)	8.689	69	130240	4.965
72) 1,4-Dioxane	(1)	8.713	88	23162	139.580
73) Dibromomethane	(2)	8.726	93	125402	4.747
74) Bromodichloromethane	(2)	8.951	83	362079	4.909
76) 2-Nitropropane	(1)	9.195	41	37539M	4.465
80) cis-1,3-Dichloropropene	(2)	9.500	75	447003	4.932
81) 4-Methyl-2-Pentanone	(1)	9.646	43	859279M	23.744
82)$Toluene-d8	(3)	9.811	98	2249744	10.002
83) Toluene	(3)	9.890	92	742657	4.902
84) trans-1,3-Dichloropropene	(3)	10.128	75	356461	5.020
85) 1,3-Dichloropropene (total)	(3)		75	803464	9.952
86) Ethyl Methacrylate	(3)	10.189	69	277034	5.071
88) 1,1,2-Trichloroethane	(3)	10.335	97	176312	4.804
89) Tetrachloroethene	(3)	10.445	166	351918	4.918
90) 1,3-Dichloropropane	(3)	10.500	76	323115	4.897
91) 2-Hexanone	(1)	10.536	43	615079	24.038
93) Dibromochloromethane	(3)	10.719	129	228064	4.848
95) 1,2-Dibromoethane	(3)	10.835	107	175678	5.082
97)*Chlorobenzene-d5	(3)	11.262	117	1578909	10.000
98) Chlorobenzene	(3)	11.286	112	804977	4.881
99) 1,1,1,2-Tetrachloroethane	(3)	11.365	131	278208	4.918
100) Ethylbenzene	(3)	11.371	91	1456679	4.912

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.487	106	1105802	9.776
105) Xylene (Total)	(3)		106	1636412	14.610
104) o-Xylene	(3)	11.816	106	530610	4.834
106) Styrene	(3)	11.829	104	866196	4.933
107) Bromoform	(3)	11.993	173	124959	4.789
108) Isopropylbenzene	(3)	12.115	105	1447902	4.977
111)$4-Bromofluorobenzene	(3)	12.261	95	726691	10.023
113) 1,1,2,2-Tetrachloroethane	(4)	12.347	83	205716M	4.686
115) trans-1,4-Dichloro-2-butene	(1)	12.371	53	273261	24.520
114) Bromobenzene	(4)	12.377	156	316623	4.843
116) 1,2,3-Trichloropropane	(4)	12.396	110	54629	4.957
117) n-Propylbenzene	(4)	12.444	91	1736744	4.911
119) 2-Chlorotoluene	(4)	12.524	126	332613	4.878
121) 1,3,5-Trimethylbenzene	(4)	12.578	105	1202820	4.878
122) 4-Chlorotoluene	(4)	12.615	126	333089	4.793
125) tert-Butylbenzene	(4)	12.822	134	261563M	4.976
126) Pentachloroethane	(4)	12.853	167	199481	5.029
127) 1,2,4-Trimethylbenzene	(4)	12.865	105	1202340	4.877
128) sec-Butylbenzene	(4)	12.987	105	1570903	4.921
131) 1,3-Dichlorobenzene	(4)	13.091	146	610401	4.773
132) p-Isopropyltoluene	(4)	13.097	119	1315146	4.867
133)*1,4-Dichlorobenzene-d4	(4)	13.145	152	701377	10.000
134) 1,4-Dichlorobenzene	(4)	13.164	146	611552	4.706
135) 1,2,3-Trimethylbenzene	(4)	13.170	120	492432	4.817
136) Benzyl Chloride	(4)	13.231	126	85413	4.911
138) n-Butylbenzene	(4)	13.389	92	661432	5.003
139) 1,2-Dichlorobenzene	(4)	13.420	146	539092	4.746
143) 1,2-Dibromo-3-chloropropane	(1)	13.962	155	27547	4.792
145) 1,2,4-Trichlorobenzene	(4)	14.517	180	348528	4.289
146) Hexachlorobutadiene	(4)	14.596	225	205577	4.842
147) Naphthalene	(4)	14.694	128	555174	4.262
148) 1,2,3-Trichlorobenzene	(4)	14.840	180	270242	4.164

M = Compound was manually integrated.
* = Compound is an internal standard.
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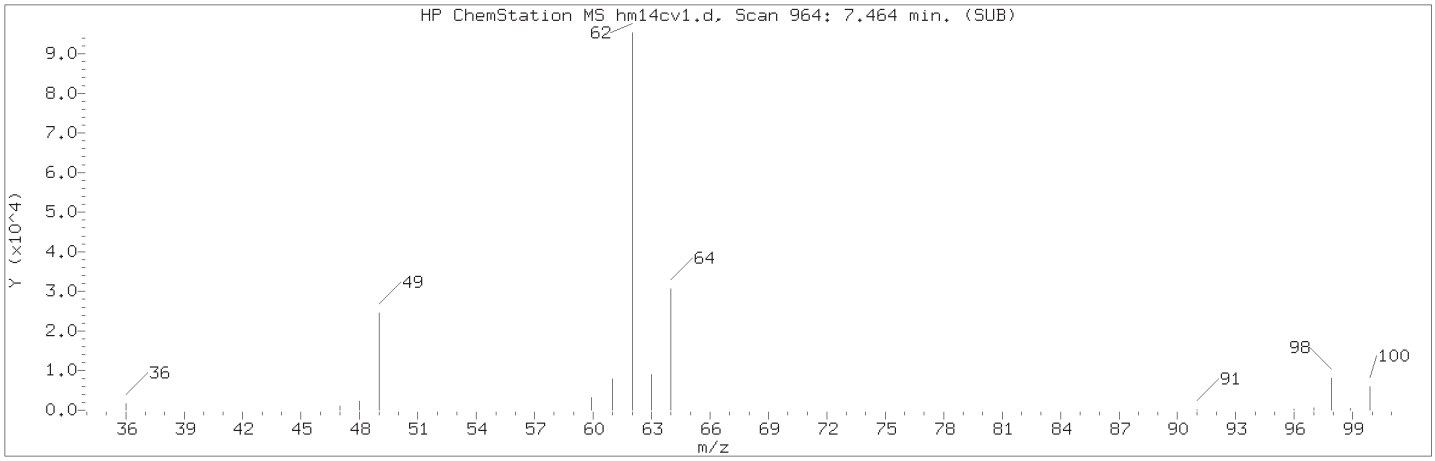
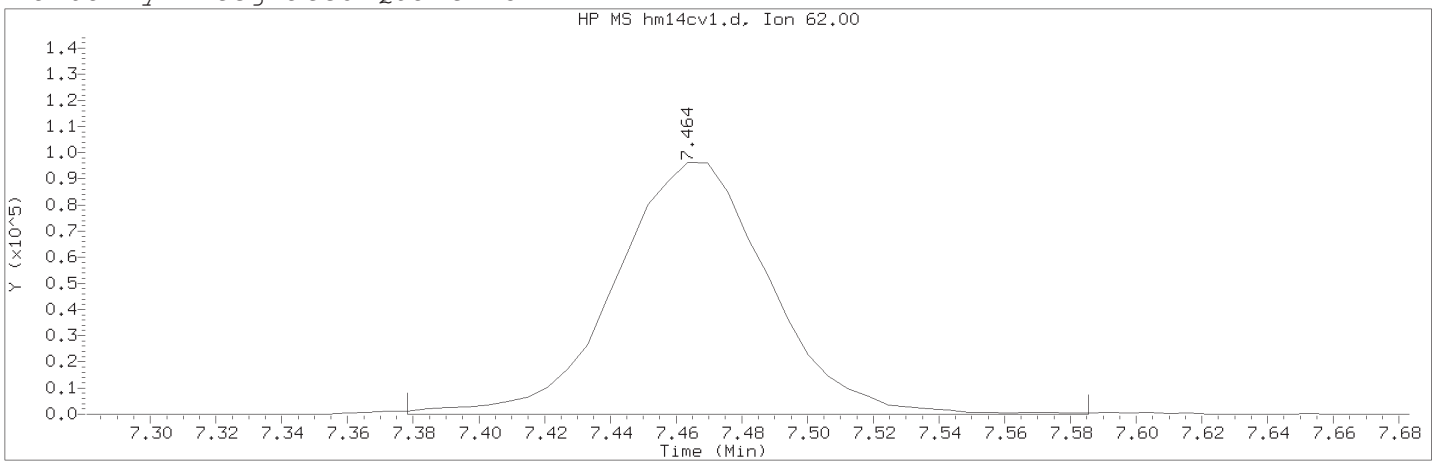
Digitally signed by Kerri E. Koch Legerlotz
on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

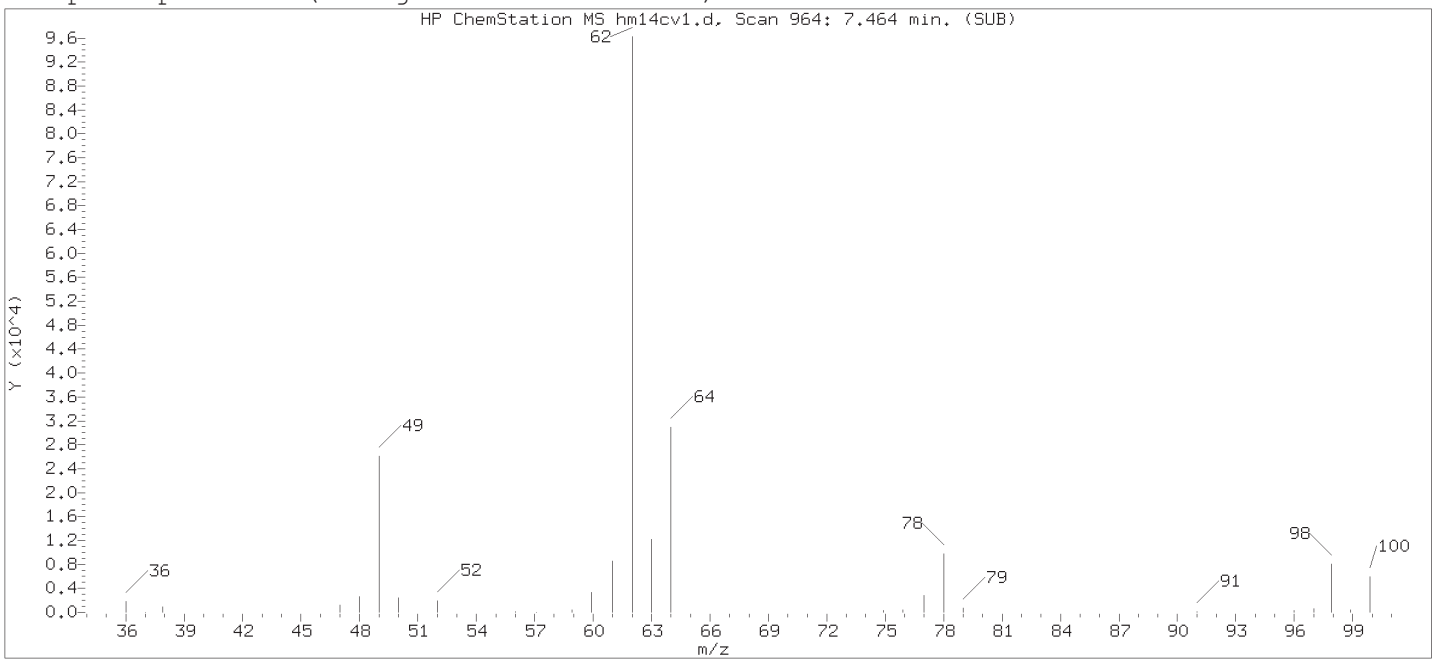
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area (flag) : 312832M
On-Column Amount (ng) : 4.9022
Integration start scan : 949 Integration stop scan: 983
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

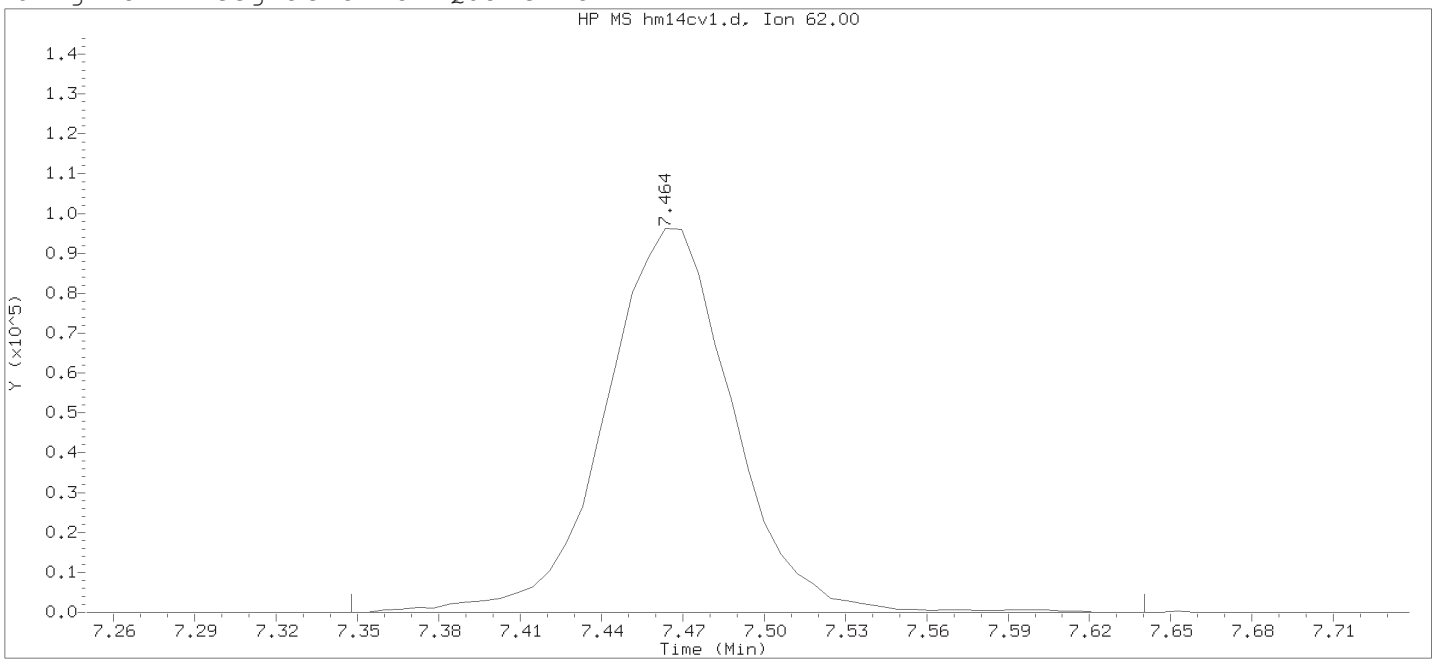
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

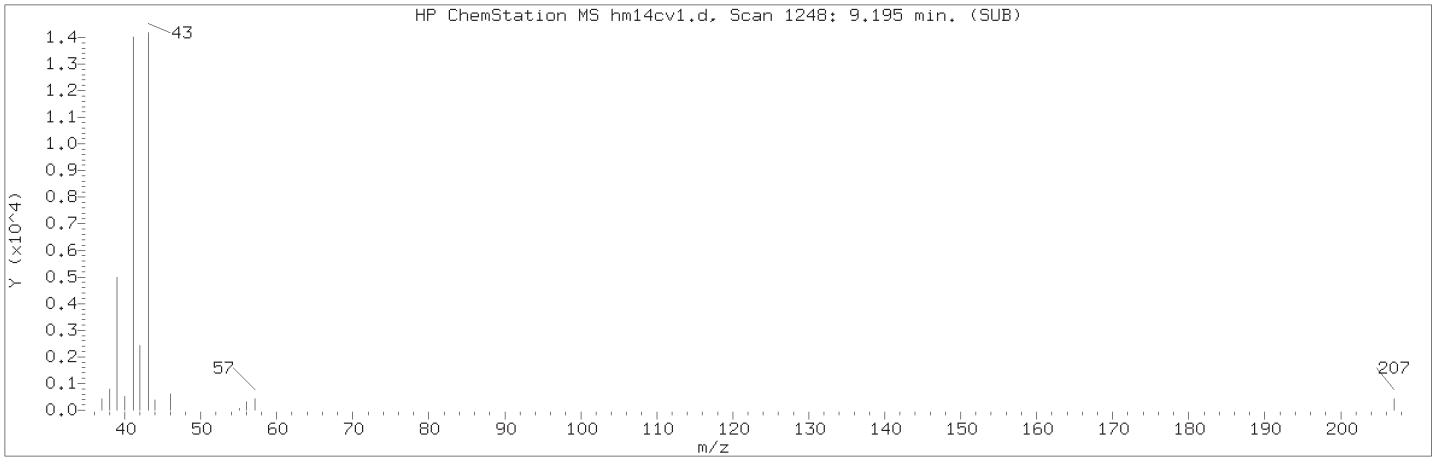
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

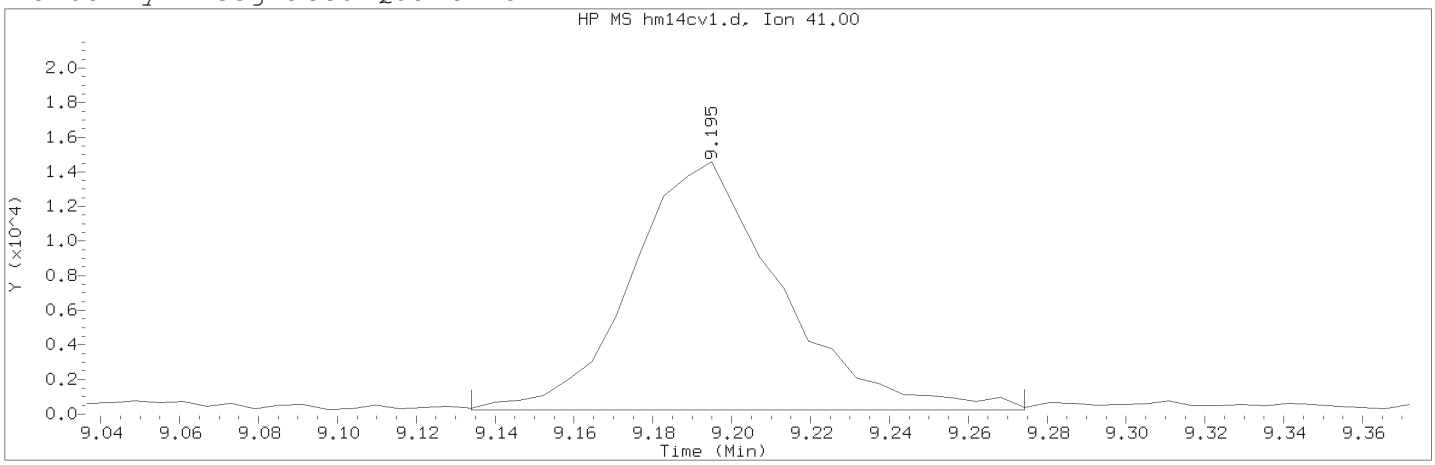
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 964
Retention Time (minutes): 7.464
Quant Ion : 62.00
Area : 314656
On-column Amount (ng) : 4.9308
Integration start scan : 944 Integration stop scan: 992
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

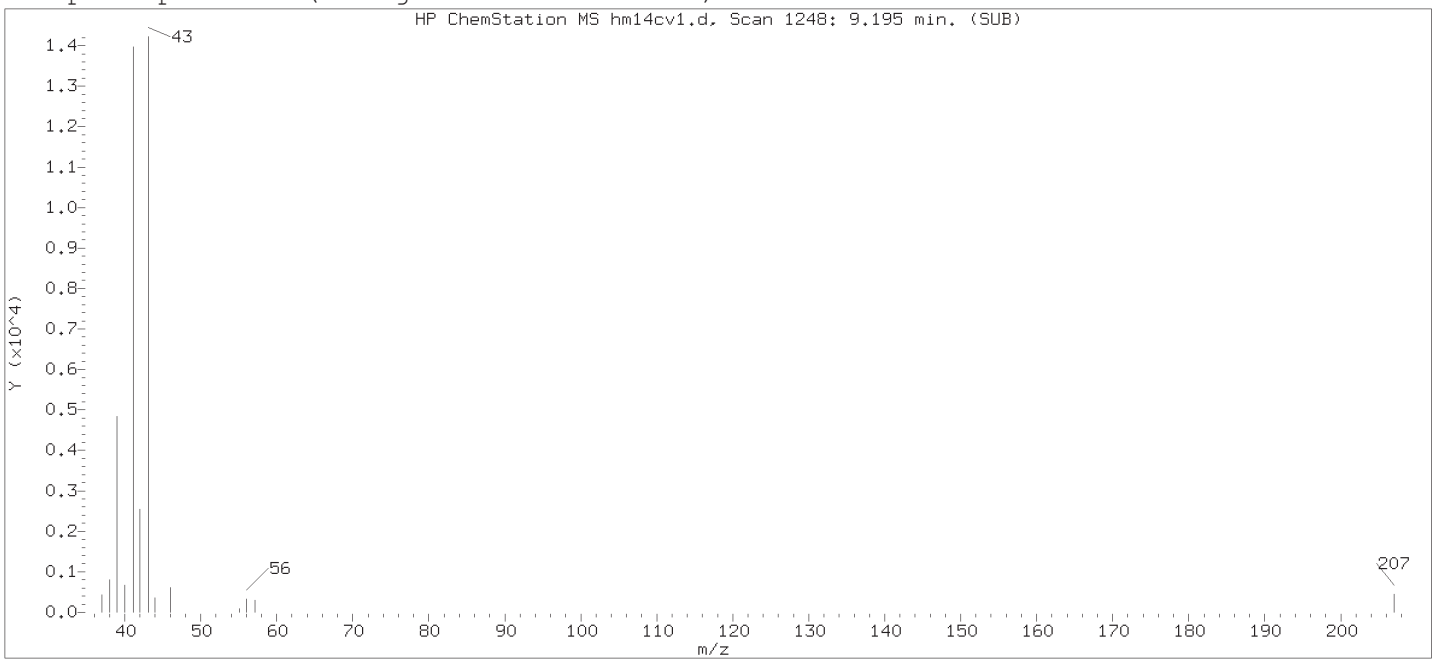
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area (flag) : 37539M
On-Column Amount (ng) : 4.4645
Integration start scan : 1237 Integration stop scan: 1260
Y at integration start : 259 Y at integration end: 259

Reason for manual integration: improper integration

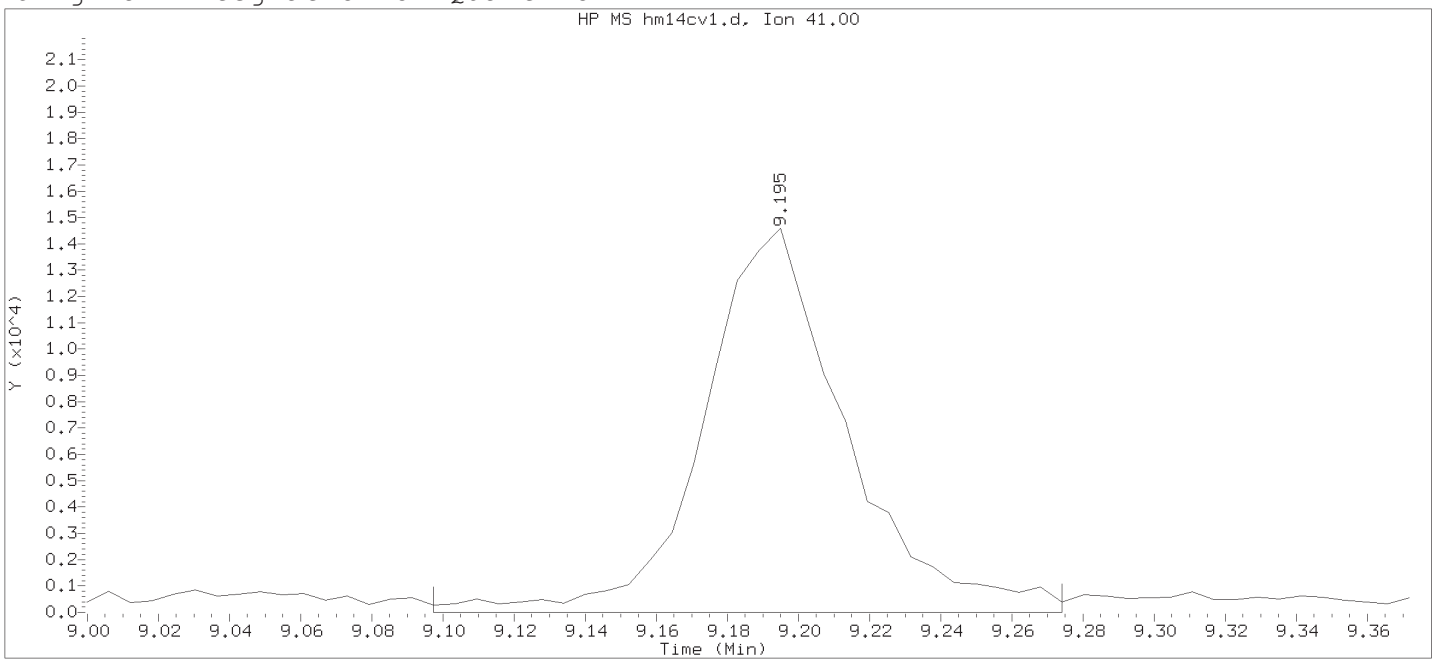
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

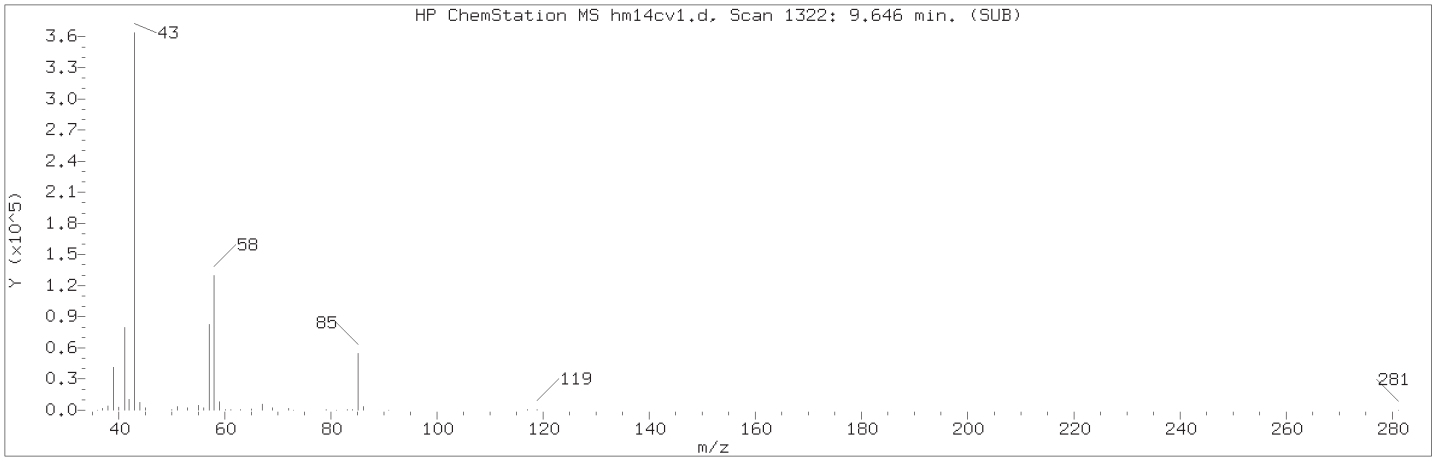
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

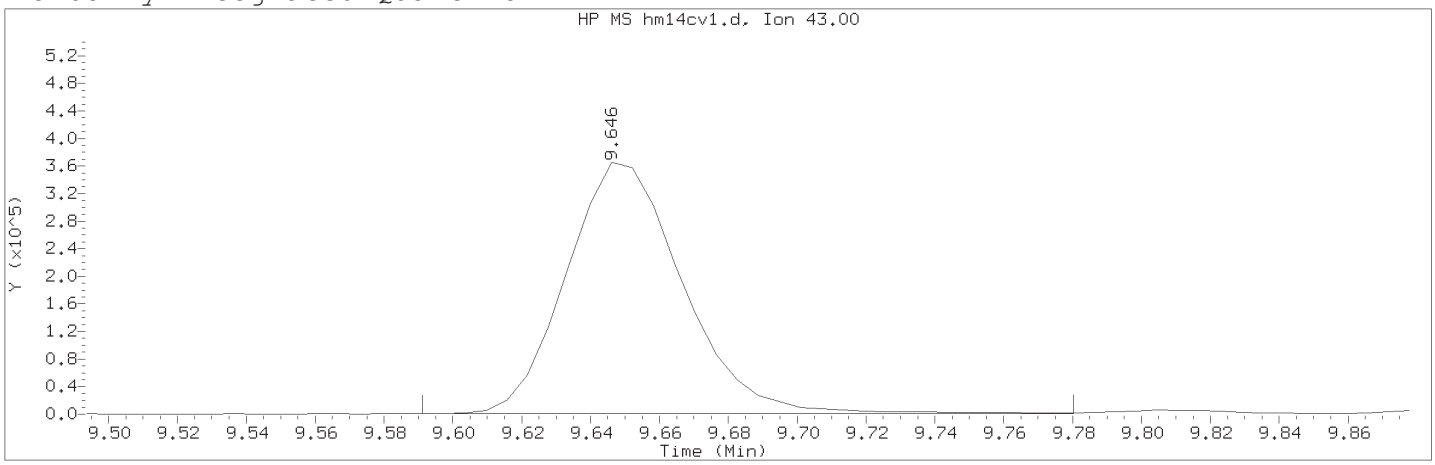
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 41.00
Area : 40531
On-column Amount (ng) : 4.8202
Integration start scan : 1231 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

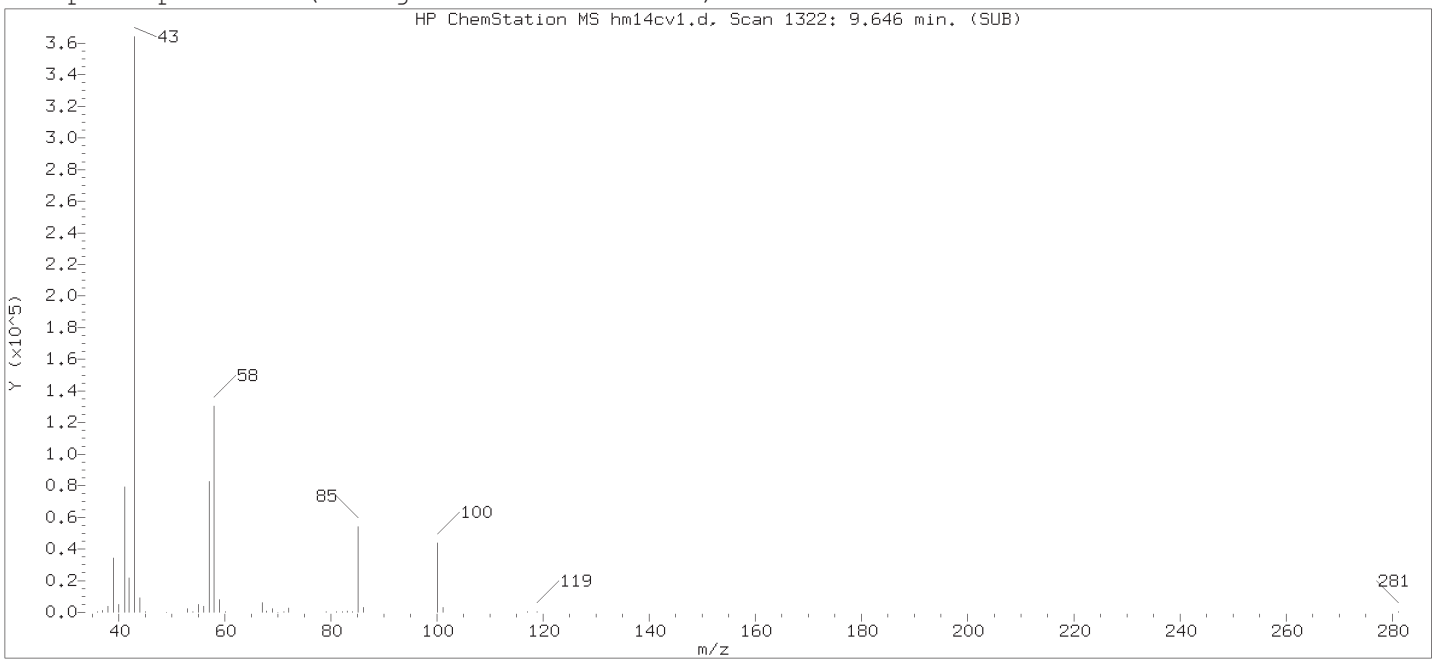
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area (flag) : 859279M
On-Column Amount (ng) : 23.7437
Integration start scan : 1312 Integration stop scan: 1343
Y at integration start : 445 Y at integration end: 445

Reason for manual integration: improper integration

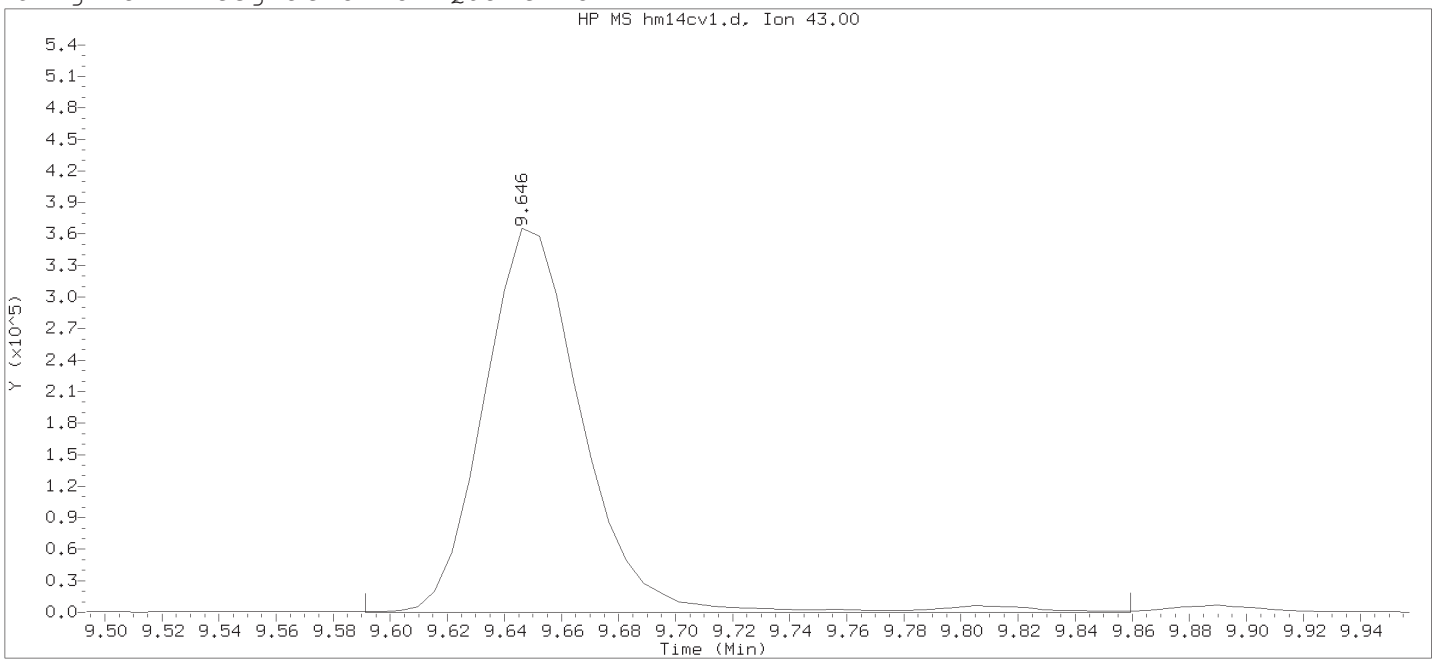
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

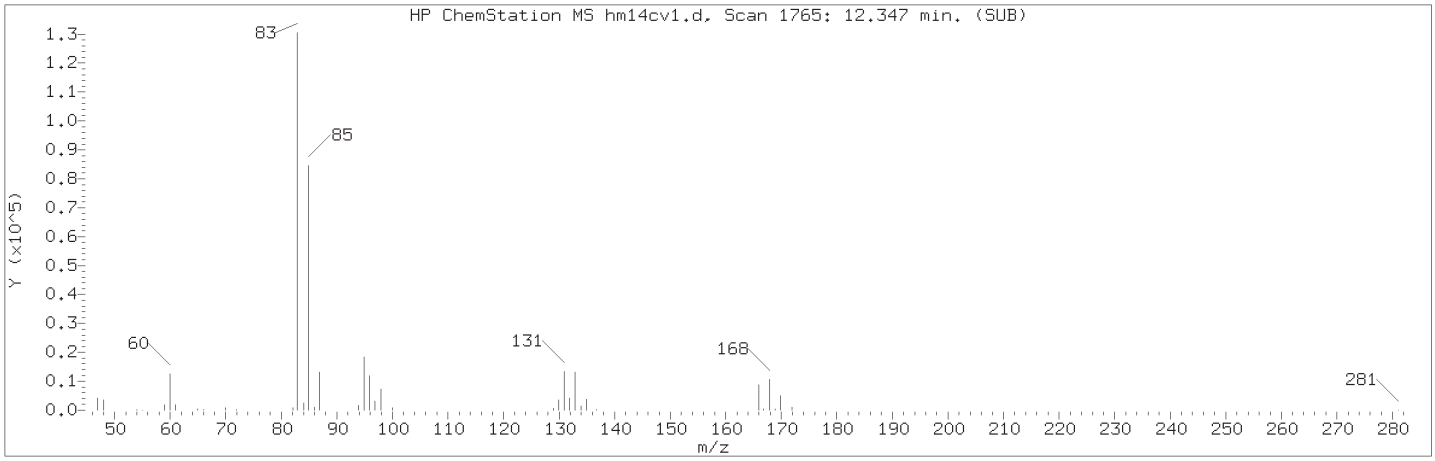
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

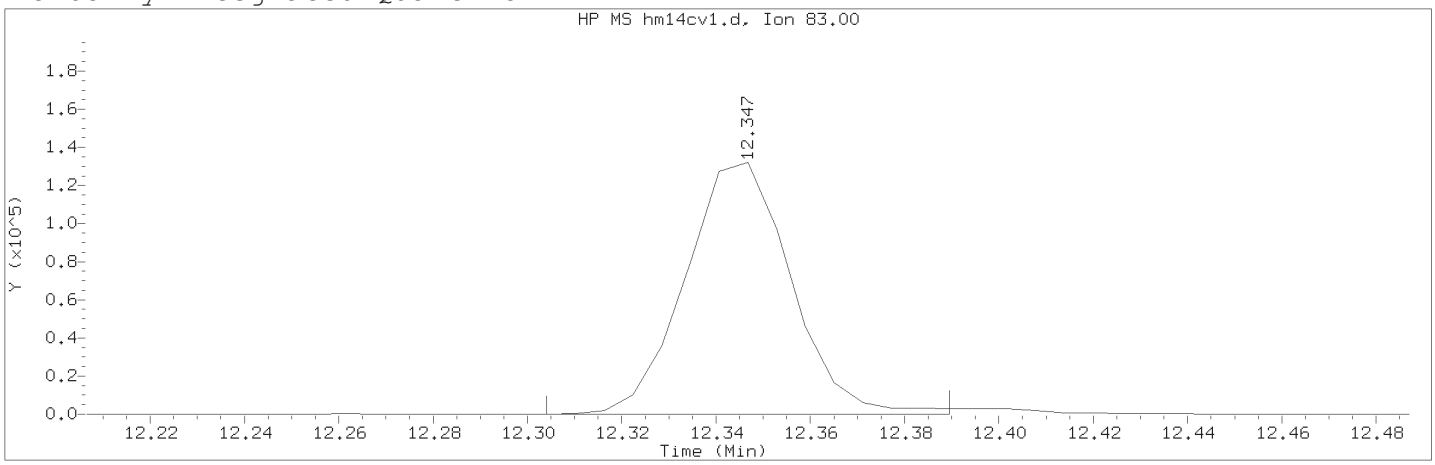
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1322
Retention Time (minutes): 9.646
Quant Ion : 43.00
Area : 879138
On-column Amount (ng) : 24.2924
Integration start scan : 1312 Integration stop scan: 1356
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

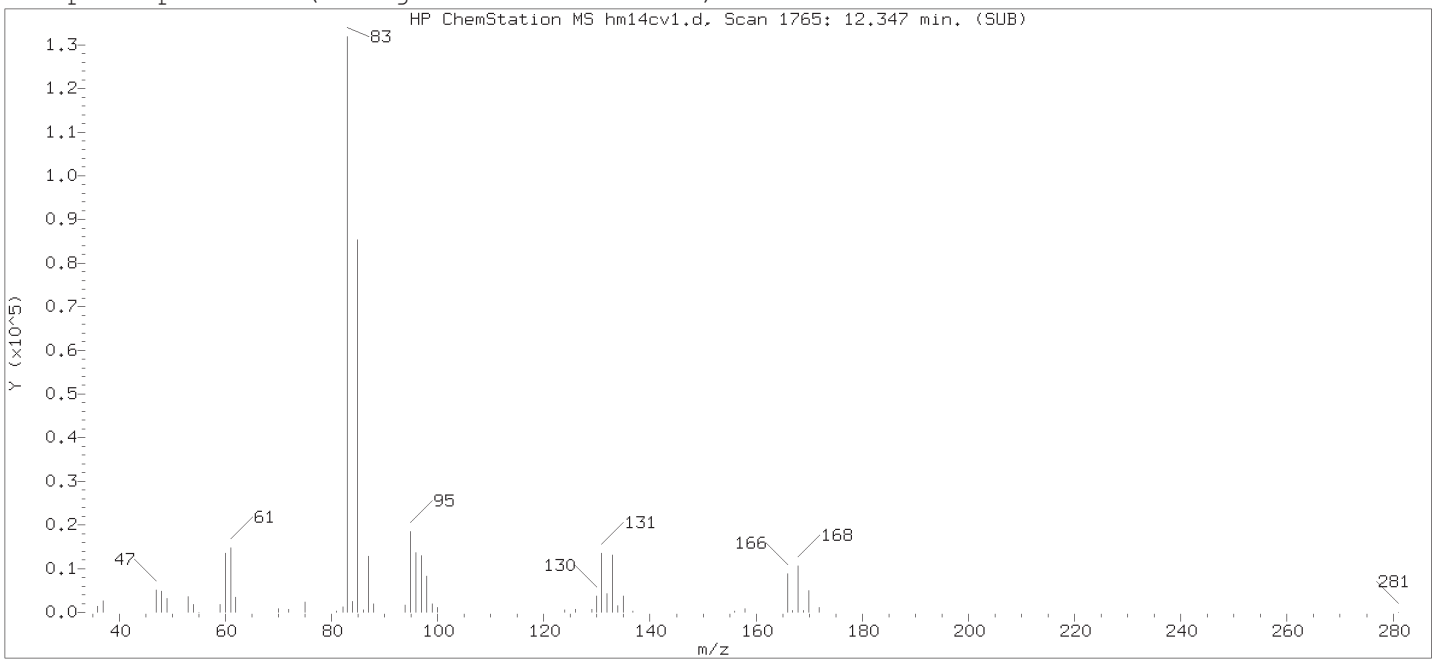
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area (flag) : 205716M
On-Column Amount (ng) : 4.6861
Integration start scan : 1757 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

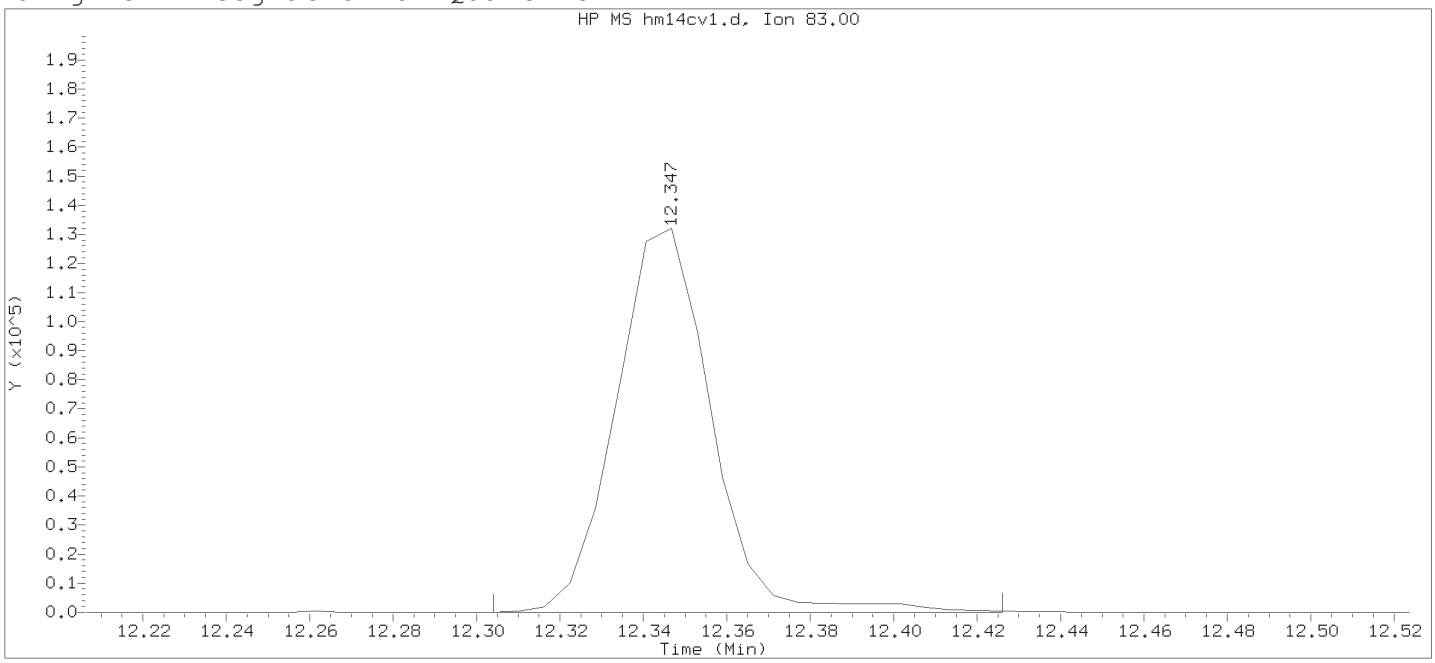
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

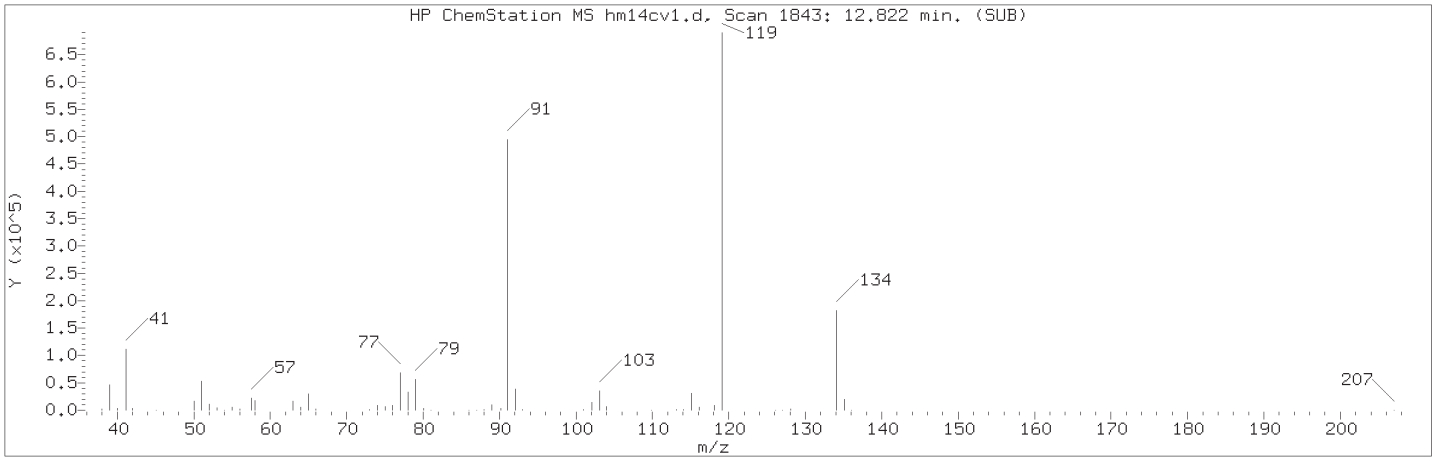
Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

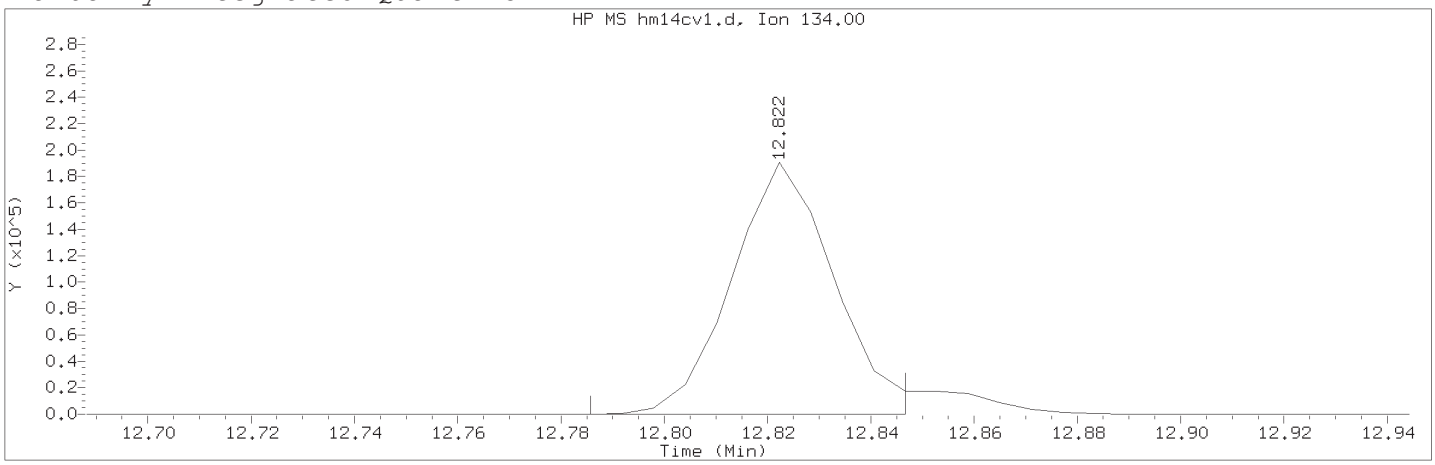
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1765
Retention Time (minutes): 12.347
Quant Ion : 83.00
Area : 208705
On-column Amount (ng) : 4.7542
Integration start scan : 1757 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 95

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature User ID: kel01973

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:24 kel01973

Sample Name: LCSHLG Lab Sample ID: LCSHLG

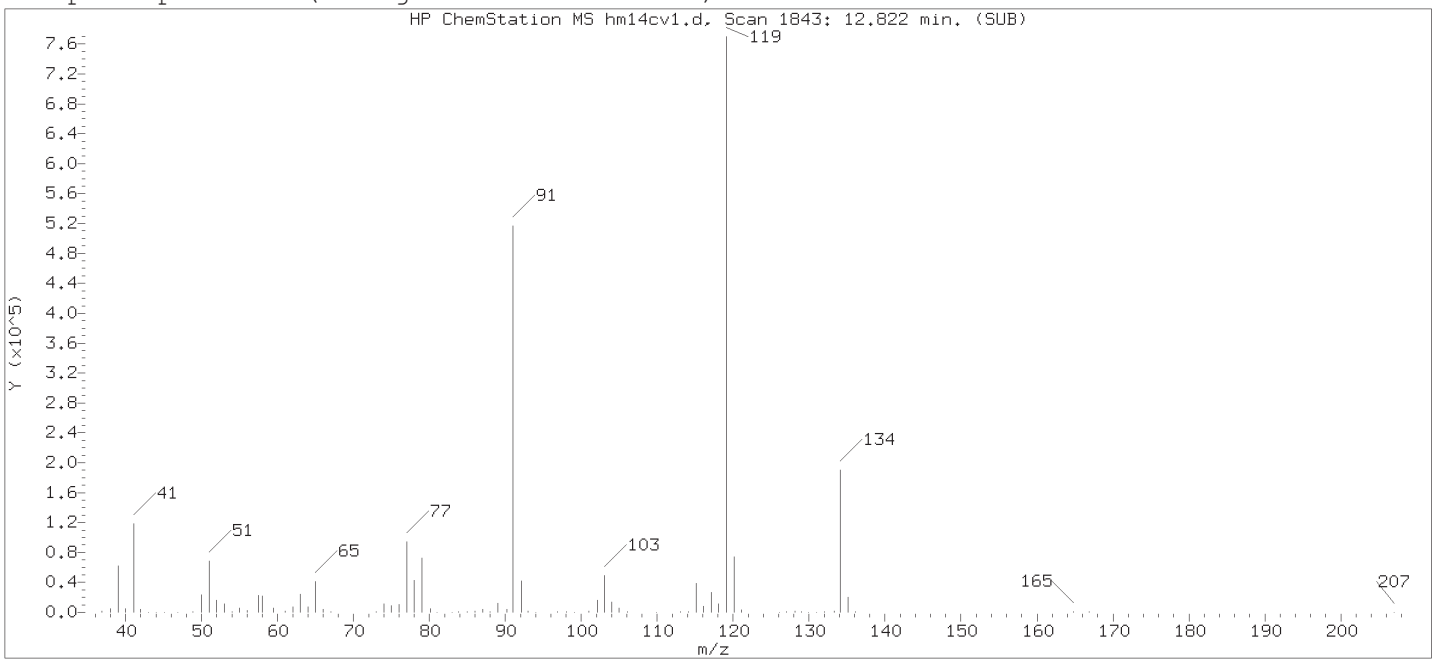
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area (flag) : 261563M
On-Column Amount (ng) : 4.9763
Integration start scan : 1836 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

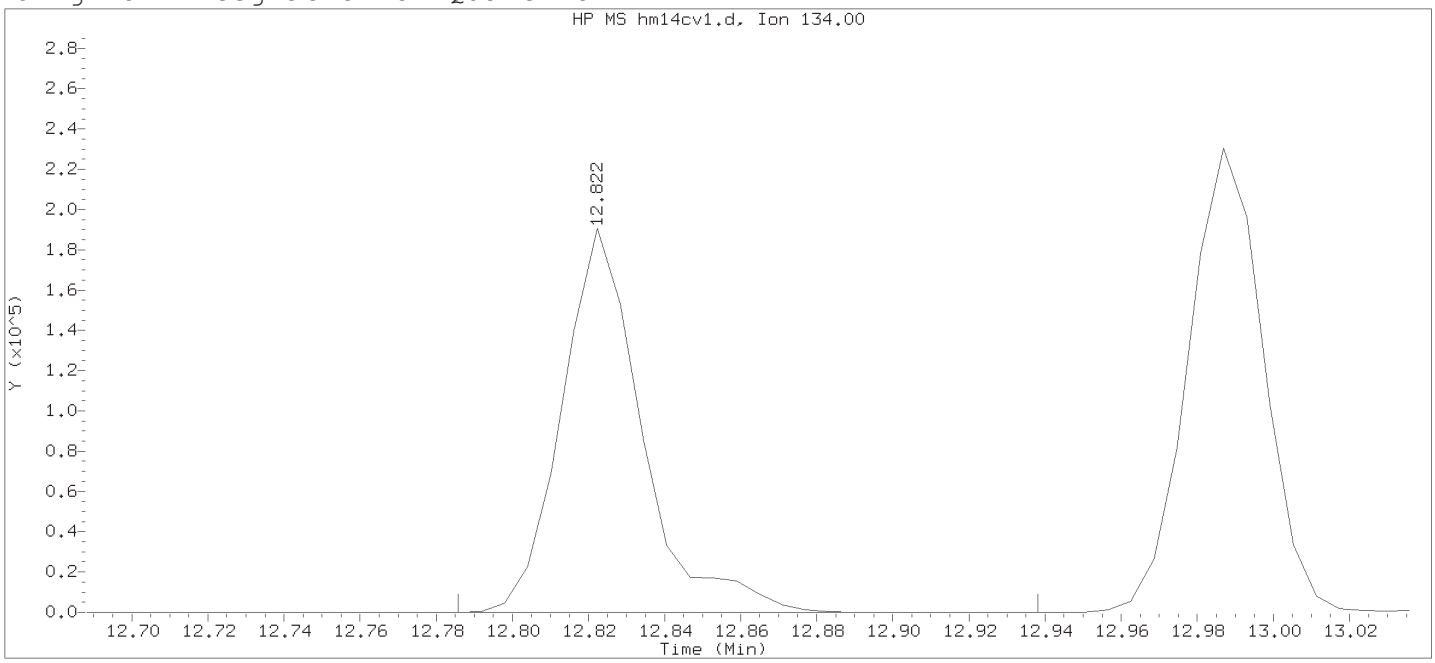
Analyst responsible for change: Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature user ID: kel01973

Secondary review performed and digitally signed by Chelsea B. Stong on 03/15/2016 at 15:30.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16mar14a.b/hm14cv1.d Instrument ID: HP19094.i
Injection date and time: 14-MAR-2016 17:56 Analyst ID: kel01973

Method used: /chem2/HP19094.i/16mar14a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 14-MAR-2016 18:14
Date, time and analyst ID of latest file update: 14-Mar-2016 18:15 Automation

Sample Name: LCSHLG Lab Sample ID: LCSHLG

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1843
Retention Time (minutes): 12.822
Quant Ion : 134.00
Area : 278761
On-column Amount (ng) : 5.3035
Integration start scan : 1836 Integration stop scan: 1861
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kerri E. Koch Legerlotz on 03/14/2016 at 18:25.
Target 3.5 esignature User ID: kel01973

Data File: /chem2/HP19094.i/16jun21b.b/hu21t08.d

Date : 21-JUN-2016 19:55

Client ID: BFB/feb23-16

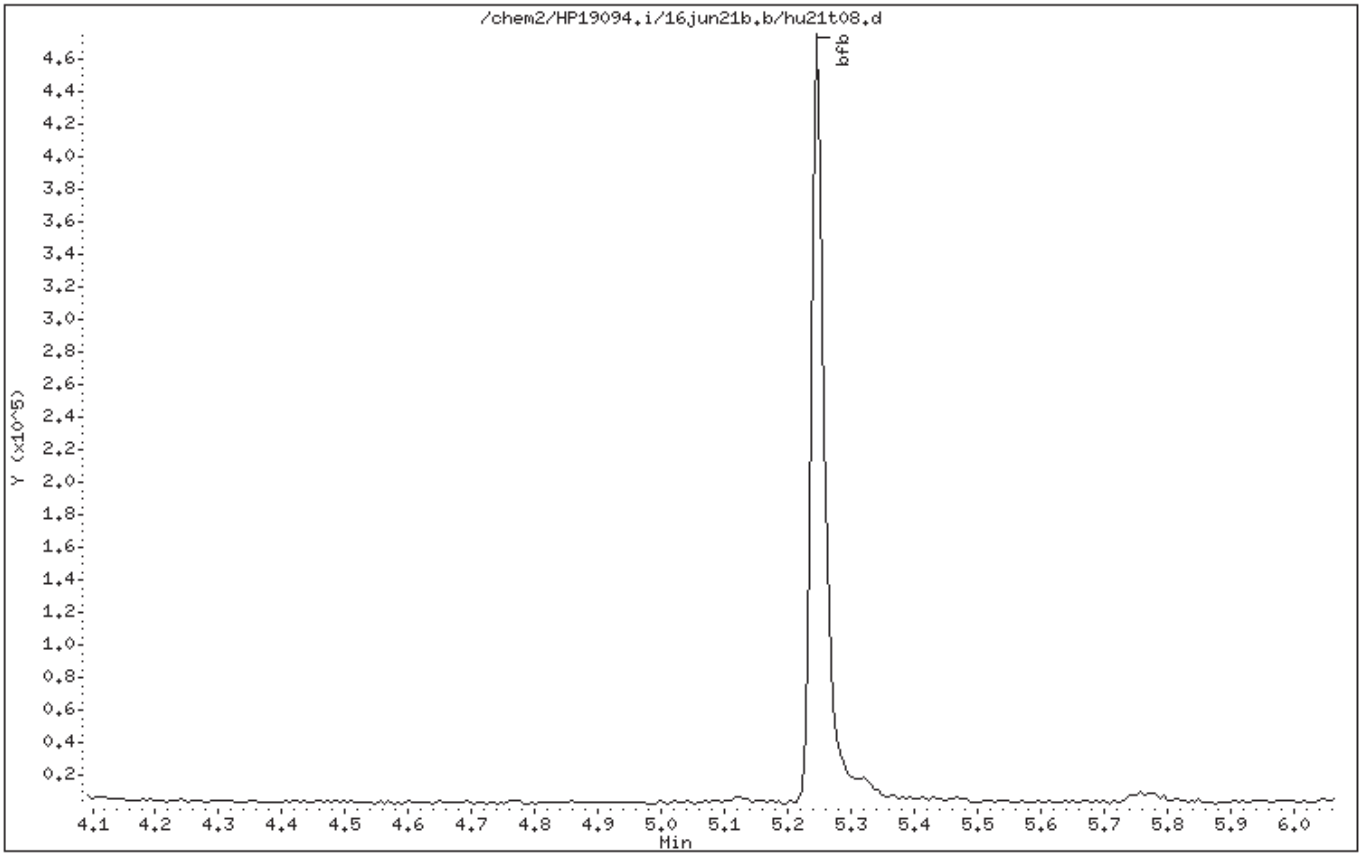
Instrument: HP19094.i

Sample Info: BFB/feb23-16;50NGBFB;1;3;;;;;;

Operator: MSK07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP19094.i/16jun21b.b/hu21t08.d

Date : 21-JUN-2016 19:55

Client ID: BFB/feb23-16

Instrument: HP19094.i

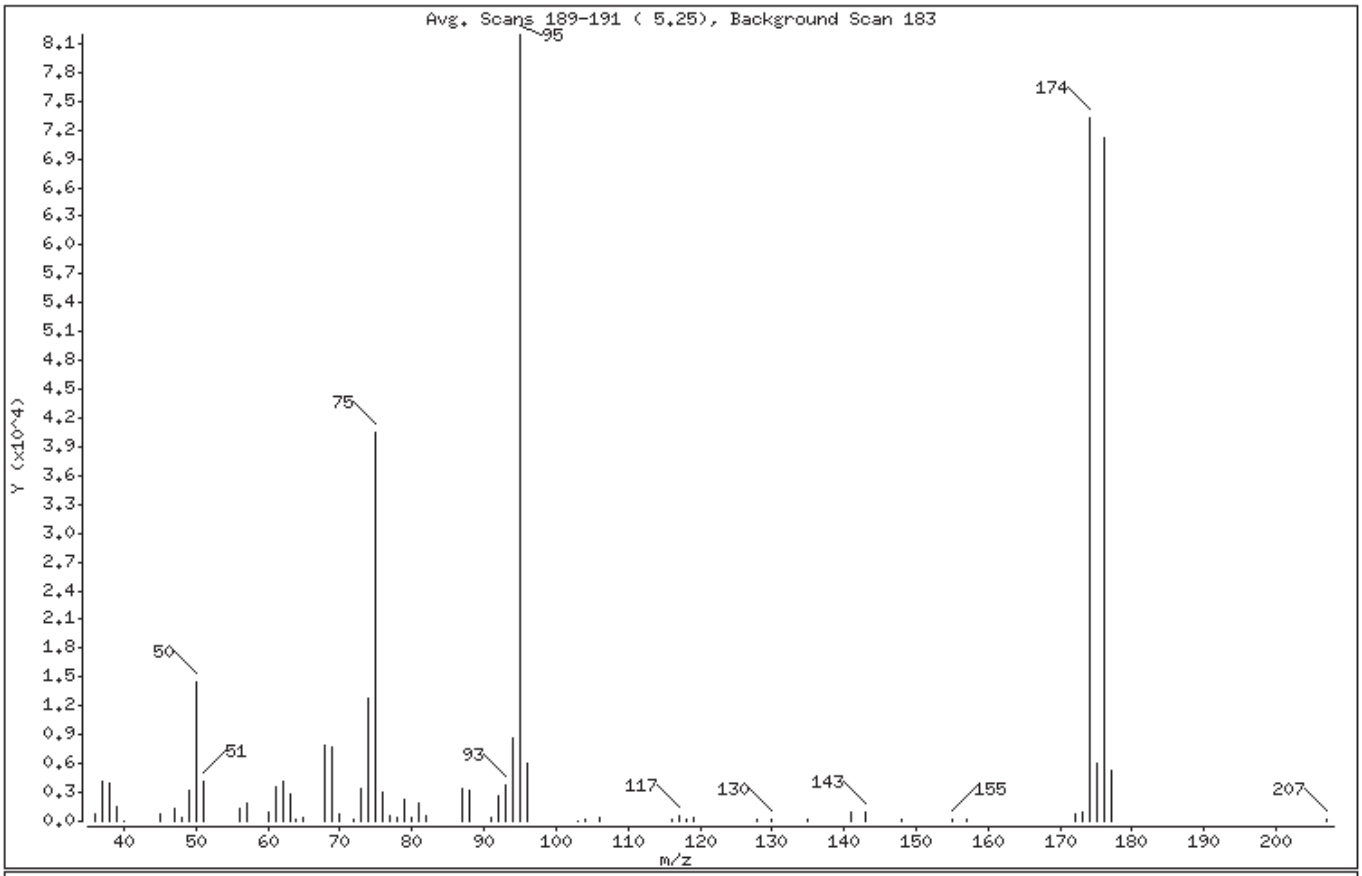
Sample Info: BFB/feb23-16;50NGBFB;1;3;;;;;;

Operator: MSK07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.60
75	30.00 - 60.00% of mass 95	49.43
96	5.00 - 9.00% of mass 95	7.44
173	Less than 2.00% of mass 174	1.08 (1.20)
174	50.00 - 100.00% of mass 95	89.40
175	5.00 - 9.00% of mass 174	7.46 (8.34)
176	95.00 - 101.00% of mass 174	86.99 (97.30)
177	5.00 - 9.00% of mass 176	6.37 (7.33)

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Date : 21-JUN-2016 19:55

Client ID: BFB/feb23-16 Instrument: HP19094.i

Sample Info: BFB/feb23-16;50NGBFB;1;3;;;;;;

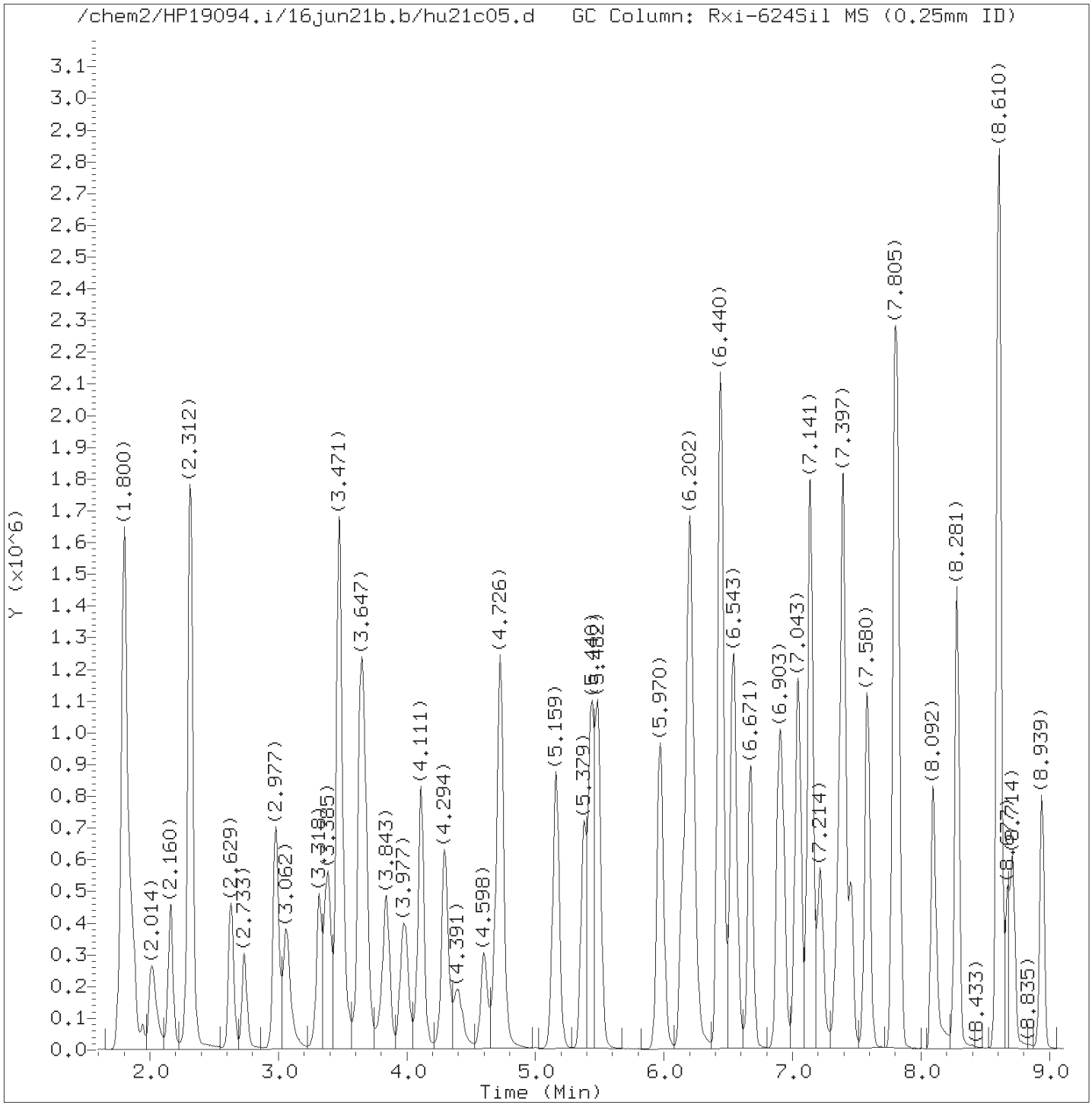
Operator: MSK07970

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hu21t08.d
Spectrum: Avg. Scans 189-191 (5.25), Background Scan 183
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	827	63.00	2860	82.00	505	128.00	246
37.00	4214	64.00	233	87.00	3443	130.00	267
38.00	3886	65.00	310	88.00	3186	135.00	179
39.00	1520	68.00	7869	91.00	286	141.00	875
40.00	6	69.00	7745	92.00	2602	143.00	928
45.00	835	70.00	801	93.00	3693	148.00	196
47.00	1376	72.00	279	94.00	8601	155.00	203
48.00	450	73.00	3400	95.00	81912	157.00	187
49.00	3238	74.00	12789	96.00	6095	172.00	769
50.00	14416	75.00	40488	103.00	88	173.00	881
51.00	4166	76.00	2946	104.00	229	174.00	73232
56.00	1256	77.00	484	106.00	352	175.00	6111
57.00	1848	78.00	399	116.00	139	176.00	71256
60.00	886	79.00	2170	117.00	636	177.00	5220
61.00	3579	80.00	390	118.00	168	207.00	173
62.00	4144	81.00	1892	119.00	440		

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

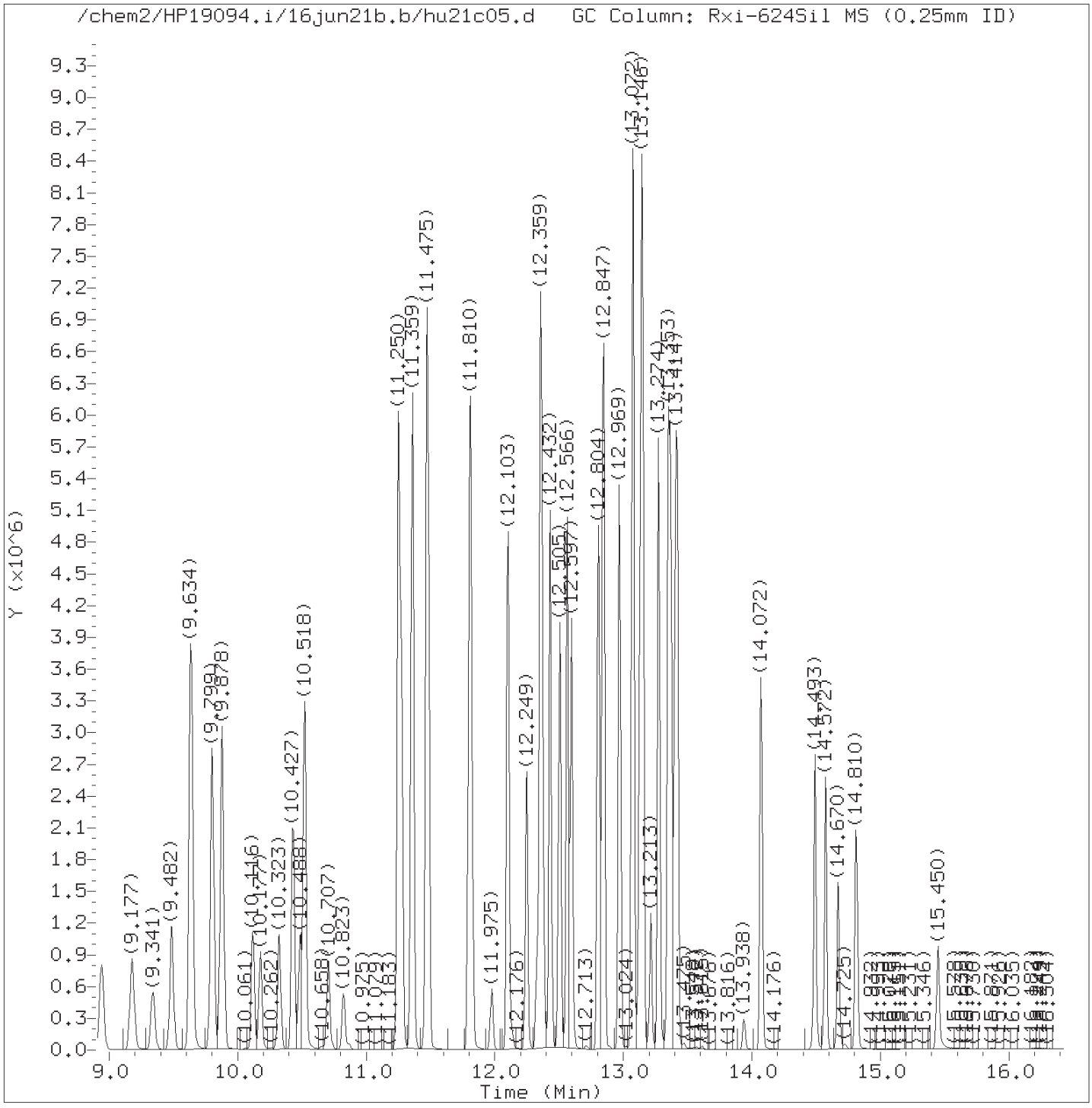
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.020	85	671556	9.190
2) Chloromethane	(2)	2.160	50	716721	9.998
5) Vinyl Chloride	(2)	2.300	62	696369	10.445
6) 1,3-Butadiene	(2)	2.312	39	1041252	20.649
7) Bromomethane	(2)	2.629	94	492639	11.133
8) Chloroethane	(2)	2.733	64	406554	9.893
9) Dichlorofluoromethane	(2)	2.977	67	1003677	10.762
10) Trichlorofluoromethane	(2)	3.062	101	897827	10.337
11) Ethyl ether	(2)	3.318	59	392071	10.942
12) Freon 123a	(2)	3.385	67	683321	10.285
13) Acrolein	(1)	3.471	56	2754429	459.667
14) Acetone	(1)	3.635	43	761276	92.197
15) 1,1-Dichloroethene	(2)	3.641	96	494142	9.916
16) Freon 113	(2)	3.672	101	516059	9.959
17) Methyl Iodide	(2)	3.843	142	971054	10.525
18) Carbon Disulfide	(2)	3.977	76	1318685	8.569
21) Methyl Acetate	(1)	4.068	43	197439	9.645
22) Allyl Chloride	(2)	4.111	41	891663	9.463
26)*t-Butyl Alcohol-d10	(1)	4.263	65	105096	50.000
23) Methylene Chloride	(2)	4.294	84	538468	10.110
28) t-Butyl Alcohol	(1)	4.391	59	544265M	192.605
29) Acrylonitrile	(1)	4.598	53	483834	48.835
30) Methyl Tertiary Butyl Ether	(2)	4.702	73	1131579	9.841
31) trans-1,2-Dichloroethene	(2)	4.733	96	547306	10.199
32) n-Hexane	(2)	5.165	57	799189	8.774
33) 1,1-Dichloroethane	(2)	5.373	63	1056624	9.661
34) di-Isopropyl Ether	(2)	5.440	45	1797290	9.414
35) 2-Chloro-1,3-Butadiene	(2)	5.489	53	897049	9.992
37) Ethyl t-butyl ether	(2)	5.970	59	1498522	9.308
40) 1,2-Dichloroethene (Total)	(2)		96	1185024	20.927
38) 2-Butanone	(1)	6.147	43	1300060	92.401
39) cis-1,2-Dichloroethene	(2)	6.196	96	637718	10.728
42) Propionitrile	(1)	6.214	54	749215	213.553
41) 2,2-Dichloropropane	(2)	6.220	77	784316	8.963
45) Methacrylonitrile	(1)	6.440	67	1276832	106.293
47) Bromochloromethane	(2)	6.525	128	271548	12.008
48) Tetrahydrofuran	(1)	6.549	71	350257	98.404
49) Chloroform	(2)	6.671	83	1056946	10.573

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.891	113	542907	10.870
50)$Dibromofluoromethane	(2)	6.891	111	564423	10.983
51) 1,1,1-Trichloroethane	(2)	6.921	97	808957	9.487
52) Cyclohexane	(2)	7.037	56	985897	8.848
52) Cyclohexane	(2)	7.043	84	796453	9.335
52) Cyclohexane	(2)	7.049	69	293822	9.218
55) 1,1-Dichloropropene	(2)	7.135	75	816331	9.974
54) Carbon Tetrachloride	(2)	7.147	117	752044	9.700
56) Isobutyl Alcohol	(1)	7.220	41	490065	514.804
57)$1,2-Dichloroethane-d4	(2)	7.354	102	91269	11.033
57)$1,2-Dichloroethane-d4	(2)	7.354	65	438467	10.382
57)$1,2-Dichloroethane-d4	(2)	7.354	104	58450	11.190
58) Benzene	(2)	7.397	78	2372246	10.414
59) 1,2-Dichloroethane	(2)	7.452	62	608129	10.303
60) t-Amyl methyl ether	(2)	7.580	73	1300739	9.887
63)*Fluorobenzene	(2)	7.793	96	2119584	10.000
62) n-Heptane	(2)	7.817	43	903244	8.773
65) n-Butanol	(1)	8.098	56	832839	1033.443
67) Trichloroethene	(2)	8.281	95	637910	10.744
70) 1,2-Dichloropropane	(2)	8.604	63	616832	10.399
69) Methylcyclohexane	(2)	8.610	83	1034308	10.635
71) Methyl Methacrylate	(1)	8.671	69	240456M	9.581
72) 1,4-Dioxane	(1)	8.689	88	122207	769.697
73) Dibromomethane	(2)	8.714	93	269716	11.040
74) Bromodichloromethane	(2)	8.939	83	694768	10.185
76) 2-Nitropropane	(1)	9.177	41	716637	89.075
80) cis-1,3-Dichloropropene	(2)	9.488	75	828518	9.884
81) 4-Methyl-2-Pentanone	(1)	9.634	43	3226449	93.179
82)$Toluene-d8	(3)	9.799	98	2214389	8.895
82)$Toluene-d8	(3)	9.799	100	1427164	8.856
83) Toluene	(3)	9.878	92	1493815	8.908
84) trans-1,3-Dichloropropene	(3)	10.116	75	651669	8.292
85) 1,3-Dichloropropene (total)	(3)		75	1480187	18.175
86) Ethyl Methacrylate	(3)	10.177	69	505376	8.359
88) 1,1,2-Trichloroethane	(3)	10.323	97	376425	9.267
89) Tetrachloroethene	(3)	10.427	166	711762	8.988
90) 1,3-Dichloropropane	(3)	10.488	76	662181	9.067
91) 2-Hexanone	(1)	10.518	43	2245197	91.708

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.707	129	461697	8.867
95) 1,2-Dibromoethane	(3)	10.823	107	360981	9.435
97)*Chlorobenzene-d5	(3)	11.250	117	1747547	10.000
98) Chlorobenzene	(3)	11.274	112	1720404	9.425
99) 1,1,1,2-Tetrachloroethane	(3)	11.353	131	574614	9.177
100) Ethylbenzene	(3)	11.359	91	2946145	8.976
101) m+p-Xylene	(3)	11.475	106	2320905	18.538
105) Xylene (Total)	(3)		106	3453483	27.859
104) o-Xylene	(3)	11.804	106	1132578	9.322
106) Styrene	(3)	11.817	104	1850574	9.521
107) Bromoform	(3)	11.975	173	257735	8.924
108) Isopropylbenzene	(3)	12.103	105	2885766	8.963
111)$4-Bromofluorobenzene	(3)	12.243	95	785846	9.793
111)$4-Bromofluorobenzene	(3)	12.249	174	709198	10.600
113) 1,1,2,2-Tetrachloroethane	(4)	12.329	83	452060	8.461
115) trans-1,4-Dichloro-2-butene	(1)	12.353	53	890280	83.494
114) Bromobenzene	(4)	12.365	156	704559	8.854
116) 1,2,3-Trichloropropane	(4)	12.384	110	116382	8.677
117) n-Propylbenzene	(4)	12.432	91	3515905	8.168
119) 2-Chlorotoluene	(4)	12.505	126	712368	8.583
121) 1,3,5-Trimethylbenzene	(4)	12.566	105	2486852	8.287
122) 4-Chlorotoluene	(4)	12.597	126	741836	8.771
125) tert-Butylbenzene	(4)	12.804	134	566841	8.861
126) Pentachloroethane	(4)	12.841	167	423843	8.779
127) 1,2,4-Trimethylbenzene	(4)	12.847	105	2559069	8.529
128) sec-Butylbenzene	(4)	12.969	105	3210165	8.262
131) 1,3-Dichlorobenzene	(4)	13.072	146	1385419	8.901
132) p-Isopropyltoluene	(4)	13.079	119	2824681	8.588
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	853631	10.000
134) 1,4-Dichlorobenzene	(4)	13.146	146	1368227	8.652
135) 1,2,3-Trimethylbenzene	(4)	13.152	120	1102408	8.860
136) Benzyl Chloride	(4)	13.213	126	177009	8.362
138) n-Butylbenzene	(4)	13.365	92	1419112	8.820
139) 1,2-Dichlorobenzene	(4)	13.402	146	1219316	8.819
143) 1,2-Dibromo-3-chloropropane	(1)	13.938	155	59546	10.825
145) 1,2,4-Trichlorobenzene	(4)	14.493	180	837982	8.473
146) Hexachlorobutadiene	(4)	14.578	225	454926	8.803
147) Naphthalene	(4)	14.670	128	1181715	7.454

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.810	180	651167	8.243

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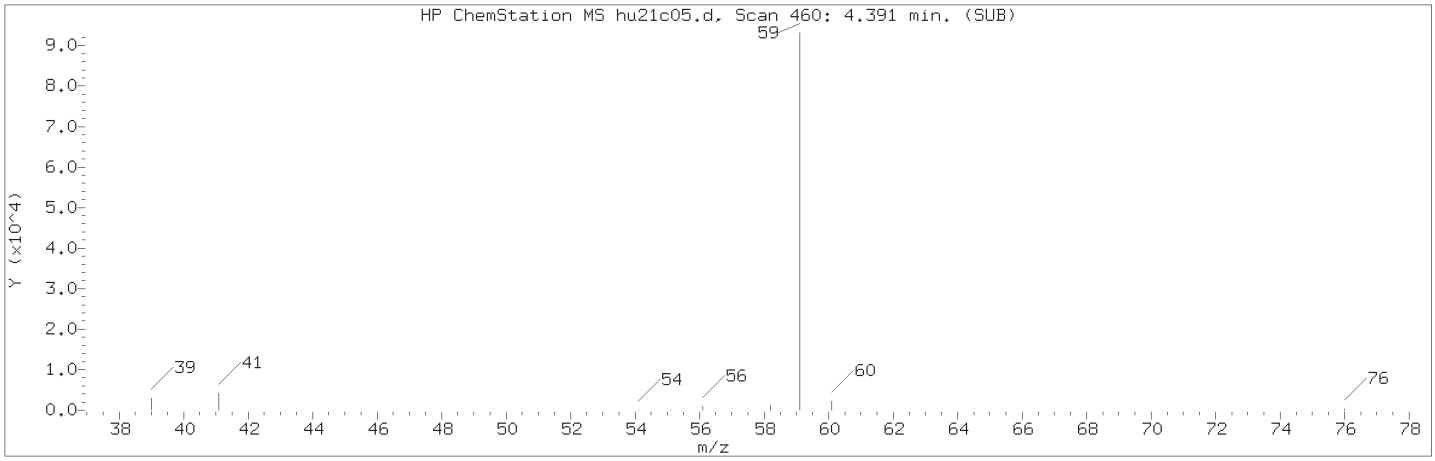
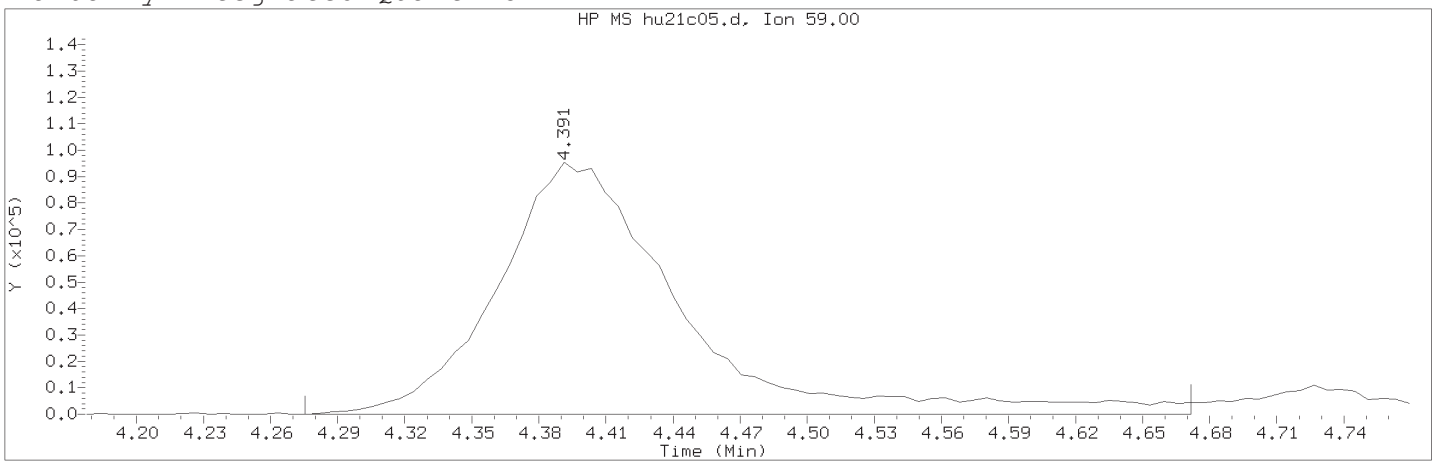
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

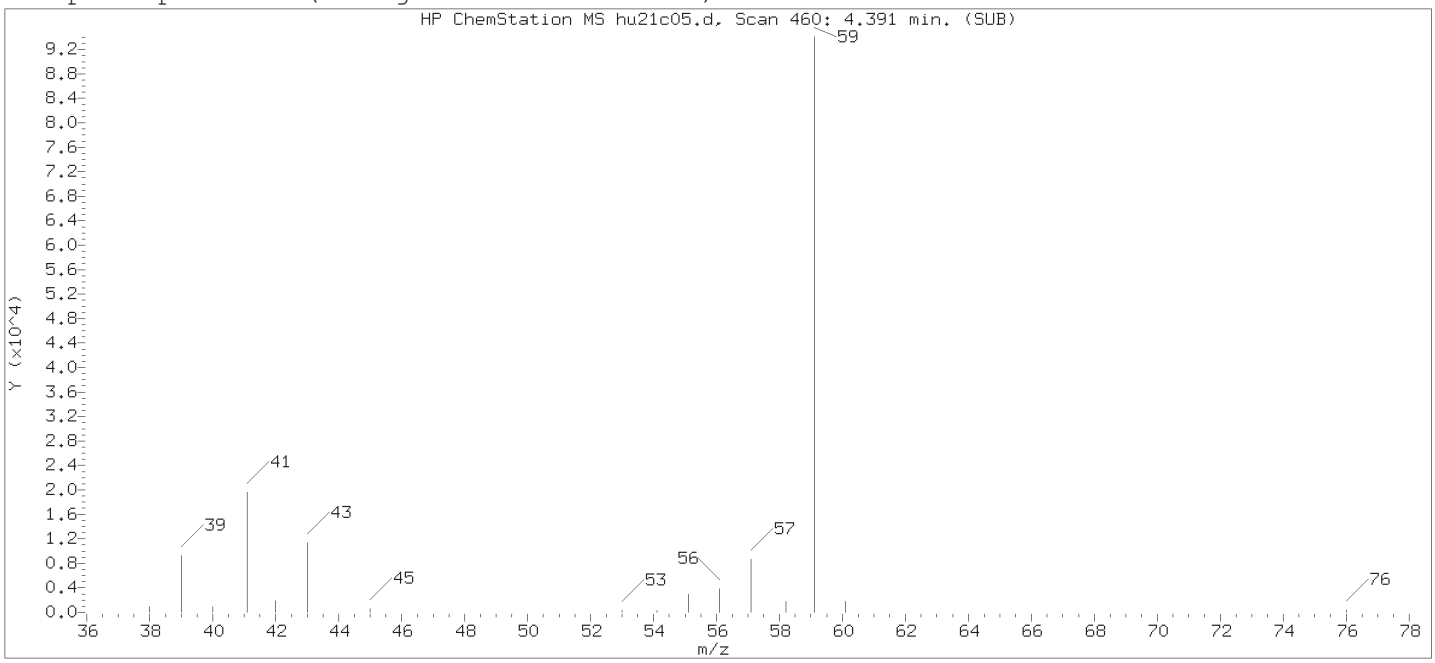
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 460
Retention Time (minutes): 4.391
Quant Ion : 59.00
Area (flag) : 544265M
On-Column Amount (ng) : 192.6047
Integration start scan : 440 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

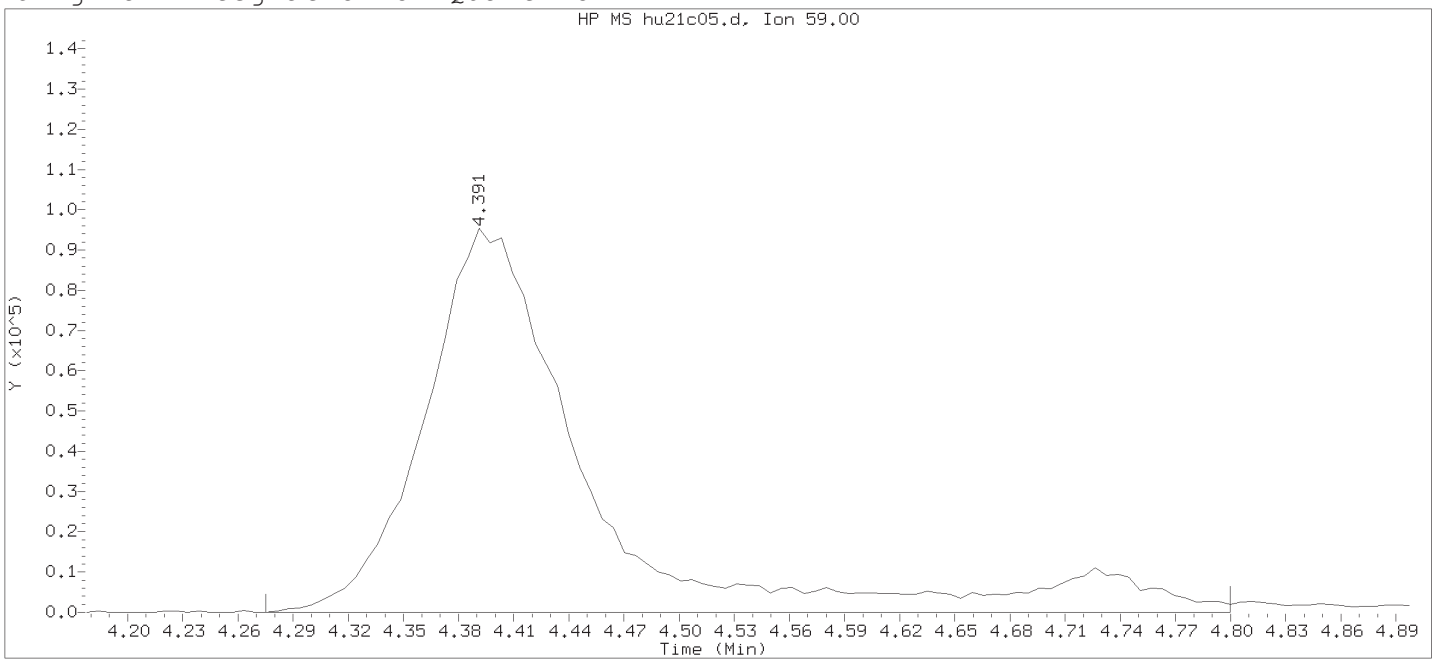
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 11:59.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

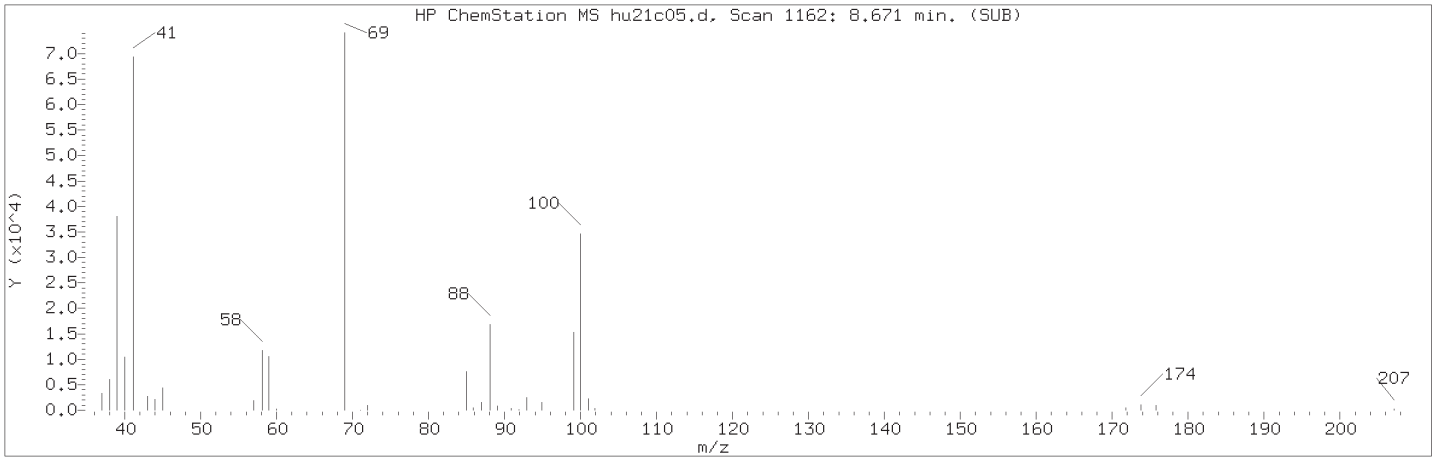
Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 20:55
Date, time and analyst ID of latest file update: 21-Jun-2016 20:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

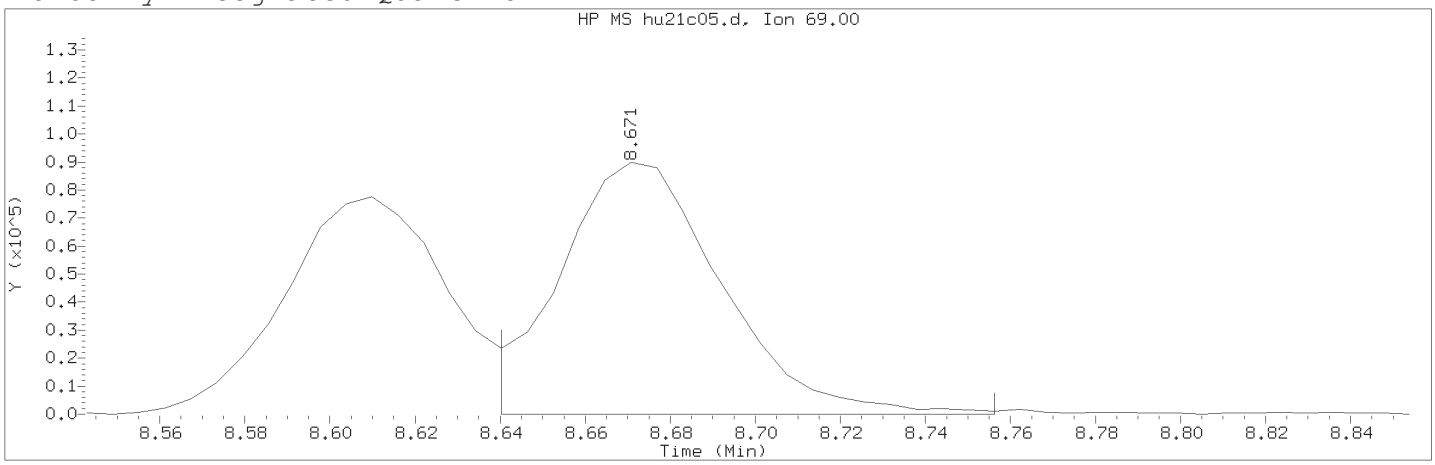
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 460
Retention Time (minutes): 4.391
Quant Ion : 59.00
Area : 589048
On-column Amount (ng) : 208.4518
Integration start scan : 440 Integration stop scan: 526
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature User ID: MSK07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 21:36 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

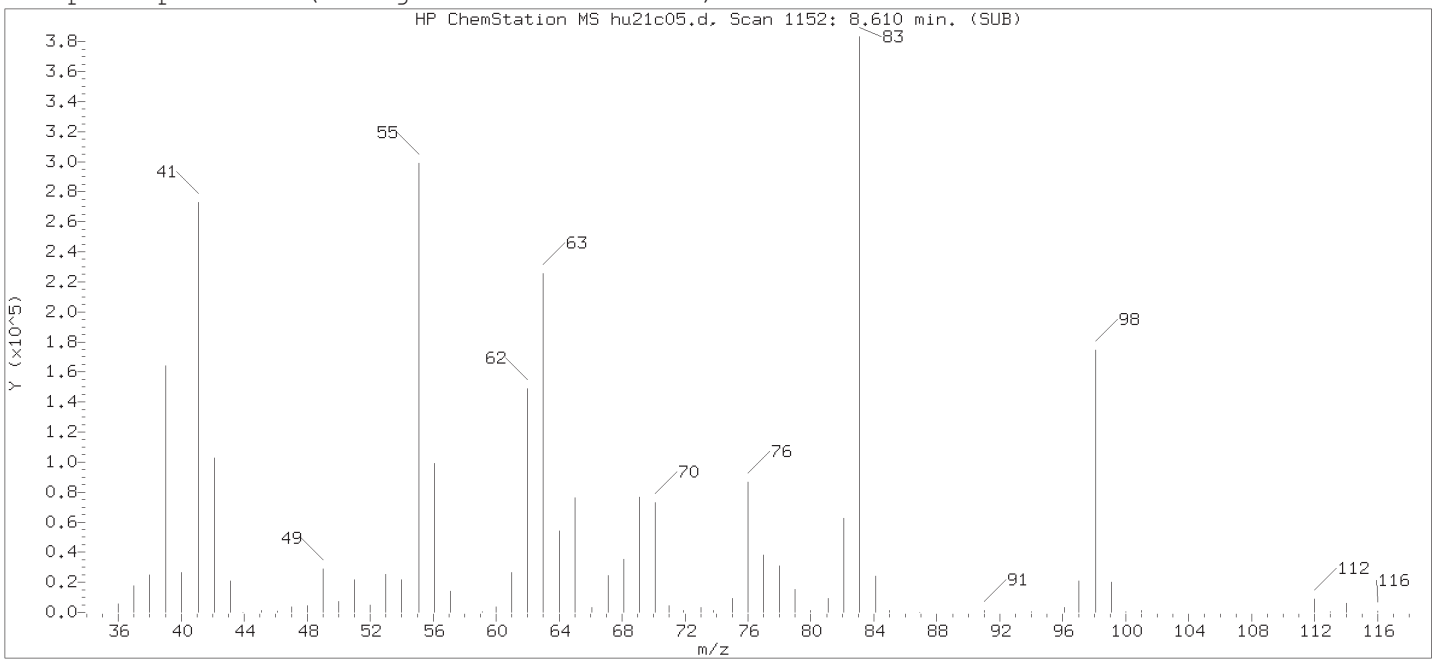
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1162
Retention Time (minutes): 8.671
Quant Ion : 69.00
Area (flag) : 240456M
On-Column Amount (ng) : 9.5807
Integration start scan : 1156 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

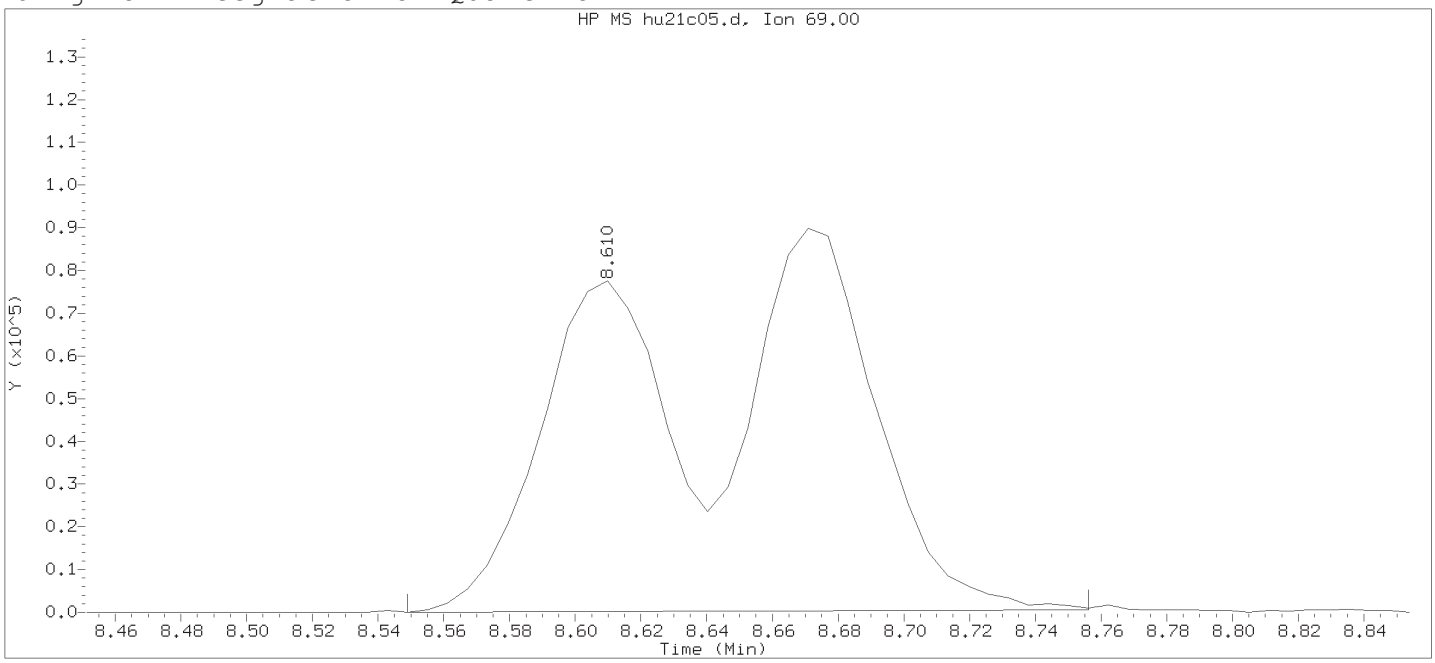
Analyst responsible for change: Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 11:59.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/16jun21b.b/hu21c05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 20:36 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 21-JUN-2016 20:55
Date, time and analyst ID of latest file update: 21-Jun-2016 20:55 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1152
Retention Time (minutes): 8.610
Quant Ion : 69.00
Area : 436192
On-column Amount (ng) : 17.3796
Integration start scan : 1141 Integration stop scan: 1175
Y at integration start : 0 Y at integration end: 505

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: MSK07970

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH62

Data file: /chem2/HP19094.i/16jun21b.b/hu21b05.d Injection date and time: **21-JUN-2016 22:18**
Data file Sample Info. Line: VBLKH62;VBLKH62;1;3;;;DARAAP;;; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **DRAPER**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.257	(0.006)	438	65	93368	(-11)	50.00	
63) Fluorobenzene	7.787	(0.006)	1017	96	2165033	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1650766	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	708002	(-17)	10.00	

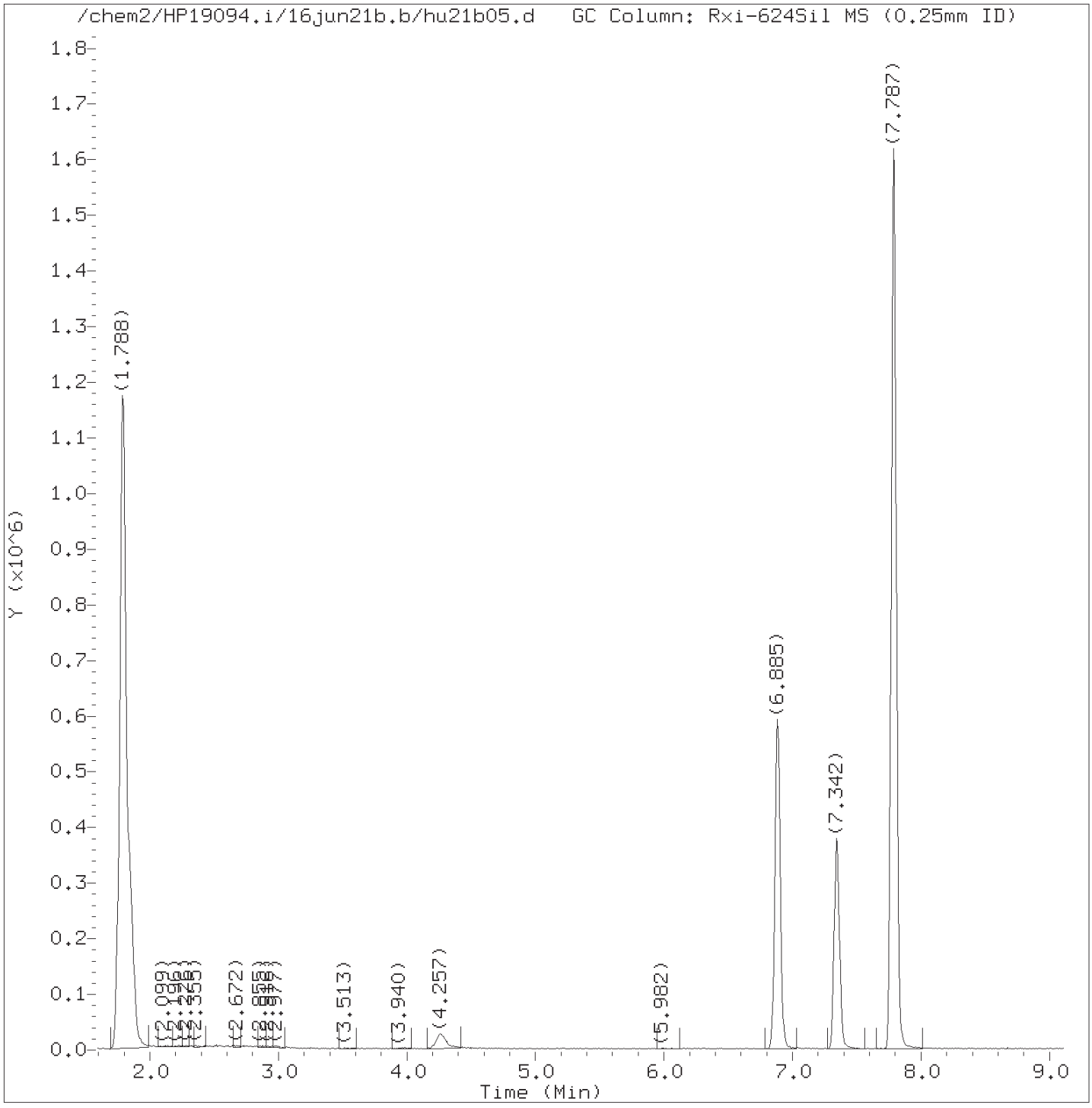
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.885	(0.000)	113	524165	10.274	103%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.342	(0.001)	102	82630	9.779	98%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2218810	9.435	94%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	692963	9.142	91%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.2	1
48) Tetrahydrofuran	(1)				Not Detected					2	25

Total number of targets = 2

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:49. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 11:59. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

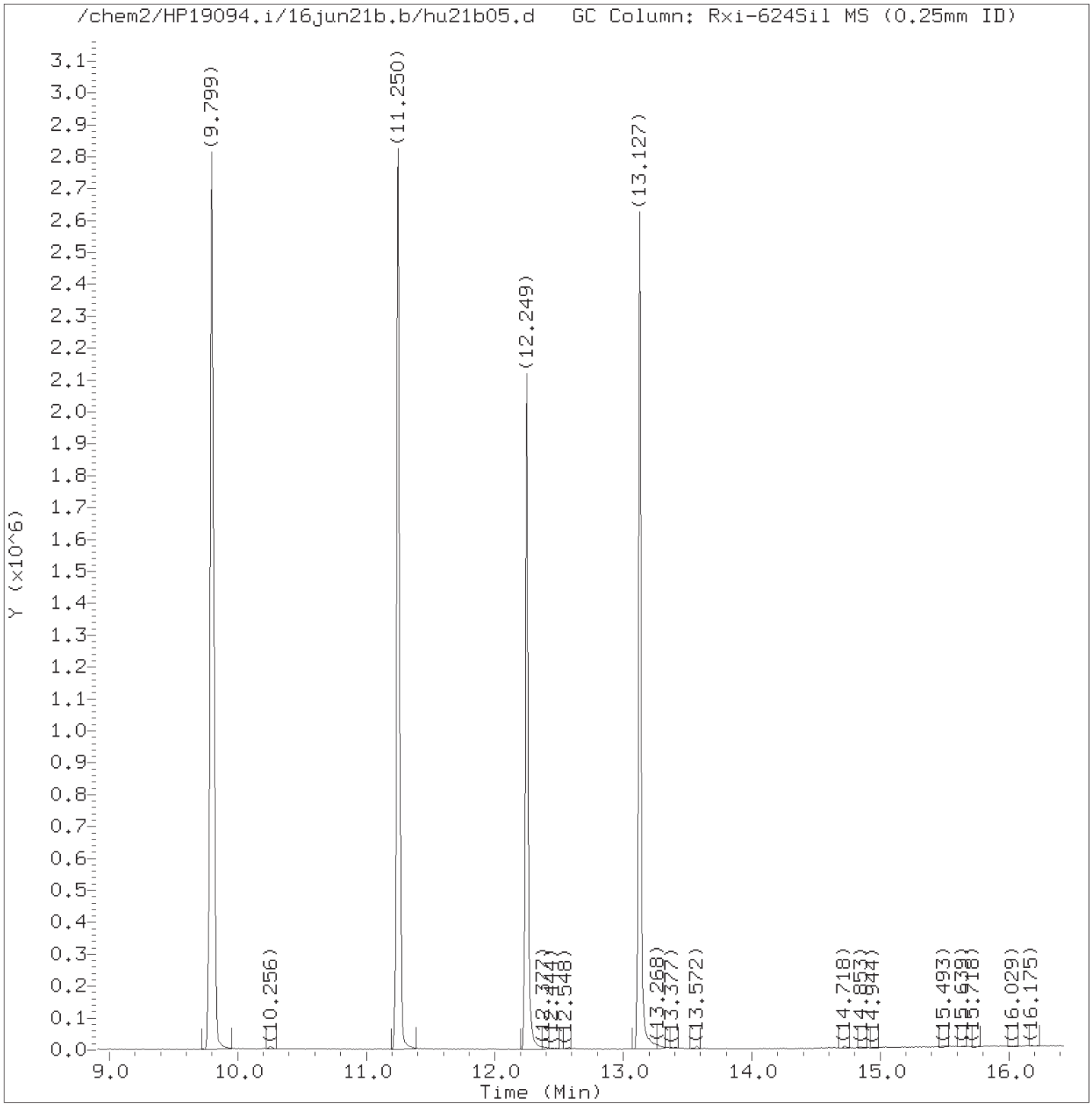
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21b05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:18 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:49.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21b05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:18 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:49.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21b05.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 22:18 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.257	65	93368	50.000
50)$Dibromofluoromethane	(2)	6.885	113	524165	10.274
57)$1,2-Dichloroethane-d4	(2)	7.342	102	82630	9.779
63)*Fluorobenzene	(2)	7.787	96	2165033	10.000
82)$Toluene-d8	(3)	9.799	98	2218810	9.435
97)*Chlorobenzene-d5	(3)	11.250	117	1650766	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	692963	9.142
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	708002	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:49.
Target 3.5 esignature user ID: msk07970

R16M9MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8433277MS

Data file: /chem2/HP19094.i/16jun21b.b/hu21s43.d Injection date and time: **21-JUN-2016 23:01**
Data file Sample Info. Line: R16M9MS;8433277MS;1;3;MS;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 21-Jun-2016 23:27 msk07970

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **19827**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.012)	441	65	102470	(-2)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2094452	(-1)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1567262	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	728633	(-15)	10.00	

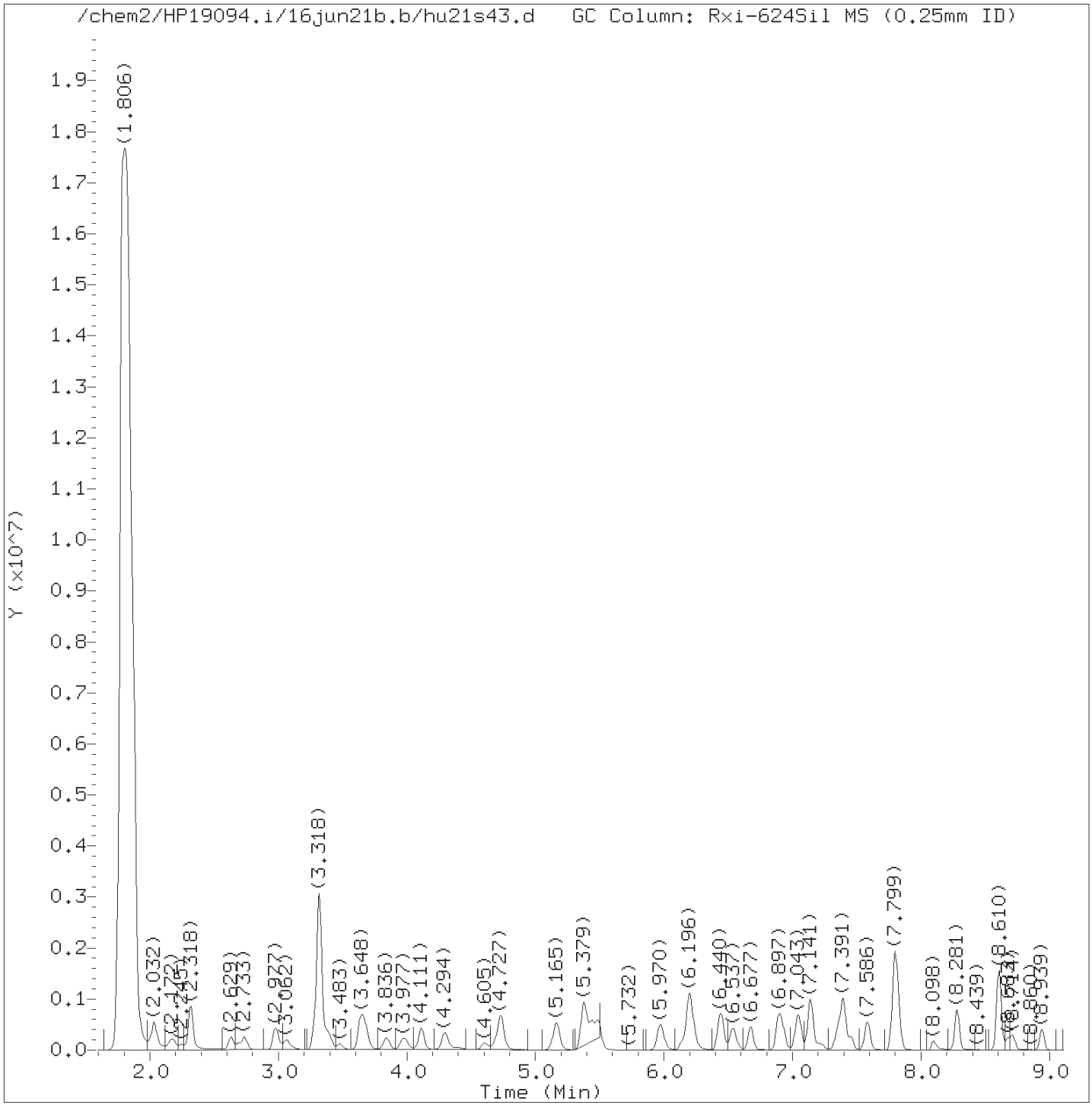
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	492832	9.986	100%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(0.000)	102	87104	10.656	107%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2152273	9.640	96%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.243	(0.000)	95	695542	9.665	97%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.312	(-0.001)	62	372151	5.649	5.65			0.2	1

Total number of targets = 1

Digitally signed by Matthew S. Krause on 06/21/2016 at 23:49. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

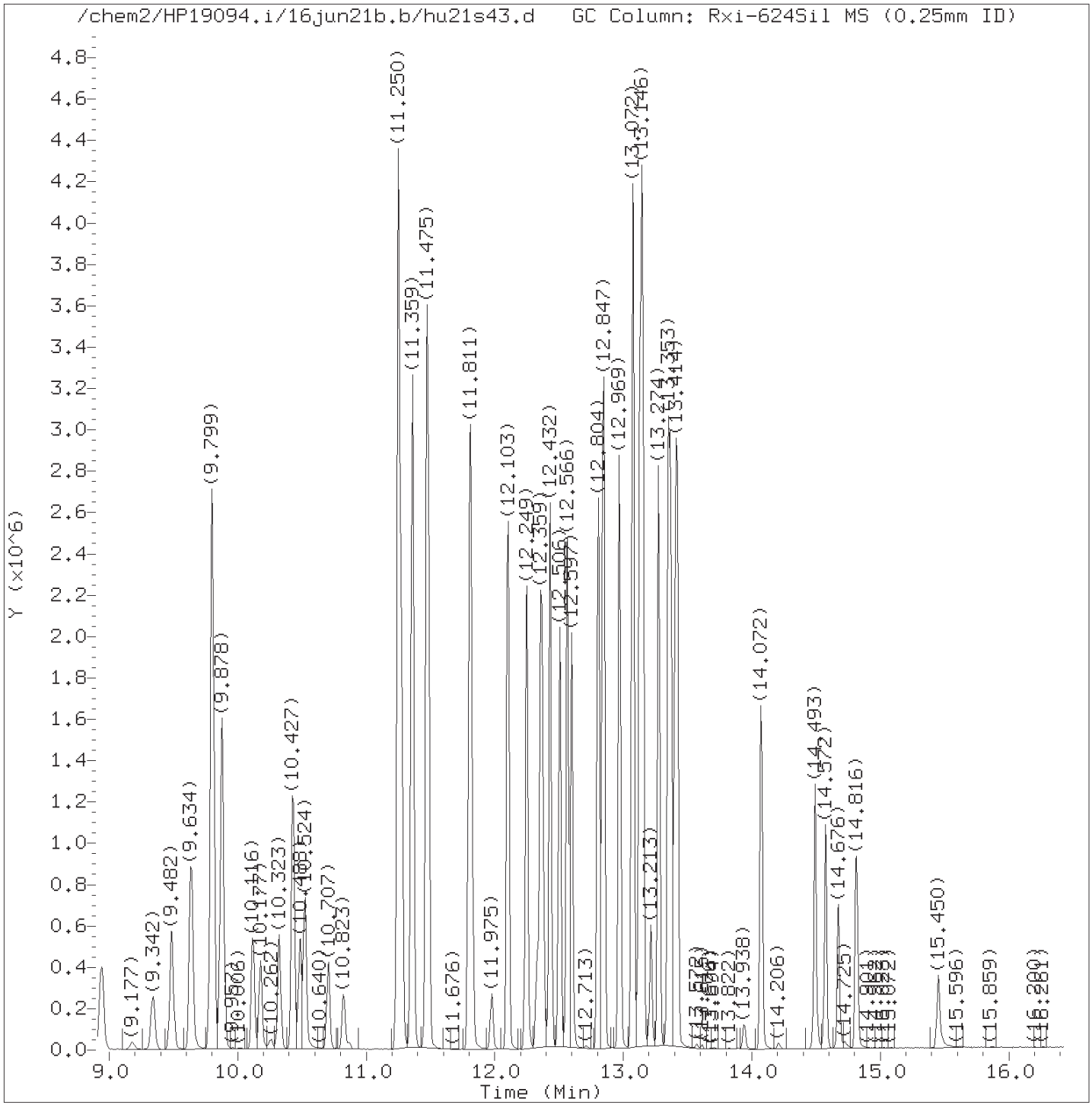
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s43.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:01 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:27 msk07970

Sample Name: R16M9MS Lab Sample ID: 8433277MS

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s43.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:01 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:27 msk07970

Sample Name: R16M9MS Lab Sample ID: 8433277MS

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s43.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:01 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:27 msk07970

Sample Name: R16M9MS Lab Sample ID: 8433277MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.312	62	372151	5.649
26)*t-Butyl Alcohol-d10	(1)	4.275	65	102470	50.000
50)$Dibromofluoromethane	(2)	6.891	113	492832	9.986
57)$1,2-Dichloroethane-d4	(2)	7.354	102	87104	10.656
63)*Fluorobenzene	(2)	7.793	96	2094452	10.000
82)$Toluene-d8	(3)	9.799	98	2152273	9.640
97)*Chlorobenzene-d5	(3)	11.250	117	1567262	10.000
111)$4-Bromofluorobenzene	(3)	12.243	95	695542	9.665
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	728633	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970

R16M9MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

8433278MSD

Data file: /chem2/HP19094.i/16jun21b.b/hu21s44.d Injection date and time: **21-JUN-2016 23:22**
Data file Sample Info. Line: R16M9MSD;8433278MSD;1;3;MSD;RAE66;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 21-Jun-2016 23:48 msk07970

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **19827**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.263	(0.000)	439	65	102730	(-2)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2161159	(2)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1612726	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	747154	(-12)	10.00	

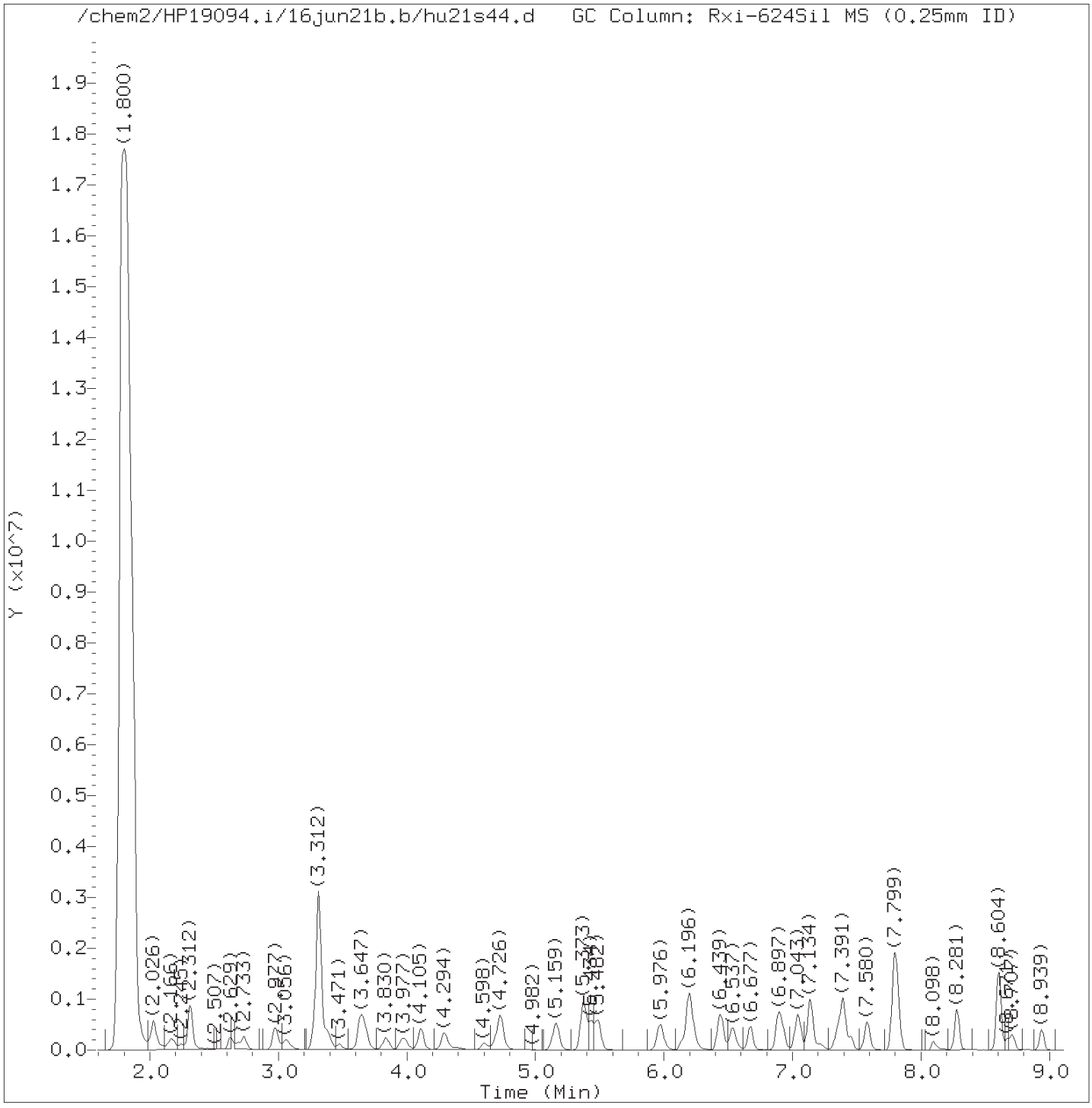
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	515871	10.130	101%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.354	(0.000)	102	84530	10.021	100%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2232848	9.719	97%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	708899	9.573	96%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.312	(-0.001)	62	375785	5.528	5.53			0.2	1

Total number of targets = 1

Digitally signed by Matthew S. Krause on 06/21/2016 at 23:49. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 12:04. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

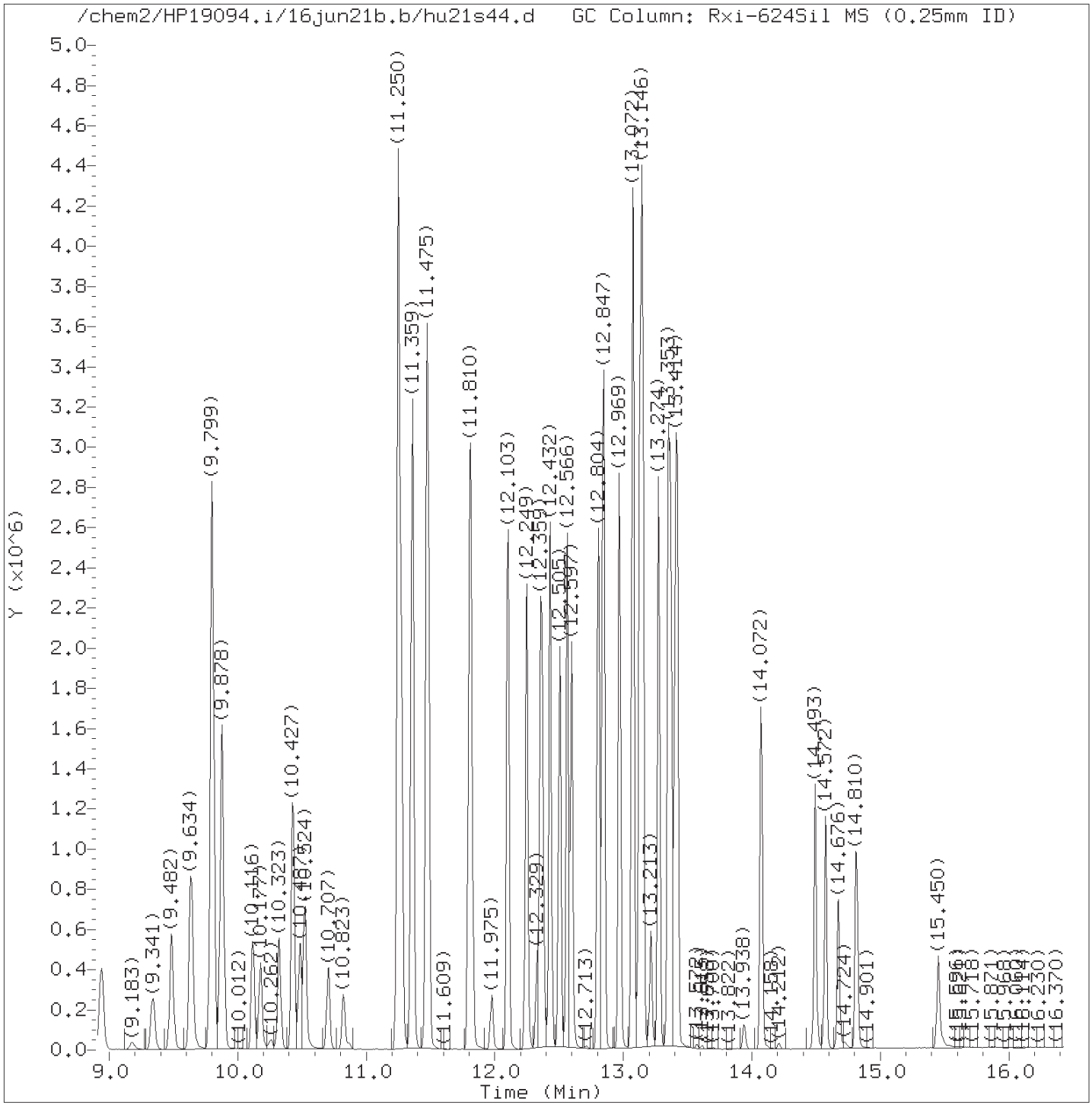
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s44.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:22 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:48 msk07970

Sample Name: R16M9MSD Lab Sample ID: 8433278MSD

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s44.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:22 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:48 msk07970

Sample Name: R16M9MSD Lab Sample ID: 8433278MSD

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s44.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 23:22 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: 19827
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 23:48 msk07970

Sample Name: R16M9MSD Lab Sample ID: 8433278MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.312	62	375785	5.528
26)*t-Butyl Alcohol-d10	(1)	4.263	65	102730	50.000
50)$Dibromofluoromethane	(2)	6.891	113	515871	10.130
57)$1,2-Dichloroethane-d4	(2)	7.354	102	84530	10.021
63)*Fluorobenzene	(2)	7.793	96	2161159	10.000
82)$Toluene-d8	(3)	9.799	98	2232848	9.719
97)*Chlorobenzene-d5	(3)	11.250	117	1612726	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	708899	9.573
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	747154	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 23:49.
Target 3.5 esignature user ID: msk07970

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSH62

Data file: /chem2/HP19094.i/16jun21b.b/hu21s41.d Injection date and time: **21-JUN-2016 21:17**
Data file Sample Info. Line: LCSH62;LCSH62;1;3;LCS;;DARAAP;;hu21b05; Instrument ID: **HP19094.i** Batch: **H161732AA**
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Blank Data file reference: **/chem2/HP19094.i/16jun21b.b/hu21b05.d**

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: **DRAPER**
Calibration date and time (Last Method Edit): 21-JUN-2016 21:36
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/16jun21b.b/hu21c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.275	(-0.012)	441	65	108258	(3)	50.00	
63) Fluorobenzene	7.793	(0.000)	1018	96	2220800	(5)	10.00	
97) Chlorobenzene-d5	11.250	(0.000)	1585	117	1753541	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.127	(0.000)	1893	152	837654	(-2)	10.00	

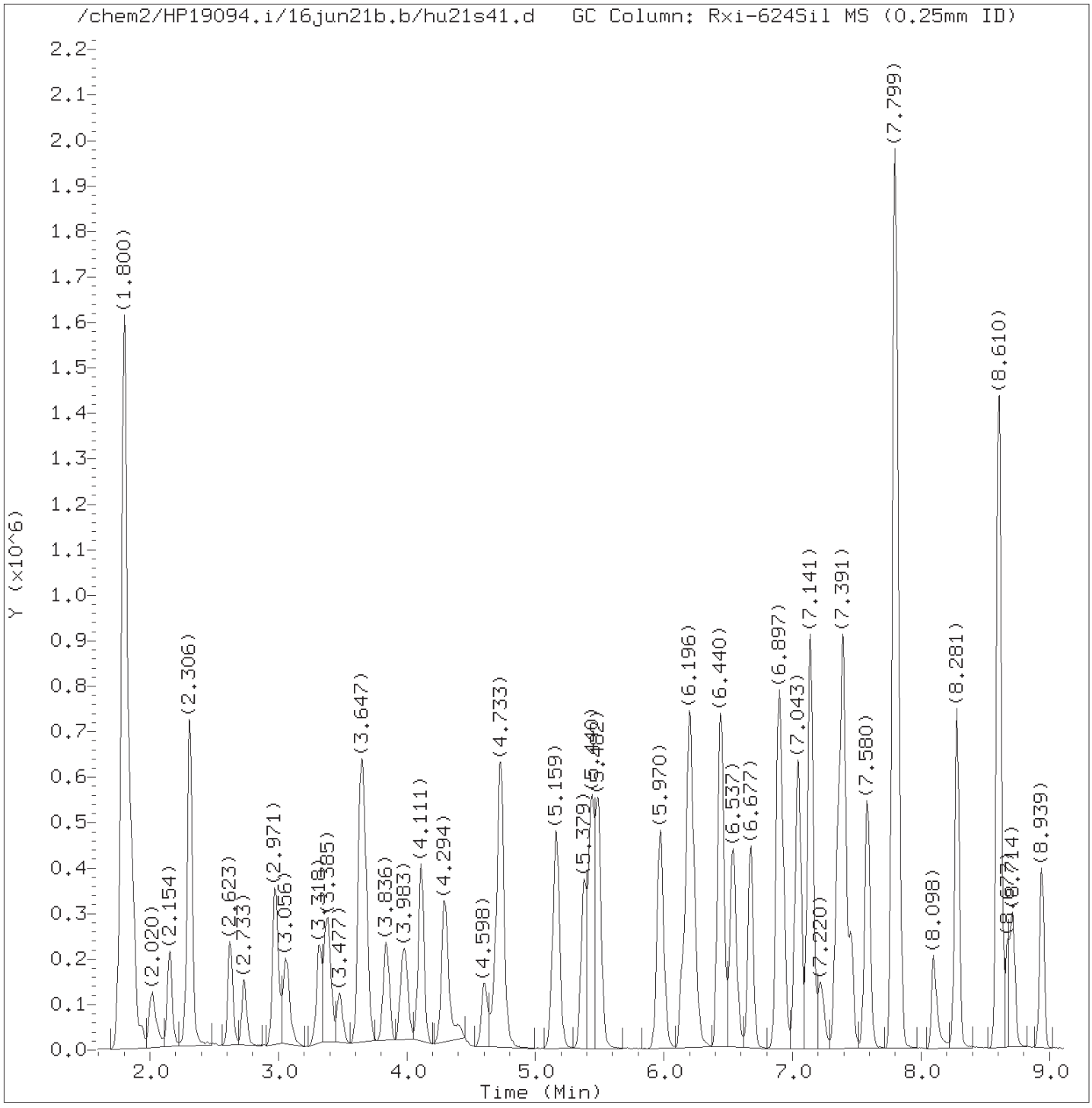
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.891	(0.000)	113	551164	10.532	105%		77 - 114
57) 1,2-Dichloroethane-d4	(2)	7.348	(0.001)	102	87937	10.145	101%		74 - 113
82) Toluene-d8	(3)	9.799	(0.000)	98	2313592	9.262	93%		77 - 110
111) 4-Bromofluorobenzene	(3)	12.249	(-0.001)	95	777669	9.658	97%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
5) Vinyl Chloride	(2)	2.300	(-0.000)	62	329359	4.715	4.72			0.2	1
48) Tetrahydrofuran	(1)	6.555	(0.002)	71	83682	22.824	22.82		J	2	25

Total number of targets = 2

Digitally signed by Matthew S. Krause on 06/21/2016 at 22:50. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Chelsea B. Stong on 06/22/2016 at 11:59. PARALLAX ID: cbs01947



Total Ion Chromatogram (TIC)

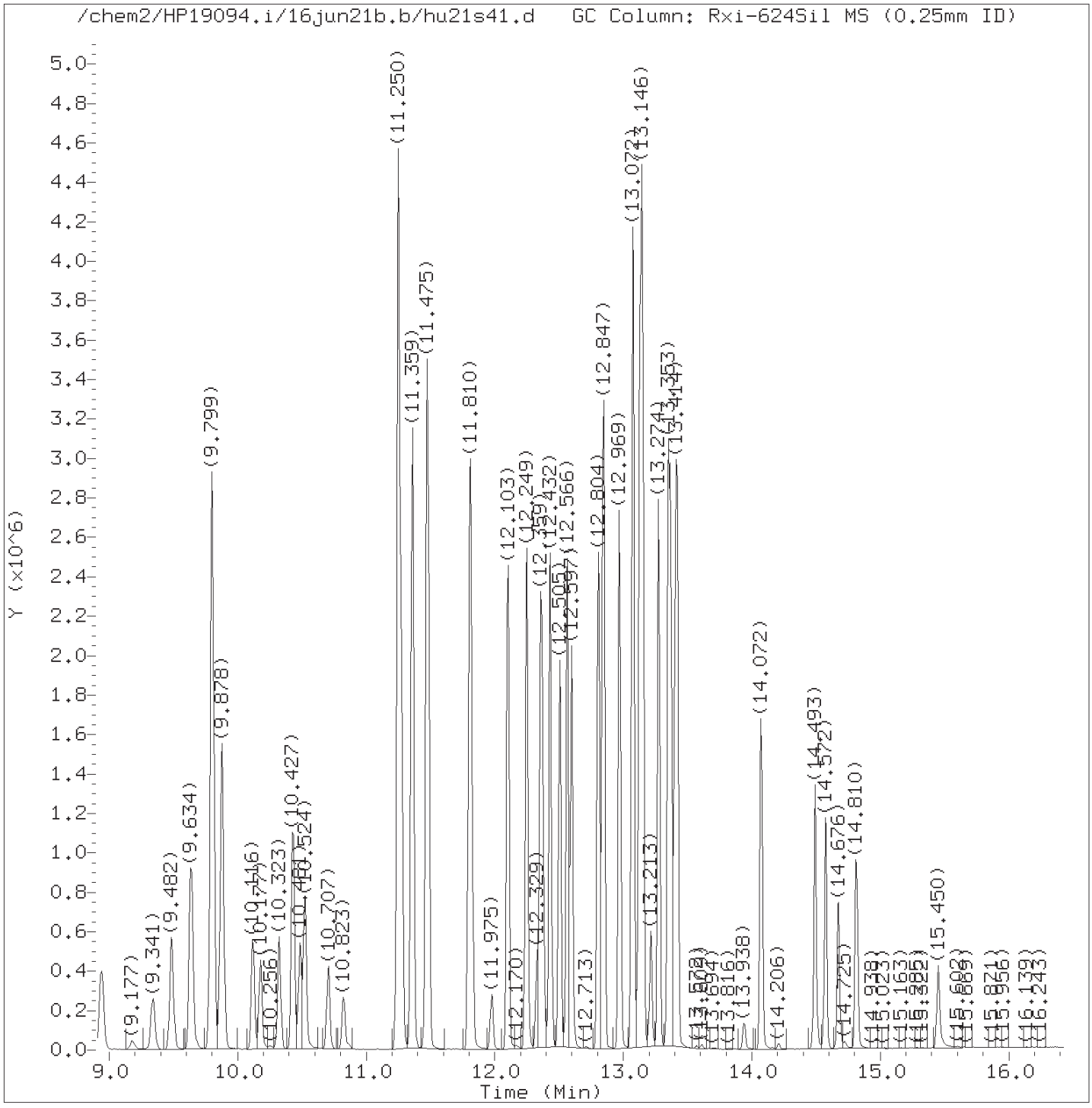
Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s41.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 21:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: LCSH62 Lab Sample ID: LCSH62

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s41.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 21:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: LCSH62 Lab Sample ID: LCSH62

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/16jun21b.b/hu21s41.d Instrument ID: HP19094.i
Injection date and time: 21-JUN-2016 21:17 Analyst ID: MSK07970

Method used: /chem2/HP19094.i/16jun21b.b/m8260c25.m Sublist used: DRAPER
Calibration date and time: 21-JUN-2016 21:36
Date, time and analyst ID of latest file update: 21-Jun-2016 22:46 msk07970

Sample Name: LCSH62 Lab Sample ID: LCSH62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.300	62	329359	4.715
26)*t-Butyl Alcohol-d10	(1)	4.275	65	108258	50.000
48) Tetrahydrofuran	(1)	6.555	71	83682	22.824
50)$Dibromofluoromethane	(2)	6.891	113	551164	10.532
57)$1,2-Dichloroethane-d4	(2)	7.348	102	87937	10.145
63)*Fluorobenzene	(2)	7.793	96	2220800	10.000
82)$Toluene-d8	(3)	9.799	98	2313592	9.262
97)*Chlorobenzene-d5	(3)	11.250	117	1753541	10.000
111)$4-Bromofluorobenzene	(3)	12.249	95	777669	9.658
133)*1,4-Dichlorobenzene-d4	(4)	13.127	152	837654	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 06/21/2016 at 22:50.
Target 3.5 esignature user ID: msk07970

Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8433275	16MW8	X		1	
8433276	16MW9	X		1	Background/Unspiked
8433277	16MW9 MS	X		1	Matrix Spike
8433279	16MW9 DUP	X		1	Duplicate
8433280	16WC1A	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Draper Aden Associates, Inc.
SDG: RAE66

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
Total Cyanide (water)	16173117101A	P17317AB	06/22/2016 21:19:00
		P17317AQ	06/22/2016 21:15:00
		8433275	06/22/2016 21:27:00
		8433276 UNSPK/BKG	06/22/2016 21:28:00
		8433277 MS	06/22/2016 21:29:00
		8433279 DUP	06/22/2016 21:33:00
		8433280	06/22/2016 21:34:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: RAE66
Matrix: LIQUID

Fraction: Instrumental Wet Chemistry

16173117101A / P17317AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Cyanide (water)	AK	06/22/16	N.D.	mg/l	0.0050	0.020

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

UNSPK: 8433276 MS: 8433277 **Parameter**	Batch: **16173117101A** (Sample number(s): 8433275-8433277, 8433279-8433280) **ME**	**Spike Added mg/l**	**Unspiked Conc mg/l**	**MS Conc mg/l**	**MSD Conc mg/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	0.200	N.D.	0.183	NA	91	NA	72-114	NA	NA

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

BKG: 8433276 DUP: 8433279 **Parameter**	Batch: **16173117101A** (Sample number(s): 8433275-8433277, 8433279-8433280) **ME**	**Unspiked Conc mg/l**	**DUP Conc mg/l**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	N.D.	N.D.	0 (1)	20

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAE66
Matrix: LIQUID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: P17317AQ	Batch: **16173117101A** (Sample number(s): 8433275-8433277, 8433279-8433280)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	0.200	0.194	NA	97	NA	90-110	NA	NA

Instrument ID: 09037
Calibration Date: 06/22/2016

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	CC
Total Cyanide	0.3916	0.4511	0.6318	0.9391	1.5486	2.4324	1.0000

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < MDL

Concentration units: mg/L

Batch Numbers: 16173117101A
Run Start Dates: 06/22/2016
Run Names: 1617403C01

	Total Cyanide		
Sample	True	Result	%Rec
ICV	0.15	0.14940	100
ICB	0	ND	NA
CCV2	0.15	0.14940	100
CCB 1	0	ND	NA
CCV2	0.15	0.15000	100
CCB 2	0	ND	NA
CCV2	0.15	0.15220	101
CCB 3	0	ND	NA
CCV2	0.15	0.15420	103
CCB 4	0	ND	NA

* = Out of Specifications

Raw Data

Instrumental Wet Chemistry

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LOQ/MDL Summary
Instrumental Water Quality

SDG: RAE66

Fraction: Instrumental Wet Chemistry

08255: Total Cyanide (water) Analyte Name	Default MDL	Default LOQ	Units
Total Cyanide (water)	0.0050	0.020	mg/l

Instrumental Water Quality Report

Analyte: Total Cyanide
Run Start Date/Time: 6/22/2016 8:36:06PM
Instrument Name: 09037

Calibration Information

Curve Information Location:
Book # 233566
Page # 28

Sample Names	Volts	Detected Result	True Result
S1	0.3916	0.00950	-
S2	0.4511	0.01950	0.01
S3	0.6318	0.04960	0.02
S4	0.9391	0.10070	0.05
S5	1.5486	0.20190	0.1
S6	2.4324	0.34880	0.2

Number of Calibrants: 6

Correlation Coefficient: 0.99996
Y-Intercept: 0.00630
Slope: 6.02110

QC Information

QC Names	Units	True Values	QC Ranges
ICV	mg/L	0.15	0.13425 - 0.165
ICB/CCB	mg/L	0	0 - 0.005
CCV2	mg/L	0.15	0.13425 - 0.165
PB Waters	mg/L	0	0 - 0.005
LCS Waters	mg/L	0.2	0.16 - 0.24
LCS Waters	mg/L	0.2	0.179 - 0.2208

Analyst: [signature] 495 Date: 6.22.16

Verifier: Sandra J Miller Date: —

Sandra J. Miller
Chemist

JUN 23 2016

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
SYNC	1			6/22/2016 8:36:06PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.35320		2.4611	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	2			6/22/2016 8:37:15PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00010		0.3342	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
SBLANK0	3			6/22/2016 8:38:25PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00110	-0.055	0.3283	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S1	4			6/22/2016 8:39:35PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00950	0.475	0.3916	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S2	5			6/22/2016 8:40:45PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01950	0.975	0.4511	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S3	6			6/22/2016 8:41:55PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.04960	2.480	0.6318	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S4	7			6/22/2016 8:43:05PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.10070	5.035	0.9391	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S5	8			6/22/2016 8:44:15PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.20190	10.095	1.5486	1.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S6	9			6/22/2016 8:45:25PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.34880	17.440	2.4324	1.0000	50.0	1

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	10			6/22/2016 8:46:34PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00060		0.3281	1.0000	50.0	1

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
W	11			6/22/2016 8:47:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.055	0.3251	1.0000	50.0	1

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICV	12			6/22/2016 8:48:54PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec
0.14940		1.2350	1.0000	50.0	1	100

IS

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICB	13			6/22/2016 8:50:04PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.055	0.3333	1.0000	50.0	1

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	14	Q	16174102101A	6/22/2016 8:51:14PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.19240	0.192	1.4976	50.0000	50.0	1	96	0.2

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCSD	15	Y	16174102101A	6/22/2016 8:52:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.19340	0.193	1.5034	50.0000	50.0	1	97	0.2

IS

R = 1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	16	B	16174102101A	6/22/2016 8:53:34PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00080	-0.001	0.3335	50.0000	50.0	1

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8430084	17		16174102101A	6/22/2016 8:54:44PM	BOY18	TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00300	0.003	0.3565	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8431473	18		16174102101A	6/22/2016 8:55:54PM	DWV67	TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00690	0.007	0.3793	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8431475	19		16174102101A	6/22/2016 8:57:04PM	DWV67	TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00230	-0.002	0.3239	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8432056	20	U	16174102101A	6/22/2016 8:58:13PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00560	0.006	0.3712	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8432056	21	D	16174102101A	6/22/2016 8:59:23PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD
0.00640	0.006	0.3754	50.0000	50.0	1	13

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8432056	22	R	16174102101A	6/22/2016 9:00:33PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.20190	0.202	1.5522	50.0000	50.0	1	98	0.2

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8432808	23		16174102101A	6/22/2016 9:01:43PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.06720	0.067	0.7409	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	24			6/22/2016 9:02:53PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec
0.14940		1.2354	1.0000	50.0	1	100

IS

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 1	25			6/22/2016 9:04:03PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.055	0.3292	1.0000	50.0	1

Verified ☐

Comments: IS

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433712	26		16174102101A	6/22/2016 9:05:13PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00030	0.000	0.3368	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8434463	27		16174102101A	6/22/2016 9:06:23PM	IP564	TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.001	0.3281	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8434701	28		16174102101A	6/22/2016 9:07:33PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00040	0.000	0.3321	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436689	29		16174102101A	6/22/2016 9:08:42PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00070	-0.001	0.3301	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436849	30		16174102101A	6/22/2016 9:09:52PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00020	0.000	0.3349	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436886	31		16174102101B	6/22/2016 9:11:02PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00070	-0.001	0.3291	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436887	32	U	16174102101B	6/22/2016 9:12:12PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00100	-0.001	0.3272	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436887	33	D	16174102101B	6/22/2016 9:13:22PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD
-0.00040	0.000	0.3306	50.0000	50.0	1	0

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8436887	34	R	16174102101B	6/22/2016 9:14:32PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.15620	0.156	1.2730	50.0000	50.0	1	78	0.2

Verified ☑

Comments: PDS 16178O1C01 15

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	35	Q	16173117101A	6/22/2016 9:15:42PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.19430	0.194	1.5019	50.0000	50.0	1	97	0.2

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	36			6/22/2016 9:16:52PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec
0.15000		1.2351	1.0000	50.0	1	100

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 2	37			6/22/2016 9:18:02PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.055	0.3252	1.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	38	B	16173117101A	6/22/2016 9:19:12PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00070	-0.001	0.3271	50.0000	50.0	1

IS

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8425236	39		16173117101A	6/22/2016 9:20:22PM	BOY16	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00020	0.000	0.3330	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8425237	40		16173117101A	6/22/2016 9:21:31PM	BOY16	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00020	0.000	0.3306	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8425238	41		16173117101A	6/22/2016 9:22:41PM	BOY16	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00010	0.000	0.3312	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8425239	42		16173117101A	6/22/2016 9:23:51PM	BOY16	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
0.00010	0.000	0.3321	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8428926	43		16173117101A	6/22/2016 9:25:01PM	BEE03	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00030	0.000	0.3300	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8431659	44		16173117101A	6/22/2016 9:26:11PM	RAE63	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00020	0.000	0.3307	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433275	45		16173117101A	6/22/2016 9:27:21PM	RAE66	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00110	-0.001	0.3249	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433276	46	U	16173117101A	6/22/2016 9:28:31PM	RAE66	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF
-0.00090	-0.001	0.3263	50.0000	50.0	1

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433277	47	R	16173117101A	6/22/2016 9:29:41PM	RAE66	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK
0.18290	0.183	1.4334	50.0000	50.0	1	91	0.2

Verified ☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	48			6/22/2016 9:30:51PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec
0.15220		1.2486	1.0000	50.0	1	101

IS

Verified ☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 3	49			6/22/2016 9:32:00PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00110	-0.055	0.3256	1.0000	50.0	1	☐

IJ

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433279	50	D	16173117101A	6/22/2016 9:33:10PM	RAE66	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00080	-0.001	0.3263	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
8433280	51		16173117101A	6/22/2016 9:34:20PM	RAE66	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00070	-0.001	0.3263	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	52			6/22/2016 9:35:30PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15420		1.2586	1.0000	50.0	1	103	☐

IJ

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 4	53			6/22/2016 9:36:40PM		TCN

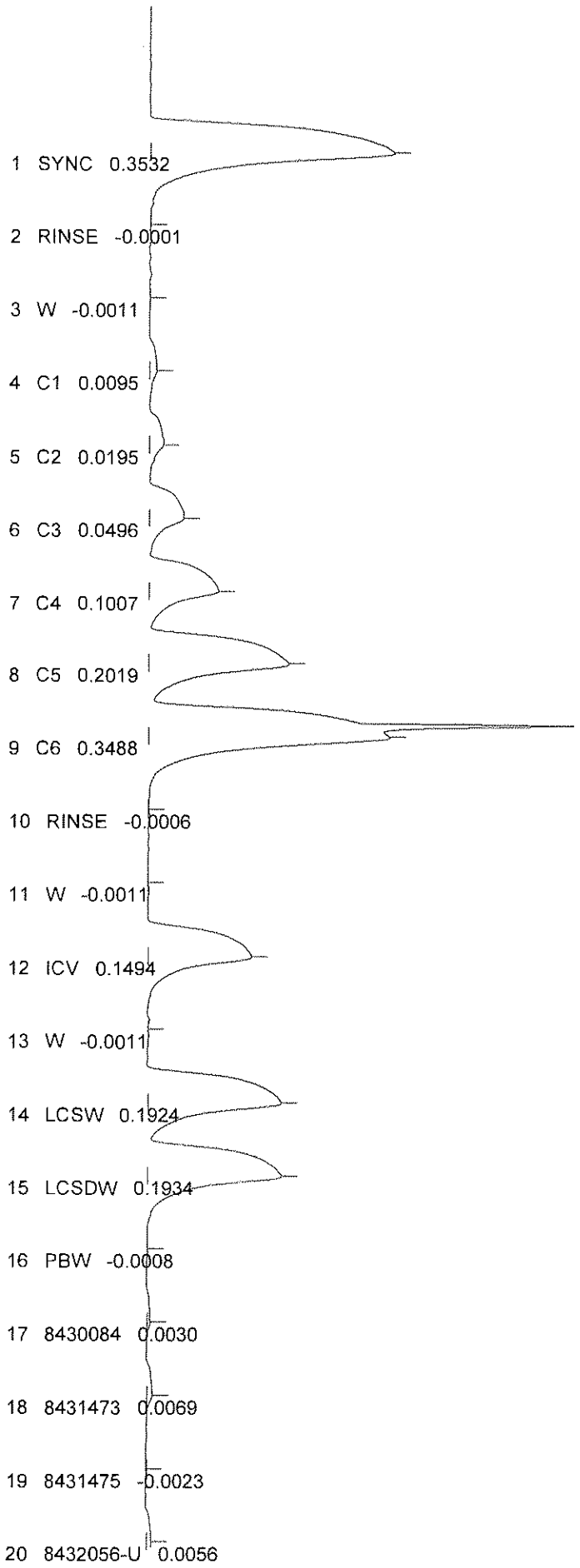
Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00110	-0.055	0.3233	1.0000	50.0	1	☐

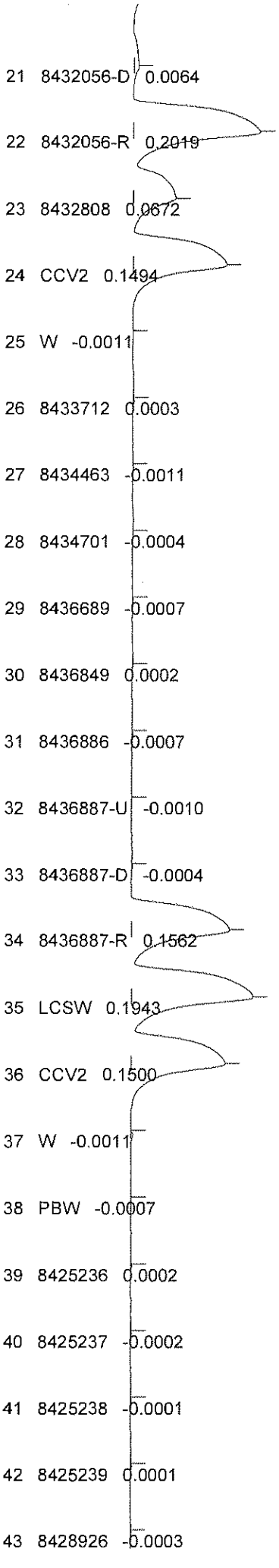
Comments:

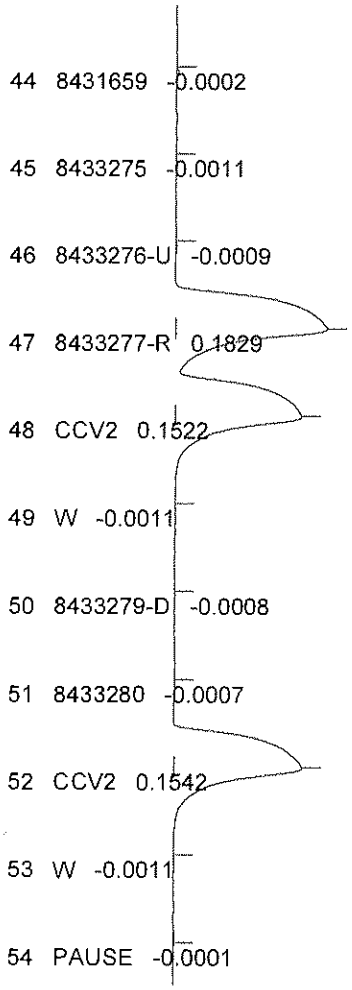
Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PAUSE	54			6/22/2016 9:37:50PM		TCN

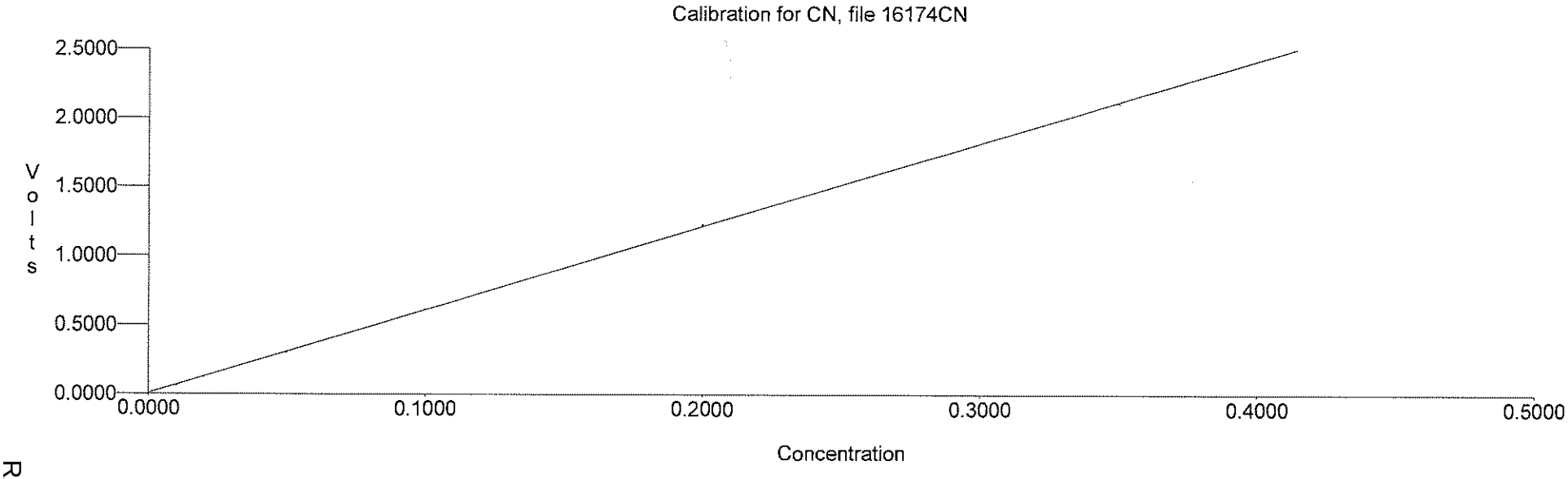
Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00010		0.3289	1.0000	50.0	1	☐

Comments:


1 SYNC 0.3532
2 RINSE -0.0001
3 W -0.0011
4 C1 0.0095
5 C2 0.0195
6 C3 0.0496
7 C4 0.1007
8 C5 0.2019
9 C6 0.3488
10 RINSE -0.0006
11 W -0.0011
12 ICV 0.1494
13 W -0.0011
14 LCSW 0.1924
15 LCSDW 0.1934
16 PBW -0.0008
17 8430084 0.0030
18 8431473 0.0069
19 8431475 -0.0023
20 8432056-U 0.0056


21 8432056-D 0.0064
22 8432056-R 0.2019
23 8432808 0.0672
24 CCV2 0.1494
25 W -0.0011
26 8433712 0.0003
27 8434463 -0.0011
28 8434701 -0.0004
29 8436689 -0.0007
30 8436849 0.0002
31 8436886 -0.0007
32 8436887-U -0.0010
33 8436887-D -0.0004
34 8436887-R 0.1562
35 LCSW 0.1943
36 CCV2 0.1500
37 W -0.0011
38 PBW -0.0007
39 8425236 0.0002
40 8425237 -0.0002
41 8425238 -0.0001
42 8425239 0.0001
43 8428926 -0.0003


44 8431659 -0.0002
45 8433275 -0.0011
46 8433276-U -0.0009
47 8433277-R 0.1829
48 CCV2 0.1522
49 W -0.0011
50 8433279-D -0.0008
51 8433280 -0.0007
52 CCV2 0.1542
53 W -0.0011
54 PAUSE -0.0001



1st Order Y=BX+A
B=6.0211A=0.0063
Correlation=0.999963

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

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Raw Data Logbook
Total Cyanide/Distillations
Analysis #492, 5896, 8256

Start Time: 17:20
Cool Time: 18:55
Finish: 19:20

Batch No. 16173 | 117 | 101 | A

Enter 102 for Analysis 492, 5896
Enter 117 for Analysis 8256

Analysis: 08256 Date: 6-21-16 Analyst: BW/9263

Std. Ref. (Book/Page/Line): 220405 / P6 / 5,6

Bottle Code	Sample Number	Initial Volume (mL)	Initial Weight (g)	Comments/True Values	SDG
	LCSW	50	N.A.	+.5mL 20 mg/L KCN	
	PBW	50			
002A	8425236	50			BOY16
002A	8425237	50			
002A	8425238	50			
002A	8425239	50			
002A	8428926-L	50			BEE03
(7) BW-9263	~~8428926-R~~				
6-21-16	~~8428926-D~~				③6-21-16
002A	8431659	50		9263 R	RAE63
002A	8433275	50			RAE66
002A	8433276-L	50			
002A	8433277-R	50		+.5mL 20mg/L KCN	
002A	8433279-D	50			
002A	8433280	50			

Please Note: Final extraction volume is 50 mL

Verified: SM/347 Date: 6/23/16

ANALYTICAL REPORT

Job Number: 240-66154-1

Job Description: RAAP, Radford VA - HWMU16

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
6/30/2016 9:13 AM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
06/30/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RAAP, Radford VA - HWMU16

Report Number: 240-66154-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/17/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples 16MW8 (240-66154-1), 16MW9 (240-66154-2), 16WC1A (240-66154-3) and TRIP BLANK (240-66154-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 06/27/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample 16MW9 (240-66154-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 06/20/2016 and analyzed on 06/21/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Client Sample ID: 16MW8 — Lab Sample ID: 240-66154-1

No Detections.

Client Sample ID: 16MW9 — Lab Sample ID: 240-66154-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	4.7	J	5.0	1.0	ug/L	1		6020A	Total Recoverable

Client Sample ID: 16WC1A — Lab Sample ID: 240-66154-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	2.8	J	5.0	1.4	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-66154-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16MW8 — Lab Sample ID: 240-66154-1

Date Collected: 06/16/16 11:00 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	25	U	25	2.0	ug/L			06/27/16 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 120*		*06/27/16 17:21*	*1*
Dibromofluoromethane (Surr)	*94*		*79 - 120*		*06/27/16 17:21*	*1*
4-Bromofluorobenzene (Surr)	*78*		*61 - 120*		*06/27/16 17:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*78 - 125*		*06/27/16 17:21*	*1*

Client Sample ID: 16MW9 — Lab Sample ID: 240-66154-2

Date Collected: 06/16/16 13:40 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 120*		*06/27/16 21:29*	*1*
Dibromofluoromethane (Surr)	*111*		*79 - 120*		*06/27/16 21:29*	*1*
4-Bromofluorobenzene (Surr)	*89*		*61 - 120*		*06/27/16 21:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*78 - 125*		*06/27/16 21:29*	*1*

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**4.7**	**J**	5.0	1.0	ug/L		06/20/16 11:14	06/21/16 11:27	1

Client Sample ID: 16WC1A — Lab Sample ID: 240-66154-3

Date Collected: 06/16/16 12:25 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	**2.8**	**J**	5.0	1.4	ug/L			06/27/16 20:44	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 120*		*06/27/16 20:44*	*1*
Dibromofluoromethane (Surr)	*96*		*79 - 120*		*06/27/16 20:44*	*1*
4-Bromofluorobenzene (Surr)	*81*		*61 - 120*		*06/27/16 20:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 125*		*06/27/16 20:44*	*1*

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-66154-4

Date Collected: 06/16/16 00:00 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	5.0	U	5.0	1.4	ug/L			06/27/16 17:43	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 17:43	1

Client Sample ID: TRIP BLANK

Date Collected: 06/16/16 00:00
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66154-4

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*101*		*80 - 120*		*06/27/16 17:43*	*1*
Dibromofluoromethane (Surr)	*97*		*79 - 120*		*06/27/16 17:43*	*1*
4-Bromofluorobenzene (Surr)	*80*		*61 - 120*		*06/27/16 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*78 - 125*		*06/27/16 17:43*	*1*

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units	Method
Tetrahydrofuran	25	2.0	ug/L	8260C
Tetrahydrofuran	5.0	1.4	ug/L	8260C
Vinyl chloride	1.0	0.29	ug/L	8260C

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units	Method
Cobalt	5.0	1.0	ug/L	6020A

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(80-120)	(79-120)	(61-120)	(78-125)
240-66154-1	16MW8	97	94	78	96
240-66154-2	16MW9	108	111	89	114
240-66154-2 MS	16MW9	97	93	77	98
240-66154-2 MSD	16MW9	101	96	77	103
240-66154-3	16WC1A	101	96	81	98
240-66154-4	TRIP BLANK	101	97	80	101
LCS 240-236061/4	Lab Control Sample	99	92	78	98
MB 240-236061/6	Method Blank	96	92	77	94

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-236061/6

Matrix: Water
Analysis Batch: 236061

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	25	U	25	2.0	ug/L			06/27/16 12:26	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*06/27/16 12:26*	*1*
Dibromofluoromethane (Surr)	*92*		*79 - 120*		*06/27/16 12:26*	*1*
4-Bromofluorobenzene (Surr)	*77*		*61 - 120*		*06/27/16 12:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*78 - 125*		*06/27/16 12:26*	*1*

Lab Sample ID: LCS 240-236061/4

Matrix: Water
Analysis Batch: 236061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrahydrofuran	20.0	19.1	J	ug/L		96	61 - 136
Vinyl chloride	10.0	10.4		ug/L		104	52 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*79 - 120*
4-Bromofluorobenzene (Surr)	*78*		*61 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 125*

Lab Sample ID: 240-66154-2 MS

Matrix: Water
Analysis Batch: 236061

Client Sample ID: 16MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	1.0	U	10.0	10.0		ug/L		100	44 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*79 - 120*
4-Bromofluorobenzene (Surr)	*77*		*61 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 125*

Lab Sample ID: 240-66154-2 MSD

Matrix: Water
Analysis Batch: 236061

Client Sample ID: 16MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	1.0	U	10.0	10.5		ug/L		105	44 - 122	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*79 - 120*
4-Bromofluorobenzene (Surr)	*77*		*61 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-66154-2 MSD
Matrix: Water
Analysis Batch: 236061

Client Sample ID: 16MW9
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 125*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-235182/1-A
Matrix: Water
Analysis Batch: 235476

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.0	U	5.0	1.0	ug/L		06/20/16 11:14	06/21/16 11:19	1

Lab Sample ID: LCS 240-235182/2-A
Matrix: Water
Analysis Batch: 235476

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cobalt			1000	964		ug/L		96	80 - 120		

Lab Sample ID: 240-66154-2 MS
Matrix: Water
Analysis Batch: 235476

Client Sample ID: 16MW9
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cobalt	4.7	J	1000	938		ug/L		93	75 - 125		

Lab Sample ID: 240-66154-2 MSD
Matrix: Water
Analysis Batch: 235476

Client Sample ID: 16MW9
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	4.7	J	1000	925		ug/L		92	75 - 125	1	20

QC Association Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

GC/MS VOA

Analysis Batch: 236061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66154-1	16MW8	Total/NA	Water	8260C	
240-66154-2	16MW9	Total/NA	Water	8260C	
240-66154-2 MS	16MW9	Total/NA	Water	8260C	
240-66154-2 MSD	16MW9	Total/NA	Water	8260C	
240-66154-3	16WC1A	Total/NA	Water	8260C	
240-66154-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 240-236061/4	Lab Control Sample	Total/NA	Water	8260C	
MB 240-236061/6	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 235182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66154-2	16MW9	Total Recoverable	Water	3005A	
240-66154-2 MS	16MW9	Total Recoverable	Water	3005A	
240-66154-2 MSD	16MW9	Total Recoverable	Water	3005A	
240-66154-2 SD	16MW9	Total Recoverable	Water	3005A	
LCS 240-235182/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-235182/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 235476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66154-2	16MW9	Total Recoverable	Water	6020A	235182
240-66154-2 MS	16MW9	Total Recoverable	Water	6020A	235182
240-66154-2 MSD	16MW9	Total Recoverable	Water	6020A	235182
240-66154-2 SD	16MW9	Total Recoverable	Water	6020A	235182
CRI 240-235476/48	DL		Water	6020A	
CRI 240-235476/9	DL		Water	6020A	
ICSA 240-235476/10	ICS		Water	6020A	
ICSAB 240-235476/11	ICS		Water	6020A	
LCS 240-235182/2-A	Lab Control Sample	Total Recoverable	Water	6020A	235182
MB 240-235182/1-A	Method Blank	Total Recoverable	Water	6020A	235182

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Client Sample ID: 16MW8
Date Collected: 06/16/16 11:00
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66154-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236061	06/27/16 17:21	LEE	TAL CAN

Client Sample ID: 16MW9
Date Collected: 06/16/16 13:40
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66154-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236061	06/27/16 21:29	LEE	TAL CAN
Total Recoverable	Prep	3005A			235182	06/20/16 11:14	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	235476	06/21/16 11:27	AS1	TAL CAN

Client Sample ID: 16WC1A
Date Collected: 06/16/16 12:25
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66154-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236061	06/27/16 20:44	LEE	TAL CAN

Client Sample ID: TRIP BLANK
Date Collected: 06/16/16 00:00
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66154-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236061	06/27/16 17:43	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Laboratory: TestAmerica Canton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460175	09-14-16

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66154-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-66154-1	16MW8	Water	06/16/16 11:00	06/17/16 10:00
240-66154-2	16MW9	Water	06/16/16 13:40	06/17/16 10:00
240-66154-3	16WC1A	Water	06/16/16 12:25	06/17/16 10:00
240-66154-4	TRIP BLANK	Water	06/16/16 00:00	06/17/16 10:00

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MTICPMS2_00025	05/01/17	Inorganic Ventures, Lot K2-MEB615154			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Na	1000 ug/mL
MTICPMSA_00027	04/21/19	Inorganic Ventures, Lot K2-MEB632079			(Purchased Reagent)		As	100 ug/mL
							Ba	100 ug/mL
							Be	100 ug/mL
							Cd	100 ug/mL
							Cobalt	100 ug/mL
							Cr	100 ug/mL
							Cu	100 ug/mL
							Mn	100 ug/mL
							Ni	100 ug/mL
							Pb	100 ug/mL
							Se	100 ug/mL
							Sr	100 ug/mL
							Tl	25 ug/mL
							V	100 ug/mL
							Zn	100 ug/mL
MTICPMSB_00028	05/01/17	Inorganic Ventures, Lot K2-MEB615153			(Purchased Reagent)		Ag	10 ug/mL
							B	10 ug/mL
							Li	10 ug/mL
							Mo	10 ug/mL
							Sb	10 ug/mL
							Sn	100 ug/mL
							Ti	10 ug/mL
							W	10 ug/mL
MTMSCAL2CCVW_00168	11/01/16	05/24/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	As	50 ug/L
							Cobalt	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		As	5 ug/mL
							Cobalt	5 ug/mL
MTMSCAL3W_00058	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	10 mL	Cobalt	100 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Cobalt	5 ug/mL
MTMSCRI6020AW_00038	08/01/16	04/12/16	DIWATER, Lot DIWATER	500 mL	MS6020ACRIA_00003	0.5 mL	Cobalt	1 ug/L
.MS6020ACRIA_00003	08/01/16	Inorganic Ventures, Lot J2-MEB592019			(Purchased Reagent)		Cobalt	1 ug/mL
MTMSICSABW_00068	12/09/16	06/09/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1100 ug/L
							Na	50000 ug/L
							Ti	1100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MTMSICSABSOLA_00008	1 mL	As	100 ug/L
							B	100 ug/L
							Ba	100 ug/L
							Be	100 ug/L
							Cd	100 ug/L
							Cobalt	100 ug/L
							Cr	100 ug/L
							Cu	100 ug/L
							Li	100 ug/L
							Mn	100 ug/L
							Ni	100 ug/L
							Pb	100 ug/L
							Se	100 ug/L
							Sr	100 ug/L
							Tl	100 ug/L
							V	100 ug/L
							Zn	100 ug/L
					MTMSICSABSOLB_00008	1 mL	Ag	100 ug/L
							Mo	1100 ug/L
							Sb	100 ug/L
							Sn	100 ug/L
							Ti	1100 ug/L
							W	100 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
.MTMSICSABSOLA_00008	04/20/17	HIGH PURITY STANDARDS, Lot 1610907			(Purchased Reagent)		As	20 ug/mL
							B	20 ug/mL
							Ba	20 ug/mL
							Be	20 ug/mL
							Cd	20 ug/mL
							Cobalt	20 ug/mL
							Cr	20 ug/mL
							Cu	20 ug/mL
							Li	20 ug/mL
							Mn	20 ug/mL
							Ni	20 ug/mL
							Pb	20 ug/mL
							Se	20 ug/mL
							Sr	20 ug/mL
							Tl	20 ug/mL
							V	20 ug/mL
							Zn	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MTMSICSABSOLB_00008	04/20/17	HIGH PURITY STANDARDS, Lot 1610908			(Purchased Reagent)		Ag	20 ug/mL
							Mo	20 ug/mL
							Sb	20 ug/mL
							Sn	20 ug/mL
							Ti	20 ug/mL
							W	20 ug/mL
MTMSICSAW_00069	11/10/16	05/10/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1000 ug/L
							Na	50000 ug/L
							Ti	1000 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
MTMSICVW_00068	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSICVA_00010	5 mL	As	40 ug/L
							Cobalt	40 ug/L
.MTMSICVA_00010	09/01/17	CPI, Lot 1087406			(Purchased Reagent)		As	4 mg/L
							Cobalt	4 mg/L
MTMSSCAL1_00038	11/01/16	06/09/16	DIWATER, Lot DIWATER	250 mL	MTMSCAL3_00010	0.5 mL	Cobalt	10 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Cobalt	5 ug/mL
MTTMHCL_00114	06/14/18	Fisher, Lot 4115120			(Purchased Reagent)		Hydrogen Chloride	100 %
MTTMHNO3_00089	06/07/18	Macron/Avantor, Lot 0000138698			(Purchased Reagent)		Nitric acid	100 %
VM50IS_00055	10/03/16	04/05/16	MEOH, Lot 118655	100 mL	vm30241_00004	2 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00004	04/30/20	restek, Lot A0110589			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50ss_stk_00068	06/21/16	12/21/15	MEOH, Lot 0000118655	200 mL	VM567650_00023	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00023	06/30/19	Restek, Lot A0104073			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00069	10/18/16	04/19/16	MEOH, Lot 0000118655	200 mL	VM567650_00023	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00023	06/30/19		Restek, Lot A0104073		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VMAROLISTDW_00150	06/02/16	05/26/16	MEOH, Lot na	3 mL	VMACROLSTD_00036	3 mL	Acrolein	250 ug/mL
.VMACROLSTD_00036	06/06/16	05/02/16	MEOH, Lot 0000118655	20 mL	VM568720_00012	250 uL	Acrolein	250 ug/mL
..VM568720_00012	06/30/16		restek, Lot A0117486		(Purchased Reagent)		Acrolein	20000 ug/mL
VMFASGW_00161	06/28/16	06/21/16	MEOH, Lot NA	2 mL	VMFASG_00045	2 mL	Vinyl chloride	50 ug/mL
.VMFASG_00045	06/30/16	05/31/16	MEOH, Lot 0000118655	50 mL	vm569722S_00001	1 mL	Vinyl chloride	50 ug/mL
..vm569722S_00001	08/31/18		Restek, Lot A0113063		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMFASPW_00155	06/02/16	05/26/16	MEOH, Lot n/a	2 mL	VMRFASP_00029	2 mL	Tetrahydrofuran	100 ug/mL
.VMRFASP_00029	06/02/16	05/02/16	MEOH, Lot 0000118655	50 mL	VM569720S_00001	1 mL	Tetrahydrofuran	100 ug/mL
..VM569720S_00001	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL
VMFASPW_00160	06/28/16	06/21/16	MEOH, Lot n/a	2 mL	VMRFASP_00030	2 mL	Tetrahydrofuran	100 ug/mL
.VMRFASP_00030	06/30/16	05/31/16	MEOH, Lot +173000000127999JM	100 mL	VM569720S_00001	2 mL	Tetrahydrofuran	100 ug/mL
..VM569720S_00001	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL
VMRGAS_00154	06/01/16	05/25/16	MEOH, Lot 0000127999	10 mL	vm569722_00004	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00004	04/30/18		Restek, Lot A0110070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00158	06/27/16	06/20/16	MEOH, Lot 0000127999	10 mL	vm569722_00006	0.2 mL	Vinyl chloride	50 ug/mL
.vm569722_00006	10/31/18		Restek, Lot A0115012		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMRPRIMW_00186	05/30/16	05/23/16	MEOH, Lot NA	1 mL	VMRPRIM_00015	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	250 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
							2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
.VMRPRIM_00015	06/30/16	01/30/16	MEOH, Lot 0000118655	50 mL	VM569720_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	250 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					VM569721_00001	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00001	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00004	0.5 mL	Vinyl acetate	50 ug/mL
..VM569720_00001	01/31/17		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..VM569721_00001	04/30/18		Restek, Lot A0110400		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00001	01/31/18		restek, Lot A0108172		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00004	06/30/16		Restek, Lot A0115764		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VMRPRIMW_00191	06/28/16	06/21/16	MEOH, Lot NA	1 mL	VMRPRIM_00017	1 mL	Tetrahydrofuran	100 ug/mL
.VMRPRIM_00017	06/30/16	05/31/16	MEOH, Lot +173000000127999JM	50 mL	VM569720_00001	1 mL	Tetrahydrofuran	100 ug/mL
..VM569720_00001	01/31/17		Restek, Lot A0108166		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL

Reagent

MS6020ACRIA_00003

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-6020A-CRI-A-REV1
Lot Number:	J2-MEB592019
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea:
	Ca, K, Mg,
	Na,
	100 µg/mL ea:
	Fe,
	50 µg/mL ea:
	Al,
	20 µg/mL ea:
	B, Zn,
	10 µg/mL ea:
	Sr,
	5 µg/mL ea:
	As, Ba, Mn,
	Se, V,
	2 µg/mL ea:
	Cr3, Cu, Ni,
	1 µg/mL ea:
	Be, Cd, Co,
	Pb, Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	50.03 ± 0.28 µg/mL	Arsenic, As	5.000 ± 0.033 µg/mL
Barium, Ba	4.997 ± 0.029 µg/mL	Beryllium, Be	1.000 ± 0.006 µg/mL
Boron, B	20.00 ± 0.14 µg/mL	Cadmium, Cd	1.001 ± 0.007 µg/mL
Calcium, Ca	1 000 ± 5 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	1.000 ± 0.006 µg/mL	Copper, Cu	1.999 ± 0.010 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	1.000 ± 0.006 µg/mL
Magnesium, Mg	1 001 ± 5 µg/mL	Manganese, Mn	5.006 ± 0.029 µg/mL
Nickel, Ni	2.001 ± 0.014 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	5.003 ± 0.029 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	1.000 ± 0.008 µg/mL
Vanadium, V	5.005 ± 0.033 µg/mL	Zinc, Zn	20.00 ± 0.13 µg/mL

Certified Density: 1.039 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = $2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.

$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing,- Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

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10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 14, 2015

11.2 Expiration Date

EXPIRES
1 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMS2_00025

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CERTIFICATE OF ANALYSIS

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Recd 4-25-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-84
Lot Number:	K2-MEB615154
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Aluminum, Calcium, Iron, Potassium, Magnesium, Sodium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Magnesium, Mg	1 000 ± 4 µg/mL
Potassium, K	1 000 ± 4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	051220
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES 1 M 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMSA_00027

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CERTIFICATE OF ANALYSIS

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Rec'd 4-25-16 ku

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1A
Lot Number:	K2-MEB632079
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

Arsenic, Barium, Beryllium,
Cadmium, Cobalt, Chromium+3,
Copper, Manganese, Nickel,
Lead, Selenium, Strontium,
Vanadium, Zinc,
25 µg/mL ea:
Thallium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	100.0 ± 0.9 µg/mL	Barium, Ba	100.0 ± 0.4 µg/mL
Beryllium, Be	100.0 ± 0.5 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Chromium+3, Cr3	100.0 ± 0.4 µg/mL	Cobalt, Co	100.0 ± 0.4 µg/mL
Copper, Cu	100.1 ± 0.4 µg/mL	Lead, Pb	100.0 ± 0.4 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Selentum, Se	100.0 ± 0.6 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	25.00 ± 0.18 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Certified Density: 1.029 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	ICP Assay	3112a	030730
Cr3	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax. 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 21, 2019

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
QC Supervisor

Michael 2 Booth

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

MTICPMSB_00028

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CERTIFICATE OF ANALYSIS

Rec'd 4-25-16 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1BREV2
Lot Number:	K2-MEB615153
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 µg/mL ea: Tin, 10 µg/mL ea: Silver, Boron, Lithium, Molybdenum, Antimony, Titanium, Tungsten

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	10.01 ± 0.06 µg/mL
Lithium, Li	10.01 ± 0.04 µg/mL	Molybdenum, Mo	10.00 ± 0.04 µg/mL
Silver, Ag	10.00 ± 0.06 µg/mL	Tin, Sn	100.0 ± 0.4 µg/mL
Titanium, Ti	9.99 ± 0.06 µg/mL	Tungsten, W	10.00 ± 0.06 µg/mL

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
B	ICP Assay	3107	110830
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/4}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM by one method

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES 1 NOV 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSCAL3_00010

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CERTIFICATE OF ANALYSIS

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Rec'd 10-19-15 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLPA-CAL-SPECA-REV
Lot Number:	J2-MEB596139
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:
	Ca, K, Mg,
	Na,
	1 250 µg/mL ea:
	Fe,
	25 µg/mL ea:
	Al, Mn,
	5 µg/mL ea:
	Ag, As, Ba,
	Be, Cd, Co,
	Cr3, Cu, Ni,
	Pb, Se, Sr,
	Tl, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.14 µg/mL	Arsenic, As	5.001 ± 0.032 µg/mL
Barium, Ba	5.000 ± 0.032 µg/mL	Beryllium, Be	5.000 ± 0.029 µg/mL
Cadmium, Cd	4.999 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 12 µg/mL
Chromium+3, Cr3	5.000 ± 0.029 µg/mL	Cobalt, Co	5.001 ± 0.025 µg/mL
Copper, Cu	5.000 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	5.000 ± 0.026 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	25.00 ± 0.12 µg/mL	Nickel, Ni	5.001 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	5.001 ± 0.029 µg/mL
Silver, Ag	5.001 ± 0.036 µg/mL	Sodium, Na	2 501 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.001 ± 0.040 µg/mL
Vanadium, V	5.000 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.032 µg/mL

Certified Density: 1.049 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 13, 2015

11.2 Expiration Date

EXPIRES
1 NOV 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSA_00011

INORGANIC VENTURES™

CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	J2-MEB533111
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cl-, 2 000 µg/mL ea: C, 1 000 µg/mL ea: Al, Ca, Fe, K, Mg, Na, P, S, 20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 5 µg/mL	Calcium, Ca	1 001 ± 6 µg/mL
Carbon, C	2 002 ± 10 µg/mL	Chloride, Chloride	10 010.0 ± 50.0 µg/mL
Iron, Fe	1 001 ± 5 µg/mL	Magnesium, Mg	1 001 ± 6 µg/mL
Molybdenum, Mo	20.02 ± 0.09 µg/mL	Phosphorus, P	1 001 ± 8 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 7 µg/mL	Titanium, Ti	20.03 ± 0.13 µg/mL

Certified Density: 1.033 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.
[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	M	Eu	<	0.000102	s	Na	<		M	Se	<	0.001333	M	Zn		0.005643
s	Al	<		s	Fe	<		M	Nb	<	0.000102	n	Si	<		M	Zr	<	0.000410
M	As	<	0.015390	M	Ga	<	0.000102	M	Nd	<	0.000205	M	Sm	<	0.000102				
M	Au	<	0.001026	M	Gd	<	0.000102	M	Ni	<	0.002770	M	Sn	<	0.000615				
O	B	<	0.010330	O	Ge	<	0.020660	M	Os	<	0.000102	O	Sr		0.003543				
M	Ba	<	0.001846	M	Hf	<	0.000102	s	P	<		M	Ta	<	0.000102				
O	Be	<	0.000103	M	Hg	<	0.000307	M	Pb		0.003796	M	Tb	<	0.000102				
M	Bi	<	0.000205	M	Ho	<	0.000102	M	Pd	<	0.000102	M	Te	<	0.000205				
s	Ca	<		M	In	<	0.000102	M	Pr	<	0.000102	M	Th	<	0.000102				
O	Cd		0.001549	M	Ir	<	0.000102	M	Pt	<	0.000102	s	Ti	<					
M	Ce	<	0.000410	s	K	<		M	Rb		0.012927	M	Tl	<	0.000102				
M	Co	<	0.004309	M	La	<	0.000205	M	Re	<	0.000102	M	Tm	<	0.000102				
M	Cr		0.012619	O	Li		0.000999	M	Rh	<	0.000102	M	U	<	0.000102				
M	Cs	<	0.000205	M	Lu	<	0.000102	M	Ru	<	0.000102	M	V	<	0.001436				
O	Cu	<	0.015495	s	Mg	<		s	S	<		M	W		0.001128				
M	Dy	<	0.000102	O	Mn		0.001189	M	Sb	<	0.000615	M	Y	<	0.000102				
M	Er	<	0.000102	s	Mo	<		M	Sc	<	0.000102	M	Yb	<	0.000102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

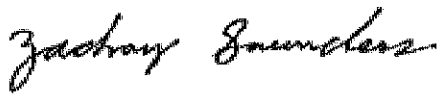
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSABSOLA_00008

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Rec'd 4-25-16 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-139 Solution A**
Lot Number:	**1610907**
Matrix:	2% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)			SRM ID	SRM Lot#
Cd	20.0	±	0.1	3108	130116
As	20.0	±	0.1	3103a	100818
Ba	20.0	±	0.1	*	
Be	20.0	±	0.2	3105a	090514
B	20.0	±	0.2	3107	110830
Cr	20.0	±	0.1	3112a	030730
Ni	20.0	±	0.1	3136	120619
Co	20.0	±	0.1	3113	000630
Cu	20.0	±	0.1	3114	121207
Mn	20.0	±	0.3	3132	050429
Se	20.0	±	0.2	3149	100901
Sr	20.0	±	0.1	3153a	990906
Tl	20.0	±	0.1	3158	993012
Zn	20.0	±	0.1	3168a	120629
V	20.0	±	0.2	3165	992706
Pb	20.0	±	0.2	3128	101026
Li	20.0	±	0.2	3129a	100714

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	April 18, 2016
Shipped Date:	**April 20, 2016**
Expiration Date:	**April 20, 2017**
Certificate Issue Date:	April 19, 2016

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base aud derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

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Rec'd 4-25-16 KH

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1438

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-139 Solution B**
Lot Number:	**1610908**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#
Ag	20.0 ± 0.1	3151	992212
Sb	20.0 ± 0.2	*	
W	20.0 ± 0.3	3163	140606
Mo	20.0 ± 0.2	3134	130418
Ti	20.0 ± 0.2	3162a	130925
Sn	20.0 ± 0.2	3161a	140917

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	April 18, 2016
Shipped Date:	**April 20, 2016**
Expiration Date:	**April 20, 2017**
Certificate Issue Date:	April 19, 2016

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenanee of the base and derived units of International System of Units (SI) with traceeability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetrie vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Speetrometric Standard Solutions. If a SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

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The Netherlands

CPI INTERNATIONAL

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Rec'd 3-7-16 KL

Additional Information:

Date Received: _____

Container: 16 oz (500 mL) Narrow Mouth, LDPE clean

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.
The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Aluminum	Al	7429-90-5	3101	060502	7001.46.8P	99.9995	20	0.06
Manganese	Mn	7439-96-5	3132	050429	7017.46.5P	99.95	20	0.06
Silver	Ag	7440-22-4	3151	992212	7000.29.1P	99.999	4	0.01
Arsenic	As	7440-38-2	3103	010713	7002.46.5P	99.9999	4	0.01
Boron	B	7440-42-8	3107	070514	7003.46.4P	99.999	4	0.01
Barium	Ba	7440-39-3	3104	070222	7004.29.3P	99.997	4	0.01
Beryllium	Be	7440-41-7	3105	892707	7005.46.5P	99.999	4	0.01
Cadmium	Cd	7440-43-9	3108	060531	7007.46.3P	99.9999	4	0.01
Cobalt	Co	7440-48-4	3113	000630	7008.409.1P	99.999	4	0.01
Chromium	Cr	7440-47-3	3112	030730	7009.46.2P	99.998	4	0.01
Copper	Cu	7440-50-8	3114	011017	7011.46.5P	99.9995	4	0.01
Lithium	Li	7439-93-2	3129	000505	7015.46.5P	99.999	4	0.01
Molybdenum	Mo	7439-98-7	3134	891307	7018.29.3P	99.999	4	0.01
Nickel	Ni	7440-02-0	3136	000612	7021.46.9P	99.995	4	0.01
Lead	Pb	7439-92-1	3128	030721	7023.29.3P	99.999	4	0.01
Antimony	Sb	7440-36-0	3102	061229	7026.46.3P	99.999	4	0.01
Selenium	Se	7782-49-2	3149	992106	7027.46.4P	99.999	4	0.01
Tin	Sn	7440-31-5	3161	070330	7029.46.4P	99.999	4	0.01
Strontium	Sr	7440-24-6	3153	990906	7030.409.1P	99.999	4	0.01
Titanium	Ti	7440-32-6	3162	060808	7033.38.2P	99.995	4	0.01
Thallium	Tl	7440-28-0	3158	993012	7034.29.4P	99.99	4	0.01
Vanadium	V	7440-62-2	3165	992706	7036.46.6P	99.995	4	0.01
Tungsten	W	7440-33-7	3163	080331	7072.46.2P	99.99	4	0.01
Zinc	Zn	7440-66-6	3168	080123	7037.46.5P	99.9995	4	0.01
Calcium	Ca	7440-70-2	3109	050825	7006.29.3P	99.999	2000	5.66
Potassium	K	7440-09-7	3141	051220	7013.409.1P	99.999	2000	5.66
Magnesium	Mg	7439-95-4	3131	050302	7016.46.5P	99.99	2000	5.66
Sodium	Na	7440-23-5	3152	010728	7020.46.7P	99.999	2000	5.66
Iron	Fe	7439-89-6	3126	051031	7012.409.1P	99.99	1000	2.83

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Intended Uses:

This Certified Reference material, CRM, is intended for use as a calibration standard or a quality control standard for Inorganic Spectrometry Equipment such as ICP-OES, ICP-MS, AA, and XRF, It may aslo be used for various USEPA and ASTM methods.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with NIST traceable weights (NIST Test Number 822/264157-00). Only calibrated Class A volumetric glassware was used to prepare this standard. Sub-boiled distilled acid and 18 megaohm deionized water were used to stabilize the product. All raw materials were checked for stoichiometry and purity prior to use. This standard has been spectrometrically certified by an independent source, which is directly traceable to NIST.

Packaging and Storage:

The Solution should be kept trightly capped and stored under normal laboratory conditions. Pre-cleaned polyethlene bottles are used to package this material. Special storage information: Ambient

Glassware Calibration:

Only Class A glassware is used in the manufacture and quality control of Standards. All Glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used perform daily checks on balances calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to the National Institute of Standards and Technology (NIST). Balances are checked daily in accordance to in house procedure O2-LB-004. Balances are calibrated annually by an ISO 17025 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-10 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC Guide 17025:2005 and ISO Guide 34:2009. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous information:

Refer to MSDS

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:
$U=ku_c$ U=Expanded Uncertainty, k= the coverage factor at the 95% confidence level, k=2, u_c = the combined uncertainty
$u_c=\sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Mark Filla

Manufacture Date: 2/29/2016

Certified By:

Zachary Spinelli

Certified Date:2/29/2016

Released By:

HuiChen Stavros, Ph.D.

Original Issue Date: 2/29/2016

Reagent

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vm30241_00004

VM30241_00004 Rec: 7/9/15

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ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0110589

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Fluorobenzene		2,503.8 µg/mL	+/- 14.5573	µg/mL	Gravimetric
	CAS # 462-06-6	(Lot 1380033)		+/- 28.2339	µg/mL	Unstressed
	Purity 99%			+/- 32.4891	µg/mL	Stressed
2	Chlorobenzene-d5		2,504.6 µg/mL	+/- 14.5620	µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-22736)		+/- 28.2430	µg/mL	Unstressed
	Purity 99%			+/- 32.4995	µg/mL	Stressed
3	1,4-Dichlorobenzene-d4		2,504.6 µg/mL	+/- 14.5620	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)		+/- 28.2430	µg/mL	Unstressed
	Purity 99%			+/- 32.4995	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM567650_00023

VM567650_00023 Rec: 11/7/14

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0104073

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 022012)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
2	1,2-Dichloroethane-d4		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot 12K-027)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
3	Toluene-d8		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot 13I-050)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 01127COV)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM568720_00012

(4) Rec: 4/13/16

VM568720_0001/2

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0117486

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750 µg/mL, Water, 1 mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2016 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Acrolein	19,938.0 µg/mL	+/- 116.7414	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 160105JLM)		+/- 639.2750	µg/mL	Unstressed
	Purity 99%		+/- 743.0872	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM569720_00001

VM569720-00001 Rec: 9/16/15

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720 **Lot No.:** A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBF3466V) **Purity** 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL +/- 134.1754 µg/mL +/- 134.3233 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00001135) **Purity** 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL +/- 134.2419 µg/mL +/- 134.3899 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL +/- 133.0173 µg/mL +/- 133.1640 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBC6893V) **Purity** 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL +/- 1,330.5704 µg/mL +/- 1,332.0378 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBC7288V) **Purity** 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL +/- 133.5767 µg/mL +/- 133.7240 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9 (Lot SHBD7134V) **Purity** 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL +/- 665.5101 µg/mL +/- 666.2440 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot MKBG5777V) **Purity** 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL +/- 133.6453 µg/mL +/- 133.7914 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBD4974V)	2,514.3	µg/mL	+/- 14.6006 +/- 133.6432 +/- 133.7906	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 98%	(Lot C30Y997)	2,511.7	µg/mL	+/- 14.6035 +/- 133.6693 +/- 133.8167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot 10172706)	25,017.1	µg/mL	+/- 145.4441 +/- 1,331.3554 +/- 1,332.8236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 99%	(Lot MKBG8424V)	2,503.9	µg/mL	+/- 14.5577 +/- 133.2507 +/- 133.3977	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBF0293V)	2,511.9	µg/mL	+/- 14.6043 +/- 133.6764 +/- 133.8239	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,1-dichloroethene CAS # 75-35-4 Purity 99%	(Lot SHBD6170V)	2,521.3	µg/mL	+/- 14.6588 +/- 134.1754 +/- 134.3233	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2-Dichloropropane CAS # 594-20-7 Purity 98%	(Lot BCBH9246V)	2,500.0	µg/mL	+/- 14.5351 +/- 133.0434 +/- 133.1901	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,505.0	µg/mL	+/- 14.5643 +/- 133.3106 +/- 133.4576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBF2852V)	62,553.8	µg/mL	+/- 363.6739 +/- 3,328.9705 +/- 3,332.6417	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot SHBF1193V)	2,504.6	µg/mL	+/- 14.5621 +/- 133.2906 +/- 133.4376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,505.1	µg/mL	+/- 14.5650 +/- 133.3172 +/- 133.4642	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Tetrahydrofuran CAS # 109-99-9 Purity 97%	(Lot SHBF2660V)	5,000.7	µg/mL	+/- 29.0746 +/- 266.1270 +/- 266.4204	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B14Z1114)	2,508.1	µg/mL	+/- 14.5825 +/- 133.4769 +/- 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot SHBD7873V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	1,1-Dichloropropene CAS # 563-58-6 Purity 98%	(Lot PR09161302)	2,502.4	µg/mL	+/- 14.5493 +/- 133.1738 +/- 133.3207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBC1410V)	2,505.3	µg/mL	+/- 14.5657 +/- 133.3239 +/- 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBF2321V)	2,501.4	µg/mL	+/- +/- +/-	14.5432 133.1177 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBC6595V)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBD4617V)	2,509.1	µg/mL	+/- +/- +/-	14.5883 133.5301 133.6774	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBF0943V)	2,504.8	µg/mL	+/- +/- +/-	14.5628 133.2973 133.4443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot 50996APV)	2,502.5	µg/mL	+/- +/- +/-	14.5498 133.1775 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,502.4	µg/mL	+/- +/- +/-	14.5490 133.1709 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane **CAS #** 75-27-4 **Purity** 98%	(Lot MKBL1617V)	2,507.9	µg/mL	+/- +/- +/-	14.5814 133.4672 133.6144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBF2002V)	50,001.4	µg/mL	+/- +/- +/-	290.6971 2,660.9612 2,663.8957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10169264)	2,508.1	µg/mL	+/- +/- +/-	14.5825 133.4769 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 20936)	2,507.0	µg/mL	+/- +/- +/-	14.5759 133.4170 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBF2730V)	2,502.4	µg/mL	+/- +/- +/-	14.5490 133.1709 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot 69796APV)	2,500.9	µg/mL	+/- +/- +/-	14.5403 133.0911 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C363110)	2,502.1	µg/mL	+/- +/- +/-	14.5476 133.1576 133.3044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,507.5	µg/mL	+/- +/- +/-	14.5788 133.4436 133.5908	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,505.3	µg/mL	+/- +/- +/-	14.5657 133.3239 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,506.5	µg/mL	+/- +/- +/-	14.5730 133.3904 133.5375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ1732V)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBH8892V)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetrie Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBB7205V)	2,506.4	µg/mL	+/- 14.5723 +/- 133.3837 +/- 133.5308	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBJ3305V)	2,503.1	µg/mL	+/- 14.5534 +/- 133.2108 +/- 133.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBK3151V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBK4439V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,506.1	µg/mL	+/- 14.5708 +/- 133.3704 +/- 133.5175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.9	µg/mL	+/- 14.5694 +/- 133.3571 +/- 133.5042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot 26896BM)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot K22W009)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

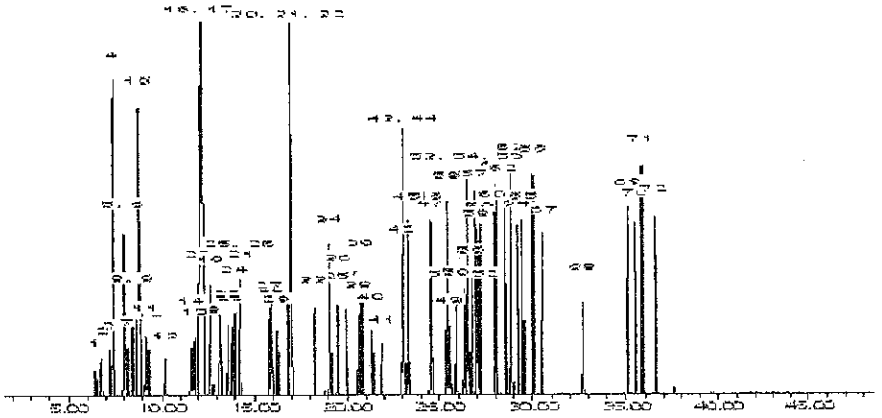
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 07-Jan-2015 **Balance:** 1125113331

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VM569720S_00001

VM5697[illegible] 20s_00001 Rec: 3/30/15

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0108163

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 903000) **Purity** 99%	2,502.8 µg/mL	+/- 14.5512 µg/mL +/- 133.1908 µg/mL +/- 133.3377 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,000.5 µg/mL	+/- 145.3477 µg/mL +/- 1,330.4725 µg/mL +/- 1,331.9397 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot A13Y016) **Purity** 97%	2,500.5 µg/mL	+/- 14.5383 µg/mL +/- 133.0732 µg/mL +/- 133.2199 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	12,500.6 µg/mL	+/- 72.6759 µg/mL +/- 665.2553 µg/mL +/- 665.9889 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot 5MNOA-DQ) **Purity** 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL +/- 133.1110 µg/mL +/- 133.2578 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGI702)			+/-	133.1177	µg/mL	Unstressed
	Purity 99%				+/-	133.2645	µg/mL	Stressed
9	Carbon disulfide		2,501.2	µg/mL	+/-	14.5422	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	133.1086	µg/mL	Unstressed
	Purity 98%				+/-	133.2554	µg/mL	Stressed
10	Acrylonitrile		25,002.1	µg/mL	+/-	145.3569	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot CCFKL)			+/-	1,330.5571	µg/mL	Unstressed
	Purity 99%				+/-	1,332.0244	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
12	n-Hexane (C6)		2,500.1	µg/mL	+/-	14.5358	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot K24W001)			+/-	133.0499	µg/mL	Unstressed
	Purity 98%				+/-	133.1967	µg/mL	Stressed
13	1,1-Dichloroethane		2,503.0	µg/mL	+/-	14.5527	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 2663100)			+/-	133.2041	µg/mL	Unstressed
	Purity 99%				+/-	133.3510	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot GI01)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	133.0538	µg/mL	Unstressed
	Purity 97%				+/-	133.2005	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,501.3	µg/mL	+/-	363.3687	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot PH2XK)			+/-	3,326.1766	µg/mL	Unstressed
	Purity 99%				+/-	3,329.8447	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZAQTA-MS)			+/-	133.0711	µg/mL	Unstressed
	Purity 99%				+/-	133.2178	µg/mL	Stressed
18	Bromochloromethane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 345600)			+/-	133.0777	µg/mL	Unstressed
	Purity 99%				+/-	133.2245	µg/mL	Stressed
19	Tetrahydrofuran		5,002.3	µg/mL	+/-	29.0835	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot XWFLA)			+/-	266.2087	µg/mL	Unstressed
	Purity 99%				+/-	266.5023	µg/mL	Stressed
20	1,1,1-Trichloroethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 1103200)			+/-	133.1443	µg/mL	Unstressed
	Purity 99%				+/-	133.2911	µg/mL	Stressed
21	Cyclohexane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
22	1,1-Dichloropropene		2,501.1	µg/mL	+/-	14.5419	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 2028500)			+/-	133.1054	µg/mL	Unstressed
	Purity 97%				+/-	133.2522	µg/mL	Stressed
23	Carbon tetrachloride		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed

24	n-Heptane (C7) **CAS #** 142-82-5.SEC **Purity** 99%	(Lot OGM01)	2,500.4	µg/mL	+/- 14.5374 +/- 133.0644 +/- 133.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2.SEC **Purity** 99%	(Lot FO6PK)	2,501.9	µg/mL	+/- 14.5461 +/- 133.1443 +/- 133.2911	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2.SEC **Purity** 99%	(Lot B28Y008)	2,500.9	µg/mL	+/- 14.5403 +/- 133.0911 +/- 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6.SEC **Purity** 98%	(Lot H04X050)	2,500.6	µg/mL	+/- 14.5387 +/- 133.0760 +/- 133.2228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	(Lot 24MSD-CD)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	(Lot OGG01)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Bromodichloromethane **CAS #** 75-27-4.SEC **Purity** 99%	(Lot 10171168)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	(Lot CHA4A)	50,000.8	µg/mL	+/- 290.6935 +/- 2,660.9280 +/- 2,663.8624	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	(Lot FGI01-OICH)	2,500.6	µg/mL	+/- 14.5388 +/- 133.0777 +/- 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	(Lot 7ZLXJ-TJ)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	(Lot YND2B-BD)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	(Lot MLWYK-LS)	2,500.8	µg/mL	+/- 14.5396 +/- 133.0844 +/- 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 98%	(Lot 2ECIC-NM)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 99%	(Lot 732700)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	(Lot AGN01-EFPC)	2,500.8	µg/mL	+/- 14.5396 +/- 133.0844 +/- 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	(Lot F09W014)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot I13W021)			+/-	133.1377	µg/mL	Unstressed
	Purity 97%				+/-	133.2845	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,502.1	µg/mL	+/-	14.5472	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 1368400)			+/-	133.1542	µg/mL	Unstressed
	Purity 98%				+/-	133.3011	µg/mL	Stressed
42	Chlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01-QSHR)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
44	Ethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE-GR)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
45	m-Xylene		1,250.4	µg/mL	+/-	7.2698	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	66.5422	µg/mL	Unstressed
	Purity 99%				+/-	66.6156	µg/mL	Stressed
46	o-Xylene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
47	p-Xylene		1,251.6	µg/mL	+/-	7.2771	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	66.6087	µg/mL	Unstressed
	Purity 99%				+/-	66.6822	µg/mL	Stressed
48	Styrene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
50	Bromoform		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 1039300)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
52	Chloroform		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,502.7	µg/mL	+/-	14.5510	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-2)			+/-	133.1893	µg/mL	Unstressed
	Purity 97%				+/-	133.3362	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1.SEC **Purity** 99%	(Lot 2FUHG-EM)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6.SEC **Purity** 99%	(Lot SC7LO-QA)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8.SEC **Purity** 99%	(Lot SW8QG-AO)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4.SEC **Purity** 99%	(Lot P4XHJ-AO)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6.SEC **Purity** 99%	(Lot OGN01)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8.SEC **Purity** 99%	(Lot FGH02-CMLN)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8.SEC **Purity** 99%	(Lot OGN01)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) **CAS #** 99-87-6.SEC **Purity** 99%	(Lot 1721700)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1.SEC **Purity** 99%	(Lot FMDFD-KA)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7.SEC **Purity** 99%	(Lot YWKDC-MK)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8.SEC **Purity** 99%	(Lot OGN01)	2,500.6	µg/mL	+/- 14.5388 +/- 133.0777 +/- 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1.SEC **Purity** 99%	(Lot 4NRGF-OT)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8.SEC **Purity** 97%	(Lot LC00408V)	2,500.5	µg/mL	+/- 14.5383 +/- 133.0732 +/- 133.2199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1.SEC **Purity** 99%	(Lot OGO01)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3.SEC **Purity** 97%	(Lot 2009400)	2,501.0	µg/mL	+/- 14.5412 +/- 133.0990 +/- 133.2458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3.SEC **Purity** 99%	(Lot 4KW3H-OO)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene **CAS #** 87-61-6.SEC **Purity** 99%	(Lot A0043055)	2,502.4 µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

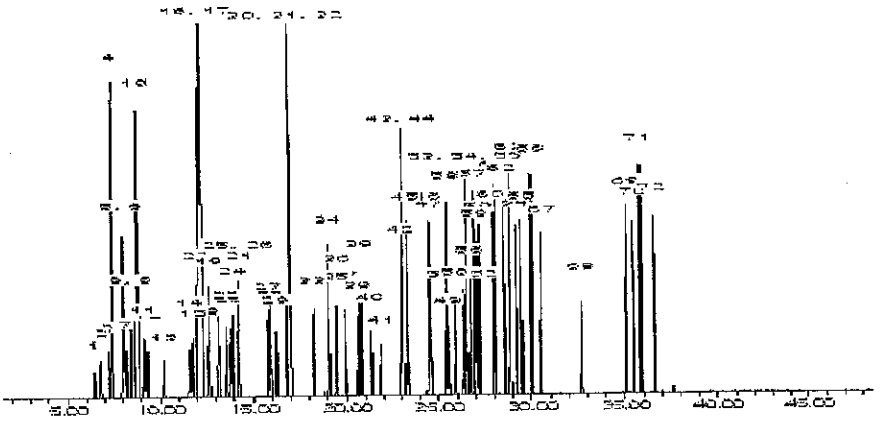
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Tyler Brown - QA Analyst

Date Mixed: 07-Jan-2015 **Balance:** 1127510105

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VM569721_00001

VM569721_0000 Rec: 9/16/15

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

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vm569722_00004

VM569722_00004 Rec: 9/16/15

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0110070

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,499.9 µg/mL	+/- 17.9502 +/- 30.0934 +/- 34.1055	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 +/- 29.7101 +/- 33.7686	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 +/- 29.2906 +/- 33.4004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 +/- 29.5416 +/- 33.6200	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 +/- 30.6969 +/- 34.6391	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 +/- 29.9122 +/- 33.9470	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 +/- 29.3854 +/- 33.4835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

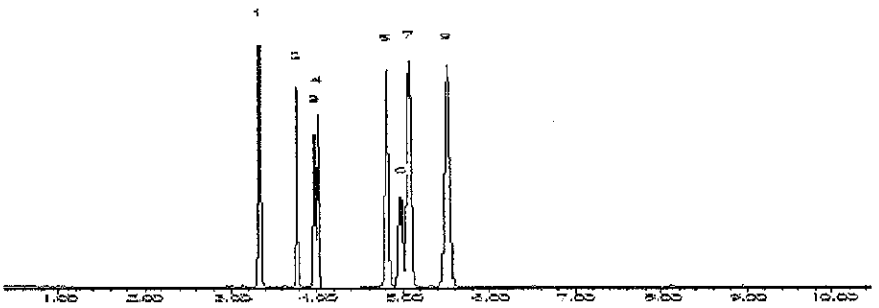
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

P. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

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vm569722_00006

Rec: 2/16/16

VM569722_00006

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0115012

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,502.3 µg/mL	+/- 17.1236 +/- 140.5935 +/- 143.8698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,506.2 µg/mL	+/- 15.8909 +/- 140.6631 +/- 143.9478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,507.2 µg/mL	+/- 16.0743 +/- 140.7405 +/- 144.0261	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,517.0 µg/mL	+/- 17.1894 +/- 141.4157 +/- 144.7114	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,511.3 µg/mL	+/- 17.3826 +/- 141.1222 +/- 144.4097	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,497.4 µg/mL	+/- 16.0992 +/- 140.2015 +/- 143.4741	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,516.3 µg/mL	+/- 19.2032 +/- 141.6354 +/- 144.9242	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)			2,512.2	µg/mL	+/-	18.6489	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBF6387V)				+/-	141.3341	µg/mL	Unstressed
	Purity 99%					+/-	144.6191	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

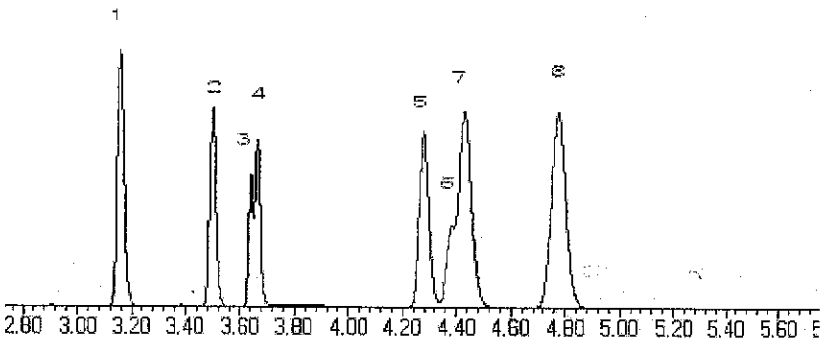
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 5°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 29-Oct-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 02-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

vm569722S_00001

VM569722S-00001 Rec: 9/16/15

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0113063

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,500.3 µg/mL	+/- 18.8969	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 21773)		+/- 30.6711	µg/mL	Unstressed
	Purity 99%		+/- 34.6178	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,502.2 µg/mL	+/- 22.3652	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 32.9346	µg/mL	Unstressed
	Purity 99%		+/- 36.6435	µg/mL	Stressed
3	Vinyl chloride	2,507.8 µg/mL	+/- 20.2660	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 31.5880	µg/mL	Unstressed
	Purity 99%		+/- 35.4543	µg/mL	Stressed
4	1,3-Butadiene	2,524.8 µg/mL	+/- 19.2677	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/- 31.0859	µg/mL	Unstressed
	Purity 99%		+/- 35.0581	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,510.7 µg/mL	+/- 24.3913	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 34.4006	µg/mL	Unstressed
	Purity 99%		+/- 37.9896	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,499.3 µg/mL	+/- 20.7673	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 31.8496	µg/mL	Unstressed
	Purity 99%		+/- 35.6630	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,511.4 µg/mL	+/- 18.9807	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 30.8071	µg/mL	Unstressed
	Purity 99%		+/- 34.7713	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,525.9 µg/mL	+/-	18.1086	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q12B-59)		+/-	30.3895	µg/mL	Unstressed
	Purity 99%			+/-	34.4453	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

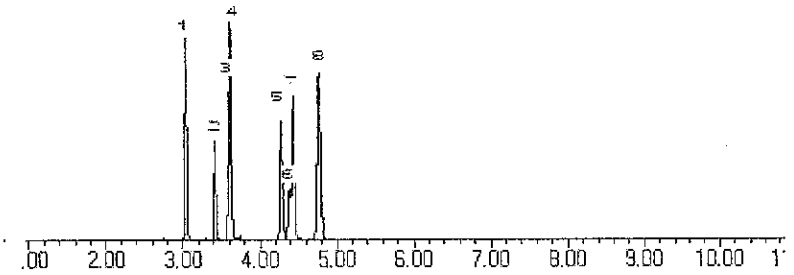
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 05-Aug-2015 **Balance:** 1127510105

Jennifer L. Pollino - QC Analyst

Date Passed: 13-Aug-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VM569723_00001

Rec: 3/30/15
VM569723_00001

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
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Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0108172

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,502.0 µg/mL	+/- 14.6831	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKBK2735V)		+/- 53.0984	µg/mL	Unstressed
	Purity 99%		+/- 53.3337	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569724_00004

VM569724_00004 Rec: 1/14/16

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0115764

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2016 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,009.0 µg/mL	+/- 29.3956 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.2416 µg/mL	Unstressed
	Purity 99%		+/- 302.9590 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16MW8	240-66154-1	94	96	97	78
16MW9	240-66154-2	111	114	108	89
16WC1A	240-66154-3	96	98	101	81
TRIP BLANK	240-66154-4	97	101	101	80
	MB 240-236061/6	92	94	96	77
	LCS 240-236061/4	92	98	99	78
16MW9 MS	240-66154-2 MS	93	98	97	77
16MW9 MSD	240-66154-2 MSD	96	103	101	77

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	79-120
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	61-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5817A.D

Lab ID: LCS 240-236061/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Tetrahydrofuran	20.0	19.1 J	96	61-136	
Vinyl chloride	10.0	10.4	104	52-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5839.D

Lab ID: 240-66154-2 MS Client ID: 16MW9 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Vinyl chloride	10.0	1.0 U	10.0	100	44-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5840.D

Lab ID: 240-66154-2 MSD Client ID: 16MW9 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Vinyl chloride	10.0	10.5	105	5	35	44-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab File ID: UXJ5819.D Lab Sample ID: MB 240-236061/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 06/27/2016 12:26

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-236061/4	UXJ5817A.D	06/27/2016 11:40
16MW8	240-66154-1	UXJ5832.D	06/27/2016 17:21
TRIP BLANK	240-66154-4	UXJ5833.D	06/27/2016 17:43
16MW9 MS	240-66154-2 MS	UXJ5839.D	06/27/2016 19:59
16MW9 MSD	240-66154-2 MSD	UXJ5840.D	06/27/2016 20:22
16WC1A	240-66154-3	UXJ5841.D	06/27/2016 20:44
16MW9	240-66154-2	UXJ5843.D	06/27/2016 21:29

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab File ID: BFB6528.D BFB Injection Date: 05/28/2016

Instrument ID: A3UX11 BFB Injection Time: 08:28

Analysis Batch No.: 232366

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.5	
75	30.0 - 60.0 % of mass 95	43.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	89.7	
175	5.0 - 9.0 % of mass 174	6.8	(7.6) 1
176	95.0 - 101.0 % of mass 174	86.3	(96.2) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-232366/2	UXJ4939.D	05/28/2016	09:12
	STD8260 240-232366/3	UXJ4940.D	05/28/2016	09:34
	STD8260 240-232366/4	UXJ4941.D	05/28/2016	09:56
	STD8260 240-232366/5	UXJ4942.D	05/28/2016	10:19
	STD8260 240-232366/6	UXJ4943.D	05/28/2016	10:40
	STD8260 240-232366/7	UXJ4944.D	05/28/2016	11:03
	ICV 240-232366/14	UXJ4945.D	05/28/2016	11:25
	ICV 240-232366/15	UXJ4952.D	05/28/2016	14:03

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab File ID: BFB6627A.D BFB Injection Date: 06/27/2016

Instrument ID: A3UX11 BFB Injection Time: 09:44

Analysis Batch No.: 236061

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.6	
75	30.0 - 60.0 % of mass 95	46.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	83.1	
175	5.0 - 9.0 % of mass 174	7.0	(8.4) 1
176	95.0 - 101.0 % of mass 174	82.6	(99.5) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-236061/2	UXJ5814A.D	06/27/2016	10:32
	CCV 240-236061/3	UXJ5816A.D	06/27/2016	11:18
	LCS 240-236061/4	UXJ5817A.D	06/27/2016	11:40
	MB 240-236061/6	UXJ5819.D	06/27/2016	12:26
16MW8	240-66154-1	UXJ5832.D	06/27/2016	17:21
TRIP BLANK	240-66154-4	UXJ5833.D	06/27/2016	17:43
16MW9 MS	240-66154-2 MS	UXJ5839.D	06/27/2016	19:59
16MW9 MSD	240-66154-2 MSD	UXJ5840.D	06/27/2016	20:22
16WC1A	240-66154-3	UXJ5841.D	06/27/2016	20:44
16MW9	240-66154-2	UXJ5843.D	06/27/2016	21:29

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Sample No.: STD8260 240-232366/4 Date Analyzed: 05/28/2016 09:56

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ4941.D Heated Purge: (Y/N) N

Calibration ID: 34632

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1420065	5.12	934240	7.78	380946	10.01
UPPER LIMIT		2840130	5.62	1868480	8.28	761892	10.51
LOWER LIMIT		710033	4.62	467120	7.28	190473	9.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-232366/14		1349328	5.12	892490	7.78	381895	10.03
ICV 240-232366/15		1213041	5.12	839047	7.78	340685	10.01
CCVIS 240-236061/2		2032326	5.12	1160670	7.78	355778	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Sample No.: CCVIS 240-236061/2 Date Analyzed: 06/27/2016 10:32

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ5814A.D Heated Purge: (Y/N) N

Calibration ID: 34635

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2032326	5.12	1160670	7.78	355778	10.03
UPPER LIMIT		4064652	5.62	2321340	8.28	711556	10.53
LOWER LIMIT		1016163	4.62	580335	7.28	177889	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-236061/3		1540110	5.12	957505	7.78	307644	10.03
LCS 240-236061/4		1576480	5.12	946408	7.78	307979	10.03
MB 240-236061/6		1473316	5.12	921655	7.78	289266	10.03
240-66154-1	16MW8	1408036	5.12	880754	7.78	276406	10.03
240-66154-4	TRIP BLANK	1343616	5.12	847700	7.78	265970	10.03
240-66154-2 MS	16MW9 MS	1596682	5.12	955957	7.78	300255	10.03
240-66154-2 MSD	16MW9 MSD	1544537	5.12	916756	7.78	289501	10.03
240-66154-3	16WC1A	1401425	5.12	855051	7.78	274552	10.03
240-66154-2	16MW9	1213300	5.12	786108	7.78	239861	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: 16MW8 | Lab Sample ID: 240-66154-1

Matrix: Water | Lab File ID: UXJ5832.D

Analysis Method: 8260C | Date Collected: 06/16/2016 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 17:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	25	U	25	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		79-120
460-00-4	4-Bromofluorobenzene (Surr)	78		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5832.D				
Lims ID:	240-66154-B-1				
Client ID:	16MW8				
Sample Type:	Client				
Inject. Date:	27-Jun-2016 17:21:30	ALS Bottle#:	19	Worklist Smp#:	42
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	240-0055771-042				
Misc. Info.:	J60627A,8260LLUX11,,43582				
Operator ID:	43582	Instrument ID:	A3UX11		
Method:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	28-Jun-2016 08:27:29	Calib Date:	28-May-2016 13:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: evansle		Date:	28-Jun-2016 08:19:46		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1408036	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	85	880754	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	276406	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	353400	11.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	406058	11.5	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1458216	11.6	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	89	351992	9.30	
48 Tetrahydrofuran	42	4.393	4.405	-0.012	87	7604	1.02	

Reagents:

VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

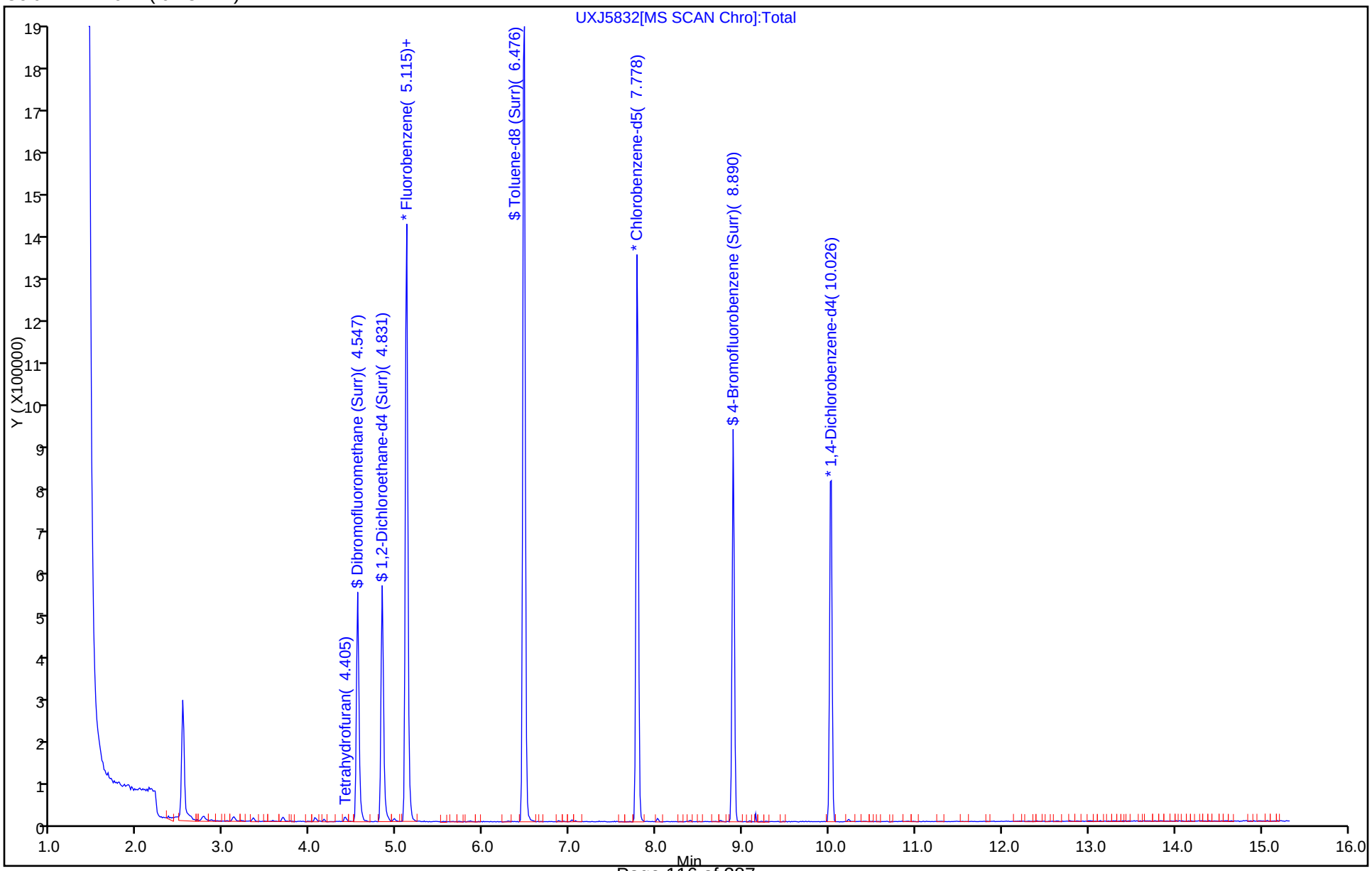
Report Date: 28-Jun-2016 08:27:38 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5832.D

Injection Date:	27-Jun-2016 17:21:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-B-1	Lab Sample ID:	240-66154-1	Worklist Smp#:	42
Client ID:	16MW8				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5832.D
Lims ID: 240-66154-B-1
Client ID: 16MW8
Sample Type: Client
Inject. Date: 27-Jun-2016 17:21:30 ALS Bottle#: 19 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-042
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:19:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.2	94.06
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.5	96.44
$ 6 Toluene-d8 (Surr)	12.0	11.6	97.41
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.30	77.75

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: 16MW9 | Lab Sample ID: 240-66154-2

Matrix: Water | Lab File ID: UXJ5843.D

Analysis Method: 8260C | Date Collected: 06/16/2016 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 21:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	108		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		79-120
460-00-4	4-Bromofluorobenzene (Surr)	89		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5843.D				
Lims ID:	240-66154-B-2				
Client ID:	16MW9				
Sample Type:	Client				
Inject. Date:	27-Jun-2016 21:29:30	ALS Bottle#:	30	Worklist Smp#:	53
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	240-0055771-053				
Misc. Info.:	J60627A,8260LLUX11,,43582				
Operator ID:	43582	Instrument ID:	A3UX11		
Method:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	28-Jun-2016 08:27:29	Calib Date:	28-May-2016 13:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: evansle		Date:	28-Jun-2016 08:24:30		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1213300	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	786108	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	239861	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	357988	13.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	414565	13.7	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1444187	12.9	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	361443	10.7	
12 Vinyl chloride	62	1.731	1.731	0.000	30	5155	0.1775	

Reagents:

VM50IS_00055	Amount Added: 1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added: 1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added: 0.00	Units:	Run Reagent

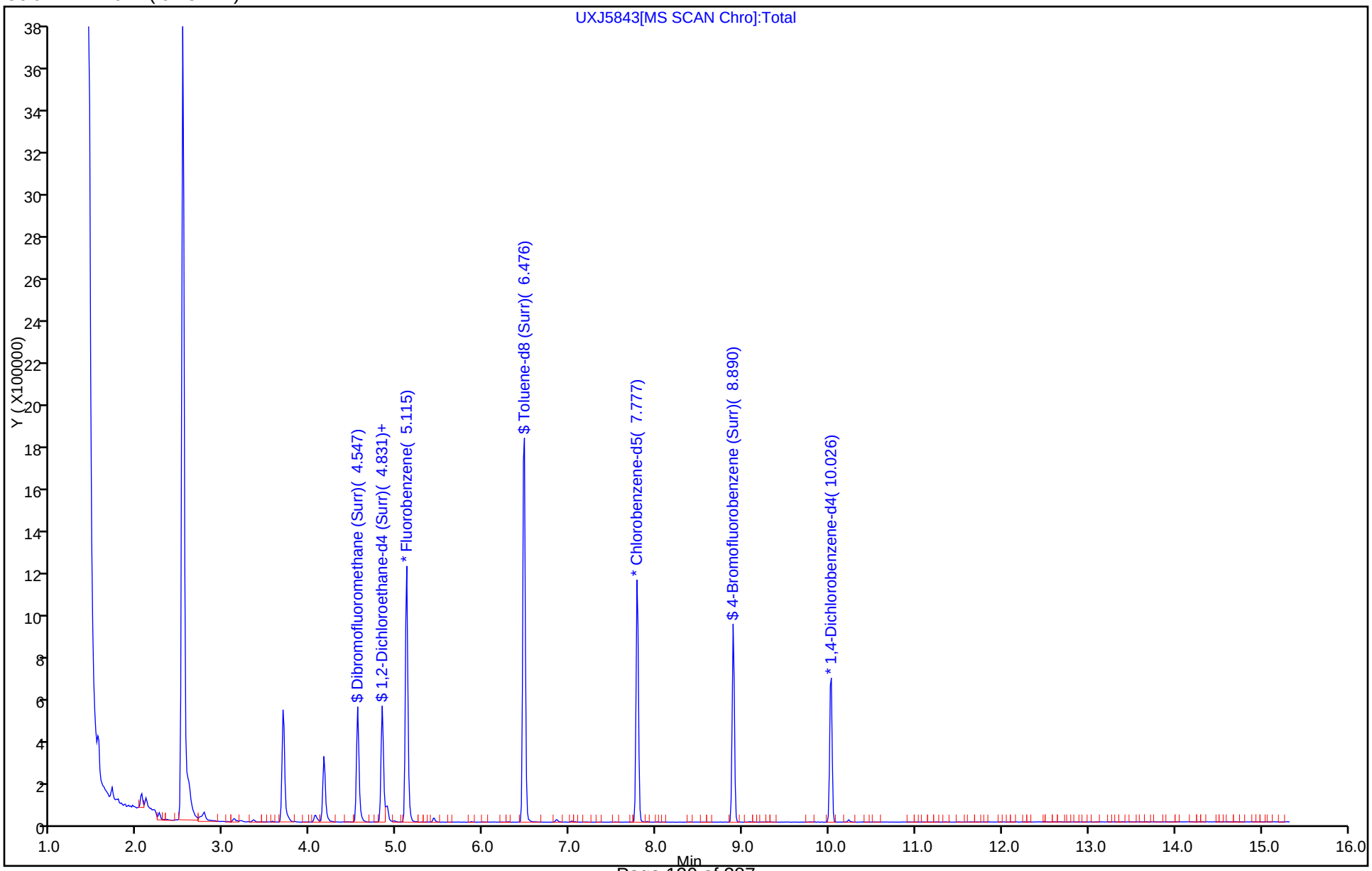
Report Date: 28-Jun-2016 08:27:46 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5843.D

Injection Date:	27-Jun-2016 21:29:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-B-2	Lab Sample ID:	240-66154-2	Worklist Smp#:	53
Client ID:	16MW9				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5843.D
Lims ID: 240-66154-B-2
Client ID: 16MW9
Sample Type: Client
Inject. Date: 27-Jun-2016 21:29:30 ALS Bottle#: 30 Worklist Smp#: 53
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-053
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:24:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	13.2	110.58
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	13.7	114.26
$ 6 Toluene-d8 (Surr)	12.0	12.9	108.08
$ 7 4-Bromofluorobenzene (Surr)	12.0	10.7	89.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: 16WC1A | Lab Sample ID: 240-66154-3

Matrix: Water | Lab File ID: UXJ5841.D

Analysis Method: 8260C | Date Collected: 06/16/2016 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 20:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	2.8	J	5.0	1.4
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		79-120
460-00-4	4-Bromofluorobenzene (Surr)	81		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5841.D				
Lims ID:	240-66154-C-3				
Client ID:	16WC1A				
Sample Type:	Client				
Inject. Date:	27-Jun-2016 20:44:30	ALS Bottle#:	28	Worklist Smp#:	51
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	240-0055771-051				
Misc. Info.:	J60627A,8260LLUX11,,43582				
Operator ID:	43582	Instrument ID:	A3UX11		
Method:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	28-Jun-2016 08:27:29	Calib Date:	28-May-2016 13:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: evansle		Date:	28-Jun-2016 08:23:08		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1401425	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	855051	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	274552	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	97	357559	11.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	412583	11.8	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1470238	12.1	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	90	356337	9.69	
12 Vinyl chloride	62	1.731	1.731	0.000	94	8419	0.2510	
48 Tetrahydrofuran	42	4.405	4.405	0.000	90	21007	2.83	

Reagents:

VM50IS_00055	Amount Added: 1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added: 1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added: 0.00	Units:	Run Reagent

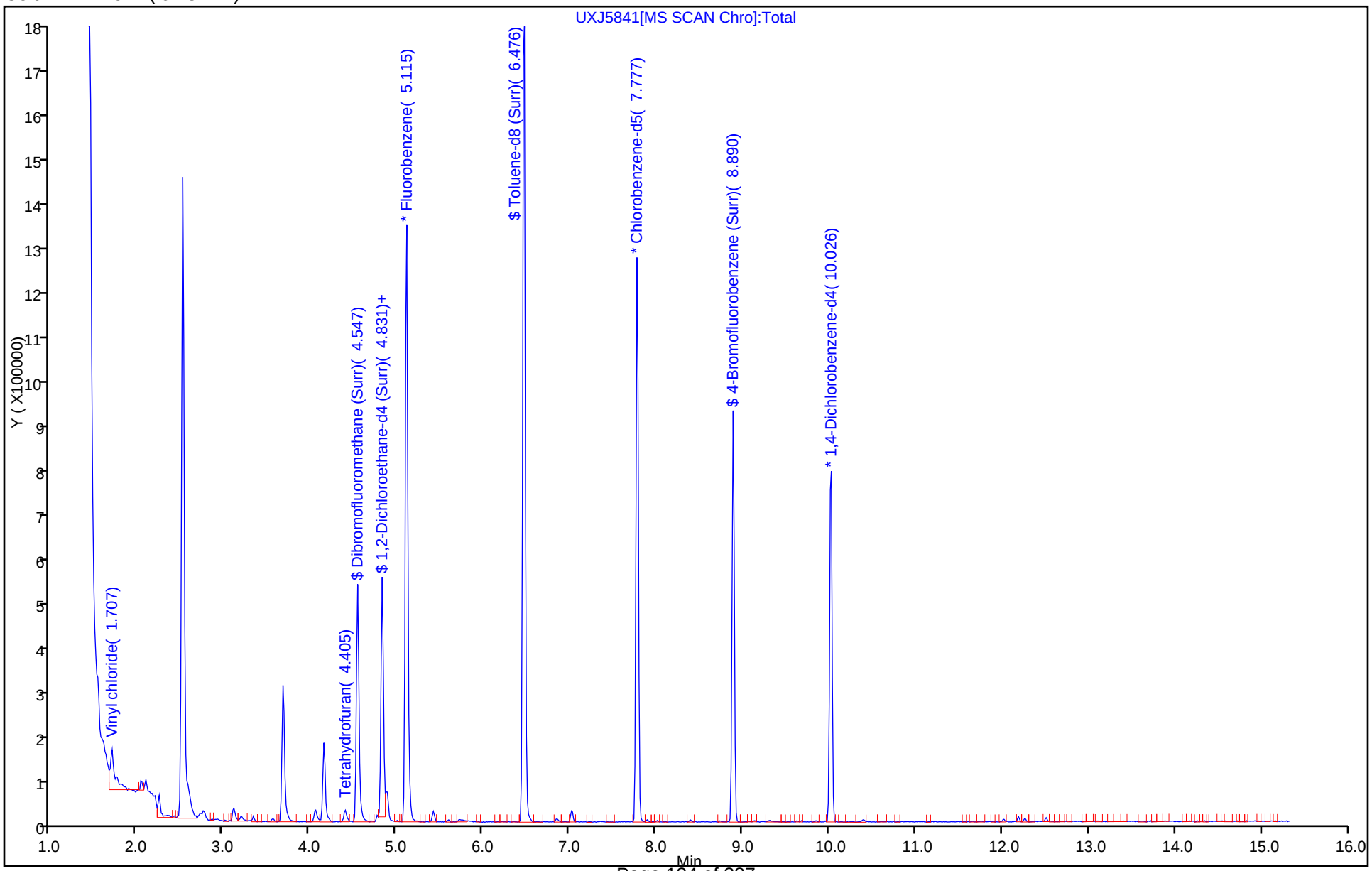
Report Date: 28-Jun-2016 08:27:44 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5841.D

Injection Date:	27-Jun-2016 20:44:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-C-3	Lab Sample ID:	240-66154-3	Worklist Smp#:	51
Client ID:	16WC1A				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5841.D
Lims ID: 240-66154-C-3
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 27-Jun-2016 20:44:30 ALS Bottle#: 28 Worklist Smp#: 51
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-051
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:23:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.4	95.62
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.8	98.45
$ 6 Toluene-d8 (Surr)	12.0	12.1	101.16
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.69	81.07

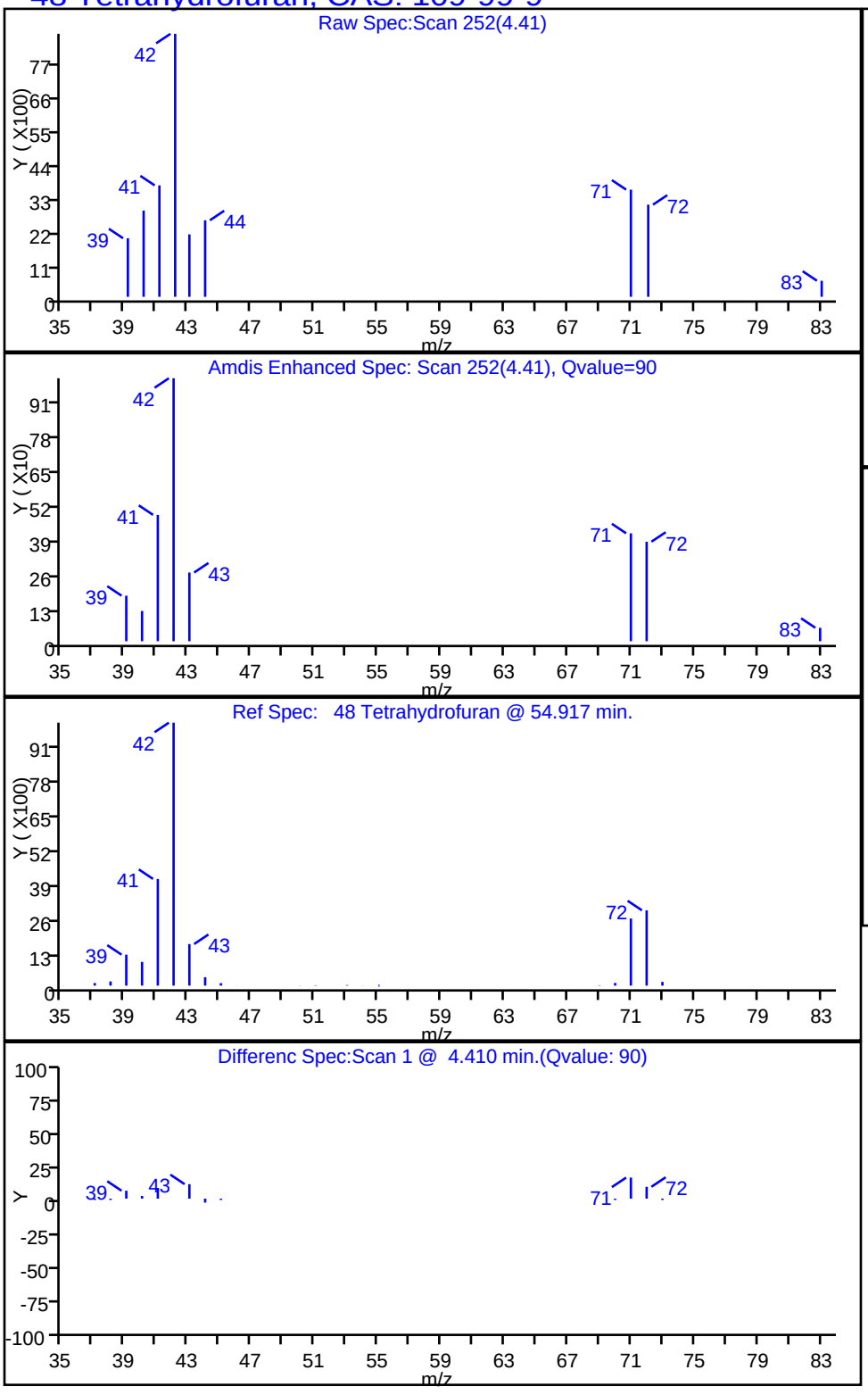
Report Date: 28-Jun-2016 08:27:45 Chrom Revision: 2.2 20-Apr-2016 13:59:46

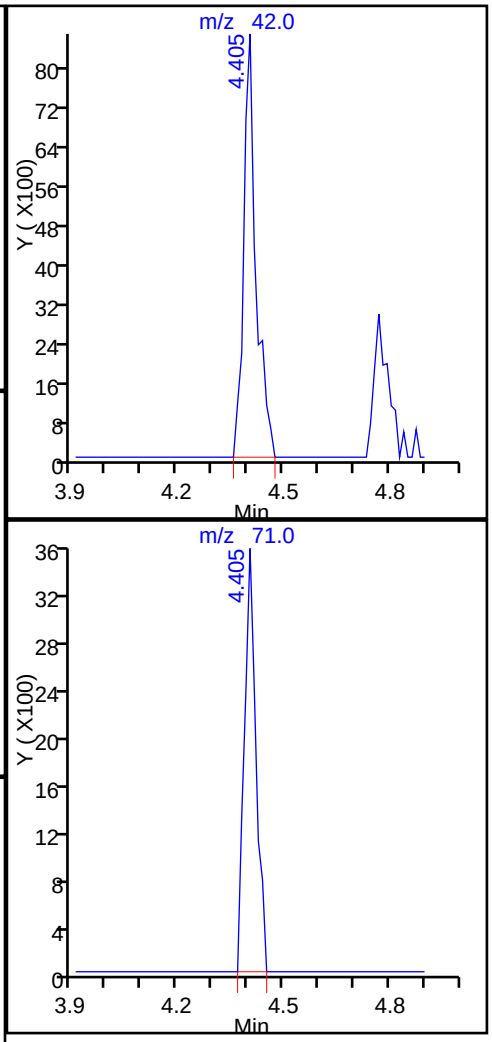
TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5841.D

Injection Date:	27-Jun-2016 20:44:30	Instrument ID:	A3UX11		
Lims ID:	240-66154-C-3	Lab Sample ID:	240-66154-3		
Client ID:	16WC1A				
Operator ID:	43582	ALS Bottle#:	28	Worklist Smp#:	51
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_11	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

48 Tetrahydrofuran, CAS: 109-99-9





FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: TRIP BLANK | Lab Sample ID: 240-66154-4

Matrix: Water | Lab File ID: UXJ5833.D

Analysis Method: 8260C | Date Collected: 06/16/2016 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	5.0	U	5.0	1.4
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		79-120
460-00-4	4-Bromofluorobenzene (Surr)	80		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5833.D
Lims ID: 240-66154-A-4
Client ID: TRIP BLANK
Sample Type: Client
Inject. Date: 27-Jun-2016 17:43:30 ALS Bottle#: 20 Worklist Smp#: 43
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-043
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1343616	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	85	847700	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	95	265970	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	348503	11.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	405041	12.1	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1449634	12.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	350501	9.62	
12 Vinyl chloride	62		1.731				ND	
48 Tetrahydrofuran	42		4.405				ND	

Reagents:

VM50IS_00055	Amount Added: 1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added: 1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added: 0.00	Units:	Run Reagent

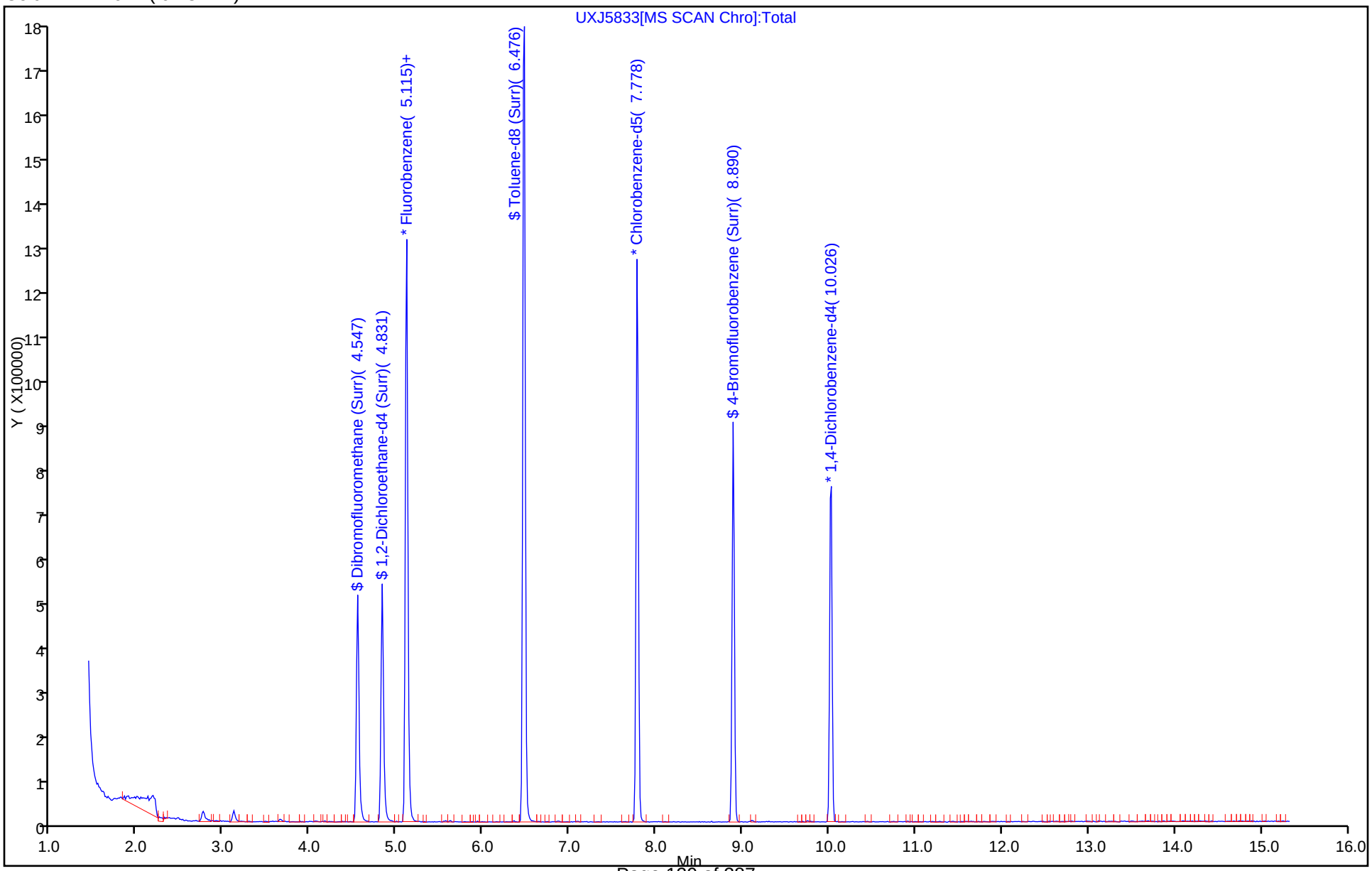
Report Date: 28-Jun-2016 08:27:39 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5833.D

Injection Date:	27-Jun-2016 17:43:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-A-4	Lab Sample ID:	240-66154-4	Worklist Smp#:	43
Client ID:	TRIP BLANK				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5833.D
Lims ID: 240-66154-A-4
Client ID: TRIP BLANK
Sample Type: Client
Inject. Date: 27-Jun-2016 17:43:30 ALS Bottle#: 20 Worklist Smp#: 43
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-043
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.6	97.21
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	12.1	100.81
$ 6 Toluene-d8 (Surr)	12.0	12.0	100.61
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.62	80.44

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232366/7	UXJ4944.D
Level 2	STD8260 240-232366/6	UXJ4943.D
Level 3	STD8260 240-232366/5	UXJ4942.D
Level 4	STD8260 240-232366/4	UXJ4941.D
Level 5	STD8260 240-232366/3	UXJ4940.D
Level 6	STD8260 240-232366/2	UXJ4939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1874 0.1365	0.1804	0.1569	0.1477	0.1345	Ave		0.1572			0.1000	14.2		20.0			
Chloromethane	0.2347 0.2087	0.2368	0.2391	0.2296	0.2034	Ave		0.2254			0.1000	6.8		20.0			
Vinyl chloride	0.2661 0.1948	0.2726	0.2549	0.2398	0.2079	Ave		0.2393			0.1000	13.3		20.0			
Butadiene	0.2902 0.1915	0.2430	0.2236	0.2072	0.1931	Ave		0.2248				16.7		20.0			
Bromomethane	0.1050 0.1039	0.1171	0.1178	0.1085	0.1034	Ave		0.1093			0.0500	6.0		20.0			
Chloroethane	0.1242 0.1044	0.1183	0.1173	0.1128	0.1037	Ave		0.1134			0.0500	7.2		20.0			
Dichlorofluoromethane	0.2652 0.2353	0.2510	0.2494	0.2472	0.2313	Ave		0.2466				4.9		20.0			
Trichlorofluoromethane	0.1586 0.1718	0.1896	0.1718	0.1763	0.1658	Ave		0.1723			0.1000	6.1		20.0			
Ethyl ether	0.2791 0.1930	0.2355	0.2143	0.2247	0.1967	Ave		0.2239				14.1		20.0			
Acrolein	0.0309 0.0285	0.0362	0.0322	0.0324	0.0295	Ave		0.0316				8.6		20.0			
1,1-Dichloroethene	0.1891 0.1632	0.1879	0.1767	0.1764	0.1670	Ave		0.1767			0.1000	6.0		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1179 0.1005	0.1146	0.1068	0.1044	0.0984	Ave		0.1071			0.0500	7.2		20.0			
Acetone	0.1159 0.0473	0.0784	0.0616	0.0562	0.0505	Lin1	0.1399	0.0464			0.0100				0.9990		0.9900
Iodomethane	0.2712 0.2217	0.2508	0.2518	0.2412	0.2336	Ave		0.2451				7.0		20.0			
Carbon disulfide	0.5031 0.4104	0.4698	0.4742	0.4421	0.4373	Ave		0.4562			0.1000	7.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1477 0.1632	0.1624	0.1618	0.1717	0.1628	Ave		0.1616				4.8		20.0			
Methyl acetate	0.1492 0.1172	0.1415	0.1379	0.1354	0.1267	Ave		0.1347			0.1000	8.4		20.0			
Methylene Chloride	0.4395 0.1915	0.3287	0.2437	0.2251	0.2061	Lin1	0.2668	0.1891			0.1000				0.9990		0.9900
2-Methyl-2-propanol	0.0152 +++++	0.0127	0.0136	0.0126	0.0116	Ave		0.0132				10.4		20.0			
Acrylonitrile	0.0740 0.0627	0.0715	0.0721	0.0723	0.0674	Ave		0.0700				6.0		20.0			
Methyl tert-butyl ether	0.6968 0.6087	0.6644	0.6642	0.6935	0.6425	Ave		0.6617			0.1000	5.0		20.0			
trans-1,2-Dichloroethene	0.2888 0.2454	0.2625	0.2591	0.2657	0.2505	Ave		0.2620			0.1000	5.8		20.0			
Hexane	0.0673 0.0553	0.0534	0.0515	0.0545	0.0543	Ave		0.0561				10.1		20.0			
1,1-Dichloroethane	0.4677 0.4326	0.4478	0.4396	0.4565	0.4422	Ave		0.4477			0.2000	2.8		20.0			
Vinyl acetate	0.4182 0.3938	0.4338	0.4161	0.4307	0.4152	Ave		0.4179				3.4		20.0			
cis-1,2-Dichloroethene	0.2801 0.2752	0.2762	0.2735	0.2834	0.2738	Ave		0.2770			0.1000	1.4		20.0			
2-Butanone (MEK)	0.0983 0.0737	0.0786	0.0817	0.0829	0.0790	Ave		0.0824			0.0100	10.2		20.0			
2,2-Dichloropropane	0.2080 0.1863	0.1876	0.1977	0.2027	0.1990	Ave		0.1969				4.3		20.0			
Chlorobromomethane	0.1272 0.1276	0.1218	0.1259	0.1333	0.1309	Ave		0.1278				3.1		20.0			
Tetrahydrofuran	0.0601 0.0461	0.0557	0.0518	0.0536	0.0500	Ave		0.0529				9.1		20.0			
Chloroform	0.4249 0.3958	0.3907	0.3887	0.4080	0.4090	Ave		0.4028			0.2000	3.4		20.0			
1,1,1-Trichloroethane	0.2866 0.2625	0.2619	0.2664	0.2757	0.2770	Ave		0.2717			0.1000	3.6		20.0			
Cyclohexane	0.3397 0.2916	0.3042	0.2938	0.2971	0.2985	Ave		0.3041			0.1000	5.9		20.0			
1,1-Dichloropropene	0.3733 0.3357	0.3276	0.3319	0.3472	0.3430	Ave		0.3431				4.8		20.0			
Carbon tetrachloride	0.2549 0.2547	0.2228	0.2418	0.2613	0.2561	Ave		0.2486			0.1000	5.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0062 0.0045	0.0059	0.0063	0.0071	0.0058	Ave		0.0060				14.3		20.0			
1,2-Dichloroethane	0.2981 0.2726	0.2707	0.2764	0.2862	0.2852	Ave		0.2815			0.1000	3.7		20.0			
Benzene	1.0915 1.0604	1.0274	1.0168	1.0745	1.0726	Ave		1.0572			0.5000	2.8		20.0			
n-Heptane	0.0767 0.0562	0.0637	0.0501	0.0519	0.0539	Ave		0.0587				17.0		20.0			
Trichloroethene	0.2904 0.2807	0.2627	0.2619	0.2746	0.2860	Ave		0.2761			0.1500	4.3		20.0			
Methylcyclohexane	0.3899 0.3159	0.3438	0.3048	0.3065	0.3225	Ave		0.3306			0.1000	9.8		20.0			
1,2-Dichloropropane	0.2636 0.2540	0.2477	0.2418	0.2504	0.2626	Ave		0.2533			0.1000	3.4		20.0			
Dibromomethane	0.1260 0.1258	0.1267	0.1228	0.1240	0.1303	Ave		0.1259				2.0		20.0			
1,4-Dioxane	0.0010 +++++	0.0013	0.0014	0.0016	0.0017	Lin1	-0.017	0.0017							0.9990		0.9900
Dichlorobromomethane	0.2938 0.3017	0.2907	0.2723	0.2880	0.3112	Ave		0.2929			0.1500	4.5		20.0			
2-Chloroethyl vinyl ether	0.1384 0.1445	0.1484	0.1416	0.1458	0.1535	Ave		0.1454				3.6		20.0			
cis-1,3-Dichloropropene	0.3776 0.4191	0.3788	0.3775	0.4025	0.4308	Ave		0.3977			0.1500	5.9		20.0			
4-Methyl-2-pentanone (MIBK)	0.1794 0.1579	0.1670	0.1634	0.1645	0.1729	Ave		0.1675			0.0500	4.5		20.0			
Toluene	1.6592 1.5713	1.5809	1.5586	1.6505	1.6591	Ave		1.6133			0.4000	3.0		20.0			
trans-1,3-Dichloropropene	0.4368 0.4929	0.4583	0.4669	0.5112	0.5324	Ave		0.4831			0.1000	7.4		20.0			
Ethyl methacrylate	0.4247 0.4021	0.4124	0.4087	0.4397	0.4428	Ave		0.4217				4.0		20.0			
1,1,2-Trichloroethane	0.2779 0.2701	0.2893	0.2905	0.2951	0.3013	Ave		0.2874			0.1000	4.0		20.0			
Tetrachloroethene	0.3260 0.2981	0.2891	0.2964	0.3117	0.3178	Ave		0.3065			0.1500	4.6		20.0			
1,3-Dichloropropane	0.5178 0.4955	0.5274	0.5141	0.5435	0.5440	Ave		0.5237				3.6		20.0			
2-Hexanone	0.1845 0.1578	0.1883	0.1732	0.1827	0.1815	Ave		0.1780			0.0500	6.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2713 0.3118	0.2819	0.2799	0.3107	0.3300	Ave		0.2976				7.8		20.0			
Ethylene Dibromide	0.2749 0.2645	0.2712	0.2625	0.2827	0.2896	Ave		0.2742				3.8		20.0			
Chlorobenzene	1.0021 0.9778	0.9625	0.9467	0.9849	1.0339	Ave		0.9846			0.3000	3.1		20.0			
1,1,1,2-Tetrachloroethane	0.3124 0.3245	0.2955	0.3071	0.3343	0.3508	Ave		0.3208				6.2		20.0			
Ethylbenzene	0.5297 0.5154	0.5166	0.5168	0.5295	0.5569	Ave		0.5275				3.0		20.0			
m-Xylene & p-Xylene	0.6526 0.6339	0.6292	0.6072	0.6409	0.6817	Ave		0.6409				3.9		20.0			
o-Xylene	0.6267 0.6070	0.5789	0.5953	0.6248	0.6608	Ave		0.6156				4.6		20.0			
Styrene	1.0612 1.0573	1.0236	1.0246	1.0787	1.1399	Ave		1.0642			0.3000	4.0		20.0			
Bromoform	0.1294 0.1729	0.1399	0.1527	0.1658	0.1841	Ave		0.1575			0.1000	13.1		20.0			
Isopropylbenzene	1.4418 1.3777	1.3579	1.3867	1.4136	1.5024	Ave		1.4133			0.1000	3.7		20.0			
1,1,2,2-Tetrachloroethane	0.7048 0.6684	0.6947	0.6821	0.7009	0.7169	Ave		0.6946			0.3000	2.5		20.0			
Bromobenzene	0.9492 0.9267	0.9025	0.8699	0.9413	0.9437	Ave		0.9222				3.3		20.0			
1,2,3-Trichloropropane	0.2266 0.2086	0.2279	0.2147	0.2187	0.2292	Ave		0.2209				3.8		20.0			
trans-1,4-Dichloro-2-butene	0.1143 0.1900	0.1405	0.1609	0.1869	0.1886	Ave		0.1635				19.0		20.0			
N-Propylbenzene	0.8818 0.9344	0.8262	0.8621	0.9134	0.9434	Ave		0.8936				5.1		20.0			
2-Chlorotoluene	0.7900 0.8102	0.7694	0.7533	0.8111	0.8197	Ave		0.7923				3.3		20.0			
1,3,5-Trimethylbenzene	2.4904 2.4634	2.4676	2.4041	2.5168	2.5605	Ave		2.4838				2.1		20.0			
4-Chlorotoluene	0.8392 0.8484	0.7868	0.8198	0.8628	0.8527	Ave		0.8349				3.3		20.0			
tert-Butylbenzene	2.0991 2.0866	2.0122	2.0006	2.1022	2.1464	Ave		2.0745				2.7		20.0			
1,2,4-Trimethylbenzene	2.5486 2.4454	2.3862	2.4030	2.4835	2.5470	Ave		2.4689				2.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.7399 2.7081	2.5216	2.6264	2.7096	2.7610	Ave		2.6778				3.3		20.0			
1,3-Dichlorobenzene	1.4310 1.3899	1.4226	1.3716	1.4076	1.4392	Ave		1.4103			0.6000	1.8		20.0			
4-Isopropyltoluene	2.3727 2.2716	2.1405	2.1846	2.3189	2.3681	Ave		2.2761				4.2		20.0			
1,4-Dichlorobenzene	1.5090 1.3897	1.4507	1.3767	1.4493	1.4354	Ave		1.4351			0.5000	3.3		20.0			
n-Butylbenzene	1.6341 1.7034	1.5296	1.6133	1.6710	1.7165	Ave		1.6446				4.2		20.0			
1,2-Dichlorobenzene	1.3346 1.2285	1.2638	1.2189	1.2545	1.3092	Ave		1.2683			0.4000	3.6		20.0			
1,2-Dibromo-3-Chloropropane	0.1065 0.1011	0.1093	0.0973	0.1023	0.1039	Ave		0.1034			0.0500	4.0		20.0			
1,2,4-Trichlorobenzene	0.6139 0.6504	0.5991	0.5773	0.5968	0.6016	Ave		0.6065			0.2000	4.0		20.0			
Hexachlorobutadiene	0.2676 0.2710	0.2301	0.2389	0.2482	0.2407	Ave		0.2494				6.6		20.0			
Naphthalene	1.5365 1.5180	1.5623	1.4231	1.4795	1.4541	Ave		1.4956				3.5		20.0			
1,2,3-Trichlorobenzene	0.6048 0.5976	0.5621	0.5340	0.5478	0.5466	Ave		0.5655				5.2		20.0			
Dibromofluoromethane (Surr)	0.2118 0.2284	0.2331	0.2147	0.2235	0.2274	Ave		0.2231				3.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2439 0.2455	0.2559	0.2483	0.2521	0.2548	Ave		0.2501				2.0		20.0			
Toluene-d8 (Surr)	1.3628 1.3928	1.4804	1.3814	1.4319	1.4793	Ave		1.4214				3.6		20.0			
4-Bromofluorobenzene (Surr)	0.4331 0.4121	0.4504	0.4110	0.4176	0.4550	Ave		0.4299				4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232366/7	UXJ4944.D
Level 2	STD8260 240-232366/6	UXJ4943.D
Level 3	STD8260 240-232366/5	UXJ4942.D
Level 4	STD8260 240-232366/4	UXJ4941.D
Level 5	STD8260 240-232366/3	UXJ4940.D
Level 6	STD8260 240-232366/2	UXJ4939.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	23438 969646	42058	107457	209756	461100	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	29346 1482852	55193	163736	326020	697263	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	33272 1384307	63543	174517	340550	712641	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	36282 1360774	56652	153087	294290	661868	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	13133 737973	27304	80655	154065	354503	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	15535 741914	27565	80324	160210	355335	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	33161 1672330	58518	170748	351106	792812	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	19826 1220713	44203	117652	250400	568474	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	34902 1371794	54893	146699	319048	674181	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	19345 1011188	42139	110232	230248	504916	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	23639 1159454	43795	120990	250490	572421	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	14742 714053	26719	73100	148245	337417	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	28981 671519	36559	84334	159576	346148	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	33915 1575329	58473	172386	342536	800688	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	62901 2916487	109512	324706	627823	1499243	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	18473 1159970	37846	110804	243798	558156	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	93308 4164389	164975	472016	961335	2171435	5.00 200	10.0	25.0	50.0	100
Methylene Chloride	FB	Lin1	54952 1360621	76625	166894	319614	706494	1.00 40.0	2.00	5.00	10.0	20.0
2-Methyl-2-propanol	FB	Ave	19046 +++++	29614	93221	179576	396690	10.0 +++++	20.0	50.0	100	200
Acrylonitrile	FB	Ave	92538 4456158	166619	493445	1026114	2310723	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	87130 4325311	154869	454764	984808	2202465	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	36112 1743734	61202	177398	377290	858573	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	8411 393099	12458	35278	77440	186021	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	58482 3074215	104382	300963	648277	1515866	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	52287 2798107	101120	284897	611598	1423228	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	35026 1955375	64376	187256	402405	938653	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	24577 1047570	36632	111907	235494	541494	2.00 80.0	4.00	10.0	20.0	40.0
2,2-Dichloropropane	FB	Ave	26011 1323995	43737	135347	287783	682298	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobromomethane	FB	Ave	15903 906929	28396	86218	189361	448591	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	15041 655509	25966	70954	152241	343109	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	53127 2812352	91075	266160	579380	1401934	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	35830 1865466	61062	182420	391457	949514	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	42471 2072077	70906	201144	421868	1023155	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	46682 2385800	76372	227255	493069	1175854	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	31877 1810111	51928	165573	371005	877932	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	CBZ	Ave	13422 573415	23137	71716	165409	346408	25.0 1000	50.0	125	250	500
1,2-Dichloroethane	FB	Ave	37279 1937374	63100	189233	406414	977633	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	136474 7535140	239491	696193	1525909	3676999	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	9589 399180	14850	34326	73669	184802	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	36312 1994931	61235	179338	389926	980416	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	48752 2244745	80144	208709	435279	1105669	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	32959 1805020	57733	165544	355570	900391	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	15759 893810	29538	84084	176155	446516	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	2389 +++++	5839	19728	45884	116617	20.0 +++++	40.0	100	200	400
Dichlorobromomethane	FB	Ave	36730 2143575	67774	186411	408988	1066920	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	34608 2053796	69187	193865	414102	1052330	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	47210 2978040	88305	258474	571517	1476878	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	44864 2244086	77867	223750	467130	1185315	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	144044 8029244	249812	709069	1541950	3940121	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Ave	37924 2518763	72411	212400	477555	1264252	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	36871 2054489	65159	185916	410793	1051538	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	24123 1380154	45708	132150	275721	715429	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	28299 1523102	45686	134856	291169	754731	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	44953 2531875	83331	233859	507728	1292001	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	32027 1612159	59501	157567	341374	862024	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBZ	Ave	23554 1593454	44552	127325	290309	783600	1.00 40.0	2.00	5.00	10.0	20.0
Ethylene Dibromide	CBZ	Ave	23865 1351721	42860	119418	264149	687637	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	86992 4996437	152088	430677	920095	2455209	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBZ	Ave	27119 1658297	46691	139687	312343	833066	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	45982 2633678	81638	235106	494680	1322420	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	56654 3239332	99428	276253	598757	1618844	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBZ	Ave	54405 3101509	91472	270825	583693	1569355	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	92131 5402427	161748	466131	1007809	2707000	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBZ	Ave	11231 883629	22107	69468	154911	437289	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	125166 7039981	214561	630849	1320617	3567815	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	25606 1320740	45008	128137	267022	717067	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	34487 1831098	58469	163415	358578	943899	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	8232 412165	14764	40339	83319	229215	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Ave	4152 375383	9104	30230	71192	188602	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCB	Ave	32036 1846340	53527	161966	347958	943616	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	28701 1600970	49842	141521	308991	819834	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	90482 4867513	159861	451652	958776	2560992	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	30490 1676282	50970	154006	328673	852917	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	76263 4123008	130358	375851	800843	2146865	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	92596 4831967	154586	451431	946085	2547486	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	99545 5351016	163359	493405	1032207	2761616	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	51991 2746303	92159	257669	536230	1439504	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCB	Ave	86204 4488515	138667	410400	883378	2368635	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	54824 2745946	93985	258634	552092	1435662	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66154-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCB	Ave	59368 3365724	99096	303086	636551	1716834	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	48489 2427432	81874	228991	477902	1309473	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	3871 199818	7078	18285	38988	103876	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	22303 1285197	38811	108453	227330	601708	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCB	Ave	9723 535504	14906	44887	94559	240736	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	55824 2999354	101211	267349	563612	1454401	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	21973 1180872	36416	100312	208665	546761	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	26480 1622950	54331	147009	317401	779417	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	30496 1744610	59649	169978	358027	873328	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	118314 7117198	233918	628430	1337711	3513064	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	37600 2105890	71175	186973	390173	1080418	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4939.D
Lims ID: STD8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-May-2016 09:12:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-002
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:20 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 15:46:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	100	1776497	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	83	1277453	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	91	493981	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	1622950	40.0	40.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	1744610	40.0	39.3	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	7117198	40.0	39.2	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	94	2105890	40.0	38.3	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	969646	40.0	34.7	
10 Chloromethane	50	1.636	1.636	0.000	99	1482852	40.0	37.0	
12 Vinyl chloride	62	1.731	1.731	0.000	98	1384307	40.0	32.6	
13 Butadiene	54	1.766	1.766	0.000	97	1360774	40.0	34.1	
15 Bromomethane	94	2.015	2.015	0.000	89	737973	40.0	38.0	
16 Chloroethane	64	2.098	2.109	-0.011	99	741914	40.0	36.8	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	96	1672330	40.0	38.2	
18 Trichlorofluoromethane	101	2.299	2.311	-0.012	97	1220713	40.0	39.9	
19 Ethyl ether	59	2.524	2.524	0.000	89	1371794	40.0	34.5	
20 Acrolein	56	2.630	2.642	-0.012	99	1011188	200.0	180.1	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	1159454	40.0	36.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.748	-0.011	88	714053	40.0	37.5	
23 Acetone	43	2.760	2.760	0.000	100	671519	80.0	78.4	
25 Iodomethane	142	2.879	2.879	0.000	96	1575329	40.0	36.2	
26 Carbon disulfide	76	2.926	2.926	0.000	98	2916487	40.0	36.0	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	1159970	40.0	40.4	
29 Methyl acetate	43	3.021	3.032	-0.011	97	4164389	200.0	174.1	
30 Methylene Chloride	84	3.115	3.115	0.000	90	1360621	40.0	39.1	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	664323	400.0	284.3	
32 Acrylonitrile	53	3.305	3.316	-0.011	99	4456158	400.0	358.4	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	4325311	40.0	36.8	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	1743734	40.0	37.5	
35 Hexane	86	3.565	3.565	0.000	90	393099	40.0	39.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	3074215	40.0	38.7	
37 Vinyl acetate	43	3.707	3.719	-0.012	97	2798107	40.0	37.7	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	73	1047570	80.0	71.6	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	79	1955375	40.0	39.7	
43 2,2-Dichloropropane	77	4.157	4.168	-0.011	86	1323995	40.0	37.9	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	906929	40.0	39.9	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	655509	80.0	69.7	
49 Chloroform	83	4.417	4.417	0.000	92	2812352	40.0	39.3	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	1865466	40.0	38.7	
51 Cyclohexane	56	4.630	4.642	-0.012	87	2072077	40.0	38.4	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	2385800	40.0	39.1	
53 Carbon tetrachloride	117	4.725	4.725	0.000	96	1810111	40.0	41.0	
54 Isobutyl alcohol	41	4.772	4.772	0.000	96	573415	1000.0	753.3	
55 Benzene	78	4.890	4.890	0.000	94	7535140	40.0	40.1	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	1937374	40.0	38.7	
58 n-Heptane	100	5.091	5.091	0.000	90	399180	40.0	38.2	
60 Trichloroethene	130	5.423	5.423	0.000	95	1994931	40.0	40.7	
62 Methylcyclohexane	83	5.600	5.600	0.000	90	2244745	40.0	38.2	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	98	1805020	40.0	40.1	
65 Dibromomethane	93	5.707	5.707	0.000	91	893810	40.0	40.0	
66 1,4-Dioxane	88	5.719	5.719	0.000	89	167169	800.0	558.6	
67 Dichlorobromomethane	83	5.837	5.837	0.000	100	2143575	40.0	41.2	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	2053796	80.0	79.5	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	2978040	40.0	42.2	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	2244086	80.0	75.4	
72 Toluene	91	6.535	6.523	0.012	99	8029244	40.0	39.0	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	90	2518763	40.0	40.8	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	2054489	40.0	38.1	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	1380154	40.0	37.6	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	1523102	40.0	38.9	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	2531875	40.0	37.8	
78 2-Hexanone	43	7.091	7.091	0.000	94	1612159	80.0	70.9	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	1593454	40.0	41.9	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	1351721	40.0	38.6	
84 Chlorobenzene	112	7.813	7.801	0.012	97	4996437	40.0	39.7	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	1658297	40.0	40.5	
86 Ethylbenzene	106	7.908	7.908	0.000	97	2633678	40.0	39.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	3239332	40.0	39.6	
88 o-Xylene	106	8.393	8.393	0.000	96	3101509	40.0	39.4	
89 Styrene	104	8.405	8.405	0.000	94	5402427	40.0	39.7	
90 Bromoform	173	8.582	8.582	0.000	99	883629	40.0	43.9	
91 Isopropylbenzene	105	8.748	8.736	0.012	94	7039981	40.0	39.0	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	1320740	40.0	38.5	
95 Bromobenzene	156	9.044	9.044	0.000	91	1831098	40.0	40.2	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	412165	40.0	37.8	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.067	0.012	81	375383	40.0	46.5	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	1846340	40.0	41.8	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	1600970	40.0	40.9	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	96	4867513	40.0	39.7	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	1676282	40.0	40.6	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	4123008	40.0	40.2	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	4831967	40.0	39.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	5351016	40.0	40.5	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	2746303	40.0	39.4	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	4488515	40.0	39.9	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	2745946	40.0	38.7	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	3365724	40.0	41.4	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	2427432	40.0	38.7	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	91	199818	40.0	39.1	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	1285197	40.0	42.9	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	94	535504	40.0	43.5	
118 Naphthalene	128	12.262	12.262	0.000	97	2999354	40.0	40.6	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	1180872	40.0	42.3	
S 130 1,2-Dichloroethene, Total	96				0			77.2	
S 131 1,3-Dichloropropene, Total	75				0			83.0	
S 132 Xylenes, Total	106				0		80.0	79.0	
S 133 Trihalomethanes, Total	1				0		160.0	166.3	

Reagents:

VMAROLISTDW_00150	Amount Added:	32.00	Units: uL
VMRGAS_00154	Amount Added:	32.00	Units: uL
vm50ss_stk_00068	Amount Added:	32.00	Units: uL
VMRPRIMW_00186	Amount Added:	32.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

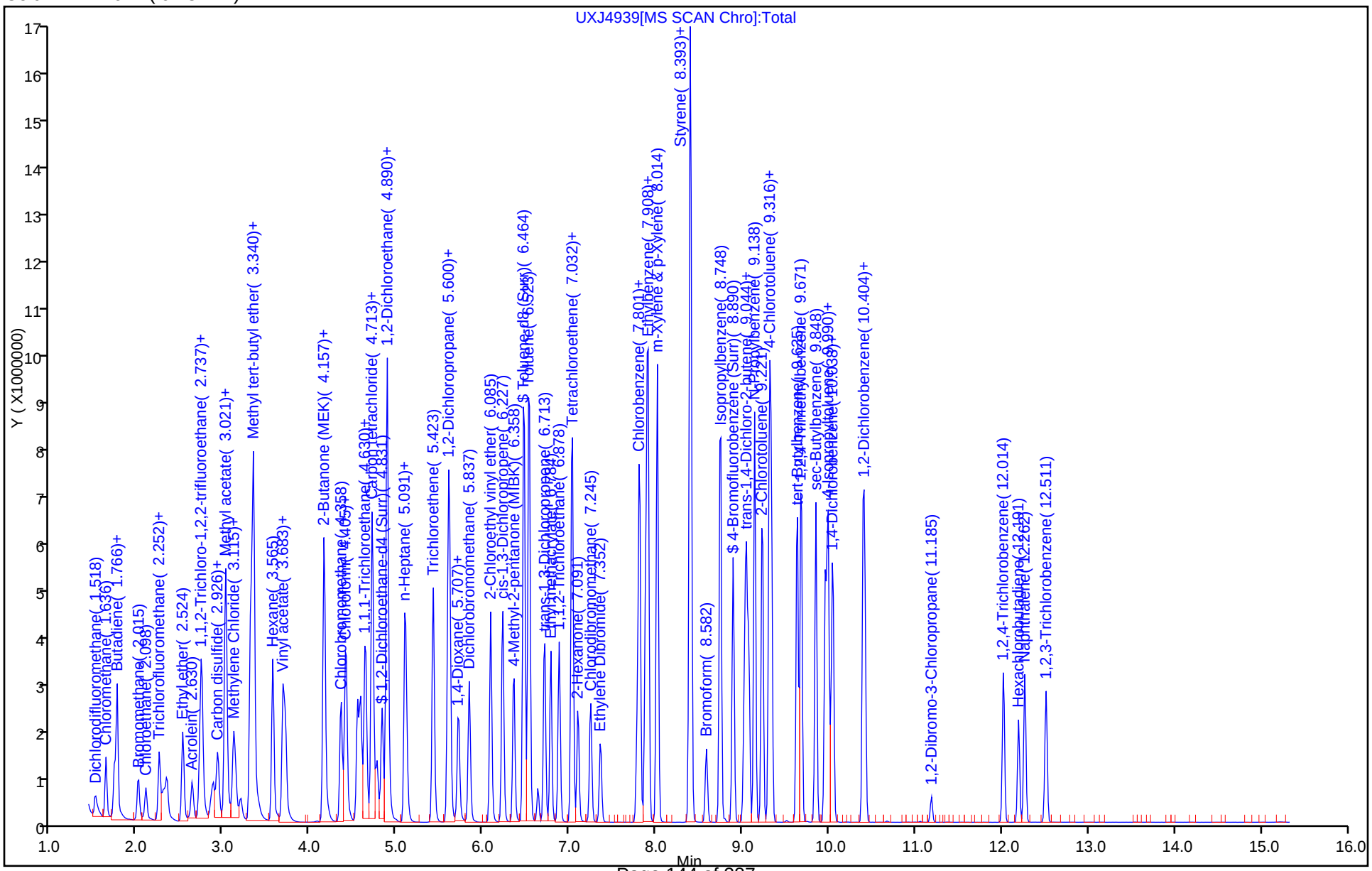
Report Date: 31-May-2016 12:57:21 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4939.D

Injection Date:	28-May-2016 09:12:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L6			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4940.D
Lims ID: STD8260 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-May-2016 09:34:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-003
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:22 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:30:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1714054	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	83	1187398	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	92	500105	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	779417	20.0	20.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	873328	20.0	20.4	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	91	3513064	20.0	20.8	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	94	1080418	20.0	21.2	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	461100	20.0	17.1	
10 Chloromethane	50	1.636	1.636	0.000	99	697263	20.0	18.0	
12 Vinyl chloride	62	1.731	1.731	0.000	98	712641	20.0	17.4	
13 Butadiene	54	1.766	1.766	0.000	98	661868	20.0	17.2	
15 Bromomethane	94	2.015	2.015	0.000	90	354503	20.0	18.9	
16 Chloroethane	64	2.098	2.109	-0.011	99	355335	20.0	18.3	
17 Dichlorofluoromethane	67	2.251	2.263	-0.012	97	792812	20.0	18.8	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	97	568474	20.0	19.2	
19 Ethyl ether	59	2.524	2.524	0.000	89	674181	20.0	17.6	
20 Acrolein	56	2.630	2.642	-0.012	99	504916	100.0	93.2	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	572421	20.0	18.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.748	2.748	0.000	87	337417	20.0	18.4	
23 Acetone	43	2.760	2.760	0.000	99	346148	40.0	40.5	
25 Iodomethane	142	2.879	2.879	0.000	96	800688	20.0	19.1	
26 Carbon disulfide	76	2.926	2.926	0.000	98	1499243	20.0	19.2	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	558156	20.0	20.1	
29 Methyl acetate	43	3.032	3.032	0.000	97	2171435	100.0	94.1	
30 Methylene Chloride	84	3.115	3.115	0.000	89	706494	20.0	20.4	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	396690	200.0	175.9	
32 Acrylonitrile	53	3.305	3.316	-0.011	99	2310723	200.0	192.6	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	2202465	20.0	19.4	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	67	858573	20.0	19.1	
35 Hexane	86	3.565	3.565	0.000	89	186021	20.0	19.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	1515866	20.0	19.8	
37 Vinyl acetate	43	3.719	3.719	0.000	97	1423228	20.0	19.9	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	70	541494	40.0	38.4	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	938653	20.0	19.8	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	682298	20.0	20.2	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	448591	20.0	20.5	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	343109	40.0	37.8	
49 Chloroform	83	4.417	4.417	0.000	92	1401934	20.0	20.3	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	949514	20.0	20.4	
51 Cyclohexane	56	4.630	4.642	-0.012	87	1023155	20.0	19.6	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	1175854	20.0	20.0	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	877932	20.0	20.6	
54 Isobutyl alcohol	41	4.772	4.772	0.000	95	346408	500.0	489.6	
55 Benzene	78	4.890	4.890	0.000	95	3676999	20.0	20.3	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	97	977633	20.0	20.3	
58 n-Heptane	100	5.091	5.091	0.000	89	184802	20.0	18.4	
60 Trichloroethene	130	5.423	5.423	0.000	95	980416	20.0	20.7	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	1105669	20.0	19.5	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	98	900391	20.0	20.7	
65 Dibromomethane	93	5.707	5.707	0.000	94	446516	20.0	20.7	
66 1,4-Dioxane	88	5.718	5.719	-0.001	93	116617	400.0	406.7	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	1066920	20.0	21.2	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	1052330	40.0	42.2	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	1476878	20.0	21.7	
71 4-Methyl-2-pentanone (MIBK	43	6.357	6.358	-0.001	94	1185315	40.0	41.3	
72 Toluene	91	6.535	6.523	0.012	99	3940121	20.0	20.6	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	91	1264252	20.0	22.0	
74 Ethyl methacrylate	69	6.783	6.783	0.000	89	1051538	20.0	21.0	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	715429	20.0	21.0	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	754731	20.0	20.7	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	1292001	20.0	20.8	
78 2-Hexanone	43	7.091	7.091	0.000	94	862024	40.0	40.8	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	783600	20.0	22.2	
82 Ethylene Dibromide	107	7.351	7.351	0.000	99	687637	20.0	21.1	
84 Chlorobenzene	112	7.813	7.801	0.012	96	2455209	20.0	21.0	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	833066	20.0	21.9	
86 Ethylbenzene	106	7.908	7.908	0.000	97	1322420	20.0	21.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	1618844	20.0	21.3	
88 o-Xylene	106	8.393	8.393	0.000	96	1569355	20.0	21.5	
89 Styrene	104	8.405	8.405	0.000	94	2707000	20.0	21.4	
90 Bromoform	173	8.582	8.582	0.000	99	437289	20.0	23.4	
91 Isopropylbenzene	105	8.748	8.736	0.012	94	3567815	20.0	21.3	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	717067	20.0	20.6	
95 Bromobenzene	156	9.044	9.044	0.000	92	943899	20.0	20.5	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	229215	20.0	20.7	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.067	0.012	80	188602	20.0	23.1	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	943616	20.0	21.1	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	819834	20.0	20.7	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	2560992	20.0	20.6	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	852917	20.0	20.4	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	2146865	20.0	20.7	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	2547486	20.0	20.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	2761616	20.0	20.6	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	1439504	20.0	20.4	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	2368635	20.0	20.8	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	1435662	20.0	20.0	
111 n-Butylbenzene	91	10.392	10.393	-0.001	97	1716834	20.0	20.9	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	1309473	20.0	20.6	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	92	103876	20.0	20.1	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	601708	20.0	19.8	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	94	240736	20.0	19.3	
118 Naphthalene	128	12.262	12.262	0.000	96	1454401	20.0	19.4	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	546761	20.0	19.3	
S 130 1,2-Dichloroethene, Total	96				0			38.9	
S 131 1,3-Dichloropropene, Total	75				0			43.7	
S 132 Xylenes, Total	106				0		40.0	42.7	
S 133 Trihalomethanes, Total	1				0		80.0	87.1	

Reagents:

VMAROLISTDW_00150	Amount Added:	16.00	Units: uL
VMRGAS_00154	Amount Added:	16.00	Units: uL
vm50ss_stk_00068	Amount Added:	16.00	Units: uL
VMRPRIMW_00186	Amount Added:	16.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

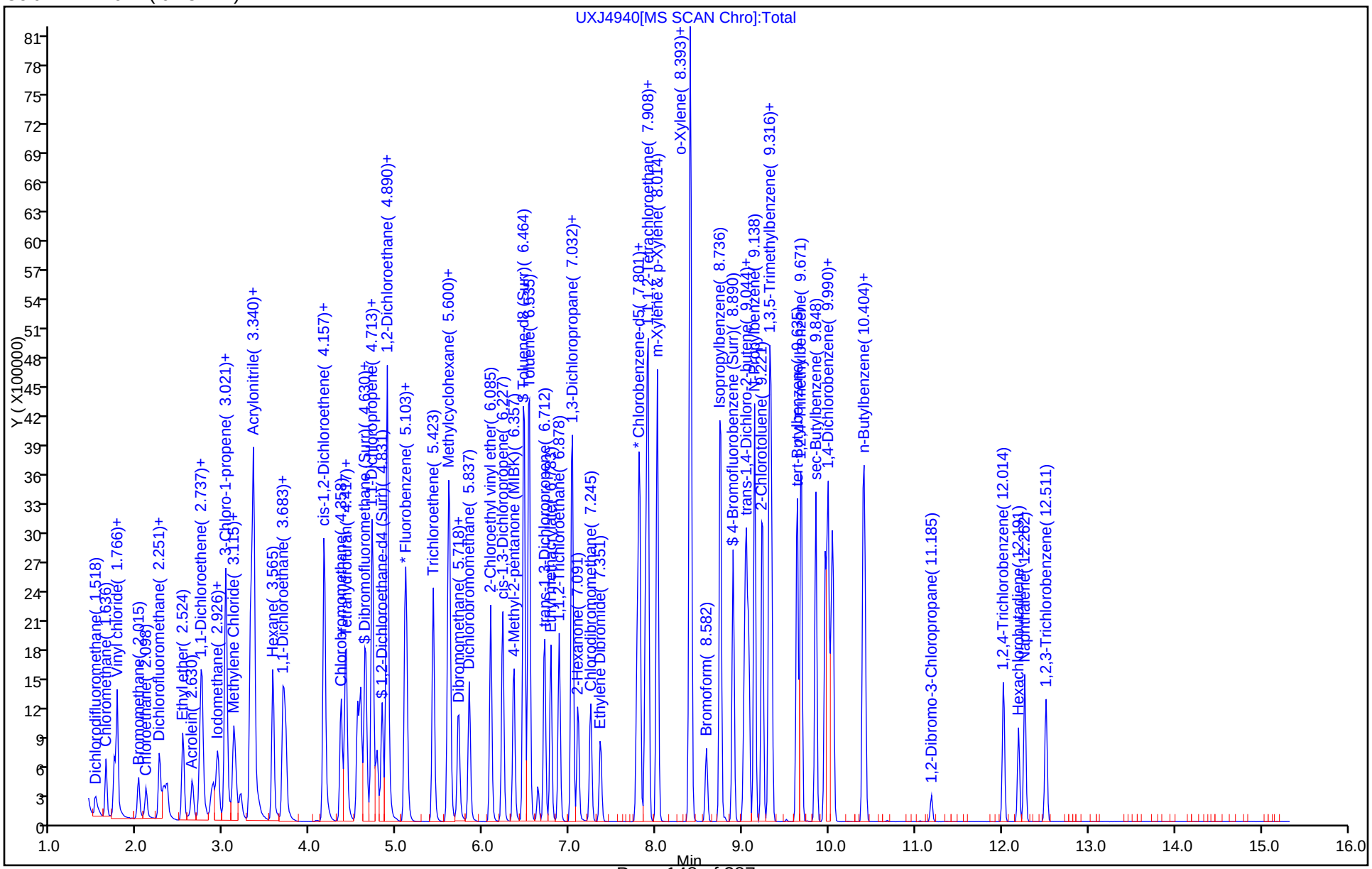
Report Date: 31-May-2016 12:57:23 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4940.D

Injection Date:	28-May-2016 09:34:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L5			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4941.D
Lims ID: STD8260 L4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 28-May-2016 09:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-004
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:25 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 16:23:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1420065	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	83	934240	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.014	10.014	0.000	92	380946	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	317401	10.0	10.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	358027	10.0	10.1	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1337711	10.0	10.1	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	390173	10.0	9.72	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	209756	10.0	9.39	
10 Chloromethane	50	1.636	1.636	0.000	99	326020	10.0	10.2	
12 Vinyl chloride	62	1.731	1.731	0.000	98	340550	10.0	10.0	
13 Butadiene	54	1.766	1.766	0.000	99	294290	10.0	9.22	
15 Bromomethane	94	2.015	2.015	0.000	90	154065	10.0	9.93	
16 Chloroethane	64	2.109	2.109	0.000	99	160210	10.0	9.94	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	351106	10.0	10.0	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	98	250400	10.0	10.2	
19 Ethyl ether	59	2.524	2.524	0.000	89	319048	10.0	10.0	
20 Acrolein	56	2.642	2.642	0.000	98	230248	50.0	51.3	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	250490	10.0	9.98	
22 1,1,2-Trichloro-1,2,2-trif	151	2.748	2.748	0.000	84	148245	10.0	9.75	
23 Acetone	43	2.760	2.760	0.000	98	159576	20.0	21.2	
25 Iodomethane	142	2.879	2.879	0.000	96	342536	10.0	9.84	
26 Carbon disulfide	76	2.926	2.926	0.000	98	627823	10.0	9.69	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	95	243798	10.0	10.6	
29 Methyl acetate	43	3.032	3.032	0.000	97	961335	50.0	50.3	
30 Methylene Chloride	84	3.115	3.115	0.000	91	319614	10.0	10.5	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	179576	100.0	96.1	
32 Acrylonitrile	53	3.316	3.316	0.000	99	1026114	100.0	103.2	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	984808	10.0	10.5	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	67	377290	10.0	10.1	
35 Hexane	86	3.565	3.565	0.000	89	77440	10.0	9.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	648277	10.0	10.2	
37 Vinyl acetate	43	3.719	3.719	0.000	97	611598	10.0	10.3	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	77	235494	20.0	20.1	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	402405	10.0	10.2	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	287783	10.0	10.3	
47 Chlorobromomethane	128	4.358	4.358	0.000	90	189361	10.0	10.4	
48 Tetrahydrofuran	42	4.393	4.393	0.000	90	152241	20.0	20.3	
49 Chloroform	83	4.417	4.417	0.000	92	579380	10.0	10.1	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	391457	10.0	10.1	
51 Cyclohexane	56	4.642	4.642	0.000	87	421868	10.0	9.77	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	493069	10.0	10.1	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	371005	10.0	10.5	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	165409	250.0	297.1	
55 Benzene	78	4.890	4.890	0.000	95	1525909	10.0	10.2	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	406414	10.0	10.2	
58 n-Heptane	100	5.091	5.091	0.000	89	73669	10.0	8.83	
60 Trichloroethene	130	5.423	5.423	0.000	95	389926	10.0	9.95	
62 Methylcyclohexane	83	5.600	5.600	0.000	90	435279	10.0	9.27	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	355570	10.0	9.88	
65 Dibromomethane	93	5.707	5.707	0.000	90	176155	10.0	9.85	
66 1,4-Dioxane	88	5.719	5.719	0.000	31	45884	200.0	198.5	
67 Dichlorobromomethane	83	5.837	5.837	0.000	100	408988	10.0	9.83	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	414102	20.0	20.1	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	571517	10.0	10.1	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	467130	20.0	19.6	
72 Toluene	91	6.523	6.523	0.000	99	1541950	10.0	10.2	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	91	477555	10.0	10.6	
74 Ethyl methacrylate	69	6.783	6.783	0.000	88	410793	10.0	10.4	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	275721	10.0	10.3	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	291169	10.0	10.2	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	507728	10.0	10.4	
78 2-Hexanone	43	7.091	7.091	0.000	93	341374	20.0	20.5	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	290309	10.0	10.4	
82 Ethylene Dibromide	107	7.351	7.351	0.000	99	264149	10.0	10.3	
84 Chlorobenzene	112	7.801	7.801	0.000	96	920095	10.0	10.0	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	312343	10.0	10.4	
86 Ethylbenzene	106	7.908	7.908	0.000	98	494680	10.0	10.0	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	598757	10.0	10.0	
88 o-Xylene	106	8.393	8.393	0.000	95	583693	10.0	10.1	
89 Styrene	104	8.405	8.405	0.000	94	1007809	10.0	10.1	
90 Bromoform	173	8.582	8.582	0.000	99	154911	10.0	10.5	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	1320617	10.0	10.0	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	267022	10.0	10.1	
95 Bromobenzene	156	9.044	9.044	0.000	91	358578	10.0	10.2	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	83319	10.0	9.90	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	77	71192	10.0	11.4	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	347958	10.0	10.2	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	308991	10.0	10.2	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	958776	10.0	10.1	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	328673	10.0	10.3	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	800843	10.0	10.1	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	946085	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	1032207	10.0	10.1	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	536230	10.0	9.98	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	883378	10.0	10.2	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	552092	10.0	10.1	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	636551	10.0	10.2	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	477902	10.0	9.89	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	92	38988	10.0	9.90	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	227330	10.0	9.84	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	94559	10.0	9.95	
118 Naphthalene	128	12.262	12.262	0.000	97	563612	10.0	9.89	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	208665	10.0	9.69	
S 132 Xylenes, Total	106				0		20.0	20.1	
S 133 Trihalomethanes, Total	1				0		40.0	40.9	

Reagents:

VMAROLISTDW_00150	Amount Added:	8.00	Units: uL
VMRGAS_00154	Amount Added:	8.00	Units: uL
vm50ss_stk_00068	Amount Added:	8.00	Units: uL
VMRPRIMW_00186	Amount Added:	8.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

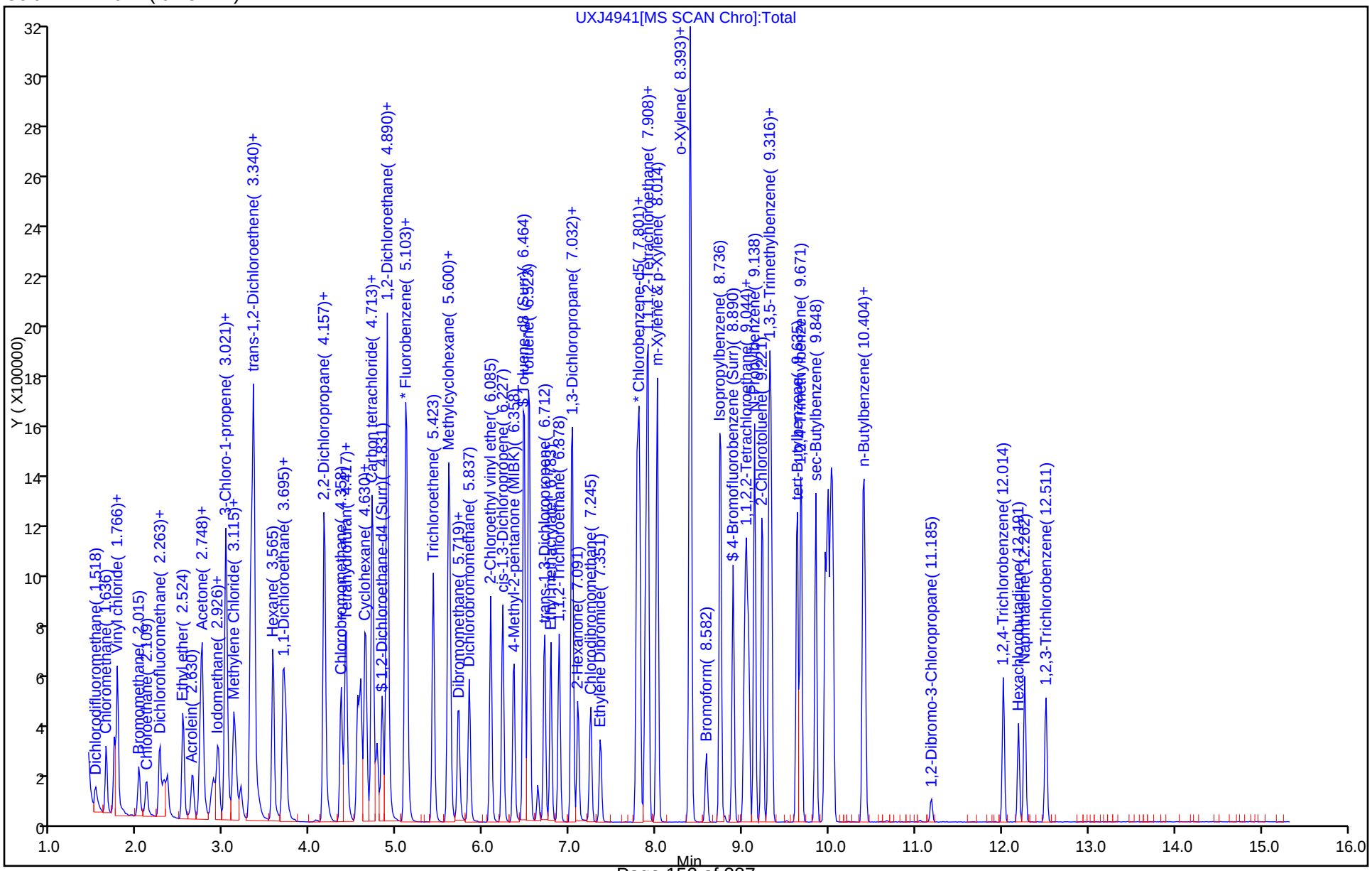
Report Date: 31-May-2016 12:57:26 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4941.D

Injection Date:	28-May-2016 09:56:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4942.D
Lims ID: STD8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-May-2016 10:19:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-005
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:27 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 16:48:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1369393	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	909861	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	94	375729	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	94	147009	5.00	4.81	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	169978	5.00	4.96	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	628430	5.00	4.86	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	186973	5.00	4.78	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	107457	5.00	4.99	
10 Chloromethane	50	1.636	1.636	0.000	99	163736	5.00	5.31	
12 Vinyl chloride	62	1.731	1.731	0.000	97	174517	5.00	5.32	
13 Butadiene	54	1.766	1.766	0.000	97	153087	5.00	4.97	
15 Bromomethane	94	2.015	2.015	0.000	88	80655	5.00	5.39	
16 Chloroethane	64	2.098	2.109	-0.011	98	80324	5.00	5.17	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	95	170748	5.00	5.06	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	98	117652	5.00	4.99	
19 Ethyl ether	59	2.524	2.524	0.000	88	146699	5.00	4.79	
20 Acrolein	56	2.630	2.642	-0.012	99	110232	25.0	25.5	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	120990	5.00	5.00	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	91	73100	5.00	4.98	
23 Acetone	43	2.760	2.760	0.000	100	84334	10.0	10.2	
25 Iodomethane	142	2.867	2.879	-0.012	96	172386	5.00	5.14	
26 Carbon disulfide	76	2.926	2.926	0.000	99	324706	5.00	5.20	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	110804	5.00	5.01	
29 Methyl acetate	43	3.033	3.032	0.001	97	472016	25.0	25.6	
30 Methylene Chloride	84	3.115	3.115	0.000	91	166894	5.00	5.04	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	93221	50.0	51.8	
32 Acrylonitrile	53	3.317	3.316	0.000	99	493445	50.0	51.5	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	454764	5.00	5.02	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	177398	5.00	4.94	
35 Hexane	86	3.565	3.565	0.000	89	35278	5.00	4.60	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	300963	5.00	4.91	
37 Vinyl acetate	43	3.719	3.719	0.000	97	284897	5.00	4.98	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	70	111907	10.0	9.92	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	79	187256	5.00	4.94	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	135347	5.00	5.02	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	86218	5.00	4.93	
48 Tetrahydrofuran	42	4.405	4.393	0.012	89	70954	10.0	9.79	
49 Chloroform	83	4.417	4.417	0.000	92	266160	5.00	4.82	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	97	182420	5.00	4.90	
51 Cyclohexane	56	4.630	4.642	-0.012	87	201144	5.00	4.83	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	227255	5.00	4.84	
53 Carbon tetrachloride	117	4.725	4.725	0.000	94	165573	5.00	4.86	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	71716	125.0	132.3	
55 Benzene	78	4.890	4.890	0.000	95	696193	5.00	4.81	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	189233	5.00	4.91	
58 n-Heptane	100	5.091	5.091	0.000	90	34326	5.00	4.27	
60 Trichloroethene	130	5.423	5.423	0.000	95	179338	5.00	4.74	
62 Methylcyclohexane	83	5.600	5.600	0.000	88	208709	5.00	4.61	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	165544	5.00	4.77	
65 Dibromomethane	93	5.707	5.707	0.000	91	84084	5.00	4.88	
66 1,4-Dioxane	88	5.719	5.719	0.000	29	19728	100.0	94.1	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	186411	5.00	4.65	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	91	193865	10.0	9.74	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	98	258474	5.00	4.75	
71 4-Methyl-2-pentanone (MIBK	43	6.346	6.358	-0.012	95	223750	10.0	9.75	
72 Toluene	91	6.523	6.523	0.000	98	709069	5.00	4.83	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	90	212400	5.00	4.83	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	185916	5.00	4.85	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	132150	5.00	5.05	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	134856	5.00	4.84	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	233859	5.00	4.91	
78 2-Hexanone	43	7.091	7.091	0.000	95	157567	10.0	9.73	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	127325	5.00	4.70	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	119418	5.00	4.79	
84 Chlorobenzene	112	7.801	7.801	0.000	97	430677	5.00	4.81	
85 1,1,1,2-Tetrachloroethane	131	7.872	7.884	-0.012	95	139687	5.00	4.79	
86 Ethylbenzene	106	7.908	7.908	0.000	97	235106	5.00	4.90	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	276253	5.00	4.74	
88 o-Xylene	106	8.393	8.393	0.000	95	270825	5.00	4.84	
89 Styrene	104	8.405	8.405	0.000	94	466131	5.00	4.81	
90 Bromoform	173	8.582	8.582	0.000	97	69468	5.00	4.85	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	630849	5.00	4.91	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	128137	5.00	4.91	
95 Bromobenzene	156	9.044	9.044	0.000	91	163415	5.00	4.72	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	40339	5.00	4.86	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	74	30230	5.00	4.92	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	161966	5.00	4.82	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	141521	5.00	4.75	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	96	451652	5.00	4.84	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	154006	5.00	4.91	
102 tert-Butylbenzene	119	9.635	9.635	0.000	90	375851	5.00	4.82	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	451431	5.00	4.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	493405	5.00	4.90	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	257669	5.00	4.86	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	410400	5.00	4.80	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	258634	5.00	4.80	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	303086	5.00	4.90	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	228991	5.00	4.81	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	90	18285	5.00	4.71	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	108453	5.00	4.76	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	92	44887	5.00	4.79	
118 Naphthalene	128	12.262	12.262	0.000	97	267349	5.00	4.76	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	100312	5.00	4.72	
S 130 1,2-Dichloroethene, Total	96				0			9.88	
S 131 1,3-Dichloropropene, Total	75				0			9.58	
S 132 Xylenes, Total	106				0		10.0	9.57	
S 133 Trihalomethanes, Total	1				0		20.0	19.0	

Reagents:

VMAROLISTDW_00150	Amount Added:	4.00	Units: uL
VMRGAS_00154	Amount Added:	4.00	Units: uL
vm50ss_stk_00068	Amount Added:	4.00	Units: uL
VMRPRIMW_00186	Amount Added:	4.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

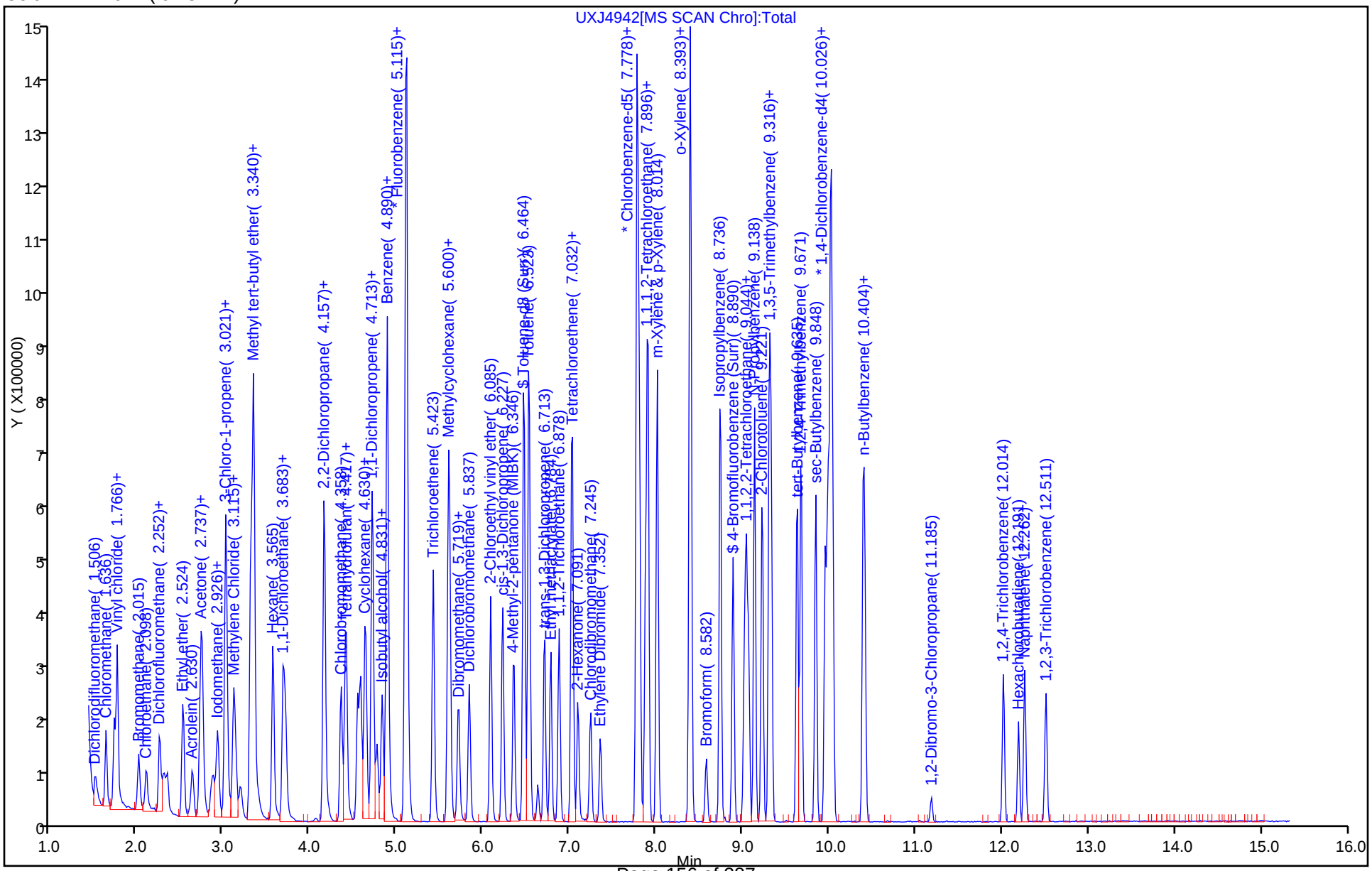
Report Date: 31-May-2016 12:57:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4942.D

Injection Date:	28-May-2016 10:19:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4943.D
Lims ID: STD8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-May-2016 10:40:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-006
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:28 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:32:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1165536	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	790075	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.014	10.014	0.000	93	323920	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	54331	2.00	2.09	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	59649	2.00	2.05	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	91	233918	2.00	2.08	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	93	71175	2.00	2.10	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	42058	2.00	2.29	
10 Chloromethane	50	1.636	1.636	0.000	98	55193	2.00	2.10	
12 Vinyl chloride	62	1.731	1.731	0.000	98	63543	2.00	2.28	
13 Butadiene	54	1.767	1.766	0.001	98	56652	2.00	2.16	
15 Bromomethane	94	2.015	2.015	0.000	91	27304	2.00	2.14	
16 Chloroethane	64	2.110	2.109	0.001	98	27565	2.00	2.08	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	96	58518	2.00	2.04	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	95	44203	2.00	2.20	
19 Ethyl ether	59	2.524	2.524	0.000	88	54893	2.00	2.10	
20 Acrolein	56	2.642	2.642	0.000	99	42139	10.0	11.4	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	96	43795	2.00	2.13	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	84	26719	2.00	2.14	
23 Acetone	43	2.760	2.760	0.000	99	36559	4.00	3.74	
25 Iodomethane	142	2.867	2.879	-0.012	96	58473	2.00	2.05	
26 Carbon disulfide	76	2.926	2.926	0.000	99	109512	2.00	2.06	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	37846	2.00	2.01	
29 Methyl acetate	43	3.033	3.032	0.001	97	164975	10.0	10.5	
30 Methylene Chloride	84	3.115	3.115	0.000	86	76625	2.00	2.07	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	29614	20.0	19.3	
32 Acrylonitrile	53	3.317	3.316	0.001	98	166619	20.0	20.4	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	154869	2.00	2.01	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	69	61202	2.00	2.00	
35 Hexane	86	3.565	3.565	0.000	87	12458	2.00	1.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	95	104382	2.00	2.00	
37 Vinyl acetate	43	3.719	3.719	0.000	97	101120	2.00	2.08	
42 2-Butanone (MEK)	43	4.169	4.157	0.012	90	36632	4.00	3.82	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	64376	2.00	1.99	
43 2,2-Dichloropropane	77	4.157	4.168	-0.011	84	43737	2.00	1.91	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	28396	2.00	1.91	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	25966	4.00	4.21	
49 Chloroform	83	4.417	4.417	0.000	92	91075	2.00	1.94	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	97	61062	2.00	1.93	
51 Cyclohexane	56	4.642	4.642	0.000	88	70906	2.00	2.00	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	76372	2.00	1.91	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	51928	2.00	1.79	
54 Isobutyl alcohol	41	4.772	4.772	0.000	94	23137	50.0	49.1	
55 Benzene	78	4.890	4.890	0.000	95	239491	2.00	1.94	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	95	63100	2.00	1.92	
58 n-Heptane	100	5.103	5.091	0.012	90	14850	2.00	2.17	
60 Trichloroethene	130	5.423	5.423	0.000	95	61235	2.00	1.90	
62 Methylcyclohexane	83	5.600	5.600	0.000	88	80144	2.00	2.08	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	57733	2.00	1.96	
65 Dibromomethane	93	5.707	5.707	0.000	91	29538	2.00	2.01	
66 1,4-Dioxane	88	5.742	5.719	0.023	27	5839	40.0	39.4	
67 Dichlorobromomethane	83	5.837	5.837	0.000	97	67774	2.00	1.98	
69 2-Chloroethyl vinyl ether	63	6.086	6.085	0.001	91	69187	4.00	4.08	
70 cis-1,3-Dichloropropene	75	6.228	6.227	0.001	97	88305	2.00	1.91	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	77867	4.00	3.99	
72 Toluene	91	6.535	6.523	0.012	99	249812	2.00	1.96	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	72411	2.00	1.90	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	65159	2.00	1.96	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	87	45708	2.00	2.01	
76 Tetrachloroethene	164	7.020	7.020	0.000	94	45686	2.00	1.89	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	87	83331	2.00	2.01	
78 2-Hexanone	43	7.091	7.091	0.000	94	59501	4.00	4.23	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	44552	2.00	1.89	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	42860	2.00	1.98	
84 Chlorobenzene	112	7.801	7.801	0.000	96	152088	2.00	1.96	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	94	46691	2.00	1.84	
86 Ethylbenzene	106	7.908	7.908	0.000	97	81638	2.00	1.96	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	99428	2.00	1.96	
88 o-Xylene	106	8.393	8.393	0.000	95	91472	2.00	1.88	
89 Styrene	104	8.405	8.405	0.000	94	161748	2.00	1.92	
90 Bromoform	173	8.582	8.582	0.000	97	22107	2.00	1.78	
91 Isopropylbenzene	105	8.736	8.736	0.000	94	214561	2.00	1.92	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	93	45008	2.00	2.00	
95 Bromobenzene	156	9.044	9.044	0.000	91	58469	2.00	1.96	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	14764	2.00	2.06	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	67	9104	2.00	1.72	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	53527	2.00	1.85	
99 2-Chlorotoluene	126	9.221	9.233	-0.012	97	49842	2.00	1.94	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	159861	2.00	1.99	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	50970	2.00	1.88	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	130358	2.00	1.94	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	154586	2.00	1.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	163359	2.00	1.88	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	96	92159	2.00	2.02	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	138667	2.00	1.88	
108 1,4-Dichlorobenzene	146	10.038	10.049	-0.011	95	93985	2.00	2.02	
111 n-Butylbenzene	91	10.393	10.393	0.000	96	99096	2.00	1.86	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	81874	2.00	1.99	
114 1,2-Dibromo-3-Chloropropan	157	11.186	11.185	0.001	89	7078	2.00	2.11	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	92	38811	2.00	1.98	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	14906	2.00	1.84	
118 Naphthalene	128	12.262	12.262	0.000	97	101211	2.00	2.09	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	36416	2.00	1.99	
S 130 1,2-Dichloroethene, Total	96				0			4.00	
S 131 1,3-Dichloropropene, Total	75				0			3.80	
S 132 Xylenes, Total	106				0		4.00	3.84	
S 133 Trihalomethanes, Total	1				0		8.00	7.60	

Reagents:

VMAROLISTDW_00150	Amount Added:	1.60	Units: uL
VMRGAS_00154	Amount Added:	1.60	Units: uL
vm50ss_stk_00068	Amount Added:	1.60	Units: uL
VMRPRIMW_00186	Amount Added:	1.60	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

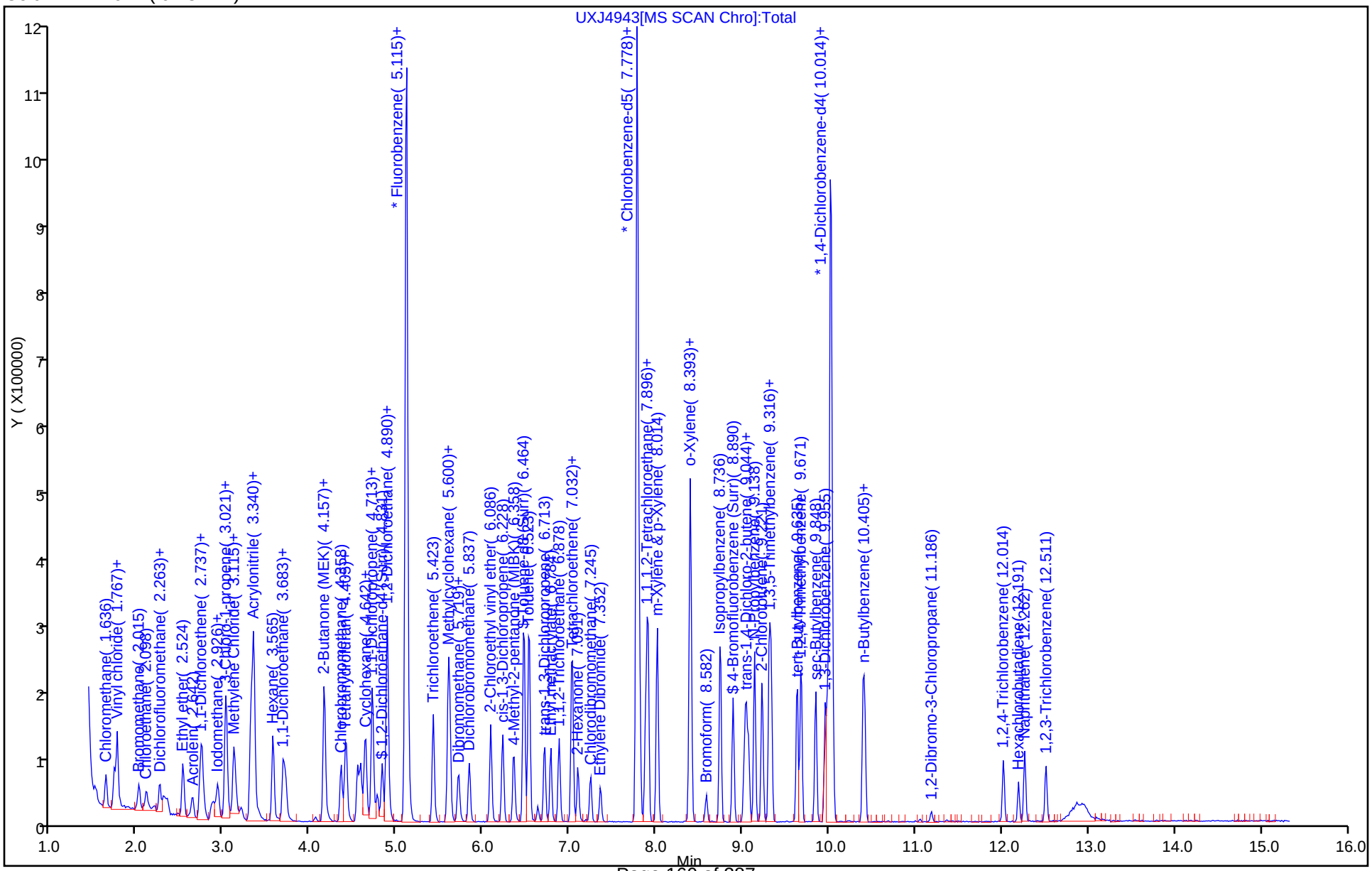
Report Date: 31-May-2016 12:57:29 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4943.D

Injection Date:	28-May-2016 10:40:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L2			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4944.D
Lims ID: STD8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 28-May-2016 11:03:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-007
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:33:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1250375	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	868140	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	93	363316	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	94	26480	1.00	0.9491	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	30496	1.00	0.9753	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	118314	1.00	0.9588	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	37600	1.00	1.01	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	23438	1.00	1.19	
10 Chloromethane	50	1.636	1.636	0.000	99	29346	1.00	1.04	
12 Vinyl chloride	62	1.731	1.731	0.000	98	33272	1.00	1.11	
13 Butadiene	54	1.766	1.766	0.000	97	36282	1.00	1.29	
15 Bromomethane	94	2.015	2.015	0.000	90	13133	1.00	0.9611	
16 Chloroethane	64	2.110	2.109	0.001	96	15535	1.00	1.10	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	33161	1.00	1.08	
18 Trichlorofluoromethane	101	2.299	2.311	-0.012	94	19826	1.00	0.9201	
19 Ethyl ether	59	2.524	2.524	0.000	89	34902	1.00	1.25	
20 Acrolein	56	2.642	2.642	0.000	97	19345	5.00	4.89	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	23639	1.00	1.07	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	90	14742	1.00	1.10	
23 Acetone	43	2.760	2.760	0.000	98	28981	2.00	1.98	
25 Iodomethane	142	2.879	2.879	0.000	94	33915	1.00	1.11	
26 Carbon disulfide	76	2.926	2.926	0.000	99	62901	1.00	1.10	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	18473	1.00	0.9142	
29 Methyl acetate	43	3.033	3.032	0.001	97	93308	5.00	5.54	
30 Methylene Chloride	84	3.127	3.115	0.012	91	54952	1.00	0.9134	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	19046	10.0	11.6	
32 Acrylonitrile	53	3.317	3.316	0.001	98	92538	10.0	10.6	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	87130	1.00	1.05	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	36112	1.00	1.10	
35 Hexane	86	3.565	3.565	0.000	92	8411	1.00	1.20	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	95	58482	1.00	1.04	
37 Vinyl acetate	43	3.719	3.719	0.000	97	52287	1.00	1.00	
42 2-Butanone (MEK)	43	4.169	4.157	0.012	69	24577	2.00	2.39	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	78	35026	1.00	1.01	
43 2,2-Dichloropropane	77	4.169	4.168	0.001	84	26011	1.00	1.06	
47 Chlorobromomethane	128	4.358	4.358	0.000	91	15903	1.00	1.00	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	15041	2.00	2.27	
49 Chloroform	83	4.417	4.417	0.000	91	53127	1.00	1.05	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	96	35830	1.00	1.05	
51 Cyclohexane	56	4.642	4.642	0.000	87	42471	1.00	1.12	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	46682	1.00	1.09	
53 Carbon tetrachloride	117	4.725	4.725	0.000	73	31877	1.00	1.03	
54 Isobutyl alcohol	41	4.772	4.772	0.000	89	13422	25.0	25.9	
55 Benzene	78	4.890	4.890	0.000	95	136474	1.00	1.03	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	54	37279	1.00	1.06	
58 n-Heptane	100	5.091	5.091	0.000	76	9589	1.00	1.31	
60 Trichloroethene	130	5.423	5.423	0.000	94	36312	1.00	1.05	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	48752	1.00	1.18	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	95	32959	1.00	1.04	
65 Dibromomethane	93	5.707	5.707	0.000	91	15759	1.00	1.00	
66 1,4-Dioxane	88	5.719	5.719	0.000	31	2389	20.0	21.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	98	36730	1.00	1.00	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	93	34608	2.00	1.90	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	47210	1.00	0.9494	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	93	44864	2.00	2.14	
72 Toluene	91	6.535	6.523	0.012	99	144044	1.00	1.03	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	37924	1.00	0.9043	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	36871	1.00	1.01	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	88	24123	1.00	0.9670	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	28299	1.00	1.06	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	44953	1.00	0.9887	
78 2-Hexanone	43	7.091	7.091	0.000	90	32027	2.00	2.07	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	23554	1.00	0.9116	
82 Ethylene Dibromide	107	7.352	7.351	0.001	97	23865	1.00	1.00	
84 Chlorobenzene	112	7.813	7.801	0.012	97	86992	1.00	1.02	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	27119	1.00	0.9739	
86 Ethylbenzene	106	7.908	7.908	0.000	98	45982	1.00	1.00	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	56654	1.00	1.02	
88 o-Xylene	106	8.393	8.393	0.000	96	54405	1.00	1.02	
89 Styrene	104	8.405	8.405	0.000	94	92131	1.00	1.00	
90 Bromoform	173	8.582	8.582	0.000	95	11231	1.00	0.8215	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	125166	1.00	1.02	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	25606	1.00	1.01	
95 Bromobenzene	156	9.044	9.044	0.000	90	34487	1.00	1.03	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	82	8232	1.00	1.03	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	66	4152	1.00	0.6989	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	32036	1.00	0.9868	
99 2-Chlorotoluene	126	9.221	9.233	-0.012	97	28701	1.00	1.00	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	90482	1.00	1.00	
101 4-Chlorotoluene	126	9.328	9.328	0.000	96	30490	1.00	1.01	
102 tert-Butylbenzene	119	9.635	9.635	0.000	91	76263	1.00	1.01	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	92596	1.00	1.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	92	99545	1.00	1.02	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	96	51991	1.00	1.01	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	86204	1.00	1.04	
108 1,4-Dichlorobenzene	146	10.038	10.049	-0.011	96	54824	1.00	1.05	
111 n-Butylbenzene	91	10.393	10.393	0.000	96	59368	1.00	0.99	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	97	48489	1.00	1.05	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	90	3871	1.00	1.03	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	92	22303	1.00	1.01	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	90	9723	1.00	1.07	
118 Naphthalene	128	12.262	12.262	0.000	96	55824	1.00	1.03	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	94	21973	1.00	1.07	
S 130 1,2-Dichloroethene, Total	96				0			2.11	
S 131 1,3-Dichloropropene, Total	75				0			1.85	
S 132 Xylenes, Total	106				0		2.00	2.04	
S 133 Trihalomethanes, Total	1				0		4.00	3.79	

Reagents:

VMAROLISTDW_00150	Amount Added:	0.80	Units: uL
VMRGAS_00154	Amount Added:	0.80	Units: uL
vm50ss_stk_00068	Amount Added:	0.80	Units: uL
VMRPRIMW_00186	Amount Added:	0.80	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

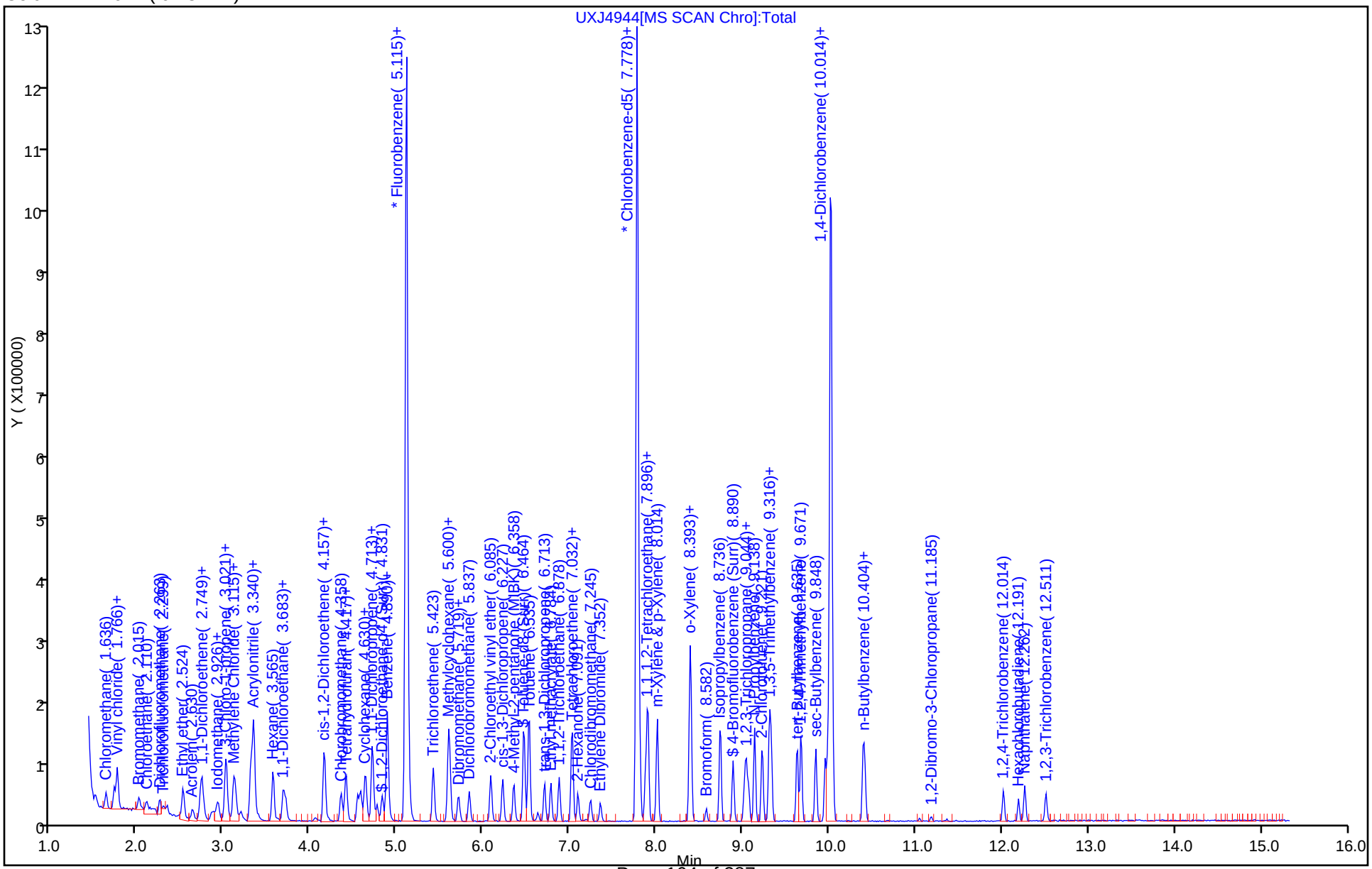
Report Date: 31-May-2016 12:57:31 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4944.D

Injection Date:	28-May-2016 11:03:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L1			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.0785*	0.1000	0.00499	0.0100	-50.1*	20.0
Chloromethane	Ave	0.2254	0.1613	0.1000	0.00716	0.0100	-28.4*	20.0
Vinyl chloride	Ave	0.2393	0.1918	0.1000	0.00801	0.0100	-19.9	20.0
Butadiene	Ave	0.2248	0.1710		0.00761	0.0100	-23.9	30.0
Bromomethane	Ave	0.1093	0.0897	0.0500	0.00821	0.0100	-17.9	20.0
Chloroethane	Ave	0.1134	0.0951	0.0500	0.00838	0.0100	-16.2	20.0
Dichlorofluoromethane	Ave	0.2466	0.2222		0.00901	0.0100	-9.9	20.0
Trichlorofluoromethane	Ave	0.1723	0.1649	0.1000	0.00957	0.0100	-4.3	20.0
Ethyl ether	Ave	0.2239	0.2205		0.00985	0.0100	-1.5	20.0
Acrolein	Ave	0.0316	0.0196		0.0309	0.0500	-38.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1892	0.1000	0.0107	0.0100	7.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1197	0.0500	0.0112	0.0100	11.8	20.0
Acetone	Lin1		0.0409	0.0100	0.0146	0.0200	-27.1	50.0
Iodomethane	Ave	0.2451	0.2543		0.0104	0.0100	3.8	20.0
Carbon disulfide	Ave	0.4562	0.4979	0.1000	0.0109	0.0100	9.1	20.0
3-Chloro-1-propene	Ave	0.1616	0.1753		0.0108	0.0100	8.5	20.0
Methyl acetate	Ave	0.1347	0.1285	0.1000	0.0477	0.0500	-4.6	20.0
Methylene Chloride	Lin1		0.2133	0.1000	0.00987	0.0100	-1.3	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0104		0.0788	0.100	-21.2	50.0
Acrylonitrile	Ave	0.0700	0.0688		0.0982	0.100	-1.8	20.0
Methyl tert-butyl ether	Ave	0.6617	0.6529	0.1000	0.00987	0.0100	-1.3	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2698	0.1000	0.0103	0.0100	3.0	20.0
Hexane	Ave	0.0561	0.0718		0.0128	0.0100	28.0*	20.0
1,1-Dichloroethane	Ave	0.4477	0.4276	0.2000	0.00955	0.0100	-4.5	20.0
Vinyl acetate	Ave	0.4179	0.4341		0.0104	0.0100	3.9	50.0
2-Butanone (MEK)	Ave	0.0824	0.0709	0.0100	0.0172	0.0200	-13.9	20.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2702	0.1000	0.00975	0.0100	-2.5	20.0
2,2-Dichloropropane	Ave	0.1969	0.1923		0.00977	0.0100	-2.3	20.0
Chlorobromomethane	Ave	0.1278	0.1279		0.0100	0.0100	0.0	20.0
Tetrahydrofuran	Ave	0.0529	0.0487		0.0184	0.0200	-8.0	20.0
Chloroform	Ave	0.4028	0.3863	0.2000	0.00959	0.0100	-4.1	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2653	0.1000	0.00977	0.0100	-2.3	20.0
Cyclohexane	Ave	0.3041	0.3496	0.1000	0.0115	0.0100	14.9	20.0
1,1-Dichloropropene	Ave	0.3431	0.3373		0.00983	0.0100	-1.7	20.0
Carbon tetrachloride	Ave	0.2486	0.2618	0.1000	0.0105	0.0100	5.3	20.0
Isobutyl alcohol	Ave	0.0060	0.0055		0.231	0.250	-7.5	20.0
1,2-Dichloroethane	Ave	0.2815	0.2824	0.1000	0.0100	0.0100	0.3	20.0
Benzene	Ave	1.057	1.019	0.5000	0.00964	0.0100	-3.6	20.0
n-Heptane	Ave	0.0587	0.0635		0.0108	0.0100	8.1	20.0
Trichloroethene	Ave	0.2761	0.2702	0.1500	0.00979	0.0100	-2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.3651	0.1000	0.0110	0.0100	10.4	20.0
1,2-Dichloropropane	Ave	0.2533	0.2462	0.1000	0.00972	0.0100	-2.8	20.0
Dibromomethane	Ave	0.1259	0.1188		0.00943	0.0100	-5.7	20.0
1,4-Dioxane	Lin1		0.0009		0.119	0.200	-40.4	50.0
Dichlorobromomethane	Ave	0.2929	0.2750	0.1500	0.00939	0.0100	-6.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1420		0.00977	0.0100	-2.3	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3785	0.1500	0.00952	0.0100	-4.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1619	0.0500	0.0193	0.0200	-3.4	20.0
Toluene	Ave	1.613	1.577	0.4000	0.00977	0.0100	-2.3	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4634	0.1000	0.00959	0.0100	-4.1	20.0
Ethyl methacrylate	Ave	0.4217	0.4208		0.00998	0.0100	-0.2	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2803	0.1000	0.00975	0.0100	-2.5	20.0
Tetrachloroethene	Ave	0.3065	0.3058	0.1500	0.00998	0.0100	-0.2	20.0
1,3-Dichloropropane	Ave	0.5237	0.5135		0.00980	0.0100	-2.0	20.0
2-Hexanone	Ave	0.1780	0.1624	0.0500	0.0182	0.0200	-8.8	20.0
Chlorodibromomethane	Ave	0.2976	0.2888		0.00970	0.0100	-3.0	20.0
Ethylene Dibromide	Ave	0.2742	0.2692		0.00982	0.0100	-1.8	20.0
Chlorobenzene	Ave	0.9846	0.9345	0.3000	0.00949	0.0100	-5.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.3054		0.00952	0.0100	-4.8	20.0
Ethylbenzene	Ave	0.5275	0.5081		0.00963	0.0100	-3.7	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.6189		0.00966	0.0100	-3.4	20.0
o-Xylene	Ave	0.6156	0.5915		0.00961	0.0100	-3.9	20.0
Styrene	Ave	1.064	1.036	0.3000	0.00973	0.0100	-2.7	20.0
Bromoform	Ave	0.1575	0.1606	0.1000	0.0102	0.0100	2.0	20.0
Isopropylbenzene	Ave	1.413	1.372	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6670	0.3000	0.00960	0.0100	-4.0	20.0
Bromobenzene	Ave	0.9222	0.8545		0.00927	0.0100	-7.3	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2222		0.0101	0.0100	0.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1515		0.00927	0.0100	-7.3	20.0
N-Propylbenzene	Ave	0.8936	0.8451		0.00946	0.0100	-5.4	20.0
2-Chlorotoluene	Ave	0.7923	0.7318		0.00924	0.0100	-7.6	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.313		0.00931	0.0100	-6.9	20.0
4-Chlorotoluene	Ave	0.8349	0.7709		0.00923	0.0100	-7.7	20.0
tert-Butylbenzene	Ave	2.075	1.952		0.00941	0.0100	-5.9	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.264		0.00917	0.0100	-8.3	20.0
sec-Butylbenzene	Ave	2.678	2.475		0.00924	0.0100	-7.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.275	0.6000	0.00904	0.0100	-9.6	20.0
4-Isopropyltoluene	Ave	2.276	2.122		0.00933	0.0100	-6.7	20.0
1,4-Dichlorobenzene	Ave	1.435	1.312	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.645	1.481		0.00901	0.0100	-9.9	20.0
1,2-Dichlorobenzene	Ave	1.268	1.157	0.4000	0.00912	0.0100	-8.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0919	0.0500	0.00889	0.0100	-11.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.5148	0.2000	0.00849	0.0100	-15.1	50.0
Hexachlorobutadiene	Ave	0.2494	0.2019		0.00810	0.0100	-19.0	20.0
Naphthalene	Ave	1.496	1.340		0.00896	0.0100	-10.4	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.4760		0.00842	0.0100	-15.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2015		0.0108	0.0120	-9.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2259		0.0108	0.0120	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.421	1.311		0.0110	0.0120	-7.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3884		0.0108	0.0120	-9.6	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4945.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-May-2016 11:25:30 ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-014
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:39 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:57:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1349328	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.778	0.000	84	892490	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	91	381895	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	95	325046	12.0	10.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	364427	12.0	10.8	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	1398868	12.0	11.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	414538	12.0	10.8	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	105925	10.0	4.99	
10 Chloromethane	50	1.636	1.636	0.000	99	217689	10.0	7.16	
12 Vinyl chloride	62	1.731	1.731	0.000	97	258820	10.0	8.01	
13 Butadiene	54	1.766	1.766	0.000	98	230774	10.0	7.61	
15 Bromomethane	94	2.015	2.015	0.000	90	121055	10.0	8.21	
16 Chloroethane	64	2.110	2.109	0.001	98	128267	10.0	8.38	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	299818	10.0	9.01	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	96	222512	10.0	9.57	
19 Ethyl ether	59	2.524	2.524	0.000	88	297526	10.0	9.85	
20 Acrolein	56	2.630	2.642	-0.012	99	131913	50.0	30.9	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	255292	10.0	10.7	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	91	161571	10.0	11.2	
23 Acetone	43	2.760	2.760	0.000	98	110245	20.0	14.6	
25 Iodomethane	142	2.879	2.879	0.000	96	343130	10.0	10.4	
26 Carbon disulfide	76	2.926	2.926	0.000	98	671762	10.0	10.9	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	95	236576	10.0	10.8	
29 Methyl acetate	43	3.033	3.032	0.001	97	866854	50.0	47.7	
30 Methylene Chloride	84	3.115	3.115	0.000	89	287787	10.0	9.87	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	139877	100.0	78.8	
32 Acrylonitrile	53	3.317	3.316	0.001	100	927822	100.0	98.2	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	881021	10.0	9.87	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	70	364035	10.0	10.3	
35 Hexane	86	3.565	3.565	0.000	90	96824	10.0	12.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	577030	10.0	9.55	
37 Vinyl acetate	43	3.719	3.719	0.000	97	585795	10.0	10.4	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	66	191319	20.0	17.2	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	364524	10.0	9.75	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	259514	10.0	9.77	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	172519	10.0	10.0	
48 Tetrahydrofuran	42	4.393	4.393	0.000	88	131334	20.0	18.4	
49 Chloroform	83	4.417	4.417	0.000	92	521251	10.0	9.59	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	357996	10.0	9.77	
51 Cyclohexane	56	4.642	4.642	0.000	87	471668	10.0	11.5	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	97	455057	10.0	9.83	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	353273	10.0	10.5	
54 Isobutyl alcohol	41	4.772	4.772	0.000	94	122967	250.0	231.2	
55 Benzene	78	4.890	4.890	0.000	95	1374458	10.0	9.64	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	381046	10.0	10.0	
58 n-Heptane	100	5.091	5.091	0.000	95	85725	10.0	10.8	
60 Trichloroethene	130	5.423	5.423	0.000	95	364582	10.0	9.79	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	492599	10.0	11.0	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	332263	10.0	9.72	
65 Dibromomethane	93	5.707	5.707	0.000	91	160298	10.0	9.43	
66 1,4-Dioxane	88	5.730	5.719	0.011	29	25260	200.0	119.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	371057	10.0	9.39	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	191547	10.0	9.77	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	510763	10.0	9.52	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	436788	20.0	19.3	
72 Toluene	91	6.535	6.523	0.012	98	1407175	10.0	9.77	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	413573	10.0	9.59	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	375511	10.0	9.98	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	250121	10.0	9.75	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	272934	10.0	9.98	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	458257	10.0	9.80	
78 2-Hexanone	43	7.091	7.091	0.000	94	289831	20.0	18.2	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	257708	10.0	9.70	
82 Ethylene Dibromide	107	7.352	7.351	0.001	99	240275	10.0	9.82	
84 Chlorobenzene	112	7.813	7.801	0.012	97	833993	10.0	9.49	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	272592	10.0	9.52	
86 Ethylbenzene	106	7.908	7.908	0.000	98	453514	10.0	9.63	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	552335	10.0	9.66	
88 o-Xylene	106	8.393	8.393	0.000	96	527889	10.0	9.61	
89 Styrene	104	8.405	8.405	0.000	95	924399	10.0	9.73	
90 Bromoform	173	8.582	8.582	0.000	99	143330	10.0	10.2	
91 Isopropylbenzene	105	8.748	8.736	0.012	95	1224899	10.0	9.71	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	254715	10.0	9.60	
95 Bromobenzene	156	9.044	9.044	0.000	91	326331	10.0	9.27	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	80	84859	10.0	10.1	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	74	57870	10.0	9.27	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	322733	10.0	9.46	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	279470	10.0	9.24	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	883484	10.0	9.31	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	294384	10.0	9.23	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	745426	10.0	9.41	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	864751	10.0	9.17	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	945307	10.0	9.24	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	486991	10.0	9.04	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	810545	10.0	9.33	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	500958	10.0	9.14	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	565640	10.0	9.01	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	441938	10.0	9.12	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	89	35095	10.0	8.89	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	196613	10.0	8.49	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	77112	10.0	8.10	
118 Naphthalene	128	12.262	12.262	0.000	96	511556	10.0	8.96	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	181780	10.0	8.42	
S 132 Xylenes, Total	106				0		20.0	19.3	
S 133 Trihalomethanes, Total	1				0		40.0	38.9	

Reagents:

VMFASPW_00155	Amount Added:	8.00	Units: uL	
VMFASGW_00157	Amount Added:	8.00	Units: uL	
VMFASAW_00140	Amount Added:	8.00	Units: uL	
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00068	Amount Added:	0.00	Units:	Run Reagent

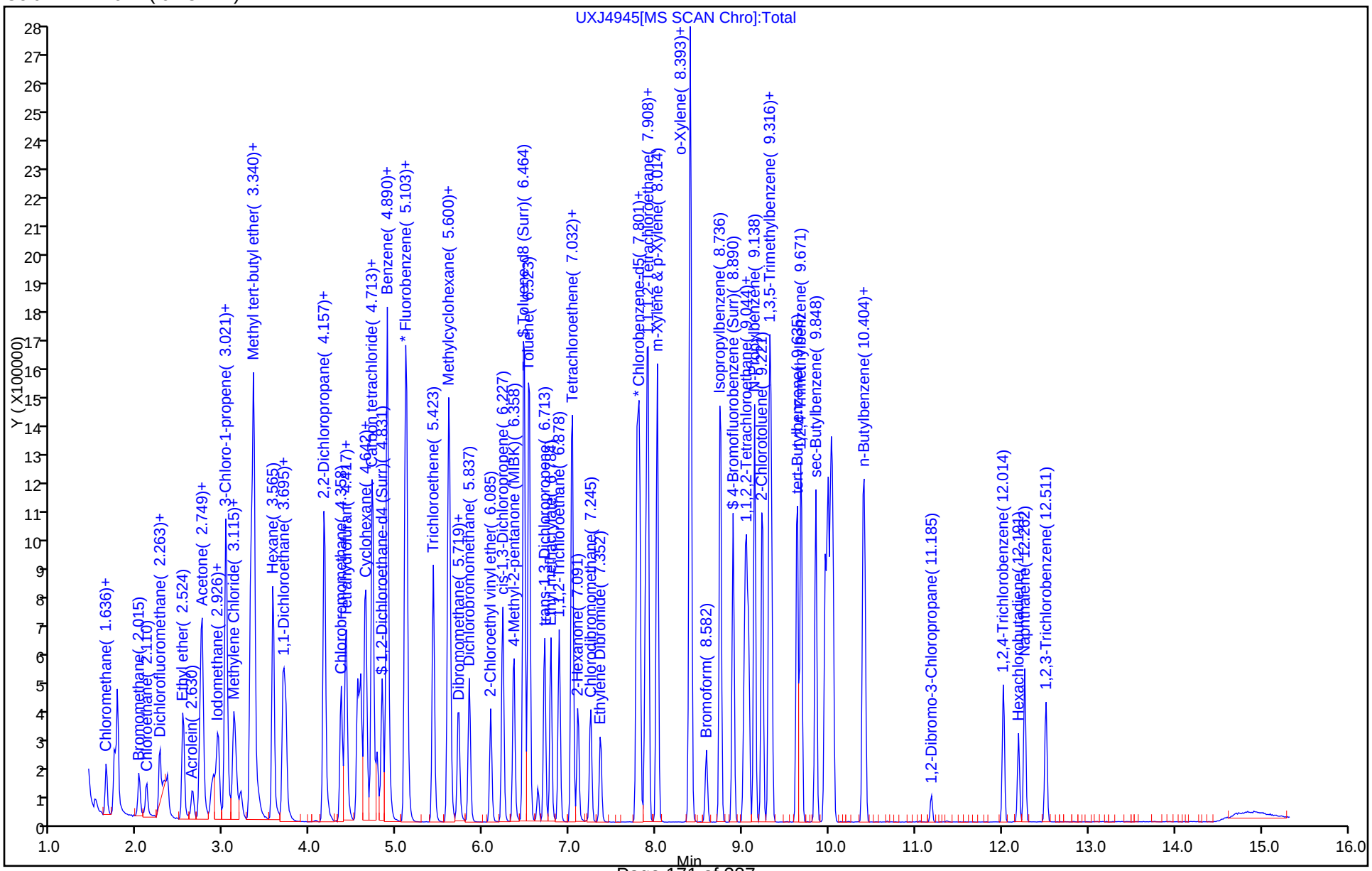
Report Date: 31-May-2016 12:58:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4945.D

Injection Date:	28-May-2016 11:25:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.1830	0.1000	0.0116	0.0100	16.4	20.0
Chloromethane	Ave	0.2254	0.2695	0.1000	0.0120	0.0100	19.6	20.0
Vinyl chloride	Ave	0.2393	0.2439	0.1000	0.0102	0.0100	1.9	20.0
Butadiene	Ave	0.2248	0.2685		0.0119	0.0100	19.4	20.0
Bromomethane	Ave	0.1093	0.1250	0.0500	0.0114	0.0100	14.4	20.0
Chloroethane	Ave	0.1134	0.1494	0.0500	0.0132	0.0100	31.7*	20.0
Dichlorofluoromethane	Ave	0.2466	0.3022		0.0123	0.0100	22.6*	20.0
Trichlorofluoromethane	Ave	0.1723	0.2009	0.1000	0.0117	0.0100	16.6	20.0
Ethyl ether	Ave	0.2239	0.1866		0.00833	0.0100	-16.7	20.0
Acrolein	Ave	0.0316	0.0177		0.0280	0.0500	-44.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1796	0.1000	0.0102	0.0100	1.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1086	0.0500	0.0101	0.0100	1.4	20.0
Acetone	Lin1		0.0486	0.0100	0.0179	0.0200	-10.3	50.0
Iodomethane	Ave	0.2451	0.2501		0.0102	0.0100	2.0	20.0
Carbon disulfide	Ave	0.4562	0.4932	0.1000	0.0108	0.0100	8.1	20.0
3-Chloro-1-propene	Ave	0.1616	0.1538		0.00952	0.0100	-4.8	20.0
Methyl acetate	Ave	0.1347	0.1130	0.1000	0.0420	0.0500	-16.1	20.0
Methylene Chloride	Lin1		0.2317	0.1000	0.0108	0.0100	8.4	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0069		0.0525	0.100	-47.5	50.0
Acrylonitrile	Ave	0.0700	0.0590		0.0843	0.100	-15.7	20.0
Methyl tert-butyl ether	Ave	0.6617	0.5663	0.1000	0.00856	0.0100	-14.4	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2316	0.1000	0.00884	0.0100	-11.6	20.0
Hexane	Ave	0.0561	0.0560		0.00999	0.0100	-0.0	20.0
1,1-Dichloroethane	Ave	0.4477	0.4185	0.2000	0.00935	0.0100	-6.5	20.0
Vinyl acetate	Ave	0.4179	0.3582		0.00857	0.0100	-14.3	50.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2535	0.1000	0.00915	0.0100	-8.5	20.0
2,2-Dichloropropane	Ave	0.1969	0.1854		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0824	0.0688	0.0100	0.0167	0.0200	-16.4	20.0
Chlorobromomethane	Ave	0.1278	0.1134		0.00887	0.0100	-11.3	20.0
Tetrahydrofuran	Ave	0.0529	0.0436		0.0165	0.0200	-17.6	20.0
Chloroform	Ave	0.4028	0.3756	0.2000	0.00932	0.0100	-6.8	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2484	0.1000	0.00914	0.0100	-8.6	20.0
Cyclohexane	Ave	0.3041	0.3027	0.1000	0.00995	0.0100	-0.5	20.0
1,1-Dichloropropene	Ave	0.3431	0.3157		0.00920	0.0100	-8.0	20.0
Carbon tetrachloride	Ave	0.2486	0.2155	0.1000	0.00867	0.0100	-13.3	20.0
Isobutyl alcohol	Ave	0.0060	0.0054		0.228	0.250	-8.9	20.0
1,2-Dichloroethane	Ave	0.2815	0.2770	0.1000	0.00984	0.0100	-1.6	20.0
Benzene	Ave	1.057	0.9675	0.5000	0.00915	0.0100	-8.5	20.0
n-Heptane	Ave	0.0587	0.0504		0.00858	0.0100	-14.2	20.0
Trichloroethene	Ave	0.2761	0.2434	0.1500	0.00882	0.0100	-11.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.2985	0.1000	0.00903	0.0100	-9.7	20.0
1,2-Dichloropropane	Ave	0.2533	0.2221	0.1000	0.00877	0.0100	-12.3	20.0
Dibromomethane	Ave	0.1259	0.1090		0.00866	0.0100	-13.4	20.0
1,4-Dioxane	Lin1		0.0009		0.109	0.200	-45.3	50.0
Dichlorobromomethane	Ave	0.2929	0.2546	0.1500	0.00869	0.0100	-13.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1231		0.0169	0.0200	-15.3	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3324	0.1500	0.00836	0.0100	-16.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1395	0.0500	0.0167	0.0200	-16.7	20.0
Toluene	Ave	1.613	1.727	0.4000	0.0107	0.0100	7.1	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4696	0.1000	0.00972	0.0100	-2.8	20.0
Ethyl methacrylate	Ave	0.4217	0.3975		0.00943	0.0100	-5.7	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2751	0.1000	0.00957	0.0100	-4.3	20.0
Tetrachloroethene	Ave	0.3065	0.2831	0.1500	0.00924	0.0100	-7.6	20.0
1,3-Dichloropropane	Ave	0.5237	0.5276		0.0101	0.0100	0.7	20.0
2-Hexanone	Ave	0.1780	0.1644	0.0500	0.0185	0.0200	-7.6	20.0
Chlorodibromomethane	Ave	0.2976	0.2875		0.00966	0.0100	-3.4	20.0
Ethylene Dibromide	Ave	0.2742	0.2528		0.00922	0.0100	-7.8	20.0
Chlorobenzene	Ave	0.9846	0.8732	0.3000	0.00887	0.0100	-11.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.2748		0.00857	0.0100	-14.3	20.0
Ethylbenzene	Ave	0.5275	0.4877		0.00925	0.0100	-7.5	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.5636		0.00879	0.0100	-12.1	20.0
o-Xylene	Ave	0.6156	0.5082		0.00826	0.0100	-17.4	20.0
Styrene	Ave	1.064	0.8604	0.3000	0.00808	0.0100	-19.2	20.0
Bromoform	Ave	0.1575	0.1210	0.1000	0.00768	0.0100	-23.2*	20.0
Isopropylbenzene	Ave	1.413	1.080	0.1000	0.00764	0.0100	-23.6*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6527	0.3000	0.00940	0.0100	-6.0	20.0
Bromobenzene	Ave	0.9222	0.9083		0.00985	0.0100	-1.5	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2280		0.0103	0.0100	3.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1932		0.0118	0.0100	18.1	20.0
N-Propylbenzene	Ave	0.8936	0.8972		0.0100	0.0100	0.4	20.0
2-Chlorotoluene	Ave	0.7923	0.7456		0.00941	0.0100	-5.9	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.284		0.00920	0.0100	-8.0	20.0
4-Chlorotoluene	Ave	0.8349	0.7774		0.00931	0.0100	-6.9	20.0
tert-Butylbenzene	Ave	2.075	1.782		0.00859	0.0100	-14.1	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.286		0.00926	0.0100	-7.4	20.0
sec-Butylbenzene	Ave	2.678	2.367		0.00884	0.0100	-11.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.267	0.6000	0.00898	0.0100	-10.2	20.0
4-Isopropyltoluene	Ave	2.276	2.035		0.00894	0.0100	-10.6	20.0
1,4-Dichlorobenzene	Ave	1.435	1.293	0.5000	0.00901	0.0100	-9.9	20.0
n-Butylbenzene	Ave	1.645	1.597		0.00971	0.0100	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.268	1.154	0.4000	0.00910	0.0100	-9.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0981	0.0500	0.00949	0.0100	-5.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.6764	0.2000	0.0112	0.0100	11.5	50.0
Hexachlorobutadiene	Ave	0.2494	0.2659		0.0107	0.0100	6.6	20.0
Naphthalene	Ave	1.496	1.706		0.0114	0.0100	14.1	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.6089		0.0108	0.0100	7.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2019		0.0108	0.0120	-9.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2368		0.0113	0.0120	-5.3	20.0
Toluene-d8 (Surr)	Ave	1.421	1.425		0.0120	0.0120	0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3189		0.00887	0.0120	-25.8*	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5814A.D
Lims ID: CCVIS L4 8260
Client ID:
Sample Type: CCVIS
Inject. Date: 27-Jun-2016 10:32:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-002
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:21 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	2032326	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	1160670	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	92	355778	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	97	490641	12.0	10.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	575556	12.0	11.3	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1977124	12.0	12.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	442572	12.0	8.87	
9 Dichlorodifluoromethane	85	1.506	1.506	0.000	99	371943	10.0	11.6	
10 Chloromethane	50	1.636	1.636	0.000	99	547756	10.0	12.0	
12 Vinyl chloride	62	1.731	1.731	0.000	97	495614	10.0	10.2	
13 Butadiene	54	1.754	1.754	0.000	98	545606	10.0	11.9	
15 Bromomethane	94	2.015	2.015	0.000	89	253979	10.0	11.4	
16 Chloroethane	64	2.098	2.098	0.000	99	303547	10.0	13.2	
17 Dichlorofluoromethane	67	2.251	2.251	0.000	97	614255	10.0	12.3	
18 Trichlorofluoromethane	101	2.299	2.299	0.000	98	408383	10.0	11.7	
19 Ethyl ether	59	2.524	2.524	0.000	90	379202	10.0	8.33	
20 Acrolein	56	2.630	2.630	0.000	99	179636	50.0	28.0	
21 1,1-Dichloroethene	96	2.725	2.725	0.000	98	365075	10.0	10.2	
22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.737	0.000	90	220761	10.0	10.1	
23 Acetone	43	2.760	2.760	0.000	99	197715	20.0	17.9	
25 Iodomethane	142	2.855	2.855	0.000	97	508182	10.0	10.2	
26 Carbon disulfide	76	2.926	2.926	0.000	99	1002355	10.0	10.8	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	92	312595	10.0	9.52	
29 Methyl acetate	43	3.032	3.032	0.000	97	1148658	50.0	42.0	
30 Methylene Chloride	84	3.115	3.115	0.000	91	470888	10.0	10.8	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	140289	100.0	52.5	
32 Acrylonitrile	53	3.305	3.305	0.000	99	1198534	100.0	84.3	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	1150811	10.0	8.56	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	72	470735	10.0	8.84	
35 Hexane	86	3.565	3.565	0.000	90	113831	10.0	10.0	
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	850512	10.0	9.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
37 Vinyl acetate	43	3.719	3.719	0.000	97	728021	10.0	8.57	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	515270	10.0	9.15	
42 2-Butanone (MEK)	43	4.168	4.168	0.000	73	279792	20.0	16.7	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	88	376855	10.0	9.42	
47 Chlorobromomethane	128	4.358	4.358	0.000	93	230366	10.0	8.87	
48 Tetrahydrofuran	42	4.405	4.405	0.000	88	177200	20.0	16.5	
49 Chloroform	83	4.417	4.417	0.000	92	763239	10.0	9.32	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	504745	10.0	9.14	
51 Cyclohexane	56	4.630	4.630	0.000	88	615203	10.0	9.95	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	641685	10.0	9.20	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	437921	10.0	8.67	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	157505	250.0	227.7	
55 Benzene	78	4.890	4.890	0.000	95	1966297	10.0	9.15	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	97	562971	10.0	9.84	
58 n-Heptane	100	5.091	5.091	0.000	90	102409	10.0	8.58	
60 Trichloroethene	130	5.423	5.423	0.000	96	494653	10.0	8.82	
62 Methylcyclohexane	83	5.600	5.600	0.000	91	606583	10.0	9.03	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	451415	10.0	8.77	
65 Dibromomethane	93	5.707	5.707	0.000	92	221561	10.0	8.66	
66 1,4-Dioxane	88	5.718	5.718	0.000	30	34571	200.0	109.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	517519	10.0	8.69	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	500493	20.0	16.9	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	96	675509	10.0	8.36	
71 4-Methyl-2-pentanone (MIBK	43	6.357	6.357	0.000	95	566893	20.0	16.7	
72 Toluene	91	6.535	6.535	0.000	98	2004995	10.0	10.7	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	92	545034	10.0	9.72	
74 Ethyl methacrylate	69	6.783	6.783	0.000	89	461357	10.0	9.43	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	90	319335	10.0	9.57	
76 Tetrachloroethene	164	7.020	7.020	0.000	98	328599	10.0	9.24	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	90	612389	10.0	10.1	
78 2-Hexanone	43	7.091	7.091	0.000	96	381541	20.0	18.5	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	333687	10.0	9.66	
82 Ethylene Dibromide	107	7.351	7.351	0.000	98	293370	10.0	9.22	
84 Chlorobenzene	112	7.813	7.813	0.000	98	1013531	10.0	8.87	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	94	318927	10.0	8.57	
86 Ethylbenzene	106	7.908	7.908	0.000	98	566095	10.0	9.25	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	654172	10.0	8.79	
88 o-Xylene	106	8.393	8.393	0.000	95	589902	10.0	8.26	
89 Styrene	104	8.405	8.405	0.000	93	998649	10.0	8.08	
90 Bromoform	173	8.582	8.582	0.000	98	140412	10.0	7.68	
91 Isopropylbenzene	105	8.748	8.748	0.000	95	1253354	10.0	7.64	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	93	232200	10.0	9.40	
95 Bromobenzene	156	9.044	9.044	0.000	93	323135	10.0	9.85	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	82	81115	10.0	10.3	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.079	0.000	78	68727	10.0	11.8	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	319205	10.0	10.0	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	265284	10.0	9.41	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	812555	10.0	9.20	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	276576	10.0	9.31	
102 tert-Butylbenzene	119	9.635	9.635	0.000	91	634172	10.0	8.59	
104 1,2,4-Trimethylbenzene	105	9.683	9.683	0.000	95	813338	10.0	9.26	
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	842057	10.0	8.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	450659	10.0	8.98	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	724081	10.0	8.94	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	459918	10.0	9.01	
111 n-Butylbenzene	91	10.392	10.392	0.000	97	568266	10.0	9.71	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	98	410419	10.0	9.10	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	85	34899	10.0	9.49	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	240659	10.0	11.2	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	96	94609	10.0	10.7	
118 Naphthalene	128	12.262	12.262	0.000	97	606853	10.0	11.4	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	94	216633	10.0	10.8	
S 132 Xylenes, Total	106				0		20.0	17.1	
S 133 Trihalomethanes, Total	1				0		40.0	35.4	

Reagents:

VMRGAS_00158	Amount Added:	8.00	Units: uL	
VMRPRIMW_00191	Amount Added:	8.00	Units: uL	
VMAROLISTDW_00153	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

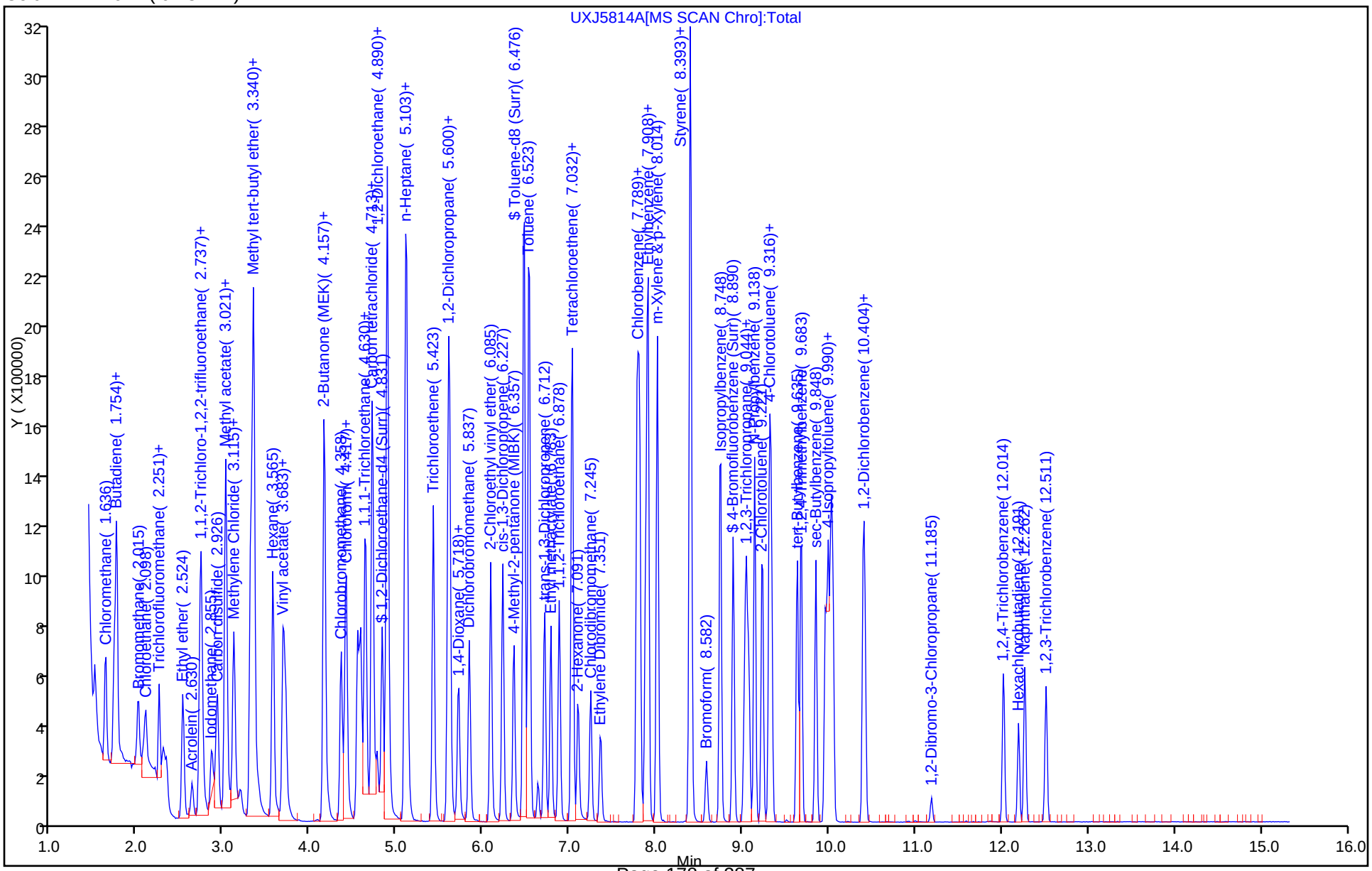
Report Date: 28-Jun-2016 10:20:22 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5814A.D

Injection Date:	27-Jun-2016 10:32:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	CCVIS L4 8260			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	28-May-2016 08:28:30	ALS Bottle#:	31	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	J60528A-IC,BFBUX11,,43582				
Operator ID:		Instrument ID:	A3UX11		
Method:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	31-May-2016 12:57:19	Calib Date:	28-May-2016 13:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.198	4.198	0.000	0	932386	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

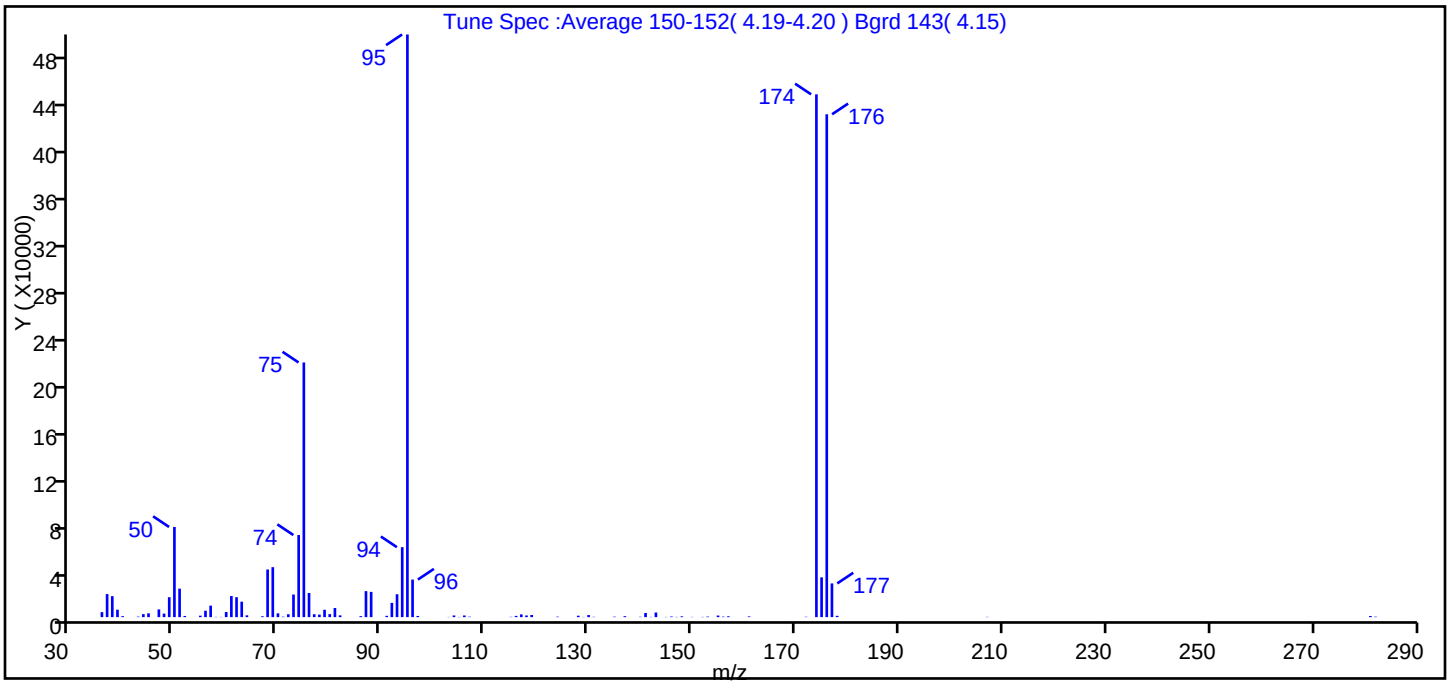
vmbfb_00015 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D
Injection Date: 28-May-2016 08:28:30 Instrument ID: A3UX11
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 31 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_11 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.5
75	30 to 60% of m/z 95	43.7
96	5 to 9% of m/z 95	6.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	89.7
175	5 to 9% of m/z 174	6.8 (7.6)
176	Greater than 95% but less than 101% of m/z 174	86.3 (96.2)
177	5 to 9% of m/z 176	5.8 (6.7)

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D\8260_11.rslt\spectra.d
Injection Date: 28-May-2016 08:28:30
Spectrum: Tune Spec :Average 150-152(4.19-4.20) Bgrd 143(4.15)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4265	64.00	1544	94.00	59328	142.00	205
37.00	19576	67.00	715	95.00	494016	143.00	3929
38.00	17784	68.00	40408	96.00	31864	145.00	175
39.00	6303	69.00	42368	97.00	1005	146.00	529
40.00	841	70.00	3215	103.00	172	147.00	203
43.00	437	71.00	393	104.00	1422	148.00	684
44.00	2537	72.00	2453	105.00	182	150.00	207
45.00	3240	73.00	19168	106.00	1402	152.00	190
47.00	6562	74.00	69624	107.00	394	153.00	490
48.00	3005	75.00	215936	115.00	268	155.00	1354
49.00	16904	76.00	20488	116.00	1062	156.00	421
50.00	76456	77.00	2488	117.00	2314	157.00	724
51.00	24152	78.00	2149	118.00	1416	161.00	610
52.00	1006	79.00	6255	119.00	1826	172.00	314
55.00	1245	80.00	2540	124.00	414	174.00	443264
56.00	5426	81.00	7761	128.00	1214	175.00	33736
57.00	9758	82.00	1511	129.00	176	176.00	426368
58.00	223	86.00	840	130.00	1754	177.00	28592
59.00	177	87.00	22056	131.00	273	178.00	1143
60.00	4362	88.00	21416	135.00	406	207.00	239
61.00	17880	91.00	1127	137.00	825	281.00	953
62.00	16904	92.00	12095	140.00	301	282.00	403
63.00	13123	93.00	19416	141.00	3514		

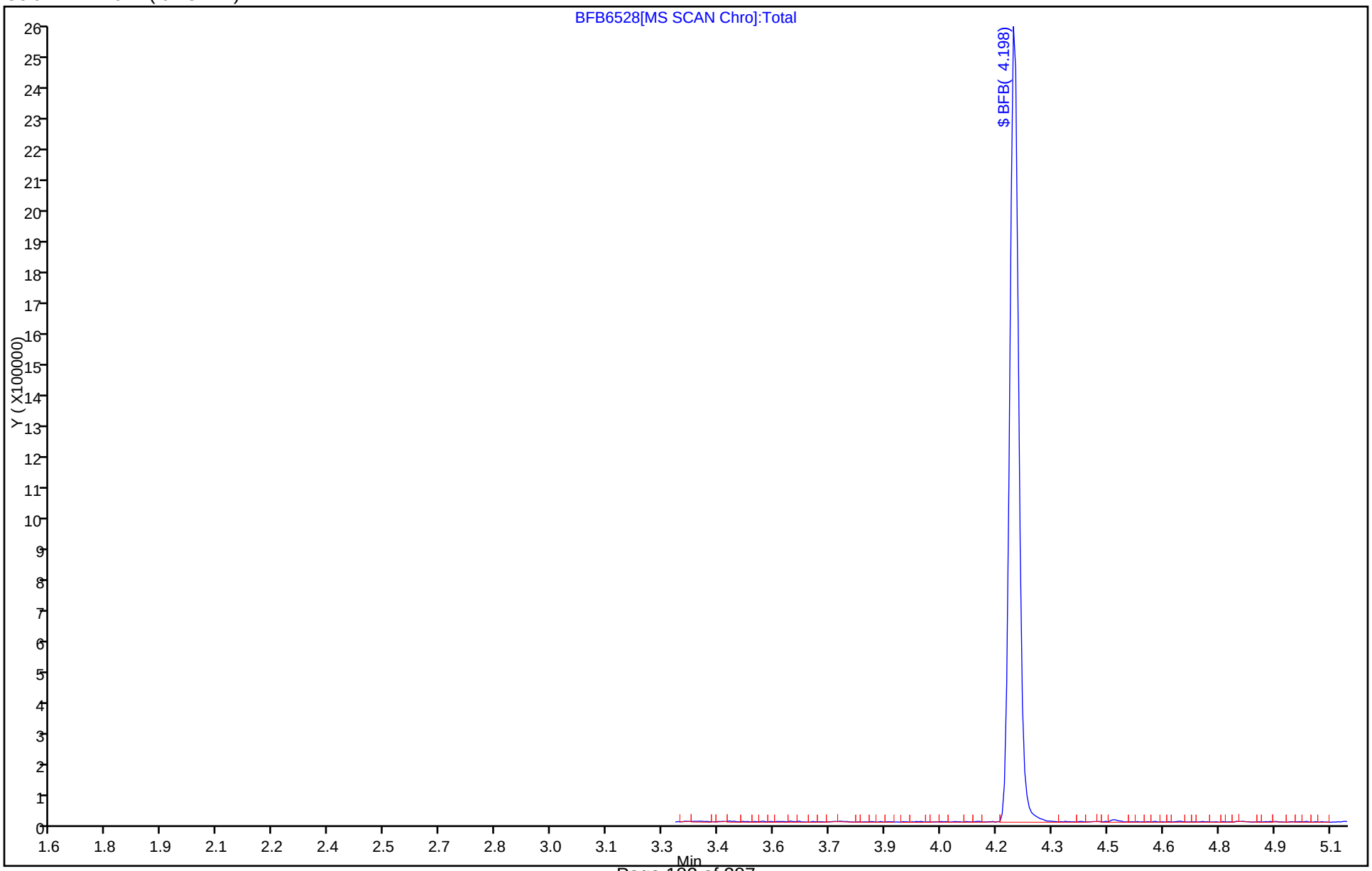
Report Date: 31-May-2016 12:57:20 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D

Injection Date:	28-May-2016 08:28:30	Instrument ID:	A3UX11	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	27-Jun-2016 09:44:30	ALS Bottle#:	3	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	J60627A,BFBUX11,,43582				
Operator ID:	43582	Instrument ID:	A3UX11		
Method:	\\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	28-Jun-2016 10:20:11	Calib Date:	28-May-2016 13:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: evansle		Date:	27-Jun-2016 10:52:37		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.198	4.198	0.000	0	1229845	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

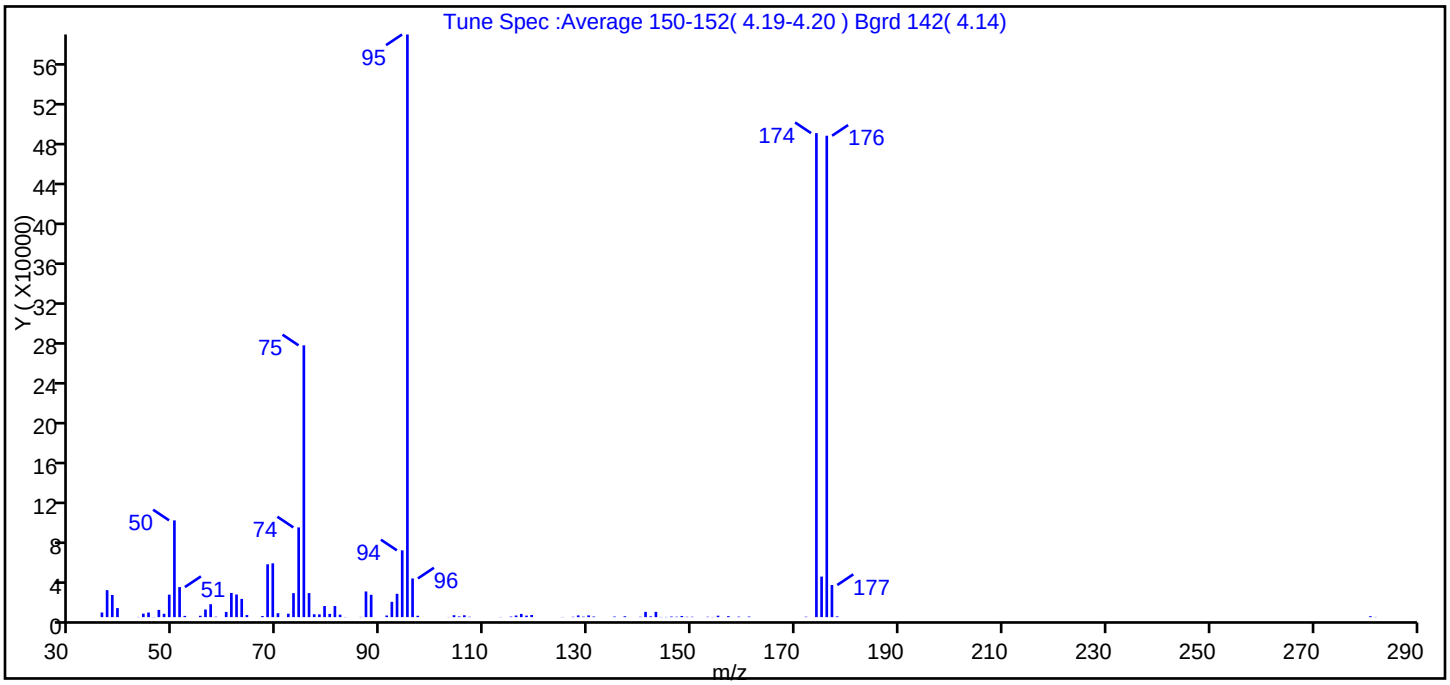
vmbfb_00016 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D
Injection Date: 27-Jun-2016 09:44:30 Instrument ID: A3UX11
Lims ID: BFB
Client ID:
Operator ID: 43582 ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_11 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.6
75	30 to 60% of m/z 95	46.6
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	83.1
175	5 to 9% of m/z 174	7.0 (8.4)
176	Greater than 95% but less than 101% of m/z 174	82.6 (99.5)
177	5 to 9% of m/z 176	5.5 (6.7)

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D\8260_11.rslt\spectra.d
Injection Date: 27-Jun-2016 09:44:30
Spectrum: Tune Spec :Average 150-152(4.19-4.20) Bgrd 142(4.14)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4682	68.00	53280	97.00	1381	144.00	214
37.00	27216	69.00	54256	103.00	182	145.00	213
38.00	22352	70.00	3969	104.00	1939	146.00	620
39.00	9147	72.00	3456	105.00	677	147.00	426
43.00	228	73.00	24200	106.00	1879	148.00	1186
44.00	3540	74.00	90488	107.00	382	149.00	348
45.00	4656	75.00	274048	113.00	177	150.00	385
46.00	167	76.00	24240	115.00	543	153.00	380
47.00	7314	77.00	2902	116.00	1652	154.00	198
48.00	3378	78.00	2786	117.00	3262	155.00	1458
49.00	22656	79.00	11195	118.00	1547	157.00	977
50.00	97584	80.00	3276	119.00	2197	159.00	514
51.00	30336	81.00	11199	125.00	173	161.00	606
52.00	1286	82.00	2480	127.00	376	172.00	437
55.00	1371	83.00	171	128.00	1757	174.00	488000
56.00	7690	86.00	224	129.00	479	175.00	40880
57.00	13038	87.00	25888	130.00	1765	176.00	485376
58.00	411	88.00	22520	131.00	626	177.00	32400
60.00	5284	91.00	1645	135.00	590	178.00	739
61.00	24392	92.00	15427	137.00	897	281.00	921
62.00	22800	93.00	23536	140.00	376	282.00	196
63.00	18384	94.00	67360	141.00	5322		
64.00	2100	95.00	587456	142.00	799		
67.00	1046	96.00	39016	143.00	5327		

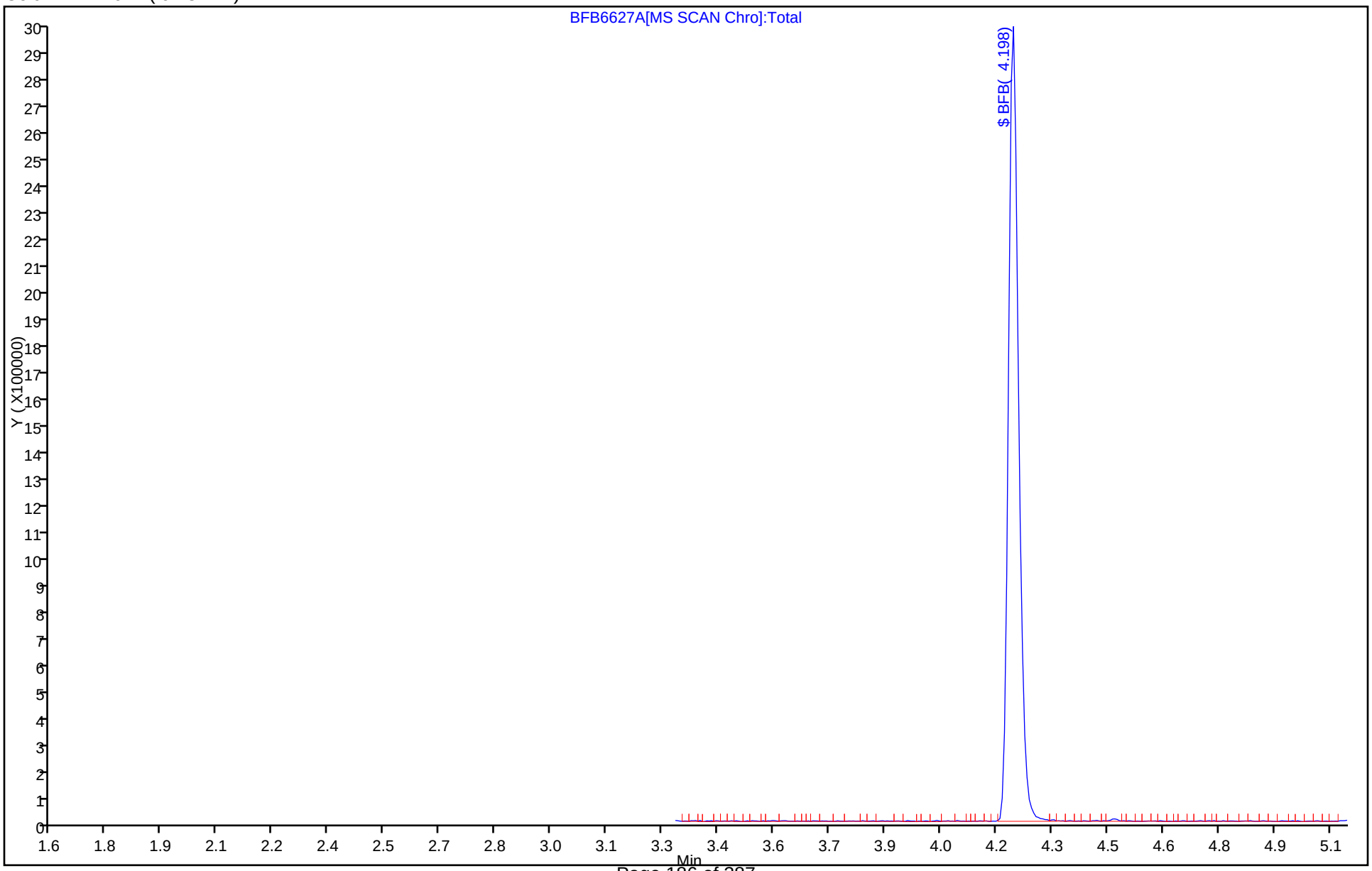
Report Date: 28-Jun-2016 10:20:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D

Injection Date:	27-Jun-2016 09:44:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-236061/6

Matrix: Water Lab File ID: UXJ5819.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 06/27/2016 12:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 236061 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	25	U	25	2.0
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	77		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Jun-2016 12:26:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-006
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 27-Jun-2016 14:44:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1473316	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	921655	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	289266	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	360951	12.0	11.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	413988	12.0	11.2	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1506002	12.0	11.5	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	90	366927	12.0	9.26	
122 Chlorodifluoromethane TIC	51		1.475					ND	
9 Dichlorodifluoromethane	85		1.506					ND	
10 Chloromethane	50		1.636					ND	
12 Vinyl chloride	62		1.731					ND	
11 Isobutylene TIC	1		1.750					ND	
13 Butadiene	54		1.754					ND	
15 Bromomethane	94		2.015					ND	
16 Chloroethane	64		2.098					ND	
17 Dichlorofluoromethane	67		2.251					ND	
18 Trichlorofluoromethane	101		2.299					ND	
19 Ethyl ether	59		2.524					ND	
20 Acrolein	56		2.630					ND	
21 1,1-Dichloroethene	96		2.725					ND	
22 1,1,2-Trichloro-1,2,2-trif	151		2.737					ND	
23 Acetone	43		2.760					ND	
24 Methylal	45		2.808					ND	
25 Iodomethane	142		2.855					ND	
26 Carbon disulfide	76		2.926					ND	
27 Acetonitrile	41		2.985					ND	
28 3-Chloro-1-propene	76		3.021					ND	
29 Methyl acetate	43		3.032					ND	
30 Methylene Chloride	84		3.115					ND	
31 2-Methyl-2-propanol	59		3.198					ND	
32 Acrylonitrile	53		3.305					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Methyl tert-butyl ether	73		3.340					ND	
34 trans-1,2-Dichloroethene	96		3.340					ND	
35 Hexane	86		3.565					ND	
36 1,1-Dichloroethane	63		3.683					ND	
37 Vinyl acetate	43		3.719					ND	
38 Isopropyl ether	87		3.731					ND	
39 2-Chloro-1,3-butadiene	53		3.766					ND	
40 Tert-butyl ethyl ether	59		4.026					ND	
41 cis-1,2-Dichloroethene	96		4.157					ND	
42 2-Butanone (MEK)	43		4.168					ND	
43 2,2-Dichloropropane	77		4.168					ND	
45 Ethyl acetate	43		4.204					ND	
44 Propionitrile	54		4.204					ND	
46 Methacrylonitrile	41		4.334					ND	
47 Chlorobromomethane	128		4.358					ND	
48 Tetrahydrofuran	42		4.405					ND	
49 Chloroform	83		4.417					ND	
50 1,1,1-Trichloroethane	97		4.583					ND	
51 Cyclohexane	56		4.630					ND	
52 1,1-Dichloropropene	75		4.713					ND	
53 Carbon tetrachloride	117		4.725					ND	
54 Isobutyl alcohol	41		4.772					ND	
55 Benzene	78		4.890					ND	
56 1,2-Dichloroethane	62		4.890					ND	
57 Tert-amyl methyl ether	73		4.973					ND	
58 n-Heptane	100		5.091					ND	
59 n-Butanol	56		5.328					ND	
60 Trichloroethene	130		5.423					ND	
61 Ethyl acrylate	55		5.482					ND	
62 Methylcyclohexane	83		5.600					ND	
63 1,2-Dichloropropane	63		5.612					ND	
64 Methyl methacrylate	41		5.683					ND	
65 Dibromomethane	93		5.707					ND	
66 1,4-Dioxane	88		5.718					ND	
67 Dichlorobromomethane	83		5.837					ND	
68 2-Nitropropane	41		6.026					ND	
69 2-Chloroethyl vinyl ether	63		6.085					ND	
70 cis-1,3-Dichloropropene	75		6.227					ND	
71 4-Methyl-2-pentanone (MIBK	43		6.357					ND	
72 Toluene	91	6.535	6.535	0.000	98	53403		0.3592	
73 trans-1,3-Dichloropropene	75		6.712					ND	
74 Ethyl methacrylate	69		6.783					ND	
75 1,1,2-Trichloroethane	97		6.878					ND	
76 Tetrachloroethene	164		7.020					ND	
77 1,3-Dichloropropane	76		7.032					ND	
78 2-Hexanone	43		7.091					ND	
79 n-Butyl acetate	43		7.210					ND	
81 Tetrahydrothiophene	60		7.245					ND	
80 Chlorodibromomethane	129		7.245					ND	
82 Ethylene Dibromide	107		7.351					ND	
83 1-Chlorohexane	91		7.777					ND	
84 Chlorobenzene	112		7.813					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 1,1,1,2-Tetrachloroethane	131		7.884					ND	
86 Ethylbenzene	106		7.908					ND	
87 m-Xylene & p-Xylene	106		8.014					ND	
88 o-Xylene	106		8.393					ND	
89 Styrene	104		8.405					ND	
90 Bromoform	173		8.582					ND	
91 Isopropylbenzene	105		8.748					ND	
93 1,4-Dichlorobutane	55		8.831					ND	
92 Cyclohexanone	55		8.831					ND	
94 1,1,2,2-Tetrachloroethane	83		9.020					ND	
95 Bromobenzene	156		9.044					ND	
96 1,2,3-Trichloropropane	110		9.067					ND	
97 trans-1,4-Dichloro-2-buten	53		9.079					ND	
98 N-Propylbenzene	120		9.138					ND	
99 2-Chlorotoluene	126		9.233					ND	
100 1,3,5-Trimethylbenzene	105		9.304					ND	
101 4-Chlorotoluene	126		9.328					ND	
102 tert-Butylbenzene	119		9.635					ND	
103 Pentachloroethane	167		9.659					ND	
104 1,2,4-Trimethylbenzene	105		9.683					ND	
105 sec-Butylbenzene	105		9.848					ND	
106 1,3-Dichlorobenzene	146		9.955					ND	
107 4-Isopropyltoluene	119		9.990					ND	
108 1,4-Dichlorobenzene	146		10.049					ND	
109 1,2,3-Trimethylbenzene	105		10.097					ND	
110 Benzyl chloride	126		10.180					ND	
111 n-Butylbenzene	91		10.392					ND	
112 1,2-Dichlorobenzene	146		10.416					ND	
113 1,3-Diethylbenzene TIC	1		10.500					ND	
114 1,2-Dibromo-3-Chloropropan	157		11.185					ND	
115 1,3,5-Trichlorobenzene	180		11.398					ND	
116 1,2,4-Trichlorobenzene	180		12.014					ND	
117 Hexachlorobutadiene	225		12.191					ND	
118 Naphthalene	128		12.262					ND	
119 1,2,3-Trichlorobenzene	180		12.511					ND	
120 2-Methylnaphthalene	142		13.540					ND	
126 Ethylene oxide	1		0.000					ND	
121 3-Ethyltoluene	1		0.000					ND	
123 2-Ethyltoluene	1		0.000					ND	
128 Propene oxide	1		0.000					ND	
127 Epichlorohydrin	1		0.000					ND	
S 130 1,2-Dichloroethene, Total	96		1.140					ND	
S 131 1,3-Dichloropropene, Total	75		6.760					ND	
S 132 Xylenes, Total	106		16.530					ND	
S 133 Trihalomethanes, Total	1		0.000					ND	
S 159 Total BTEX	1		0.000					ND	
T 134 Butyl Methacrylate TIC	1		8.925					ND	
T 135 Hexachloroethane TIC	1		10.774					ND	

Reagents:

VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

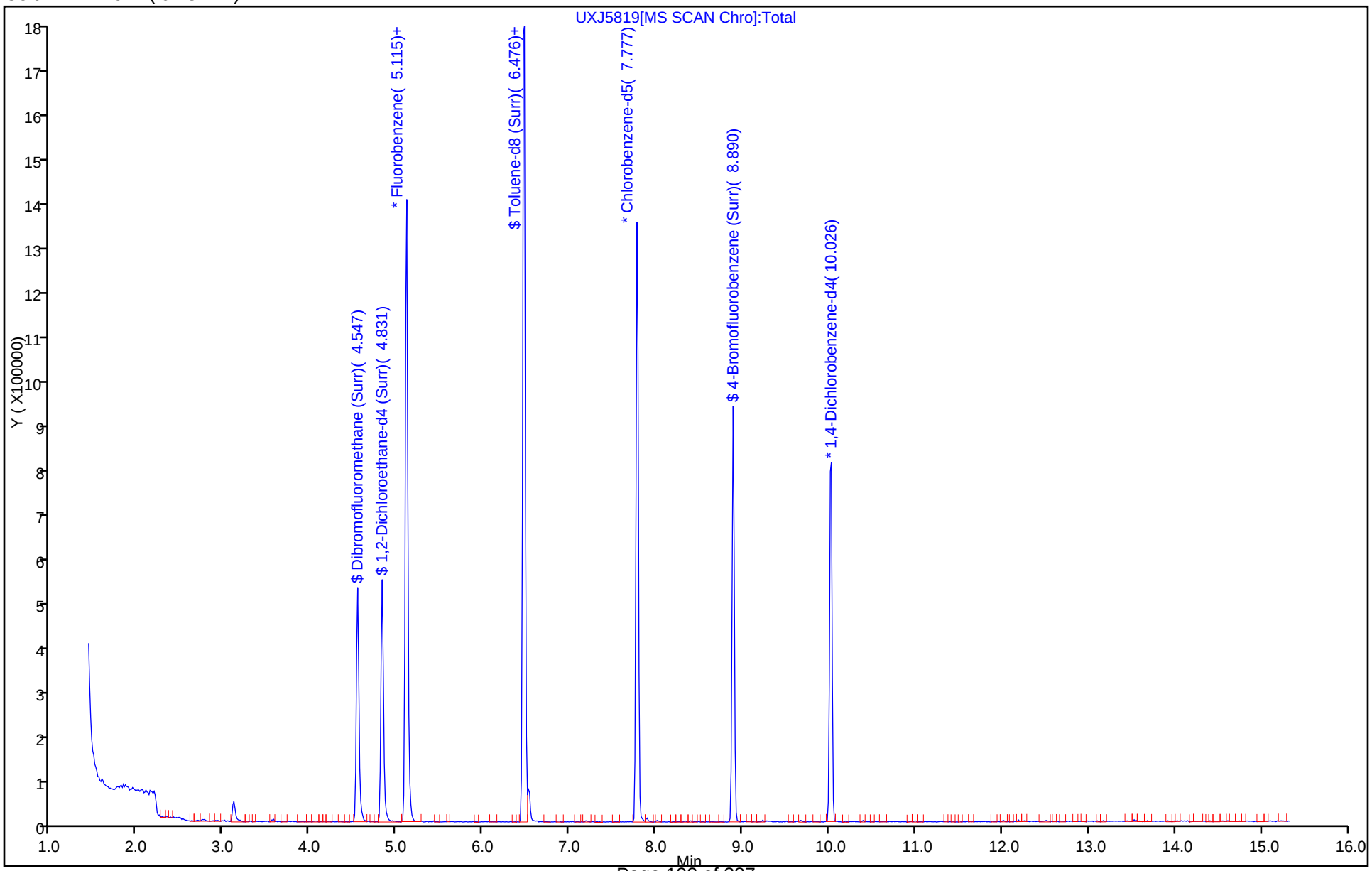
Report Date: 28-Jun-2016 10:20:50 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D

Injection Date:	27-Jun-2016 12:26:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Jun-2016 12:26:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-006
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 27-Jun-2016 14:44:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.0	91.82
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.2	93.97
$ 6 Toluene-d8 (Surr)	12.0	11.5	96.13
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.26	77.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-236061/4

Matrix: Water | Lab File ID: UXJ5817A.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 11:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	19.1	J	25	2.0
75-01-4	Vinyl chloride	10.4		1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	78		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Jun-2016 11:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-004
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.115	5.115	0.000	99	1576480	10.0	10.0	
*	2 Chlorobenzene-d5	117	7.778	7.777	0.001	85	946408	10.0	10.0	
*	3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	92	307979	10.0	10.0	
$	4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	387899	12.0	11.0	
$	5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	460435	12.0	11.7	
$	6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1596419	12.0	11.9	
$	7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	377377	12.0	9.28	
	9 Dichlorodifluoromethane	85	1.506	1.506	0.000	99	227071	10.0	9.16	
	10 Chloromethane	50	1.636	1.636	0.000	99	388088	10.0	10.9	
	12 Vinyl chloride	62	1.731	1.731	0.000	97	391336	10.0	10.4	
	13 Butadiene	54	1.766	1.754	0.012	98	368201	10.0	10.4	
	15 Bromomethane	94	2.015	2.015	0.000	90	181683	10.0	10.5	
	16 Chloroethane	64	2.098	2.098	0.000	98	201642	10.0	11.3	
	17 Dichlorofluoromethane	67	2.252	2.251	0.001	97	473002	10.0	12.2	
	18 Trichlorofluoromethane	101	2.299	2.299	0.000	97	299001	10.0	11.0	
	19 Ethyl ether	59	2.524	2.524	0.000	90	365770	10.0	10.4	
	20 Acrolein	56	2.630	2.630	0.000	100	249716	50.0	50.1	
	21 1,1-Dichloroethene	96	2.725	2.725	0.000	98	367540	10.0	13.2	
	22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.737	0.000	91	211470	10.0	12.5	
	23 Acetone	43	2.760	2.760	0.000	100	152317	20.0	17.8	
	25 Iodomethane	142	2.867	2.855	0.012	97	484891	10.0	12.6	
	26 Carbon disulfide	76	2.926	2.926	0.000	99	1017583	10.0	14.2	
	28 3-Chloro-1-propene	76	3.021	3.021	0.000	91	303453	10.0	11.9	
	29 Methyl acetate	43	3.021	3.032	-0.011	97	1077731	50.0	50.8	
	30 Methylene Chloride	84	3.115	3.115	0.000	91	409353	10.0	12.3	
	31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	145559	100.0	70.2	
	32 Acrylonitrile	53	3.305	3.305	0.000	98	1120093	100.0	101.5	
	33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	1109227	10.0	10.6	
	34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	73	466848	10.0	11.3	
	35 Hexane	86	3.565	3.565	0.000	90	106191	10.0	12.0	
	36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	771464	10.0	10.9	
	37 Vinyl acetate	43	3.719	3.719	0.000	97	675795	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	466995	10.0	10.7	
42 2-Butanone (MEK)	43	4.157	4.168	-0.011	59	230688	20.0	17.8	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	88	342104	10.0	11.0	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	212301	10.0	10.5	
48 Tetrahydrofuran	42	4.405	4.405	0.000	85	159361	20.0	19.1	
49 Chloroform	83	4.417	4.417	0.000	93	709933	10.0	11.2	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	468260	10.0	10.9	
51 Cyclohexane	56	4.630	4.630	0.000	88	585419	10.0	12.2	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	97	574282	10.0	10.6	
53 Carbon tetrachloride	117	4.725	4.725	0.000	96	379737	10.0	9.69	
54 Isobutyl alcohol	41	4.772	4.772	0.000	96	148501	250.0	263.3	
55 Benzene	78	4.890	4.890	0.000	95	1782877	10.0	10.7	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	489973	10.0	11.0	
58 n-Heptane	100	5.091	5.091	0.000	90	91183	10.0	9.85	
60 Trichloroethene	130	5.423	5.423	0.000	96	437005	10.0	10.0	
62 Methylcyclohexane	83	5.600	5.600	0.000	91	537998	10.0	10.3	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	415258	10.0	10.4	
65 Dibromomethane	93	5.707	5.707	0.000	93	206161	10.0	10.4	
66 1,4-Dioxane	88	5.719	5.718	0.001	30	30855	200.0	124.2	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	444951	10.0	9.63	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	93	216322	10.0	9.44	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	601207	10.0	9.59	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.357	0.001	95	489151	20.0	18.5	
72 Toluene	91	6.523	6.535	-0.012	98	1736610	10.0	11.4	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	92	473946	10.0	10.4	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	430058	10.0	10.8	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	298669	10.0	11.0	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	295810	10.0	10.2	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	91	534478	10.0	10.8	
78 2-Hexanone	43	7.091	7.091	0.000	96	332870	20.0	19.8	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	285710	10.0	10.1	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	276983	10.0	10.7	
84 Chlorobenzene	112	7.813	7.813	0.000	95	928545	10.0	9.96	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	288201	10.0	9.49	
86 Ethylbenzene	106	7.908	7.908	0.000	98	503833	10.0	10.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	615247	10.0	10.1	
88 o-Xylene	106	8.393	8.393	0.000	95	551548	10.0	9.47	
89 Styrene	104	8.405	8.405	0.000	94	962794	10.0	9.56	
90 Bromoform	173	8.582	8.582	0.000	97	138664	10.0	9.30	
91 Isopropylbenzene	105	8.748	8.748	0.000	95	1229287	10.0	9.19	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	232335	10.0	10.9	
95 Bromobenzene	156	9.044	9.044	0.000	94	304358	10.0	10.7	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	83	80398	10.0	11.8	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.079	0.000	73	70509	10.0	14.0	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	301827	10.0	11.0	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	262558	10.0	10.8	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	770498	10.0	10.1	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	267042	10.0	10.4	
102 tert-Butylbenzene	119	9.635	9.635	0.000	90	614031	10.0	9.61	
104 1,2,4-Trimethylbenzene	105	9.683	9.683	0.000	95	774739	10.0	10.2	
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	818078	10.0	9.92	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	424855	10.0	9.78	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Isopropyltoluene	119	9.990	9.990	0.000	98	685144	10.0	9.77	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	446503	10.0	10.1	
111 n-Butylbenzene	91	10.393	10.392	0.001	97	530977	10.0	10.5	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	98	393152	10.0	10.1	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	87	34978	10.0	11.0	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	247364	10.0	13.2	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	95	93338	10.0	12.2	
118 Naphthalene	128	12.262	12.262	0.000	97	639900	10.0	13.9	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	216954	10.0	12.5	
S 132 Xylenes, Total	106				0		20.0	19.6	
S 133 Trihalomethanes, Total	1				0		40.0	40.3	

Reagents:

VMFASAW_00144	Amount Added:	8.00	Units: uL	
VMFASPW_00160	Amount Added:	8.00	Units: uL	
VMFASGW_00161	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

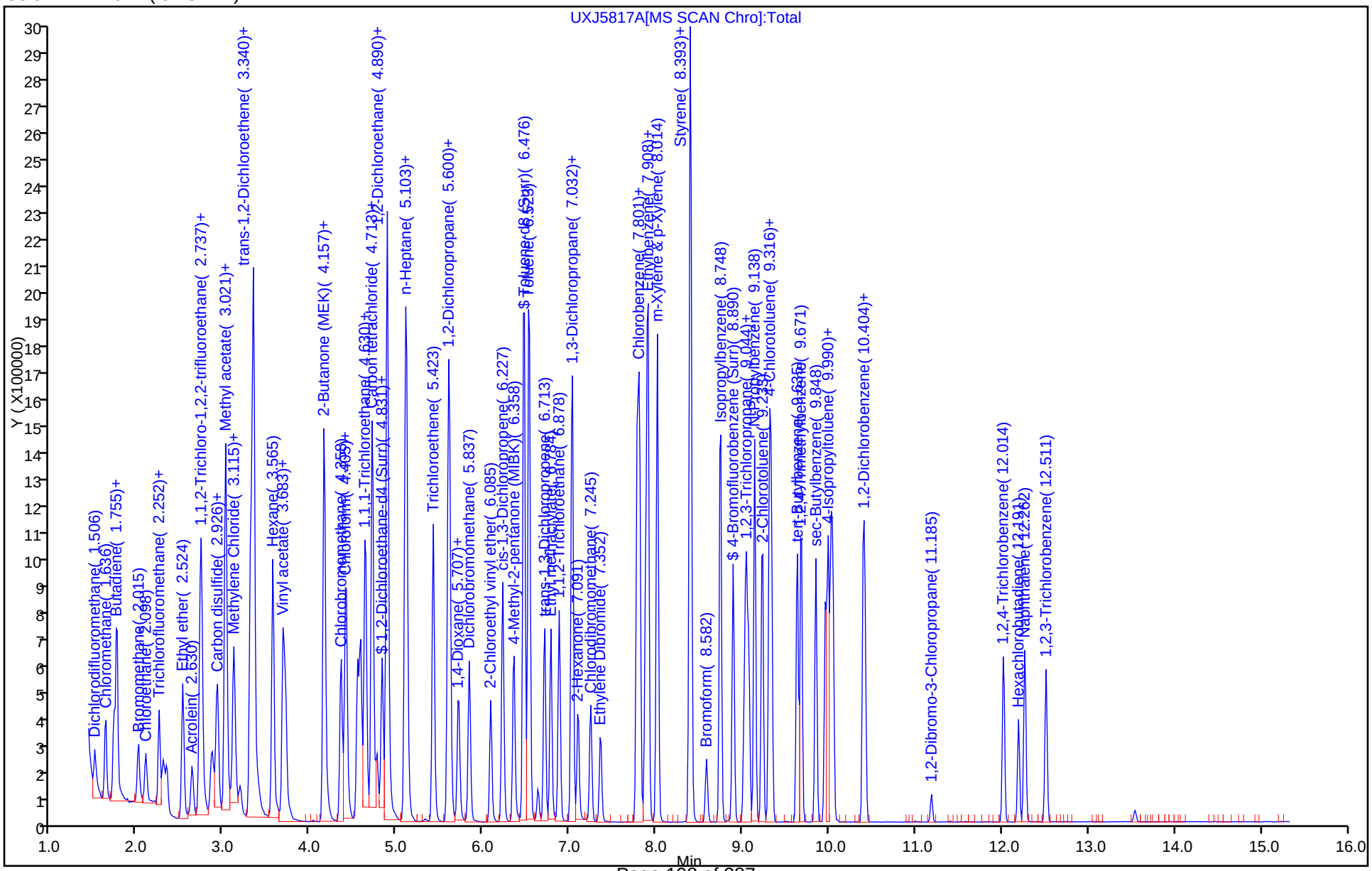
Report Date: 28-Jun-2016 10:20:38 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D

Injection Date:	27-Jun-2016 11:40:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Jun-2016 11:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-004
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.0	92.21
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.7	97.67
$ 6 Toluene-d8 (Surr)	12.0	11.9	99.24
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.28	77.57

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: 16MW9 MS | Lab Sample ID: 240-66154-2 MS

Matrix: Water | Lab File ID: UXJ5839.D

Analysis Method: 8260C | Date Collected: 06/16/2016 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 19:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	10.0		1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		79-120
460-00-4	4-Bromofluorobenzene (Surr)	77		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5839.D
Lims ID: 240-66154-F-2 MS
Client ID: 16MW9
Sample Type: MS
Inject. Date: 27-Jun-2016 19:59:30 ALS Bottle#: 26 Worklist Smp#: 49
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-049
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:22:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1596682	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	86	955957	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	300255	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	397800	12.0	11.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	466158	12.0	11.7	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1576960	12.0	11.6	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	379956	12.0	9.25	
12 Vinyl chloride	62	1.731	1.731	0.000	98	382494	10.0	10.0	

Reagents:

VMFASAW_00144	Amount Added:	8.00	Units: uL	
VMFASPW_00160	Amount Added:	8.00	Units: uL	
VMFASGW_00161	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

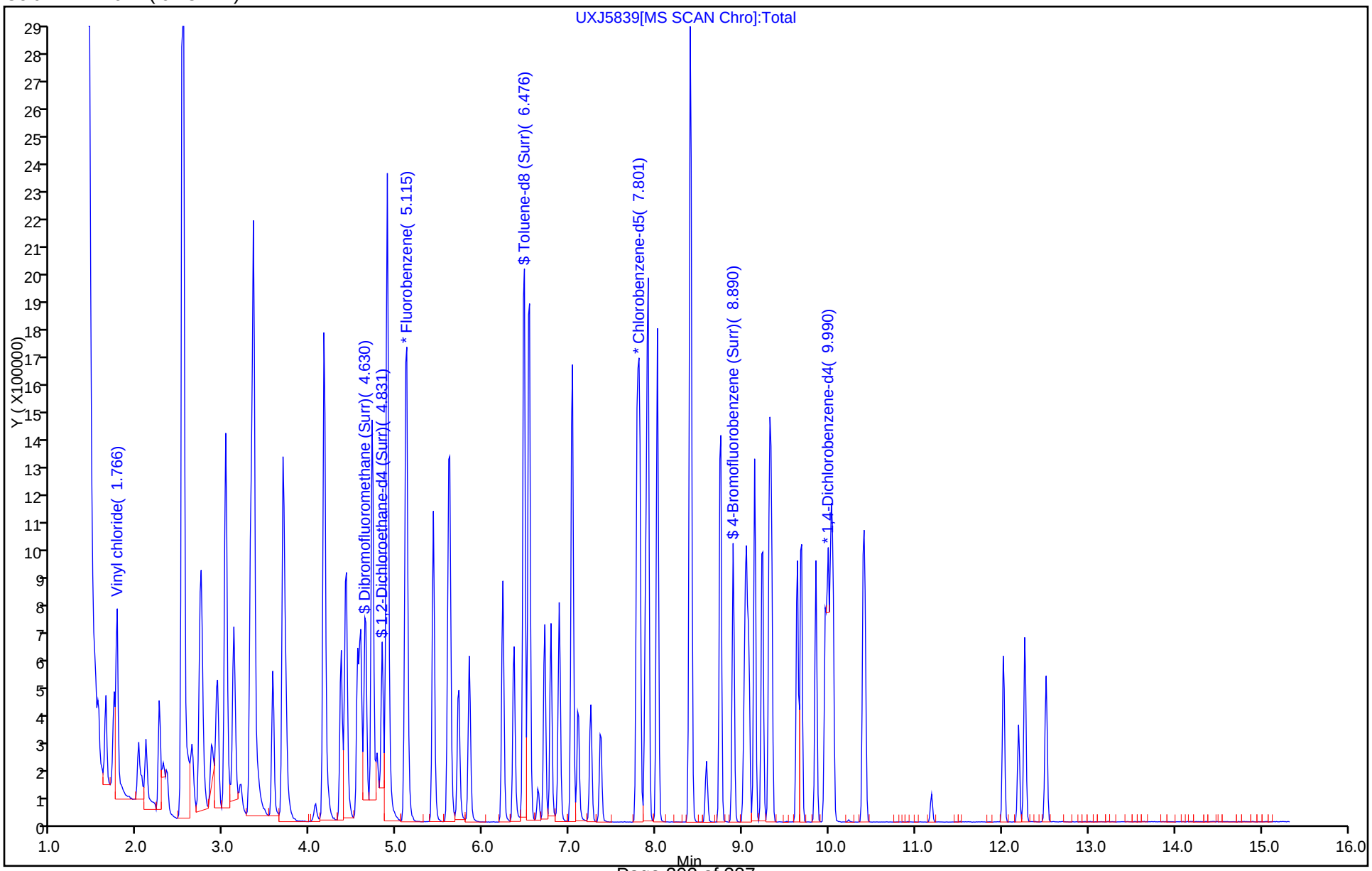
Report Date: 28-Jun-2016 08:27:43 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5839.D

Injection Date:	27-Jun-2016 19:59:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-F-2 MS			Worklist Smp#:	49
Client ID:	16MW9				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5839.D
Lims ID: 240-66154-F-2 MS
Client ID: 16MW9
Sample Type: MS
Inject. Date: 27-Jun-2016 19:59:30 ALS Bottle#: 26 Worklist Smp#: 49
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-049
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:22:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.2	93.37
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.7	97.63
$ 6 Toluene-d8 (Surr)	12.0	11.6	97.05
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.25	77.32

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Client Sample ID: 16MW9 MSD | Lab Sample ID: 240-66154-2 MSD

Matrix: Water | Lab File ID: UXJ5840.D

Analysis Method: 8260C | Date Collected: 06/16/2016 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 20:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	10.5		1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		79-120
460-00-4	4-Bromofluorobenzene (Surr)	77		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5840.D
Lims ID: 240-66154-E-2 MSD
Client ID: 16MW9
Sample Type: MSD
Inject. Date: 27-Jun-2016 20:22:30 ALS Bottle#: 27 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-050
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1544537	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	916756	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	92	289501	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	97	397222	12.0	11.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	476363	12.0	12.3	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1579283	12.0	12.1	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	92	364539	12.0	9.25	
12 Vinyl chloride	62	1.731	1.731	0.000	97	389426	10.0	10.5	

Reagents:

VMFASAW_00144	Amount Added:	8.00	Units: uL	
VMFASPW_00160	Amount Added:	8.00	Units: uL	
VMFASGW_00161	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

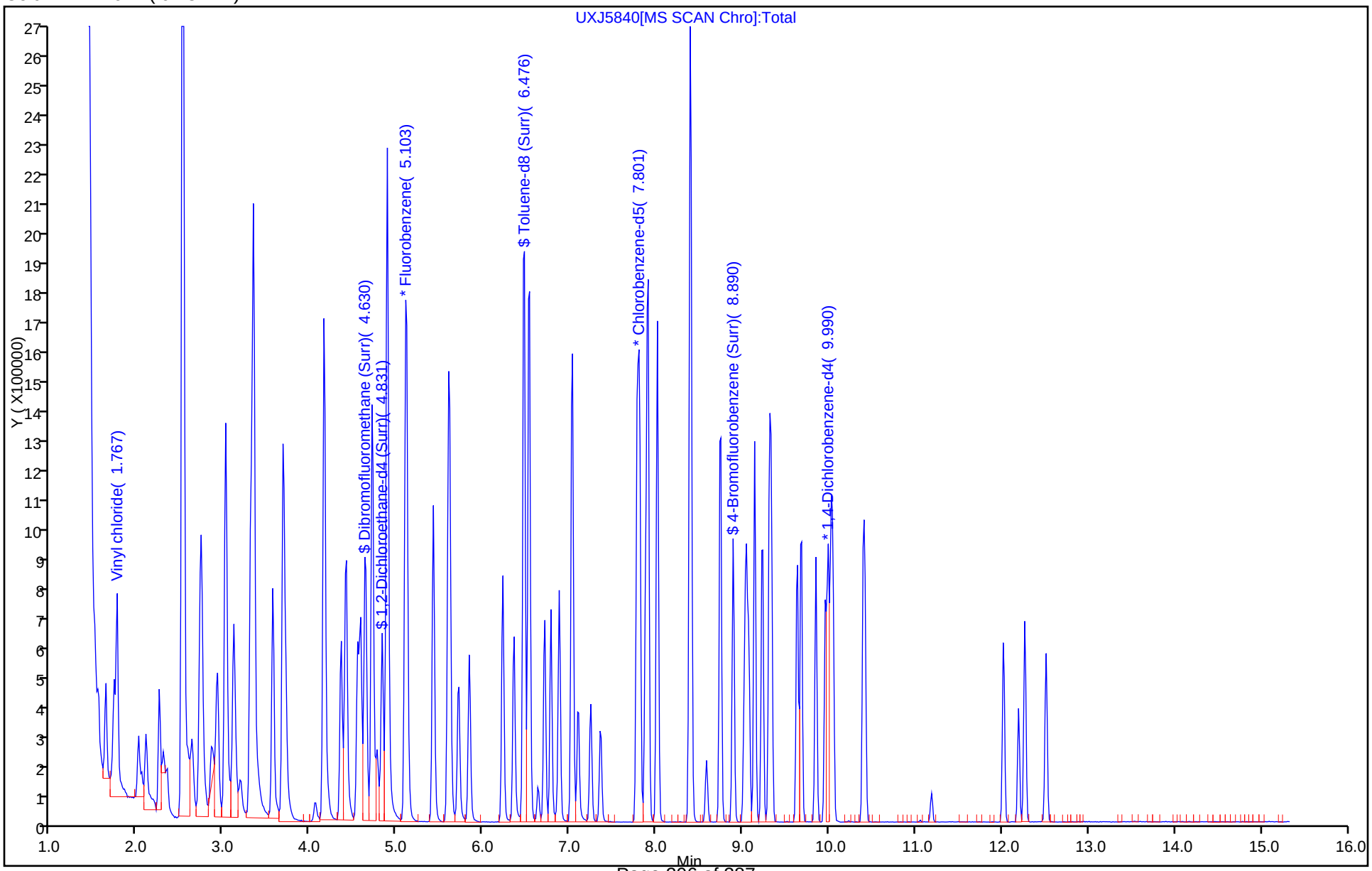
Report Date: 28-Jun-2016 08:27:44 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5840.D

Injection Date:	27-Jun-2016 20:22:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66154-E-2 MSD			Worklist Smp#:	50
Client ID:	16MW9				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5840.D
Lims ID: 240-66154-E-2 MSD
Client ID: 16MW9
Sample Type: MSD
Inject. Date: 27-Jun-2016 20:22:30 ALS Bottle#: 27 Worklist Smp#: 50
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-050
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.5	96.38
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	12.3	103.14
$ 6 Toluene-d8 (Surr)	12.0	12.1	101.35
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.25	77.36

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Instrument ID: A3UX11 Start Date: 05/28/2016 08:28

Analysis Batch Number: 232366 End Date: 05/28/2016 14:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-232366/1		05/28/2016 08:28	1	BFB6528.D	DB-624 0.18(mm)
STD8260 240-232366/2 IC		05/28/2016 09:12	1	UXJ4939.D	DB-624 0.18(mm)
STD8260 240-232366/3 IC		05/28/2016 09:34	1	UXJ4940.D	DB-624 0.18(mm)
STD8260 240-232366/4 ICIS		05/28/2016 09:56	1	UXJ4941.D	DB-624 0.18(mm)
STD8260 240-232366/5 IC		05/28/2016 10:19	1	UXJ4942.D	DB-624 0.18(mm)
STD8260 240-232366/6 IC		05/28/2016 10:40	1	UXJ4943.D	DB-624 0.18(mm)
STD8260 240-232366/7 IC		05/28/2016 11:03	1	UXJ4944.D	DB-624 0.18(mm)
ICV 240-232366/14		05/28/2016 11:25	1	UXJ4945.D	DB-624 0.18(mm)
STD6 240-232366/8 IC		05/28/2016 11:48	1		DB-624 0.18(mm)
STD5 240-232366/9 IC		05/28/2016 12:10	1		DB-624 0.18(mm)
STD4 240-232366/10 IC		05/28/2016 12:33	1		DB-624 0.18(mm)
STD3 240-232366/11 IC		05/28/2016 12:56	1		DB-624 0.18(mm)
STD2 240-232366/12 IC		05/28/2016 13:18	1		DB-624 0.18(mm)
STD1 240-232366/13 IC		05/28/2016 13:41	1		DB-624 0.18(mm)
ICV 240-232366/15		05/28/2016 14:03	1	UXJ4952.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Instrument ID: A3UX11 Start Date: 06/27/2016 09:44

Analysis Batch Number: 236061 End Date: 06/27/2016 21:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-236061/1		06/27/2016 09:44	1	BFB6627A.D	DB-624 0.18(mm)
CCVIS 240-236061/2		06/27/2016 10:32	1	UXJ5814A.D	DB-624 0.18(mm)
CCV 240-236061/3		06/27/2016 11:18	1	UXJ5816A.D	DB-624 0.18(mm)
LCS 240-236061/4		06/27/2016 11:40	1	UXJ5817A.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 12:03	1		DB-624 0.18(mm)
MB 240-236061/6		06/27/2016 12:26	1	UXJ5819.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 12:48	333.33		DB-624 0.18(mm)
ZZZZZ		06/27/2016 14:19	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 14:42	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:05	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:27	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:50	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:12	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:35	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:58	1		DB-624 0.18(mm)
240-66154-1		06/27/2016 17:21	1	UXJ5832.D	DB-624 0.18(mm)
240-66154-4		06/27/2016 17:43	1	UXJ5833.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 19:14	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 19:36	1		DB-624 0.18(mm)
240-66154-2 MS		06/27/2016 19:59	1	UXJ5839.D	DB-624 0.18(mm)
240-66154-2 MSD		06/27/2016 20:22	1	UXJ5840.D	DB-624 0.18(mm)
240-66154-3		06/27/2016 20:44	1	UXJ5841.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 21:07	1		DB-624 0.18(mm)
240-66154-2		06/27/2016 21:29	1	UXJ5843.D	DB-624 0.18(mm)

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-66154-1

SDG No.:

Project: RAAP, Radford VA - HWMU16

Client Sample ID	Lab Sample ID
16MW9	240-66154-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16MW9 Lab Sample ID: 240-66154-2

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG ID.:

Matrix: Water Date Sampled: 06/16/2016 13:40

Reporting Basis: WET Date Received: 06/17/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	4.7	5.0	1.0	ug/L	J		1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

ICV Source: MTMSICVW_00068 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00168

Analyte	ICV 240-235476/7 06/21/2016 10:35				CCV 240-235476/12 06/21/2016 10:56				CCV 240-235476/24 06/21/2016 11:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	39.9		40.0	100	50.3		50.0	101	50.3		50.0	101
Arsenic	40.9		40.0	102	51.4		50.0	103	51.6		50.0	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-235476/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	1.00	1.01		101	70-130

Lab Sample ID: CRI 240-235476/48 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	1.00	1.00		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-235476/8 06/21/2016 10:39		CCB 240-235476/13 06/21/2016 11:00		CCB 240-235476/25 06/21/2016 11:55			
		Found	C	Found	C	Found	C	Found	C
Cobalt	1.0	1.0	U	1.0	U	0.0280	J		
Arsenic	5.0	5.0	U	5.0	U	5.0	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-235182/1-A

Instrument Code: I10 Batch No.: 235476

CAS No.	Analyte	Concentration	C	Q	Method
7440-48-4	Cobalt	5.0	U		6020A

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: ICSA 240-235476/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00069

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Cobalt		**0.0190**	
Aluminum	*50000*	*51034*	*102*
Antimony		*0.0340*	
Arsenic		*0.0460*	
Barium		*0.0380*	
Beryllium		*0.0130*	
Boron		*1.91*	
Cadmium		*0.0060*	
Calcium	*50000*	*49430*	*99*
Chromium		*1.03*	
Copper		*0.434*	
Iron	*50000*	*49279*	*99*
Lead		*0.113*	
Lithium		*0.0410*	
Magnesium	*50000*	*49552*	*99*
Manganese		*0.314*	
Molybdenum	*1000*	*1020*	*102*
Nickel		*0.267*	
Potassium	*50000*	*48927*	*98*
Selenium		*0.0930*	
Silver		*0.0170*	
Sodium	*50000*	*49459*	*99*
Strontium		*0.241*	
Thallium		*0.0060*	
Tin		*-2.97*	
Titanium	*1000*	*1013*	*101*
Tungsten		*0.155*	
Vanadium		*0.164*	
Zinc		*0.716*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Lab Sample ID: ICSAB 240-235476/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00068

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Cobalt	**100**	**99.1**	**99**
Aluminum	*50000*	*50878*	*102*
Antimony	*100*	*98.4*	*98*
Arsenic	*100*	*104*	*104*
Barium	*100*	*98.9*	*99*
Beryllium	*100*	*96.8*	*97*
Boron	*100*	*103*	*103*
Cadmium	*100*	*99.1*	*99*
Calcium	*50000*	*49454*	*99*
Chromium	*100*	*98.3*	*98*
Copper	*100*	*98.8*	*99*
Iron	*50000*	*49239*	*98*
Lead	*100*	*98.4*	*98*
Lithium	*100*	*96.4*	*96*
Magnesium	*50000*	*49736*	*99*
Manganese	*100*	*99.3*	*99*
Molybdenum	*1100*	*1135*	*103*
Nickel	*100*	*99.1*	*99*
Potassium	*50000*	*49465*	*99*
Selenium	*100*	*101*	*101*
Silver	*100*	*102*	*102*
Sodium	*50000*	*49841*	*100*
Strontium	*100*	*100*	*100*
Thallium	*100*	*97.1*	*97*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1109*	*101*
Tungsten	*100*	*99.8*	*100*
Vanadium	*100*	*98.8*	*99*
Zinc	*100*	*99.6*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 16MW9 MS | Lab ID: 240-66154-2 MS

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cobalt	938		4.7	J	1000	93	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 16MW9 MSD | Lab ID: 240-66154-2 MSD

Lab Name: TestAmerica Canton | Job No.: 240-66154-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cobalt	925		1000	92	75-125	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-235182/2-A

Lab Name: TestAmerica Canton Job No.: 240-66154-1

Sample Matrix: Water LCS Source: MTICPMSA_00027

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Cobalt	1000	964		96	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-66154-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-66154-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Cobalt	4.7	J	5.02	J	NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-66154-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A MDL Date: 06/17/2016 14:11

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Cobalt	59.00	5	1

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-66154-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 09/15/2014 17:03

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cobalt	59.00	1	0.021

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-66154-1

SDG No.:

Instrument ID: I10 Date: 04/12/2016 14:53

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Cobalt		5000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-235182/1-A	06/20/2016 11:14	235182		50	50
LCS 240-235182/2-A	06/20/2016 11:14	235182		50	50
240-66154-2	06/20/2016 11:14	235182		50	50
240-66154-2 MS	06/20/2016 11:14	235182		50	50
240-66154-2 MSD	06/20/2016 11:14	235182		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			10:11	
ICIS 240-235476/2	1		10:15	X
STD1 240-235476/3 IC	1		10:19	X
STD2 240-235476/4 IC	1		10:23	X
STD3 240-235476/5 IC	1		10:27	X
STD4 240-235476/6 IC	1		10:31	X
ICV 240-235476/7	1		10:35	X
ICB 240-235476/8	1		10:39	X
CRI 240-235476/9	1		10:43	X
ICSA 240-235476/10	1		10:48	X
ICSAB 240-235476/11	1		10:52	X
CCV 240-235476/12	1		10:56	X
CCB 240-235476/13	1		11:00	X
ZZZZZZ			11:11	
ZZZZZZ			11:15	
MB 240-235182/1-A	1	R	11:19	X
LCS 240-235182/2-A	1	R	11:23	X
240-66154-2	1	R	11:27	X
240-66154-2 SD	5	R	11:31	X
ZZZZZZ			11:35	
240-66154-2 MS	1	R	11:39	X
240-66154-2 MSD	1	R	11:43	X
ZZZZZZ			11:47	
CCV 240-235476/24	1		11:51	X
CCB 240-235476/25	1		11:55	X
ZZZZZZ			11:59	
ZZZZZZ			12:03	
ZZZZZZ			12:08	
ZZZZZZ			12:12	
ZZZZZZ			12:16	
ZZZZZZ			12:20	
ZZZZZZ			12:24	
ZZZZZZ			12:28	
ZZZZZZ			12:32	
ZZZZZZ			12:36	
CCV 240-235476/36			12:40	
CCB 240-235476/37			12:44	
ZZZZZZ			12:48	
ZZZZZZ			12:53	
ZZZZZZ			12:57	
ZZZZZZ			13:01	
ZZZZZZ			13:05	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			13:09	
ZZZZZZ			13:13	
ZZZZZZ			13:17	
CCV 240-235476/46			13:21	
CCB 240-235476/47			13:25	
CRI 240-235476/48	1		13:29	X
ZZZZZZ			13:34	
ZZZZZZ			13:38	
ZZZZZZ			13:42	
ZZZZZZ			13:46	
ZZZZZZ			13:50	
ZZZZZZ			13:54	
ZZZZZZ			13:58	
ZZZZZZ			14:02	
ZZZZZZ			14:06	
CCV 240-235476/58			14:10	
CCB 240-235476/59			14:14	
ZZZZZZ			14:18	
ZZZZZZ			14:22	
ZZZZZZ			14:26	
ZZZZZZ			14:30	
ZZZZZZ			14:35	
ZZZZZZ			14:38	
ZZZZZZ			14:42	
ZZZZZZ			14:46	
ZZZZZZ			14:50	
ZZZZZZ			14:54	
CCV 240-235476/70			14:58	
CCB 240-235476/71			15:02	
ZZZZZZ			15:07	
ZZZZZZ			15:11	
ZZZZZZ			15:15	
ZZZZZZ			15:19	
ZZZZZZ			15:23	
ZZZZZZ			15:27	
ZZZZZZ			15:31	
ZZZZZZ			15:35	
ZZZZZZ			15:39	
ZZZZZZ			15:43	
CCV 240-235476/82			15:47	
CCB 240-235476/83			15:51	
ZZZZZZ			15:55	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			15:59	
ZZZZZZ			16:04	
ZZZZZZ			16:08	
ZZZZZZ			16:12	
ZZZZZZ			16:16	
ZZZZZZ			16:20	
ZZZZZZ			16:23	
ZZZZZZ			16:27	
ZZZZZZ			16:31	
CCV 240-235476/94			16:35	
CCB 240-235476/95			16:39	
ZZZZZZ			16:43	
ZZZZZZ			16:47	
ZZZZZZ			16:52	
ZZZZZZ			16:56	
ZZZZZZ			17:00	
ZZZZZZ			17:04	
ZZZZZZ			17:08	
ZZZZZZ			17:12	
ZZZZZZ			17:16	
ZZZZZZ			17:20	
CCV 240-235476/106			17:24	
CCB 240-235476/107			17:28	
ZZZZZZ			17:32	
ZZZZZZ			17:36	
ZZZZZZ			17:40	
ZZZZZZ			17:44	
ZZZZZZ			17:49	
ZZZZZZ			17:53	
ZZZZZZ			17:57	
ZZZZZZ			18:01	
CCV 240-235476/116			18:05	
CCB 240-235476/117			18:09	

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 06/21/2016 End Date: 06/21/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-235476/2	10:15	100		100		100		100		100	
STD1 240-235476/3 I	10:19	99		99		99		97		100	
STD2 240-235476/4 I	10:23	97		97		99		94		96	
STD3 240-235476/5 I	10:27	97		97		99		94		95	
STD4 240-235476/6 I	10:31	95		99		98		96		98	
ICV 240-235476/7	10:35	97		100		100		95		98	
ICB 240-235476/8	10:39	99		101		101		98		101	
CRI 240-235476/9	10:43	98		101		101		99		100	
ICSA 240-235476/10	10:48	104		100		105		93		96	
ICSAB 240-235476/11	10:52	103		106		111		97		101	
CCV 240-235476/12	10:56	103		108		109		102		103	
CCB 240-235476/13	11:00	103		108		105		104		104	
MB 240-235182/1-A	11:19	102		104		103		103		101	
LCS 240-235182/2-A	11:23	101		105		105		99		98	
240-66154-2	11:27	104		109		108		99		101	
240-66154-2 SD	11:31	104		109		106		104		104	
240-66154-2 MS	11:39	104		108		110		99		99	
240-66154-2 MSD	11:43	106		109		112		101		101	
CCV 240-235476/24	11:51	105		108		110		101		102	
CCB 240-235476/25	11:55	106		108		109		104		103	
CRI 240-235476/48	13:29	111		104		109		102		101	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-66154-1

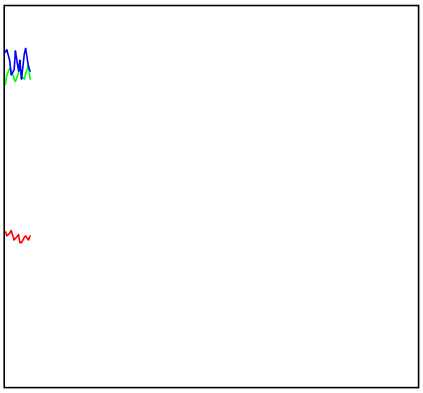
SDG No.:

ICP-MS Instrument ID: I10 Start Date: 06/21/2016 End Date: 06/21/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-235476/2	10:15	100		100		100					
STD1 240-235476/3 I	10:19	98		99		98					
STD2 240-235476/4 I	10:23	100		97		94					
STD3 240-235476/5 I	10:27	100		97		91					
STD4 240-235476/6 I	10:31	97		97		97					
ICV 240-235476/7	10:35	99		98		95					
ICB 240-235476/8	10:39	99		98		97					
CRI 240-235476/9	10:43	99		98		98					
ICSA 240-235476/10	10:48	98		96		92					
ICSAB 240-235476/11	10:52	101		101		95					
CCV 240-235476/12	10:56	101		98		95					
CCB 240-235476/13	11:00	99		99		98					
MB 240-235182/1-A	11:19	98		98		98					
LCS 240-235182/2-A	11:23	99		98		94					
240-66154-2	11:27	100		100		94					
240-66154-2 SD	11:31	101		101		97					
240-66154-2 MS	11:39	99		101		93					
240-66154-2 MSD	11:43	103		98		94					
CCV 240-235476/24	11:51	100		100		95					
CCB 240-235476/25	11:55	100		101		98					
CRI 240-235476/48	13:29	101		99		98					

Current Signal

[NoGas]



Mass	Range	Count	Avg. Count	RSD [%]
7	5000	1977	1964.4	2.68
89	5000	4049	4104.3	1.94
205	2000	1664	1707.3	3.22
156/140	1	0.560 %	0.600 %	23.52
11	500	347	374.9	6.32
63	500	399	400.7	5.01
45	200	124	112.2	12.25
52	5000	2754	2728.0	3.26
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	14.0	V
Extract 2	-200.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

Meters

IF/BK Press	2.33E+2	Pa	Carrier Gas	0.55	L/min	Forward Power	1600	W
Analyzer Press	1.08E-4	Pa	Reflected Power	4	W			

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Current Signal

[He]

Mass	Range	Count	Avg. Count	RSD [%]
59	1000	728	777.3	4.70
51	200	78	98.9	15.48
52	200	127	136.2	9.64
51/59	20	10.712 %	12.760 %	16.52
63	200	106	120.1	12.82
65	100	69	64.0	13.43
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	3.4	V
Extract 2	-200.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-75	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	6.8	V
He Flow	4.3	mL/min	OctP Bias	-22.3	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Meters

IF/BK Press	2.34E+2	Pa	Carrier Gas	0.55	L/min	Forward Power	1599	W
Analyzer Press	1.99E-4	Pa	Reflected Power	4	W			

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US EPA Tune Check Sample Report

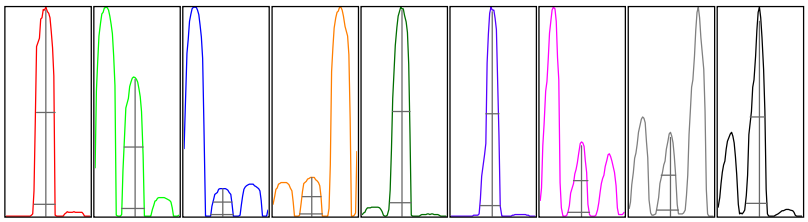
Batch Folder D:\Analytical Runs\I10062116A.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	32225	0.18	5.00	
24	136992	0.33	5.00	
25	18386	0.59	5.00	
26	21932	1.11	5.00	
59	155510	0.44	5.00	
115	151511	0.41	5.00	
206	25996	0.39	5.00	
207	22638	0.83	5.00	
208	54485	0.40	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	32165	32258	32297	32235	32172
24	137322	136619	137379	136410	137230
25	18424	18499	18458	18237	18310
26	21718	21644	22223	22020	22055
59	155352	154917	155387	155218	156677
115	150672	151646	152048	152093	151098
206	26028	26109	25834	25994	26015
207	22704	22840	22622	22689	22335
208	54410	54562	54721	54145	54588

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	5136	8.95	8.9 - 9.1		0.776	0.850	
24	22037	23.95	23.9 - 24.1		0.787	0.850	
25	2937	24.90	24.9 - 25.1		0.787	0.850	
26	3388	25.90	25.9 - 26.1		0.788	0.850	
59	26562	58.95	58.9 - 59.1		0.774	0.850	
115	31565	115.00	114.9 - 115.1		0.721	0.850	
206	5336	206.00	205.9 - 206.1		0.749	0.850	
207	4451	207.00	206.9 - 207.1		0.751	0.850	
208	11022	208.00	207.9 - 208.1		0.757	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	14.0	V
Extract 2	-200.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:11:11-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	97360	0.00
Be	9	45	2	NoGas	52	47.71
B	11	45	2	NoGas	4719	0.10
Na	23	45	1	He	12664	0.04
Mg	24	45	1	He	478	2.96
Al	27	45	1	He	230	2.27
K	39	45	1	He	25140	0.01
Ca	44	45	1	He	299	6.21
Ti	47	45	1	He	4	1947.58
V	51	45	1	He	529	17.08
Cr	52	45	1	He	3186	0.12
Mn	55	45	1	He	494	1.59
Fe	56	45	1	He	2595	0.27
Co	59	45	1	He	66	46.75
Ni	60	45	1	He	201	8.81
Cu	63	45	1	He	2874	0.11
Zn	66	45	1	He	503	0.95
As	75	115	1	He	124	9.61
Se	78	115	1	He	20	18.97
Sr	88	103	1	He	50	46.18
Mo	95	103	1	He	28	274.40
Ag	107	103	1	He	22	169.94
Cd	111	115	1	He	3	2910.62
Sn	118	115	1	He	6898	0.06
Sb	123	115	1	He	41	88.92
Ba	137	115	1	He	26	206.34
W	182	159	1	He	1711	0.53
Tl	205	165	1	He	67	34.37
Pb	208	165	1	He	649	1.90

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1668272	1.19
Sc	45	1	He	351001	1.68
Sc	45	2	NoGas	8935902	1.76
Rh	103	1	He	1471668	1.04
In	115	1	He	491753	1.42
Tb	159	1	He	1396589	3.35
Ho	165	1	He	1397235	1.18
Bi	209	1	He	916058	0.97

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:15:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	97455	0.00
Be	9	45	2	NoGas	41	215.17
B	11	45	2	NoGas	4812	0.15
Na	23	45	1	He	13398	0.06
Mg	24	45	1	He	419	7.32
Al	27	45	1	He	207	8.11
K	39	45	1	He	24936	0.01
Ca	44	45	1	He	282	6.67
Ti	47	45	1	He	1	15604.06
V	51	45	1	He	485	5.92
Cr	52	45	1	He	3420	0.28
Mn	55	45	1	He	513	1.74
Fe	56	45	1	He	2338	0.34
Co	59	45	1	He	71	16.59
Ni	60	45	1	He	228	7.05
Cu	63	45	1	He	2766	0.08
Zn	66	45	1	He	554	0.53
As	75	115	1	He	124	6.58
Se	78	115	1	He	24	23.03
Sr	88	103	1	He	222	55.84
Mo	95	103	1	He	23	106.01
Ag	107	103	1	He	23	106.01
Sn	118	115	1	He	6709	0.04
Sb	123	115	1	He	36	99.81
Ba	137	115	1	He	19	470.26
W	182	159	1	He	1419	0.59
Tl	205	165	1	He	41	69.26
Pb	208	165	1	He	521	0.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1674650	0.34
Sc	45	1	He	355173	0.69
Sc	45	2	NoGas	8635903	0.47
Rh	103	1	He	1470259	0.96
In	115	1	He	490642	0.43
Tb	159	1	He	1434034	2.64
Ho	165	1	He	1409606	1.06
Bi	209	1	He	906964	0.24

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Calibration Standard Report

Sample Table

Sample Name	STD1-2569623
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:19:23-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	274671	0.00
Be	9	2	NoGas	50744	0.00
B	11	2	NoGas	38285	0.00
Na	23	1	He	4708911	0.00
Mg	24	1	He	2541914	0.00
Al	27	1	He	13616	0.01
K	39	1	He	1513940	0.00
Ca	44	1	He	81498	0.00
Ti	47	1	He	1036	0.42
V	51	1	He	37314	0.01
Cr	52	1	He	47284	0.00
Mn	55	1	He	116371	0.00
Fe	56	1	He	8502763	0.00
Co	59	1	He	72202	0.00
Ni	60	1	He	19864	0.01
Cu	63	1	He	57916	0.00
Zn	66	1	He	7434	0.07
As	75	1	He	4833	0.03
Se	78	1	He	278	0.65
Sr	88	1	He	23937	0.01
Mo	95	1	He	22151	0.01
Ag	107	1	He	70158	0.00
Cd	111	1	He	8500	0.00
Sn	118	1	He	18444	0.02
Sb	123	1	He	18510	0.01
Ba	137	1	He	7426	0.03
W	182	1	He	53273	0.00
Tl	205	1	He	95752	0.00
Pb	208	1	He	131539	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656716	2.12	1674650	98.93	60	120	
Sc	45	1	He	350299	1.07	355173	98.63	60	120	
Sc	45	2	NoGas	8529861	0.90	8635903	98.77	60	120	
Rh	103	1	He	1425404	0.55	1470259	96.95	60	120	
In	115	1	He	488266	0.80	490642	99.52	60	120	
Tb	159	1	He	1401760	0.76	1434034	97.75	60	120	
Ho	165	1	He	1392954	0.19	1409606	98.82	60	120	
Bi	209	1	He	889127	0.27	906964	98.03	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2549639
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:23:28-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	989583	0.00
Be	9	2	NoGas	256574	0.00
B	11	2	NoGas	158292	0.00
Na	23	1	He	22986794	0.00
Mg	24	1	He	12486187	0.00
Al	27	1	He	51910	0.00
K	39	1	He	7337184	0.00
Ca	44	1	He	398611	0.00
Ti	47	1	He	5512	0.04
V	51	1	He	182426	0.00
Cr	52	1	He	218306	0.00
Mn	55	1	He	569784	0.00
Fe	56	1	He	41307834	0.00
Co	59	1	He	352006	0.00
Ni	60	1	He	96124	0.00
Cu	63	1	He	267621	0.00
Zn	66	1	He	35121	0.00
As	75	1	He	23428	0.01
Se	78	1	He	1299	0.18
Sr	88	1	He	117759	0.00
Mo	95	1	He	110718	0.00
Ag	107	1	He	340079	0.00
Cd	111	1	He	41815	0.00
Sn	118	1	He	87572	0.00
Sb	123	1	He	94449	0.00
Ba	137	1	He	36288	0.00
W	182	1	He	264076	0.00
Tl	205	1	He	471890	0.00
Pb	208	1	He	640398	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1624660	1.18	1674650	97.01	60	120	
Sc	45	1	He	344620	0.26	355173	97.03	60	120	
Sc	45	2	NoGas	8554359	0.70	8635903	99.06	60	120	
Rh	103	1	He	1387189	1.42	1470259	94.35	60	120	
In	115	1	He	471537	0.55	490642	96.11	60	120	
Tb	159	1	He	1426317	2.25	1434034	99.46	60	120	
Ho	165	1	He	1371276	0.67	1409606	97.28	60	120	
Bi	209	1	He	851607	1.15	906964	93.90	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:27:32-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	97686	0.00
Be	9	2	NoGas	504767	0.00
B	11	2	NoGas	8098	0.09
Na	23	1	He	45915334	0.00
Mg	24	1	He	24664209	0.00
Al	27	1	He	102633	0.00
K	39	1	He	14734064	0.00
Ca	44	1	He	797531	0.00
Ti	47	1	He	9	644.79
V	51	1	He	359935	0.00
Cr	52	1	He	431221	0.00
Mn	55	1	He	1133204	0.00
Fe	56	1	He	81994112	0.00
Co	59	1	He	699496	0.00
Ni	60	1	He	190535	0.00
Cu	63	1	He	527730	0.00
Zn	66	1	He	69056	0.00
As	75	1	He	46724	0.00
Se	78	1	He	2589	0.04
Sr	88	1	He	234704	0.00
Mo	95	1	He	300	3.23
Ag	107	1	He	662063	0.00
Cd	111	1	He	82058	0.00
Sn	118	1	He	963	2.88
Sb	123	1	He	328	1.09
Ba	137	1	He	71335	0.00
W	182	1	He	2971	0.34
Tl	205	1	He	921683	0.00
Pb	208	1	He	1251619	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1626773	0.06	1674650	97.14	60	120	
Sc	45	1	He	345659	1.01	355173	97.32	60	120	
Sc	45	2	NoGas	8516960	0.40	8635903	98.62	60	120	
Rh	103	1	He	1377355	0.24	1470259	93.68	60	120	
In	115	1	He	468137	0.23	490642	95.41	60	120	
Tb	159	1	He	1430065	0.56	1434034	99.72	60	120	
Ho	165	1	He	1360827	0.18	1409606	96.54	60	120	
Bi	209	1	He	829408	0.99	906964	91.45	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:31:38-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	2008248	0.00
Be	9	2	NoGas	133	33.07
B	11	2	NoGas	307486	0.00
Na	23	1	He	23775	0.03
Mg	24	1	He	2763	0.60
Al	27	1	He	222	5.24
K	39	1	He	30408	0.01
Ca	44	1	He	242	3.95
Ti	47	1	He	10972	0.02
V	51	1	He	1040	2.75
Cr	52	1	He	3695	0.04
Mn	55	1	He	249	5.60
Fe	56	1	He	24649	0.12
Co	59	1	He	126	12.21
Ni	60	1	He	190	7.56
Cu	63	1	He	3480	0.06
Zn	66	1	He	142	14.95
As	75	1	He	101	1.41
Se	78	1	He	26	66.22
Sr	88	1	He	69	67.50
Mo	95	1	He	221935	0.00
Ag	107	1	He	104	28.39
Cd	111	1	He	35	94.47
Sn	118	1	He	179494	0.00
Sb	123	1	He	189393	0.00
Ba	137	1	He	39	12.71
W	182	1	He	516579	0.00
Tl	205	1	He	776	3.79
Pb	208	1	He	1040	1.13

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1593579	1.43	1674650	95.16	60	120	
Sc	45	1	He	352825	0.17	355173	99.34	60	120	
Sc	45	2	NoGas	8493804	1.38	8635903	98.35	60	120	
Rh	103	1	He	1414010	0.93	1470259	96.17	60	120	
In	115	1	He	480569	0.43	490642	97.95	60	120	
Tb	159	1	He	1384047	2.09	1434034	96.51	60	120	
Ho	165	1	He	1363182	0.51	1409606	96.71	60	120	
Bi	209	1	He	882365	1.04	906964	97.29	60	120	

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Calibration for 060_Blk.d

Batch Folder: D:\Analytical Runs\I10062116A.b\
Analysis File: I10062116A.batch.bin
DA Date-Time: 6/21/2016 2:20:48 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	6/21/2016 10:15:17 AM
2	003CALS.d	STD1-2569623	6/21/2016 10:19:23 AM
3	004CALS.d	STD2-2549639	6/21/2016 10:23:28 AM
4	005CALS.d	STD3-2510771	6/21/2016 10:27:32 AM
5	006CALS.d	STD4-2510772	6/21/2016 10:31:38 AM

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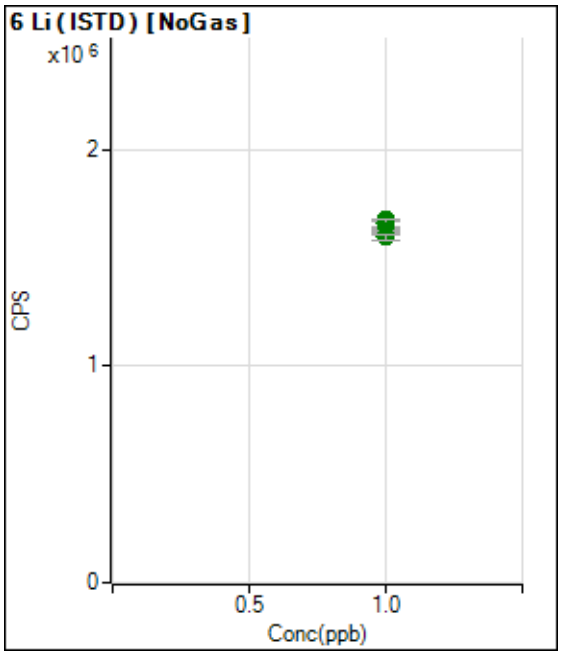
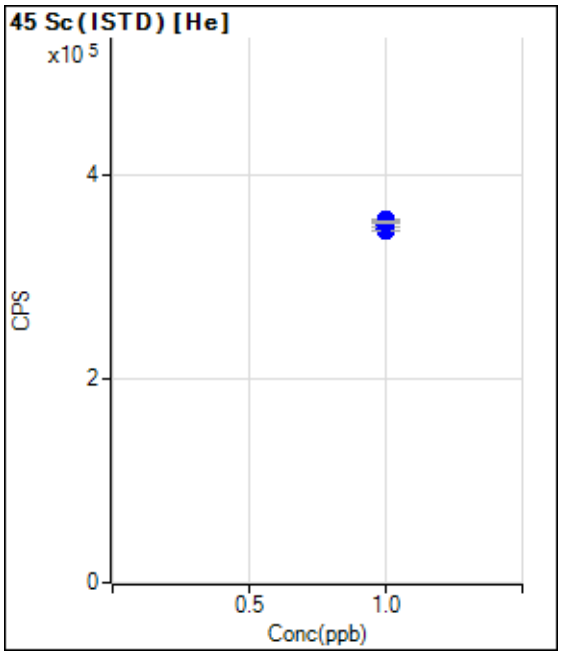


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1674649.85		A	0.3
2	☐	1.000		1656715.67		A	2.1
3	☐	1.000		1624659.76		A	1.2
4	☐	1.000		1626773.23		A	0.1
5	☐	1.000		1593579.23		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		355172.81		P	0.7
2	☐	1.000		350299.35		P	1.1
3	☐	1.000		344620.08		P	0.3
4	☐	1.000		345658.52		P	1.0
5	☐	1.000		352824.83		P	0.2

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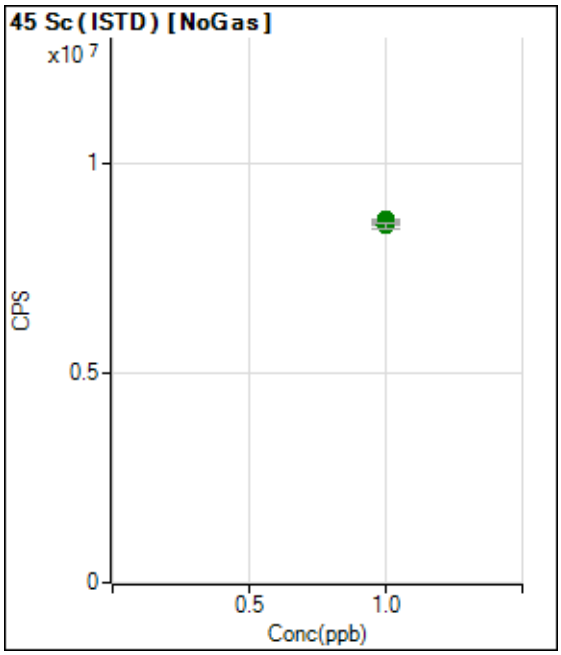
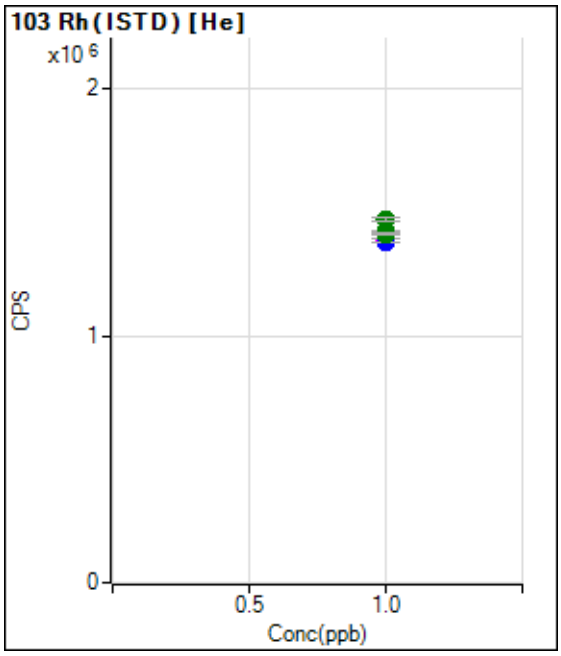


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8635902.99		A	0.5
2	☐	1.000		8529861.05		A	0.9
3	☐	1.000		8554358.83		A	0.7
4	☐	1.000		8516959.94		A	0.4
5	☐	1.000		8493804.39		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1470259.20		A	1.0
2	☐	1.000		1425403.73		A	0.5
3	☐	1.000		1387189.41		M	1.4
4	☐	1.000		1377355.40		P	0.2
5	☐	1.000		1414010.14		A	0.9

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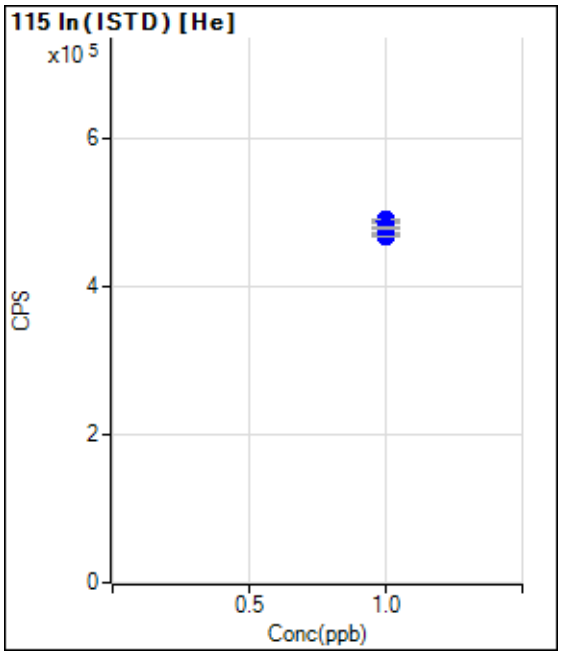
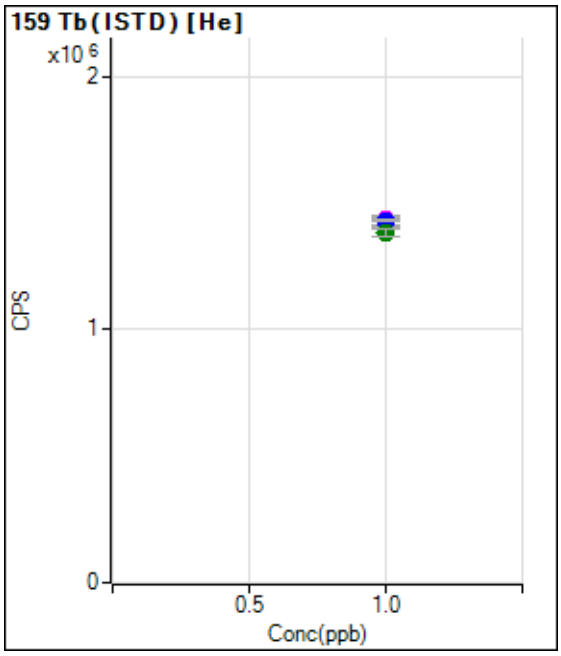


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		490642.11		P	0.4
2	☐	1.000		488266.06		P	0.8
3	☐	1.000		471536.58		P	0.6
4	☐	1.000		468136.67		P	0.2
5	☐	1.000		480569.24		P	0.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1434033.78		M	2.6
2	☐	1.000		1401759.56		A	0.8
3	☐	1.000		1426316.96		M	2.3
4	☐	1.000		1430064.87		P	0.6
5	☐	1.000		1384046.75		A	2.1

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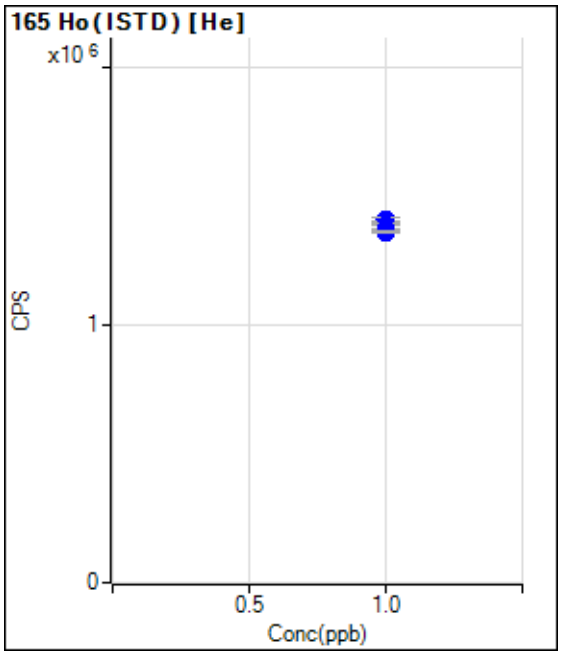

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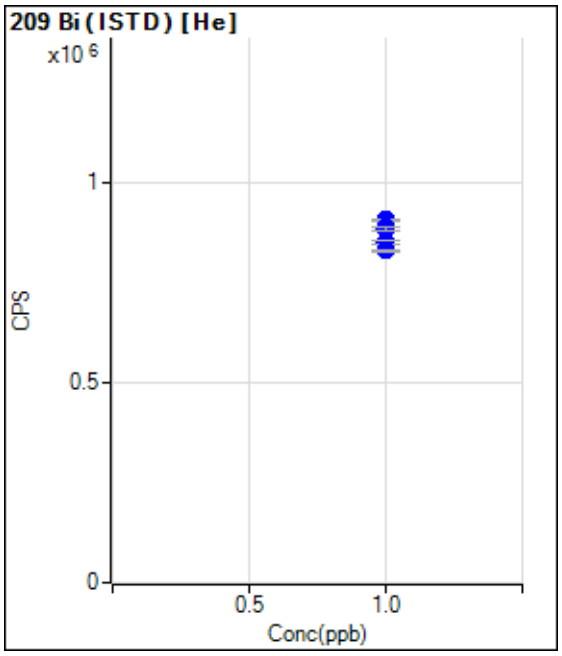
1		1.000		1409605.76		P	1.1
2		1.000		1392954.09		P	0.2
3		1.000		1371276.02		P	0.7
4		1.000		1360827.17		P	0.2
5		1.000		1363181.90		P	0.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		906964.00		P	0.2
2		1.000		889127.15		P	0.3
3		1.000		851606.71		P	1.1
4		1.000		829407.88		P	1.0
5		1.000		882365.32		P	1.0

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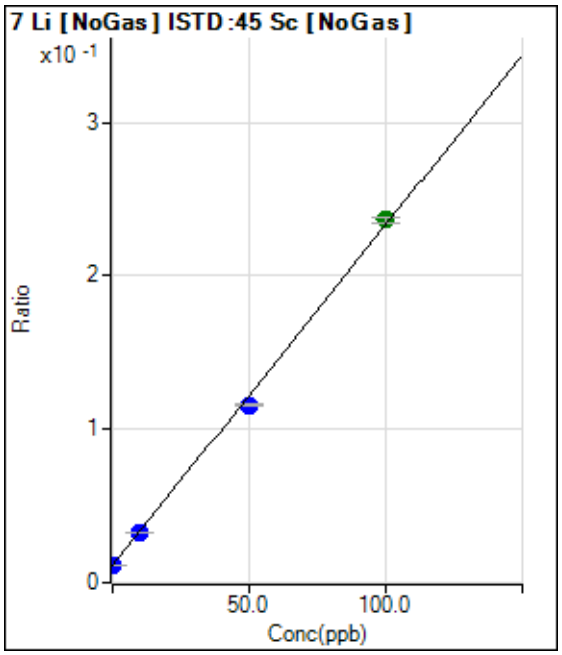
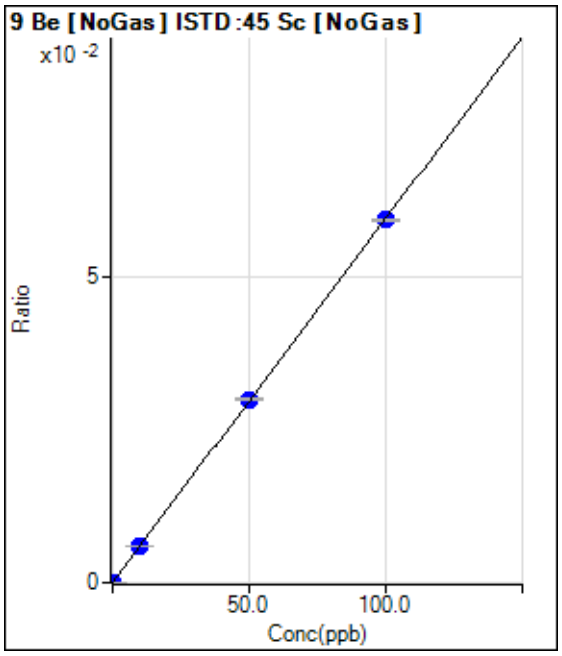


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	97455.18	0.0113	P	1.1
2		10.000	9.430	274671.16	0.0322	P	1.0
3		50.000	47.069	989582.84	0.1157	P	0.8
4				97685.64	0.0115	P	0.9
5		100.000	101.523	2008248.18	0.2365	A	1.4

y = 0.0022 * x + 0.0113
R = 0.9993
DL = 0.1668
BEC = 5.088

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	40.74	0.0000	P	87.7
2		10.000	10.006	50744.14	0.0059	P	1.3
3		50.000	50.482	256574.25	0.0300	P	0.8
4		100.000	99.758	504767.08	0.0593	P	0.6
5				133.34	0.0000	P	45.5

y = 5.9406E-004 * x + 4.7307E-006
R = 1.0000
DL = 0.02094
BEC = 0.007963

Weight: <None>
Min Conc: <None>

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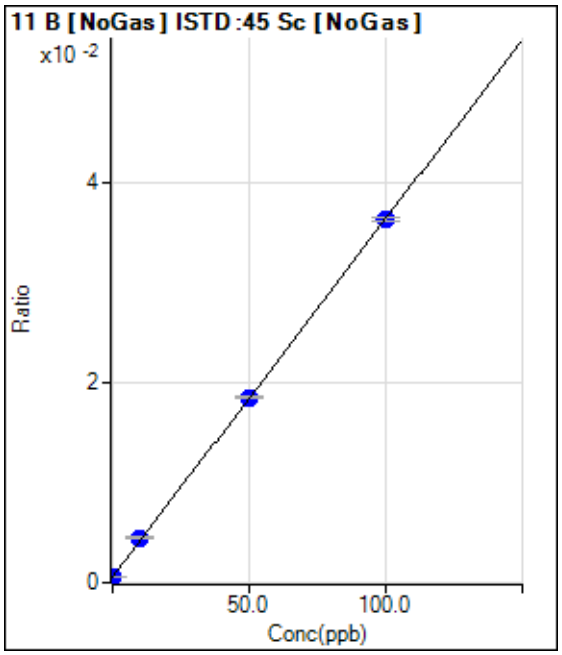


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	4811.96	0.0006	P	6.8
2		10.000	11.004	38284.80	0.0045	P	1.3
3		50.000	50.236	158291.66	0.0185	P	0.4
4				8098.43	0.0010	P	7.4
5		100.000	99.782	307485.69	0.0362	P	1.2

y = 3.5725E-004 * x + 5.5714E-004

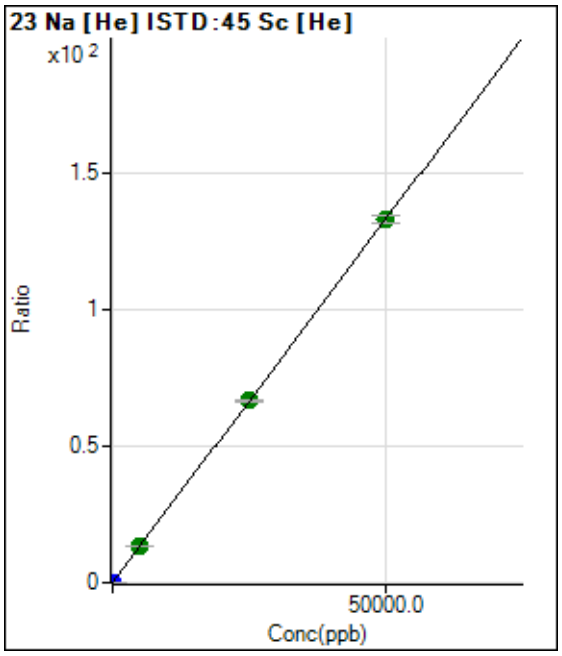
R = 1.0000

DL = 0.316

BEC = 1.56

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	13398.05	0.0377	P	8.0
2		5000.000	5042.889	4708910.81	13.4444	A	2.2
3		25000.000	25075.687	22986793.53	66.7024	A	0.5
4		50000.000	49957.868	45915334.29	132.8526	A	2.2
5				23775.43	0.0674	P	7.2

y = 0.0027 * x + 0.0377

R = 1.0000

DL = 3.422

BEC = 14.19

Weight: <None>

Min Conc: <None>

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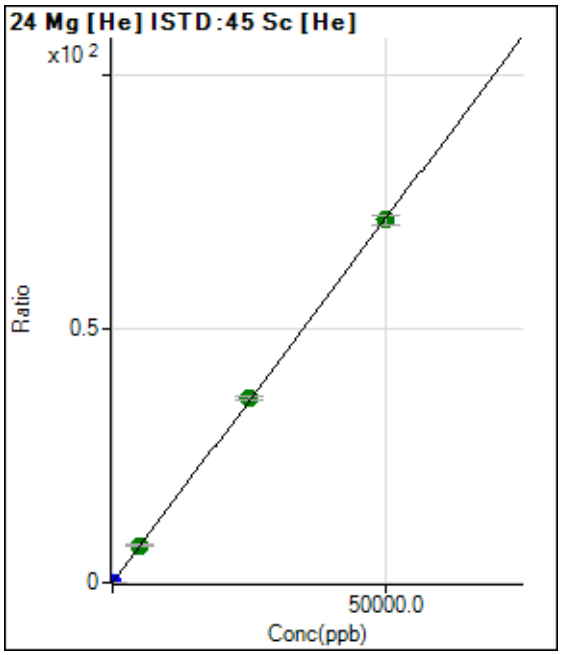
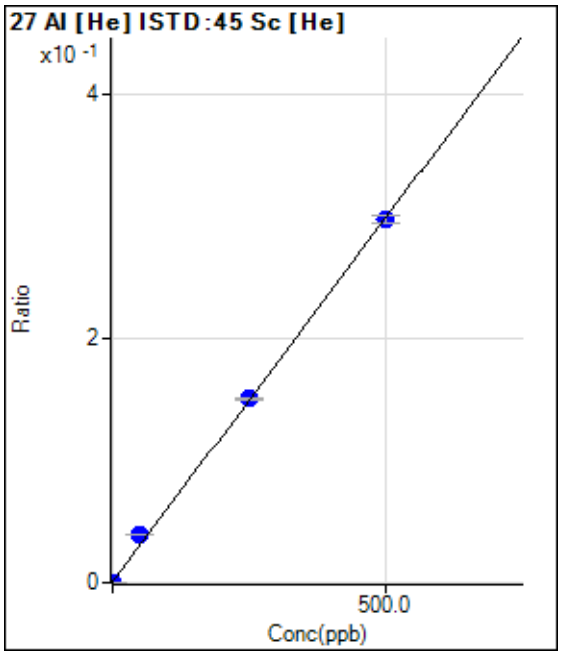


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	418.54	0.0012	P	30.9
2	☐	5000.000	5068.016	2541913.62	7.2579	A	4.1
3	☐	25000.000	25303.232	12486187.46	36.2320	A	1.6
4	☐	50000.000	49841.582	24664209.20	71.3675	A	2.8
5	☐			2763.31	0.0078	P	16.4

y = 0.0014 * x + 0.0012
R = 1.0000
DL = 0.7633
BEC = 0.8234

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.67	0.0006	P	17.4
2	☐	50.000	64.287	13616.25	0.0389	P	1.0
3	☐	250.000	251.928	51910.18	0.1506	P	1.6
4	☐	500.000	497.607	102633.41	0.2970	P	2.0
5	☐			222.23	0.0006	P	11.8

y = 5.9560E-004 * x + 5.8234E-004
R = 0.9996
DL = 0.5091
BEC = 0.9777

Weight: <None>
Min Conc: <None>

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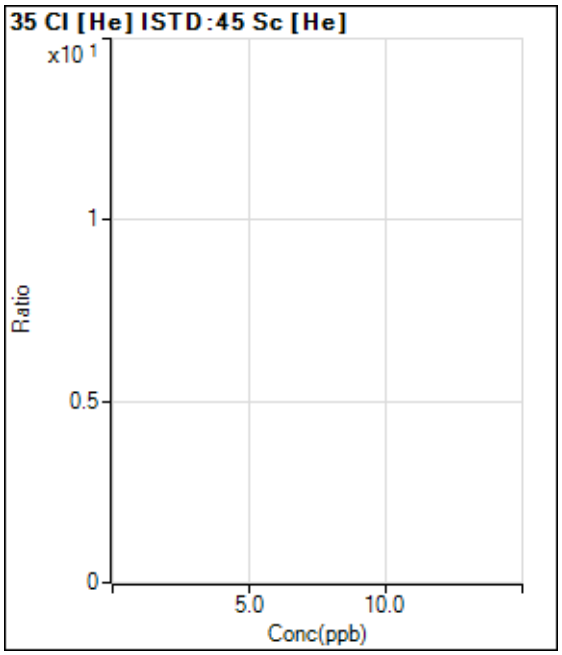
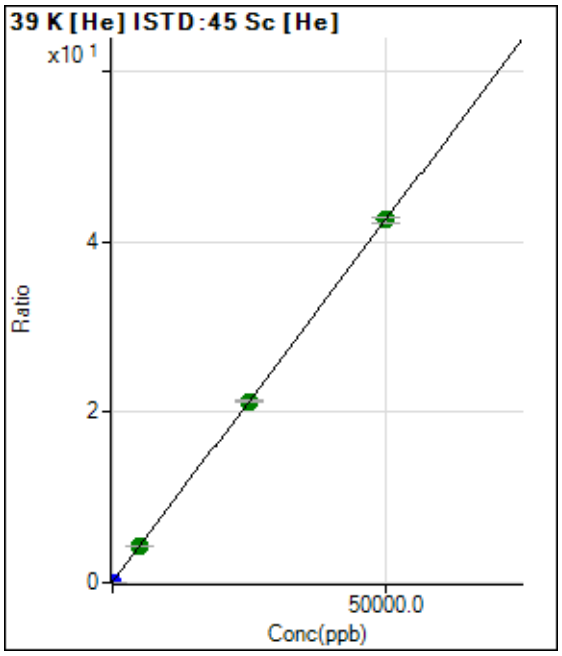


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			27595087.79	77.7047	A	2.9
2	☐			28894842.37	82.4961	A	2.0
3	☐			27981503.52	81.1947	A	0.7
4	☐			28894285.89	83.6041	A	2.2
5	☐			29130156.25	82.5636	A	1.0

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24936.36	0.0702	P	3.8
2	☐	5000.000	4998.118	1513939.64	4.3222	A	1.5
3	☐	25000.000	24944.115	7337183.97	21.2908	A	0.6
4	☐	50000.000	50028.130	14734063.77	42.6305	A	1.7
5	☐			30407.86	0.0862	P	2.6

y = 8.5073E-004 * x + 0.0702

R = 1.0000

DL = 9.502

BEC = 82.54

Weight: <None>

Min Conc: <None>

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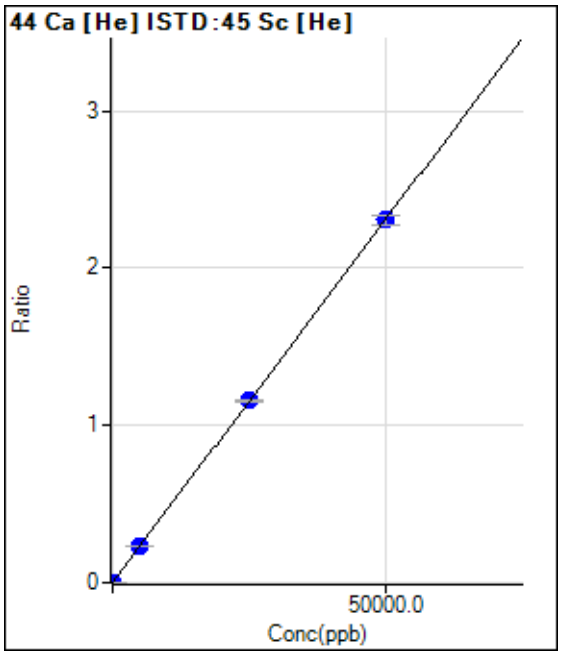
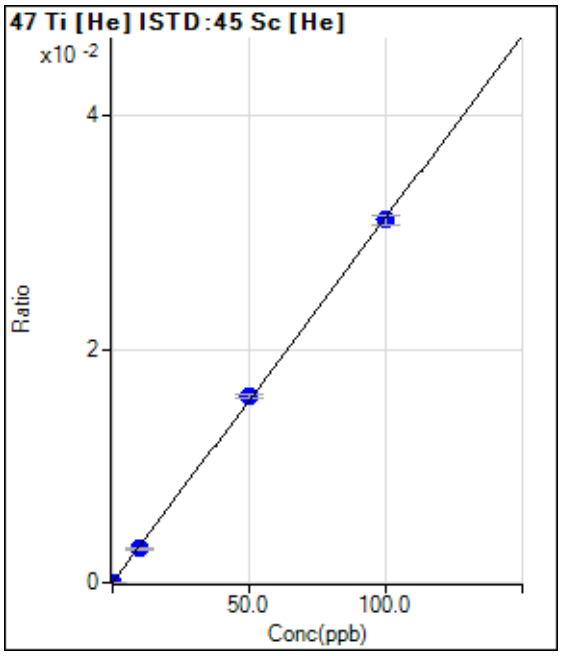


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	282.22	0.0008	P	19.4
2	☐	5000.000	5023.449	81498.20	0.2327	P	1.8
3	☐	25000.000	25041.043	398610.78	1.1567	P	1.4
4	☐	50000.000	49977.134	797530.79	2.3077	P	3.0
5	☐			242.30	0.0007	P	9.4

y = 4.6160E-005 * x + 7.9527E-004
R = 1.0000
DL = 10.02
BEC = 17.23

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	10.000	9.450	1035.60	0.0030	P	5.1
3	☐	50.000	51.159	5512.02	0.0160	P	2.5
4	☐			8.89	0.0000	P	56.6
5	☐	100.000	99.475	10972.30	0.0311	P	2.4

y = 3.1259E-004 * x + 3.1011E-006
R = 0.9998
DL = 0.05155
BEC = 0.009921

Weight: <None>
Min Conc: <None>

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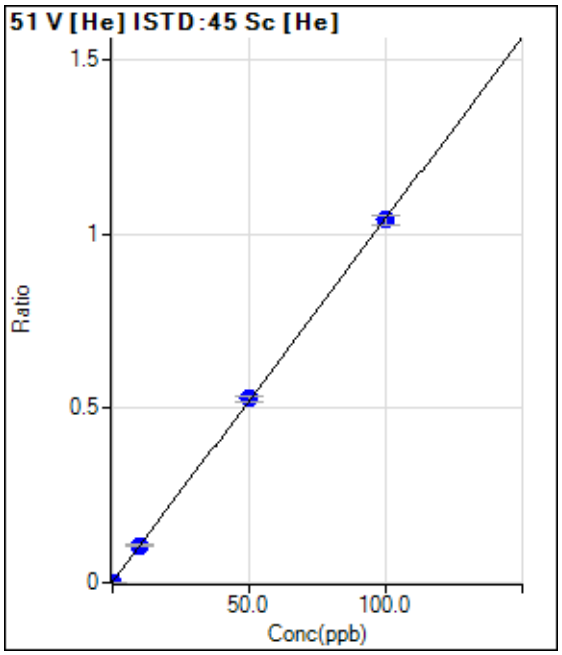
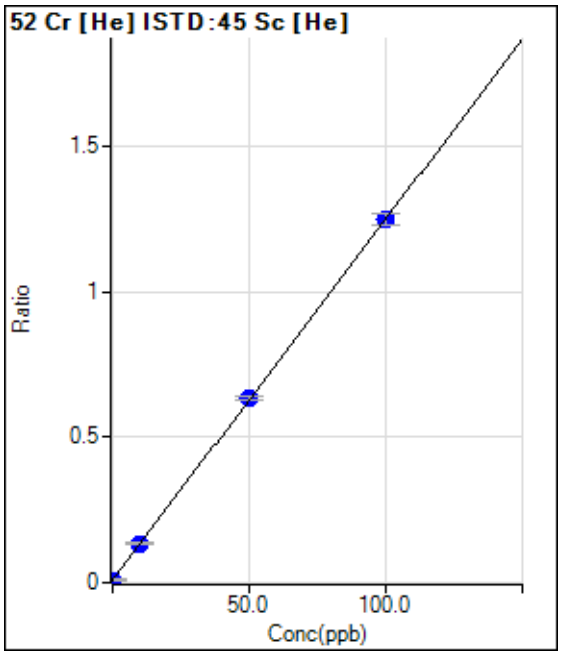


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	484.84	0.0014	P	28.6
2	☐	10.000	10.080	37313.97	0.1065	P	4.5
3	☐	50.000	50.605	182426.10	0.5294	P	3.1
4	☐	100.000	99.690	359935.32	1.0415	P	3.0
5	☐			1039.69	0.0029	P	28.7

y = 0.0104 * x + 0.0014
R = 1.0000
DL = 0.112
BEC = 0.1308

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3420.38	0.0096	P	10.2
2	☐	10.000	10.110	47283.62	0.1350	P	3.4
3	☐	50.000	50.303	218305.67	0.6335	P	2.2
4	☐	100.000	99.837	431220.98	1.2477	P	3.2
5	☐			3694.86	0.0105	P	1.7

y = 0.0124 * x + 0.0096
R = 1.0000
DL = 0.2388
BEC = 0.7769

Weight: <None>
Min Conc: <None>

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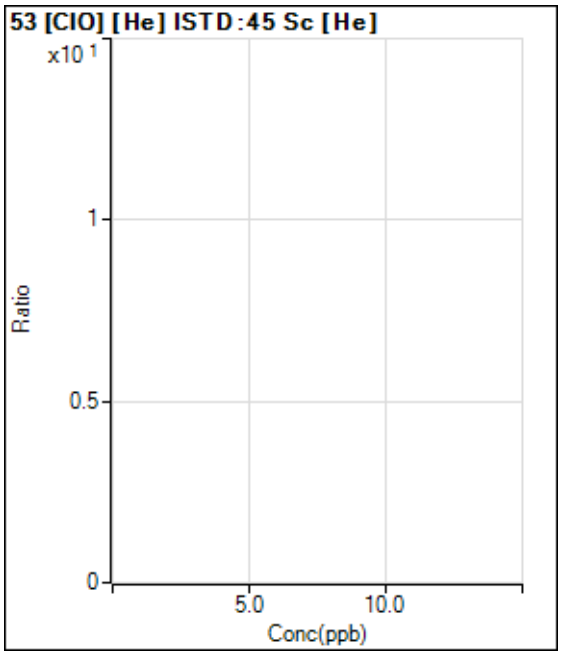
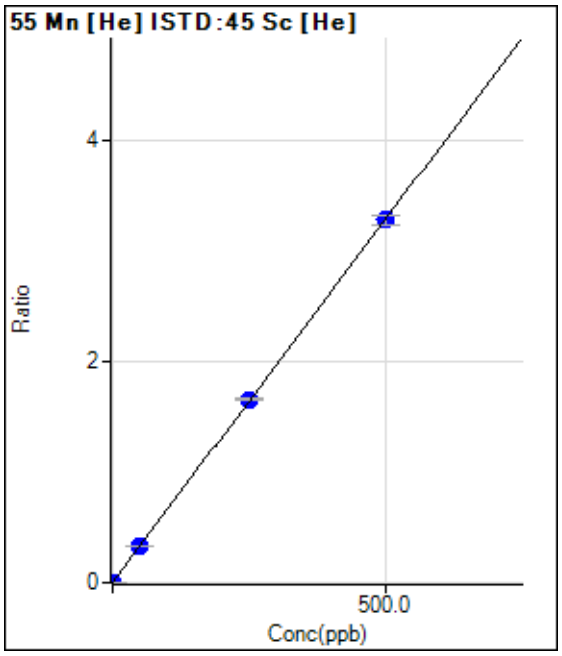


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1533.48	0.0043	P	8.2
2	☐			6601.52	0.0188	P	3.1
3	☐			26435.16	0.0767	P	2.8
4	☐			53290.98	0.1542	P	2.9
5	☐			437.06	0.0012	P	24.0

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0014	P	8.2
2	☐	50.000	50.383	116371.02	0.3323	P	2.1
3	☐	250.000	251.589	569783.85	1.6534	P	0.9
4	☐	500.000	499.167	1133204.47	3.2789	P	2.8
5	☐			248.89	0.0007	P	13.8

y = 0.0066 * x + 0.0014

R = 1.0000

DL = 0.05432

BEC = 0.22

Weight: <None>

Min Conc: <None>

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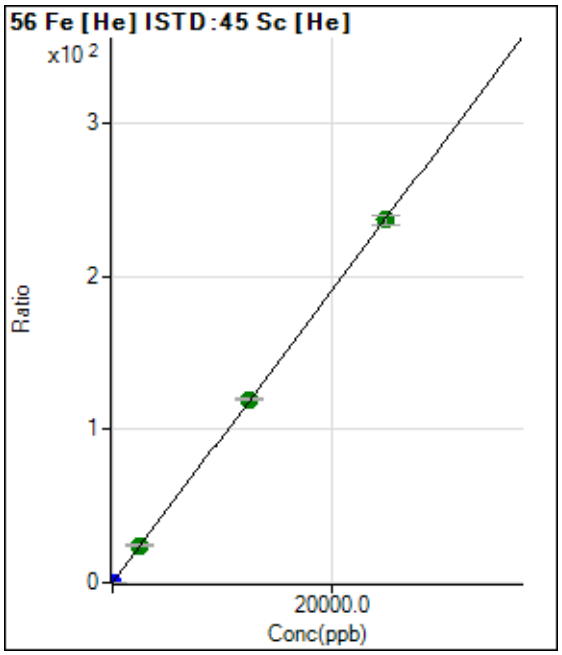
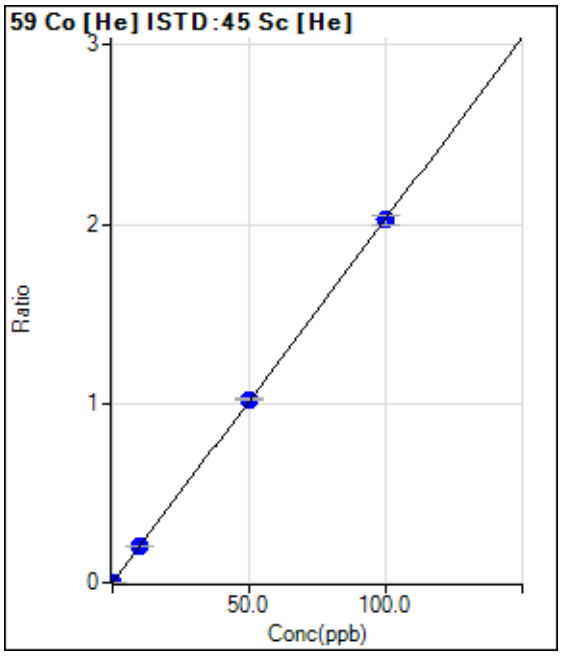


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2337.97	0.0066	P	8.5
2	☐	2500.000	2551.832	8502763.00	24.2776	A	3.0
3	☐	12500.000	12601.683	41307833.91	119.8639	A	1.5
4	☐	25000.000	24943.975	81994112.30	237.2541	A	2.9
5	☐			24649.24	0.0698	P	29.3

y = 0.0095 * x + 0.0066
R = 1.0000
DL = 0.1756
BEC = 0.6923

Weight: <None>
Min Conc: <None>

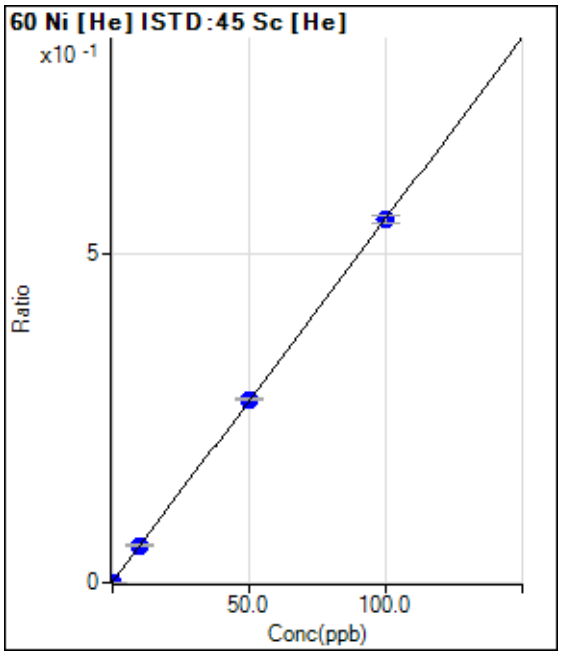


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71.11	0.0002	P	12.1
2	☐	10.000	10.156	72202.35	0.2061	P	2.4
3	☐	50.000	50.361	352006.35	1.0214	P	1.5
4	☐	100.000	99.804	699496.05	2.0240	P	2.8
5	☐			125.56	0.0004	P	15.2

y = 0.0203 * x + 2.0025E-004
R = 1.0000
DL = 0.003578
BEC = 0.009875

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	227.78	0.0006	P	16.6
2	☐	10.000	10.161	19864.43	0.0567	P	3.0
3	☐	50.000	50.421	96123.85	0.2789	P	1.2
4	☐	100.000	99.773	190535.45	0.5513	P	2.2
5	☐			190.00	0.0005	P	14.5

y = 0.0055 * x + 6.4178E-004

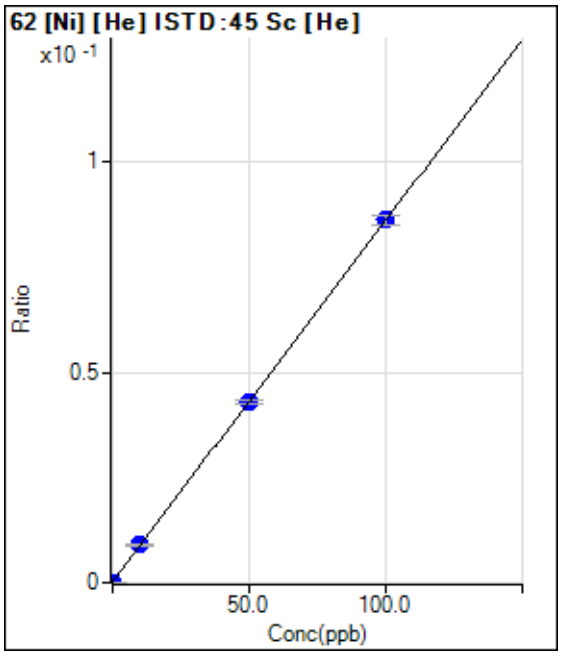
R = 1.0000

DL = 0.05792

BEC = 0.1163

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58.89	0.0002	P	9.2
2	☐	10.000	10.189	3126.98	0.0089	P	5.3
3	☐	50.000	49.602	14752.83	0.0428	P	2.2
4	☐	100.000	100.180	29823.67	0.0863	P	2.9
5	☐			70.00	0.0002	P	57.2

y = 8.5974E-004 * x + 1.6586E-004

R = 1.0000

DL = 0.05329

BEC = 0.1929

Weight: <None>

Min Conc: <None>

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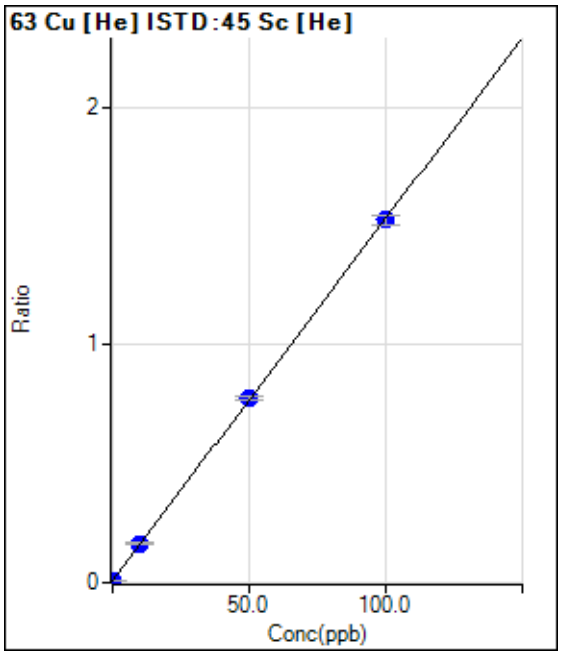
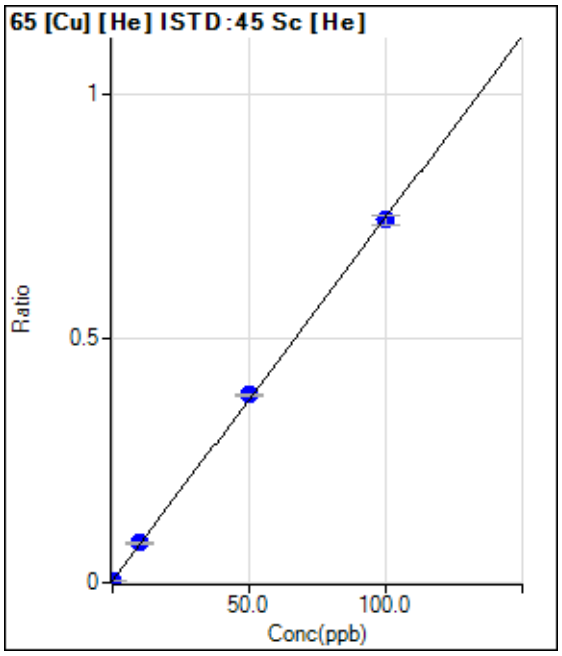


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2765.81	0.0078	P	2.7
2	☐	10.000	10.344	57916.32	0.1654	P	2.5
3	☐	50.000	50.468	267621.43	0.7766	P	1.8
4	☐	100.000	99.732	527730.03	1.5270	P	2.9
5	☐			3480.38	0.0099	P	2.2

y = 0.0152 * x + 0.0078
R = 1.0000
DL = 0.04144
BEC = 0.5113

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1298.95	0.0037	P	6.9
2	☐	10.000	10.370	28266.91	0.0807	P	3.1
3	☐	50.000	51.151	132241.17	0.3837	P	1.0
4	☐	100.000	99.388	256488.16	0.7422	P	2.9
5	☐			1562.31	0.0044	P	3.0

y = 0.0074 * x + 0.0037
R = 0.9999
DL = 0.1013
BEC = 0.4921

Weight: <None>
Min Conc: <None>

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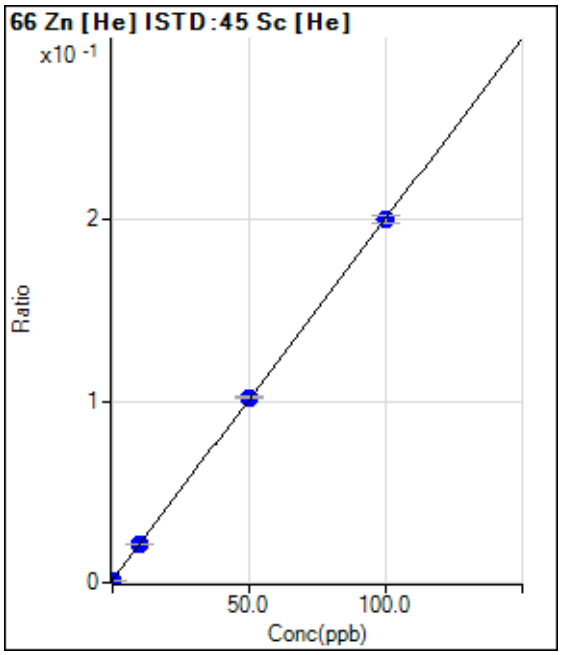
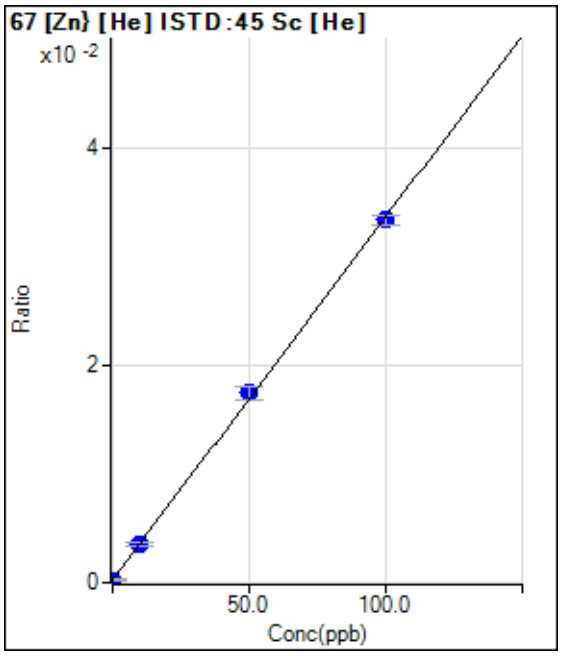


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	554.46	0.0016	P	3.4
2		10.000	9.892	7433.85	0.0212	P	4.4
3		50.000	50.500	35121.00	0.1019	P	0.9
4		100.000	99.761	69056.40	0.1998	P	2.1
5				142.22	0.0004	P	21.2

y = 0.0020 * x + 0.0016
R = 1.0000
DL = 0.08064
BEC = 0.7857

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	85.56	0.0002	P	32.9
2		10.000	9.816	1232.29	0.0035	P	12.4
3		50.000	51.495	6008.85	0.0174	P	6.2
4		100.000	99.271	11541.61	0.0334	P	2.8
5				30.00	0.0001	P	38.4

y = 3.3393E-004 * x + 2.4070E-004
R = 0.9998
DL = 0.7121
BEC = 0.7208

Weight: <None>
Min Conc: <None>

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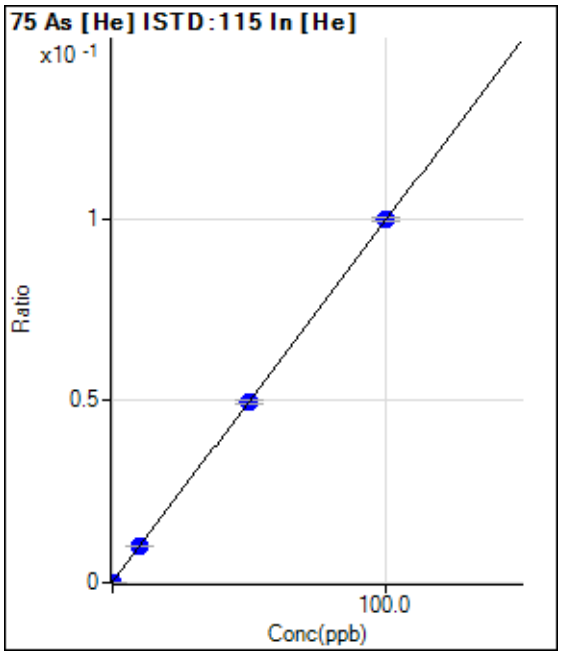


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.95	0.0003	P	8.3
2	☐	10.000	9.706	4833.46	0.0099	P	1.7
3	☐	50.000	49.735	23428.39	0.0497	P	1.9
4	☐	100.000	100.162	46723.94	0.0998	P	0.9
5	☐			101.45	0.0002	P	1.5

y = 9.9393E-004 * x + 2.5265E-004

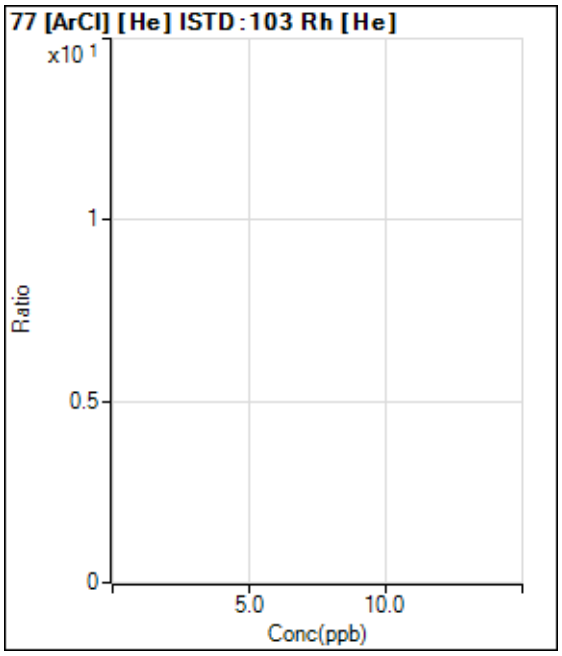
R = 1.0000

DL = 0.06351

BEC = 0.2542

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			33.34	0.0000	P	33.0
2	☐			103.71	0.0001	P	44.7
3	☐			433.36	0.0003	P	21.4
4	☐			863.03	0.0006	P	5.0
5	☐			7.41	0.0000	P	86.6

Excluded

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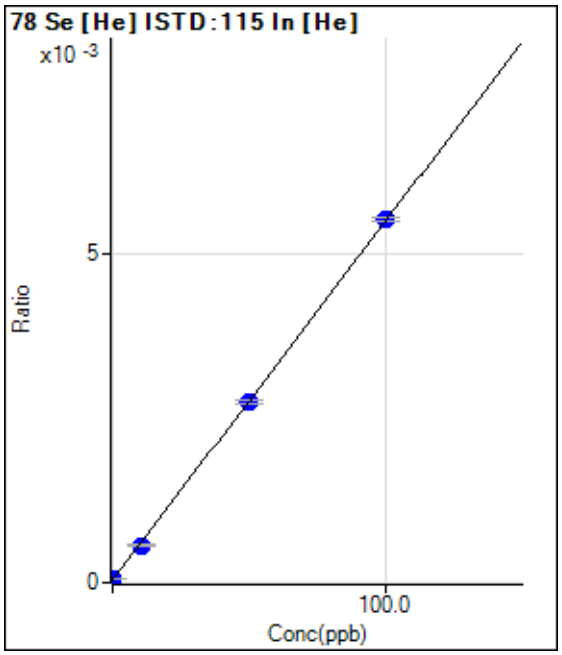


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.88	0.0000	P	5.9
2	☐	10.000	9.538	278.27	0.0006	P	2.0
3	☐	50.000	49.505	1298.72	0.0028	P	2.1
4	☐	100.000	100.294	2588.75	0.0055	P	0.9
5	☐			26.04	0.0001	P	16.9

y = 5.4651E-005 * x + 4.8679E-005

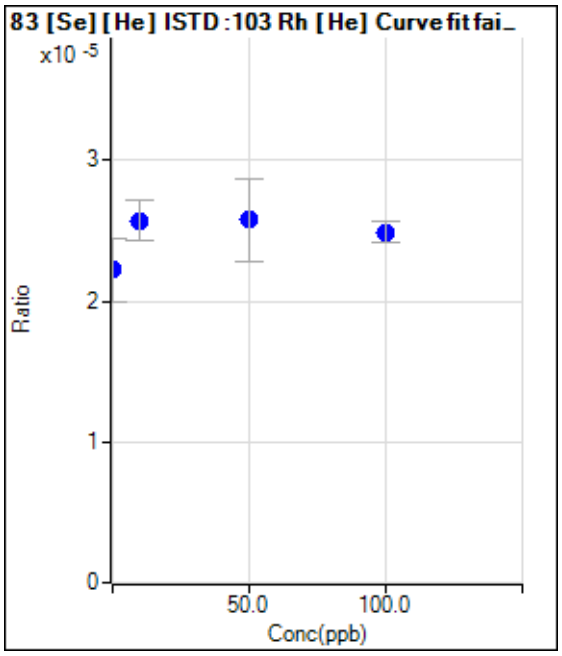
R = 1.0000

DL = 0.1586

BEC = 0.8907

Weight: <None>

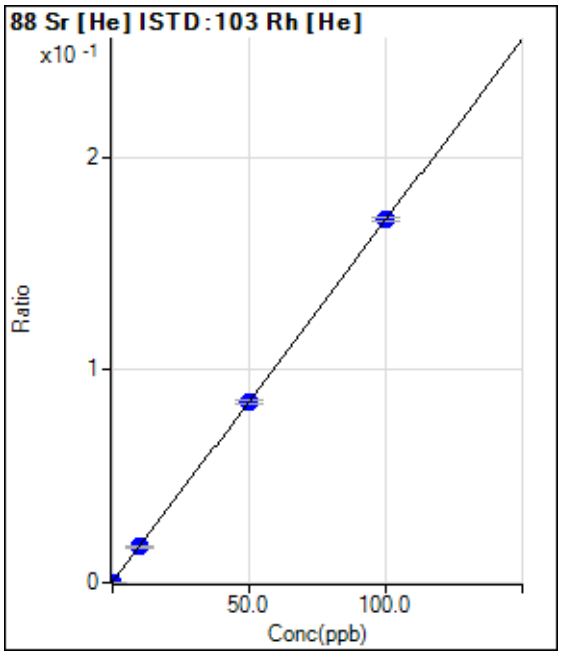
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		32.66	0.0000	P	19.9
2	☐	10.000		36.70	0.0000	P	11.5
3	☐	50.000		35.69	0.0000	P	22.9
4	☐	100.000		34.34	0.0000	P	5.8
5	☐			34.00	0.0000	P	28.9

Excluded

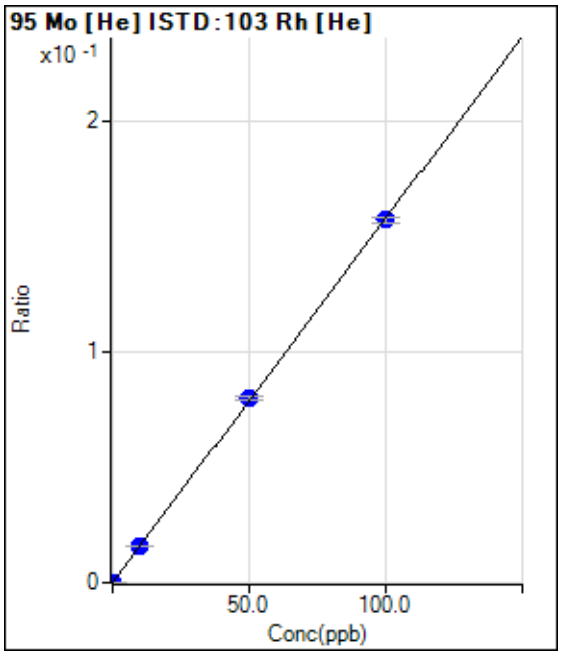
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222.45	0.0002	P	124.9
2	☐	10.000	9.785	23937.49	0.0168	P	2.4
3	☐	50.000	49.834	117758.85	0.0849	P	2.9
4	☐	100.000	100.105	234703.56	0.1704	P	0.9
5	☐			68.89	0.0000	P	46.5

y = 0.0017 * x + 1.5247E-004
R = 1.0000
DL = 0.3359
BEC = 0.08965

Weight: <None>
Min Conc: <None>

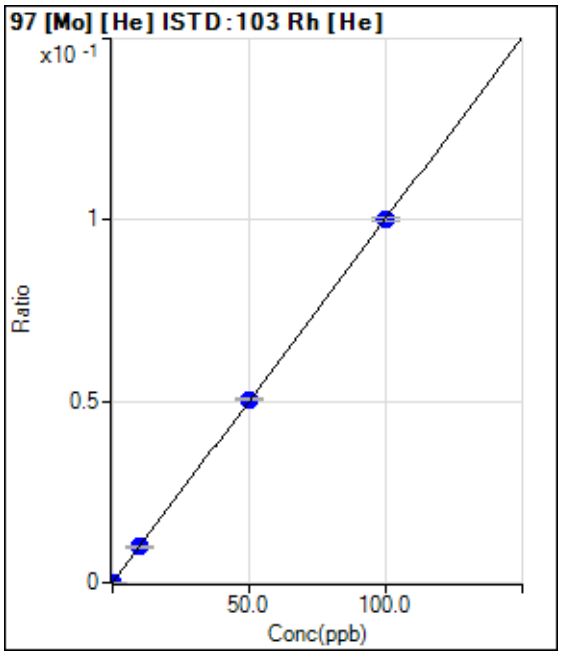


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.34	0.0000	P	25.3
2	☐	10.000	9.860	22150.83	0.0155	P	1.7
3	☐	50.000	50.688	110718.03	0.0798	P	2.3
4	☐			300.01	0.0002	P	9.7
5	☐	100.000	99.670	221935.32	0.1570	P	1.4

y = 0.0016 * x + 1.5890E-005
R = 1.0000
DL = 0.00765
BEC = 0.01009

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.70	0.0000	P	173.2
2	☐	10.000	9.865	14102.59	0.0099	P	2.8
3	☐	50.000	50.479	70206.02	0.0506	P	1.0
4	☐			218.53	0.0002	P	56.8
5	☐	100.000	99.774	141462.79	0.1000	P	1.0

y = 0.0010 * x + 2.5465E-006

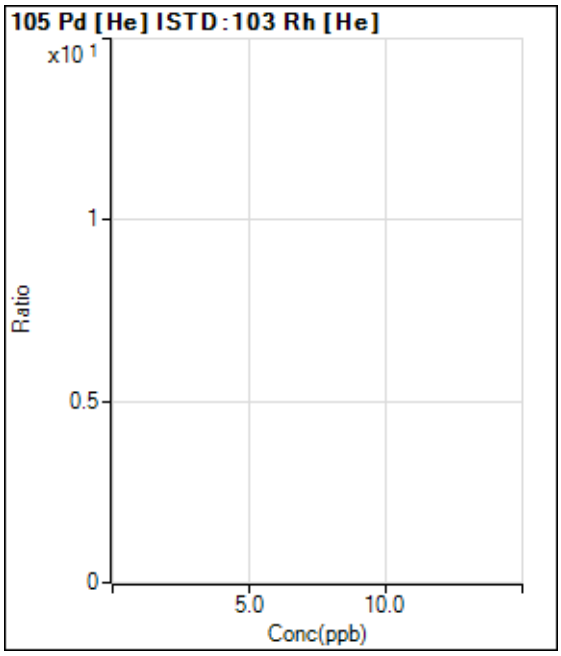
R = 1.0000

DL = 0.0132

BEC = 0.00254

Weight: <None>

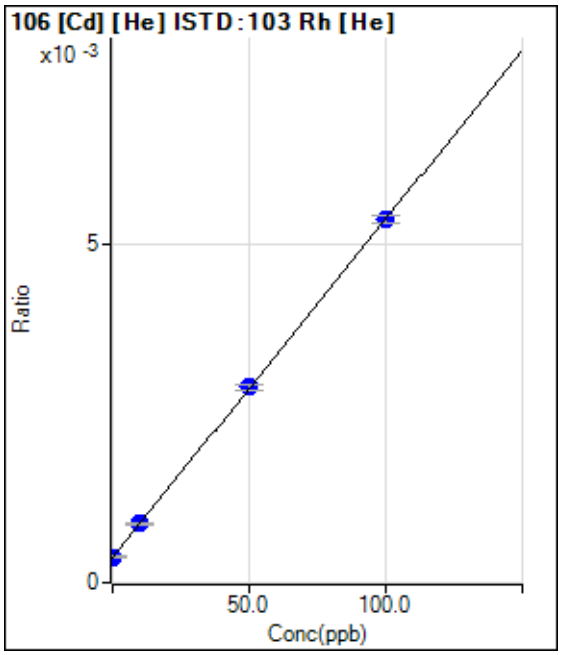
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			370.39	0.0003	P	20.3
2	☐			400.02	0.0003	P	7.1
3	☐			507.44	0.0004	P	10.8
4	☐			540.77	0.0004	P	11.4
5	☐			459.29	0.0003	P	10.7

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	550.18	0.0004	P	4.5
2		10.000	9.974	1241.46	0.0009	P	2.8
3		50.000	50.295	3992.06	0.0029	P	2.8
4		100.000	99.855	7363.53	0.0053	P	2.0
5				556.58	0.0004	P	3.1

y = 4.9792E-005 * x + 3.7425E-004

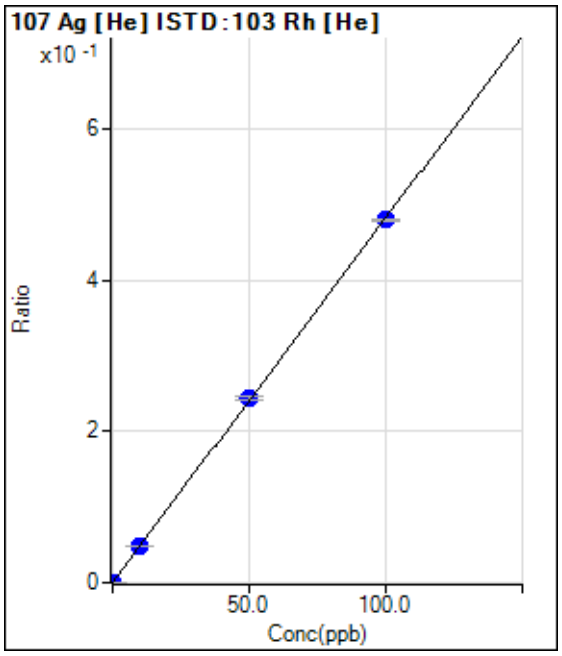
R = 1.0000

DL = 1.006

BEC = 7.516

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	23.34	0.0000	P	25.0
2		10.000	10.194	70157.58	0.0492	P	1.1
3		50.000	50.796	340079.16	0.2452	P	2.3
4		100.000	99.583	662063.17	0.4807	P	0.9
5				104.44	0.0001	P	28.8

y = 0.0048 * x + 1.5882E-005

R = 0.9999

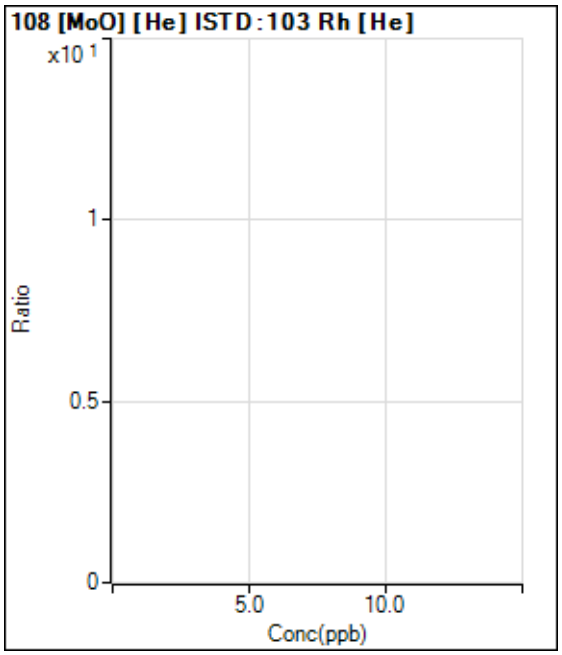
DL = 0.00247

BEC = 0.00329

Weight: <None>

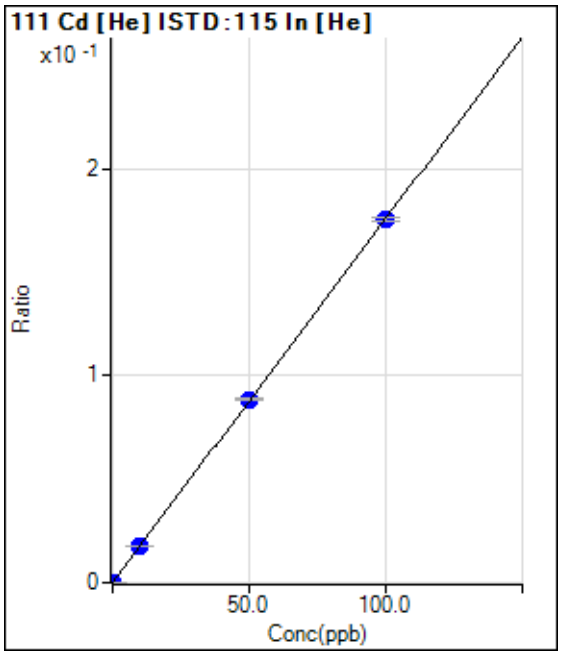
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.70	0.0000	P	173.2
2	☐			407.43	0.0003	P	24.1
3	☐			2678.12	0.0019	P	7.4
4	☐			5571.54	0.0040	P	2.3
5	☐			3.70	0.0000	P	173.2

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.67	0.0000	P	86.6
2	☐	10.000	9.908	8499.88	0.0174	P	0.7
3	☐	50.000	50.476	41815.02	0.0887	P	1.2
4	☐	100.000	99.771	82057.53	0.1753	P	1.1
5	☐			34.97	0.0001	P	32.7

y = 0.0018 * x + 1.3691E-006

R = 1.0000

DL = 0.002025

BEC = 0.0007793

Weight: <None>

Min Conc: <None>

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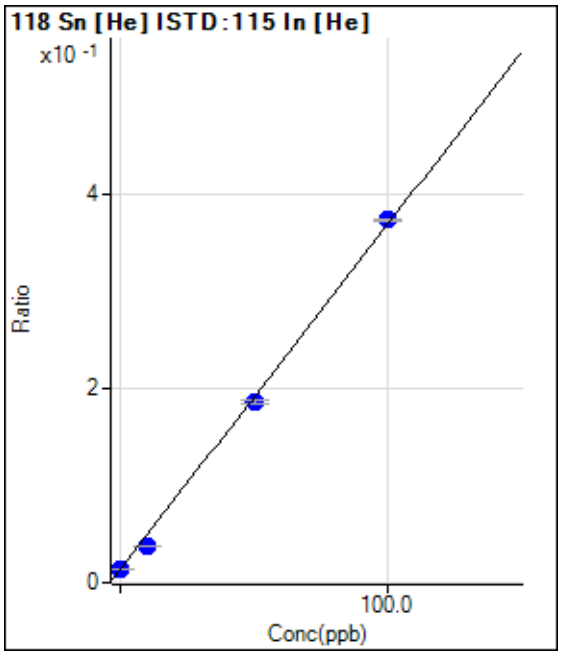
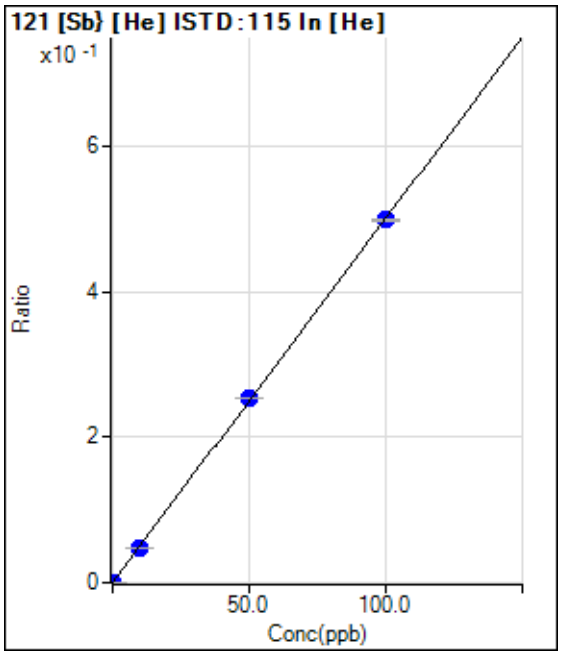


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6709.07	0.0137	P	2.4
2	☐	10.000	6.773	18443.89	0.0378	P	2.7
3	☐	50.000	48.356	87572.07	0.1857	P	2.1
4	☐			963.04	0.0021	P	27.9
5	☐	100.000	101.145	179494.15	0.3735	P	0.6

y = 0.0036 * x + 0.0137
R = 0.9994
DL = 0.2807
BEC = 3.843

Weight: <None>
Min Conc: <None>

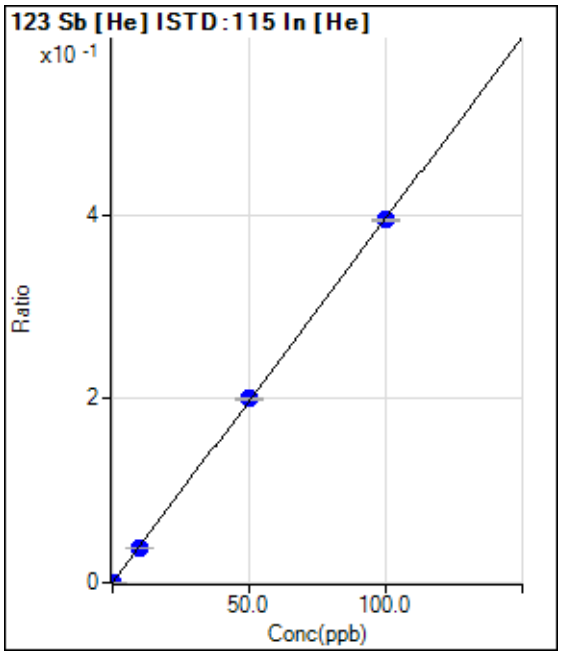


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.78	0.0001	P	35.5
2	☐	10.000	9.699	23738.73	0.0486	P	0.8
3	☐	50.000	50.605	119416.49	0.2533	P	0.4
4	☐			410.01	0.0009	P	3.7
5	☐	100.000	99.728	239802.81	0.4990	P	0.6

y = 0.0050 * x + 9.7466E-005
R = 1.0000
DL = 0.02074
BEC = 0.01948

Weight: <None>
Min Conc: <None>

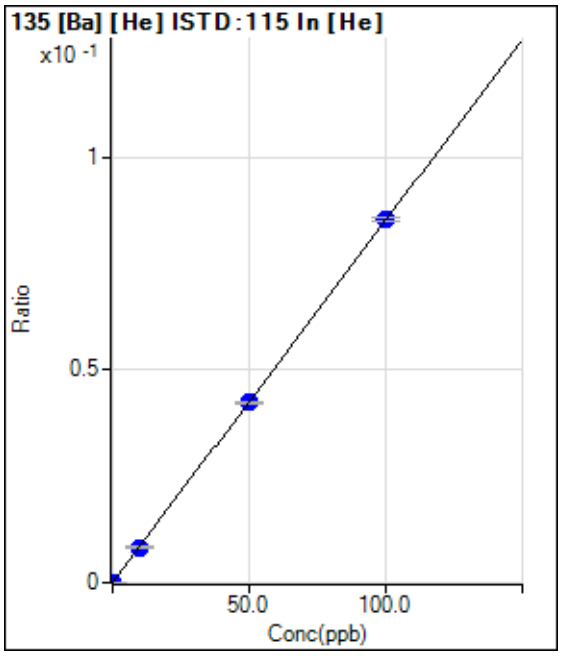
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.56	0.0001	P	36.0
2	☐	10.000	9.576	18510.15	0.0379	P	2.3
3	☐	50.000	50.668	94449.11	0.2003	P	0.8
4	☐			327.79	0.0007	P	3.7
5	☐	100.000	99.708	189393.01	0.3941	P	0.4

y = 0.0040 * x + 7.2543E-005
R = 0.9999
DL = 0.0198
BEC = 0.01836

Weight: <None>
Min Conc: <None>

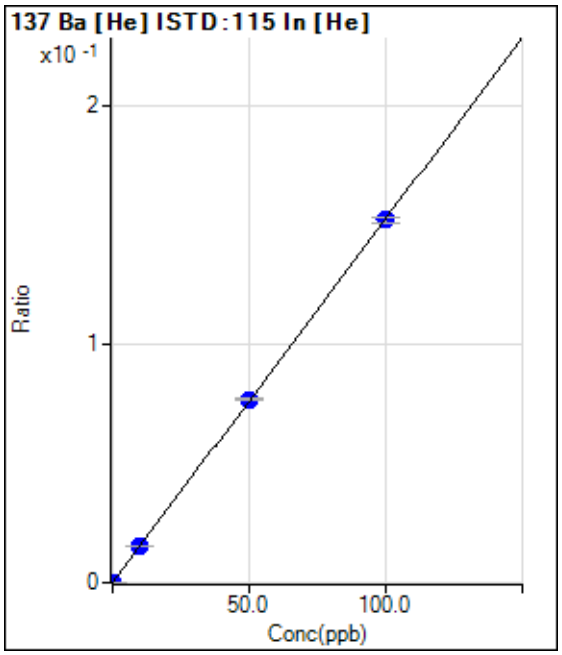


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	45.6
2	☐	10.000	9.719	4051.65	0.0083	P	1.9
3	☐	50.000	49.661	19948.54	0.0423	P	1.8
4	☐	100.000	100.198	39948.16	0.0853	P	1.0
5	☐			18.89	0.0000	P	36.9

y = 8.5144E-004 * x + 2.2633E-005
R = 1.0000
DL = 0.0364
BEC = 0.02658

Weight: <None>
Min Conc: <None>

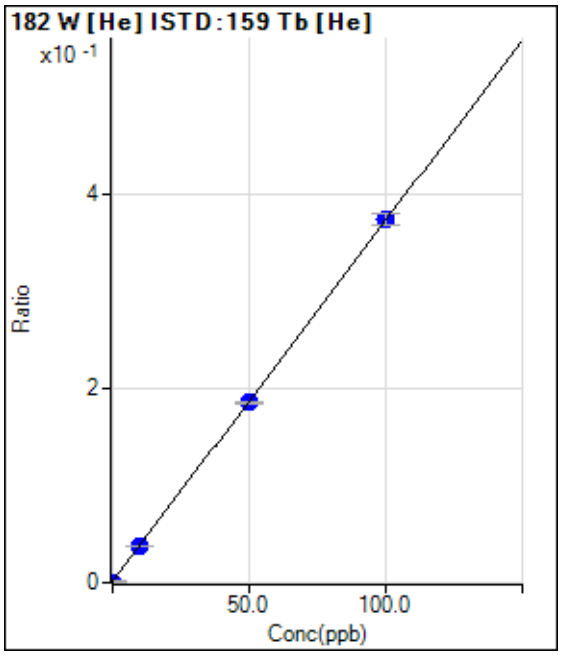
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.89	0.0000	P	88.7
2	☐	10.000	9.941	7426.16	0.0152	P	3.2
3	☐	50.000	50.396	36287.77	0.0770	P	1.5
4	☐	100.000	99.808	71334.72	0.1524	P	1.7
5	☐			38.89	0.0001	P	5.4

y = 0.0015 * x + 3.8412E-005
R = 1.0000
DL = 0.06694
BEC = 0.02517

Weight: <None>
Min Conc: <None>

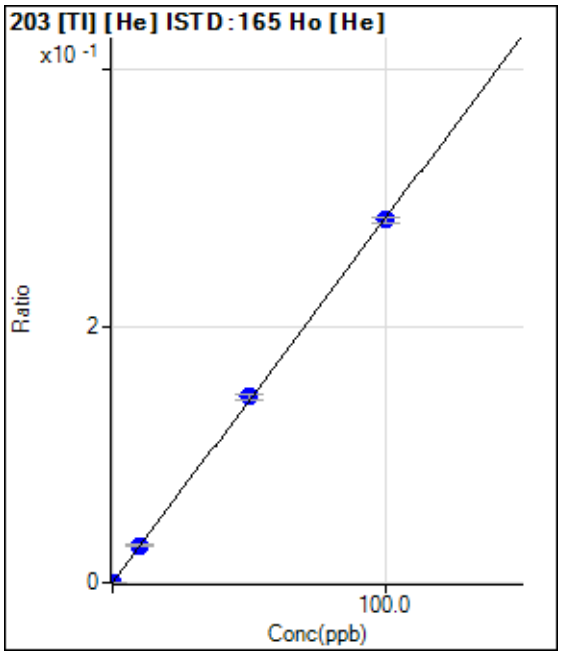


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1418.66	0.0010	P	5.7
2	☐	10.000	9.963	53273.43	0.0380	P	2.2
3	☐	50.000	49.566	264076.29	0.1852	P	0.8
4	☐			2970.81	0.0021	P	10.6
5	☐	100.000	100.221	516578.52	0.3734	P	3.3

y = 0.0037 * x + 9.8829E-004
R = 1.0000
DL = 0.04517
BEC = 0.266

Weight: <None>
Min Conc: <None>

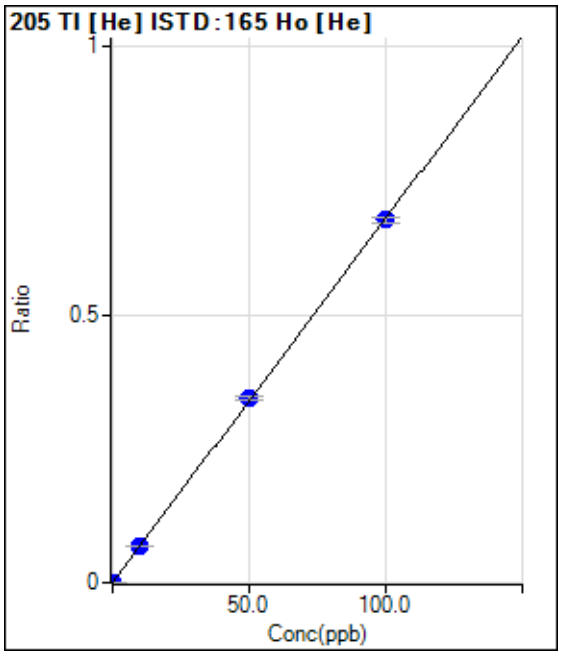
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51.86	0.0000	P	62.5
2	☐	10.000	10.247	40652.53	0.0292	P	1.5
3	☐	50.000	50.938	198725.72	0.1449	P	2.4
4	☐	100.000	99.506	385239.16	0.2831	P	1.8
5	☐			466.70	0.0003	P	9.1

y = 0.0028 * x + 3.6887E-005
R = 0.9999
DL = 0.02433
BEC = 0.01297

Weight: <None>
Min Conc: <None>

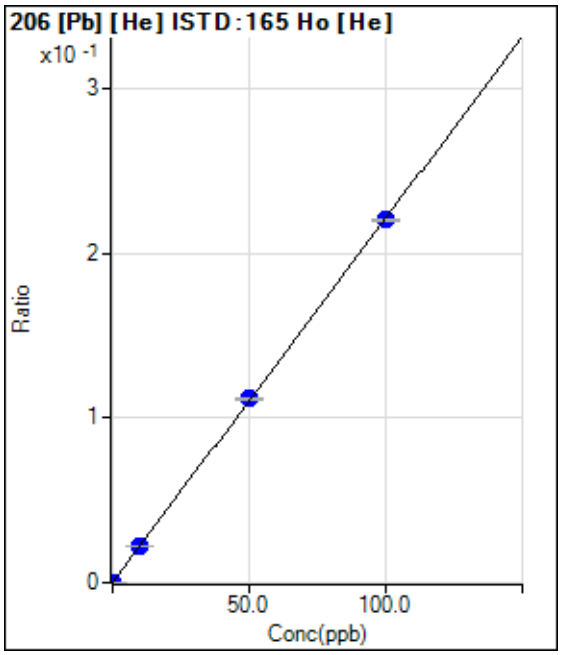


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0000	P	28.9
2	☐	10.000	10.112	95752.50	0.0687	P	1.4
3	☐	50.000	50.640	471889.77	0.3441	P	1.5
4	☐	100.000	99.669	921682.81	0.6773	P	1.4
5	☐			775.59	0.0006	P	29.7

y = 0.0068 * x + 2.9178E-005
R = 1.0000
DL = 0.003718
BEC = 0.004294

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	110.00	0.0001	P	20.3
2		10.000	10.186	31505.42	0.0226	P	1.1
3		50.000	50.653	153797.96	0.1122	P	1.1
4		100.000	99.655	300185.48	0.2206	P	0.4
5				240.01	0.0002	P	21.9

y = 0.0022 * x + 7.8071E-005

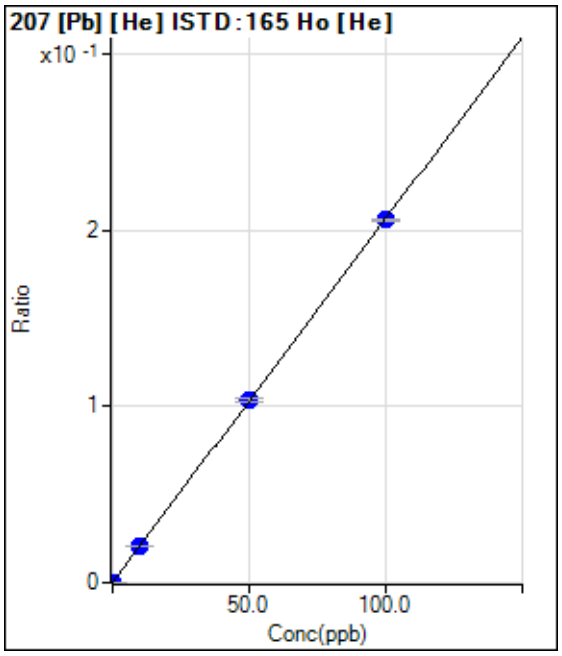
R = 1.0000

DL = 0.02146

BEC = 0.03528

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	132.22	0.0001	P	25.6
2		10.000	10.145	29255.77	0.0210	P	1.7
3		50.000	50.441	142675.92	0.1041	P	2.0
4		100.000	99.765	279935.91	0.2057	P	0.8
5				248.89	0.0002	P	28.5

y = 0.0021 * x + 9.3704E-005

R = 1.0000

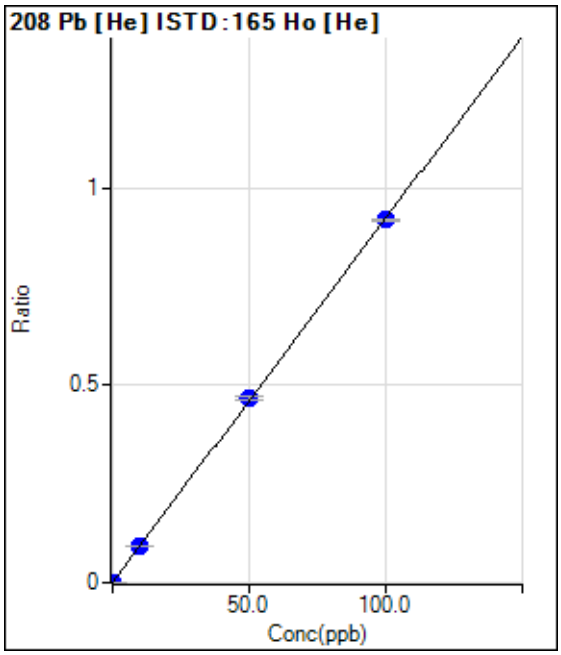
DL = 0.03497

BEC = 0.04547

Weight: <None>

Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	521.12	0.0004	P	4.3
2	☐	10.000	10.198	131538.55	0.0944	P	1.1
3	☐	50.000	50.597	640398.14	0.4670	P	1.5
4	☐	100.000	99.682	1251618.55	0.9197	P	0.6
5	☐			1040.03	0.0008	P	12.2

y = 0.0092 * x + 3.6971E-004

R = 1.0000

DL = 0.005184

BEC = 0.04009

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2510777
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:35:42-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.152	1.930	810262	0.75	40	92.9	89.5	110.5	
Be	9	45	NoGas	39.712	1.003	204077	0.64	40	99.3	89.5	110.5	
B	11	45	NoGas	42.384	2.448	135773	2.07	40	106.0	89.5	110.5	
Na	23	45	He	19801.249	0.755	18673963	0.57	20000	99.0	89.5	110.5	
Mg	24	45	He	19922.733	1.051	10112706	1.22	20000	99.6	89.5	110.5	
Al	27	45	He	198.271	0.669	42068	0.87	200	99.1	89.5	110.5	
K	39	45	He	19899.859	0.574	6025993	0.41	20000	99.5	89.5	110.5	
Ca	44	45	He	19771.405	2.127	323805	2.29	20000	98.9	89.5	110.5	
Ti	47	45	He	39.715	2.714	4402	2.63	40	99.3	89.5	110.5	
V	51	45	He	40.506	3.181	150304	3.29	40	101.3	89.5	110.5	
Cr	52	45	He	39.888	2.133	178766	2.21	40	99.7	89.5	110.5	
Mn	55	45	He	200.409	1.470	466970	1.58	200	100.2	89.5	110.5	
Fe	56	45	He	10011.141	1.388	33755899	1.54	10000	100.1	89.5	110.5	
Co	59	45	He	39.903	1.242	286907	1.43	40	99.8	89.5	110.5	
Ni	60	45	He	40.360	0.532	79189	0.64	40	100.9	89.5	110.5	
Cu	63	45	He	40.592	0.389	221954	0.56	40	101.5	89.5	110.5	
Zn	66	45	He	40.466	2.040	29058	1.98	40	101.2	89.5	110.5	
As	75	115	He	40.870	1.948	19579	1.17	40	102.2	89.5	110.5	
Se	78	115	He	40.773	2.413	1091	2.30	40	101.9	89.5	110.5	
Sr	88	103	He	39.464	1.776	93673	1.70	40	98.7	89.5	110.5	
Mo	95	103	He	41.092	1.858	90124	2.09	40	102.7	89.5	110.5	
Ag	107	103	He	41.083	1.696	276136	0.65	40	102.7	89.5	110.5	
Cd	111	115	He	40.253	1.621	33875	0.93	40	100.6	89.5	110.5	
Sn	118	115	He	37.747	2.810	70874	2.01	40	94.4	89.5	110.5	
Sb	123	115	He	39.845	2.240	75456	1.47	40	99.6	89.5	110.5	
Ba	137	115	He	39.354	3.282	28789	2.62	40	98.4	89.5	110.5	
W	182	159	He	39.852	2.629	212385	2.50	40	99.6	89.5	110.5	
Tl	205	165	He	40.328	1.211	378927	1.55	40	100.8	89.5	110.5	
Pb	208	165	He	40.320	0.304	514667	0.66	40	100.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1629221	1.46	1674650	97.29	60	120	
Sc	45	He	354482	0.22	355173	99.81	60	120	
Sc	45	NoGas	8649498	1.39	8635903	100.16	60	120	
Rh	103	He	1392674	1.70	1470259	94.72	60	120	
In	115	He	479044	0.76	490642	97.64	60	120	
Tb	159	He	1425108	2.40	1434034	99.38	60	120	
Ho	165	He	1382622	0.70	1409606	98.09	60	120	
Bi	209	He	859771	1.26	906964	94.80	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:39:49-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.108	97.9	13	90.1	20	
W	182	1	He	0.316	25.2	3086	14.7	10	
Ca	44	1	He	0.562	448.1	295	12.5	1000	
Na	23	1	He	5.886	12.9	19185	5.0	1000	
Mg	24	1	He	2.441	77.3	1689	59.5	1000	
K	39	1	He	9.769	21.8	28226	4.1	1000	
V	51	1	He	0.123	61.2	954	31.6	2	
Cr	52	1	He	0.048	51.1	3675	3.0	2	
Mn	55	1	He	-0.024	-37.9	463	3.6	2	
Fe	56	1	He	3.226	44.4	13445	38.4	50	
Co	59	1	He	0.000	1835.8	76	77.5	1	
Ni	60	1	He	-0.023	-102.5	186	25.2	2	
Cu	63	1	He	0.019	197.0	2906	8.8	2	
Zn	66	1	He	-0.304	-16.9	343	9.4	20	
As	75	1	He	-0.064	-22.8	93	8.1	2	
Se	78	1	He	0.002	12643.1	24	24.0	2	
Sr	88	1	He	-0.063	-14.5	64	33.3	10	
Mo	95	1	He	0.125	32.2	306	27.8	2	
Ag	107	1	He	0.006	72.5	67	45.8	0.2	
Cd	111	1	He	0.020	42.1	18	41.0	0.2	
Ba	137	1	He	-0.010	-66.0	11	45.8	5	
Sn	118	1	He	-0.649	-25.9	5601	5.0	10	
Tl	205	1	He	0.037	37.2	388	33.6	0.5	
Pb	208	1	He	0.021	18.3	783	6.4	0.5	
Al	27	1	He	-0.029	-480.5	203	15.6	50	
Sb	123	1	He	0.105	17.8	240	15.0	2	
B	11	2	NoGas	1.977	14.1	10989	7.5	20	
Be	9	2	NoGas	0.014	56.6	111	36.1	1	
Li	7	2	NoGas	-0.073	-84.8	96770	1.2	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656631	1.47	1674650	98.92	60	120	
Sc	45	1	He	359342	1.82	355173	101.17	60	120	
Sc	45	2	NoGas	8699164	0.54	8635903	100.73	60	120	
Rh	103	1	He	1440681	2.00	1470259	97.99	60	120	

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In	115	1	He	492886	0.50	490642	100.46	60	120	
Tb	159	1	He	1425388	1.66	1434034	99.40	60	120	
Ho	165	1	He	1386769	0.34	1409606	98.38	60	120	
Bi	209	1	He	881499	0.72	906964	97.19	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:43:55-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.442	7.442	0.409	241273	0.52	8	93.0	69.5	130.5	
Be	9	2	NoGas	1.053	1.053	4.294	5475	4.96	1	105.3	69.5	130.5	
B	11	2	NoGas	21.682	21.682	3.252	72077	2.74	20	108.4	69.5	130.5	
Na	23	1	He	953.319	953.319	1.424	919675	1.21	1000	95.3	69.5	130.5	
Mg	24	1	He	964.769	964.769	2.247	494335	1.95	1000	96.5	69.5	130.5	
Al	27	1	He	55.292	55.292	2.670	11983	2.43	50	110.6	69.5	130.5	
K	39	1	He	1025.746	1025.746	1.021	337118	0.85	1000	102.6	69.5	130.5	
Ca	44	1	He	999.859	999.859	3.313	16786	2.96	1000	100.0	69.5	130.5	
Ti	47	1	He	9.733	9.733	1.781	1089	1.57	10	97.3	69.5	130.5	
V	51	1	He	4.880	4.880	0.728	18693	0.95	5	97.6	69.5	130.5	
Cr	52	1	He	2.026	2.026	2.244	12430	1.34	2	101.3	69.5	130.5	
Mn	55	1	He	4.887	4.887	2.002	11991	2.13	5	97.7	69.5	130.5	
Fe	56	1	He	108.457	108.457	1.562	371188	1.40	100	108.5	69.5	130.5	
Co	59	1	He	1.012	1.012	2.606	7412	2.53	1	101.2	69.5	130.5	
Ni	60	1	He	1.967	1.967	4.920	4112	4.75	2	98.4	69.5	130.5	
Cu	63	1	He	2.072	2.072	1.186	14068	0.88	2	103.6	69.5	130.5	
Zn	66	1	He	20.538	20.538	1.721	15151	1.80	20	102.7	69.5	130.5	
As	75	1	He	5.126	5.126	3.177	2626	3.45	5	102.5	69.5	130.5	
Se	78	1	He	5.567	5.567	3.825	173	3.90	5	111.3	69.5	130.5	
Sr	88	1	He	9.519	9.519	1.046	23722	1.32	10	95.2	69.5	130.5	
Mo	95	1	He	5.068	5.068	2.179	11610	3.58	5	101.4	69.5	130.5	
Ag	107	1	He	1.033	1.033	1.488	7258	1.79	1	103.3	69.5	130.5	
Cd	111	1	He	1.013	1.013	1.134	874	1.97	1	101.3	69.5	130.5	
Sn	118	1	He	7.133	7.133	2.201	19174	1.93	10	71.3	69.5	130.5	
Sb	123	1	He	1.976	1.976	5.628	3868	4.99	2	98.8	69.5	130.5	
Ba	137	1	He	4.880	4.880	0.723	3676	1.47	5	97.6	69.5	130.5	
W	182	1	He	10.243	10.243	5.569	55507	4.35	10	102.4	69.5	130.5	
Tl	205	1	He	0.996	0.996	2.407	9417	3.24	1	99.6	69.5	130.5	
Pb	208	1	He	1.039	1.039	0.751	13786	0.67	1	103.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1646270	0.23	1674650	98.31	60	120	
Sc	45	1	He	357557	0.31	355173	100.67	60	120	
Sc	45	2	NoGas	8681529	0.70	8635903	100.53	60	120	
Rh	103	1	He	1451618	1.46	1470259	98.73	60	120	
In	115	1	He	491018	0.89	490642	100.08	60	120	
Tb	159	1	He	1422075	1.16	1434034	99.17	60	120	
Ho	165	1	He	1385565	0.84	1409606	98.29	60	120	
Bi	209	1	He	892513	0.77	906964	98.41	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2528694
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:48:02-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.041	205.4	103013	1.2	4	
Be	9	45	2	NoGas	0.013	146.3	111	88.9	2	
B	11	45	2	NoGas	1.914	6.5	11233	2.3	20	
Na	23	45	1	He	49459.103	3.1	46543696	0.9	75200	
Mg	24	45	1	He	49551.648	3.1	25109418	1.5	75200	
Al	27	45	1	He	51034.443	2.5	10758895	2.0	75200	
K	39	45	1	He	48926.597	2.9	14754899	1.1	75200	
Ca	44	45	1	He	49430.297	3.5	807689	1.6	75200	
Ti	47	45	1	He	1012.628	2.8	112029	1.7	1505	
V	51	45	1	He	0.164	66.6	1091	37.5	4	
Cr	52	45	1	He	1.032	8.8	7937	3.8	4	
Mn	55	45	1	He	0.314	3.8	1242	2.6	4	
Fe	56	45	1	He	49279.461	3.2	165882913	2.1	75200	
Co	59	45	1	He	0.019	31.6	207	22.2	2	
Ni	60	45	1	He	0.267	11.3	748	4.9	4	
Cu	63	45	1	He	0.434	9.1	5097	4.8	4	
Zn	66	45	1	He	0.716	11.8	1057	6.7	20	
As	75	115	1	He	0.046	67.4	140	10.1	4	
Se	78	115	1	He	0.093	58.4	25	2.3	4	
Sr	88	103	1	He	0.241	4.9	770	3.7	20	
Mo	95	103	1	He	1020.345	1.7	2199117	2.2	1505	
Ag	107	103	1	He	0.017	34.3	132	24.9	1	
Cd	111	115	1	He	0.006	96.8	5	86.4	1	
Sn	118	115	1	He	-2.967	-3.6	1459	8.8	20	
Sb	123	115	1	He	0.034	51.2	97	33.3	4	
Ba	137	115	1	He	0.038	71.3	46	44.7	2	
W	182	159	1	He	0.155	23.4	2197	6.3	20	
Tl	205	165	1	He	0.006	35.1	97	15.8	2	
Pb	208	165	1	He	0.113	10.7	1912	4.2	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1733659	2.15	1674650	103.52	60	120	
Sc	45	1	He	354169	4.03	355173	99.72	60	120	
Sc	45	2	NoGas	9056881	1.64	8635903	104.87	60	120	
Rh	103	1	He	1369380	3.83	1470259	93.14	60	120	
In	115	1	He	469574	5.32	490642	95.71	60	120	
Tb	159	1	He	1406541	2.58	1434034	98.08	60	120	
Ho	165	1	He	1355524	4.78	1409606	96.16	60	120	
Bi	209	1	He	834867	2.42	906964	92.05	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2569428
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:52:05-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	96.358	1.218	2150708	0.70	100	96.4	49.5	150.5	
Be	9	45	2	NoGas	96.791	0.842	549653	0.93	100	96.8	49.5	150.5	
B	11	45	2	NoGas	103.050	1.037	357208	0.70	100	103.0	49.5	150.5	
Na	23	45	1	He	49840.849	2.751	49991735	1.87	50000	99.7	49.5	150.5	
Mg	24	45	1	He	49735.927	2.506	26861711	1.67	50000	99.5	49.5	150.5	
Al	27	45	1	He	50877.629	2.499	11429940	1.65	50000	101.8	49.5	150.5	
K	39	45	1	He	49465.068	2.551	15898698	1.61	50000	98.9	49.5	150.5	
Ca	44	45	1	He	49453.930	2.461	861333	1.61	50000	98.9	49.5	150.5	
Ti	47	45	1	He	1108.898	2.075	130747	1.16	1100	100.8	49.5	150.5	
V	51	45	1	He	98.816	2.986	389395	2.18	100	98.8	49.5	150.5	
Cr	52	45	1	He	98.336	3.014	463594	2.11	100	98.3	49.5	150.5	
Mn	55	45	1	He	99.311	2.457	246495	1.56	100	99.3	49.5	150.5	
Fe	56	45	1	He	49238.737	2.875	176639953	1.94	50000	98.5	49.5	150.5	
Co	59	45	1	He	99.097	2.619	758008	1.67	100	99.1	49.5	150.5	
Ni	60	45	1	He	99.068	2.982	206465	2.06	100	99.1	49.5	150.5	
Cu	63	45	1	He	98.824	2.383	570757	1.51	100	98.8	49.5	150.5	
Zn	66	45	1	He	99.594	2.836	75235	1.89	100	99.6	49.5	150.5	
As	75	115	1	He	103.577	1.185	50931	1.27	100	103.6	49.5	150.5	
Se	78	115	1	He	101.237	2.001	2755	2.45	100	101.2	49.5	150.5	
Sr	88	103	1	He	100.282	2.656	242863	1.38	100	100.3	49.5	150.5	
Mo	95	103	1	He	1135.143	3.599	2542772	2.52	1100	103.2	49.5	150.5	
Ag	107	103	1	He	101.866	2.145	699579	0.83	100	101.9	49.5	150.5	
Cd	111	115	1	He	99.090	1.406	85914	1.56	100	99.1	49.5	150.5	
Sn	118	115	1	He	102.218	1.825	186219	2.11	100	102.2	49.5	150.5	
Sb	123	115	1	He	98.421	1.179	191980	1.30	100	98.4	49.5	150.5	
Ba	137	115	1	He	98.926	1.389	74532	0.80	100	98.9	49.5	150.5	
W	182	159	1	He	99.769	2.368	536659	3.36	100	99.8	49.5	150.5	
Tl	205	165	1	He	97.100	2.257	939250	2.09	100	97.1	49.5	150.5	
Pb	208	165	1	He	98.429	1.058	1292792	0.80	100	98.4	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1717012	0.66	1674650	102.53	60	120	
Sc	45	1	He	377241	0.96	355173	106.21	60	120	
Sc	45	2	NoGas	9558765	1.03	8635903	110.69	60	120	
Rh	103	1	He	1423049	1.34	1470259	96.79	60	120	
In	115	1	He	493533	1.33	490642	100.59	60	120	
Tb	159	1	He	1443618	1.04	1434034	100.67	60	120	
Ho	165	1	He	1423525	0.61	1409606	100.99	60	120	
Bi	209	1	He	860844	1.00	906964	94.91	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:56:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	48.782	1.632	1125237	1.65	50	97.6	89.5	110.5	
Be	9	45	2	NoGas	48.493	1.190	271334	1.33	50	97.0	89.5	110.5	
B	11	45	2	NoGas	51.136	1.461	177281	1.25	50	102.3	89.5	110.5	
Na	23	45	1	He	25300.738	0.485	25794877	1.82	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25314.324	1.153	13892683	1.92	25000	101.3	89.5	110.5	
Al	27	45	1	He	253.608	0.633	58117	1.92	250	101.4	89.5	110.5	
K	39	45	1	He	24959.297	0.706	8165421	2.04	25000	99.8	89.5	110.5	
Ca	44	45	1	He	24889.293	0.957	440632	1.72	25000	99.6	89.5	110.5	
Ti	47	45	1	He	52.796	1.248	6326	0.29	50	105.6	89.5	110.5	
V	51	45	1	He	50.466	1.702	202329	2.02	50	100.9	89.5	110.5	
Cr	52	45	1	He	50.181	2.677	242195	2.82	50	100.4	89.5	110.5	
Mn	55	45	1	He	248.922	1.673	626943	1.92	250	99.6	89.5	110.5	
Fe	56	45	1	He	12481.543	1.250	45499465	1.45	12500	99.9	89.5	110.5	
Co	59	45	1	He	50.305	0.954	391023	1.27	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.354	0.768	106757	1.46	50	100.7	89.5	110.5	
Cu	63	45	1	He	50.253	0.813	296380	1.69	50	100.5	89.5	110.5	
Zn	66	45	1	He	50.214	1.826	38838	1.47	50	100.4	89.5	110.5	
As	75	115	1	He	51.390	1.534	25854	1.30	50	102.8	89.5	110.5	
Se	78	115	1	He	50.851	2.358	1424	1.24	50	101.7	89.5	110.5	
Sr	88	103	1	He	49.711	1.481	126527	1.86	50	99.4	89.5	110.5	
Mo	95	103	1	He	54.650	1.348	128572	1.84	50	109.3	89.5	110.5	
Ag	107	103	1	He	50.814	0.753	366429	1.44	50	101.6	89.5	110.5	
Cd	111	115	1	He	50.346	1.558	44555	1.92	50	100.7	89.5	110.5	
Sn	118	115	1	He	48.843	1.871	94409	1.52	50	97.7	89.5	110.5	
Sb	123	115	1	He	50.709	0.969	100977	1.55	50	101.4	89.5	110.5	
Ba	137	115	1	He	49.149	2.722	37810	3.38	50	98.3	89.5	110.5	
W	182	159	1	He	50.563	3.781	274310	2.25	50	101.1	89.5	110.5	
Tl	205	165	1	He	51.110	4.320	481552	2.35	50	102.2	89.5	110.5	
Pb	208	165	1	He	50.662	2.941	648464	0.89	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1723582	0.63	1674650	102.92	60	120	
Sc	45	1	He	383262	1.34	355173	107.91	60	120	
Sc	45	2	NoGas	9417175	0.18	8635903	109.05	60	120	
Rh	103	1	He	1493852	0.90	1470259	101.60	60	120	
In	115	1	He	503712	1.18	490642	102.66	60	120	
Tb	159	1	He	1453058	1.90	1434034	101.33	60	120	
Ho	165	1	He	1387530	3.16	1409606	98.43	60	120	
Bi	209	1	He	863822	0.84	906964	95.24	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:00:11-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.121	-43.4	99425	1.3	8	
Be	9	45	2	NoGas	0.010	134.7	96	75.1	1	
B	11	45	2	NoGas	2.301	2.7	12446	0.4	20	
Na	23	45	1	He	11.394	4.5	26034	1.9	1000	
Mg	24	45	1	He	3.612	19.8	2430	15.8	1000	
Al	27	45	1	He	1.527	8.8	571	5.4	50	
K	39	45	1	He	16.283	8.7	32178	1.2	1000	
Ca	44	45	1	He	5.034	75.4	393	16.8	1000	
Ti	47	45	1	He	0.148	66.0	19	62.0	20	
V	51	45	1	He	0.095	121.6	900	50.9	2	
Cr	52	45	1	He	0.013	131.6	3748	2.4	2	
Mn	55	45	1	He	0.012	143.6	582	7.1	2	
Fe	56	45	1	He	5.423	24.2	22255	21.2	50	
Co	59	45	1	He	0.002	188.0	90	28.0	1	
Ni	60	45	1	He	-0.026	-36.3	190	10.5	2	
Cu	63	45	1	He	0.005	529.2	3010	5.4	2	
Zn	66	45	1	He	-0.039	-118.2	568	6.5	20	
As	75	115	1	He	-0.042	-19.9	107	5.1	2	
Se	78	115	1	He	0.136	39.0	29	5.3	2	
Sr	88	103	1	He	-0.057	-11.7	83	21.2	10	
Mo	95	103	1	He	0.665	5.2	1619	5.1	2	
Ag	107	103	1	He	0.011	17.9	102	13.2	0.2	
Cd	111	115	1	He	0.023	20.6	21	20.9	0.2	
Sn	118	115	1	He	0.237	69.0	7380	5.0	10	
Sb	123	115	1	He	0.124	19.6	287	16.4	2	
Ba	137	115	1	He	0.004	559.1	22	69.3	5	
W	182	159	1	He	0.359	27.1	3304	17.7	10	
Tl	205	165	1	He	0.049	36.2	508	34.0	0.5	
Pb	208	165	1	He	0.022	35.8	802	13.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1718686	0.89	1674650	102.63	60	120	
Sc	45	1	He	382754	0.31	355173	107.77	60	120	
Sc	45	2	NoGas	9025961	1.18	8635903	104.52	60	120	
Rh	103	1	He	1522251	0.49	1470259	103.54	60	120	
In	115	1	He	508189	1.22	490642	103.58	60	120	
Tb	159	1	He	1420087	2.15	1434034	99.03	60	120	
Ho	165	1	He	1398706	0.70	1409606	99.23	60	120	
Bi	209	1	He	885066	0.54	906964	97.59	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-234979/1-a
Data File Name	014_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:11:49-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.153	-40.3	98620	0.8	8	
Be	9	45	2	NoGas	0.011	32.8	100	19.2	1	
B	11	45	2	NoGas	4.436	4.7	19300	3.7	20	
Na	23	45	1	He	94.003	1.7	109049	0.6	1000	
Mg	24	45	1	He	138.512	2.8	75633	2.0	1000	
Al	27	45	1	He	2.739	8.3	839	5.2	50	
K	39	45	1	He	24.958	6.8	34671	1.0	1000	
Ca	44	45	1	He	454.407	2.7	8253	1.7	1000	
Ti	47	45	1	He	0.140	23.6	18	21.7	20	
V	51	45	1	He	0.049	673.7	710	185.9	2	
Cr	52	45	1	He	25.712	1.6	124541	0.8	2	Blank High
Mn	55	45	1	He	3.180	4.4	8462	3.3	2	Blank High
Fe	56	45	1	He	123.474	2.5	447701	1.5	50	Blank High
Co	59	45	1	He	0.234	12.2	1873	11.3	1	
Ni	60	45	1	He	11.912	2.3	25168	1.6	2	Blank High
Cu	63	45	1	He	1.407	4.6	11078	2.5	2	
Zn	66	45	1	He	10.537	0.8	8531	1.4	20	
As	75	115	1	He	-0.077	-31.5	89	13.8	2	
Se	78	115	1	He	-0.065	-126.8	23	9.5	2	
Sr	88	103	1	He	1.015	2.7	2818	2.0	10	
Mo	95	103	1	He	0.544	6.4	1310	6.2	2	
Ag	107	103	1	He	0.002	82.5	39	32.4	0.2	
Cd	111	115	1	He	0.006	50.9	6	44.9	0.2	
Sn	118	115	1	He	-3.277	-1.7	1022	9.5	10	
Sb	123	115	1	He	0.063	21.0	162	16.6	2	
Ba	137	115	1	He	2.172	1.6	1700	1.1	5	
W	182	159	1	He	0.138	17.9	2160	4.2	10	
Tl	205	165	1	He	0.006	20.3	99	10.8	0.5	
Pb	208	165	1	He	0.080	7.0	1543	4.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1714484	1.80	1674650	102.38	60	120	
Sc	45	1	He	379152	0.93	355173	106.75	60	120	
Sc	45	2	NoGas	9010149	0.55	8635903	104.33	60	120	
Rh	103	1	He	1500426	0.88	1470259	102.05	60	120	
In	115	1	He	506950	0.59	490642	103.32	60	120	
Tb	159	1	He	1440855	2.51	1434034	100.48	60	120	
Ho	165	1	He	1396627	1.36	1409606	99.08	60	120	
Bi	209	1	He	919493	1.05	906964	101.38	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-234979/2-a
Data File Name	015_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:15:55-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	91.301	91.301	1.697	1934492	0.40	100	91.3	84.5	115.4	
Be	9	2	NoGas	951.335	951.335	0.331	5114659	1.86	1000	95.1	84.5	115.4	
B	11	2	NoGas	94.153	94.153	1.748	309428	1.98	100	94.2	84.5	115.4	
Na	23	1	He	9556.841	9556.841	2.638	9399555	1.25	10000	95.6	84.5	115.4	
Mg	24	1	He	9621.947	9621.947	1.331	5090498	0.20	10000	96.2	84.5	115.4	
Al	27	1	He	9569.796	9569.796	1.154	2106115	1.07	10000	95.7	84.5	115.4	
K	39	1	He	9264.452	9264.452	2.655	2937421	1.20	10000	92.6	84.5	115.4	
Ca	44	1	He	11032.021	11032.021	2.294	188420	1.23	10000	110.3	84.5	115.4	
Ti	47	1	He	93.327	93.327	1.488	10780	1.67	100	93.3	84.5	115.4	
V	51	1	He	962.437	962.437	2.420	3710112	0.95	1000	96.2	84.5	115.4	
Cr	52	1	He	931.667	931.667	1.394	4272335	1.14	1000	93.2	84.5	115.4	
Mn	55	1	He	963.732	963.732	2.252	2338163	0.90	1000	96.4	84.5	115.4	
Fe	56	1	He	9381.582	9381.582	2.756	32964449	1.39	10000	93.8	84.5	115.4	
Co	59	1	He	942.381	942.381	1.423	7060202	0.71	1000	94.2	84.5	115.4	
Ni	60	1	He	947.183	947.183	0.943	1931682	0.80	1000	94.7	84.5	115.4	
Cu	63	1	He	924.739	924.739	1.814	5207081	0.70	1000	92.5	84.5	115.4	
Zn	66	1	He	976.439	976.439	1.553	717444	0.92	1000	97.6	84.5	115.4	
As	75	1	He	968.731	968.731	0.358	472131	0.49	1000	96.9	84.5	115.4	
Se	78	1	He	952.709	952.709	1.291	25547	1.06	1000	95.3	84.5	115.4	
Sr	88	1	He	907.148	907.148	0.911	2262182	0.38	1000	90.7	84.5	115.4	
Mo	95	1	He	93.394	93.394	1.009	215640	1.55	100	93.4	84.5	115.4	
Ag	107	1	He	93.714	93.714	0.925	663245	1.22	100	93.7	84.5	115.4	
Cd	111	1	He	946.777	946.777	0.225	815405	0.54	1000	94.7	84.5	115.4	
Sn	118	1	He	948.941	948.941	1.388	1661712	1.77	1000	94.9	84.5	115.4	
Sb	123	1	He	92.240	92.240	0.474	178726	0.69	100	92.2	84.5	115.4	
Ba	137	1	He	925.950	925.950	0.689	692851	0.91	1000	92.6	84.5	115.4	
W	182	1	He	93.750	93.750	1.335	488619	2.89	100	93.7	84.5	115.4	
Tl	205	1	He	223.170	223.170	0.337	2114913	0.93	250	89.3	84.5	115.4	
Pb	208	1	He	885.317	885.317	0.483	11387792	0.48	1000	88.5	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1672990	0.76	1674650	99.90	60	120	
Sc	45	1	He	369501	1.50	355173	104.03	60	120	
Sc	45	2	NoGas	9050264	2.02	8635903	104.80	60	120	
Rh	103	1	He	1466197	0.61	1470259	99.72	60	120	
In	115	1	He	490218	0.39	490642	99.91	60	120	
Tb	159	1	He	1398664	2.13	1434034	97.53	60	120	
Ho	165	1	He	1394597	0.59	1409606	98.94	60	120	
Bi	209	1	He	866753	0.66	906964	95.57	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235182/1-a
Data File Name	016_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:19:48-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.056	-223.7	99380	1.1	8	
Be	9	45	2	NoGas	0.132	11.8	741	9.2	1	
B	11	45	2	NoGas	4.949	1.7	20705	1.3	20	
Na	23	45	1	He	6.549	17.4	20382	4.5	1000	
Mg	24	45	1	He	1.693	18.0	1333	13.1	1000	
Al	27	45	1	He	1.393	37.2	522	21.9	50	
K	39	45	1	He	7.279	33.7	28260	3.4	1000	
Ca	44	45	1	He	-2.385	-55.0	253	7.8	1000	
Ti	47	45	1	He	0.125	12.6	16	12.4	20	
V	51	45	1	He	0.248	26.0	1465	18.2	2	
Cr	52	45	1	He	0.071	20.4	3887	2.3	2	
Mn	55	45	1	He	0.346	6.7	1373	4.5	2	
Fe	56	45	1	He	3.970	25.7	16425	23.0	50	
Co	59	45	1	He	0.124	15.3	1003	15.1	1	
Ni	60	45	1	He	0.085	47.1	412	21.0	2	
Cu	63	45	1	He	0.283	17.2	4476	7.2	2	
Zn	66	45	1	He	0.762	15.6	1137	7.1	20	
As	75	115	1	He	0.185	29.8	216	12.1	2	
Se	78	115	1	He	0.432	44.4	36	13.8	2	
Sr	88	103	1	He	0.029	47.5	304	12.0	10	
Mo	95	103	1	He	0.277	12.5	681	11.3	2	
Ag	107	103	1	He	0.011	21.9	107	16.2	0.2	
Cd	111	115	1	He	0.274	25.4	238	24.6	0.2	Blank High
Sn	118	115	1	He	-0.529	-214.4	5812	33.5	10	
Sb	123	115	1	He	0.256	17.2	536	15.3	2	
Ba	137	115	1	He	0.105	17.3	98	13.8	5	
W	182	159	1	He	0.551	33.3	4275	24.4	10	
Tl	205	165	1	He	0.147	22.7	1411	22.2	0.5	
Pb	208	165	1	He	0.157	22.4	2497	17.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1700513	0.91	1674650	101.54	60	120	
Sc	45	1	He	369805	1.10	355173	104.12	60	120	
Sc	45	2	NoGas	8907055	2.51	8635903	103.14	60	120	
Rh	103	1	He	1507379	0.88	1470259	102.52	60	120	
In	115	1	He	493632	0.70	490642	100.61	60	120	
Tb	159	1	He	1404184	2.87	1434034	97.92	60	120	
Ho	165	1	He	1376804	0.58	1409606	97.67	60	120	
Bi	209	1	He	888568	0.93	906964	97.97	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235182/2-a
Data File Name	017_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:23:56-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	94.868	94.868	0.525	2008469	1.30	100	94.9	84.5	115.4	
Be	9	2	NoGas	1008.937	1008.937	0.391	5429621	0.96	1000	100.9	84.5	115.4	
B	11	2	NoGas	100.035	100.035	0.309	328793	1.10	100	100.0	84.5	115.4	
Na	23	1	He	9806.466	9806.466	2.541	9724213	1.66	10000	98.1	84.5	115.4	
Mg	24	1	He	9902.941	9902.941	3.449	5281412	2.58	10000	99.0	84.5	115.4	
Al	27	1	He	9836.601	9836.601	3.169	2182245	2.39	10000	98.4	84.5	115.4	
K	39	1	He	9723.408	9723.408	1.950	3107208	1.19	10000	97.2	84.5	115.4	
Ca	44	1	He	10840.073	10840.073	2.518	186666	1.80	10000	108.4	84.5	115.4	
Ti	47	1	He	97.178	97.178	5.121	11314	4.31	100	97.2	84.5	115.4	
V	51	1	He	1005.292	1005.292	1.504	3907415	0.62	1000	100.5	84.5	115.4	
Cr	52	1	He	953.082	953.082	3.631	4405514	2.77	1000	95.3	84.5	115.4	
Mn	55	1	He	994.146	994.146	2.911	2431703	2.13	1000	99.4	84.5	115.4	
Fe	56	1	He	9650.596	9650.596	3.433	34187914	2.61	10000	96.5	84.5	115.4	
Co	59	1	He	964.223	964.223	2.910	7282398	2.15	1000	96.4	84.5	115.4	
Ni	60	1	He	968.199	968.199	3.563	1990377	2.77	1000	96.8	84.5	115.4	
Cu	63	1	He	960.104	960.104	2.871	5450160	2.09	1000	96.0	84.5	115.4	
Zn	66	1	He	989.459	989.459	2.208	732921	1.39	1000	98.9	84.5	115.4	
As	75	1	He	1019.929	1019.929	2.374	489472	1.54	1000	102.0	84.5	115.4	
Se	78	1	He	997.886	997.886	1.866	26350	1.04	1000	99.8	84.5	115.4	
Sr	88	1	He	940.199	940.199	1.074	2323560	1.42	1000	94.0	84.5	115.4	
Mo	95	1	He	99.439	99.439	2.319	227520	2.46	100	99.4	84.5	115.4	
Ag	107	1	He	99.567	99.567	0.593	698327	1.29	100	99.6	84.5	115.4	
Cd	111	1	He	996.092	996.092	1.972	844770	1.15	1000	99.6	84.5	115.4	
Sn	118	1	He	990.802	990.802	1.851	1708185	1.13	1000	99.1	84.5	115.4	
Sb	123	1	He	96.954	96.954	2.225	184987	1.44	100	97.0	84.5	115.4	
Ba	137	1	He	966.179	966.179	2.224	711894	1.41	1000	96.6	84.5	115.4	
W	182	1	He	95.657	95.657	1.904	506857	2.91	100	95.7	84.5	115.4	
Tl	205	1	He	235.268	235.268	3.253	2217519	3.77	250	94.1	84.5	115.4	
Pb	208	1	He	919.708	919.708	0.761	11765470	1.27	1000	92.0	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1689348	0.43	1674650	100.88	60	120	
Sc	45	1	He	372508	0.89	355173	104.88	60	120	
Sc	45	2	NoGas	9059024	1.16	8635903	104.90	60	120	
Rh	103	1	He	1452998	0.99	1470259	98.83	60	120	
In	115	1	He	482783	0.85	490642	98.40	60	120	
Tb	159	1	He	1422205	2.62	1434034	99.18	60	120	
Ho	165	1	He	1386925	0.58	1409606	98.39	60	120	
Bi	209	1	He	855485	0.91	906964	94.32	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-a
Data File Name	018SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:27:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.592	23.592	0.63	592765	0.00	10000	
Be	9	45	2	NoGas	0.150	0.150	13.13	878	0.02	2000	
B	11	45	2	NoGas	11.009	11.009	2.63	41848	0.03	300	
Na	23	45	1	He	5187.192	5187.192	1.79	5330502	0.10	500000	
Mg	24	45	1	He	46840.834	46840.834	2.37	25854891	0.18	500000	
Al	27	45	1	He	2.358	2.358	14.99	766	0.31	200000	
K	39	45	1	He	3602.210	3602.210	1.43	1208365	0.30	500000	
Ca	44	45	1	He	128297.081	128297.081	1.03	2283129	5.62	500000	
Ti	47	45	1	He	0.220	0.220	56.00	28	0.79	2500	
V	51	45	1	He	0.164	0.164	109.23	1181	0.01	10000	
Cr	52	45	1	He	0.104	0.104	82.19	4209	0.00	10000	
Mn	55	45	1	He	319.406	319.406	1.73	809000	0.04	10000	
Fe	56	45	1	He	1347.362	1347.362	2.46	4942582	0.03	200000	
Co	59	45	1	He	4.662	4.662	2.03	36517	0.01	5000	
Ni	60	45	1	He	12.557	12.557	2.80	26961	0.05	10000	
Cu	63	45	1	He	0.199	0.199	24.44	4169	0.00	10000	
Zn	66	45	1	He	1.381	1.381	10.70	1659	0.08	10000	
As	75	115	1	He	1.708	1.708	7.12	964	0.18	10000	
Se	78	115	1	He	0.485	0.485	32.60	37	1.31	10000	
Sr	88	103	1	He	81.380	81.380	0.90	202282	0.04	10000	
Mo	95	103	1	He	0.289	0.289	8.77	687	0.04	2000	
Ag	107	103	1	He	0.015	0.015	17.56	131	0.01	300	
Cd	111	115	1	He	0.239	0.239	20.51	208	0.11	4000	
Sn	118	115	1	He	-1.180	-1.180	-62.61	4675	-0.03	2000	
Sb	123	115	1	He	0.270	0.270	7.33	563	0.05	200	
Ba	137	115	1	He	549.054	549.054	0.77	414212	0.13	10000	
W	182	159	1	He	0.562	0.562	25.41	4408	0.01	2500	
Tl	205	165	1	He	0.179	0.179	20.84	1761	0.01	2000	
Pb	208	165	1	He	0.148	0.148	18.09	2449	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1747046	1.16	1674650	104.32	60	120	
Sc	45	1	He	385466	0.58	355173	108.53	60	120	
Sc	45	2	NoGas	9318445	1.19	8635903	107.90	60	120	
Rh	103	1	He	1459883	0.98	1470259	99.29	60	120	
In	115	1	He	494252	1.03	490642	100.74	60	120	
Tb	159	1	He	1435865	2.63	1434034	100.13	60	120	
Ho	165	1	He	1415027	1.44	1409606	100.38	60	120	
Bi	209	1	He	855692	1.49	906964	94.35	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66154-g-2-a@5
Data File Name	019SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:31:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.561	4.561	3.87	196670	0.00	10000	
Be	9	45	2	NoGas	0.078	0.078	35.38	467	0.02	2000	
B	11	45	2	NoGas	3.286	3.286	1.25	15911	0.02	300	
Na	23	45	1	He	995.488	995.488	1.42	1042638	0.10	500000	
Mg	24	45	1	He	9554.619	9554.619	2.49	5314203	0.18	500000	
Al	27	45	1	He	0.747	0.747	19.53	399	0.19	200000	
K	39	45	1	He	726.590	726.590	0.55	267387	0.27	500000	
Ca	44	45	1	He	25704.371	25704.371	2.23	461159	5.57	500000	
Ti	47	45	1	He	0.036	0.036	160.17	6	0.65	2500	
V	51	45	1	He	0.144	0.144	108.23	1112	0.01	10000	
Cr	52	45	1	He	0.073	0.073	21.82	4093	0.00	10000	
Mn	55	45	1	He	65.455	65.455	2.23	167489	0.04	10000	
Fe	56	45	1	He	294.233	294.233	2.47	1089488	0.03	200000	
Co	59	45	1	He	1.004	1.004	1.02	7986	0.01	5000	
Ni	60	45	1	He	2.583	2.583	0.53	5788	0.04	10000	
Cu	63	45	1	He	0.027	0.027	32.08	3187	0.00	10000	
Zn	66	45	1	He	0.072	0.072	61.06	662	0.01	10000	
As	75	115	1	He	0.352	0.352	8.10	306	0.11	10000	
Se	78	115	1	He	0.273	0.273	19.93	32	0.84	10000	
Sr	88	103	1	He	15.788	15.788	3.20	41335	0.04	10000	
Mo	95	103	1	He	0.080	0.080	11.25	217	0.04	2000	
Ag	107	103	1	He	0.008	0.008	11.89	84	0.01	300	
Cd	111	115	1	He	0.088	0.088	15.28	79	0.11	4000	
Sn	118	115	1	He	-1.120	-1.120	-10.55	4927	-0.02	2000	
Sb	123	115	1	He	0.097	0.097	32.59	231	0.04	200	
Ba	137	115	1	He	110.826	110.826	1.76	86035	0.13	10000	
W	182	159	1	He	0.121	0.121	24.95	2074	0.01	2500	
Tl	205	165	1	He	0.036	0.036	14.15	389	0.01	2000	
Pb	208	165	1	He	0.051	0.051	14.12	1194	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1738694	1.55	1674650	103.82	60	120	
Sc	45	1	He	388460	1.03	355173	109.37	60	120	
Sc	45	2	NoGas	9190734	1.04	8635903	106.42	60	120	
Rh	103	1	He	1531422	2.25	1470259	104.16	60	120	
In	115	1	He	508513	0.43	490642	103.64	60	120	
Tb	159	1	He	1442731	1.08	1434034	100.61	60	120	
Ho	165	1	He	1422987	1.49	1409606	100.95	60	120	
Bi	209	1	He	878070	0.51	906964	96.81	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66154-g-2-a
Data File Name	020SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:35:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	125.175	125.175	2.10	2704056	0.00	10000	
Be	9	45	2	NoGas	1043.398	1043.398	1.42	5801215	0.02	2000	
B	11	45	2	NoGas	118.835	118.835	0.86	402575	0.03	300	
Na	23	45	1	He	15193.665	15193.665	1.79	15491667	0.10	500000	
Mg	24	45	1	He	55641.343	55641.343	3.23	30525044	0.18	500000	
Al	27	45	1	He	10293.328	10293.328	2.68	2349249	0.44	200000	
K	39	45	1	He	13483.574	13483.574	0.82	4422401	0.30	500000	
Ca	44	45	1	He	136643.431	136643.431	2.62	2417028	5.65	500000	
Ti	47	45	1	He	103.239	103.239	1.76	12367	0.83	2500	
V	51	45	1	He	1045.307	1045.307	2.51	4179389	0.03	10000	
Cr	52	45	1	He	983.290	983.290	2.84	4676022	0.02	10000	
Mn	55	45	1	He	1339.473	1339.473	3.77	3370299	0.04	10000	
Fe	56	45	1	He	11242.802	11242.802	3.22	40972526	0.03	200000	
Co	59	45	1	He	980.046	980.046	3.44	7614346	0.01	5000	
Ni	60	45	1	He	986.957	986.957	3.03	2087253	0.05	10000	
Cu	63	45	1	He	949.369	949.369	4.04	5543659	0.02	10000	
Zn	66	45	1	He	988.070	988.070	2.51	752903	0.13	10000	
As	75	115	1	He	1066.733	1066.733	1.39	516962	0.21	10000	
Se	78	115	1	He	1023.202	1023.202	1.32	27283	3.75	10000	
Sr	88	103	1	He	1060.744	1060.744	1.58	2631089	0.04	10000	
Mo	95	103	1	He	106.067	106.067	1.79	243580	0.04	2000	
Ag	107	103	1	He	95.398	95.398	0.78	671433	0.01	300	
Cd	111	115	1	He	1013.968	1013.968	1.36	868362	0.12	4000	
Sn	118	115	1	He	1059.556	1059.556	3.19	1844052	0.06	2000	
Sb	123	115	1	He	103.892	103.892	1.81	200163	0.05	200	
Ba	137	115	1	He	1545.954	1545.954	0.53	1150291	0.13	10000	
W	182	159	1	He	103.656	103.656	4.05	547144	0.02	2500	
Tl	205	165	1	He	238.941	238.941	1.13	2290483	0.01	2000	
Pb	208	165	1	He	945.896	945.896	1.33	12307697	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1735603	1.10	1674650	103.64	60	120	
Sc	45	1	He	383208	0.94	355173	107.89	60	120	
Sc	45	2	NoGas	9360471	1.50	8635903	108.39	60	120	
Rh	103	1	He	1458184	1.02	1470259	99.18	60	120	
In	115	1	He	487477	0.55	490642	99.35	60	120	
Tb	159	1	He	1417670	1.80	1434034	98.86	60	120	
Ho	165	1	He	1410770	0.84	1409606	100.08	60	120	
Bi	209	1	He	848405	1.13	906964	93.54	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-b ms
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:39:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	120.445	120.445	1.04	2638482	0.00	10000	
Be	9	45	2	NoGas	973.844	973.844	2.04	5481739	0.02	2000	
B	11	45	2	NoGas	105.397	105.397	1.03	362065	0.03	300	
Na	23	45	1	He	14911.758	14911.758	1.96	15180716	0.10	500000	
Mg	24	45	1	He	57680.298	57680.298	2.11	31596914	0.18	500000	
Al	27	45	1	He	9833.540	9833.540	2.57	2240835	0.44	200000	
K	39	45	1	He	13153.244	13153.244	1.49	4307877	0.31	500000	
Ca	44	45	1	He	142484.509	142484.509	2.57	2516586	5.66	500000	
Ti	47	45	1	He	97.581	97.581	1.77	11673	0.84	2500	
V	51	45	1	He	995.545	995.545	2.99	3974223	0.03	10000	
Cr	52	45	1	He	932.247	932.247	3.78	4426193	0.02	10000	
Mn	55	45	1	He	1309.001	1309.001	3.50	3288308	0.04	10000	
Fe	56	45	1	He	10732.826	10732.826	2.15	39056152	0.03	200000	
Co	59	45	1	He	938.080	938.080	2.98	7276829	0.01	5000	
Ni	60	45	1	He	946.461	946.461	2.48	1998639	0.05	10000	
Cu	63	45	1	He	908.040	908.040	2.66	5294592	0.02	10000	
Zn	66	45	1	He	938.019	938.019	1.98	713718	0.13	10000	
As	75	115	1	He	1017.245	1017.245	2.34	491497	0.21	10000	
Se	78	115	1	He	979.339	979.339	2.20	26035	3.76	10000	
Sr	88	103	1	He	1035.578	1035.578	1.08	2553502	0.04	10000	
Mo	95	103	1	He	101.273	101.273	1.74	231216	0.04	2000	
Ag	107	103	1	He	97.542	97.542	0.72	682492	0.01	300	
Cd	111	115	1	He	962.203	962.203	2.67	821518	0.12	4000	
Sn	118	115	1	He	996.011	996.011	2.56	1728644	0.06	2000	
Sb	123	115	1	He	96.606	96.606	2.85	185559	0.05	200	
Ba	137	115	1	He	1522.234	1522.234	2.32	1129175	0.13	10000	
W	182	159	1	He	98.423	98.423	3.65	521476	0.02	2500	
Tl	205	165	1	He	225.096	225.096	1.61	2166244	0.01	2000	
Pb	208	165	1	He	889.189	889.189	1.08	11615494	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1740571	0.86	1674650	103.94	60	120	
Sc	45	1	He	382626	1.20	355173	107.73	60	120	
Sc	45	2	NoGas	9475740	0.44	8635903	109.72	60	120	
Rh	103	1	He	1449633	1.37	1470259	98.60	60	120	
In	115	1	He	486076	1.30	490642	99.07	60	120	
Tb	159	1	He	1422619	1.60	1434034	99.20	60	120	
Ho	165	1	He	1416342	0.88	1409606	100.48	60	120	
Bi	209	1	He	845393	1.21	906964	93.21	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-c msd
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:43:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	117.659	117.659	1.18	2625904	0.00	10000	
Be	9	45	2	NoGas	973.960	973.960	2.19	5580384	0.02	2000	
B	11	45	2	NoGas	105.048	105.048	1.37	367325	0.03	300	
Na	23	45	1	He	14729.654	14729.654	1.47	15200865	0.10	500000	
Mg	24	45	1	He	56394.895	56394.895	2.46	31313075	0.18	500000	
Al	27	45	1	He	9655.906	9655.906	2.84	2230253	0.43	200000	
K	39	45	1	He	13088.945	13088.945	1.06	4345675	0.30	500000	
Ca	44	45	1	He	140238.592	140238.592	1.60	2510686	5.59	500000	
Ti	47	45	1	He	95.373	95.373	7.98	11556	0.83	2500	
V	51	45	1	He	983.467	983.467	3.72	3979582	0.02	10000	
Cr	52	45	1	He	923.491	923.491	3.01	4444759	0.02	10000	
Mn	55	45	1	He	1298.599	1298.599	2.95	3306847	0.04	10000	
Fe	56	45	1	He	10647.983	10647.983	2.82	39275561	0.03	200000	
Co	59	45	1	He	925.385	925.385	2.34	7277644	0.01	5000	
Ni	60	45	1	He	935.610	935.610	2.49	2002657	0.05	10000	
Cu	63	45	1	He	890.744	890.744	2.10	5265242	0.02	10000	
Zn	66	45	1	He	925.851	925.851	2.33	714061	0.13	10000	
As	75	115	1	He	1005.782	1005.782	1.95	493120	0.20	10000	
Se	78	115	1	He	961.860	961.860	0.98	25949	3.71	10000	
Sr	88	103	1	He	1006.627	1006.627	1.67	2552294	0.04	10000	
Mo	95	103	1	He	98.262	98.262	1.87	230668	0.04	2000	
Ag	107	103	1	He	94.205	94.205	0.62	677865	0.01	300	
Cd	111	115	1	He	954.231	954.231	1.73	826752	0.12	4000	
Sn	118	115	1	He	989.949	989.949	1.55	1743579	0.06	2000	
Sb	123	115	1	He	96.157	96.157	1.75	187432	0.05	200	
Ba	137	115	1	He	1503.706	1503.706	1.53	1131901	0.13	10000	
W	182	159	1	He	94.281	94.281	3.19	517673	0.02	2500	
Tl	205	165	1	He	230.775	230.775	3.75	2167435	0.01	2000	
Pb	208	165	1	He	912.422	912.422	3.25	11632801	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1781104	0.74	1674650	106.36	60	120	
Sc	45	1	He	387852	1.34	355173	109.20	60	120	
Sc	45	2	NoGas	9645742	1.20	8635903	111.69	60	120	
Rh	103	1	He	1490715	0.17	1470259	101.39	60	120	
In	115	1	He	493195	0.65	490642	100.52	60	120	
Tb	159	1	He	1473558	0.47	1434034	102.76	60	120	
Ho	165	1	He	1382988	2.43	1409606	98.11	60	120	
Bi	209	1	He	855106	0.55	906964	94.28	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-1-a
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:47:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.233	0.233	13.33	111936	0.00	10000	
Be	9	45	2	NoGas	0.247	0.247	3.23	1433	0.02	2000	
B	11	45	2	NoGas	21.159	21.159	0.57	76979	0.03	300	
Na	23	45	1	He	1188.564	1188.564	1.79	1240351	0.10	500000	
Mg	24	45	1	He	1667.568	1667.568	2.21	926612	0.18	500000	
Al	27	45	1	He	206.229	206.229	2.94	47868	0.43	200000	
K	39	45	1	He	3588.857	3588.857	0.95	1211606	0.30	500000	
Ca	44	45	1	He	7888.012	7888.012	1.26	141549	5.57	500000	
Ti	47	45	1	He	7.170	7.170	11.81	870	0.82	2500	
V	51	45	1	He	2.469	2.469	6.21	10518	0.02	10000	
Cr	52	45	1	He	2.079	2.079	6.23	13733	0.02	10000	
Mn	55	45	1	He	340.086	340.086	1.63	866729	0.04	10000	
Fe	56	45	1	He	30009.835	30009.835	2.36	110715836	0.03	200000	
Co	59	45	1	He	175.298	175.298	3.34	1378810	0.01	5000	
Ni	60	45	1	He	1.271	1.271	4.59	2969	0.04	10000	
Cu	63	45	1	He	1.199	1.199	4.98	10105	0.01	10000	
Zn	66	45	1	He	1.401	1.401	17.04	1687	0.08	10000	
As	75	115	1	He	1.325	1.325	3.65	803	0.16	10000	
Se	78	115	1	He	0.823	0.823	14.60	48	1.72	10000	
Sr	88	103	1	He	30.318	30.318	0.64	78946	0.04	10000	
Mo	95	103	1	He	0.576	0.576	5.86	1410	0.04	2000	
Ag	107	103	1	He	0.023	0.023	18.45	191	0.01	300	
Cd	111	115	1	He	0.349	0.349	11.45	315	0.11	4000	
Sn	118	115	1	He	0.175	0.175	459.38	7320	0.00	2000	
Sb	123	115	1	He	0.332	0.332	9.61	709	0.05	200	
Ba	137	115	1	He	32.379	32.379	0.68	25308	0.13	10000	
W	182	159	1	He	26.834	26.834	1.32	148423	0.02	2500	
Tl	205	165	1	He	0.245	0.245	21.67	2398	0.01	2000	
Pb	208	165	1	He	0.532	0.532	3.49	7461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1820266	1.62	1674650	108.70	60	120	
Sc	45	1	He	387939	1.02	355173	109.23	60	120	
Sc	45	2	NoGas	9484157	1.92	8635903	109.82	60	120	
Rh	103	1	He	1526598	0.92	1470259	103.83	60	120	
In	115	1	He	511697	0.51	490642	104.29	60	120	
Tb	159	1	He	1473962	0.72	1434034	102.78	60	120	
Ho	165	1	He	1414131	1.51	1409606	100.32	60	120	
Bi	209	1	He	898984	0.94	906964	99.12	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	024_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:51:35-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	48.783	1.141	1135009	0.66	50	97.6	89.5	110.5	
Be	9	45	2	NoGas	48.181	0.207	271930	0.44	50	96.4	89.5	110.5	
B	11	45	2	NoGas	52.419	1.093	183179	0.98	50	104.8	89.5	110.5	
Na	23	45	1	He	25621.400	0.890	26114854	0.90	25000	102.5	89.5	110.5	
Mg	24	45	1	He	25298.455	0.973	13882407	2.16	25000	101.2	89.5	110.5	
Al	27	45	1	He	249.147	1.265	57090	2.16	250	99.7	89.5	110.5	
K	39	45	1	He	25053.051	0.954	8193789	1.10	25000	100.2	89.5	110.5	
Ca	44	45	1	He	24794.133	1.392	438842	1.19	25000	99.2	89.5	110.5	
Ti	47	45	1	He	51.388	2.166	6158	3.47	50	102.8	89.5	110.5	
V	51	45	1	He	50.730	0.835	203343	0.79	50	101.5	89.5	110.5	
Cr	52	45	1	He	50.080	1.746	241672	1.83	50	100.2	89.5	110.5	
Mn	55	45	1	He	248.288	1.468	625193	0.68	250	99.3	89.5	110.5	
Fe	56	45	1	He	12452.486	1.726	45383393	1.24	12500	99.6	89.5	110.5	
Co	59	45	1	He	50.329	1.459	391141	1.51	50	100.7	89.5	110.5	
Ni	60	45	1	He	50.417	2.274	106862	1.80	50	100.8	89.5	110.5	
Cu	63	45	1	He	50.165	1.583	295787	1.16	50	100.3	89.5	110.5	
Zn	66	45	1	He	50.063	0.512	38720	1.13	50	100.1	89.5	110.5	
As	75	115	1	He	51.594	1.040	25863	1.31	50	103.2	89.5	110.5	
Se	78	115	1	He	51.446	3.081	1435	2.81	50	102.9	89.5	110.5	
Sr	88	103	1	He	49.790	1.664	125461	1.54	50	99.6	89.5	110.5	
Mo	95	103	1	He	51.369	1.906	119652	2.17	50	102.7	89.5	110.5	
Ag	107	103	1	He	50.976	2.079	363884	1.08	50	102.0	89.5	110.5	
Cd	111	115	1	He	50.062	1.108	44141	1.38	50	100.1	89.5	110.5	
Sn	118	115	1	He	49.306	2.799	94896	2.73	50	98.6	89.5	110.5	
Sb	123	115	1	He	50.047	1.124	99293	1.30	50	100.1	89.5	110.5	
Ba	137	115	1	He	48.931	1.821	37500	1.73	50	97.9	89.5	110.5	
W	182	159	1	He	51.598	0.768	274953	1.25	50	103.2	89.5	110.5	
Tl	205	165	1	He	49.922	1.056	477071	1.57	50	99.8	89.5	110.5	
Pb	208	165	1	He	49.609	0.557	643905	0.34	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1756093	1.55	1674650	104.86	60	120	
Sc	45	1	He	383212	1.63	355173	107.89	60	120	
Sc	45	2	NoGas	9499150	0.45	8635903	110.00	60	120	
Rh	103	1	He	1479056	1.34	1470259	100.60	60	120	
In	115	1	He	501861	0.31	490642	102.29	60	120	
Tb	159	1	He	1426797	1.01	1434034	99.50	60	120	
Ho	165	1	He	1406206	0.79	1409606	99.76	60	120	
Bi	209	1	He	857335	0.34	906964	94.53	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	025_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:55:44-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.148	-18.5	102990	1.0	8	
Be	9	45	2	NoGas	0.104	16.1	626	14.5	1	
B	11	45	2	NoGas	3.275	2.4	16234	1.4	20	
Na	23	45	1	He	9.217	5.8	23842	2.1	1000	
Mg	24	45	1	He	3.145	14.2	2178	11.8	1000	
Al	27	45	1	He	0.327	44.0	298	11.5	50	
K	39	45	1	He	10.909	21.3	30460	2.6	1000	
Ca	44	45	1	He	2.709	90.3	353	11.9	1000	
Ti	47	45	1	He	0.055	77.2	8	65.5	20	
V	51	45	1	He	0.145	41.7	1101	22.3	2	
Cr	52	45	1	He	0.088	35.7	4109	4.0	2	
Mn	55	45	1	He	0.047	32.0	672	5.8	2	
Fe	56	45	1	He	4.647	25.2	19471	22.6	50	
Co	59	45	1	He	0.028	16.9	298	12.9	1	
Ni	60	45	1	He	-0.016	-63.0	212	10.5	2	
Cu	63	45	1	He	0.112	37.4	3637	6.3	2	
Zn	66	45	1	He	0.013	97.1	608	1.1	20	
As	75	115	1	He	0.021	171.1	139	13.1	2	
Se	78	115	1	He	0.008	1803.3	25	15.1	2	
Sr	88	103	1	He	-0.040	-21.9	130	16.8	10	
Mo	95	103	1	He	0.122	20.5	318	18.9	2	
Ag	107	103	1	He	0.008	14.6	84	9.9	0.2	
Cd	111	115	1	He	0.072	18.4	65	18.0	0.2	
Sn	118	115	1	He	0.987	30.1	8710	6.3	10	
Sb	123	115	1	He	0.176	8.9	389	7.9	2	
Ba	137	115	1	He	0.041	21.7	51	13.6	5	
W	182	159	1	He	0.317	5.2	3100	4.0	10	
Tl	205	165	1	He	0.072	18.8	739	17.5	0.5	
Pb	208	165	1	He	0.061	6.4	1316	3.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1781121	0.85	1674650	106.36	60	120	
Sc	45	1	He	383148	0.71	355173	107.88	60	120	
Sc	45	2	NoGas	9398967	0.71	8635903	108.84	60	120	
Rh	103	1	He	1525278	0.49	1470259	103.74	60	120	
In	115	1	He	506778	0.18	490642	103.29	60	120	
Tb	159	1	He	1431789	1.82	1434034	99.84	60	120	
Ho	165	1	He	1417140	0.60	1409606	100.53	60	120	
Bi	209	1	He	890184	0.33	906964	98.15	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-2-a
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:59:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.733	2.733	1.06	161511	0.00	10000	
Be	9	45	2	NoGas	0.198	0.198	11.95	1141	0.02	2000	
B	11	45	2	NoGas	8.140	8.140	2.14	32266	0.03	300	
Na	23	45	1	He	2401.438	2401.438	0.08	2421356	0.10	500000	
Mg	24	45	1	He	1933.810	1933.810	1.14	1044499	0.19	500000	
Al	27	45	1	He	1061.731	1061.731	1.32	238655	0.44	200000	
K	39	45	1	He	1117.367	1117.367	1.81	384910	0.29	500000	
Ca	44	45	1	He	1623.380	1623.380	1.64	28551	5.69	500000	
Ti	47	45	1	He	30.995	30.995	6.76	3653	0.85	2500	
V	51	45	1	He	2.031	2.031	22.10	8507	0.02	10000	
Cr	52	45	1	He	10.659	10.659	7.84	53483	0.02	10000	
Mn	55	45	1	He	362.788	362.788	0.73	898701	0.04	10000	
Fe	56	45	1	He	1081.813	1081.813	1.39	3882201	0.03	200000	
Co	59	45	1	He	12.572	12.572	1.56	96205	0.01	5000	
Ni	60	45	1	He	5.268	5.268	3.82	11201	0.05	10000	
Cu	63	45	1	He	6.475	6.475	3.29	40130	0.02	10000	
Zn	66	45	1	He	11.340	11.340	4.46	9087	0.12	10000	
As	75	115	1	He	0.296	0.296	22.68	277	0.11	10000	
Se	78	115	1	He	0.623	0.623	50.26	42	1.48	10000	
Sr	88	103	1	He	19.750	19.750	1.14	51364	0.04	10000	
Mo	95	103	1	He	0.304	0.304	3.09	753	0.04	2000	
Ag	107	103	1	He	0.032	0.032	13.99	257	0.01	300	
Cd	111	115	1	He	0.065	0.065	8.51	58	0.11	4000	
Sn	118	115	1	He	-2.685	-2.685	-1.04	2089	-0.13	2000	
Sb	123	115	1	He	0.290	0.290	6.67	617	0.05	200	
Ba	137	115	1	He	22.719	22.719	1.01	17592	0.13	10000	
W	182	159	1	He	0.209	0.209	16.15	2537	0.01	2500	
Tl	205	165	1	He	0.154	0.154	2.21	1497	0.01	2000	
Pb	208	165	1	He	2.104	2.104	4.21	27550	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1779498	2.55	1674650	106.26	60	120	
Sc	45	1	He	377040	0.73	355173	106.16	60	120	
Sc	45	2	NoGas	9310768	2.04	8635903	107.81	60	120	
Rh	103	1	He	1522283	1.49	1470259	103.54	60	120	
In	115	1	He	506754	0.74	490642	103.28	60	120	
Tb	159	1	He	1436651	0.53	1434034	100.18	60	120	
Ho	165	1	He	1393416	2.02	1409606	98.85	60	120	
Bi	209	1	He	901739	0.73	906964	99.42	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-3-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:03:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.196	1.196	3.90	131483	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	15.47	585	0.02	2000	
B	11	45	2	NoGas	5.726	5.726	6.07	24547	0.02	300	
Na	23	45	1	He	1244.149	1244.149	1.99	1292734	0.10	500000	
Mg	24	45	1	He	680.704	680.704	3.21	377047	0.18	500000	
Al	27	45	1	He	121.456	121.456	6.37	28167	0.43	200000	
K	39	45	1	He	856.101	856.101	2.65	308554	0.28	500000	
Ca	44	45	1	He	18.500	18.500	8.73	637	2.90	500000	
Ti	47	45	1	He	7.086	7.086	8.91	857	0.83	2500	
V	51	45	1	He	0.389	0.389	13.73	2094	0.02	10000	
Cr	52	45	1	He	0.727	0.727	7.09	7206	0.01	10000	
Mn	55	45	1	He	8.769	8.769	3.23	22806	0.04	10000	
Fe	56	45	1	He	181.772	181.772	2.86	670561	0.03	200000	
Co	59	45	1	He	162.045	162.045	2.67	1269759	0.01	5000	
Ni	60	45	1	He	2.085	2.085	2.76	4694	0.04	10000	
Cu	63	45	1	He	3.062	3.062	1.32	21037	0.01	10000	
Zn	66	45	1	He	4.444	4.444	2.72	4017	0.11	10000	
As	75	115	1	He	-0.010	-0.010	-229.16	126	-0.01	10000	
Se	78	115	1	He	-0.019	-0.019	-823.50	25	-0.08	10000	
Sr	88	103	1	He	0.313	0.313	4.38	1060	0.03	10000	
Mo	95	103	1	He	0.123	0.123	5.58	323	0.04	2000	
Ag	107	103	1	He	0.023	0.023	21.05	197	0.01	300	
Cd	111	115	1	He	0.032	0.032	20.90	30	0.11	4000	
Sn	118	115	1	He	-3.245	-3.245	-0.22	1104	-0.29	2000	
Sb	123	115	1	He	0.068	0.068	42.31	178	0.04	200	
Ba	137	115	1	He	18.495	18.495	2.27	14658	0.13	10000	
W	182	159	1	He	11.958	11.958	3.58	66743	0.02	2500	
Tl	205	165	1	He	0.047	0.047	14.39	490	0.01	2000	
Pb	208	165	1	He	0.368	0.368	3.21	5345	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1828640	1.61	1674650	109.20	60	120	
Sc	45	1	He	386493	1.42	355173	108.82	60	120	
Sc	45	2	NoGas	9433829	1.23	8635903	109.24	60	120	
Rh	103	1	He	1549426	1.53	1470259	105.38	60	120	
In	115	1	He	518505	0.50	490642	105.68	60	120	
Tb	159	1	He	1469302	1.47	1434034	102.46	60	120	
Ho	165	1	He	1418723	3.61	1409606	100.65	60	120	
Bi	209	1	He	924282	0.78	906964	101.91	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-4-a
Data File Name	028SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:08:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.283	1.283	4.43	133890	0.00	10000	
Be	9	45	2	NoGas	0.328	0.328	16.00	1889	0.02	2000	
B	11	45	2	NoGas	5.233	5.233	2.46	22993	0.02	300	
Na	23	45	1	He	4258.544	4258.544	1.63	4371862	0.10	500000	
Mg	24	45	1	He	927.589	927.589	2.28	511609	0.18	500000	
Al	27	45	1	He	32.034	32.034	3.38	7567	0.42	200000	
K	39	45	1	He	1025.808	1025.808	2.43	362876	0.28	500000	
Ca	44	45	1	He	809.627	809.627	1.05	14691	5.51	500000	
Ti	47	45	1	He	2.150	2.150	4.22	260	0.83	2500	
V	51	45	1	He	0.249	0.249	27.06	1527	0.02	10000	
Cr	52	45	1	He	0.324	0.324	20.34	5251	0.01	10000	
Mn	55	45	1	He	9.375	9.375	3.15	24245	0.04	10000	
Fe	56	45	1	He	38.232	38.232	1.74	142489	0.03	200000	
Co	59	45	1	He	0.731	0.731	1.81	5782	0.01	5000	
Ni	60	45	1	He	1.413	1.413	3.70	3248	0.04	10000	
Cu	63	45	1	He	0.306	0.306	8.79	4788	0.01	10000	
Zn	66	45	1	He	2.257	2.257	8.72	2327	0.10	10000	
As	75	115	1	He	-0.029	-0.029	-112.42	114	-0.03	10000	
Se	78	115	1	He	0.158	0.158	133.76	29	0.54	10000	
Sr	88	103	1	He	14.210	14.210	0.18	37313	0.04	10000	
Mo	95	103	1	He	0.055	0.055	5.05	158	0.03	2000	
Ag	107	103	1	He	0.005	0.005	31.90	58	0.01	300	
Cd	111	115	1	He	0.028	0.028	26.64	26	0.11	4000	
Sn	118	115	1	He	-3.252	-3.252	-1.85	1070	-0.30	2000	
Sb	123	115	1	He	0.046	0.046	17.38	129	0.04	200	
Ba	137	115	1	He	44.915	44.915	2.50	34866	0.13	10000	
W	182	159	1	He	0.157	0.157	19.29	2271	0.01	2500	
Tl	205	165	1	He	0.035	0.035	4.21	372	0.01	2000	
Pb	208	165	1	He	0.058	0.058	20.96	1276	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804225	1.83	1674650	107.74	60	120	
Sc	45	1	He	384933	1.44	355173	108.38	60	120	
Sc	45	2	NoGas	9475360	0.38	8635903	109.72	60	120	
Rh	103	1	He	1534246	0.87	1470259	104.35	60	120	
In	115	1	He	508420	1.46	490642	103.62	60	120	
Tb	159	1	He	1445347	0.78	1434034	100.79	60	120	
Ho	165	1	He	1409047	0.83	1409606	99.96	60	120	
Bi	209	1	He	904253	0.98	906964	99.70	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-5-a
Data File Name	029SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:12:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.474	1.474	1.44	139907	0.00	10000	
Be	9	45	2	NoGas	0.090	0.090	14.82	559	0.02	2000	
B	11	45	2	NoGas	4.277	4.277	2.79	20045	0.02	300	
Na	23	45	1	He	2396.751	2396.751	0.47	2459811	0.10	500000	
Mg	24	45	1	He	675.763	675.763	1.56	371766	0.18	500000	
Al	27	45	1	He	66.920	66.920	3.98	15518	0.43	200000	
K	39	45	1	He	652.641	652.641	0.85	240015	0.27	500000	
Ca	44	45	1	He	80.681	80.681	5.53	1735	4.65	500000	
Ti	47	45	1	He	2.530	2.530	13.37	304	0.83	2500	
V	51	45	1	He	0.250	0.250	30.42	1528	0.02	10000	
Cr	52	45	1	He	0.125	0.125	25.19	4295	0.00	10000	
Mn	55	45	1	He	14.407	14.407	1.26	36855	0.04	10000	
Fe	56	45	1	He	78.870	78.870	1.83	290392	0.03	200000	
Co	59	45	1	He	2.100	2.100	5.73	16415	0.01	5000	
Ni	60	45	1	He	1.633	1.633	2.92	3705	0.04	10000	
Cu	63	45	1	He	1.415	1.415	2.85	11261	0.01	10000	
Zn	66	45	1	He	7.371	7.371	5.18	6222	0.12	10000	
As	75	115	1	He	-0.022	-0.022	-43.12	118	-0.02	10000	
Se	78	115	1	He	0.088	0.088	191.72	27	0.32	10000	
Sr	88	103	1	He	2.009	2.009	1.90	5541	0.04	10000	
Mo	95	103	1	He	0.017	0.017	48.39	67	0.03	2000	
Ag	107	103	1	He	0.003	0.003	9.80	46	0.01	300	
Cd	111	115	1	He	0.025	0.025	26.08	23	0.11	4000	
Sn	118	115	1	He	-3.337	-3.337	-1.88	922	-0.36	2000	
Sb	123	115	1	He	0.122	0.122	6.06	283	0.04	200	
Ba	137	115	1	He	7.754	7.754	1.66	6073	0.13	10000	
W	182	159	1	He	0.063	0.063	61.74	1808	0.00	2500	
Tl	205	165	1	He	0.041	0.041	5.66	437	0.01	2000	
Pb	208	165	1	He	0.110	0.110	9.40	1965	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1869651	0.95	1674650	111.64	60	120	
Sc	45	1	He	383770	0.90	355173	108.05	60	120	
Sc	45	2	NoGas	9612669	0.72	8635903	111.31	60	120	
Rh	103	1	He	1552386	0.28	1470259	105.59	60	120	
In	115	1	He	511495	0.69	490642	104.25	60	120	
Tb	159	1	He	1478117	1.57	1434034	103.07	60	120	
Ho	165	1	He	1422919	0.48	1409606	100.94	60	120	
Bi	209	1	He	910918	0.82	906964	100.44	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-6-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:16:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.533	1.533	2.14	140563	0.00	10000	
Be	9	45	2	NoGas	0.179	0.179	14.40	1063	0.02	2000	
B	11	45	2	NoGas	5.442	5.442	4.61	23942	0.02	300	
Na	23	45	1	He	2363.933	2363.933	1.97	2421454	0.10	500000	
Mg	24	45	1	He	807.279	807.279	2.43	443151	0.18	500000	
Al	27	45	1	He	9.879	9.879	6.03	2476	0.40	200000	
K	39	45	1	He	1577.404	1577.404	1.67	540891	0.29	500000	
Ca	44	45	1	He	235.210	235.210	3.75	4465	5.27	500000	
Ti	47	45	1	He	0.185	0.185	24.76	23	0.79	2500	
V	51	45	1	He	0.180	0.180	4.62	1245	0.01	10000	
Cr	52	45	1	He	0.047	0.047	76.96	3913	0.00	10000	
Mn	55	45	1	He	16.206	16.206	2.64	41305	0.04	10000	
Fe	56	45	1	He	16.354	16.354	3.67	62087	0.03	200000	
Co	59	45	1	He	0.406	0.406	0.77	3227	0.01	5000	
Ni	60	45	1	He	0.916	0.916	6.95	2181	0.04	10000	
Cu	63	45	1	He	7.166	7.166	4.18	44786	0.02	10000	
Zn	66	45	1	He	13.505	13.505	2.75	10876	0.12	10000	
As	75	115	1	He	-0.055	-0.055	-25.75	101	-0.05	10000	
Se	78	115	1	He	0.017	0.017	82.93	25	0.07	10000	
Sr	88	103	1	He	4.208	4.208	3.40	11334	0.04	10000	
Mo	95	103	1	He	0.028	0.028	13.30	93	0.03	2000	
Ag	107	103	1	He	0.002	0.002	49.45	42	0.01	300	
Cd	111	115	1	He	0.021	0.021	33.21	20	0.11	4000	
Sn	118	115	1	He	-3.157	-3.157	-3.75	1248	-0.25	2000	
Sb	123	115	1	He	2.476	2.476	4.19	5041	0.05	200	
Ba	137	115	1	He	15.565	15.565	1.45	12168	0.13	10000	
W	182	159	1	He	0.018	0.018	82.02	1522	0.00	2500	
Tl	205	165	1	He	0.063	0.063	4.58	634	0.01	2000	
Pb	208	165	1	He	0.043	0.043	11.64	1068	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1805519	1.08	1674650	107.81	60	120	
Sc	45	1	He	383087	1.74	355173	107.86	60	120	
Sc	45	2	NoGas	9571180	0.96	8635903	110.83	60	120	
Rh	103	1	He	1551056	0.88	1470259	105.50	60	120	
In	115	1	He	511338	0.39	490642	104.22	60	120	
Tb	159	1	He	1443231	1.52	1434034	100.64	60	120	
Ho	165	1	He	1390283	1.67	1409606	98.63	60	120	
Bi	209	1	He	912075	0.59	906964	100.56	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-7-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:20:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.873	1.873	2.59	145393	0.00	10000	
Be	9	45	2	NoGas	0.148	0.148	14.37	870	0.02	2000	
B	11	45	2	NoGas	4.182	4.182	5.88	19314	0.02	300	
Na	23	45	1	He	1102.376	1102.376	1.32	1133986	0.10	500000	
Mg	24	45	1	He	513.619	513.619	1.81	281394	0.18	500000	
Al	27	45	1	He	405.790	405.790	0.18	92553	0.44	200000	
K	39	45	1	He	712.972	712.972	1.55	258532	0.28	500000	
Ca	44	45	1	He	306.962	306.962	1.98	5717	5.37	500000	
Ti	47	45	1	He	28.905	28.905	17.36	3454	0.84	2500	
V	51	45	1	He	0.823	0.823	4.90	3802	0.02	10000	
Cr	52	45	1	He	0.411	0.411	19.92	5624	0.01	10000	
Mn	55	45	1	He	8.546	8.546	2.48	21987	0.04	10000	
Fe	56	45	1	He	511.298	511.298	3.95	1860081	0.03	200000	
Co	59	45	1	He	0.467	0.467	0.21	3692	0.01	5000	
Ni	60	45	1	He	0.846	0.846	3.71	2029	0.04	10000	
Cu	63	45	1	He	0.510	0.510	12.03	5943	0.01	10000	
Zn	66	45	1	He	3.964	3.964	5.37	3606	0.11	10000	
As	75	115	1	He	-0.030	-0.030	-137.04	114	-0.03	10000	
Se	78	115	1	He	0.244	0.244	77.66	32	0.77	10000	
Sr	88	103	1	He	4.154	4.154	4.18	11085	0.04	10000	
Mo	95	103	1	He	0.022	0.022	14.88	78	0.03	2000	
Ag	107	103	1	He	0.004	0.004	90.35	52	0.01	300	
Cd	111	115	1	He	0.010	0.010	67.13	10	0.10	4000	
Sn	118	115	1	He	-3.336	-3.336	-1.65	922	-0.36	2000	
Sb	123	115	1	He	0.127	0.127	16.26	292	0.04	200	
Ba	137	115	1	He	9.122	9.122	1.60	7128	0.13	10000	
W	182	159	1	He	0.107	0.107	34.80	2026	0.01	2500	
Tl	205	165	1	He	0.033	0.033	23.47	366	0.01	2000	
Pb	208	165	1	He	0.426	0.426	2.50	6146	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1829871	0.95	1674650	109.27	60	120	
Sc	45	1	He	382025	0.60	355173	107.56	60	120	
Sc	45	2	NoGas	9417569	0.79	8635903	109.05	60	120	
Rh	103	1	He	1536193	0.57	1470259	104.48	60	120	
In	115	1	He	510595	1.09	490642	104.07	60	120	
Tb	159	1	He	1463230	0.61	1434034	102.04	60	120	
Ho	165	1	He	1431165	0.71	1409606	101.53	60	120	
Bi	209	1	He	920346	0.77	906964	101.48	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-8-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:24:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.951	0.951	7.88	128160	0.00	10000	
Be	9	45	2	NoGas	0.046	0.046	40.14	304	0.02	2000	
B	11	45	2	NoGas	3.995	3.995	2.57	18984	0.02	300	
Na	23	45	1	He	4387.461	4387.461	1.52	4413455	0.10	500000	
Mg	24	45	1	He	825.120	825.120	2.76	445983	0.19	500000	
Al	27	45	1	He	8.775	8.775	3.59	2191	0.40	200000	
K	39	45	1	He	1634.423	1634.423	2.03	550878	0.30	500000	
Ca	44	45	1	He	1019.468	1019.468	3.41	18045	5.65	500000	
Ti	47	45	1	He	0.303	0.303	66.85	37	0.83	2500	
V	51	45	1	He	0.178	0.178	46.52	1219	0.01	10000	
Cr	52	45	1	He	0.092	0.092	47.31	4063	0.00	10000	
Mn	55	45	1	He	68.626	68.626	3.10	170463	0.04	10000	
Fe	56	45	1	He	19.262	19.262	2.74	71572	0.03	200000	
Co	59	45	1	He	3.443	3.443	5.22	26397	0.01	5000	
Ni	60	45	1	He	0.491	0.491	15.73	1262	0.04	10000	
Cu	63	45	1	He	2.481	2.481	2.85	17193	0.01	10000	
Zn	66	45	1	He	2.034	2.034	3.12	2113	0.10	10000	
As	75	115	1	He	-0.063	-0.063	-33.59	97	-0.06	10000	
Se	78	115	1	He	0.050	0.050	143.95	26	0.19	10000	
Sr	88	103	1	He	18.434	18.434	0.12	48096	0.04	10000	
Mo	95	103	1	He	0.054	0.054	16.99	153	0.04	2000	
Ag	107	103	1	He	0.012	0.012	15.26	112	0.01	300	
Cd	111	115	1	He	0.018	0.018	13.60	16	0.11	4000	
Sn	118	115	1	He	-3.294	-3.294	-0.30	996	-0.33	2000	
Sb	123	115	1	He	0.062	0.062	13.45	161	0.04	200	
Ba	137	115	1	He	4.758	4.758	3.44	3719	0.13	10000	
W	182	159	1	He	0.399	0.399	9.75	3567	0.01	2500	
Tl	205	165	1	He	0.008	0.008	24.12	121	0.01	2000	
Pb	208	165	1	He	0.064	0.064	14.97	1372	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1878086	0.95	1674650	112.15	60	120	
Sc	45	1	He	377207	1.43	355173	106.20	60	120	
Sc	45	2	NoGas	9568246	0.97	8635903	110.80	60	120	
Rh	103	1	He	1526704	1.75	1470259	103.84	60	120	
In	115	1	He	509553	0.52	490642	103.85	60	120	
Tb	159	1	He	1442380	0.66	1434034	100.58	60	120	
Ho	165	1	He	1429160	0.26	1409606	101.39	60	120	
Bi	209	1	He	918046	0.95	906964	101.22	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-9-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:28:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.163	1.163	5.04	131433	0.00	10000	
Be	9	45	2	NoGas	0.099	0.099	14.25	604	0.02	2000	
B	11	45	2	NoGas	4.233	4.233	3.73	19615	0.02	300	
Na	23	45	1	He	1530.829	1530.829	0.50	1546303	0.10	500000	
Mg	24	45	1	He	622.717	622.717	1.79	336091	0.19	500000	
Al	27	45	1	He	16.156	16.156	6.87	3843	0.42	200000	
K	39	45	1	He	711.743	711.743	1.92	254365	0.28	500000	
Ca	44	45	1	He	318.653	318.653	5.37	5836	5.46	500000	
Ti	47	45	1	He	0.339	0.339	12.32	41	0.83	2500	
V	51	45	1	He	0.125	0.125	96.87	1006	0.01	10000	
Cr	52	45	1	He	0.077	0.077	13.87	3985	0.00	10000	
Mn	55	45	1	He	6.180	6.180	2.33	15820	0.04	10000	
Fe	56	45	1	He	8.633	8.633	2.52	33389	0.03	200000	
Co	59	45	1	He	0.406	0.406	2.37	3176	0.01	5000	
Ni	60	45	1	He	0.930	0.930	3.37	2174	0.04	10000	
Cu	63	45	1	He	0.992	0.992	5.81	8623	0.01	10000	
Zn	66	45	1	He	5.197	5.197	2.36	4475	0.12	10000	
As	75	115	1	He	-0.030	-0.030	-41.99	113	-0.03	10000	
Se	78	115	1	He	0.136	0.136	86.40	28	0.48	10000	
Sr	88	103	1	He	4.836	4.836	1.86	12788	0.04	10000	
Mo	95	103	1	He	0.017	0.017	20.19	66	0.03	2000	
Ag	107	103	1	He	0.000	0.000	6047.07	24	0.00	300	
Cd	111	115	1	He	0.013	0.013	58.96	12	0.11	4000	
Sn	118	115	1	He	-2.117	-2.117	-5.21	3108	-0.07	2000	
Sb	123	115	1	He	0.078	0.078	34.44	193	0.04	200	
Ba	137	115	1	He	9.526	9.526	2.48	7374	0.13	10000	
W	182	159	1	He	0.023	0.023	143.47	1541	0.00	2500	
Tl	205	165	1	He	0.032	0.032	5.13	347	0.01	2000	
Pb	208	165	1	He	0.047	0.047	5.62	1116	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1819737	0.87	1674650	108.66	60	120	
Sc	45	1	He	376461	0.60	355173	105.99	60	120	
Sc	45	2	NoGas	9479696	0.58	8635903	109.77	60	120	
Rh	103	1	He	1526518	0.09	1470259	103.83	60	120	
In	115	1	He	505907	1.06	490642	103.11	60	120	
Tb	159	1	He	1437230	1.13	1434034	100.22	60	120	
Ho	165	1	He	1393530	2.58	1409606	98.86	60	120	
Bi	209	1	He	907213	1.14	906964	100.03	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-10-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:32:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.370	1.370	6.16	132829	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	16.82	582	0.02	2000	
B	11	45	2	NoGas	3.581	3.581	3.34	17031	0.02	300	
Na	23	45	1	He	3001.397	3001.397	0.80	3004681	0.10	500000	
Mg	24	45	1	He	841.296	841.296	1.31	451899	0.19	500000	
Al	27	45	1	He	10.174	10.174	5.32	2489	0.41	200000	
K	39	45	1	He	915.996	915.996	1.37	318360	0.29	500000	
Ca	44	45	1	He	1027.928	1027.928	2.74	18080	5.69	500000	
Ti	47	45	1	He	0.104	0.104	54.31	13	0.78	2500	
V	51	45	1	He	0.123	0.123	110.99	995	0.01	10000	
Cr	52	45	1	He	0.102	0.102	4.33	4083	0.00	10000	
Mn	55	45	1	He	12.567	12.567	1.54	31466	0.04	10000	
Fe	56	45	1	He	25.355	25.355	1.53	92844	0.03	200000	
Co	59	45	1	He	0.121	0.121	9.12	991	0.01	5000	
Ni	60	45	1	He	0.500	0.500	4.27	1276	0.04	10000	
Cu	63	45	1	He	-0.027	-0.027	-74.83	2765	0.00	10000	
Zn	66	45	1	He	1.807	1.807	4.95	1931	0.09	10000	
As	75	115	1	He	-0.040	-0.040	-32.16	107	-0.04	10000	
Se	78	115	1	He	-0.072	-0.072	-128.62	23	-0.32	10000	
Sr	88	103	1	He	9.265	9.265	1.62	24014	0.04	10000	
Mo	95	103	1	He	0.014	0.014	13.19	58	0.02	2000	
Ag	107	103	1	He	0.001	0.001	258.69	31	0.00	300	
Cd	111	115	1	He	0.013	0.013	26.76	12	0.11	4000	
Sn	118	115	1	He	-3.393	-3.393	-1.49	807	-0.42	2000	
Sb	123	115	1	He	0.115	0.115	16.98	267	0.04	200	
Ba	137	115	1	He	13.438	13.438	3.46	10357	0.13	10000	
W	182	159	1	He	0.061	0.061	147.03	1738	0.00	2500	
Tl	205	165	1	He	0.043	0.043	18.06	452	0.01	2000	
Pb	208	165	1	He	0.117	0.117	10.56	2046	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1807376	1.54	1674650	107.93	60	120	
Sc	45	1	He	374785	0.48	355173	105.52	60	120	
Sc	45	2	NoGas	9274383	1.06	8635903	107.39	60	120	
Rh	103	1	He	1509495	1.15	1470259	102.67	60	120	
In	115	1	He	503997	0.54	490642	102.72	60	120	
Tb	159	1	He	1429680	0.80	1434034	99.70	60	120	
Ho	165	1	He	1410051	0.63	1409606	100.03	60	120	
Bi	209	1	He	900702	0.59	906964	99.31	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-11-a
Data File Name	035SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:36:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.505	2.505	1.26	156419	0.00	10000	
Be	9	45	2	NoGas	0.181	0.181	16.28	1045	0.02	2000	
B	11	45	2	NoGas	4.421	4.421	7.94	19841	0.02	300	
Na	23	45	1	He	727.169	727.169	2.05	739786	0.10	500000	
Mg	24	45	1	He	729.431	729.431	3.03	392428	0.19	500000	
Al	27	45	1	He	70.102	70.102	2.86	15889	0.44	200000	
K	39	45	1	He	913.707	913.707	2.42	318112	0.29	500000	
Ca	44	45	1	He	97.489	97.489	12.90	1986	4.91	500000	
Ti	47	45	1	He	0.104	0.104	99.50	13	0.78	2500	
V	51	45	1	He	0.041	0.041	250.70	675	0.01	10000	
Cr	52	45	1	He	-0.051	-0.051	-30.38	3378	0.00	10000	
Mn	55	45	1	He	61.987	61.987	1.84	153314	0.04	10000	
Fe	56	45	1	He	40.135	40.135	3.42	145731	0.03	200000	
Co	59	45	1	He	4.334	4.334	2.77	33060	0.01	5000	
Ni	60	45	1	He	2.317	2.317	3.32	5040	0.05	10000	
Cu	63	45	1	He	4.236	4.236	4.58	27139	0.02	10000	
Zn	66	45	1	He	6.858	6.858	4.22	5703	0.12	10000	
As	75	115	1	He	0.030	0.030	143.02	144	0.02	10000	
Se	78	115	1	He	0.493	0.493	67.75	38	1.28	10000	
Sr	88	103	1	He	3.191	3.191	4.50	8513	0.04	10000	
Mo	95	103	1	He	0.007	0.007	23.37	42	0.02	2000	
Ag	107	103	1	He	0.002	0.002	135.02	38	0.00	300	
Cd	111	115	1	He	0.030	0.030	13.24	27	0.11	4000	
Sn	118	115	1	He	-3.471	-3.471	-0.31	674	-0.51	2000	
Sb	123	115	1	He	0.072	0.072	16.16	181	0.04	200	
Ba	137	115	1	He	32.207	32.207	2.31	25061	0.13	10000	
W	182	159	1	He	0.050	0.050	49.80	1708	0.00	2500	
Tl	205	165	1	He	0.049	0.049	0.95	512	0.01	2000	
Pb	208	165	1	He	0.095	0.095	4.31	1757	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1826817	1.58	1674650	109.09	60	120	
Sc	45	1	He	375432	1.69	355173	105.70	60	120	
Sc	45	2	NoGas	9288071	0.40	8635903	107.55	60	120	
Rh	103	1	He	1526254	0.84	1470259	103.81	60	120	
In	115	1	He	509458	1.02	490642	103.83	60	120	
Tb	159	1	He	1455549	0.51	1434034	101.50	60	120	
Ho	165	1	He	1407030	2.36	1409606	99.82	60	120	
Bi	209	1	He	917478	0.88	906964	101.16	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	036_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:40:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.473	0.801	1166542	1.00	50	104.9	89.5	110.5	
Be	9	45	2	NoGas	50.690	0.911	275173	0.61	50	101.4	89.5	110.5	
B	11	45	2	NoGas	53.061	1.670	178288	1.47	50	106.1	89.5	110.5	
Na	23	45	1	He	25297.507	1.734	24573829	0.41	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25383.472	2.845	13272060	1.66	25000	101.5	89.5	110.5	
Al	27	45	1	He	246.383	2.041	53800	0.71	250	98.6	89.5	110.5	
K	39	45	1	He	25110.303	2.531	7826173	1.32	25000	100.4	89.5	110.5	
Ca	44	45	1	He	24901.296	3.110	419991	1.75	25000	99.6	89.5	110.5	
Ti	47	45	1	He	53.029	1.937	6054	0.57	50	106.1	89.5	110.5	
V	51	45	1	He	50.685	2.723	193604	1.41	50	101.4	89.5	110.5	
Cr	52	45	1	He	49.849	2.466	229259	1.21	50	99.7	89.5	110.5	
Mn	55	45	1	He	249.519	2.403	598783	1.15	250	99.8	89.5	110.5	
Fe	56	45	1	He	12540.458	3.122	43554363	1.87	12500	100.3	89.5	110.5	
Co	59	45	1	He	50.048	2.169	370673	0.85	50	100.1	89.5	110.5	
Ni	60	45	1	He	50.051	3.029	101100	1.77	50	100.1	89.5	110.5	
Cu	63	45	1	He	50.099	2.534	281522	1.18	50	100.2	89.5	110.5	
Zn	66	45	1	He	50.770	2.501	37411	1.52	50	101.5	89.5	110.5	
As	75	115	1	He	51.009	1.108	24518	0.91	50	102.0	89.5	110.5	
Se	78	115	1	He	50.777	1.162	1359	1.10	50	101.6	89.5	110.5	
Sr	88	103	1	He	49.913	0.577	121079	1.00	50	99.8	89.5	110.5	
Mo	95	103	1	He	51.430	2.047	115315	1.93	50	102.9	89.5	110.5	
Ag	107	103	1	He	51.000	1.423	350486	0.87	50	102.0	89.5	110.5	
Cd	111	115	1	He	50.910	2.568	43038	2.31	50	101.8	89.5	110.5	
Sn	118	115	1	He	48.501	0.658	89609	0.42	50	97.0	89.5	110.5	
Sb	123	115	1	He	51.122	1.763	97250	1.88	50	102.2	89.5	110.5	
Ba	137	115	1	He	49.835	1.649	36619	0.82	50	99.7	89.5	110.5	
W	182	159	1	He	51.819	1.662	271601	2.30	50	103.6	89.5	110.5	
Tl	205	165	1	He	49.921	1.891	474245	1.24	50	99.8	89.5	110.5	
Pb	208	165	1	He	49.620	1.870	640275	1.18	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1769865	1.04	1674650	105.69	60	120	
Sc	45	1	He	365239	1.38	355173	102.83	60	120	
Sc	45	2	NoGas	9136880	0.36	8635903	105.80	60	120	
Rh	103	1	He	1423831	1.35	1470259	96.84	60	120	
In	115	1	He	481212	0.87	490642	98.08	60	120	
Tb	159	1	He	1403337	0.67	1434034	97.86	60	120	
Ho	165	1	He	1398059	0.81	1409606	99.18	60	120	
Bi	209	1	He	852265	0.41	906964	93.97	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	037_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:44:49-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.032	-349.4	103348	1.2	8	
Be	9	45	2	NoGas	0.028	5.4	196	3.3	1	
B	11	45	2	NoGas	1.618	5.5	10463	3.2	20	
Na	23	45	1	He	6.847	1.9	20594	0.4	1000	
Mg	24	45	1	He	3.729	6.9	2400	6.0	1000	
Al	27	45	1	He	0.122	84.5	241	9.0	50	
K	39	45	1	He	11.408	5.5	29428	0.2	1000	
Ca	44	45	1	He	6.421	14.3	402	3.8	1000	
Ti	47	45	1	He	0.067	65.4	9	57.3	20	
V	51	45	1	He	0.112	64.1	933	29.8	2	
Cr	52	45	1	He	0.063	35.2	3834	2.6	2	
Mn	55	45	1	He	0.046	18.3	643	3.6	2	
Fe	56	45	1	He	4.269	25.8	17388	22.7	50	
Co	59	45	1	He	0.020	33.2	220	22.0	1	
Ni	60	45	1	He	-0.051	-13.4	132	10.2	2	
Cu	63	45	1	He	-0.107	-22.0	2268	5.4	2	
Zn	66	45	1	He	0.016	629.5	587	12.5	20	
As	75	115	1	He	-0.047	-43.4	102	9.7	2	
Se	78	115	1	He	-0.270	-55.7	17	24.1	2	
Sr	88	103	1	He	-0.053	-14.4	93	21.7	10	
Mo	95	103	1	He	0.099	24.7	260	21.9	2	
Ag	107	103	1	He	0.010	16.0	94	12.4	0.2	
Cd	111	115	1	He	0.025	20.2	22	19.8	0.2	
Sn	118	115	1	He	0.332	49.2	7406	4.0	10	
Sb	123	115	1	He	0.107	17.2	247	14.6	2	
Ba	137	115	1	He	0.061	49.2	66	34.6	5	
W	182	159	1	He	0.308	15.7	3026	9.2	10	
Tl	205	165	1	He	0.047	35.7	492	32.5	0.5	
Pb	208	165	1	He	0.024	29.1	830	10.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1763196	0.56	1674650	105.29	60	120	
Sc	45	1	He	368213	0.46	355173	103.67	60	120	
Sc	45	2	NoGas	9217503	0.99	8635903	106.73	60	120	
Rh	103	1	He	1509355	0.76	1470259	102.66	60	120	
In	115	1	He	498512	0.30	490642	101.60	60	120	
Tb	159	1	He	1419420	0.78	1434034	98.98	60	120	
Ho	165	1	He	1408582	0.70	1409606	99.93	60	120	
Bi	209	1	He	889943	1.16	906964	98.12	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-12-a
Data File Name	038SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:48:55-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.278	0.278	15.57	109082	0.00	10000	
Be	9	45	2	NoGas	0.077	0.077	25.18	463	0.02	2000	
B	11	45	2	NoGas	7.847	7.847	2.48	30800	0.03	300	
Na	23	45	1	He	819.999	819.999	1.34	819971	0.10	500000	
Mg	24	45	1	He	278.949	278.949	2.74	148104	0.19	500000	
Al	27	45	1	He	316.153	316.153	3.65	69830	0.45	200000	
K	39	45	1	He	2247.974	2247.974	1.42	733047	0.31	500000	
Ca	44	45	1	He	119.543	119.543	2.15	2334	5.12	500000	
Ti	47	45	1	He	6.502	6.502	17.44	752	0.86	2500	
V	51	45	1	He	0.561	0.561	5.23	2670	0.02	10000	
Cr	52	45	1	He	0.311	0.311	9.88	4989	0.01	10000	
Mn	55	45	1	He	11.931	11.931	2.75	29498	0.04	10000	
Fe	56	45	1	He	369.900	369.900	2.26	1303178	0.03	200000	
Co	59	45	1	He	0.977	0.977	4.10	7395	0.01	5000	
Ni	60	45	1	He	0.436	0.436	9.67	1127	0.04	10000	
Cu	63	45	1	He	3.486	3.486	1.20	22518	0.02	10000	
Zn	66	45	1	He	1.406	1.406	9.80	1610	0.09	10000	
As	75	115	1	He	0.040	0.040	30.64	146	0.03	10000	
Se	78	115	1	He	0.285	0.285	78.65	32	0.89	10000	
Sr	88	103	1	He	1.245	1.245	1.03	3364	0.04	10000	
Mo	95	103	1	He	0.063	0.063	3.07	170	0.04	2000	
Ag	107	103	1	He	0.004	0.004	67.49	52	0.01	300	
Cd	111	115	1	He	0.018	0.018	48.89	16	0.11	4000	
Sn	118	115	1	He	-3.107	-3.107	-1.65	1304	-0.24	2000	
Sb	123	115	1	He	0.061	0.061	5.26	156	0.04	200	
Ba	137	115	1	He	14.104	14.104	2.54	10737	0.13	10000	
W	182	159	1	He	0.056	0.056	47.90	1708	0.00	2500	
Tl	205	165	1	He	0.019	0.019	30.02	220	0.01	2000	
Pb	208	165	1	He	0.844	0.844	4.51	11314	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804268	2.47	1674650	107.74	60	120	
Sc	45	1	He	369754	0.70	355173	104.11	60	120	
Sc	45	2	NoGas	9165065	0.72	8635903	106.13	60	120	
Rh	103	1	He	1482186	1.38	1470259	100.81	60	120	
In	115	1	He	497870	0.61	490642	101.47	60	120	
Tb	159	1	He	1426720	1.20	1434034	99.49	60	120	
Ho	165	1	He	1388479	3.06	1409606	98.50	60	120	
Bi	209	1	He	912005	0.26	906964	100.56	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-13-a
Data File Name	039SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:53:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.877	1.877	3.25	141855	0.00	10000	
Be	9	45	2	NoGas	0.076	0.076	26.58	456	0.02	2000	
B	11	45	2	NoGas	5.828	5.828	2.07	24232	0.02	300	
Na	23	45	1	He	1341.553	1341.553	2.32	1299941	0.10	500000	
Mg	24	45	1	He	1981.941	1981.941	2.72	1023934	0.19	500000	
Al	27	45	1	He	36.046	36.046	5.83	7951	0.45	200000	
K	39	45	1	He	923.177	923.177	1.40	308604	0.30	500000	
Ca	44	45	1	He	1314.988	1314.988	2.51	22179	5.93	500000	
Ti	47	45	1	He	0.069	0.069	51.20	9	0.78	2500	
V	51	45	1	He	0.137	0.137	94.44	1003	0.01	10000	
Cr	52	45	1	He	-0.035	-0.035	-78.83	3317	0.00	10000	
Mn	55	45	1	He	16204.512	16204.512	2.02	38378218	0.04	10000	>LDR
Fe	56	45	1	He	5186.312	5186.312	2.57	17793436	0.03	200000	
Co	59	45	1	He	144.410	144.410	1.63	1056289	0.01	5000	
Ni	60	45	1	He	4.159	4.159	5.21	8510	0.05	10000	
Cu	63	45	1	He	3.428	3.428	3.27	21639	0.02	10000	
Zn	66	45	1	He	2.798	2.798	6.13	2568	0.11	10000	
As	75	115	1	He	0.141	0.141	19.67	192	0.07	10000	
Se	78	115	1	He	0.895	0.895	4.43	48	1.87	10000	
Sr	88	103	1	He	2.425	2.425	1.79	6189	0.04	10000	
Mo	95	103	1	He	0.017	0.017	39.69	61	0.03	2000	
Ag	107	103	1	He	0.005	0.005	9.10	60	0.01	300	
Cd	111	115	1	He	0.045	0.045	4.57	39	0.11	4000	
Sn	118	115	1	He	-3.573	-3.573	-1.66	470	-0.76	2000	
Sb	123	115	1	He	0.045	0.045	32.02	123	0.04	200	
Ba	137	115	1	He	46.969	46.969	1.84	35099	0.13	10000	
W	182	159	1	He	0.059	0.059	37.57	1726	0.00	2500	
Tl	205	165	1	He	0.308	0.308	10.00	2941	0.01	2000	
Pb	208	165	1	He	0.596	0.596	3.03	8145	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1821197	1.17	1674650	108.75	60	120	
Sc	45	1	He	360734	1.36	355173	101.57	60	120	
Sc	45	2	NoGas	9181446	0.72	8635903	106.32	60	120	
Rh	103	1	He	1447464	0.87	1470259	98.45	60	120	
In	115	1	He	489404	1.46	490642	99.75	60	120	
Tb	159	1	He	1430710	0.36	1434034	99.77	60	120	
Ho	165	1	He	1388699	3.33	1409606	98.52	60	120	
Bi	209	1	He	905149	0.47	906964	99.80	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-14-a
Data File Name	040SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:57:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.813	1.813	1.93	141237	0.00	10000	
Be	9	45	2	NoGas	0.150	0.150	18.57	867	0.02	2000	
B	11	45	2	NoGas	5.308	5.308	0.68	22637	0.02	300	
Na	23	45	1	He	1231.160	1231.160	2.32	1192698	0.10	500000	
Mg	24	45	1	He	702.063	702.063	2.78	362492	0.19	500000	
Al	27	45	1	He	118.880	118.880	2.22	25714	0.46	200000	
K	39	45	1	He	708.985	708.985	1.99	242543	0.29	500000	
Ca	44	45	1	He	168.269	168.269	2.10	3084	5.46	500000	
Ti	47	45	1	He	0.381	0.381	151.47	44	0.86	2500	
V	51	45	1	He	0.134	0.134	11.81	997	0.01	10000	
Cr	52	45	1	He	-0.012	-0.012	-46.02	3416	0.00	10000	
Mn	55	45	1	He	3457.072	3457.072	1.81	8176504	0.04	10000	
Fe	56	45	1	He	1189.846	1189.846	2.95	4078345	0.03	200000	
Co	59	45	1	He	38.587	38.587	2.16	281904	0.01	5000	
Ni	60	45	1	He	2.594	2.594	2.86	5389	0.05	10000	
Cu	63	45	1	He	0.573	0.573	3.48	5948	0.01	10000	
Zn	66	45	1	He	2.728	2.728	3.07	2515	0.11	10000	
As	75	115	1	He	0.116	0.116	50.39	182	0.06	10000	
Se	78	115	1	He	0.652	0.652	54.87	42	1.56	10000	
Sr	88	103	1	He	0.995	0.995	5.26	2701	0.04	10000	
Mo	95	103	1	He	0.005	0.005	181.67	34	0.01	2000	
Ag	107	103	1	He	0.001	0.001	65.35	33	0.00	300	
Cd	111	115	1	He	0.033	0.033	17.34	29	0.11	4000	
Sn	118	115	1	He	-3.570	-3.570	-1.90	482	-0.74	2000	
Sb	123	115	1	He	0.057	0.057	49.67	148	0.04	200	
Ba	137	115	1	He	48.698	48.698	1.24	36830	0.13	10000	
W	182	159	1	He	0.028	0.028	81.43	1582	0.00	2500	
Tl	205	165	1	He	0.113	0.113	4.81	1136	0.01	2000	
Pb	208	165	1	He	0.690	0.690	0.92	9555	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1820623	1.99	1674650	108.72	60	120	
Sc	45	1	He	360231	0.91	355173	101.42	60	120	
Sc	45	2	NoGas	9226711	0.42	8635903	106.84	60	120	
Rh	103	1	He	1464117	0.31	1470259	99.58	60	120	
In	115	1	He	495266	0.91	490642	100.94	60	120	
Tb	159	1	He	1446050	0.83	1434034	100.84	60	120	
Ho	165	1	He	1419240	0.22	1409606	100.68	60	120	
Bi	209	1	He	912515	0.77	906964	100.61	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-15-a
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:01:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.271	3.271	1.67	173906	0.00	10000	
Be	9	45	2	NoGas	0.152	0.152	18.81	893	0.02	2000	
B	11	45	2	NoGas	4.548	4.548	4.70	20468	0.02	300	
Na	23	45	1	He	1871.513	1871.513	1.77	1828716	0.10	500000	
Mg	24	45	1	He	720.347	720.347	1.20	376665	0.19	500000	
Al	27	45	1	He	40.866	40.866	6.22	9089	0.45	200000	
K	39	45	1	He	729.338	729.338	1.31	251942	0.29	500000	
Ca	44	45	1	He	422.379	422.379	3.23	7401	5.71	500000	
Ti	47	45	1	He	0.029	0.029	57.56	4	0.65	2500	
V	51	45	1	He	0.113	0.113	32.68	929	0.01	10000	
Cr	52	45	1	He	-0.070	-0.070	-43.24	3196	0.00	10000	
Mn	55	45	1	He	229.493	229.493	1.64	550168	0.04	10000	
Fe	56	45	1	He	5.379	5.379	1.47	21066	0.03	200000	
Co	59	45	1	He	8.020	8.020	2.11	59392	0.01	5000	
Ni	60	45	1	He	1.924	1.924	4.71	4108	0.05	10000	
Cu	63	45	1	He	0.743	0.743	11.07	6968	0.01	10000	
Zn	66	45	1	He	6.085	6.085	4.20	4981	0.12	10000	
As	75	115	1	He	0.007	0.007	296.37	130	0.01	10000	
Se	78	115	1	He	0.374	0.374	36.45	34	1.09	10000	
Sr	88	103	1	He	3.007	3.007	2.84	7816	0.04	10000	
Mo	95	103	1	He	0.006	0.006	196.38	38	0.02	2000	
Ag	107	103	1	He	0.001	0.001	289.25	30	0.00	300	
Cd	111	115	1	He	0.021	0.021	33.62	19	0.11	4000	
Sn	118	115	1	He	-0.371	-0.371	-37.96	6161	-0.01	2000	
Sb	123	115	1	He	0.040	0.040	25.24	116	0.03	200	
Ba	137	115	1	He	20.706	20.706	2.20	15775	0.13	10000	
W	182	159	1	He	0.047	0.047	107.22	1685	0.00	2500	
Tl	205	165	1	He	0.097	0.097	13.30	967	0.01	2000	
Pb	208	165	1	He	0.090	0.090	6.35	1680	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1843415	0.76	1674650	110.08	60	120	
Sc	45	1	He	364795	0.97	355173	102.71	60	120	
Sc	45	2	NoGas	9380004	0.89	8635903	108.62	60	120	
Rh	103	1	He	1484545	1.96	1470259	100.97	60	120	
In	115	1	He	498621	0.97	490642	101.63	60	120	
Tb	159	1	He	1447181	1.09	1434034	100.92	60	120	
Ho	165	1	He	1403166	2.13	1409606	99.54	60	120	
Bi	209	1	He	909968	0.94	906964	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-16-a
Data File Name	042SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:05:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.902	0.902	7.22	124780	0.00	10000	
Be	9	45	2	NoGas	0.131	0.131	6.63	774	0.02	2000	
B	11	45	2	NoGas	7.409	7.409	1.32	30092	0.02	300	
Na	23	45	1	He	2307.558	2307.558	0.51	2235675	0.10	500000	
Mg	24	45	1	He	1396.650	1396.650	1.21	724793	0.19	500000	
Al	27	45	1	He	646.833	646.833	0.36	139753	0.46	200000	
K	39	45	1	He	1503.660	1503.660	1.46	488747	0.31	500000	
Ca	44	45	1	He	2949.036	2949.036	0.46	49594	5.95	500000	
Ti	47	45	1	He	15.259	15.259	6.22	1729	0.88	2500	
V	51	45	1	He	2.369	2.369	1.17	9446	0.03	10000	
Cr	52	45	1	He	1.195	1.195	8.76	8857	0.01	10000	
Mn	55	45	1	He	121.263	121.263	0.49	288913	0.04	10000	
Fe	56	45	1	He	4757.030	4757.030	1.18	16390968	0.03	200000	
Co	59	45	1	He	3.961	3.961	1.74	29169	0.01	5000	
Ni	60	45	1	He	1.719	1.719	2.72	3669	0.05	10000	
Cu	63	45	1	He	0.802	0.802	1.55	7248	0.01	10000	
Zn	66	45	1	He	14.499	14.499	4.08	11001	0.13	10000	
As	75	115	1	He	1.069	1.069	4.11	645	0.17	10000	
Se	78	115	1	He	0.276	0.276	91.04	31	0.88	10000	
Sr	88	103	1	He	13.977	13.977	2.19	35004	0.04	10000	
Mo	95	103	1	He	0.089	0.089	39.82	230	0.04	2000	
Ag	107	103	1	He	0.001	0.001	146.67	32	0.00	300	
Cd	111	115	1	He	0.030	0.030	6.18	27	0.11	4000	
Sn	118	115	1	He	-2.662	-2.662	-2.14	2059	-0.13	2000	
Sb	123	115	1	He	0.067	0.067	30.46	166	0.04	200	
Ba	137	115	1	He	20.983	20.983	2.05	15715	0.13	10000	
W	182	159	1	He	0.066	0.066	21.47	1741	0.00	2500	
Tl	205	165	1	He	0.043	0.043	14.30	454	0.01	2000	
Pb	208	165	1	He	0.640	0.640	3.00	8770	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1868569	0.72	1674650	111.58	60	120	
Sc	45	1	He	362205	0.45	355173	101.98	60	120	
Sc	45	2	NoGas	9391553	0.29	8635903	108.75	60	120	
Rh	103	1	He	1463682	2.76	1470259	99.55	60	120	
In	115	1	He	490209	1.79	490642	99.91	60	120	
Tb	159	1	He	1413373	1.78	1434034	98.56	60	120	
Ho	165	1	He	1399091	2.52	1409606	99.25	60	120	
Bi	209	1	He	887915	1.04	906964	97.90	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-17-a
Data File Name	043SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:09:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.635	1.635	4.39	140221	0.00	10000	
Be	9	45	2	NoGas	0.083	0.083	23.45	511	0.02	2000	
B	11	45	2	NoGas	5.070	5.070	5.08	22270	0.02	300	
Na	23	45	1	He	2424.238	2424.238	0.97	2390130	0.10	500000	
Mg	24	45	1	He	585.285	585.285	2.77	309420	0.19	500000	
Al	27	45	1	He	629.315	629.315	1.80	138409	0.45	200000	
K	39	45	1	He	964.122	964.122	1.94	328297	0.29	500000	
Ca	44	45	1	He	1294.295	1294.295	3.82	22321	5.80	500000	
Ti	47	45	1	He	14.791	14.791	6.57	1706	0.87	2500	
V	51	45	1	He	1.449	1.449	4.59	6077	0.02	10000	
Cr	52	45	1	He	0.651	0.651	3.79	6527	0.01	10000	
Mn	55	45	1	He	89.928	89.928	1.63	218233	0.04	10000	
Fe	56	45	1	He	1312.581	1312.581	1.86	4605298	0.03	200000	
Co	59	45	1	He	1.030	1.030	3.05	7777	0.01	5000	
Ni	60	45	1	He	0.641	0.641	6.02	1541	0.04	10000	
Cu	63	45	1	He	0.287	0.287	12.52	4483	0.01	10000	
Zn	66	45	1	He	2.930	2.930	5.79	2722	0.11	10000	
As	75	115	1	He	0.265	0.265	24.32	255	0.10	10000	
Se	78	115	1	He	-0.043	-0.043	-280.30	23	-0.19	10000	
Sr	88	103	1	He	7.816	7.816	1.10	19939	0.04	10000	
Mo	95	103	1	He	0.048	0.048	18.46	137	0.04	2000	
Ag	107	103	1	He	0.002	0.002	50.79	38	0.01	300	
Cd	111	115	1	He	0.011	0.011	6.18	10	0.11	4000	
Sn	118	115	1	He	-0.947	-0.947	-12.33	5086	-0.02	2000	
Sb	123	115	1	He	0.044	0.044	29.00	122	0.04	200	
Ba	137	115	1	He	16.269	16.269	0.80	12278	0.13	10000	
W	182	159	1	He	0.006	0.006	310.87	1430	0.00	2500	
Tl	205	165	1	He	0.026	0.026	12.32	287	0.01	2000	
Pb	208	165	1	He	0.700	0.700	4.38	9448	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1819362	2.07	1674650	108.64	60	120	
Sc	45	1	He	368694	0.10	355173	103.81	60	120	
Sc	45	2	NoGas	9404519	1.16	8635903	108.90	60	120	
Rh	103	1	He	1483020	0.96	1470259	100.87	60	120	
In	115	1	He	493686	0.19	490642	100.62	60	120	
Tb	159	1	He	1412608	1.35	1434034	98.51	60	120	
Ho	165	1	He	1385997	3.16	1409606	98.33	60	120	
Bi	209	1	He	902644	0.58	906964	99.52	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-18-a
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:13:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.081	1.081	4.41	127789	0.00	10000	
Be	9	45	2	NoGas	0.050	0.050	16.99	322	0.02	2000	
B	11	45	2	NoGas	7.158	7.158	1.95	29083	0.02	300	
Na	23	45	1	He	2482.434	2482.434	0.96	2420097	0.10	500000	
Mg	24	45	1	He	885.797	885.797	2.40	462879	0.19	500000	
Al	27	45	1	He	234.580	234.580	2.06	51154	0.46	200000	
K	39	45	1	He	1327.056	1327.056	2.37	437240	0.30	500000	
Ca	44	45	1	He	2354.212	2354.212	2.51	39912	5.90	500000	
Ti	47	45	1	He	4.903	4.903	6.56	560	0.88	2500	
V	51	45	1	He	1.480	1.480	10.31	6126	0.02	10000	
Cr	52	45	1	He	0.570	0.570	9.12	6090	0.01	10000	
Mn	55	45	1	He	299.843	299.843	1.24	718365	0.04	10000	
Fe	56	45	1	He	5978.181	5978.181	2.32	20734287	0.03	200000	
Co	59	45	1	He	4.468	4.468	2.00	33105	0.01	5000	
Ni	60	45	1	He	1.380	1.380	5.69	3011	0.05	10000	
Cu	63	45	1	He	0.414	0.414	12.70	5136	0.01	10000	
Zn	66	45	1	He	2.805	2.805	3.36	2601	0.11	10000	
As	75	115	1	He	0.670	0.670	4.14	454	0.15	10000	
Se	78	115	1	He	0.153	0.153	69.35	28	0.54	10000	
Sr	88	103	1	He	12.226	12.226	2.27	31129	0.04	10000	
Mo	95	103	1	He	0.045	0.045	24.41	128	0.03	2000	
Ag	107	103	1	He	0.002	0.002	96.96	41	0.01	300	
Cd	111	115	1	He	0.015	0.015	32.30	13	0.11	4000	
Sn	118	115	1	He	-3.542	-3.542	-4.32	530	-0.67	2000	
Sb	123	115	1	He	0.056	0.056	18.76	144	0.04	200	
Ba	137	115	1	He	21.046	21.046	0.04	15892	0.13	10000	
W	182	159	1	He	0.006	0.006	576.03	1448	0.00	2500	
Tl	205	165	1	He	0.024	0.024	28.80	269	0.01	2000	
Pb	208	165	1	He	0.833	0.833	5.13	11139	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1846660	0.24	1674650	110.27	60	120	
Sc	45	1	He	364614	0.17	355173	102.66	60	120	
Sc	45	2	NoGas	9339671	1.28	8635903	108.15	60	120	
Rh	103	1	He	1486145	0.91	1470259	101.08	60	120	
In	115	1	He	494128	0.39	490642	100.71	60	120	
Tb	159	1	He	1434116	1.62	1434034	100.01	60	120	
Ho	165	1	He	1385232	3.29	1409606	98.27	60	120	
Bi	209	1	He	893622	1.00	906964	98.53	60	120	

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Sample Report

Sample Table

Sample Name	240-66155-a-2-a
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:17:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	24.241	24.241	0.70	621644	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	41.78	167	0.01	2000	
B	11	45	2	NoGas	8.966	8.966	4.91	35936	0.02	300	
Na	23	45	1	He	5152.773	5152.773	0.37	5083544	0.10	500000	
Mg	24	45	1	He	47279.294	47279.294	2.10	25054821	0.19	500000	
Al	27	45	1	He	1.135	1.135	23.68	466	0.24	200000	
K	39	45	1	He	3631.493	3631.493	0.81	1169346	0.31	500000	
Ca	44	45	1	He	127579.969	127579.969	1.42	2179865	5.85	500000	
Ti	47	45	1	He	0.143	0.143	82.08	18	0.80	2500	
V	51	45	1	He	0.144	0.144	45.44	1064	0.01	10000	
Cr	52	45	1	He	0.025	0.025	30.04	3678	0.00	10000	
Mn	55	45	1	He	360.353	360.353	2.39	876131	0.04	10000	
Fe	56	45	1	He	1456.276	1456.276	2.44	5128448	0.03	200000	
Co	59	45	1	He	4.841	4.841	1.90	36403	0.01	5000	
Ni	60	45	1	He	12.790	12.790	3.34	26357	0.05	10000	
Cu	63	45	1	He	-0.074	-0.074	-48.38	2464	0.00	10000	
Zn	66	45	1	He	1.624	1.624	9.60	1771	0.09	10000	
As	75	115	1	He	1.350	1.350	5.38	772	0.17	10000	
Se	78	115	1	He	-0.053	-0.053	-311.86	22	-0.24	10000	
Sr	88	103	1	He	79.758	79.758	0.19	193961	0.04	10000	
Mo	95	103	1	He	0.060	0.060	33.20	158	0.04	2000	
Ag	107	103	1	He	0.003	0.003	127.60	41	0.01	300	
Cd	111	115	1	He	0.009	0.009	26.56	8	0.11	4000	
Sn	118	115	1	He	-3.552	-3.552	-2.00	500	-0.71	2000	
Sb	123	115	1	He	0.046	0.046	40.22	123	0.04	200	
Ba	137	115	1	He	544.178	544.178	0.93	402066	0.14	10000	
W	182	159	1	He	0.061	0.061	50.13	1745	0.00	2500	
Tl	205	165	1	He	0.040	0.040	10.29	414	0.01	2000	
Pb	208	165	1	He	0.011	0.011	20.94	653	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1875773	2.21	1674650	112.01	60	120	
Sc	45	1	He	370083	1.35	355173	104.20	60	120	
Sc	45	2	NoGas	9556183	0.87	8635903	110.66	60	120	
Rh	103	1	He	1428327	1.38	1470259	97.15	60	120	
In	115	1	He	484096	1.85	490642	98.67	60	120	
Tb	159	1	He	1435669	2.99	1434034	100.11	60	120	
Ho	165	1	He	1383314	3.89	1409606	98.13	60	120	
Bi	209	1	He	863882	0.50	906964	95.25	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	046_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:21:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.452	1.164	1190541	0.39	50	102.9	89.5	110.5	
Be	9	45	2	NoGas	50.235	0.717	283366	1.18	50	100.5	89.5	110.5	
B	11	45	2	NoGas	51.591	0.458	180265	0.28	50	103.2	89.5	110.5	
Na	23	45	1	He	25153.984	2.353	24885331	1.66	25000	100.6	89.5	110.5	
Mg	24	45	1	He	25120.655	2.456	13378164	1.83	25000	100.5	89.5	110.5	
Al	27	45	1	He	251.720	2.309	55976	1.59	250	100.7	89.5	110.5	
K	39	45	1	He	25235.825	1.857	8011078	1.35	25000	100.9	89.5	110.5	
Ca	44	45	1	He	24951.416	2.214	428659	1.56	25000	99.8	89.5	110.5	
Ti	47	45	1	He	50.751	0.887	5902	1.43	50	101.5	89.5	110.5	
V	51	45	1	He	49.574	3.448	192880	2.97	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.682	2.291	232733	1.59	50	99.4	89.5	110.5	
Mn	55	45	1	He	247.725	1.640	605505	1.02	250	99.1	89.5	110.5	
Fe	56	45	1	He	12477.129	3.255	44137558	2.60	12500	99.8	89.5	110.5	
Co	59	45	1	He	49.737	1.846	375190	1.19	50	99.5	89.5	110.5	
Ni	60	45	1	He	50.136	1.437	103156	0.74	50	100.3	89.5	110.5	
Cu	63	45	1	He	49.897	2.551	285593	1.95	50	99.8	89.5	110.5	
Zn	66	45	1	He	50.727	3.017	38070	2.36	50	101.5	89.5	110.5	
As	75	115	1	He	51.354	1.804	25079	1.73	50	102.7	89.5	110.5	
Se	78	115	1	He	50.116	2.820	1363	2.82	50	100.2	89.5	110.5	
Sr	88	103	1	He	50.655	2.459	123950	1.40	50	101.3	89.5	110.5	
Mo	95	103	1	He	52.204	2.575	118078	1.54	50	104.4	89.5	110.5	
Ag	107	103	1	He	51.468	1.510	356851	0.77	50	102.9	89.5	110.5	
Cd	111	115	1	He	50.625	0.967	43485	0.87	50	101.2	89.5	110.5	
Sn	118	115	1	He	48.831	0.781	91623	1.17	50	97.7	89.5	110.5	
Sb	123	115	1	He	50.526	1.584	97653	1.26	50	101.1	89.5	110.5	
Ba	137	115	1	He	50.198	0.392	37479	0.66	50	100.4	89.5	110.5	
W	182	159	1	He	50.955	2.466	274176	2.86	50	101.9	89.5	110.5	
Tl	205	165	1	He	49.869	0.960	479366	1.43	50	99.7	89.5	110.5	
Pb	208	165	1	He	49.912	0.266	651661	0.79	50	99.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1833655	1.70	1674650	109.49	60	120	
Sc	45	1	He	371960	0.72	355173	104.73	60	120	
Sc	45	2	NoGas	9493722	0.70	8635903	109.93	60	120	
Rh	103	1	He	1436504	1.15	1470259	97.70	60	120	
In	115	1	He	488920	0.45	490642	99.65	60	120	
Tb	159	1	He	1440755	2.18	1434034	100.47	60	120	
Ho	165	1	He	1414477	0.81	1409606	100.35	60	120	
Bi	209	1	He	860690	0.58	906964	94.90	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	047_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:25:49-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.008	234.4	106618	0.2	8	
Be	9	45	2	NoGas	0.018	73.2	144	50.4	1	
B	11	45	2	NoGas	1.586	3.8	10600	1.5	20	
Na	23	45	1	He	6.286	2.9	19982	1.1	1000	
Mg	24	45	1	He	2.992	28.3	2004	21.7	1000	
Al	27	45	1	He	-0.241	-17.5	161	5.2	50	
K	39	45	1	He	12.113	20.7	29555	2.3	1000	
Ca	44	45	1	He	6.077	23.9	395	5.9	1000	
Ti	47	45	1	He	0.039	115.0	6	91.6	20	
V	51	45	1	He	0.149	26.4	1071	13.8	2	
Cr	52	45	1	He	0.063	136.0	3823	10.6	2	
Mn	55	45	1	He	0.063	45.9	683	10.6	2	
Fe	56	45	1	He	3.537	35.2	14751	28.9	50	
Co	59	45	1	He	0.009	24.5	138	10.9	1	
Ni	60	45	1	He	-0.035	-40.6	166	17.6	2	
Cu	63	45	1	He	-0.121	-1.2	2182	0.8	2	
Zn	66	45	1	He	0.060	42.8	617	3.0	20	
As	75	115	1	He	-0.048	-52.6	102	11.5	2	
Se	78	115	1	He	0.078	143.7	27	10.7	2	
Sr	88	103	1	He	-0.041	-42.4	124	37.2	10	
Mo	95	103	1	He	0.087	38.6	228	32.6	2	
Ag	107	103	1	He	0.006	56.2	68	36.3	0.2	
Cd	111	115	1	He	0.016	12.8	15	11.5	0.2	
Sn	118	115	1	He	0.426	59.1	7613	4.8	10	
Sb	123	115	1	He	0.078	52.9	191	42.0	2	
Ba	137	115	1	He	0.108	33.2	102	26.6	5	
W	182	159	1	He	0.290	30.2	2923	15.8	10	
Tl	205	165	1	He	0.037	33.6	394	29.6	0.5	
Pb	208	165	1	He	0.026	15.7	858	6.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1834527	0.90	1674650	109.55	60	120	
Sc	45	1	He	367051	0.52	355173	103.34	60	120	
Sc	45	2	NoGas	9432066	0.42	8635903	109.22	60	120	
Rh	103	1	He	1500418	1.77	1470259	102.05	60	120	
In	115	1	He	501479	1.08	490642	102.21	60	120	
Tb	159	1	He	1413740	0.02	1434034	98.58	60	120	
Ho	165	1	He	1412782	0.47	1409606	100.23	60	120	
Bi	209	1	He	882525	0.29	906964	97.31	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	048CRIA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:29:56-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.615	7.615	2.648	265226	0.07	8	95.2	69.5	130.5	
Be	9	2	NoGas	1.057	1.057	3.965	5957	3.11	1	105.7	69.5	130.5	
B	11	2	NoGas	21.838	21.838	1.527	78693	1.84	20	109.2	69.5	130.5	
Na	23	1	He	961.532	961.532	0.882	955955	1.08	1000	96.2	69.5	130.5	
Mg	24	1	He	968.637	968.637	1.830	511562	1.91	1000	96.9	69.5	130.5	
Al	27	1	He	54.817	54.817	0.770	12246	0.83	50	109.6	69.5	130.5	
K	39	1	He	1017.911	1017.911	0.751	345004	0.74	1000	101.8	69.5	130.5	
Ca	44	1	He	1008.801	1008.801	1.235	17453	1.07	1000	100.9	69.5	130.5	
Ti	47	1	He	9.469	9.469	7.065	1092	7.66	10	94.7	69.5	130.5	
V	51	1	He	5.121	5.121	3.588	20193	3.52	5	102.4	69.5	130.5	
Cr	52	1	He	2.007	2.007	4.312	12722	3.16	2	100.3	69.5	130.5	
Mn	55	1	He	5.016	5.016	3.638	12670	3.38	5	100.3	69.5	130.5	
Fe	56	1	He	107.539	107.539	1.865	379358	1.82	100	107.5	69.5	130.5	
Co	59	1	He	1.003	1.003	0.216	7566	0.72	1	100.3	69.5	130.5	
Ni	60	1	He	2.027	2.027	1.235	4358	0.47	2	101.3	69.5	130.5	
Cu	63	1	He	1.887	1.887	3.117	13465	2.88	2	94.4	69.5	130.5	
Zn	66	1	He	20.452	20.452	4.156	15550	3.34	20	102.3	69.5	130.5	
As	75	1	He	5.151	5.151	2.065	2671	1.25	5	103.0	69.5	130.5	
Se	78	1	He	5.181	5.181	7.227	165	6.62	5	103.6	69.5	130.5	
Sr	88	1	He	9.444	9.444	0.164	24359	1.49	10	94.4	69.5	130.5	
Mo	95	1	He	5.169	5.169	0.932	12251	0.59	5	103.4	69.5	130.5	
Ag	107	1	He	1.015	1.015	1.936	7379	0.46	1	101.5	69.5	130.5	
Cd	111	1	He	0.987	0.987	5.013	863	4.27	1	98.7	69.5	130.5	
Sn	118	1	He	6.989	6.989	7.728	19156	4.37	10	69.9	69.5	130.5	
Sb	123	1	He	2.057	2.057	3.561	4077	3.05	2	102.9	69.5	130.5	
Ba	137	1	He	4.946	4.946	8.284	3770	7.51	5	98.9	69.5	130.5	
W	182	1	He	10.011	10.011	4.730	55027	4.07	10	100.1	69.5	130.5	
Tl	205	1	He	1.038	1.038	1.265	9871	2.34	1	103.8	69.5	130.5	
Pb	208	1	He	1.029	1.029	1.929	13735	0.32	1	102.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1858160	0.82	1674650	110.96	60	120	
Sc	45	1	He	368529	0.80	355173	103.76	60	120	
Sc	45	2	NoGas	9414802	1.55	8635903	109.02	60	120	
Rh	103	1	He	1502375	1.49	1470259	102.18	60	120	
In	115	1	He	497156	0.72	490642	101.33	60	120	
Tb	159	1	He	1441388	1.93	1434034	100.51	60	120	
Ho	165	1	He	1393394	1.62	1409606	98.85	60	120	
Bi	209	1	He	888461	0.70	906964	97.96	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-1-a
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:34:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.270	3.270	0.87	174085	0.00	10000	
Be	9	45	2	NoGas	0.017	0.017	23.36	141	0.01	2000	
B	11	45	2	NoGas	365.237	365.237	0.62	1230567	0.03	300	>LDR
Na	23	45	1	He	449708.631	449708.631	2.11	436731790	0.10	500000	
Mg	24	45	1	He	13995.220	13995.220	2.37	7320452	0.19	500000	
Al	27	45	1	He	78.872	78.872	4.43	17374	0.45	200000	
K	39	45	1	He	3076.587	3076.587	0.92	981624	0.31	500000	
Ca	44	45	1	He	223188.361	223188.361	2.41	3763585	5.93	500000	
Ti	47	45	1	He	3.538	3.538	19.92	406	0.87	2500	
V	51	45	1	He	0.778	0.778	8.72	3462	0.02	10000	
Cr	52	45	1	He	0.435	0.435	17.28	5490	0.01	10000	
Mn	55	45	1	He	61.241	61.241	2.25	147415	0.04	10000	
Fe	56	45	1	He	184.240	184.240	2.72	642531	0.03	200000	
Co	59	45	1	He	0.270	0.270	8.18	2071	0.01	5000	
Ni	60	45	1	He	3.422	3.422	5.92	7134	0.05	10000	
Cu	63	45	1	He	1.076	1.076	1.41	8831	0.01	10000	
Zn	66	45	1	He	2.523	2.523	7.97	2402	0.11	10000	
As	75	115	1	He	0.237	0.237	3.32	234	0.10	10000	
Se	78	115	1	He	0.190	0.190	78.40	28	0.67	10000	
Sr	88	103	1	He	250.949	250.949	1.29	587474	0.04	10000	
Mo	95	103	1	He	12.262	12.262	4.48	26599	0.05	2000	
Ag	107	103	1	He	0.020	0.020	14.19	156	0.01	300	
Cd	111	115	1	He	0.153	0.153	3.67	130	0.12	4000	
Sn	118	115	1	He	-3.118	-3.118	-0.64	1237	-0.25	2000	
Sb	123	115	1	He	0.117	0.117	8.58	257	0.05	200	
Ba	137	115	1	He	162.514	162.514	1.23	119016	0.14	10000	
W	182	159	1	He	0.121	0.121	43.94	2074	0.01	2500	
Tl	205	165	1	He	0.015	0.015	10.77	177	0.01	2000	
Pb	208	165	1	He	0.111	0.111	7.31	1927	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1777136	0.62	1674650	106.12	60	120	
Sc	45	1	He	365242	0.93	355173	102.84	60	120	
Sc	45	2	NoGas	9391151	0.69	8635903	108.75	60	120	
Rh	103	1	He	1375875	1.79	1470259	93.58	60	120	
In	115	1	He	479696	1.53	490642	97.77	60	120	
Tb	159	1	He	1444020	0.68	1434034	100.70	60	120	
Ho	165	1	He	1385083	3.45	1409606	98.26	60	120	
Bi	209	1	He	816508	1.18	906964	90.03	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-2-a
Data File Name	050SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:38:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.207	8.207	3.59	283493	0.00	10000	
Be	9	45	2	NoGas	0.011	0.011	69.62	107	0.01	2000	
B	11	45	2	NoGas	77.830	77.830	2.04	272663	0.03	300	
Na	23	45	1	He	55545.498	55545.498	1.72	55747961	0.10	500000	
Mg	24	45	1	He	26029.717	26029.717	2.43	14067453	0.19	500000	
Al	27	45	1	He	58.391	58.391	5.64	13350	0.44	200000	
K	39	45	1	He	2069.976	2069.976	1.23	691152	0.30	500000	
Ca	44	45	1	He	132092.297	132092.297	2.55	2301377	5.74	500000	
Ti	47	45	1	He	0.498	0.498	23.82	60	0.83	2500	
V	51	45	1	He	0.154	0.154	36.03	1121	0.01	10000	
Cr	52	45	1	He	0.192	0.192	20.31	4535	0.00	10000	
Mn	55	45	1	He	154.477	154.477	1.45	383367	0.04	10000	
Fe	56	45	1	He	2273.851	2273.851	2.36	8165123	0.03	200000	
Co	59	45	1	He	0.181	0.181	7.18	1463	0.01	5000	
Ni	60	45	1	He	1.333	1.333	5.63	3020	0.04	10000	
Cu	63	45	1	He	0.093	0.093	9.14	3473	0.00	10000	
Zn	66	45	1	He	214.414	214.414	1.81	161399	0.13	10000	
As	75	115	1	He	0.175	0.175	1.52	211	0.08	10000	
Se	78	115	1	He	0.061	0.061	409.10	26	0.24	10000	
Sr	88	103	1	He	161.644	161.644	1.61	394729	0.04	10000	
Mo	95	103	1	He	65.004	65.004	2.88	146893	0.04	2000	
Ag	107	103	1	He	0.000	0.000	508.77	24	0.00	300	
Cd	111	115	1	He	0.021	0.021	41.70	19	0.11	4000	
Sn	118	115	1	He	-3.522	-3.522	-1.03	567	-0.62	2000	
Sb	123	115	1	He	0.072	0.072	19.65	177	0.04	200	
Ba	137	115	1	He	295.056	295.056	0.74	222812	0.13	10000	
W	182	159	1	He	0.320	0.320	21.87	3156	0.01	2500	
Tl	205	165	1	He	0.002	0.002	58.07	56	0.00	2000	
Pb	208	165	1	He	0.037	0.037	13.56	996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1873666	1.90	1674650	111.88	60	120	
Sc	45	1	He	377473	1.42	355173	106.28	60	120	
Sc	45	2	NoGas	9615520	1.44	8635903	111.34	60	120	
Rh	103	1	He	1435176	0.87	1470259	97.61	60	120	
In	115	1	He	494708	0.83	490642	100.83	60	120	
Tb	159	1	He	1449921	1.21	1434034	101.11	60	120	
Ho	165	1	He	1400092	2.82	1409606	99.33	60	120	
Bi	209	1	He	864204	0.73	906964	95.29	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-3-a
Data File Name	051SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:42:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.710	9.710	0.74	316982	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	33.16	119	0.01	2000	
B	11	45	2	NoGas	90.714	90.714	0.13	318364	0.03	300	
Na	23	45	1	He	108324.174	108324.174	2.22	107454392	0.10	500000	
Mg	24	45	1	He	63646.080	63646.080	2.23	34000262	0.19	500000	
Al	27	45	1	He	1.063	1.063	12.80	453	0.23	200000	
K	39	45	1	He	2165.193	2165.193	1.44	713416	0.30	500000	
Ca	44	45	1	He	156374.991	156374.991	1.44	2693290	5.81	500000	
Ti	47	45	1	He	0.085	0.085	69.56	11	0.77	2500	
V	51	45	1	He	0.179	0.179	44.32	1206	0.01	10000	
Cr	52	45	1	He	0.135	0.135	33.29	4221	0.00	10000	
Mn	55	45	1	He	72.283	72.283	1.46	177604	0.04	10000	
Fe	56	45	1	He	284.155	284.155	1.67	1010767	0.03	200000	
Co	59	45	1	He	1.326	1.326	1.71	10103	0.01	5000	
Ni	60	45	1	He	3.700	3.700	3.31	7858	0.05	10000	
Cu	63	45	1	He	-0.136	-0.136	-17.20	2130	-0.01	10000	
Zn	66	45	1	He	0.686	0.686	8.53	1091	0.06	10000	
As	75	115	1	He	0.405	0.405	17.47	317	0.13	10000	
Se	78	115	1	He	0.143	0.143	124.15	27	0.52	10000	
Sr	88	103	1	He	194.280	194.280	2.69	465552	0.04	10000	
Mo	95	103	1	He	0.280	0.280	9.71	643	0.04	2000	
Ag	107	103	1	He	0.002	0.002	86.11	36	0.01	300	
Cd	111	115	1	He	0.011	0.011	57.01	10	0.11	4000	
Sn	118	115	1	He	-3.428	-3.428	-3.03	715	-0.48	2000	
Sb	123	115	1	He	0.043	0.043	23.01	117	0.04	200	
Ba	137	115	1	He	101.067	101.067	1.01	74688	0.14	10000	
W	182	159	1	He	0.056	0.056	37.25	1715	0.00	2500	
Tl	205	165	1	He	0.003	0.003	85.02	71	0.00	2000	
Pb	208	165	1	He	0.006	0.006	74.87	593	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1821285	0.45	1674650	108.76	60	120	
Sc	45	1	He	373094	0.46	355173	105.05	60	120	
Sc	45	2	NoGas	9657694	0.84	8635903	111.83	60	120	
Rh	103	1	He	1408933	2.69	1470259	95.83	60	120	
In	115	1	He	484037	0.47	490642	98.65	60	120	
Tb	159	1	He	1432360	0.69	1434034	99.88	60	120	
Ho	165	1	He	1393637	0.75	1409606	98.87	60	120	
Bi	209	1	He	825123	0.98	906964	90.98	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-4-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:46:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.721	9.721	0.75	316786	0.00	10000	
Be	9	45	2	NoGas	0.020	0.020	75.68	163	0.01	2000	
B	11	45	2	NoGas	369.494	369.494	0.84	1278555	0.03	300	>LDR
Na	23	45	1	He	236640.773	236640.773	1.76	232011524	0.10	500000	
Mg	24	45	1	He	16761.596	16761.596	3.29	8849619	0.19	500000	
Al	27	45	1	He	12.366	12.366	3.78	2930	0.42	200000	
K	39	45	1	He	3445.830	3445.830	0.87	1107029	0.31	500000	
Ca	44	45	1	He	133160.291	133160.291	3.34	2266574	5.87	500000	
Ti	47	45	1	He	0.298	0.298	13.36	36	0.84	2500	
V	51	45	1	He	0.176	0.176	30.80	1180	0.01	10000	
Cr	52	45	1	He	0.215	0.215	19.92	4536	0.00	10000	
Mn	55	45	1	He	291.520	291.520	2.41	706340	0.04	10000	
Fe	56	45	1	He	10169.705	10169.705	2.84	35667521	0.03	200000	
Co	59	45	1	He	0.344	0.344	5.00	2646	0.01	5000	
Ni	60	45	1	He	1.770	1.770	2.24	3839	0.05	10000	
Cu	63	45	1	He	0.132	0.132	13.05	3617	0.00	10000	
Zn	66	45	1	He	4.550	4.550	3.34	3910	0.12	10000	
As	75	115	1	He	0.717	0.717	4.01	470	0.15	10000	
Se	78	115	1	He	0.181	0.181	53.31	29	0.63	10000	
Sr	88	103	1	He	156.770	156.770	1.26	374905	0.04	10000	
Mo	95	103	1	He	75.444	75.444	2.12	166975	0.05	2000	
Ag	107	103	1	He	0.003	0.003	108.81	46	0.01	300	
Cd	111	115	1	He	0.027	0.027	53.21	24	0.11	4000	
Sn	118	115	1	He	-3.435	-3.435	-2.03	707	-0.49	2000	
Sb	123	115	1	He	0.046	0.046	38.97	123	0.04	200	
Ba	137	115	1	He	172.883	172.883	0.48	128628	0.13	10000	
W	182	159	1	He	0.365	0.365	8.38	3349	0.01	2500	
Tl	205	165	1	He	0.000	0.000	747.95	43	0.00	2000	
Pb	208	165	1	He	0.033	0.033	16.27	948	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1851006	1.68	1674650	110.53	60	120	
Sc	45	1	He	368834	1.62	355173	103.85	60	120	
Sc	45	2	NoGas	9644575	1.26	8635903	111.68	60	120	
Rh	103	1	He	1405501	1.59	1470259	95.60	60	120	
In	115	1	He	487389	0.78	490642	99.34	60	120	
Tb	159	1	He	1428561	1.68	1434034	99.62	60	120	
Ho	165	1	He	1409623	0.47	1409606	100.00	60	120	
Bi	209	1	He	836760	0.35	906964	92.26	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-b-5-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:50:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.498	9.498	2.26	306696	0.00	10000	
Be	9	45	2	NoGas	0.004	0.004	181.32	70	0.01	2000	
B	11	45	2	NoGas	364.263	364.263	1.09	1239018	0.03	300	>LDR
Na	23	45	1	He	232569.595	232569.595	1.57	228897621	0.10	500000	
Mg	24	45	1	He	16402.580	16402.580	2.03	8694497	0.19	500000	
Al	27	45	1	He	2.399	2.399	13.18	744	0.32	200000	
K	39	45	1	He	3352.848	3352.848	0.91	1081924	0.31	500000	
Ca	44	45	1	He	131490.432	131490.432	2.51	2247062	5.85	500000	
Ti	47	45	1	He	0.125	0.125	131.87	16	0.81	2500	
V	51	45	1	He	0.119	0.119	36.65	965	0.01	10000	
Cr	52	45	1	He	0.005	0.005	725.00	3590	0.00	10000	
Mn	55	45	1	He	206.669	206.669	2.30	502854	0.04	10000	
Fe	56	45	1	He	1359.255	1359.255	2.86	4787965	0.03	200000	
Co	59	45	1	He	0.087	0.087	9.87	727	0.01	5000	
Ni	60	45	1	He	1.011	1.011	5.96	2304	0.04	10000	
Cu	63	45	1	He	-0.091	-0.091	-29.32	2371	0.00	10000	
Zn	66	45	1	He	0.563	0.563	1.96	992	0.06	10000	
As	75	115	1	He	0.393	0.393	14.50	314	0.13	10000	
Se	78	115	1	He	0.103	0.103	101.12	27	0.39	10000	
Sr	88	103	1	He	156.344	156.344	0.16	371599	0.04	10000	
Mo	95	103	1	He	76.309	76.309	1.34	167858	0.05	2000	
Ag	107	103	1	He	0.002	0.002	178.88	36	0.01	300	
Cd	111	115	1	He	0.001	0.001	867.53	2	0.07	4000	
Sn	118	115	1	He	-3.562	-3.562	-1.77	489	-0.73	2000	
Sb	123	115	1	He	0.035	0.035	20.21	102	0.03	200	
Ba	137	115	1	He	168.964	168.964	0.98	125986	0.13	10000	
W	182	159	1	He	0.231	0.231	16.45	2630	0.01	2500	
Tl	205	165	1	He	-0.003	-0.003	-36.97	12	-0.02	2000	
Pb	208	165	1	He	0.008	0.008	49.44	628	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1803968	2.94	1674650	107.72	60	120	
Sc	45	1	He	370209	0.67	355173	104.23	60	120	
Sc	45	2	NoGas	9480987	1.50	8635903	109.79	60	120	
Rh	103	1	He	1396729	1.10	1470259	95.00	60	120	
In	115	1	He	488437	0.24	490642	99.55	60	120	
Tb	159	1	He	1422221	1.32	1434034	99.18	60	120	
Ho	165	1	He	1411498	0.10	1409606	100.13	60	120	
Bi	209	1	He	832607	0.50	906964	91.80	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-6-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:54:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	131.393	131.393	1.17	2874133	0.00	10000	
Be	9	45	2	NoGas	0.014	0.014	36.71	122	0.01	2000	
B	11	45	2	NoGas	222.373	222.373	0.45	759482	0.03	300	
Na	23	45	1	He	24414.037	24414.037	3.31	23989967	0.10	500000	
Mg	24	45	1	He	41047.393	41047.393	3.56	21710613	0.19	500000	
Al	27	45	1	He	6.278	6.278	8.51	1596	0.39	200000	
K	39	45	1	He	2417.890	2417.890	2.83	785805	0.31	500000	
Ca	44	45	1	He	103538.531	103538.531	2.67	1765864	5.86	500000	
Ti	47	45	1	He	0.182	0.182	23.10	22	0.82	2500	
V	51	45	1	He	0.141	0.141	39.41	1051	0.01	10000	
Cr	52	45	1	He	0.052	0.052	62.32	3796	0.00	10000	
Mn	55	45	1	He	29.267	29.267	2.90	71520	0.04	10000	
Fe	56	45	1	He	730.470	730.470	2.89	2568967	0.03	200000	
Co	59	45	1	He	0.084	0.084	5.91	700	0.01	5000	
Ni	60	45	1	He	0.319	0.319	11.81	888	0.04	10000	
Cu	63	45	1	He	-0.066	-0.066	-31.32	2506	0.00	10000	
Zn	66	45	1	He	1.359	1.359	9.56	1575	0.09	10000	
As	75	115	1	He	0.119	0.119	21.60	181	0.07	10000	
Se	78	115	1	He	0.263	0.263	66.27	31	0.86	10000	
Sr	88	103	1	He	328.337	328.337	3.42	787158	0.04	10000	
Mo	95	103	1	He	0.273	0.273	18.40	629	0.04	2000	
Ag	107	103	1	He	0.001	0.001	164.13	29	0.00	300	
Cd	111	115	1	He	0.011	0.011	22.44	10	0.11	4000	
Sn	118	115	1	He	-3.478	-3.478	-0.78	633	-0.55	2000	
Sb	123	115	1	He	0.027	0.027	39.32	88	0.03	200	
Ba	137	115	1	He	212.147	212.147	2.24	157612	0.13	10000	
W	182	159	1	He	0.051	0.051	85.24	1641	0.00	2500	
Tl	205	165	1	He	-0.003	-0.003	-49.60	17	-0.02	2000	
Pb	208	165	1	He	0.011	0.011	46.54	652	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1788198	1.29	1674650	106.78	60	120	
Sc	45	1	He	369533	1.83	355173	104.04	60	120	
Sc	45	2	NoGas	9493722	0.80	8635903	109.93	60	120	
Rh	103	1	He	1409993	2.48	1470259	95.90	60	120	
In	115	1	He	486793	1.43	490642	99.22	60	120	
Tb	159	1	He	1394157	1.46	1434034	97.22	60	120	
Ho	165	1	He	1391105	1.24	1409606	98.69	60	120	
Bi	209	1	He	847792	0.77	906964	93.48	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-7-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:58:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	129.208	129.208	0.45	2874807	0.00	10000	
Be	9	45	2	NoGas	0.018	0.018	19.84	152	0.01	2000	
B	11	45	2	NoGas	226.887	226.887	0.42	787644	0.03	300	
Na	23	45	1	He	24839.252	24839.252	1.90	24558293	0.10	500000	
Mg	24	45	1	He	41781.431	41781.431	2.92	22234661	0.19	500000	
Al	27	45	1	He	7.393	7.393	7.85	1852	0.40	200000	
K	39	45	1	He	2421.739	2421.739	1.61	791872	0.31	500000	
Ca	44	45	1	He	105088.816	105088.816	1.29	1803364	5.83	500000	
Ti	47	45	1	He	0.095	0.095	18.62	12	0.78	2500	
V	51	45	1	He	0.084	0.084	47.05	831	0.01	10000	
Cr	52	45	1	He	0.081	0.081	37.36	3953	0.00	10000	
Mn	55	45	1	He	29.354	29.354	1.57	72176	0.04	10000	
Fe	56	45	1	He	642.415	642.415	1.39	2273563	0.03	200000	
Co	59	45	1	He	0.082	0.082	17.81	693	0.01	5000	
Ni	60	45	1	He	0.349	0.349	6.87	956	0.04	10000	
Cu	63	45	1	He	-0.063	-0.063	-8.72	2536	0.00	10000	
Zn	66	45	1	He	0.728	0.728	16.95	1118	0.07	10000	
As	75	115	1	He	0.133	0.133	11.18	188	0.07	10000	
Se	78	115	1	He	-0.022	-0.022	-245.01	23	-0.09	10000	
Sr	88	103	1	He	327.593	327.593	0.09	799751	0.04	10000	
Mo	95	103	1	He	0.114	0.114	21.52	281	0.04	2000	
Ag	107	103	1	He	0.001	0.001	253.80	28	0.00	300	
Cd	111	115	1	He	0.005	0.005	23.95	5	0.10	4000	
Sn	118	115	1	He	-3.145	-3.145	-1.33	1215	-0.26	2000	
Sb	123	115	1	He	0.033	0.033	12.46	99	0.03	200	
Ba	137	115	1	He	215.066	215.066	0.66	160455	0.13	10000	
W	182	159	1	He	0.038	0.038	45.26	1585	0.00	2500	
Tl	205	165	1	He	-0.001	-0.001	-83.05	30	0.00	2000	
Pb	208	165	1	He	0.005	0.005	67.56	582	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1803120	1.09	1674650	107.67	60	120	
Sc	45	1	He	371740	1.28	355173	104.66	60	120	
Sc	45	2	NoGas	9651364	1.33	8635903	111.76	60	120	
Rh	103	1	He	1435057	1.28	1470259	97.61	60	120	
In	115	1	He	488764	0.94	490642	99.62	60	120	
Tb	159	1	He	1405316	1.31	1434034	98.00	60	120	
Ho	165	1	He	1397196	0.37	1409606	99.12	60	120	
Bi	209	1	He	855381	0.33	906964	94.31	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-8-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:02:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.354	8.354	1.07	289059	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	95.30	122	0.01	2000	
B	11	45	2	NoGas	93.116	93.116	1.22	327911	0.03	300	
Na	23	45	1	He	10214.271	10214.271	1.80	10111579	0.10	500000	
Mg	24	45	1	He	36327.377	36327.377	1.71	19342429	0.19	500000	
Al	27	45	1	He	9.783	9.783	3.88	2384	0.41	200000	
K	39	45	1	He	937.039	937.039	2.13	322531	0.29	500000	
Ca	44	45	1	He	98077.027	98077.027	2.57	1683680	5.83	500000	
Ti	47	45	1	He	0.247	0.247	59.10	30	0.82	2500	
V	51	45	1	He	0.095	0.095	64.84	877	0.01	10000	
Cr	52	45	1	He	0.597	0.597	8.62	6337	0.01	10000	
Mn	55	45	1	He	12.188	12.188	1.16	30297	0.04	10000	
Fe	56	45	1	He	6401.809	6401.809	2.48	22642569	0.03	200000	
Co	59	45	1	He	0.452	0.452	7.24	3484	0.01	5000	
Ni	60	45	1	He	1.409	1.409	5.75	3130	0.05	10000	
Cu	63	45	1	He	0.710	0.710	2.06	6917	0.01	10000	
Zn	66	45	1	He	54.044	54.044	2.14	40513	0.13	10000	
As	75	115	1	He	0.209	0.209	11.58	227	0.09	10000	
Se	78	115	1	He	0.144	0.144	93.49	28	0.52	10000	
Sr	88	103	1	He	220.444	220.444	1.61	541450	0.04	10000	
Mo	95	103	1	He	0.364	0.364	14.80	849	0.04	2000	
Ag	107	103	1	He	0.001	0.001	80.65	31	0.00	300	
Cd	111	115	1	He	0.045	0.045	19.73	39	0.11	4000	
Sn	118	115	1	He	-3.453	-3.453	-0.79	685	-0.50	2000	
Sb	123	115	1	He	0.062	0.062	32.88	157	0.04	200	
Ba	137	115	1	He	255.029	255.029	1.92	191898	0.13	10000	
W	182	159	1	He	0.045	0.045	42.01	1652	0.00	2500	
Tl	205	165	1	He	-0.002	-0.002	-46.44	24	-0.01	2000	
Pb	208	165	1	He	0.051	0.051	5.35	1177	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1867870	0.98	1674650	111.54	60	120	
Sc	45	1	He	371894	1.12	355173	104.71	60	120	
Sc	45	2	NoGas	9695042	0.09	8635903	112.26	60	120	
Rh	103	1	He	1443863	1.77	1470259	98.20	60	120	
In	115	1	He	492954	0.97	490642	100.47	60	120	
Tb	159	1	He	1427172	0.97	1434034	99.52	60	120	
Ho	165	1	He	1407424	0.08	1409606	99.85	60	120	
Bi	209	1	He	865233	0.45	906964	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235200/1-a
Data File Name	057_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:06:35-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.049	61.4	111129	0.2	8	
Be	9	45	2	NoGas	0.008	50.0	93	25.0	1	
B	11	45	2	NoGas	13.588	1.4	52780	1.6	20	
Na	23	45	1	He	62.766	2.5	77388	0.8	1000	
Mg	24	45	1	He	72.157	2.2	39529	1.6	1000	
Al	27	45	1	He	2.061	14.1	684	8.8	50	
K	39	45	1	He	27.775	12.8	35495	2.1	1000	
Ca	44	45	1	He	232.349	1.1	4359	2.1	1000	
Ti	47	45	1	He	0.092	142.2	12	128.9	20	
V	51	45	1	He	0.118	52.2	982	24.7	2	
Cr	52	45	1	He	0.213	17.4	4643	2.8	2	
Mn	55	45	1	He	12.235	3.5	30930	2.2	2	Blank High
Fe	56	45	1	He	14.212	4.1	53648	5.2	50	
Co	59	45	1	He	0.000	1611.0	77	19.0	1	
Ni	60	45	1	He	0.127	23.7	508	11.5	2	
Cu	63	45	1	He	0.643	6.0	6649	2.1	2	
Zn	66	45	1	He	4.735	3.0	4151	3.1	20	
As	75	115	1	He	-0.053	-63.4	104	16.4	2	
Se	78	115	1	He	-0.075	-179.0	23	16.2	2	
Sr	88	103	1	He	0.525	3.4	1613	3.2	10	
Mo	95	103	1	He	0.025	22.7	86	15.7	2	
Ag	107	103	1	He	0.000	788.7	28	90.9	0.2	
Cd	111	115	1	He	0.002	78.2	3	57.5	0.2	
Sn	118	115	1	He	-3.526	-1.4	585	15.5	10	
Sb	123	115	1	He	0.022	11.9	82	6.2	2	
Ba	137	115	1	He	0.867	3.3	704	3.6	5	
W	182	159	1	He	0.023	79.9	1563	6.0	10	
Tl	205	165	1	He	-0.002	-59.0	22	52.7	0.5	
Pb	208	165	1	He	0.031	14.6	953	6.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1940535	0.34	1674650	115.88	60	120	
Sc	45	1	He	378318	1.31	355173	106.52	60	120	
Sc	45	2	NoGas	9753079	0.44	8635903	112.94	60	120	
Rh	103	1	He	1542431	0.73	1470259	104.91	60	120	
In	115	1	He	517528	0.49	490642	105.48	60	120	
Tb	159	1	He	1458179	0.89	1434034	101.68	60	120	
Ho	165	1	He	1446456	0.49	1409606	102.61	60	120	
Bi	209	1	He	920605	1.38	906964	101.50	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	058_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:10:40-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.708	1.590	1201916	1.45	50	101.4	89.5	110.5	
Be	9	45	2	NoGas	48.311	0.712	278773	0.78	50	96.6	89.5	110.5	
B	11	45	2	NoGas	57.461	1.132	204776	1.11	50	114.9	89.5	110.5	CCV Failed
Na	23	45	1	He	25471.144	0.640	24861251	0.71	25000	101.9	89.5	110.5	
Mg	24	45	1	He	25364.954	0.801	13326942	0.33	25000	101.5	89.5	110.5	
Al	27	45	1	He	250.852	0.504	55037	0.72	250	100.3	89.5	110.5	
K	39	45	1	He	25480.247	0.589	7979702	0.60	25000	101.9	89.5	110.5	
Ca	44	45	1	He	25174.078	0.538	426685	0.79	25000	100.7	89.5	110.5	
Ti	47	45	1	He	56.996	9.425	6534	8.34	50	114.0	89.5	110.5	CCV Failed
V	51	45	1	He	50.727	1.223	194726	1.95	50	101.5	89.5	110.5	
Cr	52	45	1	He	49.846	1.401	230366	1.67	50	99.7	89.5	110.5	
Mn	55	45	1	He	250.464	1.206	603958	1.02	250	100.2	89.5	110.5	
Fe	56	45	1	He	12564.641	0.926	43852330	0.68	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.201	1.661	373574	0.67	50	100.4	89.5	110.5	
Ni	60	45	1	He	50.935	0.896	103383	0.24	50	101.9	89.5	110.5	
Cu	63	45	1	He	50.381	0.731	284462	0.40	50	100.8	89.5	110.5	
Zn	66	45	1	He	51.555	1.262	38163	0.12	50	103.1	89.5	110.5	
As	75	115	1	He	51.666	0.999	25178	0.95	50	103.3	89.5	110.5	
Se	78	115	1	He	51.690	5.278	1401	3.69	50	103.4	89.5	110.5	
Sr	88	103	1	He	50.351	5.812	125142	0.45	50	100.7	89.5	110.5	
Mo	95	103	1	He	51.134	4.663	117523	0.81	50	102.3	89.5	110.5	
Ag	107	103	1	He	50.726	4.663	357345	0.84	50	101.5	89.5	110.5	
Cd	111	115	1	He	51.294	1.344	43966	0.86	50	102.6	89.5	110.5	
Sn	118	115	1	He	49.602	3.160	92770	3.16	50	99.2	89.5	110.5	
Sb	123	115	1	He	51.891	1.175	100082	0.99	50	103.8	89.5	110.5	
Ba	137	115	1	He	50.906	2.894	37925	2.43	50	101.8	89.5	110.5	
W	182	159	1	He	51.666	2.108	276534	2.26	50	103.3	89.5	110.5	
Tl	205	165	1	He	50.903	1.034	485685	1.06	50	101.8	89.5	110.5	
Pb	208	165	1	He	50.773	1.139	657989	0.32	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1877924	1.04	1674650	112.14	60	120	
Sc	45	1	He	366950	1.12	355173	103.32	60	120	
Sc	45	2	NoGas	9711872	0.10	8635903	112.46	60	120	
Rh	103	1	He	1461783	5.30	1470259	99.42	60	120	
In	115	1	He	487940	1.69	490642	99.45	60	120	
Tb	159	1	He	1433995	4.33	1434034	100.00	60	120	
Ho	165	1	He	1404117	1.19	1409606	99.61	60	120	
Bi	209	1	He	864067	0.91	906964	95.27	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	059_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:14:44-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.028	220.4	111071	1.0	8	
Be	9	45	2	NoGas	0.010	29.0	104	16.4	1	
B	11	45	2	NoGas	6.595	3.9	28519	3.5	20	
Na	23	45	1	He	17.345	0.8	31120	0.8	1000	
Mg	24	45	1	He	2.655	23.1	1848	17.7	1000	
Al	27	45	1	He	0.274	72.9	277	15.4	50	
K	39	45	1	He	8.613	19.7	28786	2.6	1000	
Ca	44	45	1	He	7.019	12.1	416	4.4	1000	
Ti	47	45	1	He	0.066	89.1	9	78.1	20	
V	51	45	1	He	0.155	23.6	1107	12.1	2	
Cr	52	45	1	He	0.044	56.6	3780	3.8	2	
Mn	55	45	1	He	0.043	102.3	641	16.7	2	
Fe	56	45	1	He	3.874	33.6	16123	28.8	50	
Co	59	45	1	He	0.004	124.6	107	38.0	1	
Ni	60	45	1	He	-0.053	-18.4	129	15.6	2	
Cu	63	45	1	He	0.013	75.4	2964	1.7	2	
Zn	66	45	1	He	-0.015	-757.2	569	14.9	20	
As	75	115	1	He	-0.051	-34.5	102	9.7	2	
Se	78	115	1	He	0.110	169.1	28	19.9	2	
Sr	88	103	1	He	-0.032	-27.7	149	14.9	10	
Mo	95	103	1	He	0.093	31.7	244	28.8	2	
Ag	107	103	1	He	0.007	54.8	74	36.2	0.2	
Cd	111	115	1	He	0.020	44.4	19	41.7	0.2	
Sn	118	115	1	He	0.379	58.3	7598	5.8	10	
Sb	123	115	1	He	0.111	33.7	258	29.1	2	
Ba	137	115	1	He	0.038	66.4	49	38.8	5	
W	182	159	1	He	0.247	11.5	2782	3.6	10	
Tl	205	165	1	He	0.044	10.5	464	9.1	0.5	
Pb	208	165	1	He	0.018	9.5	759	2.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1936323	0.56	1674650	115.63	60	120	
Sc	45	1	He	371190	0.92	355173	104.51	60	120	
Sc	45	2	NoGas	9788867	0.78	8635903	113.35	60	120	
Rh	103	1	He	1511375	2.05	1470259	102.80	60	120	
In	115	1	He	505754	1.44	490642	103.08	60	120	
Tb	159	1	He	1459261	1.94	1434034	101.76	60	120	
Ho	165	1	He	1417782	0.53	1409606	100.58	60	120	
Bi	209	1	He	900682	0.73	906964	99.31	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235200/1-a
Data File Name	060_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:18:49-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.084	70.6	114877	0.7	8	
Be	9	45	2	NoGas	0.006	61.8	85	27.2	1	
B	11	45	2	NoGas	9.358	2.8	39064	3.0	20	
Na	23	45	1	He	57.672	2.1	72134	1.6	1000	
Mg	24	45	1	He	67.791	4.1	37098	4.4	1000	
Al	27	45	1	He	2.541	18.0	791	12.6	50	
K	39	45	1	He	27.298	8.4	35279	1.9	1000	
Ca	44	45	1	He	217.988	3.1	4100	3.4	1000	
Ti	47	45	1	He	0.037	115.9	6	91.6	20	
V	51	45	1	He	0.075	64.9	809	23.8	2	
Cr	52	45	1	He	0.227	21.6	4702	4.5	2	
Mn	55	45	1	He	12.391	0.7	31265	0.7	2	Blank High
Fe	56	45	1	He	12.496	1.8	47360	1.8	50	
Co	59	45	1	He	0.002	152.2	88	20.9	1	
Ni	60	45	1	He	0.180	3.9	618	2.4	2	
Cu	63	45	1	He	1.076	3.2	9130	2.6	2	
Zn	66	45	1	He	5.340	5.2	4596	4.9	20	
As	75	115	1	He	-0.077	-7.9	91	3.3	2	
Se	78	115	1	He	-0.233	-69.5	19	24.2	2	
Sr	88	103	1	He	0.494	1.8	1523	1.5	10	
Mo	95	103	1	He	0.035	28.0	110	21.9	2	
Ag	107	103	1	He	0.003	91.3	44	41.3	0.2	
Cd	111	115	1	He	0.008	30.8	8	27.7	0.2	
Sn	118	115	1	He	-2.912	-5.1	1715	15.6	10	
Sb	123	115	1	He	0.053	37.9	147	27.9	2	
Ba	137	115	1	He	0.838	5.8	682	5.2	5	
W	182	159	1	He	0.089	20.0	1948	4.6	10	
Tl	205	165	1	He	0.010	19.3	132	11.9	0.5	
Pb	208	165	1	He	0.065	7.6	1364	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1991491	1.02	1674650	118.92	60	120	
Sc	45	1	He	377569	0.52	355173	106.31	60	120	
Sc	45	2	NoGas	10015082	0.60	8635903	115.97	60	120	
Rh	103	1	He	1533706	0.08	1470259	104.32	60	120	
In	115	1	He	517658	0.61	490642	105.51	60	120	
Tb	159	1	He	1479315	0.93	1434034	103.16	60	120	
Ho	165	1	He	1408368	1.47	1409606	99.91	60	120	
Bi	209	1	He	929331	0.69	906964	102.47	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235200/25-a
Data File Name	061_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:22:56-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	104.366	104.366	2.805	2414943	1.52	100	104.4	84.5	115.4	
Be	9	2	NoGas	1046.676	1046.676	1.657	6185587	0.52	1000	104.7	84.5	115.4	
B	11	2	NoGas	108.259	108.259	1.842	390282	0.53	100	108.3	84.5	115.4	
Na	23	1	He	9621.136	9621.136	0.952	9714243	0.74	10000	96.2	84.5	115.4	
Mg	24	1	He	9760.741	9760.741	2.000	5300413	1.70	10000	97.6	84.5	115.4	
Al	27	1	He	9834.335	9834.335	1.676	2221426	1.32	10000	98.3	84.5	115.4	
K	39	1	He	9553.122	9553.122	1.384	3108623	1.15	10000	95.5	84.5	115.4	
Ca	44	1	He	10969.906	10969.906	0.991	192330	0.73	10000	109.7	84.5	115.4	
Ti	47	1	He	92.025	92.025	4.506	10910	4.47	100	92.0	84.5	115.4	
V	51	1	He	981.235	981.235	3.467	3882862	3.19	1000	98.1	84.5	115.4	
Cr	52	1	He	934.485	934.485	4.122	4398263	3.91	1000	93.4	84.5	115.4	
Mn	55	1	He	989.912	989.912	3.312	2465272	2.98	1000	99.0	84.5	115.4	
Fe	56	1	He	9575.483	9575.483	2.179	34539444	1.88	10000	95.8	84.5	115.4	
Co	59	1	He	948.737	948.737	2.512	7295564	2.21	1000	94.9	84.5	115.4	
Ni	60	1	He	940.808	940.808	2.801	1969277	2.53	1000	94.1	84.5	115.4	
Cu	63	1	He	927.674	927.674	2.152	5361852	1.87	1000	92.8	84.5	115.4	
Zn	66	1	He	978.368	978.368	1.542	737863	1.22	1000	97.8	84.5	115.4	
As	75	1	He	976.536	976.536	2.052	486134	1.07	1000	97.7	84.5	115.4	
Se	78	1	He	973.132	973.132	1.980	26654	0.98	1000	97.3	84.5	115.4	
Sr	88	1	He	914.872	914.872	2.262	2354428	1.39	1000	91.5	84.5	115.4	
Mo	95	1	He	95.250	95.250	2.272	226947	1.52	100	95.2	84.5	115.4	
Ag	107	1	He	96.677	96.677	1.626	706100	0.84	100	96.7	84.5	115.4	
Cd	111	1	He	977.805	977.805	1.944	860197	1.26	1000	97.8	84.5	115.4	
Sn	118	1	He	974.855	974.855	1.671	1743465	0.62	1000	97.5	84.5	115.4	
Sb	123	1	He	95.905	95.905	2.671	189799	1.64	100	95.9	84.5	115.4	
Ba	137	1	He	952.452	952.452	2.618	727918	1.59	1000	95.2	84.5	115.4	
W	182	1	He	95.634	95.634	3.054	531377	2.87	100	95.6	84.5	115.4	
Tl	205	1	He	239.241	239.241	0.908	2265269	0.59	250	95.7	84.5	115.4	
Pb	208	1	He	949.852	949.852	0.858	12207737	0.61	1000	95.0	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2000073	1.42	1674650	119.43	60	120	
Sc	45	1	He	379234	0.36	355173	106.77	60	120	
Sc	45	2	NoGas	9949901	1.79	8635903	115.22	60	120	
Rh	103	1	He	1513274	1.16	1470259	102.93	60	120	
In	115	1	He	500793	1.06	490642	102.07	60	120	
Tb	159	1	He	1491343	0.71	1434034	104.00	60	120	
Ho	165	1	He	1393447	0.33	1409606	98.85	60	120	
Bi	209	1	He	898896	1.10	906964	99.11	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:26:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.558	1.558	4.54	146116	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	10.63	885	0.02	2000	
B	11	45	2	NoGas	18.493	18.493	1.49	71006	0.03	300	
Na	23	45	1	He	5052.781	5052.781	2.20	5074517	0.10	500000	
Mg	24	45	1	He	12237.215	12237.215	2.35	6601108	0.19	500000	
Al	27	45	1	He	23.454	23.454	4.02	5483	0.43	200000	
K	39	45	1	He	2091.791	2091.791	1.33	696862	0.30	500000	
Ca	44	45	1	He	65738.934	65738.934	1.74	1143451	5.75	500000	
Ti	47	45	1	He	0.198	0.198	21.53	24	0.81	2500	
V	51	45	1	He	0.462	0.462	13.09	2332	0.02	10000	
Cr	52	45	1	He	0.354	0.354	11.25	5283	0.01	10000	
Mn	55	45	1	He	19.357	19.357	1.44	48426	0.04	10000	
Fe	56	45	1	He	22.266	22.266	2.73	82276	0.03	200000	
Co	59	45	1	He	0.455	0.455	4.24	3555	0.01	5000	
Ni	60	45	1	He	2.098	2.098	2.27	4604	0.05	10000	
Cu	63	45	1	He	1.053	1.053	3.23	8977	0.01	10000	
Zn	66	45	1	He	2.599	2.599	3.98	2535	0.10	10000	
As	75	115	1	He	0.633	0.633	2.43	443	0.14	10000	
Se	78	115	1	He	0.595	0.595	34.17	41	1.46	10000	
Sr	88	103	1	He	242.438	242.438	2.74	616565	0.04	10000	
Mo	95	103	1	He	0.608	0.608	2.02	1455	0.04	2000	
Ag	107	103	1	He	0.024	0.024	30.06	199	0.01	300	
Cd	111	115	1	He	0.264	0.264	11.57	234	0.11	4000	
Sn	118	115	1	He	-0.647	-0.647	-108.74	5712	-0.01	2000	
Sb	123	115	1	He	0.371	0.371	9.50	772	0.05	200	
Ba	137	115	1	He	32.021	32.021	3.24	24559	0.13	10000	
W	182	159	1	He	0.576	0.576	13.61	4627	0.01	2500	
Tl	205	165	1	He	0.183	0.183	15.94	1817	0.01	2000	
Pb	208	165	1	He	0.259	0.259	14.25	3940	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2021987	3.14	1674650	120.74	60	120	ISTD warning
Sc	45	1	He	376755	0.89	355173	106.08	60	120	
Sc	45	2	NoGas	9912511	0.75	8635903	114.78	60	120	
Rh	103	1	He	1495229	1.51	1470259	101.70	60	120	
In	115	1	He	502122	0.41	490642	102.34	60	120	
Tb	159	1	He	1479327	0.82	1434034	103.16	60	120	
Ho	165	1	He	1428238	1.86	1409606	101.32	60	120	
Bi	209	1	He	895007	1.01	906964	98.68	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66152-e-1-a@5
Data File Name	063SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:30:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.362	0.362	9.25	119148	0.00	10000	
Be	9	45	2	NoGas	0.061	0.061	12.70	404	0.02	2000	
B	11	45	2	NoGas	6.754	6.754	2.80	29276	0.02	300	
Na	23	45	1	He	976.924	976.924	2.25	992418	0.10	500000	
Mg	24	45	1	He	2477.847	2477.847	2.58	1336660	0.19	500000	
Al	27	45	1	He	4.994	4.994	11.11	1339	0.37	200000	
K	39	45	1	He	427.646	427.646	1.50	163479	0.26	500000	
Ca	44	45	1	He	13209.330	13209.330	2.07	229948	5.74	500000	
Ti	47	45	1	He	0.056	0.056	27.83	8	0.72	2500	
V	51	45	1	He	0.122	0.122	2.44	993	0.01	10000	
Cr	52	45	1	He	0.071	0.071	45.73	3962	0.00	10000	
Mn	55	45	1	He	3.729	3.729	4.96	9765	0.04	10000	
Fe	56	45	1	He	3.953	3.953	4.31	16640	0.02	200000	
Co	59	45	1	He	0.103	0.103	8.74	861	0.01	5000	
Ni	60	45	1	He	0.405	0.405	2.51	1084	0.04	10000	
Cu	63	45	1	He	0.201	0.201	14.47	4085	0.00	10000	
Zn	66	45	1	He	0.738	0.738	9.84	1140	0.06	10000	
As	75	115	1	He	0.062	0.062	16.59	159	0.04	10000	
Se	78	115	1	He	0.079	0.079	122.95	27	0.30	10000	
Sr	88	103	1	He	48.737	48.737	1.14	123645	0.04	10000	
Mo	95	103	1	He	0.112	0.112	11.37	286	0.04	2000	
Ag	107	103	1	He	0.002	0.002	41.24	40	0.01	300	
Cd	111	115	1	He	0.066	0.066	14.48	60	0.11	4000	
Sn	118	115	1	He	-1.189	-1.189	-10.39	4786	-0.02	2000	
Sb	123	115	1	He	0.090	0.090	35.41	218	0.04	200	
Ba	137	115	1	He	6.579	6.579	1.83	5109	0.13	10000	
W	182	159	1	He	0.070	0.070	39.19	1811	0.00	2500	
Tl	205	165	1	He	0.037	0.037	2.18	391	0.01	2000	
Pb	208	165	1	He	0.044	0.044	12.12	1093	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1944999	2.13	1674650	116.14	60	120	
Sc	45	1	He	376690	1.12	355173	106.06	60	120	
Sc	45	2	NoGas	9856830	0.28	8635903	114.14	60	120	
Rh	103	1	He	1488955	0.39	1470259	101.27	60	120	
In	115	1	He	506871	0.55	490642	103.31	60	120	
Tb	159	1	He	1451564	2.10	1434034	101.22	60	120	
Ho	165	1	He	1410282	2.40	1409606	100.05	60	120	
Bi	209	1	He	899042	0.30	906964	99.13	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66152-e-1-a
Data File Name	064SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:35:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	108.917	108.917	1.64	2523246	0.00	10000	
Be	9	45	2	NoGas	1088.013	1088.013	0.24	6449894	0.02	2000	
B	11	45	2	NoGas	122.625	122.625	1.79	442684	0.03	300	
Na	23	45	1	He	15316.690	15316.690	2.75	15211741	0.10	500000	
Mg	24	45	1	He	22025.814	22025.814	2.30	11772498	0.19	500000	
Al	27	45	1	He	10614.995	10614.995	3.67	2359597	0.45	200000	
K	39	45	1	He	12274.007	12274.007	2.12	3923467	0.31	500000	
Ca	44	45	1	He	75755.695	75755.695	3.00	1305314	5.80	500000	
Ti	47	45	1	He	102.970	102.970	1.35	12016	0.86	2500	
V	51	45	1	He	1056.819	1056.819	3.50	4115570	0.03	10000	
Cr	52	45	1	He	1001.509	1001.509	3.45	4639087	0.02	10000	
Mn	55	45	1	He	1085.278	1085.278	3.45	2659883	0.04	10000	
Fe	56	45	1	He	10144.580	10144.580	3.04	36016842	0.03	200000	
Co	59	45	1	He	1003.987	1003.987	1.64	7599614	0.01	5000	
Ni	60	45	1	He	1007.101	1007.101	2.92	2074922	0.05	10000	
Cu	63	45	1	He	974.926	974.926	2.98	5545452	0.02	10000	
Zn	66	45	1	He	1028.135	1028.135	2.82	763104	0.13	10000	
As	75	115	1	He	1075.867	1075.867	0.61	520529	0.21	10000	
Se	78	115	1	He	1047.919	1047.919	1.08	27895	3.76	10000	
Sr	88	103	1	He	1246.327	1246.327	0.85	3111699	0.04	10000	
Mo	95	103	1	He	103.772	103.772	2.33	239859	0.04	2000	
Ag	107	103	1	He	95.376	95.376	1.14	675737	0.01	300	
Cd	111	115	1	He	1039.080	1039.080	0.83	888409	0.12	4000	
Sn	118	115	1	He	1071.440	1071.440	0.84	1861651	0.06	2000	
Sb	123	115	1	He	102.548	102.548	1.13	197254	0.05	200	
Ba	137	115	1	He	1068.291	1068.291	0.84	793551	0.13	10000	
W	182	159	1	He	100.890	100.890	2.73	555884	0.02	2500	
Tl	205	165	1	He	248.175	248.175	1.90	2394977	0.01	2000	
Pb	208	165	1	He	977.437	977.437	2.24	12802802	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1956250	1.05	1674650	116.82	60	120	
Sc	45	1	He	373336	1.92	355173	105.11	60	120	
Sc	45	2	NoGas	9979067	0.77	8635903	115.55	60	120	
Rh	103	1	He	1467924	1.22	1470259	99.84	60	120	
In	115	1	He	486656	0.28	490642	99.19	60	120	
Tb	159	1	He	1479100	0.46	1434034	103.14	60	120	
Ho	165	1	He	1420553	2.22	1409606	100.78	60	120	
Bi	209	1	He	872300	1.43	906964	96.18	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-b ms
Data File Name	065SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:38:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	103.560	103.560	0.12	2444562	0.00	10000	
Be	9	45	2	NoGas	1034.840	1034.840	0.87	6235880	0.02	2000	
B	11	45	2	NoGas	116.391	116.391	0.52	427438	0.03	300	
Na	23	45	1	He	14990.431	14990.431	3.78	14989996	0.10	500000	
Mg	24	45	1	He	22261.125	22261.125	4.00	11978094	0.19	500000	
Al	27	45	1	He	10045.713	10045.713	4.26	2248478	0.45	200000	
K	39	45	1	He	11891.188	11891.188	2.76	3828275	0.31	500000	
Ca	44	45	1	He	78440.269	78440.269	5.09	1360784	5.76	500000	
Ti	47	45	1	He	100.930	100.930	2.65	11858	0.85	2500	
V	51	45	1	He	1009.002	1009.002	2.68	3957104	0.03	10000	
Cr	52	45	1	He	953.499	953.499	3.94	4447070	0.02	10000	
Mn	55	45	1	He	1016.756	1016.756	3.36	2509355	0.04	10000	
Fe	56	45	1	He	9692.074	9692.074	3.36	34645110	0.03	200000	
Co	59	45	1	He	943.856	943.856	3.12	7192843	0.01	5000	
Ni	60	45	1	He	955.764	955.764	2.91	1982658	0.05	10000	
Cu	63	45	1	He	935.583	935.583	3.15	5359013	0.02	10000	
Zn	66	45	1	He	977.813	977.813	3.58	730771	0.13	10000	
As	75	115	1	He	1021.828	1021.828	1.87	496946	0.21	10000	
Se	78	115	1	He	989.455	989.455	2.12	26475	3.74	10000	
Sr	88	103	1	He	1194.419	1194.419	0.57	3005519	0.04	10000	
Mo	95	103	1	He	99.866	99.866	2.14	232684	0.04	2000	
Ag	107	103	1	He	97.992	97.992	0.82	699770	0.01	300	
Cd	111	115	1	He	984.250	984.250	1.92	845850	0.12	4000	
Sn	118	115	1	He	1031.511	1031.511	3.72	1801756	0.06	2000	
Sb	123	115	1	He	100.676	100.676	2.15	194643	0.05	200	
Ba	137	115	1	He	1010.233	1010.233	1.88	754323	0.13	10000	
W	182	159	1	He	98.814	98.814	2.19	542685	0.02	2500	
Tl	205	165	1	He	231.197	231.197	1.29	2250262	0.01	2000	
Pb	208	165	1	He	914.111	914.111	1.09	12076545	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1978184	1.10	1674650	118.13	60	120	
Sc	45	1	He	375935	1.65	355173	105.85	60	120	
Sc	45	2	NoGas	10143997	0.68	8635903	117.46	60	120	
Rh	103	1	He	1479463	1.11	1470259	100.63	60	120	
In	115	1	He	489210	1.06	490642	99.71	60	120	
Tb	159	1	He	1473914	1.14	1434034	102.78	60	120	
Ho	165	1	He	1432305	0.60	1409606	101.61	60	120	
Bi	209	1	He	872244	0.71	906964	96.17	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-c msd
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:42:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	104.215	104.215	3.26	2411529	0.00	10000	
Be	9	45	2	NoGas	1026.671	1026.671	2.17	6066932	0.02	2000	
B	11	45	2	NoGas	117.085	117.085	2.85	421615	0.03	300	
Na	23	45	1	He	14925.795	14925.795	0.62	14965555	0.10	500000	
Mg	24	45	1	He	22108.023	22108.023	2.75	11925649	0.19	500000	
Al	27	45	1	He	10005.981	10005.981	4.04	2244996	0.45	200000	
K	39	45	1	He	11825.203	11825.203	2.83	3816267	0.31	500000	
Ca	44	45	1	He	78986.313	78986.313	2.22	1373873	5.75	500000	
Ti	47	45	1	He	99.366	99.366	1.24	11704	0.85	2500	
V	51	45	1	He	1010.749	1010.749	3.21	3973162	0.03	10000	
Cr	52	45	1	He	959.985	959.985	3.51	4488123	0.02	10000	
Mn	55	45	1	He	1011.440	1011.440	3.75	2502094	0.04	10000	
Fe	56	45	1	He	9670.483	9670.483	3.62	34649111	0.03	200000	
Co	59	45	1	He	954.350	954.350	3.88	7289575	0.01	5000	
Ni	60	45	1	He	950.007	950.007	3.88	1975247	0.05	10000	
Cu	63	45	1	He	925.291	925.291	3.85	5312233	0.02	10000	
Zn	66	45	1	He	977.280	977.280	3.18	732142	0.13	10000	
As	75	115	1	He	1029.309	1029.309	0.97	499480	0.21	10000	
Se	78	115	1	He	996.169	996.169	1.63	26595	3.75	10000	
Sr	88	103	1	He	1212.773	1212.773	1.80	3011470	0.04	10000	
Mo	95	103	1	He	100.703	100.703	2.88	231504	0.04	2000	
Ag	107	103	1	He	99.081	99.081	0.99	698205	0.01	300	
Cd	111	115	1	He	988.755	988.755	1.46	847869	0.12	4000	
Sn	118	115	1	He	1024.093	1024.093	1.81	1784964	0.06	2000	
Sb	123	115	1	He	99.544	99.544	1.20	192040	0.05	200	
Ba	137	115	1	He	1009.630	1009.630	0.80	752174	0.13	10000	
W	182	159	1	He	97.986	97.986	2.54	539507	0.02	2500	
Tl	205	165	1	He	232.608	232.608	3.93	2240509	0.01	2000	
Pb	208	165	1	He	926.767	926.767	2.26	12119264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1947349	0.97	1674650	116.28	60	120	
Sc	45	1	He	376812	1.42	355173	106.09	60	120	
Sc	45	2	NoGas	9948156	0.60	8635903	115.20	60	120	
Rh	103	1	He	1459928	0.53	1470259	99.30	60	120	
In	115	1	He	488094	0.87	490642	99.48	60	120	
Tb	159	1	He	1477713	0.53	1434034	103.05	60	120	
Ho	165	1	He	1418284	2.37	1409606	100.62	60	120	
Bi	209	1	He	871701	1.40	906964	96.11	60	120	

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Sample Report

Sample Table

Sample Name	240-66161-p-1-a
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:46:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.873	49.873	1.47	1164266	0.00	10000	
Be	9	45	2	NoGas	0.262	0.262	16.54	1530	0.02	2000	
B	11	45	2	NoGas	10485.184	10485.184	0.79	35777848	0.03	300	>LDR
Na	23	45	1	He	334716.760	334716.760	0.61	321441365	0.10	500000	
Mg	24	45	1	He	142219.693	142219.693	1.52	73555490	0.19	500000	
Al	27	45	1	He	82.862	82.862	1.07	18037	0.46	200000	
K	39	45	1	He	60983.970	60983.970	1.00	18765023	0.32	500000	
Ca	44	45	1	He	339566.199	339566.199	2.19	5661710	6.00	500000	
Ti	47	45	1	He	3.239	3.239	14.48	367	0.88	2500	
V	51	45	1	He	3.362	3.362	3.76	13163	0.03	10000	
Cr	52	45	1	He	8.373	8.373	1.22	40986	0.02	10000	
Mn	55	45	1	He	855.395	855.395	2.16	2029154	0.04	10000	
Fe	56	45	1	He	5499.481	5499.481	2.42	18894943	0.03	200000	
Co	59	45	1	He	1.823	1.823	2.49	13421	0.01	5000	
Ni	60	45	1	He	12.850	12.850	0.83	25850	0.05	10000	
Cu	63	45	1	He	77.168	77.168	2.04	427401	0.02	10000	
Zn	66	45	1	He	18.753	18.753	2.38	14023	0.13	10000	
As	75	115	1	He	4.644	4.644	1.05	2263	0.21	10000	
Se	78	115	1	He	1.753	1.753	24.88	67	2.61	10000	
Sr	88	103	1	He	3271.903	3271.903	1.56	7419192	0.04	10000	
Mo	95	103	1	He	2.796	2.796	0.72	5891	0.05	2000	
Ag	107	103	1	He	0.039	0.039	23.49	273	0.01	300	
Cd	111	115	1	He	0.368	0.368	23.40	302	0.12	4000	
Sn	118	115	1	He	1.106	1.106	72.05	8188	0.01	2000	
Sb	123	115	1	He	0.750	0.750	10.47	1412	0.05	200	
Ba	137	115	1	He	399.044	399.044	1.66	283122	0.14	10000	
W	182	159	1	He	7.774	7.774	1.49	41844	0.02	2500	
Tl	205	165	1	He	0.274	0.274	11.22	2571	0.01	2000	
Pb	208	165	1	He	11.964	11.964	1.24	150268	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1890991	1.12	1674650	112.92	60	120	
Sc	45	1	He	361220	0.55	355173	101.70	60	120	
Sc	45	2	NoGas	9550060	0.66	8635903	110.59	60	120	
Rh	103	1	He	1333235	0.99	1470259	90.68	60	120	
In	115	1	He	464833	0.47	490642	94.74	60	120	
Tb	159	1	He	1400982	2.74	1434034	97.70	60	120	
Ho	165	1	He	1357315	0.89	1409606	96.29	60	120	
Bi	209	1	He	776479	0.57	906964	85.61	60	120	

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Sample Report

Sample Table

Sample Name	240-66170-a-1-a
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:50:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.354	4.354	1.04	206506	0.00	10000	
Be	9	45	2	NoGas	0.115	0.115	8.99	719	0.02	2000	
B	11	45	2	NoGas	273.883	273.883	1.09	970222	0.03	300	
Na	23	45	1	He	25961.007	25961.007	1.89	26158756	0.10	500000	
Mg	24	45	1	He	9053.825	9053.825	2.40	4911107	0.18	500000	
Al	27	45	1	He	325.223	325.223	2.52	73596	0.44	200000	
K	39	45	1	He	3075.155	3075.155	0.77	1017760	0.30	500000	
Ca	44	45	1	He	28556.246	28556.246	1.78	499623	5.72	500000	
Ti	47	45	1	He	0.412	0.412	37.79	50	0.82	2500	
V	51	45	1	He	0.386	0.386	10.52	2043	0.02	10000	
Cr	52	45	1	He	0.745	0.745	6.40	7152	0.01	10000	
Mn	55	45	1	He	3.534	3.534	0.81	9337	0.04	10000	
Fe	56	45	1	He	76.749	76.749	2.51	279006	0.03	200000	
Co	59	45	1	He	0.245	0.245	3.73	1961	0.01	5000	
Ni	60	45	1	He	1.337	1.337	4.77	3038	0.04	10000	
Cu	63	45	1	He	223.061	223.061	2.51	1290045	0.02	10000	
Zn	66	45	1	He	42.132	42.132	3.82	32301	0.13	10000	
As	75	115	1	He	0.404	0.404	3.05	328	0.12	10000	
Se	78	115	1	He	0.563	0.563	12.29	40	1.41	10000	
Sr	88	103	1	He	208.952	208.952	0.94	512555	0.04	10000	
Mo	95	103	1	He	2.118	2.118	2.89	4832	0.04	2000	
Ag	107	103	1	He	0.718	0.718	6.57	5019	0.01	300	
Cd	111	115	1	He	0.222	0.222	6.80	196	0.11	4000	
Sn	118	115	1	He	0.229	0.229	33.41	7257	0.00	2000	
Sb	123	115	1	He	0.826	0.826	6.02	1672	0.05	200	
Ba	137	115	1	He	35.569	35.569	0.53	27211	0.13	10000	
W	182	159	1	He	0.848	0.848	4.48	5972	0.01	2500	
Tl	205	165	1	He	0.080	0.080	6.23	811	0.01	2000	
Pb	208	165	1	He	0.761	0.761	2.28	10428	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1977247	1.44	1674650	118.07	60	120	
Sc	45	1	He	378859	1.26	355173	106.67	60	120	
Sc	45	2	NoGas	9860351	0.82	8635903	114.18	60	120	
Rh	103	1	He	1441836	1.89	1470259	98.07	60	120	
In	115	1	He	500873	1.00	490642	102.09	60	120	
Tb	159	1	He	1442028	0.28	1434034	100.56	60	120	
Ho	165	1	He	1410809	0.24	1409606	100.09	60	120	
Bi	209	1	He	866128	0.57	906964	95.50	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-21-a
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:54:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.701	6.701	0.85	258786	0.00	10000	
Be	9	45	2	NoGas	0.081	0.081	5.81	526	0.02	2000	
B	11	45	2	NoGas	581.985	581.985	1.85	2063131	0.03	300	>LDR
Na	23	45	1	He	50518.051	50518.051	1.31	49691228	0.10	500000	
Mg	24	45	1	He	24675.876	24675.876	2.73	13067991	0.19	500000	
Al	27	45	1	He	24.441	24.441	1.89	5601	0.44	200000	
K	39	45	1	He	3424.758	3424.758	1.83	1103606	0.31	500000	
Ca	44	45	1	He	49767.838	49767.838	2.50	849944	5.86	500000	
Ti	47	45	1	He	0.347	0.347	54.09	41	0.84	2500	
V	51	45	1	He	0.185	0.185	61.16	1217	0.02	10000	
Cr	52	45	1	He	0.160	0.160	26.21	4297	0.00	10000	
Mn	55	45	1	He	28.286	28.286	2.19	69226	0.04	10000	
Fe	56	45	1	He	1176.619	1176.619	2.59	4141445	0.03	200000	
Co	59	45	1	He	0.220	0.220	13.71	1727	0.01	5000	
Ni	60	45	1	He	0.224	0.224	3.99	696	0.03	10000	
Cu	63	45	1	He	0.781	0.781	4.49	7280	0.01	10000	
Zn	66	45	1	He	3.132	3.132	4.43	2879	0.11	10000	
As	75	115	1	He	1.225	1.225	5.37	716	0.17	10000	
Se	78	115	1	He	0.154	0.154	208.35	28	0.55	10000	
Sr	88	103	1	He	1141.827	1141.827	3.26	2772934	0.04	10000	
Mo	95	103	1	He	4.141	4.141	2.65	9334	0.04	2000	
Ag	107	103	1	He	0.007	0.007	28.10	71	0.01	300	
Cd	111	115	1	He	0.100	0.100	8.13	87	0.12	4000	
Sn	118	115	1	He	-3.025	-3.025	-1.69	1419	-0.21	2000	
Sb	123	115	1	He	0.101	0.101	12.61	229	0.04	200	
Ba	137	115	1	He	606.763	606.763	0.62	451276	0.13	10000	
W	182	159	1	He	0.095	0.095	27.71	1874	0.01	2500	
Tl	205	165	1	He	0.031	0.031	18.55	339	0.01	2000	
Pb	208	165	1	He	0.191	0.191	2.43	2968	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1961591	1.32	1674650	117.13	60	120	
Sc	45	1	He	369922	1.15	355173	104.15	60	120	
Sc	45	2	NoGas	9896496	0.05	8635903	114.60	60	120	
Rh	103	1	He	1428195	1.22	1470259	97.14	60	120	
In	115	1	He	487251	0.63	490642	99.31	60	120	
Tb	159	1	He	1396122	0.74	1434034	97.36	60	120	
Ho	165	1	He	1392574	0.95	1409606	98.79	60	120	
Bi	209	1	He	839263	0.63	906964	92.54	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	070_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:58:48-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.904	1.168	1351511	0.74	50	107.8	89.5	110.5	
Be	9	45	2	NoGas	50.029	0.360	307035	0.63	50	100.1	89.5	110.5	
B	11	45	2	NoGas	129.309	0.750	482911	0.52	50	258.6	89.5	110.5	CCV Failed
Na	23	45	1	He	25606.439	2.405	25165774	1.15	25000	102.4	89.5	110.5	
Mg	24	45	1	He	25527.267	2.900	13504864	1.86	25000	102.1	89.5	110.5	
Al	27	45	1	He	250.065	3.808	55236	2.47	250	100.0	89.5	110.5	
K	39	45	1	He	25419.951	2.064	8016064	0.71	25000	101.7	89.5	110.5	
Ca	44	45	1	He	25190.958	2.152	429924	0.87	25000	100.8	89.5	110.5	
Ti	47	45	1	He	50.614	4.760	5845	3.49	50	101.2	89.5	110.5	
V	51	45	1	He	50.331	1.264	194549	0.52	50	100.7	89.5	110.5	
Cr	52	45	1	He	50.004	2.958	232663	1.60	50	100.0	89.5	110.5	
Mn	55	45	1	He	250.353	2.998	607833	1.69	250	100.1	89.5	110.5	
Fe	56	45	1	He	12466.020	3.059	43806919	1.83	12500	99.7	89.5	110.5	
Co	59	45	1	He	50.233	2.839	376405	1.53	50	100.5	89.5	110.5	
Ni	60	45	1	He	50.036	2.605	102266	1.35	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.981	3.095	284165	1.81	50	100.0	89.5	110.5	
Zn	66	45	1	He	50.365	4.709	37549	3.61	50	100.7	89.5	110.5	
As	75	115	1	He	51.523	1.263	25067	1.37	50	103.0	89.5	110.5	
Se	78	115	1	He	51.129	2.920	1385	2.41	50	102.3	89.5	110.5	
Sr	88	103	1	He	51.056	0.642	125156	1.54	50	102.1	89.5	110.5	
Mo	95	103	1	He	51.303	0.555	116248	1.21	50	102.6	89.5	110.5	
Ag	107	103	1	He	51.118	0.422	355035	1.23	50	102.2	89.5	110.5	
Cd	111	115	1	He	51.196	0.866	43811	0.94	50	102.4	89.5	110.5	
Sn	118	115	1	He	48.834	2.873	91287	2.93	50	97.7	89.5	110.5	
Sb	123	115	1	He	51.133	1.581	98459	1.64	50	102.3	89.5	110.5	
Ba	137	115	1	He	50.364	1.650	37464	2.06	50	100.7	89.5	110.5	
W	182	159	1	He	51.692	6.056	272320	3.16	50	103.4	89.5	110.5	
Tl	205	165	1	He	50.126	1.281	476808	1.86	50	100.3	89.5	110.5	
Pb	208	165	1	He	50.062	0.814	646790	1.29	50	100.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2052085	1.13	1674650	122.54	60	120	ISTD warning
Sc	45	1	He	369547	1.36	355173	104.05	60	120	
Sc	45	2	NoGas	10329269	0.67	8635903	119.61	60	120	
Rh	103	1	He	1438799	0.91	1470259	97.86	60	120	
In	115	1	He	487102	1.12	490642	99.28	60	120	
Tb	159	1	He	1412282	2.97	1434034	98.48	60	120	
Ho	165	1	He	1399706	1.10	1409606	99.30	60	120	
Bi	209	1	He	856827	0.54	906964	94.47	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:02:52-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.129	87.3	117753	1.1	8	
Be	9	45	2	NoGas	0.087	33.5	574	31.5	1	
B	11	45	2	NoGas	52.219	2.4	195517	1.5	20	CCB High
Na	23	45	1	He	22.976	5.8	37495	3.3	1000	
Mg	24	45	1	He	3.496	28.4	2348	23.4	1000	
Al	27	45	1	He	0.005	580.5	222	3.1	50	
K	39	45	1	He	14.874	20.4	31447	2.8	1000	
Ca	44	45	1	He	5.300	105.7	395	25.2	1000	
Ti	47	45	1	He	0.046	61.0	7	50.0	20	
V	51	45	1	He	0.195	13.9	1288	8.0	2	
Cr	52	45	1	He	0.026	171.4	3777	5.2	2	
Mn	55	45	1	He	0.077	16.9	740	4.4	2	
Fe	56	45	1	He	3.534	32.9	15265	27.9	50	
Co	59	45	1	He	0.031	27.4	311	20.5	1	
Ni	60	45	1	He	-0.015	-215.7	211	32.8	2	
Cu	63	45	1	He	0.002	1206.3	2970	6.2	2	
Zn	66	45	1	He	-0.011	-608.0	584	8.8	20	
As	75	115	1	He	-0.014	-86.4	122	5.0	2	
Se	78	115	1	He	0.225	24.9	31	4.9	2	
Sr	88	103	1	He	0.127	17.0	568	11.2	10	
Mo	95	103	1	He	0.107	14.8	284	15.1	2	
Ag	107	103	1	He	0.007	35.6	79	25.8	0.2	
Cd	111	115	1	He	0.060	10.3	55	9.8	0.2	
Sn	118	115	1	He	0.627	5.7	8136	1.2	10	
Sb	123	115	1	He	0.149	7.8	339	6.5	2	
Ba	137	115	1	He	0.151	20.6	138	18.2	5	
W	182	159	1	He	0.317	19.8	3171	11.3	10	
Tl	205	165	1	He	0.073	30.3	746	27.5	0.5	
Pb	208	165	1	He	0.039	15.6	1031	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2037158	1.11	1674650	121.65	60	120	ISTD warning
Sc	45	1	He	379488	0.41	355173	106.85	60	120	
Sc	45	2	NoGas	10178434	1.53	8635903	117.86	60	120	
Rh	103	1	He	1536714	1.51	1470259	104.52	60	120	
In	115	1	He	511588	0.56	490642	104.27	60	120	
Tb	159	1	He	1463233	1.25	1434034	102.04	60	120	
Ho	165	1	He	1421226	1.01	1409606	100.82	60	120	
Bi	209	1	He	906217	0.57	906964	99.92	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-22-a
Data File Name	072SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:07:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.178	12.178	0.47	392733	0.00	10000	
Be	9	45	2	NoGas	0.126	0.126	17.06	819	0.02	2000	
B	11	45	2	NoGas	173.292	173.292	0.82	640584	0.03	300	
Na	23	45	1	He	28022.370	28022.370	1.92	28595678	0.10	500000	
Mg	24	45	1	He	33665.383	33665.383	2.53	18493787	0.18	500000	
Al	27	45	1	He	1512.843	1512.843	2.02	345920	0.44	200000	
K	39	45	1	He	2418.372	2418.372	1.00	816280	0.30	500000	
Ca	44	45	1	He	161169.515	161169.515	2.56	2854568	5.65	500000	
Ti	47	45	1	He	38.796	38.796	4.18	4654	0.83	2500	
V	51	45	1	He	3.116	3.116	4.34	12999	0.02	10000	
Cr	52	45	1	He	7.755	7.755	2.76	40591	0.02	10000	
Mn	55	45	1	He	87.125	87.125	2.35	220030	0.04	10000	
Fe	56	45	1	He	2607.140	2607.140	1.47	9516352	0.03	200000	
Co	59	45	1	He	1.458	1.458	1.51	11418	0.01	5000	
Ni	60	45	1	He	4.992	4.992	5.66	10814	0.05	10000	
Cu	63	45	1	He	2.066	2.066	3.46	15061	0.01	10000	
Zn	66	45	1	He	6.867	6.867	1.38	5834	0.12	10000	
As	75	115	1	He	16.020	16.020	3.46	8111	0.20	10000	
Se	78	115	1	He	0.529	0.529	73.61	39	1.36	10000	
Sr	88	103	1	He	47809.595	47809.595	1.08	119807462	0.04	10000	>LDR
Mo	95	103	1	He	89.743	89.743	2.34	208233	0.04	2000	
Ag	107	103	1	He	0.034	0.034	8.34	263	0.01	300	
Cd	111	115	1	He	0.055	0.055	27.69	49	0.11	4000	
Sn	118	115	1	He	-3.170	-3.170	-3.75	1200	-0.26	2000	
Sb	123	115	1	He	0.222	0.222	1.74	476	0.05	200	
Ba	137	115	1	He	148.639	148.639	2.08	113785	0.13	10000	
W	182	159	1	He	0.146	0.146	34.09	2211	0.01	2500	
Tl	205	165	1	He	0.080	0.080	3.87	810	0.01	2000	
Pb	208	165	1	He	1.371	1.371	1.65	18313	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2036048	0.33	1674650	121.58	60	120	ISTD warning
Sc	45	1	He	383679	0.64	355173	108.03	60	120	
Sc	45	2	NoGas	10255161	0.42	8635903	118.75	60	120	
Rh	103	1	He	1473452	0.29	1470259	100.22	60	120	
In	115	1	He	501513	0.90	490642	102.22	60	120	
Tb	159	1	He	1445067	1.64	1434034	100.77	60	120	
Ho	165	1	He	1407521	2.45	1409606	99.85	60	120	
Bi	209	1	He	868529	2.29	906964	95.76	60	120	

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Sample Report

Sample Table

Sample Name	240-66143-f-1-b
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:11:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.579	0.579	14.37	127439	0.00	10000	
Be	9	45	2	NoGas	0.064	0.064	29.53	433	0.01	2000	
B	11	45	2	NoGas	36.735	36.735	1.30	138722	0.03	300	
Na	23	45	1	He	290.992	290.992	1.19	312781	0.09	500000	
Mg	24	45	1	He	154.747	154.747	1.14	85878	0.18	500000	
Al	27	45	1	He	348.734	348.734	2.84	80288	0.43	200000	
K	39	45	1	He	106.484	106.484	4.50	61988	0.17	500000	
Ca	44	45	1	He	928.990	928.990	2.76	16839	5.52	500000	
Ti	47	45	1	He	13.916	13.916	3.97	1678	0.83	2500	
V	51	45	1	He	1.261	1.261	3.36	5600	0.02	10000	
Cr	52	45	1	He	1.478	1.478	2.54	10778	0.01	10000	
Mn	55	45	1	He	62.233	62.233	1.34	158078	0.04	10000	
Fe	56	45	1	He	936.175	936.175	1.07	3435141	0.03	200000	
Co	59	45	1	He	0.287	0.287	4.36	2318	0.01	5000	
Ni	60	45	1	He	1.320	1.320	9.75	3056	0.04	10000	
Cu	63	45	1	He	3.909	3.909	1.47	25958	0.02	10000	
Zn	66	45	1	He	7.729	7.729	6.01	6524	0.12	10000	
As	75	115	1	He	0.629	0.629	3.62	452	0.14	10000	
Se	78	115	1	He	0.370	0.370	48.02	35	1.04	10000	
Sr	88	103	1	He	9.732	9.732	28.57	25535	0.04	10000	
Mo	95	103	1	He	0.440	0.440	9.59	1083	0.04	2000	
Ag	107	103	1	He	0.011	0.011	32.12	103	0.01	300	
Cd	111	115	1	He	0.153	0.153	9.07	139	0.11	4000	
Sn	118	115	1	He	-2.780	-2.780	-2.97	1948	-0.14	2000	
Sb	123	115	1	He	0.180	0.180	14.59	403	0.04	200	
Ba	137	115	1	He	5.801	5.801	3.92	4580	0.13	10000	
W	182	159	1	He	1.094	1.094	8.50	7398	0.01	2500	
Tl	205	165	1	He	0.024	0.024	20.93	270	0.01	2000	
Pb	208	165	1	He	5.290	5.290	2.29	69461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2059357	0.65	1674650	122.97	60	120	ISTD warning
Sc	45	1	He	385524	0.85	355173	108.55	60	120	
Sc	45	2	NoGas	10139439	0.57	8635903	117.41	60	120	
Rh	103	1	He	1530541	0.87	1470259	104.10	60	120	
In	115	1	He	514993	0.51	490642	104.96	60	120	
Tb	159	1	He	1465389	2.85	1434034	102.19	60	120	
Ho	165	1	He	1413419	2.25	1409606	100.27	60	120	
Bi	209	1	He	917279	2.20	906964	101.14	60	120	

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Sample Report

Sample Table

Sample Name	240-66143-f-2-b
Data File Name	074SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:15:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.080	0.080	60.91	116708	0.00	10000	
Be	9	45	2	NoGas	0.039	0.039	9.39	281	0.01	2000	
B	11	45	2	NoGas	29.019	29.019	0.98	111227	0.03	300	
Na	23	45	1	He	17.397	17.397	3.95	31814	0.05	500000	
Mg	24	45	1	He	1.558	1.558	25.02	1293	0.12	500000	
Al	27	45	1	He	1.972	1.972	4.87	666	0.30	200000	
K	39	45	1	He	11.246	11.246	42.10	30219	0.04	500000	
Ca	44	45	1	He	2.298	2.298	160.89	342	0.67	500000	
Ti	47	45	1	He	0.093	0.093	113.85	12	0.76	2500	
V	51	45	1	He	0.076	0.076	135.84	817	0.01	10000	
Cr	52	45	1	He	-0.049	-0.049	-74.25	3417	0.00	10000	
Mn	55	45	1	He	5.156	5.156	2.69	13371	0.04	10000	
Fe	56	45	1	He	5.223	5.223	1.04	21314	0.02	200000	
Co	59	45	1	He	0.013	0.013	15.16	176	0.01	5000	
Ni	60	45	1	He	0.124	0.124	17.77	502	0.02	10000	
Cu	63	45	1	He	1.783	1.783	0.24	13243	0.01	10000	
Zn	66	45	1	He	1.031	1.031	1.46	1368	0.08	10000	
As	75	115	1	He	-0.036	-0.036	-50.13	111	-0.03	10000	
Se	78	115	1	He	0.182	0.182	61.36	30	0.61	10000	
Sr	88	103	1	He	1.132	1.132	5.90	3141	0.04	10000	
Mo	95	103	1	He	0.048	0.048	16.00	139	0.03	2000	
Ag	107	103	1	He	0.002	0.002	148.45	42	0.01	300	
Cd	111	115	1	He	0.019	0.019	14.99	18	0.11	4000	
Sn	118	115	1	He	-3.060	-3.060	-4.84	1426	-0.21	2000	
Sb	123	115	1	He	0.049	0.049	41.31	136	0.04	200	
Ba	137	115	1	He	0.037	0.037	28.96	49	0.08	10000	
W	182	159	1	He	0.036	0.036	174.01	1611	0.00	2500	
Tl	205	165	1	He	0.008	0.008	38.75	119	0.01	2000	
Pb	208	165	1	He	0.024	0.024	13.18	832	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2034046	1.49	1674650	121.46	60	120	ISTD warning
Sc	45	1	He	378859	1.00	355173	106.67	60	120	
Sc	45	2	NoGas	10181664	0.50	8635903	117.90	60	120	
Rh	103	1	He	1512371	0.48	1470259	102.86	60	120	
In	115	1	He	511961	0.54	490642	104.35	60	120	
Tb	159	1	He	1435135	0.81	1434034	100.08	60	120	
Ho	165	1	He	1409200	1.70	1409606	99.97	60	120	
Bi	209	1	He	912656	0.25	906964	100.63	60	120	

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Sample Report

Sample Table

Sample Name	490-105694-d-2-b
Data File Name	075SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:19:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.167	17.167	1.17	516668	0.00	10000	
Be	9	45	2	NoGas	0.685	0.685	9.35	4308	0.02	2000	
B	11	45	2	NoGas	56.801	56.801	0.30	218230	0.03	300	
Na	23	45	1	He	124556.678	124556.678	1.35	124631469	0.10	500000	
Mg	24	45	1	He	27873.140	27873.140	1.78	15019890	0.19	500000	
Al	27	45	1	He	12305.849	12305.849	4.06	2758437	0.45	200000	
K	39	45	1	He	4422.158	4422.158	2.03	1442206	0.31	500000	
Ca	44	45	1	He	143030.138	143030.138	0.79	2484920	5.76	500000	
Ti	47	45	1	He	142.946	142.946	4.58	16816	0.85	2500	
V	51	45	1	He	21.649	21.649	5.57	85516	0.03	10000	
Cr	52	45	1	He	33.464	33.464	3.60	159798	0.02	10000	
Mn	55	45	1	He	3274.135	3274.135	1.93	8090747	0.04	10000	
Fe	56	45	1	He	35640.115	35640.115	3.06	127570644	0.03	200000	
Co	59	45	1	He	7.468	7.468	3.24	57066	0.01	5000	
Ni	60	45	1	He	19.077	19.077	2.54	39865	0.05	10000	
Cu	63	45	1	He	17.814	17.814	2.15	105052	0.02	10000	
Zn	66	45	1	He	69.847	69.847	2.41	52820	0.13	10000	
As	75	115	1	He	24.101	24.101	1.18	11568	0.21	10000	
Se	78	115	1	He	2.132	2.132	7.20	79	2.70	10000	
Sr	88	103	1	He	531.981	531.981	2.25	1268017	0.04	10000	
Mo	95	103	1	He	8.755	8.755	3.15	19342	0.05	2000	
Ag	107	103	1	He	0.036	0.036	31.37	267	0.01	300	
Cd	111	115	1	He	1.211	1.211	3.67	1018	0.12	4000	
Sn	118	115	1	He	1.249	1.249	31.20	8662	0.01	2000	
Sb	123	115	1	He	0.514	0.514	5.75	1004	0.05	200	
Ba	137	115	1	He	254.848	254.848	1.04	185896	0.14	10000	
W	182	159	1	He	0.676	0.676	3.35	4990	0.01	2500	
Tl	205	165	1	He	0.177	0.177	3.92	1733	0.01	2000	
Pb	208	165	1	He	82.442	82.442	0.38	1070721	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2018321	0.69	1674650	120.52	60	120	ISTD warning
Sc	45	1	He	376331	0.20	355173	105.96	60	120	
Sc	45	2	NoGas	10466939	0.14	8635903	121.20	60	120	ISTD warning
Rh	103	1	He	1401426	1.85	1470259	95.32	60	120	
In	115	1	He	477823	1.12	490642	97.39	60	120	
Tb	159	1	He	1426495	1.91	1434034	99.47	60	120	
Ho	165	1	He	1407487	0.84	1409606	99.85	60	120	
Bi	209	1	He	819508	0.39	906964	90.36	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-1-b
Data File Name	076SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:23:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.237	9.237	1.44	327220	0.00	10000	
Be	9	45	2	NoGas	0.034	0.034	29.71	256	0.01	2000	
B	11	45	2	NoGas	89.115	89.115	0.31	333591	0.03	300	
Na	23	45	1	He	411713.963	411713.963	1.40	424165420	0.10	500000	
Mg	24	45	1	He	70639.433	70639.433	2.29	39194476	0.18	500000	
Al	27	45	1	He	4.169	4.169	9.83	1188	0.35	200000	
K	39	45	1	He	1369.331	1369.331	1.09	478632	0.29	500000	
Ca	44	45	1	He	217391.136	217391.136	0.96	3889009	5.59	500000	
Ti	47	45	1	He	0.256	0.256	33.90	32	0.79	2500	
V	51	45	1	He	0.129	0.129	17.65	1050	0.01	10000	
Cr	52	45	1	He	0.063	0.063	95.49	4033	0.00	10000	
Mn	55	45	1	He	352.295	352.295	2.00	896911	0.04	10000	
Fe	56	45	1	He	134.282	134.282	0.42	497502	0.03	200000	
Co	59	45	1	He	1.097	1.097	2.67	8698	0.01	5000	
Ni	60	45	1	He	4.701	4.701	3.94	10301	0.05	10000	
Cu	63	45	1	He	0.468	0.468	7.16	5782	0.01	10000	
Zn	66	45	1	He	4.048	4.048	7.29	3722	0.11	10000	
As	75	115	1	He	0.230	0.230	6.06	240	0.10	10000	
Se	78	115	1	He	0.280	0.280	67.66	32	0.88	10000	
Sr	88	103	1	He	306.314	306.314	2.92	727087	0.04	10000	
Mo	95	103	1	He	0.809	0.809	4.47	1799	0.04	2000	
Ag	107	103	1	He	0.004	0.004	42.32	51	0.01	300	
Cd	111	115	1	He	0.123	0.123	5.79	108	0.11	4000	
Sn	118	115	1	He	-3.294	-3.294	-2.66	974	-0.34	2000	
Sb	123	115	1	He	0.099	0.099	13.73	231	0.04	200	
Ba	137	115	1	He	217.290	217.290	1.23	165355	0.13	10000	
W	182	159	1	He	0.040	0.040	66.37	1648	0.00	2500	
Tl	205	165	1	He	0.025	0.025	3.56	280	0.01	2000	
Pb	208	165	1	He	0.048	0.048	12.12	1147	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1984560	1.20	1674650	118.51	60	120	
Sc	45	1	He	387529	0.81	355173	109.11	60	120	
Sc	45	2	NoGas	10298057	0.32	8635903	119.25	60	120	
Rh	103	1	He	1395505	0.91	1470259	94.92	60	120	
In	115	1	He	498468	1.23	490642	101.60	60	120	
Tb	159	1	He	1448354	0.79	1434034	101.00	60	120	
Ho	165	1	He	1402867	2.27	1409606	99.52	60	120	
Bi	209	1	He	811643	0.44	906964	89.49	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-2-b
Data File Name	077SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:27:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	671.940	671.940	1.26	15939440	0.00	10000	
Be	9	45	2	NoGas	0.060	0.060	32.52	426	0.01	2000	
B	11	45	2	NoGas	1863.861	1863.861	1.50	7073431	0.03	300	>LDR
Na	23	45	1	He	60682.547	60682.547	1.53	63095773	0.10	500000	
Mg	24	45	1	He	83184.056	83184.056	3.35	46566231	0.18	500000	
Al	27	45	1	He	280.556	280.556	3.45	65557	0.43	200000	
K	39	45	1	He	4406.035	4406.035	0.90	1493205	0.30	500000	
Ca	44	45	1	He	199421.427	199421.427	1.48	3599702	5.54	500000	
Ti	47	45	1	He	6.788	6.788	8.05	831	0.82	2500	
V	51	45	1	He	0.604	0.604	27.16	2993	0.02	10000	
Cr	52	45	1	He	0.770	0.770	4.04	7501	0.01	10000	
Mn	55	45	1	He	699.095	699.095	2.40	1795293	0.04	10000	
Fe	56	45	1	He	1558.591	1558.591	3.19	5798180	0.03	200000	
Co	59	45	1	He	3.032	3.032	2.71	24115	0.01	5000	
Ni	60	45	1	He	2.366	2.366	3.20	5358	0.04	10000	
Cu	63	45	1	He	2.216	2.216	4.00	16245	0.01	10000	
Zn	66	45	1	He	4.005	4.005	5.99	3722	0.11	10000	
As	75	115	1	He	0.565	0.565	6.83	407	0.14	10000	
Se	78	115	1	He	0.504	0.504	47.68	38	1.32	10000	
Sr	88	103	1	He	650.963	650.963	0.54	1624833	0.04	10000	
Mo	95	103	1	He	0.104	0.104	6.61	264	0.04	2000	
Ag	107	103	1	He	0.003	0.003	2.06	43	0.01	300	
Cd	111	115	1	He	0.115	0.115	2.68	101	0.11	4000	
Sn	118	115	1	He	-3.406	-3.406	-1.18	778	-0.44	2000	
Sb	123	115	1	He	0.090	0.090	19.73	213	0.04	200	
Ba	137	115	1	He	433.191	433.191	1.45	330770	0.13	10000	
W	182	159	1	He	0.654	0.654	8.01	5027	0.01	2500	
Tl	205	165	1	He	0.013	0.013	23.21	163	0.01	2000	
Pb	208	165	1	He	2.555	2.555	2.05	34003	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1749973	0.80	1674650	104.50	60	120	
Sc	45	1	He	391060	1.22	355173	110.10	60	120	
Sc	45	2	NoGas	10615608	1.51	8635903	122.92	60	120	ISTD warning
Rh	103	1	He	1467445	0.95	1470259	99.81	60	120	
In	115	1	He	500250	0.36	490642	101.96	60	120	
Tb	159	1	He	1471159	0.22	1434034	102.59	60	120	
Ho	165	1	He	1421092	1.10	1409606	100.81	60	120	
Bi	209	1	He	852890	0.72	906964	94.04	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-3-b
Data File Name	078SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:31:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.029	10.029	0.29	350629	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	18.01	300	0.01	2000	
B	11	45	2	NoGas	7307.490	7307.490	0.04	27305469	0.03	300	>LDR
Na	23	45	1	He	17303.180	17303.180	1.89	18181656	0.10	500000	
Mg	24	45	1	He	17245.727	17245.727	1.75	9752544	0.18	500000	
Al	27	45	1	He	101.829	101.829	2.49	24182	0.42	200000	
K	39	45	1	He	10264.729	10264.729	0.65	3476557	0.30	500000	
Ca	44	45	1	He	102278.998	102278.998	1.97	1864898	5.48	500000	
Ti	47	45	1	He	2.493	2.493	6.60	309	0.81	2500	
V	51	45	1	He	0.428	0.428	15.75	2303	0.02	10000	
Cr	52	45	1	He	0.266	0.266	8.63	5105	0.01	10000	
Mn	55	45	1	He	2853.780	2853.780	0.97	7400899	0.04	10000	
Fe	56	45	1	He	783.561	783.561	2.20	2945762	0.03	200000	
Co	59	45	1	He	0.143	0.143	14.28	1221	0.01	5000	
Ni	60	45	1	He	6.590	6.590	2.53	14616	0.05	10000	
Cu	63	45	1	He	0.086	0.086	21.06	3594	0.00	10000	
Zn	66	45	1	He	1.231	1.231	20.31	1583	0.08	10000	
As	75	115	1	He	0.204	0.204	4.97	233	0.09	10000	
Se	78	115	1	He	0.093	0.093	146.30	28	0.34	10000	
Sr	88	103	1	He	268.257	268.257	1.26	700567	0.04	10000	
Mo	95	103	1	He	5.074	5.074	1.48	12288	0.04	2000	
Ag	107	103	1	He	0.002	0.002	36.21	38	0.00	300	
Cd	111	115	1	He	0.029	0.029	35.54	26	0.11	4000	
Sn	118	115	1	He	-3.386	-3.386	-1.93	833	-0.41	2000	
Sb	123	115	1	He	0.040	0.040	12.26	119	0.03	200	
Ba	137	115	1	He	101.989	101.989	0.63	79728	0.13	10000	
W	182	159	1	He	1.415	1.415	8.80	9277	0.02	2500	
Tl	205	165	1	He	0.004	0.004	106.15	84	0.01	2000	
Pb	208	165	1	He	0.135	0.135	7.67	2349	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089750	2.21	1674650	124.79	60	120	ISTD warning
Sc	45	1	He	394953	0.68	355173	111.20	60	120	
Sc	45	2	NoGas	10457217	0.85	8635903	121.09	60	120	ISTD warning
Rh	103	1	He	1535054	0.67	1470259	104.41	60	120	
In	115	1	He	512032	0.66	490642	104.36	60	120	
Tb	159	1	He	1485839	0.89	1434034	103.61	60	120	
Ho	165	1	He	1457624	0.39	1409606	103.41	60	120	
Bi	209	1	He	882659	0.18	906964	97.32	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-4-b
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:35:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.627	16.627	1.31	509878	0.00	10000	
Be	9	45	2	NoGas	0.035	0.035	30.97	270	0.01	2000	
B	11	45	2	NoGas	366.030	366.030	1.98	1390131	0.03	300	>LDR
Na	23	45	1	He	29232.696	29232.696	2.15	30469392	0.10	500000	
Mg	24	45	1	He	21979.329	21979.329	1.84	12333476	0.18	500000	
Al	27	45	1	He	43.268	43.268	2.99	10326	0.42	200000	
K	39	45	1	He	6625.241	6625.241	1.29	2236431	0.30	500000	
Ca	44	45	1	He	118202.366	118202.366	1.71	2138510	5.53	500000	
Ti	47	45	1	He	1.732	1.732	21.49	213	0.81	2500	
V	51	45	1	He	1.142	1.142	6.06	5205	0.02	10000	
Cr	52	45	1	He	0.281	0.281	21.72	5139	0.01	10000	
Mn	55	45	1	He	1907.644	1907.644	1.81	4909045	0.04	10000	
Fe	56	45	1	He	4417.104	4417.104	2.23	16465729	0.03	200000	
Co	59	45	1	He	0.268	0.268	8.04	2206	0.01	5000	
Ni	60	45	1	He	1.123	1.123	10.86	2679	0.04	10000	
Cu	63	45	1	He	0.776	0.776	1.48	7687	0.01	10000	
Zn	66	45	1	He	1.122	1.122	6.54	1486	0.08	10000	
As	75	115	1	He	13.400	13.400	2.10	6940	0.19	10000	
Se	78	115	1	He	0.461	0.461	42.97	38	1.22	10000	
Sr	88	103	1	He	288.225	288.225	1.09	743697	0.04	10000	
Mo	95	103	1	He	0.408	0.408	1.16	999	0.04	2000	
Ag	107	103	1	He	0.003	0.003	73.32	48	0.01	300	
Cd	111	115	1	He	0.056	0.056	3.81	51	0.11	4000	
Sn	118	115	1	He	-3.514	-3.514	-1.01	600	-0.59	2000	
Sb	123	115	1	He	0.090	0.090	23.82	219	0.04	200	
Ba	137	115	1	He	116.330	116.330	1.10	90822	0.13	10000	
W	182	159	1	He	0.055	0.055	11.97	1800	0.00	2500	
Tl	205	165	1	He	0.005	0.005	36.78	86	0.01	2000	
Pb	208	165	1	He	0.109	0.109	4.22	1957	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098868	0.59	1674650	125.33	60	120	ISTD warning
Sc	45	1	He	391933	1.13	355173	110.35	60	120	
Sc	45	2	NoGas	10585970	0.30	8635903	122.58	60	120	ISTD warning
Rh	103	1	He	1516747	0.83	1470259	103.16	60	120	
In	115	1	He	511421	0.62	490642	104.24	60	120	
Tb	159	1	He	1507186	1.39	1434034	105.10	60	120	
Ho	165	1	He	1427573	0.97	1409606	101.27	60	120	
Bi	209	1	He	892379	0.46	906964	98.39	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-5-b
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:39:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.542	8.542	0.23	312123	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	40.93	230	0.01	2000	
B	11	45	2	NoGas	222.036	222.036	1.02	824711	0.03	300	
Na	23	45	1	He	307062.374	307062.374	0.82	316139928	0.10	500000	
Mg	24	45	1	He	54325.040	54325.040	1.28	30122973	0.18	500000	
Al	27	45	1	He	1.874	1.874	10.55	658	0.28	200000	
K	39	45	1	He	1383.497	1383.497	1.07	482976	0.29	500000	
Ca	44	45	1	He	249981.664	249981.664	1.19	4468789	5.59	500000	
Ti	47	45	1	He	0.201	0.201	48.13	26	0.79	2500	
V	51	45	1	He	0.211	0.211	22.76	1382	0.02	10000	
Cr	52	45	1	He	0.148	0.148	48.49	4439	0.00	10000	
Mn	55	45	1	He	279.683	279.683	1.54	711696	0.04	10000	
Fe	56	45	1	He	1763.418	1763.418	1.62	6497557	0.03	200000	
Co	59	45	1	He	1.359	1.359	1.73	10752	0.01	5000	
Ni	60	45	1	He	6.195	6.195	4.84	13490	0.05	10000	
Cu	63	45	1	He	0.000	0.000	-1813.14	3014	0.00	10000	
Zn	66	45	1	He	5.589	5.589	2.71	4905	0.11	10000	
As	75	115	1	He	1.033	1.033	4.75	635	0.16	10000	
Se	78	115	1	He	0.290	0.290	28.53	32	0.91	10000	
Sr	88	103	1	He	325.998	325.998	0.83	799911	0.04	10000	
Mo	95	103	1	He	0.213	0.213	7.25	507	0.04	2000	
Ag	107	103	1	He	0.003	0.003	34.68	43	0.01	300	
Cd	111	115	1	He	0.026	0.026	10.04	24	0.11	4000	
Sn	118	115	1	He	-3.490	-3.490	-2.47	622	-0.56	2000	
Sb	123	115	1	He	0.109	0.109	13.88	249	0.04	200	
Ba	137	115	1	He	255.396	255.396	0.62	193447	0.13	10000	
W	182	159	1	He	0.025	0.025	282.20	1574	0.00	2500	
Tl	205	165	1	He	0.016	0.016	9.50	191	0.01	2000	
Pb	208	165	1	He	0.013	0.013	7.33	680	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1998047	0.79	1674650	119.31	60	120	
Sc	45	1	He	387248	0.07	355173	109.03	60	120	
Sc	45	2	NoGas	10324591	0.46	8635903	119.55	60	120	
Rh	103	1	He	1442412	1.27	1470259	98.11	60	120	
In	115	1	He	496176	1.27	490642	101.13	60	120	
Tb	159	1	He	1458785	2.36	1434034	101.73	60	120	
Ho	165	1	He	1401461	2.78	1409606	99.42	60	120	
Bi	209	1	He	828784	0.89	906964	91.38	60	120	

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Sample Report

Sample Table

Sample Name	240-66171-b-1-b
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:43:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.882	5.882	3.01	252697	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	29.53	241	0.01	2000	
B	11	45	2	NoGas	180.366	180.366	0.44	674984	0.03	300	
Na	23	45	1	He	40429.661	40429.661	2.60	41540159	0.10	500000	
Mg	24	45	1	He	13433.090	13433.090	1.89	7432169	0.18	500000	
Al	27	45	1	He	351.480	351.480	3.36	81102	0.43	200000	
K	39	45	1	He	8452.091	8452.091	2.48	2805188	0.30	500000	
Ca	44	45	1	He	40345.985	40345.985	1.59	719876	5.60	500000	
Ti	47	45	1	He	0.893	0.893	21.48	109	0.82	2500	
V	51	45	1	He	0.767	0.767	27.45	3618	0.02	10000	
Cr	52	45	1	He	2.401	2.401	8.03	15223	0.02	10000	
Mn	55	45	1	He	14.376	14.376	2.01	37028	0.04	10000	
Fe	56	45	1	He	172.934	172.934	2.79	638013	0.03	200000	
Co	59	45	1	He	0.234	0.234	5.41	1909	0.01	5000	
Ni	60	45	1	He	3.006	3.006	3.03	6657	0.05	10000	
Cu	63	45	1	He	251.912	251.912	2.40	1485630	0.02	10000	
Zn	66	45	1	He	82.067	82.067	1.47	63617	0.13	10000	
As	75	115	1	He	0.373	0.373	13.18	318	0.12	10000	
Se	78	115	1	He	0.458	0.458	13.73	38	1.22	10000	
Sr	88	103	1	He	282.762	282.762	1.98	709943	0.04	10000	
Mo	95	103	1	He	3.789	3.789	2.58	8827	0.04	2000	
Ag	107	103	1	He	4.846	4.846	1.78	34541	0.01	300	
Cd	111	115	1	He	0.142	0.142	7.46	128	0.11	4000	
Sn	118	115	1	He	1.856	1.856	6.23	10352	0.02	2000	
Sb	123	115	1	He	0.890	0.890	5.47	1835	0.05	200	
Ba	137	115	1	He	51.340	51.340	2.10	40014	0.13	10000	
W	182	159	1	He	0.734	0.734	8.14	5442	0.01	2500	
Tl	205	165	1	He	0.018	0.018	22.77	210	0.01	2000	
Pb	208	165	1	He	0.891	0.891	1.51	12091	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2068877	0.86	1674650	123.54	60	120	ISTD warning
Sc	45	1	He	386425	1.25	355173	108.80	60	120	
Sc	45	2	NoGas	10385506	0.35	8635903	120.26	60	120	ISTD warning
Rh	103	1	He	1475931	1.06	1470259	100.39	60	120	
In	115	1	He	510495	1.99	490642	104.05	60	120	
Tb	159	1	He	1464106	0.26	1434034	102.10	60	120	
Ho	165	1	He	1408473	1.93	1409606	99.92	60	120	
Bi	209	1	He	891678	0.05	906964	98.31	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	082_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:47:41-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.847	1.672	1328419	1.42	50	113.7	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.944	0.883	309934	0.63	50	107.9	89.5	110.5	
B	11	45	2	NoGas	109.265	0.666	382868	0.93	50	218.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25034.948	1.245	25592667	1.30	25000	100.1	89.5	110.5	
Mg	24	45	1	He	25039.534	2.704	13777748	2.12	25000	100.2	89.5	110.5	
Al	27	45	1	He	247.361	3.506	56836	2.90	250	98.9	89.5	110.5	
K	39	45	1	He	25339.239	0.560	8311404	0.61	25000	101.4	89.5	110.5	
Ca	44	45	1	He	24937.674	1.712	442660	1.03	25000	99.8	89.5	110.5	
Ti	47	45	1	He	51.222	1.078	6154	1.02	50	102.4	89.5	110.5	
V	51	45	1	He	50.290	3.742	202161	3.41	50	100.6	89.5	110.5	
Cr	52	45	1	He	49.201	2.327	238176	1.82	50	98.4	89.5	110.5	
Mn	55	45	1	He	246.619	2.184	622819	1.72	250	98.6	89.5	110.5	
Fe	56	45	1	He	12433.516	2.304	45447278	1.92	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.739	2.060	387674	1.65	50	99.5	89.5	110.5	
Ni	60	45	1	He	48.896	2.499	103946	1.77	50	97.8	89.5	110.5	
Cu	63	45	1	He	49.391	2.105	292120	1.61	50	98.8	89.5	110.5	
Zn	66	45	1	He	50.374	2.488	39066	1.84	50	100.7	89.5	110.5	
As	75	115	1	He	52.689	0.893	26369	0.56	50	105.4	89.5	110.5	
Se	78	115	1	He	51.816	0.714	1444	1.25	50	103.6	89.5	110.5	
Sr	88	103	1	He	51.027	1.346	129329	1.43	50	102.1	89.5	110.5	
Mo	95	103	1	He	50.915	2.303	119303	3.05	50	101.8	89.5	110.5	
Ag	107	103	1	He	51.033	1.742	366454	1.31	50	102.1	89.5	110.5	
Cd	111	115	1	He	51.216	2.010	45090	1.94	50	102.4	89.5	110.5	
Sn	118	115	1	He	48.636	0.666	93559	0.83	50	97.3	89.5	110.5	
Sb	123	115	1	He	51.798	1.086	102610	0.72	50	103.6	89.5	110.5	
Ba	137	115	1	He	50.580	1.705	38704	1.05	50	101.2	89.5	110.5	
W	182	159	1	He	50.394	2.564	274783	3.06	50	100.8	89.5	110.5	
Tl	205	165	1	He	50.871	1.902	482014	2.13	50	101.7	89.5	110.5	
Pb	208	165	1	He	50.956	2.435	655668	0.81	50	101.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1962070	3.44	1674650	117.16	60	120	
Sc	45	1	He	384317	0.91	355173	108.21	60	120	
Sc	45	2	NoGas	9670530	1.06	8635903	111.98	60	120	
Rh	103	1	He	1487722	1.16	1470259	101.19	60	120	
In	115	1	He	501124	0.72	490642	102.14	60	120	
Tb	159	1	He	1459721	0.99	1434034	101.79	60	120	
Ho	165	1	He	1394699	3.09	1409606	98.94	60	120	
Bi	209	1	He	865214	0.98	906964	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	083_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:51:43-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.204	6.5	117064	1.0	8	
Be	9	45	2	NoGas	0.023	17.7	185	12.5	1	
B	11	45	2	NoGas	38.878	0.8	144079	0.8	20	CCB High
Na	23	45	1	He	29.025	1.8	41919	1.7	1000	
Mg	24	45	1	He	3.382	35.0	2200	29.0	1000	
Al	27	45	1	He	0.055	401.6	224	21.6	50	
K	39	45	1	He	15.385	15.4	30397	3.0	1000	
Ca	44	45	1	He	5.628	35.0	385	9.5	1000	
Ti	47	45	1	He	0.039	157.5	6	124.9	20	
V	51	45	1	He	0.145	64.9	1048	33.5	2	
Cr	52	45	1	He	0.045	13.9	3718	1.4	2	
Mn	55	45	1	He	0.145	21.7	873	8.0	2	
Fe	56	45	1	He	3.821	38.4	15686	33.4	50	
Co	59	45	1	He	0.006	83.0	117	31.8	1	
Ni	60	45	1	He	-0.032	-25.1	170	9.0	2	
Cu	63	45	1	He	0.082	42.1	3295	6.1	2	
Zn	66	45	1	He	-0.015	-654.2	559	12.8	20	
As	75	115	1	He	-0.012	-93.1	119	3.5	2	
Se	78	115	1	He	0.362	76.3	34	20.7	2	
Sr	88	103	1	He	0.333	5.4	1067	3.9	10	
Mo	95	103	1	He	0.096	16.0	249	14.4	2	
Ag	107	103	1	He	0.005	81.0	57	47.1	0.2	
Cd	111	115	1	He	0.016	27.0	15	25.8	0.2	
Sn	118	115	1	He	0.318	74.3	7291	4.4	10	
Sb	123	115	1	He	0.101	17.8	232	14.4	2	
Ba	137	115	1	He	0.032	25.8	43	15.4	5	
W	182	159	1	He	0.328	8.8	3108	4.9	10	
Tl	205	165	1	He	0.053	21.3	542	20.0	0.5	
Pb	208	165	1	He	0.028	44.6	870	18.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2004717	2.30	1674650	119.71	60	120	
Sc	45	1	He	364849	0.89	355173	102.72	60	120	
Sc	45	2	NoGas	9973487	0.78	8635903	115.49	60	120	
Rh	103	1	He	1485556	0.48	1470259	101.04	60	120	
In	115	1	He	492739	1.53	490642	100.43	60	120	
Tb	159	1	He	1407799	2.12	1434034	98.17	60	120	
Ho	165	1	He	1383770	0.98	1409606	98.17	60	120	
Bi	209	1	He	869907	0.44	906964	95.91	60	120	

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Sample Report

Sample Table

Sample Name	240-66173-b-1-b
Data File Name	084SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:55:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.072	2.072	1.96	149673	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	25.08	207	0.01	2000	
B	11	45	2	NoGas	212.769	212.769	0.95	721651	0.03	300	
Na	23	45	1	He	325964.543	325964.543	1.99	302194299	0.11	500000	
Mg	24	45	1	He	8051.692	8051.692	2.78	4020690	0.20	500000	
Al	27	45	1	He	378.110	378.110	2.83	78733	0.48	200000	
K	39	45	1	He	51140.849	51140.849	0.63	15196401	0.34	500000	
Ca	44	45	1	He	24951.036	24951.036	1.47	401909	6.21	500000	
Ti	47	45	1	He	4.659	4.659	10.15	509	0.92	2500	
V	51	45	1	He	0.967	0.967	16.78	3995	0.02	10000	
Cr	52	45	1	He	2.485	2.485	4.76	14106	0.02	10000	
Mn	55	45	1	He	58.124	58.124	2.76	133575	0.04	10000	
Fe	56	45	1	He	2036.780	2036.780	2.46	6757563	0.03	200000	
Co	59	45	1	He	0.596	0.596	2.18	4286	0.01	5000	
Ni	60	45	1	He	6.089	6.089	2.74	11942	0.05	10000	
Cu	63	45	1	He	55.679	55.679	1.64	298488	0.02	10000	
Zn	66	45	1	He	243.794	243.794	1.68	169492	0.14	10000	
As	75	115	1	He	0.863	0.863	3.30	511	0.17	10000	
Se	78	115	1	He	1.789	1.789	24.88	67	2.65	10000	
Sr	88	103	1	He	114.350	114.350	1.05	260853	0.04	10000	
Mo	95	103	1	He	5.335	5.335	5.65	11280	0.05	2000	
Ag	107	103	1	He	0.090	0.090	18.16	603	0.01	300	
Cd	111	115	1	He	1.385	1.385	2.77	1120	0.12	4000	
Sn	118	115	1	He	-0.208	-0.208	-147.91	5953	0.00	2000	
Sb	123	115	1	He	0.521	0.521	7.66	981	0.05	200	
Ba	137	115	1	He	74.810	74.810	0.10	52552	0.14	10000	
W	182	159	1	He	0.759	0.759	7.31	5253	0.01	2500	
Tl	205	165	1	He	0.032	0.032	13.84	327	0.01	2000	
Pb	208	165	1	He	3.211	3.211	0.18	39783	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1874886	0.90	1674650	111.96	60	120	
Sc	45	1	He	348738	0.95	355173	98.19	60	120	
Sc	45	2	NoGas	9424487	0.61	8635903	109.13	60	120	
Rh	103	1	He	1340263	0.80	1470259	91.16	60	120	
In	115	1	He	460090	1.73	490642	93.77	60	120	
Tb	159	1	He	1379630	1.79	1434034	96.21	60	120	
Ho	165	1	He	1326888	1.52	1409606	94.13	60	120	
Bi	209	1	He	1651668	0.40	906964	182.11	60	120	ISTD warning

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Sample Report

Sample Table

Sample Name	240-66199-i-23-a
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:59:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	754.835	754.835	0.79	15397884	0.00	10000	
Be	9	45	2	NoGas	0.047	0.047	23.85	300	0.02	2000	
B	11	45	2	NoGas	3495.026	3495.026	1.87	11410162	0.03	300	>LDR
Na	23	45	1	He	1164850.123	1164850.123	1.97	1052438210	0.11	500000	>LDR
Mg	24	45	1	He	140665.669	140665.669	2.49	68445373	0.21	500000	
Al	27	45	1	He	668.151	668.151	2.81	135427	0.49	200000	
K	39	45	1	He	43012.758	43012.758	2.31	12459103	0.35	500000	
Ca	44	45	1	He	369156.126	369156.126	2.21	5790878	6.37	500000	
Ti	47	45	1	He	5.040	5.040	8.62	537	0.94	2500	
V	51	45	1	He	1.035	1.035	10.34	4133	0.03	10000	
Cr	52	45	1	He	1.737	1.737	1.71	10595	0.02	10000	
Mn	55	45	1	He	257.021	257.021	1.95	573991	0.04	10000	
Fe	56	45	1	He	1515.627	1515.627	2.15	4901201	0.03	200000	
Co	59	45	1	He	1.425	1.425	2.44	9889	0.01	5000	
Ni	60	45	1	He	3.554	3.554	3.83	6883	0.05	10000	
Cu	63	45	1	He	2.369	2.369	4.74	14907	0.02	10000	
Zn	66	45	1	He	5.915	5.915	2.09	4525	0.13	10000	
As	75	115	1	He	1.527	1.527	4.35	769	0.20	10000	
Se	78	115	1	He	0.722	0.722	15.19	38	1.88	10000	
Sr	88	103	1	He	29734.663	29734.663	2.18	61231546	0.05	10000	>LDR
Mo	95	103	1	He	3.836	3.836	2.24	7334	0.05	2000	
Ag	107	103	1	He	0.186	0.186	7.85	1104	0.02	300	
Cd	111	115	1	He	0.033	0.033	21.54	25	0.13	4000	
Sn	118	115	1	He	-2.720	-2.720	-5.48	1737	-0.16	2000	
Sb	123	115	1	He	0.383	0.383	6.29	690	0.06	200	
Ba	137	115	1	He	416.784	416.784	1.08	276392	0.15	10000	
W	182	159	1	He	0.082	0.082	44.88	1667	0.00	2500	
Tl	205	165	1	He	0.013	0.013	31.37	147	0.01	2000	
Pb	208	165	1	He	0.297	0.297	7.70	3845	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1467007	2.45	1674650	87.60	60	120	
Sc	45	1	He	339842	0.75	355173	95.68	60	120	
Sc	45	2	NoGas	9135787	1.33	8635903	105.79	60	120	
Rh	103	1	He	1210888	0.82	1470259	82.36	60	120	
In	115	1	He	434449	1.63	490642	88.55	60	120	
Tb	159	1	He	1289352	1.85	1434034	89.91	60	120	
Ho	165	1	He	1238173	2.27	1409606	87.84	60	120	
Bi	209	1	He	689552	1.30	906964	76.03	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235186/1-a
Data File Name	086_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:04:03-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.501	15.9	120663	1.7	8	
Be	9	45	2	NoGas	0.019	52.7	156	37.1	1	
B	11	45	2	NoGas	66.664	0.5	237238	0.9	20	Blank High
Na	23	45	1	He	254.966	7.8	263904	8.2	1000	
Mg	24	45	1	He	101.882	4.7	54192	2.7	1000	
Al	27	45	1	He	1.963	11.3	646	7.4	50	
K	39	45	1	He	40.159	4.9	38486	2.1	1000	
Ca	44	45	1	He	323.656	3.2	5800	1.8	1000	
Ti	47	45	1	He	0.077	66.0	10	57.8	20	
V	51	45	1	He	0.059	131.9	728	40.4	2	
Cr	52	45	1	He	0.182	11.4	4385	2.3	2	
Mn	55	45	1	He	0.537	13.2	1831	7.7	2	
Fe	56	45	1	He	18.814	3.0	68385	1.2	50	
Co	59	45	1	He	0.004	29.9	100	5.8	1	
Ni	60	45	1	He	0.145	26.4	530	13.1	2	
Cu	63	45	1	He	0.880	1.8	7815	2.5	2	
Zn	66	45	1	He	5.167	10.0	4356	6.6	20	
As	75	115	1	He	-0.022	-136.2	115	12.3	2	
Se	78	115	1	He	0.050	137.0	26	7.9	2	
Sr	88	103	1	He	3.329	16.9	8517	17.4	10	
Mo	95	103	1	He	0.056	9.4	153	7.8	2	
Ag	107	103	1	He	0.004	37.9	51	21.0	0.2	
Cd	111	115	1	He	0.010	84.7	9	77.9	0.2	
Sn	118	115	1	He	-3.372	-0.4	833	2.7	10	
Sb	123	115	1	He	0.030	41.5	94	25.5	2	
Ba	137	115	1	He	1.178	9.2	911	8.5	5	
W	182	159	1	He	0.022	207.4	1533	15.7	10	
Tl	205	165	1	He	0.001	172.5	50	34.6	0.5	
Pb	208	165	1	He	0.064	19.3	1321	11.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1966598	0.09	1674650	117.43	60	120	
Sc	45	1	He	368728	2.08	355173	103.82	60	120	
Sc	45	2	NoGas	9733593	0.40	8635903	112.71	60	120	
Rh	103	1	He	1463410	1.25	1470259	99.53	60	120	
In	115	1	He	496365	0.55	490642	101.17	60	120	
Tb	159	1	He	1432007	0.39	1434034	99.86	60	120	
Ho	165	1	He	1370254	0.28	1409606	97.21	60	120	
Bi	209	1	He	873167	0.94	906964	96.27	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235186/3-a
Data File Name	087_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:08:09-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	100.505	100.505	1.174	2359214	1.69	100	100.5	84.5	115.4	
Be	9	2	NoGas	993.693	993.693	0.674	5946085	1.04	1000	99.4	84.5	115.4	
B	11	2	NoGas	138.605	138.605	1.095	504378	1.29	100	138.6	84.5	115.4	LCS Failed
Na	23	1	He	9479.316	9479.316	5.029	9305907	1.32	10000	94.8	84.5	115.4	
Mg	24	1	He	9493.579	9493.579	6.008	5011293	2.32	10000	94.9	84.5	115.4	
Al	27	1	He	9644.380	9644.380	6.353	2117494	2.78	10000	96.4	84.5	115.4	
K	39	1	He	9613.787	9613.787	2.205	3043689	1.60	10000	96.1	84.5	115.4	
Ca	44	1	He	10718.798	10718.798	4.494	182750	0.80	10000	107.2	84.5	115.4	
Ti	47	1	He	93.507	93.507	4.427	10783	3.01	100	93.5	84.5	115.4	
V	51	1	He	977.150	977.150	5.901	3758842	2.21	1000	97.7	84.5	115.4	
Cr	52	1	He	924.435	924.435	5.718	4229934	2.22	1000	92.4	84.5	115.4	
Mn	55	1	He	982.458	982.458	5.937	2378756	2.92	1000	98.2	84.5	115.4	
Fe	56	1	He	9303.478	9303.478	5.895	32621628	2.20	10000	93.0	84.5	115.4	
Co	59	1	He	936.955	936.955	5.373	7004842	1.68	1000	93.7	84.5	115.4	
Ni	60	1	He	942.368	942.368	7.970	1916527	4.37	1000	94.2	84.5	115.4	
Cu	63	1	He	912.040	912.040	5.273	5125212	1.58	1000	91.2	84.5	115.4	
Zn	66	1	He	974.403	974.403	4.961	714525	1.26	1000	97.4	84.5	115.4	
As	75	1	He	996.304	996.304	3.119	482290	1.79	1000	99.6	84.5	115.4	
Se	78	1	He	979.528	979.528	2.213	26091	1.00	1000	98.0	84.5	115.4	
Sr	88	1	He	948.193	948.193	7.251	2305617	3.50	1000	94.8	84.5	115.4	
Mo	95	1	He	95.367	95.367	6.751	214724	3.01	100	95.4	84.5	115.4	
Ag	107	1	He	96.562	96.562	4.590	666809	0.78	100	96.6	84.5	115.4	
Cd	111	1	He	958.931	958.931	2.755	820325	1.42	1000	95.9	84.5	115.4	
Sn	118	1	He	966.228	966.228	3.131	1680430	1.98	1000	96.6	84.5	115.4	
Sb	123	1	He	96.000	96.000	3.003	184759	1.70	100	96.0	84.5	115.4	
Ba	137	1	He	948.444	948.444	2.804	704911	1.51	1000	94.8	84.5	115.4	
W	182	1	He	94.521	94.521	3.280	494004	4.34	100	94.5	84.5	115.4	
Tl	205	1	He	229.325	229.325	1.436	2163024	1.47	250	91.7	84.5	115.4	
Pb	208	1	He	903.041	903.041	2.827	11559087	1.45	1000	90.3	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1991205	1.13	1674650	118.90	60	120	
Sc	45	1	He	369186	3.83	355173	103.95	60	120	
Sc	45	2	NoGas	10072605	0.57	8635903	116.64	60	120	
Rh	103	1	He	1432326	3.91	1470259	97.42	60	120	
In	115	1	He	487047	1.36	490642	99.27	60	120	
Tb	159	1	He	1402486	2.15	1434034	97.80	60	120	
Ho	165	1	He	1388142	1.41	1409606	98.48	60	120	
Bi	209	1	He	853593	1.93	906964	94.12	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-a
Data File Name	088SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:12:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.789	6.789	0.44	268633	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	5.19	1489	0.02	2000	
B	11	45	2	NoGas	60.502	60.502	1.01	226098	0.03	300	
Na	23	45	1	He	5911.797	5911.797	1.04	5863010	0.10	500000	
Mg	24	45	1	He	44906.113	44906.113	2.27	23928039	0.19	500000	
Al	27	45	1	He	1786.050	1786.050	2.17	396078	0.45	200000	
K	39	45	1	He	1804.507	1804.507	1.00	597455	0.30	500000	
Ca	44	45	1	He	116633.227	116633.227	2.49	2003708	5.82	500000	
Ti	47	45	1	He	33.351	33.351	10.02	3879	0.86	2500	
V	51	45	1	He	3.935	3.935	6.22	15787	0.02	10000	
Cr	52	45	1	He	15.185	15.185	3.51	73658	0.02	10000	
Mn	55	45	1	He	77.232	77.232	2.25	189243	0.04	10000	
Fe	56	45	1	He	5097.770	5097.770	2.76	18044956	0.03	200000	
Co	59	45	1	He	1.278	1.278	1.40	9717	0.01	5000	
Ni	60	45	1	He	9.269	9.269	3.04	19274	0.05	10000	
Cu	63	45	1	He	3.042	3.042	0.67	20146	0.02	10000	
Zn	66	45	1	He	13.744	13.744	2.69	10744	0.13	10000	
As	75	115	1	He	25.146	25.146	0.08	12271	0.20	10000	
Se	78	115	1	He	1.200	1.200	9.90	56	2.16	10000	
Sr	88	103	1	He	1263.995	1263.995	0.72	3075467	0.04	10000	
Mo	95	103	1	He	9.460	9.460	1.05	21330	0.04	2000	
Ag	107	103	1	He	0.023	0.023	13.94	184	0.01	300	
Cd	111	115	1	He	0.428	0.428	22.76	366	0.12	4000	
Sn	118	115	1	He	-0.546	-0.546	-157.91	5694	-0.01	2000	
Sb	123	115	1	He	0.370	0.370	7.00	746	0.05	200	
Ba	137	115	1	He	146.826	146.826	0.74	108942	0.13	10000	
W	182	159	1	He	0.693	0.693	18.74	5083	0.01	2500	
Tl	205	165	1	He	0.248	0.248	13.69	2350	0.01	2000	
Pb	208	165	1	He	1.504	1.504	4.16	19516	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017498	1.30	1674650	120.47	60	120	ISTD warning
Sc	45	1	He	372163	0.68	355173	104.78	60	120	
Sc	45	2	NoGas	10197610	0.36	8635903	118.08	60	120	
Rh	103	1	He	1430513	1.15	1470259	97.30	60	120	
In	115	1	He	486048	0.95	490642	99.06	60	120	
Tb	159	1	He	1427077	1.93	1434034	99.51	60	120	
Ho	165	1	He	1370370	0.96	1409606	97.22	60	120	
Bi	209	1	He	835839	0.31	906964	92.16	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66199-i-1-a@5
Data File Name	089SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:16:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.480	1.480	1.00	150919	0.00	10000	
Be	9	45	2	NoGas	0.093	0.093	33.26	622	0.01	2000	
B	11	45	2	NoGas	32.777	32.777	1.47	127073	0.03	300	
Na	23	45	1	He	1259.174	1259.174	2.50	1288254	0.10	500000	
Mg	24	45	1	He	9376.446	9376.446	2.16	5109664	0.18	500000	
Al	27	45	1	He	373.495	373.495	3.11	84879	0.44	200000	
K	39	45	1	He	372.319	372.319	4.51	147257	0.25	500000	
Ca	44	45	1	He	23124.419	23124.419	1.61	406521	5.69	500000	
Ti	47	45	1	He	8.034	8.034	25.60	957	0.84	2500	
V	51	45	1	He	0.742	0.742	33.48	3462	0.02	10000	
Cr	52	45	1	He	3.153	3.153	4.93	18544	0.02	10000	
Mn	55	45	1	He	15.776	15.776	1.64	39971	0.04	10000	
Fe	56	45	1	He	1059.633	1059.633	2.64	3837756	0.03	200000	
Co	59	45	1	He	0.334	0.334	3.27	2655	0.01	5000	
Ni	60	45	1	He	3.236	3.236	0.23	7041	0.05	10000	
Cu	63	45	1	He	0.685	0.685	2.10	6933	0.01	10000	
Zn	66	45	1	He	4.014	4.014	10.85	3628	0.11	10000	
As	75	115	1	He	5.012	5.012	3.78	2643	0.19	10000	
Se	78	115	1	He	0.394	0.394	25.79	35	1.11	10000	
Sr	88	103	1	He	247.523	247.523	1.58	630225	0.04	10000	
Mo	95	103	1	He	1.880	1.880	6.04	4454	0.04	2000	
Ag	107	103	1	He	0.006	0.006	35.86	66	0.01	300	
Cd	111	115	1	He	0.103	0.103	21.20	92	0.11	4000	
Sn	118	115	1	He	-1.195	-1.195	-15.18	4756	-0.03	2000	
Sb	123	115	1	He	0.104	0.104	5.00	243	0.04	200	
Ba	137	115	1	He	29.167	29.167	2.35	22500	0.13	10000	
W	182	159	1	He	0.116	0.116	31.50	2041	0.01	2500	
Tl	205	165	1	He	0.063	0.063	9.68	642	0.01	2000	
Pb	208	165	1	He	0.322	0.322	1.93	4678	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2054757	1.19	1674650	122.70	60	120	ISTD warning
Sc	45	1	He	380594	0.80	355173	107.16	60	120	
Sc	45	2	NoGas	10359403	0.29	8635903	119.96	60	120	
Rh	103	1	He	1496610	0.40	1470259	101.79	60	120	
In	115	1	He	505025	1.17	490642	102.93	60	120	
Tb	159	1	He	1436769	0.78	1434034	100.19	60	120	
Ho	165	1	He	1400213	0.69	1409606	99.33	60	120	
Bi	209	1	He	877471	1.23	906964	96.75	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66199-i-1-a
Data File Name	090SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:20:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.686	112.686	0.87	2711859	0.00	10000	
Be	9	45	2	NoGas	1049.880	1049.880	1.35	6474383	0.02	2000	
B	11	45	2	NoGas	154.285	154.285	1.29	577957	0.03	300	
Na	23	45	1	He	15653.451	15653.451	2.79	15704705	0.10	500000	
Mg	24	45	1	He	53356.764	53356.764	4.18	28801366	0.19	500000	
Al	27	45	1	He	12086.414	12086.414	2.96	2714329	0.45	200000	
K	39	45	1	He	11841.663	11841.663	2.97	3824735	0.31	500000	
Ca	44	45	1	He	123855.525	123855.525	4.31	2155544	5.75	500000	
Ti	47	45	1	He	134.652	134.652	7.14	15867	0.85	2500	
V	51	45	1	He	1049.966	1049.966	2.88	4130990	0.03	10000	
Cr	52	45	1	He	991.421	991.421	3.57	4638868	0.02	10000	
Mn	55	45	1	He	1101.359	1101.359	4.06	2726698	0.04	10000	
Fe	56	45	1	He	14677.603	14677.603	4.16	52629353	0.03	200000	
Co	59	45	1	He	970.306	970.306	3.11	7418361	0.01	5000	
Ni	60	45	1	He	971.769	971.769	2.71	2022418	0.05	10000	
Cu	63	45	1	He	936.154	936.154	3.95	5379047	0.02	10000	
Zn	66	45	1	He	999.020	999.020	3.64	749036	0.13	10000	
As	75	115	1	He	1121.953	1121.953	3.25	536312	0.21	10000	
Se	78	115	1	He	1042.277	1042.277	2.20	27415	3.80	10000	
Sr	88	103	1	He	2216.638	2216.638	0.79	5425110	0.04	10000	
Mo	95	103	1	He	113.541	113.541	1.29	257312	0.04	2000	
Ag	107	103	1	He	94.427	94.427	0.15	655857	0.01	300	
Cd	111	115	1	He	1024.122	1024.122	2.98	865142	0.12	4000	
Sn	118	115	1	He	1083.610	1083.610	3.28	1860197	0.06	2000	
Sb	123	115	1	He	105.556	105.556	2.96	200610	0.05	200	
Ba	137	115	1	He	1168.561	1168.561	3.19	857630	0.14	10000	
W	182	159	1	He	102.277	102.277	2.98	539560	0.02	2500	
Tl	205	165	1	He	238.870	238.870	2.43	2268096	0.01	2000	
Pb	208	165	1	He	941.752	941.752	2.81	12137235	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2010429	0.80	1674650	120.05	60	120	ISTD warning
Sc	45	1	He	377155	1.69	355173	106.19	60	120	
Sc	45	2	NoGas	10381323	0.72	8635903	120.21	60	120	ISTD warning
Rh	103	1	He	1438957	1.86	1470259	97.87	60	120	
In	115	1	He	480997	1.65	490642	98.03	60	120	
Tb	159	1	He	1416507	3.08	1434034	98.78	60	120	
Ho	165	1	He	1397698	1.69	1409606	99.16	60	120	
Bi	209	1	He	840280	1.09	906964	92.65	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-d ms
Data File Name	091SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:23:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	111.085	111.085	1.00	2671087	0.00	10000	
Be	9	45	2	NoGas	1041.033	1041.033	0.49	6410503	0.02	2000	
B	11	45	2	NoGas	152.551	152.551	0.21	570702	0.03	300	
Na	23	45	1	He	16114.152	16114.152	1.03	16248013	0.10	500000	
Mg	24	45	1	He	56741.941	56741.941	2.71	30784975	0.18	500000	
Al	27	45	1	He	12504.258	12504.258	2.85	2822097	0.44	200000	
K	39	45	1	He	12024.566	12024.566	1.52	3902732	0.31	500000	
Ca	44	45	1	He	133118.483	133118.483	2.60	2328527	5.72	500000	
Ti	47	45	1	He	139.858	139.858	1.67	16569	0.84	2500	
V	51	45	1	He	1037.678	1037.678	2.35	4102915	0.03	10000	
Cr	52	45	1	He	979.993	979.993	2.63	4608467	0.02	10000	
Mn	55	45	1	He	1083.790	1083.790	3.17	2696620	0.04	10000	
Fe	56	45	1	He	14946.981	14946.981	3.67	53865345	0.03	200000	
Co	59	45	1	He	952.196	952.196	2.69	7315999	0.01	5000	
Ni	60	45	1	He	962.347	962.347	2.45	2012716	0.05	10000	
Cu	63	45	1	He	914.097	914.097	1.44	5279307	0.02	10000	
Zn	66	45	1	He	986.726	986.726	2.44	743522	0.13	10000	
As	75	115	1	He	1103.781	1103.781	0.59	529127	0.21	10000	
Se	78	115	1	He	1024.554	1024.554	0.46	27022	3.79	10000	
Sr	88	103	1	He	2312.010	2312.010	1.34	5677887	0.04	10000	
Mo	95	103	1	He	112.049	112.049	1.86	254774	0.04	2000	
Ag	107	103	1	He	100.123	100.123	1.24	697824	0.01	300	
Cd	111	115	1	He	999.329	999.329	0.49	846564	0.12	4000	
Sn	118	115	1	He	1060.659	1060.659	1.24	1826146	0.06	2000	
Sb	123	115	1	He	103.597	103.597	0.60	197442	0.05	200	
Ba	137	115	1	He	1165.483	1165.483	0.76	857786	0.14	10000	
W	182	159	1	He	99.831	99.831	4.80	520550	0.02	2500	
Tl	205	165	1	He	234.601	234.601	0.81	2222700	0.01	2000	
Pb	208	165	1	He	928.120	928.120	0.87	11935710	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2031405	1.74	1674650	121.30	60	120	ISTD warning
Sc	45	1	He	378957	1.19	355173	106.70	60	120	
Sc	45	2	NoGas	10365715	0.57	8635903	120.03	60	120	ISTD warning
Rh	103	1	He	1444106	1.66	1470259	98.22	60	120	
In	115	1	He	482178	0.76	490642	98.27	60	120	
Tb	159	1	He	1400320	1.56	1434034	97.65	60	120	
Ho	165	1	He	1394265	0.20	1409606	98.91	60	120	
Bi	209	1	He	832736	0.92	906964	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-e msd
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:27:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	109.898	109.898	0.96	2642893	0.00	10000	
Be	9	45	2	NoGas	1026.494	1026.494	1.16	6318990	0.02	2000	
B	11	45	2	NoGas	147.851	147.851	0.64	553126	0.03	300	
Na	23	45	1	He	15902.905	15902.905	2.53	15714795	0.10	500000	
Mg	24	45	1	He	56030.719	56030.719	3.59	29790729	0.19	500000	
Al	27	45	1	He	12319.724	12319.724	3.55	2724905	0.45	200000	
K	39	45	1	He	11946.407	11946.407	2.86	3800204	0.31	500000	
Ca	44	45	1	He	131216.526	131216.526	3.74	2249453	5.83	500000	
Ti	47	45	1	He	138.440	138.440	2.59	16072	0.86	2500	
V	51	45	1	He	1035.092	1035.092	3.53	4010897	0.03	10000	
Cr	52	45	1	He	982.157	982.157	3.26	4526396	0.02	10000	
Mn	55	45	1	He	1086.913	1086.913	3.35	2650559	0.04	10000	
Fe	56	45	1	He	14890.539	14890.539	3.90	52589241	0.03	200000	
Co	59	45	1	He	949.638	949.638	3.24	7150895	0.01	5000	
Ni	60	45	1	He	952.805	952.805	3.33	1952909	0.05	10000	
Cu	63	45	1	He	915.625	915.625	3.96	5181720	0.02	10000	
Zn	66	45	1	He	982.147	982.147	2.49	725376	0.14	10000	
As	75	115	1	He	1081.439	1081.439	1.53	517447	0.21	10000	
Se	78	115	1	He	1005.344	1005.344	1.10	26468	3.80	10000	
Sr	88	103	1	He	2268.404	2268.404	0.89	5464928	0.04	10000	
Mo	95	103	1	He	111.631	111.631	0.53	249000	0.04	2000	
Ag	107	103	1	He	98.819	98.819	0.25	675648	0.01	300	
Cd	111	115	1	He	979.944	979.944	1.90	828573	0.12	4000	
Sn	118	115	1	He	1039.174	1039.174	2.86	1785743	0.06	2000	
Sb	123	115	1	He	100.922	100.922	2.34	191973	0.05	200	
Ba	137	115	1	He	1137.681	1137.681	2.28	835723	0.14	10000	
W	182	159	1	He	98.120	98.120	1.85	509360	0.02	2500	
Tl	205	165	1	He	231.874	231.874	1.17	2188138	0.01	2000	
Pb	208	165	1	He	911.771	911.771	0.73	11679008	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2019831	1.54	1674650	120.61	60	120	ISTD warning
Sc	45	1	He	371486	1.93	355173	104.59	60	120	
Sc	45	2	NoGas	10362846	0.65	8635903	120.00	60	120	
Rh	103	1	He	1416485	1.15	1470259	96.34	60	120	
In	115	1	He	481330	0.90	490642	98.10	60	120	
Tb	159	1	He	1393191	1.06	1434034	97.15	60	120	
Ho	165	1	He	1388766	0.60	1409606	98.52	60	120	
Bi	209	1	He	828031	1.19	906964	91.30	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-2-a
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:31:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.563	2.563	3.72	180902	0.00	10000	
Be	9	45	2	NoGas	0.263	0.263	5.02	1715	0.02	2000	
B	11	45	2	NoGas	68.071	68.071	1.26	265182	0.03	300	
Na	23	45	1	He	9072.799	9072.799	0.84	9228182	0.10	500000	
Mg	24	45	1	He	54106.926	54106.926	1.63	29594178	0.18	500000	
Al	27	45	1	He	673.086	673.086	2.61	153355	0.44	200000	
K	39	45	1	He	1624.833	1624.833	1.81	554845	0.29	500000	
Ca	44	45	1	He	140326.904	140326.904	1.73	2474596	5.67	500000	
Ti	47	45	1	He	10.680	10.680	12.99	1277	0.84	2500	
V	51	45	1	He	1.870	1.870	1.56	7975	0.02	10000	
Cr	52	45	1	He	1.201	1.201	1.52	9370	0.01	10000	
Mn	55	45	1	He	1379.963	1379.963	2.61	3461601	0.04	10000	
Fe	56	45	1	He	1112.160	1112.160	2.58	4043079	0.03	200000	
Co	59	45	1	He	1.512	1.512	1.17	11785	0.01	5000	
Ni	60	45	1	He	13.235	13.235	2.84	28148	0.05	10000	
Cu	63	45	1	He	3.754	3.754	2.45	24822	0.02	10000	
Zn	66	45	1	He	15.839	15.839	2.82	12620	0.13	10000	
As	75	115	1	He	1.742	1.742	3.75	988	0.18	10000	
Se	78	115	1	He	1.090	1.090	23.44	54	2.02	10000	
Sr	88	103	1	He	252.438	252.438	1.55	628313	0.04	10000	
Mo	95	103	1	He	1.057	1.057	2.05	2458	0.04	2000	
Ag	107	103	1	He	0.032	0.032	25.05	252	0.01	300	
Cd	111	115	1	He	0.572	0.572	17.04	501	0.11	4000	
Sn	118	115	1	He	-0.032	-0.032	-2226.00	6739	0.00	2000	
Sb	123	115	1	He	0.437	0.437	14.03	896	0.05	200	
Ba	137	115	1	He	75.426	75.426	1.81	57319	0.13	10000	
W	182	159	1	He	0.683	0.683	32.69	5027	0.01	2500	
Tl	205	165	1	He	0.438	0.438	9.97	4201	0.01	2000	
Pb	208	165	1	He	0.889	0.889	4.66	11976	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2111341	1.18	1674650	126.08	60	120	ISTD warning
Sc	45	1	He	381997	0.34	355173	107.55	60	120	
Sc	45	2	NoGas	10661272	1.22	8635903	123.45	60	120	ISTD warning
Rh	103	1	He	1462993	0.43	1470259	99.51	60	120	
In	115	1	He	497795	1.71	490642	101.46	60	120	
Tb	159	1	He	1428876	1.77	1434034	99.64	60	120	
Ho	165	1	He	1397804	0.69	1409606	99.16	60	120	
Bi	209	1	He	847772	0.56	906964	93.47	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	094_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:35:43-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.022	1.392	1333874	0.41	50	106.0	89.5	110.5	
Be	9	45	2	NoGas	50.104	1.199	308107	1.71	50	100.2	89.5	110.5	
B	11	45	2	NoGas	68.308	0.848	258323	0.88	50	136.6	89.5	110.5	CCV Failed
Na	23	45	1	He	25147.779	3.614	25634406	2.07	25000	100.6	89.5	110.5	
Mg	24	45	1	He	25108.439	3.853	13776012	1.70	25000	100.4	89.5	110.5	
Al	27	45	1	He	248.058	4.298	56827	1.72	250	99.2	89.5	110.5	
K	39	45	1	He	25396.424	2.518	8306971	0.10	25000	101.6	89.5	110.5	
Ca	44	45	1	He	25012.860	2.724	442773	0.14	25000	100.1	89.5	110.5	
Ti	47	45	1	He	51.563	3.478	6181	4.37	50	103.1	89.5	110.5	
V	51	45	1	He	50.337	4.257	201747	1.91	50	100.7	89.5	110.5	
Cr	52	45	1	He	49.306	3.755	237984	1.27	50	98.6	89.5	110.5	
Mn	55	45	1	He	249.597	3.313	628537	0.78	250	99.8	89.5	110.5	
Fe	56	45	1	He	12393.694	2.916	45175495	0.48	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.727	2.952	386492	0.51	50	99.5	89.5	110.5	
Ni	60	45	1	He	49.193	3.844	104273	1.37	50	98.4	89.5	110.5	
Cu	63	45	1	He	49.359	3.529	291097	1.05	50	98.7	89.5	110.5	
Zn	66	45	1	He	51.564	2.110	39871	0.69	50	103.1	89.5	110.5	
As	75	115	1	He	53.924	1.133	26674	1.05	50	107.8	89.5	110.5	
Se	78	115	1	He	52.746	2.325	1452	2.04	50	105.5	89.5	110.5	
Sr	88	103	1	He	50.968	2.656	129998	1.61	50	101.9	89.5	110.5	
Mo	95	103	1	He	50.871	2.536	119936	1.08	50	101.7	89.5	110.5	
Ag	107	103	1	He	50.119	1.988	362202	0.72	50	100.2	89.5	110.5	
Cd	111	115	1	He	51.446	1.098	44773	1.17	50	102.9	89.5	110.5	
Sn	118	115	1	He	50.002	1.140	94889	0.77	50	100.0	89.5	110.5	
Sb	123	115	1	He	52.601	2.538	103001	2.30	50	105.2	89.5	110.5	
Ba	137	115	1	He	51.167	0.444	38705	0.15	50	102.3	89.5	110.5	
W	182	159	1	He	51.186	3.207	271748	2.62	50	102.4	89.5	110.5	
Tl	205	165	1	He	50.292	2.069	479369	1.81	50	100.6	89.5	110.5	
Pb	208	165	1	He	50.080	0.871	648401	0.79	50	100.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2048569	1.46	1674650	122.33	60	120	ISTD warning
Sc	45	1	He	383409	2.63	355173	107.95	60	120	
Sc	45	2	NoGas	10349643	0.92	8635903	119.84	60	120	
Rh	103	1	He	1497418	1.48	1470259	101.85	60	120	
In	115	1	He	495356	0.30	490642	100.96	60	120	
Tb	159	1	He	1421632	0.58	1434034	99.14	60	120	
Ho	165	1	He	1402694	0.73	1409606	99.51	60	120	
Bi	209	1	He	853052	1.33	906964	94.06	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	095_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:39:48-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.285	16.3	126585	1.2	8	
Be	9	45	2	NoGas	0.104	10.7	707	10.2	1	
B	11	45	2	NoGas	13.923	1.3	58749	0.9	20	
Na	23	45	1	He	41.039	1.8	56651	1.0	1000	
Mg	24	45	1	He	4.439	12.9	2908	11.1	1000	
Al	27	45	1	He	0.134	106.1	256	12.8	50	
K	39	45	1	He	16.885	20.1	32638	3.8	1000	
Ca	44	45	1	He	9.637	28.6	478	10.0	1000	
Ti	47	45	1	He	0.036	159.3	6	124.9	20	
V	51	45	1	He	0.110	76.8	968	34.9	2	
Cr	52	45	1	He	0.080	36.9	4099	3.2	2	
Mn	55	45	1	He	0.133	15.6	893	5.5	2	
Fe	56	45	1	He	3.791	30.3	16463	26.0	50	
Co	59	45	1	He	0.050	18.8	469	15.5	1	
Ni	60	45	1	He	-0.030	-68.5	184	23.6	2	
Cu	63	45	1	He	0.144	26.0	3854	6.1	2	
Zn	66	45	1	He	0.123	28.4	697	3.6	20	
As	75	115	1	He	0.028	109.1	145	12.4	2	
Se	78	115	1	He	0.269	35.2	33	8.8	2	
Sr	88	103	1	He	0.398	1.6	1295	1.5	10	
Mo	95	103	1	He	0.110	17.0	294	15.4	2	
Ag	107	103	1	He	0.007	9.1	77	7.5	0.2	
Cd	111	115	1	He	0.117	8.2	107	7.4	0.2	
Sn	118	115	1	He	0.765	27.3	8447	3.4	10	
Sb	123	115	1	He	0.136	13.3	314	11.7	2	
Ba	137	115	1	He	0.097	38.6	96	29.7	5	
W	182	159	1	He	0.290	29.2	3023	16.1	10	
Tl	205	165	1	He	0.129	6.7	1287	6.3	0.5	
Pb	208	165	1	He	0.065	12.5	1371	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2134407	0.85	1674650	127.45	60	120	ISTD warning
Sc	45	1	He	385835	0.37	355173	108.63	60	120	
Sc	45	2	NoGas	10621985	0.31	8635903	123.00	60	120	ISTD warning
Rh	103	1	He	1562524	1.46	1470259	106.28	60	120	
In	115	1	He	515458	1.40	490642	105.06	60	120	
Tb	159	1	He	1461814	1.05	1434034	101.94	60	120	
Ho	165	1	He	1416368	1.58	1409606	100.48	60	120	
Bi	209	1	He	898633	0.68	906964	99.08	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-3-a
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:43:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.861	7.861	0.46	313581	0.00	10000	
Be	9	45	2	NoGas	0.262	0.262	8.77	1752	0.01	2000	
B	11	45	2	NoGas	42.971	42.971	1.55	173684	0.02	300	
Na	23	45	1	He	9570.363	9570.363	1.57	9909911	0.10	500000	
Mg	24	45	1	He	39550.709	39550.709	2.84	22024324	0.18	500000	
Al	27	45	1	He	3710.517	3710.517	3.07	859680	0.43	200000	
K	39	45	1	He	2969.630	2969.630	0.98	1009866	0.29	500000	
Ca	44	45	1	He	105592.041	105592.041	2.69	1895847	5.57	500000	
Ti	47	45	1	He	55.117	55.117	3.74	6701	0.82	2500	
V	51	45	1	He	8.419	8.419	4.76	34692	0.02	10000	
Cr	52	45	1	He	6.834	6.834	3.13	36704	0.02	10000	
Mn	55	45	1	He	361.991	361.991	2.73	924906	0.04	10000	
Fe	56	45	1	He	5548.926	5548.926	2.25	20528075	0.03	200000	
Co	59	45	1	He	6.353	6.353	1.11	50180	0.01	5000	
Ni	60	45	1	He	6.313	6.313	2.58	13799	0.05	10000	
Cu	63	45	1	He	13.684	13.684	2.17	84097	0.02	10000	
Zn	66	45	1	He	64.497	64.497	2.88	50452	0.13	10000	
As	75	115	1	He	4.476	4.476	2.56	2375	0.19	10000	
Se	78	115	1	He	0.797	0.797	25.47	47	1.71	10000	
Sr	88	103	1	He	1218.030	1218.030	2.08	3069592	0.04	10000	
Mo	95	103	1	He	2.931	2.931	4.84	6863	0.04	2000	
Ag	107	103	1	He	0.024	0.024	6.77	197	0.01	300	
Cd	111	115	1	He	0.939	0.939	2.70	834	0.11	4000	
Sn	118	115	1	He	-2.671	-2.671	-1.71	2108	-0.13	2000	
Sb	123	115	1	He	0.482	0.482	9.67	998	0.05	200	
Ba	137	115	1	He	131.111	131.111	1.61	101090	0.13	10000	
W	182	159	1	He	0.092	0.092	28.24	1911	0.00	2500	
Tl	205	165	1	He	0.306	0.306	1.27	2936	0.01	2000	
Pb	208	165	1	He	7.088	7.088	2.34	91582	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2151965	0.97	1674650	128.50	60	120	ISTD warning
Sc	45	1	He	388939	0.59	355173	109.51	60	120	
Sc	45	2	NoGas	10918106	0.42	8635903	126.43	60	120	ISTD warning
Rh	103	1	He	1481701	0.16	1470259	100.78	60	120	
In	115	1	He	505088	0.77	490642	102.94	60	120	
Tb	159	1	He	1437906	1.73	1434034	100.27	60	120	
Ho	165	1	He	1393345	1.21	1409606	98.85	60	120	
Bi	209	1	He	868446	1.60	906964	95.75	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-4-a
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:47:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.226	0.226	20.28	128565	0.00	10000	
Be	9	45	2	NoGas	0.066	0.066	10.12	482	0.01	2000	
B	11	45	2	NoGas	15.485	15.485	2.40	66415	0.02	300	
Na	23	45	1	He	66.023	66.023	4.79	84080	0.08	500000	
Mg	24	45	1	He	17.507	17.507	7.05	10363	0.17	500000	
Al	27	45	1	He	7.212	7.212	3.21	1923	0.37	200000	
K	39	45	1	He	24.836	24.836	1.74	36037	0.07	500000	
Ca	44	45	1	He	48.327	48.327	5.89	1195	4.05	500000	
Ti	47	45	1	He	0.325	0.325	33.36	41	0.79	2500	
V	51	45	1	He	0.195	0.195	41.01	1337	0.01	10000	
Cr	52	45	1	He	0.216	0.216	7.32	4857	0.00	10000	
Mn	55	45	1	He	7.616	7.616	3.63	20287	0.04	10000	
Fe	56	45	1	He	17.909	17.909	3.17	69816	0.03	200000	
Co	59	45	1	He	0.081	0.081	13.70	729	0.01	5000	
Ni	60	45	1	He	0.137	0.137	11.23	552	0.02	10000	
Cu	63	45	1	He	0.965	0.965	3.72	8870	0.01	10000	
Zn	66	45	1	He	3.653	3.653	1.49	3479	0.10	10000	
As	75	115	1	He	-0.003	-0.003	-302.75	131	0.00	10000	
Se	78	115	1	He	0.164	0.164	76.81	30	0.54	10000	
Sr	88	103	1	He	0.541	0.541	15.29	1691	0.03	10000	
Mo	95	103	1	He	0.024	0.024	47.45	86	0.03	2000	
Ag	107	103	1	He	0.005	0.005	24.80	66	0.01	300	
Cd	111	115	1	He	0.065	0.065	11.71	61	0.11	4000	
Sn	118	115	1	He	-2.453	-2.453	-1.76	2604	-0.09	2000	
Sb	123	115	1	He	0.045	0.045	35.86	132	0.03	200	
Ba	137	115	1	He	0.287	0.287	12.15	251	0.11	10000	
W	182	159	1	He	0.034	0.034	54.68	1656	0.00	2500	
Tl	205	165	1	He	0.046	0.046	13.67	476	0.01	2000	
Pb	208	165	1	He	0.202	0.202	2.69	3134	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2157936	0.92	1674650	128.86	60	120	ISTD warning
Sc	45	1	He	394527	2.47	355173	111.08	60	120	
Sc	45	2	NoGas	10907528	0.99	8635903	126.30	60	120	ISTD warning
Rh	103	1	He	1576624	0.25	1470259	107.23	60	120	
In	115	1	He	526328	1.37	490642	107.27	60	120	
Tb	159	1	He	1485076	1.16	1434034	103.56	60	120	
Ho	165	1	He	1403702	1.15	1409606	99.58	60	120	
Bi	209	1	He	925102	1.14	906964	102.00	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-5-a
Data File Name	098SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:52:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.242	0.242	27.03	128303	0.00	10000	
Be	9	45	2	NoGas	0.059	0.059	37.91	433	0.01	2000	
B	11	45	2	NoGas	14.872	14.872	3.13	63728	0.02	300	
Na	23	45	1	He	35.947	35.947	5.87	52888	0.07	500000	
Mg	24	45	1	He	2.385	2.385	12.17	1822	0.13	500000	
Al	27	45	1	He	0.399	0.399	6.99	326	0.12	200000	
K	39	45	1	He	10.515	10.515	30.18	31432	0.03	500000	
Ca	44	45	1	He	4.347	4.347	29.94	395	1.10	500000	
Ti	47	45	1	He	0.053	0.053	118.34	8	0.68	2500	
V	51	45	1	He	0.059	0.059	69.38	786	0.01	10000	
Cr	52	45	1	He	0.348	0.348	18.15	5532	0.01	10000	
Mn	55	45	1	He	0.597	0.597	8.14	2129	0.03	10000	
Fe	56	45	1	He	5.011	5.011	3.93	21524	0.02	200000	
Co	59	45	1	He	0.036	0.036	8.53	369	0.01	5000	
Ni	60	45	1	He	0.015	0.015	47.20	287	0.01	10000	
Cu	63	45	1	He	0.064	0.064	43.57	3479	0.00	10000	
Zn	66	45	1	He	0.755	0.755	8.40	1216	0.06	10000	
As	75	115	1	He	-0.024	-0.024	-62.31	121	-0.02	10000	
Se	78	115	1	He	0.059	0.059	383.11	27	0.22	10000	
Sr	88	103	1	He	0.220	0.220	7.79	831	0.03	10000	
Mo	95	103	1	He	0.018	0.018	26.56	71	0.03	2000	
Ag	107	103	1	He	0.005	0.005	45.32	62	0.01	300	
Cd	111	115	1	He	0.064	0.064	15.37	60	0.11	4000	
Sn	118	115	1	He	-3.423	-3.423	-1.45	789	-0.43	2000	
Sb	123	115	1	He	0.052	0.052	12.83	147	0.04	200	
Ba	137	115	1	He	0.040	0.040	59.98	52	0.08	10000	
W	182	159	1	He	0.025	0.025	163.88	1608	0.00	2500	
Tl	205	165	1	He	0.029	0.029	12.48	323	0.01	2000	
Pb	208	165	1	He	0.033	0.033	3.80	964	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2190185	1.01	1674650	130.78	60	120	ISTD warning
Sc	45	1	He	396929	1.37	355173	111.76	60	120	
Sc	45	2	NoGas	10854165	1.03	8635903	125.69	60	120	ISTD warning
Rh	103	1	He	1581468	2.09	1470259	107.56	60	120	
In	115	1	He	528370	1.72	490642	107.69	60	120	
Tb	159	1	He	1484517	0.48	1434034	103.52	60	120	
Ho	165	1	He	1430472	1.42	1409606	101.48	60	120	
Bi	209	1	He	932811	0.91	906964	102.85	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-6-a
Data File Name	099SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.312	15.312	0.44	488467	0.00	10000	
Be	9	45	2	NoGas	0.156	0.156	22.08	1052	0.01	2000	
B	11	45	2	NoGas	56.403	56.403	2.52	223544	0.03	300	
Na	23	45	1	He	25727.958	25727.958	2.81	26851982	0.10	500000	
Mg	24	45	1	He	49584.638	49584.638	3.26	27856522	0.18	500000	
Al	27	45	1	He	2234.336	2234.336	3.29	522355	0.43	200000	
K	39	45	1	He	3640.995	3640.995	2.23	1242957	0.29	500000	
Ca	44	45	1	He	122955.967	122955.967	3.22	2227178	5.52	500000	
Ti	47	45	1	He	47.476	47.476	5.28	5823	0.82	2500	
V	51	45	1	He	4.561	4.561	7.81	19199	0.02	10000	
Cr	52	45	1	He	5.117	5.117	4.54	28677	0.02	10000	
Mn	55	45	1	He	340.160	340.160	2.49	876925	0.04	10000	
Fe	56	45	1	He	4393.870	4393.870	3.53	16399119	0.03	200000	
Co	59	45	1	He	2.998	2.998	2.81	23934	0.01	5000	
Ni	60	45	1	He	29.743	29.743	3.01	64660	0.05	10000	
Cu	63	45	1	He	10.491	10.491	3.66	65759	0.02	10000	
Zn	66	45	1	He	24.380	24.380	2.92	19622	0.12	10000	
As	75	115	1	He	7.179	7.179	4.19	3744	0.19	10000	
Se	78	115	1	He	1.008	1.008	19.06	53	1.92	10000	
Sr	88	103	1	He	5624.972	5624.972	2.19	14288377	0.04	10000	
Mo	95	103	1	He	15.612	15.612	3.36	36739	0.04	2000	
Ag	107	103	1	He	0.020	0.020	10.20	166	0.01	300	
Cd	111	115	1	He	0.465	0.465	9.02	414	0.11	4000	
Sn	118	115	1	He	-2.627	-2.627	-3.65	2193	-0.12	2000	
Sb	123	115	1	He	0.401	0.401	3.25	840	0.05	200	
Ba	137	115	1	He	170.038	170.038	1.76	131537	0.13	10000	
W	182	159	1	He	0.032	0.032	73.71	1626	0.00	2500	
Tl	205	165	1	He	0.157	0.157	0.51	1532	0.01	2000	
Pb	208	165	1	He	7.181	7.181	1.04	93178	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2155928	1.14	1674650	128.74	60	120	ISTD warning
Sc	45	1	He	392460	1.34	355173	110.50	60	120	
Sc	45	2	NoGas	10795244	0.16	8635903	125.00	60	120	ISTD warning
Rh	103	1	He	1493770	0.95	1470259	101.60	60	120	
In	115	1	He	506747	0.09	490642	103.28	60	120	
Tb	159	1	He	1467381	0.78	1434034	102.33	60	120	
Ho	165	1	He	1399163	1.74	1409606	99.26	60	120	
Bi	209	1	He	866911	0.90	906964	95.58	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-7-a
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:00:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.898	15.898	2.22	525950	0.00	10000	
Be	9	45	2	NoGas	0.165	0.165	3.62	1159	0.01	2000	
B	11	45	2	NoGas	57.618	57.618	1.44	238884	0.02	300	
Na	23	45	1	He	26899.941	26899.941	1.89	28663449	0.09	500000	
Mg	24	45	1	He	49845.939	49845.939	1.02	28592911	0.17	500000	
Al	27	45	1	He	2926.397	2926.397	2.74	698442	0.42	200000	
K	39	45	1	He	4437.696	4437.696	2.30	1540460	0.29	500000	
Ca	44	45	1	He	122906.999	122906.999	1.49	2273069	5.41	500000	
Ti	47	45	1	He	66.783	66.783	23.10	8357	0.80	2500	
V	51	45	1	He	6.012	6.012	3.80	25674	0.02	10000	
Cr	52	45	1	He	6.985	6.985	4.02	38559	0.02	10000	
Mn	55	45	1	He	410.311	410.311	1.71	1079831	0.04	10000	
Fe	56	45	1	He	5653.099	5653.099	1.71	21542104	0.03	200000	
Co	59	45	1	He	3.624	3.624	1.26	29516	0.01	5000	
Ni	60	45	1	He	32.806	32.806	2.44	72787	0.05	10000	
Cu	63	45	1	He	13.340	13.340	2.92	84522	0.02	10000	
Zn	66	45	1	He	29.962	29.962	3.30	24476	0.12	10000	
As	75	115	1	He	9.602	9.602	2.94	5093	0.19	10000	
Se	78	115	1	He	0.668	0.668	0.94	44	1.51	10000	
Sr	88	103	1	He	5799.150	5799.150	1.30	15205013	0.04	10000	
Mo	95	103	1	He	17.532	17.532	1.10	42579	0.04	2000	
Ag	107	103	1	He	0.030	0.030	4.80	248	0.01	300	
Cd	111	115	1	He	1.266	1.266	3.35	1157	0.11	4000	
Sn	118	115	1	He	-2.798	-2.798	-1.68	1934	-0.14	2000	
Sb	123	115	1	He	0.376	0.376	4.68	810	0.05	200	
Ba	137	115	1	He	185.050	185.050	1.29	146877	0.13	10000	
W	182	159	1	He	0.092	0.092	25.78	1982	0.00	2500	
Tl	205	165	1	He	0.170	0.170	5.55	1691	0.01	2000	
Pb	208	165	1	He	9.340	9.340	1.51	123768	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2229861	0.75	1674650	133.15	60	120	ISTD warning
Sc	45	1	He	400623	0.58	355173	112.80	60	120	
Sc	45	2	NoGas	11300839	1.35	8635903	130.86	60	120	ISTD warning
Rh	103	1	He	1541587	0.49	1470259	104.85	60	120	
In	115	1	He	519958	0.40	490642	105.97	60	120	
Tb	159	1	He	1489779	0.97	1434034	103.89	60	120	
Ho	165	1	He	1431035	2.63	1409606	101.52	60	120	
Bi	209	1	He	889692	0.63	906964	98.10	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-8-a
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:04:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.208	11.208	0.53	406485	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	35.67	319	0.01	2000	
B	11	45	2	NoGas	49.247	49.247	1.05	204111	0.02	300	
Na	23	45	1	He	9978.702	9978.702	1.96	10786612	0.09	500000	
Mg	24	45	1	He	43703.234	43703.234	2.64	25407082	0.17	500000	
Al	27	45	1	He	10.213	10.213	5.32	2706	0.38	200000	
K	39	45	1	He	1239.902	1239.902	1.19	456817	0.27	500000	
Ca	44	45	1	He	112109.650	112109.650	2.05	2101478	5.33	500000	
Ti	47	45	1	He	0.393	0.393	64.54	51	0.77	2500	
V	51	45	1	He	0.112	0.112	117.18	1024	0.01	10000	
Cr	52	45	1	He	-0.028	-0.028	-115.24	3768	0.00	10000	
Mn	55	45	1	He	20.231	20.231	3.43	54516	0.04	10000	
Fe	56	45	1	He	2636.281	2636.281	2.29	10183162	0.03	200000	
Co	59	45	1	He	0.049	0.049	7.73	486	0.01	5000	
Ni	60	45	1	He	0.088	0.088	24.28	457	0.02	10000	
Cu	63	45	1	He	-0.087	-0.087	-17.03	2626	0.00	10000	
Zn	66	45	1	He	1.232	1.232	8.92	1628	0.08	10000	
As	75	115	1	He	21.331	21.331	0.92	11416	0.19	10000	
Se	78	115	1	He	0.090	0.090	158.71	29	0.32	10000	
Sr	88	103	1	He	6128.825	6128.825	2.65	16349682	0.04	10000	
Mo	95	103	1	He	22.175	22.175	2.84	54791	0.04	2000	
Ag	107	103	1	He	0.006	0.006	44.40	73	0.01	300	
Cd	111	115	1	He	0.050	0.050	12.97	47	0.11	4000	
Sn	118	115	1	He	-3.233	-3.233	-3.40	1156	-0.28	2000	
Sb	123	115	1	He	0.049	0.049	36.31	142	0.03	200	
Ba	137	115	1	He	100.629	100.629	0.81	81747	0.12	10000	
W	182	159	1	He	0.009	0.009	58.05	1563	0.00	2500	
Tl	205	165	1	He	0.014	0.014	39.56	182	0.01	2000	
Pb	208	165	1	He	0.041	0.041	8.82	1091	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2214770	1.49	1674650	132.25	60	120	ISTD warning
Sc	45	1	He	406077	1.01	355173	114.33	60	120	
Sc	45	2	NoGas	11245865	0.55	8635903	130.22	60	120	ISTD warning
Rh	103	1	He	1568876	1.21	1470259	106.71	60	120	
In	115	1	He	532108	0.45	490642	108.45	60	120	
Tb	159	1	He	1530255	0.63	1434034	106.71	60	120	
Ho	165	1	He	1450567	0.94	1409606	102.91	60	120	
Bi	209	1	He	920205	1.17	906964	101.46	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-9-a
Data File Name	102SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:08:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.154	0.154	31.98	129145	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	46.10	193	0.01	2000	
B	11	45	2	NoGas	10.969	10.969	1.69	49719	0.02	300	
Na	23	45	1	He	26.442	26.442	1.70	44699	0.06	500000	
Mg	24	45	1	He	8.878	8.878	30.27	5749	0.15	500000	
Al	27	45	1	He	1.164	1.164	8.75	528	0.22	200000	
K	39	45	1	He	9.025	9.025	31.99	32230	0.03	500000	
Ca	44	45	1	He	22.168	22.168	62.10	752	2.95	500000	
Ti	47	45	1	He	0.050	0.050	165.16	8	0.65	2500	
V	51	45	1	He	0.065	0.065	86.76	848	0.01	10000	
Cr	52	45	1	He	-0.100	-0.100	-9.64	3474	0.00	10000	
Mn	55	45	1	He	0.727	0.727	7.53	2572	0.03	10000	
Fe	56	45	1	He	3.082	3.082	10.92	14854	0.02	200000	
Co	59	45	1	He	0.005	0.005	87.72	128	0.00	5000	
Ni	60	45	1	He	-0.040	-0.040	-27.01	174	-0.02	10000	
Cu	63	45	1	He	0.058	0.058	49.49	3590	0.00	10000	
Zn	66	45	1	He	0.929	0.929	1.42	1410	0.07	10000	
As	75	115	1	He	-0.031	-0.031	-36.12	123	-0.03	10000	
Se	78	115	1	He	0.090	0.090	320.54	30	0.30	10000	
Sr	88	103	1	He	1.439	1.439	23.12	4289	0.03	10000	
Mo	95	103	1	He	0.055	0.055	15.21	168	0.03	2000	
Ag	107	103	1	He	0.000	0.000	355.00	29	0.00	300	
Cd	111	115	1	He	0.040	0.040	13.21	39	0.10	4000	
Sn	118	115	1	He	-3.216	-3.216	-2.38	1233	-0.26	2000	
Sb	123	115	1	He	0.047	0.047	4.87	142	0.03	200	
Ba	137	115	1	He	0.042	0.042	72.56	57	0.07	10000	
W	182	159	1	He	0.039	0.039	110.73	1745	0.00	2500	
Tl	205	165	1	He	0.011	0.011	18.67	153	0.01	2000	
Pb	208	165	1	He	0.060	0.060	13.50	1341	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2242591	0.35	1674650	133.91	60	120	ISTD warning
Sc	45	1	He	413793	0.49	355173	116.50	60	120	
Sc	45	2	NoGas	11108385	0.38	8635903	128.63	60	120	ISTD warning
Rh	103	1	He	1648633	0.70	1470259	112.13	60	120	
In	115	1	He	552190	1.36	490642	112.54	60	120	
Tb	159	1	He	1538700	0.40	1434034	107.30	60	120	
Ho	165	1	He	1458824	1.42	1409606	103.49	60	120	
Bi	209	1	He	971948	0.42	906964	107.17	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-10-a
Data File Name	103SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:12:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.873	5.873	0.82	266644	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	31.73	315	0.01	2000	
B	11	45	2	NoGas	33.183	33.183	0.50	136130	0.02	300	
Na	23	45	1	He	5891.961	5891.961	3.61	6240479	0.09	500000	
Mg	24	45	1	He	35721.794	35721.794	2.94	20329331	0.18	500000	
Al	27	45	1	He	2.680	2.680	15.61	866	0.31	200000	
K	39	45	1	He	881.327	881.327	2.23	325913	0.27	500000	
Ca	44	45	1	He	95963.395	95963.395	3.26	1760811	5.45	500000	
Ti	47	45	1	He	0.133	0.133	50.00	18	0.75	2500	
V	51	45	1	He	0.146	0.146	34.48	1148	0.01	10000	
Cr	52	45	1	He	0.085	0.085	47.75	4251	0.00	10000	
Mn	55	45	1	He	37.686	37.686	4.08	98917	0.04	10000	
Fe	56	45	1	He	1317.179	1317.179	2.19	4982102	0.03	200000	
Co	59	45	1	He	1.535	1.535	1.30	12456	0.01	5000	
Ni	60	45	1	He	0.174	0.174	26.83	636	0.03	10000	
Cu	63	45	1	He	-0.044	-0.044	-100.00	2831	0.00	10000	
Zn	66	45	1	He	1.895	1.895	14.26	2117	0.09	10000	
As	75	115	1	He	3.701	3.701	2.13	2056	0.18	10000	
Se	78	115	1	He	0.119	0.119	97.88	29	0.41	10000	
Sr	88	103	1	He	3690.876	3690.876	1.68	9498086	0.04	10000	
Mo	95	103	1	He	12.129	12.129	0.40	28924	0.04	2000	
Ag	107	103	1	He	0.005	0.005	44.76	62	0.01	300	
Cd	111	115	1	He	0.037	0.037	35.05	35	0.11	4000	
Sn	118	115	1	He	-3.443	-3.443	-2.10	745	-0.46	2000	
Sb	123	115	1	He	0.050	0.050	34.13	142	0.04	200	
Ba	137	115	1	He	102.139	102.139	1.37	81565	0.13	10000	
W	182	159	1	He	0.308	0.308	4.82	3212	0.01	2500	
Tl	205	165	1	He	0.010	0.010	38.82	140	0.01	2000	
Pb	208	165	1	He	0.028	0.028	17.82	886	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2164512	0.27	1674650	129.25	60	120	ISTD warning
Sc	45	1	He	397510	0.94	355173	111.92	60	120	
Sc	45	2	NoGas	10967680	0.18	8635903	127.00	60	120	ISTD warning
Rh	103	1	He	1513268	2.13	1470259	102.93	60	120	
In	115	1	He	523015	1.01	490642	106.60	60	120	
Tb	159	1	He	1504773	0.81	1434034	104.93	60	120	
Ho	165	1	He	1407766	0.88	1409606	99.87	60	120	
Bi	209	1	He	900278	0.79	906964	99.26	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-11-a
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:16:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.756	6.756	1.40	279699	0.00	10000	
Be	9	45	2	NoGas	0.036	0.036	10.36	278	0.01	2000	
B	11	45	2	NoGas	161.482	161.482	0.51	620139	0.03	300	
Na	23	45	1	He	25448.858	25448.858	2.61	25938131	0.10	500000	
Mg	24	45	1	He	30482.907	30482.907	2.75	16724595	0.18	500000	
Al	27	45	1	He	2.803	2.803	9.52	863	0.32	200000	
K	39	45	1	He	1528.621	1528.621	2.00	525226	0.29	500000	
Ca	44	45	1	He	113006.888	113006.888	1.03	1999363	5.65	500000	
Ti	47	45	1	He	0.165	0.165	74.64	21	0.78	2500	
V	51	45	1	He	0.181	0.181	7.95	1248	0.01	10000	
Cr	52	45	1	He	0.045	0.045	70.09	3905	0.00	10000	
Mn	55	45	1	He	13.101	13.101	3.44	33513	0.04	10000	
Fe	56	45	1	He	1371.843	1371.843	2.31	5002191	0.03	200000	
Co	59	45	1	He	0.090	0.090	2.05	774	0.01	5000	
Ni	60	45	1	He	0.065	0.065	52.49	382	0.02	10000	
Cu	63	45	1	He	0.059	0.059	26.35	3330	0.00	10000	
Zn	66	45	1	He	1.050	1.050	4.51	1398	0.08	10000	
As	75	115	1	He	6.773	6.773	0.67	3526	0.19	10000	
Se	78	115	1	He	0.160	0.160	144.44	29	0.55	10000	
Sr	88	103	1	He	30324.884	30324.884	0.46	76213388	0.04	10000	>LDR
Mo	95	103	1	He	55.385	55.385	1.97	128894	0.04	2000	
Ag	107	103	1	He	0.018	0.018	22.13	149	0.01	300	
Cd	111	115	1	He	0.046	0.046	38.02	41	0.11	4000	
Sn	118	115	1	He	-3.549	-3.549	-0.62	530	-0.67	2000	
Sb	123	115	1	He	0.067	0.067	9.85	171	0.04	200	
Ba	137	115	1	He	154.295	154.295	1.06	118892	0.13	10000	
W	182	159	1	He	0.055	0.055	62.71	1722	0.00	2500	
Tl	205	165	1	He	0.007	0.007	42.80	107	0.01	2000	
Pb	208	165	1	He	0.031	0.031	31.57	917	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2092633	1.09	1674650	124.96	60	120	ISTD warning
Sc	45	1	He	383266	1.52	355173	107.91	60	120	
Sc	45	2	NoGas	10647028	0.77	8635903	123.29	60	120	ISTD warning
Rh	103	1	He	1477773	0.60	1470259	100.51	60	120	
In	115	1	He	504784	0.87	490642	102.88	60	120	
Tb	159	1	He	1441889	0.25	1434034	100.55	60	120	
Ho	165	1	He	1402937	2.96	1409606	99.53	60	120	
Bi	209	1	He	868762	0.74	906964	95.79	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-12-a
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:20:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.678	6.678	1.19	295613	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	33.95	259	0.01	2000	
B	11	45	2	NoGas	166.817	166.817	1.15	681404	0.02	300	
Na	23	45	1	He	25123.442	25123.442	3.08	27332125	0.09	500000	
Mg	24	45	1	He	30191.176	30191.176	2.76	17682335	0.17	500000	
Al	27	45	1	He	1.907	1.907	15.63	702	0.27	200000	
K	39	45	1	He	1508.311	1508.311	2.32	553607	0.27	500000	
Ca	44	45	1	He	113044.003	113044.003	3.21	2135150	5.29	500000	
Ti	47	45	1	He	0.206	0.206	58.70	28	0.74	2500	
V	51	45	1	He	0.203	0.203	14.07	1423	0.01	10000	
Cr	52	45	1	He	0.100	0.100	17.54	4451	0.00	10000	
Mn	55	45	1	He	13.361	13.361	2.75	36475	0.04	10000	
Fe	56	45	1	He	1354.771	1354.771	3.51	5272607	0.03	200000	
Co	59	45	1	He	0.094	0.094	1.00	864	0.01	5000	
Ni	60	45	1	He	0.116	0.116	35.88	523	0.02	10000	
Cu	63	45	1	He	-0.032	-0.032	-27.16	2988	0.00	10000	
Zn	66	45	1	He	0.493	0.493	24.32	1039	0.05	10000	
As	75	115	1	He	6.724	6.724	1.50	3677	0.18	10000	
Se	78	115	1	He	0.122	0.122	144.99	29	0.42	10000	
Sr	88	103	1	He	31099.584	31099.584	2.50	80738603	0.04	10000	>LDR
Mo	95	103	1	He	56.991	56.991	3.51	136989	0.04	2000	
Ag	107	103	1	He	0.015	0.015	31.51	137	0.01	300	
Cd	111	115	1	He	0.027	0.027	27.67	26	0.10	4000	
Sn	118	115	1	He	-3.525	-3.525	-3.04	600	-0.59	2000	
Sb	123	115	1	He	0.063	0.063	19.60	171	0.04	200	
Ba	137	115	1	He	152.363	152.363	0.72	123315	0.12	10000	
W	182	159	1	He	0.012	0.012	72.53	1545	0.00	2500	
Tl	205	165	1	He	0.007	0.007	6.79	109	0.01	2000	
Pb	208	165	1	He	0.028	0.028	13.79	911	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2239282	1.25	1674650	133.72	60	120	ISTD warning
Sc	45	1	He	409095	1.44	355173	115.18	60	120	
Sc	45	2	NoGas	11327794	0.81	8635903	131.17	60	120	ISTD warning
Rh	103	1	He	1526894	1.62	1470259	103.85	60	120	
In	115	1	He	530161	0.55	490642	108.05	60	120	
Tb	159	1	He	1495024	3.17	1434034	104.25	60	120	
Ho	165	1	He	1453740	3.66	1409606	103.13	60	120	
Bi	209	1	He	922541	1.40	906964	101.72	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	106_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:24:38-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.927	1.005	1416460	0.76	50	105.9	89.5	110.5	
Be	9	45	2	NoGas	50.460	0.962	330008	0.52	50	100.9	89.5	110.5	
B	11	45	2	NoGas	62.001	0.403	249952	0.36	50	124.0	89.5	110.5	CCV Failed
Na	23	45	1	He	24774.029	1.902	26632133	1.19	25000	99.1	89.5	110.5	
Mg	24	45	1	He	24853.110	1.954	14381956	1.37	25000	99.4	89.5	110.5	
Al	27	45	1	He	245.994	1.687	59447	1.16	250	98.4	89.5	110.5	
K	39	45	1	He	25247.457	1.130	8708859	0.60	25000	101.0	89.5	110.5	
Ca	44	45	1	He	24930.880	2.033	465397	1.49	25000	99.7	89.5	110.5	
Ti	47	45	1	He	50.791	3.019	6418	2.93	50	101.6	89.5	110.5	
V	51	45	1	He	50.235	3.247	212369	2.86	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.195	2.938	250439	2.32	50	98.4	89.5	110.5	
Mn	55	45	1	He	247.725	1.577	657933	1.03	250	99.1	89.5	110.5	
Fe	56	45	1	He	12334.056	2.195	47411513	1.62	12500	98.7	89.5	110.5	
Co	59	45	1	He	49.318	1.523	404251	1.24	50	98.6	89.5	110.5	
Ni	60	45	1	He	49.070	2.318	109705	1.61	50	98.1	89.5	110.5	
Cu	63	45	1	He	49.044	1.833	305072	1.19	50	98.1	89.5	110.5	
Zn	66	45	1	He	50.791	1.965	41421	1.63	50	101.6	89.5	110.5	
As	75	115	1	He	52.798	0.985	28162	1.24	50	105.6	89.5	110.5	
Se	78	115	1	He	51.503	2.170	1529	1.26	50	103.0	89.5	110.5	
Sr	88	103	1	He	57.770	2.382	154754	1.23	50	115.5	89.5	110.5	CCV Failed
Mo	95	103	1	He	51.241	0.964	126943	2.09	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.865	0.775	386187	0.55	50	101.7	89.5	110.5	
Cd	111	115	1	He	50.696	1.016	47567	0.46	50	101.4	89.5	110.5	
Sn	118	115	1	He	48.596	0.370	99638	0.91	50	97.2	89.5	110.5	
Sb	123	115	1	He	51.594	0.953	108936	1.60	50	103.2	89.5	110.5	
Ba	137	115	1	He	50.417	2.693	41123	3.22	50	100.8	89.5	110.5	
W	182	159	1	He	50.221	3.559	286239	4.00	50	100.4	89.5	110.5	
Tl	205	165	1	He	51.433	1.716	510764	2.17	50	102.9	89.5	110.5	
Pb	208	165	1	He	51.290	1.619	691747	0.93	50	102.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2168056	0.99	1674650	129.46	60	120	ISTD warning
Sc	45	1	He	404163	0.72	355173	113.79	60	120	
Sc	45	2	NoGas	11007693	0.46	8635903	127.46	60	120	ISTD warning
Rh	103	1	He	1572947	1.15	1470259	106.98	60	120	
In	115	1	He	534091	1.13	490642	108.86	60	120	
Tb	159	1	He	1525827	1.56	1434034	106.40	60	120	
Ho	165	1	He	1461444	2.06	1409606	103.68	60	120	
Bi	209	1	He	919459	0.50	906964	101.38	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	107_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:28:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.112	51.9	129791	0.4	8	
Be	9	45	2	NoGas	0.029	43.9	244	34.3	1	
B	11	45	2	NoGas	7.864	2.3	37880	0.9	20	
Na	23	45	1	He	27.297	5.8	44432	2.7	1000	
Mg	24	45	1	He	3.655	10.2	2585	9.5	1000	
Al	27	45	1	He	0.014	1037.7	238	13.6	50	
K	39	45	1	He	15.113	17.5	33469	1.6	1000	
Ca	44	45	1	He	6.533	16.7	442	5.0	1000	
Ti	47	45	1	He	0.043	60.6	7	50.0	20	
V	51	45	1	He	0.077	71.6	874	26.1	2	
Cr	52	45	1	He	0.039	142.1	4073	5.5	2	
Mn	55	45	1	He	0.056	44.6	729	8.2	2	
Fe	56	45	1	He	3.836	31.6	17383	27.9	50	
Co	59	45	1	He	0.015	44.8	202	27.1	1	
Ni	60	45	1	He	-0.059	-3.8	127	5.3	2	
Cu	63	45	1	He	0.228	12.3	4538	4.8	2	
Zn	66	45	1	He	0.001	2838.6	630	4.5	20	
As	75	115	1	He	-0.022	-109.4	126	10.5	2	
Se	78	115	1	He	0.085	187.4	29	16.6	2	
Sr	88	103	1	He	1.894	5.3	5496	4.7	10	
Mo	95	103	1	He	0.135	11.1	372	10.5	2	
Ag	107	103	1	He	0.009	37.7	98	27.6	0.2	
Cd	111	115	1	He	0.035	16.5	34	15.3	0.2	
Sn	118	115	1	He	0.132	104.8	7739	2.9	10	
Sb	123	115	1	He	0.114	1.8	286	0.7	2	
Ba	137	115	1	He	0.044	93.0	58	58.9	5	
W	182	159	1	He	0.283	7.2	3152	3.2	10	
Tl	205	165	1	He	0.056	11.2	596	11.2	0.5	
Pb	208	165	1	He	0.034	4.3	1000	2.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2258292	0.77	1674650	134.85	60	120	ISTD warning
Sc	45	1	He	402957	1.27	355173	113.45	60	120	
Sc	45	2	NoGas	11253621	1.11	8635903	130.31	60	120	ISTD warning
Rh	103	1	He	1629813	0.35	1470259	110.85	60	120	
In	115	1	He	547315	0.93	490642	111.55	60	120	
Tb	159	1	He	1544402	0.83	1434034	107.70	60	120	
Ho	165	1	He	1458999	1.39	1409606	103.50	60	120	
Bi	209	1	He	945907	1.45	906964	104.29	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-13-a
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:32:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.317	0.317	11.14	128983	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	8.87	252	0.01	2000	
B	11	45	2	NoGas	228.921	228.921	1.18	885877	0.03	300	
Na	23	45	1	He	51558.971	51558.971	1.91	54922902	0.09	500000	
Mg	24	45	1	He	26072.472	26072.472	2.87	14953538	0.17	500000	
Al	27	45	1	He	6.670	6.670	5.73	1825	0.37	200000	
K	39	45	1	He	1338.822	1338.822	0.96	484419	0.28	500000	
Ca	44	45	1	He	77421.800	77421.800	2.81	1431770	5.41	500000	
Ti	47	45	1	He	0.097	0.097	28.53	13	0.73	2500	
V	51	45	1	He	0.275	0.275	27.40	1697	0.02	10000	
Cr	52	45	1	He	0.219	0.219	3.56	4947	0.00	10000	
Mn	55	45	1	He	89.490	89.490	2.79	235937	0.04	10000	
Fe	56	45	1	He	1255.503	1255.503	3.13	4785529	0.03	200000	
Co	59	45	1	He	0.179	0.179	10.60	1532	0.01	5000	
Ni	60	45	1	He	0.198	0.198	8.02	694	0.03	10000	
Cu	63	45	1	He	0.179	0.179	22.84	4214	0.00	10000	
Zn	66	45	1	He	2.181	2.181	5.61	2362	0.09	10000	
As	75	115	1	He	0.930	0.930	1.36	610	0.15	10000	
Se	78	115	1	He	0.005	0.005	1206.72	25	0.02	10000	
Sr	88	103	1	He	9377.534	9377.534	0.84	24412240	0.04	10000	
Mo	95	103	1	He	13.494	13.494	0.66	32547	0.04	2000	
Ag	107	103	1	He	0.009	0.009	21.53	93	0.01	300	
Cd	111	115	1	He	0.033	0.033	13.01	30	0.11	4000	
Sn	118	115	1	He	-3.512	-3.512	-0.76	611	-0.57	2000	
Sb	123	115	1	He	0.093	0.093	18.36	229	0.04	200	
Ba	137	115	1	He	345.493	345.493	1.19	273253	0.13	10000	
W	182	159	1	He	0.094	0.094	37.11	1989	0.00	2500	
Tl	205	165	1	He	0.019	0.019	23.38	231	0.01	2000	
Pb	208	165	1	He	0.028	0.028	17.23	902	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2133772	0.06	1674650	127.42	60	120	ISTD warning
Sc	45	1	He	400649	1.42	355173	112.80	60	120	
Sc	45	2	NoGas	10759391	0.65	8635903	124.59	60	120	ISTD warning
Rh	103	1	He	1530684	0.50	1470259	104.11	60	120	
In	115	1	He	518145	0.21	490642	105.61	60	120	
Tb	159	1	He	1486282	0.61	1434034	103.64	60	120	
Ho	165	1	He	1428043	2.09	1409606	101.31	60	120	
Bi	209	1	He	888498	1.69	906964	97.96	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-14-a
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:36:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.678	11.678	1.77	403455	0.00	10000	
Be	9	45	2	NoGas	0.030	0.030	50.81	248	0.01	2000	
B	11	45	2	NoGas	86.671	86.671	1.67	341962	0.03	300	
Na	23	45	1	He	14037.251	14037.251	0.60	14446663	0.10	500000	
Mg	24	45	1	He	35935.067	35935.067	1.19	19899648	0.18	500000	
Al	27	45	1	He	10.403	10.403	4.89	2621	0.40	200000	
K	39	45	1	He	1412.325	1412.325	1.59	491809	0.29	500000	
Ca	44	45	1	He	99117.715	99117.715	1.56	1769881	5.60	500000	
Ti	47	45	1	He	0.368	0.368	68.06	46	0.81	2500	
V	51	45	1	He	0.130	0.130	12.01	1054	0.01	10000	
Cr	52	45	1	He	0.182	0.182	19.22	4598	0.00	10000	
Mn	55	45	1	He	40.839	40.839	2.66	104257	0.04	10000	
Fe	56	45	1	He	1564.231	1564.231	2.31	5756233	0.03	200000	
Co	59	45	1	He	0.557	0.557	3.30	4449	0.01	5000	
Ni	60	45	1	He	0.272	0.272	4.96	828	0.03	10000	
Cu	63	45	1	He	0.213	0.213	7.57	4266	0.00	10000	
Zn	66	45	1	He	1.426	1.426	8.74	1700	0.08	10000	
As	75	115	1	He	14.203	14.203	1.50	7255	0.20	10000	
Se	78	115	1	He	0.336	0.336	53.12	34	0.99	10000	
Sr	88	103	1	He	17225.364	17225.364	0.56	44215685	0.04	10000	>LDR
Mo	95	103	1	He	37.121	37.121	1.41	88257	0.04	2000	
Ag	107	103	1	He	0.010	0.010	31.02	97	0.01	300	
Cd	111	115	1	He	0.035	0.035	30.18	32	0.11	4000	
Sn	118	115	1	He	-3.252	-3.252	-0.28	1063	-0.31	2000	
Sb	123	115	1	He	0.065	0.065	29.41	166	0.04	200	
Ba	137	115	1	He	221.148	221.148	0.72	170450	0.13	10000	
W	182	159	1	He	0.071	0.071	9.29	1808	0.00	2500	
Tl	205	165	1	He	0.020	0.020	15.48	233	0.01	2000	
Pb	208	165	1	He	0.055	0.055	6.83	1241	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2185199	0.54	1674650	130.49	60	120	ISTD warning
Sc	45	1	He	386738	0.80	355173	108.89	60	120	
Sc	45	2	NoGas	10850347	1.21	8635903	125.64	60	120	ISTD warning
Rh	103	1	He	1509329	1.68	1470259	102.66	60	120	
In	115	1	He	504908	0.41	490642	102.91	60	120	
Tb	159	1	He	1442349	0.56	1434034	100.58	60	120	
Ho	165	1	He	1414612	2.01	1409606	100.36	60	120	
Bi	209	1	He	878384	1.05	906964	96.85	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-15-a
Data File Name	110SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:40:55-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.868	7.868	1.26	313411	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	74.06	189	0.01	2000	
B	11	45	2	NoGas	51.938	51.938	0.25	208433	0.02	300	
Na	23	45	1	He	8880.644	8880.644	1.93	9318089	0.10	500000	
Mg	24	45	1	He	30699.244	30699.244	1.94	17321552	0.18	500000	
Al	27	45	1	He	1.475	1.475	6.94	576	0.26	200000	
K	39	45	1	He	1085.611	1085.611	0.35	391607	0.28	500000	
Ca	44	45	1	He	86123.357	86123.357	2.24	1566807	5.50	500000	
Ti	47	45	1	He	0.116	0.116	48.23	16	0.75	2500	
V	51	45	1	He	0.119	0.119	77.16	1026	0.01	10000	
Cr	52	45	1	He	0.084	0.084	41.58	4205	0.00	10000	
Mn	55	45	1	He	27.535	27.535	2.13	71809	0.04	10000	
Fe	56	45	1	He	1512.333	1512.333	2.47	5670622	0.03	200000	
Co	59	45	1	He	0.048	0.048	10.68	462	0.01	5000	
Ni	60	45	1	He	0.080	0.080	10.93	428	0.02	10000	
Cu	63	45	1	He	-0.095	-0.095	-17.21	2501	0.00	10000	
Zn	66	45	1	He	1.106	1.106	14.16	1481	0.07	10000	
As	75	115	1	He	13.804	13.804	1.14	7231	0.19	10000	
Se	78	115	1	He	0.211	0.211	89.12	31	0.68	10000	
Sr	88	103	1	He	7943.072	7943.072	1.97	20658284	0.04	10000	
Mo	95	103	1	He	23.837	23.837	1.73	57422	0.04	2000	
Ag	107	103	1	He	0.004	0.004	81.66	54	0.01	300	
Cd	111	115	1	He	0.025	0.025	18.41	24	0.11	4000	
Sn	118	115	1	He	-3.435	-3.435	-3.40	752	-0.46	2000	
Sb	123	115	1	He	0.059	0.059	10.46	159	0.04	200	
Ba	137	115	1	He	174.781	174.781	1.23	138077	0.13	10000	
W	182	159	1	He	0.037	0.037	105.59	1645	0.00	2500	
Tl	205	165	1	He	0.011	0.011	25.38	149	0.01	2000	
Pb	208	165	1	He	0.033	0.033	6.64	944	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2195982	1.08	1674650	131.13	60	120	ISTD warning
Sc	45	1	He	394061	0.32	355173	110.95	60	120	
Sc	45	2	NoGas	10905932	0.54	8635903	126.29	60	120	ISTD warning
Rh	103	1	He	1529436	1.49	1470259	104.02	60	120	
In	115	1	He	517509	0.10	490642	105.48	60	120	
Tb	159	1	He	1461839	2.30	1434034	101.94	60	120	
Ho	165	1	He	1405816	2.09	1409606	99.73	60	120	
Bi	209	1	He	893765	0.73	906964	98.54	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-16-a
Data File Name	111SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:44:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.148	12.148	1.15	414904	0.00	10000	
Be	9	45	2	NoGas	0.034	0.034	56.75	274	0.01	2000	
B	11	45	2	NoGas	182.160	182.160	1.47	712292	0.03	300	
Na	23	45	1	He	26913.905	26913.905	1.54	28283781	0.10	500000	
Mg	24	45	1	He	33689.564	33689.564	2.84	19057805	0.18	500000	
Al	27	45	1	He	3.469	3.469	5.90	1047	0.33	200000	
K	39	45	1	He	2014.056	2014.056	2.48	704657	0.29	500000	
Ca	44	45	1	He	149061.405	149061.405	2.87	2718590	5.48	500000	
Ti	47	45	1	He	0.242	0.242	41.87	31	0.78	2500	
V	51	45	1	He	0.175	0.175	9.08	1260	0.01	10000	
Cr	52	45	1	He	0.161	0.161	41.59	4595	0.00	10000	
Mn	55	45	1	He	70.194	70.194	1.98	182658	0.04	10000	
Fe	56	45	1	He	1005.301	1005.301	2.48	3780093	0.03	200000	
Co	59	45	1	He	0.384	0.384	3.52	3153	0.01	5000	
Ni	60	45	1	He	0.141	0.141	33.51	560	0.03	10000	
Cu	63	45	1	He	0.001	0.001	302.89	3086	0.00	10000	
Zn	66	45	1	He	2.176	2.176	2.32	2326	0.09	10000	
As	75	115	1	He	2.973	2.973	3.46	1669	0.18	10000	
Se	78	115	1	He	0.084	0.084	141.38	28	0.30	10000	
Sr	88	103	1	He	55097.997	55097.997	1.30	141928292	0.04	10000	>LDR
Mo	95	103	1	He	78.364	78.364	2.18	186906	0.04	2000	
Ag	107	103	1	He	0.027	0.027	25.05	222	0.01	300	
Cd	111	115	1	He	0.043	0.043	40.70	40	0.11	4000	
Sn	118	115	1	He	-3.121	-3.121	-3.81	1337	-0.23	2000	
Sb	123	115	1	He	0.112	0.112	10.46	268	0.04	200	
Ba	137	115	1	He	146.225	146.225	0.42	116133	0.13	10000	
W	182	159	1	He	0.043	0.043	110.41	1704	0.00	2500	
Tl	205	165	1	He	0.007	0.007	33.49	103	0.01	2000	
Pb	208	165	1	He	0.029	0.029	8.02	876	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2175437	0.52	1674650	129.90	60	120	ISTD warning
Sc	45	1	He	395110	0.64	355173	111.24	60	120	
Sc	45	2	NoGas	10853221	0.93	8635903	125.68	60	120	ISTD warning
Rh	103	1	He	1514643	0.74	1470259	103.02	60	120	
In	115	1	He	520239	0.54	490642	106.03	60	120	
Tb	159	1	He	1487020	0.57	1434034	103.69	60	120	
Ho	165	1	He	1380471	0.77	1409606	97.93	60	120	
Bi	209	1	He	884746	0.48	906964	97.55	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-17-a
Data File Name	112SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:49:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.293	0.293	18.30	121884	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	45.01	126	0.01	2000	
B	11	45	2	NoGas	14.595	14.595	2.84	58935	0.02	300	
Na	23	45	1	He	55.375	55.375	0.09	69993	0.08	500000	
Mg	24	45	1	He	6.413	6.413	21.22	3923	0.16	500000	
Al	27	45	1	He	2.608	2.608	12.10	808	0.32	200000	
K	39	45	1	He	18.913	18.913	1.33	32664	0.06	500000	
Ca	44	45	1	He	21.013	21.013	21.63	668	3.15	500000	
Ti	47	45	1	He	0.027	0.027	235.90	4	0.62	2500	
V	51	45	1	He	0.151	0.151	39.59	1111	0.01	10000	
Cr	52	45	1	He	0.059	0.059	47.99	3924	0.00	10000	
Mn	55	45	1	He	0.542	0.542	5.80	1893	0.03	10000	
Fe	56	45	1	He	1.802	1.802	11.00	8978	0.02	200000	
Co	59	45	1	He	0.007	0.007	39.57	129	0.01	5000	
Ni	60	45	1	He	-0.014	-0.014	-46.28	214	-0.01	10000	
Cu	63	45	1	He	-0.044	-0.044	-56.50	2691	0.00	10000	
Zn	66	45	1	He	2.001	2.001	1.72	2096	0.10	10000	
As	75	115	1	He	-0.022	-0.022	-147.76	116	-0.02	10000	
Se	78	115	1	He	0.108	0.108	286.22	28	0.39	10000	
Sr	88	103	1	He	9.006	9.006	27.24	23181	0.04	10000	
Mo	95	103	1	He	0.134	0.134	22.79	340	0.04	2000	
Ag	107	103	1	He	0.003	0.003	77.88	42	0.01	300	
Cd	111	115	1	He	0.027	0.027	22.96	24	0.11	4000	
Sn	118	115	1	He	-3.462	-3.462	-1.55	685	-0.51	2000	
Sb	123	115	1	He	0.037	0.037	17.31	111	0.03	200	
Ba	137	115	1	He	0.088	0.088	48.10	87	0.10	10000	
W	182	159	1	He	-0.022	-0.022	-122.61	1270	0.00	2500	
Tl	205	165	1	He	0.004	0.004	9.21	76	0.01	2000	
Pb	208	165	1	He	0.018	0.018	38.66	728	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2129747	1.36	1674650	127.18	60	120	ISTD warning
Sc	45	1	He	378451	0.79	355173	106.55	60	120	
Sc	45	2	NoGas	10212177	0.99	8635903	118.25	60	120	
Rh	103	1	He	1498425	2.41	1470259	101.92	60	120	
In	115	1	He	504798	0.85	490642	102.89	60	120	
Tb	159	1	He	1399708	1.61	1434034	97.61	60	120	
Ho	165	1	He	1357307	2.39	1409606	96.29	60	120	
Bi	209	1	He	896203	0.80	906964	98.81	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-18-a
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:53:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	91.604	91.604	1.55	2397595	0.00	10000	
Be	9	45	2	NoGas	2.249	2.249	1.66	14988	0.02	2000	
B	11	45	2	NoGas	150.802	150.802	0.80	608521	0.02	300	
Na	23	45	1	He	12759.044	12759.044	2.52	13086020	0.10	500000	
Mg	24	45	1	He	163239.127	163239.127	2.96	90070356	0.18	500000	
Al	27	45	1	He	49774.148	49774.148	2.78	11424416	0.44	200000	
K	39	45	1	He	16005.566	16005.566	2.11	5274455	0.30	500000	
Ca	44	45	1	He	444933.188	444933.188	2.87	7914660	5.62	500000	
Ti	47	45	1	He	842.066	842.066	5.42	101424	0.83	2500	
V	51	45	1	He	112.656	112.656	3.26	453470	0.02	10000	
Cr	52	45	1	He	86.017	86.017	3.16	414769	0.02	10000	
Mn	55	45	1	He	1422.933	1422.933	3.11	3600803	0.04	10000	
Fe	56	45	1	He	77051.329	77051.329	3.36	282402362	0.03	200000	
Co	59	45	1	He	26.044	26.044	2.75	203588	0.01	5000	
Ni	60	45	1	He	76.590	76.590	2.97	163136	0.05	10000	
Cu	63	45	1	He	59.439	59.439	2.56	351928	0.02	10000	
Zn	66	45	1	He	189.252	189.252	2.30	145527	0.13	10000	
As	75	115	1	He	32.452	32.452	0.63	15117	0.21	10000	
Se	78	115	1	He	10.840	10.840	6.35	298	3.64	10000	
Sr	88	103	1	He	2136.582	2136.582	0.96	4971599	0.04	10000	
Mo	95	103	1	He	38.989	38.989	2.37	84019	0.05	2000	
Ag	107	103	1	He	0.193	0.193	8.18	1298	0.01	300	
Cd	111	115	1	He	0.808	0.808	2.84	661	0.12	4000	
Sn	118	115	1	He	-0.681	-0.681	-18.17	5231	-0.01	2000	
Sb	123	115	1	He	1.106	1.106	5.10	2066	0.05	200	
Ba	137	115	1	He	773.741	773.741	0.89	549192	0.14	10000	
W	182	159	1	He	0.282	0.282	11.38	2863	0.01	2500	
Tl	205	165	1	He	1.399	1.399	3.71	13082	0.01	2000	
Pb	208	165	1	He	30.857	30.857	0.77	391020	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2086535	0.62	1674650	124.60	60	120	ISTD warning
Sc	45	1	He	385414	0.88	355173	108.51	60	120	
Sc	45	2	NoGas	11179564	0.30	8635903	129.45	60	120	ISTD warning
Rh	103	1	He	1368109	0.69	1470259	93.05	60	120	
In	115	1	He	465003	1.02	490642	94.77	60	120	
Tb	159	1	He	1408430	2.59	1434034	98.21	60	120	
Ho	165	1	He	1372133	0.71	1409606	97.34	60	120	
Bi	209	1	He	791169	0.09	906964	87.23	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-19-a
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:57:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.003	7.003	1.51	276085	0.00	10000	
Be	9	45	2	NoGas	0.017	0.017	41.62	156	0.01	2000	
B	11	45	2	NoGas	351.719	351.719	1.82	1299462	0.03	300	>LDR
Na	23	45	1	He	60668.938	60668.938	2.82	60592644	0.10	500000	
Mg	24	45	1	He	27118.736	27118.736	2.83	14584859	0.19	500000	
Al	27	45	1	He	13.277	13.277	14.72	3194	0.42	200000	
K	39	45	1	He	3060.766	3060.766	2.27	1004435	0.30	500000	
Ca	44	45	1	He	81911.270	81911.270	0.93	1420796	5.77	500000	
Ti	47	45	1	He	0.780	0.780	48.20	93	0.84	2500	
V	51	45	1	He	0.220	0.220	36.62	1378	0.02	10000	
Cr	52	45	1	He	0.148	0.148	26.21	4311	0.00	10000	
Mn	55	45	1	He	51.921	51.921	3.69	128574	0.04	10000	
Fe	56	45	1	He	2770.222	2770.222	3.04	9898397	0.03	200000	
Co	59	45	1	He	0.187	0.187	4.48	1497	0.01	5000	
Ni	60	45	1	He	0.216	0.216	9.08	690	0.03	10000	
Cu	63	45	1	He	0.112	0.112	16.89	3566	0.00	10000	
Zn	66	45	1	He	53.704	53.704	2.72	40669	0.13	10000	
As	75	115	1	He	2.184	2.184	2.45	1181	0.18	10000	
Se	78	115	1	He	0.275	0.275	54.82	31	0.89	10000	
Sr	88	103	1	He	13717.621	13717.621	1.58	33267858	0.04	10000	>LDR
Mo	95	103	1	He	10.788	10.788	2.29	24246	0.04	2000	
Ag	107	103	1	He	0.016	0.016	10.75	131	0.01	300	
Cd	111	115	1	He	0.056	0.056	14.18	49	0.12	4000	
Sn	118	115	1	He	-3.406	-3.406	-3.55	759	-0.45	2000	
Sb	123	115	1	He	0.083	0.083	18.02	196	0.04	200	
Ba	137	115	1	He	442.090	442.090	0.49	328821	0.13	10000	
W	182	159	1	He	0.026	0.026	117.70	1522	0.00	2500	
Tl	205	165	1	He	0.009	0.009	27.80	127	0.01	2000	
Pb	208	165	1	He	0.521	0.521	2.85	7066	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2097365	1.10	1674650	125.24	60	120	ISTD warning
Sc	45	1	He	375720	1.90	355173	105.79	60	120	
Sc	45	2	NoGas	10295290	1.06	8635903	119.21	60	120	
Rh	103	1	He	1426089	1.27	1470259	97.00	60	120	
In	115	1	He	487284	0.92	490642	99.32	60	120	
Tb	159	1	He	1403022	2.97	1434034	97.84	60	120	
Ho	165	1	He	1366745	0.80	1409606	96.96	60	120	
Bi	209	1	He	827601	0.98	906964	91.25	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-20-a
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:01:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	47.619	47.619	1.54	1176626	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	33.53	222	0.01	2000	
B	11	45	2	NoGas	1940.524	1940.524	1.20	6983258	0.03	300	>LDR
Na	23	45	1	He	92937.662	92937.662	1.26	89810859	0.10	500000	
Mg	24	45	1	He	18967.419	18967.419	1.74	9870905	0.19	500000	
Al	27	45	1	He	30.792	30.792	1.78	6877	0.45	200000	
K	39	45	1	He	20764.334	20764.334	1.43	6445650	0.32	500000	
Ca	44	45	1	He	37411.418	37411.418	3.05	627898	5.96	500000	
Ti	47	45	1	He	0.392	0.392	56.70	46	0.86	2500	
V	51	45	1	He	0.188	0.188	36.20	1209	0.02	10000	
Cr	52	45	1	He	0.318	0.318	7.47	4933	0.01	10000	
Mn	55	45	1	He	18.727	18.727	2.86	45212	0.04	10000	
Fe	56	45	1	He	691.483	691.483	1.73	2392653	0.03	200000	
Co	59	45	1	He	0.103	0.103	1.78	829	0.01	5000	
Ni	60	45	1	He	0.736	0.736	9.10	1709	0.04	10000	
Cu	63	45	1	He	1.003	1.003	5.07	8383	0.01	10000	
Zn	66	45	1	He	3.777	3.777	6.31	3296	0.11	10000	
As	75	115	1	He	0.766	0.766	7.32	481	0.16	10000	
Se	78	115	1	He	0.332	0.332	52.19	32	1.05	10000	
Sr	88	103	1	He	3650.386	3650.386	0.75	8601124	0.04	10000	
Mo	95	103	1	He	2.536	2.536	3.33	5554	0.05	2000	
Ag	107	103	1	He	0.004	0.004	59.12	51	0.01	300	
Cd	111	115	1	He	0.059	0.059	26.00	50	0.12	4000	
Sn	118	115	1	He	-3.123	-3.123	-1.17	1215	-0.26	2000	
Sb	123	115	1	He	0.061	0.061	12.48	149	0.04	200	
Ba	137	115	1	He	142.334	142.334	0.61	103043	0.14	10000	
W	182	159	1	He	-0.017	-0.017	-85.90	1285	0.00	2500	
Tl	205	165	1	He	0.004	0.004	26.67	74	0.01	2000	
Pb	208	165	1	He	0.198	0.198	2.61	2921	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2035571	1.36	1674650	121.55	60	120	ISTD warning
Sc	45	1	He	363447	0.47	355173	102.33	60	120	
Sc	45	2	NoGas	10064864	0.26	8635903	116.55	60	120	
Rh	103	1	He	1385413	0.93	1470259	94.23	60	120	
In	115	1	He	474202	1.21	490642	96.65	60	120	
Tb	159	1	He	1388728	0.13	1434034	96.84	60	120	
Ho	165	1	He	1332096	1.00	1409606	94.50	60	120	
Bi	209	1	He	808337	0.75	906964	89.13	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	116_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:05:24-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.253	0.917	1321403	1.02	50	108.5	89.5	110.5	
Be	9	45	2	NoGas	49.964	1.522	298037	1.72	50	99.9	89.5	110.5	
B	11	45	2	NoGas	90.776	1.525	331167	1.58	50	181.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24924.491	2.537	24690924	1.30	25000	99.7	89.5	110.5	
Mg	24	45	1	He	24740.121	2.610	13192677	1.29	25000	99.0	89.5	110.5	
Al	27	45	1	He	243.505	3.521	54221	1.98	250	97.4	89.5	110.5	
K	39	45	1	He	25339.367	2.509	8054093	1.17	25000	101.4	89.5	110.5	
Ca	44	45	1	He	25101.295	2.872	431770	1.32	25000	100.4	89.5	110.5	
Ti	47	45	1	He	52.530	5.136	6114	3.64	50	105.1	89.5	110.5	
V	51	45	1	He	50.644	3.071	197278	1.50	50	101.3	89.5	110.5	
Cr	52	45	1	He	49.490	2.950	232135	1.35	50	99.0	89.5	110.5	
Mn	55	45	1	He	247.962	2.440	606852	0.90	250	99.2	89.5	110.5	
Fe	56	45	1	He	12279.481	3.115	43493393	1.55	12500	98.2	89.5	110.5	
Co	59	45	1	He	49.445	2.377	373464	0.87	50	98.9	89.5	110.5	
Ni	60	45	1	He	48.901	3.203	100738	1.64	50	97.8	89.5	110.5	
Cu	63	45	1	He	48.611	3.530	278637	1.94	50	97.2	89.5	110.5	
Zn	66	45	1	He	50.724	2.251	38119	0.64	50	101.4	89.5	110.5	
As	75	115	1	He	53.080	0.408	25970	0.39	50	106.2	89.5	110.5	
Se	78	115	1	He	51.665	3.539	1407	3.79	50	103.3	89.5	110.5	
Sr	88	103	1	He	55.236	0.966	135377	0.31	50	110.5	89.5	110.5	
Mo	95	103	1	He	51.268	2.248	116162	1.76	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.390	1.560	349967	1.43	50	100.8	89.5	110.5	
Cd	111	115	1	He	50.198	0.888	43205	1.16	50	100.4	89.5	110.5	
Sn	118	115	1	He	49.077	2.685	92229	2.38	50	98.2	89.5	110.5	
Sb	123	115	1	He	51.645	0.280	100018	0.56	50	103.3	89.5	110.5	
Ba	137	115	1	He	51.021	3.715	38172	4.03	50	102.0	89.5	110.5	
W	182	159	1	He	48.485	3.331	257355	2.92	50	97.0	89.5	110.5	
Tl	205	165	1	He	49.826	2.272	460872	1.54	50	99.7	89.5	110.5	
Pb	208	165	1	He	49.936	1.838	627399	0.96	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2047211	1.76	1674650	122.25	60	120	ISTD warning
Sc	45	1	He	372500	1.60	355173	104.88	60	120	
Sc	45	2	NoGas	10039247	0.20	8635903	116.25	60	120	
Rh	103	1	He	1438842	0.80	1470259	97.86	60	120	
In	115	1	He	489892	0.31	490642	99.85	60	120	
Tb	159	1	He	1420930	0.87	1434034	99.09	60	120	
Ho	165	1	He	1361326	1.30	1409606	96.57	60	120	
Bi	209	1	He	838477	0.81	906964	92.45	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	117_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:09:30-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.237	12.0	126791	1.1	8	
Be	9	45	2	NoGas	0.019	27.3	170	18.8	1	
B	11	45	2	NoGas	22.868	2.0	93683	1.5	20	CCB High
Na	23	45	1	He	27.898	6.8	42732	3.8	1000	
Mg	24	45	1	He	5.022	17.9	3197	15.2	1000	
Al	27	45	1	He	0.273	55.7	284	11.6	50	
K	39	45	1	He	19.622	22.8	33191	3.6	1000	
Ca	44	45	1	He	7.742	26.5	440	7.5	1000	
Ti	47	45	1	He	0.036	158.3	6	124.9	20	
V	51	45	1	He	0.125	17.1	1019	9.1	2	
Cr	52	45	1	He	0.024	76.1	3794	2.3	2	
Mn	55	45	1	He	0.088	31.9	772	9.3	2	
Fe	56	45	1	He	4.484	36.6	18794	31.5	50	
Co	59	45	1	He	0.009	32.7	146	15.2	1	
Ni	60	45	1	He	-0.049	-10.3	142	6.8	2	
Cu	63	45	1	He	-0.007	-370.6	2933	5.5	2	
Zn	66	45	1	He	-0.001	-4047.4	596	6.4	20	
As	75	115	1	He	-0.032	-24.5	113	4.6	2	
Se	78	115	1	He	0.171	200.8	30	31.9	2	
Sr	88	103	1	He	1.701	6.0	4662	4.4	10	
Mo	95	103	1	He	0.105	18.1	278	15.5	2	
Ag	107	103	1	He	0.008	82.1	82	57.4	0.2	
Cd	111	115	1	He	0.025	7.6	23	7.5	0.2	
Sn	118	115	1	He	0.444	14.9	7769	2.5	10	
Sb	123	115	1	He	0.103	7.7	243	6.0	2	
Ba	137	115	1	He	0.043	17.7	53	10.8	5	
W	182	159	1	He	0.298	31.2	2971	18.6	10	
Tl	205	165	1	He	0.059	32.0	594	30.3	0.5	
Pb	208	165	1	He	0.037	24.7	987	12.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2208609	0.44	1674650	131.88	60	120	ISTD warning
Sc	45	1	He	381976	0.76	355173	107.55	60	120	
Sc	45	2	NoGas	10735546	0.63	8635903	124.31	60	120	ISTD warning
Rh	103	1	He	1531258	1.30	1470259	104.15	60	120	
In	115	1	He	509307	1.30	490642	103.80	60	120	
Tb	159	1	He	1414640	2.07	1434034	98.65	60	120	
Ho	165	1	He	1389731	0.66	1409606	98.59	60	120	
Bi	209	1	He	879145	0.24	906964	96.93	60	120	

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MTMSCCBDILH20- 268 EPA Tune Solution Spex CL11-62YPY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 6/21/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

Level I Analyst: Anjali Sharma **Date:** 6/22/16 **Time:** 10:11 – 18:09

Level I Analyst: _____ **Date:** _____ **Time:** _____

Level II Reviewer: Kara Lloyd **Date:** 6-22-16 **Time:** 10:11 -18:09

Level II Reviewer: _____ **Date:** _____ **Time:** _____

Comments: _____

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-66154-1

SDG No.:

Batch Number: 235182 Batch Start Date: 06/20/16 11:14 Batch Analyst: Colosi, Alexander J

Batch Method: 3005A Batch End Date: 06/20/16 19:14

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00025	MTICPMSA 00027	MTICPMSB 00028	MTTMHCL 00114
MB 240-235182/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-235182/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-66154-G-2	16MW9	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-66154-G-2 MS	16MW9	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-66154-G-2 MSD	16MW9	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00089					
MB 240-235182/1		3005A, 6020A		1 mL					
LCS 240-235182/2		3005A, 6020A		1 mL					
240-66154-G-2	16MW9	3005A, 6020A	R	1 mL					
240-66154-G-2 MS	16MW9	3005A, 6020A	R	1 mL					
240-66154-G-2 MSD	16MW9	3005A, 6020A	R	1 mL					

Batch Notes	
Filter Paper ID	9672596
Hot Block ID	HB4
Pipette ID	MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

1.21C22

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Manager/1-330-966-9279

KT 6/14/16

Client: 0 Attn: 0 Addres 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: HWMU16 Event: 2016 Verification Monitoring Event DAA JN: B03204-16A Lab JN:	Project Specific (PS) or Batch (B) QC: ~~Sample Collection~~ for Project Complete? YES Carrier: UPS Tracking Number: 1Z2373010198831436		

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCL	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E Equipment Blar	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P Product	C H_2SO_4	G Other (Specify)	Box 5: Sample Container Type		Preserved and shipped on ice: YES
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

Box 4 - Sample Type	G	G	G							
Box 3 - Filtered/Unfiltered	U	U	U							
Required pH of Sample	<2	<2	<2							
Box 2 - Preservative	B	A	A							
Box 5 - Sample Container Type	1-500 mL P	3-40 mL V	3-40 mL V							

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Total Metals - 6020A (Cobalt ONLY)	8260C - 25 mL purge (Tetrahydrofuran Only)	8260C - 25 mL purge (Vinyl Chloride Only)							
16MW8	6-16	1100	GW	3		X								
16MW9	6-16	1340	GW	~~10~~ 7	X (1)		X (6)	JWC 6/14/16						Use for QC
16WC1A	6-16	1225	GW	3		X	X							
Trip Blank	6-16	—	GW	3		X	X							

GENERAL NOTES:

1. Full deliverable with EDD and pdf.
2. Report DL/QL and estimated results.
3. VELAP accreditation required.
4. Report result at or above project DL and QL.

Cobalt: QL- 5 ug/L, DL- 1 ug/L.
Tetrahydrofuran: QL- 25 ug/L, DL- 2 ug/L.
Vinyl Chloride: QL- 1 ug/L, DL- 0.2 ug/L.

240-66154 Chain of Custody

Clients Special Instructions:

Received by lab in Good Condition Yes No Custody Seal Intact Yes No Temperature upon arrival Received on Ice Yes No
Describe problems, if any:

Sampler Name (Print): Will Mason-Deese	Date: 6-16-16	#1 Relinquished by (Signature):	Date: 6-16-16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): MICHAEL J. NELSON	Date: 6-16-16	#1 Received by (Signature):	Date: 6-17-16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name: TA	Time: 1000	Company Name:	Time:	

Y(JWC 6/14/16

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TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 66154
Canton Facility

Client Draper Aden Site Name _____ Cooler unpacked by:

Cooler Received on 6-17-16 Opened on 6-17-16

FedEx: 1st Grd Exp (UPS) FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

☐ See Multiple Cooler Form

1. Cooler temperature upon receipt
   IR GUN# IR-8 (CF **+1.3** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #36 (CF **+1.0**°C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 2.2 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC574756**
12. Were VOAs on the COC? (Yes) No
13. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ (Yes) No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: RH

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
16MW9	240-66154-G-2	Plastic 500ml - with Nitric Acid	<2	_____	_____

ANALYTICAL REPORT

Job Number: 240-66155-1

Job Description: RAAP, Radford VA - HWMU16

For:
Draper Aden Associates, Inc.
2206 South Main street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
6/30/2016 2:25 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
06/30/2016

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RAAP, Radford VA - HWMU16

Report Number: 240-66155-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 6/17/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample 16WDUP1 (240-66155-1) was analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 06/27/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample 16WDUP2 (240-66155-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 06/20/2016 and analyzed on 06/21/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Client Sample ID: 16WDUP1 — Lab Sample ID: 240-66155-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	2.8	J	25	2.0	ug/L	1		8260C	Total/NA

Client Sample ID: 16WDUP2 — Lab Sample ID: 240-66155-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	4.8	J	5.0	1.0	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16WDUP1 — Lab Sample ID: 240-66155-1

Date Collected: 06/16/16 12:35 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	2.8	J	25	2.0	ug/L			06/27/16 21:07	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*06/27/16 21:07*	*1*
Dibromofluoromethane (Surr)	*91*		*79 - 120*		*06/27/16 21:07*	*1*
4-Bromofluorobenzene (Surr)	*81*		*61 - 120*		*06/27/16 21:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*78 - 125*		*06/27/16 21:07*	*1*

Client Sample ID: 16WDUP2 — Lab Sample ID: 240-66155-2

Date Collected: 06/16/16 13:50 — **Matrix: Water**
Date Received: 06/17/16 10:00

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	4.8	J	5.0	1.0	ug/L		06/20/16 11:14	06/21/16 13:17	1

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units	Method
Tetrahydrofuran	25	2.0	ug/L	8260C
Vinyl chloride	1.0	0.29	ug/L	8260C

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units	Method
Cobalt	5.0	1.0	ug/L	6020A

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(80-120)	(79-120)	(61-120)	(78-125)
240-66155-1	16WDUP1	96	91	81	94
LCS 240-236061/4	Lab Control Sample	99	92	78	98
MB 240-236061/6	Method Blank	96	92	77	94

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-236061/6
Matrix: Water
Analysis Batch: 236061

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	25	U	25	2.0	ug/L			06/27/16 12:26	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/27/16 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 120*		*06/27/16 12:26*	*1*
Dibromofluoromethane (Surr)	*92*		*79 - 120*		*06/27/16 12:26*	*1*
4-Bromofluorobenzene (Surr)	*77*		*61 - 120*		*06/27/16 12:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*78 - 125*		*06/27/16 12:26*	*1*

Lab Sample ID: LCS 240-236061/4
Matrix: Water
Analysis Batch: 236061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrahydrofuran	20.0	19.1	J	ug/L		96	61 - 136
Vinyl chloride	10.0	10.4		ug/L		104	52 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*79 - 120*
4-Bromofluorobenzene (Surr)	*78*		*61 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*78 - 125*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-235182/1-A
Matrix: Water
Analysis Batch: 235476

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	5.0	U	5.0	1.0	ug/L		06/20/16 11:14	06/21/16 11:19	1

Lab Sample ID: LCS 240-235182/2-A
Matrix: Water
Analysis Batch: 235476

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 235182

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	1000	964		ug/L		96	80 - 120

QC Association Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

GC/MS VOA

Analysis Batch: 236061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66155-1	16WDUP1	Total/NA	Water	8260C	
LCS 240-236061/4	Lab Control Sample	Total/NA	Water	8260C	
MB 240-236061/6	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 235182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66155-2	16WDUP2	Total Recoverable	Water	3005A	
LCS 240-235182/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-235182/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 235476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-66155-2	16WDUP2	Total Recoverable	Water	6020A	235182
CRI 240-235476/48	DL		Water	6020A	
CRI 240-235476/9	DL		Water	6020A	
ICSA 240-235476/10	ICS		Water	6020A	
ICSAB 240-235476/11	ICS		Water	6020A	
LCS 240-235182/2-A	Lab Control Sample	Total Recoverable	Water	6020A	235182
MB 240-235182/1-A	Method Blank	Total Recoverable	Water	6020A	235182

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Client Sample ID: 16WDUP1

Date Collected: 06/16/16 12:35
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66155-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	236061	06/27/16 21:07	LEE	TAL CAN

Client Sample ID: 16WDUP2

Date Collected: 06/16/16 13:50
Date Received: 06/17/16 10:00

Lab Sample ID: 240-66155-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			235182	06/20/16 11:14	AJC	TAL CAN
Total Recoverable	Analysis	6020A		1	235476	06/21/16 13:17	AS1	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-66155-1
Project/Site: RAAP, Radford VA - HWMU16

Laboratory: TestAmerica Canton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460175	09-14-16 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP, Radford VA - HWMU16

TestAmerica Job ID: 240-66155-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-66155-1	16WDUP1	Water	06/16/16 12:35	06/17/16 10:00
240-66155-2	16WDUP2	Water	06/16/16 13:50	06/17/16 10:00

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MTICPMS2_00025	05/01/17	Inorganic Ventures, Lot K2-MEB615154			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Na	1000 ug/mL
MTICPMSA_00027	04/21/19	Inorganic Ventures, Lot K2-MEB632079			(Purchased Reagent)		As	100 ug/mL
							Ba	100 ug/mL
							Be	100 ug/mL
							Cd	100 ug/mL
							Cobalt	100 ug/mL
							Cr	100 ug/mL
							Cu	100 ug/mL
							Mn	100 ug/mL
							Ni	100 ug/mL
							Pb	100 ug/mL
							Se	100 ug/mL
							Sr	100 ug/mL
							Tl	25 ug/mL
							V	100 ug/mL
							Zn	100 ug/mL
MTICPMSB_00028	05/01/17	Inorganic Ventures, Lot K2-MEB615153			(Purchased Reagent)		Ag	10 ug/mL
							B	10 ug/mL
							Li	10 ug/mL
							Mo	10 ug/mL
							Sb	10 ug/mL
							Sn	100 ug/mL
							Ti	10 ug/mL
							W	10 ug/mL
MTMSCAL2CCVW_00168	11/01/16	05/24/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	5 mL	As	50 ug/L
							Cobalt	50 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		As	5 ug/mL
							Cobalt	5 ug/mL
MTMSCAL3W_00058	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSCAL3_00010	10 mL	Cobalt	100 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Cobalt	5 ug/mL
MTMSCRI6020AW_00038	08/01/16	04/12/16	DIWATER, Lot DIWATER	500 mL	MS6020ACRIA_00003	0.5 mL	Cobalt	1 ug/L
.MS6020ACRIA_00003	08/01/16	Inorganic Ventures, Lot J2-MEB592019			(Purchased Reagent)		Cobalt	1 ug/mL
MTMSICSABW_00068	12/09/16	06/09/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1100 ug/L
							Na	50000 ug/L
							Ti	1100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MTMSICSABSOLA_00008	1 mL	As	100 ug/L
							B	100 ug/L
							Ba	100 ug/L
							Be	100 ug/L
							Cd	100 ug/L
							Cobalt	100 ug/L
							Cr	100 ug/L
							Cu	100 ug/L
							Li	100 ug/L
							Mn	100 ug/L
							Ni	100 ug/L
							Pb	100 ug/L
							Se	100 ug/L
							Sr	100 ug/L
							Tl	100 ug/L
							V	100 ug/L
							Zn	100 ug/L
					MTMSICSABSOLB_00008	1 mL	Ag	100 ug/L
							Mo	1100 ug/L
							Sb	100 ug/L
							Sn	100 ug/L
							Ti	1100 ug/L
							W	100 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
.MTMSICSABSOLA_00008	04/20/17	HIGH PURITY STANDARDS, Lot 1610907			(Purchased Reagent)		As	20 ug/mL
							B	20 ug/mL
							Ba	20 ug/mL
							Be	20 ug/mL
							Cd	20 ug/mL
							Cobalt	20 ug/mL
							Cr	20 ug/mL
							Cu	20 ug/mL
							Li	20 ug/mL
							Mn	20 ug/mL
							Ni	20 ug/mL
							Pb	20 ug/mL
							Se	20 ug/mL
							Sr	20 ug/mL
							Tl	20 ug/mL
							V	20 ug/mL
							Zn	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MTMSICSABSOLB_00008	04/20/17	HIGH PURITY STANDARDS, Lot 1610908			(Purchased Reagent)		Ag	20 ug/mL
							Mo	20 ug/mL
							Sb	20 ug/mL
							Sn	20 ug/mL
							Ti	20 ug/mL
							W	20 ug/mL
MTMSICSAW_00069	11/10/16	05/10/16	DIWATER, Lot DIWATER	200 mL	MTMSICSA_00011	10 mL	Al	50000 ug/L
							Ca	50000 ug/L
							Fe	50000 ug/L
							K	50000 ug/L
							Mg	50000 ug/L
							Mo	1000 ug/L
							Na	50000 ug/L
							Ti	1000 ug/L
.MTMSICSA_00011	01/26/18	INORGANIC VENTURES, Lot J2-MEB533111			(Purchased Reagent)		Al	1000 ug/mL
							Ca	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							Ti	20 ug/mL
MTMSICVW_00068	10/29/16	04/29/16	DIWATER, Lot DIWATER	500 mL	MTMSICVA_00010	5 mL	As	40 ug/L
							Cobalt	40 ug/L
.MTMSICVA_00010	09/01/17	CPI, Lot 1087406			(Purchased Reagent)		As	4 mg/L
							Cobalt	4 mg/L
MTMSSCAL1_00038	11/01/16	06/09/16	DIWATER, Lot DIWATER	250 mL	MTMSCAL3_00010	0.5 mL	Cobalt	10 ug/L
.MTMSCAL3_00010	11/01/16	INORGANIC VENTURES, Lot J2-MEB596139			(Purchased Reagent)		Cobalt	5 ug/mL
MTTMHCL_00114	06/14/18	Fisher, Lot 4115120			(Purchased Reagent)		Hydrogen Chloride	100 %
MTTMHNO3_00089	06/07/18	Macron/Avantor, Lot 0000138698			(Purchased Reagent)		Nitric acid	100 %
VM50IS_00055	10/03/16	04/05/16	MEOH, Lot 118655	100 mL	vm30241_00004	2 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00004	04/30/20	restek, Lot A0110589			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50ss_stk_00068	06/21/16	12/21/15	MEOH, Lot 0000118655	200 mL	VM567650_00023	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00023	06/30/19	Restek, Lot A0104073			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00069	10/18/16	04/19/16	MEOH, Lot 0000118655	200 mL	VM567650_00023	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00023	06/30/19		Restek, Lot A0104073		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VMAROLISTDW_00150	06/02/16	05/26/16	MEOH, Lot na	3 mL	VMACROLSTD_00036	3 mL	Acrolein	250 ug/mL
.VMACROLSTD_00036	06/06/16	05/02/16	MEOH, Lot 0000118655	20 mL	VM568720_00012	250 uL	Acrolein	250 ug/mL
..VM568720_00012	06/30/16		restek, Lot A0117486		(Purchased Reagent)		Acrolein	20000 ug/mL
VMFASGW_00157	05/28/16	05/25/16	MEOH, Lot NA	2 mL	VMFASG_00044	2 mL	Vinyl chloride	50 ug/mL
.VMFASG_00044	05/28/16	04/28/16	MEOH, Lot 0000118655	50 mL	vm569722S_00001	1 mL	Vinyl chloride	50 ug/mL
..vm569722S_00001	08/31/18		Restek, Lot A0113063		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMFASGW_00161	06/28/16	06/21/16	MEOH, Lot NA	2 mL	VMFASG_00045	2 mL	Vinyl chloride	50 ug/mL
.VMFASG_00045	06/30/16	05/31/16	MEOH, Lot 0000118655	50 mL	vm569722S_00001	1 mL	Vinyl chloride	50 ug/mL
..vm569722S_00001	08/31/18		Restek, Lot A0113063		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMFASPW_00155	06/02/16	05/26/16	MEOH, Lot n/a	2 mL	VMRFASP_00029	2 mL	Tetrahydrofuran	100 ug/mL
.VMRFASP_00029	06/02/16	05/02/16	MEOH, Lot 0000118655	50 mL	VM569720S_00001	1 mL	Tetrahydrofuran	100 ug/mL
..VM569720S_00001	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL
VMFASPW_00160	06/28/16	06/21/16	MEOH, Lot n/a	2 mL	VMRFASP_00030	2 mL	Tetrahydrofuran	100 ug/mL
.VMRFASP_00030	06/30/16	05/31/16	MEOH, Lot +173000000127999JM	100 mL	VM569720S_00001	2 mL	Tetrahydrofuran	100 ug/mL
..VM569720S_00001	01/31/17		Restek, Lot A0108163		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL
VMRGAS_00154	06/01/16	05/25/16	MEOH, Lot 0000127999	10 mL	vm569722_00004	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00004	04/30/18		Restek, Lot A0110070		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00158	06/27/16	06/20/16	MEOH, Lot 0000127999	10 mL	vm569722_00006	0.2 mL	Vinyl chloride	50 ug/mL
.vm569722_00006	10/31/18		Restek, Lot A0115012		(Purchased Reagent)		Vinyl chloride	2500 ug/mL
VMRPRIMW_00186	05/30/16	05/23/16	MEOH, Lot NA	1 mL	VMRPRIM_00015	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	250 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
							2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
.VMRPRIM_00015	06/30/16	01/30/16	MEOH, Lot 0000118655	50 mL	VM569720_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	250 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					VM569721_00001	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00001	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00004	0.5 mL	Vinyl acetate	50 ug/mL
..VM569720_00001	01/31/17		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
..VM569721_00001	04/30/18		Restek, Lot A0110400		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00001	01/31/18		restek, Lot A0108172		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00004	06/30/16		Restek, Lot A0115764		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VMRPRIMW_00191	06/28/16	06/21/16	MEOH, Lot NA	1 mL	VMRPRIM_00017	1 mL	Tetrahydrofuran	100 ug/mL
.VMRPRIM_00017	06/30/16	05/31/16	MEOH, Lot +173000000127999JM	50 mL	VM569720_00001	1 mL	Tetrahydrofuran	100 ug/mL
..VM569720_00001	01/31/17		Restek, Lot A0108166		(Purchased Reagent)		Tetrahydrofuran	5000 ug/mL

Reagent

MS6020ACRIA_00003

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-6020A-CRI-A-REV1
Lot Number:	J2-MEB592019
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea:
	Ca, K, Mg,
	Na,
	100 µg/mL ea:
	Fe,
	50 µg/mL ea:
	Al,
	20 µg/mL ea:
	B, Zn,
	10 µg/mL ea:
	Sr,
	5 µg/mL ea:
	As, Ba, Mn,
	Se, V,
	2 µg/mL ea:
	Cr3, Cu, Ni,
	1 µg/mL ea:
	Be, Cd, Co,
	Pb, Tl

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	50.03 ± 0.28 µg/mL	Arsenic, As	5.000 ± 0.033 µg/mL
Barium, Ba	4.997 ± 0.029 µg/mL	Beryllium, Be	1.000 ± 0.006 µg/mL
Boron, B	20.00 ± 0.14 µg/mL	Cadmium, Cd	1.001 ± 0.007 µg/mL
Calcium, Ca	1 000 ± 5 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	1.000 ± 0.006 µg/mL	Copper, Cu	1.999 ± 0.010 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	1.000 ± 0.006 µg/mL
Magnesium, Mg	1 001 ± 5 µg/mL	Manganese, Mn	5.006 ± 0.029 µg/mL
Nickel, Ni	2.001 ± 0.014 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	5.003 ± 0.029 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	1.000 ± 0.008 µg/mL
Vanadium, V	5.005 ± 0.033 µg/mL	Zinc, Zn	20.00 ± 0.13 µg/mL

Certified Density: 1.039 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = $2\ [\ \Sigma(s_i)^2\ ]^{1/2}$ 2 = the coverage factor.

$[\ \Sigma(s_i)^2\ ]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing,- Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

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10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 14, 2015

11.2 Expiration Date

EXPIRES
1 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMS2_00025

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CERTIFICATE OF ANALYSIS

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Recd 4-25-16 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-84
Lot Number:	K2-MEB615154
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Aluminum, Calcium, Iron, Potassium, Magnesium, Sodium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Magnesium, Mg	1 000 ± 4 µg/mL
Potassium, K	1 000 ± 4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL

Certified Density: 1.035 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	051220
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES 1 M 1 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTICPMSA_00027

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CERTIFICATE OF ANALYSIS

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Rec'd 4-25-16 ku

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1A
Lot Number:	K2-MEB632079
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea:

Arsenic, Barium, Beryllium,
Cadmium, Cobalt, Chromium+3,
Copper, Manganese, Nickel,
Lead, Selenium, Strontium,
Vanadium, Zinc,
25 µg/mL ea:
Thallium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	100.0 ± 0.9 µg/mL	Barium, Ba	100.0 ± 0.4 µg/mL
Beryllium, Be	100.0 ± 0.5 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Chromium+3, Cr3	100.0 ± 0.4 µg/mL	Cobalt, Co	100.0 ± 0.4 µg/mL
Copper, Cu	100.1 ± 0.4 µg/mL	Lead, Pb	100.0 ± 0.4 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Selentum, Se	100.0 ± 0.6 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	25.00 ± 0.18 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Certified Density: 1.029 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	ICP Assay	3112a	030730
Cr3	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax. 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 21, 2019

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
QC Supervisor

Michael 2 Booth

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

MTICPMSB_00028

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CERTIFICATE OF ANALYSIS

Rec'd 4-25-16 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICPMS-1BREV2
Lot Number:	K2-MEB615153
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 µg/mL ea: Tin, 10 µg/mL ea: Silver, Boron, Lithium, Molybdenum, Antimony, Titanium, Tungsten

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.07 µg/mL	Boron, B	10.01 ± 0.06 µg/mL
Lithium, Li	10.01 ± 0.04 µg/mL	Molybdenum, Mo	10.00 ± 0.04 µg/mL
Silver, Ag	10.00 ± 0.06 µg/mL	Tin, Sn	100.0 ± 0.4 µg/mL
Titanium, Ti	9.99 ± 0.06 µg/mL	Tungsten, W	10.00 ± 0.06 µg/mL

Certified Density: 1.024 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
B	ICP Assay	3107	110830
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808
Ti	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/4}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

Characterization of CRM by one method

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{sts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{sts} = short term stability standard uncertainty (transportation)

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 20, 2016

11.2 Expiration Date EXPIRES 1 JAN 2017

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
QC Supervisor

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSCAL3_00010

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

Rec'd 10-19-15 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLPA-CAL-SPECA-REV
Lot Number:	J2-MEB596139
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:
	Ca, K, Mg,
	Na,
	1 250 µg/mL ea:
	Fe,
	25 µg/mL ea:
	Al, Mn,
	5 µg/mL ea:
	Ag, As, Ba,
	Be, Cd, Co,
	Cr3, Cu, Ni,
	Pb, Se, Sr,
	Tl, V, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	25.01 ± 0.14 µg/mL	Arsenic, As	5.001 ± 0.032 µg/mL
Barium, Ba	5.000 ± 0.032 µg/mL	Beryllium, Be	5.000 ± 0.029 µg/mL
Cadmium, Cd	4.999 ± 0.032 µg/mL	Calcium, Ca	2 500 ± 12 µg/mL
Chromium+3, Cr3	5.000 ± 0.029 µg/mL	Cobalt, Co	5.001 ± 0.025 µg/mL
Copper, Cu	5.000 ± 0.032 µg/mL	Iron, Fe	1 250 ± 6 µg/mL
Lead, Pb	5.000 ± 0.026 µg/mL	Magnesium, Mg	2 500 ± 12 µg/mL
Manganese, Mn	25.00 ± 0.12 µg/mL	Nickel, Ni	5.001 ± 0.028 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	5.001 ± 0.029 µg/mL
Silver, Ag	5.001 ± 0.036 µg/mL	Sodium, Na	2 501 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.001 ± 0.040 µg/mL
Vanadium, V	5.000 ± 0.032 µg/mL	Zinc, Zn	5.001 ± 0.032 µg/mL

Certified Density: 1.049 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	060502
As	EDTA		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2 [\Sigma(s_i)^2]^{1/2}$ 2 = the coverage factor.
$[\Sigma(s_i)^2]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep cap tightly sealed when not in use. Store and use at 20 ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 13, 2015

11.2 Expiration Date

EXPIRES
1 NOV 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Maurice Harris
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSA_00011

INORGANIC VENTURES™

CERTIFICATE OF ANALYSIS

Rec'd 10-19-15 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	J2-MEB533111
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cl-, 2 000 µg/mL ea: C, 1 000 µg/mL ea: Al, Ca, Fe, K, Mg, Na, P, S, 20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 5 µg/mL	Calcium, Ca	1 001 ± 6 µg/mL
Carbon, C	2 002 ± 10 µg/mL	Chloride, Chloride	10 010.0 ± 50.0 µg/mL
Iron, Fe	1 001 ± 5 µg/mL	Magnesium, Mg	1 001 ± 6 µg/mL
Molybdenum, Mo	20.02 ± 0.09 µg/mL	Phosphorus, P	1 001 ± 8 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 7 µg/mL	Titanium, Ti	20.03 ± 0.13 µg/mL

Certified Density: 1.033 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.
[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	M	Eu	<	0.000102	s	Na	<		M	Se	<	0.001333	M	Zn		0.005643
s	Al	<		s	Fe	<		M	Nb	<	0.000102	n	Si	<		M	Zr	<	0.000410
M	As	<	0.015390	M	Ga	<	0.000102	M	Nd	<	0.000205	M	Sm	<	0.000102				
M	Au	<	0.001026	M	Gd	<	0.000102	M	Ni	<	0.002770	M	Sn	<	0.000615				
O	B	<	0.010330	O	Ge	<	0.020660	M	Os	<	0.000102	O	Sr		0.003543				
M	Ba	<	0.001846	M	Hf	<	0.000102	s	P	<		M	Ta	<	0.000102				
O	Be	<	0.000103	M	Hg	<	0.000307	M	Pb		0.003796	M	Tb	<	0.000102				
M	Bi	<	0.000205	M	Ho	<	0.000102	M	Pd	<	0.000102	M	Te	<	0.000205				
s	Ca	<		M	In	<	0.000102	M	Pr	<	0.000102	M	Th	<	0.000102				
O	Cd		0.001549	M	Ir	<	0.000102	M	Pt	<	0.000102	s	Ti	<					
M	Ce	<	0.000410	s	K	<		M	Rb		0.012927	M	Tl	<	0.000102				
M	Co	<	0.004309	M	La	<	0.000205	M	Re	<	0.000102	M	Tm	<	0.000102				
M	Cr		0.012619	O	Li		0.000999	M	Rh	<	0.000102	M	U	<	0.000102				
M	Cs	<	0.000205	M	Lu	<	0.000102	M	Ru	<	0.000102	M	V	<	0.001436				
O	Cu	<	0.015495	s	Mg	<		s	S	<		M	W		0.001128				
M	Dy	<	0.000102	O	Mn		0.001189	M	Sb	<	0.000615	M	Y	<	0.000102				
M	Er	<	0.000102	s	Mo	<		M	Sc	<	0.000102	M	Yb	<	0.000102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 26, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 26, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

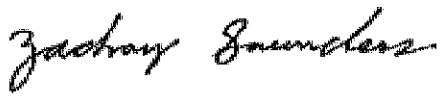
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician



Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTMSICSABSOLA_00008

HIGH-PURITY STANDARDS
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Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 4-25-16 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-139 Solution A**
Lot Number:	**1610907**
Matrix:	2% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)			SRM ID	SRM Lot#
Cd	20.0	±	0.1	3108	130116
As	20.0	±	0.1	3103a	100818
Ba	20.0	±	0.1	*	
Be	20.0	±	0.2	3105a	090514
B	20.0	±	0.2	3107	110830
Cr	20.0	±	0.1	3112a	030730
Ni	20.0	±	0.1	3136	120619
Co	20.0	±	0.1	3113	000630
Cu	20.0	±	0.1	3114	121207
Mn	20.0	±	0.3	3132	050429
Se	20.0	±	0.2	3149	100901
Sr	20.0	±	0.1	3153a	990906
Tl	20.0	±	0.1	3158	993012
Zn	20.0	±	0.1	3168a	120629
V	20.0	±	0.2	3165	992706
Pb	20.0	±	0.2	3128	101026
Li	20.0	±	0.2	3129a	100714

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	April 18, 2016
Shipped Date:	**April 20, 2016**
Expiration Date:	**April 20, 2017**
Certificate Issue Date:	April 19, 2016

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base aud derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 4-25-16 KK

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1438

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-139 Solution B**
Lot Number:	**1610908**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#
Ag	20.0 ± 0.1	3151	992212
Sb	20.0 ± 0.2	*	
W	20.0 ± 0.3	3163	140606
Mo	20.0 ± 0.2	3134	130418
Ti	20.0 ± 0.2	3162a	130925
Sn	20.0 ± 0.2	3161a	140917

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	April 18, 2016
Shipped Date:	**April 20, 2016**
Expiration Date:	**April 20, 2017**
Certificate Issue Date:	April 19, 2016

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenanee of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetrie vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Speetrometric Standard Solutions. If a SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTMSICVA_00010

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Europe

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Rec'd 3-7-16 KL

Additional Information:

Date Received: _____

Container: 16 oz (500 mL) Narrow Mouth, LDPE clean

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.
The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Aluminum	Al	7429-90-5	3101	060502	7001.46.8P	99.9995	20	0.06
Manganese	Mn	7439-96-5	3132	050429	7017.46.5P	99.95	20	0.06
Silver	Ag	7440-22-4	3151	992212	7000.29.1P	99.999	4	0.01
Arsenic	As	7440-38-2	3103	010713	7002.46.5P	99.9999	4	0.01
Boron	B	7440-42-8	3107	070514	7003.46.4P	99.999	4	0.01
Barium	Ba	7440-39-3	3104	070222	7004.29.3P	99.997	4	0.01
Beryllium	Be	7440-41-7	3105	892707	7005.46.5P	99.999	4	0.01
Cadmium	Cd	7440-43-9	3108	060531	7007.46.3P	99.9999	4	0.01
Cobalt	Co	7440-48-4	3113	000630	7008.409.1P	99.999	4	0.01
Chromium	Cr	7440-47-3	3112	030730	7009.46.2P	99.998	4	0.01
Copper	Cu	7440-50-8	3114	011017	7011.46.5P	99.9995	4	0.01
Lithium	Li	7439-93-2	3129	000505	7015.46.5P	99.999	4	0.01
Molybdenum	Mo	7439-98-7	3134	891307	7018.29.3P	99.999	4	0.01
Nickel	Ni	7440-02-0	3136	000612	7021.46.9P	99.995	4	0.01
Lead	Pb	7439-92-1	3128	030721	7023.29.3P	99.999	4	0.01
Antimony	Sb	7440-36-0	3102	061229	7026.46.3P	99.999	4	0.01
Selenium	Se	7782-49-2	3149	992106	7027.46.4P	99.999	4	0.01
Tin	Sn	7440-31-5	3161	070330	7029.46.4P	99.999	4	0.01
Strontium	Sr	7440-24-6	3153	990906	7030.409.1P	99.999	4	0.01
Titanium	Ti	7440-32-6	3162	060808	7033.38.2P	99.995	4	0.01
Thallium	Tl	7440-28-0	3158	993012	7034.29.4P	99.99	4	0.01
Vanadium	V	7440-62-2	3165	992706	7036.46.6P	99.995	4	0.01
Tungsten	W	7440-33-7	3163	080331	7072.46.2P	99.99	4	0.01
Zinc	Zn	7440-66-6	3168	080123	7037.46.5P	99.9995	4	0.01
Calcium	Ca	7440-70-2	3109	050825	7006.29.3P	99.999	2000	5.66
Potassium	K	7440-09-7	3141	051220	7013.409.1P	99.999	2000	5.66
Magnesium	Mg	7439-95-4	3131	050302	7016.46.5P	99.99	2000	5.66
Sodium	Na	7440-23-5	3152	010728	7020.46.7P	99.999	2000	5.66
Iron	Fe	7439-89-6	3126	051031	7012.409.1P	99.99	1000	2.83

CPI INTERNATIONAL

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F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Intended Uses:

This Certified Reference material, CRM, is intended for use as a calibration standard or a quality control standard for Inorganic Spectrometry Equipment such as ICP-OES, ICP-MS, AA, and XRF, It may aslo be used for various USEPA and ASTM methods.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with NIST traceable weights (NIST Test Number 822/264157-00). Only calibrated Class A volumetric glassware was used to prepare this standard. Sub-boiled distilled acid and 18 megaohm deionized water were used to stabilize the product. All raw materials were checked for stoichiometry and purity prior to use. This standard has been spectrometrically certified by an independent source, which is directly traceable to NIST.

Packaging and Storage:

The Solution should be kept trightly capped and stored under normal laboratory conditions. Pre-cleaned polyethlene bottles are used to package this material. Special storage information: Ambient

Glassware Calibration:

Only Class A glassware is used in the manufacture and quality control of Standards. All Glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used perform daily checks on balances calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to the National Institute of Standards and Technology (NIST). Balances are checked daily in accordance to in house procedure O2-LB-004. Balances are calibrated annually by an ISO 17025 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-10 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC Guide 17025:2005 and ISO Guide 34:2009. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous information:

Refer to MSDS

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F: 707.545.7901

Europe

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1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment: Ca, K, Mg, Na, Fe Shipped Separately

Catalog No:	Lot No:	Expiration Date:	Matrix:	Description:
Z-G34-4400 -150526AM01	1087406	1-Sep-2017	5% HNO_3 + Tr HF	ISO Guide 34 - Custom 29 Element Mix, ICPMS-ICV, 100 mL

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:
$U=ku_c$ U=Expanded Uncertainty, k= the coverage factor at the 95% confidence level, k=2, u_c = the combined uncertainty
$u_c=\sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Mark Filla

Manufacture Date: 2/29/2016

Certified By:

Zachary Spinelli

Certified Date:2/29/2016

Released By:

HuiChen Stavros, Ph.D.

Original Issue Date: 2/29/2016

Reagent

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vm30241_00004

VM30241_00004 Rec: 7/9/15

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Certificate of Analysis

ACCREDITED ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0110589

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Fluorobenzene		2,503.8 µg/mL	+/- 14.5573	µg/mL	Gravimetric
	CAS # 462-06-6	(Lot 1380033)		+/- 28.2339	µg/mL	Unstressed
	Purity 99%			+/- 32.4891	µg/mL	Stressed
2	Chlorobenzene-d5		2,504.6 µg/mL	+/- 14.5620	µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-22736)		+/- 28.2430	µg/mL	Unstressed
	Purity 99%			+/- 32.4995	µg/mL	Stressed
3	1,4-Dichlorobenzene-d4		2,504.6 µg/mL	+/- 14.5620	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)		+/- 28.2430	µg/mL	Unstressed
	Purity 99%			+/- 32.4995	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM567650_00023

VM567650_00023 Rec: 11/7/14

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0104073

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 022012)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
2	1,2-Dichloroethane-d4		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot 12K-027)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
3	Toluene-d8		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot 13I-050)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)		2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 01127COV)		+/- 28.2046	µg/mL	Unstressed
	Purity 99%			+/- 32.4554	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM568720_00012

(4) Rec: 4/13/16

VM568720_0002

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0117486

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750 µg/mL, Water, 1 mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2016 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L., K=2)		
1	Acrolein		19,938.0	µg/mL	+/- 116.7414	µg/mL	Gravimetric
	CAS #	107-02-8 (Lot 160105JLM)			+/- 639.2750	µg/mL	Unstressed
	Purity	99%			+/- 743.0872	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM569720_00001

VM569720-00001 Rec: 9/16/15

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720 **Lot No.:** A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBF3466V) **Purity** 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL +/- 134.1754 µg/mL +/- 134.3233 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00001135) **Purity** 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL +/- 134.2419 µg/mL +/- 134.3899 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethane **CAS #** 75-34-3 (Lot Q179-33) **Purity** 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL +/- 133.0173 µg/mL +/- 133.1640 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBC6893V) **Purity** 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL +/- 1,330.5704 µg/mL +/- 1,332.0378 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBC7288V) **Purity** 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL +/- 133.5767 µg/mL +/- 133.7240 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9 (Lot SHBD7134V) **Purity** 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL +/- 665.5101 µg/mL +/- 666.2440 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot MKBG5777V) **Purity** 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL +/- 133.6453 µg/mL +/- 133.7914 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBD4974V)	2,514.3	µg/mL	+/- +/- +/-	14.6006 133.6432 133.7906	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 98%	(Lot C30Y997)	2,511.7	µg/mL	+/- +/- +/-	14.6035 133.6693 133.8167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot 10172706)	25,017.1	µg/mL	+/- +/- +/-	145.4441 1,331.3554 1,332.8236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 99%	(Lot MKBG8424V)	2,503.9	µg/mL	+/- +/- +/-	14.5577 133.2507 133.3977	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBF0293V)	2,511.9	µg/mL	+/- +/- +/-	14.6043 133.6764 133.8239	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,1-dichloroethene CAS # 75-35-4 Purity 99%	(Lot SHBD6170V)	2,521.3	µg/mL	+/- +/- +/-	14.6588 134.1754 134.3233	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2-Dichloropropane CAS # 594-20-7 Purity 98%	(Lot BCBH9246V)	2,500.0	µg/mL	+/- +/- +/-	14.5351 133.0434 133.1901	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,505.0	µg/mL	+/- +/- +/-	14.5643 133.3106 133.4576	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBF2852V)	62,553.8	µg/mL	+/- +/- +/-	363.6739 3,328.9705 3,332.6417	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot SHBF1193V)	2,504.6	µg/mL	+/- +/- +/-	14.5621 133.2906 133.4376	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,505.1	µg/mL	+/- +/- +/-	14.5650 133.3172 133.4642	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Tetrahydrofuran CAS # 109-99-9 Purity 97%	(Lot SHBF2660V)	5,000.7	µg/mL	+/- +/- +/-	29.0746 266.1270 266.4204	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B14Z1114)	2,508.1	µg/mL	+/- +/- +/-	14.5825 133.4769 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot SHBD7873V)	2,504.0	µg/mL	+/- +/- +/-	14.5585 133.2574 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	1,1-Dichloropropene CAS # 563-58-6 Purity 98%	(Lot PR09161302)	2,502.4	µg/mL	+/- +/- +/-	14.5493 133.1738 133.3207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBC1410V)	2,505.3	µg/mL	+/- +/- +/-	14.5657 133.3239 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBF2321V)	2,501.4	µg/mL	+/- +/- +/-	14.5432 133.1177 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBC6595V)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBD4617V)	2,509.1	µg/mL	+/- +/- +/-	14.5883 133.5301 133.6774	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBF0943V)	2,504.8	µg/mL	+/- +/- +/-	14.5628 133.2973 133.4443	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2 **Purity** 99%	(Lot 50996APV)	2,502.5	µg/mL	+/- +/- +/-	14.5498 133.1775 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,502.4	µg/mL	+/- +/- +/-	14.5490 133.1709 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	bromodichloromethane **CAS #** 75-27-4 **Purity** 98%	(Lot MKBL1617V)	2,507.9	µg/mL	+/- +/- +/-	14.5814 133.4672 133.6144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBF2002V)	50,001.4	µg/mL	+/- +/- +/-	290.6971 2,660.9612 2,663.8957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 99%	(Lot 10169264)	2,508.1	µg/mL	+/- +/- +/-	14.5825 133.4769 133.6241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 20936)	2,507.0	µg/mL	+/- +/- +/-	14.5759 133.4170 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBF2730V)	2,502.4	µg/mL	+/- +/- +/-	14.5490 133.1709 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot 69796APV)	2,500.9	µg/mL	+/- +/- +/-	14.5403 133.0911 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C363110)	2,502.1	µg/mL	+/- +/- +/-	14.5476 133.1576 133.3044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,507.5	µg/mL	+/- +/- +/-	14.5788 133.4436 133.5908	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,505.3	µg/mL	+/- +/- +/-	14.5657 133.3239 133.4709	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD2073V)	2,506.5	µg/mL	+/- +/- +/-	14.5730 133.3904 133.5375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ1732V)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBH8892V)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetrie Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBB7205V)	2,506.4	µg/mL	+/- 14.5723 +/- 133.3837 +/- 133.5308	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBJ3305V)	2,503.1	µg/mL	+/- 14.5534 +/- 133.2108 +/- 133.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBK3151V)	2,504.0	µg/mL	+/- 14.5585 +/- 133.2574 +/- 133.4043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBK4439V)	2,501.1	µg/mL	+/- 14.5418 +/- 133.1044 +/- 133.2511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBC1891V)	2,506.1	µg/mL	+/- 14.5708 +/- 133.3704 +/- 133.5175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBL3891V)	2,507.0	µg/mL	+/- 14.5759 +/- 133.4170 +/- 133.5641	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot 68996CMV)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.9	µg/mL	+/- 14.5694 +/- 133.3571 +/- 133.5042	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot 26896BM)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot K22W009)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	2,502.6	µg/mL	+/- 14.5505 +/- 133.1842 +/- 133.3311	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

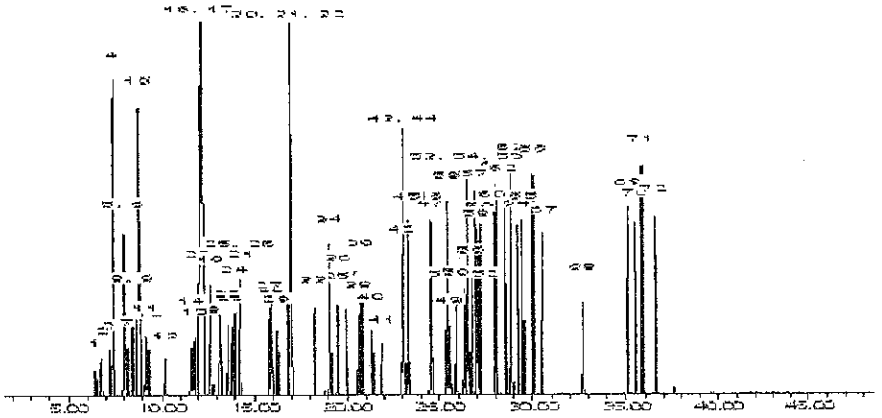
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 07-Jan-2015 **Balance:** 1125113331

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VM569720S_00001

VM56972 20s_00001 Rec: 3/30/15

RESTEK® CERTIFIED REFERENCE MATERIAL

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Bellefonte, PA 16823-8812
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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0108163

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 133.1044 µg/mL +/- 133.2511 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 903000) **Purity** 99%	2,502.8 µg/mL	+/- 14.5512 µg/mL +/- 133.1908 µg/mL +/- 133.3377 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,000.5 µg/mL	+/- 145.3477 µg/mL +/- 1,330.4725 µg/mL +/- 1,331.9397 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot A13Y016) **Purity** 97%	2,500.5 µg/mL	+/- 14.5383 µg/mL +/- 133.0732 µg/mL +/- 133.2199 µg/mL	Gravimetric Unstressed Stressed
6	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	12,500.6 µg/mL	+/- 72.6759 µg/mL +/- 665.2553 µg/mL +/- 665.9889 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot 5MNOA-DQ) **Purity** 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL +/- 133.1110 µg/mL +/- 133.2578 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane)		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGI702)			+/-	133.1177	µg/mL	Unstressed
	Purity 99%				+/-	133.2645	µg/mL	Stressed
9	Carbon disulfide		2,501.2	µg/mL	+/-	14.5422	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	133.1086	µg/mL	Unstressed
	Purity 98%				+/-	133.2554	µg/mL	Stressed
10	Acrylonitrile		25,002.1	µg/mL	+/-	145.3569	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot CCFKL)			+/-	1,330.5571	µg/mL	Unstressed
	Purity 99%				+/-	1,332.0244	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
12	n-Hexane (C6)		2,500.1	µg/mL	+/-	14.5358	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot K24W001)			+/-	133.0499	µg/mL	Unstressed
	Purity 98%				+/-	133.1967	µg/mL	Stressed
13	1,1-Dichloroethane		2,503.0	µg/mL	+/-	14.5527	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 2663100)			+/-	133.2041	µg/mL	Unstressed
	Purity 99%				+/-	133.3510	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot GI01)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,500.2	µg/mL	+/-	14.5362	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	133.0538	µg/mL	Unstressed
	Purity 97%				+/-	133.2005	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,501.3	µg/mL	+/-	363.3687	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot PH2XK)			+/-	3,326.1766	µg/mL	Unstressed
	Purity 99%				+/-	3,329.8447	µg/mL	Stressed
17	Methyl-tert-butyl ether (MTBE)		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZAQTA-MS)			+/-	133.0711	µg/mL	Unstressed
	Purity 99%				+/-	133.2178	µg/mL	Stressed
18	Bromochloromethane		2,500.6	µg/mL	+/-	14.5388	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 345600)			+/-	133.0777	µg/mL	Unstressed
	Purity 99%				+/-	133.2245	µg/mL	Stressed
19	Tetrahydrofuran		5,002.3	µg/mL	+/-	29.0835	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot XWFLA)			+/-	266.2087	µg/mL	Unstressed
	Purity 99%				+/-	266.5023	µg/mL	Stressed
20	1,1,1-Trichloroethane		2,501.9	µg/mL	+/-	14.5461	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 1103200)			+/-	133.1443	µg/mL	Unstressed
	Purity 99%				+/-	133.2911	µg/mL	Stressed
21	Cyclohexane		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
22	1,1-Dichloropropene		2,501.1	µg/mL	+/-	14.5419	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 2028500)			+/-	133.1054	µg/mL	Unstressed
	Purity 97%				+/-	133.2522	µg/mL	Stressed
23	Carbon tetrachloride		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed

24	n-Heptane (C7) **CAS #** 142-82-5.SEC **Purity** 99%	(Lot OGM01)	2,500.4	µg/mL	+/- 14.5374 +/- 133.0644 +/- 133.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane **CAS #** 107-06-2.SEC **Purity** 99%	(Lot FO6PK)	2,501.9	µg/mL	+/- 14.5461 +/- 133.1443 +/- 133.2911	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene **CAS #** 71-43-2.SEC **Purity** 99%	(Lot B28Y008)	2,500.9	µg/mL	+/- 14.5403 +/- 133.0911 +/- 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene **CAS #** 79-01-6.SEC **Purity** 98%	(Lot H04X050)	2,500.6	µg/mL	+/- 14.5387 +/- 133.0760 +/- 133.2228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	(Lot 24MSD-CD)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	(Lot OGG01)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Bromodichloromethane **CAS #** 75-27-4.SEC **Purity** 99%	(Lot 10171168)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	(Lot CHA4A)	50,000.8	µg/mL	+/- 290.6935 +/- 2,660.9280 +/- 2,663.8624	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	(Lot FGI01-OICH)	2,500.6	µg/mL	+/- 14.5388 +/- 133.0777 +/- 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	(Lot 7ZLXJ-TJ)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	(Lot YND2B-BD)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	(Lot MLWYK-LS)	2,500.8	µg/mL	+/- 14.5396 +/- 133.0844 +/- 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 98%	(Lot 2ECIC-NM)	2,501.6	µg/mL	+/- 14.5444 +/- 133.1282 +/- 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 99%	(Lot 732700)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	(Lot AGN01-EFPC)	2,500.8	µg/mL	+/- 14.5396 +/- 133.0844 +/- 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	(Lot F09W014)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot I13W021)			+/-	133.1377	µg/mL	Unstressed
	Purity 97%				+/-	133.2845	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,502.1	µg/mL	+/-	14.5472	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 1368400)			+/-	133.1542	µg/mL	Unstressed
	Purity 98%				+/-	133.3011	µg/mL	Stressed
42	Chlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01-QSHR)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
44	Ethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE-GR)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
45	m-Xylene		1,250.4	µg/mL	+/-	7.2698	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	66.5422	µg/mL	Unstressed
	Purity 99%				+/-	66.6156	µg/mL	Stressed
46	o-Xylene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
47	p-Xylene		1,251.6	µg/mL	+/-	7.2771	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	66.6087	µg/mL	Unstressed
	Purity 99%				+/-	66.6822	µg/mL	Stressed
48	Styrene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
50	Bromoform		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 1039300)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
52	Chloroform		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,502.7	µg/mL	+/-	14.5510	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-2)			+/-	133.1893	µg/mL	Unstressed
	Purity 97%				+/-	133.3362	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed

56	Bromobenzene **CAS #** 108-86-1.SEC **Purity** 99%	(Lot 2FUHG-EM)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene **CAS #** 95-63-6.SEC **Purity** 99%	(Lot SC7LO-QA)	2,502.4	µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8.SEC **Purity** 99%	(Lot SW8QG-AO)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4.SEC **Purity** 99%	(Lot P4XHJ-AO)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6.SEC **Purity** 99%	(Lot OGN01)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene **CAS #** 108-67-8.SEC **Purity** 99%	(Lot FGH02-CMLN)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8.SEC **Purity** 99%	(Lot OGN01)	2,500.1	µg/mL	+/- 14.5359 +/- 133.0511 +/- 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) **CAS #** 99-87-6.SEC **Purity** 99%	(Lot 1721700)	2,501.6	µg/mL	+/- 14.5447 +/- 133.1310 +/- 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1.SEC **Purity** 99%	(Lot FMDFD-KA)	2,501.5	µg/mL	+/- 14.5439 +/- 133.1243 +/- 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7.SEC **Purity** 99%	(Lot YWKDC-MK)	2,500.3	µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8.SEC **Purity** 99%	(Lot OGN01)	2,500.6	µg/mL	+/- 14.5388 +/- 133.0777 +/- 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1.SEC **Purity** 99%	(Lot 4NRGF-OT)	2,500.0	µg/mL	+/- 14.5352 +/- 133.0445 +/- 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8.SEC **Purity** 97%	(Lot LC00408V)	2,500.5	µg/mL	+/- 14.5383 +/- 133.0732 +/- 133.2199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1.SEC **Purity** 99%	(Lot OGO01)	2,501.0	µg/mL	+/- 14.5410 +/- 133.0977 +/- 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3.SEC **Purity** 97%	(Lot 2009400)	2,501.0	µg/mL	+/- 14.5412 +/- 133.0990 +/- 133.2458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3.SEC **Purity** 99%	(Lot 4KW3H-OO)	2,500.5	µg/mL	+/- 14.5381 +/- 133.0711 +/- 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene **CAS #** 87-61-6.SEC **Purity** 99%	(Lot A0043055)	2,502.4 µg/mL	+/- 14.5490 +/- 133.1709 +/- 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

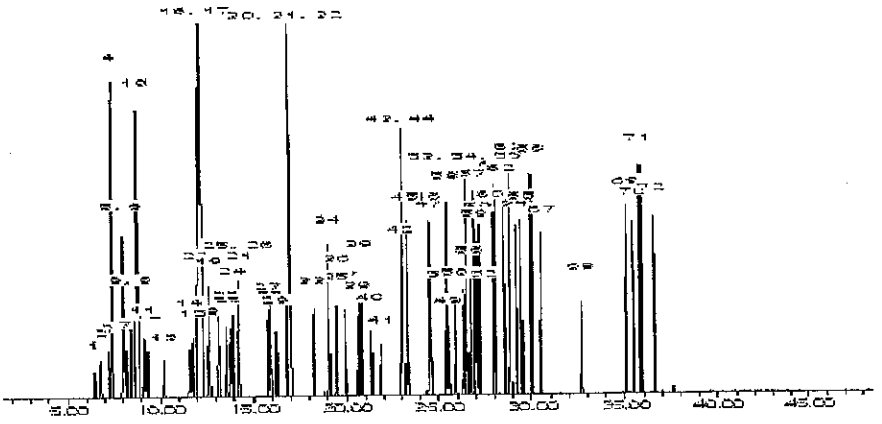
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Tyler Brown - QA Analyst

Date Mixed: 07-Jan-2015 **Balance:** 1127510105

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VM569721_00001

VM569721_0000 Rec: 9/16/15

RESTEK® CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0110400

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,506.8 µg/mL	+/- 73.2301 µg/mL +/- 665.6407 µg/mL +/- 666.3747 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot BCBH7802V) **Purity** 99%	12,504.8 µg/mL	+/- 73.2184 µg/mL +/- 665.5343 µg/mL +/- 666.2681 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF5332V) **Purity** 99%	12,509.2 µg/mL	+/- 73.2441 µg/mL +/- 665.7684 µg/mL +/- 666.5025 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBN7380V) **Purity** 99%	12,501.6 µg/mL	+/- 73.1996 µg/mL +/- 665.3640 µg/mL +/- 666.0976 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

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vm569722_00004

VM569722_00004 Rec: 9/16/15

RESTEK® CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0110070

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,499.9 µg/mL	+/- 17.9502 +/- 30.0934 +/- 34.1055	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,500.1 µg/mL	+/- 17.2963 +/- 29.7101 +/- 33.7686	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,500.2 µg/mL	+/- 16.5642 +/- 29.2906 +/- 33.4004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,500.0 µg/mL	+/- 17.0072 +/- 29.5416 +/- 33.6200	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,499.8 µg/mL	+/- 18.9451 +/- 30.6969 +/- 34.6391	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,500.3 µg/mL	+/- 17.6395 +/- 29.9122 +/- 33.9470	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.2 µg/mL	+/- 16.7318 +/- 29.3854 +/- 33.4835	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,500.3	µg/mL	+/-	16.5866	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	29.3037	µg/mL	Unstressed
	Purity 99%				+/-	33.4120	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

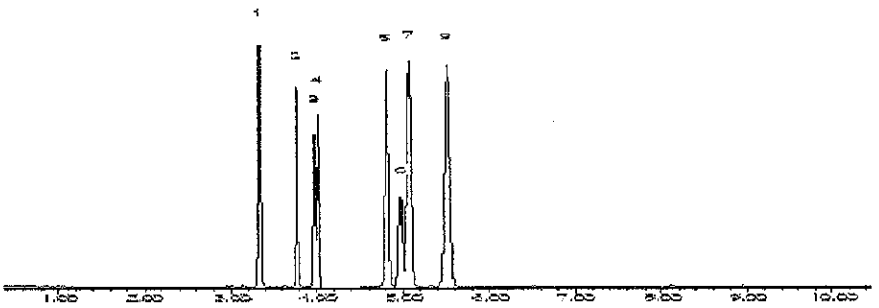
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

P. Joseph Tallon - Mix Technician

Date Mixed: 02-Apr-2015 **Balance:** B251644995

Tyler Brown - QA Analyst

Date Passed: 08-Apr-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

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vm569722_00006

Rec: 2/16/16

VM569722_00006

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0115012

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,502.3 µg/mL	+/- 17.1236 +/- 140.5935 +/- 143.8698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBF7067V) **Purity** 99%	2,506.2 µg/mL	+/- 15.8909 +/- 140.6631 +/- 143.9478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 25LPST) **Purity** 99%	2,507.2 µg/mL	+/- 16.0743 +/- 140.7405 +/- 144.0261	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBF3387V) **Purity** 99%	2,517.0 µg/mL	+/- 17.1894 +/- 141.4157 +/- 144.7114	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,511.3 µg/mL	+/- 17.3826 +/- 141.1222 +/- 144.4097	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,497.4 µg/mL	+/- 16.0992 +/- 140.2015 +/- 143.4741	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,516.3 µg/mL	+/- 19.2032 +/- 141.6354 +/- 144.9242	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,512.2	µg/mL	+/-	18.6489	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBF6387V)			+/-	141.3341	µg/mL	Unstressed
	Purity 99%				+/-	144.6191	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

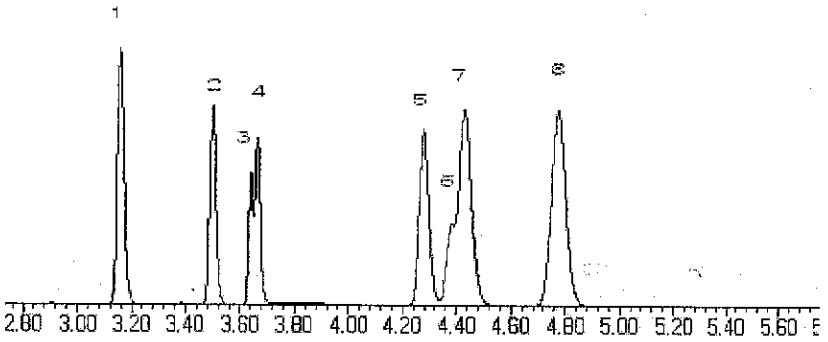
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 5°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 29-Oct-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 02-Nov-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

vm569722S_00001

VM569722S-00001 Rec: 9/16/15

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0113063

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,500.3 µg/mL	+/- 18.8969 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 21773)		+/- 30.6711 µg/mL	Unstressed
	Purity 99%		+/- 34.6178 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,502.2 µg/mL	+/- 22.3652 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 32.9346 µg/mL	Unstressed
	Purity 99%		+/- 36.6435 µg/mL	Stressed
3	Vinyl chloride	2,507.8 µg/mL	+/- 20.2660 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 31.5880 µg/mL	Unstressed
	Purity 99%		+/- 35.4543 µg/mL	Stressed
4	1,3-Butadiene	2,524.8 µg/mL	+/- 19.2677 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/- 31.0859 µg/mL	Unstressed
	Purity 99%		+/- 35.0581 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,510.7 µg/mL	+/- 24.3913 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 34.4006 µg/mL	Unstressed
	Purity 99%		+/- 37.9896 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,499.3 µg/mL	+/- 20.7673 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 31.8496 µg/mL	Unstressed
	Purity 99%		+/- 35.6630 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,511.4 µg/mL	+/- 18.9807 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 30.8071 µg/mL	Unstressed
	Purity 99%		+/- 34.7713 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,525.9 µg/mL	+/-	18.1086	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q12B-59)		+/-	30.3895	µg/mL	Unstressed
	Purity 99%			+/-	34.4453	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

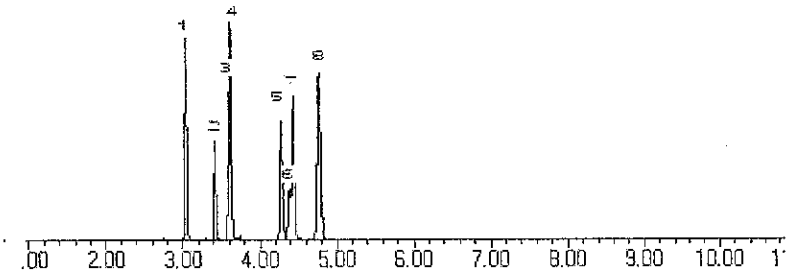
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 05-Aug-2015 **Balance:** 1127510105

Jennifer L. Pollino - QC Analyst

Date Passed: 13-Aug-2015

Manufactured under Restek's ISO 9001:2008
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Certificate #FM 80397

Reagent

VM569723_00001

Rec: 3/30/15
VM569723_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0108172

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,502.0 µg/mL	+/- 14.6831	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKBK2735V)		+/- 53.0984	µg/mL	Unstressed
	Purity 99%		+/- 53.3337	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569724_00004

VM569724_00004 Rec: 1/14/16

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0115764

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2016 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Vinyl acetate	5,009.0 µg/mL	+/- 29.3956 µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.2416 µg/mL	Unstressed
	Purity 99%		+/- 302.9590 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
16WDUP1	240-66155-1	91	94	96	81
	MB 240-236061/6	92	94	96	77
	LCS 240-236061/4	92	98	99	78

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	79-120
DCA = 1,2-Dichloroethane-d4 (Surr)	78-125
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	61-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ5817A.D

Lab ID: LCS 240-236061/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Tetrahydrofuran	20.0	19.1 J	96	61-136	
Vinyl chloride	10.0	10.4	104	52-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab File ID: UXJ5819.D Lab Sample ID: MB 240-236061/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 06/27/2016 12:26

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-236061/4	UXJ5817A.D	06/27/2016 11:40
16WDUP1	240-66155-1	UXJ5842.D	06/27/2016 21:07

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab File ID: BFB6528.D BFB Injection Date: 05/28/2016

Instrument ID: A3UX11 BFB Injection Time: 08:28

Analysis Batch No.: 232366

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.5	
75	30.0 - 60.0 % of mass 95	43.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	89.7	
175	5.0 - 9.0 % of mass 174	6.8	(7.6) 1
176	95.0 - 101.0 % of mass 174	86.3	(96.2) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-232366/2	UXJ4939.D	05/28/2016	09:12
	STD8260 240-232366/3	UXJ4940.D	05/28/2016	09:34
	STD8260 240-232366/4	UXJ4941.D	05/28/2016	09:56
	STD8260 240-232366/5	UXJ4942.D	05/28/2016	10:19
	STD8260 240-232366/6	UXJ4943.D	05/28/2016	10:40
	STD8260 240-232366/7	UXJ4944.D	05/28/2016	11:03
	ICV 240-232366/14	UXJ4945.D	05/28/2016	11:25
	ICV 240-232366/15	UXJ4952.D	05/28/2016	14:03

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab File ID: BFB6627A.D BFB Injection Date: 06/27/2016

Instrument ID: A3UX11 BFB Injection Time: 09:44

Analysis Batch No.: 236061

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.6	
75	30.0 - 60.0 % of mass 95	46.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	83.1	
175	5.0 - 9.0 % of mass 174	7.0	(8.4) 1
176	95.0 - 101.0 % of mass 174	82.6	(99.5) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-236061/2	UXJ5814A.D	06/27/2016	10:32
	CCV 240-236061/3	UXJ5816A.D	06/27/2016	11:18
	LCS 240-236061/4	UXJ5817A.D	06/27/2016	11:40
	MB 240-236061/6	UXJ5819.D	06/27/2016	12:26
16WDUP1	240-66155-1	UXJ5842.D	06/27/2016	21:07

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Sample No.: STD8260 240-232366/4 Date Analyzed: 05/28/2016 09:56

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ4941.D Heated Purge: (Y/N) N

Calibration ID: 34632

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1420065	5.12	934240	7.78	380946	10.01
UPPER LIMIT		2840130	5.62	1868480	8.28	761892	10.51
LOWER LIMIT		710033	4.62	467120	7.28	190473	9.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-232366/14		1349328	5.12	892490	7.78	381895	10.03
ICV 240-232366/15		1213041	5.12	839047	7.78	340685	10.01
CCVIS 240-236061/2		2032326	5.12	1160670	7.78	355778	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Sample No.: CCVIS 240-236061/2 Date Analyzed: 06/27/2016 10:32

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ5814A.D Heated Purge: (Y/N) N

Calibration ID: 34635

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2032326	5.12	1160670	7.78	355778	10.03
UPPER LIMIT		4064652	5.62	2321340	8.28	711556	10.53
LOWER LIMIT		1016163	4.62	580335	7.28	177889	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-236061/3		1540110	5.12	957505	7.78	307644	10.03
LCS 240-236061/4		1576480	5.12	946408	7.78	307979	10.03
MB 240-236061/6		1473316	5.12	921655	7.78	289266	10.03
240-66155-1	16WDUP1	1466658	5.12	915227	7.78	294852	10.03

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-66155-1

SDG No.:

Client Sample ID: 16WDUP1 | Lab Sample ID: 240-66155-1

Matrix: Water | Lab File ID: UXJ5842.D

Analysis Method: 8260C | Date Collected: 06/16/2016 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 06/27/2016 21:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 236061 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	2.8	J	25	2.0
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	91		79-120
460-00-4	4-Bromofluorobenzene (Surr)	81		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5842.D
Lims ID: 240-66155-A-1
Client ID: 16WDUP1
Sample Type: Client
Inject. Date: 27-Jun-2016 21:07:30 ALS Bottle#: 29 Worklist Smp#: 52
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-052
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:23:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1466658	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	915227	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	294852	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	357437	10.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	410753	11.2	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1488582	11.4	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	90	382125	9.71	
12 Vinyl chloride	62	1.731	1.731	0.000	94	6039	0.1720	
48 Tetrahydrofuran	42	4.405	4.405	0.000	90	21782	2.81	

Reagents:

VM50IS_00055	Amount Added: 1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added: 1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added: 0.00	Units:	Run Reagent

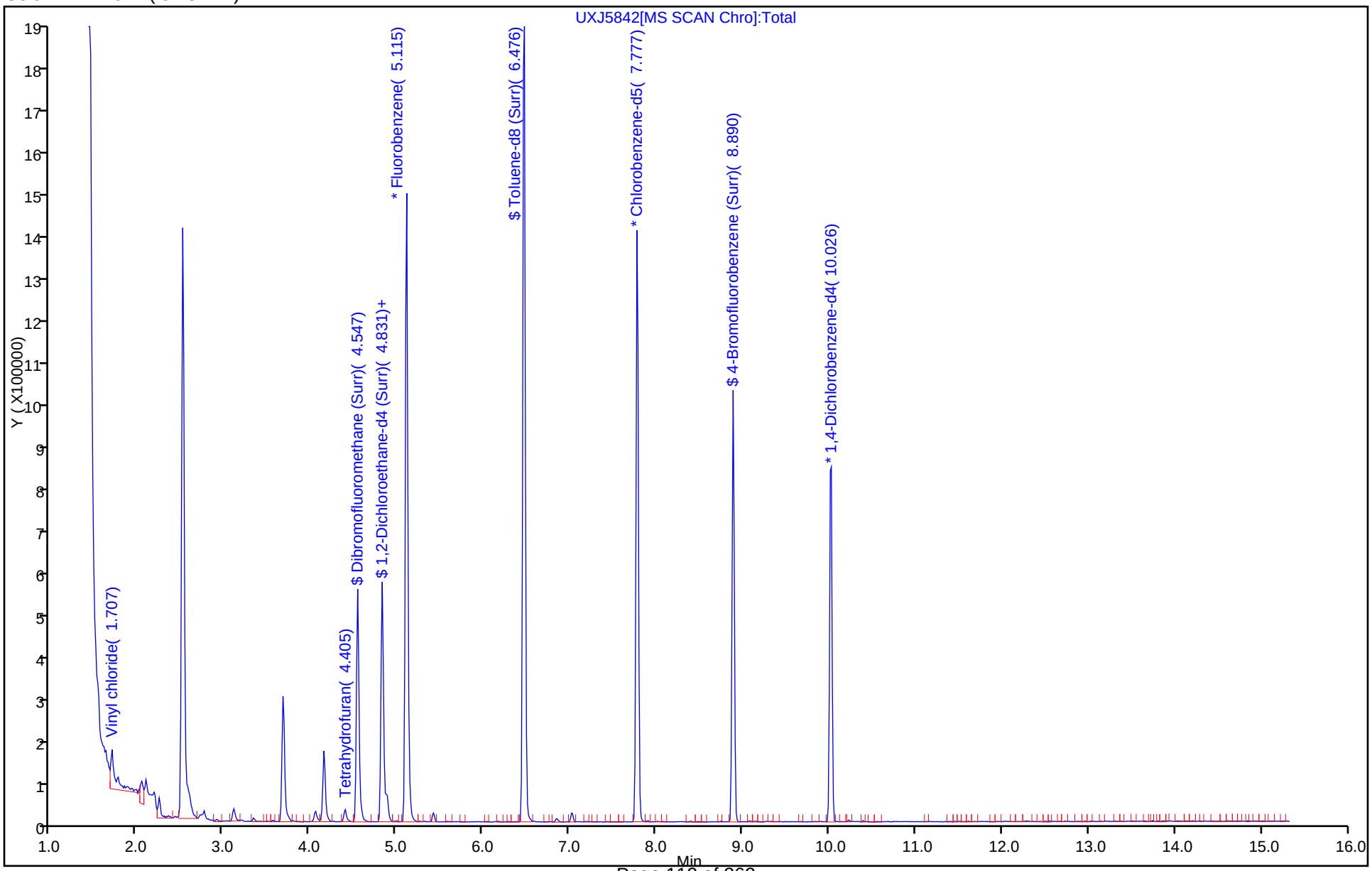
Report Date: 28-Jun-2016 08:27:45 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5842.D

Injection Date:	27-Jun-2016 21:07:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	240-66155-A-1	Lab Sample ID:	240-66155-1	Worklist Smp#:	52
Client ID:	16WDUP1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5842.D
Lims ID: 240-66155-A-1
Client ID: 16WDUP1
Sample Type: Client
Inject. Date: 27-Jun-2016 21:07:30 ALS Bottle#: 29 Worklist Smp#: 52
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-052
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 08:27:29 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 28-Jun-2016 08:23:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	10.9	91.34
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.2	93.66
$ 6 Toluene-d8 (Surr)	12.0	11.4	95.69
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.71	81.22

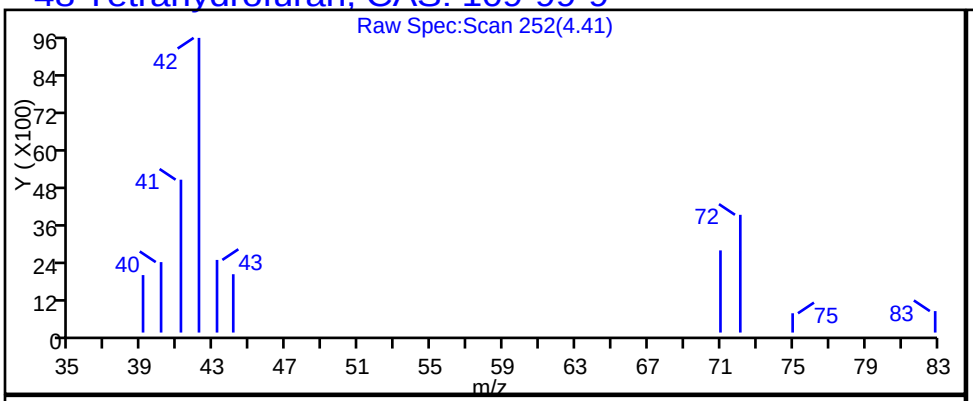
Report Date: 28-Jun-2016 08:27:45 Chrom Revision: 2.2 20-Apr-2016 13:59:46

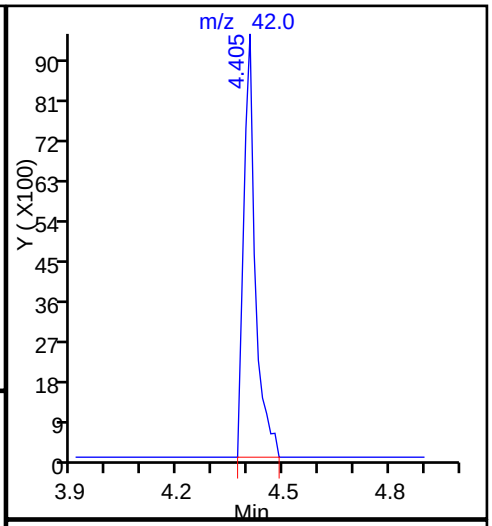
TestAmerica Canton

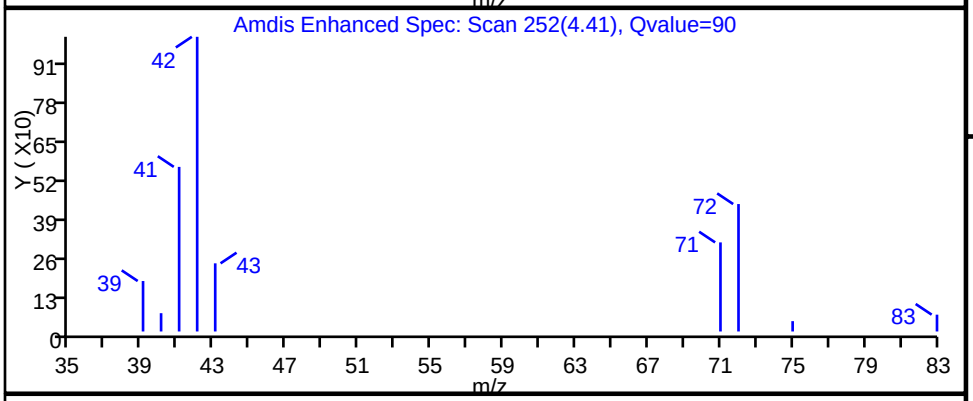
Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5842.D

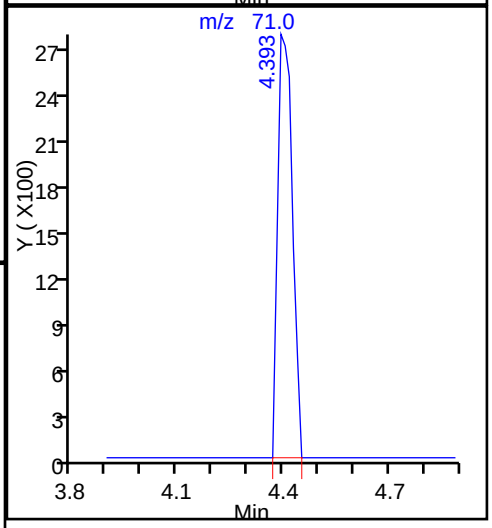
Injection Date:	27-Jun-2016 21:07:30	Instrument ID:	A3UX11		
Lims ID:	240-66155-A-1	Lab Sample ID:	240-66155-1		
Client ID:	16WDUP1				
Operator ID:	43582	ALS Bottle#:	29	Worklist Smp#:	52
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_11	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

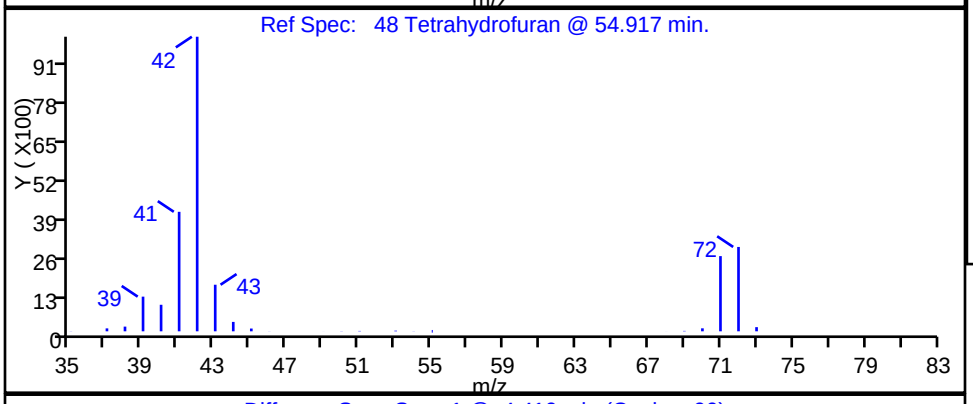
48 Tetrahydrofuran, CAS: 109-99-9

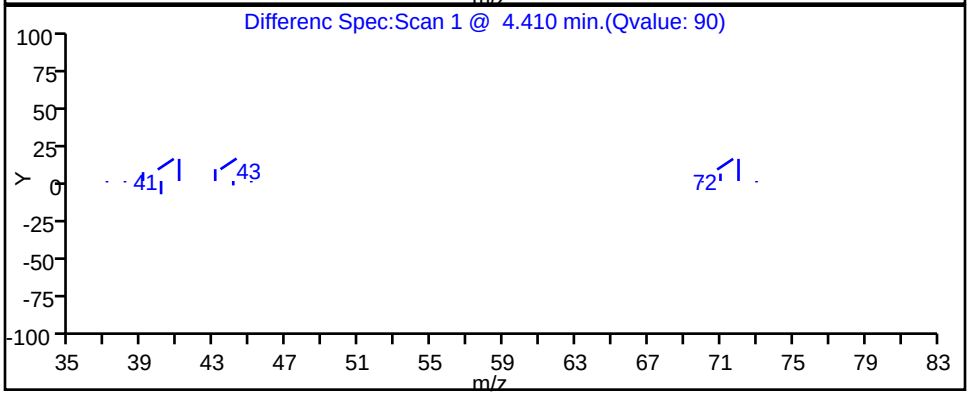












FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232366/7	UXJ4944.D
Level 2	STD8260 240-232366/6	UXJ4943.D
Level 3	STD8260 240-232366/5	UXJ4942.D
Level 4	STD8260 240-232366/4	UXJ4941.D
Level 5	STD8260 240-232366/3	UXJ4940.D
Level 6	STD8260 240-232366/2	UXJ4939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1874 0.1365	0.1804	0.1569	0.1477	0.1345	Ave		0.1572			0.1000	14.2		20.0			
Chloromethane	0.2347 0.2087	0.2368	0.2391	0.2296	0.2034	Ave		0.2254			0.1000	6.8		20.0			
Vinyl chloride	0.2661 0.1948	0.2726	0.2549	0.2398	0.2079	Ave		0.2393			0.1000	13.3		20.0			
Butadiene	0.2902 0.1915	0.2430	0.2236	0.2072	0.1931	Ave		0.2248				16.7		20.0			
Bromomethane	0.1050 0.1039	0.1171	0.1178	0.1085	0.1034	Ave		0.1093			0.0500	6.0		20.0			
Chloroethane	0.1242 0.1044	0.1183	0.1173	0.1128	0.1037	Ave		0.1134			0.0500	7.2		20.0			
Dichlorofluoromethane	0.2652 0.2353	0.2510	0.2494	0.2472	0.2313	Ave		0.2466				4.9		20.0			
Trichlorofluoromethane	0.1586 0.1718	0.1896	0.1718	0.1763	0.1658	Ave		0.1723			0.1000	6.1		20.0			
Ethyl ether	0.2791 0.1930	0.2355	0.2143	0.2247	0.1967	Ave		0.2239				14.1		20.0			
Acrolein	0.0309 0.0285	0.0362	0.0322	0.0324	0.0295	Ave		0.0316				8.6		20.0			
1,1-Dichloroethene	0.1891 0.1632	0.1879	0.1767	0.1764	0.1670	Ave		0.1767			0.1000	6.0		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1179 0.1005	0.1146	0.1068	0.1044	0.0984	Ave		0.1071			0.0500	7.2		20.0			
Acetone	0.1159 0.0473	0.0784	0.0616	0.0562	0.0505	Lin1	0.1399	0.0464			0.0100				0.9990		0.9900
Iodomethane	0.2712 0.2217	0.2508	0.2518	0.2412	0.2336	Ave		0.2451				7.0		20.0			
Carbon disulfide	0.5031 0.4104	0.4698	0.4742	0.4421	0.4373	Ave		0.4562			0.1000	7.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1477 0.1632	0.1624	0.1618	0.1717	0.1628	Ave		0.1616				4.8		20.0			
Methyl acetate	0.1492 0.1172	0.1415	0.1379	0.1354	0.1267	Ave		0.1347			0.1000	8.4		20.0			
Methylene Chloride	0.4395 0.1915	0.3287	0.2437	0.2251	0.2061	Lin1	0.2668	0.1891			0.1000				0.9990		0.9900
2-Methyl-2-propanol	0.0152 +++++	0.0127	0.0136	0.0126	0.0116	Ave		0.0132				10.4		20.0			
Acrylonitrile	0.0740 0.0627	0.0715	0.0721	0.0723	0.0674	Ave		0.0700				6.0		20.0			
Methyl tert-butyl ether	0.6968 0.6087	0.6644	0.6642	0.6935	0.6425	Ave		0.6617			0.1000	5.0		20.0			
trans-1,2-Dichloroethene	0.2888 0.2454	0.2625	0.2591	0.2657	0.2505	Ave		0.2620			0.1000	5.8		20.0			
Hexane	0.0673 0.0553	0.0534	0.0515	0.0545	0.0543	Ave		0.0561				10.1		20.0			
1,1-Dichloroethane	0.4677 0.4326	0.4478	0.4396	0.4565	0.4422	Ave		0.4477			0.2000	2.8		20.0			
Vinyl acetate	0.4182 0.3938	0.4338	0.4161	0.4307	0.4152	Ave		0.4179				3.4		20.0			
cis-1,2-Dichloroethene	0.2801 0.2752	0.2762	0.2735	0.2834	0.2738	Ave		0.2770			0.1000	1.4		20.0			
2-Butanone (MEK)	0.0983 0.0737	0.0786	0.0817	0.0829	0.0790	Ave		0.0824			0.0100	10.2		20.0			
2,2-Dichloropropane	0.2080 0.1863	0.1876	0.1977	0.2027	0.1990	Ave		0.1969				4.3		20.0			
Chlorobromomethane	0.1272 0.1276	0.1218	0.1259	0.1333	0.1309	Ave		0.1278				3.1		20.0			
Tetrahydrofuran	0.0601 0.0461	0.0557	0.0518	0.0536	0.0500	Ave		0.0529				9.1		20.0			
Chloroform	0.4249 0.3958	0.3907	0.3887	0.4080	0.4090	Ave		0.4028			0.2000	3.4		20.0			
1,1,1-Trichloroethane	0.2866 0.2625	0.2619	0.2664	0.2757	0.2770	Ave		0.2717			0.1000	3.6		20.0			
Cyclohexane	0.3397 0.2916	0.3042	0.2938	0.2971	0.2985	Ave		0.3041			0.1000	5.9		20.0			
1,1-Dichloropropene	0.3733 0.3357	0.3276	0.3319	0.3472	0.3430	Ave		0.3431				4.8		20.0			
Carbon tetrachloride	0.2549 0.2547	0.2228	0.2418	0.2613	0.2561	Ave		0.2486			0.1000	5.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0062 0.0045	0.0059	0.0063	0.0071	0.0058	Ave		0.0060				14.3		20.0			
1,2-Dichloroethane	0.2981 0.2726	0.2707	0.2764	0.2862	0.2852	Ave		0.2815			0.1000	3.7		20.0			
Benzene	1.0915 1.0604	1.0274	1.0168	1.0745	1.0726	Ave		1.0572			0.5000	2.8		20.0			
n-Heptane	0.0767 0.0562	0.0637	0.0501	0.0519	0.0539	Ave		0.0587				17.0		20.0			
Trichloroethene	0.2904 0.2807	0.2627	0.2619	0.2746	0.2860	Ave		0.2761			0.1500	4.3		20.0			
Methylcyclohexane	0.3899 0.3159	0.3438	0.3048	0.3065	0.3225	Ave		0.3306			0.1000	9.8		20.0			
1,2-Dichloropropane	0.2636 0.2540	0.2477	0.2418	0.2504	0.2626	Ave		0.2533			0.1000	3.4		20.0			
Dibromomethane	0.1260 0.1258	0.1267	0.1228	0.1240	0.1303	Ave		0.1259				2.0		20.0			
1,4-Dioxane	0.0010 +++++	0.0013	0.0014	0.0016	0.0017	Lin1	-0.017	0.0017							0.9990		0.9900
Dichlorobromomethane	0.2938 0.3017	0.2907	0.2723	0.2880	0.3112	Ave		0.2929			0.1500	4.5		20.0			
2-Chloroethyl vinyl ether	0.1384 0.1445	0.1484	0.1416	0.1458	0.1535	Ave		0.1454				3.6		20.0			
cis-1,3-Dichloropropene	0.3776 0.4191	0.3788	0.3775	0.4025	0.4308	Ave		0.3977			0.1500	5.9		20.0			
4-Methyl-2-pentanone (MIBK)	0.1794 0.1579	0.1670	0.1634	0.1645	0.1729	Ave		0.1675			0.0500	4.5		20.0			
Toluene	1.6592 1.5713	1.5809	1.5586	1.6505	1.6591	Ave		1.6133			0.4000	3.0		20.0			
trans-1,3-Dichloropropene	0.4368 0.4929	0.4583	0.4669	0.5112	0.5324	Ave		0.4831			0.1000	7.4		20.0			
Ethyl methacrylate	0.4247 0.4021	0.4124	0.4087	0.4397	0.4428	Ave		0.4217				4.0		20.0			
1,1,2-Trichloroethane	0.2779 0.2701	0.2893	0.2905	0.2951	0.3013	Ave		0.2874			0.1000	4.0		20.0			
Tetrachloroethene	0.3260 0.2981	0.2891	0.2964	0.3117	0.3178	Ave		0.3065			0.1500	4.6		20.0			
1,3-Dichloropropane	0.5178 0.4955	0.5274	0.5141	0.5435	0.5440	Ave		0.5237				3.6		20.0			
2-Hexanone	0.1845 0.1578	0.1883	0.1732	0.1827	0.1815	Ave		0.1780			0.0500	6.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2713 0.3118	0.2819	0.2799	0.3107	0.3300	Ave		0.2976				7.8		20.0			
Ethylene Dibromide	0.2749 0.2645	0.2712	0.2625	0.2827	0.2896	Ave		0.2742				3.8		20.0			
Chlorobenzene	1.0021 0.9778	0.9625	0.9467	0.9849	1.0339	Ave		0.9846			0.3000	3.1		20.0			
1,1,1,2-Tetrachloroethane	0.3124 0.3245	0.2955	0.3071	0.3343	0.3508	Ave		0.3208				6.2		20.0			
Ethylbenzene	0.5297 0.5154	0.5166	0.5168	0.5295	0.5569	Ave		0.5275				3.0		20.0			
m-Xylene & p-Xylene	0.6526 0.6339	0.6292	0.6072	0.6409	0.6817	Ave		0.6409				3.9		20.0			
o-Xylene	0.6267 0.6070	0.5789	0.5953	0.6248	0.6608	Ave		0.6156				4.6		20.0			
Styrene	1.0612 1.0573	1.0236	1.0246	1.0787	1.1399	Ave		1.0642			0.3000	4.0		20.0			
Bromoform	0.1294 0.1729	0.1399	0.1527	0.1658	0.1841	Ave		0.1575			0.1000	13.1		20.0			
Isopropylbenzene	1.4418 1.3777	1.3579	1.3867	1.4136	1.5024	Ave		1.4133			0.1000	3.7		20.0			
1,1,2,2-Tetrachloroethane	0.7048 0.6684	0.6947	0.6821	0.7009	0.7169	Ave		0.6946			0.3000	2.5		20.0			
Bromobenzene	0.9492 0.9267	0.9025	0.8699	0.9413	0.9437	Ave		0.9222				3.3		20.0			
1,2,3-Trichloropropane	0.2266 0.2086	0.2279	0.2147	0.2187	0.2292	Ave		0.2209				3.8		20.0			
trans-1,4-Dichloro-2-butene	0.1143 0.1900	0.1405	0.1609	0.1869	0.1886	Ave		0.1635				19.0		20.0			
N-Propylbenzene	0.8818 0.9344	0.8262	0.8621	0.9134	0.9434	Ave		0.8936				5.1		20.0			
2-Chlorotoluene	0.7900 0.8102	0.7694	0.7533	0.8111	0.8197	Ave		0.7923				3.3		20.0			
1,3,5-Trimethylbenzene	2.4904 2.4634	2.4676	2.4041	2.5168	2.5605	Ave		2.4838				2.1		20.0			
4-Chlorotoluene	0.8392 0.8484	0.7868	0.8198	0.8628	0.8527	Ave		0.8349				3.3		20.0			
tert-Butylbenzene	2.0991 2.0866	2.0122	2.0006	2.1022	2.1464	Ave		2.0745				2.7		20.0			
1,2,4-Trimethylbenzene	2.5486 2.4454	2.3862	2.4030	2.4835	2.5470	Ave		2.4689				2.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.7399 2.7081	2.5216	2.6264	2.7096	2.7610	Ave		2.6778				3.3		20.0			
1,3-Dichlorobenzene	1.4310 1.3899	1.4226	1.3716	1.4076	1.4392	Ave		1.4103			0.6000	1.8		20.0			
4-Isopropyltoluene	2.3727 2.2716	2.1405	2.1846	2.3189	2.3681	Ave		2.2761				4.2		20.0			
1,4-Dichlorobenzene	1.5090 1.3897	1.4507	1.3767	1.4493	1.4354	Ave		1.4351			0.5000	3.3		20.0			
n-Butylbenzene	1.6341 1.7034	1.5296	1.6133	1.6710	1.7165	Ave		1.6446				4.2		20.0			
1,2-Dichlorobenzene	1.3346 1.2285	1.2638	1.2189	1.2545	1.3092	Ave		1.2683			0.4000	3.6		20.0			
1,2-Dibromo-3-Chloropropane	0.1065 0.1011	0.1093	0.0973	0.1023	0.1039	Ave		0.1034			0.0500	4.0		20.0			
1,2,4-Trichlorobenzene	0.6139 0.6504	0.5991	0.5773	0.5968	0.6016	Ave		0.6065			0.2000	4.0		20.0			
Hexachlorobutadiene	0.2676 0.2710	0.2301	0.2389	0.2482	0.2407	Ave		0.2494				6.6		20.0			
Naphthalene	1.5365 1.5180	1.5623	1.4231	1.4795	1.4541	Ave		1.4956				3.5		20.0			
1,2,3-Trichlorobenzene	0.6048 0.5976	0.5621	0.5340	0.5478	0.5466	Ave		0.5655				5.2		20.0			
Dibromofluoromethane (Surr)	0.2118 0.2284	0.2331	0.2147	0.2235	0.2274	Ave		0.2231				3.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2439 0.2455	0.2559	0.2483	0.2521	0.2548	Ave		0.2501				2.0		20.0			
Toluene-d8 (Surr)	1.3628 1.3928	1.4804	1.3814	1.4319	1.4793	Ave		1.4214				3.6		20.0			
4-Bromofluorobenzene (Surr)	0.4331 0.4121	0.4504	0.4110	0.4176	0.4550	Ave		0.4299				4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-232366/7	UXJ4944.D
Level 2	STD8260 240-232366/6	UXJ4943.D
Level 3	STD8260 240-232366/5	UXJ4942.D
Level 4	STD8260 240-232366/4	UXJ4941.D
Level 5	STD8260 240-232366/3	UXJ4940.D
Level 6	STD8260 240-232366/2	UXJ4939.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	23438 969646	42058	107457	209756	461100	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	29346 1482852	55193	163736	326020	697263	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	33272 1384307	63543	174517	340550	712641	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	36282 1360774	56652	153087	294290	661868	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	13133 737973	27304	80655	154065	354503	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	15535 741914	27565	80324	160210	355335	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	33161 1672330	58518	170748	351106	792812	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	19826 1220713	44203	117652	250400	568474	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	34902 1371794	54893	146699	319048	674181	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	19345 1011188	42139	110232	230248	504916	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	23639 1159454	43795	120990	250490	572421	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	14742 714053	26719	73100	148245	337417	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	28981 671519	36559	84334	159576	346148	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	33915 1575329	58473	172386	342536	800688	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	62901 2916487	109512	324706	627823	1499243	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	18473 1159970	37846	110804	243798	558156	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	93308 4164389	164975	472016	961335	2171435	5.00 200	10.0	25.0	50.0	100
Methylene Chloride	FB	Lin1	54952 1360621	76625	166894	319614	706494	1.00 40.0	2.00	5.00	10.0	20.0
2-Methyl-2-propanol	FB	Ave	19046 +++++	29614	93221	179576	396690	10.0 +++++	20.0	50.0	100	200
Acrylonitrile	FB	Ave	92538 4456158	166619	493445	1026114	2310723	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	87130 4325311	154869	454764	984808	2202465	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	36112 1743734	61202	177398	377290	858573	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	8411 393099	12458	35278	77440	186021	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	58482 3074215	104382	300963	648277	1515866	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	52287 2798107	101120	284897	611598	1423228	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	35026 1955375	64376	187256	402405	938653	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	24577 1047570	36632	111907	235494	541494	2.00 80.0	4.00	10.0	20.0	40.0
2,2-Dichloropropane	FB	Ave	26011 1323995	43737	135347	287783	682298	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobromomethane	FB	Ave	15903 906929	28396	86218	189361	448591	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	15041 655509	25966	70954	152241	343109	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	53127 2812352	91075	266160	579380	1401934	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	35830 1865466	61062	182420	391457	949514	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	42471 2072077	70906	201144	421868	1023155	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	46682 2385800	76372	227255	493069	1175854	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	31877 1810111	51928	165573	371005	877932	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	CBZ	Ave	13422 573415	23137	71716	165409	346408	25.0 1000	50.0	125	250	500
1,2-Dichloroethane	FB	Ave	37279 1937374	63100	189233	406414	977633	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	136474 7535140	239491	696193	1525909	3676999	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	9589 399180	14850	34326	73669	184802	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	36312 1994931	61235	179338	389926	980416	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	48752 2244745	80144	208709	435279	1105669	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	32959 1805020	57733	165544	355570	900391	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	15759 893810	29538	84084	176155	446516	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	2389 +++++	5839	19728	45884	116617	20.0 +++++	40.0	100	200	400
Dichlorobromomethane	FB	Ave	36730 2143575	67774	186411	408988	1066920	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	34608 2053796	69187	193865	414102	1052330	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	47210 2978040	88305	258474	571517	1476878	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	44864 2244086	77867	223750	467130	1185315	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	144044 8029244	249812	709069	1541950	3940121	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Ave	37924 2518763	72411	212400	477555	1264252	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	36871 2054489	65159	185916	410793	1051538	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	24123 1380154	45708	132150	275721	715429	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	28299 1523102	45686	134856	291169	754731	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	44953 2531875	83331	233859	507728	1292001	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	32027 1612159	59501	157567	341374	862024	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBZ	Ave	23554 1593454	44552	127325	290309	783600	1.00 40.0	2.00	5.00	10.0	20.0
Ethylene Dibromide	CBZ	Ave	23865 1351721	42860	119418	264149	687637	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	86992 4996437	152088	430677	920095	2455209	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBZ	Ave	27119 1658297	46691	139687	312343	833066	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	45982 2633678	81638	235106	494680	1322420	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	56654 3239332	99428	276253	598757	1618844	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBZ	Ave	54405 3101509	91472	270825	583693	1569355	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	92131 5402427	161748	466131	1007809	2707000	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBZ	Ave	11231 883629	22107	69468	154911	437289	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	125166 7039981	214561	630849	1320617	3567815	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	25606 1320740	45008	128137	267022	717067	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	34487 1831098	58469	163415	358578	943899	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	8232 412165	14764	40339	83319	229215	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Ave	4152 375383	9104	30230	71192	188602	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCB	Ave	32036 1846340	53527	161966	347958	943616	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	28701 1600970	49842	141521	308991	819834	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	90482 4867513	159861	451652	958776	2560992	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	30490 1676282	50970	154006	328673	852917	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	76263 4123008	130358	375851	800843	2146865	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	92596 4831967	154586	451431	946085	2547486	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	99545 5351016	163359	493405	1032207	2761616	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	51991 2746303	92159	257669	536230	1439504	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCB	Ave	86204 4488515	138667	410400	883378	2368635	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	54824 2745946	93985	258634	552092	1435662	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-66155-1 Analy Batch No.: 232366

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/28/2016 09:12 Calibration End Date: 05/28/2016 11:03 Calibration ID: 34632

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCB	Ave	59368 3365724	99096	303086	636551	1716834	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	48489 2427432	81874	228991	477902	1309473	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	3871 199818	7078	18285	38988	103876	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	22303 1285197	38811	108453	227330	601708	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCB	Ave	9723 535504	14906	44887	94559	240736	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	55824 2999354	101211	267349	563612	1454401	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	21973 1180872	36416	100312	208665	546761	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	26480 1622950	54331	147009	317401	779417	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	30496 1744610	59649	169978	358027	873328	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	118314 7117198	233918	628430	1337711	3513064	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	37600 2105890	71175	186973	390173	1080418	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4939.D
Lims ID: STD8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-May-2016 09:12:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-002
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:20 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 15:46:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	100	1776497	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	83	1277453	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	91	493981	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	1622950	40.0	40.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	1744610	40.0	39.3	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	7117198	40.0	39.2	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	94	2105890	40.0	38.3	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	969646	40.0	34.7	
10 Chloromethane	50	1.636	1.636	0.000	99	1482852	40.0	37.0	
12 Vinyl chloride	62	1.731	1.731	0.000	98	1384307	40.0	32.6	
13 Butadiene	54	1.766	1.766	0.000	97	1360774	40.0	34.1	
15 Bromomethane	94	2.015	2.015	0.000	89	737973	40.0	38.0	
16 Chloroethane	64	2.098	2.109	-0.011	99	741914	40.0	36.8	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	96	1672330	40.0	38.2	
18 Trichlorofluoromethane	101	2.299	2.311	-0.012	97	1220713	40.0	39.9	
19 Ethyl ether	59	2.524	2.524	0.000	89	1371794	40.0	34.5	
20 Acrolein	56	2.630	2.642	-0.012	99	1011188	200.0	180.1	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	1159454	40.0	36.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.748	-0.011	88	714053	40.0	37.5	
23 Acetone	43	2.760	2.760	0.000	100	671519	80.0	78.4	
25 Iodomethane	142	2.879	2.879	0.000	96	1575329	40.0	36.2	
26 Carbon disulfide	76	2.926	2.926	0.000	98	2916487	40.0	36.0	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	1159970	40.0	40.4	
29 Methyl acetate	43	3.021	3.032	-0.011	97	4164389	200.0	174.1	
30 Methylene Chloride	84	3.115	3.115	0.000	90	1360621	40.0	39.1	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	664323	400.0	284.3	
32 Acrylonitrile	53	3.305	3.316	-0.011	99	4456158	400.0	358.4	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	4325311	40.0	36.8	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	1743734	40.0	37.5	
35 Hexane	86	3.565	3.565	0.000	90	393099	40.0	39.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	3074215	40.0	38.7	
37 Vinyl acetate	43	3.707	3.719	-0.012	97	2798107	40.0	37.7	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	73	1047570	80.0	71.6	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	79	1955375	40.0	39.7	
43 2,2-Dichloropropane	77	4.157	4.168	-0.011	86	1323995	40.0	37.9	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	906929	40.0	39.9	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	655509	80.0	69.7	
49 Chloroform	83	4.417	4.417	0.000	92	2812352	40.0	39.3	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	1865466	40.0	38.7	
51 Cyclohexane	56	4.630	4.642	-0.012	87	2072077	40.0	38.4	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	2385800	40.0	39.1	
53 Carbon tetrachloride	117	4.725	4.725	0.000	96	1810111	40.0	41.0	
54 Isobutyl alcohol	41	4.772	4.772	0.000	96	573415	1000.0	753.3	
55 Benzene	78	4.890	4.890	0.000	94	7535140	40.0	40.1	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	1937374	40.0	38.7	
58 n-Heptane	100	5.091	5.091	0.000	90	399180	40.0	38.2	
60 Trichloroethene	130	5.423	5.423	0.000	95	1994931	40.0	40.7	
62 Methylcyclohexane	83	5.600	5.600	0.000	90	2244745	40.0	38.2	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	98	1805020	40.0	40.1	
65 Dibromomethane	93	5.707	5.707	0.000	91	893810	40.0	40.0	
66 1,4-Dioxane	88	5.719	5.719	0.000	89	167169	800.0	558.6	
67 Dichlorobromomethane	83	5.837	5.837	0.000	100	2143575	40.0	41.2	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	2053796	80.0	79.5	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	2978040	40.0	42.2	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	2244086	80.0	75.4	
72 Toluene	91	6.535	6.523	0.012	99	8029244	40.0	39.0	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	90	2518763	40.0	40.8	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	2054489	40.0	38.1	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	1380154	40.0	37.6	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	1523102	40.0	38.9	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	2531875	40.0	37.8	
78 2-Hexanone	43	7.091	7.091	0.000	94	1612159	80.0	70.9	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	1593454	40.0	41.9	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	1351721	40.0	38.6	
84 Chlorobenzene	112	7.813	7.801	0.012	97	4996437	40.0	39.7	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	1658297	40.0	40.5	
86 Ethylbenzene	106	7.908	7.908	0.000	97	2633678	40.0	39.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	3239332	40.0	39.6	
88 o-Xylene	106	8.393	8.393	0.000	96	3101509	40.0	39.4	
89 Styrene	104	8.405	8.405	0.000	94	5402427	40.0	39.7	
90 Bromoform	173	8.582	8.582	0.000	99	883629	40.0	43.9	
91 Isopropylbenzene	105	8.748	8.736	0.012	94	7039981	40.0	39.0	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	1320740	40.0	38.5	
95 Bromobenzene	156	9.044	9.044	0.000	91	1831098	40.0	40.2	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	412165	40.0	37.8	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.067	0.012	81	375383	40.0	46.5	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	1846340	40.0	41.8	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	1600970	40.0	40.9	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	96	4867513	40.0	39.7	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	1676282	40.0	40.6	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	4123008	40.0	40.2	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	4831967	40.0	39.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	5351016	40.0	40.5	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	2746303	40.0	39.4	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	4488515	40.0	39.9	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	2745946	40.0	38.7	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	3365724	40.0	41.4	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	2427432	40.0	38.7	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	91	199818	40.0	39.1	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	1285197	40.0	42.9	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	94	535504	40.0	43.5	
118 Naphthalene	128	12.262	12.262	0.000	97	2999354	40.0	40.6	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	1180872	40.0	42.3	
S 130 1,2-Dichloroethene, Total	96				0			77.2	
S 131 1,3-Dichloropropene, Total	75				0			83.0	
S 132 Xylenes, Total	106				0		80.0	79.0	
S 133 Trihalomethanes, Total	1				0		160.0	166.3	

Reagents:

VMAROLISTDW_00150	Amount Added:	32.00	Units: uL
VMRGAS_00154	Amount Added:	32.00	Units: uL
vm50ss_stk_00068	Amount Added:	32.00	Units: uL
VMRPRIMW_00186	Amount Added:	32.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

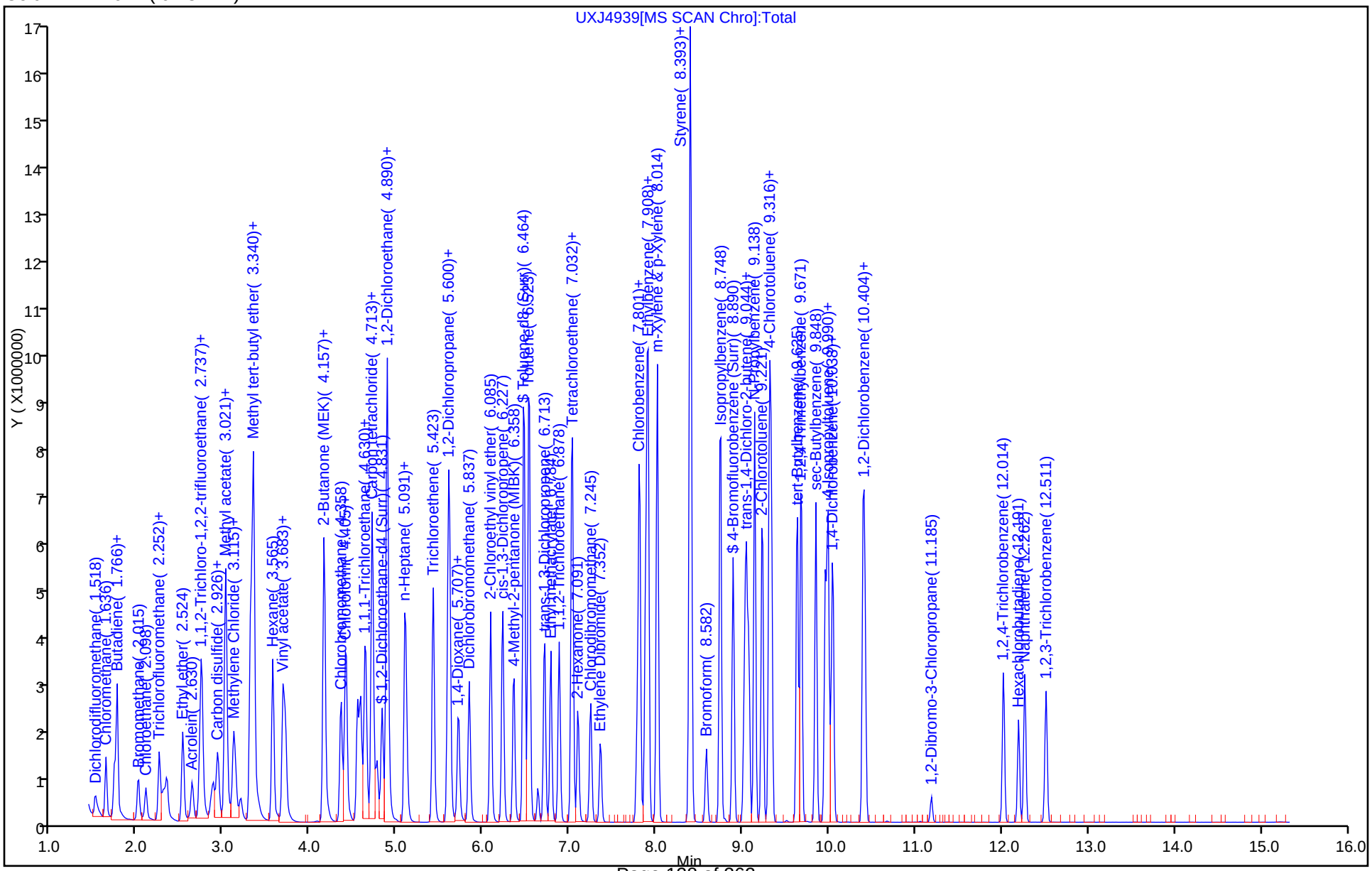
Report Date: 31-May-2016 12:57:21 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4939.D

Injection Date:	28-May-2016 09:12:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L6			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4940.D
Lims ID: STD8260 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-May-2016 09:34:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-003
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:22 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:30:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1714054	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	83	1187398	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	92	500105	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	779417	20.0	20.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	873328	20.0	20.4	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	91	3513064	20.0	20.8	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	94	1080418	20.0	21.2	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	461100	20.0	17.1	
10 Chloromethane	50	1.636	1.636	0.000	99	697263	20.0	18.0	
12 Vinyl chloride	62	1.731	1.731	0.000	98	712641	20.0	17.4	
13 Butadiene	54	1.766	1.766	0.000	98	661868	20.0	17.2	
15 Bromomethane	94	2.015	2.015	0.000	90	354503	20.0	18.9	
16 Chloroethane	64	2.098	2.109	-0.011	99	355335	20.0	18.3	
17 Dichlorofluoromethane	67	2.251	2.263	-0.012	97	792812	20.0	18.8	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	97	568474	20.0	19.2	
19 Ethyl ether	59	2.524	2.524	0.000	89	674181	20.0	17.6	
20 Acrolein	56	2.630	2.642	-0.012	99	504916	100.0	93.2	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	572421	20.0	18.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.748	2.748	0.000	87	337417	20.0	18.4	
23 Acetone	43	2.760	2.760	0.000	99	346148	40.0	40.5	
25 Iodomethane	142	2.879	2.879	0.000	96	800688	20.0	19.1	
26 Carbon disulfide	76	2.926	2.926	0.000	98	1499243	20.0	19.2	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	558156	20.0	20.1	
29 Methyl acetate	43	3.032	3.032	0.000	97	2171435	100.0	94.1	
30 Methylene Chloride	84	3.115	3.115	0.000	89	706494	20.0	20.4	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	396690	200.0	175.9	
32 Acrylonitrile	53	3.305	3.316	-0.011	99	2310723	200.0	192.6	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	2202465	20.0	19.4	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	67	858573	20.0	19.1	
35 Hexane	86	3.565	3.565	0.000	89	186021	20.0	19.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	1515866	20.0	19.8	
37 Vinyl acetate	43	3.719	3.719	0.000	97	1423228	20.0	19.9	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	70	541494	40.0	38.4	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	938653	20.0	19.8	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	682298	20.0	20.2	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	448591	20.0	20.5	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	343109	40.0	37.8	
49 Chloroform	83	4.417	4.417	0.000	92	1401934	20.0	20.3	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	949514	20.0	20.4	
51 Cyclohexane	56	4.630	4.642	-0.012	87	1023155	20.0	19.6	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	1175854	20.0	20.0	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	877932	20.0	20.6	
54 Isobutyl alcohol	41	4.772	4.772	0.000	95	346408	500.0	489.6	
55 Benzene	78	4.890	4.890	0.000	95	3676999	20.0	20.3	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	97	977633	20.0	20.3	
58 n-Heptane	100	5.091	5.091	0.000	89	184802	20.0	18.4	
60 Trichloroethene	130	5.423	5.423	0.000	95	980416	20.0	20.7	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	1105669	20.0	19.5	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	98	900391	20.0	20.7	
65 Dibromomethane	93	5.707	5.707	0.000	94	446516	20.0	20.7	
66 1,4-Dioxane	88	5.718	5.719	-0.001	93	116617	400.0	406.7	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	1066920	20.0	21.2	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	1052330	40.0	42.2	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	1476878	20.0	21.7	
71 4-Methyl-2-pentanone (MIBK	43	6.357	6.358	-0.001	94	1185315	40.0	41.3	
72 Toluene	91	6.535	6.523	0.012	99	3940121	20.0	20.6	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	91	1264252	20.0	22.0	
74 Ethyl methacrylate	69	6.783	6.783	0.000	89	1051538	20.0	21.0	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	715429	20.0	21.0	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	754731	20.0	20.7	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	1292001	20.0	20.8	
78 2-Hexanone	43	7.091	7.091	0.000	94	862024	40.0	40.8	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	783600	20.0	22.2	
82 Ethylene Dibromide	107	7.351	7.351	0.000	99	687637	20.0	21.1	
84 Chlorobenzene	112	7.813	7.801	0.012	96	2455209	20.0	21.0	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	833066	20.0	21.9	
86 Ethylbenzene	106	7.908	7.908	0.000	97	1322420	20.0	21.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	1618844	20.0	21.3	
88 o-Xylene	106	8.393	8.393	0.000	96	1569355	20.0	21.5	
89 Styrene	104	8.405	8.405	0.000	94	2707000	20.0	21.4	
90 Bromoform	173	8.582	8.582	0.000	99	437289	20.0	23.4	
91 Isopropylbenzene	105	8.748	8.736	0.012	94	3567815	20.0	21.3	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	717067	20.0	20.6	
95 Bromobenzene	156	9.044	9.044	0.000	92	943899	20.0	20.5	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	229215	20.0	20.7	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.067	0.012	80	188602	20.0	23.1	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	943616	20.0	21.1	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	819834	20.0	20.7	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	2560992	20.0	20.6	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	852917	20.0	20.4	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	2146865	20.0	20.7	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	2547486	20.0	20.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	2761616	20.0	20.6	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	1439504	20.0	20.4	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	2368635	20.0	20.8	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	1435662	20.0	20.0	
111 n-Butylbenzene	91	10.392	10.393	-0.001	97	1716834	20.0	20.9	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	1309473	20.0	20.6	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	92	103876	20.0	20.1	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	601708	20.0	19.8	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	94	240736	20.0	19.3	
118 Naphthalene	128	12.262	12.262	0.000	96	1454401	20.0	19.4	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	546761	20.0	19.3	
S 130 1,2-Dichloroethene, Total	96				0			38.9	
S 131 1,3-Dichloropropene, Total	75				0			43.7	
S 132 Xylenes, Total	106				0		40.0	42.7	
S 133 Trihalomethanes, Total	1				0		80.0	87.1	

Reagents:

VMAROLISTDW_00150	Amount Added:	16.00	Units: uL
VMRGAS_00154	Amount Added:	16.00	Units: uL
vm50ss_stk_00068	Amount Added:	16.00	Units: uL
VMRPRIMW_00186	Amount Added:	16.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

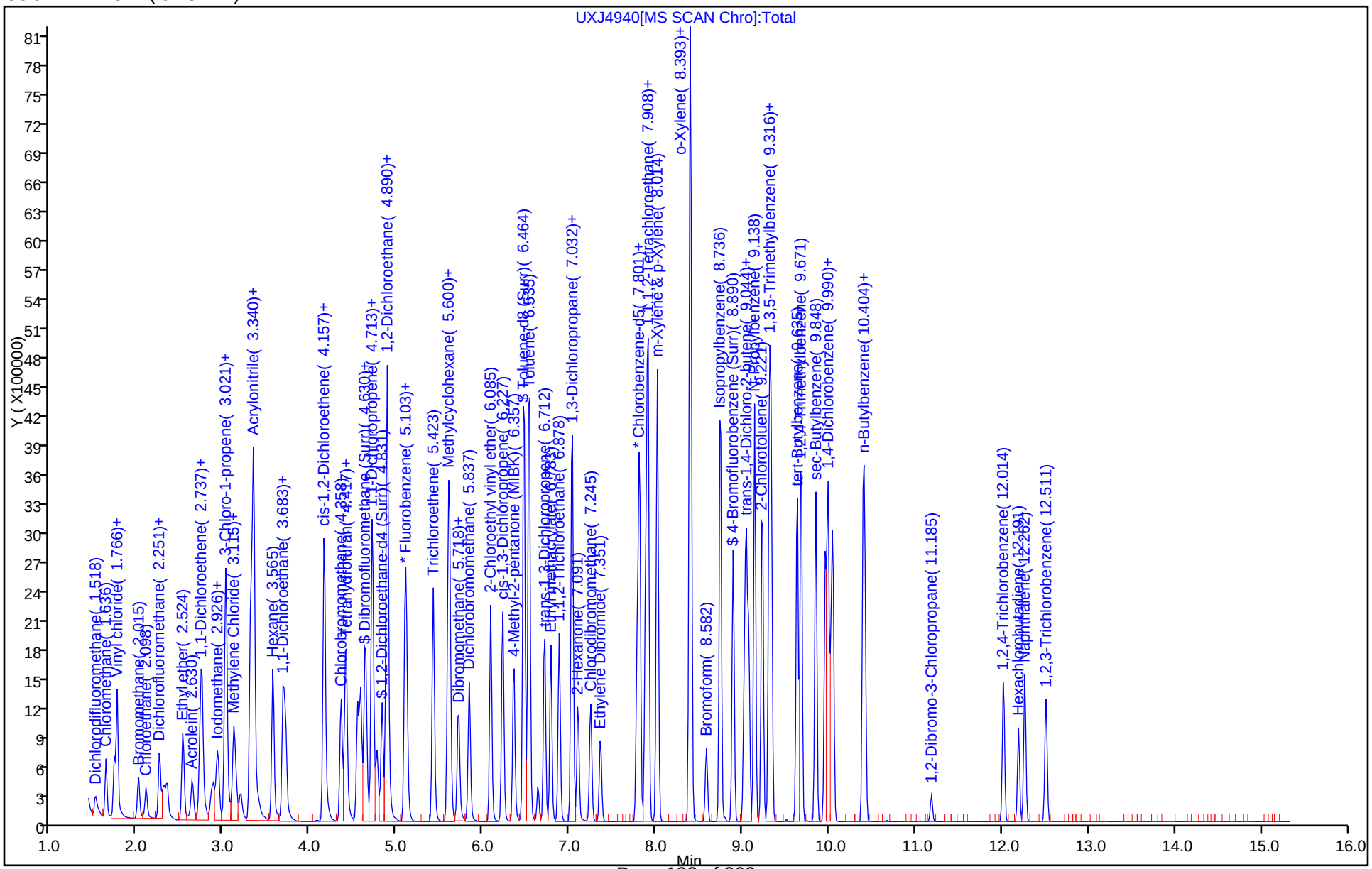
Report Date: 31-May-2016 12:57:23 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4940.D

Injection Date:	28-May-2016 09:34:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L5			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4941.D
Lims ID: STD8260 L4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 28-May-2016 09:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-004
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:25 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 16:23:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1420065	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	83	934240	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.014	10.014	0.000	92	380946	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	317401	10.0	10.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	358027	10.0	10.1	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1337711	10.0	10.1	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	390173	10.0	9.72	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	99	209756	10.0	9.39	
10 Chloromethane	50	1.636	1.636	0.000	99	326020	10.0	10.2	
12 Vinyl chloride	62	1.731	1.731	0.000	98	340550	10.0	10.0	
13 Butadiene	54	1.766	1.766	0.000	99	294290	10.0	9.22	
15 Bromomethane	94	2.015	2.015	0.000	90	154065	10.0	9.93	
16 Chloroethane	64	2.109	2.109	0.000	99	160210	10.0	9.94	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	351106	10.0	10.0	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	98	250400	10.0	10.2	
19 Ethyl ether	59	2.524	2.524	0.000	89	319048	10.0	10.0	
20 Acrolein	56	2.642	2.642	0.000	98	230248	50.0	51.3	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	97	250490	10.0	9.98	
22 1,1,2-Trichloro-1,2,2-trif	151	2.748	2.748	0.000	84	148245	10.0	9.75	
23 Acetone	43	2.760	2.760	0.000	98	159576	20.0	21.2	
25 Iodomethane	142	2.879	2.879	0.000	96	342536	10.0	9.84	
26 Carbon disulfide	76	2.926	2.926	0.000	98	627823	10.0	9.69	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	95	243798	10.0	10.6	
29 Methyl acetate	43	3.032	3.032	0.000	97	961335	50.0	50.3	
30 Methylene Chloride	84	3.115	3.115	0.000	91	319614	10.0	10.5	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	100	179576	100.0	96.1	
32 Acrylonitrile	53	3.316	3.316	0.000	99	1026114	100.0	103.2	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	984808	10.0	10.5	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	67	377290	10.0	10.1	
35 Hexane	86	3.565	3.565	0.000	89	77440	10.0	9.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	648277	10.0	10.2	
37 Vinyl acetate	43	3.719	3.719	0.000	97	611598	10.0	10.3	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	77	235494	20.0	20.1	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	402405	10.0	10.2	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	287783	10.0	10.3	
47 Chlorobromomethane	128	4.358	4.358	0.000	90	189361	10.0	10.4	
48 Tetrahydrofuran	42	4.393	4.393	0.000	90	152241	20.0	20.3	
49 Chloroform	83	4.417	4.417	0.000	92	579380	10.0	10.1	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	391457	10.0	10.1	
51 Cyclohexane	56	4.642	4.642	0.000	87	421868	10.0	9.77	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	493069	10.0	10.1	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	371005	10.0	10.5	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	165409	250.0	297.1	
55 Benzene	78	4.890	4.890	0.000	95	1525909	10.0	10.2	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	406414	10.0	10.2	
58 n-Heptane	100	5.091	5.091	0.000	89	73669	10.0	8.83	
60 Trichloroethene	130	5.423	5.423	0.000	95	389926	10.0	9.95	
62 Methylcyclohexane	83	5.600	5.600	0.000	90	435279	10.0	9.27	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	355570	10.0	9.88	
65 Dibromomethane	93	5.707	5.707	0.000	90	176155	10.0	9.85	
66 1,4-Dioxane	88	5.719	5.719	0.000	31	45884	200.0	198.5	
67 Dichlorobromomethane	83	5.837	5.837	0.000	100	408988	10.0	9.83	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	414102	20.0	20.1	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	571517	10.0	10.1	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	467130	20.0	19.6	
72 Toluene	91	6.523	6.523	0.000	99	1541950	10.0	10.2	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	91	477555	10.0	10.6	
74 Ethyl methacrylate	69	6.783	6.783	0.000	88	410793	10.0	10.4	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	275721	10.0	10.3	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	291169	10.0	10.2	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	507728	10.0	10.4	
78 2-Hexanone	43	7.091	7.091	0.000	93	341374	20.0	20.5	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	290309	10.0	10.4	
82 Ethylene Dibromide	107	7.351	7.351	0.000	99	264149	10.0	10.3	
84 Chlorobenzene	112	7.801	7.801	0.000	96	920095	10.0	10.0	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	312343	10.0	10.4	
86 Ethylbenzene	106	7.908	7.908	0.000	98	494680	10.0	10.0	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	598757	10.0	10.0	
88 o-Xylene	106	8.393	8.393	0.000	95	583693	10.0	10.1	
89 Styrene	104	8.405	8.405	0.000	94	1007809	10.0	10.1	
90 Bromoform	173	8.582	8.582	0.000	99	154911	10.0	10.5	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	1320617	10.0	10.0	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	267022	10.0	10.1	
95 Bromobenzene	156	9.044	9.044	0.000	91	358578	10.0	10.2	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	83319	10.0	9.90	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	77	71192	10.0	11.4	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	347958	10.0	10.2	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	308991	10.0	10.2	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	958776	10.0	10.1	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	328673	10.0	10.3	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	800843	10.0	10.1	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	946085	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	1032207	10.0	10.1	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	536230	10.0	9.98	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	883378	10.0	10.2	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	552092	10.0	10.1	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	636551	10.0	10.2	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	477902	10.0	9.89	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	92	38988	10.0	9.90	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	227330	10.0	9.84	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	94559	10.0	9.95	
118 Naphthalene	128	12.262	12.262	0.000	97	563612	10.0	9.89	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	208665	10.0	9.69	
S 132 Xylenes, Total	106				0		20.0	20.1	
S 133 Trihalomethanes, Total	1				0		40.0	40.9	

Reagents:

VMAROLISTDW_00150	Amount Added:	8.00	Units: uL
VMRGAS_00154	Amount Added:	8.00	Units: uL
vm50ss_stk_00068	Amount Added:	8.00	Units: uL
VMRPRIMW_00186	Amount Added:	8.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

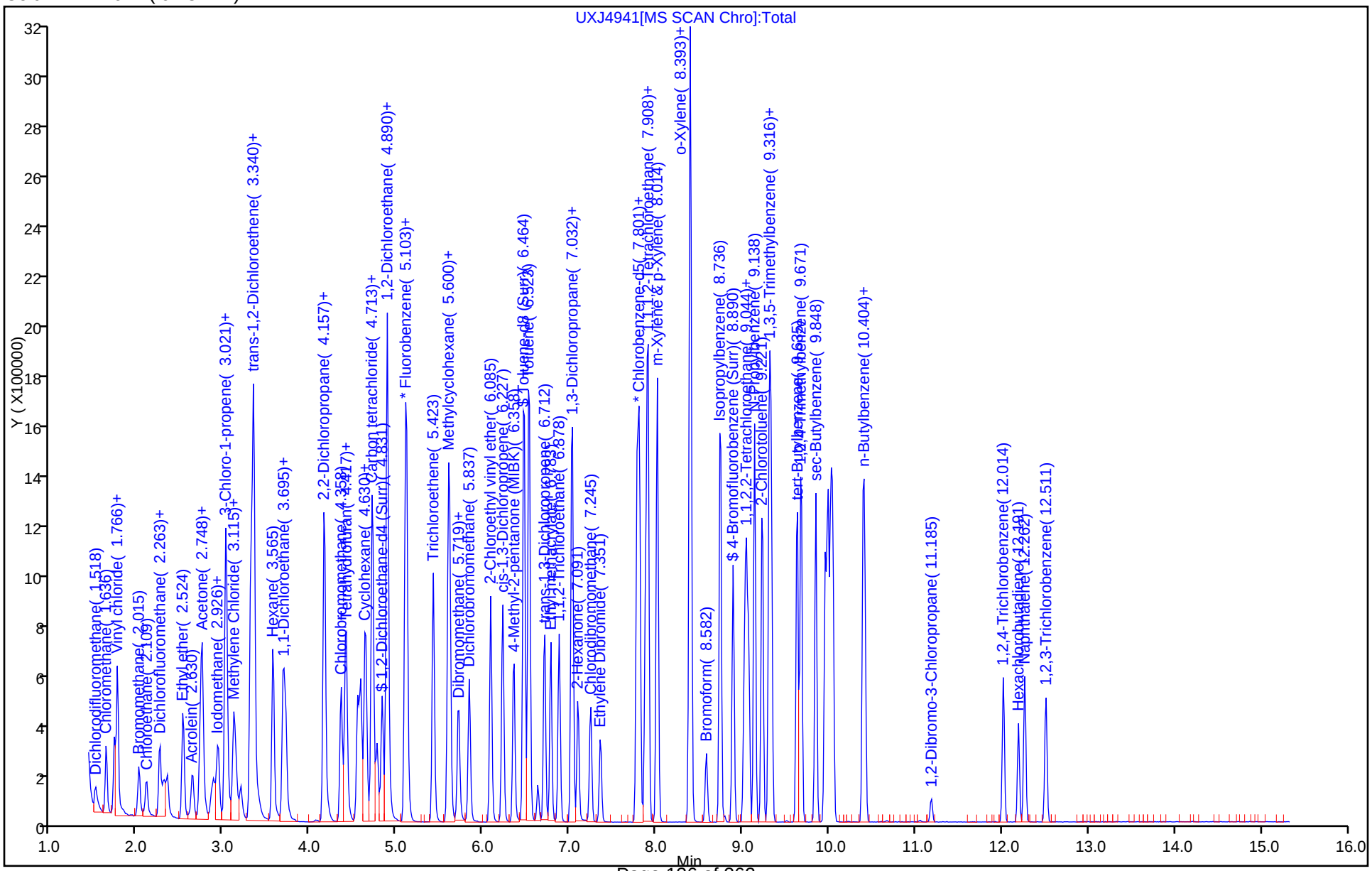
Report Date: 31-May-2016 12:57:26 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4941.D

Injection Date:	28-May-2016 09:56:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4942.D
Lims ID: STD8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-May-2016 10:19:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-005
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:27 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 28-May-2016 16:48:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1369393	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	909861	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	94	375729	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	94	147009	5.00	4.81	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	169978	5.00	4.96	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	628430	5.00	4.86	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	186973	5.00	4.78	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	107457	5.00	4.99	
10 Chloromethane	50	1.636	1.636	0.000	99	163736	5.00	5.31	
12 Vinyl chloride	62	1.731	1.731	0.000	97	174517	5.00	5.32	
13 Butadiene	54	1.766	1.766	0.000	97	153087	5.00	4.97	
15 Bromomethane	94	2.015	2.015	0.000	88	80655	5.00	5.39	
16 Chloroethane	64	2.098	2.109	-0.011	98	80324	5.00	5.17	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	95	170748	5.00	5.06	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	98	117652	5.00	4.99	
19 Ethyl ether	59	2.524	2.524	0.000	88	146699	5.00	4.79	
20 Acrolein	56	2.630	2.642	-0.012	99	110232	25.0	25.5	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	120990	5.00	5.00	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	91	73100	5.00	4.98	
23 Acetone	43	2.760	2.760	0.000	100	84334	10.0	10.2	
25 Iodomethane	142	2.867	2.879	-0.012	96	172386	5.00	5.14	
26 Carbon disulfide	76	2.926	2.926	0.000	99	324706	5.00	5.20	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	110804	5.00	5.01	
29 Methyl acetate	43	3.033	3.032	0.001	97	472016	25.0	25.6	
30 Methylene Chloride	84	3.115	3.115	0.000	91	166894	5.00	5.04	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	93221	50.0	51.8	
32 Acrylonitrile	53	3.317	3.316	0.000	99	493445	50.0	51.5	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	454764	5.00	5.02	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	177398	5.00	4.94	
35 Hexane	86	3.565	3.565	0.000	89	35278	5.00	4.60	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	300963	5.00	4.91	
37 Vinyl acetate	43	3.719	3.719	0.000	97	284897	5.00	4.98	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	70	111907	10.0	9.92	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	79	187256	5.00	4.94	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	135347	5.00	5.02	
47 Chlorobromomethane	128	4.358	4.358	0.000	92	86218	5.00	4.93	
48 Tetrahydrofuran	42	4.405	4.393	0.012	89	70954	10.0	9.79	
49 Chloroform	83	4.417	4.417	0.000	92	266160	5.00	4.82	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	97	182420	5.00	4.90	
51 Cyclohexane	56	4.630	4.642	-0.012	87	201144	5.00	4.83	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	227255	5.00	4.84	
53 Carbon tetrachloride	117	4.725	4.725	0.000	94	165573	5.00	4.86	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	71716	125.0	132.3	
55 Benzene	78	4.890	4.890	0.000	95	696193	5.00	4.81	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	189233	5.00	4.91	
58 n-Heptane	100	5.091	5.091	0.000	90	34326	5.00	4.27	
60 Trichloroethene	130	5.423	5.423	0.000	95	179338	5.00	4.74	
62 Methylcyclohexane	83	5.600	5.600	0.000	88	208709	5.00	4.61	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	165544	5.00	4.77	
65 Dibromomethane	93	5.707	5.707	0.000	91	84084	5.00	4.88	
66 1,4-Dioxane	88	5.719	5.719	0.000	29	19728	100.0	94.1	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	186411	5.00	4.65	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	91	193865	10.0	9.74	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	98	258474	5.00	4.75	
71 4-Methyl-2-pentanone (MIBK	43	6.346	6.358	-0.012	95	223750	10.0	9.75	
72 Toluene	91	6.523	6.523	0.000	98	709069	5.00	4.83	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	90	212400	5.00	4.83	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	185916	5.00	4.85	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	132150	5.00	5.05	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	134856	5.00	4.84	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	233859	5.00	4.91	
78 2-Hexanone	43	7.091	7.091	0.000	95	157567	10.0	9.73	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	127325	5.00	4.70	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	119418	5.00	4.79	
84 Chlorobenzene	112	7.801	7.801	0.000	97	430677	5.00	4.81	
85 1,1,1,2-Tetrachloroethane	131	7.872	7.884	-0.012	95	139687	5.00	4.79	
86 Ethylbenzene	106	7.908	7.908	0.000	97	235106	5.00	4.90	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	276253	5.00	4.74	
88 o-Xylene	106	8.393	8.393	0.000	95	270825	5.00	4.84	
89 Styrene	104	8.405	8.405	0.000	94	466131	5.00	4.81	
90 Bromoform	173	8.582	8.582	0.000	97	69468	5.00	4.85	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	630849	5.00	4.91	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	128137	5.00	4.91	
95 Bromobenzene	156	9.044	9.044	0.000	91	163415	5.00	4.72	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	40339	5.00	4.86	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	74	30230	5.00	4.92	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	161966	5.00	4.82	
99 2-Chlorotoluene	126	9.233	9.233	0.000	98	141521	5.00	4.75	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	96	451652	5.00	4.84	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	154006	5.00	4.91	
102 tert-Butylbenzene	119	9.635	9.635	0.000	90	375851	5.00	4.82	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	451431	5.00	4.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	493405	5.00	4.90	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	257669	5.00	4.86	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	410400	5.00	4.80	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	258634	5.00	4.80	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	303086	5.00	4.90	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	228991	5.00	4.81	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	90	18285	5.00	4.71	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	108453	5.00	4.76	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	92	44887	5.00	4.79	
118 Naphthalene	128	12.262	12.262	0.000	97	267349	5.00	4.76	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	100312	5.00	4.72	
S 130 1,2-Dichloroethene, Total	96				0			9.88	
S 131 1,3-Dichloropropene, Total	75				0			9.58	
S 132 Xylenes, Total	106				0		10.0	9.57	
S 133 Trihalomethanes, Total	1				0		20.0	19.0	

Reagents:

VMAROLISTDW_00150	Amount Added:	4.00	Units: uL
VMRGAS_00154	Amount Added:	4.00	Units: uL
vm50ss_stk_00068	Amount Added:	4.00	Units: uL
VMRPRIMW_00186	Amount Added:	4.00	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

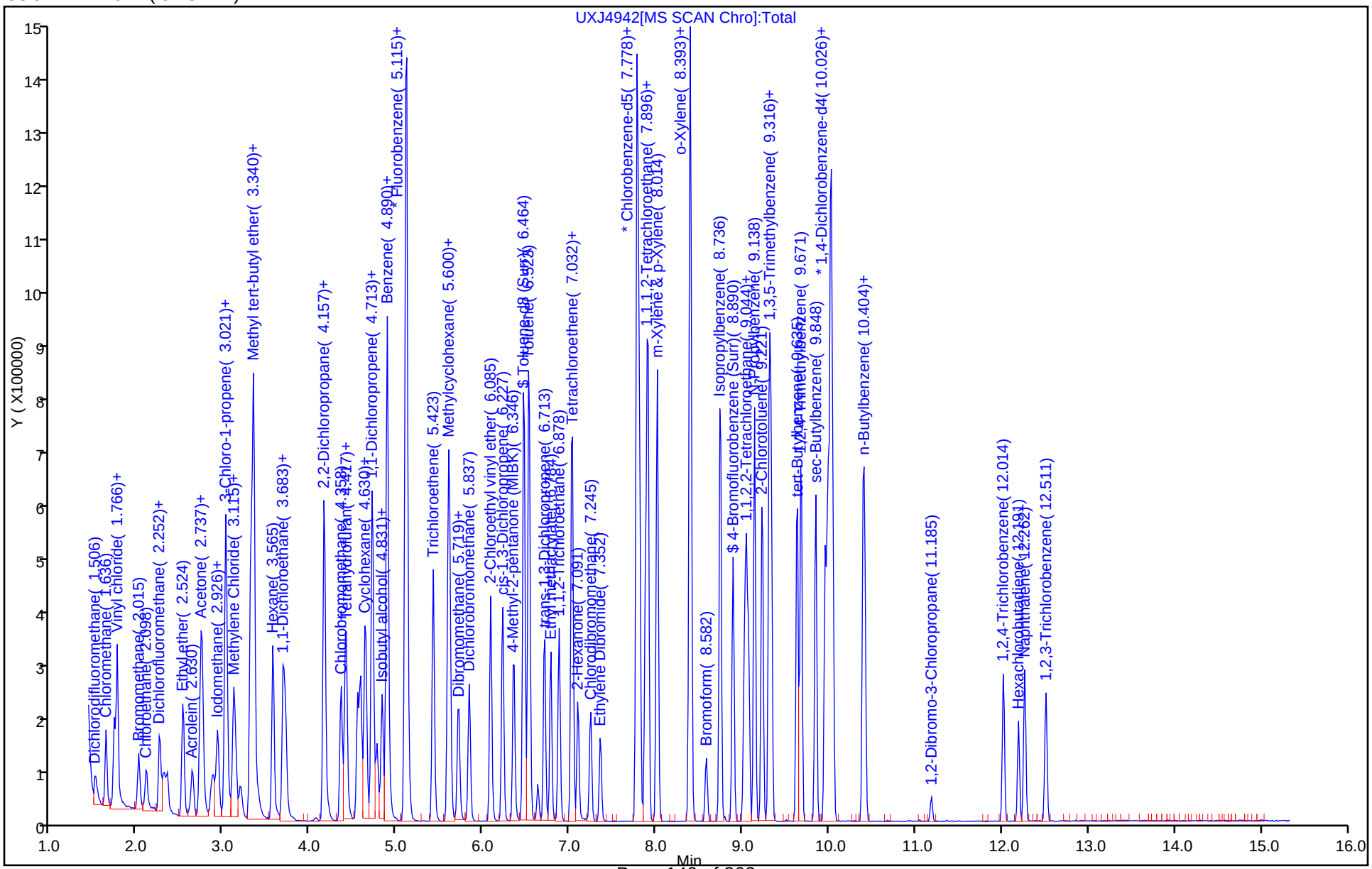
Report Date: 31-May-2016 12:57:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4942.D

Injection Date:	28-May-2016 10:19:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4943.D
Lims ID: STD8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-May-2016 10:40:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-006
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:28 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:32:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1165536	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	790075	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.014	10.014	0.000	93	323920	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	54331	2.00	2.09	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	59649	2.00	2.05	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	91	233918	2.00	2.08	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	93	71175	2.00	2.10	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	42058	2.00	2.29	
10 Chloromethane	50	1.636	1.636	0.000	98	55193	2.00	2.10	
12 Vinyl chloride	62	1.731	1.731	0.000	98	63543	2.00	2.28	
13 Butadiene	54	1.767	1.766	0.001	98	56652	2.00	2.16	
15 Bromomethane	94	2.015	2.015	0.000	91	27304	2.00	2.14	
16 Chloroethane	64	2.110	2.109	0.001	98	27565	2.00	2.08	
17 Dichlorofluoromethane	67	2.252	2.263	-0.011	96	58518	2.00	2.04	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	95	44203	2.00	2.20	
19 Ethyl ether	59	2.524	2.524	0.000	88	54893	2.00	2.10	
20 Acrolein	56	2.642	2.642	0.000	99	42139	10.0	11.4	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	96	43795	2.00	2.13	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	84	26719	2.00	2.14	
23 Acetone	43	2.760	2.760	0.000	99	36559	4.00	3.74	
25 Iodomethane	142	2.867	2.879	-0.012	96	58473	2.00	2.05	
26 Carbon disulfide	76	2.926	2.926	0.000	99	109512	2.00	2.06	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	37846	2.00	2.01	
29 Methyl acetate	43	3.033	3.032	0.001	97	164975	10.0	10.5	
30 Methylene Chloride	84	3.115	3.115	0.000	86	76625	2.00	2.07	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	29614	20.0	19.3	
32 Acrylonitrile	53	3.317	3.316	0.001	98	166619	20.0	20.4	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	154869	2.00	2.01	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	69	61202	2.00	2.00	
35 Hexane	86	3.565	3.565	0.000	87	12458	2.00	1.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	95	104382	2.00	2.00	
37 Vinyl acetate	43	3.719	3.719	0.000	97	101120	2.00	2.08	
42 2-Butanone (MEK)	43	4.169	4.157	0.012	90	36632	4.00	3.82	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	64376	2.00	1.99	
43 2,2-Dichloropropane	77	4.157	4.168	-0.011	84	43737	2.00	1.91	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	28396	2.00	1.91	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	25966	4.00	4.21	
49 Chloroform	83	4.417	4.417	0.000	92	91075	2.00	1.94	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	97	61062	2.00	1.93	
51 Cyclohexane	56	4.642	4.642	0.000	88	70906	2.00	2.00	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	76372	2.00	1.91	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	51928	2.00	1.79	
54 Isobutyl alcohol	41	4.772	4.772	0.000	94	23137	50.0	49.1	
55 Benzene	78	4.890	4.890	0.000	95	239491	2.00	1.94	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	95	63100	2.00	1.92	
58 n-Heptane	100	5.103	5.091	0.012	90	14850	2.00	2.17	
60 Trichloroethene	130	5.423	5.423	0.000	95	61235	2.00	1.90	
62 Methylcyclohexane	83	5.600	5.600	0.000	88	80144	2.00	2.08	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	57733	2.00	1.96	
65 Dibromomethane	93	5.707	5.707	0.000	91	29538	2.00	2.01	
66 1,4-Dioxane	88	5.742	5.719	0.023	27	5839	40.0	39.4	
67 Dichlorobromomethane	83	5.837	5.837	0.000	97	67774	2.00	1.98	
69 2-Chloroethyl vinyl ether	63	6.086	6.085	0.001	91	69187	4.00	4.08	
70 cis-1,3-Dichloropropene	75	6.228	6.227	0.001	97	88305	2.00	1.91	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	77867	4.00	3.99	
72 Toluene	91	6.535	6.523	0.012	99	249812	2.00	1.96	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	72411	2.00	1.90	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	65159	2.00	1.96	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	87	45708	2.00	2.01	
76 Tetrachloroethene	164	7.020	7.020	0.000	94	45686	2.00	1.89	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	87	83331	2.00	2.01	
78 2-Hexanone	43	7.091	7.091	0.000	94	59501	4.00	4.23	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	44552	2.00	1.89	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	42860	2.00	1.98	
84 Chlorobenzene	112	7.801	7.801	0.000	96	152088	2.00	1.96	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	94	46691	2.00	1.84	
86 Ethylbenzene	106	7.908	7.908	0.000	97	81638	2.00	1.96	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	99428	2.00	1.96	
88 o-Xylene	106	8.393	8.393	0.000	95	91472	2.00	1.88	
89 Styrene	104	8.405	8.405	0.000	94	161748	2.00	1.92	
90 Bromoform	173	8.582	8.582	0.000	97	22107	2.00	1.78	
91 Isopropylbenzene	105	8.736	8.736	0.000	94	214561	2.00	1.92	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	93	45008	2.00	2.00	
95 Bromobenzene	156	9.044	9.044	0.000	91	58469	2.00	1.96	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	81	14764	2.00	2.06	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	67	9104	2.00	1.72	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	53527	2.00	1.85	
99 2-Chlorotoluene	126	9.221	9.233	-0.012	97	49842	2.00	1.94	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	159861	2.00	1.99	
101 4-Chlorotoluene	126	9.328	9.328	0.000	97	50970	2.00	1.88	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	130358	2.00	1.94	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	154586	2.00	1.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	163359	2.00	1.88	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	96	92159	2.00	2.02	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	138667	2.00	1.88	
108 1,4-Dichlorobenzene	146	10.038	10.049	-0.011	95	93985	2.00	2.02	
111 n-Butylbenzene	91	10.393	10.393	0.000	96	99096	2.00	1.86	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	81874	2.00	1.99	
114 1,2-Dibromo-3-Chloropropan	157	11.186	11.185	0.001	89	7078	2.00	2.11	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	92	38811	2.00	1.98	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	14906	2.00	1.84	
118 Naphthalene	128	12.262	12.262	0.000	97	101211	2.00	2.09	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	36416	2.00	1.99	
S 130 1,2-Dichloroethene, Total	96				0			4.00	
S 131 1,3-Dichloropropene, Total	75				0			3.80	
S 132 Xylenes, Total	106				0		4.00	3.84	
S 133 Trihalomethanes, Total	1				0		8.00	7.60	

Reagents:

VMAROLISTDW_00150	Amount Added:	1.60	Units: uL
VMRGAS_00154	Amount Added:	1.60	Units: uL
vm50ss_stk_00068	Amount Added:	1.60	Units: uL
VMRPRIMW_00186	Amount Added:	1.60	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

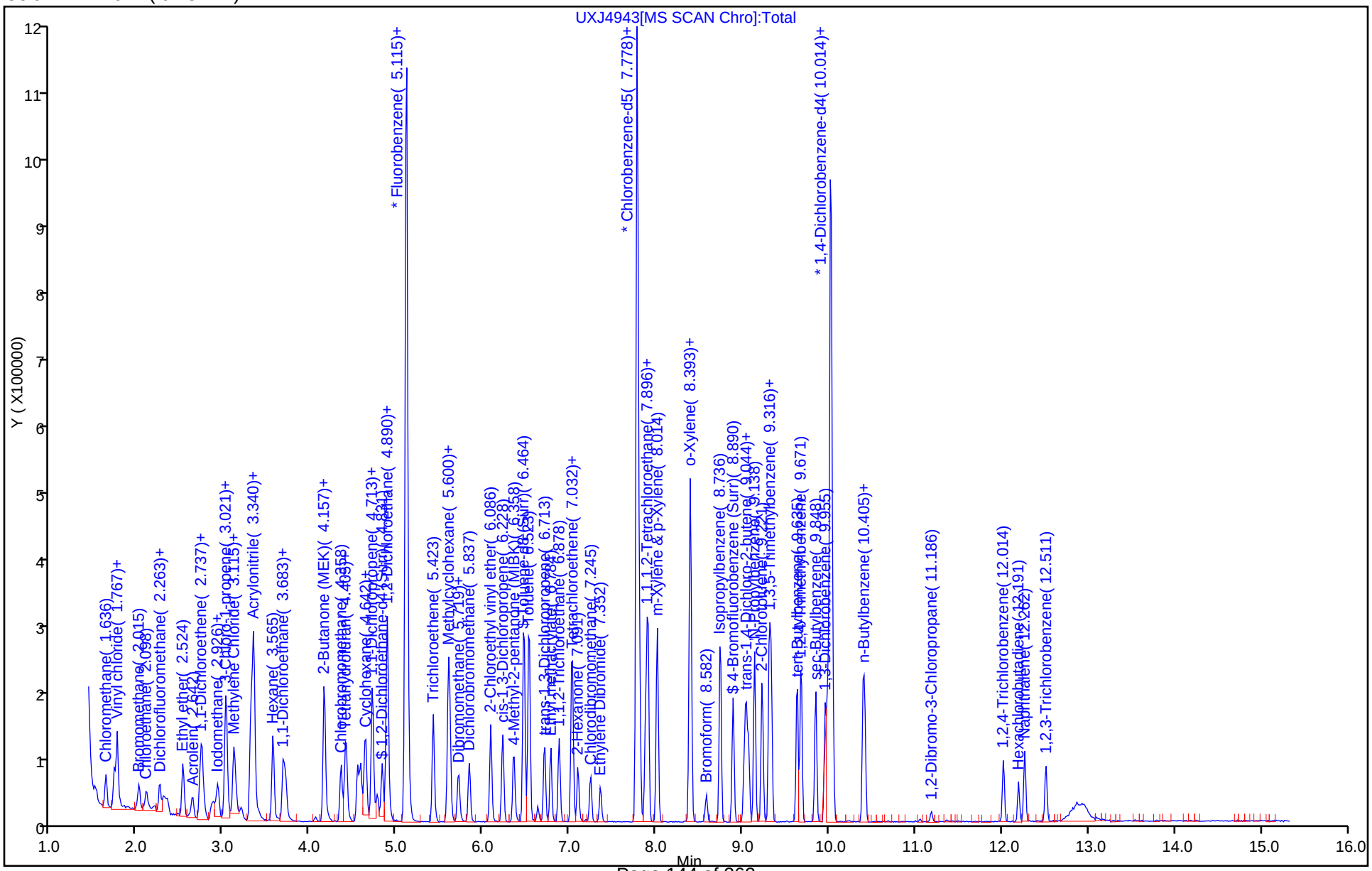
Report Date: 31-May-2016 12:57:29 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4943.D

Injection Date:	28-May-2016 10:40:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L2			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4944.D
Lims ID: STD8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 28-May-2016 11:03:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-007
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:33:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1250375	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.777	0.001	84	868140	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	93	363316	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	94	26480	1.00	0.9491	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	30496	1.00	0.9753	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	118314	1.00	0.9588	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	37600	1.00	1.01	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	23438	1.00	1.19	
10 Chloromethane	50	1.636	1.636	0.000	99	29346	1.00	1.04	
12 Vinyl chloride	62	1.731	1.731	0.000	98	33272	1.00	1.11	
13 Butadiene	54	1.766	1.766	0.000	97	36282	1.00	1.29	
15 Bromomethane	94	2.015	2.015	0.000	90	13133	1.00	0.9611	
16 Chloroethane	64	2.110	2.109	0.001	96	15535	1.00	1.10	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	33161	1.00	1.08	
18 Trichlorofluoromethane	101	2.299	2.311	-0.012	94	19826	1.00	0.9201	
19 Ethyl ether	59	2.524	2.524	0.000	89	34902	1.00	1.25	
20 Acrolein	56	2.642	2.642	0.000	97	19345	5.00	4.89	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	23639	1.00	1.07	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	90	14742	1.00	1.10	
23 Acetone	43	2.760	2.760	0.000	98	28981	2.00	1.98	
25 Iodomethane	142	2.879	2.879	0.000	94	33915	1.00	1.11	
26 Carbon disulfide	76	2.926	2.926	0.000	99	62901	1.00	1.10	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	94	18473	1.00	0.9142	
29 Methyl acetate	43	3.033	3.032	0.001	97	93308	5.00	5.54	
30 Methylene Chloride	84	3.127	3.115	0.012	91	54952	1.00	0.9134	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	19046	10.0	11.6	
32 Acrylonitrile	53	3.317	3.316	0.001	98	92538	10.0	10.6	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	87130	1.00	1.05	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	68	36112	1.00	1.10	
35 Hexane	86	3.565	3.565	0.000	92	8411	1.00	1.20	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	95	58482	1.00	1.04	
37 Vinyl acetate	43	3.719	3.719	0.000	97	52287	1.00	1.00	
42 2-Butanone (MEK)	43	4.169	4.157	0.012	69	24577	2.00	2.39	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	78	35026	1.00	1.01	
43 2,2-Dichloropropane	77	4.169	4.168	0.001	84	26011	1.00	1.06	
47 Chlorobromomethane	128	4.358	4.358	0.000	91	15903	1.00	1.00	
48 Tetrahydrofuran	42	4.393	4.393	0.000	87	15041	2.00	2.27	
49 Chloroform	83	4.417	4.417	0.000	91	53127	1.00	1.05	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	96	35830	1.00	1.05	
51 Cyclohexane	56	4.642	4.642	0.000	87	42471	1.00	1.12	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	46682	1.00	1.09	
53 Carbon tetrachloride	117	4.725	4.725	0.000	73	31877	1.00	1.03	
54 Isobutyl alcohol	41	4.772	4.772	0.000	89	13422	25.0	25.9	
55 Benzene	78	4.890	4.890	0.000	95	136474	1.00	1.03	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	54	37279	1.00	1.06	
58 n-Heptane	100	5.091	5.091	0.000	76	9589	1.00	1.31	
60 Trichloroethene	130	5.423	5.423	0.000	94	36312	1.00	1.05	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	48752	1.00	1.18	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	95	32959	1.00	1.04	
65 Dibromomethane	93	5.707	5.707	0.000	91	15759	1.00	1.00	
66 1,4-Dioxane	88	5.719	5.719	0.000	31	2389	20.0	21.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	98	36730	1.00	1.00	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	93	34608	2.00	1.90	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	47210	1.00	0.9494	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	93	44864	2.00	2.14	
72 Toluene	91	6.535	6.523	0.012	99	144044	1.00	1.03	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	37924	1.00	0.9043	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	36871	1.00	1.01	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	88	24123	1.00	0.9670	
76 Tetrachloroethene	164	7.020	7.020	0.000	96	28299	1.00	1.06	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	44953	1.00	0.9887	
78 2-Hexanone	43	7.091	7.091	0.000	90	32027	2.00	2.07	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	23554	1.00	0.9116	
82 Ethylene Dibromide	107	7.352	7.351	0.001	97	23865	1.00	1.00	
84 Chlorobenzene	112	7.813	7.801	0.012	97	86992	1.00	1.02	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	27119	1.00	0.9739	
86 Ethylbenzene	106	7.908	7.908	0.000	98	45982	1.00	1.00	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	96	56654	1.00	1.02	
88 o-Xylene	106	8.393	8.393	0.000	96	54405	1.00	1.02	
89 Styrene	104	8.405	8.405	0.000	94	92131	1.00	1.00	
90 Bromoform	173	8.582	8.582	0.000	95	11231	1.00	0.8215	
91 Isopropylbenzene	105	8.736	8.736	0.000	95	125166	1.00	1.02	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	25606	1.00	1.01	
95 Bromobenzene	156	9.044	9.044	0.000	90	34487	1.00	1.03	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	82	8232	1.00	1.03	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	66	4152	1.00	0.6989	
98 N-Propylbenzene	120	9.138	9.138	0.000	98	32036	1.00	0.9868	
99 2-Chlorotoluene	126	9.221	9.233	-0.012	97	28701	1.00	1.00	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	90482	1.00	1.00	
101 4-Chlorotoluene	126	9.328	9.328	0.000	96	30490	1.00	1.01	
102 tert-Butylbenzene	119	9.635	9.635	0.000	91	76263	1.00	1.01	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	92596	1.00	1.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	92	99545	1.00	1.02	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	96	51991	1.00	1.01	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	86204	1.00	1.04	
108 1,4-Dichlorobenzene	146	10.038	10.049	-0.011	96	54824	1.00	1.05	
111 n-Butylbenzene	91	10.393	10.393	0.000	96	59368	1.00	0.99	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	97	48489	1.00	1.05	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	90	3871	1.00	1.03	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	92	22303	1.00	1.01	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	90	9723	1.00	1.07	
118 Naphthalene	128	12.262	12.262	0.000	96	55824	1.00	1.03	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	94	21973	1.00	1.07	
S 130 1,2-Dichloroethene, Total	96				0			2.11	
S 131 1,3-Dichloropropene, Total	75				0			1.85	
S 132 Xylenes, Total	106				0		2.00	2.04	
S 133 Trihalomethanes, Total	1				0		4.00	3.79	

Reagents:

VMAROLISTDW_00150	Amount Added:	0.80	Units: uL
VMRGAS_00154	Amount Added:	0.80	Units: uL
vm50ss_stk_00068	Amount Added:	0.80	Units: uL
VMRPRIMW_00186	Amount Added:	0.80	Units: uL
VM50IS_00055	Amount Added:	1.00	Units: uL

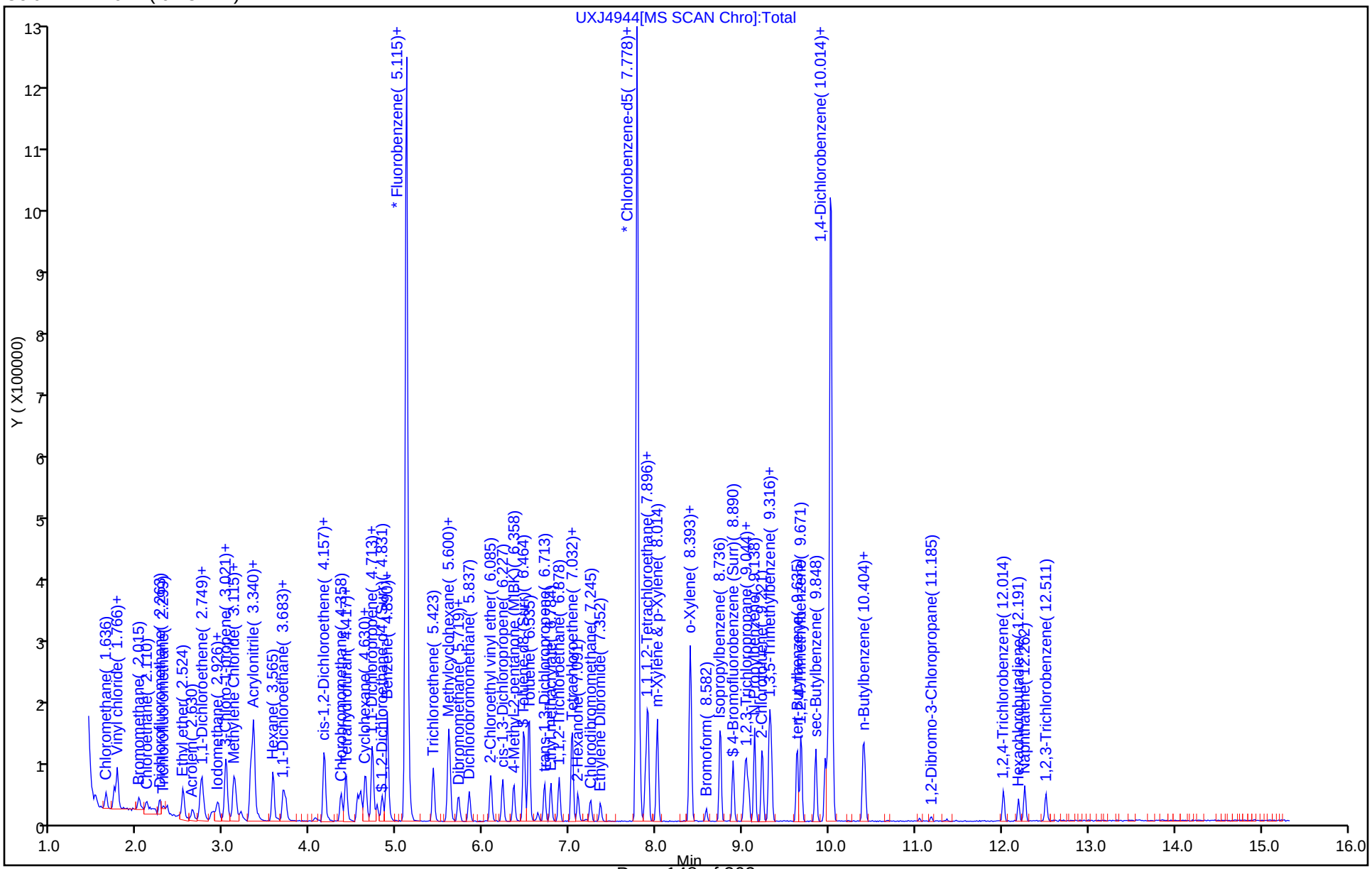
Report Date: 31-May-2016 12:57:31 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4944.D

Injection Date:	28-May-2016 11:03:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	STD8260 L1			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.0785*	0.1000	0.00499	0.0100	-50.1*	20.0
Chloromethane	Ave	0.2254	0.1613	0.1000	0.00716	0.0100	-28.4*	20.0
Vinyl chloride	Ave	0.2393	0.1918	0.1000	0.00801	0.0100	-19.9	20.0
Butadiene	Ave	0.2248	0.1710		0.00761	0.0100	-23.9	30.0
Bromomethane	Ave	0.1093	0.0897	0.0500	0.00821	0.0100	-17.9	20.0
Chloroethane	Ave	0.1134	0.0951	0.0500	0.00838	0.0100	-16.2	20.0
Dichlorofluoromethane	Ave	0.2466	0.2222		0.00901	0.0100	-9.9	20.0
Trichlorofluoromethane	Ave	0.1723	0.1649	0.1000	0.00957	0.0100	-4.3	20.0
Ethyl ether	Ave	0.2239	0.2205		0.00985	0.0100	-1.5	20.0
Acrolein	Ave	0.0316	0.0196		0.0309	0.0500	-38.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1892	0.1000	0.0107	0.0100	7.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1197	0.0500	0.0112	0.0100	11.8	20.0
Acetone	Lin1		0.0409	0.0100	0.0146	0.0200	-27.1	50.0
Iodomethane	Ave	0.2451	0.2543		0.0104	0.0100	3.8	20.0
Carbon disulfide	Ave	0.4562	0.4979	0.1000	0.0109	0.0100	9.1	20.0
3-Chloro-1-propene	Ave	0.1616	0.1753		0.0108	0.0100	8.5	20.0
Methyl acetate	Ave	0.1347	0.1285	0.1000	0.0477	0.0500	-4.6	20.0
Methylene Chloride	Lin1		0.2133	0.1000	0.00987	0.0100	-1.3	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0104		0.0788	0.100	-21.2	50.0
Acrylonitrile	Ave	0.0700	0.0688		0.0982	0.100	-1.8	20.0
Methyl tert-butyl ether	Ave	0.6617	0.6529	0.1000	0.00987	0.0100	-1.3	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2698	0.1000	0.0103	0.0100	3.0	20.0
Hexane	Ave	0.0561	0.0718		0.0128	0.0100	28.0*	20.0
1,1-Dichloroethane	Ave	0.4477	0.4276	0.2000	0.00955	0.0100	-4.5	20.0
Vinyl acetate	Ave	0.4179	0.4341		0.0104	0.0100	3.9	50.0
2-Butanone (MEK)	Ave	0.0824	0.0709	0.0100	0.0172	0.0200	-13.9	20.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2702	0.1000	0.00975	0.0100	-2.5	20.0
2,2-Dichloropropane	Ave	0.1969	0.1923		0.00977	0.0100	-2.3	20.0
Chlorobromomethane	Ave	0.1278	0.1279		0.0100	0.0100	0.0	20.0
Tetrahydrofuran	Ave	0.0529	0.0487		0.0184	0.0200	-8.0	20.0
Chloroform	Ave	0.4028	0.3863	0.2000	0.00959	0.0100	-4.1	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2653	0.1000	0.00977	0.0100	-2.3	20.0
Cyclohexane	Ave	0.3041	0.3496	0.1000	0.0115	0.0100	14.9	20.0
1,1-Dichloropropene	Ave	0.3431	0.3373		0.00983	0.0100	-1.7	20.0
Carbon tetrachloride	Ave	0.2486	0.2618	0.1000	0.0105	0.0100	5.3	20.0
Isobutyl alcohol	Ave	0.0060	0.0055		0.231	0.250	-7.5	20.0
1,2-Dichloroethane	Ave	0.2815	0.2824	0.1000	0.0100	0.0100	0.3	20.0
Benzene	Ave	1.057	1.019	0.5000	0.00964	0.0100	-3.6	20.0
n-Heptane	Ave	0.0587	0.0635		0.0108	0.0100	8.1	20.0
Trichloroethene	Ave	0.2761	0.2702	0.1500	0.00979	0.0100	-2.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.3651	0.1000	0.0110	0.0100	10.4	20.0
1,2-Dichloropropane	Ave	0.2533	0.2462	0.1000	0.00972	0.0100	-2.8	20.0
Dibromomethane	Ave	0.1259	0.1188		0.00943	0.0100	-5.7	20.0
1,4-Dioxane	Lin1		0.0009		0.119	0.200	-40.4	50.0
Dichlorobromomethane	Ave	0.2929	0.2750	0.1500	0.00939	0.0100	-6.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1420		0.00977	0.0100	-2.3	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3785	0.1500	0.00952	0.0100	-4.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1619	0.0500	0.0193	0.0200	-3.4	20.0
Toluene	Ave	1.613	1.577	0.4000	0.00977	0.0100	-2.3	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4634	0.1000	0.00959	0.0100	-4.1	20.0
Ethyl methacrylate	Ave	0.4217	0.4208		0.00998	0.0100	-0.2	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2803	0.1000	0.00975	0.0100	-2.5	20.0
Tetrachloroethene	Ave	0.3065	0.3058	0.1500	0.00998	0.0100	-0.2	20.0
1,3-Dichloropropane	Ave	0.5237	0.5135		0.00980	0.0100	-2.0	20.0
2-Hexanone	Ave	0.1780	0.1624	0.0500	0.0182	0.0200	-8.8	20.0
Chlorodibromomethane	Ave	0.2976	0.2888		0.00970	0.0100	-3.0	20.0
Ethylene Dibromide	Ave	0.2742	0.2692		0.00982	0.0100	-1.8	20.0
Chlorobenzene	Ave	0.9846	0.9345	0.3000	0.00949	0.0100	-5.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.3054		0.00952	0.0100	-4.8	20.0
Ethylbenzene	Ave	0.5275	0.5081		0.00963	0.0100	-3.7	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.6189		0.00966	0.0100	-3.4	20.0
o-Xylene	Ave	0.6156	0.5915		0.00961	0.0100	-3.9	20.0
Styrene	Ave	1.064	1.036	0.3000	0.00973	0.0100	-2.7	20.0
Bromoform	Ave	0.1575	0.1606	0.1000	0.0102	0.0100	2.0	20.0
Isopropylbenzene	Ave	1.413	1.372	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6670	0.3000	0.00960	0.0100	-4.0	20.0
Bromobenzene	Ave	0.9222	0.8545		0.00927	0.0100	-7.3	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2222		0.0101	0.0100	0.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1515		0.00927	0.0100	-7.3	20.0
N-Propylbenzene	Ave	0.8936	0.8451		0.00946	0.0100	-5.4	20.0
2-Chlorotoluene	Ave	0.7923	0.7318		0.00924	0.0100	-7.6	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.313		0.00931	0.0100	-6.9	20.0
4-Chlorotoluene	Ave	0.8349	0.7709		0.00923	0.0100	-7.7	20.0
tert-Butylbenzene	Ave	2.075	1.952		0.00941	0.0100	-5.9	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.264		0.00917	0.0100	-8.3	20.0
sec-Butylbenzene	Ave	2.678	2.475		0.00924	0.0100	-7.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.275	0.6000	0.00904	0.0100	-9.6	20.0
4-Isopropyltoluene	Ave	2.276	2.122		0.00933	0.0100	-6.7	20.0
1,4-Dichlorobenzene	Ave	1.435	1.312	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.645	1.481		0.00901	0.0100	-9.9	20.0
1,2-Dichlorobenzene	Ave	1.268	1.157	0.4000	0.00912	0.0100	-8.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: ICV 240-232366/14 Calibration Date: 05/28/2016 11:25

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ4945.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0919	0.0500	0.00889	0.0100	-11.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.5148	0.2000	0.00849	0.0100	-15.1	50.0
Hexachlorobutadiene	Ave	0.2494	0.2019		0.00810	0.0100	-19.0	20.0
Naphthalene	Ave	1.496	1.340		0.00896	0.0100	-10.4	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.4760		0.00842	0.0100	-15.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2015		0.0108	0.0120	-9.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2259		0.0108	0.0120	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.421	1.311		0.0110	0.0120	-7.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3884		0.0108	0.0120	-9.6	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4945.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-May-2016 11:25:30 ALS Bottle#: 7 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0054939-014
Misc. Info.: J60528A-IC,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:39 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: evansle Date: 31-May-2016 12:57:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1349328	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.778	7.778	0.000	84	892490	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.014	0.012	91	381895	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	95	325046	12.0	10.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	364427	12.0	10.8	
$ 6 Toluene-d8 (Surr)	98	6.464	6.476	-0.012	92	1398868	12.0	11.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	95	414538	12.0	10.8	
9 Dichlorodifluoromethane	85	1.518	1.518	0.000	98	105925	10.0	4.99	
10 Chloromethane	50	1.636	1.636	0.000	99	217689	10.0	7.16	
12 Vinyl chloride	62	1.731	1.731	0.000	97	258820	10.0	8.01	
13 Butadiene	54	1.766	1.766	0.000	98	230774	10.0	7.61	
15 Bromomethane	94	2.015	2.015	0.000	90	121055	10.0	8.21	
16 Chloroethane	64	2.110	2.109	0.001	98	128267	10.0	8.38	
17 Dichlorofluoromethane	67	2.263	2.263	0.000	96	299818	10.0	9.01	
18 Trichlorofluoromethane	101	2.311	2.311	0.000	96	222512	10.0	9.57	
19 Ethyl ether	59	2.524	2.524	0.000	88	297526	10.0	9.85	
20 Acrolein	56	2.630	2.642	-0.012	99	131913	50.0	30.9	
21 1,1-Dichloroethene	96	2.737	2.737	0.000	98	255292	10.0	10.7	
22 1,1,2-Trichloro-1,2,2-trif	151	2.749	2.748	0.001	91	161571	10.0	11.2	
23 Acetone	43	2.760	2.760	0.000	98	110245	20.0	14.6	
25 Iodomethane	142	2.879	2.879	0.000	96	343130	10.0	10.4	
26 Carbon disulfide	76	2.926	2.926	0.000	98	671762	10.0	10.9	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	95	236576	10.0	10.8	
29 Methyl acetate	43	3.033	3.032	0.001	97	866854	50.0	47.7	
30 Methylene Chloride	84	3.115	3.115	0.000	89	287787	10.0	9.87	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	99	139877	100.0	78.8	
32 Acrylonitrile	53	3.317	3.316	0.001	100	927822	100.0	98.2	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	94	881021	10.0	9.87	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	70	364035	10.0	10.3	
35 Hexane	86	3.565	3.565	0.000	90	96824	10.0	12.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	577030	10.0	9.55	
37 Vinyl acetate	43	3.719	3.719	0.000	97	585795	10.0	10.4	
42 2-Butanone (MEK)	43	4.157	4.157	0.000	66	191319	20.0	17.2	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	364524	10.0	9.75	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	86	259514	10.0	9.77	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	172519	10.0	10.0	
48 Tetrahydrofuran	42	4.393	4.393	0.000	88	131334	20.0	18.4	
49 Chloroform	83	4.417	4.417	0.000	92	521251	10.0	9.59	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	357996	10.0	9.77	
51 Cyclohexane	56	4.642	4.642	0.000	87	471668	10.0	11.5	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	97	455057	10.0	9.83	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	353273	10.0	10.5	
54 Isobutyl alcohol	41	4.772	4.772	0.000	94	122967	250.0	231.2	
55 Benzene	78	4.890	4.890	0.000	95	1374458	10.0	9.64	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	381046	10.0	10.0	
58 n-Heptane	100	5.091	5.091	0.000	95	85725	10.0	10.8	
60 Trichloroethene	130	5.423	5.423	0.000	95	364582	10.0	9.79	
62 Methylcyclohexane	83	5.600	5.600	0.000	89	492599	10.0	11.0	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	332263	10.0	9.72	
65 Dibromomethane	93	5.707	5.707	0.000	91	160298	10.0	9.43	
66 1,4-Dioxane	88	5.730	5.719	0.011	29	25260	200.0	119.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	371057	10.0	9.39	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	191547	10.0	9.77	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	510763	10.0	9.52	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.358	0.000	94	436788	20.0	19.3	
72 Toluene	91	6.535	6.523	0.012	98	1407175	10.0	9.77	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	91	413573	10.0	9.59	
74 Ethyl methacrylate	69	6.784	6.783	0.001	88	375511	10.0	9.98	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	250121	10.0	9.75	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	272934	10.0	9.98	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	88	458257	10.0	9.80	
78 2-Hexanone	43	7.091	7.091	0.000	94	289831	20.0	18.2	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	257708	10.0	9.70	
82 Ethylene Dibromide	107	7.352	7.351	0.001	99	240275	10.0	9.82	
84 Chlorobenzene	112	7.813	7.801	0.012	97	833993	10.0	9.49	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	272592	10.0	9.52	
86 Ethylbenzene	106	7.908	7.908	0.000	98	453514	10.0	9.63	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	552335	10.0	9.66	
88 o-Xylene	106	8.393	8.393	0.000	96	527889	10.0	9.61	
89 Styrene	104	8.405	8.405	0.000	95	924399	10.0	9.73	
90 Bromoform	173	8.582	8.582	0.000	99	143330	10.0	10.2	
91 Isopropylbenzene	105	8.748	8.736	0.012	95	1224899	10.0	9.71	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	254715	10.0	9.60	
95 Bromobenzene	156	9.044	9.044	0.000	91	326331	10.0	9.27	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	80	84859	10.0	10.1	
97 trans-1,4-Dichloro-2-buten	53	9.067	9.067	0.000	74	57870	10.0	9.27	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	322733	10.0	9.46	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	279470	10.0	9.24	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	883484	10.0	9.31	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	294384	10.0	9.23	
102 tert-Butylbenzene	119	9.635	9.635	0.000	89	745426	10.0	9.41	
104 1,2,4-Trimethylbenzene	105	9.671	9.671	0.000	95	864751	10.0	9.17	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	945307	10.0	9.24	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	486991	10.0	9.04	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	810545	10.0	9.33	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	500958	10.0	9.14	
111 n-Butylbenzene	91	10.393	10.393	0.000	97	565640	10.0	9.01	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	99	441938	10.0	9.12	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	89	35095	10.0	8.89	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	93	196613	10.0	8.49	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	93	77112	10.0	8.10	
118 Naphthalene	128	12.262	12.262	0.000	96	511556	10.0	8.96	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	96	181780	10.0	8.42	
S 132 Xylenes, Total	106				0		20.0	19.3	
S 133 Trihalomethanes, Total	1				0		40.0	38.9	

Reagents:

VMFASPW_00155	Amount Added:	8.00	Units: uL	
VMFASGW_00157	Amount Added:	8.00	Units: uL	
VMFASAW_00140	Amount Added:	8.00	Units: uL	
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00068	Amount Added:	0.00	Units:	Run Reagent

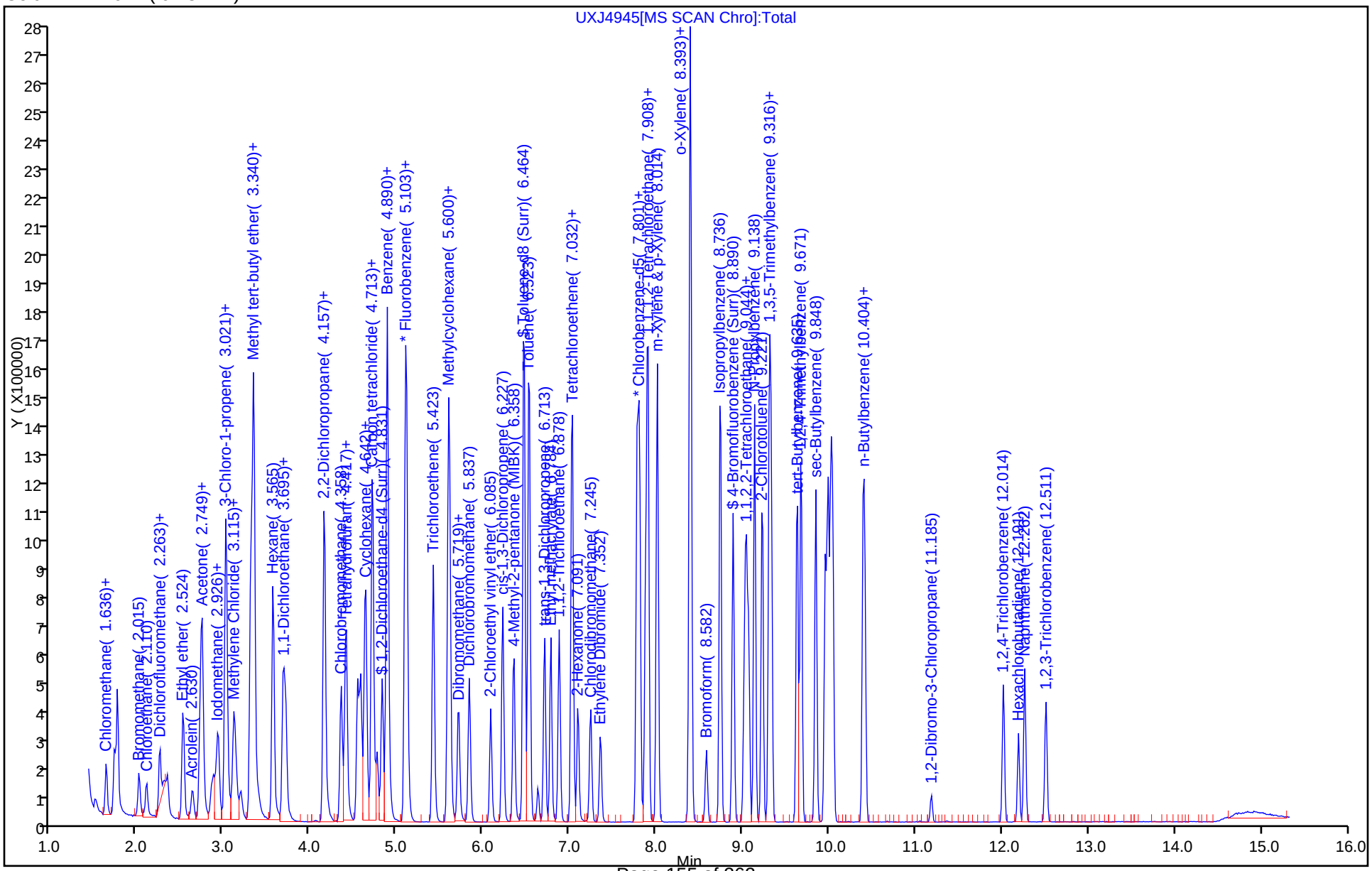
Report Date: 31-May-2016 12:58:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4945.D

Injection Date:	28-May-2016 11:25:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1572	0.1830	0.1000	0.0116	0.0100	16.4	20.0
Chloromethane	Ave	0.2254	0.2695	0.1000	0.0120	0.0100	19.6	20.0
Vinyl chloride	Ave	0.2393	0.2439	0.1000	0.0102	0.0100	1.9	20.0
Butadiene	Ave	0.2248	0.2685		0.0119	0.0100	19.4	20.0
Bromomethane	Ave	0.1093	0.1250	0.0500	0.0114	0.0100	14.4	20.0
Chloroethane	Ave	0.1134	0.1494	0.0500	0.0132	0.0100	31.7*	20.0
Dichlorofluoromethane	Ave	0.2466	0.3022		0.0123	0.0100	22.6*	20.0
Trichlorofluoromethane	Ave	0.1723	0.2009	0.1000	0.0117	0.0100	16.6	20.0
Ethyl ether	Ave	0.2239	0.1866		0.00833	0.0100	-16.7	20.0
Acrolein	Ave	0.0316	0.0177		0.0280	0.0500	-44.1	50.0
1,1-Dichloroethene	Ave	0.1767	0.1796	0.1000	0.0102	0.0100	1.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1071	0.1086	0.0500	0.0101	0.0100	1.4	20.0
Acetone	Lin1		0.0486	0.0100	0.0179	0.0200	-10.3	50.0
Iodomethane	Ave	0.2451	0.2501		0.0102	0.0100	2.0	20.0
Carbon disulfide	Ave	0.4562	0.4932	0.1000	0.0108	0.0100	8.1	20.0
3-Chloro-1-propene	Ave	0.1616	0.1538		0.00952	0.0100	-4.8	20.0
Methyl acetate	Ave	0.1347	0.1130	0.1000	0.0420	0.0500	-16.1	20.0
Methylene Chloride	Lin1		0.2317	0.1000	0.0108	0.0100	8.4	50.0
2-Methyl-2-propanol	Ave	0.0132	0.0069		0.0525	0.100	-47.5	50.0
Acrylonitrile	Ave	0.0700	0.0590		0.0843	0.100	-15.7	20.0
Methyl tert-butyl ether	Ave	0.6617	0.5663	0.1000	0.00856	0.0100	-14.4	20.0
trans-1,2-Dichloroethene	Ave	0.2620	0.2316	0.1000	0.00884	0.0100	-11.6	20.0
Hexane	Ave	0.0561	0.0560		0.00999	0.0100	-0.0	20.0
1,1-Dichloroethane	Ave	0.4477	0.4185	0.2000	0.00935	0.0100	-6.5	20.0
Vinyl acetate	Ave	0.4179	0.3582		0.00857	0.0100	-14.3	50.0
cis-1,2-Dichloroethene	Ave	0.2770	0.2535	0.1000	0.00915	0.0100	-8.5	20.0
2,2-Dichloropropane	Ave	0.1969	0.1854		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0824	0.0688	0.0100	0.0167	0.0200	-16.4	20.0
Chlorobromomethane	Ave	0.1278	0.1134		0.00887	0.0100	-11.3	20.0
Tetrahydrofuran	Ave	0.0529	0.0436		0.0165	0.0200	-17.6	20.0
Chloroform	Ave	0.4028	0.3756	0.2000	0.00932	0.0100	-6.8	20.0
1,1,1-Trichloroethane	Ave	0.2717	0.2484	0.1000	0.00914	0.0100	-8.6	20.0
Cyclohexane	Ave	0.3041	0.3027	0.1000	0.00995	0.0100	-0.5	20.0
1,1-Dichloropropene	Ave	0.3431	0.3157		0.00920	0.0100	-8.0	20.0
Carbon tetrachloride	Ave	0.2486	0.2155	0.1000	0.00867	0.0100	-13.3	20.0
Isobutyl alcohol	Ave	0.0060	0.0054		0.228	0.250	-8.9	20.0
1,2-Dichloroethane	Ave	0.2815	0.2770	0.1000	0.00984	0.0100	-1.6	20.0
Benzene	Ave	1.057	0.9675	0.5000	0.00915	0.0100	-8.5	20.0
n-Heptane	Ave	0.0587	0.0504		0.00858	0.0100	-14.2	20.0
Trichloroethene	Ave	0.2761	0.2434	0.1500	0.00882	0.0100	-11.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3306	0.2985	0.1000	0.00903	0.0100	-9.7	20.0
1,2-Dichloropropane	Ave	0.2533	0.2221	0.1000	0.00877	0.0100	-12.3	20.0
Dibromomethane	Ave	0.1259	0.1090		0.00866	0.0100	-13.4	20.0
1,4-Dioxane	Lin1		0.0009		0.109	0.200	-45.3	50.0
Dichlorobromomethane	Ave	0.2929	0.2546	0.1500	0.00869	0.0100	-13.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1454	0.1231		0.0169	0.0200	-15.3	20.0
cis-1,3-Dichloropropene	Ave	0.3977	0.3324	0.1500	0.00836	0.0100	-16.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1675	0.1395	0.0500	0.0167	0.0200	-16.7	20.0
Toluene	Ave	1.613	1.727	0.4000	0.0107	0.0100	7.1	20.0
trans-1,3-Dichloropropene	Ave	0.4831	0.4696	0.1000	0.00972	0.0100	-2.8	20.0
Ethyl methacrylate	Ave	0.4217	0.3975		0.00943	0.0100	-5.7	20.0
1,1,2-Trichloroethane	Ave	0.2874	0.2751	0.1000	0.00957	0.0100	-4.3	20.0
Tetrachloroethene	Ave	0.3065	0.2831	0.1500	0.00924	0.0100	-7.6	20.0
1,3-Dichloropropane	Ave	0.5237	0.5276		0.0101	0.0100	0.7	20.0
2-Hexanone	Ave	0.1780	0.1644	0.0500	0.0185	0.0200	-7.6	20.0
Chlorodibromomethane	Ave	0.2976	0.2875		0.00966	0.0100	-3.4	20.0
Ethylene Dibromide	Ave	0.2742	0.2528		0.00922	0.0100	-7.8	20.0
Chlorobenzene	Ave	0.9846	0.8732	0.3000	0.00887	0.0100	-11.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3208	0.2748		0.00857	0.0100	-14.3	20.0
Ethylbenzene	Ave	0.5275	0.4877		0.00925	0.0100	-7.5	20.0
m-Xylene & p-Xylene	Ave	0.6409	0.5636		0.00879	0.0100	-12.1	20.0
o-Xylene	Ave	0.6156	0.5082		0.00826	0.0100	-17.4	20.0
Styrene	Ave	1.064	0.8604	0.3000	0.00808	0.0100	-19.2	20.0
Bromoform	Ave	0.1575	0.1210	0.1000	0.00768	0.0100	-23.2*	20.0
Isopropylbenzene	Ave	1.413	1.080	0.1000	0.00764	0.0100	-23.6*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6946	0.6527	0.3000	0.00940	0.0100	-6.0	20.0
Bromobenzene	Ave	0.9222	0.9083		0.00985	0.0100	-1.5	20.0
1,2,3-Trichloropropane	Ave	0.2209	0.2280		0.0103	0.0100	3.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1635	0.1932		0.0118	0.0100	18.1	20.0
N-Propylbenzene	Ave	0.8936	0.8972		0.0100	0.0100	0.4	20.0
2-Chlorotoluene	Ave	0.7923	0.7456		0.00941	0.0100	-5.9	20.0
1,3,5-Trimethylbenzene	Ave	2.484	2.284		0.00920	0.0100	-8.0	20.0
4-Chlorotoluene	Ave	0.8349	0.7774		0.00931	0.0100	-6.9	20.0
tert-Butylbenzene	Ave	2.075	1.782		0.00859	0.0100	-14.1	20.0
1,2,4-Trimethylbenzene	Ave	2.469	2.286		0.00926	0.0100	-7.4	20.0
sec-Butylbenzene	Ave	2.678	2.367		0.00884	0.0100	-11.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.267	0.6000	0.00898	0.0100	-10.2	20.0
4-Isopropyltoluene	Ave	2.276	2.035		0.00894	0.0100	-10.6	20.0
1,4-Dichlorobenzene	Ave	1.435	1.293	0.5000	0.00901	0.0100	-9.9	20.0
n-Butylbenzene	Ave	1.645	1.597		0.00971	0.0100	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.268	1.154	0.4000	0.00910	0.0100	-9.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: CCVIS 240-236061/2 Calibration Date: 06/27/2016 10:32

Instrument ID: A3UX11 Calib Start Date: 05/28/2016 09:12

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/28/2016 11:03

Lab File ID: UXJ5814A.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1034	0.0981	0.0500	0.00949	0.0100	-5.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6065	0.6764	0.2000	0.0112	0.0100	11.5	50.0
Hexachlorobutadiene	Ave	0.2494	0.2659		0.0107	0.0100	6.6	20.0
Naphthalene	Ave	1.496	1.706		0.0114	0.0100	14.1	50.0
1,2,3-Trichlorobenzene	Ave	0.5655	0.6089		0.0108	0.0100	7.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2231	0.2019		0.0108	0.0120	-9.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2501	0.2368		0.0113	0.0120	-5.3	20.0
Toluene-d8 (Surr)	Ave	1.421	1.425		0.0120	0.0120	0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4299	0.3189		0.00887	0.0120	-25.8*	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5814A.D
Lims ID: CCVIS L4 8260
Client ID:
Sample Type: CCVIS
Inject. Date: 27-Jun-2016 10:32:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-002
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11
Sublist: chrom-8260_11*sub61

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:21 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	2032326	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	1160670	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	92	355778	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	97	490641	12.0	10.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	96	575556	12.0	11.3	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1977124	12.0	12.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	442572	12.0	8.87	
9 Dichlorodifluoromethane	85	1.506	1.506	0.000	99	371943	10.0	11.6	
10 Chloromethane	50	1.636	1.636	0.000	99	547756	10.0	12.0	
12 Vinyl chloride	62	1.731	1.731	0.000	97	495614	10.0	10.2	
13 Butadiene	54	1.754	1.754	0.000	98	545606	10.0	11.9	
15 Bromomethane	94	2.015	2.015	0.000	89	253979	10.0	11.4	
16 Chloroethane	64	2.098	2.098	0.000	99	303547	10.0	13.2	
17 Dichlorofluoromethane	67	2.251	2.251	0.000	97	614255	10.0	12.3	
18 Trichlorofluoromethane	101	2.299	2.299	0.000	98	408383	10.0	11.7	
19 Ethyl ether	59	2.524	2.524	0.000	90	379202	10.0	8.33	
20 Acrolein	56	2.630	2.630	0.000	99	179636	50.0	28.0	
21 1,1-Dichloroethene	96	2.725	2.725	0.000	98	365075	10.0	10.2	
22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.737	0.000	90	220761	10.0	10.1	
23 Acetone	43	2.760	2.760	0.000	99	197715	20.0	17.9	
25 Iodomethane	142	2.855	2.855	0.000	97	508182	10.0	10.2	
26 Carbon disulfide	76	2.926	2.926	0.000	99	1002355	10.0	10.8	
28 3-Chloro-1-propene	76	3.021	3.021	0.000	92	312595	10.0	9.52	
29 Methyl acetate	43	3.032	3.032	0.000	97	1148658	50.0	42.0	
30 Methylene Chloride	84	3.115	3.115	0.000	91	470888	10.0	10.8	
31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	140289	100.0	52.5	
32 Acrylonitrile	53	3.305	3.305	0.000	99	1198534	100.0	84.3	
33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	1150811	10.0	8.56	
34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	72	470735	10.0	8.84	
35 Hexane	86	3.565	3.565	0.000	90	113831	10.0	10.0	
36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	850512	10.0	9.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
37 Vinyl acetate	43	3.719	3.719	0.000	97	728021	10.0	8.57	
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	515270	10.0	9.15	
42 2-Butanone (MEK)	43	4.168	4.168	0.000	73	279792	20.0	16.7	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	88	376855	10.0	9.42	
47 Chlorobromomethane	128	4.358	4.358	0.000	93	230366	10.0	8.87	
48 Tetrahydrofuran	42	4.405	4.405	0.000	88	177200	20.0	16.5	
49 Chloroform	83	4.417	4.417	0.000	92	763239	10.0	9.32	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	504745	10.0	9.14	
51 Cyclohexane	56	4.630	4.630	0.000	88	615203	10.0	9.95	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	98	641685	10.0	9.20	
53 Carbon tetrachloride	117	4.725	4.725	0.000	95	437921	10.0	8.67	
54 Isobutyl alcohol	41	4.772	4.772	0.000	93	157505	250.0	227.7	
55 Benzene	78	4.890	4.890	0.000	95	1966297	10.0	9.15	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	97	562971	10.0	9.84	
58 n-Heptane	100	5.091	5.091	0.000	90	102409	10.0	8.58	
60 Trichloroethene	130	5.423	5.423	0.000	96	494653	10.0	8.82	
62 Methylcyclohexane	83	5.600	5.600	0.000	91	606583	10.0	9.03	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	451415	10.0	8.77	
65 Dibromomethane	93	5.707	5.707	0.000	92	221561	10.0	8.66	
66 1,4-Dioxane	88	5.718	5.718	0.000	30	34571	200.0	109.3	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	517519	10.0	8.69	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	92	500493	20.0	16.9	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	96	675509	10.0	8.36	
71 4-Methyl-2-pentanone (MIBK	43	6.357	6.357	0.000	95	566893	20.0	16.7	
72 Toluene	91	6.535	6.535	0.000	98	2004995	10.0	10.7	
73 trans-1,3-Dichloropropene	75	6.712	6.712	0.000	92	545034	10.0	9.72	
74 Ethyl methacrylate	69	6.783	6.783	0.000	89	461357	10.0	9.43	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	90	319335	10.0	9.57	
76 Tetrachloroethene	164	7.020	7.020	0.000	98	328599	10.0	9.24	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	90	612389	10.0	10.1	
78 2-Hexanone	43	7.091	7.091	0.000	96	381541	20.0	18.5	
80 Chlorodibromomethane	129	7.245	7.245	0.000	89	333687	10.0	9.66	
82 Ethylene Dibromide	107	7.351	7.351	0.000	98	293370	10.0	9.22	
84 Chlorobenzene	112	7.813	7.813	0.000	98	1013531	10.0	8.87	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	94	318927	10.0	8.57	
86 Ethylbenzene	106	7.908	7.908	0.000	98	566095	10.0	9.25	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	654172	10.0	8.79	
88 o-Xylene	106	8.393	8.393	0.000	95	589902	10.0	8.26	
89 Styrene	104	8.405	8.405	0.000	93	998649	10.0	8.08	
90 Bromoform	173	8.582	8.582	0.000	98	140412	10.0	7.68	
91 Isopropylbenzene	105	8.748	8.748	0.000	95	1253354	10.0	7.64	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	93	232200	10.0	9.40	
95 Bromobenzene	156	9.044	9.044	0.000	93	323135	10.0	9.85	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	82	81115	10.0	10.3	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.079	0.000	78	68727	10.0	11.8	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	319205	10.0	10.0	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	265284	10.0	9.41	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	95	812555	10.0	9.20	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	276576	10.0	9.31	
102 tert-Butylbenzene	119	9.635	9.635	0.000	91	634172	10.0	8.59	
104 1,2,4-Trimethylbenzene	105	9.683	9.683	0.000	95	813338	10.0	9.26	
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	842057	10.0	8.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	98	450659	10.0	8.98	
107 4-Isopropyltoluene	119	9.990	9.990	0.000	97	724081	10.0	8.94	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	95	459918	10.0	9.01	
111 n-Butylbenzene	91	10.392	10.392	0.000	97	568266	10.0	9.71	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	98	410419	10.0	9.10	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	85	34899	10.0	9.49	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	240659	10.0	11.2	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	96	94609	10.0	10.7	
118 Naphthalene	128	12.262	12.262	0.000	97	606853	10.0	11.4	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	94	216633	10.0	10.8	
S 132 Xylenes, Total	106				0		20.0	17.1	
S 133 Trihalomethanes, Total	1				0		40.0	35.4	

Reagents:

VMRGAS_00158	Amount Added:	8.00	Units: uL	
VMRPRIMW_00191	Amount Added:	8.00	Units: uL	
VMAROLISTDW_00153	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

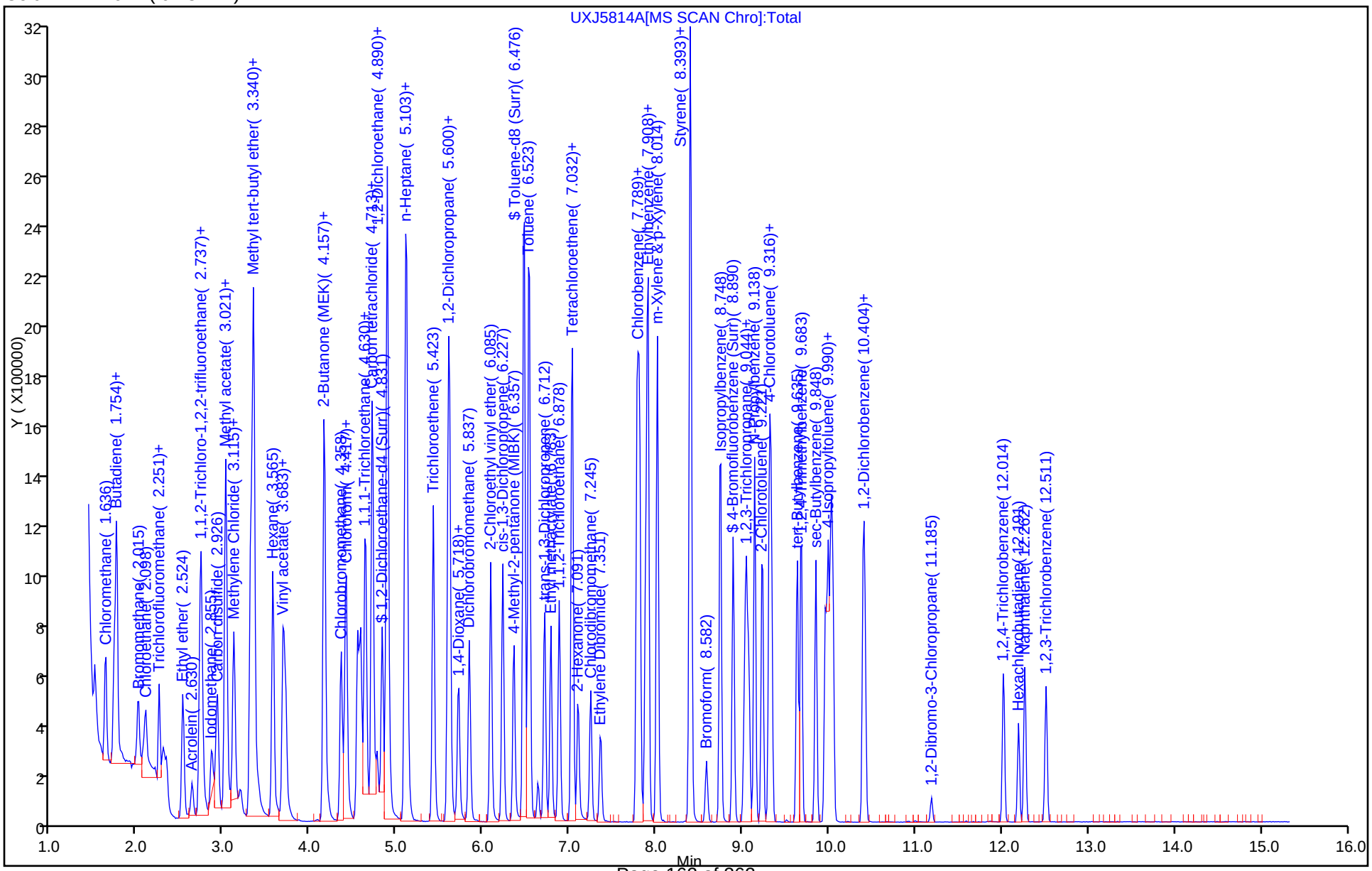
Report Date: 28-Jun-2016 10:20:22 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5814A.D

Injection Date:	27-Jun-2016 10:32:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	CCVIS L4 8260			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-May-2016 08:28:30 ALS Bottle#: 31 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: J60528A-IC,BFBUX11,,43582
Operator ID: Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 31-May-2016 12:57:19 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK020

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.198	4.198	0.000	0	932386	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

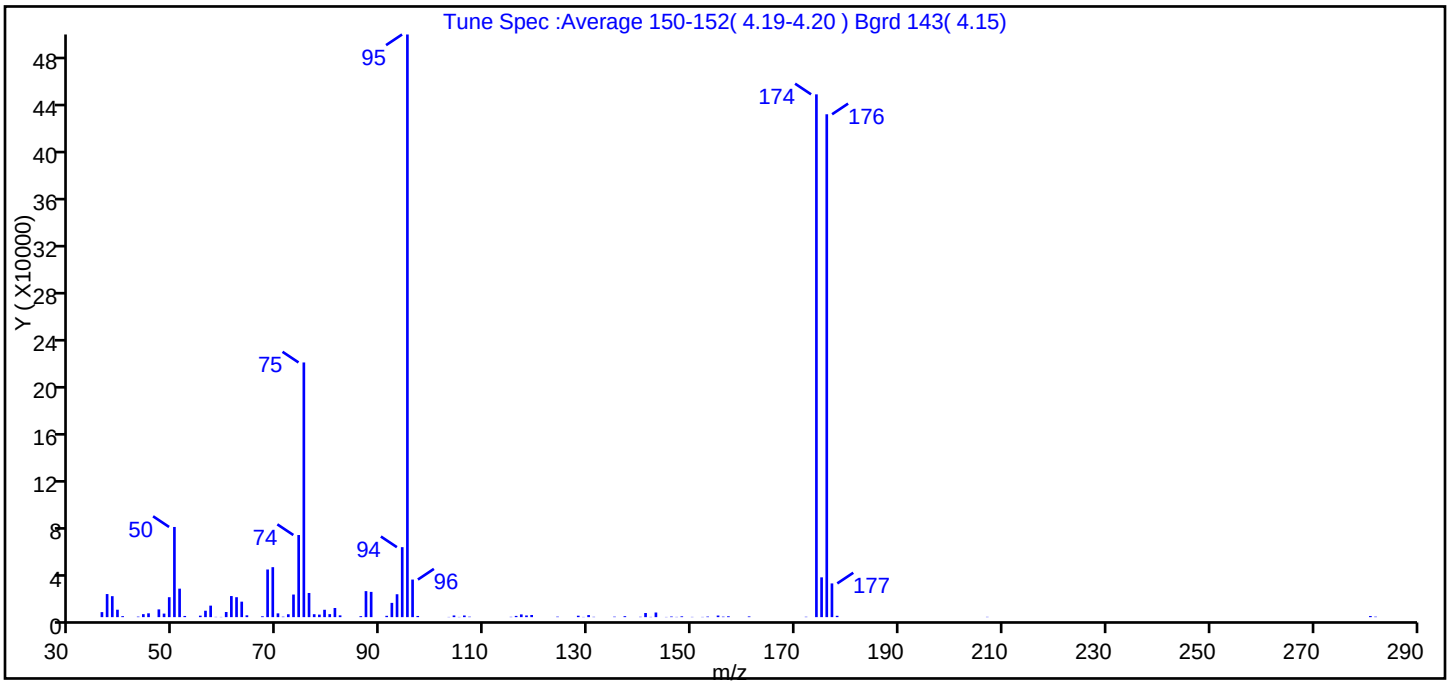
vmbfb_00015 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D
Injection Date: 28-May-2016 08:28:30 Instrument ID: A3UX11
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 31 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_11 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.5
75	30 to 60% of m/z 95	43.7
96	5 to 9% of m/z 95	6.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	89.7
175	5 to 9% of m/z 174	6.8 (7.6)
176	Greater than 95% but less than 101% of m/z 174	86.3 (96.2)
177	5 to 9% of m/z 176	5.8 (6.7)

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D\8260_11.rslt\spectra.d
Injection Date: 28-May-2016 08:28:30
Spectrum: Tune Spec :Average 150-152(4.19-4.20) Bgrd 143(4.15)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4265	64.00	1544	94.00	59328	142.00	205
37.00	19576	67.00	715	95.00	494016	143.00	3929
38.00	17784	68.00	40408	96.00	31864	145.00	175
39.00	6303	69.00	42368	97.00	1005	146.00	529
40.00	841	70.00	3215	103.00	172	147.00	203
43.00	437	71.00	393	104.00	1422	148.00	684
44.00	2537	72.00	2453	105.00	182	150.00	207
45.00	3240	73.00	19168	106.00	1402	152.00	190
47.00	6562	74.00	69624	107.00	394	153.00	490
48.00	3005	75.00	215936	115.00	268	155.00	1354
49.00	16904	76.00	20488	116.00	1062	156.00	421
50.00	76456	77.00	2488	117.00	2314	157.00	724
51.00	24152	78.00	2149	118.00	1416	161.00	610
52.00	1006	79.00	6255	119.00	1826	172.00	314
55.00	1245	80.00	2540	124.00	414	174.00	443264
56.00	5426	81.00	7761	128.00	1214	175.00	33736
57.00	9758	82.00	1511	129.00	176	176.00	426368
58.00	223	86.00	840	130.00	1754	177.00	28592
59.00	177	87.00	22056	131.00	273	178.00	1143
60.00	4362	88.00	21416	135.00	406	207.00	239
61.00	17880	91.00	1127	137.00	825	281.00	953
62.00	16904	92.00	12095	140.00	301	282.00	403
63.00	13123	93.00	19416	141.00	3514		

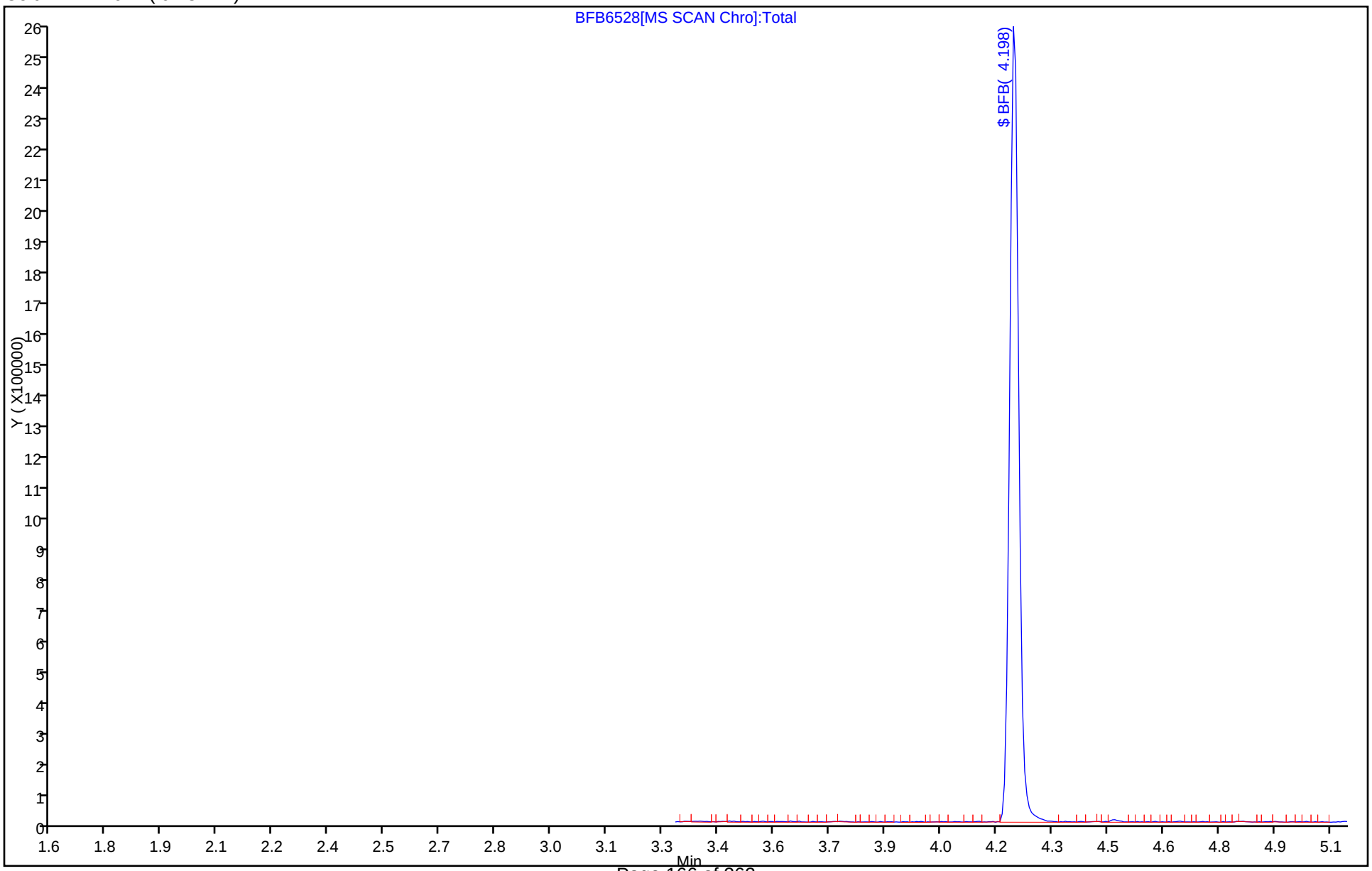
Report Date: 31-May-2016 12:57:20 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\BFB6528.D

Injection Date:	28-May-2016 08:28:30	Instrument ID:	A3UX11	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 27-Jun-2016 09:44:30 ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: J60627A,BFBUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:11 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 27-Jun-2016 10:52:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.198	4.198	0.000	0	1229845	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

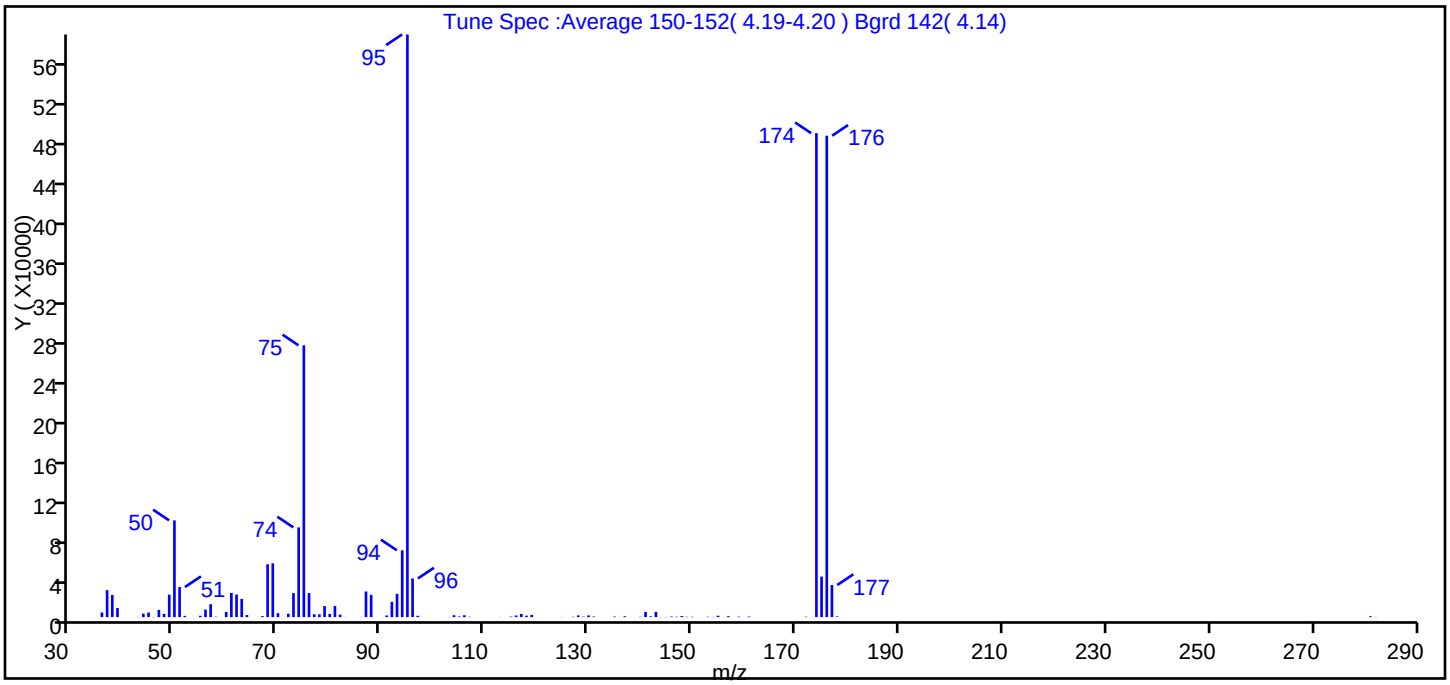
vmbfb_00016 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D
Injection Date: 27-Jun-2016 09:44:30 Instrument ID: A3UX11
Lims ID: BFB
Client ID:
Operator ID: 43582 ALS Bottle#: 3 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_11 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.6
75	30 to 60% of m/z 95	46.6
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	83.1
175	5 to 9% of m/z 174	7.0 (8.4)
176	Greater than 95% but less than 101% of m/z 174	82.6 (99.5)
177	5 to 9% of m/z 176	5.5 (6.7)

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D\8260_11.rslt\spectra.d
Injection Date: 27-Jun-2016 09:44:30
Spectrum: Tune Spec :Average 150-152(4.19-4.20) Bgrd 142(4.14)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4682	68.00	53280	97.00	1381	144.00	214
37.00	27216	69.00	54256	103.00	182	145.00	213
38.00	22352	70.00	3969	104.00	1939	146.00	620
39.00	9147	72.00	3456	105.00	677	147.00	426
43.00	228	73.00	24200	106.00	1879	148.00	1186
44.00	3540	74.00	90488	107.00	382	149.00	348
45.00	4656	75.00	274048	113.00	177	150.00	385
46.00	167	76.00	24240	115.00	543	153.00	380
47.00	7314	77.00	2902	116.00	1652	154.00	198
48.00	3378	78.00	2786	117.00	3262	155.00	1458
49.00	22656	79.00	11195	118.00	1547	157.00	977
50.00	97584	80.00	3276	119.00	2197	159.00	514
51.00	30336	81.00	11199	125.00	173	161.00	606
52.00	1286	82.00	2480	127.00	376	172.00	437
55.00	1371	83.00	171	128.00	1757	174.00	488000
56.00	7690	86.00	224	129.00	479	175.00	40880
57.00	13038	87.00	25888	130.00	1765	176.00	485376
58.00	411	88.00	22520	131.00	626	177.00	32400
60.00	5284	91.00	1645	135.00	590	178.00	739
61.00	24392	92.00	15427	137.00	897	281.00	921
62.00	22800	93.00	23536	140.00	376	282.00	196
63.00	18384	94.00	67360	141.00	5322		
64.00	2100	95.00	587456	142.00	799		
67.00	1046	96.00	39016	143.00	5327		

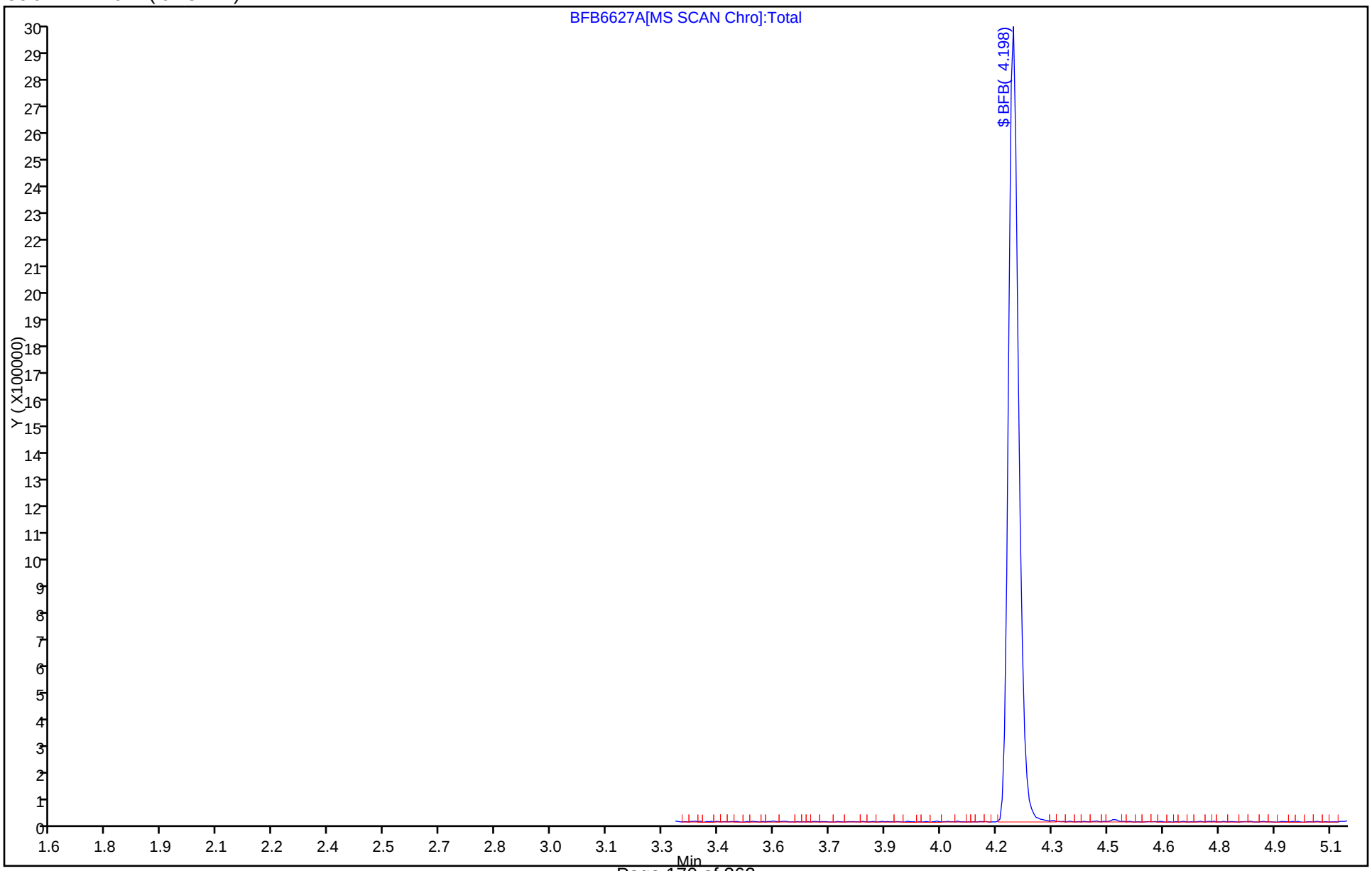
Report Date: 28-Jun-2016 10:20:13 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\BFB6627A.D

Injection Date:	27-Jun-2016 09:44:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-236061/6

Matrix: Water Lab File ID: UXJ5819.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 06/27/2016 12:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 236061 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	25	U	25	2.0
75-01-4	Vinyl chloride	1.0	U	1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	77		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Jun-2016 12:26:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-006
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 27-Jun-2016 14:44:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.115	5.115	0.000	99	1473316	10.0	10.0	
* 2 Chlorobenzene-d5	117	7.777	7.777	0.000	85	921655	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	94	289266	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	360951	12.0	11.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	98	413988	12.0	11.2	
$ 6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1506002	12.0	11.5	
$ 7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	90	366927	12.0	9.26	
122 Chlorodifluoromethane TIC	51		1.475					ND	
9 Dichlorodifluoromethane	85		1.506					ND	
10 Chloromethane	50		1.636					ND	
12 Vinyl chloride	62		1.731					ND	
11 Isobutylene TIC	1		1.750					ND	
13 Butadiene	54		1.754					ND	
15 Bromomethane	94		2.015					ND	
16 Chloroethane	64		2.098					ND	
17 Dichlorofluoromethane	67		2.251					ND	
18 Trichlorofluoromethane	101		2.299					ND	
19 Ethyl ether	59		2.524					ND	
20 Acrolein	56		2.630					ND	
21 1,1-Dichloroethene	96		2.725					ND	
22 1,1,2-Trichloro-1,2,2-trif	151		2.737					ND	
23 Acetone	43		2.760					ND	
24 Methylal	45		2.808					ND	
25 Iodomethane	142		2.855					ND	
26 Carbon disulfide	76		2.926					ND	
27 Acetonitrile	41		2.985					ND	
28 3-Chloro-1-propene	76		3.021					ND	
29 Methyl acetate	43		3.032					ND	
30 Methylene Chloride	84		3.115					ND	
31 2-Methyl-2-propanol	59		3.198					ND	
32 Acrylonitrile	53		3.305					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Methyl tert-butyl ether	73		3.340					ND	
34 trans-1,2-Dichloroethene	96		3.340					ND	
35 Hexane	86		3.565					ND	
36 1,1-Dichloroethane	63		3.683					ND	
37 Vinyl acetate	43		3.719					ND	
38 Isopropyl ether	87		3.731					ND	
39 2-Chloro-1,3-butadiene	53		3.766					ND	
40 Tert-butyl ethyl ether	59		4.026					ND	
41 cis-1,2-Dichloroethene	96		4.157					ND	
42 2-Butanone (MEK)	43		4.168					ND	
43 2,2-Dichloropropane	77		4.168					ND	
45 Ethyl acetate	43		4.204					ND	
44 Propionitrile	54		4.204					ND	
46 Methacrylonitrile	41		4.334					ND	
47 Chlorobromomethane	128		4.358					ND	
48 Tetrahydrofuran	42		4.405					ND	
49 Chloroform	83		4.417					ND	
50 1,1,1-Trichloroethane	97		4.583					ND	
51 Cyclohexane	56		4.630					ND	
52 1,1-Dichloropropene	75		4.713					ND	
53 Carbon tetrachloride	117		4.725					ND	
54 Isobutyl alcohol	41		4.772					ND	
55 Benzene	78		4.890					ND	
56 1,2-Dichloroethane	62		4.890					ND	
57 Tert-amyl methyl ether	73		4.973					ND	
58 n-Heptane	100		5.091					ND	
59 n-Butanol	56		5.328					ND	
60 Trichloroethene	130		5.423					ND	
61 Ethyl acrylate	55		5.482					ND	
62 Methylcyclohexane	83		5.600					ND	
63 1,2-Dichloropropane	63		5.612					ND	
64 Methyl methacrylate	41		5.683					ND	
65 Dibromomethane	93		5.707					ND	
66 1,4-Dioxane	88		5.718					ND	
67 Dichlorobromomethane	83		5.837					ND	
68 2-Nitropropane	41		6.026					ND	
69 2-Chloroethyl vinyl ether	63		6.085					ND	
70 cis-1,3-Dichloropropene	75		6.227					ND	
71 4-Methyl-2-pentanone (MIBK	43		6.357					ND	
72 Toluene	91	6.535	6.535	0.000	98	53403		0.3592	
73 trans-1,3-Dichloropropene	75		6.712					ND	
74 Ethyl methacrylate	69		6.783					ND	
75 1,1,2-Trichloroethane	97		6.878					ND	
76 Tetrachloroethene	164		7.020					ND	
77 1,3-Dichloropropane	76		7.032					ND	
78 2-Hexanone	43		7.091					ND	
79 n-Butyl acetate	43		7.210					ND	
81 Tetrahydrothiophene	60		7.245					ND	
80 Chlorodibromomethane	129		7.245					ND	
82 Ethylene Dibromide	107		7.351					ND	
83 1-Chlorohexane	91		7.777					ND	
84 Chlorobenzene	112		7.813					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 1,1,1,2-Tetrachloroethane	131		7.884					ND	
86 Ethylbenzene	106		7.908					ND	
87 m-Xylene & p-Xylene	106		8.014					ND	
88 o-Xylene	106		8.393					ND	
89 Styrene	104		8.405					ND	
90 Bromoform	173		8.582					ND	
91 Isopropylbenzene	105		8.748					ND	
93 1,4-Dichlorobutane	55		8.831					ND	
92 Cyclohexanone	55		8.831					ND	
94 1,1,2,2-Tetrachloroethane	83		9.020					ND	
95 Bromobenzene	156		9.044					ND	
96 1,2,3-Trichloropropane	110		9.067					ND	
97 trans-1,4-Dichloro-2-buten	53		9.079					ND	
98 N-Propylbenzene	120		9.138					ND	
99 2-Chlorotoluene	126		9.233					ND	
100 1,3,5-Trimethylbenzene	105		9.304					ND	
101 4-Chlorotoluene	126		9.328					ND	
102 tert-Butylbenzene	119		9.635					ND	
103 Pentachloroethane	167		9.659					ND	
104 1,2,4-Trimethylbenzene	105		9.683					ND	
105 sec-Butylbenzene	105		9.848					ND	
106 1,3-Dichlorobenzene	146		9.955					ND	
107 4-Isopropyltoluene	119		9.990					ND	
108 1,4-Dichlorobenzene	146		10.049					ND	
109 1,2,3-Trimethylbenzene	105		10.097					ND	
110 Benzyl chloride	126		10.180					ND	
111 n-Butylbenzene	91		10.392					ND	
112 1,2-Dichlorobenzene	146		10.416					ND	
113 1,3-Diethylbenzene TIC	1		10.500					ND	
114 1,2-Dibromo-3-Chloropropan	157		11.185					ND	
115 1,3,5-Trichlorobenzene	180		11.398					ND	
116 1,2,4-Trichlorobenzene	180		12.014					ND	
117 Hexachlorobutadiene	225		12.191					ND	
118 Naphthalene	128		12.262					ND	
119 1,2,3-Trichlorobenzene	180		12.511					ND	
120 2-Methylnaphthalene	142		13.540					ND	
126 Ethylene oxide	1		0.000					ND	
121 3-Ethyltoluene	1		0.000					ND	
123 2-Ethyltoluene	1		0.000					ND	
128 Propene oxide	1		0.000					ND	
127 Epichlorohydrin	1		0.000					ND	
S 130 1,2-Dichloroethene, Total	96		1.140					ND	
S 131 1,3-Dichloropropene, Total	75		6.760					ND	
S 132 Xylenes, Total	106		16.530					ND	
S 133 Trihalomethanes, Total	1		0.000					ND	
S 159 Total BTEX	1		0.000					ND	
T 134 Butyl Methacrylate TIC	1		8.925					ND	
T 135 Hexachloroethane TIC	1		10.774					ND	

Reagents:

VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

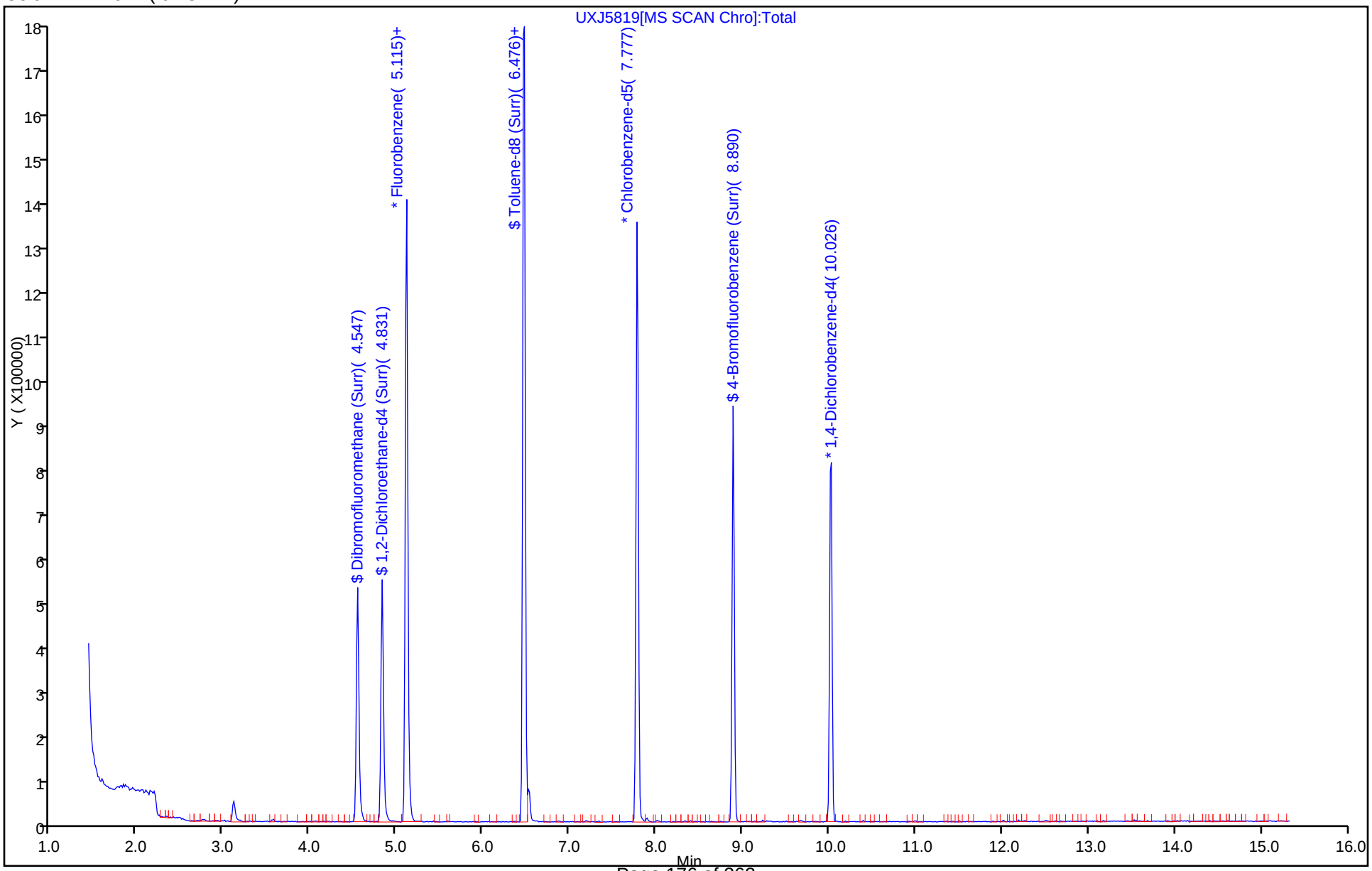
Report Date: 28-Jun-2016 10:20:50 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D

Injection Date:	27-Jun-2016 12:26:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5819.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 27-Jun-2016 12:26:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-006
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: evansle Date: 27-Jun-2016 14:44:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.0	91.82
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.2	93.97
$ 6 Toluene-d8 (Surr)	12.0	11.5	96.13
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.26	77.45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-236061/4

Matrix: Water Lab File ID: UXJ5817A.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 06/27/2016 11:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 236061 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
109-99-9	Tetrahydrofuran	19.1	J	25	2.0
75-01-4	Vinyl chloride	10.4		1.0	0.29

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		79-120
460-00-4	4-Bromofluorobenzene (Surr)	78		61-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		78-125

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Jun-2016 11:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-004
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.115	5.115	0.000	99	1576480	10.0	10.0	
*	2 Chlorobenzene-d5	117	7.778	7.777	0.001	85	946408	10.0	10.0	
*	3 1,4-Dichlorobenzene-d4	152	10.026	10.026	0.000	92	307979	10.0	10.0	
$	4 Dibromofluoromethane (Surr	113	4.547	4.547	0.000	96	387899	12.0	11.0	
$	5 1,2-Dichloroethane-d4 (Sur	65	4.831	4.831	0.000	97	460435	12.0	11.7	
$	6 Toluene-d8 (Surr)	98	6.476	6.476	0.000	92	1596419	12.0	11.9	
$	7 4-Bromofluorobenzene (Surr	95	8.890	8.890	0.000	91	377377	12.0	9.28	
	9 Dichlorodifluoromethane	85	1.506	1.506	0.000	99	227071	10.0	9.16	
	10 Chloromethane	50	1.636	1.636	0.000	99	388088	10.0	10.9	
	12 Vinyl chloride	62	1.731	1.731	0.000	97	391336	10.0	10.4	
	13 Butadiene	54	1.766	1.754	0.012	98	368201	10.0	10.4	
	15 Bromomethane	94	2.015	2.015	0.000	90	181683	10.0	10.5	
	16 Chloroethane	64	2.098	2.098	0.000	98	201642	10.0	11.3	
	17 Dichlorofluoromethane	67	2.252	2.251	0.001	97	473002	10.0	12.2	
	18 Trichlorofluoromethane	101	2.299	2.299	0.000	97	299001	10.0	11.0	
	19 Ethyl ether	59	2.524	2.524	0.000	90	365770	10.0	10.4	
	20 Acrolein	56	2.630	2.630	0.000	100	249716	50.0	50.1	
	21 1,1-Dichloroethene	96	2.725	2.725	0.000	98	367540	10.0	13.2	
	22 1,1,2-Trichloro-1,2,2-trif	151	2.737	2.737	0.000	91	211470	10.0	12.5	
	23 Acetone	43	2.760	2.760	0.000	100	152317	20.0	17.8	
	25 Iodomethane	142	2.867	2.855	0.012	97	484891	10.0	12.6	
	26 Carbon disulfide	76	2.926	2.926	0.000	99	1017583	10.0	14.2	
	28 3-Chloro-1-propene	76	3.021	3.021	0.000	91	303453	10.0	11.9	
	29 Methyl acetate	43	3.021	3.032	-0.011	97	1077731	50.0	50.8	
	30 Methylene Chloride	84	3.115	3.115	0.000	91	409353	10.0	12.3	
	31 2-Methyl-2-propanol	59	3.198	3.198	0.000	98	145559	100.0	70.2	
	32 Acrylonitrile	53	3.305	3.305	0.000	98	1120093	100.0	101.5	
	33 Methyl tert-butyl ether	73	3.340	3.340	0.000	95	1109227	10.0	10.6	
	34 trans-1,2-Dichloroethene	96	3.340	3.340	0.000	73	466848	10.0	11.3	
	35 Hexane	86	3.565	3.565	0.000	90	106191	10.0	12.0	
	36 1,1-Dichloroethane	63	3.683	3.683	0.000	96	771464	10.0	10.9	
	37 Vinyl acetate	43	3.719	3.719	0.000	97	675795	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	4.157	4.157	0.000	80	466995	10.0	10.7	
42 2-Butanone (MEK)	43	4.157	4.168	-0.011	59	230688	20.0	17.8	
43 2,2-Dichloropropane	77	4.168	4.168	0.000	88	342104	10.0	11.0	
47 Chlorobromomethane	128	4.358	4.358	0.000	94	212301	10.0	10.5	
48 Tetrahydrofuran	42	4.405	4.405	0.000	85	159361	20.0	19.1	
49 Chloroform	83	4.417	4.417	0.000	93	709933	10.0	11.2	
50 1,1,1-Trichloroethane	97	4.583	4.583	0.000	98	468260	10.0	10.9	
51 Cyclohexane	56	4.630	4.630	0.000	88	585419	10.0	12.2	
52 1,1-Dichloropropene	75	4.713	4.713	0.000	97	574282	10.0	10.6	
53 Carbon tetrachloride	117	4.725	4.725	0.000	96	379737	10.0	9.69	
54 Isobutyl alcohol	41	4.772	4.772	0.000	96	148501	250.0	263.3	
55 Benzene	78	4.890	4.890	0.000	95	1782877	10.0	10.7	
56 1,2-Dichloroethane	62	4.890	4.890	0.000	96	489973	10.0	11.0	
58 n-Heptane	100	5.091	5.091	0.000	90	91183	10.0	9.85	
60 Trichloroethene	130	5.423	5.423	0.000	96	437005	10.0	10.0	
62 Methylcyclohexane	83	5.600	5.600	0.000	91	537998	10.0	10.3	
63 1,2-Dichloropropane	63	5.612	5.612	0.000	97	415258	10.0	10.4	
65 Dibromomethane	93	5.707	5.707	0.000	93	206161	10.0	10.4	
66 1,4-Dioxane	88	5.719	5.718	0.001	30	30855	200.0	124.2	
67 Dichlorobromomethane	83	5.837	5.837	0.000	99	444951	10.0	9.63	
69 2-Chloroethyl vinyl ether	63	6.085	6.085	0.000	93	216322	10.0	9.44	
70 cis-1,3-Dichloropropene	75	6.227	6.227	0.000	97	601207	10.0	9.59	
71 4-Methyl-2-pentanone (MIBK	43	6.358	6.357	0.001	95	489151	20.0	18.5	
72 Toluene	91	6.523	6.535	-0.012	98	1736610	10.0	11.4	
73 trans-1,3-Dichloropropene	75	6.713	6.712	0.001	92	473946	10.0	10.4	
74 Ethyl methacrylate	69	6.784	6.783	0.001	89	430058	10.0	10.8	
75 1,1,2-Trichloroethane	97	6.878	6.878	0.000	89	298669	10.0	11.0	
76 Tetrachloroethene	164	7.020	7.020	0.000	97	295810	10.0	10.2	
77 1,3-Dichloropropane	76	7.032	7.032	0.000	91	534478	10.0	10.8	
78 2-Hexanone	43	7.091	7.091	0.000	96	332870	20.0	19.8	
80 Chlorodibromomethane	129	7.245	7.245	0.000	90	285710	10.0	10.1	
82 Ethylene Dibromide	107	7.352	7.351	0.001	98	276983	10.0	10.7	
84 Chlorobenzene	112	7.813	7.813	0.000	95	928545	10.0	9.96	
85 1,1,1,2-Tetrachloroethane	131	7.884	7.884	0.000	95	288201	10.0	9.49	
86 Ethylbenzene	106	7.908	7.908	0.000	98	503833	10.0	10.1	
87 m-Xylene & p-Xylene	106	8.014	8.014	0.000	97	615247	10.0	10.1	
88 o-Xylene	106	8.393	8.393	0.000	95	551548	10.0	9.47	
89 Styrene	104	8.405	8.405	0.000	94	962794	10.0	9.56	
90 Bromoform	173	8.582	8.582	0.000	97	138664	10.0	9.30	
91 Isopropylbenzene	105	8.748	8.748	0.000	95	1229287	10.0	9.19	
94 1,1,2,2-Tetrachloroethane	83	9.020	9.020	0.000	92	232335	10.0	10.9	
95 Bromobenzene	156	9.044	9.044	0.000	94	304358	10.0	10.7	
96 1,2,3-Trichloropropane	110	9.067	9.067	0.000	83	80398	10.0	11.8	
97 trans-1,4-Dichloro-2-buten	53	9.079	9.079	0.000	73	70509	10.0	14.0	
98 N-Propylbenzene	120	9.138	9.138	0.000	99	301827	10.0	11.0	
99 2-Chlorotoluene	126	9.233	9.233	0.000	97	262558	10.0	10.8	
100 1,3,5-Trimethylbenzene	105	9.304	9.304	0.000	94	770498	10.0	10.1	
101 4-Chlorotoluene	126	9.328	9.328	0.000	98	267042	10.0	10.4	
102 tert-Butylbenzene	119	9.635	9.635	0.000	90	614031	10.0	9.61	
104 1,2,4-Trimethylbenzene	105	9.683	9.683	0.000	95	774739	10.0	10.2	
105 sec-Butylbenzene	105	9.848	9.848	0.000	93	818078	10.0	9.92	
106 1,3-Dichlorobenzene	146	9.955	9.955	0.000	97	424855	10.0	9.78	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 4-Isopropyltoluene	119	9.990	9.990	0.000	98	685144	10.0	9.77	
108 1,4-Dichlorobenzene	146	10.049	10.049	0.000	96	446503	10.0	10.1	
111 n-Butylbenzene	91	10.393	10.392	0.001	97	530977	10.0	10.5	
112 1,2-Dichlorobenzene	146	10.416	10.416	0.000	98	393152	10.0	10.1	
114 1,2-Dibromo-3-Chloropropan	157	11.185	11.185	0.000	87	34978	10.0	11.0	
116 1,2,4-Trichlorobenzene	180	12.014	12.014	0.000	94	247364	10.0	13.2	
117 Hexachlorobutadiene	225	12.191	12.191	0.000	95	93338	10.0	12.2	
118 Naphthalene	128	12.262	12.262	0.000	97	639900	10.0	13.9	
119 1,2,3-Trichlorobenzene	180	12.511	12.511	0.000	95	216954	10.0	12.5	
S 132 Xylenes, Total	106				0		20.0	19.6	
S 133 Trihalomethanes, Total	1				0		40.0	40.3	

Reagents:

VMFASAW_00144	Amount Added:	8.00	Units: uL	
VMFASPW_00160	Amount Added:	8.00	Units: uL	
VMFASGW_00161	Amount Added:	8.00	Units: uL	
VM50IS_00055	Amount Added:	1.00	Units: uL	Run Reagent
vm50ss_stk_00069	Amount Added:	1.20	Units: uL	Run Reagent
vmDist_H2o_00071	Amount Added:	0.00	Units:	Run Reagent

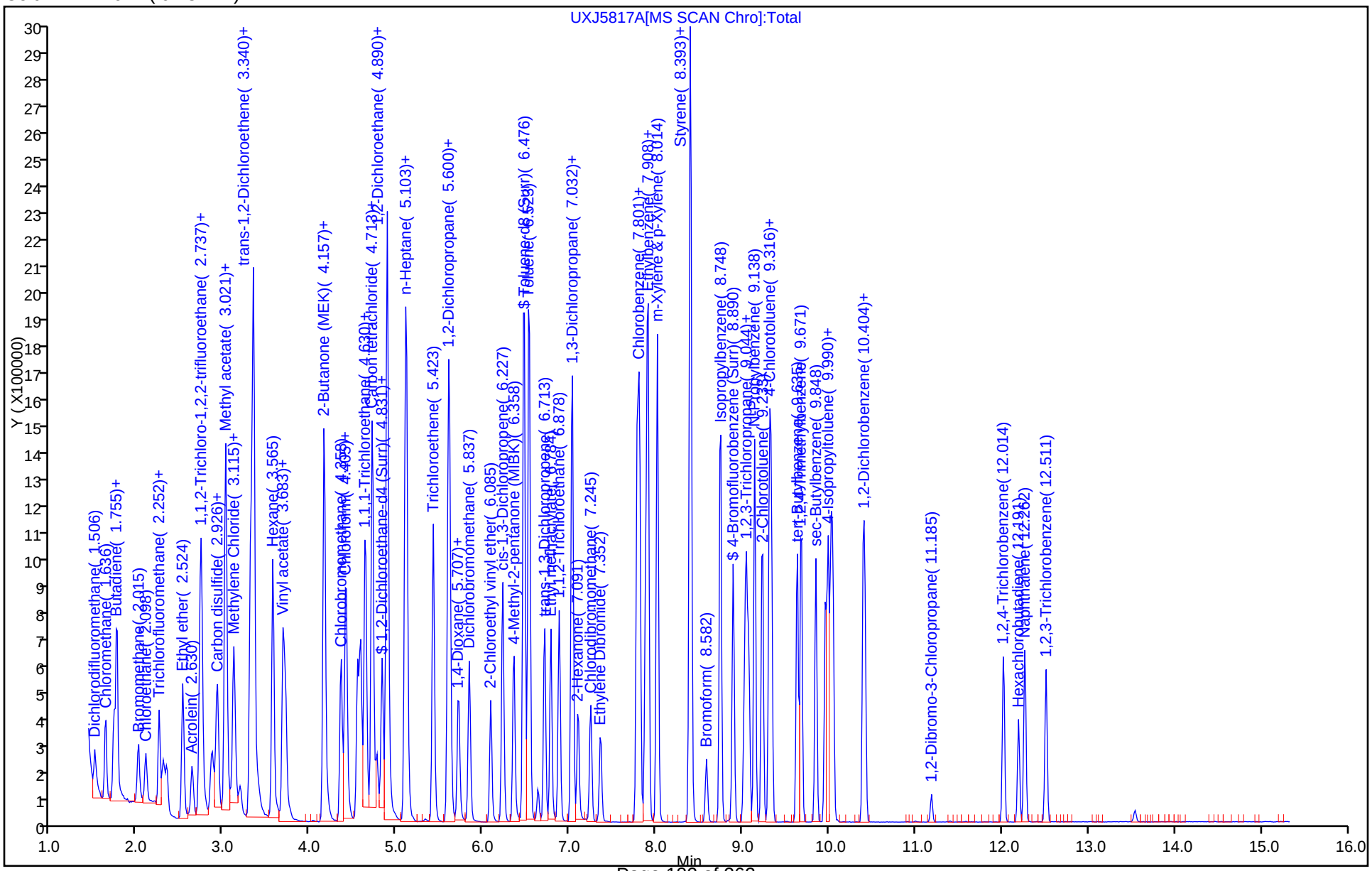
Report Date: 28-Jun-2016 10:20:38 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D

Injection Date:	27-Jun-2016 11:40:30	Instrument ID:	A3UX11	Operator ID:	43582
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_11	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\UXJ5817A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Jun-2016 11:40:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0055771-004
Misc. Info.: J60627A,8260LLUX11,,43582
Operator ID: 43582 Instrument ID: A3UX11

Method: \\ChromNA\Canton\ChromData\A3UX11\20160627-55771.b\8260_11.m
Limit Group: MSV 8260C ICAL
Last Update: 28-Jun-2016 10:20:30 Calib Date: 28-May-2016 13:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX11\20160528-54939.b\UXJ4951.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	12.0	11.0	92.21
$ 5 1,2-Dichloroethane-d4 (Surr)	12.0	11.7	97.67
$ 6 Toluene-d8 (Surr)	12.0	11.9	99.24
$ 7 4-Bromofluorobenzene (Surr)	12.0	9.28	77.57

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Instrument ID: A3UX11 Start Date: 05/28/2016 08:28

Analysis Batch Number: 232366 End Date: 05/28/2016 14:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-232366/1		05/28/2016 08:28	1	BFB6528.D	DB-624 0.18(mm)
STD8260 240-232366/2 IC		05/28/2016 09:12	1	UXJ4939.D	DB-624 0.18(mm)
STD8260 240-232366/3 IC		05/28/2016 09:34	1	UXJ4940.D	DB-624 0.18(mm)
STD8260 240-232366/4 ICIS		05/28/2016 09:56	1	UXJ4941.D	DB-624 0.18(mm)
STD8260 240-232366/5 IC		05/28/2016 10:19	1	UXJ4942.D	DB-624 0.18(mm)
STD8260 240-232366/6 IC		05/28/2016 10:40	1	UXJ4943.D	DB-624 0.18(mm)
STD8260 240-232366/7 IC		05/28/2016 11:03	1	UXJ4944.D	DB-624 0.18(mm)
ICV 240-232366/14		05/28/2016 11:25	1	UXJ4945.D	DB-624 0.18(mm)
STD6 240-232366/8 IC		05/28/2016 11:48	1		DB-624 0.18(mm)
STD5 240-232366/9 IC		05/28/2016 12:10	1		DB-624 0.18(mm)
STD4 240-232366/10 IC		05/28/2016 12:33	1		DB-624 0.18(mm)
STD3 240-232366/11 IC		05/28/2016 12:56	1		DB-624 0.18(mm)
STD2 240-232366/12 IC		05/28/2016 13:18	1		DB-624 0.18(mm)
STD1 240-232366/13 IC		05/28/2016 13:41	1		DB-624 0.18(mm)
ICV 240-232366/15		05/28/2016 14:03	1	UXJ4952.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Instrument ID: A3UX11 Start Date: 06/27/2016 09:44

Analysis Batch Number: 236061 End Date: 06/27/2016 21:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-236061/1		06/27/2016 09:44	1	BFB6627A.D	DB-624 0.18(mm)
CCVIS 240-236061/2		06/27/2016 10:32	1	UXJ5814A.D	DB-624 0.18(mm)
CCV 240-236061/3		06/27/2016 11:18	1	UXJ5816A.D	DB-624 0.18(mm)
LCS 240-236061/4		06/27/2016 11:40	1	UXJ5817A.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 12:03	1		DB-624 0.18(mm)
MB 240-236061/6		06/27/2016 12:26	1	UXJ5819.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 12:48	333.33		DB-624 0.18(mm)
ZZZZZ		06/27/2016 14:19	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 14:42	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:05	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:27	166.67		DB-624 0.18(mm)
ZZZZZ		06/27/2016 15:50	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:12	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:35	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 16:58	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 17:21	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 17:43	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 19:14	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 19:36	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 19:59	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 20:22	1		DB-624 0.18(mm)
ZZZZZ		06/27/2016 20:44	1		DB-624 0.18(mm)
240-66155-1		06/27/2016 21:07	1	UXJ5842.D	DB-624 0.18(mm)
ZZZZZ		06/27/2016 21:29	1		DB-624 0.18(mm)

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-66155-1

SDG No.:

Project: RAAP, Radford VA - HWMU16

Client Sample ID	Lab Sample ID
16WDUP2	240-66155-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 16WDUP2 Lab Sample ID: 240-66155-2

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG ID.:

Matrix: Water Date Sampled: 06/16/2016 13:50

Reporting Basis: WET Date Received: 06/17/2016 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	4.8	5.0	1.0	ug/L	J		1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

ICV Source: MTMSICVW_00068 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00168

Analyte	ICV 240-235476/7 06/21/2016 10:35				CCV 240-235476/12 06/21/2016 10:56				CCV 240-235476/24 06/21/2016 11:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	39.9		40.0	100	50.3		50.0	101	50.3		50.0	101
Arsenic	40.9		40.0	102	51.4		50.0	103	51.6		50.0	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

ICV Source: MTMSICVW_00068 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00168

Analyte	CCV 240-235476/36 06/21/2016 12:40				CCV 240-235476/46 06/21/2016 13:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	50.0		50.0	100	49.7		50.0	99				
Arsenic	51.0		50.0	102	51.4		50.0	103				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Method: 6020A Instrument ID: I10

Lab Sample ID: CRI 240-235476/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	1.00	1.01		101	70-130

Lab Sample ID: CRI 240-235476/48 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00038

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	1.00	1.00		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-235476/8 06/21/2016 10:39		CCB 240-235476/13 06/21/2016 11:00		CCB 240-235476/25 06/21/2016 11:55		CCB 240-235476/37 06/21/2016 12:44	
		Found	C	Found	C	Found	C	Found	C
Cobalt	1.0	1.0	U	1.0	U	0.0280	J	1.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-235476/47 06/21/2016 13:25							
		Found	C	Found	C	Found	C	Found	C
Cobalt	1.0	1.0	U						
Arsenic	5.0	5.0	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-235182/1-A

Instrument Code: I10 Batch No.: 235476

CAS No.	Analyte	Concentration	C	Q	Method
7440-48-4	Cobalt	5.0	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: ICSA 240-235476/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00069

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Cobalt		**0.0190**	
Aluminum	*50000*	*51034*	*102*
Antimony		*0.0340*	
Arsenic		*0.0460*	
Barium		*0.0380*	
Beryllium		*0.0130*	
Boron		*1.91*	
Cadmium		*0.0060*	
Calcium	*50000*	*49430*	*99*
Chromium		*1.03*	
Copper		*0.434*	
Iron	*50000*	*49279*	*99*
Lead		*0.113*	
Lithium		*0.0410*	
Magnesium	*50000*	*49552*	*99*
Manganese		*0.314*	
Molybdenum	*1000*	*1020*	*102*
Nickel		*0.267*	
Potassium	*50000*	*48927*	*98*
Selenium		*0.0930*	
Silver		*0.0170*	
Sodium	*50000*	*49459*	*99*
Strontium		*0.241*	
Thallium		*0.0060*	
Tin		*-2.97*	
Titanium	*1000*	*1013*	*101*
Tungsten		*0.155*	
Vanadium		*0.164*	
Zinc		*0.716*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Lab Sample ID: ICSAB 240-235476/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00068

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Cobalt	**100**	**99.1**	**99**
Aluminum	*50000*	*50878*	*102*
Antimony	*100*	*98.4*	*98*
Arsenic	*100*	*104*	*104*
Barium	*100*	*98.9*	*99*
Beryllium	*100*	*96.8*	*97*
Boron	*100*	*103*	*103*
Cadmium	*100*	*99.1*	*99*
Calcium	*50000*	*49454*	*99*
Chromium	*100*	*98.3*	*98*
Copper	*100*	*98.8*	*99*
Iron	*50000*	*49239*	*98*
Lead	*100*	*98.4*	*98*
Lithium	*100*	*96.4*	*96*
Magnesium	*50000*	*49736*	*99*
Manganese	*100*	*99.3*	*99*
Molybdenum	*1100*	*1135*	*103*
Nickel	*100*	*99.1*	*99*
Potassium	*50000*	*49465*	*99*
Selenium	*100*	*101*	*101*
Silver	*100*	*102*	*102*
Sodium	*50000*	*49841*	*100*
Strontium	*100*	*100*	*100*
Thallium	*100*	*97.1*	*97*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1109*	*101*
Tungsten	*100*	*99.8*	*100*
Vanadium	*100*	*98.8*	*99*
Zinc	*100*	*99.6*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-235182/2-A

Lab Name: TestAmerica Canton Job No.: 240-66155-1

Sample Matrix: Water LCS Source: MTICPMSA_00027

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Cobalt	1000	964		96	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-66155-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A MDL Date: 06/17/2016 14:11

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Cobalt	59.00	5	1

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-66155-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 09/15/2014 17:03

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cobalt	59.00	1	0.021

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-66155-1

SDG No.:

Instrument ID: I10 Date: 04/12/2016 14:53

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Cobalt		5000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-235182/1-A	06/20/2016 11:14	235182		50	50
LCS 240-235182/2-A	06/20/2016 11:14	235182		50	50
240-66155-2	06/20/2016 11:14	235182		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			10:11	
ICIS 240-235476/2	1		10:15	X
STD1 240-235476/3 IC	1		10:19	X
STD2 240-235476/4 IC	1		10:23	X
STD3 240-235476/5 IC	1		10:27	X
STD4 240-235476/6 IC	1		10:31	X
ICV 240-235476/7	1		10:35	X
ICB 240-235476/8	1		10:39	X
CRI 240-235476/9	1		10:43	X
ICSA 240-235476/10	1		10:48	X
ICSAB 240-235476/11	1		10:52	X
CCV 240-235476/12	1		10:56	X
CCB 240-235476/13	1		11:00	X
ZZZZZZ			11:11	
ZZZZZZ			11:15	
MB 240-235182/1-A	1	R	11:19	X
LCS 240-235182/2-A	1	R	11:23	X
ZZZZZZ			11:27	
ZZZZZZ			11:31	
ZZZZZZ			11:35	
ZZZZZZ			11:39	
ZZZZZZ			11:43	
ZZZZZZ			11:47	
CCV 240-235476/24	1		11:51	X
CCB 240-235476/25	1		11:55	X
ZZZZZZ			11:59	
ZZZZZZ			12:03	
ZZZZZZ			12:08	
ZZZZZZ			12:12	
ZZZZZZ			12:16	
ZZZZZZ			12:20	
ZZZZZZ			12:24	
ZZZZZZ			12:28	
ZZZZZZ			12:32	
ZZZZZZ			12:36	
CCV 240-235476/36	1		12:40	X
CCB 240-235476/37	1		12:44	X
ZZZZZZ			12:48	
ZZZZZZ			12:53	
ZZZZZZ			12:57	
ZZZZZZ			13:01	
ZZZZZZ			13:05	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			13:09	
ZZZZZZ			13:13	
240-66155-2	1	R	13:17	X
CCV 240-235476/46	1		13:21	X
CCB 240-235476/47	1		13:25	X
CRI 240-235476/48	1		13:29	X
ZZZZZZ			13:34	
ZZZZZZ			13:38	
ZZZZZZ			13:42	
ZZZZZZ			13:46	
ZZZZZZ			13:50	
ZZZZZZ			13:54	
ZZZZZZ			13:58	
ZZZZZZ			14:02	
ZZZZZZ			14:06	
CCV 240-235476/58			14:10	
CCB 240-235476/59			14:14	
ZZZZZZ			14:18	
ZZZZZZ			14:22	
ZZZZZZ			14:26	
ZZZZZZ			14:30	
ZZZZZZ			14:35	
ZZZZZZ			14:38	
ZZZZZZ			14:42	
ZZZZZZ			14:46	
ZZZZZZ			14:50	
ZZZZZZ			14:54	
CCV 240-235476/70			14:58	
CCB 240-235476/71			15:02	
ZZZZZZ			15:07	
ZZZZZZ			15:11	
ZZZZZZ			15:15	
ZZZZZZ			15:19	
ZZZZZZ			15:23	
ZZZZZZ			15:27	
ZZZZZZ			15:31	
ZZZZZZ			15:35	
ZZZZZZ			15:39	
ZZZZZZ			15:43	
CCV 240-235476/82			15:47	
CCB 240-235476/83			15:51	
ZZZZZZ			15:55	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 06/21/2016 10:11 End Date: 06/21/2016 18:09

Lab Sample Id	D/F	Type	Time	Analytes
				Co
ZZZZZZ			15:59	
ZZZZZZ			16:04	
ZZZZZZ			16:08	
ZZZZZZ			16:12	
ZZZZZZ			16:16	
ZZZZZZ			16:20	
ZZZZZZ			16:23	
ZZZZZZ			16:27	
ZZZZZZ			16:31	
CCV 240-235476/94			16:35	
CCB 240-235476/95			16:39	
ZZZZZZ			16:43	
ZZZZZZ			16:47	
ZZZZZZ			16:52	
ZZZZZZ			16:56	
ZZZZZZ			17:00	
ZZZZZZ			17:04	
ZZZZZZ			17:08	
ZZZZZZ			17:12	
ZZZZZZ			17:16	
ZZZZZZ			17:20	
CCV 240-235476/106			17:24	
CCB 240-235476/107			17:28	
ZZZZZZ			17:32	
ZZZZZZ			17:36	
ZZZZZZ			17:40	
ZZZZZZ			17:44	
ZZZZZZ			17:49	
ZZZZZZ			17:53	
ZZZZZZ			17:57	
ZZZZZZ			18:01	
CCV 240-235476/116			18:05	
CCB 240-235476/117			18:09	

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 06/21/2016 End Date: 06/21/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
ICIS 240-235476/2	10:15	100		100		100		100		100	
STD1 240-235476/3 I	10:19	99		99		99		97		100	
STD2 240-235476/4 I	10:23	97		97		99		94		96	
STD3 240-235476/5 I	10:27	97		97		99		94		95	
STD4 240-235476/6 I	10:31	95		99		98		96		98	
ICV 240-235476/7	10:35	97		100		100		95		98	
ICB 240-235476/8	10:39	99		101		101		98		101	
CRI 240-235476/9	10:43	98		101		101		99		100	
ICSA 240-235476/10	10:48	104		100		105		93		96	
ICSAB 240-235476/11	10:52	103		106		111		97		101	
CCV 240-235476/12	10:56	103		108		109		102		103	
CCB 240-235476/13	11:00	103		108		105		104		104	
MB 240-235182/1-A	11:19	102		104		103		103		101	
LCS 240-235182/2-A	11:23	101		105		105		99		98	
CCV 240-235476/24	11:51	105		108		110		101		102	
CCB 240-235476/25	11:55	106		108		109		104		103	
CCV 240-235476/36	12:40	106		103		106		97		98	
CCB 240-235476/37	12:44	105		104		107		103		102	
240-66155-2	13:17	112		104		111		97		99	
CCV 240-235476/46	13:21	110		105		110		98		100	
CCB 240-235476/47	13:25	110		103		109		102		102	
CRI 240-235476/48	13:29	111		104		109		102		101	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-66155-1

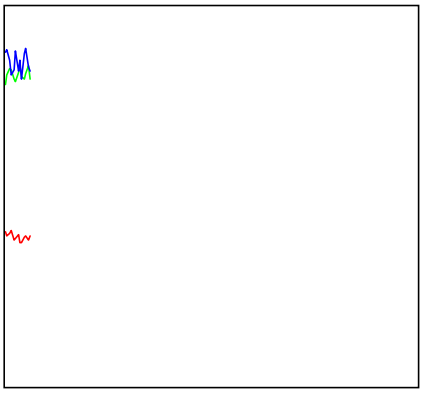
SDG No.:

ICP-MS Instrument ID: I10 Start Date: 06/21/2016 End Date: 06/21/2016

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
ICIS 240-235476/2	10:15	100		100		100					
STD1 240-235476/3 I	10:19	98		99		98					
STD2 240-235476/4 I	10:23	100		97		94					
STD3 240-235476/5 I	10:27	100		97		91					
STD4 240-235476/6 I	10:31	97		97		97					
ICV 240-235476/7	10:35	99		98		95					
ICB 240-235476/8	10:39	99		98		97					
CRI 240-235476/9	10:43	99		98		98					
ICSA 240-235476/10	10:48	98		96		92					
ICSAB 240-235476/11	10:52	101		101		95					
CCV 240-235476/12	10:56	101		98		95					
CCB 240-235476/13	11:00	99		99		98					
MB 240-235182/1-A	11:19	98		98		98					
LCS 240-235182/2-A	11:23	99		98		94					
CCV 240-235476/24	11:51	100		100		95					
CCB 240-235476/25	11:55	100		101		98					
CCV 240-235476/36	12:40	98		99		94					
CCB 240-235476/37	12:44	99		100		98					
240-66155-2	13:17	100		98		95					
CCV 240-235476/46	13:21	101		100		95					
CCB 240-235476/47	13:25	99		100		97					
CRI 240-235476/48	13:29	101		99		98					

Current Signal

[NoGas]



Mass	Range	Count	Avg. Count	RSD [%]
7	5000	1977	1964.4	2.68
89	5000	4049	4104.3	1.94
205	2000	1664	1707.3	3.22
156/140	1	0.560 %	0.600 %	23.52
11	500	347	374.9	6.32
63	500	399	400.7	5.01
45	200	124	112.2	12.25
52	5000	2754	2728.0	3.26
Integration Time [sec]		0.10		

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	14.0	V
Extract 2	-200.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

Meters

IF/BK Press	2.33E+2	Pa	Carrier Gas	0.55	L/min	Forward Power	1600	W
Analyzer Press	1.08E-4	Pa	Reflected Power	4	W			

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Current Signal

[He]

Mass	Range	Count	Avg. Count	RSD [%]
59	1000	728	777.3	4.70
51	200	78	98.9	15.48
52	200	127	136.2	9.64
51/59	20	10.712 %	12.760 %	16.52
63	200	106	120.1	12.82
65	100	69	64.0	13.43
Integration Time [sec]			0.10	

Tune Parameters

Plasma Parameters

RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	3.4	V
Extract 2	-200.0	V	Cell Entrance	-60	V	Plate Bias	-70	V
Omega Bias	-75	V	Cell Exit	-70	V			

Cell Parameters

Use Gas	true		3rd Gas Flow	0	%	Energy Discrimination	6.8	V
He Flow	4.3	mL/min	OctP Bias	-22.3	V			
H2 Flow	0.0	mL/min	OctP RF	190	V			

Meters

IF/BK Press	2.34E+2	Pa	Carrier Gas	0.55	L/min	Forward Power	1599	W
Analyzer Press	1.99E-4	Pa	Reflected Power	4	W			

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US EPA Tune Check Sample Report

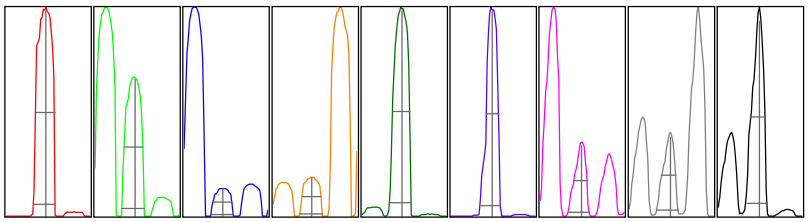
Batch Folder D:\Analytical Runs\I10062116A.b
Report Comment
Instrument Name I10 JP12452145

[NoGas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	32225	0.18	5.00	
24	136992	0.33	5.00	
25	18386	0.59	5.00	
26	21932	1.11	5.00	
59	155510	0.44	5.00	
115	151511	0.41	5.00	
206	25996	0.39	5.00	
207	22638	0.83	5.00	
208	54485	0.40	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	32165	32258	32297	32235	32172
24	137322	136619	137379	136410	137230
25	18424	18499	18458	18237	18310
26	21718	21644	22223	22020	22055
59	155352	154917	155387	155218	156677
115	150672	151646	152048	152093	151098
206	26028	26109	25834	25994	26015
207	22704	22840	22622	22689	22335
208	54410	54562	54721	54145	54588

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
9	5136	8.95	8.9 - 9.1		0.776	0.850	
24	22037	23.95	23.9 - 24.1		0.787	0.850	
25	2937	24.90	24.9 - 25.1		0.787	0.850	
26	3388	25.90	25.9 - 26.1		0.788	0.850	
59	26562	58.95	58.9 - 59.1		0.774	0.850	
115	31565	115.00	114.9 - 115.1		0.721	0.850	
206	5336	206.00	205.9 - 206.1		0.749	0.850	
207	4451	207.00	206.9 - 207.1		0.751	0.850	
208	11022	208.00	207.9 - 208.1		0.757	0.850	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 235 **Y Axis =** Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.55	L/min	S/C Temp	2	℃
RF Matching	1.60	V	Option Gas	0.0	%	Gas Switch	Dilution Gas	
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.55	L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	-18.0	V	Omega Lens	8.2	V	Deflect	14.0	V
Extract 2	-200.0	V	Cell Entrance	-30	V	Plate Bias	-40	V
Omega Bias	-75	V	Cell Exit	-50	V			

Cell Parameters

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US EPA Tune Check Sample Report

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	false		3rd Gas Flow	0	%	Energy Discrimination	4.0	V
ParameterName	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**	**ParameterName**	**Value**	**Unit**
He Flow	0.0	mL/min	OctP Bias	-8.0	V			
H2 Flow	0.0	mL/min	OctP RF	160	V			

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Calibration Blank Report

Sample Table

Sample Name	Blank
Data File Name	001CALB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:11:11-04:00
Sample Type	CalBlk
Level	
Dilution	1
Comment	6020/200.8

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	97360	0.00
Be	9	45	2	NoGas	52	47.71
B	11	45	2	NoGas	4719	0.10
Na	23	45	1	He	12664	0.04
Mg	24	45	1	He	478	2.96
Al	27	45	1	He	230	2.27
K	39	45	1	He	25140	0.01
Ca	44	45	1	He	299	6.21
Ti	47	45	1	He	4	1947.58
V	51	45	1	He	529	17.08
Cr	52	45	1	He	3186	0.12
Mn	55	45	1	He	494	1.59
Fe	56	45	1	He	2595	0.27
Co	59	45	1	He	66	46.75
Ni	60	45	1	He	201	8.81
Cu	63	45	1	He	2874	0.11
Zn	66	45	1	He	503	0.95
As	75	115	1	He	124	9.61
Se	78	115	1	He	20	18.97
Sr	88	103	1	He	50	46.18
Mo	95	103	1	He	28	274.40
Ag	107	103	1	He	22	169.94
Cd	111	115	1	He	3	2910.62
Sn	118	115	1	He	6898	0.06
Sb	123	115	1	He	41	88.92
Ba	137	115	1	He	26	206.34
W	182	159	1	He	1711	0.53
Tl	205	165	1	He	67	34.37
Pb	208	165	1	He	649	1.90

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1668272	1.19
Sc	45	1	He	351001	1.68
Sc	45	2	NoGas	8935902	1.76
Rh	103	1	He	1471668	1.04
In	115	1	He	491753	1.42
Tb	159	1	He	1396589	3.35
Ho	165	1	He	1397235	1.18
Bi	209	1	He	916058	0.97

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Calibration Blank Report

Sample Table

Sample Name	ICIS
Data File Name	002CALB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:15:17-04:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	2	NoGas	97455	0.00
Be	9	45	2	NoGas	41	215.17
B	11	45	2	NoGas	4812	0.15
Na	23	45	1	He	13398	0.06
Mg	24	45	1	He	419	7.32
Al	27	45	1	He	207	8.11
K	39	45	1	He	24936	0.01
Ca	44	45	1	He	282	6.67
Ti	47	45	1	He	1	15604.06
V	51	45	1	He	485	5.92
Cr	52	45	1	He	3420	0.28
Mn	55	45	1	He	513	1.74
Fe	56	45	1	He	2338	0.34
Co	59	45	1	He	71	16.59
Ni	60	45	1	He	228	7.05
Cu	63	45	1	He	2766	0.08
Zn	66	45	1	He	554	0.53
As	75	115	1	He	124	6.58
Se	78	115	1	He	24	23.03
Sr	88	103	1	He	222	55.84
Mo	95	103	1	He	23	106.01
Ag	107	103	1	He	23	106.01
Sn	118	115	1	He	6709	0.04
Sb	123	115	1	He	36	99.81
Ba	137	115	1	He	19	470.26
W	182	159	1	He	1419	0.59
Tl	205	165	1	He	41	69.26
Pb	208	165	1	He	521	0.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	2	NoGas	1674650	0.34
Sc	45	1	He	355173	0.69
Sc	45	2	NoGas	8635903	0.47
Rh	103	1	He	1470259	0.96
In	115	1	He	490642	0.43
Tb	159	1	He	1434034	2.64
Ho	165	1	He	1409606	1.06
Bi	209	1	He	906964	0.24

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Calibration Standard Report

Sample Table

Sample Name	STD1-2569623
Data File Name	003CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:19:23-04:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	274671	0.00
Be	9	2	NoGas	50744	0.00
B	11	2	NoGas	38285	0.00
Na	23	1	He	4708911	0.00
Mg	24	1	He	2541914	0.00
Al	27	1	He	13616	0.01
K	39	1	He	1513940	0.00
Ca	44	1	He	81498	0.00
Ti	47	1	He	1036	0.42
V	51	1	He	37314	0.01
Cr	52	1	He	47284	0.00
Mn	55	1	He	116371	0.00
Fe	56	1	He	8502763	0.00
Co	59	1	He	72202	0.00
Ni	60	1	He	19864	0.01
Cu	63	1	He	57916	0.00
Zn	66	1	He	7434	0.07
As	75	1	He	4833	0.03
Se	78	1	He	278	0.65
Sr	88	1	He	23937	0.01
Mo	95	1	He	22151	0.01
Ag	107	1	He	70158	0.00
Cd	111	1	He	8500	0.00
Sn	118	1	He	18444	0.02
Sb	123	1	He	18510	0.01
Ba	137	1	He	7426	0.03
W	182	1	He	53273	0.00
Tl	205	1	He	95752	0.00
Pb	208	1	He	131539	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656716	2.12	1674650	98.93	60	120	
Sc	45	1	He	350299	1.07	355173	98.63	60	120	
Sc	45	2	NoGas	8529861	0.90	8635903	98.77	60	120	
Rh	103	1	He	1425404	0.55	1470259	96.95	60	120	
In	115	1	He	488266	0.80	490642	99.52	60	120	
Tb	159	1	He	1401760	0.76	1434034	97.75	60	120	
Ho	165	1	He	1392954	0.19	1409606	98.82	60	120	
Bi	209	1	He	889127	0.27	906964	98.03	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD2-2549639
Data File Name	004CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:23:28-04:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	989583	0.00
Be	9	2	NoGas	256574	0.00
B	11	2	NoGas	158292	0.00
Na	23	1	He	22986794	0.00
Mg	24	1	He	12486187	0.00
Al	27	1	He	51910	0.00
K	39	1	He	7337184	0.00
Ca	44	1	He	398611	0.00
Ti	47	1	He	5512	0.04
V	51	1	He	182426	0.00
Cr	52	1	He	218306	0.00
Mn	55	1	He	569784	0.00
Fe	56	1	He	41307834	0.00
Co	59	1	He	352006	0.00
Ni	60	1	He	96124	0.00
Cu	63	1	He	267621	0.00
Zn	66	1	He	35121	0.00
As	75	1	He	23428	0.01
Se	78	1	He	1299	0.18
Sr	88	1	He	117759	0.00
Mo	95	1	He	110718	0.00
Ag	107	1	He	340079	0.00
Cd	111	1	He	41815	0.00
Sn	118	1	He	87572	0.00
Sb	123	1	He	94449	0.00
Ba	137	1	He	36288	0.00
W	182	1	He	264076	0.00
Tl	205	1	He	471890	0.00
Pb	208	1	He	640398	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1624660	1.18	1674650	97.01	60	120	
Sc	45	1	He	344620	0.26	355173	97.03	60	120	
Sc	45	2	NoGas	8554359	0.70	8635903	99.06	60	120	
Rh	103	1	He	1387189	1.42	1470259	94.35	60	120	
In	115	1	He	471537	0.55	490642	96.11	60	120	
Tb	159	1	He	1426317	2.25	1434034	99.46	60	120	
Ho	165	1	He	1371276	0.67	1409606	97.28	60	120	
Bi	209	1	He	851607	1.15	906964	93.90	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD3-2510771
Data File Name	005CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:27:32-04:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	97686	0.00
Be	9	2	NoGas	504767	0.00
B	11	2	NoGas	8098	0.09
Na	23	1	He	45915334	0.00
Mg	24	1	He	24664209	0.00
Al	27	1	He	102633	0.00
K	39	1	He	14734064	0.00
Ca	44	1	He	797531	0.00
Ti	47	1	He	9	644.79
V	51	1	He	359935	0.00
Cr	52	1	He	431221	0.00
Mn	55	1	He	1133204	0.00
Fe	56	1	He	81994112	0.00
Co	59	1	He	699496	0.00
Ni	60	1	He	190535	0.00
Cu	63	1	He	527730	0.00
Zn	66	1	He	69056	0.00
As	75	1	He	46724	0.00
Se	78	1	He	2589	0.04
Sr	88	1	He	234704	0.00
Mo	95	1	He	300	3.23
Ag	107	1	He	662063	0.00
Cd	111	1	He	82058	0.00
Sn	118	1	He	963	2.88
Sb	123	1	He	328	1.09
Ba	137	1	He	71335	0.00
W	182	1	He	2971	0.34
Tl	205	1	He	921683	0.00
Pb	208	1	He	1251619	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1626773	0.06	1674650	97.14	60	120	
Sc	45	1	He	345659	1.01	355173	97.32	60	120	
Sc	45	2	NoGas	8516960	0.40	8635903	98.62	60	120	
Rh	103	1	He	1377355	0.24	1470259	93.68	60	120	
In	115	1	He	468137	0.23	490642	95.41	60	120	
Tb	159	1	He	1430065	0.56	1434034	99.72	60	120	
Ho	165	1	He	1360827	0.18	1409606	96.54	60	120	
Bi	209	1	He	829408	0.99	906964	91.45	60	120	

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Calibration Standard Report

Sample Table

Sample Name	STD4-2510772
Data File Name	006CALS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:31:38-04:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	2	NoGas	2008248	0.00
Be	9	2	NoGas	133	33.07
B	11	2	NoGas	307486	0.00
Na	23	1	He	23775	0.03
Mg	24	1	He	2763	0.60
Al	27	1	He	222	5.24
K	39	1	He	30408	0.01
Ca	44	1	He	242	3.95
Ti	47	1	He	10972	0.02
V	51	1	He	1040	2.75
Cr	52	1	He	3695	0.04
Mn	55	1	He	249	5.60
Fe	56	1	He	24649	0.12
Co	59	1	He	126	12.21
Ni	60	1	He	190	7.56
Cu	63	1	He	3480	0.06
Zn	66	1	He	142	14.95
As	75	1	He	101	1.41
Se	78	1	He	26	66.22
Sr	88	1	He	69	67.50
Mo	95	1	He	221935	0.00
Ag	107	1	He	104	28.39
Cd	111	1	He	35	94.47
Sn	118	1	He	179494	0.00
Sb	123	1	He	189393	0.00
Ba	137	1	He	39	12.71
W	182	1	He	516579	0.00
Tl	205	1	He	776	3.79
Pb	208	1	He	1040	1.13

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1593579	1.43	1674650	95.16	60	120	
Sc	45	1	He	352825	0.17	355173	99.34	60	120	
Sc	45	2	NoGas	8493804	1.38	8635903	98.35	60	120	
Rh	103	1	He	1414010	0.93	1470259	96.17	60	120	
In	115	1	He	480569	0.43	490642	97.95	60	120	
Tb	159	1	He	1384047	2.09	1434034	96.51	60	120	
Ho	165	1	He	1363182	0.51	1409606	96.71	60	120	
Bi	209	1	He	882365	1.04	906964	97.29	60	120	

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Calibration for 060_Blk.d

Batch Folder: D:\Analytical Runs\I10062116A.b\
Analysis File: I10062116A.batch.bin
DA Date-Time: 6/21/2016 2:20:48 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	ICIS	6/21/2016 10:15:17 AM
2	003CALS.d	STD1-2569623	6/21/2016 10:19:23 AM
3	004CALS.d	STD2-2549639	6/21/2016 10:23:28 AM
4	005CALS.d	STD3-2510771	6/21/2016 10:27:32 AM
5	006CALS.d	STD4-2510772	6/21/2016 10:31:38 AM

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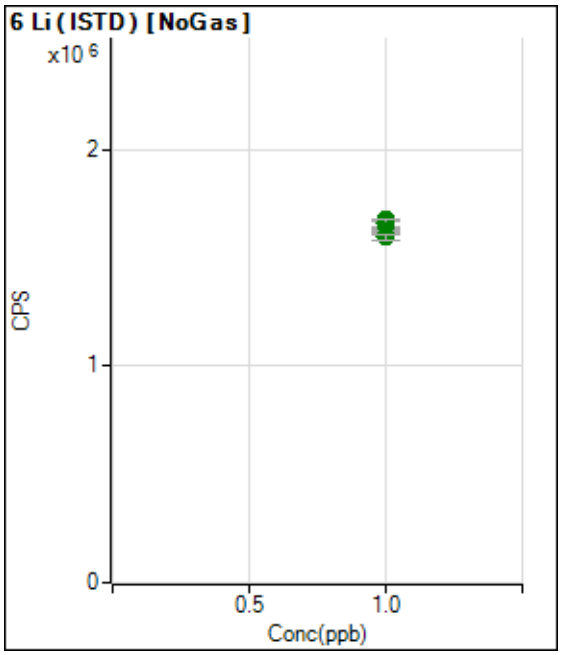
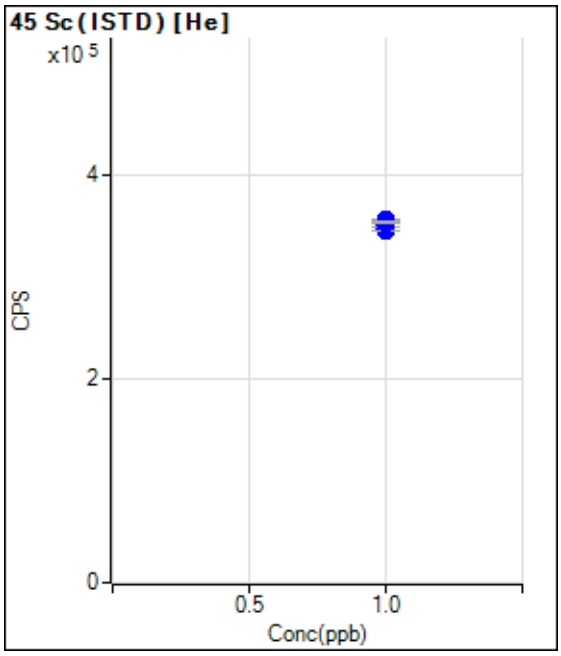


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1674649.85		A	0.3
2		1.000		1656715.67		A	2.1
3		1.000		1624659.76		A	1.2
4		1.000		1626773.23		A	0.1
5		1.000		1593579.23		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		355172.81		P	0.7
2		1.000		350299.35		P	1.1
3		1.000		344620.08		P	0.3
4		1.000		345658.52		P	1.0
5		1.000		352824.83		P	0.2

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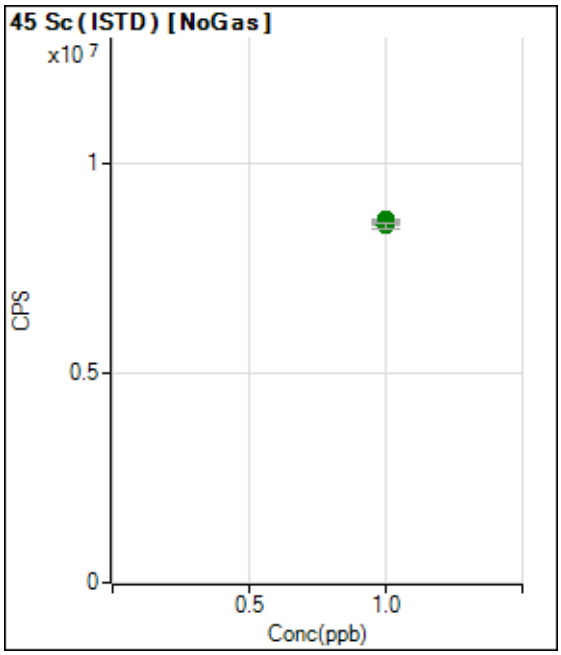
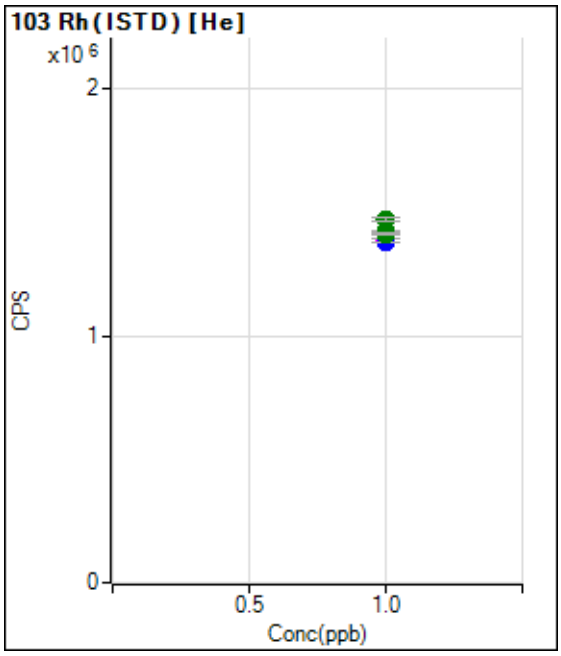


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8635902.99		A	0.5
2	☐	1.000		8529861.05		A	0.9
3	☐	1.000		8554358.83		A	0.7
4	☐	1.000		8516959.94		A	0.4
5	☐	1.000		8493804.39		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1470259.20		A	1.0
2	☐	1.000		1425403.73		A	0.5
3	☐	1.000		1387189.41		M	1.4
4	☐	1.000		1377355.40		P	0.2
5	☐	1.000		1414010.14		A	0.9

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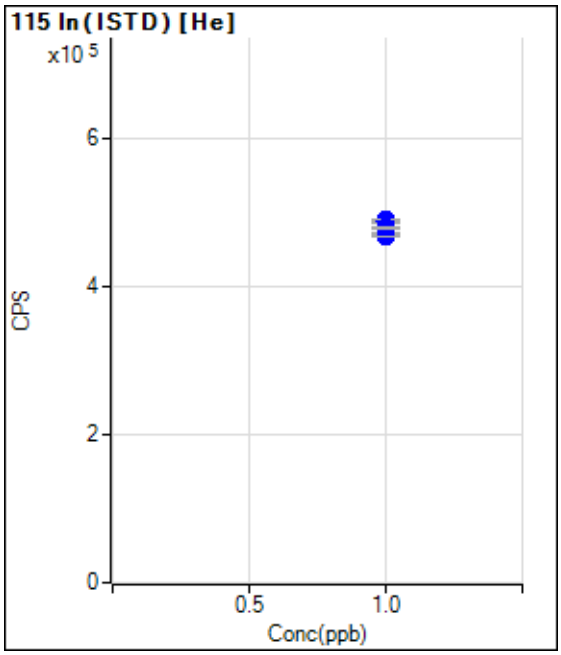
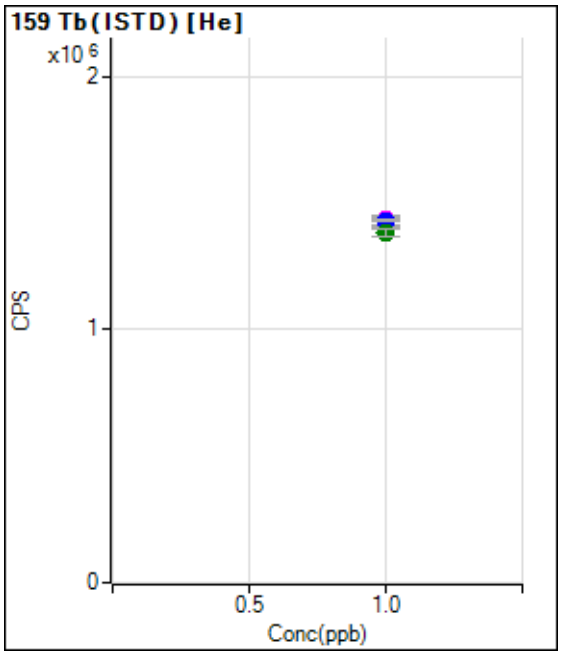


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		490642.11		P	0.4
2	☐	1.000		488266.06		P	0.8
3	☐	1.000		471536.58		P	0.6
4	☐	1.000		468136.67		P	0.2
5	☐	1.000		480569.24		P	0.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1434033.78		M	2.6
2	☐	1.000		1401759.56		A	0.8
3	☐	1.000		1426316.96		M	2.3
4	☐	1.000		1430064.87		P	0.6
5	☐	1.000		1384046.75		A	2.1

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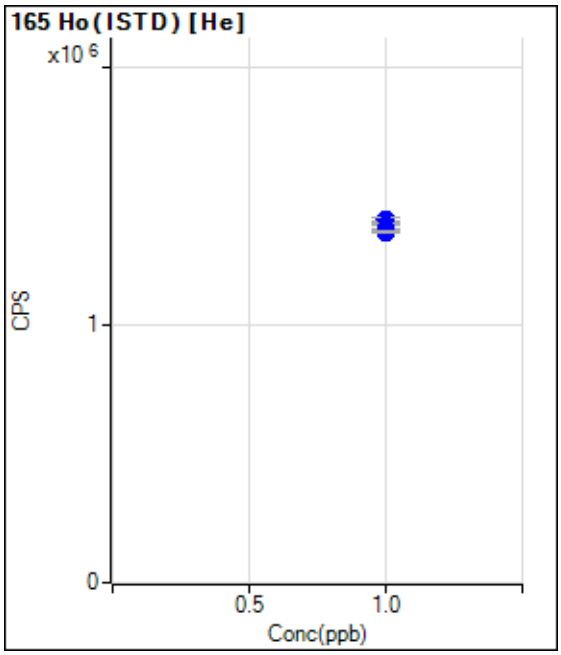
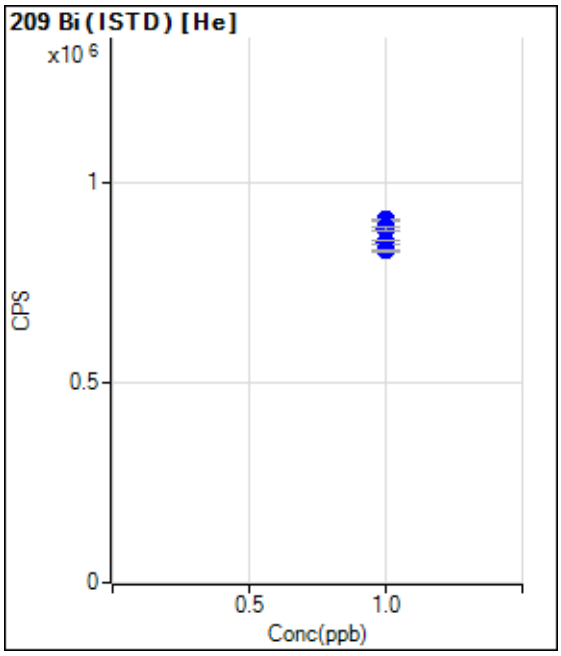


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1409605.76		P	1.1
2	☐	1.000		1392954.09		P	0.2
3	☐	1.000		1371276.02		P	0.7
4	☐	1.000		1360827.17		P	0.2
5	☐	1.000		1363181.90		P	0.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		906964.00		P	0.2
2	☐	1.000		889127.15		P	0.3
3	☐	1.000		851606.71		P	1.1
4	☐	1.000		829407.88		P	1.0
5	☐	1.000		882365.32		P	1.0

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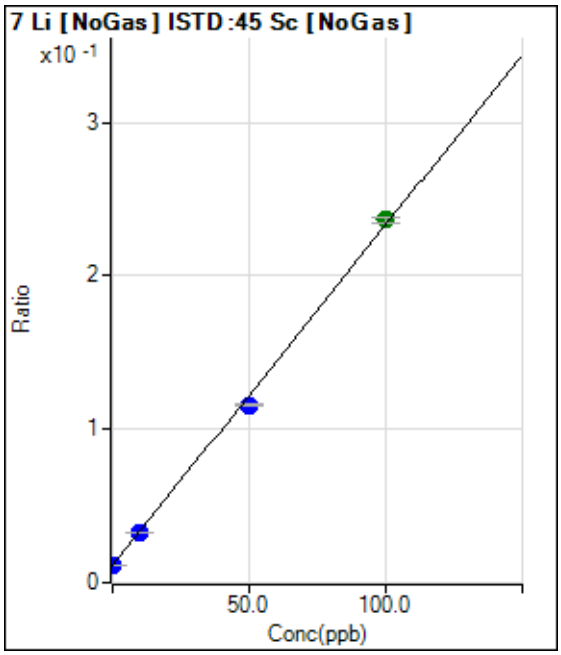
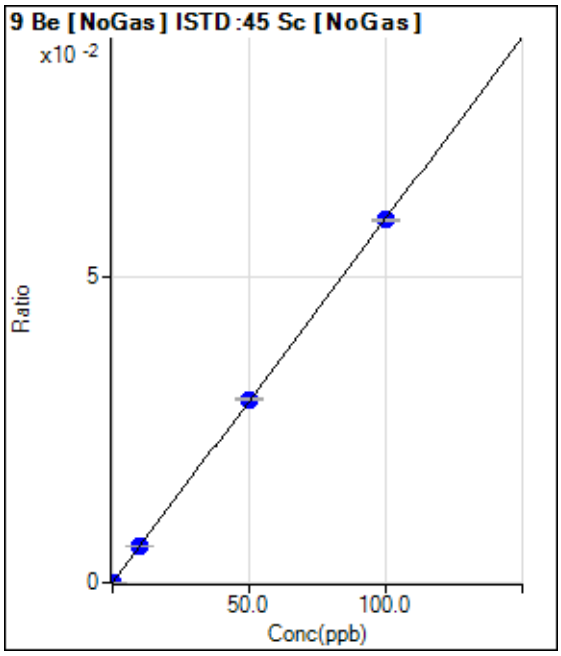


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	97455.18	0.0113	P	1.1
2	☐	10.000	9.430	274671.16	0.0322	P	1.0
3	☐	50.000	47.069	989582.84	0.1157	P	0.8
4	☐			97685.64	0.0115	P	0.9
5	☐	100.000	101.523	2008248.18	0.2365	A	1.4

y = 0.0022 * x + 0.0113
R = 0.9993
DL = 0.1668
BEC = 5.088

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.74	0.0000	P	87.7
2	☐	10.000	10.006	50744.14	0.0059	P	1.3
3	☐	50.000	50.482	256574.25	0.0300	P	0.8
4	☐	100.000	99.758	504767.08	0.0593	P	0.6
5	☐			133.34	0.0000	P	45.5

y = 5.9406E-004 * x + 4.7307E-006
R = 1.0000
DL = 0.02094
BEC = 0.007963

Weight: <None>
Min Conc: <None>

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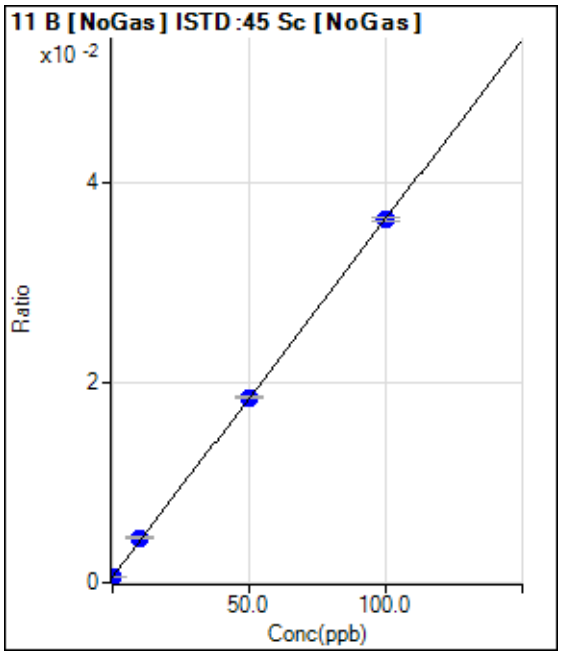


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	4811.96	0.0006	P	6.8
2		10.000	11.004	38284.80	0.0045	P	1.3
3		50.000	50.236	158291.66	0.0185	P	0.4
4				8098.43	0.0010	P	7.4
5		100.000	99.782	307485.69	0.0362	P	1.2

y = 3.5725E-004 * x + 5.5714E-004

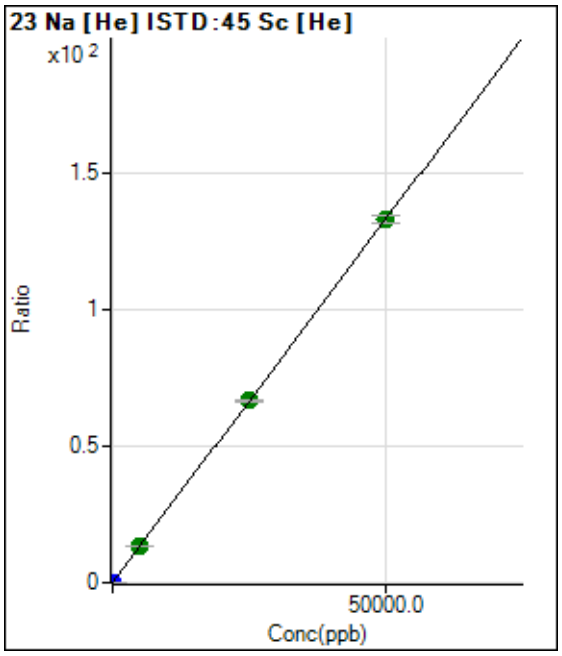
R = 1.0000

DL = 0.316

BEC = 1.56

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	13398.05	0.0377	P	8.0
2		5000.000	5042.889	4708910.81	13.4444	A	2.2
3		25000.000	25075.687	22986793.53	66.7024	A	0.5
4		50000.000	49957.868	45915334.29	132.8526	A	2.2
5				23775.43	0.0674	P	7.2

y = 0.0027 * x + 0.0377

R = 1.0000

DL = 3.422

BEC = 14.19

Weight: <None>

Min Conc: <None>

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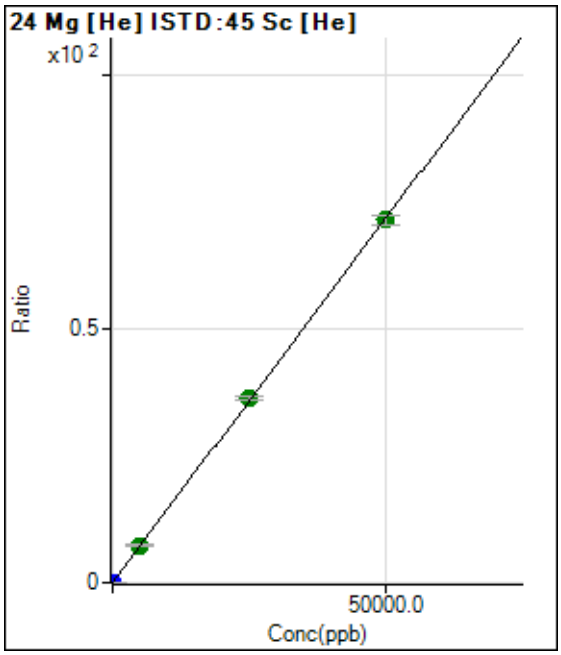
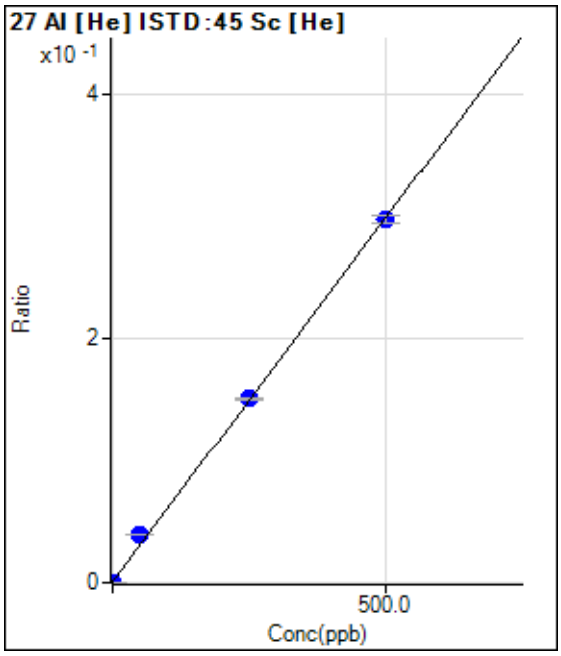


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	418.54	0.0012	P	30.9
2	☐	5000.000	5068.016	2541913.62	7.2579	A	4.1
3	☐	25000.000	25303.232	12486187.46	36.2320	A	1.6
4	☐	50000.000	49841.582	24664209.20	71.3675	A	2.8
5	☐			2763.31	0.0078	P	16.4

y = 0.0014 * x + 0.0012
R = 1.0000
DL = 0.7633
BEC = 0.8234

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	206.67	0.0006	P	17.4
2	☐	50.000	64.287	13616.25	0.0389	P	1.0
3	☐	250.000	251.928	51910.18	0.1506	P	1.6
4	☐	500.000	497.607	102633.41	0.2970	P	2.0
5	☐			222.23	0.0006	P	11.8

y = 5.9560E-004 * x + 5.8234E-004
R = 0.9996
DL = 0.5091
BEC = 0.9777

Weight: <None>
Min Conc: <None>

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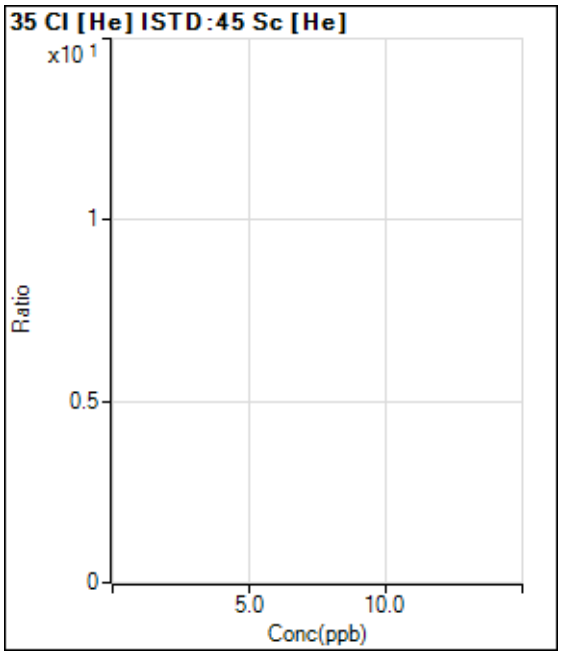
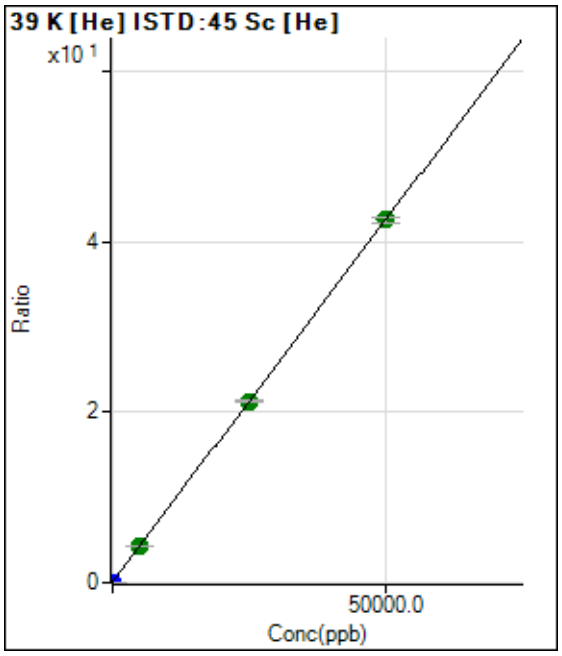


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			27595087.79	77.7047	A	2.9
2	☐			28894842.37	82.4961	A	2.0
3	☐			27981503.52	81.1947	A	0.7
4	☐			28894285.89	83.6041	A	2.2
5	☐			29130156.25	82.5636	A	1.0

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24936.36	0.0702	P	3.8
2	☐	5000.000	4998.118	1513939.64	4.3222	A	1.5
3	☐	25000.000	24944.115	7337183.97	21.2908	A	0.6
4	☐	50000.000	50028.130	14734063.77	42.6305	A	1.7
5	☐			30407.86	0.0862	P	2.6

y = 8.5073E-004 * x + 0.0702

R = 1.0000

DL = 9.502

BEC = 82.54

Weight: <None>

Min Conc: <None>

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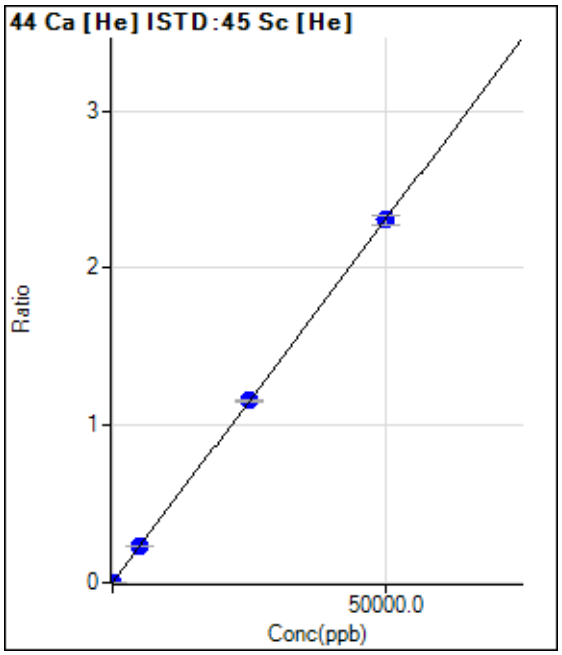
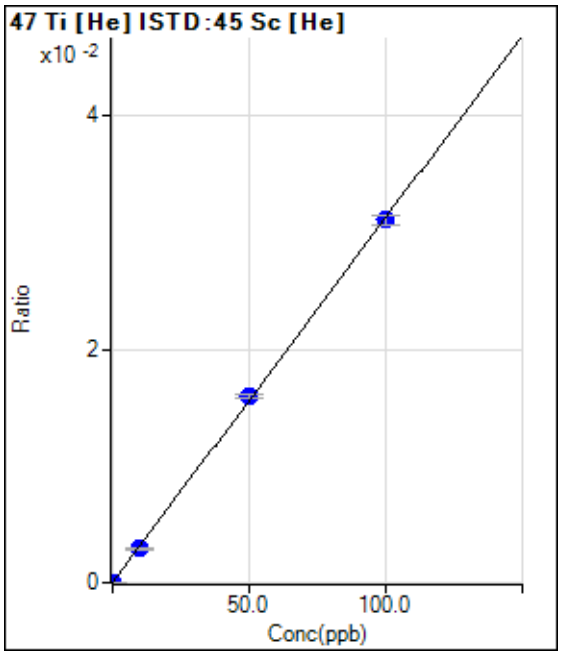


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	282.22	0.0008	P	19.4
2	☐	5000.000	5023.449	81498.20	0.2327	P	1.8
3	☐	25000.000	25041.043	398610.78	1.1567	P	1.4
4	☐	50000.000	49977.134	797530.79	2.3077	P	3.0
5	☐			242.30	0.0007	P	9.4

y = 4.6160E-005 * x + 7.9527E-004
R = 1.0000
DL = 10.02
BEC = 17.23

Weight: <None>
Min Conc: <None>

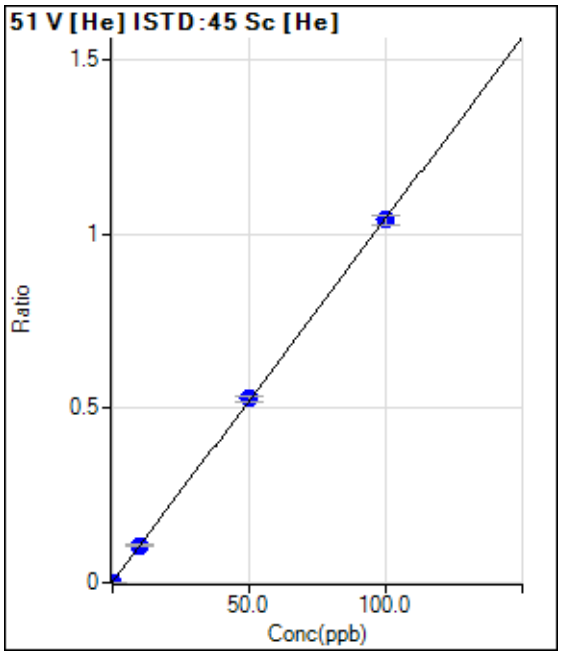


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	10.000	9.450	1035.60	0.0030	P	5.1
3	☐	50.000	51.159	5512.02	0.0160	P	2.5
4	☐			8.89	0.0000	P	56.6
5	☐	100.000	99.475	10972.30	0.0311	P	2.4

y = 3.1259E-004 * x + 3.1011E-006
R = 0.9998
DL = 0.05155
BEC = 0.009921

Weight: <None>
Min Conc: <None>

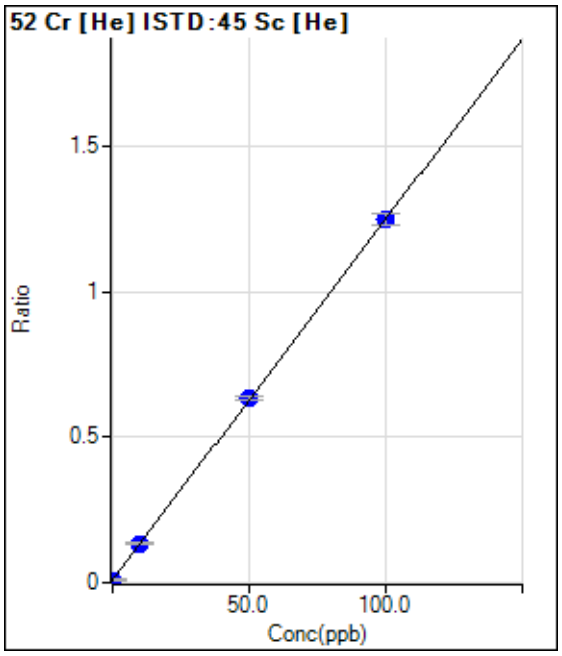
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	484.84	0.0014	P	28.6
2	☐	10.000	10.080	37313.97	0.1065	P	4.5
3	☐	50.000	50.605	182426.10	0.5294	P	3.1
4	☐	100.000	99.690	359935.32	1.0415	P	3.0
5	☐			1039.69	0.0029	P	28.7

y = 0.0104 * x + 0.0014
R = 1.0000
DL = 0.112
BEC = 0.1308

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3420.38	0.0096	P	10.2
2	☐	10.000	10.110	47283.62	0.1350	P	3.4
3	☐	50.000	50.303	218305.67	0.6335	P	2.2
4	☐	100.000	99.837	431220.98	1.2477	P	3.2
5	☐			3694.86	0.0105	P	1.7

y = 0.0124 * x + 0.0096
R = 1.0000
DL = 0.2388
BEC = 0.7769

Weight: <None>
Min Conc: <None>

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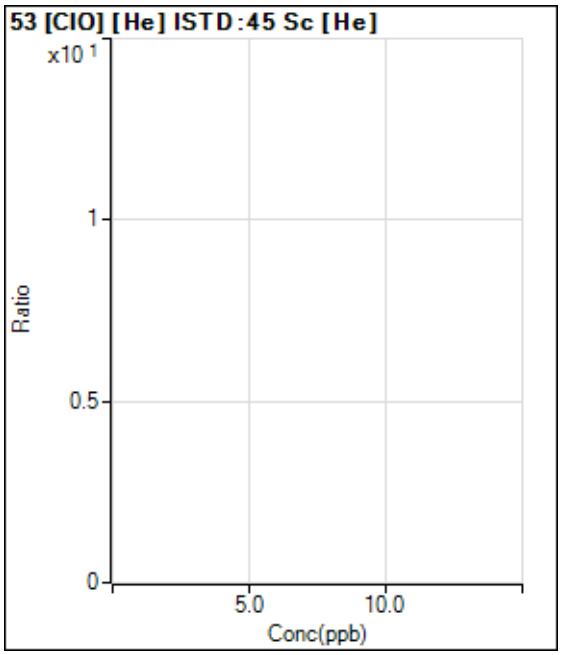
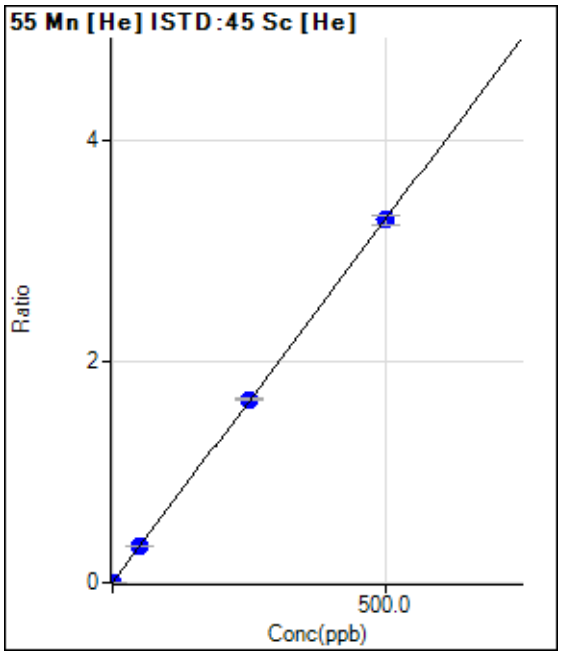


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1533.48	0.0043	P	8.2
2	☐			6601.52	0.0188	P	3.1
3	☐			26435.16	0.0767	P	2.8
4	☐			53290.98	0.1542	P	2.9
5	☐			437.06	0.0012	P	24.0

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.35	0.0014	P	8.2
2	☐	50.000	50.383	116371.02	0.3323	P	2.1
3	☐	250.000	251.589	569783.85	1.6534	P	0.9
4	☐	500.000	499.167	1133204.47	3.2789	P	2.8
5	☐			248.89	0.0007	P	13.8

y = 0.0066 * x + 0.0014
R = 1.0000
DL = 0.05432
BEC = 0.22

Weight: <None>
Min Conc: <None>

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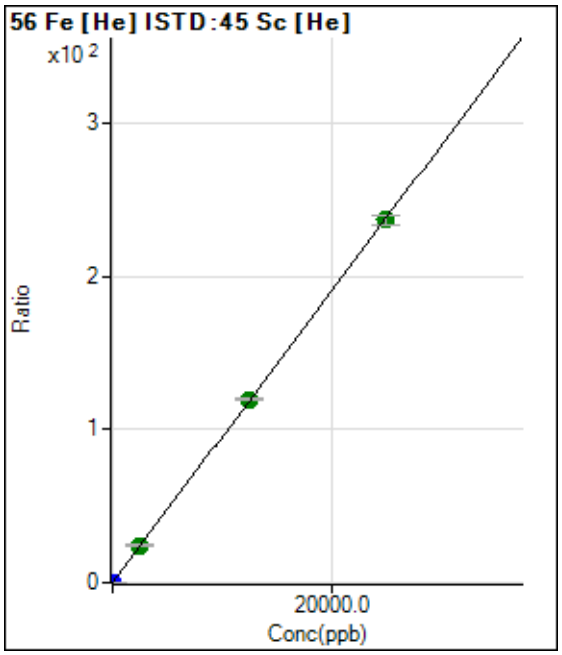
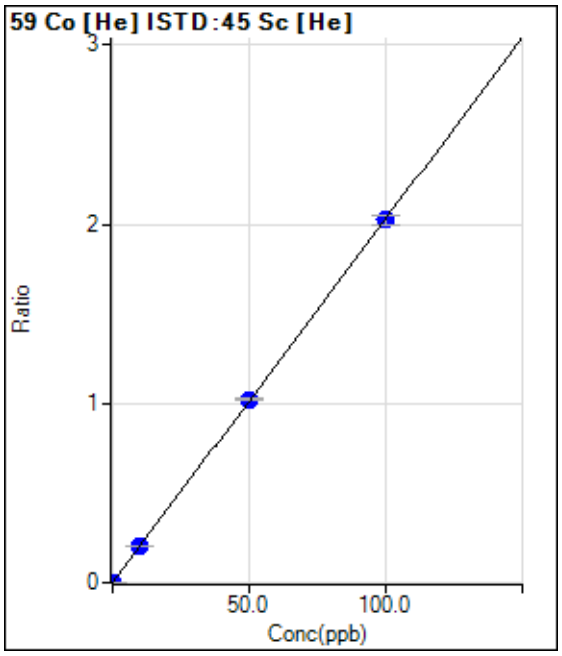


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2337.97	0.0066	P	8.5
2	☐	2500.000	2551.832	8502763.00	24.2776	A	3.0
3	☐	12500.000	12601.683	41307833.91	119.8639	A	1.5
4	☐	25000.000	24943.975	81994112.30	237.2541	A	2.9
5	☐			24649.24	0.0698	P	29.3

y = 0.0095 * x + 0.0066
R = 1.0000
DL = 0.1756
BEC = 0.6923

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71.11	0.0002	P	12.1
2	☐	10.000	10.156	72202.35	0.2061	P	2.4
3	☐	50.000	50.361	352006.35	1.0214	P	1.5
4	☐	100.000	99.804	699496.05	2.0240	P	2.8
5	☐			125.56	0.0004	P	15.2

y = 0.0203 * x + 2.0025E-004
R = 1.0000
DL = 0.003578
BEC = 0.009875

Weight: <None>
Min Conc: <None>

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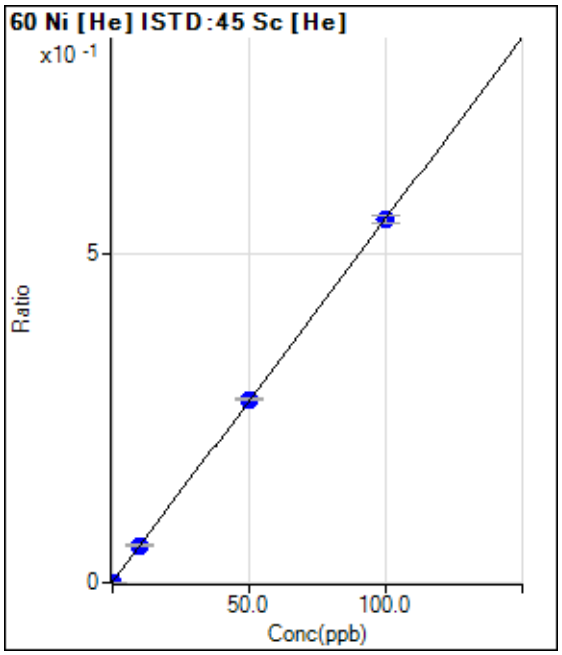


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	227.78	0.0006	P	16.6
2	☐	10.000	10.161	19864.43	0.0567	P	3.0
3	☐	50.000	50.421	96123.85	0.2789	P	1.2
4	☐	100.000	99.773	190535.45	0.5513	P	2.2
5	☐			190.00	0.0005	P	14.5

y = 0.0055 * x + 6.4178E-004

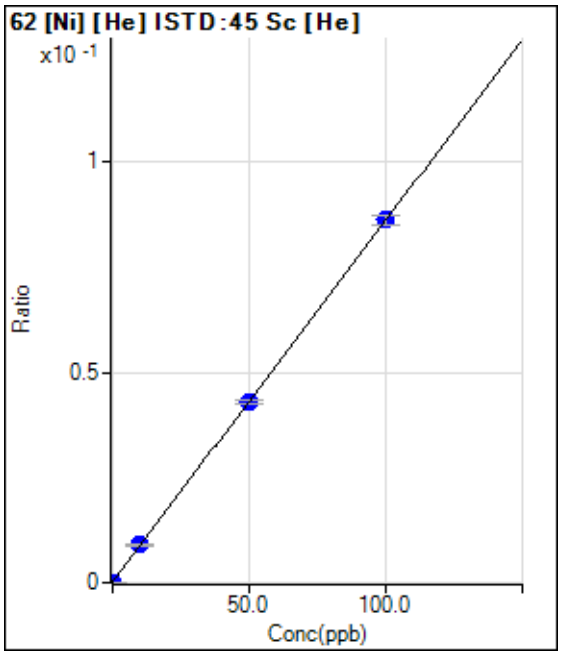
R = 1.0000

DL = 0.05792

BEC = 0.1163

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58.89	0.0002	P	9.2
2	☐	10.000	10.189	3126.98	0.0089	P	5.3
3	☐	50.000	49.602	14752.83	0.0428	P	2.2
4	☐	100.000	100.180	29823.67	0.0863	P	2.9
5	☐			70.00	0.0002	P	57.2

y = 8.5974E-004 * x + 1.6586E-004

R = 1.0000

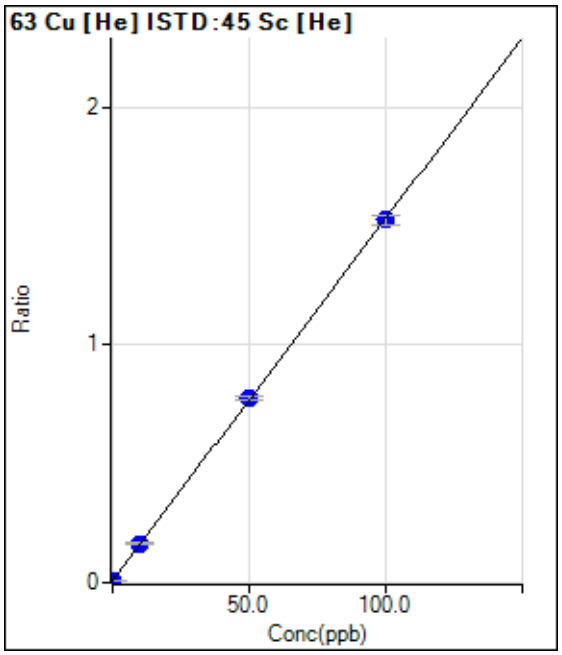
DL = 0.05329

BEC = 0.1929

Weight: <None>

Min Conc: <None>

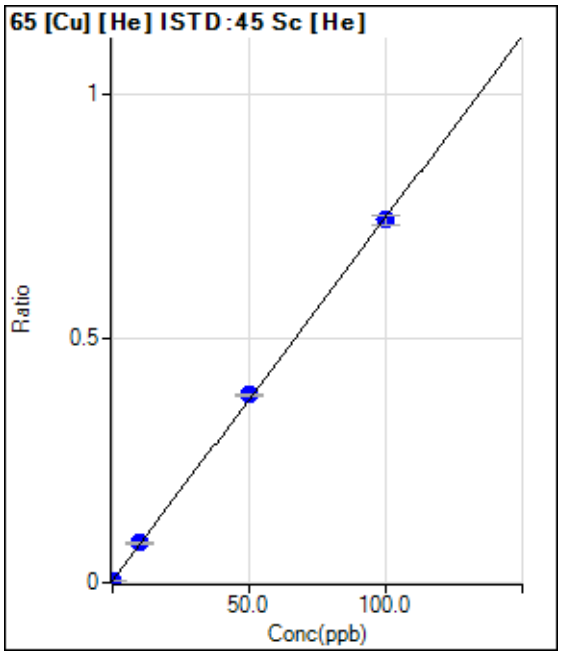
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2765.81	0.0078	P	2.7
2	☐	10.000	10.344	57916.32	0.1654	P	2.5
3	☐	50.000	50.468	267621.43	0.7766	P	1.8
4	☐	100.000	99.732	527730.03	1.5270	P	2.9
5	☐			3480.38	0.0099	P	2.2

y = 0.0152 * x + 0.0078
R = 1.0000
DL = 0.04144
BEC = 0.5113

Weight: <None>
Min Conc: <None>

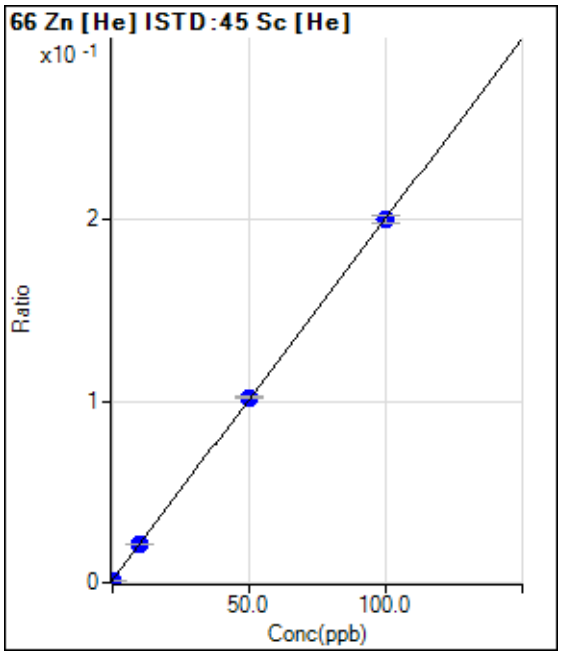


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1298.95	0.0037	P	6.9
2	☐	10.000	10.370	28266.91	0.0807	P	3.1
3	☐	50.000	51.151	132241.17	0.3837	P	1.0
4	☐	100.000	99.388	256488.16	0.7422	P	2.9
5	☐			1562.31	0.0044	P	3.0

y = 0.0074 * x + 0.0037
R = 0.9999
DL = 0.1013
BEC = 0.4921

Weight: <None>
Min Conc: <None>

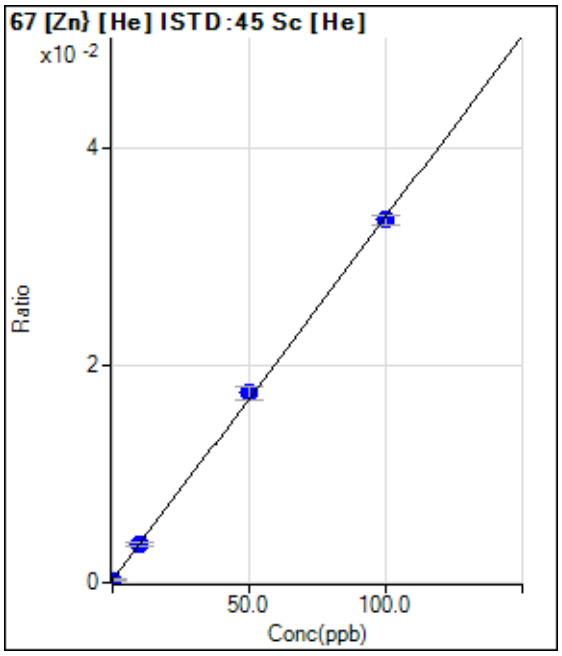
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	554.46	0.0016	P	3.4
2		10.000	9.892	7433.85	0.0212	P	4.4
3		50.000	50.500	35121.00	0.1019	P	0.9
4		100.000	99.761	69056.40	0.1998	P	2.1
5				142.22	0.0004	P	21.2

y = 0.0020 * x + 0.0016
R = 1.0000
DL = 0.08064
BEC = 0.7857

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		0.000	0.000	85.56	0.0002	P	32.9
2		10.000	9.816	1232.29	0.0035	P	12.4
3		50.000	51.495	6008.85	0.0174	P	6.2
4		100.000	99.271	11541.61	0.0334	P	2.8
5				30.00	0.0001	P	38.4

y = 3.3393E-004 * x + 2.4070E-004
R = 0.9998
DL = 0.7121
BEC = 0.7208

Weight: <None>
Min Conc: <None>

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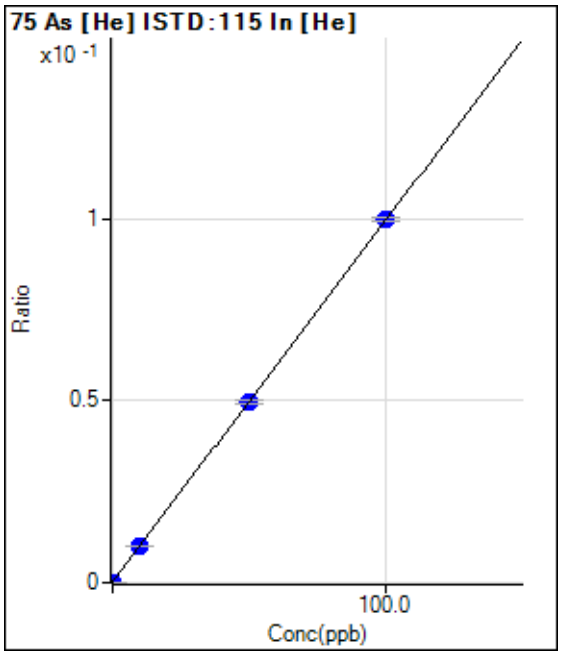


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.95	0.0003	P	8.3
2	☐	10.000	9.706	4833.46	0.0099	P	1.7
3	☐	50.000	49.735	23428.39	0.0497	P	1.9
4	☐	100.000	100.162	46723.94	0.0998	P	0.9
5	☐			101.45	0.0002	P	1.5

y = 9.9393E-004 * x + 2.5265E-004

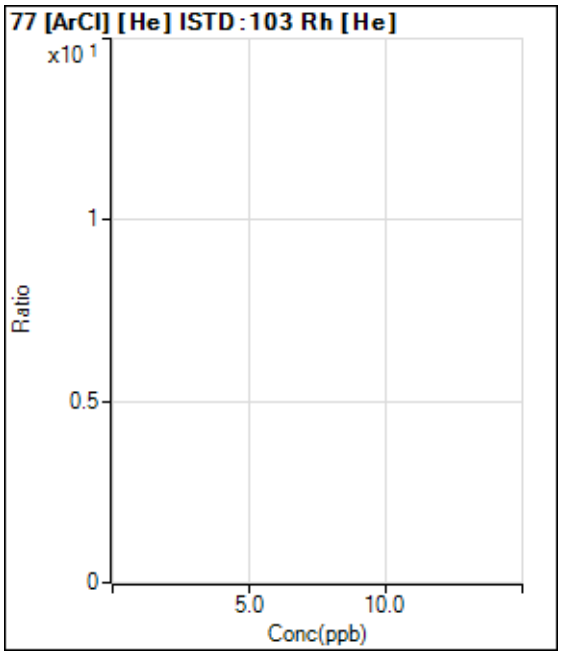
R = 1.0000

DL = 0.06351

BEC = 0.2542

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			33.34	0.0000	P	33.0
2	☐			103.71	0.0001	P	44.7
3	☐			433.36	0.0003	P	21.4
4	☐			863.03	0.0006	P	5.0
5	☐			7.41	0.0000	P	86.6

Excluded

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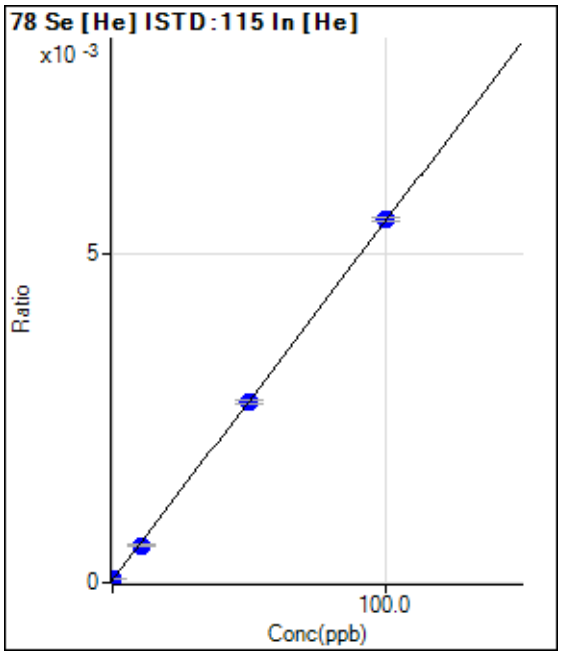


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.88	0.0000	P	5.9
2	☐	10.000	9.538	278.27	0.0006	P	2.0
3	☐	50.000	49.505	1298.72	0.0028	P	2.1
4	☐	100.000	100.294	2588.75	0.0055	P	0.9
5	☐			26.04	0.0001	P	16.9

y = 5.4651E-005 * x + 4.8679E-005

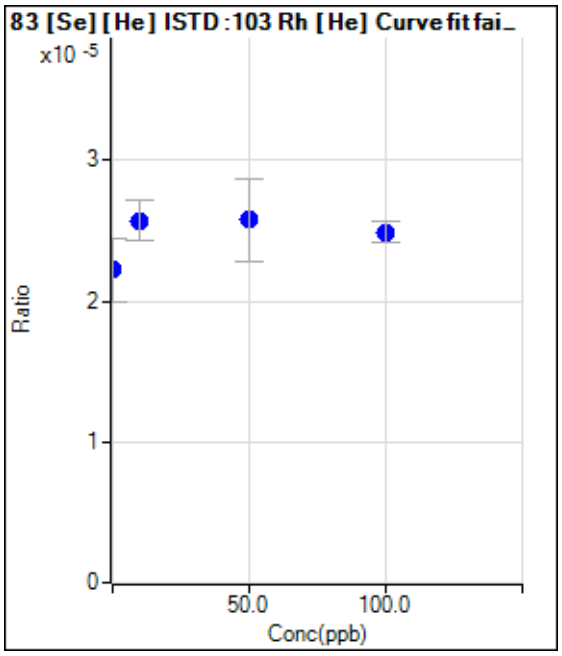
R = 1.0000

DL = 0.1586

BEC = 0.8907

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000		32.66	0.0000	P	19.9
2	☐	10.000		36.70	0.0000	P	11.5
3	☐	50.000		35.69	0.0000	P	22.9
4	☐	100.000		34.34	0.0000	P	5.8
5	☐			34.00	0.0000	P	28.9

Excluded

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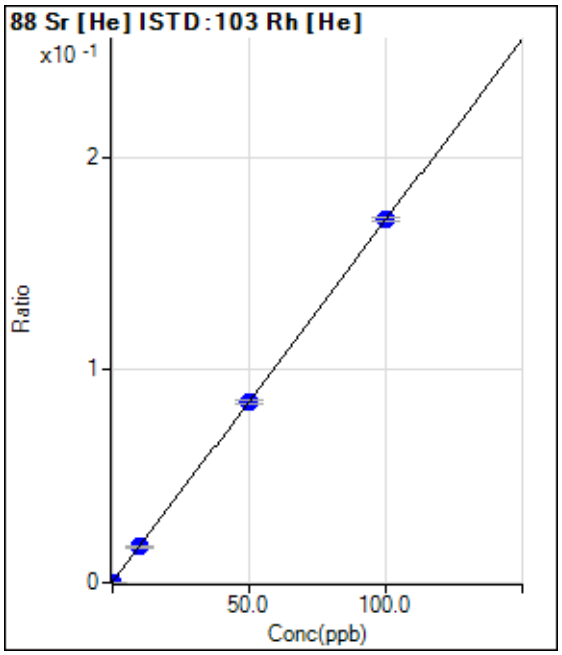
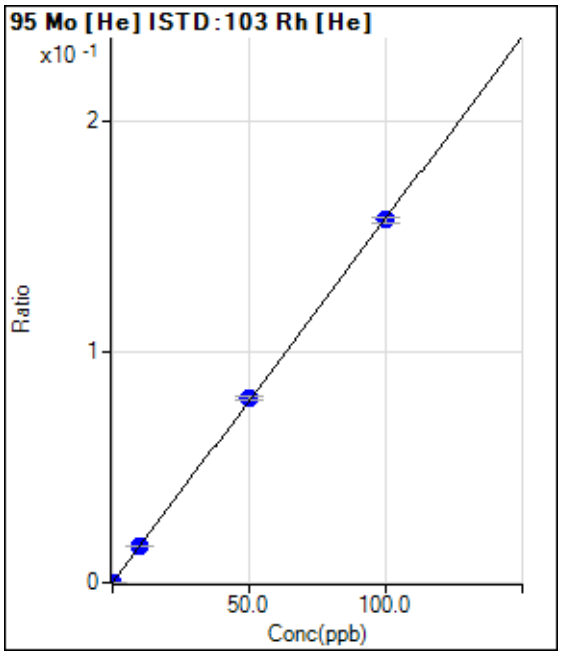


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222.45	0.0002	P	124.9
2	☐	10.000	9.785	23937.49	0.0168	P	2.4
3	☐	50.000	49.834	117758.85	0.0849	P	2.9
4	☐	100.000	100.105	234703.56	0.1704	P	0.9
5	☐			68.89	0.0000	P	46.5

y = 0.0017 * x + 1.5247E-004
R = 1.0000
DL = 0.3359
BEC = 0.08965

Weight: <None>
Min Conc: <None>

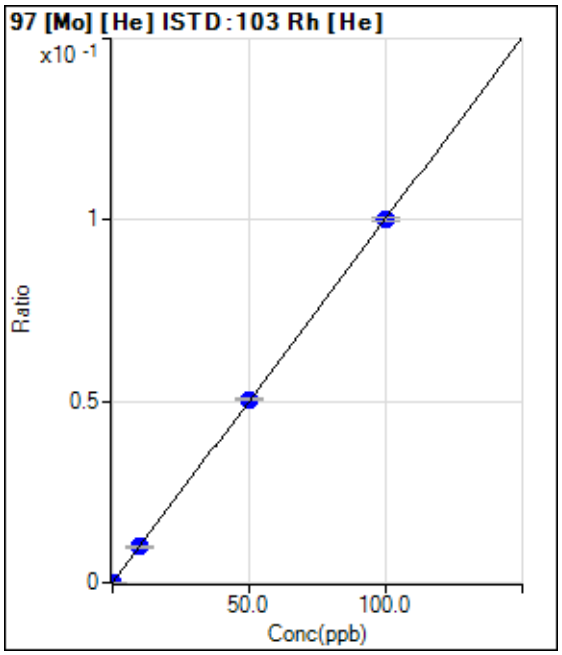


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.34	0.0000	P	25.3
2	☐	10.000	9.860	22150.83	0.0155	P	1.7
3	☐	50.000	50.688	110718.03	0.0798	P	2.3
4	☐			300.01	0.0002	P	9.7
5	☐	100.000	99.670	221935.32	0.1570	P	1.4

y = 0.0016 * x + 1.5890E-005
R = 1.0000
DL = 0.00765
BEC = 0.01009

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.70	0.0000	P	173.2
2	☐	10.000	9.865	14102.59	0.0099	P	2.8
3	☐	50.000	50.479	70206.02	0.0506	P	1.0
4	☐			218.53	0.0002	P	56.8
5	☐	100.000	99.774	141462.79	0.1000	P	1.0

y = 0.0010 * x + 2.5465E-006

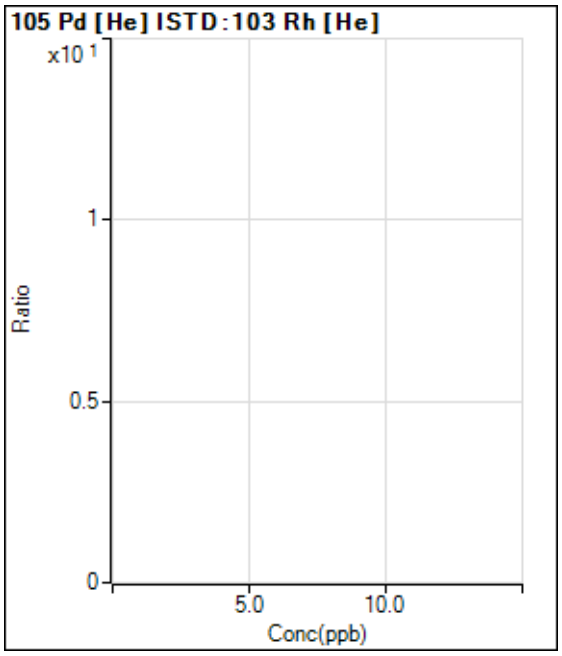
R = 1.0000

DL = 0.0132

BEC = 0.00254

Weight: <None>

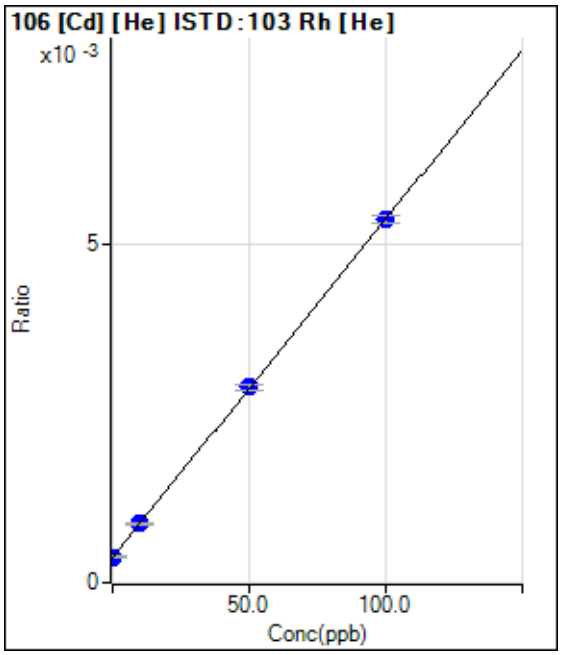
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			370.39	0.0003	P	20.3
2	☐			400.02	0.0003	P	7.1
3	☐			507.44	0.0004	P	10.8
4	☐			540.77	0.0004	P	11.4
5	☐			459.29	0.0003	P	10.7

Excluded

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.18	0.0004	P	4.5
2	☐	10.000	9.974	1241.46	0.0009	P	2.8
3	☐	50.000	50.295	3992.06	0.0029	P	2.8
4	☐	100.000	99.855	7363.53	0.0053	P	2.0
5	☐			556.58	0.0004	P	3.1

y = 4.9792E-005 * x + 3.7425E-004

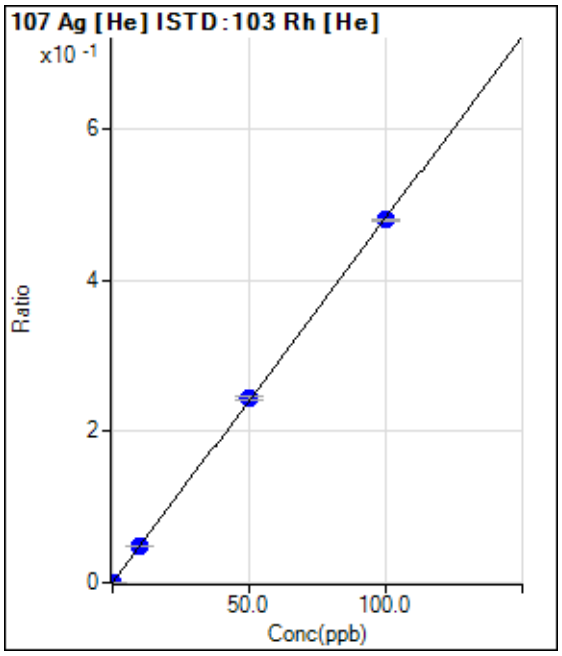
R = 1.0000

DL = 1.006

BEC = 7.516

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.34	0.0000	P	25.0
2	☐	10.000	10.194	70157.58	0.0492	P	1.1
3	☐	50.000	50.796	340079.16	0.2452	P	2.3
4	☐	100.000	99.583	662063.17	0.4807	P	0.9
5	☐			104.44	0.0001	P	28.8

y = 0.0048 * x + 1.5882E-005

R = 0.9999

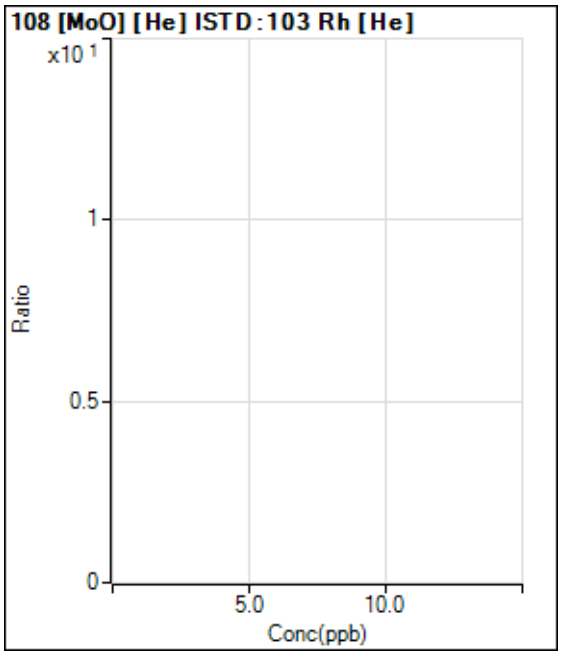
DL = 0.00247

BEC = 0.00329

Weight: <None>

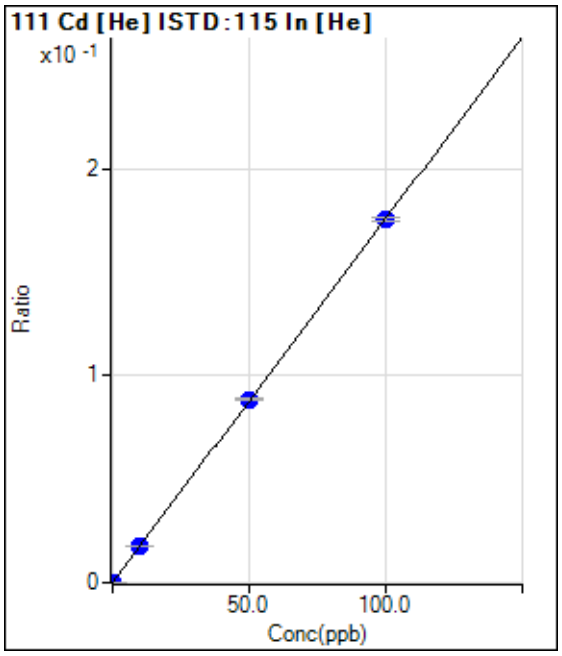
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.70	0.0000	P	173.2
2	☐			407.43	0.0003	P	24.1
3	☐			2678.12	0.0019	P	7.4
4	☐			5571.54	0.0040	P	2.3
5	☐			3.70	0.0000	P	173.2

Excluded



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.67	0.0000	P	86.6
2	☐	10.000	9.908	8499.88	0.0174	P	0.7
3	☐	50.000	50.476	41815.02	0.0887	P	1.2
4	☐	100.000	99.771	82057.53	0.1753	P	1.1
5	☐			34.97	0.0001	P	32.7

y = 0.0018 * x + 1.3691E-006

R = 1.0000

DL = 0.002025

BEC = 0.0007793

Weight: <None>

Min Conc: <None>

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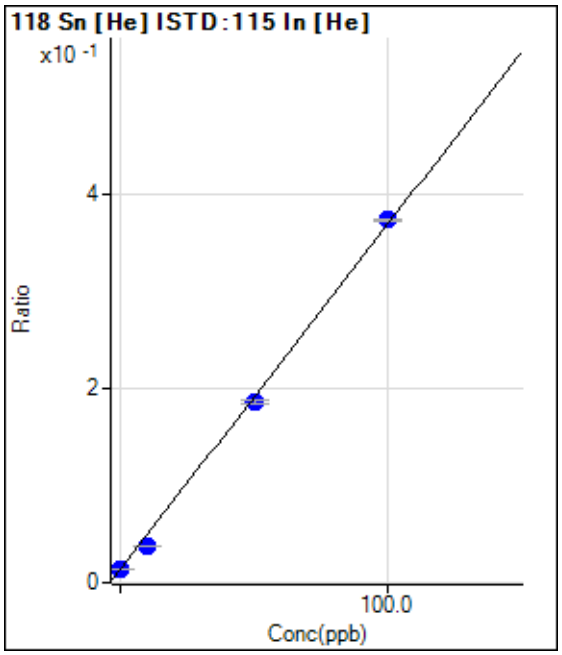
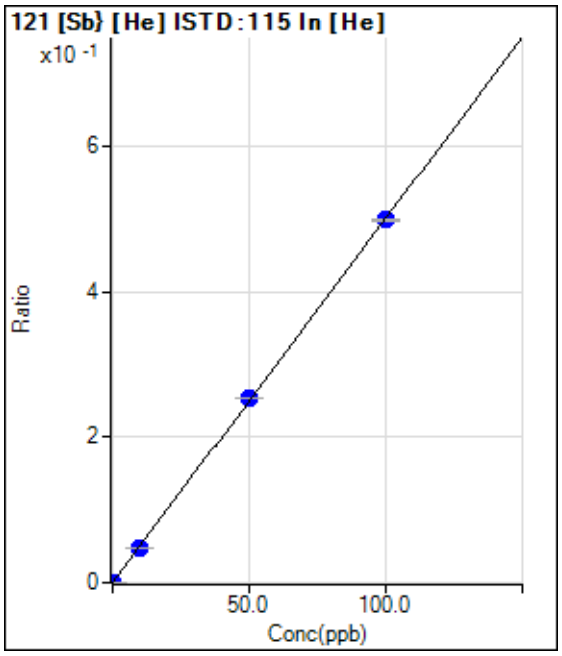


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6709.07	0.0137	P	2.4
2	☐	10.000	6.773	18443.89	0.0378	P	2.7
3	☐	50.000	48.356	87572.07	0.1857	P	2.1
4	☐			963.04	0.0021	P	27.9
5	☐	100.000	101.145	179494.15	0.3735	P	0.6

y = 0.0036 * x + 0.0137
R = 0.9994
DL = 0.2807
BEC = 3.843

Weight: <None>
Min Conc: <None>

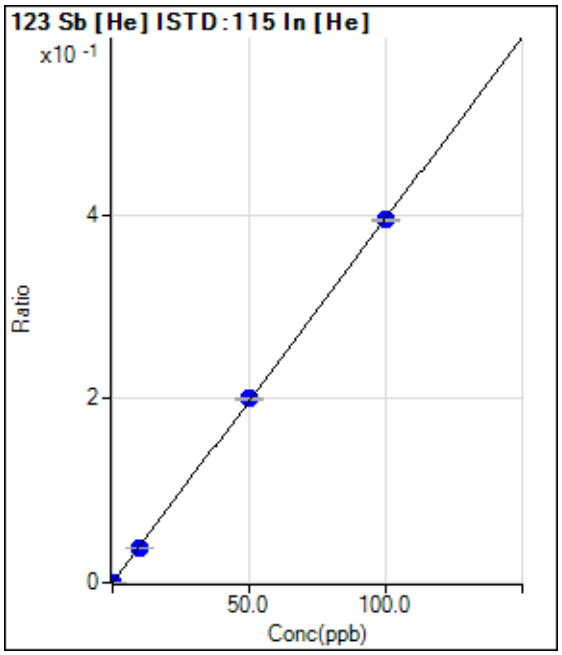


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.78	0.0001	P	35.5
2	☐	10.000	9.699	23738.73	0.0486	P	0.8
3	☐	50.000	50.605	119416.49	0.2533	P	0.4
4	☐			410.01	0.0009	P	3.7
5	☐	100.000	99.728	239802.81	0.4990	P	0.6

y = 0.0050 * x + 9.7466E-005
R = 1.0000
DL = 0.02074
BEC = 0.01948

Weight: <None>
Min Conc: <None>

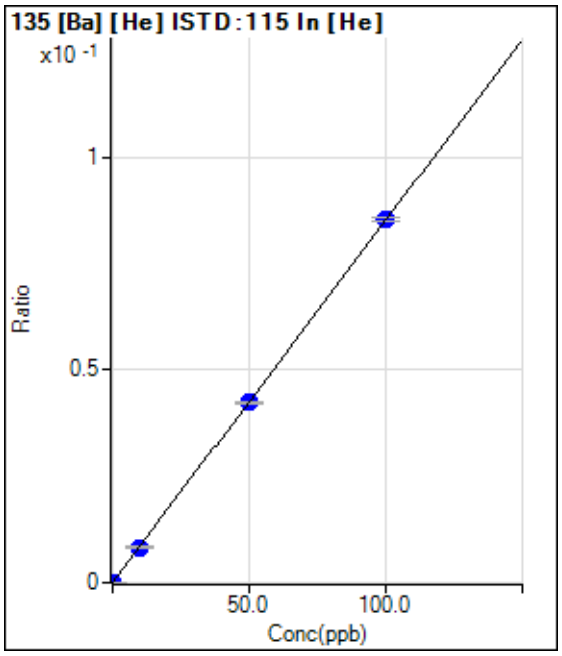
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35.56	0.0001	P	36.0
2	☐	10.000	9.576	18510.15	0.0379	P	2.3
3	☐	50.000	50.668	94449.11	0.2003	P	0.8
4	☐			327.79	0.0007	P	3.7
5	☐	100.000	99.708	189393.01	0.3941	P	0.4

y = 0.0040 * x + 7.2543E-005
R = 0.9999
DL = 0.0198
BEC = 0.01836

Weight: <None>
Min Conc: <None>

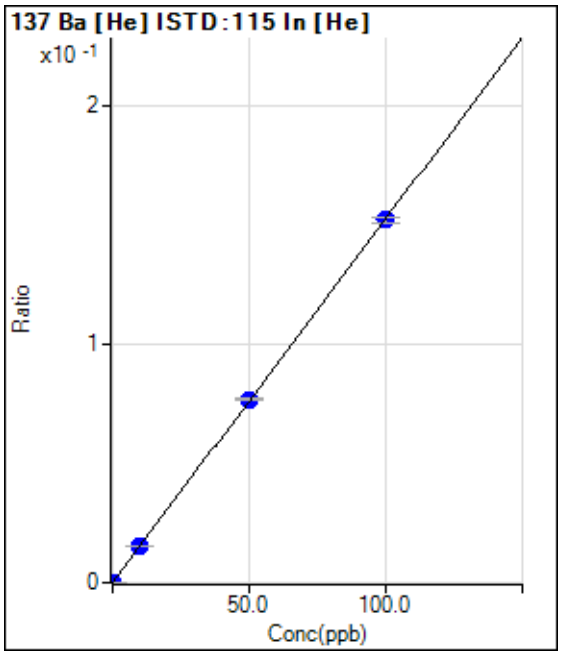


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11.11	0.0000	P	45.6
2	☐	10.000	9.719	4051.65	0.0083	P	1.9
3	☐	50.000	49.661	19948.54	0.0423	P	1.8
4	☐	100.000	100.198	39948.16	0.0853	P	1.0
5	☐			18.89	0.0000	P	36.9

y = 8.5144E-004 * x + 2.2633E-005
R = 1.0000
DL = 0.0364
BEC = 0.02658

Weight: <None>
Min Conc: <None>

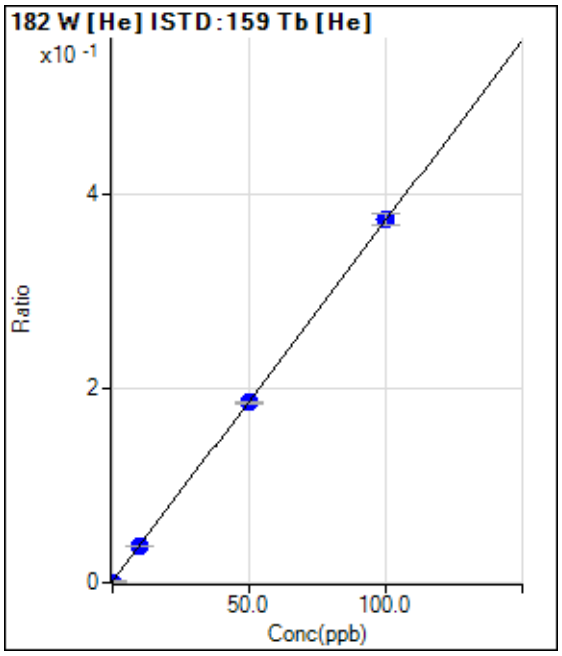
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18.89	0.0000	P	88.7
2	☐	10.000	9.941	7426.16	0.0152	P	3.2
3	☐	50.000	50.396	36287.77	0.0770	P	1.5
4	☐	100.000	99.808	71334.72	0.1524	P	1.7
5	☐			38.89	0.0001	P	5.4

y = 0.0015 * x + 3.8412E-005
R = 1.0000
DL = 0.06694
BEC = 0.02517

Weight: <None>
Min Conc: <None>

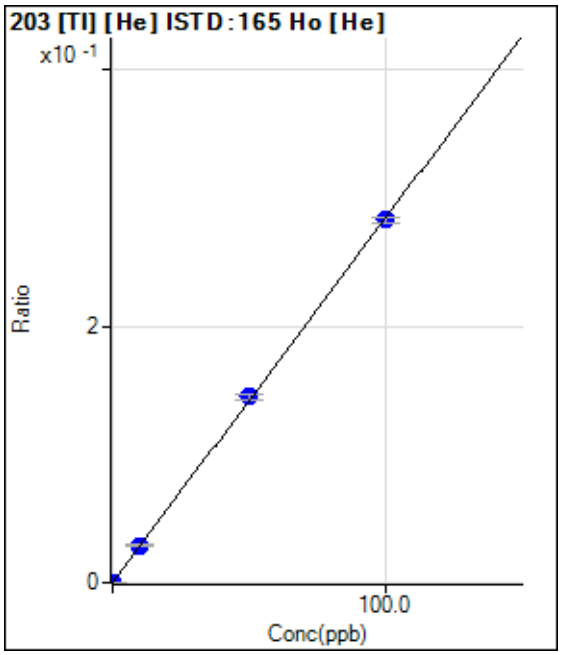


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1418.66	0.0010	P	5.7
2	☐	10.000	9.963	53273.43	0.0380	P	2.2
3	☐	50.000	49.566	264076.29	0.1852	P	0.8
4	☐			2970.81	0.0021	P	10.6
5	☐	100.000	100.221	516578.52	0.3734	P	3.3

y = 0.0037 * x + 9.8829E-004
R = 1.0000
DL = 0.04517
BEC = 0.266

Weight: <None>
Min Conc: <None>

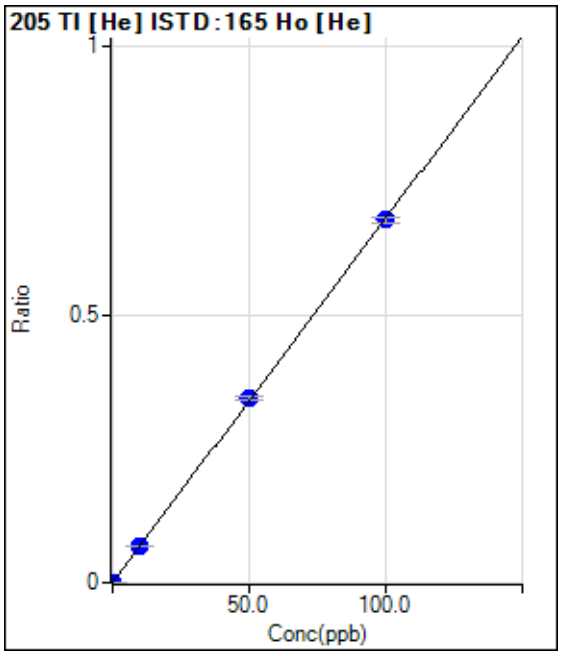
PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51.86	0.0000	P	62.5
2	☐	10.000	10.247	40652.53	0.0292	P	1.5
3	☐	50.000	50.938	198725.72	0.1449	P	2.4
4	☐	100.000	99.506	385239.16	0.2831	P	1.8
5	☐			466.70	0.0003	P	9.1

y = 0.0028 * x + 3.6887E-005
R = 0.9999
DL = 0.02433
BEC = 0.01297

Weight: <None>
Min Conc: <None>

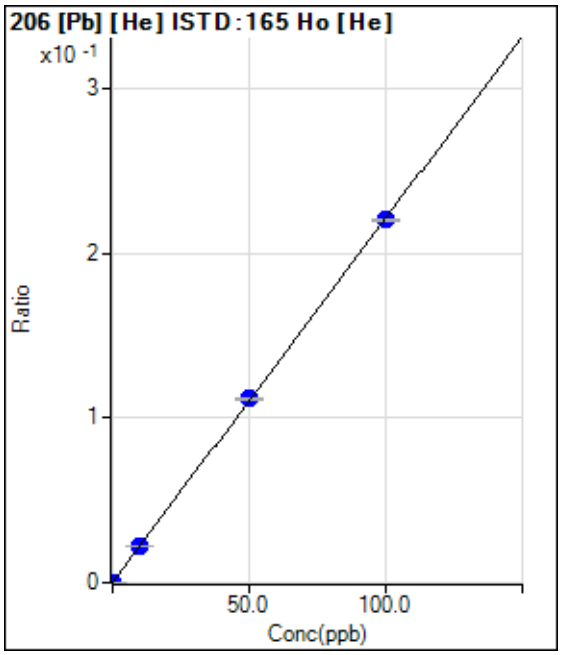


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.11	0.0000	P	28.9
2	☐	10.000	10.112	95752.50	0.0687	P	1.4
3	☐	50.000	50.640	471889.77	0.3441	P	1.5
4	☐	100.000	99.669	921682.81	0.6773	P	1.4
5	☐			775.59	0.0006	P	29.7

y = 0.0068 * x + 2.9178E-005
R = 1.0000
DL = 0.003718
BEC = 0.004294

Weight: <None>
Min Conc: <None>

PDF created with pdfFactory trial version www.pdffactory.com



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110.00	0.0001	P	20.3
2	☐	10.000	10.186	31505.42	0.0226	P	1.1
3	☐	50.000	50.653	153797.96	0.1122	P	1.1
4	☐	100.000	99.655	300185.48	0.2206	P	0.4
5	☐			240.01	0.0002	P	21.9

y = 0.0022 * x + 7.8071E-005

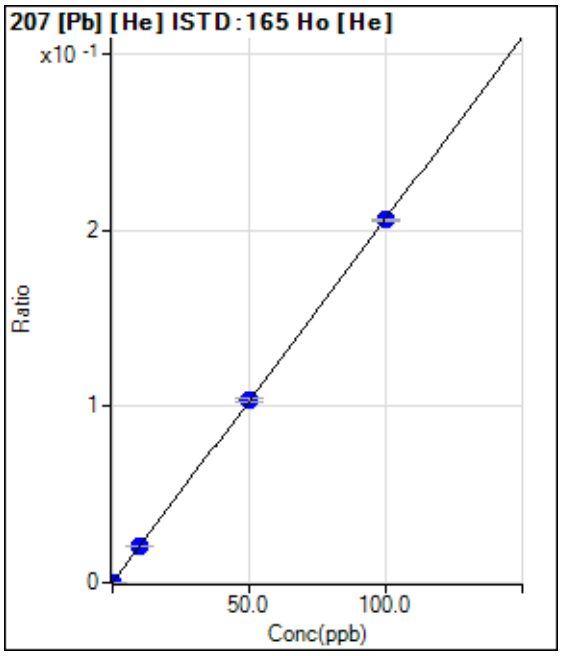
R = 1.0000

DL = 0.02146

BEC = 0.03528

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	132.22	0.0001	P	25.6
2	☐	10.000	10.145	29255.77	0.0210	P	1.7
3	☐	50.000	50.441	142675.92	0.1041	P	2.0
4	☐	100.000	99.765	279935.91	0.2057	P	0.8
5	☐			248.89	0.0002	P	28.5

y = 0.0021 * x + 9.3704E-005

R = 1.0000

DL = 0.03497

BEC = 0.04547

Weight: <None>

Min Conc: <None>

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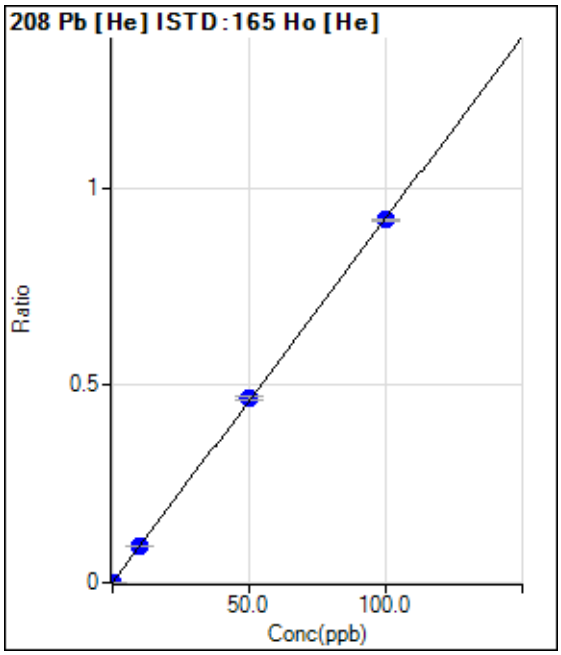
Calibration for 060_Blk.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	521.12	0.0004	P	4.3
2	☐	10.000	10.198	131538.55	0.0944	P	1.1
3	☐	50.000	50.597	640398.14	0.4670	P	1.5
4	☐	100.000	99.682	1251618.55	0.9197	P	0.6
5	☐			1040.03	0.0008	P	12.2

y = 0.0092 * x + 3.6971E-004

R = 1.0000

DL = 0.005184

BEC = 0.04009

Weight: <None>

Min Conc: <None>

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Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-2510777
Data File Name	007_ICV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:35:42-04:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	NoGas	37.152	1.930	810262	0.75	40	92.9	89.5	110.5	
Be	9	45	NoGas	39.712	1.003	204077	0.64	40	99.3	89.5	110.5	
B	11	45	NoGas	42.384	2.448	135773	2.07	40	106.0	89.5	110.5	
Na	23	45	He	19801.249	0.755	18673963	0.57	20000	99.0	89.5	110.5	
Mg	24	45	He	19922.733	1.051	10112706	1.22	20000	99.6	89.5	110.5	
Al	27	45	He	198.271	0.669	42068	0.87	200	99.1	89.5	110.5	
K	39	45	He	19899.859	0.574	6025993	0.41	20000	99.5	89.5	110.5	
Ca	44	45	He	19771.405	2.127	323805	2.29	20000	98.9	89.5	110.5	
Ti	47	45	He	39.715	2.714	4402	2.63	40	99.3	89.5	110.5	
V	51	45	He	40.506	3.181	150304	3.29	40	101.3	89.5	110.5	
Cr	52	45	He	39.888	2.133	178766	2.21	40	99.7	89.5	110.5	
Mn	55	45	He	200.409	1.470	466970	1.58	200	100.2	89.5	110.5	
Fe	56	45	He	10011.141	1.388	33755899	1.54	10000	100.1	89.5	110.5	
Co	59	45	He	39.903	1.242	286907	1.43	40	99.8	89.5	110.5	
Ni	60	45	He	40.360	0.532	79189	0.64	40	100.9	89.5	110.5	
Cu	63	45	He	40.592	0.389	221954	0.56	40	101.5	89.5	110.5	
Zn	66	45	He	40.466	2.040	29058	1.98	40	101.2	89.5	110.5	
As	75	115	He	40.870	1.948	19579	1.17	40	102.2	89.5	110.5	
Se	78	115	He	40.773	2.413	1091	2.30	40	101.9	89.5	110.5	
Sr	88	103	He	39.464	1.776	93673	1.70	40	98.7	89.5	110.5	
Mo	95	103	He	41.092	1.858	90124	2.09	40	102.7	89.5	110.5	
Ag	107	103	He	41.083	1.696	276136	0.65	40	102.7	89.5	110.5	
Cd	111	115	He	40.253	1.621	33875	0.93	40	100.6	89.5	110.5	
Sn	118	115	He	37.747	2.810	70874	2.01	40	94.4	89.5	110.5	
Sb	123	115	He	39.845	2.240	75456	1.47	40	99.6	89.5	110.5	
Ba	137	115	He	39.354	3.282	28789	2.62	40	98.4	89.5	110.5	
W	182	159	He	39.852	2.629	212385	2.50	40	99.6	89.5	110.5	
Tl	205	165	He	40.328	1.211	378927	1.55	40	100.8	89.5	110.5	
Pb	208	165	He	40.320	0.304	514667	0.66	40	100.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	NoGas	1629221	1.46	1674650	97.29	60	120	
Sc	45	He	354482	0.22	355173	99.81	60	120	
Sc	45	NoGas	8649498	1.39	8635903	100.16	60	120	
Rh	103	He	1392674	1.70	1470259	94.72	60	120	
In	115	He	479044	0.76	490642	97.64	60	120	
Tb	159	He	1425108	2.40	1434034	99.38	60	120	
Ho	165	He	1382622	0.70	1409606	98.09	60	120	
Bi	209	He	859771	1.26	906964	94.80	60	120	

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Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	008_ICB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:39:49-04:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Ti	47	1	He	0.108	97.9	13	90.1	20	
W	182	1	He	0.316	25.2	3086	14.7	10	
Ca	44	1	He	0.562	448.1	295	12.5	1000	
Na	23	1	He	5.886	12.9	19185	5.0	1000	
Mg	24	1	He	2.441	77.3	1689	59.5	1000	
K	39	1	He	9.769	21.8	28226	4.1	1000	
V	51	1	He	0.123	61.2	954	31.6	2	
Cr	52	1	He	0.048	51.1	3675	3.0	2	
Mn	55	1	He	-0.024	-37.9	463	3.6	2	
Fe	56	1	He	3.226	44.4	13445	38.4	50	
Co	59	1	He	0.000	1835.8	76	77.5	1	
Ni	60	1	He	-0.023	-102.5	186	25.2	2	
Cu	63	1	He	0.019	197.0	2906	8.8	2	
Zn	66	1	He	-0.304	-16.9	343	9.4	20	
As	75	1	He	-0.064	-22.8	93	8.1	2	
Se	78	1	He	0.002	12643.1	24	24.0	2	
Sr	88	1	He	-0.063	-14.5	64	33.3	10	
Mo	95	1	He	0.125	32.2	306	27.8	2	
Ag	107	1	He	0.006	72.5	67	45.8	0.2	
Cd	111	1	He	0.020	42.1	18	41.0	0.2	
Ba	137	1	He	-0.010	-66.0	11	45.8	5	
Sn	118	1	He	-0.649	-25.9	5601	5.0	10	
Tl	205	1	He	0.037	37.2	388	33.6	0.5	
Pb	208	1	He	0.021	18.3	783	6.4	0.5	
Al	27	1	He	-0.029	-480.5	203	15.6	50	
Sb	123	1	He	0.105	17.8	240	15.0	2	
B	11	2	NoGas	1.977	14.1	10989	7.5	20	
Be	9	2	NoGas	0.014	56.6	111	36.1	1	
Li	7	2	NoGas	-0.073	-84.8	96770	1.2	8	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1656631	1.47	1674650	98.92	60	120	
Sc	45	1	He	359342	1.82	355173	101.17	60	120	
Sc	45	2	NoGas	8699164	0.54	8635903	100.73	60	120	
Rh	103	1	He	1440681	2.00	1470259	97.99	60	120	

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In	115	1	He	492886	0.50	490642	100.46	60	120	
Tb	159	1	He	1425388	1.66	1434034	99.40	60	120	
Ho	165	1	He	1386769	0.34	1409606	98.38	60	120	
Bi	209	1	He	881499	0.72	906964	97.19	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	009CRIA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:43:55-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.442	7.442	0.409	241273	0.52	8	93.0	69.5	130.5	
Be	9	2	NoGas	1.053	1.053	4.294	5475	4.96	1	105.3	69.5	130.5	
B	11	2	NoGas	21.682	21.682	3.252	72077	2.74	20	108.4	69.5	130.5	
Na	23	1	He	953.319	953.319	1.424	919675	1.21	1000	95.3	69.5	130.5	
Mg	24	1	He	964.769	964.769	2.247	494335	1.95	1000	96.5	69.5	130.5	
Al	27	1	He	55.292	55.292	2.670	11983	2.43	50	110.6	69.5	130.5	
K	39	1	He	1025.746	1025.746	1.021	337118	0.85	1000	102.6	69.5	130.5	
Ca	44	1	He	999.859	999.859	3.313	16786	2.96	1000	100.0	69.5	130.5	
Ti	47	1	He	9.733	9.733	1.781	1089	1.57	10	97.3	69.5	130.5	
V	51	1	He	4.880	4.880	0.728	18693	0.95	5	97.6	69.5	130.5	
Cr	52	1	He	2.026	2.026	2.244	12430	1.34	2	101.3	69.5	130.5	
Mn	55	1	He	4.887	4.887	2.002	11991	2.13	5	97.7	69.5	130.5	
Fe	56	1	He	108.457	108.457	1.562	371188	1.40	100	108.5	69.5	130.5	
Co	59	1	He	1.012	1.012	2.606	7412	2.53	1	101.2	69.5	130.5	
Ni	60	1	He	1.967	1.967	4.920	4112	4.75	2	98.4	69.5	130.5	
Cu	63	1	He	2.072	2.072	1.186	14068	0.88	2	103.6	69.5	130.5	
Zn	66	1	He	20.538	20.538	1.721	15151	1.80	20	102.7	69.5	130.5	
As	75	1	He	5.126	5.126	3.177	2626	3.45	5	102.5	69.5	130.5	
Se	78	1	He	5.567	5.567	3.825	173	3.90	5	111.3	69.5	130.5	
Sr	88	1	He	9.519	9.519	1.046	23722	1.32	10	95.2	69.5	130.5	
Mo	95	1	He	5.068	5.068	2.179	11610	3.58	5	101.4	69.5	130.5	
Ag	107	1	He	1.033	1.033	1.488	7258	1.79	1	103.3	69.5	130.5	
Cd	111	1	He	1.013	1.013	1.134	874	1.97	1	101.3	69.5	130.5	
Sn	118	1	He	7.133	7.133	2.201	19174	1.93	10	71.3	69.5	130.5	
Sb	123	1	He	1.976	1.976	5.628	3868	4.99	2	98.8	69.5	130.5	
Ba	137	1	He	4.880	4.880	0.723	3676	1.47	5	97.6	69.5	130.5	
W	182	1	He	10.243	10.243	5.569	55507	4.35	10	102.4	69.5	130.5	
Tl	205	1	He	0.996	0.996	2.407	9417	3.24	1	99.6	69.5	130.5	
Pb	208	1	He	1.039	1.039	0.751	13786	0.67	1	103.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1646270	0.23	1674650	98.31	60	120	
Sc	45	1	He	357557	0.31	355173	100.67	60	120	
Sc	45	2	NoGas	8681529	0.70	8635903	100.53	60	120	
Rh	103	1	He	1451618	1.46	1470259	98.73	60	120	
In	115	1	He	491018	0.89	490642	100.08	60	120	
Tb	159	1	He	1422075	1.16	1434034	99.17	60	120	
Ho	165	1	He	1385565	0.84	1409606	98.29	60	120	
Bi	209	1	He	892513	0.77	906964	98.41	60	120	

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Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA-2528694
Data File Name	010ICSA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:48:02-04:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.041	205.4	103013	1.2	4	
Be	9	45	2	NoGas	0.013	146.3	111	88.9	2	
B	11	45	2	NoGas	1.914	6.5	11233	2.3	20	
Na	23	45	1	He	49459.103	3.1	46543696	0.9	75200	
Mg	24	45	1	He	49551.648	3.1	25109418	1.5	75200	
Al	27	45	1	He	51034.443	2.5	10758895	2.0	75200	
K	39	45	1	He	48926.597	2.9	14754899	1.1	75200	
Ca	44	45	1	He	49430.297	3.5	807689	1.6	75200	
Ti	47	45	1	He	1012.628	2.8	112029	1.7	1505	
V	51	45	1	He	0.164	66.6	1091	37.5	4	
Cr	52	45	1	He	1.032	8.8	7937	3.8	4	
Mn	55	45	1	He	0.314	3.8	1242	2.6	4	
Fe	56	45	1	He	49279.461	3.2	165882913	2.1	75200	
Co	59	45	1	He	0.019	31.6	207	22.2	2	
Ni	60	45	1	He	0.267	11.3	748	4.9	4	
Cu	63	45	1	He	0.434	9.1	5097	4.8	4	
Zn	66	45	1	He	0.716	11.8	1057	6.7	20	
As	75	115	1	He	0.046	67.4	140	10.1	4	
Se	78	115	1	He	0.093	58.4	25	2.3	4	
Sr	88	103	1	He	0.241	4.9	770	3.7	20	
Mo	95	103	1	He	1020.345	1.7	2199117	2.2	1505	
Ag	107	103	1	He	0.017	34.3	132	24.9	1	
Cd	111	115	1	He	0.006	96.8	5	86.4	1	
Sn	118	115	1	He	-2.967	-3.6	1459	8.8	20	
Sb	123	115	1	He	0.034	51.2	97	33.3	4	
Ba	137	115	1	He	0.038	71.3	46	44.7	2	
W	182	159	1	He	0.155	23.4	2197	6.3	20	
Tl	205	165	1	He	0.006	35.1	97	15.8	2	
Pb	208	165	1	He	0.113	10.7	1912	4.2	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1733659	2.15	1674650	103.52	60	120	
Sc	45	1	He	354169	4.03	355173	99.72	60	120	
Sc	45	2	NoGas	9056881	1.64	8635903	104.87	60	120	
Rh	103	1	He	1369380	3.83	1470259	93.14	60	120	
In	115	1	He	469574	5.32	490642	95.71	60	120	
Tb	159	1	He	1406541	2.58	1434034	98.08	60	120	
Ho	165	1	He	1355524	4.78	1409606	96.16	60	120	
Bi	209	1	He	834867	2.42	906964	92.05	60	120	

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Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB-2569428
Data File Name	011ICAB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:52:05-04:00
Sample Type	ICSAB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTDMass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	45	2	NoGas	96.358	1.218	2150708	0.70	100	96.4	49.5	150.5	
Be	9	45	2	NoGas	96.791	0.842	549653	0.93	100	96.8	49.5	150.5	
B	11	45	2	NoGas	103.050	1.037	357208	0.70	100	103.0	49.5	150.5	
Na	23	45	1	He	49840.849	2.751	49991735	1.87	50000	99.7	49.5	150.5	
Mg	24	45	1	He	49735.927	2.506	26861711	1.67	50000	99.5	49.5	150.5	
Al	27	45	1	He	50877.629	2.499	11429940	1.65	50000	101.8	49.5	150.5	
K	39	45	1	He	49465.068	2.551	15898698	1.61	50000	98.9	49.5	150.5	
Ca	44	45	1	He	49453.930	2.461	861333	1.61	50000	98.9	49.5	150.5	
Ti	47	45	1	He	1108.898	2.075	130747	1.16	1100	100.8	49.5	150.5	
V	51	45	1	He	98.816	2.986	389395	2.18	100	98.8	49.5	150.5	
Cr	52	45	1	He	98.336	3.014	463594	2.11	100	98.3	49.5	150.5	
Mn	55	45	1	He	99.311	2.457	246495	1.56	100	99.3	49.5	150.5	
Fe	56	45	1	He	49238.737	2.875	176639953	1.94	50000	98.5	49.5	150.5	
Co	59	45	1	He	99.097	2.619	758008	1.67	100	99.1	49.5	150.5	
Ni	60	45	1	He	99.068	2.982	206465	2.06	100	99.1	49.5	150.5	
Cu	63	45	1	He	98.824	2.383	570757	1.51	100	98.8	49.5	150.5	
Zn	66	45	1	He	99.594	2.836	75235	1.89	100	99.6	49.5	150.5	
As	75	115	1	He	103.577	1.185	50931	1.27	100	103.6	49.5	150.5	
Se	78	115	1	He	101.237	2.001	2755	2.45	100	101.2	49.5	150.5	
Sr	88	103	1	He	100.282	2.656	242863	1.38	100	100.3	49.5	150.5	
Mo	95	103	1	He	1135.143	3.599	2542772	2.52	1100	103.2	49.5	150.5	
Ag	107	103	1	He	101.866	2.145	699579	0.83	100	101.9	49.5	150.5	
Cd	111	115	1	He	99.090	1.406	85914	1.56	100	99.1	49.5	150.5	
Sn	118	115	1	He	102.218	1.825	186219	2.11	100	102.2	49.5	150.5	
Sb	123	115	1	He	98.421	1.179	191980	1.30	100	98.4	49.5	150.5	
Ba	137	115	1	He	98.926	1.389	74532	0.80	100	98.9	49.5	150.5	
W	182	159	1	He	99.769	2.368	536659	3.36	100	99.8	49.5	150.5	
Tl	205	165	1	He	97.100	2.257	939250	2.09	100	97.1	49.5	150.5	
Pb	208	165	1	He	98.429	1.058	1292792	0.80	100	98.4	49.5	150.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1717012	0.66	1674650	102.53	60	120	
Sc	45	1	He	377241	0.96	355173	106.21	60	120	
Sc	45	2	NoGas	9558765	1.03	8635903	110.69	60	120	
Rh	103	1	He	1423049	1.34	1470259	96.79	60	120	
In	115	1	He	493533	1.33	490642	100.59	60	120	
Tb	159	1	He	1443618	1.04	1434034	100.67	60	120	
Ho	165	1	He	1423525	0.61	1409606	100.99	60	120	
Bi	209	1	He	860844	1.00	906964	94.91	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	012_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T10:56:07-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	48.782	1.632	1125237	1.65	50	97.6	89.5	110.5	
Be	9	45	2	NoGas	48.493	1.190	271334	1.33	50	97.0	89.5	110.5	
B	11	45	2	NoGas	51.136	1.461	177281	1.25	50	102.3	89.5	110.5	
Na	23	45	1	He	25300.738	0.485	25794877	1.82	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25314.324	1.153	13892683	1.92	25000	101.3	89.5	110.5	
Al	27	45	1	He	253.608	0.633	58117	1.92	250	101.4	89.5	110.5	
K	39	45	1	He	24959.297	0.706	8165421	2.04	25000	99.8	89.5	110.5	
Ca	44	45	1	He	24889.293	0.957	440632	1.72	25000	99.6	89.5	110.5	
Ti	47	45	1	He	52.796	1.248	6326	0.29	50	105.6	89.5	110.5	
V	51	45	1	He	50.466	1.702	202329	2.02	50	100.9	89.5	110.5	
Cr	52	45	1	He	50.181	2.677	242195	2.82	50	100.4	89.5	110.5	
Mn	55	45	1	He	248.922	1.673	626943	1.92	250	99.6	89.5	110.5	
Fe	56	45	1	He	12481.543	1.250	45499465	1.45	12500	99.9	89.5	110.5	
Co	59	45	1	He	50.305	0.954	391023	1.27	50	100.6	89.5	110.5	
Ni	60	45	1	He	50.354	0.768	106757	1.46	50	100.7	89.5	110.5	
Cu	63	45	1	He	50.253	0.813	296380	1.69	50	100.5	89.5	110.5	
Zn	66	45	1	He	50.214	1.826	38838	1.47	50	100.4	89.5	110.5	
As	75	115	1	He	51.390	1.534	25854	1.30	50	102.8	89.5	110.5	
Se	78	115	1	He	50.851	2.358	1424	1.24	50	101.7	89.5	110.5	
Sr	88	103	1	He	49.711	1.481	126527	1.86	50	99.4	89.5	110.5	
Mo	95	103	1	He	54.650	1.348	128572	1.84	50	109.3	89.5	110.5	
Ag	107	103	1	He	50.814	0.753	366429	1.44	50	101.6	89.5	110.5	
Cd	111	115	1	He	50.346	1.558	44555	1.92	50	100.7	89.5	110.5	
Sn	118	115	1	He	48.843	1.871	94409	1.52	50	97.7	89.5	110.5	
Sb	123	115	1	He	50.709	0.969	100977	1.55	50	101.4	89.5	110.5	
Ba	137	115	1	He	49.149	2.722	37810	3.38	50	98.3	89.5	110.5	
W	182	159	1	He	50.563	3.781	274310	2.25	50	101.1	89.5	110.5	
Tl	205	165	1	He	51.110	4.320	481552	2.35	50	102.2	89.5	110.5	
Pb	208	165	1	He	50.662	2.941	648464	0.89	50	101.3	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1723582	0.63	1674650	102.92	60	120	
Sc	45	1	He	383262	1.34	355173	107.91	60	120	
Sc	45	2	NoGas	9417175	0.18	8635903	109.05	60	120	
Rh	103	1	He	1493852	0.90	1470259	101.60	60	120	
In	115	1	He	503712	1.18	490642	102.66	60	120	
Tb	159	1	He	1453058	1.90	1434034	101.33	60	120	
Ho	165	1	He	1387530	3.16	1409606	98.43	60	120	
Bi	209	1	He	863822	0.84	906964	95.24	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	013_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:00:11-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.121	-43.4	99425	1.3	8	
Be	9	45	2	NoGas	0.010	134.7	96	75.1	1	
B	11	45	2	NoGas	2.301	2.7	12446	0.4	20	
Na	23	45	1	He	11.394	4.5	26034	1.9	1000	
Mg	24	45	1	He	3.612	19.8	2430	15.8	1000	
Al	27	45	1	He	1.527	8.8	571	5.4	50	
K	39	45	1	He	16.283	8.7	32178	1.2	1000	
Ca	44	45	1	He	5.034	75.4	393	16.8	1000	
Ti	47	45	1	He	0.148	66.0	19	62.0	20	
V	51	45	1	He	0.095	121.6	900	50.9	2	
Cr	52	45	1	He	0.013	131.6	3748	2.4	2	
Mn	55	45	1	He	0.012	143.6	582	7.1	2	
Fe	56	45	1	He	5.423	24.2	22255	21.2	50	
Co	59	45	1	He	0.002	188.0	90	28.0	1	
Ni	60	45	1	He	-0.026	-36.3	190	10.5	2	
Cu	63	45	1	He	0.005	529.2	3010	5.4	2	
Zn	66	45	1	He	-0.039	-118.2	568	6.5	20	
As	75	115	1	He	-0.042	-19.9	107	5.1	2	
Se	78	115	1	He	0.136	39.0	29	5.3	2	
Sr	88	103	1	He	-0.057	-11.7	83	21.2	10	
Mo	95	103	1	He	0.665	5.2	1619	5.1	2	
Ag	107	103	1	He	0.011	17.9	102	13.2	0.2	
Cd	111	115	1	He	0.023	20.6	21	20.9	0.2	
Sn	118	115	1	He	0.237	69.0	7380	5.0	10	
Sb	123	115	1	He	0.124	19.6	287	16.4	2	
Ba	137	115	1	He	0.004	559.1	22	69.3	5	
W	182	159	1	He	0.359	27.1	3304	17.7	10	
Tl	205	165	1	He	0.049	36.2	508	34.0	0.5	
Pb	208	165	1	He	0.022	35.8	802	13.2	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1718686	0.89	1674650	102.63	60	120	
Sc	45	1	He	382754	0.31	355173	107.77	60	120	
Sc	45	2	NoGas	9025961	1.18	8635903	104.52	60	120	
Rh	103	1	He	1522251	0.49	1470259	103.54	60	120	
In	115	1	He	508189	1.22	490642	103.58	60	120	
Tb	159	1	He	1420087	2.15	1434034	99.03	60	120	
Ho	165	1	He	1398706	0.70	1409606	99.23	60	120	
Bi	209	1	He	885066	0.54	906964	97.59	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-234979/1-a
Data File Name	014_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:11:49-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.153	-40.3	98620	0.8	8	
Be	9	45	2	NoGas	0.011	32.8	100	19.2	1	
B	11	45	2	NoGas	4.436	4.7	19300	3.7	20	
Na	23	45	1	He	94.003	1.7	109049	0.6	1000	
Mg	24	45	1	He	138.512	2.8	75633	2.0	1000	
Al	27	45	1	He	2.739	8.3	839	5.2	50	
K	39	45	1	He	24.958	6.8	34671	1.0	1000	
Ca	44	45	1	He	454.407	2.7	8253	1.7	1000	
Ti	47	45	1	He	0.140	23.6	18	21.7	20	
V	51	45	1	He	0.049	673.7	710	185.9	2	
Cr	52	45	1	He	25.712	1.6	124541	0.8	2	Blank High
Mn	55	45	1	He	3.180	4.4	8462	3.3	2	Blank High
Fe	56	45	1	He	123.474	2.5	447701	1.5	50	Blank High
Co	59	45	1	He	0.234	12.2	1873	11.3	1	
Ni	60	45	1	He	11.912	2.3	25168	1.6	2	Blank High
Cu	63	45	1	He	1.407	4.6	11078	2.5	2	
Zn	66	45	1	He	10.537	0.8	8531	1.4	20	
As	75	115	1	He	-0.077	-31.5	89	13.8	2	
Se	78	115	1	He	-0.065	-126.8	23	9.5	2	
Sr	88	103	1	He	1.015	2.7	2818	2.0	10	
Mo	95	103	1	He	0.544	6.4	1310	6.2	2	
Ag	107	103	1	He	0.002	82.5	39	32.4	0.2	
Cd	111	115	1	He	0.006	50.9	6	44.9	0.2	
Sn	118	115	1	He	-3.277	-1.7	1022	9.5	10	
Sb	123	115	1	He	0.063	21.0	162	16.6	2	
Ba	137	115	1	He	2.172	1.6	1700	1.1	5	
W	182	159	1	He	0.138	17.9	2160	4.2	10	
Tl	205	165	1	He	0.006	20.3	99	10.8	0.5	
Pb	208	165	1	He	0.080	7.0	1543	4.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1714484	1.80	1674650	102.38	60	120	
Sc	45	1	He	379152	0.93	355173	106.75	60	120	
Sc	45	2	NoGas	9010149	0.55	8635903	104.33	60	120	
Rh	103	1	He	1500426	0.88	1470259	102.05	60	120	
In	115	1	He	506950	0.59	490642	103.32	60	120	
Tb	159	1	He	1440855	2.51	1434034	100.48	60	120	
Ho	165	1	He	1396627	1.36	1409606	99.08	60	120	
Bi	209	1	He	919493	1.05	906964	101.38	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-234979/2-a
Data File Name	015_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:15:55-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	91.301	91.301	1.697	1934492	0.40	100	91.3	84.5	115.4	
Be	9	2	NoGas	951.335	951.335	0.331	5114659	1.86	1000	95.1	84.5	115.4	
B	11	2	NoGas	94.153	94.153	1.748	309428	1.98	100	94.2	84.5	115.4	
Na	23	1	He	9556.841	9556.841	2.638	9399555	1.25	10000	95.6	84.5	115.4	
Mg	24	1	He	9621.947	9621.947	1.331	5090498	0.20	10000	96.2	84.5	115.4	
Al	27	1	He	9569.796	9569.796	1.154	2106115	1.07	10000	95.7	84.5	115.4	
K	39	1	He	9264.452	9264.452	2.655	2937421	1.20	10000	92.6	84.5	115.4	
Ca	44	1	He	11032.021	11032.021	2.294	188420	1.23	10000	110.3	84.5	115.4	
Ti	47	1	He	93.327	93.327	1.488	10780	1.67	100	93.3	84.5	115.4	
V	51	1	He	962.437	962.437	2.420	3710112	0.95	1000	96.2	84.5	115.4	
Cr	52	1	He	931.667	931.667	1.394	4272335	1.14	1000	93.2	84.5	115.4	
Mn	55	1	He	963.732	963.732	2.252	2338163	0.90	1000	96.4	84.5	115.4	
Fe	56	1	He	9381.582	9381.582	2.756	32964449	1.39	10000	93.8	84.5	115.4	
Co	59	1	He	942.381	942.381	1.423	7060202	0.71	1000	94.2	84.5	115.4	
Ni	60	1	He	947.183	947.183	0.943	1931682	0.80	1000	94.7	84.5	115.4	
Cu	63	1	He	924.739	924.739	1.814	5207081	0.70	1000	92.5	84.5	115.4	
Zn	66	1	He	976.439	976.439	1.553	717444	0.92	1000	97.6	84.5	115.4	
As	75	1	He	968.731	968.731	0.358	472131	0.49	1000	96.9	84.5	115.4	
Se	78	1	He	952.709	952.709	1.291	25547	1.06	1000	95.3	84.5	115.4	
Sr	88	1	He	907.148	907.148	0.911	2262182	0.38	1000	90.7	84.5	115.4	
Mo	95	1	He	93.394	93.394	1.009	215640	1.55	100	93.4	84.5	115.4	
Ag	107	1	He	93.714	93.714	0.925	663245	1.22	100	93.7	84.5	115.4	
Cd	111	1	He	946.777	946.777	0.225	815405	0.54	1000	94.7	84.5	115.4	
Sn	118	1	He	948.941	948.941	1.388	1661712	1.77	1000	94.9	84.5	115.4	
Sb	123	1	He	92.240	92.240	0.474	178726	0.69	100	92.2	84.5	115.4	
Ba	137	1	He	925.950	925.950	0.689	692851	0.91	1000	92.6	84.5	115.4	
W	182	1	He	93.750	93.750	1.335	488619	2.89	100	93.7	84.5	115.4	
Tl	205	1	He	223.170	223.170	0.337	2114913	0.93	250	89.3	84.5	115.4	
Pb	208	1	He	885.317	885.317	0.483	11387792	0.48	1000	88.5	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1672990	0.76	1674650	99.90	60	120	
Sc	45	1	He	369501	1.50	355173	104.03	60	120	
Sc	45	2	NoGas	9050264	2.02	8635903	104.80	60	120	
Rh	103	1	He	1466197	0.61	1470259	99.72	60	120	
In	115	1	He	490218	0.39	490642	99.91	60	120	
Tb	159	1	He	1398664	2.13	1434034	97.53	60	120	
Ho	165	1	He	1394597	0.59	1409606	98.94	60	120	
Bi	209	1	He	866753	0.66	906964	95.57	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235182/1-a
Data File Name	016_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:19:48-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.056	-223.7	99380	1.1	8	
Be	9	45	2	NoGas	0.132	11.8	741	9.2	1	
B	11	45	2	NoGas	4.949	1.7	20705	1.3	20	
Na	23	45	1	He	6.549	17.4	20382	4.5	1000	
Mg	24	45	1	He	1.693	18.0	1333	13.1	1000	
Al	27	45	1	He	1.393	37.2	522	21.9	50	
K	39	45	1	He	7.279	33.7	28260	3.4	1000	
Ca	44	45	1	He	-2.385	-55.0	253	7.8	1000	
Ti	47	45	1	He	0.125	12.6	16	12.4	20	
V	51	45	1	He	0.248	26.0	1465	18.2	2	
Cr	52	45	1	He	0.071	20.4	3887	2.3	2	
Mn	55	45	1	He	0.346	6.7	1373	4.5	2	
Fe	56	45	1	He	3.970	25.7	16425	23.0	50	
Co	59	45	1	He	0.124	15.3	1003	15.1	1	
Ni	60	45	1	He	0.085	47.1	412	21.0	2	
Cu	63	45	1	He	0.283	17.2	4476	7.2	2	
Zn	66	45	1	He	0.762	15.6	1137	7.1	20	
As	75	115	1	He	0.185	29.8	216	12.1	2	
Se	78	115	1	He	0.432	44.4	36	13.8	2	
Sr	88	103	1	He	0.029	47.5	304	12.0	10	
Mo	95	103	1	He	0.277	12.5	681	11.3	2	
Ag	107	103	1	He	0.011	21.9	107	16.2	0.2	
Cd	111	115	1	He	0.274	25.4	238	24.6	0.2	Blank High
Sn	118	115	1	He	-0.529	-214.4	5812	33.5	10	
Sb	123	115	1	He	0.256	17.2	536	15.3	2	
Ba	137	115	1	He	0.105	17.3	98	13.8	5	
W	182	159	1	He	0.551	33.3	4275	24.4	10	
Tl	205	165	1	He	0.147	22.7	1411	22.2	0.5	
Pb	208	165	1	He	0.157	22.4	2497	17.9	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1700513	0.91	1674650	101.54	60	120	
Sc	45	1	He	369805	1.10	355173	104.12	60	120	
Sc	45	2	NoGas	8907055	2.51	8635903	103.14	60	120	
Rh	103	1	He	1507379	0.88	1470259	102.52	60	120	
In	115	1	He	493632	0.70	490642	100.61	60	120	
Tb	159	1	He	1404184	2.87	1434034	97.92	60	120	
Ho	165	1	He	1376804	0.58	1409606	97.67	60	120	
Bi	209	1	He	888568	0.93	906964	97.97	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235182/2-a
Data File Name	017_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:23:56-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	94.868	94.868	0.525	2008469	1.30	100	94.9	84.5	115.4	
Be	9	2	NoGas	1008.937	1008.937	0.391	5429621	0.96	1000	100.9	84.5	115.4	
B	11	2	NoGas	100.035	100.035	0.309	328793	1.10	100	100.0	84.5	115.4	
Na	23	1	He	9806.466	9806.466	2.541	9724213	1.66	10000	98.1	84.5	115.4	
Mg	24	1	He	9902.941	9902.941	3.449	5281412	2.58	10000	99.0	84.5	115.4	
Al	27	1	He	9836.601	9836.601	3.169	2182245	2.39	10000	98.4	84.5	115.4	
K	39	1	He	9723.408	9723.408	1.950	3107208	1.19	10000	97.2	84.5	115.4	
Ca	44	1	He	10840.073	10840.073	2.518	186666	1.80	10000	108.4	84.5	115.4	
Ti	47	1	He	97.178	97.178	5.121	11314	4.31	100	97.2	84.5	115.4	
V	51	1	He	1005.292	1005.292	1.504	3907415	0.62	1000	100.5	84.5	115.4	
Cr	52	1	He	953.082	953.082	3.631	4405514	2.77	1000	95.3	84.5	115.4	
Mn	55	1	He	994.146	994.146	2.911	2431703	2.13	1000	99.4	84.5	115.4	
Fe	56	1	He	9650.596	9650.596	3.433	34187914	2.61	10000	96.5	84.5	115.4	
Co	59	1	He	964.223	964.223	2.910	7282398	2.15	1000	96.4	84.5	115.4	
Ni	60	1	He	968.199	968.199	3.563	1990377	2.77	1000	96.8	84.5	115.4	
Cu	63	1	He	960.104	960.104	2.871	5450160	2.09	1000	96.0	84.5	115.4	
Zn	66	1	He	989.459	989.459	2.208	732921	1.39	1000	98.9	84.5	115.4	
As	75	1	He	1019.929	1019.929	2.374	489472	1.54	1000	102.0	84.5	115.4	
Se	78	1	He	997.886	997.886	1.866	26350	1.04	1000	99.8	84.5	115.4	
Sr	88	1	He	940.199	940.199	1.074	2323560	1.42	1000	94.0	84.5	115.4	
Mo	95	1	He	99.439	99.439	2.319	227520	2.46	100	99.4	84.5	115.4	
Ag	107	1	He	99.567	99.567	0.593	698327	1.29	100	99.6	84.5	115.4	
Cd	111	1	He	996.092	996.092	1.972	844770	1.15	1000	99.6	84.5	115.4	
Sn	118	1	He	990.802	990.802	1.851	1708185	1.13	1000	99.1	84.5	115.4	
Sb	123	1	He	96.954	96.954	2.225	184987	1.44	100	97.0	84.5	115.4	
Ba	137	1	He	966.179	966.179	2.224	711894	1.41	1000	96.6	84.5	115.4	
W	182	1	He	95.657	95.657	1.904	506857	2.91	100	95.7	84.5	115.4	
Tl	205	1	He	235.268	235.268	3.253	2217519	3.77	250	94.1	84.5	115.4	
Pb	208	1	He	919.708	919.708	0.761	11765470	1.27	1000	92.0	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1689348	0.43	1674650	100.88	60	120	
Sc	45	1	He	372508	0.89	355173	104.88	60	120	
Sc	45	2	NoGas	9059024	1.16	8635903	104.90	60	120	
Rh	103	1	He	1452998	0.99	1470259	98.83	60	120	
In	115	1	He	482783	0.85	490642	98.40	60	120	
Tb	159	1	He	1422205	2.62	1434034	99.18	60	120	
Ho	165	1	He	1386925	0.58	1409606	98.39	60	120	
Bi	209	1	He	855485	0.91	906964	94.32	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-a
Data File Name	018SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:27:48-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	23.592	23.592	0.63	592765	0.00	10000	
Be	9	45	2	NoGas	0.150	0.150	13.13	878	0.02	2000	
B	11	45	2	NoGas	11.009	11.009	2.63	41848	0.03	300	
Na	23	45	1	He	5187.192	5187.192	1.79	5330502	0.10	500000	
Mg	24	45	1	He	46840.834	46840.834	2.37	25854891	0.18	500000	
Al	27	45	1	He	2.358	2.358	14.99	766	0.31	200000	
K	39	45	1	He	3602.210	3602.210	1.43	1208365	0.30	500000	
Ca	44	45	1	He	128297.081	128297.081	1.03	2283129	5.62	500000	
Ti	47	45	1	He	0.220	0.220	56.00	28	0.79	2500	
V	51	45	1	He	0.164	0.164	109.23	1181	0.01	10000	
Cr	52	45	1	He	0.104	0.104	82.19	4209	0.00	10000	
Mn	55	45	1	He	319.406	319.406	1.73	809000	0.04	10000	
Fe	56	45	1	He	1347.362	1347.362	2.46	4942582	0.03	200000	
Co	59	45	1	He	4.662	4.662	2.03	36517	0.01	5000	
Ni	60	45	1	He	12.557	12.557	2.80	26961	0.05	10000	
Cu	63	45	1	He	0.199	0.199	24.44	4169	0.00	10000	
Zn	66	45	1	He	1.381	1.381	10.70	1659	0.08	10000	
As	75	115	1	He	1.708	1.708	7.12	964	0.18	10000	
Se	78	115	1	He	0.485	0.485	32.60	37	1.31	10000	
Sr	88	103	1	He	81.380	81.380	0.90	202282	0.04	10000	
Mo	95	103	1	He	0.289	0.289	8.77	687	0.04	2000	
Ag	107	103	1	He	0.015	0.015	17.56	131	0.01	300	
Cd	111	115	1	He	0.239	0.239	20.51	208	0.11	4000	
Sn	118	115	1	He	-1.180	-1.180	-62.61	4675	-0.03	2000	
Sb	123	115	1	He	0.270	0.270	7.33	563	0.05	200	
Ba	137	115	1	He	549.054	549.054	0.77	414212	0.13	10000	
W	182	159	1	He	0.562	0.562	25.41	4408	0.01	2500	
Tl	205	165	1	He	0.179	0.179	20.84	1761	0.01	2000	
Pb	208	165	1	He	0.148	0.148	18.09	2449	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1747046	1.16	1674650	104.32	60	120	
Sc	45	1	He	385466	0.58	355173	108.53	60	120	
Sc	45	2	NoGas	9318445	1.19	8635903	107.90	60	120	
Rh	103	1	He	1459883	0.98	1470259	99.29	60	120	
In	115	1	He	494252	1.03	490642	100.74	60	120	
Tb	159	1	He	1435865	2.63	1434034	100.13	60	120	
Ho	165	1	He	1415027	1.44	1409606	100.38	60	120	
Bi	209	1	He	855692	1.49	906964	94.35	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66154-g-2-a@5
Data File Name	019SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:31:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.561	4.561	3.87	196670	0.00	10000	
Be	9	45	2	NoGas	0.078	0.078	35.38	467	0.02	2000	
B	11	45	2	NoGas	3.286	3.286	1.25	15911	0.02	300	
Na	23	45	1	He	995.488	995.488	1.42	1042638	0.10	500000	
Mg	24	45	1	He	9554.619	9554.619	2.49	5314203	0.18	500000	
Al	27	45	1	He	0.747	0.747	19.53	399	0.19	200000	
K	39	45	1	He	726.590	726.590	0.55	267387	0.27	500000	
Ca	44	45	1	He	25704.371	25704.371	2.23	461159	5.57	500000	
Ti	47	45	1	He	0.036	0.036	160.17	6	0.65	2500	
V	51	45	1	He	0.144	0.144	108.23	1112	0.01	10000	
Cr	52	45	1	He	0.073	0.073	21.82	4093	0.00	10000	
Mn	55	45	1	He	65.455	65.455	2.23	167489	0.04	10000	
Fe	56	45	1	He	294.233	294.233	2.47	1089488	0.03	200000	
Co	59	45	1	He	1.004	1.004	1.02	7986	0.01	5000	
Ni	60	45	1	He	2.583	2.583	0.53	5788	0.04	10000	
Cu	63	45	1	He	0.027	0.027	32.08	3187	0.00	10000	
Zn	66	45	1	He	0.072	0.072	61.06	662	0.01	10000	
As	75	115	1	He	0.352	0.352	8.10	306	0.11	10000	
Se	78	115	1	He	0.273	0.273	19.93	32	0.84	10000	
Sr	88	103	1	He	15.788	15.788	3.20	41335	0.04	10000	
Mo	95	103	1	He	0.080	0.080	11.25	217	0.04	2000	
Ag	107	103	1	He	0.008	0.008	11.89	84	0.01	300	
Cd	111	115	1	He	0.088	0.088	15.28	79	0.11	4000	
Sn	118	115	1	He	-1.120	-1.120	-10.55	4927	-0.02	2000	
Sb	123	115	1	He	0.097	0.097	32.59	231	0.04	200	
Ba	137	115	1	He	110.826	110.826	1.76	86035	0.13	10000	
W	182	159	1	He	0.121	0.121	24.95	2074	0.01	2500	
Tl	205	165	1	He	0.036	0.036	14.15	389	0.01	2000	
Pb	208	165	1	He	0.051	0.051	14.12	1194	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1738694	1.55	1674650	103.82	60	120	
Sc	45	1	He	388460	1.03	355173	109.37	60	120	
Sc	45	2	NoGas	9190734	1.04	8635903	106.42	60	120	
Rh	103	1	He	1531422	2.25	1470259	104.16	60	120	
In	115	1	He	508513	0.43	490642	103.64	60	120	
Tb	159	1	He	1442731	1.08	1434034	100.61	60	120	
Ho	165	1	He	1422987	1.49	1409606	100.95	60	120	
Bi	209	1	He	878070	0.51	906964	96.81	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66154-g-2-a
Data File Name	020SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:35:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	125.175	125.175	2.10	2704056	0.00	10000	
Be	9	45	2	NoGas	1043.398	1043.398	1.42	5801215	0.02	2000	
B	11	45	2	NoGas	118.835	118.835	0.86	402575	0.03	300	
Na	23	45	1	He	15193.665	15193.665	1.79	15491667	0.10	500000	
Mg	24	45	1	He	55641.343	55641.343	3.23	30525044	0.18	500000	
Al	27	45	1	He	10293.328	10293.328	2.68	2349249	0.44	200000	
K	39	45	1	He	13483.574	13483.574	0.82	4422401	0.30	500000	
Ca	44	45	1	He	136643.431	136643.431	2.62	2417028	5.65	500000	
Ti	47	45	1	He	103.239	103.239	1.76	12367	0.83	2500	
V	51	45	1	He	1045.307	1045.307	2.51	4179389	0.03	10000	
Cr	52	45	1	He	983.290	983.290	2.84	4676022	0.02	10000	
Mn	55	45	1	He	1339.473	1339.473	3.77	3370299	0.04	10000	
Fe	56	45	1	He	11242.802	11242.802	3.22	40972526	0.03	200000	
Co	59	45	1	He	980.046	980.046	3.44	7614346	0.01	5000	
Ni	60	45	1	He	986.957	986.957	3.03	2087253	0.05	10000	
Cu	63	45	1	He	949.369	949.369	4.04	5543659	0.02	10000	
Zn	66	45	1	He	988.070	988.070	2.51	752903	0.13	10000	
As	75	115	1	He	1066.733	1066.733	1.39	516962	0.21	10000	
Se	78	115	1	He	1023.202	1023.202	1.32	27283	3.75	10000	
Sr	88	103	1	He	1060.744	1060.744	1.58	2631089	0.04	10000	
Mo	95	103	1	He	106.067	106.067	1.79	243580	0.04	2000	
Ag	107	103	1	He	95.398	95.398	0.78	671433	0.01	300	
Cd	111	115	1	He	1013.968	1013.968	1.36	868362	0.12	4000	
Sn	118	115	1	He	1059.556	1059.556	3.19	1844052	0.06	2000	
Sb	123	115	1	He	103.892	103.892	1.81	200163	0.05	200	
Ba	137	115	1	He	1545.954	1545.954	0.53	1150291	0.13	10000	
W	182	159	1	He	103.656	103.656	4.05	547144	0.02	2500	
Tl	205	165	1	He	238.941	238.941	1.13	2290483	0.01	2000	
Pb	208	165	1	He	945.896	945.896	1.33	12307697	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1735603	1.10	1674650	103.64	60	120	
Sc	45	1	He	383208	0.94	355173	107.89	60	120	
Sc	45	2	NoGas	9360471	1.50	8635903	108.39	60	120	
Rh	103	1	He	1458184	1.02	1470259	99.18	60	120	
In	115	1	He	487477	0.55	490642	99.35	60	120	
Tb	159	1	He	1417670	1.80	1434034	98.86	60	120	
Ho	165	1	He	1410770	0.84	1409606	100.08	60	120	
Bi	209	1	He	848405	1.13	906964	93.54	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-b ms
Data File Name	021SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:39:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	120.445	120.445	1.04	2638482	0.00	10000	
Be	9	45	2	NoGas	973.844	973.844	2.04	5481739	0.02	2000	
B	11	45	2	NoGas	105.397	105.397	1.03	362065	0.03	300	
Na	23	45	1	He	14911.758	14911.758	1.96	15180716	0.10	500000	
Mg	24	45	1	He	57680.298	57680.298	2.11	31596914	0.18	500000	
Al	27	45	1	He	9833.540	9833.540	2.57	2240835	0.44	200000	
K	39	45	1	He	13153.244	13153.244	1.49	4307877	0.31	500000	
Ca	44	45	1	He	142484.509	142484.509	2.57	2516586	5.66	500000	
Ti	47	45	1	He	97.581	97.581	1.77	11673	0.84	2500	
V	51	45	1	He	995.545	995.545	2.99	3974223	0.03	10000	
Cr	52	45	1	He	932.247	932.247	3.78	4426193	0.02	10000	
Mn	55	45	1	He	1309.001	1309.001	3.50	3288308	0.04	10000	
Fe	56	45	1	He	10732.826	10732.826	2.15	39056152	0.03	200000	
Co	59	45	1	He	938.080	938.080	2.98	7276829	0.01	5000	
Ni	60	45	1	He	946.461	946.461	2.48	1998639	0.05	10000	
Cu	63	45	1	He	908.040	908.040	2.66	5294592	0.02	10000	
Zn	66	45	1	He	938.019	938.019	1.98	713718	0.13	10000	
As	75	115	1	He	1017.245	1017.245	2.34	491497	0.21	10000	
Se	78	115	1	He	979.339	979.339	2.20	26035	3.76	10000	
Sr	88	103	1	He	1035.578	1035.578	1.08	2553502	0.04	10000	
Mo	95	103	1	He	101.273	101.273	1.74	231216	0.04	2000	
Ag	107	103	1	He	97.542	97.542	0.72	682492	0.01	300	
Cd	111	115	1	He	962.203	962.203	2.67	821518	0.12	4000	
Sn	118	115	1	He	996.011	996.011	2.56	1728644	0.06	2000	
Sb	123	115	1	He	96.606	96.606	2.85	185559	0.05	200	
Ba	137	115	1	He	1522.234	1522.234	2.32	1129175	0.13	10000	
W	182	159	1	He	98.423	98.423	3.65	521476	0.02	2500	
Tl	205	165	1	He	225.096	225.096	1.61	2166244	0.01	2000	
Pb	208	165	1	He	889.189	889.189	1.08	11615494	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1740571	0.86	1674650	103.94	60	120	
Sc	45	1	He	382626	1.20	355173	107.73	60	120	
Sc	45	2	NoGas	9475740	0.44	8635903	109.72	60	120	
Rh	103	1	He	1449633	1.37	1470259	98.60	60	120	
In	115	1	He	486076	1.30	490642	99.07	60	120	
Tb	159	1	He	1422619	1.60	1434034	99.20	60	120	
Ho	165	1	He	1416342	0.88	1409606	100.48	60	120	
Bi	209	1	He	845393	1.21	906964	93.21	60	120	

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Sample Report

Sample Table

Sample Name	240-66154-g-2-c msd
Data File Name	022SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:43:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	117.659	117.659	1.18	2625904	0.00	10000	
Be	9	45	2	NoGas	973.960	973.960	2.19	5580384	0.02	2000	
B	11	45	2	NoGas	105.048	105.048	1.37	367325	0.03	300	
Na	23	45	1	He	14729.654	14729.654	1.47	15200865	0.10	500000	
Mg	24	45	1	He	56394.895	56394.895	2.46	31313075	0.18	500000	
Al	27	45	1	He	9655.906	9655.906	2.84	2230253	0.43	200000	
K	39	45	1	He	13088.945	13088.945	1.06	4345675	0.30	500000	
Ca	44	45	1	He	140238.592	140238.592	1.60	2510686	5.59	500000	
Ti	47	45	1	He	95.373	95.373	7.98	11556	0.83	2500	
V	51	45	1	He	983.467	983.467	3.72	3979582	0.02	10000	
Cr	52	45	1	He	923.491	923.491	3.01	4444759	0.02	10000	
Mn	55	45	1	He	1298.599	1298.599	2.95	3306847	0.04	10000	
Fe	56	45	1	He	10647.983	10647.983	2.82	39275561	0.03	200000	
Co	59	45	1	He	925.385	925.385	2.34	7277644	0.01	5000	
Ni	60	45	1	He	935.610	935.610	2.49	2002657	0.05	10000	
Cu	63	45	1	He	890.744	890.744	2.10	5265242	0.02	10000	
Zn	66	45	1	He	925.851	925.851	2.33	714061	0.13	10000	
As	75	115	1	He	1005.782	1005.782	1.95	493120	0.20	10000	
Se	78	115	1	He	961.860	961.860	0.98	25949	3.71	10000	
Sr	88	103	1	He	1006.627	1006.627	1.67	2552294	0.04	10000	
Mo	95	103	1	He	98.262	98.262	1.87	230668	0.04	2000	
Ag	107	103	1	He	94.205	94.205	0.62	677865	0.01	300	
Cd	111	115	1	He	954.231	954.231	1.73	826752	0.12	4000	
Sn	118	115	1	He	989.949	989.949	1.55	1743579	0.06	2000	
Sb	123	115	1	He	96.157	96.157	1.75	187432	0.05	200	
Ba	137	115	1	He	1503.706	1503.706	1.53	1131901	0.13	10000	
W	182	159	1	He	94.281	94.281	3.19	517673	0.02	2500	
Tl	205	165	1	He	230.775	230.775	3.75	2167435	0.01	2000	
Pb	208	165	1	He	912.422	912.422	3.25	11632801	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1781104	0.74	1674650	106.36	60	120	
Sc	45	1	He	387852	1.34	355173	109.20	60	120	
Sc	45	2	NoGas	9645742	1.20	8635903	111.69	60	120	
Rh	103	1	He	1490715	0.17	1470259	101.39	60	120	
In	115	1	He	493195	0.65	490642	100.52	60	120	
Tb	159	1	He	1473558	0.47	1434034	102.76	60	120	
Ho	165	1	He	1382988	2.43	1409606	98.11	60	120	
Bi	209	1	He	855106	0.55	906964	94.28	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-1-a
Data File Name	023SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:47:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.233	0.233	13.33	111936	0.00	10000	
Be	9	45	2	NoGas	0.247	0.247	3.23	1433	0.02	2000	
B	11	45	2	NoGas	21.159	21.159	0.57	76979	0.03	300	
Na	23	45	1	He	1188.564	1188.564	1.79	1240351	0.10	500000	
Mg	24	45	1	He	1667.568	1667.568	2.21	926612	0.18	500000	
Al	27	45	1	He	206.229	206.229	2.94	47868	0.43	200000	
K	39	45	1	He	3588.857	3588.857	0.95	1211606	0.30	500000	
Ca	44	45	1	He	7888.012	7888.012	1.26	141549	5.57	500000	
Ti	47	45	1	He	7.170	7.170	11.81	870	0.82	2500	
V	51	45	1	He	2.469	2.469	6.21	10518	0.02	10000	
Cr	52	45	1	He	2.079	2.079	6.23	13733	0.02	10000	
Mn	55	45	1	He	340.086	340.086	1.63	866729	0.04	10000	
Fe	56	45	1	He	30009.835	30009.835	2.36	110715836	0.03	200000	
Co	59	45	1	He	175.298	175.298	3.34	1378810	0.01	5000	
Ni	60	45	1	He	1.271	1.271	4.59	2969	0.04	10000	
Cu	63	45	1	He	1.199	1.199	4.98	10105	0.01	10000	
Zn	66	45	1	He	1.401	1.401	17.04	1687	0.08	10000	
As	75	115	1	He	1.325	1.325	3.65	803	0.16	10000	
Se	78	115	1	He	0.823	0.823	14.60	48	1.72	10000	
Sr	88	103	1	He	30.318	30.318	0.64	78946	0.04	10000	
Mo	95	103	1	He	0.576	0.576	5.86	1410	0.04	2000	
Ag	107	103	1	He	0.023	0.023	18.45	191	0.01	300	
Cd	111	115	1	He	0.349	0.349	11.45	315	0.11	4000	
Sn	118	115	1	He	0.175	0.175	459.38	7320	0.00	2000	
Sb	123	115	1	He	0.332	0.332	9.61	709	0.05	200	
Ba	137	115	1	He	32.379	32.379	0.68	25308	0.13	10000	
W	182	159	1	He	26.834	26.834	1.32	148423	0.02	2500	
Tl	205	165	1	He	0.245	0.245	21.67	2398	0.01	2000	
Pb	208	165	1	He	0.532	0.532	3.49	7461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1820266	1.62	1674650	108.70	60	120	
Sc	45	1	He	387939	1.02	355173	109.23	60	120	
Sc	45	2	NoGas	9484157	1.92	8635903	109.82	60	120	
Rh	103	1	He	1526598	0.92	1470259	103.83	60	120	
In	115	1	He	511697	0.51	490642	104.29	60	120	
Tb	159	1	He	1473962	0.72	1434034	102.78	60	120	
Ho	165	1	He	1414131	1.51	1409606	100.32	60	120	
Bi	209	1	He	898984	0.94	906964	99.12	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	024_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:51:35-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	48.783	1.141	1135009	0.66	50	97.6	89.5	110.5	
Be	9	45	2	NoGas	48.181	0.207	271930	0.44	50	96.4	89.5	110.5	
B	11	45	2	NoGas	52.419	1.093	183179	0.98	50	104.8	89.5	110.5	
Na	23	45	1	He	25621.400	0.890	26114854	0.90	25000	102.5	89.5	110.5	
Mg	24	45	1	He	25298.455	0.973	13882407	2.16	25000	101.2	89.5	110.5	
Al	27	45	1	He	249.147	1.265	57090	2.16	250	99.7	89.5	110.5	
K	39	45	1	He	25053.051	0.954	8193789	1.10	25000	100.2	89.5	110.5	
Ca	44	45	1	He	24794.133	1.392	438842	1.19	25000	99.2	89.5	110.5	
Ti	47	45	1	He	51.388	2.166	6158	3.47	50	102.8	89.5	110.5	
V	51	45	1	He	50.730	0.835	203343	0.79	50	101.5	89.5	110.5	
Cr	52	45	1	He	50.080	1.746	241672	1.83	50	100.2	89.5	110.5	
Mn	55	45	1	He	248.288	1.468	625193	0.68	250	99.3	89.5	110.5	
Fe	56	45	1	He	12452.486	1.726	45383393	1.24	12500	99.6	89.5	110.5	
Co	59	45	1	He	50.329	1.459	391141	1.51	50	100.7	89.5	110.5	
Ni	60	45	1	He	50.417	2.274	106862	1.80	50	100.8	89.5	110.5	
Cu	63	45	1	He	50.165	1.583	295787	1.16	50	100.3	89.5	110.5	
Zn	66	45	1	He	50.063	0.512	38720	1.13	50	100.1	89.5	110.5	
As	75	115	1	He	51.594	1.040	25863	1.31	50	103.2	89.5	110.5	
Se	78	115	1	He	51.446	3.081	1435	2.81	50	102.9	89.5	110.5	
Sr	88	103	1	He	49.790	1.664	125461	1.54	50	99.6	89.5	110.5	
Mo	95	103	1	He	51.369	1.906	119652	2.17	50	102.7	89.5	110.5	
Ag	107	103	1	He	50.976	2.079	363884	1.08	50	102.0	89.5	110.5	
Cd	111	115	1	He	50.062	1.108	44141	1.38	50	100.1	89.5	110.5	
Sn	118	115	1	He	49.306	2.799	94896	2.73	50	98.6	89.5	110.5	
Sb	123	115	1	He	50.047	1.124	99293	1.30	50	100.1	89.5	110.5	
Ba	137	115	1	He	48.931	1.821	37500	1.73	50	97.9	89.5	110.5	
W	182	159	1	He	51.598	0.768	274953	1.25	50	103.2	89.5	110.5	
Tl	205	165	1	He	49.922	1.056	477071	1.57	50	99.8	89.5	110.5	
Pb	208	165	1	He	49.609	0.557	643905	0.34	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1756093	1.55	1674650	104.86	60	120	
Sc	45	1	He	383212	1.63	355173	107.89	60	120	
Sc	45	2	NoGas	9499150	0.45	8635903	110.00	60	120	
Rh	103	1	He	1479056	1.34	1470259	100.60	60	120	
In	115	1	He	501861	0.31	490642	102.29	60	120	
Tb	159	1	He	1426797	1.01	1434034	99.50	60	120	
Ho	165	1	He	1406206	0.79	1409606	99.76	60	120	
Bi	209	1	He	857335	0.34	906964	94.53	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	025_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:55:44-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.148	-18.5	102990	1.0	8	
Be	9	45	2	NoGas	0.104	16.1	626	14.5	1	
B	11	45	2	NoGas	3.275	2.4	16234	1.4	20	
Na	23	45	1	He	9.217	5.8	23842	2.1	1000	
Mg	24	45	1	He	3.145	14.2	2178	11.8	1000	
Al	27	45	1	He	0.327	44.0	298	11.5	50	
K	39	45	1	He	10.909	21.3	30460	2.6	1000	
Ca	44	45	1	He	2.709	90.3	353	11.9	1000	
Ti	47	45	1	He	0.055	77.2	8	65.5	20	
V	51	45	1	He	0.145	41.7	1101	22.3	2	
Cr	52	45	1	He	0.088	35.7	4109	4.0	2	
Mn	55	45	1	He	0.047	32.0	672	5.8	2	
Fe	56	45	1	He	4.647	25.2	19471	22.6	50	
Co	59	45	1	He	0.028	16.9	298	12.9	1	
Ni	60	45	1	He	-0.016	-63.0	212	10.5	2	
Cu	63	45	1	He	0.112	37.4	3637	6.3	2	
Zn	66	45	1	He	0.013	97.1	608	1.1	20	
As	75	115	1	He	0.021	171.1	139	13.1	2	
Se	78	115	1	He	0.008	1803.3	25	15.1	2	
Sr	88	103	1	He	-0.040	-21.9	130	16.8	10	
Mo	95	103	1	He	0.122	20.5	318	18.9	2	
Ag	107	103	1	He	0.008	14.6	84	9.9	0.2	
Cd	111	115	1	He	0.072	18.4	65	18.0	0.2	
Sn	118	115	1	He	0.987	30.1	8710	6.3	10	
Sb	123	115	1	He	0.176	8.9	389	7.9	2	
Ba	137	115	1	He	0.041	21.7	51	13.6	5	
W	182	159	1	He	0.317	5.2	3100	4.0	10	
Tl	205	165	1	He	0.072	18.8	739	17.5	0.5	
Pb	208	165	1	He	0.061	6.4	1316	3.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1781121	0.85	1674650	106.36	60	120	
Sc	45	1	He	383148	0.71	355173	107.88	60	120	
Sc	45	2	NoGas	9398967	0.71	8635903	108.84	60	120	
Rh	103	1	He	1525278	0.49	1470259	103.74	60	120	
In	115	1	He	506778	0.18	490642	103.29	60	120	
Tb	159	1	He	1431789	1.82	1434034	99.84	60	120	
Ho	165	1	He	1417140	0.60	1409606	100.53	60	120	
Bi	209	1	He	890184	0.33	906964	98.15	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-2-a
Data File Name	026SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T11:59:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.733	2.733	1.06	161511	0.00	10000	
Be	9	45	2	NoGas	0.198	0.198	11.95	1141	0.02	2000	
B	11	45	2	NoGas	8.140	8.140	2.14	32266	0.03	300	
Na	23	45	1	He	2401.438	2401.438	0.08	2421356	0.10	500000	
Mg	24	45	1	He	1933.810	1933.810	1.14	1044499	0.19	500000	
Al	27	45	1	He	1061.731	1061.731	1.32	238655	0.44	200000	
K	39	45	1	He	1117.367	1117.367	1.81	384910	0.29	500000	
Ca	44	45	1	He	1623.380	1623.380	1.64	28551	5.69	500000	
Ti	47	45	1	He	30.995	30.995	6.76	3653	0.85	2500	
V	51	45	1	He	2.031	2.031	22.10	8507	0.02	10000	
Cr	52	45	1	He	10.659	10.659	7.84	53483	0.02	10000	
Mn	55	45	1	He	362.788	362.788	0.73	898701	0.04	10000	
Fe	56	45	1	He	1081.813	1081.813	1.39	3882201	0.03	200000	
Co	59	45	1	He	12.572	12.572	1.56	96205	0.01	5000	
Ni	60	45	1	He	5.268	5.268	3.82	11201	0.05	10000	
Cu	63	45	1	He	6.475	6.475	3.29	40130	0.02	10000	
Zn	66	45	1	He	11.340	11.340	4.46	9087	0.12	10000	
As	75	115	1	He	0.296	0.296	22.68	277	0.11	10000	
Se	78	115	1	He	0.623	0.623	50.26	42	1.48	10000	
Sr	88	103	1	He	19.750	19.750	1.14	51364	0.04	10000	
Mo	95	103	1	He	0.304	0.304	3.09	753	0.04	2000	
Ag	107	103	1	He	0.032	0.032	13.99	257	0.01	300	
Cd	111	115	1	He	0.065	0.065	8.51	58	0.11	4000	
Sn	118	115	1	He	-2.685	-2.685	-1.04	2089	-0.13	2000	
Sb	123	115	1	He	0.290	0.290	6.67	617	0.05	200	
Ba	137	115	1	He	22.719	22.719	1.01	17592	0.13	10000	
W	182	159	1	He	0.209	0.209	16.15	2537	0.01	2500	
Tl	205	165	1	He	0.154	0.154	2.21	1497	0.01	2000	
Pb	208	165	1	He	2.104	2.104	4.21	27550	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1779498	2.55	1674650	106.26	60	120	
Sc	45	1	He	377040	0.73	355173	106.16	60	120	
Sc	45	2	NoGas	9310768	2.04	8635903	107.81	60	120	
Rh	103	1	He	1522283	1.49	1470259	103.54	60	120	
In	115	1	He	506754	0.74	490642	103.28	60	120	
Tb	159	1	He	1436651	0.53	1434034	100.18	60	120	
Ho	165	1	He	1393416	2.02	1409606	98.85	60	120	
Bi	209	1	He	901739	0.73	906964	99.42	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-3-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:03:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.196	1.196	3.90	131483	0.00	10000	
Be	9	45	2	NoGas	0.096	0.096	15.47	585	0.02	2000	
B	11	45	2	NoGas	5.726	5.726	6.07	24547	0.02	300	
Na	23	45	1	He	1244.149	1244.149	1.99	1292734	0.10	500000	
Mg	24	45	1	He	680.704	680.704	3.21	377047	0.18	500000	
Al	27	45	1	He	121.456	121.456	6.37	28167	0.43	200000	
K	39	45	1	He	856.101	856.101	2.65	308554	0.28	500000	
Ca	44	45	1	He	18.500	18.500	8.73	637	2.90	500000	
Ti	47	45	1	He	7.086	7.086	8.91	857	0.83	2500	
V	51	45	1	He	0.389	0.389	13.73	2094	0.02	10000	
Cr	52	45	1	He	0.727	0.727	7.09	7206	0.01	10000	
Mn	55	45	1	He	8.769	8.769	3.23	22806	0.04	10000	
Fe	56	45	1	He	181.772	181.772	2.86	670561	0.03	200000	
Co	59	45	1	He	162.045	162.045	2.67	1269759	0.01	5000	
Ni	60	45	1	He	2.085	2.085	2.76	4694	0.04	10000	
Cu	63	45	1	He	3.062	3.062	1.32	21037	0.01	10000	
Zn	66	45	1	He	4.444	4.444	2.72	4017	0.11	10000	
As	75	115	1	He	-0.010	-0.010	-229.16	126	-0.01	10000	
Se	78	115	1	He	-0.019	-0.019	-823.50	25	-0.08	10000	
Sr	88	103	1	He	0.313	0.313	4.38	1060	0.03	10000	
Mo	95	103	1	He	0.123	0.123	5.58	323	0.04	2000	
Ag	107	103	1	He	0.023	0.023	21.05	197	0.01	300	
Cd	111	115	1	He	0.032	0.032	20.90	30	0.11	4000	
Sn	118	115	1	He	-3.245	-3.245	-0.22	1104	-0.29	2000	
Sb	123	115	1	He	0.068	0.068	42.31	178	0.04	200	
Ba	137	115	1	He	18.495	18.495	2.27	14658	0.13	10000	
W	182	159	1	He	11.958	11.958	3.58	66743	0.02	2500	
Tl	205	165	1	He	0.047	0.047	14.39	490	0.01	2000	
Pb	208	165	1	He	0.368	0.368	3.21	5345	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1828640	1.61	1674650	109.20	60	120	
Sc	45	1	He	386493	1.42	355173	108.82	60	120	
Sc	45	2	NoGas	9433829	1.23	8635903	109.24	60	120	
Rh	103	1	He	1549426	1.53	1470259	105.38	60	120	
In	115	1	He	518505	0.50	490642	105.68	60	120	
Tb	159	1	He	1469302	1.47	1434034	102.46	60	120	
Ho	165	1	He	1418723	3.61	1409606	100.65	60	120	
Bi	209	1	He	924282	0.78	906964	101.91	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-4-a
Data File Name	028SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:08:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.283	1.283	4.43	133890	0.00	10000	
Be	9	45	2	NoGas	0.328	0.328	16.00	1889	0.02	2000	
B	11	45	2	NoGas	5.233	5.233	2.46	22993	0.02	300	
Na	23	45	1	He	4258.544	4258.544	1.63	4371862	0.10	500000	
Mg	24	45	1	He	927.589	927.589	2.28	511609	0.18	500000	
Al	27	45	1	He	32.034	32.034	3.38	7567	0.42	200000	
K	39	45	1	He	1025.808	1025.808	2.43	362876	0.28	500000	
Ca	44	45	1	He	809.627	809.627	1.05	14691	5.51	500000	
Ti	47	45	1	He	2.150	2.150	4.22	260	0.83	2500	
V	51	45	1	He	0.249	0.249	27.06	1527	0.02	10000	
Cr	52	45	1	He	0.324	0.324	20.34	5251	0.01	10000	
Mn	55	45	1	He	9.375	9.375	3.15	24245	0.04	10000	
Fe	56	45	1	He	38.232	38.232	1.74	142489	0.03	200000	
Co	59	45	1	He	0.731	0.731	1.81	5782	0.01	5000	
Ni	60	45	1	He	1.413	1.413	3.70	3248	0.04	10000	
Cu	63	45	1	He	0.306	0.306	8.79	4788	0.01	10000	
Zn	66	45	1	He	2.257	2.257	8.72	2327	0.10	10000	
As	75	115	1	He	-0.029	-0.029	-112.42	114	-0.03	10000	
Se	78	115	1	He	0.158	0.158	133.76	29	0.54	10000	
Sr	88	103	1	He	14.210	14.210	0.18	37313	0.04	10000	
Mo	95	103	1	He	0.055	0.055	5.05	158	0.03	2000	
Ag	107	103	1	He	0.005	0.005	31.90	58	0.01	300	
Cd	111	115	1	He	0.028	0.028	26.64	26	0.11	4000	
Sn	118	115	1	He	-3.252	-3.252	-1.85	1070	-0.30	2000	
Sb	123	115	1	He	0.046	0.046	17.38	129	0.04	200	
Ba	137	115	1	He	44.915	44.915	2.50	34866	0.13	10000	
W	182	159	1	He	0.157	0.157	19.29	2271	0.01	2500	
Tl	205	165	1	He	0.035	0.035	4.21	372	0.01	2000	
Pb	208	165	1	He	0.058	0.058	20.96	1276	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804225	1.83	1674650	107.74	60	120	
Sc	45	1	He	384933	1.44	355173	108.38	60	120	
Sc	45	2	NoGas	9475360	0.38	8635903	109.72	60	120	
Rh	103	1	He	1534246	0.87	1470259	104.35	60	120	
In	115	1	He	508420	1.46	490642	103.62	60	120	
Tb	159	1	He	1445347	0.78	1434034	100.79	60	120	
Ho	165	1	He	1409047	0.83	1409606	99.96	60	120	
Bi	209	1	He	904253	0.98	906964	99.70	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-5-a
Data File Name	029SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:12:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.474	1.474	1.44	139907	0.00	10000	
Be	9	45	2	NoGas	0.090	0.090	14.82	559	0.02	2000	
B	11	45	2	NoGas	4.277	4.277	2.79	20045	0.02	300	
Na	23	45	1	He	2396.751	2396.751	0.47	2459811	0.10	500000	
Mg	24	45	1	He	675.763	675.763	1.56	371766	0.18	500000	
Al	27	45	1	He	66.920	66.920	3.98	15518	0.43	200000	
K	39	45	1	He	652.641	652.641	0.85	240015	0.27	500000	
Ca	44	45	1	He	80.681	80.681	5.53	1735	4.65	500000	
Ti	47	45	1	He	2.530	2.530	13.37	304	0.83	2500	
V	51	45	1	He	0.250	0.250	30.42	1528	0.02	10000	
Cr	52	45	1	He	0.125	0.125	25.19	4295	0.00	10000	
Mn	55	45	1	He	14.407	14.407	1.26	36855	0.04	10000	
Fe	56	45	1	He	78.870	78.870	1.83	290392	0.03	200000	
Co	59	45	1	He	2.100	2.100	5.73	16415	0.01	5000	
Ni	60	45	1	He	1.633	1.633	2.92	3705	0.04	10000	
Cu	63	45	1	He	1.415	1.415	2.85	11261	0.01	10000	
Zn	66	45	1	He	7.371	7.371	5.18	6222	0.12	10000	
As	75	115	1	He	-0.022	-0.022	-43.12	118	-0.02	10000	
Se	78	115	1	He	0.088	0.088	191.72	27	0.32	10000	
Sr	88	103	1	He	2.009	2.009	1.90	5541	0.04	10000	
Mo	95	103	1	He	0.017	0.017	48.39	67	0.03	2000	
Ag	107	103	1	He	0.003	0.003	9.80	46	0.01	300	
Cd	111	115	1	He	0.025	0.025	26.08	23	0.11	4000	
Sn	118	115	1	He	-3.337	-3.337	-1.88	922	-0.36	2000	
Sb	123	115	1	He	0.122	0.122	6.06	283	0.04	200	
Ba	137	115	1	He	7.754	7.754	1.66	6073	0.13	10000	
W	182	159	1	He	0.063	0.063	61.74	1808	0.00	2500	
Tl	205	165	1	He	0.041	0.041	5.66	437	0.01	2000	
Pb	208	165	1	He	0.110	0.110	9.40	1965	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1869651	0.95	1674650	111.64	60	120	
Sc	45	1	He	383770	0.90	355173	108.05	60	120	
Sc	45	2	NoGas	9612669	0.72	8635903	111.31	60	120	
Rh	103	1	He	1552386	0.28	1470259	105.59	60	120	
In	115	1	He	511495	0.69	490642	104.25	60	120	
Tb	159	1	He	1478117	1.57	1434034	103.07	60	120	
Ho	165	1	He	1422919	0.48	1409606	100.94	60	120	
Bi	209	1	He	910918	0.82	906964	100.44	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-6-a
Data File Name	030SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:16:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.533	1.533	2.14	140563	0.00	10000	
Be	9	45	2	NoGas	0.179	0.179	14.40	1063	0.02	2000	
B	11	45	2	NoGas	5.442	5.442	4.61	23942	0.02	300	
Na	23	45	1	He	2363.933	2363.933	1.97	2421454	0.10	500000	
Mg	24	45	1	He	807.279	807.279	2.43	443151	0.18	500000	
Al	27	45	1	He	9.879	9.879	6.03	2476	0.40	200000	
K	39	45	1	He	1577.404	1577.404	1.67	540891	0.29	500000	
Ca	44	45	1	He	235.210	235.210	3.75	4465	5.27	500000	
Ti	47	45	1	He	0.185	0.185	24.76	23	0.79	2500	
V	51	45	1	He	0.180	0.180	4.62	1245	0.01	10000	
Cr	52	45	1	He	0.047	0.047	76.96	3913	0.00	10000	
Mn	55	45	1	He	16.206	16.206	2.64	41305	0.04	10000	
Fe	56	45	1	He	16.354	16.354	3.67	62087	0.03	200000	
Co	59	45	1	He	0.406	0.406	0.77	3227	0.01	5000	
Ni	60	45	1	He	0.916	0.916	6.95	2181	0.04	10000	
Cu	63	45	1	He	7.166	7.166	4.18	44786	0.02	10000	
Zn	66	45	1	He	13.505	13.505	2.75	10876	0.12	10000	
As	75	115	1	He	-0.055	-0.055	-25.75	101	-0.05	10000	
Se	78	115	1	He	0.017	0.017	82.93	25	0.07	10000	
Sr	88	103	1	He	4.208	4.208	3.40	11334	0.04	10000	
Mo	95	103	1	He	0.028	0.028	13.30	93	0.03	2000	
Ag	107	103	1	He	0.002	0.002	49.45	42	0.01	300	
Cd	111	115	1	He	0.021	0.021	33.21	20	0.11	4000	
Sn	118	115	1	He	-3.157	-3.157	-3.75	1248	-0.25	2000	
Sb	123	115	1	He	2.476	2.476	4.19	5041	0.05	200	
Ba	137	115	1	He	15.565	15.565	1.45	12168	0.13	10000	
W	182	159	1	He	0.018	0.018	82.02	1522	0.00	2500	
Tl	205	165	1	He	0.063	0.063	4.58	634	0.01	2000	
Pb	208	165	1	He	0.043	0.043	11.64	1068	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1805519	1.08	1674650	107.81	60	120	
Sc	45	1	He	383087	1.74	355173	107.86	60	120	
Sc	45	2	NoGas	9571180	0.96	8635903	110.83	60	120	
Rh	103	1	He	1551056	0.88	1470259	105.50	60	120	
In	115	1	He	511338	0.39	490642	104.22	60	120	
Tb	159	1	He	1443231	1.52	1434034	100.64	60	120	
Ho	165	1	He	1390283	1.67	1409606	98.63	60	120	
Bi	209	1	He	912075	0.59	906964	100.56	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-7-a
Data File Name	031SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:20:17-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.873	1.873	2.59	145393	0.00	10000	
Be	9	45	2	NoGas	0.148	0.148	14.37	870	0.02	2000	
B	11	45	2	NoGas	4.182	4.182	5.88	19314	0.02	300	
Na	23	45	1	He	1102.376	1102.376	1.32	1133986	0.10	500000	
Mg	24	45	1	He	513.619	513.619	1.81	281394	0.18	500000	
Al	27	45	1	He	405.790	405.790	0.18	92553	0.44	200000	
K	39	45	1	He	712.972	712.972	1.55	258532	0.28	500000	
Ca	44	45	1	He	306.962	306.962	1.98	5717	5.37	500000	
Ti	47	45	1	He	28.905	28.905	17.36	3454	0.84	2500	
V	51	45	1	He	0.823	0.823	4.90	3802	0.02	10000	
Cr	52	45	1	He	0.411	0.411	19.92	5624	0.01	10000	
Mn	55	45	1	He	8.546	8.546	2.48	21987	0.04	10000	
Fe	56	45	1	He	511.298	511.298	3.95	1860081	0.03	200000	
Co	59	45	1	He	0.467	0.467	0.21	3692	0.01	5000	
Ni	60	45	1	He	0.846	0.846	3.71	2029	0.04	10000	
Cu	63	45	1	He	0.510	0.510	12.03	5943	0.01	10000	
Zn	66	45	1	He	3.964	3.964	5.37	3606	0.11	10000	
As	75	115	1	He	-0.030	-0.030	-137.04	114	-0.03	10000	
Se	78	115	1	He	0.244	0.244	77.66	32	0.77	10000	
Sr	88	103	1	He	4.154	4.154	4.18	11085	0.04	10000	
Mo	95	103	1	He	0.022	0.022	14.88	78	0.03	2000	
Ag	107	103	1	He	0.004	0.004	90.35	52	0.01	300	
Cd	111	115	1	He	0.010	0.010	67.13	10	0.10	4000	
Sn	118	115	1	He	-3.336	-3.336	-1.65	922	-0.36	2000	
Sb	123	115	1	He	0.127	0.127	16.26	292	0.04	200	
Ba	137	115	1	He	9.122	9.122	1.60	7128	0.13	10000	
W	182	159	1	He	0.107	0.107	34.80	2026	0.01	2500	
Tl	205	165	1	He	0.033	0.033	23.47	366	0.01	2000	
Pb	208	165	1	He	0.426	0.426	2.50	6146	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1829871	0.95	1674650	109.27	60	120	
Sc	45	1	He	382025	0.60	355173	107.56	60	120	
Sc	45	2	NoGas	9417569	0.79	8635903	109.05	60	120	
Rh	103	1	He	1536193	0.57	1470259	104.48	60	120	
In	115	1	He	510595	1.09	490642	104.07	60	120	
Tb	159	1	He	1463230	0.61	1434034	102.04	60	120	
Ho	165	1	He	1431165	0.71	1409606	101.53	60	120	
Bi	209	1	He	920346	0.77	906964	101.48	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-8-a
Data File Name	032SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:24:22-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.951	0.951	7.88	128160	0.00	10000	
Be	9	45	2	NoGas	0.046	0.046	40.14	304	0.02	2000	
B	11	45	2	NoGas	3.995	3.995	2.57	18984	0.02	300	
Na	23	45	1	He	4387.461	4387.461	1.52	4413455	0.10	500000	
Mg	24	45	1	He	825.120	825.120	2.76	445983	0.19	500000	
Al	27	45	1	He	8.775	8.775	3.59	2191	0.40	200000	
K	39	45	1	He	1634.423	1634.423	2.03	550878	0.30	500000	
Ca	44	45	1	He	1019.468	1019.468	3.41	18045	5.65	500000	
Ti	47	45	1	He	0.303	0.303	66.85	37	0.83	2500	
V	51	45	1	He	0.178	0.178	46.52	1219	0.01	10000	
Cr	52	45	1	He	0.092	0.092	47.31	4063	0.00	10000	
Mn	55	45	1	He	68.626	68.626	3.10	170463	0.04	10000	
Fe	56	45	1	He	19.262	19.262	2.74	71572	0.03	200000	
Co	59	45	1	He	3.443	3.443	5.22	26397	0.01	5000	
Ni	60	45	1	He	0.491	0.491	15.73	1262	0.04	10000	
Cu	63	45	1	He	2.481	2.481	2.85	17193	0.01	10000	
Zn	66	45	1	He	2.034	2.034	3.12	2113	0.10	10000	
As	75	115	1	He	-0.063	-0.063	-33.59	97	-0.06	10000	
Se	78	115	1	He	0.050	0.050	143.95	26	0.19	10000	
Sr	88	103	1	He	18.434	18.434	0.12	48096	0.04	10000	
Mo	95	103	1	He	0.054	0.054	16.99	153	0.04	2000	
Ag	107	103	1	He	0.012	0.012	15.26	112	0.01	300	
Cd	111	115	1	He	0.018	0.018	13.60	16	0.11	4000	
Sn	118	115	1	He	-3.294	-3.294	-0.30	996	-0.33	2000	
Sb	123	115	1	He	0.062	0.062	13.45	161	0.04	200	
Ba	137	115	1	He	4.758	4.758	3.44	3719	0.13	10000	
W	182	159	1	He	0.399	0.399	9.75	3567	0.01	2500	
Tl	205	165	1	He	0.008	0.008	24.12	121	0.01	2000	
Pb	208	165	1	He	0.064	0.064	14.97	1372	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1878086	0.95	1674650	112.15	60	120	
Sc	45	1	He	377207	1.43	355173	106.20	60	120	
Sc	45	2	NoGas	9568246	0.97	8635903	110.80	60	120	
Rh	103	1	He	1526704	1.75	1470259	103.84	60	120	
In	115	1	He	509553	0.52	490642	103.85	60	120	
Tb	159	1	He	1442380	0.66	1434034	100.58	60	120	
Ho	165	1	He	1429160	0.26	1409606	101.39	60	120	
Bi	209	1	He	918046	0.95	906964	101.22	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-9-a
Data File Name	033SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:28:28-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.163	1.163	5.04	131433	0.00	10000	
Be	9	45	2	NoGas	0.099	0.099	14.25	604	0.02	2000	
B	11	45	2	NoGas	4.233	4.233	3.73	19615	0.02	300	
Na	23	45	1	He	1530.829	1530.829	0.50	1546303	0.10	500000	
Mg	24	45	1	He	622.717	622.717	1.79	336091	0.19	500000	
Al	27	45	1	He	16.156	16.156	6.87	3843	0.42	200000	
K	39	45	1	He	711.743	711.743	1.92	254365	0.28	500000	
Ca	44	45	1	He	318.653	318.653	5.37	5836	5.46	500000	
Ti	47	45	1	He	0.339	0.339	12.32	41	0.83	2500	
V	51	45	1	He	0.125	0.125	96.87	1006	0.01	10000	
Cr	52	45	1	He	0.077	0.077	13.87	3985	0.00	10000	
Mn	55	45	1	He	6.180	6.180	2.33	15820	0.04	10000	
Fe	56	45	1	He	8.633	8.633	2.52	33389	0.03	200000	
Co	59	45	1	He	0.406	0.406	2.37	3176	0.01	5000	
Ni	60	45	1	He	0.930	0.930	3.37	2174	0.04	10000	
Cu	63	45	1	He	0.992	0.992	5.81	8623	0.01	10000	
Zn	66	45	1	He	5.197	5.197	2.36	4475	0.12	10000	
As	75	115	1	He	-0.030	-0.030	-41.99	113	-0.03	10000	
Se	78	115	1	He	0.136	0.136	86.40	28	0.48	10000	
Sr	88	103	1	He	4.836	4.836	1.86	12788	0.04	10000	
Mo	95	103	1	He	0.017	0.017	20.19	66	0.03	2000	
Ag	107	103	1	He	0.000	0.000	6047.07	24	0.00	300	
Cd	111	115	1	He	0.013	0.013	58.96	12	0.11	4000	
Sn	118	115	1	He	-2.117	-2.117	-5.21	3108	-0.07	2000	
Sb	123	115	1	He	0.078	0.078	34.44	193	0.04	200	
Ba	137	115	1	He	9.526	9.526	2.48	7374	0.13	10000	
W	182	159	1	He	0.023	0.023	143.47	1541	0.00	2500	
Tl	205	165	1	He	0.032	0.032	5.13	347	0.01	2000	
Pb	208	165	1	He	0.047	0.047	5.62	1116	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1819737	0.87	1674650	108.66	60	120	
Sc	45	1	He	376461	0.60	355173	105.99	60	120	
Sc	45	2	NoGas	9479696	0.58	8635903	109.77	60	120	
Rh	103	1	He	1526518	0.09	1470259	103.83	60	120	
In	115	1	He	505907	1.06	490642	103.11	60	120	
Tb	159	1	He	1437230	1.13	1434034	100.22	60	120	
Ho	165	1	He	1393530	2.58	1409606	98.86	60	120	
Bi	209	1	He	907213	1.14	906964	100.03	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-10-a
Data File Name	034SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:32:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.370	1.370	6.16	132829	0.00	10000	
Be	9	45	2	NoGas	0.098	0.098	16.82	582	0.02	2000	
B	11	45	2	NoGas	3.581	3.581	3.34	17031	0.02	300	
Na	23	45	1	He	3001.397	3001.397	0.80	3004681	0.10	500000	
Mg	24	45	1	He	841.296	841.296	1.31	451899	0.19	500000	
Al	27	45	1	He	10.174	10.174	5.32	2489	0.41	200000	
K	39	45	1	He	915.996	915.996	1.37	318360	0.29	500000	
Ca	44	45	1	He	1027.928	1027.928	2.74	18080	5.69	500000	
Ti	47	45	1	He	0.104	0.104	54.31	13	0.78	2500	
V	51	45	1	He	0.123	0.123	110.99	995	0.01	10000	
Cr	52	45	1	He	0.102	0.102	4.33	4083	0.00	10000	
Mn	55	45	1	He	12.567	12.567	1.54	31466	0.04	10000	
Fe	56	45	1	He	25.355	25.355	1.53	92844	0.03	200000	
Co	59	45	1	He	0.121	0.121	9.12	991	0.01	5000	
Ni	60	45	1	He	0.500	0.500	4.27	1276	0.04	10000	
Cu	63	45	1	He	-0.027	-0.027	-74.83	2765	0.00	10000	
Zn	66	45	1	He	1.807	1.807	4.95	1931	0.09	10000	
As	75	115	1	He	-0.040	-0.040	-32.16	107	-0.04	10000	
Se	78	115	1	He	-0.072	-0.072	-128.62	23	-0.32	10000	
Sr	88	103	1	He	9.265	9.265	1.62	24014	0.04	10000	
Mo	95	103	1	He	0.014	0.014	13.19	58	0.02	2000	
Ag	107	103	1	He	0.001	0.001	258.69	31	0.00	300	
Cd	111	115	1	He	0.013	0.013	26.76	12	0.11	4000	
Sn	118	115	1	He	-3.393	-3.393	-1.49	807	-0.42	2000	
Sb	123	115	1	He	0.115	0.115	16.98	267	0.04	200	
Ba	137	115	1	He	13.438	13.438	3.46	10357	0.13	10000	
W	182	159	1	He	0.061	0.061	147.03	1738	0.00	2500	
Tl	205	165	1	He	0.043	0.043	18.06	452	0.01	2000	
Pb	208	165	1	He	0.117	0.117	10.56	2046	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1807376	1.54	1674650	107.93	60	120	
Sc	45	1	He	374785	0.48	355173	105.52	60	120	
Sc	45	2	NoGas	9274383	1.06	8635903	107.39	60	120	
Rh	103	1	He	1509495	1.15	1470259	102.67	60	120	
In	115	1	He	503997	0.54	490642	102.72	60	120	
Tb	159	1	He	1429680	0.80	1434034	99.70	60	120	
Ho	165	1	He	1410051	0.63	1409606	100.03	60	120	
Bi	209	1	He	900702	0.59	906964	99.31	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-11-a
Data File Name	035SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:36:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.505	2.505	1.26	156419	0.00	10000	
Be	9	45	2	NoGas	0.181	0.181	16.28	1045	0.02	2000	
B	11	45	2	NoGas	4.421	4.421	7.94	19841	0.02	300	
Na	23	45	1	He	727.169	727.169	2.05	739786	0.10	500000	
Mg	24	45	1	He	729.431	729.431	3.03	392428	0.19	500000	
Al	27	45	1	He	70.102	70.102	2.86	15889	0.44	200000	
K	39	45	1	He	913.707	913.707	2.42	318112	0.29	500000	
Ca	44	45	1	He	97.489	97.489	12.90	1986	4.91	500000	
Ti	47	45	1	He	0.104	0.104	99.50	13	0.78	2500	
V	51	45	1	He	0.041	0.041	250.70	675	0.01	10000	
Cr	52	45	1	He	-0.051	-0.051	-30.38	3378	0.00	10000	
Mn	55	45	1	He	61.987	61.987	1.84	153314	0.04	10000	
Fe	56	45	1	He	40.135	40.135	3.42	145731	0.03	200000	
Co	59	45	1	He	4.334	4.334	2.77	33060	0.01	5000	
Ni	60	45	1	He	2.317	2.317	3.32	5040	0.05	10000	
Cu	63	45	1	He	4.236	4.236	4.58	27139	0.02	10000	
Zn	66	45	1	He	6.858	6.858	4.22	5703	0.12	10000	
As	75	115	1	He	0.030	0.030	143.02	144	0.02	10000	
Se	78	115	1	He	0.493	0.493	67.75	38	1.28	10000	
Sr	88	103	1	He	3.191	3.191	4.50	8513	0.04	10000	
Mo	95	103	1	He	0.007	0.007	23.37	42	0.02	2000	
Ag	107	103	1	He	0.002	0.002	135.02	38	0.00	300	
Cd	111	115	1	He	0.030	0.030	13.24	27	0.11	4000	
Sn	118	115	1	He	-3.471	-3.471	-0.31	674	-0.51	2000	
Sb	123	115	1	He	0.072	0.072	16.16	181	0.04	200	
Ba	137	115	1	He	32.207	32.207	2.31	25061	0.13	10000	
W	182	159	1	He	0.050	0.050	49.80	1708	0.00	2500	
Tl	205	165	1	He	0.049	0.049	0.95	512	0.01	2000	
Pb	208	165	1	He	0.095	0.095	4.31	1757	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1826817	1.58	1674650	109.09	60	120	
Sc	45	1	He	375432	1.69	355173	105.70	60	120	
Sc	45	2	NoGas	9288071	0.40	8635903	107.55	60	120	
Rh	103	1	He	1526254	0.84	1470259	103.81	60	120	
In	115	1	He	509458	1.02	490642	103.83	60	120	
Tb	159	1	He	1455549	0.51	1434034	101.50	60	120	
Ho	165	1	He	1407030	2.36	1409606	99.82	60	120	
Bi	209	1	He	917478	0.88	906964	101.16	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	036_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:40:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.473	0.801	1166542	1.00	50	104.9	89.5	110.5	
Be	9	45	2	NoGas	50.690	0.911	275173	0.61	50	101.4	89.5	110.5	
B	11	45	2	NoGas	53.061	1.670	178288	1.47	50	106.1	89.5	110.5	
Na	23	45	1	He	25297.507	1.734	24573829	0.41	25000	101.2	89.5	110.5	
Mg	24	45	1	He	25383.472	2.845	13272060	1.66	25000	101.5	89.5	110.5	
Al	27	45	1	He	246.383	2.041	53800	0.71	250	98.6	89.5	110.5	
K	39	45	1	He	25110.303	2.531	7826173	1.32	25000	100.4	89.5	110.5	
Ca	44	45	1	He	24901.296	3.110	419991	1.75	25000	99.6	89.5	110.5	
Ti	47	45	1	He	53.029	1.937	6054	0.57	50	106.1	89.5	110.5	
V	51	45	1	He	50.685	2.723	193604	1.41	50	101.4	89.5	110.5	
Cr	52	45	1	He	49.849	2.466	229259	1.21	50	99.7	89.5	110.5	
Mn	55	45	1	He	249.519	2.403	598783	1.15	250	99.8	89.5	110.5	
Fe	56	45	1	He	12540.458	3.122	43554363	1.87	12500	100.3	89.5	110.5	
Co	59	45	1	He	50.048	2.169	370673	0.85	50	100.1	89.5	110.5	
Ni	60	45	1	He	50.051	3.029	101100	1.77	50	100.1	89.5	110.5	
Cu	63	45	1	He	50.099	2.534	281522	1.18	50	100.2	89.5	110.5	
Zn	66	45	1	He	50.770	2.501	37411	1.52	50	101.5	89.5	110.5	
As	75	115	1	He	51.009	1.108	24518	0.91	50	102.0	89.5	110.5	
Se	78	115	1	He	50.777	1.162	1359	1.10	50	101.6	89.5	110.5	
Sr	88	103	1	He	49.913	0.577	121079	1.00	50	99.8	89.5	110.5	
Mo	95	103	1	He	51.430	2.047	115315	1.93	50	102.9	89.5	110.5	
Ag	107	103	1	He	51.000	1.423	350486	0.87	50	102.0	89.5	110.5	
Cd	111	115	1	He	50.910	2.568	43038	2.31	50	101.8	89.5	110.5	
Sn	118	115	1	He	48.501	0.658	89609	0.42	50	97.0	89.5	110.5	
Sb	123	115	1	He	51.122	1.763	97250	1.88	50	102.2	89.5	110.5	
Ba	137	115	1	He	49.835	1.649	36619	0.82	50	99.7	89.5	110.5	
W	182	159	1	He	51.819	1.662	271601	2.30	50	103.6	89.5	110.5	
Tl	205	165	1	He	49.921	1.891	474245	1.24	50	99.8	89.5	110.5	
Pb	208	165	1	He	49.620	1.870	640275	1.18	50	99.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1769865	1.04	1674650	105.69	60	120	
Sc	45	1	He	365239	1.38	355173	102.83	60	120	
Sc	45	2	NoGas	9136880	0.36	8635903	105.80	60	120	
Rh	103	1	He	1423831	1.35	1470259	96.84	60	120	
In	115	1	He	481212	0.87	490642	98.08	60	120	
Tb	159	1	He	1403337	0.67	1434034	97.86	60	120	
Ho	165	1	He	1398059	0.81	1409606	99.18	60	120	
Bi	209	1	He	852265	0.41	906964	93.97	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	037_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:44:49-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	-0.032	-349.4	103348	1.2	8	
Be	9	45	2	NoGas	0.028	5.4	196	3.3	1	
B	11	45	2	NoGas	1.618	5.5	10463	3.2	20	
Na	23	45	1	He	6.847	1.9	20594	0.4	1000	
Mg	24	45	1	He	3.729	6.9	2400	6.0	1000	
Al	27	45	1	He	0.122	84.5	241	9.0	50	
K	39	45	1	He	11.408	5.5	29428	0.2	1000	
Ca	44	45	1	He	6.421	14.3	402	3.8	1000	
Ti	47	45	1	He	0.067	65.4	9	57.3	20	
V	51	45	1	He	0.112	64.1	933	29.8	2	
Cr	52	45	1	He	0.063	35.2	3834	2.6	2	
Mn	55	45	1	He	0.046	18.3	643	3.6	2	
Fe	56	45	1	He	4.269	25.8	17388	22.7	50	
Co	59	45	1	He	0.020	33.2	220	22.0	1	
Ni	60	45	1	He	-0.051	-13.4	132	10.2	2	
Cu	63	45	1	He	-0.107	-22.0	2268	5.4	2	
Zn	66	45	1	He	0.016	629.5	587	12.5	20	
As	75	115	1	He	-0.047	-43.4	102	9.7	2	
Se	78	115	1	He	-0.270	-55.7	17	24.1	2	
Sr	88	103	1	He	-0.053	-14.4	93	21.7	10	
Mo	95	103	1	He	0.099	24.7	260	21.9	2	
Ag	107	103	1	He	0.010	16.0	94	12.4	0.2	
Cd	111	115	1	He	0.025	20.2	22	19.8	0.2	
Sn	118	115	1	He	0.332	49.2	7406	4.0	10	
Sb	123	115	1	He	0.107	17.2	247	14.6	2	
Ba	137	115	1	He	0.061	49.2	66	34.6	5	
W	182	159	1	He	0.308	15.7	3026	9.2	10	
Tl	205	165	1	He	0.047	35.7	492	32.5	0.5	
Pb	208	165	1	He	0.024	29.1	830	10.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1763196	0.56	1674650	105.29	60	120	
Sc	45	1	He	368213	0.46	355173	103.67	60	120	
Sc	45	2	NoGas	9217503	0.99	8635903	106.73	60	120	
Rh	103	1	He	1509355	0.76	1470259	102.66	60	120	
In	115	1	He	498512	0.30	490642	101.60	60	120	
Tb	159	1	He	1419420	0.78	1434034	98.98	60	120	
Ho	165	1	He	1408582	0.70	1409606	99.93	60	120	
Bi	209	1	He	889943	1.16	906964	98.12	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-12-a
Data File Name	038SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:48:55-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.278	0.278	15.57	109082	0.00	10000	
Be	9	45	2	NoGas	0.077	0.077	25.18	463	0.02	2000	
B	11	45	2	NoGas	7.847	7.847	2.48	30800	0.03	300	
Na	23	45	1	He	819.999	819.999	1.34	819971	0.10	500000	
Mg	24	45	1	He	278.949	278.949	2.74	148104	0.19	500000	
Al	27	45	1	He	316.153	316.153	3.65	69830	0.45	200000	
K	39	45	1	He	2247.974	2247.974	1.42	733047	0.31	500000	
Ca	44	45	1	He	119.543	119.543	2.15	2334	5.12	500000	
Ti	47	45	1	He	6.502	6.502	17.44	752	0.86	2500	
V	51	45	1	He	0.561	0.561	5.23	2670	0.02	10000	
Cr	52	45	1	He	0.311	0.311	9.88	4989	0.01	10000	
Mn	55	45	1	He	11.931	11.931	2.75	29498	0.04	10000	
Fe	56	45	1	He	369.900	369.900	2.26	1303178	0.03	200000	
Co	59	45	1	He	0.977	0.977	4.10	7395	0.01	5000	
Ni	60	45	1	He	0.436	0.436	9.67	1127	0.04	10000	
Cu	63	45	1	He	3.486	3.486	1.20	22518	0.02	10000	
Zn	66	45	1	He	1.406	1.406	9.80	1610	0.09	10000	
As	75	115	1	He	0.040	0.040	30.64	146	0.03	10000	
Se	78	115	1	He	0.285	0.285	78.65	32	0.89	10000	
Sr	88	103	1	He	1.245	1.245	1.03	3364	0.04	10000	
Mo	95	103	1	He	0.063	0.063	3.07	170	0.04	2000	
Ag	107	103	1	He	0.004	0.004	67.49	52	0.01	300	
Cd	111	115	1	He	0.018	0.018	48.89	16	0.11	4000	
Sn	118	115	1	He	-3.107	-3.107	-1.65	1304	-0.24	2000	
Sb	123	115	1	He	0.061	0.061	5.26	156	0.04	200	
Ba	137	115	1	He	14.104	14.104	2.54	10737	0.13	10000	
W	182	159	1	He	0.056	0.056	47.90	1708	0.00	2500	
Tl	205	165	1	He	0.019	0.019	30.02	220	0.01	2000	
Pb	208	165	1	He	0.844	0.844	4.51	11314	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1804268	2.47	1674650	107.74	60	120	
Sc	45	1	He	369754	0.70	355173	104.11	60	120	
Sc	45	2	NoGas	9165065	0.72	8635903	106.13	60	120	
Rh	103	1	He	1482186	1.38	1470259	100.81	60	120	
In	115	1	He	497870	0.61	490642	101.47	60	120	
Tb	159	1	He	1426720	1.20	1434034	99.49	60	120	
Ho	165	1	He	1388479	3.06	1409606	98.50	60	120	
Bi	209	1	He	912005	0.26	906964	100.56	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-13-a
Data File Name	039SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:53:03-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.877	1.877	3.25	141855	0.00	10000	
Be	9	45	2	NoGas	0.076	0.076	26.58	456	0.02	2000	
B	11	45	2	NoGas	5.828	5.828	2.07	24232	0.02	300	
Na	23	45	1	He	1341.553	1341.553	2.32	1299941	0.10	500000	
Mg	24	45	1	He	1981.941	1981.941	2.72	1023934	0.19	500000	
Al	27	45	1	He	36.046	36.046	5.83	7951	0.45	200000	
K	39	45	1	He	923.177	923.177	1.40	308604	0.30	500000	
Ca	44	45	1	He	1314.988	1314.988	2.51	22179	5.93	500000	
Ti	47	45	1	He	0.069	0.069	51.20	9	0.78	2500	
V	51	45	1	He	0.137	0.137	94.44	1003	0.01	10000	
Cr	52	45	1	He	-0.035	-0.035	-78.83	3317	0.00	10000	
Mn	55	45	1	He	16204.512	16204.512	2.02	38378218	0.04	10000	>LDR
Fe	56	45	1	He	5186.312	5186.312	2.57	17793436	0.03	200000	
Co	59	45	1	He	144.410	144.410	1.63	1056289	0.01	5000	
Ni	60	45	1	He	4.159	4.159	5.21	8510	0.05	10000	
Cu	63	45	1	He	3.428	3.428	3.27	21639	0.02	10000	
Zn	66	45	1	He	2.798	2.798	6.13	2568	0.11	10000	
As	75	115	1	He	0.141	0.141	19.67	192	0.07	10000	
Se	78	115	1	He	0.895	0.895	4.43	48	1.87	10000	
Sr	88	103	1	He	2.425	2.425	1.79	6189	0.04	10000	
Mo	95	103	1	He	0.017	0.017	39.69	61	0.03	2000	
Ag	107	103	1	He	0.005	0.005	9.10	60	0.01	300	
Cd	111	115	1	He	0.045	0.045	4.57	39	0.11	4000	
Sn	118	115	1	He	-3.573	-3.573	-1.66	470	-0.76	2000	
Sb	123	115	1	He	0.045	0.045	32.02	123	0.04	200	
Ba	137	115	1	He	46.969	46.969	1.84	35099	0.13	10000	
W	182	159	1	He	0.059	0.059	37.57	1726	0.00	2500	
Tl	205	165	1	He	0.308	0.308	10.00	2941	0.01	2000	
Pb	208	165	1	He	0.596	0.596	3.03	8145	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1821197	1.17	1674650	108.75	60	120	
Sc	45	1	He	360734	1.36	355173	101.57	60	120	
Sc	45	2	NoGas	9181446	0.72	8635903	106.32	60	120	
Rh	103	1	He	1447464	0.87	1470259	98.45	60	120	
In	115	1	He	489404	1.46	490642	99.75	60	120	
Tb	159	1	He	1430710	0.36	1434034	99.77	60	120	
Ho	165	1	He	1388699	3.33	1409606	98.52	60	120	
Bi	209	1	He	905149	0.47	906964	99.80	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-14-a
Data File Name	040SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T12:57:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.813	1.813	1.93	141237	0.00	10000	
Be	9	45	2	NoGas	0.150	0.150	18.57	867	0.02	2000	
B	11	45	2	NoGas	5.308	5.308	0.68	22637	0.02	300	
Na	23	45	1	He	1231.160	1231.160	2.32	1192698	0.10	500000	
Mg	24	45	1	He	702.063	702.063	2.78	362492	0.19	500000	
Al	27	45	1	He	118.880	118.880	2.22	25714	0.46	200000	
K	39	45	1	He	708.985	708.985	1.99	242543	0.29	500000	
Ca	44	45	1	He	168.269	168.269	2.10	3084	5.46	500000	
Ti	47	45	1	He	0.381	0.381	151.47	44	0.86	2500	
V	51	45	1	He	0.134	0.134	11.81	997	0.01	10000	
Cr	52	45	1	He	-0.012	-0.012	-46.02	3416	0.00	10000	
Mn	55	45	1	He	3457.072	3457.072	1.81	8176504	0.04	10000	
Fe	56	45	1	He	1189.846	1189.846	2.95	4078345	0.03	200000	
Co	59	45	1	He	38.587	38.587	2.16	281904	0.01	5000	
Ni	60	45	1	He	2.594	2.594	2.86	5389	0.05	10000	
Cu	63	45	1	He	0.573	0.573	3.48	5948	0.01	10000	
Zn	66	45	1	He	2.728	2.728	3.07	2515	0.11	10000	
As	75	115	1	He	0.116	0.116	50.39	182	0.06	10000	
Se	78	115	1	He	0.652	0.652	54.87	42	1.56	10000	
Sr	88	103	1	He	0.995	0.995	5.26	2701	0.04	10000	
Mo	95	103	1	He	0.005	0.005	181.67	34	0.01	2000	
Ag	107	103	1	He	0.001	0.001	65.35	33	0.00	300	
Cd	111	115	1	He	0.033	0.033	17.34	29	0.11	4000	
Sn	118	115	1	He	-3.570	-3.570	-1.90	482	-0.74	2000	
Sb	123	115	1	He	0.057	0.057	49.67	148	0.04	200	
Ba	137	115	1	He	48.698	48.698	1.24	36830	0.13	10000	
W	182	159	1	He	0.028	0.028	81.43	1582	0.00	2500	
Tl	205	165	1	He	0.113	0.113	4.81	1136	0.01	2000	
Pb	208	165	1	He	0.690	0.690	0.92	9555	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1820623	1.99	1674650	108.72	60	120	
Sc	45	1	He	360231	0.91	355173	101.42	60	120	
Sc	45	2	NoGas	9226711	0.42	8635903	106.84	60	120	
Rh	103	1	He	1464117	0.31	1470259	99.58	60	120	
In	115	1	He	495266	0.91	490642	100.94	60	120	
Tb	159	1	He	1446050	0.83	1434034	100.84	60	120	
Ho	165	1	He	1419240	0.22	1409606	100.68	60	120	
Bi	209	1	He	912515	0.77	906964	100.61	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-15-a
Data File Name	041SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:01:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.271	3.271	1.67	173906	0.00	10000	
Be	9	45	2	NoGas	0.152	0.152	18.81	893	0.02	2000	
B	11	45	2	NoGas	4.548	4.548	4.70	20468	0.02	300	
Na	23	45	1	He	1871.513	1871.513	1.77	1828716	0.10	500000	
Mg	24	45	1	He	720.347	720.347	1.20	376665	0.19	500000	
Al	27	45	1	He	40.866	40.866	6.22	9089	0.45	200000	
K	39	45	1	He	729.338	729.338	1.31	251942	0.29	500000	
Ca	44	45	1	He	422.379	422.379	3.23	7401	5.71	500000	
Ti	47	45	1	He	0.029	0.029	57.56	4	0.65	2500	
V	51	45	1	He	0.113	0.113	32.68	929	0.01	10000	
Cr	52	45	1	He	-0.070	-0.070	-43.24	3196	0.00	10000	
Mn	55	45	1	He	229.493	229.493	1.64	550168	0.04	10000	
Fe	56	45	1	He	5.379	5.379	1.47	21066	0.03	200000	
Co	59	45	1	He	8.020	8.020	2.11	59392	0.01	5000	
Ni	60	45	1	He	1.924	1.924	4.71	4108	0.05	10000	
Cu	63	45	1	He	0.743	0.743	11.07	6968	0.01	10000	
Zn	66	45	1	He	6.085	6.085	4.20	4981	0.12	10000	
As	75	115	1	He	0.007	0.007	296.37	130	0.01	10000	
Se	78	115	1	He	0.374	0.374	36.45	34	1.09	10000	
Sr	88	103	1	He	3.007	3.007	2.84	7816	0.04	10000	
Mo	95	103	1	He	0.006	0.006	196.38	38	0.02	2000	
Ag	107	103	1	He	0.001	0.001	289.25	30	0.00	300	
Cd	111	115	1	He	0.021	0.021	33.62	19	0.11	4000	
Sn	118	115	1	He	-0.371	-0.371	-37.96	6161	-0.01	2000	
Sb	123	115	1	He	0.040	0.040	25.24	116	0.03	200	
Ba	137	115	1	He	20.706	20.706	2.20	15775	0.13	10000	
W	182	159	1	He	0.047	0.047	107.22	1685	0.00	2500	
Tl	205	165	1	He	0.097	0.097	13.30	967	0.01	2000	
Pb	208	165	1	He	0.090	0.090	6.35	1680	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1843415	0.76	1674650	110.08	60	120	
Sc	45	1	He	364795	0.97	355173	102.71	60	120	
Sc	45	2	NoGas	9380004	0.89	8635903	108.62	60	120	
Rh	103	1	He	1484545	1.96	1470259	100.97	60	120	
In	115	1	He	498621	0.97	490642	101.63	60	120	
Tb	159	1	He	1447181	1.09	1434034	100.92	60	120	
Ho	165	1	He	1403166	2.13	1409606	99.54	60	120	
Bi	209	1	He	909968	0.94	906964	100.33	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-16-a
Data File Name	042SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:05:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.902	0.902	7.22	124780	0.00	10000	
Be	9	45	2	NoGas	0.131	0.131	6.63	774	0.02	2000	
B	11	45	2	NoGas	7.409	7.409	1.32	30092	0.02	300	
Na	23	45	1	He	2307.558	2307.558	0.51	2235675	0.10	500000	
Mg	24	45	1	He	1396.650	1396.650	1.21	724793	0.19	500000	
Al	27	45	1	He	646.833	646.833	0.36	139753	0.46	200000	
K	39	45	1	He	1503.660	1503.660	1.46	488747	0.31	500000	
Ca	44	45	1	He	2949.036	2949.036	0.46	49594	5.95	500000	
Ti	47	45	1	He	15.259	15.259	6.22	1729	0.88	2500	
V	51	45	1	He	2.369	2.369	1.17	9446	0.03	10000	
Cr	52	45	1	He	1.195	1.195	8.76	8857	0.01	10000	
Mn	55	45	1	He	121.263	121.263	0.49	288913	0.04	10000	
Fe	56	45	1	He	4757.030	4757.030	1.18	16390968	0.03	200000	
Co	59	45	1	He	3.961	3.961	1.74	29169	0.01	5000	
Ni	60	45	1	He	1.719	1.719	2.72	3669	0.05	10000	
Cu	63	45	1	He	0.802	0.802	1.55	7248	0.01	10000	
Zn	66	45	1	He	14.499	14.499	4.08	11001	0.13	10000	
As	75	115	1	He	1.069	1.069	4.11	645	0.17	10000	
Se	78	115	1	He	0.276	0.276	91.04	31	0.88	10000	
Sr	88	103	1	He	13.977	13.977	2.19	35004	0.04	10000	
Mo	95	103	1	He	0.089	0.089	39.82	230	0.04	2000	
Ag	107	103	1	He	0.001	0.001	146.67	32	0.00	300	
Cd	111	115	1	He	0.030	0.030	6.18	27	0.11	4000	
Sn	118	115	1	He	-2.662	-2.662	-2.14	2059	-0.13	2000	
Sb	123	115	1	He	0.067	0.067	30.46	166	0.04	200	
Ba	137	115	1	He	20.983	20.983	2.05	15715	0.13	10000	
W	182	159	1	He	0.066	0.066	21.47	1741	0.00	2500	
Tl	205	165	1	He	0.043	0.043	14.30	454	0.01	2000	
Pb	208	165	1	He	0.640	0.640	3.00	8770	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1868569	0.72	1674650	111.58	60	120	
Sc	45	1	He	362205	0.45	355173	101.98	60	120	
Sc	45	2	NoGas	9391553	0.29	8635903	108.75	60	120	
Rh	103	1	He	1463682	2.76	1470259	99.55	60	120	
In	115	1	He	490209	1.79	490642	99.91	60	120	
Tb	159	1	He	1413373	1.78	1434034	98.56	60	120	
Ho	165	1	He	1399091	2.52	1409606	99.25	60	120	
Bi	209	1	He	887915	1.04	906964	97.90	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-17-a
Data File Name	043SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:09:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.635	1.635	4.39	140221	0.00	10000	
Be	9	45	2	NoGas	0.083	0.083	23.45	511	0.02	2000	
B	11	45	2	NoGas	5.070	5.070	5.08	22270	0.02	300	
Na	23	45	1	He	2424.238	2424.238	0.97	2390130	0.10	500000	
Mg	24	45	1	He	585.285	585.285	2.77	309420	0.19	500000	
Al	27	45	1	He	629.315	629.315	1.80	138409	0.45	200000	
K	39	45	1	He	964.122	964.122	1.94	328297	0.29	500000	
Ca	44	45	1	He	1294.295	1294.295	3.82	22321	5.80	500000	
Ti	47	45	1	He	14.791	14.791	6.57	1706	0.87	2500	
V	51	45	1	He	1.449	1.449	4.59	6077	0.02	10000	
Cr	52	45	1	He	0.651	0.651	3.79	6527	0.01	10000	
Mn	55	45	1	He	89.928	89.928	1.63	218233	0.04	10000	
Fe	56	45	1	He	1312.581	1312.581	1.86	4605298	0.03	200000	
Co	59	45	1	He	1.030	1.030	3.05	7777	0.01	5000	
Ni	60	45	1	He	0.641	0.641	6.02	1541	0.04	10000	
Cu	63	45	1	He	0.287	0.287	12.52	4483	0.01	10000	
Zn	66	45	1	He	2.930	2.930	5.79	2722	0.11	10000	
As	75	115	1	He	0.265	0.265	24.32	255	0.10	10000	
Se	78	115	1	He	-0.043	-0.043	-280.30	23	-0.19	10000	
Sr	88	103	1	He	7.816	7.816	1.10	19939	0.04	10000	
Mo	95	103	1	He	0.048	0.048	18.46	137	0.04	2000	
Ag	107	103	1	He	0.002	0.002	50.79	38	0.01	300	
Cd	111	115	1	He	0.011	0.011	6.18	10	0.11	4000	
Sn	118	115	1	He	-0.947	-0.947	-12.33	5086	-0.02	2000	
Sb	123	115	1	He	0.044	0.044	29.00	122	0.04	200	
Ba	137	115	1	He	16.269	16.269	0.80	12278	0.13	10000	
W	182	159	1	He	0.006	0.006	310.87	1430	0.00	2500	
Tl	205	165	1	He	0.026	0.026	12.32	287	0.01	2000	
Pb	208	165	1	He	0.700	0.700	4.38	9448	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1819362	2.07	1674650	108.64	60	120	
Sc	45	1	He	368694	0.10	355173	103.81	60	120	
Sc	45	2	NoGas	9404519	1.16	8635903	108.90	60	120	
Rh	103	1	He	1483020	0.96	1470259	100.87	60	120	
In	115	1	He	493686	0.19	490642	100.62	60	120	
Tb	159	1	He	1412608	1.35	1434034	98.51	60	120	
Ho	165	1	He	1385997	3.16	1409606	98.33	60	120	
Bi	209	1	He	902644	0.58	906964	99.52	60	120	

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Sample Report

Sample Table

Sample Name	240-66145-a-18-a
Data File Name	044SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:13:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.081	1.081	4.41	127789	0.00	10000	
Be	9	45	2	NoGas	0.050	0.050	16.99	322	0.02	2000	
B	11	45	2	NoGas	7.158	7.158	1.95	29083	0.02	300	
Na	23	45	1	He	2482.434	2482.434	0.96	2420097	0.10	500000	
Mg	24	45	1	He	885.797	885.797	2.40	462879	0.19	500000	
Al	27	45	1	He	234.580	234.580	2.06	51154	0.46	200000	
K	39	45	1	He	1327.056	1327.056	2.37	437240	0.30	500000	
Ca	44	45	1	He	2354.212	2354.212	2.51	39912	5.90	500000	
Ti	47	45	1	He	4.903	4.903	6.56	560	0.88	2500	
V	51	45	1	He	1.480	1.480	10.31	6126	0.02	10000	
Cr	52	45	1	He	0.570	0.570	9.12	6090	0.01	10000	
Mn	55	45	1	He	299.843	299.843	1.24	718365	0.04	10000	
Fe	56	45	1	He	5978.181	5978.181	2.32	20734287	0.03	200000	
Co	59	45	1	He	4.468	4.468	2.00	33105	0.01	5000	
Ni	60	45	1	He	1.380	1.380	5.69	3011	0.05	10000	
Cu	63	45	1	He	0.414	0.414	12.70	5136	0.01	10000	
Zn	66	45	1	He	2.805	2.805	3.36	2601	0.11	10000	
As	75	115	1	He	0.670	0.670	4.14	454	0.15	10000	
Se	78	115	1	He	0.153	0.153	69.35	28	0.54	10000	
Sr	88	103	1	He	12.226	12.226	2.27	31129	0.04	10000	
Mo	95	103	1	He	0.045	0.045	24.41	128	0.03	2000	
Ag	107	103	1	He	0.002	0.002	96.96	41	0.01	300	
Cd	111	115	1	He	0.015	0.015	32.30	13	0.11	4000	
Sn	118	115	1	He	-3.542	-3.542	-4.32	530	-0.67	2000	
Sb	123	115	1	He	0.056	0.056	18.76	144	0.04	200	
Ba	137	115	1	He	21.046	21.046	0.04	15892	0.13	10000	
W	182	159	1	He	0.006	0.006	576.03	1448	0.00	2500	
Tl	205	165	1	He	0.024	0.024	28.80	269	0.01	2000	
Pb	208	165	1	He	0.833	0.833	5.13	11139	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1846660	0.24	1674650	110.27	60	120	
Sc	45	1	He	364614	0.17	355173	102.66	60	120	
Sc	45	2	NoGas	9339671	1.28	8635903	108.15	60	120	
Rh	103	1	He	1486145	0.91	1470259	101.08	60	120	
In	115	1	He	494128	0.39	490642	100.71	60	120	
Tb	159	1	He	1434116	1.62	1434034	100.01	60	120	
Ho	165	1	He	1385232	3.29	1409606	98.27	60	120	
Bi	209	1	He	893622	1.00	906964	98.53	60	120	

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Sample Report

Sample Table

Sample Name	240-66155-a-2-a
Data File Name	045SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:17:41-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	24.241	24.241	0.70	621644	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	41.78	167	0.01	2000	
B	11	45	2	NoGas	8.966	8.966	4.91	35936	0.02	300	
Na	23	45	1	He	5152.773	5152.773	0.37	5083544	0.10	500000	
Mg	24	45	1	He	47279.294	47279.294	2.10	25054821	0.19	500000	
Al	27	45	1	He	1.135	1.135	23.68	466	0.24	200000	
K	39	45	1	He	3631.493	3631.493	0.81	1169346	0.31	500000	
Ca	44	45	1	He	127579.969	127579.969	1.42	2179865	5.85	500000	
Ti	47	45	1	He	0.143	0.143	82.08	18	0.80	2500	
V	51	45	1	He	0.144	0.144	45.44	1064	0.01	10000	
Cr	52	45	1	He	0.025	0.025	30.04	3678	0.00	10000	
Mn	55	45	1	He	360.353	360.353	2.39	876131	0.04	10000	
Fe	56	45	1	He	1456.276	1456.276	2.44	5128448	0.03	200000	
Co	59	45	1	He	4.841	4.841	1.90	36403	0.01	5000	
Ni	60	45	1	He	12.790	12.790	3.34	26357	0.05	10000	
Cu	63	45	1	He	-0.074	-0.074	-48.38	2464	0.00	10000	
Zn	66	45	1	He	1.624	1.624	9.60	1771	0.09	10000	
As	75	115	1	He	1.350	1.350	5.38	772	0.17	10000	
Se	78	115	1	He	-0.053	-0.053	-311.86	22	-0.24	10000	
Sr	88	103	1	He	79.758	79.758	0.19	193961	0.04	10000	
Mo	95	103	1	He	0.060	0.060	33.20	158	0.04	2000	
Ag	107	103	1	He	0.003	0.003	127.60	41	0.01	300	
Cd	111	115	1	He	0.009	0.009	26.56	8	0.11	4000	
Sn	118	115	1	He	-3.552	-3.552	-2.00	500	-0.71	2000	
Sb	123	115	1	He	0.046	0.046	40.22	123	0.04	200	
Ba	137	115	1	He	544.178	544.178	0.93	402066	0.14	10000	
W	182	159	1	He	0.061	0.061	50.13	1745	0.00	2500	
Tl	205	165	1	He	0.040	0.040	10.29	414	0.01	2000	
Pb	208	165	1	He	0.011	0.011	20.94	653	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1875773	2.21	1674650	112.01	60	120	
Sc	45	1	He	370083	1.35	355173	104.20	60	120	
Sc	45	2	NoGas	9556183	0.87	8635903	110.66	60	120	
Rh	103	1	He	1428327	1.38	1470259	97.15	60	120	
In	115	1	He	484096	1.85	490642	98.67	60	120	
Tb	159	1	He	1435669	2.99	1434034	100.11	60	120	
Ho	165	1	He	1383314	3.89	1409606	98.13	60	120	
Bi	209	1	He	863882	0.50	906964	95.25	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	046_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:21:45-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	51.452	1.164	1190541	0.39	50	102.9	89.5	110.5	
Be	9	45	2	NoGas	50.235	0.717	283366	1.18	50	100.5	89.5	110.5	
B	11	45	2	NoGas	51.591	0.458	180265	0.28	50	103.2	89.5	110.5	
Na	23	45	1	He	25153.984	2.353	24885331	1.66	25000	100.6	89.5	110.5	
Mg	24	45	1	He	25120.655	2.456	13378164	1.83	25000	100.5	89.5	110.5	
Al	27	45	1	He	251.720	2.309	55976	1.59	250	100.7	89.5	110.5	
K	39	45	1	He	25235.825	1.857	8011078	1.35	25000	100.9	89.5	110.5	
Ca	44	45	1	He	24951.416	2.214	428659	1.56	25000	99.8	89.5	110.5	
Ti	47	45	1	He	50.751	0.887	5902	1.43	50	101.5	89.5	110.5	
V	51	45	1	He	49.574	3.448	192880	2.97	50	99.1	89.5	110.5	
Cr	52	45	1	He	49.682	2.291	232733	1.59	50	99.4	89.5	110.5	
Mn	55	45	1	He	247.725	1.640	605505	1.02	250	99.1	89.5	110.5	
Fe	56	45	1	He	12477.129	3.255	44137558	2.60	12500	99.8	89.5	110.5	
Co	59	45	1	He	49.737	1.846	375190	1.19	50	99.5	89.5	110.5	
Ni	60	45	1	He	50.136	1.437	103156	0.74	50	100.3	89.5	110.5	
Cu	63	45	1	He	49.897	2.551	285593	1.95	50	99.8	89.5	110.5	
Zn	66	45	1	He	50.727	3.017	38070	2.36	50	101.5	89.5	110.5	
As	75	115	1	He	51.354	1.804	25079	1.73	50	102.7	89.5	110.5	
Se	78	115	1	He	50.116	2.820	1363	2.82	50	100.2	89.5	110.5	
Sr	88	103	1	He	50.655	2.459	123950	1.40	50	101.3	89.5	110.5	
Mo	95	103	1	He	52.204	2.575	118078	1.54	50	104.4	89.5	110.5	
Ag	107	103	1	He	51.468	1.510	356851	0.77	50	102.9	89.5	110.5	
Cd	111	115	1	He	50.625	0.967	43485	0.87	50	101.2	89.5	110.5	
Sn	118	115	1	He	48.831	0.781	91623	1.17	50	97.7	89.5	110.5	
Sb	123	115	1	He	50.526	1.584	97653	1.26	50	101.1	89.5	110.5	
Ba	137	115	1	He	50.198	0.392	37479	0.66	50	100.4	89.5	110.5	
W	182	159	1	He	50.955	2.466	274176	2.86	50	101.9	89.5	110.5	
Tl	205	165	1	He	49.869	0.960	479366	1.43	50	99.7	89.5	110.5	
Pb	208	165	1	He	49.912	0.266	651661	0.79	50	99.8	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1833655	1.70	1674650	109.49	60	120	
Sc	45	1	He	371960	0.72	355173	104.73	60	120	
Sc	45	2	NoGas	9493722	0.70	8635903	109.93	60	120	
Rh	103	1	He	1436504	1.15	1470259	97.70	60	120	
In	115	1	He	488920	0.45	490642	99.65	60	120	
Tb	159	1	He	1440755	2.18	1434034	100.47	60	120	
Ho	165	1	He	1414477	0.81	1409606	100.35	60	120	
Bi	209	1	He	860690	0.58	906964	94.90	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	047_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:25:49-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.008	234.4	106618	0.2	8	
Be	9	45	2	NoGas	0.018	73.2	144	50.4	1	
B	11	45	2	NoGas	1.586	3.8	10600	1.5	20	
Na	23	45	1	He	6.286	2.9	19982	1.1	1000	
Mg	24	45	1	He	2.992	28.3	2004	21.7	1000	
Al	27	45	1	He	-0.241	-17.5	161	5.2	50	
K	39	45	1	He	12.113	20.7	29555	2.3	1000	
Ca	44	45	1	He	6.077	23.9	395	5.9	1000	
Ti	47	45	1	He	0.039	115.0	6	91.6	20	
V	51	45	1	He	0.149	26.4	1071	13.8	2	
Cr	52	45	1	He	0.063	136.0	3823	10.6	2	
Mn	55	45	1	He	0.063	45.9	683	10.6	2	
Fe	56	45	1	He	3.537	35.2	14751	28.9	50	
Co	59	45	1	He	0.009	24.5	138	10.9	1	
Ni	60	45	1	He	-0.035	-40.6	166	17.6	2	
Cu	63	45	1	He	-0.121	-1.2	2182	0.8	2	
Zn	66	45	1	He	0.060	42.8	617	3.0	20	
As	75	115	1	He	-0.048	-52.6	102	11.5	2	
Se	78	115	1	He	0.078	143.7	27	10.7	2	
Sr	88	103	1	He	-0.041	-42.4	124	37.2	10	
Mo	95	103	1	He	0.087	38.6	228	32.6	2	
Ag	107	103	1	He	0.006	56.2	68	36.3	0.2	
Cd	111	115	1	He	0.016	12.8	15	11.5	0.2	
Sn	118	115	1	He	0.426	59.1	7613	4.8	10	
Sb	123	115	1	He	0.078	52.9	191	42.0	2	
Ba	137	115	1	He	0.108	33.2	102	26.6	5	
W	182	159	1	He	0.290	30.2	2923	15.8	10	
Tl	205	165	1	He	0.037	33.6	394	29.6	0.5	
Pb	208	165	1	He	0.026	15.7	858	6.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1834527	0.90	1674650	109.55	60	120	
Sc	45	1	He	367051	0.52	355173	103.34	60	120	
Sc	45	2	NoGas	9432066	0.42	8635903	109.22	60	120	
Rh	103	1	He	1500418	1.77	1470259	102.05	60	120	
In	115	1	He	501479	1.08	490642	102.21	60	120	
Tb	159	1	He	1413740	0.02	1434034	98.58	60	120	
Ho	165	1	He	1412782	0.47	1409606	100.23	60	120	
Bi	209	1	He	882525	0.29	906964	97.31	60	120	

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Quality Control Sample (QCS) Report

Sample Table

Sample Name	CRI-2478719
Data File Name	048CRIA.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:29:56-04:00
Sample Type	CRI6020A
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	7.615	7.615	2.648	265226	0.07	8	95.2	69.5	130.5	
Be	9	2	NoGas	1.057	1.057	3.965	5957	3.11	1	105.7	69.5	130.5	
B	11	2	NoGas	21.838	21.838	1.527	78693	1.84	20	109.2	69.5	130.5	
Na	23	1	He	961.532	961.532	0.882	955955	1.08	1000	96.2	69.5	130.5	
Mg	24	1	He	968.637	968.637	1.830	511562	1.91	1000	96.9	69.5	130.5	
Al	27	1	He	54.817	54.817	0.770	12246	0.83	50	109.6	69.5	130.5	
K	39	1	He	1017.911	1017.911	0.751	345004	0.74	1000	101.8	69.5	130.5	
Ca	44	1	He	1008.801	1008.801	1.235	17453	1.07	1000	100.9	69.5	130.5	
Ti	47	1	He	9.469	9.469	7.065	1092	7.66	10	94.7	69.5	130.5	
V	51	1	He	5.121	5.121	3.588	20193	3.52	5	102.4	69.5	130.5	
Cr	52	1	He	2.007	2.007	4.312	12722	3.16	2	100.3	69.5	130.5	
Mn	55	1	He	5.016	5.016	3.638	12670	3.38	5	100.3	69.5	130.5	
Fe	56	1	He	107.539	107.539	1.865	379358	1.82	100	107.5	69.5	130.5	
Co	59	1	He	1.003	1.003	0.216	7566	0.72	1	100.3	69.5	130.5	
Ni	60	1	He	2.027	2.027	1.235	4358	0.47	2	101.3	69.5	130.5	
Cu	63	1	He	1.887	1.887	3.117	13465	2.88	2	94.4	69.5	130.5	
Zn	66	1	He	20.452	20.452	4.156	15550	3.34	20	102.3	69.5	130.5	
As	75	1	He	5.151	5.151	2.065	2671	1.25	5	103.0	69.5	130.5	
Se	78	1	He	5.181	5.181	7.227	165	6.62	5	103.6	69.5	130.5	
Sr	88	1	He	9.444	9.444	0.164	24359	1.49	10	94.4	69.5	130.5	
Mo	95	1	He	5.169	5.169	0.932	12251	0.59	5	103.4	69.5	130.5	
Ag	107	1	He	1.015	1.015	1.936	7379	0.46	1	101.5	69.5	130.5	
Cd	111	1	He	0.987	0.987	5.013	863	4.27	1	98.7	69.5	130.5	
Sn	118	1	He	6.989	6.989	7.728	19156	4.37	10	69.9	69.5	130.5	
Sb	123	1	He	2.057	2.057	3.561	4077	3.05	2	102.9	69.5	130.5	
Ba	137	1	He	4.946	4.946	8.284	3770	7.51	5	98.9	69.5	130.5	
W	182	1	He	10.011	10.011	4.730	55027	4.07	10	100.1	69.5	130.5	
Tl	205	1	He	1.038	1.038	1.265	9871	2.34	1	103.8	69.5	130.5	
Pb	208	1	He	1.029	1.029	1.929	13735	0.32	1	102.9	69.5	130.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1858160	0.82	1674650	110.96	60	120	
Sc	45	1	He	368529	0.80	355173	103.76	60	120	
Sc	45	2	NoGas	9414802	1.55	8635903	109.02	60	120	
Rh	103	1	He	1502375	1.49	1470259	102.18	60	120	
In	115	1	He	497156	0.72	490642	101.33	60	120	
Tb	159	1	He	1441388	1.93	1434034	100.51	60	120	
Ho	165	1	He	1393394	1.62	1409606	98.85	60	120	
Bi	209	1	He	888461	0.70	906964	97.96	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-1-a
Data File Name	049SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:34:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.270	3.270	0.87	174085	0.00	10000	
Be	9	45	2	NoGas	0.017	0.017	23.36	141	0.01	2000	
B	11	45	2	NoGas	365.237	365.237	0.62	1230567	0.03	300	>LDR
Na	23	45	1	He	449708.631	449708.631	2.11	436731790	0.10	500000	
Mg	24	45	1	He	13995.220	13995.220	2.37	7320452	0.19	500000	
Al	27	45	1	He	78.872	78.872	4.43	17374	0.45	200000	
K	39	45	1	He	3076.587	3076.587	0.92	981624	0.31	500000	
Ca	44	45	1	He	223188.361	223188.361	2.41	3763585	5.93	500000	
Ti	47	45	1	He	3.538	3.538	19.92	406	0.87	2500	
V	51	45	1	He	0.778	0.778	8.72	3462	0.02	10000	
Cr	52	45	1	He	0.435	0.435	17.28	5490	0.01	10000	
Mn	55	45	1	He	61.241	61.241	2.25	147415	0.04	10000	
Fe	56	45	1	He	184.240	184.240	2.72	642531	0.03	200000	
Co	59	45	1	He	0.270	0.270	8.18	2071	0.01	5000	
Ni	60	45	1	He	3.422	3.422	5.92	7134	0.05	10000	
Cu	63	45	1	He	1.076	1.076	1.41	8831	0.01	10000	
Zn	66	45	1	He	2.523	2.523	7.97	2402	0.11	10000	
As	75	115	1	He	0.237	0.237	3.32	234	0.10	10000	
Se	78	115	1	He	0.190	0.190	78.40	28	0.67	10000	
Sr	88	103	1	He	250.949	250.949	1.29	587474	0.04	10000	
Mo	95	103	1	He	12.262	12.262	4.48	26599	0.05	2000	
Ag	107	103	1	He	0.020	0.020	14.19	156	0.01	300	
Cd	111	115	1	He	0.153	0.153	3.67	130	0.12	4000	
Sn	118	115	1	He	-3.118	-3.118	-0.64	1237	-0.25	2000	
Sb	123	115	1	He	0.117	0.117	8.58	257	0.05	200	
Ba	137	115	1	He	162.514	162.514	1.23	119016	0.14	10000	
W	182	159	1	He	0.121	0.121	43.94	2074	0.01	2500	
Tl	205	165	1	He	0.015	0.015	10.77	177	0.01	2000	
Pb	208	165	1	He	0.111	0.111	7.31	1927	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1777136	0.62	1674650	106.12	60	120	
Sc	45	1	He	365242	0.93	355173	102.84	60	120	
Sc	45	2	NoGas	9391151	0.69	8635903	108.75	60	120	
Rh	103	1	He	1375875	1.79	1470259	93.58	60	120	
In	115	1	He	479696	1.53	490642	97.77	60	120	
Tb	159	1	He	1444020	0.68	1434034	100.70	60	120	
Ho	165	1	He	1385083	3.45	1409606	98.26	60	120	
Bi	209	1	He	816508	1.18	906964	90.03	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-2-a
Data File Name	050SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:38:10-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.207	8.207	3.59	283493	0.00	10000	
Be	9	45	2	NoGas	0.011	0.011	69.62	107	0.01	2000	
B	11	45	2	NoGas	77.830	77.830	2.04	272663	0.03	300	
Na	23	45	1	He	55545.498	55545.498	1.72	55747961	0.10	500000	
Mg	24	45	1	He	26029.717	26029.717	2.43	14067453	0.19	500000	
Al	27	45	1	He	58.391	58.391	5.64	13350	0.44	200000	
K	39	45	1	He	2069.976	2069.976	1.23	691152	0.30	500000	
Ca	44	45	1	He	132092.297	132092.297	2.55	2301377	5.74	500000	
Ti	47	45	1	He	0.498	0.498	23.82	60	0.83	2500	
V	51	45	1	He	0.154	0.154	36.03	1121	0.01	10000	
Cr	52	45	1	He	0.192	0.192	20.31	4535	0.00	10000	
Mn	55	45	1	He	154.477	154.477	1.45	383367	0.04	10000	
Fe	56	45	1	He	2273.851	2273.851	2.36	8165123	0.03	200000	
Co	59	45	1	He	0.181	0.181	7.18	1463	0.01	5000	
Ni	60	45	1	He	1.333	1.333	5.63	3020	0.04	10000	
Cu	63	45	1	He	0.093	0.093	9.14	3473	0.00	10000	
Zn	66	45	1	He	214.414	214.414	1.81	161399	0.13	10000	
As	75	115	1	He	0.175	0.175	1.52	211	0.08	10000	
Se	78	115	1	He	0.061	0.061	409.10	26	0.24	10000	
Sr	88	103	1	He	161.644	161.644	1.61	394729	0.04	10000	
Mo	95	103	1	He	65.004	65.004	2.88	146893	0.04	2000	
Ag	107	103	1	He	0.000	0.000	508.77	24	0.00	300	
Cd	111	115	1	He	0.021	0.021	41.70	19	0.11	4000	
Sn	118	115	1	He	-3.522	-3.522	-1.03	567	-0.62	2000	
Sb	123	115	1	He	0.072	0.072	19.65	177	0.04	200	
Ba	137	115	1	He	295.056	295.056	0.74	222812	0.13	10000	
W	182	159	1	He	0.320	0.320	21.87	3156	0.01	2500	
Tl	205	165	1	He	0.002	0.002	58.07	56	0.00	2000	
Pb	208	165	1	He	0.037	0.037	13.56	996	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1873666	1.90	1674650	111.88	60	120	
Sc	45	1	He	377473	1.42	355173	106.28	60	120	
Sc	45	2	NoGas	9615520	1.44	8635903	111.34	60	120	
Rh	103	1	He	1435176	0.87	1470259	97.61	60	120	
In	115	1	He	494708	0.83	490642	100.83	60	120	
Tb	159	1	He	1449921	1.21	1434034	101.11	60	120	
Ho	165	1	He	1400092	2.82	1409606	99.33	60	120	
Bi	209	1	He	864204	0.73	906964	95.29	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-3-a
Data File Name	051SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:42:13-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.710	9.710	0.74	316982	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	33.16	119	0.01	2000	
B	11	45	2	NoGas	90.714	90.714	0.13	318364	0.03	300	
Na	23	45	1	He	108324.174	108324.174	2.22	107454392	0.10	500000	
Mg	24	45	1	He	63646.080	63646.080	2.23	34000262	0.19	500000	
Al	27	45	1	He	1.063	1.063	12.80	453	0.23	200000	
K	39	45	1	He	2165.193	2165.193	1.44	713416	0.30	500000	
Ca	44	45	1	He	156374.991	156374.991	1.44	2693290	5.81	500000	
Ti	47	45	1	He	0.085	0.085	69.56	11	0.77	2500	
V	51	45	1	He	0.179	0.179	44.32	1206	0.01	10000	
Cr	52	45	1	He	0.135	0.135	33.29	4221	0.00	10000	
Mn	55	45	1	He	72.283	72.283	1.46	177604	0.04	10000	
Fe	56	45	1	He	284.155	284.155	1.67	1010767	0.03	200000	
Co	59	45	1	He	1.326	1.326	1.71	10103	0.01	5000	
Ni	60	45	1	He	3.700	3.700	3.31	7858	0.05	10000	
Cu	63	45	1	He	-0.136	-0.136	-17.20	2130	-0.01	10000	
Zn	66	45	1	He	0.686	0.686	8.53	1091	0.06	10000	
As	75	115	1	He	0.405	0.405	17.47	317	0.13	10000	
Se	78	115	1	He	0.143	0.143	124.15	27	0.52	10000	
Sr	88	103	1	He	194.280	194.280	2.69	465552	0.04	10000	
Mo	95	103	1	He	0.280	0.280	9.71	643	0.04	2000	
Ag	107	103	1	He	0.002	0.002	86.11	36	0.01	300	
Cd	111	115	1	He	0.011	0.011	57.01	10	0.11	4000	
Sn	118	115	1	He	-3.428	-3.428	-3.03	715	-0.48	2000	
Sb	123	115	1	He	0.043	0.043	23.01	117	0.04	200	
Ba	137	115	1	He	101.067	101.067	1.01	74688	0.14	10000	
W	182	159	1	He	0.056	0.056	37.25	1715	0.00	2500	
Tl	205	165	1	He	0.003	0.003	85.02	71	0.00	2000	
Pb	208	165	1	He	0.006	0.006	74.87	593	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1821285	0.45	1674650	108.76	60	120	
Sc	45	1	He	373094	0.46	355173	105.05	60	120	
Sc	45	2	NoGas	9657694	0.84	8635903	111.83	60	120	
Rh	103	1	He	1408933	2.69	1470259	95.83	60	120	
In	115	1	He	484037	0.47	490642	98.65	60	120	
Tb	159	1	He	1432360	0.69	1434034	99.88	60	120	
Ho	165	1	He	1393637	0.75	1409606	98.87	60	120	
Bi	209	1	He	825123	0.98	906964	90.98	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-4-a
Data File Name	052SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:46:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.721	9.721	0.75	316786	0.00	10000	
Be	9	45	2	NoGas	0.020	0.020	75.68	163	0.01	2000	
B	11	45	2	NoGas	369.494	369.494	0.84	1278555	0.03	300	>LDR
Na	23	45	1	He	236640.773	236640.773	1.76	232011524	0.10	500000	
Mg	24	45	1	He	16761.596	16761.596	3.29	8849619	0.19	500000	
Al	27	45	1	He	12.366	12.366	3.78	2930	0.42	200000	
K	39	45	1	He	3445.830	3445.830	0.87	1107029	0.31	500000	
Ca	44	45	1	He	133160.291	133160.291	3.34	2266574	5.87	500000	
Ti	47	45	1	He	0.298	0.298	13.36	36	0.84	2500	
V	51	45	1	He	0.176	0.176	30.80	1180	0.01	10000	
Cr	52	45	1	He	0.215	0.215	19.92	4536	0.00	10000	
Mn	55	45	1	He	291.520	291.520	2.41	706340	0.04	10000	
Fe	56	45	1	He	10169.705	10169.705	2.84	35667521	0.03	200000	
Co	59	45	1	He	0.344	0.344	5.00	2646	0.01	5000	
Ni	60	45	1	He	1.770	1.770	2.24	3839	0.05	10000	
Cu	63	45	1	He	0.132	0.132	13.05	3617	0.00	10000	
Zn	66	45	1	He	4.550	4.550	3.34	3910	0.12	10000	
As	75	115	1	He	0.717	0.717	4.01	470	0.15	10000	
Se	78	115	1	He	0.181	0.181	53.31	29	0.63	10000	
Sr	88	103	1	He	156.770	156.770	1.26	374905	0.04	10000	
Mo	95	103	1	He	75.444	75.444	2.12	166975	0.05	2000	
Ag	107	103	1	He	0.003	0.003	108.81	46	0.01	300	
Cd	111	115	1	He	0.027	0.027	53.21	24	0.11	4000	
Sn	118	115	1	He	-3.435	-3.435	-2.03	707	-0.49	2000	
Sb	123	115	1	He	0.046	0.046	38.97	123	0.04	200	
Ba	137	115	1	He	172.883	172.883	0.48	128628	0.13	10000	
W	182	159	1	He	0.365	0.365	8.38	3349	0.01	2500	
Tl	205	165	1	He	0.000	0.000	747.95	43	0.00	2000	
Pb	208	165	1	He	0.033	0.033	16.27	948	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1851006	1.68	1674650	110.53	60	120	
Sc	45	1	He	368834	1.62	355173	103.85	60	120	
Sc	45	2	NoGas	9644575	1.26	8635903	111.68	60	120	
Rh	103	1	He	1405501	1.59	1470259	95.60	60	120	
In	115	1	He	487389	0.78	490642	99.34	60	120	
Tb	159	1	He	1428561	1.68	1434034	99.62	60	120	
Ho	165	1	He	1409623	0.47	1409606	100.00	60	120	
Bi	209	1	He	836760	0.35	906964	92.26	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-b-5-a
Data File Name	053SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:50:21-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.498	9.498	2.26	306696	0.00	10000	
Be	9	45	2	NoGas	0.004	0.004	181.32	70	0.01	2000	
B	11	45	2	NoGas	364.263	364.263	1.09	1239018	0.03	300	>LDR
Na	23	45	1	He	232569.595	232569.595	1.57	228897621	0.10	500000	
Mg	24	45	1	He	16402.580	16402.580	2.03	8694497	0.19	500000	
Al	27	45	1	He	2.399	2.399	13.18	744	0.32	200000	
K	39	45	1	He	3352.848	3352.848	0.91	1081924	0.31	500000	
Ca	44	45	1	He	131490.432	131490.432	2.51	2247062	5.85	500000	
Ti	47	45	1	He	0.125	0.125	131.87	16	0.81	2500	
V	51	45	1	He	0.119	0.119	36.65	965	0.01	10000	
Cr	52	45	1	He	0.005	0.005	725.00	3590	0.00	10000	
Mn	55	45	1	He	206.669	206.669	2.30	502854	0.04	10000	
Fe	56	45	1	He	1359.255	1359.255	2.86	4787965	0.03	200000	
Co	59	45	1	He	0.087	0.087	9.87	727	0.01	5000	
Ni	60	45	1	He	1.011	1.011	5.96	2304	0.04	10000	
Cu	63	45	1	He	-0.091	-0.091	-29.32	2371	0.00	10000	
Zn	66	45	1	He	0.563	0.563	1.96	992	0.06	10000	
As	75	115	1	He	0.393	0.393	14.50	314	0.13	10000	
Se	78	115	1	He	0.103	0.103	101.12	27	0.39	10000	
Sr	88	103	1	He	156.344	156.344	0.16	371599	0.04	10000	
Mo	95	103	1	He	76.309	76.309	1.34	167858	0.05	2000	
Ag	107	103	1	He	0.002	0.002	178.88	36	0.01	300	
Cd	111	115	1	He	0.001	0.001	867.53	2	0.07	4000	
Sn	118	115	1	He	-3.562	-3.562	-1.77	489	-0.73	2000	
Sb	123	115	1	He	0.035	0.035	20.21	102	0.03	200	
Ba	137	115	1	He	168.964	168.964	0.98	125986	0.13	10000	
W	182	159	1	He	0.231	0.231	16.45	2630	0.01	2500	
Tl	205	165	1	He	-0.003	-0.003	-36.97	12	-0.02	2000	
Pb	208	165	1	He	0.008	0.008	49.44	628	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1803968	2.94	1674650	107.72	60	120	
Sc	45	1	He	370209	0.67	355173	104.23	60	120	
Sc	45	2	NoGas	9480987	1.50	8635903	109.79	60	120	
Rh	103	1	He	1396729	1.10	1470259	95.00	60	120	
In	115	1	He	488437	0.24	490642	99.55	60	120	
Tb	159	1	He	1422221	1.32	1434034	99.18	60	120	
Ho	165	1	He	1411498	0.10	1409606	100.13	60	120	
Bi	209	1	He	832607	0.50	906964	91.80	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-6-a
Data File Name	054SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:54:26-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	131.393	131.393	1.17	2874133	0.00	10000	
Be	9	45	2	NoGas	0.014	0.014	36.71	122	0.01	2000	
B	11	45	2	NoGas	222.373	222.373	0.45	759482	0.03	300	
Na	23	45	1	He	24414.037	24414.037	3.31	23989967	0.10	500000	
Mg	24	45	1	He	41047.393	41047.393	3.56	21710613	0.19	500000	
Al	27	45	1	He	6.278	6.278	8.51	1596	0.39	200000	
K	39	45	1	He	2417.890	2417.890	2.83	785805	0.31	500000	
Ca	44	45	1	He	103538.531	103538.531	2.67	1765864	5.86	500000	
Ti	47	45	1	He	0.182	0.182	23.10	22	0.82	2500	
V	51	45	1	He	0.141	0.141	39.41	1051	0.01	10000	
Cr	52	45	1	He	0.052	0.052	62.32	3796	0.00	10000	
Mn	55	45	1	He	29.267	29.267	2.90	71520	0.04	10000	
Fe	56	45	1	He	730.470	730.470	2.89	2568967	0.03	200000	
Co	59	45	1	He	0.084	0.084	5.91	700	0.01	5000	
Ni	60	45	1	He	0.319	0.319	11.81	888	0.04	10000	
Cu	63	45	1	He	-0.066	-0.066	-31.32	2506	0.00	10000	
Zn	66	45	1	He	1.359	1.359	9.56	1575	0.09	10000	
As	75	115	1	He	0.119	0.119	21.60	181	0.07	10000	
Se	78	115	1	He	0.263	0.263	66.27	31	0.86	10000	
Sr	88	103	1	He	328.337	328.337	3.42	787158	0.04	10000	
Mo	95	103	1	He	0.273	0.273	18.40	629	0.04	2000	
Ag	107	103	1	He	0.001	0.001	164.13	29	0.00	300	
Cd	111	115	1	He	0.011	0.011	22.44	10	0.11	4000	
Sn	118	115	1	He	-3.478	-3.478	-0.78	633	-0.55	2000	
Sb	123	115	1	He	0.027	0.027	39.32	88	0.03	200	
Ba	137	115	1	He	212.147	212.147	2.24	157612	0.13	10000	
W	182	159	1	He	0.051	0.051	85.24	1641	0.00	2500	
Tl	205	165	1	He	-0.003	-0.003	-49.60	17	-0.02	2000	
Pb	208	165	1	He	0.011	0.011	46.54	652	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1788198	1.29	1674650	106.78	60	120	
Sc	45	1	He	369533	1.83	355173	104.04	60	120	
Sc	45	2	NoGas	9493722	0.80	8635903	109.93	60	120	
Rh	103	1	He	1409993	2.48	1470259	95.90	60	120	
In	115	1	He	486793	1.43	490642	99.22	60	120	
Tb	159	1	He	1394157	1.46	1434034	97.22	60	120	
Ho	165	1	He	1391105	1.24	1409606	98.69	60	120	
Bi	209	1	He	847792	0.77	906964	93.48	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-7-a
Data File Name	055SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T13:58:27-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	129.208	129.208	0.45	2874807	0.00	10000	
Be	9	45	2	NoGas	0.018	0.018	19.84	152	0.01	2000	
B	11	45	2	NoGas	226.887	226.887	0.42	787644	0.03	300	
Na	23	45	1	He	24839.252	24839.252	1.90	24558293	0.10	500000	
Mg	24	45	1	He	41781.431	41781.431	2.92	22234661	0.19	500000	
Al	27	45	1	He	7.393	7.393	7.85	1852	0.40	200000	
K	39	45	1	He	2421.739	2421.739	1.61	791872	0.31	500000	
Ca	44	45	1	He	105088.816	105088.816	1.29	1803364	5.83	500000	
Ti	47	45	1	He	0.095	0.095	18.62	12	0.78	2500	
V	51	45	1	He	0.084	0.084	47.05	831	0.01	10000	
Cr	52	45	1	He	0.081	0.081	37.36	3953	0.00	10000	
Mn	55	45	1	He	29.354	29.354	1.57	72176	0.04	10000	
Fe	56	45	1	He	642.415	642.415	1.39	2273563	0.03	200000	
Co	59	45	1	He	0.082	0.082	17.81	693	0.01	5000	
Ni	60	45	1	He	0.349	0.349	6.87	956	0.04	10000	
Cu	63	45	1	He	-0.063	-0.063	-8.72	2536	0.00	10000	
Zn	66	45	1	He	0.728	0.728	16.95	1118	0.07	10000	
As	75	115	1	He	0.133	0.133	11.18	188	0.07	10000	
Se	78	115	1	He	-0.022	-0.022	-245.01	23	-0.09	10000	
Sr	88	103	1	He	327.593	327.593	0.09	799751	0.04	10000	
Mo	95	103	1	He	0.114	0.114	21.52	281	0.04	2000	
Ag	107	103	1	He	0.001	0.001	253.80	28	0.00	300	
Cd	111	115	1	He	0.005	0.005	23.95	5	0.10	4000	
Sn	118	115	1	He	-3.145	-3.145	-1.33	1215	-0.26	2000	
Sb	123	115	1	He	0.033	0.033	12.46	99	0.03	200	
Ba	137	115	1	He	215.066	215.066	0.66	160455	0.13	10000	
W	182	159	1	He	0.038	0.038	45.26	1585	0.00	2500	
Tl	205	165	1	He	-0.001	-0.001	-83.05	30	0.00	2000	
Pb	208	165	1	He	0.005	0.005	67.56	582	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1803120	1.09	1674650	107.67	60	120	
Sc	45	1	He	371740	1.28	355173	104.66	60	120	
Sc	45	2	NoGas	9651364	1.33	8635903	111.76	60	120	
Rh	103	1	He	1435057	1.28	1470259	97.61	60	120	
In	115	1	He	488764	0.94	490642	99.62	60	120	
Tb	159	1	He	1405316	1.31	1434034	98.00	60	120	
Ho	165	1	He	1397196	0.37	1409606	99.12	60	120	
Bi	209	1	He	855381	0.33	906964	94.31	60	120	

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Sample Report

Sample Table

Sample Name	240-66083-e-8-a
Data File Name	056SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:02:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.354	8.354	1.07	289059	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	95.30	122	0.01	2000	
B	11	45	2	NoGas	93.116	93.116	1.22	327911	0.03	300	
Na	23	45	1	He	10214.271	10214.271	1.80	10111579	0.10	500000	
Mg	24	45	1	He	36327.377	36327.377	1.71	19342429	0.19	500000	
Al	27	45	1	He	9.783	9.783	3.88	2384	0.41	200000	
K	39	45	1	He	937.039	937.039	2.13	322531	0.29	500000	
Ca	44	45	1	He	98077.027	98077.027	2.57	1683680	5.83	500000	
Ti	47	45	1	He	0.247	0.247	59.10	30	0.82	2500	
V	51	45	1	He	0.095	0.095	64.84	877	0.01	10000	
Cr	52	45	1	He	0.597	0.597	8.62	6337	0.01	10000	
Mn	55	45	1	He	12.188	12.188	1.16	30297	0.04	10000	
Fe	56	45	1	He	6401.809	6401.809	2.48	22642569	0.03	200000	
Co	59	45	1	He	0.452	0.452	7.24	3484	0.01	5000	
Ni	60	45	1	He	1.409	1.409	5.75	3130	0.05	10000	
Cu	63	45	1	He	0.710	0.710	2.06	6917	0.01	10000	
Zn	66	45	1	He	54.044	54.044	2.14	40513	0.13	10000	
As	75	115	1	He	0.209	0.209	11.58	227	0.09	10000	
Se	78	115	1	He	0.144	0.144	93.49	28	0.52	10000	
Sr	88	103	1	He	220.444	220.444	1.61	541450	0.04	10000	
Mo	95	103	1	He	0.364	0.364	14.80	849	0.04	2000	
Ag	107	103	1	He	0.001	0.001	80.65	31	0.00	300	
Cd	111	115	1	He	0.045	0.045	19.73	39	0.11	4000	
Sn	118	115	1	He	-3.453	-3.453	-0.79	685	-0.50	2000	
Sb	123	115	1	He	0.062	0.062	32.88	157	0.04	200	
Ba	137	115	1	He	255.029	255.029	1.92	191898	0.13	10000	
W	182	159	1	He	0.045	0.045	42.01	1652	0.00	2500	
Tl	205	165	1	He	-0.002	-0.002	-46.44	24	-0.01	2000	
Pb	208	165	1	He	0.051	0.051	5.35	1177	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1867870	0.98	1674650	111.54	60	120	
Sc	45	1	He	371894	1.12	355173	104.71	60	120	
Sc	45	2	NoGas	9695042	0.09	8635903	112.26	60	120	
Rh	103	1	He	1443863	1.77	1470259	98.20	60	120	
In	115	1	He	492954	0.97	490642	100.47	60	120	
Tb	159	1	He	1427172	0.97	1434034	99.52	60	120	
Ho	165	1	He	1407424	0.08	1409606	99.85	60	120	
Bi	209	1	He	865233	0.45	906964	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235200/1-a
Data File Name	057_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:06:35-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.049	61.4	111129	0.2	8	
Be	9	45	2	NoGas	0.008	50.0	93	25.0	1	
B	11	45	2	NoGas	13.588	1.4	52780	1.6	20	
Na	23	45	1	He	62.766	2.5	77388	0.8	1000	
Mg	24	45	1	He	72.157	2.2	39529	1.6	1000	
Al	27	45	1	He	2.061	14.1	684	8.8	50	
K	39	45	1	He	27.775	12.8	35495	2.1	1000	
Ca	44	45	1	He	232.349	1.1	4359	2.1	1000	
Ti	47	45	1	He	0.092	142.2	12	128.9	20	
V	51	45	1	He	0.118	52.2	982	24.7	2	
Cr	52	45	1	He	0.213	17.4	4643	2.8	2	
Mn	55	45	1	He	12.235	3.5	30930	2.2	2	Blank High
Fe	56	45	1	He	14.212	4.1	53648	5.2	50	
Co	59	45	1	He	0.000	1611.0	77	19.0	1	
Ni	60	45	1	He	0.127	23.7	508	11.5	2	
Cu	63	45	1	He	0.643	6.0	6649	2.1	2	
Zn	66	45	1	He	4.735	3.0	4151	3.1	20	
As	75	115	1	He	-0.053	-63.4	104	16.4	2	
Se	78	115	1	He	-0.075	-179.0	23	16.2	2	
Sr	88	103	1	He	0.525	3.4	1613	3.2	10	
Mo	95	103	1	He	0.025	22.7	86	15.7	2	
Ag	107	103	1	He	0.000	788.7	28	90.9	0.2	
Cd	111	115	1	He	0.002	78.2	3	57.5	0.2	
Sn	118	115	1	He	-3.526	-1.4	585	15.5	10	
Sb	123	115	1	He	0.022	11.9	82	6.2	2	
Ba	137	115	1	He	0.867	3.3	704	3.6	5	
W	182	159	1	He	0.023	79.9	1563	6.0	10	
Tl	205	165	1	He	-0.002	-59.0	22	52.7	0.5	
Pb	208	165	1	He	0.031	14.6	953	6.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1940535	0.34	1674650	115.88	60	120	
Sc	45	1	He	378318	1.31	355173	106.52	60	120	
Sc	45	2	NoGas	9753079	0.44	8635903	112.94	60	120	
Rh	103	1	He	1542431	0.73	1470259	104.91	60	120	
In	115	1	He	517528	0.49	490642	105.48	60	120	
Tb	159	1	He	1458179	0.89	1434034	101.68	60	120	
Ho	165	1	He	1446456	0.49	1409606	102.61	60	120	
Bi	209	1	He	920605	1.38	906964	101.50	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	058_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:10:40-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	50.708	1.590	1201916	1.45	50	101.4	89.5	110.5	
Be	9	45	2	NoGas	48.311	0.712	278773	0.78	50	96.6	89.5	110.5	
B	11	45	2	NoGas	57.461	1.132	204776	1.11	50	114.9	89.5	110.5	CCV Failed
Na	23	45	1	He	25471.144	0.640	24861251	0.71	25000	101.9	89.5	110.5	
Mg	24	45	1	He	25364.954	0.801	13326942	0.33	25000	101.5	89.5	110.5	
Al	27	45	1	He	250.852	0.504	55037	0.72	250	100.3	89.5	110.5	
K	39	45	1	He	25480.247	0.589	7979702	0.60	25000	101.9	89.5	110.5	
Ca	44	45	1	He	25174.078	0.538	426685	0.79	25000	100.7	89.5	110.5	
Ti	47	45	1	He	56.996	9.425	6534	8.34	50	114.0	89.5	110.5	CCV Failed
V	51	45	1	He	50.727	1.223	194726	1.95	50	101.5	89.5	110.5	
Cr	52	45	1	He	49.846	1.401	230366	1.67	50	99.7	89.5	110.5	
Mn	55	45	1	He	250.464	1.206	603958	1.02	250	100.2	89.5	110.5	
Fe	56	45	1	He	12564.641	0.926	43852330	0.68	12500	100.5	89.5	110.5	
Co	59	45	1	He	50.201	1.661	373574	0.67	50	100.4	89.5	110.5	
Ni	60	45	1	He	50.935	0.896	103383	0.24	50	101.9	89.5	110.5	
Cu	63	45	1	He	50.381	0.731	284462	0.40	50	100.8	89.5	110.5	
Zn	66	45	1	He	51.555	1.262	38163	0.12	50	103.1	89.5	110.5	
As	75	115	1	He	51.666	0.999	25178	0.95	50	103.3	89.5	110.5	
Se	78	115	1	He	51.690	5.278	1401	3.69	50	103.4	89.5	110.5	
Sr	88	103	1	He	50.351	5.812	125142	0.45	50	100.7	89.5	110.5	
Mo	95	103	1	He	51.134	4.663	117523	0.81	50	102.3	89.5	110.5	
Ag	107	103	1	He	50.726	4.663	357345	0.84	50	101.5	89.5	110.5	
Cd	111	115	1	He	51.294	1.344	43966	0.86	50	102.6	89.5	110.5	
Sn	118	115	1	He	49.602	3.160	92770	3.16	50	99.2	89.5	110.5	
Sb	123	115	1	He	51.891	1.175	100082	0.99	50	103.8	89.5	110.5	
Ba	137	115	1	He	50.906	2.894	37925	2.43	50	101.8	89.5	110.5	
W	182	159	1	He	51.666	2.108	276534	2.26	50	103.3	89.5	110.5	
Tl	205	165	1	He	50.903	1.034	485685	1.06	50	101.8	89.5	110.5	
Pb	208	165	1	He	50.773	1.139	657989	0.32	50	101.5	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1877924	1.04	1674650	112.14	60	120	
Sc	45	1	He	366950	1.12	355173	103.32	60	120	
Sc	45	2	NoGas	9711872	0.10	8635903	112.46	60	120	
Rh	103	1	He	1461783	5.30	1470259	99.42	60	120	
In	115	1	He	487940	1.69	490642	99.45	60	120	
Tb	159	1	He	1433995	4.33	1434034	100.00	60	120	
Ho	165	1	He	1404117	1.19	1409606	99.61	60	120	
Bi	209	1	He	864067	0.91	906964	95.27	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	059_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:14:44-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.028	220.4	111071	1.0	8	
Be	9	45	2	NoGas	0.010	29.0	104	16.4	1	
B	11	45	2	NoGas	6.595	3.9	28519	3.5	20	
Na	23	45	1	He	17.345	0.8	31120	0.8	1000	
Mg	24	45	1	He	2.655	23.1	1848	17.7	1000	
Al	27	45	1	He	0.274	72.9	277	15.4	50	
K	39	45	1	He	8.613	19.7	28786	2.6	1000	
Ca	44	45	1	He	7.019	12.1	416	4.4	1000	
Ti	47	45	1	He	0.066	89.1	9	78.1	20	
V	51	45	1	He	0.155	23.6	1107	12.1	2	
Cr	52	45	1	He	0.044	56.6	3780	3.8	2	
Mn	55	45	1	He	0.043	102.3	641	16.7	2	
Fe	56	45	1	He	3.874	33.6	16123	28.8	50	
Co	59	45	1	He	0.004	124.6	107	38.0	1	
Ni	60	45	1	He	-0.053	-18.4	129	15.6	2	
Cu	63	45	1	He	0.013	75.4	2964	1.7	2	
Zn	66	45	1	He	-0.015	-757.2	569	14.9	20	
As	75	115	1	He	-0.051	-34.5	102	9.7	2	
Se	78	115	1	He	0.110	169.1	28	19.9	2	
Sr	88	103	1	He	-0.032	-27.7	149	14.9	10	
Mo	95	103	1	He	0.093	31.7	244	28.8	2	
Ag	107	103	1	He	0.007	54.8	74	36.2	0.2	
Cd	111	115	1	He	0.020	44.4	19	41.7	0.2	
Sn	118	115	1	He	0.379	58.3	7598	5.8	10	
Sb	123	115	1	He	0.111	33.7	258	29.1	2	
Ba	137	115	1	He	0.038	66.4	49	38.8	5	
W	182	159	1	He	0.247	11.5	2782	3.6	10	
Tl	205	165	1	He	0.044	10.5	464	9.1	0.5	
Pb	208	165	1	He	0.018	9.5	759	2.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1936323	0.56	1674650	115.63	60	120	
Sc	45	1	He	371190	0.92	355173	104.51	60	120	
Sc	45	2	NoGas	9788867	0.78	8635903	113.35	60	120	
Rh	103	1	He	1511375	2.05	1470259	102.80	60	120	
In	115	1	He	505754	1.44	490642	103.08	60	120	
Tb	159	1	He	1459261	1.94	1434034	101.76	60	120	
Ho	165	1	He	1417782	0.53	1409606	100.58	60	120	
Bi	209	1	He	900682	0.73	906964	99.31	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235200/1-a
Data File Name	060_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:18:49-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.084	70.6	114877	0.7	8	
Be	9	45	2	NoGas	0.006	61.8	85	27.2	1	
B	11	45	2	NoGas	9.358	2.8	39064	3.0	20	
Na	23	45	1	He	57.672	2.1	72134	1.6	1000	
Mg	24	45	1	He	67.791	4.1	37098	4.4	1000	
Al	27	45	1	He	2.541	18.0	791	12.6	50	
K	39	45	1	He	27.298	8.4	35279	1.9	1000	
Ca	44	45	1	He	217.988	3.1	4100	3.4	1000	
Ti	47	45	1	He	0.037	115.9	6	91.6	20	
V	51	45	1	He	0.075	64.9	809	23.8	2	
Cr	52	45	1	He	0.227	21.6	4702	4.5	2	
Mn	55	45	1	He	12.391	0.7	31265	0.7	2	Blank High
Fe	56	45	1	He	12.496	1.8	47360	1.8	50	
Co	59	45	1	He	0.002	152.2	88	20.9	1	
Ni	60	45	1	He	0.180	3.9	618	2.4	2	
Cu	63	45	1	He	1.076	3.2	9130	2.6	2	
Zn	66	45	1	He	5.340	5.2	4596	4.9	20	
As	75	115	1	He	-0.077	-7.9	91	3.3	2	
Se	78	115	1	He	-0.233	-69.5	19	24.2	2	
Sr	88	103	1	He	0.494	1.8	1523	1.5	10	
Mo	95	103	1	He	0.035	28.0	110	21.9	2	
Ag	107	103	1	He	0.003	91.3	44	41.3	0.2	
Cd	111	115	1	He	0.008	30.8	8	27.7	0.2	
Sn	118	115	1	He	-2.912	-5.1	1715	15.6	10	
Sb	123	115	1	He	0.053	37.9	147	27.9	2	
Ba	137	115	1	He	0.838	5.8	682	5.2	5	
W	182	159	1	He	0.089	20.0	1948	4.6	10	
Tl	205	165	1	He	0.010	19.3	132	11.9	0.5	
Pb	208	165	1	He	0.065	7.6	1364	4.4	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1991491	1.02	1674650	118.92	60	120	
Sc	45	1	He	377569	0.52	355173	106.31	60	120	
Sc	45	2	NoGas	10015082	0.60	8635903	115.97	60	120	
Rh	103	1	He	1533706	0.08	1470259	104.32	60	120	
In	115	1	He	517658	0.61	490642	105.51	60	120	
Tb	159	1	He	1479315	0.93	1434034	103.16	60	120	
Ho	165	1	He	1408368	1.47	1409606	99.91	60	120	
Bi	209	1	He	929331	0.69	906964	102.47	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235200/25-a
Data File Name	061_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:22:56-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	104.366	104.366	2.805	2414943	1.52	100	104.4	84.5	115.4	
Be	9	2	NoGas	1046.676	1046.676	1.657	6185587	0.52	1000	104.7	84.5	115.4	
B	11	2	NoGas	108.259	108.259	1.842	390282	0.53	100	108.3	84.5	115.4	
Na	23	1	He	9621.136	9621.136	0.952	9714243	0.74	10000	96.2	84.5	115.4	
Mg	24	1	He	9760.741	9760.741	2.000	5300413	1.70	10000	97.6	84.5	115.4	
Al	27	1	He	9834.335	9834.335	1.676	2221426	1.32	10000	98.3	84.5	115.4	
K	39	1	He	9553.122	9553.122	1.384	3108623	1.15	10000	95.5	84.5	115.4	
Ca	44	1	He	10969.906	10969.906	0.991	192330	0.73	10000	109.7	84.5	115.4	
Ti	47	1	He	92.025	92.025	4.506	10910	4.47	100	92.0	84.5	115.4	
V	51	1	He	981.235	981.235	3.467	3882862	3.19	1000	98.1	84.5	115.4	
Cr	52	1	He	934.485	934.485	4.122	4398263	3.91	1000	93.4	84.5	115.4	
Mn	55	1	He	989.912	989.912	3.312	2465272	2.98	1000	99.0	84.5	115.4	
Fe	56	1	He	9575.483	9575.483	2.179	34539444	1.88	10000	95.8	84.5	115.4	
Co	59	1	He	948.737	948.737	2.512	7295564	2.21	1000	94.9	84.5	115.4	
Ni	60	1	He	940.808	940.808	2.801	1969277	2.53	1000	94.1	84.5	115.4	
Cu	63	1	He	927.674	927.674	2.152	5361852	1.87	1000	92.8	84.5	115.4	
Zn	66	1	He	978.368	978.368	1.542	737863	1.22	1000	97.8	84.5	115.4	
As	75	1	He	976.536	976.536	2.052	486134	1.07	1000	97.7	84.5	115.4	
Se	78	1	He	973.132	973.132	1.980	26654	0.98	1000	97.3	84.5	115.4	
Sr	88	1	He	914.872	914.872	2.262	2354428	1.39	1000	91.5	84.5	115.4	
Mo	95	1	He	95.250	95.250	2.272	226947	1.52	100	95.2	84.5	115.4	
Ag	107	1	He	96.677	96.677	1.626	706100	0.84	100	96.7	84.5	115.4	
Cd	111	1	He	977.805	977.805	1.944	860197	1.26	1000	97.8	84.5	115.4	
Sn	118	1	He	974.855	974.855	1.671	1743465	0.62	1000	97.5	84.5	115.4	
Sb	123	1	He	95.905	95.905	2.671	189799	1.64	100	95.9	84.5	115.4	
Ba	137	1	He	952.452	952.452	2.618	727918	1.59	1000	95.2	84.5	115.4	
W	182	1	He	95.634	95.634	3.054	531377	2.87	100	95.6	84.5	115.4	
Tl	205	1	He	239.241	239.241	0.908	2265269	0.59	250	95.7	84.5	115.4	
Pb	208	1	He	949.852	949.852	0.858	12207737	0.61	1000	95.0	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2000073	1.42	1674650	119.43	60	120	
Sc	45	1	He	379234	0.36	355173	106.77	60	120	
Sc	45	2	NoGas	9949901	1.79	8635903	115.22	60	120	
Rh	103	1	He	1513274	1.16	1470259	102.93	60	120	
In	115	1	He	500793	1.06	490642	102.07	60	120	
Tb	159	1	He	1491343	0.71	1434034	104.00	60	120	
Ho	165	1	He	1393447	0.33	1409606	98.85	60	120	
Bi	209	1	He	898896	1.10	906964	99.11	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-a
Data File Name	062SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:26:47-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.558	1.558	4.54	146116	0.00	10000	
Be	9	45	2	NoGas	0.142	0.142	10.63	885	0.02	2000	
B	11	45	2	NoGas	18.493	18.493	1.49	71006	0.03	300	
Na	23	45	1	He	5052.781	5052.781	2.20	5074517	0.10	500000	
Mg	24	45	1	He	12237.215	12237.215	2.35	6601108	0.19	500000	
Al	27	45	1	He	23.454	23.454	4.02	5483	0.43	200000	
K	39	45	1	He	2091.791	2091.791	1.33	696862	0.30	500000	
Ca	44	45	1	He	65738.934	65738.934	1.74	1143451	5.75	500000	
Ti	47	45	1	He	0.198	0.198	21.53	24	0.81	2500	
V	51	45	1	He	0.462	0.462	13.09	2332	0.02	10000	
Cr	52	45	1	He	0.354	0.354	11.25	5283	0.01	10000	
Mn	55	45	1	He	19.357	19.357	1.44	48426	0.04	10000	
Fe	56	45	1	He	22.266	22.266	2.73	82276	0.03	200000	
Co	59	45	1	He	0.455	0.455	4.24	3555	0.01	5000	
Ni	60	45	1	He	2.098	2.098	2.27	4604	0.05	10000	
Cu	63	45	1	He	1.053	1.053	3.23	8977	0.01	10000	
Zn	66	45	1	He	2.599	2.599	3.98	2535	0.10	10000	
As	75	115	1	He	0.633	0.633	2.43	443	0.14	10000	
Se	78	115	1	He	0.595	0.595	34.17	41	1.46	10000	
Sr	88	103	1	He	242.438	242.438	2.74	616565	0.04	10000	
Mo	95	103	1	He	0.608	0.608	2.02	1455	0.04	2000	
Ag	107	103	1	He	0.024	0.024	30.06	199	0.01	300	
Cd	111	115	1	He	0.264	0.264	11.57	234	0.11	4000	
Sn	118	115	1	He	-0.647	-0.647	-108.74	5712	-0.01	2000	
Sb	123	115	1	He	0.371	0.371	9.50	772	0.05	200	
Ba	137	115	1	He	32.021	32.021	3.24	24559	0.13	10000	
W	182	159	1	He	0.576	0.576	13.61	4627	0.01	2500	
Tl	205	165	1	He	0.183	0.183	15.94	1817	0.01	2000	
Pb	208	165	1	He	0.259	0.259	14.25	3940	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2021987	3.14	1674650	120.74	60	120	ISTD warning
Sc	45	1	He	376755	0.89	355173	106.08	60	120	
Sc	45	2	NoGas	9912511	0.75	8635903	114.78	60	120	
Rh	103	1	He	1495229	1.51	1470259	101.70	60	120	
In	115	1	He	502122	0.41	490642	102.34	60	120	
Tb	159	1	He	1479327	0.82	1434034	103.16	60	120	
Ho	165	1	He	1428238	1.86	1409606	101.32	60	120	
Bi	209	1	He	895007	1.01	906964	98.68	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66152-e-1-a@5
Data File Name	063SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:30:54-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.362	0.362	9.25	119148	0.00	10000	
Be	9	45	2	NoGas	0.061	0.061	12.70	404	0.02	2000	
B	11	45	2	NoGas	6.754	6.754	2.80	29276	0.02	300	
Na	23	45	1	He	976.924	976.924	2.25	992418	0.10	500000	
Mg	24	45	1	He	2477.847	2477.847	2.58	1336660	0.19	500000	
Al	27	45	1	He	4.994	4.994	11.11	1339	0.37	200000	
K	39	45	1	He	427.646	427.646	1.50	163479	0.26	500000	
Ca	44	45	1	He	13209.330	13209.330	2.07	229948	5.74	500000	
Ti	47	45	1	He	0.056	0.056	27.83	8	0.72	2500	
V	51	45	1	He	0.122	0.122	2.44	993	0.01	10000	
Cr	52	45	1	He	0.071	0.071	45.73	3962	0.00	10000	
Mn	55	45	1	He	3.729	3.729	4.96	9765	0.04	10000	
Fe	56	45	1	He	3.953	3.953	4.31	16640	0.02	200000	
Co	59	45	1	He	0.103	0.103	8.74	861	0.01	5000	
Ni	60	45	1	He	0.405	0.405	2.51	1084	0.04	10000	
Cu	63	45	1	He	0.201	0.201	14.47	4085	0.00	10000	
Zn	66	45	1	He	0.738	0.738	9.84	1140	0.06	10000	
As	75	115	1	He	0.062	0.062	16.59	159	0.04	10000	
Se	78	115	1	He	0.079	0.079	122.95	27	0.30	10000	
Sr	88	103	1	He	48.737	48.737	1.14	123645	0.04	10000	
Mo	95	103	1	He	0.112	0.112	11.37	286	0.04	2000	
Ag	107	103	1	He	0.002	0.002	41.24	40	0.01	300	
Cd	111	115	1	He	0.066	0.066	14.48	60	0.11	4000	
Sn	118	115	1	He	-1.189	-1.189	-10.39	4786	-0.02	2000	
Sb	123	115	1	He	0.090	0.090	35.41	218	0.04	200	
Ba	137	115	1	He	6.579	6.579	1.83	5109	0.13	10000	
W	182	159	1	He	0.070	0.070	39.19	1811	0.00	2500	
Tl	205	165	1	He	0.037	0.037	2.18	391	0.01	2000	
Pb	208	165	1	He	0.044	0.044	12.12	1093	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1944999	2.13	1674650	116.14	60	120	
Sc	45	1	He	376690	1.12	355173	106.06	60	120	
Sc	45	2	NoGas	9856830	0.28	8635903	114.14	60	120	
Rh	103	1	He	1488955	0.39	1470259	101.27	60	120	
In	115	1	He	506871	0.55	490642	103.31	60	120	
Tb	159	1	He	1451564	2.10	1434034	101.22	60	120	
Ho	165	1	He	1410282	2.40	1409606	100.05	60	120	
Bi	209	1	He	899042	0.30	906964	99.13	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66152-e-1-a
Data File Name	064SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:35:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	108.917	108.917	1.64	2523246	0.00	10000	
Be	9	45	2	NoGas	1088.013	1088.013	0.24	6449894	0.02	2000	
B	11	45	2	NoGas	122.625	122.625	1.79	442684	0.03	300	
Na	23	45	1	He	15316.690	15316.690	2.75	15211741	0.10	500000	
Mg	24	45	1	He	22025.814	22025.814	2.30	11772498	0.19	500000	
Al	27	45	1	He	10614.995	10614.995	3.67	2359597	0.45	200000	
K	39	45	1	He	12274.007	12274.007	2.12	3923467	0.31	500000	
Ca	44	45	1	He	75755.695	75755.695	3.00	1305314	5.80	500000	
Ti	47	45	1	He	102.970	102.970	1.35	12016	0.86	2500	
V	51	45	1	He	1056.819	1056.819	3.50	4115570	0.03	10000	
Cr	52	45	1	He	1001.509	1001.509	3.45	4639087	0.02	10000	
Mn	55	45	1	He	1085.278	1085.278	3.45	2659883	0.04	10000	
Fe	56	45	1	He	10144.580	10144.580	3.04	36016842	0.03	200000	
Co	59	45	1	He	1003.987	1003.987	1.64	7599614	0.01	5000	
Ni	60	45	1	He	1007.101	1007.101	2.92	2074922	0.05	10000	
Cu	63	45	1	He	974.926	974.926	2.98	5545452	0.02	10000	
Zn	66	45	1	He	1028.135	1028.135	2.82	763104	0.13	10000	
As	75	115	1	He	1075.867	1075.867	0.61	520529	0.21	10000	
Se	78	115	1	He	1047.919	1047.919	1.08	27895	3.76	10000	
Sr	88	103	1	He	1246.327	1246.327	0.85	3111699	0.04	10000	
Mo	95	103	1	He	103.772	103.772	2.33	239859	0.04	2000	
Ag	107	103	1	He	95.376	95.376	1.14	675737	0.01	300	
Cd	111	115	1	He	1039.080	1039.080	0.83	888409	0.12	4000	
Sn	118	115	1	He	1071.440	1071.440	0.84	1861651	0.06	2000	
Sb	123	115	1	He	102.548	102.548	1.13	197254	0.05	200	
Ba	137	115	1	He	1068.291	1068.291	0.84	793551	0.13	10000	
W	182	159	1	He	100.890	100.890	2.73	555884	0.02	2500	
Tl	205	165	1	He	248.175	248.175	1.90	2394977	0.01	2000	
Pb	208	165	1	He	977.437	977.437	2.24	12802802	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1956250	1.05	1674650	116.82	60	120	
Sc	45	1	He	373336	1.92	355173	105.11	60	120	
Sc	45	2	NoGas	9979067	0.77	8635903	115.55	60	120	
Rh	103	1	He	1467924	1.22	1470259	99.84	60	120	
In	115	1	He	486656	0.28	490642	99.19	60	120	
Tb	159	1	He	1479100	0.46	1434034	103.14	60	120	
Ho	165	1	He	1420553	2.22	1409606	100.78	60	120	
Bi	209	1	He	872300	1.43	906964	96.18	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-b ms
Data File Name	065SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:38:51-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	103.560	103.560	0.12	2444562	0.00	10000	
Be	9	45	2	NoGas	1034.840	1034.840	0.87	6235880	0.02	2000	
B	11	45	2	NoGas	116.391	116.391	0.52	427438	0.03	300	
Na	23	45	1	He	14990.431	14990.431	3.78	14989996	0.10	500000	
Mg	24	45	1	He	22261.125	22261.125	4.00	11978094	0.19	500000	
Al	27	45	1	He	10045.713	10045.713	4.26	2248478	0.45	200000	
K	39	45	1	He	11891.188	11891.188	2.76	3828275	0.31	500000	
Ca	44	45	1	He	78440.269	78440.269	5.09	1360784	5.76	500000	
Ti	47	45	1	He	100.930	100.930	2.65	11858	0.85	2500	
V	51	45	1	He	1009.002	1009.002	2.68	3957104	0.03	10000	
Cr	52	45	1	He	953.499	953.499	3.94	4447070	0.02	10000	
Mn	55	45	1	He	1016.756	1016.756	3.36	2509355	0.04	10000	
Fe	56	45	1	He	9692.074	9692.074	3.36	34645110	0.03	200000	
Co	59	45	1	He	943.856	943.856	3.12	7192843	0.01	5000	
Ni	60	45	1	He	955.764	955.764	2.91	1982658	0.05	10000	
Cu	63	45	1	He	935.583	935.583	3.15	5359013	0.02	10000	
Zn	66	45	1	He	977.813	977.813	3.58	730771	0.13	10000	
As	75	115	1	He	1021.828	1021.828	1.87	496946	0.21	10000	
Se	78	115	1	He	989.455	989.455	2.12	26475	3.74	10000	
Sr	88	103	1	He	1194.419	1194.419	0.57	3005519	0.04	10000	
Mo	95	103	1	He	99.866	99.866	2.14	232684	0.04	2000	
Ag	107	103	1	He	97.992	97.992	0.82	699770	0.01	300	
Cd	111	115	1	He	984.250	984.250	1.92	845850	0.12	4000	
Sn	118	115	1	He	1031.511	1031.511	3.72	1801756	0.06	2000	
Sb	123	115	1	He	100.676	100.676	2.15	194643	0.05	200	
Ba	137	115	1	He	1010.233	1010.233	1.88	754323	0.13	10000	
W	182	159	1	He	98.814	98.814	2.19	542685	0.02	2500	
Tl	205	165	1	He	231.197	231.197	1.29	2250262	0.01	2000	
Pb	208	165	1	He	914.111	914.111	1.09	12076545	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1978184	1.10	1674650	118.13	60	120	
Sc	45	1	He	375935	1.65	355173	105.85	60	120	
Sc	45	2	NoGas	10143997	0.68	8635903	117.46	60	120	
Rh	103	1	He	1479463	1.11	1470259	100.63	60	120	
In	115	1	He	489210	1.06	490642	99.71	60	120	
Tb	159	1	He	1473914	1.14	1434034	102.78	60	120	
Ho	165	1	He	1432305	0.60	1409606	101.61	60	120	
Bi	209	1	He	872244	0.71	906964	96.17	60	120	

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Sample Report

Sample Table

Sample Name	240-66152-e-1-c msd
Data File Name	066SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:42:43-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	104.215	104.215	3.26	2411529	0.00	10000	
Be	9	45	2	NoGas	1026.671	1026.671	2.17	6066932	0.02	2000	
B	11	45	2	NoGas	117.085	117.085	2.85	421615	0.03	300	
Na	23	45	1	He	14925.795	14925.795	0.62	14965555	0.10	500000	
Mg	24	45	1	He	22108.023	22108.023	2.75	11925649	0.19	500000	
Al	27	45	1	He	10005.981	10005.981	4.04	2244996	0.45	200000	
K	39	45	1	He	11825.203	11825.203	2.83	3816267	0.31	500000	
Ca	44	45	1	He	78986.313	78986.313	2.22	1373873	5.75	500000	
Ti	47	45	1	He	99.366	99.366	1.24	11704	0.85	2500	
V	51	45	1	He	1010.749	1010.749	3.21	3973162	0.03	10000	
Cr	52	45	1	He	959.985	959.985	3.51	4488123	0.02	10000	
Mn	55	45	1	He	1011.440	1011.440	3.75	2502094	0.04	10000	
Fe	56	45	1	He	9670.483	9670.483	3.62	34649111	0.03	200000	
Co	59	45	1	He	954.350	954.350	3.88	7289575	0.01	5000	
Ni	60	45	1	He	950.007	950.007	3.88	1975247	0.05	10000	
Cu	63	45	1	He	925.291	925.291	3.85	5312233	0.02	10000	
Zn	66	45	1	He	977.280	977.280	3.18	732142	0.13	10000	
As	75	115	1	He	1029.309	1029.309	0.97	499480	0.21	10000	
Se	78	115	1	He	996.169	996.169	1.63	26595	3.75	10000	
Sr	88	103	1	He	1212.773	1212.773	1.80	3011470	0.04	10000	
Mo	95	103	1	He	100.703	100.703	2.88	231504	0.04	2000	
Ag	107	103	1	He	99.081	99.081	0.99	698205	0.01	300	
Cd	111	115	1	He	988.755	988.755	1.46	847869	0.12	4000	
Sn	118	115	1	He	1024.093	1024.093	1.81	1784964	0.06	2000	
Sb	123	115	1	He	99.544	99.544	1.20	192040	0.05	200	
Ba	137	115	1	He	1009.630	1009.630	0.80	752174	0.13	10000	
W	182	159	1	He	97.986	97.986	2.54	539507	0.02	2500	
Tl	205	165	1	He	232.608	232.608	3.93	2240509	0.01	2000	
Pb	208	165	1	He	926.767	926.767	2.26	12119264	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1947349	0.97	1674650	116.28	60	120	
Sc	45	1	He	376812	1.42	355173	106.09	60	120	
Sc	45	2	NoGas	9948156	0.60	8635903	115.20	60	120	
Rh	103	1	He	1459928	0.53	1470259	99.30	60	120	
In	115	1	He	488094	0.87	490642	99.48	60	120	
Tb	159	1	He	1477713	0.53	1434034	103.05	60	120	
Ho	165	1	He	1418284	2.37	1409606	100.62	60	120	
Bi	209	1	He	871701	1.40	906964	96.11	60	120	

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Sample Report

Sample Table

Sample Name	240-66161-p-1-a
Data File Name	067SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:46:35-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	49.873	49.873	1.47	1164266	0.00	10000	
Be	9	45	2	NoGas	0.262	0.262	16.54	1530	0.02	2000	
B	11	45	2	NoGas	10485.184	10485.184	0.79	35777848	0.03	300	>LDR
Na	23	45	1	He	334716.760	334716.760	0.61	321441365	0.10	500000	
Mg	24	45	1	He	142219.693	142219.693	1.52	73555490	0.19	500000	
Al	27	45	1	He	82.862	82.862	1.07	18037	0.46	200000	
K	39	45	1	He	60983.970	60983.970	1.00	18765023	0.32	500000	
Ca	44	45	1	He	339566.199	339566.199	2.19	5661710	6.00	500000	
Ti	47	45	1	He	3.239	3.239	14.48	367	0.88	2500	
V	51	45	1	He	3.362	3.362	3.76	13163	0.03	10000	
Cr	52	45	1	He	8.373	8.373	1.22	40986	0.02	10000	
Mn	55	45	1	He	855.395	855.395	2.16	2029154	0.04	10000	
Fe	56	45	1	He	5499.481	5499.481	2.42	18894943	0.03	200000	
Co	59	45	1	He	1.823	1.823	2.49	13421	0.01	5000	
Ni	60	45	1	He	12.850	12.850	0.83	25850	0.05	10000	
Cu	63	45	1	He	77.168	77.168	2.04	427401	0.02	10000	
Zn	66	45	1	He	18.753	18.753	2.38	14023	0.13	10000	
As	75	115	1	He	4.644	4.644	1.05	2263	0.21	10000	
Se	78	115	1	He	1.753	1.753	24.88	67	2.61	10000	
Sr	88	103	1	He	3271.903	3271.903	1.56	7419192	0.04	10000	
Mo	95	103	1	He	2.796	2.796	0.72	5891	0.05	2000	
Ag	107	103	1	He	0.039	0.039	23.49	273	0.01	300	
Cd	111	115	1	He	0.368	0.368	23.40	302	0.12	4000	
Sn	118	115	1	He	1.106	1.106	72.05	8188	0.01	2000	
Sb	123	115	1	He	0.750	0.750	10.47	1412	0.05	200	
Ba	137	115	1	He	399.044	399.044	1.66	283122	0.14	10000	
W	182	159	1	He	7.774	7.774	1.49	41844	0.02	2500	
Tl	205	165	1	He	0.274	0.274	11.22	2571	0.01	2000	
Pb	208	165	1	He	11.964	11.964	1.24	150268	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1890991	1.12	1674650	112.92	60	120	
Sc	45	1	He	361220	0.55	355173	101.70	60	120	
Sc	45	2	NoGas	9550060	0.66	8635903	110.59	60	120	
Rh	103	1	He	1333235	0.99	1470259	90.68	60	120	
In	115	1	He	464833	0.47	490642	94.74	60	120	
Tb	159	1	He	1400982	2.74	1434034	97.70	60	120	
Ho	165	1	He	1357315	0.89	1409606	96.29	60	120	
Bi	209	1	He	776479	0.57	906964	85.61	60	120	

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Sample Report

Sample Table

Sample Name	240-66170-a-1-a
Data File Name	068SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:50:38-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	4.354	4.354	1.04	206506	0.00	10000	
Be	9	45	2	NoGas	0.115	0.115	8.99	719	0.02	2000	
B	11	45	2	NoGas	273.883	273.883	1.09	970222	0.03	300	
Na	23	45	1	He	25961.007	25961.007	1.89	26158756	0.10	500000	
Mg	24	45	1	He	9053.825	9053.825	2.40	4911107	0.18	500000	
Al	27	45	1	He	325.223	325.223	2.52	73596	0.44	200000	
K	39	45	1	He	3075.155	3075.155	0.77	1017760	0.30	500000	
Ca	44	45	1	He	28556.246	28556.246	1.78	499623	5.72	500000	
Ti	47	45	1	He	0.412	0.412	37.79	50	0.82	2500	
V	51	45	1	He	0.386	0.386	10.52	2043	0.02	10000	
Cr	52	45	1	He	0.745	0.745	6.40	7152	0.01	10000	
Mn	55	45	1	He	3.534	3.534	0.81	9337	0.04	10000	
Fe	56	45	1	He	76.749	76.749	2.51	279006	0.03	200000	
Co	59	45	1	He	0.245	0.245	3.73	1961	0.01	5000	
Ni	60	45	1	He	1.337	1.337	4.77	3038	0.04	10000	
Cu	63	45	1	He	223.061	223.061	2.51	1290045	0.02	10000	
Zn	66	45	1	He	42.132	42.132	3.82	32301	0.13	10000	
As	75	115	1	He	0.404	0.404	3.05	328	0.12	10000	
Se	78	115	1	He	0.563	0.563	12.29	40	1.41	10000	
Sr	88	103	1	He	208.952	208.952	0.94	512555	0.04	10000	
Mo	95	103	1	He	2.118	2.118	2.89	4832	0.04	2000	
Ag	107	103	1	He	0.718	0.718	6.57	5019	0.01	300	
Cd	111	115	1	He	0.222	0.222	6.80	196	0.11	4000	
Sn	118	115	1	He	0.229	0.229	33.41	7257	0.00	2000	
Sb	123	115	1	He	0.826	0.826	6.02	1672	0.05	200	
Ba	137	115	1	He	35.569	35.569	0.53	27211	0.13	10000	
W	182	159	1	He	0.848	0.848	4.48	5972	0.01	2500	
Tl	205	165	1	He	0.080	0.080	6.23	811	0.01	2000	
Pb	208	165	1	He	0.761	0.761	2.28	10428	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1977247	1.44	1674650	118.07	60	120	
Sc	45	1	He	378859	1.26	355173	106.67	60	120	
Sc	45	2	NoGas	9860351	0.82	8635903	114.18	60	120	
Rh	103	1	He	1441836	1.89	1470259	98.07	60	120	
In	115	1	He	500873	1.00	490642	102.09	60	120	
Tb	159	1	He	1442028	0.28	1434034	100.56	60	120	
Ho	165	1	He	1410809	0.24	1409606	100.09	60	120	
Bi	209	1	He	866128	0.57	906964	95.50	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-21-a
Data File Name	069SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:54:45-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.701	6.701	0.85	258786	0.00	10000	
Be	9	45	2	NoGas	0.081	0.081	5.81	526	0.02	2000	
B	11	45	2	NoGas	581.985	581.985	1.85	2063131	0.03	300	>LDR
Na	23	45	1	He	50518.051	50518.051	1.31	49691228	0.10	500000	
Mg	24	45	1	He	24675.876	24675.876	2.73	13067991	0.19	500000	
Al	27	45	1	He	24.441	24.441	1.89	5601	0.44	200000	
K	39	45	1	He	3424.758	3424.758	1.83	1103606	0.31	500000	
Ca	44	45	1	He	49767.838	49767.838	2.50	849944	5.86	500000	
Ti	47	45	1	He	0.347	0.347	54.09	41	0.84	2500	
V	51	45	1	He	0.185	0.185	61.16	1217	0.02	10000	
Cr	52	45	1	He	0.160	0.160	26.21	4297	0.00	10000	
Mn	55	45	1	He	28.286	28.286	2.19	69226	0.04	10000	
Fe	56	45	1	He	1176.619	1176.619	2.59	4141445	0.03	200000	
Co	59	45	1	He	0.220	0.220	13.71	1727	0.01	5000	
Ni	60	45	1	He	0.224	0.224	3.99	696	0.03	10000	
Cu	63	45	1	He	0.781	0.781	4.49	7280	0.01	10000	
Zn	66	45	1	He	3.132	3.132	4.43	2879	0.11	10000	
As	75	115	1	He	1.225	1.225	5.37	716	0.17	10000	
Se	78	115	1	He	0.154	0.154	208.35	28	0.55	10000	
Sr	88	103	1	He	1141.827	1141.827	3.26	2772934	0.04	10000	
Mo	95	103	1	He	4.141	4.141	2.65	9334	0.04	2000	
Ag	107	103	1	He	0.007	0.007	28.10	71	0.01	300	
Cd	111	115	1	He	0.100	0.100	8.13	87	0.12	4000	
Sn	118	115	1	He	-3.025	-3.025	-1.69	1419	-0.21	2000	
Sb	123	115	1	He	0.101	0.101	12.61	229	0.04	200	
Ba	137	115	1	He	606.763	606.763	0.62	451276	0.13	10000	
W	182	159	1	He	0.095	0.095	27.71	1874	0.01	2500	
Tl	205	165	1	He	0.031	0.031	18.55	339	0.01	2000	
Pb	208	165	1	He	0.191	0.191	2.43	2968	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1961591	1.32	1674650	117.13	60	120	
Sc	45	1	He	369922	1.15	355173	104.15	60	120	
Sc	45	2	NoGas	9896496	0.05	8635903	114.60	60	120	
Rh	103	1	He	1428195	1.22	1470259	97.14	60	120	
In	115	1	He	487251	0.63	490642	99.31	60	120	
Tb	159	1	He	1396122	0.74	1434034	97.36	60	120	
Ho	165	1	He	1392574	0.95	1409606	98.79	60	120	
Bi	209	1	He	839263	0.63	906964	92.54	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	070_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T14:58:48-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.904	1.168	1351511	0.74	50	107.8	89.5	110.5	
Be	9	45	2	NoGas	50.029	0.360	307035	0.63	50	100.1	89.5	110.5	
B	11	45	2	NoGas	129.309	0.750	482911	0.52	50	258.6	89.5	110.5	CCV Failed
Na	23	45	1	He	25606.439	2.405	25165774	1.15	25000	102.4	89.5	110.5	
Mg	24	45	1	He	25527.267	2.900	13504864	1.86	25000	102.1	89.5	110.5	
Al	27	45	1	He	250.065	3.808	55236	2.47	250	100.0	89.5	110.5	
K	39	45	1	He	25419.951	2.064	8016064	0.71	25000	101.7	89.5	110.5	
Ca	44	45	1	He	25190.958	2.152	429924	0.87	25000	100.8	89.5	110.5	
Ti	47	45	1	He	50.614	4.760	5845	3.49	50	101.2	89.5	110.5	
V	51	45	1	He	50.331	1.264	194549	0.52	50	100.7	89.5	110.5	
Cr	52	45	1	He	50.004	2.958	232663	1.60	50	100.0	89.5	110.5	
Mn	55	45	1	He	250.353	2.998	607833	1.69	250	100.1	89.5	110.5	
Fe	56	45	1	He	12466.020	3.059	43806919	1.83	12500	99.7	89.5	110.5	
Co	59	45	1	He	50.233	2.839	376405	1.53	50	100.5	89.5	110.5	
Ni	60	45	1	He	50.036	2.605	102266	1.35	50	100.1	89.5	110.5	
Cu	63	45	1	He	49.981	3.095	284165	1.81	50	100.0	89.5	110.5	
Zn	66	45	1	He	50.365	4.709	37549	3.61	50	100.7	89.5	110.5	
As	75	115	1	He	51.523	1.263	25067	1.37	50	103.0	89.5	110.5	
Se	78	115	1	He	51.129	2.920	1385	2.41	50	102.3	89.5	110.5	
Sr	88	103	1	He	51.056	0.642	125156	1.54	50	102.1	89.5	110.5	
Mo	95	103	1	He	51.303	0.555	116248	1.21	50	102.6	89.5	110.5	
Ag	107	103	1	He	51.118	0.422	355035	1.23	50	102.2	89.5	110.5	
Cd	111	115	1	He	51.196	0.866	43811	0.94	50	102.4	89.5	110.5	
Sn	118	115	1	He	48.834	2.873	91287	2.93	50	97.7	89.5	110.5	
Sb	123	115	1	He	51.133	1.581	98459	1.64	50	102.3	89.5	110.5	
Ba	137	115	1	He	50.364	1.650	37464	2.06	50	100.7	89.5	110.5	
W	182	159	1	He	51.692	6.056	272320	3.16	50	103.4	89.5	110.5	
Tl	205	165	1	He	50.126	1.281	476808	1.86	50	100.3	89.5	110.5	
Pb	208	165	1	He	50.062	0.814	646790	1.29	50	100.1	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2052085	1.13	1674650	122.54	60	120	ISTD warning
Sc	45	1	He	369547	1.36	355173	104.05	60	120	
Sc	45	2	NoGas	10329269	0.67	8635903	119.61	60	120	
Rh	103	1	He	1438799	0.91	1470259	97.86	60	120	
In	115	1	He	487102	1.12	490642	99.28	60	120	
Tb	159	1	He	1412282	2.97	1434034	98.48	60	120	
Ho	165	1	He	1399706	1.10	1409606	99.30	60	120	
Bi	209	1	He	856827	0.54	906964	94.47	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	071_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:02:52-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.129	87.3	117753	1.1	8	
Be	9	45	2	NoGas	0.087	33.5	574	31.5	1	
B	11	45	2	NoGas	52.219	2.4	195517	1.5	20	CCB High
Na	23	45	1	He	22.976	5.8	37495	3.3	1000	
Mg	24	45	1	He	3.496	28.4	2348	23.4	1000	
Al	27	45	1	He	0.005	580.5	222	3.1	50	
K	39	45	1	He	14.874	20.4	31447	2.8	1000	
Ca	44	45	1	He	5.300	105.7	395	25.2	1000	
Ti	47	45	1	He	0.046	61.0	7	50.0	20	
V	51	45	1	He	0.195	13.9	1288	8.0	2	
Cr	52	45	1	He	0.026	171.4	3777	5.2	2	
Mn	55	45	1	He	0.077	16.9	740	4.4	2	
Fe	56	45	1	He	3.534	32.9	15265	27.9	50	
Co	59	45	1	He	0.031	27.4	311	20.5	1	
Ni	60	45	1	He	-0.015	-215.7	211	32.8	2	
Cu	63	45	1	He	0.002	1206.3	2970	6.2	2	
Zn	66	45	1	He	-0.011	-608.0	584	8.8	20	
As	75	115	1	He	-0.014	-86.4	122	5.0	2	
Se	78	115	1	He	0.225	24.9	31	4.9	2	
Sr	88	103	1	He	0.127	17.0	568	11.2	10	
Mo	95	103	1	He	0.107	14.8	284	15.1	2	
Ag	107	103	1	He	0.007	35.6	79	25.8	0.2	
Cd	111	115	1	He	0.060	10.3	55	9.8	0.2	
Sn	118	115	1	He	0.627	5.7	8136	1.2	10	
Sb	123	115	1	He	0.149	7.8	339	6.5	2	
Ba	137	115	1	He	0.151	20.6	138	18.2	5	
W	182	159	1	He	0.317	19.8	3171	11.3	10	
Tl	205	165	1	He	0.073	30.3	746	27.5	0.5	
Pb	208	165	1	He	0.039	15.6	1031	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2037158	1.11	1674650	121.65	60	120	ISTD warning
Sc	45	1	He	379488	0.41	355173	106.85	60	120	
Sc	45	2	NoGas	10178434	1.53	8635903	117.86	60	120	
Rh	103	1	He	1536714	1.51	1470259	104.52	60	120	
In	115	1	He	511588	0.56	490642	104.27	60	120	
Tb	159	1	He	1463233	1.25	1434034	102.04	60	120	
Ho	165	1	He	1421226	1.01	1409606	100.82	60	120	
Bi	209	1	He	906217	0.57	906964	99.92	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-22-a
Data File Name	072SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:07:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.178	12.178	0.47	392733	0.00	10000	
Be	9	45	2	NoGas	0.126	0.126	17.06	819	0.02	2000	
B	11	45	2	NoGas	173.292	173.292	0.82	640584	0.03	300	
Na	23	45	1	He	28022.370	28022.370	1.92	28595678	0.10	500000	
Mg	24	45	1	He	33665.383	33665.383	2.53	18493787	0.18	500000	
Al	27	45	1	He	1512.843	1512.843	2.02	345920	0.44	200000	
K	39	45	1	He	2418.372	2418.372	1.00	816280	0.30	500000	
Ca	44	45	1	He	161169.515	161169.515	2.56	2854568	5.65	500000	
Ti	47	45	1	He	38.796	38.796	4.18	4654	0.83	2500	
V	51	45	1	He	3.116	3.116	4.34	12999	0.02	10000	
Cr	52	45	1	He	7.755	7.755	2.76	40591	0.02	10000	
Mn	55	45	1	He	87.125	87.125	2.35	220030	0.04	10000	
Fe	56	45	1	He	2607.140	2607.140	1.47	9516352	0.03	200000	
Co	59	45	1	He	1.458	1.458	1.51	11418	0.01	5000	
Ni	60	45	1	He	4.992	4.992	5.66	10814	0.05	10000	
Cu	63	45	1	He	2.066	2.066	3.46	15061	0.01	10000	
Zn	66	45	1	He	6.867	6.867	1.38	5834	0.12	10000	
As	75	115	1	He	16.020	16.020	3.46	8111	0.20	10000	
Se	78	115	1	He	0.529	0.529	73.61	39	1.36	10000	
Sr	88	103	1	He	47809.595	47809.595	1.08	119807462	0.04	10000	>LDR
Mo	95	103	1	He	89.743	89.743	2.34	208233	0.04	2000	
Ag	107	103	1	He	0.034	0.034	8.34	263	0.01	300	
Cd	111	115	1	He	0.055	0.055	27.69	49	0.11	4000	
Sn	118	115	1	He	-3.170	-3.170	-3.75	1200	-0.26	2000	
Sb	123	115	1	He	0.222	0.222	1.74	476	0.05	200	
Ba	137	115	1	He	148.639	148.639	2.08	113785	0.13	10000	
W	182	159	1	He	0.146	0.146	34.09	2211	0.01	2500	
Tl	205	165	1	He	0.080	0.080	3.87	810	0.01	2000	
Pb	208	165	1	He	1.371	1.371	1.65	18313	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2036048	0.33	1674650	121.58	60	120	ISTD warning
Sc	45	1	He	383679	0.64	355173	108.03	60	120	
Sc	45	2	NoGas	10255161	0.42	8635903	118.75	60	120	
Rh	103	1	He	1473452	0.29	1470259	100.22	60	120	
In	115	1	He	501513	0.90	490642	102.22	60	120	
Tb	159	1	He	1445067	1.64	1434034	100.77	60	120	
Ho	165	1	He	1407521	2.45	1409606	99.85	60	120	
Bi	209	1	He	868529	2.29	906964	95.76	60	120	

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Sample Report

Sample Table

Sample Name	240-66143-f-1-b
Data File Name	073SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:11:04-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.579	0.579	14.37	127439	0.00	10000	
Be	9	45	2	NoGas	0.064	0.064	29.53	433	0.01	2000	
B	11	45	2	NoGas	36.735	36.735	1.30	138722	0.03	300	
Na	23	45	1	He	290.992	290.992	1.19	312781	0.09	500000	
Mg	24	45	1	He	154.747	154.747	1.14	85878	0.18	500000	
Al	27	45	1	He	348.734	348.734	2.84	80288	0.43	200000	
K	39	45	1	He	106.484	106.484	4.50	61988	0.17	500000	
Ca	44	45	1	He	928.990	928.990	2.76	16839	5.52	500000	
Ti	47	45	1	He	13.916	13.916	3.97	1678	0.83	2500	
V	51	45	1	He	1.261	1.261	3.36	5600	0.02	10000	
Cr	52	45	1	He	1.478	1.478	2.54	10778	0.01	10000	
Mn	55	45	1	He	62.233	62.233	1.34	158078	0.04	10000	
Fe	56	45	1	He	936.175	936.175	1.07	3435141	0.03	200000	
Co	59	45	1	He	0.287	0.287	4.36	2318	0.01	5000	
Ni	60	45	1	He	1.320	1.320	9.75	3056	0.04	10000	
Cu	63	45	1	He	3.909	3.909	1.47	25958	0.02	10000	
Zn	66	45	1	He	7.729	7.729	6.01	6524	0.12	10000	
As	75	115	1	He	0.629	0.629	3.62	452	0.14	10000	
Se	78	115	1	He	0.370	0.370	48.02	35	1.04	10000	
Sr	88	103	1	He	9.732	9.732	28.57	25535	0.04	10000	
Mo	95	103	1	He	0.440	0.440	9.59	1083	0.04	2000	
Ag	107	103	1	He	0.011	0.011	32.12	103	0.01	300	
Cd	111	115	1	He	0.153	0.153	9.07	139	0.11	4000	
Sn	118	115	1	He	-2.780	-2.780	-2.97	1948	-0.14	2000	
Sb	123	115	1	He	0.180	0.180	14.59	403	0.04	200	
Ba	137	115	1	He	5.801	5.801	3.92	4580	0.13	10000	
W	182	159	1	He	1.094	1.094	8.50	7398	0.01	2500	
Tl	205	165	1	He	0.024	0.024	20.93	270	0.01	2000	
Pb	208	165	1	He	5.290	5.290	2.29	69461	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2059357	0.65	1674650	122.97	60	120	ISTD warning
Sc	45	1	He	385524	0.85	355173	108.55	60	120	
Sc	45	2	NoGas	10139439	0.57	8635903	117.41	60	120	
Rh	103	1	He	1530541	0.87	1470259	104.10	60	120	
In	115	1	He	514993	0.51	490642	104.96	60	120	
Tb	159	1	He	1465389	2.85	1434034	102.19	60	120	
Ho	165	1	He	1413419	2.25	1409606	100.27	60	120	
Bi	209	1	He	917279	2.20	906964	101.14	60	120	

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Sample Report

Sample Table

Sample Name	240-66143-f-2-b
Data File Name	074SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:15:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.080	0.080	60.91	116708	0.00	10000	
Be	9	45	2	NoGas	0.039	0.039	9.39	281	0.01	2000	
B	11	45	2	NoGas	29.019	29.019	0.98	111227	0.03	300	
Na	23	45	1	He	17.397	17.397	3.95	31814	0.05	500000	
Mg	24	45	1	He	1.558	1.558	25.02	1293	0.12	500000	
Al	27	45	1	He	1.972	1.972	4.87	666	0.30	200000	
K	39	45	1	He	11.246	11.246	42.10	30219	0.04	500000	
Ca	44	45	1	He	2.298	2.298	160.89	342	0.67	500000	
Ti	47	45	1	He	0.093	0.093	113.85	12	0.76	2500	
V	51	45	1	He	0.076	0.076	135.84	817	0.01	10000	
Cr	52	45	1	He	-0.049	-0.049	-74.25	3417	0.00	10000	
Mn	55	45	1	He	5.156	5.156	2.69	13371	0.04	10000	
Fe	56	45	1	He	5.223	5.223	1.04	21314	0.02	200000	
Co	59	45	1	He	0.013	0.013	15.16	176	0.01	5000	
Ni	60	45	1	He	0.124	0.124	17.77	502	0.02	10000	
Cu	63	45	1	He	1.783	1.783	0.24	13243	0.01	10000	
Zn	66	45	1	He	1.031	1.031	1.46	1368	0.08	10000	
As	75	115	1	He	-0.036	-0.036	-50.13	111	-0.03	10000	
Se	78	115	1	He	0.182	0.182	61.36	30	0.61	10000	
Sr	88	103	1	He	1.132	1.132	5.90	3141	0.04	10000	
Mo	95	103	1	He	0.048	0.048	16.00	139	0.03	2000	
Ag	107	103	1	He	0.002	0.002	148.45	42	0.01	300	
Cd	111	115	1	He	0.019	0.019	14.99	18	0.11	4000	
Sn	118	115	1	He	-3.060	-3.060	-4.84	1426	-0.21	2000	
Sb	123	115	1	He	0.049	0.049	41.31	136	0.04	200	
Ba	137	115	1	He	0.037	0.037	28.96	49	0.08	10000	
W	182	159	1	He	0.036	0.036	174.01	1611	0.00	2500	
Tl	205	165	1	He	0.008	0.008	38.75	119	0.01	2000	
Pb	208	165	1	He	0.024	0.024	13.18	832	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2034046	1.49	1674650	121.46	60	120	ISTD warning
Sc	45	1	He	378859	1.00	355173	106.67	60	120	
Sc	45	2	NoGas	10181664	0.50	8635903	117.90	60	120	
Rh	103	1	He	1512371	0.48	1470259	102.86	60	120	
In	115	1	He	511961	0.54	490642	104.35	60	120	
Tb	159	1	He	1435135	0.81	1434034	100.08	60	120	
Ho	165	1	He	1409200	1.70	1409606	99.97	60	120	
Bi	209	1	He	912656	0.25	906964	100.63	60	120	

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Sample Report

Sample Table

Sample Name	490-105694-d-2-b
Data File Name	075SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:19:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	17.167	17.167	1.17	516668	0.00	10000	
Be	9	45	2	NoGas	0.685	0.685	9.35	4308	0.02	2000	
B	11	45	2	NoGas	56.801	56.801	0.30	218230	0.03	300	
Na	23	45	1	He	124556.678	124556.678	1.35	124631469	0.10	500000	
Mg	24	45	1	He	27873.140	27873.140	1.78	15019890	0.19	500000	
Al	27	45	1	He	12305.849	12305.849	4.06	2758437	0.45	200000	
K	39	45	1	He	4422.158	4422.158	2.03	1442206	0.31	500000	
Ca	44	45	1	He	143030.138	143030.138	0.79	2484920	5.76	500000	
Ti	47	45	1	He	142.946	142.946	4.58	16816	0.85	2500	
V	51	45	1	He	21.649	21.649	5.57	85516	0.03	10000	
Cr	52	45	1	He	33.464	33.464	3.60	159798	0.02	10000	
Mn	55	45	1	He	3274.135	3274.135	1.93	8090747	0.04	10000	
Fe	56	45	1	He	35640.115	35640.115	3.06	127570644	0.03	200000	
Co	59	45	1	He	7.468	7.468	3.24	57066	0.01	5000	
Ni	60	45	1	He	19.077	19.077	2.54	39865	0.05	10000	
Cu	63	45	1	He	17.814	17.814	2.15	105052	0.02	10000	
Zn	66	45	1	He	69.847	69.847	2.41	52820	0.13	10000	
As	75	115	1	He	24.101	24.101	1.18	11568	0.21	10000	
Se	78	115	1	He	2.132	2.132	7.20	79	2.70	10000	
Sr	88	103	1	He	531.981	531.981	2.25	1268017	0.04	10000	
Mo	95	103	1	He	8.755	8.755	3.15	19342	0.05	2000	
Ag	107	103	1	He	0.036	0.036	31.37	267	0.01	300	
Cd	111	115	1	He	1.211	1.211	3.67	1018	0.12	4000	
Sn	118	115	1	He	1.249	1.249	31.20	8662	0.01	2000	
Sb	123	115	1	He	0.514	0.514	5.75	1004	0.05	200	
Ba	137	115	1	He	254.848	254.848	1.04	185896	0.14	10000	
W	182	159	1	He	0.676	0.676	3.35	4990	0.01	2500	
Tl	205	165	1	He	0.177	0.177	3.92	1733	0.01	2000	
Pb	208	165	1	He	82.442	82.442	0.38	1070721	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2018321	0.69	1674650	120.52	60	120	ISTD warning
Sc	45	1	He	376331	0.20	355173	105.96	60	120	
Sc	45	2	NoGas	10466939	0.14	8635903	121.20	60	120	ISTD warning
Rh	103	1	He	1401426	1.85	1470259	95.32	60	120	
In	115	1	He	477823	1.12	490642	97.39	60	120	
Tb	159	1	He	1426495	1.91	1434034	99.47	60	120	
Ho	165	1	He	1407487	0.84	1409606	99.85	60	120	
Bi	209	1	He	819508	0.39	906964	90.36	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-1-b
Data File Name	076SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:23:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	9.237	9.237	1.44	327220	0.00	10000	
Be	9	45	2	NoGas	0.034	0.034	29.71	256	0.01	2000	
B	11	45	2	NoGas	89.115	89.115	0.31	333591	0.03	300	
Na	23	45	1	He	411713.963	411713.963	1.40	424165420	0.10	500000	
Mg	24	45	1	He	70639.433	70639.433	2.29	39194476	0.18	500000	
Al	27	45	1	He	4.169	4.169	9.83	1188	0.35	200000	
K	39	45	1	He	1369.331	1369.331	1.09	478632	0.29	500000	
Ca	44	45	1	He	217391.136	217391.136	0.96	3889009	5.59	500000	
Ti	47	45	1	He	0.256	0.256	33.90	32	0.79	2500	
V	51	45	1	He	0.129	0.129	17.65	1050	0.01	10000	
Cr	52	45	1	He	0.063	0.063	95.49	4033	0.00	10000	
Mn	55	45	1	He	352.295	352.295	2.00	896911	0.04	10000	
Fe	56	45	1	He	134.282	134.282	0.42	497502	0.03	200000	
Co	59	45	1	He	1.097	1.097	2.67	8698	0.01	5000	
Ni	60	45	1	He	4.701	4.701	3.94	10301	0.05	10000	
Cu	63	45	1	He	0.468	0.468	7.16	5782	0.01	10000	
Zn	66	45	1	He	4.048	4.048	7.29	3722	0.11	10000	
As	75	115	1	He	0.230	0.230	6.06	240	0.10	10000	
Se	78	115	1	He	0.280	0.280	67.66	32	0.88	10000	
Sr	88	103	1	He	306.314	306.314	2.92	727087	0.04	10000	
Mo	95	103	1	He	0.809	0.809	4.47	1799	0.04	2000	
Ag	107	103	1	He	0.004	0.004	42.32	51	0.01	300	
Cd	111	115	1	He	0.123	0.123	5.79	108	0.11	4000	
Sn	118	115	1	He	-3.294	-3.294	-2.66	974	-0.34	2000	
Sb	123	115	1	He	0.099	0.099	13.73	231	0.04	200	
Ba	137	115	1	He	217.290	217.290	1.23	165355	0.13	10000	
W	182	159	1	He	0.040	0.040	66.37	1648	0.00	2500	
Tl	205	165	1	He	0.025	0.025	3.56	280	0.01	2000	
Pb	208	165	1	He	0.048	0.048	12.12	1147	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1984560	1.20	1674650	118.51	60	120	
Sc	45	1	He	387529	0.81	355173	109.11	60	120	
Sc	45	2	NoGas	10298057	0.32	8635903	119.25	60	120	
Rh	103	1	He	1395505	0.91	1470259	94.92	60	120	
In	115	1	He	498468	1.23	490642	101.60	60	120	
Tb	159	1	He	1448354	0.79	1434034	101.00	60	120	
Ho	165	1	He	1402867	2.27	1409606	99.52	60	120	
Bi	209	1	He	811643	0.44	906964	89.49	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-2-b
Data File Name	077SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:27:31-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	671.940	671.940	1.26	15939440	0.00	10000	
Be	9	45	2	NoGas	0.060	0.060	32.52	426	0.01	2000	
B	11	45	2	NoGas	1863.861	1863.861	1.50	7073431	0.03	300	>LDR
Na	23	45	1	He	60682.547	60682.547	1.53	63095773	0.10	500000	
Mg	24	45	1	He	83184.056	83184.056	3.35	46566231	0.18	500000	
Al	27	45	1	He	280.556	280.556	3.45	65557	0.43	200000	
K	39	45	1	He	4406.035	4406.035	0.90	1493205	0.30	500000	
Ca	44	45	1	He	199421.427	199421.427	1.48	3599702	5.54	500000	
Ti	47	45	1	He	6.788	6.788	8.05	831	0.82	2500	
V	51	45	1	He	0.604	0.604	27.16	2993	0.02	10000	
Cr	52	45	1	He	0.770	0.770	4.04	7501	0.01	10000	
Mn	55	45	1	He	699.095	699.095	2.40	1795293	0.04	10000	
Fe	56	45	1	He	1558.591	1558.591	3.19	5798180	0.03	200000	
Co	59	45	1	He	3.032	3.032	2.71	24115	0.01	5000	
Ni	60	45	1	He	2.366	2.366	3.20	5358	0.04	10000	
Cu	63	45	1	He	2.216	2.216	4.00	16245	0.01	10000	
Zn	66	45	1	He	4.005	4.005	5.99	3722	0.11	10000	
As	75	115	1	He	0.565	0.565	6.83	407	0.14	10000	
Se	78	115	1	He	0.504	0.504	47.68	38	1.32	10000	
Sr	88	103	1	He	650.963	650.963	0.54	1624833	0.04	10000	
Mo	95	103	1	He	0.104	0.104	6.61	264	0.04	2000	
Ag	107	103	1	He	0.003	0.003	2.06	43	0.01	300	
Cd	111	115	1	He	0.115	0.115	2.68	101	0.11	4000	
Sn	118	115	1	He	-3.406	-3.406	-1.18	778	-0.44	2000	
Sb	123	115	1	He	0.090	0.090	19.73	213	0.04	200	
Ba	137	115	1	He	433.191	433.191	1.45	330770	0.13	10000	
W	182	159	1	He	0.654	0.654	8.01	5027	0.01	2500	
Tl	205	165	1	He	0.013	0.013	23.21	163	0.01	2000	
Pb	208	165	1	He	2.555	2.555	2.05	34003	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1749973	0.80	1674650	104.50	60	120	
Sc	45	1	He	391060	1.22	355173	110.10	60	120	
Sc	45	2	NoGas	10615608	1.51	8635903	122.92	60	120	ISTD warning
Rh	103	1	He	1467445	0.95	1470259	99.81	60	120	
In	115	1	He	500250	0.36	490642	101.96	60	120	
Tb	159	1	He	1471159	0.22	1434034	102.59	60	120	
Ho	165	1	He	1421092	1.10	1409606	100.81	60	120	
Bi	209	1	He	852890	0.72	906964	94.04	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-3-b
Data File Name	078SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:31:30-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	10.029	10.029	0.29	350629	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	18.01	300	0.01	2000	
B	11	45	2	NoGas	7307.490	7307.490	0.04	27305469	0.03	300	>LDR
Na	23	45	1	He	17303.180	17303.180	1.89	18181656	0.10	500000	
Mg	24	45	1	He	17245.727	17245.727	1.75	9752544	0.18	500000	
Al	27	45	1	He	101.829	101.829	2.49	24182	0.42	200000	
K	39	45	1	He	10264.729	10264.729	0.65	3476557	0.30	500000	
Ca	44	45	1	He	102278.998	102278.998	1.97	1864898	5.48	500000	
Ti	47	45	1	He	2.493	2.493	6.60	309	0.81	2500	
V	51	45	1	He	0.428	0.428	15.75	2303	0.02	10000	
Cr	52	45	1	He	0.266	0.266	8.63	5105	0.01	10000	
Mn	55	45	1	He	2853.780	2853.780	0.97	7400899	0.04	10000	
Fe	56	45	1	He	783.561	783.561	2.20	2945762	0.03	200000	
Co	59	45	1	He	0.143	0.143	14.28	1221	0.01	5000	
Ni	60	45	1	He	6.590	6.590	2.53	14616	0.05	10000	
Cu	63	45	1	He	0.086	0.086	21.06	3594	0.00	10000	
Zn	66	45	1	He	1.231	1.231	20.31	1583	0.08	10000	
As	75	115	1	He	0.204	0.204	4.97	233	0.09	10000	
Se	78	115	1	He	0.093	0.093	146.30	28	0.34	10000	
Sr	88	103	1	He	268.257	268.257	1.26	700567	0.04	10000	
Mo	95	103	1	He	5.074	5.074	1.48	12288	0.04	2000	
Ag	107	103	1	He	0.002	0.002	36.21	38	0.00	300	
Cd	111	115	1	He	0.029	0.029	35.54	26	0.11	4000	
Sn	118	115	1	He	-3.386	-3.386	-1.93	833	-0.41	2000	
Sb	123	115	1	He	0.040	0.040	12.26	119	0.03	200	
Ba	137	115	1	He	101.989	101.989	0.63	79728	0.13	10000	
W	182	159	1	He	1.415	1.415	8.80	9277	0.02	2500	
Tl	205	165	1	He	0.004	0.004	106.15	84	0.01	2000	
Pb	208	165	1	He	0.135	0.135	7.67	2349	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2089750	2.21	1674650	124.79	60	120	ISTD warning
Sc	45	1	He	394953	0.68	355173	111.20	60	120	
Sc	45	2	NoGas	10457217	0.85	8635903	121.09	60	120	ISTD warning
Rh	103	1	He	1535054	0.67	1470259	104.41	60	120	
In	115	1	He	512032	0.66	490642	104.36	60	120	
Tb	159	1	He	1485839	0.89	1434034	103.61	60	120	
Ho	165	1	He	1457624	0.39	1409606	103.41	60	120	
Bi	209	1	He	882659	0.18	906964	97.32	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-4-b
Data File Name	079SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:35:32-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	16.627	16.627	1.31	509878	0.00	10000	
Be	9	45	2	NoGas	0.035	0.035	30.97	270	0.01	2000	
B	11	45	2	NoGas	366.030	366.030	1.98	1390131	0.03	300	>LDR
Na	23	45	1	He	29232.696	29232.696	2.15	30469392	0.10	500000	
Mg	24	45	1	He	21979.329	21979.329	1.84	12333476	0.18	500000	
Al	27	45	1	He	43.268	43.268	2.99	10326	0.42	200000	
K	39	45	1	He	6625.241	6625.241	1.29	2236431	0.30	500000	
Ca	44	45	1	He	118202.366	118202.366	1.71	2138510	5.53	500000	
Ti	47	45	1	He	1.732	1.732	21.49	213	0.81	2500	
V	51	45	1	He	1.142	1.142	6.06	5205	0.02	10000	
Cr	52	45	1	He	0.281	0.281	21.72	5139	0.01	10000	
Mn	55	45	1	He	1907.644	1907.644	1.81	4909045	0.04	10000	
Fe	56	45	1	He	4417.104	4417.104	2.23	16465729	0.03	200000	
Co	59	45	1	He	0.268	0.268	8.04	2206	0.01	5000	
Ni	60	45	1	He	1.123	1.123	10.86	2679	0.04	10000	
Cu	63	45	1	He	0.776	0.776	1.48	7687	0.01	10000	
Zn	66	45	1	He	1.122	1.122	6.54	1486	0.08	10000	
As	75	115	1	He	13.400	13.400	2.10	6940	0.19	10000	
Se	78	115	1	He	0.461	0.461	42.97	38	1.22	10000	
Sr	88	103	1	He	288.225	288.225	1.09	743697	0.04	10000	
Mo	95	103	1	He	0.408	0.408	1.16	999	0.04	2000	
Ag	107	103	1	He	0.003	0.003	73.32	48	0.01	300	
Cd	111	115	1	He	0.056	0.056	3.81	51	0.11	4000	
Sn	118	115	1	He	-3.514	-3.514	-1.01	600	-0.59	2000	
Sb	123	115	1	He	0.090	0.090	23.82	219	0.04	200	
Ba	137	115	1	He	116.330	116.330	1.10	90822	0.13	10000	
W	182	159	1	He	0.055	0.055	11.97	1800	0.00	2500	
Tl	205	165	1	He	0.005	0.005	36.78	86	0.01	2000	
Pb	208	165	1	He	0.109	0.109	4.22	1957	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2098868	0.59	1674650	125.33	60	120	ISTD warning
Sc	45	1	He	391933	1.13	355173	110.35	60	120	
Sc	45	2	NoGas	10585970	0.30	8635903	122.58	60	120	ISTD warning
Rh	103	1	He	1516747	0.83	1470259	103.16	60	120	
In	115	1	He	511421	0.62	490642	104.24	60	120	
Tb	159	1	He	1507186	1.39	1434034	105.10	60	120	
Ho	165	1	He	1427573	0.97	1409606	101.27	60	120	
Bi	209	1	He	892379	0.46	906964	98.39	60	120	

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Sample Report

Sample Table

Sample Name	240-66144-e-5-b
Data File Name	080SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:39:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	8.542	8.542	0.23	312123	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	40.93	230	0.01	2000	
B	11	45	2	NoGas	222.036	222.036	1.02	824711	0.03	300	
Na	23	45	1	He	307062.374	307062.374	0.82	316139928	0.10	500000	
Mg	24	45	1	He	54325.040	54325.040	1.28	30122973	0.18	500000	
Al	27	45	1	He	1.874	1.874	10.55	658	0.28	200000	
K	39	45	1	He	1383.497	1383.497	1.07	482976	0.29	500000	
Ca	44	45	1	He	249981.664	249981.664	1.19	4468789	5.59	500000	
Ti	47	45	1	He	0.201	0.201	48.13	26	0.79	2500	
V	51	45	1	He	0.211	0.211	22.76	1382	0.02	10000	
Cr	52	45	1	He	0.148	0.148	48.49	4439	0.00	10000	
Mn	55	45	1	He	279.683	279.683	1.54	711696	0.04	10000	
Fe	56	45	1	He	1763.418	1763.418	1.62	6497557	0.03	200000	
Co	59	45	1	He	1.359	1.359	1.73	10752	0.01	5000	
Ni	60	45	1	He	6.195	6.195	4.84	13490	0.05	10000	
Cu	63	45	1	He	0.000	0.000	-1813.14	3014	0.00	10000	
Zn	66	45	1	He	5.589	5.589	2.71	4905	0.11	10000	
As	75	115	1	He	1.033	1.033	4.75	635	0.16	10000	
Se	78	115	1	He	0.290	0.290	28.53	32	0.91	10000	
Sr	88	103	1	He	325.998	325.998	0.83	799911	0.04	10000	
Mo	95	103	1	He	0.213	0.213	7.25	507	0.04	2000	
Ag	107	103	1	He	0.003	0.003	34.68	43	0.01	300	
Cd	111	115	1	He	0.026	0.026	10.04	24	0.11	4000	
Sn	118	115	1	He	-3.490	-3.490	-2.47	622	-0.56	2000	
Sb	123	115	1	He	0.109	0.109	13.88	249	0.04	200	
Ba	137	115	1	He	255.396	255.396	0.62	193447	0.13	10000	
W	182	159	1	He	0.025	0.025	282.20	1574	0.00	2500	
Tl	205	165	1	He	0.016	0.016	9.50	191	0.01	2000	
Pb	208	165	1	He	0.013	0.013	7.33	680	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1998047	0.79	1674650	119.31	60	120	
Sc	45	1	He	387248	0.07	355173	109.03	60	120	
Sc	45	2	NoGas	10324591	0.46	8635903	119.55	60	120	
Rh	103	1	He	1442412	1.27	1470259	98.11	60	120	
In	115	1	He	496176	1.27	490642	101.13	60	120	
Tb	159	1	He	1458785	2.36	1434034	101.73	60	120	
Ho	165	1	He	1401461	2.78	1409606	99.42	60	120	
Bi	209	1	He	828784	0.89	906964	91.38	60	120	

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Sample Report

Sample Table

Sample Name	240-66171-b-1-b
Data File Name	081SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:43:37-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.882	5.882	3.01	252697	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	29.53	241	0.01	2000	
B	11	45	2	NoGas	180.366	180.366	0.44	674984	0.03	300	
Na	23	45	1	He	40429.661	40429.661	2.60	41540159	0.10	500000	
Mg	24	45	1	He	13433.090	13433.090	1.89	7432169	0.18	500000	
Al	27	45	1	He	351.480	351.480	3.36	81102	0.43	200000	
K	39	45	1	He	8452.091	8452.091	2.48	2805188	0.30	500000	
Ca	44	45	1	He	40345.985	40345.985	1.59	719876	5.60	500000	
Ti	47	45	1	He	0.893	0.893	21.48	109	0.82	2500	
V	51	45	1	He	0.767	0.767	27.45	3618	0.02	10000	
Cr	52	45	1	He	2.401	2.401	8.03	15223	0.02	10000	
Mn	55	45	1	He	14.376	14.376	2.01	37028	0.04	10000	
Fe	56	45	1	He	172.934	172.934	2.79	638013	0.03	200000	
Co	59	45	1	He	0.234	0.234	5.41	1909	0.01	5000	
Ni	60	45	1	He	3.006	3.006	3.03	6657	0.05	10000	
Cu	63	45	1	He	251.912	251.912	2.40	1485630	0.02	10000	
Zn	66	45	1	He	82.067	82.067	1.47	63617	0.13	10000	
As	75	115	1	He	0.373	0.373	13.18	318	0.12	10000	
Se	78	115	1	He	0.458	0.458	13.73	38	1.22	10000	
Sr	88	103	1	He	282.762	282.762	1.98	709943	0.04	10000	
Mo	95	103	1	He	3.789	3.789	2.58	8827	0.04	2000	
Ag	107	103	1	He	4.846	4.846	1.78	34541	0.01	300	
Cd	111	115	1	He	0.142	0.142	7.46	128	0.11	4000	
Sn	118	115	1	He	1.856	1.856	6.23	10352	0.02	2000	
Sb	123	115	1	He	0.890	0.890	5.47	1835	0.05	200	
Ba	137	115	1	He	51.340	51.340	2.10	40014	0.13	10000	
W	182	159	1	He	0.734	0.734	8.14	5442	0.01	2500	
Tl	205	165	1	He	0.018	0.018	22.77	210	0.01	2000	
Pb	208	165	1	He	0.891	0.891	1.51	12091	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2068877	0.86	1674650	123.54	60	120	ISTD warning
Sc	45	1	He	386425	1.25	355173	108.80	60	120	
Sc	45	2	NoGas	10385506	0.35	8635903	120.26	60	120	ISTD warning
Rh	103	1	He	1475931	1.06	1470259	100.39	60	120	
In	115	1	He	510495	1.99	490642	104.05	60	120	
Tb	159	1	He	1464106	0.26	1434034	102.10	60	120	
Ho	165	1	He	1408473	1.93	1409606	99.92	60	120	
Bi	209	1	He	891678	0.05	906964	98.31	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	082_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:47:41-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	56.847	1.672	1328419	1.42	50	113.7	89.5	110.5	CCV Failed
Be	9	45	2	NoGas	53.944	0.883	309934	0.63	50	107.9	89.5	110.5	
B	11	45	2	NoGas	109.265	0.666	382868	0.93	50	218.5	89.5	110.5	CCV Failed
Na	23	45	1	He	25034.948	1.245	25592667	1.30	25000	100.1	89.5	110.5	
Mg	24	45	1	He	25039.534	2.704	13777748	2.12	25000	100.2	89.5	110.5	
Al	27	45	1	He	247.361	3.506	56836	2.90	250	98.9	89.5	110.5	
K	39	45	1	He	25339.239	0.560	8311404	0.61	25000	101.4	89.5	110.5	
Ca	44	45	1	He	24937.674	1.712	442660	1.03	25000	99.8	89.5	110.5	
Ti	47	45	1	He	51.222	1.078	6154	1.02	50	102.4	89.5	110.5	
V	51	45	1	He	50.290	3.742	202161	3.41	50	100.6	89.5	110.5	
Cr	52	45	1	He	49.201	2.327	238176	1.82	50	98.4	89.5	110.5	
Mn	55	45	1	He	246.619	2.184	622819	1.72	250	98.6	89.5	110.5	
Fe	56	45	1	He	12433.516	2.304	45447278	1.92	12500	99.5	89.5	110.5	
Co	59	45	1	He	49.739	2.060	387674	1.65	50	99.5	89.5	110.5	
Ni	60	45	1	He	48.896	2.499	103946	1.77	50	97.8	89.5	110.5	
Cu	63	45	1	He	49.391	2.105	292120	1.61	50	98.8	89.5	110.5	
Zn	66	45	1	He	50.374	2.488	39066	1.84	50	100.7	89.5	110.5	
As	75	115	1	He	52.689	0.893	26369	0.56	50	105.4	89.5	110.5	
Se	78	115	1	He	51.816	0.714	1444	1.25	50	103.6	89.5	110.5	
Sr	88	103	1	He	51.027	1.346	129329	1.43	50	102.1	89.5	110.5	
Mo	95	103	1	He	50.915	2.303	119303	3.05	50	101.8	89.5	110.5	
Ag	107	103	1	He	51.033	1.742	366454	1.31	50	102.1	89.5	110.5	
Cd	111	115	1	He	51.216	2.010	45090	1.94	50	102.4	89.5	110.5	
Sn	118	115	1	He	48.636	0.666	93559	0.83	50	97.3	89.5	110.5	
Sb	123	115	1	He	51.798	1.086	102610	0.72	50	103.6	89.5	110.5	
Ba	137	115	1	He	50.580	1.705	38704	1.05	50	101.2	89.5	110.5	
W	182	159	1	He	50.394	2.564	274783	3.06	50	100.8	89.5	110.5	
Tl	205	165	1	He	50.871	1.902	482014	2.13	50	101.7	89.5	110.5	
Pb	208	165	1	He	50.956	2.435	655668	0.81	50	101.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1962070	3.44	1674650	117.16	60	120	
Sc	45	1	He	384317	0.91	355173	108.21	60	120	
Sc	45	2	NoGas	9670530	1.06	8635903	111.98	60	120	
Rh	103	1	He	1487722	1.16	1470259	101.19	60	120	
In	115	1	He	501124	0.72	490642	102.14	60	120	
Tb	159	1	He	1459721	0.99	1434034	101.79	60	120	
Ho	165	1	He	1394699	3.09	1409606	98.94	60	120	
Bi	209	1	He	865214	0.98	906964	95.40	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	083_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:51:43-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.204	6.5	117064	1.0	8	
Be	9	45	2	NoGas	0.023	17.7	185	12.5	1	
B	11	45	2	NoGas	38.878	0.8	144079	0.8	20	CCB High
Na	23	45	1	He	29.025	1.8	41919	1.7	1000	
Mg	24	45	1	He	3.382	35.0	2200	29.0	1000	
Al	27	45	1	He	0.055	401.6	224	21.6	50	
K	39	45	1	He	15.385	15.4	30397	3.0	1000	
Ca	44	45	1	He	5.628	35.0	385	9.5	1000	
Ti	47	45	1	He	0.039	157.5	6	124.9	20	
V	51	45	1	He	0.145	64.9	1048	33.5	2	
Cr	52	45	1	He	0.045	13.9	3718	1.4	2	
Mn	55	45	1	He	0.145	21.7	873	8.0	2	
Fe	56	45	1	He	3.821	38.4	15686	33.4	50	
Co	59	45	1	He	0.006	83.0	117	31.8	1	
Ni	60	45	1	He	-0.032	-25.1	170	9.0	2	
Cu	63	45	1	He	0.082	42.1	3295	6.1	2	
Zn	66	45	1	He	-0.015	-654.2	559	12.8	20	
As	75	115	1	He	-0.012	-93.1	119	3.5	2	
Se	78	115	1	He	0.362	76.3	34	20.7	2	
Sr	88	103	1	He	0.333	5.4	1067	3.9	10	
Mo	95	103	1	He	0.096	16.0	249	14.4	2	
Ag	107	103	1	He	0.005	81.0	57	47.1	0.2	
Cd	111	115	1	He	0.016	27.0	15	25.8	0.2	
Sn	118	115	1	He	0.318	74.3	7291	4.4	10	
Sb	123	115	1	He	0.101	17.8	232	14.4	2	
Ba	137	115	1	He	0.032	25.8	43	15.4	5	
W	182	159	1	He	0.328	8.8	3108	4.9	10	
Tl	205	165	1	He	0.053	21.3	542	20.0	0.5	
Pb	208	165	1	He	0.028	44.6	870	18.1	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2004717	2.30	1674650	119.71	60	120	
Sc	45	1	He	364849	0.89	355173	102.72	60	120	
Sc	45	2	NoGas	9973487	0.78	8635903	115.49	60	120	
Rh	103	1	He	1485556	0.48	1470259	101.04	60	120	
In	115	1	He	492739	1.53	490642	100.43	60	120	
Tb	159	1	He	1407799	2.12	1434034	98.17	60	120	
Ho	165	1	He	1383770	0.98	1409606	98.17	60	120	
Bi	209	1	He	869907	0.44	906964	95.91	60	120	

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Sample Report

Sample Table

Sample Name	240-66173-b-1-b
Data File Name	084SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:55:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.072	2.072	1.96	149673	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	25.08	207	0.01	2000	
B	11	45	2	NoGas	212.769	212.769	0.95	721651	0.03	300	
Na	23	45	1	He	325964.543	325964.543	1.99	302194299	0.11	500000	
Mg	24	45	1	He	8051.692	8051.692	2.78	4020690	0.20	500000	
Al	27	45	1	He	378.110	378.110	2.83	78733	0.48	200000	
K	39	45	1	He	51140.849	51140.849	0.63	15196401	0.34	500000	
Ca	44	45	1	He	24951.036	24951.036	1.47	401909	6.21	500000	
Ti	47	45	1	He	4.659	4.659	10.15	509	0.92	2500	
V	51	45	1	He	0.967	0.967	16.78	3995	0.02	10000	
Cr	52	45	1	He	2.485	2.485	4.76	14106	0.02	10000	
Mn	55	45	1	He	58.124	58.124	2.76	133575	0.04	10000	
Fe	56	45	1	He	2036.780	2036.780	2.46	6757563	0.03	200000	
Co	59	45	1	He	0.596	0.596	2.18	4286	0.01	5000	
Ni	60	45	1	He	6.089	6.089	2.74	11942	0.05	10000	
Cu	63	45	1	He	55.679	55.679	1.64	298488	0.02	10000	
Zn	66	45	1	He	243.794	243.794	1.68	169492	0.14	10000	
As	75	115	1	He	0.863	0.863	3.30	511	0.17	10000	
Se	78	115	1	He	1.789	1.789	24.88	67	2.65	10000	
Sr	88	103	1	He	114.350	114.350	1.05	260853	0.04	10000	
Mo	95	103	1	He	5.335	5.335	5.65	11280	0.05	2000	
Ag	107	103	1	He	0.090	0.090	18.16	603	0.01	300	
Cd	111	115	1	He	1.385	1.385	2.77	1120	0.12	4000	
Sn	118	115	1	He	-0.208	-0.208	-147.91	5953	0.00	2000	
Sb	123	115	1	He	0.521	0.521	7.66	981	0.05	200	
Ba	137	115	1	He	74.810	74.810	0.10	52552	0.14	10000	
W	182	159	1	He	0.759	0.759	7.31	5253	0.01	2500	
Tl	205	165	1	He	0.032	0.032	13.84	327	0.01	2000	
Pb	208	165	1	He	3.211	3.211	0.18	39783	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1874886	0.90	1674650	111.96	60	120	
Sc	45	1	He	348738	0.95	355173	98.19	60	120	
Sc	45	2	NoGas	9424487	0.61	8635903	109.13	60	120	
Rh	103	1	He	1340263	0.80	1470259	91.16	60	120	
In	115	1	He	460090	1.73	490642	93.77	60	120	
Tb	159	1	He	1379630	1.79	1434034	96.21	60	120	
Ho	165	1	He	1326888	1.52	1409606	94.13	60	120	
Bi	209	1	He	1651668	0.40	906964	182.11	60	120	ISTD warning

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Sample Report

Sample Table

Sample Name	240-66199-i-23-a
Data File Name	085SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T15:59:58-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	754.835	754.835	0.79	15397884	0.00	10000	
Be	9	45	2	NoGas	0.047	0.047	23.85	300	0.02	2000	
B	11	45	2	NoGas	3495.026	3495.026	1.87	11410162	0.03	300	>LDR
Na	23	45	1	He	1164850.123	1164850.123	1.97	1052438210	0.11	500000	>LDR
Mg	24	45	1	He	140665.669	140665.669	2.49	68445373	0.21	500000	
Al	27	45	1	He	668.151	668.151	2.81	135427	0.49	200000	
K	39	45	1	He	43012.758	43012.758	2.31	12459103	0.35	500000	
Ca	44	45	1	He	369156.126	369156.126	2.21	5790878	6.37	500000	
Ti	47	45	1	He	5.040	5.040	8.62	537	0.94	2500	
V	51	45	1	He	1.035	1.035	10.34	4133	0.03	10000	
Cr	52	45	1	He	1.737	1.737	1.71	10595	0.02	10000	
Mn	55	45	1	He	257.021	257.021	1.95	573991	0.04	10000	
Fe	56	45	1	He	1515.627	1515.627	2.15	4901201	0.03	200000	
Co	59	45	1	He	1.425	1.425	2.44	9889	0.01	5000	
Ni	60	45	1	He	3.554	3.554	3.83	6883	0.05	10000	
Cu	63	45	1	He	2.369	2.369	4.74	14907	0.02	10000	
Zn	66	45	1	He	5.915	5.915	2.09	4525	0.13	10000	
As	75	115	1	He	1.527	1.527	4.35	769	0.20	10000	
Se	78	115	1	He	0.722	0.722	15.19	38	1.88	10000	
Sr	88	103	1	He	29734.663	29734.663	2.18	61231546	0.05	10000	>LDR
Mo	95	103	1	He	3.836	3.836	2.24	7334	0.05	2000	
Ag	107	103	1	He	0.186	0.186	7.85	1104	0.02	300	
Cd	111	115	1	He	0.033	0.033	21.54	25	0.13	4000	
Sn	118	115	1	He	-2.720	-2.720	-5.48	1737	-0.16	2000	
Sb	123	115	1	He	0.383	0.383	6.29	690	0.06	200	
Ba	137	115	1	He	416.784	416.784	1.08	276392	0.15	10000	
W	182	159	1	He	0.082	0.082	44.88	1667	0.00	2500	
Tl	205	165	1	He	0.013	0.013	31.37	147	0.01	2000	
Pb	208	165	1	He	0.297	0.297	7.70	3845	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1467007	2.45	1674650	87.60	60	120	
Sc	45	1	He	339842	0.75	355173	95.68	60	120	
Sc	45	2	NoGas	9135787	1.33	8635903	105.79	60	120	
Rh	103	1	He	1210888	0.82	1470259	82.36	60	120	
In	115	1	He	434449	1.63	490642	88.55	60	120	
Tb	159	1	He	1289352	1.85	1434034	89.91	60	120	
Ho	165	1	He	1238173	2.27	1409606	87.84	60	120	
Bi	209	1	He	689552	1.30	906964	76.03	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	mb 240-235186/1-a
Data File Name	086_Blk.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:04:03-04:00
Sample Type	Blank
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.501	15.9	120663	1.7	8	
Be	9	45	2	NoGas	0.019	52.7	156	37.1	1	
B	11	45	2	NoGas	66.664	0.5	237238	0.9	20	Blank High
Na	23	45	1	He	254.966	7.8	263904	8.2	1000	
Mg	24	45	1	He	101.882	4.7	54192	2.7	1000	
Al	27	45	1	He	1.963	11.3	646	7.4	50	
K	39	45	1	He	40.159	4.9	38486	2.1	1000	
Ca	44	45	1	He	323.656	3.2	5800	1.8	1000	
Ti	47	45	1	He	0.077	66.0	10	57.8	20	
V	51	45	1	He	0.059	131.9	728	40.4	2	
Cr	52	45	1	He	0.182	11.4	4385	2.3	2	
Mn	55	45	1	He	0.537	13.2	1831	7.7	2	
Fe	56	45	1	He	18.814	3.0	68385	1.2	50	
Co	59	45	1	He	0.004	29.9	100	5.8	1	
Ni	60	45	1	He	0.145	26.4	530	13.1	2	
Cu	63	45	1	He	0.880	1.8	7815	2.5	2	
Zn	66	45	1	He	5.167	10.0	4356	6.6	20	
As	75	115	1	He	-0.022	-136.2	115	12.3	2	
Se	78	115	1	He	0.050	137.0	26	7.9	2	
Sr	88	103	1	He	3.329	16.9	8517	17.4	10	
Mo	95	103	1	He	0.056	9.4	153	7.8	2	
Ag	107	103	1	He	0.004	37.9	51	21.0	0.2	
Cd	111	115	1	He	0.010	84.7	9	77.9	0.2	
Sn	118	115	1	He	-3.372	-0.4	833	2.7	10	
Sb	123	115	1	He	0.030	41.5	94	25.5	2	
Ba	137	115	1	He	1.178	9.2	911	8.5	5	
W	182	159	1	He	0.022	207.4	1533	15.7	10	
Tl	205	165	1	He	0.001	172.5	50	34.6	0.5	
Pb	208	165	1	He	0.064	19.3	1321	11.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1966598	0.09	1674650	117.43	60	120	
Sc	45	1	He	368728	2.08	355173	103.82	60	120	
Sc	45	2	NoGas	9733593	0.40	8635903	112.71	60	120	
Rh	103	1	He	1463410	1.25	1470259	99.53	60	120	
In	115	1	He	496365	0.55	490642	101.17	60	120	
Tb	159	1	He	1432007	0.39	1434034	99.86	60	120	
Ho	165	1	He	1370254	0.28	1409606	97.21	60	120	
Bi	209	1	He	873167	0.94	906964	96.27	60	120	

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Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 240-235186/3-a
Data File Name	087_LCS.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:08:09-04:00
Sample Type	LCSW
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	2	NoGas	100.505	100.505	1.174	2359214	1.69	100	100.5	84.5	115.4	
Be	9	2	NoGas	993.693	993.693	0.674	5946085	1.04	1000	99.4	84.5	115.4	
B	11	2	NoGas	138.605	138.605	1.095	504378	1.29	100	138.6	84.5	115.4	LCS Failed
Na	23	1	He	9479.316	9479.316	5.029	9305907	1.32	10000	94.8	84.5	115.4	
Mg	24	1	He	9493.579	9493.579	6.008	5011293	2.32	10000	94.9	84.5	115.4	
Al	27	1	He	9644.380	9644.380	6.353	2117494	2.78	10000	96.4	84.5	115.4	
K	39	1	He	9613.787	9613.787	2.205	3043689	1.60	10000	96.1	84.5	115.4	
Ca	44	1	He	10718.798	10718.798	4.494	182750	0.80	10000	107.2	84.5	115.4	
Ti	47	1	He	93.507	93.507	4.427	10783	3.01	100	93.5	84.5	115.4	
V	51	1	He	977.150	977.150	5.901	3758842	2.21	1000	97.7	84.5	115.4	
Cr	52	1	He	924.435	924.435	5.718	4229934	2.22	1000	92.4	84.5	115.4	
Mn	55	1	He	982.458	982.458	5.937	2378756	2.92	1000	98.2	84.5	115.4	
Fe	56	1	He	9303.478	9303.478	5.895	32621628	2.20	10000	93.0	84.5	115.4	
Co	59	1	He	936.955	936.955	5.373	7004842	1.68	1000	93.7	84.5	115.4	
Ni	60	1	He	942.368	942.368	7.970	1916527	4.37	1000	94.2	84.5	115.4	
Cu	63	1	He	912.040	912.040	5.273	5125212	1.58	1000	91.2	84.5	115.4	
Zn	66	1	He	974.403	974.403	4.961	714525	1.26	1000	97.4	84.5	115.4	
As	75	1	He	996.304	996.304	3.119	482290	1.79	1000	99.6	84.5	115.4	
Se	78	1	He	979.528	979.528	2.213	26091	1.00	1000	98.0	84.5	115.4	
Sr	88	1	He	948.193	948.193	7.251	2305617	3.50	1000	94.8	84.5	115.4	
Mo	95	1	He	95.367	95.367	6.751	214724	3.01	100	95.4	84.5	115.4	
Ag	107	1	He	96.562	96.562	4.590	666809	0.78	100	96.6	84.5	115.4	
Cd	111	1	He	958.931	958.931	2.755	820325	1.42	1000	95.9	84.5	115.4	
Sn	118	1	He	966.228	966.228	3.131	1680430	1.98	1000	96.6	84.5	115.4	
Sb	123	1	He	96.000	96.000	3.003	184759	1.70	100	96.0	84.5	115.4	
Ba	137	1	He	948.444	948.444	2.804	704911	1.51	1000	94.8	84.5	115.4	
W	182	1	He	94.521	94.521	3.280	494004	4.34	100	94.5	84.5	115.4	
Tl	205	1	He	229.325	229.325	1.436	2163024	1.47	250	91.7	84.5	115.4	
Pb	208	1	He	903.041	903.041	2.827	11559087	1.45	1000	90.3	84.5	115.4	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	1991205	1.13	1674650	118.90	60	120	
Sc	45	1	He	369186	3.83	355173	103.95	60	120	
Sc	45	2	NoGas	10072605	0.57	8635903	116.64	60	120	
Rh	103	1	He	1432326	3.91	1470259	97.42	60	120	
In	115	1	He	487047	1.36	490642	99.27	60	120	
Tb	159	1	He	1402486	2.15	1434034	97.80	60	120	
Ho	165	1	He	1388142	1.41	1409606	98.48	60	120	
Bi	209	1	He	853593	1.93	906964	94.12	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-a
Data File Name	088SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:12:00-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.789	6.789	0.44	268633	0.00	10000	
Be	9	45	2	NoGas	0.238	0.238	5.19	1489	0.02	2000	
B	11	45	2	NoGas	60.502	60.502	1.01	226098	0.03	300	
Na	23	45	1	He	5911.797	5911.797	1.04	5863010	0.10	500000	
Mg	24	45	1	He	44906.113	44906.113	2.27	23928039	0.19	500000	
Al	27	45	1	He	1786.050	1786.050	2.17	396078	0.45	200000	
K	39	45	1	He	1804.507	1804.507	1.00	597455	0.30	500000	
Ca	44	45	1	He	116633.227	116633.227	2.49	2003708	5.82	500000	
Ti	47	45	1	He	33.351	33.351	10.02	3879	0.86	2500	
V	51	45	1	He	3.935	3.935	6.22	15787	0.02	10000	
Cr	52	45	1	He	15.185	15.185	3.51	73658	0.02	10000	
Mn	55	45	1	He	77.232	77.232	2.25	189243	0.04	10000	
Fe	56	45	1	He	5097.770	5097.770	2.76	18044956	0.03	200000	
Co	59	45	1	He	1.278	1.278	1.40	9717	0.01	5000	
Ni	60	45	1	He	9.269	9.269	3.04	19274	0.05	10000	
Cu	63	45	1	He	3.042	3.042	0.67	20146	0.02	10000	
Zn	66	45	1	He	13.744	13.744	2.69	10744	0.13	10000	
As	75	115	1	He	25.146	25.146	0.08	12271	0.20	10000	
Se	78	115	1	He	1.200	1.200	9.90	56	2.16	10000	
Sr	88	103	1	He	1263.995	1263.995	0.72	3075467	0.04	10000	
Mo	95	103	1	He	9.460	9.460	1.05	21330	0.04	2000	
Ag	107	103	1	He	0.023	0.023	13.94	184	0.01	300	
Cd	111	115	1	He	0.428	0.428	22.76	366	0.12	4000	
Sn	118	115	1	He	-0.546	-0.546	-157.91	5694	-0.01	2000	
Sb	123	115	1	He	0.370	0.370	7.00	746	0.05	200	
Ba	137	115	1	He	146.826	146.826	0.74	108942	0.13	10000	
W	182	159	1	He	0.693	0.693	18.74	5083	0.01	2500	
Tl	205	165	1	He	0.248	0.248	13.69	2350	0.01	2000	
Pb	208	165	1	He	1.504	1.504	4.16	19516	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2017498	1.30	1674650	120.47	60	120	ISTD warning
Sc	45	1	He	372163	0.68	355173	104.78	60	120	
Sc	45	2	NoGas	10197610	0.36	8635903	118.08	60	120	
Rh	103	1	He	1430513	1.15	1470259	97.30	60	120	
In	115	1	He	486048	0.95	490642	99.06	60	120	
Tb	159	1	He	1427077	1.93	1434034	99.51	60	120	
Ho	165	1	He	1370370	0.96	1409606	97.22	60	120	
Bi	209	1	He	835839	0.31	906964	92.16	60	120	

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Sample Report

Sample Table

Sample Name	SD 240-66199-i-1-a@5
Data File Name	089SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:16:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	1.480	1.480	1.00	150919	0.00	10000	
Be	9	45	2	NoGas	0.093	0.093	33.26	622	0.01	2000	
B	11	45	2	NoGas	32.777	32.777	1.47	127073	0.03	300	
Na	23	45	1	He	1259.174	1259.174	2.50	1288254	0.10	500000	
Mg	24	45	1	He	9376.446	9376.446	2.16	5109664	0.18	500000	
Al	27	45	1	He	373.495	373.495	3.11	84879	0.44	200000	
K	39	45	1	He	372.319	372.319	4.51	147257	0.25	500000	
Ca	44	45	1	He	23124.419	23124.419	1.61	406521	5.69	500000	
Ti	47	45	1	He	8.034	8.034	25.60	957	0.84	2500	
V	51	45	1	He	0.742	0.742	33.48	3462	0.02	10000	
Cr	52	45	1	He	3.153	3.153	4.93	18544	0.02	10000	
Mn	55	45	1	He	15.776	15.776	1.64	39971	0.04	10000	
Fe	56	45	1	He	1059.633	1059.633	2.64	3837756	0.03	200000	
Co	59	45	1	He	0.334	0.334	3.27	2655	0.01	5000	
Ni	60	45	1	He	3.236	3.236	0.23	7041	0.05	10000	
Cu	63	45	1	He	0.685	0.685	2.10	6933	0.01	10000	
Zn	66	45	1	He	4.014	4.014	10.85	3628	0.11	10000	
As	75	115	1	He	5.012	5.012	3.78	2643	0.19	10000	
Se	78	115	1	He	0.394	0.394	25.79	35	1.11	10000	
Sr	88	103	1	He	247.523	247.523	1.58	630225	0.04	10000	
Mo	95	103	1	He	1.880	1.880	6.04	4454	0.04	2000	
Ag	107	103	1	He	0.006	0.006	35.86	66	0.01	300	
Cd	111	115	1	He	0.103	0.103	21.20	92	0.11	4000	
Sn	118	115	1	He	-1.195	-1.195	-15.18	4756	-0.03	2000	
Sb	123	115	1	He	0.104	0.104	5.00	243	0.04	200	
Ba	137	115	1	He	29.167	29.167	2.35	22500	0.13	10000	
W	182	159	1	He	0.116	0.116	31.50	2041	0.01	2500	
Tl	205	165	1	He	0.063	0.063	9.68	642	0.01	2000	
Pb	208	165	1	He	0.322	0.322	1.93	4678	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2054757	1.19	1674650	122.70	60	120	ISTD warning
Sc	45	1	He	380594	0.80	355173	107.16	60	120	
Sc	45	2	NoGas	10359403	0.29	8635903	119.96	60	120	
Rh	103	1	He	1496610	0.40	1470259	101.79	60	120	
In	115	1	He	505025	1.17	490642	102.93	60	120	
Tb	159	1	He	1436769	0.78	1434034	100.19	60	120	
Ho	165	1	He	1400213	0.69	1409606	99.33	60	120	
Bi	209	1	He	877471	1.23	906964	96.75	60	120	

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Sample Report

Sample Table

Sample Name	PDS 240-66199-i-1-a
Data File Name	090SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:20:08-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	112.686	112.686	0.87	2711859	0.00	10000	
Be	9	45	2	NoGas	1049.880	1049.880	1.35	6474383	0.02	2000	
B	11	45	2	NoGas	154.285	154.285	1.29	577957	0.03	300	
Na	23	45	1	He	15653.451	15653.451	2.79	15704705	0.10	500000	
Mg	24	45	1	He	53356.764	53356.764	4.18	28801366	0.19	500000	
Al	27	45	1	He	12086.414	12086.414	2.96	2714329	0.45	200000	
K	39	45	1	He	11841.663	11841.663	2.97	3824735	0.31	500000	
Ca	44	45	1	He	123855.525	123855.525	4.31	2155544	5.75	500000	
Ti	47	45	1	He	134.652	134.652	7.14	15867	0.85	2500	
V	51	45	1	He	1049.966	1049.966	2.88	4130990	0.03	10000	
Cr	52	45	1	He	991.421	991.421	3.57	4638868	0.02	10000	
Mn	55	45	1	He	1101.359	1101.359	4.06	2726698	0.04	10000	
Fe	56	45	1	He	14677.603	14677.603	4.16	52629353	0.03	200000	
Co	59	45	1	He	970.306	970.306	3.11	7418361	0.01	5000	
Ni	60	45	1	He	971.769	971.769	2.71	2022418	0.05	10000	
Cu	63	45	1	He	936.154	936.154	3.95	5379047	0.02	10000	
Zn	66	45	1	He	999.020	999.020	3.64	749036	0.13	10000	
As	75	115	1	He	1121.953	1121.953	3.25	536312	0.21	10000	
Se	78	115	1	He	1042.277	1042.277	2.20	27415	3.80	10000	
Sr	88	103	1	He	2216.638	2216.638	0.79	5425110	0.04	10000	
Mo	95	103	1	He	113.541	113.541	1.29	257312	0.04	2000	
Ag	107	103	1	He	94.427	94.427	0.15	655857	0.01	300	
Cd	111	115	1	He	1024.122	1024.122	2.98	865142	0.12	4000	
Sn	118	115	1	He	1083.610	1083.610	3.28	1860197	0.06	2000	
Sb	123	115	1	He	105.556	105.556	2.96	200610	0.05	200	
Ba	137	115	1	He	1168.561	1168.561	3.19	857630	0.14	10000	
W	182	159	1	He	102.277	102.277	2.98	539560	0.02	2500	
Tl	205	165	1	He	238.870	238.870	2.43	2268096	0.01	2000	
Pb	208	165	1	He	941.752	941.752	2.81	12137235	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2010429	0.80	1674650	120.05	60	120	ISTD warning
Sc	45	1	He	377155	1.69	355173	106.19	60	120	
Sc	45	2	NoGas	10381323	0.72	8635903	120.21	60	120	ISTD warning
Rh	103	1	He	1438957	1.86	1470259	97.87	60	120	
In	115	1	He	480997	1.65	490642	98.03	60	120	
Tb	159	1	He	1416507	3.08	1434034	98.78	60	120	
Ho	165	1	He	1397698	1.69	1409606	99.16	60	120	
Bi	209	1	He	840280	1.09	906964	92.65	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-d ms
Data File Name	091SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:23:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	111.085	111.085	1.00	2671087	0.00	10000	
Be	9	45	2	NoGas	1041.033	1041.033	0.49	6410503	0.02	2000	
B	11	45	2	NoGas	152.551	152.551	0.21	570702	0.03	300	
Na	23	45	1	He	16114.152	16114.152	1.03	16248013	0.10	500000	
Mg	24	45	1	He	56741.941	56741.941	2.71	30784975	0.18	500000	
Al	27	45	1	He	12504.258	12504.258	2.85	2822097	0.44	200000	
K	39	45	1	He	12024.566	12024.566	1.52	3902732	0.31	500000	
Ca	44	45	1	He	133118.483	133118.483	2.60	2328527	5.72	500000	
Ti	47	45	1	He	139.858	139.858	1.67	16569	0.84	2500	
V	51	45	1	He	1037.678	1037.678	2.35	4102915	0.03	10000	
Cr	52	45	1	He	979.993	979.993	2.63	4608467	0.02	10000	
Mn	55	45	1	He	1083.790	1083.790	3.17	2696620	0.04	10000	
Fe	56	45	1	He	14946.981	14946.981	3.67	53865345	0.03	200000	
Co	59	45	1	He	952.196	952.196	2.69	7315999	0.01	5000	
Ni	60	45	1	He	962.347	962.347	2.45	2012716	0.05	10000	
Cu	63	45	1	He	914.097	914.097	1.44	5279307	0.02	10000	
Zn	66	45	1	He	986.726	986.726	2.44	743522	0.13	10000	
As	75	115	1	He	1103.781	1103.781	0.59	529127	0.21	10000	
Se	78	115	1	He	1024.554	1024.554	0.46	27022	3.79	10000	
Sr	88	103	1	He	2312.010	2312.010	1.34	5677887	0.04	10000	
Mo	95	103	1	He	112.049	112.049	1.86	254774	0.04	2000	
Ag	107	103	1	He	100.123	100.123	1.24	697824	0.01	300	
Cd	111	115	1	He	999.329	999.329	0.49	846564	0.12	4000	
Sn	118	115	1	He	1060.659	1060.659	1.24	1826146	0.06	2000	
Sb	123	115	1	He	103.597	103.597	0.60	197442	0.05	200	
Ba	137	115	1	He	1165.483	1165.483	0.76	857786	0.14	10000	
W	182	159	1	He	99.831	99.831	4.80	520550	0.02	2500	
Tl	205	165	1	He	234.601	234.601	0.81	2222700	0.01	2000	
Pb	208	165	1	He	928.120	928.120	0.87	11935710	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2031405	1.74	1674650	121.30	60	120	ISTD warning
Sc	45	1	He	378957	1.19	355173	106.70	60	120	
Sc	45	2	NoGas	10365715	0.57	8635903	120.03	60	120	ISTD warning
Rh	103	1	He	1444106	1.66	1470259	98.22	60	120	
In	115	1	He	482178	0.76	490642	98.27	60	120	
Tb	159	1	He	1400320	1.56	1434034	97.65	60	120	
Ho	165	1	He	1394265	0.20	1409606	98.91	60	120	
Bi	209	1	He	832736	0.92	906964	91.82	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-1-e msd
Data File Name	092SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:27:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	109.898	109.898	0.96	2642893	0.00	10000	
Be	9	45	2	NoGas	1026.494	1026.494	1.16	6318990	0.02	2000	
B	11	45	2	NoGas	147.851	147.851	0.64	553126	0.03	300	
Na	23	45	1	He	15902.905	15902.905	2.53	15714795	0.10	500000	
Mg	24	45	1	He	56030.719	56030.719	3.59	29790729	0.19	500000	
Al	27	45	1	He	12319.724	12319.724	3.55	2724905	0.45	200000	
K	39	45	1	He	11946.407	11946.407	2.86	3800204	0.31	500000	
Ca	44	45	1	He	131216.526	131216.526	3.74	2249453	5.83	500000	
Ti	47	45	1	He	138.440	138.440	2.59	16072	0.86	2500	
V	51	45	1	He	1035.092	1035.092	3.53	4010897	0.03	10000	
Cr	52	45	1	He	982.157	982.157	3.26	4526396	0.02	10000	
Mn	55	45	1	He	1086.913	1086.913	3.35	2650559	0.04	10000	
Fe	56	45	1	He	14890.539	14890.539	3.90	52589241	0.03	200000	
Co	59	45	1	He	949.638	949.638	3.24	7150895	0.01	5000	
Ni	60	45	1	He	952.805	952.805	3.33	1952909	0.05	10000	
Cu	63	45	1	He	915.625	915.625	3.96	5181720	0.02	10000	
Zn	66	45	1	He	982.147	982.147	2.49	725376	0.14	10000	
As	75	115	1	He	1081.439	1081.439	1.53	517447	0.21	10000	
Se	78	115	1	He	1005.344	1005.344	1.10	26468	3.80	10000	
Sr	88	103	1	He	2268.404	2268.404	0.89	5464928	0.04	10000	
Mo	95	103	1	He	111.631	111.631	0.53	249000	0.04	2000	
Ag	107	103	1	He	98.819	98.819	0.25	675648	0.01	300	
Cd	111	115	1	He	979.944	979.944	1.90	828573	0.12	4000	
Sn	118	115	1	He	1039.174	1039.174	2.86	1785743	0.06	2000	
Sb	123	115	1	He	100.922	100.922	2.34	191973	0.05	200	
Ba	137	115	1	He	1137.681	1137.681	2.28	835723	0.14	10000	
W	182	159	1	He	98.120	98.120	1.85	509360	0.02	2500	
Tl	205	165	1	He	231.874	231.874	1.17	2188138	0.01	2000	
Pb	208	165	1	He	911.771	911.771	0.73	11679008	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2019831	1.54	1674650	120.61	60	120	ISTD warning
Sc	45	1	He	371486	1.93	355173	104.59	60	120	
Sc	45	2	NoGas	10362846	0.65	8635903	120.00	60	120	
Rh	103	1	He	1416485	1.15	1470259	96.34	60	120	
In	115	1	He	481330	0.90	490642	98.10	60	120	
Tb	159	1	He	1393191	1.06	1434034	97.15	60	120	
Ho	165	1	He	1388766	0.60	1409606	98.52	60	120	
Bi	209	1	He	828031	1.19	906964	91.30	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-2-a
Data File Name	093SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:31:40-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	2.563	2.563	3.72	180902	0.00	10000	
Be	9	45	2	NoGas	0.263	0.263	5.02	1715	0.02	2000	
B	11	45	2	NoGas	68.071	68.071	1.26	265182	0.03	300	
Na	23	45	1	He	9072.799	9072.799	0.84	9228182	0.10	500000	
Mg	24	45	1	He	54106.926	54106.926	1.63	29594178	0.18	500000	
Al	27	45	1	He	673.086	673.086	2.61	153355	0.44	200000	
K	39	45	1	He	1624.833	1624.833	1.81	554845	0.29	500000	
Ca	44	45	1	He	140326.904	140326.904	1.73	2474596	5.67	500000	
Ti	47	45	1	He	10.680	10.680	12.99	1277	0.84	2500	
V	51	45	1	He	1.870	1.870	1.56	7975	0.02	10000	
Cr	52	45	1	He	1.201	1.201	1.52	9370	0.01	10000	
Mn	55	45	1	He	1379.963	1379.963	2.61	3461601	0.04	10000	
Fe	56	45	1	He	1112.160	1112.160	2.58	4043079	0.03	200000	
Co	59	45	1	He	1.512	1.512	1.17	11785	0.01	5000	
Ni	60	45	1	He	13.235	13.235	2.84	28148	0.05	10000	
Cu	63	45	1	He	3.754	3.754	2.45	24822	0.02	10000	
Zn	66	45	1	He	15.839	15.839	2.82	12620	0.13	10000	
As	75	115	1	He	1.742	1.742	3.75	988	0.18	10000	
Se	78	115	1	He	1.090	1.090	23.44	54	2.02	10000	
Sr	88	103	1	He	252.438	252.438	1.55	628313	0.04	10000	
Mo	95	103	1	He	1.057	1.057	2.05	2458	0.04	2000	
Ag	107	103	1	He	0.032	0.032	25.05	252	0.01	300	
Cd	111	115	1	He	0.572	0.572	17.04	501	0.11	4000	
Sn	118	115	1	He	-0.032	-0.032	-2226.00	6739	0.00	2000	
Sb	123	115	1	He	0.437	0.437	14.03	896	0.05	200	
Ba	137	115	1	He	75.426	75.426	1.81	57319	0.13	10000	
W	182	159	1	He	0.683	0.683	32.69	5027	0.01	2500	
Tl	205	165	1	He	0.438	0.438	9.97	4201	0.01	2000	
Pb	208	165	1	He	0.889	0.889	4.66	11976	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2111341	1.18	1674650	126.08	60	120	ISTD warning
Sc	45	1	He	381997	0.34	355173	107.55	60	120	
Sc	45	2	NoGas	10661272	1.22	8635903	123.45	60	120	ISTD warning
Rh	103	1	He	1462993	0.43	1470259	99.51	60	120	
In	115	1	He	497795	1.71	490642	101.46	60	120	
Tb	159	1	He	1428876	1.77	1434034	99.64	60	120	
Ho	165	1	He	1397804	0.69	1409606	99.16	60	120	
Bi	209	1	He	847772	0.56	906964	93.47	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	094_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:35:43-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	53.022	1.392	1333874	0.41	50	106.0	89.5	110.5	
Be	9	45	2	NoGas	50.104	1.199	308107	1.71	50	100.2	89.5	110.5	
B	11	45	2	NoGas	68.308	0.848	258323	0.88	50	136.6	89.5	110.5	CCV Failed
Na	23	45	1	He	25147.779	3.614	25634406	2.07	25000	100.6	89.5	110.5	
Mg	24	45	1	He	25108.439	3.853	13776012	1.70	25000	100.4	89.5	110.5	
Al	27	45	1	He	248.058	4.298	56827	1.72	250	99.2	89.5	110.5	
K	39	45	1	He	25396.424	2.518	8306971	0.10	25000	101.6	89.5	110.5	
Ca	44	45	1	He	25012.860	2.724	442773	0.14	25000	100.1	89.5	110.5	
Ti	47	45	1	He	51.563	3.478	6181	4.37	50	103.1	89.5	110.5	
V	51	45	1	He	50.337	4.257	201747	1.91	50	100.7	89.5	110.5	
Cr	52	45	1	He	49.306	3.755	237984	1.27	50	98.6	89.5	110.5	
Mn	55	45	1	He	249.597	3.313	628537	0.78	250	99.8	89.5	110.5	
Fe	56	45	1	He	12393.694	2.916	45175495	0.48	12500	99.1	89.5	110.5	
Co	59	45	1	He	49.727	2.952	386492	0.51	50	99.5	89.5	110.5	
Ni	60	45	1	He	49.193	3.844	104273	1.37	50	98.4	89.5	110.5	
Cu	63	45	1	He	49.359	3.529	291097	1.05	50	98.7	89.5	110.5	
Zn	66	45	1	He	51.564	2.110	39871	0.69	50	103.1	89.5	110.5	
As	75	115	1	He	53.924	1.133	26674	1.05	50	107.8	89.5	110.5	
Se	78	115	1	He	52.746	2.325	1452	2.04	50	105.5	89.5	110.5	
Sr	88	103	1	He	50.968	2.656	129998	1.61	50	101.9	89.5	110.5	
Mo	95	103	1	He	50.871	2.536	119936	1.08	50	101.7	89.5	110.5	
Ag	107	103	1	He	50.119	1.988	362202	0.72	50	100.2	89.5	110.5	
Cd	111	115	1	He	51.446	1.098	44773	1.17	50	102.9	89.5	110.5	
Sn	118	115	1	He	50.002	1.140	94889	0.77	50	100.0	89.5	110.5	
Sb	123	115	1	He	52.601	2.538	103001	2.30	50	105.2	89.5	110.5	
Ba	137	115	1	He	51.167	0.444	38705	0.15	50	102.3	89.5	110.5	
W	182	159	1	He	51.186	3.207	271748	2.62	50	102.4	89.5	110.5	
Tl	205	165	1	He	50.292	2.069	479369	1.81	50	100.6	89.5	110.5	
Pb	208	165	1	He	50.080	0.871	648401	0.79	50	100.2	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2048569	1.46	1674650	122.33	60	120	ISTD warning
Sc	45	1	He	383409	2.63	355173	107.95	60	120	
Sc	45	2	NoGas	10349643	0.92	8635903	119.84	60	120	
Rh	103	1	He	1497418	1.48	1470259	101.85	60	120	
In	115	1	He	495356	0.30	490642	100.96	60	120	
Tb	159	1	He	1421632	0.58	1434034	99.14	60	120	
Ho	165	1	He	1402694	0.73	1409606	99.51	60	120	
Bi	209	1	He	853052	1.33	906964	94.06	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	095_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:39:48-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.285	16.3	126585	1.2	8	
Be	9	45	2	NoGas	0.104	10.7	707	10.2	1	
B	11	45	2	NoGas	13.923	1.3	58749	0.9	20	
Na	23	45	1	He	41.039	1.8	56651	1.0	1000	
Mg	24	45	1	He	4.439	12.9	2908	11.1	1000	
Al	27	45	1	He	0.134	106.1	256	12.8	50	
K	39	45	1	He	16.885	20.1	32638	3.8	1000	
Ca	44	45	1	He	9.637	28.6	478	10.0	1000	
Ti	47	45	1	He	0.036	159.3	6	124.9	20	
V	51	45	1	He	0.110	76.8	968	34.9	2	
Cr	52	45	1	He	0.080	36.9	4099	3.2	2	
Mn	55	45	1	He	0.133	15.6	893	5.5	2	
Fe	56	45	1	He	3.791	30.3	16463	26.0	50	
Co	59	45	1	He	0.050	18.8	469	15.5	1	
Ni	60	45	1	He	-0.030	-68.5	184	23.6	2	
Cu	63	45	1	He	0.144	26.0	3854	6.1	2	
Zn	66	45	1	He	0.123	28.4	697	3.6	20	
As	75	115	1	He	0.028	109.1	145	12.4	2	
Se	78	115	1	He	0.269	35.2	33	8.8	2	
Sr	88	103	1	He	0.398	1.6	1295	1.5	10	
Mo	95	103	1	He	0.110	17.0	294	15.4	2	
Ag	107	103	1	He	0.007	9.1	77	7.5	0.2	
Cd	111	115	1	He	0.117	8.2	107	7.4	0.2	
Sn	118	115	1	He	0.765	27.3	8447	3.4	10	
Sb	123	115	1	He	0.136	13.3	314	11.7	2	
Ba	137	115	1	He	0.097	38.6	96	29.7	5	
W	182	159	1	He	0.290	29.2	3023	16.1	10	
Tl	205	165	1	He	0.129	6.7	1287	6.3	0.5	
Pb	208	165	1	He	0.065	12.5	1371	6.6	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2134407	0.85	1674650	127.45	60	120	ISTD warning
Sc	45	1	He	385835	0.37	355173	108.63	60	120	
Sc	45	2	NoGas	10621985	0.31	8635903	123.00	60	120	ISTD warning
Rh	103	1	He	1562524	1.46	1470259	106.28	60	120	
In	115	1	He	515458	1.40	490642	105.06	60	120	
Tb	159	1	He	1461814	1.05	1434034	101.94	60	120	
Ho	165	1	He	1416368	1.58	1409606	100.48	60	120	
Bi	209	1	He	898633	0.68	906964	99.08	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-3-a
Data File Name	096SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:43:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.861	7.861	0.46	313581	0.00	10000	
Be	9	45	2	NoGas	0.262	0.262	8.77	1752	0.01	2000	
B	11	45	2	NoGas	42.971	42.971	1.55	173684	0.02	300	
Na	23	45	1	He	9570.363	9570.363	1.57	9909911	0.10	500000	
Mg	24	45	1	He	39550.709	39550.709	2.84	22024324	0.18	500000	
Al	27	45	1	He	3710.517	3710.517	3.07	859680	0.43	200000	
K	39	45	1	He	2969.630	2969.630	0.98	1009866	0.29	500000	
Ca	44	45	1	He	105592.041	105592.041	2.69	1895847	5.57	500000	
Ti	47	45	1	He	55.117	55.117	3.74	6701	0.82	2500	
V	51	45	1	He	8.419	8.419	4.76	34692	0.02	10000	
Cr	52	45	1	He	6.834	6.834	3.13	36704	0.02	10000	
Mn	55	45	1	He	361.991	361.991	2.73	924906	0.04	10000	
Fe	56	45	1	He	5548.926	5548.926	2.25	20528075	0.03	200000	
Co	59	45	1	He	6.353	6.353	1.11	50180	0.01	5000	
Ni	60	45	1	He	6.313	6.313	2.58	13799	0.05	10000	
Cu	63	45	1	He	13.684	13.684	2.17	84097	0.02	10000	
Zn	66	45	1	He	64.497	64.497	2.88	50452	0.13	10000	
As	75	115	1	He	4.476	4.476	2.56	2375	0.19	10000	
Se	78	115	1	He	0.797	0.797	25.47	47	1.71	10000	
Sr	88	103	1	He	1218.030	1218.030	2.08	3069592	0.04	10000	
Mo	95	103	1	He	2.931	2.931	4.84	6863	0.04	2000	
Ag	107	103	1	He	0.024	0.024	6.77	197	0.01	300	
Cd	111	115	1	He	0.939	0.939	2.70	834	0.11	4000	
Sn	118	115	1	He	-2.671	-2.671	-1.71	2108	-0.13	2000	
Sb	123	115	1	He	0.482	0.482	9.67	998	0.05	200	
Ba	137	115	1	He	131.111	131.111	1.61	101090	0.13	10000	
W	182	159	1	He	0.092	0.092	28.24	1911	0.00	2500	
Tl	205	165	1	He	0.306	0.306	1.27	2936	0.01	2000	
Pb	208	165	1	He	7.088	7.088	2.34	91582	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2151965	0.97	1674650	128.50	60	120	ISTD warning
Sc	45	1	He	388939	0.59	355173	109.51	60	120	
Sc	45	2	NoGas	10918106	0.42	8635903	126.43	60	120	ISTD warning
Rh	103	1	He	1481701	0.16	1470259	100.78	60	120	
In	115	1	He	505088	0.77	490642	102.94	60	120	
Tb	159	1	He	1437906	1.73	1434034	100.27	60	120	
Ho	165	1	He	1393345	1.21	1409606	98.85	60	120	
Bi	209	1	He	868446	1.60	906964	95.75	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-4-a
Data File Name	097SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:47:57-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.226	0.226	20.28	128565	0.00	10000	
Be	9	45	2	NoGas	0.066	0.066	10.12	482	0.01	2000	
B	11	45	2	NoGas	15.485	15.485	2.40	66415	0.02	300	
Na	23	45	1	He	66.023	66.023	4.79	84080	0.08	500000	
Mg	24	45	1	He	17.507	17.507	7.05	10363	0.17	500000	
Al	27	45	1	He	7.212	7.212	3.21	1923	0.37	200000	
K	39	45	1	He	24.836	24.836	1.74	36037	0.07	500000	
Ca	44	45	1	He	48.327	48.327	5.89	1195	4.05	500000	
Ti	47	45	1	He	0.325	0.325	33.36	41	0.79	2500	
V	51	45	1	He	0.195	0.195	41.01	1337	0.01	10000	
Cr	52	45	1	He	0.216	0.216	7.32	4857	0.00	10000	
Mn	55	45	1	He	7.616	7.616	3.63	20287	0.04	10000	
Fe	56	45	1	He	17.909	17.909	3.17	69816	0.03	200000	
Co	59	45	1	He	0.081	0.081	13.70	729	0.01	5000	
Ni	60	45	1	He	0.137	0.137	11.23	552	0.02	10000	
Cu	63	45	1	He	0.965	0.965	3.72	8870	0.01	10000	
Zn	66	45	1	He	3.653	3.653	1.49	3479	0.10	10000	
As	75	115	1	He	-0.003	-0.003	-302.75	131	0.00	10000	
Se	78	115	1	He	0.164	0.164	76.81	30	0.54	10000	
Sr	88	103	1	He	0.541	0.541	15.29	1691	0.03	10000	
Mo	95	103	1	He	0.024	0.024	47.45	86	0.03	2000	
Ag	107	103	1	He	0.005	0.005	24.80	66	0.01	300	
Cd	111	115	1	He	0.065	0.065	11.71	61	0.11	4000	
Sn	118	115	1	He	-2.453	-2.453	-1.76	2604	-0.09	2000	
Sb	123	115	1	He	0.045	0.045	35.86	132	0.03	200	
Ba	137	115	1	He	0.287	0.287	12.15	251	0.11	10000	
W	182	159	1	He	0.034	0.034	54.68	1656	0.00	2500	
Tl	205	165	1	He	0.046	0.046	13.67	476	0.01	2000	
Pb	208	165	1	He	0.202	0.202	2.69	3134	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2157936	0.92	1674650	128.86	60	120	ISTD warning
Sc	45	1	He	394527	2.47	355173	111.08	60	120	
Sc	45	2	NoGas	10907528	0.99	8635903	126.30	60	120	ISTD warning
Rh	103	1	He	1576624	0.25	1470259	107.23	60	120	
In	115	1	He	526328	1.37	490642	107.27	60	120	
Tb	159	1	He	1485076	1.16	1434034	103.56	60	120	
Ho	165	1	He	1403702	1.15	1409606	99.58	60	120	
Bi	209	1	He	925102	1.14	906964	102.00	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-5-a
Data File Name	098SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:52:02-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.242	0.242	27.03	128303	0.00	10000	
Be	9	45	2	NoGas	0.059	0.059	37.91	433	0.01	2000	
B	11	45	2	NoGas	14.872	14.872	3.13	63728	0.02	300	
Na	23	45	1	He	35.947	35.947	5.87	52888	0.07	500000	
Mg	24	45	1	He	2.385	2.385	12.17	1822	0.13	500000	
Al	27	45	1	He	0.399	0.399	6.99	326	0.12	200000	
K	39	45	1	He	10.515	10.515	30.18	31432	0.03	500000	
Ca	44	45	1	He	4.347	4.347	29.94	395	1.10	500000	
Ti	47	45	1	He	0.053	0.053	118.34	8	0.68	2500	
V	51	45	1	He	0.059	0.059	69.38	786	0.01	10000	
Cr	52	45	1	He	0.348	0.348	18.15	5532	0.01	10000	
Mn	55	45	1	He	0.597	0.597	8.14	2129	0.03	10000	
Fe	56	45	1	He	5.011	5.011	3.93	21524	0.02	200000	
Co	59	45	1	He	0.036	0.036	8.53	369	0.01	5000	
Ni	60	45	1	He	0.015	0.015	47.20	287	0.01	10000	
Cu	63	45	1	He	0.064	0.064	43.57	3479	0.00	10000	
Zn	66	45	1	He	0.755	0.755	8.40	1216	0.06	10000	
As	75	115	1	He	-0.024	-0.024	-62.31	121	-0.02	10000	
Se	78	115	1	He	0.059	0.059	383.11	27	0.22	10000	
Sr	88	103	1	He	0.220	0.220	7.79	831	0.03	10000	
Mo	95	103	1	He	0.018	0.018	26.56	71	0.03	2000	
Ag	107	103	1	He	0.005	0.005	45.32	62	0.01	300	
Cd	111	115	1	He	0.064	0.064	15.37	60	0.11	4000	
Sn	118	115	1	He	-3.423	-3.423	-1.45	789	-0.43	2000	
Sb	123	115	1	He	0.052	0.052	12.83	147	0.04	200	
Ba	137	115	1	He	0.040	0.040	59.98	52	0.08	10000	
W	182	159	1	He	0.025	0.025	163.88	1608	0.00	2500	
Tl	205	165	1	He	0.029	0.029	12.48	323	0.01	2000	
Pb	208	165	1	He	0.033	0.033	3.80	964	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2190185	1.01	1674650	130.78	60	120	ISTD warning
Sc	45	1	He	396929	1.37	355173	111.76	60	120	
Sc	45	2	NoGas	10854165	1.03	8635903	125.69	60	120	ISTD warning
Rh	103	1	He	1581468	2.09	1470259	107.56	60	120	
In	115	1	He	528370	1.72	490642	107.69	60	120	
Tb	159	1	He	1484517	0.48	1434034	103.52	60	120	
Ho	165	1	He	1430472	1.42	1409606	101.48	60	120	
Bi	209	1	He	932811	0.91	906964	102.85	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-6-a
Data File Name	099SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T16:56:07-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.312	15.312	0.44	488467	0.00	10000	
Be	9	45	2	NoGas	0.156	0.156	22.08	1052	0.01	2000	
B	11	45	2	NoGas	56.403	56.403	2.52	223544	0.03	300	
Na	23	45	1	He	25727.958	25727.958	2.81	26851982	0.10	500000	
Mg	24	45	1	He	49584.638	49584.638	3.26	27856522	0.18	500000	
Al	27	45	1	He	2234.336	2234.336	3.29	522355	0.43	200000	
K	39	45	1	He	3640.995	3640.995	2.23	1242957	0.29	500000	
Ca	44	45	1	He	122955.967	122955.967	3.22	2227178	5.52	500000	
Ti	47	45	1	He	47.476	47.476	5.28	5823	0.82	2500	
V	51	45	1	He	4.561	4.561	7.81	19199	0.02	10000	
Cr	52	45	1	He	5.117	5.117	4.54	28677	0.02	10000	
Mn	55	45	1	He	340.160	340.160	2.49	876925	0.04	10000	
Fe	56	45	1	He	4393.870	4393.870	3.53	16399119	0.03	200000	
Co	59	45	1	He	2.998	2.998	2.81	23934	0.01	5000	
Ni	60	45	1	He	29.743	29.743	3.01	64660	0.05	10000	
Cu	63	45	1	He	10.491	10.491	3.66	65759	0.02	10000	
Zn	66	45	1	He	24.380	24.380	2.92	19622	0.12	10000	
As	75	115	1	He	7.179	7.179	4.19	3744	0.19	10000	
Se	78	115	1	He	1.008	1.008	19.06	53	1.92	10000	
Sr	88	103	1	He	5624.972	5624.972	2.19	14288377	0.04	10000	
Mo	95	103	1	He	15.612	15.612	3.36	36739	0.04	2000	
Ag	107	103	1	He	0.020	0.020	10.20	166	0.01	300	
Cd	111	115	1	He	0.465	0.465	9.02	414	0.11	4000	
Sn	118	115	1	He	-2.627	-2.627	-3.65	2193	-0.12	2000	
Sb	123	115	1	He	0.401	0.401	3.25	840	0.05	200	
Ba	137	115	1	He	170.038	170.038	1.76	131537	0.13	10000	
W	182	159	1	He	0.032	0.032	73.71	1626	0.00	2500	
Tl	205	165	1	He	0.157	0.157	0.51	1532	0.01	2000	
Pb	208	165	1	He	7.181	7.181	1.04	93178	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2155928	1.14	1674650	128.74	60	120	ISTD warning
Sc	45	1	He	392460	1.34	355173	110.50	60	120	
Sc	45	2	NoGas	10795244	0.16	8635903	125.00	60	120	ISTD warning
Rh	103	1	He	1493770	0.95	1470259	101.60	60	120	
In	115	1	He	506747	0.09	490642	103.28	60	120	
Tb	159	1	He	1467381	0.78	1434034	102.33	60	120	
Ho	165	1	He	1399163	1.74	1409606	99.26	60	120	
Bi	209	1	He	866911	0.90	906964	95.58	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-7-a
Data File Name	100SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:00:12-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	15.898	15.898	2.22	525950	0.00	10000	
Be	9	45	2	NoGas	0.165	0.165	3.62	1159	0.01	2000	
B	11	45	2	NoGas	57.618	57.618	1.44	238884	0.02	300	
Na	23	45	1	He	26899.941	26899.941	1.89	28663449	0.09	500000	
Mg	24	45	1	He	49845.939	49845.939	1.02	28592911	0.17	500000	
Al	27	45	1	He	2926.397	2926.397	2.74	698442	0.42	200000	
K	39	45	1	He	4437.696	4437.696	2.30	1540460	0.29	500000	
Ca	44	45	1	He	122906.999	122906.999	1.49	2273069	5.41	500000	
Ti	47	45	1	He	66.783	66.783	23.10	8357	0.80	2500	
V	51	45	1	He	6.012	6.012	3.80	25674	0.02	10000	
Cr	52	45	1	He	6.985	6.985	4.02	38559	0.02	10000	
Mn	55	45	1	He	410.311	410.311	1.71	1079831	0.04	10000	
Fe	56	45	1	He	5653.099	5653.099	1.71	21542104	0.03	200000	
Co	59	45	1	He	3.624	3.624	1.26	29516	0.01	5000	
Ni	60	45	1	He	32.806	32.806	2.44	72787	0.05	10000	
Cu	63	45	1	He	13.340	13.340	2.92	84522	0.02	10000	
Zn	66	45	1	He	29.962	29.962	3.30	24476	0.12	10000	
As	75	115	1	He	9.602	9.602	2.94	5093	0.19	10000	
Se	78	115	1	He	0.668	0.668	0.94	44	1.51	10000	
Sr	88	103	1	He	5799.150	5799.150	1.30	15205013	0.04	10000	
Mo	95	103	1	He	17.532	17.532	1.10	42579	0.04	2000	
Ag	107	103	1	He	0.030	0.030	4.80	248	0.01	300	
Cd	111	115	1	He	1.266	1.266	3.35	1157	0.11	4000	
Sn	118	115	1	He	-2.798	-2.798	-1.68	1934	-0.14	2000	
Sb	123	115	1	He	0.376	0.376	4.68	810	0.05	200	
Ba	137	115	1	He	185.050	185.050	1.29	146877	0.13	10000	
W	182	159	1	He	0.092	0.092	25.78	1982	0.00	2500	
Tl	205	165	1	He	0.170	0.170	5.55	1691	0.01	2000	
Pb	208	165	1	He	9.340	9.340	1.51	123768	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2229861	0.75	1674650	133.15	60	120	ISTD warning
Sc	45	1	He	400623	0.58	355173	112.80	60	120	
Sc	45	2	NoGas	11300839	1.35	8635903	130.86	60	120	ISTD warning
Rh	103	1	He	1541587	0.49	1470259	104.85	60	120	
In	115	1	He	519958	0.40	490642	105.97	60	120	
Tb	159	1	He	1489779	0.97	1434034	103.89	60	120	
Ho	165	1	He	1431035	2.63	1409606	101.52	60	120	
Bi	209	1	He	889692	0.63	906964	98.10	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-8-a
Data File Name	101SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:04:15-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.208	11.208	0.53	406485	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	35.67	319	0.01	2000	
B	11	45	2	NoGas	49.247	49.247	1.05	204111	0.02	300	
Na	23	45	1	He	9978.702	9978.702	1.96	10786612	0.09	500000	
Mg	24	45	1	He	43703.234	43703.234	2.64	25407082	0.17	500000	
Al	27	45	1	He	10.213	10.213	5.32	2706	0.38	200000	
K	39	45	1	He	1239.902	1239.902	1.19	456817	0.27	500000	
Ca	44	45	1	He	112109.650	112109.650	2.05	2101478	5.33	500000	
Ti	47	45	1	He	0.393	0.393	64.54	51	0.77	2500	
V	51	45	1	He	0.112	0.112	117.18	1024	0.01	10000	
Cr	52	45	1	He	-0.028	-0.028	-115.24	3768	0.00	10000	
Mn	55	45	1	He	20.231	20.231	3.43	54516	0.04	10000	
Fe	56	45	1	He	2636.281	2636.281	2.29	10183162	0.03	200000	
Co	59	45	1	He	0.049	0.049	7.73	486	0.01	5000	
Ni	60	45	1	He	0.088	0.088	24.28	457	0.02	10000	
Cu	63	45	1	He	-0.087	-0.087	-17.03	2626	0.00	10000	
Zn	66	45	1	He	1.232	1.232	8.92	1628	0.08	10000	
As	75	115	1	He	21.331	21.331	0.92	11416	0.19	10000	
Se	78	115	1	He	0.090	0.090	158.71	29	0.32	10000	
Sr	88	103	1	He	6128.825	6128.825	2.65	16349682	0.04	10000	
Mo	95	103	1	He	22.175	22.175	2.84	54791	0.04	2000	
Ag	107	103	1	He	0.006	0.006	44.40	73	0.01	300	
Cd	111	115	1	He	0.050	0.050	12.97	47	0.11	4000	
Sn	118	115	1	He	-3.233	-3.233	-3.40	1156	-0.28	2000	
Sb	123	115	1	He	0.049	0.049	36.31	142	0.03	200	
Ba	137	115	1	He	100.629	100.629	0.81	81747	0.12	10000	
W	182	159	1	He	0.009	0.009	58.05	1563	0.00	2500	
Tl	205	165	1	He	0.014	0.014	39.56	182	0.01	2000	
Pb	208	165	1	He	0.041	0.041	8.82	1091	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2214770	1.49	1674650	132.25	60	120	ISTD warning
Sc	45	1	He	406077	1.01	355173	114.33	60	120	
Sc	45	2	NoGas	11245865	0.55	8635903	130.22	60	120	ISTD warning
Rh	103	1	He	1568876	1.21	1470259	106.71	60	120	
In	115	1	He	532108	0.45	490642	108.45	60	120	
Tb	159	1	He	1530255	0.63	1434034	106.71	60	120	
Ho	165	1	He	1450567	0.94	1409606	102.91	60	120	
Bi	209	1	He	920205	1.17	906964	101.46	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-9-a
Data File Name	102SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:08:18-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.154	0.154	31.98	129145	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	46.10	193	0.01	2000	
B	11	45	2	NoGas	10.969	10.969	1.69	49719	0.02	300	
Na	23	45	1	He	26.442	26.442	1.70	44699	0.06	500000	
Mg	24	45	1	He	8.878	8.878	30.27	5749	0.15	500000	
Al	27	45	1	He	1.164	1.164	8.75	528	0.22	200000	
K	39	45	1	He	9.025	9.025	31.99	32230	0.03	500000	
Ca	44	45	1	He	22.168	22.168	62.10	752	2.95	500000	
Ti	47	45	1	He	0.050	0.050	165.16	8	0.65	2500	
V	51	45	1	He	0.065	0.065	86.76	848	0.01	10000	
Cr	52	45	1	He	-0.100	-0.100	-9.64	3474	0.00	10000	
Mn	55	45	1	He	0.727	0.727	7.53	2572	0.03	10000	
Fe	56	45	1	He	3.082	3.082	10.92	14854	0.02	200000	
Co	59	45	1	He	0.005	0.005	87.72	128	0.00	5000	
Ni	60	45	1	He	-0.040	-0.040	-27.01	174	-0.02	10000	
Cu	63	45	1	He	0.058	0.058	49.49	3590	0.00	10000	
Zn	66	45	1	He	0.929	0.929	1.42	1410	0.07	10000	
As	75	115	1	He	-0.031	-0.031	-36.12	123	-0.03	10000	
Se	78	115	1	He	0.090	0.090	320.54	30	0.30	10000	
Sr	88	103	1	He	1.439	1.439	23.12	4289	0.03	10000	
Mo	95	103	1	He	0.055	0.055	15.21	168	0.03	2000	
Ag	107	103	1	He	0.000	0.000	355.00	29	0.00	300	
Cd	111	115	1	He	0.040	0.040	13.21	39	0.10	4000	
Sn	118	115	1	He	-3.216	-3.216	-2.38	1233	-0.26	2000	
Sb	123	115	1	He	0.047	0.047	4.87	142	0.03	200	
Ba	137	115	1	He	0.042	0.042	72.56	57	0.07	10000	
W	182	159	1	He	0.039	0.039	110.73	1745	0.00	2500	
Tl	205	165	1	He	0.011	0.011	18.67	153	0.01	2000	
Pb	208	165	1	He	0.060	0.060	13.50	1341	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2242591	0.35	1674650	133.91	60	120	ISTD warning
Sc	45	1	He	413793	0.49	355173	116.50	60	120	
Sc	45	2	NoGas	11108385	0.38	8635903	128.63	60	120	ISTD warning
Rh	103	1	He	1648633	0.70	1470259	112.13	60	120	
In	115	1	He	552190	1.36	490642	112.54	60	120	
Tb	159	1	He	1538700	0.40	1434034	107.30	60	120	
Ho	165	1	He	1458824	1.42	1409606	103.49	60	120	
Bi	209	1	He	971948	0.42	906964	107.17	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-10-a
Data File Name	103SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:12:24-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	5.873	5.873	0.82	266644	0.00	10000	
Be	9	45	2	NoGas	0.040	0.040	31.73	315	0.01	2000	
B	11	45	2	NoGas	33.183	33.183	0.50	136130	0.02	300	
Na	23	45	1	He	5891.961	5891.961	3.61	6240479	0.09	500000	
Mg	24	45	1	He	35721.794	35721.794	2.94	20329331	0.18	500000	
Al	27	45	1	He	2.680	2.680	15.61	866	0.31	200000	
K	39	45	1	He	881.327	881.327	2.23	325913	0.27	500000	
Ca	44	45	1	He	95963.395	95963.395	3.26	1760811	5.45	500000	
Ti	47	45	1	He	0.133	0.133	50.00	18	0.75	2500	
V	51	45	1	He	0.146	0.146	34.48	1148	0.01	10000	
Cr	52	45	1	He	0.085	0.085	47.75	4251	0.00	10000	
Mn	55	45	1	He	37.686	37.686	4.08	98917	0.04	10000	
Fe	56	45	1	He	1317.179	1317.179	2.19	4982102	0.03	200000	
Co	59	45	1	He	1.535	1.535	1.30	12456	0.01	5000	
Ni	60	45	1	He	0.174	0.174	26.83	636	0.03	10000	
Cu	63	45	1	He	-0.044	-0.044	-100.00	2831	0.00	10000	
Zn	66	45	1	He	1.895	1.895	14.26	2117	0.09	10000	
As	75	115	1	He	3.701	3.701	2.13	2056	0.18	10000	
Se	78	115	1	He	0.119	0.119	97.88	29	0.41	10000	
Sr	88	103	1	He	3690.876	3690.876	1.68	9498086	0.04	10000	
Mo	95	103	1	He	12.129	12.129	0.40	28924	0.04	2000	
Ag	107	103	1	He	0.005	0.005	44.76	62	0.01	300	
Cd	111	115	1	He	0.037	0.037	35.05	35	0.11	4000	
Sn	118	115	1	He	-3.443	-3.443	-2.10	745	-0.46	2000	
Sb	123	115	1	He	0.050	0.050	34.13	142	0.04	200	
Ba	137	115	1	He	102.139	102.139	1.37	81565	0.13	10000	
W	182	159	1	He	0.308	0.308	4.82	3212	0.01	2500	
Tl	205	165	1	He	0.010	0.010	38.82	140	0.01	2000	
Pb	208	165	1	He	0.028	0.028	17.82	886	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2164512	0.27	1674650	129.25	60	120	ISTD warning
Sc	45	1	He	397510	0.94	355173	111.92	60	120	
Sc	45	2	NoGas	10967680	0.18	8635903	127.00	60	120	ISTD warning
Rh	103	1	He	1513268	2.13	1470259	102.93	60	120	
In	115	1	He	523015	1.01	490642	106.60	60	120	
Tb	159	1	He	1504773	0.81	1434034	104.93	60	120	
Ho	165	1	He	1407766	0.88	1409606	99.87	60	120	
Bi	209	1	He	900278	0.79	906964	99.26	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-11-a
Data File Name	104SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:16:29-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.756	6.756	1.40	279699	0.00	10000	
Be	9	45	2	NoGas	0.036	0.036	10.36	278	0.01	2000	
B	11	45	2	NoGas	161.482	161.482	0.51	620139	0.03	300	
Na	23	45	1	He	25448.858	25448.858	2.61	25938131	0.10	500000	
Mg	24	45	1	He	30482.907	30482.907	2.75	16724595	0.18	500000	
Al	27	45	1	He	2.803	2.803	9.52	863	0.32	200000	
K	39	45	1	He	1528.621	1528.621	2.00	525226	0.29	500000	
Ca	44	45	1	He	113006.888	113006.888	1.03	1999363	5.65	500000	
Ti	47	45	1	He	0.165	0.165	74.64	21	0.78	2500	
V	51	45	1	He	0.181	0.181	7.95	1248	0.01	10000	
Cr	52	45	1	He	0.045	0.045	70.09	3905	0.00	10000	
Mn	55	45	1	He	13.101	13.101	3.44	33513	0.04	10000	
Fe	56	45	1	He	1371.843	1371.843	2.31	5002191	0.03	200000	
Co	59	45	1	He	0.090	0.090	2.05	774	0.01	5000	
Ni	60	45	1	He	0.065	0.065	52.49	382	0.02	10000	
Cu	63	45	1	He	0.059	0.059	26.35	3330	0.00	10000	
Zn	66	45	1	He	1.050	1.050	4.51	1398	0.08	10000	
As	75	115	1	He	6.773	6.773	0.67	3526	0.19	10000	
Se	78	115	1	He	0.160	0.160	144.44	29	0.55	10000	
Sr	88	103	1	He	30324.884	30324.884	0.46	76213388	0.04	10000	>LDR
Mo	95	103	1	He	55.385	55.385	1.97	128894	0.04	2000	
Ag	107	103	1	He	0.018	0.018	22.13	149	0.01	300	
Cd	111	115	1	He	0.046	0.046	38.02	41	0.11	4000	
Sn	118	115	1	He	-3.549	-3.549	-0.62	530	-0.67	2000	
Sb	123	115	1	He	0.067	0.067	9.85	171	0.04	200	
Ba	137	115	1	He	154.295	154.295	1.06	118892	0.13	10000	
W	182	159	1	He	0.055	0.055	62.71	1722	0.00	2500	
Tl	205	165	1	He	0.007	0.007	42.80	107	0.01	2000	
Pb	208	165	1	He	0.031	0.031	31.57	917	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2092633	1.09	1674650	124.96	60	120	ISTD warning
Sc	45	1	He	383266	1.52	355173	107.91	60	120	
Sc	45	2	NoGas	10647028	0.77	8635903	123.29	60	120	ISTD warning
Rh	103	1	He	1477773	0.60	1470259	100.51	60	120	
In	115	1	He	504784	0.87	490642	102.88	60	120	
Tb	159	1	He	1441889	0.25	1434034	100.55	60	120	
Ho	165	1	He	1402937	2.96	1409606	99.53	60	120	
Bi	209	1	He	868762	0.74	906964	95.79	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-12-a
Data File Name	105SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:20:34-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	6.678	6.678	1.19	295613	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	33.95	259	0.01	2000	
B	11	45	2	NoGas	166.817	166.817	1.15	681404	0.02	300	
Na	23	45	1	He	25123.442	25123.442	3.08	27332125	0.09	500000	
Mg	24	45	1	He	30191.176	30191.176	2.76	17682335	0.17	500000	
Al	27	45	1	He	1.907	1.907	15.63	702	0.27	200000	
K	39	45	1	He	1508.311	1508.311	2.32	553607	0.27	500000	
Ca	44	45	1	He	113044.003	113044.003	3.21	2135150	5.29	500000	
Ti	47	45	1	He	0.206	0.206	58.70	28	0.74	2500	
V	51	45	1	He	0.203	0.203	14.07	1423	0.01	10000	
Cr	52	45	1	He	0.100	0.100	17.54	4451	0.00	10000	
Mn	55	45	1	He	13.361	13.361	2.75	36475	0.04	10000	
Fe	56	45	1	He	1354.771	1354.771	3.51	5272607	0.03	200000	
Co	59	45	1	He	0.094	0.094	1.00	864	0.01	5000	
Ni	60	45	1	He	0.116	0.116	35.88	523	0.02	10000	
Cu	63	45	1	He	-0.032	-0.032	-27.16	2988	0.00	10000	
Zn	66	45	1	He	0.493	0.493	24.32	1039	0.05	10000	
As	75	115	1	He	6.724	6.724	1.50	3677	0.18	10000	
Se	78	115	1	He	0.122	0.122	144.99	29	0.42	10000	
Sr	88	103	1	He	31099.584	31099.584	2.50	80738603	0.04	10000	>LDR
Mo	95	103	1	He	56.991	56.991	3.51	136989	0.04	2000	
Ag	107	103	1	He	0.015	0.015	31.51	137	0.01	300	
Cd	111	115	1	He	0.027	0.027	27.67	26	0.10	4000	
Sn	118	115	1	He	-3.525	-3.525	-3.04	600	-0.59	2000	
Sb	123	115	1	He	0.063	0.063	19.60	171	0.04	200	
Ba	137	115	1	He	152.363	152.363	0.72	123315	0.12	10000	
W	182	159	1	He	0.012	0.012	72.53	1545	0.00	2500	
Tl	205	165	1	He	0.007	0.007	6.79	109	0.01	2000	
Pb	208	165	1	He	0.028	0.028	13.79	911	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2239282	1.25	1674650	133.72	60	120	ISTD warning
Sc	45	1	He	409095	1.44	355173	115.18	60	120	
Sc	45	2	NoGas	11327794	0.81	8635903	131.17	60	120	ISTD warning
Rh	103	1	He	1526894	1.62	1470259	103.85	60	120	
In	115	1	He	530161	0.55	490642	108.05	60	120	
Tb	159	1	He	1495024	3.17	1434034	104.25	60	120	
Ho	165	1	He	1453740	3.66	1409606	103.13	60	120	
Bi	209	1	He	922541	1.40	906964	101.72	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	106_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:24:38-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	52.927	1.005	1416460	0.76	50	105.9	89.5	110.5	
Be	9	45	2	NoGas	50.460	0.962	330008	0.52	50	100.9	89.5	110.5	
B	11	45	2	NoGas	62.001	0.403	249952	0.36	50	124.0	89.5	110.5	CCV Failed
Na	23	45	1	He	24774.029	1.902	26632133	1.19	25000	99.1	89.5	110.5	
Mg	24	45	1	He	24853.110	1.954	14381956	1.37	25000	99.4	89.5	110.5	
Al	27	45	1	He	245.994	1.687	59447	1.16	250	98.4	89.5	110.5	
K	39	45	1	He	25247.457	1.130	8708859	0.60	25000	101.0	89.5	110.5	
Ca	44	45	1	He	24930.880	2.033	465397	1.49	25000	99.7	89.5	110.5	
Ti	47	45	1	He	50.791	3.019	6418	2.93	50	101.6	89.5	110.5	
V	51	45	1	He	50.235	3.247	212369	2.86	50	100.5	89.5	110.5	
Cr	52	45	1	He	49.195	2.938	250439	2.32	50	98.4	89.5	110.5	
Mn	55	45	1	He	247.725	1.577	657933	1.03	250	99.1	89.5	110.5	
Fe	56	45	1	He	12334.056	2.195	47411513	1.62	12500	98.7	89.5	110.5	
Co	59	45	1	He	49.318	1.523	404251	1.24	50	98.6	89.5	110.5	
Ni	60	45	1	He	49.070	2.318	109705	1.61	50	98.1	89.5	110.5	
Cu	63	45	1	He	49.044	1.833	305072	1.19	50	98.1	89.5	110.5	
Zn	66	45	1	He	50.791	1.965	41421	1.63	50	101.6	89.5	110.5	
As	75	115	1	He	52.798	0.985	28162	1.24	50	105.6	89.5	110.5	
Se	78	115	1	He	51.503	2.170	1529	1.26	50	103.0	89.5	110.5	
Sr	88	103	1	He	57.770	2.382	154754	1.23	50	115.5	89.5	110.5	CCV Failed
Mo	95	103	1	He	51.241	0.964	126943	2.09	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.865	0.775	386187	0.55	50	101.7	89.5	110.5	
Cd	111	115	1	He	50.696	1.016	47567	0.46	50	101.4	89.5	110.5	
Sn	118	115	1	He	48.596	0.370	99638	0.91	50	97.2	89.5	110.5	
Sb	123	115	1	He	51.594	0.953	108936	1.60	50	103.2	89.5	110.5	
Ba	137	115	1	He	50.417	2.693	41123	3.22	50	100.8	89.5	110.5	
W	182	159	1	He	50.221	3.559	286239	4.00	50	100.4	89.5	110.5	
Tl	205	165	1	He	51.433	1.716	510764	2.17	50	102.9	89.5	110.5	
Pb	208	165	1	He	51.290	1.619	691747	0.93	50	102.6	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2168056	0.99	1674650	129.46	60	120	ISTD warning
Sc	45	1	He	404163	0.72	355173	113.79	60	120	
Sc	45	2	NoGas	11007693	0.46	8635903	127.46	60	120	ISTD warning
Rh	103	1	He	1572947	1.15	1470259	106.98	60	120	
In	115	1	He	534091	1.13	490642	108.86	60	120	
Tb	159	1	He	1525827	1.56	1434034	106.40	60	120	
Ho	165	1	He	1461444	2.06	1409606	103.68	60	120	
Bi	209	1	He	919459	0.50	906964	101.38	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	107_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:28:42-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.112	51.9	129791	0.4	8	
Be	9	45	2	NoGas	0.029	43.9	244	34.3	1	
B	11	45	2	NoGas	7.864	2.3	37880	0.9	20	
Na	23	45	1	He	27.297	5.8	44432	2.7	1000	
Mg	24	45	1	He	3.655	10.2	2585	9.5	1000	
Al	27	45	1	He	0.014	1037.7	238	13.6	50	
K	39	45	1	He	15.113	17.5	33469	1.6	1000	
Ca	44	45	1	He	6.533	16.7	442	5.0	1000	
Ti	47	45	1	He	0.043	60.6	7	50.0	20	
V	51	45	1	He	0.077	71.6	874	26.1	2	
Cr	52	45	1	He	0.039	142.1	4073	5.5	2	
Mn	55	45	1	He	0.056	44.6	729	8.2	2	
Fe	56	45	1	He	3.836	31.6	17383	27.9	50	
Co	59	45	1	He	0.015	44.8	202	27.1	1	
Ni	60	45	1	He	-0.059	-3.8	127	5.3	2	
Cu	63	45	1	He	0.228	12.3	4538	4.8	2	
Zn	66	45	1	He	0.001	2838.6	630	4.5	20	
As	75	115	1	He	-0.022	-109.4	126	10.5	2	
Se	78	115	1	He	0.085	187.4	29	16.6	2	
Sr	88	103	1	He	1.894	5.3	5496	4.7	10	
Mo	95	103	1	He	0.135	11.1	372	10.5	2	
Ag	107	103	1	He	0.009	37.7	98	27.6	0.2	
Cd	111	115	1	He	0.035	16.5	34	15.3	0.2	
Sn	118	115	1	He	0.132	104.8	7739	2.9	10	
Sb	123	115	1	He	0.114	1.8	286	0.7	2	
Ba	137	115	1	He	0.044	93.0	58	58.9	5	
W	182	159	1	He	0.283	7.2	3152	3.2	10	
Tl	205	165	1	He	0.056	11.2	596	11.2	0.5	
Pb	208	165	1	He	0.034	4.3	1000	2.5	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2258292	0.77	1674650	134.85	60	120	ISTD warning
Sc	45	1	He	402957	1.27	355173	113.45	60	120	
Sc	45	2	NoGas	11253621	1.11	8635903	130.31	60	120	ISTD warning
Rh	103	1	He	1629813	0.35	1470259	110.85	60	120	
In	115	1	He	547315	0.93	490642	111.55	60	120	
Tb	159	1	He	1544402	0.83	1434034	107.70	60	120	
Ho	165	1	He	1458999	1.39	1409606	103.50	60	120	
Bi	209	1	He	945907	1.45	906964	104.29	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-13-a
Data File Name	108SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:32:49-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.317	0.317	11.14	128983	0.00	10000	
Be	9	45	2	NoGas	0.031	0.031	8.87	252	0.01	2000	
B	11	45	2	NoGas	228.921	228.921	1.18	885877	0.03	300	
Na	23	45	1	He	51558.971	51558.971	1.91	54922902	0.09	500000	
Mg	24	45	1	He	26072.472	26072.472	2.87	14953538	0.17	500000	
Al	27	45	1	He	6.670	6.670	5.73	1825	0.37	200000	
K	39	45	1	He	1338.822	1338.822	0.96	484419	0.28	500000	
Ca	44	45	1	He	77421.800	77421.800	2.81	1431770	5.41	500000	
Ti	47	45	1	He	0.097	0.097	28.53	13	0.73	2500	
V	51	45	1	He	0.275	0.275	27.40	1697	0.02	10000	
Cr	52	45	1	He	0.219	0.219	3.56	4947	0.00	10000	
Mn	55	45	1	He	89.490	89.490	2.79	235937	0.04	10000	
Fe	56	45	1	He	1255.503	1255.503	3.13	4785529	0.03	200000	
Co	59	45	1	He	0.179	0.179	10.60	1532	0.01	5000	
Ni	60	45	1	He	0.198	0.198	8.02	694	0.03	10000	
Cu	63	45	1	He	0.179	0.179	22.84	4214	0.00	10000	
Zn	66	45	1	He	2.181	2.181	5.61	2362	0.09	10000	
As	75	115	1	He	0.930	0.930	1.36	610	0.15	10000	
Se	78	115	1	He	0.005	0.005	1206.72	25	0.02	10000	
Sr	88	103	1	He	9377.534	9377.534	0.84	24412240	0.04	10000	
Mo	95	103	1	He	13.494	13.494	0.66	32547	0.04	2000	
Ag	107	103	1	He	0.009	0.009	21.53	93	0.01	300	
Cd	111	115	1	He	0.033	0.033	13.01	30	0.11	4000	
Sn	118	115	1	He	-3.512	-3.512	-0.76	611	-0.57	2000	
Sb	123	115	1	He	0.093	0.093	18.36	229	0.04	200	
Ba	137	115	1	He	345.493	345.493	1.19	273253	0.13	10000	
W	182	159	1	He	0.094	0.094	37.11	1989	0.00	2500	
Tl	205	165	1	He	0.019	0.019	23.38	231	0.01	2000	
Pb	208	165	1	He	0.028	0.028	17.23	902	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2133772	0.06	1674650	127.42	60	120	ISTD warning
Sc	45	1	He	400649	1.42	355173	112.80	60	120	
Sc	45	2	NoGas	10759391	0.65	8635903	124.59	60	120	ISTD warning
Rh	103	1	He	1530684	0.50	1470259	104.11	60	120	
In	115	1	He	518145	0.21	490642	105.61	60	120	
Tb	159	1	He	1486282	0.61	1434034	103.64	60	120	
Ho	165	1	He	1428043	2.09	1409606	101.31	60	120	
Bi	209	1	He	888498	1.69	906964	97.96	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-14-a
Data File Name	109SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:36:53-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	11.678	11.678	1.77	403455	0.00	10000	
Be	9	45	2	NoGas	0.030	0.030	50.81	248	0.01	2000	
B	11	45	2	NoGas	86.671	86.671	1.67	341962	0.03	300	
Na	23	45	1	He	14037.251	14037.251	0.60	14446663	0.10	500000	
Mg	24	45	1	He	35935.067	35935.067	1.19	19899648	0.18	500000	
Al	27	45	1	He	10.403	10.403	4.89	2621	0.40	200000	
K	39	45	1	He	1412.325	1412.325	1.59	491809	0.29	500000	
Ca	44	45	1	He	99117.715	99117.715	1.56	1769881	5.60	500000	
Ti	47	45	1	He	0.368	0.368	68.06	46	0.81	2500	
V	51	45	1	He	0.130	0.130	12.01	1054	0.01	10000	
Cr	52	45	1	He	0.182	0.182	19.22	4598	0.00	10000	
Mn	55	45	1	He	40.839	40.839	2.66	104257	0.04	10000	
Fe	56	45	1	He	1564.231	1564.231	2.31	5756233	0.03	200000	
Co	59	45	1	He	0.557	0.557	3.30	4449	0.01	5000	
Ni	60	45	1	He	0.272	0.272	4.96	828	0.03	10000	
Cu	63	45	1	He	0.213	0.213	7.57	4266	0.00	10000	
Zn	66	45	1	He	1.426	1.426	8.74	1700	0.08	10000	
As	75	115	1	He	14.203	14.203	1.50	7255	0.20	10000	
Se	78	115	1	He	0.336	0.336	53.12	34	0.99	10000	
Sr	88	103	1	He	17225.364	17225.364	0.56	44215685	0.04	10000	>LDR
Mo	95	103	1	He	37.121	37.121	1.41	88257	0.04	2000	
Ag	107	103	1	He	0.010	0.010	31.02	97	0.01	300	
Cd	111	115	1	He	0.035	0.035	30.18	32	0.11	4000	
Sn	118	115	1	He	-3.252	-3.252	-0.28	1063	-0.31	2000	
Sb	123	115	1	He	0.065	0.065	29.41	166	0.04	200	
Ba	137	115	1	He	221.148	221.148	0.72	170450	0.13	10000	
W	182	159	1	He	0.071	0.071	9.29	1808	0.00	2500	
Tl	205	165	1	He	0.020	0.020	15.48	233	0.01	2000	
Pb	208	165	1	He	0.055	0.055	6.83	1241	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2185199	0.54	1674650	130.49	60	120	ISTD warning
Sc	45	1	He	386738	0.80	355173	108.89	60	120	
Sc	45	2	NoGas	10850347	1.21	8635903	125.64	60	120	ISTD warning
Rh	103	1	He	1509329	1.68	1470259	102.66	60	120	
In	115	1	He	504908	0.41	490642	102.91	60	120	
Tb	159	1	He	1442349	0.56	1434034	100.58	60	120	
Ho	165	1	He	1414612	2.01	1409606	100.36	60	120	
Bi	209	1	He	878384	1.05	906964	96.85	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-15-a
Data File Name	110SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:40:55-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.868	7.868	1.26	313411	0.00	10000	
Be	9	45	2	NoGas	0.021	0.021	74.06	189	0.01	2000	
B	11	45	2	NoGas	51.938	51.938	0.25	208433	0.02	300	
Na	23	45	1	He	8880.644	8880.644	1.93	9318089	0.10	500000	
Mg	24	45	1	He	30699.244	30699.244	1.94	17321552	0.18	500000	
Al	27	45	1	He	1.475	1.475	6.94	576	0.26	200000	
K	39	45	1	He	1085.611	1085.611	0.35	391607	0.28	500000	
Ca	44	45	1	He	86123.357	86123.357	2.24	1566807	5.50	500000	
Ti	47	45	1	He	0.116	0.116	48.23	16	0.75	2500	
V	51	45	1	He	0.119	0.119	77.16	1026	0.01	10000	
Cr	52	45	1	He	0.084	0.084	41.58	4205	0.00	10000	
Mn	55	45	1	He	27.535	27.535	2.13	71809	0.04	10000	
Fe	56	45	1	He	1512.333	1512.333	2.47	5670622	0.03	200000	
Co	59	45	1	He	0.048	0.048	10.68	462	0.01	5000	
Ni	60	45	1	He	0.080	0.080	10.93	428	0.02	10000	
Cu	63	45	1	He	-0.095	-0.095	-17.21	2501	0.00	10000	
Zn	66	45	1	He	1.106	1.106	14.16	1481	0.07	10000	
As	75	115	1	He	13.804	13.804	1.14	7231	0.19	10000	
Se	78	115	1	He	0.211	0.211	89.12	31	0.68	10000	
Sr	88	103	1	He	7943.072	7943.072	1.97	20658284	0.04	10000	
Mo	95	103	1	He	23.837	23.837	1.73	57422	0.04	2000	
Ag	107	103	1	He	0.004	0.004	81.66	54	0.01	300	
Cd	111	115	1	He	0.025	0.025	18.41	24	0.11	4000	
Sn	118	115	1	He	-3.435	-3.435	-3.40	752	-0.46	2000	
Sb	123	115	1	He	0.059	0.059	10.46	159	0.04	200	
Ba	137	115	1	He	174.781	174.781	1.23	138077	0.13	10000	
W	182	159	1	He	0.037	0.037	105.59	1645	0.00	2500	
Tl	205	165	1	He	0.011	0.011	25.38	149	0.01	2000	
Pb	208	165	1	He	0.033	0.033	6.64	944	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2195982	1.08	1674650	131.13	60	120	ISTD warning
Sc	45	1	He	394061	0.32	355173	110.95	60	120	
Sc	45	2	NoGas	10905932	0.54	8635903	126.29	60	120	ISTD warning
Rh	103	1	He	1529436	1.49	1470259	104.02	60	120	
In	115	1	He	517509	0.10	490642	105.48	60	120	
Tb	159	1	He	1461839	2.30	1434034	101.94	60	120	
Ho	165	1	He	1405816	2.09	1409606	99.73	60	120	
Bi	209	1	He	893765	0.73	906964	98.54	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-16-a
Data File Name	111SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:44:59-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	12.148	12.148	1.15	414904	0.00	10000	
Be	9	45	2	NoGas	0.034	0.034	56.75	274	0.01	2000	
B	11	45	2	NoGas	182.160	182.160	1.47	712292	0.03	300	
Na	23	45	1	He	26913.905	26913.905	1.54	28283781	0.10	500000	
Mg	24	45	1	He	33689.564	33689.564	2.84	19057805	0.18	500000	
Al	27	45	1	He	3.469	3.469	5.90	1047	0.33	200000	
K	39	45	1	He	2014.056	2014.056	2.48	704657	0.29	500000	
Ca	44	45	1	He	149061.405	149061.405	2.87	2718590	5.48	500000	
Ti	47	45	1	He	0.242	0.242	41.87	31	0.78	2500	
V	51	45	1	He	0.175	0.175	9.08	1260	0.01	10000	
Cr	52	45	1	He	0.161	0.161	41.59	4595	0.00	10000	
Mn	55	45	1	He	70.194	70.194	1.98	182658	0.04	10000	
Fe	56	45	1	He	1005.301	1005.301	2.48	3780093	0.03	200000	
Co	59	45	1	He	0.384	0.384	3.52	3153	0.01	5000	
Ni	60	45	1	He	0.141	0.141	33.51	560	0.03	10000	
Cu	63	45	1	He	0.001	0.001	302.89	3086	0.00	10000	
Zn	66	45	1	He	2.176	2.176	2.32	2326	0.09	10000	
As	75	115	1	He	2.973	2.973	3.46	1669	0.18	10000	
Se	78	115	1	He	0.084	0.084	141.38	28	0.30	10000	
Sr	88	103	1	He	55097.997	55097.997	1.30	141928292	0.04	10000	>LDR
Mo	95	103	1	He	78.364	78.364	2.18	186906	0.04	2000	
Ag	107	103	1	He	0.027	0.027	25.05	222	0.01	300	
Cd	111	115	1	He	0.043	0.043	40.70	40	0.11	4000	
Sn	118	115	1	He	-3.121	-3.121	-3.81	1337	-0.23	2000	
Sb	123	115	1	He	0.112	0.112	10.46	268	0.04	200	
Ba	137	115	1	He	146.225	146.225	0.42	116133	0.13	10000	
W	182	159	1	He	0.043	0.043	110.41	1704	0.00	2500	
Tl	205	165	1	He	0.007	0.007	33.49	103	0.01	2000	
Pb	208	165	1	He	0.029	0.029	8.02	876	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2175437	0.52	1674650	129.90	60	120	ISTD warning
Sc	45	1	He	395110	0.64	355173	111.24	60	120	
Sc	45	2	NoGas	10853221	0.93	8635903	125.68	60	120	ISTD warning
Rh	103	1	He	1514643	0.74	1470259	103.02	60	120	
In	115	1	He	520239	0.54	490642	106.03	60	120	
Tb	159	1	He	1487020	0.57	1434034	103.69	60	120	
Ho	165	1	He	1380471	0.77	1409606	97.93	60	120	
Bi	209	1	He	884746	0.48	906964	97.55	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-17-a
Data File Name	112SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:49:01-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	0.293	0.293	18.30	121884	0.00	10000	
Be	9	45	2	NoGas	0.013	0.013	45.01	126	0.01	2000	
B	11	45	2	NoGas	14.595	14.595	2.84	58935	0.02	300	
Na	23	45	1	He	55.375	55.375	0.09	69993	0.08	500000	
Mg	24	45	1	He	6.413	6.413	21.22	3923	0.16	500000	
Al	27	45	1	He	2.608	2.608	12.10	808	0.32	200000	
K	39	45	1	He	18.913	18.913	1.33	32664	0.06	500000	
Ca	44	45	1	He	21.013	21.013	21.63	668	3.15	500000	
Ti	47	45	1	He	0.027	0.027	235.90	4	0.62	2500	
V	51	45	1	He	0.151	0.151	39.59	1111	0.01	10000	
Cr	52	45	1	He	0.059	0.059	47.99	3924	0.00	10000	
Mn	55	45	1	He	0.542	0.542	5.80	1893	0.03	10000	
Fe	56	45	1	He	1.802	1.802	11.00	8978	0.02	200000	
Co	59	45	1	He	0.007	0.007	39.57	129	0.01	5000	
Ni	60	45	1	He	-0.014	-0.014	-46.28	214	-0.01	10000	
Cu	63	45	1	He	-0.044	-0.044	-56.50	2691	0.00	10000	
Zn	66	45	1	He	2.001	2.001	1.72	2096	0.10	10000	
As	75	115	1	He	-0.022	-0.022	-147.76	116	-0.02	10000	
Se	78	115	1	He	0.108	0.108	286.22	28	0.39	10000	
Sr	88	103	1	He	9.006	9.006	27.24	23181	0.04	10000	
Mo	95	103	1	He	0.134	0.134	22.79	340	0.04	2000	
Ag	107	103	1	He	0.003	0.003	77.88	42	0.01	300	
Cd	111	115	1	He	0.027	0.027	22.96	24	0.11	4000	
Sn	118	115	1	He	-3.462	-3.462	-1.55	685	-0.51	2000	
Sb	123	115	1	He	0.037	0.037	17.31	111	0.03	200	
Ba	137	115	1	He	0.088	0.088	48.10	87	0.10	10000	
W	182	159	1	He	-0.022	-0.022	-122.61	1270	0.00	2500	
Tl	205	165	1	He	0.004	0.004	9.21	76	0.01	2000	
Pb	208	165	1	He	0.018	0.018	38.66	728	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2129747	1.36	1674650	127.18	60	120	ISTD warning
Sc	45	1	He	378451	0.79	355173	106.55	60	120	
Sc	45	2	NoGas	10212177	0.99	8635903	118.25	60	120	
Rh	103	1	He	1498425	2.41	1470259	101.92	60	120	
In	115	1	He	504798	0.85	490642	102.89	60	120	
Tb	159	1	He	1399708	1.61	1434034	97.61	60	120	
Ho	165	1	He	1357307	2.39	1409606	96.29	60	120	
Bi	209	1	He	896203	0.80	906964	98.81	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-18-a
Data File Name	113SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:53:11-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	91.604	91.604	1.55	2397595	0.00	10000	
Be	9	45	2	NoGas	2.249	2.249	1.66	14988	0.02	2000	
B	11	45	2	NoGas	150.802	150.802	0.80	608521	0.02	300	
Na	23	45	1	He	12759.044	12759.044	2.52	13086020	0.10	500000	
Mg	24	45	1	He	163239.127	163239.127	2.96	90070356	0.18	500000	
Al	27	45	1	He	49774.148	49774.148	2.78	11424416	0.44	200000	
K	39	45	1	He	16005.566	16005.566	2.11	5274455	0.30	500000	
Ca	44	45	1	He	444933.188	444933.188	2.87	7914660	5.62	500000	
Ti	47	45	1	He	842.066	842.066	5.42	101424	0.83	2500	
V	51	45	1	He	112.656	112.656	3.26	453470	0.02	10000	
Cr	52	45	1	He	86.017	86.017	3.16	414769	0.02	10000	
Mn	55	45	1	He	1422.933	1422.933	3.11	3600803	0.04	10000	
Fe	56	45	1	He	77051.329	77051.329	3.36	282402362	0.03	200000	
Co	59	45	1	He	26.044	26.044	2.75	203588	0.01	5000	
Ni	60	45	1	He	76.590	76.590	2.97	163136	0.05	10000	
Cu	63	45	1	He	59.439	59.439	2.56	351928	0.02	10000	
Zn	66	45	1	He	189.252	189.252	2.30	145527	0.13	10000	
As	75	115	1	He	32.452	32.452	0.63	15117	0.21	10000	
Se	78	115	1	He	10.840	10.840	6.35	298	3.64	10000	
Sr	88	103	1	He	2136.582	2136.582	0.96	4971599	0.04	10000	
Mo	95	103	1	He	38.989	38.989	2.37	84019	0.05	2000	
Ag	107	103	1	He	0.193	0.193	8.18	1298	0.01	300	
Cd	111	115	1	He	0.808	0.808	2.84	661	0.12	4000	
Sn	118	115	1	He	-0.681	-0.681	-18.17	5231	-0.01	2000	
Sb	123	115	1	He	1.106	1.106	5.10	2066	0.05	200	
Ba	137	115	1	He	773.741	773.741	0.89	549192	0.14	10000	
W	182	159	1	He	0.282	0.282	11.38	2863	0.01	2500	
Tl	205	165	1	He	1.399	1.399	3.71	13082	0.01	2000	
Pb	208	165	1	He	30.857	30.857	0.77	391020	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2086535	0.62	1674650	124.60	60	120	ISTD warning
Sc	45	1	He	385414	0.88	355173	108.51	60	120	
Sc	45	2	NoGas	11179564	0.30	8635903	129.45	60	120	ISTD warning
Rh	103	1	He	1368109	0.69	1470259	93.05	60	120	
In	115	1	He	465003	1.02	490642	94.77	60	120	
Tb	159	1	He	1408430	2.59	1434034	98.21	60	120	
Ho	165	1	He	1372133	0.71	1409606	97.34	60	120	
Bi	209	1	He	791169	0.09	906964	87.23	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-19-a
Data File Name	114SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T17:57:14-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	7.003	7.003	1.51	276085	0.00	10000	
Be	9	45	2	NoGas	0.017	0.017	41.62	156	0.01	2000	
B	11	45	2	NoGas	351.719	351.719	1.82	1299462	0.03	300	>LDR
Na	23	45	1	He	60668.938	60668.938	2.82	60592644	0.10	500000	
Mg	24	45	1	He	27118.736	27118.736	2.83	14584859	0.19	500000	
Al	27	45	1	He	13.277	13.277	14.72	3194	0.42	200000	
K	39	45	1	He	3060.766	3060.766	2.27	1004435	0.30	500000	
Ca	44	45	1	He	81911.270	81911.270	0.93	1420796	5.77	500000	
Ti	47	45	1	He	0.780	0.780	48.20	93	0.84	2500	
V	51	45	1	He	0.220	0.220	36.62	1378	0.02	10000	
Cr	52	45	1	He	0.148	0.148	26.21	4311	0.00	10000	
Mn	55	45	1	He	51.921	51.921	3.69	128574	0.04	10000	
Fe	56	45	1	He	2770.222	2770.222	3.04	9898397	0.03	200000	
Co	59	45	1	He	0.187	0.187	4.48	1497	0.01	5000	
Ni	60	45	1	He	0.216	0.216	9.08	690	0.03	10000	
Cu	63	45	1	He	0.112	0.112	16.89	3566	0.00	10000	
Zn	66	45	1	He	53.704	53.704	2.72	40669	0.13	10000	
As	75	115	1	He	2.184	2.184	2.45	1181	0.18	10000	
Se	78	115	1	He	0.275	0.275	54.82	31	0.89	10000	
Sr	88	103	1	He	13717.621	13717.621	1.58	33267858	0.04	10000	>LDR
Mo	95	103	1	He	10.788	10.788	2.29	24246	0.04	2000	
Ag	107	103	1	He	0.016	0.016	10.75	131	0.01	300	
Cd	111	115	1	He	0.056	0.056	14.18	49	0.12	4000	
Sn	118	115	1	He	-3.406	-3.406	-3.55	759	-0.45	2000	
Sb	123	115	1	He	0.083	0.083	18.02	196	0.04	200	
Ba	137	115	1	He	442.090	442.090	0.49	328821	0.13	10000	
W	182	159	1	He	0.026	0.026	117.70	1522	0.00	2500	
Tl	205	165	1	He	0.009	0.009	27.80	127	0.01	2000	
Pb	208	165	1	He	0.521	0.521	2.85	7066	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2097365	1.10	1674650	125.24	60	120	ISTD warning
Sc	45	1	He	375720	1.90	355173	105.79	60	120	
Sc	45	2	NoGas	10295290	1.06	8635903	119.21	60	120	
Rh	103	1	He	1426089	1.27	1470259	97.00	60	120	
In	115	1	He	487284	0.92	490642	99.32	60	120	
Tb	159	1	He	1403022	2.97	1434034	97.84	60	120	
Ho	165	1	He	1366745	0.80	1409606	96.96	60	120	
Bi	209	1	He	827601	0.98	906964	91.25	60	120	

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Sample Report

Sample Table

Sample Name	240-66199-i-20-a
Data File Name	115SMPL.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:01:19-04:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	47.619	47.619	1.54	1176626	0.00	10000	
Be	9	45	2	NoGas	0.029	0.029	33.53	222	0.01	2000	
B	11	45	2	NoGas	1940.524	1940.524	1.20	6983258	0.03	300	>LDR
Na	23	45	1	He	92937.662	92937.662	1.26	89810859	0.10	500000	
Mg	24	45	1	He	18967.419	18967.419	1.74	9870905	0.19	500000	
Al	27	45	1	He	30.792	30.792	1.78	6877	0.45	200000	
K	39	45	1	He	20764.334	20764.334	1.43	6445650	0.32	500000	
Ca	44	45	1	He	37411.418	37411.418	3.05	627898	5.96	500000	
Ti	47	45	1	He	0.392	0.392	56.70	46	0.86	2500	
V	51	45	1	He	0.188	0.188	36.20	1209	0.02	10000	
Cr	52	45	1	He	0.318	0.318	7.47	4933	0.01	10000	
Mn	55	45	1	He	18.727	18.727	2.86	45212	0.04	10000	
Fe	56	45	1	He	691.483	691.483	1.73	2392653	0.03	200000	
Co	59	45	1	He	0.103	0.103	1.78	829	0.01	5000	
Ni	60	45	1	He	0.736	0.736	9.10	1709	0.04	10000	
Cu	63	45	1	He	1.003	1.003	5.07	8383	0.01	10000	
Zn	66	45	1	He	3.777	3.777	6.31	3296	0.11	10000	
As	75	115	1	He	0.766	0.766	7.32	481	0.16	10000	
Se	78	115	1	He	0.332	0.332	52.19	32	1.05	10000	
Sr	88	103	1	He	3650.386	3650.386	0.75	8601124	0.04	10000	
Mo	95	103	1	He	2.536	2.536	3.33	5554	0.05	2000	
Ag	107	103	1	He	0.004	0.004	59.12	51	0.01	300	
Cd	111	115	1	He	0.059	0.059	26.00	50	0.12	4000	
Sn	118	115	1	He	-3.123	-3.123	-1.17	1215	-0.26	2000	
Sb	123	115	1	He	0.061	0.061	12.48	149	0.04	200	
Ba	137	115	1	He	142.334	142.334	0.61	103043	0.14	10000	
W	182	159	1	He	-0.017	-0.017	-85.90	1285	0.00	2500	
Tl	205	165	1	He	0.004	0.004	26.67	74	0.01	2000	
Pb	208	165	1	He	0.198	0.198	2.61	2921	0.01	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2035571	1.36	1674650	121.55	60	120	ISTD warning
Sc	45	1	He	363447	0.47	355173	102.33	60	120	
Sc	45	2	NoGas	10064864	0.26	8635903	116.55	60	120	
Rh	103	1	He	1385413	0.93	1470259	94.23	60	120	
In	115	1	He	474202	1.21	490642	96.65	60	120	
Tb	159	1	He	1388728	0.13	1434034	96.84	60	120	
Ho	165	1	He	1332096	1.00	1409606	94.50	60	120	
Bi	209	1	He	808337	0.75	906964	89.13	60	120	

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Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-2549639
Data File Name	116_CCV.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:05:24-04:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	45	2	NoGas	54.253	0.917	1321403	1.02	50	108.5	89.5	110.5	
Be	9	45	2	NoGas	49.964	1.522	298037	1.72	50	99.9	89.5	110.5	
B	11	45	2	NoGas	90.776	1.525	331167	1.58	50	181.6	89.5	110.5	CCV Failed
Na	23	45	1	He	24924.491	2.537	24690924	1.30	25000	99.7	89.5	110.5	
Mg	24	45	1	He	24740.121	2.610	13192677	1.29	25000	99.0	89.5	110.5	
Al	27	45	1	He	243.505	3.521	54221	1.98	250	97.4	89.5	110.5	
K	39	45	1	He	25339.367	2.509	8054093	1.17	25000	101.4	89.5	110.5	
Ca	44	45	1	He	25101.295	2.872	431770	1.32	25000	100.4	89.5	110.5	
Ti	47	45	1	He	52.530	5.136	6114	3.64	50	105.1	89.5	110.5	
V	51	45	1	He	50.644	3.071	197278	1.50	50	101.3	89.5	110.5	
Cr	52	45	1	He	49.490	2.950	232135	1.35	50	99.0	89.5	110.5	
Mn	55	45	1	He	247.962	2.440	606852	0.90	250	99.2	89.5	110.5	
Fe	56	45	1	He	12279.481	3.115	43493393	1.55	12500	98.2	89.5	110.5	
Co	59	45	1	He	49.445	2.377	373464	0.87	50	98.9	89.5	110.5	
Ni	60	45	1	He	48.901	3.203	100738	1.64	50	97.8	89.5	110.5	
Cu	63	45	1	He	48.611	3.530	278637	1.94	50	97.2	89.5	110.5	
Zn	66	45	1	He	50.724	2.251	38119	0.64	50	101.4	89.5	110.5	
As	75	115	1	He	53.080	0.408	25970	0.39	50	106.2	89.5	110.5	
Se	78	115	1	He	51.665	3.539	1407	3.79	50	103.3	89.5	110.5	
Sr	88	103	1	He	55.236	0.966	135377	0.31	50	110.5	89.5	110.5	
Mo	95	103	1	He	51.268	2.248	116162	1.76	50	102.5	89.5	110.5	
Ag	107	103	1	He	50.390	1.560	349967	1.43	50	100.8	89.5	110.5	
Cd	111	115	1	He	50.198	0.888	43205	1.16	50	100.4	89.5	110.5	
Sn	118	115	1	He	49.077	2.685	92229	2.38	50	98.2	89.5	110.5	
Sb	123	115	1	He	51.645	0.280	100018	0.56	50	103.3	89.5	110.5	
Ba	137	115	1	He	51.021	3.715	38172	4.03	50	102.0	89.5	110.5	
W	182	159	1	He	48.485	3.331	257355	2.92	50	97.0	89.5	110.5	
Tl	205	165	1	He	49.826	2.272	460872	1.54	50	99.7	89.5	110.5	
Pb	208	165	1	He	49.936	1.838	627399	0.96	50	99.9	89.5	110.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2047211	1.76	1674650	122.25	60	120	ISTD warning
Sc	45	1	He	372500	1.60	355173	104.88	60	120	
Sc	45	2	NoGas	10039247	0.20	8635903	116.25	60	120	
Rh	103	1	He	1438842	0.80	1470259	97.86	60	120	
In	115	1	He	489892	0.31	490642	99.85	60	120	
Tb	159	1	He	1420930	0.87	1434034	99.09	60	120	
Ho	165	1	He	1361326	1.30	1409606	96.57	60	120	
Bi	209	1	He	838477	0.81	906964	92.45	60	120	

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Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	117_CCB.d
Data Path Name	D:\Analytical Runs\I10062116A.b
Acq Date Time	2016-06-21T18:09:30-04:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	45	2	NoGas	0.237	12.0	126791	1.1	8	
Be	9	45	2	NoGas	0.019	27.3	170	18.8	1	
B	11	45	2	NoGas	22.868	2.0	93683	1.5	20	CCB High
Na	23	45	1	He	27.898	6.8	42732	3.8	1000	
Mg	24	45	1	He	5.022	17.9	3197	15.2	1000	
Al	27	45	1	He	0.273	55.7	284	11.6	50	
K	39	45	1	He	19.622	22.8	33191	3.6	1000	
Ca	44	45	1	He	7.742	26.5	440	7.5	1000	
Ti	47	45	1	He	0.036	158.3	6	124.9	20	
V	51	45	1	He	0.125	17.1	1019	9.1	2	
Cr	52	45	1	He	0.024	76.1	3794	2.3	2	
Mn	55	45	1	He	0.088	31.9	772	9.3	2	
Fe	56	45	1	He	4.484	36.6	18794	31.5	50	
Co	59	45	1	He	0.009	32.7	146	15.2	1	
Ni	60	45	1	He	-0.049	-10.3	142	6.8	2	
Cu	63	45	1	He	-0.007	-370.6	2933	5.5	2	
Zn	66	45	1	He	-0.001	-4047.4	596	6.4	20	
As	75	115	1	He	-0.032	-24.5	113	4.6	2	
Se	78	115	1	He	0.171	200.8	30	31.9	2	
Sr	88	103	1	He	1.701	6.0	4662	4.4	10	
Mo	95	103	1	He	0.105	18.1	278	15.5	2	
Ag	107	103	1	He	0.008	82.1	82	57.4	0.2	
Cd	111	115	1	He	0.025	7.6	23	7.5	0.2	
Sn	118	115	1	He	0.444	14.9	7769	2.5	10	
Sb	123	115	1	He	0.103	7.7	243	6.0	2	
Ba	137	115	1	He	0.043	17.7	53	10.8	5	
W	182	159	1	He	0.298	31.2	2971	18.6	10	
Tl	205	165	1	He	0.059	32.0	594	30.3	0.5	
Pb	208	165	1	He	0.037	24.7	987	12.3	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	2208609	0.44	1674650	131.88	60	120	ISTD warning
Sc	45	1	He	381976	0.76	355173	107.55	60	120	
Sc	45	2	NoGas	10735546	0.63	8635903	124.31	60	120	ISTD warning
Rh	103	1	He	1531258	1.30	1470259	104.15	60	120	
In	115	1	He	509307	1.30	490642	103.80	60	120	
Tb	159	1	He	1414640	2.07	1434034	98.65	60	120	
Ho	165	1	He	1389731	0.66	1409606	98.59	60	120	
Bi	209	1	He	879145	0.24	906964	96.93	60	120	

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MTMSCCBDILH20- 268 EPA Tune Solution Spex CL11-62YPY

TestAmerica Canton ICP/MS Data Review Checklist

Analysis Date: 6/21/16 **Analyst:** AS **Instrument:** I10

Review Items

A. Tune/Daily performance
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass.
B. Calibration/Instrument Run QC
1. Instrument calibrated per and within acceptance criteria.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. (*ICV:* = 90 – 110%) (*CCV:* 90 - 110%).
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
C. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standards within acceptance criteria.
3. Sample analyses done within holding time.
D. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
E. Other
1. All nonconformance's documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

Level I Analyst: Anjali Sharma **Date:** 6/22/16 **Time:** 10:11 – 18:09

Level I Analyst: _____ **Date:** _____ **Time:** _____

Level II Reviewer: Kara Lloyd **Date:** 6-22-16 **Time:** 10:11 -18:09

Level II Reviewer: _____ **Date:** _____ **Time:** _____

Comments: _____

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-66155-1

SDG No.:

Batch Number: 235182 Batch Start Date: 06/20/16 11:14 Batch Analyst: Colosi, Alexander J

Batch Method: 3005A Batch End Date: 06/20/16 19:14

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00025	MTICPMSA 00027	MTICPMSB 00028	MTTMHCL 00114
MB 240-235182/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-235182/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-66155-A-2	16WDUP2	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00089					
MB 240-235182/1		3005A, 6020A		1 mL					
LCS 240-235182/2		3005A, 6020A		1 mL					
240-66155-A-2	16WDUP2	3005A, 6020A	R	1 mL					

Batch Notes	
Filter Paper ID	9672596
Hot Block ID	HB4
Pipette ID	MP3
Digestion Tube/Cup ID	1509104

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

JCR 6/16/16

CHAIN OF CUSTODY RECORD

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Manager/1-330-966-9279

Client: 0 Attn: 0 Addres 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: HWMU16 Event: 2016 Verification Monitoring Event DAA JN: B03204-16A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES Carrier: Tracking Number:		

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCL	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E Equipment Blar	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P Product	C H_2SO_4	G Other (Specify)	Box 5: Sample Container Type		Preserved and shipped on Ice: YES
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

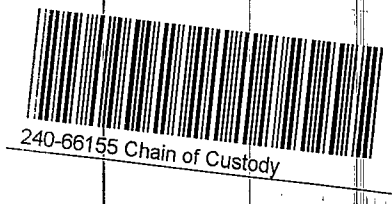
Box 4 - Sample Type					G	G	G						
Box 3 - Filtered/Unfiltered					U	U	U						
Required pH of Sample					<2	<2	<2						
Box 2 - Preservative					B	A	A						
Box 5 - Sample Container Type					1-500 mL P	3-40 mL V	3-40 mL V						
Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Total Metals - 6020A (Cobalt ONLY)	8260C - 25 mL purge (Tetrahydrofuran Only)	8260C - 25 mL purge (Vinyl Chloride Only)						
16WDUP1	6-16	1235	GW	3		X	X						
16WDUP2	6-16	1350	GW	1	X								

Page 360 of 362

GENERAL NOTES:

1. Full deliverable with EDD and pdf.
2. Report DL/QL and estimated results.
3. VELAP accreditation required.
4. Report result at or above project DL and QL.

Cobalt: QL- 5 ug/L, DL- 1 ug/L.
Tetrahydrofuran: QL- 25 ug/L, DL- 2 ug/L.
Vinyl Chloride: QL- 1 ug/L, DL- 0.2 ug/L.



Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Will Mason-Deese	Date: 6-16-16	#1 Relinquished by (Signature):	Date: 6-16-16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:	
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:		
Sampler Name (Print): Michael Nelson	Date: 6-16-16	#1 Received by (Signature):	Date: 6-17-16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG	
Sampler Signature:	Time: 0800	Company Name: TA	Time: 1000	Company Name:	Time:		

JCR 6/14/16 (Y1) 2+2

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 66155**
Canton Facility

Client Draper Aden Site Name

Cooler Received on 6-17-16 Opened on 6-17-16

Cooler unpacked by:

FedEx: 1st Grd Exp (UPS) FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box (Client Cooler) Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-8 (CF +1.3°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN #36 (CF +1.0°C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 2.2 °C

2.	Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No
	-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
	-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)
3.	Shippers' packing slip attached to the cooler(s)?	(Yes) No
4.	Did custody papers accompany the sample(s)?	(Yes) No
5.	Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No
7.	Did all bottles arrive in good condition (Unbroken)?	(Yes) No
8.	Could all bottle labels be reconciled with the COC?	(Yes) No
9.	Were correct bottle(s) used for the test(s) indicated?	(Yes) No
10.	Sufficient quantity received to perform indicated analyses?	(Yes) No
11.	Are these work share samples?	Yes (No)
	If yes, Questions 11-15 have been checked at the originating laboratory.	
11.	Were sample(s) at the correct pH upon receipt?	(Yes) No NA pH Strip Lot# **HC574756**
12.	Were VOAs on the COC?	(Yes) No
13.	Were air bubbles >6 mm in any VOA vials?	Yes (No) NA
14.	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)
15.	Was a LL Hg or Me Hg trip blank present?	Yes (No)

Contacted PM Date by via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
16WDUP2	240-66155-A-2	Plastic 500ml - with Nitric Acid	<2	_____	_____

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2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater Samples
Collected on 06/16/16

SDG# RAE67

GROUP	SAMPLE NUMBERS
1673729	8433822-8433825

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **07/01/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number RAE67
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8433822	16MW9	06/16/2016 13:40	06/17/2016 09:20
8433823	16MW9 MS	06/16/2016 13:40	06/17/2016 09:20
8433824	16MW9 MSD	06/16/2016 13:40	06/17/2016 09:20
8433825	16MW9 DUP	06/16/2016 13:40	06/17/2016 09:20

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Sample pH Log

SDG: RAE67

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8433822	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

06032 Cobalt

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: June 22, 2016

Project: RAAP - Radford, VA - HWMU16

Submittal Date: 06/17/2016
Group Number: 1673729
SDG: RAE67
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
16MW9 Grab Groundwater	8433822
16MW9 MS Grab Groundwater	8433823
16MW9 MSD Grab Groundwater	8433824
16MW9 DUP Grab Groundwater	8433825

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU16
LL Group #: 1673729

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: 16MW9 Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433822
LL Group # 1673729
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/22/2016 09:48

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R169M SDG#: RAE67-01BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0056	0.00010	0.0040	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161720639001A	06/21/2016 07:39	Scott P Cuff	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161720639001	06/20/2016 23:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 MS Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433823
LL Group # 1673729
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/22/2016 09:48

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R169M SDG#: RAE67-01MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.250	0.00010	0.0040	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161720639001A	06/21/2016 07:48	Scott P Cuff	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161720639001	06/20/2016 23:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 MSD Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433824
LL Group # 1673729
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/22/2016 09:48

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R169M SDG#: RAE67-01MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.263	0.00010	0.0040	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161720639001A	06/21/2016 07:51	Scott P Cuff	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161720639001	06/20/2016 23:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MW9 DUP Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8433825
LL Group # 1673729
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:40 by WM

Submitted: 06/17/2016 09:20
Reported: 06/22/2016 09:48

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

R169M SDG#: RAE67-01DUP

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0054	0.00010	0.0040	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161720639001A	06/21/2016 07:45	Scott P Cuff	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161720639001	06/20/2016 23:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1673729
Reported: 06/22/2016 09:48

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 161720639001A	Sample number(s): 8433822-8433825		
Cobalt	N.D.	0.00010	0.0040

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 161720639001A	Sample number(s): 8433822-8433825								
Cobalt	0.250	0.250			100		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 161720639001A	Sample number(s): 8433822-8433825 UNSPK: 8433822									
Cobalt	0.00562	0.250	0.250	0.250	0.263	98	103	75-125	5	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 161720639001A	Sample number(s): 8433822-8433825 BKG: 8433822			
Cobalt	0.00562	0.00542	4 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200 / 1673729 / 8433822-25 ③ KMZ 6/20/16
11200 / ~~1673287~~ / ~~8431662~~

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC , 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 KH 6/14/16

Client: 0 Attn: 0 Addres 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: HWMU16 Event: 2016 Verification Monitoring Event DAA JN: B03204-16A Lab JN:		Project Specific (PS) or Batch (B) QC: ~~Sample Collection for Project Complete?~~ YES Carrier: UPS Tracking Number: ~~1Z75Y02XY044521847~~	

Box 1: Matrix	Box 2: Preservative	Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water T Trip Blank GW Groundwater E Equipment Blar L Leachate P Product S Soil O Other	A HCL E NaOH B HNO_3 F ZnAc C H_2SO_4 G Other (Specify) D $Na_2S_2O_3$ H None	F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic V VOA AG Amber Glass CG Clear Glass	G Grab C Composite	Copy to Consultant: YES Bill: CLIENT OTHER Preserved and shipped on Ice: YES

Box 4 - Sample Type	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U
Required pH of Sample	<2	<2	<2	>12
Box 2 - Preservative	B	A	A	E
Box 5 - Sample Container Type	1-500 mL P	3-40 mL V	3-40 mL V	1-500 mL P

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Total Metals - 6020A (Cobalt ONLY)	8260C - 25 mL purge (Tetrahydrofuran Only)	8260C - 25 mL purge (Vinyl Chloride Only)	Cyanide - 9012B
16MW8	6-16	1100	GW	4		X		X
16MW9	6-16	1340	GW	~~4~~ 8	X (1)		X (2)	X (1)
16WC1A	6-16	1225	GW	4		X	X	X
Trip Blank	6-16	—	GW	3		X	X	

GENERAL NOTES:

1. Level 1 deliverable with EDD and pdf.
2. Report DL/QL and estimated results.
3. VELAP accreditation required.
4. Report result at or above project DL and QL.

Cobalt: QL- 5 ug/L, DL- 1 ug/L.
Tetrahydrofuran: QL- 25 ug/L, DL- 2 ug/L.
Vinyl Chloride: QL- 1 ug/L, DL- 0.2 ug/L.
Cyanide: QL- 20 ug/L, DL- 5 ug/L.

* Need Results by on or before 22nd/June. JCF 6/14/16

JMC 6/14/16

Use for QC

Clients Special Instructions:

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Will Mason-Deese	Date: 6-16-16	#1 Relinquished by (Signature):	Date: 6-16-16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): MICHAEL NELSON	Date: 6-16-16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 6/17/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name: ECLE	Time 920	

JMC 6/14/16
KH

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Sample Administration Receipt Documentation Log

Doc Log ID: 150799

Group Number(s): ~~1673289~~ 1673729 ⑤Km2 6/20/16

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	06/17/2016 9:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Joseph Huber (7831) at 10:41 on 06/17/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2155
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE67

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8433822	16MW9	X		1	Background/Unspiked
8433823	16MW9 MS	X		1	Matrix Spike
8433824	16MW9 MSD	X		1	Matrix Spike Duplicate
8433825	16MW9 DUP	X		1	Duplicate

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE67

ICP Metals

Fraction: Metals in Liquid

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8433822BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 06/17/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	5.6			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8433823MS % Solids: 0.0
Concentration Units: UG/L Date Received: 06/17/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	250			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8433824MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 06/17/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	263			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8433825DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 06/17/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	5.4			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: RAE67
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Cobalt	161720639001	8433822BKG
		8433823MS
		8433824MSD
		8433825DUP
		P17239AB
		P17239AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE67

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Cobalt	59	500.0	515.83	103.2	250.0	263.76	105.5	250.0	260.11	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE67

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59				250.0	265.64	106.3			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAE67

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Cobalt	59	1.0	0.89	89.0	0.91	91.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59	0.17	B	0.13	B	0.10	U	0.10	U	59	0.100	U	161720639001A

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE67

Instrument ID: 19204
Run Name: 1617302E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	103245	103.2	103326.6	103.3
Calcium	44	300000	300000	283479	94.5	287914.6	96.0
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	4		215.1	104.9
Iron	57	250000	250000	267113	106.8	265629.0	106.3
Magnesium	24	100000	100000	105172	105.2	106461.7	106.5
Molybdenum	98	2000	2000	2096	104.8	2177.5	108.9
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	105740	105.7	106040.6	106.0
Sodium	23	250000	250000	266530	106.6	267978.8	107.2
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2115	105.8	2202.8	110.1

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE67

Instrument ID: 19204
Run Name: 1617302E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	100036	100.0	103437.5	103.4
Calcium	44	300000	300000	280037	93.3	292222.9	97.4
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	3		227.8	111.1
Iron	57	250000	250000	261221	104.5	271121.6	108.4
Magnesium	24	100000	100000	102422	102.4	107252.9	107.3
Molybdenum	98	2000	2000	2081	104.1	2289.8	114.5
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	105038	105.0	109831.5	109.8
Sodium	23	250000	250000	259267	103.7	271377.3	108.6
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2135	106.8	2174.3	108.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8433822BKG Matrix Spike Lab Sample ID: 8433823MS Matrix Spike Duplicate Lab Sample ID: 8433824MSD
Batch Number(s): 161720639001

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Cobalt	59	5.6150		249.6540		262.5610		250.0000	250.0000	UG/L	98		103		5		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8433822BKG Duplicate Lab Sample ID: 8433825DUP
Batch Number(s): 161720639001
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Cobalt	59	4.0	5.6150		5.4190		4		MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAE67
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Cobalt	59	161720639001	UG/L	250.000	249.693		80 - 120	100	MS	Yes

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAE67
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 8433822BKG Serial Dilution Lab Sample ID: 8433822L
Batch Number(s): 161720639001
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Cobalt	59	5.6150		5.2350	B	7		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Method: MS
Instrument ID: 19204
Date: 04/2016

Analyte	MASS (amu)	Background	IDL (UG/L)
Cobalt	59		0.10

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAE67
Matrix: WATER

Method: MS
Date: 11/2012

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Cobalt	59		4.0	0.10

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 161720639001

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
8433822BKG	06/20/2016	50.00	50
8433825DUP	06/20/2016	50.00	50
8433824MSD	06/20/2016	50.00	50
8433823MS	06/20/2016	50.00	50
P17239AB	06/20/2016	50.00	50
P17239AQ	06/20/2016	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE67

Method: MS
Instrument ID: 19204
Run Name: 1617302E05

Run Start Date: 06/21/2016
Run End Date: 06/21/2016

Lab Sample ID	D/F	Time	Analytes
			CO
S0	1.00	06:56	X
S	1.00	06:59	X
CCS	1.00	07:02	X
CCS	1.00	07:05	X
ICV	1.00	07:08	X
ICB	1.00	07:11	X
LLC	1.00	07:14	X
ICSA	1.00	07:17	X
ICSAB	1.00	07:20	X
ZZZZZZ	1.00	07:24	
CCV	1.00	07:27	X
CCB	1.00	07:30	X
P17239AB	1.00	07:33	X
P17239AQ	1.00	07:36	X
8433822BKG	1.00	07:39	X
8433822A	1.00	07:42	
8433825DUP	1.00	07:45	X
8433823MS	1.00	07:48	X
8433824MSD	1.00	07:51	X
8433822L	5.00	07:54	X
ZZZZZZ	1.00	07:57	
ZZZZZZ	1.00	08:01	
CCV	1.00	08:04	X
CCB	1.00	08:07	X
LLC	1.00	08:10	X
ICSA	1.00	08:13	X
ICSAB	1.00	08:16	X
ZZZZZZ	1.00	08:19	
CCV	1.00	08:22	X
CCB	1.00	08:25	X

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE67

Instrument ID: 19204
Run Name: 1617302E05

Start Date: 06/21/2016
End Date: 06/21/2016

Standard	Elements Applies to	Standard	Elements Applies to
IN-2-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-2-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	06:56	100													
S	06:59	97													
CCS	07:02	93													
CCS	07:05	89													
ICV	07:08	90													
ICB	07:11	89													
LLC	07:14	88													
ICSA	07:17	87													
ICSAB	07:20	86													
ZZZZZZ	07:24														
CCV	07:27	85													
CCB	07:30	90													
P17239AB	07:33	89													
P17239AQ	07:36	92													
8433822BKG	07:39	87													
8433822A	07:42	88													
8433825DUP	07:45	87													
8433823MS	07:48	91													
8433824MSD	07:51	95													
8433822L	07:54	101													
ZZZZZZ	07:57														
ZZZZZZ	08:01														
CCV	08:04	99													
CCB	08:07	93													
LLC	08:10	99													
ICSA	08:13	97													
ICSAB	08:16	91													
ZZZZZZ	08:19														
CCV	08:22	97													
CCB	08:25	94													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 16F21C00.E05

Run Name: 1617302E05

Analyst: 8381

Reviewed By: Scott P Cuff

Reviewed Date: 06/21/2016 08:40

Verified By: Robert Strocko

Verified Date: 06/21/2016 13:11

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	RB	85
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1617302E05 Date/Time: 06/21/2016 6:56:26
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	5.33000	0.000	-0.00062	0.00128	-0.00066
B	11	0.00000	32045.83000	0.000	0.19934	-0.10138	-0.09796
NA	23	0.00000	5067.56000	0.000	-0.41894	-6.94308	7.36202
MG	24	0.00000	16.67000	0.000	-0.22354	0.09893	0.12461
AL	27	0.00000	6.67000	0.000	-0.92355	-0.92355	1.84710
K	39	0.00000	790.05000	0.000	3.04817	10.27278	-13.32095
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	581033.17000	0.00000	0.000	578529.87000	589377.57000	575192.06000
SC-2	45	10856.95000	0.00000	0.000	10713.64000	11133.75000	10723.45000
SC-3	45	1295219	0	0.000	1272798	1313771	1299088
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	-0.01369	0.02738	-0.01369
CR	52	0.00000	56.67000	0.000	0.01123	-0.08241	0.07117
MN	55	0.00000	3.33000	0.000	0.05317	-0.02658	-0.02658
FE	57	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.00000	13.33000	0.000	-0.02218	0.01128	0.01090
NI	60	0.00000	23.33000	0.000	0.03130	0.04075	-0.07205
CU	63	0.00000	156.68000	0.000	-0.04112	-0.02586	0.06698
ZN	66	0.00000	30.00000	0.000	0.29441	0.01578	-0.31020
GE-1	72	625620.72000	0.00000	0.000	625796.83000	631864.52000	619200.81000
GE-2	72	27635.59000	0.00000	0.000	26530.58000	27572.27000	28803.93000
GE-3	72	1023635	0	0.000	1022709	1022712	1025485
AS	75	0.00000	3.33000	0.000	0.01907	0.10114	-0.12021
SE	78	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
RB	85	0.00000	6.67000	0.000	0.04684	0.05573	-0.10257
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	46.67000	0.000	-0.02107	0.06333	-0.04225
AG	107	0.00000	3.33000	0.000	0.00719	-0.00360	-0.00360
CD	111	0.00000	0.67000	0.000	-0.00733	0.01465	-0.00733
IN-1	115	301783.73000	0.00000	0.000	298839.14000	309259.37000	297252.68000
IN-2	115	12564.74000	0.00000	0.000	13005.05000	12274.53000	12414.65000
SN	120	0.00000	56.67000	0.000	-0.09285	-0.13331	0.22615
SB	121	0.00000	3.33000	0.000	-0.02233	-0.02233	0.04466
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-2	159	78737.15000	0.00000	0.000	78947.92000	77330.42000	79933.12000
TL	203	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
PB	208	0.00000	173.34000	0.000	-0.00818	-0.00099	0.00917
BI-2	209	64881.82000	0.00000	0.000	64068.37000	64670.96000	65906.13000
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000

Run Name: 1617302E05 Date/Time: 06/21/2016 6:59:30
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10480.03000	0.00000	0.000	10613.51000	10563.39000	10263.20000
SC-3	45	1271252	0	0.000	1271374	1297574	1244807
AL	27	10000.00000	70525.15000	3.500	9666.66604	9975.00405	10358.32991
B	11	1000.00000	1459842.08000	1.900	1009.11391	978.51717	1012.36892
BE	9	100.00000	196539.92000	2.200	99.89381	97.85363	102.25256
CA	44	10000.00000	6618.11000	4.100	9710.21501	9816.16042	10473.62456
CR	52	1000.00000	325157.44000	2.800	980.98787	986.51439	1032.49775
FE	57	10000.00000	63100.98000	1.700	9931.91229	9870.14616	10197.94155
K	39	10000.00000	102676.46000	2.500	9774.94753	9950.82722	10274.22525
MG	24	10000.00000	280378.19000	2.600	9818.35035	9889.11107	10292.53858
MN	55	1000.00000	122633.67000	1.700	984.15734	998.59587	1017.24678
NA	23	10000.00000	589555.62000	2.500	9715.68475	10101.54397	10182.77129
TI	47	1000.00000	5390.98000	9.600	995.65022	906.57534	1097.77444
V	51	1000.00000	229069.58000	4.500	961.15343	990.20905	1048.63752
IN-1	115	309821.82000	0.00000	0.000	315048.40000	309569.87000	304847.20000
IN-2	115	12166.53000	0.00000	0.000	12097.72000	11978.69000	12423.17000
AG	107	100.00000	86727.43000	1.500	98.87951	101.71031	99.41018
AS	75	1000.00000	26866.86000	1.600	1015.03175	1001.56937	983.39888
BA	137	1000.00000	45883.74000	2.500	995.30587	1026.71141	977.98272
CD	111	100.00000	9019.73000	1.000	98.88071	100.78758	100.33171
CO	59	1000.00000	592465.41000	1.200	993.65533	1014.37461	991.97006
CU	63	1000.00000	510965.20000	1.700	1007.04059	1012.09617	980.86324
MO	98	100.00000	37905.29000	2.400	99.97335	102.36513	97.66152
NI	60	1000.00000	176724.43000	1.300	1003.63743	1011.30084	985.06173
RB	85	100.00000	6268.00000	2.800	96.92515	102.43330	100.64156
SB	121	100.00000	14630.05000	2.300	98.39494	102.63834	98.96672
SE	78	100.00000	13069.44000	2.100	98.54635	99.02878	102.42488
SN	120	100.00000	19047.81000	1.900	98.03836	101.85268	100.10896
SR	88	100.00000	9602.97000	4.900	105.49439	95.95945	98.54616
ZN	66	1000.00000	61195.45000	2.500	971.69066	1007.52242	1020.78692
BI-2	209	66920.68000	0.00000	0.000	65403.92000	66900.51000	68457.61000
PB	208	100.00000	267503.14000	1.600	101.49449	100.15991	98.34560
TL	203	100.00000	86625.94000	2.400	100.92157	101.84362	97.23481
U	238	100.00000	347121.91000	1.400	101.49890	99.83279	98.66831
SC-1	45	608257.73000	0.00000	0.000	610518.82000	615408.98000	598845.38000
GE-1	72	645315.33000	0.00000	0.000	652804.17000	648613.12000	634528.70000
GE-2	72	28657.20000	0.00000	0.000	27552.03000	29625.39000	28794.17000
GE-3	72	977087.62000	0.00000	0.000	983100.38000	975604.20000	972558.27000
TB-2	159	80240.30000	0.00000	0.000	80022.37000	79509.40000	81189.14000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:02:34
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9916.38000	0.00000	0.000	9622.89000	10403.31000	9722.94000
SC-3	45	1221136	0	0.000	1221025	1232795	1209587
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	27.24800	67605.37000	2.400	27.04164	26.70943	27.99423
BE	9	0.00400	12.00000	198.300	0.01217	-0.00056	-0.00052
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.26500	133.34000	22.300	0.33312	0.23348	0.22852
FE	57	1.14400	6.67000	86.600	1.72558	0.00000	1.70782
K	39	19.85600	910.05000	76.600	11.85737	10.30750	37.40251
MG	24	0.07200	16.67000	820.200	0.59266	-0.57234	0.19633
MN	55	0.11600	16.67000	40.600	0.06221	0.13768	0.14917
NA	23	2.79700	4780.81000	194.300	3.43681	-2.93080	7.88649
TI	47	1.96100	10.00000	4.200	2.01828	1.86687	1.99751
V	51	0.00200	3.33000	1276.400	0.03383	-0.01369	-0.01369
IN-1	115	289046.05000	0.00000	0.000	291138.14000	289035.23000	286964.79000
IN-2	115	11635.63000	0.00000	0.000	11792.59000	11471.80000	11642.50000
AG	107	0.02400	23.33000	124.300	0.02019	-0.00360	0.05665
AS	75	0.03400	4.00000	383.700	0.18699	-0.04126	-0.04242
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.04800	40.00000	95.800	0.08229	-0.00428	0.06600
CU	63	0.22100	253.34000	33.600	0.14678	0.22148	0.29569
MO	98	0.05500	63.33000	161.200	-0.01091	0.02014	0.15606
NI	60	-0.02900	16.67000	0.000	-0.06913	-0.00748	-0.00924
RB	85	-0.04600	3.33000	0.000	-0.10257	0.06681	-0.10257
SB	121	0.83900	120.01000	52.800	0.33029	1.13766	1.04922
SE	78	0.11800	14.44000	9.500	0.11397	0.13120	0.11009
SN	120	0.87100	210.01000	57.700	0.30764	1.27364	1.03064
SR	88	0.07200	6.67000	173.200	0.21487	0.00000	0.00000
ZN	66	-0.24100	13.33000	0.000	-0.47044	-0.12361	-0.12870
BI-2	209	61987.72000	0.00000	0.000	61530.06000	62261.71000	62171.40000
PB	208	-0.01700	123.33000	0.000	-0.00577	-0.02256	-0.02250
TL	203	0.06600	53.33000	28.400	0.06276	0.08683	0.04969
U	238	0.00700	23.33000	66.100	0.01253	0.00310	0.00620
SC-1	45	557177.24000	0.00000	0.000	558980.58000	555107.45000	557443.70000
GE-1	72	599428.85000	0.00000	0.000	600325.11000	601561.48000	596399.95000
GE-2	72	27545.59000	0.00000	0.000	28012.90000	27512.13000	27111.74000
GE-3	72	953208.84000	0.00000	0.000	959131.78000	947900.38000	952594.36000
TB-2	159	74788.85000	0.00000	0.000	73734.82000	76335.98000	74295.75000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:05:39
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9722.95000	0.00000	0.000	9662.94000	9352.74000	10153.17000
SC-3	45	1205805	0	0.000	1218342	1216763	1182311
AL	27	1.10200	13.33000	214.000	3.68855	-0.92355	0.53959
B	11	16.78400	52570.04000	4.500	16.63352	16.11171	17.60606
BE	9	0.00300	10.00000	42.600	0.00159	0.00266	0.00391
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.42500	176.67000	76.000	0.39773	0.76109	0.11641
FE	57	2.31000	13.33000	113.400	5.15527	1.77542	0.00000
K	39	15.78000	856.72000	118.700	35.96966	-1.03114	12.40228
MG	24	-0.45000	3.33000	0.000	-0.57234	-0.57234	-0.20429
MN	55	0.09300	13.33000	111.300	0.15026	0.15613	-0.02658
NA	23	5.03400	4804.15000	214.500	-2.11947	17.45461	-0.23296
TI	47	1.94500	10.00000	98.400	2.00991	0.00000	3.82573
V	51	0.01800	6.67000	306.000	0.08095	-0.01369	-0.01369
IN-1	115	284474.20000	0.00000	0.000	284382.78000	281950.51000	287089.30000
IN-2	115	11179.95000	0.00000	0.000	11423.34000	11343.33000	10773.19000
AG	107	-0.00400	0.00000	0.000	-0.00360	-0.00360	-0.00360
AS	75	0.09700	5.33000	128.000	-0.04093	0.19915	0.13199
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.03300	30.00000	51.800	0.04972	0.03213	0.01594
CU	63	0.14200	206.68000	29.900	0.14030	0.18537	0.10041
MO	98	-0.09100	10.00000	0.000	-0.06364	-0.11989	-0.09007
NI	60	-0.06700	10.00000	0.000	0.05329	-0.12750	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.05100	10.00000	249.100	-0.02233	0.19762	-0.02233
SE	78	0.00600	0.67000	100.400	0.00000	0.01118	0.00553
SN	120	0.05200	60.00000	564.800	-0.12164	0.38783	-0.11149
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	-0.23800	13.33000	0.000	0.05201	-0.29506	-0.47044
BI-2	209	61726.49000	0.00000	0.000	60314.00000	62653.64000	62211.83000
PB	208	-0.00500	153.33000	0.000	-0.01698	0.00512	-0.00241
TL	203	0.02500	20.00000	2.000	0.02561	0.02465	0.02483
U	238	0.00100	3.33000	173.200	0.00000	0.00308	0.00000
SC-1	45	547387.58000	0.00000	0.000	554266.32000	539053.82000	548842.61000
GE-1	72	587217.62000	0.00000	0.000	593498.86000	576071.44000	592082.57000
GE-2	72	26827.58000	0.00000	0.000	26580.60000	26320.03000	27582.12000
GE-3	72	948806.11000	0.00000	0.000	963677.49000	952408.66000	930332.17000
TB-2	159	74972.99000	0.00000	0.000	73000.48000	75843.21000	76075.29000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:08:43
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9906.39000	0.00000	0.000	9893.01000	10033.13000	9793.04000
SC-3	45	1221186	0	0.000	1219903	1231325	1212328
AL	27	4907.94000	32723.28000	5.000	4795.01452	4741.42372	5187.38158
B	11	542.49200	774795.81000	0.900	543.46139	546.87492	537.14078
BE	9	51.27300	96838.18000	0.800	51.50506	51.53917	50.77405
CA	44	4848.96100	3033.70000	5.100	4912.21386	4575.35339	5059.31480
CR	52	497.95000	153118.59000	1.900	488.35465	498.18069	507.31497
FE	57	4867.81900	29027.48000	6.300	4747.18656	4639.40721	5216.86352
K	39	4966.60700	48569.08000	3.300	4903.11922	4845.91234	5150.79061
MG	24	4955.34900	131359.32000	2.000	4973.56137	4849.29774	5043.18938
MN	55	503.71400	58392.06000	2.500	502.94439	491.63715	516.55927
NA	23	4925.91400	276882.47000	1.900	4897.76996	4847.95202	5032.02016
TI	47	531.79200	2713.65000	5.300	522.26401	563.37178	509.74058
V	51	502.61700	108881.77000	1.100	504.89565	496.33132	506.62550
IN-1	115	286750.40000	0.00000	0.000	287447.63000	287443.06000	285360.50000
IN-2	115	11260.50000	0.00000	0.000	11135.37000	10993.10000	11653.02000
AG	107	51.77400	41540.60000	2.800	52.46479	52.75980	50.09823
AS	75	522.02600	12981.43000	1.500	530.19657	521.23086	514.64935
BA	137	518.57500	22021.83000	1.600	518.35775	526.76213	510.60553
CD	111	51.27200	4277.89000	4.000	50.32230	53.62484	49.86976
CO	59	515.83200	282741.45000	2.800	514.95611	530.69678	501.84311
CU	63	508.14300	240335.99000	1.900	514.08679	513.42253	496.92071
MO	98	47.97100	16838.78000	5.100	49.29870	49.47062	45.14436
NI	60	513.68200	83989.14000	3.400	513.06529	531.41640	496.56408
RB	85	50.78500	2953.69000	8.500	47.18924	49.56964	55.59495
SB	121	51.06400	6911.63000	6.800	54.88541	50.14620	48.16181
SE	78	51.11000	6183.52000	0.900	50.65136	51.09750	51.58121
SN	120	50.14500	8865.94000	2.200	51.38252	49.19439	49.85697
SR	88	47.19600	4193.98000	0.900	47.22505	47.60618	46.75796
ZN	66	506.97100	28713.82000	1.700	504.64477	516.61650	499.65085
BI-2	209	63516.38000	0.00000	0.000	63877.72000	63707.29000	62964.12000
PB	208	50.71500	128868.30000	2.200	50.87255	49.51888	51.75471
TL	203	48.58300	39950.74000	2.600	47.84125	47.84800	50.06028
U	238	50.21600	165472.16000	1.100	50.09262	49.74318	50.81329
SC-1	45	555576.06000	0.00000	0.000	555638.04000	557641.20000	553448.94000
GE-1	72	598078.32000	0.00000	0.000	602768.70000	596423.82000	595042.45000
GE-2	72	27087.98000	0.00000	0.000	25739.34000	27281.42000	28243.18000
GE-3	72	957600.19000	0.00000	0.000	967587.56000	963742.49000	941470.53000
TB-2	159	75404.94000	0.00000	0.000	73824.58000	75140.42000	77249.83000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:11:47
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9896.37000	0.00000	0.000	9422.77000	10083.15000	10183.18000
SC-3	45	1174119	0	0.000	1166746	1202862	1152749
AL	27	0.09300	6.67000	947.600	0.65300	0.54975	-0.92355
B	11	23.76700	60401.17000	3.900	24.70817	22.85264	23.73927
BE	9	0.02100	42.67000	24.000	0.02506	0.02208	0.01530
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.31100	146.67000	71.500	0.44638	0.05448	0.43206
FE	57	2.77200	16.67000	31.600	1.76222	3.29362	3.26127
K	39	14.24100	856.72000	24.700	11.51325	13.00699	18.20171
MG	24	2.85900	90.00000	40.800	4.18702	2.39251	1.99642
MN	55	0.11600	16.67000	81.800	0.06409	0.05816	0.22514
NA	23	1.17500	4684.10000	304.500	4.52760	1.59050	-2.59265
TI	47	0.63600	3.33000	173.200	0.00000	0.00000	1.90723
V	51	0.12900	30.00000	101.900	0.27748	0.07701	0.03121
IN-1	115	274326.31000	0.00000	0.000	273483.10000	275351.69000	274144.13000
IN-2	115	11209.54000	0.00000	0.000	11152.49000	11743.37000	10732.75000
AG	107	0.03400	30.00000	36.000	0.04672	0.03224	0.02254
AS	75	0.44900	14.00000	38.700	0.61065	0.26540	0.47047
BA	137	0.08200	3.33000	173.200	0.00000	0.00000	0.24699
CD	111	0.00900	1.33000	156.300	0.01686	-0.00733	0.01781
CO	59	0.17300	106.67000	17.900	0.14353	0.20515	0.16914
CU	63	0.04100	160.01000	277.600	0.15093	0.04726	-0.07561
MO	98	0.05000	60.00000	134.500	-0.00466	0.12633	0.02978
NI	60	0.16000	46.67000	29.100	0.18113	0.10698	0.19320
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.37600	53.34000	64.400	0.64888	0.19013	0.28762
SE	78	0.08800	10.22000	30.700	0.09819	0.10906	0.05766
SN	120	0.24800	93.34000	67.700	0.22706	0.09196	0.42638
SR	88	0.03600	3.33000	173.200	0.00000	0.10789	0.00000
ZN	66	0.11200	33.33000	482.600	0.59985	0.20718	-0.47044
BI-2	209	60080.03000	0.00000	0.000	57955.15000	60736.14000	61548.79000
PB	208	0.00900	183.34000	367.900	-0.02791	0.01976	0.03488
TL	203	0.05100	40.00000	112.800	0.03998	0.11444	0.00000
U	238	0.02000	63.34000	54.900	0.01995	0.03174	0.00939
SC-1	45	529525.88000	0.00000	0.000	529039.13000	531132.65000	528405.85000
GE-1	72	577814.47000	0.00000	0.000	574256.09000	581339.72000	577847.61000
GE-2	72	25562.50000	0.00000	0.000	25459.01000	25579.07000	25649.42000
GE-3	72	929123.66000	0.00000	0.000	944002.88000	929820.30000	913547.80000
TB-2	159	72364.78000	0.00000	0.000	72126.56000	71484.25000	73483.52000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:14:51
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9779.71000	0.00000	0.000	9813.01000	9422.76000	10103.35000
SC-3	45	1224223	0	0.000	1221207	1201194	1250269
AL	27	198.90700	1316.76000	4.600	204.97614	188.27559	203.47026
B	11	119.53500	194710.07000	2.400	118.16517	122.86021	117.58035
BE	9	1.05300	1997.46000	5.500	1.03842	1.11714	1.00388
CA	44	365.89100	226.68000	13.500	338.72707	335.95859	422.98661
CR	52	4.34300	1370.10000	10.300	4.85555	4.03754	4.13700
FE	57	184.82000	1086.74000	9.700	169.22462	204.43408	180.80007
K	39	407.77600	4584.07000	6.600	414.62903	430.52575	378.17392
MG	24	206.54000	5414.36000	9.200	186.81880	224.72817	208.07331
MN	55	3.95400	453.36000	22.500	3.63062	4.96100	3.27182
NA	23	397.20500	26235.94000	2.100	400.76726	403.11845	387.72904
TI	47	29.42100	146.67000	46.900	21.77092	45.34721	21.14529
V	51	0.85200	186.68000	41.000	0.68533	0.61718	1.25366
IN-1	115	280416.54000	0.00000	0.000	282950.69000	280926.30000	277372.64000
IN-2	115	11076.77000	0.00000	0.000	11126.91000	11275.67000	10827.74000
AG	107	1.15000	910.06000	10.100	1.11847	1.05391	1.27905
AS	75	4.11100	103.33000	13.500	4.27505	3.49419	4.56378
BA	137	3.98700	166.67000	20.500	3.09709	4.70212	4.16218
CD	111	1.08400	89.33000	39.900	0.64735	1.09333	1.51262
CO	59	0.89400	493.36000	12.500	0.90055	0.77912	1.00192
CU	63	4.40900	2190.20000	4.100	4.45399	4.56032	4.21138
MO	98	0.97000	376.69000	27.700	0.77523	1.27627	0.85930
NI	60	3.91800	650.04000	9.500	3.83240	3.59693	4.32334
RB	85	1.54700	93.34000	58.700	1.11979	0.93134	2.58931
SB	121	1.97700	266.68000	13.600	2.14527	2.11675	1.66751
SE	78	4.13600	489.34000	0.600	4.13238	4.11154	4.16421
SN	120	4.25400	786.72000	11.000	4.14323	4.76644	3.85148
SR	88	1.48700	130.00000	33.200	2.04967	1.12362	1.28711
ZN	66	29.35900	1660.14000	6.100	27.42336	29.70220	30.95041
BI-2	209	61117.32000	0.00000	0.000	61438.53000	61117.40000	60796.03000
PB	208	2.15300	5420.56000	4.900	2.12095	2.27171	2.06587
TL	203	0.95700	756.72000	12.800	0.85484	0.92252	1.09255
U	238	0.97700	3097.10000	3.500	0.97895	1.00933	0.94172
SC-1	45	540513.12000	0.00000	0.000	545197.49000	540488.20000	535853.66000
GE-1	72	580030.15000	0.00000	0.000	587289.80000	584969.29000	567831.36000
GE-2	72	26206.58000	0.00000	0.000	25889.44000	26380.29000	26350.01000
GE-3	72	941115.25000	0.00000	0.000	949906.78000	937186.24000	936252.72000
TB-2	159	73164.38000	0.00000	0.000	73512.48000	71754.72000	74225.94000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:17:55
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9496.14000	0.00000	0.000	9282.69000	9112.59000	10093.15000
SC-3	45	1286259	0	0.000	1285384	1267838	1305555
AL	27	103245.15100	658691.70000	5.400	104454.88430	108120.96276	97159.60744
B	11	20.63400	61644.52000	3.700	20.67906	21.36557	19.85799
BE	9	0.05400	112.00000	26.000	0.06979	0.04529	0.04589
CA	44	283479.12900	169718.77000	6.200	283052.06056	301379.87460	266005.45181
CR	52	2.77500	870.06000	8.100	2.71230	2.58928	3.02376
FE	57	267113.25500	1525098.20000	4.500	269354.48110	277851.18210	254134.10150
K	39	105740.42600	975942.36000	4.400	106298.62071	110061.50777	100861.14987
MG	24	105171.78800	2667855.90000	5.200	105130.92489	110668.30079	99716.13952
MN	55	1.63000	183.34000	27.500	1.26216	2.13010	1.49730
NA	23	266529.70700	14100144.79000	5.300	270512.29192	278225.07955	250851.75060
TI	47	2114.58200	10336.66000	4.300	2023.81356	2204.46909	2115.46300
V	51	0.30200	66.67000	62.500	0.38039	0.08667	0.43940
IN-1	115	273882.65000	0.00000	0.000	272458.17000	277623.55000	271566.23000
IN-2	115	10968.85000	0.00000	0.000	10001.34000	11202.87000	11702.34000
AG	107	0.33900	266.68000	17.800	0.38913	0.27189	0.35603
AS	75	0.12500	6.00000	186.400	0.15145	-0.12021	0.34414
BA	137	2.31300	96.67000	43.400	2.12039	1.41973	3.39807
CD	111	0.19400	16.67000	45.000	0.12755	0.16125	0.29239
CO	59	3.73100	1993.53000	11.600	4.22811	3.44226	3.52255
CU	63	3.67100	1826.83000	2.500	3.70286	3.74156	3.56919
MO	98	2095.78000	713041.81000	6.800	2246.80907	2074.43101	1966.09860
NI	60	1.74400	293.35000	33.700	2.41944	1.47032	1.34324
RB	85	0.02000	6.67000	533.200	0.09171	0.07087	-0.10257
SB	121	0.20700	30.00000	38.300	0.22713	0.27461	0.11980
SE	78	0.07300	8.45000	5.700	0.07542	0.06830	0.07567
SN	120	0.06300	60.00000	109.600	0.09442	0.11038	-0.01618
SR	88	3.88800	333.35000	35.400	5.06753	2.37505	4.22256
ZN	66	2.00000	133.34000	49.300	3.11019	1.66051	1.22956
BI-2	209	56928.73000	0.00000	0.000	55878.69000	57874.96000	57032.53000
PB	208	0.21200	633.36000	8.300	0.21540	0.19270	0.22724
TL	203	0.02200	16.67000	92.000	0.00000	0.02669	0.04062
U	238	0.02500	73.33000	54.700	0.01035	0.02664	0.03718
SC-1	45	518707.83000	0.00000	0.000	511352.18000	524819.68000	519951.63000
GE-1	72	582426.80000	0.00000	0.000	575306.91000	591344.01000	580629.48000
GE-2	72	26383.62000	0.00000	0.000	24818.04000	27371.87000	26960.94000
GE-3	72	1039888	0	0.000	1055814	1026299	1037552
TB-2	159	66249.18000	0.00000	0.000	65720.62000	65108.46000	67918.46000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:20:58
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9562.81000	0.00000	0.000	9462.78000	9702.86000	9522.80000
SC-3	45	1306599	0	0.000	1320367	1314916	1284516
AL	27	103326.56000	665112.59000	1.700	102329.38844	102263.69034	105386.60240
B	11	16.76700	56941.24000	4.300	16.55855	16.17685	17.56427
BE	9	0.04200	90.00000	26.100	0.04240	0.03079	0.05272
CA	44	287914.60700	173933.82000	1.800	288367.31267	282449.67010	292926.83732
CR	52	213.27200	63334.77000	1.000	213.45299	211.13462	215.22954
FE	57	265629.04800	1529759.93000	1.000	267628.13358	266468.01996	262790.98969
K	39	106040.61000	987096.00000	0.800	105556.43736	105504.95007	107060.44112
MG	24	106461.73000	2724149.33000	1.200	107059.48547	105050.94946	107274.75525
MN	55	209.22700	23415.88000	3.400	207.15932	203.43912	217.08302
NA	23	267978.84200	14302394.79000	1.300	270950.63285	264202.97414	268782.92009
TI	47	2202.78700	10843.60000	2.700	2235.82901	2134.45361	2238.07749
V	51	223.13300	46660.94000	1.500	224.06317	219.41416	225.92029
IN-1	115	288707.19000	0.00000	0.000	287000.48000	291611.62000	287509.46000
IN-2	115	10809.84000	0.00000	0.000	9993.12000	11603.60000	10832.79000
AG	107	51.09800	39255.39000	6.700	53.79104	47.23341	52.26950
AS	75	107.72200	2569.54000	4.000	111.08945	102.83589	109.24211
BA	137	2.07100	83.33000	36.400	2.91794	1.82760	1.46824
CD	111	99.34000	7933.19000	7.000	106.12029	92.13507	99.76318
CO	59	215.12800	112902.37000	7.000	232.46471	204.94549	207.97510
CU	63	211.67800	95855.86000	7.900	230.32349	197.69779	207.01311
MO	98	2177.51500	729904.91000	7.800	2341.58713	2003.61727	2187.34192
NI	60	210.37500	32921.00000	8.100	227.62850	193.52111	209.97509
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	95.14700	11589.54000	2.100	93.88628	94.06077	97.49255
SN	120	0.27700	96.67000	59.900	0.09473	0.31743	0.41977
SR	88	4.07900	346.69000	7.900	4.43766	3.82175	3.97673
ZN	66	98.31400	5354.32000	5.100	103.06815	93.15669	98.71688
BI-2	209	56925.26000	0.00000	0.000	56069.45000	57554.12000	57152.20000
PB	208	0.15500	503.35000	21.400	0.18766	0.15501	0.12153
TL	203	0.01400	10.00000	173.200	0.00000	0.00000	0.04054
U	238	0.01400	40.00000	65.800	0.00688	0.01005	0.02361
SC-1	45	547715.28000	0.00000	0.000	541988.90000	552302.10000	548854.84000
GE-1	72	614752.09000	0.00000	0.000	607855.58000	620210.93000	616189.76000
GE-2	72	25929.65000	0.00000	0.000	25518.83000	26090.17000	26179.96000
GE-3	72	1050726	0	0.000	1056862	1047378	1047938
TB-2	159	64335.49000	0.00000	0.000	64375.84000	65208.92000	63421.71000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:24:02
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9549.56000	0.00000	0.000	9432.88000	9832.97000	9382.82000
SC-3	45	1240266	0	0.000	1220287	1257976	1242534
AL	27	36.29200	240.01000	40.000	46.32391	42.89069	19.66048
B	11	8.16500	42061.27000	7.700	8.70651	7.47984	8.30858
BE	9	0.00200	8.00000	139.800	0.00371	0.00146	-0.00057
CA	44	170.92700	103.34000	12.200	167.80747	193.15622	151.81731
CR	52	0.39100	166.67000	31.300	0.27488	0.51902	0.38031
FE	57	142.12600	816.72000	5.500	140.83563	135.10523	150.43567
K	39	98.99500	1613.46000	9.500	108.42476	98.88361	89.67716
MG	24	58.63800	1513.46000	15.800	48.55444	60.61877	66.74142
MN	55	0.09500	13.33000	111.000	0.15458	-0.02658	0.15554
NA	23	154.12500	12678.10000	2.300	152.69403	158.21161	151.47074
TI	47	2.03800	10.00000	101.600	0.00000	1.97516	4.13983
V	51	0.06500	16.67000	109.600	-0.01369	0.12582	0.08378
IN-1	115	291145.67000	0.00000	0.000	289037.75000	292083.26000	292316.01000
IN-2	115	10970.10000	0.00000	0.000	11003.63000	11063.29000	10843.38000
AG	107	0.00900	10.00000	139.600	0.02190	0.00908	-0.00360
AS	75	0.26500	9.33000	72.100	0.04440	0.37096	0.38092
BA	137	0.08100	3.33000	173.200	0.00000	0.00000	0.24447
CD	111	0.02500	2.67000	54.700	0.01719	0.04145	0.01755
CO	59	0.09000	60.00000	54.000	0.05246	0.14486	0.07250
CU	63	0.25900	256.68000	30.200	0.20028	0.34827	0.22960
MO	98	2.93300	1043.41000	11.600	3.06274	3.19077	2.54679
NI	60	-0.06500	10.00000	0.000	-0.06494	-0.00305	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.00300	3.33000	1368.500	-0.02233	-0.02233	0.05437
SE	78	0.09400	11.55000	3.100	0.09291	0.09737	0.09186
SN	120	-0.09500	33.33000	0.000	-0.17344	-0.11617	0.00550
SR	88	0.07800	6.67000	173.200	0.00000	0.00000	0.23368
ZN	66	0.25700	40.00000	254.200	0.79512	-0.47044	0.44689
BI-2	209	60555.28000	0.00000	0.000	60475.22000	60404.79000	60785.83000
PB	208	0.02100	213.34000	92.200	0.03669	0.02852	-0.00090
TL	203	0.02500	20.00000	86.300	0.01277	0.01279	0.05082
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	567596.44000	0.00000	0.000	569974.01000	564689.02000	568126.28000
GE-1	72	610241.55000	0.00000	0.000	603773.90000	606824.56000	620126.20000
GE-2	72	26069.93000	0.00000	0.000	25799.62000	26941.05000	25469.11000
GE-3	72	962393.16000	0.00000	0.000	962682.17000	971893.19000	952604.13000
TB-2	159	72511.92000	0.00000	0.000	72358.12000	72218.07000	72959.58000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:27:06
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9782.92000	0.00000	0.000	9572.85000	9932.97000	9842.93000
SC-3	45	1229292	0	0.000	1234122	1212050	1241702
AL	27	2475.90200	16314.43000	2.600	2441.22878	2548.78819	2437.68882
B	11	272.52600	406862.16000	2.100	270.25771	279.13394	268.18675
BE	9	25.50700	48488.52000	1.900	25.30878	26.05415	25.15937
CA	44	2277.65400	1406.78000	10.600	2480.27487	2342.51769	2010.16881
CR	52	244.96400	74420.25000	0.300	244.10800	245.15872	245.62541
FE	57	2536.83800	14936.75000	5.500	2653.41236	2381.54635	2575.55454
K	39	2430.76600	23832.97000	3.400	2522.69880	2367.35135	2402.24823
MG	24	2458.01000	64345.61000	2.700	2510.30554	2384.56825	2479.15682
MN	55	245.23200	28069.28000	3.700	252.86393	235.16806	247.66362
NA	23	2544.69400	143467.19000	1.400	2561.94394	2502.93843	2569.19869
TI	47	224.10000	1130.07000	20.400	190.71990	205.31725	276.26188
V	51	247.71800	52998.41000	2.500	246.72602	242.02992	254.39814
IN-1	115	283481.24000	0.00000	0.000	286382.03000	281291.45000	282770.23000
IN-2	115	10668.37000	0.00000	0.000	10288.07000	10684.40000	11032.63000
AG	107	26.28400	19985.48000	1.900	26.57258	26.57251	25.70818
AS	75	262.24800	6179.10000	2.900	269.65176	254.64238	262.44971
BA	137	264.11900	10637.09000	4.100	252.07456	272.51791	267.76351
CD	111	26.85400	2124.15000	4.500	26.29727	28.22581	26.03846
CO	59	263.75900	137017.90000	1.100	267.07008	262.43124	261.77637
CU	63	264.71800	118706.95000	1.000	267.64483	262.93010	263.57895
MO	98	26.83800	8932.62000	9.500	29.21116	27.16020	24.14354
NI	60	258.97800	40142.13000	2.100	264.54586	253.76061	258.62642
RB	85	23.30100	1290.10000	17.300	19.54017	22.81287	27.54964
SB	121	27.43000	3517.17000	9.700	27.70841	29.94987	24.63039
SE	78	24.90500	2979.37000	3.400	25.65226	23.99844	25.06338
SN	120	24.92100	4194.04000	7.900	25.36649	26.63350	22.76353
SR	88	22.68000	1910.18000	13.800	24.13926	19.09306	24.80727
ZN	66	265.09700	14229.43000	3.800	276.36058	261.43254	257.49720
BI-2	209	61656.05000	0.00000	0.000	60063.50000	61277.96000	63626.70000
PB	208	25.29800	62449.93000	3.400	25.72111	25.85685	24.31666
TL	203	24.13500	19258.88000	2.700	24.44597	24.57936	23.38077
U	238	24.82500	79394.78000	1.800	25.32561	24.47875	24.67125
SC-1	45	550788.08000	0.00000	0.000	550877.37000	553224.64000	548262.22000
GE-1	72	585038.56000	0.00000	0.000	585848.12000	584178.62000	585088.94000
GE-2	72	25699.21000	0.00000	0.000	25819.37000	24927.87000	26350.39000
GE-3	72	942159.28000	0.00000	0.000	943856.78000	942574.36000	940046.70000
TB-2	159	72823.79000	0.00000	0.000	71806.19000	73775.07000	72890.10000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:30:10
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9629.55000	0.00000	0.000	9672.96000	9152.60000	10063.10000
SC-3	45	1221216	0	0.000	1246404	1219775	1197468
AL	27	0.08000	6.67000	1081.400	0.61222	-0.92355	0.55268
B	11	13.58100	48855.52000	0.700	13.48705	13.57470	13.68192
BE	9	0.00700	17.33000	64.000	0.00357	0.00477	0.01139
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.31900	146.68000	33.700	0.23057	0.28851	0.43923
FE	57	10.92400	63.33000	36.100	15.44980	9.07121	8.25046
K	39	26.94200	953.40000	21.500	24.16574	23.04519	33.61387
MG	24	1.41800	50.00000	128.400	0.20030	3.51052	0.54169
MN	55	0.09100	13.33000	50.400	0.06175	0.06677	0.14323
NA	23	15.62700	5341.02000	18.800	12.62314	15.75048	18.50766
TI	47	0.64300	3.33000	173.200	0.00000	0.00000	1.92999
V	51	0.01800	6.67000	306.200	0.08086	-0.01369	-0.01369
IN-1	115	273765.48000	0.00000	0.000	274808.32000	271944.43000	274543.70000
IN-2	115	11303.42000	0.00000	0.000	11063.18000	11293.70000	11553.39000
AG	107	0.00900	10.00000	140.600	-0.00360	0.00883	0.02069
AS	75	0.14900	6.67000	128.700	0.37097	0.04017	0.03657
BA	137	0.15600	6.67000	86.700	0.23961	0.00000	0.22944
CD	111	0.02400	2.67000	112.900	-0.00733	0.04045	0.03938
CO	59	0.12900	83.34000	19.600	0.12630	0.10509	0.15557
CU	63	0.24900	260.01000	29.100	0.17608	0.25075	0.32089
MO	98	0.12700	86.67000	38.200	0.17050	0.13613	0.07476
NI	60	-0.00700	20.00000	0.000	-0.12750	-0.00559	0.11084
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.17400	26.67000	24.500	0.20319	0.12495	0.19362
SE	78	0.06000	6.89000	30.800	0.05175	0.04645	0.08054
SN	120	0.27700	100.00000	35.700	0.34703	0.16388	0.32006
SR	88	0.07500	6.67000	173.200	0.00000	0.22437	0.00000
ZN	66	-0.06100	23.33000	0.000	-0.29062	0.23416	-0.12606
BI-2	209	59652.13000	0.00000	0.000	59170.43000	59441.36000	60344.61000
PB	208	0.00300	166.67000	304.000	0.00936	-0.00783	0.00787
TL	203	0.03000	23.33000	89.500	0.00000	0.05197	0.03839
U	238	0.01300	40.00000	24.200	0.01303	0.00973	0.01597
SC-1	45	527868.08000	0.00000	0.000	525277.34000	524307.02000	534019.87000
GE-1	72	571474.76000	0.00000	0.000	572964.56000	566472.92000	574986.79000
GE-2	72	25779.45000	0.00000	0.000	25388.78000	26069.90000	25879.67000
GE-3	72	944194.55000	0.00000	0.000	963226.24000	930041.16000	939316.24000
TB-2	159	71705.50000	0.00000	0.000	70631.09000	71465.17000	73020.25000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:33:16
Tube Number: 13 Batch: 161720639001A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10053.17000	0.00000	0.000	9753.01000	9893.08000	10513.42000
SC-3	45	1228566	0	0.000	1247472	1218254	1219973
AL	27	10.37300	76.67000	11.900	9.73864	9.58768	11.79347
B	11	10.35500	44692.60000	4.000	9.91006	10.72259	10.43377
BE	9	0.00300	11.33000	72.800	0.00460	0.00478	0.00053
CA	44	5.01800	3.33000	173.200	0.00000	0.00000	15.05456
CR	52	0.16600	103.34000	94.900	0.26033	0.25425	-0.01598
FE	57	17.76800	106.67000	46.200	27.24258	13.42759	12.63530
K	39	35.90600	1083.42000	32.800	22.30042	42.74979	42.66755
MG	24	9.54900	273.35000	15.500	8.24053	9.24894	11.15787
MN	55	0.17200	23.33000	30.400	0.14863	0.23252	0.13596
NA	23	24.91800	6074.55000	55.200	36.46185	28.59885	9.69379
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04800	13.33000	151.000	0.12696	-0.01369	0.02980
IN-1	115	276697.63000	0.00000	0.000	276479.66000	277877.21000	275736.01000
IN-2	115	11136.83000	0.00000	0.000	10893.31000	10843.29000	11673.90000
AG	107	0.00500	6.67000	153.100	0.00928	-0.00360	0.00842
AS	75	0.04100	4.00000	341.900	-0.12021	0.13036	0.11253
BA	137	0.48900	20.00000	132.400	0.24335	1.22234	0.00000
CD	111	0.03300	3.33000	86.900	0.06697	0.01755	0.01578
CO	59	0.00200	13.33000	997.100	0.01552	-0.02218	0.01300
CU	63	0.09900	186.67000	100.100	0.03044	0.05389	0.21250
MO	98	0.11200	80.00000	57.800	0.17503	0.11714	0.04523
NI	60	-0.08700	6.67000	0.000	-0.06431	-0.12750	-0.06853
RB	85	0.01200	6.67000	806.200	0.07580	-0.10257	0.06387
SB	121	0.13100	20.00000	116.900	0.28305	0.13106	-0.02233
SE	78	0.01300	1.56000	49.500	0.01714	0.00571	0.01719
SN	120	-0.11900	30.00000	0.000	-0.11346	-0.17172	-0.07038
SR	88	0.07500	6.67000	86.800	0.00000	0.11684	0.10853
ZN	66	0.23600	40.00000	260.000	0.62531	-0.47044	0.55204
BI-2	209	62094.46000	0.00000	0.000	61026.98000	62432.18000	62824.23000
PB	208	-0.02200	110.00000	0.000	-0.02167	-0.03471	-0.01101
TL	203	0.02900	23.33000	50.100	0.03797	0.03711	0.01229
U	238	0.00700	23.33000	108.100	0.00000	0.01544	0.00614
SC-1	45	533149.12000	0.00000	0.000	531801.16000	532808.98000	534837.22000
GE-1	72	577708.05000	0.00000	0.000	581002.37000	577738.78000	574383.00000
GE-2	72	26059.60000	0.00000	0.000	25278.42000	26119.64000	26780.73000
GE-3	72	964663.03000	0.00000	0.000	967469.67000	967280.06000	959239.36000
TB-2	159	73225.35000	0.00000	0.000	72026.76000	73502.80000	74146.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:36:22
Tube Number: 14 Batch: 161720639001A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9959.74000	0.00000	0.000	9602.89000	10263.19000	10013.15000
SC-3	45	1276710	0	0.000	1269880	1293204	1267046
AL	27	1918.47800	12854.96000	4.900	2004.74423	1819.21925	1931.46936
B	11	269.87800	418824.52000	0.400	268.68308	269.88539	271.06458
BE	9	4.15500	8209.17000	3.000	4.29301	4.12650	4.04632
CA	44	3922.10800	2463.59000	12.200	4417.72303	3886.61661	3461.98533
CR	52	50.83300	15740.58000	8.100	53.24611	46.06961	53.18328
FE	57	1001.98000	6001.21000	6.600	1075.77394	949.90419	980.26101
K	39	9877.61400	96365.83000	3.400	10066.74185	9493.82949	10072.26929
MG	24	1995.50900	53147.09000	4.700	2080.49830	1894.74916	2011.28029
MN	55	50.02300	5827.82000	5.500	51.94658	46.85398	51.26811
NA	23	10053.27800	563045.33000	2.800	10286.19924	9737.86974	10135.76476
TI	47	258.32900	1323.43000	10.400	281.14502	264.94943	228.89205
V	51	50.54900	11000.45000	5.500	52.90827	47.49725	51.24233
IN-1	115	290832.01000	0.00000	0.000	294818.88000	289120.47000	288556.69000
IN-2	115	11534.19000	0.00000	0.000	11566.89000	11125.38000	11910.31000
AG	107	50.90800	41841.75000	2.200	50.87276	52.04477	49.80701
AS	75	11.20000	287.34000	16.000	10.52827	13.23060	9.84104
BA	137	50.88200	2216.90000	5.900	50.88222	47.89708	53.86733
CD	111	5.45000	466.01000	5.600	5.42749	5.76443	5.15752
CO	59	249.69300	140224.57000	2.100	245.01599	255.42717	248.63459
CU	63	50.40200	24547.58000	1.900	49.84747	51.51591	49.84281
MO	98	49.78400	17909.82000	1.700	49.51205	50.73086	49.10788
NI	60	52.67700	8849.13000	2.900	54.40472	51.43097	52.19625
RB	85	-0.04700	3.33000	0.000	0.06541	-0.10257	-0.10257
SB	121	6.86400	953.40000	12.600	6.01756	7.75245	6.82111
SE	78	9.91800	1217.38000	6.800	10.24764	10.36756	9.13927
SN	120	50.11000	9069.39000	3.200	50.78471	51.25602	48.28927
SR	88	40.15200	3653.85000	3.200	38.88984	41.45787	40.10927
ZN	66	513.83800	29802.45000	2.900	522.84457	522.29491	496.37503
BI-2	209	64169.81000	0.00000	0.000	64209.25000	62563.61000	65736.58000
PB	208	15.24900	39263.63000	1.300	15.07209	15.46241	15.21228
TL	203	1.84900	1536.80000	2.100	1.84045	1.81475	1.89168
U	238	0.00100	3.33000	173.200	0.00000	0.00000	0.00293
SC-1	45	563962.14000	0.00000	0.000	572146.83000	551090.30000	568649.29000
GE-1	72	604176.88000	0.00000	0.000	610451.75000	596135.50000	605943.39000
GE-2	72	27458.69000	0.00000	0.000	27772.39000	27541.97000	27061.71000
GE-3	72	994732.14000	0.00000	0.000	996315.92000	1004060	983820.84000
TB-2	159	76817.54000	0.00000	0.000	75431.15000	76475.79000	78545.67000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:39:28
Tube Number: 15 Batch: 161720639001A
Sample Number: **8433822** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10119.80000	0.00000	0.000	10243.12000	9772.89000	10343.39000
SC-3	45	1268007	0	0.000	1285900	1235436	1282686
AL	27	1.02400	13.33000	78.300	0.52674	0.59652	1.94891
B	11	20.12700	60042.78000	4.100	20.05514	20.99200	19.33524
BE	9	0.00600	17.33000	46.100	0.00439	0.00467	0.00945
CA	44	120360.99800	76898.96000	4.100	116330.01084	125862.20992	118890.77418
CR	52	0.37200	170.01000	8.900	0.33416	0.39135	0.39159
FE	57	1551.74600	9446.16000	6.300	1470.74805	1660.52536	1523.96602
K	39	3811.01100	38220.93000	5.200	3610.33258	4010.06773	3812.63177
MG	24	48253.75100	1305696.93000	4.700	46254.30735	50711.48929	47795.45698
MN	55	372.61400	44101.53000	4.100	360.69045	389.61165	367.54012
NA	23	5252.12100	301123.06000	3.700	5074.19416	5458.18131	5223.98739
TI	47	0.66200	3.33000	173.200	0.00000	1.98730	0.00000
V	51	0.03100	10.00000	249.800	0.12023	-0.01369	-0.01369
IN-1	115	284240.50000	0.00000	0.000	283158.77000	287110.84000	282451.89000
IN-2	115	10964.16000	0.00000	0.000	10571.66000	11131.22000	11189.59000
AG	107	0.04700	40.00000	70.000	0.00967	0.05941	0.07162
AS	75	1.45300	38.00000	17.300	1.67883	1.18159	1.49855
BA	137	612.38700	25326.61000	2.000	614.29262	623.50209	599.36568
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.61500	3007.04000	4.700	5.92207	5.45714	5.46530
CU	63	0.36900	306.68000	33.100	0.40082	0.47270	0.23457
MO	98	0.11400	80.00000	85.900	0.06245	0.22648	0.05238
NI	60	13.35000	2143.55000	11.400	14.52579	11.62421	13.90121
RB	85	2.36400	140.01000	31.600	1.55157	2.51592	3.02319
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	0.05000	6.00000	30.100	0.05583	0.03302	0.06151
SN	120	0.39500	116.67000	36.700	0.55842	0.34314	0.28259
SR	88	84.27000	7288.44000	3.400	87.14818	81.40133	84.26095
ZN	66	2.11500	143.34000	40.400	1.22320	2.92546	2.19659
BI-2	209	61632.72000	0.00000	0.000	60394.71000	62070.93000	62432.51000
PB	208	0.01200	193.34000	214.800	0.03682	0.01387	-0.01467
TL	203	0.04200	33.33000	62.200	0.05115	0.01244	0.06185
U	238	1.09800	3510.52000	4.200	1.14910	1.05905	1.08688
SC-1	45	556996.37000	0.00000	0.000	552494.52000	559680.27000	558814.33000
GE-1	72	579502.79000	0.00000	0.000	573054.95000	594666.94000	570786.48000
GE-2	72	26093.09000	0.00000	0.000	26820.72000	25689.17000	25769.37000
GE-3	72	964072.72000	0.00000	0.000	972525.61000	961330.77000	958361.78000
TB-2	159	76131.73000	0.00000	0.000	74628.80000	77510.82000	76255.57000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:42:32
Tube Number: 16 Batch: 161720639001A
Sample Number: **8433822** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10189.89000	0.00000	0.000	9652.91000	10653.44000	10263.33000
SC-3	45	1239498	0	0.000	1266428	1229035	1223032
AL	27	191.40000	1320.10000	7.100	193.00147	204.07463	177.12387
B	11	124.23600	203707.84000	1.300	122.57713	124.46756	125.66255
BE	9	1.00600	1930.78000	9.300	0.91647	0.99811	1.10244
CA	44	115963.13700	74533.24000	5.300	121452.15616	109343.99274	117093.26101
CR	52	4.33700	1423.44000	7.300	4.37130	4.00540	4.63508
FE	57	1644.41800	10086.50000	2.200	1657.06629	1604.36677	1671.82209
K	39	3969.11100	40024.39000	4.600	4152.57396	3790.37054	3964.38941
MG	24	46310.60000	1261267.58000	4.000	47898.16460	44295.37146	46738.26443
MN	55	363.71700	43306.02000	5.200	382.20555	344.46303	364.48249
NA	23	5368.92800	309647.95000	3.900	5596.08481	5188.06266	5322.63514
TI	47	26.27500	136.67000	47.700	38.23002	27.34744	13.24634
V	51	1.16900	263.34000	5.200	1.21801	1.18818	1.10020
IN-1	115	281972.74000	0.00000	0.000	281467.61000	283742.98000	280707.64000
IN-2	115	11031.54000	0.00000	0.000	11152.53000	10456.23000	11485.85000
AG	107	0.94100	740.05000	16.400	0.78886	1.09653	0.93685
AS	75	5.95400	148.00000	38.700	8.56891	5.07666	4.21655
BA	137	587.00400	24375.01000	6.900	573.49985	632.50820	555.00497
CD	111	1.02100	84.00000	13.200	1.15387	1.02477	0.88527
CO	59	6.03500	3243.76000	13.800	6.51479	6.51800	5.07344
CU	63	4.65100	2296.91000	6.700	4.74214	4.30328	4.90693
MO	98	1.06000	403.35000	18.900	1.14766	1.20134	0.83117
NI	60	19.46900	3127.06000	15.700	20.67735	21.73353	15.99710
RB	85	11.84800	680.04000	19.900	14.53285	10.11822	10.89366
SB	121	1.54700	210.01000	29.500	1.54373	1.09126	2.00512
SE	78	3.97900	473.34000	1.300	4.03626	3.95378	3.94587
SN	120	4.40500	803.38000	21.600	4.42017	5.34648	3.44689
SR	88	86.67700	7541.87000	2.300	85.56372	88.95878	85.50904
ZN	66	31.45100	1766.83000	11.000	27.71622	34.54092	32.09489
BI-2	209	61662.72000	0.00000	0.000	60575.19000	61257.76000	63155.22000
PB	208	2.00300	5097.20000	6.200	1.95382	2.14376	1.91088
TL	203	0.98500	786.71000	4.000	0.94352	1.02127	0.99059
U	238	10.81100	34572.52000	2.900	10.95828	11.02531	10.44928
SC-1	45	556160.91000	0.00000	0.000	558969.64000	558785.73000	550727.37000
GE-1	72	578846.25000	0.00000	0.000	567989.09000	584578.98000	583970.69000
GE-2	72	26243.28000	0.00000	0.000	25769.24000	26300.10000	26660.49000
GE-3	72	940762.64000	0.00000	0.000	954834.67000	937535.85000	929917.41000
TB-2	159	74038.99000	0.00000	0.000	73042.05000	74135.87000	74939.04000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:45:38
Tube Number: 17 Batch: 161720639001A
Sample Number: **8433825** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9816.32000	0.00000	0.000	9552.89000	9652.78000	10243.28000
SC-3	45	1237128	0	0.000	1223777	1240628	1246978
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	16.61000	53706.61000	2.500	16.36860	17.08559	16.37715
BE	9	0.00600	16.67000	70.600	0.01003	0.00152	0.00668
CA	44	121223.63200	75148.80000	2.300	121258.60999	123988.60981	118423.67636
CR	52	0.37900	166.68000	37.600	0.53920	0.26479	0.33415
FE	57	1613.23000	9519.57000	7.300	1670.95867	1691.51735	1477.21258
K	39	3715.21800	36180.13000	3.500	3856.12524	3598.80943	3690.71864
MG	24	48171.13100	1264647.01000	2.400	48885.93872	48783.42026	46844.03476
MN	55	377.72900	43370.01000	3.400	376.98061	391.09406	365.11247
NA	23	5321.04000	295849.13000	2.900	5367.41853	5447.53607	5148.16527
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.03400	10.00000	242.600	0.12991	-0.01369	-0.01369
IN-1	115	282303.82000	0.00000	0.000	281296.98000	282043.76000	283570.71000
IN-2	115	10915.71000	0.00000	0.000	10902.15000	10481.94000	11363.04000
AG	107	0.00500	6.67000	307.600	-0.00360	-0.00360	0.02109
AS	75	1.70600	44.00000	12.800	1.45815	1.86704	1.79265
BA	137	594.38000	24445.07000	5.000	582.77299	627.91571	572.45123
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.41900	2887.02000	7.000	5.42160	5.79656	5.03814
CU	63	0.21600	236.68000	43.000	0.24860	0.11146	0.28932
MO	98	0.03400	53.34000	322.500	-0.03148	-0.02794	0.16287
NI	60	14.94500	2386.92000	4.900	14.71304	15.76798	14.35362
RB	85	2.66500	156.67000	29.300	2.57094	1.93647	3.48846
SB	121	0.10200	16.67000	110.600	0.13024	-0.02233	0.19724
SE	78	0.02200	2.67000	25.300	0.02806	0.02244	0.01672
SN	120	0.55500	143.34000	39.500	0.76778	0.56574	0.33023
SR	88	88.53900	7615.25000	6.400	87.99468	94.42427	83.19765
ZN	66	2.18100	146.67000	37.000	2.08424	1.42768	3.03126
BI-2	209	60417.91000	0.00000	0.000	58687.86000	60263.66000	62302.21000
PB	208	-0.02500	100.00000	0.000	-0.02413	-0.03356	-0.01857
TL	203	0.04600	36.67000	88.100	0.00000	0.07689	0.06198
U	238	1.07000	3347.15000	14.400	1.11023	1.19958	0.90039
SC-1	45	560406.07000	0.00000	0.000	560241.05000	562983.19000	557993.98000
GE-1	72	579861.01000	0.00000	0.000	578952.53000	581062.73000	579567.76000
GE-2	72	25882.83000	0.00000	0.000	25148.49000	26330.11000	26169.90000
GE-3	72	950290.66000	0.00000	0.000	948897.80000	955090.22000	946883.97000
TB-2	159	73392.50000	0.00000	0.000	72970.77000	72960.01000	74246.71000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:48:43
Tube Number: 18 Batch: 161720639001A
Sample Number: **8433823** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10333.35000	0.00000	0.000	10433.35000	10483.46000	10083.23000
SC-3	45	1288374	0	0.000	1110929	1337736	1416457
AL	27	1848.50300	12858.24000	6.300	1715.43284	1895.82706	1934.24951
B	11	293.34900	454383.06000	6.500	314.96256	285.91779	279.16649
BE	9	4.09600	8135.81000	4.900	4.32765	3.96679	3.99464
CA	44	121757.92500	79447.25000	4.200	117926.89795	119743.23168	127603.64607
CR	52	46.89200	15090.15000	3.100	48.40737	45.46777	46.79939
FE	57	2400.99300	14926.86000	7.400	2260.94454	2342.11288	2599.92190
K	39	13094.77500	132305.28000	3.900	12790.80764	12804.29792	13689.21915
MG	24	48768.33200	1348139.62000	2.600	47620.80224	48557.01308	50127.18169
MN	55	405.73800	49040.67000	4.500	397.37851	393.02593	426.80979
NA	23	14775.77600	856359.15000	3.800	14365.07487	14539.07392	15423.17845
TI	47	243.11800	1293.43000	5.600	256.90531	229.73907	242.71029
V	51	48.68900	11000.43000	3.900	48.91486	46.67333	50.47794
IN-1	115	275251.03000	0.00000	0.000	275173.78000	278201.92000	272377.40000
IN-2	115	11431.20000	0.00000	0.000	11247.60000	11479.68000	11566.33000
AG	107	49.50600	40344.48000	0.700	49.62845	49.77699	49.11169
AS	75	11.93300	304.00000	10.300	13.32709	11.00363	11.46841
BA	137	635.40500	27399.74000	1.400	639.93270	625.38180	640.90064
CD	111	5.05300	428.68000	4.800	5.31791	4.83422	5.00789
CO	59	249.65400	138975.53000	1.700	254.01215	249.14973	245.79893
CU	63	48.05000	23209.04000	1.300	47.81513	48.77423	47.56109
MO	98	51.28300	18293.50000	2.000	50.09244	51.99022	51.76707
NI	60	60.28900	10033.15000	3.800	58.95372	62.91951	58.99366
RB	85	2.78700	170.01000	32.000	2.48883	3.79049	2.08127
SB	121	6.77700	933.40000	14.800	7.59410	7.07775	5.65834
SE	78	10.29700	1195.82000	0.300	10.27865	10.33145	10.27976
SN	120	50.75300	9106.12000	3.900	52.97529	49.10721	50.17766
SR	88	122.81000	11073.88000	7.000	132.51675	116.47392	119.43804
ZN	66	480.40500	27628.72000	1.300	487.02723	474.56426	479.62368
BI-2	209	59384.01000	0.00000	0.000	59480.83000	60113.65000	58557.56000
PB	208	15.34700	36578.00000	1.600	15.34925	15.58697	15.10469
TL	203	2.33400	1793.50000	8.000	2.45424	2.11999	2.42697
U	238	1.09800	3380.50000	5.400	1.07275	1.05505	1.16539
SC-1	45	559833.77000	0.00000	0.000	562657.06000	553275.15000	563569.09000
GE-1	72	586431.02000	0.00000	0.000	586980.77000	581429.95000	590882.33000
GE-2	72	27004.60000	0.00000	0.000	26210.26000	27842.54000	26961.00000
GE-3	72	980071.39000	0.00000	0.000	861337.57000	1014587	1064290
TB-2	159	74528.08000	0.00000	0.000	74427.66000	75441.78000	73714.79000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:51:49
Tube Number: 19 Batch: 161720639001A
Sample Number: **8433824** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11027.06000	0.00000	0.000	10663.47000	10953.71000	11464.01000
SC-3	45	1416450	0	0.000	1399526	1436817	1413007
AL	27	2026.55000	15036.65000	4.500	2131.50440	1975.91573	1972.22873
B	11	281.20800	482667.89000	0.900	283.29970	278.27864	282.04587
BE	9	4.07700	8936.83000	1.400	4.11233	4.10730	4.01173
CA	44	123130.65800	85741.30000	2.100	125758.20217	123121.60265	120512.16921
CR	52	50.03800	17178.61000	0.800	49.99019	50.45743	49.66713
FE	57	2574.50700	17088.69000	3.000	2661.04514	2517.68157	2544.79436
K	39	13587.60800	146495.73000	1.600	13808.72189	13574.42293	13379.67983
MG	24	49912.03500	1471867.89000	2.700	51129.31429	50176.41019	48430.37931
MN	55	423.97200	54673.30000	3.500	435.64524	428.88177	407.38929
NA	23	15300.77600	946010.69000	2.700	15655.75378	15393.35393	14853.22058
TI	47	250.03500	1416.78000	10.000	278.68478	237.60866	233.81020
V	51	48.63100	11720.92000	4.400	51.07778	47.42608	47.38972
IN-1	115	314392.26000	0.00000	0.000	309259.91000	320550.45000	313366.43000
IN-2	115	11887.89000	0.00000	0.000	11917.07000	12066.37000	11680.22000
AG	107	51.51700	43652.60000	3.100	49.95539	51.45810	53.13607
AS	75	13.03400	345.34000	0.900	12.95164	13.16518	12.98409
BA	137	659.66400	29573.31000	3.000	653.89896	643.16153	681.93162
CD	111	5.11900	451.34000	7.600	5.10931	4.73297	5.51335
CO	59	262.56100	152005.17000	1.200	260.63542	260.82612	266.22294
CU	63	51.44800	25829.31000	2.600	49.97425	51.80301	52.56632
MO	98	52.38200	19431.51000	2.600	51.42757	53.96187	51.75700
NI	60	67.09500	11600.92000	5.900	66.27098	63.62265	71.39272
RB	85	1.85600	120.01000	15.900	1.85412	2.15196	1.56093
SB	121	6.16100	883.39000	6.500	6.39844	5.69862	6.38624
SE	78	9.60200	1273.83000	0.700	9.52381	9.64189	9.64110
SN	120	55.07200	10273.43000	1.600	54.17821	55.15083	55.88563
SR	88	125.04300	11731.05000	1.700	123.47578	124.26216	127.39146
ZN	66	506.66700	30303.20000	3.000	488.90256	515.38378	515.71444
BI-2	209	66813.38000	0.00000	0.000	67833.99000	64882.22000	67723.94000
PB	208	15.27800	40938.63000	4.000	14.78782	15.95759	15.08931
TL	203	2.15700	1866.85000	7.600	2.34560	2.08327	2.04146
U	238	1.03400	3580.54000	8.300	1.06570	1.09933	0.93648
SC-1	45	640698.69000	0.00000	0.000	631044.17000	640939.33000	650112.57000
GE-1	72	657701.59000	0.00000	0.000	651783.39000	663613.43000	657707.96000
GE-2	72	29865.79000	0.00000	0.000	29344.87000	30817.28000	29435.22000
GE-3	72	1052730	0	0.000	1049435	1060466	1048288
TB-2	159	81701.42000	0.00000	0.000	81451.03000	80173.36000	83479.86000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:54:53
Tube Number: 20 Batch: 161720639001A
Sample Number: **8433822** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11030.42000	0.00000	0.000	11063.68000	11093.77000	10933.80000
SC-3	45	1375614	0	0.000	1367555	1384057	1375232
AL	27	1.76700	20.00000	200.900	5.79008	-0.92355	0.43512
B	11	13.16400	54386.42000	2.800	13.56736	12.83368	13.08971
BE	9	0.00200	10.67000	24.100	0.00302	0.00202	0.00205
CA	44	22598.25400	15750.62000	2.000	22856.89925	22852.31417	22085.54898
CR	52	0.19100	123.34000	63.000	0.32595	0.15029	0.09602
FE	57	339.39000	2253.56000	9.600	346.73164	303.87810	367.56050
K	39	733.95100	8675.71000	8.500	793.41696	669.61201	738.82354
MG	24	9255.04100	273205.12000	0.300	9288.99927	9232.33344	9243.79074
MN	55	73.99600	9552.88000	7.300	74.90890	68.23205	78.84848
NA	23	1027.10500	68369.59000	1.800	1005.46007	1036.23385	1039.62069
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.01400	6.67000	344.200	0.06897	-0.01369	-0.01369
IN-1	115	305596.99000	0.00000	0.000	306889.98000	308023.05000	301877.94000
IN-2	115	12673.39000	0.00000	0.000	11952.86000	12443.01000	13624.29000
AG	107	0.01600	16.67000	113.900	0.03161	0.01895	-0.00360
AS	75	0.10800	6.67000	216.200	-0.12021	0.09814	0.34511
BA	137	114.89200	5457.75000	14.600	131.76215	114.63844	98.27440
CD	111	0.00600	1.33000	389.200	-0.00733	-0.00733	0.03228
CO	59	1.04700	656.71000	15.900	1.04295	1.21559	0.88214
CU	63	0.08900	203.34000	133.400	0.10098	0.20011	-0.03529
MO	98	-0.06200	23.33000	0.000	-0.11989	-0.01661	-0.04915
NI	60	2.49900	483.36000	16.700	2.17638	2.97090	2.34850
RB	85	0.45800	36.67000	15.000	0.38510	0.52204	0.46789
SB	121	0.06700	13.33000	231.100	-0.02233	0.24502	-0.02233
SE	78	0.01200	1.56000	49.600	0.00517	0.01539	0.01570
SN	120	0.29800	116.67000	36.300	0.35327	0.17345	0.36840
SR	88	16.05200	1606.80000	3.300	15.47682	16.49619	16.18219
ZN	66	0.17100	40.00000	177.300	0.36174	0.32896	-0.17841
BI-2	209	67606.40000	0.00000	0.000	67562.95000	66759.74000	68496.51000
PB	208	-0.00700	163.33000	0.000	-0.00010	-0.03304	0.01361
TL	203	0.00800	6.67000	173.200	0.02286	0.00000	0.00000
U	238	0.21200	743.38000	4.400	0.22254	0.20789	0.20543
SC-1	45	603332.15000	0.00000	0.000	601253.82000	604746.98000	603995.66000
GE-1	72	639092.78000	0.00000	0.000	642644.25000	639677.37000	634956.71000
GE-2	72	28877.51000	0.00000	0.000	28463.66000	30246.41000	27922.47000
GE-3	72	1076776	0	0.000	1071279	1105004	1054046
TB-2	159	81235.04000	0.00000	0.000	80986.59000	82063.06000	80655.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:57:59
Tube Number: 21 Batch: 161720639001A
Sample Number: **8431678** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11110.52000	0.00000	0.000	10363.36000	11584.19000	11384.02000
SC-3	45	1352147	0	0.000	1341727	1352791	1361925
AL	27	1.33700	16.67000	151.600	1.94337	-0.92355	2.99128
B	11	14.47800	55454.90000	3.300	15.01597	14.30666	14.11160
BE	9	0.00600	17.33000	35.100	0.00409	0.00786	0.00494
CA	44	116814.54000	81820.10000	5.600	124306.04223	112097.49781	114040.08128
CR	52	0.31600	166.67000	79.600	0.42160	0.49843	0.02891
FE	57	1519.73000	10166.53000	0.500	1529.01354	1515.63591	1514.53998
K	39	3711.18400	40795.96000	7.700	4037.73968	3510.04461	3585.76920
MG	24	46786.92700	1388537.01000	4.700	49288.53011	45249.34134	45822.90839
MN	55	359.55300	46671.53000	4.800	377.99350	343.99734	356.66821
NA	23	5175.71900	325420.44000	5.200	5473.67351	4950.94205	5102.54038
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00100	3.33000	0.000	-0.01369	0.02578	-0.01369
IN-1	115	302321.74000	0.00000	0.000	304817.46000	302971.24000	299176.52000
IN-2	115	11826.40000	0.00000	0.000	11612.83000	12093.70000	11772.67000
AG	107	-0.00400	0.00000	0.000	-0.00360	-0.00360	-0.00360
AS	75	1.51500	42.67000	9.800	1.67351	1.37753	1.49530
BA	137	598.42900	26698.55000	1.600	590.54125	595.60622	609.13929
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.99000	3463.81000	9.200	5.47753	5.92116	6.57171
CU	63	0.23200	263.34000	21.900	0.17417	0.25387	0.26890
MO	98	0.02500	53.33000	72.200	0.04610	0.01294	0.01656
NI	60	12.85800	2226.89000	13.100	13.98279	10.91664	13.67426
RB	85	1.59700	103.33000	16.800	1.57058	1.34339	1.87795
SB	121	0.00100	3.33000	3349.500	-0.02233	-0.02233	0.04831
SE	78	0.02800	3.56000	77.400	0.05186	0.01040	0.02115
SN	120	0.21400	93.34000	73.200	0.04109	0.34578	0.25424
SR	88	84.79400	7912.07000	5.000	84.24653	80.89661	89.24018
ZN	66	1.42300	113.34000	68.600	0.38611	2.32620	1.55754
BI-2	209	64798.84000	0.00000	0.000	62955.17000	66127.76000	65313.59000
PB	208	-0.01000	146.67000	0.000	-0.01112	-0.01379	-0.00547
TL	203	0.03600	30.00000	66.200	0.03680	0.01168	0.05912
U	238	1.15900	3897.33000	2.400	1.17892	1.17194	1.12751
SC-1	45	601875.71000	0.00000	0.000	601485.58000	605411.24000	598730.30000
GE-1	72	622351.36000	0.00000	0.000	627890.62000	616223.78000	622939.68000
GE-2	72	28720.90000	0.00000	0.000	27402.00000	29415.54000	29345.16000
GE-3	72	1021085	0	0.000	1024891	1023881	1014483
TB-2	159	79802.27000	0.00000	0.000	78133.89000	80013.18000	81259.74000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:01:06
Tube Number: 22 Batch: 161720639001A
Sample Number: **8425102** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10763.59000	0.00000	0.000	10003.17000	11053.69000	11233.91000
SC-3	45	1387987	0	0.000	1395395	1370239	1398328
AL	27	26.20900	193.35000	43.400	39.17654	17.89295	21.55822
B	11	8.93400	48275.38000	4.800	8.69635	9.42688	8.67921
BE	9	0.00800	23.33000	63.800	0.01403	0.00395	0.00660
CA	44	12729.35400	8639.02000	8.000	13326.08717	13306.03546	11555.93876
CR	52	0.30400	156.67000	53.300	0.41066	0.38470	0.11762
FE	57	207.57000	1340.10000	9.700	230.75341	198.30757	193.64810
K	39	743.08700	8532.28000	9.600	820.67460	727.20085	681.38432
MG	24	20388.50900	586080.37000	5.000	21566.04160	19810.94884	19788.53550
MN	55	258.13600	32443.58000	6.000	274.75864	255.22456	244.42493
NA	23	16351.59400	985100.77000	5.000	17295.09197	15938.76851	15820.92198
TI	47	0.58600	3.33000	173.200	0.00000	1.75703	0.00000
V	51	0.41100	100.01000	26.000	0.39777	0.52414	0.31195
IN-1	115	307178.92000	0.00000	0.000	307705.49000	306455.02000	307376.26000
IN-2	115	12143.95000	0.00000	0.000	11142.91000	11863.62000	13425.32000
AG	107	0.00000	3.33000	0.000	-0.00360	-0.00360	0.00685
AS	75	0.97100	28.67000	47.600	1.50533	0.71952	0.68930
BA	137	12.31800	560.03000	34.700	10.46787	17.20626	9.28061
CD	111	0.05300	5.33000	33.200	0.06531	0.06090	0.03287
CO	59	0.87500	523.36000	25.100	1.12039	0.80864	0.69670
CU	63	0.26100	283.35000	66.200	0.42913	0.08391	0.27015
MO	98	0.38100	190.01000	15.900	0.39911	0.31342	0.43052
NI	60	1.52000	290.01000	8.900	1.47886	1.67141	1.41092
RB	85	0.40000	33.33000	148.600	0.24618	-0.10257	1.05525
SB	121	0.15900	26.67000	19.300	0.12694	0.18797	0.16351
SE	78	0.04100	5.33000	69.800	0.01024	0.06705	0.04626
SN	120	-0.02000	53.33000	0.000	-0.23238	0.03409	0.13955
SR	88	48.80600	4650.75000	9.200	52.19695	50.52154	43.70082
ZN	66	3.44100	236.68000	33.600	3.10043	4.72808	2.49336
BI-2	209	67576.61000	0.00000	0.000	67232.06000	67613.15000	67884.61000
PB	208	0.11700	496.68000	9.800	0.13052	0.11090	0.11019
TL	203	0.00800	6.67000	86.600	0.01149	0.01142	0.00000
U	238	0.03100	110.01000	23.600	0.02293	0.03421	0.03691
SC-1	45	605618.37000	0.00000	0.000	606469.33000	603871.05000	606514.72000
GE-1	72	641882.79000	0.00000	0.000	643671.87000	640615.03000	641361.47000
GE-2	72	29391.67000	0.00000	0.000	29224.68000	28363.25000	30587.08000
GE-3	72	1070903	0	0.000	1061617	1095854	1055239
TB-2	159	79715.35000	0.00000	0.000	78434.70000	80034.30000	80677.05000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:04:10
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10823.65000	0.00000	0.000	10653.49000	11143.77000	10673.68000
SC-3	45	1334838	0	0.000	1344356	1321331	1338827
AL	27	2481.23700	18079.40000	2.000	2486.60392	2429.22091	2527.88603
B	11	272.11600	441255.80000	0.200	272.76954	271.93870	271.64104
BE	9	26.04800	53776.02000	1.200	26.29970	26.15637	25.68857
CA	44	2393.54700	1633.47000	12.300	2510.99309	2059.60517	2610.04306
CR	52	246.32400	82763.26000	2.000	248.22211	240.63184	250.11946
FE	57	2507.45300	16331.19000	6.100	2482.54161	2367.35226	2672.46365
K	39	2464.50500	26716.88000	4.600	2467.92565	2348.66408	2576.92515
MG	24	2494.30700	72238.07000	2.000	2518.26816	2436.74028	2527.91347
MN	55	246.63700	31227.92000	3.400	252.03679	236.95253	250.92038
NA	23	2536.78500	158200.45000	2.800	2550.64249	2458.71582	2600.99634
TI	47	239.89400	1336.76000	8.500	260.71370	238.78466	220.18423
V	51	249.98100	59160.70000	1.700	254.59260	246.22960	249.12222
IN-1	115	308498.67000	0.00000	0.000	308768.97000	307780.91000	308946.12000
IN-2	115	12393.85000	0.00000	0.000	11957.88000	12798.75000	12424.93000
AG	107	25.66400	22678.88000	4.300	25.09274	24.95855	26.94199
AS	75	257.52600	7046.77000	3.900	262.51414	245.82638	264.23649
BA	137	253.66400	11847.86000	4.700	267.45182	245.32153	248.21818
CD	111	26.21400	2408.85000	2.800	25.94117	25.64883	27.05065
CO	59	260.11100	156885.28000	3.600	269.76015	250.88815	259.68325
CU	63	256.38400	133529.50000	2.200	261.70627	250.66211	256.78373
MO	98	25.68400	9943.17000	5.700	26.78198	24.03509	26.23639
NI	60	255.77600	46030.02000	5.100	262.09629	240.82281	264.40915
RB	85	24.48100	1566.79000	8.700	24.43494	22.36741	26.64048
SB	121	26.42400	3940.61000	0.700	26.61861	26.23346	26.42066
SE	78	25.18500	3278.08000	1.500	24.75970	25.47586	25.31841
SN	120	25.23200	4930.91000	12.100	28.26726	25.28966	22.13986
SR	88	22.81200	2230.22000	7.600	24.26547	23.26509	20.90547
ZN	66	252.01800	15724.05000	2.100	254.68937	246.01244	255.35148
BI-2	209	67726.92000	0.00000	0.000	65835.70000	68245.37000	69099.68000
PB	208	25.44200	69010.88000	1.900	25.98100	25.05780	25.28786
TL	203	25.10300	22015.77000	0.800	25.02743	24.95969	25.32271
U	238	25.42700	89318.12000	1.800	25.91036	25.37537	24.99476
SC-1	45	601124.50000	0.00000	0.000	596992.14000	601205.42000	605175.93000
GE-1	72	636252.05000	0.00000	0.000	637532.49000	637473.86000	633749.80000
GE-2	72	28503.54000	0.00000	0.000	28182.72000	28473.68000	28854.23000
GE-3	72	1029208	0	0.000	1049664	1020827	1017133
TB-2	159	80401.99000	0.00000	0.000	79038.42000	79892.12000	82275.43000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:07:14
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10760.18000	0.00000	0.000	10703.48000	11293.88000	10283.19000
SC-3	45	1336814	0	0.000	1368372	1324207	1317863
AL	27	0.43500	10.00000	302.900	-0.92355	1.70716	0.52109
B	11	9.19300	46879.89000	5.200	8.66669	9.59835	9.31339
BE	9	-0.00100	3.33000	0.000	-0.00265	0.00028	-0.00069
CA	44	14.98900	10.00000	98.700	29.57448	0.00000	15.39162
CR	52	0.16300	110.00000	46.300	0.16194	0.08756	0.23818
FE	57	3.16600	20.00000	86.700	4.65410	0.00000	4.84432
K	39	18.92200	976.74000	66.500	9.84694	13.62127	33.29649
MG	24	0.59400	33.33000	92.000	1.17330	0.08941	0.51785
MN	55	-0.00100	3.33000	0.000	-0.02658	0.04907	-0.02658
NA	23	-3.17800	4837.52000	0.000	-7.03882	-1.20659	-1.28841
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	-0.01369	0.02680	-0.01369
IN-1	115	302572.71000	0.00000	0.000	296102.68000	304083.12000	307532.34000
IN-2	115	11736.89000	0.00000	0.000	11483.70000	11723.60000	12003.38000
AG	107	0.00000	3.33000	1480.600	0.00862	-0.00360	-0.00360
AS	75	0.00900	3.33000	1768.200	-0.04134	0.18879	-0.12021
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.03100	30.00000	61.000	0.04934	0.03037	0.01203
CU	63	0.04200	166.68000	166.900	0.11726	0.02753	-0.01973
MO	98	-0.02900	33.33000	0.000	-0.09191	0.04453	-0.03959
NI	60	-0.03100	16.67000	0.000	-0.06756	-0.06878	0.04455
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.35500	53.33000	9.400	0.33977	0.33236	0.39338
SE	78	0.02600	3.33000	21.900	0.03202	0.02595	0.02058
SN	120	0.21900	93.33000	34.400	0.21215	0.14724	0.29715
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.09700	33.33000	542.500	0.56898	-0.47044	0.19250
BI-2	209	66033.40000	0.00000	0.000	63285.61000	67351.77000	67462.82000
PB	208	-0.01800	130.00000	0.000	-0.02723	-0.01104	-0.01484
TL	203	0.02300	20.00000	49.000	0.02441	0.01147	0.03434
U	238	0.00200	6.67000	173.200	0.00000	0.00572	0.00000
SC-1	45	590158.88000	0.00000	0.000	586452.18000	589919.64000	594104.83000
GE-1	72	632797.07000	0.00000	0.000	629044.21000	638769.83000	630577.18000
GE-2	72	28533.57000	0.00000	0.000	27582.11000	28954.10000	29064.50000
GE-3	72	1043273	0	0.000	1060329	1037292	1032198
TB-2	159	79136.48000	0.00000	0.000	77873.64000	79340.41000	80195.38000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:10:18
Tube Number: 25
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10706.83000	0.00000	0.000	10553.41000	11013.75000	10553.34000
SC-3	45	1329543	0	0.000	1342987	1314142	1331502
AL	27	179.98400	1303.43000	5.100	190.53075	175.78449	173.63730
B	11	113.88900	203057.84000	1.400	112.09195	115.16289	114.41111
BE	9	1.08400	2234.81000	1.800	1.10003	1.08979	1.06292
CA	44	443.05600	300.02000	26.100	314.96285	474.26079	539.94418
CR	52	4.06400	1403.44000	18.800	3.89226	3.40062	4.90008
FE	57	216.55100	1396.78000	2.200	215.57697	221.64468	212.42995
K	39	426.42900	5217.62000	3.500	443.63622	416.37015	419.28027
MG	24	195.98700	5631.05000	3.400	190.31886	194.21681	203.42518
MN	55	4.33300	546.70000	23.800	3.21212	4.55084	5.23640
NA	23	413.50400	29691.42000	4.000	417.96451	395.04847	427.49952
TI	47	23.54000	130.00000	10.700	22.08385	26.45278	22.08399
V	51	1.34500	316.68000	30.800	1.71956	0.89975	1.41627
IN-1	115	310673.68000	0.00000	0.000	313052.05000	310559.21000	308409.79000
IN-2	115	12440.50000	0.00000	0.000	12177.80000	12268.33000	12875.36000
AG	107	0.89800	800.05000	3.200	0.91798	0.86544	0.91162
AS	75	4.21800	119.33000	22.500	4.86257	3.12791	4.66295
BA	137	2.78200	130.00000	49.900	4.35379	1.72858	2.26474
CD	111	1.13900	105.33000	21.500	1.18903	1.35613	0.87276
CO	59	0.90500	563.36000	17.900	0.71976	0.98209	1.01450
CU	63	3.90600	2196.88000	4.000	3.73115	4.03138	3.95677
MO	98	0.97300	423.36000	14.200	1.09370	0.82288	1.00302
NI	60	3.98400	743.37000	4.000	4.05598	3.80060	4.09667
RB	85	1.25200	86.67000	19.500	1.49296	1.00606	1.25561
SB	121	2.15600	326.68000	13.800	1.95821	2.01139	2.49690
SE	78	3.93600	515.79000	4.700	3.81581	3.84133	4.14990
SN	120	4.27400	886.72000	7.900	4.49702	3.88737	4.43673
SR	88	1.79700	176.68000	12.200	1.87279	1.54916	1.96813
ZN	66	30.46700	1936.85000	8.600	31.06165	27.58517	32.75272
BI-2	209	67754.31000	0.00000	0.000	68688.18000	65876.15000	68698.60000
PB	208	2.10300	5870.65000	5.500	2.12694	2.20538	1.97721
TL	203	1.05800	926.73000	17.600	1.18066	1.14898	0.84320
U	238	1.01100	3553.88000	7.800	0.92614	1.02422	1.08316
SC-1	45	601407.80000	0.00000	0.000	607648.35000	595888.19000	600686.87000
GE-1	72	640715.02000	0.00000	0.000	648059.29000	637663.78000	636421.98000
GE-2	72	29254.78000	0.00000	0.000	29485.13000	29164.88000	29114.32000
GE-3	72	1046820	0	0.000	1047138	1044046	1049277
TB-2	159	80167.08000	0.00000	0.000	79139.28000	79771.45000	81590.51000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:13:23
Tube Number: 26
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10400.05000	0.00000	0.000	9873.09000	10653.53000	10673.54000
SC-3	45	1413060	0	0.000	1425173	1403537	1410470
AL	27	100036.29100	699903.22000	2.300	102531.59177	97905.63948	99671.64071
B	11	12.46500	54761.50000	2.400	12.80246	12.31309	12.27845
BE	9	0.04800	111.33000	11.700	0.04181	0.05171	0.05144
CA	44	280036.52600	183863.04000	3.100	288878.46190	271689.63596	279541.48046
CR	52	3.18000	1083.41000	12.500	2.89906	3.00702	3.63524
FE	57	261220.54800	1635567.94000	1.100	264411.50854	259768.45295	259481.68312
K	39	105038.43800	1063100.14000	2.500	106280.90639	102002.64730	106831.76056
MG	24	102421.63500	2848316.42000	3.300	105561.20841	98892.14758	102811.54824
MN	55	1.44700	176.68000	51.700	2.31015	1.01613	1.01418
NA	23	259267.20300	15038313.94000	2.900	267773.89267	253684.02976	256343.68768
TI	47	2135.40000	11424.03000	6.200	2211.82991	2212.13585	1982.23357
V	51	0.13300	33.33000	17.000	0.12525	0.15800	0.11483
IN-1	115	302737.76000	0.00000	0.000	299880.80000	302653.35000	305679.14000
IN-2	115	12144.18000	0.00000	0.000	12334.25000	11523.96000	12574.34000
AG	107	0.21600	190.01000	3.600	0.22387	0.21552	0.20837
AS	75	0.05600	4.67000	162.000	0.10007	0.11556	-0.04819
BA	137	2.87000	130.01000	38.500	2.14939	4.14076	2.31895
CD	111	0.17900	16.67000	49.300	0.08017	0.25020	0.20723
CO	59	3.28200	1953.52000	7.700	2.99130	3.39921	3.45639
CU	63	3.53500	1953.52000	10.700	3.10076	3.71166	3.79346
MO	98	2080.93600	785500.48000	5.100	2012.18647	2203.32599	2027.29446
NI	60	1.57000	300.01000	39.500	0.93301	1.60495	2.17201
RB	85	0.17000	16.67000	118.800	0.05496	0.40325	0.05195
SB	121	0.07000	13.33000	114.600	-0.02233	0.12200	0.10995
SE	78	0.06400	8.22000	19.700	0.06323	0.05223	0.07754
SN	120	0.09300	73.34000	165.100	0.02173	-0.01194	0.27054
SR	88	2.71500	260.01000	8.000	2.46535	2.85858	2.82131
ZN	66	1.72600	133.34000	57.800	2.59424	1.94640	0.63703
BI-2	209	60143.92000	0.00000	0.000	58768.49000	60525.58000	61137.70000
PB	208	0.14300	503.36000	31.000	0.15894	0.17720	0.09288
TL	203	0.01700	13.33000	42.700	0.01314	0.02552	0.01263
U	238	0.01100	33.33000	62.500	0.01312	0.01592	0.00315
SC-1	45	571477.99000	0.00000	0.000	568271.40000	570408.59000	575753.98000
GE-1	72	636833.14000	0.00000	0.000	633387.22000	630711.36000	646400.85000
GE-2	72	28162.94000	0.00000	0.000	27542.03000	28954.22000	27992.58000
GE-3	72	1187668	0	0.000	1178848	1197822	1186334
TB-2	159	69750.06000	0.00000	0.000	67768.73000	70168.17000	71313.28000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:16:26
Tube Number: 27
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10520.10000	0.00000	0.000	10543.43000	10343.44000	10673.42000
SC-3	45	1477036	0	0.000	1491222	1462352	1477533
AL	27	103437.51700	732452.23000	2.600	100420.99012	105429.87908	104461.68174
B	11	8.02900	49869.48000	7.400	7.36402	8.49923	8.22433
BE	9	0.03900	94.00000	20.000	0.03897	0.04599	0.03061
CA	44	292222.93300	194221.13000	2.300	284610.84913	296854.71678	295203.23160
CR	52	221.81900	72455.45000	2.900	215.42544	228.41217	221.61827
FE	57	271121.55000	1717643.52000	2.700	262570.49251	275146.88665	275647.27181
K	39	109831.51400	1124531.81000	3.800	105241.98455	113467.21554	110785.34253
MG	24	107252.93000	3018950.79000	2.100	105130.97903	109642.48335	106985.32745
MN	55	211.49000	26046.30000	3.900	202.96506	211.85243	219.65181
NA	23	271377.25900	15934587.26000	2.100	264848.81445	275246.97104	274035.99123
TI	47	2174.26600	11777.59000	0.700	2159.67472	2175.10689	2188.01580
V	51	227.28100	52290.05000	0.500	226.36382	228.52419	226.95528
IN-1	115	320774.19000	0.00000	0.000	322344.43000	320479.95000	319498.18000
IN-2	115	11416.49000	0.00000	0.000	11203.31000	11492.87000	11553.28000
AG	107	53.68900	43699.38000	1.000	53.54000	54.25896	53.26910
AS	75	116.63700	2943.60000	4.200	117.59138	111.31559	121.00356
BA	137	2.70900	116.67000	29.800	2.83959	1.84521	3.44191
CD	111	101.87500	8622.20000	1.000	101.81247	102.88720	100.92399
CO	59	227.75900	126638.89000	0.900	229.22720	225.37423	228.67428
CU	63	222.35300	106746.42000	0.200	221.82777	222.34021	222.89092
MO	98	2289.82400	813731.97000	0.500	2298.49394	2277.82950	2293.14962
NI	60	222.10500	36852.08000	1.300	222.97314	224.49638	218.84402
RB	85	0.29200	23.33000	87.100	0.07086	0.23556	0.57014
SB	121	0.19700	30.00000	64.600	0.27460	0.05003	0.26561
SE	78	95.21700	12886.86000	0.300	94.96190	95.12463	95.56537
SN	120	0.10300	70.00000	55.300	0.11036	0.15602	0.04280
SR	88	3.00100	270.01000	15.100	3.50595	2.86631	2.63200
ZN	66	99.77900	5751.16000	4.600	103.78597	94.75185	100.80039
BI-2	209	61568.95000	0.00000	0.000	60786.19000	62753.40000	61167.26000
PB	208	0.13900	506.69000	19.400	0.15968	0.10871	0.15009
TL	203	0.02100	16.67000	67.500	0.01271	0.03692	0.01263
U	238	0.01400	43.33000	59.000	0.02220	0.01229	0.00630
SC-1	45	614129.53000	0.00000	0.000	615215.89000	609469.44000	617703.27000
GE-1	72	681262.39000	0.00000	0.000	683236.32000	679181.01000	681369.83000
GE-2	72	30440.14000	0.00000	0.000	29515.20000	31498.70000	30306.52000
GE-3	72	1262093	0	0.000	1263556	1258953	1263770
TB-2	159	70322.40000	0.00000	0.000	69053.82000	71413.90000	70499.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:19:29
Tube Number: 28
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11277.24000	0.00000	0.000	10983.70000	11363.98000	11484.04000
SC-3	45	1415241	0	0.000	1424064	1407622	1414039
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	0.55700	35903.39000	6.600	0.54861	0.52467	0.59636
BE	9	-0.00100	4.67000	0.000	-0.00084	-0.00082	0.00009
CA	44	9.28500	6.67000	173.200	0.00000	27.85555	0.00000
CR	52	0.31600	170.01000	44.000	0.32956	0.17108	0.44813
FE	57	5.97500	40.00000	92.000	12.09431	4.38360	1.44592
K	39	39.95500	1256.76000	21.700	47.00260	30.26429	42.59722
MG	24	0.42600	30.00000	82.700	0.78854	0.08533	0.40385
MN	55	0.02400	6.67000	368.800	-0.02658	0.12379	-0.02658
NA	23	22.63100	6691.46000	20.500	23.64708	26.67932	17.56523
TI	47	0.58900	3.33000	173.200	1.76823	0.00000	0.00000
V	51	-0.01400	0.00000	0.000	-0.01369	-0.01369	-0.01369
IN-1	115	333583.43000	0.00000	0.000	336040.97000	334237.04000	330472.28000
IN-2	115	12054.24000	0.00000	0.000	12084.48000	12214.18000	11864.05000
AG	107	0.01600	16.67000	153.700	0.00801	-0.00360	0.04370
AS	75	-0.07000	1.33000	0.000	0.02968	-0.12021	-0.12021
BA	137	0.14500	6.67000	173.200	0.00000	0.43406	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	-0.01100	6.67000	0.000	-0.02218	-0.00537	-0.00487
CU	63	0.60500	456.85000	78.200	1.14199	0.24845	0.42513
MO	98	1.50600	610.03000	8.300	1.36895	1.53726	1.61327
NI	60	-0.01400	20.00000	0.000	-0.01357	0.09794	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	0.02800	4.00000	17.600	0.02349	0.02836	0.03349
SN	120	-0.00400	53.34000	0.000	-0.23686	-0.08009	0.30409
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	-0.19600	16.67000	0.000	0.02343	-0.30757	-0.30276
BI-2	209	67981.58000	0.00000	0.000	66689.55000	68245.69000	69009.49000
PB	208	-0.02100	123.34000	0.000	-0.01048	-0.03377	-0.01963
TL	203	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
U	238	0.00100	3.33000	173.200	0.00000	0.00000	0.00279
SC-1	45	651100.54000	0.00000	0.000	647120.11000	653854.48000	652327.02000
GE-1	72	696781.50000	0.00000	0.000	700456.79000	702152.02000	687735.69000
GE-2	72	30062.84000	0.00000	0.000	29775.60000	30546.96000	29865.95000
GE-3	72	1138928	0	0.000	1115063	1166751	1134969
TB-2	159	82086.01000	0.00000	0.000	82002.92000	80996.67000	83258.44000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:22:33
Tube Number: 29
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10783.63000	0.00000	0.000	10683.53000	10793.58000	10873.79000
SC-3	45	1401896	0	0.000	1424026	1409177	1372487
AL	27	2427.48700	17628.96000	1.500	2414.18764	2399.22253	2469.05013
B	11	262.35200	447929.47000	2.100	257.40005	261.54200	268.11390
BE	9	25.28500	54812.92000	1.700	25.21891	24.88910	25.74552
CA	44	2525.26400	1720.15000	3.900	2637.29599	2478.38822	2460.10651
CR	52	253.04700	84741.33000	2.900	252.73256	245.92302	260.48492
FE	57	2508.74300	16294.52000	2.400	2444.43393	2521.15096	2560.64353
K	39	2494.06200	26947.24000	2.900	2435.70635	2576.10448	2470.37449
MG	24	2473.23700	71384.83000	0.700	2492.91983	2463.33154	2463.45998
MN	55	249.89800	31541.76000	0.500	250.04535	251.06657	248.58262
NA	23	2508.76700	156005.21000	0.900	2482.66791	2523.97722	2519.65703
TI	47	267.75800	1486.79000	1.200	265.43797	266.32675	271.50838
V	51	252.62900	59579.21000	1.600	251.12898	257.32270	249.43582
IN-1	115	323415.42000	0.00000	0.000	327138.46000	322473.46000	320634.34000
IN-2	115	12153.95000	0.00000	0.000	12329.21000	12019.23000	12113.41000
AG	107	26.63600	23072.61000	4.400	25.43061	27.76921	26.70715
AS	75	258.11700	6930.05000	1.700	253.06155	261.17357	260.11474
BA	137	255.33700	11707.83000	4.300	253.80509	245.12135	267.08552
CD	111	27.00000	2433.52000	4.500	27.67649	27.71694	25.60800
CO	59	265.63900	157196.05000	3.800	254.07172	272.96327	269.88337
CU	63	264.70400	135226.09000	2.600	256.81637	268.51426	268.78250
MO	98	26.37400	10019.90000	4.400	25.47648	27.68793	25.95873
NI	60	264.83100	46775.22000	0.700	262.87684	266.84268	264.77265
RB	85	23.61900	1483.45000	6.200	22.43502	23.17793	25.24302
SB	121	26.53800	3880.60000	6.700	26.15372	28.49000	24.97170
SE	78	25.21200	3440.12000	1.100	24.88625	25.42766	25.32211
SN	120	25.60300	4914.20000	4.300	26.26377	24.33606	26.20771
SR	88	23.88100	2290.23000	5.200	23.32913	25.30113	23.01239
ZN	66	260.30100	15934.22000	2.600	264.44341	252.55572	263.90515
BI-2	209	67432.53000	0.00000	0.000	65956.44000	67743.61000	68597.54000
PB	208	25.92700	70045.86000	1.100	25.60664	26.09814	26.07677
TL	203	25.37600	22149.18000	2.900	26.20095	24.75647	25.16957
U	238	25.33400	88627.03000	0.400	25.39508	25.39181	25.21437
SC-1	45	624169.17000	0.00000	0.000	620741.79000	631993.58000	619772.14000
GE-1	72	670590.28000	0.00000	0.000	675190.07000	663857.33000	672723.43000
GE-2	72	28710.46000	0.00000	0.000	27541.80000	29414.88000	29174.69000
GE-3	72	1124607	0	0.000	1155821	1138744	1079256
TB-2	159	81473.04000	0.00000	0.000	80846.50000	81168.56000	82404.07000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:25:37
Tube Number: 30
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10880.33000	0.00000	0.000	11524.11000	10603.50000	10513.39000
SC-3	45	1376347	0	0.000	1370804	1368851	1389386
AL	27	0.87400	13.33000	77.400	1.65461	0.47745	0.48946
B	11	4.86900	41586.98000	3.800	5.07684	4.73368	4.79666
BE	9	0.00100	8.00000	86.800	0.00206	0.00113	0.00014
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.20900	126.67000	49.700	0.11040	0.31705	0.19858
FE	57	1.00700	6.67000	86.900	1.44090	0.00000	1.57942
K	39	31.93400	1123.41000	55.200	17.20860	27.12533	51.46715
MG	24	0.69600	36.67000	36.800	0.40046	0.83734	0.84942
MN	55	0.10400	16.67000	41.400	0.12170	0.13458	0.05469
NA	23	9.60400	5651.08000	78.900	0.87749	13.46423	14.46915
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	0.02599	-0.01369	-0.01369
IN-1	115	309742.15000	0.00000	0.000	305920.08000	309741.67000	313564.71000
IN-2	115	11833.92000	0.00000	0.000	11923.56000	11373.60000	12204.60000
AG	107	0.00400	6.67000	158.500	-0.00360	0.00874	0.00790
AS	75	0.03400	4.00000	238.600	-0.04425	0.11868	0.02820
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.07000	53.33000	13.900	0.08115	0.06809	0.06194
CU	63	0.13200	213.34000	142.600	0.34162	0.07940	-0.02430
MO	98	0.13600	93.34000	90.800	0.09566	0.27559	0.03805
NI	60	-0.10800	3.33000	0.000	-0.06977	-0.12750	-0.12750
RB	85	-0.04600	3.33000	0.000	-0.10257	0.06827	-0.10257
SB	121	0.16800	26.67000	67.700	0.18692	0.27015	0.04581
SE	78	0.04100	5.33000	22.600	0.04648	0.04591	0.03023
SN	120	0.51400	146.69000	83.100	0.24735	1.00593	0.28747
SR	88	0.07100	6.67000	173.200	0.21251	0.00000	0.00000
ZN	66	-0.19000	16.67000	0.000	-0.30360	-0.12062	-0.14443
BI-2	209	66438.75000	0.00000	0.000	64841.61000	67503.24000	66971.41000
PB	208	-0.00400	166.67000	0.000	-0.01660	0.01479	-0.01072
TL	203	0.01200	10.00000	98.700	0.01191	0.02288	0.00000
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	595392.93000	0.00000	0.000	595656.98000	593270.66000	597251.16000
GE-1	72	639061.20000	0.00000	0.000	638228.47000	635191.79000	643763.35000
GE-2	72	28139.62000	0.00000	0.000	27662.11000	28804.00000	27952.75000
GE-3	72	1061468	0	0.000	1051733	1062618	1070054
TB-2	159	80250.50000	0.00000	0.000	78284.72000	81328.28000	81138.49000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

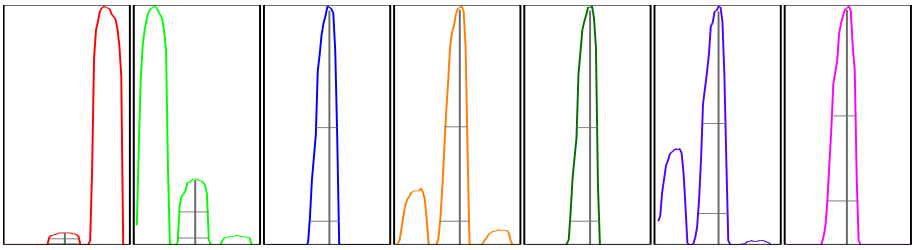
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		12679	12679.38			NaN	-	
24		24581	24580.62			NaN	-	
103		34924	34924.15			NaN	-	
115		34713	34713.33			NaN	-	
140		36550	36549.52			NaN	-	
208		20043	20043.26			NaN	-	
238		44003	44002.78			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	1.01	5.00				
24	0.84	5.00				
103	2.12	5.00				
115	2.62	5.00				
140	2.59	5.00				
208	2.43	5.00				
238	1.77	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	12556	12706	12594	12660	12882
24	24275	24581	24577	24853	24616
103	33871	34529	35071	35393	35757
115	33333	34376	35047	35074	35738
140	35013	36585	36590	36992	37567
208	19353	19790	20242	20207	20625
238	42814	43696	44475	44226	44803

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1846.69	5.95	5.9 - 6.1		0.73	0.787	0.900	
24	3828.05	23.95	23.9 - 24.1		0.68	0.743	0.900	
103	6614.94	103.05	102.9 - 103.1		0.54	0.697	0.900	
115	6588.26	115.05	114.9 - 115.1		0.55	0.691	0.900	
140	7011.20	140.05	139.9 - 140.1		0.52	0.698	0.900	
208	3745.20	208.00	207.9 - 208.1		0.55	0.708	0.900	
238	7971.50	237.95	237.9 - 238.1		0.56	0.721	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		6.1 V	Deflect		16.8 V	
Extract 2		-160.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-75 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V		
OctP RF	200 V	H2 Flow	0.0 mL/min				
Use Gas	false	3rd Gas Flow	0 %				

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 16 172 0639 001

Balance ID#: CLEAR **Start Time:** 6/20/16 23:30 **End Time:** 6/21/16 3:30 **Hot Block:** 13

Pipette ID: S/500

Reflux Cap Lot#: 1512329-6131NK

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	119637	3.00
ICP/MS Spike	1614727#1	0.50
LCS CP/MS Spike	1614727#1	0.50

Method Ref: SW-846 3020A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1512329	
2)	LCSW	.							1512329	
3)	8431678FD	06/22/16 09:20		WW	S3			008a	1512329	
4)	**8433822U**	06/22/16 09:20		WW	S3			008a	1512329	
5)	**8433823R**	06/22/16 09:20		WW	S3			008a	1512329	
6)	**8433824M**	06/22/16 09:20		WW	S3			008a	1512329	
7)	**8433825D**	06/22/16 09:20		WW	S3			008a	1512329	
8)	8425102	06/24/16 09:30		WW	N8			008a	1512329	

Prep Employee: 862

6/21/2016

v 1.0.1

Batch# 16 172 0639 001

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		6/20/16 13:29	862
2)	Sample Vol		6/21/16 3:14	862
3)	Final Vol	CLEAR	6/21/16 3:14	862
4)	Trial		6/21/16 3:14	862
5)	Upload Prep	US19PCC06691	6/21/16 4:29	862

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 16 172 0639 001

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
8431678FD	06/22/16	S3	AE651	RAE65-01FD	50.0000	50.0000	1
8433822U	06/22/16	S3	R169M	RAE67-01BKG	50.0000	50.0000	1
8433823R	06/22/16	S3	R169M	RAE67-01MS	50.0000	50.0000	1
8433824M	06/22/16	S3	R169M	RAE67-01MSD	50.0000	50.0000	1
8433825D	06/22/16	S3	R169M	RAE67-01DUP	50.0000	50.0000	1
8425102	06/24/16	N8	P3501	PAG35-01	50.0000	50.0000	1

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater Sample
Collected on 06/16/16

SDG# RAE65

GROUP	SAMPLE NUMBERS
1673289	8431678

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **07/01/2016**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAE65
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8431678	16MDUP2	06/16/2016 13:50	06/17/2016 09:20

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Sample pH Log

SDG: RAE65

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
8431678	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

06032 Cobalt

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: June 23, 2016

Project: RAAP - Radford, VA - HWMU16

Submittal Date: 06/17/2016
Group Number: 1673289
SDG: RAE65
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
16MDUP2 Grab Groundwater	8431678

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

Project Name: RAAP - Radford, VA - HWMU16
LL Group #: 1673289

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: 16MDUP2 Grab Groundwater
2016 Verification Monitoring Event
RAAP - Radford, VA - HWMU16

LL Sample # WW 8431678
LL Group # 1673289
Account # 11200

Project Name: RAAP - Radford, VA - HWMU16

Collected: 06/16/2016 13:50 by WM

Submitted: 06/17/2016 09:20
Reported: 06/23/2016 09:32

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

AE651 SDG#: RAE65-01FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**mg/l**	**mg/l**	**mg/l**	
06032	Cobalt	7440-48-4	0.0060	0.00010	0.0040	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	161720639001A	06/21/2016 07:57	Scott P Cuff	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	161720639001	06/20/2016 23:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1673289
Reported: 06/23/2016 09:32

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 161720639001A	Sample number(s): 8431678		
Cobalt	N.D.	0.00010	0.0040

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 161720639001A	Sample number(s): 8431678								
Cobalt	0.250	0.250			100		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 161720639001A	Sample number(s): 8431678 UNSPK: P433822									
Cobalt	0.00562	0.250	0.250	0.250	0.263	98	103	75-125	5	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 161720639001A	Sample number(s): 8431678 BKG: P433822			
Cobalt	0.00562	0.00542	4 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1673289/8431678

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC , 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client: 0 Attn: 0 Addres 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: HWMU16 Event: 2016 Verification Monitoring Event DAA JN: B03204-16A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for ~~Project~~ Complete? YES Carrier: Tracking Number:

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blar; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on Ice: YES

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Total Metals - 6020A (Cobalt ONLY)	8260C - 25 mL purge (Tetrahydrofuran Only)	8260C - 25 mL purge (Vinyl Chloride Only)	Cyanide - 9012B
Box 4 - Sample Type					G	G	G	G
Box 3 - Filtered/Unfiltered					U	U	U	U
Required pH of Sample					<2	<2	<2	>12
Box 2 - Preservative					B	A	A	E
Box 5 - Sample Container Type					1-500 mL P	3-40 mL V	3-40 mL V	1-500 mL P
16WDUP1	6-16	1235	GW	3		X	X	
16WDUP2	6-16	1350	GW	2	X			X

GENERAL NOTES:
1. Level 1 deliverable with EDD and pdf.
2. Report DL/QL and estimated results.
3. VELAP accreditation required.
4. Report result at or above project DL and QL.

Cobalt: QL- 5 ug/L, DL- 1 ug/L.
Tetrahydrofuran: QL- 25 ug/L, DL- 2 ug/L.
Vinyl Chloride: QL- 1 ug/L, DL- 0.2 ug/L.
Cyanide: QL- 20 ug/L, DL- 5 ug/L.

Clients Special Instructions:

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Will Mason-Deese	Date: 6-16-16	#1 Relinquished by (Signature):	Date: 6-16-16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): MICHAEL J. NELSON	Date: 6-16-16	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 6/17/16	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0900	Company Name:	Time:	Company Name: ECLE	Time: 920	

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Sample Administration Receipt Documentation Log

Doc Log ID: 150799

Group Number(s): 1673289

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	06/17/2016 9:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Joseph Huber (7831) at 10:41 on 06/17/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.3	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE65

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
8431678	16MDUP2	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAE65

ICP Metals

Fraction: Metals in Liquid

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAE65
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 8431678 % Solids: 0.0
Concentration Units: UG/L Date Received: 06/17/2016

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	6.0			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAE65
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Cobalt	161720639001	8431678
		*33822BKG
		P17239AB
		P17239AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE65

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59	500.0	515.83	103.2	250.0	263.76	105.5	250.0	260.11	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAE65

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59				250.0	265.64	106.3			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAE65

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Cobalt	59	1.0	0.89	89.0	0.91	91.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1617302E05
Calibration Date(s): 06/21/2016
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59	0.17	B	0.13	B	0.10	U	0.10	U	59	0.100	U	161720639001A

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE65

Instrument ID: 19204
Run Name: 1617302E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	103245	103.2	103326.6	103.3
Calcium	44	300000	300000	283479	94.5	287914.6	96.0
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	4		215.1	104.9
Iron	57	250000	250000	267113	106.8	265629.0	106.3
Magnesium	24	100000	100000	105172	105.2	106461.7	106.5
Molybdenum	98	2000	2000	2096	104.8	2177.5	108.9
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	105740	105.7	106040.6	106.0
Sodium	23	250000	250000	266530	106.6	267978.8	107.2
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2115	105.8	2202.8	110.1

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAE65

Instrument ID: 19204
Run Name: 1617302E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	100036	100.0	103437.5	103.4
Calcium	44	300000	300000	280037	93.3	292222.9	97.4
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	3		227.8	111.1
Iron	57	250000	250000	261221	104.5	271121.6	108.4
Magnesium	24	100000	100000	102422	102.4	107252.9	107.3
Molybdenum	98	2000	2000	2081	104.1	2289.8	114.5
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	105038	105.0	109831.5	109.8
Sodium	23	250000	250000	259267	103.7	271377.3	108.6
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2135	106.8	2174.3	108.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAE65
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Cobalt	59	161720639001	UG/L	250.000	249.693		80 - 120	100	MS	Yes

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAE65
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: *33822BKG Serial Dilution Lab Sample ID: *33822L
Batch Number(s): 161720639001
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Cobalt	59	5.6150		5.2350	B	7		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: RAE65

Method: MS
Instrument ID: 19204
Date: 04/2016

Analyte	MASS (amu)	Background	IDL (UG/L)
Cobalt	59		0.10

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAE65
Matrix: WATER

Method: MS
Date: 11/2012

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Cobalt	59		4.0	0.10

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 161720639001

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
8431678	06/20/2016	50.00	50
*33822BKG	06/20/2016	50.00	50
P17239AB	06/20/2016	50.00	50
P17239AQ	06/20/2016	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAE65

Method: MS
Instrument ID: 19204
Run Name: 1617302E05

Run Start Date: 06/21/2016
Run End Date: 06/21/2016

Lab Sample ID	D/F	Time	Analytes
			CO
S0	1.00	06:56	X
S	1.00	06:59	X
CCS	1.00	07:02	X
CCS	1.00	07:05	X
ICV	1.00	07:08	X
ICB	1.00	07:11	X
LLC	1.00	07:14	X
ICSA	1.00	07:17	X
ICSAB	1.00	07:20	X
ZZZZZZ	1.00	07:24	
CCV	1.00	07:27	X
CCB	1.00	07:30	X
P17239AB	1.00	07:33	X
P17239AQ	1.00	07:36	X
*33822BKG	1.00	07:39	X
ZZZZZZ	1.00	07:42	
ZZZZZZ	1.00	07:45	
ZZZZZZ	1.00	07:48	
ZZZZZZ	1.00	07:51	
*33822L	5.00	07:54	X
8431678	1.00	07:57	X
ZZZZZZ	1.00	08:01	
CCV	1.00	08:04	X
CCB	1.00	08:07	X
LLC	1.00	08:10	X
ICSA	1.00	08:13	X
ICSAB	1.00	08:16	X
ZZZZZZ	1.00	08:19	
CCV	1.00	08:22	X
CCB	1.00	08:25	X

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAE65

Instrument ID: 19204
Run Name: 1617302E05

Start Date: 06/21/2016
End Date: 06/21/2016

Standard	Elements Applies to	Standard	Elements Applies to
IN-2-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-2-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	06:56	100													
S	06:59	97													
CCS	07:02	93													
CCS	07:05	89													
ICV	07:08	90													
ICB	07:11	89													
LLC	07:14	88													
ICSA	07:17	87													
ICSAB	07:20	86													
ZZZZZZ	07:24														
CCV	07:27	85													
CCB	07:30	90													
P17239AB	07:33	89													
P17239AQ	07:36	92													
*33822BKG	07:39	87													
ZZZZZZ	07:42														
ZZZZZZ	07:45														
ZZZZZZ	07:48														
ZZZZZZ	07:51														
*33822L	07:54	101													
8431678	07:57	94													
ZZZZZZ	08:01														
CCV	08:04	99													
CCB	08:07	93													
LLC	08:10	99													
ICSA	08:13	97													
ICSAB	08:16	91													
ZZZZZZ	08:19														
CCV	08:22	97													
CCB	08:25	94													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 16F21C00.E05

Run Name: 1617302E05

Analyst: 8381

Reviewed By: Scott P Cuff

Reviewed Date: 06/21/2016 08:40

Verified By: Robert Strocko

Verified Date: 06/21/2016 13:11

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	RB	85
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1617302E05 Date/Time: 06/21/2016 6:56:26
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	5.33000	0.000	-0.00062	0.00128	-0.00066
B	11	0.00000	32045.83000	0.000	0.19934	-0.10138	-0.09796
NA	23	0.00000	5067.56000	0.000	-0.41894	-6.94308	7.36202
MG	24	0.00000	16.67000	0.000	-0.22354	0.09893	0.12461
AL	27	0.00000	6.67000	0.000	-0.92355	-0.92355	1.84710
K	39	0.00000	790.05000	0.000	3.04817	10.27278	-13.32095
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	581033.17000	0.00000	0.000	578529.87000	589377.57000	575192.06000
SC-2	45	10856.95000	0.00000	0.000	10713.64000	11133.75000	10723.45000
SC-3	45	1295219	0	0.000	1272798	1313771	1299088
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	-0.01369	0.02738	-0.01369
CR	52	0.00000	56.67000	0.000	0.01123	-0.08241	0.07117
MN	55	0.00000	3.33000	0.000	0.05317	-0.02658	-0.02658
FE	57	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.00000	13.33000	0.000	-0.02218	0.01128	0.01090
NI	60	0.00000	23.33000	0.000	0.03130	0.04075	-0.07205
CU	63	0.00000	156.68000	0.000	-0.04112	-0.02586	0.06698
ZN	66	0.00000	30.00000	0.000	0.29441	0.01578	-0.31020
GE-1	72	625620.72000	0.00000	0.000	625796.83000	631864.52000	619200.81000
GE-2	72	27635.59000	0.00000	0.000	26530.58000	27572.27000	28803.93000
GE-3	72	1023635	0	0.000	1022709	1022712	1025485
AS	75	0.00000	3.33000	0.000	0.01907	0.10114	-0.12021
SE	78	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
RB	85	0.00000	6.67000	0.000	0.04684	0.05573	-0.10257
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	46.67000	0.000	-0.02107	0.06333	-0.04225
AG	107	0.00000	3.33000	0.000	0.00719	-0.00360	-0.00360
CD	111	0.00000	0.67000	0.000	-0.00733	0.01465	-0.00733
IN-1	115	301783.73000	0.00000	0.000	298839.14000	309259.37000	297252.68000
IN-2	115	12564.74000	0.00000	0.000	13005.05000	12274.53000	12414.65000
SN	120	0.00000	56.67000	0.000	-0.09285	-0.13331	0.22615
SB	121	0.00000	3.33000	0.000	-0.02233	-0.02233	0.04466
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-2	159	78737.15000	0.00000	0.000	78947.92000	77330.42000	79933.12000
TL	203	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
PB	208	0.00000	173.34000	0.000	-0.00818	-0.00099	0.00917
BI-2	209	64881.82000	0.00000	0.000	64068.37000	64670.96000	65906.13000
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000

Run Name: 1617302E05 Date/Time: 06/21/2016 6:59:30
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10480.03000	0.00000	0.000	10613.51000	10563.39000	10263.20000
SC-3	45	1271252	0	0.000	1271374	1297574	1244807
AL	27	10000.00000	70525.15000	3.500	9666.66604	9975.00405	10358.32991
B	11	1000.00000	1459842.08000	1.900	1009.11391	978.51717	1012.36892
BE	9	100.00000	196539.92000	2.200	99.89381	97.85363	102.25256
CA	44	10000.00000	6618.11000	4.100	9710.21501	9816.16042	10473.62456
CR	52	1000.00000	325157.44000	2.800	980.98787	986.51439	1032.49775
FE	57	10000.00000	63100.98000	1.700	9931.91229	9870.14616	10197.94155
K	39	10000.00000	102676.46000	2.500	9774.94753	9950.82722	10274.22525
MG	24	10000.00000	280378.19000	2.600	9818.35035	9889.11107	10292.53858
MN	55	1000.00000	122633.67000	1.700	984.15734	998.59587	1017.24678
NA	23	10000.00000	589555.62000	2.500	9715.68475	10101.54397	10182.77129
TI	47	1000.00000	5390.98000	9.600	995.65022	906.57534	1097.77444
V	51	1000.00000	229069.58000	4.500	961.15343	990.20905	1048.63752
IN-1	115	309821.82000	0.00000	0.000	315048.40000	309569.87000	304847.20000
IN-2	115	12166.53000	0.00000	0.000	12097.72000	11978.69000	12423.17000
AG	107	100.00000	86727.43000	1.500	98.87951	101.71031	99.41018
AS	75	1000.00000	26866.86000	1.600	1015.03175	1001.56937	983.39888
BA	137	1000.00000	45883.74000	2.500	995.30587	1026.71141	977.98272
CD	111	100.00000	9019.73000	1.000	98.88071	100.78758	100.33171
CO	59	1000.00000	592465.41000	1.200	993.65533	1014.37461	991.97006
CU	63	1000.00000	510965.20000	1.700	1007.04059	1012.09617	980.86324
MO	98	100.00000	37905.29000	2.400	99.97335	102.36513	97.66152
NI	60	1000.00000	176724.43000	1.300	1003.63743	1011.30084	985.06173
RB	85	100.00000	6268.00000	2.800	96.92515	102.43330	100.64156
SB	121	100.00000	14630.05000	2.300	98.39494	102.63834	98.96672
SE	78	100.00000	13069.44000	2.100	98.54635	99.02878	102.42488
SN	120	100.00000	19047.81000	1.900	98.03836	101.85268	100.10896
SR	88	100.00000	9602.97000	4.900	105.49439	95.95945	98.54616
ZN	66	1000.00000	61195.45000	2.500	971.69066	1007.52242	1020.78692
BI-2	209	66920.68000	0.00000	0.000	65403.92000	66900.51000	68457.61000
PB	208	100.00000	267503.14000	1.600	101.49449	100.15991	98.34560
TL	203	100.00000	86625.94000	2.400	100.92157	101.84362	97.23481
U	238	100.00000	347121.91000	1.400	101.49890	99.83279	98.66831
SC-1	45	608257.73000	0.00000	0.000	610518.82000	615408.98000	598845.38000
GE-1	72	645315.33000	0.00000	0.000	652804.17000	648613.12000	634528.70000
GE-2	72	28657.20000	0.00000	0.000	27552.03000	29625.39000	28794.17000
GE-3	72	977087.62000	0.00000	0.000	983100.38000	975604.20000	972558.27000
TB-2	159	80240.30000	0.00000	0.000	80022.37000	79509.40000	81189.14000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:02:34
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9916.38000	0.00000	0.000	9622.89000	10403.31000	9722.94000
SC-3	45	1221136	0	0.000	1221025	1232795	1209587
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	27.24800	67605.37000	2.400	27.04164	26.70943	27.99423
BE	9	0.00400	12.00000	198.300	0.01217	-0.00056	-0.00052
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.26500	133.34000	22.300	0.33312	0.23348	0.22852
FE	57	1.14400	6.67000	86.600	1.72558	0.00000	1.70782
K	39	19.85600	910.05000	76.600	11.85737	10.30750	37.40251
MG	24	0.07200	16.67000	820.200	0.59266	-0.57234	0.19633
MN	55	0.11600	16.67000	40.600	0.06221	0.13768	0.14917
NA	23	2.79700	4780.81000	194.300	3.43681	-2.93080	7.88649
TI	47	1.96100	10.00000	4.200	2.01828	1.86687	1.99751
V	51	0.00200	3.33000	1276.400	0.03383	-0.01369	-0.01369
IN-1	115	289046.05000	0.00000	0.000	291138.14000	289035.23000	286964.79000
IN-2	115	11635.63000	0.00000	0.000	11792.59000	11471.80000	11642.50000
AG	107	0.02400	23.33000	124.300	0.02019	-0.00360	0.05665
AS	75	0.03400	4.00000	383.700	0.18699	-0.04126	-0.04242
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.04800	40.00000	95.800	0.08229	-0.00428	0.06600
CU	63	0.22100	253.34000	33.600	0.14678	0.22148	0.29569
MO	98	0.05500	63.33000	161.200	-0.01091	0.02014	0.15606
NI	60	-0.02900	16.67000	0.000	-0.06913	-0.00748	-0.00924
RB	85	-0.04600	3.33000	0.000	-0.10257	0.06681	-0.10257
SB	121	0.83900	120.01000	52.800	0.33029	1.13766	1.04922
SE	78	0.11800	14.44000	9.500	0.11397	0.13120	0.11009
SN	120	0.87100	210.01000	57.700	0.30764	1.27364	1.03064
SR	88	0.07200	6.67000	173.200	0.21487	0.00000	0.00000
ZN	66	-0.24100	13.33000	0.000	-0.47044	-0.12361	-0.12870
BI-2	209	61987.72000	0.00000	0.000	61530.06000	62261.71000	62171.40000
PB	208	-0.01700	123.33000	0.000	-0.00577	-0.02256	-0.02250
TL	203	0.06600	53.33000	28.400	0.06276	0.08683	0.04969
U	238	0.00700	23.33000	66.100	0.01253	0.00310	0.00620
SC-1	45	557177.24000	0.00000	0.000	558980.58000	555107.45000	557443.70000
GE-1	72	599428.85000	0.00000	0.000	600325.11000	601561.48000	596399.95000
GE-2	72	27545.59000	0.00000	0.000	28012.90000	27512.13000	27111.74000
GE-3	72	953208.84000	0.00000	0.000	959131.78000	947900.38000	952594.36000
TB-2	159	74788.85000	0.00000	0.000	73734.82000	76335.98000	74295.75000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:05:39
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9722.95000	0.00000	0.000	9662.94000	9352.74000	10153.17000
SC-3	45	1205805	0	0.000	1218342	1216763	1182311
AL	27	1.10200	13.33000	214.000	3.68855	-0.92355	0.53959
B	11	16.78400	52570.04000	4.500	16.63352	16.11171	17.60606
BE	9	0.00300	10.00000	42.600	0.00159	0.00266	0.00391
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.42500	176.67000	76.000	0.39773	0.76109	0.11641
FE	57	2.31000	13.33000	113.400	5.15527	1.77542	0.00000
K	39	15.78000	856.72000	118.700	35.96966	-1.03114	12.40228
MG	24	-0.45000	3.33000	0.000	-0.57234	-0.57234	-0.20429
MN	55	0.09300	13.33000	111.300	0.15026	0.15613	-0.02658
NA	23	5.03400	4804.15000	214.500	-2.11947	17.45461	-0.23296
TI	47	1.94500	10.00000	98.400	2.00991	0.00000	3.82573
V	51	0.01800	6.67000	306.000	0.08095	-0.01369	-0.01369
IN-1	115	284474.20000	0.00000	0.000	284382.78000	281950.51000	287089.30000
IN-2	115	11179.95000	0.00000	0.000	11423.34000	11343.33000	10773.19000
AG	107	-0.00400	0.00000	0.000	-0.00360	-0.00360	-0.00360
AS	75	0.09700	5.33000	128.000	-0.04093	0.19915	0.13199
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.03300	30.00000	51.800	0.04972	0.03213	0.01594
CU	63	0.14200	206.68000	29.900	0.14030	0.18537	0.10041
MO	98	-0.09100	10.00000	0.000	-0.06364	-0.11989	-0.09007
NI	60	-0.06700	10.00000	0.000	0.05329	-0.12750	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.05100	10.00000	249.100	-0.02233	0.19762	-0.02233
SE	78	0.00600	0.67000	100.400	0.00000	0.01118	0.00553
SN	120	0.05200	60.00000	564.800	-0.12164	0.38783	-0.11149
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	-0.23800	13.33000	0.000	0.05201	-0.29506	-0.47044
BI-2	209	61726.49000	0.00000	0.000	60314.00000	62653.64000	62211.83000
PB	208	-0.00500	153.33000	0.000	-0.01698	0.00512	-0.00241
TL	203	0.02500	20.00000	2.000	0.02561	0.02465	0.02483
U	238	0.00100	3.33000	173.200	0.00000	0.00308	0.00000
SC-1	45	547387.58000	0.00000	0.000	554266.32000	539053.82000	548842.61000
GE-1	72	587217.62000	0.00000	0.000	593498.86000	576071.44000	592082.57000
GE-2	72	26827.58000	0.00000	0.000	26580.60000	26320.03000	27582.12000
GE-3	72	948806.11000	0.00000	0.000	963677.49000	952408.66000	930332.17000
TB-2	159	74972.99000	0.00000	0.000	73000.48000	75843.21000	76075.29000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:08:43
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9906.39000	0.00000	0.000	9893.01000	10033.13000	9793.04000
SC-3	45	1221186	0	0.000	1219903	1231325	1212328
AL	27	4907.94000	32723.28000	5.000	4795.01452	4741.42372	5187.38158
B	11	542.49200	774795.81000	0.900	543.46139	546.87492	537.14078
BE	9	51.27300	96838.18000	0.800	51.50506	51.53917	50.77405
CA	44	4848.96100	3033.70000	5.100	4912.21386	4575.35339	5059.31480
CR	52	497.95000	153118.59000	1.900	488.35465	498.18069	507.31497
FE	57	4867.81900	29027.48000	6.300	4747.18656	4639.40721	5216.86352
K	39	4966.60700	48569.08000	3.300	4903.11922	4845.91234	5150.79061
MG	24	4955.34900	131359.32000	2.000	4973.56137	4849.29774	5043.18938
MN	55	503.71400	58392.06000	2.500	502.94439	491.63715	516.55927
NA	23	4925.91400	276882.47000	1.900	4897.76996	4847.95202	5032.02016
TI	47	531.79200	2713.65000	5.300	522.26401	563.37178	509.74058
V	51	502.61700	108881.77000	1.100	504.89565	496.33132	506.62550
IN-1	115	286750.40000	0.00000	0.000	287447.63000	287443.06000	285360.50000
IN-2	115	11260.50000	0.00000	0.000	11135.37000	10993.10000	11653.02000
AG	107	51.77400	41540.60000	2.800	52.46479	52.75980	50.09823
AS	75	522.02600	12981.43000	1.500	530.19657	521.23086	514.64935
BA	137	518.57500	22021.83000	1.600	518.35775	526.76213	510.60553
CD	111	51.27200	4277.89000	4.000	50.32230	53.62484	49.86976
CO	59	515.83200	282741.45000	2.800	514.95611	530.69678	501.84311
CU	63	508.14300	240335.99000	1.900	514.08679	513.42253	496.92071
MO	98	47.97100	16838.78000	5.100	49.29870	49.47062	45.14436
NI	60	513.68200	83989.14000	3.400	513.06529	531.41640	496.56408
RB	85	50.78500	2953.69000	8.500	47.18924	49.56964	55.59495
SB	121	51.06400	6911.63000	6.800	54.88541	50.14620	48.16181
SE	78	51.11000	6183.52000	0.900	50.65136	51.09750	51.58121
SN	120	50.14500	8865.94000	2.200	51.38252	49.19439	49.85697
SR	88	47.19600	4193.98000	0.900	47.22505	47.60618	46.75796
ZN	66	506.97100	28713.82000	1.700	504.64477	516.61650	499.65085
BI-2	209	63516.38000	0.00000	0.000	63877.72000	63707.29000	62964.12000
PB	208	50.71500	128868.30000	2.200	50.87255	49.51888	51.75471
TL	203	48.58300	39950.74000	2.600	47.84125	47.84800	50.06028
U	238	50.21600	165472.16000	1.100	50.09262	49.74318	50.81329
SC-1	45	555576.06000	0.00000	0.000	555638.04000	557641.20000	553448.94000
GE-1	72	598078.32000	0.00000	0.000	602768.70000	596423.82000	595042.45000
GE-2	72	27087.98000	0.00000	0.000	25739.34000	27281.42000	28243.18000
GE-3	72	957600.19000	0.00000	0.000	967587.56000	963742.49000	941470.53000
TB-2	159	75404.94000	0.00000	0.000	73824.58000	75140.42000	77249.83000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:11:47
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9896.37000	0.00000	0.000	9422.77000	10083.15000	10183.18000
SC-3	45	1174119	0	0.000	1166746	1202862	1152749
AL	27	0.09300	6.67000	947.600	0.65300	0.54975	-0.92355
B	11	23.76700	60401.17000	3.900	24.70817	22.85264	23.73927
BE	9	0.02100	42.67000	24.000	0.02506	0.02208	0.01530
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.31100	146.67000	71.500	0.44638	0.05448	0.43206
FE	57	2.77200	16.67000	31.600	1.76222	3.29362	3.26127
K	39	14.24100	856.72000	24.700	11.51325	13.00699	18.20171
MG	24	2.85900	90.00000	40.800	4.18702	2.39251	1.99642
MN	55	0.11600	16.67000	81.800	0.06409	0.05816	0.22514
NA	23	1.17500	4684.10000	304.500	4.52760	1.59050	-2.59265
TI	47	0.63600	3.33000	173.200	0.00000	0.00000	1.90723
V	51	0.12900	30.00000	101.900	0.27748	0.07701	0.03121
IN-1	115	274326.31000	0.00000	0.000	273483.10000	275351.69000	274144.13000
IN-2	115	11209.54000	0.00000	0.000	11152.49000	11743.37000	10732.75000
AG	107	0.03400	30.00000	36.000	0.04672	0.03224	0.02254
AS	75	0.44900	14.00000	38.700	0.61065	0.26540	0.47047
BA	137	0.08200	3.33000	173.200	0.00000	0.00000	0.24699
CD	111	0.00900	1.33000	156.300	0.01686	-0.00733	0.01781
CO	59	0.17300	106.67000	17.900	0.14353	0.20515	0.16914
CU	63	0.04100	160.01000	277.600	0.15093	0.04726	-0.07561
MO	98	0.05000	60.00000	134.500	-0.00466	0.12633	0.02978
NI	60	0.16000	46.67000	29.100	0.18113	0.10698	0.19320
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.37600	53.34000	64.400	0.64888	0.19013	0.28762
SE	78	0.08800	10.22000	30.700	0.09819	0.10906	0.05766
SN	120	0.24800	93.34000	67.700	0.22706	0.09196	0.42638
SR	88	0.03600	3.33000	173.200	0.00000	0.10789	0.00000
ZN	66	0.11200	33.33000	482.600	0.59985	0.20718	-0.47044
BI-2	209	60080.03000	0.00000	0.000	57955.15000	60736.14000	61548.79000
PB	208	0.00900	183.34000	367.900	-0.02791	0.01976	0.03488
TL	203	0.05100	40.00000	112.800	0.03998	0.11444	0.00000
U	238	0.02000	63.34000	54.900	0.01995	0.03174	0.00939
SC-1	45	529525.88000	0.00000	0.000	529039.13000	531132.65000	528405.85000
GE-1	72	577814.47000	0.00000	0.000	574256.09000	581339.72000	577847.61000
GE-2	72	25562.50000	0.00000	0.000	25459.01000	25579.07000	25649.42000
GE-3	72	929123.66000	0.00000	0.000	944002.88000	929820.30000	913547.80000
TB-2	159	72364.78000	0.00000	0.000	72126.56000	71484.25000	73483.52000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:14:51
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9779.71000	0.00000	0.000	9813.01000	9422.76000	10103.35000
SC-3	45	1224223	0	0.000	1221207	1201194	1250269
AL	27	198.90700	1316.76000	4.600	204.97614	188.27559	203.47026
B	11	119.53500	194710.07000	2.400	118.16517	122.86021	117.58035
BE	9	1.05300	1997.46000	5.500	1.03842	1.11714	1.00388
CA	44	365.89100	226.68000	13.500	338.72707	335.95859	422.98661
CR	52	4.34300	1370.10000	10.300	4.85555	4.03754	4.13700
FE	57	184.82000	1086.74000	9.700	169.22462	204.43408	180.80007
K	39	407.77600	4584.07000	6.600	414.62903	430.52575	378.17392
MG	24	206.54000	5414.36000	9.200	186.81880	224.72817	208.07331
MN	55	3.95400	453.36000	22.500	3.63062	4.96100	3.27182
NA	23	397.20500	26235.94000	2.100	400.76726	403.11845	387.72904
TI	47	29.42100	146.67000	46.900	21.77092	45.34721	21.14529
V	51	0.85200	186.68000	41.000	0.68533	0.61718	1.25366
IN-1	115	280416.54000	0.00000	0.000	282950.69000	280926.30000	277372.64000
IN-2	115	11076.77000	0.00000	0.000	11126.91000	11275.67000	10827.74000
AG	107	1.15000	910.06000	10.100	1.11847	1.05391	1.27905
AS	75	4.11100	103.33000	13.500	4.27505	3.49419	4.56378
BA	137	3.98700	166.67000	20.500	3.09709	4.70212	4.16218
CD	111	1.08400	89.33000	39.900	0.64735	1.09333	1.51262
CO	59	0.89400	493.36000	12.500	0.90055	0.77912	1.00192
CU	63	4.40900	2190.20000	4.100	4.45399	4.56032	4.21138
MO	98	0.97000	376.69000	27.700	0.77523	1.27627	0.85930
NI	60	3.91800	650.04000	9.500	3.83240	3.59693	4.32334
RB	85	1.54700	93.34000	58.700	1.11979	0.93134	2.58931
SB	121	1.97700	266.68000	13.600	2.14527	2.11675	1.66751
SE	78	4.13600	489.34000	0.600	4.13238	4.11154	4.16421
SN	120	4.25400	786.72000	11.000	4.14323	4.76644	3.85148
SR	88	1.48700	130.00000	33.200	2.04967	1.12362	1.28711
ZN	66	29.35900	1660.14000	6.100	27.42336	29.70220	30.95041
BI-2	209	61117.32000	0.00000	0.000	61438.53000	61117.40000	60796.03000
PB	208	2.15300	5420.56000	4.900	2.12095	2.27171	2.06587
TL	203	0.95700	756.72000	12.800	0.85484	0.92252	1.09255
U	238	0.97700	3097.10000	3.500	0.97895	1.00933	0.94172
SC-1	45	540513.12000	0.00000	0.000	545197.49000	540488.20000	535853.66000
GE-1	72	580030.15000	0.00000	0.000	587289.80000	584969.29000	567831.36000
GE-2	72	26206.58000	0.00000	0.000	25889.44000	26380.29000	26350.01000
GE-3	72	941115.25000	0.00000	0.000	949906.78000	937186.24000	936252.72000
TB-2	159	73164.38000	0.00000	0.000	73512.48000	71754.72000	74225.94000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:17:55
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9496.14000	0.00000	0.000	9282.69000	9112.59000	10093.15000
SC-3	45	1286259	0	0.000	1285384	1267838	1305555
AL	27	103245.15100	658691.70000	5.400	104454.88430	108120.96276	97159.60744
B	11	20.63400	61644.52000	3.700	20.67906	21.36557	19.85799
BE	9	0.05400	112.00000	26.000	0.06979	0.04529	0.04589
CA	44	283479.12900	169718.77000	6.200	283052.06056	301379.87460	266005.45181
CR	52	2.77500	870.06000	8.100	2.71230	2.58928	3.02376
FE	57	267113.25500	1525098.20000	4.500	269354.48110	277851.18210	254134.10150
K	39	105740.42600	975942.36000	4.400	106298.62071	110061.50777	100861.14987
MG	24	105171.78800	2667855.90000	5.200	105130.92489	110668.30079	99716.13952
MN	55	1.63000	183.34000	27.500	1.26216	2.13010	1.49730
NA	23	266529.70700	14100144.79000	5.300	270512.29192	278225.07955	250851.75060
TI	47	2114.58200	10336.66000	4.300	2023.81356	2204.46909	2115.46300
V	51	0.30200	66.67000	62.500	0.38039	0.08667	0.43940
IN-1	115	273882.65000	0.00000	0.000	272458.17000	277623.55000	271566.23000
IN-2	115	10968.85000	0.00000	0.000	10001.34000	11202.87000	11702.34000
AG	107	0.33900	266.68000	17.800	0.38913	0.27189	0.35603
AS	75	0.12500	6.00000	186.400	0.15145	-0.12021	0.34414
BA	137	2.31300	96.67000	43.400	2.12039	1.41973	3.39807
CD	111	0.19400	16.67000	45.000	0.12755	0.16125	0.29239
CO	59	3.73100	1993.53000	11.600	4.22811	3.44226	3.52255
CU	63	3.67100	1826.83000	2.500	3.70286	3.74156	3.56919
MO	98	2095.78000	713041.81000	6.800	2246.80907	2074.43101	1966.09860
NI	60	1.74400	293.35000	33.700	2.41944	1.47032	1.34324
RB	85	0.02000	6.67000	533.200	0.09171	0.07087	-0.10257
SB	121	0.20700	30.00000	38.300	0.22713	0.27461	0.11980
SE	78	0.07300	8.45000	5.700	0.07542	0.06830	0.07567
SN	120	0.06300	60.00000	109.600	0.09442	0.11038	-0.01618
SR	88	3.88800	333.35000	35.400	5.06753	2.37505	4.22256
ZN	66	2.00000	133.34000	49.300	3.11019	1.66051	1.22956
BI-2	209	56928.73000	0.00000	0.000	55878.69000	57874.96000	57032.53000
PB	208	0.21200	633.36000	8.300	0.21540	0.19270	0.22724
TL	203	0.02200	16.67000	92.000	0.00000	0.02669	0.04062
U	238	0.02500	73.33000	54.700	0.01035	0.02664	0.03718
SC-1	45	518707.83000	0.00000	0.000	511352.18000	524819.68000	519951.63000
GE-1	72	582426.80000	0.00000	0.000	575306.91000	591344.01000	580629.48000
GE-2	72	26383.62000	0.00000	0.000	24818.04000	27371.87000	26960.94000
GE-3	72	1039888	0	0.000	1055814	1026299	1037552
TB-2	159	66249.18000	0.00000	0.000	65720.62000	65108.46000	67918.46000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:20:58
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9562.81000	0.00000	0.000	9462.78000	9702.86000	9522.80000
SC-3	45	1306599	0	0.000	1320367	1314916	1284516
AL	27	103326.56000	665112.59000	1.700	102329.38844	102263.69034	105386.60240
B	11	16.76700	56941.24000	4.300	16.55855	16.17685	17.56427
BE	9	0.04200	90.00000	26.100	0.04240	0.03079	0.05272
CA	44	287914.60700	173933.82000	1.800	288367.31267	282449.67010	292926.83732
CR	52	213.27200	63334.77000	1.000	213.45299	211.13462	215.22954
FE	57	265629.04800	1529759.93000	1.000	267628.13358	266468.01996	262790.98969
K	39	106040.61000	987096.00000	0.800	105556.43736	105504.95007	107060.44112
MG	24	106461.73000	2724149.33000	1.200	107059.48547	105050.94946	107274.75525
MN	55	209.22700	23415.88000	3.400	207.15932	203.43912	217.08302
NA	23	267978.84200	14302394.79000	1.300	270950.63285	264202.97414	268782.92009
TI	47	2202.78700	10843.60000	2.700	2235.82901	2134.45361	2238.07749
V	51	223.13300	46660.94000	1.500	224.06317	219.41416	225.92029
IN-1	115	288707.19000	0.00000	0.000	287000.48000	291611.62000	287509.46000
IN-2	115	10809.84000	0.00000	0.000	9993.12000	11603.60000	10832.79000
AG	107	51.09800	39255.39000	6.700	53.79104	47.23341	52.26950
AS	75	107.72200	2569.54000	4.000	111.08945	102.83589	109.24211
BA	137	2.07100	83.33000	36.400	2.91794	1.82760	1.46824
CD	111	99.34000	7933.19000	7.000	106.12029	92.13507	99.76318
CO	59	215.12800	112902.37000	7.000	232.46471	204.94549	207.97510
CU	63	211.67800	95855.86000	7.900	230.32349	197.69779	207.01311
MO	98	2177.51500	729904.91000	7.800	2341.58713	2003.61727	2187.34192
NI	60	210.37500	32921.00000	8.100	227.62850	193.52111	209.97509
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	95.14700	11589.54000	2.100	93.88628	94.06077	97.49255
SN	120	0.27700	96.67000	59.900	0.09473	0.31743	0.41977
SR	88	4.07900	346.69000	7.900	4.43766	3.82175	3.97673
ZN	66	98.31400	5354.32000	5.100	103.06815	93.15669	98.71688
BI-2	209	56925.26000	0.00000	0.000	56069.45000	57554.12000	57152.20000
PB	208	0.15500	503.35000	21.400	0.18766	0.15501	0.12153
TL	203	0.01400	10.00000	173.200	0.00000	0.00000	0.04054
U	238	0.01400	40.00000	65.800	0.00688	0.01005	0.02361
SC-1	45	547715.28000	0.00000	0.000	541988.90000	552302.10000	548854.84000
GE-1	72	614752.09000	0.00000	0.000	607855.58000	620210.93000	616189.76000
GE-2	72	25929.65000	0.00000	0.000	25518.83000	26090.17000	26179.96000
GE-3	72	1050726	0	0.000	1056862	1047378	1047938
TB-2	159	64335.49000	0.00000	0.000	64375.84000	65208.92000	63421.71000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:24:02
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9549.56000	0.00000	0.000	9432.88000	9832.97000	9382.82000
SC-3	45	1240266	0	0.000	1220287	1257976	1242534
AL	27	36.29200	240.01000	40.000	46.32391	42.89069	19.66048
B	11	8.16500	42061.27000	7.700	8.70651	7.47984	8.30858
BE	9	0.00200	8.00000	139.800	0.00371	0.00146	-0.00057
CA	44	170.92700	103.34000	12.200	167.80747	193.15622	151.81731
CR	52	0.39100	166.67000	31.300	0.27488	0.51902	0.38031
FE	57	142.12600	816.72000	5.500	140.83563	135.10523	150.43567
K	39	98.99500	1613.46000	9.500	108.42476	98.88361	89.67716
MG	24	58.63800	1513.46000	15.800	48.55444	60.61877	66.74142
MN	55	0.09500	13.33000	111.000	0.15458	-0.02658	0.15554
NA	23	154.12500	12678.10000	2.300	152.69403	158.21161	151.47074
TI	47	2.03800	10.00000	101.600	0.00000	1.97516	4.13983
V	51	0.06500	16.67000	109.600	-0.01369	0.12582	0.08378
IN-1	115	291145.67000	0.00000	0.000	289037.75000	292083.26000	292316.01000
IN-2	115	10970.10000	0.00000	0.000	11003.63000	11063.29000	10843.38000
AG	107	0.00900	10.00000	139.600	0.02190	0.00908	-0.00360
AS	75	0.26500	9.33000	72.100	0.04440	0.37096	0.38092
BA	137	0.08100	3.33000	173.200	0.00000	0.00000	0.24447
CD	111	0.02500	2.67000	54.700	0.01719	0.04145	0.01755
CO	59	0.09000	60.00000	54.000	0.05246	0.14486	0.07250
CU	63	0.25900	256.68000	30.200	0.20028	0.34827	0.22960
MO	98	2.93300	1043.41000	11.600	3.06274	3.19077	2.54679
NI	60	-0.06500	10.00000	0.000	-0.06494	-0.00305	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.00300	3.33000	1368.500	-0.02233	-0.02233	0.05437
SE	78	0.09400	11.55000	3.100	0.09291	0.09737	0.09186
SN	120	-0.09500	33.33000	0.000	-0.17344	-0.11617	0.00550
SR	88	0.07800	6.67000	173.200	0.00000	0.00000	0.23368
ZN	66	0.25700	40.00000	254.200	0.79512	-0.47044	0.44689
BI-2	209	60555.28000	0.00000	0.000	60475.22000	60404.79000	60785.83000
PB	208	0.02100	213.34000	92.200	0.03669	0.02852	-0.00090
TL	203	0.02500	20.00000	86.300	0.01277	0.01279	0.05082
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	567596.44000	0.00000	0.000	569974.01000	564689.02000	568126.28000
GE-1	72	610241.55000	0.00000	0.000	603773.90000	606824.56000	620126.20000
GE-2	72	26069.93000	0.00000	0.000	25799.62000	26941.05000	25469.11000
GE-3	72	962393.16000	0.00000	0.000	962682.17000	971893.19000	952604.13000
TB-2	159	72511.92000	0.00000	0.000	72358.12000	72218.07000	72959.58000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:27:06
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9782.92000	0.00000	0.000	9572.85000	9932.97000	9842.93000
SC-3	45	1229292	0	0.000	1234122	1212050	1241702
AL	27	2475.90200	16314.43000	2.600	2441.22878	2548.78819	2437.68882
B	11	272.52600	406862.16000	2.100	270.25771	279.13394	268.18675
BE	9	25.50700	48488.52000	1.900	25.30878	26.05415	25.15937
CA	44	2277.65400	1406.78000	10.600	2480.27487	2342.51769	2010.16881
CR	52	244.96400	74420.25000	0.300	244.10800	245.15872	245.62541
FE	57	2536.83800	14936.75000	5.500	2653.41236	2381.54635	2575.55454
K	39	2430.76600	23832.97000	3.400	2522.69880	2367.35135	2402.24823
MG	24	2458.01000	64345.61000	2.700	2510.30554	2384.56825	2479.15682
MN	55	245.23200	28069.28000	3.700	252.86393	235.16806	247.66362
NA	23	2544.69400	143467.19000	1.400	2561.94394	2502.93843	2569.19869
TI	47	224.10000	1130.07000	20.400	190.71990	205.31725	276.26188
V	51	247.71800	52998.41000	2.500	246.72602	242.02992	254.39814
IN-1	115	283481.24000	0.00000	0.000	286382.03000	281291.45000	282770.23000
IN-2	115	10668.37000	0.00000	0.000	10288.07000	10684.40000	11032.63000
AG	107	26.28400	19985.48000	1.900	26.57258	26.57251	25.70818
AS	75	262.24800	6179.10000	2.900	269.65176	254.64238	262.44971
BA	137	264.11900	10637.09000	4.100	252.07456	272.51791	267.76351
CD	111	26.85400	2124.15000	4.500	26.29727	28.22581	26.03846
CO	59	263.75900	137017.90000	1.100	267.07008	262.43124	261.77637
CU	63	264.71800	118706.95000	1.000	267.64483	262.93010	263.57895
MO	98	26.83800	8932.62000	9.500	29.21116	27.16020	24.14354
NI	60	258.97800	40142.13000	2.100	264.54586	253.76061	258.62642
RB	85	23.30100	1290.10000	17.300	19.54017	22.81287	27.54964
SB	121	27.43000	3517.17000	9.700	27.70841	29.94987	24.63039
SE	78	24.90500	2979.37000	3.400	25.65226	23.99844	25.06338
SN	120	24.92100	4194.04000	7.900	25.36649	26.63350	22.76353
SR	88	22.68000	1910.18000	13.800	24.13926	19.09306	24.80727
ZN	66	265.09700	14229.43000	3.800	276.36058	261.43254	257.49720
BI-2	209	61656.05000	0.00000	0.000	60063.50000	61277.96000	63626.70000
PB	208	25.29800	62449.93000	3.400	25.72111	25.85685	24.31666
TL	203	24.13500	19258.88000	2.700	24.44597	24.57936	23.38077
U	238	24.82500	79394.78000	1.800	25.32561	24.47875	24.67125
SC-1	45	550788.08000	0.00000	0.000	550877.37000	553224.64000	548262.22000
GE-1	72	585038.56000	0.00000	0.000	585848.12000	584178.62000	585088.94000
GE-2	72	25699.21000	0.00000	0.000	25819.37000	24927.87000	26350.39000
GE-3	72	942159.28000	0.00000	0.000	943856.78000	942574.36000	940046.70000
TB-2	159	72823.79000	0.00000	0.000	71806.19000	73775.07000	72890.10000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:30:10
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9629.55000	0.00000	0.000	9672.96000	9152.60000	10063.10000
SC-3	45	1221216	0	0.000	1246404	1219775	1197468
AL	27	0.08000	6.67000	1081.400	0.61222	-0.92355	0.55268
B	11	13.58100	48855.52000	0.700	13.48705	13.57470	13.68192
BE	9	0.00700	17.33000	64.000	0.00357	0.00477	0.01139
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.31900	146.68000	33.700	0.23057	0.28851	0.43923
FE	57	10.92400	63.33000	36.100	15.44980	9.07121	8.25046
K	39	26.94200	953.40000	21.500	24.16574	23.04519	33.61387
MG	24	1.41800	50.00000	128.400	0.20030	3.51052	0.54169
MN	55	0.09100	13.33000	50.400	0.06175	0.06677	0.14323
NA	23	15.62700	5341.02000	18.800	12.62314	15.75048	18.50766
TI	47	0.64300	3.33000	173.200	0.00000	0.00000	1.92999
V	51	0.01800	6.67000	306.200	0.08086	-0.01369	-0.01369
IN-1	115	273765.48000	0.00000	0.000	274808.32000	271944.43000	274543.70000
IN-2	115	11303.42000	0.00000	0.000	11063.18000	11293.70000	11553.39000
AG	107	0.00900	10.00000	140.600	-0.00360	0.00883	0.02069
AS	75	0.14900	6.67000	128.700	0.37097	0.04017	0.03657
BA	137	0.15600	6.67000	86.700	0.23961	0.00000	0.22944
CD	111	0.02400	2.67000	112.900	-0.00733	0.04045	0.03938
CO	59	0.12900	83.34000	19.600	0.12630	0.10509	0.15557
CU	63	0.24900	260.01000	29.100	0.17608	0.25075	0.32089
MO	98	0.12700	86.67000	38.200	0.17050	0.13613	0.07476
NI	60	-0.00700	20.00000	0.000	-0.12750	-0.00559	0.11084
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.17400	26.67000	24.500	0.20319	0.12495	0.19362
SE	78	0.06000	6.89000	30.800	0.05175	0.04645	0.08054
SN	120	0.27700	100.00000	35.700	0.34703	0.16388	0.32006
SR	88	0.07500	6.67000	173.200	0.00000	0.22437	0.00000
ZN	66	-0.06100	23.33000	0.000	-0.29062	0.23416	-0.12606
BI-2	209	59652.13000	0.00000	0.000	59170.43000	59441.36000	60344.61000
PB	208	0.00300	166.67000	304.000	0.00936	-0.00783	0.00787
TL	203	0.03000	23.33000	89.500	0.00000	0.05197	0.03839
U	238	0.01300	40.00000	24.200	0.01303	0.00973	0.01597
SC-1	45	527868.08000	0.00000	0.000	525277.34000	524307.02000	534019.87000
GE-1	72	571474.76000	0.00000	0.000	572964.56000	566472.92000	574986.79000
GE-2	72	25779.45000	0.00000	0.000	25388.78000	26069.90000	25879.67000
GE-3	72	944194.55000	0.00000	0.000	963226.24000	930041.16000	939316.24000
TB-2	159	71705.50000	0.00000	0.000	70631.09000	71465.17000	73020.25000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:33:16
Tube Number: 13 Batch: 161720639001A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10053.17000	0.00000	0.000	9753.01000	9893.08000	10513.42000
SC-3	45	1228566	0	0.000	1247472	1218254	1219973
AL	27	10.37300	76.67000	11.900	9.73864	9.58768	11.79347
B	11	10.35500	44692.60000	4.000	9.91006	10.72259	10.43377
BE	9	0.00300	11.33000	72.800	0.00460	0.00478	0.00053
CA	44	5.01800	3.33000	173.200	0.00000	0.00000	15.05456
CR	52	0.16600	103.34000	94.900	0.26033	0.25425	-0.01598
FE	57	17.76800	106.67000	46.200	27.24258	13.42759	12.63530
K	39	35.90600	1083.42000	32.800	22.30042	42.74979	42.66755
MG	24	9.54900	273.35000	15.500	8.24053	9.24894	11.15787
MN	55	0.17200	23.33000	30.400	0.14863	0.23252	0.13596
NA	23	24.91800	6074.55000	55.200	36.46185	28.59885	9.69379
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04800	13.33000	151.000	0.12696	-0.01369	0.02980
IN-1	115	276697.63000	0.00000	0.000	276479.66000	277877.21000	275736.01000
IN-2	115	11136.83000	0.00000	0.000	10893.31000	10843.29000	11673.90000
AG	107	0.00500	6.67000	153.100	0.00928	-0.00360	0.00842
AS	75	0.04100	4.00000	341.900	-0.12021	0.13036	0.11253
BA	137	0.48900	20.00000	132.400	0.24335	1.22234	0.00000
CD	111	0.03300	3.33000	86.900	0.06697	0.01755	0.01578
CO	59	0.00200	13.33000	997.100	0.01552	-0.02218	0.01300
CU	63	0.09900	186.67000	100.100	0.03044	0.05389	0.21250
MO	98	0.11200	80.00000	57.800	0.17503	0.11714	0.04523
NI	60	-0.08700	6.67000	0.000	-0.06431	-0.12750	-0.06853
RB	85	0.01200	6.67000	806.200	0.07580	-0.10257	0.06387
SB	121	0.13100	20.00000	116.900	0.28305	0.13106	-0.02233
SE	78	0.01300	1.56000	49.500	0.01714	0.00571	0.01719
SN	120	-0.11900	30.00000	0.000	-0.11346	-0.17172	-0.07038
SR	88	0.07500	6.67000	86.800	0.00000	0.11684	0.10853
ZN	66	0.23600	40.00000	260.000	0.62531	-0.47044	0.55204
BI-2	209	62094.46000	0.00000	0.000	61026.98000	62432.18000	62824.23000
PB	208	-0.02200	110.00000	0.000	-0.02167	-0.03471	-0.01101
TL	203	0.02900	23.33000	50.100	0.03797	0.03711	0.01229
U	238	0.00700	23.33000	108.100	0.00000	0.01544	0.00614
SC-1	45	533149.12000	0.00000	0.000	531801.16000	532808.98000	534837.22000
GE-1	72	577708.05000	0.00000	0.000	581002.37000	577738.78000	574383.00000
GE-2	72	26059.60000	0.00000	0.000	25278.42000	26119.64000	26780.73000
GE-3	72	964663.03000	0.00000	0.000	967469.67000	967280.06000	959239.36000
TB-2	159	73225.35000	0.00000	0.000	72026.76000	73502.80000	74146.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:36:22
Tube Number: 14 Batch: 161720639001A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9959.74000	0.00000	0.000	9602.89000	10263.19000	10013.15000
SC-3	45	1276710	0	0.000	1269880	1293204	1267046
AL	27	1918.47800	12854.96000	4.900	2004.74423	1819.21925	1931.46936
B	11	269.87800	418824.52000	0.400	268.68308	269.88539	271.06458
BE	9	4.15500	8209.17000	3.000	4.29301	4.12650	4.04632
CA	44	3922.10800	2463.59000	12.200	4417.72303	3886.61661	3461.98533
CR	52	50.83300	15740.58000	8.100	53.24611	46.06961	53.18328
FE	57	1001.98000	6001.21000	6.600	1075.77394	949.90419	980.26101
K	39	9877.61400	96365.83000	3.400	10066.74185	9493.82949	10072.26929
MG	24	1995.50900	53147.09000	4.700	2080.49830	1894.74916	2011.28029
MN	55	50.02300	5827.82000	5.500	51.94658	46.85398	51.26811
NA	23	10053.27800	563045.33000	2.800	10286.19924	9737.86974	10135.76476
TI	47	258.32900	1323.43000	10.400	281.14502	264.94943	228.89205
V	51	50.54900	11000.45000	5.500	52.90827	47.49725	51.24233
IN-1	115	290832.01000	0.00000	0.000	294818.88000	289120.47000	288556.69000
IN-2	115	11534.19000	0.00000	0.000	11566.89000	11125.38000	11910.31000
AG	107	50.90800	41841.75000	2.200	50.87276	52.04477	49.80701
AS	75	11.20000	287.34000	16.000	10.52827	13.23060	9.84104
BA	137	50.88200	2216.90000	5.900	50.88222	47.89708	53.86733
CD	111	5.45000	466.01000	5.600	5.42749	5.76443	5.15752
CO	59	249.69300	140224.57000	2.100	245.01599	255.42717	248.63459
CU	63	50.40200	24547.58000	1.900	49.84747	51.51591	49.84281
MO	98	49.78400	17909.82000	1.700	49.51205	50.73086	49.10788
NI	60	52.67700	8849.13000	2.900	54.40472	51.43097	52.19625
RB	85	-0.04700	3.33000	0.000	0.06541	-0.10257	-0.10257
SB	121	6.86400	953.40000	12.600	6.01756	7.75245	6.82111
SE	78	9.91800	1217.38000	6.800	10.24764	10.36756	9.13927
SN	120	50.11000	9069.39000	3.200	50.78471	51.25602	48.28927
SR	88	40.15200	3653.85000	3.200	38.88984	41.45787	40.10927
ZN	66	513.83800	29802.45000	2.900	522.84457	522.29491	496.37503
BI-2	209	64169.81000	0.00000	0.000	64209.25000	62563.61000	65736.58000
PB	208	15.24900	39263.63000	1.300	15.07209	15.46241	15.21228
TL	203	1.84900	1536.80000	2.100	1.84045	1.81475	1.89168
U	238	0.00100	3.33000	173.200	0.00000	0.00000	0.00293
SC-1	45	563962.14000	0.00000	0.000	572146.83000	551090.30000	568649.29000
GE-1	72	604176.88000	0.00000	0.000	610451.75000	596135.50000	605943.39000
GE-2	72	27458.69000	0.00000	0.000	27772.39000	27541.97000	27061.71000
GE-3	72	994732.14000	0.00000	0.000	996315.92000	1004060	983820.84000
TB-2	159	76817.54000	0.00000	0.000	75431.15000	76475.79000	78545.67000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:39:28
Tube Number: 15 Batch: 161720639001A
Sample Number: **8433822** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10119.80000	0.00000	0.000	10243.12000	9772.89000	10343.39000
SC-3	45	1268007	0	0.000	1285900	1235436	1282686
AL	27	1.02400	13.33000	78.300	0.52674	0.59652	1.94891
B	11	20.12700	60042.78000	4.100	20.05514	20.99200	19.33524
BE	9	0.00600	17.33000	46.100	0.00439	0.00467	0.00945
CA	44	120360.99800	76898.96000	4.100	116330.01084	125862.20992	118890.77418
CR	52	0.37200	170.01000	8.900	0.33416	0.39135	0.39159
FE	57	1551.74600	9446.16000	6.300	1470.74805	1660.52536	1523.96602
K	39	3811.01100	38220.93000	5.200	3610.33258	4010.06773	3812.63177
MG	24	48253.75100	1305696.93000	4.700	46254.30735	50711.48929	47795.45698
MN	55	372.61400	44101.53000	4.100	360.69045	389.61165	367.54012
NA	23	5252.12100	301123.06000	3.700	5074.19416	5458.18131	5223.98739
TI	47	0.66200	3.33000	173.200	0.00000	1.98730	0.00000
V	51	0.03100	10.00000	249.800	0.12023	-0.01369	-0.01369
IN-1	115	284240.50000	0.00000	0.000	283158.77000	287110.84000	282451.89000
IN-2	115	10964.16000	0.00000	0.000	10571.66000	11131.22000	11189.59000
AG	107	0.04700	40.00000	70.000	0.00967	0.05941	0.07162
AS	75	1.45300	38.00000	17.300	1.67883	1.18159	1.49855
BA	137	612.38700	25326.61000	2.000	614.29262	623.50209	599.36568
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.61500	3007.04000	4.700	5.92207	5.45714	5.46530
CU	63	0.36900	306.68000	33.100	0.40082	0.47270	0.23457
MO	98	0.11400	80.00000	85.900	0.06245	0.22648	0.05238
NI	60	13.35000	2143.55000	11.400	14.52579	11.62421	13.90121
RB	85	2.36400	140.01000	31.600	1.55157	2.51592	3.02319
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	0.05000	6.00000	30.100	0.05583	0.03302	0.06151
SN	120	0.39500	116.67000	36.700	0.55842	0.34314	0.28259
SR	88	84.27000	7288.44000	3.400	87.14818	81.40133	84.26095
ZN	66	2.11500	143.34000	40.400	1.22320	2.92546	2.19659
BI-2	209	61632.72000	0.00000	0.000	60394.71000	62070.93000	62432.51000
PB	208	0.01200	193.34000	214.800	0.03682	0.01387	-0.01467
TL	203	0.04200	33.33000	62.200	0.05115	0.01244	0.06185
U	238	1.09800	3510.52000	4.200	1.14910	1.05905	1.08688
SC-1	45	556996.37000	0.00000	0.000	552494.52000	559680.27000	558814.33000
GE-1	72	579502.79000	0.00000	0.000	573054.95000	594666.94000	570786.48000
GE-2	72	26093.09000	0.00000	0.000	26820.72000	25689.17000	25769.37000
GE-3	72	964072.72000	0.00000	0.000	972525.61000	961330.77000	958361.78000
TB-2	159	76131.73000	0.00000	0.000	74628.80000	77510.82000	76255.57000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:42:32
Tube Number: 16 Batch: 161720639001A
Sample Number: **8433822** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10189.89000	0.00000	0.000	9652.91000	10653.44000	10263.33000
SC-3	45	1239498	0	0.000	1266428	1229035	1223032
AL	27	191.40000	1320.10000	7.100	193.00147	204.07463	177.12387
B	11	124.23600	203707.84000	1.300	122.57713	124.46756	125.66255
BE	9	1.00600	1930.78000	9.300	0.91647	0.99811	1.10244
CA	44	115963.13700	74533.24000	5.300	121452.15616	109343.99274	117093.26101
CR	52	4.33700	1423.44000	7.300	4.37130	4.00540	4.63508
FE	57	1644.41800	10086.50000	2.200	1657.06629	1604.36677	1671.82209
K	39	3969.11100	40024.39000	4.600	4152.57396	3790.37054	3964.38941
MG	24	46310.60000	1261267.58000	4.000	47898.16460	44295.37146	46738.26443
MN	55	363.71700	43306.02000	5.200	382.20555	344.46303	364.48249
NA	23	5368.92800	309647.95000	3.900	5596.08481	5188.06266	5322.63514
TI	47	26.27500	136.67000	47.700	38.23002	27.34744	13.24634
V	51	1.16900	263.34000	5.200	1.21801	1.18818	1.10020
IN-1	115	281972.74000	0.00000	0.000	281467.61000	283742.98000	280707.64000
IN-2	115	11031.54000	0.00000	0.000	11152.53000	10456.23000	11485.85000
AG	107	0.94100	740.05000	16.400	0.78886	1.09653	0.93685
AS	75	5.95400	148.00000	38.700	8.56891	5.07666	4.21655
BA	137	587.00400	24375.01000	6.900	573.49985	632.50820	555.00497
CD	111	1.02100	84.00000	13.200	1.15387	1.02477	0.88527
CO	59	6.03500	3243.76000	13.800	6.51479	6.51800	5.07344
CU	63	4.65100	2296.91000	6.700	4.74214	4.30328	4.90693
MO	98	1.06000	403.35000	18.900	1.14766	1.20134	0.83117
NI	60	19.46900	3127.06000	15.700	20.67735	21.73353	15.99710
RB	85	11.84800	680.04000	19.900	14.53285	10.11822	10.89366
SB	121	1.54700	210.01000	29.500	1.54373	1.09126	2.00512
SE	78	3.97900	473.34000	1.300	4.03626	3.95378	3.94587
SN	120	4.40500	803.38000	21.600	4.42017	5.34648	3.44689
SR	88	86.67700	7541.87000	2.300	85.56372	88.95878	85.50904
ZN	66	31.45100	1766.83000	11.000	27.71622	34.54092	32.09489
BI-2	209	61662.72000	0.00000	0.000	60575.19000	61257.76000	63155.22000
PB	208	2.00300	5097.20000	6.200	1.95382	2.14376	1.91088
TL	203	0.98500	786.71000	4.000	0.94352	1.02127	0.99059
U	238	10.81100	34572.52000	2.900	10.95828	11.02531	10.44928
SC-1	45	556160.91000	0.00000	0.000	558969.64000	558785.73000	550727.37000
GE-1	72	578846.25000	0.00000	0.000	567989.09000	584578.98000	583970.69000
GE-2	72	26243.28000	0.00000	0.000	25769.24000	26300.10000	26660.49000
GE-3	72	940762.64000	0.00000	0.000	954834.67000	937535.85000	929917.41000
TB-2	159	74038.99000	0.00000	0.000	73042.05000	74135.87000	74939.04000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:45:38
Tube Number: 17 Batch: 161720639001A
Sample Number: **8433825** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	9816.32000	0.00000	0.000	9552.89000	9652.78000	10243.28000
SC-3	45	1237128	0	0.000	1223777	1240628	1246978
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	16.61000	53706.61000	2.500	16.36860	17.08559	16.37715
BE	9	0.00600	16.67000	70.600	0.01003	0.00152	0.00668
CA	44	121223.63200	75148.80000	2.300	121258.60999	123988.60981	118423.67636
CR	52	0.37900	166.68000	37.600	0.53920	0.26479	0.33415
FE	57	1613.23000	9519.57000	7.300	1670.95867	1691.51735	1477.21258
K	39	3715.21800	36180.13000	3.500	3856.12524	3598.80943	3690.71864
MG	24	48171.13100	1264647.01000	2.400	48885.93872	48783.42026	46844.03476
MN	55	377.72900	43370.01000	3.400	376.98061	391.09406	365.11247
NA	23	5321.04000	295849.13000	2.900	5367.41853	5447.53607	5148.16527
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.03400	10.00000	242.600	0.12991	-0.01369	-0.01369
IN-1	115	282303.82000	0.00000	0.000	281296.98000	282043.76000	283570.71000
IN-2	115	10915.71000	0.00000	0.000	10902.15000	10481.94000	11363.04000
AG	107	0.00500	6.67000	307.600	-0.00360	-0.00360	0.02109
AS	75	1.70600	44.00000	12.800	1.45815	1.86704	1.79265
BA	137	594.38000	24445.07000	5.000	582.77299	627.91571	572.45123
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.41900	2887.02000	7.000	5.42160	5.79656	5.03814
CU	63	0.21600	236.68000	43.000	0.24860	0.11146	0.28932
MO	98	0.03400	53.34000	322.500	-0.03148	-0.02794	0.16287
NI	60	14.94500	2386.92000	4.900	14.71304	15.76798	14.35362
RB	85	2.66500	156.67000	29.300	2.57094	1.93647	3.48846
SB	121	0.10200	16.67000	110.600	0.13024	-0.02233	0.19724
SE	78	0.02200	2.67000	25.300	0.02806	0.02244	0.01672
SN	120	0.55500	143.34000	39.500	0.76778	0.56574	0.33023
SR	88	88.53900	7615.25000	6.400	87.99468	94.42427	83.19765
ZN	66	2.18100	146.67000	37.000	2.08424	1.42768	3.03126
BI-2	209	60417.91000	0.00000	0.000	58687.86000	60263.66000	62302.21000
PB	208	-0.02500	100.00000	0.000	-0.02413	-0.03356	-0.01857
TL	203	0.04600	36.67000	88.100	0.00000	0.07689	0.06198
U	238	1.07000	3347.15000	14.400	1.11023	1.19958	0.90039
SC-1	45	560406.07000	0.00000	0.000	560241.05000	562983.19000	557993.98000
GE-1	72	579861.01000	0.00000	0.000	578952.53000	581062.73000	579567.76000
GE-2	72	25882.83000	0.00000	0.000	25148.49000	26330.11000	26169.90000
GE-3	72	950290.66000	0.00000	0.000	948897.80000	955090.22000	946883.97000
TB-2	159	73392.50000	0.00000	0.000	72970.77000	72960.01000	74246.71000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:48:43
Tube Number: 18 Batch: 161720639001A
Sample Number: **8433823** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10333.35000	0.00000	0.000	10433.35000	10483.46000	10083.23000
SC-3	45	1288374	0	0.000	1110929	1337736	1416457
AL	27	1848.50300	12858.24000	6.300	1715.43284	1895.82706	1934.24951
B	11	293.34900	454383.06000	6.500	314.96256	285.91779	279.16649
BE	9	4.09600	8135.81000	4.900	4.32765	3.96679	3.99464
CA	44	121757.92500	79447.25000	4.200	117926.89795	119743.23168	127603.64607
CR	52	46.89200	15090.15000	3.100	48.40737	45.46777	46.79939
FE	57	2400.99300	14926.86000	7.400	2260.94454	2342.11288	2599.92190
K	39	13094.77500	132305.28000	3.900	12790.80764	12804.29792	13689.21915
MG	24	48768.33200	1348139.62000	2.600	47620.80224	48557.01308	50127.18169
MN	55	405.73800	49040.67000	4.500	397.37851	393.02593	426.80979
NA	23	14775.77600	856359.15000	3.800	14365.07487	14539.07392	15423.17845
TI	47	243.11800	1293.43000	5.600	256.90531	229.73907	242.71029
V	51	48.68900	11000.43000	3.900	48.91486	46.67333	50.47794
IN-1	115	275251.03000	0.00000	0.000	275173.78000	278201.92000	272377.40000
IN-2	115	11431.20000	0.00000	0.000	11247.60000	11479.68000	11566.33000
AG	107	49.50600	40344.48000	0.700	49.62845	49.77699	49.11169
AS	75	11.93300	304.00000	10.300	13.32709	11.00363	11.46841
BA	137	635.40500	27399.74000	1.400	639.93270	625.38180	640.90064
CD	111	5.05300	428.68000	4.800	5.31791	4.83422	5.00789
CO	59	249.65400	138975.53000	1.700	254.01215	249.14973	245.79893
CU	63	48.05000	23209.04000	1.300	47.81513	48.77423	47.56109
MO	98	51.28300	18293.50000	2.000	50.09244	51.99022	51.76707
NI	60	60.28900	10033.15000	3.800	58.95372	62.91951	58.99366
RB	85	2.78700	170.01000	32.000	2.48883	3.79049	2.08127
SB	121	6.77700	933.40000	14.800	7.59410	7.07775	5.65834
SE	78	10.29700	1195.82000	0.300	10.27865	10.33145	10.27976
SN	120	50.75300	9106.12000	3.900	52.97529	49.10721	50.17766
SR	88	122.81000	11073.88000	7.000	132.51675	116.47392	119.43804
ZN	66	480.40500	27628.72000	1.300	487.02723	474.56426	479.62368
BI-2	209	59384.01000	0.00000	0.000	59480.83000	60113.65000	58557.56000
PB	208	15.34700	36578.00000	1.600	15.34925	15.58697	15.10469
TL	203	2.33400	1793.50000	8.000	2.45424	2.11999	2.42697
U	238	1.09800	3380.50000	5.400	1.07275	1.05505	1.16539
SC-1	45	559833.77000	0.00000	0.000	562657.06000	553275.15000	563569.09000
GE-1	72	586431.02000	0.00000	0.000	586980.77000	581429.95000	590882.33000
GE-2	72	27004.60000	0.00000	0.000	26210.26000	27842.54000	26961.00000
GE-3	72	980071.39000	0.00000	0.000	861337.57000	1014587	1064290
TB-2	159	74528.08000	0.00000	0.000	74427.66000	75441.78000	73714.79000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:51:49
Tube Number: 19 Batch: 161720639001A
Sample Number: **8433824** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11027.06000	0.00000	0.000	10663.47000	10953.71000	11464.01000
SC-3	45	1416450	0	0.000	1399526	1436817	1413007
AL	27	2026.55000	15036.65000	4.500	2131.50440	1975.91573	1972.22873
B	11	281.20800	482667.89000	0.900	283.29970	278.27864	282.04587
BE	9	4.07700	8936.83000	1.400	4.11233	4.10730	4.01173
CA	44	123130.65800	85741.30000	2.100	125758.20217	123121.60265	120512.16921
CR	52	50.03800	17178.61000	0.800	49.99019	50.45743	49.66713
FE	57	2574.50700	17088.69000	3.000	2661.04514	2517.68157	2544.79436
K	39	13587.60800	146495.73000	1.600	13808.72189	13574.42293	13379.67983
MG	24	49912.03500	1471867.89000	2.700	51129.31429	50176.41019	48430.37931
MN	55	423.97200	54673.30000	3.500	435.64524	428.88177	407.38929
NA	23	15300.77600	946010.69000	2.700	15655.75378	15393.35393	14853.22058
TI	47	250.03500	1416.78000	10.000	278.68478	237.60866	233.81020
V	51	48.63100	11720.92000	4.400	51.07778	47.42608	47.38972
IN-1	115	314392.26000	0.00000	0.000	309259.91000	320550.45000	313366.43000
IN-2	115	11887.89000	0.00000	0.000	11917.07000	12066.37000	11680.22000
AG	107	51.51700	43652.60000	3.100	49.95539	51.45810	53.13607
AS	75	13.03400	345.34000	0.900	12.95164	13.16518	12.98409
BA	137	659.66400	29573.31000	3.000	653.89896	643.16153	681.93162
CD	111	5.11900	451.34000	7.600	5.10931	4.73297	5.51335
CO	59	262.56100	152005.17000	1.200	260.63542	260.82612	266.22294
CU	63	51.44800	25829.31000	2.600	49.97425	51.80301	52.56632
MO	98	52.38200	19431.51000	2.600	51.42757	53.96187	51.75700
NI	60	67.09500	11600.92000	5.900	66.27098	63.62265	71.39272
RB	85	1.85600	120.01000	15.900	1.85412	2.15196	1.56093
SB	121	6.16100	883.39000	6.500	6.39844	5.69862	6.38624
SE	78	9.60200	1273.83000	0.700	9.52381	9.64189	9.64110
SN	120	55.07200	10273.43000	1.600	54.17821	55.15083	55.88563
SR	88	125.04300	11731.05000	1.700	123.47578	124.26216	127.39146
ZN	66	506.66700	30303.20000	3.000	488.90256	515.38378	515.71444
BI-2	209	66813.38000	0.00000	0.000	67833.99000	64882.22000	67723.94000
PB	208	15.27800	40938.63000	4.000	14.78782	15.95759	15.08931
TL	203	2.15700	1866.85000	7.600	2.34560	2.08327	2.04146
U	238	1.03400	3580.54000	8.300	1.06570	1.09933	0.93648
SC-1	45	640698.69000	0.00000	0.000	631044.17000	640939.33000	650112.57000
GE-1	72	657701.59000	0.00000	0.000	651783.39000	663613.43000	657707.96000
GE-2	72	29865.79000	0.00000	0.000	29344.87000	30817.28000	29435.22000
GE-3	72	1052730	0	0.000	1049435	1060466	1048288
TB-2	159	81701.42000	0.00000	0.000	81451.03000	80173.36000	83479.86000

Run Name: 1617302E05
Tube Number: 20
Sample Number: **8433822**

Date/Time: 06/21/2016 7:54:53
Batch: 161720639001A
Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11030.42000	0.00000	0.000	11063.68000	11093.77000	10933.80000
SC-3	45	1375614	0	0.000	1367555	1384057	1375232
AL	27	1.76700	20.00000	200.900	5.79008	-0.92355	0.43512
B	11	13.16400	54386.42000	2.800	13.56736	12.83368	13.08971
BE	9	0.00200	10.67000	24.100	0.00302	0.00202	0.00205
CA	44	22598.25400	15750.62000	2.000	22856.89925	22852.31417	22085.54898
CR	52	0.19100	123.34000	63.000	0.32595	0.15029	0.09602
FE	57	339.39000	2253.56000	9.600	346.73164	303.87810	367.56050
K	39	733.95100	8675.71000	8.500	793.41696	669.61201	738.82354
MG	24	9255.04100	273205.12000	0.300	9288.99927	9232.33344	9243.79074
MN	55	73.99600	9552.88000	7.300	74.90890	68.23205	78.84848
NA	23	1027.10500	68369.59000	1.800	1005.46007	1036.23385	1039.62069
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.01400	6.67000	344.200	0.06897	-0.01369	-0.01369
IN-1	115	305596.99000	0.00000	0.000	306889.98000	308023.05000	301877.94000
IN-2	115	12673.39000	0.00000	0.000	11952.86000	12443.01000	13624.29000
AG	107	0.01600	16.67000	113.900	0.03161	0.01895	-0.00360
AS	75	0.10800	6.67000	216.200	-0.12021	0.09814	0.34511
BA	137	114.89200	5457.75000	14.600	131.76215	114.63844	98.27440
CD	111	0.00600	1.33000	389.200	-0.00733	-0.00733	0.03228
CO	59	1.04700	656.71000	15.900	1.04295	1.21559	0.88214
CU	63	0.08900	203.34000	133.400	0.10098	0.20011	-0.03529
MO	98	-0.06200	23.33000	0.000	-0.11989	-0.01661	-0.04915
NI	60	2.49900	483.36000	16.700	2.17638	2.97090	2.34850
RB	85	0.45800	36.67000	15.000	0.38510	0.52204	0.46789
SB	121	0.06700	13.33000	231.100	-0.02233	0.24502	-0.02233
SE	78	0.01200	1.56000	49.600	0.00517	0.01539	0.01570
SN	120	0.29800	116.67000	36.300	0.35327	0.17345	0.36840
SR	88	16.05200	1606.80000	3.300	15.47682	16.49619	16.18219
ZN	66	0.17100	40.00000	177.300	0.36174	0.32896	-0.17841
BI-2	209	67606.40000	0.00000	0.000	67562.95000	66759.74000	68496.51000
PB	208	-0.00700	163.33000	0.000	-0.00010	-0.03304	0.01361
TL	203	0.00800	6.67000	173.200	0.02286	0.00000	0.00000
U	238	0.21200	743.38000	4.400	0.22254	0.20789	0.20543
SC-1	45	603332.15000	0.00000	0.000	601253.82000	604746.98000	603995.66000
GE-1	72	639092.78000	0.00000	0.000	642644.25000	639677.37000	634956.71000
GE-2	72	28877.51000	0.00000	0.000	28463.66000	30246.41000	27922.47000
GE-3	72	1076776	0	0.000	1071279	1105004	1054046
TB-2	159	81235.04000	0.00000	0.000	80986.59000	82063.06000	80655.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 7:57:59
Tube Number: 21 Batch: 161720639001A
Sample Number: **8431678** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11110.52000	0.00000	0.000	10363.36000	11584.19000	11384.02000
SC-3	45	1352147	0	0.000	1341727	1352791	1361925
AL	27	1.33700	16.67000	151.600	1.94337	-0.92355	2.99128
B	11	14.47800	55454.90000	3.300	15.01597	14.30666	14.11160
BE	9	0.00600	17.33000	35.100	0.00409	0.00786	0.00494
CA	44	116814.54000	81820.10000	5.600	124306.04223	112097.49781	114040.08128
CR	52	0.31600	166.67000	79.600	0.42160	0.49843	0.02891
FE	57	1519.73000	10166.53000	0.500	1529.01354	1515.63591	1514.53998
K	39	3711.18400	40795.96000	7.700	4037.73968	3510.04461	3585.76920
MG	24	46786.92700	1388537.01000	4.700	49288.53011	45249.34134	45822.90839
MN	55	359.55300	46671.53000	4.800	377.99350	343.99734	356.66821
NA	23	5175.71900	325420.44000	5.200	5473.67351	4950.94205	5102.54038
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00100	3.33000	0.000	-0.01369	0.02578	-0.01369
IN-1	115	302321.74000	0.00000	0.000	304817.46000	302971.24000	299176.52000
IN-2	115	11826.40000	0.00000	0.000	11612.83000	12093.70000	11772.67000
AG	107	-0.00400	0.00000	0.000	-0.00360	-0.00360	-0.00360
AS	75	1.51500	42.67000	9.800	1.67351	1.37753	1.49530
BA	137	598.42900	26698.55000	1.600	590.54125	595.60622	609.13929
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	5.99000	3463.81000	9.200	5.47753	5.92116	6.57171
CU	63	0.23200	263.34000	21.900	0.17417	0.25387	0.26890
MO	98	0.02500	53.33000	72.200	0.04610	0.01294	0.01656
NI	60	12.85800	2226.89000	13.100	13.98279	10.91664	13.67426
RB	85	1.59700	103.33000	16.800	1.57058	1.34339	1.87795
SB	121	0.00100	3.33000	3349.500	-0.02233	-0.02233	0.04831
SE	78	0.02800	3.56000	77.400	0.05186	0.01040	0.02115
SN	120	0.21400	93.34000	73.200	0.04109	0.34578	0.25424
SR	88	84.79400	7912.07000	5.000	84.24653	80.89661	89.24018
ZN	66	1.42300	113.34000	68.600	0.38611	2.32620	1.55754
BI-2	209	64798.84000	0.00000	0.000	62955.17000	66127.76000	65313.59000
PB	208	-0.01000	146.67000	0.000	-0.01112	-0.01379	-0.00547
TL	203	0.03600	30.00000	66.200	0.03680	0.01168	0.05912
U	238	1.15900	3897.33000	2.400	1.17892	1.17194	1.12751
SC-1	45	601875.71000	0.00000	0.000	601485.58000	605411.24000	598730.30000
GE-1	72	622351.36000	0.00000	0.000	627890.62000	616223.78000	622939.68000
GE-2	72	28720.90000	0.00000	0.000	27402.00000	29415.54000	29345.16000
GE-3	72	1021085	0	0.000	1024891	1023881	1014483
TB-2	159	79802.27000	0.00000	0.000	78133.89000	80013.18000	81259.74000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:01:06
Tube Number: 22 Batch: 161720639001A
Sample Number: **8425102** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10763.59000	0.00000	0.000	10003.17000	11053.69000	11233.91000
SC-3	45	1387987	0	0.000	1395395	1370239	1398328
AL	27	26.20900	193.35000	43.400	39.17654	17.89295	21.55822
B	11	8.93400	48275.38000	4.800	8.69635	9.42688	8.67921
BE	9	0.00800	23.33000	63.800	0.01403	0.00395	0.00660
CA	44	12729.35400	8639.02000	8.000	13326.08717	13306.03546	11555.93876
CR	52	0.30400	156.67000	53.300	0.41066	0.38470	0.11762
FE	57	207.57000	1340.10000	9.700	230.75341	198.30757	193.64810
K	39	743.08700	8532.28000	9.600	820.67460	727.20085	681.38432
MG	24	20388.50900	586080.37000	5.000	21566.04160	19810.94884	19788.53550
MN	55	258.13600	32443.58000	6.000	274.75864	255.22456	244.42493
NA	23	16351.59400	985100.77000	5.000	17295.09197	15938.76851	15820.92198
TI	47	0.58600	3.33000	173.200	0.00000	1.75703	0.00000
V	51	0.41100	100.01000	26.000	0.39777	0.52414	0.31195
IN-1	115	307178.92000	0.00000	0.000	307705.49000	306455.02000	307376.26000
IN-2	115	12143.95000	0.00000	0.000	11142.91000	11863.62000	13425.32000
AG	107	0.00000	3.33000	0.000	-0.00360	-0.00360	0.00685
AS	75	0.97100	28.67000	47.600	1.50533	0.71952	0.68930
BA	137	12.31800	560.03000	34.700	10.46787	17.20626	9.28061
CD	111	0.05300	5.33000	33.200	0.06531	0.06090	0.03287
CO	59	0.87500	523.36000	25.100	1.12039	0.80864	0.69670
CU	63	0.26100	283.35000	66.200	0.42913	0.08391	0.27015
MO	98	0.38100	190.01000	15.900	0.39911	0.31342	0.43052
NI	60	1.52000	290.01000	8.900	1.47886	1.67141	1.41092
RB	85	0.40000	33.33000	148.600	0.24618	-0.10257	1.05525
SB	121	0.15900	26.67000	19.300	0.12694	0.18797	0.16351
SE	78	0.04100	5.33000	69.800	0.01024	0.06705	0.04626
SN	120	-0.02000	53.33000	0.000	-0.23238	0.03409	0.13955
SR	88	48.80600	4650.75000	9.200	52.19695	50.52154	43.70082
ZN	66	3.44100	236.68000	33.600	3.10043	4.72808	2.49336
BI-2	209	67576.61000	0.00000	0.000	67232.06000	67613.15000	67884.61000
PB	208	0.11700	496.68000	9.800	0.13052	0.11090	0.11019
TL	203	0.00800	6.67000	86.600	0.01149	0.01142	0.00000
U	238	0.03100	110.01000	23.600	0.02293	0.03421	0.03691
SC-1	45	605618.37000	0.00000	0.000	606469.33000	603871.05000	606514.72000
GE-1	72	641882.79000	0.00000	0.000	643671.87000	640615.03000	641361.47000
GE-2	72	29391.67000	0.00000	0.000	29224.68000	28363.25000	30587.08000
GE-3	72	1070903	0	0.000	1061617	1095854	1055239
TB-2	159	79715.35000	0.00000	0.000	78434.70000	80034.30000	80677.05000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:04:10
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10823.65000	0.00000	0.000	10653.49000	11143.77000	10673.68000
SC-3	45	1334838	0	0.000	1344356	1321331	1338827
AL	27	2481.23700	18079.40000	2.000	2486.60392	2429.22091	2527.88603
B	11	272.11600	441255.80000	0.200	272.76954	271.93870	271.64104
BE	9	26.04800	53776.02000	1.200	26.29970	26.15637	25.68857
CA	44	2393.54700	1633.47000	12.300	2510.99309	2059.60517	2610.04306
CR	52	246.32400	82763.26000	2.000	248.22211	240.63184	250.11946
FE	57	2507.45300	16331.19000	6.100	2482.54161	2367.35226	2672.46365
K	39	2464.50500	26716.88000	4.600	2467.92565	2348.66408	2576.92515
MG	24	2494.30700	72238.07000	2.000	2518.26816	2436.74028	2527.91347
MN	55	246.63700	31227.92000	3.400	252.03679	236.95253	250.92038
NA	23	2536.78500	158200.45000	2.800	2550.64249	2458.71582	2600.99634
TI	47	239.89400	1336.76000	8.500	260.71370	238.78466	220.18423
V	51	249.98100	59160.70000	1.700	254.59260	246.22960	249.12222
IN-1	115	308498.67000	0.00000	0.000	308768.97000	307780.91000	308946.12000
IN-2	115	12393.85000	0.00000	0.000	11957.88000	12798.75000	12424.93000
AG	107	25.66400	22678.88000	4.300	25.09274	24.95855	26.94199
AS	75	257.52600	7046.77000	3.900	262.51414	245.82638	264.23649
BA	137	253.66400	11847.86000	4.700	267.45182	245.32153	248.21818
CD	111	26.21400	2408.85000	2.800	25.94117	25.64883	27.05065
CO	59	260.11100	156885.28000	3.600	269.76015	250.88815	259.68325
CU	63	256.38400	133529.50000	2.200	261.70627	250.66211	256.78373
MO	98	25.68400	9943.17000	5.700	26.78198	24.03509	26.23639
NI	60	255.77600	46030.02000	5.100	262.09629	240.82281	264.40915
RB	85	24.48100	1566.79000	8.700	24.43494	22.36741	26.64048
SB	121	26.42400	3940.61000	0.700	26.61861	26.23346	26.42066
SE	78	25.18500	3278.08000	1.500	24.75970	25.47586	25.31841
SN	120	25.23200	4930.91000	12.100	28.26726	25.28966	22.13986
SR	88	22.81200	2230.22000	7.600	24.26547	23.26509	20.90547
ZN	66	252.01800	15724.05000	2.100	254.68937	246.01244	255.35148
BI-2	209	67726.92000	0.00000	0.000	65835.70000	68245.37000	69099.68000
PB	208	25.44200	69010.88000	1.900	25.98100	25.05780	25.28786
TL	203	25.10300	22015.77000	0.800	25.02743	24.95969	25.32271
U	238	25.42700	89318.12000	1.800	25.91036	25.37537	24.99476
SC-1	45	601124.50000	0.00000	0.000	596992.14000	601205.42000	605175.93000
GE-1	72	636252.05000	0.00000	0.000	637532.49000	637473.86000	633749.80000
GE-2	72	28503.54000	0.00000	0.000	28182.72000	28473.68000	28854.23000
GE-3	72	1029208	0	0.000	1049664	1020827	1017133
TB-2	159	80401.99000	0.00000	0.000	79038.42000	79892.12000	82275.43000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:07:14
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10760.18000	0.00000	0.000	10703.48000	11293.88000	10283.19000
SC-3	45	1336814	0	0.000	1368372	1324207	1317863
AL	27	0.43500	10.00000	302.900	-0.92355	1.70716	0.52109
B	11	9.19300	46879.89000	5.200	8.66669	9.59835	9.31339
BE	9	-0.00100	3.33000	0.000	-0.00265	0.00028	-0.00069
CA	44	14.98900	10.00000	98.700	29.57448	0.00000	15.39162
CR	52	0.16300	110.00000	46.300	0.16194	0.08756	0.23818
FE	57	3.16600	20.00000	86.700	4.65410	0.00000	4.84432
K	39	18.92200	976.74000	66.500	9.84694	13.62127	33.29649
MG	24	0.59400	33.33000	92.000	1.17330	0.08941	0.51785
MN	55	-0.00100	3.33000	0.000	-0.02658	0.04907	-0.02658
NA	23	-3.17800	4837.52000	0.000	-7.03882	-1.20659	-1.28841
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	-0.01369	0.02680	-0.01369
IN-1	115	302572.71000	0.00000	0.000	296102.68000	304083.12000	307532.34000
IN-2	115	11736.89000	0.00000	0.000	11483.70000	11723.60000	12003.38000
AG	107	0.00000	3.33000	1480.600	0.00862	-0.00360	-0.00360
AS	75	0.00900	3.33000	1768.200	-0.04134	0.18879	-0.12021
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.03100	30.00000	61.000	0.04934	0.03037	0.01203
CU	63	0.04200	166.68000	166.900	0.11726	0.02753	-0.01973
MO	98	-0.02900	33.33000	0.000	-0.09191	0.04453	-0.03959
NI	60	-0.03100	16.67000	0.000	-0.06756	-0.06878	0.04455
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	0.35500	53.33000	9.400	0.33977	0.33236	0.39338
SE	78	0.02600	3.33000	21.900	0.03202	0.02595	0.02058
SN	120	0.21900	93.33000	34.400	0.21215	0.14724	0.29715
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.09700	33.33000	542.500	0.56898	-0.47044	0.19250
BI-2	209	66033.40000	0.00000	0.000	63285.61000	67351.77000	67462.82000
PB	208	-0.01800	130.00000	0.000	-0.02723	-0.01104	-0.01484
TL	203	0.02300	20.00000	49.000	0.02441	0.01147	0.03434
U	238	0.00200	6.67000	173.200	0.00000	0.00572	0.00000
SC-1	45	590158.88000	0.00000	0.000	586452.18000	589919.64000	594104.83000
GE-1	72	632797.07000	0.00000	0.000	629044.21000	638769.83000	630577.18000
GE-2	72	28533.57000	0.00000	0.000	27582.11000	28954.10000	29064.50000
GE-3	72	1043273	0	0.000	1060329	1037292	1032198
TB-2	159	79136.48000	0.00000	0.000	77873.64000	79340.41000	80195.38000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:10:18
Tube Number: 25
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10706.83000	0.00000	0.000	10553.41000	11013.75000	10553.34000
SC-3	45	1329543	0	0.000	1342987	1314142	1331502
AL	27	179.98400	1303.43000	5.100	190.53075	175.78449	173.63730
B	11	113.88900	203057.84000	1.400	112.09195	115.16289	114.41111
BE	9	1.08400	2234.81000	1.800	1.10003	1.08979	1.06292
CA	44	443.05600	300.02000	26.100	314.96285	474.26079	539.94418
CR	52	4.06400	1403.44000	18.800	3.89226	3.40062	4.90008
FE	57	216.55100	1396.78000	2.200	215.57697	221.64468	212.42995
K	39	426.42900	5217.62000	3.500	443.63622	416.37015	419.28027
MG	24	195.98700	5631.05000	3.400	190.31886	194.21681	203.42518
MN	55	4.33300	546.70000	23.800	3.21212	4.55084	5.23640
NA	23	413.50400	29691.42000	4.000	417.96451	395.04847	427.49952
TI	47	23.54000	130.00000	10.700	22.08385	26.45278	22.08399
V	51	1.34500	316.68000	30.800	1.71956	0.89975	1.41627
IN-1	115	310673.68000	0.00000	0.000	313052.05000	310559.21000	308409.79000
IN-2	115	12440.50000	0.00000	0.000	12177.80000	12268.33000	12875.36000
AG	107	0.89800	800.05000	3.200	0.91798	0.86544	0.91162
AS	75	4.21800	119.33000	22.500	4.86257	3.12791	4.66295
BA	137	2.78200	130.00000	49.900	4.35379	1.72858	2.26474
CD	111	1.13900	105.33000	21.500	1.18903	1.35613	0.87276
CO	59	0.90500	563.36000	17.900	0.71976	0.98209	1.01450
CU	63	3.90600	2196.88000	4.000	3.73115	4.03138	3.95677
MO	98	0.97300	423.36000	14.200	1.09370	0.82288	1.00302
NI	60	3.98400	743.37000	4.000	4.05598	3.80060	4.09667
RB	85	1.25200	86.67000	19.500	1.49296	1.00606	1.25561
SB	121	2.15600	326.68000	13.800	1.95821	2.01139	2.49690
SE	78	3.93600	515.79000	4.700	3.81581	3.84133	4.14990
SN	120	4.27400	886.72000	7.900	4.49702	3.88737	4.43673
SR	88	1.79700	176.68000	12.200	1.87279	1.54916	1.96813
ZN	66	30.46700	1936.85000	8.600	31.06165	27.58517	32.75272
BI-2	209	67754.31000	0.00000	0.000	68688.18000	65876.15000	68698.60000
PB	208	2.10300	5870.65000	5.500	2.12694	2.20538	1.97721
TL	203	1.05800	926.73000	17.600	1.18066	1.14898	0.84320
U	238	1.01100	3553.88000	7.800	0.92614	1.02422	1.08316
SC-1	45	601407.80000	0.00000	0.000	607648.35000	595888.19000	600686.87000
GE-1	72	640715.02000	0.00000	0.000	648059.29000	637663.78000	636421.98000
GE-2	72	29254.78000	0.00000	0.000	29485.13000	29164.88000	29114.32000
GE-3	72	1046820	0	0.000	1047138	1044046	1049277
TB-2	159	80167.08000	0.00000	0.000	79139.28000	79771.45000	81590.51000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:13:23
Tube Number: 26
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10400.05000	0.00000	0.000	9873.09000	10653.53000	10673.54000
SC-3	45	1413060	0	0.000	1425173	1403537	1410470
AL	27	100036.29100	699903.22000	2.300	102531.59177	97905.63948	99671.64071
B	11	12.46500	54761.50000	2.400	12.80246	12.31309	12.27845
BE	9	0.04800	111.33000	11.700	0.04181	0.05171	0.05144
CA	44	280036.52600	183863.04000	3.100	288878.46190	271689.63596	279541.48046
CR	52	3.18000	1083.41000	12.500	2.89906	3.00702	3.63524
FE	57	261220.54800	1635567.94000	1.100	264411.50854	259768.45295	259481.68312
K	39	105038.43800	1063100.14000	2.500	106280.90639	102002.64730	106831.76056
MG	24	102421.63500	2848316.42000	3.300	105561.20841	98892.14758	102811.54824
MN	55	1.44700	176.68000	51.700	2.31015	1.01613	1.01418
NA	23	259267.20300	15038313.94000	2.900	267773.89267	253684.02976	256343.68768
TI	47	2135.40000	11424.03000	6.200	2211.82991	2212.13585	1982.23357
V	51	0.13300	33.33000	17.000	0.12525	0.15800	0.11483
IN-1	115	302737.76000	0.00000	0.000	299880.80000	302653.35000	305679.14000
IN-2	115	12144.18000	0.00000	0.000	12334.25000	11523.96000	12574.34000
AG	107	0.21600	190.01000	3.600	0.22387	0.21552	0.20837
AS	75	0.05600	4.67000	162.000	0.10007	0.11556	-0.04819
BA	137	2.87000	130.01000	38.500	2.14939	4.14076	2.31895
CD	111	0.17900	16.67000	49.300	0.08017	0.25020	0.20723
CO	59	3.28200	1953.52000	7.700	2.99130	3.39921	3.45639
CU	63	3.53500	1953.52000	10.700	3.10076	3.71166	3.79346
MO	98	2080.93600	785500.48000	5.100	2012.18647	2203.32599	2027.29446
NI	60	1.57000	300.01000	39.500	0.93301	1.60495	2.17201
RB	85	0.17000	16.67000	118.800	0.05496	0.40325	0.05195
SB	121	0.07000	13.33000	114.600	-0.02233	0.12200	0.10995
SE	78	0.06400	8.22000	19.700	0.06323	0.05223	0.07754
SN	120	0.09300	73.34000	165.100	0.02173	-0.01194	0.27054
SR	88	2.71500	260.01000	8.000	2.46535	2.85858	2.82131
ZN	66	1.72600	133.34000	57.800	2.59424	1.94640	0.63703
BI-2	209	60143.92000	0.00000	0.000	58768.49000	60525.58000	61137.70000
PB	208	0.14300	503.36000	31.000	0.15894	0.17720	0.09288
TL	203	0.01700	13.33000	42.700	0.01314	0.02552	0.01263
U	238	0.01100	33.33000	62.500	0.01312	0.01592	0.00315
SC-1	45	571477.99000	0.00000	0.000	568271.40000	570408.59000	575753.98000
GE-1	72	636833.14000	0.00000	0.000	633387.22000	630711.36000	646400.85000
GE-2	72	28162.94000	0.00000	0.000	27542.03000	28954.22000	27992.58000
GE-3	72	1187668	0	0.000	1178848	1197822	1186334
TB-2	159	69750.06000	0.00000	0.000	67768.73000	70168.17000	71313.28000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:16:26
Tube Number: 27
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10520.10000	0.00000	0.000	10543.43000	10343.44000	10673.42000
SC-3	45	1477036	0	0.000	1491222	1462352	1477533
AL	27	103437.51700	732452.23000	2.600	100420.99012	105429.87908	104461.68174
B	11	8.02900	49869.48000	7.400	7.36402	8.49923	8.22433
BE	9	0.03900	94.00000	20.000	0.03897	0.04599	0.03061
CA	44	292222.93300	194221.13000	2.300	284610.84913	296854.71678	295203.23160
CR	52	221.81900	72455.45000	2.900	215.42544	228.41217	221.61827
FE	57	271121.55000	1717643.52000	2.700	262570.49251	275146.88665	275647.27181
K	39	109831.51400	1124531.81000	3.800	105241.98455	113467.21554	110785.34253
MG	24	107252.93000	3018950.79000	2.100	105130.97903	109642.48335	106985.32745
MN	55	211.49000	26046.30000	3.900	202.96506	211.85243	219.65181
NA	23	271377.25900	15934587.26000	2.100	264848.81445	275246.97104	274035.99123
TI	47	2174.26600	11777.59000	0.700	2159.67472	2175.10689	2188.01580
V	51	227.28100	52290.05000	0.500	226.36382	228.52419	226.95528
IN-1	115	320774.19000	0.00000	0.000	322344.43000	320479.95000	319498.18000
IN-2	115	11416.49000	0.00000	0.000	11203.31000	11492.87000	11553.28000
AG	107	53.68900	43699.38000	1.000	53.54000	54.25896	53.26910
AS	75	116.63700	2943.60000	4.200	117.59138	111.31559	121.00356
BA	137	2.70900	116.67000	29.800	2.83959	1.84521	3.44191
CD	111	101.87500	8622.20000	1.000	101.81247	102.88720	100.92399
CO	59	227.75900	126638.89000	0.900	229.22720	225.37423	228.67428
CU	63	222.35300	106746.42000	0.200	221.82777	222.34021	222.89092
MO	98	2289.82400	813731.97000	0.500	2298.49394	2277.82950	2293.14962
NI	60	222.10500	36852.08000	1.300	222.97314	224.49638	218.84402
RB	85	0.29200	23.33000	87.100	0.07086	0.23556	0.57014
SB	121	0.19700	30.00000	64.600	0.27460	0.05003	0.26561
SE	78	95.21700	12886.86000	0.300	94.96190	95.12463	95.56537
SN	120	0.10300	70.00000	55.300	0.11036	0.15602	0.04280
SR	88	3.00100	270.01000	15.100	3.50595	2.86631	2.63200
ZN	66	99.77900	5751.16000	4.600	103.78597	94.75185	100.80039
BI-2	209	61568.95000	0.00000	0.000	60786.19000	62753.40000	61167.26000
PB	208	0.13900	506.69000	19.400	0.15968	0.10871	0.15009
TL	203	0.02100	16.67000	67.500	0.01271	0.03692	0.01263
U	238	0.01400	43.33000	59.000	0.02220	0.01229	0.00630
SC-1	45	614129.53000	0.00000	0.000	615215.89000	609469.44000	617703.27000
GE-1	72	681262.39000	0.00000	0.000	683236.32000	679181.01000	681369.83000
GE-2	72	30440.14000	0.00000	0.000	29515.20000	31498.70000	30306.52000
GE-3	72	1262093	0	0.000	1263556	1258953	1263770
TB-2	159	70322.40000	0.00000	0.000	69053.82000	71413.90000	70499.48000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:19:29
Tube Number: 28
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	11277.24000	0.00000	0.000	10983.70000	11363.98000	11484.04000
SC-3	45	1415241	0	0.000	1424064	1407622	1414039
AL	27	-0.92400	0.00000	0.000	-0.92355	-0.92355	-0.92355
B	11	0.55700	35903.39000	6.600	0.54861	0.52467	0.59636
BE	9	-0.00100	4.67000	0.000	-0.00084	-0.00082	0.00009
CA	44	9.28500	6.67000	173.200	0.00000	27.85555	0.00000
CR	52	0.31600	170.01000	44.000	0.32956	0.17108	0.44813
FE	57	5.97500	40.00000	92.000	12.09431	4.38360	1.44592
K	39	39.95500	1256.76000	21.700	47.00260	30.26429	42.59722
MG	24	0.42600	30.00000	82.700	0.78854	0.08533	0.40385
MN	55	0.02400	6.67000	368.800	-0.02658	0.12379	-0.02658
NA	23	22.63100	6691.46000	20.500	23.64708	26.67932	17.56523
TI	47	0.58900	3.33000	173.200	1.76823	0.00000	0.00000
V	51	-0.01400	0.00000	0.000	-0.01369	-0.01369	-0.01369
IN-1	115	333583.43000	0.00000	0.000	336040.97000	334237.04000	330472.28000
IN-2	115	12054.24000	0.00000	0.000	12084.48000	12214.18000	11864.05000
AG	107	0.01600	16.67000	153.700	0.00801	-0.00360	0.04370
AS	75	-0.07000	1.33000	0.000	0.02968	-0.12021	-0.12021
BA	137	0.14500	6.67000	173.200	0.00000	0.43406	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	-0.01100	6.67000	0.000	-0.02218	-0.00537	-0.00487
CU	63	0.60500	456.85000	78.200	1.14199	0.24845	0.42513
MO	98	1.50600	610.03000	8.300	1.36895	1.53726	1.61327
NI	60	-0.01400	20.00000	0.000	-0.01357	0.09794	-0.12750
RB	85	-0.10300	0.00000	0.000	-0.10257	-0.10257	-0.10257
SB	121	-0.02200	0.00000	0.000	-0.02233	-0.02233	-0.02233
SE	78	0.02800	4.00000	17.600	0.02349	0.02836	0.03349
SN	120	-0.00400	53.34000	0.000	-0.23686	-0.08009	0.30409
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	-0.19600	16.67000	0.000	0.02343	-0.30757	-0.30276
BI-2	209	67981.58000	0.00000	0.000	66689.55000	68245.69000	69009.49000
PB	208	-0.02100	123.34000	0.000	-0.01048	-0.03377	-0.01963
TL	203	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
U	238	0.00100	3.33000	173.200	0.00000	0.00000	0.00279
SC-1	45	651100.54000	0.00000	0.000	647120.11000	653854.48000	652327.02000
GE-1	72	696781.50000	0.00000	0.000	700456.79000	702152.02000	687735.69000
GE-2	72	30062.84000	0.00000	0.000	29775.60000	30546.96000	29865.95000
GE-3	72	1138928	0	0.000	1115063	1166751	1134969
TB-2	159	82086.01000	0.00000	0.000	82002.92000	80996.67000	83258.44000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:22:33
Tube Number: 29
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10783.63000	0.00000	0.000	10683.53000	10793.58000	10873.79000
SC-3	45	1401896	0	0.000	1424026	1409177	1372487
AL	27	2427.48700	17628.96000	1.500	2414.18764	2399.22253	2469.05013
B	11	262.35200	447929.47000	2.100	257.40005	261.54200	268.11390
BE	9	25.28500	54812.92000	1.700	25.21891	24.88910	25.74552
CA	44	2525.26400	1720.15000	3.900	2637.29599	2478.38822	2460.10651
CR	52	253.04700	84741.33000	2.900	252.73256	245.92302	260.48492
FE	57	2508.74300	16294.52000	2.400	2444.43393	2521.15096	2560.64353
K	39	2494.06200	26947.24000	2.900	2435.70635	2576.10448	2470.37449
MG	24	2473.23700	71384.83000	0.700	2492.91983	2463.33154	2463.45998
MN	55	249.89800	31541.76000	0.500	250.04535	251.06657	248.58262
NA	23	2508.76700	156005.21000	0.900	2482.66791	2523.97722	2519.65703
TI	47	267.75800	1486.79000	1.200	265.43797	266.32675	271.50838
V	51	252.62900	59579.21000	1.600	251.12898	257.32270	249.43582
IN-1	115	323415.42000	0.00000	0.000	327138.46000	322473.46000	320634.34000
IN-2	115	12153.95000	0.00000	0.000	12329.21000	12019.23000	12113.41000
AG	107	26.63600	23072.61000	4.400	25.43061	27.76921	26.70715
AS	75	258.11700	6930.05000	1.700	253.06155	261.17357	260.11474
BA	137	255.33700	11707.83000	4.300	253.80509	245.12135	267.08552
CD	111	27.00000	2433.52000	4.500	27.67649	27.71694	25.60800
CO	59	265.63900	157196.05000	3.800	254.07172	272.96327	269.88337
CU	63	264.70400	135226.09000	2.600	256.81637	268.51426	268.78250
MO	98	26.37400	10019.90000	4.400	25.47648	27.68793	25.95873
NI	60	264.83100	46775.22000	0.700	262.87684	266.84268	264.77265
RB	85	23.61900	1483.45000	6.200	22.43502	23.17793	25.24302
SB	121	26.53800	3880.60000	6.700	26.15372	28.49000	24.97170
SE	78	25.21200	3440.12000	1.100	24.88625	25.42766	25.32211
SN	120	25.60300	4914.20000	4.300	26.26377	24.33606	26.20771
SR	88	23.88100	2290.23000	5.200	23.32913	25.30113	23.01239
ZN	66	260.30100	15934.22000	2.600	264.44341	252.55572	263.90515
BI-2	209	67432.53000	0.00000	0.000	65956.44000	67743.61000	68597.54000
PB	208	25.92700	70045.86000	1.100	25.60664	26.09814	26.07677
TL	203	25.37600	22149.18000	2.900	26.20095	24.75647	25.16957
U	238	25.33400	88627.03000	0.400	25.39508	25.39181	25.21437
SC-1	45	624169.17000	0.00000	0.000	620741.79000	631993.58000	619772.14000
GE-1	72	670590.28000	0.00000	0.000	675190.07000	663857.33000	672723.43000
GE-2	72	28710.46000	0.00000	0.000	27541.80000	29414.88000	29174.69000
GE-3	72	1124607	0	0.000	1155821	1138744	1079256
TB-2	159	81473.04000	0.00000	0.000	80846.50000	81168.56000	82404.07000

Run Name: 1617302E05 Date/Time: 06/21/2016 8:25:37
Tube Number: 30
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	10880.33000	0.00000	0.000	11524.11000	10603.50000	10513.39000
SC-3	45	1376347	0	0.000	1370804	1368851	1389386
AL	27	0.87400	13.33000	77.400	1.65461	0.47745	0.48946
B	11	4.86900	41586.98000	3.800	5.07684	4.73368	4.79666
BE	9	0.00100	8.00000	86.800	0.00206	0.00113	0.00014
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.20900	126.67000	49.700	0.11040	0.31705	0.19858
FE	57	1.00700	6.67000	86.900	1.44090	0.00000	1.57942
K	39	31.93400	1123.41000	55.200	17.20860	27.12533	51.46715
MG	24	0.69600	36.67000	36.800	0.40046	0.83734	0.84942
MN	55	0.10400	16.67000	41.400	0.12170	0.13458	0.05469
NA	23	9.60400	5651.08000	78.900	0.87749	13.46423	14.46915
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33000	0.000	0.02599	-0.01369	-0.01369
IN-1	115	309742.15000	0.00000	0.000	305920.08000	309741.67000	313564.71000
IN-2	115	11833.92000	0.00000	0.000	11923.56000	11373.60000	12204.60000
AG	107	0.00400	6.67000	158.500	-0.00360	0.00874	0.00790
AS	75	0.03400	4.00000	238.600	-0.04425	0.11868	0.02820
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.00700	0.00000	0.000	-0.00733	-0.00733	-0.00733
CO	59	0.07000	53.33000	13.900	0.08115	0.06809	0.06194
CU	63	0.13200	213.34000	142.600	0.34162	0.07940	-0.02430
MO	98	0.13600	93.34000	90.800	0.09566	0.27559	0.03805
NI	60	-0.10800	3.33000	0.000	-0.06977	-0.12750	-0.12750
RB	85	-0.04600	3.33000	0.000	-0.10257	0.06827	-0.10257
SB	121	0.16800	26.67000	67.700	0.18692	0.27015	0.04581
SE	78	0.04100	5.33000	22.600	0.04648	0.04591	0.03023
SN	120	0.51400	146.69000	83.100	0.24735	1.00593	0.28747
SR	88	0.07100	6.67000	173.200	0.21251	0.00000	0.00000
ZN	66	-0.19000	16.67000	0.000	-0.30360	-0.12062	-0.14443
BI-2	209	66438.75000	0.00000	0.000	64841.61000	67503.24000	66971.41000
PB	208	-0.00400	166.67000	0.000	-0.01660	0.01479	-0.01072
TL	203	0.01200	10.00000	98.700	0.01191	0.02288	0.00000
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	595392.93000	0.00000	0.000	595656.98000	593270.66000	597251.16000
GE-1	72	639061.20000	0.00000	0.000	638228.47000	635191.79000	643763.35000
GE-2	72	28139.62000	0.00000	0.000	27662.11000	28804.00000	27952.75000
GE-3	72	1061468	0	0.000	1051733	1062618	1070054
TB-2	159	80250.50000	0.00000	0.000	78284.72000	81328.28000	81138.49000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

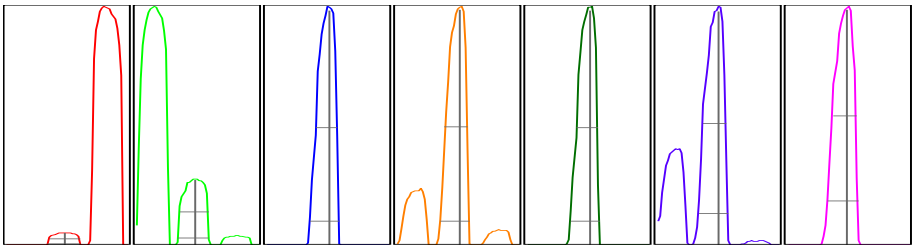
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		12679	12679.38			NaN	-	
24		24581	24580.62			NaN	-	
103		34924	34924.15			NaN	-	
115		34713	34713.33			NaN	-	
140		36550	36549.52			NaN	-	
208		20043	20043.26			NaN	-	
238		44003	44002.78			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	1.01	5.00				
24	0.84	5.00				
103	2.12	5.00				
115	2.62	5.00				
140	2.59	5.00				
208	2.43	5.00				
238	1.77	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	12556	12706	12594	12660	12882
24	24275	24581	24577	24853	24616
103	33871	34529	35071	35393	35757
115	33333	34376	35047	35074	35738
140	35013	36585	36590	36992	37567
208	19353	19790	20242	20207	20625
238	42814	43696	44475	44226	44803

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1846.69	5.95	5.9 - 6.1		0.73	0.787	0.900	
24	3828.05	23.95	23.9 - 24.1		0.68	0.743	0.900	
103	6614.94	103.05	102.9 - 103.1		0.54	0.697	0.900	
115	6588.26	115.05	114.9 - 115.1		0.55	0.691	0.900	
140	7011.20	140.05	139.9 - 140.1		0.52	0.698	0.900	
208	3745.20	208.00	207.9 - 208.1		0.55	0.708	0.900	
238	7971.50	237.95	237.9 - 238.1		0.56	0.721	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		6.1 V	Deflect		16.8 V	
Extract 2		-160.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-75 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V		
OctP RF	200 V	H2 Flow	0.0 mL/min				
Use Gas	false	3rd Gas Flow	0 %				

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 16 172 0639 001

Balance ID#: CLEAR **Start Time:** 6/20/16 23:30 **End Time:** 6/21/16 3:30 **Hot Block:** 13

Pipette ID: S/500

Reflux Cap Lot#: 1512329-6131NK

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	119637	3.00
ICP/MS Spike	1614727#1	0.50
LCS CP/MS Spike	1614727#1	0.50

Method Ref: SW-846 3020A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1512329	
2)	LCSW	.							1512329	
3)	8431678FD	06/22/16 09:20		WW	S3			008a	1512329	
4)	**8433822U**	06/22/16 09:20		WW	S3			008a	1512329	
5)	**8433823R**	06/22/16 09:20		WW	S3			008a	1512329	
6)	**8433824M**	06/22/16 09:20		WW	S3			008a	1512329	
7)	**8433825D**	06/22/16 09:20		WW	S3			008a	1512329	
8)	8425102	06/24/16 09:30		WW	N8			008a	1512329	

Prep Employee: 862

6/21/2016

v 1.0.1

Batch# 16 172 0639 001

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		6/20/16 13:29	862
2)	Sample Vol		6/21/16 3:14	862
3)	Final Vol	CLEAR	6/21/16 3:14	862
4)	Trial		6/21/16 3:14	862
5)	Upload Prep	US19PCC06691	6/21/16 4:29	862

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Data	Units	Analyst	Data Changed Date/Time	Analyst	Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 16 172 0639 001

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
8431678FD	06/22/16	S3	AE651	RAE65-01FD	50.0000	50.0000	1
8433822U	06/22/16	S3	R169M	RAE67-01BKG	50.0000	50.0000	1
8433823R	06/22/16	S3	R169M	RAE67-01MS	50.0000	50.0000	1
8433824M	06/22/16	S3	R169M	RAE67-01MSD	50.0000	50.0000	1
8433825D	06/22/16	S3	R169M	RAE67-01DUP	50.0000	50.0000	1
8425102	06/24/16	N8	P3501	PAG35-01	50.0000	50.0000	1